



ROTARY MODULES

AUTOMATION

SCHUNK takes the initiative. For you.

SCHUNK AUTOMATION anticipates technological trends and customer needs, and turns them into unique products, solutions and services.

As the most innovative market leader for more than 20 years we stand for state-of-the-art technology. Continuously we are setting trends for the entire Automation industry.

Take advantage of our comprehensive range of gripping modules, rotary and swivel units, linear modules, robot accessories and industry specific applications.

Discover in us a partner whose consistency and innovation will permanently strengthen your market position. In every industry. Worldwide.



GRIPPING MODULES



ROTARY MODULES



LINEAR MODULES



ROBOT ACCESSORIES



MODULAR ASSEMBLY
AUTOMATION



MACHINE VISION

Rotary Modules

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Pneumatic Rotary Modules

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Electro-pneumatic Rotary Modules

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Electric Rotary Modules

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Product Overview

Rotary Modules



Pneumatic Rotary Modules

Rotary Actuators

	SFL 25 - 64	Seite 16
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Swivel Heads

	SRH 20 - 60	Seite 142
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Rotary Fingers

	GFS 16 - 40	Seite 192
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Electro-pneumatic Rotary Actuators

Rotary Actuators

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Electric Rotary Modules

Rotary Actuators

	MRD-S 4 - 12	Seite 224
	PR 70 - 110	Seite 240
	PRL 60 - 120	Seite 256
	PW 70 - 90	Seite 268

Drives

	PSM 70 - 110	Seite 284
	PDU 70 - 110	Seite 300

Product Selection Table

Rotary Modules

		Torque [Nm]				Weight [kg]		
		0.1-1.0	1.1-10	11-100	101-200	0.0-1.0	1.0-10	11-100
Pneumatic Rotary Actuators								
Miniature rotary actuator								
MRU	Page 34	0.09 1.15				0.155 0.485		
Rotor								
SFL	Page 16	0.1 3.6				0.09 0.71		
Universal rotary actuator								
SRU	Page 56		1.5 115				1.2 26.5	
Pneumatic Swivel Heads								
SRH	Page 142		3 69.9				2.1 21.2	
SKE	Page 170	0.4 9.0				0.13 1.95		
Pneumatic Rotary Fingers								
GFS	Page 192	0.64 10				0.69 5.0		
Elektro-pneumatic Rotary Actuators								
SRU-Masterdrive	Page 214			13			6	
Electric Rotary Actuators								
Miniature rotary actuator								
MRD-S	Page 224	0.4 1.2				1.05 1.8		
Universal rotary actuator								
PR	Page 240		7.5 142				1.7 5.6	
PRL	Page 256		4.5 216				1 3.6	
Rotary tilting actuator								
PW	Page 268		2 12				1.8 3.4	
Electric Drives								
PSM	Page 284	0.19 1.8					2.4 3.9	
PDU	Page 300		7.6 142				1.6 5.5	

Product Selection Table

Rotary Modules

			Working environment						Typical areas of application								
			Normal, clean environment	Dirty environment I Grit	Dirty environment II Fine dust and fluids	Dirty environment III Aggressive fluids	High temperature range > 90 °C	Clean room	Machine tools	Material feed Component insertion	Assembly	Packaging	Electronics	Paintshop	Clean room/laboratory	Foundry	Food
Well suited																	
Suitable in a special design (on request)																	
Limited suitability																	
Pneumatic Rotary Actuators																	
Miniature rotary actuator																	
MRU	Page	34								●	●	●	●				
Rotor																	
SFL	Page	16								●	●	●	●				
Universal rotary actuator																	
SRU	Page	56							●	●	●	●	●	●			
Pneumatic Swivel Heads																	
SRH	Page	142							●								
SKE	Page	170									●	●	●				
Pneumatic Rotary Fingers																	
GFS	Page	192									●	●	●				
Elektro-pneumatic Rotary Actuators																	
SRU-Masterdrive	Page	214							●	●	●	●	●				
Electric Rotary Actuators																	
Miniature rotary actuator																	
MRD-S	Page	224								●	●	●	●		●		
Universal rotary actuator																	
PR	Page	240								●	●	●	●		●		
PRL	Page	256								●	●	●	●		●		
Rotary tilting actuator																	
PW	Page	268								●	●	●	●		●		
Electric Drives																	
PSM	Page	284								●	●	●	●		●		
PDU	Page	300								●	●	●	●		●		

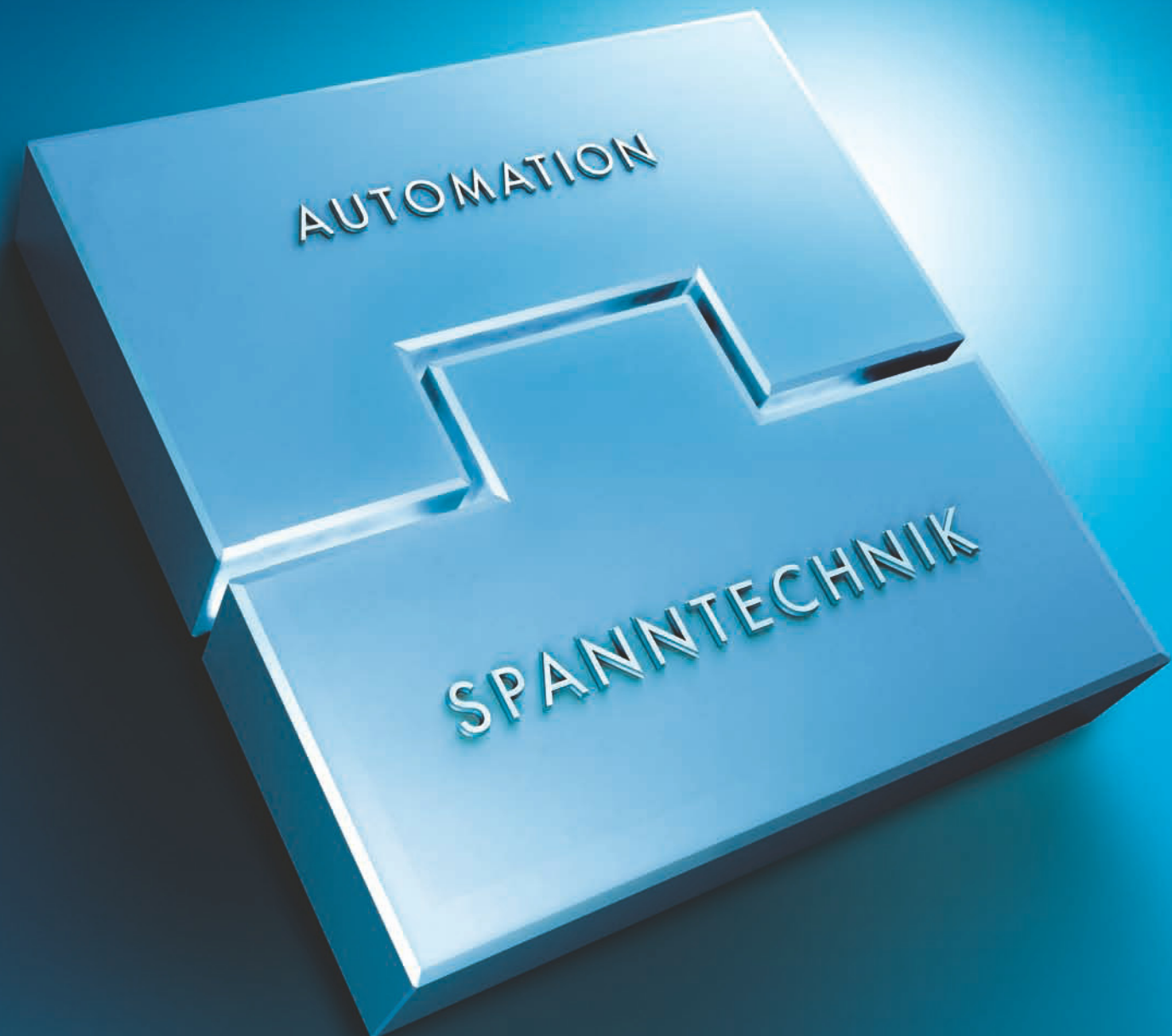
Synergies with SCHUNK

SCHUNK SYNERGY: **Toolholding/Workholding and Automation**

Visions in two technology areas

Toolholding/workholding and automation are our core competences. The resulting synergy effects make us unique. SCHUNK understands this complex world of clamping and handling like no one else. As a long-standing components specialist we know the demands and requirements of both technology areas. Moreover there's the fascination of new possibilities. With our twofold expertise we can provide you with trend-setting leading technology. From the spindle to robotics.

We call this "SCHUNK SYNERGY". Get to know us as your active "all-in-one" partner – all the services from one source to benefit you.



More innovative for you!

SCHUNK opens up new horizons

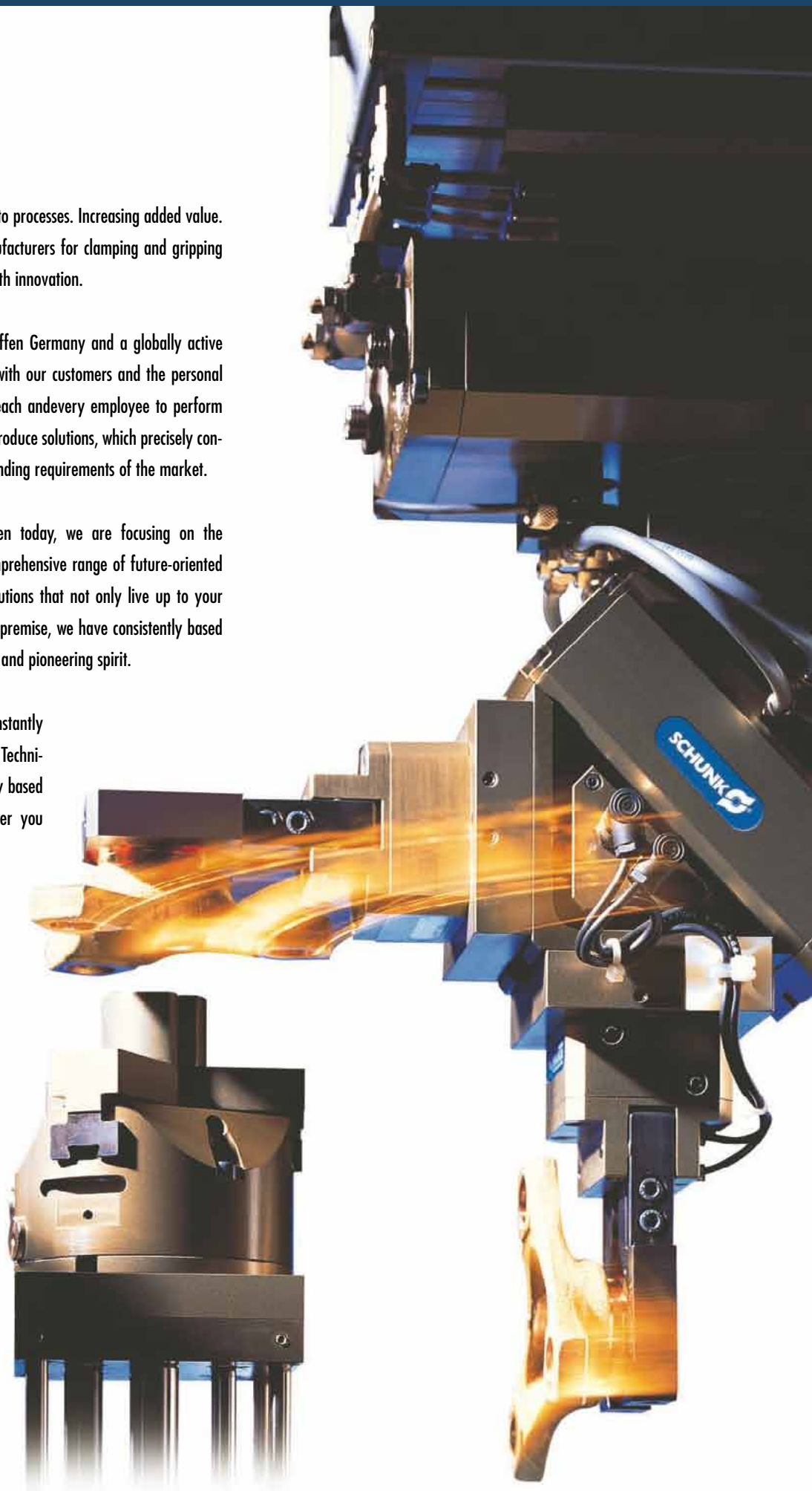
Shaping technology. Putting the dynamics into processes. Increasing added value. SCHUNK is one of the world's leading manufacturers for clamping and gripping technology, and our name is synonymous with innovation.

We are a family-run business based in Lauffen Germany and a globally active company rolled into one. Continual dialog with our customers and the personal responsibility and individual endeavors of each and every employee to perform the work faultlessly and in the best quality produce solutions, which precisely conform to our customers' needs and the demanding requirements of the market.

SCHUNK opens up new horizons. For even today, we are focusing on the opportunities of tomorrow, and boast a comprehensive range of future-oriented technologies. Our promise: High-quality solutions that not only live up to your expectations, but exceed them! And on this premise, we have consistently based our corporate philosophy: Quality, reliability and pioneering spirit.

Through continuous development, we are constantly opening up new prospects for our customers. Technical creativity, supreme expertise and soundly based experience are the success factors we offer you in engineering, production and service.

We are thinking ahead – for you!



Partners with a System Approach

System partners

Solutions from one source

As one of the most innovative market leaders, we offer unique solutions with our gripping systems, rotary units, linear modules, robot accessories and customized applications. Our broad product range enables us to offer precisely the right solution, even for your specialized tasks. We are development partners for various industries and specialize in your handling applications.

Whenever handling tasks require maximum precision and economic efficiency, SCHUNK provides the momentum and the perfect solution for putting them into practice.

You, too, can benefit from our complete automation range from one source. From standardized and individual gripper modules to complex functional modules. Rediscover SCHUNK! Again and again.



Automation product range

Gripping Modules

SCHUNK currently has the most comprehensive range of universal grippers and gripper modules für small components. Pneumatic or electric. Offering all features from state-of-the-art materials and coatings employed as standard to internal media feed-through. With our high level of technical expertise, SCHUNK sets the trend for cost-efficient handling in any industry, in any field.



Rotary Modules

Technology and functionality in the most compact form. SCHUNK's range of rotary modules represents the entire spectrum of compact turning and rotary units, swivel heads and rotary fingers. In other words, it's the ideal solution for handling tasks.



Linear Modules

Precision mini-slides, pneumatic linear modules, rigid gantry axes and axes with servo-electric linear drive – the SCHUNK product range offers linear technology for high-speed automated assembly. Compact and designed as a modular system.



Robot Accessories

Robot accessories from SCHUNK – the complete range of modules for perfect interplay between the robot arm and the tool. Suitable for all types of robot, it is also an ideal enhancement to flexible robot applications.



Rotary Modules

**Rotary and swivel modules from SCHUNK –
Cutting edge technology for rotational movements**

With its rotary modules, SCHUNK offers a complete range of rotary and swivel units for all handling tasks and for simple and fast integration. Internal media feed-through guarantees process security and minimizes interference contours. Different sensor styles and many mounting possibilities in all modules increase the flexibility of the system design. The prerequisite for this leading "Made in Germany" quality is our continuous innovative spirit.

SCHUNK offers more. More willingness to take up challenges and make ideas a reality, more commitment to investment in innovative technologies, more flexibility to provide solutions for the tasks of a rapidly developing future. This is what we stand for.

For the benefit of our customers.

Good reasons for choosing rotary modules from SCHUNK:

- Short swivel times
- Continuously adjustable end positions
- Lockable intermediate position
- Easy and fast integration
- Pneumatic or electric



Product highlight: SRU Flat Rotary Actuator

Awarded for technology and design

Thanks to the finely graduated sizes with different torques and the modular system with numerous options the units can be ideally adapted to your specific needs for a large variety of applications. Due to its unique design and the outstanding overall impression the SRU flat rotary actuator won the 2004 iF design award.

Facts that cannot fail to convince:

- Pistons guided in guide sleeves
- End position adjustable from 0° to 183°
- Hydraulic end position and middle position dampin



Pneumatic Rotary Modules

Pneumatic · Rotary Actuators



ROTARY ACTUATORS

Series	Size	Page
Rotors		
SFL		16
SFL	25	22
SFL	40	26
SFL	64	30
Miniature Rotary Actuators		
MRU		34
MRU	8	40
MRU	10	44
MRU	12	48
MRU	14	52
Universal Rotary Actuators		
SRU		56
SRU	20	64
SRU	25	76
SRU	35	88
SRU	40	100
SRU	50	112
SRU	60	124
SRU	63	136

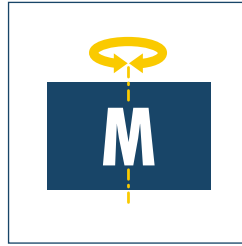




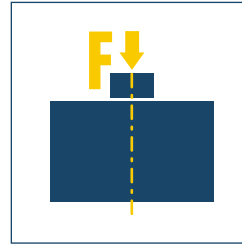
Sizes
25 .. 64



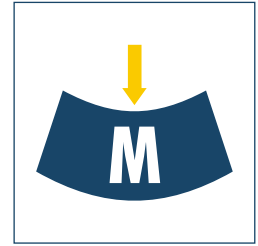
Weight
0.09 .. 0.71 kg



Torque
0.12 Nm .. 3.9 Nm

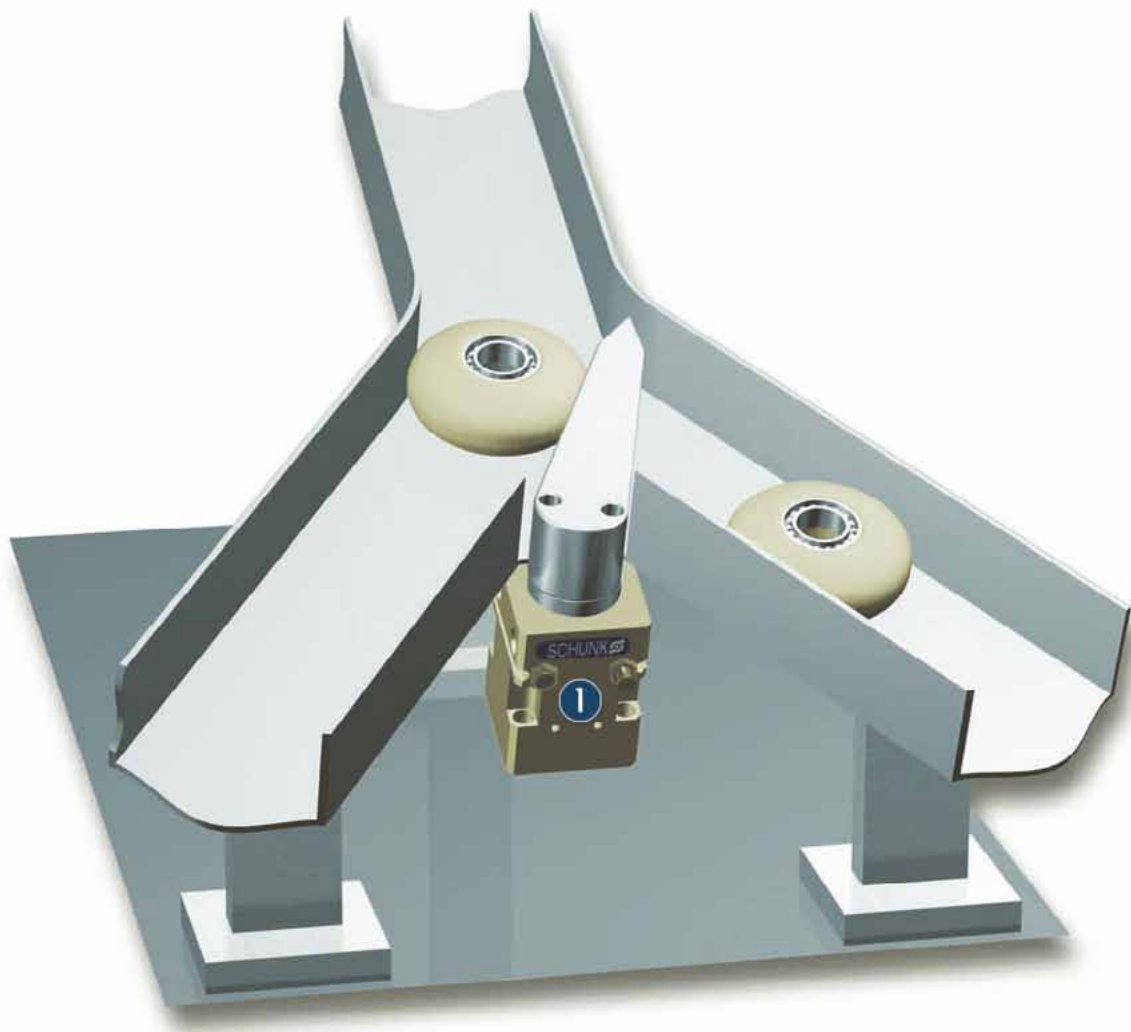


Axial force
10 .. 50 N



Bending moment
0.1 .. 0.5 Nm

Application example



Sorting unit with SFL rotor to drive the separator switch

1 Rotor SFL 40

Rotor

with high torque for light swiveling jobs up to 180°

Area of application

The ideal solution for light swiveling jobs

Your advantages and benefits

Extremely compact design

Several modules can be mounted next to one another thanks to the approximately cubic structure

Flexible adjustment of the angle of traverse from 0 - 180°

making the unit suitable for a varied range of applications

Fine adjustment of angle of rotation

for precision adjustment of the end positions

Powerful

as the version with hydraulic shock absorbers enables it to work with even greater weights and inertia.

Long life and excellent smooth-running characteristics

due to the machined bearing surfaces



Information about the series

Working principle

Rotor

Housing material

Aluminum alloy, hard-anodized

Base jaw material

Steel

Actuation

Pneumatic, with filtered compressed air (10 µm): Dry, lubricated or non-lubricated
Pressure medium: Required quality class of compressed air according to DIN ISO 8573-1: Quality class 4

Warranty

24 months

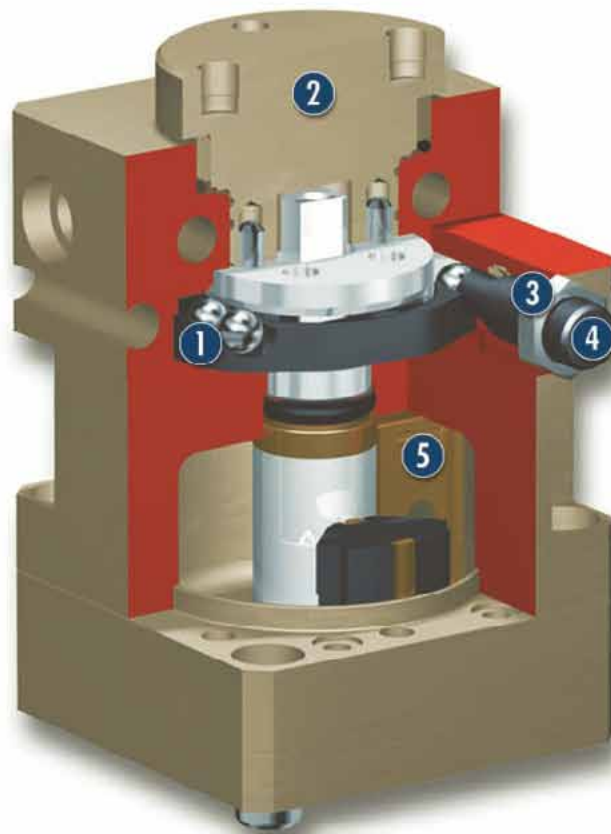
Maintenance

Maintenance-free up to 2 million traverses

Scope of delivery

Guide sleeves, centering pins, O-rings for direct connection, mounting screws for attachment to the side, assembly and operating manual with manufacturer's declaration

Sectional diagram



- 1 Preset angle of rotation**
using steel balls for any desired angle of rotation
- 2 Rotary table**
for mounting the attachment
- 3 Fine adjustment of angle of rotation**
for precision adjustment of the end positions
- 4 End position damping**
with elastomer or hydraulic shock absorbers
- 5 Rotor**
as a compact, powerful drive

Function description

The unit is driven pneumatically on the basis of the rotor principle. Using the direct connection, the entire module can be supplied via a central connection on the base.

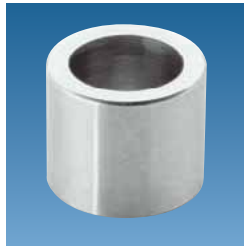
Options and special information

Thanks to the innovative end stop concept, the end positions of the SFL rotor can be adjusted infinitely as desired in a range from 0° to 180°.

Accessories

Accessories from SCHUNK — the suitable complement for the highest level of functionality, reliability and controlled production of all automation components.

Centering sleeves



Fittings



MMS magnetic switches



W/WK/KV/GK sensor cables



V sensor distributors



SDV-P pressure maintenance valves



① For the exact size of the required accessories, availability of this size and the designation and ID, please refer to the additional views at the end of the size in question. You will find more detailed information on our accessory range in the „Accessories“ catalog section.

General information on the series

Repeat accuracy

Repeat accuracy is defined as the spread of the limit position after 100 consecutive swiveling cycles.

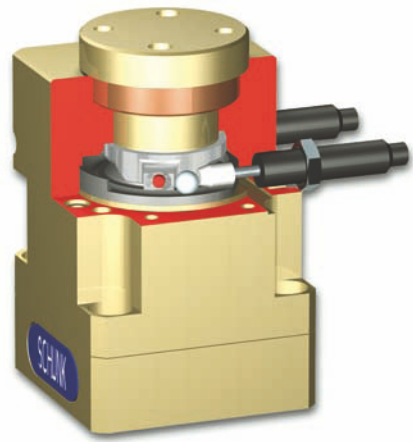
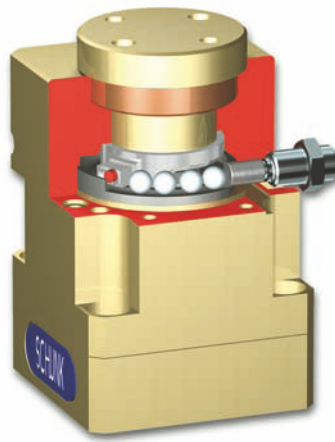
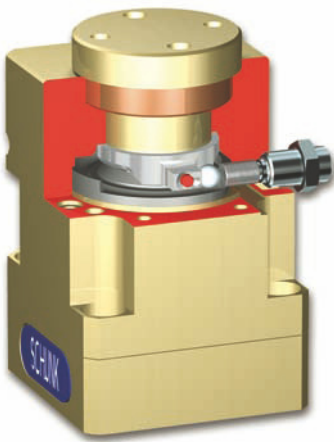
Flange position

The position of the output flange is always shown in the drawing in the left-hand end position. From here, it rotates clockwise. The direction of rotation is indicated by the arrow.

Cycle time

Cycle times are purely the times taken by the pinion/flange to turn round the nominal angle of rotation. Valve switching times, hose filling times or SPC reaction times are not included in the above times and must be taken into consideration when determining cycle times.

Damping and setting of rotating angle



End position rough adjustment via number of steel balls
End position fine adjustment via thread of end stop
Damping via elastomer

End position rough adjustment via number of steel balls
End position fine adjustment via thread of shock absorbers
Damping via hydraulic shock absorbers

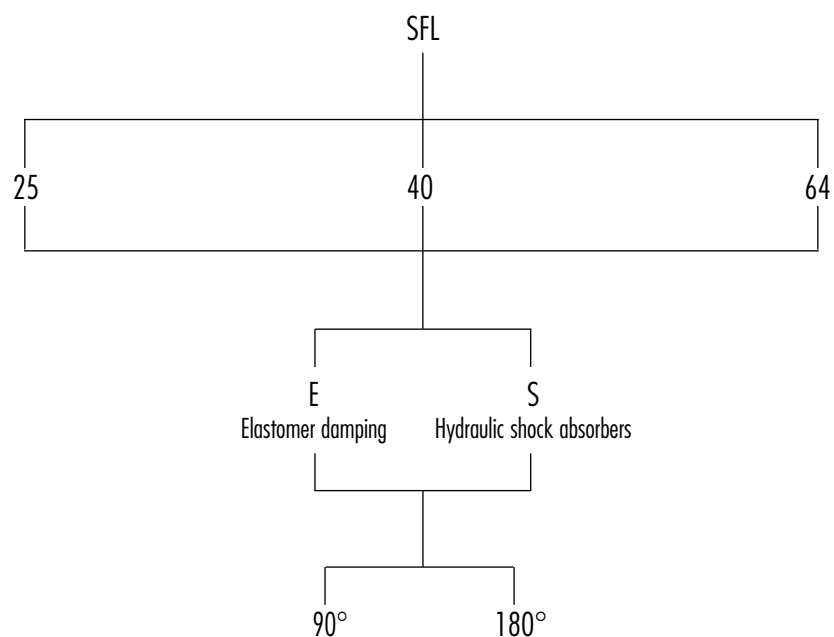
Versions of the series

Description

Size

End position damping

Swivel angle range



How to order

SFL 25 - E - 090

90° / 180°

Swivel angle range

E = with Elastomer damping
S = with shock absorbers

End position damping

25 / 40 / 64

Size

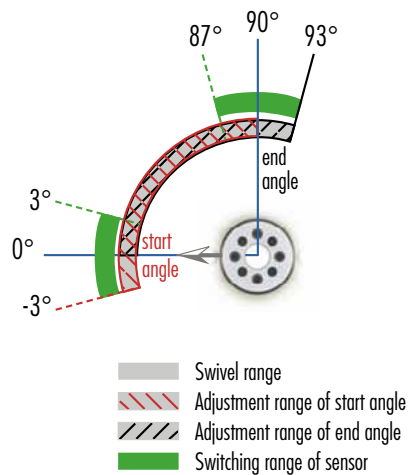
Rotor drive

Description

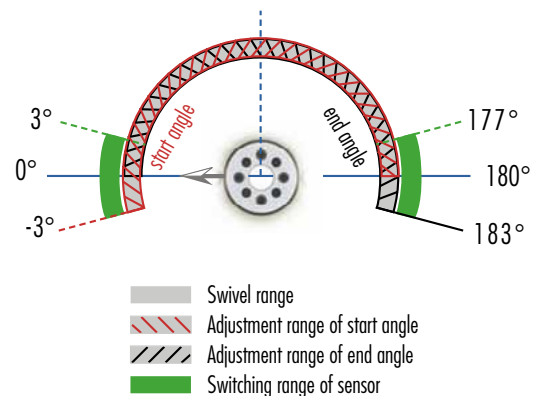


End stop adjustability and switching angle of sensor

- in case of 90°-units

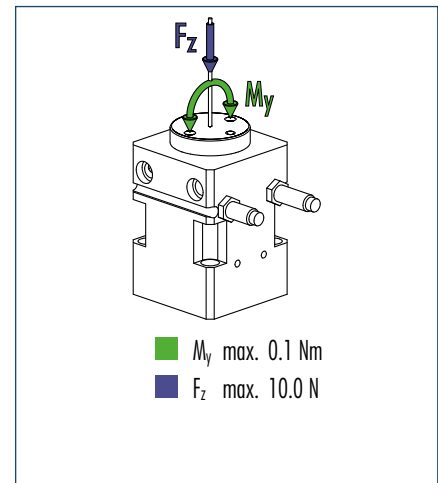


- in case of 180°-units





Flange load



① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		SFL-25-E-090	SFL-25-E-180
	ID	0304560	0304060
Torque	[Nm]	0.1	0.1
Rotating angle	[°]	90.0	180.0
Adjustability of end positions	[°]	90.0	180.0
End position damping		Elastomer clamping	Elastomer clamping
IP class		52	52
Weight	[kg]	0.09	0.09
Cycle time (1 x nominal angle of rotation) without attached load	[s]	0.06	0.1
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	2.0	3.0
Nominal pressure	[bar]	6.0	6.0
Minimum pressure	[bar]	4.0	4.0
Maximum pressure	[bar]	6.5	6.5
Diameter of connecting hose	[mm]	3.0	3.0
Min. ambient temperature	[°C]	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0
Repeat accuracy	[°]	0.05	0.05

① The rotary movement can only be monitored at angles of rotation between 0° and 90° or 0° and 180°, angles between these cannot be monitored.

[illegible]

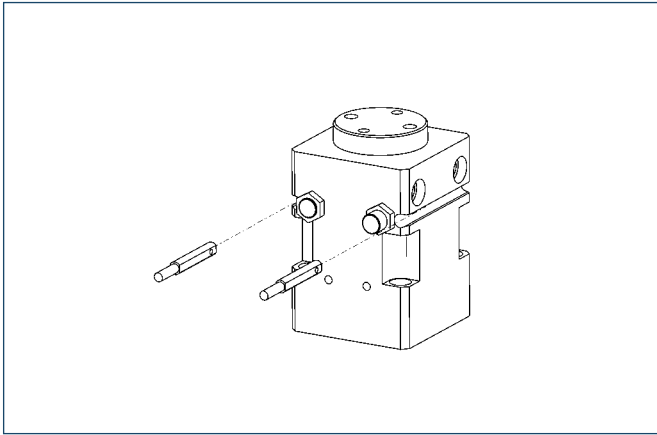
- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Linear unit connection
- ② Attachment connection
- 90 Sensorprojection of housing

Technical drawing of a mechanical part with dimensions and callouts:

- Overall width: $\varnothing 3.5$
- Overall height: $\varnothing 2$
- Internal hole diameter: $\varnothing 2.5 \times 0.5$
- Internal hole depth: $M 2.5$
- Internal hole length: 0.35
- Callout 4: Points to the internal hole.
- Callout 3: Points to the internal hole.

- The direction connection is used for supplying compressed air without hoses, which are liable to faults. Instead, the pressure medium is conveyed through the bore-holes of the mounting plate.

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each rotor, plus extension cables as an option.

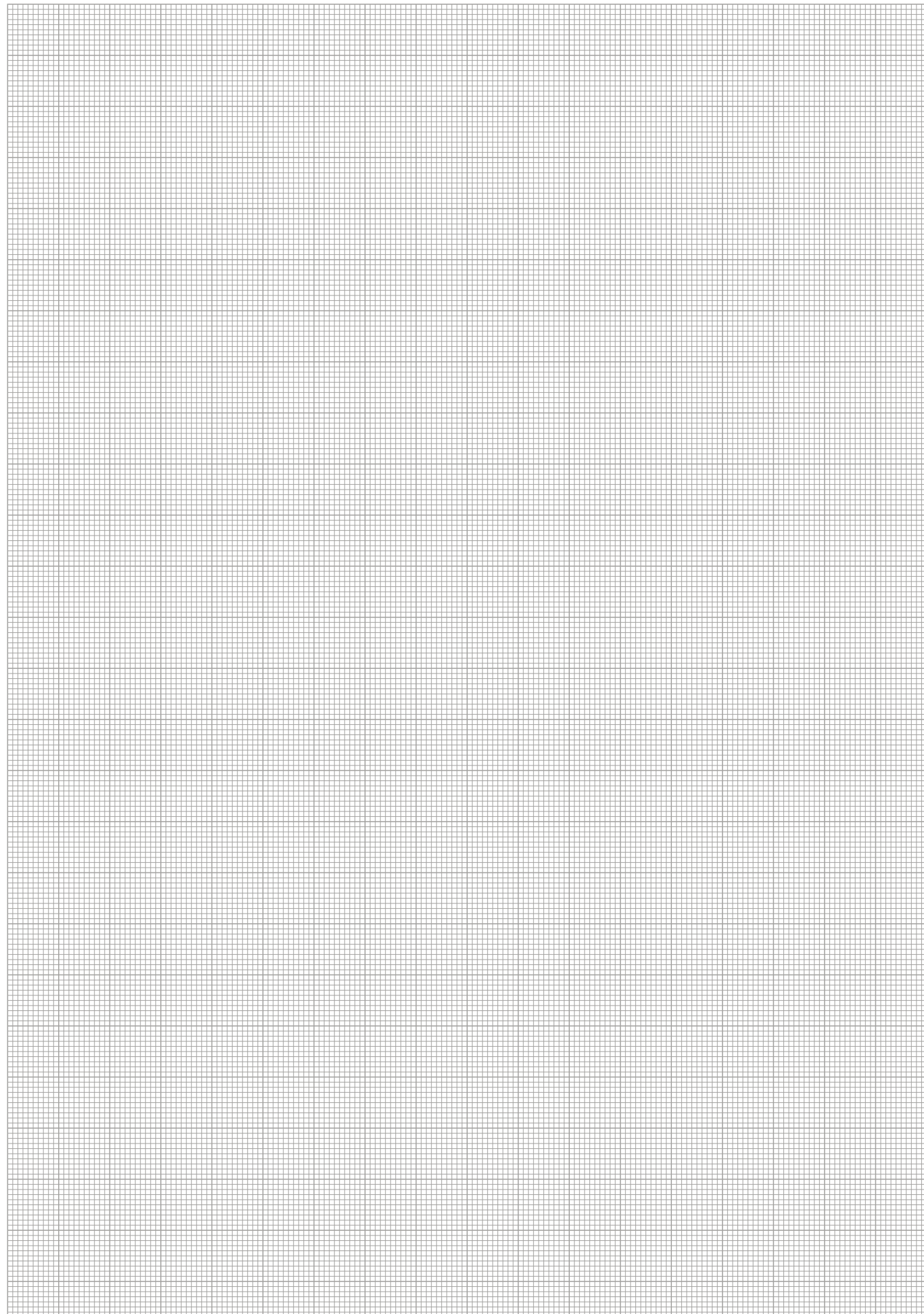
Extension cables for proximity switches/magnetic switches

Description	ID
GK 3-M8	0301622
KV 10-M8	0301496
KV 20-M8	0301497
WK 3-M8	0301594
WK 3-M8 NPN	0301602
WK 5-M8	0301502
WK 5-M8 NPN	9641116

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

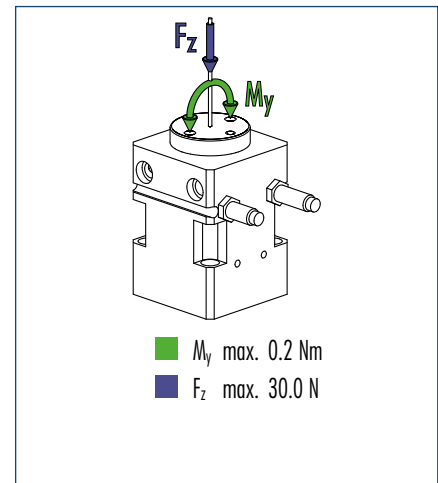


You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.





Flange load



① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		SFL-40-E-090	SFL-40-E-180	SFL-40-S-090	SFL-40-S-180
	ID	0304564	0304064	0304565	0304065
Torque	[Nm]	0.5	0.5	0.5	0.5
Rotating angle	[°]	90.0	180.0	90.0	180.0
Adjustability of end positions	[°]	90.0	180.0	90.0	180.0
End position damping		Elastomer clamping	Elastomer clamping	hydr. shock absorbers	hydr. shock absorbers
IP class		52	52	52	52
Weight	[kg]	0.24	0.24	0.24	0.24
Cycle time (1 x nominal angle of rotation) without attached load	[s]	0.07	0.12	0.07	0.12
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	9.0	15.0	9.0	15.0
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	2.5	2.5	3.0	3.0
Maximum pressure	[bar]	6.5	6.5	6.5	6.5
Diameter of connecting hose	[mm]	3.0	3.0	3.0	3.0
Min. ambient temperature	[°C]	-10.0	-10.0	5.0	5.0
Max. ambient temperature	[°C]	90.0	90.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

① The rotary movement can only be monitored at angles of rotation between 0° and 90° or 0° and 180°, angles between these cannot be monitored.

Technical drawing of a 4-way valve assembly, showing six views with dimensions and part specifications.

Front View (Top Left): Shows the main body with dimensions: 55.5 (35.2) total height, 17.7 (13.5) distance between top ports, 20.3 distance between bottom ports, and 6.5 base thickness. Port diameters are $\varnothing 6$ (2x) and $\varnothing 28_{-0.05}^0$. Fasteners include M3/4, M4 (4x), and 8 (4x). A 2.5 (2x) dimension is shown at the bottom.

Top View (Bottom Left): Shows the top face with dimensions: 40 (31±0.02) width, 40 (31±0.02) depth, 16 (8.5) distance from center to side ports, and 23.9 (16) distance between side ports. It includes M3 (2x) fasteners and a 0° angle.

Side View (Top Middle): Shows the side profile with dimensions: 25±0.02 width, 6.3 distance from top to side port, 39.7 (2x) and 46.7 (6x) heights, and a 6-G fastener.

Isometric View (Top Right): Shows the 3D assembly with dimensions: 25±0.02 width, 18.5 (2x) distance from center to side port, 39.7 (2x) height, and a 90° angle. It includes a 1 (2x) fastener and a $\varnothing 4.1$ (2x) MMS 22 hole.

Isometric View (Bottom Middle): Shows the 3D assembly with dimensions: 2.5 (6x) and 19 (6x) distances, and a 5-G fastener.

Isometric View (Bottom Right): Shows the 3D assembly with dimensions: 20±0.02 width, 20 distance from center to side port, and a 0° angle. It includes M4/6 (2x) fasteners and a 20 distance from center to side port.

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Linear unit connection
- ② Attachment connection
- 90 Sensorprojection of housing

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

Technical drawing of a mechanical part, likely a cross-section of a shaft or hub. The drawing includes the following dimensions and callouts:

- Ø4.5**: Dimension for the outer diameter of the left section.
- M3**: Dimension for the thread of the central hole.
- Ø2.5**: Dimension for the outer diameter of the right section.
- Ø2.5x1**: Dimension for the diameter and length of the central hole.
- 0.65**: Dimension for the thickness of the central section.
- 3**: Callout for the central section.
- 4**: Callout for the left section.

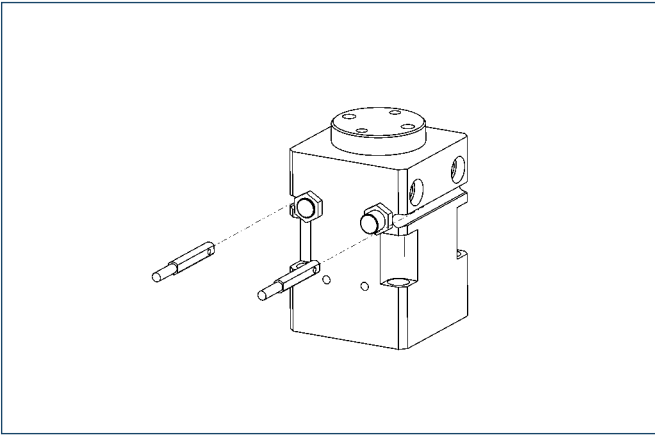
- ③ Adapter
④ Gripper swivel module

The direction connection is used for supplying compressed air without hoses, which are liable to faults. Instead, the pressure medium is conveyed through the bore-holes of the mounting plate.

Technical drawing of the 1000 Series 2-Port RJ45 Patch Panel. The drawing includes two views: a front view (left) and a side view (right). The front view shows a rectangular panel with two RJ45 ports on the left and two RJ45 ports on the right. The side view shows the panel's profile with a height dimension of 39.7 (2x) and a width dimension of 19.5. The front view dimensions are: overall width 23.9, overall height <23.5, and a central horizontal slot width of 19.5.

Different dimensions in the shock absorber version

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each rotor, plus extension cables as an option.

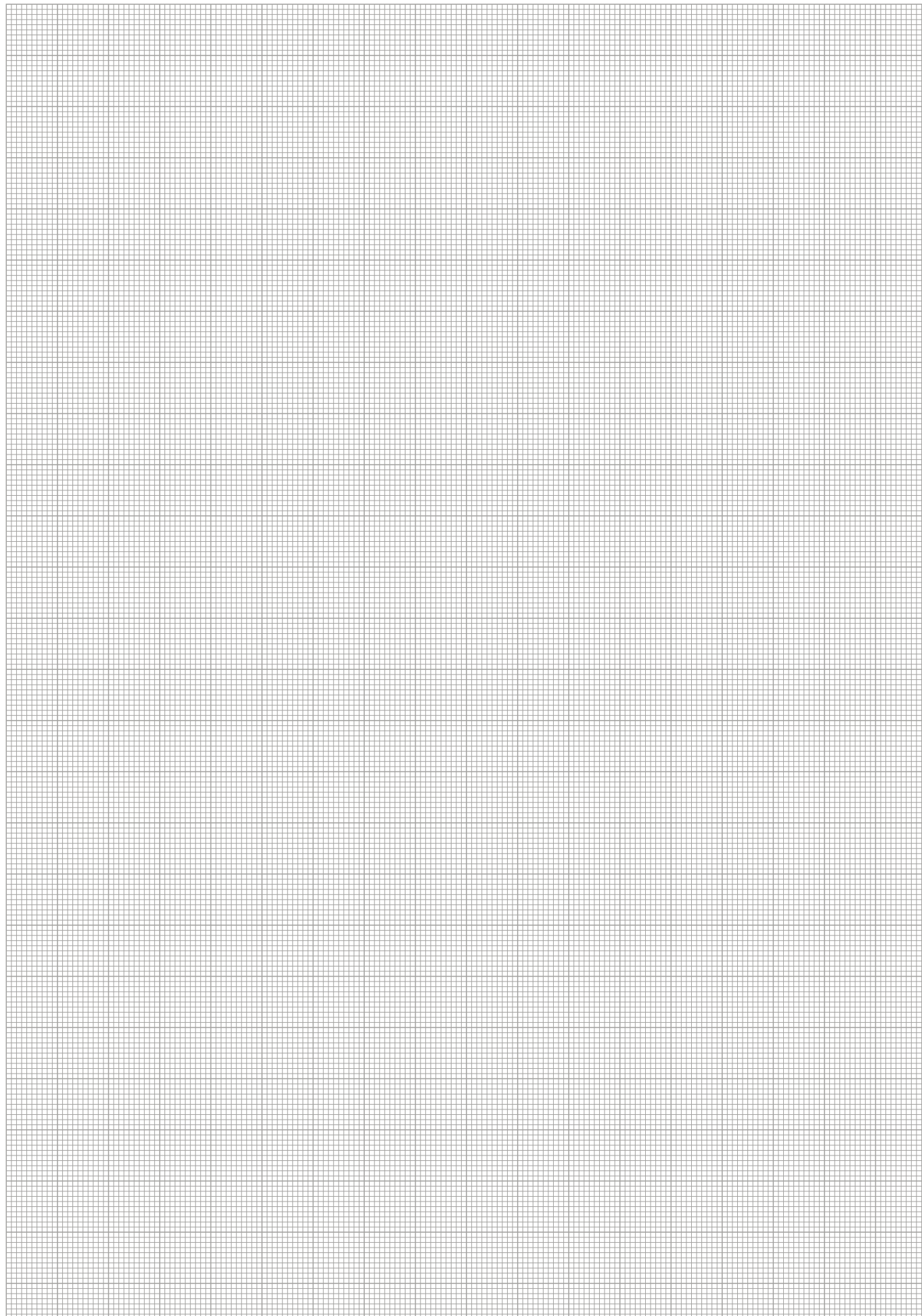
Extension cables for proximity switches/magnetic switches

Description	ID
GK 3-M8	0301622
KV 10-M8	0301496
KV 20-M8	0301497
WK 3-M8	0301594
WK 3-M8 NPN	0301602
WK 5-M8	0301502
WK 5-M8 NPN	9641116

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

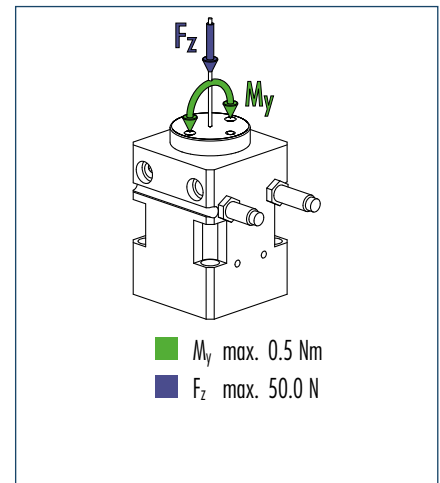


You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.





Pinion load



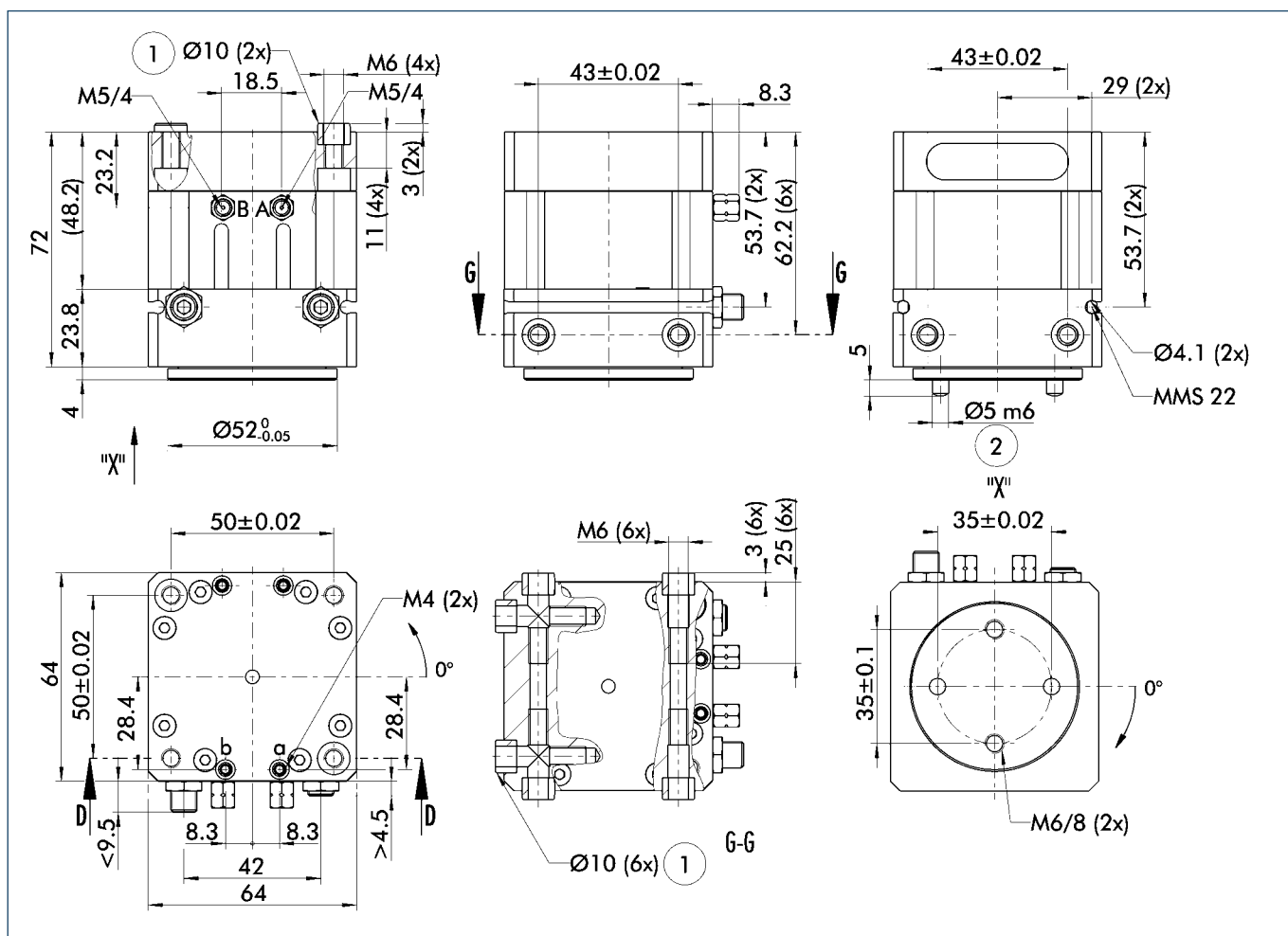
① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		SFL-64-E-090	SFL-64-E-180	SFL-64-S-090	SFL-64-S-180
	ID	0304568	0304068	0304569	0304069
Torque	[Nm]	3.6	3.6	3.6	3.6
Rotating angle	[°]	90.0	180.0	90.0	180.0
Adjustability of end positions	[°]	90.0	180.0	90.0	180.0
End position damping		Elastomer clamping	Elastomer clamping	hydr. shock absorbers	hydr. shock absorbers
IP class		52	52	52	52
Weight	[kg]	0.71	0.71	0.71	0.71
Cycle time (1 x nominal angle of rotation) without attached load	[s]	0.11	0.18	0.11	0.18
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	51.0	85.0	51.0	85.0
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	2.0	2.0	2.0	2.0
Maximum pressure	[bar]	6.5	6.5	6.5	6.5
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Min. ambient temperature	[°C]	-10.0	-10.0	5.0	5.0
Max. ambient temperature	[°C]	90.0	90.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

① The rotary movement can only be monitored at angles of rotation between 0° and 90° or 0° and 180°, angles between these cannot be monitored.

Main views

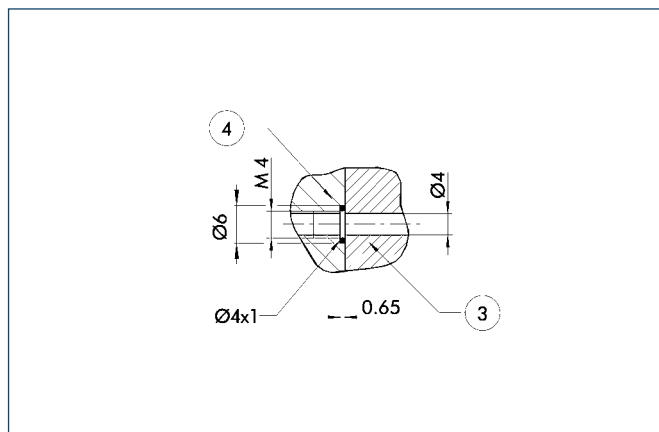


The drawing shows the rotor in the basic version with elastomer damping

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Linear unit connection
- ② Attachment connection

① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

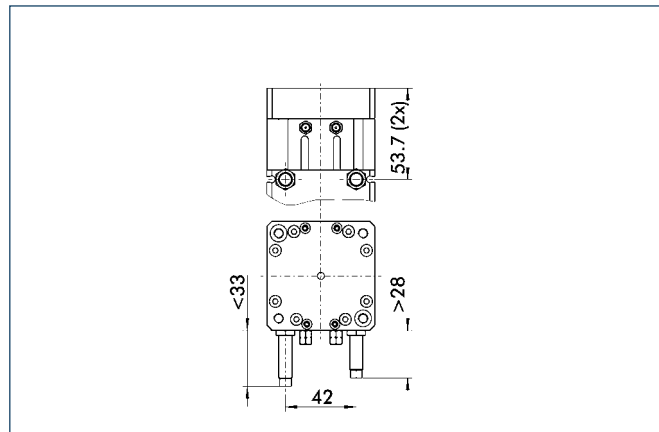
Hose-free direct connection



- ③ Adapter
- ④ Gripper swivel module

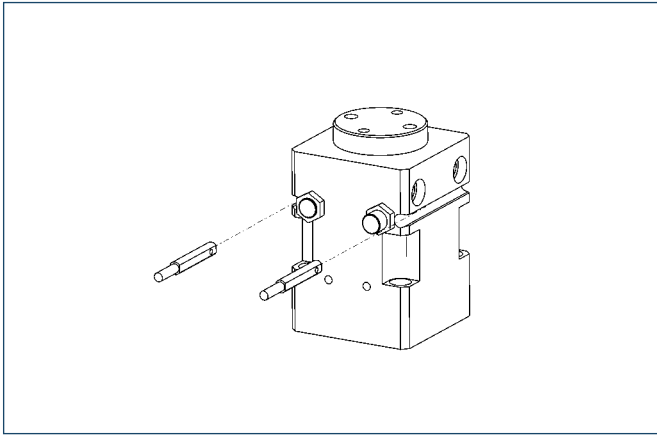
The direction connection is used for supplying compressed air without hoses, which are liable to faults. Instead, the pressure medium is conveyed through the bore-holes of the mounting plate.

Shock absorber version



Different dimensions in the shock absorber version

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each rotor, plus extension cables as an option.

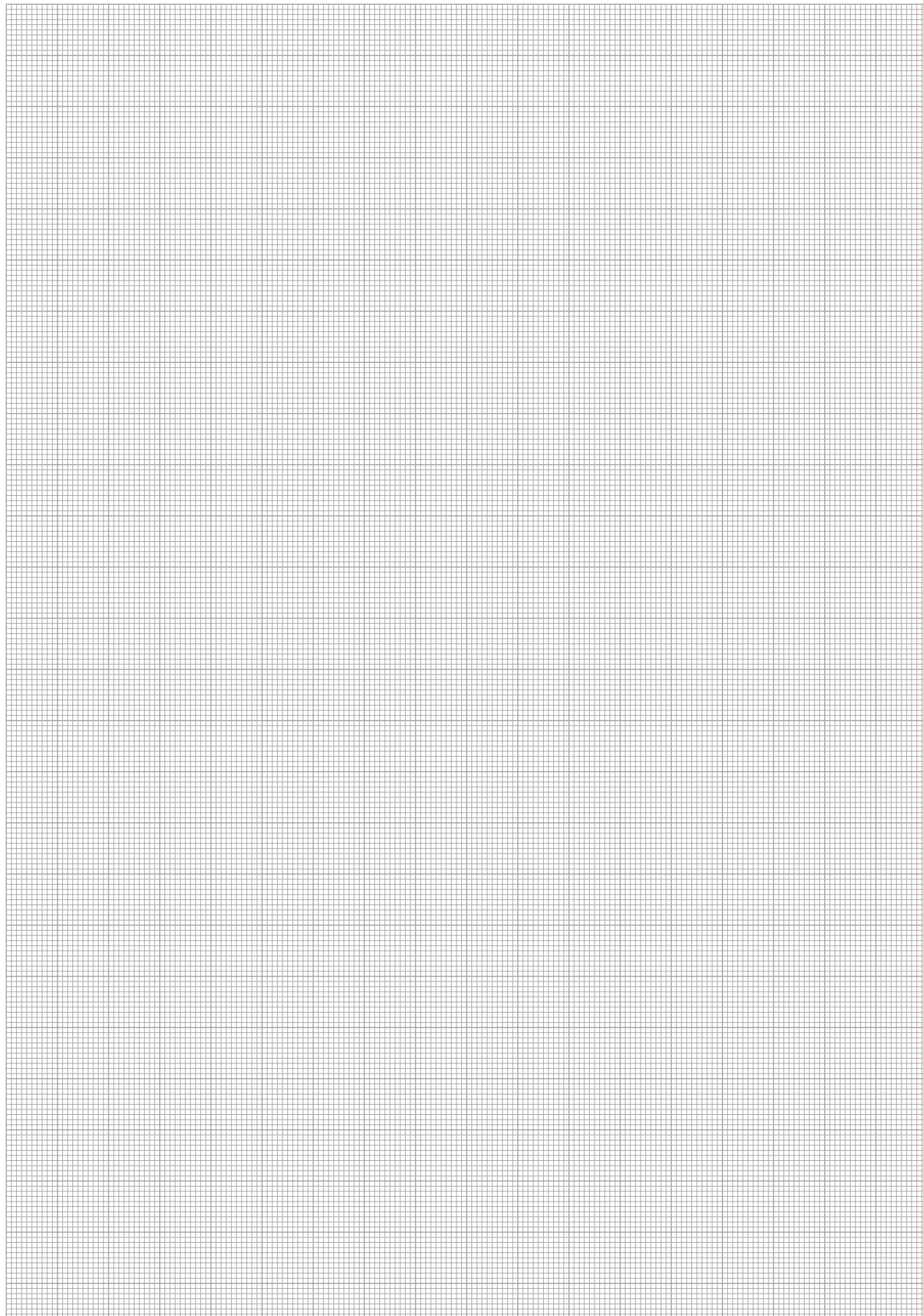
Extension cables for proximity switches/magnetic switches

Description	ID
GK 3-M8	0301622
KV 10-M8	0301496
KV 20-M8	0301497
WK 3-M8	0301594
WK 3-M8 NPN	0301602
WK 5-M8	0301502
WK 5-M8 NPN	9641116

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

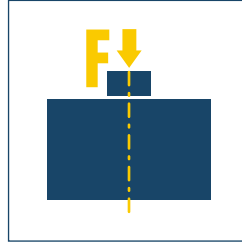




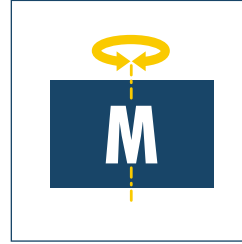
Sizes
8 .. 14



Weight
0.155 kg .. 0.485 kg



Axial force
280 N .. 330 N



Torque
0.09 Nm .. 1.15 Nm



Bending moment
1.9 Nm .. 3.4 Nm

Application example



Miniature rotary gripping combination for the rapid handling of small components.

1 MRU 8.1-E-2 Rotary Actuator

2 MPG 32 2-Finger Parallel Gripper

Miniature Flat Rotary Actuator

Light, fast, flat rotary unit with numerous options such as flange/PTO shaft, fluid feed-through and more.

Area of application

For use in clean environmental conditions such as assembly or packaging zones and for rapid motion cycles

Your advantages and benefits

Clearly graded series with uniform torque growth

so that for many applications, the correct size is available as a standard product

Always with highly adjustable end positions

for the flexible adjustment of the angle of traverse

Drive with flange shaft or PTO shaft

for easy connection

Fluid feed-through can be used for gases, fluids and vacuum

dispensing with troublesome hoses

End positions free from play

for greater accuracy

Upwards continuation of the series

with the SRU series, ensuring suitability for a broad range of applications



Information about the series

Actuation

Pneumatic, with filtered compressed air (10 µm): Dry, lubricated or non-lubricated
Pressure medium: Required quality class of compressed air according to DIN ISO 8573-1: Quality class 4

Piston and pinion material

Hardened steel (16 MnCr 5)

Housing material

Aluminum press-drawn section

Working principle

Double pinion rack and pinion system

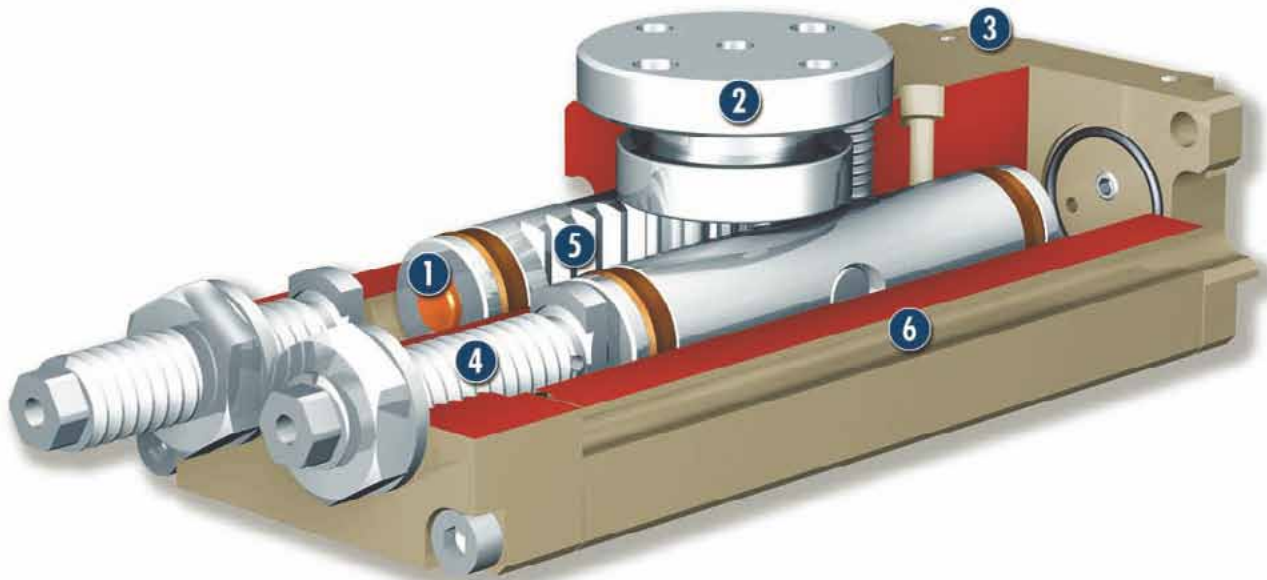
Warranty

24 months

Scope of delivery

Flow control couplings, guide sleeves, O-ring for direct connection, assembly and operating manual with manufacturer's declaration

Sectional diagram



- 1 Damping**
integrated damping with elastomer
- 2 Bearing arrangement**
high-precision bearing arrangement through the use of high-quality rolling-contact bearings
- 3 Housing**
weight-reduced through the use of a hard-anodized, high-strength aluminum alloy
- 4 End position**
for a flexible end position
- 5 Kinematics**
rack and pinion principle for transforming the drive force into the rotary movement with little play
- 6 Monitoring**
position monitoring via solenoid switches

Function description

When subjected to pressure, the two pneumatic pistons move their end faces in a straight line in their bores, turning the pinion by means of the serrations on their sides.

Options and special information

Specialized angles of traverse and swivel ranges are also available on request.

Accessories

Accessories from SCHUNK – the suitable complement for the highest level of functionality, reliability and controlled production of all automation components.

Centering sleeves



Fittings



MMS magnetic switches



W/WK/KV/GK sensor cables



V sensor distributors



SDV-P pressure maintenance valves



① For the exact size of the required accessories, availability of this size and the designation and ID, please refer to the additional views at the end of the size in question. You will find more detailed information on our accessory range in the „Accessories“ catalog section.

General information on the series

Repeat accuracy

Repeat accuracy is defined as the spread of the limit position after 100 consecutive swiveling cycles.

Pinion position

The position of the pinion is always shown in the drawing in the left-hand end position. From here, the pinion rotates clockwise. The direction of rotation is indicated by the arrow.

Pinion screw connection diagram

Please note that if you wish to set the angle of traverse to less than 90°, the left-hand end stop must generally be screwed in completely. In this way, the screw connection diagram of the left-hand end stop is rotated clockwise by 90° in relation to the drawing, which shows the situation with an angle of traverse of 180°.

Special angles of traverse

Special angles of traverse and swivel ranges are available on request.

Cycle time

Cycle times are purely the times taken by the pinion/flange to turn round the nominal angle of rotation. Valve switching times, hose filling times or SPC reaction times are not included in the above times and must be taken into consideration when determining cycle times.

Layout or checking calculation

For deciding the layout or for checking calculations of rotary modules, we recommend that you use our SSE software, available on CD or from www.schunk.com. A checking calculation of the unit you have chosen is absolutely essential, as otherwise overloading may occur.

Obtain calculation support
from our calculation program
»SSE«
Available on CD-ROM or on the
Internet at www.schunk.com

Application specific parameters
→ Torque
→ Mass moment of inertia
→ Swivel time

Size
(piston diameter)

8	10	12	14
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Actuation

Single Double

End position damping

Elastomer Hydraulic shock absorbers
(please enquire)

Fluid feed-through

Without With fluid feed-through

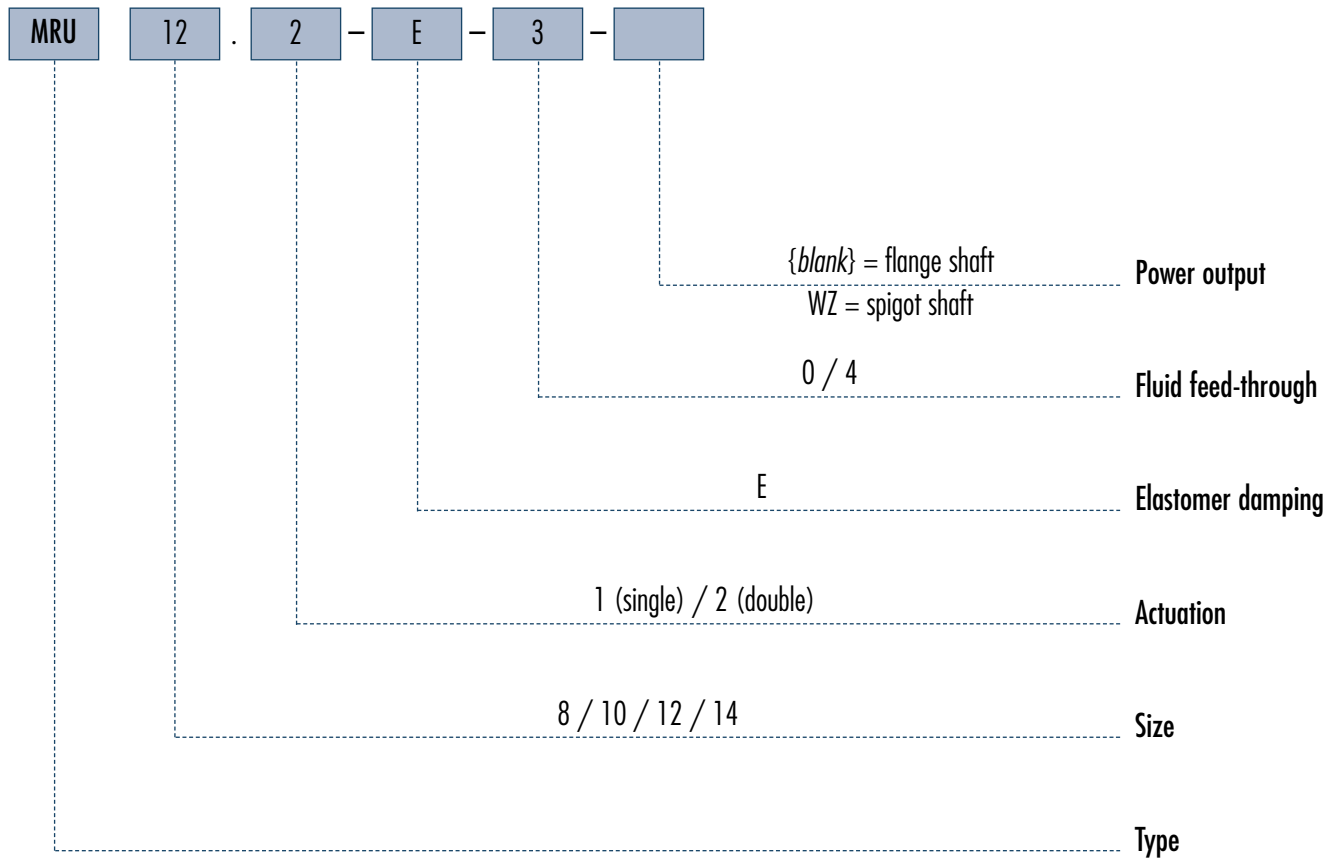
Power output

Flange shaft Shaft journal Flange shaft

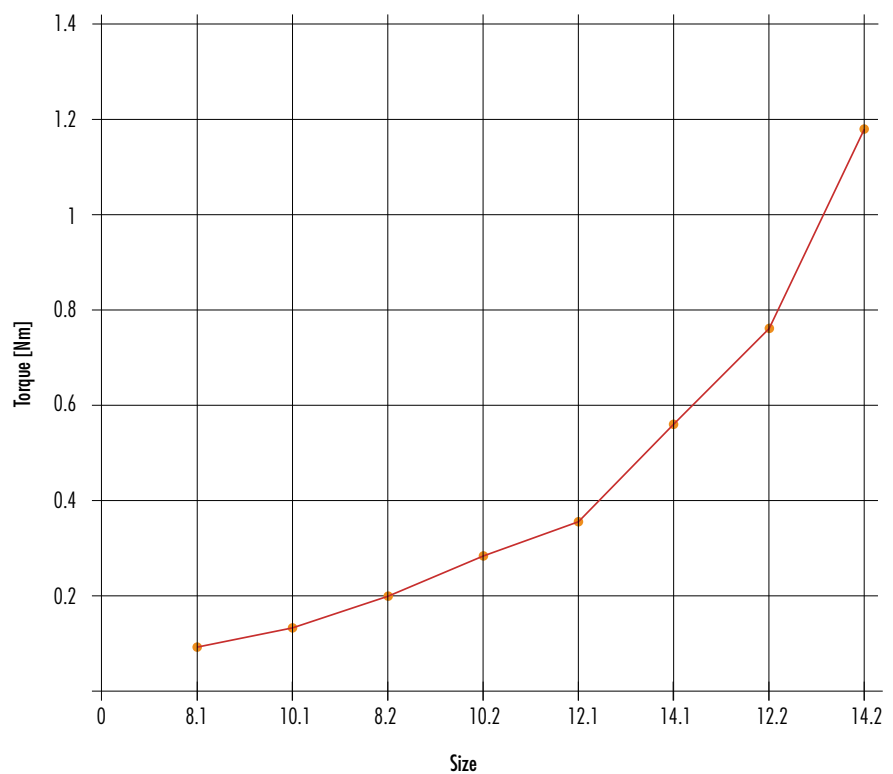
Middle position

Without Please enquire

How to order

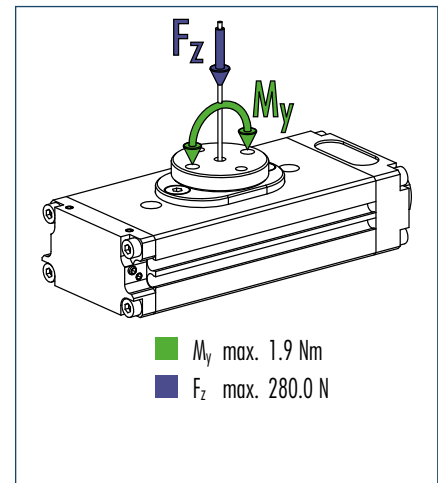


Staggered torque values





Pinion load

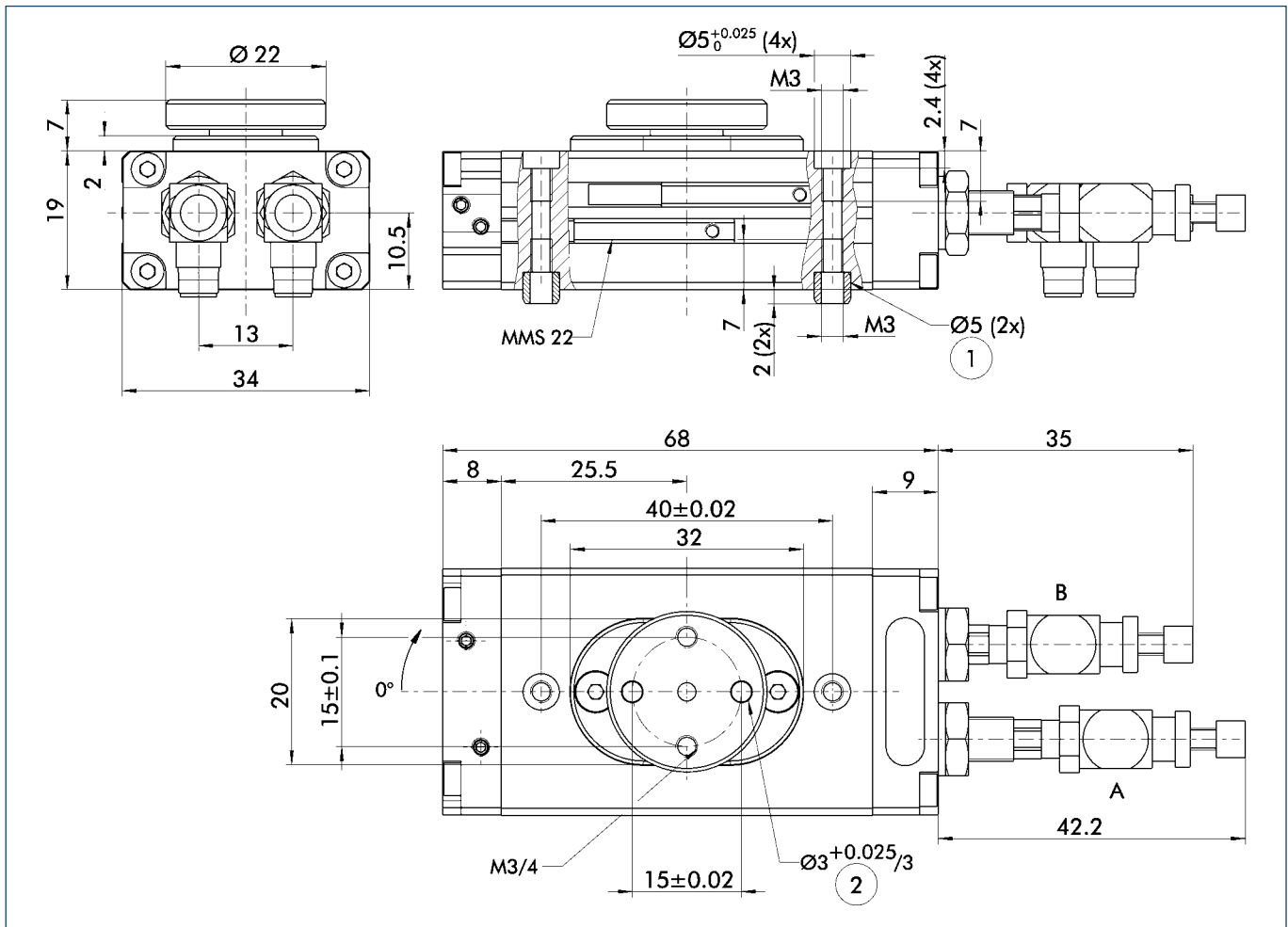


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		MRU 8.1-E-0	MRU 8.2-E-0	MRU 8.2-E-2	MRU 8.1-E-0-WZ	MRU 8.2-E-0-WZ
	ID	0357010	0357110	0357111	0357012	0357112
Torque	[Nm]	0.09	0.2	0.14	0.09	0.2
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0	90.0
No. of fluid feed-throughs		2				
IP class		65	65	65	65	65
Weight	[kg]	0.16	0.16	0.19	0.155	0.155
Cycle time (1 x nominal angle of rotation) without attached load	[s]	0.04	0.04	0.05	0.04	0.04
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	0.7	1.4	1.4	0.7	1.4
Nominal pressure	[bar]	6.0	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	4.5	4.5	4.5	4.5	4.5
Maximum pressure	[bar]	8.0	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	3.0	3.0	3.0	3.0	3.0
Max. pressure in fluid feed-through	[bar]	8.0				
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0	90.0
Repeat accuracy	[°]	0.07	0.07	0.07	0.07	0.07

Main views

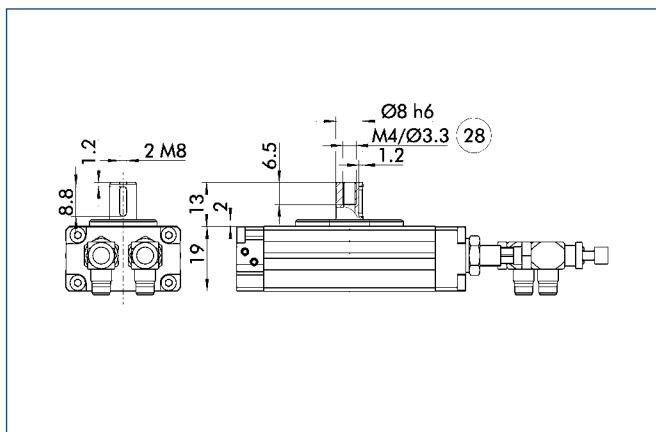


The drawing shows the unit in the basic version, the dimensions do not include the option described below.

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Rotary unit connection
- ② Attachment connection

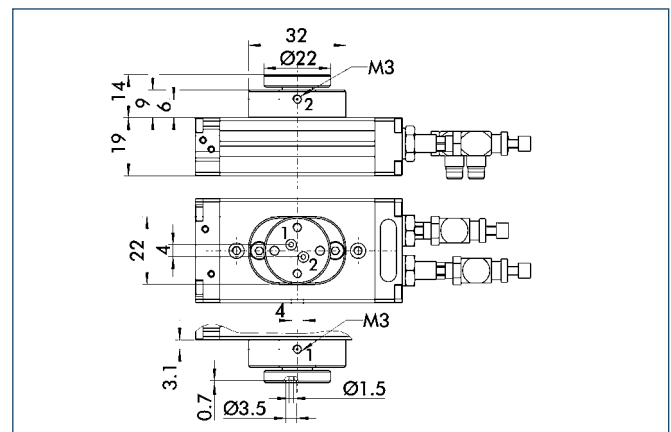
Shaft extensions



②⑧ Through-bore

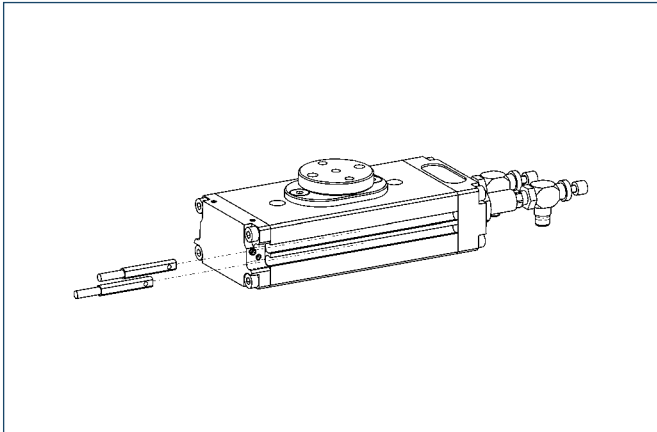
Different dimensions with the „shaft extension“ option

Fluid feed-through



The fluid feed-through enables compressed air or fluids to be conveyed without the need for external hoses.

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Each rotary unit requires the same number of sensors as the positions that are to be monitored, i.e. mostly two, plus extension cable as an option.

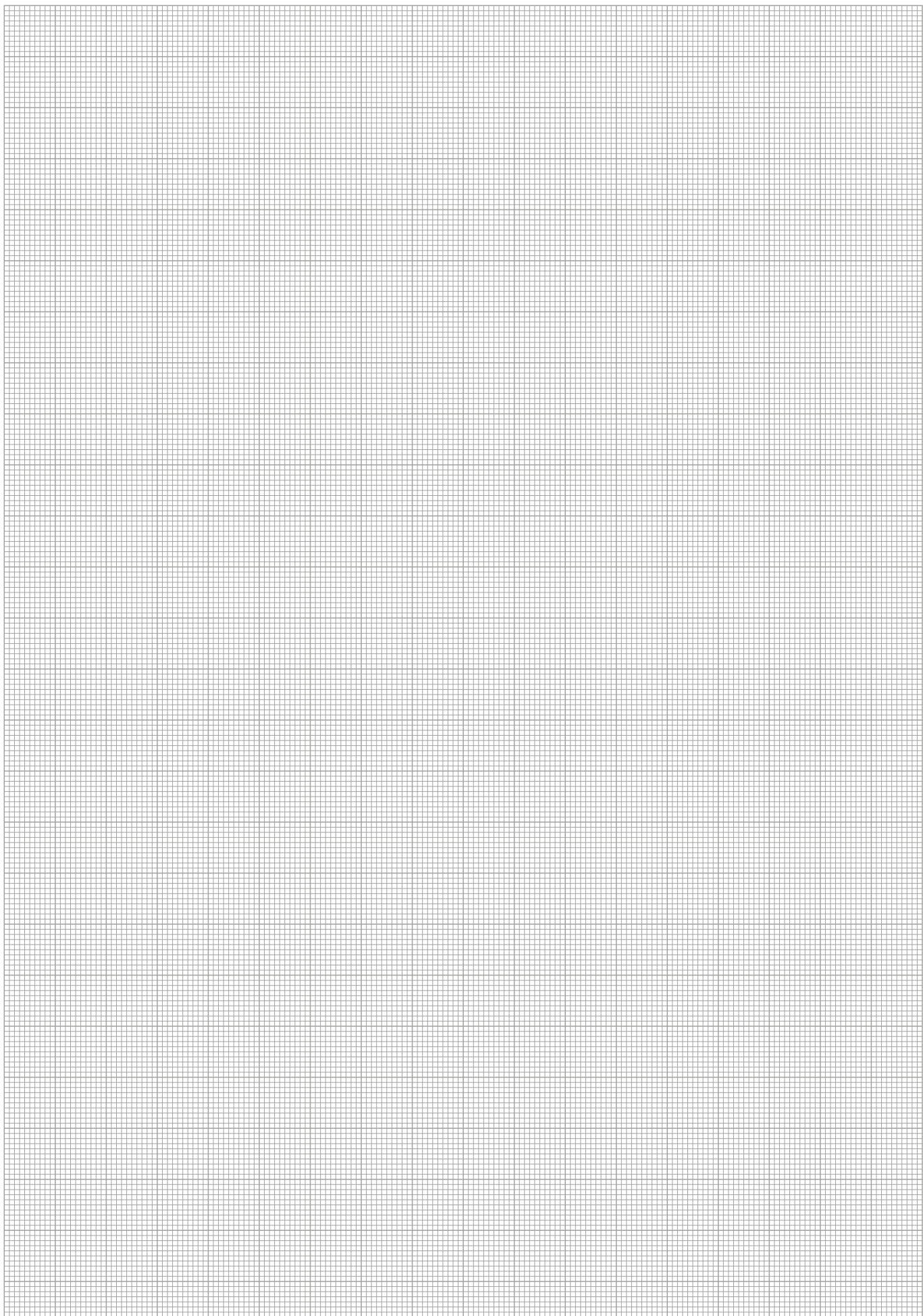
Extension cables for proximity switches/magnetic switches

Description	ID
GK 3-M8	0301622
KV 10-M8	0301496
KV 20-M8	0301497
WK 3-M8	0301594
WK 3-M8 NPN	0301602
WK 5-M8	0301502
WK 5-M8 NPN	9641116

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

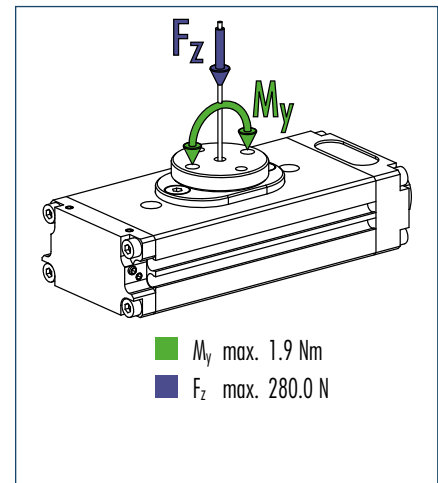


You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.





Pinion load

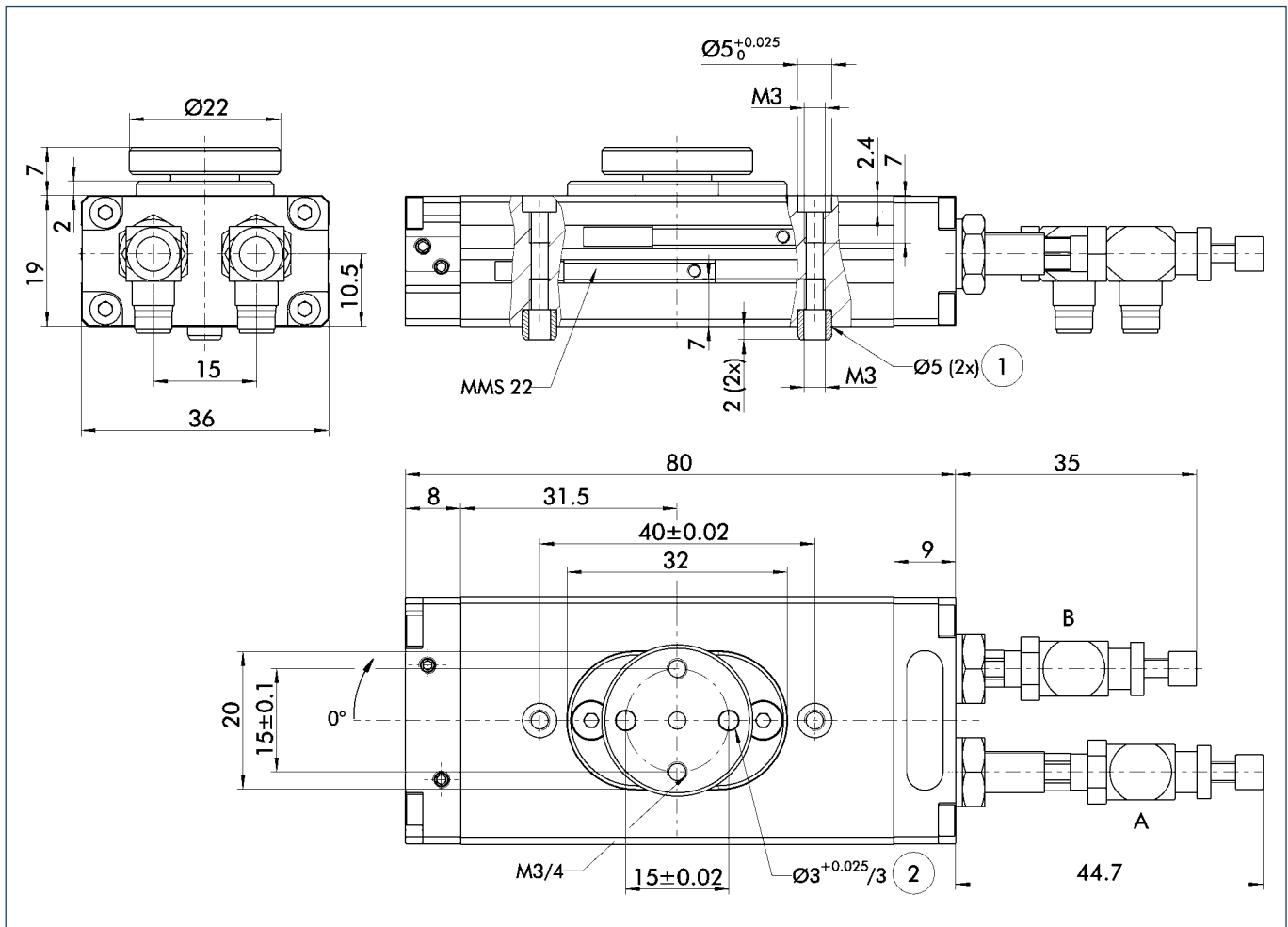


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		MRU 10.1-E-0	MRU 10.2-E-0	MRU 10.2-E-2	MRU 10.1-E-0-WZ	MRU 10.2-E-0-WZ
	ID	0357030	0357130	0357131	0357032	0357132
Torque	[Nm]	0.13	0.28	0.2	0.13	0.28
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0	90.0
No. of fluid feed-throughs		2				
IP class		65	65	65	65	65
Weight	[kg]	0.19	0.19	0.22	0.19	0.19
Cycle time (1 x nominal angle of rotation) without attached load	[s]	0.04	0.04	0.05	0.04	0.04
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	0.9	1.8	1.8	0.9	1.8
Nominal pressure	[bar]	6.0	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	4.5	4.5	4.5	4.5	4.5
Maximum pressure	[bar]	8.0	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	3.0	3.0	3.0	3.0	3.0
Max. pressure in fluid feed-through	[bar]	8.0				
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0	90.0
Repeat accuracy	[°]	0.07	0.07	0.07	0.07	0.07

Main views

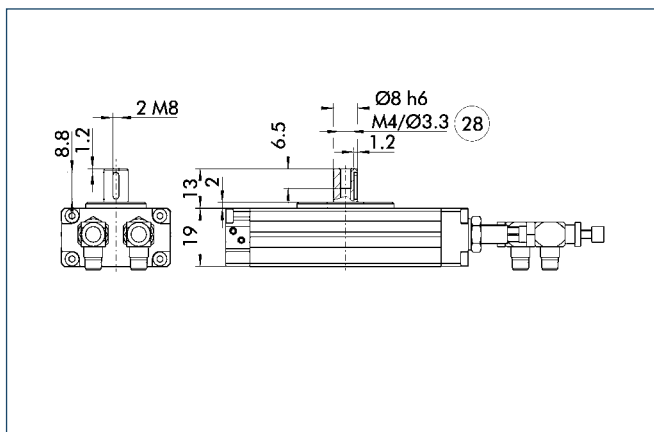


The drawing shows the unit in the basic version, the dimensions do not include the option described below.

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Rotary unit connection
- ② Attachment connection

① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

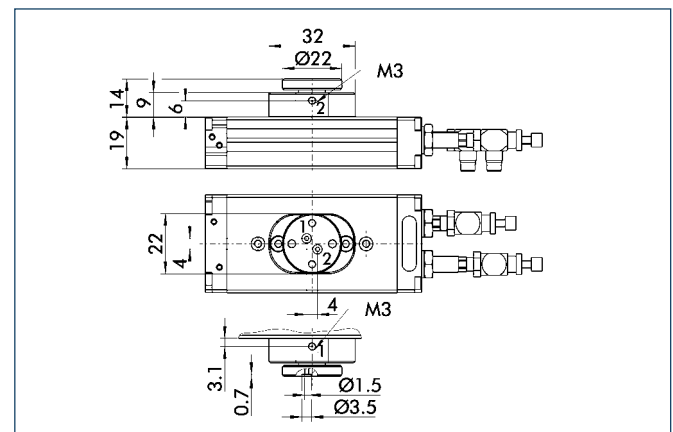
Shaft extensions



②⑧ Through-bore

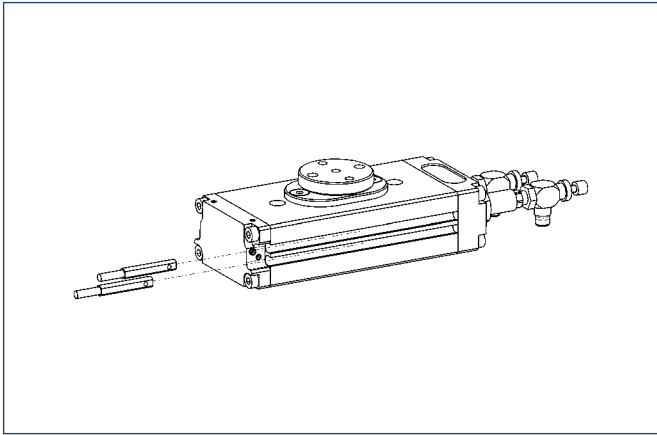
Different dimensions with the „shaft extension“ option

Fluid feed-through



The fluid feed-through enables compressed air or fluids to be conveyed without the need for external hoses.

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
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MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
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① Each rotary unit requires the same number of sensors as the positions that are to be monitored, i.e. mostly two, plus extension cable as an option.

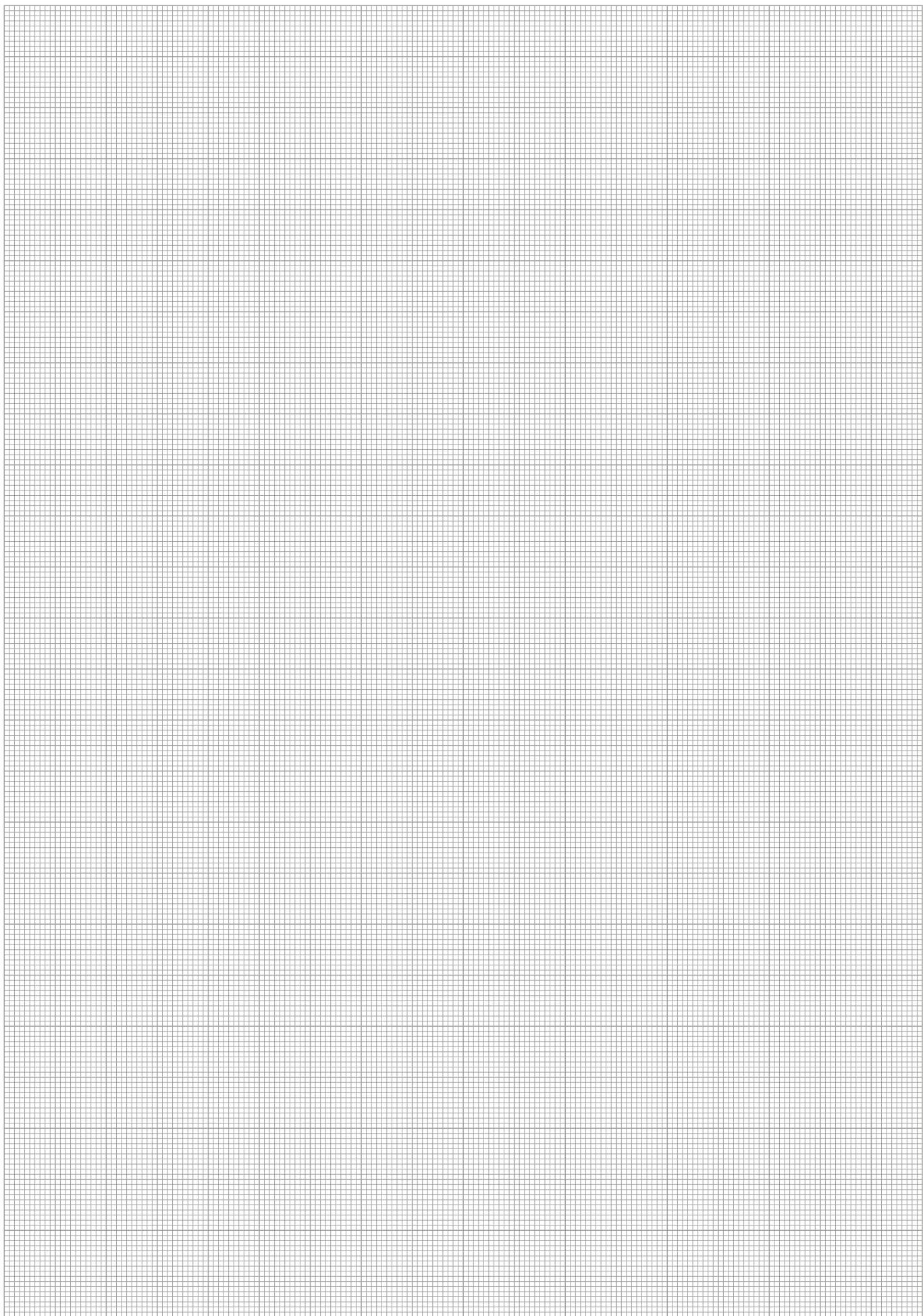
Extension cables for proximity switches/magnetic switches

Description	ID
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KV 10-M8	0301496
KV 20-M8	0301497
WK 3-M8	0301594
WK 3-M8 NPN	0301602
WK 5-M8	0301502
WK 5-M8 NPN	9641116

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

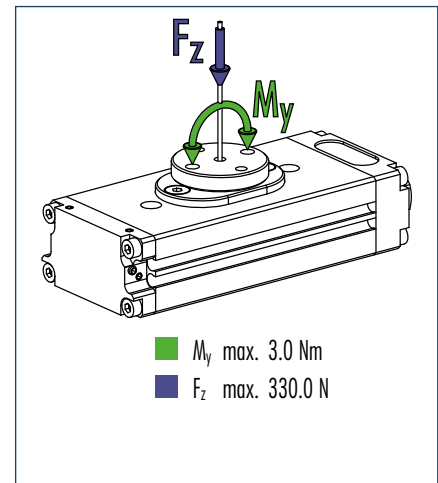


You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.





Pinion load

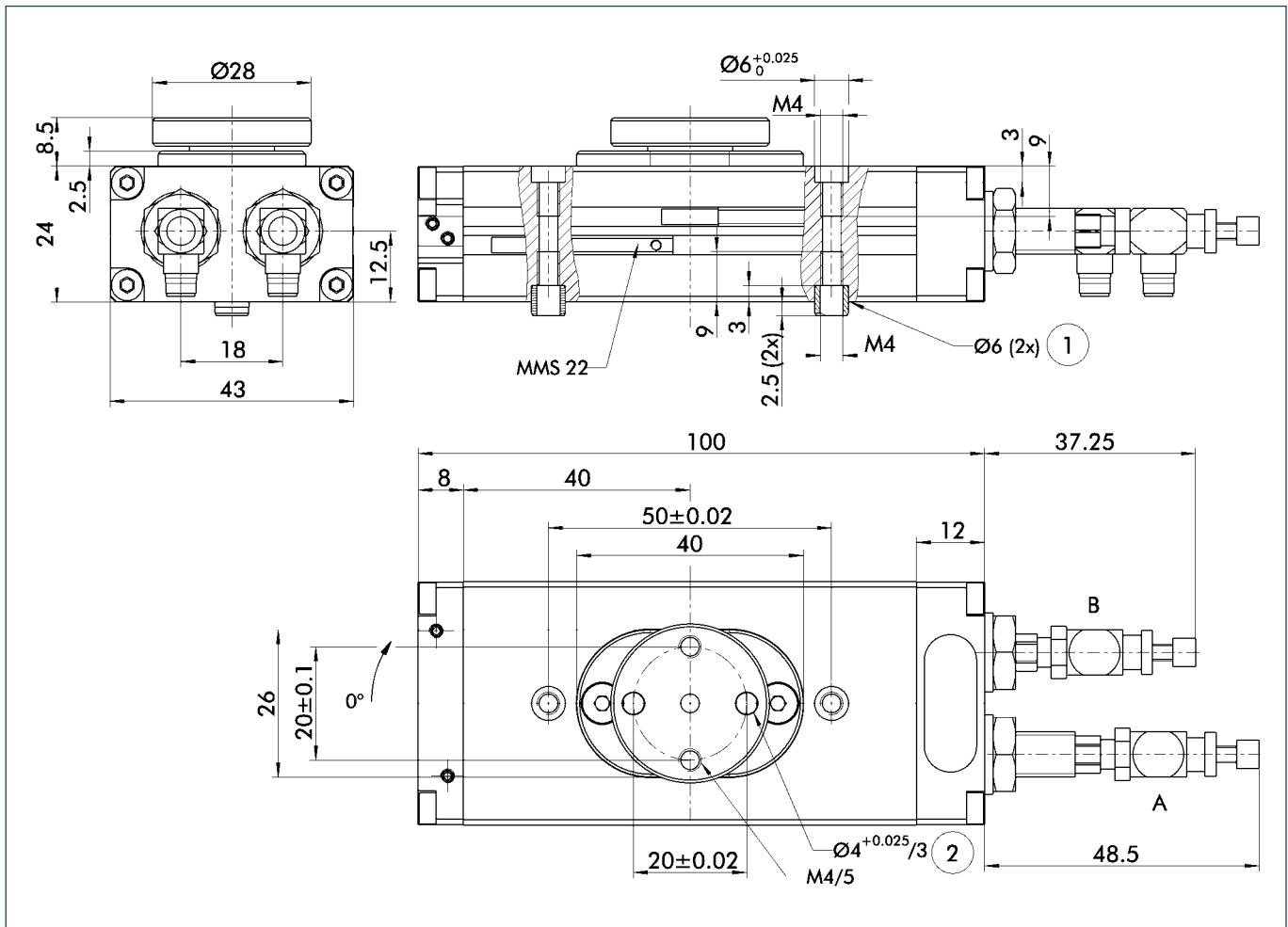


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		MRU 12.1-E-0	MRU 12.2-E-0	MRU 12.1-E-4	MRU 12.2-E-4	MRU 12.1-E-0-WZ	MRU 12.2-E-0-WZ
	ID	0357050	0357150	0357051	0357151	0357052	0357152
Torque	[Nm]	0.35	0.75	0.2	0.6	0.35	0.75
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0	90.0	90.0
No. of fluid feed-throughs				4	4		
IP class		65	65	65	65	65	65
Weight	[kg]	0.37	0.37	0.42	0.42	0.37	0.37
Cycle time (1 x nominal angle of rotation) without attached load	[s]	0.06	0.06	0.08	0.08	0.06	0.06
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	2.5	5.0	2.5	5.0	2.5	5.0
Nominal pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	4.5	4.5	4.5	4.5	4.5	4.5
Maximum pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	3.0	3.0	3.0	3.0	3.0	3.0
Max. pressure in fluid feed-through	[bar]			8.0	8.0		
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0	90.0	90.0
Repeat accuracy	[°]	0.07	0.07	0.07	0.07	0.07	0.07

Main views

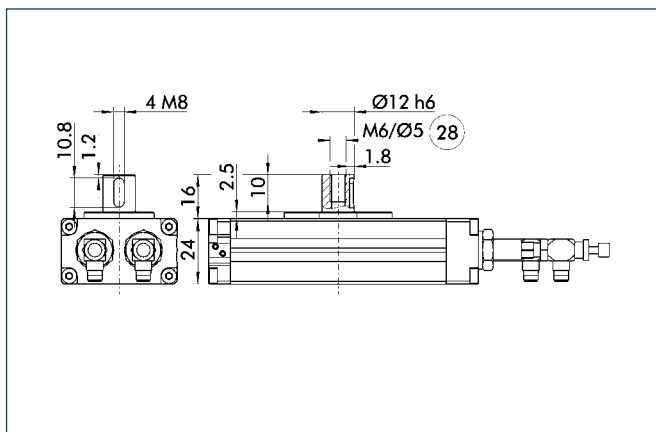


The drawing shows the unit in the basic version, the dimensions do not include the option described below.

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Rotary unit connection
- ② Attachment connection

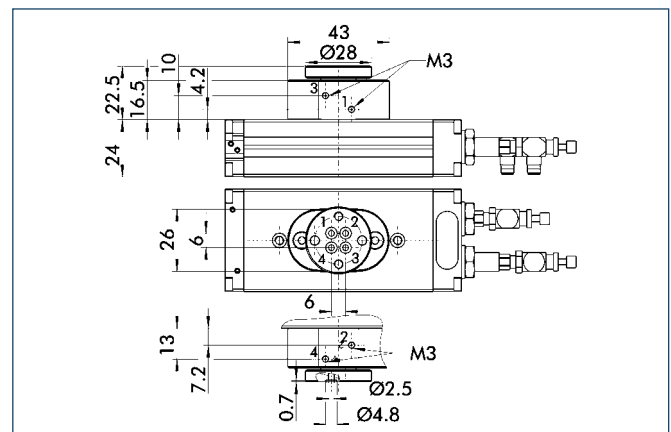
Shaft extensions



②8 Through-bore

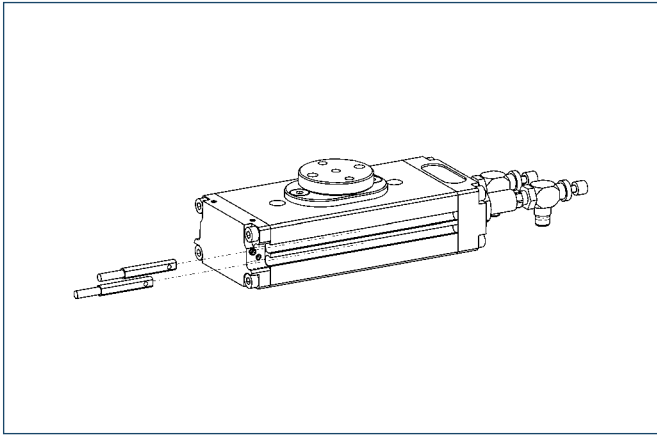
Different dimensions with the „shaft extension“ option

Fluid feed-through



The fluid feed-through enables compressed air or fluids to be conveyed without the need for external hoses.

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Each rotary unit requires the same number of sensors as the positions that are to be monitored, i.e. mostly two, plus extension cable as an option.

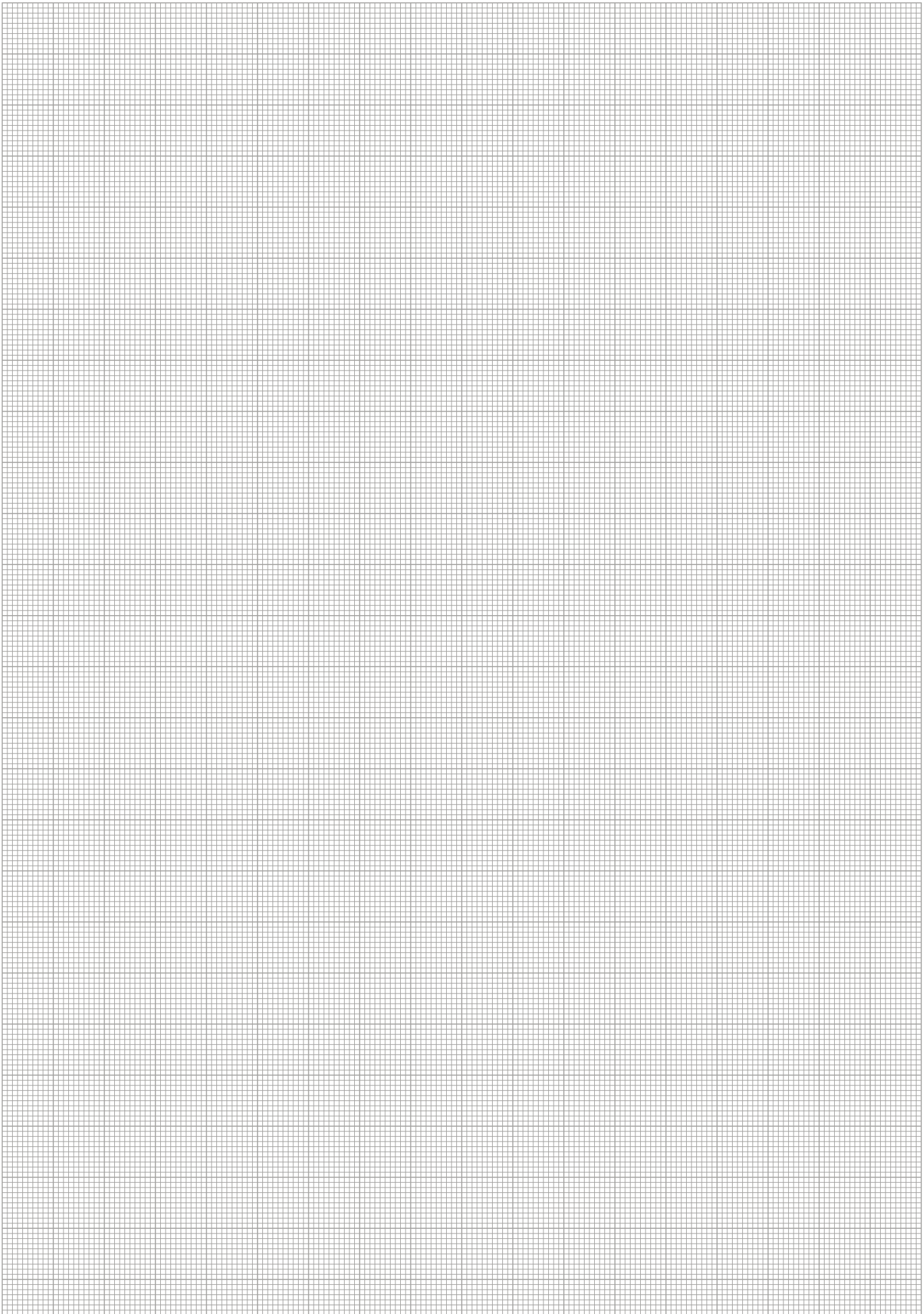
Extension cables for proximity switches/magnetic switches

Description	ID
GK 3-M8	0301622
KV 10-M8	0301496
KV 20-M8	0301497
WK 3-M8	0301594
WK 3-M8 NPN	0301602
WK 5-M8	0301502
WK 5-M8 NPN	9641116

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

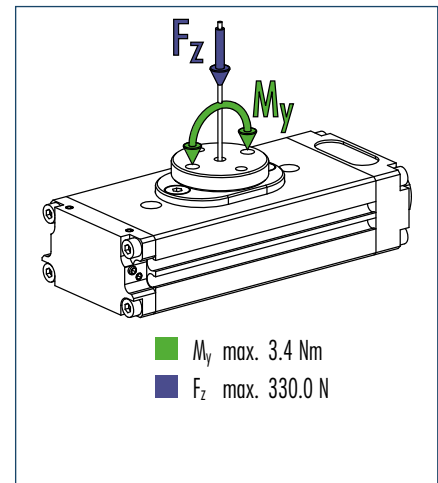


You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.





Pinion load

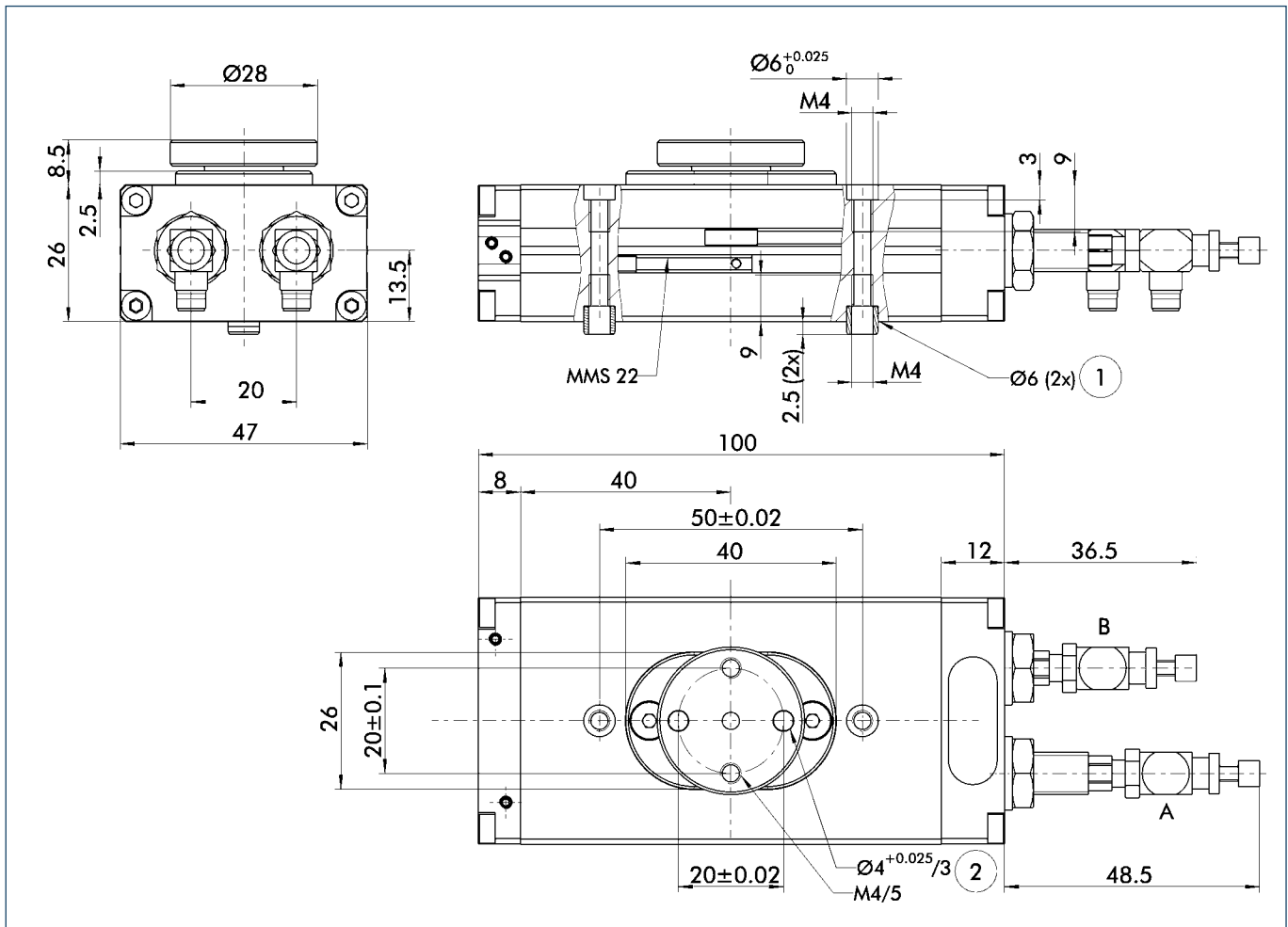


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		MRU 14.1-E-0	MRU 14.2-E-0	MRU 14.1-E-4	MRU 14.2-E-4	MRU 14.1-E-0-WZ	MRU 14.2-E-0-WZ
	ID	0357070	0357170	0357071	0357171	0357072	0357172
Torque	[Nm]	0.55	1.15	0.35	0.9	0.55	1.15
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0	90.0	90.0
No. of fluid feed-throughs				4	4		
IP class		65	65	65	65	65	65
Weight	[kg]	0.435	0.435	0.484	0.485	0.44	0.44
Cycle time (1 x nominal angle of rotation) without attached load	[s]	0.08	0.08	0.1	0.1	0.08	0.08
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	3.4	6.8	3.4	6.8	3.4	6.8
Nominal pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	4.5	4.5	4.5	4.5	4.5	4.5
Maximum pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	3.0	3.0	3.0	3.0	3.0	3.0
Max. pressure in fluid feed-through	[bar]			8.0	8.0		
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0	90.0	90.0
Repeat accuracy	[°]	0.07	0.07	0.07	0.07	0.07	0.07

Main views

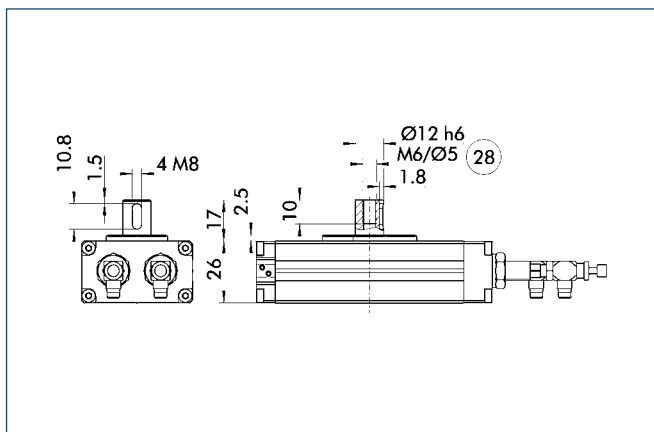


The drawing shows the unit in the basic version, the dimensions do not include the option described below.

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

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- ① Rotary unit connection
- ② Attachment connection

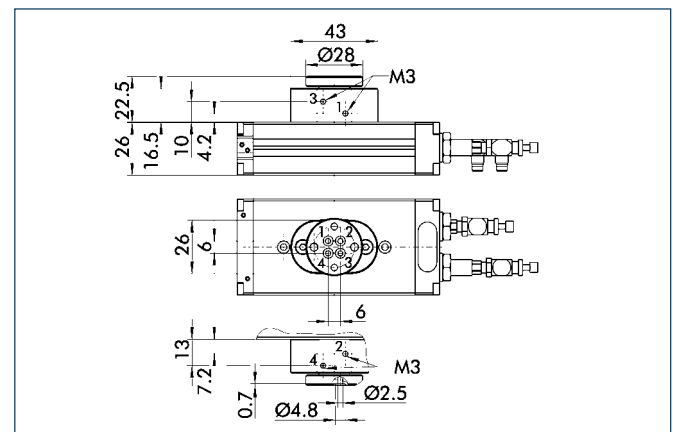
Shaft extensions



②8 Through-bore

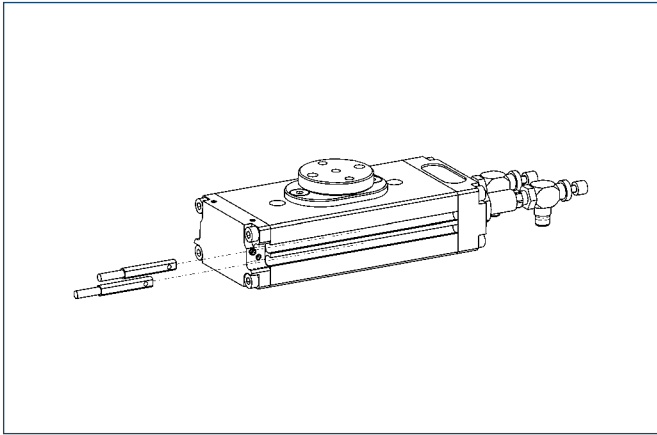
Different dimensions with the „shaft extension“ option

Fluid feed-through



The fluid feed-through enables compressed air or fluids to be conveyed without the need for external hoses.

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Each rotary unit requires the same number of sensors as the positions that are to be monitored, i.e. mostly two, plus extension cable as an option.

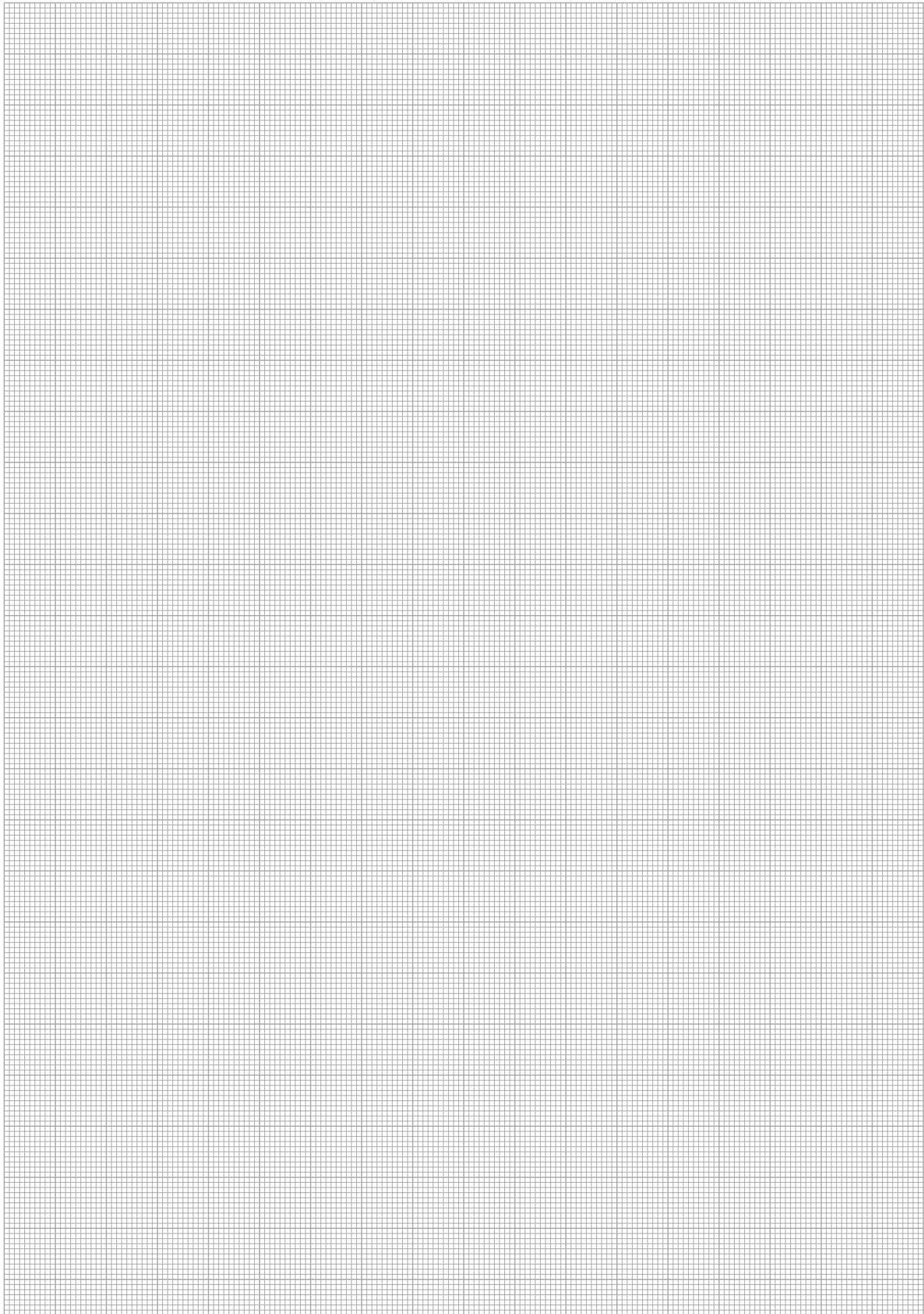
Extension cables for proximity switches/magnetic switches

Description	ID
GK 3-M8	0301622
KV 10-M8	0301496
KV 20-M8	0301497
WK 3-M8	0301594
WK 3-M8 NPN	0301602
WK 5-M8	0301502
WK 5-M8 NPN	9641116

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.





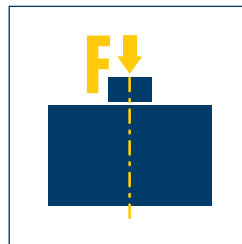
Sizes
20 .. 63



Weight
1.2 kg .. 26.5 kg



Torque
1.1 Nm .. 115.0 Nm

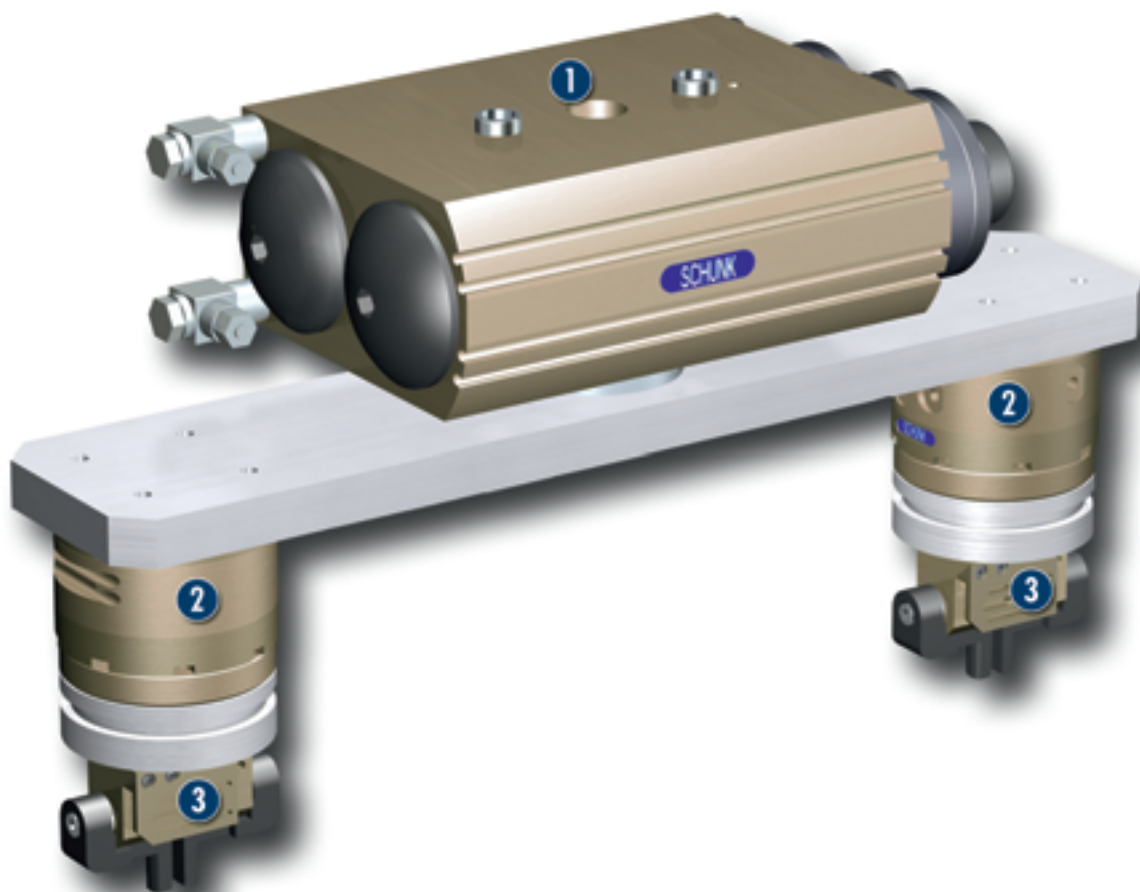


Axial force
800 N .. 11000 N



Bending moment
10.5 Nm .. 950 Nm

Application example



Unit for the swiveling of roughly positioned small components

- 1 SRU 40.1-180-3 rotary unit
- 2 AGE-XY-50 compensation unit

- 3 DKG 44 2-finger parallel gripper

Universal Rotary Actuator

Universal unit for swiveling movements up to 180°, especially suitable with large and heavy attachments.

Area of application

For use in both clean and dirty environments, wherever pneumatic swiveling is suitable.

Your advantages and benefits

Clearly graded series with uniform torque growth

so that for many applications, the correct size is available as a standard product

Choice of 90° or 180° angle of traverse

Ultimate flexibility in the choice of the angle of traverse.
Special angles available on request

Adjustability of end positions

Choice of +3°/-3° (small) or +3°/-90° (large)

Choice of pneumatic or locked center position

The locked center position can be released under load.
Swiveling can always continue in any direction from both types of center position.

Fluid feed-through can be used for gases, fluids and vacuum

dispensing with troublesome hoses

electric rotary transmission leadthrough

for the steady reliable realization of sensor-, actuator- and bus-signals

Choice of electronic solenoid switches or inductive proximity switches

for absolute variability in position monitoring

Replaceable, screw-in guide sleeves (bushes)

for simple maintenance and rapid replacement after many millions of cycles.

Downwards continuation of the series

with the MRU series, ensuring suitability for a broad range of applications



Information about the series

Working principle

Double pinion rack and pinion system

Housing material

Aluminum press-drawn section

Piston and pinion material

Hardened steel (16 MnCr 5)

Actuation

Pneumatic, with filtered compressed air (10 µm): Dry, lubricated or non-lubricated
Pressure medium: Requirements on quality of the compressed air according to DIN ISO 8573-1: 6 4 4.

Condition standard

The mentioned information alludes to a periphery of 20°C and 1013 mbar

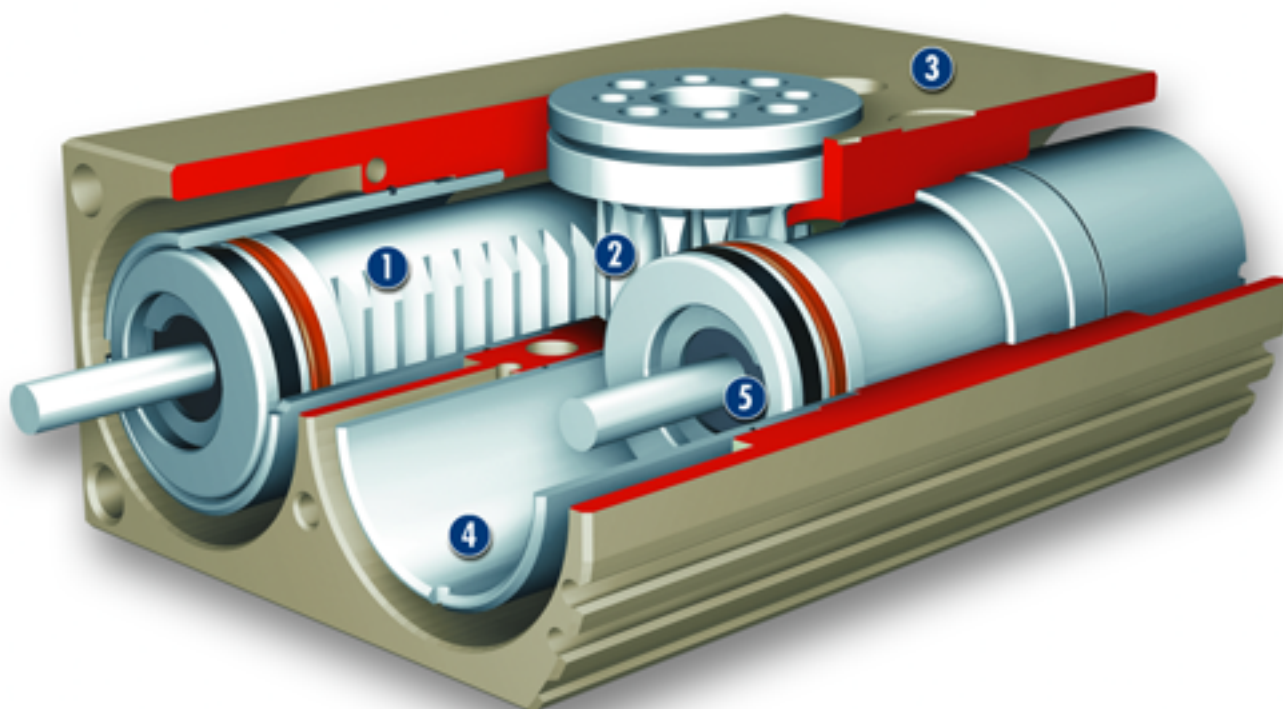
Warranty

24 months

Scope of delivery

Flow control coupling, guide sleeves, O-rings for direct connection, dowel screws (SRU 63 only), Assembly and Operating Manual with manufacturer's declaration

Sectional diagram



- | | | |
|---|---|---|
| <p>1 Drive
Pneumatic, powerful double piston drive</p> <p>2 Pinion
Stable pinion, optionally with fluid feed-through, for transforming the piston movement into a rotary movement</p> | <p>3 Housing
Weight-reduced through the use of a hard-anodized, high-strength aluminum alloy</p> <p>4 Sleeve technology
For radial adjustment of the end positions without a settling effect and ensuring rapid replacement for maintenance</p> | <p>5 Damping
Hydraulic shock absorbers for high moments of inertia</p> |
|---|---|---|

Function description

When subjected to pressure, the two pneumatic pistons move their end faces in a straight line in their bores, turning the pinion by means of the serrations on their sides.

Torque at the endpositions

Please consider that the last angular degrees (appr. 2°) prior to the end position are driven with the force of just one actuation piston. Thus the double actuated modules just dispose of appr. half of the nominal torque in this range.

Options and special information

On request, the SRU series can also be obtained **with tightness class IP67** (to DIN 40050). For swiveling movements requiring particularly intensive damping, additional external shock absorbers can also be fitted. Please ask for details. Special angles of traverse and swivel ranges are available on request. Please note that for pneumatic units, appropriate **emergency stop** (e.g. controlled lowering) and **restart strategies** (e.g. pressure build-up valves, suitable valve switching sequences) are required. Cutting off the pressure in an uncontrolled manner could lead to undefined states and behavior.

Accessories

Accessories from SCHUNK – the suitable supplement for maximum functionality, reliability and performance of all automation modules.

Centering Sleeves



Fittings



MMS magnetic switches



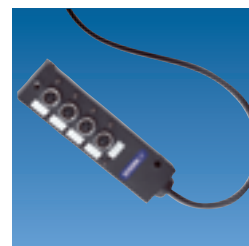
IN inductive proximity switches



KV/KA sensor cables



V sensor distributors



SDV-P pressure maintenance valves



① For the exact size of the required accessories, availability of this size and the designation and ID, please refer to the additional views at the end of the size in question. You will find more detailed information on our accessory range in the „Accessories“ catalog section.

General information on the series

Repeat accuracy

Repeat accuracy is defined as the spread of the limit position after 100 consecutive swiveling cycles.

Pinion position

The position of the pinion is always shown in the drawing in the left-hand end position. From here, the pinion rotates clockwise. The direction of rotation is indicated by the arrow.

Pinion screw connection diagram

Please note that if you wish to set the angle of traverse to less than 90°, the left-hand end stop must generally be screwed in completely. In this way, the screw connection diagram of the left-hand end stop is rotated clockwise by 90° in relation to the drawing, which shows the situation with an angle of traverse of 180°.

Travel to pneumatic center position

In units with double compressed air action, travel to pneumatic center position takes place at only half the nominal torque.

Mean attached load

The mean attached load should constitute a typical load. It is defined as the half of the max. possible moment of inertia that can be swiveled without restriction, bouncing or hitting, with a centric load and a vertical rotating axis.

Cycle time

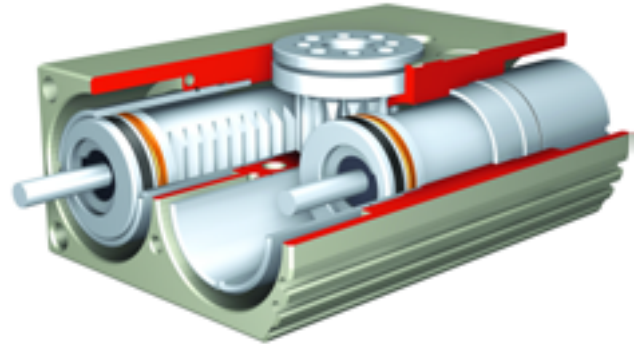
Cycle times are purely the times taken by the pinion/flange to turn round the nominal angle of rotation. Valve switching times, hose filling times or SPC reaction times are not included in the above times and must be taken into consideration when determining cycle times.

Layout or checking calculation

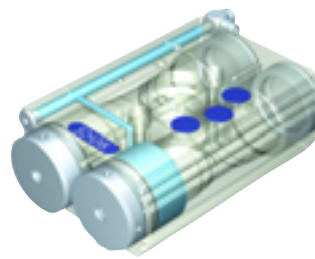
For deciding the layout or for checking calculations of rotary modules, we recommend that you use our SSE software, available on CD or from www.schunk.com. A checking calculation of the unit you have chosen is absolutely essential, as otherwise overloading may occur.

Basic module

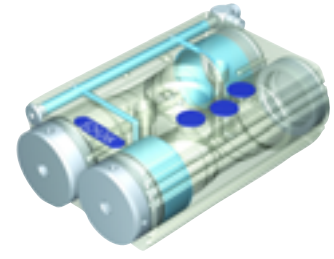
- Tailored for every application thanks to the modular system with options
- Integrated hydraulic shock absorbers for short swivel times
- Pistons guided in centering sleeves with simple replaceability in the event of maintenance



Pneumatic drive



Single actuation



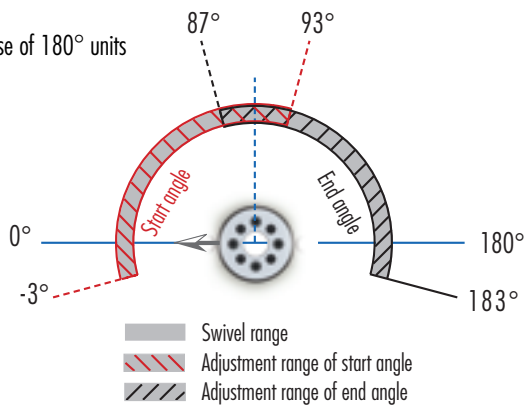
Double actuation

- High torques despite a small installation space

End stop adjustability of the two-position units

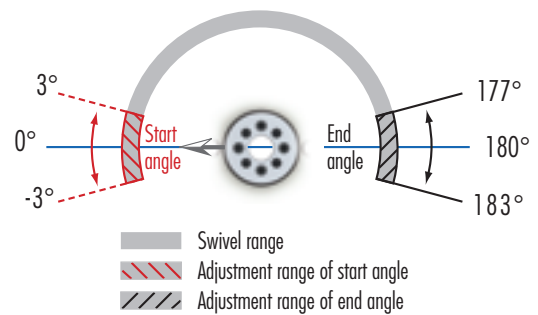
Large end position adjustability (90°) for variable adjustment of the swivel angle

- In the case of 180° units

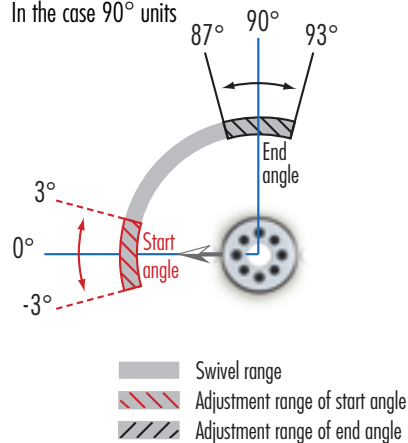


Small end position adjustability ($\pm 3^\circ$) for fine adjustment

- In the case 180° -units



- In the case 90° units

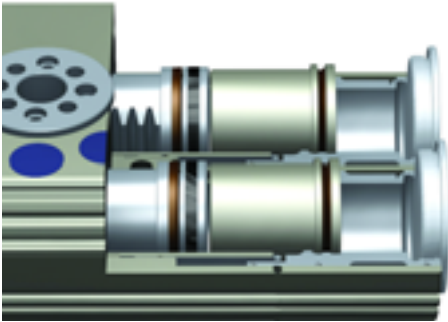


- Small end position adjustability for fast and exact fine adjustment
- Large end position adjustability for flexible adjustability of the swivel angle

Middle position

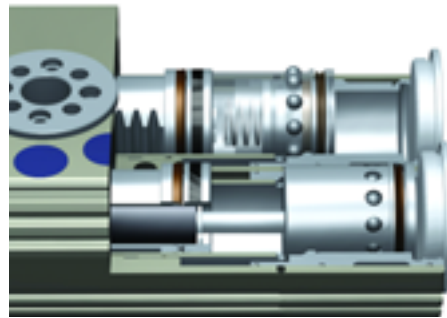
Pneumatic (M)

- Pneumatic middle position for pneumatically dampened intermediate position
- Middle position adjustable by $\pm 3^\circ$ for fast fine adjustment



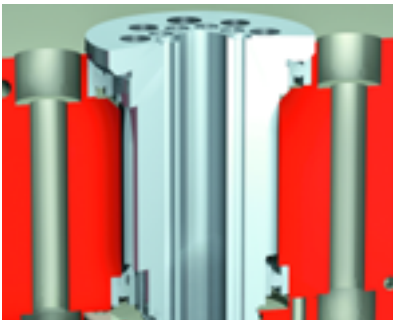
Locked (VM)

- Mechanically locked and hydraulically dampened middle position for short cycle times especially in the case of heavy loads
- Middle position adjustable by $\pm 3^\circ$ for fast fine adjustment



Air feed-through

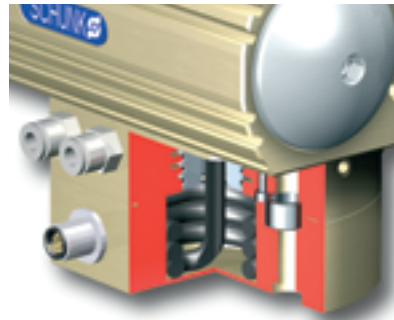
- Tubeless air feed-through and a big center bore
- No hoses or cables swiveling, thus increasing process reliability



Section through the pinion

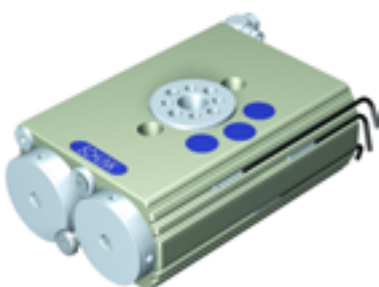
Electric feed-through

- Completely integrated feed-through for sensor, actuator and bus signals
- Connection via plugs and bushes



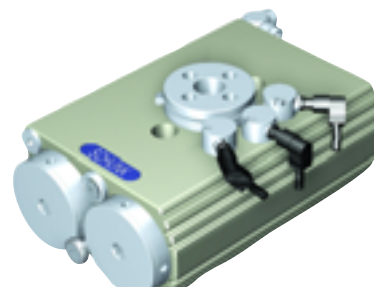
End position monitoring possibilities

- Electronic magnetic switches can be completely recessed in the groove to minimize the interfering contour
- Up to eight positions can be monitored



Electronic magnetic switches MMS 22

- One mounting kit for fast assembly of inductive proximity switches M8
- Reliable monitoring of up to three positions



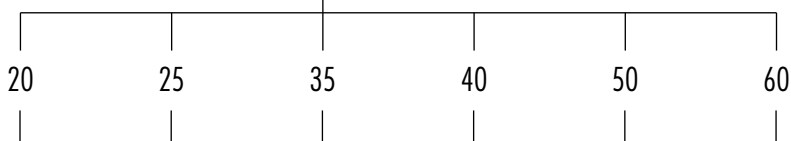
Inductive proximity switches IN 80

Obtain calculation support
from our calculation program
"SSE"
Available on CD-ROM, or on the
Internet at www.schunk.com

Application specific parameters

- Torque
- Mass moment of inertia
- Swivel time

Size
(piston diameter)



Actuation

Single Double

Swivel angle

0° – 90° 0° – 180° 0° – 90° – 180°

End position adjustability

3° 3° 90° 3° 90° 3°

Middle position

None Pneumatic (M) Locked (VM)

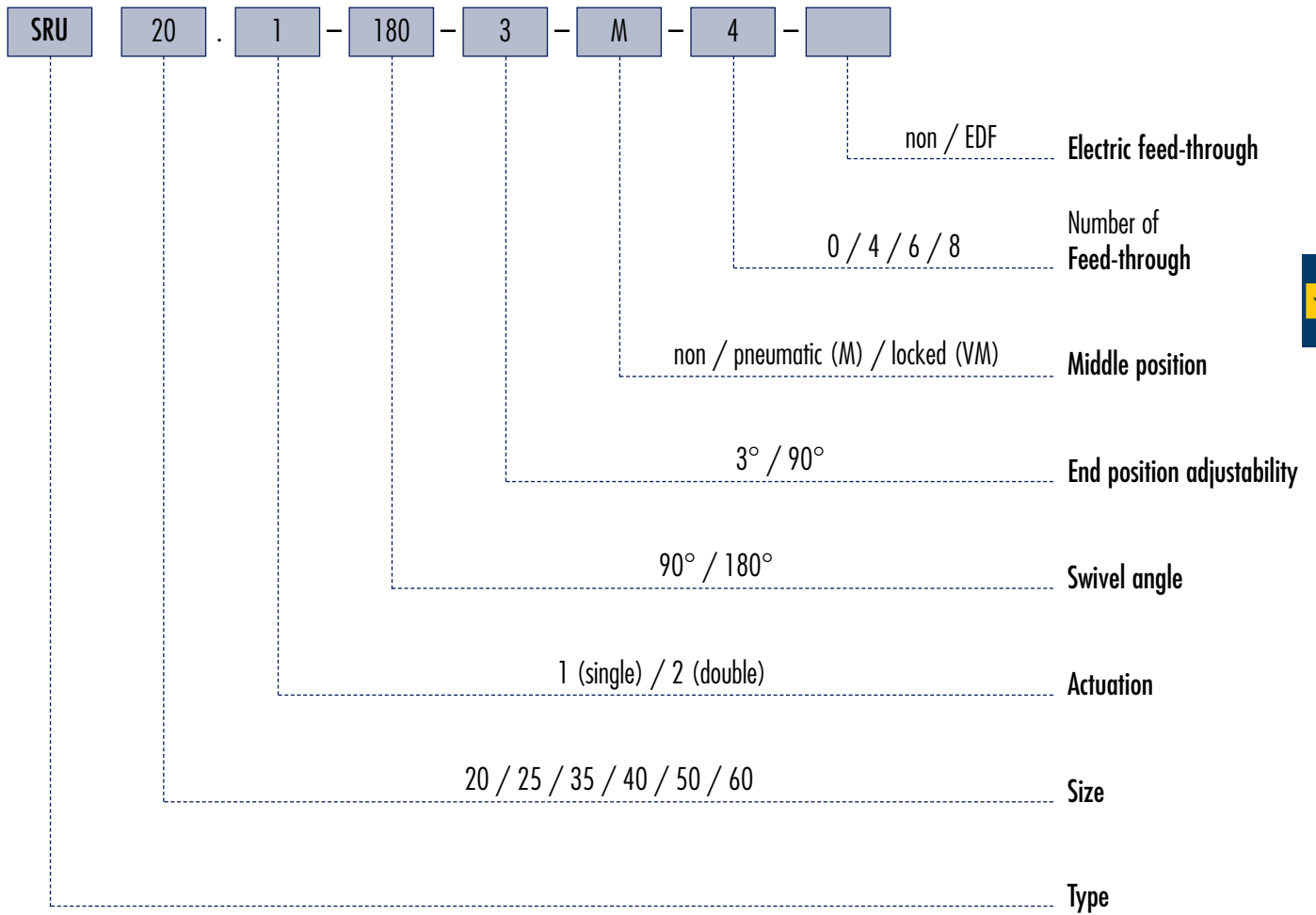
Feed-through

Without With feed-through With fluid and electric feed-through EDF Without With feed-through With fluid and electric feed-through EDF

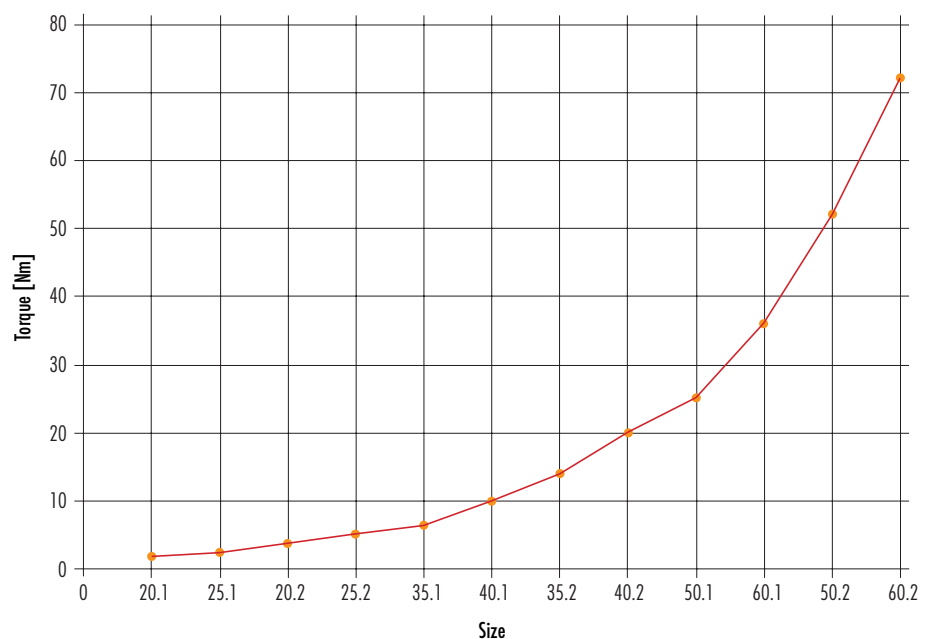
Accessories (see "Accessories" catalog section)

- Magnetic proximity switches MMS 22
- Inductive proximity switches IN 80 and mounting kits

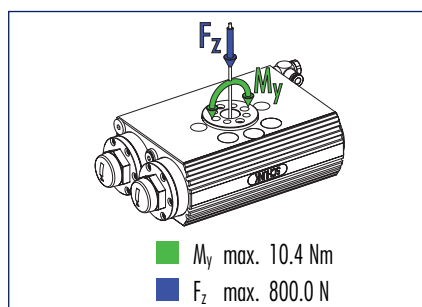
How to order



Staged torque values



Pinion load



① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Angle of traverse 90° and small end position adjustability of 3°

Description		SRU 20.1-90-3	SRU 20.1-90-3-4	SRU 20.2-90-3	SRU 20.2-90-3-4
	ID	0357300	0357302	0357400	0357402
Torque	[Nm]	1.5	1.1	3.4	3.0
Rotating angle	[°]	90.0	90.0	90.0	90.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	1.2	1.4	1.2	1.4
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	18.0	18.0	36.0	36.0
Swiveling time with middle attached load	[s]	0.9	1.1	0.6	0.7
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3° and electric feed-through EDF

Description		SRU 20.1-90-3-4-EDF M5	SRU 20.1-90-3-4-EDF M8	SRU 20.2-90-3-4-EDF M5	SRU 20.2-90-3-4-EDF M8
	ID	0357303	0357304	0357403	0357404
Torque	[Nm]	1.1	1.1	3.0	3.0
Rotating angle	[°]	90.0	90.0	90.0	90.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	1.4 + 0.65	1.4 + 0.65	1.4 + 0.65	1.4 + 0.65
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	18.0	18.0	36.0	36.0
Swiveling time with middle attached load	[s]	1.1	1.1	0.7	0.7
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180° and small end position adjustability of 3°

Description		SRU 20.1-180-3	SRU 20.1-180-3-4	SRU 20.2-180-3	SRU 20.2-180-3-4
	ID	0357320	0357322	0357420	0357422
Torque	[Nm]	1.5	1.1	3.4	3.0
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	1.2	1.4	1.2	1.4
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	30.0	30.0	60.0	60.0
Swiveling time with middle attached load	[s]	1.0	1.2	0.7	0.8
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3° and electrical feed-through EDF

Description		SRU 20.1-180-3-4-EDF M5	SRU 20.1-180-3-4-EDF M8	SRU 20.2-180-3-4-EDF M5	SRU 20.2-180-3-4-EDF M8
	ID	0357323	0357324	0357423	0357424
Torque	[Nm]	1.1	1.1	3.0	3.0
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	1.4 + 0.65	1.4 + 0.65	1.4 + 0.65	1.4 + 0.65
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	30.0	30.0	60.0	60.0
Swiveling time with middle attached load	[s]	1.2	1.2	0.8	0.8
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, small end position adjustability of 3° and pneumatic center position

Description		SRU 20.1-180-3-M	SRU 20.1-180-3-M-4	SRU 20.2-180-3-M	SRU 20.2-180-3-M-4
	ID	0357330	0357332	0357430	0357432
Torque	[Nm]	1.5	1.1	3.4	3.0
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Adjustability of center position	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	1.55	1.75	1.55	1.75
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	18.0	18.0	36.0	36.0
Swiveling time with middle attached load	[s]	1.0	1.2	0.7	0.8
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3°, pneumatic center position and electric feed-through

Description		SRU 20.1-180-3-M-4-EDF M5	SRU 20.1-180-3-M-4-EDF M8	SRU 20.2-180-3-M-4-EDF M5	SRU 20.2-180-3-M-4-EDF M8
	ID	0357333	0357334	0357433	0357434
Torque	[Nm]	1.1	1.1	3.0	3.0
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	1.75 + 0.65	1.75 + 0.65	1.75 + 0.65	1.75 + 0.65
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	18.0	18.0	36.0	36.0
Swiveling time with middle attached load	[s]	1.2	1.2	0.8	0.8
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, small end position adjustability of 3° and locked center position

Description		SRU 20.2-180-3-VM	SRU 20.2-180-3-VM-4
	ID	0357440	0357442
Torque	[Nm]	3.4	3.0
Rotating angle	[°]	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0
Center position		VM (locked middle position)	VM (locked middle position)
Adjustability of center position	[°]	3.0	3.0
No. of fluid feed-throughs			4
IP class		65	65
Weight	[kg]	1.76	1.96
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	60.0	60.0
Swiveling time with middle attached load	[s]	0.7	0.8
Nominal pressure	[bar]	6.0	6.0
Minimum pressure	[bar]	4.0	4.0
Maximum pressure	[bar]	6.5	6.5
Diameter of connecting hose	[mm]	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0
Min. ambient temperature	[°C]	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0
Repeat accuracy	[°]	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3°, blocked center position and electric feed-through

Description		SRU 20.2-180-3-VM-4-EDF M5	SRU 20.2-180-3-VM-4-EDF M8
	ID	0357443	0357444
Torque	[Nm]	3.0	3.0
Rotating angle	[°]	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0
Center position		VM (locked middle position)	VM (locked middle position)
Central Position Adjustability	[°]	3.0	3.0
No. of fluid feed-throughs		4	4
IP class		65	65
Weight	[kg]	1.96 + 0.65	1.96 + 0.65
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	60.0	60.0
Swiveling time with middle attached load	[s]	0.8	0.8
Nominal pressure	[bar]	6.5	6.5
Minimum pressure	[bar]	4.0	4.0
Maximum pressure	[bar]	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0
Repeat accuracy	[°]	0.05	0.05
Number of E-fittings on the output end		4	4
Size of the E-connections on the output end.		M5	M8
Number of cores by EDF		6	6
maximum voltage by EDF	[V]	24.0	24.0
Max. current per wire	[A]	1.0	1.0
Max. overall current	[A]	1.0	1.0

Technical data

Angle of traverse 180° and large end position adjustability of 90°

Description		SRU 20.1-180-90	SRU 20.1-180-90-4	SRU 20.2-180-90	SRU 20.2-180-90-4
	ID	0357350	0357352	0357450	0357452
Torque	[Nm]	1.5	1.1	3.4	3.0
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	1.24	1.44	1.24	1.44
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	30.0	30.0	60.0	60.0
Swiveling time with middle attached load	[s]	1.0	1.2	0.7	0.8
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, large end position adjustability of 90° and electric feed-through EDF

Description		SRU 20.1-180-90-4-EDF M5	SRU 20.1-180-90-4-EDF M8	SRU 20.2-180-90-4-EDF M5	SRU 20.2-180-90-4-EDF M8
	ID	0357353	0357354	0357453	0357454
Torque	[Nm]	1.1	1.1	3.0	3.0
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	1.44 + 0.65	1.44 + 0.65	1.44 + 0.65	1.44 + 0.65
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	30.0	30.0	60.0	60.0
Swiveling time with middle attached load	[s]	1.2	1.2	0.8	0.8
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, large end position adjustability of 90° and pneumatic center position

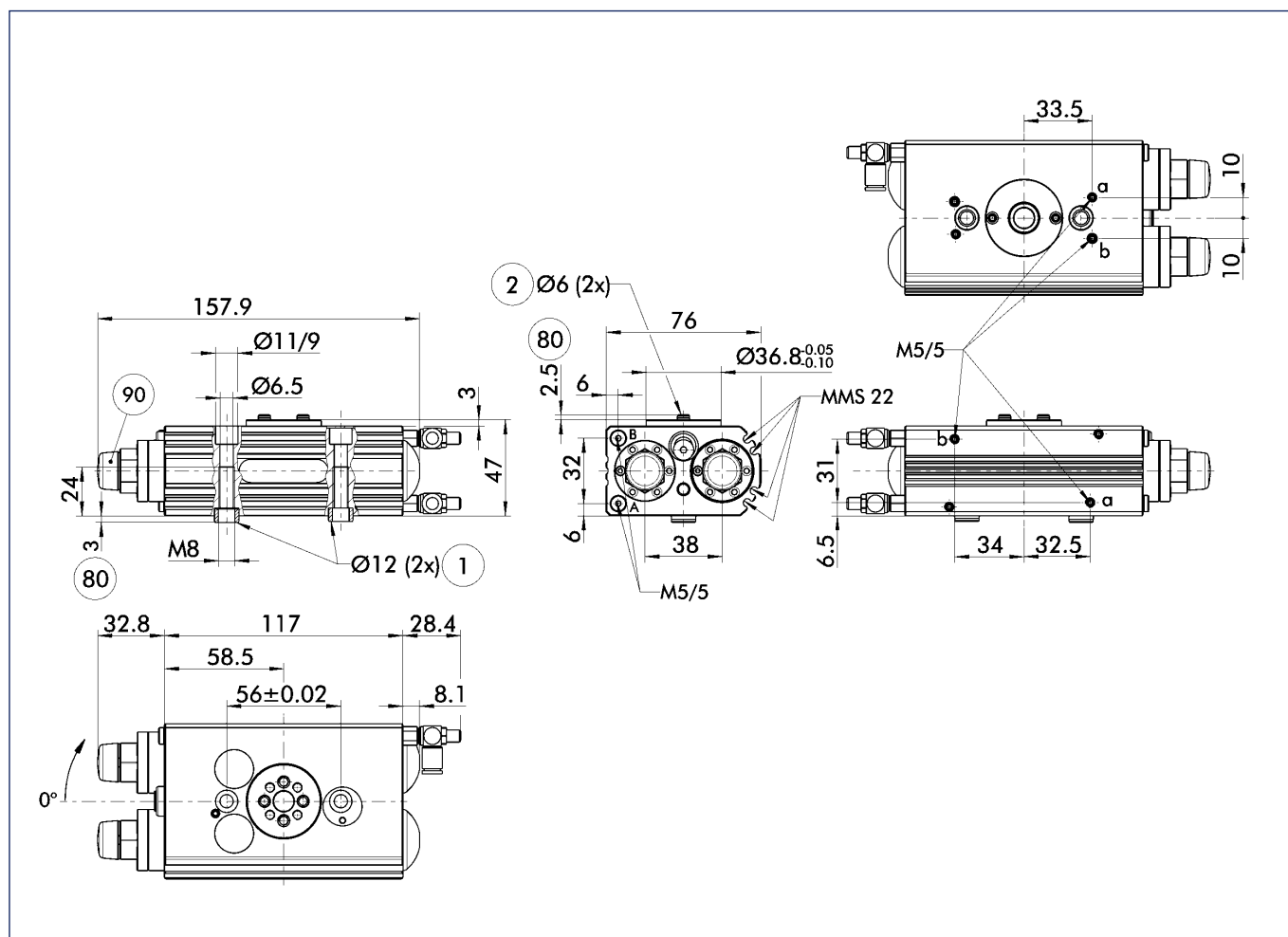
Description		SRU 20.1-180-90-M	SRU 20.1-180-90-M-4	SRU 20.2-180-90-M	SRU 20.2-180-90-M-4
	ID	0357360	0357362	0357460	0357462
Torque	[Nm]	1.5	1.1	3.4	3.0
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Adjustability of center position	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	1.6	1.8	1.6	1.8
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	30.0	30.0	60.0	60.0
Swiveling time with middle attached load	[s]	1.0	1.2	0.7	0.8
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05



Angle of traverse 180°, large end position adjustability of 90°, pneumatic center position and electric feed-through EDF

Description		SRU 20.1-180-90-M-4-EDF M5	SRU 20.1-180-90-M-4-EDF M8	SRU 20.2-180-90-M-4-EDF M5	SRU 20.2-180-90-M-4-EDF M8
	ID	0357363	0357364	0357463	0357464
Torque	[Nm]	1.1	1.1	3.0	3.0
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	1.8 + 0.65	1.8 + 0.65	1.8 + 0.65	1.8 + 0.65
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	30.0	30.0	60.0	60.0
Swiveling time with middle attached load	[s]	1.2	1.2	0.8	0.8
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Main views for SRU without EDF

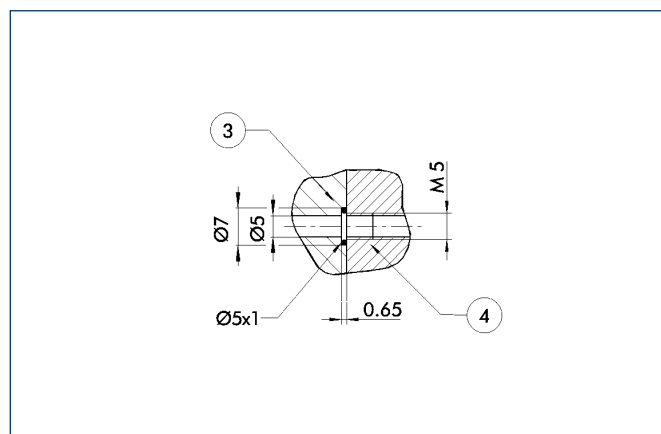


The main view shows the SRU in the most basic version, that is with an angle of traverse of $180^{\circ}/90^{\circ}$, small end position adjustability of 3° , without center position and without fluid feed-through. Modifications to the drawings as a result of various options can be seen in the relevant additional views.

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
B,b Main/direct connection, anti-clockwise rotary unit
① Linear unit connection
② Attachment connection
③ depth of the centering sleeve hole in the matching part
④ setting shock absorber-hub

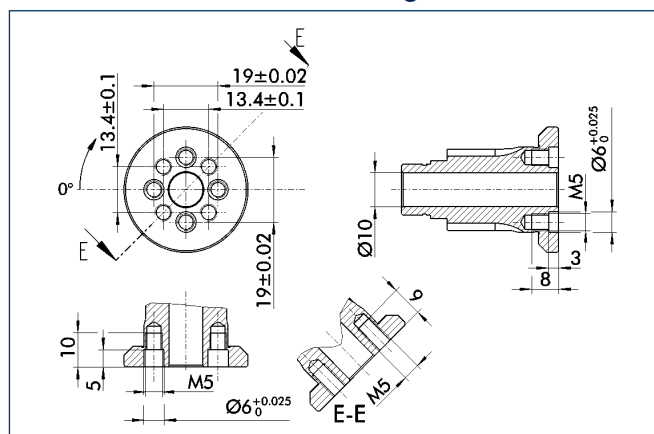
Hose-free direct connection



- ③ Adapter
- ④ Rotary unit

The direction connection is used for supplying compressed air without hoses, which are liable to faults. Instead, the pressure medium is conveyed through the bore-holes of the mounting plate.

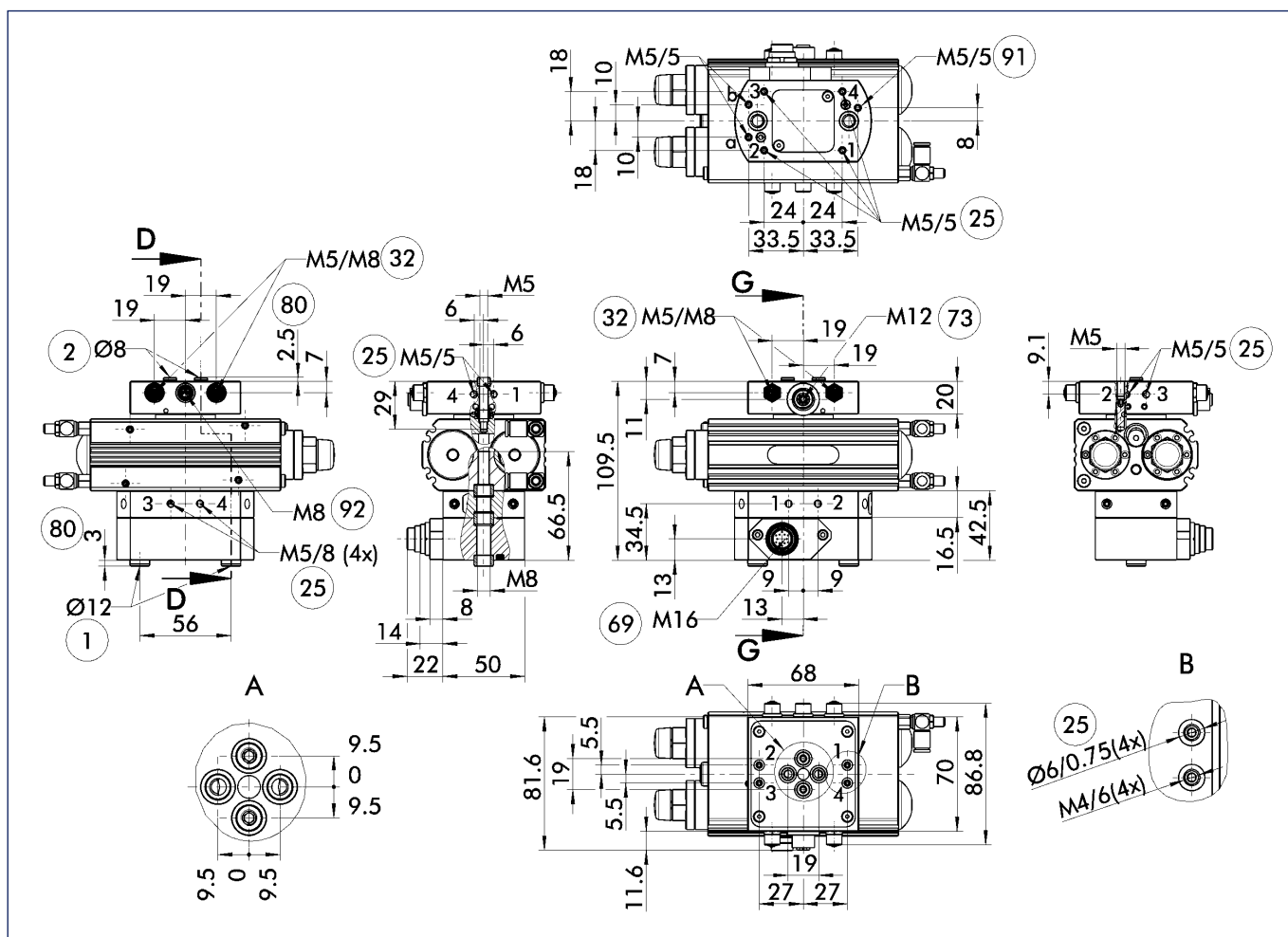
Pinion with fluid feed-through



Pinion screw connection diagram for mounting the swiveling attachment. The „4x large thread for 4x screw and 2x flat fit for guide sleeve“ screw connection diagram is preferable to the „4x small thread for 2x screw and 2x dowel screw“ (in deep fit) screw connection diagram.

- ① View adaptable at versions without EDF

Main views for SRU with EDF



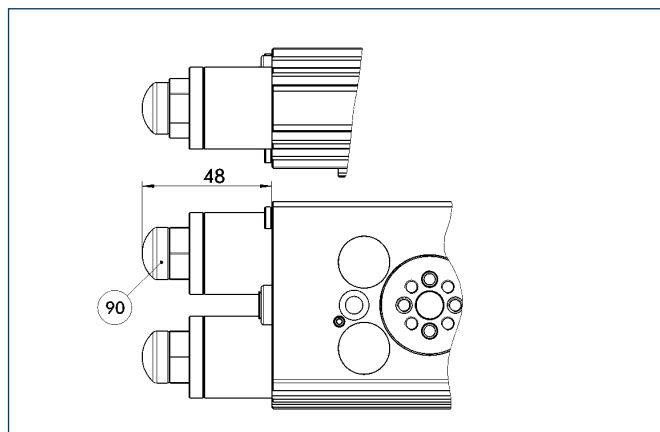
The main view shows the SRU in the most basic version, that is with an angle of traverse of 180°/90°, small end position adjustability of 3°, without center position and without fluid feed-through. Modifications to the drawings as a result of various options can be seen in the relevant additional views.

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
B,b Main/direct connection, anti-clockwise rotary unit
① Rotary unit connection
② Attachment connection
②⑤ Fluid feed-through

- ③② flange socket for sensor feed-through
⑥⑨ Connection for electric feed-through
⑦③ Connection BUS-throughs
⑧⑩ depth of the centering sleeve hole in the matching part
⑨① ventilation-drill for simple admitted SRU with middle position
⑨② change Bus-/Sensor feed-through

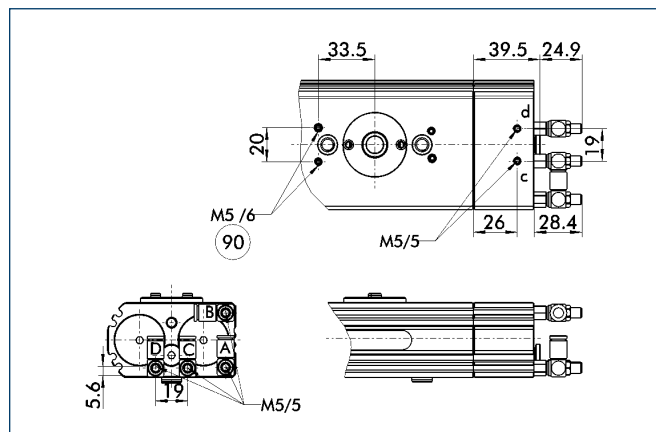
Large end position adjustability 90°



- ⑨⑩ setting shock absorber-hub

Different dimensions with the option „Large end position adjustability (90°)“ This permits the end positions to be adjusted by up to 93°. More information can be found in the introduction to the series.

Pneumatic center position (M)



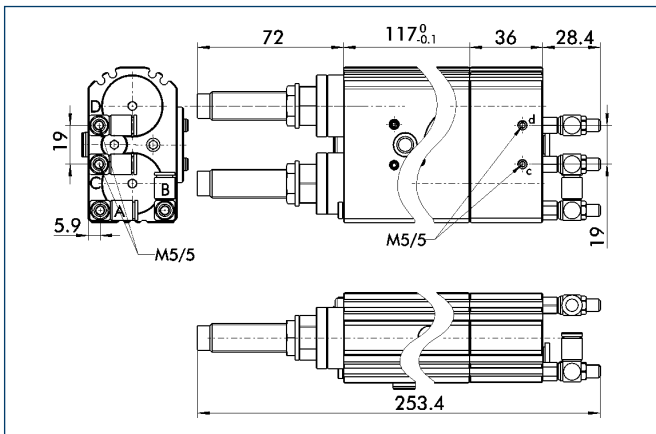
- C,c Main/direct connection, center position
D,d Main/direct connection, center position

- ⑨⑩ Bleeder hole for unit with single compressed air action (.1)

Different dimensions with the „Pneumatic Center Position (M)“ option. Heavy attachments may have to level out until they reach the correct position. The locked center position (VM) offers a remedy. Units with single compressed air action (.1) and pneumatic center position need an essential bleeder hose.

- ① View applicable for version with or without EDF!

Locked center position (VM)



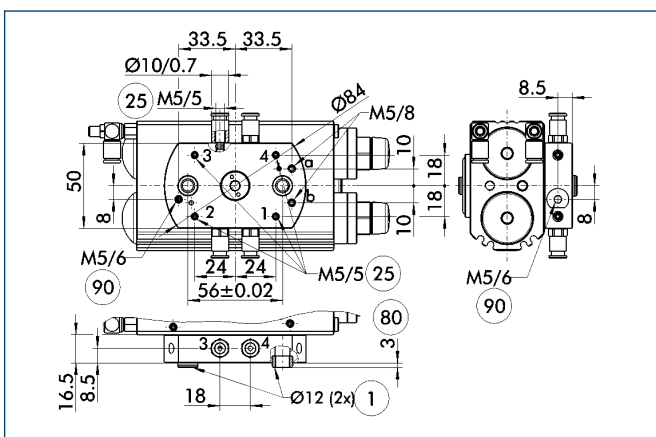
C,c Main/direct connection, center position

Dd, Main/direct connection, center position

Different dimensions with the „Locked center position (VM)“ option. The center position is locked. The unit travels to center position using the force of the main drive piston. Shock absorbers brake the travel to center position as fast as possible to prevent overshooting.

View applicable for version with or without EDF!

Connections for Medium-throughs

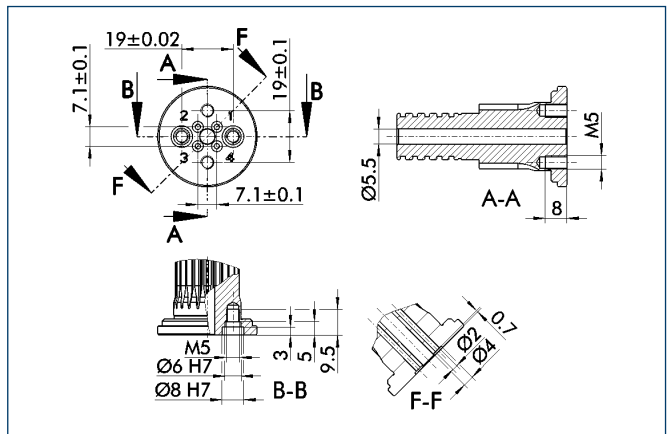


- ① Linear unit connection
②5 Fluid feed-through
⑧0 depth of the centering sleeve hole in the matching part
⑨0 Bleeder hole for unit with single compressed air action provided with pneumatic center position (1-M)

Lower mounting plate for the „Fluid feed-through“ option. Vacuum, gases or fluids can be conveyed. The connection may be a screw type or a direct connection.

 View adaptable at versions without EDF

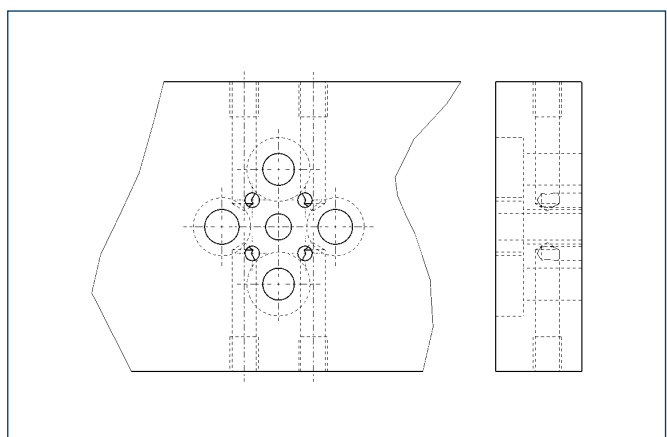
Pinion



Pinion screw connection diagram for the „Fluid feed-through“ option. The preferred drilling pattern is 2 x screws and 2 x screws with guide sleeve (in $\varnothing 8\text{ H7}$).

 View adaptable at versions without EDF

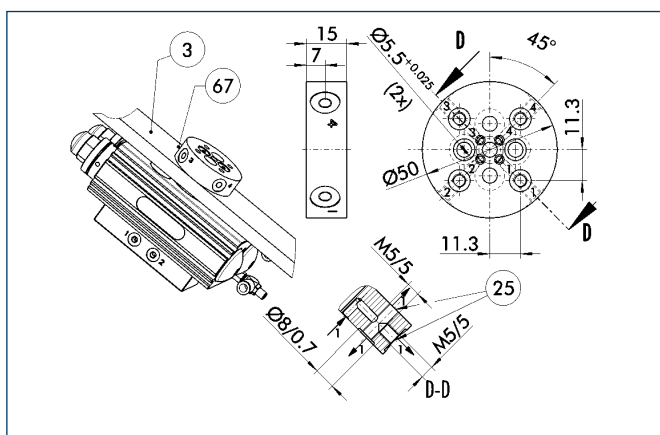
Adapter plate arrangement



Suggested here is an arrangement of the adapter plate which enables all fluid feed-throughs to be reached as easily as possible.

 View adaptable at versions without EDF

Distributor for SRU



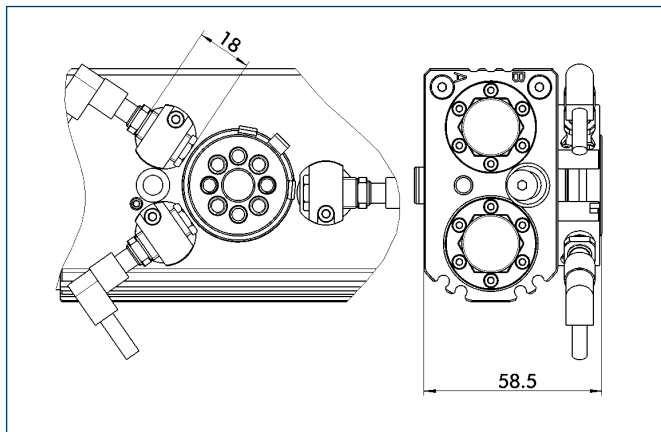
- ③ Adapter
- ②⑤ Fluid feed-through
- ⑥⑦ Distributor for media feed-through

The distributor (ID: 0357392) for SRU 20 and SRU 25 facilitates the use of the fluid feed-throughs, both at the direct attachment to the distributor and in the lines conveying the fluid inside the adapter plate. Thanks to the distributor, only a simple drilling pattern has to be drilled in the adapter plate situated between the pinion and the distributor.

① View adaptable at versions without EDF



Mounting kit for proximity switch at SRU without EDF



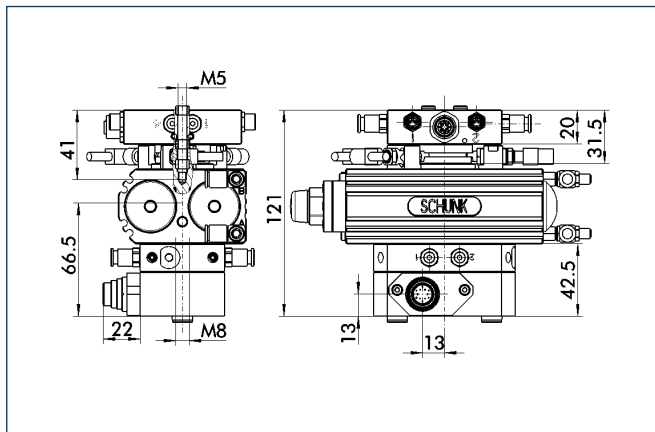
The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

Description	ID
AS-SRU 20	0357390
AS-SRU 20/25-4	0357391

① View adaptable at versions without EDF

Mounting kit for proximity switch at SRU with EDF



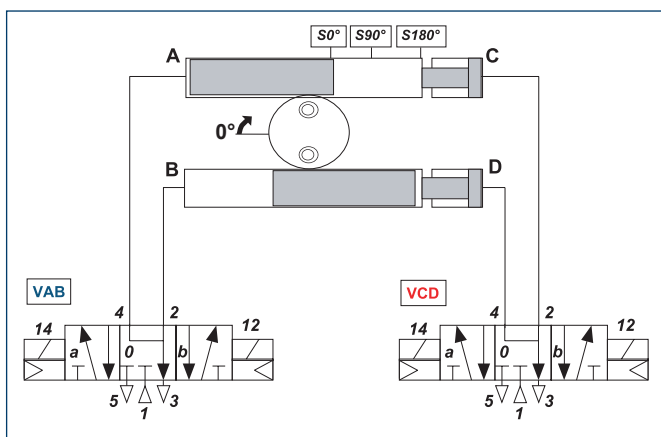
The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

① View adaptable at versions with EDF

The adaptor kit cannot be ordered individually. The SRU with EDF and adaptor kit is being delivered by SCHUNK completely mounted.

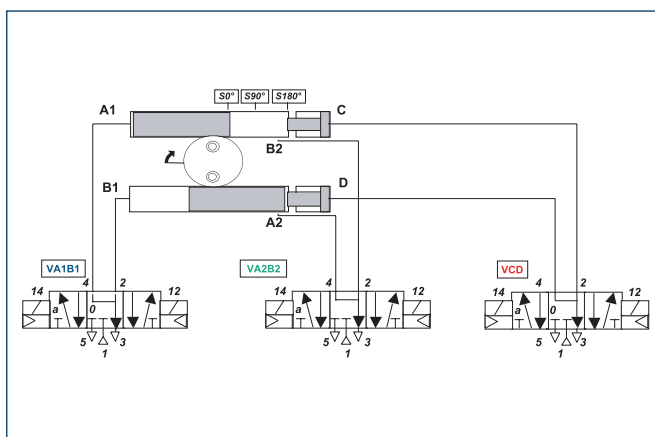
Pneumatic diagram of SRU-VM – Vertical axis



VM units with vertical swivel axis are generally actuated by two 5/3 directional control valves with bled center position. To prevent damage, it is essential that you pay attention to the actuation sequence in the Operating Manual.

① View applicable for version with or without EDF!

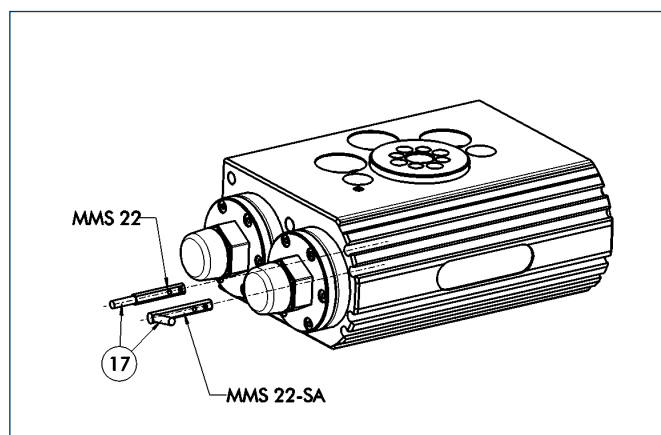
Pneumatic diagram of SRU-VM – horizontal axis



VM units with horizontal or non-vertical swivel axis must generally be actuated by three 5/3 directional control valves with bled center position. To prevent damage, it is essential that you pay attention to the actuation sequence in the Operating Manual.

① View applicable for version with or without EDF!

Sensor System



17 Cable outlet

End position monitoring: Electronic magnetic switches, for mounting in C-slot

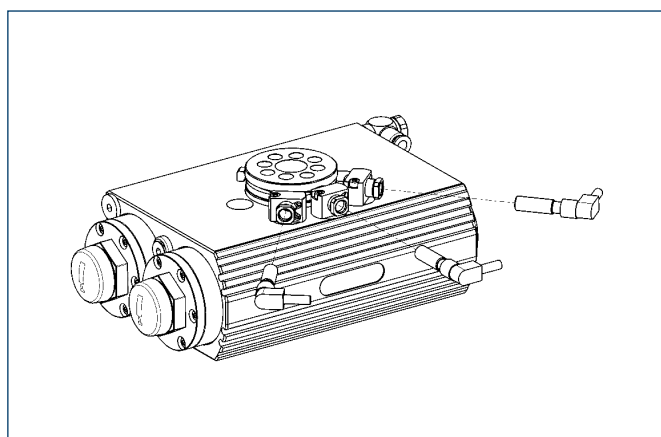
Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KA BW12-L 3P-0300-PNP	0301503
KA BW12-L 3P-0500-PNP	0301507
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497
KV BW12-SG12 3P-0030-PNP	0301595
KV BW12-SG12 3P-0100-PNP	0301596
KV BW12-SG12 3P-0200-PNP	0301597

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Assembly IN on SRU without EDF



End position monitoring:

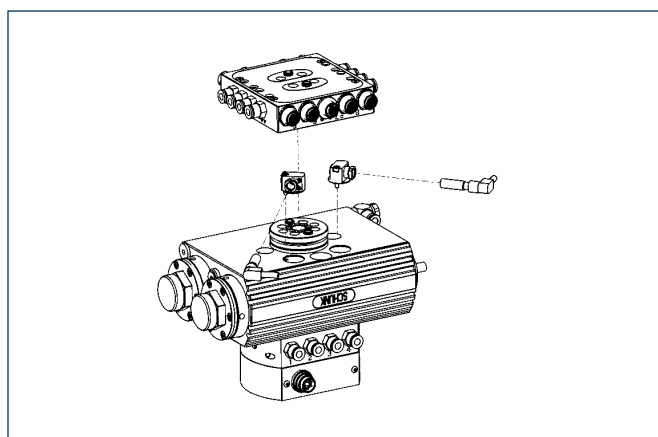
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRU 20	0357390	
AS-SRU 20/25-4	0357391	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	

① In general there are two sensors needed per swivel unit, with additional request of the middle position, three sensors plus optional an extension cable.

View adaptable at versions without EDF!

Assembly IN on SRU with EDF and add-on kit



End position monitoring:

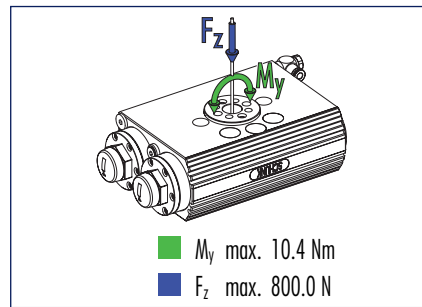
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	

① In general there are two sensors needed per swivel unit, with additional request of the middle position, three sensors plus optional an extension cable.

View adaptable at versions without EDF!

Pinion load



① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Angle of traverse 90° and small end position adjustability of 3°

Description		SRU 25.1-90-3	SRU 25.1-90-3-4	SRU 25.2-90-3	SRU 25.2-90-3-4
	ID	0357500	0357502	0357600	0357602
Torque	[Nm]	2.4	2.0	5.0	4.6
Rotating angle	[°]	90.0	90.0	90.0	90.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	1.6	1.8	1.6	1.8
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	30.0	30.0	60.0	60.0
Swiveling time with middle attached load	[s]	1.0	1.4	0.8	1.0
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3° and electric feed-through EDF

Description		SRU 25.1-90-3-4-EDF M5	SRU 25.1-90-3-4-EDF M8	SRU 25.2-90-3-4-EDF M5	SRU 25.2-90-3-4-EDF M8
	ID	0357503	0357504	0357603	0357604
Torque	[Nm]	2.0	2.0	4.6	4.6
Rotating angle	[°]	90.0	90.0	90.0	90.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	1.8 + 0.65	1.8 + 0.65	1.8 + 0.65	1.8 + 0.65
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	30.0	30.0	60.0	60.0
Swiveling time with middle attached load	[s]	1.4	1.4	1.0	1.0
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180° and small end position adjustability of 3°

Description		SRU 25.1-180-3	SRU 25.1-180-3-4	SRU 25.2-180-3	SRU 25.2-180-3-4
	ID	0357520	0357522	0357620	0357622
Torque	[Nm]	2.4	2.0	5.0	4.6
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	1.6	1.8	1.6	1.8
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	44.0	44.0	88.0	88.0
Swiveling time with middle attached load	[s]	1.1	1.5	0.9	1.1
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3° and electrical feed-through EDF

Description		SRU 25.1-180-3-4-EDF M5	SRU 25.1-180-3-4-EDF M8	SRU 25.2-180-3-4-EDF M5	SRU 25.2-180-3-4-EDF M8
	ID	0357523	0357524	0357623	0357624
Torque	[Nm]	2.0	2.0	4.6	4.6
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	1.8 + 0.65	1.8 + 0.65	1.8 + 0.65	1.8 + 0.65
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	44.0	44.0	88.0	88.0
Swiveling time with middle attached load	[s]	1.5	1.5	1.1	1.1
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the Econnections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, small end position adjustability of 3° and pneumatic center position

Description		SRU 25.1-180-3-M	SRU 25.1-180-3-M-4	SRU 25.2-180-3-M	SRU 25.2-180-3-M-4
	ID	0357530	0357532	0357630	0357632
Torque	[Nm]	2.4	2.0	5.0	4.6
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Adjustability of center position	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	2.2	2.35	2.2	2.35
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	44.0	44.0	88.0	88.0
Swiveling time with middle attached load	[s]	1.1	1.5	0.9	1.1
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3°, pneumatic center position and electric feed-through

Description		SRU 25.1-180-3-M-4-EDF M5	SRU 25.1-180-3-M-4-EDF M8	SRU 25.2-180-3-M-4-EDF M5	SRU 25.2-180-3-M-4-EDF M8
ID	ID	0357533	0357534	0357633	0357634
Torque	[Nm]	2.0	2.0	4.6	4.6
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	2.35 + 0.65	2.35 + 0.65	2.35 + 0.65	2.35 + 0.65
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	44.0	44.0	88.0	88.0
Swiveling time with middle attached load	[s]	1.5	1.5	1.1	1.1
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, small end position adjustability of 3° and locked center position

Description		SRU 25.2-180-3-VM	SRU 25.2-180-3-VM-4
	ID	0357640	0357642
Torque	[Nm]	5.0	4.6
Rotating angle	[°]	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0
Center position		VM (locked middle position)	VM (locked middle position)
Adjustability of center position	[°]	3.0	3.0
No. of fluid feed-throughs			4
IP class		65	65
Weight	[kg]	2.57	2.74
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	88.0	88.0
Swiveling time with middle attached load	[s]	0.9	1.1
Nominal pressure	[bar]	6.0	6.0
Minimum pressure	[bar]	4.0	4.0
Maximum pressure	[bar]	6.5	6.5
Diameter of connecting hose	[mm]	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0
Min. ambient temperature	[°C]	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0
Repeat accuracy	[°]	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3°, blocked center position and electric feed-through

Description		SRU 25.2-180-3-VM-4-EDF M5	SRU 25.2-180-3-VM-4-EDF M8
	ID	0357643	0357644
Torque	[Nm]	4.6	4.6
Rotating angle	[°]	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0
Center position		VM (locked middle position)	VM (locked middle position)
Central Position Adjustability	[°]	3.0	3.0
No. of fluid feed-throughs		4	4
IP class		65	65
Weight	[kg]	2.74 + 0.65	2.74 + 0.65
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	88.0	88.0
Swiveling time with middle attached load	[s]	1.1	1.1
Nominal pressure	[bar]	6.5	6.5
Minimum pressure	[bar]	4.0	4.0
Maximum pressure	[bar]	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0
Repeat accuracy	[°]	0.05	0.05
Number of E-fittings on the output end		4	4
Size of the E-connections on the output end.		M5	M8
Number of cores by EDF		6	6
maximum voltage by EDF	[V]	24.0	24.0
Max. current per wire	[A]	1.0	1.0
Max. overall current	[A]	1.0	1.0

Technical data

Angle of traverse 180° and large end position adjustability of 90°

Description		SRU 25.1-180-90	SRU 25.1-180-90-4	SRU 25.2-180-90	SRU 25.2-180-90-4
	ID	0357550	0357552	0357650	0357652
Torque	[Nm]	2.4	2.0	5.0	4.6
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	1.65	1.8	1.65	1.8
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	44.0	44.0	88.0	88.0
Swiveling time with middle attached load	[s]	1.1	1.5	0.9	1.1
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, large end position adjustability of 90° and electric feed-through EDF

Description		SRU 25.1-180-90-4-EDF M5	SRU 25.1-180-90-4-EDF M8	SRU 25.2-180-90-4-EDF M5	SRU 25.2-180-90-4-EDF M8
ID	ID	0357553	0357554	0357653	0357654
Torque	[Nm]	2.0	2.0	4.6	4.6
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	1.8 + 0.65	1.8 + 0.65	1.8 + 0.65	1.8 + 0.65
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	44.0	44.0	88.0	88.0
Swiveling time with middle attached load	[s]	1.5	1.5	1.1	1.1
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, large end position adjustability of 90° and pneumatic center position

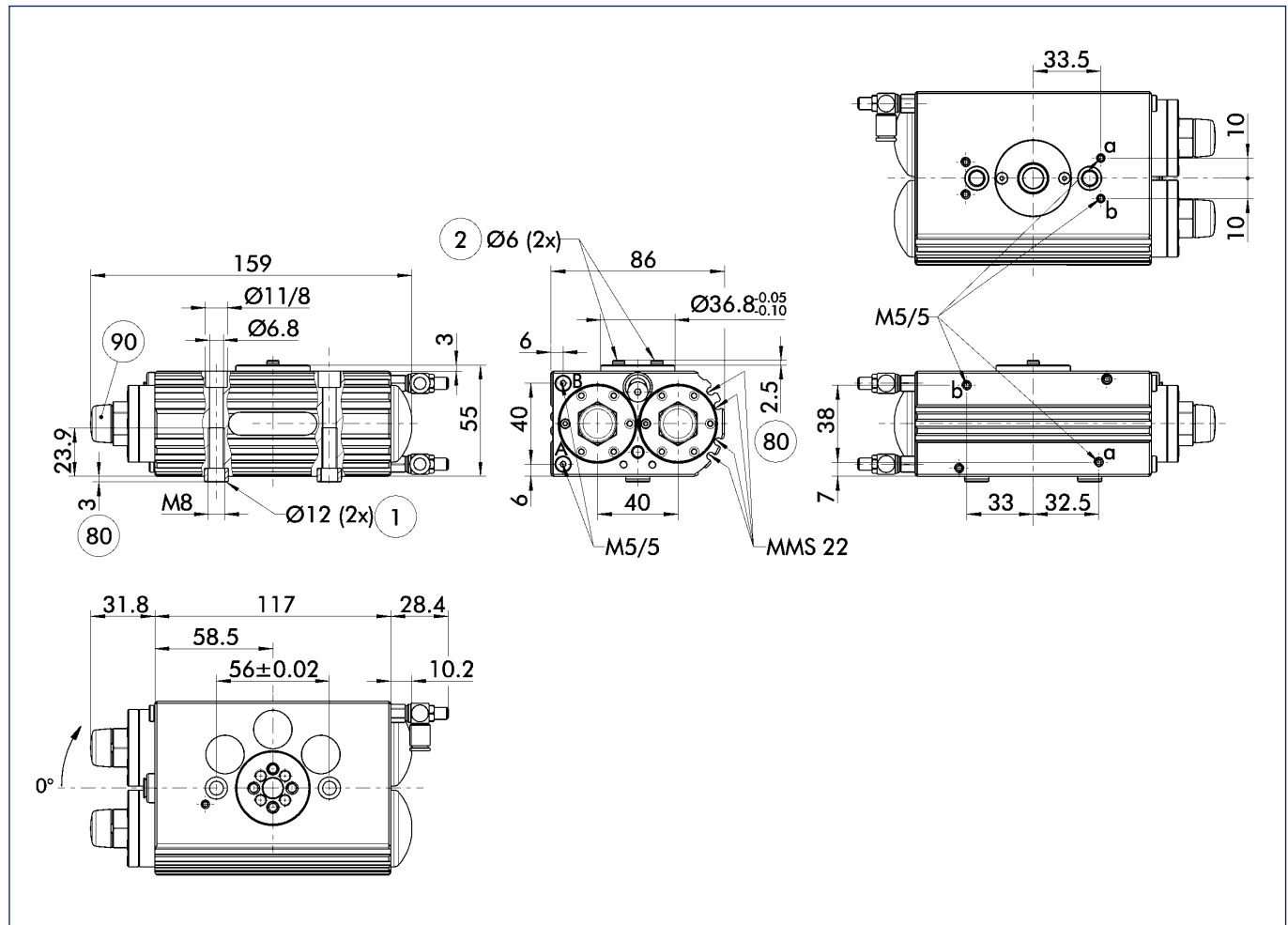
Description		SRU 25.1-180-90-M	SRU 25.1-180-90-M-4	SRU 25.2-180-90-M	SRU 25.2-180-90-M-4
	ID	0357560	0357562	0357660	0357662
Torque	[Nm]	2.4	2.0	5.0	4.6
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Adjustability of center position	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	2.23	2.4	2.23	2.4
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	44.0	44.0	88.0	88.0
Swiveling time with middle attached load	[s]	1.1	1.5	0.9	1.1
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05



Angle of traverse 180°, large end position adjustability of 90°, pneumatic center position and electric feed-through EDF

Description		SRU 25.1-180-90-M-4-EDF M5	SRU 25.1-180-90-M-4-EDF M8	SRU 25.2-180-90-M-4-EDF M5	SRU 25.2-180-90-M-4-EDF M8
ID	ID	0357563	0357564	0357663	0357664
Torque	[Nm]	2.0	2.0	4.6	4.6
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	2.4 + 0.65	2.4 + 0.65	2.4 + 0.65	2.4 + 0.65
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	44.0	44.0	88.0	88.0
Swiveling time with middle attached load	[s]	1.5	1.5	1.1	1.1
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Main views for SRU without EDF

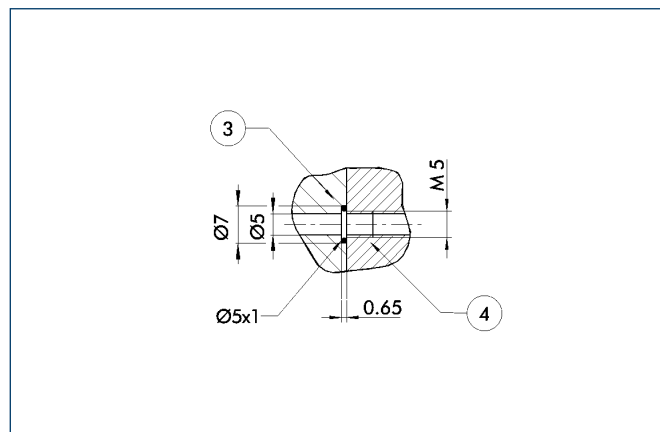


The main view shows the SRU in the most basic version, that is with an angle of traverse of 180°/90°, small end position adjustability of 3°, without center position and without fluid feed-through. Modifications to the drawings as a result of various options can be seen in the relevant additional views.

① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Linear unit connection
- ② Attachment connection
- 80 depth of the centering sleeve hole in the matching part
- 90 setting shock absorber-hub

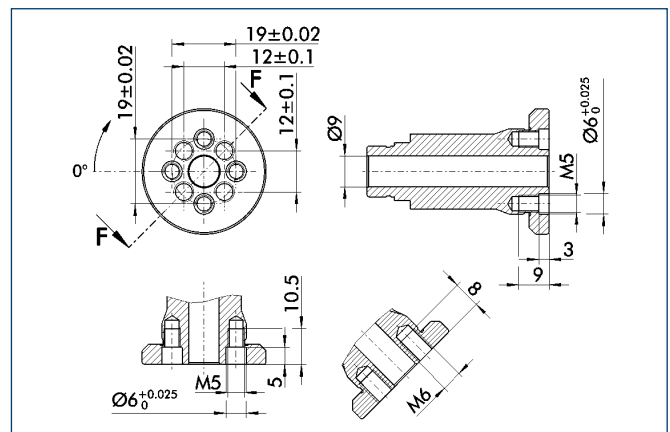
Hose-free direct connection



- ③ Adapter
- ④ Rotary unit

The direction connection is used for supplying compressed air without hoses, which are liable to faults. Instead, the pressure medium is conveyed through the bore-holes of the mounting plate.

Pinion with fluid feed-through



Pinion screw connection diagram for mounting the swiveling attachment. The „4x large thread for 4x screw and 2x flat fit for guide sleeve“ screw connection diagram is preferable to the „4x small thread for 2x screw and 2x dowel screw“ (in deep fit) screw connection diagram.

① View adaptable at versions without EDF

[illegible]

⑨2 change Bus-/Sensor feed-through

Technical drawing of the SCHUNK 90° adapter, showing three views: front, side, and top. The front view shows the adapter with the SCHUNK logo and a dimension of 48.3. The side view shows the adapter with a 90° angle. The top view shows the adapter with a circular feature and a dimension of 48.3.

Technical drawing of the M5/5 pump assembly, showing three views: front, side, and top.

Front View Dimensions:

- Top horizontal dimensions: 33.5, 23.5, 43, 28.4
- Left vertical dimension: 20
- Right vertical dimension: 19
- Bottom horizontal dimension: 19

Side View Dimensions:

- Width: 19

Top View Dimensions:

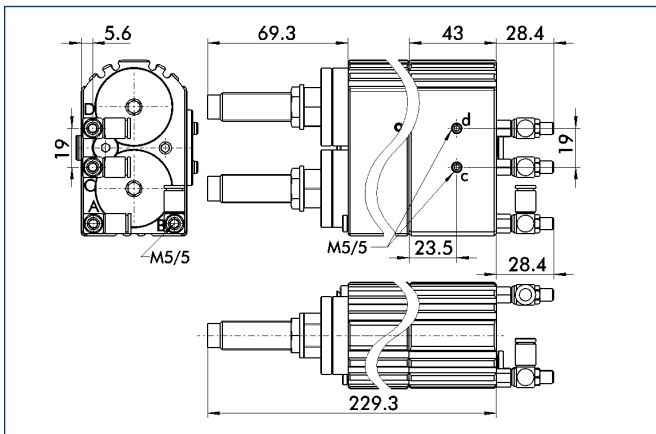
- Width: 19

Callouts:

- M5/6: Points to the top port on the front view.
- M5/5: Points to the bottom port on the front view.
- M5/5: Points to the side port on the front view.

View applicable for version with or without EDF!

Locked center position (VM)



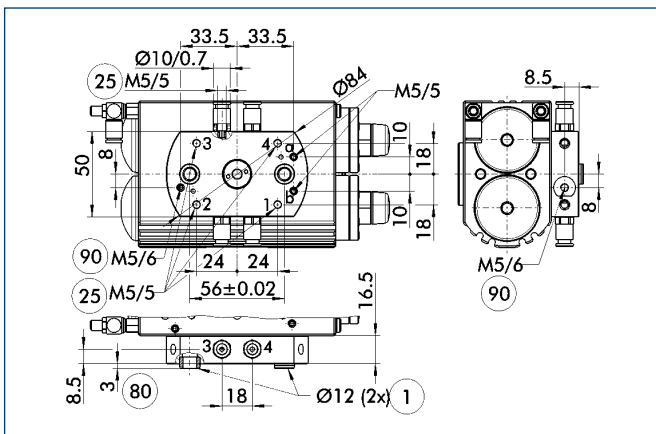
C,c Main/direct connection, center position

Dd, Main/direct connection, center position

Different dimensions with the „Locked center position (VM)“ option. The center position is locked. The unit travels to center position using the force of the main drive piston. Shock absorbers brake the travel to center position as fast as possible to prevent overshooting.

View applicable for version with or without EDF!

Connections for Medium-throughs

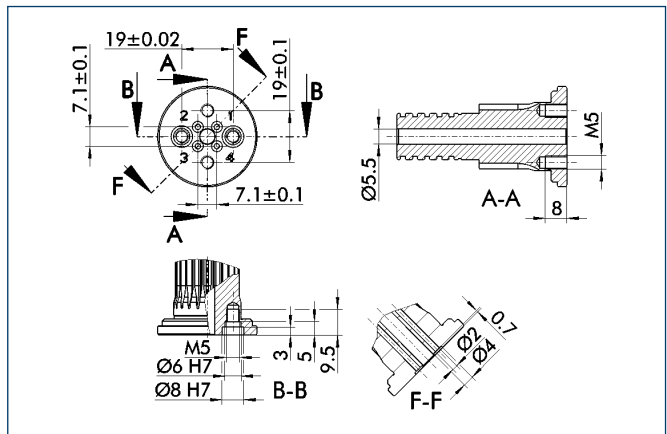


- ① Linear unit connection
②5 Fluid feed-through
⑧0 depth of the centering sleeve hole in the matching part
⑨0 Bleeder hole for unit with single compressed air action provided with pneumatic center position (.1-M)

Lower mounting plate for the „Fluid feed-through“ option. Vacuum, gases or fluids can be conveyed. The connection may be a screw type or a direct connection.

View adaptable at versions without EDF

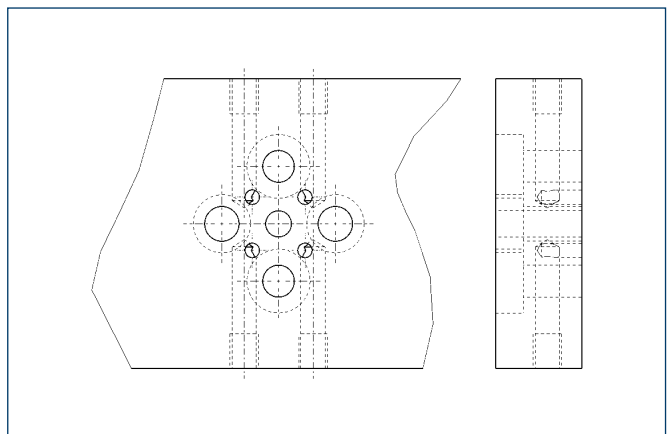
Pinion



Pinion screw connection diagram for the „Fluid feed-through“ option. The preferred drilling pattern is 2 x screws and 2 x screws with guide sleeve (in $\varnothing 8\text{ H7}$).

 View adaptable at versions without EDF

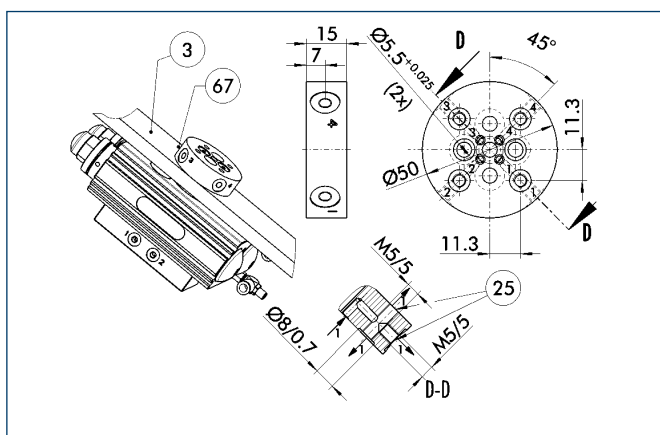
Adapter plate arrangement



Suggested here is an arrangement of the adapter plate which enables all fluid feed-throughs to be reached as easily as possible.

 View adaptable at versions without EDF

Distributor for SRU



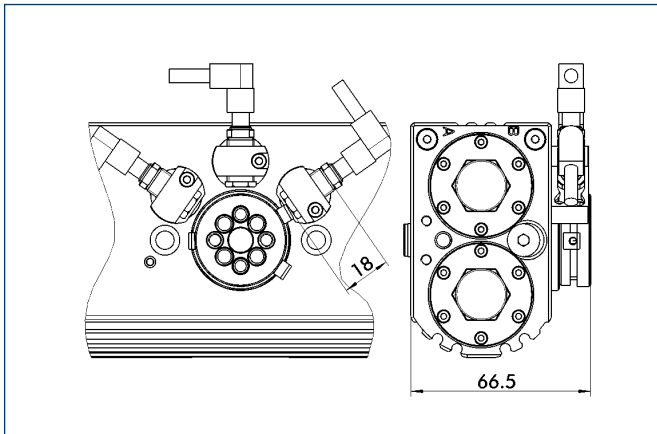
- ③ Adapter
- ②⑤ Fluid feed-through
- ⑥⑦ Distributor for media feed-through

The distributor (ID: 0357392) for SRU 20 and SRU 25 facilitates the use of the fluid feed-throughs, both at the direct attachment to the distributor and in the lines conveying the fluid inside the adapter plate. Thanks to the distributor, only a simple drilling pattern has to be drilled in the adapter plate situated between the pinion and the distributor.

① View adaptable at versions without EDF



Mounting kit for proximity switch at SRU without EDF



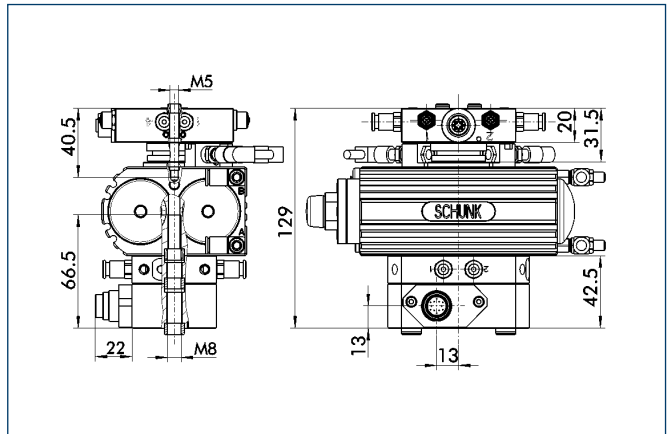
The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

Description	ID
AS-SRU 20/25-4	0357391
AS-SRU 25	0357590

① View adaptable at versions without EDF

Mounting kit for proximity switch at SRU with EDF



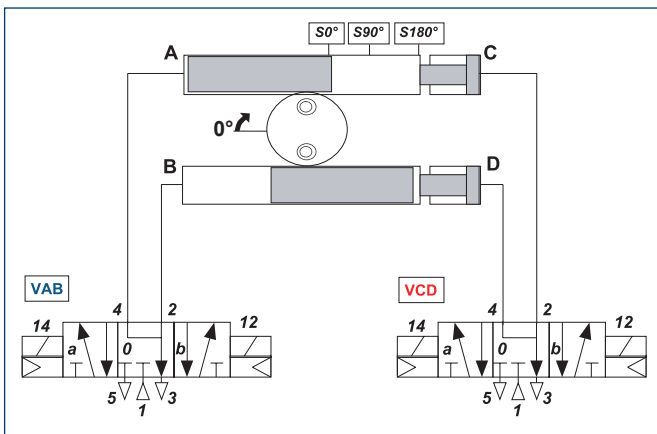
The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

① View adaptable at versions with EDF

The adaptor kit cannot be ordered individually. The SRU with EDF and adaptor kit is being delivered by SCHUNK completely mounted.

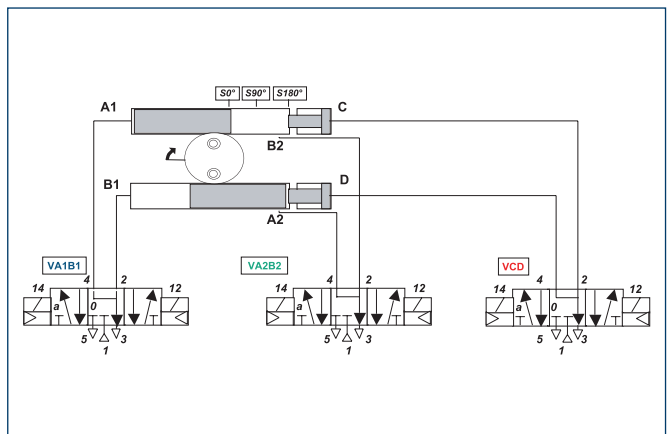
Pneumatic diagram of SRU-VM – Vertical axis



VM units with vertical swivel axis are generally actuated by two 5/3 directional control valves with bled center position. To prevent damage, it is essential that you pay attention to the actuation sequence in the Operating Manual.

① View applicable for version with or without EDF!

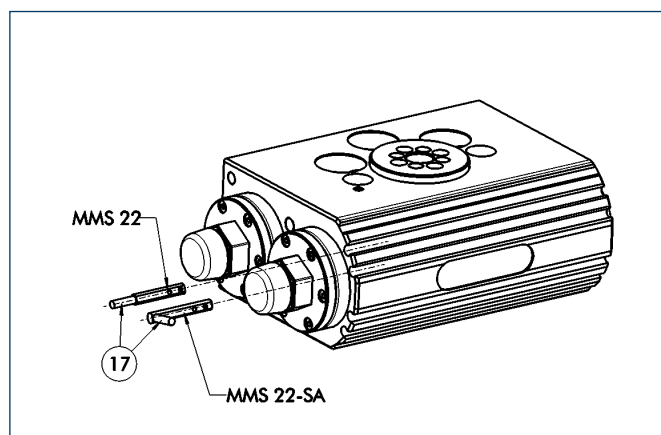
Pneumatic diagram of SRU-VM – horizontal axis



VM units with horizontal or non-vertical swivel axis must generally be actuated by three 5/3 directional control valves with bled center position. To prevent damage, it is essential that you pay attention to the actuation sequence in the Operating Manual.

① View applicable for version with or without EDF!

Sensor System



17 Cable outlet

End position monitoring: Electronic magnetic switches, for mounting in C-slot

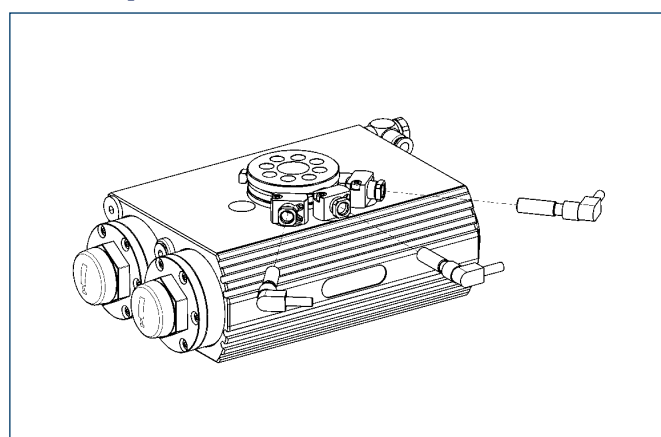
Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KA BW12-L 3P-0300-PNP	0301503
KA BW12-L 3P-0500-PNP	0301507
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497
KV BW12-SG12 3P-0030-PNP	0301595
KV BW12-SG12 3P-0100-PNP	0301596
KV BW12-SG12 3P-0200-PNP	0301597

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Assembly IN on SRU without EDF



End position monitoring:

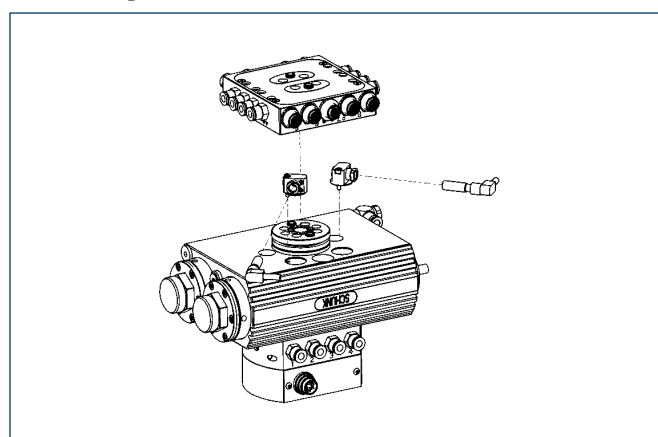
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRU 20/25-4	0357391	
AS-SRU 25	0357590	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	

① In general there are two sensors needed per swivel unit, with additional request of the middle position, three sensors plus optional an extension cable.

View adaptable at versions without EDF!

Assembly IN on SRU with EDF and add-on kit



End position monitoring:

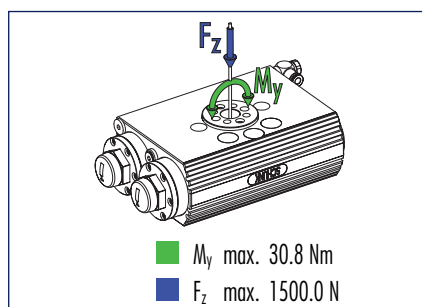
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	

① In general there are two sensors needed per swivel unit, with additional request of the middle position, three sensors plus optional an extension cable.

View adaptable at versions without EDF!

Pinion load



① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Angle of traverse 90° and small end position adjustability of 3°

Description		SRU 35.1-90-3	SRU 35.1-90-3-4	SRU 35.2-90-3	SRU 35.2-90-3-4
	ID	0357700	0357702	0357800	0357802
Torque	[Nm]	6.6	6.0	14.0	13.4
Rotating angle	[°]	90.0	90.0	90.0	90.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	2.65	2.97	2.65	2.97
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	66.0	66.0	132.0	132.0
Swiveling time with middle attached load	[s]	1.3	1.6	1.0	1.1
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3° and electric feed-through EDF

Description		SRU 35.1-90-3-4-EDF M5	SRU 35.1-90-3-4-EDF M8	SRU 35.2-90-3-4-EDF M5	SRU 35.2-90-3-4-EDF M8
	ID	0357703	0357704	0357803	0357804
Torque	[Nm]	6.0	6.0	13.4	13.4
Rotating angle	[°]	90.0	90.0	90.0	90.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	2.97 + 0.75	2.97 + 0.75	2.97 + 0.75	2.97 + 0.75
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	66.0	66.0	132.0	132.0
Swiveling time with middle attached load	[s]	1.6	1.6	1.1	1.1
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180° and small end position adjustability of 3°

Description		SRU 35.1-180-3	SRU 35.1-180-3-4	SRU 35.2-180-3	SRU 35.2-180-3-4
	ID	0357720	0357722	0357820	0357822
Torque	[Nm]	6.6	6.0	14.0	13.4
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	2.63	2.95	2.63	2.95
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	108.0	108.0	216.0	216.0
Swiveling time with middle attached load	[s]	1.5	1.8	1.1	1.3
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3° and electrical feed-through EDF

Description		SRU 35.1-180-3-4-EDF M5	SRU 35.1-180-3-4-EDF M8	SRU 35.2-180-3-4-EDF M5	SRU 35.2-180-3-4-EDF M8
	ID	0357723	0357724	0357823	0357824
Torque	[Nm]	6.0	6.0	13.4	13.4
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	2.95 + 0.75	2.95 + 0.75	2.95 + 0.75	2.95 + 0.75
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	108.0	108.0	216.0	216.0
Swiveling time with middle attached load	[s]	1.8	1.8	1.3	1.3
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, small end position adjustability of 3° and pneumatic center position

Description		SRU 35.1-180-3-M	SRU 35.1-180-3-M-4	SRU 35.2-180-3-M	SRU 35.2-180-3-M-4
	ID	0357730	0357732	0357830	0357832
Torque	[Nm]	6.6	6.0	14.0	13.4
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Adjustability of center position	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	3.63	3.95	3.63	3.95
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	108.0	108.0	216.0	216.0
Swiveling time with middle attached load	[s]	1.5	1.8	1.1	1.3
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3°, pneumatic center position and electric feed-through

Description		SRU 35.1-180-3-M-4-EDF M5	SRU 35.1-180-3-M-4-EDF M8	SRU 35.2-180-3-M-4-EDF M5	SRU 35.2-180-3-M-4-EDF M8
ID	ID	0357733	0357734	0357833	0357834
Torque	[Nm]	6.0	6.0	13.4	13.4
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	3.95 + 0.75	3.95 + 0.75	3.95 + 0.75	3.95 + 0.75
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	108.0	108.0	216.0	216.0
Swiveling time with middle attached load	[s]	1.8	1.8	1.3	1.3
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, small end position adjustability of 3° and locked center position

Description		SRU 35.2-180-3-VM	SRU 35.2-180-3-VM-4
	ID	0357840	0357842
Torque	[Nm]	14.0	13.4
Rotating angle	[°]	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0
Center position		VM (locked middle position)	VM (locked middle position)
Adjustability of center position	[°]	3.0	3.0
No. of fluid feed-throughs			4
IP class		65	65
Weight	[kg]	4.15	4.47
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	216.0	216.0
Swiveling time with middle attached load	[s]	1.1	1.3
Nominal pressure	[bar]	6.0	6.0
Minimum pressure	[bar]	4.0	4.0
Maximum pressure	[bar]	6.5	6.5
Diameter of connecting hose	[mm]	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0
Min. ambient temperature	[°C]	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0
Repeat accuracy	[°]	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3°, blocked center position and electric feed-through

Description		SRU 35.2-180-3-VM-4-EDF M5	SRU 35.2-180-3-VM-4-EDF M8
ID	ID	0357843	0357844
Torque	[Nm]	13.4	13.4
Rotating angle	[°]	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0
Center position		VM (locked middle position)	VM (locked middle position)
Central Position Adjustability	[°]	3.0	3.0
No. of fluid feed-throughs		4	4
IP class		65	65
Weight	[kg]	4.47 + 0.75	4.47 + 0.75
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	216.0	216.0
Swiveling time with middle attached load	[s]	1.3	1.3
Nominal pressure	[bar]	6.5	6.5
Minimum pressure	[bar]	4.0	4.0
Maximum pressure	[bar]	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0
Repeat accuracy	[°]	0.05	0.05
Number of E-fittings on the output end		4	4
Size of the E-connections on the output end.		M5	M8
Number of cores by EDF		6	6
maximum voltage by EDF	[V]	24.0	24.0
Max. current per wire	[A]	1.0	1.0
Max. overall current	[A]	1.0	1.0

Technical data

Angle of traverse 180° and large end position adjustability of 90°

Description		SRU 35.1-180-90	SRU 35.1-180-90-4	SRU 35.2-180-90	SRU 35.2-180-90-4
	ID	0357750	0357752	0357850	0357852
Torque	[Nm]	6.6	6.0	14.0	13.4
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	2.75	3.07	2.75	3.07
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	108.0	108.0	216.0	216.0
Swiveling time with middle attached load	[s]	1.5	1.8	1.1	1.3
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, large end position adjustability of 90° and electric feed-through EDF

Description		SRU 35.1-180-90-4-EDF M5	SRU 35.1-180-90-4-EDF M8	SRU 35.2-180-90-4-EDF M5	SRU 35.2-180-90-4-EDF M8
ID	ID	0357753	0357754	0357853	0357854
Torque	[Nm]	6.0	6.0	13.4	13.4
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	3.07	3.07	3.07	3.07
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	108.0	108.0	216.0	216.0
Swiveling time with middle attached load	[s]	1.8	1.8	1.3	1.3
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, large end position adjustability of 90° and pneumatic center position

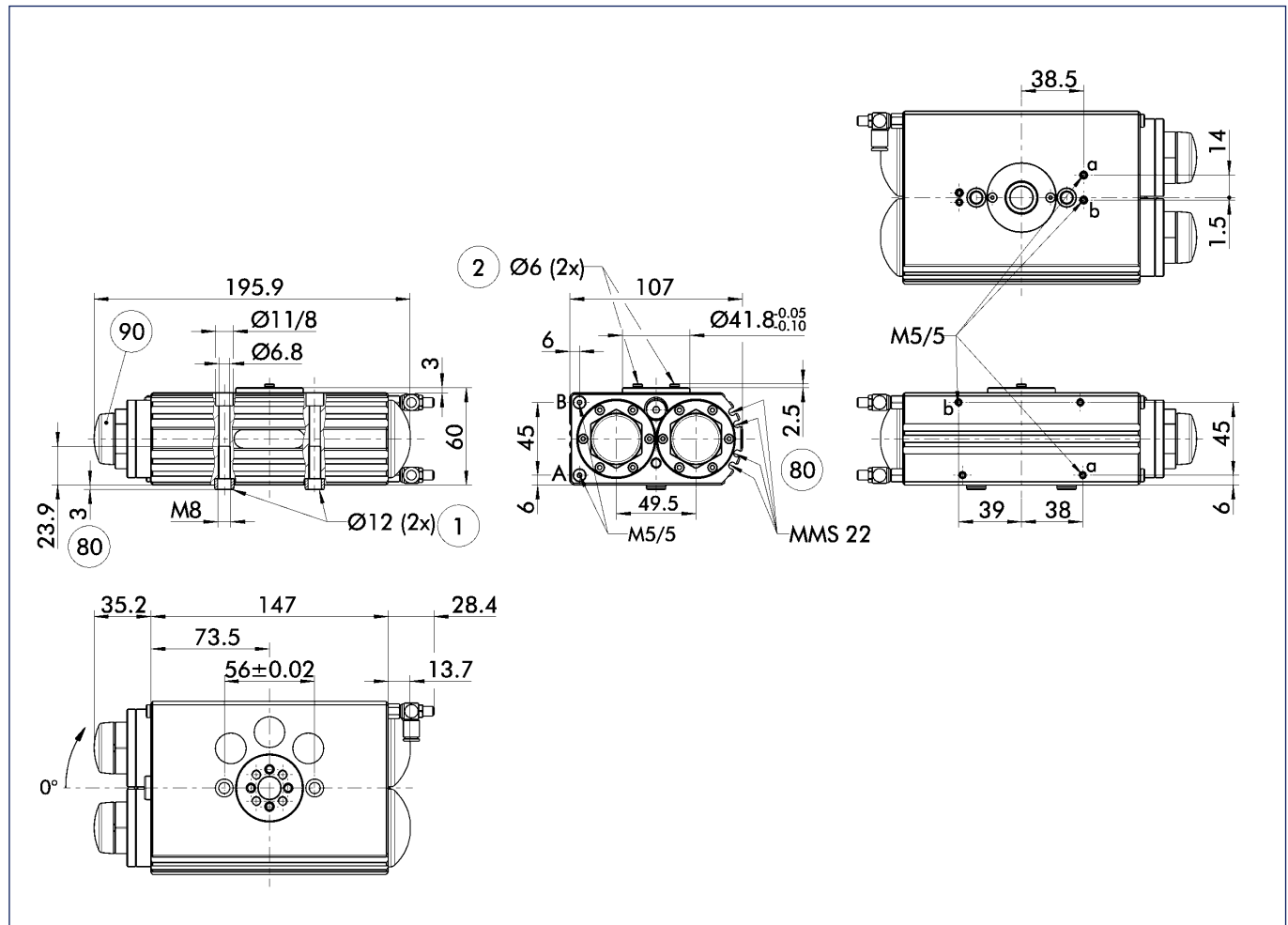
Description		SRU 35.1-180-90-M	SRU 35.1-180-90-M-4	SRU 35.2-180-90-M	SRU 35.2-180-90-M-4
	ID	0357760	0357762	0357860	0357862
Torque	[Nm]	6.6	6.0	14.0	13.4
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Adjustability of center position	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			4		4
IP class		65	65	65	65
Weight	[kg]	3.75	4.07	3.75	4.07
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	108.0	108.0	216.0	216.0
Swiveling time with middle attached load	[s]	1.5	1.8	1.1	1.3
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05



Angle of traverse 180°, large end position adjustability of 90°, pneumatic center position and electric feed-through EDF

Description		SRU 35.1-180-90-M-4-EDF M5	SRU 35.1-180-90-M-4-EDF M8	SRU 35.2-180-90-M-4-EDF M5	SRU 35.2-180-90-M-4-EDF M8
ID	ID	0357763	0357764	0357863	0357864
Torque	[Nm]	6.0	6.0	13.4	13.4
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4
IP class		65	65	65	65
Weight	[kg]	4.07 + 0.75	4.07 + 0.75	4.07 + 0.75	4.07 + 0.75
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	108.0	108.0	216.0	216.0
Swiveling time with middle attached load	[s]	1.8	1.8	1.3	1.3
Nominal pressure	[bar]	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4
Size of the E-connections on the output end.		M5	M8	M5	M8
Number of cores by EDF		6	6	6	6
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0

Main views for SRU without EDF

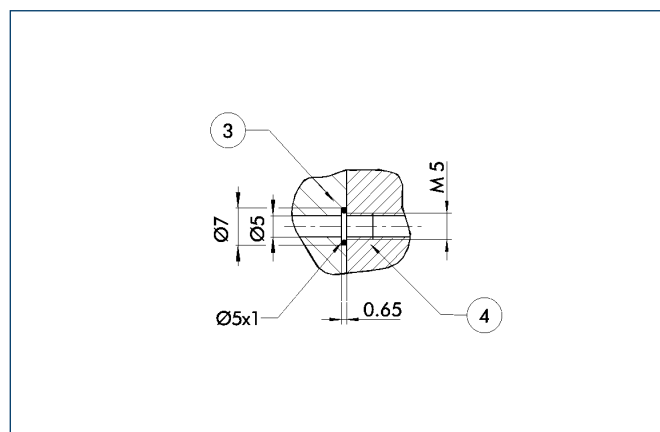


The main view shows the SRU in the most basic version, that is with an angle of traverse of 180°/90°, small end position adjustability of 3°, without center position and without fluid feed-through. Modifications to the drawings as a result of various options can be seen in the relevant additional views.

① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Linear unit connection
- ② Attachment connection
- 80 depth of the centering sleeve hole in the matching part
- 90 setting shock absorber-hub

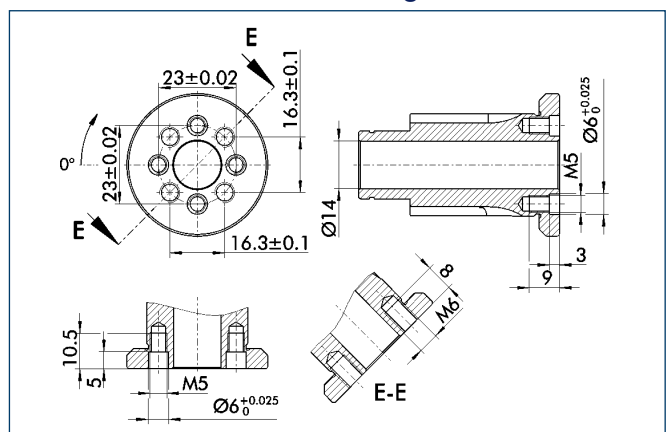
Hose-free direct connection



- ③ Adapter
- ④ Rotary unit

The direction connection is used for supplying compressed air without hoses, which are liable to faults. Instead, the pressure medium is conveyed through the bore-holes of the mounting plate.

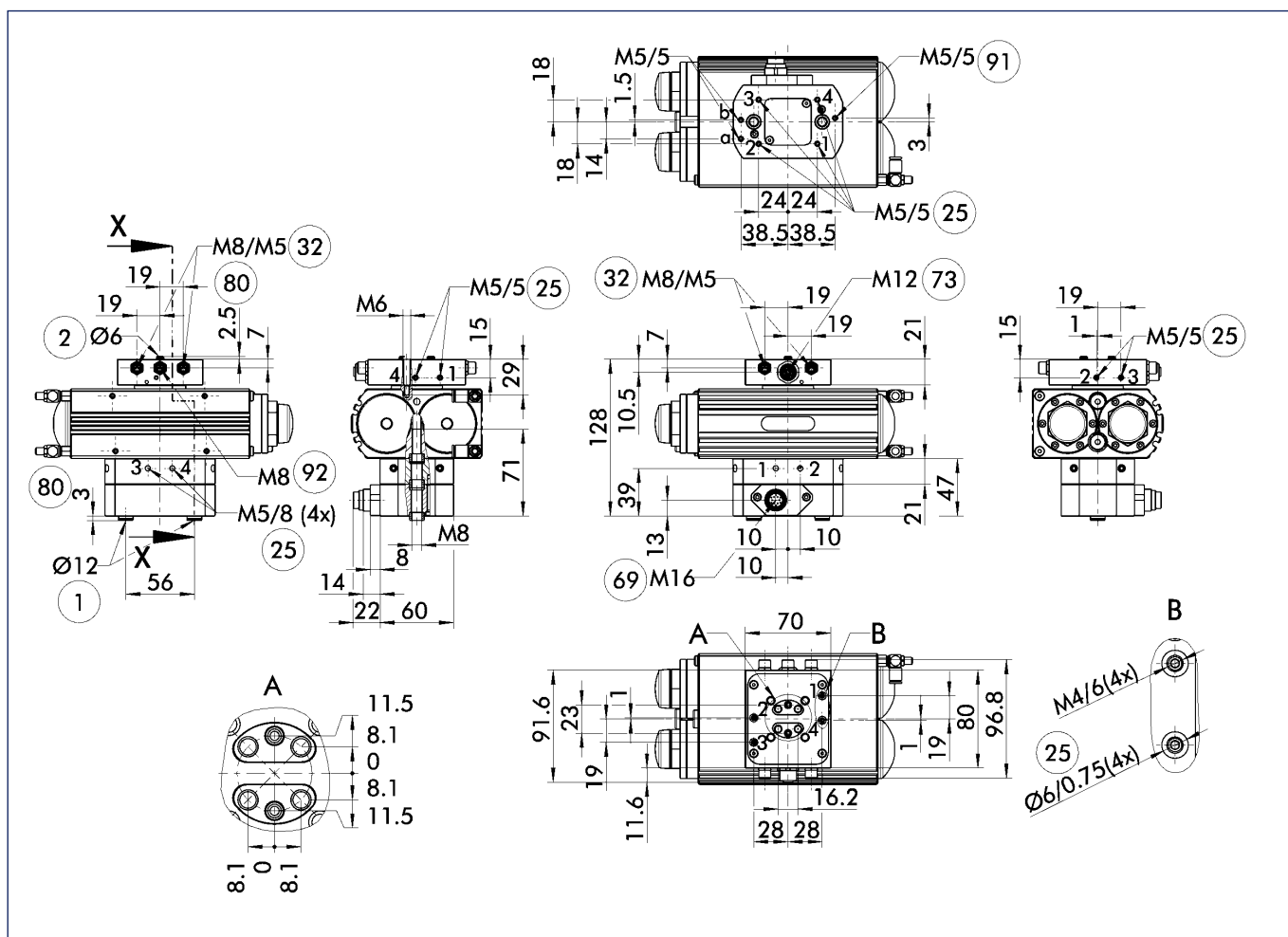
Pinion with fluid feed-through



Pinion screw connection diagram for mounting the swiveling attachment. The „4x large thread for 4x screw and 2x flat fit for guide sleeve“ screw connection diagram is preferable to the „4x small thread for 2x screw and 2x dowel screw“ (in deep fit) screw connection diagram.

① View adaptable at versions without EDF

Main views for SRU with EDF



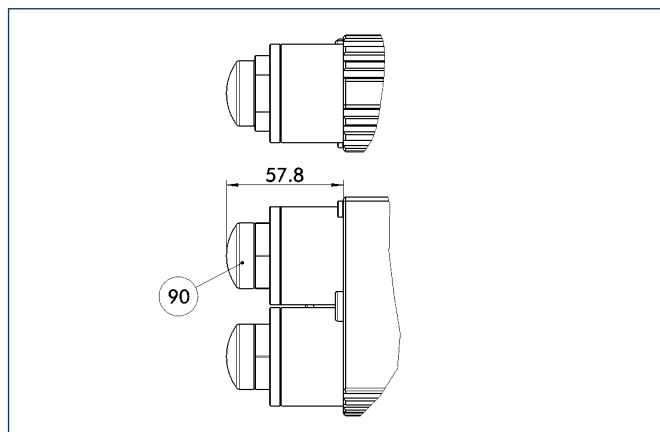
The main view shows the SRU in the most basic version, that is with an angle of traverse of 180°/90°, small end position adjustability of 3°, without center position and without fluid feed-through. Modifications to the drawings as a result of various options can be seen in the relevant additional views.

① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Rotary unit connection
- ② Attachment connection
- ②⑤ Fluid feed-through

- ③② flange socket for sensor feed-through
- ⑥⑨ Connection for electric feed-through
- ⑦③ Connection BUS-throughs
- ⑧① depth of the centering sleeve hole in the matching part
- ⑨① ventilation-drill for simple admitted SRU with middle position
- ⑨② change Bus-/Sensor feed-through

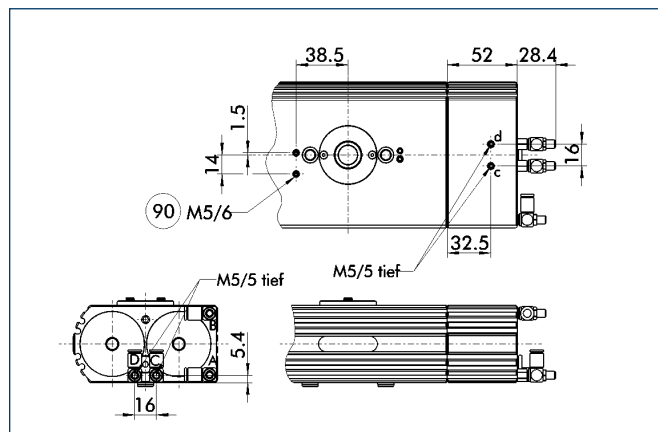
Large end position adjustability 90°



⑨① setting shock absorber-hub

Different dimensions with the option „Large end position adjustability (90°)“ This permits the end positions to be adjusted by up to 93°. More information can be found in the introduction to the series.

Pneumatic center position (M)



- C,c Main/direct connection, center position
- D,d Main/direct connection, center position

⑨① Bleeder hole for unit with single compressed air action (.1)

Different dimensions with the „Pneumatic Center Position (M)“ option. Heavy attachments may have to level out until they reach the correct position. The locked center position (VM) offers a remedy. Units with single compressed air action (.1) and pneumatic center position need an essential bleeder hose.

① View applicable for version with or without EDF!

Technical drawing of the 3000 series pressure washer, showing front, side, and top views with dimensions.

Front View (Left): Shows the trigger gun and spray lance assembly. Dimensions include a height of 16 and a width of 5.4. The connection is labeled M5/5.

Side View (Top): Shows the side profile of the unit. Dimensions include a total width of 83, a distance of 52 between the trigger gun and the motor, and a distance of 28.4 from the motor to the rear connection. The rear connection is labeled M5/5. Internal components are labeled 'c' and 'd'.

Top View (Bottom): Shows the top profile of the unit. Dimensions include a total length of 282 and a distance of 32.5 from the trigger gun to the motor.

Dd, Main/direct connection, center position

View applicable for version with or without EDF!

[illegible]

- Lower mounting plate for the „Fluid feed-through“ option. Vacuum, gases or fluids can be conveyed. The connection may be a screw type or a direct connection.

 View adaptable at versions without EDF

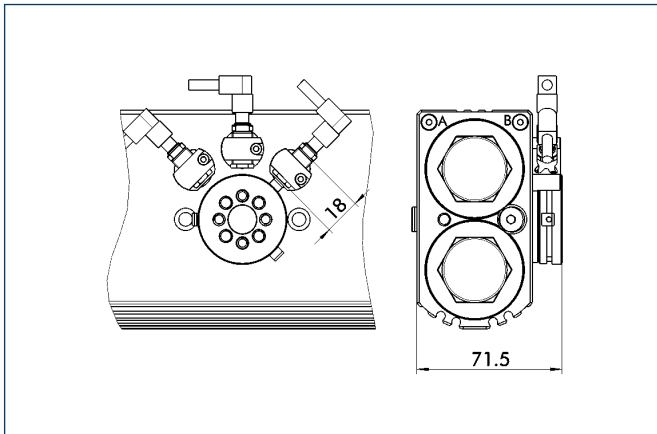
 View adaptable at versions without EDF

 View adaptable at versions without EDF

-

 View adaptable at versions without EDF

Mounting kit for proximity switch at SRU without EDF



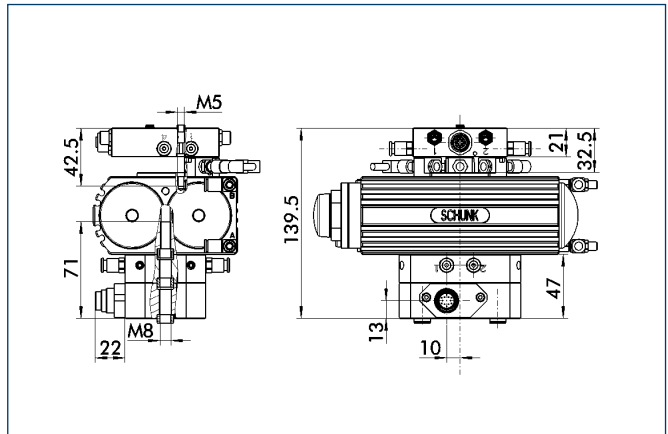
The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

Description	ID
AS-SRU 35	0357790
AS-SRU 35-4	0357791

① View adaptable at versions without EDF

Mounting kit for proximity switch at SRU with EDF



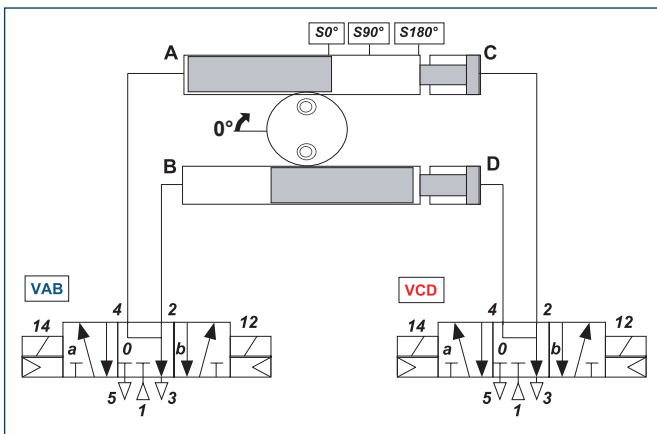
The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

① View adaptable at versions with EDF

The adaptor kit cannot be ordered individually. The SRU with EDF and adaptor kit is being delivered by SCHUNK completely mounted.

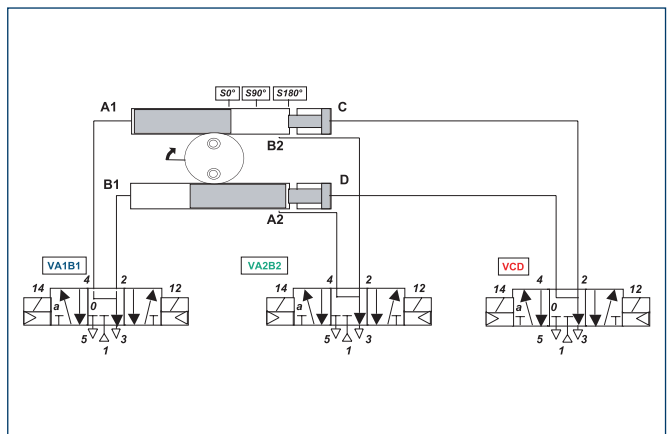
Pneumatic diagram of SRU-VM – Vertical axis



VM units with vertical swivel axis are generally actuated by two 5/3 directional control valves with bled center position. To prevent damage, it is essential that you pay attention to the actuation sequence in the Operating Manual.

① View applicable for version with or without EDF!

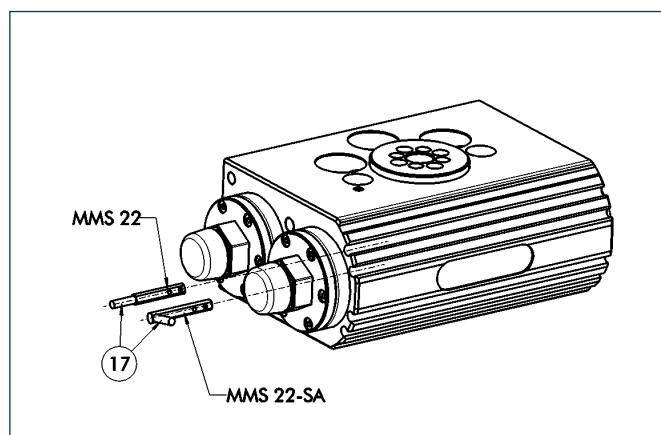
Pneumatic diagram of SRU-VM – horizontal axis



VM units with horizontal or non-vertical swivel axis must generally be actuated by three 5/3 directional control valves with bled center position. To prevent damage, it is essential that you pay attention to the actuation sequence in the Operating Manual.

① View applicable for version with or without EDF!

Sensor System



17 Cable outlet

End position monitoring: Electronic magnetic switches, for mounting in C-slot

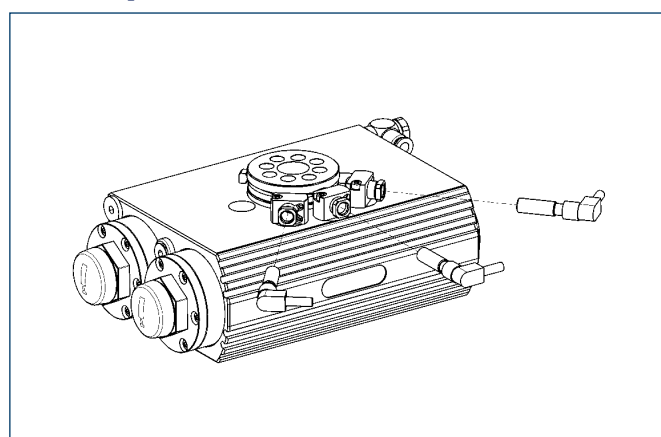
Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KA BW12-L 3P-0300-PNP	0301503
KA BW12-L 3P-0500-PNP	0301507
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497
KV BW12-SG12 3P-0030-PNP	0301595
KV BW12-SG12 3P-0100-PNP	0301596
KV BW12-SG12 3P-0200-PNP	0301597

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Assembly IN on SRU without EDF



End position monitoring:

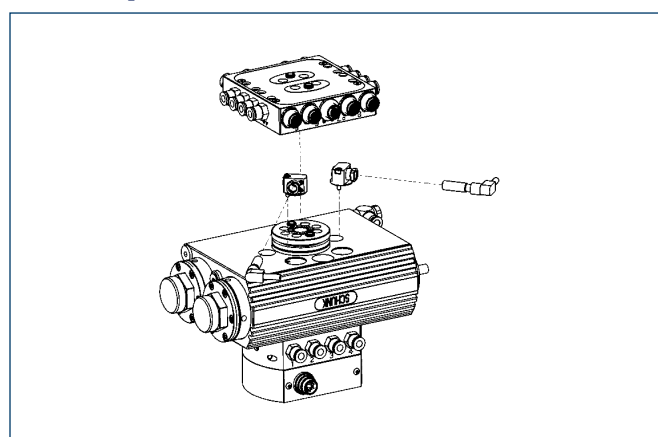
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRU 35	0357790	
AS-SRU 35-4	0357791	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	

① In general there are two sensors needed per swivel unit, with additional request of the middle position, three sensors plus optional an extension cable.

View adaptable at versions without EDF!

Assembly IN on SRU with EDF and add-on kit



End position monitoring:

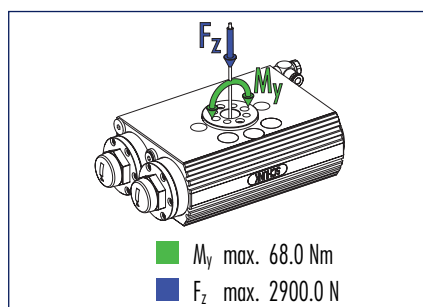
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	

① In general there are two sensors needed per swivel unit, with additional request of the middle position, three sensors plus optional an extension cable.

View adaptable at versions without EDF!

Pinion load



① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Angle of traverse 90° and small end position adjustability of 3°

Description		SRU 40.1-90-3	SRU 40.1-90-3-8	SRU 40.2-90-3	SRU 40.2-90-3-8
	ID	0357900	0357902	0358000	0358002
Torque	[Nm]	10.0	9.2	20.0	19.2
Rotating angle	[°]	90.0	90.0	90.0	90.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	4.2	4.9	4.2	4.9
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	104.0	104.0	208.0	208.0
Swiveling time with middle attached load	[s]	1.8	2.0	1.4	1.6
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3° and electric feed-through EDF

Description		SRU 40.1-90-3-8-EDF M5	SRU 40.1-90-3-8-EDF M8	SRU 40.1-90-3-8-EDF M12	SRU 40.2-90-3-8-EDF M5	SRU 40.2-90-3-8-EDF M8	SRU 40.2-90-3-8-EDF M12
	ID	0357903	0357904	0357905	0358003	0358004	0358005
Torque	[Nm]	9.2	9.2	9.2	19.2	19.2	19.2
Rotating angle	[°]	90.0	90.0	90.0	90.0	90.0	90.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	4.9 + 1.35	4.9 + 1.35	4.9 + 1.35	4.9 + 1.35	4.9 + 1.35	4.9 + 1.35
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	104.0	104.0	104.0	208.0	208.0	208.0
Swiveling time with middle attached load	[s]	2.0	2.0	2.0	1.6	1.6	1.6
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180° and small end position adjustability of 3°

Description		SRU 40.1-180-3	SRU 40.1-180-3-8	SRU 40.2-180-3	SRU 40.2-180-3-8
	ID	0357920	0357922	0358020	0358022
Torque	[Nm]	10.0	9.2	20.0	19.2
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	4.1	4.8	4.1	4.8
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	168.0	168.0	336.0	336.0
Swiveling time with middle attached load	[s]	2.0	2.2	1.6	1.8
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3° and electrical feed-through EDF

Description		SRU 40.1-180-3-8-EDF M5	SRU 40.1-180-3-8-EDF M8	SRU 40.1-180-3-8-EDF M12	SRU 40.2-180-3-8-EDF M5	SRU 40.2-180-3-8-EDF M8	SRU 40.2-180-3-8-EDF M12
ID	ID	0357923	0357924	0357925	0358023	0358024	0358025
Torque	[Nm]	9.2	9.2	9.2	19.2	19.2	19.2
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	4.8 + 1.35	4.8 + 1.35	4.8 + 1.35	4.8 + 1.35	4.8 + 1.35	4.8 + 1.35
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	168.0	168.0	168.0	336.0	336.0	336.0
Swiveling time with middle attached load	[s]	2.2	2.2	2.2	1.8	1.8	1.8
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, small end position adjustability of 3° and pneumatic center position

Description		SRU 40.1-180-3-M	SRU 40.1-180-3-M-8	SRU 40.2-180-3-M	SRU 40.2-180-3-M-8
	ID	0357930	0357932	0358030	0358032
Torque	[Nm]	10.0	9.2	20.0	19.2
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Adjustability of center position	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	5.5	6.2	5.5	6.2
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	168.0	168.0	336.0	336.0
Swiveling time with middle attached load	[s]	2.0	2.2	1.6	1.8
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3°, pneumatic center position and electric feed-through

Description		SRU 40.1-180-3-M-8-EDF M5	SRU 40.1-180-3-M-8-EDF M8	SRU 40.1-180-3-M-8-EDF M12	SRU 40.2-180-3-M-8-EDF M5	SRU 40.2-180-3-M-8-EDF M8	SRU 40.2-180-3-M-8-EDF M12
ID	ID	0357933	0357934	0357935	0358033	0358034	0358035
Torque	[Nm]	9.2	9.2	9.2	19.2	19.2	19.2
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0	3.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	6.2 + 1.35	6.2 + 1.35	6.2 + 1.35	6.2 + 1.35	6.2 + 1.35	6.2 + 1.35
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	168.0	168.0	168.0	336.0	336.0	336.0
Swiveling time with middle attached load	[s]	2.2	2.2	2.2	1.8	1.8	1.8
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, small end position adjustability of 3° and locked center position

Description		SRU 40.2-180-3-VM	SRU 40.2-180-3-VM-8
	ID	0358040	0358042
Torque	[Nm]	20.0	19.2
Rotating angle	[°]	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0
Center position		VM (locked middle position)	VM (locked middle position)
Adjustability of center position	[°]	3.0	3.0
No. of fluid feed-throughs			8
IP class		65	65
Weight	[kg]	6.5	7.3
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	336.0	336.0
Swiveling time with middle attached load	[s]	1.6	1.8
Nominal pressure	[bar]	6.0	6.0
Minimum pressure	[bar]	4.0	4.0
Maximum pressure	[bar]	6.5	6.5
Diameter of connecting hose	[mm]	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0
Min. ambient temperature	[°C]	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0
Repeat accuracy	[°]	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3°, blocked center position and electric feed-through

Description		SRU 40.2-180-3-VM-8-EDF M5	SRU 40.2-180-3-VM-8-EDF M8	SRU 40.2-180-3-VM-8-EDF M12
ID	ID	0358043	0358044	0358045
Torque	[Nm]	19.2	19.2	19.2
Rotating angle	[°]	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0
Center position		VM (locked middle position)	VM (locked middle position)	VM (locked middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8
IP class		65	65	65
Weight	[kg]	7.3 + 1.35	7.3 + 1.35	7.3 + 1.35
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	336.0	336.0	336.0
Swiveling time with middle attached load	[s]	1.8	1.8	1.8
Nominal pressure	[bar]	6.5	6.5	6.5
Minimum pressure	[bar]	4.0	4.0	4.0
Maximum pressure	[bar]	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8
Size of the E-connections on the output end.		M5	M8	M12
Number of cores by EDF		10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0

Technical data

Angle of traverse 180° and large end position adjustability of 90°

Description		SRU 40.1-180-90	SRU 40.1-180-90-8	SRU 40.2-180-90	SRU 40.2-180-90-8
	ID	0357950	0357952	0358050	0358052
Torque	[Nm]	10.0	9.2	20.0	19.2
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	4.3	5.0	4.3	5.0
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	168.0	168.0	336.0	336.0
Swiveling time with middle attached load	[s]	2.0	2.2	1.6	1.8
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, large end position adjustability of 90° and electric feed-through EDF

Description		SRU 40.1-180-90-8-EDF M5	SRU 40.1-180-90-8-EDF M8	SRU 40.1-180-90-8-EDF M12	SRU 40.2-180-90-8-EDF M5	SRU 40.2-180-90-8-EDF M8	SRU 40.2-180-90-8-EDF M12
ID	ID	0357953	0357954	0357955	0358053	0358054	0358055
Torque	[Nm]	9.2	9.2	9.2	19.2	19.2	19.2
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0	90.0	90.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	5.0 + 1.35	5.0 + 1.35	5.0 + 1.35	5.0 + 1.35	5.0 + 1.35	5.0 + 1.35
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	168.0	168.0	168.0	336.0	336.0	336.0
Swiveling time with middle attached load	[s]	2.2	2.2	2.2	1.8	1.8	1.8
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, large end position adjustability of 90° and pneumatic center position

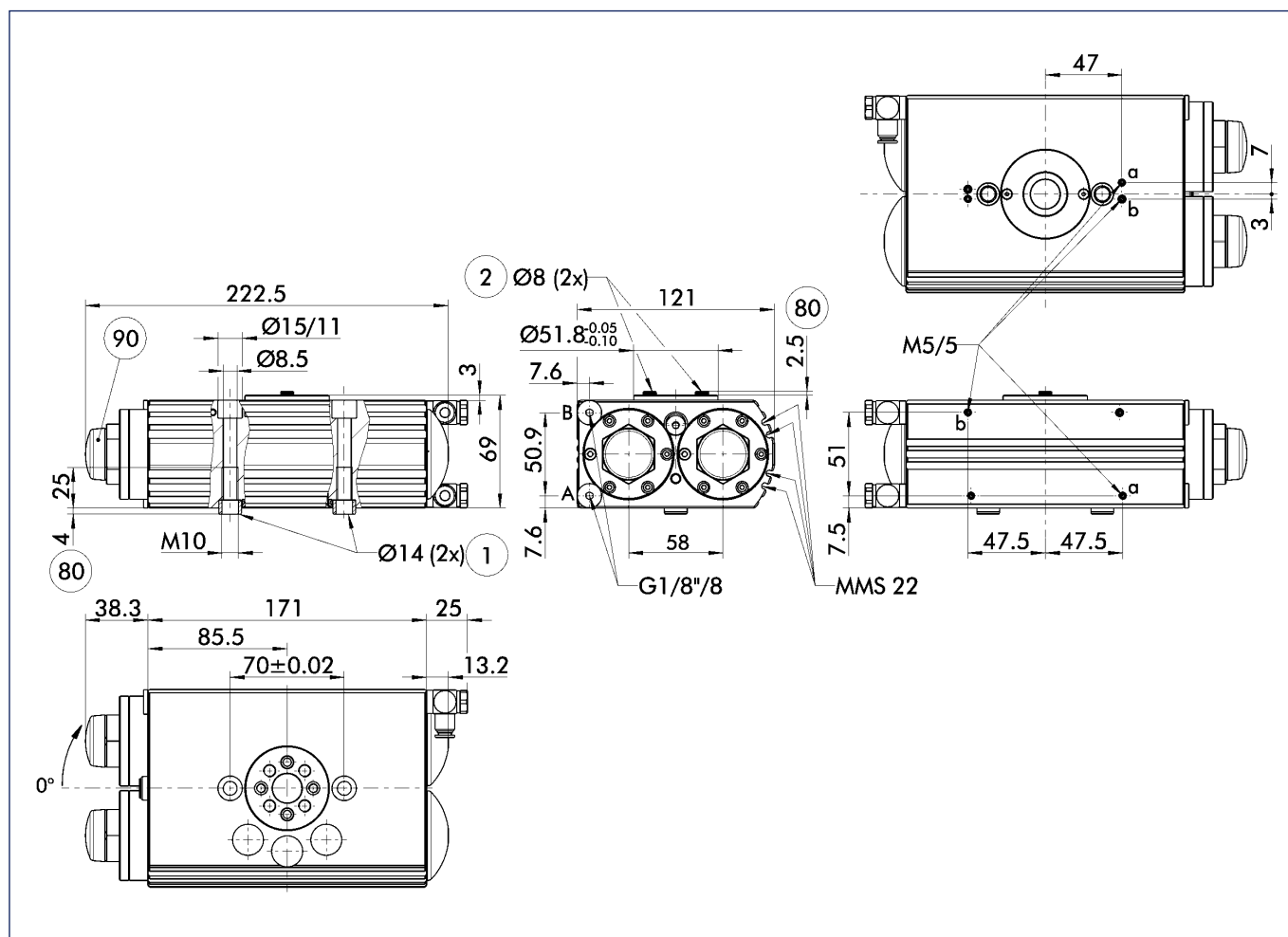
Description		SRU 40.1-180-90-M	SRU 40.1-180-90-M-8	SRU 40.2-180-90-M	SRU 40.2-180-90-M-8
	ID	0357960	0357962	0358060	0358062
Torque	[Nm]	10.0	9.2	20.0	19.2
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Adjustability of center position	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	5.7	6.4	5.7	6.4
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	168.0	168.0	336.0	336.0
Swiveling time with middle attached load	[s]	2.0	2.2	1.6	1.8
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05



Angle of traverse 180°, large end position adjustability of 90°, pneumatic center position and electric feed-through EDF

Description		SRU 40.1-180-90-M-8-EDF M5	SRU 40.1-180-90-M-8-EDF M8	SRU 40.1-180-90-M-8-EDF M12	SRU 40.2-180-90-M-8-EDF M5	SRU 40.2-180-90-M-8-EDF M8	SRU 40.2-180-90-M-8-EDF M12
ID	ID	0357963	0357964	0357965	0358063	0358064	0358065
Torque	[Nm]	9.2	9.2	9.2	19.2	19.2	19.2
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0	90.0	90.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	6.4 + 1.35	6.4 + 1.35	6.4 + 1.35	6.4 + 1.35	6.4 + 1.35	6.4 + 1.35
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	168.0	168.0	168.0	336.0	336.0	336.0
Swiveling time with middle attached load	[s]	2.2	2.2	2.2	1.8	1.8	1.8
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Main views for SRU without EDF

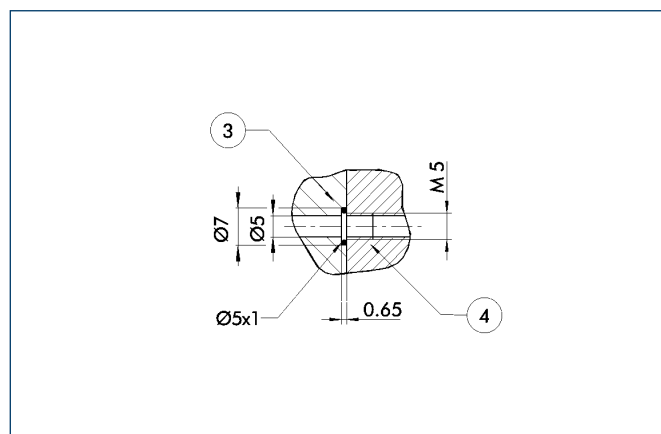


The main view shows the SRU in the most basic version, that is with an angle of traverse of $180^{\circ}/90^{\circ}$, small end position adjustability of 3° , without center position and without fluid feed-through. Modifications to the drawings as a result of various options can be seen in the relevant additional views.

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
B,b Main/direct connection, anti-clockwise rotary unit
① Linear unit connection
② Attachment connection
③ depth of the centering sleeve hole in the matching part
④ setting shock absorber-hub

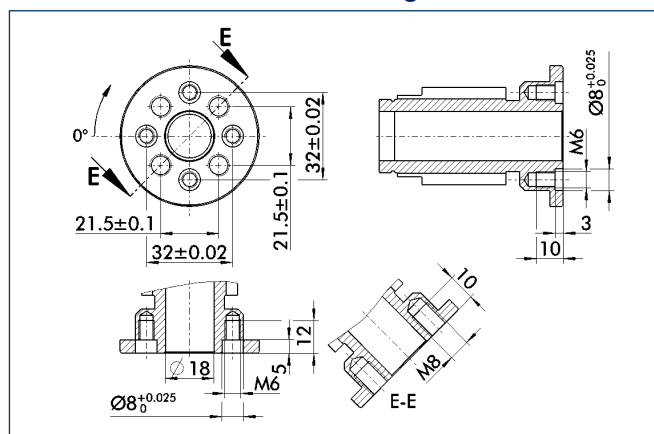
Hose-free direct connection



- ③ Adapter
- ④ Rotary unit

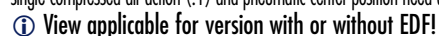
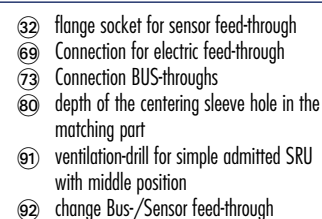
The direction connection is used for supplying compressed air without hoses, which are liable to faults. Instead, the pressure medium is conveyed through the bore-holes of the mounting plate.

Pinion with fluid feed-through

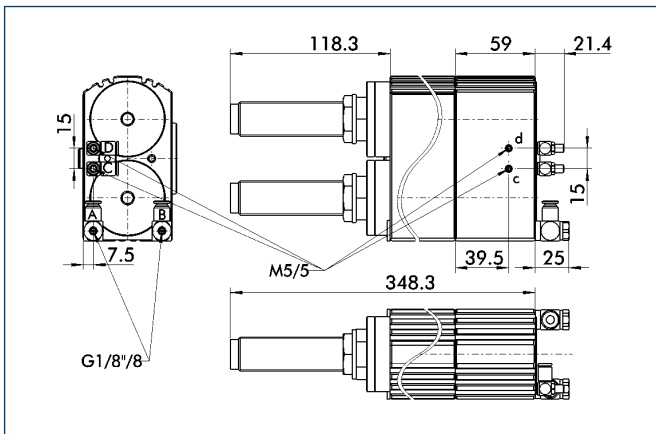


Pinion screw connection diagram for mounting the swiveling attachment. The „4x large thread for 4x screw and 2x flat fit for guide sleeve“ screw connection diagram is preferable to the „4x small thread for 2x screw and 2x dowel screw“ (in deep fit) screw connection diagram.

- ① View adaptable at versions without EDF



Locked center position (VM)



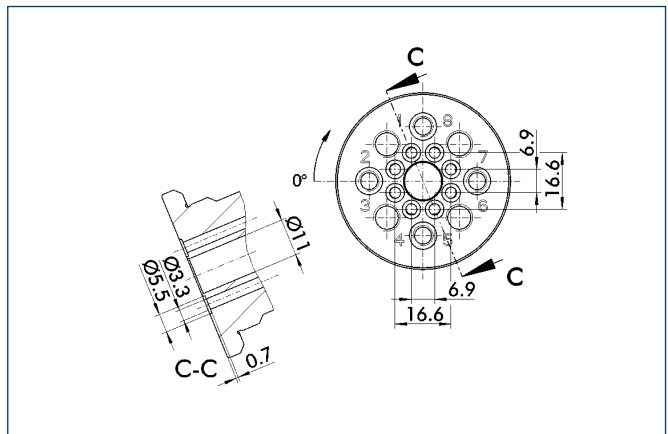
C, c Main/direct connection, center position

D, d Main/direct connection, center position

Different dimensions with the „Locked center position (VM)“ option. The center position is locked. The unit travels to center position using the force of the main drive piston. Shock absorbers brake the travel to center position as fast as possible to prevent overshooting.

① View applicable for version with or without EDF!

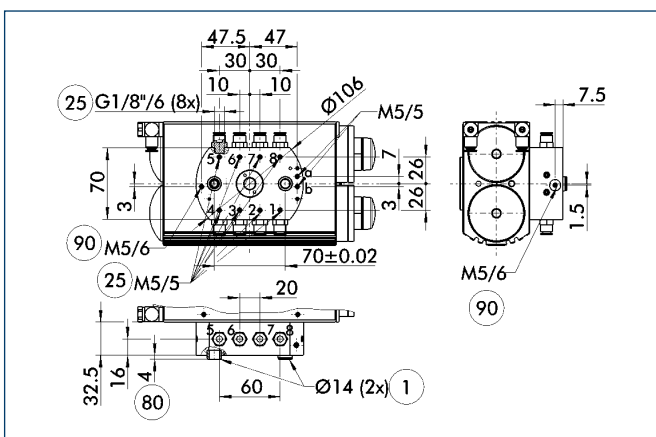
Pinion



Pinion screw connection diagram for mounting the swiveling attachment. The „4x large thread for 4x screw and 2x flat fit for guide sleeve“ screw connection diagram is preferable to the „4x small thread for 2x screw and 2x dowel screw“ (in deep fit) screw connection diagram.

① View adaptable at versions without EDF

Connections for Medium-throughs



① Rotary unit connection

25 Fluid feed-through

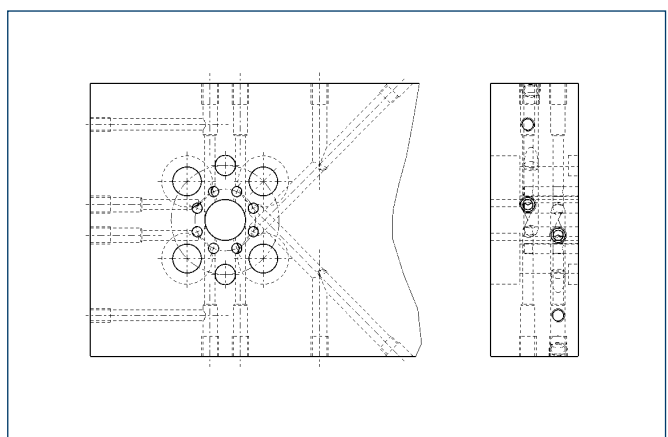
80 depth of the centering sleeve hole in the matching part

90 Bleeder hole for unit with single compressed air action provided with pneumatic center position (.1-M)

Lower mounting plate for the „Fluid feed-through“ option. Vacuum, gases or fluids can be conveyed. The connection may be a screw type or a direct connection.

① View adaptable at versions without EDF

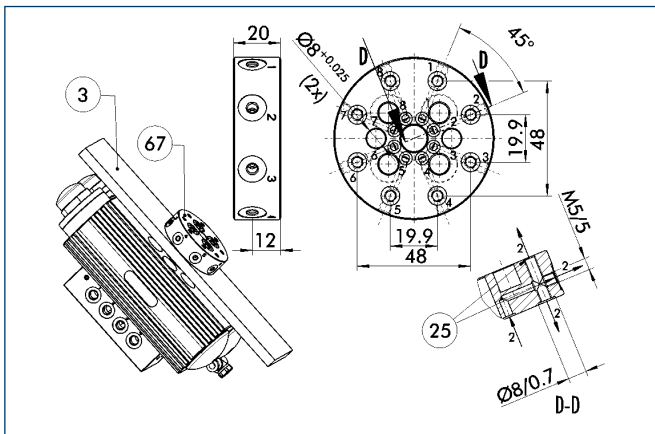
Adapter plate arrangement



Suggested here is an arrangement of the adapter plate which enables all fluid feed-throughs to be reached as easily as possible.

① View adaptable at versions without EDF

Distributor for SRU



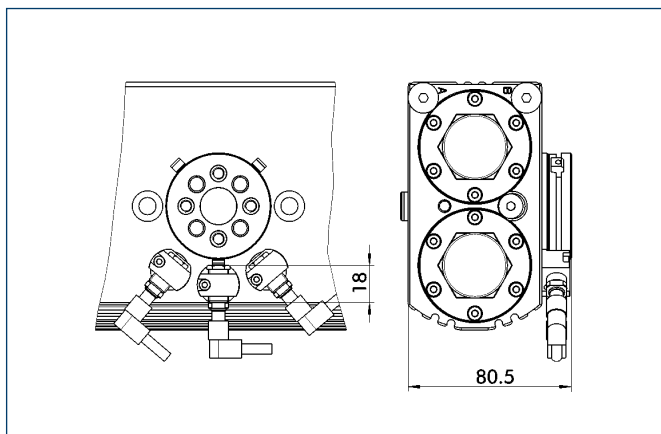
- ③ Adapter
- ②⑤ Fluid feed-through
- ⑥⑦ Distributor for media feed-through

The distributor (ID: 0357992) for SRU 40 facilitates the use of the fluid feed-throughs, both at the direct attachment to the distributor and in the lines conveying the fluid inside the adapter plate. Thanks to the distributor, only a simple drilling pattern has to be drilled in the adapter plate situated between the pinion and the distributor.

 View adaptable at versions without EDF



Mounting kit for proximity switch at SRU without EDF



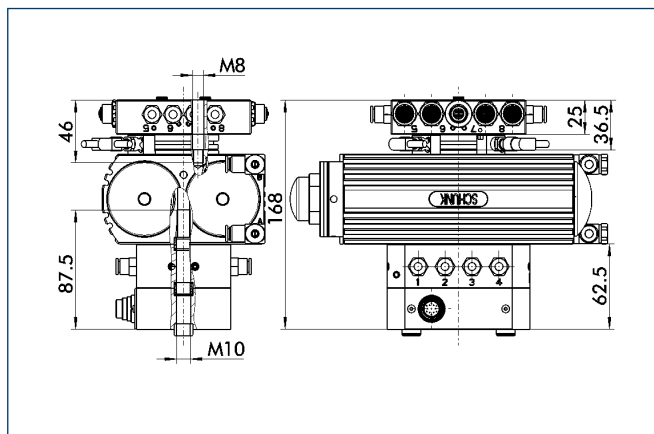
The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

Description	ID
AS-SRU 40	0357990
AS-SRU 40-8	0357991

① View adaptable at versions without EDF

Mounting kit for proximity switch at SRU with EDF



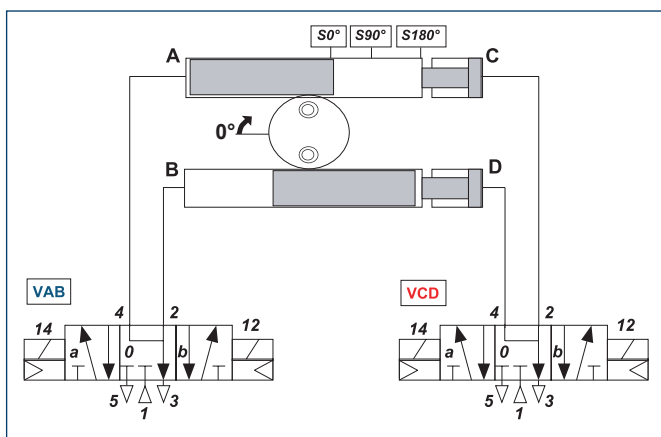
The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

① View adaptable at versions with EDF

The adaptor kit cannot be ordered individually. The SRU with EDF and adaptor kit is being delivered by SCHUNK completely mounted.

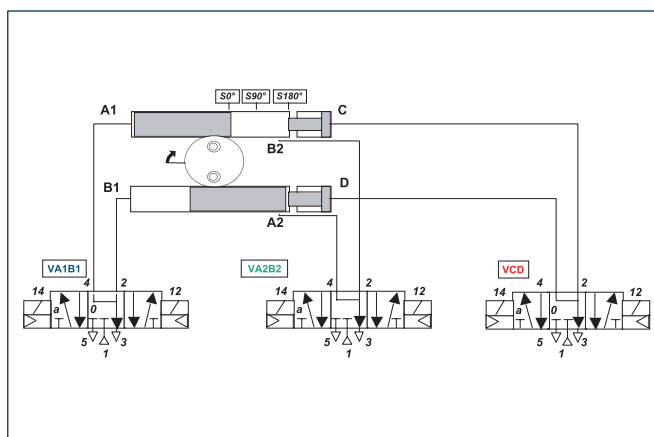
Pneumatic diagram of SRU-VM – Vertical axis



VM units with vertical swivel axis are generally actuated by two 5/3 directional control valves with bled center position. To prevent damage, it is essential that you pay attention to the actuation sequence in the Operating Manual.

① View applicable for version with or without EDF!

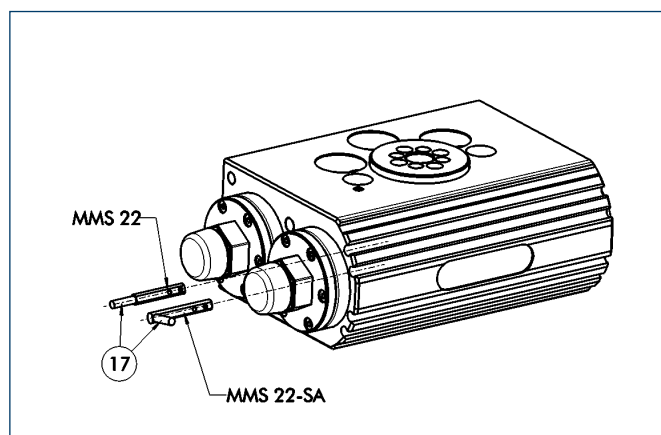
Pneumatic diagram of SRU-VM – horizontal axis



VM units with horizontal or non-vertical swivel axis must generally be actuated by three 5/3 directional control valves with bled center position. To prevent damage, it is essential that you pay attention to the actuation sequence in the Operating Manual.

① View applicable for version with or without EDF!

Sensor System



17 Cable outlet

End position monitoring: Electronic magnetic switches, for mounting in C-slot

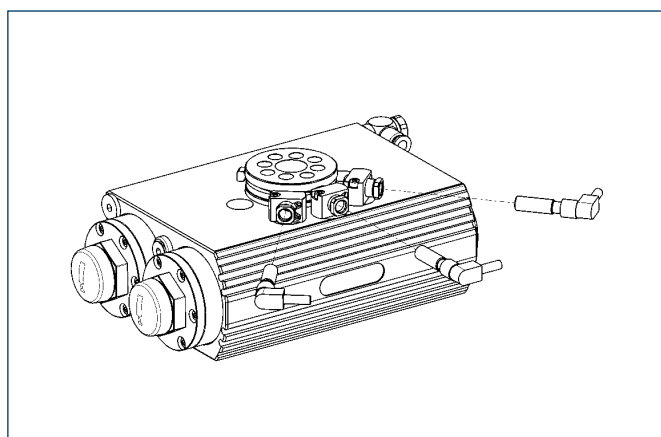
Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KA BW12-L 3P-0300-PNP	0301503
KA BW12-L 3P-0500-PNP	0301507
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497
KV BW12-SG12 3P-0030-PNP	0301595
KV BW12-SG12 3P-0100-PNP	0301596
KV BW12-SG12 3P-0200-PNP	0301597

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Assembly IN on SRU without EDF



End position monitoring:

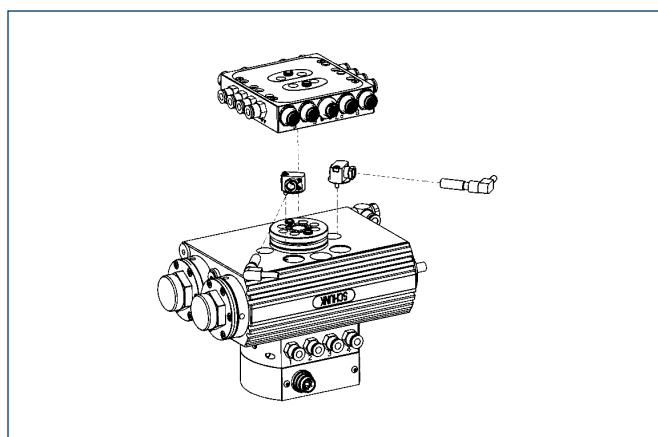
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRU 40	0357990	
AS-SRU 40-8	0357991	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	

① In general there are two sensors needed per swivel unit, with additional request of the middle position, three sensors plus optional an extension cable.

View adaptable at versions without EDF!

Assembly IN on SRU with EDF and add-on kit



End position monitoring:

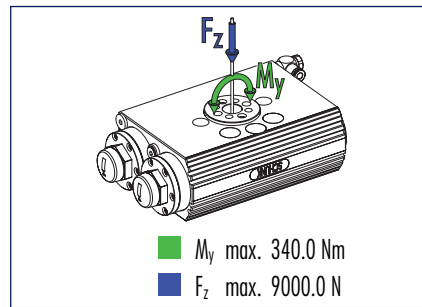
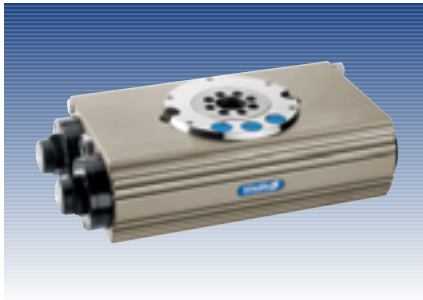
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	

① In general there are two sensors needed per swivel unit, with additional request of the middle position, three sensors plus optional an extension cable.

View adaptable at versions without EDF!

Pinion load



① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Angle of traverse 90° and small end position adjustability of 3°

Description		SRU 50.1-90-3	SRU 50.1-90-3-8	SRU 50.2-90-3	SRU 50.2-90-3-8
	ID	0358100	0358102	0358200	0358202
Torque	[Nm]	25.0	23.3	52.0	50.3
Rotating angle	[°]	90.0	90.0	90.0	90.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	9.4	9.6	9.4	9.6
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	224.0	224.0	448.0	448.0
Swiveling time with middle attached load	[s]	1.9	2.2	1.6	1.9
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3° and electric feed-through EDF

Description		SRU 50.1-90-3-8-EDF M5	SRU 50.1-90-3-8-EDF M8	SRU 50.1-90-3-8-EDF M12	SRU 50.2-90-3-8-EDF M5	SRU 50.2-90-3-8-EDF M8	SRU 50.2-90-3-8-EDF M12
	ID	0358103	0358104	0358105	0358203	0358204	0358205
Torque	[Nm]	23.3	23.3	23.3	50.3	50.3	50.3
Rotating angle	[°]	90.0	90.0	90.0	90.0	90.0	90.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	9.6 + 1.85	9.6 + 1.85	9.6 + 1.85	9.6 + 1.85	9.6 + 1.85	9.6 + 1.85
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	224.0	224.0	224.0	448.0	448.0	448.0
Swiveling time with middle attached load	[s]	2.2	2.2	2.2	1.9	1.9	1.9
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180° and small end position adjustability of 3°

Description		SRU 50.1-180-3	SRU 50.1-180-3-8	SRU 50.2-180-3	SRU 50.2-180-3-8
	ID	0358120	0358122	0358220	0358222
Torque	[Nm]	25.0	23.3	52.0	50.3
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	9.3	9.5	9.3	9.5
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	388.0	388.0	776.0	776.0
Swiveling time with middle attached load	[s]	2.2	2.4	1.9	2.1
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3° and electric feed-through EDF

Description		SRU 50.1-180-3-8-EDF M5	SRU 50.1-180-3-8-EDF M8	SRU 50.1-180-3-8-EDF M12	SRU 50.2-180-3-8-EDF M5	SRU 50.2-180-3-8-EDF M8	SRU 50.2-180-3-8-EDF M12
ID	ID	0358123	0358124	0358125	0358223	0358224	0358225
Torque	[Nm]	23.3	23.3	23.3	50.3	50.3	50.3
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	9.5 + 1.85	9.5 + 1.85	9.5 + 1.85	9.5 + 1.85	9.5 + 1.85	9.5 + 1.85
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	388.0	388.0	388.0	776.0	776.0	776.0
Swiveling time with middle attached load	[s]	2.4	2.4	2.4	2.1	2.1	2.1
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, small end position adjustability of 3° and pneumatic center position

Description		SRU 50.1-180-3-M	SRU 50.1-180-3-M-8	SRU 50.2-180-3-M	SRU 50.2-180-3-M-8
	ID	0358130	0358132	0358230	0358232
Torque	[Nm]	25.0	23.3	52.0	50.3
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Adjustability of center position	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	12.2	12.4	12.2	12.4
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	388.0	388.0	776.0	776.0
Swiveling time with middle attached load	[s]	2.2	2.4	1.9	2.1
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3°, pneumatic center position and electric feed-through

Description		SRU 50.1-180-3-M-8-EDF M5	SRU 50.1-180-3-M-8-EDF M8	SRU 50.1-180-3-M-8-EDF M12	SRU 50.2-180-3-M-8-EDF M5	SRU 50.2-180-3-M-8-EDF M8	SRU 50.2-180-3-M-8-EDF M12
ID	ID	0358133	0358134	0358135	0358233	0358234	0358235
Torque	[Nm]	23.3	23.3	23.3	50.3	50.3	50.3
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0	3.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	12.4 + 1.85	12.4 + 1.85	12.4 + 1.85	12.4 + 1.85	12.4 + 1.85	12.4 + 1.85
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	388.0	388.0	388.0	776.0	776.0	776.0
Swiveling time with middle attached load	[s]	2.4	2.4	2.4	2.1	2.1	2.1
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, small end position adjustability of 3° and locked center position

Description		SRU 50.2-180-3-VM	SRU 50.2-180-3-VM-8
	ID	0358240	0358242
Torque	[Nm]	52.0	50.3
Rotating angle	[°]	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0
Center position		VM (locked middle position)	VM (locked middle position)
Adjustability of center position	[°]	3.0	3.0
No. of fluid feed-throughs			8
IP class		65	65
Weight	[kg]	12.8	13.0
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	776.0	776.0
Swiveling time with middle attached load	[s]	1.9	2.1
Nominal pressure	[bar]	6.0	6.0
Minimum pressure	[bar]	4.0	4.0
Maximum pressure	[bar]	6.5	6.5
Diameter of connecting hose	[mm]	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0
Min. ambient temperature	[°C]	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0
Repeat accuracy	[°]	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3°, blocked center position and electric feed-through

Description		SRU 50.2-180-3-VM-8-EDF M5	SRU 50.2-180-3-VM-8-EDF M8	SRU 50.2-180-3-VM-8-EDF M12
ID	ID	0358243	0358244	0358245
Torque	[Nm]	50.3	50.3	50.3
Rotating angle	[°]	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0
Center position		VM (locked middle position)	VM (locked middle position)	VM (locked middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8
IP class		65	65	65
Weight	[kg]	13.0 + 1.85	13.0 + 1.85	13.0 + 1.85
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	776.0	776.0	776.0
Swiveling time with middle attached load	[s]	2.1	2.1	2.1
Nominal pressure	[bar]	6.5	6.5	6.5
Minimum pressure	[bar]	4.0	4.0	4.0
Maximum pressure	[bar]	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8
Size of the E-connections on the output end.		M5	M8	M12
Number of cores by EDF		10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0

Technical data

Angle of traverse 180° and large end position adjustability of 90°

Description		SRU 50.1-180-90	SRU 50.1-180-90-8	SRU 50.2-180-90	SRU 50.2-180-90-8
	ID	0358150	0358152	0358250	0358252
Torque	[Nm]	25.0	23.3	52.0	50.3
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	9.7	9.9	9.7	9.9
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	388.0	388.0	776.0	776.0
Swiveling time with middle attached load	[s]	2.2	2.4	1.9	2.1
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, large end position adjustability of 90° and electric feed-through EDF

Description		SRU 50.1-180-90-8-EDF M5	SRU 50.1-180-90-8-EDF M8	SRU 50.1-180-90-8-EDF M12	SRU 50.2-180-90-8-EDF M5	SRU 50.2-180-90-8-EDF M8	SRU 50.2-180-90-8-EDF M12
ID	ID	0358153	0358154	0358155	0358253	0358254	0358255
Torque	[Nm]	23.3	23.3	23.3	50.3	50.3	50.3
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0	90.0	90.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	9.9 + 1.85	9.9 + 1.85	9.9 + 1.85	9.9 + 1.85	9.9 + 1.85	9.9 + 1.85
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	388.0	388.0	388.0	776.0	776.0	776.0
Swiveling time with middle attached load	[s]	2.4	2.4	2.4	2.1	2.1	2.1
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, large end position adjustability of 90° and pneumatic center position

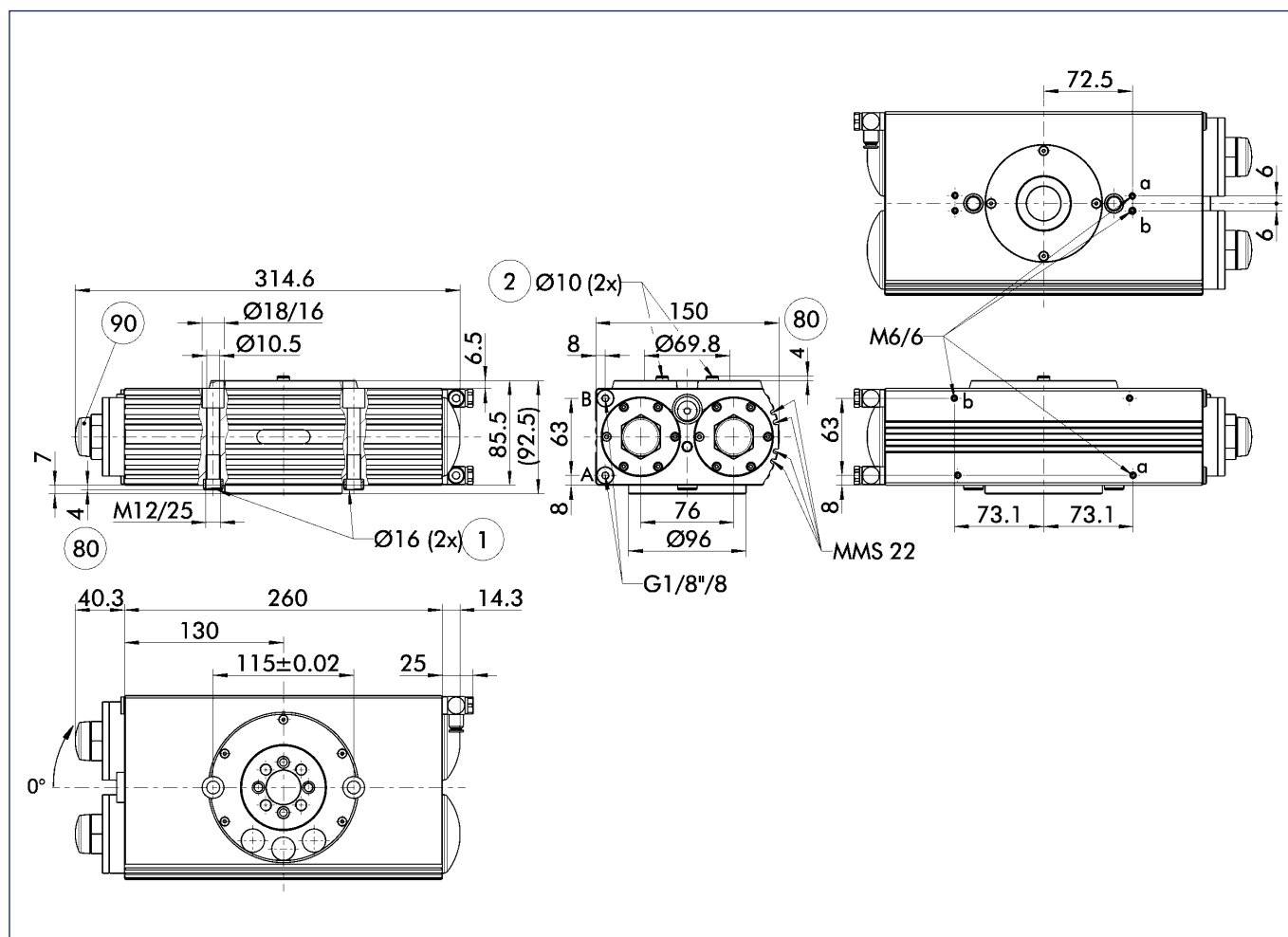
Description		SRU 50.1-180-90-M	SRU 50.1-180-90-M-8	SRU 50.2-180-90-M	SRU 50.2-180-90-M-8
	ID	0358160	0358162	0358260	0358262
Torque	[Nm]	25.0	23.3	52.0	50.3
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Adjustability of center position	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	12.6	12.8	12.6	12.8
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	388.0	388.0	776.0	776.0
Swiveling time with middle attached load	[s]	2.2	2.4	1.9	2.1
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05



Angle of traverse 180°, large end position adjustability of 90°, pneumatic center position and electric feed-through EDF

Description		SRU 50.1-180-90-M-8-EDF M5	SRU 50.1-180-90-M-8-EDF M8	SRU 50.1-180-90-M-8-EDF M12	SRU 50.2-180-90-M-8-EDF M5	SRU 50.2-180-90-M-8-EDF M8	SRU 50.2-180-90-M-8-EDF M12
	ID	0358163	0358164	0358165	0358263	0358264	0358265
Torque	[Nm]	23.3	23.3	23.3	50.3	50.3	50.3
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0	90.0	90.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	12.8 + 1.85	12.8 + 1.85	12.8 + 1.85	12.8 + 1.85	12.8 + 1.85	12.8 + 1.85
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	388.0	388.0	388.0	776.0	776.0	776.0
Swiveling time with middle attached load	[s]	2.4	2.4	2.4	2.1	2.1	2.1
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Main views for SRU without EDF

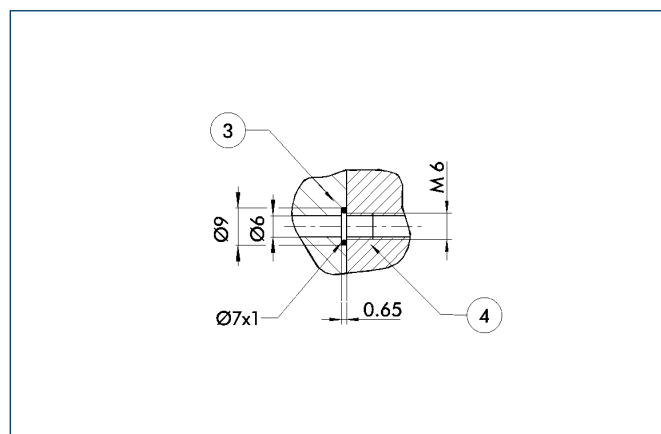


The main view shows the SRU in the most basic version, that is with an angle of traverse of $180^{\circ}/90^{\circ}$, small end position adjustability of 3° , without center position and without fluid feed-through. Modifications to the drawings as a result of various options can be seen in the relevant additional views.

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
B,b Main/direct connection, anti-clockwise rotary unit
① Linear unit connection
② Attachment connection
③ depth of the centering sleeve hole in the matching part
④ setting shock absorber-hub

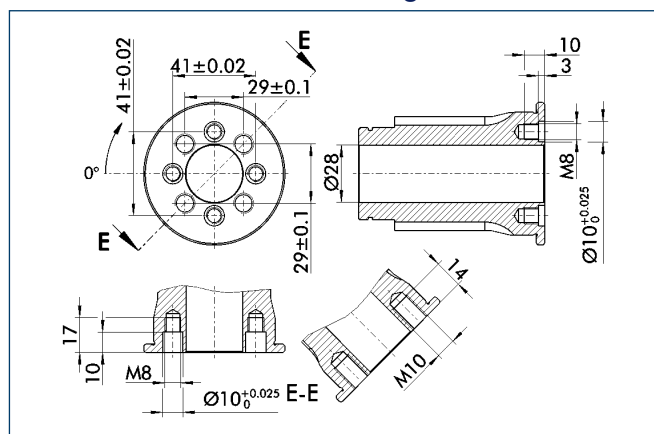
Hose-free direct connection



- ③ Adapter
- ④ Rotary unit

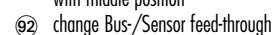
The direction connection is used for supplying compressed air without hoses, which are liable to faults. Instead, the pressure medium is conveyed through the bore-holes of the mounting plate.

Pinion with fluid feed-through



Pinion screw connection diagram for mounting the swiveling attachment. The „4x large thread for 4x screw and 2x flat fit for guide sleeve“ screw connection diagram is preferable to the „4x small thread for 2x screw and 2x dowel screw“ (in deep fit) screw connection diagram.

- ① View adaptable at versions without EDF



Technical drawing of the 2000 Series 2-Port 1/2" device, showing three views: front, side, and top.

Front View (Left): Shows the device with two ports. Dimensions include a total width of 109, a port diameter of 18, and a mounting hole diameter of 10. The connection type is G1/8" x 8.

Side View (Top): Shows the device with two ports. Dimensions include a total width of 109, a port diameter of 18, and a mounting hole diameter of 10. The connection type is G1/8" x 8.

Top View (Right): Shows the device with two ports. Dimensions include a total width of 109, a port diameter of 18, and a mounting hole diameter of 10. The connection type is G1/8" x 8.

Dd, Main/direct connection, center position

View applicable for version with or without EDF!

[illegible]

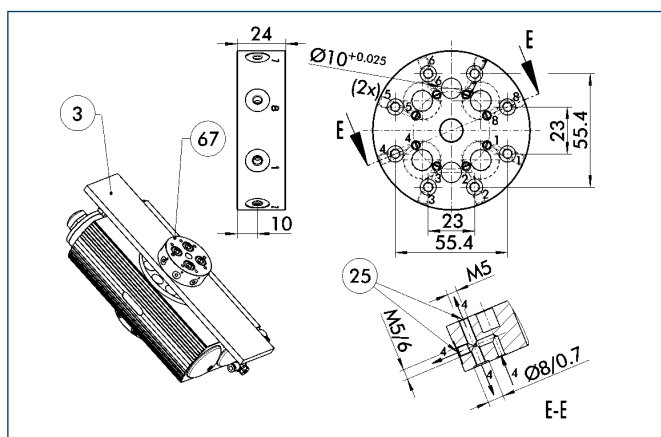
- ① Linear unit connection
②5 Fluid feed-through
⑧0 depth of the centering sleeve hole in the matching part
⑨0 Bleeder hole for unit with single compressed air action provided with pneumatic center position (1-M)

 View adaptable at versions without EDF

 View adaptable at versions without EDF

 View adaptable at versions without EDF

Distributor for SRU

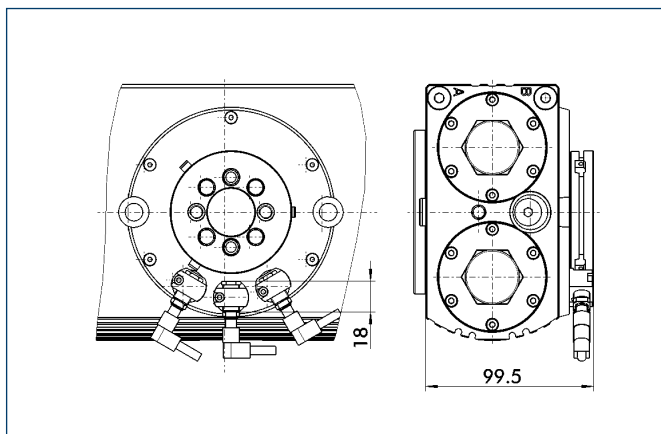


- ③ Adapter
- ②⑤ Fluid feed-through
- ⑥⑦ Distributor for media feed-through

The distributor (ID: 0358192) for SRU 50 and SRU 60 facilitates the use of the fluid feed-throughs, both at the direct attachment to the distributor and in the lines conveying the fluid inside the adapter plate. Thanks to the distributor, only a simple drilling pattern has to be drilled in the adapter plate situated between the pinion and the distributor.

① View adaptable at versions without EDF

Mounting kit for proximity switch at SRU without EDF



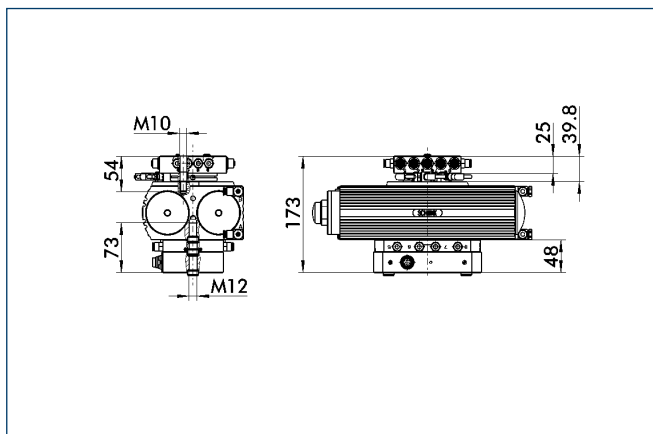
The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

Description	ID
AS-SRU 50/60	0358190
AS-SRU 50/60-8	0358191

① View adaptable at versions without EDF

Mounting kit for proximity switch at SRU with EDF



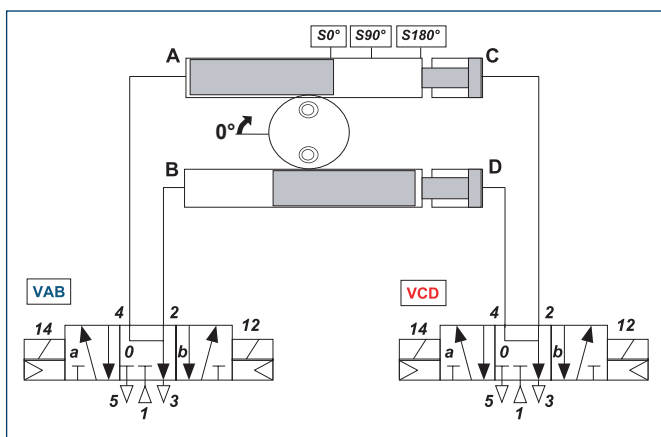
The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

① View adaptable at versions with EDF

The adaptor kit cannot be ordered individually. The SRU with EDF and adaptor kit is being delivered by SCHUNK completely mounted.

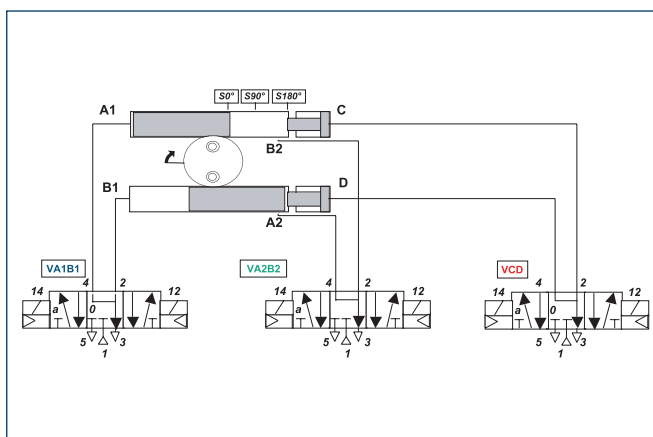
Pneumatic diagram of SRU-VM – Vertical axis



VM units with vertical swivel axis are generally actuated by two 5/3 directional control valves with bled center position. To prevent damage, it is essential that you pay attention to the actuation sequence in the Operating Manual.

① View applicable for version with or without EDF!

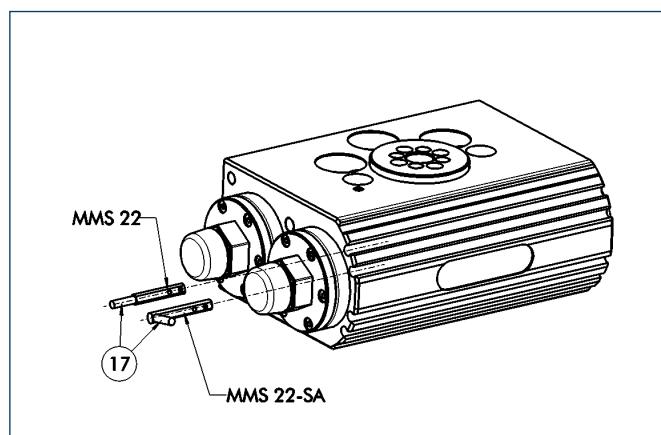
Pneumatic diagram of SRU-VM – horizontal axis



VM units with horizontal or non-vertical swivel axis must generally be actuated by three 5/3 directional control valves with bled center position. To prevent damage, it is essential that you pay attention to the actuation sequence in the Operating Manual.

① View applicable for version with or without EDF!

Sensor System



17 Cable outlet

End position monitoring: Electronic magnetic switches, for mounting in C-slot

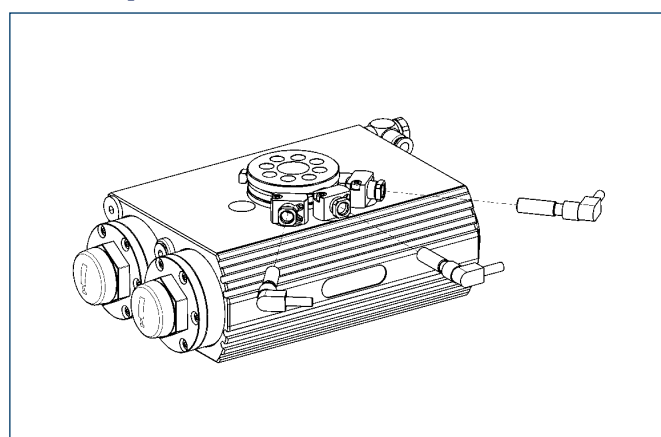
Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KA BW12-L 3P-0300-PNP	0301503
KA BW12-L 3P-0500-PNP	0301507
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497
KV BW12-SG12 3P-0030-PNP	0301595
KV BW12-SG12 3P-0100-PNP	0301596
KV BW12-SG12 3P-0200-PNP	0301597

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Assembly IN on SRU without EDF



End position monitoring:

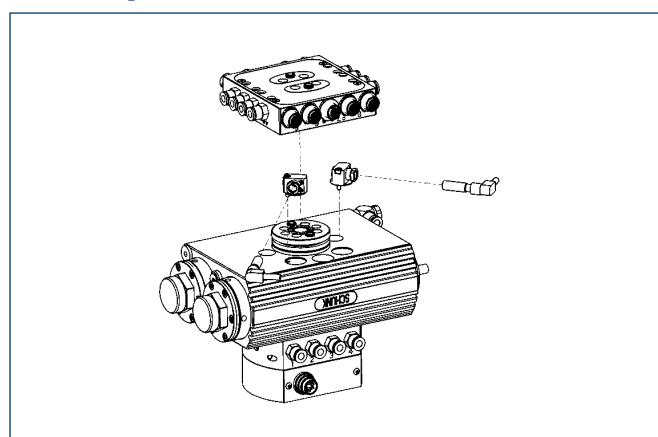
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRU 50/60	0358190	
AS-SRU 50/60-8	0358191	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	

① In general there are two sensors needed per swivel unit, with additional request of the middle position, three sensors plus optional an extension cable.

View adaptable at versions without EDF!

Assembly IN on SRU with EDF and add-on kit



End position monitoring:

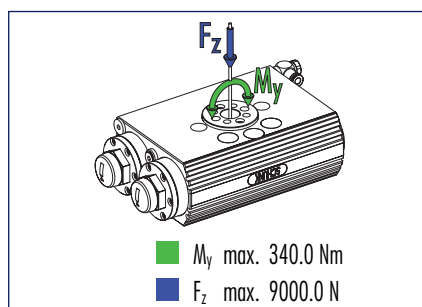
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	

① In general there are two sensors needed per swivel unit, with additional request of the middle position, three sensors plus optional an extension cable.

View adaptable at versions without EDF!

Pinion load



① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Angle of traverse 90° and small end position adjustability of 3°

Description		SRU 60.1-90-3	SRU 60.1-90-3-8	SRU 60.2-90-3	SRU 60.2-90-3-8
	ID	0358300	0358302	0358400	0358402
Torque	[Nm]	36.0	34.0	72.0	70.0
Rotating angle	[°]	90.0	90.0	90.0	90.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	13.0	13.2	13.0	13.2
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	328.0	328.0	656.0	656.0
Swiveling time with middle attached load	[s]	1.9	2.3	1.7	2.0
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3° and electric feed-through EDF

Description		SRU 60.1-90-3-8-EDF M5	SRU 60.1-90-3-8-EDF M8	SRU 60.1-90-3-8-EDF M12	SRU 60.2-90-3-8-EDF M5	SRU 60.2-90-3-8-EDF M8	SRU 60.2-90-3-8-EDF M12
	ID	0358303	0358304	0358305	0358403	0358404	0358405
Torque	[Nm]	34.0	34.0	34.0	70.0	70.0	70.0
Rotating angle	[°]	90.0	90.0	90.0	90.0	90.0	90.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	13.2 + 1.85	13.2 + 1.85	13.2 + 1.85	13.2 + 1.85	13.2 + 1.85	13.2 + 1.85
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	328.0	328.0	328.0	656.0	656.0	656.0
Swiveling time with middle attached load	[s]	2.3	2.3	2.3	2.0	2.0	2.0
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180° and small end position adjustability of 3°

Description		SRU 60.1-180-3	SRU 60.1-180-3-8	SRU 60.2-180-3	SRU 60.2-180-3-8
	ID	0358320	0358322	0358420	0358422
Torque	[Nm]	36.0	34.0	72.0	70.0
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	12.8	13.0	12.8	13.0
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	560.0	560.0	1120.0	1120.0
Swiveling time with middle attached load	[s]	2.2	2.5	1.9	2.2
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3° and electric feed-through EDF

Description		SRU 60.1-180-3-8-EDF M5	SRU 60.1-180-3-8-EDF M8	SRU 60.1-180-3-8-EDF M12	SRU 60.2-180-3-8-EDF M5	SRU 60.2-180-3-8-EDF M8	SRU 60.2-180-3-8-EDF M12
ID	ID	0358323	0358324	0358325	0358423	0358424	0358425
Torque	[Nm]	34.0	34.0	34.0	70.0	70.0	70.0
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	13.0 + 1.85	13.0 + 1.85	13.0 + 1.85	13.0 + 1.85	13.0 + 1.85	13.0 + 1.85
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	560.0	560.0	560.0	1120.0	1120.0	1120.0
Swiveling time with middle attached load	[s]	2.5	2.5	2.5	2.2	2.2	2.2
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, small end position adjustability of 3° and pneumatic center position

Description		SRU 60.1-180-3-M	SRU 60.1-180-3-M-8	SRU 60.2-180-3-M	SRU 60.2-180-3-M-8
	ID	0358330	0358332	0358430	0358432
Torque	[Nm]	36.0	34.0	72.0	70.0
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Adjustability of center position	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	16.8	17.0	16.8	17.0
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	560.0	560.0	1120.0	1120.0
Swiveling time with middle attached load	[s]	2.2	2.5	1.9	2.2
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, small end position adjustability of 3°, pneumatic center position and electric feed-through

Description		SRU 60.1-180-3-M-8-EDF M5	SRU 60.1-180-3-M-8-EDF M8	SRU 60.1-180-3-M-8-EDF M12	SRU 60.2-180-3-M-8-EDF M5	SRU 60.2-180-3-M-8-EDF M8	SRU 60.2-180-3-M-8-EDF M12
ID	ID	0358333	0358334	0358335	0358433	0358434	0358435
Torque	[Nm]	34.0	34.0	34.0	70.0	70.0	70.0
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0	3.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	17.0 + 1.85	17.0 + 1.85	17.0 + 1.85	17.0 + 1.85	17.0 + 1.85	17.0 + 1.85
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	560.0	560.0	560.0	1120.0	1120.0	1120.0
Swiveling time with middle attached load	[s]	2.5	2.5	2.5	2.2	2.2	2.2
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, small end position adjustability of 3° and locked center position

Description		SRU 60.2-180-3-VM	SRU 60.2-180-3-VM-8
	ID	0358440	0358442
Torque	[Nm]	72.0	70.0
Rotating angle	[°]	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0
Center position		VM (locked middle position)	VM (locked middle position)
Adjustability of center position	[°]	3.0	3.0
No. of fluid feed-throughs			8
IP class		65	65
Weight	[kg]	17.8	18.0
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	1120.0	1120.0
Swiveling time with middle attached load	[s]	1.9	2.2
Nominal pressure	[bar]	6.0	6.0
Minimum pressure	[bar]	4.0	4.0
Maximum pressure	[bar]	6.5	6.5
Diameter of connecting hose	[mm]	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0
Min. ambient temperature	[°C]	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0
Repeat accuracy	[°]	0.05	0.05



Angle of traverse 180°, small end position adjustability of 3°, blocked center position and electric feed-through

Description		SRU 60.2-180-3-VM-8-EDF M5	SRU 60.2-180-3-VM-8-EDF M8	SRU 60.2-180-3-VM-8-EDF M12
ID	ID	0358443	0358444	0358445
Torque	[Nm]	70.0	70.0	70.0
Rotating angle	[°]	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0
Center position		VM (locked middle position)	VM (locked middle position)	VM (locked middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8
IP class		65	65	65
Weight	[kg]	18.0 + 1.85	18.0 + 1.85	18.0 + 1.85
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	1120.0	1120.0	1120.0
Swiveling time with middle attached load	[s]	2.2	2.2	2.2
Nominal pressure	[bar]	6.5	6.5	6.5
Minimum pressure	[bar]	4.0	4.0	4.0
Maximum pressure	[bar]	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8
Size of the E-connections on the output end.		M5	M8	M12
Number of cores by EDF		10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0

Technical data

Angle of traverse 180° and large end position adjustability of 90°

Description		SRU 60.1-180-90	SRU 60.1-180-90-8	SRU 60.2-180-90	SRU 60.2-180-90-8
	ID	0358350	0358352	0358450	0358452
Torque	[Nm]	36.0	34.0	72.0	70.0
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	13.5	13.7	13.5	13.7
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	560.0	560.0	1120.0	1120.0
Swiveling time with middle attached load	[s]	2.2	2.5	1.9	2.2
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05

Angle of traverse 180°, large end position adjustability of 90° and electric feed-through EDF

Description		SRU 60.1-180-90-8-EDF M5	SRU 60.1-180-90-8-EDF M8	SRU 60.1-180-90-8-EDF M12	SRU 60.2-180-90-8-EDF M5	SRU 60.2-180-90-8-EDF M8	SRU 60.2-180-90-8-EDF M12
ID	ID	0358353	0358354	0358355	0358453	0358454	0358455
Torque	[Nm]	34.0	34.0	34.0	70.0	70.0	70.0
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0	90.0	90.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	13.7 + 1.85	13.7 + 1.85	13.7 + 1.85	13.7 + 1.85	13.7 + 1.85	13.7 + 1.85
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	560.0	560.0	560.0	1120.0	1120.0	1120.0
Swiveling time with middle attached load	[s]	2.5	2.5	2.5	2.2	2.2	2.2
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Technical data

Angle of traverse 180°, large end position adjustability of 90° and pneumatic center position

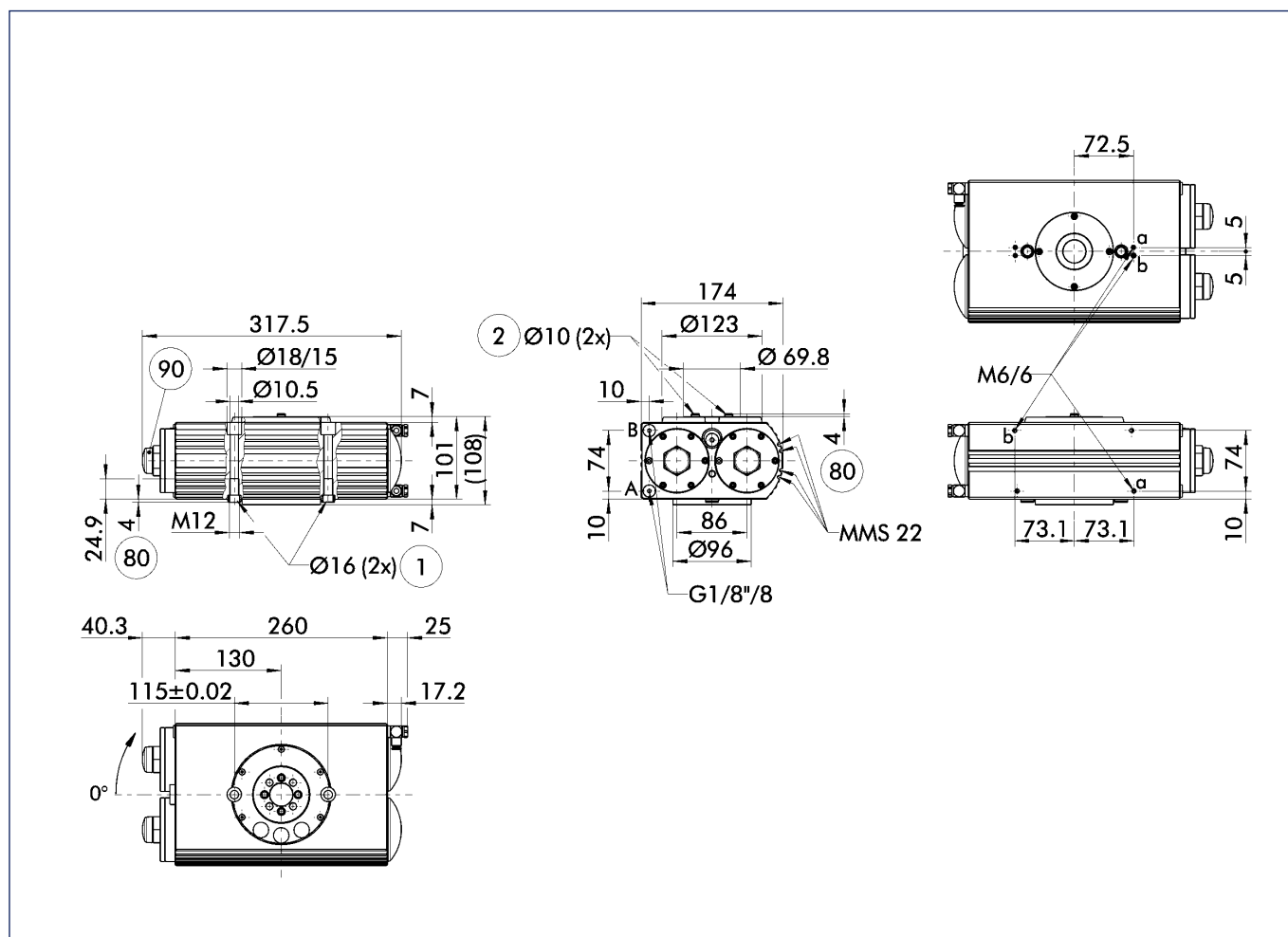
Description		SRU 60.1-180-90-M	SRU 60.1-180-90-M-8	SRU 60.2-180-90-M	SRU 60.2-180-90-M-8
	ID	0358360	0358362	0358460	0358462
Torque	[Nm]	36.0	34.0	72.0	70.0
Rotating angle	[°]	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Adjustability of center position	[°]	3.0	3.0	3.0	3.0
No. of fluid feed-throughs			8		8
IP class		65	65	65	65
Weight	[kg]	17.5	17.7	17.5	17.7
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	560.0	560.0	1120.0	1120.0
Swiveling time with middle attached load	[s]	2.2	2.5	1.9	2.2
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]		8.0		8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05



Angle of traverse 180°, large end position adjustability of 90°, pneumatic center position and electric feed-through EDF

Description		SRU 60.1-180-90-M-8-EDF M5	SRU 60.1-180-90-M-8-EDF M8	SRU 60.1-180-90-M-8-EDF M12	SRU 60.2-180-90-M-8-EDF M5	SRU 60.2-180-90-M-8-EDF M8	SRU 60.2-180-90-M-8-EDF M12
ID	ID	0358363	0358364	0358365	0358463	0358464	0358465
Torque	[Nm]	34.0	34.0	34.0	70.0	70.0	70.0
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	90.0	90.0	90.0	90.0	90.0	90.0
Center position		M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)	M (pneumatic middle position)
Central Position Adjustability	[°]	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8
IP class		65	65	65	65	65	65
Weight	[kg]	17.7 + 1.85	17.7 + 1.85	17.7 + 1.85	17.7 + 1.85	17.7 + 1.85	17.7 + 1.85
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	560.0	560.0	560.0	1120.0	1120.0	1120.0
Swiveling time with middle attached load	[s]	2.5	2.5	2.5	2.2	2.2	2.2
Nominal pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8
Size of the E-connections on the output end.		M5	M8	M12	M5	M8	M12
Number of cores by EDF		10	10	10	10	10	10
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0

Main views for SRU without EDF

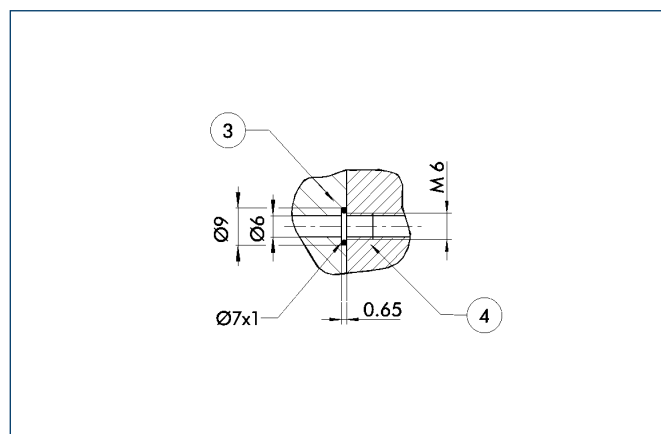


The main view shows the SRU in the most basic version, that is with an angle of traverse of $180^{\circ}/90^{\circ}$, small end position adjustability of 3° , without center position and without fluid feed-through. Modifications to the drawings as a result of various options can be seen in the relevant additional views.

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
B,b Main/direct connection, anti-clockwise rotary unit
① Linear unit connection
② Attachment connection
③ depth of the centering sleeve hole in the matching part
④ setting shock absorber-hub

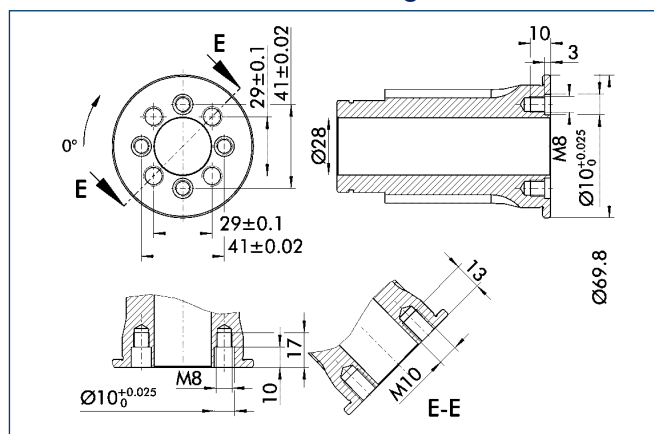
Hose-free direct connection



- ③ Adapter
- ④ Rotary unit

The direction connection is used for supplying compressed air without hoses, which are liable to faults. Instead, the pressure medium is conveyed through the bore-holes of the mounting plate.

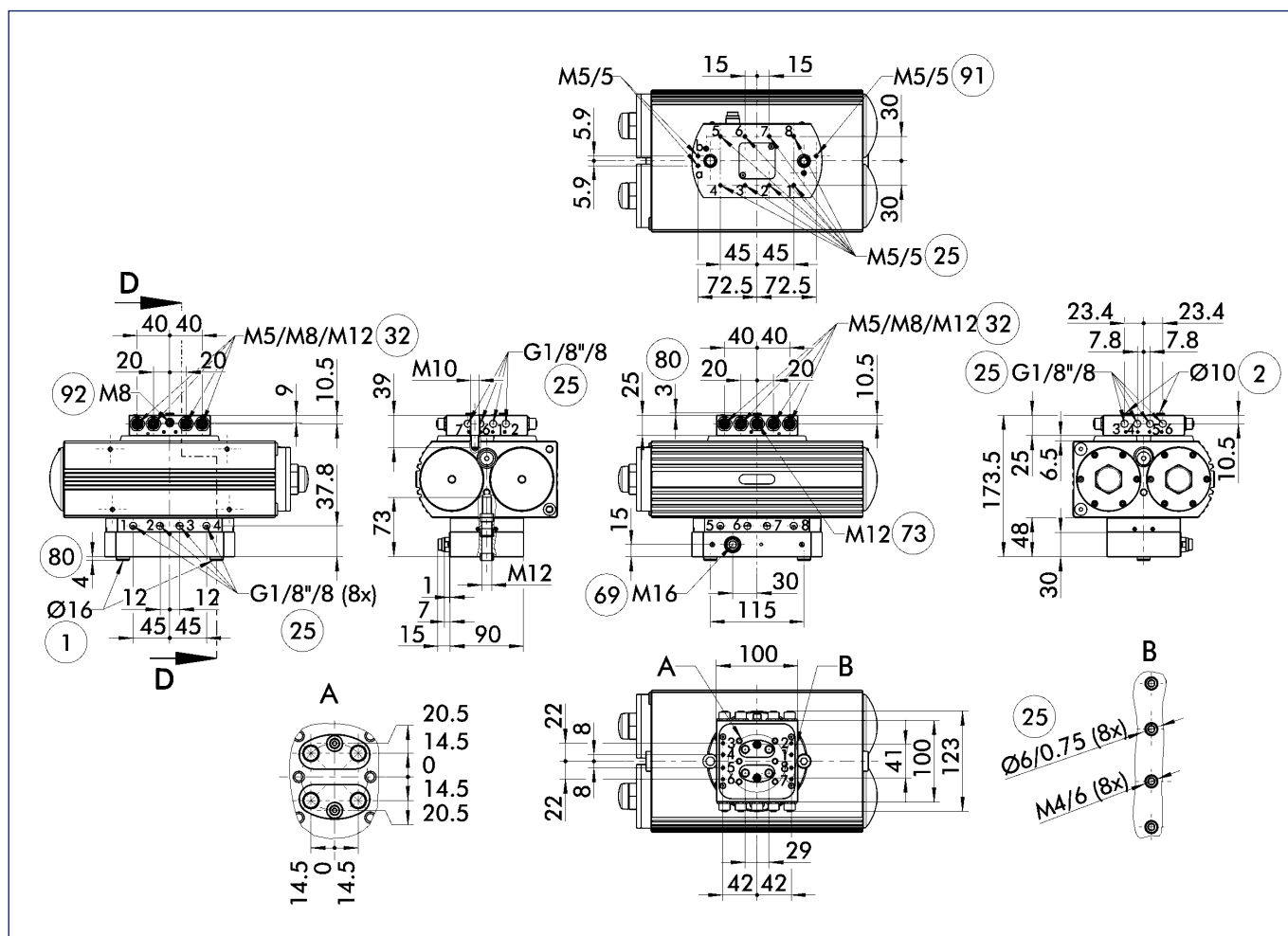
Pinion with fluid feed-through



Pinion screw connection diagram for mounting the swiveling attachment. The „4x large thread for 4x screw and 2x flat fit for guide sleeve“ screw connection diagram is preferable to the „4x small thread for 2x screw and 2x dowel screw“ (in deep fit) screw connection diagram.

- ① View adaptable at versions without EDF

Main views for SRU with EDF



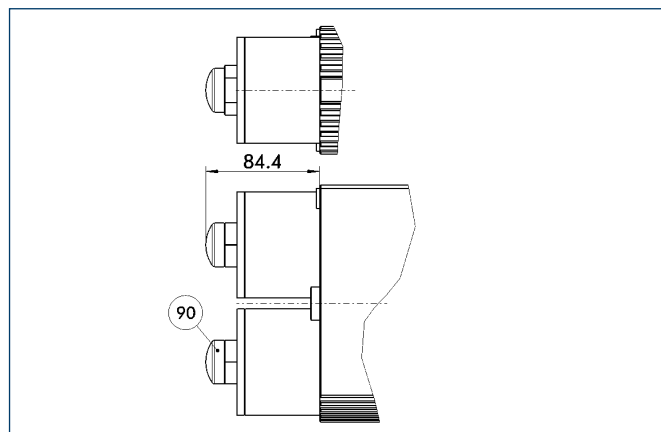
The main view shows the SRU in the most basic version, that is with an angle of traverse of 180°/90°, small end position adjustability of 3°, without center position and without fluid feed-through. Modifications to the drawings as a result of various options can be seen in the relevant additional views.

① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Rotary unit connection
- ② Attachment connection
- ② Fluid feed-through

- ③ flange socket for sensor feed-through
- ⑥ Connection for electric feed-through
- ⑦ Connection BUS-throughs
- ⑧ depth of the centering sleeve hole in the matching part
- ⑨ ventilation-drill for simple admitted SRU with middle position
- ⑩ change Bus-/Sensor feed-through

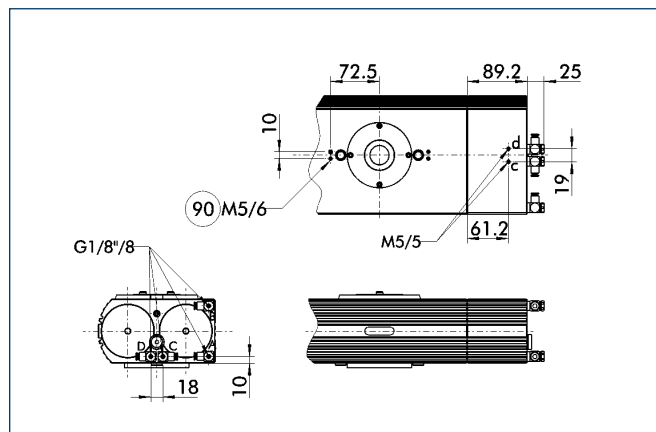
Large end position adjustability 90°



⑨ setting shock absorber-hub

Different dimensions with the option „Large end position adjustability (90°)“ This permits the end positions to be adjusted by up to 93°. More information can be found in the introduction to the series.

Pneumatic center position (M)



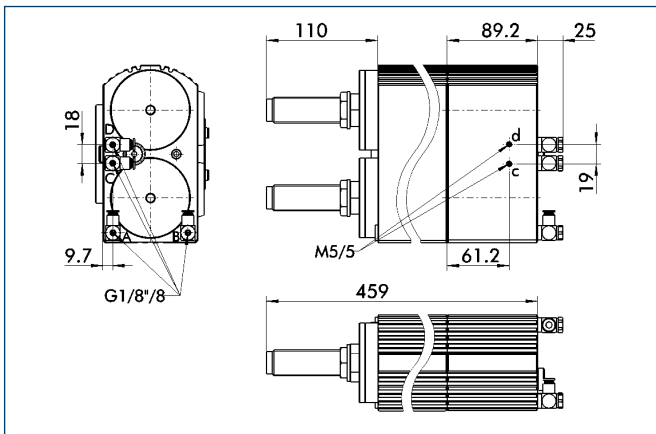
- C,c Main/direct connection, center position
- D,d Main/direct connection, center position

⑨ Bleeder hole for unit with single compressed air action (.1)

Different dimensions with the „Pneumatic Center Position (M)“ option. Heavy attachments may have to level out until they reach the correct position. The locked center position (VM) offers a remedy. Units with single compressed air action (.1) and pneumatic center position need an essential bleeder hose.

① View applicable for version with or without EDF!

Locked center position (VM)



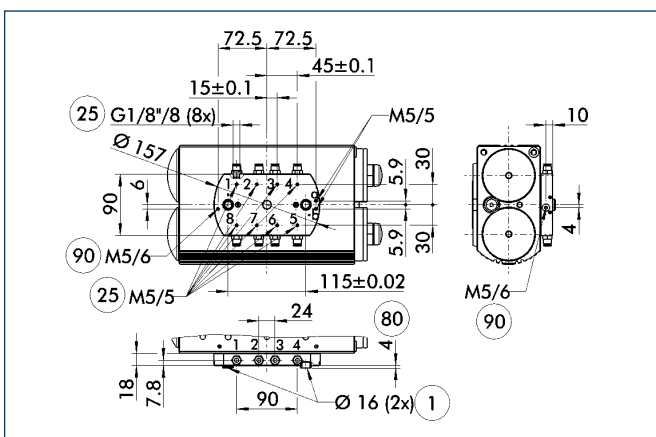
C,c Main/direct connection, center position

Dd, Main/direct connection, center position

Different dimensions with the „Locked center position (VM)“ option. The center position is locked. The unit travels to center position using the force of the main drive piston. Shock absorbers brake the travel to center position as fast as possible to prevent overshooting.

① View applicable for version with or without EDF!

Connections for Medium-throughs



① Linear unit connection

25 Fluid feed-through

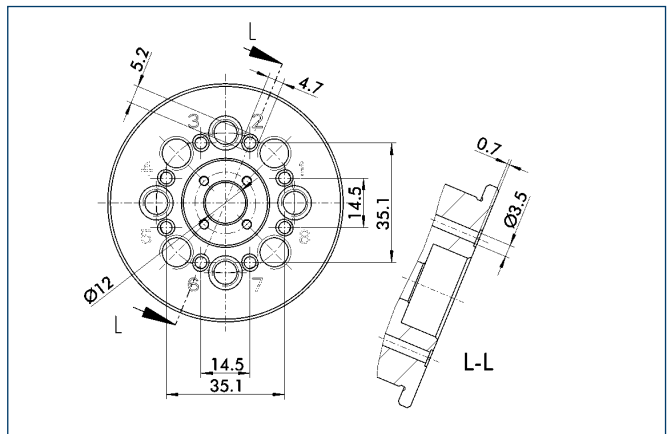
80 depth of the centering sleeve hole in the matching part

90 Bleeder hole for unit with single compressed air action provided with pneumatic center position (.1-M)

Lower mounting plate for the „Fluid feed-through“ option. Vacuum, gases or fluids can be conveyed. The connection may be a screw type or a direct connection.

① View adaptable at versions without EDF

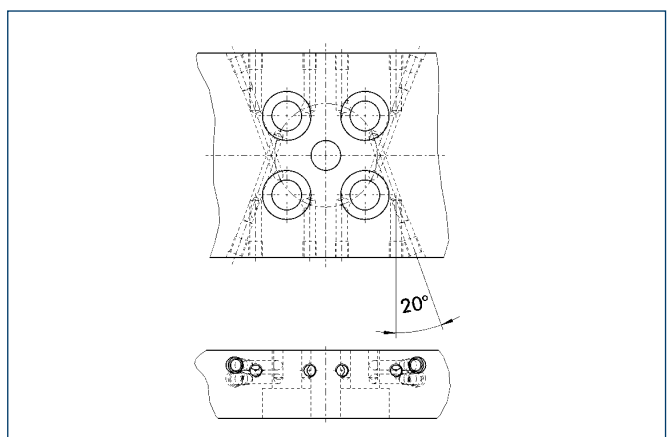
Pinion



Pinion screw connection diagram for mounting the swiveling attachment. The „4x large thread for 4x screw and 2x flat fit for guide sleeve“ screw connection diagram is preferable to the „4x small thread for 2x screw and 2x dowel screw“ (in deep fit) screw connection diagram.

① View adaptable at versions without EDF

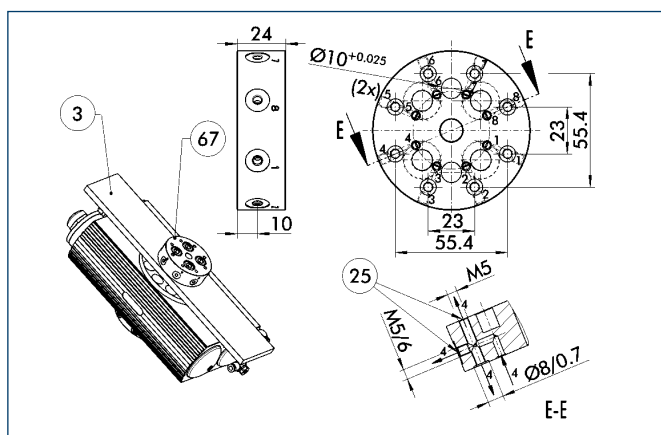
Adapter plate arrangement



Suggested here is an arrangement of the adapter plate which enables all fluid feed-throughs to be reached as easily as possible.

① View adaptable at versions without EDF

Distributor for SRU



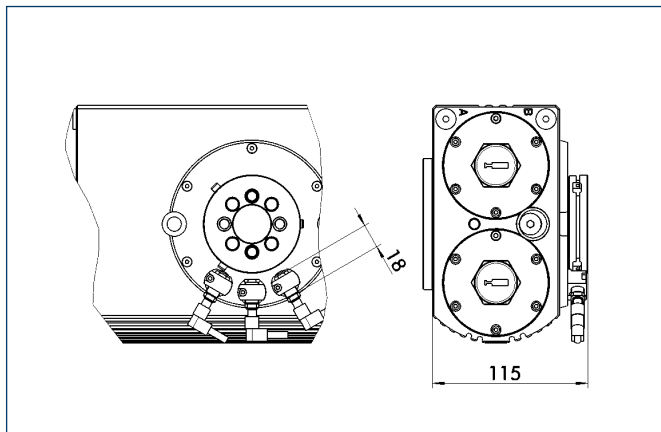
- ③ Adapter
- ②⑤ Fluid feed-through
- ⑥⑦ Distributor for media feed-through

The distributor (ID: 0358192) for SRU 50 and SRU 60 facilitates the use of the fluid feed-throughs, both at the direct attachment to the distributor and in the lines conveying the fluid inside the adapter plate. Thanks to the distributor, only a simple drilling pattern has to be drilled in the adapter plate situated between the pinion and the distributor.

① View adaptable at versions without EDF



Mounting kit for proximity switch at SRU without EDF



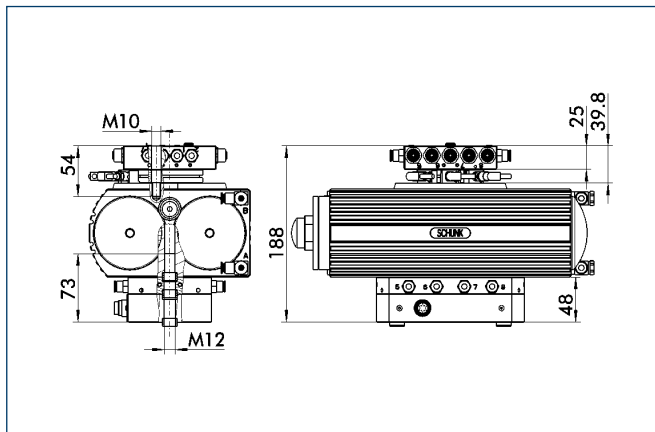
The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

Description	ID
AS-SRU 50/60	0358190
AS-SRU 50/60-8	0358191

① View adaptable at versions without EDF

Mounting kit for proximity switch at SRU with EDF



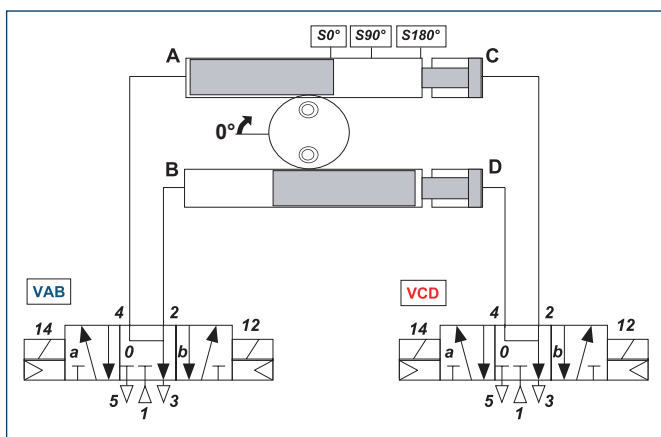
The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

① View adaptable at versions with EDF

The adaptor kit cannot be ordered individually. The SRU with EDF and adaptor kit is being delivered by SCHUNK completely mounted.

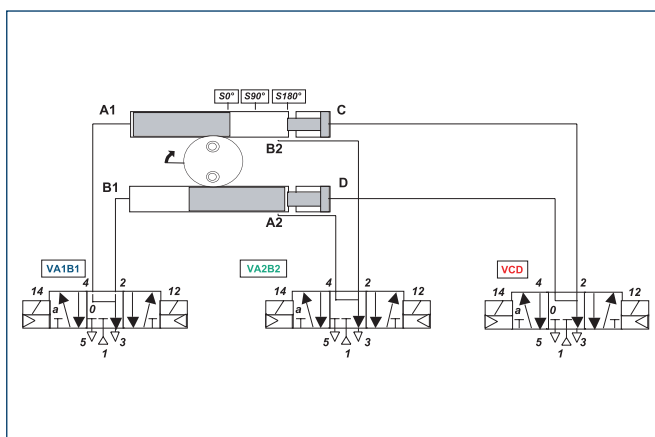
Pneumatic diagram of SRU-VM – Vertical axis



VM units with vertical swivel axis are generally actuated by two 5/3 directional control valves with bled center position. To prevent damage, it is essential that you pay attention to the actuation sequence in the Operating Manual.

① View applicable for version with or without EDF!

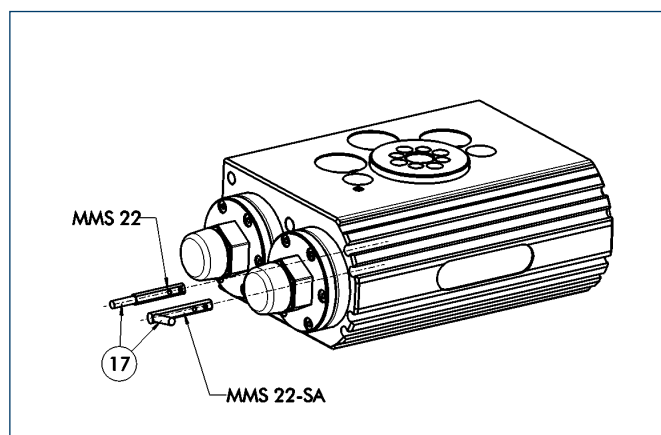
Pneumatic diagram of SRU-VM – horizontal axis



VM units with horizontal or non-vertical swivel axis must generally be actuated by three 5/3 directional control valves with bled center position. To prevent damage, it is essential that you pay attention to the actuation sequence in the Operating Manual.

① View applicable for version with or without EDF!

Sensor System



17 Cable outlet

End position monitoring: Electronic magnetic switches, for mounting in C-slot

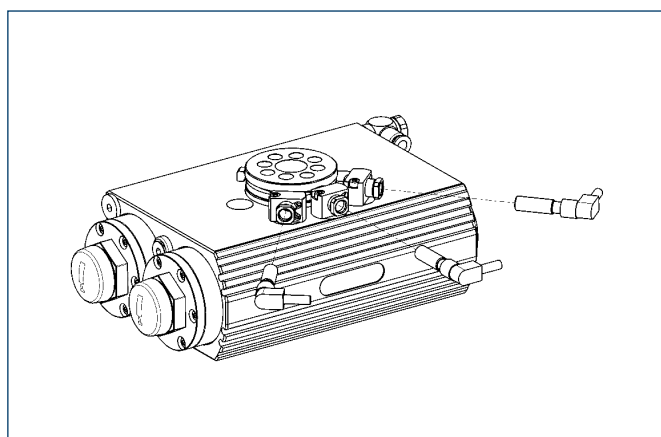
Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KA BW12-L 3P-0300-PNP	0301503
KA BW12-L 3P-0500-PNP	0301507
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497
KV BW12-SG12 3P-0030-PNP	0301595
KV BW12-SG12 3P-0100-PNP	0301596
KV BW12-SG12 3P-0200-PNP	0301597

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Assembly IN on SRU without EDF



End position monitoring:

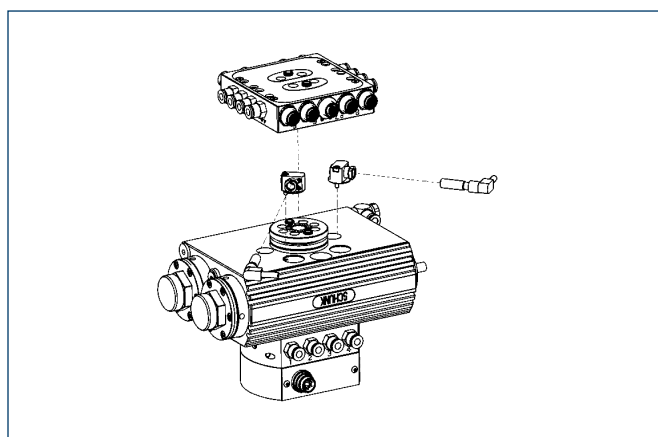
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRU 50/60	0358190	
AS-SRU 50/60-8	0358191	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	

① In general there are two sensors needed per swivel unit, with additional request of the middle position, three sensors plus optional an extension cable.

View adaptable at versions without EDF!

Assembly IN on SRU with EDF and add-on kit



End position monitoring:

Inductive proximity switches, mounted with mounting kit

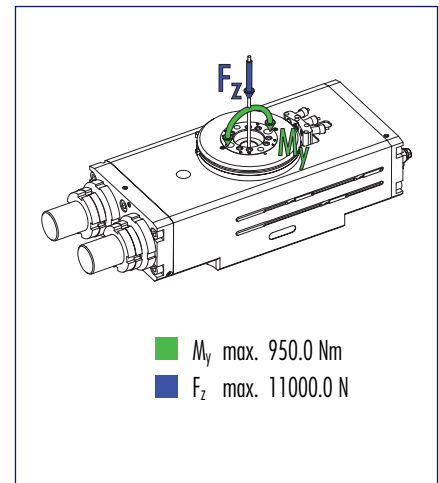
Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	

① In general there are two sensors needed per swivel unit, with additional request of the middle position, three sensors plus optional an extension cable.

View adaptable at versions without EDF!



Pinion load

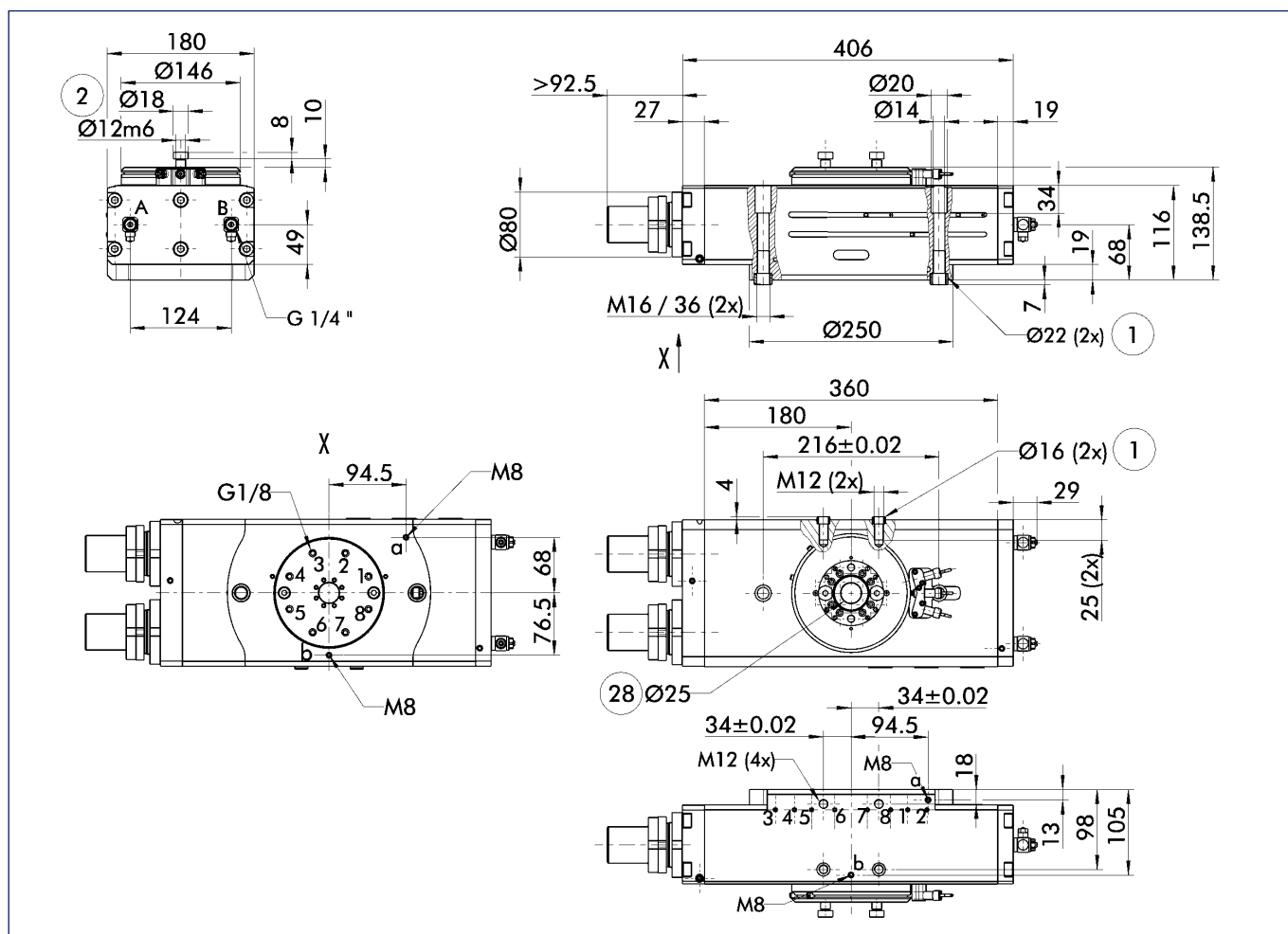


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		SRU 63.2-180-3-8	SRU 63.2-90-3-8-R	SRU 63.2-90-3-8-L
	ID	0354800	0354850	0354840
Torque	[Nm]	115.0	115.0	115.0
Rotating angle	[°]	180.0	90.0	90.0
Direction of rotation			right	left
Adjustability of end positions	[°]	2.0	2.0	2.0
No. of fluid feed-throughs		8	8	8
IP class		54	54	54
Weight	[kg]	26.5	26.5	26.5
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	950.0	475.0	475.0
Swiveling time with middle attached load	[s]	2.1	1.9	1.9
Nominal pressure	[bar]	6.0	6.0	6.0
Minimum pressure	[bar]	4.5	4.5	4.5
Maximum pressure	[bar]	8.0	8.0	8.0
Diameter of connecting hose	[mm]	8.0	8.0	8.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0
Max. ambient temperature	[°C]	60.0	60.0	60.0
Repeat accuracy	[°]	0.07	0.07	0.07

Main views

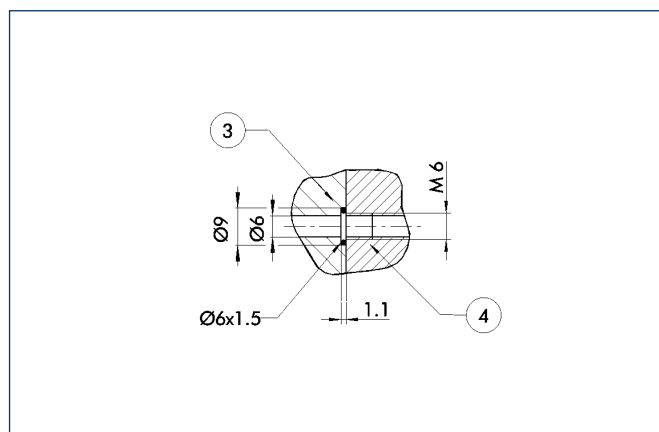


The main view shows the SRU in the most basic version, that is with an angle of traverse of $180^{\circ}/90^{\circ}$, small end position adjustability of 3° , without center position and without fluid feed-through. Modifications to the drawings as a result of various options can be seen in the relevant additional views.

- | | |
|-----|--|
| A,a | Main/direct connection, clockwise rotary unit |
| B,b | Main/direct connection, anti-clockwise rotary unit |
| ① | Linear unit connection |
| ② | Attachment connection |
| 28 | Through-bore |

- ❶ The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

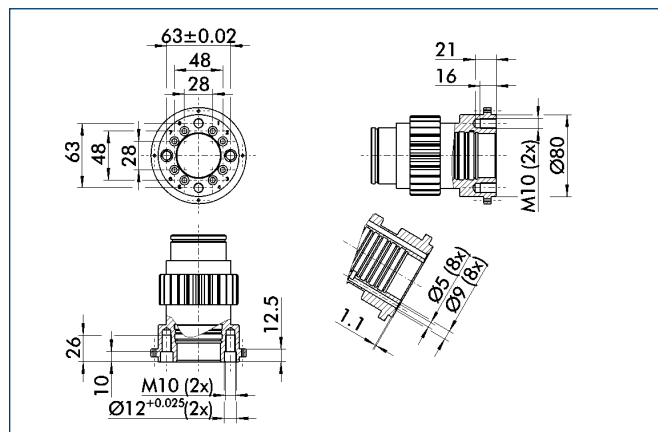
Hose-free direct connection



- ③ Adapter
- ④ Rotary unit

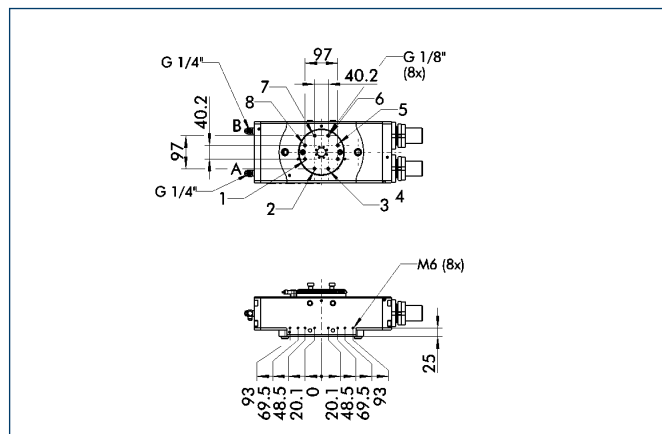
The direction connection is used for supplying compressed air without hoses, which are liable to faults. Instead, the pressure medium is conveyed through the bore-holes of the mounting plate.

Pinion with fluid feed-through



Pinion screw connection diagram for the „Fluid feed-through“ option

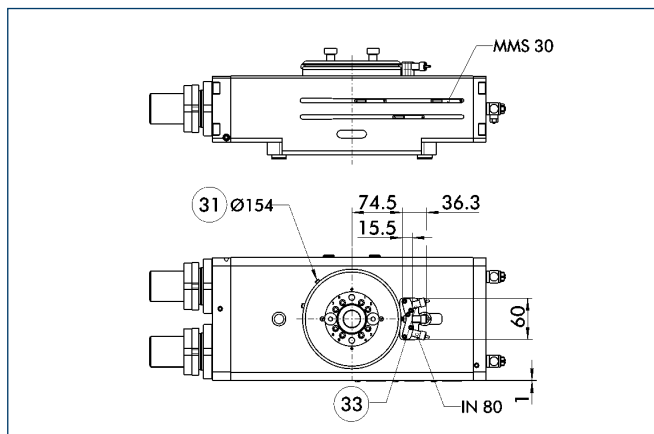
Connections for fluid feed-through



- A,a Main/direct connection, clockwise rotary unit
B,b Main/direct connection, anti-clockwise rotary unit

The connections for the fluid feed-through are integrated in the housing.

Mounting kit for proximity switches



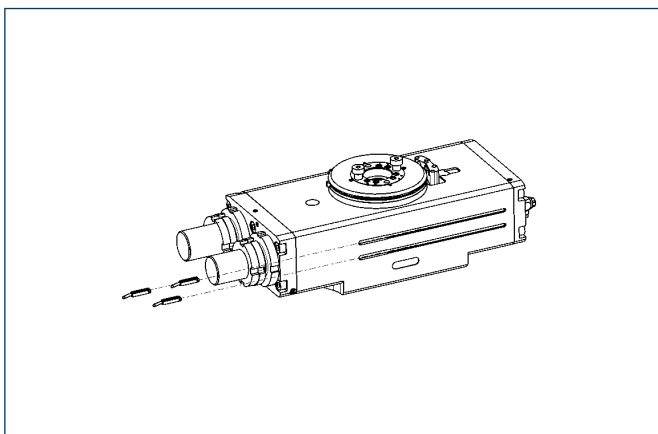
- ③① Interfering contour of operating cam
③③ Mounting kit

The size-specific mounting kit is required for installing the inductive proximity switches. Up to three proximity switches (2x end position, 1x center position) can be attached using the mounting kit. A mounting kit for IN 80 inductive proximity switches consists of:

- 3x sensor brackets complete
- 1x operating cam retaining disk
- 3x operating cams

Description	ID
AS-SRU 63-8	0300762

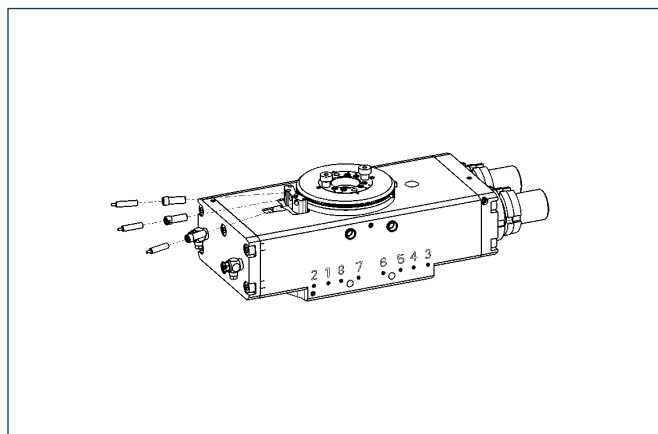
Sensor System



End position monitoring: Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 30-S-M12-PNP	0301571	
MMS 30-S-M8-PNP	0301471	
MMSK 30-S-PNP	0301563	

① Each rotary unit requires the same number of sensors as the positions that are to be monitored, i.e. mostly two or three, plus extension cables as an option.



End position monitoring:

Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRU 63-8	0300762	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
INK 80-S	0301550	

① Two sensors are generally required for each rotary unit, plus extension cables as an option.

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG08-L 3P-0300-PNP	0301622
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497
KV BW12-SG12 3P-0030-PNP	0301595
KV BW12-SG12 3P-0100-PNP	0301596
KV BW12-SG12 3P-0200-PNP	0301597

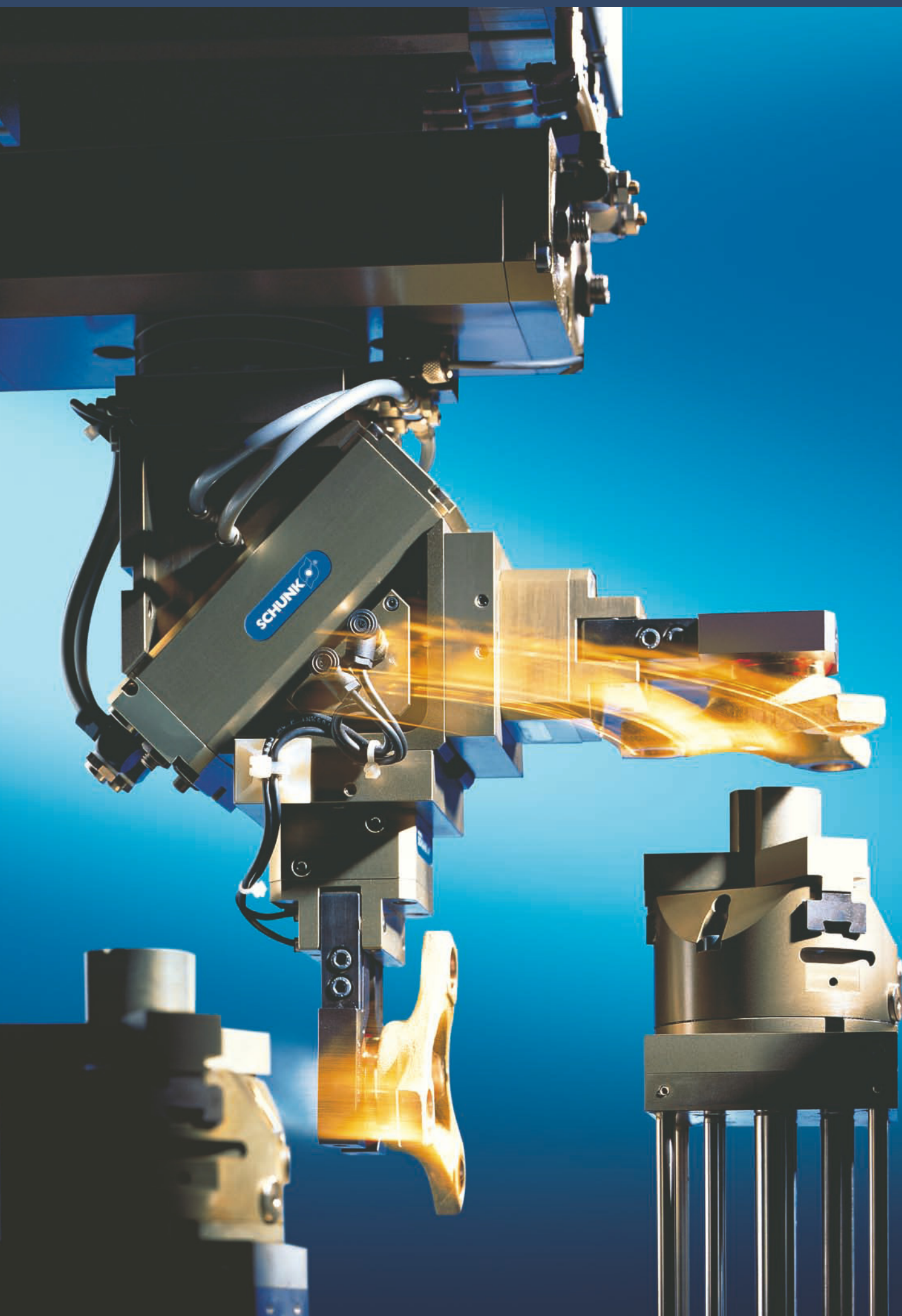
① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

Pneumatic Rotary Modules

Swivel Heads



SWIVEL HEADS

Series	Size	Page
Swivel Heads		
SRH		142
SRH	20	146
SRH	25	150
SRH	35	154
SRH	40	158
SRH	50	162
SRH	60	166
SKE		170
SKE	18	174
SKE	22	178
SKE	40	182
SKE	55	186

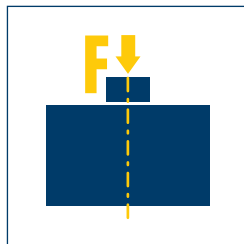




Sizes
20 .. 60



Weight
2.1 kg .. 21.2 kg



Axial force
800 N .. 9000 N

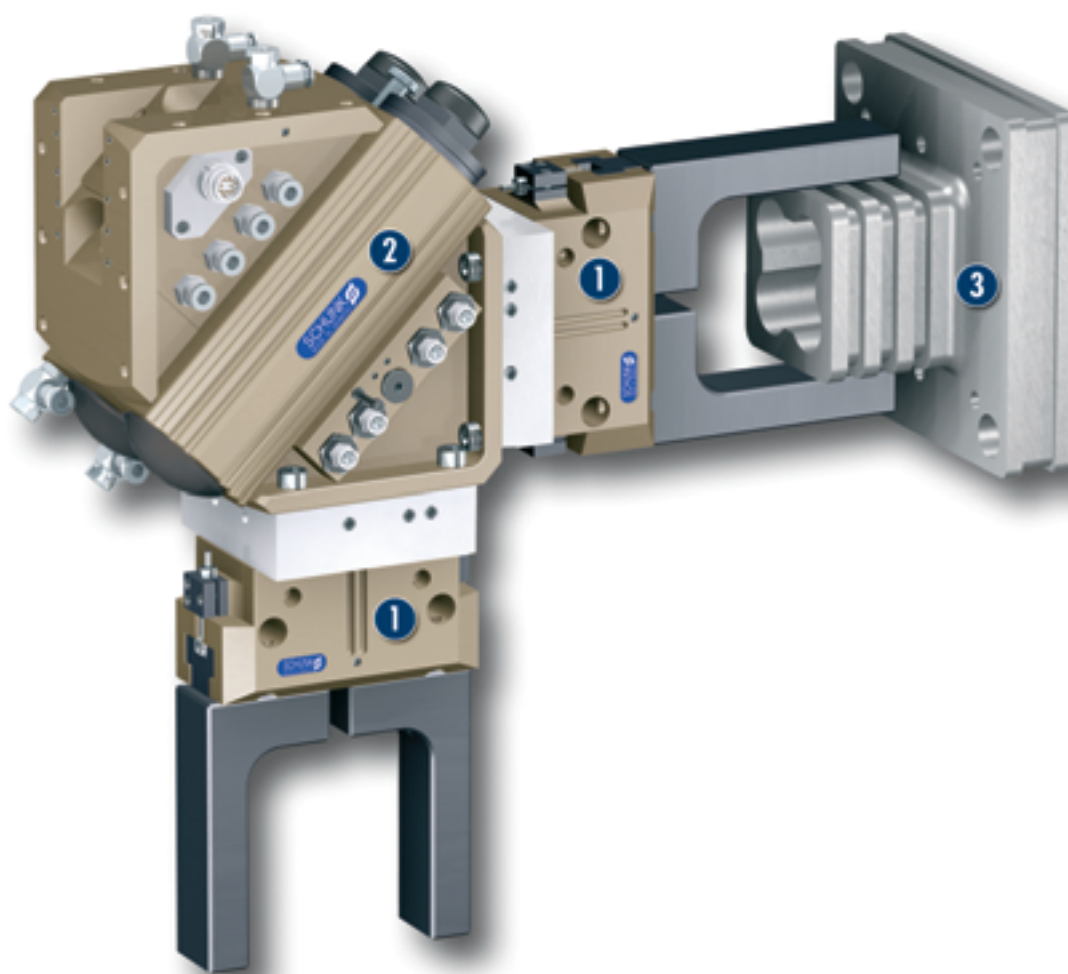


Torque
3.0 Nm .. 69.9 Nm



Bending moment
10.4 Nm .. 340 Nm

Application example



Swivel head for the rapid loading and unloading of machine tools

1 2-Finger Parallel Gripper JGP with workpiece-specific gripper fingers

2 SRH Swivel Head

3 Workpiece

Swivel Head

Swivel head for rapid loading and unloading tasks, with integrated fluid and electric feed-through

Area of application

the unit of choice for loading and unloading machine tools

Your advantages and benefits

Complete module with integrated fluid and electrical feed-through

therefore unessential disturbing hose system drop

High damping power by application hydraulic shock absorbers

thus there is an decisively contraction of the abrasion and a shorter charging periode

Feed-throudh and drive-connection both with screw connection and hose-free direct connection possible

for flexibility in all of the automation-solutions



Information about the series

Working principle

Pneumatic double piston-rack-pinion-drive

Housing material

Aluminum, hard-anodized

Functional part

Pinion

Actuation

Pneumatic, with filtered compressed air (10 µm): Dry, lubricated or non-lubricated

Pressure medium: Requirements on quality of the compressed air according to

DIN ISO 8573-1: 6 4 4.

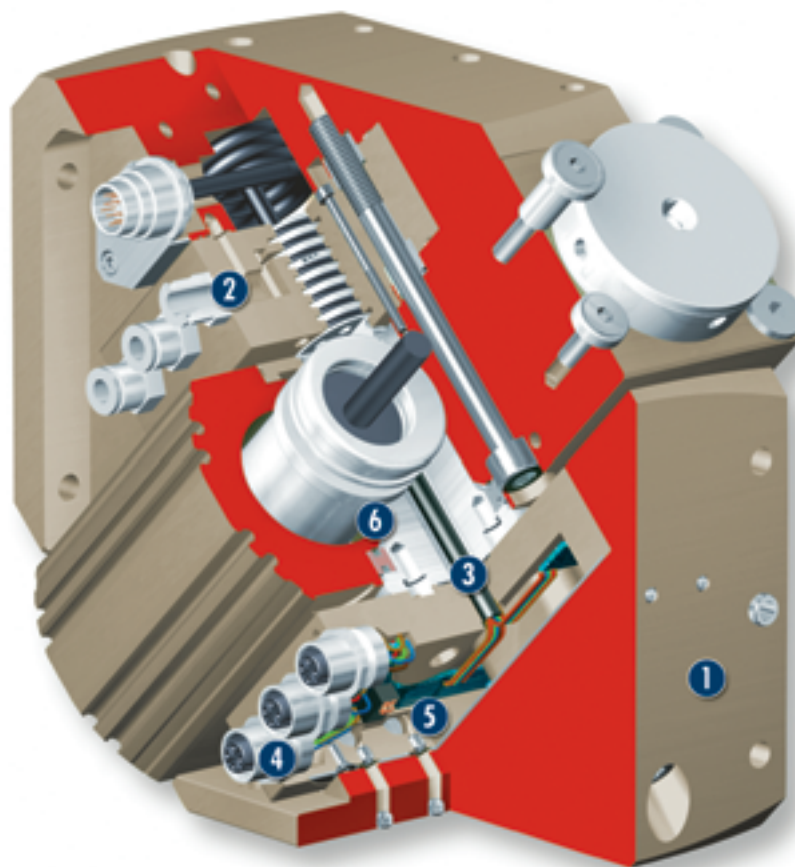
Warranty

24 months

Scope of delivery

Center sleeves for fastening, choke valves, O-rings for direct connection, instruction book and assembly instructions with producer explanation

Sectional diagram



- | | | |
|---------------------------------|--|----------------------------|
| 1 Output end | 3 Electric transmission leadthrough | 5 Distributor board |
| 2 Media feed-through MDF | 4 Housing-plug for EDF | 6 Pinion-rack-drive |

Function description

When subjected to pressure, the two pneumatic pistons move their end faces in a straight line in their bores, turning the pinion by means of the serrations on their sides. The pinion is firmly connected to the PTO head and feeds through the compressed air and electrical signals

Options and special information

The SRH series is fully equipped for the changeover of parts in machine tools. Media and fluid feed-throughs are integrated, connections for the proximity switches are already fitted.

Accessories

Accessories from SCHUNK – the suitable supplement for maximum functionality, reliability and performance of all automation modules.

Centering Sleeves



Fittings



IN inductive proximity switches



KV/KA sensor cables



V sensor distributors



SDV-P pressure maintenance valves



① For the exact size of the required accessories, availability of this size and the designation and ID, please refer to the additional views at the end of the size in question. You will find more detailed information on our accessory range in the „Accessories“ catalog section.

General information on the series

Repeat accuracy

Repeat accuracy is defined as the spread of the limit position after 100 consecutive swiveling cycles.

Cycle time

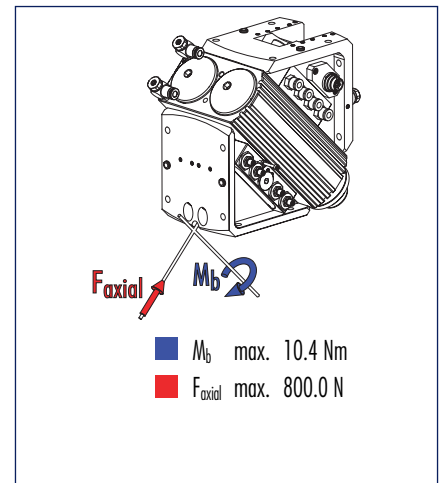
Cycle times are purely the times taken by the pinion/flange to turn round the nominal angle of rotation. Valve switching times, hose filling times or SPC reaction times are not included in the above times and must be taken into consideration when determining cycle times.

Layout or checking calculation

For deciding the layout or for checking calculations of rotary modules, we recommend that you use our SSE software, available on CD or from www.schunk.com. A checking calculation of the unit you have chosen is absolutely essential, as otherwise overloading may occur.



Pinion load

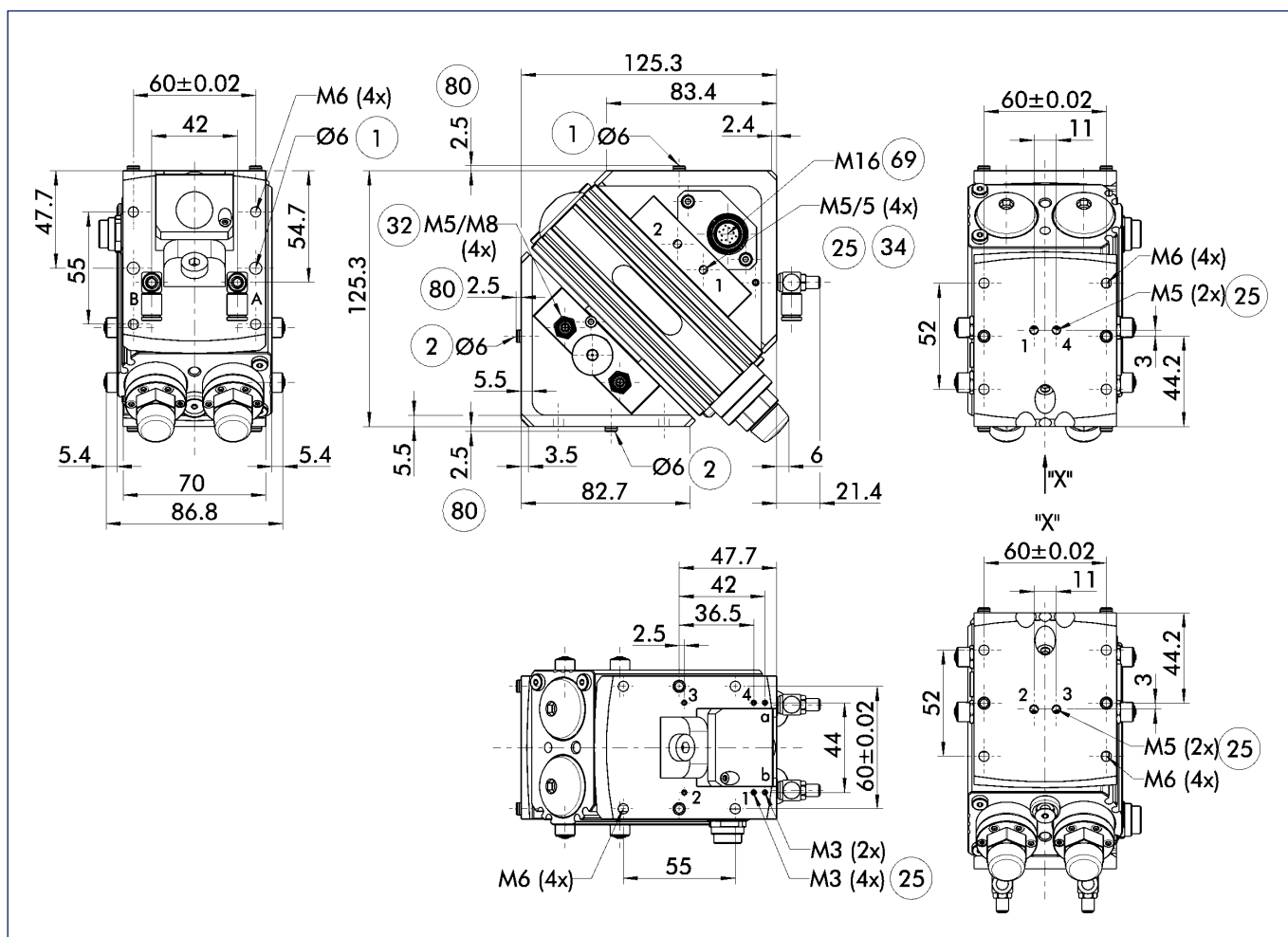


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		SRH 20.2-M5	SRH 20.2-M5-A	SRH 20.2-M8	SRH 20.2-M8-A	SRH 20.2-CB
	ID	0359045	0359220	0359046	0359221	0359145
Torque	[Nm]	3.0	3.0	3.0	3.0	3.0
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4	4
IP class		65	65	65	65	65
Weight	[kg]	2.2	2.2	2.2	2.2	2.1
Fluid Usage Per Cycle (2x Rate Angle)	[cm ³]	60.0	60.0	60.0	60.0	60.0
Swiveling time with middle attached load	[s]	0.8	0.8	0.8	0.8	0.8
Nominal pressure	[bar]	6.0	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4	
Size of the E-connections on the output end.		M5	M5	M8	M8	
Number of cores by EDF		6	6	6	6	
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	
Max. current per wire	[A]	1.0	1.0	1.0	1.0	
Max. overall current	[A]	1.0	1.0	1.0	1.0	

Main views



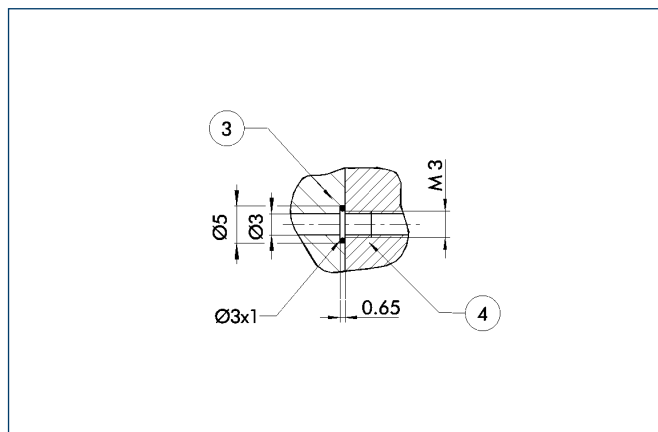
The main view shows the SRH in the version with integrated transmission leadthrough EDF. The swivel head is drawn in the left end position (0°) and turns clockwise till 180°. (view on the output side)

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
B,b Main/direct connection, anti-clockwise rotary unit

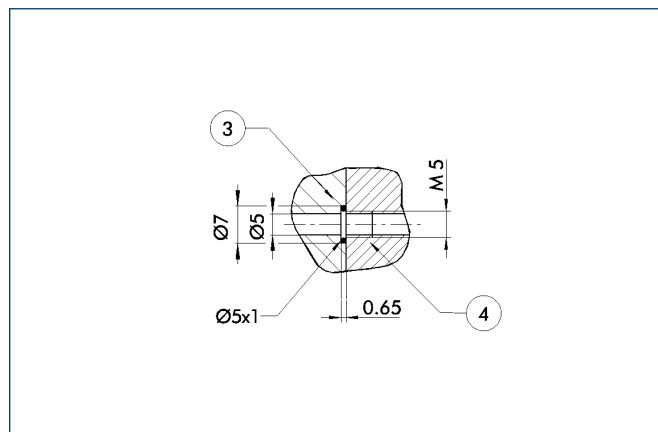
- ① Rotary unit connection
② Attachment connection
25 Fluid feed-through
32 flange socket for sensor feed-through at both terminal faces
34 Connection for electric feed-through
69 depth of the centering sleeve hole in the matching part

Direct connection on the connection side



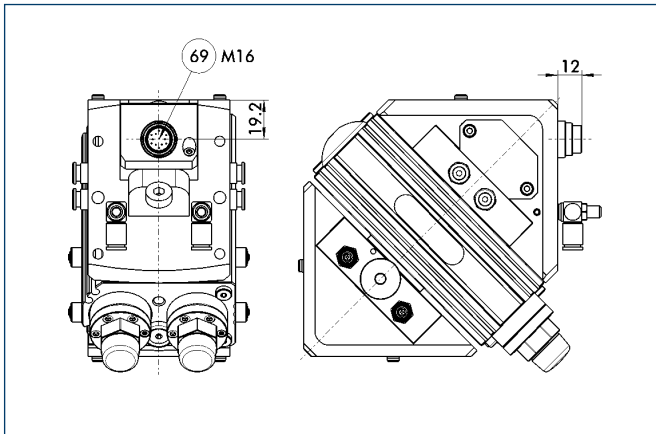
- ③ Adapter
④ Rotary unit

Direct connection on the output end



- ③ Adapter
④ Rotary unit

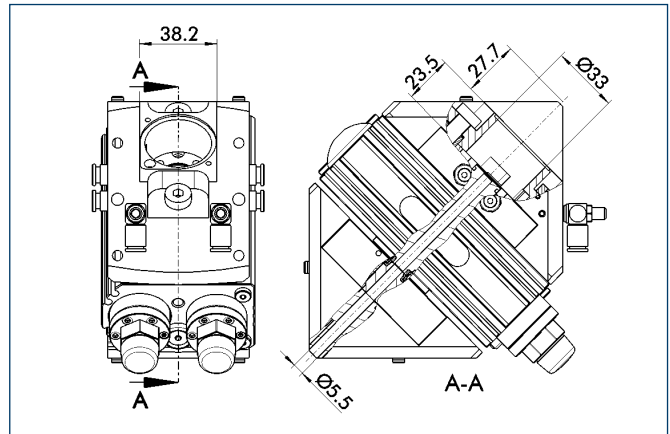
Version A (Axial Cable Connection)



69 Connection for electric feed-through

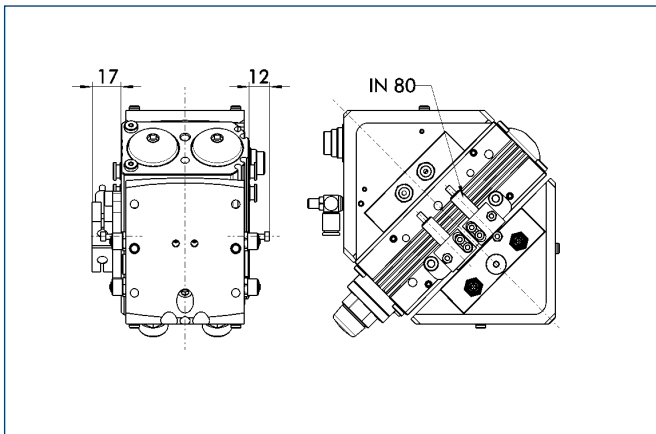
The SRH version with axial cable outlet (-A) is designed for applications, where an additional lateral interfering contour is not acceptable.

Version CB (Center Bore)



The CB-Version with central clearance hole provides the relocation of wires through the swivel head by the customer. Please note, that improper wire-relocation frequently leads to wire-damages. The inset of the swivel head with integrated transmission leadthrough „EDF“ is long-lasting and safe .

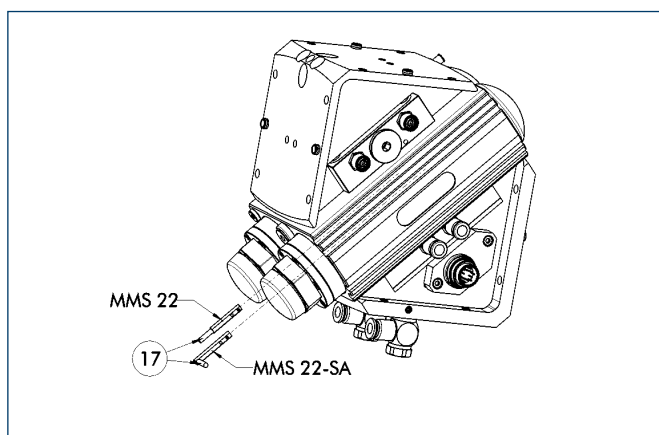
Mounting kit for proximity switch



The mounting kit consists of brackets, switch cams and the associated mounting materials. The proximity switches must be ordered separately.

Description	ID
AS-SRH 20/25	0359200

Sensor System



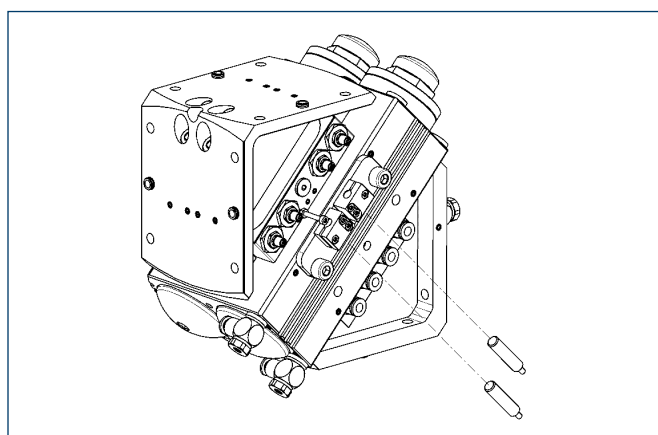
17 Cable outlet

End position monitoring:

Electronic magnetic switches, for direct mounting

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.



End position monitoring:

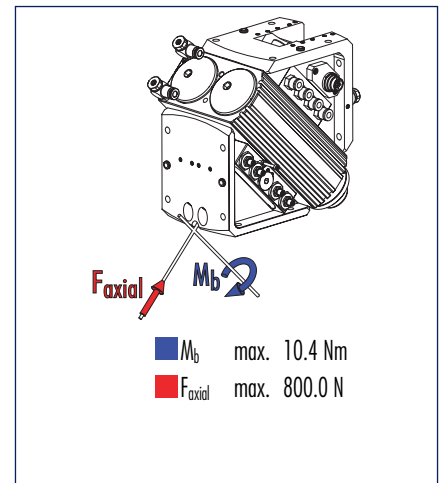
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRH 20/25	0359200	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.



Pinion load

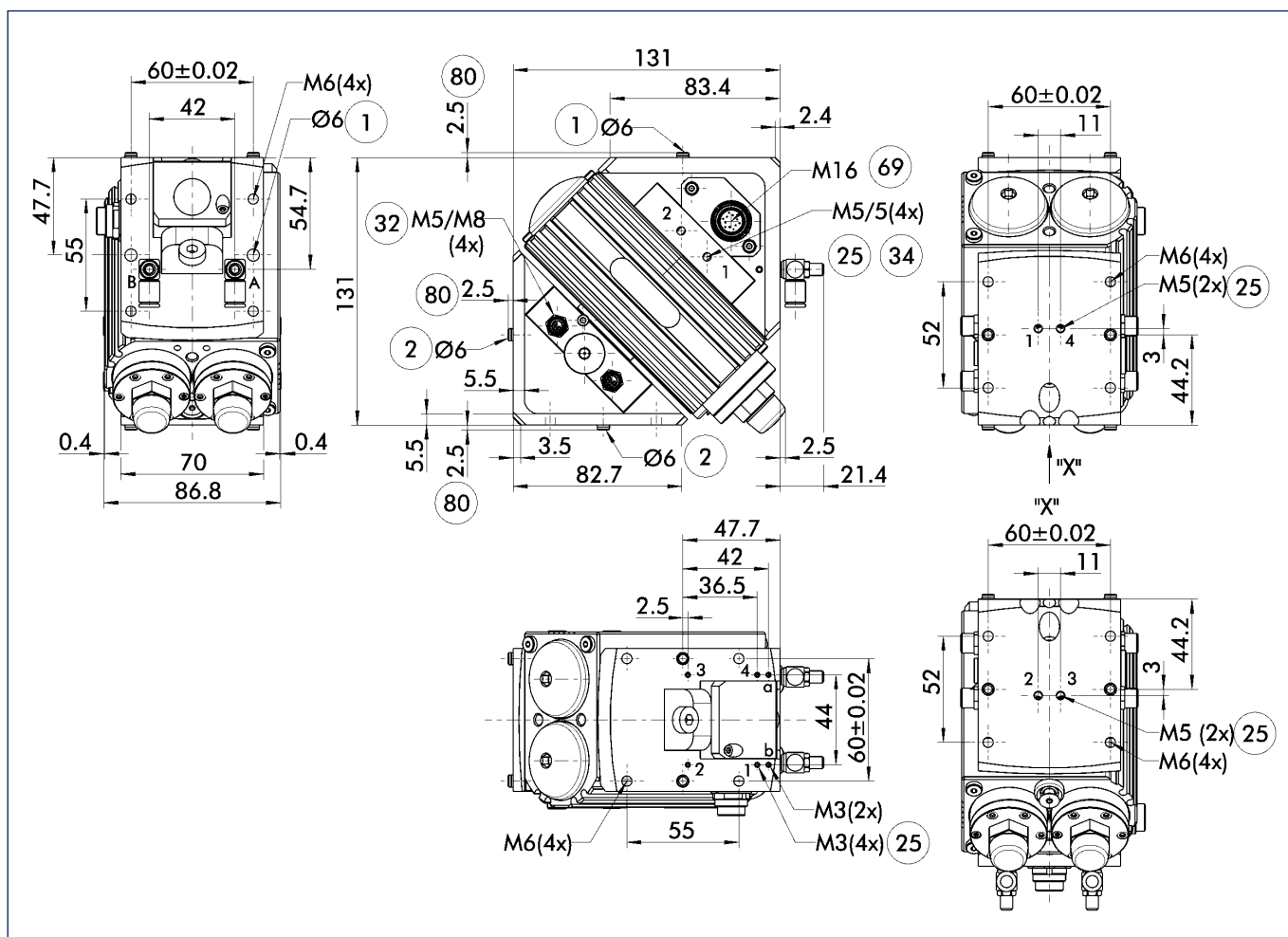


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		SRH 25.2-M5	SRH 25.2-M5-A	SRH 25.2-M8	SRH 25.2-M8-A	SRH 25.2-CB
	ID	0359055	0359222	0359056	0359223	0359155
Torque	[Nm]	4.6	4.6	4.6	4.6	4.6
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4	4
IP class		65	65	65	65	65
Weight	[kg]	2.6	2.6	2.6	2.6	2.5
Fluid Usage Per Cycle (2x Rate Angle)	[cm ³]	88.0	88.0	88.0	88.0	88.0
Swiveling time with middle attached load	[s]	1.1	1.1	1.1	1.1	1.1
Nominal pressure	[bar]	6.0	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4	
Size of the E-connections on the output end.		M5	M5	M8	M8	
Number of cores by EDF		6	6	6	6	
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	
Max. current per wire	[A]	1.0	1.0	1.0	1.0	
Max. overall current	[A]	1.0	1.0	1.0	1.0	

Main views



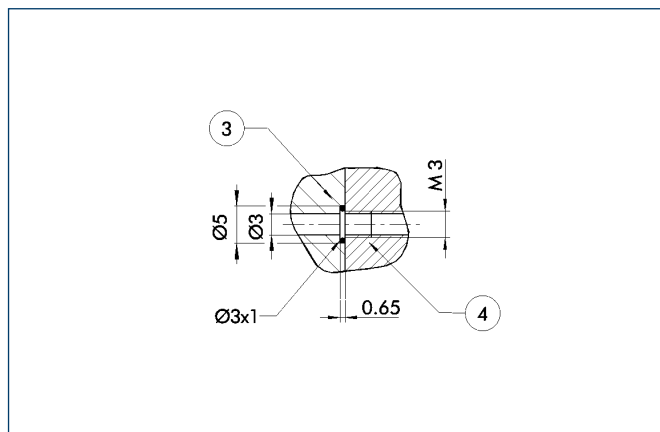
The main view shows the SRH in the version with integrated transmission leadthrough EDF. The swivel head is drawn in the left end position (0°) and turns clockwise till 180°. (view on the output side)

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
B,b Main/direct connection, anti-clockwise rotary unit

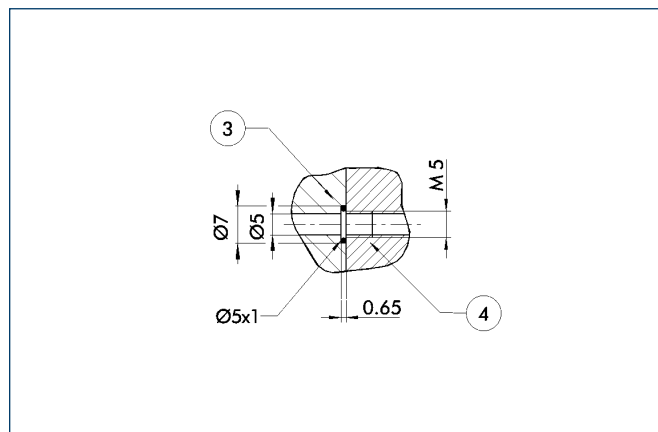
- ① Rotary unit connection
② Attachment connection
25 Fluid feed-through
32 flange socket for sensor feed-through at both terminal faces
34 Connection for electric feed-through
69 depth of the centering sleeve hole in the matching part

Direct connection on the connection side



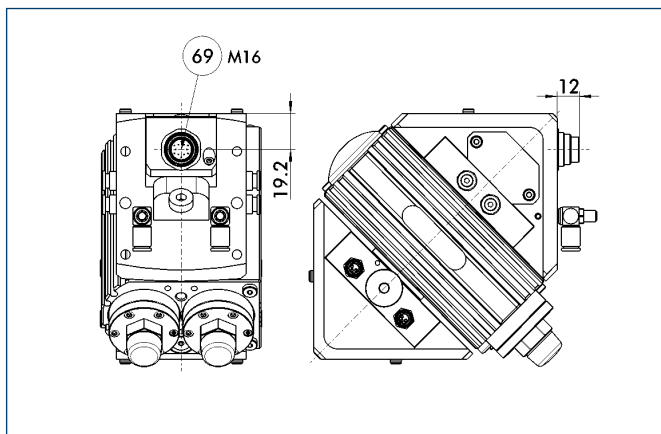
- ③ Adapter
④ Rotary unit

Direct connection on the output end



- ③ Adapter
④ Rotary unit

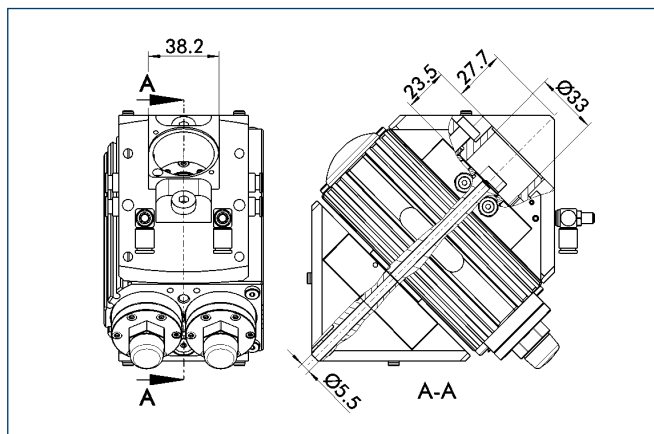
Version A (Axial Cable Connection)



69 Connection for electric feed-through

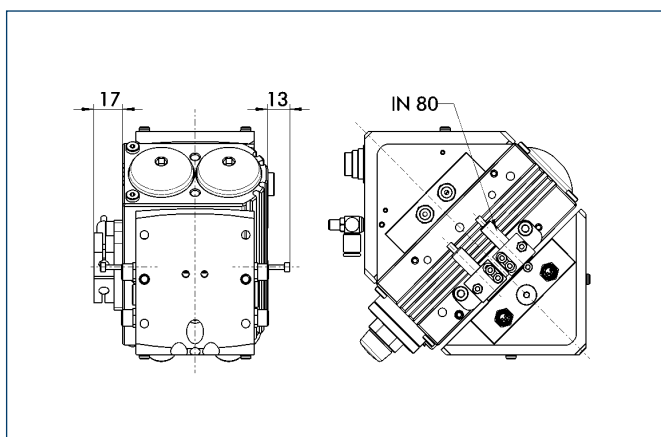
The SRH version with axial cable outlet (-A) is designed for applications, where an additional lateral interfering contour is not acceptable.

Version CB (Center Bore)



The CB-Version with central clearance hole provides the relocation of wires through the swivel head by the customer. Please note, that improper wire-relocation frequently leads to wire-damages. The inset of the swivel head with integrated transmission leadthrough „EDF“ is long-lasting and safe .

Mounting kit for proximity switch

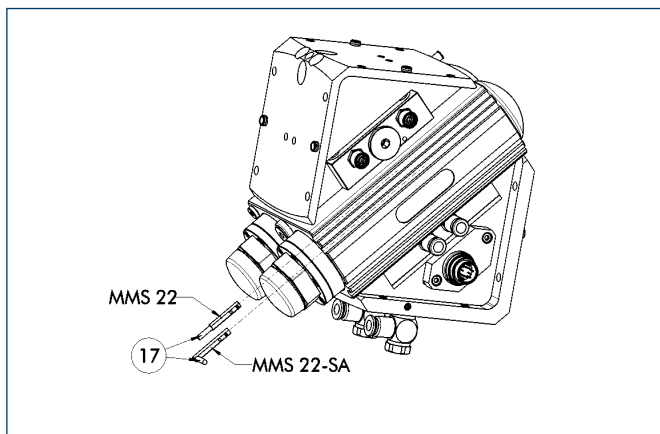


The mounting kit consists of brackets, switch cams and the associated mounting materials. The proximity switches must be ordered separately.

Description
AS-SRH 20/25

ID
0359200

Sensor System



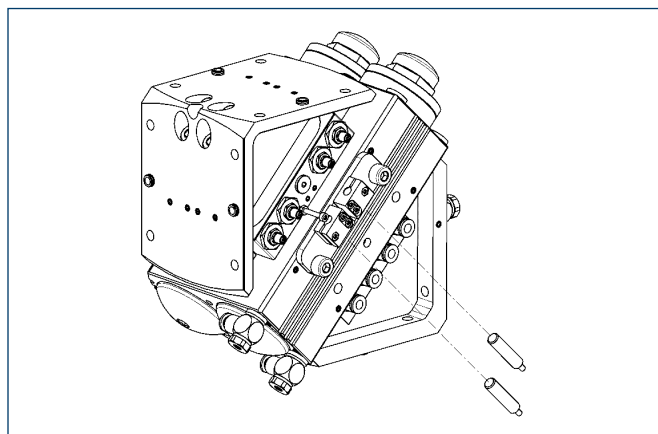
17 Cable outlet

End position monitoring:

Electronic magnetic switches, for direct mounting

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.



End position monitoring:

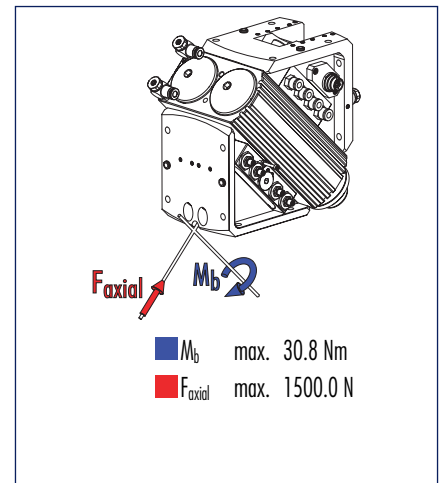
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRH 20/25	0359200	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.



Pinion load



① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		SRH 35.2-M5	SRH 35.2-M5-A	SRH 35.2-M8	SRH 35.2-M8-A	SRH 35.2-CB
	ID	0359065	0359226	0359066	0359227	0359165
Torque	[Nm]	13.3	13.3	13.3	13.3	13.3
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		4	4	4	4	4
IP class		65	65	65	65	65
Weight	[kg]	4.3	4.3	4.3	4.3	4.2
Fluid Usage Per Cycle (2x Rate Angle)	[cm ³]	216.0	216.0	216.0	216.0	216.0
Swiveling time with middle attached load	[s]	1.4	1.4	1.4	1.4	1.4
Nominal pressure	[bar]	6.0	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		4	4	4	4	
Size of the E-connections on the output end.		M5	M5	M8	M8	
Number of cores by EDF		6	6	6	6	
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	
Max. current per wire	[A]	1.0	1.0	1.0	1.0	
Max. overall current	[A]	1.0	1.0	1.0	1.0	

[illegible]

- ① Rotary unit connection
- ② Attachment connection
- ②⑤ Fluid feed-through
- ③② flange socket for sensor feed-through
- ③④ at both terminal faces
- ⑥⑨ Connection for electric feed-through
- ⑧⑩ depth of the centering sleeve hole in the matching part

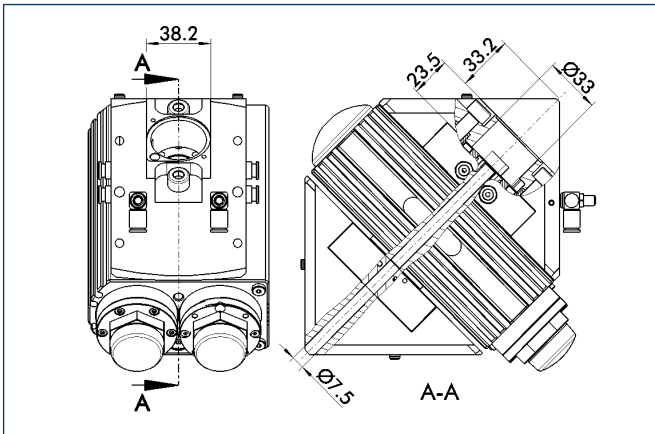
Technical drawing of a mechanical part showing dimensions and callouts:

- Callout 3:** Points to the top surface of the part.
- Callout 4:** Points to the right side of the part.
- Dimensions:**
 - Overall width: $\varnothing 7$
 - Inner hole diameter: $\varnothing 5$
 - Distance from inner hole center to right edge: $M 5$
 - Distance from left edge to inner hole center: $\varnothing 5 \times 1$
 - Radius at the bottom corner: $R 0.65$

- [illegible]

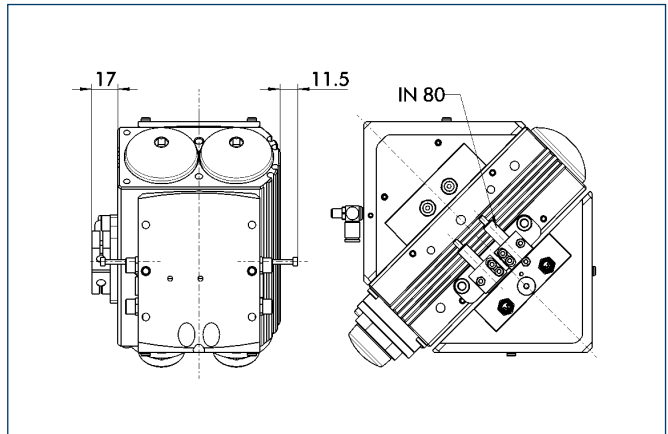
- The SRH version with axial cable outlet (-A) is designed for applications, where an additional lateral interfering contour is not acceptable.

Version CB (Center Bore)



The CB-Version with central clearance hole provides the relocation of wires through the swivel head by the customer. Please note, that improper wire-relocation frequently leads to wire-damages. The inset of the swivel head with integrated transmission leadthrough „EDF“ is long-lasting and safe.

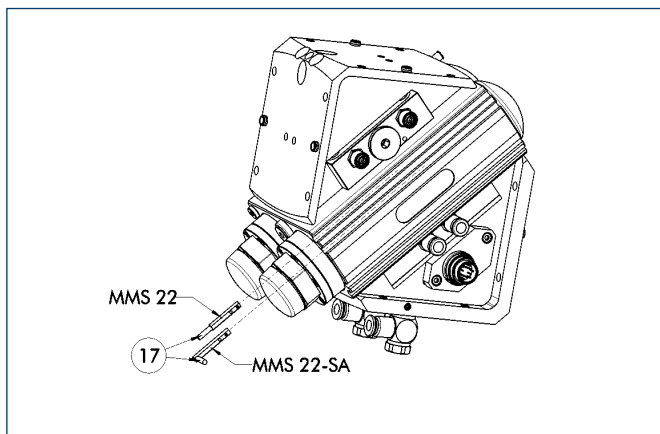
Mounting kit for proximity switch



The mounting kit consists of brackets, switch cams and the associated mounting materials. The proximity switches must be ordered separately.

Description	ID
AS-SRH 35	0359201

Sensor System



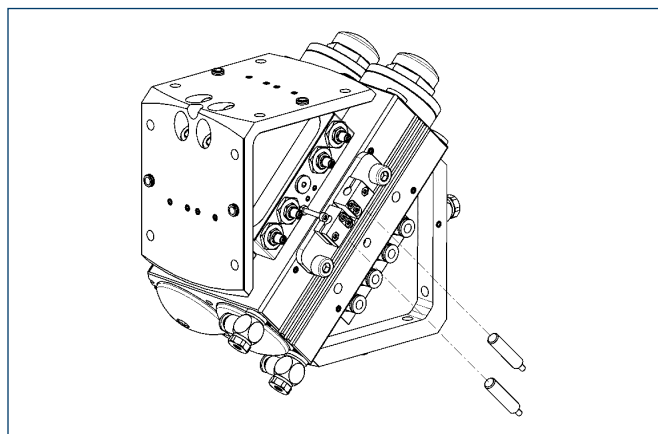
17 Cable outlet

End position monitoring:

Electronic magnetic switches, for direct mounting

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.



End position monitoring:

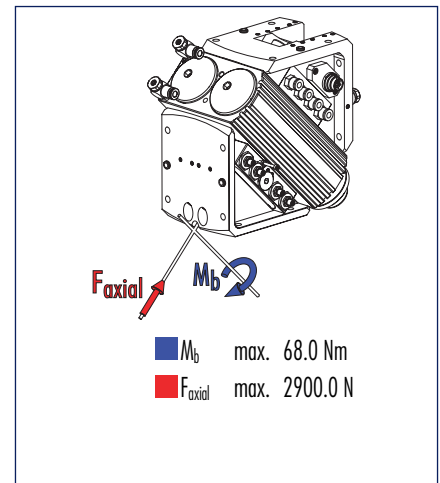
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRH 35	0359201	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.



Pinion load



① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		SRH 40.2-M5	SRH 40.2-M5-A	SRH 40.2-M8	SRH 40.2-M8-A	SRH 40.2-M12	SRH 40.2-M12-A	SRH 40.2-CB
	ID	0359075	0359228	0359076	0359229	0359077	0359230	0359175
Torque	[Nm]	19.1	19.1	19.1	19.1	19.1	19.1	19.1
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8	8
IP class		65	65	65	65	65	65	65
Weight	[kg]	6.9	6.9	6.9	6.9	6.9	6.9	6.7
Fluid Usage Per Cycle (2x Rate Angle)	[cm ³]	336.0	336.0	336.0	336.0	336.0	336.0	336.0
Swiveling time with middle attached load	[s]	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Nominal pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8	
Size of the E-connections on the output end.		M5	M5	M8	M8	M12	M12	
Number of cores by EDF		10	10	10	10	10	10	
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0	
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0	
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0	

[illegible]

i The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
B,b Main/direct connection, anti-clockwise rotary unit

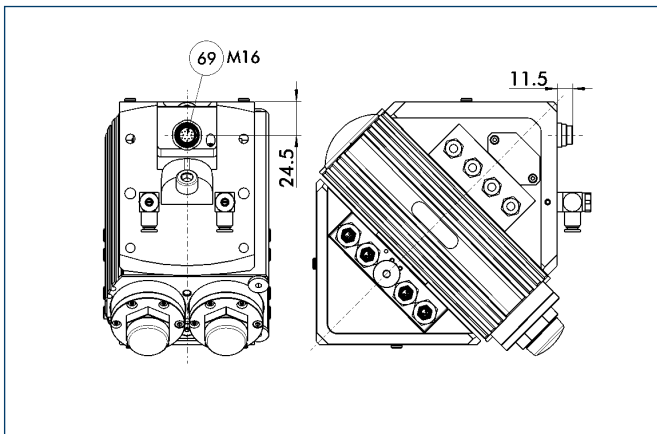
- ① Rotary unit connection
- ② Attachment connection
- ②⑤ Fluid feed-through
- ③② flange socket for sensor feed-through
- ③④ at both terminal faces
- ⑥⑨ Connection for electric feed-through
- ⑧⑩ depth of the centering sleeve hole in the matching part

Technical drawing of a mechanical part with the following dimensions and callouts:

- Overall width: $\varnothing 7$
- Inner width: $\varnothing 5$
- Overall height: $M 5$
- Inner height: 0.65
- Callout 3: Points to the top surface of the part.
- Callout 4: Points to the right side of the part.
- Callout $\varnothing 5 \times 1$: Points to the central hole.

- ③ Adapter
- ④ Rotary unit

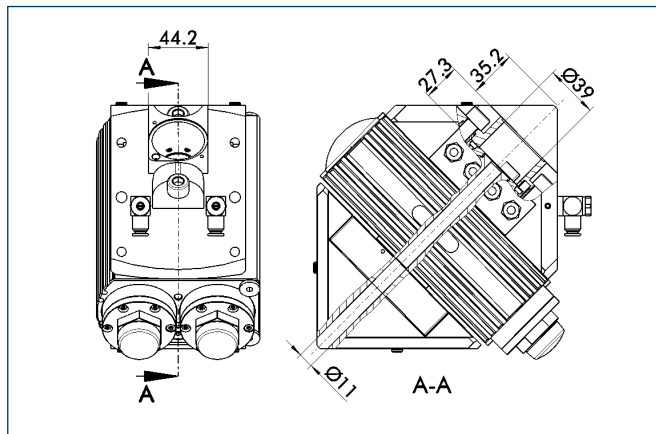
Version A (Axial Cable Connection)



69 Connection for electric feed-through

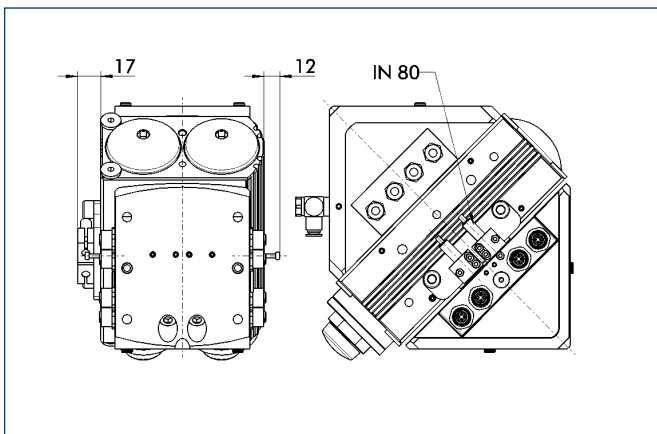
The SRH version with axial cable outlet (-A) is designed for applications, where an additional lateral interfering contour is not acceptable.

Version CB (Center Bore)



The CB-Version with central clearance hole provides the relocation of wires through the swivel head by the customer. Please note, that improper wire-relocation frequently leads to wire-damages. The inset of the swivel head with integrated transmission leadthrough „EDF“ is long-lasting and safe.

Mounting kit for proximity switch



The mounting kit consists of brackets, switch cams and the associated mounting materials. The proximity switches must be ordered separately.

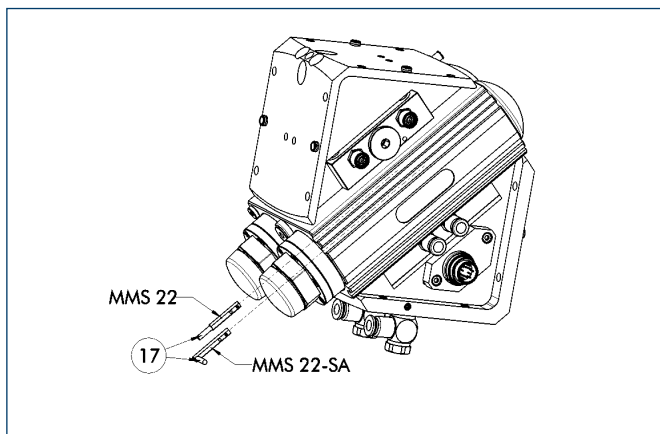
Description

AS-SRH 40

ID

0359202

Sensor System



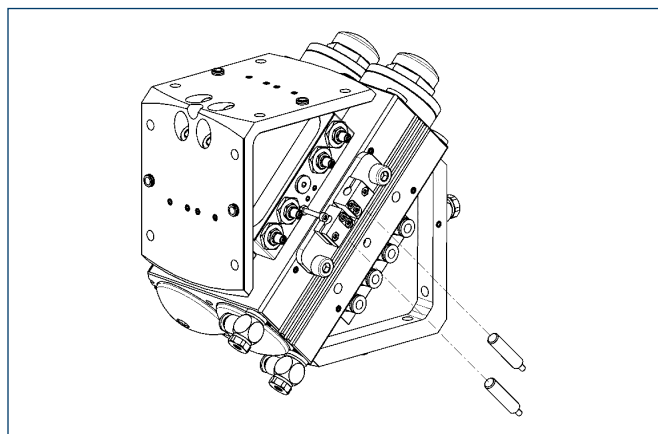
17 Cable outlet

End position monitoring:

Electronic magnetic switches, for direct mounting

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.



End position monitoring:

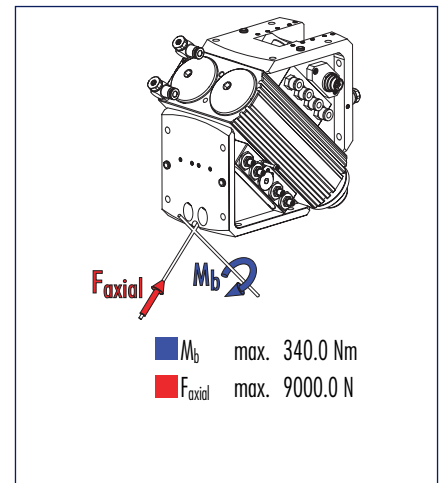
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRH 40	0359202	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.



Pinion load

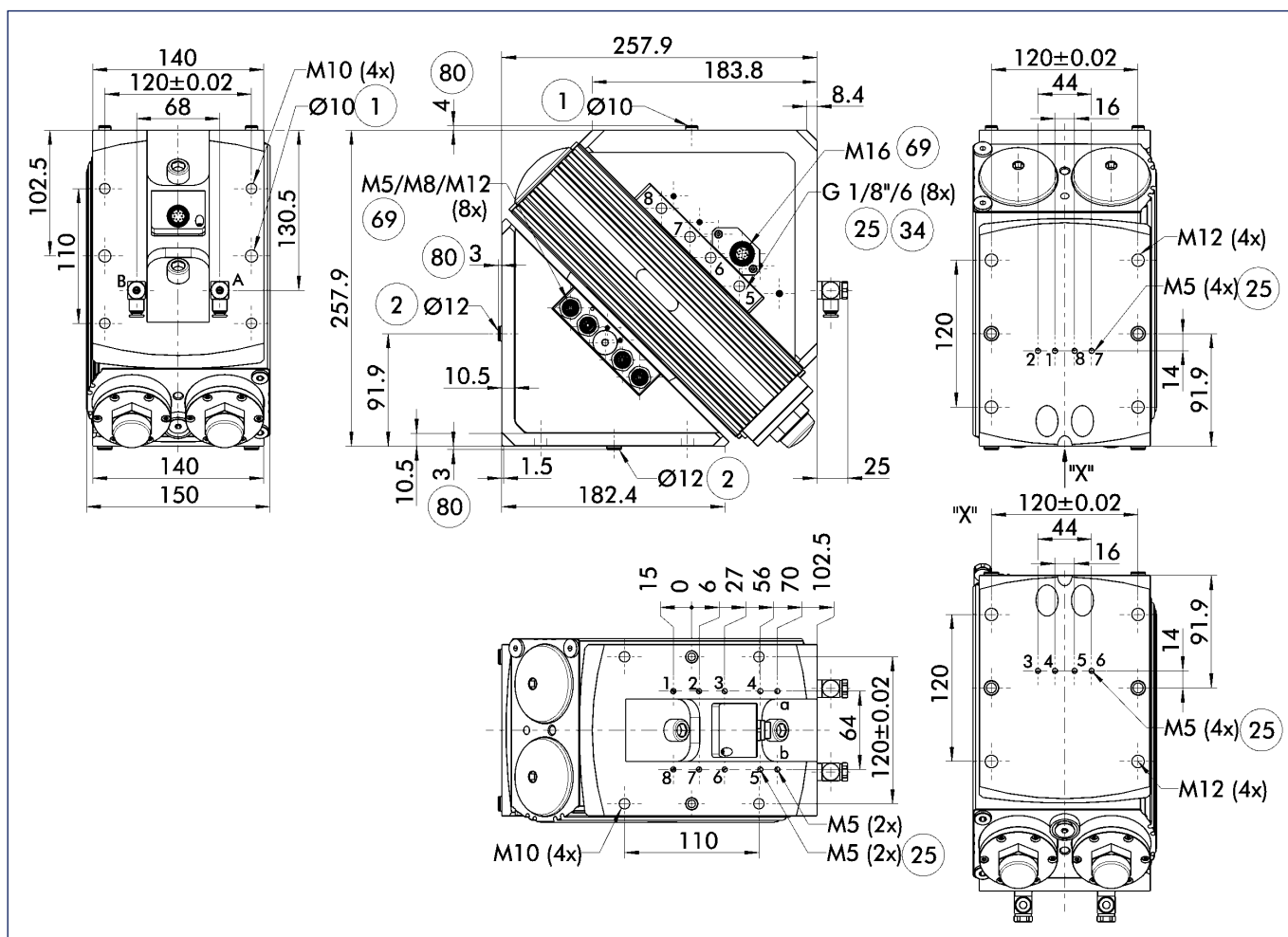


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		SRH 50.2-M5	SRH 50.2-M5-A	SRH 50.2-M8	SRH 50.2-M8-A	SRH 50.2-M12	SRH 50.2-M12-A	SRH 50.2-CB
	ID	0359085	0359231	0359086	0359232	0359087	0359233	0359185
Torque	[Nm]	50.2	50.2	50.2	50.2	50.2	50.2	50.2
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8	8
IP class		65	65	65	65	65	65	65
Weight	[kg]	17.6	17.6	17.6	17.6	17.6	17.6	17.3
Fluid Usage Per Cycle (2x Rate Angle)	[cm ³]	776.0	776.0	776.0	776.0	776.0	776.0	776.0
Swiveling time with middle attached load	[s]	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Nominal pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8	
Size of the E-connections on the output end.		M5	M5	M8	M8	M12	M12	
Number of cores by EDF		10	10	10	10	10	10	
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0	
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0	
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0	

Main views



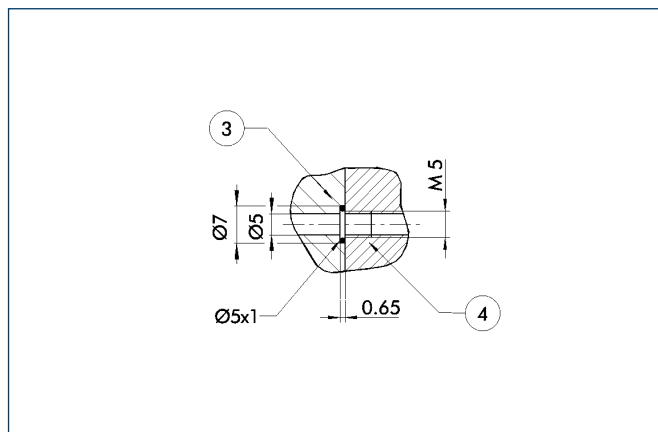
The main view shows the SRH in the version with integrated transmission leadthrough EDF. The swivel head is drawn in the left end position (0°) and turns clockwise till 180°. (view on the output side)

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
B,b Main/direct connection, anti-clockwise rotary unit

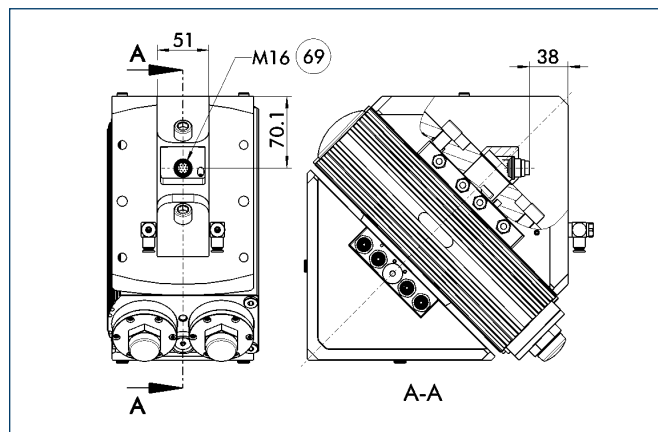
- ① Rotary unit connection
② Attachment connection
25 Fluid feed-through
32 flange socket for sensor feed-through at both terminal faces
34 Connection for electric feed-through
69 depth of the centering sleeve hole in the matching part

Direct connection on the output end and the connection side



- ③ Adapter
④ Rotary unit

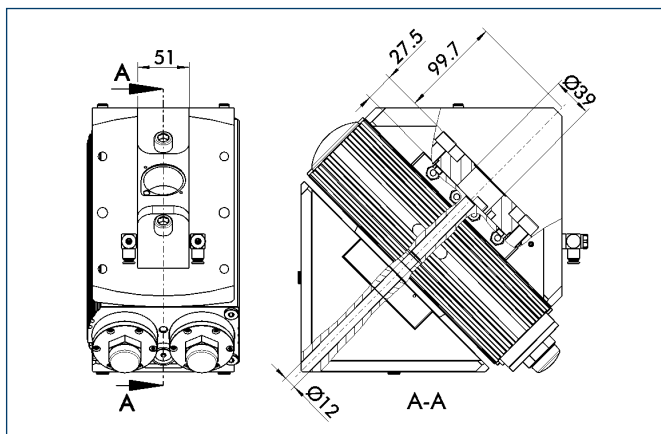
Version A (Axial Cable Connection)



- 69 Connection for electric feed-through

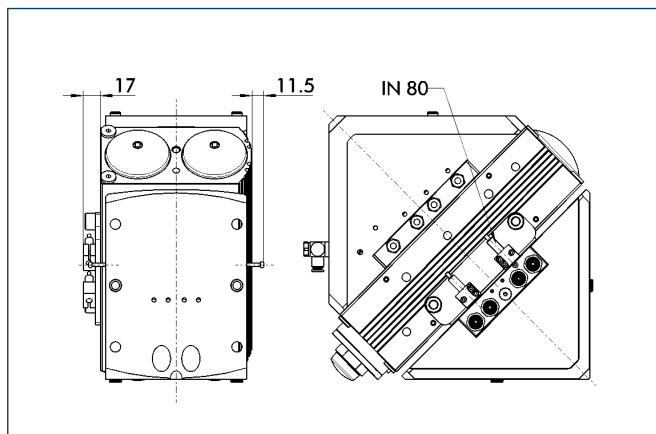
The SRH version with axial cable outlet (-A) is designed for applications, where an additional lateral interfering contour is not acceptable.

Version CB (Center Bore)



The CB-Version with central clearance hole provides the relocation of wires through the swivel head by the customer. Please note, that improper wire-relocation frequently leads to wire-damages. The inset of the swivel head with integrated transmission leadthrough „EDF“ is long-lasting and safe.

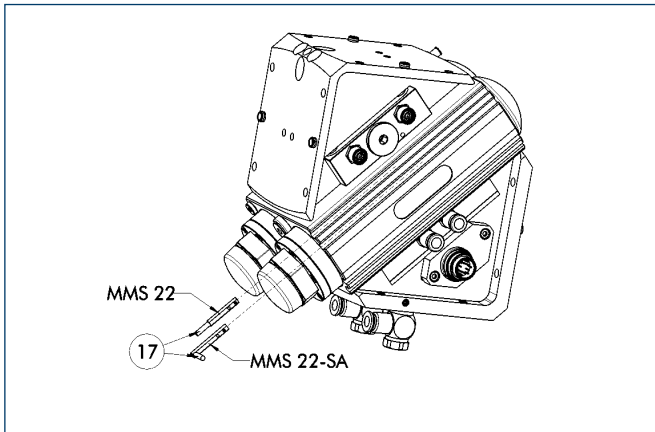
Mounting kit for proximity switch



The mounting kit consists of brackets, switch cams and the associated mounting materials. The proximity switches must be ordered separately.

Description	ID
AS-SRH 50/60	0359203

Sensor System



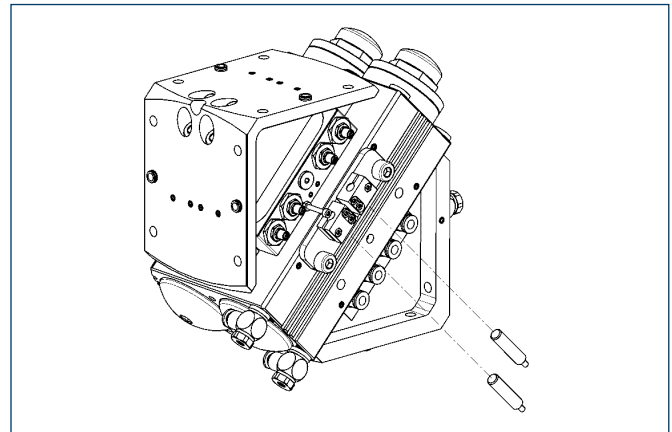
17 Cable outlet

End position monitoring:

Electronic magnetic switches, for direct mounting

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.



End position monitoring:

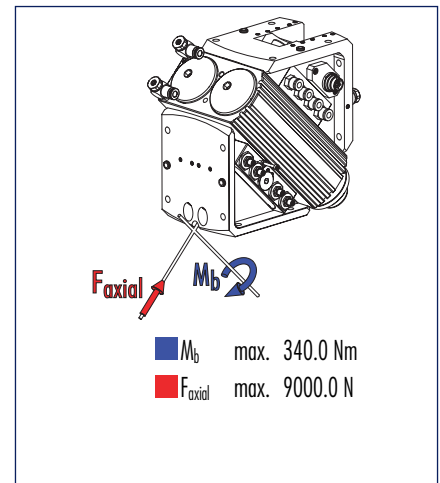
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRH 50/60	0359203	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.



Pinion load

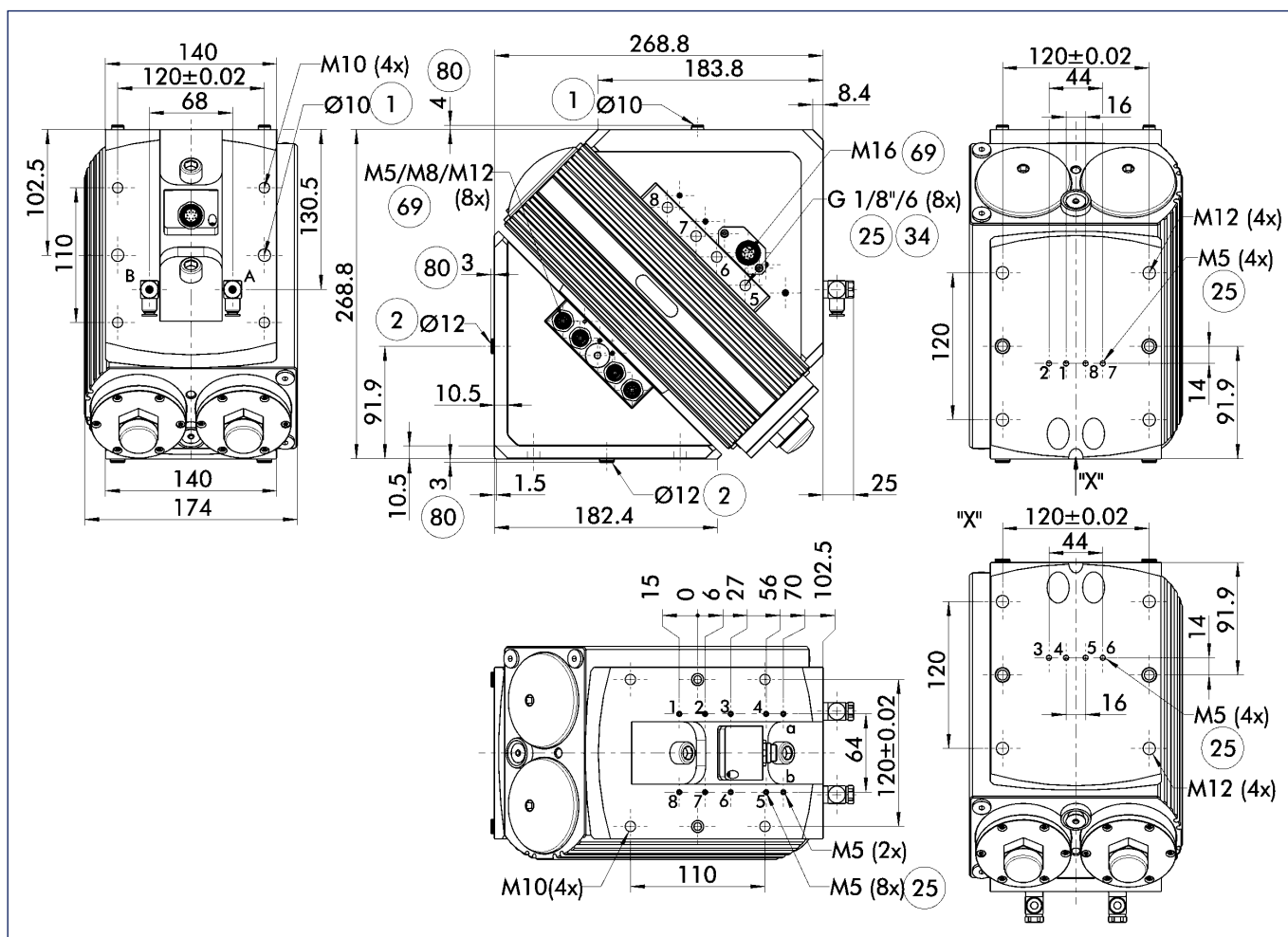


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description		SRH 60.2-M5	SRH 60.2-M5-A	SRH 60.2-M8	SRH 60.2-M8-A	SRH 60.2-M12	SRH 60.2-M12-A	SRH 60.2-CB
	ID	0359095	0359234	0359096	0359235	0359097	0359236	0359195
Torque	[Nm]	69.9	69.9	69.9	69.9	69.9	69.9	69.9
Rotating angle	[°]	180.0	180.0	180.0	180.0	180.0	180.0	180.0
Adjustability of end positions	[°]	3.0	3.0	3.0	3.0	3.0	3.0	3.0
No. of fluid feed-throughs		8	8	8	8	8	8	8
IP class		65	65	65	65	65	65	65
Weight	[kg]	21.2	21.2	21.2	21.2	21.2	21.2	19.9
Fluid Usage Per Cycle (2x Rate Angle)	[cm ³]	1120.0	1120.0	1120.0	1120.0	1120.0	1120.0	1120.0
Swiveling time with middle attached load	[s]	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Nominal pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Maximum pressure	[bar]	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Diameter of connecting hose	[mm]	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max. pressure in fluid feed-through	[bar]	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Min. ambient temperature	[°C]	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Température ambiante max.	[°C]	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end		8	8	8	8	8	8	
Size of the E-connections on the output end.		M5	M5	M8	M8	M12	M12	
Number of cores by EDF		10	10	10	10	10	10	
maximum voltage by EDF	[V]	24.0	24.0	24.0	24.0	24.0	24.0	
Max. current per wire	[A]	1.0	1.0	1.0	1.0	1.0	1.0	
Max. overall current	[A]	1.0	1.0	1.0	1.0	1.0	1.0	

Main views



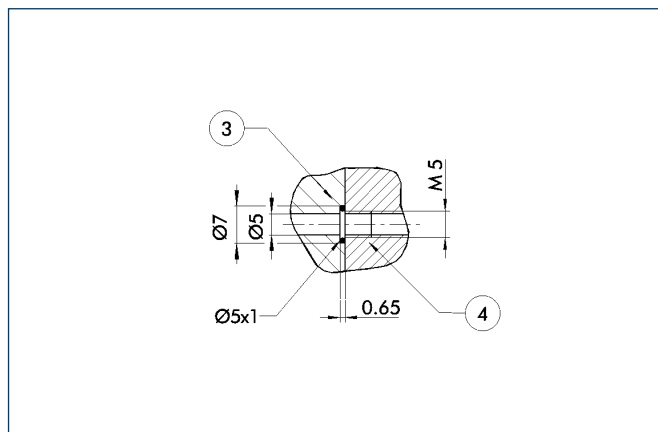
The main view shows the SRH in the version with integrated transmission leadthrough EDF. The swivel head is drawn in the left end position (0°) and turns clockwise till 180°. (view on the output side)

- ① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
B,b Main/direct connection, anti-clockwise rotary unit

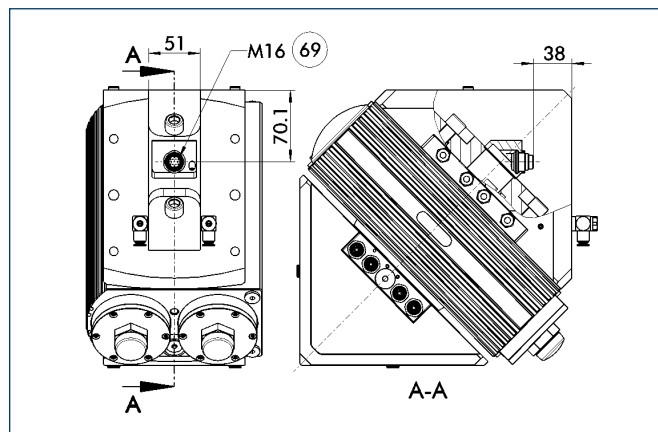
- ① Rotary unit connection
② Attachment connection
25 Fluid feed-through
32 flange socket for sensor feed-through at both terminal faces
34 Connection for electric feed-through
69 depth of the centering sleeve hole in the matching part

Direct connection on the output end and the connection side



- ③ Adapter
④ Rotary unit

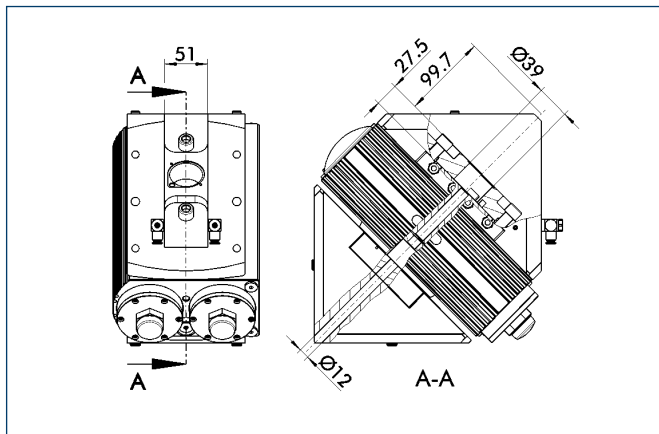
Version A (Axial Cable Connection)



- 69 Connection for electric feed-through

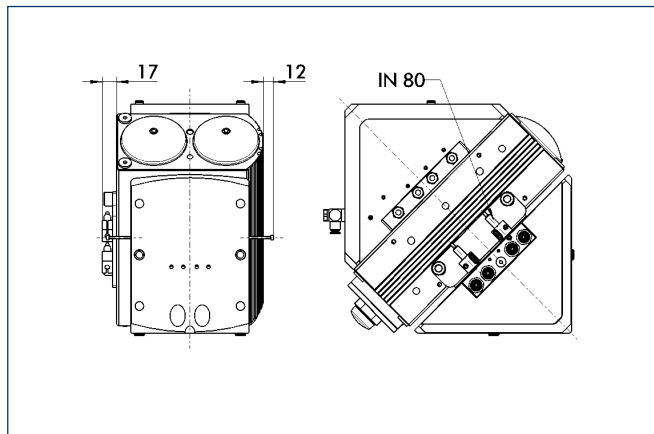
The SRH version with axial cable outlet (-A) is designed for applications, where an additional lateral interfering contour is not acceptable.

Version CB (Center Bore)



The CB-Version with central clearance hole provides the relocation of wires through the swivel head by the customer. Please note, that improper wire-relocation frequently leads to wire-damages. The inset of the swivel head with integrated transmission leadthrough „EDF“ is long-lasting and safe.

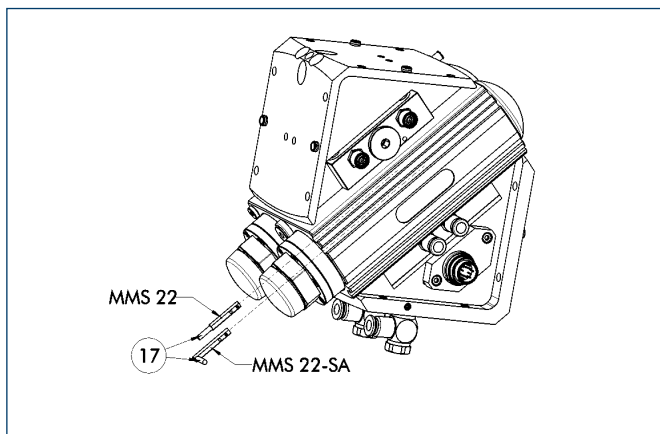
Mounting kit for proximity switch



The mounting kit consists of brackets, switch cams and the associated mounting materials. The proximity switches must be ordered separately.

Description	ID
AS-SRH 50/60	0359203

Sensor System



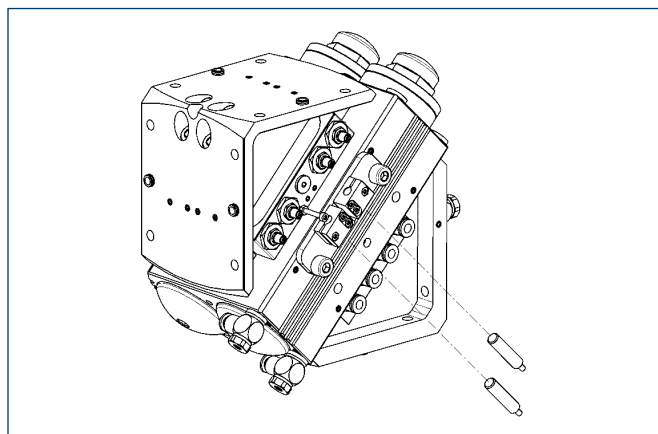
17 Cable outlet

End position monitoring:

Electronic magnetic switches, for direct mounting

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.



End position monitoring:

Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
AS-SRH 50/60	0359203	
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	

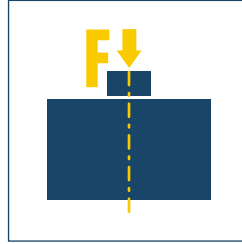
① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.



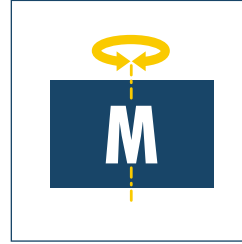
Sizes
18 .. 55



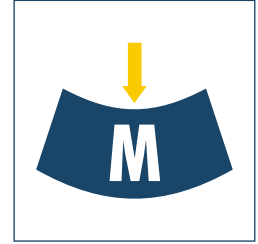
Weight
0.13 kg .. 1.95 kg



Axial force
140 N .. 2560 N

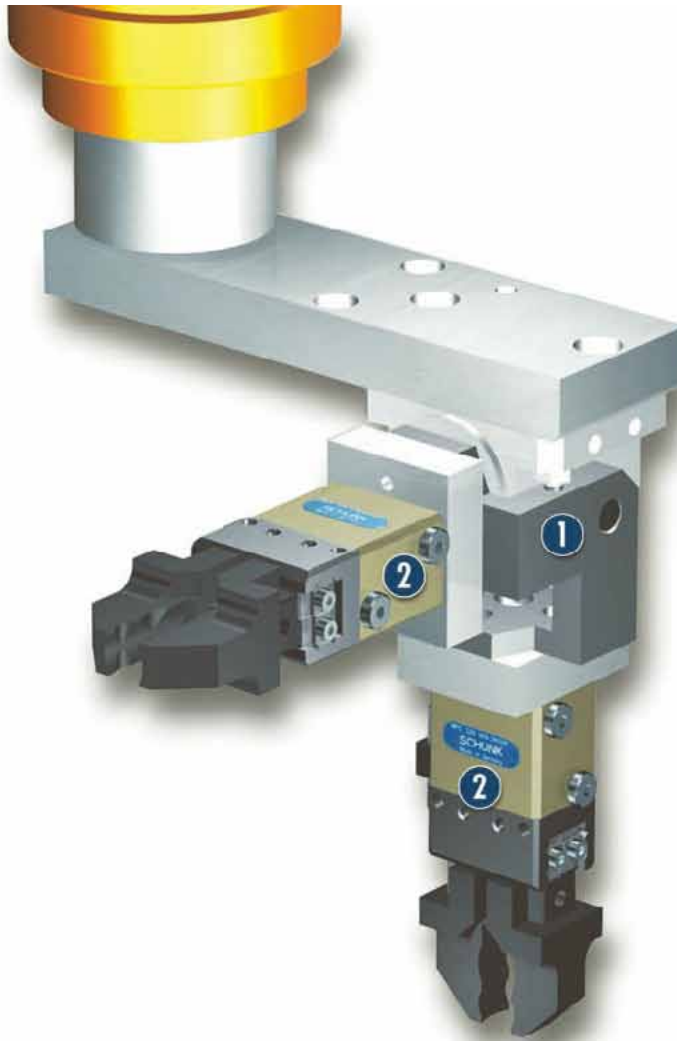


Torque
0.4 Nm .. 9.0 Nm



Bending moment
7.0 Nm .. 128 Nm

Application example



Robot gripper module for the removal and loading of a variety of axles and bolts

1 SKE 22 Swivel Head

2 MPG 32 2-Finger Parallel Gripper

Swivel Head

90° swivel head with single piston drive

Area of application

For use in clean environments such as assembly or packaging zones and for light external loads

Your advantages and benefits

90° swivel head

can travel to three positions

Low weight and compact design

for short cycle times

Standardized interfaces to many grippers in the RH series

for rapid gripper assembly without intermediate plates



Information about the series

Working principle

Double-acting single piston with transfer to a swivel movement by means of a serration

Housing material

High-strength aluminum

Material of functional components (internal)

Steel

Actuation

Pneumatic, with filtered compressed air (10 µm): Dry, lubricated or non-lubricated

Pressure medium: Required quality class of compressed air according to DIN ISO

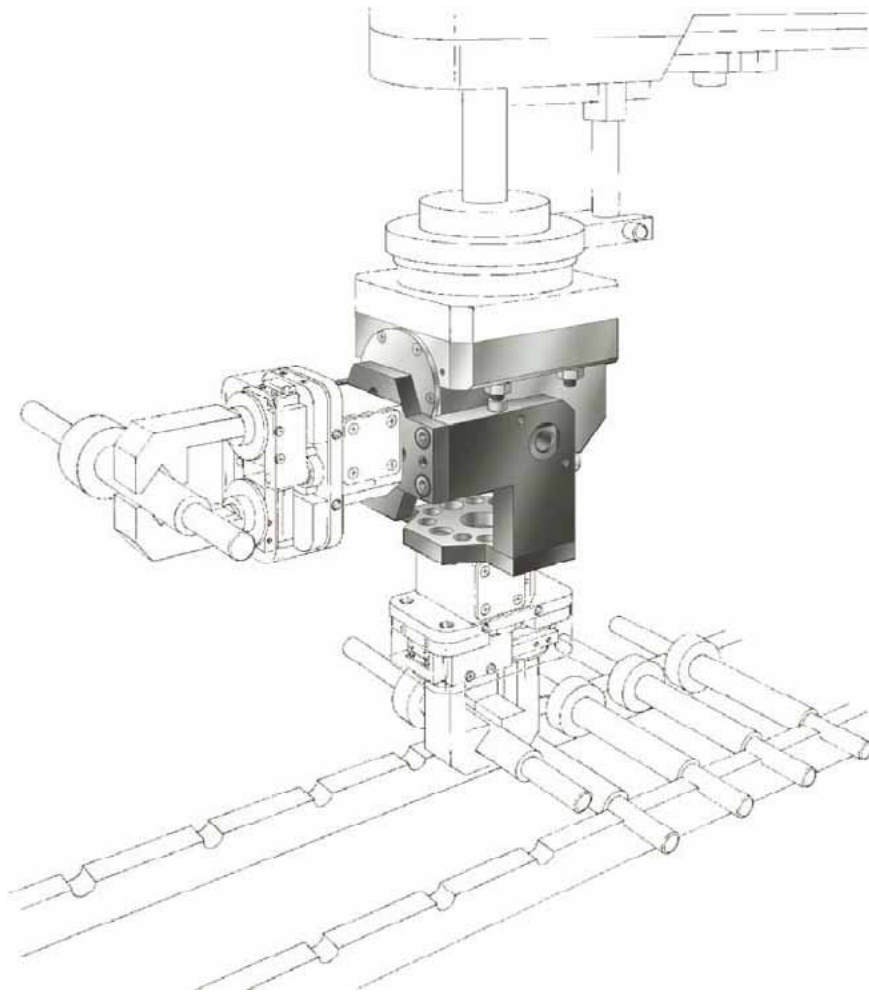
8573-1: Quality class 4

Warranty

24 months

Scope of delivery

Small parts for mounting, flow control couplings, assembly and operating manual with manufacturer's declaration



Function description

A double-acting piston located in the housing turns the die 90° swivel axis. Its speed is restricted by flow control couplings, ensuring that it travels cleanly to the end position.

Options and special information

In order to keep the manufacturing costs and thus the sale prices low, the SKE series is designed for low-cost production. Therefore, repairs are generally not economically feasible.

Accessories

Accessories from SCHUNK — the suitable complement for the highest level of functionality, reliability and controlled production of all automation components.

Fittings



IN inductive proximity switches



W/WK/KV/GK sensor cables



V sensor distributors



SDV-P pressure maintenance valves



① For the exact size of the required accessories, availability of this size and the designation and ID, please refer to the additional views at the end of the size in question. You will find more detailed information on our accessory range in the „Accessories“ catalog section.

General information on the series

Clean environment

SKE rotary units may only be employed in a clean environment.

Repeat accuracy

Repeat accuracy is defined as the spread of the limit position after 100 consecutive swiveling cycles.

Cycle time

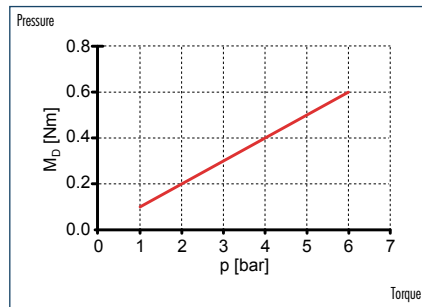
Cycle times are purely the times taken by the pinion/flange to turn round the nominal angle of rotation. Valve switching times, hose filling times or SPC reaction times are not included in the above times and must be taken into consideration when determining cycle times.

Direct connection of grippers

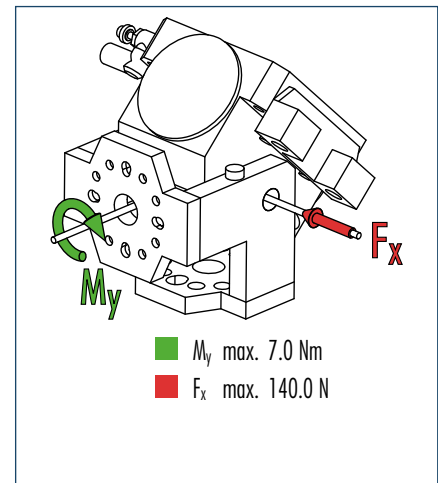
Some RH grippers can be flange-mounted directly to the SKE without an adapter plate. In this case, please note the screw connection diagram.



Torque



Moment load

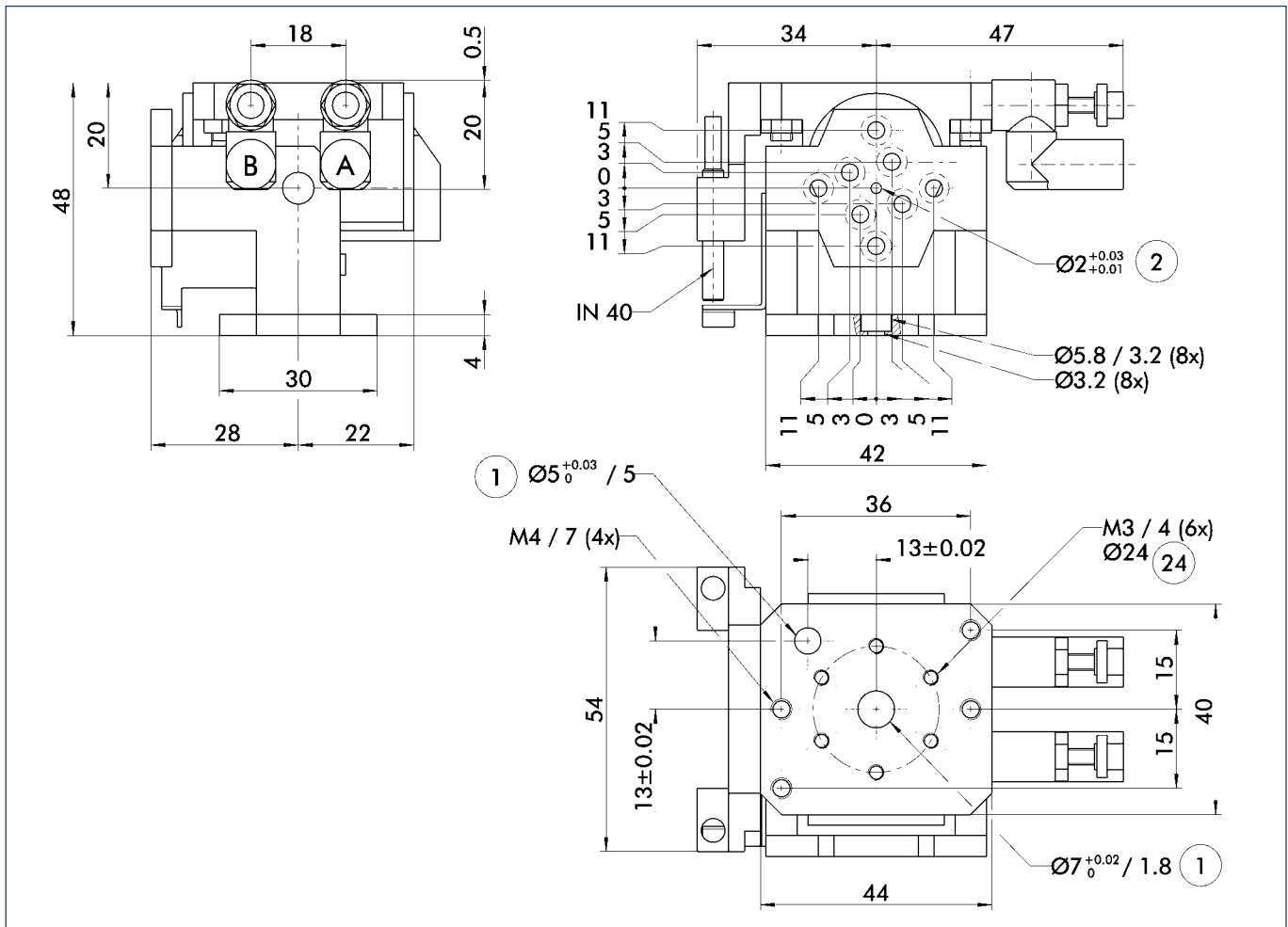


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description	ID	SKE 18
		0351100
Torque	[Nm]	0.4
Rotating angle	[°]	90.0
Adjustability of end positions	[°]	5.0
IP class		30
Weight	[kg]	0.13
Cycle time (1 x nominal angle of rotation) without attached load	[s]	0.5
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	10.0
Nominal pressure	[bar]	4.0
Minimum pressure	[bar]	1.0
Maximum pressure	[bar]	6.0
Diameter of connecting hose	[mm]	4.0
Min. ambient temperature	[°C]	5.0
Max. ambient temperature	[°C]	50.0
Repeat accuracy	[°]	0.03

Main views

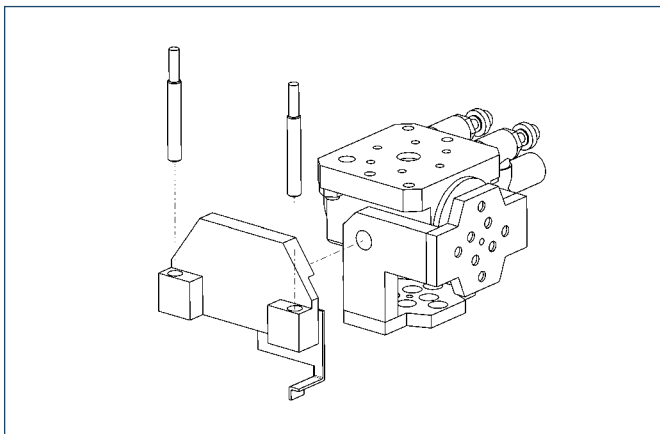


The drawing shows the swivel head in the basic version.

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Rotary unit connection
- ② Attachment connection
- ② Bolt circle

① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

Sensor system



End position monitoring:

Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 40-S-M12	0301574	
IN 40-S-M8	0301474	•
INK 40-S	0301555	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.

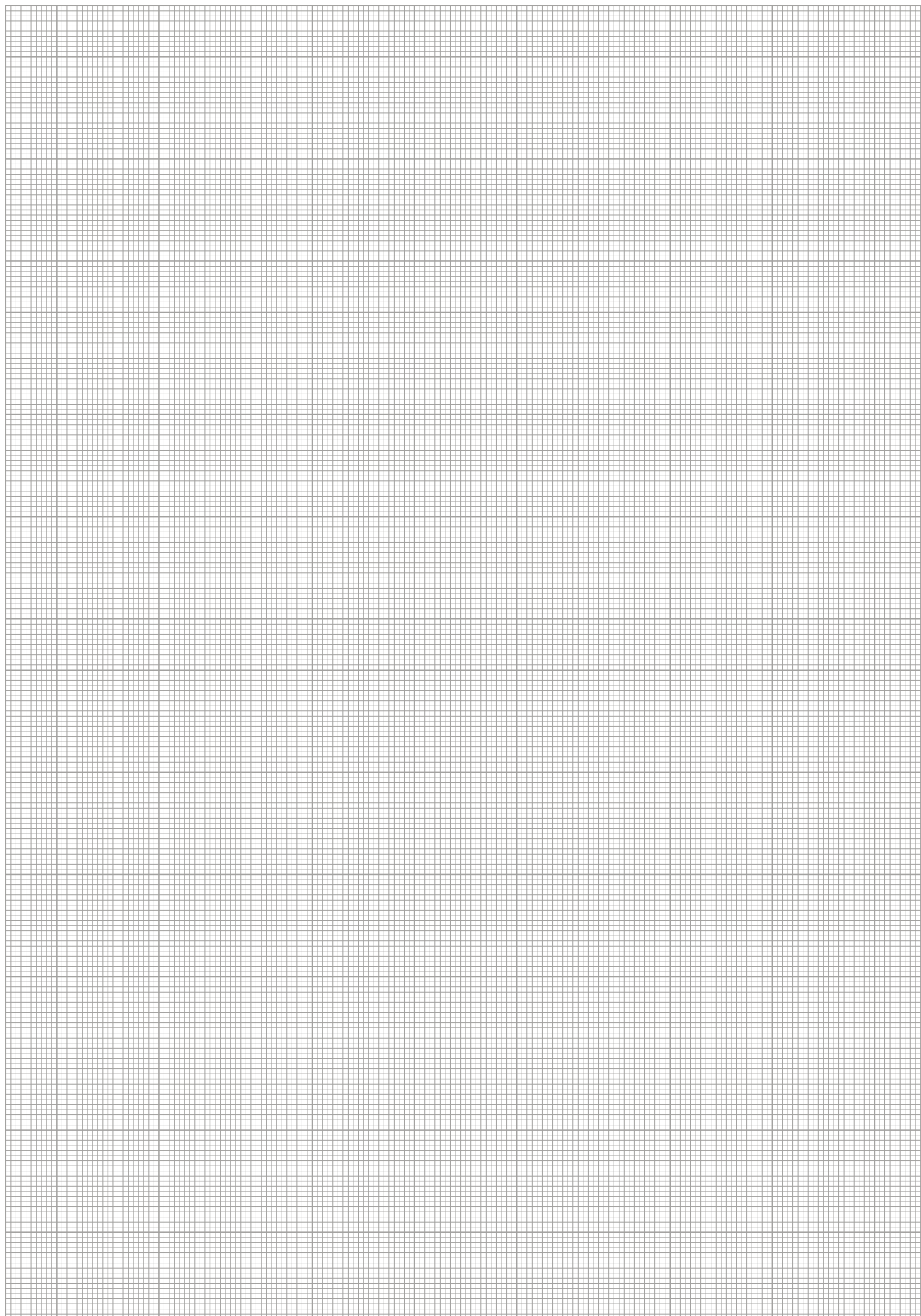
Extension cables for proximity switches/magnetic switches

Description	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

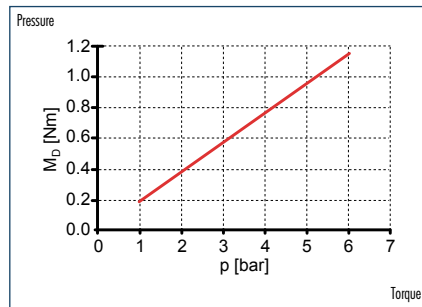


You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

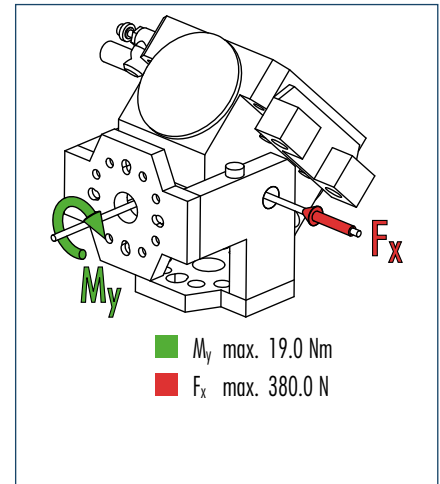




Torque



Moment load

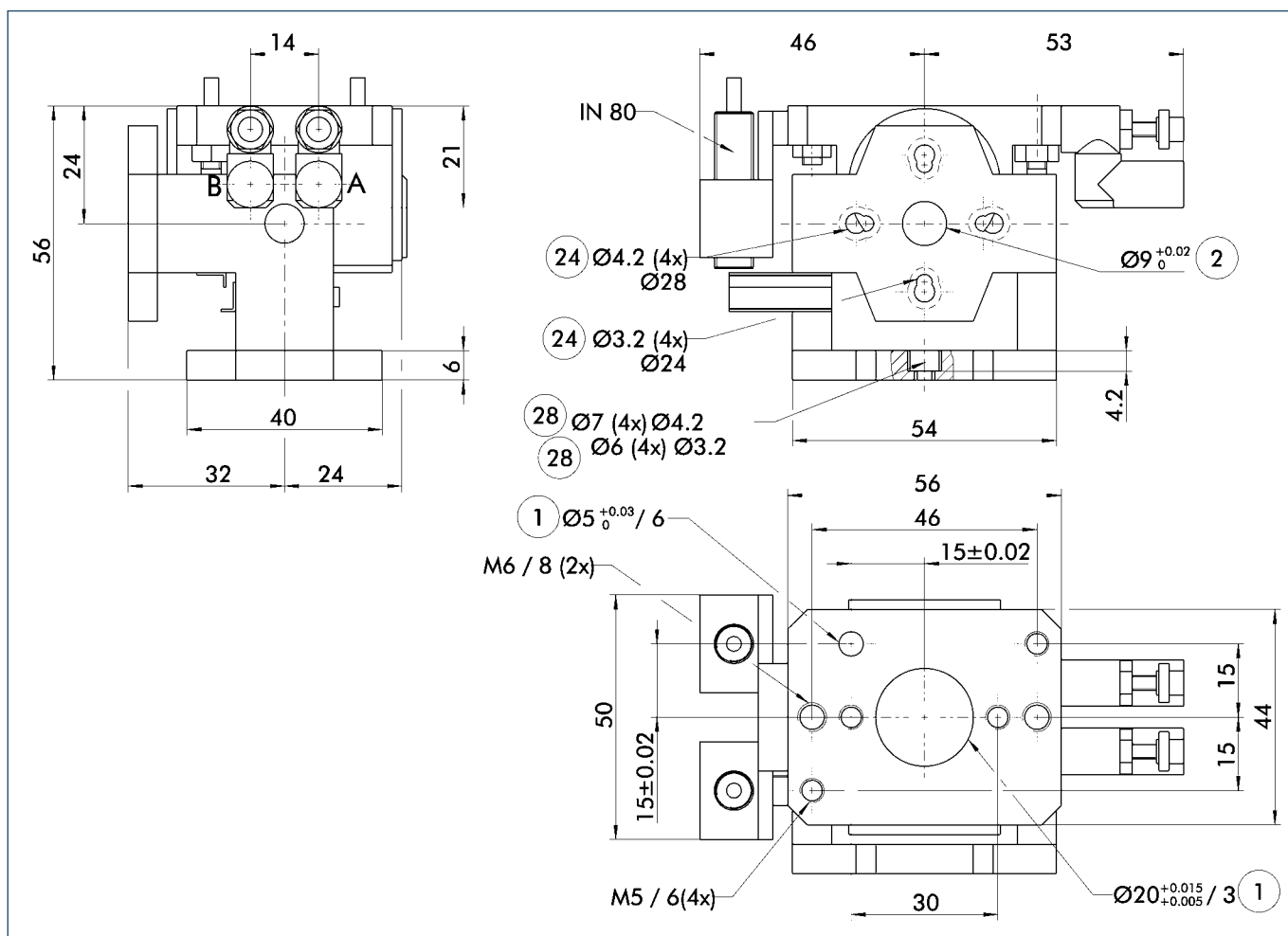


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description	ID	SKE 22
		0351102
Torque	[Nm]	0.75
Rotating angle	[°]	90.0
Adjustability of end positions	[°]	5.0
IP class		30
Weight	[kg]	0.2
Cycle time (1 x nominal angle of rotation) without attached load	[s]	0.8
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	20.0
Nominal pressure	[bar]	4.0
Minimum pressure	[bar]	1.0
Maximum pressure	[bar]	6.0
Diameter of connecting hose	[mm]	4.0
Min. ambient temperature	[°C]	5.0
Max. ambient temperature	[°C]	50.0
Repeat accuracy	[°]	0.03

Main views

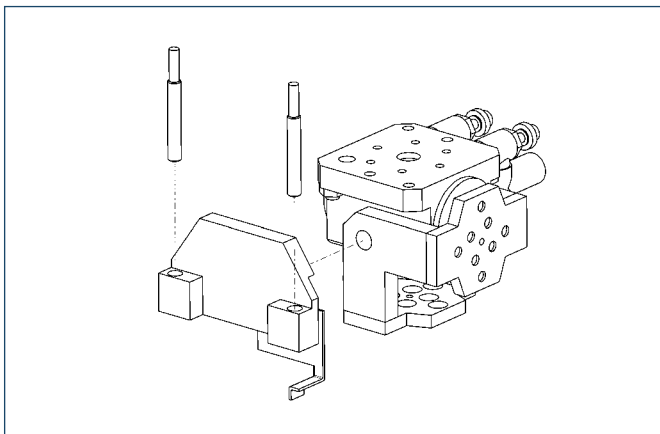


The drawing shows the swivel head in the basic version.

① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Rotary unit connection
- ② Attachment connection
- 24 Bolt circle
- 28 Through-bore

Sensor system



End position monitoring:

Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.

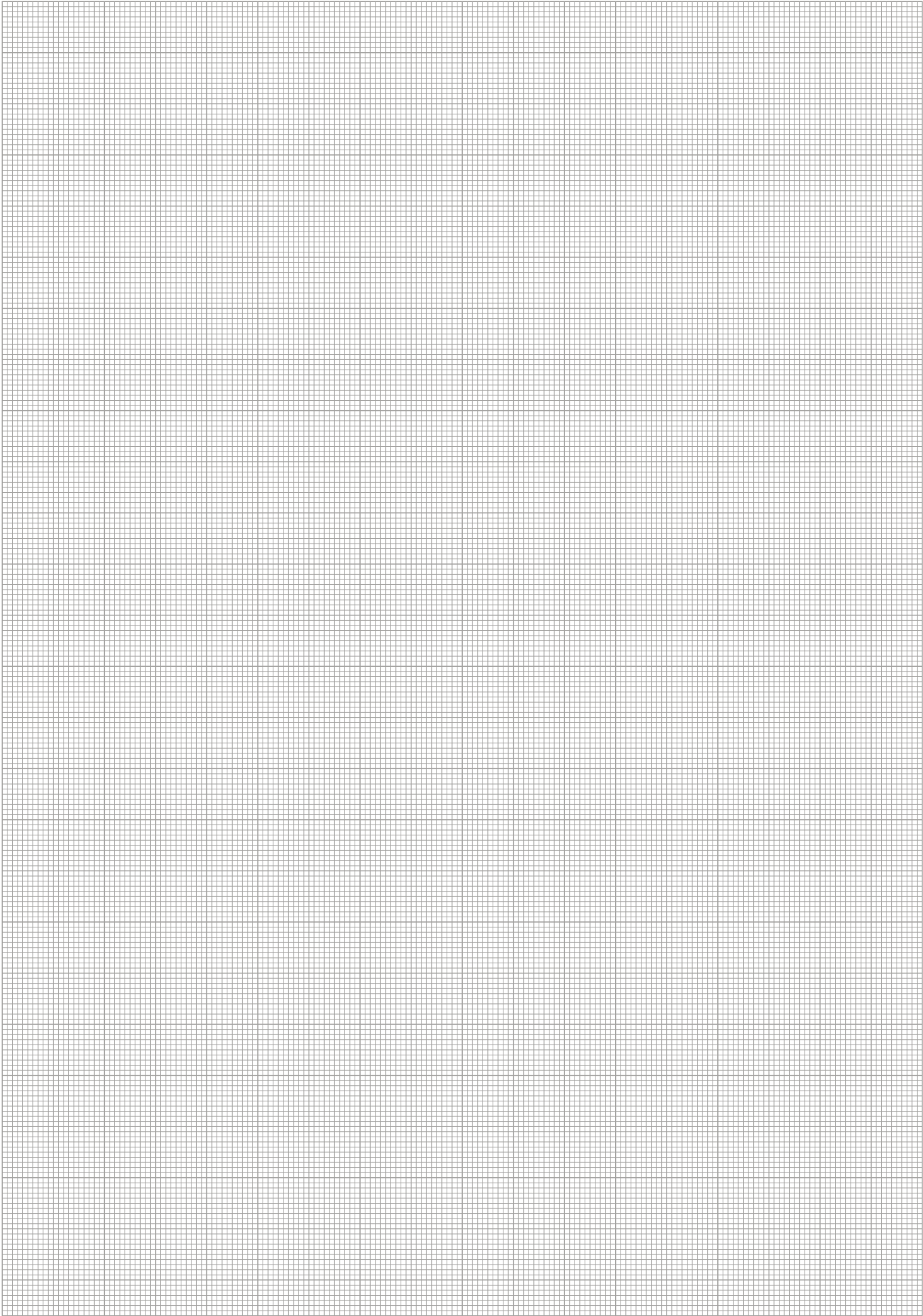
Extension cables for proximity switches/magnetic switches

Description	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

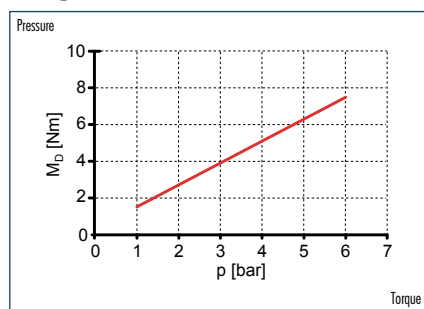


You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

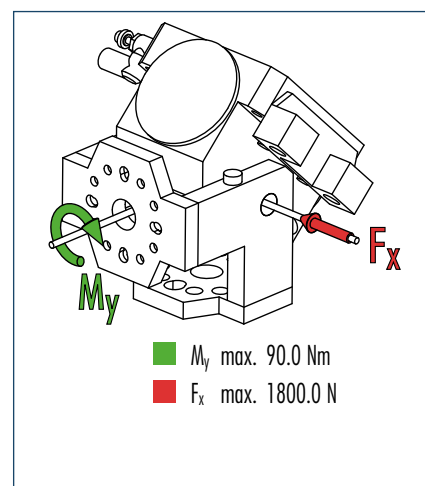




Torque



Moment load

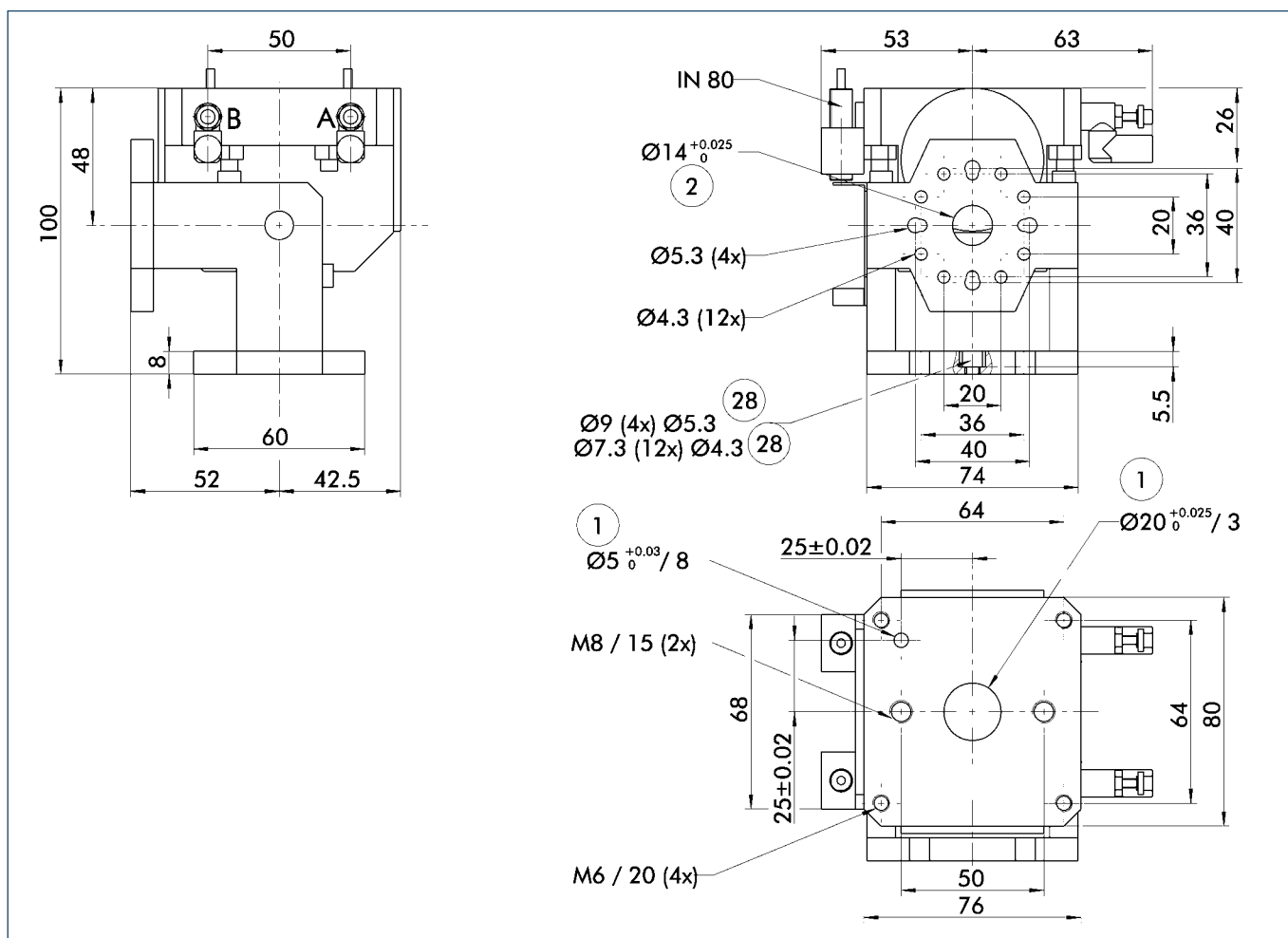


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description	ID	SKE 40
		0351104
Torque	[Nm]	5.0
Rotating angle	[°]	90.0
Adjustability of end positions	[°]	5.0
IP class		30
Weight	[kg]	0.92
Cycle time (1 x nominal angle of rotation) without attached load	[s]	1.0
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	100.0
Nominal pressure	[bar]	4.0
Minimum pressure	[bar]	1.0
Maximum pressure	[bar]	6.0
Diameter of connecting hose	[mm]	4.0
Min. ambient temperature	[°C]	5.0
Max. ambient temperature	[°C]	50.0
Repeat accuracy	[°]	0.03

Main views

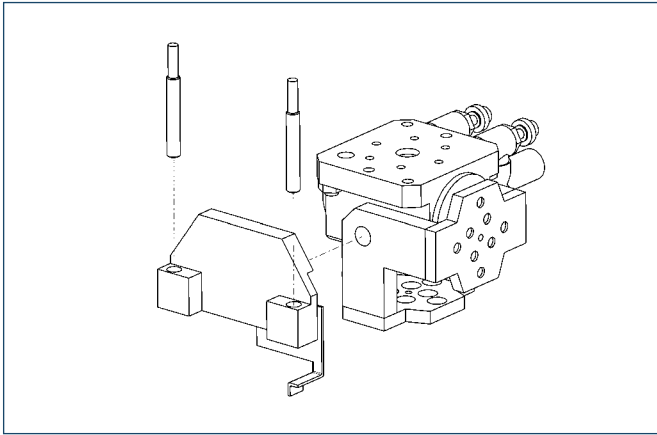


The drawing shows the swivel head in the basic version.

① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Rotary unit connection
- ② Attachment connection
- 28 Through-bore

Sensor system



End position monitoring:

Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.

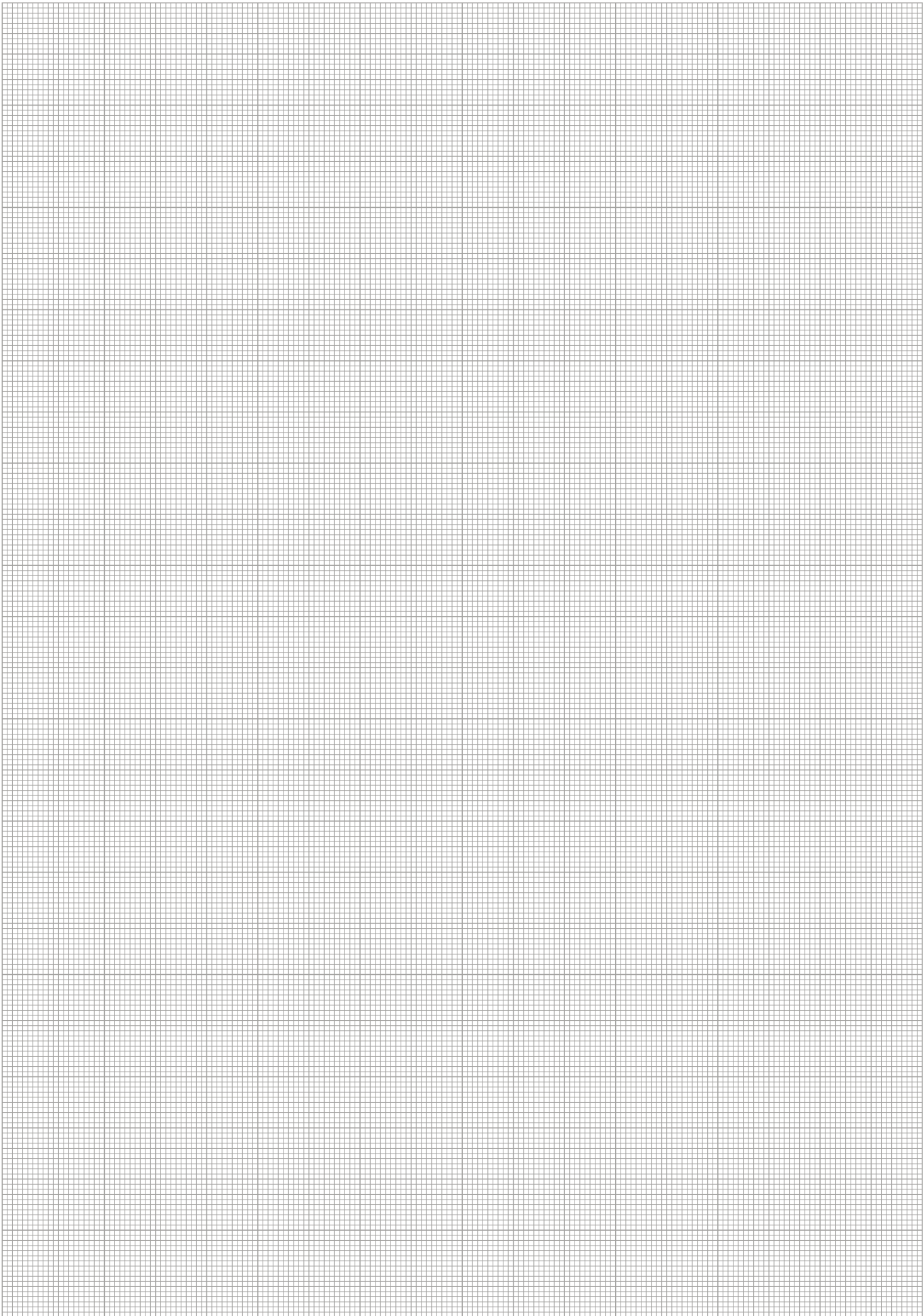
Extension cables for proximity switches/magnetic switches

Description	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

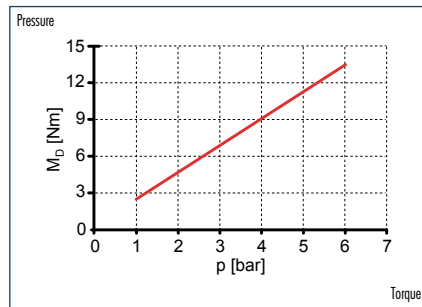


You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

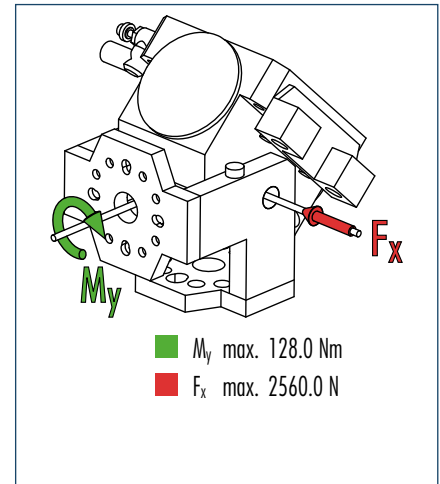




Torque



Moment load

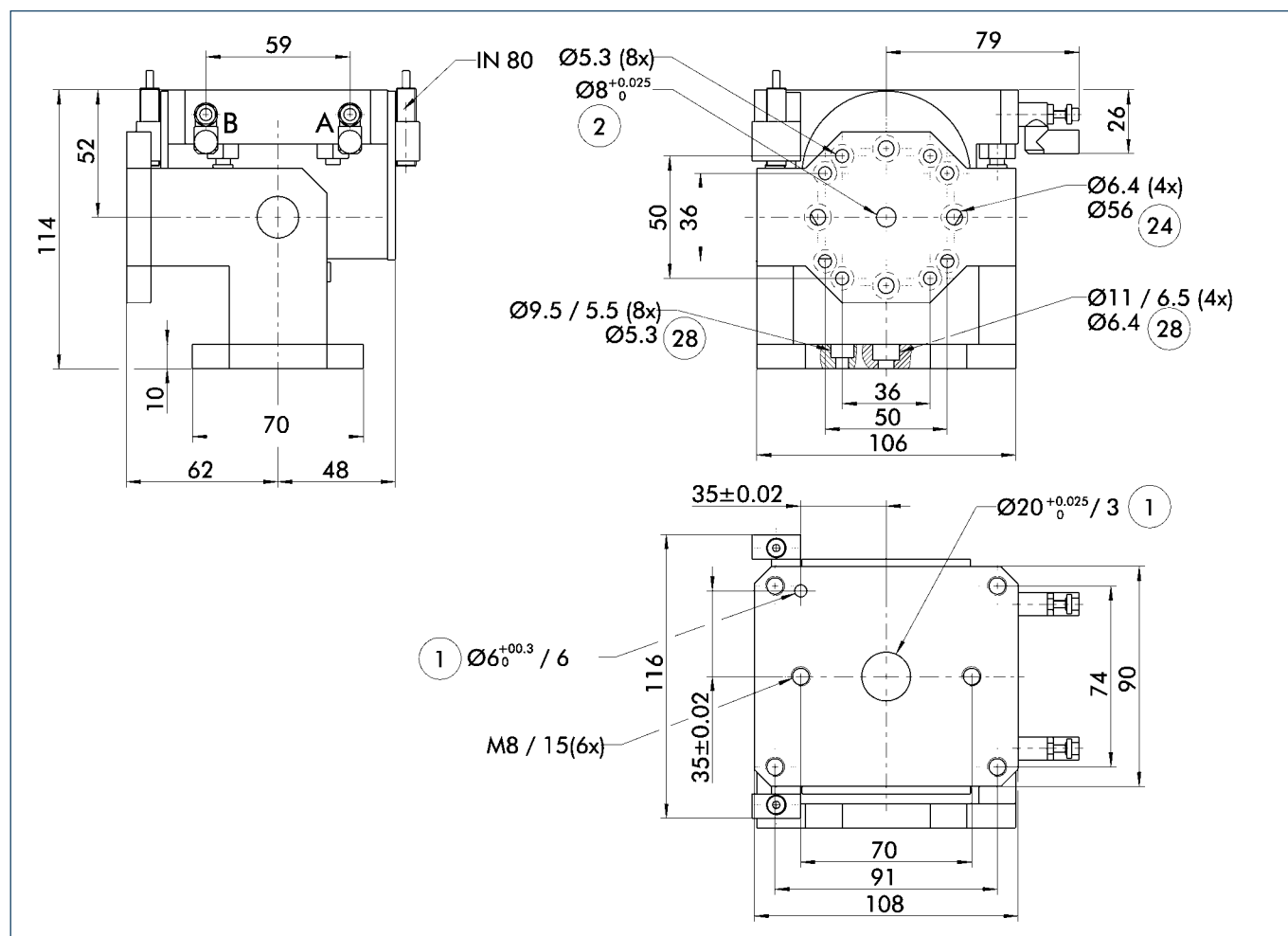


① Moments and forces may occur simultaneously. When using heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing.

Technical data

Description	ID	SKE 55
		0351106
Torque	[Nm]	9.0
Rotating angle	[°]	90.0
Adjustability of end positions	[°]	5.0
IP class		30
Weight	[kg]	1.95
Cycle time (1 x nominal angle of rotation) without attached load	[s]	1.5
Fluid consumption per cycle (2 x nominal angle)	[cm ³]	160.0
Nominal pressure	[bar]	4.0
Minimum pressure	[bar]	1.0
Maximum pressure	[bar]	6.0
Diameter of connecting hose	[mm]	4.0
Min. ambient temperature	[°C]	5.0
Max. ambient temperature	[°C]	50.0
Repeat accuracy	[°]	0.03

Main views

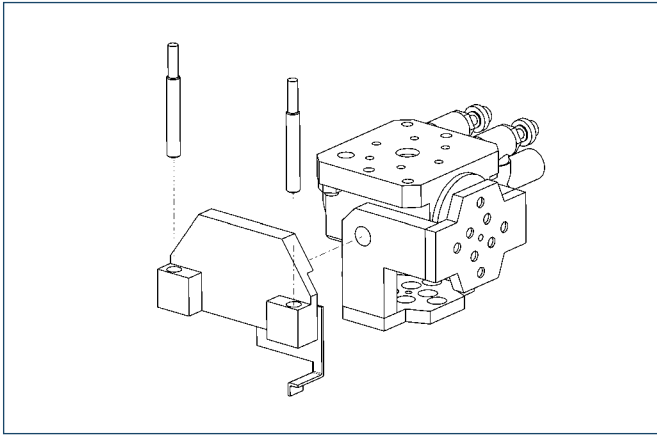


The drawing shows the swivel head in the basic version.

- A,a Main/direct connection, clockwise rotary unit
- B,b Main/direct connection, anti-clockwise rotary unit
- ① Rotary unit connection
- ② Attachment connection
- ②④ Bolt circle
- ②⑧ Through-bore

① The SDV-P pressure maintenance valve can be used to hold the position upon a loss of pressure (see „Accessories“ catalog section).

Sensor system



End position monitoring:

Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
IN-C 80-S-M8	0301475	
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each swivel head, plus extension cables as an option.

Extension cables for proximity switches/magnetic switches

Description	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

