

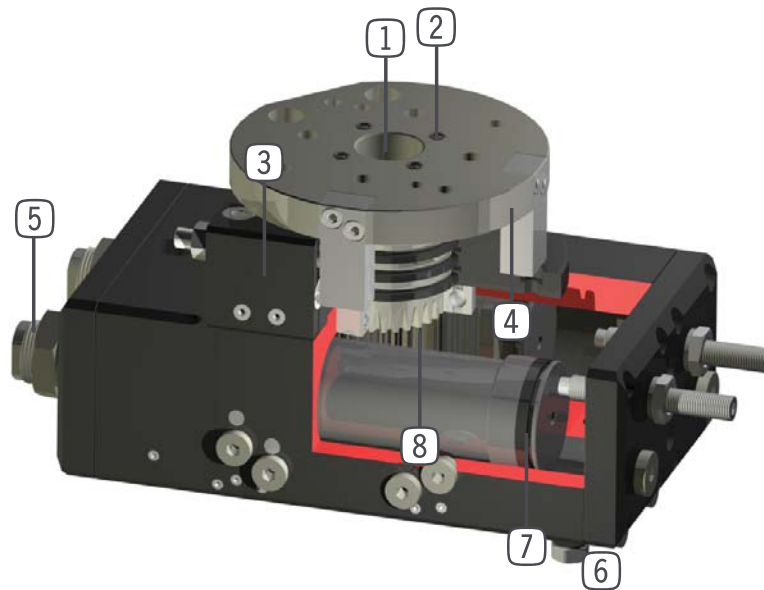


### Product information:

- ▶ Torque up to 130 Nm
- ▶ Power transmission with rack & pinion
- ▶ Optimum conversion of input power to torque
- ▶ High-precision repeatability
- ▶ Mounted in double ball bearings for high torque loading capacity
- ▶ Hydraulic shock absorber with spiral groove technology, sets off from limit position with minimal wear, smooth power absorption due to spiral groove
- ▶ Screw-in depth enables damping characteristics to be adjusted to a range of individual settings
- ▶ Air transfer hoseless, up to 8 pneumatic air feed-through
- ▶ Compact external dimensions, directly bolted to housing
- ▶ Maintenance free up to 10 million cycles

### Certification for clean room application:

- ▶ Category 5 for clean room applications according to DIN EN ISO 14644-1



### Design:

- ① **Quill shaft mounted in double ball bearings**
  - large centre bore to accommodate supply lines
  - absorbing high forces and torque levels
- ② **Up to 8-fold integrated air connection**
  - for transmitting compressed air without hoses
  - hose pack does not need to be swivelled at same time
- ③ **Adjustable limit position**
  - +/- 3° adjustable limit position
- ④ **Large, precise locating flange**
  - simple tool connection
- ⑤ **Integrated and patented shock absorber**
  - adjustable limit position damping
  - heating is prevented through installation in pneumatic pressure chamber
- ⑥ **Throttle-type screw connection**
  - for speed control (included in scope of supply)
- ⑦ **Power transmission**
  - rack and pinion
- ⑧ **Drive unit**
  - two dual-action pneumatic cylinders
  - high torque rating

**Versions:**e.g order no.:   **SF**     **-C****R**

- ▶ Category 5 for clean room applications according to DIN EN ISO 14644-1

**50**

- ▶ Installation size 50

**74**

- ▶ Installation size 74

**100**

- ▶ Installation size 100

**125**

- ▶ Installation size 125

**155**

- ▶ Installation size 155

**195**

- ▶ Installation size 195

**N**

- ▶ Swivel angle 0 - 180° adjustable

**D4**

- ▶ Integrated 4 way hoseless pneumatic feed-through

**D6**

- ▶ Integrated 6 way hoseless pneumatic feed-through

**D8**

- ▶ Integrated 8 way hoseless pneumatic feed-through

**-90N**

- ▶ Swivel angle 90°

**-90D4**

- ▶ Integrated 4 way hoseless pneumatic feed-through

**-90D6**

- ▶ Integrated 6 way hoseless pneumatic feed-through

**-90D8**

- ▶ Integrated 8 way hoseless pneumatic feed-through

**-180N**

- ▶ Swivel angle 180°

**-180D4**

- ▶ Integrated 4 way hoseless pneumatic feed-through

**-180D6**

- ▶ Integrated 6 way hoseless pneumatic feed-through

**-180D8**

- ▶ Integrated 8 way hoseless pneumatic feed-through

**Version: ML**

- ▶ at the -90° and the +90° positions mechanical and shock-absorbed hard stop
- ▶ 0° position does not lock, in contrast to the M-designation models
- ▶ the main pistons drive against dominant acting stop-piston, acting as a locked center position which is shock-absorbed and travel together to the endstop position
- ▶ these units with 3 positions should only be used for horizontal rotation applications or for simple orientation applications

**ML**

- ▶ Swivel angle -90° - 0° - +90°

**MLD4**

- ▶ Integrated 4 way hoseless pneumatic feed-through

**MLD6**

- ▶ Integrated 6 way hoseless pneumatic feed-through

**MLD8**

- ▶ Integrated 8 way hoseless pneumatic feed-through

**Version: M**

- ▶ mechanical and shock absorbed hard stops in all three positions
- ▶ 0° center position is achieved by means of two stop-pistons with integrated shock absorbers
- ▶ a mechanical hard stop is achieved by stop bolts, that are pushed by the catch-piston into the snap ring-groove of the stop-piston

**M**

- ▶ Swivel angle -90° - 0° - +90°

**MD4**

- ▶ Integrated 4 way hoseless pneumatic feed-through

**MD6**

- ▶ Integrated 6 way hoseless pneumatic feed-through

**MD8**

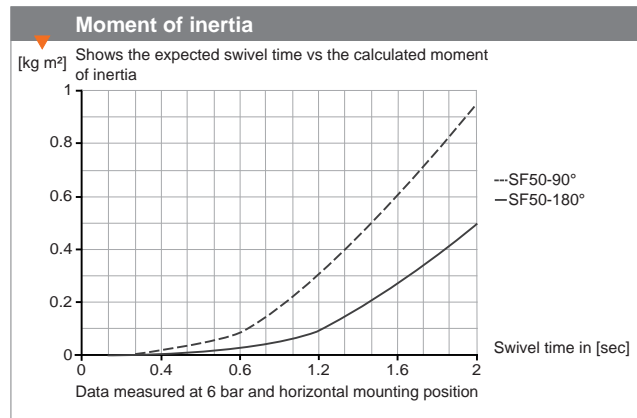
- ▶ Integrated 8 way hoseless pneumatic feed-through

**Version: ML****Version: M**

▶ Installation size: **SF50**

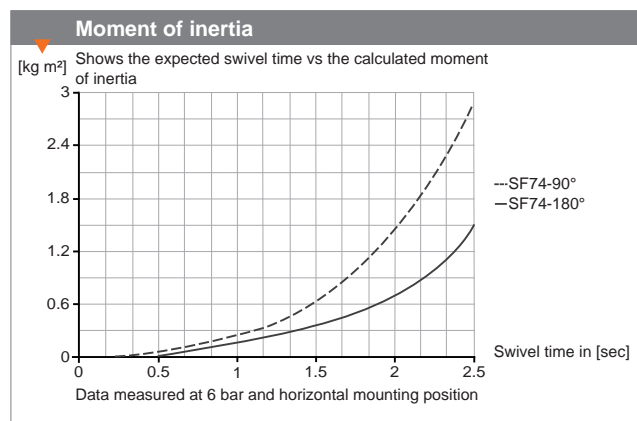
Dimension	
B [mm]	T [mm]
93	50

Technical Data*					
Order no.	Torque [Nm]	Bearing load		Weight [kg]	H [mm]
		axial [N]	radial [Nm]		
SF50-90N-C	2.4	490	24	0.6	46
SF50-180N-C	2.4	490	24	0.6	46
SF50N-C	2.4	490	24	0.6	46
SF50-90D4-C	1.5	490	24	0.76	63
SF50-180D4-C	1.5	490	24	0.76	63
SF50D4-C	1.5	490	24	0.76	63
SF50ML-C	2.4	490	24	0.6	46
SF50MLD4-C	1.5	490	24	0.76	63

▶ Installation size: **SF74**

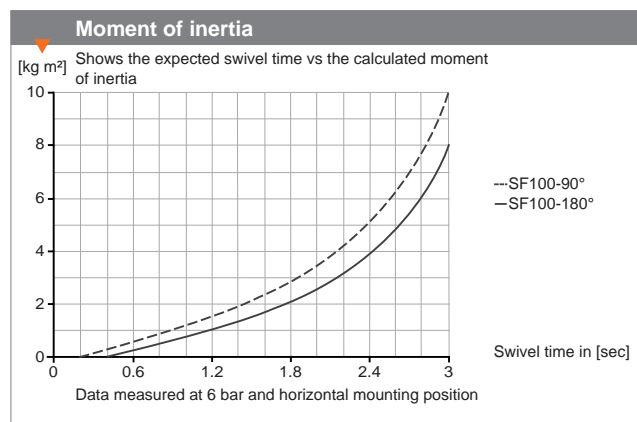
Dimension	
B [mm]	T [mm]
120	74

Technical Data*					
Order no.	Torque [Nm]	Bearing load		Weight [kg]	H [mm]
		axial [N]	radial [Nm]		
SF74-90N-C	7.3	1120	88	1.6	61.5
SF74-180N-C	7.3	1120	88	1.6	61.5
SF74N-C	7.3	1120	88	1.6	61.5
SF74-90D4-C	5.5	1120	88	1.8	71.5
SF74-180D4-C	5.5	1120	88	1.8	71.5
SF74D4-C	5.5	1120	88	1.8	71.5
SF74-90D6-C	5.5	1120	88	1.8	82
SF74-180D6-C	5.5	1120	88	1.8	82
SF74D6-C	5.5	1120	88	1.8	82
SF74ML-C	7.3	1120	88	1.9	61.5
SF74MLD4-C	5.5	1120	88	1.9	72
SF74MLD6-C	5.5	1120	88	1.9	82

▶ Installation size: **SF100**

Dimension	
B [mm]	T [mm]
174	100

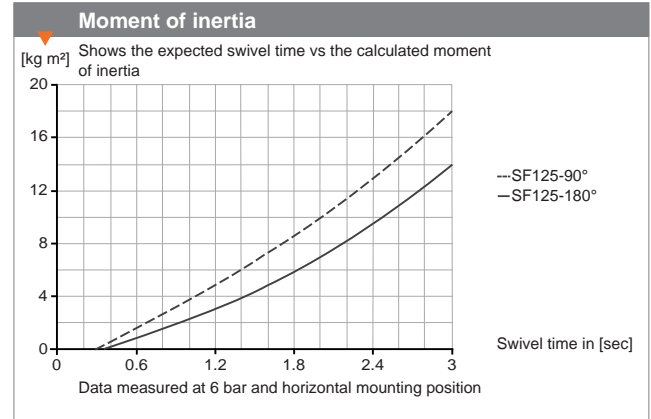
Technical Data*					
Order no.	Torque [Nm]	Bearing load		Weight [kg]	H [mm]
		axial [N]	radial [Nm]		
SF100-90N-C	20	2500	155	3.7	81
SF100-180N-C	20	2500	155	3.7	81
SF100N-C	20	2500	155	3.7	81
SF100-90D4-C	15	2500	155	4	93
SF100-180D4-C	15	2500	155	4	93
SF100D4-C	15	2500	155	4	93
SF100-90D6-C	15	2500	155	4.1	105
SF100-180D6-C	15	2500	155	4.1	105
SF100D6-C	15	2500	155	4.1	105
SF100ML-C	20	2500	155	3.7	81
SF100MLD4-C	15	2500	155	4.1	93
SF100MLD6-C	15	2500	155	4.1	105



► Installation size: **SF125**

Dimension	
B [mm]	T [mm]
230	125

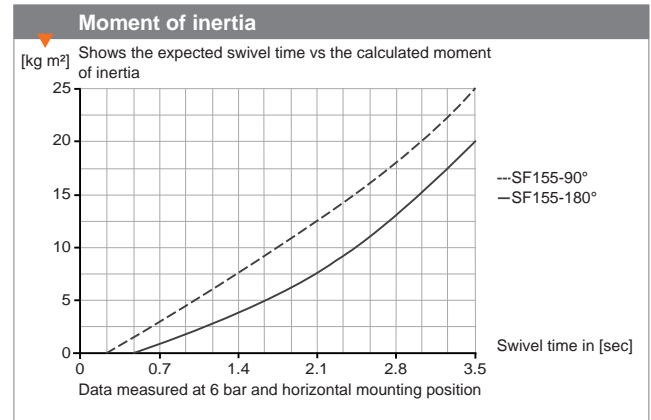
Technical Data*					
Order no.	Torque [Nm]	Bearing load		Weight [kg]	H [mm]
		axial [N]	radial [Nm]		
SF125-90N-C	38	3400	391	8.8	115
SF125-180N-C	38	3400	391	8.8	115
SF125N-C	38	3400	391	9.8	115
SF125-90D4-C	34	3400	391	9.5	130
SF125-180D4-C	34	3400	391	9.5	130
SF125D4-C	34	3400	391	10.5	130
SF125-90D8-C	34	3400	391	10.5	161
SF125-180D8-C	34	3400	391	10.5	161
SF125D8-C	34	3400	391	11.5	161
SF125M-C	38	3400	391	8.8	115
SF125MD4-C	34	3400	391	10.5	130
SF125MD8-C	34	3400	391	10.5	161



► Installation size: **SF155**

Dimension	
B [mm]	T [mm]
301	155

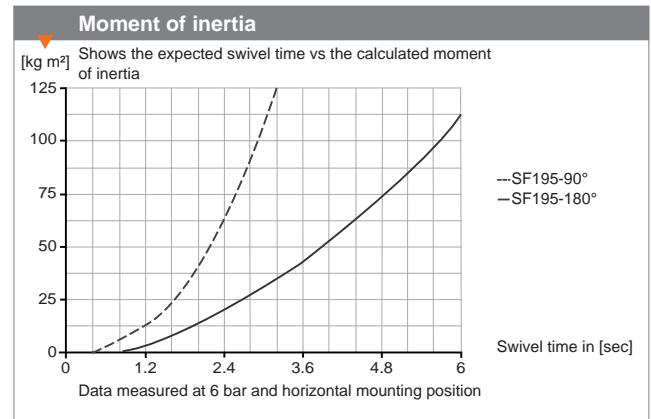
Technical Data*					
Order no.	Torque [Nm]	Bearing load		Weight [kg]	H [mm]
		axial [N]	radial [Nm]		
SF155-90N-C	62	5900	761	15	130
SF155-180N-C	62	5900	761	15	130
SF155N-C	62	5900	761	17.5	130
SF155-90D4-C	58	5900	761	16	144
SF155-180D4-C	58	5900	761	16	144
SF155D4-C	58	5900	761	17.5	144
SF155-90D8-C	54	5900	761	17.5	175
SF155-180D8-C	54	5900	761	17.5	175
SF155-D8-C	54	5900	761	19	175
SF155M-C	62	5900	761	15	130
SF155MD4-C	58	5900	761	16	144
SF155MD8-C	54	5900	761	17.5	175



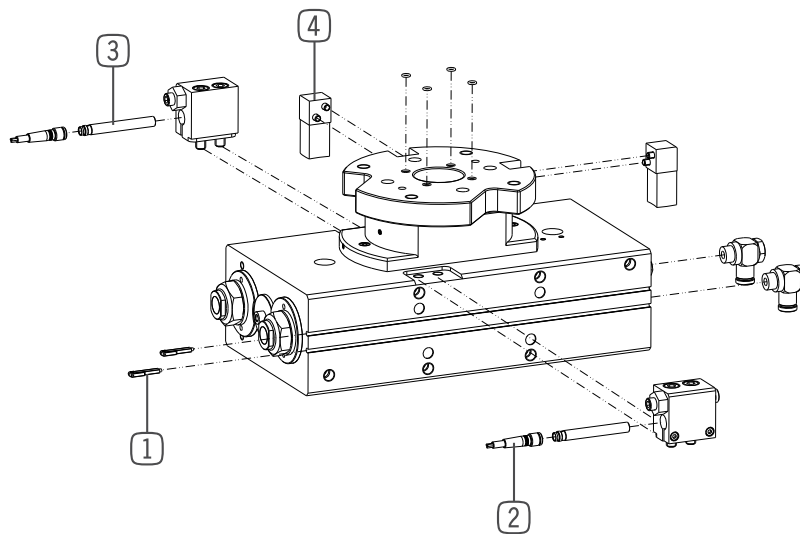
► Installation size: **SF195**

Dimension	
B [mm]	T [mm]
324	195

Technical Data*					
Order no.	Torque [Nm]	Bearing load		Weight [kg]	H [mm]
		axial [N]	radial [Nm]		
SF195-90N-C	130	7000	1253	27.5	162
SF195-180N-C	130	7000	1253	27.5	162
SF195N-C	130	7000	1253	29.5	162
SF195-90D4-C	125	7000	1253	29	176
SF195-180D4-C	125	7000	1253	29	176
SF195D4-C	125	7000	1253	31	176
SF195-90D8-C	120	7000	1253	31.5	207
SF195-180D8-C	120	7000	1253	31.5	207
SF195D8-C	120	7000	1253	33.5	207



\* All data measured at 6 bar



### Recommended accessories:

#### ① Magnetic field sensor

Version: Straight / Cable 5 m	
To match	<b>Order no.:</b>
for all	<b>MFS204KHC</b>
Version: Straight / Cable 0.3 m / Connector M8	
To match	<b>Order no.:</b>
for all	<b>MFS204SKHC</b>

#### ② Plug-in connector

Version: Angle / Cable 5 m / Socket M8 (female)	
To match	<b>Order no.:</b>
for all	<b>KAW500</b>
Version: Straight / Cable 5 m / Socket M8 (female)	
To match	<b>Order no.:</b>
for all	<b>KAG500</b>

#### ③ Inductive proximity switch

Version: Cable 5 m	
To match	<b>Order no.:</b>
SF74	<b>NJ6.5-E2-01</b>
SF50	<b>NJ8-E2</b>
SF74	<b>NJ8-E2</b>
SF100	<b>NJ8-E2</b>
SF125	<b>NJ8-E2</b>
SF155	<b>NJ8-E2</b>
SF195	<b>NJ8-E2</b>
SF125	<b>NJ12-E2</b>
SF155	<b>NJ12-E2</b>
SF195	<b>NJ12-E2</b>
Version: Connector M8	
To match	<b>Order no.:</b>
SF74	<b>NJ6.5-E2S</b>
SF50	<b>NJ8-E2S</b>
SF74	<b>NJ8-E2S</b>
SF100	<b>NJ8-E2S</b>
SF125	<b>NJ8-E2S-14</b>
SF155	<b>NJ8-E2S-14</b>
SF195	<b>NJ8-E2S-14</b>
Version: Connector M12	
To match	<b>Order no.:</b>
SF125	<b>NJ12-E2S-02</b>
SF155	<b>NJ12-E2S-02</b>
SF195	<b>NJ12-E2S-02</b>

#### ④ Adaptor kit for inductive proximity switch

To match	Order no.:
SF50	ANS0006
SF50D	ANS0008
SF50ML	ANS0066
SF50MLD4	ANS0067
SF74	ANS0010
SF74D	ANS0012
SF74ML	ANS0068
SF74MLD4	ANS0069
SF74MLD6	ANS0070
SF100	ANS0015
SF100D	ANS0017
SF100ML	ANS0071
SF100MLD4	ANS0072
SF100MLD6	ANS0073
SF125	ANS0035
SF125D4	ANS0036
SF125D8	ANS0037
SF125M	ANS0074
SF125MD4	ANS0075
SF125MD8	ANS0076
SF155	ANS0038
SF155D4	ANS0039
SF155D8	ANS0040
SF155M	ANS0077
SF155MD4	ANS0078
SF155MD8	ANS0079
SF195	ANS0041
SF195D4	ANS0042
SF195D8	ANS0043

#### Supplementary accessories:

##### Pressure safety valve

To match	Order no.:
for all	DSV1/8

##### Plug-in connector to convert

Version: Straight / 3-pole / Connector M8	
To match	Order no.:
for all	S8-G-3
Version: Straight / 3-pole / Connector M12	
To match	Order no.:
for all	S12-G-3