



Superior Clamping and Gripping



Product data sheet

Universal swivel unit SRU-plus-D

SRU-plus-D

Universal swivel unit

Robust. Fast. High Performance.

Universal swivel unit SRU-plus-D

Universally usable unit for pneumatic swivel and turning movements

Field of application

Can be used in either clean or dirty areas, or wherever pneumatic swiveling is required.



Advantages – Your benefits

Finely graded series with a steady increase in torque for multiple cases of application, the correct size as a standard product is available

Swivel angle can be selected as either 90° or 180° complete flexibility in selecting the angle of rotation, application-specific angles possible on request

Drive-side M12 plug connectors for electrical rotary feed-through for simple commissioning and maintenance

Middle position can be selected as pneumatic or locked
The locked middle position can be unlocked when loaded.
The two types of middle positions always allow further rotation in either direction.

Fluid feed-through can be used for gases, fluids, and vacuum therefore no interfering hoses

Electrical rotary feed-through for long-lasting, reliable feed-through of sensor

Choice of electronic magnetic sensors or inductive proximity sensors for absolute variability of position monitoring

Exchangeable screw-in guide sleeves (bushing) allow for easy maintenance and rapid exchange t after several million cycles.



Sizes
Quantity: 7



Weight
1.2 .. 19.95 kg



Torque
3 .. 72 Nm



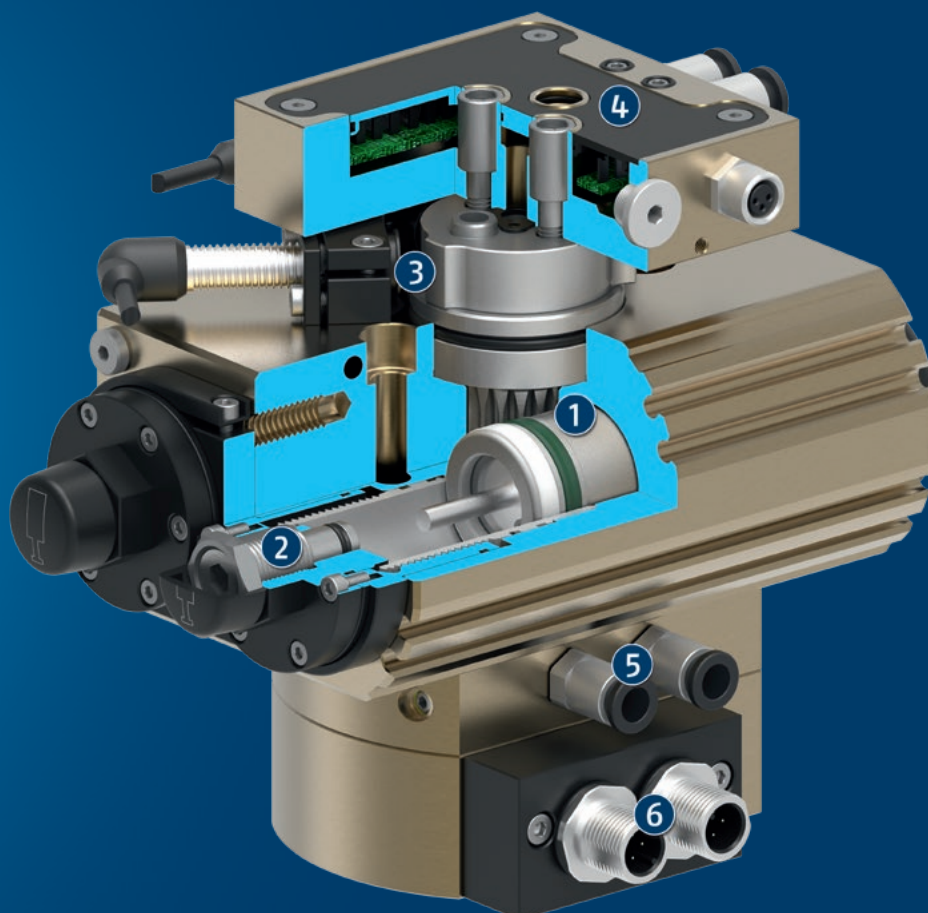
Repeat accuracy
0.05°



Angle of rotation
90 .. 180°

Functional description

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



- ① **Drive**
Pneumatic, powerful double-piston drive with rack and pinion kinematics for conversion of the piston movement into a rotational movement
- ② **Swivel angle adjustment**
for fine adjustment of end positions and damping characteristics
- ③ **Inductive monitoring with fixed control cam**
for process-reliable monitoring of end positions
- ④ **Electrical rotary feed-through**
Fully integrated feed-through for sensor and actuator signals
- ⑤ **Connections for fluid feed-through**
for direct connection of the pneumatic supply of the swivel set-up to the fixed part of the swivel unit
- ⑥ **Connections for electric rotary feed-through**
Standard M12 connector for easy connection and further processing of electric signals

General notes about the series

Housing material: Aluminum (extruded profile)

Actuation: pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4].

Operating principle: Double piston rack and pinion principle

Scope of delivery: Flow control valves, centering bushings, O-rings for direct connection, fitting screws (SRU-plus 63 only), assembly and operating manual with manufacturer's declaration

Warranty: 24 months

Service life characteristics: on request

Repeat accuracy: is defined as a distribution of the end position for 100 consecutive cycles.

Pinion position: is always shown in the left end position. The pinion rotates from here to the right in clockwise direction. The arrow makes the direction of rotation clear.

Torque in the end positions: Please note that the final angular degrees (approx. 2°) before the end position can only be approached using the force of a single drive piston. For this reason, double actuated modules only have about half the rated torque available in this area. An external stop can be used to provide the full torque even in the end positions.

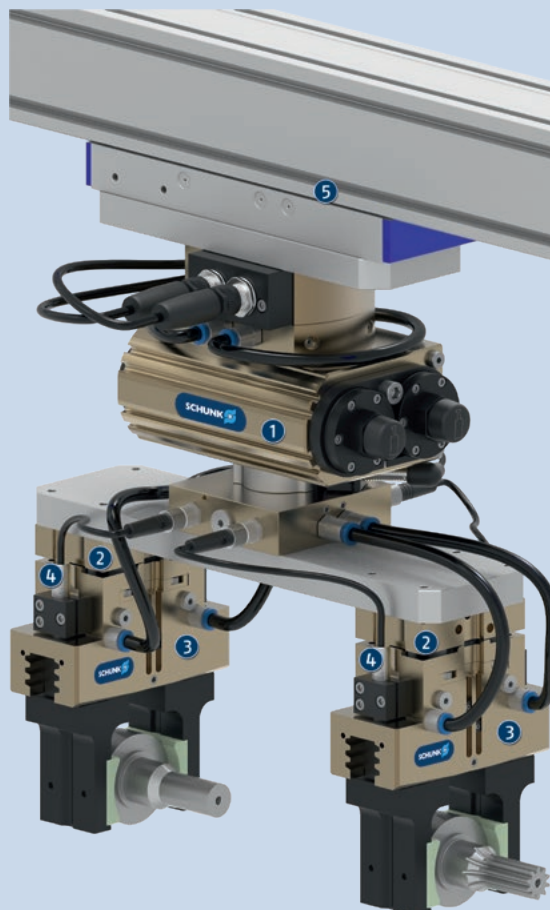
Travel to the pneumatic middle position: is carried out using only half of the nominal torque.

Swiveling time: is the rotation time of pinion/flange around the nominal rotation angle. Valve switching times, hose filling times, or PLC reaction times are not included and are to be considered when cycle times are calculated.

Application example

Swivel unit with electrical and pneumatic feed-through and double gripper for loading and unloading a machine tool

- ❶ Universal swivel unit SRU-plus-D
- ❷ Tolerance compensation unit TCU
- ❸ Universal gripper PGN-plus-P
- ❹ Inductive proximity switches IN
- ❺ Magnetic switch MMS
- ❻ Universal linear module Beta with toothed belt drive



SCHUNK offers more ...

The following components make the product even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



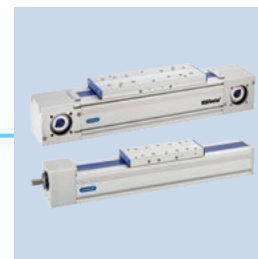
Universal gripper



Sealed gripper



Angular gripper



Linear module



Inductive proximity switch



Magnetic switches



Pressure maintenance valve



Line gantry



Fittings

① For more information on these products can be found on the following product pages or at [schunk.com](https://www.schunk.com).

Options and special information

For particularly damping-intensive swivel movements, additional, external shock absorbers can be fitted. Due to the innovative sleeve technology, special rotation angles of more than 180° can be provided quickly and economically. Please contact us for assistance.

Please note that suitable emergency stop scenarios (e.g. controlled shut down) and restarting scenarios (e.g. pressure build-up valves, appropriate valve switching sequences) are needed for all pneumatic actuators. Cutting off the pressure in an uncontrolled manner could lead to undefined states and behavior.

Food-grade lubrication: The product contains food-compliant lubricants as standard. The requirements of standard EN 1672-2:2020 are not fully met. The relevant NSF certificates are available at <https://info.nsf.org/USDA/Listings.asp> using the lubricant information in the operating manual. Components such as rolling bearings, linear guides, or shock absorbers are not provided with food-compliant lubricants.

SRU-plus-D

Universal swivel unit

Ordering example

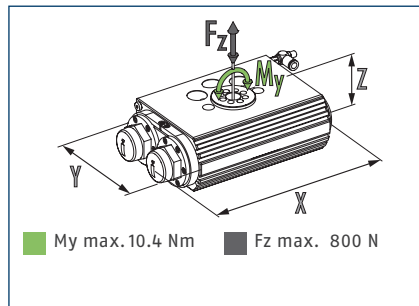
| | SRU-plus-D | 20 | - | W | - | 180 | - | 3 | - | M | - | 4 | - | M8 | - | AS |
|--|--|----|---|---|---|-----|---|---|---|---|---|---|---|----|---|----|
| Description | SRU-plus-D SRU-plus-D1 (from size 40 with electrical feed-through) | | | | | | | | | | | | | | | |
| Size | 20/25/30/35/40/50/60 | | | | | | | | | | | | | | | |
| Type of damping method | W = soft | | | | | | | | | | | | | | | |
| Swivel angle | 90°/180° | | | | | | | | | | | | | | | |
| End position adjustability | 3° | | | | | | | | | | | | | | | |
| Middle position | - = no M = pneumatic center position VM = Locked center position | | | | | | | | | | | | | | | |
| Number of air feed-throughs | - = no fluid feed-through 4 = for sizes 20 – 35 8 = for sizes 40 – 60 | | | | | | | | | | | | | | | |
| Connector size for electric feed-through | - = no electrical feed-through M8 = M8 plug connector on the rotating side M12 = M12 plug connector on the rotating side | | | | | | | | | | | | | | | |
| Mounting kit for inductive proximity switch | AS = with mounting kit | | | | | | | | | | | | | | | |

SRU-plus-D 20

Universal swivel unit



Dimensions and maximum loads



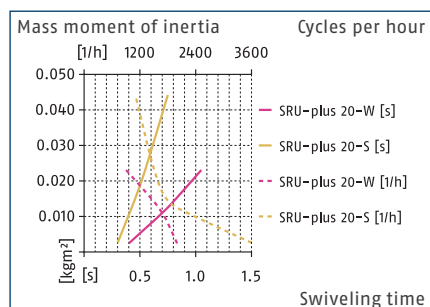
① The indicated moments and forces are static values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

Technical data SRU-plus-D without center position

| Designation (soft damping) | | SRU-plus-D 20-W-90-3-AS | SRU-plus-D 20-W-180-3-AS |
|---|-------|------------------------------|-------------------------------|
| ID | | 37361400 | 37361420 |
| End position damping | | Spring-elastomer | Spring-elastomer |
| Angle of rotation | [°] | 90.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 3.4 | 3.4 |
| Number of intermediate positions | | none | none |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 1.2 | 1.2 |
| Fluid consumption (2x nom. angle) | [cm³] | 36.0 | 60.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/8 |
| Diameter of connecting hose | | 6 x 3.9 x 1.05 | 6 x 3.9 x 1.05 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 20-W-90-3-4-AS | SRU-plus-D 20-W-180-3-4-AS |
| ID | | 37361402 | 37361422 |
| Torque | [Nm] | 3.0 | 3.0 |
| Weight | [kg] | 1.4 | 1.4 |
| No. of fluid feed-throughs | | 4 | 4 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 20-W-90-3-4-M8-AS | SRU-plus-D 20-W-180-3-4-M8-AS |
| ID | | 37361407 | 37361427 |
| Weight | [kg] | 2.05 | 2.05 |

① All units are also available in an FKM version. Please contact us for details.

Max. permissible inertia J*



* The diagrams are valid for basic units and for applications with a vertical swivel axis as well as for absolutely centric loads with a horizontal swivel axis and with an operating pressure of 6 bar. The swiveling times per throttling have to be observed, otherwise the life time may reduce. We will be happy to help you designing other applications. In addition, the SCHUNK Swiveling sizing assistant is available online.

Technical data SRU-plus-D with center position

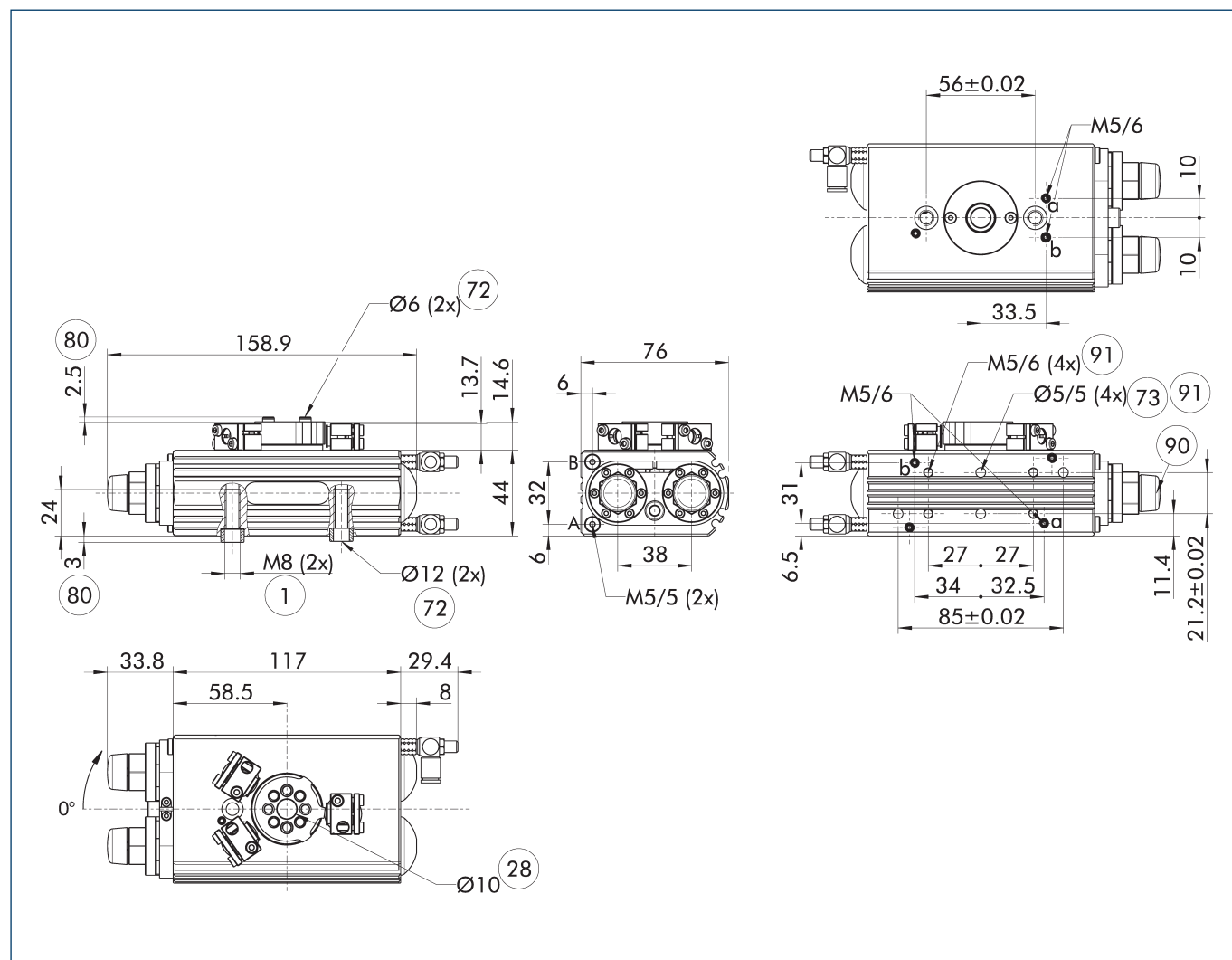
| Designation (soft damping) | | SRU-plus-D 20-W-180-3-M-AS | SRU-plus-D 20-W-180-3-VM-AS |
|---|-------|---------------------------------|----------------------------------|
| ID | | 37361430 | 37361440 |
| End position damping | | Spring-elastomer | Spring-elastomer |
| Angle of rotation | [°] | 180.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 3.4 | 3.4 |
| Number of intermediate positions | | 1 x M (pneumatic) | 1 x VM (locked) |
| Adjustability of middle position | [°] | 3.0 | 3.0 |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 1.55 | 1.76 |
| Fluid consumption (2x nom. angle) | [cm³] | 60.0 | 60.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/6.5 |
| Diameter of connecting hose | | 6 x 3.9 x 1.05 | 6 x 3.9 x 1.05 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 20-W-180-3-M-4-AS | SRU-plus-D 20-W-180-3-VM-4-AS |
| ID | | 37361432 | 37361442 |
| Torque | [Nm] | 3.0 | 3.0 |
| Weight | [kg] | 1.75 | 1.96 |
| No. of fluid feed-throughs | | 4 | 4 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 20-W-180-3-M-4-M8-AS | SRU-plus-D 20-W-180-3-VM-4-M8-AS |
| ID | | 37361437 | 37361447 |
| Weight | [kg] | 2.4 | 2.61 |

① All units are also available in an FKM version. Please contact us for details.

SRU-plus-D 20

Universal swivel unit

Main view for SRU-plus-D without EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Through-hole

⑦ Fit for centering sleeves

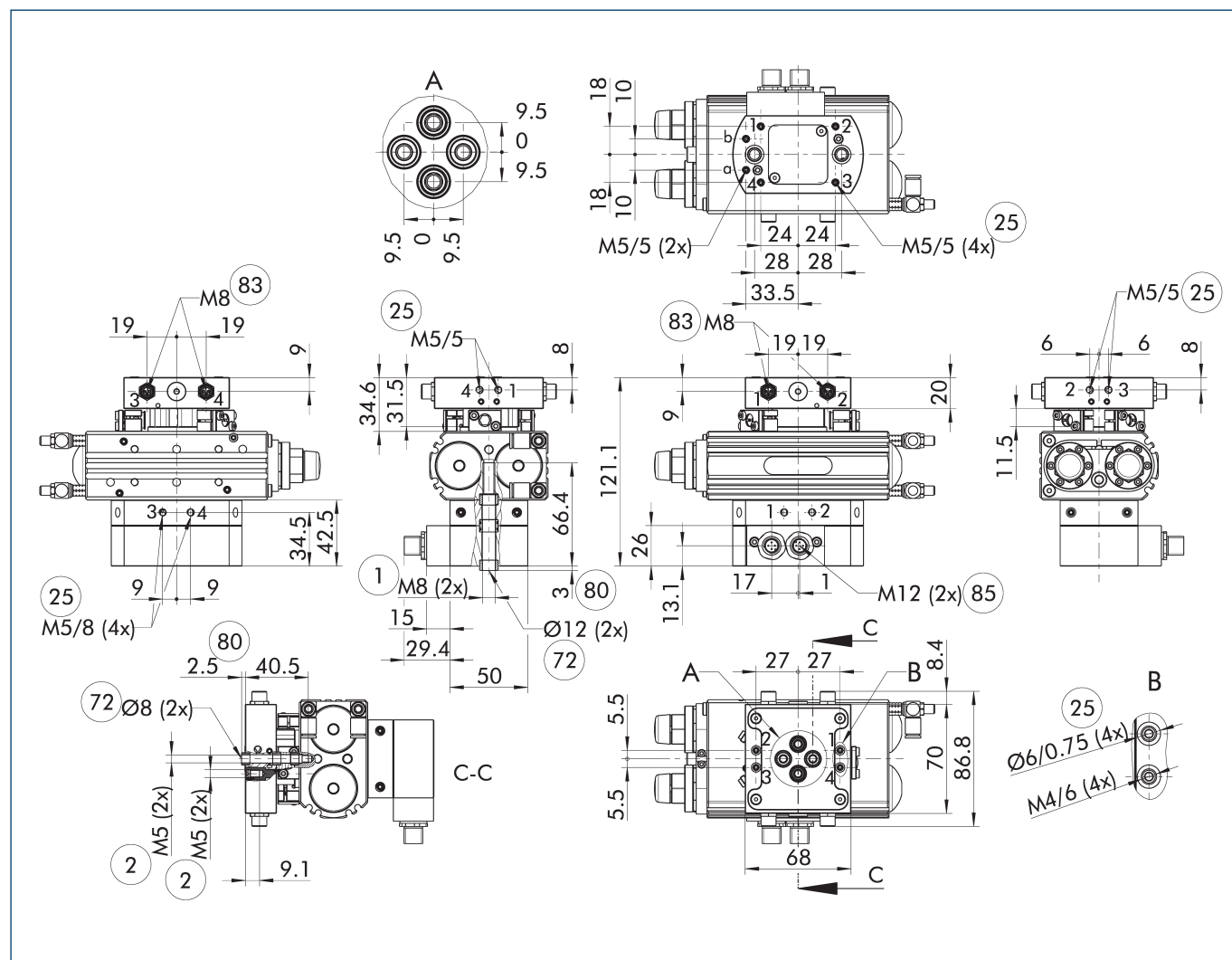
⑦ Fit for centering pins

⑧ Depth of the centering sleeve hole in the counter part

⑨ Cover caps

⑨ Not intended for mounting the unit, only for attachments

Main view for SRU-plus-D with EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Attachment connection

25 Fluid feed-through

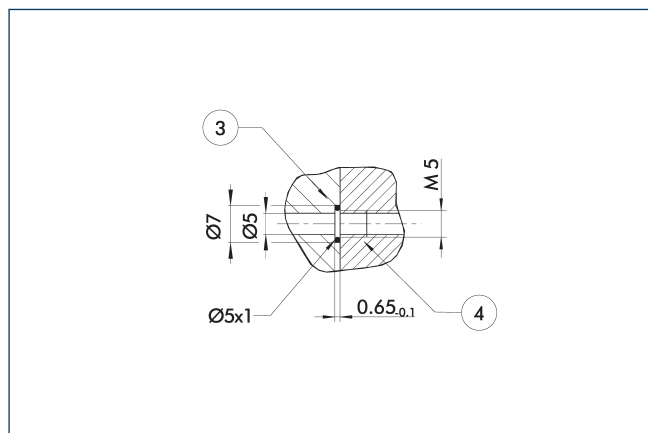
72 Fit for centering sleeves

80 Depth of the centering sleeve hole in the counter part

83 Input for 3 pole sensor feed-through

85 Sensor feed-through output

Hose-free direct connection M5

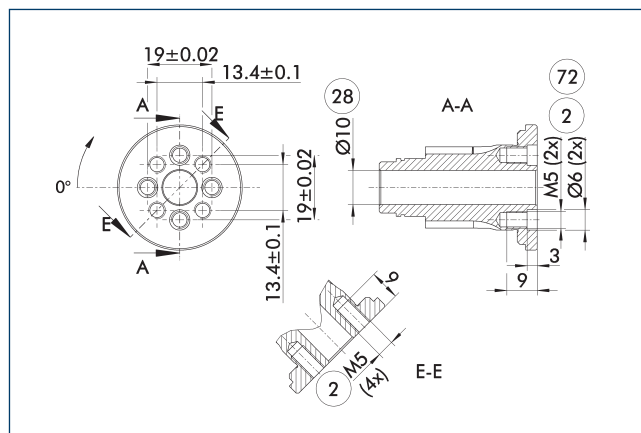


③ Adapter

④ Rotary unit

The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Pinion without fluid feed-through



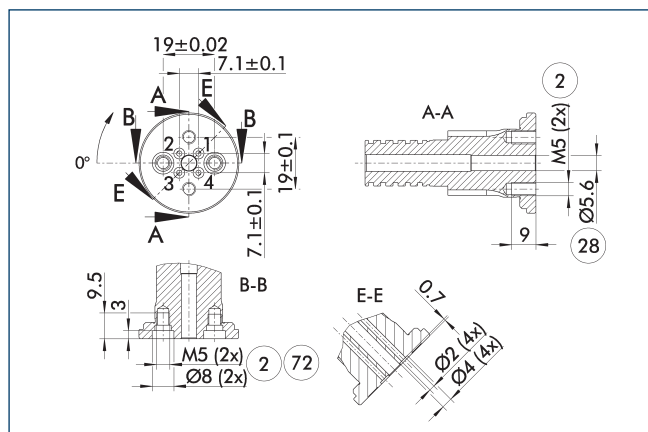
② Attachment connection

⑦② Fit for centering sleeves

②⑧ Through-hole

Mounting pattern for fastening the rotating load to the pinion. The "4x large threads for 4 screws and 2 counter bores for centering sleeves" option is preferable to the "4x small threads for 2 screws and 2 shoulder bolts (in the deeper counter bores)" option.

Pinion with fluid feed-through



② Attachment connection

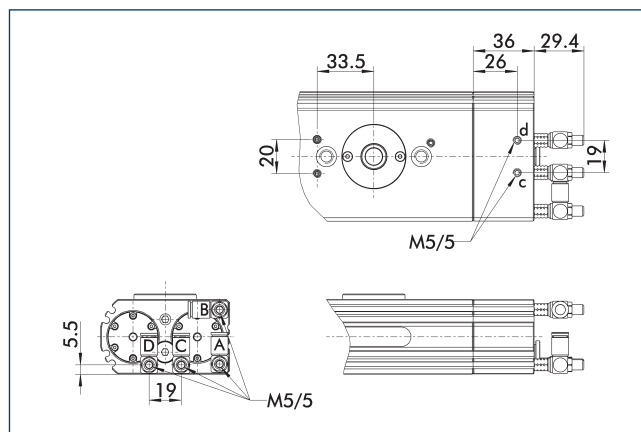
⑦② Fit for centering sleeves

②⑧ Through-hole

Pinion screw connection diagram for the fluid feed-through option. The preferred drilling pattern is 2 x screws and 2 x screws with centering sleeve (in $\varnothing 8$ H7).

① View applicable only for versions without EDF!

Pneumatic middle position (M)



A, a Main / direct connection, rotary actuator rotates clockwise

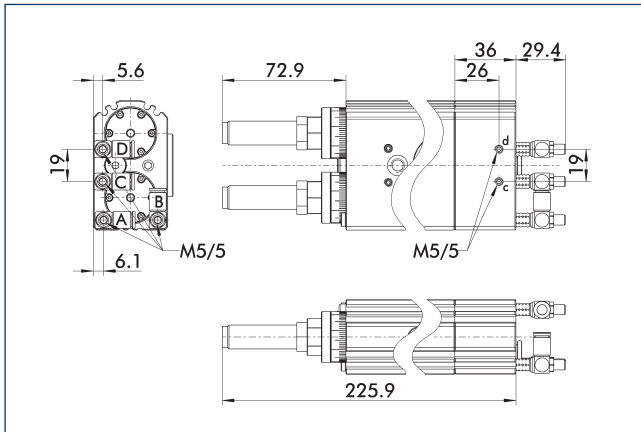
C, c Main / direct connection, middle position

B, b Main / direct connection, rotary actuator rotates counterclockwise

D, d Main / direct connection, middle position

The drawing shows the change in dimension of the "pneumatic center position (M)" option compared to the basic variant. Heavy attachments may swing before they reach the final position. The locked middle position (VM) can resolve this.

Locked middle position (VM)



A, a Main / direct connection, rotary actuator rotates clockwise

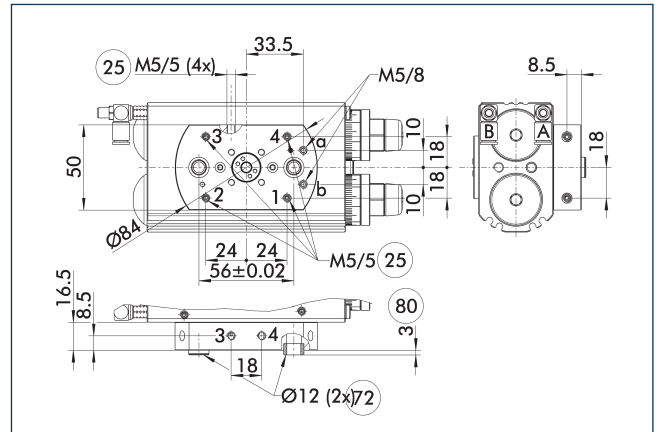
B, b Main / direct connection, rotary actuator rotates counterclockwise

C, c Main / direct connection, middle position

D, d Main / direct connection, middle position

The drawing shows the change in dimension of the "locked center position (VM)" option compared to the basic variant. The middle position is locked and is actuated with the force of the main drive piston. Shock absorbers dampen the travel to the middle position and prevent overshooting.

Connections for fluid feed-through



A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

25 Fluid feed-through

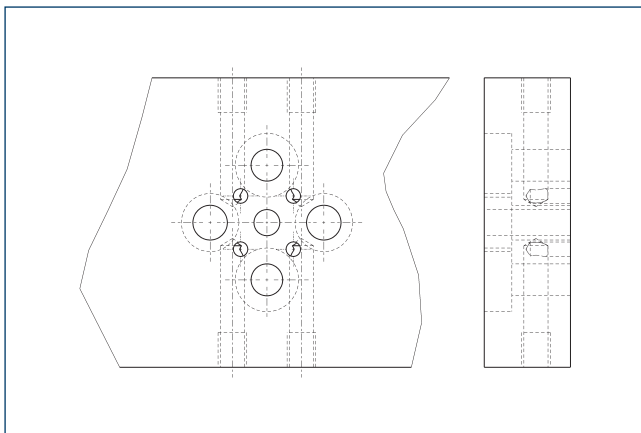
72 Fit for centering sleeves

80 Depth of the centering sleeve hole in the counter part

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

① View applicable only for versions without EDF!

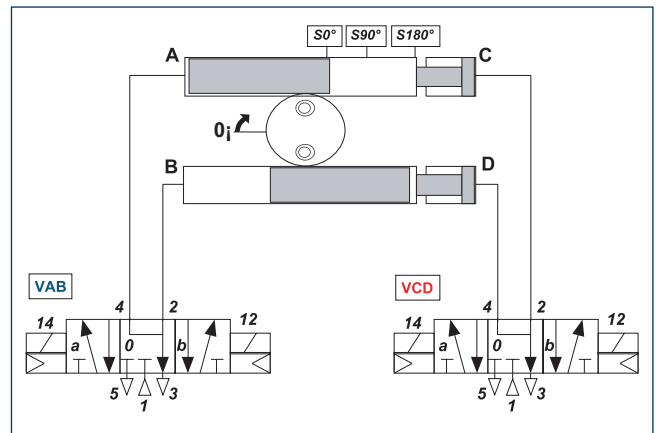
Adapter plate design



Suggested here is an adapter plate design which allows for all fluid feed-throughs to be accessed as easily as possible.

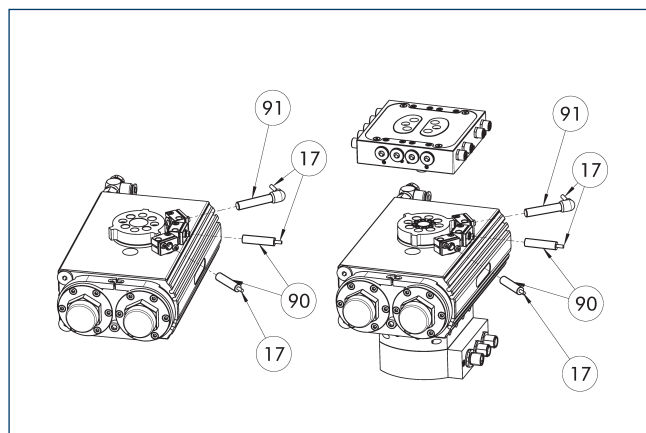
① View applicable only for versions without EDF!

Pneumatic diagram of SRU-plus-VM — vertical axis



VM rotary actuators with a vertical rotary axis are generally actuated by two 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

Inductive proximity switches



⑰ Cable outlet

⑨① Sensor IN..-SA

⑨② Sensor IN ...

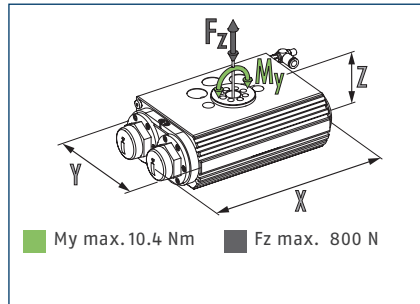
| Description | ID | Often combined |
|--|----------|----------------|
| Inductive proximity switch | | |
| IN 80-S-M12 | 0301578 | |
| IN 80-S-M8 | 0301478 | ● |
| IN-C 80-S-M8-PNP | 0301475 | |
| INK 80-S | 0301550 | |
| INK 80-SL | 0301579 | |
| Inductive proximity switch with lateral cable outlet | | |
| IN 80-S-M12-SA | 0301587 | |
| IN 80-S-M8-SA | 0301483 | ● |
| INK 80-S-SA | 0301566 | |
| Connection cables | | |
| KA BG08-L 3P-0300-PNP | 0301622 | ● |
| KA BG08-L 3P-0500-PNP | 0301623 | |
| KA BG12-L 3P-0500-PNP | 30016369 | |
| KA BW08-L 3P-0300-PNP | 0301594 | |
| KA BW08-L 3P-0500-PNP | 0301502 | |
| KA BW12-L 3P-0300-PNP | 0301503 | |
| KA BW12-L 3P-0500-PNP | 0301507 | |
| Clip for connector/socket | | |
| CLI-M12 | 0301464 | |
| CLI-M8 | 0301463 | |
| Cable extension | | |
| KV BG12-SG12 3P-0030-PNP | 0301999 | |
| KV BG12-SG12 3P-0060-PNP | 0301998 | |
| 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 | |
| Sensor distributor | | |
| V2-M12 | 0301776 | ● |
| V2-M8 | 0301775 | ● |
| V4-M8 | 0301746 | |
| V8-M8 | 0301751 | |

- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

SRU-plus-D 25

Universal swivel unit

Dimensions and maximum loads



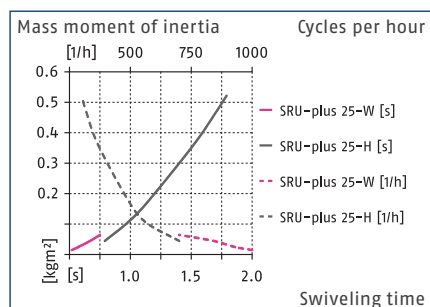
① The indicated moments and forces are static values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

Technical data SRU-plus-D without center position

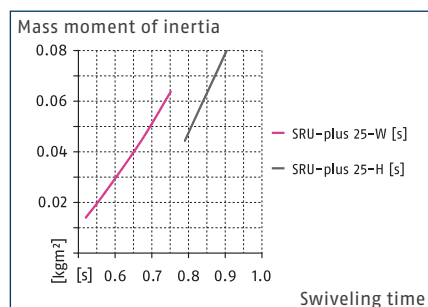
| Designation (soft damping) | | SRU-plus-D 25-W-90-3-AS | SRU-plus-D 25-W-180-3-AS |
|---|-------|------------------------------|-------------------------------|
| ID | | 37361600 | 37361620 |
| End position damping | | hydr. damper | hydr. damper |
| Angle of rotation | [°] | 90.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 5.0 | 5.0 |
| Number of intermediate positions | | none | none |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 1.6 | 1.6 |
| Fluid consumption (2x nom. angle) | [cm³] | 60.0 | 88.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/8 |
| Diameter of connecting hose | | 6 x 3.9 x 1.05 | 6 x 3.9 x 1.05 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 25-W-90-3-4-AS | SRU-plus-D 25-W-180-3-4-AS |
| ID | | 37361602 | 37361622 |
| Torque | [Nm] | 4.6 | 4.6 |
| Weight | [kg] | 1.8 | 1.8 |
| No. of fluid feed-throughs | | 4 | 4 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 25-W-90-3-4-M8-AS | SRU-plus-D 25-W-180-3-4-M8-AS |
| ID | | 37361607 | 37361627 |
| Weight | [kg] | 2.45 | 2.45 |

① All units are also available in an FKM version. Please contact us for details.

Max. permissible inertia J*



Max. permissible inertia J*



* The diagrams are valid for basic units and for applications with a vertical swivel axis as well as for absolutely centric loads with a horizontal swivel axis and with an operating pressure of 6 bar. The swiveling times per throttling have to be observed, otherwise the life time may reduce. We will be happy to help you designing other applications. In addition, the SCHUNK Swiveling sizing assistant is available online.

Technical data SRU-plus-D with center position

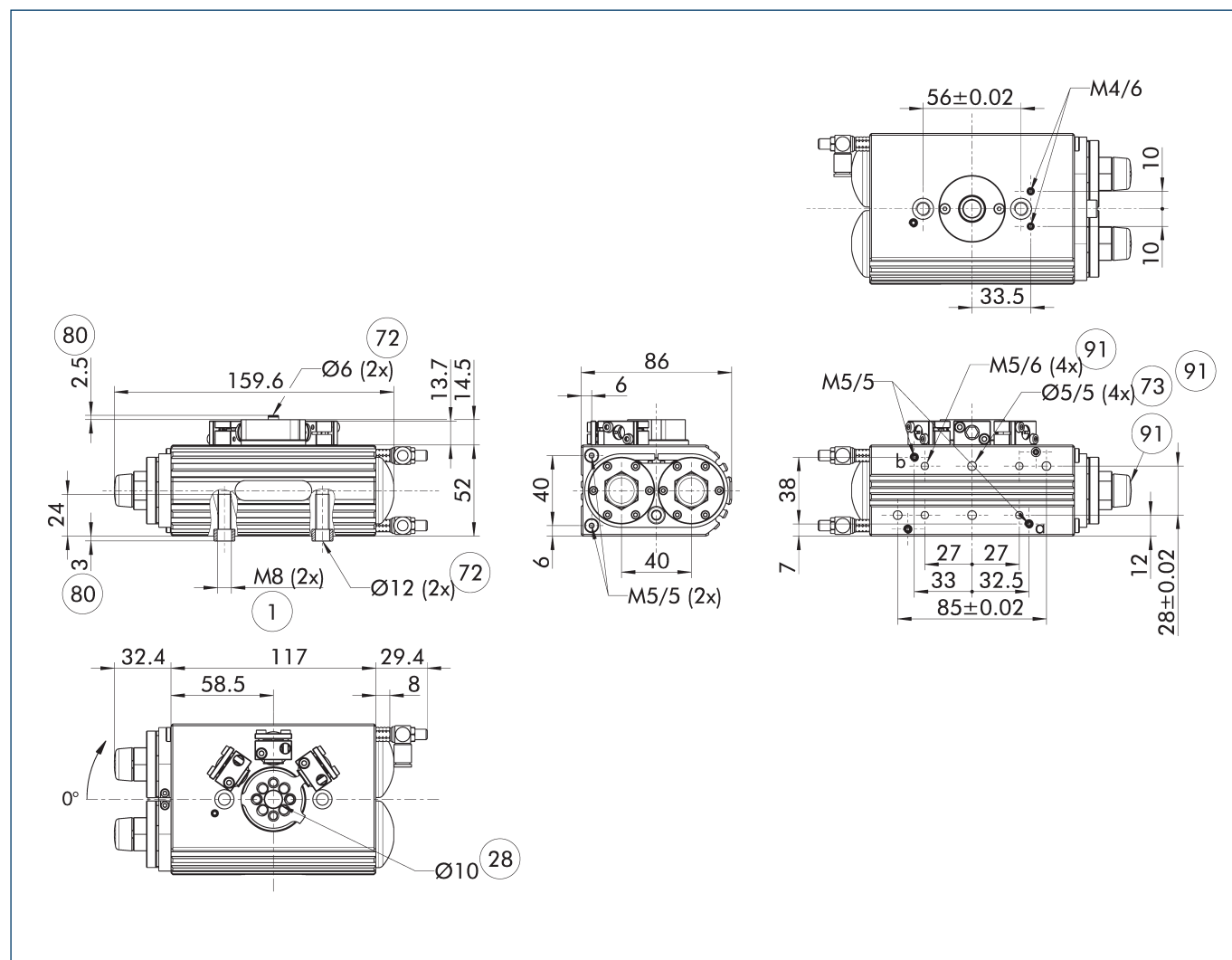
| Designation (soft damping) | | SRU-plus-D 25-W-180-3-M-AS | SRU-plus-D 25-W-180-3-VM-AS |
|---|-------|---------------------------------|----------------------------------|
| ID | | 37361630 | 37361640 |
| End position damping | | hydr. damper | hydr. damper |
| Angle of rotation | [°] | 180.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 5.0 | 5.0 |
| Number of intermediate positions | | 1 x M (pneumatic) | 1 x VM (locked) |
| Adjustability of middle position | [°] | 3.0 | 3.0 |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 2.2 | 2.6 |
| Fluid consumption (2x nom. angle) | [cm³] | 88.0 | 88.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/6.5 |
| Diameter of connecting hose | | 6 x 3.9 x 1.05 | 6 x 3.9 x 1.05 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 25-W-180-3-M-4-AS | SRU-plus-D 25-W-180-3-VM-4-AS |
| ID | | 37361632 | 37361642 |
| Torque | [Nm] | 4.6 | 4.6 |
| Weight | [kg] | 2.4 | 2.8 |
| No. of fluid feed-throughs | | 4 | 4 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 25-W-180-3-M-4-M8-AS | SRU-plus-D 25-W-180-3-VM-4-M8-AS |
| ID | | 37361637 | 37361647 |
| Weight | [kg] | 3.05 | 3.45 |

① All units are also available in an FKM version. Please contact us for details.

SRU-plus-D 25

Universal swivel unit

Main view for SRU-plus-D without EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Through-hole

⑦② Fit for centering sleeves

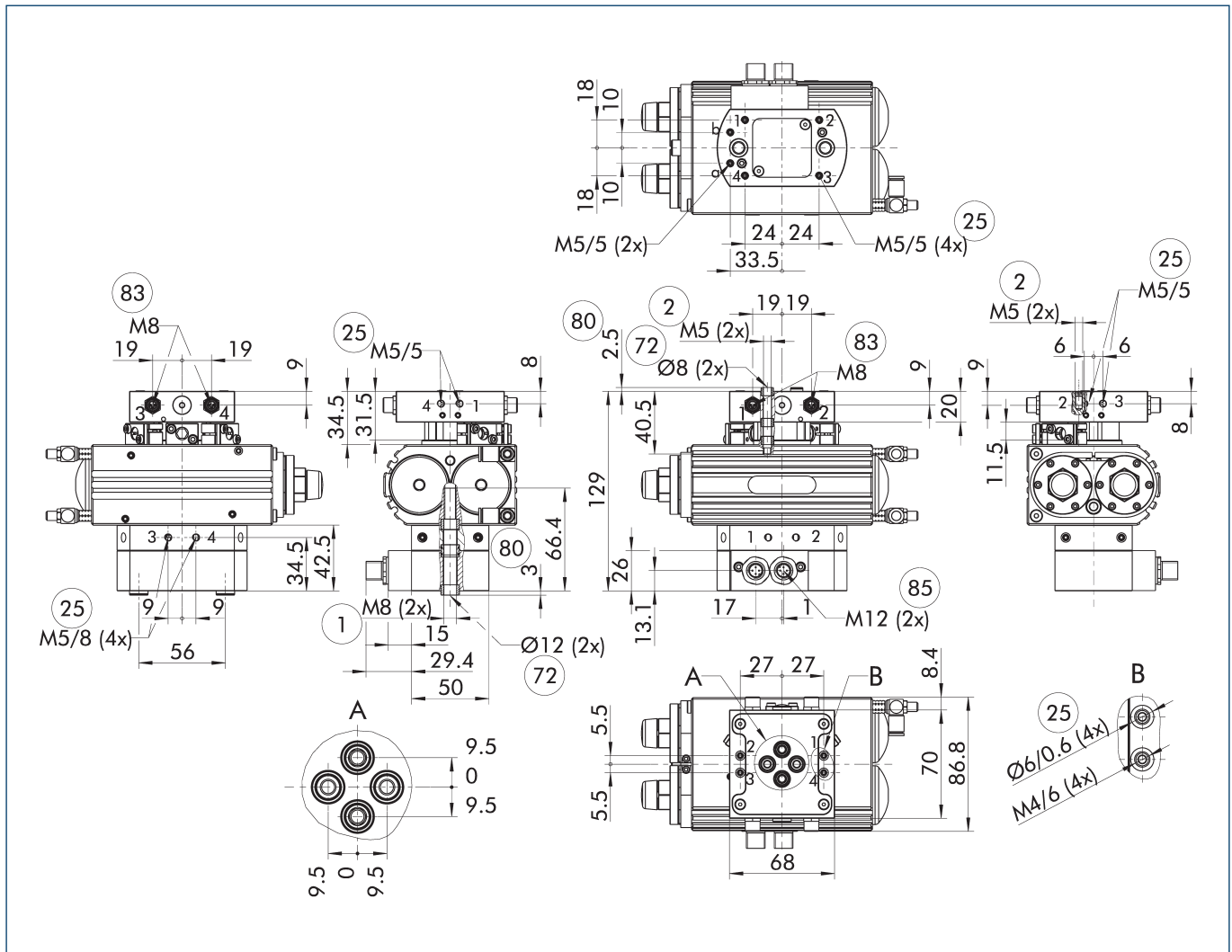
⑦③ Fit for centering pins

⑧① Depth of the centering sleeve hole in the counter part

⑨① Cover caps

⑨② Not intended for mounting the unit, only for attachments

Main view for SRU-plus-D with EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Attachment connection

25 Fluid feed-through

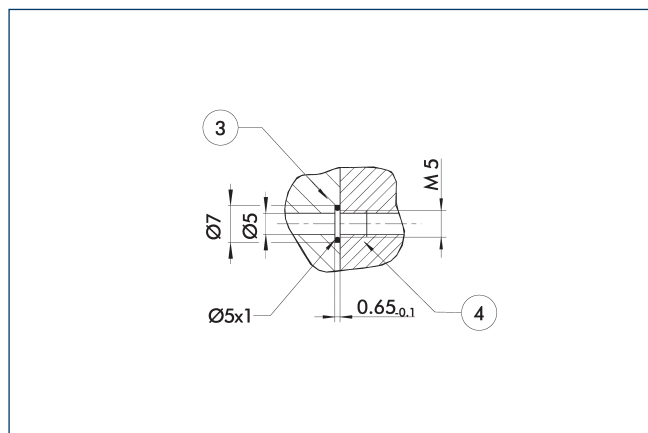
72 Fit for centering sleeves

80 Depth of the centering sleeve hole in the counter part

83 Input for 3 pole sensor feed-through

85 Sensor feed-through output

Hose-free direct connection M5

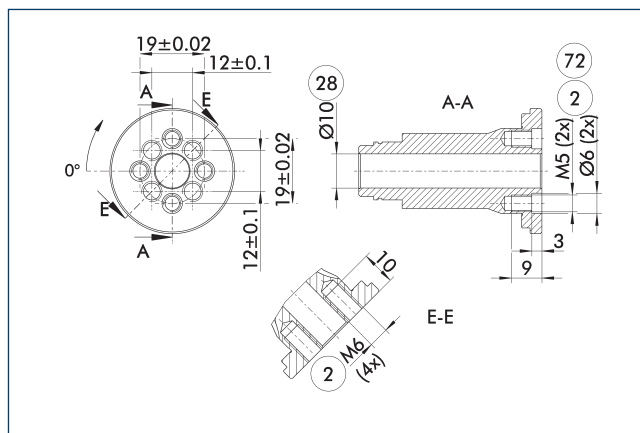


③ Adapter

④ Rotary unit

The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Pinion without fluid feed-through



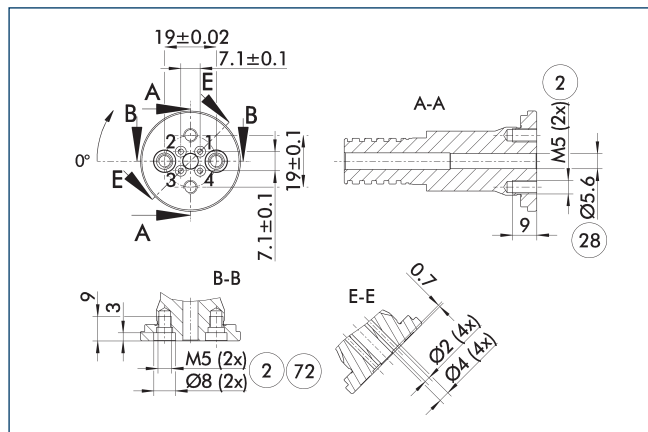
② Attachment connection

⑦② Fit for centering sleeves

②⑧ Through-hole

Mounting pattern for fastening the rotating load to the pinion. The "4x large threads for 4 screws and 2 counter bores for centering sleeves" option is preferable to the "4x small threads for 2 screws and 2 shoulder bolts (in the deeper counter bores)" option.

Pinion with fluid feed-through



② Attachment connection

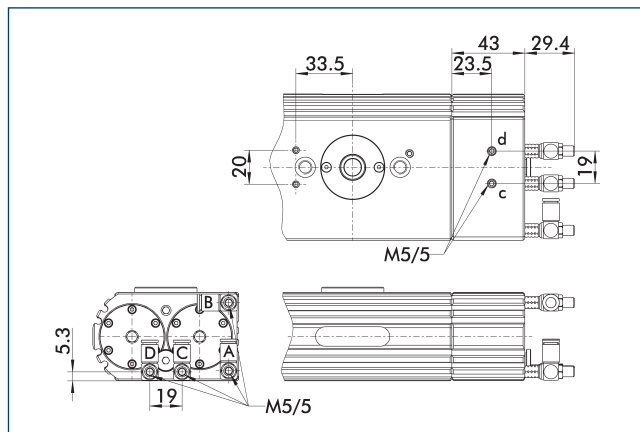
⑦② Fit for centering sleeves

②⑧ Through-hole

Pinion screw connection diagram for the fluid feed-through option. The preferred drilling pattern is 2 x screws and 2 x screws with centering sleeve (in Ø 8 H7).

① View applicable only for versions without EDF!

Pneumatic middle position (M)



A, a Main / direct connection, rotary actuator rotates clockwise

C, c Main / direct connection, middle position

B, b Main / direct connection, rotary actuator rotates counterclockwise

D, d Main / direct connection, middle position

The drawing shows the change in dimension of the "pneumatic center position (M)" option compared to the basic variant. Heavy attachments may swing before they reach the final position. The locked middle position (VM) can resolve this.

Technical drawing of the M5/5 connector showing three views: front, side, and top. The front view (left) shows a circular connector with a diameter of 5.3 and a height of 19. It features four pins labeled A, B, C, and D. The side view (top) shows the connector's profile with a total length of 70.8 and a mounting flange diameter of 23.5. The top view (bottom) shows the connector's top with a total length of 230.8 and a mounting flange diameter of 23.5. Dimensions 43 and 29.4 are also indicated for the top view. The connector is labeled M5/5.

- The drawing shows the change in dimension of the "locked center position (VM)" option compared to the basic variant. The middle position is locked and is actuated with the force of the main drive piston. Shock absorbers dampen the travel to the middle position and prevent overshooting.

 View applicable only for versions without EDF!

[illegible]

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

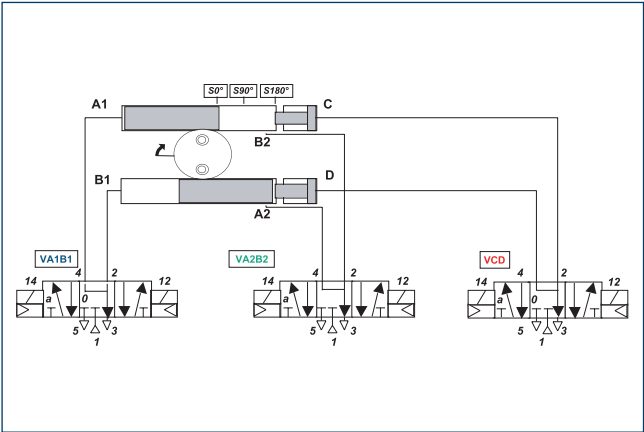
 View applicable only for versions without EDF!

VM rotary actuators with a vertical rotary axis are generally actuated by two 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

SRU-plus-D 25

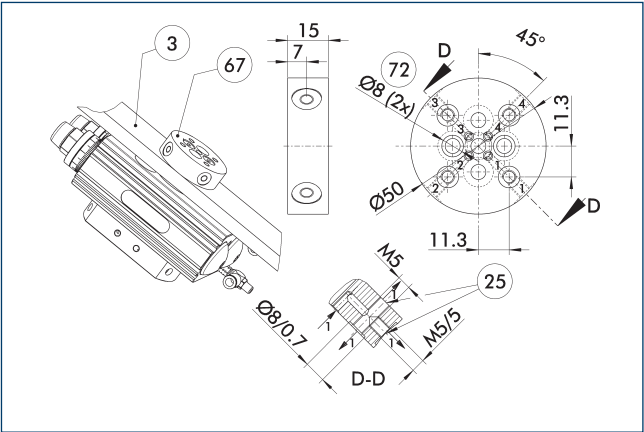
Universal swivel unit

Pneumatic diagram of SRU-plus-VM — horizontal axis



VM rotary actuators with a horizontal or non-vertical rotary axis must generally be actuated by three 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

Distributor for SRU-plus



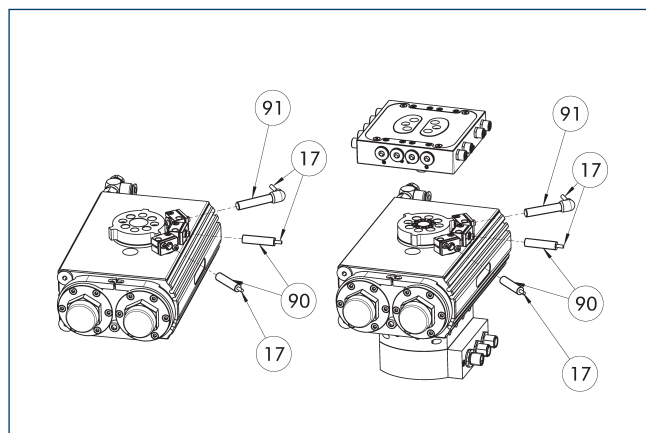
- ③ Adapter
- ⑥7 Distributor for media feed-through
- ②5 Fluid feed-through
- ⑦2 Fit for centering sleeves

The distributor for SRU-plus 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. Due to the distributor, only a simple drilling pattern has to be drilled in the adapter plate located between the pinion and the distributor.

| Description | ID | |
|---------------------|---------|--|
| Distributor plate | | |
| V-SRU-plus 20/25/30 | 0357392 | |

① View applicable only for versions without EDF!

Inductive proximity switches



⑰ Cable outlet

⑨① Sensor IN..-SA

⑨① Sensor IN ...

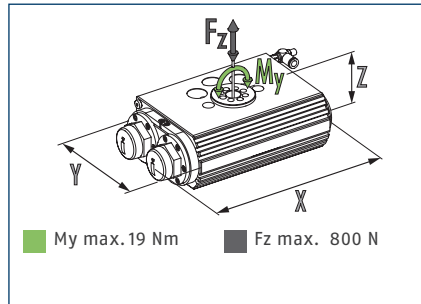
| Description | ID | Often combined |
|--|----------|----------------|
| Inductive proximity switch | | |
| IN 80-S-M12 | 0301578 | |
| IN 80-S-M8 | 0301478 | ● |
| IN-C 80-S-M8-PNP | 0301475 | |
| INK 80-S | 0301550 | |
| INK 80-SL | 0301579 | |
| Inductive proximity switch with lateral cable outlet | | |
| IN 80-S-M12-SA | 0301587 | ● |
| IN 80-S-M8-SA | 0301483 | ● |
| INK 80-S-SA | 0301566 | |
| Connection cables | | |
| KA BG08-L 3P-0300-PNP | 0301622 | ● |
| KA BG08-L 3P-0500-PNP | 0301623 | |
| KA BG12-L 3P-0500-PNP | 30016369 | |
| KA BW08-L 3P-0300-PNP | 0301594 | |
| KA BW08-L 3P-0500-PNP | 0301502 | |
| KA BW12-L 3P-0300-PNP | 0301503 | |
| KA BW12-L 3P-0500-PNP | 0301507 | |
| Clip for connector/socket | | |
| CLI-M12 | 0301464 | |
| CLI-M8 | 0301463 | |
| Cable extension | | |
| KV BG12-SG12 3P-0030-PNP | 0301999 | |
| KV BG12-SG12 3P-0060-PNP | 0301998 | |
| 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 | |
| Sensor distributor | | |
| V2-M12 | 0301776 | ● |
| V2-M8 | 0301775 | ● |
| V4-M8 | 0301746 | |
| V8-M8 | 0301751 | |

- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

SRU-plus-D 30

Universal swivel unit

Dimensions and maximum loads



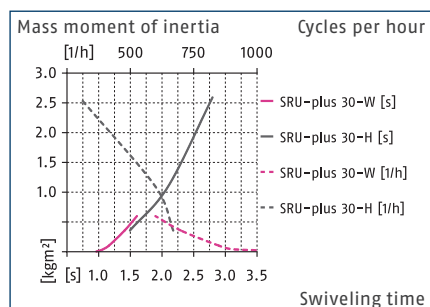
① The indicated moments and forces are static values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

Technical data SRU-plus-D without center position

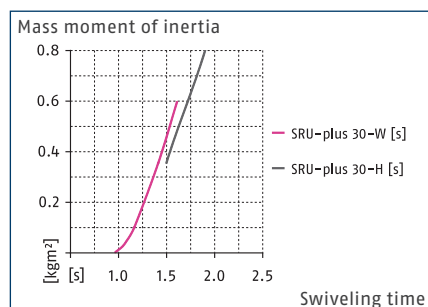
| Designation (soft damping) | | SRU-plus-D 30-W-90-3-AS | SRU-plus-D 30-W-180-3-AS |
|---|-------|------------------------------|-------------------------------|
| ID | | 1359345 | 1359548 |
| End position damping | | hydr. damper | hydr. damper |
| Angle of rotation | [°] | 90.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 9.5 | 9.5 |
| Number of intermediate positions | | none | none |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 2.4 | 2.4 |
| Fluid consumption (2x nom. angle) | [cm³] | 90.0 | 145.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/8 |
| Diameter of connecting hose | | 6 x 3.9 x 1.05 | 6 x 3.9 x 1.05 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 30-W-90-3-4-AS | SRU-plus-D 30-W-180-3-4-AS |
| ID | | 1359540 | 37361822 |
| Torque | [Nm] | 9.0 | 9.0 |
| Weight | [kg] | 2.7 | 2.7 |
| No. of fluid feed-throughs | | 4 | 4 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 30-W-90-3-4-M8-AS | SRU-plus-D 30-W-180-3-4-M8-AS |
| ID | | 37361807 | 1336508 |
| Weight | [kg] | 3.4 | 3.4 |

① All units are also available in an FKM version. Please contact us for details.

Max. permissible inertia J*



Max. permissible inertia J*



* The diagrams are valid for basic units and for applications with a vertical swivel axis as well as for absolutely centric loads with a horizontal swivel axis and with an operating pressure of 6 bar. The swiveling times per throttling have to be observed, otherwise the life time may reduce. We will be happy to help you designing other applications. In addition, the SCHUNK Swiveling sizing assistant is available online.

Technical data SRU-plus-D with center position

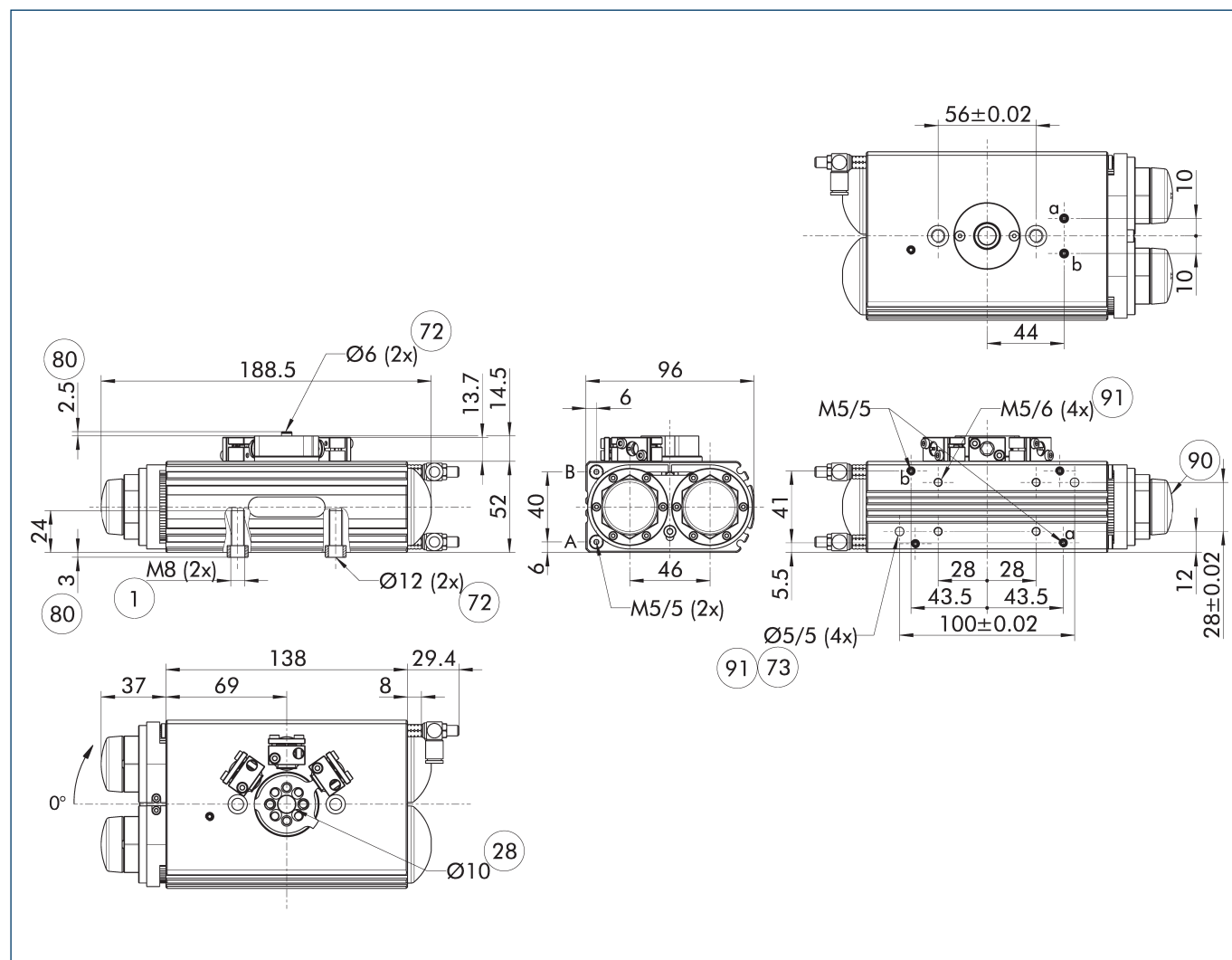
| Designation (soft damping) | | SRU-plus-D 30-W-180-3-M-AS | SRU-plus-D 30-W-180-3-VM-AS |
|---|-------|---------------------------------|----------------------------------|
| ID | | 1359560 | 1359571 |
| End position damping | | hydr. damper | hydr. damper |
| Angle of rotation | [°] | 180.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 9.5 | 9.5 |
| Number of intermediate positions | | 1 x M (pneumatic) | 1 x VM (locked) |
| Adjustability of middle position | [°] | 3.0 | 3.0 |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 3.2 | 3.4 |
| Fluid consumption (2x nom. angle) | [cm³] | 145.0 | 145.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/6.5 |
| Diameter of connecting hose | | 6 x 3.9 x 1.05 | 6 x 3.9 x 1.05 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 30-W-180-3-M-4-AS | SRU-plus-D 30-W-180-3-VM-4-AS |
| ID | | 37361832 | 1359573 |
| Torque | [Nm] | 9.0 | 9.0 |
| Weight | [kg] | 3.5 | 3.7 |
| No. of fluid feed-throughs | | 4 | 4 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 30-W-180-3-M-4-M8-AS | SRU-plus-D 30-W-180-3-VM-4-M8-AS |
| ID | | 1359567 | 1359581 |
| Weight | [kg] | 4.2 | 4.4 |

① All units are also available in an FKM version. Please contact us for details.

SRU-plus-D 30

Universal swivel unit

Main view for SRU-plus-D without EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Through-hole

⑦ Fit for centering sleeves

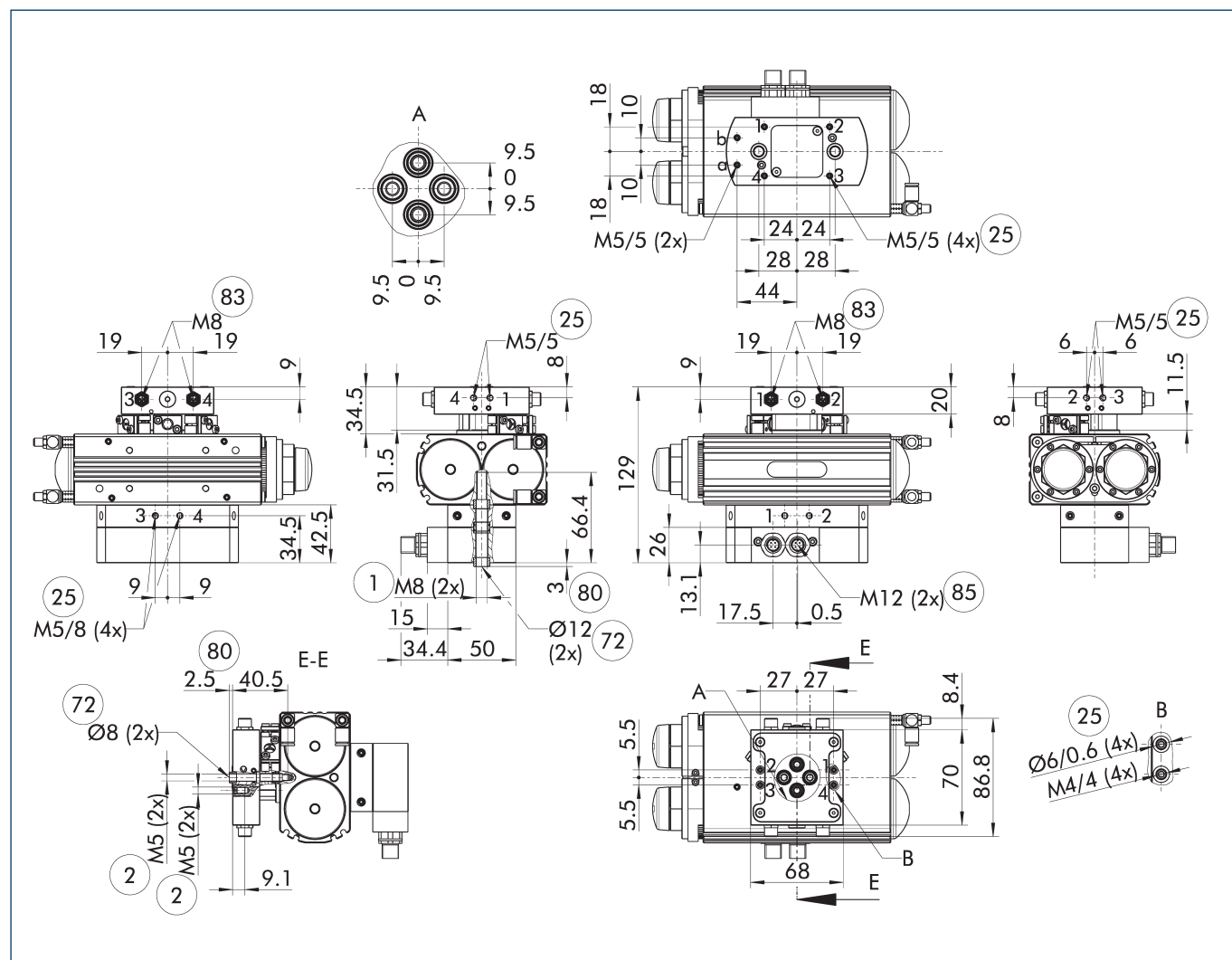
⑦ Fit for centering pins

⑧ Depth of the centering sleeve hole in the counter part

⑨ Cover caps

⑨ Not intended for mounting the unit, only for attachments

Main view for SRU-plus-D with EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Attachment connection

②⑤ Fluid feed-through

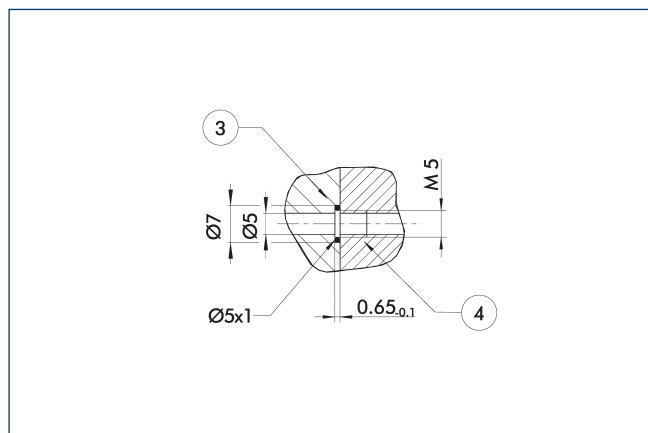
⑦② Fit for centering sleeves

⑧① Depth of the centering sleeve hole in the counter part

⑧③ Input for 3 pole sensor feed-through

⑧⑤ Sensor feed-through output

Hose-free direct connection M5

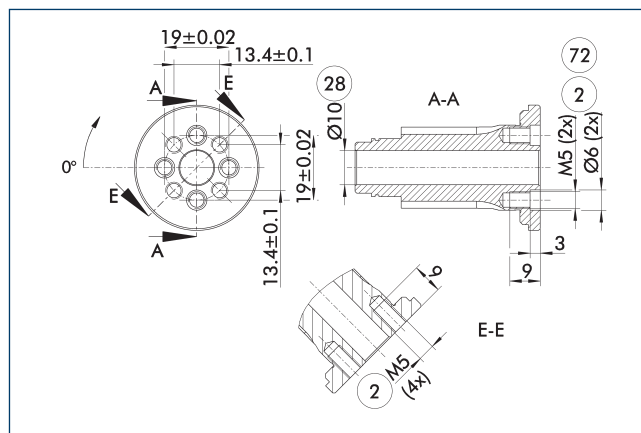


③ Adapter

④ Rotary unit

The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Pinion without fluid feed-through



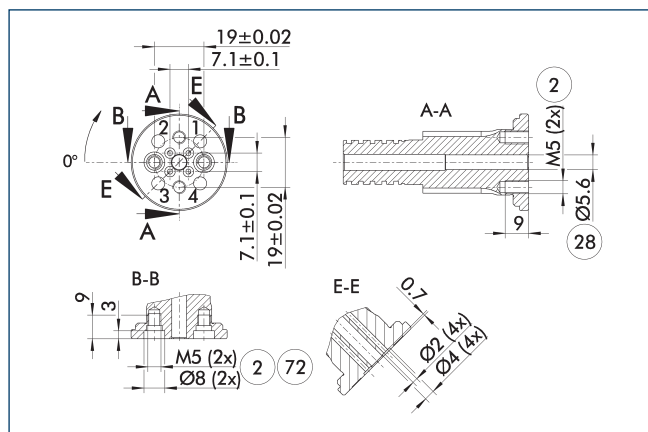
② Attachment connection

⑦② Fit for centering sleeves

②⑧ Through-hole

Mounting pattern for fastening the rotating load to the pinion. The "4x large threads for 4 screws and 2 counter bores for centering sleeves" option is preferable to the "4x small threads for 2 screws and 2 shoulder bots (in the deeper counter bores)" option.

Pinion with fluid feed-through



② Attachment connection

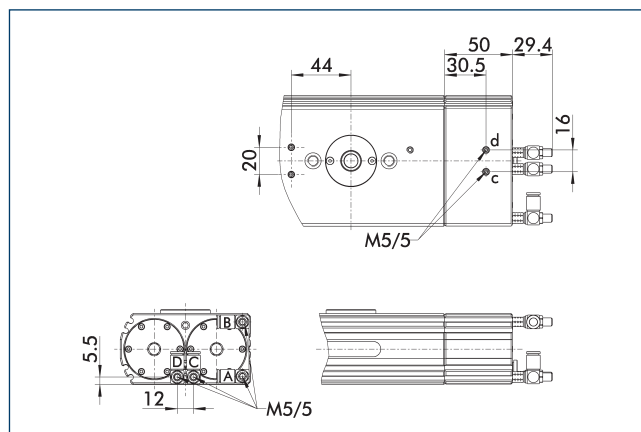
⑦② Fit for centering sleeves

②⑧ Through-hole

Pinion screw connection diagram for the fluid feed-through option. The preferred drilling pattern is 2 x screws and 2 x screws with centering sleeve (in $\varnothing 8$ H7).

① View applicable only for versions without EDF!

Pneumatic middle position (M)



A, a Main / direct connection, rotary actuator rotates clockwise

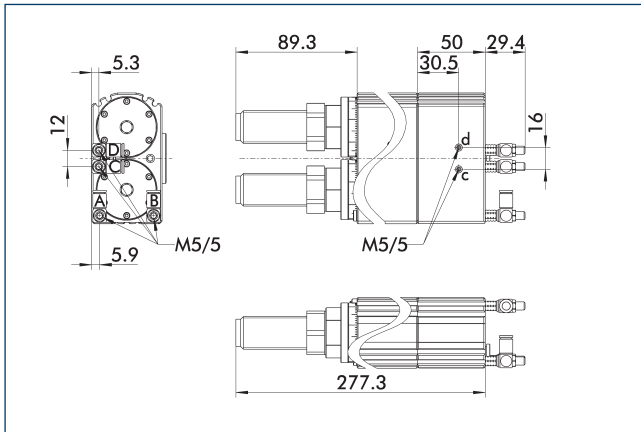
C, c Main / direct connection, middle position

B, b Main / direct connection, rotary actuator rotates counterclockwise

D, d Main / direct connection, middle position

The drawing shows the change in dimension of the "pneumatic center position (M)" option compared to the basic variant. Heavy attachments may swing before they reach the final position. The locked middle position (VM) can resolve this.

Locked middle position (VM)



A, a Main / direct connection, rotary actuator rotates clockwise

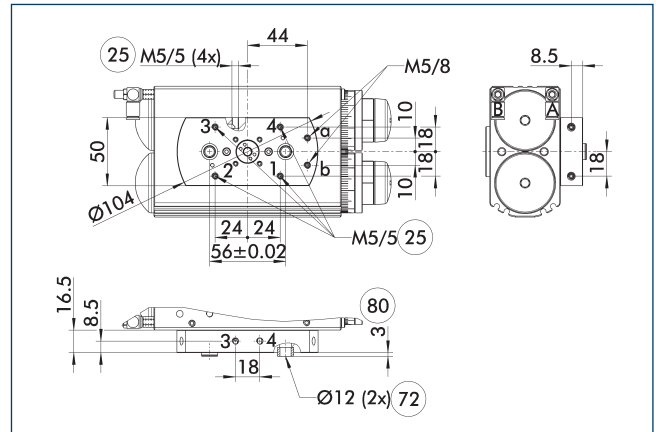
B, b Main / direct connection, rotary actuator rotates counterclockwise

C, c Main / direct connection, middle position

D, d Main / direct connection, middle position

The drawing shows the change in dimension of the "locked center position (VM)" option compared to the basic variant. The middle position is locked and is actuated with the force of the main drive piston. Shock absorbers dampen the travel to the middle position and prevent overshooting.

Connections for fluid feed-through



A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

25 Fluid feed-through

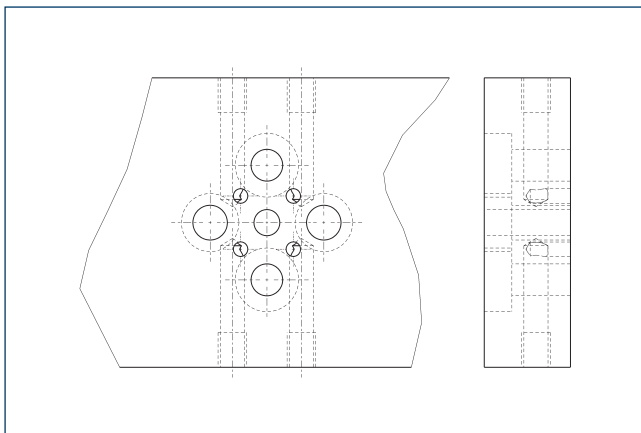
72 Fit for centering sleeves

80 Depth of the centering sleeve hole in the counter part

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

① View applicable only for versions without EDF!

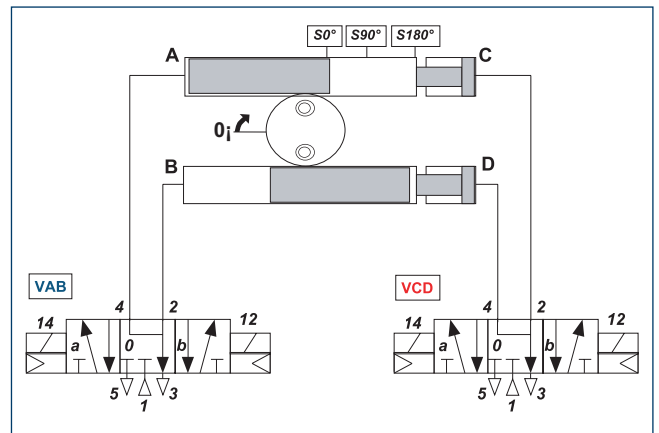
Adapter plate design



Suggested here is an adapter plate design which allows for all fluid feed-throughs to be accessed as easily as possible.

① View applicable only for versions without EDF!

Pneumatic diagram of SRU-plus-VM — vertical axis

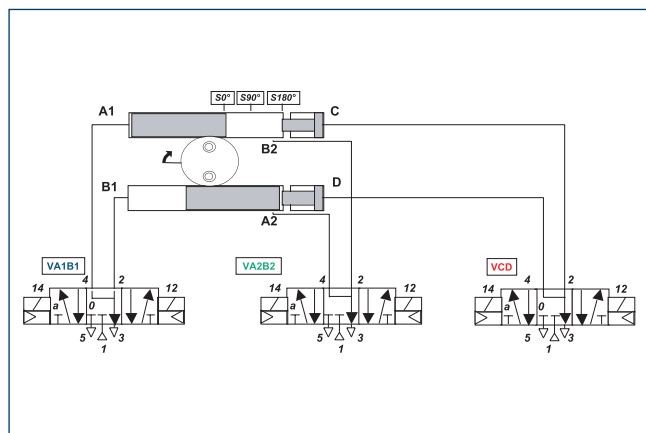


VM rotary actuators with a vertical rotary axis are generally actuated by two 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

SRU-plus-D 30

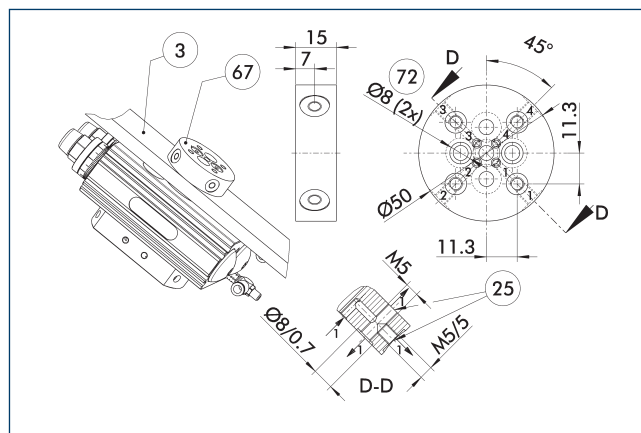
Universal swivel unit

Pneumatic diagram of SRU-plus-VM — horizontal axis



VM rotary actuators with a horizontal or non-vertical rotary axis must generally be actuated by three 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

Distributor for SRU-plus



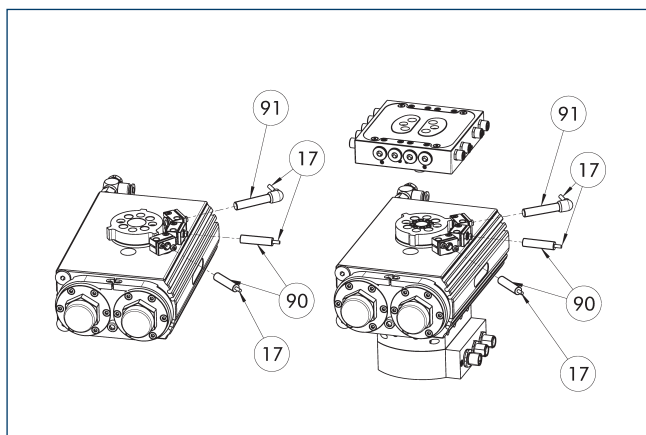
- ③ Adapter
- ②5 Fluid feed-through
- ⑥7 Distributor for media feed-through
- ⑦2 Fit for centering sleeves

The distributor for SRU-plus 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. Due to the distributor, only a simple drilling pattern has to be drilled in the adapter plate located between the pinion and the distributor.

| Description | ID | |
|---------------------|---------|--|
| Distributor plate | | |
| V-SRU-plus 20/25/30 | 0357392 | |

 View applicable only for versions without EDF!

Inductive proximity switches



17 Cable outlet

91 Sensor IN...-SA

90 Sensor IN ...

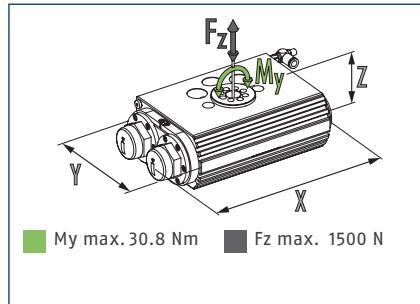
| Description | ID | Often combined |
|--|----------|----------------|
| Inductive proximity switch | | |
| IN 80-S-M12 | 0301578 | |
| IN 80-S-M8 | 0301478 | ● |
| IN-C 80-S-M8-PNP | 0301475 | |
| INK 80-S | 0301550 | |
| INK 80-SL | 0301579 | |
| Inductive proximity switch with lateral cable outlet | | |
| IN 80-S-M12-SA | 0301587 | |
| IN 80-S-M8-SA | 0301483 | ● |
| INK 80-S-SA | 0301566 | |
| Connection cables | | |
| KA BG08-L 3P-0300-PNP | 0301622 | ● |
| KA BG08-L 3P-0500-PNP | 0301623 | |
| KA BG12-L 3P-0500-PNP | 30016369 | |
| KA BW08-L 3P-0300-PNP | 0301594 | |
| KA BW08-L 3P-0500-PNP | 0301502 | |
| KA BW12-L 3P-0300-PNP | 0301503 | |
| KA BW12-L 3P-0500-PNP | 0301507 | |
| Clip for connector/socket | | |
| CLI-M12 | 0301464 | |
| CLI-M8 | 0301463 | |
| Cable extension | | |
| KV BG12-SG12 3P-0030-PNP | 0301999 | |
| KV BG12-SG12 3P-0060-PNP | 0301998 | |
| 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 | |
| Sensor distributor | | |
| V2-M12 | 0301776 | ● |
| V2-M8 | 0301775 | ● |
| V4-M8 | 0301746 | |
| V8-M8 | 0301751 | |

- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

SRU-plus-D 35

Universal swivel unit

Dimensions and maximum loads

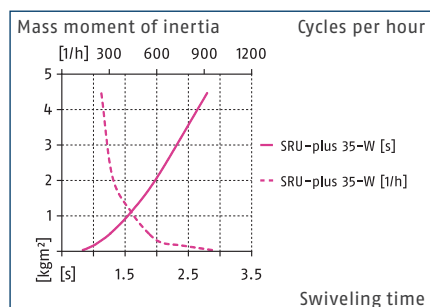


① The indicated moments and forces are static values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

Technical data SRU-plus-D without center position

| Designation (soft damping) | | SRU-plus-D 35-W-90-3-AS | SRU-plus-D 35-W-180-3-AS |
|---|-------|------------------------------|-------------------------------|
| ID | | 37362000 | 37362020 |
| End position damping | | hydr. damper | hydr. damper |
| Angle of rotation | [°] | 90.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 14.0 | 14.0 |
| Number of intermediate positions | | none | none |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 2.65 | 2.65 |
| Fluid consumption (2x nom. angle) | [cm³] | 132.0 | 216.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/8 |
| Diameter of connecting hose | | 6 x 3.9 x 1.05 | 6 x 3.9 x 1.05 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 35-W-90-3-4-AS | SRU-plus-D 35-W-180-3-4-AS |
| ID | | 37362002 | 37362022 |
| Torque | [Nm] | 13.4 | 13.4 |
| Weight | [kg] | 2.95 | 2.95 |
| No. of fluid feed-throughs | | 4 | 4 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 35-W-90-3-4-M8-AS | SRU-plus-D 35-W-180-3-4-M8-AS |
| ID | | 37362007 | 37362027 |
| Weight | [kg] | 3.7 | 3.7 |

① All units are also available in an FKM version. Please contact us for details.

Max. permissible inertia J*

* The diagrams are valid for basic units and for applications with a vertical swivel axis as well as for absolutely centric loads with a horizontal swivel axis and with an operating pressure of 6 bar. The swiveling times per throttling have to be observed, otherwise the life time may reduce. We will be happy to help you designing other applications. In addition, the SCHUNK Swiveling sizing assistant is available online.

Technical data SRU-plus-D with center position

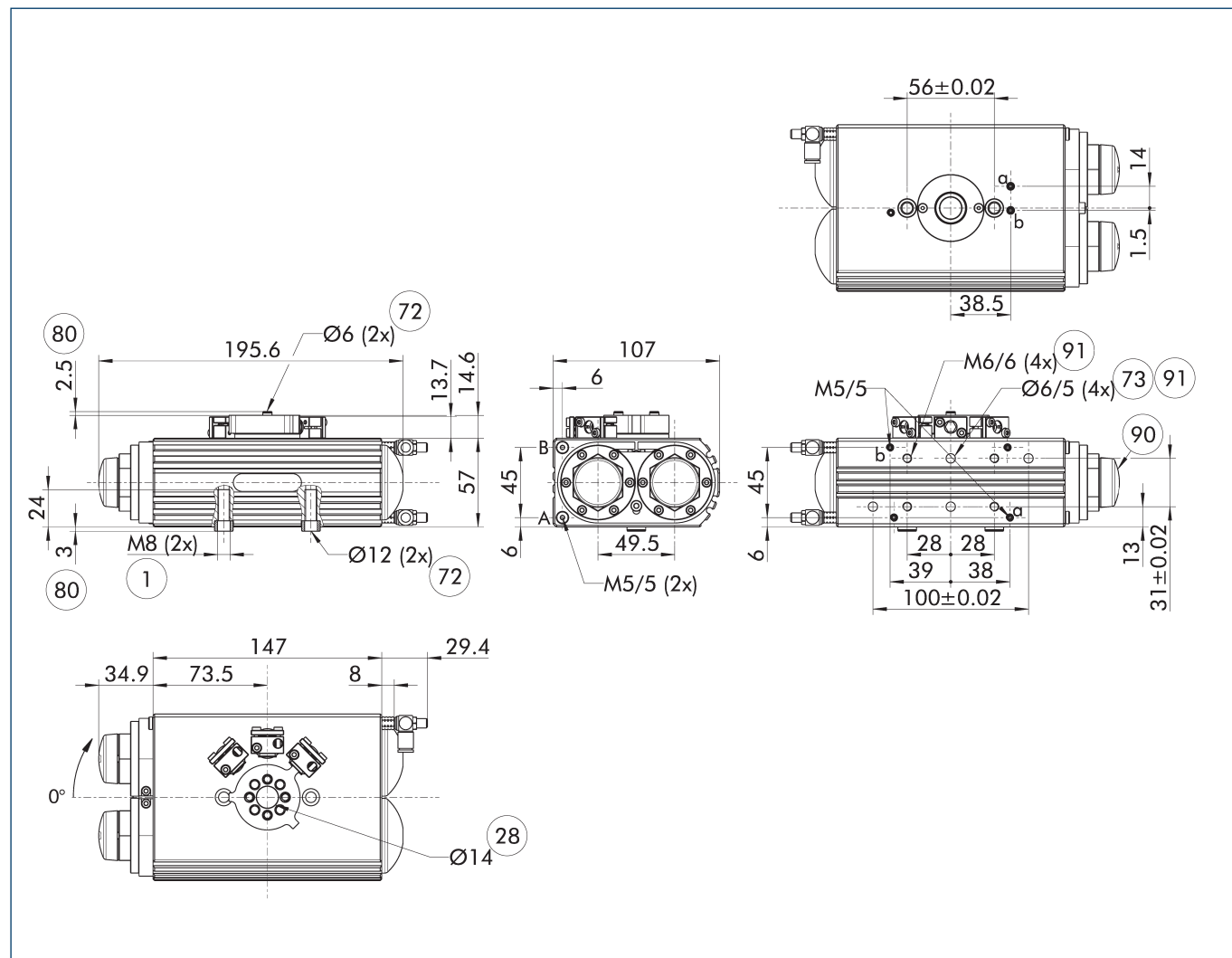
| Designation (soft damping) | | SRU-plus-D 35-W-180-3-M-AS | SRU-plus-D 35-W-180-3-VM-AS |
|---|-------|---------------------------------|----------------------------------|
| ID | | 37362030 | 37362040 |
| End position damping | | hydr. damper | hydr. damper |
| Angle of rotation | [°] | 180.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 14.0 | 14.0 |
| Number of intermediate positions | | 1 x M (pneumatic) | 1 x VM (locked) |
| Adjustability of middle position | [°] | 3.0 | 3.0 |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 3.65 | 4.15 |
| Fluid consumption (2x nom. angle) | [cm³] | 216.0 | 216.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/6.5 |
| Diameter of connecting hose | | 6 x 3.9 x 1.05 | 6 x 3.9 x 1.05 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 35-W-180-3-M-4-AS | SRU-plus-D 35-W-180-3-VM-4-AS |
| ID | | 37362032 | 37362042 |
| Torque | [Nm] | 13.4 | 13.4 |
| Weight | [kg] | 3.95 | 4.45 |
| No. of fluid feed-throughs | | 4 | 4 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 35-W-180-3-M-4-M8-AS | SRU-plus-D 35-W-180-3-VM-4-M8-AS |
| ID | | 37362037 | 37362047 |
| Weight | [kg] | 4.7 | 5.2 |

① All units are also available in an FKM version. Please contact us for details.

SRU-plus-D 35

Universal swivel unit

Main view for SRU-plus-D without EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Through-hole

⑦ Fit for centering sleeves

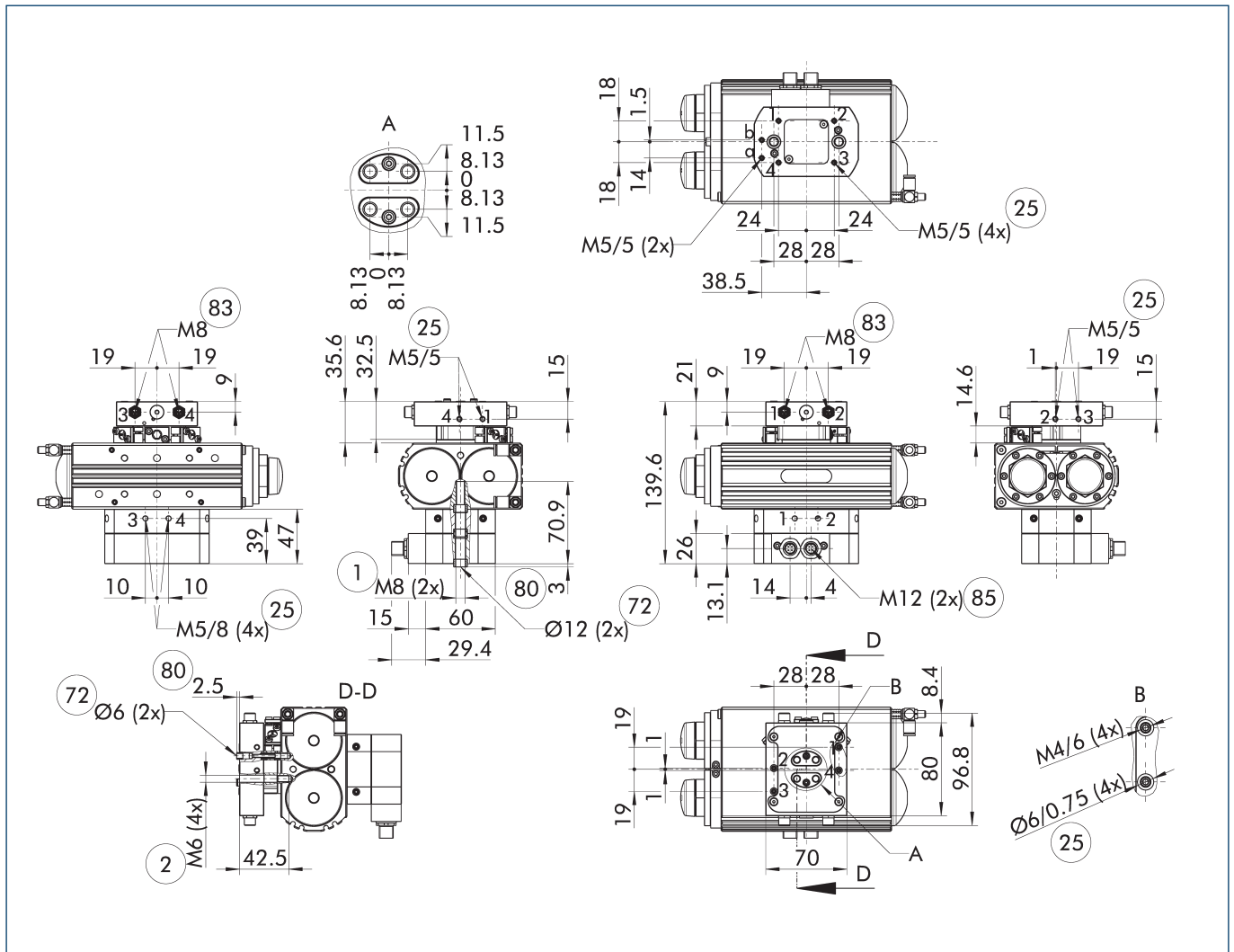
⑦ Fit for centering pins

⑧ Depth of the centering sleeve hole in the counter part

⑨ Cover caps

⑨ Not intended for mounting the unit, only for attachments

Main view for SRU-plus-D with EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Attachment connection

②⑤ Fluid feed-through

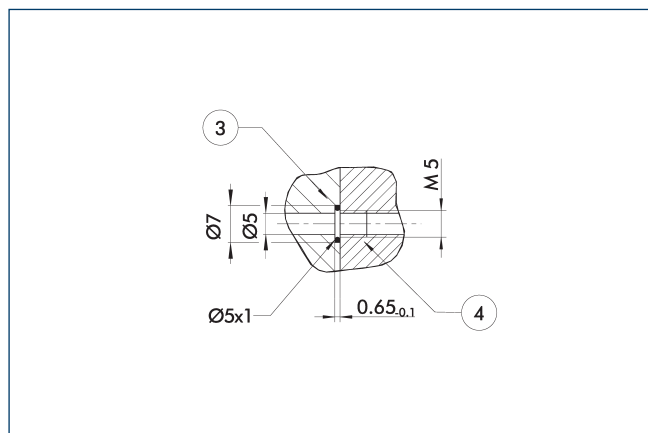
⑦② Fit for centering sleeves

⑧① Depth of the centering sleeve hole in the counter part

⑧③ Input for 3 pole sensor feed-through

⑧⑤ Sensor feed-through output

Hose-free direct connection M5

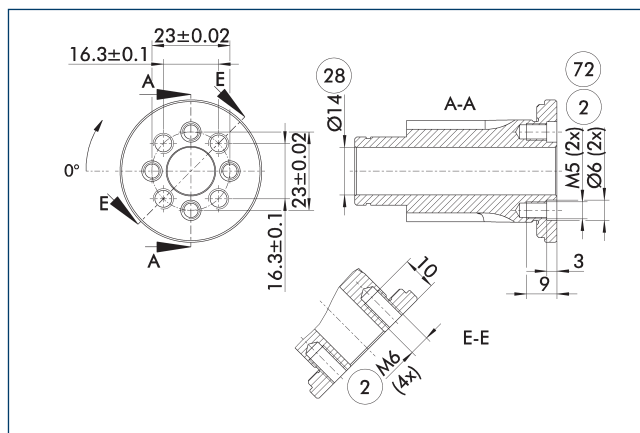


③ Adapter

④ Rotary unit

The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Pinion without fluid feed-through



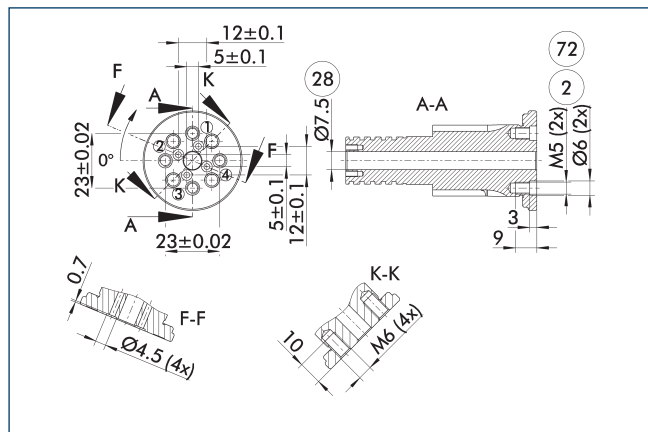
② Attachment connection

⑦② Fit for centering sleeves

②⑧ Through-hole

Mounting pattern for fastening the rotating load to the pinion. The "4x large threads for 4 screws and 2 counter bores for centering sleeves" option is preferable to the "4x small threads for 2 screws and 2 shoulder bolts (in the deeper counter bores)" option.

Pinion with fluid feed-through



② Attachment connection

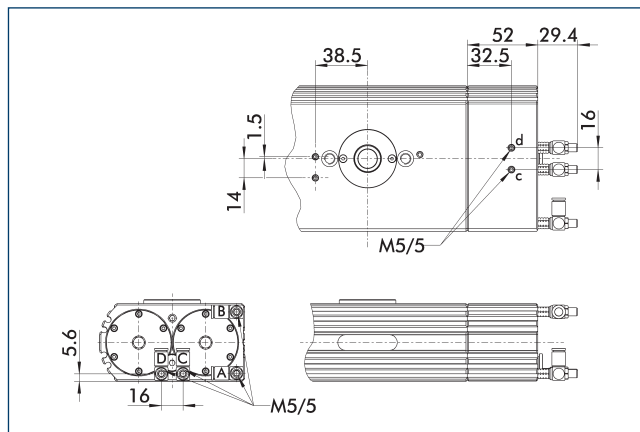
⑦② Fit for centering sleeves

②⑧ Through-hole

Pinion screw connection diagram if the option "fluid feed-through" was chosen. The preferred drilling pattern is two screws and two screws with a centering sleeve.

① View applicable only for versions without EDF!

Pneumatic middle position (M)



A, a Main / direct connection, rotary actuator rotates clockwise

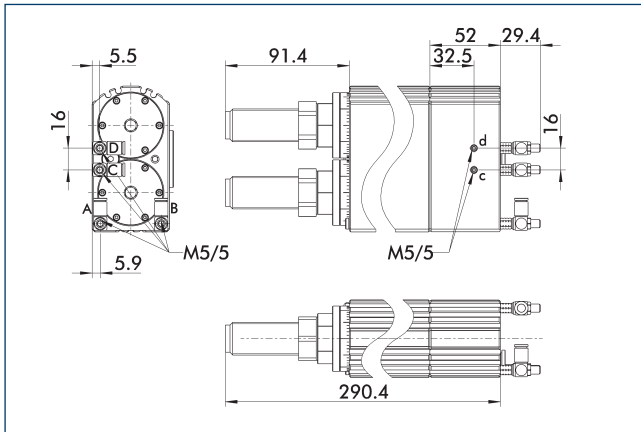
C, c Main / direct connection, middle position

B, b Main / direct connection, rotary actuator rotates counterclockwise

D, d Main / direct connection, middle position

The drawing shows the change in dimension of the "pneumatic center position (M)" option compared to the basic variant. Heavy attachments may swing before they reach the final position. The locked middle position (VM) can resolve this.

Locked middle position (VM)



A, a Main / direct connection, rotary actuator rotates clockwise

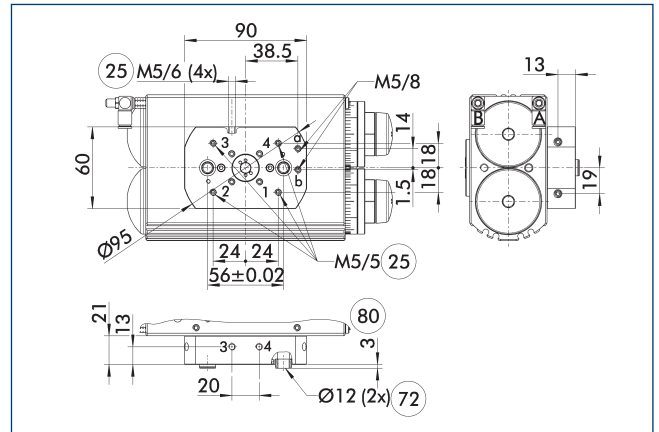
B, b Main / direct connection, rotary actuator rotates counterclockwise

C, c Main / direct connection, middle position

D, d Main / direct connection, middle position

The drawing shows the change in dimension of the "locked center position (VM)" option compared to the basic variant. The middle position is locked and is actuated with the force of the main drive piston. Shock absorbers dampen the travel to the middle position and prevent overshooting.

Connections for fluid feed-through



A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

25 Fluid feed-through

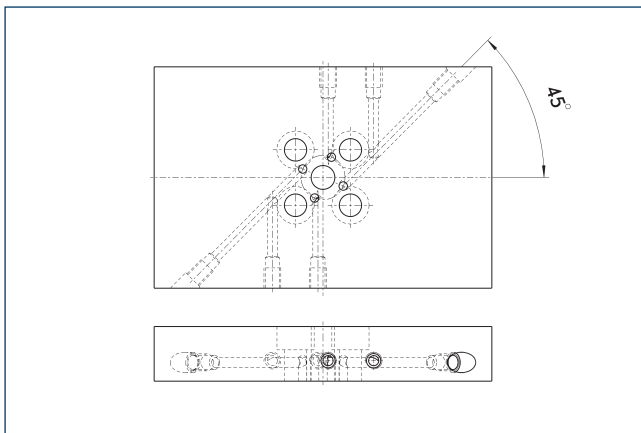
72 Fit for centering sleeves

80 Depth of the centering sleeve hole in the counter part

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

① View applicable only for versions without EDF!

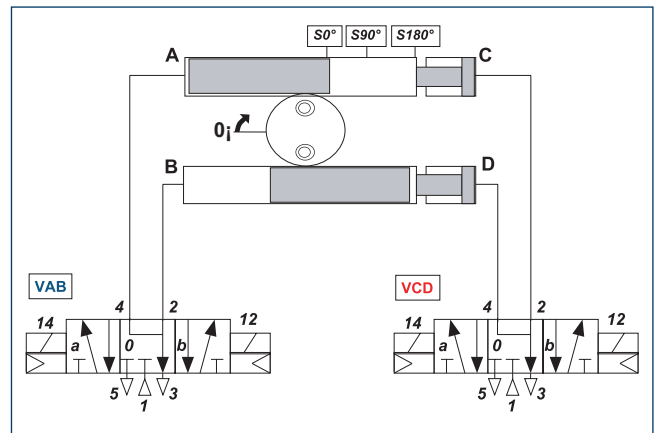
Adapter plate design



Suggested here is an adapter plate design which allows for all fluid feed-throughs to be accessed as easily as possible.

① View applicable only for versions without EDF!

Pneumatic diagram of SRU-plus-VM — vertical axis

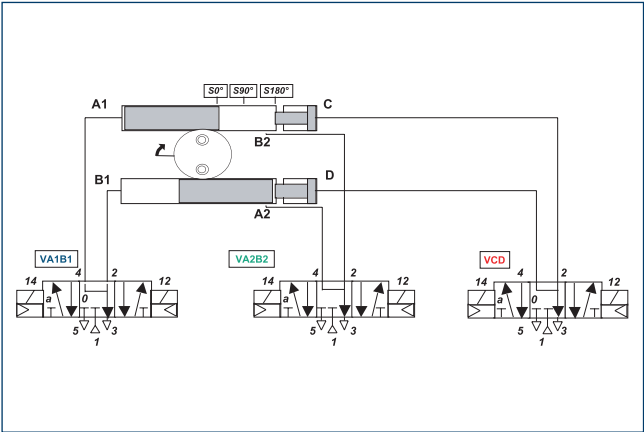


VM rotary actuators with a vertical rotary axis are generally actuated by two 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

SRU-plus-D 35

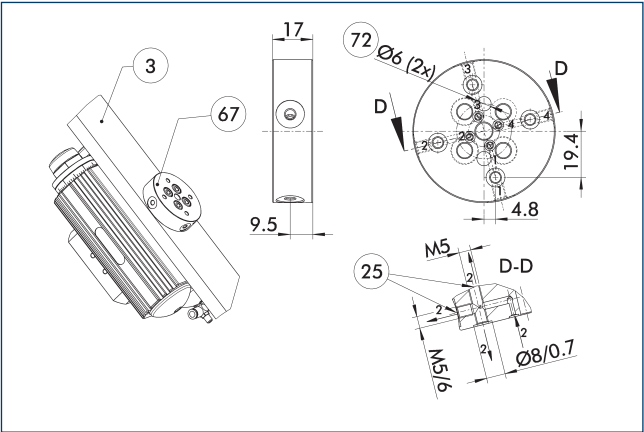
Universal swivel unit

Pneumatic diagram of SRU-plus-VM — horizontal axis



VM rotary actuators with a horizontal or non-vertical rotary axis must generally be actuated by three 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

Distributor for SRU-plus



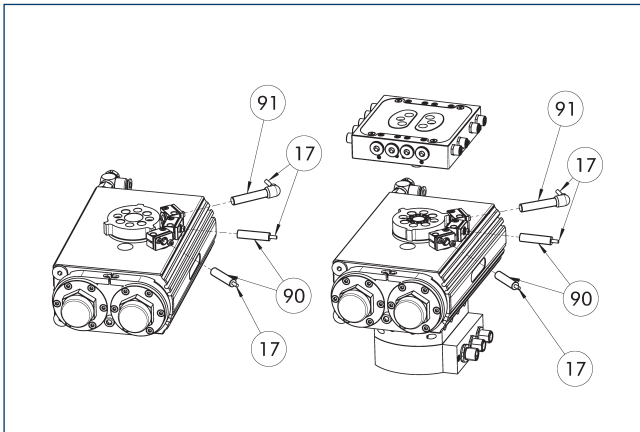
- ③ Adapter
- ⑥7 Distributor for media feed-through
- ②5 Fluid feed-through
- ⑦2 Fit for centering sleeves

The distributor for SRU-plus 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. Due to the distributor, only a simple drilling pattern has to be drilled in the adapter plate located between the pinion and the distributor.

| Description | ID | |
|-------------------|---------|--|
| Distributor plate | | |
| V-SRU-plus 35 | 0357792 | |

① View applicable only for versions without EDF!

Inductive proximity switches



① Cable outlet

⑨ Sensor IN..-SA

⑩ Sensor IN ...

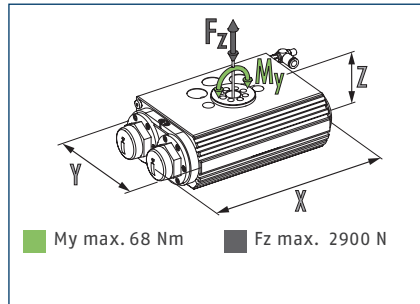
| Description | ID | Often combined |
|--|----------|----------------|
| Inductive proximity switch | | |
| IN 80-S-M12 | 0301578 | |
| IN 80-S-M8 | 0301478 | ● |
| IN-C 80-S-M8-PNP | 0301475 | |
| INK 80-S | 0301550 | |
| INK 80-SL | 0301579 | |
| Inductive proximity switch with lateral cable outlet | | |
| IN 80-S-M12-SA | 0301587 | |
| IN 80-S-M8-SA | 0301483 | ● |
| INK 80-S-SA | 0301566 | |
| Connection cables | | |
| KA BG08-L 3P-0300-PNP | 0301622 | ● |
| KA BG08-L 3P-0500-PNP | 0301623 | |
| KA BG12-L 3P-0500-PNP | 30016369 | |
| KA BW08-L 3P-0300-PNP | 0301594 | |
| KA BW08-L 3P-0500-PNP | 0301502 | |
| KA BW12-L 3P-0300-PNP | 0301503 | |
| KA BW12-L 3P-0500-PNP | 0301507 | |
| Clip for connector/socket | | |
| CLI-M12 | 0301464 | |
| CLI-M8 | 0301463 | |
| Cable extension | | |
| KV BG12-SG12 3P-0030-PNP | 0301999 | |
| KV BG12-SG12 3P-0060-PNP | 0301998 | |
| 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 | |
| Sensor distributor | | |
| V2-M12 | 0301776 | ● |
| V2-M8 | 0301775 | ● |
| V4-M8 | 0301746 | |
| V8-M8 | 0301751 | |

- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

SRU-plus-D 40

Universal swivel unit

Dimensions and maximum loads



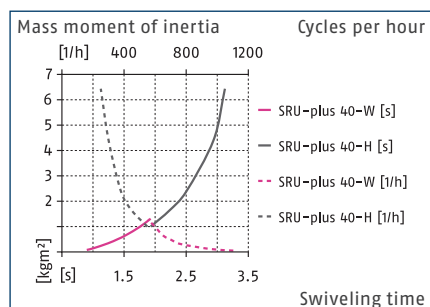
① The indicated moments and forces are static values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

Technical data SRU-plus-D without center position

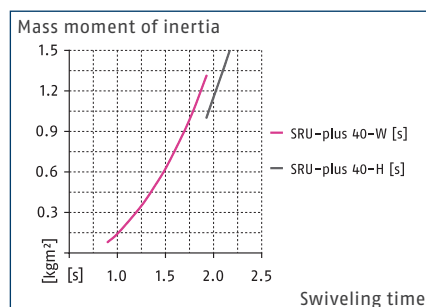
| Designation (soft damping) | | SRU-plus-D 40-W-90-3-AS | SRU-plus-D 40-W-180-3-AS |
|---|-------|--------------------------------|---------------------------------|
| ID | | 37362200 | 37362220 |
| End position damping | | hydr. damper | hydr. damper |
| Angle of rotation | [°] | 90.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 20.0 | 20.0 |
| Number of intermediate positions | | none | none |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 4.2 | 4.2 |
| Fluid consumption (2x nom. angle) | [cm³] | 208.0 | 336.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/8 |
| Diameter of connecting hose | | 8 x 6 x 1 | 8 x 6 x 1 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 40-W-90-3-8-AS | SRU-plus-D 40-W-180-3-8-AS |
| ID | | 37362202 | 37362222 |
| Torque | [Nm] | 19.2 | 19.2 |
| Weight | [kg] | 4.9 | 4.9 |
| No. of fluid feed-throughs | | 8 | 8 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D1 40-W-90-3-8-M12-AS | SRU-plus-D1 40-W-180-3-8-M12-AS |
| ID | | 1001682 | 1001684 |
| Weight | [kg] | 6.45 | 6.45 |

① All units are also available in an FKM version. Please contact us for details.

Max. permissible inertia J*



Max. permissible inertia J*



* The diagrams are valid for basic units and for applications with a vertical swivel axis as well as for absolutely centric loads with a horizontal swivel axis and with an operating pressure of 6 bar. The swiveling times per throttling have to be observed, otherwise the life time may reduce. We will be happy to help you designing other applications. In addition, the SCHUNK Swiveling sizing assistant is available online.

Technical data SRU-plus-D with center position

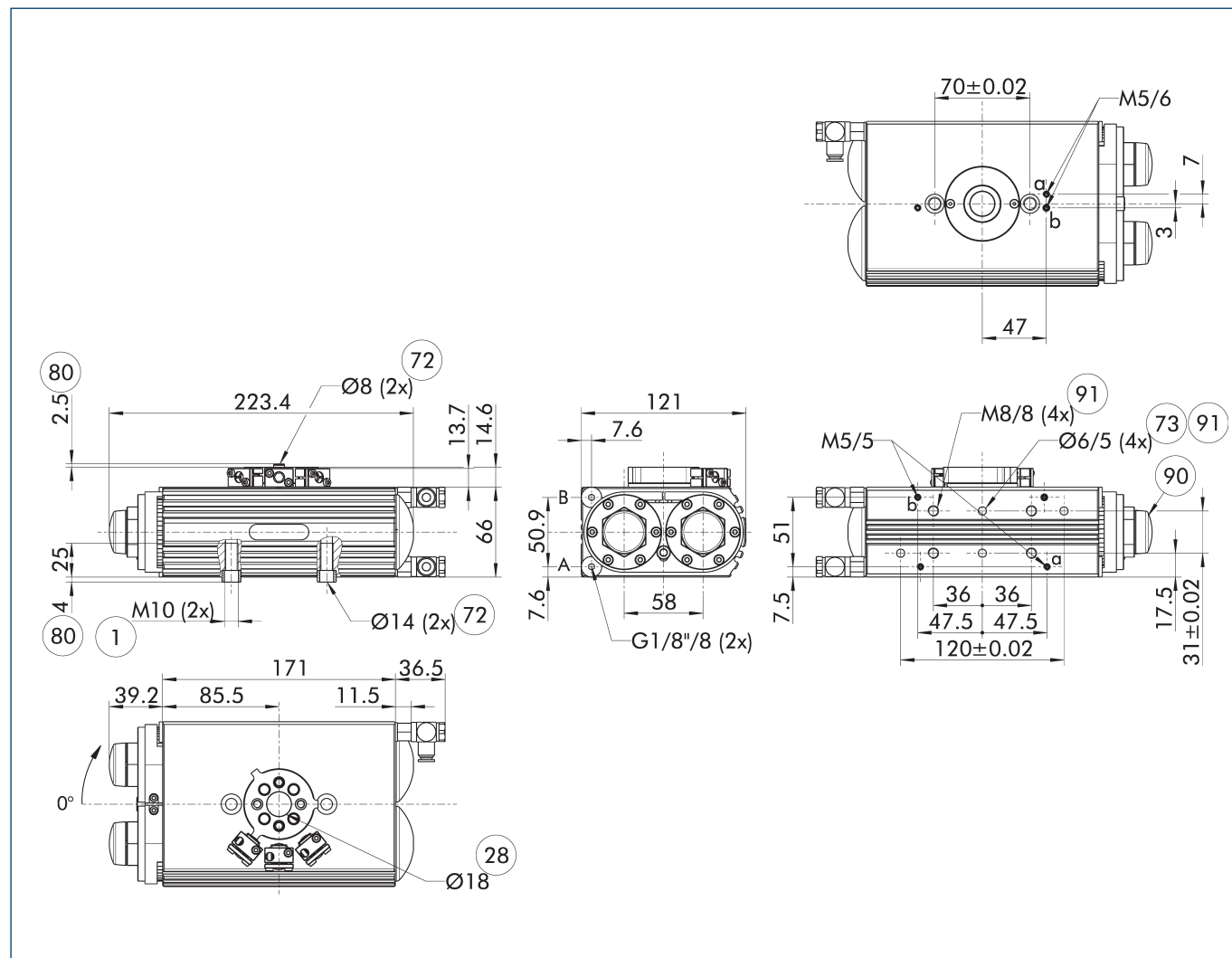
| Designation (soft damping) | | SRU-plus-D 40-W-180-3-M-AS | SRU-plus-D 40-W-180-3-VM-AS |
|---|-------|-----------------------------------|------------------------------------|
| ID | | 37362230 | 37362240 |
| End position damping | | hydr. damper | hydr. damper |
| Angle of rotation | [°] | 180.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 20.0 | 20.0 |
| Number of intermediate positions | | 1 x M (pneumatic) | 1 x VM (locked) |
| Adjustability of middle position | [°] | 3.0 | 3.0 |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 5.5 | 6.5 |
| Fluid consumption (2x nom. angle) | [cm³] | 336.0 | 336.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/6.5 |
| Diameter of connecting hose | | 8 x 6 x 1 | 8 x 6 x 1 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 40-W-180-3-M-8-AS | SRU-plus-D 40-W-180-3-VM-8-AS |
| ID | | 37362232 | 37362242 |
| Torque | [Nm] | 19.2 | 19.2 |
| Weight | [kg] | 6.2 | 7.2 |
| No. of fluid feed-throughs | | 8 | 8 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D1 40-W-180-3-M-8-M12-AS | SRU-plus-D1 40-W-180-3-VM-8-M12-AS |
| ID | | 1001686 | 1001688 |
| Weight | [kg] | 7.75 | 8.75 |

① All units are also available in an FKM version. Please contact us for details.

SRU-plus-D 40

Universal swivel unit

Main view for SRU-plus-D without EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Through-hole

⑦② Fit for centering sleeves

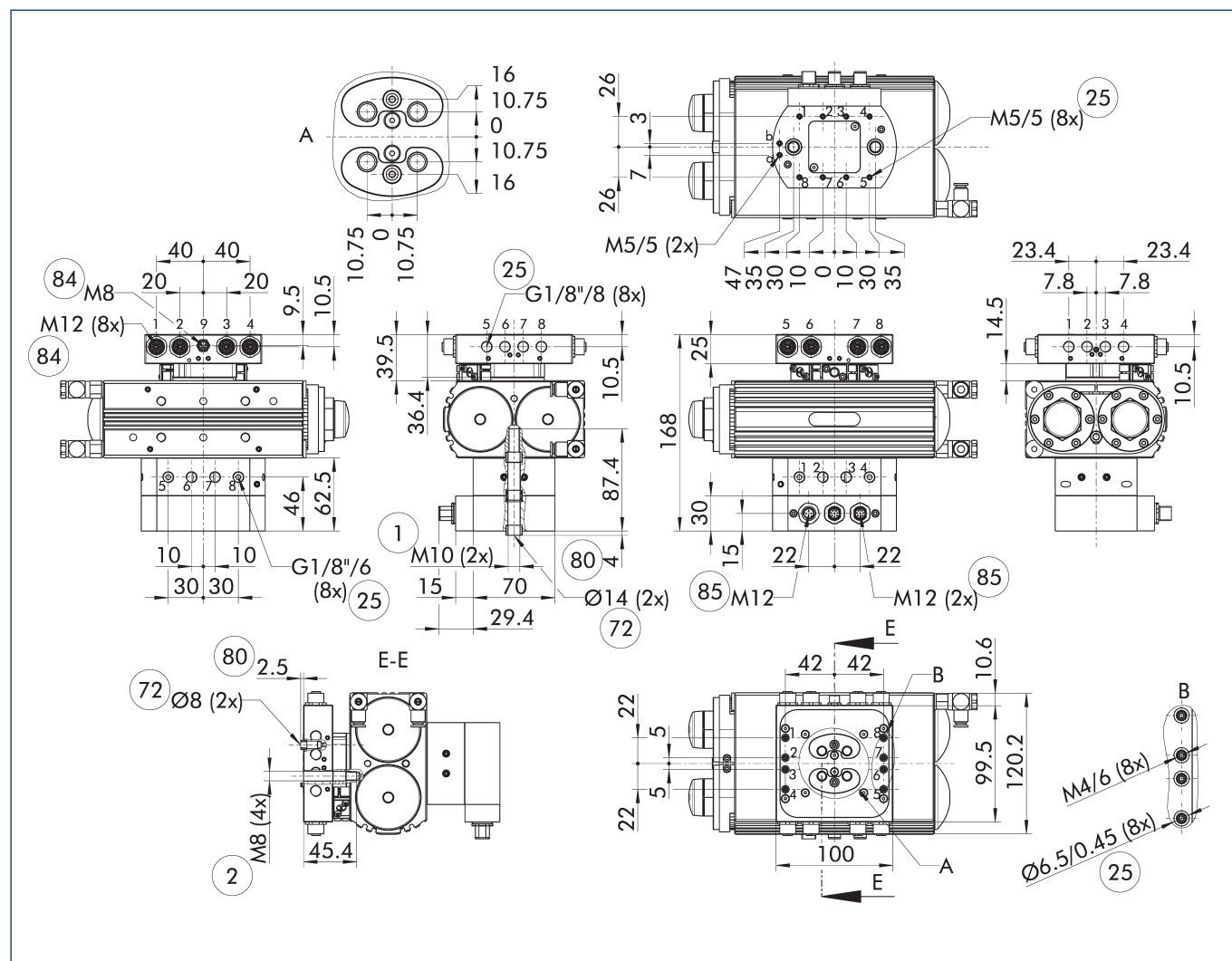
⑦③ Fit for centering pins

⑧① Depth of the centering sleeve hole in the counter part

⑨① Cover caps

⑨② Not intended for mounting the unit, only for attachments

Main view for SRU-plus-D with EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Attachment connection

②⑤ Fluid feed-through

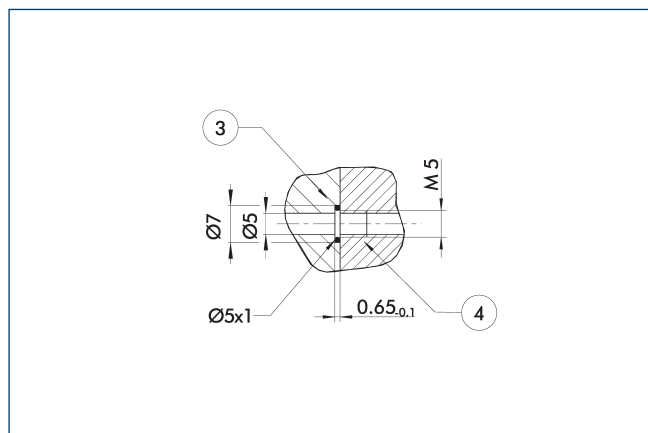
⑦② Fit for centering sleeves

⑧① Depth of the centering sleeve hole in the counter part

⑧④ Input for 4 pole sensor feed-through

⑧⑤ Sensor feed-through output

Hose-free direct connection M5

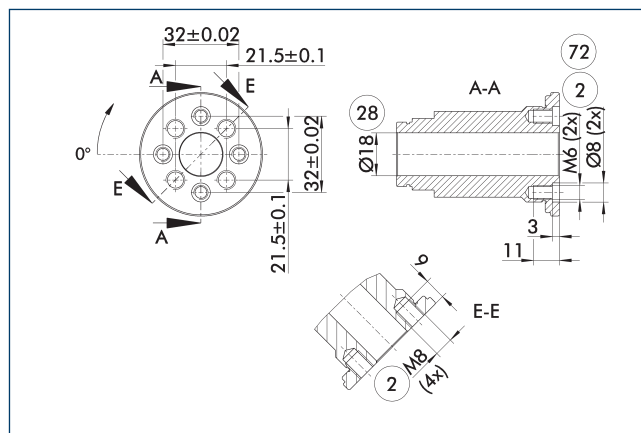


③ Adapter

④ Rotary unit

The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Pinion without fluid feed-through



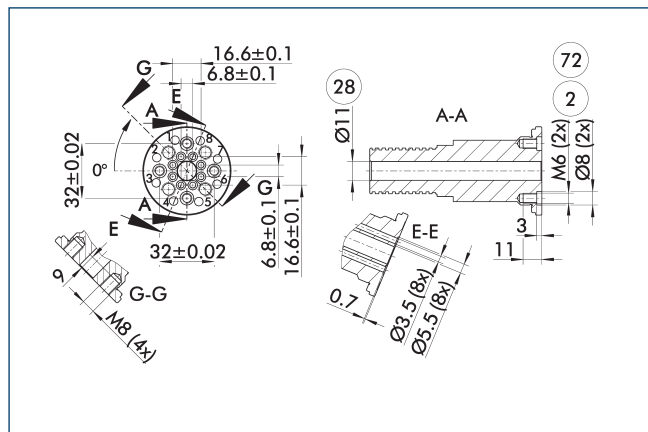
② Attachment connection

⑦② Fit for centering sleeves

②⑧ Through-hole

Mounting pattern for fastening the rotating load to the pinion. The "4x large threads for 4 screws and 2 counter bores for centering sleeves" option is preferable to the "4x small threads for 2 screws and 2 shoulder bolts (in the deeper counter bores)" option.

Pinion with fluid feed-through



② Attachment connection

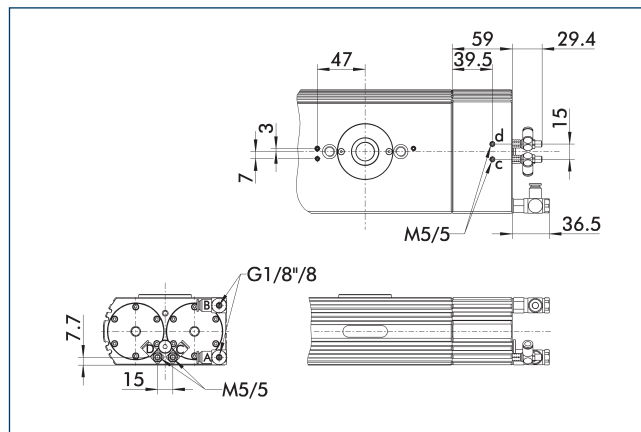
⑦② Fit for centering sleeves

②⑧ Through-hole

Pinion screw connection diagram if the option "fluid feed-through" was chosen. The preferred drilling pattern is two screws and two screws with a centering sleeve.

① View applicable only for versions without EDF!

Pneumatic middle position (M)



A, a Main / direct connection, rotary actuator rotates clockwise

C, c Main / direct connection, middle position

B, b Main / direct connection, rotary actuator rotates counterclockwise

D, d Main / direct connection, middle position

The drawing shows the change in dimension of the "pneumatic center position (M)" option compared to the basic variant. Heavy attachments may swing before they reach the final position. The locked middle position (VM) can resolve this.

- The drawing shows the change in dimension of the "locked center position (VM)" option compared to the basic variant. The middle position is locked and is actuated with the force of the main drive piston. Shock absorbers dampen the travel to the middle position and prevent overshooting.

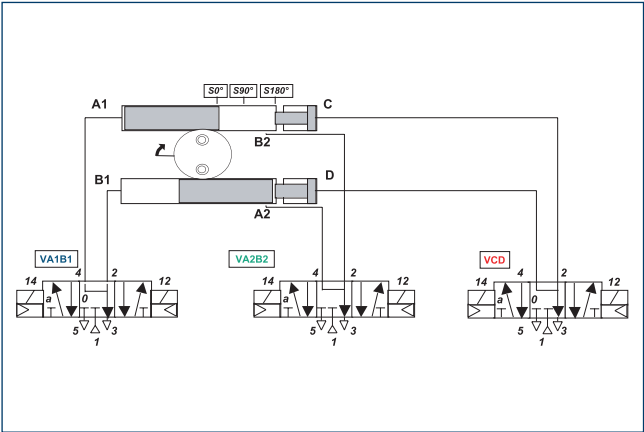
 View applicable only for versions without EDF!

[illegible]

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

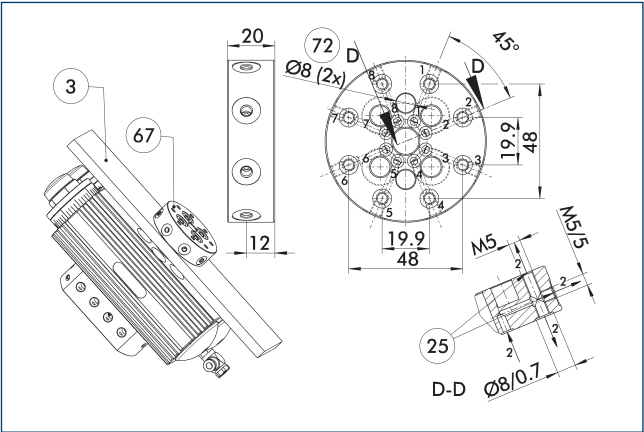
VM rotary actuators with a vertical rotary axis are generally actuated by two 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

Pneumatic diagram of SRU-plus-VM — horizontal axis



VM rotary actuators with a horizontal or non-vertical rotary axis must generally be actuated by three 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

Distributor for SRU-plus



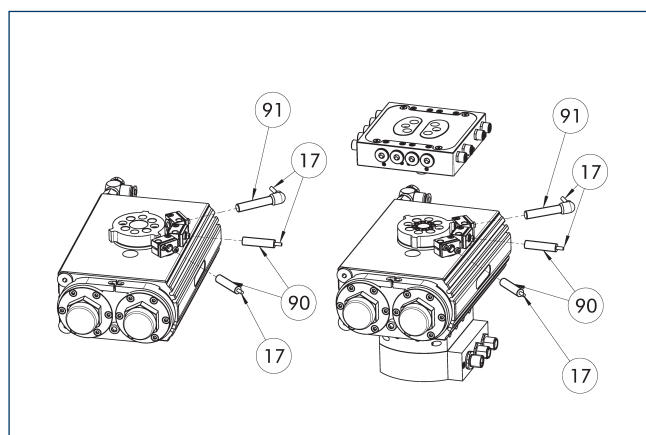
- ③ Adapter
- ②5 Fluid feed-through
- ⑥7 Distributor for media feed-through
- ⑦2 Fit for centering sleeves

The distributor for SRU-plus 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. Due to the distributor, only a simple drilling pattern has to be drilled in the adapter plate located between the pinion and the distributor.

| Description | ID | |
|-------------------|---------|--|
| Distributor plate | | |
| V-SRU-plus 40 | 0357992 | |

① View applicable only for versions without EDF!

Inductive proximity switches



① Cable outlet

⑨ Sensor IN..-SA

⑩ Sensor IN ...

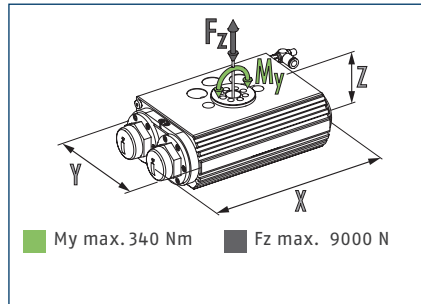
| Description | ID | Often combined |
|--|----------|----------------|
| Inductive proximity switch | | |
| IN 80-S-M12 | 0301578 | |
| IN 80-S-M8 | 0301478 | ● |
| IN-C 80-S-M8-PNP | 0301475 | |
| INK 80-S | 0301550 | |
| INK 80-SL | 0301579 | |
| Inductive proximity switch with lateral cable outlet | | |
| IN 80-S-M12-SA | 0301587 | |
| IN 80-S-M8-SA | 0301483 | ● |
| INK 80-S-SA | 0301566 | |
| Connection cables | | |
| KA BG08-L 3P-0300-PNP | 0301622 | ● |
| KA BG08-L 3P-0500-PNP | 0301623 | |
| KA BG12-L 3P-0500-PNP | 30016369 | |
| KA BW08-L 3P-0300-PNP | 0301594 | |
| KA BW08-L 3P-0500-PNP | 0301502 | |
| KA BW12-L 3P-0300-PNP | 0301503 | |
| KA BW12-L 3P-0500-PNP | 0301507 | |
| Clip for connector/socket | | |
| CLI-M12 | 0301464 | |
| CLI-M8 | 0301463 | |
| Cable extension | | |
| KV BG12-SG12 3P-0030-PNP | 0301999 | |
| KV BG12-SG12 3P-0060-PNP | 0301998 | |
| 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 | |
| Sensor distributor | | |
| V2-M12 | 0301776 | ● |
| V2-M8 | 0301775 | ● |
| V4-M8 | 0301746 | |
| V8-M8 | 0301751 | |

- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

SRU-plus-D 50

Universal swivel unit

Dimensions and maximum loads



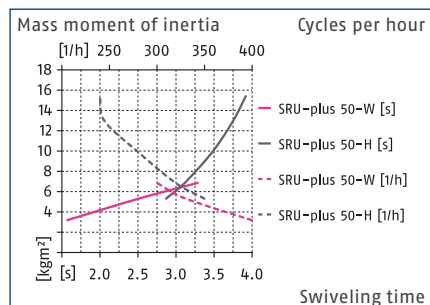
① The indicated moments and forces are static values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

Technical data SRU-plus-D without center position

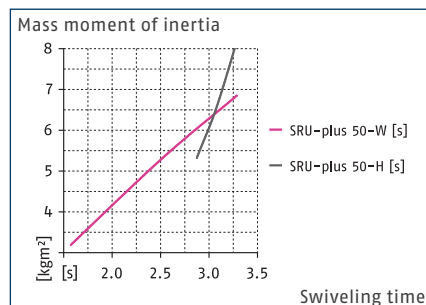
| Designation (soft damping) | | SRU-plus-D 50-W-90-3-AS | SRU-plus-D 50-W-180-3-AS |
|---|-------|--------------------------------|---------------------------------|
| ID | | 37362600 | 37362620 |
| End position damping | | hydr. damper | hydr. damper |
| Angle of rotation | [°] | 90.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 52.0 | 52.0 |
| Number of intermediate positions | | none | none |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 9.4 | 9.4 |
| Fluid consumption (2x nom. angle) | [cm³] | 448.0 | 776.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/8 |
| Diameter of connecting hose | | 8 x 6 x 1 | 8 x 6 x 1 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 50-W-90-3-8-AS | SRU-plus-D 50-W-180-3-8-AS |
| ID | | 37362602 | 37362622 |
| Torque | [Nm] | 50.3 | 50.3 |
| Weight | [kg] | 9.6 | 9.6 |
| No. of fluid feed-throughs | | 8 | 8 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D1 50-W-90-3-8-M12-AS | SRU-plus-D1 50-W-180-3-8-M12-AS |
| ID | | 1001707 | 1001709 |
| Weight | [kg] | 11.55 | 11.55 |

① All units are also available in an FKM version. Please contact us for details.

Max. permissible inertia J*



Max. permissible inertia J*



* The diagrams are valid for basic units and for applications with a vertical swivel axis as well as for absolutely centric loads with a horizontal swivel axis and with an operating pressure of 6 bar. The swiveling times per throttling have to be observed, otherwise the life time may reduce. We will be happy to help you designing other applications. In addition, the SCHUNK Swiveling sizing assistant is available online.

Technical data SRU-plus-D with center position

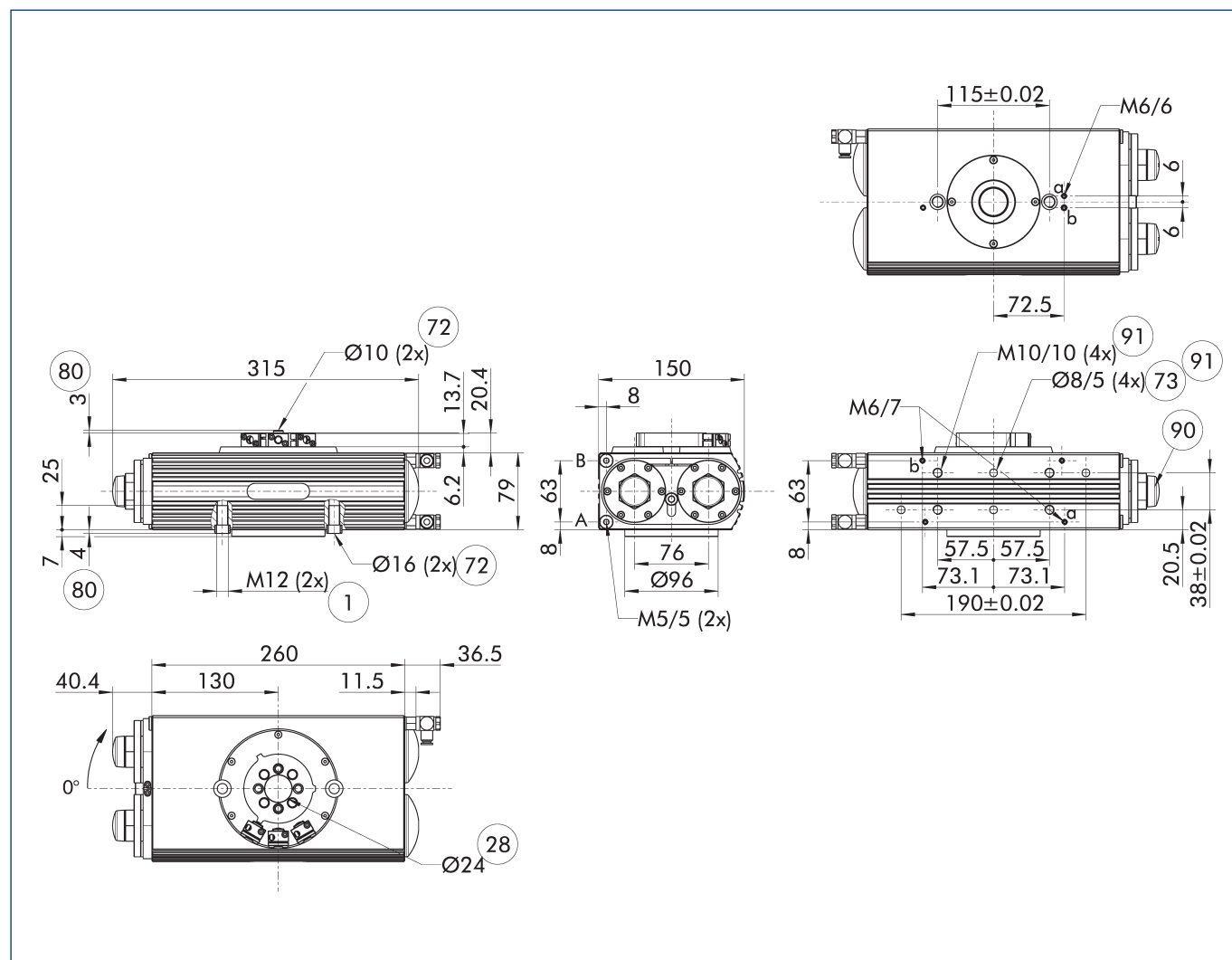
| Designation (soft damping) | | SRU-plus-D 50-W-180-3-M-AS | SRU-plus-D 50-W-180-3-VM-AS |
|---|-------|-----------------------------------|------------------------------------|
| ID | | 37362630 | 37362640 |
| End position damping | | hydr. damper | hydr. damper |
| Angle of rotation | [°] | 180.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 52.0 | 52.0 |
| Number of intermediate positions | | 1 x M (pneumatic) | 1 x VM (locked) |
| Adjustability of middle position | [°] | 3.0 | 3.0 |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 12.2 | 12.8 |
| Fluid consumption (2x nom. angle) | [cm³] | 776.0 | 776.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/6.5 |
| Diameter of connecting hose | | 8 x 6 x 1 | 8 x 6 x 1 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 50-W-180-3-M-8-AS | SRU-plus-D 50-W-180-3-VM-8-AS |
| ID | | 37362632 | 37362642 |
| Torque | [Nm] | 50.3 | 50.3 |
| Weight | [kg] | 12.4 | 13 |
| No. of fluid feed-throughs | | 8 | 8 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D1 50-W-180-3-M-8-M12-AS | SRU-plus-D1 50-W-180-3-VM-8-M12-AS |
| ID | | 1001712 | 1001714 |
| Weight | [kg] | 14.35 | 14.95 |

① All units are also available in an FKM version. Please contact us for details.

SRU-plus-D 50

Universal swivel unit

Main view for SRU-plus-D without EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Through-hole

⑦ Fit for centering sleeves

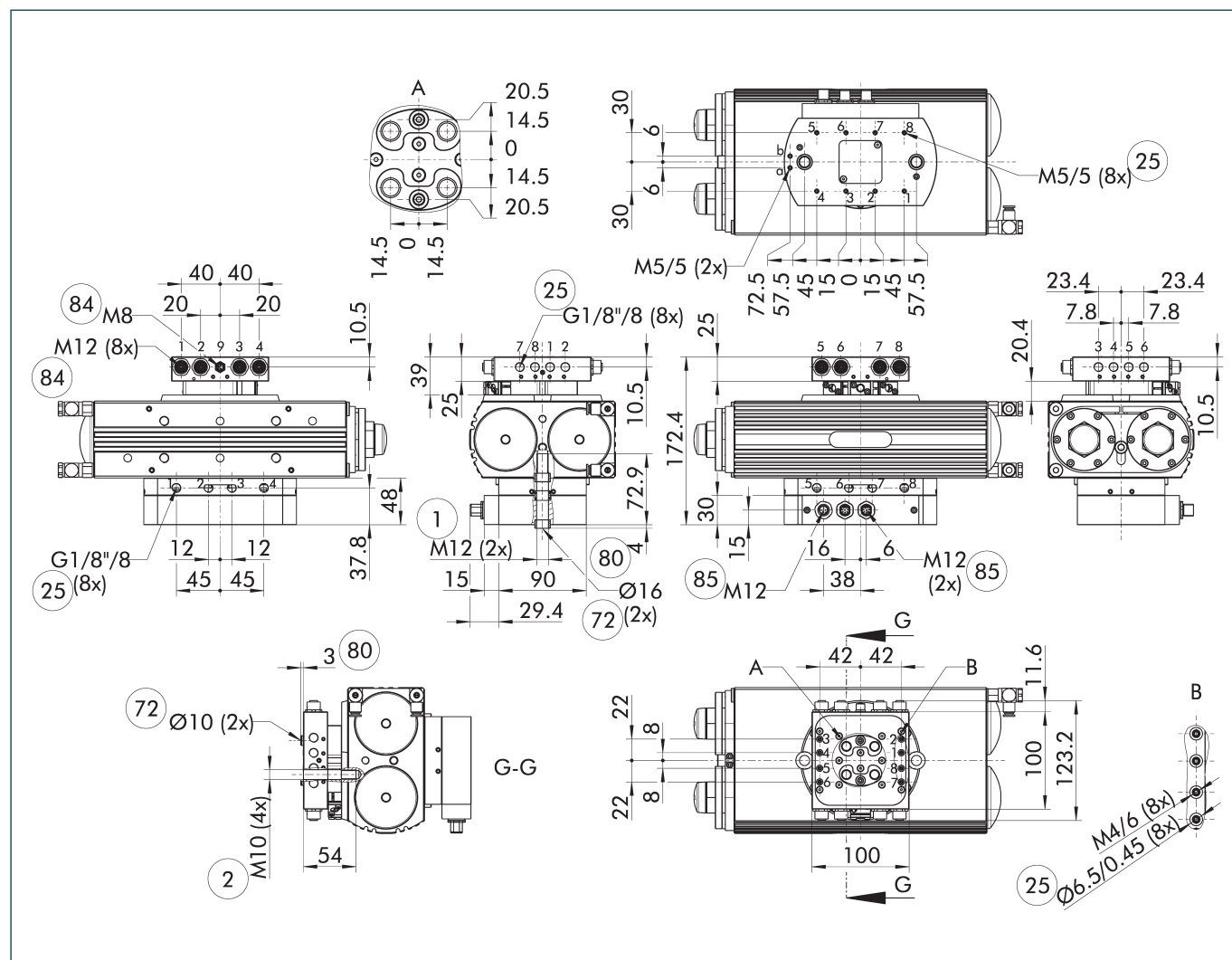
⑦ Fit for centering pins

⑧ Depth of the centering sleeve hole in the counter part

⑨ Cover caps

⑨ Not intended for mounting the unit, only for attachments

Main view for SRU-plus-D with EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Attachment connection

②⑤ Fluid feed-through

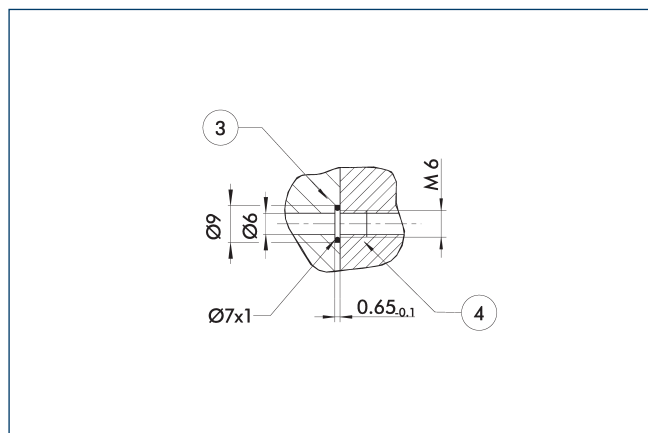
⑦② Fit for centering sleeves

⑧① Depth of the centering sleeve hole in the counter part

⑧④ Input for 4 pole sensor feed-through

⑧⑤ Sensor feed-through output

Hose-free direct connection M6

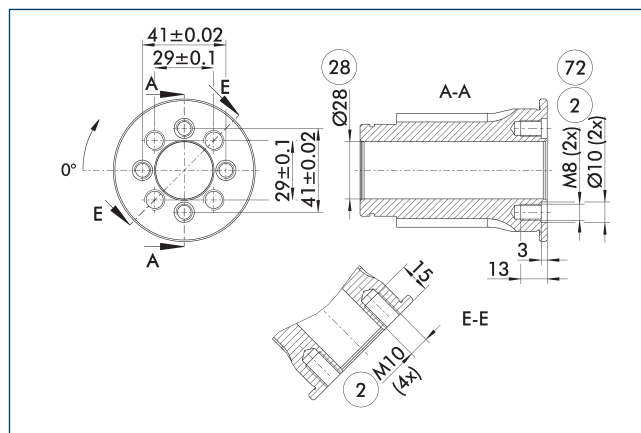


③ Adapter

④ Rotary unit

The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Pinion without fluid feed-through



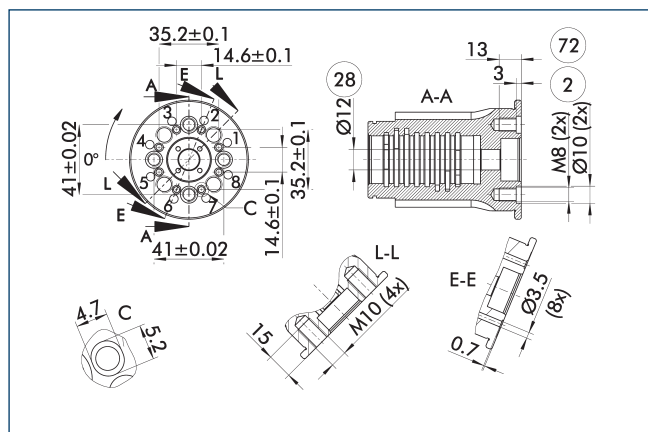
② Attachment connection

⑦② Fit for centering sleeves

②⑧ Through-hole

Mounting pattern for fastening the rotating load to the pinion. The "4x large threads for 4 screws and 2 counter bores for centering sleeves" option is preferable to the "4x small threads for 2 screws and 2 shoulder bolts (in the deeper counter bores)" option.

Pinion with fluid feed-through



② Attachment connection

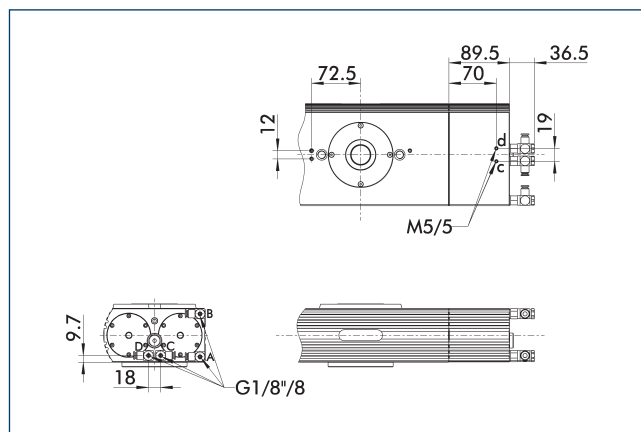
⑦② Fit for centering sleeves

②⑧ Through-hole

Pinion screw connection diagram if the option "fluid feed-through" was chosen. The preferred drilling pattern is two screws and two screws with a centering sleeve.

① View applicable only for versions without EDF!

Pneumatic middle position (M)



A, a Main / direct connection, rotary actuator rotates clockwise

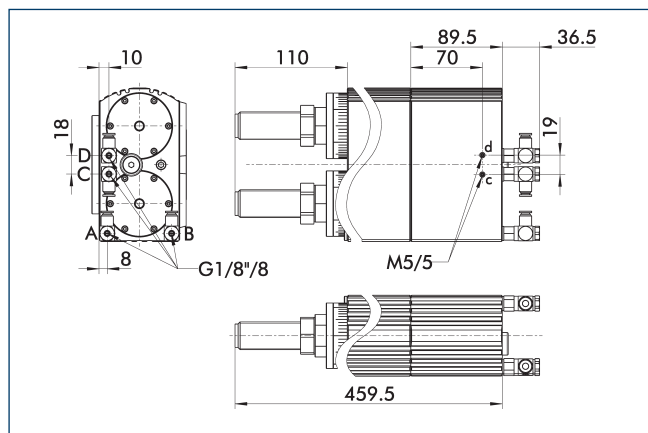
C, c Main / direct connection, middle position

B, b Main / direct connection, rotary actuator rotates counterclockwise

D, d Main / direct connection, middle position

The drawing shows the change in dimension of the "pneumatic center position (M)" option compared to the basic variant. Heavy attachments may swing before they reach the final position. The locked middle position (VM) can resolve this.

Locked middle position (VM)



A, a Main / direct connection, rotary actuator rotates clockwise

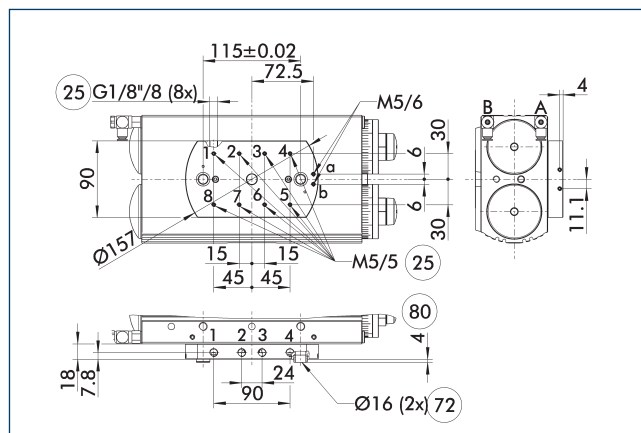
B, b Main / direct connection, rotary actuator rotates counterclockwise

C, c Main / direct connection, middle position

D, d Main / direct connection, middle position

The drawing shows the change in dimension of the "locked center position (VM)" option compared to the basic variant. The middle position is locked and is actuated with the force of the main drive piston. Shock absorbers dampen the travel to the middle position and prevent overshooting.

Connections for fluid feed-through



A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

25 Fluid feed-through

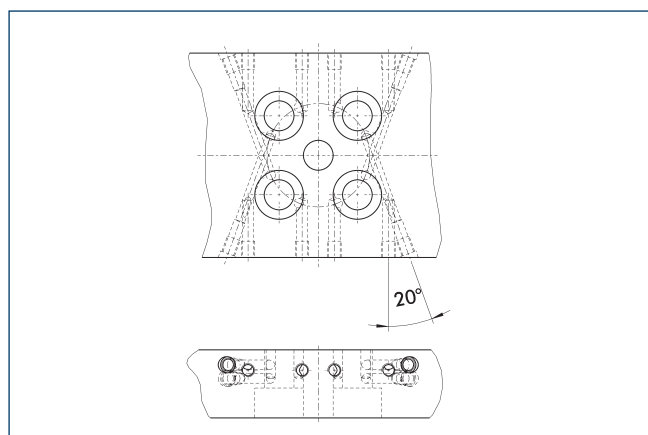
72 Fit for centering sleeves

80 Depth of the centering sleeve hole in the counter part

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

① View applicable only for versions without EDF!

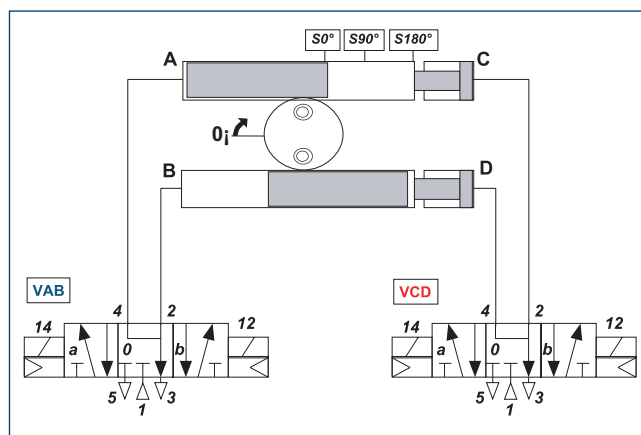
Adapter plate design



Suggested here is an adapter plate design which allows for all fluid feed-throughs to be accessed as easily as possible.

① View applicable only for versions without EDF!

Pneumatic diagram of SRU-plus-VM — vertical axis

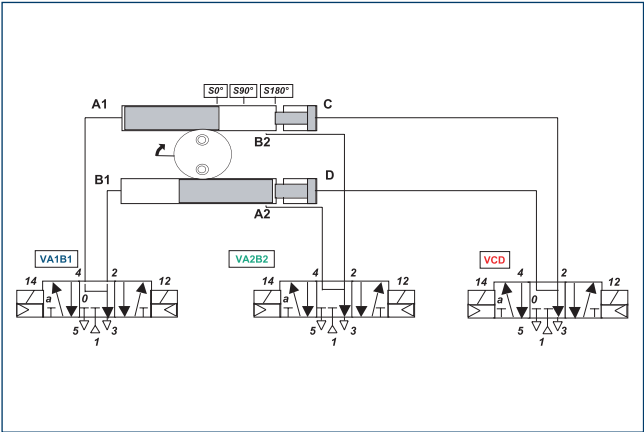


VM rotary actuators with a vertical rotary axis are generally actuated by two 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

SRU-plus-D 50

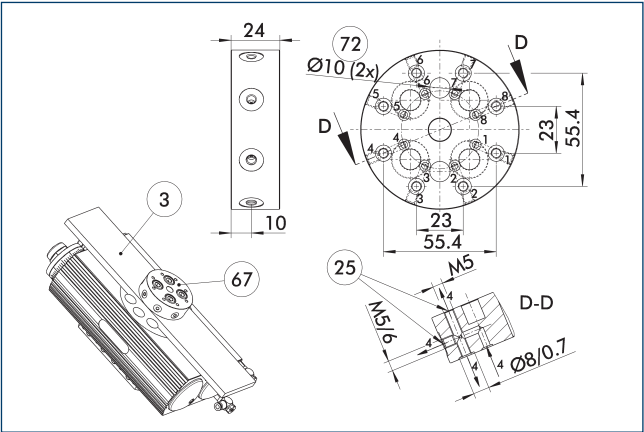
Universal swivel unit

Pneumatic diagram of SRU-plus-VM — horizontal axis



VM rotary actuators with a horizontal or non-vertical rotary axis must generally be actuated by three 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

Distributor for SRU-plus



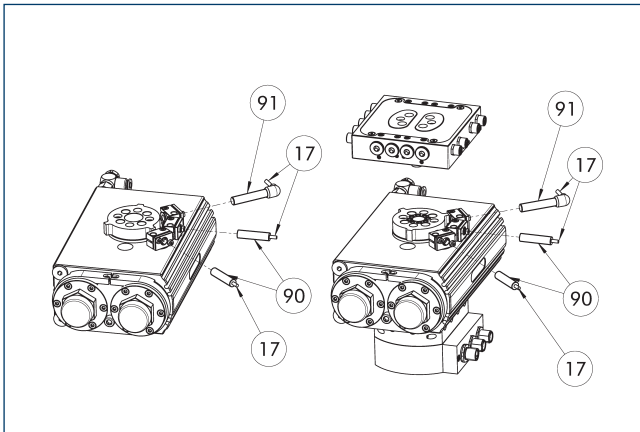
- ③ Adapter
- ②⑤ Fluid feed-through
- ⑥⑦ Distributor for media feed-through
- ⑦② Fit for centering sleeves

The distributor for SRU-plus 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. Due to the distributor, only a simple drilling pattern has to be drilled in the adapter plate located between the pinion and the distributor.

| Description | ID | |
|-------------------|---------|--|
| Distributor plate | | |
| V-SRU-plus 50/60 | 0358192 | |

① View applicable only for versions without EDF!

Inductive proximity switches



⑰ Cable outlet

⑨① Sensor IN..-SA

⑨② Sensor IN ...

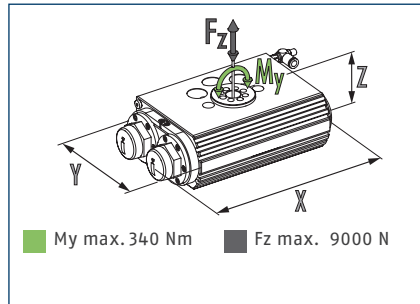
| Description | ID | Often combined |
|--|----------|----------------|
| Inductive proximity switch | | |
| IN 80-S-M12 | 0301578 | |
| IN 80-S-M8 | 0301478 | ● |
| IN-C 80-S-M8-PNP | 0301475 | |
| INK 80-S | 0301550 | |
| INK 80-SL | 0301579 | |
| Inductive proximity switch with lateral cable outlet | | |
| IN 80-S-M12-SA | 0301587 | |
| IN 80-S-M8-SA | 0301483 | ● |
| INK 80-S-SA | 0301566 | |
| Connection cables | | |
| KA BG08-L 3P-0300-PNP | 0301622 | ● |
| KA BG08-L 3P-0500-PNP | 0301623 | |
| KA BG12-L 3P-0500-PNP | 30016369 | |
| KA BW08-L 3P-0300-PNP | 0301594 | |
| KA BW08-L 3P-0500-PNP | 0301502 | |
| KA BW12-L 3P-0300-PNP | 0301503 | |
| KA BW12-L 3P-0500-PNP | 0301507 | |
| Clip for connector/socket | | |
| CLI-M12 | 0301464 | |
| CLI-M8 | 0301463 | |
| Cable extension | | |
| KV BG12-SG12 3P-0030-PNP | 0301999 | |
| KV BG12-SG12 3P-0060-PNP | 0301998 | |
| 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 | |
| Sensor distributor | | |
| V2-M12 | 0301776 | ● |
| V2-M8 | 0301775 | ● |
| V4-M8 | 0301746 | |
| V8-M8 | 0301751 | |

- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

SRU-plus-D 60

Universal swivel unit

Dimensions and maximum loads



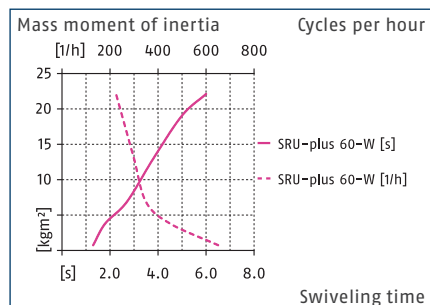
① The indicated moments and forces are static values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

Technical data SRU-plus-D without center position

| Designation (soft damping) | | SRU-plus-D 60-W-90-3-AS | SRU-plus-D 60-W-180-3-AS |
|---|-------|--------------------------------|---------------------------------|
| ID | | 37362800 | 37362820 |
| End position damping | | hydr. damper | hydr. damper |
| Angle of rotation | [°] | 90.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 72.0 | 72.0 |
| Number of intermediate positions | | none | none |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 12.8 | 12.8 |
| Fluid consumption (2x nom. angle) | [cm³] | 656.0 | 1120.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/8 |
| Diameter of connecting hose | | 8 x 6 x 1 | 8 x 6 x 1 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 60-W-90-3-8-AS | SRU-plus-D 60-W-180-3-8-AS |
| ID | | 37362802 | 37362822 |
| Torque | [Nm] | 70.0 | 70.0 |
| Weight | [kg] | 13 | 13 |
| No. of fluid feed-throughs | | 8 | 8 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D1 60-W-90-3-8-M12-AS | SRU-plus-D1 60-W-180-3-8-M12-AS |
| ID | | 1001718 | 1001719 |
| Weight | [kg] | 14.95 | 14.95 |

① All units are also available in an FKM version. Please contact us for details.

Max. permissible inertia J*



* The diagrams are valid for basic units and for applications with a vertical swivel axis as well as for absolutely centric loads with a horizontal swivel axis and with an operating pressure of 6 bar. The swiveling times per throttling have to be observed, otherwise the life time may reduce. We will be happy to help you designing other applications. In addition, the SCHUNK Swiveling sizing assistant is available online.

Technical data SRU-plus-D with center position

| Designation (soft damping) | | SRU-plus-D 60-W-180-3-M-AS | SRU-plus-D 60-W-180-3-VM-AS |
|---|-------|-----------------------------------|------------------------------------|
| ID | | 37362830 | 37362840 |
| End position damping | | hydr. damper | hydr. damper |
| Angle of rotation | [°] | 180.0 | 180.0 |
| End position adjustability | [°] | 3.0 | 3.0 |
| Torque | [Nm] | 72.0 | 72.0 |
| Number of intermediate positions | | 1 x M (pneumatic) | 1 x VM (locked) |
| Adjustability of middle position | [°] | 3.0 | 3.0 |
| IP protection class | | 67 | 67 |
| Weight | [kg] | 16.8 | 17.8 |
| Fluid consumption (2x nom. angle) | [cm³] | 1120.0 | 1120.0 |
| Min./nom./max. operating pressure | [bar] | 4/6/8 | 4/6/6.5 |
| Diameter of connecting hose | | 8 x 6 x 1 | 8 x 6 x 1 |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Repeat accuracy | [°] | 0.05 | 0.05 |
| Options with fluid feed-through | | | |
| Designation (soft damping) | | SRU-plus-D 60-W-180-3-M-8-AS | SRU-plus-D 60-W-180-3-VM-8-AS |
| ID | | 37362832 | 37362842 |
| Torque | [Nm] | 70.0 | 70.0 |
| Weight | [kg] | 17 | 18 |
| No. of fluid feed-throughs | | 8 | 8 |
| Options with fluid and electric feed-through | | | |
| Designation (soft damping) | | SRU-plus-D1 60-W-180-3-M-8-M12-AS | SRU-plus-D1 60-W-180-3-VM-8-M12-AS |
| ID | | 1001722 | 1369416 |
| Weight | [kg] | 18.95 | 19.95 |

① All units are also available in an FKM version. Please contact us for details.

Universal swivel unit

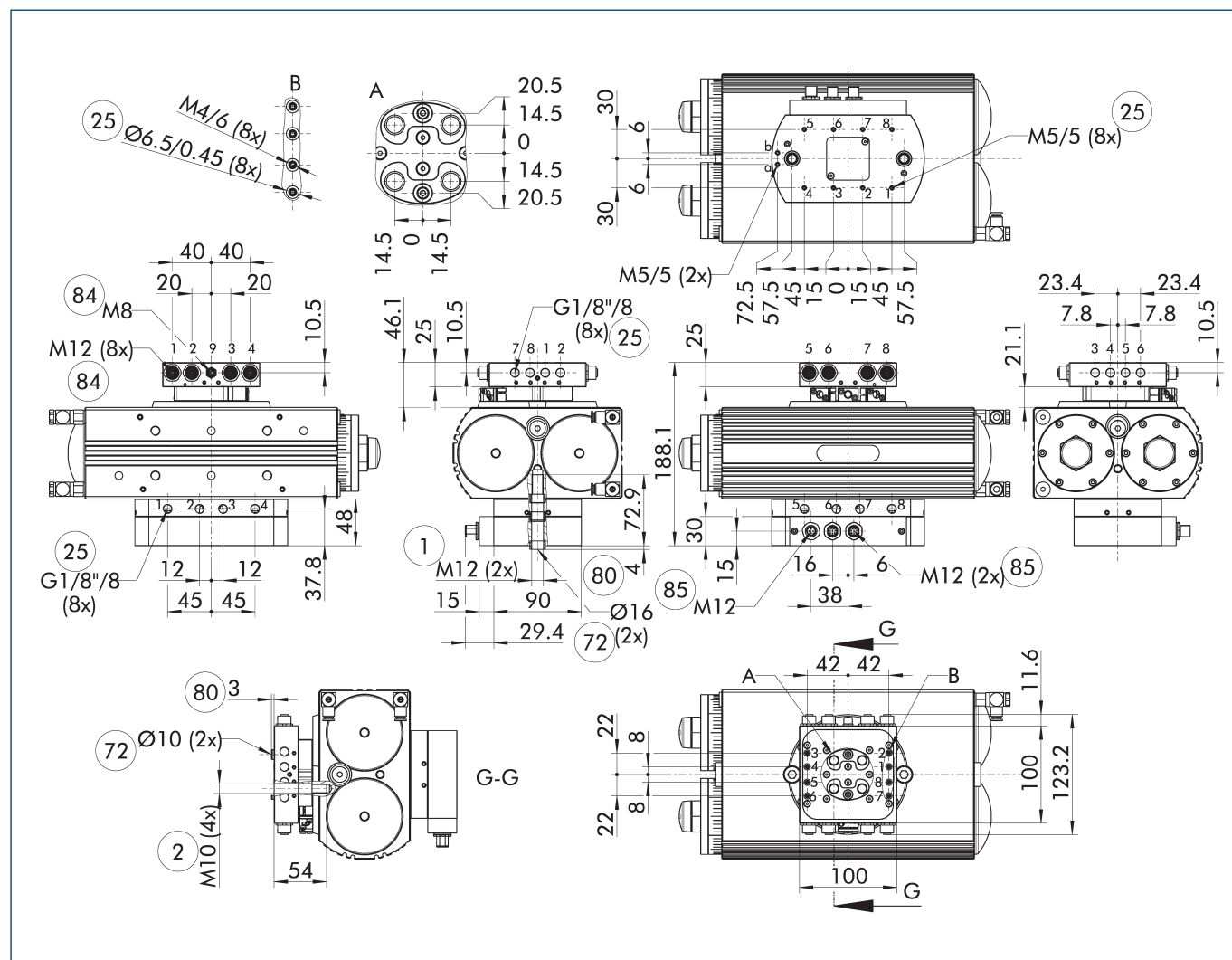
Technical drawing of a 100W, 24VDC brushless motor, showing three views: front, side, and top.

Front View (Top Left): Shows the motor's length and mounting features. Key dimensions include a total length of 320.9 mm, a mounting flange diameter of $\varnothing 10$ (2x), and a base diameter of $\varnothing 16$ (2x). Mounting holes are specified as M12 (2x). The motor has a total width of 260 mm and a mounting flange diameter of $\varnothing 24$.

Side View (Bottom Left): Shows the motor's profile and mounting flange. Key dimensions include a total length of 320.9 mm, a mounting flange diameter of $\varnothing 10$ (2x), and a base diameter of $\varnothing 16$ (2x). The motor has a total width of 260 mm and a mounting flange diameter of $\varnothing 24$.

Top View (Right): Shows the motor's mounting flange and base. Key dimensions include a total length of 320.9 mm, a mounting flange diameter of $\varnothing 10$ (2x), and a base diameter of $\varnothing 16$ (2x). The motor has a total width of 260 mm and a mounting flange diameter of $\varnothing 24$.

Main view for SRU-plus-D with EDF



① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

① Connection swivel unit

② Attachment connection

②⑤ Fluid feed-through

⑦② Fit for centering sleeves

⑧① Depth of the centering sleeve hole in the counter part

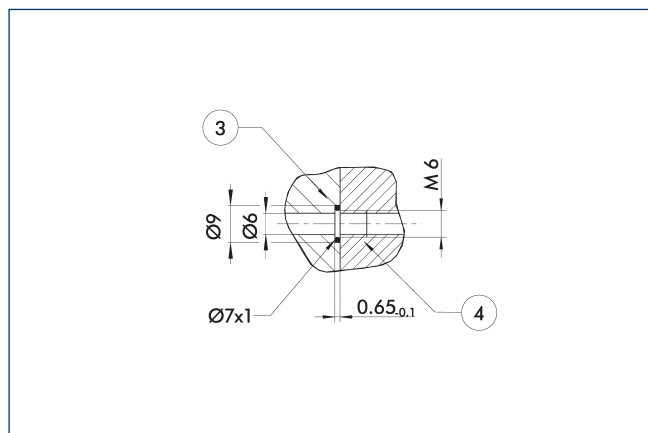
⑧③ Input for 3 pole sensor feed-through

⑧⑤ Sensor feed-through output

SRU-plus-D 60

Universal swivel unit

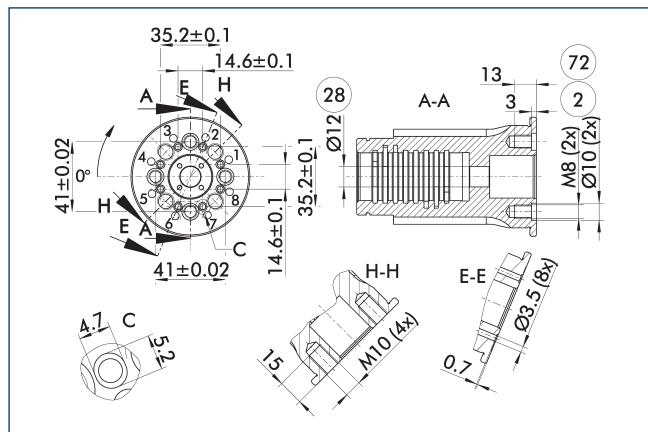
Hose-free direct connection M6



- (3) Adapter (4) Rotary unit

The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Pinion with fluid feed-through

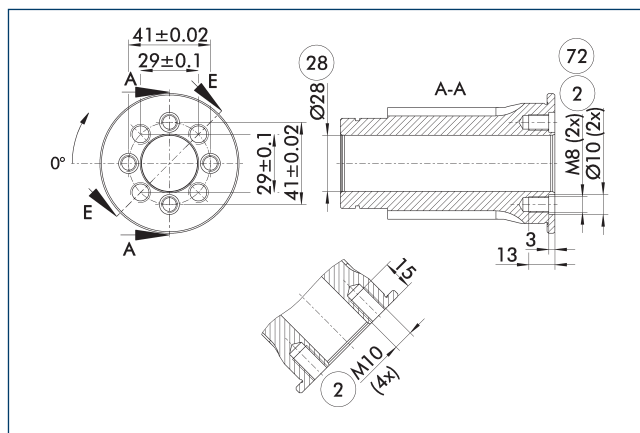


- ② Attachment connection ⑦② Fit for centering sleeves
②⑧ Through-hole

Pinion screw connection diagram if the option "fluid feed-through" was chosen. The preferred drilling pattern is two screws and two screws with a centering sleeve.

 View applicable only for versions without EDF!

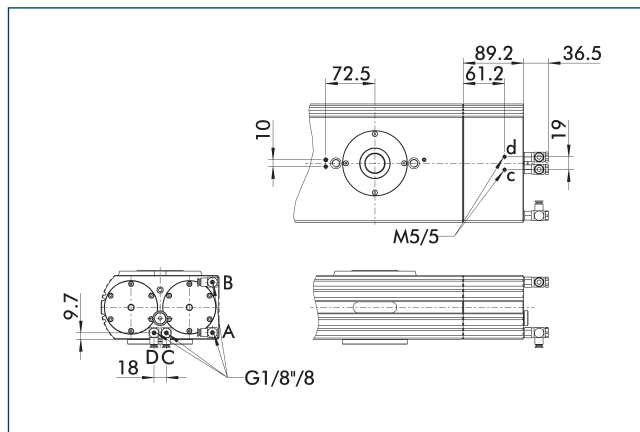
Pinion without fluid feed-through



- ② Attachment connection ⑦② Fit for centering sleeves
②⑧ Through-hole

Mounting pattern for fastening the rotating load to the pinion. The "4x large threads for 4 screws and 2 counter bores for centering sleeves" option is preferable to the "4x small threads for 2 screws and 2 shoulder bots (in the deeper counter bores)" option.

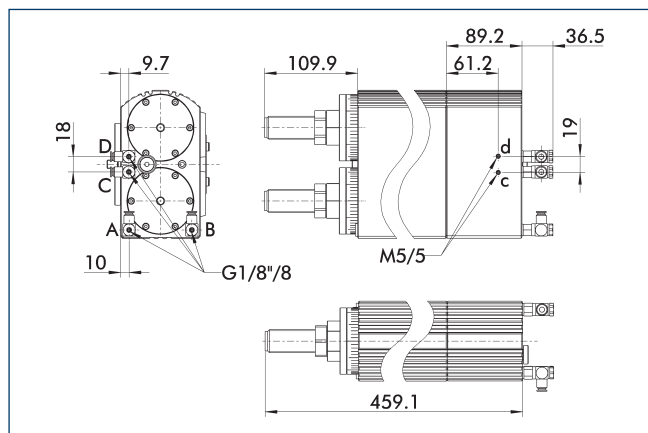
Pneumatic middle position (M)



- | | |
|---|---|
| A, a Main / direct connection, rotary actuator rotates clockwise | C, c Main / direct connection, middle position |
| B, b Main / direct connection, rotary actuator rotates counterclockwise | D, d Main / direct connection, middle position |

The drawing shows the change in dimension of the "pneumatic center position (M)" option compared to the basic variant. Heavy attachments may swing before they reach the final position. The locked middle position (VM) can resolve this.

Locked middle position (VM)



A, a Main / direct connection, rotary actuator rotates clockwise

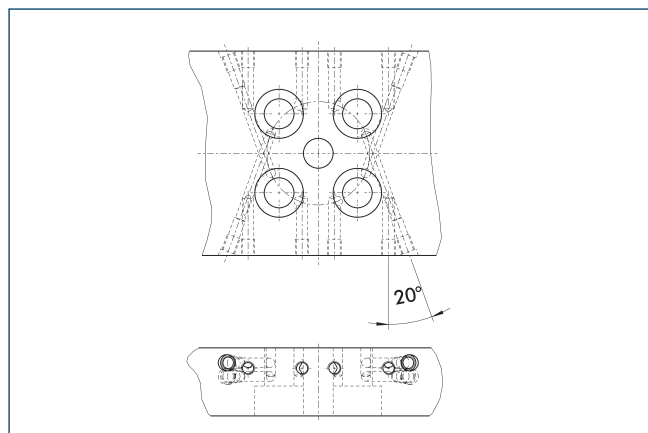
B, b Main / direct connection, rotary actuator rotates counterclockwise

C, c Main / direct connection, middle position

D, d Main / direct connection, middle position

The drawing shows the change in dimension of the "locked center position (VM)" option compared to the basic variant. The middle position is locked and is actuated with the force of the main drive piston. Shock absorbers dampen the travel to the middle position and prevent overshooting.

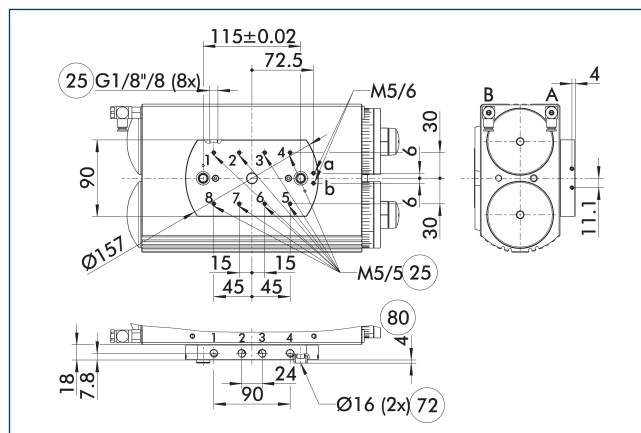
Adapter plate design



Suggested here is an adapter plate design which allows for all fluid feed-throughs to be accessed as easily as possible.

① View applicable only for versions without EDF!

Connections for fluid feed-through



A, a Main / direct connection, rotary actuator rotates clockwise

B, b Main / direct connection, rotary actuator rotates counterclockwise

25 Fluid feed-through

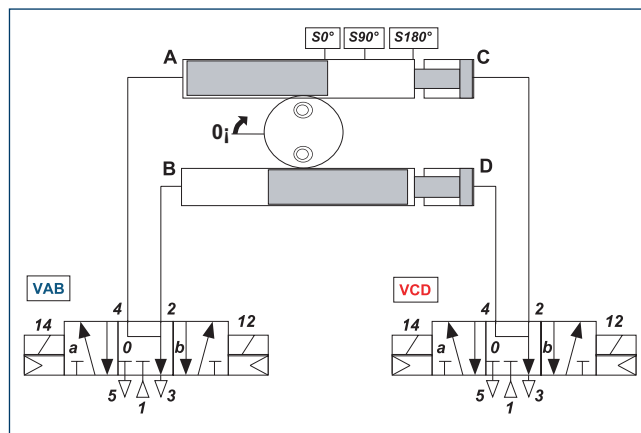
72 Fit for centering sleeves

80 Depth of the centering sleeve hole in the counter part

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

① View applicable only for versions without EDF!

Pneumatic diagram of SRU-plus-VM — vertical axis

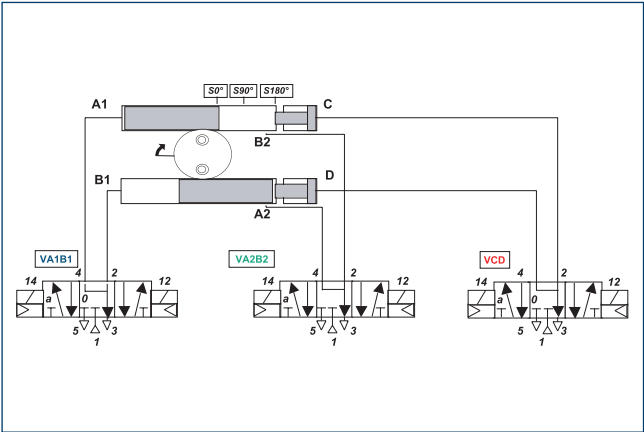


VM rotary actuators with a vertical rotary axis are generally actuated by two 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

SRU-plus-D 60

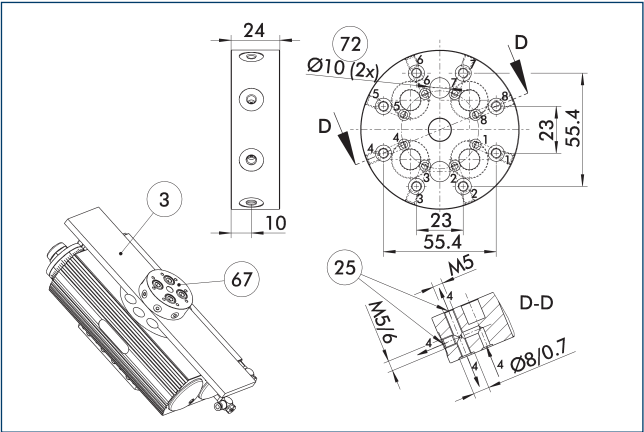
Universal swivel unit

Pneumatic diagram of SRU-plus-VM — horizontal axis



VM rotary actuators with a horizontal or non-vertical rotary axis must generally be actuated by three 5/3 directional control valves with an exhausted middle position. To prevent damage, it is essential to pay attention to the actuation sequence indicated in the operating manual.

Distributor for SRU-plus



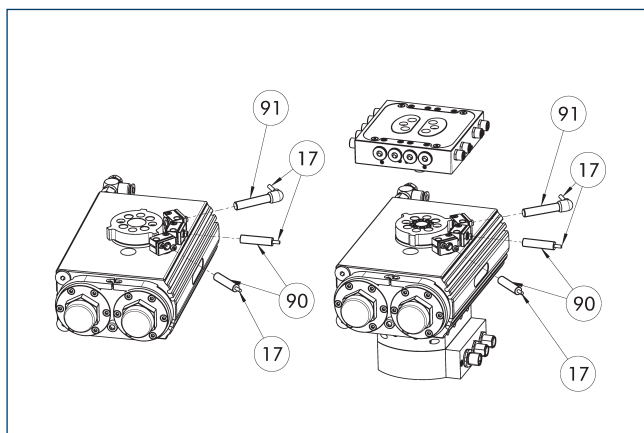
- 3 Adapter
- 67 Distributor for media feed-through
- 25 Fluid feed-through
- 72 Fit for centering sleeves

The distributor for SRU-plus 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. Due to the distributor, only a simple drilling pattern has to be drilled in the adapter plate located between the pinion and the distributor.

| Description | ID | |
|-------------------|---------|--|
| Distributor plate | | |
| V-SRU-plus 50/60 | 0358192 | |

① View applicable only for versions without EDF!

Inductive proximity switches



17 Cable outlet

91 Sensor IN...-SA

90 Sensor IN ...

| Description | ID | Often combined |
|--|----------|----------------|
| Inductive proximity switch | | |
| IN 80-S-M12 | 0301578 | |
| IN 80-S-M8 | 0301478 | • |
| IN-C 80-S-M8-PNP | 0301475 | |
| INK 80-S | 0301550 | |
| INK 80-SL | 0301579 | |
| Inductive proximity switch with lateral cable outlet | | |
| IN 80-S-M12-SA | 0301587 | |
| IN 80-S-M8-SA | 0301483 | • |
| INK 80-S-SA | 0301566 | |
| Connection cables | | |
| KA BG08-L 3P-0300-PNP | 0301622 | • |
| KA BG08-L 3P-0500-PNP | 0301623 | |
| KA BG12-L 3P-0500-PNP | 30016369 | |
| KA BW08-L 3P-0300-PNP | 0301594 | |
| KA BW08-L 3P-0500-PNP | 0301502 | |
| KA BW12-L 3P-0300-PNP | 0301503 | |
| KA BW12-L 3P-0500-PNP | 0301507 | |
| Clip for connector/socket | | |
| CLI-M12 | 0301464 | |
| CLI-M8 | 0301463 | |
| Cable extension | | |
| KV BG12-SG12 3P-0030-PNP | 0301999 | |
| KV BG12-SG12 3P-0060-PNP | 0301998 | |
| 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 | |
| Sensor distributor | | |
| V2-M12 | 0301776 | • |
| V2-M8 | 0301775 | • |
| V4-M8 | 0301746 | |
| V8-M8 | 0301751 | |

- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.



SCHUNK GmbH & Co. KG
Spann- und Greiftechnik

Bahnhofstr. 106 - 134
D-74348 Lauffen/Neckar
Tel. +49-7133-103-0
Fax +49-7133-103-2399
info@de.schunk.com
schunk.com

Folgen Sie uns | *Follow us*

