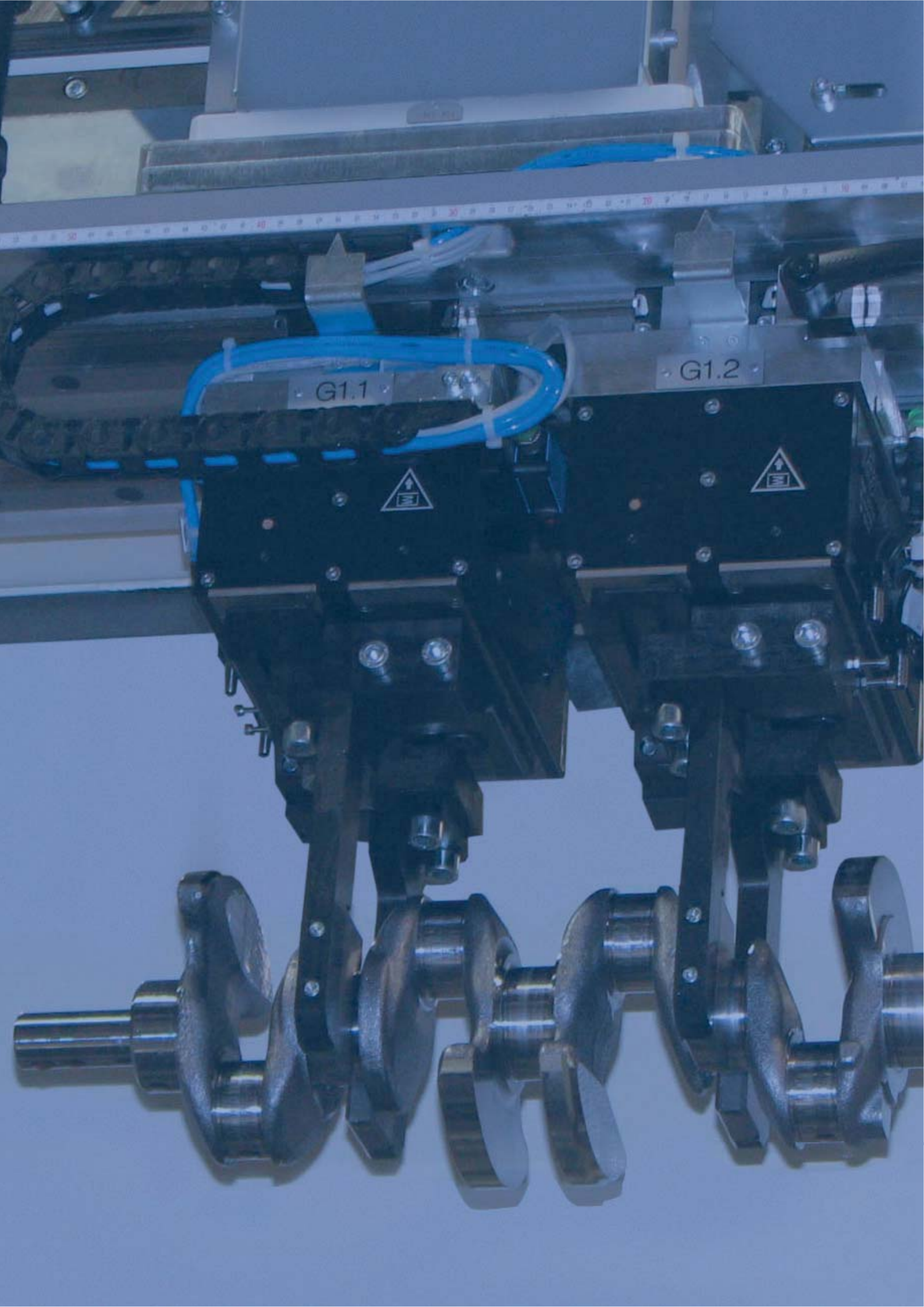

# AUTOMATION TECHNOLOGY

EDITION 8

RÖHM
driven by technology


G1.1
G1.2

## INDIVIDUAL SINGLE PIECE WITH OPTIMIZED DESIGN

With the help of a 3D model of the workpiece, the synthetic RRMG gripper is individually and perfectly adapted to the respective workpiece. Special jaws with free-form surfaces allow the secure gripping and clamping of every sensitive workpiece with complex geometries.

The particularly robust and resistant design of the new synthetic RRMG gripper makes a 30 % higher clamping force possible.

**RRMG** — **- 2**

**R**ÖHM
**R**apid
**M**anufacturing
**G**ripper

**Sizes**
2-3

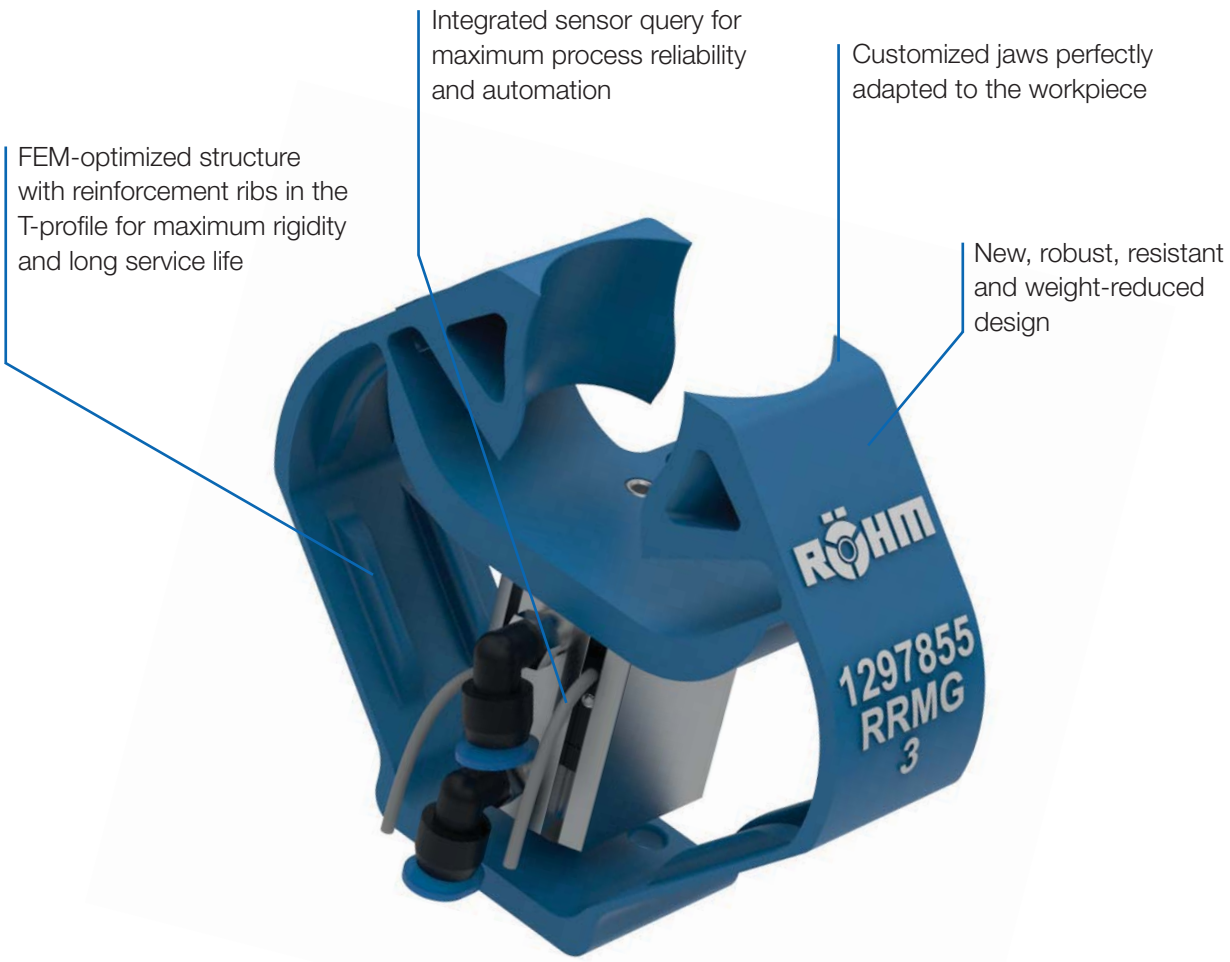
Video Synthetic gripper

# SYNTHETIC GRIPPER

Whether round material, prismatic workpieces or free-form surfaces, the synthetic RRMG gripper from RÖHM is individually adapted to the workpiece and produced. Only a 3D model of the workpiece is required, and RÖHM will produce the individual synthetic RRMG gripper based on that. This customer-specific solution is therefore perfect for gripping and clamping sensitive workpieces with complex geometries.

## ADVANTAGES AT A GLANCE

- Component-specific individual piece for sensitive workpieces with complex geometries
- FEM-optimized design with 30 % higher clamping force for a greater range of use
- Up to 16 million gripper cycles without required maintenance or signs of wear



# RRMG

## APPLICATION

Synthetic gripper for light, sensitive workpieces with complex geometries.

## TYPE

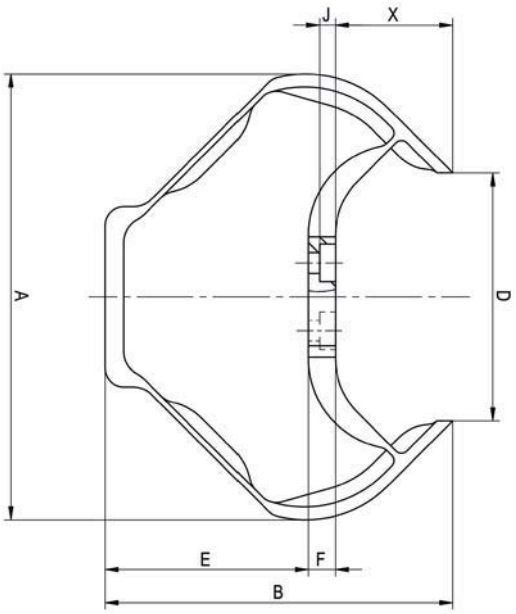
Synthetic gripper RRMG - customized and perfectly adapted jaws on the form of the workpiece.

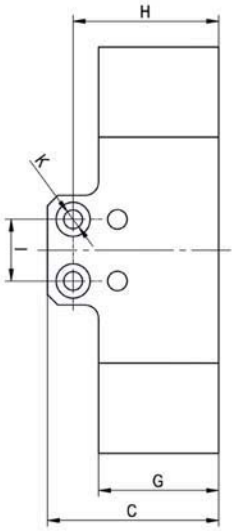
## CUSTOMER BENEFITS

- Part specific unique gripper for sensitive workpieces with complex geometries
- FEM optimized structure with 30 % higher clamping force
- Customized and perfectly adapted to the workpiece using the 3D-model
- Application specific design of the flange for maximum flexibility
- Up to 16 million gripping cycles without maintenance or wear and tear

## TECHNICAL FEATURES

- Synthetically built by selective laser sinthering for short delivery times
- Especially robust and durable material polyamid with FEM-optimized structure
- Optional position monitoring by installable standard sensors
- Position monitoring by magnetic sensors possible
- Further designs and sizes on request (e.g. double gripper, internal gripper, etc.)






**Synthetic gripper RRMG**

| | Size | Gripping force* N | Stroke* mm | Clamping point X | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | K Ø mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **RRMG** | 2 | 80 | 2,6 | 23,2 | 92 | 75,8 | 37 | 50 | 47 | 5,5 | 25 | 31 | 13 | 3,4 | 4,5 |
| **RRMG** | 3 | 152 | 4,3 | 31,2 | 118,6 | 92,4 | 50 | 66 | 54 | 7,2 | 35 | 42,5 | 18 | 4,2 | 5,5 |

* At clamping point X

# RRMG-MRK

## APPLICATION

Additive manufactured gripper with HRC-function for customer-specific and complex workpiece geometries. Rounding of edges and corners as well as the robust and durable design ensure protection of the worker from injury in accordance with the latest ISO 10218 and ISO/TS15066 standards by additional flexibility.

## TYPE

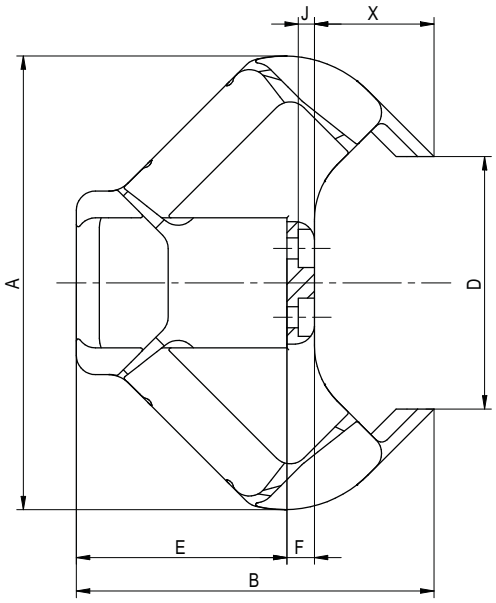
Additive manufactured gripper with customized and perfectly adapted jaws on the form of the workpiece.

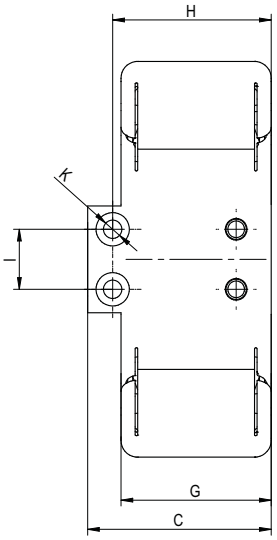
## CUSTOMER BENEFITS

- Accurate gripping of all conceivable workpiece shapes through form fitting adaption of the gripper fingers by additive manufacturing
- Up to 120 N of gripping force, depending on the contour and surface of the workpiece
- Maintenance-free for up to 10 million gripping cycles – with up to 100 gripping cycles per minute
- Solid, durable design with extremely low net weight (300 g)

## TECHNICAL FEATURES

- The clamping position is comfortably reached by integrated sensors
- Gripping position can be changed by 90° with the flange
- Synthetically built by selective laser sinthering for short delivery times
- Especially robust and durable material polyamid with FEM-optimized structure
- Optional position monitoring by installable standard sensors
- Position monitoring by magnetic sensors possible
- Further designs and sizes on request (e.g. double gripper, internal gripper, etc.)




**Synthetic gripper RRMG-MRK**

| | Gripping force* N | Stroke* mm | Clamping point X | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | K Ø mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **RRMG-MRK** | 120** | 4,3 | 31,2 | 118,6 | 93,4 | 55 | 66 | 55 | 7,2 | 45 | 47,5 | 18 | 4,2 | 5,5 |

* At clamping point X

** Max. clamping force must be controlled by air pressure

Exclusive distribution through KUKA Systems GmbH

# Operation guide

**RSP-Flex - basic unit***

- With through hole

**RSP-Flex - basic unit with fluid feedthrough***

- With fluid feedthrough and through hole
- -F4 4-way fluid feedthrough (RSP32-Flex)
- -F8 8-way fluid feedthrough (RSP42-Flex / RSP52-Flex)

**RSP-Flex - basic unit with fluid and cable feedthrough***

- With fluid feedthrough, with cable feedthrough
- -F4 + -KD8 8-way cable feedthrough (RSP32-Flex)
- -F8 + -KD8 8-way cable feedthrough (RSP42-Flex / RSP52-Flex)

**RSP-Flex - basic unit with fluid and cable feedthrough and inductive attachment kit***

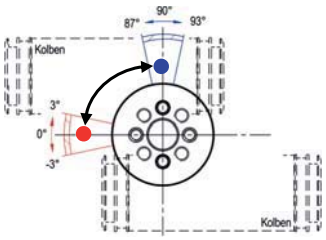
- With fluid feedthrough, with cable feedthrough, with inductive attachment kit for monitoring the swivel position with proximity switches
- -F4 + -KD8 + -AS inductive attachment kit (RSP32-Flex)
  -F8 + -KD8 + -AS inductive attachment kit (RSP42-Flex / RSP52-Flex)

* The monitoring of the swivel position by up to 6 magnetic sensors is recommended for all swivel units

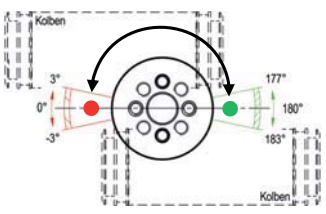


## SWIVEL ANGLE AND END POSITION ADJUSTMENT

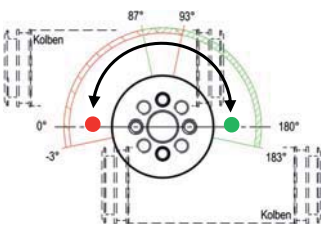
**RSP-90-J3**
Pivot angle 90°
End position ± 3°



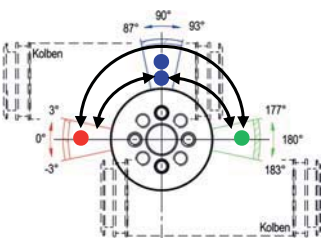

**RSP-180-J3**
Pivot angle 180°
End position ± 3°




**RSP-180-J90**
Pivot angle 180°
End position 90 ± 3°



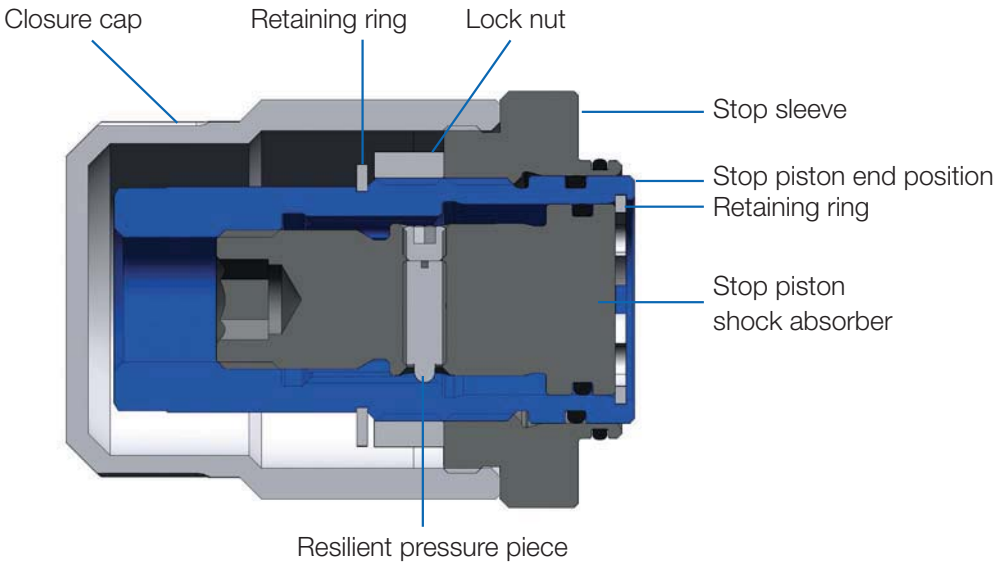

**RSP-180-J3-MV**
Pivot angle 90°-180°- 90°
End position ± 3°




with mechanically locked middle position

# Operation guide

## RSP-FLEX END POSITION ADJUSTMENT




- No unintentional readjustment of the end position thanks to the use of the lock nut with fine thread
- Stepless adjustment of the end angle
- End position is not maladjusted when the shock absorber is adjusted
- Stop piston shock absorber is locked through resilient pressure piece

## THE DAMPER SETTING MAKES THE DIFFERENCE

**Simple load adaptation**
Flexible and easy damper adjustment from outside using a wrench. It is not necessary to exchange or disassemble the swivel unit. Result: Can be quickly and easily integrated in the system.

**The trick with the click**
The shock absorber hardness can be uniquely documented. Thanks to the snap-in adjustability, the system-specific setting can be quickly and reliably reproduced.