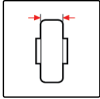
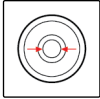
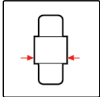
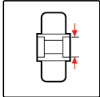
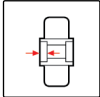
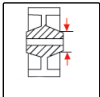
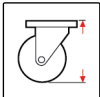
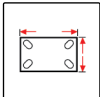
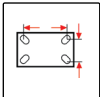
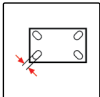
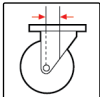
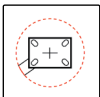
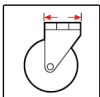
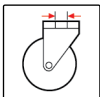
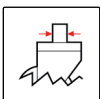
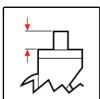
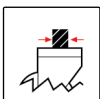
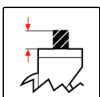
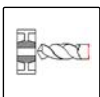
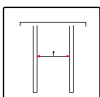
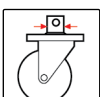
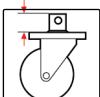
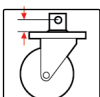
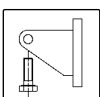
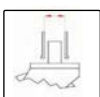
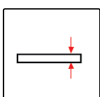
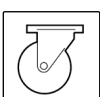
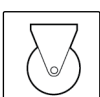
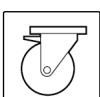
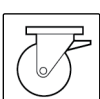
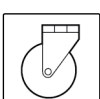
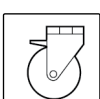
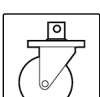
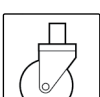
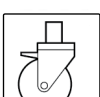
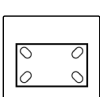
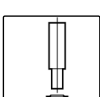

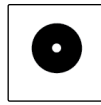
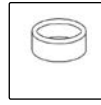
	Wheel diameter		Wheel width		Hub bore diameter
	Hub length		Ball bearing seat diameter		Ball bearing seat depth
	Hub diameter		Overall height		Top-plate outer dimensions
	Hole spacing		Hole width		Offset
	Brake swept radius		Plate diameter		Bolt hole diameter
	Solid stem diameter		Solid stem length		Threaded stem diameter
	Threaded stem length		Max. dimension of hub bore		Fork width
	Hexagonal pin diameter		Hexagonal pin protrusion		Hexagonal height
	Axle bore diameter		Tube diameter		Counter-plate thickness
	Swivel top plate bracket		Fixed bracket		Swivel top plate bracket with front brake
	Swivel top plate bracket with rear brake		Swivel bolt hole bracket		Swivel bolt hole bracket with front brake
	Swivel bracket with centralised (hexagonal) brake system		Swivel bracket with stem		Swivel bracket with stem and front brake
	Counter-plate		Solid stem, nut		Threaded stem, washer, nut



Threadguards



Spacers



Hub with plain bore



Hub with roller bearings



Hub with stainless steel roller bearings



Hub with ball bearings



Hub with stainless steel ball bearings



Hub with ball bearing seats



Static

Static load



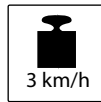
4 km/h

Dynamic carrying capacity at 4 km/h



6 km/h

Dynamic carrying capacity at 6 km/h

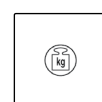


3 km/h

Dynamic carrying capacity at 3 km/h



Rolling resistance

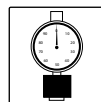


52 kg

Weight



Temperature



Hardness



Available with stainless steel brackets



Wheel with ergonomic round profile



Tile floor



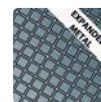
Asphalt floor



Resin-cement floor



Not paved floor



Expanded metal floor



Floor with chips



Floor with obstacles

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INDUSTRIAL LIGHT DUTY LOADS



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INDUSTRIAL MEDIUM DUTY LOADS



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INDUSTRIAL HEAVY DUTY LOADS AND MECHANICAL HANDLING



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HIGH TEMPERATURE



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WASTE BIN CONTAINERS



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FURNITURE



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ANTISTATIC AND STATICALLY CONDUCTIVE



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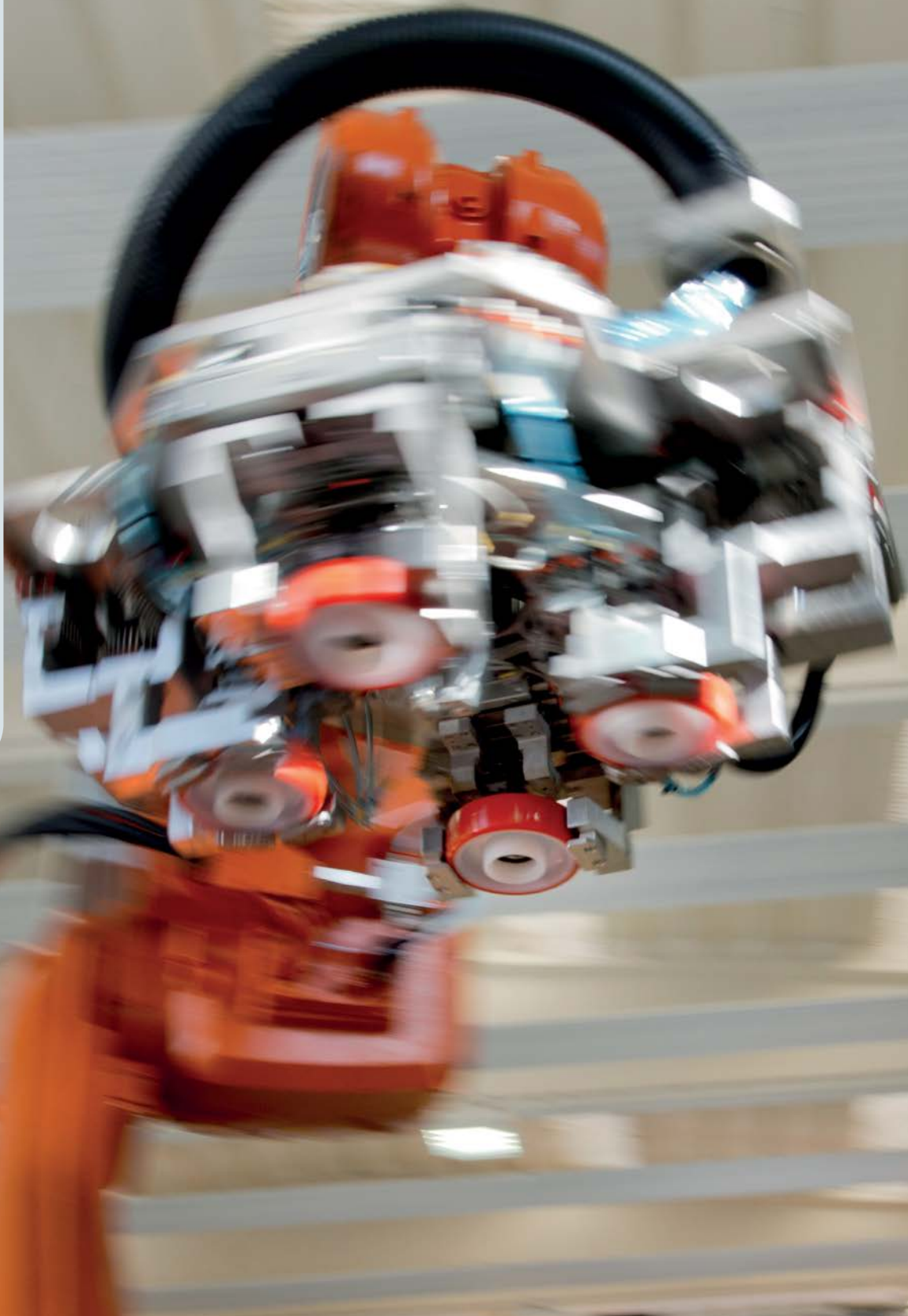
CUSTOMISED SOLUTIONS



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ACCESSORIES

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MILESTONES

- | | | | |
|------|--|------|--|
| 1950 | Company was set up as a craft business | 1980 | The company moved to the current 10,000 square metre plant |
| 1953 | Brand registration and conversion to a joint stock company (SpA) | 1995 | Production of 30,000 wheels a day with 104 employees |
| 1961 | First foreign customer for wheels with polyurethane coating | 1996 | ISO 9001 certification |
| 1972 | Production of 2,000 wheels a day with 100 employees | 2000 | Tellure Rôta do Brasil incorporated |
| | | 2002 | ISO 9001:2000 certification |



"We are working to improve, always"

This is how Roberto Lancellotti - founder and current president of Tellure Rôta - summarises the mission of the company, which works every day to satisfy its customers' movement and handling needs for industry and home applications, through the design, manufacture and sale of wheels and brackets.



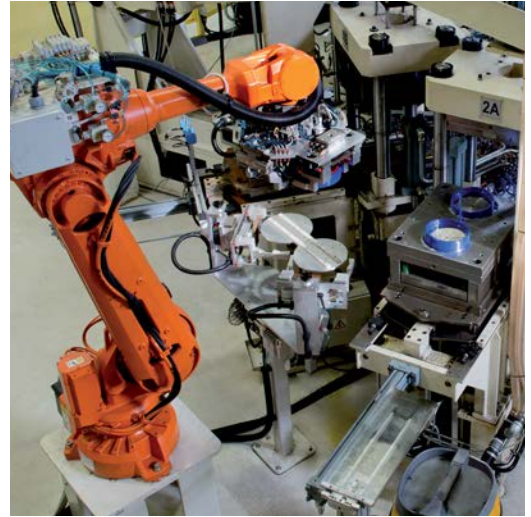
Specific design for every sector

Every day, our designers study innovative movement solutions for multiple application sectors. The result is an offer of over 3,500 catalogue items and the development of special products upon customer requests

From large industries to private homes, from office canteens to every environment of use, there is a specific solution that has been studied, developed and tested within the company, thanks to the know-how of materials and the use of the most modern conception, design and testing software.

In Tellure Rôta, technology and competence are at the customer's service.

- | | | | |
|------|---|------|---|
| 2004 | ISO 14001:2004 environmental certification | 2011 | Qualification and accreditation of the "Test & Research" lab by the Emilia-Romagna High Technology Network |
| 2005 | Production expansion for automatic assembly with the purchase of a 3,000 square metre facility next to the main plant | 2012 | Production expansion for thermoplastic moulding with the purchase of a third 1,500 square metre facility next to the main plant |
| 2006 | Start of the Lean production project | 2013 | Achievement of sixty years in the business |
| 2009 | OHSAS 18001:2007 Workplace Health and Safety Certification | | |



Tellure Rôta, 60 years of guaranteed Made in Italy quality

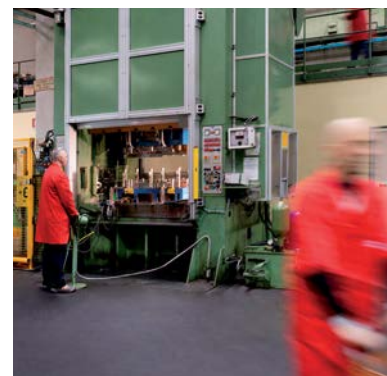
The wheels and brackets are manufactured in three plants in Formigine, on a covered surface of 15,000 square metres. Here, the skills of our people combine with technology to manufacture products which are built following certificated standards, which guarantee quality.

The steel sheets are moulded with automatic presses rated up to 630 Tonnes and pitch moulds. Strict and continuous checks made on the steel sheet and on the moulded components guarantee precise processing tolerances.

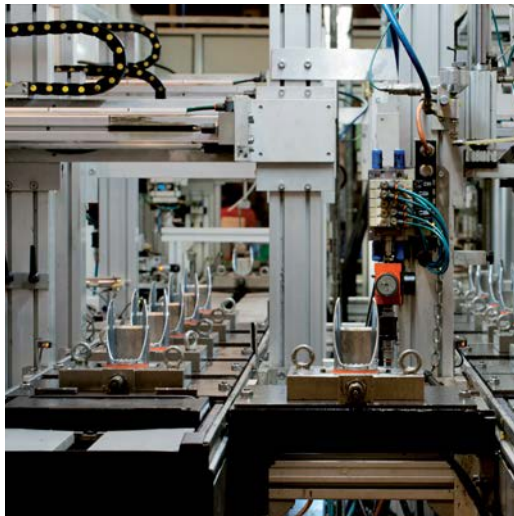
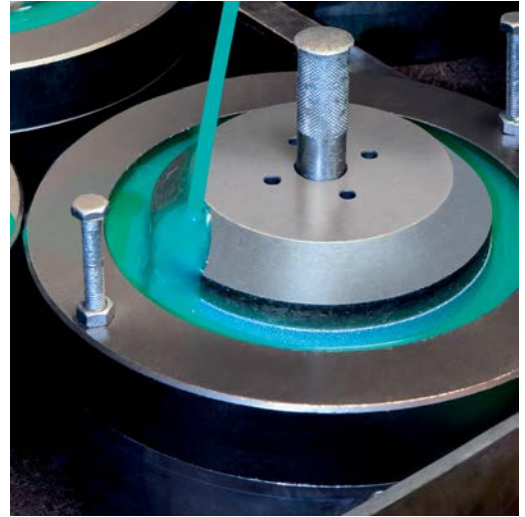
The preparation of hubs for coating and casting polyurethane wheels and rollers takes place according to in-house created formulas and by using high quality raw materials. The entire process is strictly controlled to obtain the highest performance of the Tellure Rôta polyurethanes.

The thermoplastic wheels are moulded in a specific plant with state-of-the-art presses, in a controlled environment and starting from certified materials. The process ends with the assembly of the wheels and brackets on automatic lines that guarantee high production volumes and constant high quality.

OVERVIEWS







Tellure Rôta production process is based on lean production principles, which allows a flexible response to customer requests, ensuring reliable service and rapid delivery.

Established in Italy, competitive in the world

Thanks to the commitment to product quality and innovative solutions to the different movement and handling requirements, Tellure Rôta is internationally recognised as one of the most important industrial companies in the sector. Tellure Rôta do Brasil was set-up in 2000 to strengthen the presence in South America.

CERTIFICATIONS

1996: ISO 9001 certification, updated in January 2002 according to the new Vision 2000 standards, that guarantee management of all company processes even more focused on complete and constant customer satisfaction;

2005: ISO 14001:2004 environmental certification, demonstrating Tellure Rôta's ability to combine management which focuses on continuous improvement and customer satisfaction with environmental protection and prevention of pollution;

2009: OHSAS 18001:2007 health and safety certification, thanks to the implementation of an internal system which guarantees regulations are respected, constant checks are performed and proactive management is done on all risks which can be found in the workplace.



A sales network with over 2,000 customers serves today 57 countries. Tellure Rôta is based in Formigine (Modena) in the north of Italy, on a site consisting of three production plants and the research and development laboratory.





An in-house laboratory for continuous innovation

In order to guarantee to its customers excellence in designing projects, Tellure Rôta has chosen to qualify and support its production departments with the Test & Research lab, a research laboratory with operational autonomy and accredited since 2011.

Since the laboratory belongs to a network of excellence, it is constantly updated and can expand its know-how to guarantee customers with on-going innovative projects.



EQUIPMENT

The supplied equipment consists of machinery and modern and updated technologies; it is divided into:

- test machines and benches for finished products according to the Standards of reference
- measuring instruments for the dimensional control and the physical-mechanical-electrical characterisation of the materials
- FEM design and analysis software workstations

All equipment is integrated with sensors and software for the collection and processing of data and the tests are video-recorded in real time.

Where research becomes solution

The laboratory guarantees the necessary skills to develop and test new solutions for materials, products and constructive and process technologies.

In particular, it develops and characterises polyurethane mixes and thermoplastic materials able to meet the specific application requirements of wheel users and the right quality/price ratio.

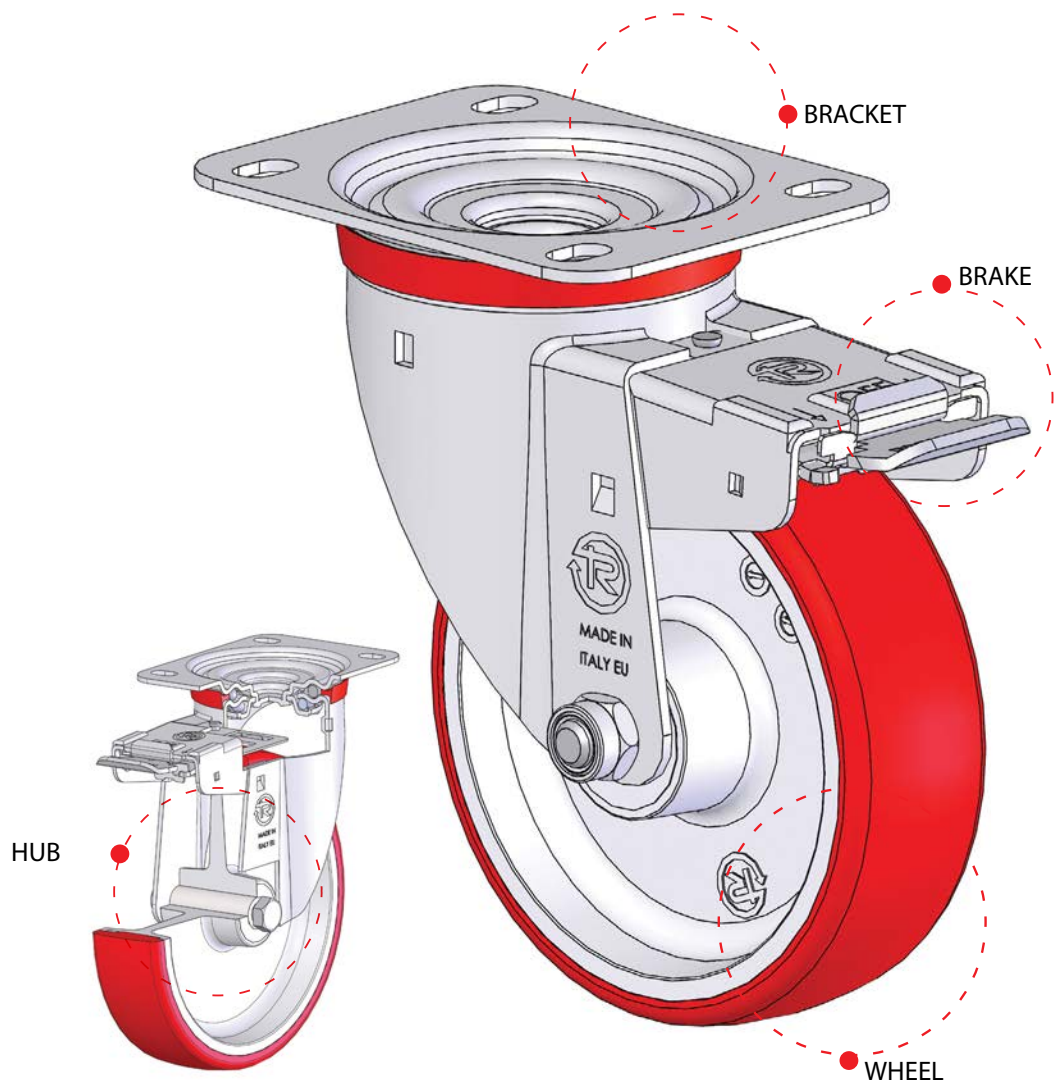
All of the chosen materials and treatments have a low environmental impact and are conform with the RoHS and Reach Directives.

TRLab also researches metal components to make brackets with optimised performance even under heavy-duty uses, and it also experiments with surface treatments that resist external chemical agents.



SERVICES

- Tests on wheels and brackets according to the wheels and brackets standards
- Tests on wheels and brackets according to standards relating to different applications (waste collection bins, mobile scaffoldings and others)
- Tests on elastomer, thermoplastic and metal materials
- Physical-mechanical characterisation tests of elastomers and vulcanised rubbers (traction, tear, abrasion, resilience, density, hysteresis)
- Electrical resistance tests on antistatic or conductive components
- Specific tests on customer projects



WHEEL

Round mechanical part allowing the transformation, by rotating around its own axis, of a sliding motion into a rolling motion.

The elements composing the wheel are: the tread, the cover, the centre, the hub and the swivel actions.

In this catalogue the wheels are divided into main usage categories. Each series contains specific information and individual codes.

Industrial - Light duty loads	from page 44 to page 329
Industrial - Medium duty loads	
Industrial - Heavy duty loads and mechanical handling	
High temperatures	
Pallet truck rollers	
Scaffoldings	
Waste bin containers	
Institutional	
Furniture	
Antistatic and statically conductive solutions	
Customised solutions	
Accessories	

BRACKET

Connecting element between a wheel and a trolley. All wheels normally require the use of a bracket to be fitted to a trolley; the wheels which have an axis integrated in the trolley itself are an exception.

Swivel bracket: turns on its own vertical axis as the direction of movement changes; it can be swivel with top plate, swivel with bolt hole, swivel with stem. It can be fitted with a lock.

Fixed bracket: it cannot rotate; it has the task of maintaining the wheel along a guideline.

Brackets	from page 14 to page 25
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BRAKE

Device to brake the rotation of the bracket around its own axis, the rotation of the wheel or the rotation of the complete castor. Front, rear, centralised, total or directional brakes can be fitted onto the swivel brackets.

Brakes	from page 26 to page 29
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HUB

Central part of the wheel intended to house the axle or the bearings, making rotation easier (ball bearing, roller bearing, plain bores,...).

Hubs	from page 30 to page 31
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Light-duty SL



Carrying capacity: 130 daN
 Diameters: 80-125 mm
 Fitting: with top plate, with bolt hole
 Brake: front

Page 15

Standard-duty NL-NLX



Carrying capacity: 400 daN
 Diameters: 65-280 mm
 Fitting: with top plate, with bolt hole, with threaded stem, with Zamak stem
 Brake: front, rear, centralised

Page 16

Medium-duty M



Carrying capacity: 500 daN
 Diameters: 150-200 mm
 Fitting: with top plate
 Brake: adjustable front

Page 18

Heavy-duty P-PX



Carrying capacity: 750 daN
 Diameters: 80-250 mm
 Fitting: with top plate
 Brake: adjustable front, rear

Page 19

Extra heavy-duty EP



Carrying capacity: 1600 daN
 Diameters: 100-250 mm
 Fitting: with top plate
 Brake: adjustable rear

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Electrowelded EE MHD



Carrying capacity: 1000 daN
 Diameters: 100-250 mm
 Fitting: with top plate
 Brake: adjustable rear

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Electrowelded EE HD-EE EHD



Carrying capacity: 3500 daN
 Diameters: 150-400 mm
 Fitting: with top plate
 Brake: adjustable rear (EE HD only)

Page 22

Twin electrowelded EEG MHD



Carrying capacity: 1000 daN
 Diameters: 100-125 mm
 Fitting: with top plate

Page 23

Twin electrowelded EEG HD - EEG EHD



Carrying capacity: 4300 daN
 Diameters: 125-300 mm
 Fitting: with top plate

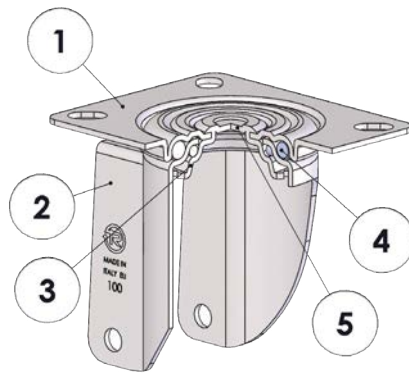
Page 24

Scaffolding TRAB



Carrying capacity: 750 daN (according to EN 1004:2005)
 Diameters: 125-200 mm
 Fitting: with top plate, with solid stem, with threaded stem with leveller

Page 25



- 1) Plate in electrolytically galvanised steel plate
- 2) Fork in electrolytically galvanised steel plate
- 3) Ball race ring in electrolytically galvanised steel plate
- 4) Swivel actions: on two ball race rings lubricated with grease
- 5) King pin: integrated with ball race ring

Light-duty SL - max carrying capacity 130 daN

The bracket is made of electrolytically galvanised steel plate.

The swivel action is composed of two roller ball race rings in calibrated tracks obtained on pressed components. The bracket assembly is made by means of cold forming the pin integrated in the lower ring, thus guaranteeing good manoeuvrability and reduced side play.

The shaping of the fixing plate that protects the upper ball race ring and their lubrication using industrial multi-purpose grease reduce maintenance during the normal conditions of use of the bracket.

Brake: front

Fittings with wheels



SERIES 52

SERIES 53

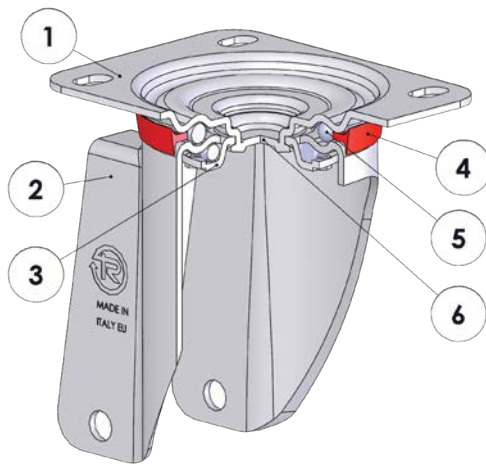
SERIES 71

Fitting with top plate

SL								
	80	40	109	95x80	80x60	8.8	36	130
	100	40	127	95x80	80x60	8.8	33	130
	125	40	153	95x80	80x60	8.8	29	130

Fitting with bolt hole

SL							
	80	40	109	12	63	36	130
	100	40	127	12	63	33	130
	125	40	153	12	63	29	130



- 1) Top Plate: electrolytically galvanised steel plate or in AISI 304 stainless steel
- 2) Fork: electrolytically galvanised steel plate or in AISI 304 stainless steel
- 3) Ball Race Ring: electrolytically galvanised steel plate or in AISI 304 stainless steel
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

Standard-duty NL and NLX - max carrying capacity 400 daN

Bracket made of printed steel plate with excellent swivel guaranteed by two ball race rings.










Precise assembly by means of cold-mechanical forming of the top plate integrated pin. The lubrication and adequate protection of the ball race rings against dust, together with the electrolytic galvanisation (NL) or the realisation in AISI 304 stainless steel (NLX) guarantee a long duration and a reduced request for maintenance in normal conditions of use. A specific model intended for uses with a temperature above 100°C is also available.

Brake: front, rear, centralised.
Directional lock available









Fittings with wheels

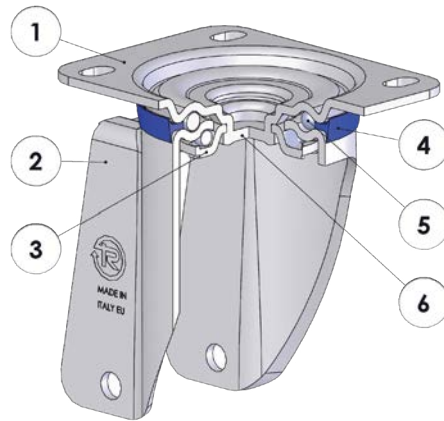


Fitting with top plate

NL-NLX									 4 km/h
	65	40	100	100x85	80x60	9	37	8	200
80	40	107	100x85	80x60	9	37	8	200	
100	45	128	100x85	80x60	9	35	8	200	
125	45	156	100x85	80x60	9	37	8	220	
125	45	156	140x110	105x80	11	37	8	220	
125	60	166	140x110	105x80	11	57	12	300	
140	45	176	100x85	80x60	9	34	8	220	
150	45	182	100x85	80x60	9	34	8	220	
150	45	182	140x110	105x80	11	34	8	220	
150	60	194	140x110	105x80	11	56	12	300	
160	60	187	100x85	80x60	9	50	12	220	
160	60	198	140x110	105x80	11	56	12	300	
175	60	217	140x110	105x80	11	56	12	300	
180	60	219	140x110	105x80	11	56	12	300	
200	60	240	140x110	105x80	11	56	12	300	
NL	225	60	263	140x110	105x80	11	56	12	300
	250	90	296	200x160	160x120	14	86	12	350
	260	90	300	200x160	160x120	14	86	12	350
	280	90	311	200x160	160x120	14	86	12	400

Fitting with bolt hole

NL-NLX								 4 km/h
	65	40	100	12	73	37	8	200
80	40	107	12	73	37	8	200	
100	45	128	12	73	35	8	200	
125	45	156	12	73	37	8	220	
140	45	176	12	73	34	8	220	
150	45	182	12	73	34	8	220	
150	60	188	20	102	56	12	300	
160	60	193	20	102	50	12	300	
175	60	212	20	102	56	12	300	
180	60	214	20	102	56	12	300	
200	60	236	20	102	56	12	300	



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: blue polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

Medium-duty M - max carrying capacity 500 daN

Bracket made of pressed steel plate thicker than the NL model. Excellent swivelling guaranteed by the two ball race ring. Precise assembly by means of cold-mechanical forming of the top plate integrated pin, the lubrication and adequate protection of the ball race rings against dust, together with the electrolytic galvanisation guarantee long duration and a reduced request for maintenance in normal conditions of use.

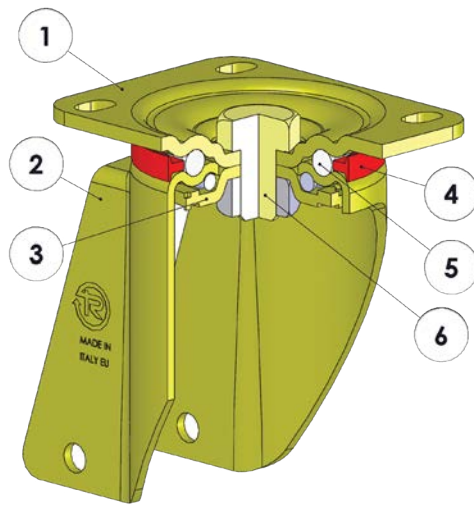
Brake: adjustable front

Fittings with wheels



Fitting with top plate

M									
	150	60	194	140x110	105x80	11	58	12	500
	160	60	199	140x110	105x80	11	58	12	500
	200	60	240	140x110	105x80	11	50	12	500



- 1) Top Plate: electrolytically colonial galvanised steel plate or AISI 304 stainless steel plate
- 2) Fork: electrolytically colonial galvanised steel plate or AISI 304 stainless steel plate
- 3) Ball Race Ring: electrolytically galvanised steel plate or AISI 304 stainless steel plate
- 4) Dust seal: orange polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: steel screw, class 8.8 and nut or A2 stainless steel screw and nut

Heavy-duty P-PX - max carrying capacity 750 daN

Bracket made of thick pressed steel plate with excellent swivelling guaranteed by two ball race rings.

Precise assembly by means of highly mechanically resistant bolt and locknut anti-loosening system. The lubrication and adequate protection of the ball race rings against dust, together with the highly resistant to corrosion electrolytic galvanisation or the realisation in AISI 304 stainless steel guarantee a long duration and a reduced request for maintenance in normal conditions of use.

Brake: front in diameters 80-125 and adjustable rear in diameters 125-200

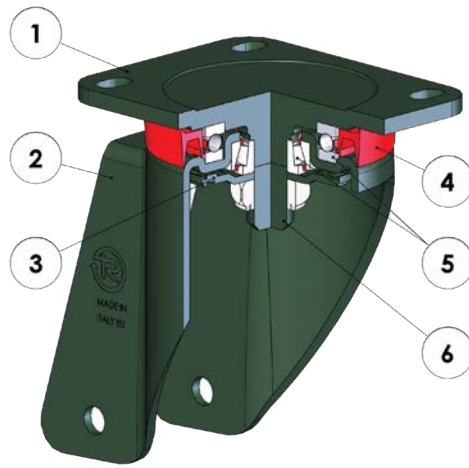
Directional lock available.

Fittings with wheels



Fitting with top plate

P										
	80	100	125	125	150	160	175	180	200	250
P-PX	45	45	45	60	60	60	60	60	60	60
	128	138	161	170	200	205	225	228	250	298
	100x85	100x85	100x85	140x110	140x110	140x110	140x110	140x110	140x110	140x110
	80x60	80x60	80x60	105x80	105x80	105x80	105x80	105x80	105x80	105x80
	9	9	9	11	11	11	11	11	11	11
	46	46	44	70	70	70	70	70	70	66
	8	8	8	12	12	12	12	12	12	12
	350	350	350	750	750	750	750	750	750	750



- 1) Plate: green galvanised forged steel
- 2) Fork: green galvanised steel plate
- 3) Lower bearing protection ring
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: axial ball bearing and tapered roller bearing
- 6) King pin: integrated with the machine-processed plate

Extra-heavy duty EP - max carrying capacity 1600 daN

Heavy-duty load brackets equipped with fixing plate made of forged steel and integrated pin; fork in thick pressed steel plate; excellent swivelling thanks to the use of an axial bearing that guarantees vertical load and tapered bearing to compensate the oblique forces.

Low-maintenance and long-duration bracket thanks to the use of purposely shaped dust seal, lubrication of the bearings (option with grease nipple available) and highly resistant electrolytic galvanising against corrosion.

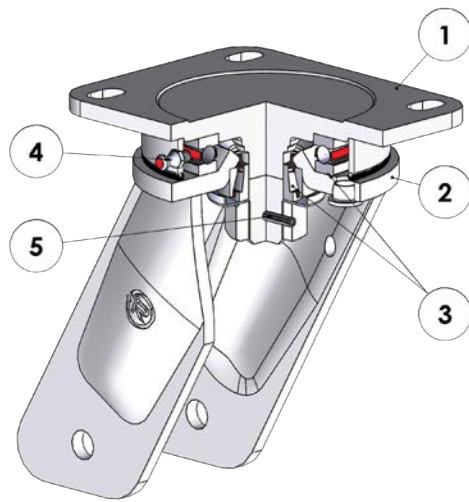
Brake: adjustable rear

Fittings with wheels



Fitting with top plate

EP									
	100	45	140	100x85	80x60	9	46	8	4-6 km/h
	125	45	164	100x85	80x60	9	48	8	350
	125	60	188	135x110	105x80	11	70	12	1100
	150	60	200	135x110	105x80	11	70	12	1100
	160	60	205	135x110	105x80	11	70	12	1100
	175	60	225	135x110	105x80	11	70	12	1100
	180	60	227	135x110	105x80	11	70	12	1100
	200	60	250	135x110	105x80	11	70	12	1100
	250	90	300	175x140	140x105	14	66	18	1600



- 1) Plate: forged steel with electrolytically galvanised integrated pin
- 2) Fork: deep-drawn legs electro-welded to the electrolytically galvanised flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

Electrowelded EE MHD - max carrying capacity 1000 daN

Bracket suitable for applications with loads up to 1000 daN, even under heavy-duty conditions (mechanised towing and high speeds). Fixing plate made of forged steel with integrated pin, fork with legs shaped by means of deep-drawing process and welded to the flange; the axial and taper bearing guarantee excellent manoeuvrability also at full load and increase the side impact resistance of the bracket.

Bracket grease nipple, locknut anti-loosening system, protective o-ring against dust and zinc electroplating guarantee its extremely long duration and simple maintenance.

Brake: adjustable rear

Directional lock available.

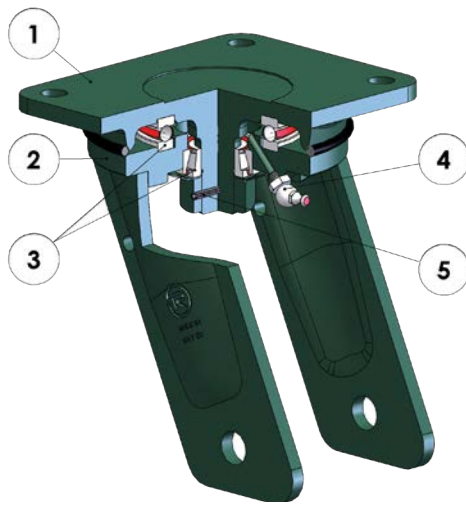
Fittings with wheels



Fitting with top plate

EE MHD

100	60	170	135x110	105x80	11	51	12	1000	
125	60	182	135x110	105x80	11	51	12	1000	
150	60	210	135x110	105x80	11	60	12	1000	
160	60	215	135x110	105x80	11	60	12	1000	
180	60	242	135x110	105x80	11	70	12	1000	
200	60	252	135x110	105x80	11	70	12	1000	
250	60	300	135x110	105x80	11	83	12	1000	



- 1) Top plate: forged steel with integrated pin painted with dark green powder
- 2) Fork: drawn legs electrowelded to the flange painted with dark green powder
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

Electrowelded EE HD - EE EHD - max carrying capacity 3500 daN

Bracket suitable for applications with loads up to 3500 daN, even under heavy-duty conditions (mechanised towing and high speeds). Fixing plate made of thick forged steel with integrated pin, fork with thick legs shaped by means of deep-drawing process and welded to the flange; the axial and taper bearing guarantee excellent manoeuvrability also at full load and increase the side impact resistance of the bracket. Bracket grease nipple, locknut anti-loosening system, protective o-ring against dust and green powder painting guarantee its extremely long duration and simple maintenance.

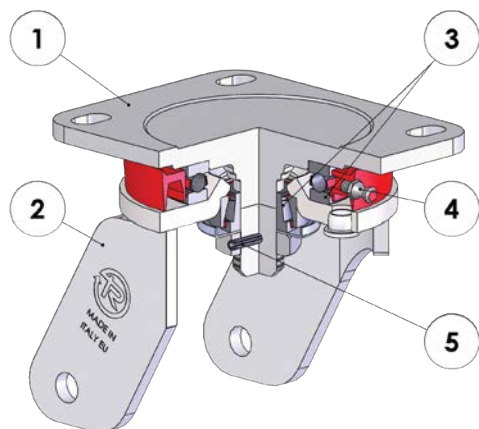
Brake: adjustable rear (EE HD model only)
Directional lock available (EE HD model only)

Fittings with wheels



Fitting with top plate

EE HD	150	90	218	175x140	140x105	14.5	50	18	1600
	200	90	275	175x140	140x105	14.5	65	18	1600
	250	90	320	175x140	140x105	14.5	74	18	1600
	250	90	325	200x160	160x120	17	74	18	2500
	300	90	360	175x140	140x105	14.5	81	18	1600
	300	90	365	200x160	160x120	17	81	18	2500
EE EHD	300	130	384	250x200	210x160	19	78	24	3500
	400	130	475	250x200	210x160	19	95	24	3500



- 1) Plate: forged steel with electrolytically galvanised integrated pin
- 2) Fork: deep-drawn legs electro-welded to the electrolytically galvanised flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

Twin electrowelded EEG MHD - max carrying capacity 1000 daN

Bracket suitable for applications with loads up to 1000 daN, even under heavy-duty conditions (mechanised towing and high speeds). Fixing plate made of forged steel with integrated pin, fork with legs shaped by means of deep-drawing process and welded to the flange; the axial and taper bearing guarantee excellent manoeuvrability also at full load and increase the side impact resistance of the bracket. Bracket grease nipple, locknut anti-loosening system, protective o-ring against dust and zinc electroplating guarantee its extremely long duration and simple maintenance.

Directional lock available.

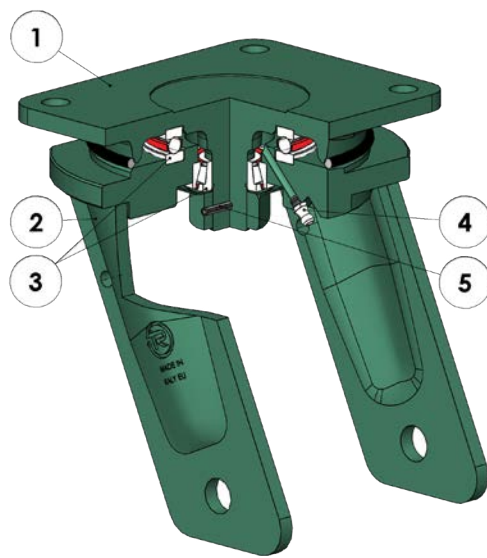
Fittings with wheels



SERIES 62 SERIES 63GH SERIES 64 SERIES 72AL SERIES 72GH

Fitting with top plate

EEG MHD										
	100	90	140	135x110	105x80	11	55	12	1000	4 km/h
	125	90	175	135x110	105x80	11	55	12	1000	



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

Twin electrowelded EEG HD - EHD - max carrying capacity 4300 daN

Bracket suitable for applications with loads up to 4300 daN, even under heavy-duty conditions (mechanised towing and high speeds). Fixing plate made of thick forged steel with integrated pin, fork with thick legs shaped by means of deep-drawing process and welded to the flange; the axial and taper bearing guarantee excellent manoeuvrability also at full load and increase the side impact resistance of the bracket. Bracket grease nipple, locknut anti-loosening system, protective o-ring against dust and green powder painting guarantee its extremely long duration and simple maintenance.

The top plate's longer side of fixed brackets is parallel to the axle of the wheel.

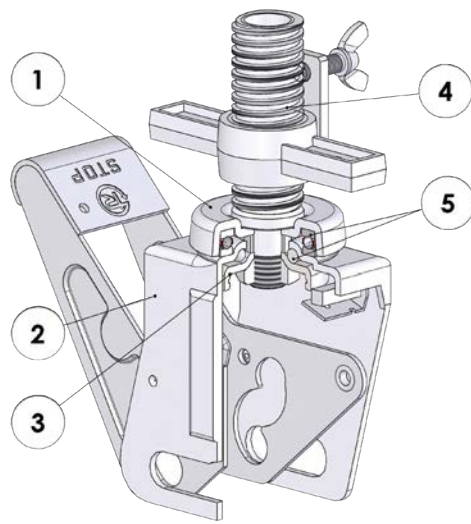
Fittings with wheels



SERIES 62 SERIES 63GH SERIES 64 SERIES 68P SERIES 72AL SERIES 72GH

Fitting with top plate

EEG HD									
	125	130	210	175x140	140x105	14	50	18	1600
	150	130	223	175x140	140x105	14	50	18	1600
	160	130	228	175x140	140x105	14	50	18	1600
	200	130	280	175x140	140x105	14	65	18	1600
	200	130	285	200x160	160x120	17	62	18	2000
EEG EHD	200	190	280	250x200	210x160	19	62	24	3500
	250	190	330	250x200	210x160	19	62	24	3500
	300	190	385	250x200	210x160	19	75	30	4300



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electroplated galvanised steel
- 4) King pin: stem with acme thread manufactured steel from tube, nut locked by mechanical deformation (different for top plate and solid stem models)
- 5) Swivel actions: for brackets diam. 125 and 150 mm: 125 and 150 mm: grease-lubricated double ball raceways; for brackets diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

Scaffolding - max carrying capacity 750 daN according to UNI EN 1004:2005

Bracket designed for the specific requirements of the scaffolding sector, regulated by Standard EN 1004:2005.

When the brake is actioned, its construction allows eliminating the offset of the wheel by aligning the bracket's swivel axis and the wheel's swivel axis on the same vertical, thus significantly increasing the set's resistance to static loads.

Also available with double pedal (one pedal to lock and one to release)

Fittings with wheels



SERIES 60 **SERIES 68**

Fitting with top plate

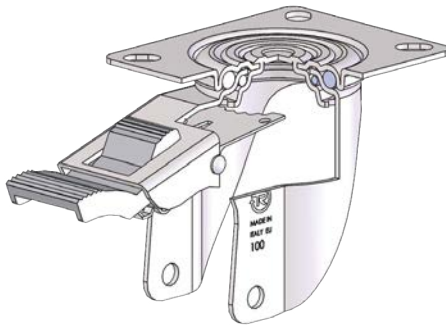
TRAB								
	150	192	140x110	105x80	19	40	300	700
	200	243	140x110	105x80	19	40	400	750

Fitting with threaded stem

TRAB								
	150	192	83	M38x6	500	40	300	700
	200	243	81	M38x6	500	40	400	750

Fitting with solid stem

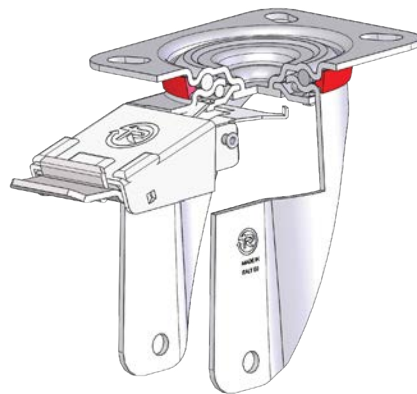
TRAB								
	125	150	89	38	57	30	250	500
	150	192	83	38	57	40	300	700
	200	243	81	38	57	40	400	750



Front brake for SL bracket diameters 80-125 mm

Total brake, it locks both wheel and bracket rotation.

The braking device is integral with the fork. The plastic brake pedal is used for locking and releasing the device. The extremely low position of the pedal makes it easier to use even when fitting to particularly bulky structures. The hardened carbon steel spring, coated with thin zinc sheets, has very high corrosion resistance.



Front brake for NL - NLX - P brackets diameters 80-150 mm

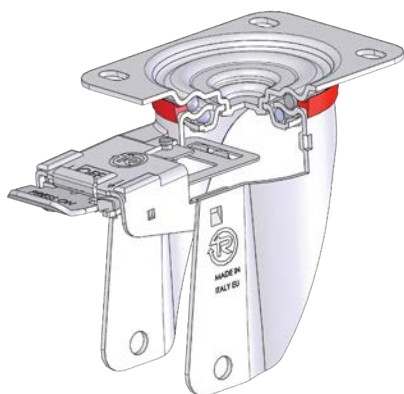
Total brake, it locks both wheel and bracket rotation

The front brake remains within the operator's reach while pushing the trolley. This brake has double lock/release pedal to improve accessibility. The fold-away braking release pedal reduces clearances.

The shape of the wheel's braking spring optimises wheel locking in both rotation directions.

The hardened carbon steel spring, coated with thin zinc sheets, has very high corrosion resistance.

For NLX brackets, this brake is available in a completely STAINLESS STEEL version.



Front brake for NL - NLX brackets diameters 150-200 mm

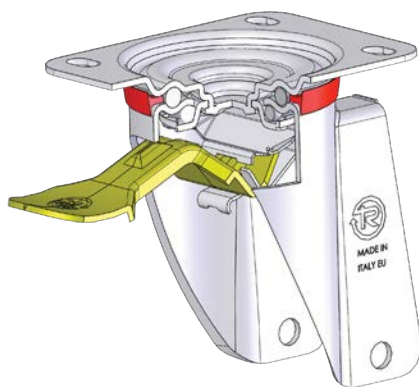
Total brake, it locks both wheel and bracket rotation.

The front brake remains within the operator's reach while pushing the trolley. This brake has a double lock/release pedal to improve its accessibility. The fold-away braking release pedal reduces clearances.

The shape of the wheel's braking spring optimises wheel locking in both rotation directions.

The hardened carbon steel spring, coated with thin zinc sheets, has very high corrosion resistance.

For brackets NLX, this brake is available in a completely STAINLESS STEEL version.



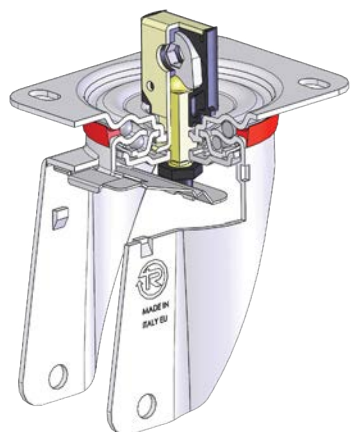
Rear brake for NL brackets diameters 160-200 mm

Total brake, it locks both wheel and bracket rotation.

The rear type brake conceived for maximum simplicity of use, has a single lock and release pedal, specially ribbed to ensure optimal strength.

The position of the lock pedal is within the operator's reach when towing the trolley.

The hardened carbon steel springs coated with thin zinc sheets and the steel braking pedal coated with yellow electrolytic galvanising, are highly resistant to corrosion.

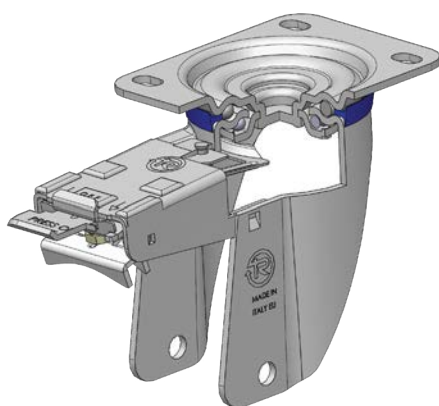


Adjustable centralised brake for NL brackets diameters 150-200 mm

The cam system is designed so that the brake can be engaged on two brackets at the same time, using a connection rod and just one lock pedal.

The hardened carbon steel spring, coated with thin zinc sheets, has very high corrosion resistance. This brake is equipped with an adjustment system to compensate for normal wheel wear during use.

Brake set-up for use with 11 mm hexagonal bar spanner.



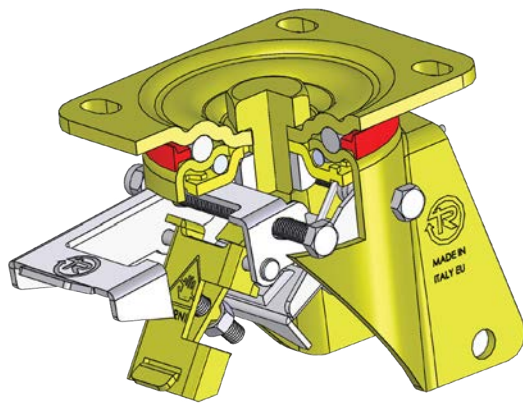
Adjustable front brake for M brackets diam. 150-200 mm

Total brake, it locks both wheel and bracket rotation

The front brake remains within the operator's reach while pushing the trolley. This brake has double lock/release pedal to improve accessibility. The fold-away braking release pedal reduces clearances.

The hardened carbon steel spring, coated with thin zinc sheets, has very high corrosion resistance.

Locking force can be adjusted using an M8 socket screw and 13 mm spanner. This system has been designed to optimise braking based on the hardness of the wheel tread, its wear and the conditions of use. Make sure that the braking setting obtained (by means of adjustment) is suitable for the specific operating requirements.

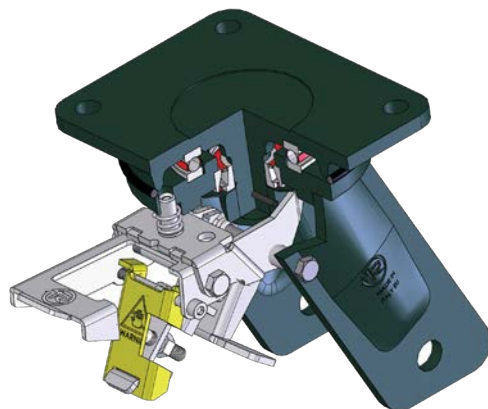


Adjustable rear brake for P-PX-EP brackets diameters 150-200 mm

Total brake, it locks both wheel and bracket rotation.

The rear type brake remains within the operator's reach while towing the trolley. This brake is made to obtain optimal braking values, while maintaining maximum simplicity of use.

A top-to-bottom movement using the tip of the foot on two independent pedals is all that's needed to engage and release the brake quickly and smoothly. Locking force can be adjusted using an M8 socket screw, in order to optimise braking based on the hardness of the wheel tread, its wear and the conditions of use; before use, we suggest making sure that the brake setting obtained (by means of adjustment) is suitable for the specific operating requirements.



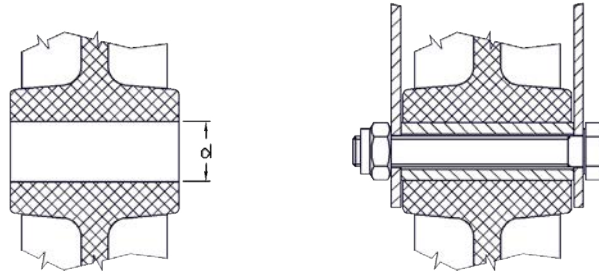
Rear brake for EE MHD and EE HD brackets diam. 125-300

Total brake, it locks both wheel and bracket rotation.

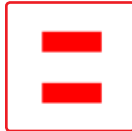
The rear type brake remains within the operator's reach while towing the trolley. This brake is made to obtain optimal braking values, while maintaining maximum simplicity of use and the necessary strength.

A top-to-bottom movement using the tip of the foot on two independent pedals is all that's needed to engage and release the brake quickly and smoothly. Locking force can be adjusted using an M8 socket screw, in order to optimise braking based on the hardness of the wheel tread, its wear and the conditions of use; before use, we suggest making sure that the braking setting obtained (by means of adjustment) is suitable for the specific operating requirements.

The brake for electrowelded brackets is a parking brake suitable for flat floors.



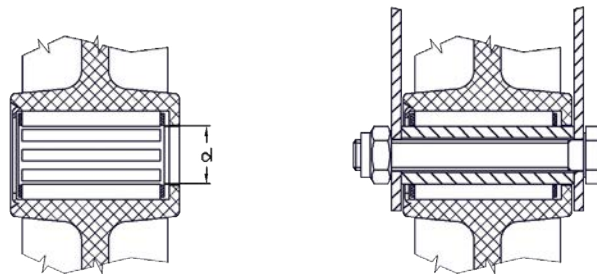
Hub with plain bore



Suitable for applications involving non-continuous movements and limited loads.

The relative sliding friction coefficient range is $b= 0.003-0.005$.

The plain bearing can be joined directly to the wheel bore. The axle set is made with a calibrated and machined tube to create a homogeneous and precision bearing coupling surface. Acting like a spacer, the tube is inserted into the bearing and tightened to the bracket using a screw and nut up to the predefined torque setting. The bearing slides freely on the tube. Axle sets can be supplied in the galvanised steel or stainless steel version. The centre of model P64 C/B is specifically dimensioned to obtain the variations for spline and key housing in the precision hole, in order to make this a drive wheel.



Hub with roller bearings

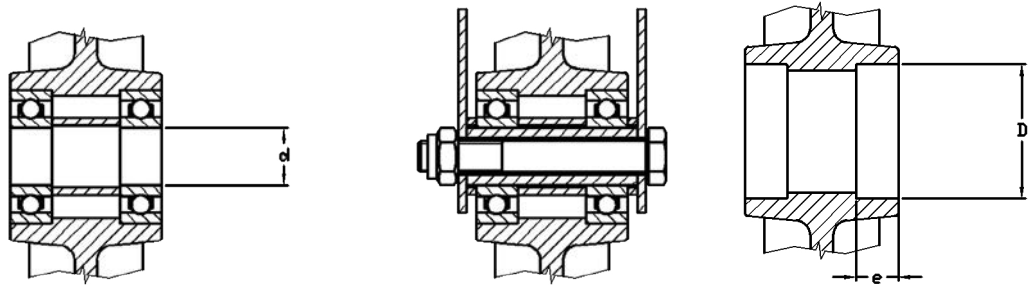


Suitable for applications involving non-continuous movements and heavier loads respect to wheels with hub with plain bore, as it guarantees low friction coefficients even in the presence of heavy loads.

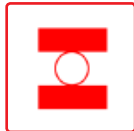
The indicative sliding friction coefficient is $b=0.0025$.

The bearing with steel cylindrical rollers or stainless steel rollers, with plastic cage is assembled in the seat specifically obtained on the hub. The axle set is made with a calibrated and machined tube to create a homogeneous and precision roller bearing coupling surface.

Acting like a spacer, the tube is inserted into the roller bearing and tightened to the bracket using a screw and nut up to the predefined torque setting. The roller bearing slides freely on the tube. Axle sets can be supplied in the galvanised steel or stainless steel version.



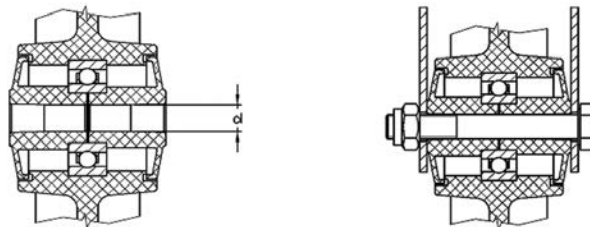
Hub with ball bearings



This is the ideal solution for heavier loads and continuous movements.

The indicative sliding friction coefficient is $b=0.0015$.

The shielded ball bearings are assembled in the relative seats in the wheel hub, in order to obtain the adequate interference tolerances. The axle set is mounted using a calibrated and machined tube to create a homogeneous surface on which to insert the bearings and spacers. The screw and nut are tightened to secure the spacer and the ball bearings. Axle sets can be supplied in the galvanised steel or stainless steel version. The wheels and rollers can be supplied with only the bearings housing seat.



Hub with single ball bearing



Solution for applications involving continuous movements and non-heavy loads.

The indicative sliding friction coefficient is $b=0.0015$.

The hub of the thermoplastic wheel is overprinted on a radial type ball bearing with double shield, making them permanently integral. Two polyamide plain bores loaded with fibreglass with internal labyrinth protect the bearing against dirt, processing residues and aggressive agents. Stainless steel ball bearing model is also available. The wheel is directly fitted by means of partially threaded screw and self-locking nut.

The safety and easy handling of a trolley depends on choosing the most suitable wheel, therefore, it is recommended to consider the following factors:

1. NATURE AND CONDITION OF THE FLOOR

The type of floor and the presence of any obstacles will have an influence on the thrust/traction force required to move the trolley, on the transmission of vibrations and wear of the wheel:

- Extremely thick wheels with soft tread and large diameter are normally chosen for uneven floors or with obstacles;
- Wheels with a more sturdy tread are normally chosen for smooth floors and heavy loads.

For each series, the catalogue shows the floor for which a wheel is suitable:



2. ENVIRONMENT OF USE

The wheel and bracket materials may or may not be suitable for use in aggressive environments: extreme temperatures, humidity, acids, solvents, bases and hydrocarbons.

The table on page 36 shows the compatibility with a detailed list of chemical substances. The table on page 38 shows the carrying capacity reduction upon temperature variation.

3. MAGNITUDE AND NATURE OF THE LOAD

The weight of the load, its nature (solid or liquid) and the tare of the trolley determine the minimum carrying capacity the wheel must have to guarantee safe handling.

GLOSSARY

Static load



Static

Maximum load (expressed in daN) that a motionless (stationary) wheel can support without generating any permanent deformation that may reduce operating efficiency.

Dynamic carrying capacity



4 km/h

Maximum load value (expressed in daN) that can be supported by a moving wheel. This value is determined in compliance with Standard ISO 22883-22884 for industrial use and ISO 22879-22880 for civil and domestic use. See page 42-43 for the test conditions.

With a 4-wheel trolley, calculate the minimum carrying capacity required using the following formula:

Solid load:

MINIMUM CARRYING CAPACITY REQUIRED = (SOLID LOAD WEIGHT + TROLLEY TARE): 3
(3 out of 4 wheels are always in contact with the ground)

Liquid load:

MINIMUM CARRYING CAPACITY REQUIRED = (LIQUID LOAD WEIGHT + TROLLEY TARE): 2
(2 out of 4 wheels are always in contact with the ground)

For each series, the catalogue shows the static, dynamic carrying capacity values and rolling resistance of each wheel.

4. MEANS OF TRACTION AND SPEED

For a static use (trolley handled only occasionally and stopped for most of the time), it is recommended to check:

STATIC CARRYING CAPACITY OF THE WHEEL > MINIMUM CARRYING CAPACITY REQUIRED

Whereas, if the trolley is intended for frequent use or for long distances, assess the type of handling: manual, with towed mechanical means or applied to a driving mechanism.

Manual handling

The trolley speed is generally less than 4 km/h; it is recommended to check:

DYNAMIC CARRYING CAPACITY OF THE WHEEL > MINIMUM CARRYING CAPACITY REQUIRED

ROLLING RESISTANCE > (SOLID/LIQUID LOAD WEIGHT + TROLLEY TARE):4

The smoother the wheel, the less effort is required.

For each wheel, Tellure Rôta catalogue shows the ROLLING RESISTANCE value: it is the maximum applicable load in correspondence of which the traction/thrust effort remains below 5 daN.

Rolling resistance



The rolling resistance is the value (expressed in daN) of the maximum load that can be supported by each single wheel at a constant speed of 4 km/h with application of a tractive force or thrust equal to 5 daN (excluding the initial pickup).

The 20 daN of traction/thrust force (corresponding to a 4-wheeled trolley) is the recommended limit for most of the adult working population. The tables in the introductory notes to each series highlight the traction force required for keeping a wheel, burdened by a certain weight, moving.

The values are detected on the TRLab laboratory test bench that detects the rolling resistance on a 1 metre long metal surface. They represent the average traction/thrust force value.

The force required for starting a wheel, defined starting point, significantly depends on the alignment position of the brackets and is always higher than indicated on the table.

The necessary force decreases if the wheel diameter increases: we recommend increasing the diameter down to traction/thrust values below 3 daN, for high movement frequency or movement along long sections.

For each series, the catalogue shows a table with the traction/thrust force at different load values, upon varying the diameter.

Towed mechanical movement

The dynamic carrying capacity of the wheels refers to a speed not higher than 4 km/h (1.1 m/s); the carrying capacity decreases if speed exceeds this value. Use the correction factor of the carrying capacity shown in the table on page 39 and we recommend to check:

WHEEL DYNAMIC CARRYING CAPACITY x CORRECTION FACTOR (%) > MINIMUM CARRYING CAPACITY REQUIRED

On-board mechanical movement

In this case the wheels are subjected to particular stress and strain, different case by case.

We recommend contacting Tellure Rôta Technical Service to choose the most suitable product for your application.

Based on the above information, the path provides:

- Choice of recommended wheels for the environmental conditions defined by the application (temperature, humidity, any aggressive chemicals and type of floor), based on the material compatibility tables and geometry of the product respect to its use.
- Choice of strap diameter and width to meet the carrying capacity, speed requirements and the product's easy movement.
- Choice of suitable bracket for the environment of use and for the requested speed and carrying capacity features.

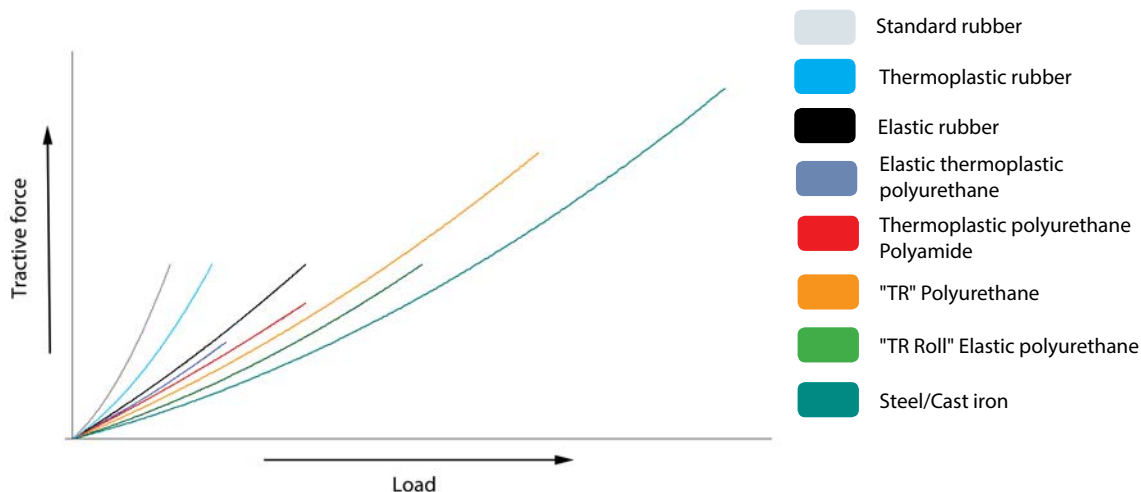
Tellure Rôta provides its experience and know-how in the movement solutions sector so that choosing a wheel becomes the most satisfying process for the final user.

FURTHER DETAILS AND INFORMATION

AVAILABLE TABLES

• AGGRESSIVE CHEMICAL AGENTS COMPATIBILITY	PAGE 36
• CARRYING CAPACITY ADJUSTMENTS BASED ON TEMPERATURE	PAGE 38
• CARRYING CAPACITY ADJUSTMENTS BASED ON SPEED	PAGE 39
• TABLE FOR CHOICE OF WHEEL	PAGE 40

Comparison chart of the rolling resistance between the different materials



Comparison table of the hardness between the different materials

	Elastic rubber	"TR Roll" Elastic polyurethane	Standard rubber	Thermoplastic rubber Elastic thermoplastic polyurethane		"TR" Polyurethane	Thermoplastic polyurethane		Polyamide	
Shore A	70	75	80	85	90	95				
Shore D						45	55	65	70	75

For further information on choosing the right wheel:

- see Internet site www.tellurerota.com
- contact Tellure Rôta Sales Department:
Tel. Export: 0039 059.410231-253 - Tel Italian Sales Dept.: 059.410300-306 -
E-mail: comm.estero@tellurerota.com - comm.italia@tellurerota.com

COMPATIBILITY WITH AGGRESSIVE CHEMICAL AGENTS

Materials		Steel	Stainless steel	Aluminium alloys	Cast iron	Standard rubber
ACIDS WEAK	Fatty acids	●	●	●	●	●
	Acetic acid	●	●	●	●	●
	Boric acid in solution 30	●	●	●	●	●
	Oleic acid	●	●	●	●	●
	Oxalic acid in solution 10	●	●	●	●	●
	Sulphurous acid	●	●	●	●	●
STRONG ACIDS	Hydrochloric acid in sol. 30	●	●	●	●	●
	Chromic acid in solution 10	●	●	●	●	●
	Phosphoric acid in sol. 10	●	●	●	●	●
	Nitric acid in solution 10	●	●	●	●	●
	Sulphuric acid in sol. 10	●	●	●	●	●
WEAK BASES	Aluminium acetate	●	●	●	●	●
	Ammonium carbonate	●	●	●	●	●
	Ammonium sulphate	●	●	●	●	●
	Sodium cyanide in sol. 10	●	●	●	●	●
	Alkaline solutions at 80°C	●	●	●	●	●
STRONG BASES	Ammonium hydrate	●	●	●	●	●
	Sodium carbonate in sol. 10	●	●	●	●	●
	Sodium phosphate in sol. 10	●	●	●	●	●
	Sodium hydroxide in sol.	●	●	●	●	●
	Sodium silicate in sol. 10	●	●	●	●	●
ALCOHOL	Alkybenzols	●	●	●	●	●
	Amyl alcohol	●	●	●	●	●
	Ethyl alcohol	●	●	●	●	●
	Methyl alcohol	●	●	●	●	●
	Propyl alcohol	●	●	●	●	●
SOLVENTS	Acetone	●	●	●	●	●
	Turpentine	●	●	●	●	●
	Amyl acetate	●	●	●	●	●
HYDRO CARBONS-	Petrol	●	●	●	●	●
	Diesel oil	●	●	●	●	●
	Mineral oils	●	●	●	●	●
OTHERS	Sea Water	●	●	●	●	●
	Water at 80°C	●	●	●	●	●
	Cold water	●	●	●	●	●
	Sodium Chloride in sol.	●	●	●	●	●
	Saturated steam 10	●	●	●	●	●

● recommended ● partially resistant ● not suitable

CARRYING CAPACITY ADJUSTMENT CHART BASED ON TEMPERATURE FOR USE WITH MANUAL HANDLING

		Carrying capacity %							
		Temperature	-40/-20°C	-20/0°C	0/20°C	20/40°C	40/ 60°C	60/ 80°C	80/ 130°C
INDUSTRIAL - LIGHT DUTY LOADS	22	-	80	100	100	85	50	-	-
	23	40	100	100	100	85	60	-	-
	52	-	80	100	100	85	50	-	-
	53	40	100	100	100	85	60	-	-
	71	-	80	100	100	85	50	-	-
	82	-	100	100	100	100	-	-	-
	82AF	-	100	100	100	100	-	-	-
INDUSTRIAL - MEDIUM DUTY LOADS	60	-	100	100	100	90	70	40	-
	61	-	100	100	100	85	60	-	-
	68	50	100	100	100	90	70	60	-
	73	40	100	100	100	85	60	50	-
	73AE	-	100	100	100	85	60	-	-
INDUSTRIAL HEAVY DUTY LOADS AND MECHANICAL HANDLING	62AL	-	100	100	100	90	80	-	-
	62ER	-	100	100	100	90	80	-	-
	62GH	-	100	100	100	90	80	-	-
	62NY	-	100	100	100	90	80	-	-
	63AC	-	100	100	100	90	80	50	-
	63GH	-	100	100	100	90	80	50	-
	64	-	100	100	100	90	80	40	-
	65AL	-	100	100	100	90	80	40	-
	65GH	-	100	100	100	90	80	40	-
	65HT	-	100	100	100	90	80	40	-
	65ER	-	100	100	100	90	80	40	-
	66	-	100	100	100	90	80	40	-
	68P	50	100	100	100	90	70	60	-
	69	100	100	100	100	100	100	100*	100*
	72AL	40	100	100	100	85	60	40	-
72GH	40	100	100	100	85	60	40	-	
HIGH TEMPERATURE	67	50	100	100	100	100	100	100	100
	68FV	70	100	100	100	100	100	100	-
	72GS	50	50	100	100	100	100	100	50
PALLET TRUCK ROLLERS	74	-	100	100	100	90	80	50	-
	75	-	100	100	100	90	80	40	-
	76	50	100	100	100	90	70	60	-
	77	-	100	100	100	90	80	40	-
	78	-	100	100	100	90	70	40	-
	79	-	100	100	100	90	80	-	-

- = not suitable

* = not suitable in ball bearing hub model

CARRYING CAPACITY ADJUSTMENT CHART BASED ON SPEED

Speed		Carrying capacity %					
		< 4 km/h	6 km/h	10 km/h	12 km/h	16 km/h	> 16 km/h
INDUSTRIAL - MEDIUM DUTY LOADS	60	100	60	-	-	-	-
	61	100	60	-	-	-	-
INDUSTRIAL - HEAVY DUTY LOADS AND MECHANICAL HANDLING	62AL	100	100	80	70	60	-
	62ER	100	100	80	70	60	-
	62GH	100	100	80	70	60	-
	62NY	100	80	-	-	-	-
	63AC	100	80	65	60	50	Contact Tellure Rôta
	63GH	100	80	65	60	50	Contact Tellure Rôta
	64	100	80	60	50	40	-
	65AL	100	80	-	-	-	-
	65GH	100	80	60	50	40	-
	65HT	100	80	60	50	-	-
	65ER	100	80	60	50	-	-
	66	100	80	-	-	-	-
	72AL	100	80	-	-	-	-
72GH	100	80	-	-	-	-	
PALLET TRUCK ROLLERS	74	100	80	65	60	50	Contact Tellure Rôta
	75	100	80	60	50	40	-
	77	100	80	-	-	-	-
	79	100	80	65	60	-	-

This table only shows references to the types of wheels that Tellure Rôta recommends for use at speeds above 4 km/h.

For the products not found in this table, use with mechanical handling and at speeds above 4 km/h is not recommended.

For use at speeds above 4 km/h, we recommend using wheels with ball bearing hub, combined with Medium-heavy duty brackets P-PX, extra-heavy duty EP, electrowelded EE MHD, EE HD, EE EHD, twin electrowelded EEG MHD, EEG HD, EEG EHD.

The light-duty SL, NL, NLX and medium-duty M brackets are not recommended for use at high speeds.

SUMMARY TABLE FOR CHOOSING THE RIGHT WHEEL

		Carrying capacity daN			Rolling resistance daN		Means of traction	
		< 250	250 / 500	> 500	< 125	> 125	Manual	Mechanical
INDUSTRIAL - LIGHT DUTY LOADS	22	●	●	●	●	●	●	●
	23	●	●	●	●	●	●	●
	52	●	●	●	●	●	●	●
	53	●	●	●	●	●	●	●
	71	●	●	●	●	●	●	●
	82	●	●	●	●	●	●	●
	82AF	●	●	●	●	●	●	●
INDUSTRIAL - MEDIUM DUTY LOADS	60	●	●	●	●	●	●	●
	61	●	●	●	●	●	●	●
	68	●	●	●	●	●	●	●
	73	●	●	●	●	●	●	●
	73AE	●	●	●	●	●	●	●
INDUSTRIAL HEAVY DUTY LOADS AND MECHANICAL HANDLING	62AL	●	●	●	●	●	●	●
	62ER	●	●	●	●	●	●	●
	62GH	●	●	●	●	●	●	●
	62NY	●	●	●	●	●	●	●
	63AC	●	●	●	●	●	●	●
	63GH	●	●	●	●	●	●	●
	64	●	●	●	●	●	●	●
	65AL	●	●	●	●	●	●	●
	65GH	●	●	●	●	●	●	●
	65HT	●	●	●	●	●	●	●
	65ER	●	●	●	●	●	●	●
	66	●	●	●	●	●	●	●
	68P	●	●	●	●	●	●	●
	69	●	●	●	●	●	●	●
72AL	●	●	●	●	●	●	●	
72GH	●	●	●	●	●	●	●	
HIGH TEMPERATURE	67	●	●	●	●	●	●	●
	68FV	●	●	●	●	●	●	●
	72GS	●	●	●	●	●	●	●
PALLET TRUCK ROLLERS	74	●	●	●	●	●	●	●
	75	●	●	●	●	●	●	●
	76	●	●	●	●	●	●	●
	77	●	●	●	●	●	●	●
	78	●	●	●	●	●	●	●
	79	●	●	●	●	●	●	●

● recommended

● partially resistant

● not suitable

Tellure Rôta products are produced in conformity with the international standards for wheels and brackets sector.

The following table summarises the main international standards, with references to Tellure Rôta series designed and tested in accordance with the specifications of each standard.

Standard	Title	TR Series to which it applies
ISO 22877:2004 UNI EN 12526:2002	Vocabulary, recommended symbols and multilingual dictionary	All series
ISO 22878:2004 UNI EN 12527:2001	Wheels and brackets, test methods and equipment	All series
ISO 22879:2004 UNI EN 12528:2001	Wheels and brackets, wheels for furniture	33, 34, 35, 39
ISO 22880:2004 UNI EN 12529:2001	Wheels and brackets, wheels for furniture, wheels for swivel chairs	34
ISO 22881:2004 UNI EN 12530:2001	Wheels and brackets, wheels and brackets for manually propelled institutional equipment	32, 36, 37
ISO 22883:2004 UNI EN 12532:2001	Wheels and brackets, wheels and brackets for applications up to 1.1 m/s	22, 23, 51, 52, 53, 60, 61, 62, 63, 64, 65, 66, 67, 68, 68P, 68FV, 69, 71, 72, 72GS, 73, 73AE, 74, 75, 76, 77, 78, 79, 82
ISO 22884:2004 UNI EN 12533:2001	Wheels and brackets, wheels and brackets for applications over 1.1 m/s and up to 4.4 m/s	62AL, 62ER, 62GH, 62NY, 63GH, 63AL, 64, 65AL, 65GH, 65HT, 65ER, 66, 68P, 72AL, 72GH, 74, 75, 77, 79

Tellure Rôta also guarantees that:



- the catalogue products are all conform with the European Directive 2002/95/EC (RoHS) specifications; Tellure Rôta commits to maintaining product conformity, even after the upgrading of Directive 2011/65/EC (RoHS 2).



- the products respect specifications stated under regulation 1907/96/EC (REACH) and, together with its suppliers, commits to working in respect of subsequent upgrades.



- a wide range of products is compatible for each category regulated by the ZEK 01-08 document issued by the Central Experience Exchange Committee, with regard to the PAH contents (Polycyclic aromatic hydrocarbons).

THE TRLAB TESTS



The quality of the Tellure Rôta products is guaranteed by in-house testing procedures that include acceptance tests on raw materials and of all other purchased components, tests on semi-finished products in various stages of the process and tests on the finished product.

The “Test & Research” laboratory is equipped with testing machines and benches for in-house testing as provided by the international standards in the wheels and brackets sector and of specific application sectors.

Specifically:

- Dynamic load test on wheels and brackets for the industrial sector in accordance with Standard ISO 22883:2004 or ISO 22884:2004
- Dynamic load test on wheels and brackets for the waste collection container sector in accordance with UNI EN 840-5:2013
- Dynamic load test on wheels and brackets for the institutional sector in accordance with ISO 22881:2004
- Conformity tests on wheels and brackets for the mobile scaffolding sector in accordance with Standard UNI EN 1004:2005;
- Rolling resistance tests on wheels and brackets for the industrial sector in accordance with UNI 11330;
- Braking efficiency and engagement tests of the braking device in accordance with ISO 22883:2004 or ISO 22884:2004;
- Static load tests on wheels for the institutional sector in accordance with ISO 22881:2004

The following layout describes the tests made in accordance with the sector standards, in order to determine the industrial wheels' carrying capacity stated in the catalogue.

	Industrial wheels manual handling	Industrial wheels mechanical handling
Standard	ISO 22883	ISO 22884
Test load	Rated carrying capacity	
Test speed	4 km/h	A= 6 km/h; B= 10 km/h; C= 16 km/h
Env. temperature	Between 15 and 28 °C	
Floor	Hard floor with obstacles	
Height of obstacles	5% of the wheel diameter for soft rolling strip (hardness <= 90 ShA); 2.5% of the wheel diameter for hard rolling strip (hardness > 90 ShA)	
Layout of obstacles	width 100 mm, rounded corners with radius between 1.5 and 5 mm and arranged 45 degrees with respect to the translation axis and in an alternating pattern to the right and to the left	
Quantity of obstacles	500 obstacles separated from each other between 1 and 3 m	5 times the wheel diameter in mm (e.g. one wheel diam. 200 mm must pass 1,000 obstacles); the obstacles are spaced out: >= 1 m; B>= 1.5 m; >= 3 m
Duration	Sequence of cycles with a maximum duration of 3 min., with a maximum pause time of 1 min.. The wheel must pass the foreseen obstacles, and complete 15,000 revs without obstacles.	Sequence of cycles with a maximum duration of 3 min., with a maximum pause time of 1 min.. The wheel must pass all the foreseen obstacles.

For any further details or explanations contact Tellure Rôta Sales Department.

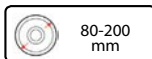
**INDUSTRIAL
LIGHT DUTY LOADS**



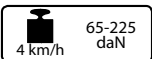


SERIES **22**

GREY RUBBER WHEELS WITH POLYPROPYLENE CENTRE



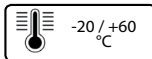
80-200 mm



4 km/h 65-225 daN



50-140 daN



-20/+60 °C

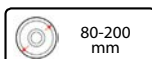
INOX

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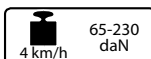


SERIES **23**

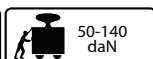
GREY RUBBER WHEELS PRESSED STEEL DISCS



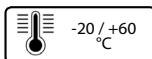
80-200 mm



4 km/h 65-230 daN



50-140 daN



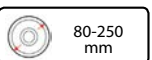
-20/+60 °C

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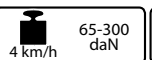


SERIES **52**

BLACK RUBBER WHEELS WITH POLYPROPYLENE CENTRE



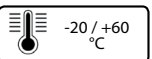
80-250 mm



4 km/h 65-300 daN



50-175 daN



-20/+60 °C

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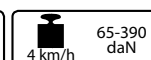


SERIES **53**

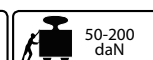
BLACK RUBBER WHEELS PRESSED STEEL DISCS



80-280 mm



4 km/h 65-390 daN



50-200 daN



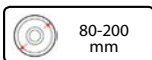
-20/+60 °C

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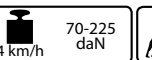


SERIES **71**

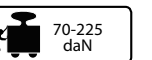
THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE



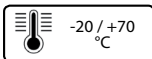
80-200 mm



4 km/h 70-225 daN



70-225 daN



-20/+70 °C

INOX

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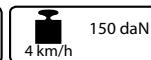


SERIES **82**

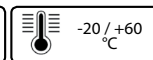
PNEUMATIC WHEELS WITH POLYPROPYLENE CENTRE



260 mm



4 km/h 150 daN



-20/+60 °C

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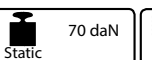


SERIES **82^{AF}**

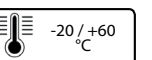
PUNCTURE-PROOF PNEUMATIC WHEELS WITH POLYPROPYLENE CENTRE



260 mm



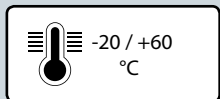
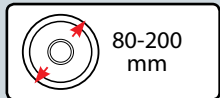
Static 70 daN



-20/+60 °C

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GREY NON-MARKING RUBBER WHEELS WITH POLYPROPYLENE CENTRE



Description

Tyre: grey non-marking standard rubber, hardness 80 Shore A

Centre: polypropylene.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing with plastic cage.

Uses

Suitable for trolleys with light-duty loads, also in the presence of obstacles and for indoor-outdoor use.

The grey non-marking rubber tyre makes them suitable for use on fragile floors as well as in domestic/institutional environments.

Examples of recommended applications: luggage trolleys, tool trolleys, small mobile scaffoldings, waste bin containers.

Environments of use

Suitable for industrial and institutional environments, also in the presence of humidity and weak acids. Not suitable in presence of strong acids, bases and solvents.

Fitted with stainless steel brackets, they are also suitable in presence of medium-harsh chemical agents.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

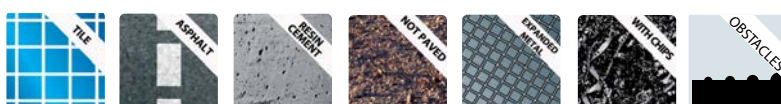
For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors


Suitable for all types of floors, even outdoors.

They facilitate overcoming of obstacles.

They do not damage or mark floors.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	225 kg
80 mm	5	----	----	----	----
100 mm	2.5	----	----	----	----
125 mm	2.2	6	----	----	----
140 mm	2	5.5	----	----	----
150 mm	2	5	----	----	----
160 mm	1.5	3.5	7.5	----	----
180 mm	1	3.2	6	----	----
200 mm	1	3	5.5	8.5	10

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 225 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 225 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.

Options available to order:










The series 22 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.












Wheels with SL bracket d. 80-125 mm

GREY NON-MARKING RUBBER WHEELS WITH POLYPROPYLENE CENTRE

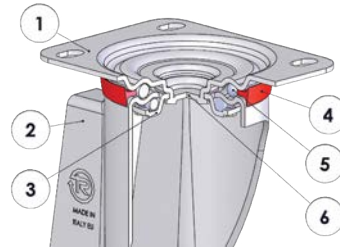


																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.11	222101	12	39	150	50	65										
100	30	0.21	222102	12	44	200	75	80										
125	37.5	0.41	221103	15	44	225	85	110										
140	37.5	0.60	221104	15	44	250	95	120										
150	40	0.67	221111	15	44	275	100	130										
160	40	0.73	221110	20	59	300	120	150										
180	45	1.02	221105	20	59	350	130	180										
200	50	1.51	221106	20	59	400	140	225										



																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.14	224101	12	39	150	50	65										
100	30	0.24	224102	12	44	200	75	80										
125	37.5	0.44	223103	15	44	225	85	110										
140	37.5	0.63	223104	15	44	250	95	120										
150	40	0.70	223111	15	44	275	100	130										
160	40	0.75	223110	20	59	300	120	150										
200	50	1.84	223106	20	59	400	140	225										

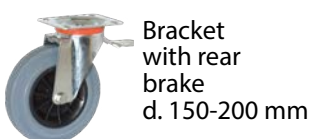
Standard-duty brackets NL - max carrying capacity 225 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

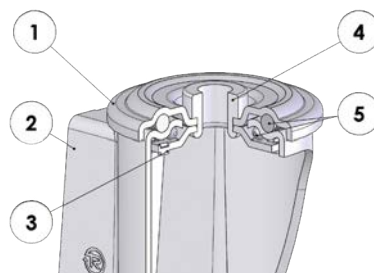
mm		kg		kg		kg		mm		mm		mm		mm		mm		4 km/h		daN	
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN			
80	25	0.64	224401	0.36	225701	0.82	225201	107	100x85	80x60	9	37	120					65			
100	30	0.73	224402	0.48	225702	0.88	225202	128	100x85	80x60	9	35	120					80			
125	37.5	1.06	224403	0.71	225703	1.20	225203	156	100x85	80x60	9	37	120					110			
140	37.5	1.18	224404	0.80	225704	1.32	225204	177	100x85	80x60	9	34	120					120			
150	40	1.31	224411	0.93	225711	1.45	225211	182	100x85	80x60	9	34	120					130			
160	40	2.10	224410	1.73	225710	2.38	225210	199	140x110	105x80	11	56	156					150			
180	45	2.40	224405	2.11	225705	2.69	225205	219	140x110	105x80	11	56	156					180			
200	50	2.72	224406	2.50	225706	3.00	225206	240	140x110	105x80	11	56	156					225			
80	25	0.69	224601	0.39	225901	0.86	225221	107	100x85	80x60	9	37	120					65			
100	30	0.78	224602	0.51	225902	0.93	225222	128	100x85	80x60	9	35	120					80			
125	37.5	1.09	224603	0.73	225903	1.24	225223	156	100x85	80x60	9	37	120					110			
140	37.5	1.20	224604	0.82	225904	1.35	225224	177	100x85	80x60	9	34	120					120			
150	40	1.31	224611	0.93	225911	1.45	225231	182	100x85	80x60	9	34	120					130			
160	40	2.18	224610	1.75	225910	2.47	225230	199	140x110	105x80	11	56	156					150			
200	50	2.76	224606	2.67	225906	3.04	225226	240	140x110	105x80	11	56	156					225			

Options available to order



GREY NON-MARKING RUBBER WHEELS WITH POLYPROPYLENE CENTRE

Standard-duty brackets NL - max carrying capacity 225 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN						
80	25	0.55	227701	0.68	225601	107	73	12	37	120	65						
100	30	0.68	227702	0.75	225602	128	73	12	35	120	80						
125	37.5	0.96	227703	1.10	225603	156	73	12	37	120	110						
140	37.5	1.12	227704	1.26	225604	177	73	12	34	120	120						
150	40	1.25	227711	1.39	225611	182	73	12	34	120	130						
160	40	1.44	227710	1.73	225610	193	102	20	56	156	150						
180	45	2.28	227705	2.57	225605	214	102	20	56	156	180						
200	50	2.62	227706	2.91	225606	236	102	20	56	156	225						
80	25	0.58	227901	0.70	225621	107	73	12	37	120	65						
100	30	0.71	227902	0.78	225622	128	73	12	35	120	80						
125	37.5	1.08	227903	1.23	225623	156	73	12	37	120	110						
140	37.5	1.19	227904	1.34	225624	177	73	12	34	120	120						
150	40	1.35	227911	1.50	225631	182	73	12	34	120	130						
160	40	1.47	227910	1.75	225630	193	102	20	56	156	150						
200	50	2.80	227906	3.08	225626	236	102	20	56	156	225						

Options available to order



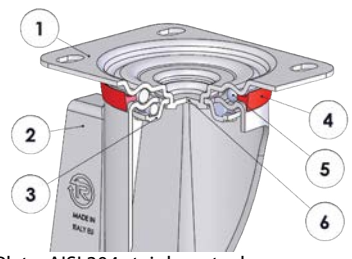
Fitting with stem in Zamak alloy d. 80-125 mm



Fitting with threaded stem d. 80-200 mm

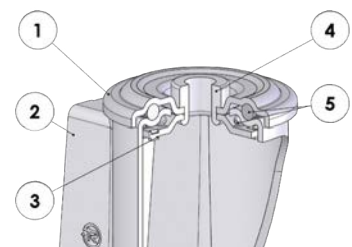
Stainless steel standard-duty brackets NLX - max carrying capacity 225 daN

INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
80	25	0.59	224801	0.33	226101	0.76	225401	107	100x85	80x60	9	37	120	65
100	30	0.70	224802	0.45	226102	0.88	225402	128	100x85	80x60	9	35	120	80
125	37.5	0.96	224803	0.80	226103	1.10	225403	156	100x85	80x60	9	37	120	110
140	37.5	1.10	224804	0.88	226104	1.25	225404	177	100x85	80x60	9	34	120	120
150	40	1.24	224811	1.02	226111	1.38	225411	182	100x85	80x60	9	34	120	130
160	40	2.04	224810	1.60	226110	2.31	225410	199	140x110	105x80	11	56	156	150
180	45	2.34	224805	1.90	226105	2.63	225405	219	140x110	105x80	11	56	156	180
200	50	2.69	224806	2.24	226106	2.98	225406	240	140x110	105x80	11	56	156	225








- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

INOX

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
80	25	0.53	227801	0.70	225501	107	73	12	37	120	65
100	30	0.66	227802	0.86	225502	128	73	12	35	120	80
125	37.5	0.94	227803	1.09	225503	156	73	12	37	120	110
140	37.5	1.10	227804	1.18	225504	177	73	12	34	120	120
150	40	1.17	227811	1.31	225511	182	73	12	34	120	130
160	40	1.83	227810	2.14	225510	193	102	20	56	156	150
180	45	2.15	227805	2.44	225505	214	102	20	56	156	180
200	50	2.61	227806	2.89	225506	236	102	20	56	156	225

**GREY NON-MARKING RUBBER WHEELS
WITH PRESSED STEEL DISCS**

-  80-200 mm
-  80 Shore A
-  65-230 daN
4 km/h
-  50-140 daN
-  -20 / +60 °C



Description

Tyre: grey non-marking standard rubber, hardness 80 Shore A

Centre: electrolytically galvanised steel plate, made of two riveted discs.

Hub with polyamide self-lubricating plain bore.

Cylindrical roller bearing hub with plastic cage.

Uses


Suitable for trolleys with light-duty loads, also in presence of obstacles and for indoor-outdoor use.

The grey non-marking rubber tyre makes them suitable for use on fragile floors as well as in domestic/institutional environments.

Examples of recommended applications: luggage trolleys, tool trolleys, small mobile scaffoldings, waste bin containers.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and oils. Not suitable in presence of aggressive chemical agents.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors



Suitable for all types of floors, even outdoors.

They facilitate the overcoming of obstacles.

They do not damage or mark floors.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	230 kg
80 mm	5	----	----	----	----
100 mm	3	----	----	----	----
125 mm	2.5	6	----	----	----
140 mm	2.2	5.5	9	----	----
150 mm	2	5	8.5	----	----
160 mm	1.5	3.5	7.5	----	----
200 mm	1	3	5.5	8.5	11

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 230 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.

Options available to order:

The series 23 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.












Wheels with SL brackets d. 80-125 mm










SERIES **23**

**GREY NON-MARKING RUBBER WHEELS
WITH PRESSED STEEL DISCS**

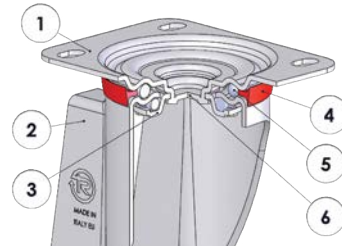


																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.17	231121	12	39	260	50	65										
100	30	0.28	231122	12	44	300	75	80										
125	37.5	0.51	231103	15	44	330	85	130										
140	37.5	0.64	231104	15	44	340	95	150										
150	40	0.73	231111	15	44	350	100	170										
160	40	1.00	231110	20	58	370	120	180										
200	50	1.75	231106	20	58	410	140	230										



																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.19	233121	12	39	260	50	65										
100	30	0.31	233122	12	44	300	75	80										
125	37.5	0.54	233103	15	44	330	85	130										
140	37.5	0.66	233104	15	44	340	95	150										
150	40	0.76	233111	15	44	350	100	170										
160	40	1.07	233110	20	58	370	120	180										
200	50	1.81	233106	20	58	410	140	230										

Standard-duty brackets NL - max carrying capacity 230 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	4 km/h
80	25	0.69	234401	0.49	235701	0.87	235201	107	100x85	80x60	9	37	120	65	
100	30	0.82	234402	0.62	235702	1.00	235202	128	100x85	80x60	9	35	120	80	
125	37.5	1.18	234403	0.92	235703	1.30	235203	156	100x85	80x60	9	37	120	130	
140	37.5	1.31	234404	0.93	235704	1.46	235204	177	100x85	80x60	9	34	120	150	
150	40	1.42	234411	1.04	235711	1.57	235211	182	100x85	80x60	9	34	120	170	
160	40	2.44	234410	2.07	235710	2.69	235210	199	140x110	105x80	11	56	156	180	
200	50	3.25	234406	2.89	235706	3.39	235206	240	140x110	105x80	11	56	156	230	
80	25	0.70	234601	0.51	235901	0.89	235221	107	100x85	80x60	9	37	120	65	
100	30	0.84	234602	0.65	235902	1.03	235222	128	100x85	80x60	9	35	120	80	
125	37.5	1.21	234603	0.95	235903	1.33	235223	156	100x85	80x60	9	34	120	130	
140	37.5	1.34	234604	0.96	235904	1.49	235224	177	100x85	80x60	9	34	120	150	
150	40	1.45	234611	1.07	235911	1.60	235231	182	100x85	80x60	9	37	120	170	
160	40	2.50	234610	2.13	235910	2.75	235230	199	140x110	105x80	11	56	156	180	
200	50	3.31	234606	3.05	235906	3.45	235226	240	140x110	105x80	11	56	156	230	

Options available to order:



Bracket with rear brake
d. 150-200 mm

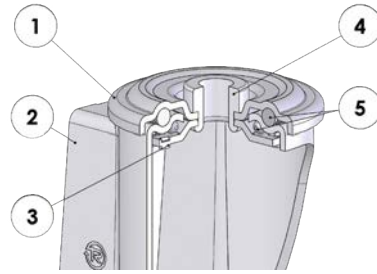


Bracket with directional lock
d. 80-125 mm















Directional lock for brackets
d. 150-200 mm

Standard-duty brackets NL - max carrying capacity 230 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

															
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
80	25	0.61	237701	0.79	235601	107	73	12	37	120	65				
100	30	0.74	237702	0.94	235602	128	73	12	35	120	80				
125	37.5	1.09	237703	1.24	235603	156	73	12	37	120	130				
140	37.5	1.23	237704	1.38	235604	177	73	12	34	120	150				
150	40	1.35	237711	1.49	235611	182	73	12	34	120	170				
160	40	1.78	237710	2.04	235610	193	102	20	56	156	180				
200	50	3.16	237706	3.29	235606	236	102	20	56	156	230				
80	25	0.63	237901	0.80	235621	107	73	12	37	120	65				
100	30	0.76	237902	0.96	235622	128	73	12	35	120	80				
125	37.5	1.12	237903	1.27	235623	156	73	12	37	120	130				
140	37.5	1.26	237904	1.41	235624	177	73	12	34	120	150				
150	40	1.38	237911	1.52	235631	182	73	12	34	120	170				
160	40	1.85	237910	2.10	235630	193	102	20	56	156	180				
200	50	3.22	237906	3.35	235626	236	102	20	56	156	230				

Options available to order:








Fitting
with stem
in Zamak
alloy



Experience and innovation

BLACK RUBBER WHEELS WITH POLYPROPYLENE CENTRE

	80-250 mm
	80 Shore A
	65-300 daN 4 km/h
	50-175 daN
	-20 / +60 °C



Description

Tyre: black standard rubber, hardness 80 Shore A.

Centre: polypropylene.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing with plastic cage.


Uses

Suitable for trolleys with light-duty loads, also in the presence of obstacles and for indoor-outdoor use.

Examples of recommended applications: luggage trolleys, tool trolleys, small mobile scaffoldings, waste bin containers.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and weak acids. Not suitable in presence of strong acids, bases and solvents.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.


Floors

Suitable for all types of floors, even outdoors.

They easily overcome obstacles, do not damage fragile floors, but they may mark the floor.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	250 kg	300 kg
80 mm	5	----	----	----	----	----
100 mm	2.5	----	----	----	----	----
125 mm	2.2	6	----	----	----	----
140 mm	2	5.5	----	----	----	----
150 mm	2	5	----	----	----	----
160 mm	1.5	3.5	7.5	----	----	----
180 mm	1	3.2	6	----	----	----
200 mm	1	3	5.5	8.5	----	----
250 mm	1	2.2	4	6	8.2	11

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Light-duty brackets SL

Maximum carrying capacity 110 daN - available diameters 80-125 mm
Top plate and bolt hole fittings. Available with front brake.



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-250 mm
Top plate, bolt hole, solid stem fittings. Available with front brake.










Options available to order:

The series 52 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.










SERIES **52**

**BLACK RUBBER WHEELS
WITH POLYPROPYLENE CENTRE**

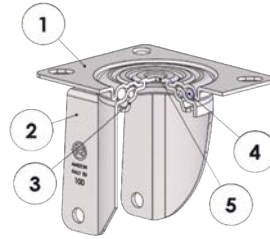


																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.11	522101	12	39	150	50	65										
100	30	0.21	522102	12	44	200	75	80										
100	30	0.19	521132	12	39	200	75	80										
125	37.5	0.41	521103	15	44	225	85	110										
125	37.5	0.35	521133	12	39	225	85	110										
140	37.5	0.48	521104	15	44	250	95	120										
150	40	0.61	521111	15	44	275	100	130										
160	40	0.73	521110	20	59	300	120	150										
180	45	1.02	521105	20	59	350	130	180										
200	50	1.31	521106	20	59	400	140	225										
200	50	1.28	521206	25	59	400	140	225										
250	60	2.59	521108	25	75	500	175	300										



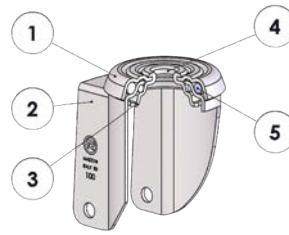
																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.14	524101	12	39	150	50	65										
100	30	0.24	524102	12	44	200	75	80										
125	37.5	0.44	523103	15	44	225	85	110										
140	37.5	0.51	523104	15	44	250	95	120										
150	40	0.61	523111	15	44	275	100	130										
160	40	0.75	523110	20	59	300	120	150										
180	45	1.18	523105	20	59	350	130	180										
200	50	1.48	523106	20	59	400	140	225										
200	50	1.45	523206	25	59	400	140	225										
250	60	2.78	523108	25	75	500	175	300										

Light-duty brackets SL - max carrying capacity 110 daN



- 1) Plate in electrolytically galvanised printed steel plate
 - 2) Fork in electrolytically galvanised printed steel plate
 - 3) Ball Race Ring in electrolytically galvanised printed steel plate
 - 4) Swivel actions: on two ball race rings lubricated with grease
 - 5) Bracket closing king pin integrated with ball race ring
- Available with total front foot brake

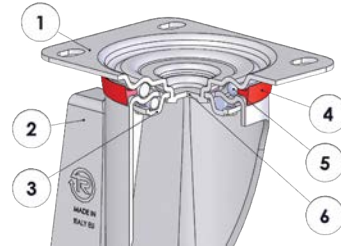
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN
80	25	0.45	525801	0.44	526001	0.57	526301	109	95x80	100x85	80x60	8.8	36	120	65	
100	30	0.54	525802	0.53	526002	0.68	526302	127	95x80	100x85	80x60	8.8	33	120	80	
125	37.5	0.78	525803	0.76	526003	0.89	526303	153	95x80	100x85	80x60	8.8	29	120	110	



- 1) Plate in electrolytically galvanised printed steel plate
 - 2) Fork in electrolytically galvanised printed steel plate
 - 3) Ball Race Ring in electrolytically galvanised printed steel plate
 - 4) Bracket closing king pin integrated with ball race ring
 - 5) Swivel actions: on two ball race rings lubricated with grease
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
80	25	0.40	526101	0.50	526201	109	63	12	36	120	65
100	30	0.49	526102	0.60	526202	127	63	12	33	120	80
125	37.5	0.72	526103	0.82	526203	153	63	12	29	120	110

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	
80	25	0.64	524401	0.36	525701	0.82	525201	107	100x85	80x60	9	37	120	65
100	30	0.73	524402	0.48	525702	0.88	525202	128	100x85	80x60	9	35	120	80
125	37.5	1.06	524403	0.71	525703	1.20	525203	156	100x85	80x60	9	37	120	110
140	37.5	1.18	524404	0.80	525704	1.32	525204	177	100x85	80x60	9	34	120	120
150	40	1.31	524411	0.93	525711	1.45	525211	182	100x85	80x60	9	34	120	130
160B	40	1.41	524412	1.25	525712			187	100x85	80x60	9	50		150
160	40	2.10	524410	1.73	525710	2.38	525210	199	140x110	105x80	11	56	156	150
180	45	2.40	524405	2.11	525705	2.69	525205	219	140x110	105x80	11	56	156	180
200	50	2.72	524406	2.50	525706	3.00	525206	240	140x110	105x80	11	56	156	225
250	60	6.02	524708	4.52	525708			296	200x160	160x120	14	87		300

80	25	0.69	524601	0.39	525901	0.86	525221	107	100x85	80x60	9	37	120	65
100	30	0.78	524602	0.51	525902	0.93	525222	128	100x85	80x60	9	35	120	80
125	37.5	1.09	524603	0.73	525903	1.24	525223	156	100x85	80x60	9	37	120	110
140	37.5	1.20	524604	0.82	525904	1.35	525224	177	100x85	80x60	9	34	120	120
150	40	1.31	524611	0.93	525911	1.45	525231	182	100x85	80x60	9	34	120	130
160B	40	1.43	524612	1.23	525912			187	100x85	80x60	9	50		150
160	40	2.18	524610	1.75	525910	2.47	525230	199	140x110	105x80	11	56	156	150
180	45	2.40	524605	2.27	525905	2.68	525225	219	140x110	105x80	11	56	156	180
200	50	2.76	524606	2.67	525906	3.04	525226	240	140x110	105x80	11	56	156	225
250	60	6.12	524908	4.70	525908			296	200x160	160x120	14	87		300

Options available to order:



Bracket with rear brake
d. 150-200 mm

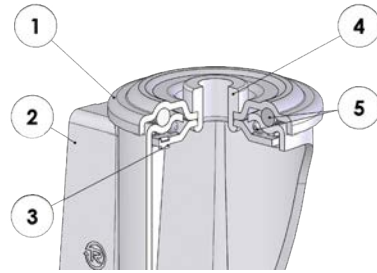


Bracket with directional lock
d. 80-125 mm



Directional lock for brackets
d. 150-200 mm

Standard-duty brackets NL - max carrying capacity 300 daN



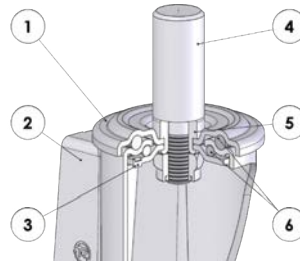
- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
80	25	0.55	527701	0.68	525601	107	73	12	37	120	65				
100	30	0.68	527702	0.75	525602	128	73	12	35	120	80				
125	37.5	0.96	527703	1.10	525603	156	73	12	37	120	110				
140	37.5	1.12	527704	1.26	525604	177	73	12	34	120	120				
150	40	1.25	527711	1.39	525611	182	73	12	34	120	130				
160	40	1.44	527710	1.73	525610	193	102	20	56	156	150				
180	45	2.28	527705	2.57	525605	214	102	20	56	156	180				
200	50	2.62	527706	2.91	525606	236	102	20	56	156	225				
<hr/>															
80	25	0.58	527901	0.70	525621	107	73	12	37	120	65				
100	30	0.71	527902	0.78	525622	128	73	12	35	120	80				
125	37.5	1.08	527903	1.23	525623	156	73	12	37	120	110				
140	37.5	1.19	527904	1.34	525624	177	73	12	34	120	120				
150	40	1.35	527911	1.50	525631	182	73	12	34	120	130				
160	40	1.47	527910	1.75	525630	193	102	20	56	156	150				
180	45	2.44	527905	2.73	525625	214	102	20	56	156	180				
200	50	2.80	527906	3.08	525626	236	102	20	56	156	225				














SERIES **52**

**BLACK RUBBER WHEELS
WITH POLYPROPYLENE CENTRE**

Standard-duty brackets NL - max carrying capacity 300 daN



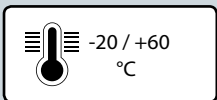
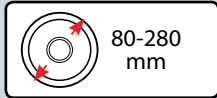
- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Solid stem: galvanised steel
 - 5) King pin: bushing in galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

																
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN				
100	30	1.68	529202	1.75	529302	128	73	22	47	35	120	80				
125	37.5	1.96	529203	2.10	529303	156	73	22	47	37	120	110				
150	40	2.25	529211	2.39	529311	182	73	22	47	34	120	130				
160	40	1.81	529210	2.01	529310	193	102	26	56	56	156	150				
160	40	2.44	525520	2.73	525620	193	102	40	86	56	156	150				
200	50	2.99	529206	3.28	529306	236	102	26	56	56	156	225				
200	50	3.62	525516	3.91	525616	236	102	40	86	56	156	225				



Products made in Italy

BLACK RUBBER WHEELS WITH PRESSED STEEL DISCS



Description

Tyre: black standard rubber, hardness 80 Shore A.

Centre: electrolytically galvanised steel plate, made of two riveted discs.

Hub with polyamide self-lubricating plain bore.

Cylindrical roller bearing hub in plastic cage.

Uses

Suitable for trolleys with light-duty loads, also in the presence of obstacles and for indoor-outdoor use.

Examples of recommended applications: tool trolleys, trolleys for industrial indoor handling, small mobile scaffoldings, waste bin containers.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and oils. Not suitable in presence of aggressive chemical agents.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable for all types of floors, even outdoors.

They easily overcome obstacles, do not damage fragile floors, but they may mark the floor.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	250 kg	300 kg
80 mm	5	---	---	---	---	---
100 mm	3	---	---	---	---	---
125 mm	2.5	6	---	---	---	---
140 mm	2.2	5.5	9	---	---	---
150 mm	2	5	8	---	---	---
160 mm	1.5	3.5	7.5	---	---	---
180 mm	1	3	6.1	---	---	---
200 mm	1	3	5.5	8.5	---	---
225 mm	< 1	2.1	4.8	7.5	11	---
250 mm	< 1	2	4	6	9	12
280 mm	< 1	2	3.5	5	7	9

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Light-duty brackets SL

Maximum carrying capacity 130 daN - available diameters 80-125 mm
Top plate and bolt hole fittings. Available with front brake.



Standard-duty brackets NL

Maximum carrying capacity 390 daN - available diameters 80-280 mm
Top plate, bolt hole and solid stem fittings. Available with front brake.

Options available to order:










The series 53 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.












Wheel with antistatic rubber tread (roller bearing hub only)

**BLACK RUBBER WHEELS
WITH PRESSED STEEL DISCS**



																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.17	531121	12	39	260	50	65										
100	30	0.28	531122	12	44	300	75	80										
100	30	0.25	531132	12	39	300	75	80										
125	37.5	0.51	531103	15	44	330	85	130										
125	37.5	0.44	531133	12	39	330	85	130										
140	37.5	0.64	531104	15	44	340	95	150										
150	40	0.73	531111	15	44	350	100	170										
160	40	1.00	531110	20	58	370	120	180										
180	45	1.33	531105	20	58	390	130	200										
200	50	1.75	531106	20	58	410	140	230										
200	50	1.74	531206	25	58	410	140	230										
225	50	2.16	531107	20	58	420	160	250										
250	60	3.24	531108	25	73	500	175	300										
280	60	3.92	531109	25	73	550	200	390										



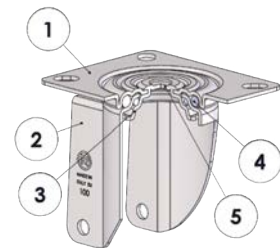
																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.19	533121	12	39	260	50	65										
100	30	0.31	533122	12	44	300	75	80										
125	37.5	0.54	533103	15	44	330	85	130										
140	37.5	0.66	533104	15	44	340	95	150										
150	40	0.76	533111	15	44	350	100	170										
160	40	1.07	533110	20	58	370	120	180										
180	45	1.39	533105	20	58	390	130	200										
200	50	1.81	533106	20	58	410	140	230										
200	50	1.78	533206	25	58	410	140	230										
225	50	2.42	533107	20	58	420	160	250										
250	60	3.14	533108	25	73	500	175	300										
280	60	3.84	533109	25	73	550	200	390										

Options available to order:



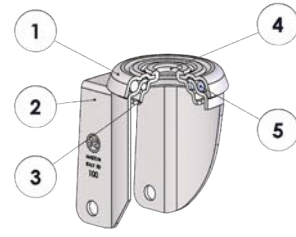
Wheel with antistatic rubber tread (roller bearing hub only)

Light-duty brackets SL - max carrying capacity 130 daN



- 1) Plate in electrolytically galvanised printed steel plate
 - 2) Fork in electrolytically galvanised printed steel plate
 - 3) Ball Race Ring in electrolytically galvanised printed steel plate
 - 4) Swivel actions: on two ball race rings lubricated with grease
 - 5) Bracket closing king pin integrated with ball race ring
- Available with total front foot brake

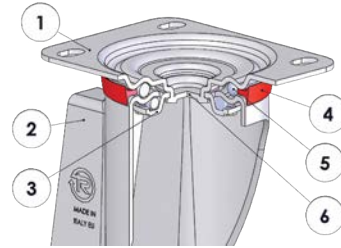
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN
80	25	0.51	535801	0.50	536001	0.63	536301	109	95x80	100x85	80x60	8.8	36	120	65	
100	30	0.60	535802	0.59	536002	0.74	536302	127	95x80	100x85	80x60	8.8	33	120	80	
125	37.5	0.87	535803	0.85	536003	0.98	536303	153	95x80	100x85	80x60	8.8	29	120	130	



- 1) Plate in electrolytically galvanised printed steel plate
 - 2) Fork in electrolytically galvanised printed steel plate
 - 3) Ball Race Ring in electrolytically galvanised printed steel plate
 - 4) Bracket closing king pin integrated with ball race ring
 - 5) Swivel actions: on two ball race rings lubricated with grease
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
80	25	0.46	536101	0.56	536201	109	63	12	36	120	65
100	30	0.55	536102	0.66	536202	127	63	12	33	120	80
125	37.5	0.81	536103	0.91	536203	153	63	12	29	120	130

Standard-duty brackets NL - max carrying capacity 390 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

Wheel		Bracket		Wheel		Bracket		Wheel		Bracket		Wheel		Bracket		Wheel		Bracket		
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN
80	25	0.69	535001	0.49	535701	0.87	535401	107	100x85	80x60	9	37	120	65						
100	30	0.82	535002	0.62	535702	1.00	535402	128	100x85	80x60	9	35	120	80						
125	37.5	1.18	535003	0.92	535703	1.30	535403	156	100x85	80x60	9	37	120	130						
140	37.5	1.27	535004	1.09	535704	1.46	535404	177	100x85	80x60	9	34	120	150						
150	40	1.40	535011	1.22	535711	1.57	535411	182	100x85	80x60	9	34	120	170						
160B	40	1.75	535012	1.55	535712			187	100x85	80x60	9	50		180						
160	40	2.44	535010	2.07	535710	2.69	535410	199	140x110	105x80	11	56	156	180						
180	45	2.78	535005	2.49	535705	3.07	535405	219	140x110	105x80	11	56	156	200						
200	50	3.25	535006	2.89	535706	3.39	535406	240	140x110	105x80	11	56	156	230						
225	50	3.67	535007	3.18	535707	3.95	535407	263	140x110	105x80	11	56	156	250						
250	60	6.66	534708	5.16	535708			296	200x160	160x120	14	87		300						
280	60	7.35	534709	5.84	535709			311	200x160	160x120	14	87		390						
80	25	0.70	535101	0.51	535901	0.89	535421	107	100x85	80x60	9	37	120	65						
100	30	0.84	535102	0.65	535902	1.03	535422	128	100x85	80x60	9	35	120	80						
125	37.5	1.21	535103	0.95	535903	1.33	535423	156	100x85	80x60	9	37	120	130						
140	37.5	1.34	535104	0.96	535904	1.49	535424	177	100x85	80x60	9	34	120	150						
150	40	1.45	535111	1.07	535911	1.60	535431	182	100x85	80x60	9	34	120	170						
160B	40	1.81	535112	1.61	535912			187	100x85	80x60	9	50		180						
160	40	2.50	535110	2.13	535910	2.75	535430	199	140x110	105x80	11	56	156	180						
180	45	2.85	535105	2.56	535905	3.13	535425	219	140x110	105x80	11	56	156	200						
200	50	3.31	535106	3.05	535906	3.45	535426	240	140x110	105x80	11	56	156	230						
225	50	3.93	535107	3.45	535907	4.22	535427	263	140x110	105x80	11	56	156	250						
250	60	6.56	534908	5.06	535908			296	200x160	160x120	14	87		300						
280	60	7.27	534909	5.76	535909			311	200x160	160x120	14	87		390						

Options available to order:



Wheel with antistatic rubber tread (roller bearing hub only)



Bracket with rear brake d. 150-200 mm

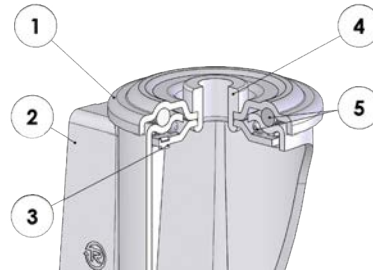


Bracket with directional lock d. 80-125 mm



Directional lock for brackets d. 150-200 mm

Standard-duty brackets NL - max carrying capacity 230 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

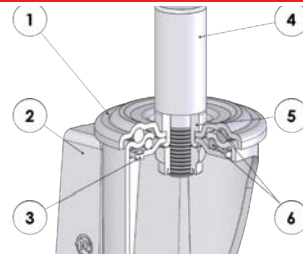
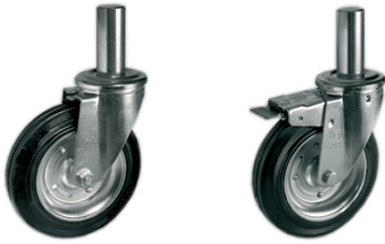
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN					
80	25	0.61	537701	0.78	538201	107	73	12	37	120	65					
100	30	0.74	537702	0.94	538202	128	73	12	35	120	80					
125	37.5	1.09	537703	1.24	538203	156	73	12	37	120	130					
140	37.5	1.23	537704	1.38	538204	177	73	12	34	120	150					
150	40	1.35	537711	1.49	538211	182	73	12	34	120	170					
160	40	1.78	537710	2.04	538210	193	102	20	56	156	180					
180	45	2.66	537705	3.95	538205	214	102	20	56	156	200					
200	50	3.16	537706	3.29	538206	236	102	20	56	156	230					
80	25	0.63	537901	0.80	538221	107	73	12	37	120	65					
100	30	0.76	537902	0.96	538222	128	73	12	35	120	80					
125	37.5	1.12	537903	1.27	538223	156	73	12	37	120	130					
140	37.5	1.26	537904	1.41	538224	177	73	12	34	120	150					
150	40	1.38	537911	1.52	538231	182	73	12	34	120	170					
160	40	1.85	537910	2.10	538230	193	102	20	56	156	180					
180	45	2.73	537905	3.01	538225	214	102	20	56	156	200					
200	50	3.22	537906	3.35	538226	236	102	20	56	156	230					

Options available to order:
















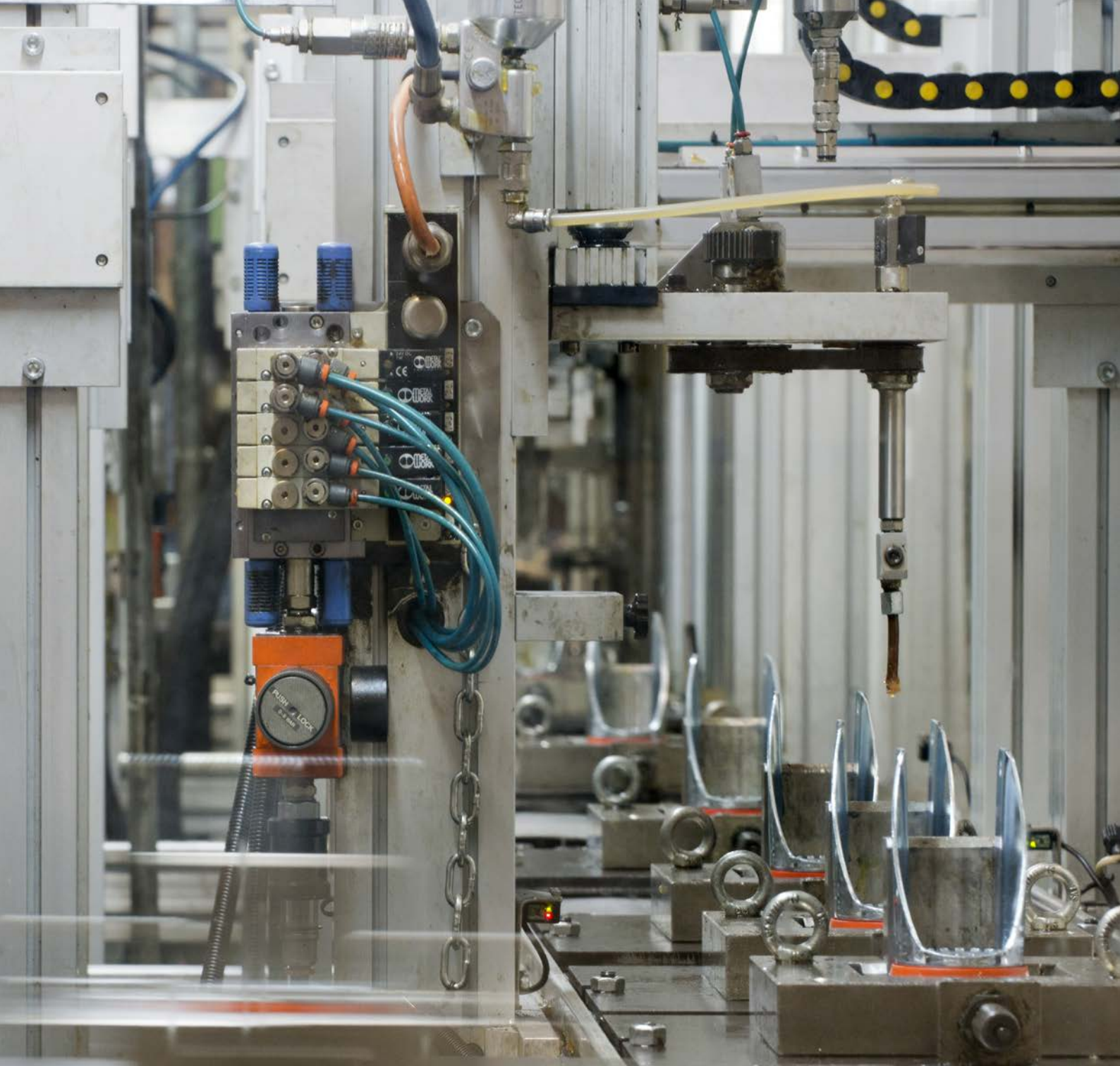
Wheel with antistatic rubber tread (roller bearing hub only)

Standard-duty brackets NL - max carrying capacity 230 daN



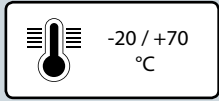
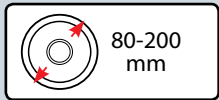
- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Solid stem: galvanised steel
 - 5) King pin: bushing in galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

															
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN			
100	30	1.74	539202	2.24	538802	128	73	22	47	35	120	80			
125	37.5	2.09	539203	2.24	538803	156	73	22	47	37	120	130			
150	40	2.35	539211	2.49	538811	182	73	22	47	34	120	170			
160	40	2.15	539210	2.41	538810	193	102	26	56	56	156	180			
160	40	3.20	535520	3.50	535620	193	102	40	86	56	156	180			
180	45	3.75	535515	3.95	535615	214	102	40	86	56	156	200			
200	50	3.53	539206	3.66	538806	236	102	26	56	56	156	230			
200	50	4.16	535516	4.29	535616	236	102	40	86	56	156	230			



Technology at work

GREY NON-MARKING THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE



INOX



Description

Tyre: grey non-marking thermoplastic rubber, hardness 85 Shore A, excellent rolling resistance and elasticity.

Centre: polypropylene.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing in plastic cage. Also available with stainless steel roller bearing.

Hub with double shielding ball bearing, co-printed in the centre of the wheel. The bearing is protected from dirt, machining residue and corrosive substances by a glass-fibre reinforced polyamide installation bushing with internal labyrinth seal

Uses

Indicated for trolleys with light-duty loads, mainly for indoor use; the grey non-marking rubber tyre makes it suitable for use on fragile floors and also in domestic/institutional environments.

Excellent rolling resistance guarantees minimum effort in manual handling.

Examples of recommended applications: luggage trolleys, tool trolleys, institutional and catering trolleys, trolleys for industrial indoor use, tubular trolleys.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity. Fitted with stainless steel brackets, they are also recommended for environments with presence of aggressive chemical agents. Not suitable in presence of organic solvents, chlorinated substances, hydrocarbons and mineral oils.

WEAK ACIDS				
STRONG ACIDS				
WATER				
ALCOHOL				

WEAK BASES				
STRONG BASES				
HYDROCARBONS				
SOLVENTS				

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

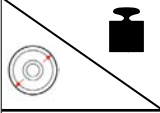

Floors

It does not stain or damage fragile floors. Suitable for tiles and cement-resin.

Not recommended on abrasive, unpaved floors or in presence of processing residues.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	225 kg
80 mm	3.5	----	----	----	----
100 mm	2.2	5	----	----	----
125 mm	1.5	3.5	----	----	----
150x35 mm	1	2.5	4.7	----	----
150x45 mm	< 1	2	3.8	----	----
200 mm	< 1	1.3	2.5	3.9	5

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Light-duty brackets SL

Maximum carrying capacity 120 daN - available diameters 80-125 mm
Top plate and bolt hole fittings. Available with front brake.



Standard-duty brackets NL

Maximum carrying capacity 225 daN - available diameters 80-200 mm
Top plate, bolt hole and Zamak expander stem fittings. Available with front brake.



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 225 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.

Options available to order:










The series 71 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.














Wheel for large commercial kitchens (conforms to Standard DIN 18867-8)
d. 160 and 200 mm

GREY NON-MARKING THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE












														
mm	mm	kg	CODE	mm	mm	daN	daN	daN						
80	30	0.09	711101	12	39	100	70	70						
100	30	0.12	711102	12	44	150	100	100						
100	30	0.11	711132	12	39	150	100	100						
125	35	0.20	711103	15	44	180	120	120						
125	35	0.20	711133	12	39	180	120	120						
150	35	0.27	711105	15	44	210	140	140						
150	45	0.36	711104	20	59	270	180	180						
200	50	0.70	711106	20	59	330	225	225						



															
mm	mm	kg	CODE	kg	CODE	mm	mm	daN	daN	daN					
80	30	0.11	713101	0.11	713201	12	39	100	70	70					
100	30	0.14	713102	0.14	713202	12	44	150	100	100					
125	35	0.22	713103	0.22	713203	15	44	180	120	120					
150	35	0.30	713105	0.30	713205	15	44	210	140	140					
150	45	0.41	713104	0.41	713204	20	59	270	180	180					
200	50	0.74	713106	0.74	713206	20	59	330	225	225					



														
mm	mm	kg	CODE	mm	mm	daN	daN	daN						
80	30	0.14	712201	8	40	100	70	70						
100	30	0.18	712202	8	45	150	100	100						
125	35	0.25	712203	8	45	180	120	120						

Options available to order:

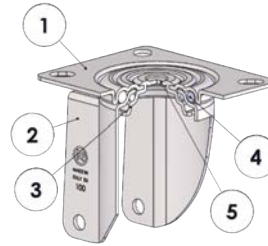


Wheel for large commercial kitchens (conforms to Standard DIN 18867-8)



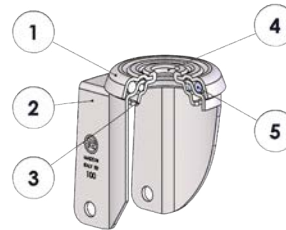
Wheel with single stainless steel ball bearing d. 80-125 mm

Light-duty brackets SL - max carrying capacity 120 daN



- 1) Plate in electrolytically galvanised printed steel plate
 - 2) Fork in electrolytically galvanised printed steel plate
 - 3) Ball Race Ring in electrolytically galvanised printed steel plate
 - 4) Swivel actions: on two ball race rings lubricated with grease
 - 5) Bracket closing king pin integrated with ball race ring
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN
80	30	0.43	715801	0.42	716001	0.55	716301	109	95x80	100x85	80x60	8.8	36	120	70	
100	30	0.46	715802	0.45	716002	0.60	716302	127	95x80	100x85	80x60	8.8	33	120	100	
125	35	0.63	715803	0.61	716003	0.74	716303	153	95x80	100x85	80x60	8.8	29	120	120	

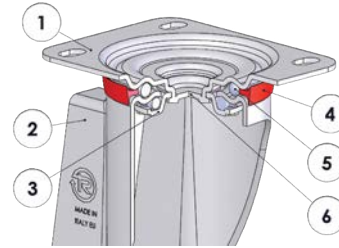


- 1) Plate in electrolytically galvanised printed steel plate
 - 2) Fork in electrolytically galvanised printed steel plate
 - 3) Ball Race Ring in electrolytically galvanised printed steel plate
 - 4) Bracket closing king pin integrated with ball race ring
 - 5) Swivel actions: on two ball race rings lubricated with grease
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
80	30	0.38	716101	0.48	716201	109	63	12	36	120	70
100	30	0.41	716102	0.52	716202	127	63	12	33	120	100
125	30	0.57	716103	0.67	716203	153	63	12	29	120	120

GREY NON-MARKING THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE

Standard-duty brackets NL - max carrying capacity 225 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm		kg		CODE		kg		CODE		mm		mm		mm		mm		mm		daN	
80	30	0.60	714201	0.36	715701	0.79	716601	107	100x85	80x60	9	37	120	70							
100	30	0.70	714202	0.39	715702	0.85	716602	128	100x85	80x60	9	35	120	100							
125	35	0.86	714203	0.61	715703	1.00	716603	156	100x85	80x60	9	37	120	120							
150	35	0.96	714204	0.76	715704	1.14	716604	182	100x85	80x60	9	34	120	140							
150	45	1.72	714211	1.35	715711	2.00	716611	194	140x110	105x80	11	56	156	180							
200	50	2.07	714206	1.86	715706	2.35	716606	240	140x110	105x80	11	56	156	225							
80	30	0.61	714501	0.38	715901	0.82	716621	107	100x85	80x60	9	37	120	70							
100	30	0.71	714502	0.39	715902	0.86	716622	128	100x85	80x60	9	35	120	100							
125	35	0.87	714503	0.62	715903	1.03	716623	156	100x85	80x60	9	37	120	120							
150	35	1.11	714504	0.81	715904	1.16	716624	182	100x85	80x60	9	34	120	140							
150	45	1.87	714511	1.40	715911	2.05	716631	194	140x110	105x80	11	56	156	180							
200	50	2.10	714506	2.02	715906	2.34	716626	240	140x110	105x80	11	56	156	225							
80	30	0.58	714701	0.45	714801	0.75	714901	107	100x85	80x60	9	37	120	70							
100	30	0.64	714702	0.50	714802	0.81	714902	128	100x85	80x60	9	35	120	100							
125	35	0.81	714703	0.61	714803	0.97	714903	156	100x85	80x60	9	37	120	120							

Options available to order:



Bracket with directional lock d. 80-125 mm

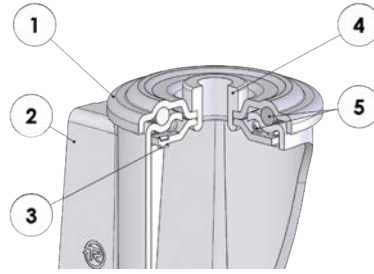


Directional lock for brackets d. 150-200 mm



Wheel for large commercial kitchens (conforms to Standard DIN 18867-8) d. 160 and 200 mm

Standard-duty brackets NL - max carrying capacity 225 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
80	30	0.53	717401	0.71	716501	107	73	12	37	120	70				
100	30	0.63	717402	0.84	716502	128	73	12	35	120	100				
125	35	0.80	717403	0.95	716503	156	73	12	37	120	120				
150	35	0.90	717404	1.04	716504	182	73	12	34	120	140				
150	45	1.58	717411	1.87	716511	188	102	20	56	156	180				
200	50	1.97	717406	2.26	716506	236	102	20	56	156	225				

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
80	30	0.55	717801	0.73	716521	107	73	12	37	120	70				
100	30	0.64	717802	0.84	716522	128	73	12	35	120	100				
125	35	0.82	717803	0.98	716523	156	73	12	37	120	120				
150	35	0.93	717804	1.00	716524	182	73	12	34	120	140				
150	45	1.85	717811	1.92	716531	188	102	20	56	156	180				
200	50	2.02	717806	2.29	716526	236	102	20	56	156	225				

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
80	30	0.53	714301	0.70	715501	107	73	12	37	120	70				
100	30	0.58	714302	0.75	715502	128	73	12	35	120	100				
125	35	0.74	714303	0.94	715503	156	73	12	37	120	120				

Options available to order:



Wheel for large commercial kitchens (conforms to Standard DIN 18867-8) d. 160 and 200 mm



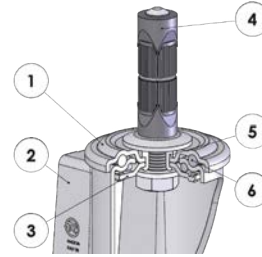
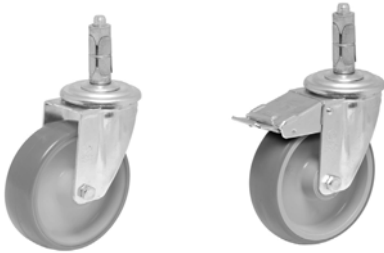
Fitting with threaded stem



Fitting with unthreaded stem with dimensions that can be customised

GREY NON-MARKING THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE

Standard-duty brackets NL - max carrying capacity 225 daN

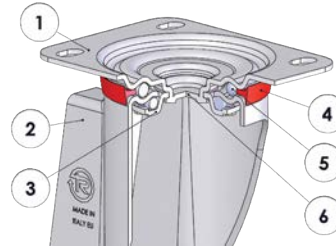


- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Stem: zamak expander
 - 5) King pin: bushing in electrolytically galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
80	30	0.65	719201	0.83	719301	109	20	65	20-24	37	120	70
100	30	0.75	719202	0.96	719302	130	20	65	20-24	35	120	100
125	35	1.02	719203	1.07	719303	158	20	65	20-24	37	120	120

Stainless steel standard-duty brackets NLX - max carrying capacity 225 daN

INOX

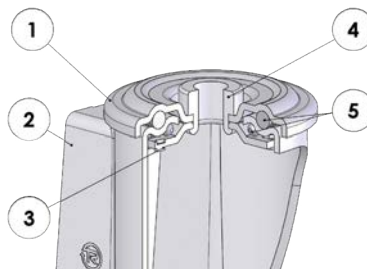


- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
80	30	0.59	714401	0.33	715301	0.76	716701	107	100x85	80x60	9	37	120	70
100	30	0.61	714402	0.36	715302	0.79	716702	128	100x85	80x60	9	35	120	100
125	35	0.76	714403	0.59	715303	0.90	716703	156	100x85	80x60	9	37	120	120
150	35	0.99	714404	0.76	715304	1.01	716704	182	100x85	80x60	9	34	120	140
150	45	1.63	714411	1.22	715311	1.95	716711	194	140x110	105x80	11	56	156	180
200	50	2.04	714406	1.59	715306	2.33	716706	240	140x110	105x80	11	56	156	225
80	30	0.61	714601	0.36	715601	0.79	716721	107	100x85	80x60	9	37	120	70
100	30	0.64	714602	0.37	715602	0.80	716722	128	100x85	80x60	9	35	120	100
125	35	0.78	714603	0.62	715603	0.93	716723	156	100x85	80x60	9	37	120	120
150	35	1.03	714604	0.81	715604	1.03	716724	182	100x85	80x60	9	34	120	140
150	45	1.71	714611	1.27	715611	2.00	716731	194	140x110	105x80	11	56	156	180
200	50	2.09	714606	1.62	715606	2.36	716726	240	140x110	105x80	11	56	156	225

Stainless steel standard-duty brackets NLX - max carrying capacity 225 daN

INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN						
80	30	0.53	717901	0.70	718801	107	73	12	37	120	70						
100	30	0.57	717902	0.78	718802	128	73	12	35	120	100						
125	35	0.74	717903	0.89	718803	156	73	12	37	120	120						
150	35	0.95	717904	0.97	718804	182	73	12	34	120	140						
150	45	1.46	717911	1.74	718811	188	102	20	56	156	180						
200	50	1.99	717906	2.25	718806	236	102	20	56	156	225						
80	30	0.56	718001	0.73	718821	107	73	12	37	120	70						
100	30	0.58	718002	0.78	718822	128	73	12	35	120	100						
125	35	0.77	718003	0.92	718823	156	73	12	37	120	120						
150	35	1.00	718004	0.99	718824	182	73	12	34	120	140						
150	45	1.51	718011	1.79	718831	188	102	20	56	156	180						
200	50	2.02	718006	2.28	718826	236	102	20	56	156	225						

Options available to order:



Wheel with single stainless steel ball bearing d. 80-125 mm



Wheel for large commercial kitchens (conforms to Standard DIN 18867-8) d. 160 and 200 mm

PNEUMATIC WHEELS WITH POLYPROPYLENE CENTRE

	260 mm
	150 daN 4 km/h
	-20 / +60 °C



Description

Tyre: four plies ribbed or country profiled tyre; working pressure 2 bar.

Centre: polypropylene.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing with plastic cage.

Uses

Suitable for use with light and medium-duty loads, on any type of flooring, also for mixed indoor and outdoor use.

Also suitable on sandy base.

Examples of recommended applications: wheelbarrows, box charts.

Environments of use

Suitable for industrial and outdoor environments, also in presence of humidity and medium-harsh chemical agents.

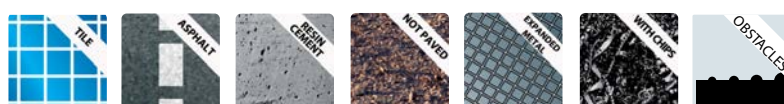
Not suitable in presence of organic solvents, chlorinated substances, hydrocarbons and mineral oils.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

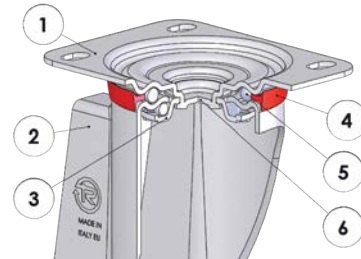
It is functional on all type of floors and especially on uneven floors and soft floor surfaces such as grass, as well as on floor with obstacles and with chips.





mm	mm	kg	CODE	kg	CODE	mm	mm	daN					
260	85	0.91	821601	1.03	823601	20	74	150					ribbed profile
260	85	0.90	821602	1.00	823602	25	74	150					ribbed profile
260	85	0.96	822601	1.08	824601	20	74	150					country profile
260	85	0.95	822602	1.05	824602	25	74	150					country profile

Standard-duty brackets NL - max carrying capacity 150 daN






- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN					
260	85	4.33	825601	2.83	826601	300	200x160	160x120	14	86				150					
260	85	4.43	825701	2.93	826701	300	200x160	160x120	14	86				150					



mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN					
260	85	4.38	825602	2.89	826602	300	200x160	160x120	14	86				150					
260	85	4.48	825702	2.98	826702	300	200x160	160x120	14	86				150					

PUNCTURE-PROOF PNEUMATIC WHEELS WITH POLYPROPYLENE CENTRE

	260 mm
	70 daN
	-20 / +60 °C



Description

Tyre: expanded polyurethane foam, without inner tube.

Centre: polypropylene.

Hub with cylindrical roller bearing with plastic cage.

Uses









Suitable for use with light and medium-duty loads, on any type of flooring, also for mixed indoor and outdoor use. The expanded polyurethane foam tyre eliminates wheel failure as a consequence of a puncture that can occur with traditional pneumatic (air filled) wheels.

Also suitable on sandy base.

Examples of recommended applications: wheelbarrows, box charts.

Environments of use

Suitable for industrial and outdoor environments, also in presence of humidity and medium-harsh chemical agents. Not suitable in presence of organic solvents, chlorinated substances, hydrocarbons and mineral oils.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36

Floors

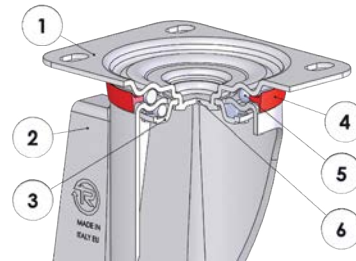
It is functional on all type of floors and especially on uneven floors and soft floor surfaces such as grass, as well as on floor with obstacles and with chips.





mm	mm	kg	COD.	mm	mm	daN								
260	75	1,03	823701	20	77	70	country profile							

Standard-duty brackets NL - max carrying capacity 70 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN			
260	75	4,48	827601	2,98	828601	300	200x160	160x120	14	86	70			

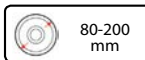
**INDUSTRIAL
MEDIUM DUTY LOADS**



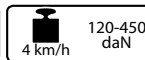


SERIES **60**

THERMOPLASTIC POLYURETHANE
WHEELS WITH POLYAMIDE 6 CENTRE



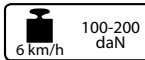
80-200
mm



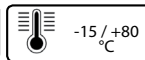
120-450
daN



120-380
daN



6 km/h
100-200
daN



-15 / +80
°C

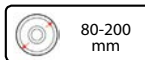
INOX

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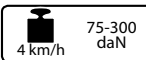


SERIES **61**

THERMOPLASTIC POLYURETHANE
WHEELS WITH POLYAMIDE 6 CENTRE



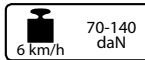
80-200
mm



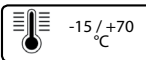
75-300
daN



120-380
daN



6 km/h
70-140
daN



-15 / +70
°C

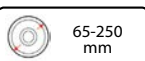
INOX

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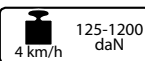


SERIES **68**

SOLID WHEELS
IN POLYAMIDE 6



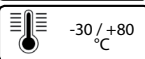
65-250
mm



125-1200
daN



90-450
daN



-30 / +80
°C

INOX

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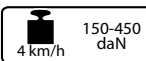


SERIES **73**

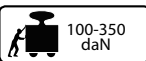
WHEELS IN SIGMA ELASTIC RUBBER
WITH POLYAMIDE 6 CENTRE



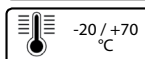
100-200
mm



150-450
daN



100-350
daN



-20 / +70
°C

INOX

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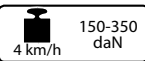


SERIES **73^{AE}**

ELASTIC RUBBER WHEELS
WITH POLYAMIDE CENTRE



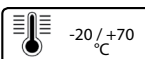
100-200
mm



150-350
daN



100-235
daN



-20 / +70
°C

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THERMOPLASTIC POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE

-  80-200 mm
-  55 Shore D
-  120-750 daN
4 km/h
-  100-200 daN
6 km/h
-  120-450 daN
-  -15 / +80 °C

INOX



Description

Tyre: red thermoplastic polyurethane, hardness 55 Shore D, excellent rolling resistance and elasticity features, good resistance to wear and tearing.

Centre: polyamide 6.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing in plastic cage. Also available with stainless steel roller bearing.

Hub with double shielding ball bearing, co-printed in centre. The bearing is protected from dirt, machining residue and corrosive substances by a glass-fibre reinforced polyamide installation bushing with internal labyrinth seal
Diam. 250 mm: hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding.

Uses

























Suitable for trolleys and machinery with medium-duty loads, also in case of continuous handling. The ball bearing model is excellent for mechanical handling or manual-mechanical handling and speed up to 6 Km/h.

Suitable for indoor and outdoor use with frequent washing and sterilisation.

Examples of recommended applications: trolleys for industrial use, tubular trolleys, trolleys for food and chemical industry, mobile scaffoldings (fitted with suitable brackets, they meet Standard UNI EN 1004:2005).

Environments of use

Suitable for industrial environments, also in presence of water and saturated vapour, alcohol and glycol, mineral and organic acids.

WEAK ACIDS				WEAK BASES			
STRONG ACIDS				STRONG BASES			
WATER				HYDROCARBONS			
ALCOHOL				SOLVENTS			

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable for tiles and cement-resin.



Not recommended unpaved floors or in presence of processing residues.

Not suitable in presence of obstacles, even if small.

They do not mark or damage fragile floors.



Force required to push or tow a wheel

 	100 kg	150 kg	200 kg	250 kg	300 kg	350 kg	400 kg	450 kg
80 mm	4.5	----	----	----	----	----	----	----
100 mm	2.2	4.5	----	----	----	----	----	----
125 mm	1.2	2.2	4	----	----	----	----	----
150x35 mm	< 1	2	3.2	5	----	----	----	----
150x45 mm	< 1	2	3.2	4.5	6	9	----	----
200 mm	< 1	< 1	< 1	2.5	3	4	5.5	7

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate, bolt hole, solid stem, Zamak expander fittings. Available with front brake.



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 450 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 100-250 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Medium-heavy duty brackets PX in stainless steel

Maximum carrying capacity 450 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable rear brake.



Mobile scaffolding brackets (See Scaffolding section)

Maximum carrying capacity 400 daN - maximum capacity according to UNI EN 1004:2005 750 daN
Available diameters 125-200 mm. Top plate, unthreaded stem, threaded stem with leveller fittings. Available with brake and double brake pedal.









Options available to order:

The series 60 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.










SERIES **60**

**THERMOPLASTIC POLYURETHANE WHEELS
WITH POLYAMIDE 6 CENTRE**













																	
mm	mm	kg	CODE	mm	mm.	daN	daN	daN									
80	30	0.11	601101	12	39	220	120	120									
100	30	0.15	601102	12	44	300	170	170									
125	35	0.25	601103	15	44	350	230	230									
150	35	0.38	601105	15	44	500	250	250									
150	45	0.47	601104	20	59	700	280	350									
200	50	0.82	601106	20	59	750	380	450									



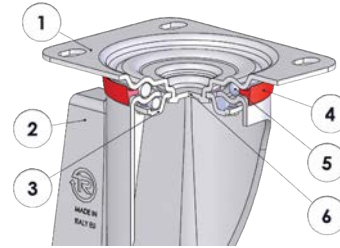
																	
mm	mm	kg	CODE	kg	CODE	mm	mm	daN	daN	daN							
80	30	0.13	603101	0.13	603201	12	39	220	120	120							
100	30	0.16	603102	0.16	603202	12	44	300	170	170							
125	35	0.27	603103	0.27	603203	15	44	350	230	230							
150	35	0.40	603105	0.40	603205	15	44	500	250	250							
150	45	0.52	603104	0.52	603204	20	59	700	280	350							
200	50	0.87	603106	0.87	603206	20	59	750	380	450							



																	
mm	mm	kg	COD.	kg	COD.	mm	mm.	daN	daN	daN	daN						
80	30	0,17	602201	0,17	602401	8	40	220	130	130	100						
100	30	0,21	602202	0,21	602402	8	45	300	200	200	160						
125	35	0,30	602203	0,30	602403	8	45	350	250	250	200						
250	50	1,50	602208*			20	58	1000	450	750							

* = wheel with double ball bearing

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm					mm	daN
80	30	0.62	604201	0.38	605701	0.81	606601	107	100x85	80x60	9	37	120	120
100	30	0.74	604202	0.43	605702	0.89	606602	128	100x85	80x60	9	35	120	170
125	35	0.91	604203	0.66	605703	1.05	606603	156	100x85	80x60	9	37	120	220
150	35	1.08	604204	0.8	605704	1.21	606604	182	100x85	80x60	9	34	120	220
150	45	1.83	604211	1.46	605711	2.11	606611	194	140x110	105x80	11	56	156	300
200	50	2.23	604206	2.01	605706	2.49	606606	240	140x110	105x80	11	56	156	300
80	30	0.63	604501	0.41	605901	0.84	606621	107	100x85	80x60	9	37	120	120
100	30	0.75	604502	0.43	605902	0.9	606622	128	100x85	80x60	9	35	120	170
125	35	0.92	604503	0.67	605903	1.07	606623	156	100x85	80x60	9	37	120	220
150	35	1.11	604504	0.82	605904	1.23	606624	182	100x85	80x60	9	34	120	220
150	45	1.98	604511	1.51	605911	2.16	606631	194	140x110	105x80	11	56	156	300
200	50	2.27	604506	2.06	605906	2.56	606626	240	140x110	105x80	11	56	156	300
80	30	0.60	604701	0.48	604801	0.77	604901	107	100x85	80x60	9	37	120	130
100	30	0.67	604702	0.53	604802	0.84	604902	128	100x85	80x60	9	35	120	200
125	35	0.86	604703	0.66	604803	1.02	604903	156	100x85	80x60	9	37	120	220

Options available to order:

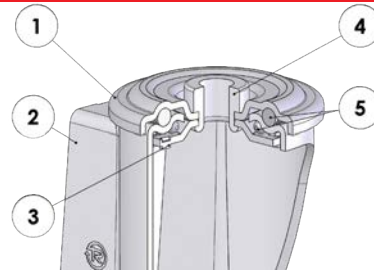


Bracket with directional lock
d. 80-125 mm

















Directional lock for brackets
d. 150-200 mm

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

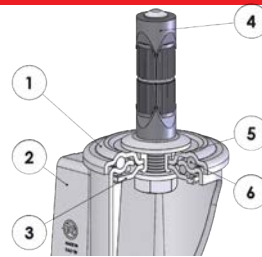
																	
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN					
80	30	0.55	607701	0.73	606401	107	73	12	37	120	120						
100	30	0.67	607702	0.88	606402	128	73	12	35	120	170						
125	35	0.85	607703	1.00	606403	156	73	12	37	120	220						
150	35	1.01	607704	1.14	606404	182	73	12	34	120	220						
150	45	1.69	607711	1.98	606411	188	102	20	56	156	300						
200	50	2.13	607706	2.41	606406	236	102	20	56	156	300						
80	30	0.57	607801	0.75	606421	107	73	12	37	120	120						
100	30	0.68	607802	0.88	606422	128	73	12	35	120	170						
125	35	0.87	607803	1.02	606423	156	73	12	37	120	220						
150	35	1.03	607804	1.16	606424	182	73	12	34	120	220						
150	45	1.74	607811	2.03	606431	188	102	20	56	156	300						
200	50	2.18	607806	2.46	606426	236	102	20	56	156	300						
80	30	0.56	604301	0.72	605501	107	73	12	37	120	130						
100	30	0.61	604302	0.78	605502	128	73	12	35	120	200						
125	35	0.79	604303	0.96	605503	156	73	12	37	120	220						

Options available to order:



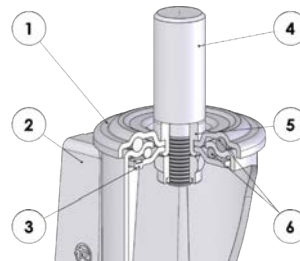
Fastening with threaded stem

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Stem: zamak expander
 - 5) King pin: bushing in electrolytically galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
80	30	0.67	609201	0.85	609301	109	73	20	65	20-24	37	120	120
100	30	0.79	609202	1.00	609302	130	73	20	65	20-24	35	120	130
125	35	0.97	609203	1.12	609303	158	73	20	65	20-24	37	120	130



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Solid stem: galvanised steel
 - 5) King pin: bushing in electrolytically galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
100	30	1.67	606102	1.88	606202	128	73	22	47	35	120	170
125	35	1.85	606103	2.00	606203	156	73	22	47	37	120	220
150	35	2.01	606104	2.14	606204	182	73	22	47	34	120	220
150	45	2.69	606111	2.98	606211	188	102	26	56	56	156	300
200	50	3.13	606106	3.41	606206	236	102	26	56	56	156	300

Options available to order:



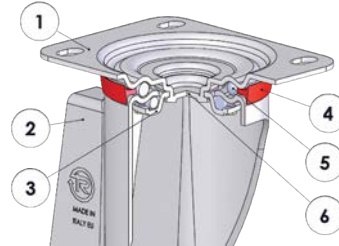
Bracket with Zamak stem fitted with wheels with roller bearings and single ball bearing d. 80-125 mm



Connection with solid stem with dimensions that can be customised

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN

INOX

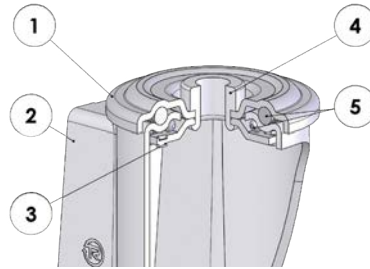


- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake













mm		kg		kg		kg		mm		mm		mm		mm		daN	
80	30	0.61	604401	0.35	605101	0.78	606701	107	100x85	80x60	9	37	120				120
100	30	0.65	604402	0.40	605102	0.83	606702	128	100x85	80x60	9	35	120				170
125	35	0.81	604403	0.64	605103	0.95	606703	156	100x85	80x60	9	37	120				220
150	35	0.97	604404	0.81	605104	1.10	606704	182	100x85	80x60	9	34	120				220
150	45	1.77	604411	1.33	605111	2.06	606711	194	140x110	105x80	11	56	156				300
200	50	2.20	604406	1.74	605106	2.48	606706	240	140x110	105x80	11	56	156				300
80	30	0.64	604601	0.38	605601	0.81	606721	107	100x85	80x60	9	37	120				120
100	30	0.65	604602	0.41	605602	0.84	606722	128	100x85	80x60	9	35	120				170
125	35	0.83	604603	0.66	605603	0.97	606723	156	100x85	80x60	9	37	120				220
150	35	0.99	604604	0.83	605604	1.12	606724	182	100x85	80x60	9	34	120				220
150	45	1.82	604611	1.38	605611	2.03	606731	194	140x110	105x80	11	56	156				300
200	50	2.25	604606	1.74	605606	2.53	606726	240	140x110	105x80	11	56	156				300
80	30	0.60	605401	0.48	605001	0.77	606901	107	100x85	80x60	9	37	120				130
100	30	0.67	605402	0.53	605002	0.84	606902	128	100x85	80x60	9	35	120				200
125	35	0.78	605403	0.66	605003	0.95	606903	156	100x85	80x60	9	37	120				220

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN

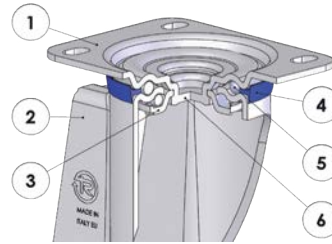
INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

															
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
80	30	0.55	607901	0.61	608801	107	73	12	37	120	120				
100	30	0.61	607902	0.82	608802	128	73	12	35	120	170				
125	35	0.79	607903	0.94	608803	156	73	12	37	120	220				
150	35	0.90	607904	1.03	608804	182	73	12	34	120	220				
150	45	1.57	607911	1.85	608811	188	102	20	56	156	300				
200	50	2.14	607906	2.40	608806	236	102	20	56	156	300				
80	30	0.58	608001	0.62	608821	107	73	12	37	120	120				
100	30	0.62	608002	0.82	608822	128	73	12	35	120	170				
125	35	0.81	608003	0.96	608823	156	73	12	37	120	220				
150	35	0.92	608004	1.25	608824	182	73	12	34	120	220				
150	45	1.62	608011	1.90	608831	188	102	20	56	156	300				
200	50	2.19	608006	2.45	608826	236	102	20	56	156	300				
80	30	0.56	606301	0.72	606501	107	73	12	37	120	130				
100	30	0.61	606302	0.78	606502	128	73	12	35	120	200				
125	35	0.73	606303	0.88	606503	156	73	12	37	120	220				

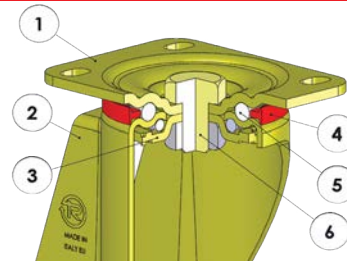
Medium-duty brackets M - max carrying capacity 450 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with adjustable total front foot brake

mm		kg		kg		kg		mm		mm		mm		mm		daN	
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN	4 km/h
150	45	2.17	604311	1.46	605711	2.64	606811	194	140x110	105x80	11	58	178			350	
200	50	2.62	604306	2.01	605706	3.04	606806	240	140x110	105x80	11	50	178			450	
150	45	2.32	604711	1.51	605911	2.68	606831	194	140x110	105x80	11	58	178			350	
200	50	2.66	604706	2.06	605906	3.11	606826	240	140x110	105x80	11	50	178			450	

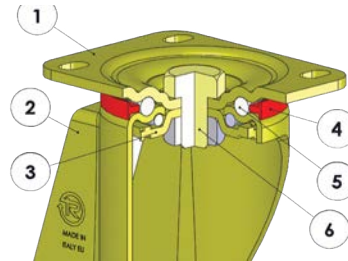
Medium-heavy duty brackets P - max carrying capacity 450 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm		kg		kg		kg		mm		mm		mm		mm		daN		daN	
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN	4 km/h	6 km/h	
100	30	1.03	607102	0.54	608102	1.18	609002	138	100x85	80x60	9	46	123			170			
125	35	1.17	607103	0.75	608103	1.31	609003	161	100x85	80x60	9	48	123			230			
100	30	1.05	607302	0.55	608302	1.19	609102	138	100x85	80x60	9	46	123			170			
125	35	1.19	607303	0.77	608303	1.33	609103	161	100x85	80x60	9	48	123			230			
100	30	1.08	608202	0.67	608222	1.24	608242	138	100x85	80x60	9	46	123			200		160	
125	35	1.22	608203	0.76	608223	1.36	608243	161	100x85	80x60	9	48	123			250		200	

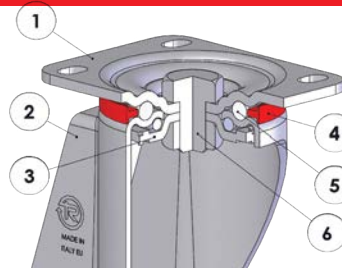
Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm					mm	daN
150	45	2.81	607604	1.39	608604	3.38	609004	200	140x110	105x80	11	70	126	350
200	50	3.20	607606	1.83	608606	3.77	609006	250	140x110	105x80	11	70	126	450
150	45	2.87	607504	1.44	608504	3.44	609104	200	140x110	105x80	11	70	126	350
200	50	3.34	607506	1.88	608506	3.91	609106	250	140x110	105x80	11	70	126	450
250	50	4.40	608208	3,30	608228	5,10	608248	298	140x110	105x80	11	66	126	750

Stainless steel medium-heavy duty brackets PX - max carrying capacity 450 daN

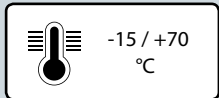
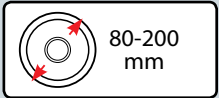


INOX

- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: screw and nut in stainless steel
- Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm					mm	daN
150	45	2.77	607004	1.53	607114	3.34	607214	200	140x110	105x80	11	70	126	350
200	50	3.24	607006	1.80	607116	3.81	607216	250	140x110	105x80	11	70	126	450
150	45	2.75	607314	1.53	607414	3.32	607514	200	140x110	105x80	11	70	126	350
200	50	3.28	607316	1.85	607416	3.85	607516	250	140x110	105x80	11	70	126	450

**THERMOPLASTIC POLYURETHANE WHEELS
WITH POLYAMIDE 6 CENTRE**



INOX



Description

Tyre: blue non-marking thermoplastic polyurethane, hardness 85 Shore A, excellent rolling resistance and elasticity, good resistance to wear and tearing.

Centre: polyamide 6.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing in a plastic cage. Also available with stainless steel roller bearings.

Hub with double shielding ball bearing, co-printed in centre. The bearing is protected from dirt, machining residue and corrosive substances by a glass-fibre reinforced polyamide installation bushing with internal labyrinth seal.

Uses

Suitable for trolleys and machinery with medium-duty loads, also in case of continuous handling. The model with ball bearing hub can also be used for mechanical handling or manual-mechanical handling and speed up to 6 km/h.

Suitable for indoor and outdoor use for frequent washing and sterilisation.

Excellent rolling resistance guarantees minimum effort in manual handling.

Examples of recommended applications: trolleys for industrial indoor use, tubular trolleys, trolleys for food and chemical industry, mobile scaffoldings (fitted with suitable brackets, they meet Standard UNI EN 1004:2005).

Environments of use

Suitable for industrial environments, also in presence of water and saturated vapour, alcohol and glycol, mineral and organic acids.

WEAK ACIDS				WEAK BASES		
STRONG ACIDS				STRONG BASES		
WATER				HYDROCARBONS		
ALCOHOL				SOLVENTS		



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable for tiles and cement-resin. Not recommended on unpaved floors or in presence of processing residues. They facilitate overcoming small obstacles along the path. They do not mark or damage fragile floors.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	250 kg	300 kg
80 mm	3.4	----	----	----	----	----
100 mm	1.5	4	----	----	----	----
125 mm	1	2.5	4	----	----	----
150x35 mm	< 1	1.8	3	4.5	----	----
150x45 mm	< 1	1.5	2.5	3.9	----	----
200 mm	< 1	< 1	1.6	2.5	3.7	5

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate, bolt hole, solid stem, Zamak expander fittings. Available with front brake..



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings Available with front brake.

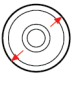
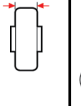

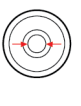
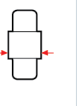


Options available to order:

The series 61 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.

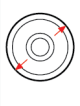
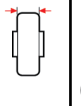



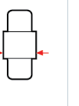


SERIES **61**

**THERMOPLASTIC POLYURETHANE WHEELS
WITH POLYAMIDE 6 CENTRE**


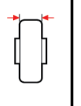



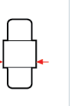





																	
mm	mm	kg	CODE	mm	mm	daN	daN	daN									
80	30	0.11	611101	12	39	160	75	75									
100	30	0.16	611102	12	44	200	120	120									
125	35	0.25	611103	15	44	350	180	180									
150	35	0.38	611105	15	44	400	220	230									
150	45	0.39	611104	20	59	450	240	250									
200	50	0.86	611106	20	59	500	300	300									

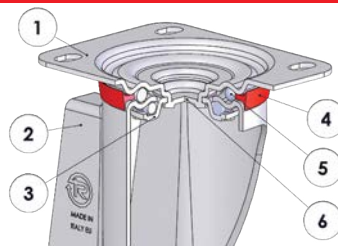


																	
mm	mm	kg	CODE	kg	CODE	mm	mm	daN	daN	daN							
80	30	0.13	613101	0.13	613201	12	39	160	75	75							
100	30	0.18	613102	0.18	613202	12	44	200	120	120							
125	35	0.27	613103	0.27	613203	15	44	350	180	180							
150	35	0.40	613105	0.40	613205	15	44	400	220	230							
150	45	0.43	613104	0.43	613204	20	59	450	240	250							
200	50	0.92	613106	0.92	613206	20	59	500	300	300							



																	
mm	mm	kg	CODE	kg	CODE	mm	mm.	daN	daN	daN	daN						
80	30	0.17	612201	0.17	612401	8	40	160	85	85	70						
100	30	0.21	612202	0.21	612402	8	45	200	120	120	100						
125	35	0.30	612203	0.30	612403	8	45	350	180	180	140						

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN	4 km/h					
80	30	0.62	614201	0.38	615701	0.81	616601	107	100x85	80x60	9	37	120	75									
100	30	0.74	614202	0.43	615702	0.89	616602	128	100x85	80x60	9	35	120	120									
125	35	0.91	614203	0.66	615703	1.05	616603	156	100x85	80x60	9	37	120	180									
150	35	1.08	614204	0.80	615704	1.21	616604	182	100x85	80x60	9	34	120	220									
150	45	1.83	614211	1.46	615711	2.11	616611	194	140x110	105x80	11	56	156	250									
200	50	2.23	614206	1.81	615706	2.49	616606	240	140x110	105x80	11	56	156	300									
80	30	0.63	614501	0.41	615901	0.84	616621	107	100x85	80x60	9	37	120	75									
100	30	0.75	614502	0.43	615902	0.90	616622	128	100x85	80x60	9	35	120	120									
125	35	0.92	614503	0.67	615903	1.07	616623	156	100x85	80x60	9	37	120	180									
150	35	1.11	614504	0.82	615904	1.23	616624	182	100x85	80x60	9	34	120	220									
150	45	1.98	614511	1.51	615911	2.16	616631	194	140x110	105x80	11	56	156	250									
200	50	2.27	614506	1.86	615906	2.51	616626	240	140x110	105x80	11	56	156	300									
80	30	0.60	614701	0.48	614801	0.77	614901	107	100x85	80x60	9	37	120	85									
100	30	0.67	614702	0.53	614802	0.84	614902	128	100x85	80x60	9	35	120	120									
125	35	0.82	614703	0.66	614803	1.02	614903	156	100x85	80x60	9	37	120	180									

Options available to order:

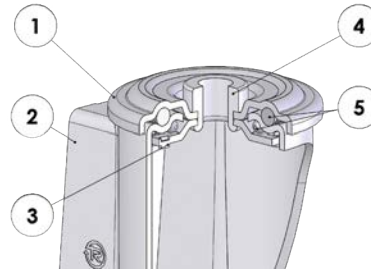


Bracket with directional lock
d. 80-125 mm



Directional lock for brackets
d. 150-200 mm

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

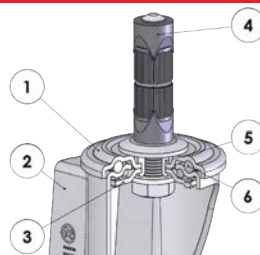
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
80	30	0.55	617701	0.73	616401	107	73	12	37	120	75				
100	30	0.67	617702	0.88	616402	128	73	12	35	120	120				
125	35	0.85	617703	1.00	616403	156	73	12	37	120	180				
150	35	1.01	617704	1.14	616404	182	73	12	34	120	220				
150	45	1.69	617711	1.98	616411	188	102	20	56	156	250				
200	50	2.13	617706	2.41	616406	236	102	20	56	156	300				
80	30	0.57	617801	0.75	616421	107	73	12	37	120	75				
100	30	0.68	617802	0.88	616422	128	73	12	35	120	120				
125	35	0.87	617803	1.02	616423	156	73	12	37	120	180				
150	35	1.03	617804	1.16	616424	182	73	12	34	120	220				
150	45	1.74	617811	2.03	616431	188	102	20	56	156	250				
200	50	2.18	617806	2.46	616426	236	102	20	56	156	300				
80	30	0.56	614301	0.72	615501	107	73	12	37	120	85				
100	30	0.61	614302	0.78	615502	128	73	12	35	120	120				
125	35	0.79	614303	0.96	615503	156	73	12	37	120	180				

Options available to order:



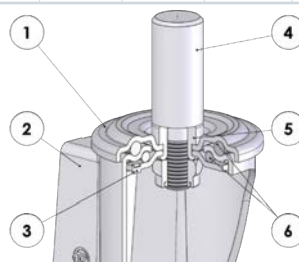
Fitting with threaded stem

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Stem: zamak expander
 - 5) King pin: bushing in electrolytically galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
80	30	0.67	619201	0.85	619301	109	20	65	20-24	37	120	75
100	30	0.79	619202	1.00	619302	130	20	65	20-24	35	120	120
125	35	0.97	619203	1.12	619303	158	20	65	20-24	37	120	130



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Solid stem: galvanised steel
 - 5) King pin: bushing in galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
100	30	1.67	616102	1.88	616202	128	73	22	47	35	120	120
125	35	1.85	616103	2.00	616203	156	73	22	47	37	120	180
150	35	2.01	616104	2.14	616204	182	73	22	47	34	120	220
150	45	2.69	616111	2.98	616211	188	102	26	56	56	156	250
200	50	3.13	616106	3.41	616206	236	102	26	56	56	156	300

Options available to order:



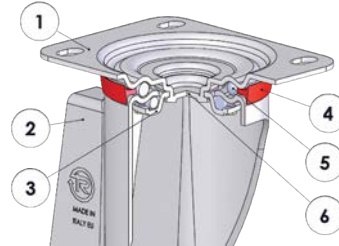
Bracket with Zamak stem fitted with wheels with roller bearings and single ball bearing d. 80-125 mm



Fitting with solid stem with customised dimensions

Standard-duty brackets NLX in stainless steel - max carrying capacity 300 daN

INOX

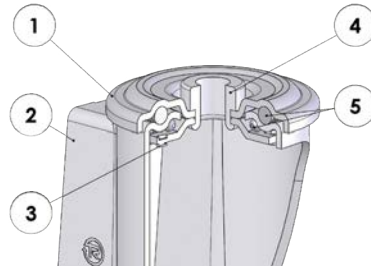


- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

Wheel		Bracket		Bracket		Bracket		Bracket		Bracket		Bracket		Bracket		Bracket	
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN
80	30	0.61	614401	0.35	615101	0.78	616701	107	100x85	80x60	9	37	120				75
100	30	0.65	614402	0.40	615102	0.83	616702	128	100x85	80x60	9	35	120				120
125	35	0.81	614403	0.64	615103	0.95	616703	156	100x85	80x60	9	37	120				180
150	35	0.97	614404	0.81	615104	1.10	616704	182	100x85	80x60	9	34	120				220
150	45	1.77	614411	1.33	615111	1.98	616711	194	140x110	105x80	11	56	156				250
200	50	2.20	614406	1.71	615106	2.48	616706	240	140x110	105x80	11	56	156				300
80	30	0.64	614601	0.38	615601	0.81	616721	107	100x85	80x60	9	37	120				75
100	30	0.65	614602	0.41	615602	0.84	616722	128	100x85	80x60	9	35	120				120
125	35	0.83	614603	0.66	615603	0.97	616723	156	100x85	80x60	9	37	120				180
150	35	0.99	614604	0.83	615604	1.12	616724	182	100x85	80x60	9	34	120				220
150	45	1.82	614611	1.38	615611	2.03	616731	194	140x110	105x80	11	56	156				250
200	50	2.25	614606	1.74	615606	2.53	616726	240	140x110	105x80	11	56	156				300
80	30	0.60	615401	0.48	615001	0.77	616901	107	100x85	80x60	9	37	120				85
100	30	0.67	615402	0.53	615002	0.84	616902	128	100x85	80x60	9	35	120				120
125	35	0.78	615403	0.66	615003	0.95	616903	156	100x85	80x60	9	37	120				180

Standard-duty brackets NLX in stainless steel - max carrying capacity 300 daN

INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
80	30	0.55	617901	0.72	618801	107	73	12	37	120	75				
100	30	0.61	617902	0.82	618802	128	73	12	35	120	120				
125	35	0.79	617903	0.94	618803	156	73	12	37	120	180				
150	35	0.90	617904	1.03	618804	182	73	12	34	120	220				
150	45	1.57	617911	1.85	618811	188	102	20	56	156	250				
200	50	2.14	617906	2.40	618806	236	102	20	56	156	300				
80	30	0.58	618001	0.75	618821	107	73	12	37	120	75				
100	30	0.62	618002	0.82	618822	128	73	12	35	120	120				
125	35	0.81	618003	0.96	618823	156	73	12	37	120	180				
150	35	0.92	618004	1.05	618824	182	73	12	34	120	220				
150	45	1.62	618011	1.90	618831	188	102	20	56	156	250				
200	50	2.46	618006	2.45	618826	236	102	20	56	156	300				
80	30	0.56	616301	0.72	616501	107	73	12	37	120	85				
100	30	0.61	616302	0.78	616502	128	73	12	35	120	120				
125	35	0.73	616303	0.88	616503	156	73	12	37	120	180				

POLYAMIDE 6 SOLID WHEELS



INOX



Description

Polyamide 6 solid wheels 6, hardness 70 Shore D.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing with plastic cage. Also available with stainless steel roller bearings.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding. The wheel is also available without bearings.

Uses

Intended mainly for static uses, for medium-heavy capacities.

The excellent rolling resistance ensures that minimum manual effort is needed in handling, but only on smooth floors.

Examples of recommended applications: trolleys for internal use in the food and canning industries, tannery equipment, flower trolleys, manual pallet trucks, mobile scaffoldings (fitted with adequate brackets, they meet UNI EN 1004:2005 Standards).

Environments of use

Designed for industrial environments, even in presence of aggressive chemical substances. Not recommended in areas with strong organic acids and concentrated mineral acids.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

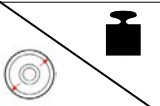
Floors

Suitable only for smooth and compact floors.

Not suited for areas with obstacles.



Force required to push or tow a wheel

	100 kg	200 kg	300 kg	400 kg	500 kg	700 kg	1000 kg	1200 kg
65 mm	5.5	----	----	----	----	----	----	----
80 mm	4	----	----	----	----	----	----	----
100 mm	3.5	6	9	----	----	----	----	----
125 mm	2.5	5	6	8	----	----	----	----
150 mm	1	2.5	6	8	10	----	----	----
175 mm	< 1	2	5.5	7	9	----	----	----
200 mm	< 1	1.8	4.7	5.8	6.5	7.8	----	----
250 mm	< 1	1.5	4	4.5	6	8	12	16

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 350 daN - available diameters 65-250 mm
Top plate, bolt hole, solid stem fittings. Available with front brake.



Standard-duty brackets NLX in stainless steel

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fittings. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 730 daN - available diameters 100-200 mm
Top plate fittings. Available with front brake and adjustable rear brake.



Heavy supports in PX stainless steel

Maximum carrying capacity 730 daN - available diameters 150-200 mm
Top plate fittings. Available with adjustable rear brake.



Electrowelded brackets EE HD

Maximum carrying capacity 1200 daN - available diameters 250 mm
Top plate fittings. Available with adjustable rear brake.



Mobile scaffolding brackets (See Scaffolding section)

Maximum carrying capacity 400 daN - maximum capacity according to UNI EN 1004:2005 750 daN
Available diameters 125-200 mm. Top plate, solid stem and threaded stem with leveller fittings. Available with single brake and double pedal.










Options available to order:

The series 68 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.














Black polypropylene wheels (only version with hub with plain bore)
















															
mm	mm	kg	CODE	mm	mm.	daN	daN	daN							
65	30	0.06	681100	12	34	125	90	120							
80	30	0.08	681111	12	39	200	150	180							
100	30	0.13	681112	12	44	350	175	300							
125	38	0.23	681103	15	44	450	200	400							
150	45	0.34	681104	20	59	600	250	500							
175	45	0.48	681105	20	59	700	275	630							
200	50	0.64	681106	20	59	800	315	730							
250	60	1.30	681108	25	88	1300	450	1200							

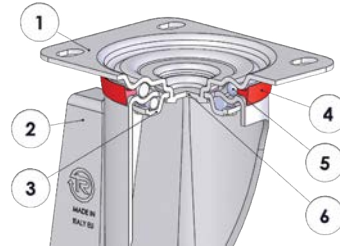


															
mm	mm	kg	CODE	kg	CODE	mm	mm	daN	daN	daN					
80	30	0.10	683111	0.10	683211	12	39	200	150	180					
100	30	0.15	683112	0.15	683212	12	44	350	175	300					
125	38	0.25	683103	0.25	683203	15	44	450	200	400					
150	45	0.51	683104	0.51	683204	20	59	600	250	500					
175	45	0.60	683105	0.60	683205	20	59	700	275	630					
200	50	0.82	683106	0.82	683206	20	59	800	315	730					
200	50	0.81	683116	0.81	683216	25	59	800	315	730					
250	60	1.38	683108	1.38	683208	25	88	1300	450	1200					



															
mm	mm	kg	CODE	kg	CODE	mm	mm.	mm	mm	daN	daN	daN			
200	50	0.82	683306	0.63	682106	20	60	47	14	800	315	730			
200	50	0.81	683316	0.63	682106	25	60	47	14	800	315	730			

Standard-duty brackets NL - max carrying capacity 350 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

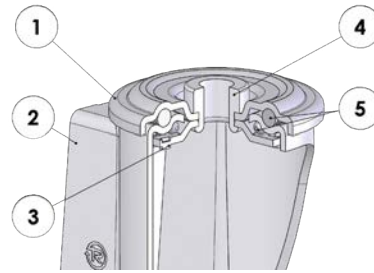
mm		kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
65	30	0.57	684500	0.37	685100			100	100x85	80x60	9	37		120
80	30	0.58	684501	0.39	685101	0.78	686801	107	100x85	80x60	9	37	120	180
100	30	0.65	684502	0.46	685102	0.85	686802	128	100x85	80x60	9	35	120	200
125	38	0.89	684503	0.64	685103	1.04	686803	156	100x85	80x60	9	37	120	220
125PG	38	1.10	684513	0.91	685143	1.30	686843	156	140x110	105x80	11	37	120	220
150B	45	1.02	684512	0.85	685142			182	100x85	80x60	9	50		220
150	45	1.77	684504	1.45	685104	1.99	686804	194	140x110	105x80	11	56	156	300
175	45	1.90	684505	1.56	685105	2.13	686805	217	140x110	105x80	11	56	156	300
200	50	2.14	684506	1.92	685106	2.33	686806	240	140x110	105x80	11	56	156	300
250	60	4.62	684108	3.19	685108			296	200x160	160x120	14	86		350
80	30	0.61	684801	0.41	685301	0.80	686821	107	100x85	80x60	9	37	120	180
100	30	0.68	684802	0.49	685302	0.88	686822	128	100x85	80x60	9	35	120	200
125	38	0.91	684803	0.66	685303	1.07	686823	156	100x85	80x60	9	37	120	220
125PG	38	1.12	684813	0.94	685323	1.33	686853	156	140x110	105x80	11	37	120	220
150B	45	1.20	684812	1.03	685322			182	100x85	80x60	9	50		220
150	45	1.94	684804	1.63	685304	2.17	686824	194	140x110	105x80	11	56	156	300
175	45	2.02	684805	1.68	685305	2.27	686825	217	140x110	105x80	11	56	156	300
200	50	2.32	684806	2.10	685306	2.46	686826	240	140x110	105x80	11	56	156	300
200	50	2.50	684866	2.30	685166	2.67	686846	240	140x110	105x80	11	56	156	300

Options available to order:















Black polypropylene wheels (only version with hub with plain bore)

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

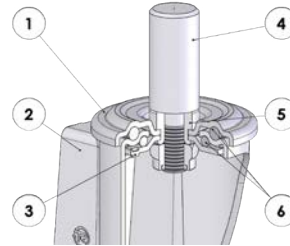
															
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
65	30	0.51	687700			100	73	12	37		120				
80	30	0.52	687701	0.70	686701	107	73	12	37	120	180				
100	30	0.55	687702	0.80	686702	128	73	12	35	120	200				
125	38	0.85	687703	0.99	686703	156	73	12	37	120	220				
150	45	1.57	687704	1.86	686704	188	102	20	56	156	300				
175	45	1.73	687705	2.02	686705	212	102	20	56	156	300				
200	50	1.95	687706	2.24	686706	236	102	20	56	156	300				
80	30	0.54	687901	0.73	686721	107	73	12	37	120	180				
100	30	0.62	687902	0.83	686722	128	73	12	35	120	200				
125	38	0.87	687903	1.02	686723	156	73	12	37	120	220				
150	45	1.75	687904	2.03	686724	188	102	20	56	156	300				
175	45	1.85	687905	2.14	686725	212	102	20	56	156	300				
200	50	2.13	687906	2.42	686726	236	102	20	56	156	300				
200	50	2.19	688006	2.48	686606	236	102	20	56	156	300				

Options available to order:



Fitting with threaded stem

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Solid stem: galvanised steel
 - 5) King pin: bushing in galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN		
100	30	1.55	686102	1.80	687102	128	73	22	47	35	120	200		
125	38	1.85	686103	1.99	687103	156	73	22	47	37	120	220		
150	45	2.57	686104	2.86	687104	188	102	26	56	56	156	300		
200	50	2.95	686106	3.24	687106	236	102	26	56	56	156	300		

Options available to order:



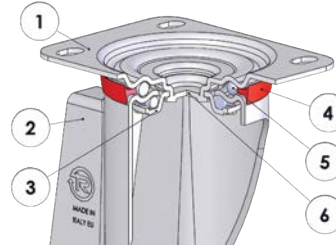
Fitting with expansion stem in polyamide d. 80-125 mm



Fitting with solid stem with dimensions that can be customised

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN

INOX

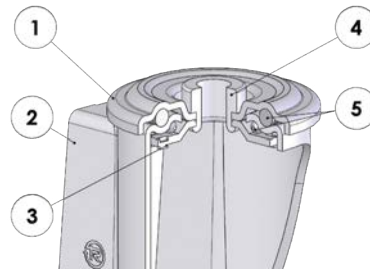


- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

													4 km/h			
mm	mm	kg	CODE	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
80	30	0.55	684401	0.29	685401	0.73	689001	107	100x85	80x60	9	37	120	180		
100	30	0.61	684402	0.36	685402	0.76	689002	128	100x85	80x60	9	35	120	200		
125	38	0.78	684403	0.63	685403	0.95	689003	156	100x85	80x60	9	37	120	220		
150B	45	1.03	684408	0.83	685408			182	100x85	80x60	9	50		220		
150	45	1.65	684404	1.20	685404	1.94	689004	194	140x110	105x80	11	56	156	300		
175	45	1.79	684405	1.35	685405	2.08	689005	217	140x110	105x80	11	56	156	300		
200	50	2.02	684406	1.56	685406	2.30	689006	240	140x110	105x80	11	56	156	300		
80	30	0.56	684601	0.31	685601	0.75	689101	107	100x85	80x60	9	37	120	180		
100	30	0.64	684602	0.39	685602	0.79	689102	128	100x85	80x60	9	35	120	200		
125	38	0.80	684603	0.65	685603	0.97	689103	156	100x85	80x60	9	37	120	220		
150B	45	1.21	684608	1.00	685608			182	100x85	80x60	9	50		220		
150	45	1.83	684604	1.39	685604	2.11	689104	194	140x110	105x80	11	56	156	300		
175	45	1.91	684605	1.47	685605	2.20	689105	217	140x110	105x80	11	56	156	300		
200	50	2.20	684606	1.75	685606	2.48	689106	240	140x110	105x80	11	56	156	300		

Stainless steel standard-duty brackets NLX -- max carrying capacity 300 daN

INOX

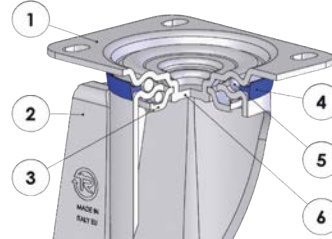
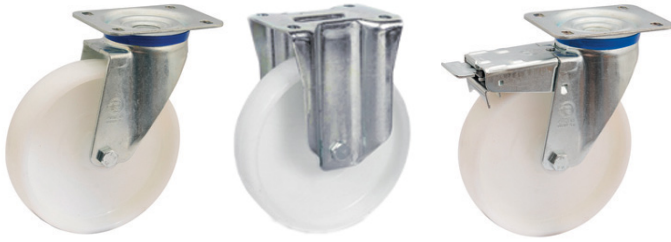


- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN						
80	30	0.50	685801	0.68	686001	107	73	12	37	120	180						
100	30	0.61	685802	0.79	686002	128	73	12	35	120	200						
125	38	0.79	685803	0.93	686003	156	73	12	37	120	220						
150	45	1.45	685804	1.75	686004	188	102	20	56	156	300						
175	45	1.61	685805	1.89	686005	212	102	20	56	156	300						
200	50	1.93	685806	2.22	686006	236	102	20	56	156	300						

80	30	0.52	685901	0.73	686021	107	73	12	37	120	180						
100	30	0.63	685902	0.81	686022	128	73	12	35	120	200						
125	38	0.81	685903	0.96	686023	156	73	12	37	120	220						
150	45	1.63	685904	1.93	686024	188	102	20	56	156	300						
175	45	1.73	685905	2.01	686025	212	102	20	56	156	300						
200	50	2.11	685906	2.40	686026	236	102	20	56	156	300						

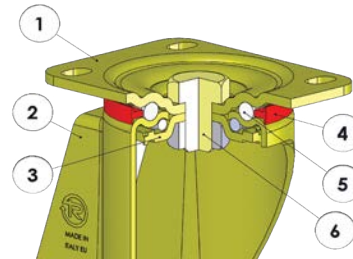
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: blue polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted
Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	45	2.12	684704	1.45	685104	2.52	688204	194	140x110	105x80	11	58	178	500
200	50	2.53	684706	1.92	685106	2.89	688206	240	140x110	105x80	11	50	178	500
150	45	2.29	685004	1.63	685304	2.70	689204	194	140x110	105x80	11	58	178	500
200	50	2.71	685006	2.10	685306	3.01	689206	240	140x110	105x80	11	50	178	500
200	50	2.69	684206	2.10	685166	3.22	684306	240	140x110	105x80	11	50	178	500

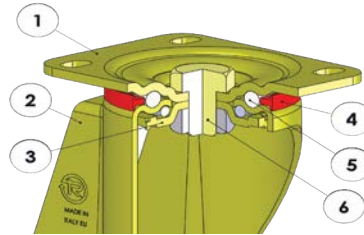
Medium-heavy duty brackets P - max carrying capacity 730 daN



- 1) Plate: galvanised colonial steel plate
- 2) Fork: galvanised colonial steel plate
- 3) Ball race ring: galvanised colonial steel plate
- 4) Dust seal: orange polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: steel bolt in grade 8.8 steel and steel nut
Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
100	30	0.99	687502	0.60	688502	1.14	686902	138	100x85	80x60	9	46	123	300
125	38	1.16	687503	0.64	688503	1.27	686903	161	100x85	80x60	9	46	123	350
100	30	1.02	687602	0.63	688602	1.17	686922	138	100x85	80x60	9	46	123	300
125	38	1.18	687603	0.66	688603	1.29	686923	161	100x85	80x60	9	46	123	350

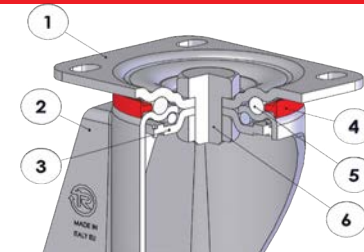
Medium-heavy duty brackets P - max carrying capacity 730 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg		CODE		kg		CODE		mm		mm		mm		mm		daN	
150	45	2.80	687504	1.67	688504	2.98	686904	200	140x110	105x80	11	70	156	500					
175	45	2.86	687505	1.45	688505	3.43	686905	225	140x110	105x80	11	70	156	630					
200	50	3.11	687506	1.65	688506	3.39	686906	250	140x110	105x80	11	70	156	730					
150	45	2.97	687604	1.57	688604	3.54	686924	200	140x110	105x80	11	70	156	500					
175	45	2.98	687605	1.69	688605	3.55	686925	225	140x110	105x80	11	70	156	630					
200	50	3.28	687606	1.83	688606	3.85	686926	250	140x110	105x80	11	70	156	730					
200	50	3.35	684966	1.89	685366	3.63	686946	250	140x110	105x80	11	70	156	730					

Stainless steel medium-heavy duty brackets PX - max carrying capacity 730 daN

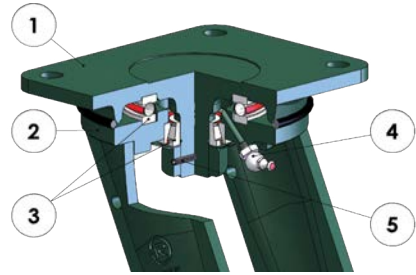


INOX

- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: red polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: screw and nut in stainless steel
- Available with adjustable total rear foot brake

mm		kg		CODE		kg		CODE		mm		mm		mm		mm		daN	
150	45	2.66	687004	1.23	687114	3.23	687214	200	140x110	105x80	11	70	156	500					
175	45	2.86	687005	1.42	687115	3.43	687215	225	140x110	105x80	11	70	156	630					
200	50	3.06	687006	1.62	687116	3.63	687216	250	140x110	105x80	11	70	156	730					
150	45	2.86	687314	1.41	687414	3.40	687514	200	140x110	105x80	11	70	156	500					
175	45	2.94	687315	1.54	687415	3.51	687515	225	140x110	105x80	11	70	156	630					
200	50	3.24	687316	1.80	687416	3.81	687516	250	140x110	105x80	11	70	156	730					

Electrowelded brackets EE HD - max carrying capacity 1200 daN



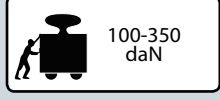
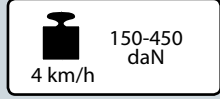
- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn tips electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable rear drive brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
250	60	7.99	688307	6.40	688407	8.87	688707	320	175x140	140x105	14	74	166	1200	



Our work, our passion

SIGMA ELASTIC RUBBER WHEELS WITH POLYAMIDE 6 CENTRE



Description

Tyre: blue non-marking Sigma Elastic rubber, hardness 70 Shore A, good resistance to tear and wear.

Centre: polyamide 6.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing in plastic cage. Also available with stainless steel roller bearings.

Hub with ball bearings with interference assembly in the seats obtained by centre moulding. The wheel is also available without bearings.

Uses

Wheels with excellent elasticity features, they are particularly suitable for use on uneven surfaces, in presence of obstacles or for mixed indoor/outdoor uses with medium-duty loads.

The good elasticity and rolling resistance guarantee minimum effort, particularly on uneven surfaces.

Examples of recommended applications: trolleys for industrial indoor and outdoor handling, manual pallet trucks, flight cases for transporting musical instruments.

Environments of use

Designed for industrial environments, even in presence of medium-harsh chemical agents. Not suitable in presence of organic, aromatic solvents, chlorinated substances and hydrocarbons.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

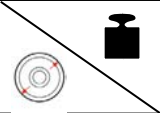
For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

They are suitable for use on all types of floors, even in presence of obstacles. They do not mark or damage fragile floors.



Force required to push or tow a wheel

 50 kg	100 kg	150 kg	200 kg	300 kg	400 kg
100 mm	2	5	8	---	---
125 mm	1.8	3	5	7	---
160 mm	1	2	3	5	8.5
180 mm	< 1	1	2	3	5.5
200 mm	< 1	< 1	1	1.7	3.5

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-200 mm
Top plate, bolt hole and solid stem fittings. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 450 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 450 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Stainless steel medium-heavy duty brackets PX I

Maximum carrying capacity 450 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable rear brake.

Options available to order:










The series 73 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.














Wheels with standard-duty bracket in stainless steel NLX

SIGMA ELASTIC RUBBER WHEELS WITH POLYAMIDE 6 CENTRE
















														
mm	mm	kg	CODE	mm	mm.	daN	daN	daN						
100	40	0.31	731102	12	44	200	100	150						
125	40	0.38	731103	15	44	270	150	230						
160	50	0.83	731104	20	59	350	200	300						
180	50	0.90	731105	20	59	400	280	350						
200	50	1.04	731106	20	59	510	350	450						

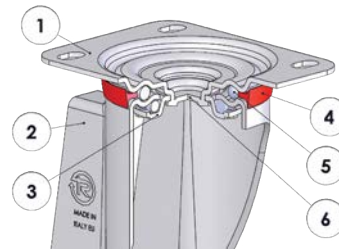
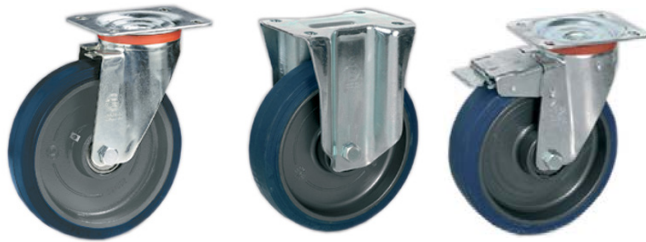


															
mm	mm	kg	CODE	kg	CODE	mm	mm	daN	daN	daN					
100	40	0.36	733102			12	44	200	100	150					
125	40	0.58	733103			20	44	270	150	230					
160	50	1.04	733104	1.04	733204	20	59	350	200	300					
180	50	1.10	733105	1.10	733205	20	59	400	280	350					
200	50	1.25	733106	1.25	733206	20	59	510	350	450					



															
mm	mm	kg	CODE	kg	CODE	mm	mm.	mm	mm	daN	daN	daN			
100	40	0.36	732102	0.29	734102	12	40	32	11.5	200	120	150			
125	40	0.58	732103	0.38	734103	20	44	47	17	270	200	230			
160	50	0.99	732104	0.79	734104	20	58	47	17	350	250	300			
160	50	0.94	732114	0.79	734104	25	58	47	17	350	250	300			
180	50	1.05	732105	0.85	734105	20	58	47	17	400	320	350			
180	50	1.00	732115	0.85	734105	25	58	47	17	400	320	350			
200	50	1.12	732106	0.92	734106	20	58	47	17	510	350	450			
200	50	1.07	732116	0.92	734106	25	58	47	17	510	350	450			

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
100	40	0.85	735002	0.65	735102	0.97	735202	128	100x85	80x60	9	35	120	150
125	40	1.08	735003	0.81	735103	1.19	735203	156	100x85	80x60	9	37	120	220
160	50	2.11	735004	1.74	735104	2.36	735204	198	140x110	105x80	11	56	156	300
180	50	2.22	735005	1.81	735105	2.46	735205	219	140x110	105x80	11	56	156	300
200	50	2.44	735006	1.98	735106	2.69	735206	240	140x110	105x80	11	56	156	300
100	40	0.91	735302	0.70	735402	1.02	735502	128	100x85	80x60	9	35	120	150
125	40	1.23	735303	0.96	735403	1.34	735503	156	100x85	80x60	9	37	120	220
160	50	2.32	735304	1.89	735404	2.51	735504	198	140x110	105x80	11	56	156	300
180	50	2.42	735305	1.96	735405	2.61	735505	219	140x110	105x80	11	56	156	300
200	50	2.65	735306	2.06	735406	2.77	735506	240	140x110	105x80	11	56	156	300
100	40	0.91	735602	0.70	735702	1.02	735802	128	100x85	80x60	9	35	120	150
125	40	1.23	735603	0.96	735703	1.34	735803	156	100x85	80x60	9	37	120	220
160	50	2.32	735604	1.94	735704	2.56	735804	198	140x110	105x80	11	56	156	300
180	50	2.42	735605	2.01	735705	2.66	735805	219	140x110	105x80	11	56	156	300
200	50	2.65	735606	2.19	735706	2.89	735806	240	140x110	105x80	11	56	156	300

Options available to order:



Bracket with directional lock
d. 80-125 mm

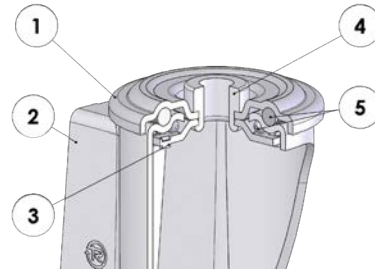


Directional lock for brackets
d. 150-200 mm















Bracket with active centralised brake
d. 160-200 mm

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

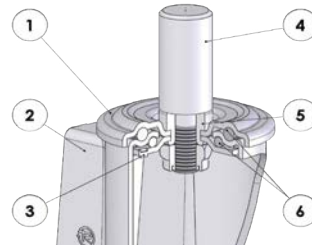
															
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
100	40	0.75	737702	0.93	738202	128	73	12	35	120	150				
125	40	0.90	737703	1.11	738203	156	73	12	37	120	220				
160	50	1.43	737704	1.56	738204	193	102	20	56	156	300				
180	50	2.21	737705	2.49	738205	214	102	20	56	156	300				
200	50	2.35	737706	2.63	738206	236	102	20	56	156	300				
100	40	0.81	737802	0.98	738302	128	73	12	35	120	150				
125	40	1.05	737803	1.26	738303	156	73	12	37	120	220				
160	50	1.64	737804	1.77	738304	193	102	20	56	156	300				
180	50	2.41	737805	2.69	738305	214	102	20	56	156	300				
200	50	2.56	737806	2.84	738306	236	102	20	56	156	300				
100	40	0.81	735902	0.98	738402	128	73	12	35	120	150				
125	40	1.05	735903	1.26	738403	156	73	12	37	120	220				
160	50	1.64	735904	1.77	738404	193	102	20	56	156	300				
180	50	2.41	735905	2.69	738405	214	102	20	56	156	300				
200	50	2.56	735906	2.84	738406	236	102	20	56	156	300				

Options available to order:



Bracket with Zamak stem fitted
d. 80-125 mm

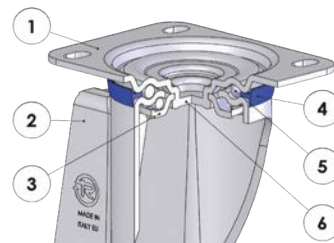
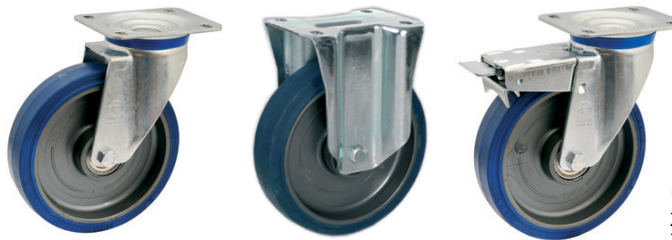
Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Solid stem: galvanised steel
 - 5) King pin: bushing in galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	
100	40	1.75	738702	1.93	738802	128	73	22	47	35	120	150	
125	40	1.90	738703	2.11	738803	156	73	22	47	37	120	220	
160	50	2.43	738704	2.56	738804	193	102	26	56	56	156	300	
180	50	3.21	738705	3.49	738805	214	102	26	56	56	156	300	
200	50	3.35	738706	3.63	738806	236	102	26	56	56	156	300	

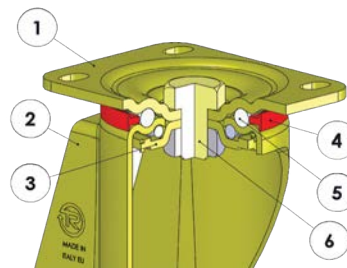
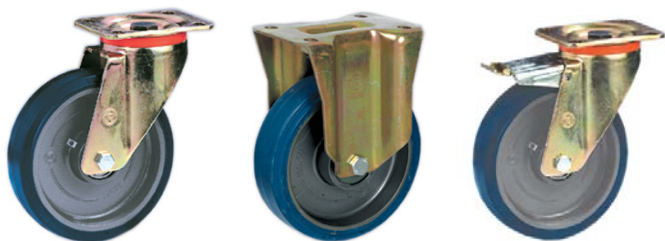
Medium-duty brackets M - max carrying capacity 450 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

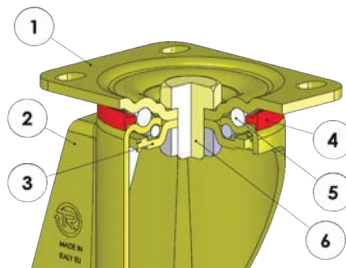
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
160	50	2.46	736904	1.74	735104	2.89	737604	198	140x110	105x80	11	58	178	300
200	50	2.83	736906	1.98	735106	3.24	737606	240	140x110	105x80	11	50	178	450
160	50	2.67	738904	1.94	735404	3.09	739004	198	140x110	105x80	11	58	178	300
200	50	3.04	738906	2.19	735406	3.44	739006	240	140x110	105x80	11	50	178	450
160	50	2.62	739104	1.89	735704	3.04	739204	198	140x110	105x80	11	58	178	300
200	50	2.91	739106	2.06	735706	3.32	739206	240	140x110	105x80	11	50	178	450

Medium-heavy duty brackets P - max carrying capacity 450 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm						daN
100	40	1.18	736002	0.69	736102	1.33	736202	138	100x85	80x60	9	46	123	150
125	40	1.34	736003	0.82	736103	1.48	736203	161	100x85	80x60	9	44	123	230
100	40	1.23	736302	0.73	736402	1.37	736502	138	100x85	80x60	9	46	123	150
125	40	1.49	736303	0.97	736403	1.63	736503	161	100x85	80x60	9	44	123	230
100	40	1.23	736602	0.73	736702	1.37	736802	138	100x85	80x60	9	46	123	150
125	40	1.49	736603	0.97	736703	1.63	736803	161	100x85	80x60	9	44	123	230

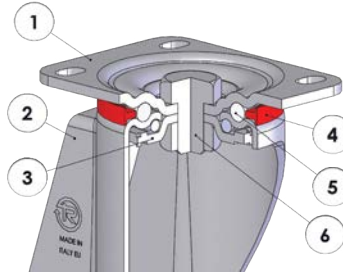


- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm						daN
160	50	3.18	736004	1.79	736104	3.75	736204	205	140x110	105x80	11	70	126	300
180	50	3.29	736005	1.89	736105	3.86	736205	225	140x110	105x80	11	70	126	350
200	50	3.54	736006	2.05	736106	4.11	736206	250	140x110	105x80	11	70	126	450
160	50	3.39	736304	1.99	736404	3.91	736504	205	140x110	105x80	11	70	126	300
180	50	3.49	736305	2.09	736405	4.06	736505	225	140x110	105x80	11	70	126	350
200	50	3.74	736306	2.26	736406	4.31	736506	250	140x110	105x80	11	70	126	450
160	50	3.34	736604	1.99	736704	3.91	736804	205	140x110	105x80	11	70	126	300
180	50	3.44	736605	2.04	736705	4.01	736805	225	140x110	105x80	11	70	126	350
200	50	3.62	736606	2.13	736706	4.19	736806	250	140x110	105x80	11	70	126	450

Stainless steel medium-heavy duty brackets PX - max carrying capacity 450 daN

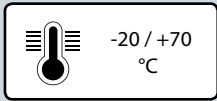
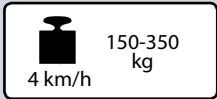
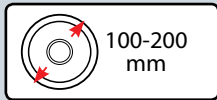
INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: screw and nut in stainless steel
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN	
160	50	3.19	737004	1.74	737104	3.76	737204	205	140x110	105x80	11	70	126	300		
180	50	3.36	737005	1.81	737105	3.93	737205	225	140x110	105x80	11	70	126	350		
200	50	3.58	737006	1.98	737106	4.15	737206	250	140x110	105x80	11	70	126	450		
160	50	3.40	737304	1.94	737404	3.97	737504	205	140x110	105x80	11	70	126	300		
180	50	3.56	737305	2.01	737405	4.13	737505	225	140x110	105x80	11	70	126	350		
200	50	3.78	737306	2.19	737406	4.35	737506	250	140x110	105x80	11	70	126	450		

ELASTIC RUBBER WHEELS WITH POLYAMIDE 6 CENTRE



Description

Tyre: blue non-marking elastic rubber, hardness 70 Shore A

Centre: in polyamide 6.

Hub with plain bore hole which directly houses the axle.

Hub with ball bearings with interference assembly in the seats obtained by centre moulding.

Uses

Wheels with good elasticity, they are particularly suitable for use on uneven surfaces, in presence of obstacles or for mixed indoor/outdoor uses with medium-duty loads. Examples of recommended applications: trolleys for industrial indoor and outdoor handling, manual transpallet, flight cases for transporting musical instruments.

Environments of use

Designed for industrial environments, even in presence of medium-harsh chemical agents. Not suitable in presence of organic, aromatic solvents, chlorinated substances and hydrocarbons.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

They are suitable for use on all types of floors, even in the presence of obstacles. They do not mark or damage fragile floors.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	300 kg	400 kg
100 mm	2	5	8	----	----	----
125 mm	1.8	3	5	7	----	----
160 mm	1	2	3	6	8.5	----
200 mm	< 1	1.7	2.5	3.8	6.5	----

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake.












Medium-heavy duty brackets P

Maximum carrying capacity 350 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.












SERIES **73AE**

ELASTIC RUBBER WHEELS
WITH POLYAMIDE 6 CENTRE

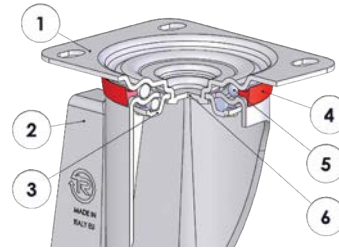


																
mm	mm	kg	CODE	mm	mm	daN	daN	daN								
100	36	0.22	731102AE	12	44	200	100	150								
125	36	0.33	731103AE	12	44	270	150	200								
160	48	0.76	731104AE	20	59	350	175	300								
200	48	1.06	731106AE	20	59	510	235	350								



																
mm	mm	kg	CODE	mm	mm	mm	mm	daN	daN	daN						
100	36	0.32	732102AE	12	40	32	10	200	100	150						
125	36	0.41	732103AE	12	40	32	10	270	150	200						
160	48	0.98	732104AE	20	55	47	14	350	175	300						
200	48	1.28	732106AE	20	55	47	14	510	235	350						

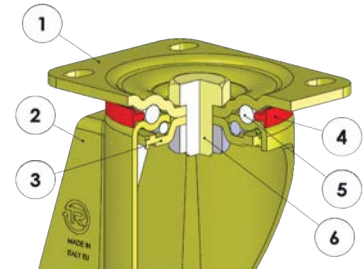
Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

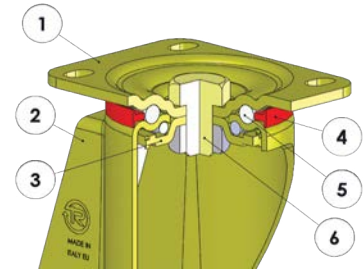
mm		kg		CODE		kg		CODE		mm		mm		mm		mm		mm		daN	
100	36	0.76	735002AE	0.56	735102AE	0.88	735202AE	128	100x85	80x60	9	35	120	150							
125	36	1.03	735003AE	0.76	735103AE	1.14	735203AE	156	100x85	80x60	9	37	120	200							
160	48	2.04	735004AE	1.67	735104AE	2.29	735204AE	198	140x110	105x80	11	56	156	300							
200	48	2.46	735006AE	2.00	735106AE	2.71	735206AE	240	140x110	105x80	11	56	156	300							
100	36	0.87	735602AE	0.66	735702AE	0.93	735802AE	128	100x85	80x60	9	35	120	150							
125	36	1.06	735603AE	0.79	735703AE	1.12	735803AE	156	100x85	80x60	9	37	120	200							
160	48	2.26	735604AE	1.88	735704AE	2.50	735804AE	198	140x110	105x80	11	56	156	300							
200	48	2.68	735606AE	2.22	735706AE	2.93	735806AE	240	140x110	105x80	11	56	156	300							

Medium-heavy duty brackets P - max carrying capacity 350 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
100	36	1.09	736002AE	0.60	736102AE	1.24	736202AE	138	100x85	80x60	9	46	123	150
125	36	1.29	736003AE	0.77	736103AE	1.28	736203AE	161	100x85	80x60	9	44	123	200
100	36	1.19	736602AE	0.69	736702AE	1.33	736802AE	138	100x85	80x60	9	46	123	150
125	36	1.32	736603AE	0.80	736703AE	1.46	736803AE	161	100x85	80x60	9	44	123	200



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
160	48	3.11	736004AE	1.72	736104AE	3.68	736204AE	205	140x110	105x80	11	70	126	300
200	48	3.56	736006AE	2.07	736106AE	4.13	736206AE	250	140x110	105x80	11	70	126	350
160	48	3.33	736604AE	1.98	736704AE	3.90	736804AE	205	140x110	105x80	11	70	126	300
200	48	3.78	736606AE	2.29	736706AE	4.35	736806AE	250	140x110	105x80	11	70	126	350



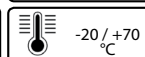
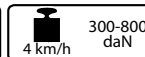
Details make the difference

INDUSTRIAL HEAVY DUTY LOADS AND MECHANICAL HANDLING



SERIES 62 AL

"TR-ROLL" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE

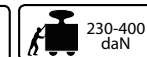


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SERIES 62 M

"TR-ROLL" POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE



PAGE 152



SERIES 64

"TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE



PAGE 172



SERIES 65 H

THICK "TR" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE



PAGE 194



SERIES 68 P

POLYAMIDE 6 SOLID WHEELS FOR HEAVY-DUTY LOADS



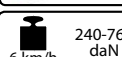
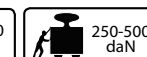
INOX

PAGE 214



SERIES 72 E

SIGMA ELASTIC RUBBER WHEELS WITH ALUMINIUM CENTRE



PAGE 232



SERIES **62A**

"TR-ROLL" POLYURETHANE WHEELS WITH ERGONOMIC ROUND PROFILE AND ALUMINIUM CENTRE

125-200 mm	4 km/h 350-700 daN	350-700 daN
6 km/h 350-700 daN	-20 / +70 °C	ERGO WORKPLACE

PAGE 142



SERIES **62B**

"TR-ROLL" POLYURETHANE WHEELS WITH CAST IRON CENTRE

200-400 mm	4 km/h 800-1700 daN	700-900 daN
6 km/h 800-1700 daN	-20 / +70 °C	

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SERIES **63A**

VULKOLLAN® WHEELS WITH STEEL CENTRE

80-200 mm	4 km/h 250-1500 daN	190-550 daN
200-1200 daN	-20 / +80 °C	

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SERIES **63B**

VULKOLLAN® WHEELS WITH CAST IRON CENTRE

80-300 mm	4 km/h 280-2300 daN	190-600 daN
6 km/h 220-1800 daN	-20 / +80 °C	

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SERIES **65A**

"TR" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE

80-200 mm	4 km/h 220-850 daN	150-360 daN
6 km/h 170-680 daN	-20 / +80 °C	

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SERIES **65B**

"TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE

150-300 mm	4 km/h 400-2200 daN	280-550 daN
6 km/h 320-1700 daN	-20 / +80 °C	

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SERIES **65C**

"TR" POLYURETHANE WHEELS WITH ERGONOMIC ROUND PROFILE AND ALUMINIUM CENTRE

125-200 mm	4 km/h 450-800 daN	250-300 daN
6 km/h 360-640 daN	-20 / +80 °C	ERGO WORKPLACE

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SERIES **66**

"TR" POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE

80-250 mm	4 km/h 150-1000 daN	100-400 daN
6 km/h 120-480 daN	-20 / +80 °C	INOX

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SERIES **69**

CAST IRON SOLID WHEELS

100-200 mm	4 km/h 500-1400 daN	260-800 daN
-40 / +400 °C		

PAGE 220



SERIES **72A**

SIGMA ELASTIC RUBBER WHEELS WITH ALUMINIUM CENTRE

100-200 mm	4 km/h 180-500 daN	180-300 daN
6 km/h 140-400 daN	-20 / +70 °C	

PAGE 226

"TR-ROLL" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE



Description

Tyre: very thick TR-Roll polyurethane, hardness 75 Shore A, with excellent rolling resistance and elasticity and good resistance to wear and tear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Innovative product that combines the load capacity and the resistance to wear and tear of the polyurethane with the ability to overcome obstacles and to damp noise, vibrations and impacts of the elastic rubber. Combined with appropriate brackets, they guarantee excellent performance for mechanical handling up to 16 km/h. The excellent rolling resistance guarantees an easy handling of heavy loads even with wheels of small diameter.

Examples of application: trolleys for the automotive industry, towing applications.

Environments of use

Industrial environments, even in presence of humidity and oils. Not suitable in presence of strong acids and solvents.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable for all types of industrial floors, even outdoors. Facilitates the overcoming of obstacles.

It does not damage the floors.



Force required to push or tow a wheel

 	150 kg	250 kg	350 kg	450 kg	550 kg	700 kg
100 mm	2,5	4	----	----	----	----
125 mm	1,8	3,2	5	----	----	----
160 mm	1,4	2,8	3,5	4,5	5	----
180 mm	< 1	2	3,2	4,2	4,7	----
200 mm	< 1	1,5	2,8	3,7	4,3	5
250 mm	< 1	1,3	2,5	3,7	4,3	5

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-125 mm
Top plate fitting. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 100-250 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 700 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD

Maximum carrying capacity 700 daN - available diameters 100-200 mm
Top plate fitting. Available with adjustable rear brake.



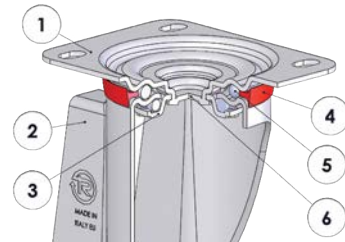
Twin electrowelded brackets EEG MHD - EEG HD

Maximum carrying capacity 1400 daN - available diameters 100-200 mm
Top plate fitting.



mm	mm	kg	CODE	kg	CODE	mm	mm.	mm	mm	daN	daN	daN	daN
100	40	0.48	622102	0.39	624102	15	40	32	10	400	300	300	300
125	40	0.79	622113	0.54	624113	20	40	47	14	500	350	350	350
125	40	0.81	622103	0.56	624103	20	50	47	14	500	350	350	350
160	50	1.25	622104	1.00	624104	20	58	47	14.5	800	550	550	550
160	50	1.24	622114	1.00	624104	25	58	47	14.5	800	550	550	550
180	50	1.50	622105	1.25	624105	20	60	47	14.5	900	600	600	600
200	50	1.85	622106	1.60	624106	20	60	47	14.5	1000	700	700	700
200	50	1.84	622116	1.60	624106	25	60	47	14.5	1000	700	700	700
250	50	2.40	622108	2.10	624108	20	55	52	15	1000	700	800	800

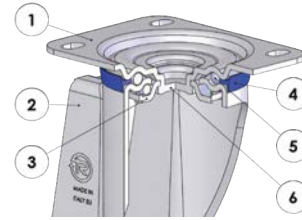
Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	
100	40	0.86	624402	0.83	626202	1.05	627302	128	100x85	80x60	9	37	120	200
125	40	1.35	624413	1.17	626213	1.51	627313	156	100x85	80x60	9	35	120	220
125	40	1.46	624403	1.11	626203	2.34	627303	166	140x110	105x80	11	57	156	300

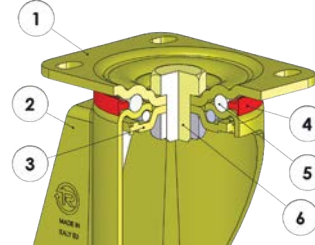
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
160	50	2.95	624504	2.24	627704	3.42	627404	199	140x110	105x80	11	58	178	500
200	50	3.69	624506	3.04	627706	4.07	627406	240	140x110	105x80	11	50	178	500

Medium-heavy duty brackets P - max carrying capacity 700 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

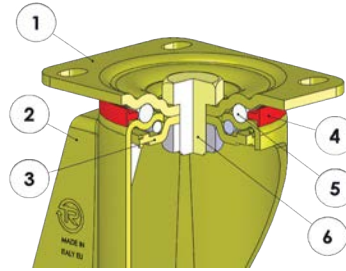
mm	mm	kg	CÓD.	kg	CÓD.	kg	CÓD.	mm	mm	mm	mm	mm	mm	daN	daN
100	40	1,35	627602	0,85	628512	1,52	627202	138	100x85	80x60	9	46	123	300	300
125	40	1,70	627613	1,26	628513	1,87	627213	161	100x85	80x60	9	44	123	350	350

Options available to order:



Footguard
for brackets
NL-M-P

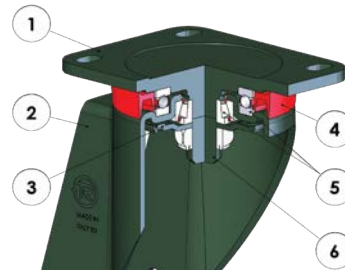
Heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
125	40	2,33	627603	1,69	628503	2,86	627203	170	140x110	105x80	11	70	126	350	350
160	50	3,60	627610	2,11	628514	4,17	627204	205	140x110	105x80	11	70	126	550	550
180	50	3,84	627605	2,42	628515	4,41	627205	228	140x110	105x80	11	70	126	600	600
200	50	4,31	627516	2,85	628516	4,91	627206	250	140x110	105x80	11	70	126	700	700
250	50	4,84	627608	3,74	628518	5,54	627208	298	140x110	105x80	11	66	126	750	750

Extra-heavy duty brackets EP - max carrying capacity 700 daN



- 1) Plate: green galvanised forged steel
 - 2) Fork: green galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
160	50	3.76	627824	3.35	628824	4.28	626664	205	135x110	105x80	11	70	126	550	550
200	50	4.57	627826	4.13	628826	5.14	626656	250	135x110	105x80	11	70	126	700	700

Options available to order:

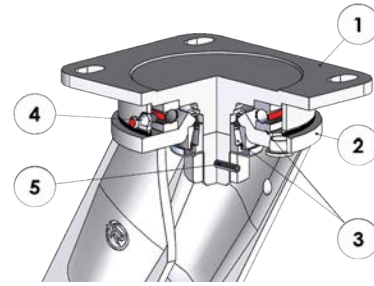


Footguard for brackets NL-M-P



Directional lock for brackets P diam. 160-200 mm

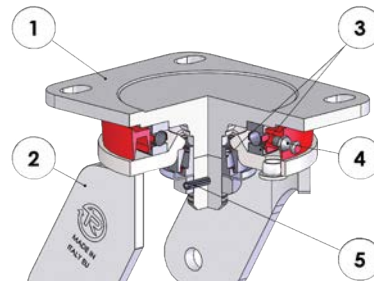
Electrowelded brackets EE MHD - max carrying capacity 700 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm				mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
100	40	3.38	628302	2.40	628402	4.26	628602	170	135x110	105x80	11	51	157	300	300
125	40	3.71	628303	2.73	628403	4.59	628603	182	135x110	105x80	11	51	157	350	350
160	50	4.25	628314	3.26	628414	5.13	628614	215	135x110	105x80	11	60	157	550	550
180	50	4.62	628305	3.64	628405	5.51	628605	242	135x110	105x80	11	70	157	600	600
200	50	4.97	628306	3.99	628406	6.31	628606	252	135x110	105x80	11	70	157	700	700

Twin electrowelded brackets EEG MHD - max carrying capacity 700 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn tips electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm		kg	CODE	kg	CODE	mm				mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN	
100	40+40	3.45	628062	2.65	628162	140	135x110	105x80	11	55	600	600	
125	40+40	4.20	628063	3.40	628163	170	135x110	105x80	11	55	700	700	

Options available to order:

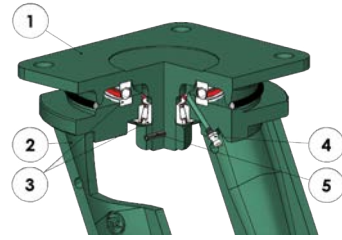


Wheels EE MHD with steering system

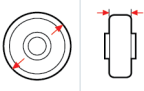


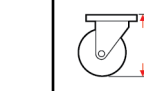
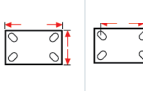
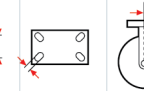

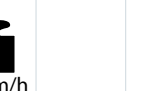


Directional lock for brackets EE MHD - EE HD - EED MHD: see page 328

Twin electrowelded brackets EEG HD - max carrying capacity 1400 daN



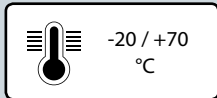
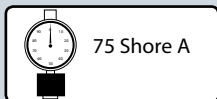
- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

															
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN	4 km/h	6 km/h	
160	50+50	10.60	628084	6.20	628184	228	175x140	140x105	14	50	1100	1100			
200	50+50	12.30	628066	7.70	628166	280	175x140	140x105	14	65	1400	1400			



Flexibility you need

"TR-ROLL" POLYURETHANE WHEELS WITH ERGONOMIC ROUND PROFILE AND ALUMINIUM CENTRE



Description

Tyre: very thick TR-Roll polyurethane with ergonomic round profile, hardness 75 Shore A, excellent rolling resistance and elasticity and good resistance to wear and tear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

The round profile reduces the start-up coefficient when the castors are positioned at 90° from the line of movement and therefore greatly reduces the amount of effort required by the operators when handling trolleys.

Combined with appropriate brackets, they guarantee excellent performance for mechanical handling up to 16 km/h.

Examples of application: trolleys for the automotive industry, lean manufacturing trolleys and whenever a combination of manual/powerd handling is involved.

Environments of use

Industrial environments, even in presence of humidity and oils. Not suitable in presence of strong acids and solvents.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable for all types of industrial floors, even outdoors. Facilitates the overcoming of obstacles.

It does not damage the floors.



Force required to push or tow a wheel

 	150 kg	250 kg	350 kg	450 kg	550 kg	700 kg
125x40 mm	< 1	1,5	5	---	---	
125x50 mm	< 1	1	2	3		
160 mm	< 1	1	2	3	3,5	
200 mm	< 1	< 1	1	2	3	4

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 125-200 mm
Top plate fitting. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 700 daN - available diameters 125-200 mm
Top plate fitting. Available with adjustable rear brake.



Extra-heavy duty brackets EP















Maximum carrying capacity 700 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable rear brake.



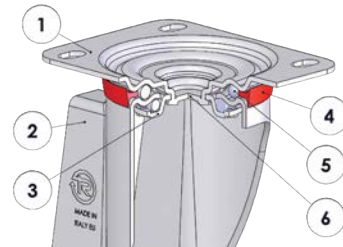
Electrowelded brackets EE MHD

Maximum carrying capacity 700 daN - available diameters 125-200 mm
Top plate fitting. Available with adjustable rear brake.


















															
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN		
125	40	0,68	622163	0,45	624163	20	40	47	14	500	350	350	350		
125	40	0,73	622143	0,51	624143	20	50	47	14	500	350	350	350		
125	50	0,88	622153	0,65	624153	20	58	47	14	500	450	450	450		
160	50	1,11	622144	0,89	624144	20	58	47	14,5	800	550	550	550		
200	50	1,68	622146	1,44	624146	20	60	47	14,5	1000	700	700	700		

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

															
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	
125	40	1.35	628703	1.17	628803	1.51	628903	156	100x85	80x60	9	35	120	220	
125	40	1.46	628713	1.11	628813	2.34	628913	166	140x110	105x80	11	57	156	300	
160	50	2.95	628704	2.24	628204	3.42	628904	199	140x110	105x80	11	57	156	300	
200	50	3.69	628716	3.04	628206	4.07	628916	240	140x110	105x80	11	57	156	300	

Options available to order:

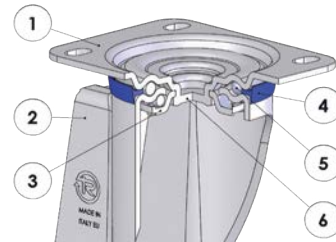


Footguard for brackets NL



Directional lock for brackets NL diam. 160-200 mm

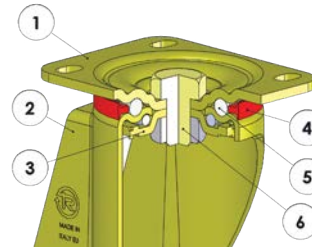
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with adjustable total front foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
160	50	2,81	624604	2,10	628204	3,28	627904	199	140x110	105x80	11	58	178	500
200	50	3,52	624606	2,87	628206	3,90	627906	240	140x110	105x80	11	50	178	500

Medium-heavy duty brackets P - max carrying capacity 700 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

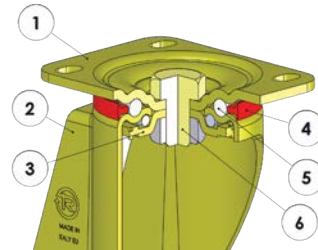
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
125	40	2,27	629023	1,63	629123	2,83	629523	161	100x85	80x60	9	44	123	350	350

Options available to order:



Footguard
for brackets
M-P

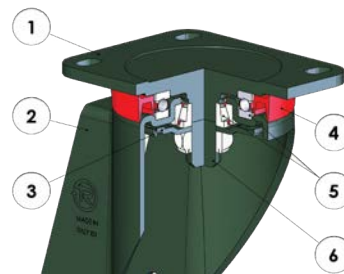
Heavy duty brackets P - max carrying capacity 700 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
125	40	2,27	629003	1,63	629103	2,83	629203	170	140x110	105x80	11	70	126	350	350	4 km/h	6 km/h				
125	50	2,42	629013	2,78	629113	2,95	629213	170	140x110	105x80	11	70	126	450	400	4 km/h	6 km/h				
160	50	3,46	629004	2,28	629104	4,27	629204	205	140x110	105x80	11	70	126	550	550	4 km/h	6 km/h				
200	50	4,14	629006	2,68	629106	4,74	629206	250	140x110	105x80	11	70	126	700	700	4 km/h	6 km/h				

Extra-heavy duty brackets EP - max carrying capacity 700 daN



- 1) Plate: green galvanised forged steel
 - 2) Fork: green galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
160	50	3,62	629304	3,21	629404	4,14	629504	205	135x110	105x80	11	70	126	550	550	4 km/h	6 km/h				
200	50	4,40	629306	3,96	629406	4,97	629506	250	135x110	105x80	11	70	126	700	700	4 km/h	6 km/h				

Options available to order:

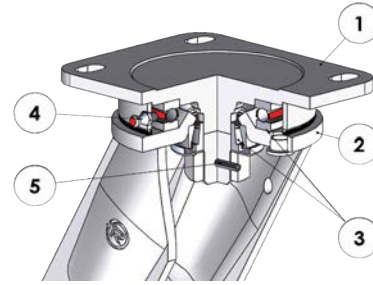


Footguard for brackets P



Directional lock for brackets P diam. 160-200 mm

Electrowelded brackets EE MHD - max carrying capacity 700 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

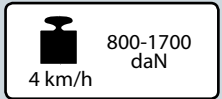
mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
125	40	3,65	629603	2,67	629703	4,53	629803	182	135x110	105x80	11	51	157	350	350	4 km/h	6 km/h				
125	50	3,80	629613	2,82	629713	4,68	629813	182	135x110	105x80	11	51	157	450	400						
160	50	4,11	629604	3,12	629704	4,99	629804	215	135x110	105x80	11	60	157	550	550						
200	50	4,80	629606	3,82	629706	6,14	629806	252	135x110	105x80	11	70	157	700	700						

Options available to order:



Directional lock
for brackets EE MHD
- EE HD - EED MHD:
see page 328

"TR-ROLL" POLYURETHANE WHEELS WITH CAST IRON CENTRE



Technical features

Tyre: very thick TR-Roll polyurethane, hardness 75 Shore A, with excellent rolling resistance and elasticity and good resistance to wear and tear.

Centre: cast iron.

Hub with shielded ball bearing press-fitted in the seats obtained by precision turning on the centre; also available without bearings.

Uses

Innovative product, which combines an excellent rolling resistance with the ability to damp down vibrations and overcoming obstacles and very good performance and durability in case of heavy usages and mechanical handling at speeds up to 16 km/h. Examples of applications: mechanically handled trolleys in automotive industries, logistics, carpentries; AGV trolleys; electrical pallet trucks.

Environments of use

Designed for industrial environments, even in the presence of alcohols, glycols, hydrocarbons.

Not recommended in areas with organic acids and mineral acids, base solutions and saturated steam. In case of use in particularly aggressive environments, it is possible to use a protective lacker available on request.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable for all types of industrial floors, even outdoors. Facilitates the overcoming of obstacles.

It does not damage the floors.



Force required to push or tow a wheel

 	200 kg	400 kg	600 kg	800 kg	1000 kg	1200 kg	1400 kg	1600 kg
200x50 mm	<1	2,5	4	6	---	---	---	---
200x80 mm	<1	2	3,5	5,5	---	---	---	---
250 mm	<1	1,5	3	5	7	9	---	---
300 mm	<1	1	2,5	4,5	6	8	10	---
400 mm	<1	<1	1	3	5,5	7	8	10

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Electrowelded brackets EE MHD

Maximum carrying capacity 800 daN – available diameters 200 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE HD

Maximum carrying capacity 800 daN – available diameters 200-300 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE EHD

Maximum carrying capacity 1700 daN – available diameters 400 mm
Top plate fitting.

Options available to order:

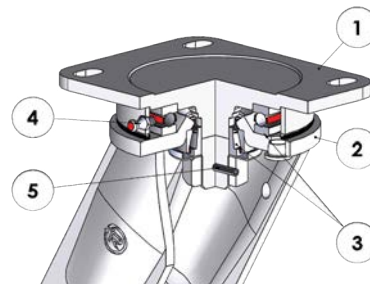


Wheel with key housing



mm		kg		COD.		mm		mm		daN		daN		daN		daN	
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN				
200	50	3,40	622126	3,17	624126	20	55	47	14	1000	700	800	800				
200	80	6,63	622136	6,14	624136	25	88	62	18	1200	750	900	900				
250	80	8,50	622127	8,00	624127	25	86	62	17	1600	800	1200	1200				
300	80	11,50	622128	11,00	624128	30	86	62	17	1900	850	1400	1400				
400	100	33,50	622109	32,70	624109	40	100	80	18	2000	900	1700	1700				

Electrowelded brackets EE MHD - Max. carrying capacity 800 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	mm	daN	daN				
200	50	6,54	628316	5,56	628416	7,42	628616	252	135x110	105x80	11	70	157		800	800					

Options available to order:

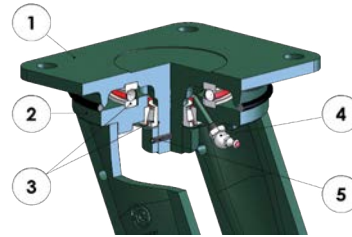


Wheel with key housing



Directional lock for brackets EE MHD - EE HD - EED MHD: see page 326

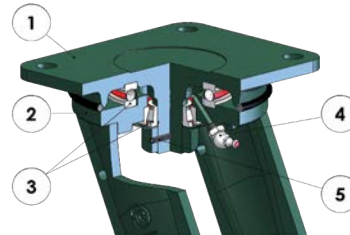
Electrowelded brackets EE HD - Max. carrying capacity 1400 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN	daN
200	80	13,10	628706	11,56	628806	13,98	628906	275	175x140	140x105	14,5	65	166	900	900	
250	80	15,19	628708	13,60	628808	16,07	628908	320	175x140	140x105	14,5	74	166	1200	1200	
300	80	18,31	628718	16,69	628818	19,19	628918	360	175x140	140x105	14,5	81	166	1400	1400	

Electrowelded brackets EE EHD - Max. carrying capacity 1700 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN	daN
400	100	49,55	628729	44,85	628829	475	250x200	210x160	19	95	1700	1700

Options available to order:

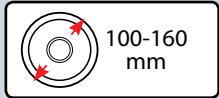


Wheel with key housing



Directional lock for brackets EE MHD - EE HD - EED MHD: see page 326

"TR-ROLL" POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE



Description

Tyre: very thick TR-Roll polyurethane, hardness 75 Shore A, with excellent rolling resistance and elasticity and good resistance to wear and tear.

Available also with ergonomic round profile (wheel diam. 125 mm).

Centre: polyamide 6.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Excellent for trolleys and equipments handling medium-heavy and heavy duty loads, also suitable for continuous handling, even in presence of humidity and aggressive chemicals.

Suitable for towing applications and manual/mechanical handling up to 6 km/h.

They offer a higher load capacity and rolling resistance in comparison to standard elastic rubber wheels, whilst maintaining the same specifications of elasticity, vibrations absorption and obstacle overcoming.

The ergonomic round profile variant also enables to reduce the start-up coefficient when pushing/pulling a trolley from a still position.

Examples of applications are: automotive industry, lean manufacturing, cash& carry, trolleys and dollies for the chemical and food processing industry.

Environments of use

Suitable for indoor industrial environments, also in presence of medium-harsh chemical agents, alcohol, glycol and water.

Not suitable in presence of strong acids and solvents.

WEAK ACIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WEAK BASES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG ACIDS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	STRONG BASES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WATER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HYDROCARBONS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SOLVENTS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable for all types of industrial floors, even outdoors. Facilitates the overcoming of obstacles.

It does not damage the floors.



Force required to push or tow a wheel

 	100 kg	150 kg	200 kg	250 kg	300 kg	350 kg	400 kg
100 mm	< 1	1	2	---	---		
125 mm	< 1	< 1	1,5	2	2,5		
125 ER mm	< 1	< 1	1,5	2	---		
160 mm	< 1	< 1	1	1,5	1,8	2,2	2,6
160 ER mm	< 1	< 1	< 1	1	1,4	1,8	2,1

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-160 mm.
Top plate fittings. Available with front brake.



Medium duty brackets M

Maximum carrying capacity 400 daN - available diameters 160 mm
Top plate fitting. Available with front adjustable brake.



Medium-heavy duty brackets P

Maximum carrying capacity 400 daN - available diameters 100-160 mm
Top plate fitting. Available with front brake and adjustable rear brake.

Options available to order:



Fitting with stainless steel NLX brackets

"TR-ROLL" POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE



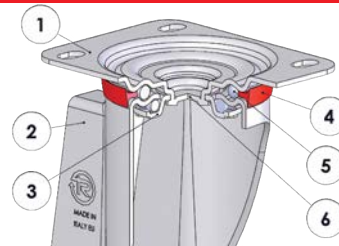
										Static			
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN
100	40	0,34	622302	0,27	624302	15	40	32	9	300	230	230	230
125	40	0,45	622303	0,37	624303	15	40	32	9	350	280	280	280
160	50	1,06	622304	0,97	624304	20	55	47	14	450	400	400	360



Ergonomic round profile

										Static			
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN
125ER	40	0,40	622603	0,32	624603	15	40	32	9	300	250	250	250
160ER	50	1,00	622604	0,91	624704	20	55	47	14	450	400	400	360

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

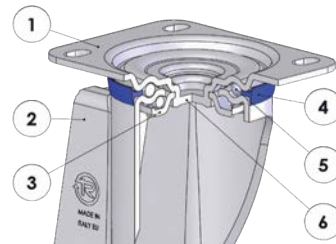
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN
100	40	0,94	624422	0,69	626222	1,08	627322	128	100x85	80x60	9	35	200
125	40	1,10	624423	0,85	626223	1,24	627323	156	100x85	80x60	9	37	220
125ER	40	1,05	629303	0,80	629403	1,19	629503	156	100x85	80x60	9	37	220
160	50	2,49	624434	2,19	627724	2,78	627334	199	140x110	105x80	11	56	300
160ER	50	2,43	624424	2,13	627734	2,72	627324	199	140x110	105x80	11	56	300

Options available to order:



Fitting with stainless steel NLX brackets

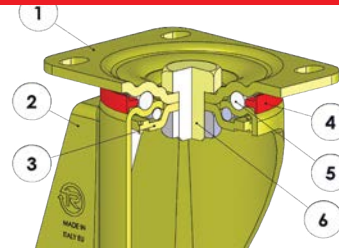
Medium duty brackets M - max carrying capacity 400 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
160	50	2,49	624544	2,19	627724	2,78	627444	199	140x110	105x80	11	58	178	400	
160ER	50	2,43	624534	2,13	627734	2,72	627434	199	140x110	105x80	11	50	178	400	

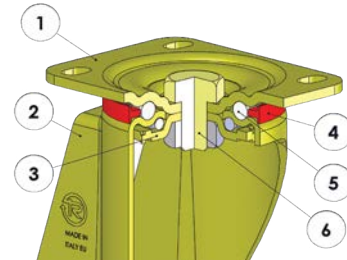
Medium-heavy duty brackets P - max carrying capacity 400 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
100	40	1,20	627622	0,82	628522	1,35	627222	138	100x85	80x60	9	46	123	230	230
125	40	1,35	627623	0,93	628523	1,50	627223	161	100x85	80x60	9	44	123	280	280
125ER	40	1,30	629313	0,88	629413	1,45	629513	161	100x85	80x60	9	44	123	250	250

Medium-heavy duty brackets P - max carrying capacity 400 daN



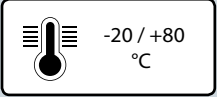
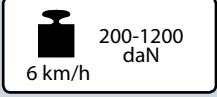
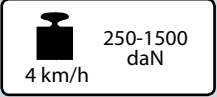
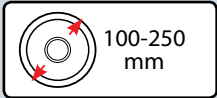
- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total adjustable rear foot brake

Wheel		Bracket		Bracket		Bracket		Bracket		Bracket		Speed			
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN	daN	
160	50	3,33	627634	2,00	628534	5,03	627234	205	140x110	105x80	11	70	126	400	360
160ER	50	3,27	627624	1,94	628524	4,96	627224	205	140x110	105x80	11	70	126	400	360



Details make the difference

VULKOLLAN® WHEELS WITH FORGED STEEL CENTRE



Description

Tyre: Vulkollan®, hardness 93 Shore A: excellent rolling resistance and elasticity, highly resistant to wear, tear and deformations.

Centre: forged steel.

Hub with shielded ball bearings with interference assembly in the seats obtained by machining the centre; also available without bearings.

Uses

Ideal for applications with heavy duty loads, even with mechanical handling at high speeds. Fitted with appropriate brackets, they guarantee excellent performance up to 16 km/h.

The excellent rolling resistance allows an easy handling of heavy loads even with wheels of a small diameter.

Examples of recommended applications: trolleys for indoor industrial handling, AGV trolleys, containers, electrical pallet trucks, forklift trucks.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable for tiles and cement-resin.

Not suitable if large obstacles are present.



Force required to push or tow a wheel

 	150 kg	300 kg	450 kg	600 kg	1000 kg	1500 kg
100 mm	4	---	---	---	---	---
125 mm	3.3	6.7	---	---	---	---
150 mm	2.4	4.8	7.2	9.6	---	---
175 mm	2.2	4.5	6.8	9	---	---
200 mm	1.7	3.5	5.5	7.6	14.2	---
250 mm	1.2	2.5	4	5.6	10.5	18

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-200 mm
Top plate fitting.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 80-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 1500 daN - available diameters 100-250 mm
Top plate fitting. Available with adjustable rear brake.

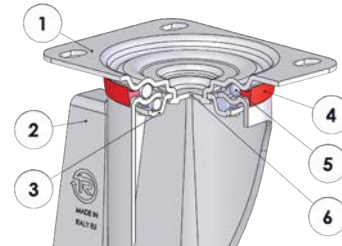
Options available to order:

The series 63AC wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.



Front view		Side view		Weight		Weight		Front view		Side view		Side view		Static		4 km/h		6 km/h	
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN						
100	30	0,74	632122	0,67	634122	12	30	32	10	375	190	250	200						
125	40	1,38	632123	1,31	634123	12	40	32	10	500	230	350	280						
150	40	1,84	632124	1,66	634124	17	40	40	12	900	320	750	600						
150	40	1,76	632224	1,60	634224	20	40	42	12	900	320	750	600						
175	40	2,80	632125	2,56	634125	20	40	47	14	1200	340	850	680						
200	50	4,03	632126	3,79	634126	20	50	47	14	1800	420	1100	880						
200	50	4,00	632226	3,72	634226	25	50	52	15	1800	420	1100	880						
250	60	8,03	632128	7,75	634128	25	60	52	15	2200	550	1500	1200						

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-rieveted

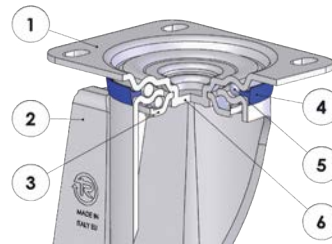
Front view		Side view		Weight		Weight		Front view		Side view		Side view		4 km/h	
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN			
100	30	1.26	637322	1.01	638222	128	100x85	80x60	9	35	200				
125	40	2.03	637323	1.68	638223	156	100x85	80x60	9	37	220				
150	40	2.54	637304	2.15	638214	182	100x85	80x60	9	34	220				
150	40	3.21	637324	2.84	638224	194	140x110	105x80	11	56	300				
175	40	4.18	637325	3.89	638225	217	140x110	105x80	11	56	300				
200	50	5.43	637326	5.21	638226	240	140x110	105x80	11	56	300				

Options available to order:



Footguard
for brackets
NL-M-P

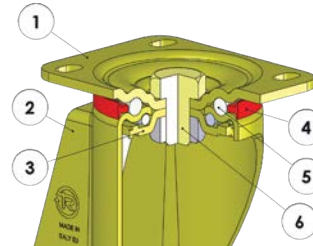
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	40	3.56	637404	2.84	638224	4.13	636704	194	140x110	105x80	11	58	178	500
200	50	5.82	637406	5.21	638226	6.18	636706	240	140x110	105x80	11	50	178	500

Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

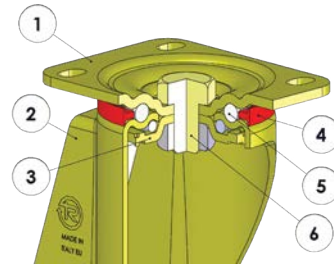
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
100	30	1.61	637622	1.11	638622	1.75	636302	138	100x85	80x60	9	46	123	250	200
125	40	2.29	637623	1.76	638623	2.43	636303	161	100x85	80x60	9	44	123	350	280

Options available to order:



Footguard
for brackets
NL-M-P

Heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total adjustable rear foot brake

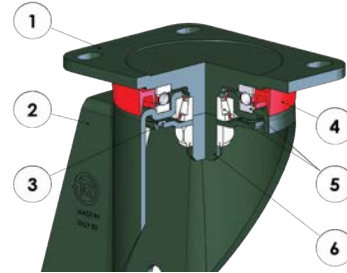
mm		kg		kg		kg		mm		mm		mm		daN	
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
150	40	4.19	637624	2.70	638624	4.76	636304	200	140x110	105x80	11	70	126	750	600
175	40	5.14	637625	3.72	638625	5.71	636305	225	140x110	105x80	11	70	126	750	600
200	50	6.44	637626	4.98	638626	7.01	636306	250	140x110	105x80	11	70	126	750	600

Options available to order:



Footguard
for brackets
NL-M-P

Extra-heavy duty brackets EP - max carrying capacity 1500 daN



- 1) Plate: green galvanised forged steel
- 2) Fork: green galvanised forged steel
- 3) Lower bearing protection ring
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: axial ball bearing and tapered roller bearing
- 6) King pin: integrated with the machine-processed plate
Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
100	30	1.85	637822	1.61	638822			140	100x85	80x60	9	46		250	200
125	40	2.56	637823	1.70	638823			164	100x85	80x60	9	48		350	280
150	40	4.46	637824	3.97	638824	5.03	636504	200	135x110	105x80	11	70	126	750	600
175	40	5.44	637825	5.02	638825	6.01	636505	225	135x110	105x80	11	70	126	850	680
200	50	6.75	637826	6.30	638826	7.32	636506	250	135x110	105x80	11	70	126	1100	880
250	60	13.58	637828	11.74	638828			300	175x140	140x105	14	66		1500	1200

VULKOLLAN® WHEELS WITH CAST IRON CENTRE

-  80-300 mm
-  93 Shore A
-  280-2300 daN
4 km/h
-  220-1800 daN
6 km/h
-  190-600 daN
-  -20 / +80 °C



Description

Tyre: Vulkollan®, hardness 93 Shore A: excellent rolling resistance and elasticity, highly resistant to wear, tear and deformations.

Centre: cast iron.

Hub with shielded ball bearings with interference assembly in the seats obtained by machining the centre; also available without bearings.

Uses









Ideal for applications with heavy duty loads, even with mechanical handling at high speeds. Combined with appropriate brackets, they guarantee excellent performance up to 16 km/h.

The excellent rolling resistance allows an easy handling of heavy loads even with wheels of small diameter.

Examples of recommended applications: trolleys for indoor industrial handling, AGV trolleys, containers, electrical pallet trucks, forklift trucks.

Environments for use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	


For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable for tiles and cement-resin.
Not suitable if large obstacles are present.



Force required to push or tow a wheel

 4 km/h	150 kg	300 kg	450 kg	600 kg	1000 kg	1500 kg	2000 kg
80 mm	4.5	11	----	----	----	----	----
100 mm	3.8	7.7	----	----	----	----	----
125x38 mm	3.5	7	11.5	----	----	----	----
125x50 mm	3.3	6.5	11	----	----	----	----
150x50 mm	2.5	5.2	8.6	12.6	----	----	----
160x50 mm	2.3	5	8.3	12	----	----	----
180x50 mm	2	4.1	6.8	9.7	----	----	----
200x50 mm	1.7	3.8	6	8.5	16	----	----
200x80 mm	1.3	3.5	5.0	6.7	11.5	17	----
250x60 mm	1	3	4.7	6.3	10.9	16	----
250x80 mm	< 1	2.5	4.5	6	10.3	15.5	----
300x60 mm	< 1	2	4	5.5	9.6	15	----
300x80 mm	< 1	1.5	3.5	5	8.6	13	16

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets:



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate fitting. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 80-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 1600 daN - available diameters 100-250 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD - EE HD - EE EHD.

Maximum carrying capacity 2300 daN - available diameters 125-400 mm
Top plate fitting. Available with adjustable rear brake.



Twin electrowelded brackets EEG MHD - EEG HD - EEG EHD

Maximum carrying capacity 3500 daN - available diameters 100-250 mm
Top plate fitting.

Options available to order:

















Wheel with key housing



Wheel with very thick tyre



															
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN		
80	28	0,51	632151	0,46	634151	12	32	28	8	370	190	280	220		
100	38	1,02	632152	0,91	634152	15	40	35	11	500	220	380	300		
125	38	1,45	632153	1,34	634153	15	40	35	11	600	240	450	360		
125	50	1,98	632163	1,76	634163	20	55	47	14	800	270	600	440		
125	50	1,96	632363	1,76	634163	25	55	47	14	800	270	600	440		
150	50	2,50	632154	2,28	634154	20	55	47	14	910	290	700	560		
150	50	2,48	632354	2,28	634154	25	55	47	14	910	290	700	560		
160	50	2,65	632164	2,43	634164	20	55	47	14	1000	300	750	600		
160	50	2,63	632364	2,43	634164	25	55	47	14	1000	300	750	600		
180	50	3,02	632155	2,80	634155	20	55	47	14	1100	350	900	720		
200	50	3,65	632156	3,43	634156	20	55	47	14	1500	380	1000	800		
200	50	3,63	632356	3,43	634156	25	55	47	14	1500	380	1000	800		
200	80	7,26	632166	6,74	634166	25	86	62	17	2000	450	1600	1300		
200	80	7,24	632366	6,74	634166	30	86	62	17	2000	450	1600	1300		
250	60	8,13	632157	7,61	634157	25	65	62	17	2500	480	1500	1200		
250	60	8,10	632357	7,61	634157	30	65	62	17	2500	480	1500	1200		
250	80	9,81	632167	9,29	634167	25	86	62	17	2800	500	1900	1500		
250	80	9,80	632367	9,29	634167	30	86	62	17	2800	500	1900	1500		
300	60	11,43	632158	10,96	634158	30	65	62	17	3200	550	1750	1400		
300	80	13,80	632168	13,33	634168	30	86	62	17	3400	600	2300	1800		

Options available to order:

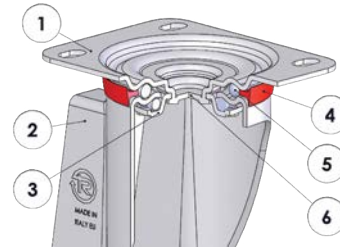


Wheel with key housing



Wheel with very thick tyre

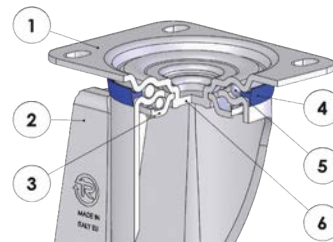
Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
80	28	0.95	634551	0.82	634651	1.11	635451	107	100x85	80x60	9	37	120	200
100	38	1.51	634552	1.40	634652	1.67	635452	128	100x85	80x60	9	35	120	200
125	38	1.97	634553	1.86	634653	2.13	635453	156	100x85	80x60	9	37	120	220
125	50	3.38	634563	2.89	634663	3.58	635463	166	140x110	105x80	11	57	156	300
150	50	3.87	634554	3.59	634654			194	140x110	105x80	11	56		300
160	50	3.98	634564	3.71	634664	4.23	635474	199	140x110	105x80	11	56	156	300
180	50	4.48	634555	4.21	634655	4.68	635465	220	140x110	105x80	11	56	156	300
200	50	5.16	634556	4.92	634656	5.36	635466	240	140x110	105x80	11	56	156	300

Medium-duty brackets M - max carrying capacity 500 daN

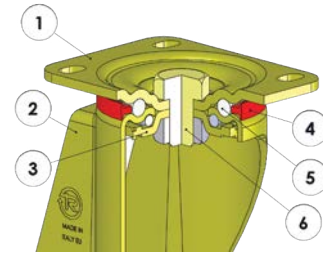


- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	50	4.21	637424	3.59	634654	4.65	636724	194	140x110	105x80	11	58	178	500
160	50	4.33	637434	3.71	634664	4.78	636734	199	140x110	105x80	11	58	178	500
200	50	5.55	637426	4.92	634656	5.91	636726	240	140x110	105x80	11	50	178	500

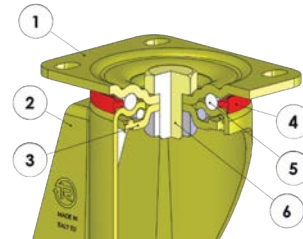
SERIES **63G** VULKOLLAN® WHEELS WITH CAST IRON CENTRE

Heavy-duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
80	28	1.38	635851	0.96	636851			128	100x85	80x60	9	46		280	220
100	38	1.93	635852	1.52	636852	2.06	634852	138	100x85	80x60	9	46	123	350	300
125	38	2.37	635853	2.04	636853	2.50	634853	161	100x85	80x60	9	44	123	350	300



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total adjustable rear foot brake

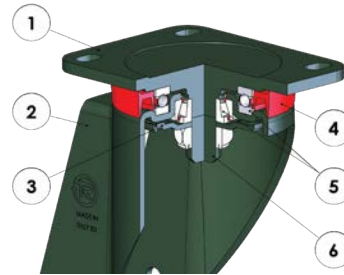
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
125	50	3.66	635863	2.65	636863	4.24	634863	170	140x110	105x80	11	70	126	550	440
150	50	4.81	635854	3.55	636854	5.33	634854	200	140x110	105x80	11	70	126	700	560
160	50	4.93	635864	4.08	636864	5.45	634864	205	140x110	105x80	11	70	126	750	600
180	50	5.30	635855	4.45	636855	5.90	634855	228	140x110	105x80	11	70	126	750	600
200	50	6.06	635856	5.15	636856	6.66	634856	250	140x110	105x80	11	70	126	750	600

Options available to order:



Footguard for brackets NL-M-P

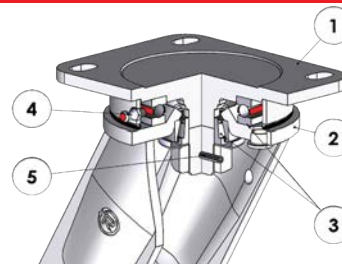
Extra-heavy duty brackets P - max carrying capacity 1600 daN



- 1) Plate: green galvanised forged steel
- 2) Fork: green galvanised forged steel
- 3) Lower bearing protection ring
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: axial ball bearing and tapered roller bearing
- 6) King pin: integrated with the machine-processed plate
Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm		mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN	
100	38	2.15	637852	1.92	638852			140	100x85	80x60	9	46		350	300	
125	38	2.64	637853	2.44	638853			164	100x85	80x60	9	48		350	300	
150	50	5.04	637854	4.63	638854	5.56	636654	200	135x110	105x80	11	70	126	700	560	
160	50	5.16	637864	4.75	638864	5.68	636664	205	135x110	105x80	11	70	126	750	560	
180	50	5.60	637855	5.20	638855	6.20	636655	228	135x110	105x80	11	70	126	900	720	
200	50	6.35	637856	6.06	638856	6.95	636656	250	135x110	105x80	11	70	126	1000	800	
200	80	12.30	637866	10.46	638866			275	175x140	140x105	14	66		1600	1300	
250	60	13.16	637857	11.32	638857			300	175x140	140x105	14	66		1500	1200	

Electrowelded brackets EE MHD - max carrying capacity 1000 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut
Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm		mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN	
125	50	4.88	638303	3.90	638403	5.76	638903	182	135x110	105x80	11	51	157	600	440	
150	50	5.50	638304	4.51	638404	6.38	638904	210	135x110	105x80	11	60	157	700	560	
160	50	5.65	638314	4.66	638414	6.53	638914	215	135x110	105x80	11	60	157	750	600	
180	50	6.14	638305	5.16	638405	7.02	638905	242	135x110	105x80	11	70	157	900	720	
200	50	6.77	638306	5.79	638406	7.65	638906	252	135x110	105x80	11	70	157	1000	800	

Options available to order:

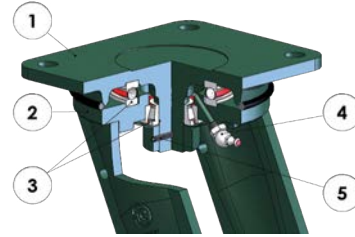


Bracket EE MHD with steering system



Directional lock for brackets EE MHD - EE HD - EED MHD: see page 328

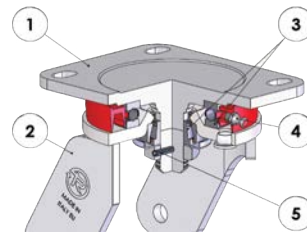
Electrowelded brackets EE HD - max carrying capacity 2300 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm		kg		CODE		kg		CODE		mm		mm		mm		mm		daN		daN	
200	80	13.72	638316	12.18	638416	14.60	638916	275	175x140	140x105	14	65	166	1600	1300						
250	60	14.82	638307	13.23	638407	15.70	638907	320	175x140	140x105	14	74	166	1500	1200						
250	80	16.50	638317	14.91	638417	17.38	638917	320	175x140	140x105	14	74	166	1600	1300						
250	80	17.56	638327	15.23	638427	18.44	638927	325	200x160	160x120	17	74	166	1900	1500						
300	60	18.24	638308	16.62	638408	19.12	638908	360	175x140	140x105	14	81	166	1600	1300						
300	60	19.30	638328	16.95	638428	20.18	638928	365	200x160	160x120	17	81	166	1750	1400						
300	80	20.61	638318	18.99	638418	21.49	638918	360	175x140	140x105	14	81	166	1600	1300						
300	80	21.67	638338	19.32	638438	22.55	638938	365	200x160	160x120	17	81	166	2300	1800						

Twin electrowelded brackets EEG MHD - max carrying capacity 900 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

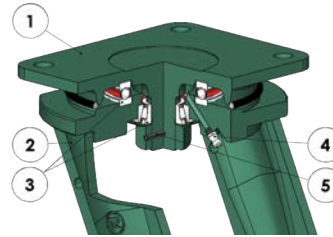
mm		kg		CODE		kg		CODE		mm		mm		mm		mm		daN		daN	
100	38+38	4.50	638062	3.75	638162	140	135x110	105x80	11	55	700	600									
125	38+38	5.45	638063	4.70	638163	170	135x110	105x80	11	55	900	720									

Options available to order:



Directional lock
for brackets EE MHD
- EE HD - EED MHD:
see page 328

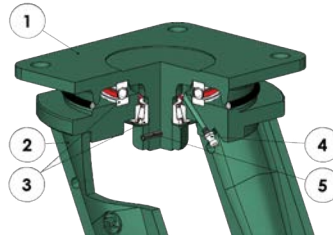
Twin electrowelded brackets EEG HD - max carrying capacity 2000 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h daN	6 km/h daN
125	50+50	11.00	638072	7.70	638172	210	175x140	140x105	14	50	1200	880
150	50+50	13.10	638074	8.70	638174	223	175x140	140x105	14	50	1400	1100
160	50+50	13.40	638084	9.00	638184	228	175x140	140x105	14	50	1500	1200
200	50+50	15.90	638066	11.30	638166	280	175x140	140x105	14	65	1600	1300
200	50+50	17.55	638076	12.70	638176	285	200x160	160x120	17	65	2000	1600

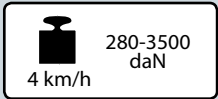
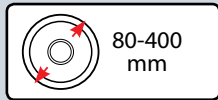
Twin electrowelded brackets EEG MHD - max carrying capacity 3500 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h daN	6 km/h daN
200	80+80	34.80	638086	25.05	638186	280	250x200	210x160	19	52	3200	2500
250	60+60	36.95	638067	27.20	638167	330	250x200	210x160	19	62	3000	2400
250	80+80	40.30	638077	30.55	638177	330	250x200	210x160	19	62	3500	2800

"TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE



Description

Tyre: "TR" polyurethane, hardness 95 Shore A, excellent rolling resistance and elasticity, highly resistant to wear.

Centre: cast iron.

Hub with plain bore so that it can easily be re-worked to achieve a spline or key housing. Hub with shielded ball bearing press-fitted in the seats obtained by precision machining the centre; also available without bearings.

Uses

Ideal for applications with heavy duty loads, even with mechanical handling at high speeds. Combined with appropriate brackets, they guarantee excellent performance up to 16 km/h.

The excellent rolling resistance allows an easy handling of heavy loads even with wheels of small diameter.

The plain bore version, with key way or spline, is suitable for use as a drive wheel.

Examples of recommended applications: trolleys for indoor industrial handling, AGV trolleys, containers, electrical pallet trucks.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated steam.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable for tiles and cement-resin.

Not suitable if large obstacles are present.



Force required to push or tow a wheel

 	150 kg	300 kg	450 kg	600 kg	1000 kg	1500 kg	2000 kg	2800 kg
80 mm	4.5	11	---	---	---	---	---	---
100 mm	3.8	7.7	---	---	---	---	---	---
125x38 mm	3.5	7	11.5	---	---	---	---	---
125x50 mm	3.3	6.5	11	---	---	---	---	---
125x60 mm	3.3	6.5	11	14	---	---	---	---
150x50 mm	2.5	5.2	8.6	12.6	---	---	---	---
150x60 mm	2	4	8	11	---	---	---	---
150x80 mm	1.8	3.5	6	10.5	18	---	---	---
160x50 mm	2.3	5	8.3	12	---	---	---	---
180x50 mm	2	4.1	6.8	9.7	---	---	---	---
200x50 mm	1.7	3.8	6	8.5	16	---	---	---
200x80 mm	1.3	3.5	5.0	6.7	11.5	17	---	---
250x60 mm	1	3	4.7	6.3	10.9	16	---	---
250x80 mm	< 1	2.5	4.5	6	10.3	15.5	---	---
300x60 mm	< 1	2	4	5.5	9.6	15	---	---
300x80 mm	< 1	1.5	3.5	5	8.6	13	16	---
400x100 mm	< 1	< 1	2	3.2	6.8	11	13	21

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets:



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate fitting. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 80-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 1600 daN - available diameters 100-250 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD - EE HD - EE EHD.

Maximum carrying capacity 2800 daN - available diameters 125-400 mm
Top plate fitting. Available with adjustable rear brake.



Twin electrowelded brackets EEG MHD - EEG HD - EEG EHD

Maximum carrying capacity 4300 daN - available diameters 100-300 mm
Top plate fitting

Options available to order:














Wheel with key housing



Wheel with very thick tyre



																
mm	mm	kg	COD.	mm	mm.	mm.	mm.	daN	daN	daN						
100	40	1,50	641102	15 H7	45	55	30	500	300	300						
125	40	1,30	641103	20 H7	60	60	30	600	400	400						
150	40	2,90	641104	20 H7	60	70	40	730	500	500						
150	50	3,70	641114	20 H7	60	70	40	910	700	700						
180	50	4,40	641105	20 H7	60	70	40	1100	800	800						
200	50	4,60	641106	20 H7	60	70	40	1500	950	950						
200	60	6,00	641116	25 H7	60	70	40	1700	1000	1000						
200	80	8,40	641126	40 H7	80	95	60	2000	1400	1400						
250	50	6,60	641107	20 H7	60	75	45	1800	1100	1100						
250	80	11,00	641117	40 H7	80	95	60	2800	1600	1600						
250	80	10,10	641127	60 H7	80	95	60	2800	1600	1600						
300	80	14,40	641108	50 H7	80	100	65	3400	2000	2000						
300	100	21,20	641118	50 H7	100	120	80	4200	2500	2500						
350	100	26,10	641109	50 H7	100	120	80	4700	2800	2800						
400	100	31,60	641110	50 H7	100	120	80	5000	3500	3500						

These wheels can also be used as drive wheels: the wheel hub is manufactured so that it can easily be reworked to achieve a spline or key housing. The carrying capacity given is valid for movements at a maximum speed of 6 km/h also if used as a drive wheel on mainly straight routes.

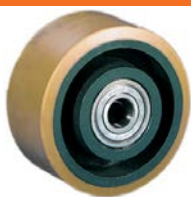
To use as a steering drive wheel or at speeds higher than 6 km/h it is advisable to contact Tellure Rôta to assess any reduction of the maximum applicable loads that may be necessary. To prevent the polyurethane tyre from deteriorating, any reworking on the wheel must be done keeping the temperature under 80°C (which is recommended as the maximum limit during normal use of the product).














Tellure Rôta is at your disposal to customise the product, modifying the bore with a groove for a key or tongue according to the specifications of the Italian (UNI 6604 and UNI 6607) and European (DIN 6885) regulations in force. The maximum applicable diameter for each wheel, guaranteeing the carrying capacity values, is given in the product dimensions column.

Options available to order:



Wheel with key housing



															
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN		
80	28	0,51	642151	0,46	644151	12	32	28	8	370	190	280	220		
100	38	1,02	642152	0,91	644152	15	40	35	11	500	220	380	300		
125	38	1,45	642153	1,34	644153	15	40	35	11	600	240	450	360		
125	50	1,98	642163	1,76	644163	20	55	47	14	800	270	550	440		
125	50	1,96	642363	1,76	644163	25	55	47	14	800	270	550	440		
125	58	2,86	642103	2,62	644103	20	58	47	15	800	250	600	480		
150	50	2,50	642154	2,28	644154	20	55	47	14	910	290	700	560		
150	50	2,48	642354	2,28	644154	25	55	47	14	910	290	700	560		
150	58	2,83	642104	2,59	644104	20	58	47	15	1400	350	850	680		
150	78	5,69	642124	5,19	644124	25	88	62	18	1700	400	1000	800		
160	50	2,65	642164	2,43	644164	20	55	47	14	1000	300	750	600		
160	50	2,63	642364	2,43	644164	25	55	47	14	1000	300	750	600		
180	50	3,02	642155	2,80	644155	20	55	47	14	1100	350	900	720		
200	50	3,65	642156	3,43	644156	20	55	47	14	1500	380	1000	800		
200	50	3,63	642356	3,43	644156	25	55	47	14	1500	380	1000	800		
200	78	7,26	642166	6,74	644166	25	86	62	17	2000	450	1600	1300		
200	78	7,24	642366	6,74	644166	30	86	62	17	2000	450	1600	1300		
250	60	8,13	642157	7,61	644157	25	65	62	17	2500	480	1500	1200		
250	60	8,10	642357	7,61	644157	30	65	62	17	2500	480	1500	1200		
250	78	9,81	642167	9,81	644167	25	86	62	17	2800	500	1900	1500		
250	78	9,80	642367	9,81	644167	30	86	62	17	2800	500	1900	1500		
300	60	11,43	642158	10,96	644158	30	65	62	17	3200	550	1750	1400		
300	78	13,80	642168	13,33	644168	30	86	62	17	3400	600	2300	1800		
360	120	31,63	642139	30,50	644139	40	120	90	23	3800	750	2800	2200		
400	100	28,86	642129	26,30	644129	50	120	110	28	4500	750	2800	2200		

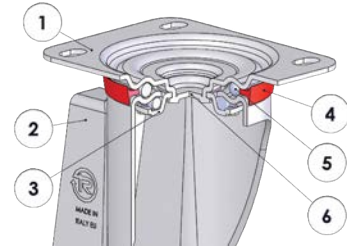
Options available to order:



Wheel with very thick tyre

"TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE

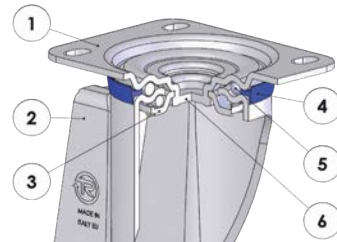
Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
80	28	0.95	644551	0.82	644651	1.11	645451	107	100x85	80x60	9	37	120	200	
100	38	1.51	644552	1.40	644652	1.67	645452	128	100x85	80x60	9	35	120	200	
125	38	1.97	644553	1.86	644653	2.13	645453	156	100x85	80x60	9	37	120	220	
125	50	3.38	644563	2.89	644663	3.58	645463	166	140x110	105x80	11	56	156	300	
150	50	3.87	644554	3.59	644654	4.12	645464	194	140x110	105x80	11	56	156	300	
160	50	3.98	644564	3.71	644664	4.23	645474	199	140x110	105x80	11	56	156	300	
200	50	4.48	644555	4.21	644655	4.68	645465	220	140x110	105x80	11	56	156	300	
200	50	5.16	644556	4.92	644656	5.36	645466	240	140x110	105x80	11	56	156	300	

Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

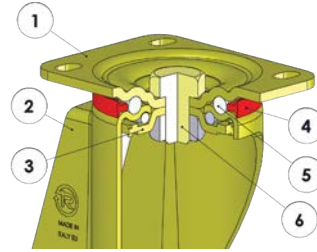
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
150	50	4.21	644954	3.59	644654	4.65	645564	194	140x110	105x80	11	58	178	500	
160	50	4.33	644964	3.71	644664	4.78	645574	199	140x110	105x80	11	58	178	500	
200	50	5.55	644956	4.92	644656	5.91	645566	240	140x110	105x80	11	50	178	500	

Options available to order:



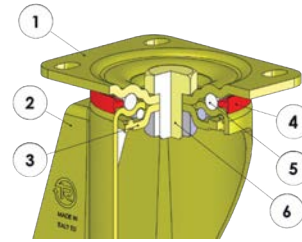
Footguard for brackets NL-M-P

Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN	daN
80	28	1.38	645851	0.96	646851			128	100x85	80x60	9	46	123		280	220
100	38	1.93	645852	1.52	646852	2.06	644852	131	100x85	80x60	9	46	123		350	300
125	38	2.37	645853	2.04	646853	2.50	644853	161	100x85	80x60	9	48	123		350	300



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total adjustable rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN	daN
125	50	3.66	645863	2.65	646863	4.24	644863	170	140x110	105x80	11	70	126		550	440
150	50	4.81	645854	3.55	646854	5.33	644854	200	140x110	105x80	11	70	126		700	560
160	50	4.93	645864	4.08	646864	5.45	644864	205	140x110	105x80	11	70	126		750	600
180	50	5.30	645855	4.45	646855	5.90	644855	228	140x110	105x80	11	70	126		750	600
200	50	6.06	645856	5.15	646856	6.66	644856	250	140x110	105x80	11	70	126		750	600

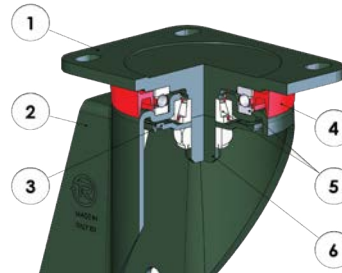
Options available to order:



Footguard for brackets NL-M-P

**"TR" POLYURETHANE WHEELS
WITH CAST IRON CENTRE**

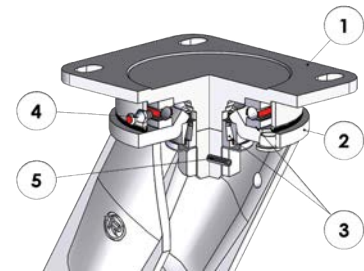
Extra-heavy duty brackets EP - max carrying capacity 1600 daN



- 1) Plate: green galvanised forged steel
- 2) Fork: green galvanised forged steel
- 3) Lower bearing protection ring
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: axial ball bearing and tapered roller bearing
- 6) King pin: integrated with the machine-processed plate
Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm					4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN
100	38	2.15	647852	1.92	648852			140	100x85	80x60	9	46	350	300
125	38	2.64	647853	2.44	648853			164	100x85	80x60	9	48	350	300
125	50	4.61	647863	4.16	648863			188	135x110	105x80	11	70	550	440
150	50	5.04	647854	4.63	648854	5.56	646654	200	135x110	105x80	11	70	700	560
150	58	5.44	647824	4.96	648824			200	135x110	105x80	11	70	850	680
160	50	5.16	647864	4.75	648864	5.68	646664	205	135x110	105x80	11	70	750	600
180	50	5.60	647855	5.20	648855	6.20	646655	228	135x110	105x80	11	70	900	720
200	50	6.35	647856	6.06	648856	6.95	646656	250	135x110	105x80	11	70	1000	800
200	78	12.30	647866	10.46	648866			275	175x140	140x105	14	66	1600	1300
250	60	13.16	647857	11.32	648857			300	175x140	140x105	14	66	1500	1200

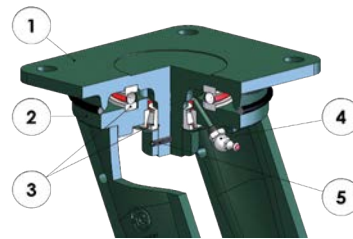
Electrowelded brackets EE MHD - max carrying capacity 1000 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut
Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm					4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN
125	50	4.88	648303	3.90	648403	5.76	648503	182	135x110	105x80	11	51	550	440
150	50	5.50	648304	4.51	648404	6.38	648504	210	135x110	105x80	11	60	700	560
160	50	5.65	648314	4.66	648414	6.53	648514	215	135x110	105x80	11	60	750	600
180	50	6.14	648305	5.16	648405	7.02	648505	242	135x110	105x80	11	70	900	720
200	50	6.77	648306	5.79	648406	7.65	648506	252	135x110	105x80	11	70	1000	800

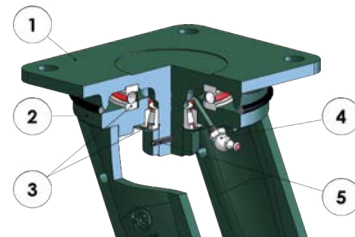
Electrowelded brackets EE HD - max carrying capacity 2300 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN	daN	
150	78	12.15	648315	10.61	648415	13.03	648515	218	175x140	140x105	14	50	166	1000	800		
150	78	12.15	648324	10.61	648424			223	200x160	160x120	17	50	166	1000	800		
200	78	13.72	648316	12.18	648416	14.60	648516	275	175x140	140x105	14	65	166	1600	1300		
250	60	14.82	648307	13.23	648407	15.70	648507	320	175x140	140x105	14	74	166	1500	1200		
250	78	16.50	648317	14.91	648417	17.38	648517	320	175x140	140x105	14	74	166	1600	1300		
250	78	17.56	648327	15.23	648427	18.44	648527	325	200x160	160x120	17	74	166	1900	1500		
300	60	18.24	648308	16.62	648408	19.12	648508	360	175x140	140x105	14	81	166	1600	1300		
300	60	19.30	648328	16.95	648428	20.18	648528	365	200x160	160x120	17	81	166	1750	1400		
300	78	20.61	648318	18.99	648418	21.49	648518	360	175x140	140x105	14	81	166	1600	1300		
300	78	21.67	648338	19.32	648438	22.55	648538	365	200x160	160x120	17	81	166	2300	1800		

Electrowelded bracket EE EHD - max carrying capacity 2800 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN			
300	100	29.80	648309	25.10	648409	384	250x200	210x160	19	78	2500	2000			
400	100	44.91	648310	40.21	648410	475	250x200	210x160	19	95	2800	2200			

Options available to order:



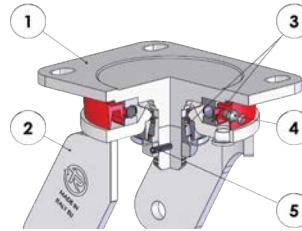
Bracket EE MHD with steering system



Directional lock for brackets EE MHD - EE HD - EED MHD: see page 328

**"TR" POLYURETHANE WHEELS
WITH CAST IRON CENTRE**

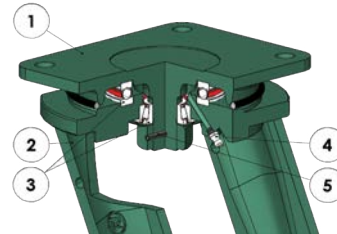
Twin electrowelded brackets EEG MHD - max carrying capacity 900 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h daN	6 km/h daN
100	38+38	4.50	648062	3.75	648162	140	135x110	105x80	11	55	700	600
125	38+38	5.45	648063	4.70	648163	170	135x110	105x80	11	55	900	720

Twin electrowelded brackets EEG HD - max carrying capacity 2000 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

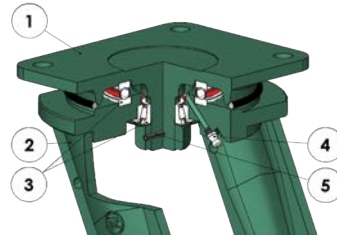
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h daN	6 km/h daN
125	50+50	11.00	648072	7.70	648172	210	175x140	140x105	14	50	1100	880
150	50+50	13.10	648074	8.70	648174	223	175x140	140x105	14	50	1400	1100
160	50+50	13.40	648084	9.00	648184	228	175x140	140x105	14	50	1500	1200
200	50+50	15.90	648066	11.30	648166	280	175x140	140x105	14	65	1600	1300
200	50+50	17.55	648076	12.70	648176	285	200x160	160x120	17	65	2000	1600

Options available to order:



Directional lock
for brackets EE MHD
- EE HD - EED MHD:
see page 328

Twin electrowelded brackets EEG MHD - max carrying capacity 4300 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h	6 km/h	
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN	
200	78+78	34.80	648086	25.05	648186	280	250x200	210x160	19	52	3200	2500	
250	60+60	36.95	648067	27.20	648167	330	250x200	210x160	19	62	3000	2400	
250	78+78	40.30	648077	30.55	648177	330	250x200	210x160	19	62	3500	2800	
300	78+78	50.00	648078	40.00	648178	385	250x200	210x160	19	75	4300	3500	

"TR" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE

-  80-200 mm
-  95 Shore A
-  220-850 daN
4 km/h
-  170-680 daN
6 km/h
-  150-360 daN
-  -20 / +80 °C



Description

Tyre: "TR" polyurethane, hardness 95 Shore A, excellent rolling resistance and elasticity, highly resistant to wear and tear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Suitable for applications with medium/heavy-duty loads, also with mechanical handling, with speed up to 6 km/h.

The excellent rolling resistance allows an easy handling of heavy loads even with wheels of small diameter.

Examples of recommended applications: trolleys for indoor industrial handling, AGV trolleys, containers, electrical pallet trucks, tilt trucks.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons.

Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable for tiles and cement-resin.

Not suitable if large obstacles are present.



Force required to push or tow a wheel

 	100 kg	200 kg	350 kg	500 kg	650 kg	850 kg
80 mm	2.8	5.8	----	----	----	----
100 mm	1.7	4.5	----	----	----	----
125 mm	1.4	3	----	----	----	----
150 mm	< 1	2	6	7.6	10.7	----
160 mm	< 1	1.8	5	7.4	10.5	----
200 mm	< 1	1.4	4.8	7.2	10.3	18

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets :



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with the front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 850 daN - available diameters 100-200 mm
Top plate fitting. Available with adjustable rear brake.

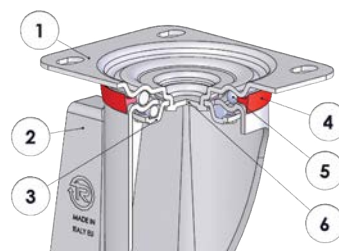
Options available to order:

The series 65AL wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.



mm		kg	COD.	kg	COD.	mm				daN	daN	daN	daN
80	25	0,20	652101	0,15	654101	12	30	28	8	280	150	220	170
100	30	0,34	652102	0,25	654102	12	40	32	10	350	225	250	200
125	35	0,50	652103	0,41	654103	12	40	32	10	500	280	400	320
150	40	0,91	651104	0,66	653104	20	50	47	14	850	330	600	480
160	50	1,25	652114	0,99	654114	20	60	47	14,5	950	350	800	640
200	50	1,47	651106	1,16	653106	20	55	52	15	1000	360	850	680
200	50	1,45	651206	1,16	653106	25	55	52	15	1000	360	850	680

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm				mm	mm	daN
80	25	0.72	659301	0.52	658201	0.91	656501	107	100x85	80x60	9	37	120	200
100	30	0.94	659302	0.69	658202	1.08	656502	128	100x85	80x60	9	35	120	200
125	35	1.14	659303	0.89	658203	1.28	656503	156	100x85	80x60	9	37	120	220
150	40	1.66	659312	1.52	658112			182	100x85	80x60	9	50		220
150	40	2.34	659304	2.04	658104	2.63	656504	194	140x110	105x80	11	56	156	300
160	50	2.68	659514	2.38	658114	2.97	656514	198	140x110	105x80	11	56	156	300
200	50	3.05	659306	2.76	658106	3.25	656506	240	140x110	105x80	11	56	156	300

Options available to order:

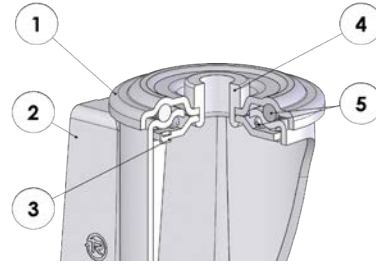


Directional lock for brackets d. 150-200 mm



Footguard for brackets NL-M-P

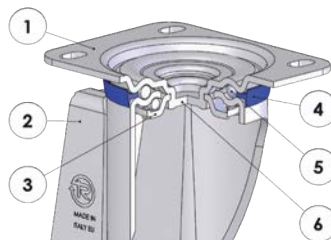
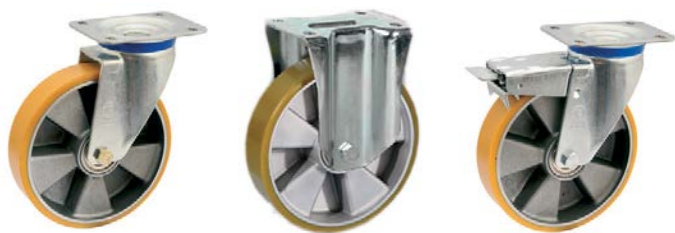
Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	mm	daN	
80	25	0,65	656401	0,78	656801	107	73	12	37	120	200				
100	30	0,88	656402	1,02	656802	128	73	12	35	120	200				
125	35	1,08	656403	1,23	656803	156	73	12	37	120	220				
150	40	2,20	656404	2,49	656804	188	102	20	56	156	300				
160	50	2,54	656414	2,96	656814	193	102	20	56	156	300				
200	50	2,95	656406	3,24	656806	236	102	20	56	156	300				

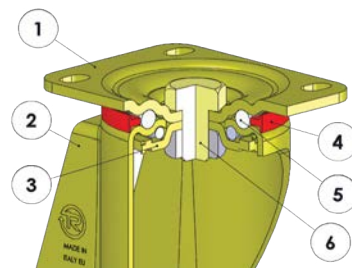
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm		kg		kg		kg		mm		mm		mm		mm		daN	
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN	
150	40	2.68	659604	2.04	658104	3.16	659704	194	140x110	105x80	11	58	178			500	4 km/h
160	50	3.03	659614	2.38	658114	3.49	659714	199	140x110	105x80	11	58	178			500	
200	50	3.44	659606	2.76	658106	3.80	659706	240	140x110	105x80	11	50	178			500	

Heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

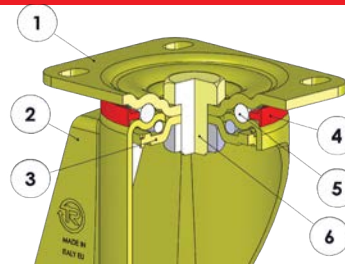
mm		kg		kg		kg		mm		mm		mm		mm		daN		daN	
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN	daN		
100	30	1.20	657602	0.82	658602	1.35	656602	138	100x85	80x60	9	46	123			250	200	4 km/h	6 km/h
125	35	1.39	657603	0.97	658603	1.54	656603	161	100x85	80x60	9	44	123			350	280		

Options available to order:



Footguard for brackets NL-M-P

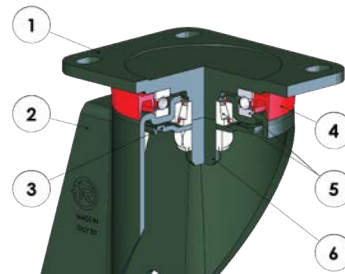
Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
150	40	3.18	657604	2.19	658604	3.75	656604	200	140x110	105x80	11	70	126	600	480
160	50	3.52	657514	2.53	658614	4.09	656614	205	140x110	105x80	11	70	126	750	600
200	50	3.94	657606	2.48	658606	4.51	656606	250	140x110	105x80	11	70	126	750	600

Extra-heavy duty brackets EP - max carrying capacity 850 daN



- 1) Plate: green galvanised forged steel
 - 2) Fork: green galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
100	30	1.44	657802	1.31	658802			140	100x85	80x60	9	46		250	200
125	35	1.79	657803	1.45	658803			164	100x85	80x60	9	48		350	280
150	40	3.44	657704	2.96	658704	4.01	656904	200	135x110	105x80	11	70	126	600	480
160	50	3.78	657714	3.30	658714	4.35	657014	205	135x110	105x80	11	70	126	800	640
200	50	4.19	657706	3.75	658706	4.76	656906	250	135x110	105x80	11	70	126	850	680

Options available to order:





Directional lock for P brackets d. 150-200 mm



Footguard for brackets NL-M-P

"TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE

-  150-300 mm
-  95 Shore A
-  400-2200 daN
4 km/h
-  320-1700 daN
6 km/h
-  280-550 daN
-  -20 / +80 °C



Description

Tyre: "TR" polyurethane, hardness 95 Shore A, excellent rolling resistance and elasticity features, highly resistant to wear and tear.

Centre: cast iron.

Hub with shielded ball bearings with interference assembly in the seats obtained by machining the centre; also available without bearings.

Uses

Suitable for applications with medium/heavy-duty loads, also with mechanical handling, with speed up to 6 km/h.

The excellent rolling resistance allows a manually handling of heavy loads.

Examples of recommended applications: trolleys for indoor industrial handling, AGV trolleys, containers, electrical pallet trucks, tilt trucks.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable for tiles and cement-resin.

Not suitable if large obstacles are present.



Force required to push or tow a wheel

 	100 kg	300 kg	500 kg	700 kg	1000 kg	2000 kg
150x30 mm	1.4	5.7	----	----	----	----
150x35 mm	1.9	5	----	----	----	----
175 mm	1	3.9	11.6	----	----	----
200 mm	< 1	2.2	6	10.4	19	----
250 mm	< 1	2	5.8	8.4	14.8	----
300 mm	< 1	1.7	4.5	7	10	19.3

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Combination with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 150-200 mm
Top plate and bolt hole fittings. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 150-250 mm
Top plate fitting. Available with front brake and adjustable rear brake.

















Extra-heavy duty brackets EP

Maximum carrying capacity 1200 daN - available diameters 150-250 mm
Top plate fitting. Available with adjustable rear brake.

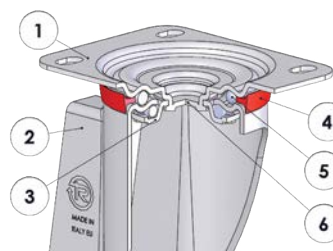
Options available to order:

The series 65GH wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.


















													
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN
150	30	1,45	652104	0,96	654104	17	30	40	12	700	280	400	320
150	35	1,60	652224	1,36	654224	20	35	47	14	825	290	490	390
175	35	2,03	652105	1,79	654105	20	35	47	14	900	350	650	520
200	45	3,51	652106	3,27	654106	20	45	47	14	1125	380	1000	800
200	45	3,42	652206	3,14	654206	25	45	52	15	1125	380	1000	800
250	50	5,50	652208	5,31	654108	20	50	52	15	1750	400	1200	960
250	50	5,59	652108	5,31	654108	25	50	52	15	1750	400	1200	960
300	70	12,31	652109	11,85	654109	30	70	62	16	3000	550	2200	1700

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel sheet
 - 2) Fork: electrolytically galvanised steel sheet
 - 3) Ball race ring: electrolytically galvanised steel sheet
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

														
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	30	2.81	656204	2.45	658204	3.10	656524	192	140x110	105x80	11	56	156	300
150	35	2.96	656214	2.60	658214	3.25	656534	192	140x110	105x80	11	56	156	300
175	35	3.41	656205	3.12	658205	3.69	656525	217	140x110	105x80	11	56	156	300
200	45	4.92	656206	4.70	658206	4.70	656526	240	140x110	105x80	11	56	156	300

Options available to order:

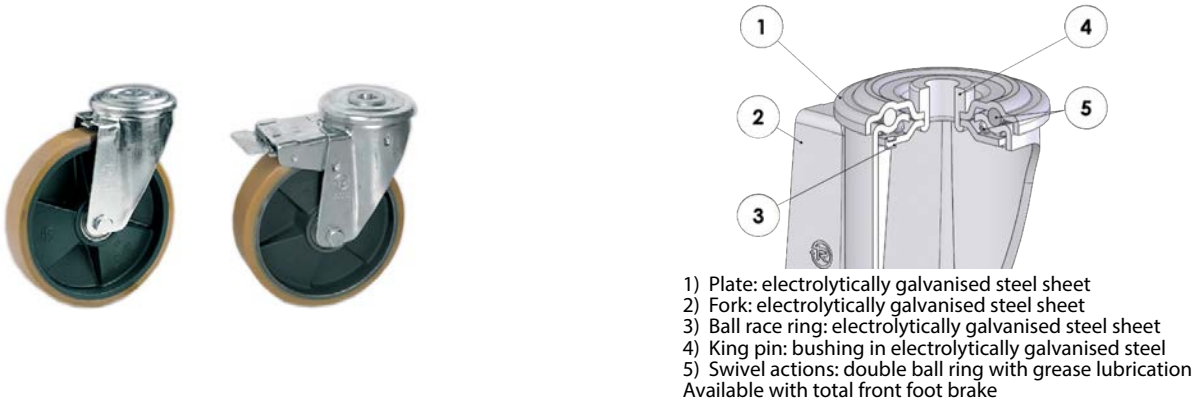


Directional lock for brackets d. 150-200 mm



Footguard for brackets NL-M-P

Standard-duty brackets NL - max carrying capacity 300 daN



mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN
150	30	2,68	656424	2,96	656824	188	102	20	56	156	300
150	35	2,83	656434	3,11	656834	188	102	20	56	156	300
175	35	3,29	656425	3,57	656825	212	102	20	56	156	300
200	45	4,77	656426	5,06	656826	236	102	20	56	156	300

Medium-duty brackets M - max carrying capacity 500 daN

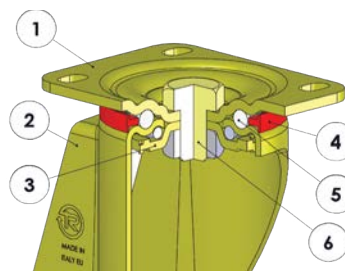


mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	35	3.31	657214	2.60	658214	3.78	657334	194	140x110	105x80	11	58	178	490
200	45	5.31	657206	4.70	658206	5.25	657326	240	140x110	105x80	11	50	178	500

Options available to order:



Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN	
150	30	3,80	657404	2,36	658404	4,08	656624	200	140x110	105x80	11	70	126	400	320				
150	35	3,95	657414	2,51	658414	4,52	656634	200	140x110	105x80	11	70	126	490	390				
175	35	4,42	657405	3,00	658405	4,99	656625	225	140x110	105x80	11	70	126	650	520				
200	45	5,89	657406	4,43	658406	6,46	656626	250	140x110	105x80	11	70	126	750	600				
250	50	8,10	657408	7,00	658408	8,80	656628	298	140x110	105x80	11	66	126	750	600				

Options available to order:

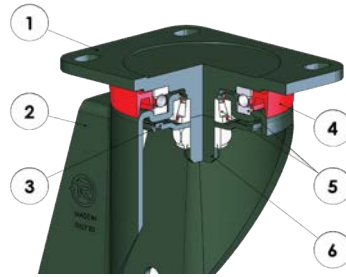


Directional lock for brackets d. 150-200 mm



Footguard for brackets NL-M-P

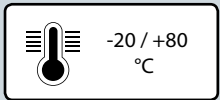
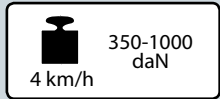
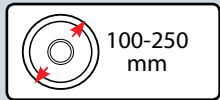
Extra-heavy duty brackets EP - max carrying capacity 1200 daN



- 1) Plate: green galvanised forged steel
 - 2) Fork: green galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN	daN	
150	30	4.06	657804	2.32	658804			200	135x110	105x80	11	70			400	320	
150	35	4.21	657814	3.73	658814	4.78	656914	200	135x110	105x80	11	70	126		490	390	
175	35	4.66	657805	4.24	658805	5.23	656915	225	135x110	105x80	11	70	126		650	520	
200	45	6.14	657806	5.70	658806	6.71	656916	250	135x110	105x80	11	70	126		1000	800	
250	50	11.14	657808	9.30	658808			300	175x140	140x105	14	66			1200	960	

WHEELS WITH THICK "TR" POLYURETHANE AND ALUMINIUM CENTRE



Technical features

Tyre: very thick "TR" polyurethane, hardness 95 Shore A; excellent rolling resistance and elasticity, highly resistant to wear and tear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Designed to improve trolleys' handling under heavy loads on uneven surfaces. The thick tread guarantees: excellent ability to overcome obstacles, reduced fatigue when pushing the trolley, excellent performance in presence of mechanical handling or mixed manual-mechanical handling, excellent performance over time, even at high speeds (up to 12 km/h).
Examples of recommended applications: trolleys for indoor handling in the logistics and automotive industry, electrical pallet trucks.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable for all types of industrial floors, except unpaved; it easily overcomes obstacles.



Force required to push or tow a wheel

 	100 kg	300 kg	400 kg	500 kg	650 kg	800 kg
100 mm	2.5	5.5	----	----	----	----
125 mm	2.4	5.3	----	----	----	----
160 mm	1.8	4.7	5.8	7	11	----
180 mm	1.5	4.4	5.6	6.5	10	----
200 mm	1.2	4	5.4	6.2	9	12

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 100-250 mm
Top plate fitting. Available with front brake and adjustable rear brake.



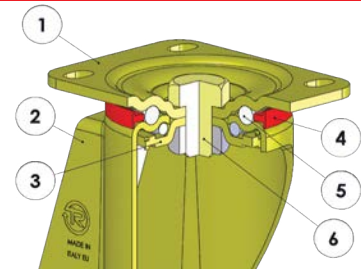
Electrowelded brackets EE MHD

Maximum carrying capacity 800 daN - available diameters 100-200 mm
Top plate fitting. Available with adjustable rear brake.



mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN	daN	daN
100	40	0.46	652302	0.38	654302	15	40	32	9	500	270	350	280
125	40	0.76	652303	0.41	654303	20	50	47	14	650	280	450	360
160	50	1.18	652304	0.95	654304	20	58	47	14.5	900	320	700	560
180	50	1.44	652305	1.21	654305	20	60	47	14.5	950	335	750	600
200	50	1.76	652306	1.52	654306	20	60	47	14.5	1000	350	800	640
250	50	2.40	652308	2.10	654308	20	55	52	15	1200	380	1000	800

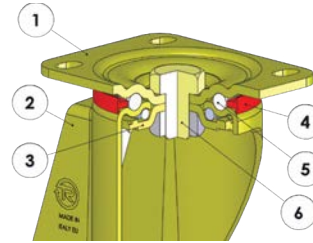
Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial platesteel
 - 2) Fork: galvanised colonial platesteel
 - 3) Ball race ring: galvanised colonial platesteel
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
100	40	1.33	655302	0.83	655412	1.50	655502	138	100x85	80x60	9	46	123	350	280

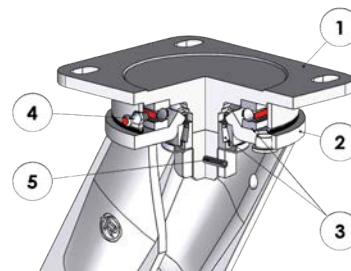
Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
- 2) Fork: galvanised colonial steel plate
- 3) Ball race ring: galvanised colonial steel plate
- 4) Dust seal: orange polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: steel bolt in grade 8.8 steel and steel nut
Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm				mm	4 km/h daN	6 km/h daN	
125	40	2.30	655303	1.63	655403	2.83	655503	170	140x110	105x80	11	70	126	450	360
160	50	3.53	655310	2.04	655414	4.10	655504	205	140x110	105x80	11	70	126	700	560
180	50	3.78	655305	2.36	655415	4.35	655505	228	140x110	105x80	11	70	126	750	600
200	50	4.22	655316	2.76	655416	4.82	655506	250	140x110	105x80	11	70	126	750	600
250	50	4.84	655318	3.74	655418	5.54	655508	298	140x110	105x80	11	66	126	750	600

Electrowelded brackets EE MHD - max carrying capacity 800 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut
Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm				mm	4 km/h daN	6 km/h daN	
100	40	3.36	655602	2.38	655702	4.24	655802	170	135x110	105x80	11	51	157	350	280
125	40	3.68	655603	2.70	655703	4.56	655803	182	135x110	105x80	11	51	157	450	360
160	50	4.18	655614	3.19	655714	5.06	655814	215	135x110	105x80	11	60	157	700	560
180	50	4.56	655605	3.58	655705	5.45	655805	242	135x110	105x80	11	70	157	750	600
200	50	4.88	655606	3.90	655706	6.22	655806	252	135x110	105x80	11	70	157	800	640

Options available to order:



Directional lock for P brackets d. 150-200 mm

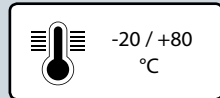
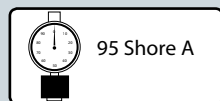


Directional lock for brackets EE MHD - EE HD - EED MHD: see page 328



Footguard for brackets M-P

"TR" POLYURETHANE WHEELS WITH ERGONOMIC ROUND PROFILE AND ALUMINIUM CENTRE



Description

Tyre: very thick TR-Roll polyurethane with ergonomic round profile; hardness 95 Shore A; excellent rolling resistance and elasticity and good resistance to wear and tear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Designed to improve trolleys' manual handling under heavy loads. The round profile reduces the start-up coefficient when the castors are positioned at 90° from the line of movement and therefore greatly reduces the amount of effort required by the operators when handling trolleys.

Combined with appropriate brackets they guarantee excellent performance for mechanical handling up to 12 km/h.

Examples of application: trolleys for the automotive industry, lean manufacturing trolleys and electrical pallet trucks.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable for all types of industrial floors, except unpaved; it easily overcomes obstacles.



Force required to push or tow a wheel

 	100 kg	250 kg	400 kg	500 kg	650 kg	800 kg
125 mm	2,5	5	7	---	---	---
160 mm	1,8	4,7	6	7	11	---
200 mm	1,2	4,5	5,4	6,2	9	12

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 125-200 mm
Top plate fitting. Available with adjustable rear brake.



Extra-heavy duty brackets EP














Maximum carrying capacity 800 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable rear brake.



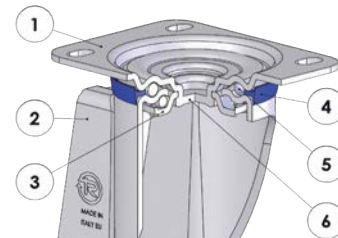
Electrowelded brackets EE MHD

Maximum carrying capacity 800 daN - available diameters 125-200 mm
Top plate fitting. Available with adjustable rear brake.


















															
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN		
125	40	0,73	652503	0,51	654503	20	50	47	14	650	250	450	360		
160	50	1,11	652504	0,89	654504	20	58	47	14,5	900	280	700	560		
200	50	1,68	652506	1,44	654506	20	60	47	14,5	1000	300	800	640		

Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with adjustable total front foot brake

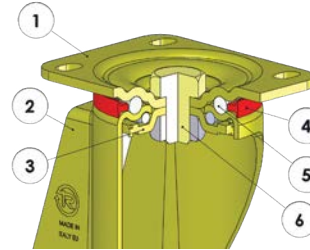
															
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN
160	50	2,81	655904	2,10	656004	3,28	656304	199	140x110	105x80	11	58	178	500	
200	50	3,52	655906	2,87	656006	3,90	656306	240	140x110	105x80	11	50	178	500	

Options available to order:



Footguard for brackets M-P

Heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
125	40	2,27	655913	1,63	656013	2,83	656313	170	140x110	105x80	11	70	126	450	360
160	50	3,46	655914	2,28	656014	4,27	656314	205	140x110	105x80	11	70	126	700	560
200	50	4,14	655916	2,68	656016	4,74	656316	250	140x110	105x80	11	70	126	750	640

Extra-heavy duty brackets EP - max carrying capacity 800 daN



- 1) Plate: green galvanised forged steel
 - 2) Fork: green galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

mm		kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
160	50	3,62	655924	3,21	656024	4,14	656324	205	135x110	105x80	11	70	126	700	560
200	50	4,40	655926	3,96	656026	4,97	656326	250	135x110	105x80	11	70	126	800	640

Options available to order:

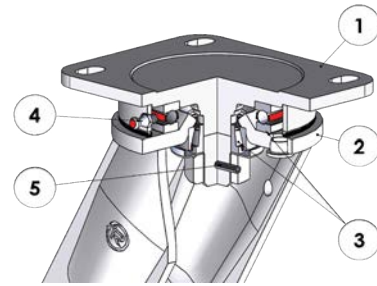


Footguard for brackets M-P



Directional lock for brackets P
diam. 160-200 mm

Electrowelded brackets EE MHD - max carrying capacity 800 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
125	40	3,65	655933	2,67	656033	4,53	656333	182	135x110	105x80	11	51	157	450	360	4 km/h	6 km/h				
160	50	4,11	655934	3,12	656034	4,99	656334	215	135x110	105x80	11	60	157	700	560						
200	50	4,80	655936	3,82	656036	6,14	656336	252	135x110	105x80	11	70	157	800	640						

Options available to order:

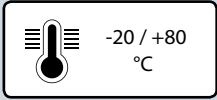
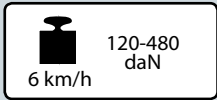
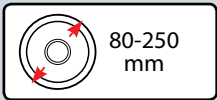


Directional lock
for brackets EE MHD
- EE HD - EED MHD:
see page 328



Technology at work

"TR" POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE



INOX



Description

Tyre: "TR" polyurethane, hardness 95 Shore A, excellent rolling resistance and elasticity, highly resistant to wear.

Centre: polyamide 6.

Hub with plain bore hole which directly houses the axle.

Hub with cylindrical roller bearing with plastic cage. Also available with stainless steel roller bearings.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding. The wheel is also available without bearings.

Uses

Excellent for trolleys and machinery with medium/heavy-duty loads, also in presence of continuous handling.

Also suitable for mechanical or mixed manual-mechanical handling, up to 6 km/h.

Its excellent rolling resistance guarantees minimum effort by manual handling.

Examples of recommended applications: trolleys for indoor industrial handling, trolleys for the food and chemical industry, manual and electric pallet trucks, equipment for dry cleaner's, slaughterhouses, meat factories.

Environments of use

Suitable for indoor environments, also in presence of medium-harsh chemical agents, alcohol, glycol and water. They are suitable for industrial environments.

Not recommended in areas with strong organic acids and mineral acids.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

They do not mark or damage delicate floors.

Suitable on tiles, resin-cement, asphalt even in presence of small obstacles on the path.

Not recommended on unpaved floors or in presence of processing residues.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	400 kg	500 kg	600 kg	800 kg	1000 kg
80 mm	5	---	---	---	---	---	---	---
100 mm	4.5	8	---	---	---	---	---	---
125 mm	4.2	7	---	---	---	---	---	---
150 mm	2.5	4	6	8				
175 mm	1.5	3.7	5.5	7.5	---	---	---	---
200 mm	< 1	3.5	5	8.5	11	17	---	---
250 mm	< 1	3	4	5	10	13	16	22
250 mm	< 1	3	4	5	10	13	16	22

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets:



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 600 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Stainless steel medium-heavy duty brackets PX

Maximum carrying capacity 600 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable rear brake.










Options available to order

The series 66 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the wheel+bracket code. To order loose thread guards see the Accessories section.












SERIES **66**

**"TR" POLYURETHANE WHEELS
WITH POLYAMIDE 6 CENTRE**
















														
mm	mm	kg	COD.	mm	mm.	daN	daN	daN						
80	25	0,10	661101	12	39	225	100	150						
100	30	0,16	661102	12	44	300	135	200						
125	30	0,25	661103	15	44	400	150	250						
150	40	0,45	661104	20	59	600	240	400						
175	40	0,62	661105	20	59	680	270	470						
200	50	0,78	661106	20	59	800	300	600						
200	50	0,75	661206	25	59	800	300	600						
250	60	1,41	661108	25	88	1200	400	1000						

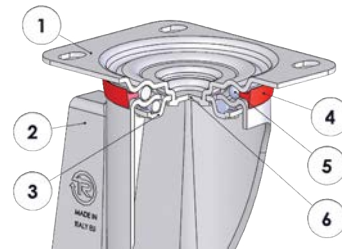
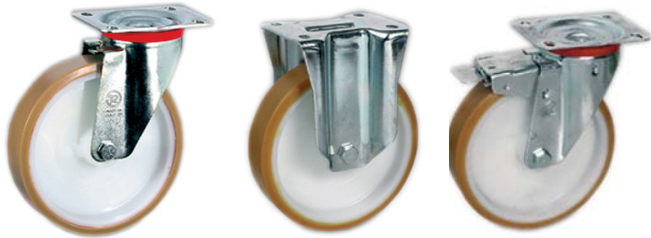


															
mm	mm	kg	COD.	kg	COD.	mm	mm	daN	daN	daN					
80	25	0,13	663101	0,13	663201	12	39	225	100	150					
100	30	0,19	663102	0,19	663202	12	44	300	135	200					
125	30	0,28	663103	0,28	663203	15	44	400	150	250					
150	40	0,54	663104	0,54	663204	20	59	600	240	400					
175	40	0,73	663105	0,73	663205	20	59	680	270	470					
200	50	0,89	663106	0,89	663206	20	59	800	300	600					
200	50	0,85	663116			25	59	800	300	600					
250	60	1,52	663108	1,52	663208	25	88	1200	400	1000					



															
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN		
80	25	0,15	662101	0,10	664101	12	32	28	10	225	100	150	120		
100	30	0,25	662102	0,15	664102	12	40	32	11,5	300	135	200	160		
125	30	0,33	662103	0,25	664103	15	40	35	13,5	400	150	250	200		
175	40	0,85	662105	0,60	664105	20	55	47	14	680	270	470	380		
200	50	1,07	662106	0,76	664106	20	55	52	15	800	300	600	480		
200	50	1,06	662126	0,76	664106	25	55	52	15	800	300	600	480		

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm		kg	COD.		kg	COD.		kg	COD.		mm					daN	
80	25	0,61	664201	III	0,37	665701	III	0,80	666601	III	107	100x85	80x60	9	37	120	150
100	30	0,75	664202	III	0,44	665702	III	0,90	666602	III	128	100x85	80x60	9	35	120	200
125	30	0,91	664203	III	0,66	665703	III	1,05	666603	III	156	100x85	80x60	9	37	120	220
125PG	30	1,10	664213	III	0,86	665713	III	1,30	666643	III	156	140x110	105x80	11	37	120	220
150	40	1,81	664204	III	1,44	665704	III	2,09	666604	III	194	140x110	105x80	11	56	156	300
175	40	1,99	664205	III	1,70	665705	III	2,27	666605	III	217	140x110	105x80	11	56	156	300
200	50	2,19	664206	III	1,97	665706	III	2,45	666606	III	240	140x110	105x80	11	56	156	300

80	25	0,63	664501	III	0,41	665901	III	0,84	666621	III	107	100x85	80x60	9	37	120	150
100	30	0,78	664502	III	0,46	665902	III	0,93	666622	III	128	100x85	80x60	9	35	120	200
125	30	0,93	664503	III	0,68	665903	III	1,08	666623	III	156	100x85	80x60	9	37	120	220
125PG	30	1,13	664513	III	0,89	665913	III	1,33	666653	III	156	140x110	105x80	11	37	120	220
150	40	2,00	664504	III	1,53	665904	III	2,18	666624	III	194	140x110	105x80	11	56	156	300
175	40	2,12	664505	III	1,79	665905	III	2,38	666625	III	217	140x110	105x80	11	56	156	300
200	50	2,29	604506	III	2,08	665906	III	2,53	666626	III	240	140x110	105x80	11	56	156	300

Options available to order



Wheel with ball bearings fitted with NL bracket

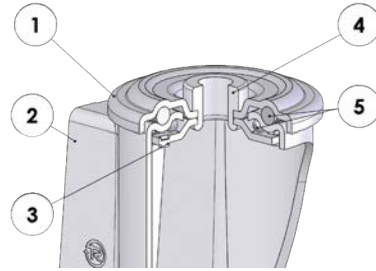


Directional lock for brackets d. 150-200 mm
















Footguard for brackets NL-M-P

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

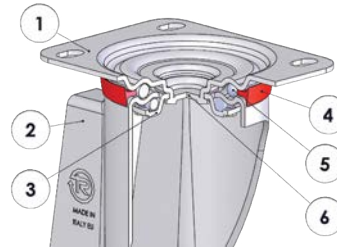
																	
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	4 km/h					
80	25	0.54	667701	0.72	666401	107	73	12	37	120	150						
100	30	0.68	667702	0.89	666402	128	73	12	35	120	200						
125	30	0.85	667703	1.00	666403	156	73	12	37	120	200						
150	40	1.67	667704	1.96	666404	188	102	20	56	156	300						
175	40	1.86	667705	2.15	666405	212	102	20	56	156	300						
200	50	2.09	667706	2.37	666406	236	102	20	56	156	300						
80	25	0.57	667801	0.75	666421	107	73	12	37	120	150						
100	30	0.71	667802	0.91	666422	128	73	12	35	120	200						
125	30	0.88	667803	1.03	666423	156	73	12	37	120	200						
150	40	1.76	667804	2.05	666424	188	102	20	56	156	300						
175	40	1.97	667805	2.26	666425	212	102	20	56	156	300						
200	50	2.20	667806	2.48	666426	236	102	20	56	156	300						

Options available to order



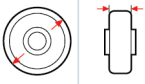









Wheel with ball bearings fitted with NL bracket

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN



INOX

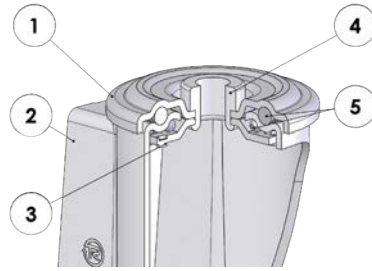
- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

																			
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN	4 km/h	
80	25	0.60	664401	0.34	665401	0.77	666701	107	100x85	80x60	9	37	120			150			
100	30	0.66	664402	0.41	665402	0.84	666702	128	100x85	80x60	9	35	120			200			
125	30	0.81	664403	0.64	665403	0.95	666703	156	100x85	80x60	9	37	120			220			
150	40	1.75	664404	1.31	665404	2.04	666704	194	140x110	105x80	11	56	156			300			
175	40	1.93	664405	1.49	665405	2.21	666705	215	140x110	105x80	11	56	156			300			
200	50	2.16	664406	1.70	665406	2.44	666706	240	140x110	105x80	11	56	156			300			
80	25	0.64	664601	0.38	665601	0.81	666721	107	100x85	80x60	9	37	120			150			
100	30	0.68	664602	0.44	665602	0.87	666722	128	100x85	80x60	9	35	120			200			
125	30	0.84	664603	0.67	665603	0.98	666723	156	100x85	80x60	9	37	120			220			
150	40	1.84	664604	1.40	665604	2.13	666724	194	140x110	105x80	11	56	156			300			
175	40	2.04	664605	1.60	665605	2.32	666725	215	140x110	105x80	11	56	156			300			
200	50	2.27	664606	1.81	665606	2.55	666726	240	140x110	105x80	11	56	156			300			














"TR" POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN

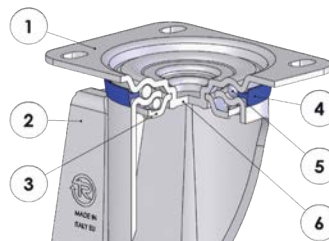
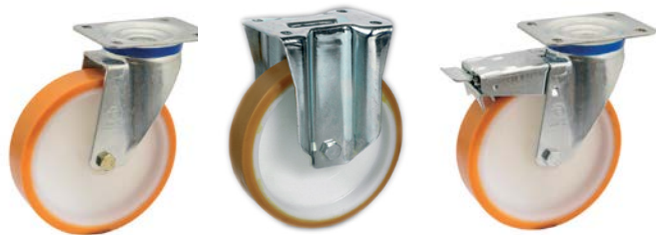
INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

																	
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	4 km/h					
80	25	0.54	667901	0.71	668801	107	73	12	37	120	150						
100	30	0.62	667902	0.83	668802	128	73	12	35	120	200						
125	30	0.79	667903	0.94	668803	156	73	12	37	120	220						
150	40	1.55	667904	1.83	668804	188	102	20	56	156	300						
175	40	1.74	667905	2.02	668805	212	102	20	56	156	300						
200	50	2.10	667906	2.36	668806	236	102	20	56	156	300						
80	25	0.58	668001	0.75	668821	107	73	12	37	120	150						
100	30	0.65	668002	0.85	668822	128	73	12	35	120	200						
125	30	0.82	668003	0.97	668823	156	73	12	37	120	220						
150	40	1.64	668004	1.32	668824	188	102	20	56	156	300						
175	40	1.85	668005	2.13	668825	212	102	20	56	156	300						
200	50	2.21	668006	2.47	668826	236	102	20	56	156	300						

Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm		kg		kg		kg		mm		mm		mm		mm		mm		daN		
150	40	2.16	664304	1.44	665704	2.62	668704	194	140x110	105x80	11	58	178	400						
200	50	2.58	664306	1.97	665706	3.00	668706	240	140x110	105x80	11	50	178	500						
150	40	2.35	664804	1.53	665904	2.71	668904	194	140x110	105x80	11	58	178	400						
200	50	2.68	664806	2.08	665906	3.08	668906	240	140x110	105x80	11	50	178	500						
200	50	2.93	665306	2.32	665806	3.35	669206	240	140x110	105x80	11	50	178	500						

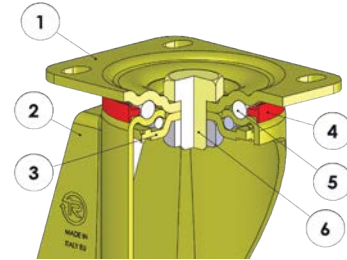
Options available to order



Footguard for brackets NL-M-P

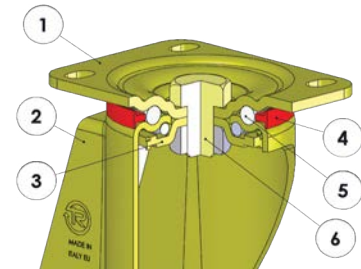
**"TR" POLYURETHANE WHEELS
WITH POLYAMIDE 6 CENTRE**

Medium-heavy duty brackets P - max carrying capacity 600 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
100	30	1.04	667102	0.55	668102	1.19	669002	138	100x85	80x60	9	46	123	200
125	30	1.17	667103	0.75	668103	1.31	669003	161	100x85	80x60	9	44	123	250
100	30	1.08	667302	0.58	668302	1.22	669102	138	100x85	80x60	9	46	123	200
125	30	1.20	667303	0.78	668303	1.34	669103	161	100x85	80x60	9	44	123	250



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	40	2.79	667604	1.37	668604	3.36	669004	200	140x110	105x80	11	70	126	400
175	40	3.01	667605	1.58	668605	3.57	669005	225	140x110	105x80	11	70	126	470
200	50	3.25	667606	1.79	668606	3.82	669006	250	140x110	105x80	11	70	126	600
150	40	2.89	667504	1.46	668504	3.46	669104	200	140x110	105x80	11	70	126	400
175	40	3.11	667505	1.69	668505	3.68	669105	225	140x110	105x80	11	70	126	470
200	50	3.36	667506	1.90	668506	3.93	669106	250	140x110	105x80	11	70	126	600

Options available to order



Wheel with ball bearings fitted with P bracket



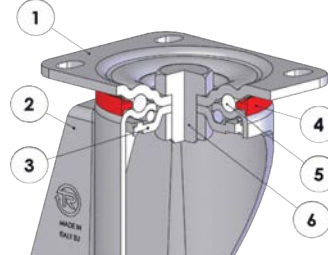
Directional lock for brackets d. 150-200 mm



Footguard for brackets NL-M-P

Stainless steel medium-heavy duty brackets PX - max carrying capacity 600 daN

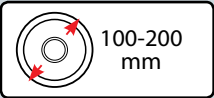
INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: screw and nut in stainless steel
- Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	40	2.75	667004	1.36	667114	3.32	667214	200	140x110	105x80	11	70	126	400
175	40	2.95	667005	1.56	667115	3.52	667215	225	140x110	105x80	11	70	126	470
200	50	3.20	667006	1.76	667116	3.77	667216	250	140x110	105x80	11	70	126	600
150	40	2.77	667314	1.55	667414	3.34	667514	200	140x110	105x80	11	70	126	400
175	40	3.09	667315	1.69	667415	3.66	667515	225	140x110	105x80	11	70	126	470
200	50	3.30	667316	1.87	667416	3.87	667516	250	140x110	105x80	11	70	126	600

POLYAMIDE 6 SOLID WHEELS FOR HEAVY LOADS



INOX



Description

Polyamide 6 solid wheels for heavy-duty loads, hardness 70 Shore D.

Hub with plain bore hole which directly houses the axle.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding. The wheel is also available without bearings.

Uses

Intended mainly for static uses, for high carrying capacities.

The excellent rolling resistance ensures that a minimum manual effort is needed when handling, but only on smooth floors.

Examples of recommended applications: trolley for internal use in the food and canning industries, tannery equipment, flower trolley, manual pallet trucks, mobile scaffolding.

Environments of use

Designed for industrial environments, even in presence of aggressive chemical substances. Not recommended in areas with strong organic acids and concentrated mineral acids.

WEAK ACIDS			
STRONG ACIDS			
WATER			
ALCOHOL			

WEAK BASES			
STRONG BASES			
HYDROCARBONS			
SOLVENTS			

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable only for smooth and compact floors.

Not suited for areas with obstacles.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	500 kg	700 kg	900 kg
100 mm	2.5	3.5	4.5	---	---	---
125x35 mm	2	2.8	3.8	---	---	---
125x45 mm	2.2	3.2	4	6.5	---	---
150 mm	1.8	2.3	3.5	5.5	7	---
200 mm	1.2	1.8	2.7	3.4	5.5	8

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 125 mm
Top plate fitting. Available with front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Stainless steel medium-heavy duty brackets PX

Maximum carrying capacity 750 daN - available diameters 125-200 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD

Maximum carrying capacity 900 daN - available diameters 125-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Twin electrowelded brackets EEG HD

Maximum carrying capacity 1800 daN - available diameters 125-200 mm
Top plate fitting.

Options available to order












Wheel in solid polyamide 6 for extremely heavy loads













68_P

POLYAMIDE 6 SOLID WHEELS FOR HEAVY-DUTY LOADS

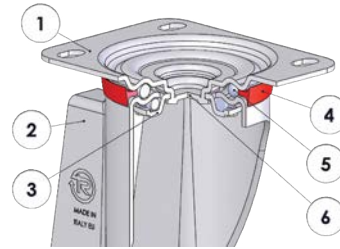


																
mm	mm	kg	CODE	mm	mm	daN	daN	daN								
100	35	0.26	681202	20	44	450	200	400								
125	45	0.36	681203	20	58	700	200	650								
150	45	0.50	681204	20	58	800	300	750								
200	50	0.90	681206	20	58	1000	400	900								



																
mm	mm	kg	CODE	kg	CODE	mm	mm.	mm	mm	daN	daN	daN				
100	35	0.33	683402	0.20	682202	15	40	35	11	450	350	350				
125	35	0.42	683403	0.29	682203	15	40	35	11	500	450	450				
125	45	0.61	683413	0.39	682213	20	56	47	13	700	400	650				
125	45	0.60	683423	0.39	682213	25	56	47	13	700	400	650				
150	45	0.74	683404	0.52	682204	20	56	47	13	800	455	750				
150	45	0.73	683424	0.52	682204	25	56	47	13	800	455	750				
200	50	1.10	683406	0.89	682206	20	56	47	13	1000	650	900				
200	50	1.08	683426	0.89	682206	25	56	47	13	1000	650	900				

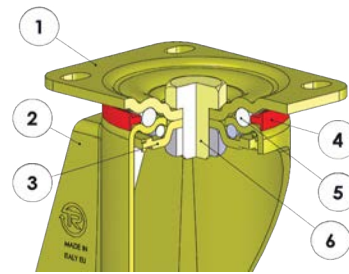
Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
125	45	1.48	684523	1.44	685113	1.70	686813	166	140x110	105x80	11	57	156	300	
125	45	1.73	684873	1.69	685173	1.95	686863	166	140x110	105x80	11	57	156	300	

Medium-heavy duty brackets P - max carrying capacity 350 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

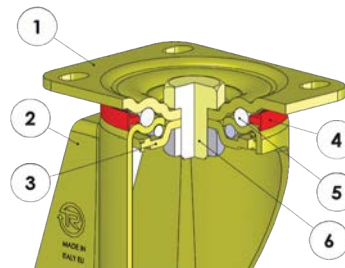
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
100	35	1.13	687522	0.74	688522	1.28	686912	138	100x85	80x60	9	46	123	350	
100	35	1.20	684972	0.81	685372	1.35	686952	138	100x85	80x60	9	46	123	350	
125	35	1.35	684973	0.83	685373	1.46	686953	161	100x85	80x60	9	48	123	350	

Options available to order



Directional lock for brackets d. 150-200 mm

Medium-heavy duty brackets P - max carrying capacity 750 daN

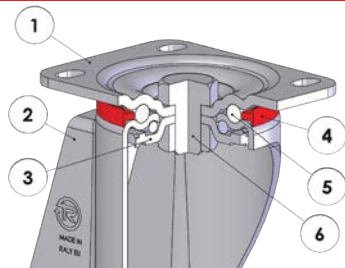


- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm		kg		CODE		kg		CODE		mm		mm		mm		mm		mm		daN	
125	45	2.28	687533	1.49	688533	2.83	686913	170	140x110	105x80	11	70	156	650							
150	45	2.96	687524	1.83	688524	3.14	686914	200	140x110	105x80	11	70	156	750							
200	50	3.37	687526	1.91	688526	3.68	686916	250	140x110	105x80	11	70	156	750							
125	45	2.53	684993	1.74	685393	3.08	686933	170	140x110	105x80	11	70	156	650							
150	45	3.20	684974	2.07	685374	3.77	686954	200	140x110	105x80	11	70	156	750							
200	50	3.64	684976	2.18	685376	3.92	686956	250	140x110	105x80	11	70	156	750							

Stainless steel medium-heavy duty brackets PX- max carrying capacity 750 daN

INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: screw and nut in stainless steel A
- Available with adjustable total rear foot brake

mm		kg		CODE		kg		CODE		mm		mm		mm		mm		mm		daN	
125	45	2.52	687033	1.10	677133	3.07	687233	170	140x110	105x80	11	70	156	650							
150	45	2.86	687014	1.42	687124	3.43	687224	200	140x110	105x80	11	70	156	750							
200	50	3.32	687016	1.88	687126	3.88	687226	250	140x110	105x80	11	70	156	750							

Options available to order



Directional lock for brackets P d. 150-200 mm

Electrowelded brackets EE MHD - max carrying capacity 900 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	4 km/h
125	45	3.26	688303	2.03	688403	4.14	688703	182	135x110	105x80	11	51	157	650	
150	45	3.50	688304	2.51	688404	4.38	688704	210	135x110	105x80	11	60	157	750	
200	50	4.02	688306	3.04	688406	4.90	688706	252	135x110	105x80	11	70	157	900	
125	45	3.51	689303	2.28	689403	4.39	689803	182	135x110	105x80	11	51	157	650	
150	45	3.74	689304	2.75	689404	4.62	689804	210	135x110	105x80	11	60	157	750	
200	50	4.22	689306	3.24	689406	5.10	689806	252	135x110	105x80	11	70	157	900	

Twin electrowelded brackets EEG HD - max carrying capacity 1800 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

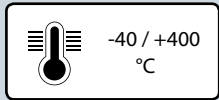
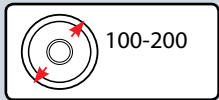
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN	4 km/h
125	45+45	9.35	688072	4.90	688172	210	175x140	140x105	14	50	1300			
150	45+45	9.62	688074	5.20	688174	223	175x140	140x105	14	50	1500			
200	50+50	12.40	688066	7.60	688166	285	200x160	160x120	17	65	1800			

Options available to order



Directional lock
for brackets EE MHD
- EE HD - EED MHD:
see page 328

CAST IRON SOLID WHEELS



Description

Cast iron solid wheels.

Hub with plain bore which directly houses the axle.

Hub with shielded ball bearings with interference assembly in the seats obtained by machining the centre. The wheel is also available without bearings.

Uses

Intended mainly for static uses and for high carrying capacities. The model with plain bore is resistant to temperatures from -40 C to +400°C and is, therefore, particularly suitable for oven applications. To use a castor at temperatures above 100 °C, the wheel needs to be fitted with a specific bracket for high-temperature use.

Examples of recommended applications: trolleys for workshops, industrial ovens.

Environments of use

Designed for industrial environments, even in presence of medium-harsh chemical agents. Not recommended in humid environments and in presence of strong organic acids and concentrated mineral acids.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors



Suitable only for smooth and compact floors.

Not suited for areas with obstacles.

They may damage fragile floors.



Force required to push or tow a wheel

 	100 kg	300 kg	500 kg	700 kg	1000 kg	1400 kg
100x30 mm	< 1	5.6	15	----	----	----
100x40 mm	< 1	4.3	11.2	----	----	----
125 mm	< 1	3.2	7.6	14	----	----
150 mm	< 1	2.5	4.7	7.4	12.2	----
200 mm	< 1	1.7	3.5	5.8	10.3	18

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets:



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-150 mm
Top plate fitting.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 125-200 mm
Top plate fitting.



Extra-heavy duty brackets EP

Maximum carrying capacity 1100 daN - available diameters 150-200 mm
Top plate fitting.

Options available to order












Steel wheel for extremely heavy loads















Wheel with brackets NL and P for high temperatures

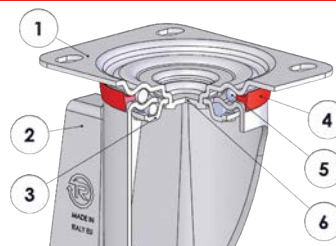


																
mm	mm	kg	CODE	mm	mm	daN	daN	daN								
100	30	0.62	691102	15	34	800	260	500								
100	30	0.70	691112	15	44	800	260	500								
100	40	0.92	691202	20	44	900	300	600								
125	40	1.09	691103	15	44	1200	350	700								
125	40	1.12	691203	20	44	1200	350	700								
150	45	1.81	691104	20	59	1500	500	1200								
200	45	3.34	691106	20	59	1900	600	1400								
200	45	3.19	691206	25	59	1900	800	1400								



																
mm	mm	kg	CODE	kg	CODE	mm	mm.	mm	mm	daN	daN	daN				
100	38	1.33	692122	1.14	694102	15	40	42	13	900	300	600				
100	38	1.28	692102	1.14	694102	20	40	42	13	900	300	600				
125	38	1.67	692103	1.43	694103	20	40	47	14	1200	350	700				
150	50	2.46	692104	2.18	694104	20	56	47	14	1500	500	1200				
200	50	3.64	692106	3.29	694106	20	56	52	15	1900	600	1400				
200	50	3.57	692126	3.57	694106	25	56	52	15	1900	600	1400				

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

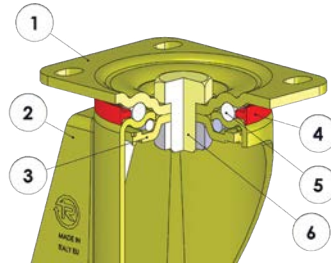
mm		kg		kg		mm		mm		mm		mm		daN	
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN	
100	30	1.16	694802	0.89	695702	128	100x85	80x60	9	35	200				
100	40	1.50	694812	1.16	695712	128	100x85	80x60	9	35	200				
125	40	1.73	694803	1.38	695703	156	100x85	80x60	9	37	220				
150	45	3.24	694804	2.87	695704	194	140x110	105x80	11	56	300				
100	40	1.91	694902	1.57	695802	128	100x85	80x60	9	35	200				
125	40	2.31	694903	1.96	695803	156	100x85	80x60	9	37	220				
150	50	3.89	694904	3.52	695804	194	140x110	105x80	11	56	300				

Options available to order



Wheel with NL and P brackets for high temperatures

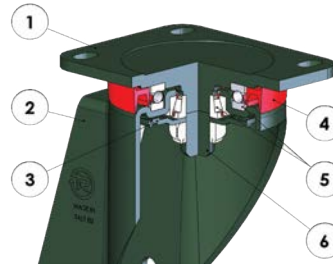
Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
- 2) Fork: galvanised colonial steel plate
- 3) Ball race ring: galvanised colonial steel plate
- 4) Dust seal: orange polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: steel bolt in grade 8.8 steel and steel nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN						
125	40	1.96	697603	1.46	698603	161	100x85	80x60	9	48	350						
150	45	4.16	697504	2.73	698504	200	140x110	105x80	11	70	750						
200	45	5.81	697506	4.35	698506	250	140x110	105x80	11	70	750						
125	40	2.75	696203	2.05	696303	161	100x85	80x60	9	48	350						
150	50	4.81	696204	3.38	696304	200	140x110	105x80	11	70	750						
200	50	6.11	696206	4.65	696306	250	140x110	105x80	11	70	750						

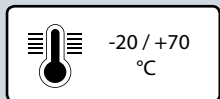
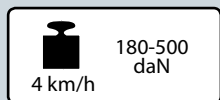
Extra-heavy duty brackets EP - max carrying capacity 1100 daN



- 1) Plate: green galvanised forged steel
- 2) Fork: green galvanised forged steel
- 3) Lower bearing protection ring
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: axial ball bearing and tapered roller bearing
- 6) King pin: integrated with the machine-processed plate

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
150	45	4.43	697804	3.94	698804	200	135x110	105x80	11	70	1100				
200	45	6.03	697806	5.62	698806	250	135x110	105x80	11	70	1100				
150	50	5.08	697604	4.59	697704	200	135x110	105x80	11	70	1100				
200	50	6.30	697606	5.92	697706	250	135x110	105x80	11	70	1100				

SIGMA ELASTIC RUBBER WHEELS WITH ALUMINIUM CENTRE



Description

Tyre: Sigma Elastic rubber, hardness 70 Shore A, excellent elasticity and good resistance to tear and wear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

The excellent elasticity guarantees an easy overcoming of obstacles, vibration damping and noise reduction during use.

Combined with appropriate brackets, they are also suitable for mechanical handling up to 6 km/h.

Good rolling resistance means less fatigue for the operator handling the equipment. Examples of recommended applications: trolleys for indoor and outdoor industrial-handling, manual pallet trucks, heavy waste collection bins.

Environments of use

Industrial environments, even in presence of humidity. Not suitable in presence of strong acids and solvents.

WEAK ACIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG ACIDS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
WATER	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WEAK BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HYDROCARBONS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOLVENTS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable for all types of industrial floor, even outdoors.

Allows easily overcoming the obstacles and does not damage floors.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	400 kg	500 kg
100 mm	3	---	---	---	---
125x40 mm	2.5	5	---	---	---
160 mm	1.8	3.5	5	---	---
180 mm	2.3	4	6	---	---
200 mm	1	2.4	5	6.5	9
250 mm	1	2.4	5	6.5	9

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets :



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 500 daN - available diameters 100-250 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD

Maximum carrying capacity 700 daN - available diameters 100-200 mm
Top plate fitting. Available with adjustable rear brake.



Twin electrowelded brackets EEG MHD - EEG HD

Maximum carrying capacity 1000 daN - available diameters 100-200 mm
Top plate fitting.

Options available to order



Wheel with grey rubber tyre

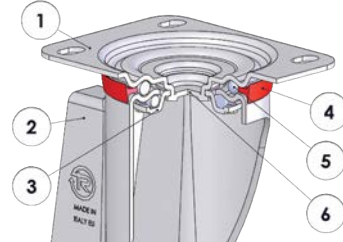
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SIGMA ELASTIC RUBBER WHEELS WITH ALUMINIUM CENTRE



mm	mm	kg	CODE	kg	CODE	mm	mm.	mm	mm	daN	daN	daN	daN
100	40	0.44	721202	0.39	723102	15	40	32	9	250	180	180	140
125	40	0.76	721103	0.50	723003	20	40	47	14	280	200	200	160
125	40	0.78	721203	0.52	723103	20	50	47	14	280	200	200	160
125	50	0.84	721213	0.62	723113	20	59	47	14	320	230	230	180
160	50	1.22	721210	0.96	723104	20	58	47	14	420	300	300	240
160	50	1.20	721110	0.96	723104	25	58	47	14	420	300	300	240
180	50	1.47	721205	1.21	723105	20	60	47	14	490	250	350	280
200	50	2.00	721206	1.71	723106	20	60	52	17.5	1000	300	500	400
200	50	1.99	721106	1.71	723106	25	60	52	17.5	1000	300	500	400
250	50	2.30	721208	1.97	723108	20	60	52	15	1000	300	500	400

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
100	40	0.96	724402	0.71	726202	1.17	727302	128	100x85	80x60	9	37	120	180	
125	50	1.49	724413	1.14	726213	2.37	727313	166	140x110	105x80	11	57	156	230	
160	50	2.59	724410	2.22	726210	2.80	727310	199	140x110	105x80	11	56	156	300	
180	50	2.85	724405	2.56	726205	3.06	727305	219	140x110	105x80	11	56	156	300	
200	50	3.40	724306	3.18	725206	3.66	727106	240	140x110	105x80	11	56	156	300	

Options available to order

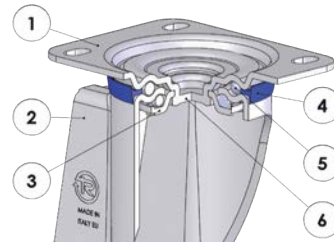


Wheel with grey rubber tyre



Directional lock for brackets d. 150-200 mm

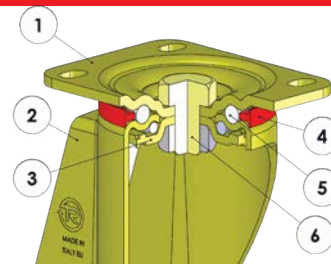
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
160	50	2.94	724610	2.22	726210	3.33	727910	199	140x110	105x80	11	58	178	300
200	50	3.79	724506	3.18	725206	4.21	727706	240	140x110	105x80	11	50	178	500

Medium-heavy duty brackets P - max carrying capacity 500 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
100	40	1.31	727602	0.81	728512			138	100x85	80x60	9	46		180	140
125	50	2.30	727613	1.66	728523			170	140x110	105x80	11	70		230	180
160	50	3.57	727610	2.08	728514	4.14	727204	205	140x110	105x80	11	70	126	300	240
180	50	3.81	727605	2.39	728515	4.38	727205	228	140x110	105x80	11	70	126	350	280
200	50	4.46	727516	3.00	728516	5.06	727206	250	140x110	105x80	11	70	126	500	400
250	50	4.74	727518	3.64	728518	5.44	727208	298	140x110	105x80	11	66	126	500	400

Options available to order

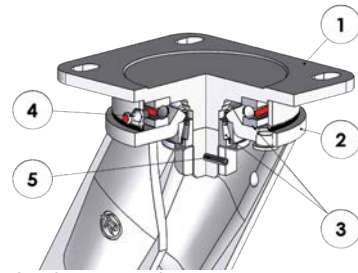


Wheel with grey rubber tyre



Directional lock for P brackets d. 150-200 mm

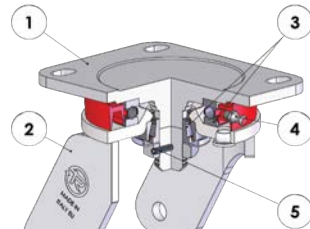
Electrowelded brackets EE MHD - max carrying capacity 500 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
125	50	3.74	728303	2.76	728403	4.62	728603	182	135x110	105x80	11	51	157	230	180
160	50	4.22	728314	3.23	728414	5.10	728614	215	135x110	105x80	11	60	157	300	240
180	50	4.59	728305	3.61	728405	5.47	728605	242	135x110	105x80	11	70	157	350	280
200	50	5.12	728306	4.14	728406	6.00	728606	252	135x110	105x80	11	70	157	500	400
250	50	5.58	728307	4.55	728407	6.46	728607	300	135x110	105x80	11	83	157	500	400

Twin electrowelded brackets EEG MHD - max carrying capacity 400 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h	6 km/h
100	40+40	3.35	728062	2.60	728162	140	135x110	105x80	11	55	360	280
125	40+40	4.10	728063	3.35	728163	170	135x110	105x80	11	55	400	320

Options available to order

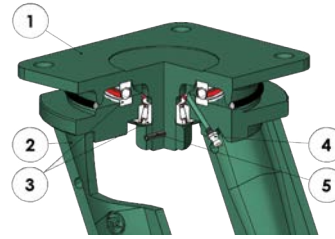


Wheel with grey rubber tyre



Directional lock for brackets EE MHD - EE HD - EED MHD: see page 328

Twin electrowelded brackets EEG HD - max carrying capacity 1000 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

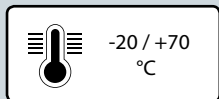
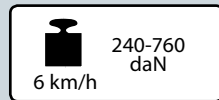
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN
160	50+50	10.60	728084	6.15	728184	228	175x140	140x105	14	50	600	480
200	50+50	12.55	728086	8.00	728186	280	175x140	140x105	14	65	1000	800

Options available to order



Wheel with grey rubber tyre

SIGMA ELASTIC RUBBER WHEELS WITH CAST IRON CENTRE



Description

Tyre: Sigma Elastic rubber, hardness 70 Shore A, excellent elasticity and good resistance to tear and wear.

Centre: cast iron.

Hub with shielded ball bearings with interference assembly in the seats obtained by machining the centre; also available without bearings.

Uses

The excellent elasticity guarantees an easy overcoming of obstacles, vibration damping and noise reduction during use.

Combined with appropriate brackets, they are also suitable for mechanical handling up to 6 km/h.

Also suitable for mixed indoor-outdoor uses.

Examples of recommended applications: trolleys for indoor and outdoor industrial handling, manual pallet trucks, heavy waste collection bins.

Environments of use

Industrial environments, even in presence of humidity. Not suitable in presence of organic, aromatic solvents, chlorinated substances and hydrocarbons.

WEAK ACIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG ACIDS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
WATER	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WEAK BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HYDROCARBONS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOLVENTS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable for all types of industrial floor, even outdoors.

Allows easily overcoming the obstacles and does not damage floors.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	400 kg	500 kg	700 kg	900 kg
125 mm	1.4	3.7	7	---	---		
150 mm	1	3	5.8	9.5	---		
200x50 mm	< 1	1.8	4	7.1	11		
200x75 mm	< 1	1.8	3.3	5	7	12	
250 mm	< 1	1.5	2.7	4.1	6	10.3	

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth floors. For manual handling of a 4-wheel trolley choose diameters that have values < 5 daN, for frequent handling choose values < 3 daN.

Available with brackets:



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 125-200 mm
Top plate fitting. Available with the front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 500 daN - available diameters 125-200 mm
Top plate fitting. Available with adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 800 daN - available diameters 150-250 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD - EE HD

Maximum carrying capacity 950 daN - available diameters 125-300 mm
Top plate fitting. Available with adjustable rear brake.



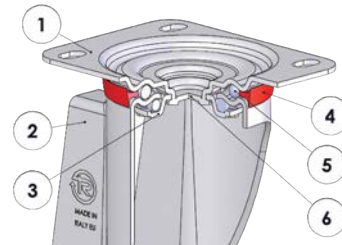
Twin electrowelded brackets EEG HD

Maximum carrying capacity 1000 daN - available diameters 150-200 mm
Top plate fitting.



mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN	daN	daN
125	50	1.88	722103	1.64	724103	20	55	47	14	450	250	300	240
150	50	2.30	722104	2.06	724104	20	55	47	14	600	275	400	320
150	50	2.28	722124	2.06	724104	25	55	47	14	600	275	400	320
200	50	3.15	722106	2.87	724106	25	55	52	17	1000	335	500	400
200	75	5.35	722126	5.07	724126	25	85	52	17	1200	400	700	560
250	75	7.17	722108	6.67	724108	25	88	52	17.5	1500	450	800	640
300	85	8.51	722109	8.05	724109	30	90	62	16	1800	500	950	760
300	85	8.49	722129	8.05	724109	35	90	62	16	1800	500	950	760

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

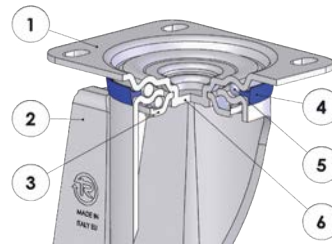
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
125	50	3.00	724313	2.63	725213	3.22	727113	166	140x110	105x80	11	57	156	300	
150	50	3.67	724304	3.30	725204	3.96	727124	194	140x110	105x80	11	56	156	300	
200	50	4.56	724336	4.34	725236	4.86	727126	240	140x110	105x80	11	56	156	300	

Options available to order



Directional lock
for brackets
d. 150-200 mm

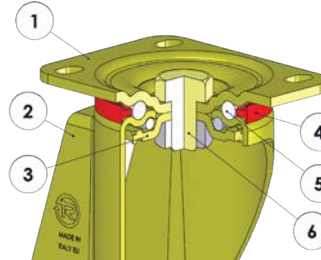
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	
150	50	4.02	724504	3.30	725204	4.49	727724	194	140x110	105x80	11	58	178	400	
200	50	4.95	724536	4.34	725236	5.11	727726	240	140x110	105x80	11	50	178	500	

Medium-heavy duty brackets P - max carrying capacity 500 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

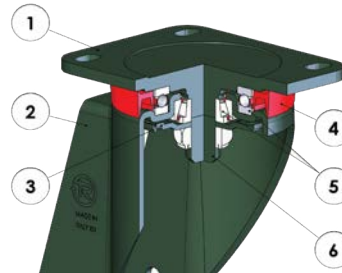
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
125	50	3.80	727513	3.24	728513			170	140x110	105x80	11	70		300	240
150	50	4.65	727504	3.42	728504	5.22	727224	200	140x110	105x80	11	70	126	400	320
200	50	5.62	727506	4.16	728506	6.19	727226	250	140x110	105x80	11	70	126	500	400

Options available to order



Directional lock for P brackets d. 150-200 mm

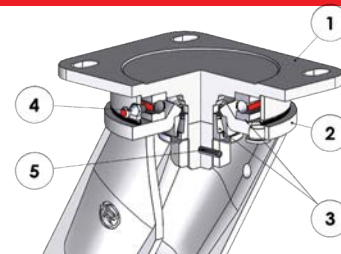
Extra-heavy duty brackets EP - max carrying capacity 800 daN



- 1) Plate: green galvanised forged steel
 - 2) Fork: green galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm				mm	daN	daN	
150	50	4.92	727814	4.43	728814	5.49	727324	200	135x110	105x80	11	70	126	400	320
200	50	5.87	727816	5.43	728816	6.44	727326	250	135x110	105x80	11	70	126	500	400
200	75	10.90	727806	9.06	728806			275	175x140	140x105	14	66		700	560
250	75	12.71	727808	10.88	728808			300	175x140	140x105	14	66		800	640

Electrowelded brackets EE MHD - max carrying capacity 500 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Nut anti-loosening system
- Available with adjustable total rear foot brake

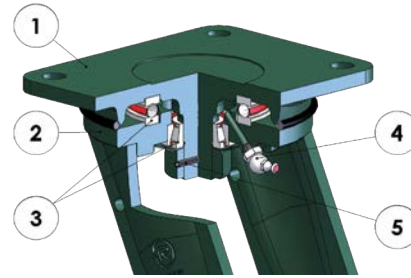
mm		kg	CODE	kg	CODE	kg	CODE	mm				mm	daN	daN	
125	50	4.78	729303	3.80	729403	5.66	729603	182	135x110	105x80	11	51	157	300	180
150	50	5.30	729304	4.31	729404	6.18	729604	210	135x110	105x80	11	60	157	400	320
200	50	6.27	729306	5.29	729406	7.15	729606	252	135x110	105x80	11	70	157	500	400

Options available to order



Directional lock
for brackets EE MHD
- EE HD - EED MHD:
see page 328

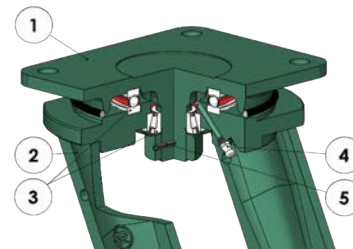
Electrowelded brackets EE HD - max carrying capacity 950 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Nut anti-loosening system

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
200	75	11.81	729316	10.27	729416	12.69	729616	275	175x140	140x105	14	65	166	700	560
250	75	13.86	729307	12.27	729407	14.74	729607	320	175x140	140x105	14	74	166	800	640
300	85	15.32	729308	13.70	729408	16.20	729608	360	175x140	140x105	14	81	166	950	760

Twin electrowelded brackets EEG HD - max carrying capacity 1000 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Nut anti-loosening system

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h	6 km/h		
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN		
150	50+50	12.75	728074	8.30	728174	228	175x140	140x105	14	50	800	640		
200	50+50	14.90	728066	10.35	728166	280	175x140	140x105	14	65	1000	800		
200	50+50	16.55	728076	11.75	728176	285	200x160	160x120	17	65	1000	800		

Options available to order



Directional lock
for brackets EE MHD
- EE HD - EED MHD:
see page 328

HIGH TEMPERATURE



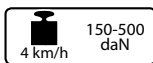


SERIES **67**

SOLID THERMOSETTING RESIN WHEELS



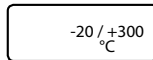
80-200 mm



4 km/h 150-500 daN



4 km/h 125-240 daN



-20 / +300 °C

INOX

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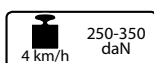


SERIES **68F**

POLYAMIDE 6 SOLID WHEELS CHARGED WITH GLASS FIBER



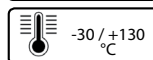
100-125 mm



4 km/h 250-350 daN



4 km/h 250-350 daN



-30 / +130 °C

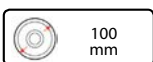
INOX

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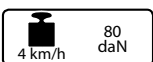


SERIES **72G**

SILICONE RUBBER WHEELS WITH ALUMINIUM CENTRE



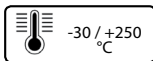
100 mm



4 km/h 80 daN



4 km/h 80 daN

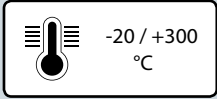
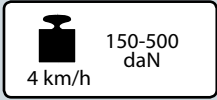
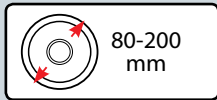


-30 / +250 °C

INOX

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THERMOSETTING RESIN SOLID WHEELS



INOX



Description

Thermosetting resin solid wheels, resistant to temperature from -20°C up to 300°C.

Hub with plain bore hole which directly houses the axle.

Hub with shielded ball bearings lubricated with a grease for high temperatures; steel thread-guards to protect the ball bearings from external agents and dirt.

Uses

Their resistance to high temperature makes them particularly suitable for use in the food industry and in cooking ovens, particularly in the bakeries.

They are fitted with brackets and axle components, which are specific for high temperatures.

The ball bearings version ensures an excellent performance and the absence of squeaking over long cycle time applications, even in presence of heavy loads.

They are resistant to medium-harsh chemical agents.

Not suitable in presence of obstacles along the path or on delicate flooring.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and chemical agents.

WEAK ACIDS					WEAK BASES				
STRONG ACIDS					STRONG BASES				
WATER					HYDROCARBONS				
ALCOHOL					SOLVENTS				

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable on tiles and resin-cement; not recommended on abrasive, unpaved floors or in presence of processing residues.

Not suitable on fragile floor or with obstacles along the path.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	400 kg	500 kg
80 mm	4	----	----	----	----
100 mm	3.7	8.2	----	----	----
125 mm	3	7	11	----	----
150 mm	2	5.5	9	----	----
200 mm	1	4	6.5	9	12

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets:



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings.



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings.



Stainless steel medium-heavy brackets PX

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting.



mm	mm	kg	COD.	mm	mm	daN	daN	daN
80	35	0,18	672201	12	39	250	125	150
100	35	0,30	671102	12	44	300	130	200
100	35	0,29	672202	15	44	300	130	200
125	35	0,43	672203	15	44	400	180	300
150	50	0,90	672104	20	58	500	190	300
200	50	1,68	672106	20	58	700	240	500

Axle sets



Low tickness PTFE-coated steel axle tubes.

Available for fitting with 80,100 and 125mm standard duty NL brackets. Suitable also for heavy usages over short cycle time applications.



Standard steel and stainless steel axle tubes for 150 and 200mm wheels fitted with standard duty NL and NLX brackets, as well as with PX medium-heavy duty brackets. Suitable also for heavy usages over short cycle time applications.



High tickness PTFE-coated stainless steel axle tube for assembly with 80,100 and 125mm standard duty NLX brackets. Available to order for fitting with other brackets. Suitable for medium-heavy duty loads over long cycle time applications.



Low friction innovative PTFE bushings over a steel or stainless steel axle tube. Available for fitting with 80 and 100mm NL and NLX brackets. Suitable for situations of heavier duty and long cycle time applications.

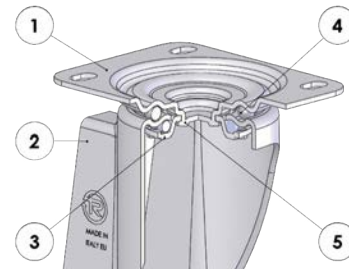


mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	daN	daN	daN
80	35	0,27	672501	0,21	674101	15	35	32	9	250	160	160
100	38	0,44	672502	0,37	674102	15	38	32	9	300	240	240



Ball bearings protection kit composed of:
 - n° 2 galvanised steel threadguards
 - n° 2 galvanised steel spacers
 Item nr. 924610VE

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Swivel actions: double ball ring with grease lubrication for high temperatures
- 5) King pin: integrated with the plate and cold-rieveted

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	4 km/h	daN	Axle set
80	35	0,71	677101	0,43	678101	107	100x85	80x60	9	37	150		
100	35	0,85	677102	0,53	678102	128	100x85	80x60	9	35	200		
125	35	1,07	677103	0,73	678103	156	100x85	80x60	9	37	220		
150	50	2,23	677314	1,90	678304	194	140x110	105x80	11	56	300		
200	50	3,08	677316	2,87	678306	240	140x110	105x80	11	56	300		

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	4 km/h	daN	Eje
80	35	0,77	677201	0,49	677401	107	100x85	80x60	9	37	150		
100	35	0,91	677202	0,59	677402	128	100x85	80x60	9	35	200		



mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	4 km/h	daN
80	35	0,75	677111	0,63	678111	107	100x85	80x60	9	37	160	
100	38	0,95	677112	0,80	678112	128	100x85	80x60	9	35	200	

Options available to order (plain bore)

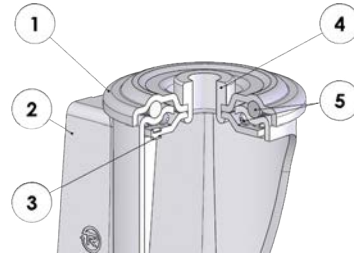


Axle components with stainless steel tube coated with hi-thickness PTFE



Axle components with stainless steel tube coated with hi-thickness PTFE and spacers

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) King pin: bushing in electrolytically galvanised steel
- 5) Swivel actions: double ball ring with grease lubrication for high temperatures

mm	mm	kg	COD.	mm	mm	mm	mm	daN	Axle set
80	35	0,62	676101	107	73	12	37	150	
100	35	0,72	676102	128	73	12	35	200	
125	35	1,05	676103	156	73	12	37	220	

mm	mm	kg	COD.	mm	mm	mm	mm	daN	Axle set
80	35	0,68	677501	107	73	12	37	150	
100	35	0,78	677502	128	73	12	35	200	



mm	mm	kg	COD.	mm	mm	mm	mm	daN
80	35	0,70	676111	107	73	12	37	160
100	35	0,87	676112	128	73	12	35	200

Options available to order (plain bore)



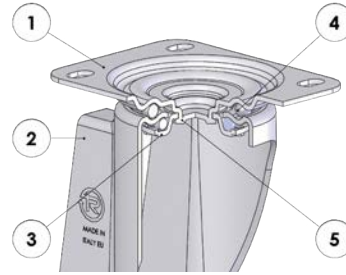
Axle components with stainless steel tube coated with hi-thickness PTFE



Axle components with stainless steel tube coated with hi-thickness PTFE and spacers

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN

INOX



- 1) Plate: AISI 304 stainless steel
- 2) Fork: AISI 304 stainless steel
- 3) Ball race ring: AISI 304 stainless steel
- 4) Swivel actions: double stainless steel ball ring with grease lubrication for high temperatures
- 5) King pin: integrated with the plate and cold-rievted

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN	Axle set
80	35	0,71	677701	0,40	678701	107	100x85	80x60	9	37	150	
100	35	0,79	677702	0,52	678702	128	100x85	80x60	9	35	200	
125	35	0,92	677713	0,80	678713	156	100x85	80x60	9	37	220	
150	50	2,21	677704	1,77	678704	194	140x110	105x80	11	56	300	
200	50	3,06	677706	2,60	678706	240	140x110	105x80	11	56	300	

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN	Axle set
80	35	0,78	677901	0,47	678001	107	100x85	80x60	9	37	150	
100	35	0,86	677902	0,59	678002	128	100x85	80x60	9	35	200	

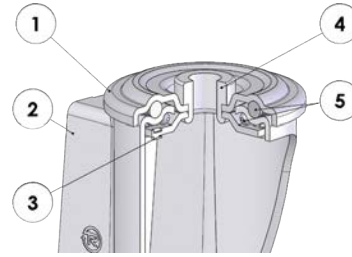
Options available to order


















Ball bearing wheel with NLX stainless steel bracket














Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN

INOX



- 1) Plate: AISI 304 stainless steel
- 2) Fork: AISI 304 stainless steel
- 3) Ball race ring: AISI 304 stainless steel
- 4) King pin: bushing in stainless steel
- 5) Swivel actions: double stainless steel ball ring with grease lubrication for high temperatures

									Axle set
mm	mm	kg	COD.	mm	mm	mm	mm	daN	
80	35	0,62	676701 	107	73	12	37	150	
100	35	0,72	676702 	128	73	12	35	200	
125	35	1,05	676703 	156	73	12	37	220	

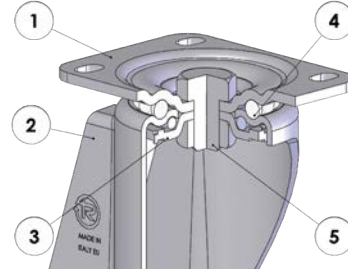
									Axle set
mm	mm	kg	COD.	mm	mm	mm	mm	daN	
80	35	0,69	678201 	107	73	12	37	150	
100	35	0,79	678202 	128	73	12	35	200	

Options available to order



Ball bearing wheel
with NLX stainless steel
bracket

Stainless steel medium-heavy duty brackets PX - max carrying capacity 500 daN

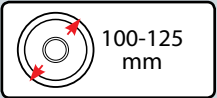


INOX

- 1) Plate: AISI 304 stainless steel
- 2) Fork: AISI 304 stainless steel
- 3) Ball race ring: AISI 304 stainless steel
- 4) Swivel actions: double stainless steel ball ring with grease lubrication for high temperatures
- 5) King pin: screw and nut in stainless steel

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	Axle set		
150	50	3.25	677004	1.90	677104	200	140x110	105x80	11	70	300			
200	50	4.25	677006	2.74	677106	250	140x110	105x80	11	70	500			

**POLYAMIDE 6 SOLID WHEELS
CHARGED WITH GLASS FIBER**



INOX



Description

Polyamide 6 solid wheels charged with glass fiber, to increase the resistance to temperature from -30°C up to +130°C. Hardness 80 Shore D.

Hub with ball bearings with interference assembly in the seats obtained by moulding. The bearing is protected against external agents by polyamide plain bore caps charged with glass fiber with internal labyrinth. Also available with stainless steel ball bearings.

Uses

Mainly suitable for static uses on smooth and compact flooring, for medium-duty carrying capacities. Resistant to temperatures between -30°C and +130°C, suitable for use on equipment that has to be frequently washed and sterilised, especially in auto-claves.

The excellent rolling resistance ensures that minimum effort is needed when manual handling, but only on smooth floors.

They are combined with brackets and axle components which are specific for high temperature environments.

Examples of recommended applications: trolleys for internal use in the food and canning industries, tannery equipments.

Environments of use

Resistant to medium-harsh chemical agents, they are suitable for industrial and institutional environments, also in presence of humidity and chemical agents.

Not recommended in areas with strong organic acids and mineral acids.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors



Only suitable on smooth and compact tile and resin-cement flooring. Not suitable in presence of obstacles.

They may damage fragile floors.

Not recommended on abrasive, unpaved floors or in presence of processing residues.



Force required to push or tow a wheel

 	100 kg	150 kg	200 kg	250 kg	300 kg	350 kg
100 mm	<1	1.2	1.5	2	---	---
125 mm	<1	< 1	1.1	1.5	1.8	2.2

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Combination with brackets



Standard-duty brackets NL

Maximum carrying capacity 220 daN - available diameters 100-125 mm
Top plate and bolt hole fittings.



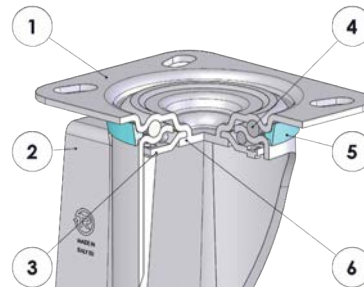
Stainless steel standard-duty brackets NLX

Maximum carrying capacity 220 daN - available diameters 100-125 mm
Top plate and bolt hole fittings.



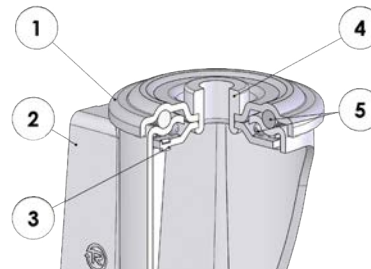
mm	mm	kg	CODE	kg	CODE	mm	mm	daN	daN	daN
100	30	0.27	683502	0.27	683602	12	45	250	250	250
125	30	0.33	683503	0.33	683603	12	45	350	350	350

Standard-duty brackets NL - max carrying capacity 220 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Dust seal: blue polyamide
- 4) Ball race ring: electrolytically galvanised steel plate
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
100	30	0.74	684882	0.63	685182	128	100x85	80x60	9	35	220
125	30	0.83	684883	0.72	685183	156	100x85	80x60	9	37	220

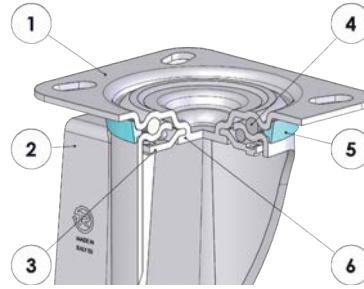


- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) King pin: bushing in electrolytically galvanised steel
- 5) Swivel actions: double ball ring with grease lubrication

mm	mm	kg	CODE	mm	mm	mm	mm	daN
100	30	0.69	688082	128	73	12	35	220
125	30	0.78	688083	156	73	12	37	220

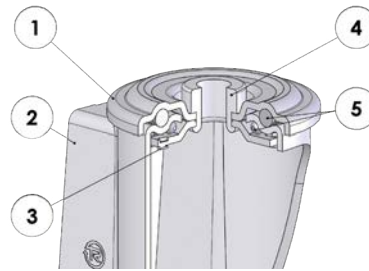
Stainless steel standard-duty brackets NLX - max carrying capacity 220 daN

INOX



- 1) Plate: AISI 304 stainless steel
- 2) Fork: AISI 304 stainless steel
- 3) Ball race ring: AISI 304 stainless steel
- 4) Dust seal: blue polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

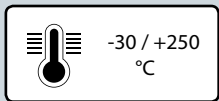
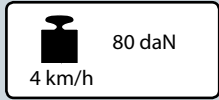
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
100	30	0.74	684682	0.63	685682	128	100x85	80x60	9	35	220
125	30	0.83	684683	0.72	685683	156	100x85	80x60	9	37	220



- 1) Plate: AISI 304 stainless steel
- 2) Fork: AISI 304 stainless steel
- 3) Ball race ring: AISI 304 stainless steel
- 4) King pin: bushing in stainless steel
- 5) Swivel actions: double ball ring with grease lubrication

mm	mm	kg	CODE	mm	mm	mm	mm	daN
100	30	0.69	685982	128	73	12	35	220
125	30	0.78	685983	156	73	12	37	220

SILICONE RUBBER WHEELS WITH ALUMINIUM CENTRE



INOX



Description

Tyre: red non-marking silicone rubber, hardness 80 Shore A, resistant to temperatures up to 250°C.

Centre: aluminium.

Hub with ball bearings with silicone grease for high temperatures, interference assembly in the seats obtained by moulding.

Uses

Suitable for use at temperatures from -30 up to +250°C. Particularly suitable for intermittent use in baking ovens (maximum permanence at 250°C is of 30 minutes, with subsequent period of resting of at least 30 minutes, at room temperature). They have excellent elasticity features and guarantee an easy overcoming of obstacles on uneven flooring also; compared to high temperature solid wheels, they allow a significant noise reduction. They are combined with brackets and axle components specific for high temperatures; all wheels are also fitted with threadguards. Not suitable in presence of obstacles along the path or on delicate flooring.

Environments of use

Suitable for industrial and institutional environments. They are resistant to medium-harsh chemical agents and humidity. Not recommended in areas with strong acids and oils.

WEAK ACIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WEAK BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
STRONG ACIDS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	STRONG BASES	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WATER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HYDROCARBONS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	SOLVENTS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable for use on tiles, resin-cement; not recommended on abrasive, unpaved floors or in the presence of processing residues. Not suitable on delicate floor or with obstacles along the path. They do not mark the floor.



Force required to push or tow a wheel

 	50 kg	75 kg	100 kg
100 mm	<1	4	----

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets



Standard-duty brackets NL

Maximum carrying capacity 80 daN - available diameters 100 mm
Top plate and bolt hole fittings. Available with front brake.



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 80 daN - available diameters 100 mm
Top plate and bolt hole fittings. Available with front brake.

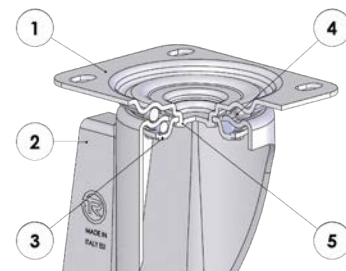
SERIES 72G

SILICONE RUBBER WHEELS WITH ALUMINIUM CENTRE



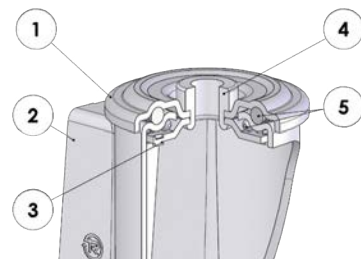
mm	mm	kg	CODE	mm	mm	Static	4 km/h	250 °C	250 °C	250 °C
mm	mm	kg	CODE	mm	mm	daN	daN	daN	daN	daN
100	40	0.43	722152	15	40	100	80	80	40	40

Standard-duty brackets NL - max carrying capacity 80 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication for high temperatures
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

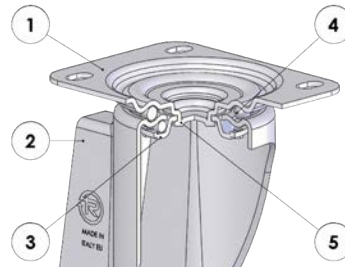
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN	250 °C
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN	250 °C
100	40	0.96	724452PF	0.71	726252PF	1.17	727152PF	128	100x85	80x60	9	35	120	80	40	250 °C



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication for high temperatures
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN	250 °C
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN	250 °C
100	40	0.86	727352PF	1.07	727452PF	128	73	12	35	120	80	40	250 °C

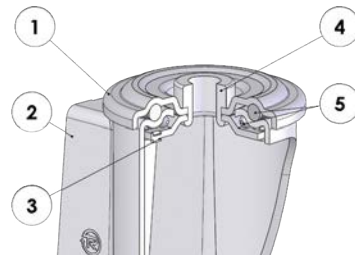
Stainless steel standard-duty brackets NLX - max carrying capacity 80 daN



INOX

- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Swivel actions: double stainless steel ball ring with grease lubrication for high temperatures
 - 5) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN	250 °C
100	40	0.96	724462PF	0.71	726262PF	1.17	727162PF	128	100x85	80x60	9	35	120	80	40	4 km/h 4 km/h



INOX

- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double stainless steel ball ring with grease lubrication for high temperatures
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN	250 °C			
100	40	0.86	727362PF	1.07	727462PF	128	73	12	35	120	80	40	4 km/h 4 km/h			

PALLET TRUCK ROLLERS





SERIES **74**

VULKOLLAN® ROLLERS WITH STEEL CENTRE

80-85 mm	400-1000 daN 4 km/h	180-450 daN
320-800 daN 6 km/h	-20 / +80 °C	

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SERIES **75**

"TR" POLYURETHANE ROLLERS WITH STEEL CENTRE

80-85 mm	400-1000 daN 4 km/h	150-400 daN
320-800 daN 6 km/h	-20 / +80 °C	

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SERIES **76**

POLYAMIDE 6 SOLID ROLLERS

40-85 mm	700-1200 daN 4 km/h	335-500 daN
-30 / +80 °C		

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SERIES **77**

"TR" POLYURETHANE ROLLERS WITH POLYAMIDE 6 CENTRE

82-85 mm	450-600 daN 4 km/h	300-350 daN
350-480 daN 6 km/h	-20 / +80 °C	

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SERIES **78**

THERMOPLASTIC POLYURETHANE ROLLERS WITH POLYAMIDE 6 CENTRE

82 mm	450-750 daN 4 km/h	390-530 daN
-15 / +80 °C		

PAGE 270





SERIES **79**

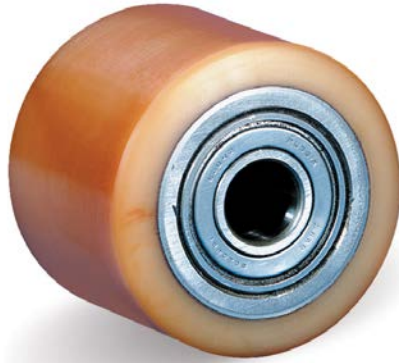
"TR-ROLL" POLYURETHANE ROLLERS WITH STEEL CENTRE

80-85 mm	400-650 daN 4 km/h	400-650 daN
320-520 daN 6 km/h	-20 / +70 °C	

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VULKOLLAN® PALLET TRUCK ROLLERS WITH STEEL CENTRE

-  80-85 mm
-  93 Shore A
-  400-1000 daN
4 km/h
-  320-800 daN
6 km/h
-  180-450 daN
-  -20 / +80 °C



Description

Tyre: Vulkollan®, hardness 93 Shore A: excellent values of rolling resistance and elasticity, highly resistant to wear, tear and deformations.

Centre: obtained from a steel tube.

Hub with shielded ball bearing with interference assembly in the seats obtained by precision machining of the centre; also available without bearings.

Model with labyrinth seals: protective plastic-rings, with interference assembly into the ball bearings. They ensure longer life, by preventing entry of dust and foreign bodies.

Uses

Excellent for use on electric pallet trucks, also in case of heavy loads and high speed handling (up to 16 km/h).

Their excellent values of rolling resistance make the manual handling of heavy loads easier.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS				WEAK BASES			
STRONG ACIDS				STRONG BASES			
WATER				HYDROCARBONS			
ALCOHOL				SOLVENTS			

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable for tiles and cement-resin.

Not suitable if voluminous obstacles are present.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	500 kg	600 kg	800 kg	1000 kg
80x70 mm	1	2.6	5	12	16.7	----	----
80x90 mm	< 1	< 1	2.3	7.1	10.6	19.5	----
85x40 mm	1.4	5.3	10.4	----	----	----	----
85x70 mm	< 1	1.9	4	10.9	15.5	----	----
85x80 mm	< 1	1.6	3.5	9.5	13.6	24	----
85x90 mm	< 1	< 1	2.3	7.9	11.4	20.5	----
85x100 mm	< 1	< 1	2	5.8	9.3	17	27

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.















Options available to order



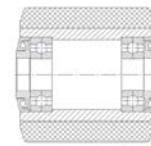
Rollers fitted with electrowelded brackets EE MHD

VULKOLLAN® PALLET TRUCK ROLLERS WITH STEEL CENTRE















															
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN	daN	daN		
80	70	1.07	742202	0.83	744202	20	70	47	14	1000	300	700	560		
80	90	1.38	742105	1.14	744105	20	90	47	14	1200	385	900	720		
85	40	0.72	742121	0.48	744121	20	40	47	14	575	180	400	320		
85	70	1.13	742122	0.89	744122	20	70	47	14	1000	315	700	560		
85	80	1.26	742123	1.02	744123	20	80	47	14	1050	360	800	640		
85	80	1.19	742224	0.91	744224	25	80	52	15	1050	360	800	640		
85	90	1.41	742125	1.17	744125	20	90	47	14	1200	400	900	720		
85	100	1.54	742127	1.30	744127	20	100	47	14	1300	450	1000	800		

With labyrinths



Labyrinths: protective plastic-rings, with interference assembly in front of the ball bearings. They ensure longer life, protecting them from dust and foreign bodies that may limit the roller's free rotation.

															
mm	mm	kg	CODE	mm	mm	mm	mm	daN	daN	daN	daN				
80	65	0.98	743201	20	70	47	20.5	930	280	650	520				
80	85	1.32	743202	20	90	47	20.5	1130	360	850	680				
85	65	1.07	743203	20	70	47	20.5	930	290	750	600				
85	75	1.20	743204	20	70	47	20.5	980	335	750	600				
85	75	1.13	743224	25	80	47	20.5	980	335	750	600				
85	85	1.35	743205	20	90	47	20.5	1130	375	850	680				
85	95	1.48	743206	20	100	47	20.5	1230	425	950	760				

Options available to order



Rollers fitted with electrowelded brackets EE MHD

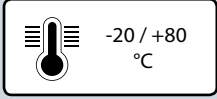
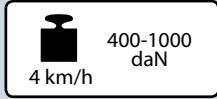
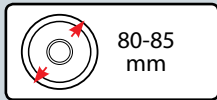


Rollers with customised dimensions



TR Lab, we work for the future

"TR" POLYURETHANE PALLET TRUCK ROLLERS WITH STEEL CENTRE



Description

Tyre: "TR" polyurethane, hardness 95 Shore A, excellent values of rolling resistance and elasticity, highly resistant to wear.

Centre: obtained from a steel tube:

Hub with shielded ball bearing with interference assembly in the seats obtained by precision machining of the centre; also available without bearings.

Model with labyrinth seals: protective plastic-rings, with interference assembly into the ball bearings. They ensure longer life, by preventing entry of dust and foreign bodies.

Uses

Excellent for use on electric pallet trucks, also in case of heavy loads and high speed handling (up to 16 km/h).

Their excellent values of rolling resistance make the manual handling of heavy loads easier.

The model with electrowelded brackets allows handling heavy loads while maintaining a low centre of gravity. It is a common solution to move set design in the show business sector.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable for tiles and cement-resin.

Not suitable if voluminous obstacles are present.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	500 kg	600 kg	800 kg	1000 kg
80x70 mm	1.3	3	5.5	10.3	13.5	----	----
80x90 mm	1.3	2.7	4.4	8.2	10.4	15.3	----
82x70 mm	1	2.6	5.4	11.2	15.3	----	----
82x85 mm	1	2.6	5	10.5	13.9	22	----
82x90 mm	< 1	2.3	4.2	9	12.2	20	----
82x100 mm	< 1	< 1	2.3	6.7	9.8	17.8	28
85x40 mm	1.4	5.3	10.4	----	----	----	----
85x70 mm	< 1	1.9	5.2	10.9	15.5	----	----
85x80 mm	< 1	1.6	4.5	9.5	13.6	24	----
85x90 mm	< 1	< 1	3.5	7.9	11.4	20.5	----
85x100 mm	< 1	< 1	2	5.8	9.3	17	27

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets














Electrowelded brackets EE MHD

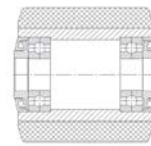
Maximum carrying capacity 800 daN - available diameters 80-85 mm
Top plate fitting.

"TR" POLYURETHANE PALLET TRUCK ROLLERS WITH STEEL CENTRE













								Static					
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN	daN	daN
80	70	1.06	752102	0.82	754102	20	70	47	14	800	250	700	560
80	90	1.35	752105	1.11	754105	20	90	47	14	1000	335	900	720
82	70	1.09	752132	0.85	754132	20	70	47	14	800	255	700	560
82	85	1.27	752134	1.03	754134	20	85	47	14	900	300	800	640
82	90	1.33	752135	1.09	754135	20	90	47	14	1000	340	900	720
82	100	1.45	752137	1.21	754137	20	100	47	14	1100	390	1000	800
85	40	0.72	752121	0.48	754121	20	40	47	14	450	150	400	320
85	70	1.12	752122	0.88	754122	20	70	47	14	800	265	700	560
85	80	1.25	752123	1.01	754123	20	80	47	14	900	310	800	640
85	80	1.18	752223	0.90	754223	25	80	52	15	900	310	800	640
85	90	1.39	752125	1.15	754125	20	90	47	14	1000	350	900	720
85	100	1.52	752127	1.28	754127	20	100	47	14	1100	400	1000	800

With labyrinths



Labyrinths: protective plastic-rings, with interference assembly in front of the ball bearings. They ensure longer life, protecting them from dust and foreign bodies that may limit the roller's free rotation.

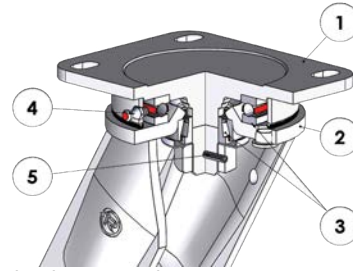
							Static						
mm	mm	kg	CODE	mm	mm	mm	mm	daN	daN	daN	daN		
80	65	0.97	753101	20	70	47	20.5	750	230	650	520		
80	85	1.29	753102	20	90	47	20.5	950	310	850	680		
82	65	1.03	753103	20	70	47	20.5	750	235	650	520		
82	80	1.21	753104	20	85	47	20.5	900	280	800	640		
82	85	1.27	753105	20	90	47	20.5	950	320	850	680		
82	95	1.39	753106	20	100	47	20.5	1050	365	950	760		
85	65	1.06	753107	20	70	47	20.5	750	245	650	520		
85	75	1.19	753108	20	80	47	20.5	850	285	750	600		
85	75	1.12	753223	25	80	47	20.5	850	285	750	600		
85	85	1.33	753209	20	90	47	20.5	950	330	850	680		
85	95	1.46	753110	20	100	47	20.5	1050	375	950	760		

Options available to order



Rollers with customised dimensions






Electrowelded brackets EE MHD - max carrying capacity 800 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h	6 km/h			
80	70	3.96	758301	2.98	758401	130	135x110	108x80	11	55	700	560			
85	70	4.02	758311	3.04	758411	132.5	135x110	105x80	11	55	700	560			
85	80	4.15	758321	3.17	758421	132.5	135x110	105x80	11	55	800	640			

POLYAMIDE 6 PALLET TRUCK ROLLERS

-  40-85 mm
-  70 Shore D
-  700-1200 daN
4 km/h
-  335-500 daN
-  -30 / +80 °C



Description

Solid polyamide 6 pallet truck rollers, hardness 70 Shore D; excellent values of rolling and impact resistance. Reduced deformation under load.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings. Hub with plain bore hole which directly houses the axle.


Uses

Suitable for use on manual pallet trucks, also with humidity and highly aggressive chemical agents.

Their excellent values of rolling resistance make the manual handling of heavy loads easier. It is specifically recommended for use in the food and canning industries.

Environments of use

Suitable for industrial environments, also in presence of humidity and chemical agents. Not recommended in areas with strong organic acids and concentrated mineral acids.

WEAK ACIDS				WEAK BASES			
STRONG ACIDS				STRONG BASES			
WATER				HYDROCARBONS			
ALCOHOL				SOLVENTS			



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable for tiles and cement-resin.
Not recommended in presence of obstacles.
They may damage fragile flooring.














Force required to push or tow a wheel







 	100 kg	200 kg	300 kg	500 kg	600 kg	800 kg	1000 kg
82x60 mm	1.2	2.6	4.5	7	8.7	---	---
82x70 mm	1.2	2.5	3.8	6.5	7.9	10.8	---
82x90 mm	< 1	1.9	2.9	5.5	6	8.4	10.8
82x100 mm	< 1	1.7	2.6	5	5.5	7.5	9.7

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.









												
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN	daN
82	60	0.47	763011	0.23	761011	20	60	47	14	1000	335	700
82	70	0.49	763012	0.25	761012	20	70	47	14	1100	350	850
82	90	0.57	763014	0.33	761014	20	90	47	14	1300	450	1100
82	100	0.65	763015	0.41	761015	20	100	47	14	1400	500	1200



					
mm	mm	kg	CODE	mm	mm
50	55	0.12	760002	12	55



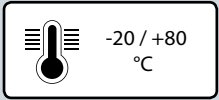
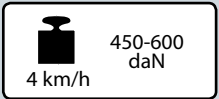
					
mm	mm	kg	CODE	mm	mm
40	43	0.05	760001	17	45

Options available to order



Rollers fitted with 25 mm bore ball bearings

"TR" POLYURETHANE PALLET TRUCK ROLLERS WITH POLYAMIDE CENTRE 6



Description

Tyre: "TR" polyurethane, hardness 95 Shore A, excellent values of rolling resistance and elasticity, highly resistant to wear.

Centre: polyamide 6.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Suitable for use on manual and electric pallet trucks, with speed up to 6 km/h. Their excellent values of rolling resistance make the manual handling of heavy loads easier.

Environments of use

Designed for industrial environments, even in presence of medium-harsh chemical agents. Not recommended in areas with strong organic acids and mineral acids.

WEAK ACIDS				
STRONG ACIDS				
WATER				
ALCOHOL				

WEAK BASES				
STRONG BASES				
HYDROCARBONS				
SOLVENTS				



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable for tiles and cement-resin.
Not suitable if voluminous obstacles are present.















Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	400 kg	500 kg	600 kg
82x70 mm	1.1	2.7	5	7.8	----	----
82x90 mm	< 1	2.1	4	6.6	9.7	----
82x100 mm	< 1	1.9	3.5	5.4	7.8	10.5
85x70 mm	< 1	2.5	4.7	7.6	11	----
85x90 mm	< 1	2.3	4	6	8	11

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single roller at the constant speed of 4 km/h on smooth floor. For manual handling of a trolley choose diameters that have values < 5 daN, for frequent handling choose values < 3 da N.



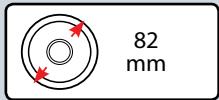
													
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN	daN	daN
82	70	0.60	772132	0.36	774132	20	70	47	14	550	300	450	360
82	90	0.70	772135	0.46	774135	20	90	47	14	610	340	510	400
82	100	0.76	772137	0.52	774137	20	100	47	14	700	380	600	480
85	70	0.65	772122	0.41	774122	20	70	47	14	600	310	500	400
85	90	0.76	772125	0.52	774125	20	90	47	14	700	350	600	480

Options available to order



Rollers fitted with 25 mm bore ball bearings

THERMOPLASTIC POLYURETHANE PALLET TRUCK ROLLERS WITH POLYAMIDE CENTRE 6



Description

Tyre: thermoplastic polyurethane, hardness 60 Shore D, excellent values of rolling resistance and elasticity, highly resistant to wear and tear.

Centre: polyamide 6.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Suitable for use on manual pallet trucks, also with humidity and highly aggressive chemical agents.

Their excellent values of rolling resistance make the manual handling of heavy loads easier.

It is specifically recommended for use in the food and canning industries.

Environments of use

Suitable for industrial environments, also in presence of humidity and chemical agents. Not recommended in areas with strong organic acids and concentrated mineral acids.

WEAK ACIDS				WEAK BASES			
STRONG ACIDS				STRONG BASES			
WATER				HYDROCARBONS			
ALCOHOL				SOLVENTS			

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable for tiles and cement-resin.

Not suitable if voluminous obstacles are present.














Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	400 kg	500 kg	600 kg	700 kg
82x60 mm	1.2	2.4	3.8	5.2	---	---	---
82x70 mm	< 1	2	3.3	4.8	6.5	---	---
82x80 mm	< 1	1.5	2.4	3.7	5.2	7	---
82x90 mm	< 1	1.5	2.4	3.6	4.8	6.1	7.5
82x100 mm	< 1	1.5	2.4	3.5	4.7	5.9	7.3

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.



															
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN	daN			
82	60	0.47	782101	0.27	784101	20	60	47	14	450	390	450			
82	70	0.53	782102	0.32	784102	20	70	47	14	500	410	500			
82	80	0.59	782103	0.38	784103	20	80	47	14	600	500	600			
82	90	0.64	782104	0.43	784104	20	90	47	14	700	525	700			
82	100	0.69	782105	0.49	784105	20	100	47	14	750	530	750			

Options available to order



Rollers fitted with 25 mm bore ball bearings

"TR-ROLL" PALLET TRUCK ROLLERS WITH STEEL CENTRE

-  82-85 mm
-  75 Shore A
-  400-650 daN
4 km/h
-  320-520 daN
6 km/h
-  400-650 daN
-  -20 / +70 °C



Description

Tyre: TR-Roll polyurethane; hardness 75 Shore A; excellent rolling resistance and elasticity and good resistance to wear and tear.

Centre: obtained from a steel tube.

Hub with shielded ball bearing with interference assembly in the seats obtained by precision machining of the centre; also available without bearings.

Uses

Excellent for use on electric pallet trucks, also in case of heavy loads and high speed handling (up to 12 km/h; for applications at higher speeds please contact Tellure Rôta). They guarantee silent running and vibration damping and are suitable also on uneven surfaces and in presence of obstacles.

Their excellent values of rolling resistance make the manual handling of heavy loads easier.

Environments of use

Designed for industrial environments, even in the presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.



Floors

Suitable for all types of industrial floors, even outdoors. Facilitates the overcoming of obstacles.

It does not damage the floors.














Force required to push or tow a wheel

 	100 kg	200 kg	400 kg	500 kg	600 kg	700 kg
80x90 mm	<1	1,5	3,5	4,5	5,5	
82x60 mm	1	2	3,5			
82x70 mm	<1	1,5	2,5	4		
82x90 mm	<1	1	2,5	3,5	4,5	
82x100 mm	<1	1,5	2,5	3	3,5	4,5
85x70 mm	<1	1,5	2,8	5		
85x80 mm	<1	1,5	2,5	3,5		
85x90mm	<1	1	2,5	3,5	4,5	
85x100 mm	<1	1	2	3	3,5	

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.



													
mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	daN	daN	daN	daN
80	90	1,25	792105	1,06	794105	20	90	47	14	750	490	580	460
82	60	0,87	792121	0,67	794121	20	60	47	14	500	400	400	320
82	70	0,98	792122	0,79	794122	20	70	47	14	550	450	450	360
82	90	1,21	792125	1,03	794125	20	90	47	14	750	580	580	460
82	100	1,34	792127	1,15	794127	20	100	47	14	850	620	650	520
85	70	1,04	792132	0,84	794132	20	70	47	14	550	450	450	360
85	80	1,16	792133	0,96	794133	20	80	47	14	600	520	520	400
85	90	1,28	792135	1,08	794135	20	90	47	16	750	580	580	460
85	100	1,40	792137	1,20	794137	20	100	47	14	850	650	650	520

Options available to order



Rollers fitted with 25 mm bore ball bearings



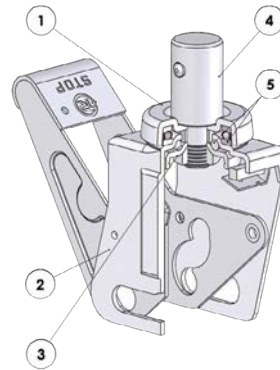
Rollers with labyrinths

SCAFFOLDINGS



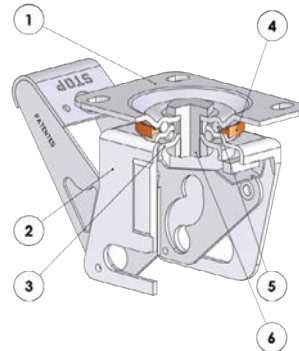
Thermoplastic polyurethane wheels with polyamide 6 centre

Wheel description on page 88-90



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) King pin: diam. 150-200 mm: solid stem in steel and nut locked by mechanical deformation; diam.125 mm: cold-headed solid stem
- 5) Swivel actions: diam. 125-150 mm: grease-lubricated double ball raceways; diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

1 PEDAL		2 PEDALS													
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN		
125	35	1.72	609553	1.94	609563	150	89	38	57	30	130	250	600		
150	45	3.16	609554	3.58	609564	192	83	38	57	40	150	300	700		
200	50	3.86	609576	4.21	609586	243	81	38	57	40	165	400	750		



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyamide
- 5) King pin: steel pin and nut locked through mechanical deformation
- 6) Swivel actions: diam. 150 mm: grease-lubricated double ball raceways; diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

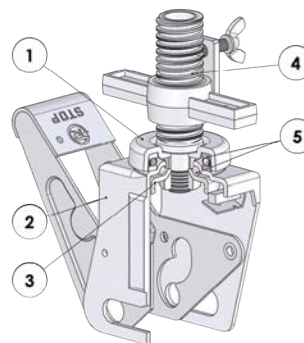
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	EN 1004	daN	daN		
150	45	3.01	609654	192	140x110	105x80	12	40	150	300	700	400	750		
200	50	3.61	609676	243	140x110	105x80	12	40	165	400	750	400	750		



This symbol indicates the castor carrying capacity according to UNI EN 1004:2005, par. 7.5 (Castor Wheels), that is guaranteed when the brake is engaged, without bracket offset and when the wheel is in a static position. With the brake released and the wheel free to rotate, the maximum load capacity is indicated in the "Dynamic carrying capacity" column at 4 km/h, defined in accordance with ISO 22883:2004

Thermoplastic polyurethane wheels with polyamide 6 centre

Wheel description on page 86-88



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) King pin: stem with acme thread manufactured steel from tube, nut locked by mechanical deformation
- 5) Swivel actions: diam. 150 mm: grease-lubricated double ball raceways; diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

		1 PEDAL		2 PEDALS											
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN		
150	45	3.86	609704	5.37	609714	192	83	M38x6	500	40	150	300	700		
200	50	4.56	609726	5.67	609736	243	81	M38x6	500	40	165	400	750		

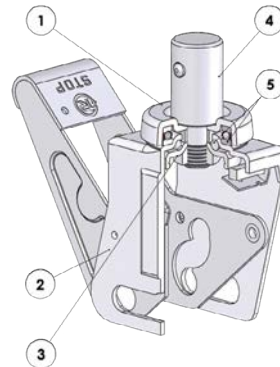


EN 1004

This symbol indicates the castor carrying capacity according to UNI EN 1004:2005, par. 7.5 (Castor Wheels), that is guaranteed when the brake is engaged, without bracket offset and when the wheel is in a static position. With the brake released and the wheel free to rotate, the maximum load capacity is indicated in the "Dynamic carrying capacity" column at 4 km/h, defined in accordance with ISO 22883:2004

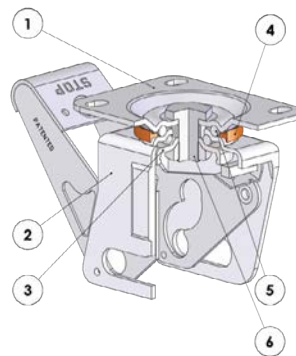
Polyamide 6 solid wheels

Wheel description on page 104-106



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) King pin: diam. 150-200 mm: solid stem in steel and nut locked by mechanical deformation; diam. 125 mm: cold-headed solid stem
- 5) Swivel actions: diam. 125-150 mm: grease-lubricated double ball raceways; diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

1 PEDAL		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS	
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN	daN
125	38	1.69	689503	1.91	689513	150	89	38	57	30	130	250	500		
150	45	3.06	689504	3.37	689514	192	83	38	57	40	150	300	700		
200	50	3.68	689506	3.99	689516	243	81	38	57	40	165	400	750		



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyamide
- 5) King pin: steel pin and nut locked through mechanical deformation
- 6) Swivel actions: diam. 150 mm: grease-lubricated double ball raceways; diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

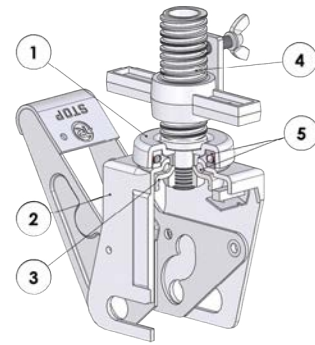
1 PEDAL		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS	
mm	mm	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN	daN	daN	daN	
150	45	3.76	689604	192	140x110	105x80	12	40	150	300	700				
200	50	4.38	689606	243	140x110	105x80	12	40	165	400	750				



This symbol indicates the castor carrying capacity according to UNI EN 1004:2005, par. 7.5 (Castor Wheels), that is guaranteed when the brake is engaged, without bracket offset and when the wheel is in a static position. With the brake released and the wheel free to rotate, the maximum load capacity is indicated in the "Dynamic carrying capacity" column at 4 km/h, defined in accordance with ISO 22883:2004

Polyamide 6 solid wheels

Description on page 106-108



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) King pin: stem with acme thread manufactured steel from tube, nut locked by mechanical deformation
- 5) Swivel actions: diam. 150 mm: grease-lubricated double ball raceways; diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

		1 PEDAL		2 PEDALS											
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	4 km/h	EN 1004		
150	45	3.76	689704	4.07	689714	192	83	M38x6	500	40	150	300	700		
200	50	4.38	689706	5.49	689716	243	81	M38x6	500	40	165	400	750		



This symbol indicates the castor carrying capacity according to UNI EN 1004:2005, par. 7.5 (Castor Wheels), that is guaranteed when the brake is engaged, without bracket offset and when the wheel is in a static position. With the brake released and the wheel free to rotate, the maximum load capacity is indicated in the "Dynamic carrying capacity" column at 4 km/h, defined in accordance with ISO 22883:2004

Customisations for scaffolding castors

Customised products are made upon customer's specific request for:

- NL brackets and Scaffolding brackets with stems of different dimensions and sizes
- assembly with different wheels.



TEST REPORT ACCORDING TO UNI EN 1004:2005

The TR Lab, Test & Research laboratory of Tellure Rôta, has the necessary equipment for conformity testing on wheel and castor according to **UNI EN 1004:2005, par. 7.5**; the test is carried out under static load and also measures the braking efficiency. The conformity requires carrying out 2 tests on 5 equal products.

The laboratory releases a test report with the results of the tests.



WASTE BIN CONTAINERS

and Paper Only

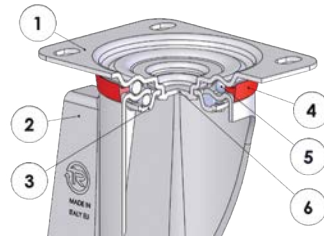


CONTINENTAL T100



Black rubber wheels with polypropylene centre

Wheel description on page 58-60



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake, total rear foot brake, centralised brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
160	40	2.10	524410	2.38	525210	2.60	524010	199	140x110	105x80	11	56	156	150
200	50	2.72	524406	3.00	525206	3.22	524006	240	140x110	105x80	11	56	156	225



mm	mm	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN
200	50	3.45	524206	240	140x110	105x80	11	56	40	34	16.5	225	

Options available to order



Directional lock for brackets
d. 150-200 mm



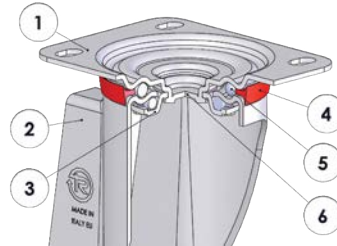
Wheel with roller bearings



Wheel with grey rubber tyre

Black rubber wheels with pressed steel discs

Wheel description on page 66-68



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake, total rear foot brake, centralised brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
160	40	2.44	535010	2.69	535410	2.97	534010	199	140x110	105x80	11	56	156	180	
200	50	3.25	535006	3.39	535406	3.67	534006	240	140x110	105x80	11	56	156	230	



mm	mm	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN
200	50	3.45	534806	240	140x110	105x80	11	56	40	34	16.5	230	

Options available to order



Directional lock for brackets d. 150-200 mm



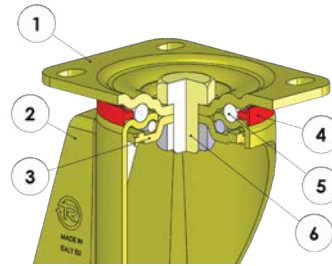
Wheel with roller bearings



Wheel with grey rubber tyre

Sigma Elastic rubber wheels with aluminium centre

Wheel description on page 224-226

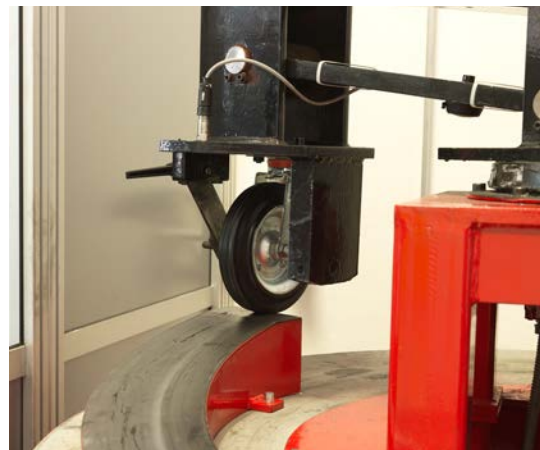
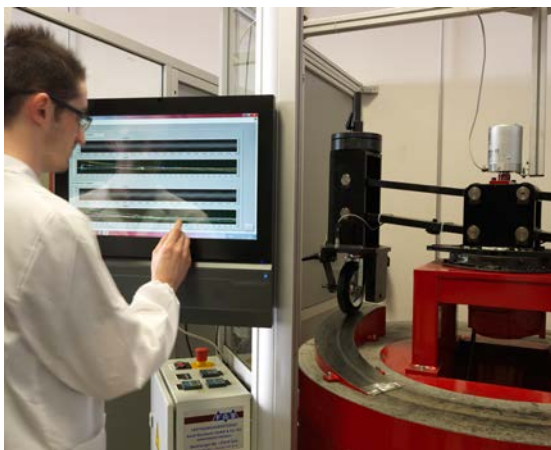


- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
200	50	4.46	727516	3.00	728516	5.06	727206	250	140x110	105x80	11	56	126	500

TEST REPORT ACCORDING TO UNI EN 840-5: 2013

The TR Lab, Test & Research laboratory of Tellure Rôta has the necessary equipment for Dynamic testing on wheel and castor according to **UNI EN 840-5:2013, par. 4.9.3**. The laboratory issues a test report with the results of the tests.



INSTITUTIONAL



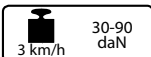


SERIES **32**

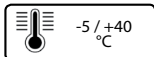
POLYAMIDE 6 WHEELS



40-60
mm



30-90
daN
3 km/h



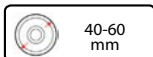
-5 / +40
°C

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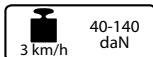


SERIES **36**

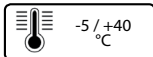
THERMOPLASTIC POLYURETHANE
WHEELS WITH POLYAMIDE 6 CENTRE



40-60
mm



40-140
daN
3 km/h



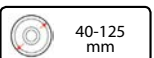
-5 / +40
°C

PAGE 292

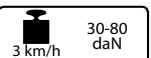


SERIES **37**

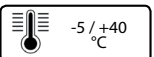
GREY RUBBER WHEELS WITH
POLYPROPYLENE CENTRE



40-125
mm



30-80
daN
3 km/h



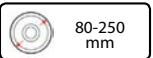
-5 / +40
°C

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SERIES **51**

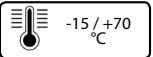
THERMOPLASTIC RUBBER WHEELS
WITH POLYPROPYLENE CENTRE



80-250
mm

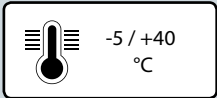
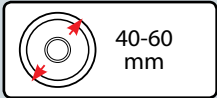


30-120
daN
Static



-15 / +70
°C

PAGE 302



Description

Polyamide 6 solid wheels.

Hub with plain bore hole which directly houses the axle.

Uses

Recommended for use on catering and institutional trolleys having light carrying capacities.

Good resistance to chemical agents: not suitable on uneven flooring.

Examples of recommended applications: shop display units, trolleys for restaurants, furniture with light loads.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and chemical agents.

WEAK ACIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG ACIDS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
WATER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WEAK BASES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
HYDROCARBONS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOLVENTS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable on tiles and resin-cement; not recommended on abrasive, unpaved floors or in presence of processing residues.

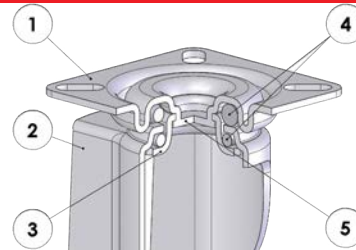
Not suitable on fragile floor or with obstacles along the path.





mm	mm	kg	CODE	mm	mm	daN
40	17	0.02	321102	8	21	30
50	17	0.02	321104	8	22	40
50	22	0.03	321105	8	28	50
60	22	0.03	321106	8	28	60

Institutional brackets



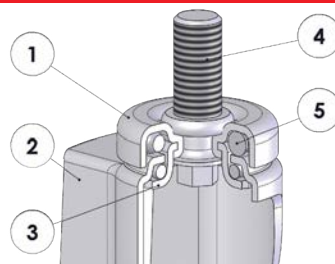
- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Swivel actions: double ball ring with grease lubrication
- 5) King pin: integrated with the plate and cold-riveted

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
40	17	0.12	324101	0.29	324001	61	42x42	30x30	5	24	30
50	17	0.12	324102	0.31	324002	66	42x42	30x30	5	24	40
60	22	0.22	324103	0.56	324003	83	60x60	45x45	6	21	60



mm	mm	kg	CODE	mm	mm	mm	mm	daN
40	17	0.10	325101	61	55x25	42	5	30
50	17	0.10	325102	66	55x25	42	5	40
60	22	0.20	325103	83	60x60	45x45	6	60

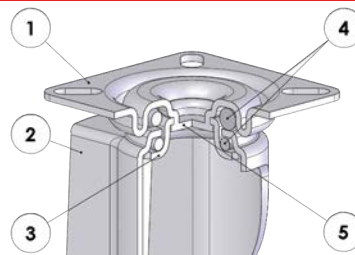
Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Galvanised steel threaded stem
- 5) Swivel actions: double ball ring with grease lubrication

				2 pc package									
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN		
40	17	0.12	326101	0.26	326001	61	35	M10	20	24	30		
50	17	0.14	326102	0.28	326002	66	35	M10	20	24	40		
60	22	0.23	326103	0.47	326003	83	41	M12	24	21	60		

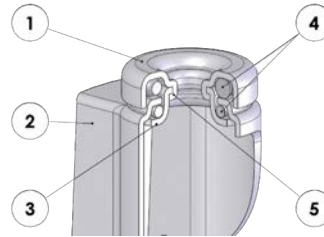
Institutional twin brackets for high carrying capacity



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

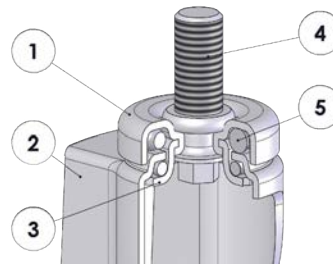
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN		
50	18+18	0.28	324302	0.33	328202	71	60x60	45x45	6	25.5	83	90		

Institutional twin brackets for high carrying capacity



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

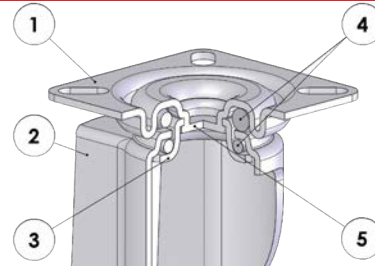
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
50	18+18	0.26	323202	0.31	327202	71	55	10	25.5	83	90



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Galvanised steel threaded stem
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

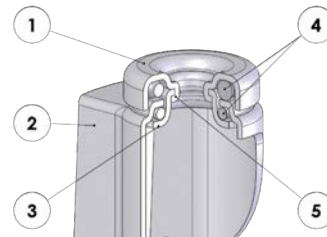
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
50	18+18	0.29	326202	0.34	329202	71	52	M10	25	25.5	90

Institutional brackets for high carrying capacity



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

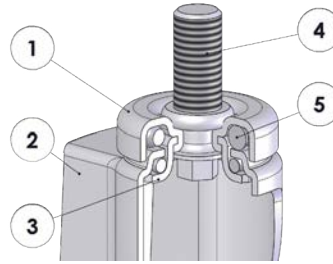
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
50	30	0.27	324402	0.32	328302	71	60x60	45x45	6	25.5	83	80



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
50	30	0.24	323302	0.29	327302	71	55	10	25.5	83	80

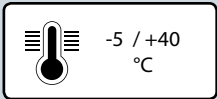
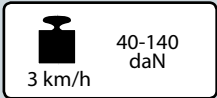
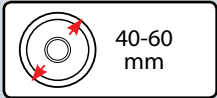
Institutional brackets for high carrying capacity



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Galvanised steel threaded stem
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN		
50	30	0.28	326302	0.33	329302	71	52	M10	25	25.5	83	80		

THERMOPLASTIC POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE



Description

Tyre: thermoplastic polyurethane.

Centre: polyamide 6.

Hub with plain bore hole which directly houses the axle.

Uses

Suitable for use on different types of trolleys within the institutional sector, particularly in catering.

Good load carrying capacity in relation to small diameter wheels.

Resist well to frequent washing, making them suitable in environments where hygiene must be guaranteed.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and chemical agents.

WEAK ACIDS				WEAK BASES			
STRONG ACIDS				STRONG BASES			
WATER				HYDROCARBONS			
ALCOHOL				SOLVENTS			

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.








Floors

Suitable on tiles and resin-cement; not recommended on abrasive, unpaved floors or in the presence of processing residues.

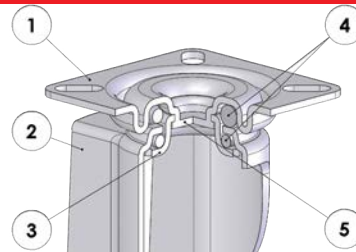
They do not damage fragile flooring and are also suitable in presence of small obstacles.




















															
mm	mm	kg	CODE	mm	mm	daN									
40	18	0.02	361101	8	21	40									
50	18	0.02	361102	8	22	55									
60	25	0.06	361103	8	28	70									









Institutional brackets



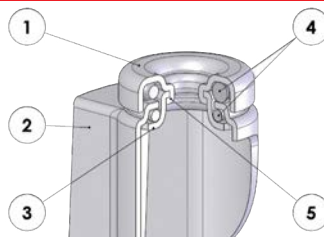
- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

														
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
40	18	0.11	364301	0.11	365101	0.13	368101	59	42x42	32x32	5	23	76	40
50	18	0.13	364302	0.12	365102	0.16	368102	66	55x55	40x40	6	24	76	55
60	25	0.24	364303	0.21	365103	0.28	368103	83	60x60	45x45	6	21	84	70



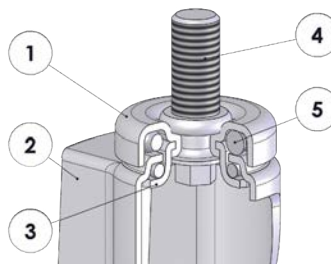
		2 pc package													
mm	mm	kg	CODE	mm	mm	mm	mm	mm	daN						
40	18	0.30	324001	59	42x42	32x32	5	23	40						
50	18	0.34	324002	66	55x55	40x40	6	24	55						
60	25	0.56	324003	83	60x60	45x45	6	21	70						

Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
40	18	0.10	363101	0.12	367101	59	35	10	23	76	40
50	18	0.13	363102	0.13	367102	66	35	10	24	76	55
60	25	0.24	363103	0.25	367103	83	42	13	21	84	70



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Galvanised steel threaded stem
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

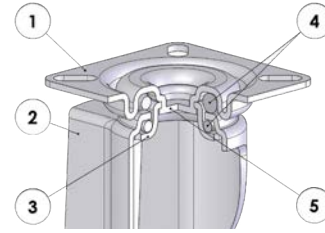
mm	mm	kg	CODE	kg	CODE	2 pc package		mm	mm	mm	mm	mm	mm	daN
40	18	0.12	366301	0.14	369101	0.34	366001	59	35	M10	20	23	76	40
50	18	0.13	366302	0.16	369102	0.38	366002	66	35	M10	20	24	76	55
60	25	0.24	366303	0.28	369103	0.62	366003	83	42	M12	25	21	84	70

Options available to order



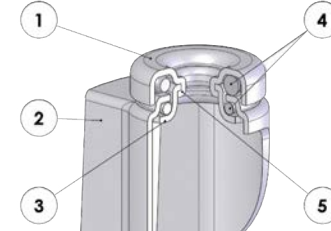
Different stem dimensions

Institutional twin brackets for high carrying capacity



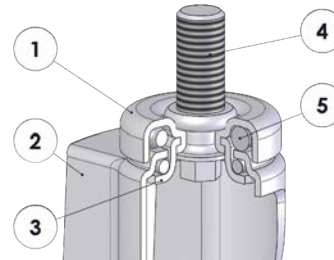
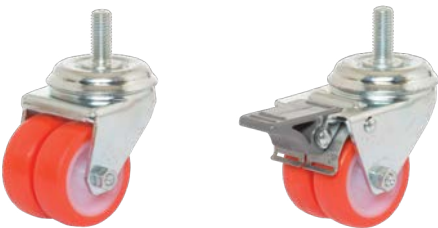
- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
50	18+18	0.30	364402	0.35	368202	71	60x60	45x45	6	25.5	83	140



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

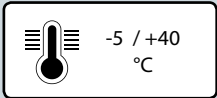
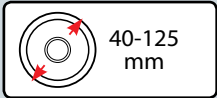
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
50	18+18	0.27	363202	0.32	367202	71	55	10	25.5	83	140



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Galvanised steel threaded stem
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	
50	18+18	0.31	366402	0.36	369202	71	52	M10	25	25.5	83	140

**GREY RUBBER WHEELS
WITH POLYPROPYLENE CENTRE**



Description

Tyre: non-marking grey rubber, good elasticity.

Centre: polypropylene with metal thread-guards.

Hub with plain bore hole which directly houses the axle.

Uses

Suitable for use on different types of trolleys within the furniture and institutional sector.

They can also be used on fragile floors and in presence of small obstacles.

Example of recommended applications: shop display units and windows, low carrying capacity tool trolleys, supermarket trolleys.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and medium-harsh chemical agents. Not suitable in the presence of organic solvents, chlorinated substances, hydrocarbons and mineral oils.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.








Floors

Suitable on tiles and resin-cement; not recommended on abrasive, unpaved floors or in presence of processing residues.

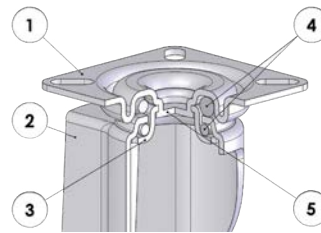
They do not damage fragile floors and are also suitable in the presence of small obstacles.






















																	
mm	mm	kg	CODE	mm	mm	daN											
40	18	0.03	371100	8	21	30											
50	20	0.06	371101	8	22	35											
60	24	0.10	371102	8	28	50											
75	24	0.14	371203	8	28	55											
80	24	0.17	371103	8	28	55											
100	24	0.22	371104	8	28	60											
125	30	0.46	371105	10	35	80											

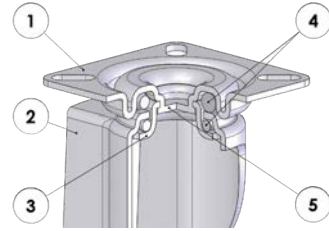
Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

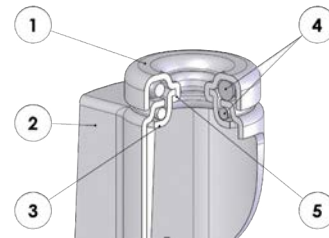
																																					
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN																					
40	18	0.12	374100	0.11	375100	0.15	378100	59	42x42	31x31	5	24	78	30																							
50	18	0.20	374101	0.20	375101	0.24	378101	67	55x55	40x40	6	24	76	35																							
60	24	0.28	374102	0.26	375102	0.40	378102	83	60x60	45x45	6	21	84	50																							
75	24	0.40	374303	0.31	375303	0.48	378303	101	60x60	45x45	6	25	91	55																							
80	24	0.43	374103	0.34	375103	0.50	378103	104	60x60	45x45	6	25	91	55																							
100	24	0.48	374104	0.40	375104	0.57	378104	121	60x60	45x45	6	32	95	55																							
125	30	0.87	374105	0.80	375105	0.97	378105	152	77x67	55x45	8	40	115	80																							

Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Swivel actions: double ball ring with grease lubrication
- 5) King pin: integrated with the plate and cold-riveted

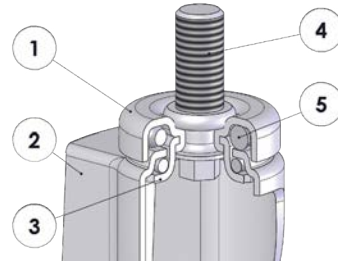
mm		kg		CODE		mm		mm		mm		mm		daN		3 km/h	
50	18	0.39	374001	67	55x55	40x40	6	24					35				
60	24	0.68	374002	85	60x60	45x45	6	21					50				



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm		kg		CODE		mm		mm		mm		mm		daN		3 km/h	
40	18	0.11	373100	0.14	377100	59	35	10	24	78			30				
50	18	0.16	373101	0.19	377101	66	35	10	24	76			35				
60	24	0.25	373102	0.32	377102	83	41	12	21	84			50				
75	24	0.31	373303	0.40	377303	101	41	12	25	91			55				
80	24	0.34	373103	0.43	377103	104	41	12	25	91			55				
100	24	0.40	373104	0.49	377104	121	41	12	32	91			55				
125	30	0.76	373105	0.87	377105	149	52	12	40	115			80				

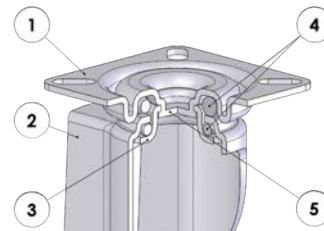
Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Galvanised steel threaded stem
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	2 pc package		mm	mm	mm	mm	mm	mm	mm	daN
						kg	CODE								
40	18	0.13	376100	0.18	379100			59	35	M8	15	24	78	30	
50	18	0.18	376101	0.21	379101	0.34	376001	66	35	M8	15	24	76	35	
60	24	0.29	376102	0.36	379102	0.60	376002	83	41	M12	25	21	84	50	
75	24	0.36	376303	0.43	379303			101	41	M12	25	25	91	55	
80	24	0.39	376103	0.46	379103			104	41	M12	25	25	91	55	
100	24	0.44	376104	0.53	379104			121	41	M12	25	32	95	55	
125	30	0.79	376105	0.89	379105			149	35	M12	25	40	115	80	

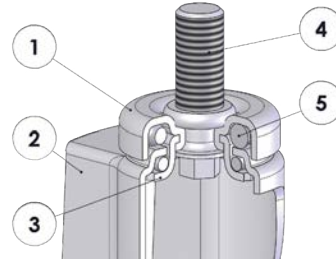
Institutional twin brackets



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
75	24+24	0.64	374203	0.72	378203	100	60x60	45x45	6	33	95	80

Twin brackets for institutional



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Galvanised steel threaded stem
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

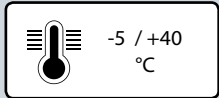
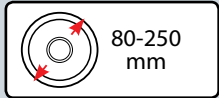
mm		kg	CODE		kg	CODE		mm	mm	mm	mm	mm	mm	daN	
50	18+18	0.30	376201		0.37	379201		70	42	M10	15	30	82	60	
75	24+24	0.50	376203		0.68	379203		100	52	M12	25	33	95	80	



Quality You need

 **tellure Rôta**

BLACK THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE



Description

Tyre: black thermoplastic rubber.

Centre: polypropylene.

Hub with plain bore hole which directly houses the axle.

Uses

Mainly suitable for static applications, on even flooring and for light carrying capacities.

Example of recommended applications: compressors, welding machines.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity. Not suitable in the presence of organic solvents, chlorinated substances, hydrocarbons and mineral oils.

WEAK ACIDS			
STRONG ACIDS			
WATER			
ALCOHOL			

WEAK BASES			
STRONG BASES			
HYDROCARBONS			
SOLVENTS			

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.








Floors

Suitable on tiles and resin-cement; not recommended on abrasive, unpaved floors or in presence of processing residues.

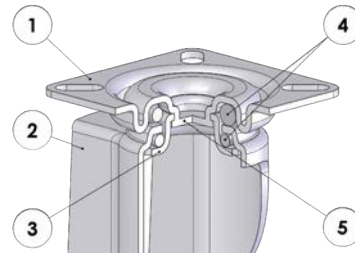
Not suitable for uneven surfaces.














													
mm	mm	kg	CODE	mm	mm	daN							
80	26	0.09	511101	10	34	30							
100	30	0.11	511112	8	35	35							
100	30	0.11	511122	12	35	35							
125	35	0.18	511103	15	44	50							
150	35	0.23	511104	15	44	90							
175	45	0.33	511105	20	59	100							
200	50	0.72	511106	20	59	120							
250	50	0.89	511108	20	59	120							

Institutional brackets

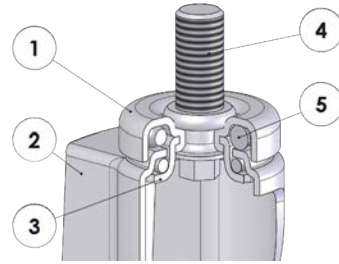


- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Swivel actions: double ball ring with grease lubrication
- 5) King pin: integrated with the plate and cold-riveted

													
mm	mm	kg	CODE	mm	mm	mm	mm	mm	daN				
80	26	0.43	514411	106	60x60	45x45	6	28	30				
100	30	0.48	514412	128	60x60	45x45	6	32	35				

BLACK THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE

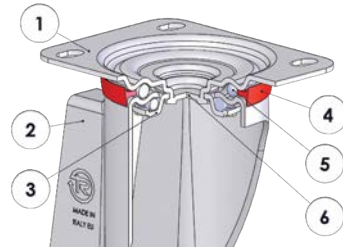
Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Galvanised steel threaded stem
- 5) Swivel actions: double ball ring with grease lubrication

mm	mm	kg	CODE	mm	mm	mm	mm	mm	daN					
80	26	0.35	516801	103	41	M12	25	28	30					
100	30	0.40	516802	126	41	M12	25	32	35					

Standard-duty brackets NL - max carrying capacity 90 daN



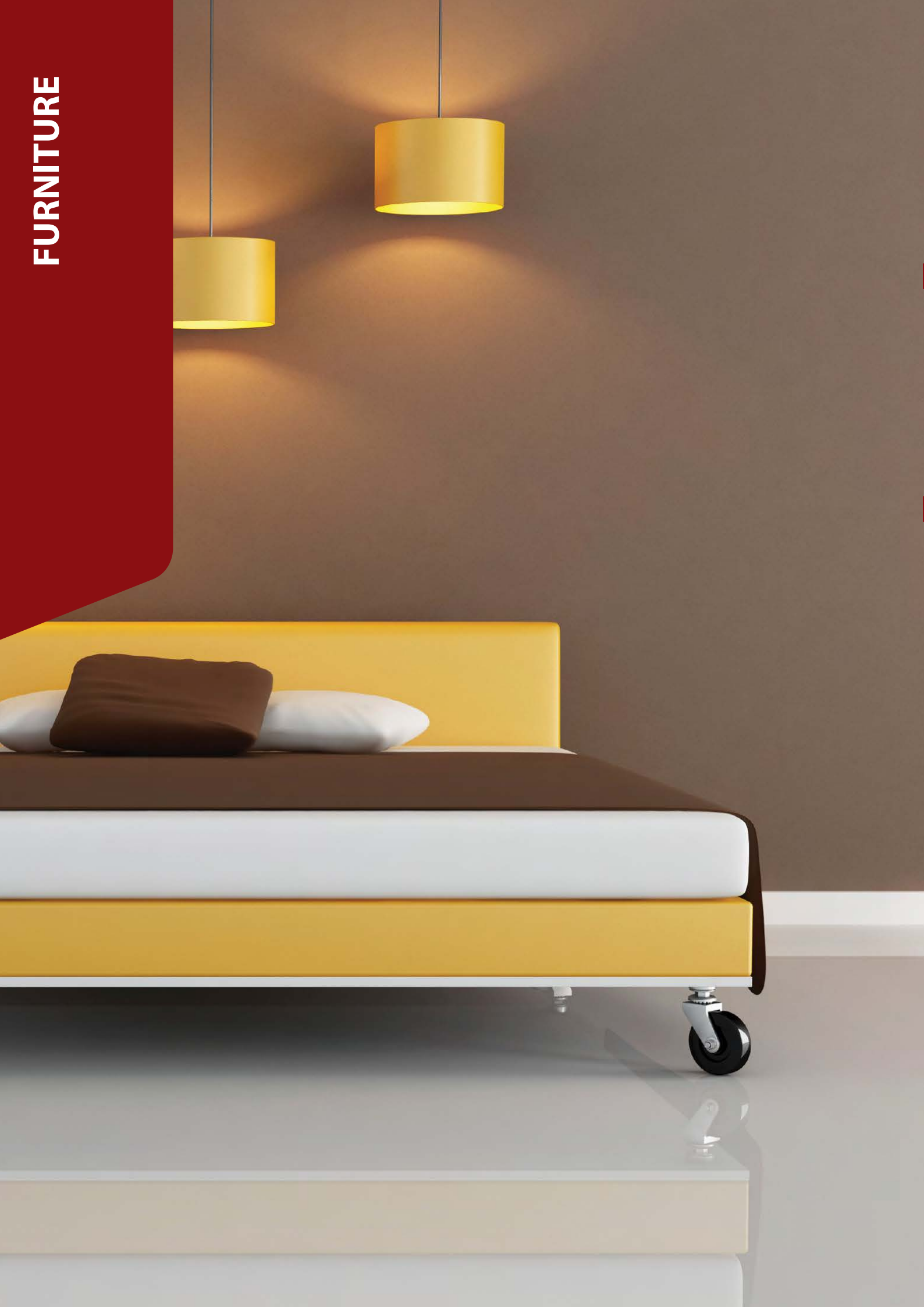
- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	kg				
80	26	0.62	514401	0.34	515701	107	100x85	80x60	9	37	30				
100	30	0.63	514402	0.37	515702	128	100x85	80x60	9	35	35				
125	35	0.82	514403	0.48	515703	156	100x85	80x60	9	37	50				
150	35	0.91	514404	0.54	515704	182	100x85	80x60	9	42	90				



Sixty years of reliability

FURNITURE





SERIES **33**

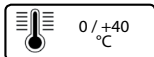
RUBBER BALL WHEELS



30-50
mm



10-30
daN



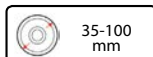
0 / +40
°C

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SERIES **34**

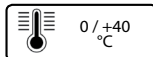
PAIRED POLYAMIDE 6 OR POLYPROPYLENE WHEELS



35-100
mm



10-40
daN



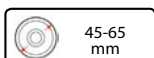
0 / +40
°C

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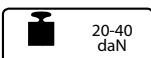


SERIES **35**

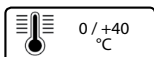
RUBBER HALF-BALL WHEELS



45-65
mm



20-40
daN



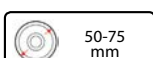
0 / +40
°C

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SERIES **39**

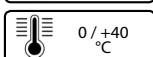
TRANSPARENT POLYURETHANE WHEELS WITH METHACRYLATE CENTRE



50-75
mm



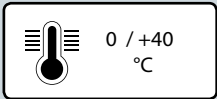
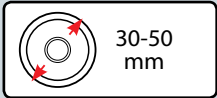
20-40
daN



0 / +40
°C

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RUBBER BALL WHEELS



Description

Black rubber ball wheels with zinc-plated brackets.

Hub with plain bore hole which directly houses the axle.

Uses

Suitable for indoor applications, without aggressive chemicals. They can be used on fragile flooring, even carpet.

Examples of recommended applications: house and office furniture with low carrying capacity.

Environments of use

Suitable for domestic environments without aggressive chemicals.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable on tiles and delicate flooring; not recommended on abrasive, unpaved floors or in presence of processing residues.

Not recommended in presence of obstacles.





			2 pc package											
	mm	kg	kg	CODE							mm	mm	mm	mm
30	0.11	334101	0.26	334001	48	40x40	27x27	5	10					
40	0.15	334102	0.34	334002	59	40x40	27x27	5	20					
50	0.23	334103	0.51	334003	69	47x47	35x35	6	30					

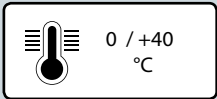
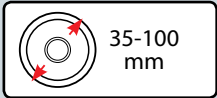


			2 pc package									
	mm	kg	kg	CODE					mm	mm	mm	daN
30	0.09	333101	0.21	333001	46	32	9	10				
40	0.13	333102	0.30	333002	57	32	9	20				
50	0.20	333103	0.43	333003	66	36	10	30				



			2 pc package										
	mm	kg	kg	CODE						mm	mm	mm	mm
30	0.10	336101	0.25	336001	51	SPANNER 13	M8	15	10				
40	0.14	336102	0.33	336002	63	SPANNER 13	M8	15	20				
50	0.22	336103	0.47	336003	73	SPANNER 13	M8	15	30				

PAIRED POLYAMIDE 6 AND POLYPROPYLENE WHEELS



Description

Paired wheels in black or grey polyamide 6.
Steel stems and plates



Paired wheels in transparent or blue polypropylene.
Steel stems and plates.

Uses

Suitable for indoor applications, without aggressive chemicals. They can be used on fragile flooring, even carpet.

Examples of recommended applications: chairs with low carrying capacity for home and office.

Environments of use

Suitable for domestic environments without aggressive chemicals.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable on tiles and fragile floors not recommended on abrasive, unpaved floors or in presence of processing residues.

Not recommended in presence of obstacles.





Black polyamide 6 wheels

mm	mm	kg	CODE	mm	mm	mm	mm	daN
35	39	0.05	344100	50	28x28	19x19	5	10
50	59	0.09	344101	68	38x38	27x27	5	30



Black polyamide 6 wheels

mm	mm	kg	CODE	mm	mm	mm	mm	daN
35	39	0.04	346200	44.5	SPANNER 12	M8	15	10
50	59	0.07	346201	62	SPANNER 12	M10	15	30



Black polyamide 6 wheels
Package with 2 pieces and 4 fittings

mm	mm	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
35	39	0.22	340000	50/44,5	28x28	19x19	5	SPANNER 12	M8	15	10
50	59	0.30	340001	68/62	38x38	27x27	5	SPANNER 12	M10	15	30



Grey polyamide 6 wheels

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN		
60	42	0.13	347403	0.14	342103	86	48x48	34x34	6	74	30		
75	48	0.16	347404	0.19	342104	102	48x48	34x34	6	87	30		
100	57	0.51	347405	0.53	342105	127	60x60	42x42	6	115	40		



Grey polyamide 6 wheels

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN		
60	42	0.09	342203	0.10	342303	93	SPANNER 12	M10	15	74	30		
75	48	0.12	342204	0.13	342304	102	SPANNER 12	M10	15	87	30		
100	57	0.54	342205	0.57	342305	127	SPANNER 12	M10	15	115	40		



Transparent polypropylene wheels

mm	mm	kg	CODE	mm	mm	mm	mm	mm	daN				
50	54	0.09	347002	66	35x35	26x26	4		20				



Transparent polypropylene wheels

mm	mm	kg	CODE	mm	mm	mm	mm	daN
50	54	0.08	347102	61	SPANNER 12	M10	15	20



Blue polypropylene wheels

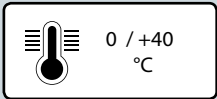
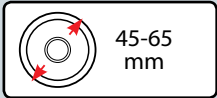
mm	mm	kg	CODE	mm	mm	mm	mm	daN
50	54	0.09	347202	66	35x35	26x26	4	20



Blue polypropylene wheels

mm	mm	kg	CODE	mm	mm	mm	mm	daN
50	54	0.08	347302	61	SPANNER 12	M10	15	20

RUBBER SPHERICAL WHEELS



Description

Black rubber spherical wheels with chrome-plated brackets and electrolytically galvanised Zamak alloy fittings. The wheels are supplied in pair only (one right and one left wheels).

Uses

Suitable for indoor applications, without aggressive chemicals. They can be used on fragile floors, even carpet. Examples of recommended applications: house and office furniture with low carrying capacity.

Environments of use

Suitable for domestic environments without aggressive chemicals.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

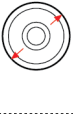
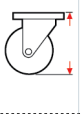




For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

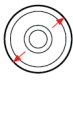
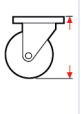
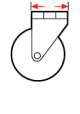

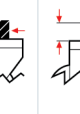

Suitable on tiles and delicate flooring; not recommended on abrasive, unpaved floors or in presence of processing residues. Not recommended in presence of obstacles.








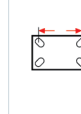
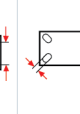
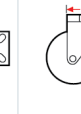

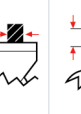

	RH		LH							daN
	mm	kg	CODE	kg						
45	0.09	354101	0.09	354201	56	28x28	19x19	5	20	
55	0.14	354102	0.14	354202	66	38x38	27x27	5	30	
65	0.19	354103	0.19	354203	76	38x38	27x27	5	40	



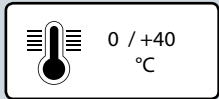
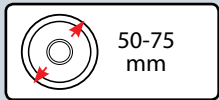
	RH		LH							daN
	mm	kg	CODE	kg						
45	0.09	356101	0.09	356201	52	SPANNER 12	M8	15	20	
55	0.13	356102	0.13	356202	62	SPANNER 12	M8	15	30	
65	0.18	356103	0.18	356203	72	SPANNER 12	M10	15	40	



Package with 2 wheels and 4 fittings

											daN
	mm	kg	CODE	mm							
45	0.25	350001	52	28x28	19x19	5	SPANNER 12	M8	15	20	
55	0.35	350002	62	38x38	27x27	5	SPANNER 12	M8	15	30	

TRANSPARENT POLYURETHANE WHEELS WITH METHACRYLATE CENTRE



Description

Tyre: transparent polyurethane.

Centre: methacrylate.

Hub with plain bore hole which directly houses the axle.

Zinc-plated brackets.

Uses

Suitable for indoor applications, without aggressive chemicals. They can be used on delicate flooring, even carpet.

Examples of recommended applications: house and office furniture with low carrying capacity.

Environments of use

Suitable for domestic environments without aggressive chemicals.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.













Floors

Suitable on tiles and fragile flooring; not recommended on abrasive, unpaved floors or in presence of processing residues.












Not recommended in presence of obstacles.





															
mm	mm	kg	CODE	mm	mm	mm	mm	mm	daN						
50	20	0.14	392002 	71	42x42	32x32	4.5	19	20						
75	22	0.33	392004 	103	60x60	43x43	6.5	28	40						



															
mm	mm	kg	CODE	mm	mm	mm	mm	daN							
50	20	0.14	392102 	71	M8	15	19	20							
75	22	0.31	392104 	103	M10	25	28	40							

Options available to order



Wheels with thread bracket d. 78 mm



Wheels with thread bracket d. 78 mm

SOLUTIONS WITH SPECIFIC CONDUCTIVE ELECTRICAL RESISTANCE

Plastic materials, rubbers and elastomers commonly used in the wheels and castors sector are generally isolating and therefore nonconducting. Therefore, they do not allow the static possibly built up on the trolley or equipment to be conducted to the ground.

The built up static can potentially compromise the functionality of sensible electrical equipment transported on the trolley and potentially trigger explosions in environments at risk.

Hence, wheels and castors made of those materials may not be fit for potentially explosive areas and for ESD sensible environments.

Tellure Rôta propose customised castor solutions with modified electrical resistance to comply with the guidelines of ESD conductive electrical resistance applications, whose specifications are shown on the following page.

Tellure Rôta do recommend to thoroughly assess the requirements of the final user and to compare them with the castor specifications in order to prevent any risk of damage.

As the electrical resistance can be altered by the conditions of the tread or by the environment, we also recommend a maintenance of the castors to inspect the electrical resistance at a regular intervals (depending on the environment of use) not to exceed a 3 months period.

The main norms of reference for wheels and castors with specific electrical resistance are:

- *ISO 22878:2004* which defines the methods of measuring the electrical resistance of wheels;
- *ISO 22883:2004* which defines the range of the electrical resistance;
- *IEC 61340-5-1:2007* which includes the general guidelines for protection of electrical devices from electrostatic events.



BLACK RUBBER WHEELS WITH $R < 10^5$ OHM

Series 53 wheel (page 66-73) with diam. 80 to 200mm and roller bearing hub fitted with rubber rings with electrical resistance below 10^5 Ohm ("conductive" according to ISO 22883:2004).



POLYAMIDE 6 WHEELS WITH $R < 10^5$ OHM

Polyamide 6 wheel with electrical resistance below 10^5 Ohm ("conductive" according to ISO 22883:2004) are available upon request.

Please contact Tellure Rôta to define the dimensional specs. and for a customised offer.



POLYURETHANE WHEELS WITH $R < 10^9$ OHM

Wheels with TR and TR-Roll tread (series 62AL, 62ER, 62GH, 64, 65AL, 65GH, 65HT, 65ER) are available upon request with electrical resistance $< 10^9$ Ohm.

Please contact Tellure Rôta to define the dimensional specs. and for a customised offer.

PRODUCTS FOR SPECIFIC CUSTOMER REQUIREMENTS

Tellure Rôta designs and implements customised solutions, manufactured according to the specific requirements of customers.

Thanks to its flexible production system and a specific prototyping department, Tellure Rôta can make customised products which are then tested in TR Lab to verify their performance.

The manufacturing of special solutions is subject to minimum quantities, which can vary according to the type of product.

The designing of a Tellure Rôta customised goes through the following phases:

- MEETING THE CUSTOMER TO ACQUIRE THE SPECIFIC REQUIREMENTS
- CREATING A DEDICATED PROJECT
- SHARING THE RESULTS WITH THE CUSTOMER
- IMPLEMENTING THE WHEEL PROTOTYPE
- QUALITY TEST
- CUSTOMER VALIDATION
- PRODUCTION START

Some examples of customised projects



THERMOPLASTIC MATERIAL WHEEL WITH CUSTOMISED COLOURS



THERMOPLASTIC MATERIAL WHEEL FOR THE PALLET TRUCK SECTOR



SPRUNG BRACKET FOR THE AUTOMOTIVE SECTOR



POLYURETHANE WHEELS WITH INCREASED THICKNESS TO BETTER OVERCOME OBSTACLES



TRIPOD WITH ELASTIC POLYURETHANE WHEELS FOR MOVING SETS



WHEEL WITH TWIN ELECTROWELDED BRACKET DIAM. 400 MM FOR HEAVY-DUTY LOADS



BRACKETS WITH CUSTOMISED STEM



POLYURETHANE COATING



POLYAMIDE 6 WHEEL FOR EXTRA-HEAVY LOADS



VULKOLLAN® WHEEL WITH GROOVES



DRIVE WHEEL



COATING FOR MOTORWHEELS

ACCESSORIES FOR WHEELS AND CASTORS: THREADGUARDS AND COUNTER-PLATES

Threadguards

Threadguards in galvanised steel for series 22-52

mm	mm	CODE
80	25	100027
100	30	100027
125	37.5	100010
140	37.5	100010
150 - 22	40	100028
150 - 52	40	100005
200	50	100007

Threadguards in galvanised steel for series 23-53

mm	mm	CODE
80	25	100010
100	30	100009
125	37.5	100012
140	37.5	100014
150	40	100014
160	40	100015
180	50	100016
200	50	100017

Polyamide 6 threadguards and galva- nised steel series 60-61-71 (models with plain bore and ball bearing)

mm	mm	POL 6 CODE	GALVANISED CODE
80	30	100501	940261
100	30	100502	940262
125	35	100503	940263
150	35	100504	
150	45	100514	
200	50	100506	

Threadguards in galvanised steel for series 63AC

mm	mm	CODE
100	30	100031
125	40	100032
150	40	100033
200	50	100035

Threadguards in galvanised steel for series 65AL



mm	mm	CODE
80	25	100461
100	30	100462
125	35	100463
150	40	100464
200	50	100466

Threadguards in galvanised steel for series 65GH



mm	mm	CODE
150	30	100033
150	35	100034
175	35	100035
200	45	100036

Threadguards

Threadguards in galvanised steel and stainless steel for series 66




		GALVANISED	STAINLESS
		CODE	CODE
80	25	100461	
100	30	100031	100231
125	30	100032	100232
150	40	100033	100234
175	40	100034	
200	50	100035	
250	60	100036	

Threadguards in galvanised steel and in stainless steel for series 68




		GALVANISED	STAINLESS
		CODE	CODE
80	30	100491	
100	30	100498	
125	38	100493	
150	45	100494	100234
175	45	100495	100237
200	50	100496	

Counter-plates




Counter-plates for brackets NL

			
			CODE
100x85	80x60	3.0	110401
140x110	105x80	3.5	110105




Counter-plates for brackets NLX

			
			CODE
100x85	80x60	2.5	110402
140x110	105x80	3.0	110106

Counter-plates for brackets P

			
			CODE
100x85	80x60	4.0	110403
135x110	105x80	6.0	110204








Counter-plates for brackets EP

			
			CODE
100x85	80x60	5.0	110202
135x110	105x80	6.0	110204
135x110	105x80	6.0	110204
175x140	140x105	8.0	110208

All counter-plates are supplied raw (not treated on the surface) to favour their welding to the trolley.

ACCESSORIES FOR WHEELS AND CASTORS: STEMS

Solid stems and nuts for assembly










															
mm	mm	mm	mm	mm	CODE	CODE									
80	73	12	22	47	926044	921079									
100	73	12	22	47	926044	921079									
125	73	12	22	47	926044	921079									
140/150	73	12	22	47	926044	921079									
150/160	102	20	26	56	926006	921070									
175/180	102	20	26	56	926006	921070									
200	102	20	26	56	926006	921070									

Solid stems assembly layout



Threaded stems, bolts, nuts

Threaded stems

															
mm	mm	mm	mm	mm	CODE	CODE	CODE	CODE							
80	73	12	10x1.5	25	925005	922028									
100	73	12	10x1.5	25	925005	922028									
125	73	12	12x1.75	45	925006	922112									
140/150	73	12	12x1.75	45	925006	922112									
150/160	102	20	16x2	35	925007	922108	929324	947015							
175/180	102	20	16x2	35	925007	922108	929324	947015							
200	102	20	16x2	35	925007	922108	929324	947015							

Threaded stems assembly layout



Expander in Zamak alloy

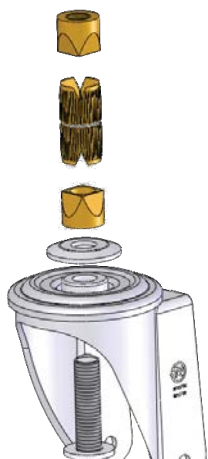


Designed to optimise the handling of tubular trolleys and perfect for use on modular trolleys.

It can be combined with bolt hole swivel castors with diameter from 80 to 125 mm and it is suitable for assembly on tubes having a diameter from 20 to 24 mm.

Standard fitting with series 60, 61, 71.

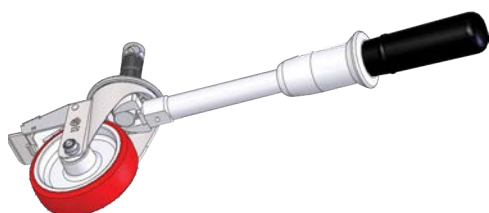
Assembly and maintenance recommendations



We recommend fastening the castor with expansion stem to the tubular structures by using adequate tightening torques. Insufficient tightening torques can jeopardise the overall carrying capacity and/or the stability of the product.

The torques must be compatible with the thickness and mechanical resistance of the tube in which the product is used. The recommended carrying capacities and maintenance cycles relate to brackets with expanders secured with fastening torque of 40 N/m.

Expander fitting are subject to adjustment during use: we recommend to periodically check its proper fastening. The stem is subject to an initial adjustment during the first days of use; following control cycles may be planned according on the intervals indicated on the Use and Maintenance Guide.

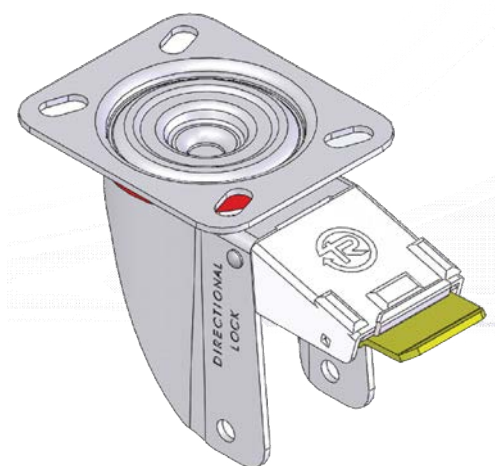


ACCESSORIES FOR WHEELS AND BRACKETS: DIRECTIONAL LOCK

Directional lock for brackets NL-P

Directional lock is an accessory that can be fitted to the top plate of a swivel bracket plate by using the same fixing bolts to the trolley. When engaged, it locks the bracket rotation in a precise direction, turning it into a fixed castor. The device is used on at least two of the four swivel brackets fitted on a trolley, thus allowing the simultaneous towing of more trolleys.

Directional lock for NL brackets, diam. up to 150 mm

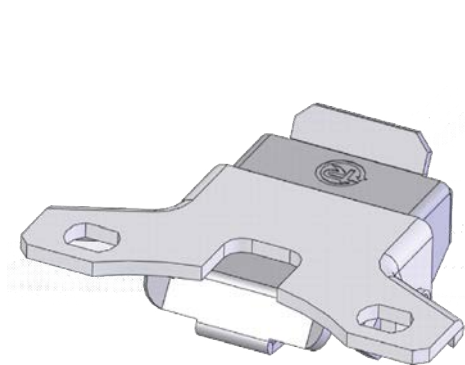


The directional lock is integrated in the swivel bracket. It is suitable for manually handled trolleys or mechanically towed trolleys at low speed (max. 6 km/h) on good condition floors.

It offers a simple engagement by self-inserting into position after pushing the front pedal.

Applicable to NL brackets diameter 80-100-125-140/150 upon request.

Directional lock for NL and P brackets, diam. from 150 to 200 mm



Designed for assembly on the top plate's shorter side.

It consists of galvanised steel plate parts and is suitable for manually handled or mechanically towed trolleys at low speed (max 6 km/h) on good condition floors.

It offers a simple engagement by self-inserting into position after pushing the front pedal.

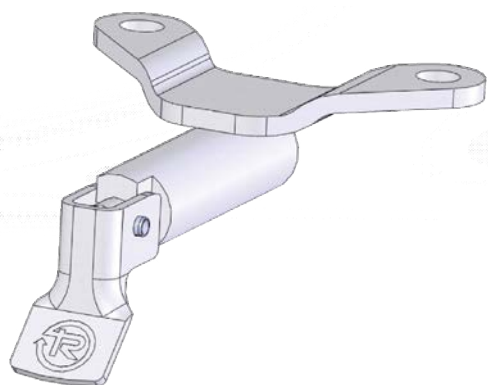
It can be purchased as an accessory and combined with the NL and P series swivel brackets for wheels diameters 150, 160, 175, 180 and 200 mm.

It can be used with swivel NL-P brackets with rear brake and central brake.

It cannot be combined to NL/P brackets with front foot brake.

Directional lock for electrowelded brackets

Directional lock for EE MHD-EEG MHD- EE HD brackets

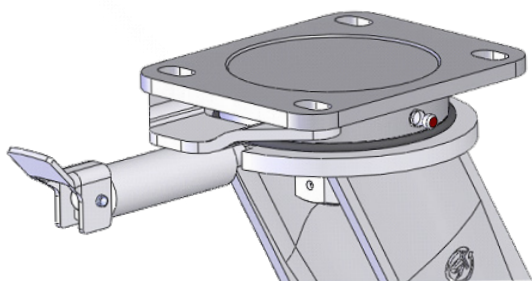


Designed for assembly on the top plate's short side, it consists of galvanised steel parts and is suitable for trolleys subject to mechanical towing at speeds up to 16 km/h on indoor and outdoor floors (asphalt, cement).

Easy to engage by self-clicking into position.

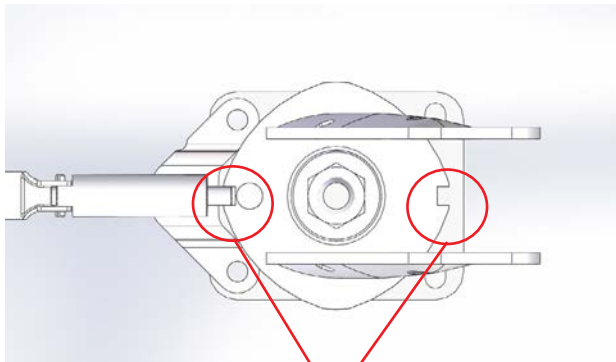
Specifications:

- it is fitted to the top plate of a castor by using the same fixing bolts which secure the castor to the trolley
- it can be fitted with EE MHD and EE HD electrowelded brackets and to EEG MHD twin electrowelded castors (please see the table on the following page for details)
- it can be fitted to Tellure Rôta brackets which have the appropriate slots

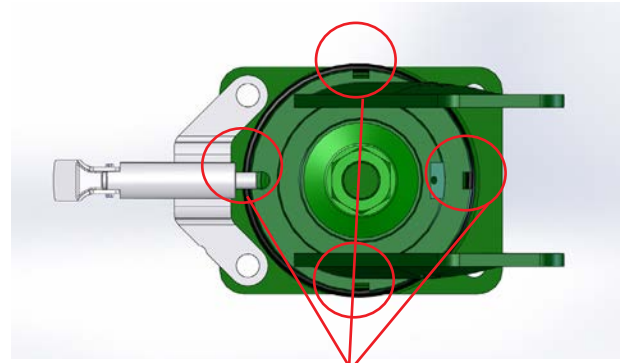


ACCESSORIES FOR WHEELS AND BRACKETS: DIRECTIONAL LOCK

Directional lock for electrowelded brackets







Bracket with 2 slots at 180°



Bracket with 4 slots at 90°

Fittings

EE	MHD					Directional lock part number	Suffix 2x180° slots	Dir. lock to be fitted on the side of the top plate with dimension:	Suffix 4x90° slots	
		4-6 km/h	Yes	Yes						
		100	135x110	1000	Yes	Yes	401216	-B2	110 mm	-B4
		125	135x110	1000	Yes	Yes	401216	-B2	110 mm	-B4
		150	135x110	1000	Yes	Yes	401216	-B2	110 mm	-B4
		160	135x110	1000	Yes	Yes	401216	-B2	110 mm	-B4
		180	135x110	1000	Yes	Yes	401216	-B2	110 mm	-B4
		200	135x110	1000	Yes	Yes	401216	-B2	110 mm	-B4
		250	135x110	1000	Yes	Yes	401216	-B2	110 mm	-B4
EE	MHD	100	135x110	1000	Yes	N.a.	401216	-B2	110 mm	-B4
		125	135x110	1000	Yes	N.a.	401216	-B2	110 mm	-B4
EE	HD	150	175x140	1600	Yes	No	401217	-D2	140 mm	-D4
		200	175x140	1600	Yes	No	401217	-D2	140 mm	-D4
		250	175x140	1600	Yes	No	401217	-D2	140 mm	-D4
		300	175x140	1600	Yes	No	401217	-D2	140 mm	-D4

The directional lock for electrowelded castors can be assembled with brackets with appropriate slots. To order castors configured with slots, please add the above specified suffix to the part number of the complete castor.

Example: to order the part number 628314 with 2 slots, it is necessary to show the part number 628314B2.

Upon request, it is possible to fit the directional lock to brackets with customised slots and to brackets with a different top plate dimension.

Directional lock for electrowelded brackets

Scheme of assembly

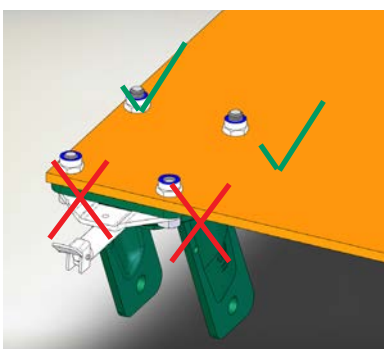
1. Four M10 bolt and four M10 nuts are required for directional lock 401216 (MHD type); M14 bolt and nuts are instead required for directional lock 401217 (HD type). Self-locking nuts and 8.8 bolt strength are recommended. The length of the bolt depends on the characteristics of the trolley the castors have to be fitted onto (it should be usually longer than 40mm).



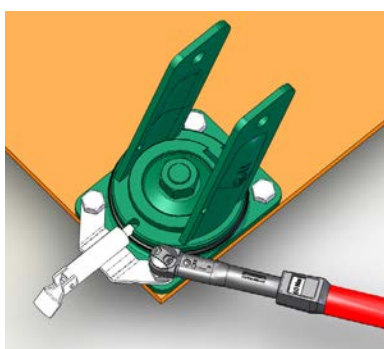
2. The directional lock and the castor have to be positioned and subsequently fastened as per the exemplification in the adjacent picture (note: the picture shows the bracket without the wheel for handiness of the image only).



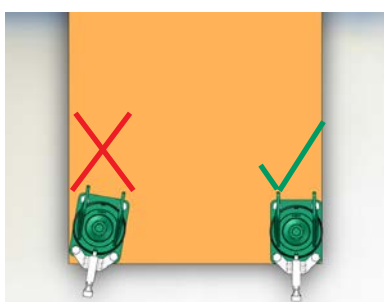
3. The bolt has to protrude through the nut by at least 3 threads.



4. The proper tightening of the bolts has to be verified by a torque wrench. The recommended tightening torque of a self-locking nut is of 25Nm for dir. lock 401216 (M10 bolts) and of 60NM for dir. lock 401217 (M14 bolts).



5. Make sure that the directional lock engages properly into the slots of the bracket and that the castors are aligned to the direction of movement of the trolley once the directional lock is applied.



Direction of movement

CORRECT PRODUCT USE

Italy has implemented EEC directive no. 83/374 concerning the manufacturer's responsibility with Italian DPR no. 224 of 24/05/1988.

Subsequent to that directive, the user must comply with and apply all the recommendations provided by the manufacturer regarding use, assembly as well as preventive and periodic maintenance of its products.

Such recommendations are summarised in the following paragraphs.

For further information, please ask Tellure Rôta for the Technical Handbook or for the "Use guide" booklet prepared by the Union of Italian Wheel Manufacturers (UCIR).

Wheel maximum load and carrying capacity

The carrying capacity declared by the manufacturer is the maximum value, expressed in daN, that a wheel or a bracket can be subjected to without reducing its operating efficiency.

The user must check the suitability of the carrying capacity declared by the manufacturer in relation to the load, the wheel and bracket layout on the trolley to be moved, the number of them actually in contact with the ground and any other conditions (type of surface on which the trolley moves, temperature, humidity, presence of aggressive chemical agents in the operating environment) that may affect the operating conditions of the mechanical moving parts.

Tractive force

The user must check that the force needed to move the trolley with the foreseen load is compatible with current provisions. To make it easier to choose the right wheel, and based on the force required to move the trolley, the rolling resistance value of each wheel is indicated in Tellure Rôta catalogue.

Speed

The maximum speed for which Tellure Rôta refers to the rated carrying capacity is 4 km/h (1.1 m/s). For applications at higher speeds, please contact Tellure Rôta.

Floor

The rated load capacity declared in this catalogue refers to use on smooth and compact floors in good condition. Uneven floors, obstacles and different levels require wheels with a larger diameter and a covering with greater elasticity.

Means of traction and moving intensity

The rated carrying capacity declared in this catalogue refers to manual handling with interruptions during use. For continuous operation or motorised handling, please contact Tellure Rôta.

Environment

The user must check that the materials used to make the selected product are compatible with physical-chemical conditions of the operating environment. The catalogue indicates the "normal" operating conditions for each type of wheel.

Electrical conductivity

If it is necessary to guarantee the electric conductivity from the connecting part to the tread, please contact Tellure Rôta.

Braking and/or locking device

Tellure Rôta produces brackets equipped with brakes and/or locks. They are designed to park

the trolley on slopes of generally no more than 3% under the condition that at least two wheels of the trolley equipped with such devices are in contact with the ground. In case of use on steeper gradients, to ensure the trolley remains at a standstill in these conditions, either the load must be reduced or the number of braking devices must be increased. Tellure Rôta is available for any further details or explanations.

Storage

Products must be stored in a well-ventilated area, without excessive humidity, with a thermal excursion ranging between -10 and +40 C and protected from dust. Never expose products to direct sunlight for extended periods of time and, in general, avoid extended storage. To store the product more efficiently and to protect it against dust, Tellure Rôta items are supplied in standard shrink-wrapped packages.

INCORRECT ACTIONS

To use wheels and brackets correctly, avoid the following:

- overloads, non-uniform load distribution, violent application of the load
- extended stationary periods under load
- impacts, collisions and falling from different heights
- activation of locks and/or brakes while the trolley is moving
- moving the trolley with locks and/or brakes engaged
- parking the trolley with the locks and/or brakes engaged on slopes of more than 3%
- washing with chemically aggressive cleaners
- replacing the wheel and/or bracket with spare parts that do not comply with the Tellure Rôta specifications.

INSTALLATION

For efficient production operation and extended service life, follow the assembly instructions listed below.

Wheel assembly

- Check the mechanical strength of the attachment parts (axle sets, nuts, washers) used for the type of assembling (projecting or fork) and the load to which they are subjected
- House the axle set horizontally, perpendicular to the operating direction, and prevent it from rotating
- Check that the nut is tightened on the axle set; Check that the wheel rotates freely once the installation has been completed.

Bracket assembly

The trolley structure must be sized to withstand the stress exerted on it and to guarantee that attachment surfaces are level. They must be flat, horizontal and sized to guarantee that the corresponding bracket attachment surfaces are perfectly coplanar in the attachment point.

Connecting through welding is not recommended. It is recommended:

- To mount the bracket with a plate using screws, nuts and washers with the sizes and quantity indicated by the manufacturer
- To tighten the nuts or screws with the appropriate torque
- To guarantee that the axle set, for fixed castors, is perpendicular to the operating direction
- To guarantee that brackets with a solid stem are attached to tubular structures with precise

tolerances

- To attach the stems with the cross hole with screws that have an adequate diameter and length
- To guarantee that the tubular structure of the trolley rests completely on the bracket attachment surface
- To guarantee, for brackets with a threaded stem or bolt hole, that the bracket connection surface adheres completely to the surface equipment without interpositions. The brackets with a bolt hole must be attached using screws with the diameter indicated by the manufacturer.

MAINTENANCE

The user must carry out scheduled maintenance that includes the inspections listed below at the intervals that vary according to operating conditions.

Trolley structure check and maintenance

- Check damage to the trolley frame that may have reduced product connection efficiency;
- Check that the product connection parts are correctly tightened on the trolley structure.

Wheels and brackets checks and maintenance

- Check that the product is undamaged, fully operational and that there is no excessive clearance, wear, deformation or tearing
- Check that any locks and/or brakes, if present, are working efficiently
- Check that the environmental conditions have not changed the product (oxidation, corrosion, foreign bodies etc.), thus reducing its operating efficiency
- For products that ensure electrical conductivity, clean the rolling strip and periodically check the electrical conductivity
- Check that the wheel axle set is correctly tightened, reapplying the necessary torque
- Lubricate the moving parts with a lubricant suitable for the specific applications.

Frequency of checks and maintenance

The maximum time interval between two successive checks is as follows:

- damage to the trolley's frame: 12 months
- tightening of connection parts: 6 months
- product condition: 6 months
- brake efficiency: 3 months
- product alteration: 6 months
- electrical conductivity: 3 months
- wheel axle set tightness: 6 months
- lubrication top-up: 6 months (but the top-up lubrication has to be done every time the product is washed).

PROCEDURES FOR DISPOSING AND RECYCLING PRODUCTS

To dispose of and/or recycle the products after use, first, separate the wheel+bracket assemblies from the equipment on which they are fitted. It is best to split the wheel+bracket assemblies down into the following component parts:

- bracket
- axle unit (screw, tube, nut)
- wheel

In particular, the dismantling of the wheel from the bracket is crucial if these are prevalently made from plastic material or aluminium alloy.

Below are details of disposal and recycling of the main materials making up the Tellure Rôta wheels and brackets. In any case, we suggest comparing and supplementing these details with the procedures and rules established by the company in charge of waste disposal in the area or locality where the products are used.

Brackets and axle components

Steel and stainless steel can be recycled as ferrous scrap.

Wheels

We suggest that product recycling procedures include preliminary treatments that involve sorting the different materials in the wheels so as to ensure the correct disposal and/or recycling of each type.

- Steel and engineering cast iron can be recycled as ferrous scrap
- Aluminium alloy can be recycled as non-ferrous metal
- Plastic, thermoplastic rubber and vulcanised rubber parts can be recycled once they have been separated from the ferrous and non-ferrous metals
- Thermosetting resin can be disposed of in waste dumps
- The polyurethane parts can be disposed of in waste dumps, once separated from ferrous and non-ferrous metals.

Shrink-wrap packaging is recyclable as low density polyethylene (PE-LD).

Wooden pallets can be reused or recycled. Any paper or cardboard packaging can be returned to the paper production cycle.

As regards recycling procedures, please refer to the production consortia in the countries where the parts are disposed of.

1. General terms

The contractual relationship, further to the conclusion of each single order, is regulated by these general terms of sale and by specific terms which may be indicated in the order, where specifically undersigned. Orders passed on to commercial assistants and intermediaries are accepted subject to the approval of Tellure Rôta S.p.A.

2. Offer

The documents forming part of the offer, such as illustrations, drawings, indications of weight and size, are only determinant in approximate terms to the extent that they have not been expressly indicated as binding. Tellure Rôta S.p.A. reserves the right of ownership and copyright with regards to the cost estimates, drawings and other documents, which must not be made accessible to third parties. The purchaser assumes full responsibility for the documents it has sent to Tellure Rôta S.p.A. in the event of breach of third party industrial protection rights, also in relation with Tellure Rôta S.p.A. The latter is obliged to make projects, indicated by the purchaser as confidential, accessible to third parties only upon the purchaser's approval.

3. Orders

Except in the event of different written terms, orders of less than Euro 500.00 are not accepted.

4. Variation in the confirmed order

Tellure Rôta reserves the right to refuse or accept, also only partially, any subsequent changes in the order and proposals by the purchaser. In the event of acceptance of these variations, the new price, methods of payment and new delivery dates shall be established by Tellure Rôta, with all other terms remaining unchanged.

5. Cancellation of a confirmed order

The purchaser that cancels a confirmed order, for any cause or motive, is bound to pay in full the amount relating to materials and to supplies already ordered by Tellure Rôta S.p.A. In any case, Tellure Rôta S.p.A. has the right to a minimum compensation equal to 25% of the agreed price, with the right to withdraw this amount even from possible sums received as advance payment for the supply.

6. Prices

Prices are considered as applying to material delivered ex works from Tellure Rôta S.p.A., except in the event of different written terms. The prices of products are those shown by Tellure Rôta S.p.A. in its price list or in its offers; these prices, if not yet agreed, may however be changed at any moment and will be absolutely applied at the date fixed by Tellure Rôta S.p.A.

7. Payments

Payment of supplies must be made within the period and the terms agreed to in the order. In all events, Tellure Rôta S.p.A. is authorised to issue drafts on the customer for the sums and at the due dates. The relative costs are to be borne by the customer. Every shipment is considered as independent of others for the purpose of payment. Delays in payments or any other breach give right to the suspension of the remaining supplies and to the rescission of the contract in progress, besides giving rise to default action against the purchaser with the immediate application of interests on arrears. On sums falling due and not paid, without prejudice to Tellure Rôta S.p.A.'s right to demand payment, interests on arrears will apply, with full right, from the day after the due date, at the legal rate of interest on arrears plus eight points, in compliance with the rate set by the ECB in respect of Italian Legislative Decree no. 192/2012. Requests for reimbursement of payments or for compensations by virtue of any possible counter-claim on the part of the purchaser are not accepted.

8. Delivery terms

The agreed and confirmed shipment and/or delivery terms are expressed in working days and are only indicative and as such are not legally binding, except in the event of a definite undertak-

ing on the part of Tellure Rôta S.p.A., which must be expressly indicated on the order confirmation, and except in cases of force majeure. Any delays may not therefore, in any event, give rise to compensation for damages or the rescission, even partial, of the contract, except where such consequences are expressly accepted by Tellure Rôta S.p.A. in the order confirmation.

9. Shipment and transport

With the exception of a contrary agreement, which must be indicated in the order confirmation, the sale takes place Ex-Works. Partial shipments by Tellure Rôta S.p.A. are also accepted. Also in the event that Tellure Rôta S.p.A. is obliged to pay the relative transport cost for the goods as far as the agreed destination, the risk of loss or damage to the goods, as well as any additional costs due to events occurring after the goods have been consigned to the carrier, is transferred from Tellure Rôta S.p.A. to the purchaser at the moment in which the goods are consigned to the carrier. Any reserves, claims, or actions deriving from or in any case connected with the transport and consequent operations, must be raised by the purchaser, and exclusively against the carrier, with the absolute term of eight days from receipt of the goods, since Tellure Rôta S.p.A. is not responsible for events occurring after the consignment of the material to the carrier. Tellure Rôta S.p.A. will take care of the packaging according to experience and common practice, remaining explicitly exonerated from any responsibility for loss and/or damage. The use of special packaging, including the exclusion of packaging in the case of goods for which this is normal practice must be agreed to between Tellure Rôta S.p.A. and the purchaser upon making the order. With regards to matters not provided for, reference should be made to articles 1678 and 1702 of the Civil Code if, and to the extent, they are compatible with this clause. Samples are made available by Tellure Rôta S.p.A.'s only upon the application of a supplementary charge to be agreed from time to time on the relative price in force.

10. Faults and defects

Any claims for materials not corresponding, both in terms of quantity and of quality, to the conditions agreed to in the order, must be raised in writing within the maximum term of eight days from receipt of the goods on penalty of forfeiture. In the event of a prompt and justified claim, Tellure Rôta S.p.A.'s obligation is limited to the replacement of the goods acknowledged as not corresponding (in any case at supply conditions), to the same delivery destination as the initial supply, subject to the restitution of this initial supply, excluding any right on the part of the purchaser to request the rescission of the contract and compensation for direct or indirect damages and the reimbursement of any costs sustained for any reason. Tellure Rôta S.p.A. will not accept claims and will not be liable for damages suffered by third parties upon the occurrence of any of the following conditions: inappropriate or incorrect use, defective assembly on the part of the purchaser or of a third party, natural wear and tear, incorrect or negligent handling, electric or chemical effects, to the extent that these are not attributable to the fault of Tellure Rôta S.p.A. The purchaser loses every right of claim, and therefore the replacement of the goods, in the event that it fails to immediately suspend the use of the materials to which the claim refers.

11. Returns of materials

In the event of errors by the purchaser during the ordering phase, the material may be returned exclusively carriage free, against Tellure Rôta S.p.A.'s written authorisation, and only if perfectly integral and unused.

12. Changes in the construction

Tellure Rôta S.p.A. may make any changes in its construction without the obligation to inform the purchaser. Changes made subsequent to the order cannot give rise to compensation of any kind.

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525223	62	526101	61	533104	68	535426	70	537704	71
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525225	62	526103	61	533106	68	535430	70	537706	71
525226	62	526201	61	533107	68	535431	70	537710	71
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525601	63	526303	61	533121	68	535616	72	537904	71
525602	63	527701	63	533122	68	535620	72	537905	71
525603	63	527702	63	533206	68	535701	70	537906	71
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525605	63	527704	63	534010	278	535703	70	537911	71
525606	63	527705	63	534708	70	535704	70	538201	71
525610	63	527706	63	534709	70	535705	70	538202	71
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538210	71	604211	91	605603	94	606623	91	607804	92
538211	71	604301	92	605604	94	606624	91	607806	92
538221	71	604302	92	605606	94	606626	91	607811	92
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538223	71	604306	96	605701	91	606701	94	607902	95
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538225	71	604401	94	605703	91	606703	94	607904	95
538226	71	604402	94	605704	91	606704	94	607906	95
538230	71	604403	94	605706	91/96	606706	94	607911	95
538231	71	604404	94	605711	91/96	606711	94	608001	95
538802	72	604406	94	605901	91	606721	94	608002	95
538803	72	604411	94	605902	91	606722	94	608003	95
538806	72	604501	91	605903	91	606723	94	608004	95
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538811	72	604503	91	605906	91/96	606726	94	608011	95
539202	72	604504	91	605911	91/96	606731	94	608102	96
539203	72	604506	91	606102	93	606806	96	608103	96
539206	72	604511	91	606103	93	606811	96	608202	96
539210	72	604601	94	606104	93	606826	96	608203	96
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		604604	94	606202	93	606902	94	608223	96
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603206	90	605501	92	606604	91	607706	92	609006	97
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627202	137	628316	150	629113	146	632363	166	635852	168
627203	138	628402	139	629203	146	632364	166	635853	168
627204	138	628403	139	629204	146	632366	166	635854	168
627205	138	628405	139	629206	146	632367	166	635855	168
627206	138	628406	139	629213	146	634122	160	635856	168
627208	138	628414	139	629303	154	634123	160	635863	168
627213	137	628416	150	629304	146	634124	160	635864	168
627222	155	628503	138	629306	146	634125	160	636302	161
627223	155	628512	137	629313	155	634126	160	636303	161
627224	156	628513	137	629403	154	634128	160	636304	162
627234	156	628514	138	629404	146	634151	166	636305	162
627302	136	628515	138	629406	146	634152	166	636306	162
627303	136	628516	138	629413	155	634153	166	636504	163
627313	136	628518	138	629503	154	634154	166	636505	163
627322	154	628522	155	629504	146	634155	166	636506	163
627323	154	628523	155	629506	146	634156	166	636654	169
627324	154	628524	156	629513	155	634157	166	636655	169
627334	154	628534	156	629523	145	634158	166	636656	169
627404	137	628602	139	629603	147	634163	166	636664	169
627406	137	628603	139	629604	147	634164	166	636704	161
627434	155	628605	139	629606	147	634166	166	636706	161
627444	155	628606	139	629613	147	634167	166	636724	167
627516	138	628614	139	629703	147	634168	166	636726	167
627602	137	628616	150	629704	147	634224	160	636734	167
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627613	137	628706	151	629806	147	634554	167	636855	168
627624	156	628708	151	629813	147	634555	167	636856	168
627634	156	628718	151			634556	167	636863	168
627704	137	628729	151			634563	167	636864	168
627706	137	628803	144	632122	160	634564	167	637304	160
627622	155	628806	151	632123	160	634651	167	637322	160
627623	155	628808	151	632124	160	634652	167	637323	160
627724	154	628813	144	632125	160	634653	167	637324	160
627734	154	628818	151	632126	160	634654	167	637325	160
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628162	139	628908	151	632158	166	634856	168	637624	162
628163	139	628918	151	632163	166	634863	168	637625	162
628166	140	629003	146	632164	166	634864	168	637626	162
628184	140	629004	146	632166	166	635451	167	637822	163
628204	144/145	629006	146	632167	166	635452	167	637823	163
628206	144/145	629013	146	632168	166	635453	167	637824	163
628302	139	629023	145	632224	160	635463	167		
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637828	163	638407	170	641109	174	644552	176	646855	177
637852	169	638408	170	641110	174	644553	176	646856	177
637853	169	638414	169	641114	174	644554	176	646863	177
637854	169	638416	170	641116	174	644555	176	646864	177
637855	169	638417	170	641117	174	644556	176	647824	178
637856	169	638418	170	641118	174	644563	176	647852	178
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637864	169	638428	170	641127	174	644651	176	647854	178
637866	169	638438	170	642103	175	644652	176	647855	178
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638063	170	638623	161	642124	175	644654	176	647857	178
638066	171	638624	162	642129	175	644655	176	647863	178
638067	171	638625	162	642139	175	644656	176	647864	178
638072	171	638626	162	642151	175	644663	176	647866	178
638074	171	638822	163	642152	175	644664	176	648062	180
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638077	171	638824	163	642154	175	644853	177	648066	180
638084	171	638825	163	642155	175	644854	177	648067	181
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638162	170	638828	163	642157	175	644856	177	648074	180
638163	170	638852	169	642158	175	644863	177	648076	180
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638305	169	638918	170	644139	175	645852	177	648304	178
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638318	170	64.....		644157	175	646654	178	648314	178
638327	170	641102	174	644158	175	646655	178	648315	179
638328	170	641103	174	644163	175	646656	178	648316	179
638338	170	641104	174	644164	175	646664	178	648317	179
638403	169	641105	174	644166	175	646851	177	648318	179
638404	169	641106	174	644167	175	646852	177	648324	179

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<u>648403</u>	<u>178</u>	<u>652108</u>	<u>190</u>	<u>655506</u>	<u>197</u>	<u>656402</u>	<u>185</u>	<u>657408</u>	<u>192</u>
<u>648404</u>	<u>178</u>	<u>652108</u>	<u>190</u>	<u>655508</u>	<u>197</u>	<u>656403</u>	<u>185</u>	<u>657414</u>	<u>192</u>
<u>648405</u>	<u>178</u>	<u>652114</u>	<u>184</u>	<u>655602</u>	<u>197</u>	<u>656404</u>	<u>185</u>	<u>657514</u>	<u>187</u>
<u>648406</u>	<u>178</u>	<u>652206</u>	<u>190</u>	<u>655603</u>	<u>197</u>	<u>656406</u>	<u>185</u>	<u>657602</u>	<u>186</u>
<u>648407</u>	<u>179</u>	<u>652208</u>	<u>190</u>	<u>655605</u>	<u>197</u>	<u>656414</u>	<u>185</u>	<u>657603</u>	<u>186</u>
<u>648408</u>	<u>179</u>	<u>652224</u>	<u>190</u>	<u>655606</u>	<u>197</u>	<u>656424</u>	<u>191</u>	<u>657604</u>	<u>187</u>
<u>648409</u>	<u>179</u>	<u>652302</u>	<u>196</u>	<u>655614</u>	<u>197</u>	<u>656425</u>	<u>191</u>	<u>657606</u>	<u>187</u>
<u>648410</u>	<u>179</u>	<u>652303</u>	<u>196</u>	<u>655702</u>	<u>197</u>	<u>656426</u>	<u>191</u>	<u>657704</u>	<u>187</u>
<u>648414</u>	<u>178</u>	<u>652304</u>	<u>196</u>	<u>655703</u>	<u>197</u>	<u>656434</u>	<u>191</u>	<u>657706</u>	<u>187</u>
<u>648415</u>	<u>179</u>	<u>652305</u>	<u>196</u>	<u>655705</u>	<u>197</u>	<u>656501</u>	<u>184</u>	<u>657714</u>	<u>187</u>
<u>648416</u>	<u>179</u>	<u>652306</u>	<u>196</u>	<u>655706</u>	<u>197</u>	<u>656502</u>	<u>184</u>	<u>657802</u>	<u>187</u>
<u>648417</u>	<u>179</u>	<u>652308</u>	<u>196</u>	<u>655714</u>	<u>197</u>	<u>656503</u>	<u>184</u>	<u>657803</u>	<u>187</u>
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<u>648424</u>	<u>179</u>	<u>652504</u>	<u>200</u>	<u>655803</u>	<u>197</u>	<u>656506</u>	<u>184</u>	<u>657805</u>	<u>193</u>
<u>648427</u>	<u>179</u>	<u>652506</u>	<u>200</u>	<u>655805</u>	<u>197</u>	<u>656514</u>	<u>184</u>	<u>657806</u>	<u>193</u>
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<u>648503</u>	<u>178</u>	<u>654101</u>	<u>184</u>	<u>655904</u>	<u>200</u>	<u>656526</u>	<u>190</u>	<u>658104</u>	<u>184/186</u>
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<u>648508</u>	<u>179</u>	<u>654106</u>	<u>190</u>	<u>655924</u>	<u>201</u>	<u>656606</u>	<u>187</u>	<u>658202</u>	<u>184</u>
<u>648514</u>	<u>178</u>	<u>654108</u>	<u>190</u>	<u>655926</u>	<u>201</u>	<u>656614</u>	<u>187</u>	<u>658203</u>	<u>184</u>
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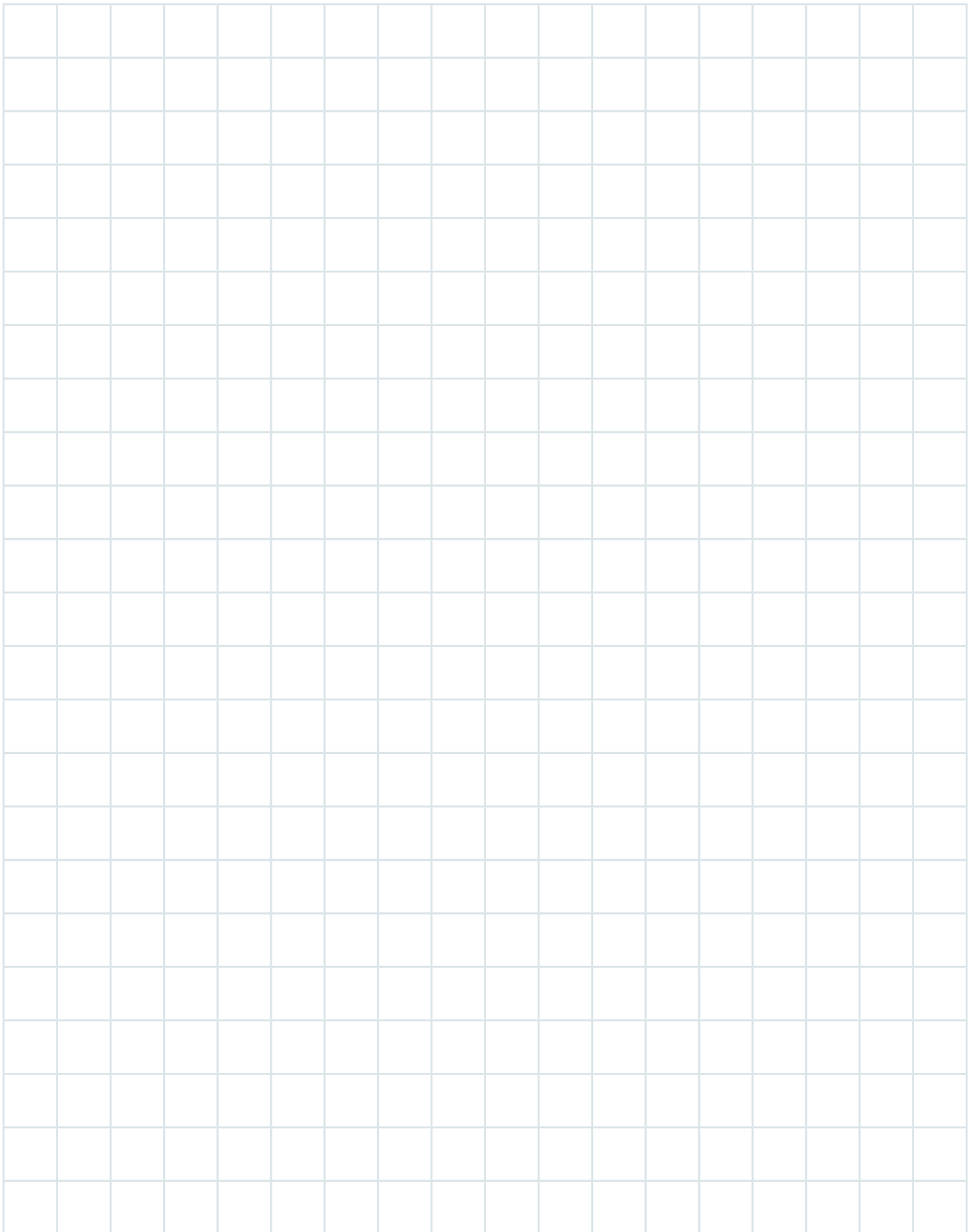
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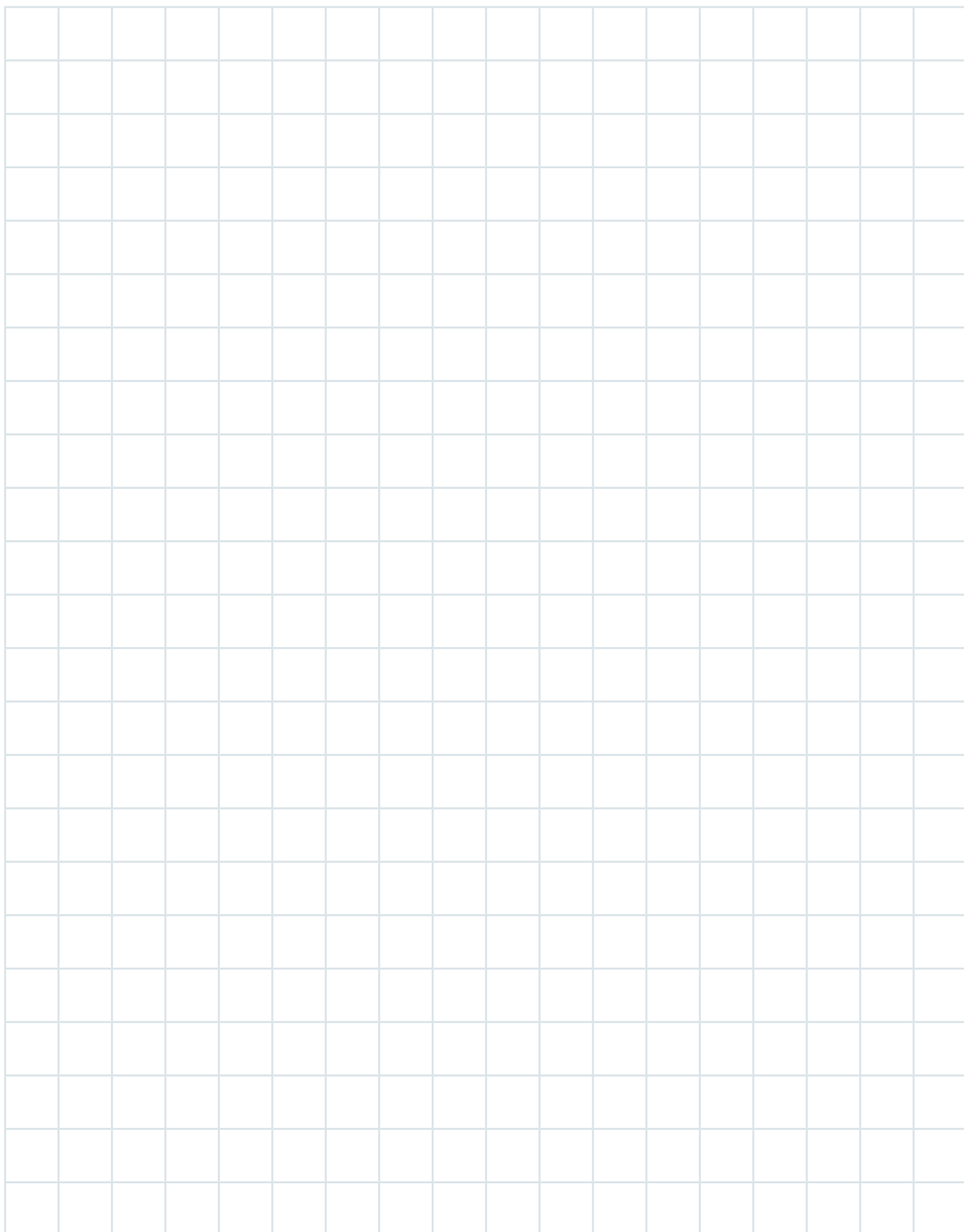
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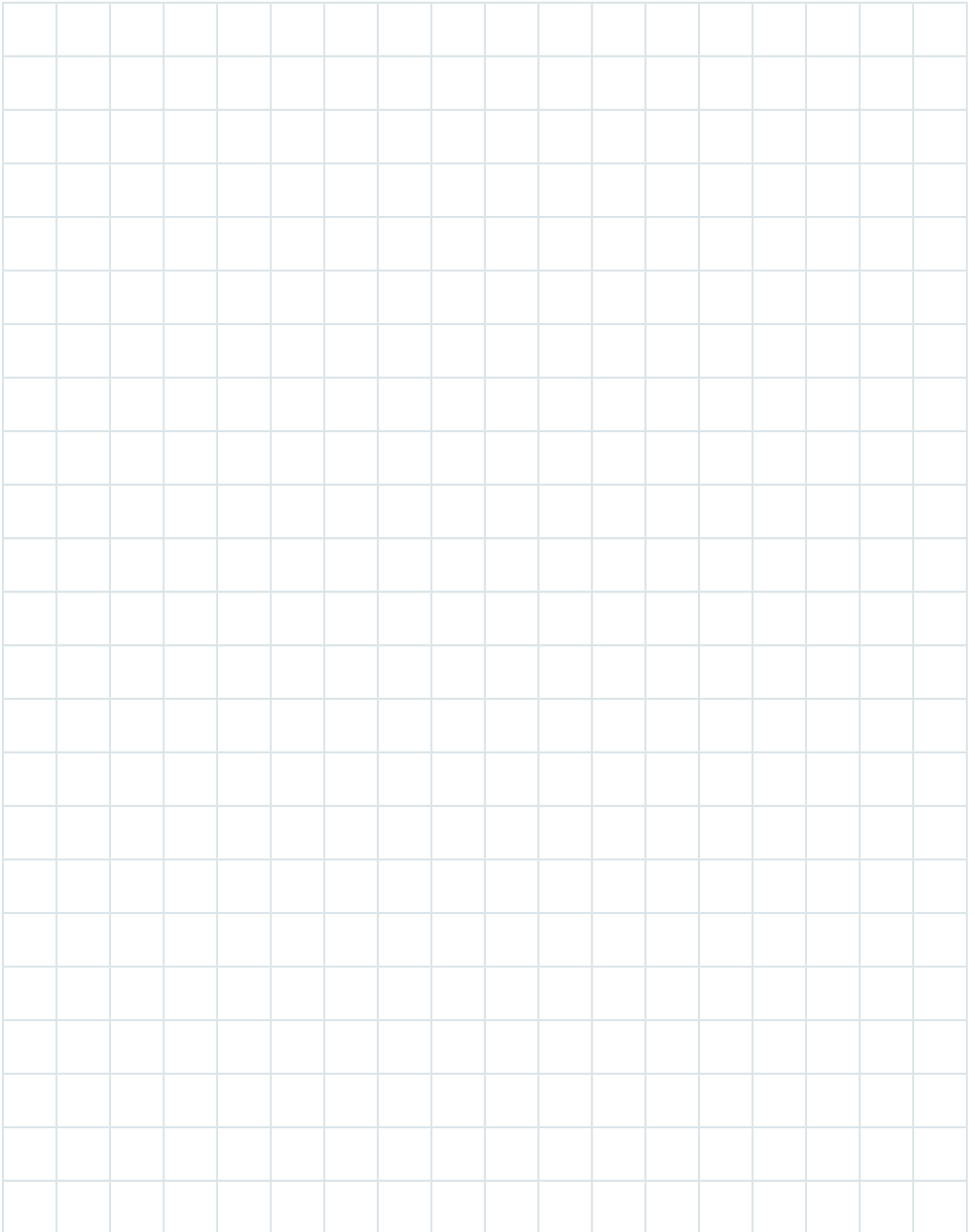
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