

Handling
technology 1

THE KNOW-HOW FACTORY

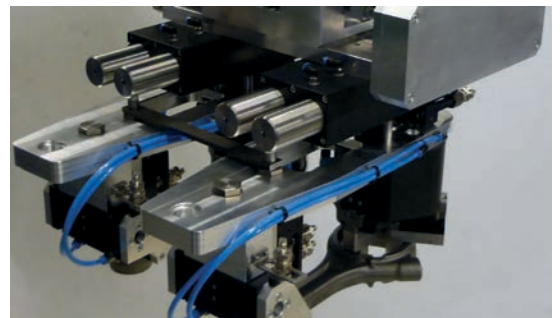
ZIMMER GROUP COMMITTED TO OUR CUSTOMERS

WE HAVE SUCCEEDED FOR YEARS BY OFFERING OUR CUSTOMERS INNOVATIVE AND INDIVIDUALIZED SOLUTIONS. ZIMMER HAS GROWN CONTINUOUSLY AND TODAY WE HAVE REACHED A NEW MILESTONE: THE ESTABLISHMENT OF THE KNOW-HOW FACTORY. IS THERE A SECRET TO OUR SUCCESS?

Foundation. Excellent products and services have always been the foundation of our company's growth. Zimmer is a source of ingenious solutions and important technical innovations. This is why customers with high expectations for technology frequently find their way to us. When things get tricky, Zimmer Group is in its best form.

Style. We have an interdisciplinary approach to everything we do, resulting in refined process solutions in six technology fields. This applies not just to development but to production. Zimmer Group serves all industries and stands ready to resolve even the most unique and highly individualized problems. Worldwide.

Motivation. Customer orientation is perhaps the most important factor of our success. We are a service provider in the complete sense of the word. With Zimmer Group, our customers have a single, centralized contact for all of their needs. We approach each customer's situation with a high level of competence and a broad range of possible solutions.



TECHNOLOGIES



HANDLING TECHNOLOGY

MORE THAN 30 YEARS OF EXPERIENCE AND INDUSTRY KNOWLEDGE: OUR PNEUMATIC, HYDRAULIC AND ELECTRICAL HANDLING COMPONENTS AND SYSTEMS ARE GLOBAL LEADERS.

Components. More than 2,000 standardized grippers, swivel units, robotic accessories and much more. We offer a complete selection of technologically superior products that are ready for rapid delivery.

Semi-standard. Our modular approach to design enables custom configurations and high rates of innovation for process automation.



DAMPING TECHNOLOGY

INDUSTRIAL DAMPING TECHNOLOGY AND SOFT CLOSE PRODUCTS EXEMPLIFY THE INNOVATION AND PIONEERING SPIRIT OF THE KNOW-HOW FACTORY.

Industrial damping technology.

Whether standard or customized solutions, our products stand for the highest cycle rates and maximum energy absorption with minimal space requirements.

Soft Close. Development and mass production of pneumatic and fluid dampers with extraordinary quality and rapid delivery.

OEM and direct. Whether they need components, returning mechanisms or complete production lines – we are the trusted partner of many prestigious customers.



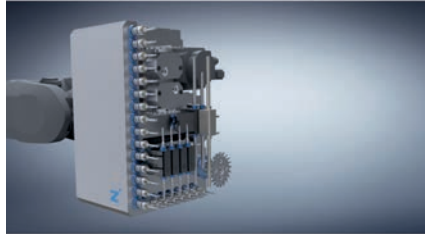
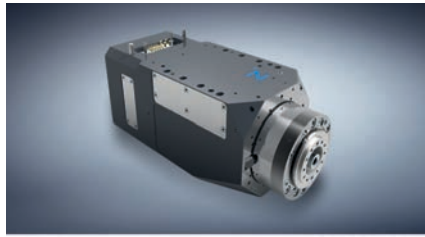
LINEAR TECHNOLOGY

WE DEVELOP LINEAR COMPONENTS AND SYSTEMS THAT ARE INDIVIDUALLY ADAPTED TO OUR CUSTOMERS' NEEDS.

Clamping and braking elements.

We offer you more than 4,000 types for profiled and round rails as well as for a variety of guide systems from all manufacturers. It makes no difference whether you prefer manual, pneumatic, electric or hydraulic drive.

Flexibility. Our clamping and braking elements ensure that movable components such as Z-axes or machining tables maintain a fixed position and that machines and systems come to a stop as quickly as possible in an emergency.



PROCESS TECHNOLOGY

MAXIMUM EFFICIENCY IS ESSENTIAL FOR SYSTEMS AND COMPONENTS USED IN PROCESS TECHNOLOGY. HIGH-LEVEL CUSTOM SOLUTIONS ARE OUR TRADEMARK.

A rich reservoir of experience. Our know-how ranges from the development of materials, processes and tools through product design to production of series products.

Deep production capabilities. The Zimmer Group pairs these capabilities with flexibility, quality and precision, even when making custom products.

Series production. We manufacture demanding products out of metal (MIM), elastomers and plastics with flexibility and speed.

MACHINE TECHNOLOGY

ZIMMER GROUP DEVELOPS INNOVATIVE METAL, WOOD AND COMPOSITE MATERIAL PROCESSING TOOL SYSTEMS FOR ALL INDUSTRIES. NUMEROUS CUSTOMERS CHOOSE US AS THEIR SYSTEMS AND INNOVATION PARTNER.

Knowledge and experience. Industry knowledge and a decades-long development partnership in exchangeable assemblies, tool interfaces and systems make us bound for new challenges around the world.

Components. We deliver numerous standard components from stock and develop innovative, customized systems for OEM and end customers – far beyond the metal and wood processing industries.

Variety. Whether you have machining centers, lathes or flexible production cells, the power tools, holders, assemblies and drilling heads of Zimmer Group are ready for action.

SYSTEM TECHNOLOGY






















ZIMMER GROUP IS ONE OF THE LEADING SPECIALISTS IN THE DEVELOPMENT OF CUSTOMIZED SYSTEM SOLUTIONS WORLDWIDE.

Customized. A team made up of more than 20 experienced designers and project engineers develop and produce customized solutions for special tasks in close collaboration with end customers and system integrators. It doesn't matter if it is a simple gripper and handling solution or a complex system solution.

Solutions. These system solutions are used in many industries, from mechanical engineering to the automotive and supplier industries to plastics engineering and consumer goods industries, all the way to foundries. The Know-how Factory helps countless companies to thrive competitively by increasing automation efficiency.

HANDLING TECHNOLOGY 1

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	2-JAW PARALLEL GRIPPERS WITH LONG STROKE	
	PNEUMATIC	
	Series MGH8000	86
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	Series GEH8000	126
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	Series GD300	152
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	3-JAW CONCENTRIC GRIPPERS WITH LONG STROKE	
	PNEUMATIC	
	Series GD500	186

2-JAW ANGULAR GRIPPERS

PNEUMATIC

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	Series GZ1000	212
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2-JAW RADIAL GRIPPER

PNEUMATIC

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GRIPPERS FOR SPECIFIC TASKS

PNEUMATIC

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	Series GS	246
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	Series GSI	258
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	Series LGS	264
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	Series LGG	268
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ELECTRICAL

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	Series HEM1000	280
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2 ROTARY GRIPPERS 282 - 287



























PNEUMATIC

















	Series DGK	284
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	Series DGP400	286
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HANDLING TECHNOLOGY 1

OVERVIEW OF SERIES

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GRIPPERS

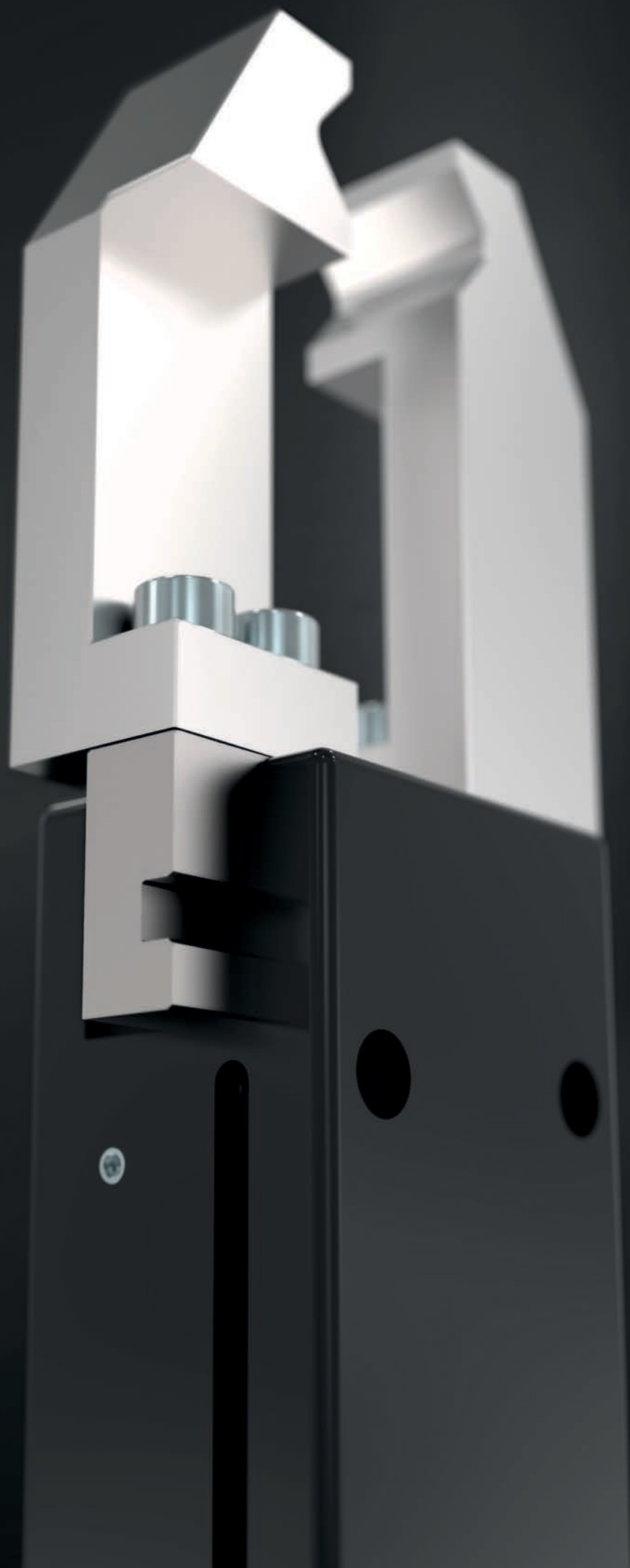
THE SERIES AT A GLANCE

1

Products

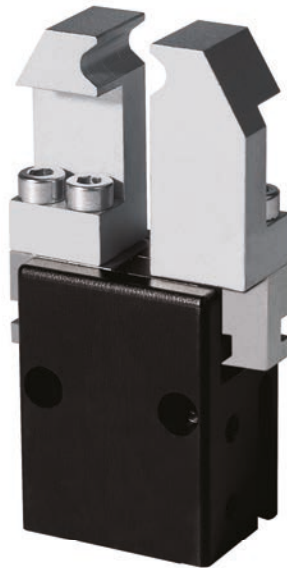
	Gripping force [N]	Stroke per jaw [mm]	Number of installation sizes
2-jaw parallel grippers pneumatic Page 12			
Series MGP800	6 400	1-12	● ● ● ● ● ● ● ●
Series GP	4 5250	3-13	● ● ● ● ● ● ●
Series GP400	85 19275	3-30	● ● ● ● ● ● ● ● ● ●
Series GP200	170 4500	6-40	● ● ● ●
2-jaw parallel grippers electric Page 78			
Series GEP9000	11-50	2-4	● ●
Series GEP1400	140-350	2-6	● ●
2-Jaw Parallel Grippers with Long Stroke pneumatic Page 84			
Series MGH8000	60 910	10 100	● ● ● ●
Series GPH8000	2000	62,5 150	●
2-Jaw Parallel Grippers with Long Stroke electric Page 124			
Series GEH8000	~200 3200	0 60	●
3-jaw concentric grippers pneumatic Page 128			
Series MGD800	30 1420	1-12	● ● ● ● ● ● ● ●
Series GD300	200 34700	3-30	● ● ● ● ● ● ● ● ● ●
Series GD	24 530	11-33	● ● ●
3-jaw concentric grippers electric Page 180			
Series GED1300	140-350	2-6	● ●
3-Jaw Concentric Grippers with Long Stroke pneumatic Page 184			
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	Gripping force [N]	Stroke per jaw [°]	Number of installation sizes
2-Jaw Angular Grippers pneumatic Page 188			
Series MGW800	5 325	37,5	● ● ● ● ● ● ● ●
Series GZ1000	62-315	8-10	● ● ●
2-jaw radial gripper pneumatic Page 214			
Series GK	70 4250	0 90	● ● ● ● ● ● ●
Series GG4000	430-4000	20 90	● ● ● ● ● ● ●

Control			Position sensing			Options					Safety characteristics			Maintenance
IO-Link	Digital I/O	Multibus	Inductive sensor	Magnetic field sensor	Integrated sensing	Temperature-resistant	High-strength S	Protected against corrosion	Purged air	IP class	Spring closing C	Spring opening O	Self locking mechanism	Maintenance-free cycles (max.)
				•						40	•			10 million
			•				•			30	•			10 million
			•	•			•		•	40	•	•		10 million
			•	•			•		•	40	•			10 million
	•				•					40	•	•		30 million
	•									52				5 million
			•	•						54				10 million
			•							54				5 million
		•			•					54			•	10 million
				•						40	•			10 million
			•	•			•		•	40	•	•		10 million
			•							40				10 million
	•									40				5 million
			•							40				10 million
				•						30	•			10 million
			•							30				2 million
				•						20	•		•	10 million
			•	•			•		•	64	•			10 million



2-JAW PARALLEL GRIPPERS

OVERVIEW OF SERIES



PNEUMATIC

	Series MGP800	14
	Series GP	36
	Series GP400	50
	Series GP200	76

2-JAW PARALLEL GRIPPERS

SERIES MGP800





▶ PRODUCT ADVANTAGES



“The powerful”

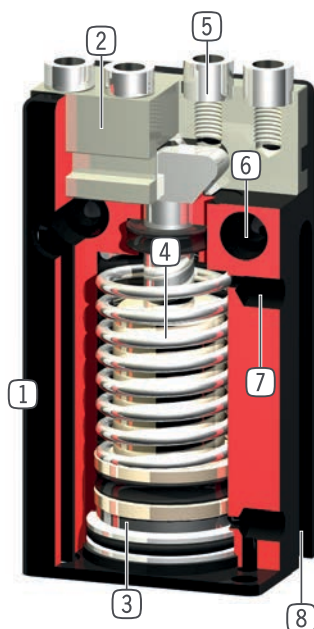
- ▶ **Over 40% more powerful than the benchmark**
Optimisation of weight and force reduces your application costs since all components can have a smaller scale
- ▶ **Gripper jaws up to 50% longer than the benchmark**
The highest force and torque measurement enables flexible use for maximum dynamics
- ▶ **Failure-free continuous operation**
Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free cycles

▶ SERIES CHARACTERISTICS

Installation size	Version	
MGP8XX	N	NC
 Spring closing C		●
 10 million maintenance-free cycles (max.)	●	●
 Magnetic field sensor	●	●
 IP40	●	●



BENEFITS IN DETAIL



- ① **Robust, lightweight housing**
- Hard-coated aluminum alloy
- ② **Gripper jaw**
- individual gripper finger mounting
- ③ **Position sensing**
- permanent magnet for direct monitoring of piston movement
- ④ **Integrated gripping force safety device**
- spring integrated into cylinder as energy storage (from size 803 upwards)
- ⑤ **Removable centering sleeves**
- quick and economical positioning of the gripper fingers
- ⑥ **Mounting and positioning**
- mounting possible from several sides for versatile positioning
- ⑦ **Energy supply**
- possible from several sides
- ⑧ **Sensing slot**
- mounting and positioning of magnetic field sensors

TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
MGP801	1	6 - 8	0,008	IP40
MGP802	2	16 - 19	0,016	IP40
MGP803	3	35 - 55	0,025 - 0,035	IP40
MGP804	4	60 - 90	0,05 - 0,07	IP40
MGP806	6	100 - 140	0,1 - 0,11	IP40
MGP808	8	170 - 220	0,16 - 0,18	IP40
MGP810	10	270 - 350	0,28 - 0,32	IP40
MGP812	12	320 - 400	0,41 - 0,46	IP40

FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

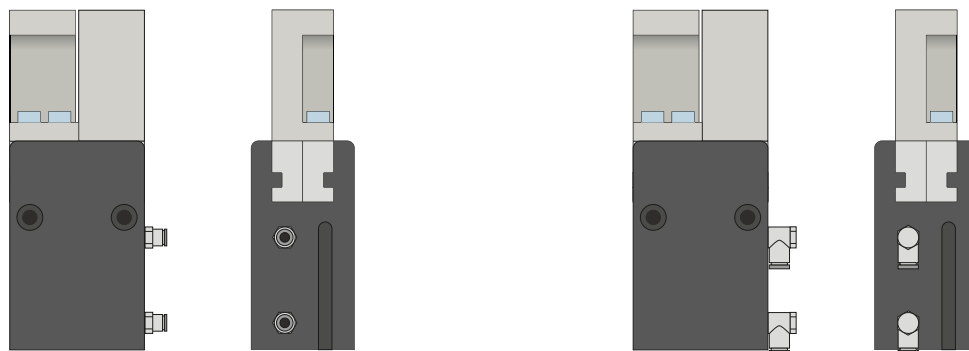
2-JAW PARALLEL GRIPPERS

SERIES MGP800 FUNCTIONAL DESCRIPTION

1

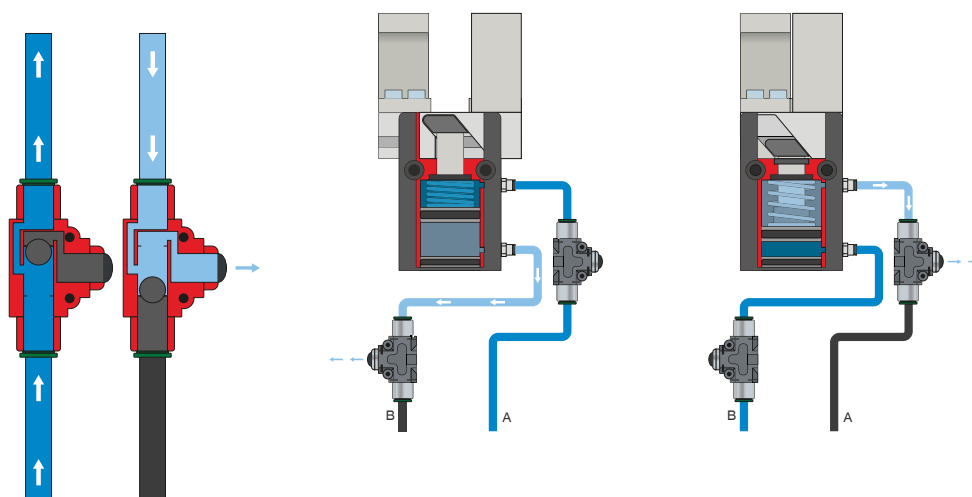


ENERGY SUPPLY



Pneumatic threaded connections

Available in straight and angled design. Can be chosen freely depending on the space conditions or installation situation.



Quick exhaust valve – DEV

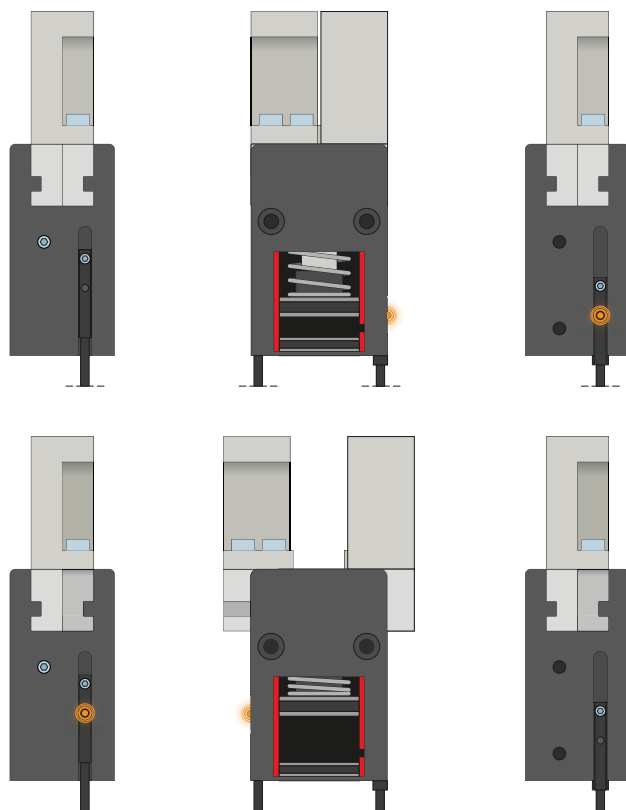
For rapid bleeding of the compressed air and preventing back pressure

The inline valves make a faster cycle time possible and prevent the formation of condensate in grippers with a small cylinder volume. To ensure the function, the valve must be installed as close to the gripper's air connection as possible.

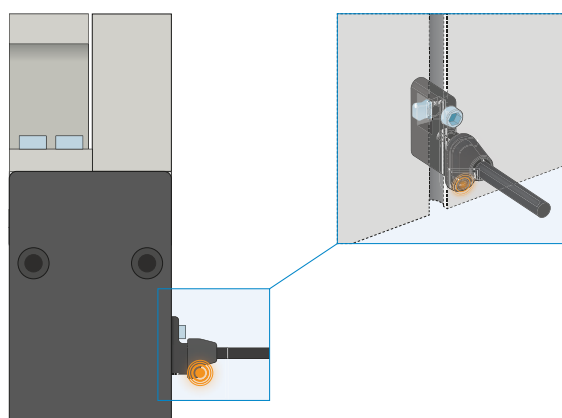


SENSORS

MFS02



MFS01



1-point magnetic field sensors – MFS

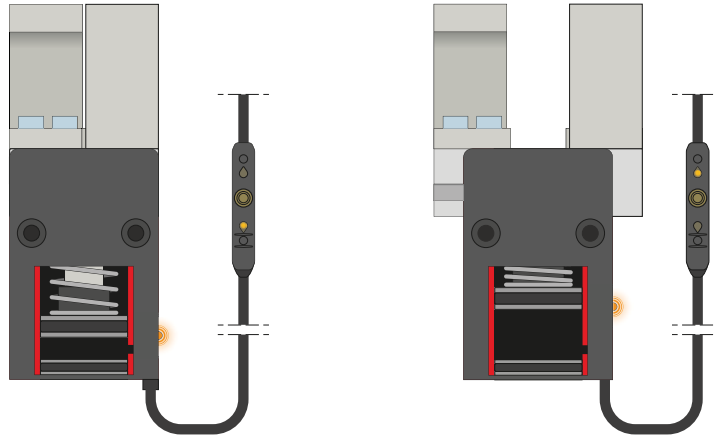
For non-contact sensing of the piston position

These sensors are installed in the C-groove of the gripper and detect the magnet attached to the piston of the gripper. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MFS01 is taller, but has a cable outlet that is offset at an angle of 90°. The variants are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.

2-JAW PARALLEL GRIPPERS

SERIES MGP800 FUNCTIONAL DESCRIPTION

SENSORS

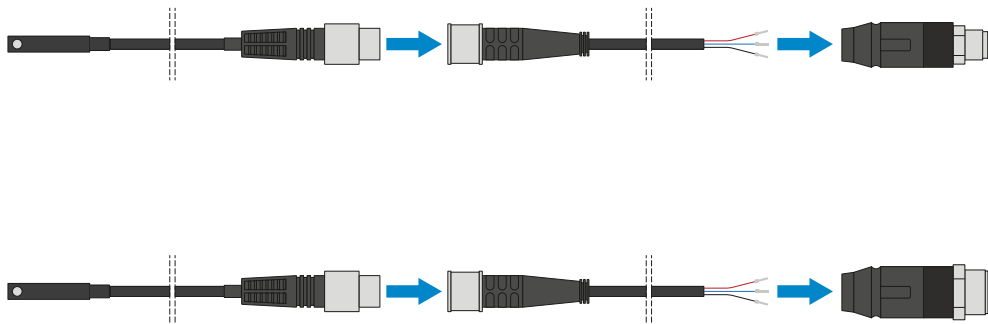


2-point magnetic field sensors – MFS

With two freely programmable switching points

Using the programming unit integrated in the cable, two switch points can be freely defined for this sensor. To do so, the sensor is clamped in the C-groove, the gripper approaches position one and the position is taught in using the teach button. Afterwards, the second position is approached with the gripper and programmed. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MFS01 is taller, but has a cable outlet that is offset at an angle of 90°. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.

CONNECTIONS / OTHER



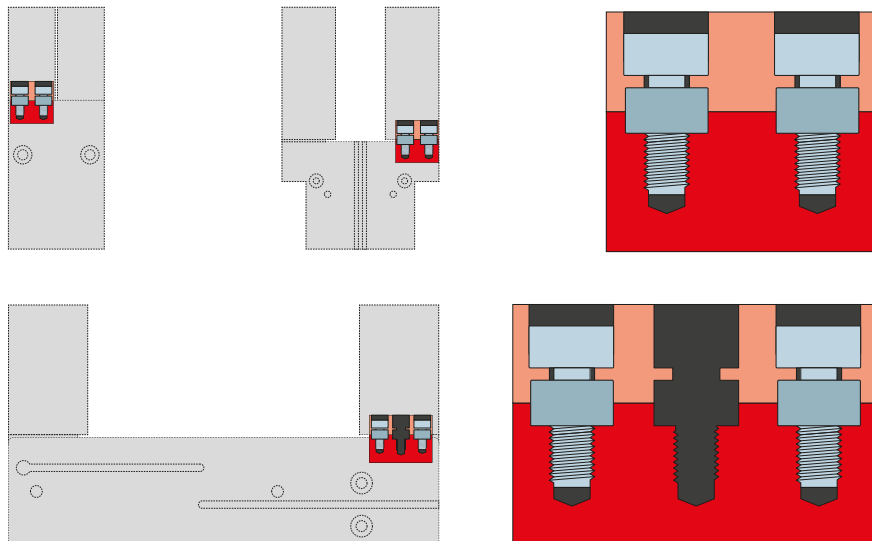
Plug-in connectors

For extending and fabricating the connection lines for the sensors

Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12.



CONNECTIONS / OTHER



Centering sleeves

For defined position measurement of the gripper fingers

The centering sleeves are inserted into the fits of the gripper jaws to define the position of the gripper fingers. The centering sleeves are comparable to a pin connection.

2-JAW PARALLEL GRIPPERS

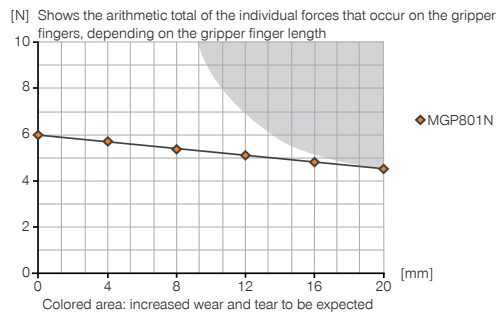
INSTALLATION SIZE MGP801

1

PRODUCT SPECIFICATIONS

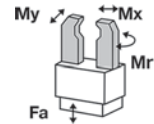


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	1
Mx [Nm]	2
My [Nm]	1
Fa [N]	54

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST80100

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection

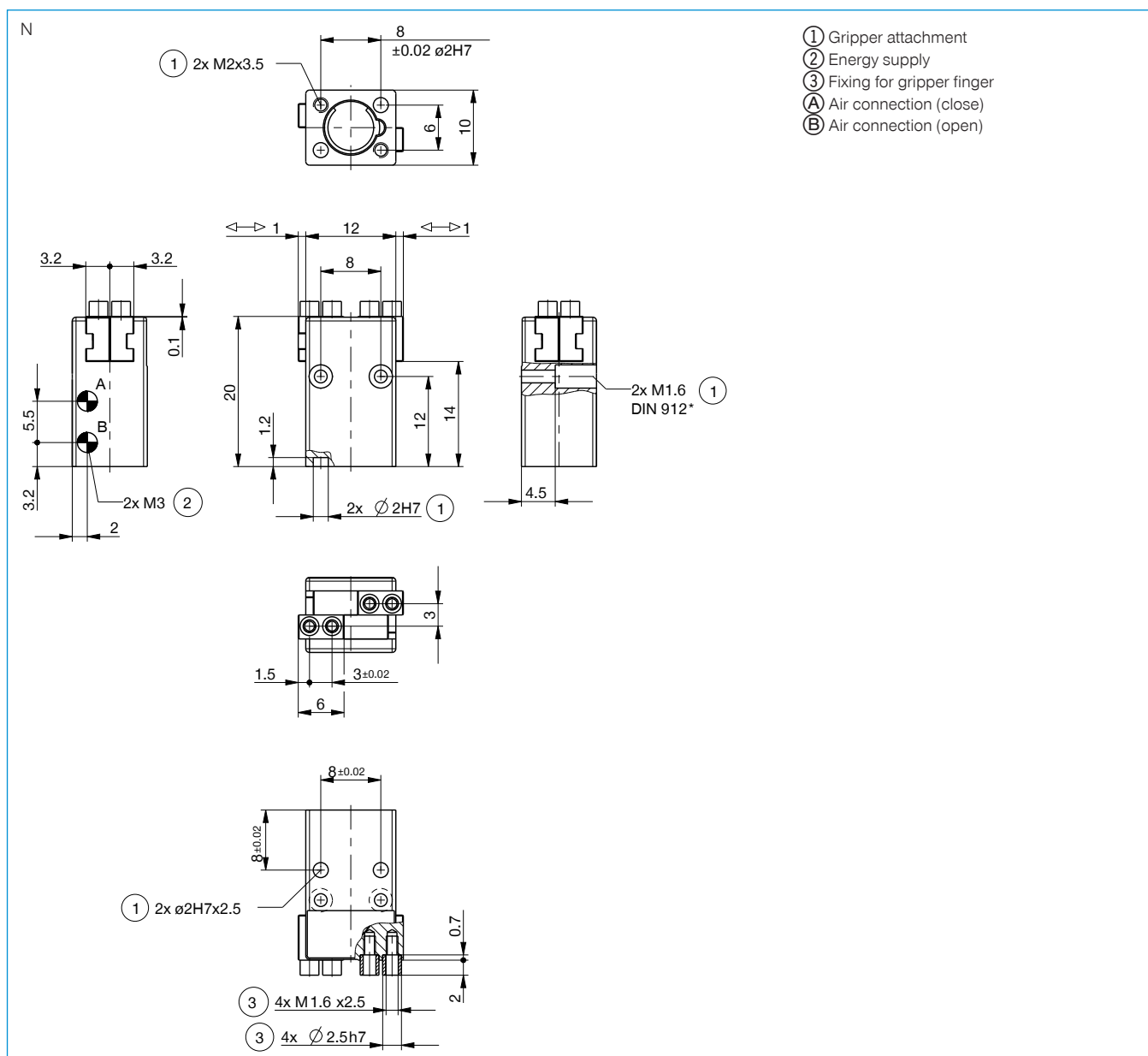


ENERGY SUPPLY



DEV04
Quick Exhaust Valve

Order no.	Technical data
	MGP801N
Stroke per jaw [mm]	1
Gripping force in closing [N]	6
Gripping force in opening [N]	8
Gripping force secured by spring min. [N]	
Closing time [s]	0.01
Opening time [s]	0.01
Repetition accuracy +/- [mm]	0.025
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	0.09
Weight [kg]	0.008



2-JAW PARALLEL GRIPPERS

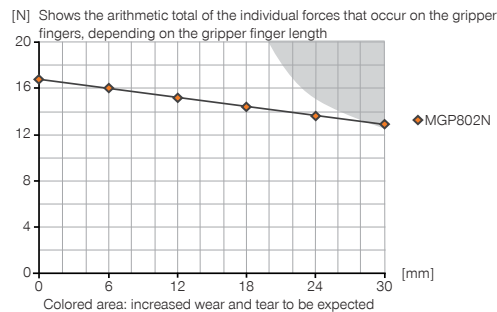
INSTALLATION SIZE MGP802

1

PRODUCT SPECIFICATIONS

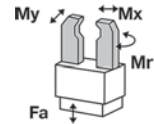


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	1
Mx [Nm]	3
My [Nm]	2
Fa [N]	90

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST80200

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection

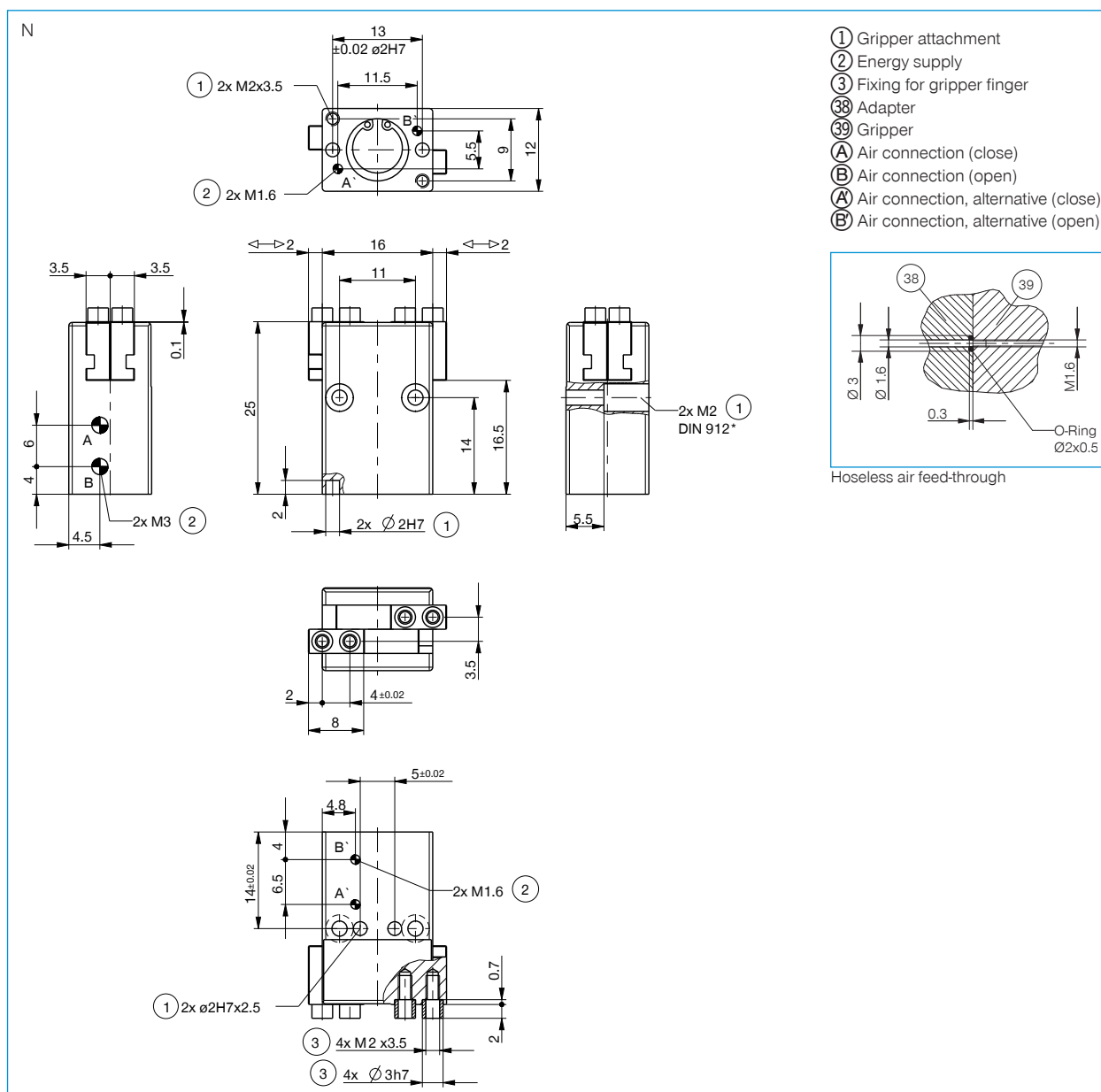


ENERGY SUPPLY



DEV04
Quick Exhaust Valve

Order no.	Technical data
	MGP802N
Stroke per jaw [mm]	2
Gripping force in closing [N]	16
Gripping force in opening [N]	19
Gripping force secured by spring min. [N]	
Closing time [s]	0.01
Opening time [s]	0.01
Repetition accuracy +/- [mm]	0.025
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm ³]	0.26
Weight [kg]	0.016



2-JAW PARALLEL GRIPPERS

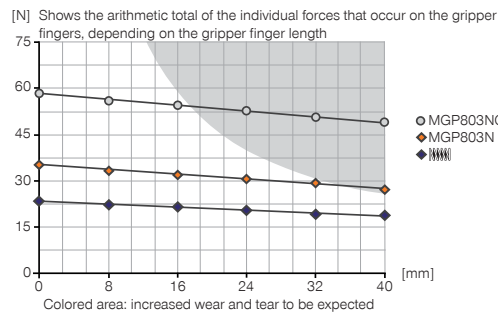
INSTALLATION SIZE MGP803

1

PRODUCT SPECIFICATIONS

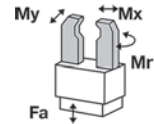


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	2
Mx [Nm]	5
My [Nm]	2
Fa [N]	140

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST80320

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection



DEV04
Quick Exhaust Valve



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8

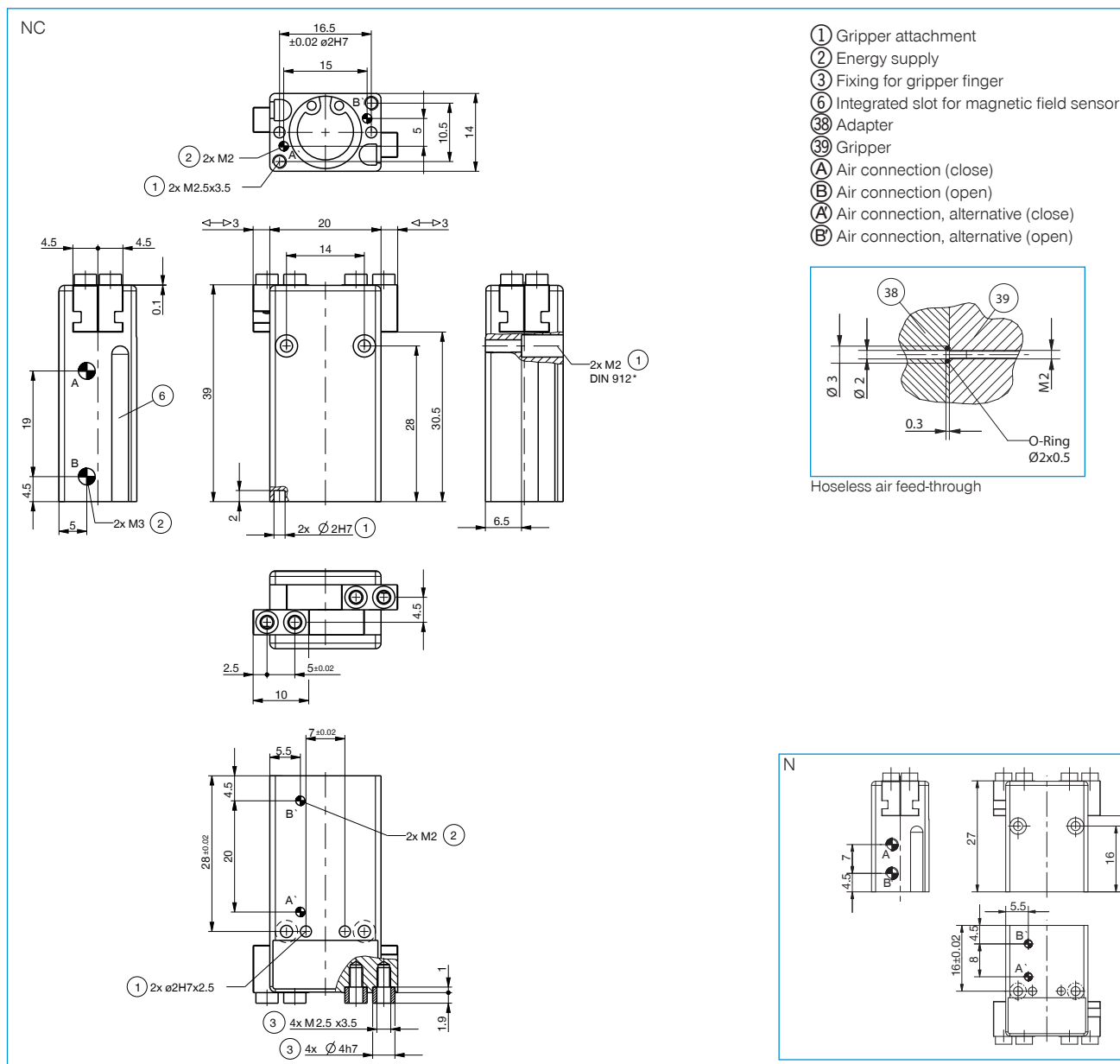


CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

	► Technical data	
Order no.	MGP803N	MGP803NC
Stroke per jaw [mm]	3	3
Gripping force in closing [N]	35	55
Gripping force in opening [N]	40	
Gripping force secured by spring min. [N]		20
Closing time [s]	0.01	0.01
Opening time [s]	0.01	0.03
Repetition accuracy +/- [mm]	0.025	0.025
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	0.8	1.1
Weight [kg]	0.025	0.035



2-JAW PARALLEL GRIPPERS

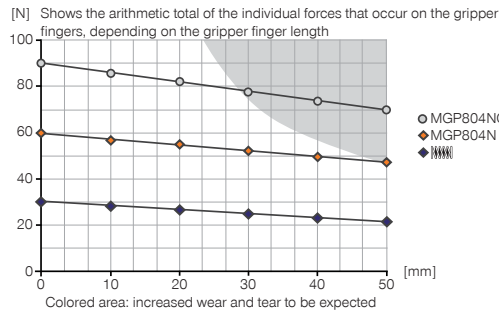
INSTALLATION SIZE MGP804

1

PRODUCT SPECIFICATIONS

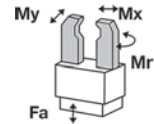


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	3
Mx [Nm]	7
My [Nm]	3
Fa [N]	230

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST40400

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection



DEV04
Quick Exhaust Valve



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8

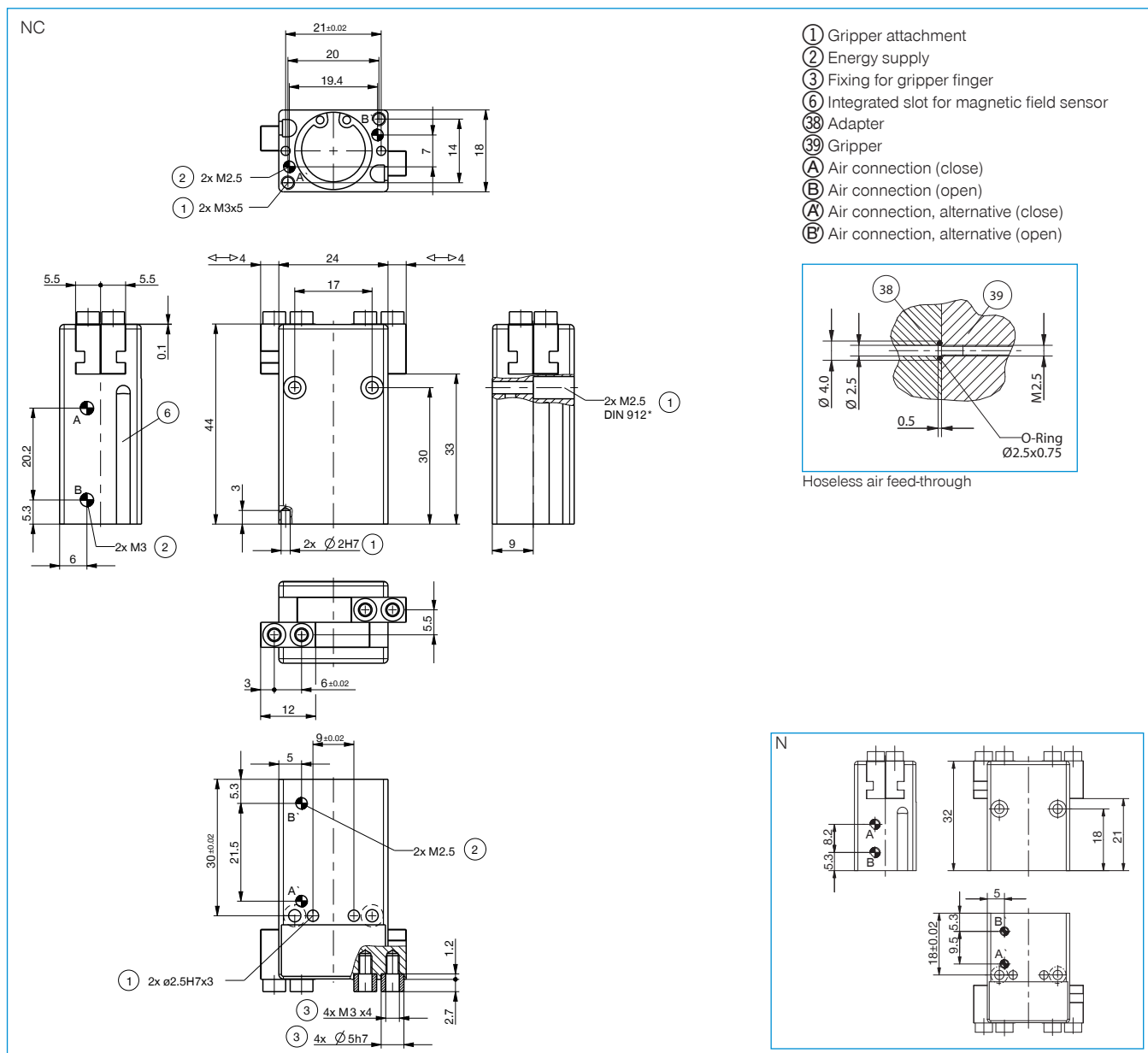


CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

Order no.	► Technical data	
	MGP804N	MGP804NC
Stroke per jaw [mm]	4	4
Gripping force in closing [N]	60	90
Gripping force in opening [N]	65	
Gripping force secured by spring min. [N]		30
Closing time [s]	0.02	0.02
Opening time [s]	0.02	0.04
Repetition accuracy +/- [mm]	0.025	0.025
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	1.9	2.5
Weight [kg]	0.05	0.07



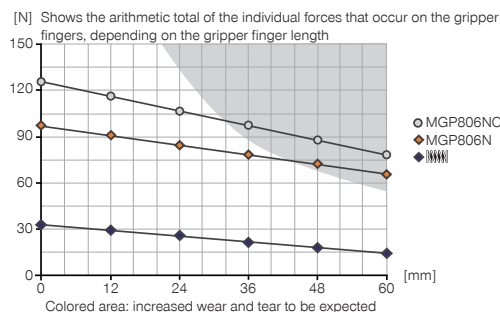
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE MGP806

PRODUCT SPECIFICATIONS

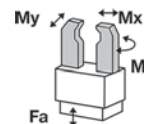


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	4
Mx [Nm]	14
My [Nm]	5
Fa [N]	330

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST40400

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection



DEV04
Quick Exhaust Valve



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8

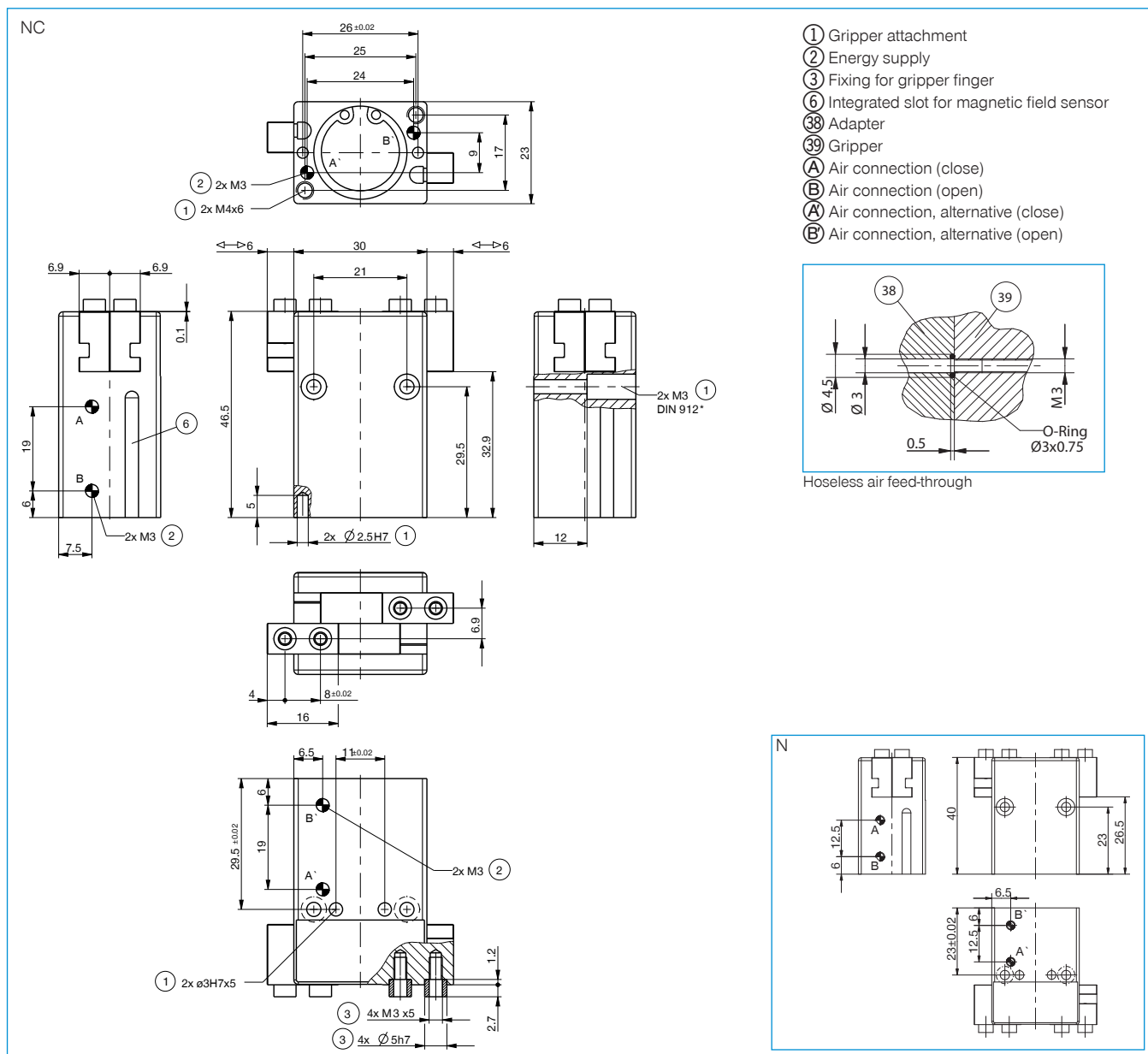


CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

Order no.	Technical data	
	MGP806N	MGP806NC
Stroke per jaw [mm]	6	6
Gripping force in closing [N]	100	140
Gripping force in opening [N]	120	
Gripping force secured by spring min. [N]		40
Closing time [s]	0.02	0.02
Opening time [s]	0.02	0.04
Repetition accuracy +/- [mm]	0.025	0.025
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	4.2	5.4
Weight [kg]	0.1	0.11



2-JAW PARALLEL GRIPPERS

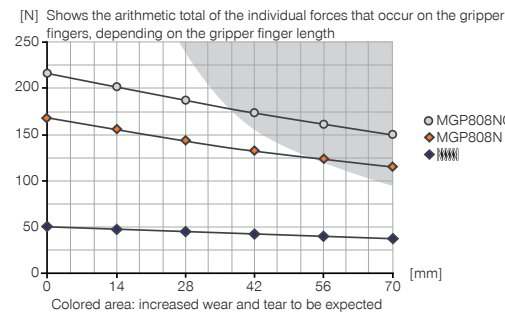
INSTALLATION SIZE MGP808

1

PRODUCT SPECIFICATIONS

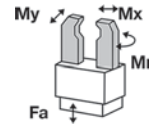


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	6
Mx [Nm]	21
My [Nm]	7
Fa [N]	450

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST40600

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



WVM5
Angled Fittings - Quick Connect Style



DEV04
Quick Exhaust Valve



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8

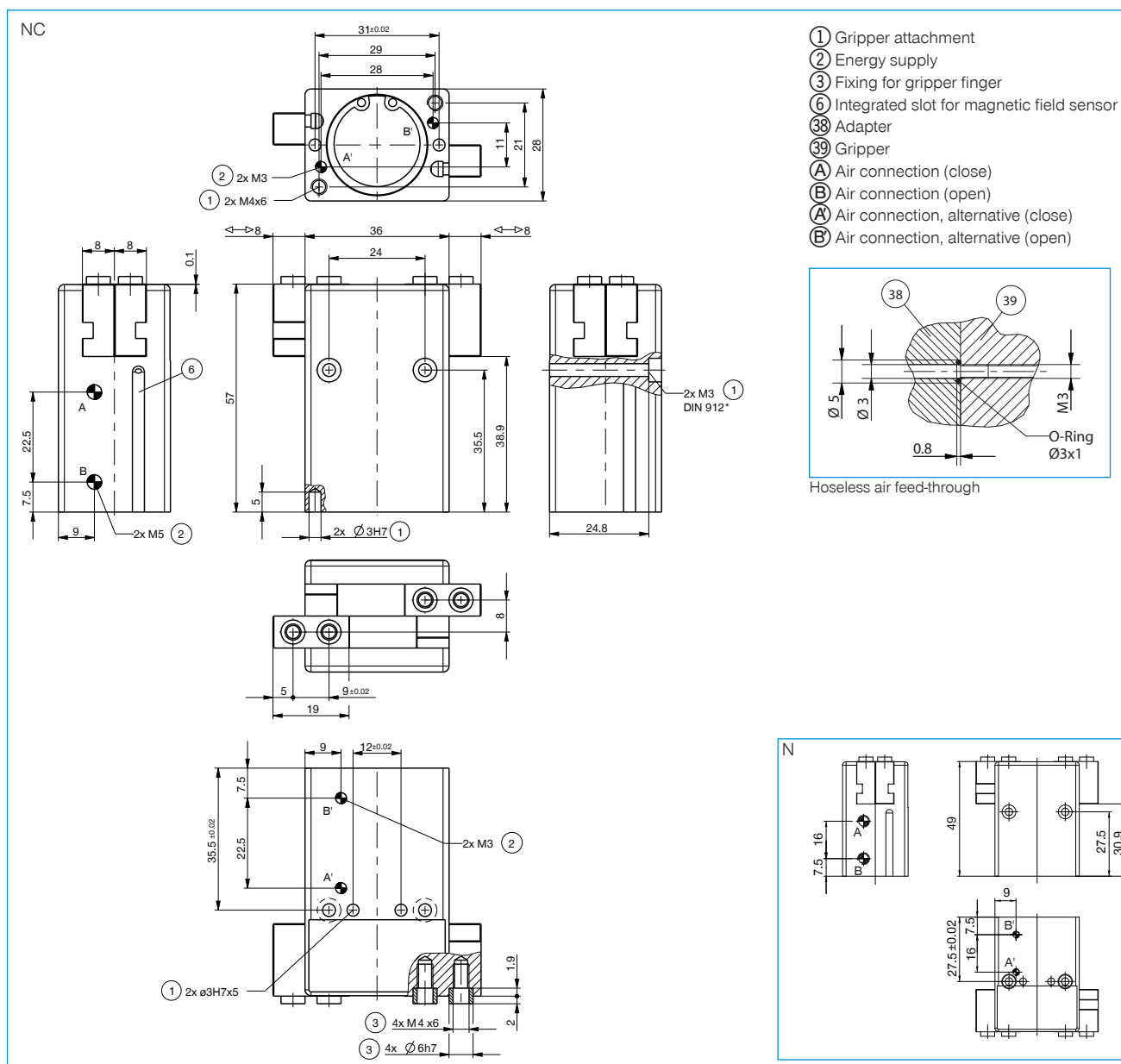


CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

	▶ Technical data	
Order no.	MGP808N	MGP808NC
Stroke per jaw [mm]	8	8
Gripping force in closing [N]	170	220
Gripping force in opening [N]	190	
Gripping force secured by spring min. [N]		50
Closing time [s]	0.04	0.04
Opening time [s]	0.04	0.06
Repetition accuracy +/- [mm]	0.02	0.02
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	8.4	11.3
Weight [kg]	0.16	0.18



2-JAW PARALLEL GRIPPERS

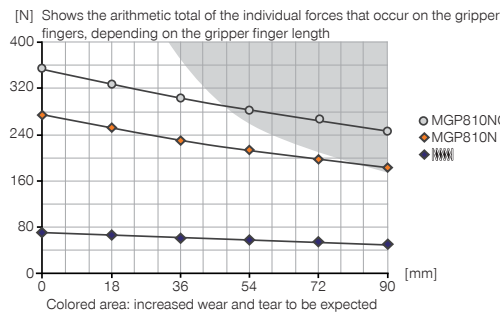
INSTALLATION SIZE MGP810

1

PRODUCT SPECIFICATIONS

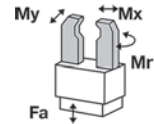


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	9
Mx [Nm]	32
My [Nm]	12
Fa [N]	590

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST07540

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



WVM5
Angled Fittings - Quick Connect Style



DEV04
Quick Exhaust Valve



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8

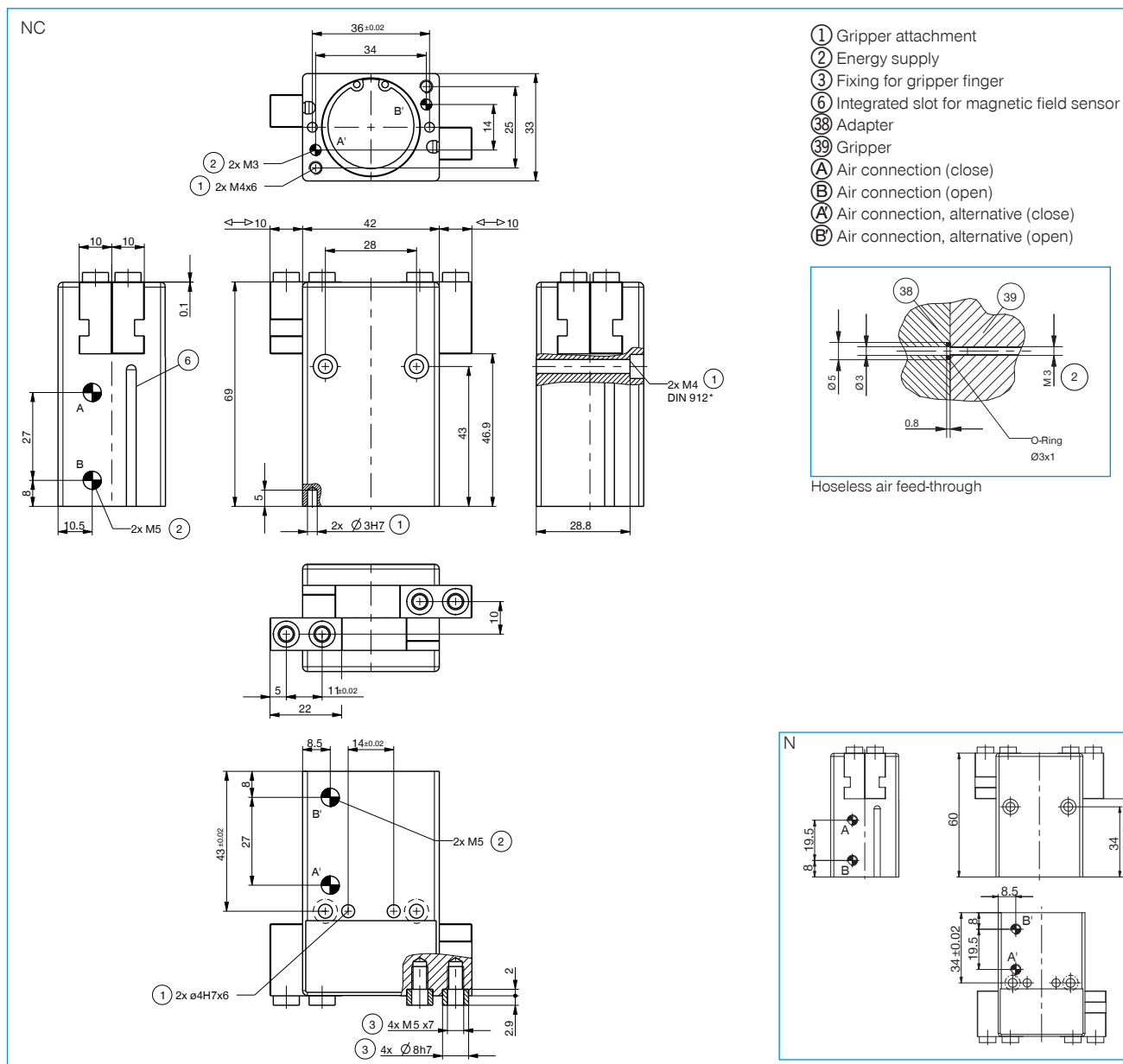


CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

	▶ Technical data	
Order no.	MGP810N	MGP810NC
Stroke per jaw [mm]	10	10
Gripping force in closing [N]	270	350
Gripping force in opening [N]	310	
Gripping force secured by spring min. [N]		80
Closing time [s]	0.04	0.04
Opening time [s]	0.04	0.06
Repetition accuracy +/- [mm]	0.02	0.02
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	15.2	20.5
Weight [kg]	0.28	0.32



2-JAW PARALLEL GRIPPERS

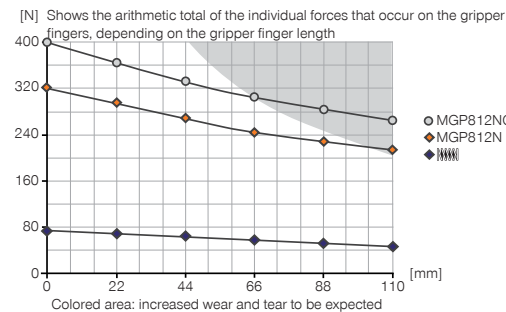
INSTALLATION SIZE MGP812

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PRODUCT SPECIFICATIONS

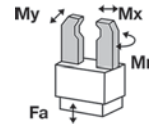


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	11
Mx [Nm]	42
My [Nm]	16
Fa [N]	790

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST07540

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



WVM5
Angled Fittings - Quick Connect Style



DEV04
Quick Exhaust Valve



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8

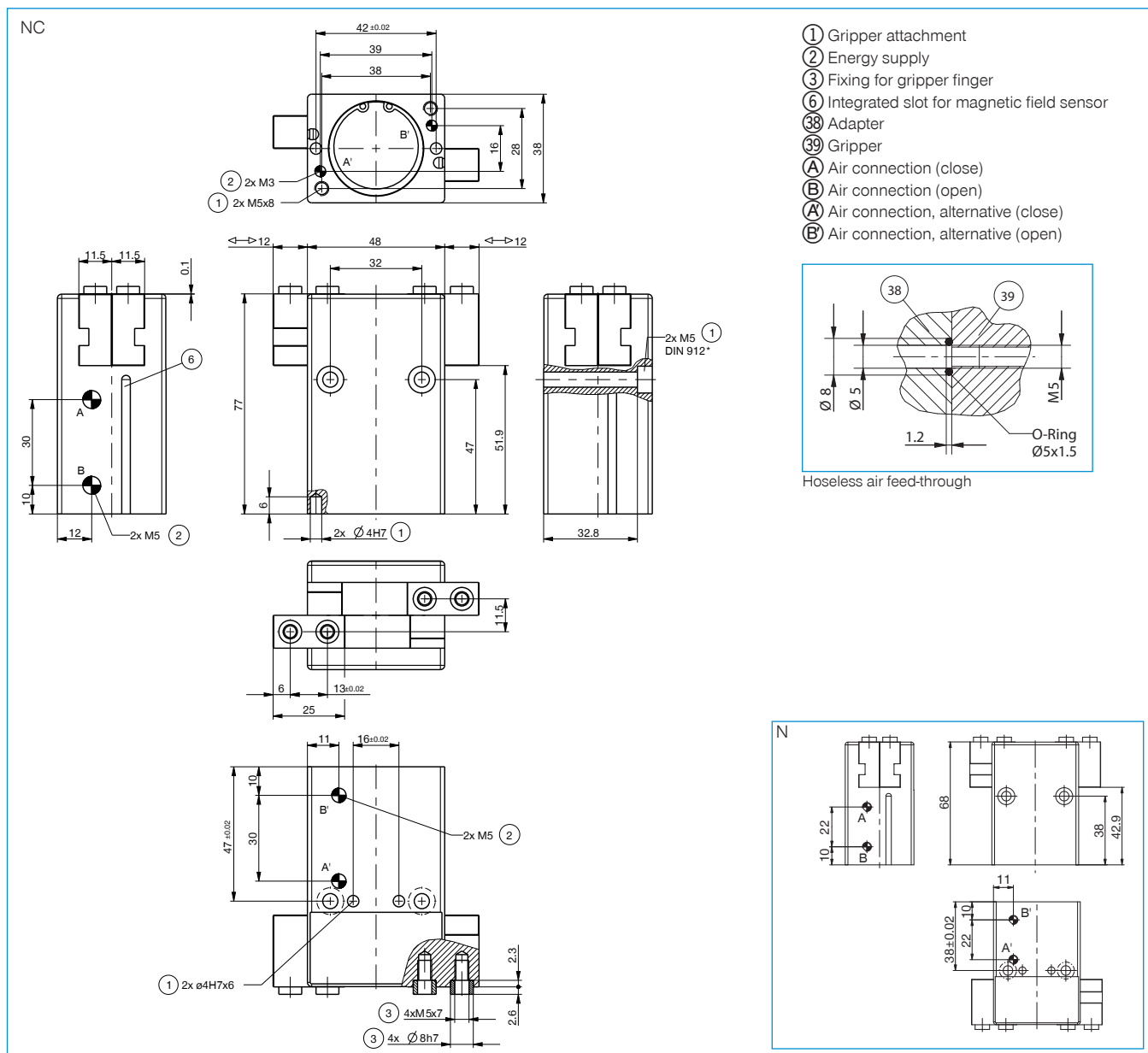


CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

Order no.	► Technical data	
	MGP812N	MGP812NC
Stroke per jaw [mm]	12	12
Gripping force in closing [N]	320	400
Gripping force in opening [N]	350	
Gripping force secured by spring min. [N]		80
Closing time [s]	0.06	0.06
Opening time [s]	0.06	0.08
Repetition accuracy +/- [mm]	0.02	0.02
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	22.3	28.1
Weight [kg]	0.41	0.46



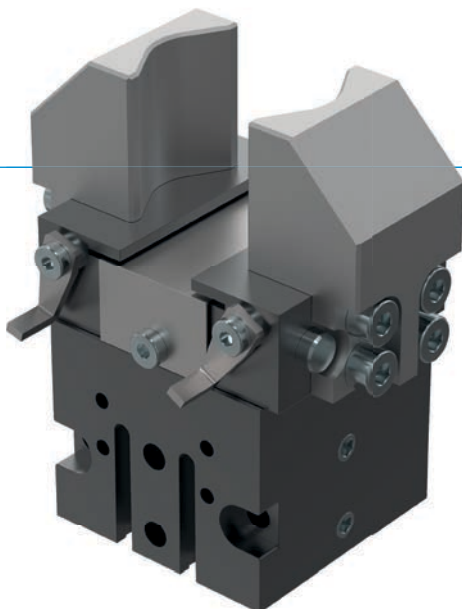
2-JAW PARALLEL GRIPPERS

SERIES GP

1

Series GP / 2-Jaw Parallel Grippers / pneumatic / Grippers

▶ PRODUCT ADVANTAGES



“The enduring”

▶ Proven technology

We have more than 20 years of proven reliability, which ensures uninterrupted production for you







▶ Very short cycle times

Low-friction circular guides enable very short cycle times and, therefore, high component output for your machine

▶ Failure-free continuous operation

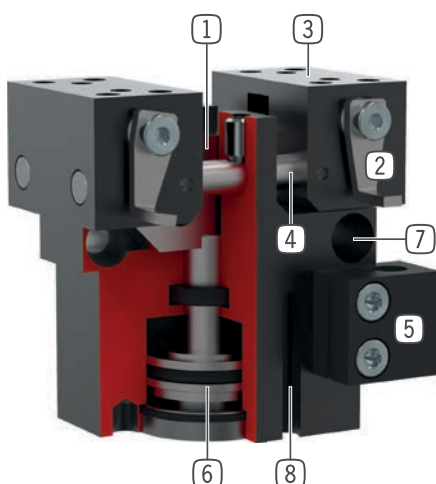
Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free cycles

▶ SERIES CHARACTERISTICS

Installation size	Version	
GPXXX	-C	S-C
 Spring closing C		•
 High-strength S		•
 10 million maintenance-free cycles (max.)	•	•
 Inductive sensor	•	•
 Magnetic field sensor	•	•
 IP 30	•	•



► BENEFITS IN DETAIL



- ① **Wedge hook mechanism**
 - synchronized the movement of the gripper jaws
 - high force transfer
- ② **Adjustable switch cam**
 - for position sensing
- ③ **Gripper jaw**
 - individual gripper finger mounting
- ④ **Roller slide**
 - for low wear movement sequence
- ⑤ **Mounting block**
 - mounting for inductive proximity switch
- ⑥ **Drive**
 - double-acting pneumatic cylinder
- ⑦ **Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- ⑧ **Sensing slot**
 - mounting and positioning of magnetic field sensors

► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
GP12	3	8,4	0.034	IP30
GP19	4	36	0.085	IP30
GP30	5	94	0.155	IP30
GP45	5	118 - 190	0.236 - 0.271	IP30
GP75	10	220 - 275	0.466 - 0.511	IP30
GP100	8 - 13	450 - 5250	1.295 - 1.311	IP30

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

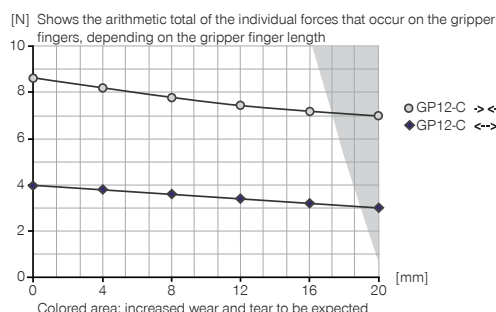
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP12

PRODUCT SPECIFICATIONS

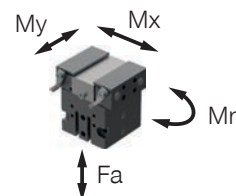


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	0.15
Mx [Nm]	0.15
My [Nm]	0.15
Fa [N]	15

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB12
Universal jaw set aluminium



SENSORS



NJ3-E2
Inductive proximity switch - Cable 5 m



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



NJ3-E2SK
Inductive Proximity Switch Cable 0,3 m - Connector M8



WVM3
Angled Fittings - Barb Style Connection



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



DEV04
Quick Exhaust Valve



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



DSV1-8
Pressure safety valve



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



DSV1-8E
Pressure safety valve with quick exhaust



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



SENSORS



KB3M
Mounting block

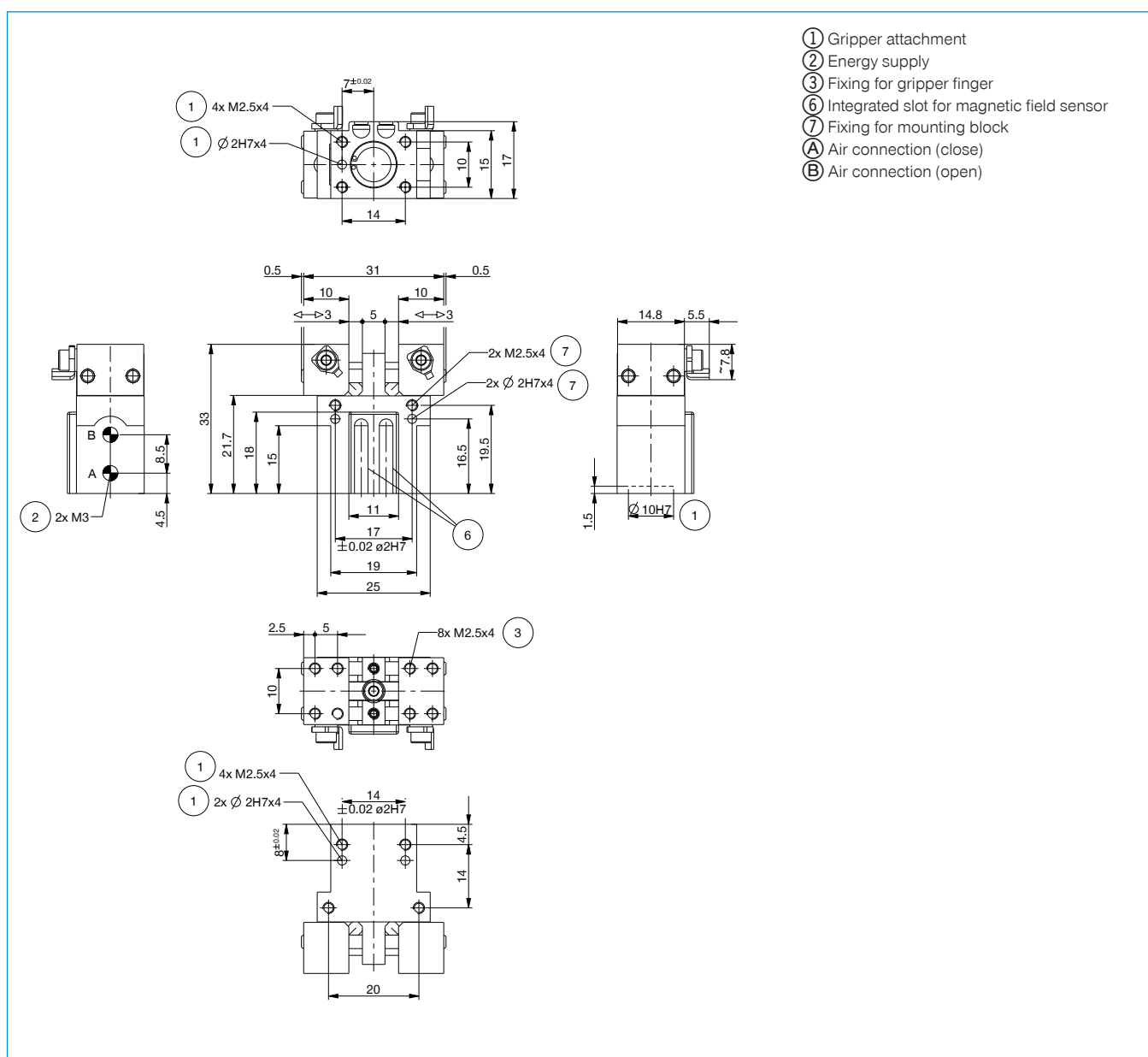


KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



ZE10H7X6
Centering Disc

Order no.	GP12-C
Stroke per jaw [mm]	3
Gripping force in closing [N]	8.4
Gripping force in opening [N]	4
Gripping force secured by spring min. [N]	
Closing time [s]	0.02
Opening time [s]	0.02
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	0.4
Weight [kg]	0.034



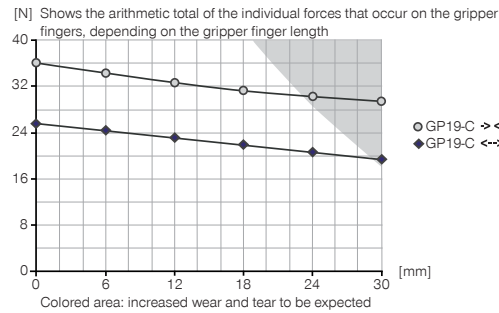
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP19

PRODUCT SPECIFICATIONS

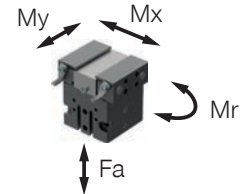


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	0.8
Mx [Nm]	0.8
My [Nm]	0.8
Fa [N]	40

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB19
Universal jaw set aluminium



SENSORS



NJ3-E2
Inductive proximity switch - Cable 5 m



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



WVM5
Angled Fittings - Quick Connect Style



DEV04
Quick Exhaust Valve



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



NJ3-E2SK
Inductive Proximity Switch Cable 0,3 m - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



ZE12H7X4
Centering Disc

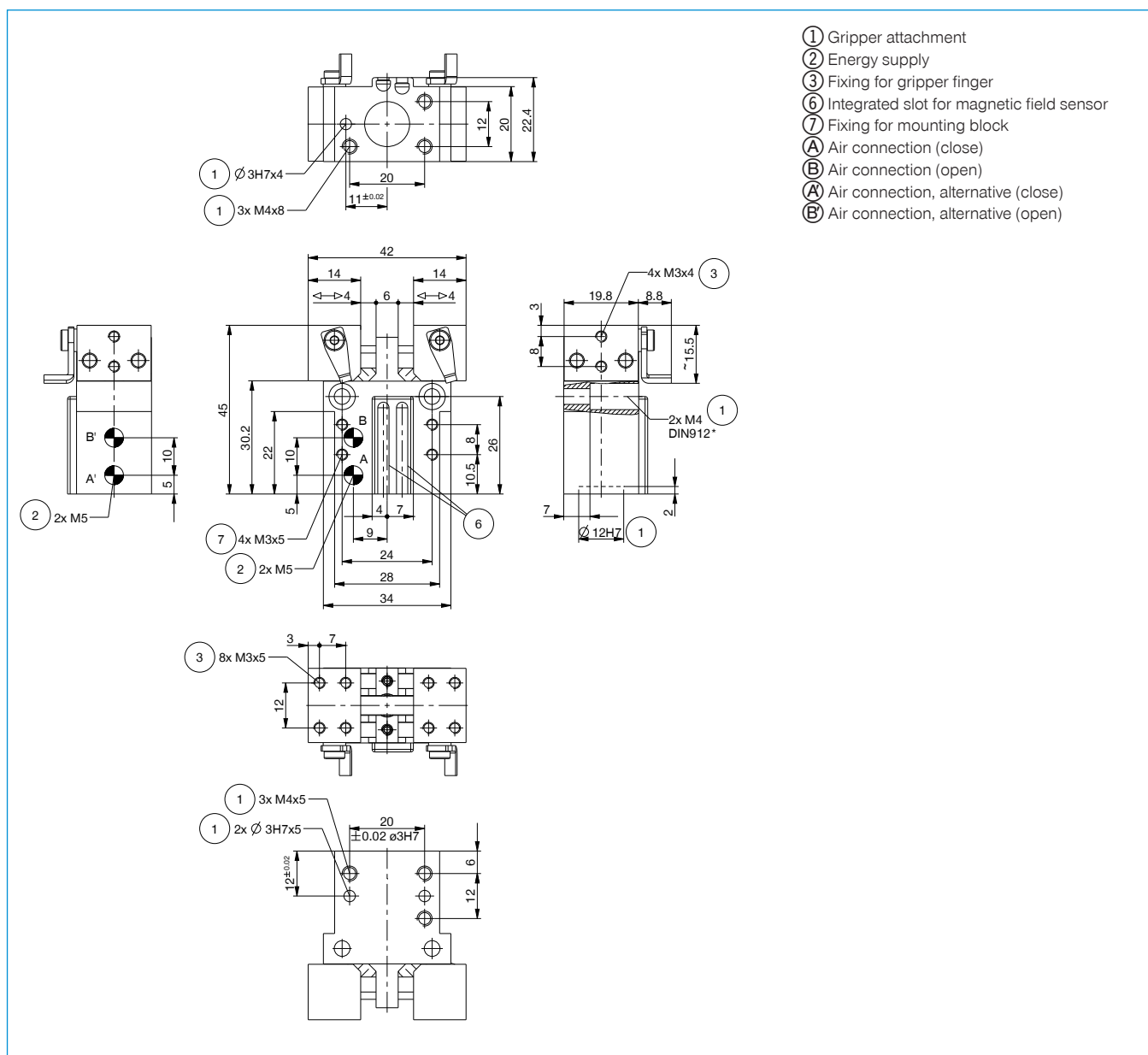


SENSORS



KB3
Mounting block

Order no.	Technical data
	GP19-C
Stroke per jaw [mm]	4
Gripping force in closing [N]	36
Gripping force in opening [N]	26
Gripping force secured by spring min. [N]	
Closing time [s]	0.02
Opening time [s]	0.02
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	1
Weight [kg]	0.085



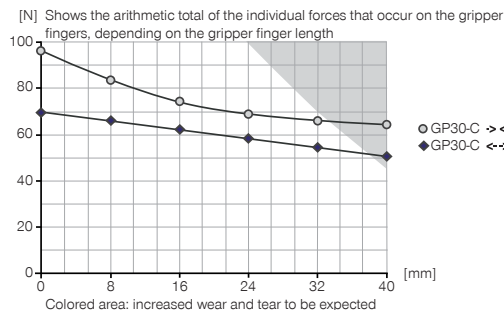
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP30

PRODUCT SPECIFICATIONS

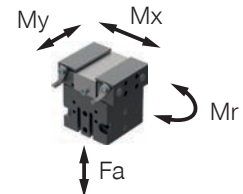


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	2
Mx [Nm]	2
My [Nm]	2
Fa [N]	80

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB30
Universal jaw set aluminium



SENSORS



NJ5-E2
Inductive proximity switch - Cable 5 m



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



NJ5-E2SK
Inductive Proximity Switch Cable 0,3 m - Connector M8



WVM5
Angled Fittings - Quick Connect Style



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



DEV04
Quick Exhaust Valve



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



DSV1-8
Pressure safety valve



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



DSV1-8E
Pressure safety valve with quick exhaust



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



SENSORS



KB5
Mounting block

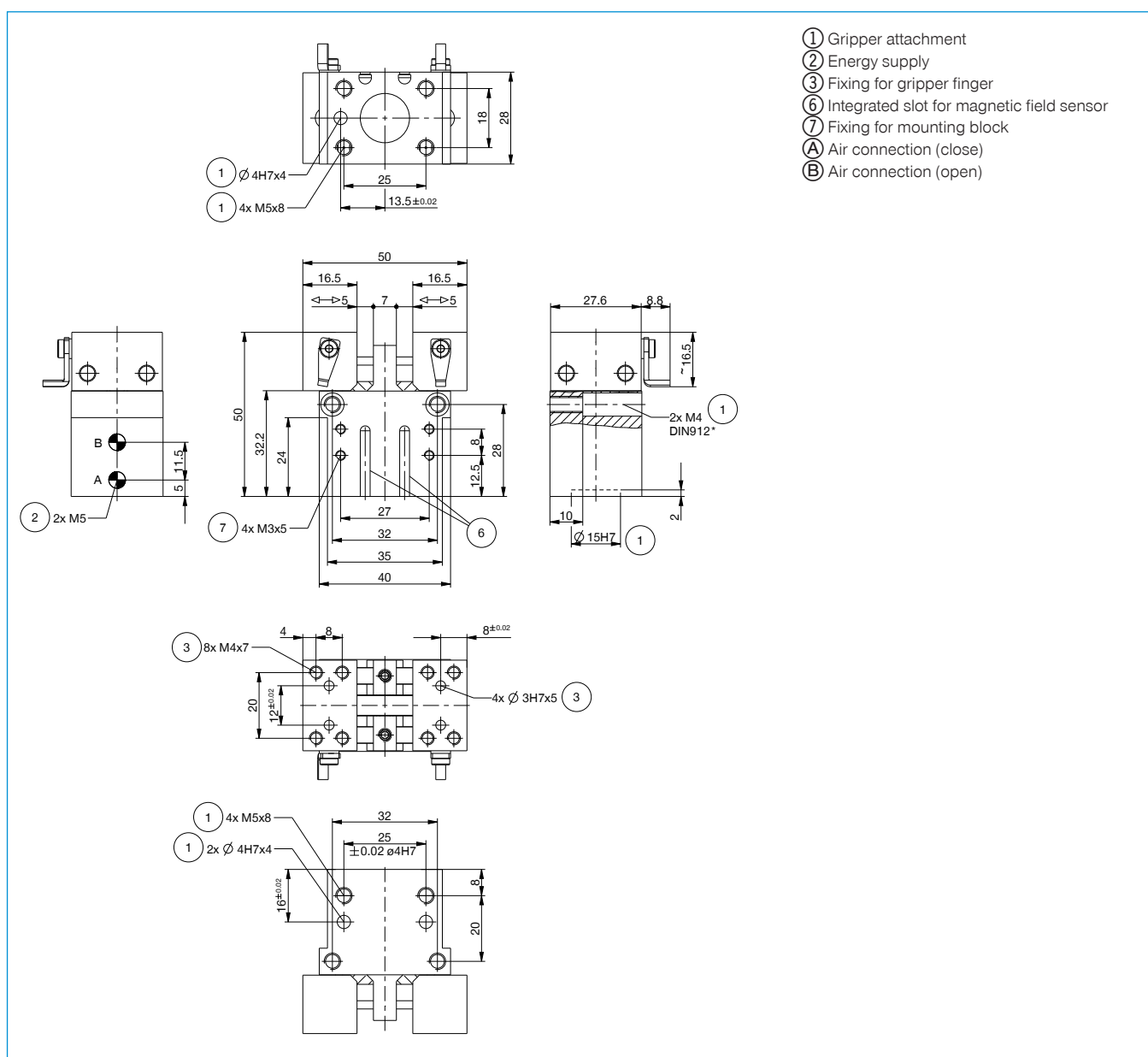


KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



ZE15H7X4
Centering Disc

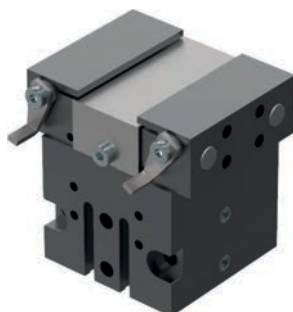
Order no.	Technical data
	GP30-C
Stroke per jaw [mm]	5
Gripping force in closing [N]	94
Gripping force in opening [N]	76
Gripping force secured by spring min. [N]	
Closing time [s]	0.02
Opening time [s]	0.02
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	3
Weight [kg]	0.155



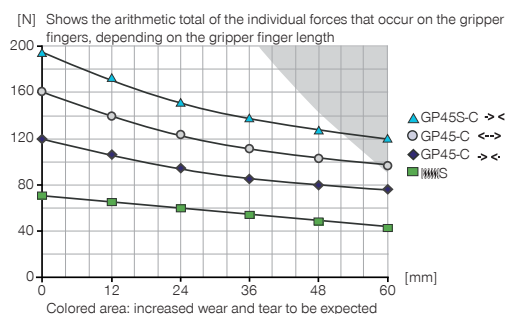
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP45

PRODUCT SPECIFICATIONS

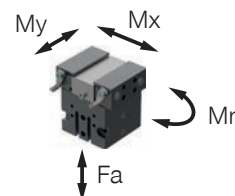


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	4
Mx [Nm]	4
My [Nm]	4
Fa [N]	160

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB45
Universal jaw set aluminium



SENSORS



NJ6.5-E2-01
Inductive proximity switch - Cable 5 m



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



WVM5
Angled Fittings - Quick Connect Style



DEV04
Quick Exhaust Valve



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



NJ6.5-E2S
Inductive proximity switch - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



ZE20H7X4
Centering Disc

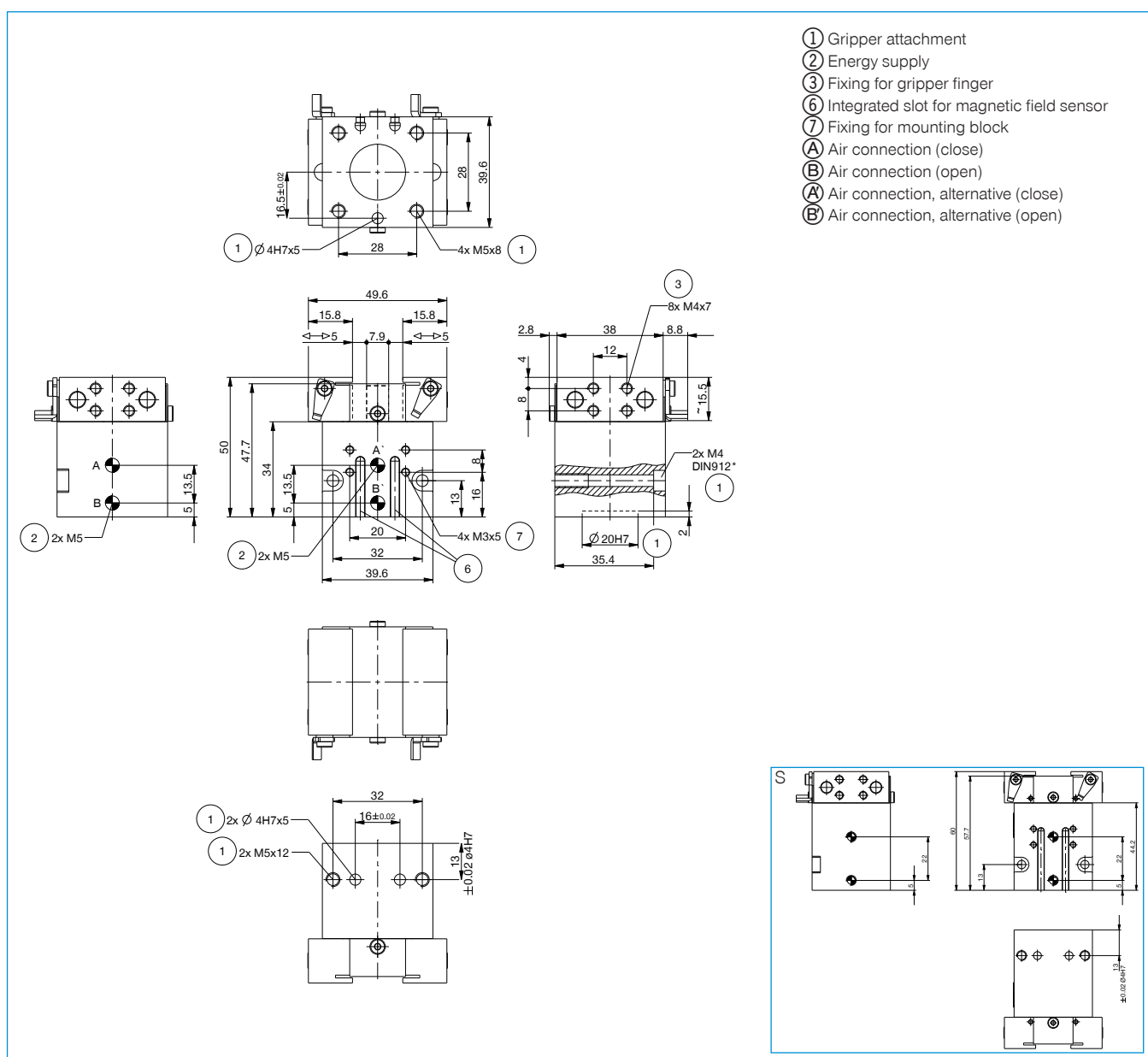


SENSORS



KB6.5
Mounting block

Order no.	► Technical data	
	GP45-C	GP45S-C
Stroke per jaw [mm]	5	5
Gripping force in closing [N]	118	190
Gripping force in opening [N]	155	
Gripping force secured by spring min. [N]		75
Closing time [s]	0.03	0.04
Opening time [s]	0.03	0.04
Repetition accuracy +/- [mm]	0.05	0.05
Operating pressure min. [bar]	3	5
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm ³]	4	8
Weight [kg]	0.236	0.271



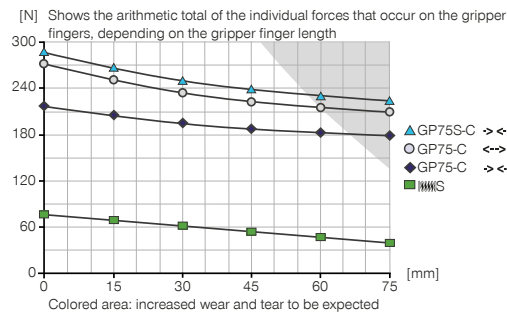
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP75

PRODUCT SPECIFICATIONS

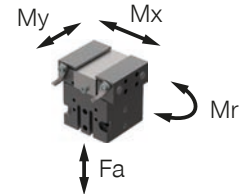


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	5
Mx [Nm]	5
My [Nm]	5
Fa [N]	180

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB75
Universal jaw set aluminium



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



ENERGY SUPPLY



GV1-8X8
Straight Fittings - Quick Connect Style



WV1-8X8
Angled Fittings - Quick Connect Style



DEV08
Quick Exhaust Valve



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



ZE20H7X4
Centering Disc



SENSORS



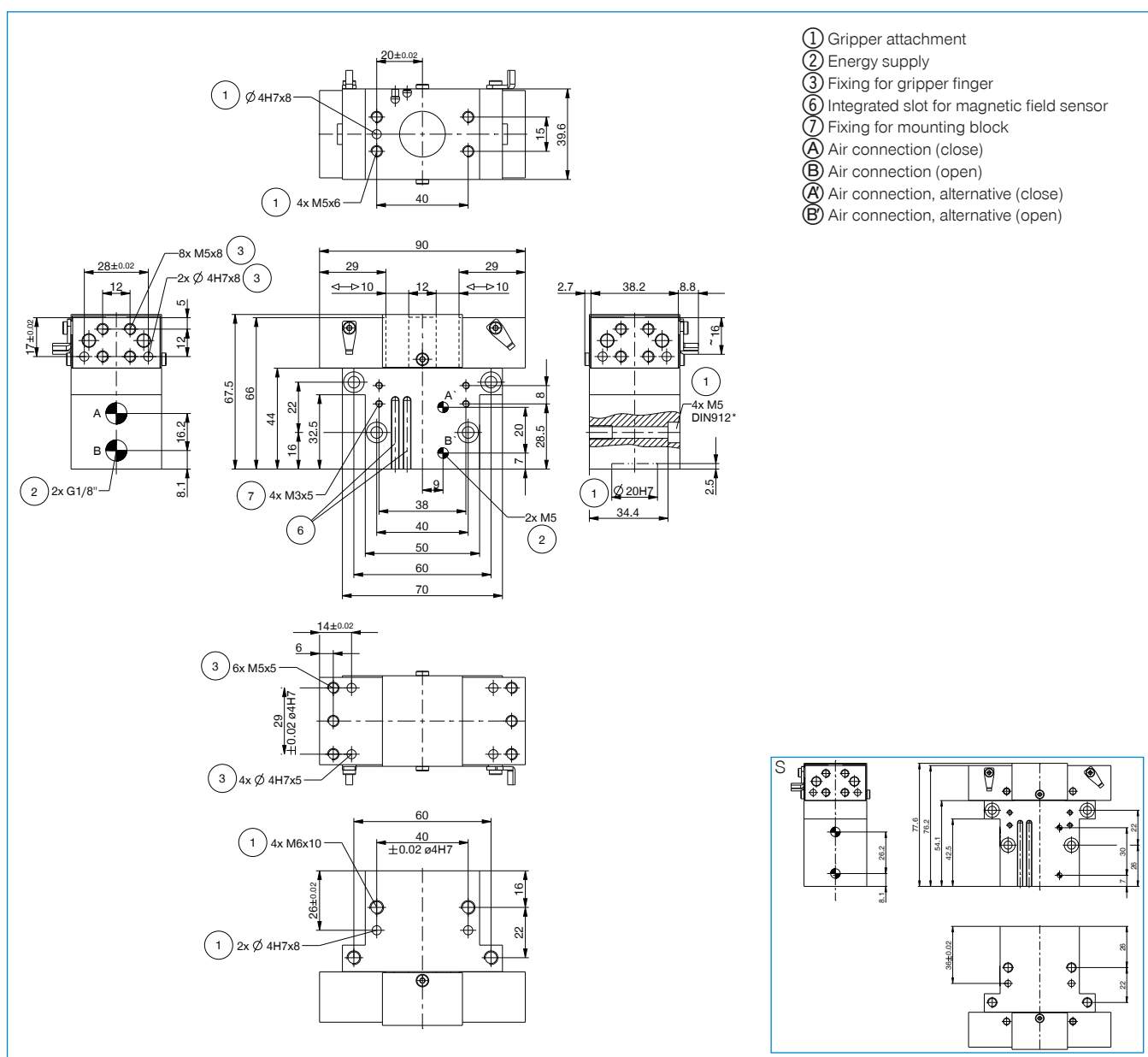
NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



Order no.	► Technical data	
	GP75-C	GP75S-C
Stroke per jaw [mm]	10	10
Gripping force in closing [N]	220	275
Gripping force in opening [N]	260	
Gripping force secured by spring min. [N]		63
Closing time [s]	0.03	0.04
Opening time [s]	0.03	0.04
Repetition accuracy +/- [mm]	0.05	0.05
Operating pressure min. [bar]	3	5
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm ³]	13	19
Weight [kg]	0.466	0.511



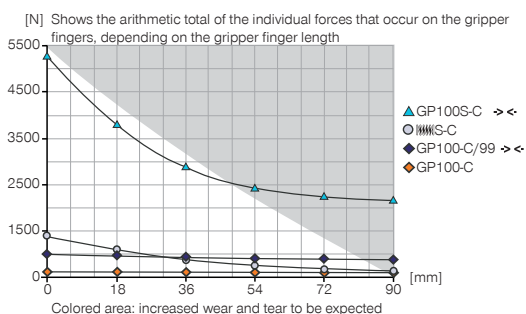
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP100

PRODUCT SPECIFICATIONS

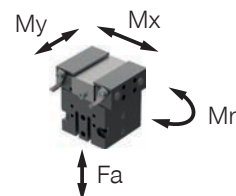


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	10
Mx [Nm]	10
My [Nm]	10
Fa [N]	400

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB100
Universal jaw set aluminium



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



ENERGY SUPPLY



GV1-8X8
Straight Fittings - Quick Connect Style



WV1-8X8
Angled Fittings - Quick Connect Style



DEV08
Quick Exhaust Valve



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



CONNECTIONS / OTHER

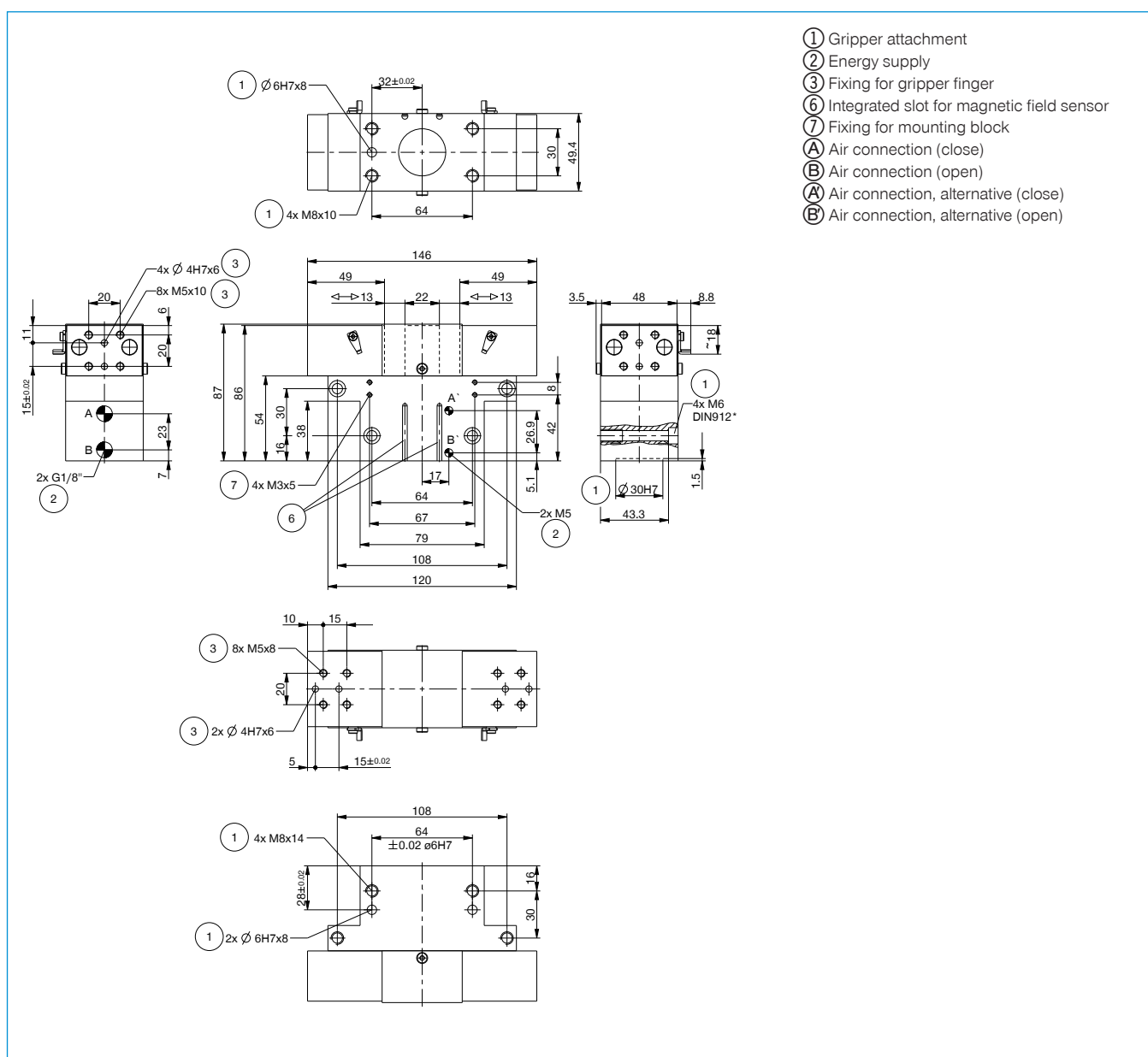


KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



ZE30H7X4
Centering Disc

Order no.	Technical data		
	GP100-C	GP100-C-99	GP100S-C
Stroke per jaw [mm]	13	13	8
Gripping force in closing [N]	450	450	5250
Gripping force in opening [N]		450	
Gripping force secured by spring min. [N]	70		250
Closing time [s]	0.05	0.04	0.05
Opening time [s]	0.05	0.04	0.05
Repetition accuracy +/- [mm]	0.05	0.05	0.05
Operating pressure min. [bar]	5	4	5
Operating pressure max. [bar]	8	8	8
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	30	30	30
Weight [kg]	1.311	1.295	1.308



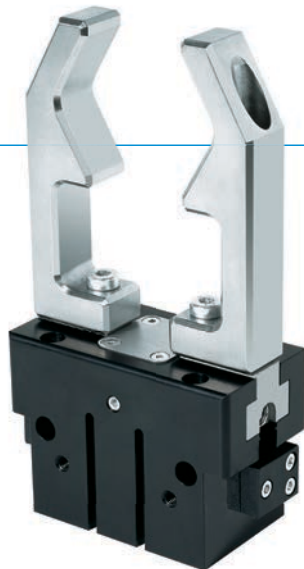
2-JAW PARALLEL GRIPPERS

SERIES GP400

1

Series GP400 / 2-Jaw Parallel Grippers / pneumatic / Grippers

▶ PRODUCT ADVANTAGES



“The economical”

▶ Concentration on the essentials

The most economic type of gripping: This is how you reduce your production costs









▶ Proven T slot guide

This established and proven guiding technology stands for the highest process reliability like no other

▶ Compact structure

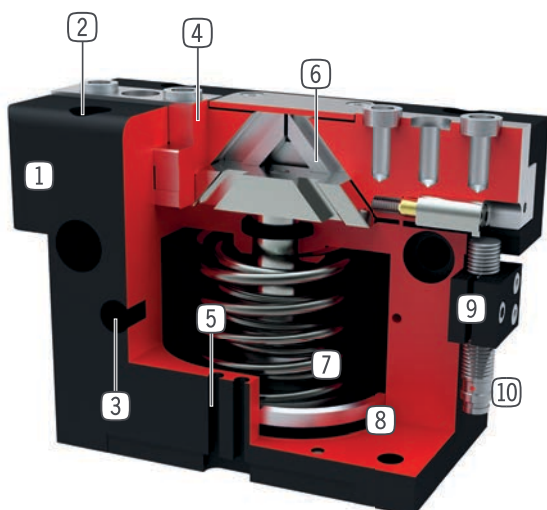
Reduces the interference contours for your application

▶ SERIES CHARACTERISTICS

Installation size		Version					
GP4XX		N	NC	NO	S	SC	SO
	Spring closing C		•			•	
	Spring opening O			•			•
	High-strength S				•	•	•
	10 million maintenance-free cycles (max.)	•	•	•	•	•	•
	Inductive sensor	•	•	•	•	•	•
	Magnetic field sensor	•	•	•	•	•	•
	Purged air	•	•	•	•	•	•
	IP 40	•	•	•	•	•	•



► BENEFITS IN DETAIL



- ① **Robust, lightweight housing**
- Hard-coated aluminum alloy
- ② **Mounting and positioning**
- mounting possible from several sides for versatile positioning
- ③ **Energy supply**
- possible from several sides
- ④ **Gripper jaw**
- individual gripper finger mounting
- ⑤ **Sensing slot**
- mounting and positioning of magnetic field sensors
- ⑥ **Wedge hook mechanism**
- synchronized the movement of the gripper jaws
- ⑦ **Integrated gripping force safety device**
- spring integrated into cylinder as energy storage
- ⑧ **Position sensing**
- permanent magnet for direct monitoring of piston movement
- ⑨ **Mounting block**
- mounting for inductive proximity switch (10)

► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
GP403	3	85 - 115	0,08 - 0,1	IP40
GP404	2 - 4	170 - 500	0,14 - 0,16	IP40
GP406	3 - 6	300 - 950	0,27 - 0,32	IP40
GP408	4 - 8	550 - 1660	0,5 - 0,57	IP40
GP410	5 - 10	740 - 2340	0,85 - 1	IP40
GP412	6 - 12	1290 - 4130	1,5 - 1,78	IP40
GP416	8 - 16	1860 - 5780	2,9 - 3,4	IP40
GP420	10 - 20	3175 - 9400	5,5 - 6,7	IP40
GP430	15 - 30	6675 - 19275	14 - 18,9	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

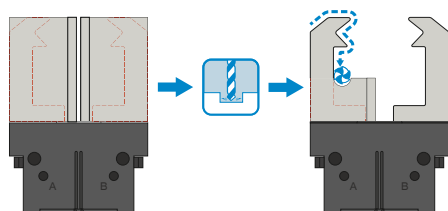
2-JAW PARALLEL GRIPPERS

SERIES GP400 FUNCTIONAL DESCRIPTION

1



GRIPPING COMPONENTS



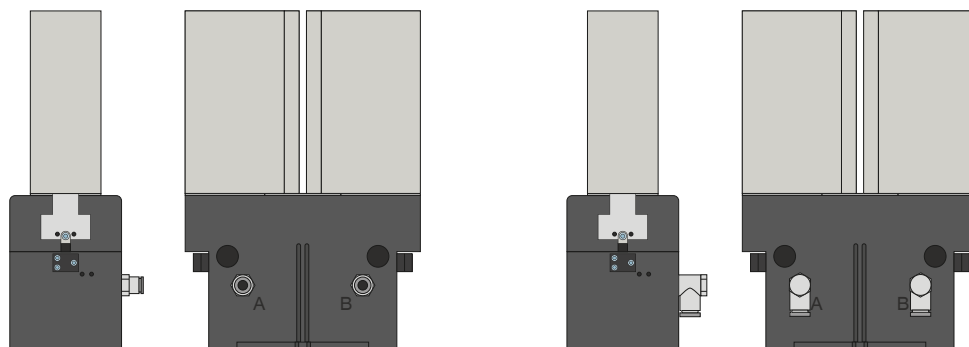
Universal jaws – UB400

Can be used immediately or for individual reprocessing

The gripper blanks are available in an aluminum (AL) and also in a steel (ST) version and are installed directly on the gripper using the screws in the scope of delivery. The fits for the centering sleeves are already in place for this purpose. One universal jaw set is required for each gripper.



ENERGY SUPPLY



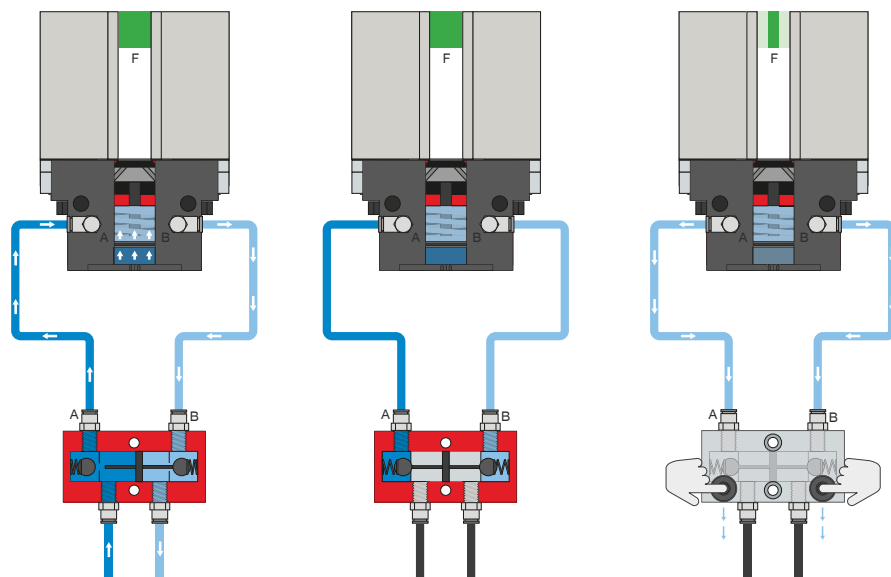
Pneumatic threaded connections

Available in straight and angled design. Can be chosen freely depending on the space conditions or installation situation.



ENERGY SUPPLY

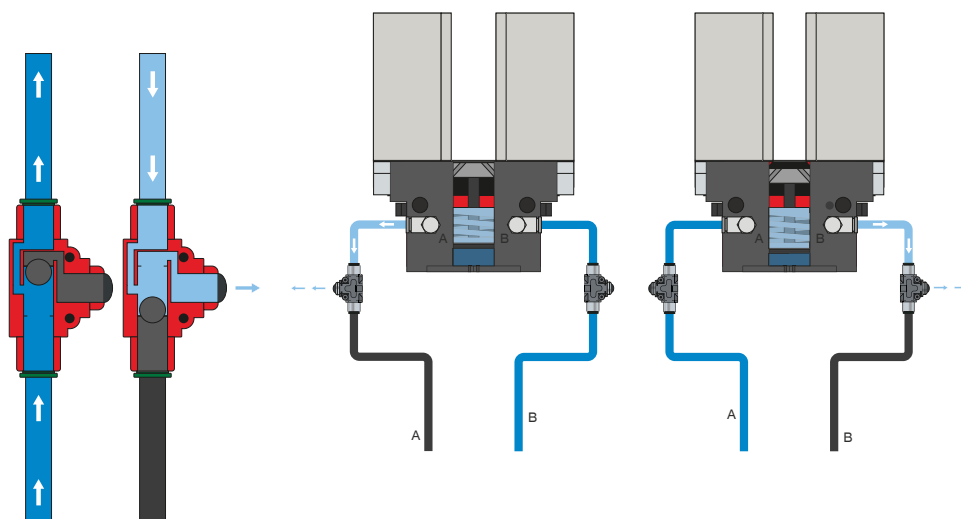
1



Pressure safety valve – DSV

Ensures safe retention of force and position if the system pressure drops

The integrated double check valve, which can be unlocked, retains the system pressure of the gripper in case of EMERGENCY STOP. To ensure the function, the valve must be installed as close to the gripper's air connection as possible. In variant E, two pushbuttons are installed that allow for controlled bleeding of the gripper.



Quick exhaust valve – DEV

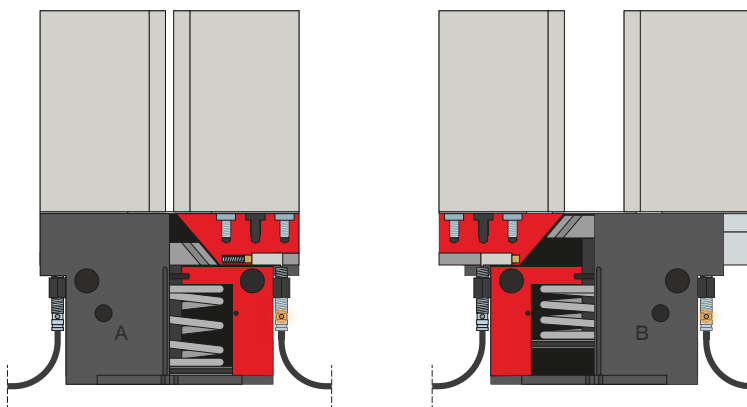
For rapid bleeding of the compressed air and preventing back pressure

The inline valves make a faster cycle time possible and prevent the formation of condensate in grippers with a small cylinder volume. To ensure the function, the valve must be installed as close to the gripper's air connection as possible.

2-JAW PARALLEL GRIPPERS

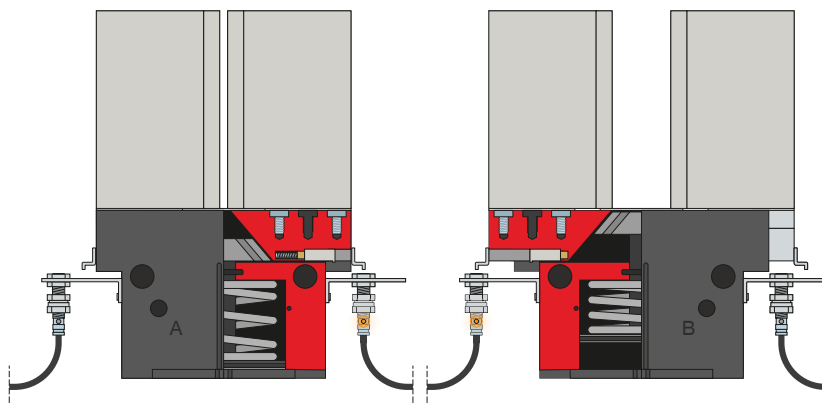
SERIES GP400 FUNCTIONAL DESCRIPTION

SENSORS



Inductive sensors – NJ

The sensor is inserted into the mounting block as far as it will go and secured. Tuning to the desired position then takes place by adjusting the cam switch. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector, as well as with direct plug orientation.



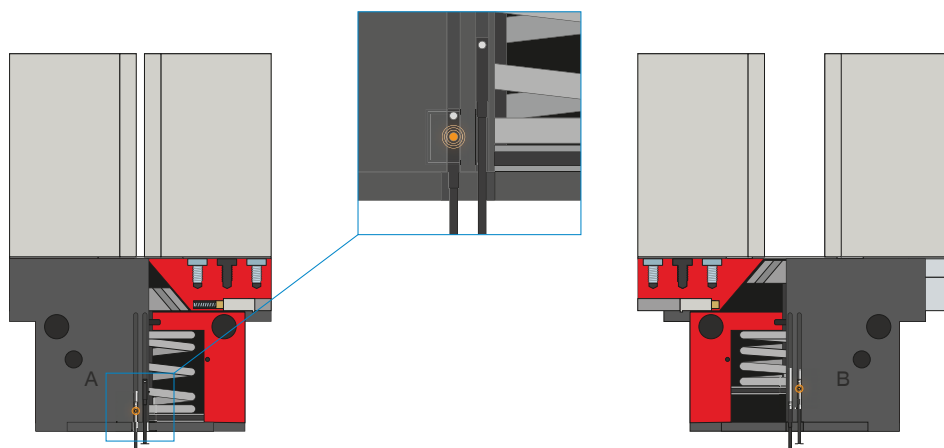
Clamping bracket – KHA

The KHA can be used as an alternative to installing the sensor via the mounting block. The sensor is inserted into the clamping bracket as far as it will go and secured. Tuning to the cam switch then takes place. Fine adjustment can be made by moving the clamping bracket again.

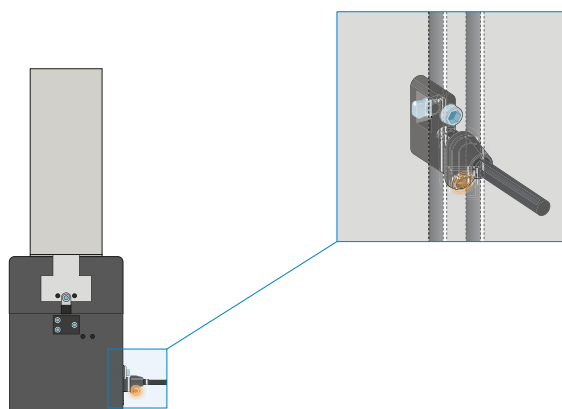


SENSORS

MFS02



MFS01



1-point magnetic field sensors – MFS

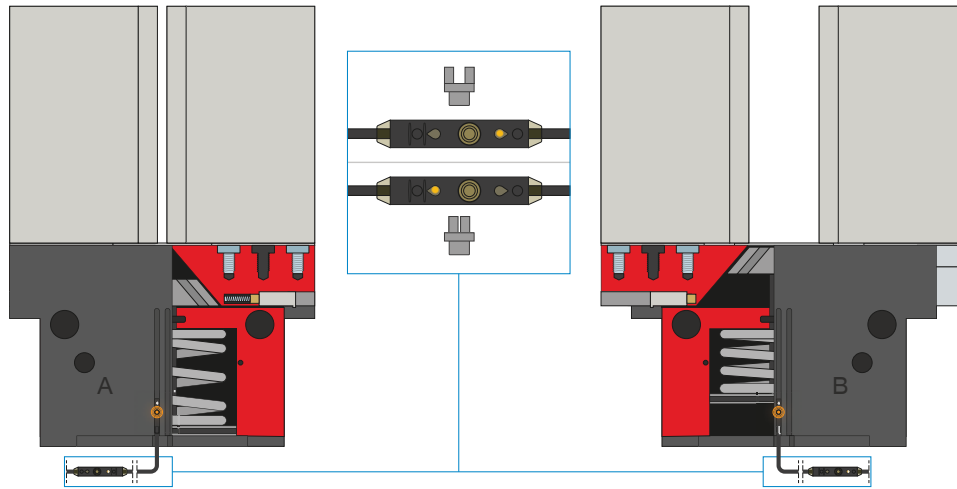
For non-contact sensing of the piston position

These sensors are installed in the C-groove of the gripper and detect the magnet attached to the piston of the gripper. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MFS01 is taller, but has a cable outlet that is offset at an angle of 90°. The variants are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.

2-JAW PARALLEL GRIPPERS

SERIES GP400 FUNCTIONAL DESCRIPTION

SENSORS

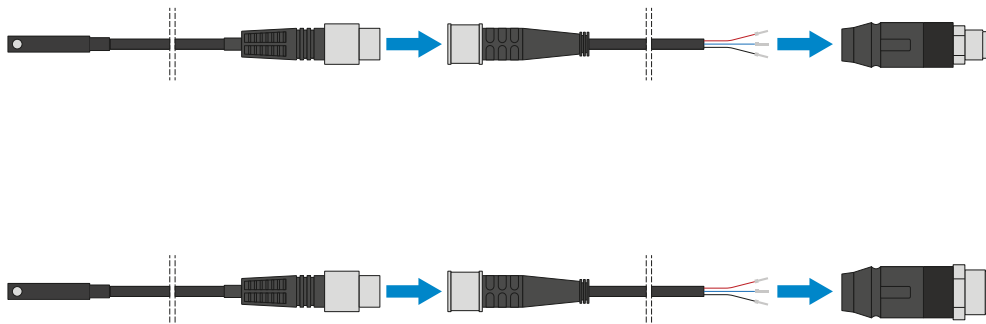


2-point magnetic field sensors – MFS

With two freely programmable switching points

Using the programming unit integrated in the cable, two switch points can be freely defined for this sensor. To do so, the sensor is clamped in the C-groove, the gripper approaches position one and the position is taught in using the teach button. Afterwards, the second position is approached with the gripper and programmed. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MSF01 is taller, but has a cable outlet that is offset at an angle of 90°. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.

CONNECTIONS / OTHER



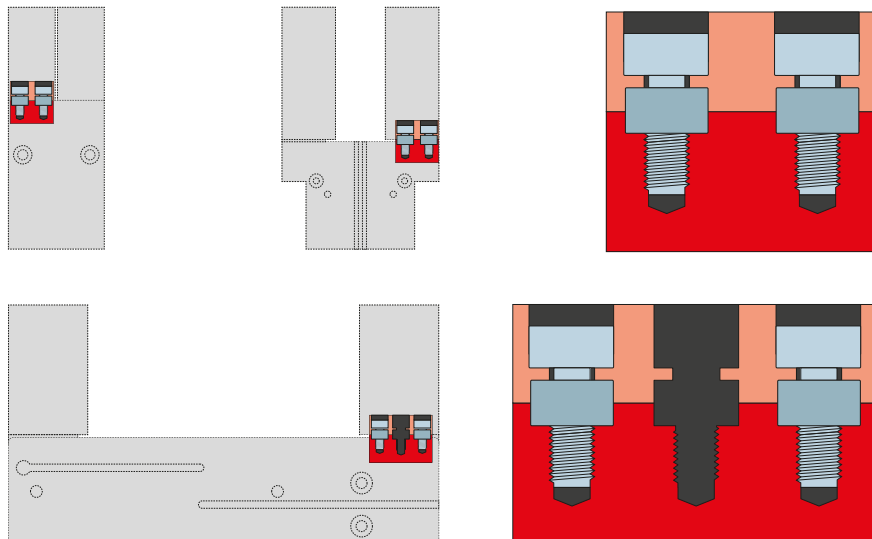
Plug-in connectors

For extending and fabricating the connection lines for the sensors

Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12.



CONNECTIONS / OTHER



Centering sleeves

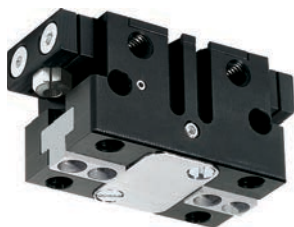
For defined position measurement of the gripper fingers

The centering sleeves are inserted into the fits of the gripper jaws to define the position of the gripper fingers. The centering sleeves are comparable to a pin connection.

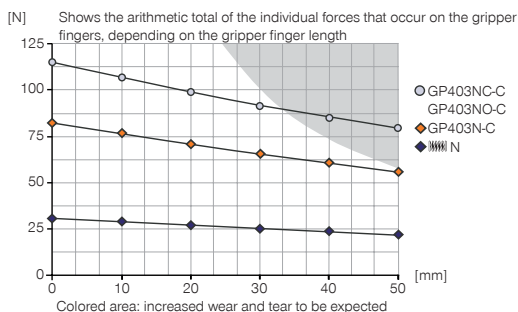
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP403

PRODUCT SPECIFICATIONS

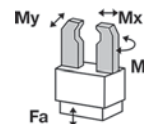


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	6
Mx [Nm]	9
My [Nm]	12
Fa [N]	500

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB3-03



4 [piece]
Centering Disc
DST40400

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB403
Universal jaw set aluminium



UB403ST
Universal jaw set steel



ENERGY SUPPLY



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ3-E2SK
Inductive Proximity Switch Cable 0,3 m - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



WVM5
Angled Fittings - Quick Connect Style



DEV04
Quick Exhaust Valve



DSV1-8
Pressure safety valve



CONNECTIONS / OTHER

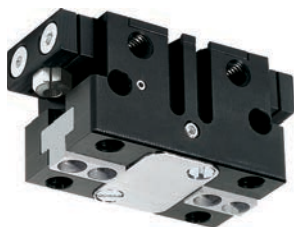


KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

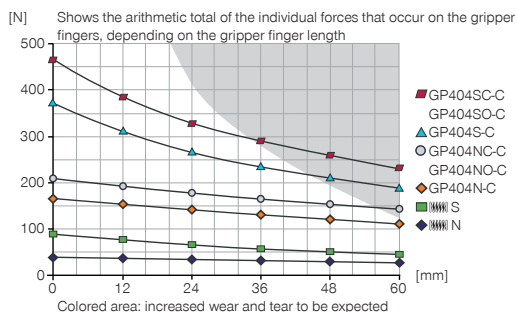
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP404

PRODUCT SPECIFICATIONS

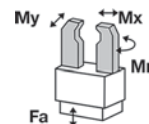


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	8
Mx [Nm]	15
My [Nm]	15
Fa [N]	700

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB3-08



4 [piece]
Centering Disc
DST40400

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB404
Universal jaw set aluminium



UB404ST
Universal jaw set steel



SENSORS



NJ3-E2SK
Inductive Proximity Switch Cable 0,3 m - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



WVM5
Angled Fittings - Quick Connect Style



DEV04
Quick Exhaust Valve



DSV1-8
Pressure safety valve



CONNECTIONS / OTHER



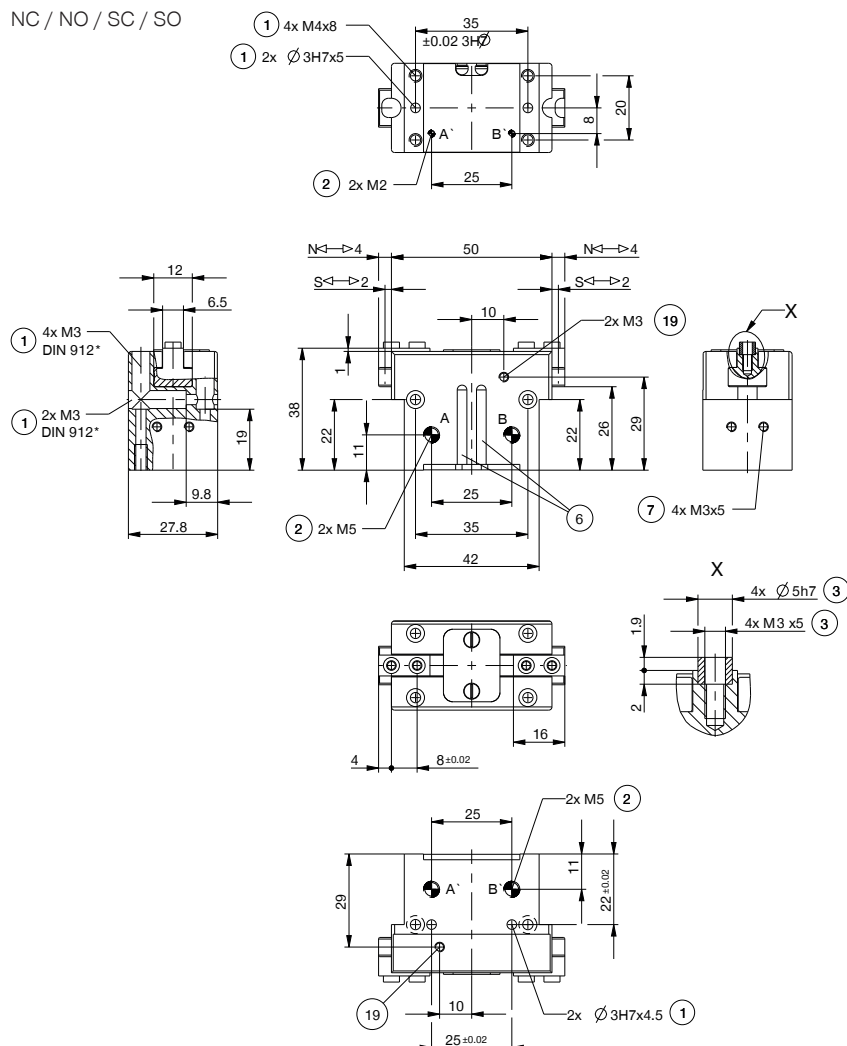
KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



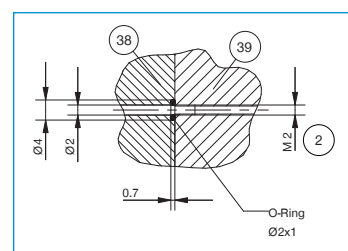
WFR01
Angle flange

Order no.	Technical data					
	GP404N-C	GP404NC-C	GP404NO-C	GP404S-C	GP404SC-C	GP404SO-C
Stroke per jaw [mm]	4	4	4	2	2	2
Gripping force in closing [N]	170	210		375	465	
Gripping force in opening [N]	185		225	410		500
Gripping force secured by spring min. [N]		40	40		90	90
Closing time [s]	0.02	0.015	0.025	0.02	0.015	0.025
Opening time [s]	0.02	0.025	0.015	0.02	0.025	0.015
Repetition accuracy +/- [mm]	0.01	0.01	0.01	0.01	0.01	0.01
Operating pressure min. [bar]	3	4	4	3	4	4
Operating pressure max. [bar]	8	8	8	8	8	8
Nominal operating pressure [bar]	6	6	6	6	6	6
Max. operating pressure for sealing air [bar]	0.5	0.5	0.5	0.5	0.5	0.5
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle [cm ³]	4.1	6.9	6.9	4.1	6.9	6.9
Weight [kg]	0.14	0.16	0.16	0.14	0.16	0.16

NC / NO / SC / SO

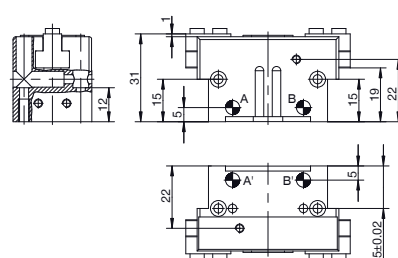


- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ①⑨ Air purge connection option
- ③⑧ Adapter
- ③⑨ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through

N / S



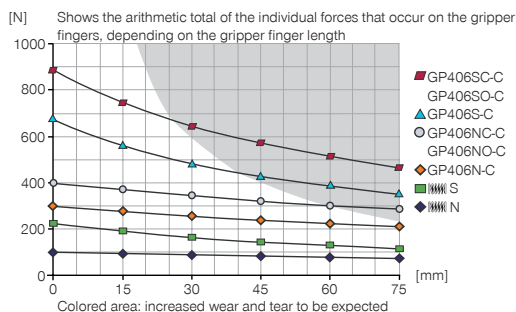
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP406

PRODUCT SPECIFICATIONS

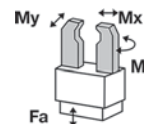


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	35
Mx [Nm]	50
My [Nm]	45
Fa [N]	1200

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K



4 [piece]
Centering Disc
DST40600

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB406
Universal jaw set aluminium



UB406ST
Universal jaw set steel



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



WVM5
Angled Fittings - Quick Connect Style



CONNECTIONS / OTHER



SENSORS



NJ8-E2S
Inductive proximity switch - Connector M8



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



WFR01
Angle flange

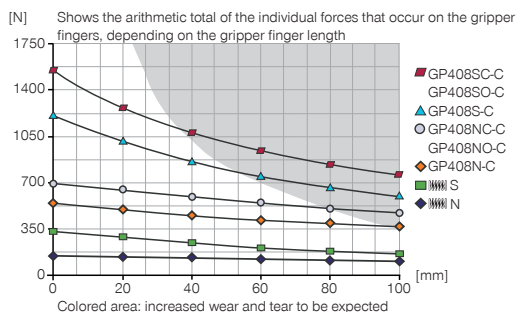
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP408

PRODUCT SPECIFICATIONS

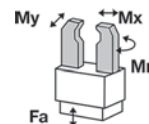


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	50
Mx [Nm]	80
My [Nm]	60
Fa [N]	1800

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K



4 [piece]
Centering Disc
DST40800

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB408
Universal jaw set aluminium



UB408ST
Universal jaw set steel



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



WVM5
Angled Fittings - Quick Connect Style



CONNECTIONS / OTHER



SENSORS



NJ8-E2S
Inductive proximity switch - Connector M8



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

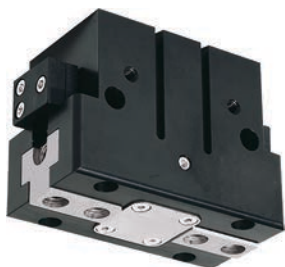


WFR02
Angle flange

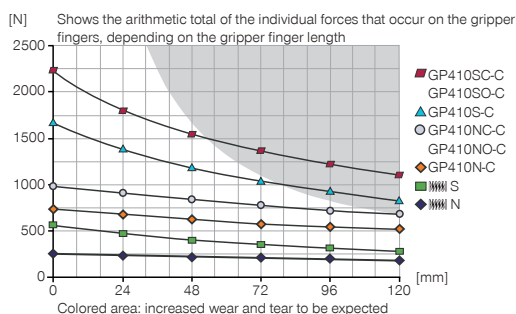
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP410

PRODUCT SPECIFICATIONS

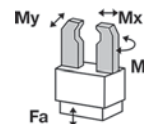


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	75
Mx [Nm]	100
My [Nm]	90
Fa [N]	2500

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K



4 [piece]
Centering Disc
DST41000

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB410
Universal jaw set aluminium



UB410ST
Universal jaw set steel



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



ENERGY SUPPLY



GV1-8X8
Straight Fittings - Quick Connect Style



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



SENSORS



KHA410-B-8
Alternate proximity bracket



NJ8-E2S
Inductive proximity switch - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



WFR02
Angle flange

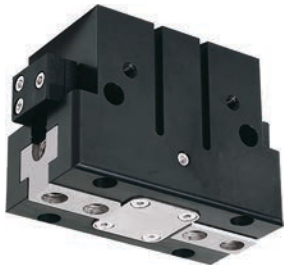
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP412

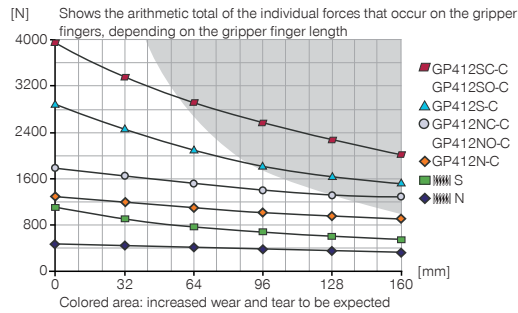
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Installation size GP412 / 2-Jaw Parallel Grippers / pneumatic / Grippers

PRODUCT SPECIFICATIONS

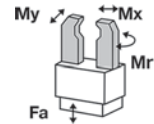


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	100
Mx [Nm]	120
My [Nm]	120
Fa [N]	3200

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K



4 [piece]
Centering Disc
DST41000

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB412
Universal jaw set aluminium



UB412ST
Universal jaw set steel



SENSORS



KHA412-B-8
Alternate proximity bracket



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



ENERGY SUPPLY



GV1-8X8
Straight Fittings - Quick Connect Style



WV1-8X8
Angled Fittings - Quick Connect Style



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



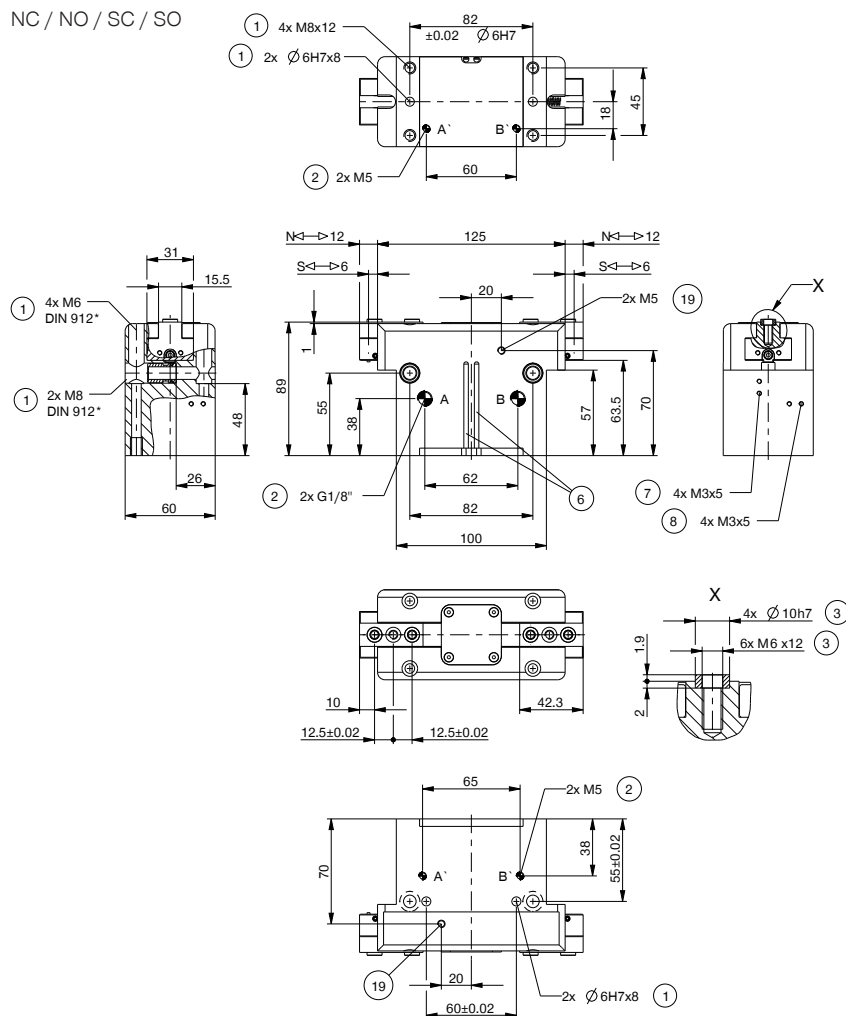
CONNECTIONS / OTHER



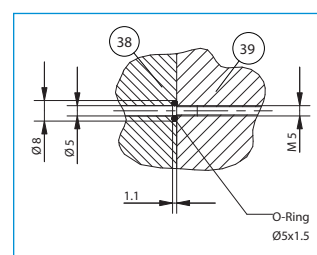
KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

Order no.	Technical data					
	GP412N-C	GP412NC-C	GP412NO-C	GP412S-C	GP412SC-C	GP412SO-C
Stroke per jaw [mm]	12	12	12	6	6	6
Gripping force in closing [N]	1290	1780		2890	3960	
Gripping force in opening [N]	1370		1850	3050		4130
Gripping force secured by spring min. [N]		490	490		1080	1080
Closing time [s]	0.1	0.08	0.12	0.1	0.08	0.12
Opening time [s]	0.1	0.12	0.08	0.1	0.12	0.08
Repetition accuracy +/- [mm]	0.01	0.01	0.01	0.01	0.01	0.01
Operating pressure min. [bar]	3	4	4	3	4	4
Operating pressure max. [bar]	8	8	8	8	8	8
Nominal operating pressure [bar]	6	6	6	6	6	6
Max. operating pressure for sealing air [bar]	0.5	0.5	0.5	0.5	0.5	0.5
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle [cm³]	80	148	148	80	148	148
Weight [kg]	1.5	1.78	1.78	1.5	1.78	1.78

NC / NO / SC / SO

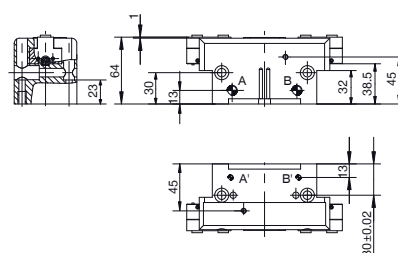


- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ⑧ Fixing clamping bracket (KHA)
- ⑨ Air purge connection option
- ③⑧ Adapter
- ③⑨ Gripper
- ③ A Air connection (close)
- ③ B Air connection (open)
- ③ A' Air connection, alternative (close)
- ③ B' Air connection, alternative (open)



Hoseless air feed-through

N / S



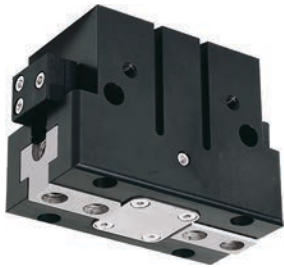
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP416

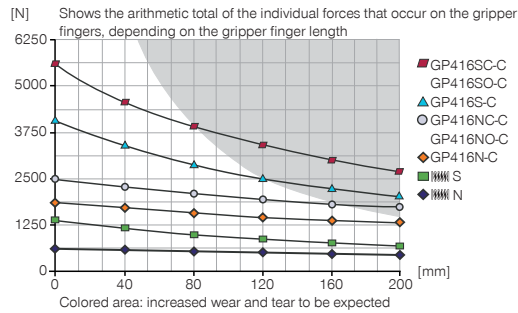
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Installation size GP416 / 2-Jaw Parallel Grippers / pneumatic / Grippers

PRODUCT SPECIFICATIONS

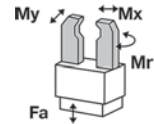


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	140
Mx [Nm]	160
My [Nm]	180
Fa [N]	5000

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K



4 [piece]
Centering Disc
DST41600

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB416
Universal jaw set aluminium



UB416ST
Universal jaw set steel



SENSORS



KHA416-B-8
Alternate proximity bracket



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



ENERGY SUPPLY



GV1-8X8
Straight Fittings - Quick Connect Style



WV1-8X8
Angled Fittings - Quick Connect Style



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



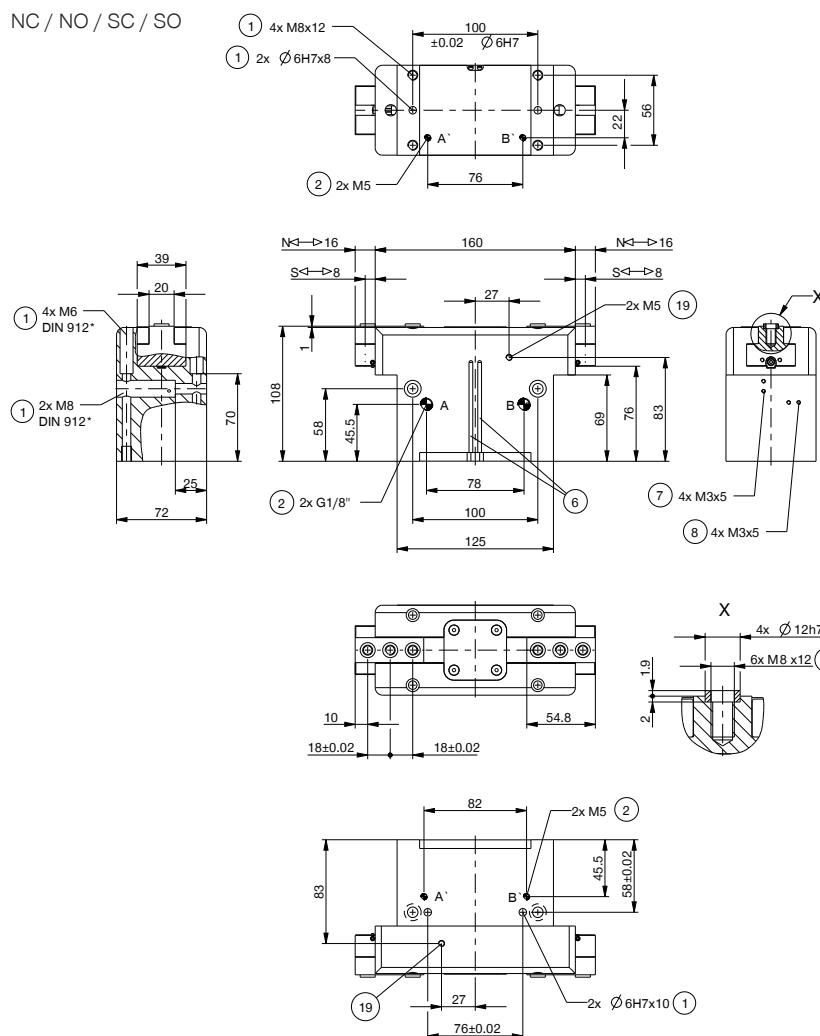
CONNECTIONS / OTHER



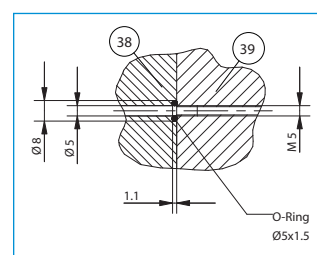
KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

Order no.	Technical data					
	GP416N-C	GP416NC-C	GP416NO-C	GP416S-C	GP416SC-C	GP416SO-C
Stroke per jaw [mm]	16	16	16	8	8	8
Gripping force in closing [N]	1860	2490		4160	5560	
Gripping force in opening [N]	1960		2590	4390		5780
Gripping force secured by spring min. [N]		630	630		1400	1400
Closing time [s]	0.2	0.15	0.25	0.2	0.15	0.25
Opening time [s]	0.2	0.25	0.15	0.2	0.25	0.15
Repetition accuracy +/- [mm]	0.01	0.01	0.01	0.01	0.01	0.01
Operating pressure min. [bar]	3	4	4	3	4	4
Operating pressure max. [bar]	8	8	8	8	8	8
Nominal operating pressure [bar]	6	6	6	6	6	6
Max. operating pressure for sealing air [bar]	0.5	0.5	0.5	0.5	0.5	0.5
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle [cm³]	268	477	477	268	477	477
Weight [kg]	2.9	3.4	3.4	2.9	3.4	3.4

NC / NO / SC / SO

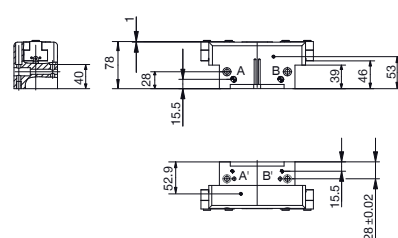


- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ⑧ Fixing clamping bracket (KHA)
- ⑨ Air purge connection option
- ⑩ Adapter
- ⑪ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through

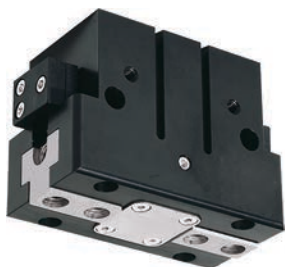
N / S



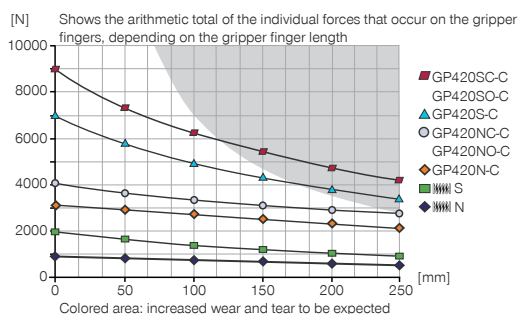
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP420

PRODUCT SPECIFICATIONS

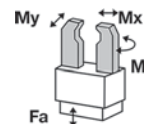


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	170
Mx [Nm]	180
My [Nm]	220
Fa [N]	7000

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K



4 [piece]
Centering Disc
DST42000

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB420
Universal jaw set aluminium



UB420ST
Universal jaw set steel



SENSORS



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



ENERGY SUPPLY



GV1-4X8
Straight Fittings - Quick Connect Style



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



SENSORS

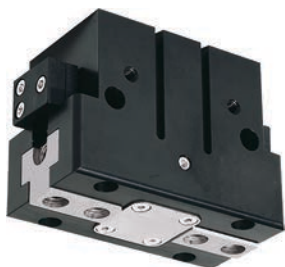


KHA420-B-8
Alternate proximity bracket

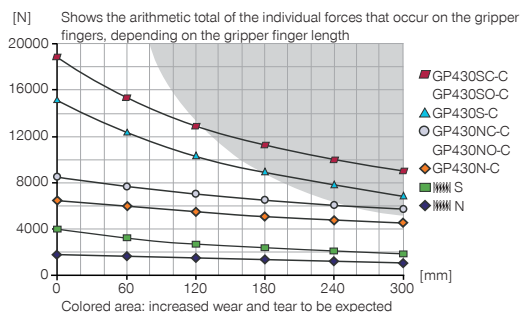
2-JAW PARALLEL GRIPPERS

INSTALLATION SIZE GP430

PRODUCT SPECIFICATIONS

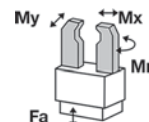


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	200
Mx [Nm]	275
My [Nm]	300
Fa [N]	9000

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K



4 [piece]
Centering Disc
DST43000

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB430
Universal jaw set aluminium



UB430ST
Universal jaw set steel



SENSORS



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



GV1-4X8
Straight Fittings - Quick Connect Style



MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



DSV1-8
Pressure safety valve



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



DSV1-8E
Pressure safety valve with quick exhaust



CONNECTIONS / OTHER



SENSORS



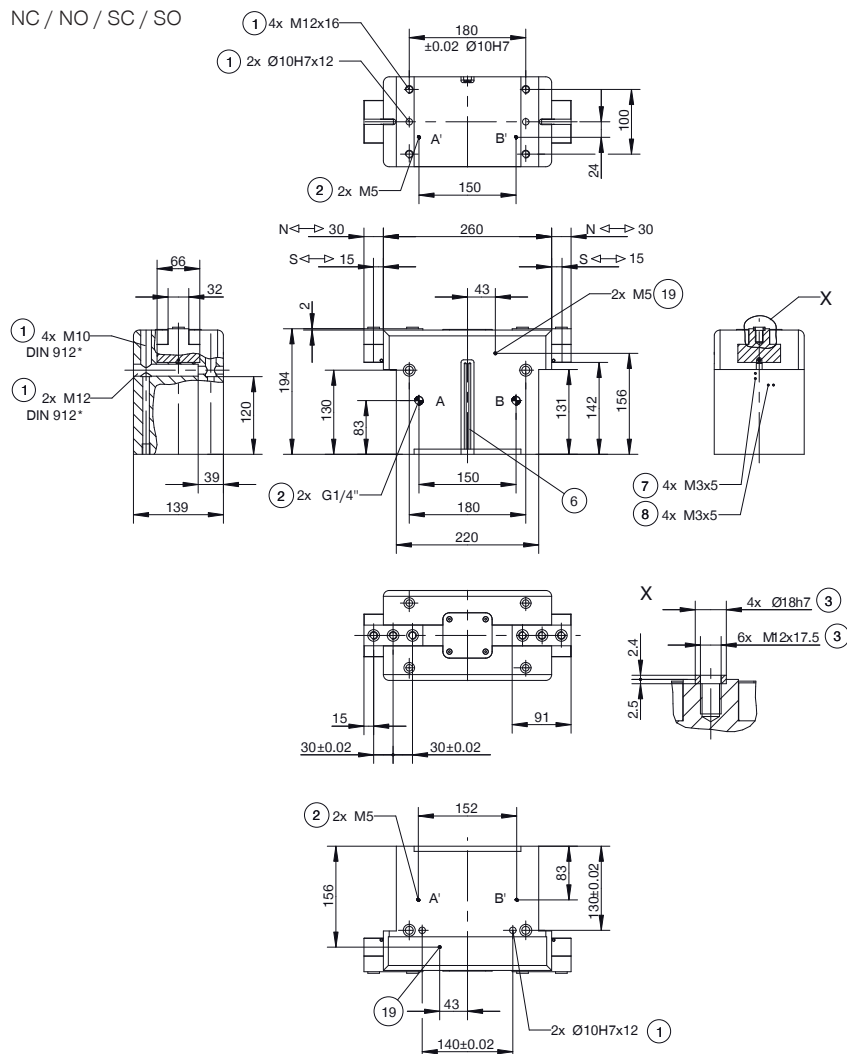
KHA430-B-8
Alternate proximity bracket



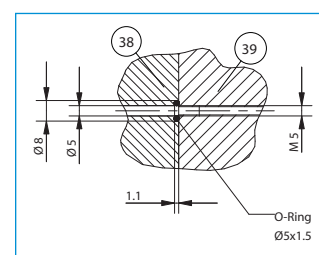
KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

Order no.	Technical data					
	GP430N-C	GP430NC-C	GP430NO-C	GP430S-C	GP430SC-C	GP430SO-C
Stroke per jaw [mm]	30	30	30	15	15	15
Gripping force in closing [N]	6675	8480		14900	18930	
Gripping force in opening [N]	6830		8640	15250		19275
Gripping force secured by spring min. [N]		1800	1800		4030	4030
Closing time [s]	0.4	0.4	0.8	0.4	0.4	0.8
Opening time [s]	0.4	0.8	0.4	0.4	0.8	0.4
Repetition accuracy +/- [mm]	0.04	0.04	0.04	0.04	0.04	0.04
Operating pressure min. [bar]	3	4	4	3	4	4
Operating pressure max. [bar]	8	8	8	8	8	8
Nominal operating pressure [bar]	6	6	6	6	6	6
Max. operating pressure for sealing air [bar]	0.5	0.5	0.5	0.5	0.5	0.5
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle [cm³]	980	1850	1850	980	1850	1850
Weight [kg]	14	18.9	18.9	14	18.9	18.9

NC / NO / SC / SO

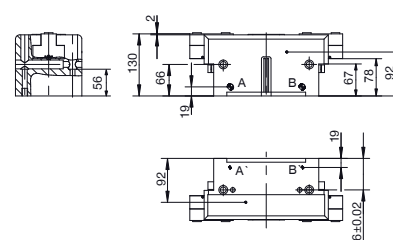


- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ⑧ Fixing clamping bracket (KHA)
- ⑨ Air purge connection option
- ③⑧ Adapter
- ③⑨ Gripper
- ③ A Air connection (close)
- ③ B Air connection (open)
- ③ A' Air connection, alternative (close)
- ③ B' Air connection, alternative (open)



Hoseless air feed-through

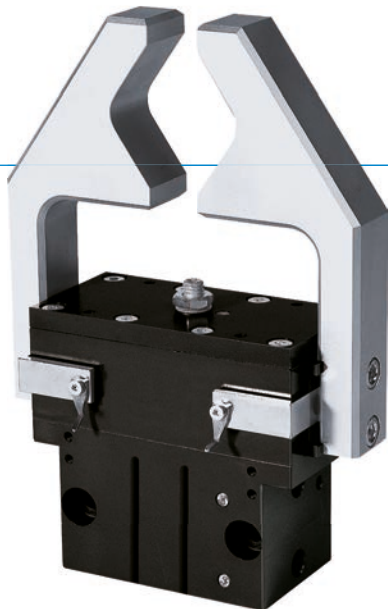
N / S



2-JAW PARALLEL GRIPPERS

SERIES GP200

▶ PRODUCT ADVANTAGES



“The variable”

▶ Smooth stroke configuration

An adjusting screw allows you to adjust the stroke to your specific application








▶ Proven technology

We have more than 20 years of proven reliability, which ensures uninterrupted production for you

▶ Dirt protection

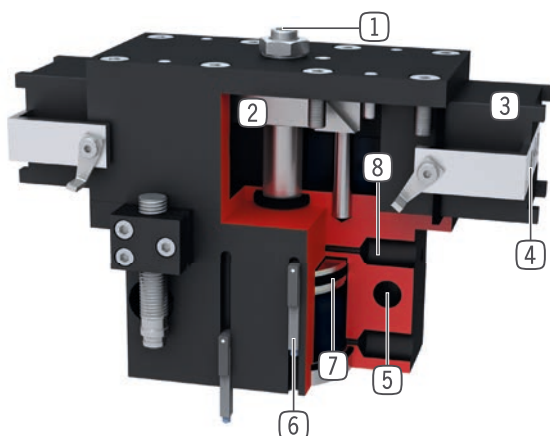
Using the scrapers on the guides, you can reliably use the gripper even under the harshest conditions

▶ SERIES CHARACTERISTICS

Installation size	Version			
GP2XX	-	-99	S	S-99
 Spring closing C	•		•	
 High-strength S			•	•
 10 million maintenance-free cycles (max.)	•	•	•	•
 Inductive sensor	•	•	•	•
 Magnetic field sensor	•	•	•	•
 Purged air	•	•	•	•
 IP40	•	•	•	•



► BENEFITS IN DETAIL



- ① **Stroke adjustment**
 - infinitely adjustable in „open“ movement
 - adjusting screw in delivery
- ② **Wedge hook mechanism**
 - synchronized the movement of the gripper jaws
 - high force transfer
- ③ **Square guide**
 - high forces and moments capacity
- ④ **Gripper jaw**
 - individual gripper finger mounting
- ⑤ **Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- ⑥ **Sensing slot**
 - mounting and positioning of magnetic field sensors
- ⑦ **Drive**
 - double-acting pneumatic cylinder
- ⑧ **Energy supply**
 - possible from several sides

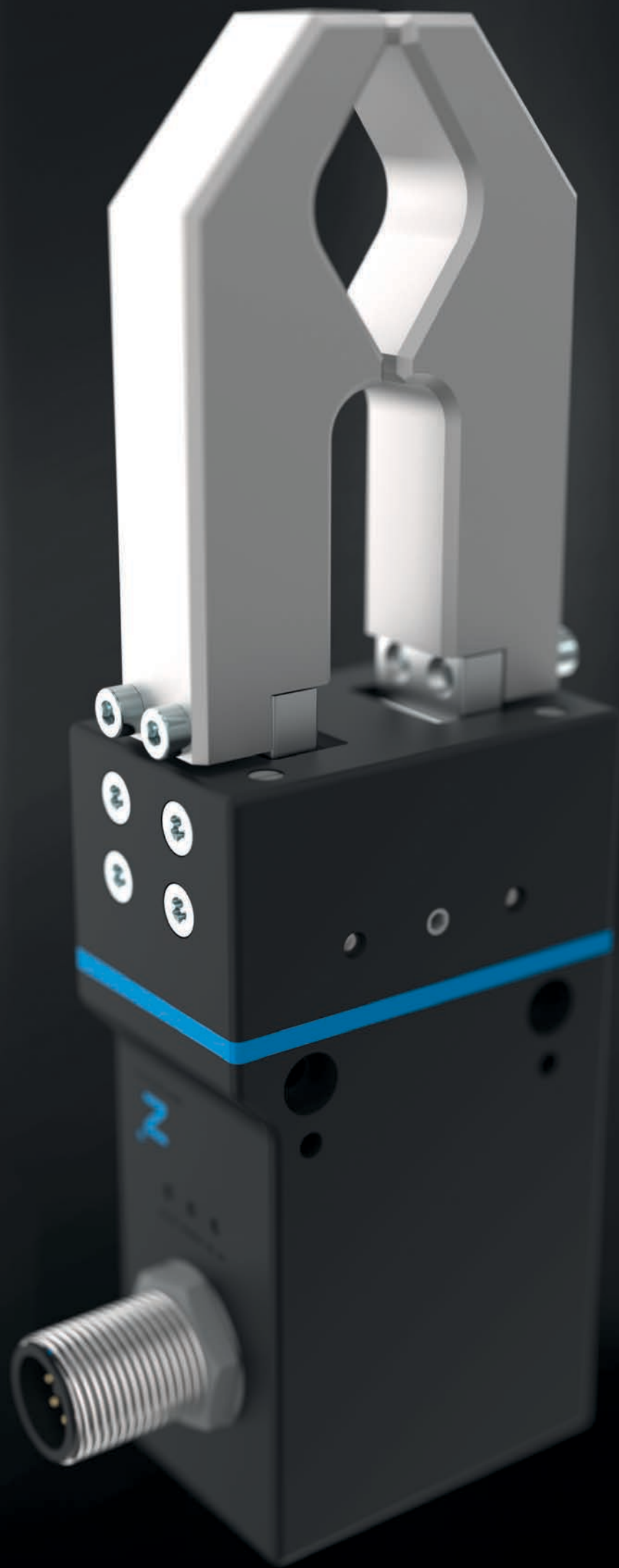
► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
GP224	6 - 12	170 - 335	0,33	IP40
GP240	8 - 20	510 - 1290	1,2	IP40
GP260	10 - 30	800 - 2480	2,9	IP40
GP280	15 - 40	1690 - 4500	8,3	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE






All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



2-JAW PARALLEL GRIPPERS

OVERVIEW OF SERIES



 ELECTRICAL		
	Series GEP9000	80
	Series GEP1400	82

2-JAW PARALLEL GRIPPERS

SERIES GEP9000

1

Series GEP9000 / 2-Jaw Parallel Grippers / electrical / Grippers

▶ PRODUCT ADVANTAGES



“The quickest”

▶ Plug and play

Reduce programming and assembly costs to a minimum with the integrated control system and the 3 position query








▶ 250 cycles per minute

No more worrying about cycle times: There is nothing faster on the market!

▶ Failure-free continuous operation

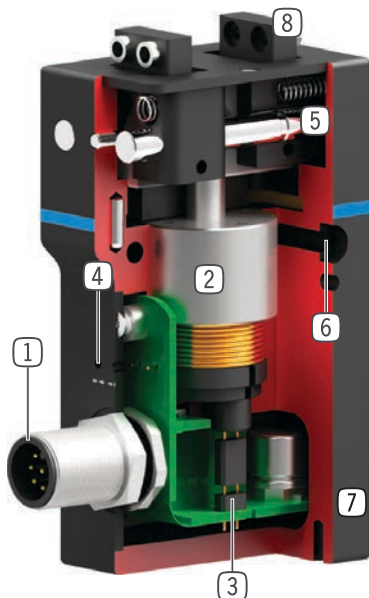
Our “Made in Germany” quality guarantees up to 30 million maintenance-free gripping cycles

▶ SERIES CHARACTERISTICS

Installation size		Version		
GEP900X		NC	NO	NCV
 I/O	Digital I/O	•	•	•
 Spring closing C		•		•
 CV	Spring closing / Power-assisted Version			•
 Spring opening O			•	
 30 Mio	30 million maintenance-free cycles (max.)	•	•	•
 Integrated sensing		•	•	•
 IP 40	IP40	•	•	•



► BENEFITS IN DETAIL



- ① Energy supply**
 - standardized interface M12 round connector
- ② Drive**
 - via Pot magnet and coil bobbin according to the coil system principle
 - energy consumption only at opening and closing (<25ms)
- ③ Position sensing**
 - integrated Hallsensor
 - 3 positions monitorable
- ④ Status control**
 - optical LED position display
 - gripper opened, gripper closed, "workpiece available"
- ⑤ Wedge hook mechanism**
 - self locking mechanism at stop position
- ⑥ Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- ⑦ Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ⑧ Gripper jaw**
 - from high-strength, hard-anodized aluminium
 - removable centering sleeves for individual gripper finger mounting

► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
GEP9002	2	11 - 30	0,25 - 0,34	IP40
GEP9004	4	14 - 50	0,57 - 0,79	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

2-JAW PARALLEL GRIPPERS

SERIES GEP1400

▶ PRODUCT ADVANTAGES



“The robust”

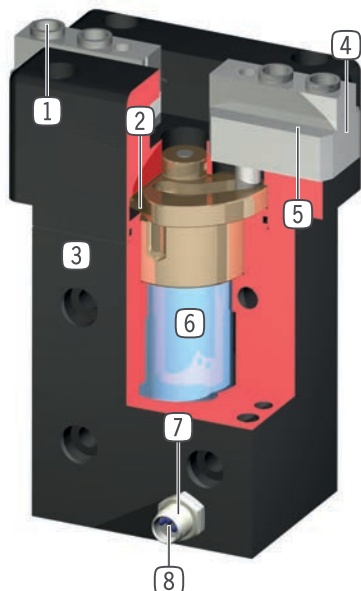
- ▶ **Proven T slot guide**
This established and proven guiding technology stands for the highest process reliability like no other
- ▶ **Integrated position sensing**
You can detect the gripper status safely via the motor current using your control system
- ▶ **The simplest activation**
The included control unit is controlled easily via plus and minus buttons, while you can optionally adjust the gripping force using the potentiometer

▶ SERIES CHARACTERISTICS

Installation size		Version		
GEP140X			C	O
I/O	Digital I/O	•	•	•
	External gripping		•	
	Internal gripping			•
	5 million maintenance-free cycles (max.)	•	•	•
IP 52	IP52	•	•	•



► BENEFITS IN DETAIL



- ① **Removable centering sleeves**
 - quick and economical positioning of the gripper fingers
- ② **Positively driven curve disc**
 - synchronized the movement of the gripper jaws
 - high force transfer
 - rapid stroke and force stroke (version with 6 mm stroke per jaw)
- ③ **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ④ **Gripper jaw**
 - hardened steel
 - individual gripper finger mounting
- ⑤ **Guide**
 - precise T-Slot guide for high forces and moments capacity
- ⑥ **Drive**
 - electric drive by 24 VDC step motor
- ⑦ **Position sensing**
 - measured at the end of stroke via power increase on the motor
- ⑧ **Energy supply**
 - standardized interface M8 round plug
 - signal control line (use only cable without diode)

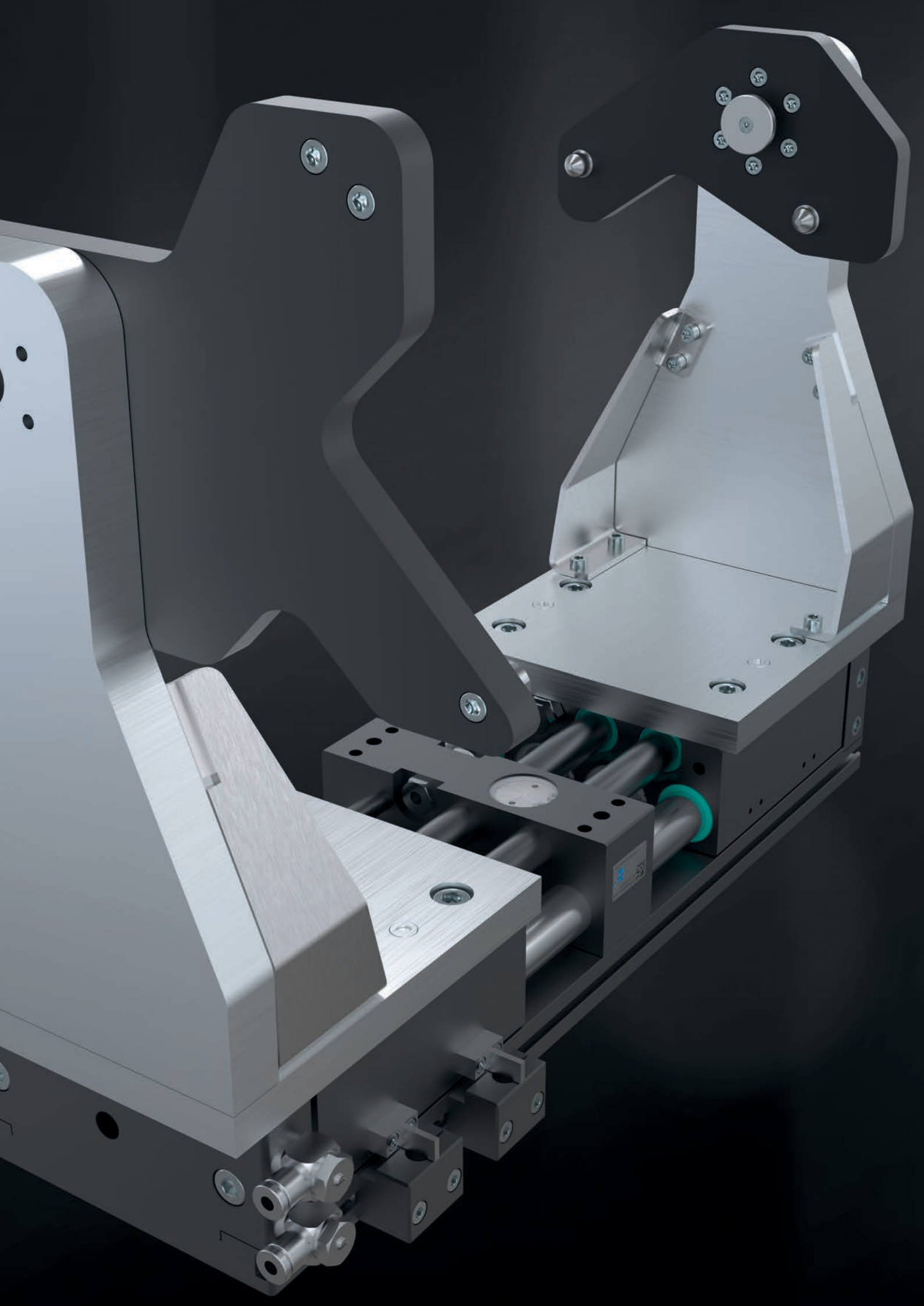
► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
GEP1402	2	140	0.3	IP52
GEP1406	6	350	1	IP52

► FURTHER INFORMATION IS AVAILABLE ONLINE






All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



2-JAW PARALLEL GRIPPERS WITH LONG STROKE

OVERVIEW OF SERIES

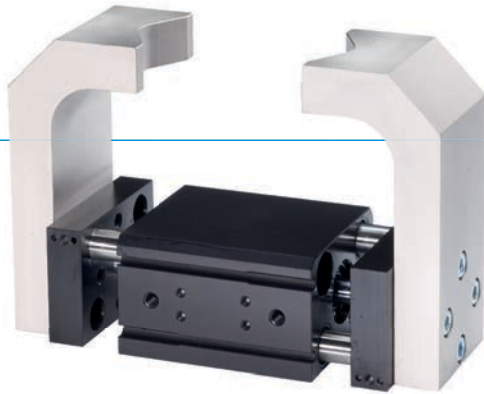


	PNEUMATIC		
	Series MGH8000		86
	Series GPH8000		110

2-JAW PARALLEL GRIPPERS WITH LONG STROKE

SERIES MGH8000

▶ PRODUCT ADVANTAGES



“The compact”

▶ Reduced interference contours

Low-profile designs and versatile screw connection options enable simple integration into your design





▶ Dirt protection

Using the scrapers on the guides, you can reliably use the gripper even under the harshest conditions

▶ Failure-free continuous operation

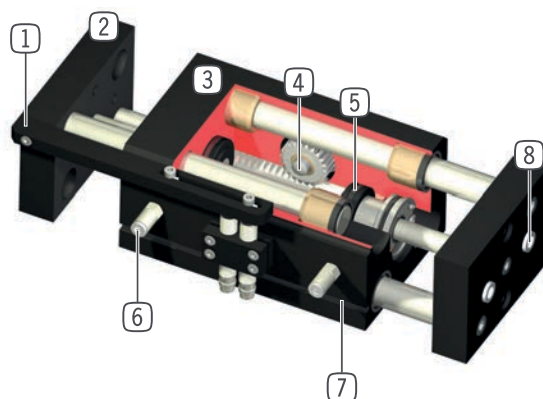
Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free cycles

▶ SERIES CHARACTERISTICS

Installation size	
MGH80XX	
 10 million maintenance-free cycles (max.)	●
 Inductive sensor	●
 Magnetic field sensor	●
 IP54	●



► BENEFITS IN DETAIL



- ① **Attachment kit (cam switch and clamping block)**
- for sensing position by means of proximity switch (optional feature)
- ② **Gripper jaw**
- individual gripper finger mounting
- ③ **Robust, lightweight housing**
- Hard-coated aluminum alloy
- ④ **Synchronization**
- via rack and pinion
- ⑤ **Drive**
- two double-acting pneumatic cylinders
- ⑥ **Energy supply**
- possible from several sides
- ⑦ **Integrated groove**
- mounting and positioning of magnetic field sensors
- ⑧ **Removable centering sleeves**
- quick and economical positioning of the gripper fingers

► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
MGH8000	10 - 20	60 - 90	0,35 - 0,5	IP54
MGH8100	10 - 20	180 - 220	0,7 - 0,85	IP54
MGH8200	30 - 40	500 - 570	2,4 - 2,9	IP54
MGH8300	50 - 100	800 - 910	5,1 - 7,3	IP54

► FURTHER INFORMATION IS AVAILABLE ONLINE

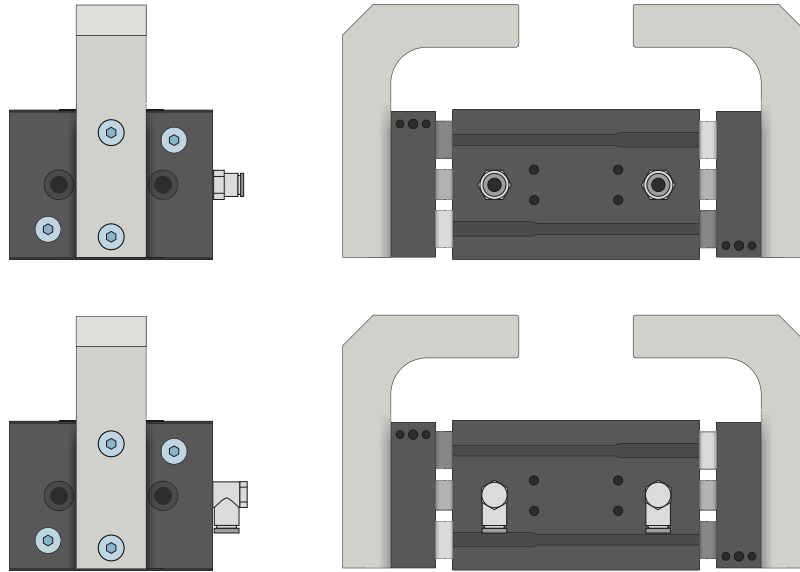


All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

2-JAW PARALLEL GRIPPERS WITH LONG STROKE

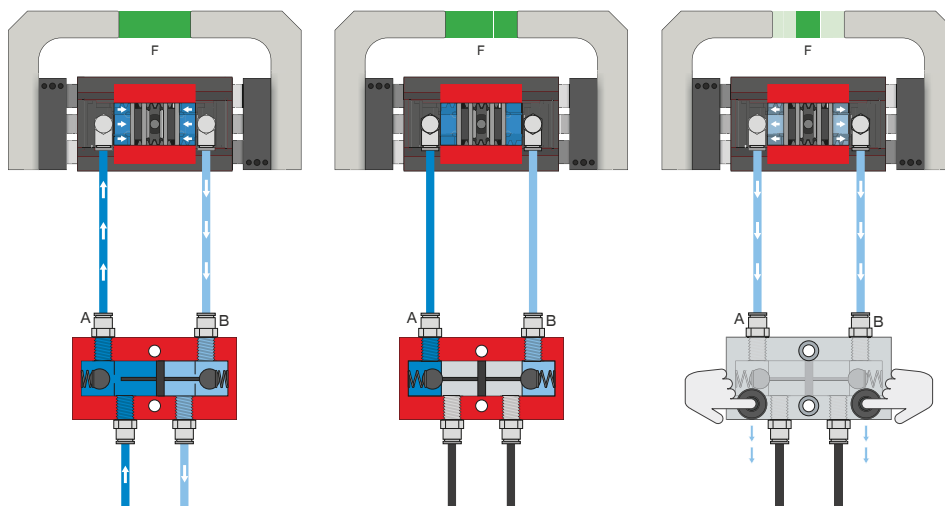
SERIES MGH8000 FUNCTIONAL DESCRIPTION

ENERGY SUPPLY



Pneumatic threaded connections

Available in straight and angled design. Can be chosen freely depending on the space conditions or installation situation.



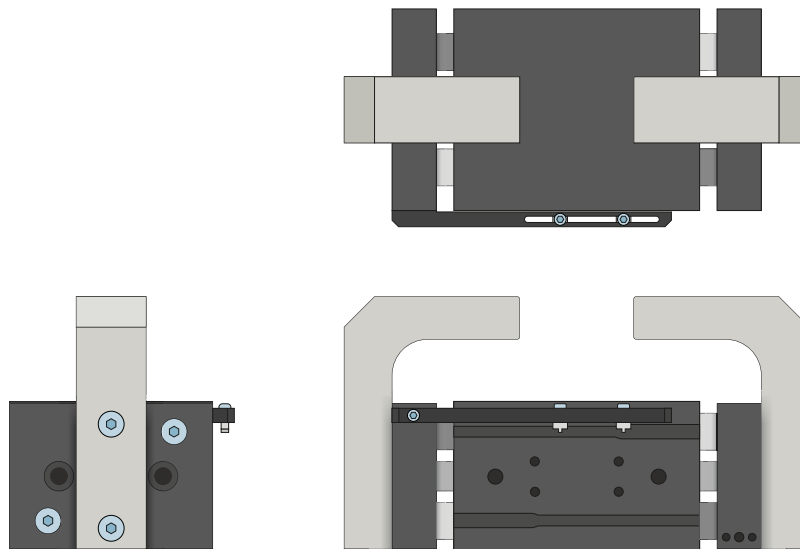
Pressure safety valve – DSV

Ensures safe retention of force and position if the system pressure drops

The integrated double check valve, which can be unlocked, retains the system pressure of the gripper in case of EMERGENCY STOP. To ensure the function, the valve must be installed as close to the gripper's air connection as possible. In variant E, two pushbuttons are installed that allow for controlled bleeding of the gripper.

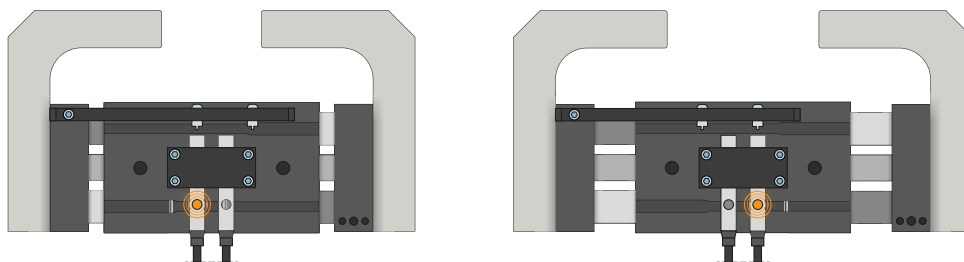


SENSORS



Attachment kit

The attachment kit is installed on the gripper using the fastening material included in the scope of delivery. The attachment kit enables sensing of the gripper positions via inductive proximity switches.



Inductive sensors – NJ

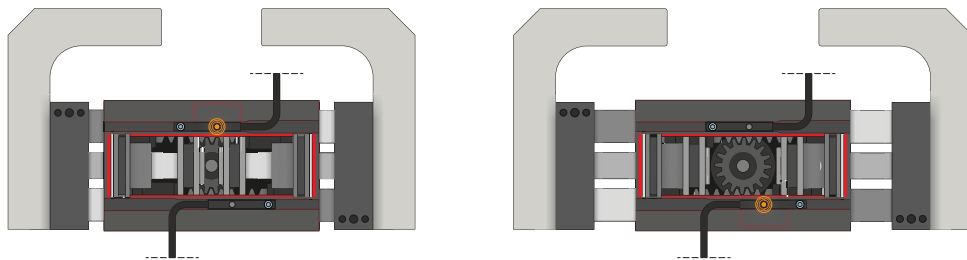
The sensor is guided into the mounting block and fixed in place according to its switching distance. Tuning to the desired position then takes place by adjusting the cam switch. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector, as well as with direct plug orientation.

2-JAW PARALLEL GRIPPERS WITH LONG STROKE

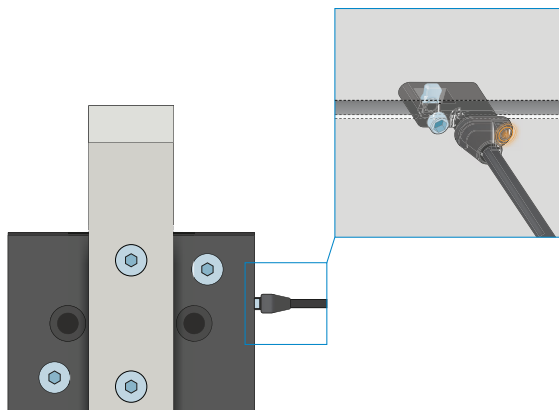
SERIES MGH8000 FUNCTIONAL DESCRIPTION

SENSORS

MFS02



MFS01



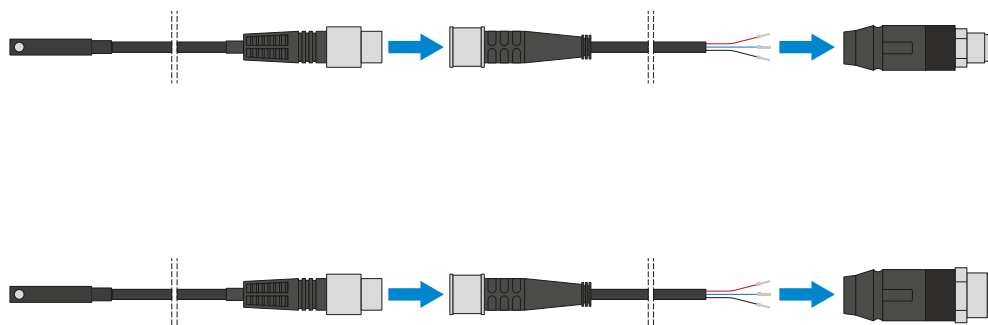
1-point magnetic field sensors – MFS

For non-contact sensing of the piston position

These sensors are installed in the C-groove of the gripper and detect the magnet attached to the piston of the gripper. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MFS01 is taller, but has a cable outlet that is offset at an angle of 90°. The variants are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.



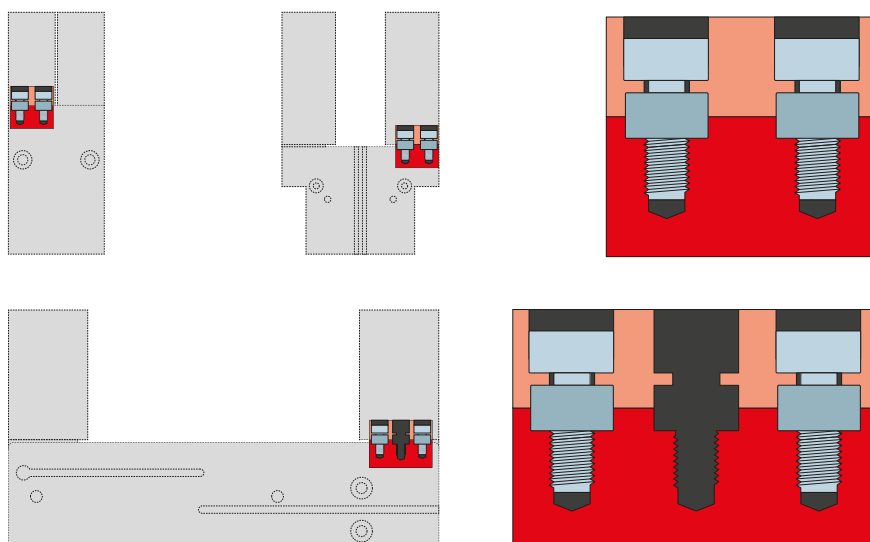
CONNECTIONS / OTHER



Plug-in connectors

For extending and fabricating the connection lines for the sensors

Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12.



Centering sleeves

For defined position measurement of the gripper fingers

The centering sleeves are inserted into the fits of the gripper jaws to define the position of the gripper fingers. The centering sleeves are comparable to a pin connection.

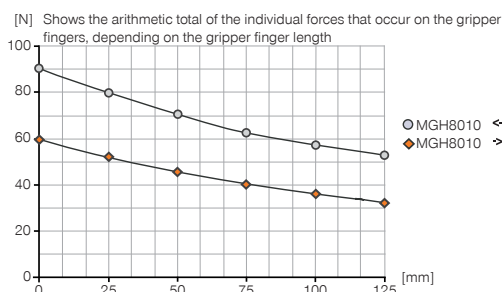
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE MGH8010

PRODUCT SPECIFICATIONS

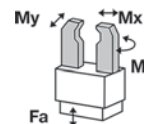


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	12
Mx [Nm]	12
My [Nm]	8
Fa [N]	260

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST40400

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



SENSORS



ANS0027
Attachment Kit for Inductive Proximity Switch



NJ4-E2-01
Inductive proximity switch - Cable 5 m



NJ4-E2SK-01
Inductive Proximity Switch Cable 0,3 m - Connector M8



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

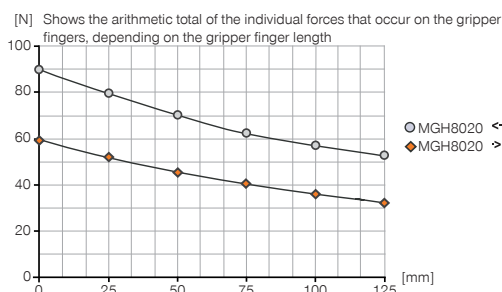
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE MGH8020

PRODUCT SPECIFICATIONS

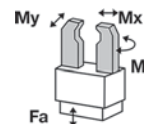


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	12
Mx [Nm]	12
My [Nm]	8
Fa [N]	260

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST40400

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



ANS0028
Attachment Kit for Inductive Proximity Switch



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



NJ4-E2-01
Inductive proximity switch - Cable 5 m



CONNECTIONS / OTHER



NJ4-E2SK-01
Inductive Proximity Switch Cable 0,3 m - Connector M8



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



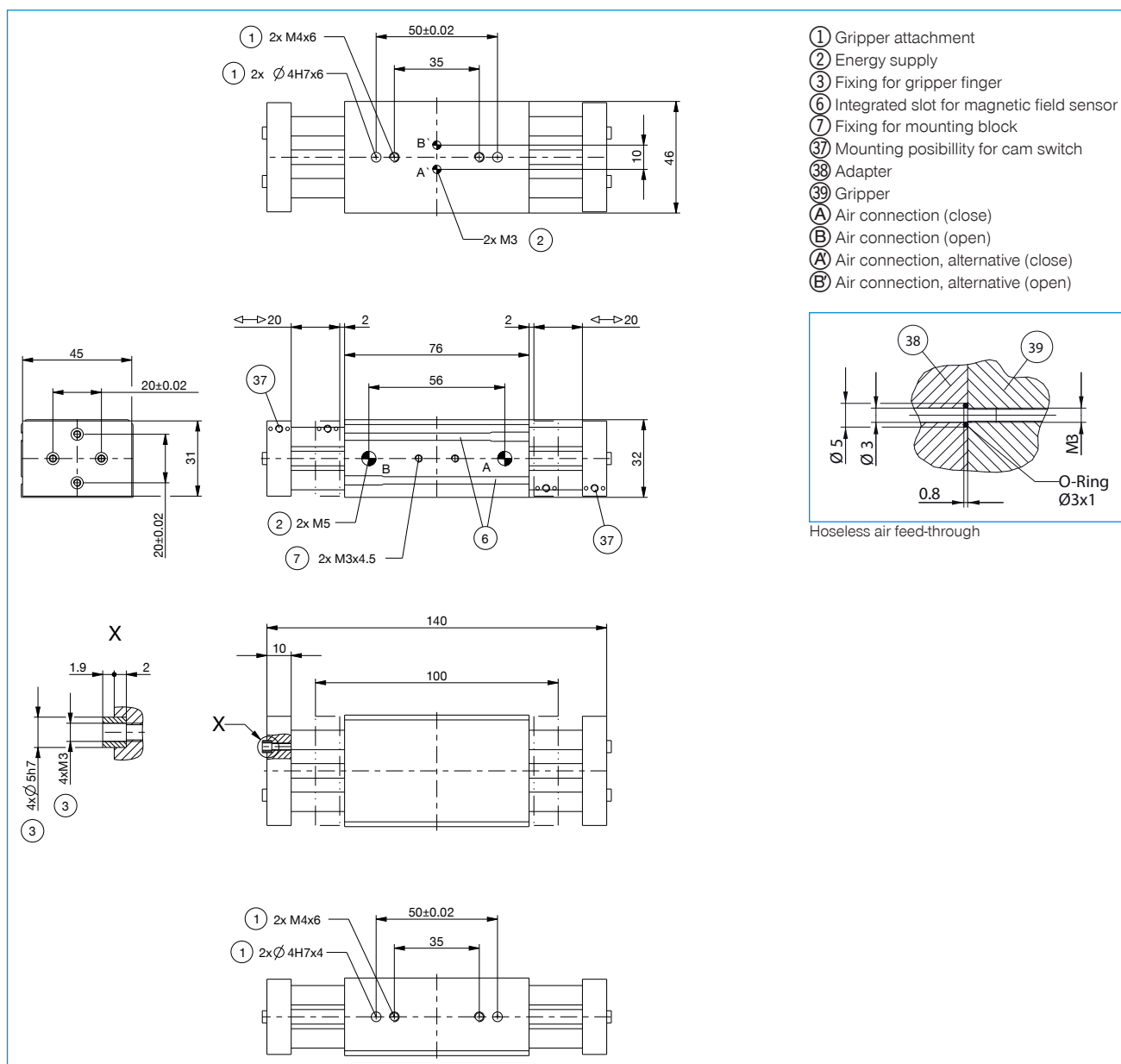
MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



Order no.	MGH8020
Stroke per jaw [mm]	20
Gripping force in closing [N]	60
Gripping force in opening [N]	90
Closing time [s]	0.09
Opening time [s]	0.05
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	8
Weight [kg]	0.5



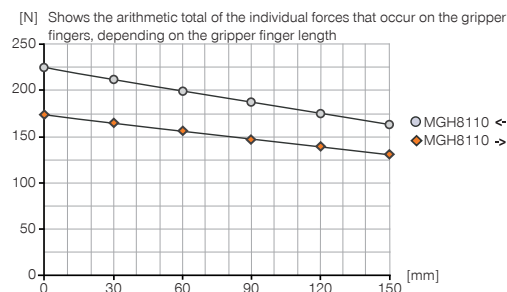
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE MGH8110

PRODUCT SPECIFICATIONS

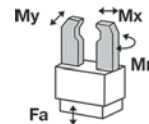


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	20
Mx [Nm]	20
My [Nm]	18
Fa [N]	435

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST40800

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



SENSORS



ANS0020
Attachment Kit for Inductive Proximity Switch



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER

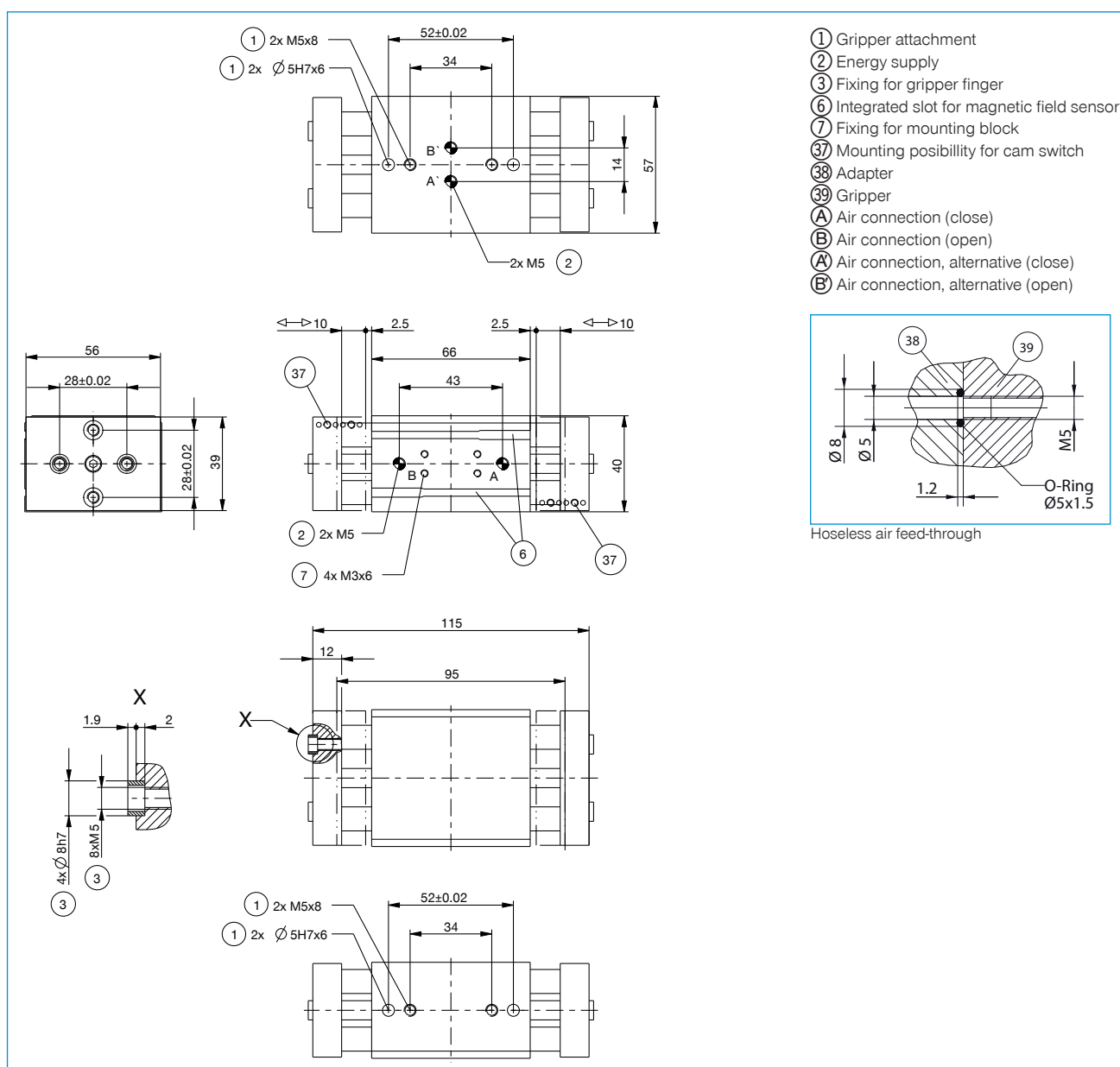


KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

Order no.	MGH8110
Stroke per jaw [mm]	10
Gripping force in closing [N]	180
Gripping force in opening [N]	220
Closing time [s]	0.08
Opening time [s]	0.04
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm ³]	9.2
Weight [kg]	0.7



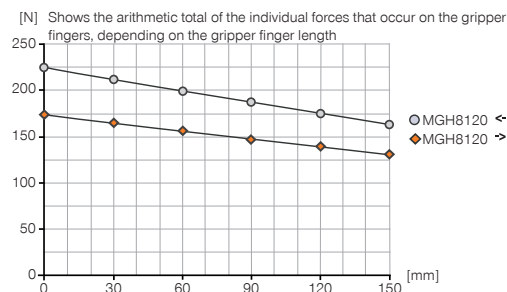
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE MGH8120

PRODUCT SPECIFICATIONS

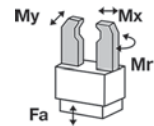


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	20
Mx [Nm]	20
My [Nm]	18
Fa [N]	435

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST40800

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



SENSORS



ANS0021
Attachment Kit for Inductive Proximity Switch



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

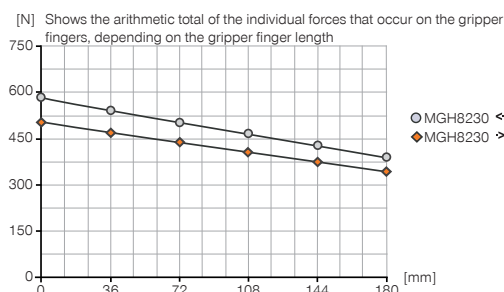
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE MGH8230

PRODUCT SPECIFICATIONS

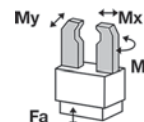


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	64
Mx [Nm]	64
My [Nm]	45
Fa [N]	760

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST41000

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



SENSORS



ANS0022
Attachment Kit for Inductive Proximity Switch



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



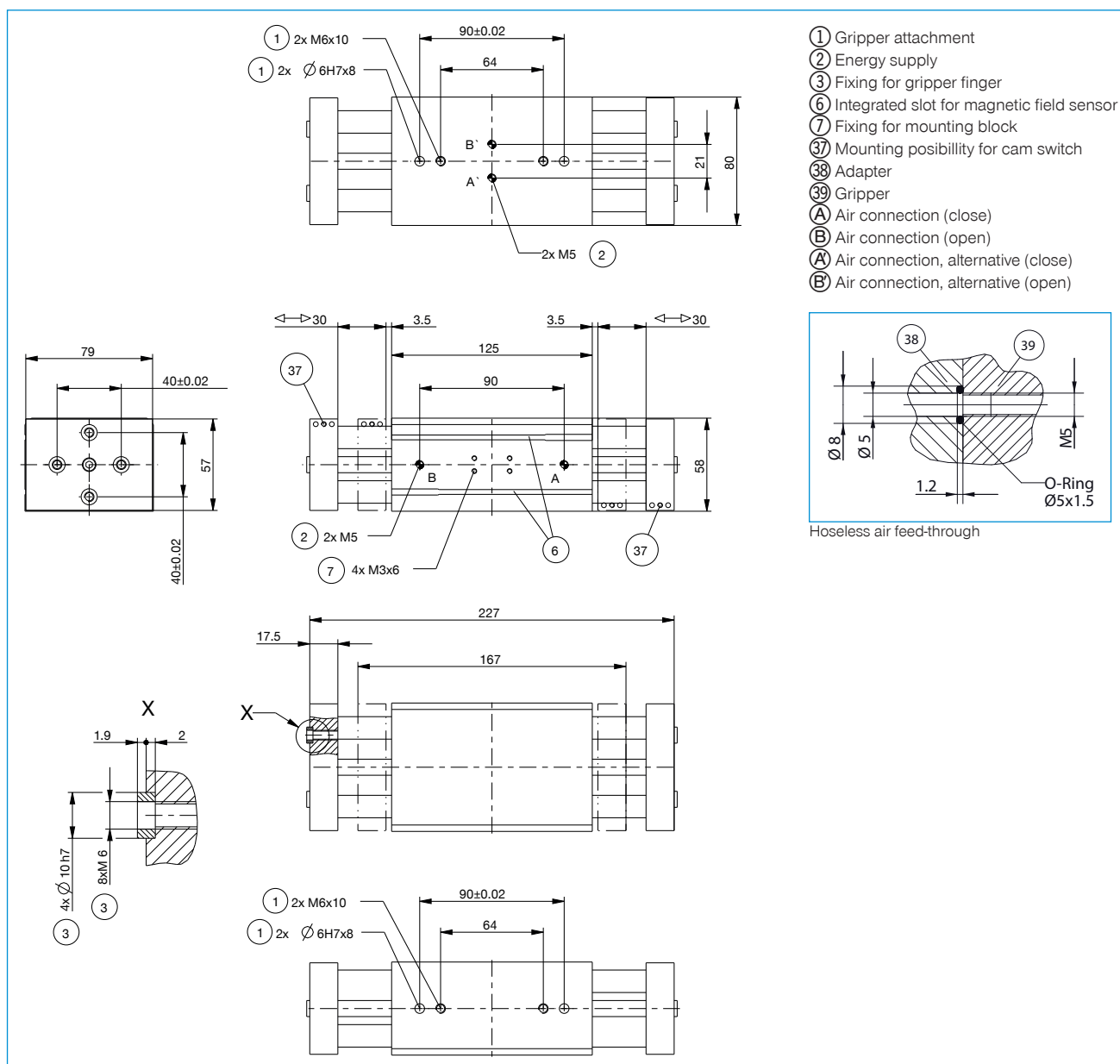
KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

Order no.	MGH8230
Stroke per jaw [mm]	30
Gripping force in closing [N]	500
Gripping force in opening [N]	570
Closing time [s]	0.14
Opening time [s]	0.1
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm ³]	64
Weight [kg]	2.4

► Technical data



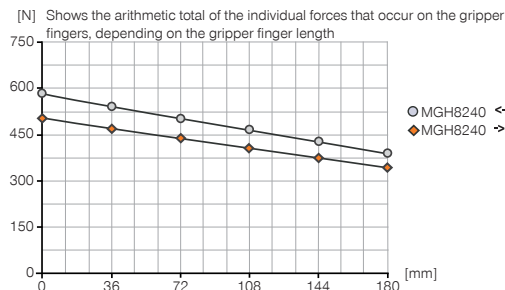
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE MGH8240

PRODUCT SPECIFICATIONS

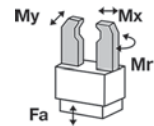


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	64
Mx [Nm]	64
My [Nm]	45
Fa [N]	760

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST41000

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



SENSORS



ANS0023
Attachment Kit for Inductive Proximity Switch



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



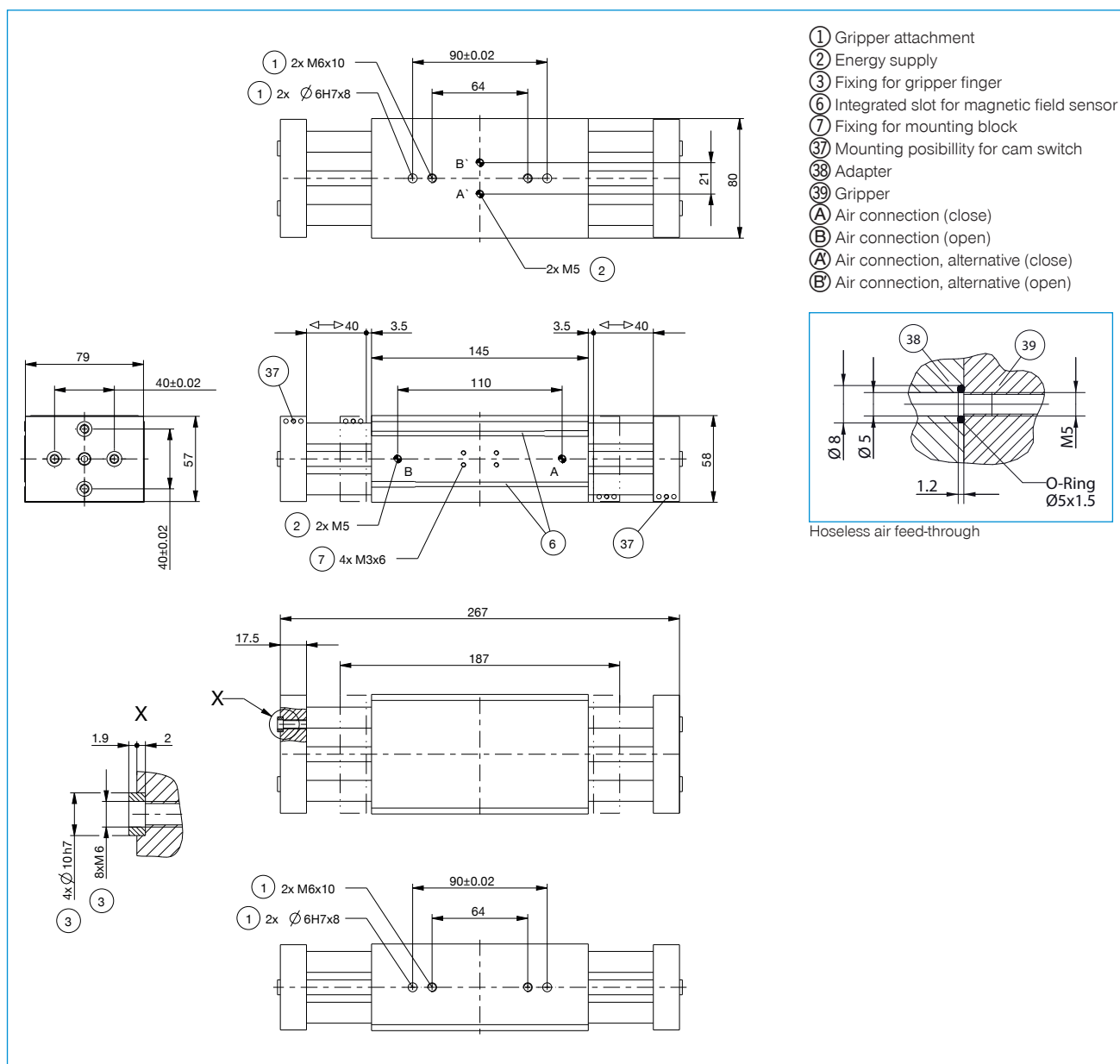
KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

Order no.	MGH8240
Stroke per jaw [mm]	40
Gripping force in closing [N]	500
Gripping force in opening [N]	570
Closing time [s]	0.18
Opening time [s]	0.14
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm ³]	128
Weight [kg]	2.9

► Technical data



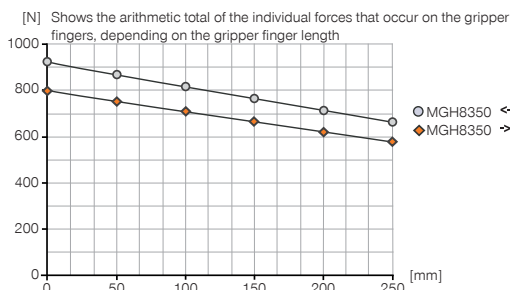
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE MGH8350

PRODUCT SPECIFICATIONS

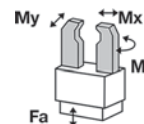


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	130
Mx [Nm]	130
My [Nm]	98
Fa [N]	1300

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST41600

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GV1-8X8
Straight Fittings - Quick Connect Style



SENSORS



ANS0024
Attachment Kit for Inductive Proximity Switch



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER

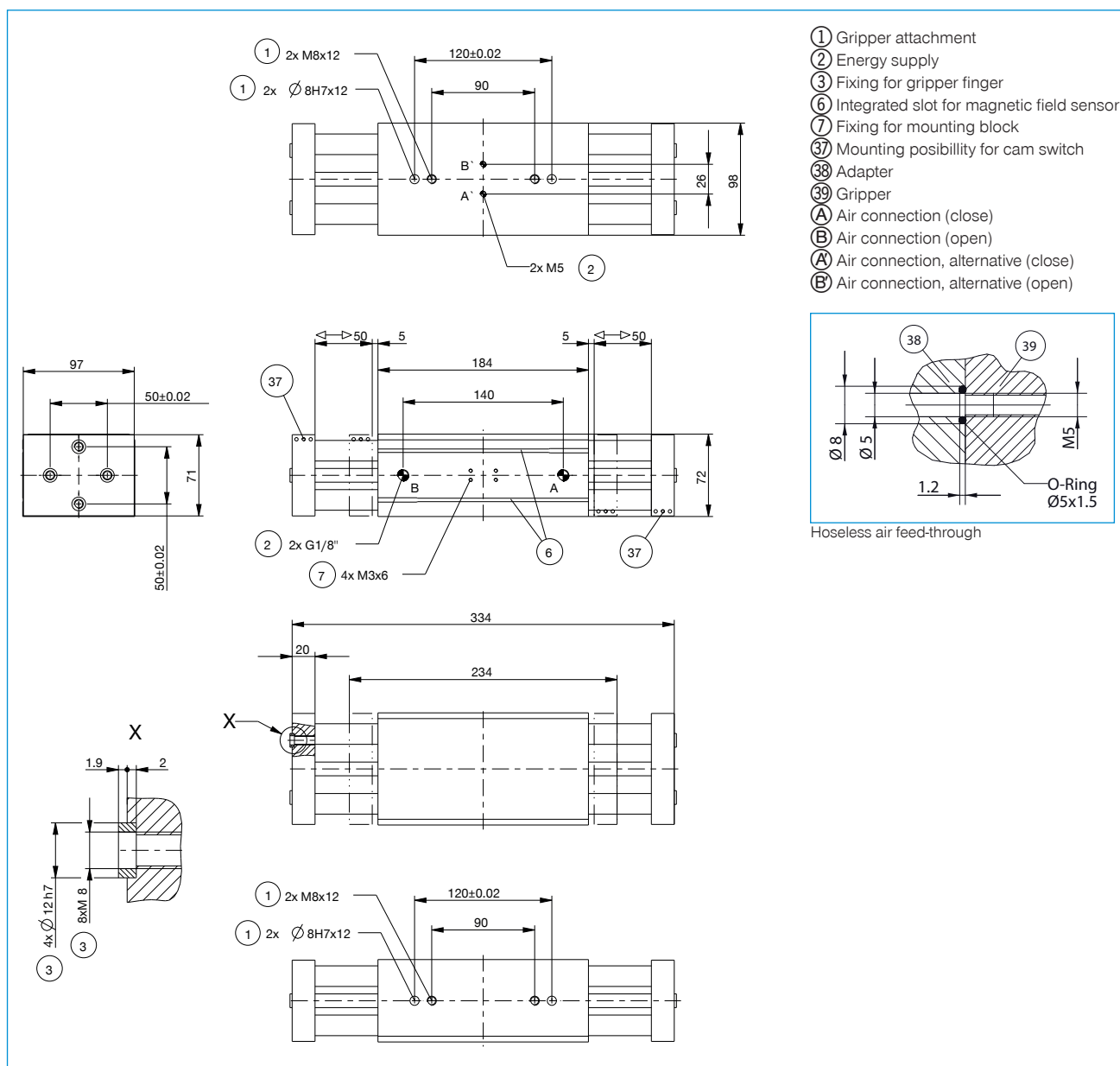


KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

	► Technical data
Order no.	MGH8350
Stroke per jaw [mm]	50
Gripping force in closing [N]	800
Gripping force in opening [N]	910
Closing time [s]	0.3
Opening time [s]	0.25
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	170
Weight [kg]	5.1



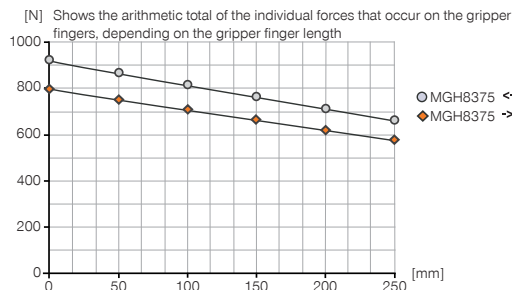
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE MGH8375

PRODUCT SPECIFICATIONS

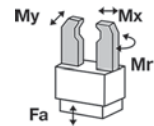


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	130
Mx [Nm]	130
My [Nm]	98
Fa [N]	1300

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST41600

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GV1-8X8
Straight Fittings - Quick Connect Style



SENSORS



ANS0025
Attachment Kit for Inductive Proximity Switch



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



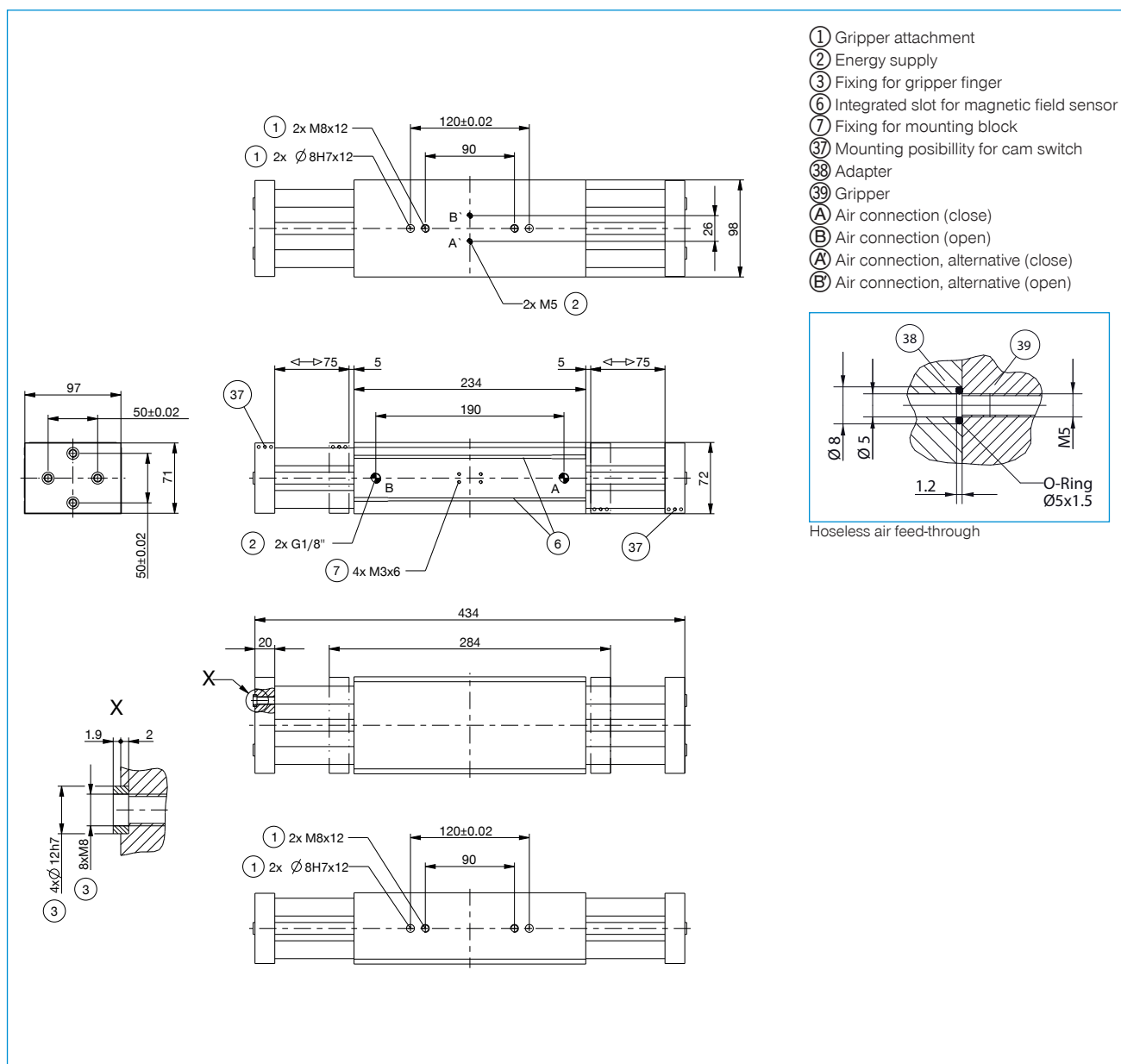
KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

Order no.	MGH8375
Stroke per jaw [mm]	75
Gripping force in closing [N]	800
Gripping force in opening [N]	910
Closing time [s]	0.4
Opening time [s]	0.35
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm ³]	255
Weight [kg]	6.2

► Technical data



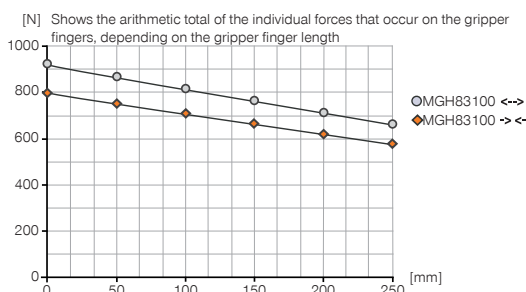
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE MGH83100

PRODUCT SPECIFICATIONS

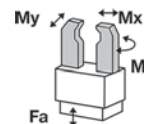


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	130
Mx [Nm]	130
My [Nm]	98
Fa [N]	1300

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST41600

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GV1-8X8
Straight Fittings - Quick Connect Style



SENSORS



ANS0026
Attachment Kit for Inductive Proximity Switch



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



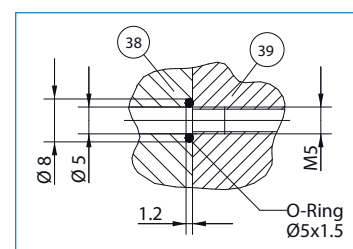
KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

Order no.	MGH83100
Stroke per jaw [mm]	100
Gripping force in closing [N]	800
Gripping force in opening [N]	910
Closing time [s]	0.5
Opening time [s]	0.4
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm ³]	340
Weight [kg]	7.3

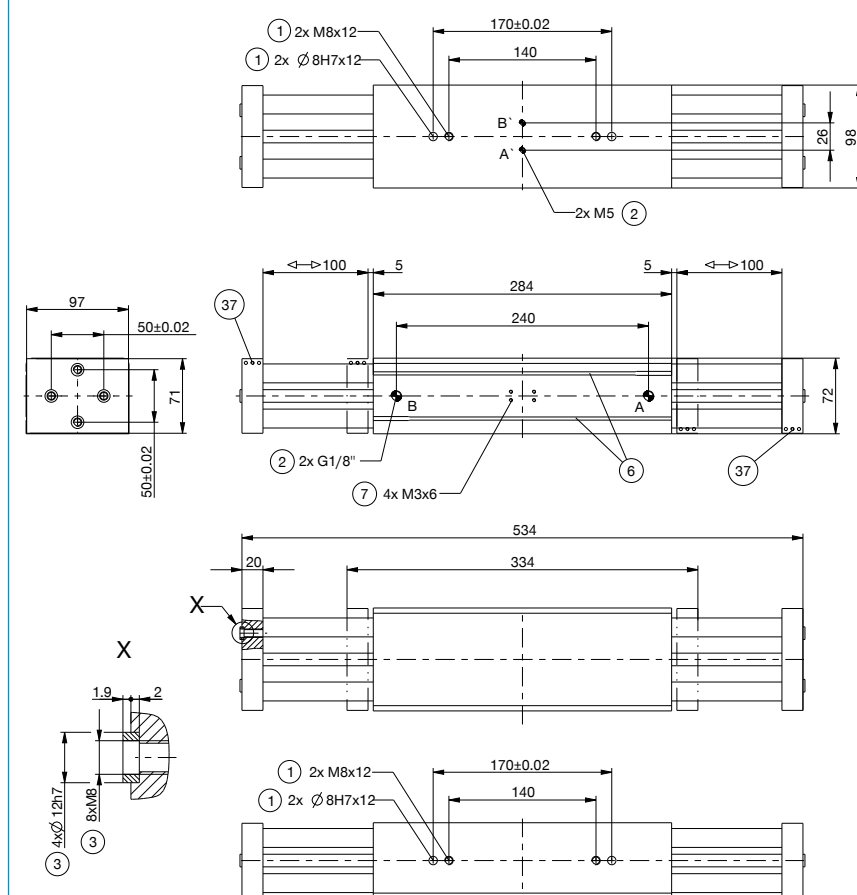
► Technical data

MGH83100

- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ③⑦ Mounting possibility for cam switch
- ③⑧ Adapter
- ③⑨ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through



2-JAW PARALLEL GRIPPERS WITH LONG STROKE

SERIES GPH8000

▶ PRODUCT ADVANTAGES



“The powerful”

▶ Extremely long and heavy gripper fingers possible

Despite their flat structural design, one of the features of the gripper fingers is that there are virtually no limitations where it comes to loading the machine with engine blocks or rims.


▶ Synchronous, asynchronous and securing the workpiece

Select between synchronous or asynchronous gripper finger movement and increase process safety by using the integrated clamping element to secure the workpiece in the event of a drop in pressure

▶ Dirt protection

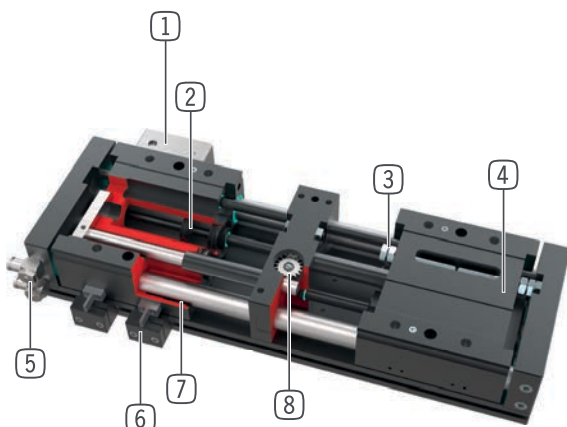
Using the scrapers on the guides, you can reliably use the gripper even under the harshest conditions

▶ SERIES CHARACTERISTICS

Installation size	Version		
GPH8XXX	N-00	CL-00	CL-30
 Gripper jaws are synchronized	•	•	
 Position maintenance by means of clamping element		•	•
 5 million maintenance-free cycles (max.)	•	•	•
 Inductive sensor	•	•	•
 IP 54	•	•	•



► BENEFITS IN DETAIL



- ① **Clamping element**
 - Workpiece secured in the event of a drop in pressure
- ② **Drive**
 - two double-acting pneumatic cylinders
- ③ **Stroke adjustment**
 - 40 mm for each gripping direction, infinitely variable
 - Further reductions in stroke are available upon request
- ④ **Gripper jaw**
 - individual gripper finger mounting
- ⑤ **Energy supply**
 - possible from several sides
 - CAUTION: always operate long stroke gripper with supplied exhaust air flow control valve (speed regulation)
- ⑥ **Mounting block**
 - mounting for inductive proximity switch
- ⑦ **Roller slide**
 - sealed round guide for harsh environmental conditions
 - Maintenance-free plain bearing bushes
- ⑧ **Synchronization**
 - By means of gear and rack
 - Encapsulated and protected against dirt
 - Also available as an asynchronous variant

► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
GPH8300	62,5 - 150	2000	14,9 - 21,3	IP54

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

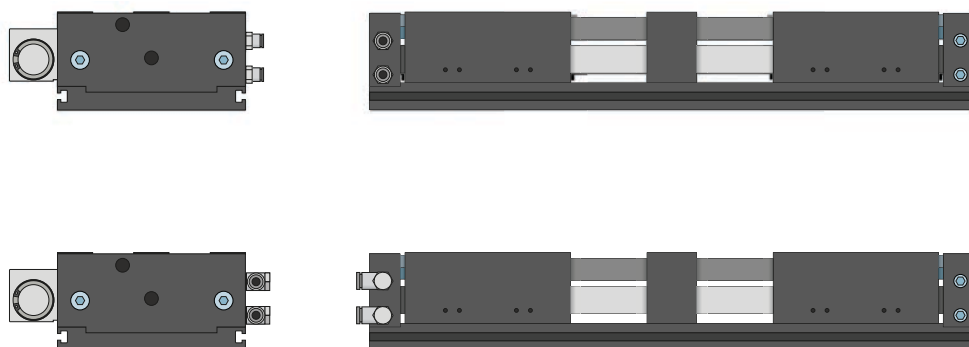
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

SERIES GPH8000 FUNCTIONAL DESCRIPTION

1



ENERGY SUPPLY

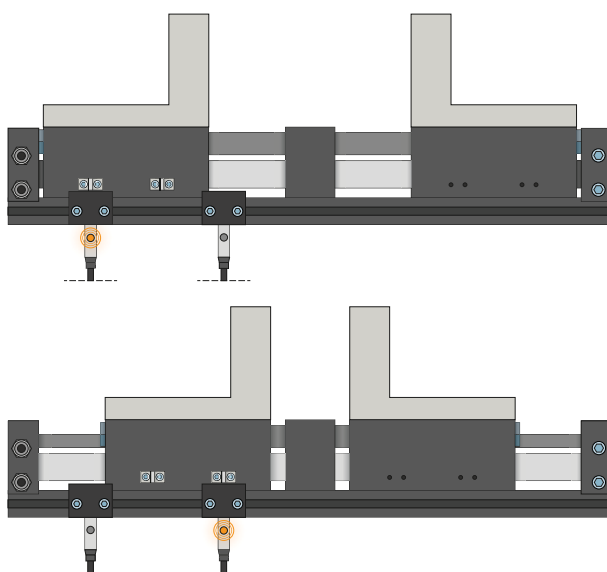


Pneumatic threaded connections

Available in straight and angled design. Can be chosen freely depending on the space conditions or installation situation.



SENSORS



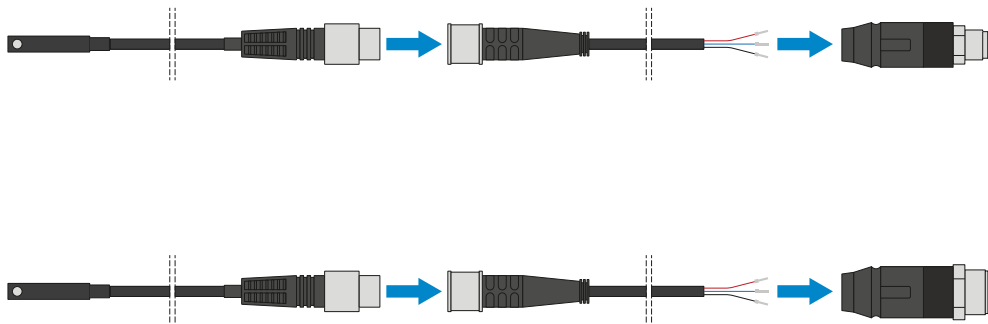
Inductive sensors – NJ

The mounting block is aligned to the cam switch, and the sensor is guided into the mounting block until the required switching distance to the cam switch is reached. Fine adjustment can be made by moving the mounting block again. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector, as well as with direct plug orientation.



CONNECTIONS / OTHER

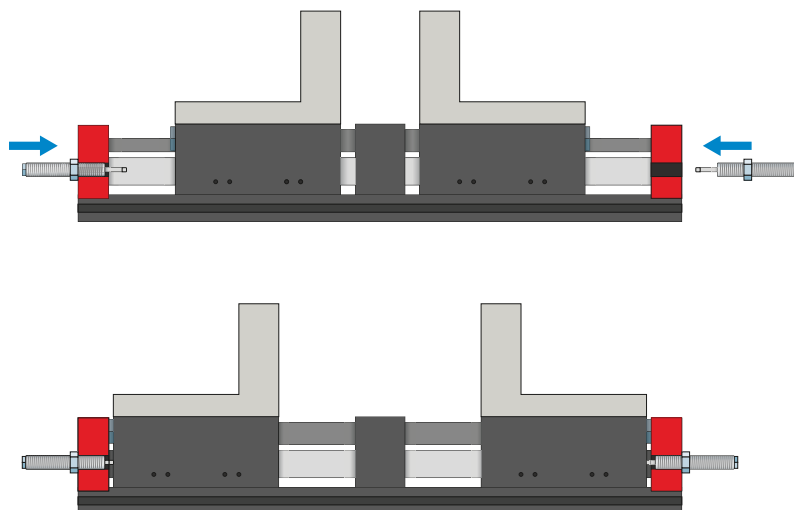
1



Plug-in connectors

For extending and fabricating the connection lines for the sensors

Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12.



PowerStop shock absorber

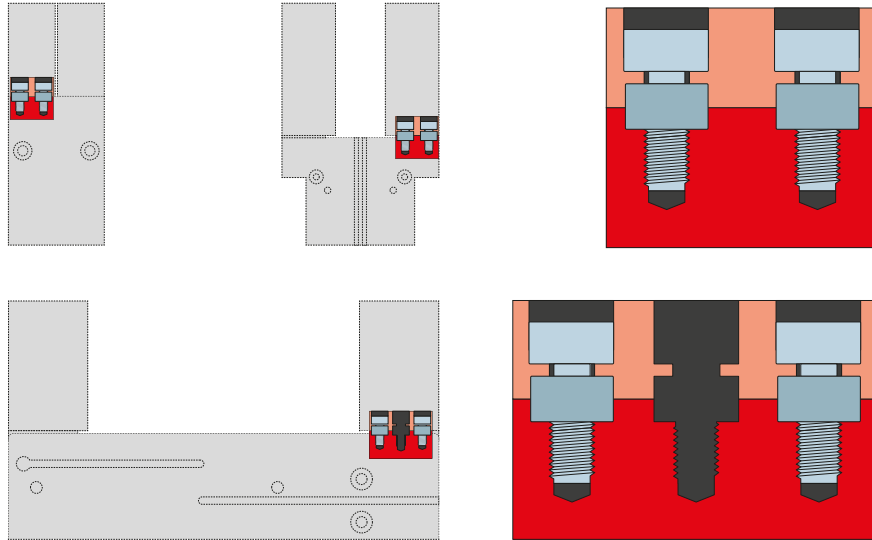
For soft absorption of kinetic energy

The shock absorbers are used primarily in fast, unthrottled jaw movements. They are equally suitable for long gripper fingers, high jaw mass and for cycle time optimization. The energy is absorbed by means of a hydraulic industrial shock absorber.

2-JAW PARALLEL GRIPPERS WITH LONG STROKE

SERIES GPH8000 FUNCTIONAL DESCRIPTION

CONNECTIONS / OTHER



Centering sleeves

For defined position measurement of the gripper fingers

The centering sleeves are inserted into the fits of the gripper jaws to define the position of the gripper fingers. The centering sleeves are comparable to a pin connection.

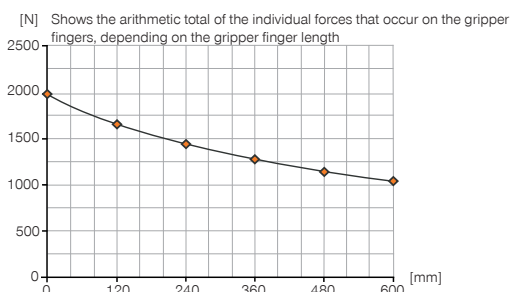
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE GPH83063

PRODUCT SPECIFICATIONS

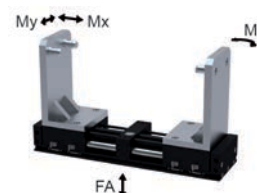


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	1020
Mx [Nm]	1010
My [Nm]	1020
Fa [N]	18000

INCLUDED IN DELIVERY (SYNCHRONOUS / -00-A)



2 [piece]
Mounting block
ANS000001



2 [piece]
Centering Disc
059600



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

INCLUDED IN DELIVERY (ASYNCHRONOUS / -30-A)



4 [piece]
Mounting block
ANS000001



2 [piece]
Centering Disc
059600



4 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

RECOMMENDED ACCESSORIES



SENSORS



NJ12-E2
Inductive proximity switch - Cable 5 m



NJ12-E2S
Inductive proximity switch - Connector M8



CONNECTIONS / OTHER



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



CONNECTIONS / OTHER



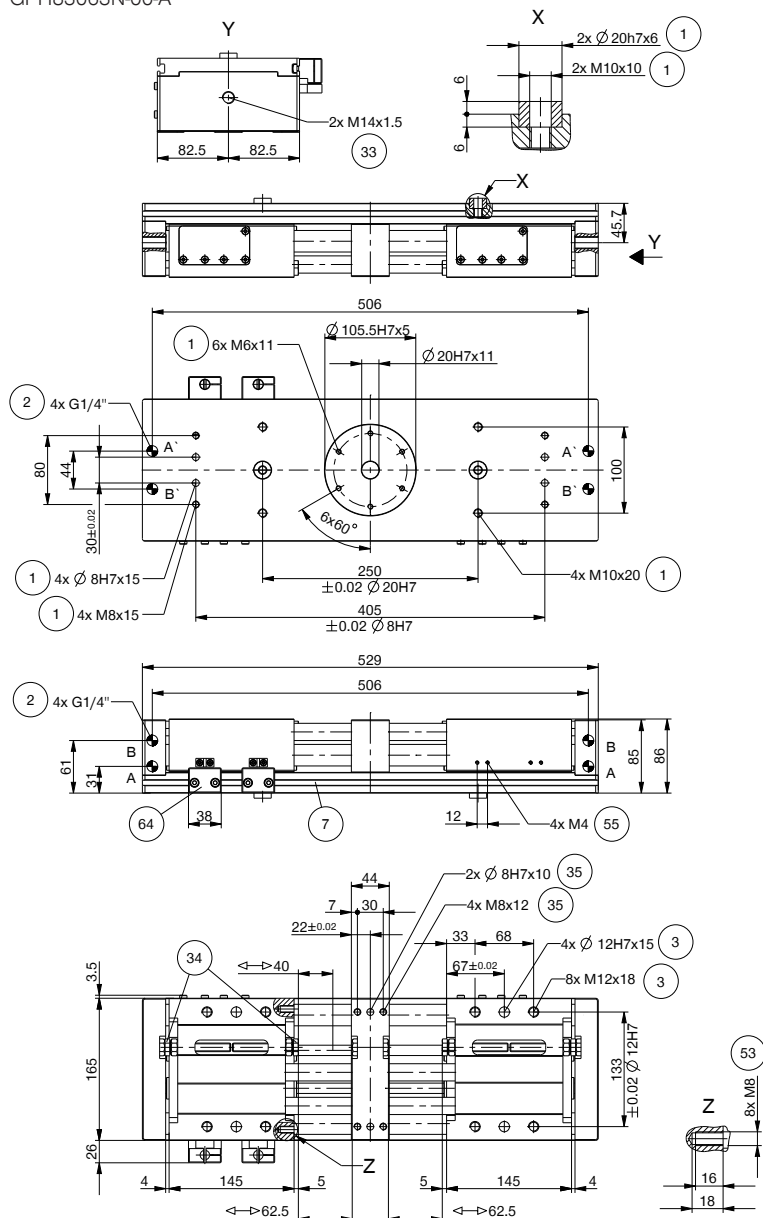
KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



M14X1.5H
Shock Absorbers

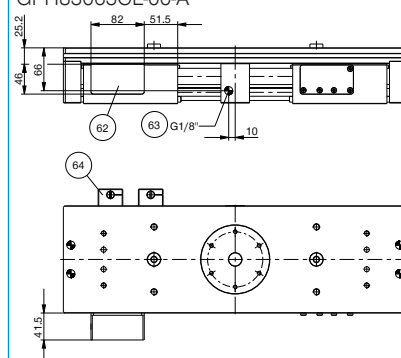
Order no.	Technical data		
	GPH83063N-00-A	GPH83063CL-00-A	GPH83063CL-30-A
Gripper jaws are synchronized	Yes	Yes	
Position maintenance by means of clamping element		Yes	Yes
No. of clamping elements [piece]	-	1	2
Holding force per clamping element [N]		2300	2300
Stroke per jaw [mm]	62.5	62.5	62.5
Gripping force in closing / opening [N]	2000 / 2000	2000 / 2000	2000 / 2000
Closing time [s]	0.32	0.32	0.32
Opening time [s]	0.32	0.32	0.32
Permissible weight per jaw max [kg]	35	35	35
Length of the gripper fingers max. [mm]	600	600	600
Repetition accuracy +/- [mm]	0.05	0.05	0.05
Operating pressure [bar]	4 ... 8	4 ... 8	4 ... 8
Nominal operating pressure [bar]	6	6	6
Operating temperature [°C]	5 ... +80	5 ... +80	5 ... +80
Air volume per cycle [cm³]	586	586	586
Protection to IEC 60529	IP54	IP54	IP54
Weight [kg]	14.9	15.7	15.7

GPH83063N-00-A

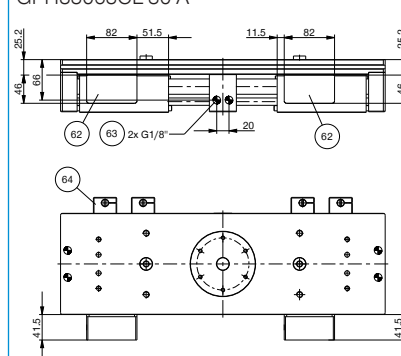


- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑦ Fixing for mounting block
- ③③ Shock absorber
- ③④ Stop screw for stroke setting
- ③⑤ Attachment option for customer-specific fittings
- ⑤⑤ Cam switch attachment
- ⑥② Clamping element
- ⑥③ Energy supply clamping element
- ⑥④ Clamp for sensor
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ' Air connection, alternative (close)
- Ⓑ' Air connection, alternative (open)

GPH83063CL-00-A



GPH83063CL-30-A



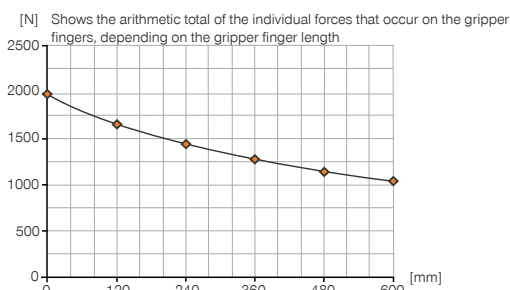
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE GPH83100

PRODUCT SPECIFICATIONS

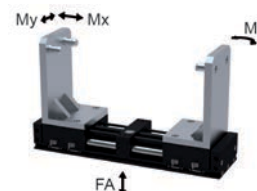


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	1020
Mx [Nm]	1010
My [Nm]	1020
Fa [N]	18000

INCLUDED IN DELIVERY (SYNCHRONOUS / -00-A)



2 [piece]
Mounting block
ANS000001



2 [piece]
Centering Disc
059600



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

INCLUDED IN DELIVERY (ASYNCHRONOUS / -30-A)



4 [piece]
Mounting block
ANS000001



2 [piece]
Centering Disc
059600



4 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

RECOMMENDED ACCESSORIES



SENSORS



NJ12-E2
Inductive proximity switch - Cable 5 m



NJ12-E2S
Inductive proximity switch - Connector M8



CONNECTIONS / OTHER



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12



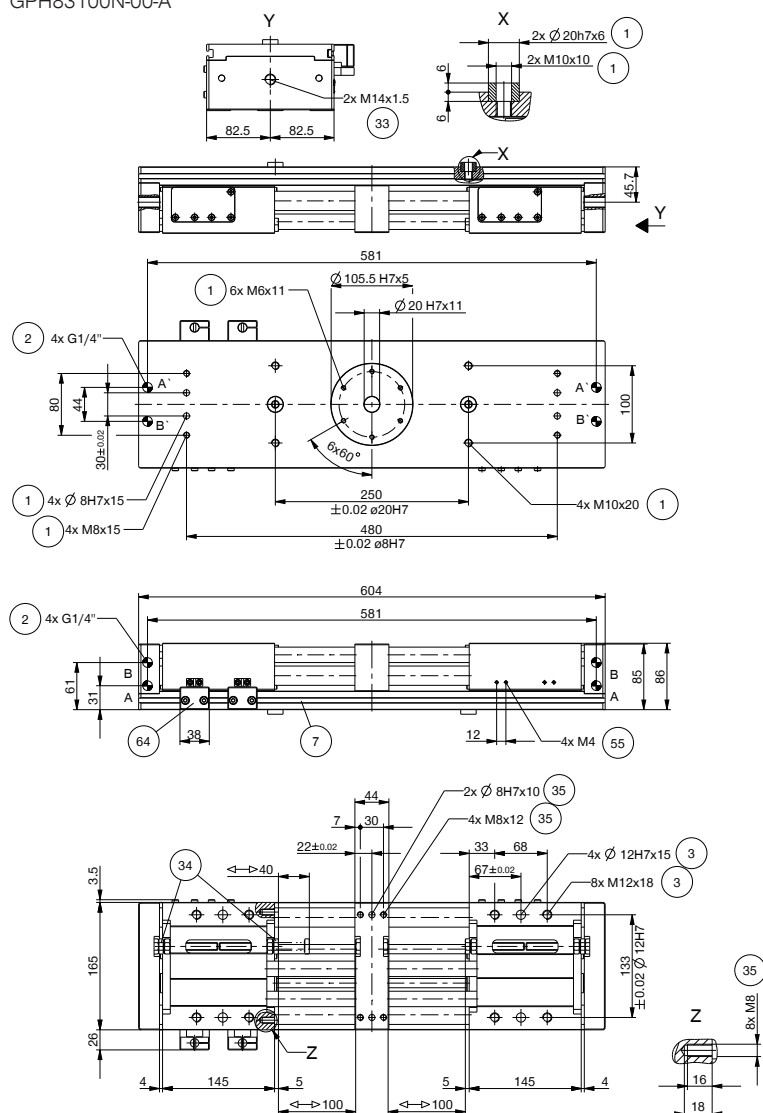
KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



M14X1.5H
Shock Absorbers

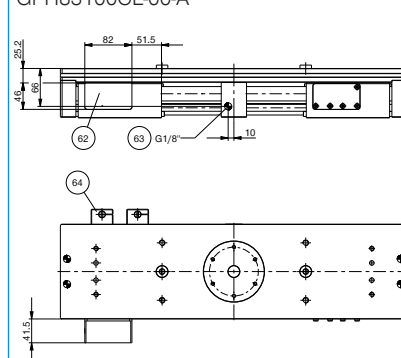
Order no.	Technical data		
	GPH83100N-00-A	GPH83100CL-00-A	GPH83100CL-30-A
Gripper jaws are synchronized	Yes	Yes	
Position maintenance by means of clamping element		Yes	Yes
No. of clamping elements [piece]	-	1	2
Holding force per clamping element [N]		2300	2300
Stroke per jaw [mm]	100	100	100
Gripping force in closing / opening [N]	2000 / 2000	2000 / 2000	2000 / 2000
Closing time [s]	0.5	0.5	0.5
Opening time [s]	0.5	0.5	0.5
Permissible weight per jaw max [kg]	35	35	35
Length of the gripper fingers max. [mm]	600	600	600
Repetition accuracy +/- [mm]	0.05	0.05	0.05
Operating pressure [bar]	4 ... 8	4 ... 8	4 ... 8
Nominal operating pressure [bar]	6	6	6
Operating temperature [°C]	5 ... +80	5 ... +80	5 ... +80
Air volume per cycle [cm³]	714	714	714
Protection to IEC 60529	IP54	IP54	IP54
Weight [kg]	15	17	16.6

GPH83100N-00-A

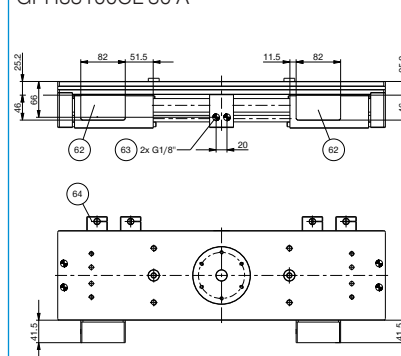


- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑦ Fixing for mounting block
- ③③ Shock absorber
- ③④ Stop screw for stroke setting
- ③⑤ Attachment option for customer-specific fittings
- ⑤⑤ Cam switch attachment
- ⑥② Clamping element
- ⑥③ Energy supply clamping element
- ⑥④ Clamp for sensor
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)

GPH83100CL-00-A



GPH83100CL-30-A



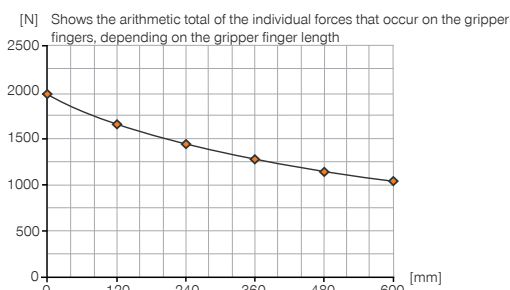
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE GPH83125

PRODUCT SPECIFICATIONS

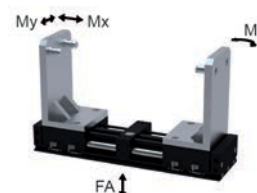


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	1020
Mx [Nm]	1010
My [Nm]	1020
Fa [N]	18000

INCLUDED IN DELIVERY (SYNCHRONOUS / -00-A)



2 [piece]
Mounting block
ANS000001



2 [piece]
Centering Disc
059600



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

INCLUDED IN DELIVERY (ASYNCHRONOUS / -30-A)



4 [piece]
Mounting block
ANS000001



2 [piece]
Centering Disc
059600



4 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

RECOMMENDED ACCESSORIES



SENSORS



NJ12-E2
Inductive proximity switch - Cable 5 m



NJ12-E2S
Inductive proximity switch - Connector M8



CONNECTIONS / OTHER



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



M14X1.5H
Shock Absorbers

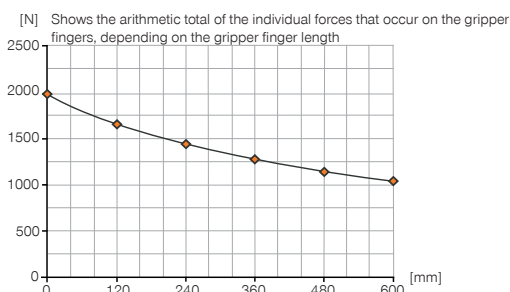
2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE GPH83150

PRODUCT SPECIFICATIONS

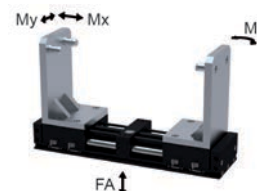


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	1020
Mx [Nm]	1010
My [Nm]	1020
Fa [N]	18000

INCLUDED IN DELIVERY (SYNCHRONOUS / -00-A)



2 [piece]
Mounting block
ANS000001



2 [piece]
Centering Disc
059600



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

INCLUDED IN DELIVERY (ASYNCHRONOUS / -30-A)



4 [piece]
Mounting block
ANS000001



2 [piece]
Centering Disc
059600



4 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

RECOMMENDED ACCESSORIES



SENSORS



NJ12-E2
Inductive proximity switch - Cable 5 m



NJ12-E2S
Inductive proximity switch - Connector M8



CONNECTIONS / OTHER



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



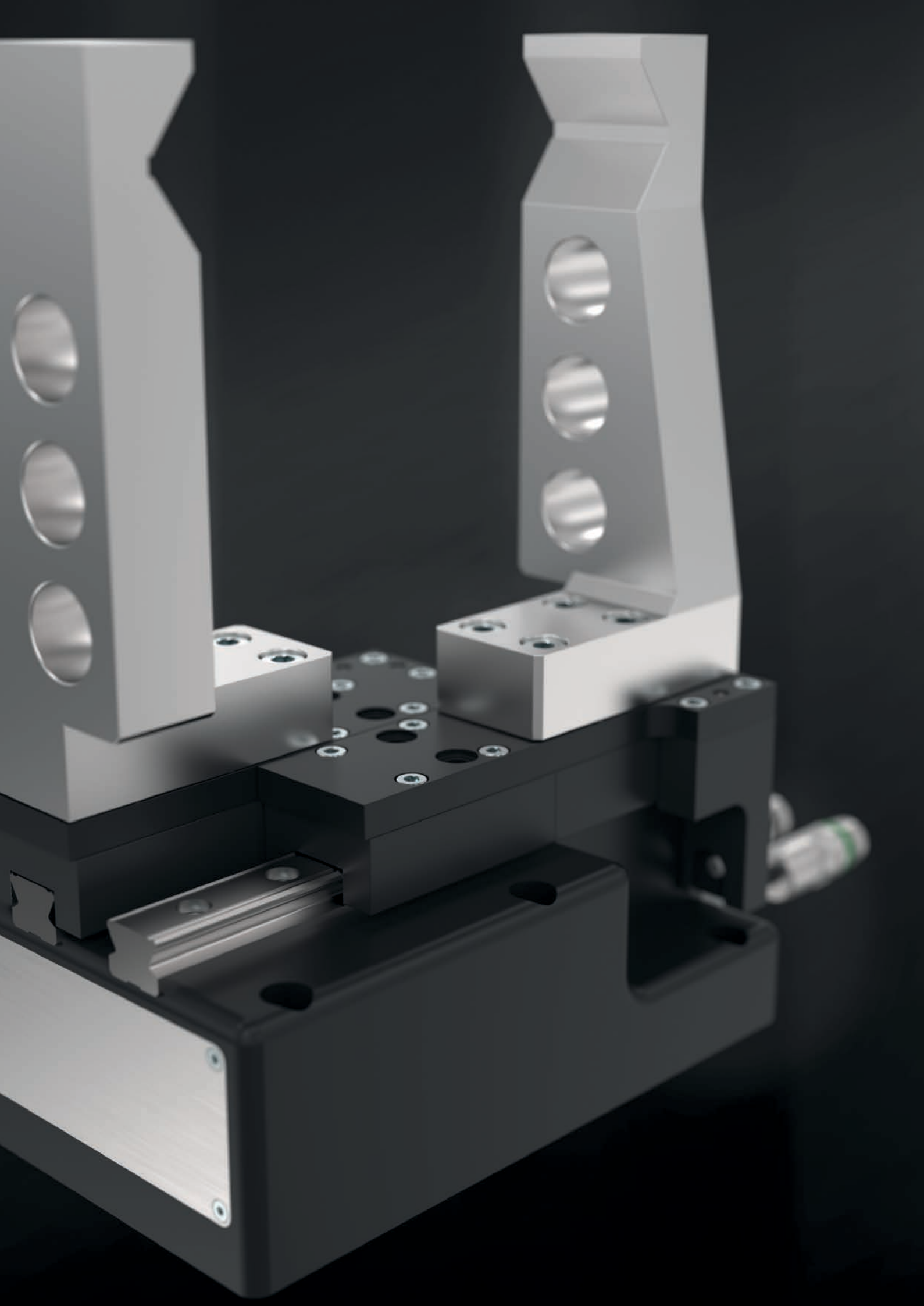
S12-G-3
Plug-in connector customizable Straight - Connector M12



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



M14X1.5H
Shock Absorbers

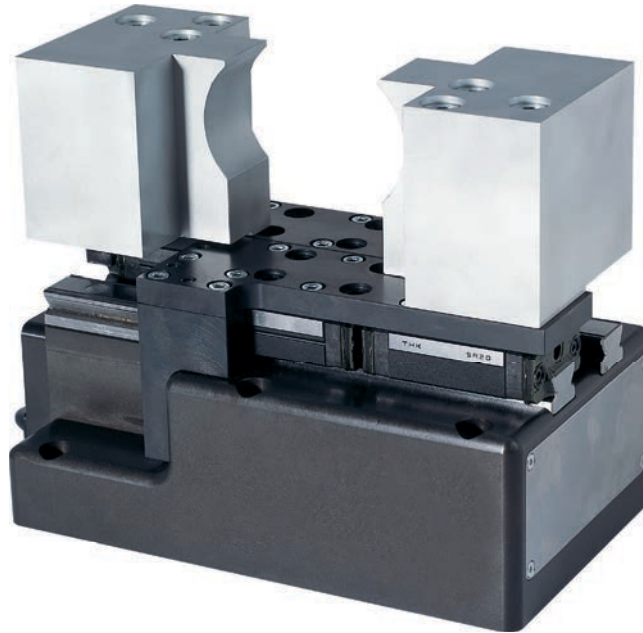


2-JAW PARALLEL GRIPPERS WITH LONG STROKE

OVERVIEW OF SERIES

1

Overview of Series / 2-Jaw Parallel Grippers with Long Stroke



ELECTRICAL



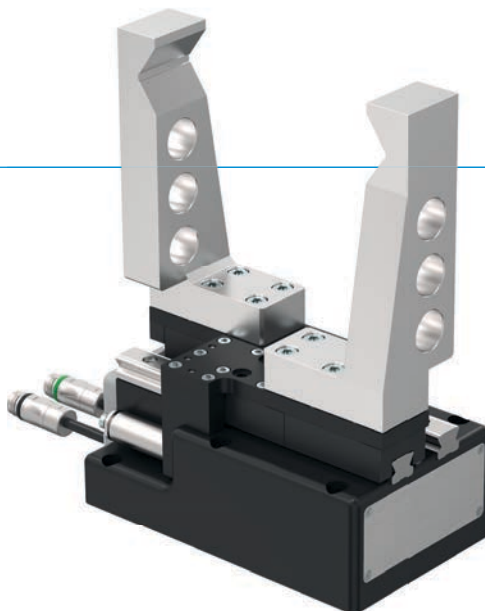
Series GEH8000

126

2-JAW PARALLEL GRIPPERS WITH LONG STROKE

SERIES GEH8000

▶ PRODUCT ADVANTAGES



“The strong”

▶ High gripping force

Using the high gripping force, you can safely handle even the heaviest workpieces




▶ Servo drive

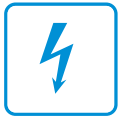
Position, speed and force control in combination with a mechanical self locking mechanism guarantee the highest functionality

▶ Multibus

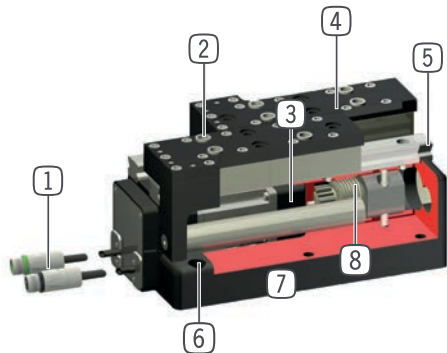
How you stay flexible: PROFIBUS, SERCOS III, PROFINET IO, EtherNet/IP or EtherCat - You decide what harmonises best with your system

▶ SERIES CHARACTERISTICS

Installation size		
GEH86XX-B		
PB Profibus		•
PN Profinet, EtherCat, EtherNet/IP, Sercos		•
 10 million maintenance-free cycles (max.)		•
 Integrated sensing		•
 Self locking mechanism		•
IP 40 IP40		•



► BENEFITS IN DETAIL



- 1 Energy supply**
 - motor cable, male
 - encoder cable, female
- 2 Removable centering sleeves**
 - quick and economical positioning of the gripper fingers
- 3 Drive**
 - AC servo motor
- 4 Gripper jaw**
 - hardened steel
 - individual gripper finger mounting
- 5 Precise linear guide**
 - high forces and moments capacity
 - guide wagon with wiper for harsh environments
- 6 Mounting and positioning**
- 7 Robust, lightweight housing**
 - Hard-coated aluminum alloy
- 8 Synchronization**
 - via rack and pinion

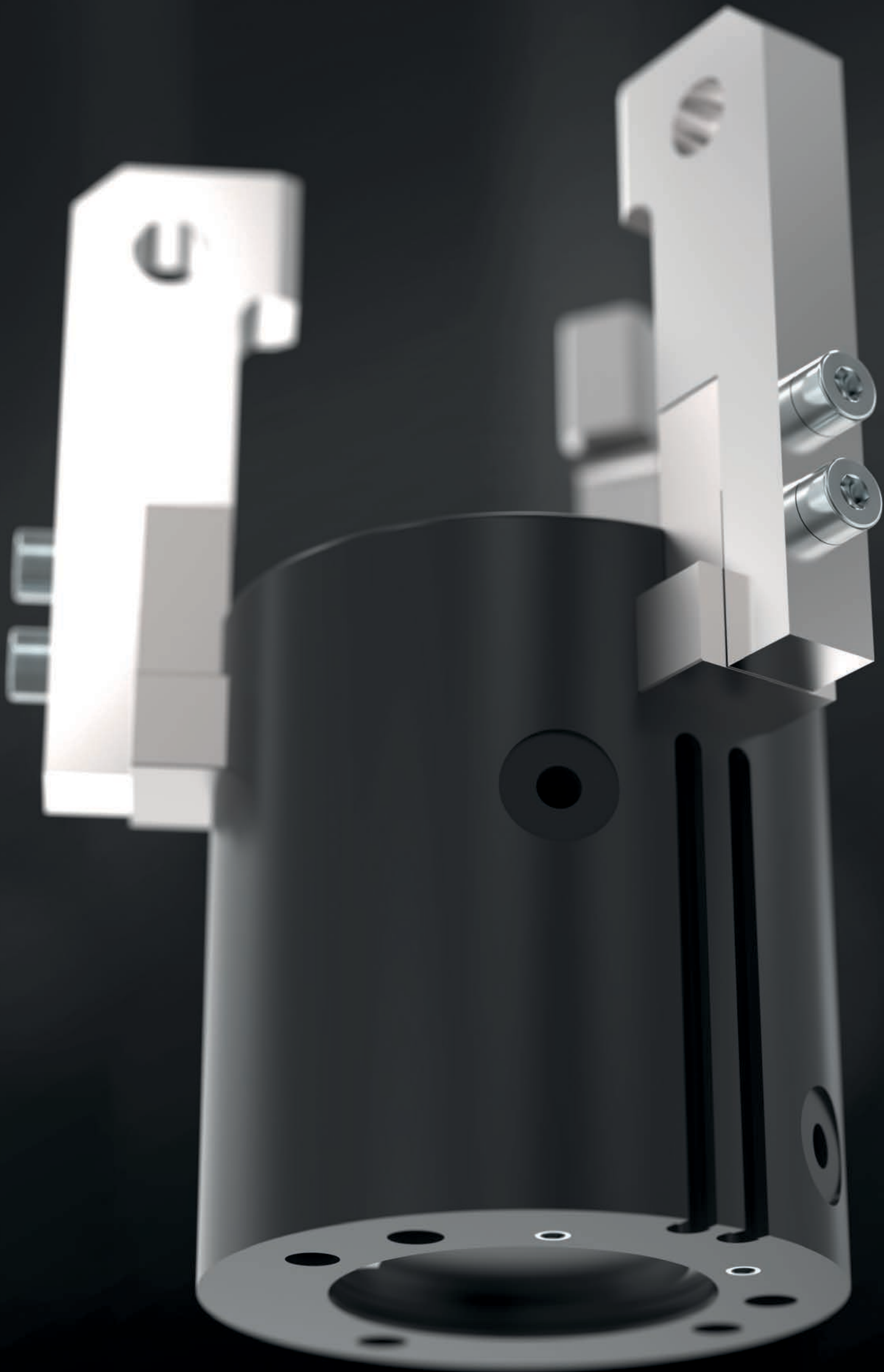
► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Holding force [N]	Weight [kg]	IP class
GEH8660	60	200 - 3200	10	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE







All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



3-JAW CONCENTRIC GRIPPERS

OVERVIEW OF SERIES



 PNEUMATIC		
	Series MGD800	130
	Series GD300	152
	Series GD	178

3-JAW CONCENTRIC GRIPPERS

SERIES MGD800





▶ PRODUCT ADVANTAGES



“The superior”

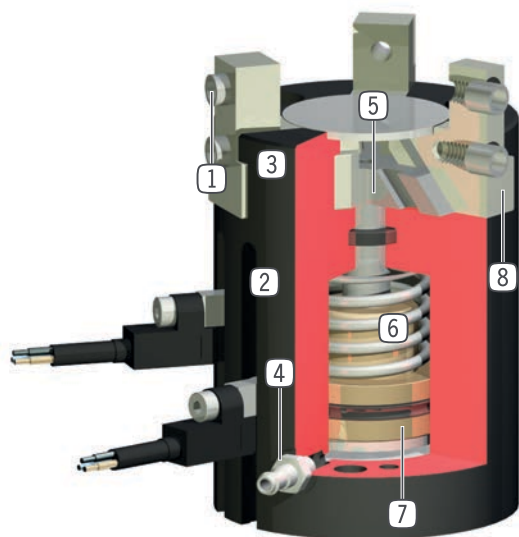
- ▶ **Gripper jaws may be almost 100% longer in comparison to the benchmark**
The highest force and torque measurement enables flexible for maximum dynamics
- ▶ **Best price/performance ratio**
Reduces your investment costs and speeds the ROI for your application
- ▶ **Failure-free continuous operation**
Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free cycles

▶ SERIES CHARACTERISTICS

Installation size	Version	
MGD8XX	N	NC
 Spring closing C		•
 10 million maintenance-free cycles (max.)	•	•
 Magnetic field sensor	•	•
 IP40	•	•



► BENEFITS IN DETAIL



- ① **Removable centering sleeves**
- quick and economical positioning of the gripper fingers
- ② **Sensing slot**
- mounting and positioning of magnetic field sensors
- ③ **Robust, lightweight housing**
- Hard-coated aluminum alloy
- ④ **Energy supply**
- possible from several sides
- ⑤ **Wedge hook mechanism**
- synchronized the movement of the gripper jaws
- ⑥ **Integrated gripping force safety device**
- spring integrated into cylinder as energy storage (from size 803 upwards)
- ⑦ **Position sensing**
- permanent magnet for direct monitoring of piston movement
- ⑧ **Precise T-Slot guide**
- high forces and moments capacity

► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
MGD801	1	30 - 34	0,025	IP40
MGD802	2	40 - 45	0,05	IP40
MGD803	3	78 - 110	0,08 - 0,115	IP40
MGD804	4	125 - 160	0,14 - 0,18	IP40
MGD806	6	240 - 295	0,26 - 0,35	IP40
MGD808	8	415 - 560	0,47 - 0,65	IP40
MGD810	10	740 - 920	0,98 - 1,16	IP40
MGD812	12	1130 - 1420	1,67 - 2	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

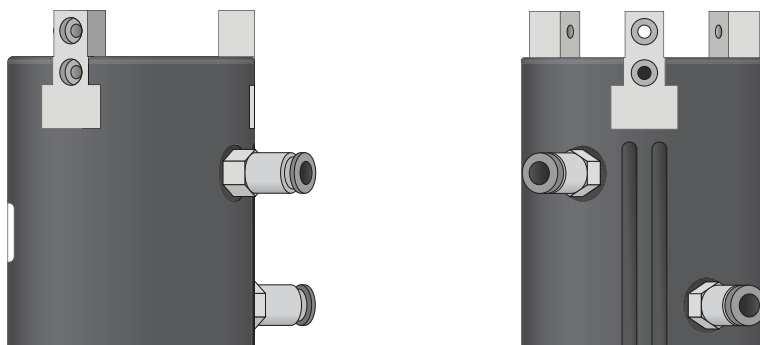
3-JAW CONCENTRIC GRIPPERS

SERIES MGD800 FUNCTIONAL DESCRIPTION

1

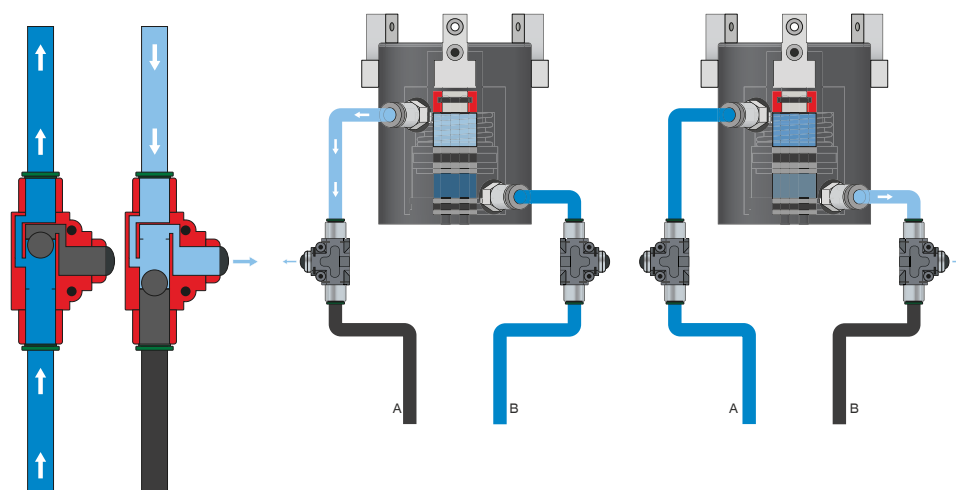


ENERGY SUPPLY



Pneumatic threaded connections

Available in straight and angled design. Can be chosen freely depending on the space conditions or installation situation.



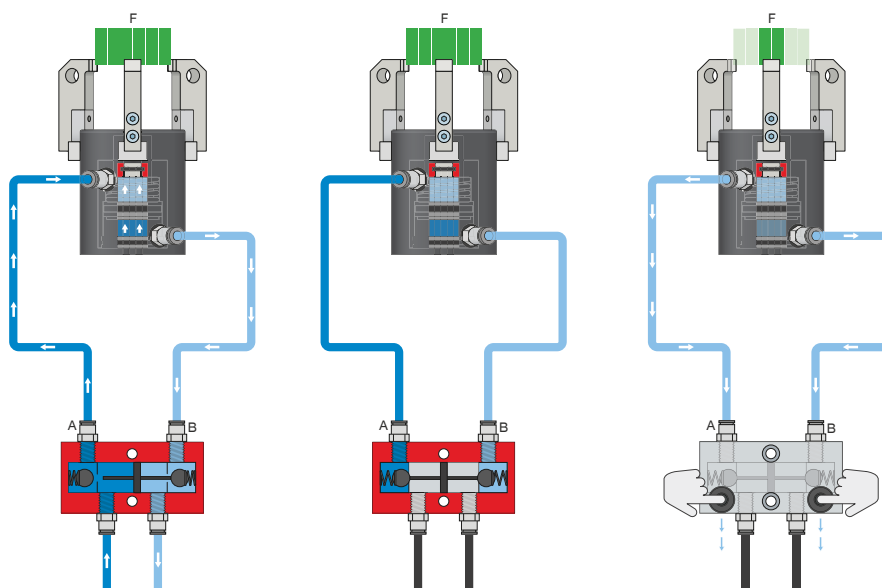
Quick exhaust valve – DEV

For rapid bleeding of the compressed air and preventing back pressure

The inline valves make a faster cycle time possible and prevent the formation of condensate in grippers with a small cylinder volume. To ensure the function, the valve must be installed as close to the gripper's air connection as possible.



ENERGY SUPPLY



Pressure safety valve – DSV

Ensures safe retention of force and position if the system pressure drops

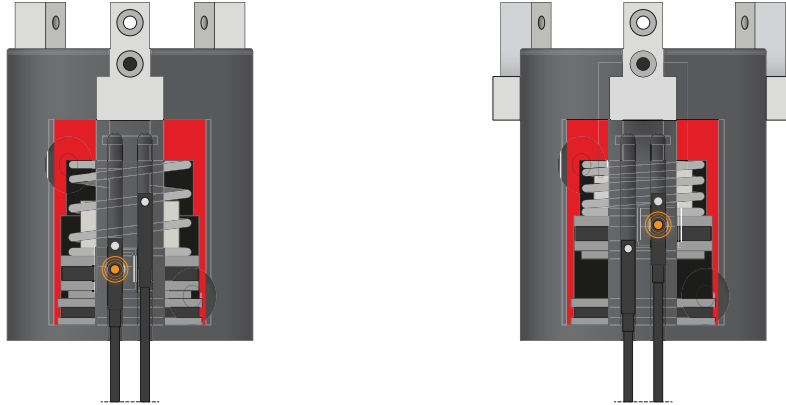
The integrated double check valve, which can be unlocked, retains the system pressure of the gripper in case of EMERGENCY STOP. To ensure the function, the valve must be installed as close to the gripper's air connection as possible. In variant E, two pushbuttons are installed that allow for controlled bleeding of the gripper.

3-JAW CONCENTRIC GRIPPERS

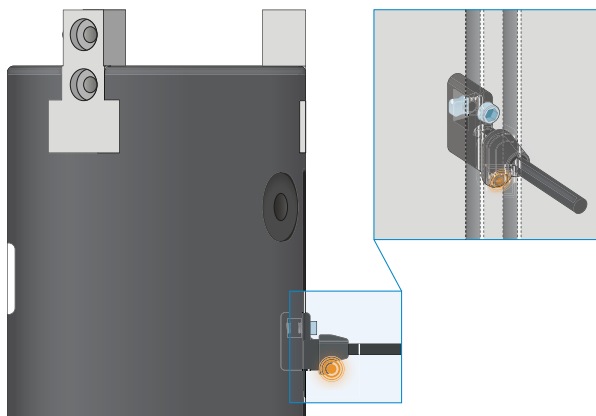
SERIES MGD800 FUNCTIONAL DESCRIPTION

SENSORS

MFS02



MFS01



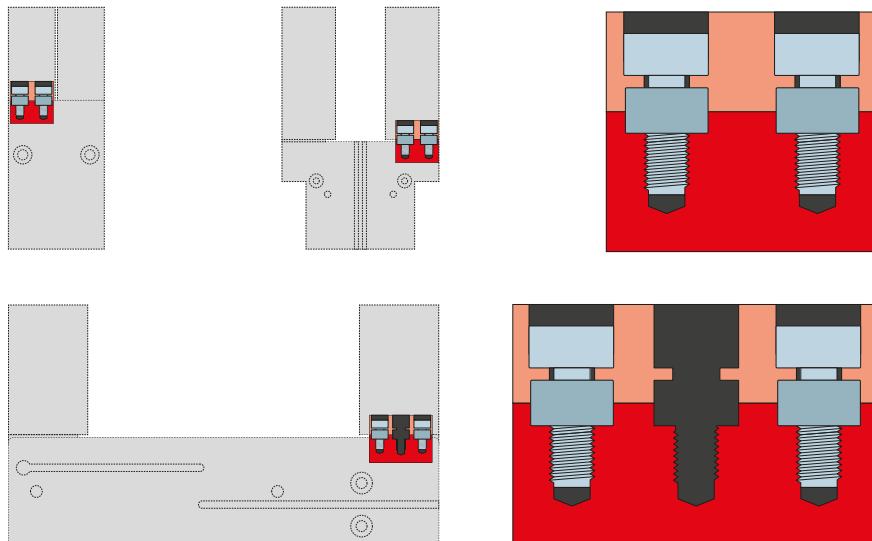
1-point magnetic field sensors – MFS

For non-contact sensing of the piston position

These sensors are installed in the C-groove of the gripper and detect the magnet attached to the piston of the gripper. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MFS01 is taller, but has a cable outlet that is offset at an angle of 90°. The variants are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.



CONNECTIONS / OTHER



Centering sleeves

For defined position measurement of the gripper fingers

The centering sleeves are inserted into the fits of the gripper jaws to define the position of the gripper fingers. The centering sleeves are comparable to a pin connection.

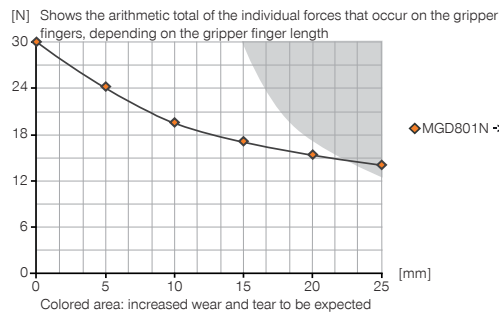
3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE MGD801

PRODUCT SPECIFICATIONS

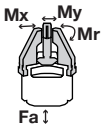


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	2
Mx [Nm]	2
My [Nm]	4
Fa [N]	58

INCLUDED IN DELIVERY



6 [piece]
Centering Disc
DST80200

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection



DEV04
Quick Exhaust Valve



ENERGY SUPPLY

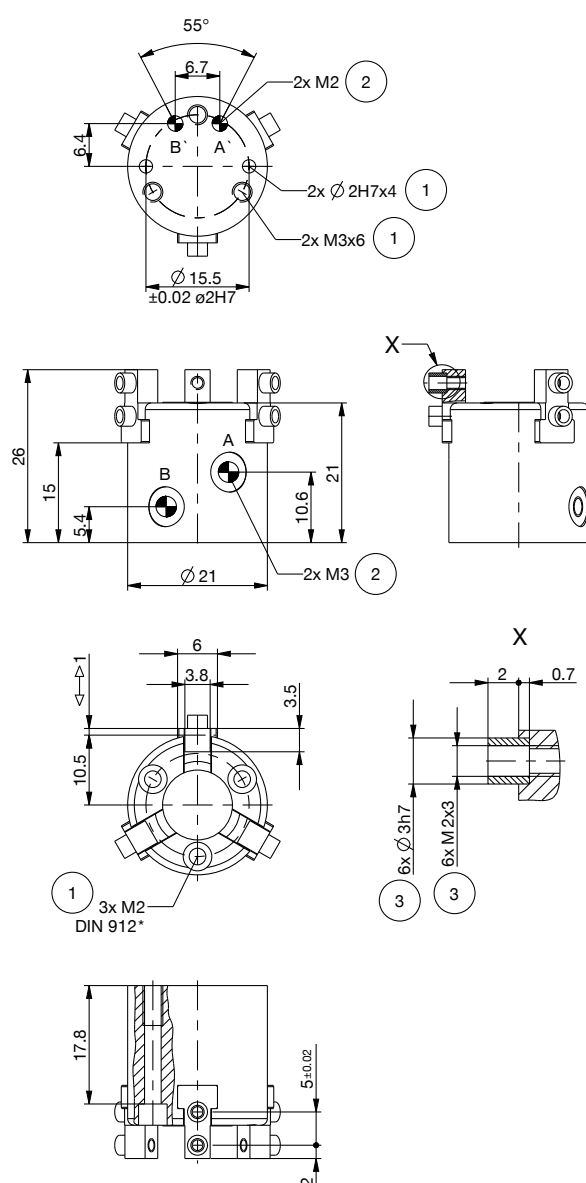


DSV1-8
Pressure safety valve

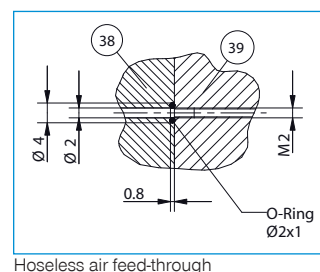


DSV1-8E
Pressure safety valve with quick exhaust

Order no.	MGD801N
Stroke per jaw [mm]	1
Gripping force in closing [N]	30
Gripping force in opening [N]	34
Closing time [s]	0.01
Opening time [s]	0.01
Repetition accuracy +/- [mm]	0.02
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	0.2
Weight [kg]	0.025



- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ③ Adapter
- ③ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through

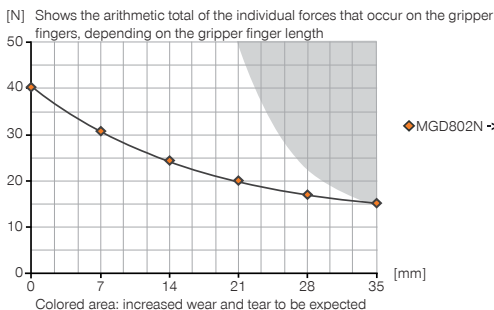
3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE MGD802

PRODUCT SPECIFICATIONS

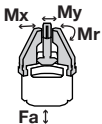


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	4
Mx [Nm]	4
My [Nm]	6
Fa [N]	100

INCLUDED IN DELIVERY



6 [piece]
Centering Disc
DST80200

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection



DEV04
Quick Exhaust Valve



ENERGY SUPPLY

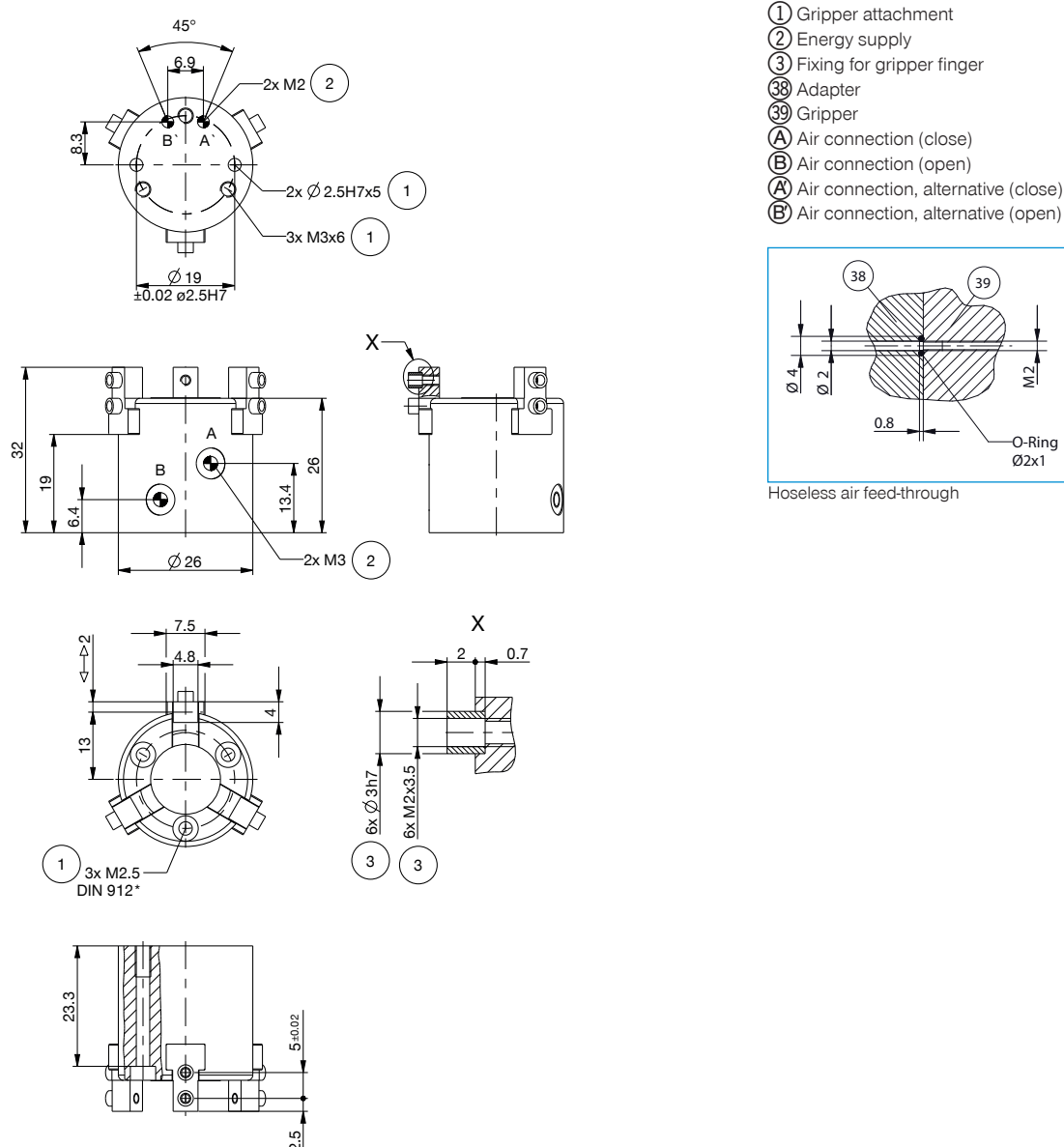


DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust

Order no.	Technical data
	MGD802N
Stroke per jaw [mm]	2
Gripping force in closing [N]	40
Gripping force in opening [N]	45
Closing time [s]	0.02
Opening time [s]	0.02
Repetition accuracy +/- [mm]	0.02
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	0.3
Weight [kg]	0.05



3-JAW CONCENTRIC GRIPPERS

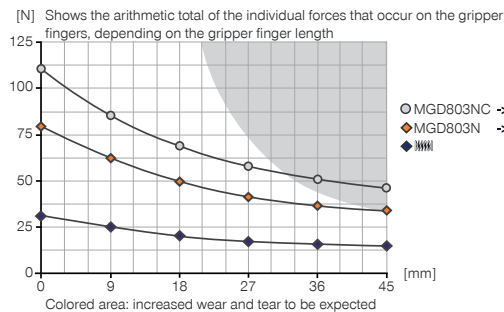
INSTALLATION SIZE MGD803

1

PRODUCT SPECIFICATIONS

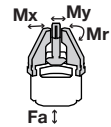


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	5
Mx [Nm]	5
My [Nm]	8
Fa [N]	155

INCLUDED IN DELIVERY



6 [piece]
Centering Disc
DST80310

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection



DEV04
Quick Exhaust Valve



DSV1-8
Pressure safety valve



ENERGY SUPPLY



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8

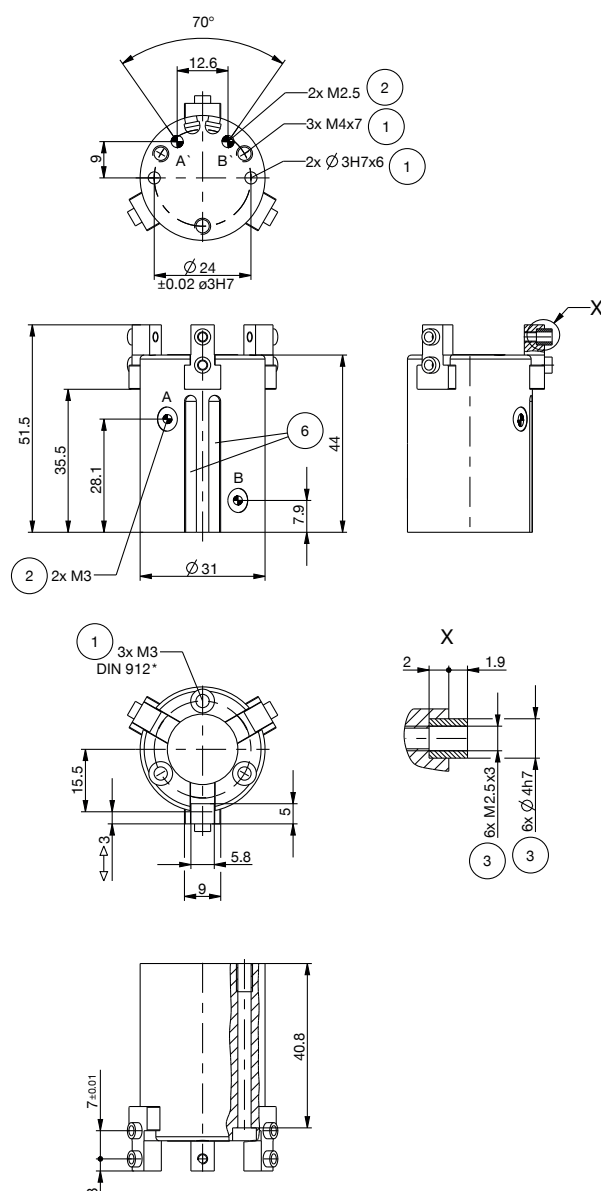


MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8

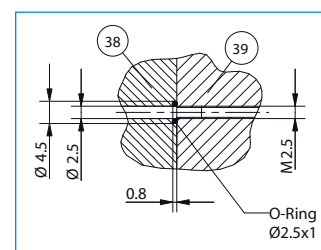


Order no.	► Technical data	
	MGD803N	MGD803NC
Stroke per jaw [mm]	3	3
Gripping force in closing [N]	78	110
Gripping force in opening [N]	87	
Gripping force secured by spring min. [N]		32
Closing time [s]	0.02	0.02
Opening time [s]	0.02	0.03
Repetition accuracy +/- [mm]	0.02	0.02
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	1.5	2.4
Weight [kg]	0.08	0.115

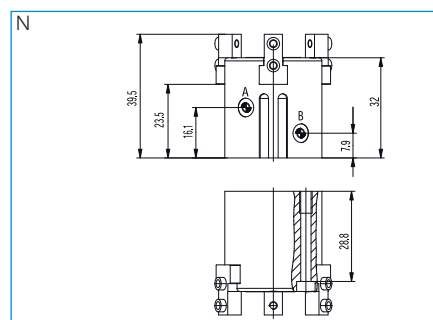
NC



- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ③⑧ Adapter
- ③⑨ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through



3-JAW CONCENTRIC GRIPPERS

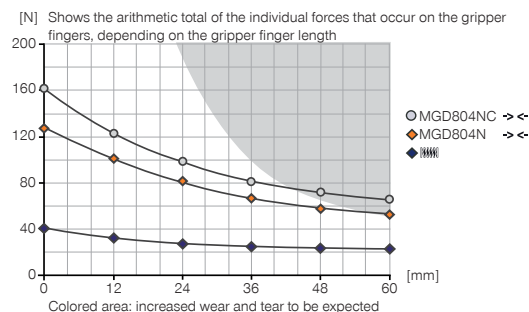
INSTALLATION SIZE MGD804

1

PRODUCT SPECIFICATIONS

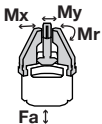


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	8
Mx [Nm]	8
My [Nm]	12
Fa [N]	250

INCLUDED IN DELIVERY



6 [piece]
Centering Disc
DST06510

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection



DEV04
Quick Exhaust Valve



DSV1-8
Pressure safety valve



ENERGY SUPPLY



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8

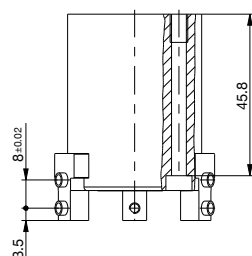
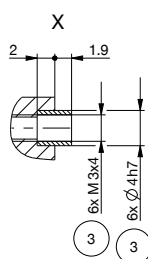
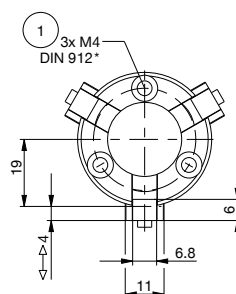
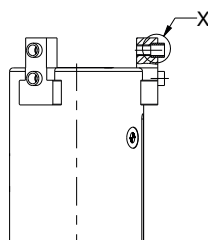
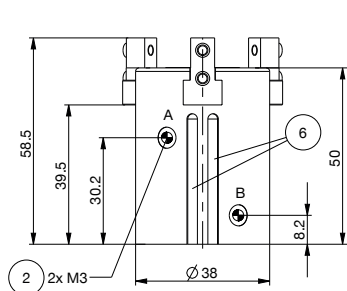
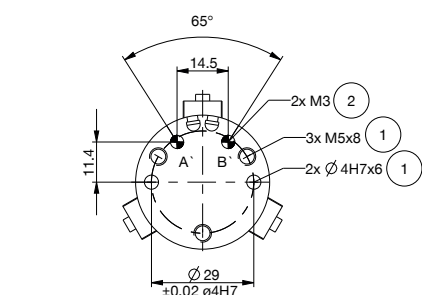


MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8

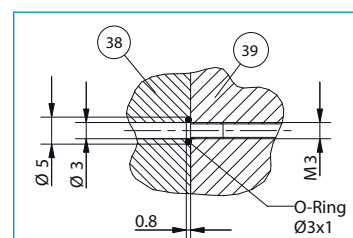


Order no.	Technical data	
	MGD804N	MGD804NC
Stroke per jaw [mm]	4	4
Gripping force in closing [N]	125	160
Gripping force in opening [N]	140	
Gripping force secured by spring min. [N]		35
Closing time [s]	0.02	0.02
Opening time [s]	0.02	0.03
Repetition accuracy +/- [mm]	0.02	0.02
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm ³]	2.9	4.5
Weight [kg]	0.14	0.18

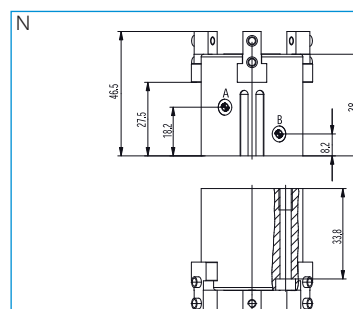
NC



- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ③⑧ Adapter
- ③⑨ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through



3-JAW CONCENTRIC GRIPPERS

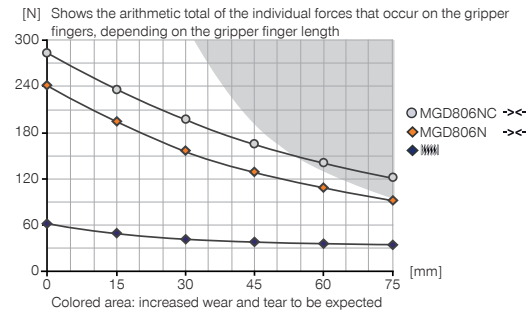
INSTALLATION SIZE MGD806

1

PRODUCT SPECIFICATIONS

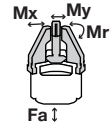


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	12
Mx [Nm]	12
My [Nm]	18
Fa [N]	420

INCLUDED IN DELIVERY



6 [piece]
Centering Disc
DST40400

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



ENERGY SUPPLY



DSV1-8E
Pressure safety valve with quick exhaust



DEV04
Quick Exhaust Valve



SENSORS



DSV1-8
Pressure safety valve



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8

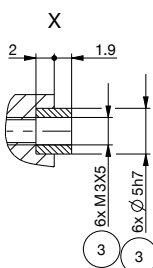
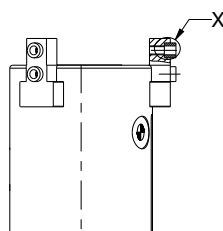
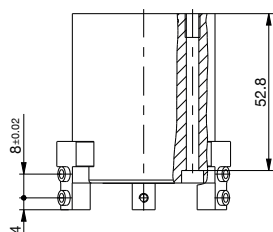
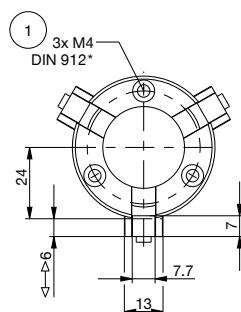
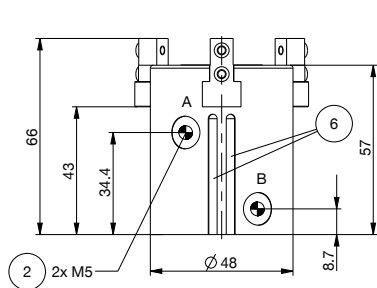
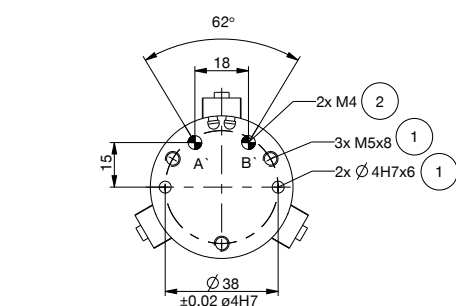


MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8

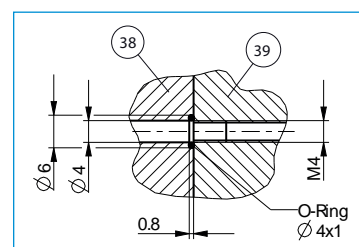


Order no.	Technical data	
	MGD806N	MGD806NC
Stroke per jaw [mm]	6	6
Gripping force in closing [N]	240	295
Gripping force in opening [N]	265	
Gripping force secured by spring min. [N]		55
Closing time [s]	0.04	0.04
Opening time [s]	0.04	0.06
Repetition accuracy +/- [mm]	0.02	0.02
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	8	11
Weight [kg]	0.26	0.35

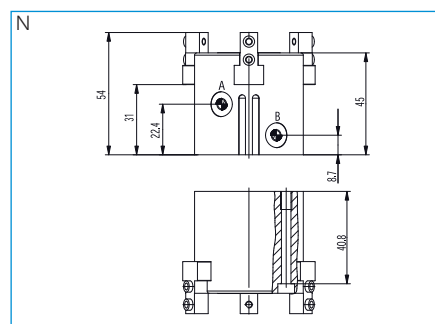
NC



- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ③⑧ Adapter
- ③⑨ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through



3-JAW CONCENTRIC GRIPPERS

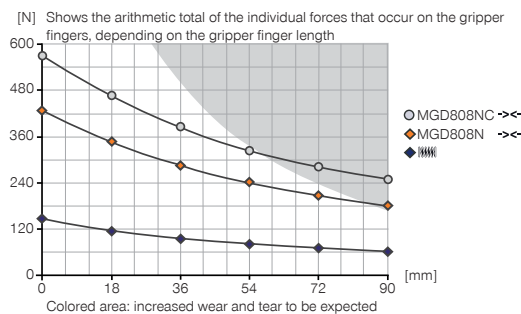
INSTALLATION SIZE MGD808

1

PRODUCT SPECIFICATIONS

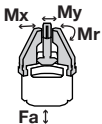


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	18
Mx [Nm]	19
My [Nm]	29
Fa [N]	660

INCLUDED IN DELIVERY



6 [piece]
Centering Disc
DST40600

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



ENERGY SUPPLY



DSV1-8E
Pressure safety valve with quick exhaust



DEV04
Quick Exhaust Valve



SENSORS



DSV1-8
Pressure safety valve



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8

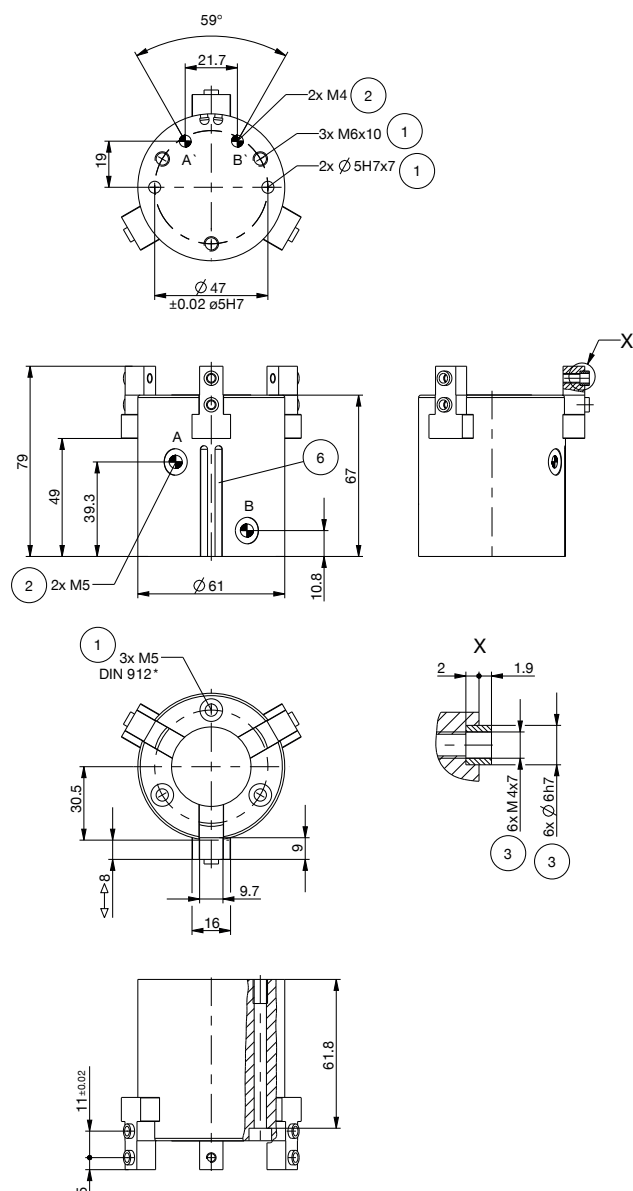


MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8

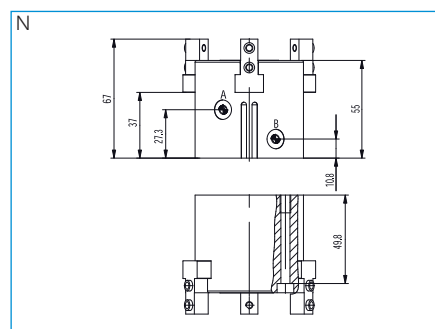
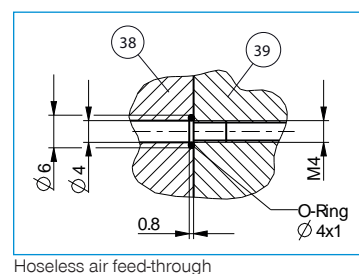


Order no.	► Technical data	
	MGD808N	MGD808NC
Stroke per jaw [mm]	8	8
Gripping force in closing [N]	415	560
Gripping force in opening [N]	450	
Gripping force secured by spring min. [N]		145
Closing time [s]	0.09	0.08
Opening time [s]	0.09	0.13
Repetition accuracy +/- [mm]	0.02	0.02
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	18	26
Weight [kg]	0.47	0.65

NC



- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ③⑧ Adapter
- ③⑨ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ' Air connection, alternative (close)
- Ⓑ' Air connection, alternative (open)



3-JAW CONCENTRIC GRIPPERS

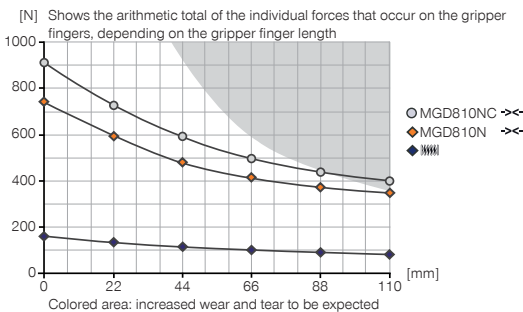
INSTALLATION SIZE MGD810

1

PRODUCT SPECIFICATIONS

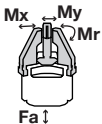


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	27
Mx [Nm]	29
My [Nm]	43
Fa [N]	960

INCLUDED IN DELIVERY



6 [piece]
Centering Disc
DST07540

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



ENERGY SUPPLY



DSV1-8E
Pressure safety valve with quick exhaust



DEV04
Quick Exhaust Valve



SENSORS



DSV1-8
Pressure safety valve



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8

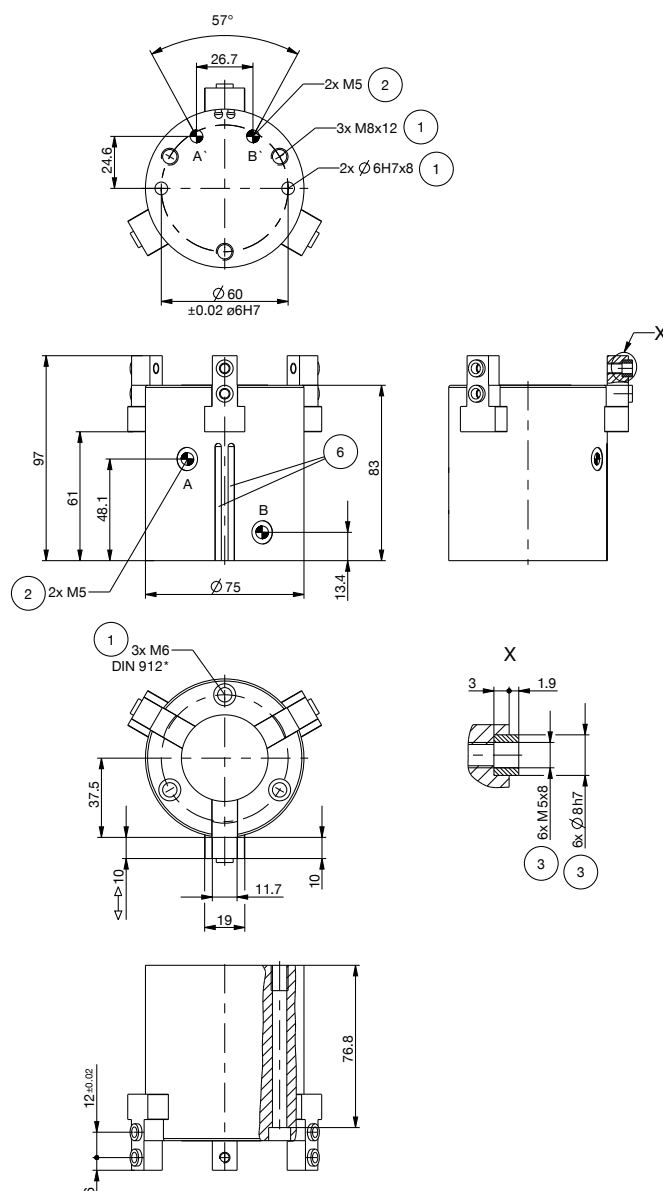


MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8

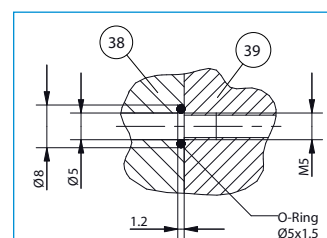


Order no.	Technical data	
	MGD810N	MGD810NC
Stroke per jaw [mm]	10	10
Gripping force in closing [N]	740	920
Gripping force in opening [N]	790	
Gripping force secured by spring min. [N]		180
Closing time [s]	0.1	0.1
Opening time [s]	0.1	0.15
Repetition accuracy +/- [mm]	0.02	0.02
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	37	50
Weight [kg]	0.98	1.16

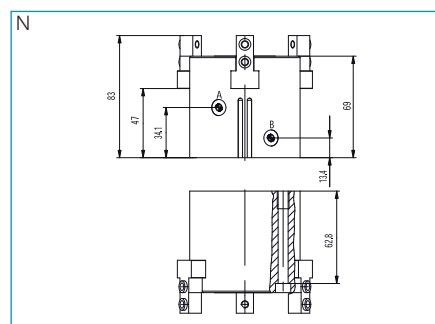
NC



- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ③⑧ Adapter
- ③⑨ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through



3-JAW CONCENTRIC GRIPPERS

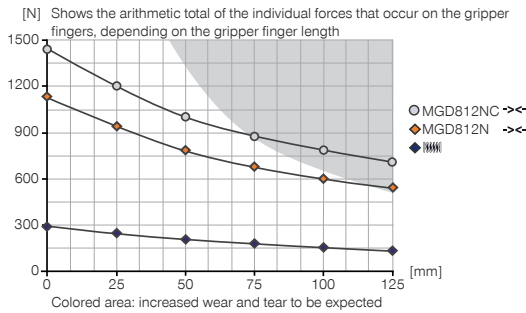
INSTALLATION SIZE MGD812

1

PRODUCT SPECIFICATIONS

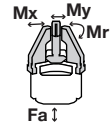


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	41
Mx [Nm]	45
My [Nm]	65
Fa [N]	1500

INCLUDED IN DELIVERY



6 [piece]
Centering Disc
DST41000

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GV1-8X8
Straight Fittings - Quick Connect Style



ENERGY SUPPLY



DSV1-8E
Pressure safety valve with quick exhaust



DEV06
Quick Exhaust Valve



SENSORS



DSV1-8
Pressure safety valve



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8

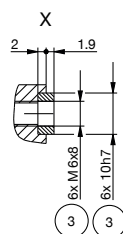
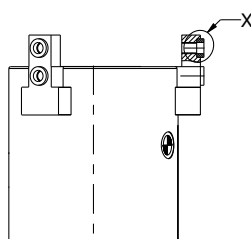
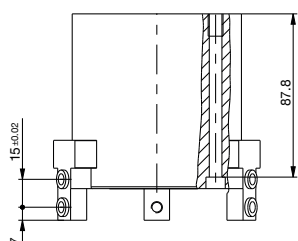
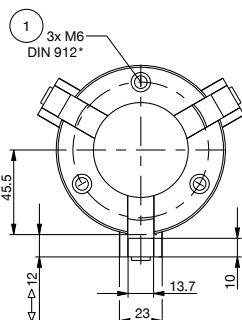
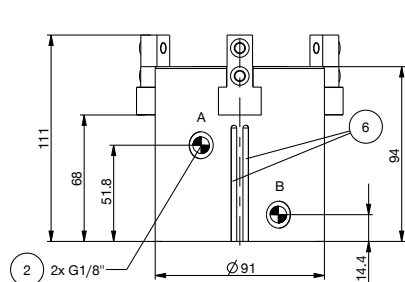
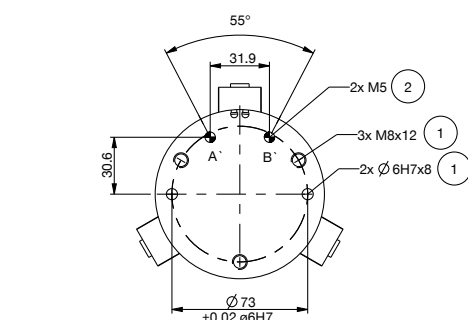


MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8

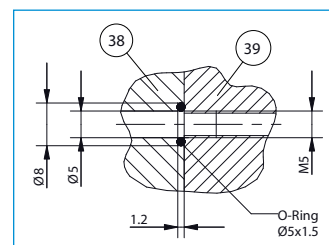


Order no.	► Technical data	
	MGD812N	MGD812NC
Stroke per jaw [mm]	12	12
Gripping force in closing [N]	1130	1420
Gripping force in opening [N]	1200	
Gripping force secured by spring min. [N]		290
Closing time [s]	0.12	0.12
Opening time [s]	0.12	0.17
Repetition accuracy +/- [mm]	0.02	0.02
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm ³]	69	97
Weight [kg]	1.67	2

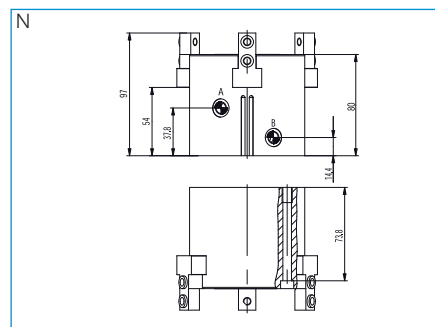
NC



- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ③⑧ Adapter
- ③⑨ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



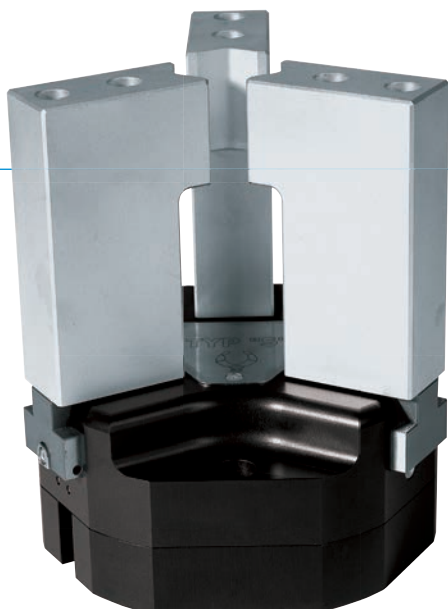
Hoseless air feed-through



3-JAW CONCENTRIC GRIPPERS

SERIES GD300

▶ PRODUCT ADVANTAGES



“The economical”

▶ Concentration on the essentials

The most economic type of gripping: This is how you reduce your production costs









▶ Proven T slot guide

This established and proven guiding technology stands for the highest process reliability like no other

▶ Compact structure

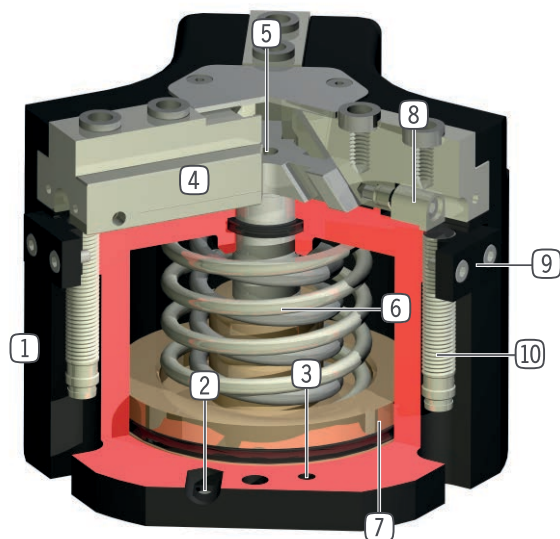
Reduces the interference contours for your application

▶ SERIES CHARACTERISTICS

Installation size		Version					
GD3XX		N	NC	NO	S	SC	SO
	Spring closing C		•			•	
	Spring opening O			•			•
	High-strength S				•	•	•
	10 million maintenance-free cycles (max.)	•	•	•	•	•	•
	Inductive sensor	•	•	•	•	•	•
	Magnetic field sensor	•	•	•	•	•	•
	Purged air	•	•	•	•	•	•
	IP 40	•	•	•	•	•	•



► BENEFITS IN DETAIL



- ① **Robust, lightweight housing**
- Hard-coated aluminum alloy
- ② **Energy supply**
- possible from several sides
- ③ **Mounting and positioning**
- mounting possible from several sides for versatile positioning
- ④ **Gripper jaw**
- individual gripper finger mounting
- ⑤ **Wedge hook mechanism**
- synchronized the movement of the gripper jaws
- high force transfer
- ⑥ **Integrated gripping force safety device**
- spring integrated into cylinder as energy storage
- ⑦ **Position sensing**
- permanent magnet for direct monitoring of piston movement
- ⑧ **Integrated, adjustable switch cam**
- for direct position sensing of the gripper jaw
- ⑨ **Mounting block**
- mounting for inductive proximity switch (10)

► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
GD303	3	200 - 300	0,13 - 0,16	IP40
GD304	2 - 4	450 - 1500	0,22 - 0,28	IP40
GD306	3 - 6	750 - 2300	0,5 - 0,65	IP40
GD308	4 - 8	1200 - 4000	0,85 - 1,2	IP40
GD310	5 - 10	2000 - 6400	1,6 - 2,2	IP40
GD312	6 - 12	3500 - 9250	2,7 - 3,8	IP40
GD316	8 - 16	6500 - 19100	5,1 - 8	IP40
GD320	10 - 20	8200 - 18700	9,6	IP40
GD330	15 - 30	15300 - 34700	24	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

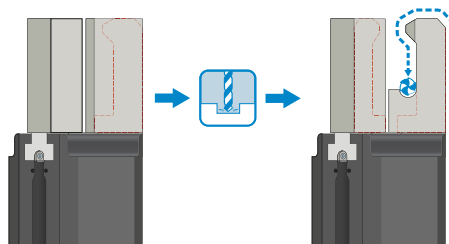
3-JAW CONCENTRIC GRIPPERS

SERIES GD300 FUNCTIONAL DESCRIPTION

1

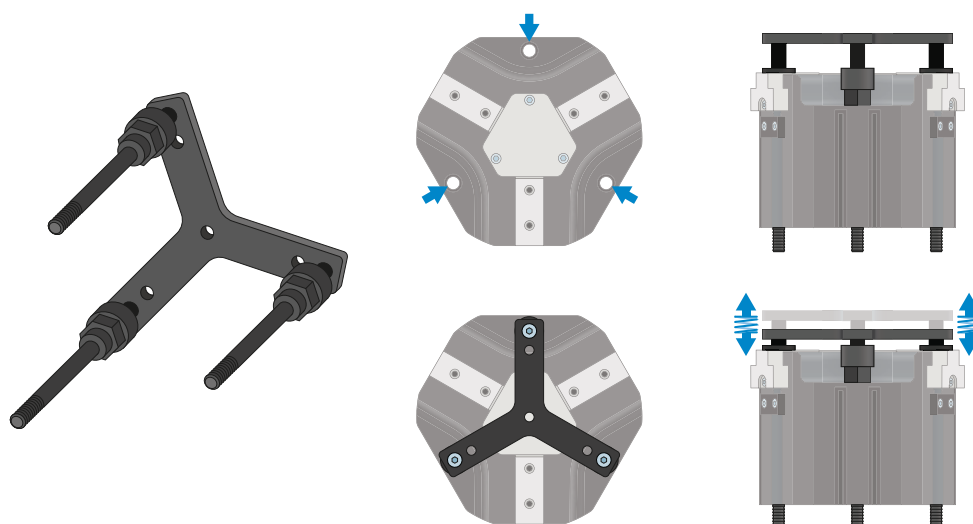


GRIPPING COMPONENTS



Universal jaws – UB300

When the gripper fingers are open, the pressure piece is used for spring-supported positioning of the workpiece against a limit stop. This greatly reduces the loads on the gripper that arise during joining.

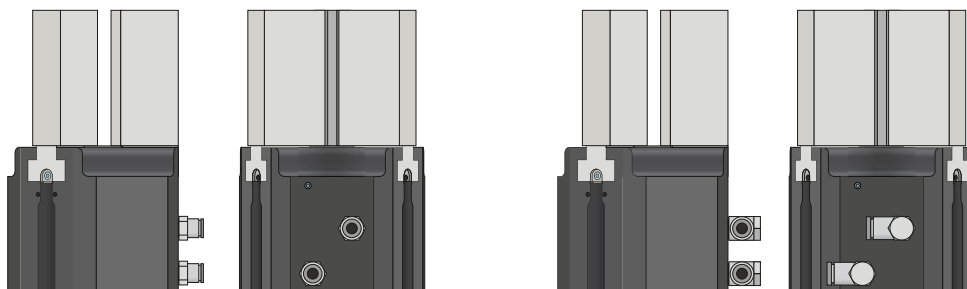


Pressure piece – ADS300

When the gripper fingers are open, the pressure piece is used for spring-supported positioning of the workpiece against a limit stop. This greatly reduces the loads on the gripper that arise during joining.

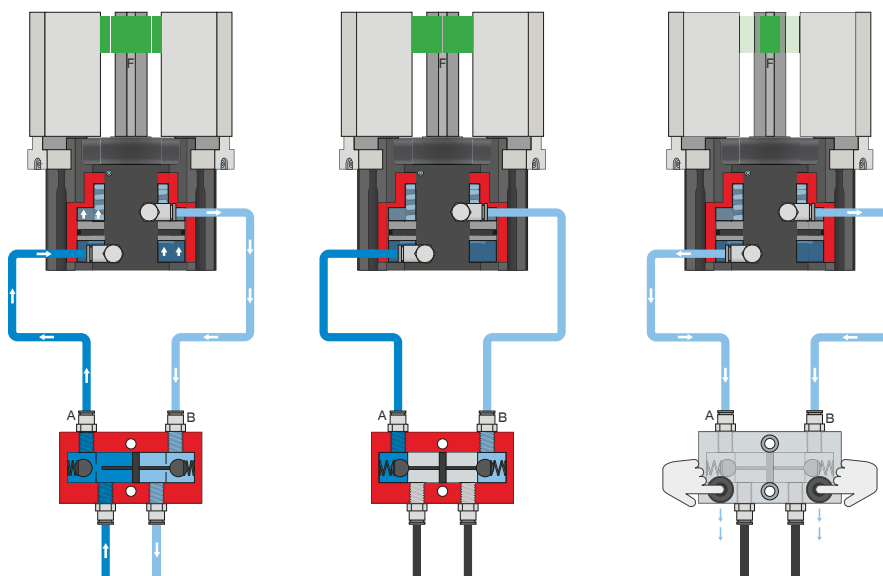


ENERGY SUPPLY



Pneumatic threaded connections

Available in straight and angled design. Can be chosen freely depending on the space conditions or installation situation.



Pressure safety valve – DSV

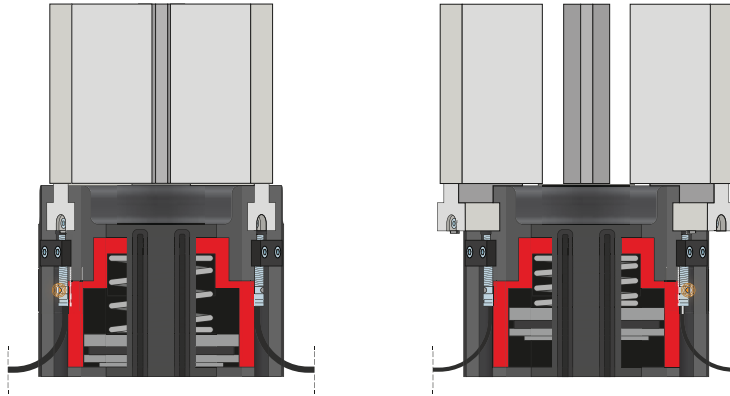
Ensures safe retention of force and position if the system pressure drops

The integrated double check valve, which can be unlocked, retains the system pressure of the gripper in case of EMERGENCY STOP. To ensure the function, the valve must be installed as close to the gripper's air connection as possible. In variant E, two pushbuttons are installed that allow for controlled bleeding of the gripper.

3-JAW CONCENTRIC GRIPPERS

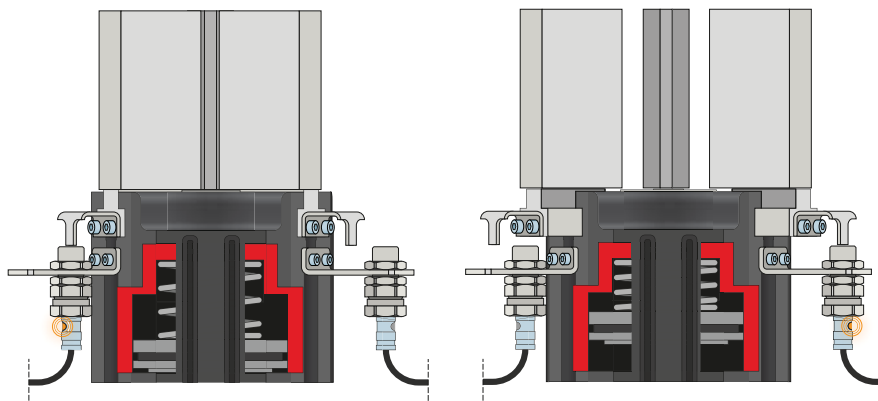
SERIES GD300 FUNCTIONAL DESCRIPTION

SENSORS



Inductive sensors – NJ

The sensor is inserted into the mounting block as far as it will go and secured. Tuning to the desired position then takes place by adjusting the cam switch. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector, as well as with direct plug orientation.



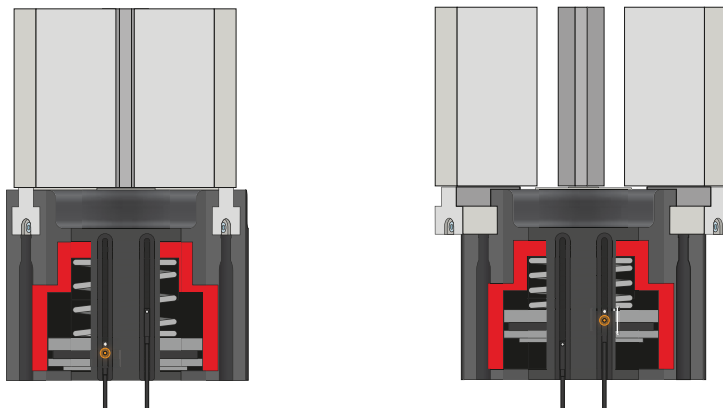
Clamping bracket – KHA

The KHA can be used as an alternative to installing the sensor via the mounting block. The sensor is inserted into the clamping bracket as far as it will go and secured. Tuning to the cam switch then takes place. Fine adjustment can be made by moving the clamping bracket again.

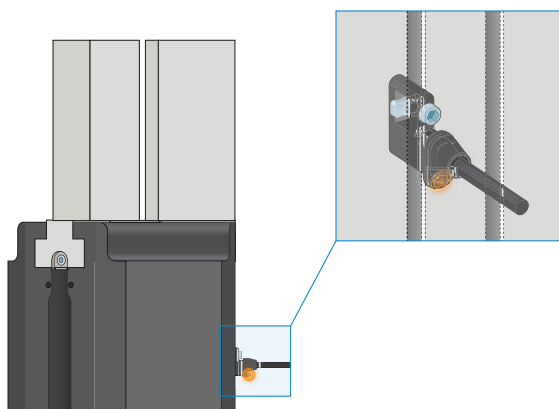


SENSORS

MFS02



MFS01



1-point magnetic field sensors – MFS

For non-contact sensing of the piston position

These sensors are installed in the C-groove of the gripper and detect the magnet attached to the piston of the gripper. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MFS01 is taller, but has a cable outlet that is offset at an angle of 90°. The variants are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.

3-JAW CONCENTRIC GRIPPERS

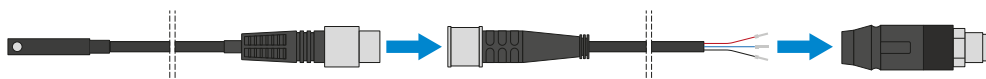
SERIES GD300 FUNCTIONAL DESCRIPTION

1

Series GD300 / 3-Jaw Concentric Grippers / pneumatic / Grippers



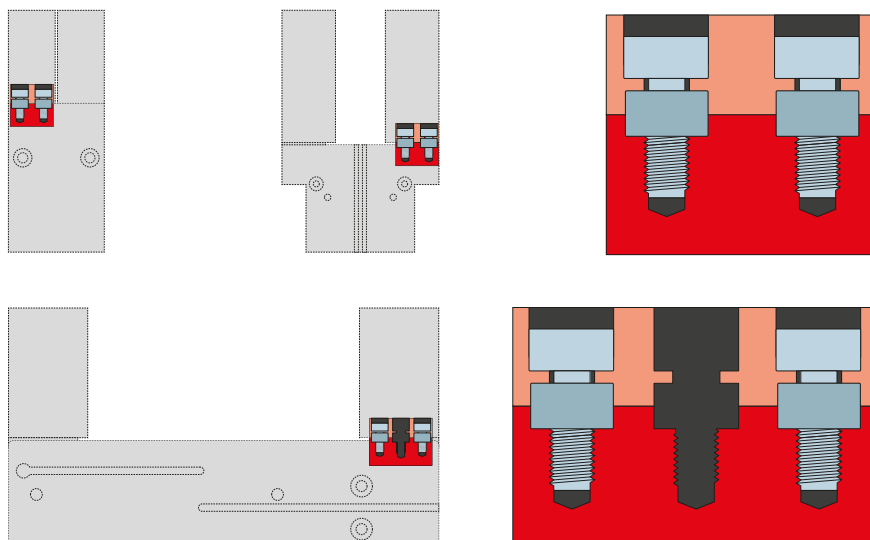
CONNECTIONS / OTHER



Plug-in connectors

For extending and fabricating the connection lines

Cables with a length of 10 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M12. A 5 m long cable with connector / socket is available for the IO-Link connection.



Centering sleeves

For defined position measurement of the gripper fingers

The centering sleeves are inserted into the fits of the gripper jaws to define the position of the gripper fingers. The centering sleeves are comparable to a pin connection.

3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE GD303

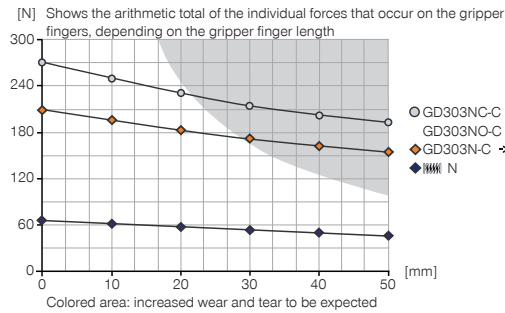
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Installation size GD303 / 3-Jaw Concentric Grippers / pneumatic / Grippers

PRODUCT SPECIFICATIONS

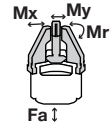


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	6
Mx [Nm]	9
My [Nm]	12
Fa [N]	500

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB3-07



6 [piece]
Centering Disc
DST40400

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB303
Universal jaw set aluminium



UB303ST
Universal jaw set steel



SENSORS



NJ3-E2SK
Inductive Proximity Switch Cable 0,3 m - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



WVM5
Angled Fittings - Quick Connect Style



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



CONNECTIONS / OTHER



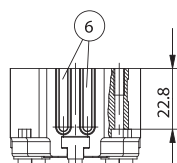
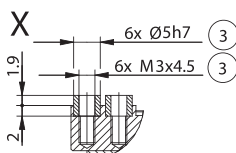
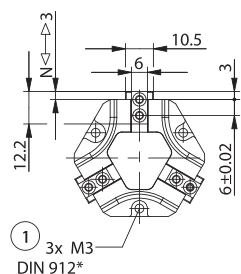
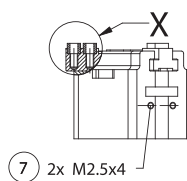
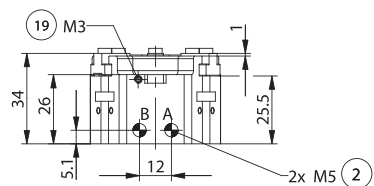
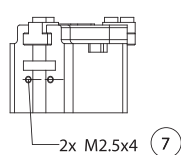
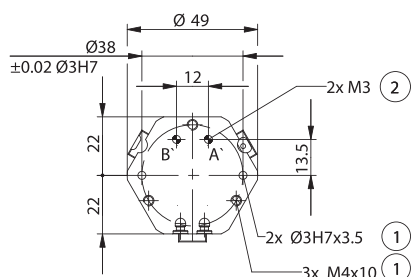
KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



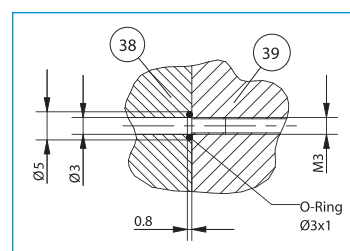
KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

Order no.	Technical data		
	GD303N-C	GD303NC-C	GD303NO-C
Stroke per jaw [mm]	3	3	3
Gripping force in closing [N]	200	270	
Gripping force in opening [N]	230		300
Gripping force secured by spring min. [N]		70	70
Closing time [s]	0.02	0.02	0.03
Opening time [s]	0.02	0.03	0.02
Repetition accuracy +/- [mm]	0.05	0.05	0.05
Operating pressure min. [bar]	2	4	4
Operating pressure max. [bar]	8	8	8
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	3.5	6.7	6.7
Weight [kg]	0.13	0.16	0.16

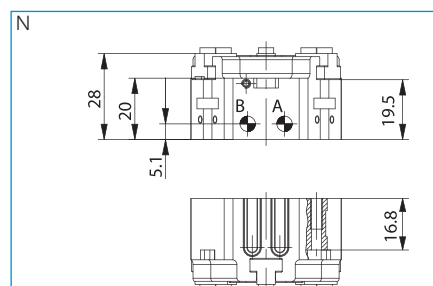
NC / NO



- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ⑰ Air purge connection option
- ⑳ Adapter
- ㉑ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through



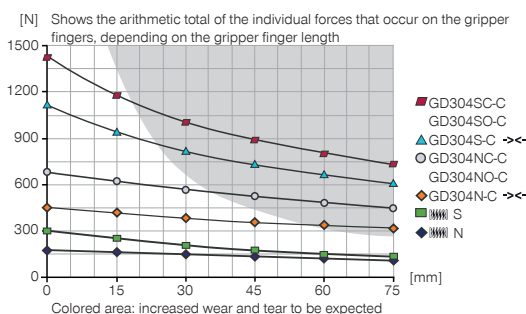
3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE GD304

PRODUCT SPECIFICATIONS

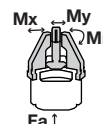


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	8
Mx [Nm]	15
My [Nm]	15
Fa [N]	700

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB3-08



6 [piece]
Centering Disc
DST40400

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB304
Universal jaw set aluminium



UB304ST
Universal jaw set steel



ADS304N-S
Pressure piece N / S



ADS304C-O
Pressure piece NC / NO / SC / SO



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ3-E2SK
Inductive Proximity Switch Cable 0,3 m - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



ENERGY SUPPLY



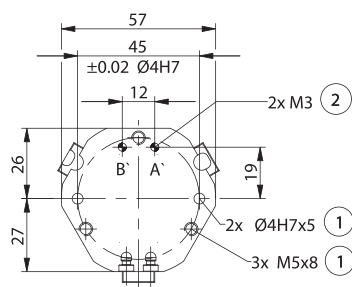
GVM5
Straight Fittings - Quick Connect Style



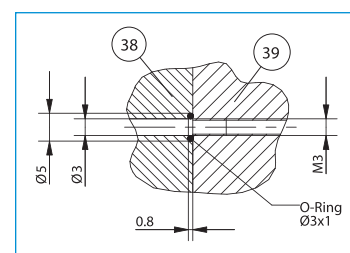
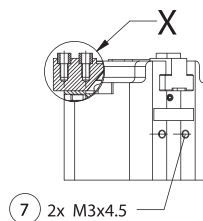
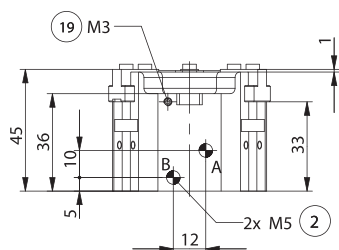
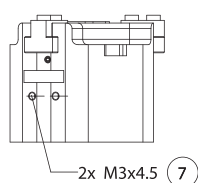
WVM5
Angled Fittings - Quick Connect Style

Order no.	Technical data					
	GD304N-C	GD304NC-C	GD304NO-C	GD304S-C	GD304SC-C	GD304SO-C
Stroke per jaw [mm]	4	4	4	2	2	2
Gripping force in closing [N]	450	650		1000	1400	
Gripping force in opening [N]	500		700	1100		1500
Gripping force secured by spring min. [N]		200	200		400	400
Closing time [s]	0.025	0.02	0.03	0.025	0.02	0.03
Opening time [s]	0.025	0.03	0.02	0.025	0.03	0.02
Repetition accuracy +/- [mm]	0.05	0.05	0.05	0.05	0.05	0.05
Operating pressure min. [bar]	2	4	4	2	4	4
Operating pressure max. [bar]	8	8	8	8	8	8
Nominal operating pressure [bar]	6	6	6	6	6	6
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle [cm³]	9.2	19.2	19.2	9.2	19.2	19.2
Weight [kg]	0.22	0.28	0.28	0.22	0.28	0.28

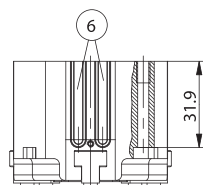
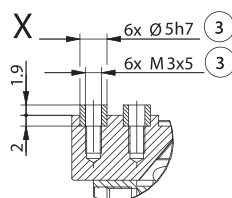
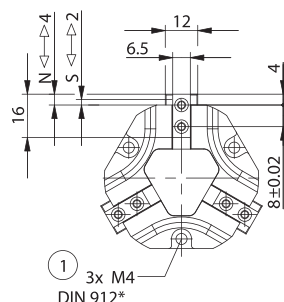
NC / NO / SC / SO



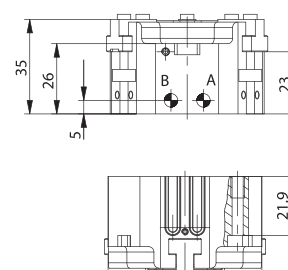
- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ⑬ Air purge connection option
- ⑬ Adapter
- ⑬ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through



N / S



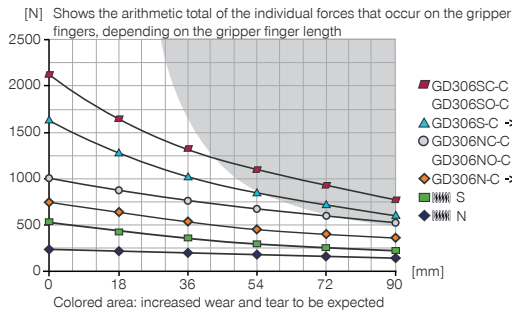
3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE GD306

PRODUCT SPECIFICATIONS

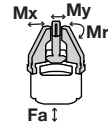


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	35
Mx [Nm]	50
My [Nm]	45
Fa [N]	1200

INCLUDED IN DELIVERY



3 [piece]
Mounting block
KB3-39



6 [piece]
Centering Disc
DST40600

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB306
Universal jaw set aluminium



UB306ST
Universal jaw set steel



ADS306N-S
Pressure piece N / S



ADS306C-O
Pressure piece NC / NO / SC / SO



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



ENERGY SUPPLY



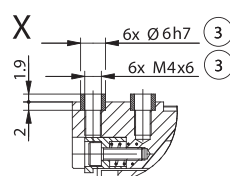
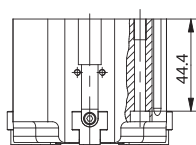
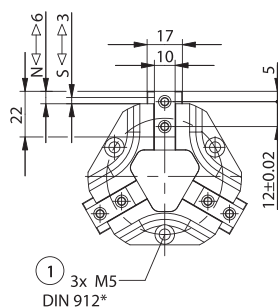
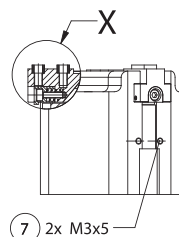
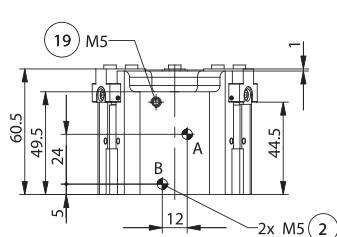
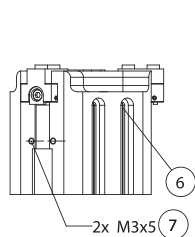
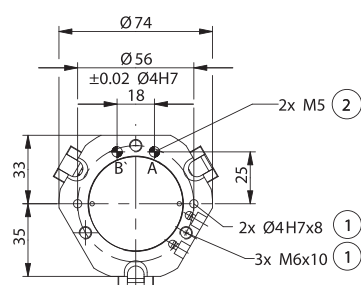
GVM5
Straight Fittings - Quick Connect Style



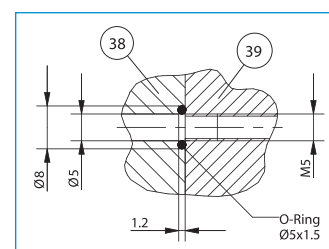
WVM5
Angled Fittings - Quick Connect Style

Order no.	Technical data					
	GD306N-C	GD306NC-C	GD306NO-C	GD306S-C	GD306SC-C	GD306SO-C
Stroke per jaw [mm]	6	6	6	3	3	3
Gripping force in closing [N]	750	1000		1600	2150	
Gripping force in opening [N]	800		1050	1750		2300
Gripping force secured by spring min. [N]		250	250		550	550
Closing time [s]	0.03	0.03	0.05	0.03	0.03	0.05
Opening time [s]	0.03	0.05	0.03	0.03	0.05	0.03
Repetition accuracy +/- [mm]	0.05	0.05	0.05	0.05	0.05	0.05
Operating pressure min. [bar]	2	4	4	2	4	4
Operating pressure max. [bar]	8	8	8	8	8	8
Nominal operating pressure [bar]	6	6	6	6	6	6
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle [cm³]	21.5	48	48	21.5	48	48
Weight [kg]	0.5	0.65	0.65	0.5	0.65	0.65

NC / NO / SC / SO

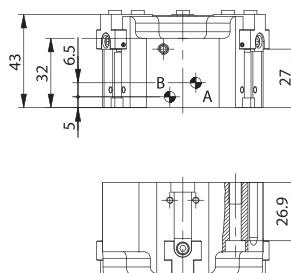


- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ⑨ Air purge connection option
- ③⑧ Adapter
- ③⑨ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through

N / S



3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE GD308

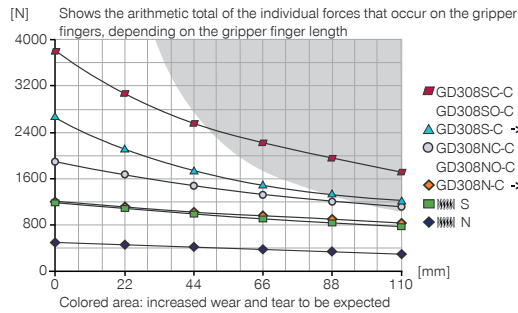
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Installation size GD308 / 3-Jaw Concentric Grippers / pneumatic / Grippers

PRODUCT SPECIFICATIONS

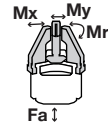


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	50
Mx [Nm]	80
My [Nm]	60
Fa [N]	1800

INCLUDED IN DELIVERY



3 [piece]
Mounting block
KB8-30



6 [piece]
Centering Disc
DST40800

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB308
Universal jaw set aluminium



UB308ST
Universal jaw set steel



ADS308N-S
Pressure piece N / S



ADS308C-O
Pressure piece NC / NO / SC / SO



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



ENERGY SUPPLY



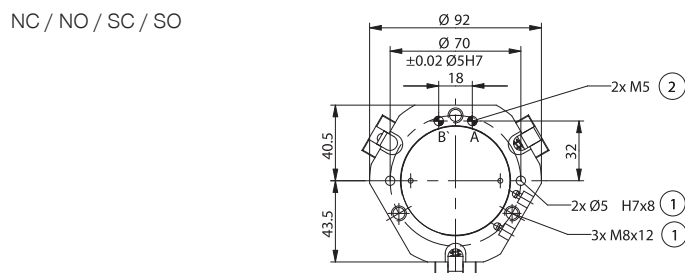
GV1-8X8
Straight Fittings - Quick Connect Style



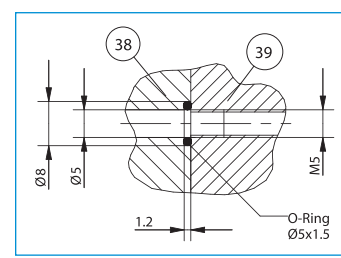
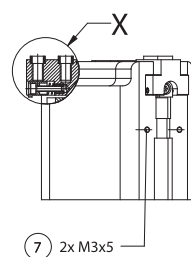
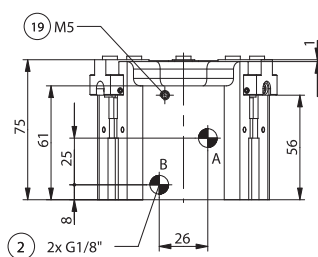
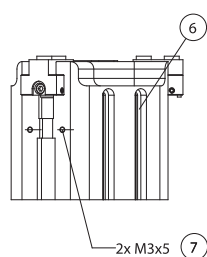
WV1-8X8
Angled Fittings - Quick Connect Style

Order no.	Technical data					
	GD308N-C	GD308NC-C	GD308NO-C	GD308S-C	GD308SC-C	GD308SO-C
Stroke per jaw [mm]	8	8	8	4	4	4
Gripping force in closing [N]	1200	1800		2600	3800	
Gripping force in opening [N]	1300		1900	2800		4000
Gripping force secured by spring min. [N]		600	600		1200	1200
Closing time [s]	0.05	0.03	0.06	0.05	0.03	0.06
Opening time [s]	0.05	0.06	0.03	0.05	0.06	0.03
Repetition accuracy +/- [mm]	0.05	0.05	0.05	0.05	0.05	0.05
Operating pressure min. [bar]	2	4	4	2	4	4
Operating pressure max. [bar]	8	8	8	8	8	8
Nominal operating pressure [bar]	6	6	6	6	6	6
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle [cm³]	47	108	108	47	108	108
Weight [kg]	0.85	1.2	1.2	0.85	1.2	1.2

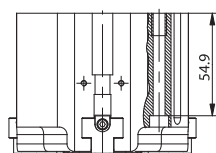
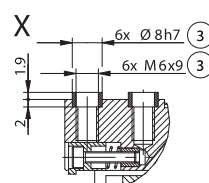
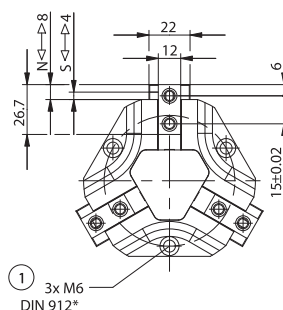
NC / NO / SC / SO



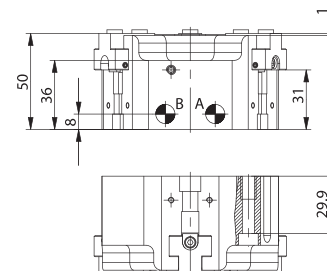
- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ⑨ Air purge connection option
- ③⑧ Adapter
- ③⑨ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through



N / S



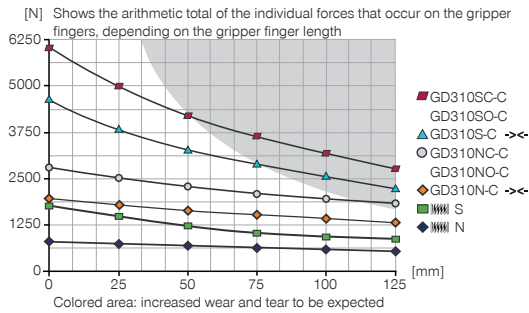
3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE GD310

PRODUCT SPECIFICATIONS

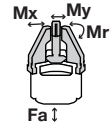


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	75
Mx [Nm]	100
My [Nm]	90
Fa [N]	2500

INCLUDED IN DELIVERY



6 [piece]
Centering Disc
DST41000

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB310
Universal jaw set aluminium



UB310ST
Universal jaw set steel



ADS310N-S
Pressure piece N / S



ADS310C-O
Pressure piece NC / NO / SC / SO



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



KHA310-B-8
Alternate proximity bracket



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



ENERGY SUPPLY



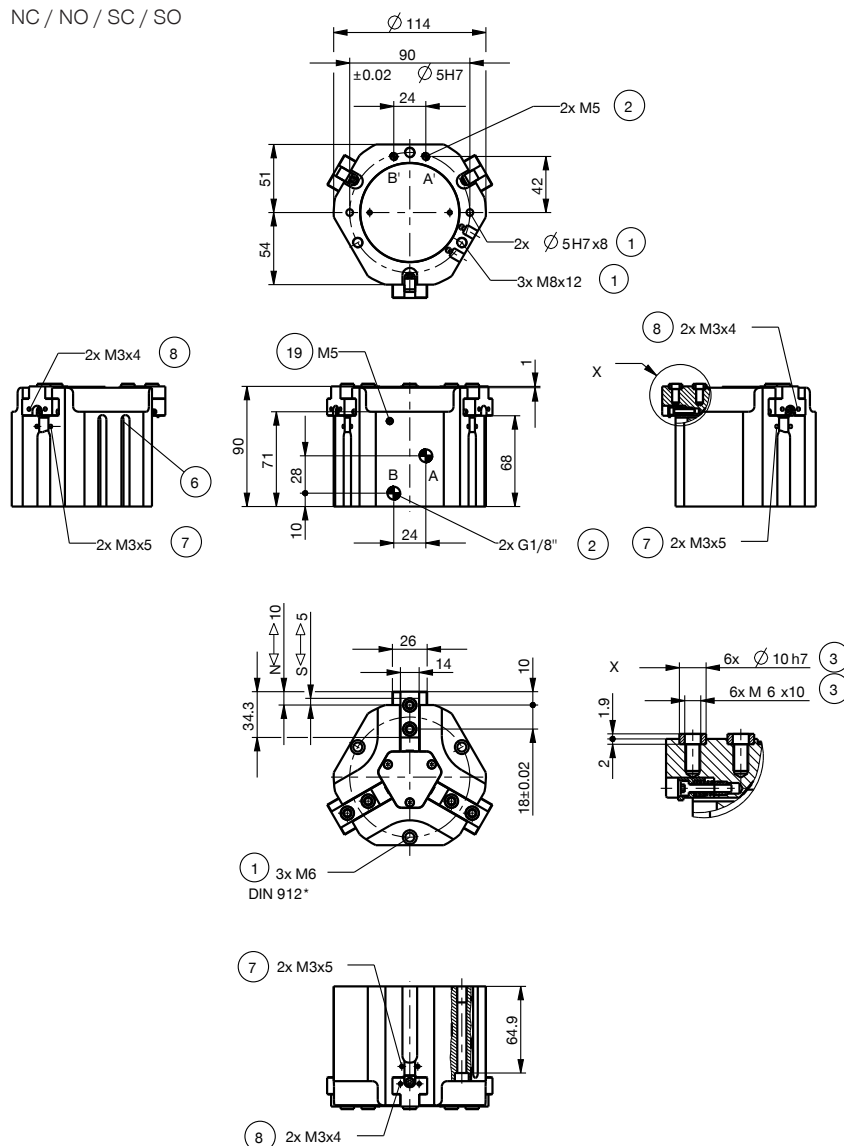
GV1-8X8
Straight Fittings - Quick Connect Style



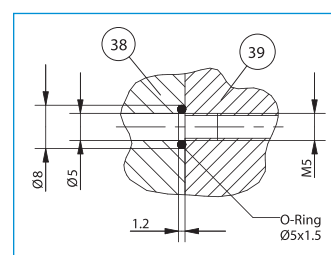
WV1-8X8
Angled Fittings - Quick Connect Style

	► Technical data					
Order no.	GD310N-C	GD310NC-C	GD310NO-C	GD310S-C	GD310SC-C	GD310SO-C
Stroke per jaw [mm]	10	10	10	5	5	5
Gripping force in closing [N]	2000	2800		4400	6200	
Gripping force in opening [N]	2100		2900	4600		6400
Gripping force secured by spring min. [N]		800	800		1800	1800
Closing time [s]	0.1	0.07	0.2	0.1	0.07	0.2
Opening time [s]	0.1	0.2	0.07	0.1	0.2	0.07
Repetition accuracy +/- [mm]	0.05	0.05	0.05	0.05	0.05	0.05
Operating pressure min. [bar]	2	4	4	2	4	4
Operating pressure max. [bar]	8	8	8	8	8	8
Nominal operating pressure [bar]	6	6	6	6	6	6
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle [cm³]	100	220	220	100	220	220
Weight [kg]	1.6	2.2	2.2	1.6	2.2	2.2

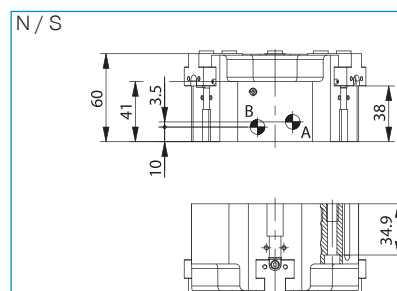
NC / NO / SC / SO



- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ⑧ Fixing clamping bracket (KHA)
- ⑨ Air purge connection option
- ⑩ Adapter
- ⑪ Gripper
- Ⓐ Air connection (close)
- Ⓑ Air connection (open)
- Ⓐ Air connection, alternative (close)
- Ⓑ Air connection, alternative (open)



Hoseless air feed-through



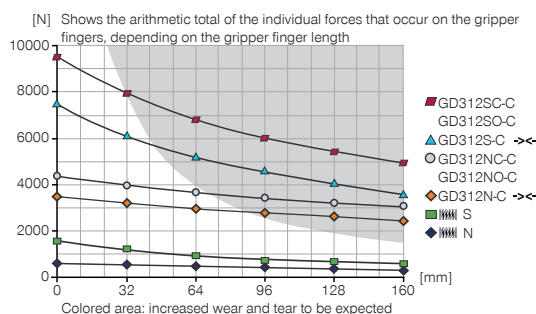
3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE GD312

PRODUCT SPECIFICATIONS

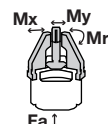


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	100
Mx [Nm]	120
My [Nm]	120
Fa [N]	3200

INCLUDED IN DELIVERY



3 [piece]
Mounting block
KB8-32



6 [piece]
Centering Disc
DST41000

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB312
Universal jaw set aluminium



UB312ST
Universal jaw set steel



ADS312N-S
Pressure piece N / S



ADS312C-O
Pressure piece NC / NO / SC / SO



ENERGY SUPPLY



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



KHA312-B-8
Alternate proximity bracket



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



ENERGY SUPPLY



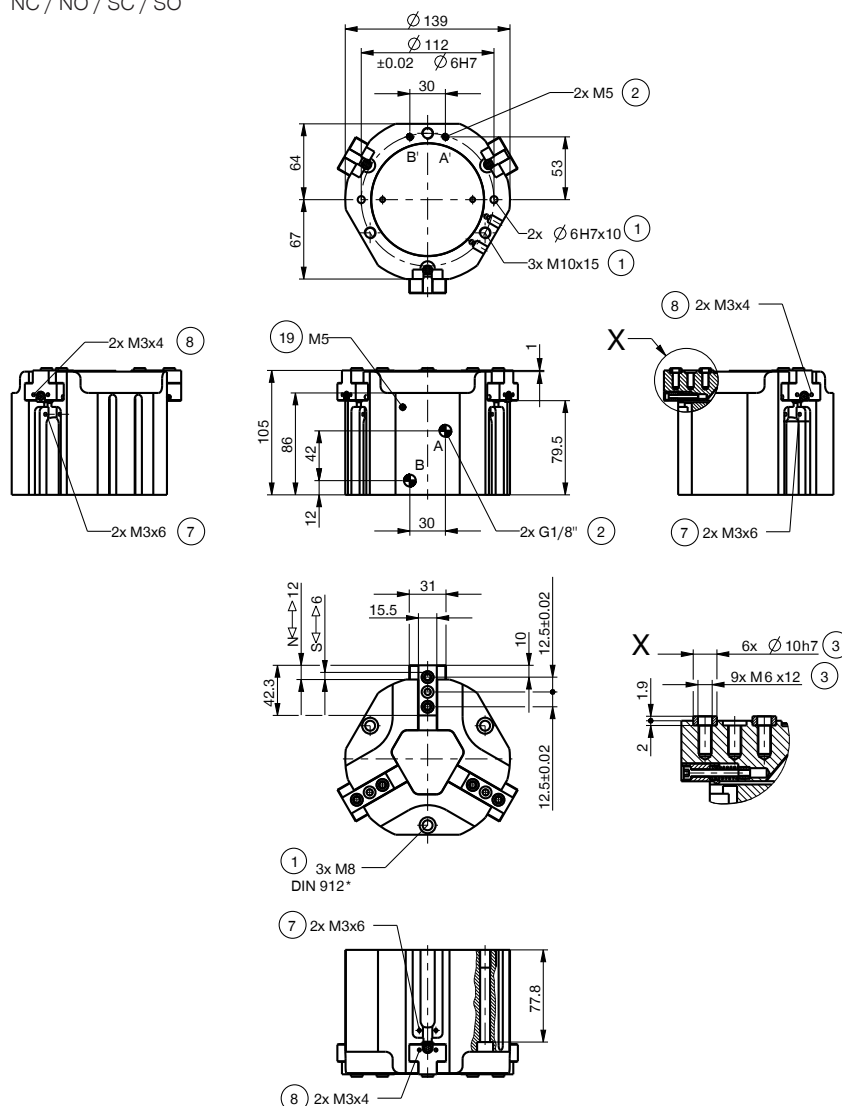
GV1-8X8
Straight Fittings - Quick Connect Style



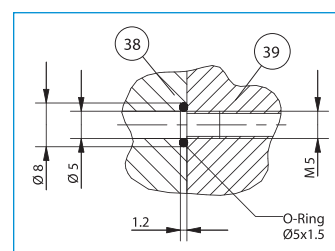
DSV1-8
Pressure safety valve

Order no.	Technical data					
	GD312N-C	GD312NC-C	GD312NO-C	GD312S-C	GD312SC-C	GD312SO-C
Stroke per jaw [mm]	12	12	12	6	6	6
Gripping force in closing [N]	3500	4150		7600	9000	
Gripping force in opening [N]	3600		4250	7850		9250
Gripping force secured by spring min. [N]		650	650		1400	1400
Closing time [s]	0.2	0.15	0.35	0.2	0.15	0.35
Opening time [s]	0.2	0.35	0.15	0.2	0.35	0.15
Repetition accuracy +/- [mm]	0.05	0.05	0.05	0.05	0.05	0.05
Operating pressure min. [bar]	2	4	4	2	4	4
Operating pressure max. [bar]	8	8	8	8	8	8
Nominal operating pressure [bar]	6	6	6	6	6	6
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle [cm³]	190	420	420	190	420	420
Weight [kg]	2.7	3.8	3.8	2.7	3.8	3.8

NC / NO / SC / SO

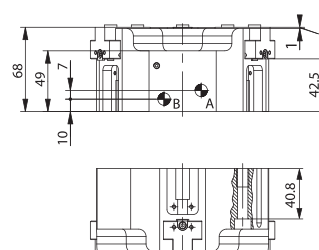


- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑦ Fixing for mounting block
- ⑧ Fixing clamping bracket (KHA)
- ⑨ Air purge connection option
- ⑩ Adapter
- ⑪ Gripper
- ⑫ Air connection (close)
- ⑬ Air connection (open)
- ⑭ Air connection, alternative (close)
- ⑮ Air connection, alternative (open)



Hoseless air feed-through

N / S



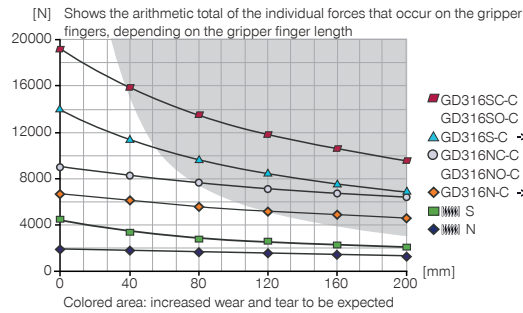
3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE GD316

PRODUCT SPECIFICATIONS

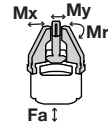


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	140
Mx [Nm]	160
My [Nm]	180
Fa [N]	5000

INCLUDED IN DELIVERY



3 [piece]
Mounting block
KB8-33



6 [piece]
Centering Disc
DST41600

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB316
Universal jaw set aluminium



UB316ST
Universal jaw set steel



ADS316N-S
Pressure piece N / S



ADS316C-O
Pressure piece NC / NO / SC / SO



ENERGY SUPPLY



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



KHA316-B-8
Alternate proximity bracket



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



ENERGY SUPPLY



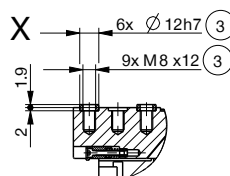
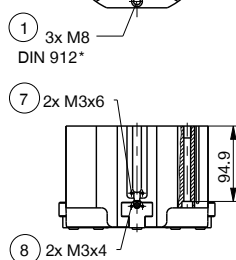
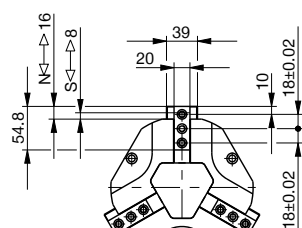
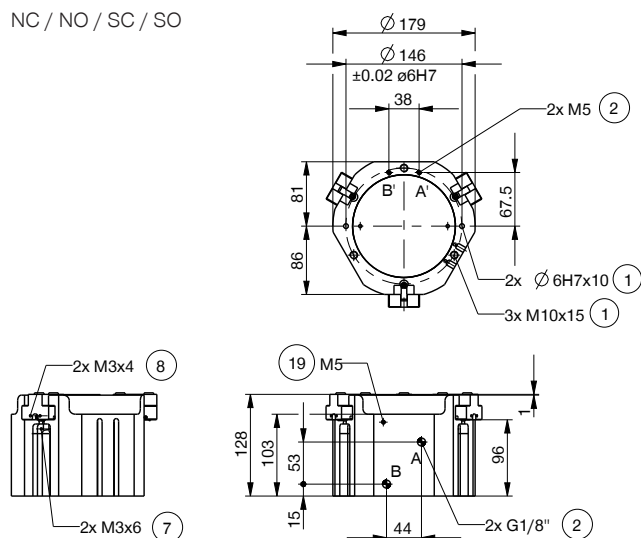
GV1-8X8
Straight Fittings - Quick Connect Style



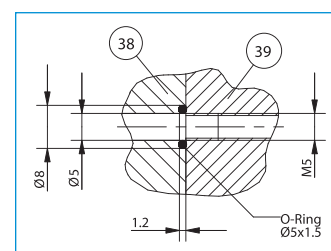
DSV1-8
Pressure safety valve

Order no.	Technical data					
	GD316N-C	GD316NC-C	GD316NO-C	GD316S-C	GD316SC-C	GD316SO-C
Stroke per jaw [mm]	16	16	16	8	8	8
Gripping force in closing [N]	6500	8600		14000	18700	
Gripping force in opening [N]	6600		8700	14400		19100
Gripping force secured by spring min. [N]		2100	2100		4700	4700
Closing time [s]	0.25	0.2	0.4	0.25	0.2	0.4
Opening time [s]	0.25	0.4	0.2	0.25	0.4	0.2
Repetition accuracy +/- [mm]	0.05	0.05	0.05	0.05	0.05	0.05
Operating pressure min. [bar]	2	4	4	2	4	4
Operating pressure max. [bar]	8	8	8	8	8	8
Nominal operating pressure [bar]	6	6	6	6	6	6
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle [cm³]	470	960	960	470	960	960
Weight [kg]	5.1	8	8	5.1	8	8

NC / NO / SC / SO

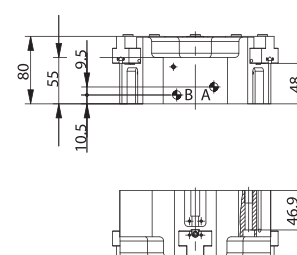


- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑦ Fixing for mounting block
- ⑧ Fixing clamping bracket (KHA)
- ⑨ Air purge connection option
- ⑩ Adapter
- ⑪ Gripper
- ⑫ Air connection (close)
- ⑬ Air connection (open)
- ⑭ Air connection, alternative (close)
- ⑮ Air connection, alternative (open)



Hoseless air feed-through

N / S



3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE GD320

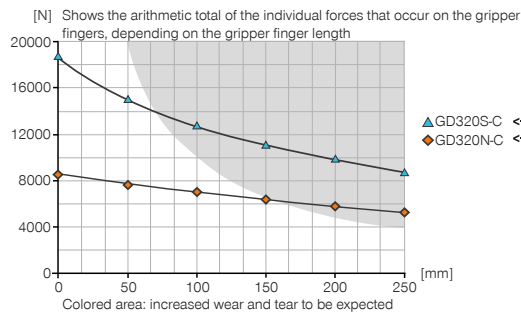
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Installation size GD320 / 3-Jaw Concentric Grippers / pneumatic / Grippers

PRODUCT SPECIFICATIONS

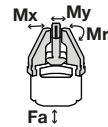


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	170
Mx [Nm]	180
My [Nm]	220
Fa [N]	7000

INCLUDED IN DELIVERY



3 [piece]
Mounting block
KB8-34



6 [piece]
Centering Disc
DST42000

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB320
Universal jaw set aluminium



UB320ST
Universal jaw set steel



ADS320N-S
Pressure piece N / S



ADS320C-O
Pressure piece NC / NO / SC / SO



ENERGY SUPPLY



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



KHA320-B-8
Alternate proximity bracket



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



ENERGY SUPPLY



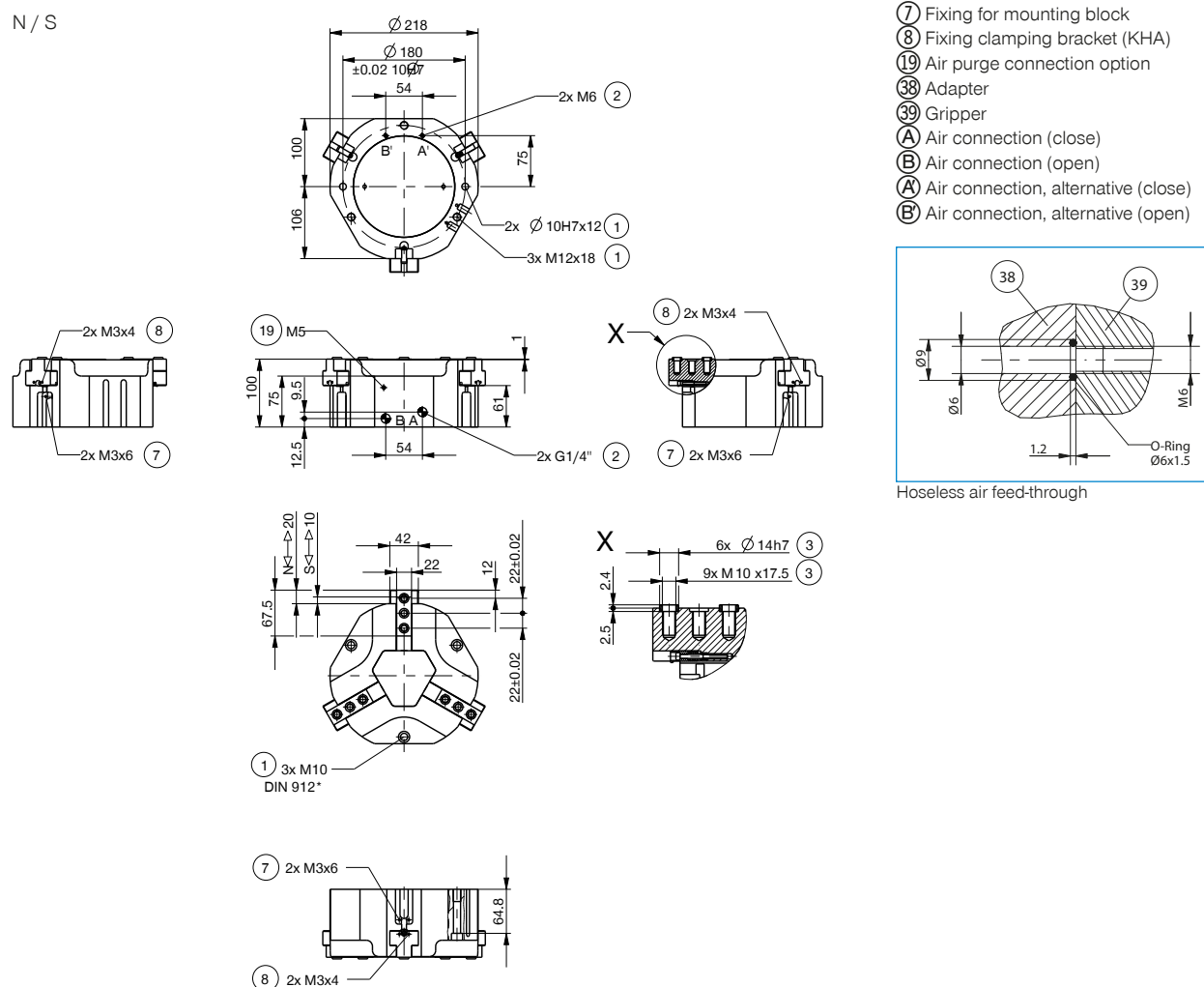
GV1-4X8
Straight Fittings - Quick Connect Style



DSV1-8
Pressure safety valve

	► Technical data	
Order no.	GD320N-C	GD320S-C
Stroke per jaw [mm]	20	10
Gripping force in closing [N]	8200	18150
Gripping force in opening [N]	8450	18700
Gripping force secured by spring min. [N]		
Closing time [s]	0.35	0.35
Opening time [s]	0.35	0.35
Repetition accuracy +/- [mm]	0.05	0.05
Operating pressure min. [bar]	2	2
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	825	825
Weight [kg]	9.6	9.6

N / S



3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE GD330

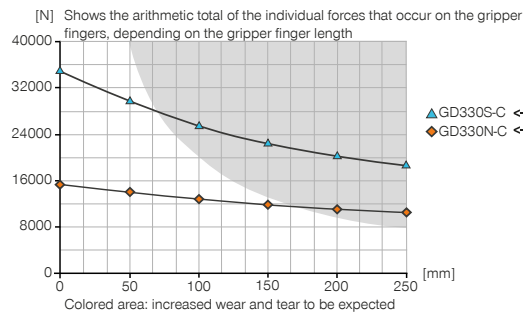
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Installation size GD330 / 3-Jaw Concentric Grippers / pneumatic / Grippers

PRODUCT SPECIFICATIONS

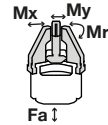


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	200
Mx [Nm]	275
My [Nm]	300
Fa [N]	9000

INCLUDED IN DELIVERY



3 [piece]
Mounting block
KB8-34



6 [piece]
Centering Disc
DST43000

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB330
Universal jaw set aluminium



UB330ST
Universal jaw set steel



SENSORS



KHA330-B-8
Alternate proximity bracket



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



ENERGY SUPPLY



GV1-4X8
Straight Fittings - Quick Connect Style



WV1-4X8
Angled Fittings - Quick Connect Style



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



CONNECTIONS / OTHER

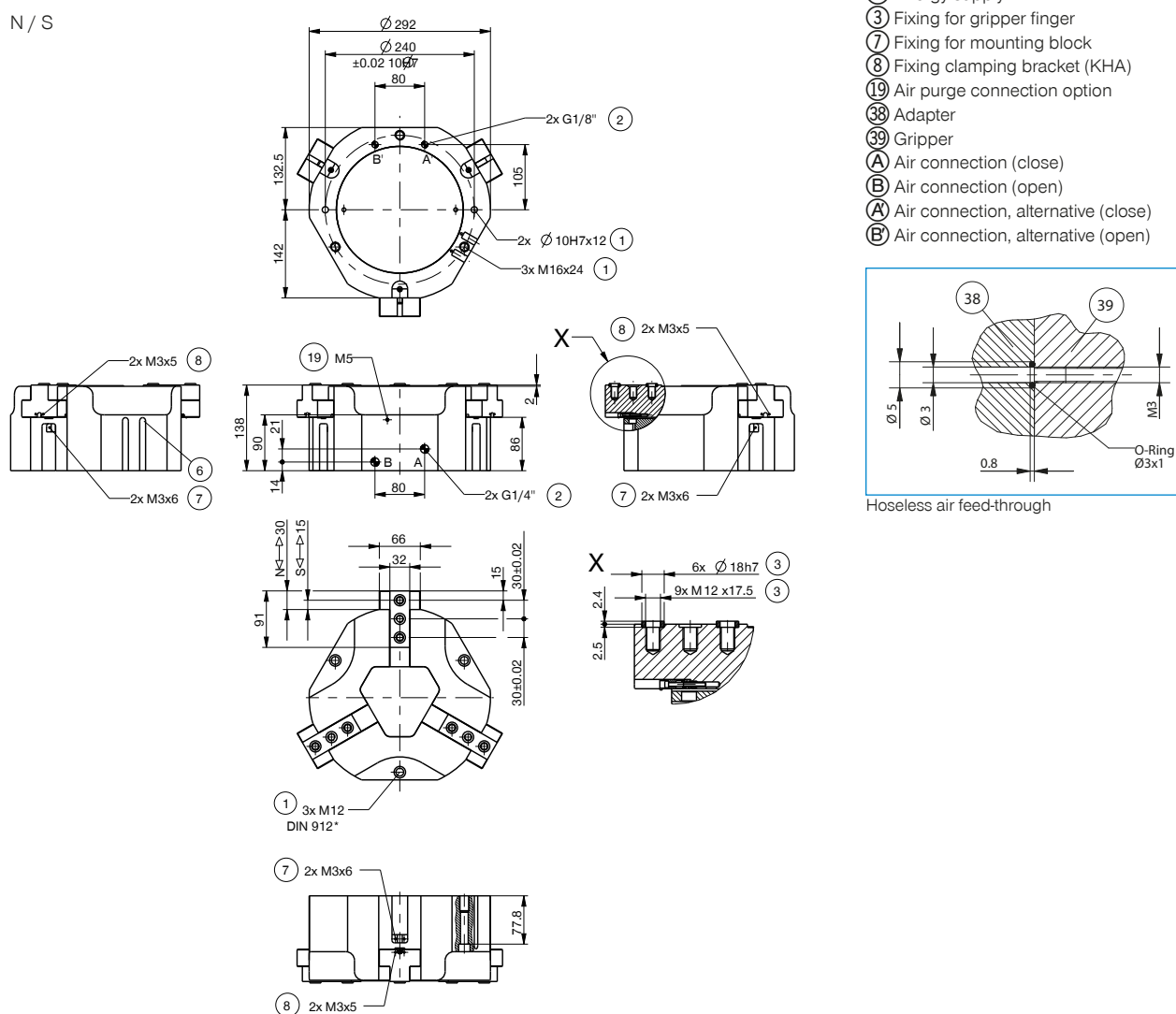


KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



Order no.	Technical data	
	GD330N-C	GD330S-C
Stroke per jaw [mm]	30	15
Gripping force in closing [N]	15300	34150
Gripping force in opening [N]	15550	34700
Gripping force secured by spring min. [N]		
Closing time [s]	0.8	0.8
Opening time [s]	0.8	0.8
Repetition accuracy +/- [mm]	0.05	0.05
Operating pressure min. [bar]	2	2
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	2270	2270
Weight [kg]	24	24

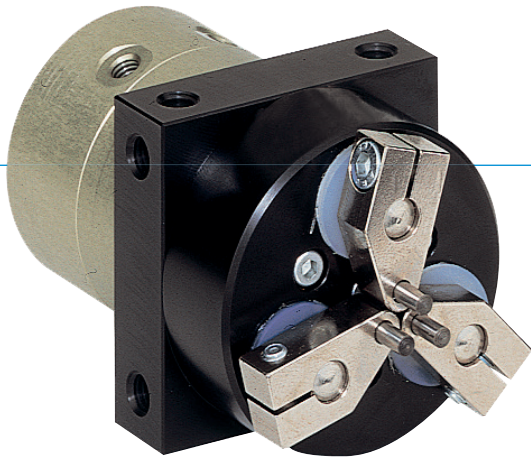
N / S



3-JAW CONCENTRIC GRIPPERS

SERIES GD




▶ PRODUCT ADVANTAGES



“The flexible”

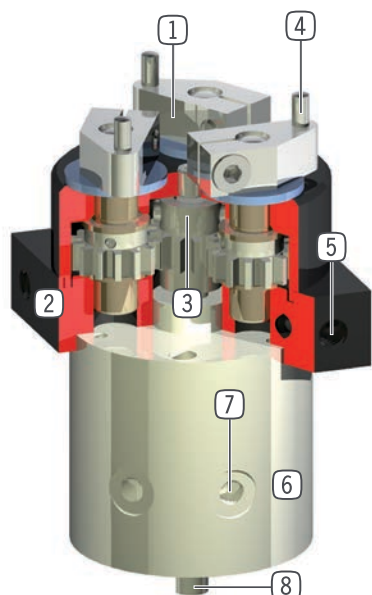
- ▶ **Largest stroke in small installation space**
You can cover numerous application variants with just one gripper type
- ▶ **Gripper jaws included in the delivery**
Reduces your design effort, manufacturing costs and setup time
- ▶ **Smooth stroke configuration**
Using the optionally available stroke limit, you can customise the stroke to your application, even stroke sensing is possible

▶ SERIES CHARACTERISTICS

Installation size		
GDXX		
 10 million maintenance-free cycles (max.)		●
 Inductive sensor		●
 IP 40		●



► BENEFITS IN DETAIL



- ① **Gripping movement on rotation**
 - for various workpiece diameters
- ② **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ③ **Planetary transmission**
 - synchronized the movement of the gripper jaws
- ④ **Standard pins serve as gripper jaw**
- ⑤ **Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- ⑥ **Drive**
 - double-acting pneumatic cylinder
- ⑦ **Energy supply**
 - possible radial and axial
- ⑧ **Shaft projection**
 - for accessory assembly e.g. sensors

► TECHNICAL DATA

Installation size	Stroke [°]	Gripping moment [Nm]	Weight [kg]	IP class
GD1	130	0,12	0.08	IP40
GD10	180	1	0.35	IP40
GD50	120	9	2	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



3-JAW CONCENTRIC GRIPPERS

OVERVIEW OF SERIES

1

Overview of Series / 3-Jaw Concentric Grippers



ELECTRICAL



Series GED1300

182

3-JAW CONCENTRIC GRIPPERS

SERIES GED1300




▶ PRODUCT ADVANTAGES



“The robust”

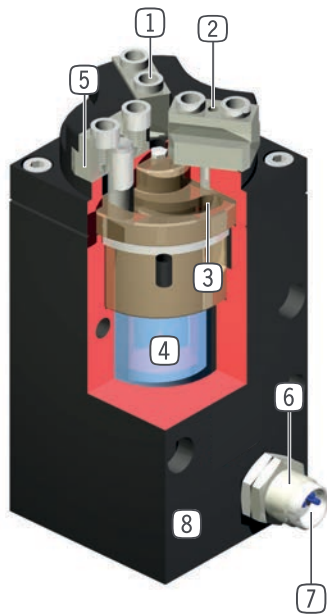
- ▶ **Proven T slot guide**
This established and proven guiding technology stands for the highest process reliability like no other
- ▶ **Integrated position sensing**
You can detect the gripper status safely via the motor current using your control system
- ▶ **The simplest activation**
The included control unit is controlled easily via plus and minus buttons, while you can optionally adjust the gripping force using the potentiometer

▶ SERIES CHARACTERISTICS

Installation size		Version		
GED130X			C	O
I/O	Digital I/O	•	•	•
	External gripping		•	
	Internal gripping			•
	5 million maintenance-free cycles (max.)	•	•	•
IP 40	IP40	•	•	•



► BENEFITS IN DETAIL



- ① **Removable centering sleeves**
 - quick and economical positioning of the gripper fingers
- ② **Gripper jaw**
 - hardened steel
 - individual gripper finger mounting
- ③ **Positively driven curve disc**
 - synchronized the movement of the gripper jaws
 - high force transfer
 - rapid stroke and force stroke (version with 6 mm stroke per jaw)
- ④ **Drive**
 - electric drive by 24 VDC step motor
- ⑤ **Guide**
 - precise T-Slot guide for high forces and moments capacity
- ⑥ **Position sensing**
 - measured at the end of stroke via power increase on the motor
- ⑦ **Energy supply**
 - standardized interface M8 round plug connection signal control line (use only cable without diode)
- ⑧ **Robust, lightweight housing**
 - Hard-coated aluminum alloy

► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
GED1302	2	140	0.25	IP40
GED1306	6	350	1.7	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE



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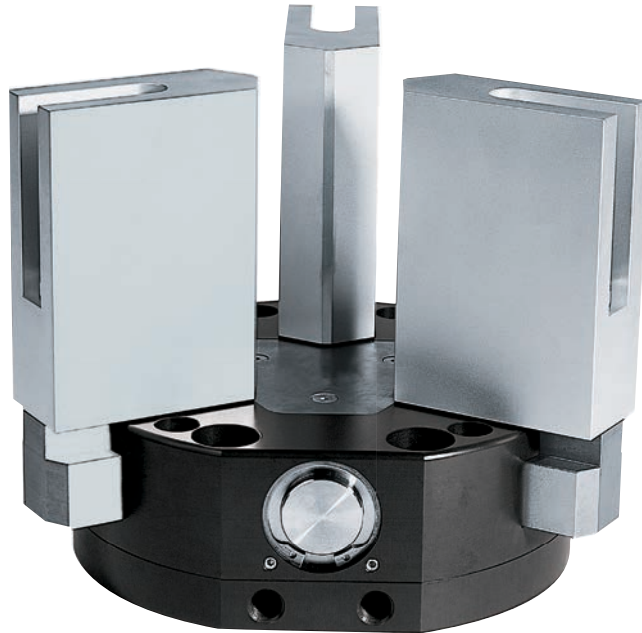


3-JAW CONCENTRIC GRIPPERS WITH LONG STROKE

OVERVIEW OF SERIES

1

Overview of Series / 3-Jaw Concentric Grippers with Long Stroke



PNEUMATIC



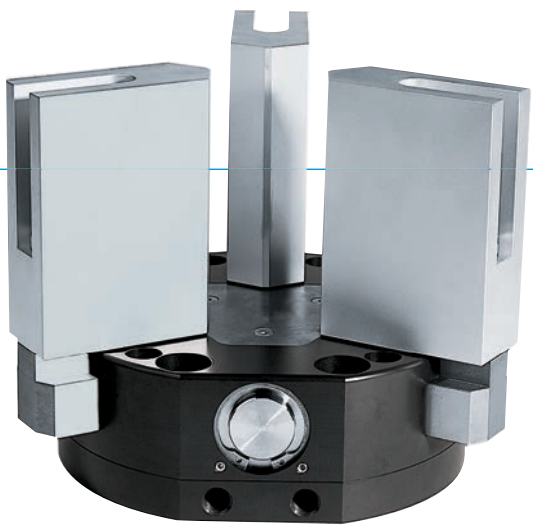
Series GD500

186

3-JAW CONCENTRIC GRIPPERS WITH LONG STROKE

SERIES GD500




▶ PRODUCT ADVANTAGES



“The flat”

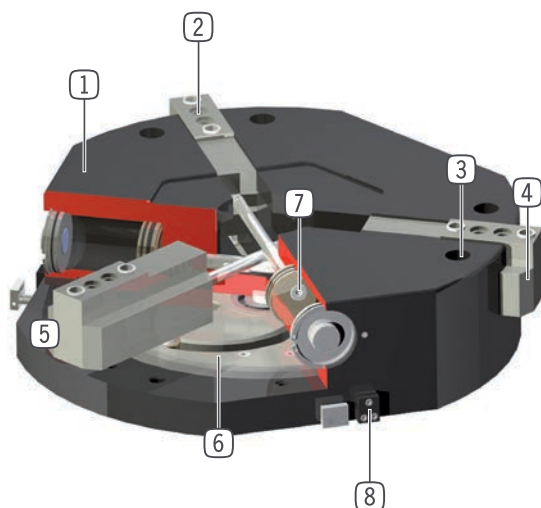
- ▶ **Reduced installation height due to horizontal drive**
Reduces the interference contours for your application
- ▶ **Proven T slot guide**
This established and proven guiding technology stands for the highest process reliability like no other
- ▶ **Failure-free continuous operation**
Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free cycles

▶ SERIES CHARACTERISTICS

Installation size		
GD5XX		
 10 million maintenance-free cycles (max.)		●
 Inductive sensor		●
 IP40		●



► BENEFITS IN DETAIL



- ① **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ② **Removable centering sleeves**
 - quick and economical positioning of the gripper fingers
- ③ **Mounting and positioning**
- ④ **Gripper jaw**
 - ground, hardened steel
 - individual gripper finger mounting
- ⑤ **Precise T-Slot guide**
 - high forces and moments capacity
- ⑥ **Cam**
 - synchronized jaw movement
- ⑦ **Drive**
 - three double-acting pneumatic cylinders
- ⑧ **Mounting block**
 - mounting for inductive proximity switch

► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
GD530	30	1300	7.4	IP40
GD540	40	2480	22.3	IP40
GD560	60	2480	34.3	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE

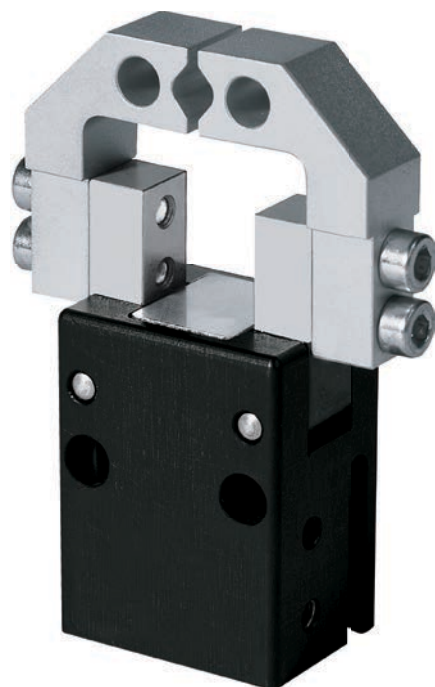




All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



2-JAW ANGULAR GRIPPERS

OVERVIEW OF SERIES

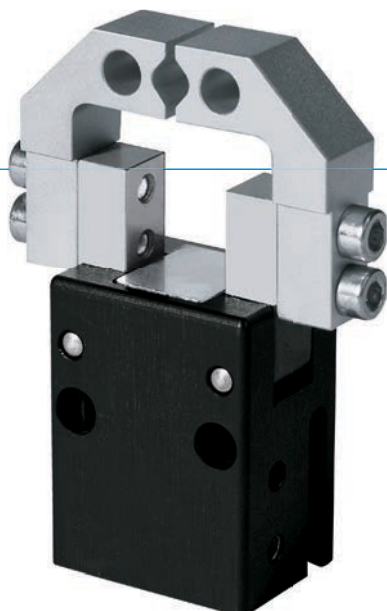


PNEUMATIC		
	Series MGW800	190
	Series GZ1000	212

2-JAW ANGULAR GRIPPERS

SERIES MGW800

▶ PRODUCT ADVANTAGES



“The economical”

▶ Concentration on the essentials

The most economic type of gripping: This is how you reduce your production costs





▶ High moment load

The optimally designed angular gear box provides the highest durability for your application

▶ Failure-free continuous operation

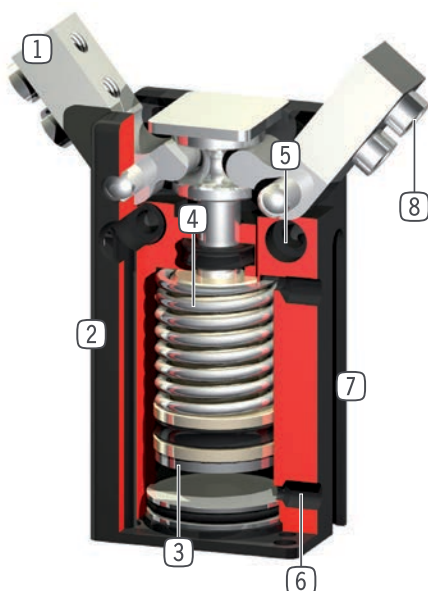
Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free cycles

▶ SERIES CHARACTERISTICS

Installation size	Version	
MGW8XX	N	NC
 Spring closing C		•
 10 million maintenance-free cycles (max.)	•	•
 Magnetic field sensor	•	•
 IP30	•	•



► BENEFITS IN DETAIL



- ① **Gripper jaw**
 - individual gripper finger mounting
- ② **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ③ **Position sensing**
 - permanent magnet for direct monitoring of piston movement
- ④ **Integrated gripping force safety device**
 - spring integrated into cylinder as energy storage (from size 803 upwards)
- ⑤ **Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- ⑥ **Energy supply**
 - possible from several sides
- ⑦ **Sensing slot**
 - mounting and positioning of magnetic field sensors
- ⑧ **Removable centering sleeves**
 - quick and economical positioning of the gripper fingers

► TECHNICAL DATA

Installation size	Stroke [°]	Gripping force [N]	Weight [kg]	IP class
MGW801	37.5	5 - 7,5	0,01	IP30
MGW802	37.5	9 - 10	0,015	IP30
MGW803	37.5	33 - 49	0,025 - 0,04	IP30
MGW804	37.5	51 - 72	0,05 - 0,08	IP30
MGW806	37.5	91 - 118	0,1 - 0,12	IP30
MGW808	37.5	148 - 190	0,18 - 0,19	IP30
MGW810	37.5	205 - 270	0,28 - 0,31	IP30
MGW812	37.5	255 - 325	0,4 - 0,45	IP30

► FURTHER INFORMATION IS AVAILABLE ONLINE

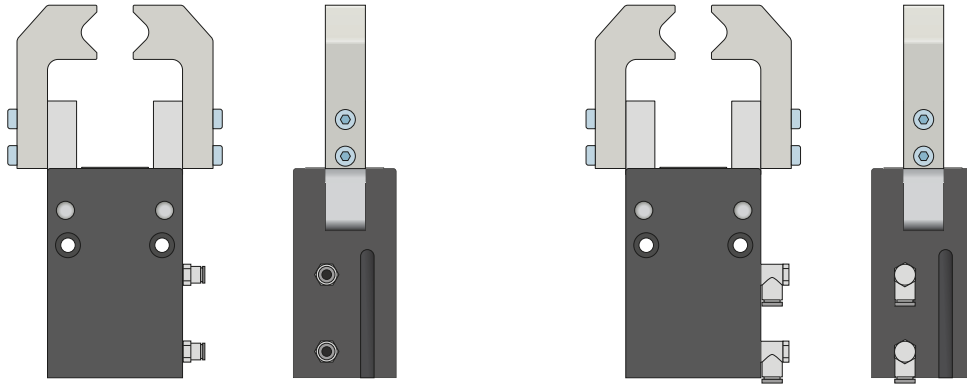


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2-JAW ANGULAR GRIPPERS

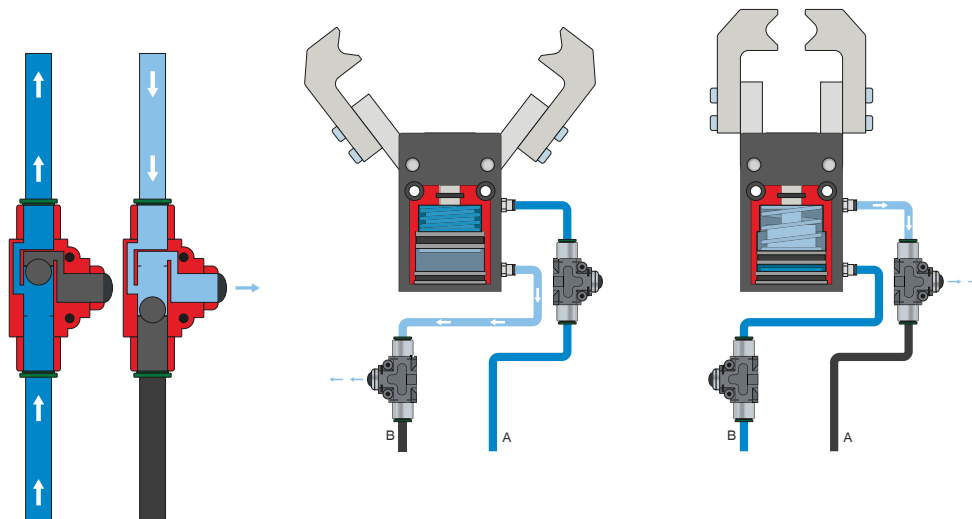
SERIES MGW800 FUNCTIONAL DESCRIPTION

ENERGY SUPPLY



Pneumatic threaded connections

Available in straight and angled design. Can be chosen freely depending on the space conditions or installation situation.



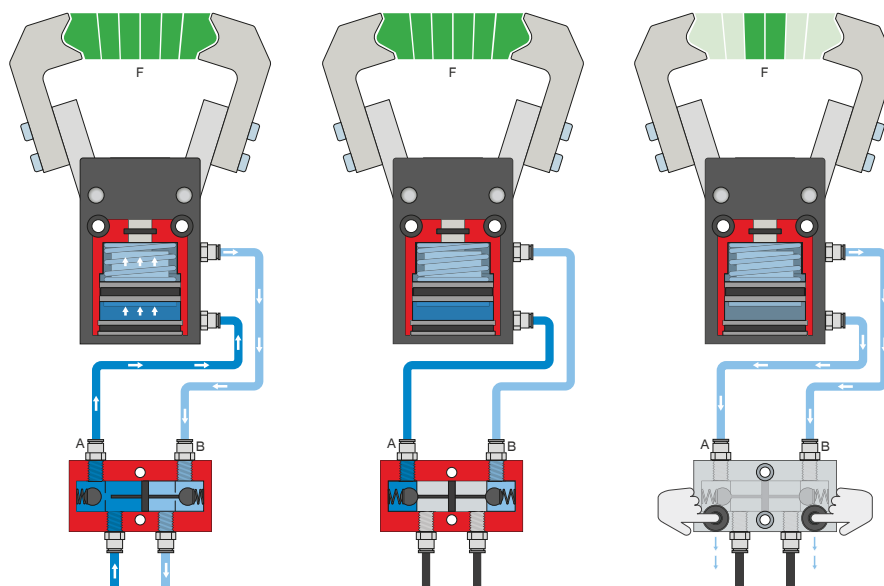
Quick exhaust valve – DEV

For rapid bleeding of the compressed air and preventing back pressure

The inline valves make a faster cycle time possible and prevent the formation of condensate in grippers with a small cylinder volume. To ensure the function, the valve must be installed as close to the gripper's air connection as possible.



ENERGY SUPPLY



Pressure safety valve – DSV

Ensures safe retention of force and position if the system pressure drops

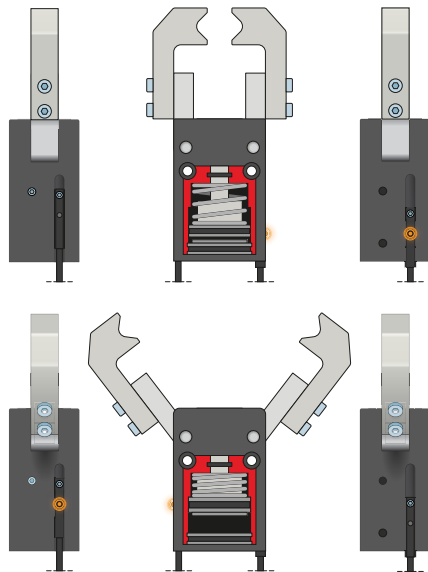
The integrated double check valve, which can be unlocked, retains the system pressure of the gripper in case of EMERGENCY STOP. To ensure the function, the valve must be installed as close to the gripper's air connection as possible. In variant E, two pushbuttons are installed that allow for controlled bleeding of the gripper.

2-JAW ANGULAR GRIPPERS

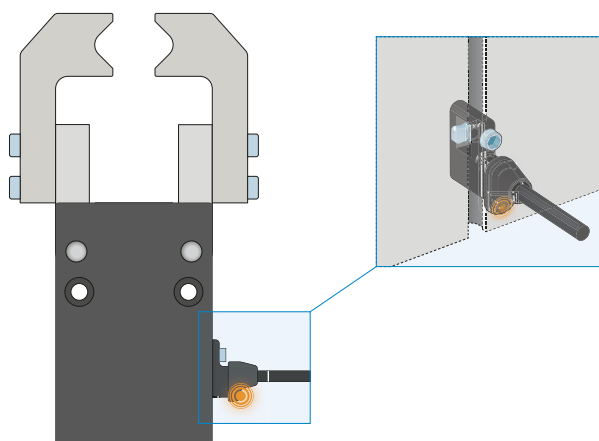
SERIES MGW800 FUNCTIONAL DESCRIPTION

SENSORS

MFS02



MFS01



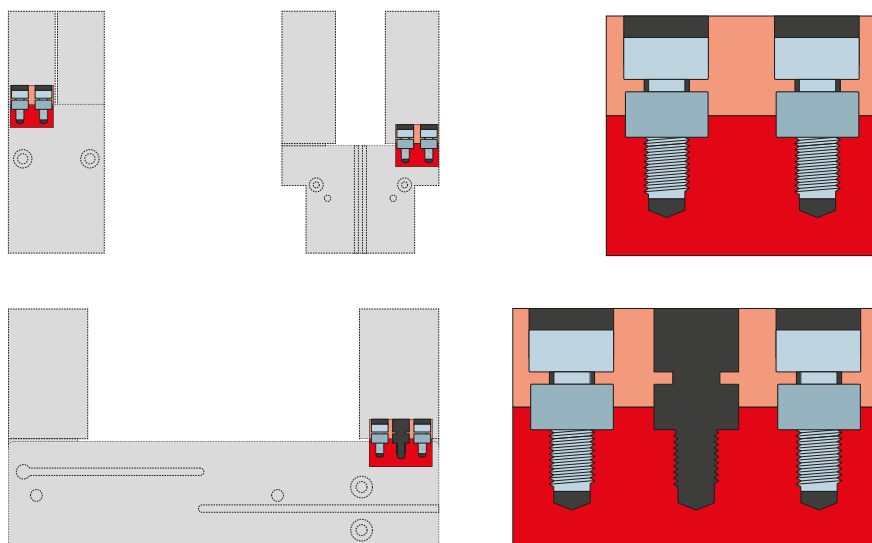
1-point magnetic field sensors – MFS

For non-contact sensing of the piston position

These sensors are installed in the C-groove of the gripper and detect the magnet attached to the piston of the gripper. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MFS01 is taller, but has a cable outlet that is offset at an angle of 90°. The variants are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.



CONNECTIONS / OTHER



Centering sleeves

For defined position measurement of the gripper fingers

The centering sleeves are inserted into the fits of the gripper jaws to define the position of the gripper fingers. The centering sleeves are comparable to a pin connection.

2-JAW ANGULAR GRIPPERS

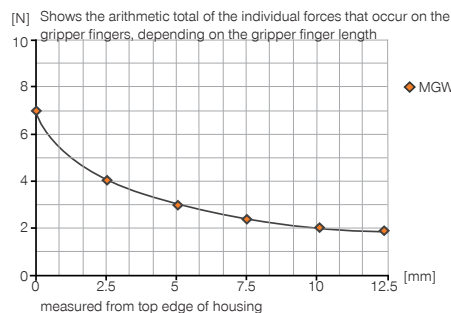
INSTALLATION SIZE MGW801

1

PRODUCT SPECIFICATIONS

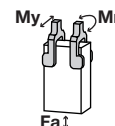


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	0.2
My [Nm]	0.2
Fa [N]	37

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST80100

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection

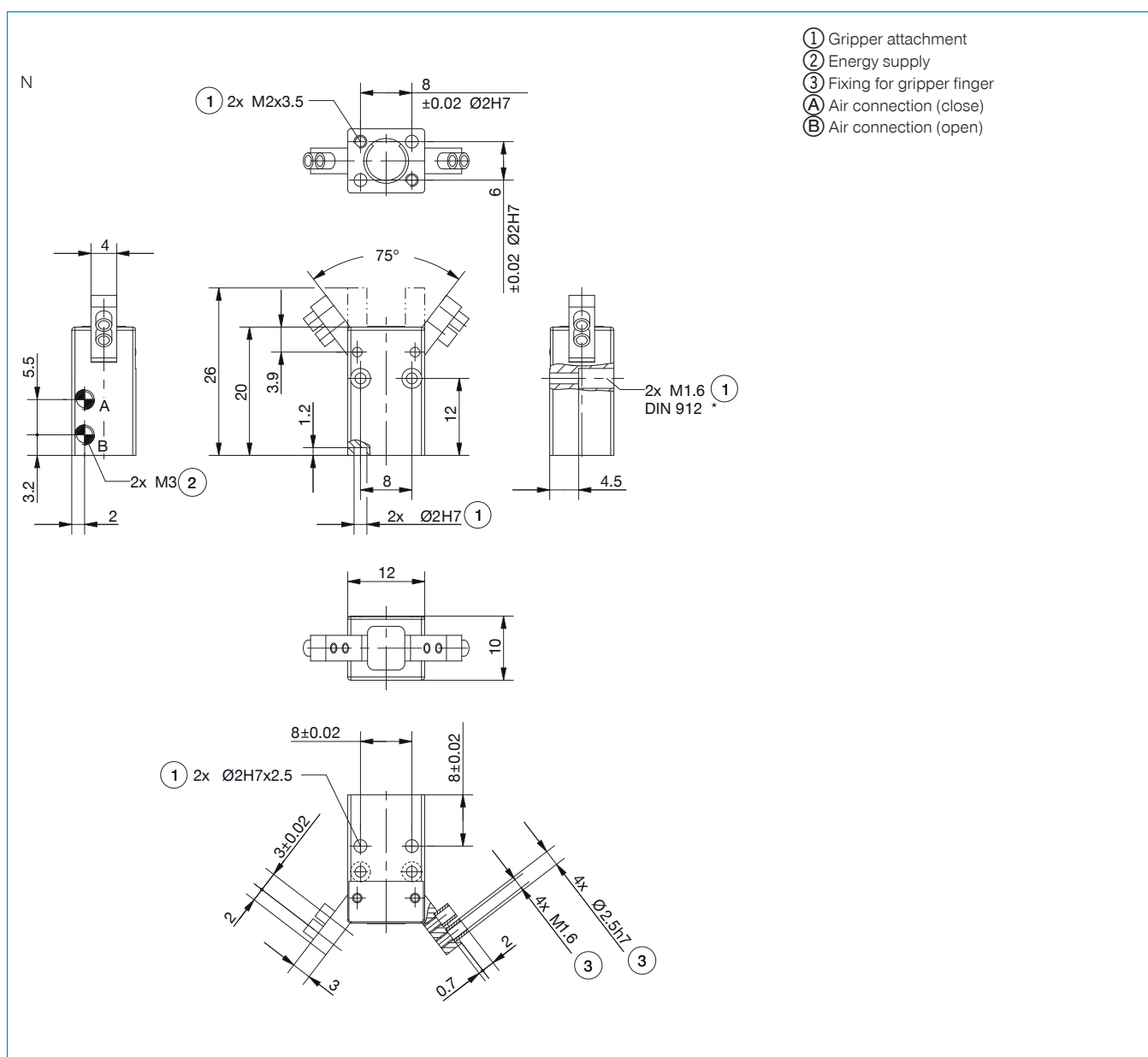


ENERGY SUPPLY



DEV04
Quick Exhaust Valve

Order no.	Technical data
	MGW801N
Stroke per jaw [°]	37.5
Gripping moment in closing [Nm]	0.025
Gripping moment in opening [Nm]	0.03
Gripping moment secured by spring min. [Nm]	
Gripping force in closing [N]	5
Gripping force in opening [N]	7.5
Closing time [s]	0.01
Opening time [s]	0.01
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	0.14
Weight [kg]	0.01



2-JAW ANGULAR GRIPPERS

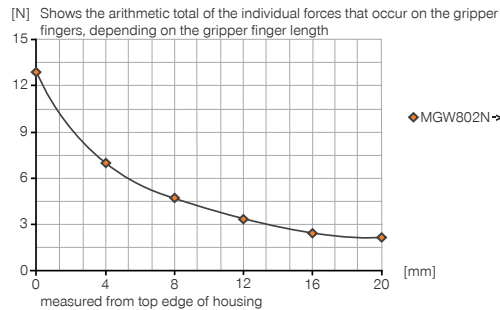
INSTALLATION SIZE MGW802

1
Installation size MGW802 / 2-Jaw Angular Grippers / pneumatic / Grippers

PRODUCT SPECIFICATIONS

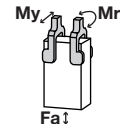


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	0.3
My [Nm]	0.3
Fa [N]	60

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST80200

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection



ENERGY SUPPLY



DEV04
Quick Exhaust Valve

2-JAW ANGULAR GRIPPERS

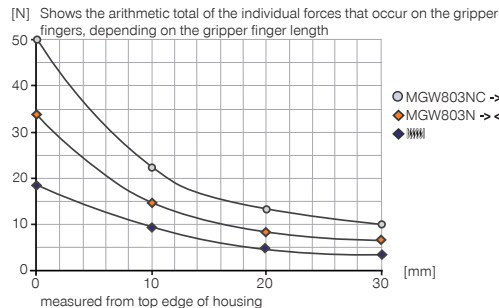
INSTALLATION SIZE MGW803

1

PRODUCT SPECIFICATIONS

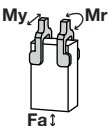


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	0.4
My [Nm]	0.4
Fa [N]	90

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST80320

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection



DEV04
Quick Exhaust Valve



SENSORS



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8

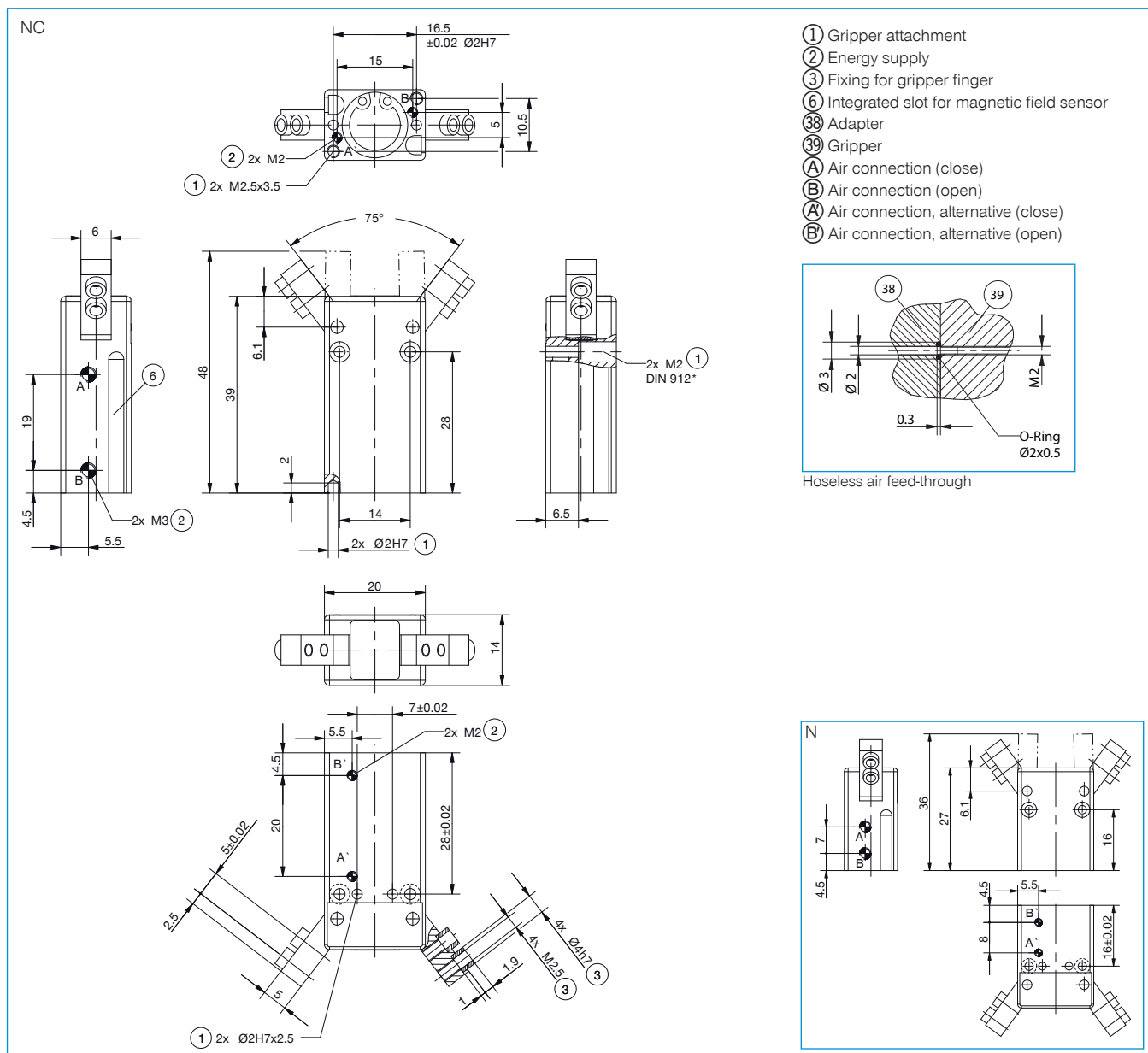


MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8

Order no.	Technical data	
	MGW803N	MGW803NC
Stroke per jaw [°]	37.5	37.5
Gripping moment in closing [Nm]	0.2	0.3
Gripping moment in opening [Nm]	0.23	
Gripping moment secured by spring min. [Nm]		0.1
Gripping force in closing [N]	33	49
Gripping force in opening [N]	38	
Closing time [s]	0.01	0.01
Opening time [s]	0.01	0.02
Repetition accuracy +/- [mm]	0.05	0.05
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	0.64	1
Weight [kg]	0.025	0.04



2-JAW ANGULAR GRIPPERS

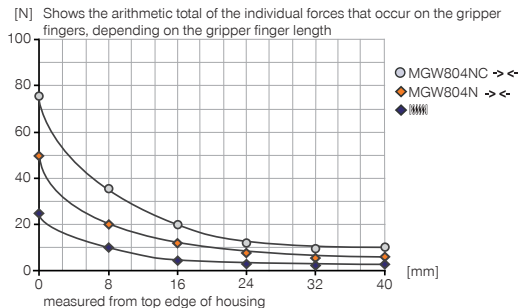
INSTALLATION SIZE MGW804

1

PRODUCT SPECIFICATIONS

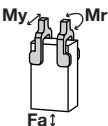


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	0.5
My [Nm]	0.5
Fa [N]	150

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST40400

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection



DEV04
Quick Exhaust Valve



SENSORS



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Con-
nector M8



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Con-
nector M8

2-JAW ANGULAR GRIPPERS

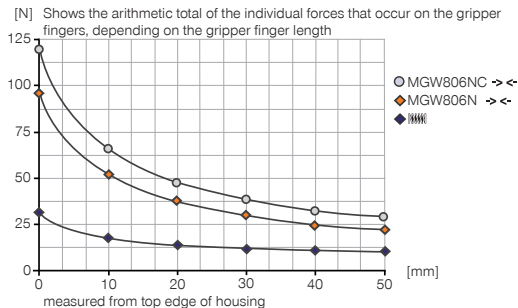
INSTALLATION SIZE MGW806

1

PRODUCT SPECIFICATIONS

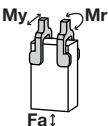


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	0.7
My [Nm]	0.7
Fa [N]	260

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST40600

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection



DEV04
Quick Exhaust Valve



SENSORS



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8

2-JAW ANGULAR GRIPPERS

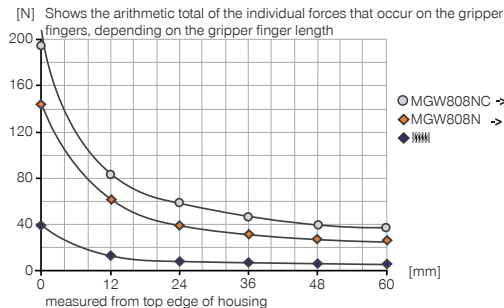
INSTALLATION SIZE MGW808

1

PRODUCT SPECIFICATIONS

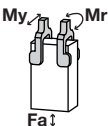


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	1.3
My [Nm]	1.3
Fa [N]	430

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST40600

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM3
Straight Fittings - Barb Style Connection



WVM3
Angled Fittings - Barb Style Connection



DEV04
Quick Exhaust Valve



SENSORS



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8

2-JAW ANGULAR GRIPPERS

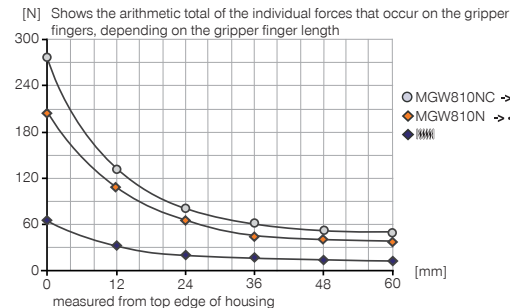
INSTALLATION SIZE MGW810

1

PRODUCT SPECIFICATIONS

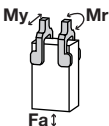


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	1.6
My [Nm]	1.6
Fa [N]	500

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST07540

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



WVM5
Angled Fittings - Quick Connect Style



DEV04
Quick Exhaust Valve



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8

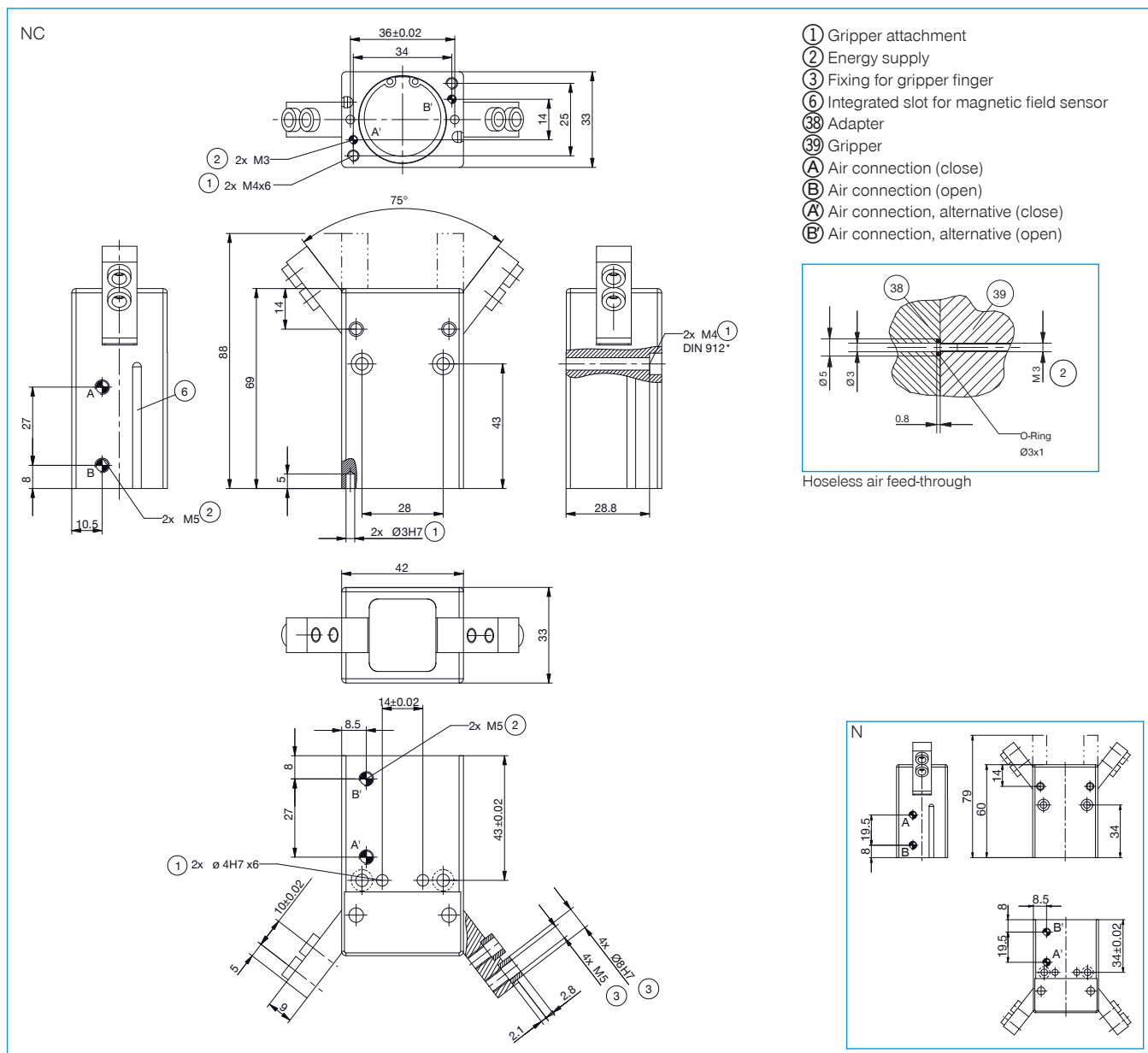


MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8

Order no.	Technical data	
	MGW810N	MGW810NC
Stroke per jaw [°]	37.5	37.5
Gripping moment in closing [Nm]	2.9	3.8
Gripping moment in opening [Nm]	3.3	
Gripping moment secured by spring min. [Nm]		0.9
Gripping force in closing [N]	205	270
Gripping force in opening [N]	235	
Closing time [s]	0.03	0.03
Opening time [s]	0.03	0.06
Repetition accuracy +/- [mm]	0.05	0.05
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	14.1	18.4
Weight [kg]	0.28	0.31



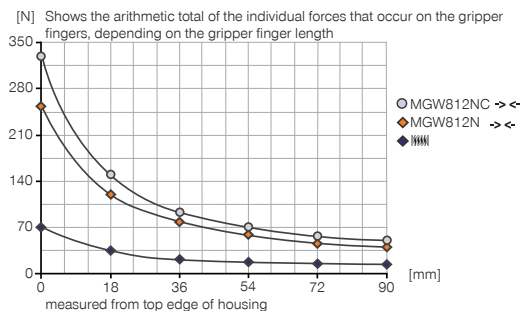
2-JAW ANGULAR GRIPPERS

INSTALLATION SIZE MGW812

PRODUCT SPECIFICATIONS

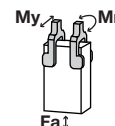


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	2.3
My [Nm]	2.3
Fa [N]	720

INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST07540

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



WVM5
Angled Fittings - Quick Connect Style



DEV04
Quick Exhaust Valve



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m




MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8

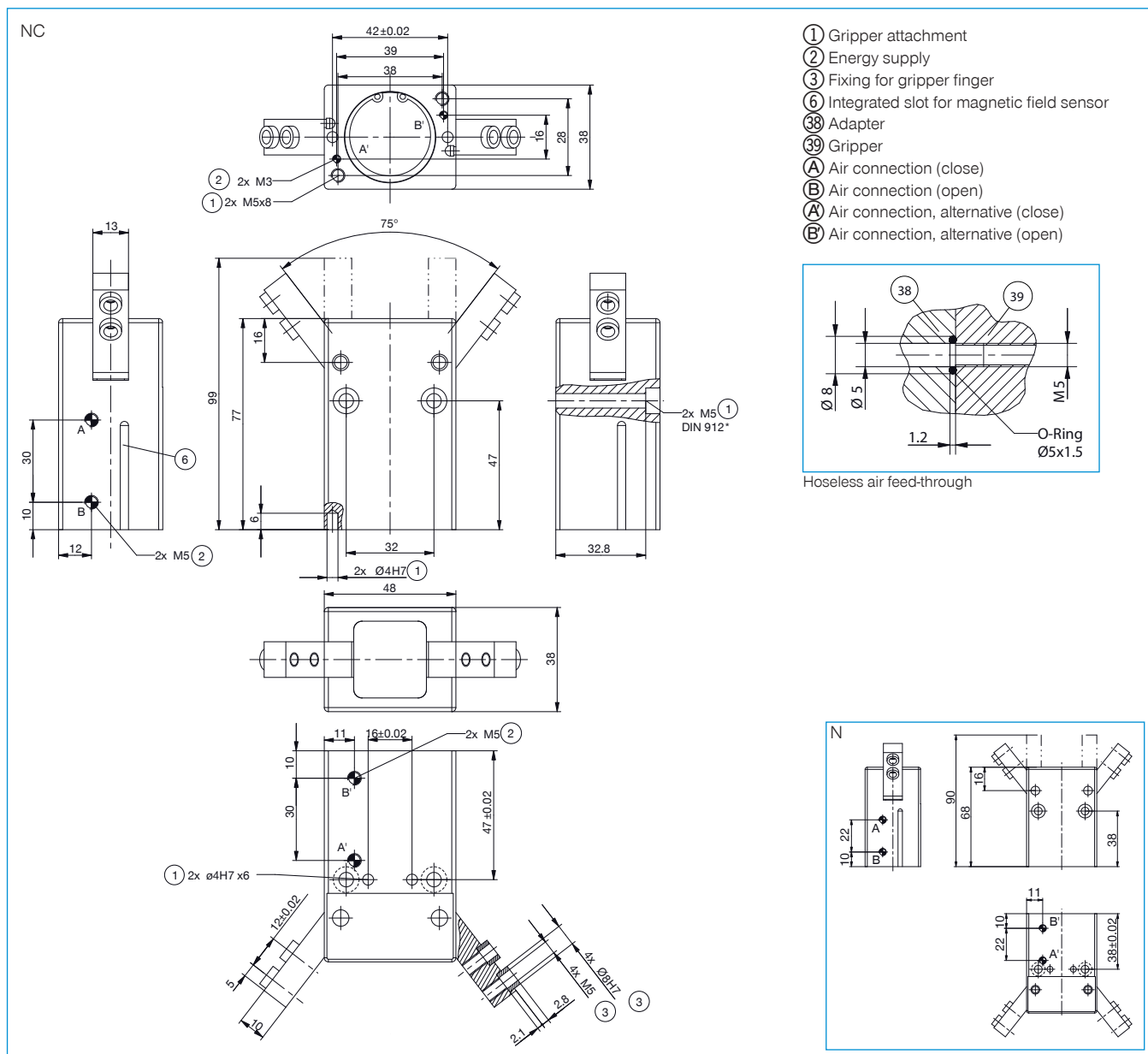


MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8

	<div>  Technical data </div>	
Order no.	MGW812N	MGW812NC
Stroke per jaw [°]	37.5	37.5
Gripping moment in closing [Nm]	4.1	5.2
Gripping moment in opening [Nm]	4.55	
Gripping moment secured by spring min. [Nm]		1.1
Gripping force in closing [N]	255	325
Gripping force in opening [N]	285	
Closing time [s]	0.03	0.03
Opening time [s]	0.03	0.06
Repetition accuracy +/- [mm]	0.05	0.05
Operating pressure min. [bar]	3	4
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	22.1	27.6
Weight [kg]	0.4	0.45



2-JAW ANGULAR GRIPPERS

SERIES GZ1000

▶ PRODUCT ADVANTAGES



“The top of the line”

▶ Unique quality meets functionality

This is one of the best angular grippers on the market, enabling you to make your application more cost-effective and functional







▶ Variable attachment

Decide for yourself whether you want use screws, lock-nuts or a toolkit clamping system for fastening

▶ Sensing with process reliability

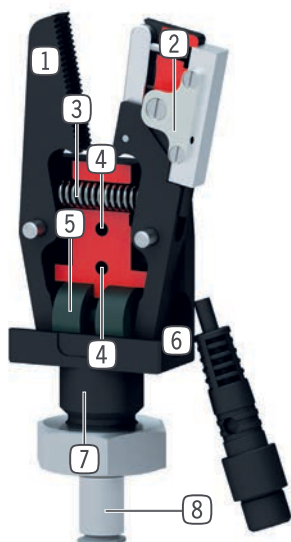
Unlike many other established products on the market, you can even differentiate between “Component present” and “Component not present”

▶ SERIES CHARACTERISTICS

Installation size		Version		
GZ10XX		-01	-02	-03
	Saw tooth jaw without query	•		
	Saw tooth jaw with query		•	
	Version for attaching customer-specific gripper fingers			•
	2 million maintenance-free cycles (max.)	•	•	•
	Inductive sensor		•	
	IP30	•	•	•



► BENEFITS IN DETAIL



- ① **Gripper jaw**
 - available in different versions
- ② **Position sensing**
 - via inductive proximity switch
- ③ **Return spring**
 - to open the gripper jaws
- ④ **Mounting and positioning**
 - via thread / through-hole
- ⑤ **Drive**
 - single-acting pneumatic cylinder
- ⑥ **Housing**
 - hard coated surface for increased durability
- ⑦ **Mounting and positioning**
 - via fit, thread and lock nut
- ⑧ **Energy supply**

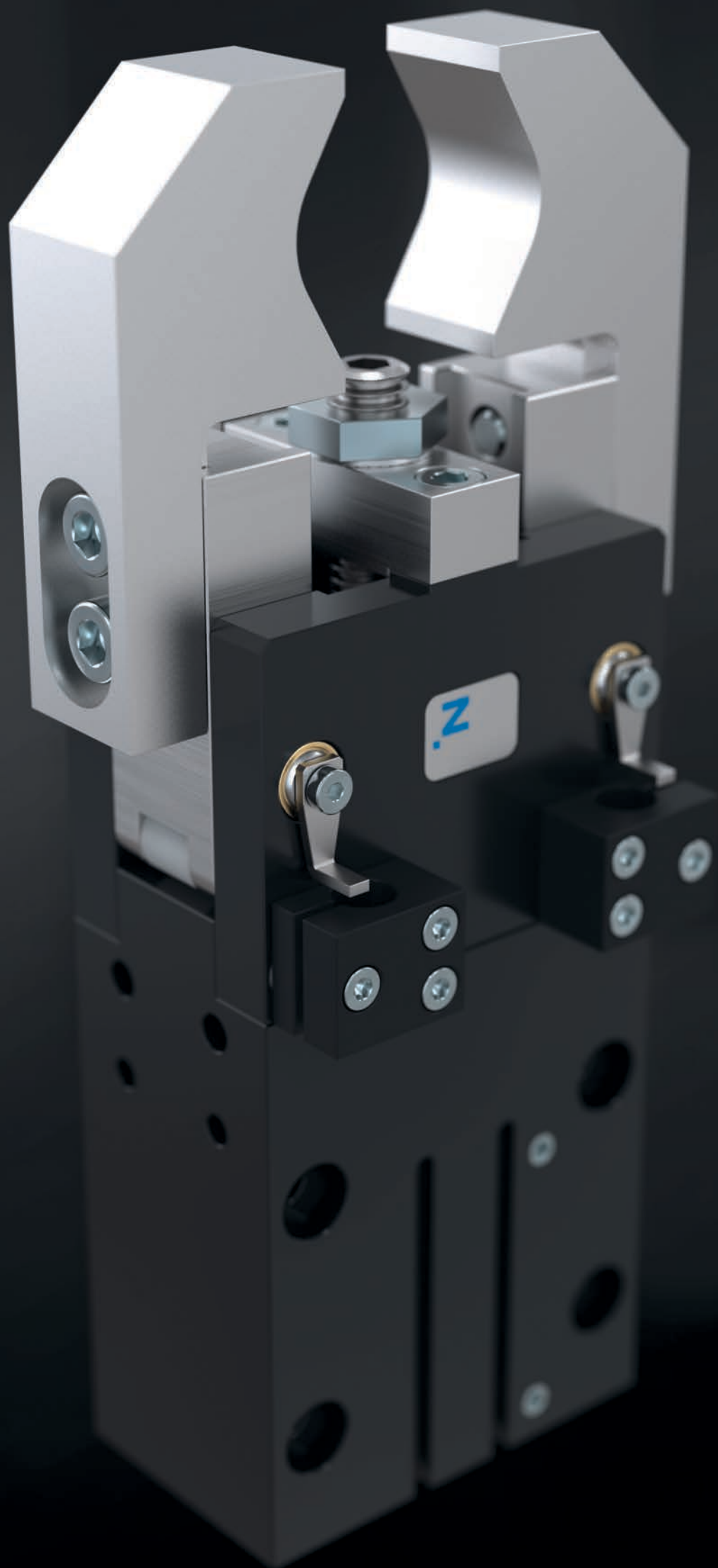
► TECHNICAL DATA

Installation size	Stroke [°]	Gripping force [N]	Weight [kg]	IP class
GZ1020	8	62	0,015 - 0,03	IP30
GZ1030	11	130	0,046 - 0,063	IP30
GZ1040	10	315	0,105 - 0,125	IP30

► FURTHER INFORMATION IS AVAILABLE ONLINE






All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



2-JAW RADIAL GRIPPER

THE SERIES AT A GLANCE



	PNEUMATIC		
	Series GK		216
	Series GG4000		234

2-JAW RADIAL GRIPPER

SERIES GK

1

Series GK / 2-jaw radial gripper / pneumatic / Grippers

► PRODUCT ADVANTAGES



“The compact”

► Proven technology

We have more than 20 years of proven reliability, which ensures uninterrupted production for you






► Best force/installation space ratio

Force transmission using the toggle lever enables high gripping force while optimally utilizing the installation space

► Smooth stroke configuration

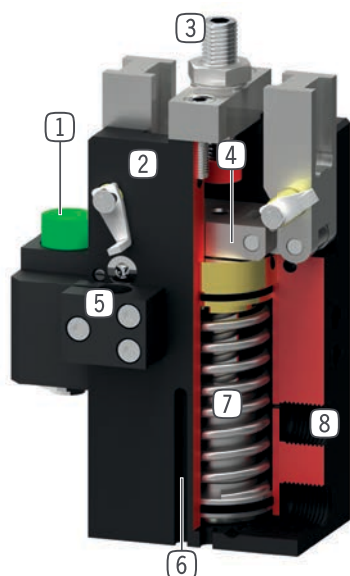
You can adjust the 180° opening angle to be unique to your application using an adjusting screw

► SERIES CHARACTERISTICS

Installation size	Version	
GKXX	N	NC
 Spring closing C		•
 10 million maintenance-free cycles (max.)	•	•
 Magnetic field sensor	•	•
 Self locking mechanism	•	•
 IP 20	•	•



► BENEFITS IN DETAIL



- ① **Buffer stop**
 - absorption of kinetic energy for heavy and long gripper fingers
- ② **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ③ **Stroke adjustment screw**
 - Infinitely adjustable opening stroke
- ④ **Guided toggle lever mechanism**
 - synchronized the movement of the gripper jaws
 - mechanically self-locking
- ⑤ **Mounting block**
 - mounting for inductive proximity switch
- ⑥ **Sensing slot**
 - mounting and positioning of magnetic field sensors
- ⑦ **Integrated gripping force safety device**
 - spring integrated into cylinder as energy storage
- ⑧ **Energy supply**
 - possible from several sides

► TECHNICAL DATA

Installation size	Stroke [°]	Gripping force [N]	Weight [kg]	IP class
GK15	90	70 - 100	0,1 - 0,12	IP20
GK20	90	150 - 210	0,23 - 0,3	IP20
GK25	90	440 - 610	0,42 - 0,58	IP20
GK35	90	950 - 1250	0,9 - 1,2	IP20
GK40	90	1400 - 1820	1,7 - 2,2	IP20
GK50	90	3500 - 4250	3,5 - 4,1	IP20

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

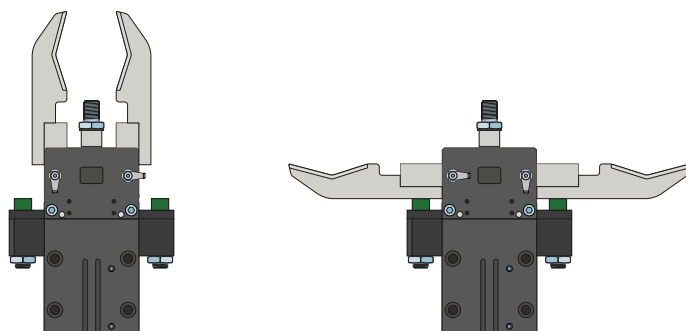
2-JAW RADIAL GRIPPERS

SERIES GK FUNCTIONAL DESCRIPTION

1



GRIPPING COMPONENTS



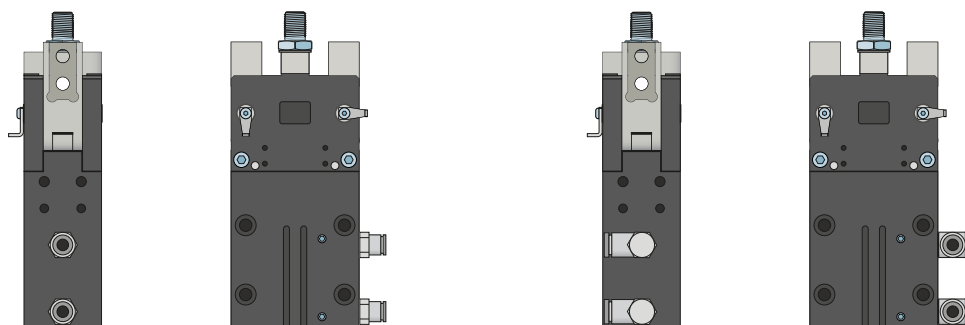
Buffer stop – PB

Absorption of kinetic energy for heavy and long gripper fingers

The buffer stops are used primarily for fast, unthrottled jaw movements. They are equally suitable for long gripper fingers, high jaw mass and for cycle time optimization. The energy is absorbed by an elastomer damper.



ENERGY SUPPLY



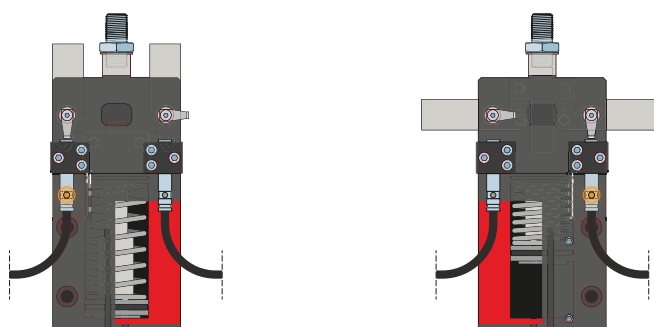
Pneumatic threaded connections

Available in straight and angled design. Can be chosen freely depending on the space conditions or installation situation.



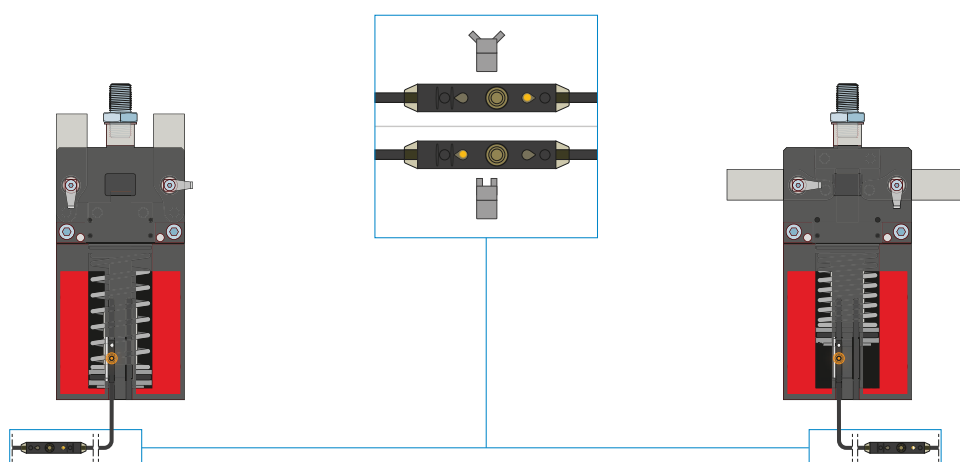
SENSORS

1



Inductive sensors – NJ

The mounting block is aligned to the cam switch, and the sensor is guided into the mounting block until the required switching distance to the cam switch is reached. Fine adjustment can be made by moving the mounting block again. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector, as well as with direct plug orientation.



2-point magnetic field sensors – MFS

With two freely programmable switching points

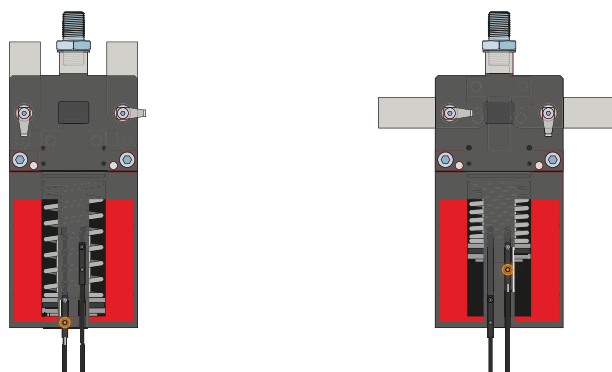
Using the programming unit integrated in the cable, two switch points can be freely defined for this sensor. To do so, the sensor is clamped in the C-groove, the gripper approaches position one and the position is taught in using the teach button. Afterwards, the second position is approached with the gripper and programmed. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MFS01 is taller, but has a cable outlet that is offset at an angle of 90°. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.

2-JAW RADIAL GRIPPERS

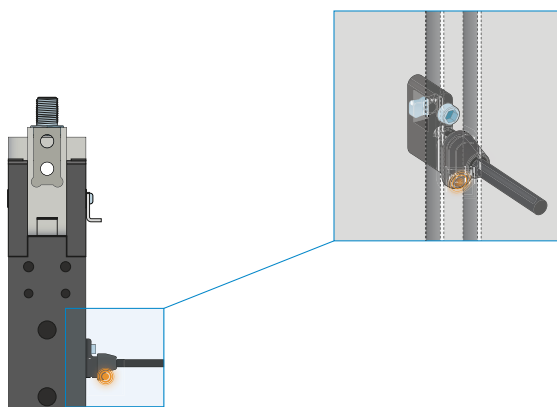
SERIES GK FUNCTIONAL DESCRIPTION

SENSORS

MFS02



MFS01



1-point magnetic field sensors – MFS

For non-contact sensing of the piston position

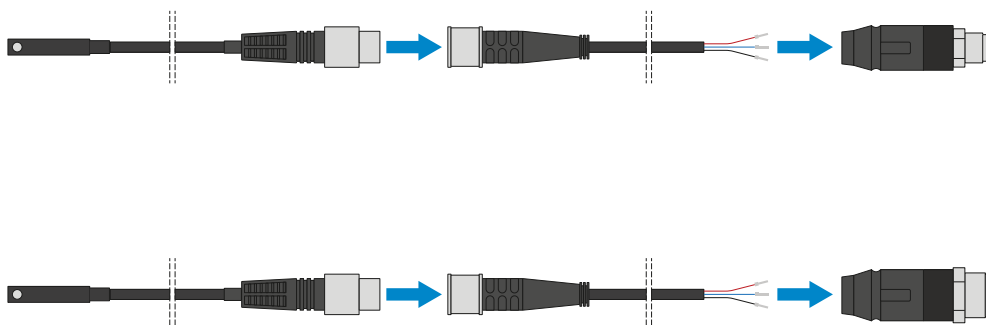
These sensors are installed in the C-groove of the gripper and detect the magnet attached to the piston of the gripper. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MFS01 is taller, but has a cable outlet that is offset at an angle of 90°. The variants are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.



CONNECTIONS / OTHER

1

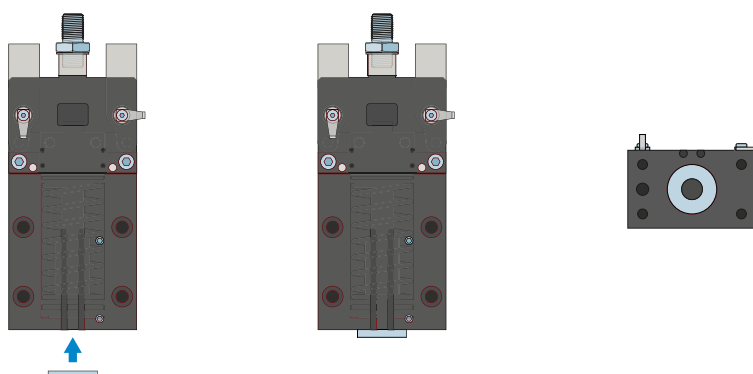
Series GK / 2-jaw radial gripper / pneumatic / Grippers



Plug-in connectors

For extending and fabricating the connection lines for the sensors

Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12.



Centering disk

Is required in connection with an alignment pin to define the position of the gripper.

2-JAW RADIAL GRIPPER

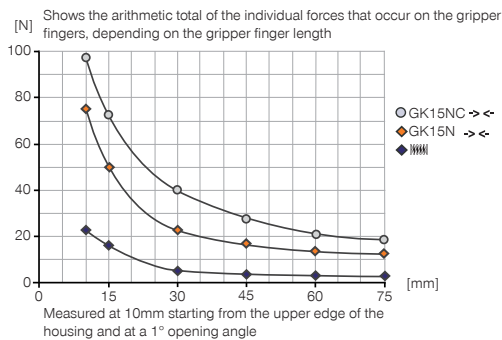
INSTALLATION SIZE GK15

1

PRODUCT SPECIFICATIONS

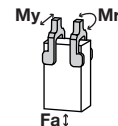


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	0.4
My [Nm]	0.4
Fa [N]	75

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



PB15N
Buffer stop



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



SENSORS



KB3
Mounting block



NJ3-E2
Inductive proximity switch - Cable 5 m



NJ3-E2SK
Inductive Proximity Switch Cable 0,3 m - Connector M8



SENSORS



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



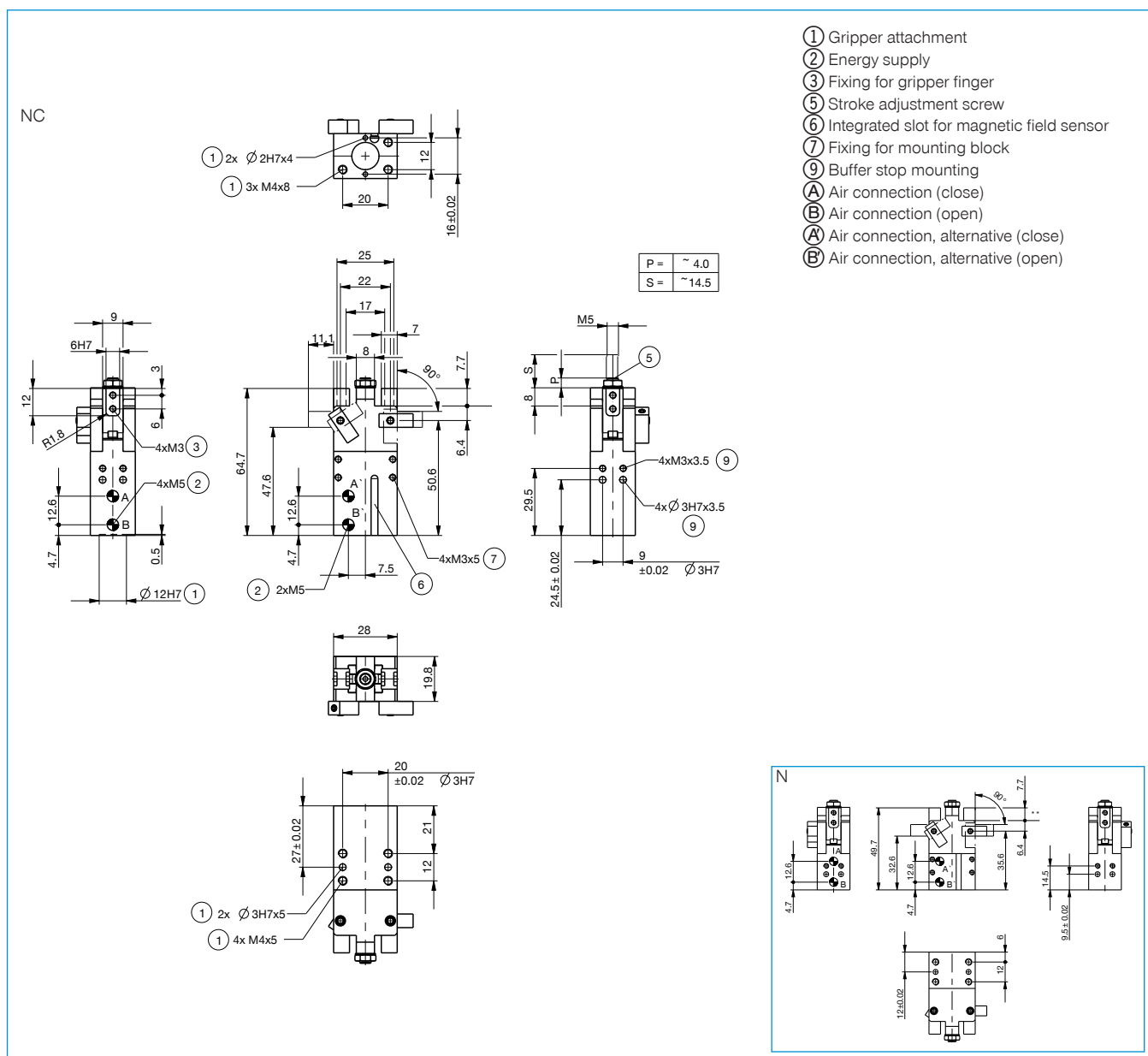
KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



ZE12H7X4
Centering Disc

Order no.	Technical data	
	GK15N-B	GK15NC-B
Stroke per jaw [°]	90	90
Gripping moment in closing [Nm]	1.2	1.6
Gripping moment secured by spring min. [Nm]		0.4
Gripping force in closing [N]*	70	100
Closing time [s]	0.1	0.2
Opening time [s]	0.1	0.2
Repetition accuracy +/- [mm]	0.06	0.06
Operating pressure min. [bar]	3	5
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	2	2.4
Weight [kg]	0.1	0.12

*Measured from top edge of housing



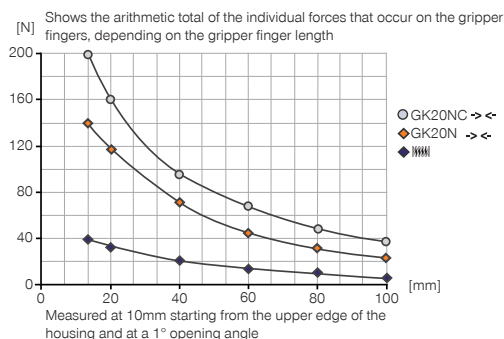
2-JAW RADIAL GRIPPER

INSTALLATION SIZE GK20

PRODUCT SPECIFICATIONS

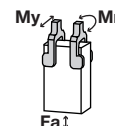


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	0.8
My [Nm]	1
Fa [N]	150

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



PB20N
Buffer stop



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



ENERGY SUPPLY



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



GVM5
Straight Fittings - Quick Connect Style



CONNECTIONS / OTHER



DRV5X4
Flow Control Valves - with Swivel joint



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ8-E2S
Inductive proximity switch - Connector M8

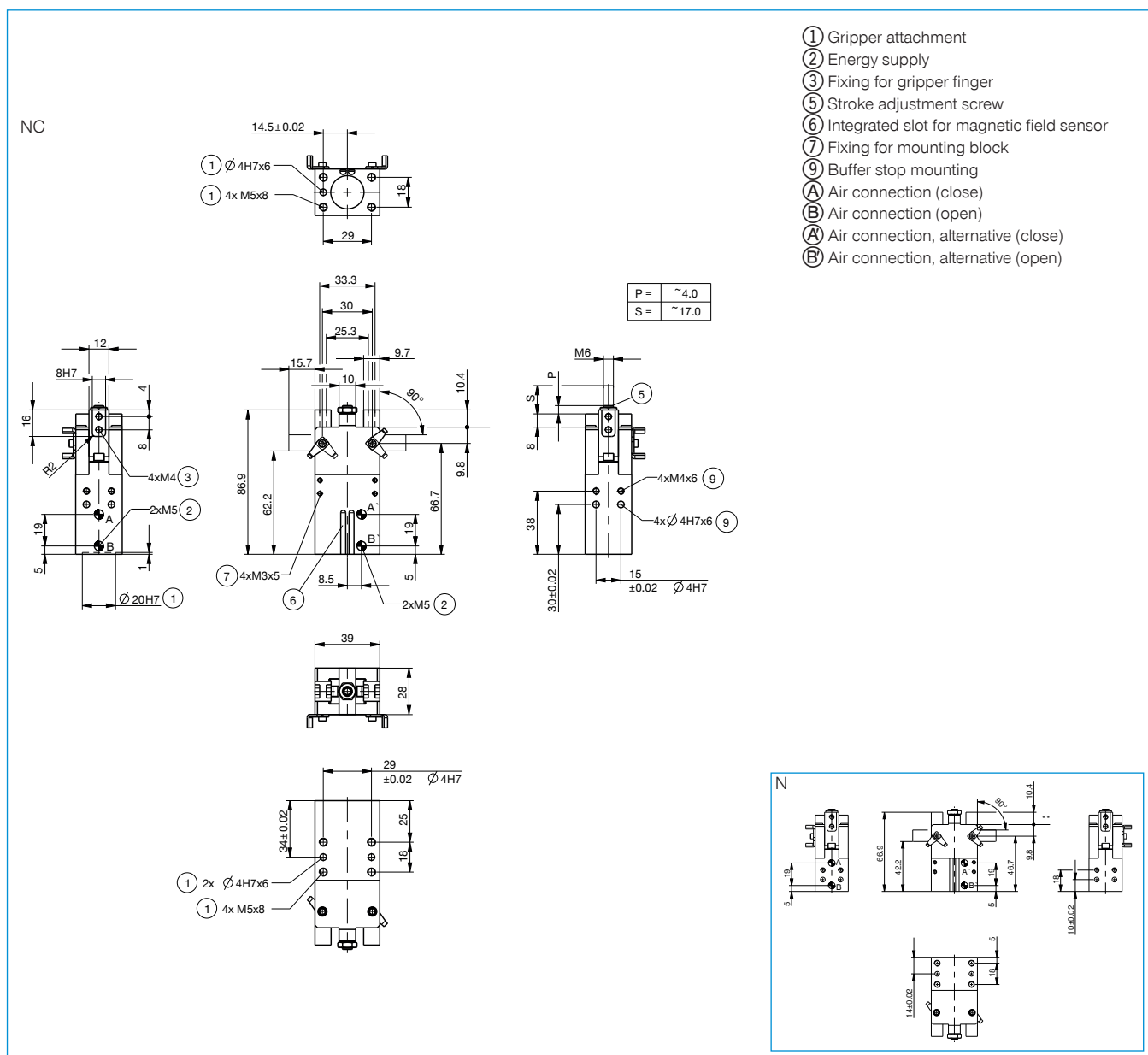


ZE20H7X4
Centering Disc



Order no.	► Technical data	
	GK20N-B	GK20NC-B
Stroke per jaw [°]	90	90
Gripping moment in closing [Nm]	3	4.2
Gripping moment secured by spring min. [Nm]		1.2
Gripping force in closing [N]*	150	210
Closing time [s]	0.1	0.2
Opening time [s]	0.1	0.2
Repetition accuracy +/- [mm]	0.05	0.05
Operating pressure min. [bar]	3	5
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm ³]	9	11
Weight [kg]	0.23	0.3

*Measured from top edge of housing



2-JAW RADIAL GRIPPER

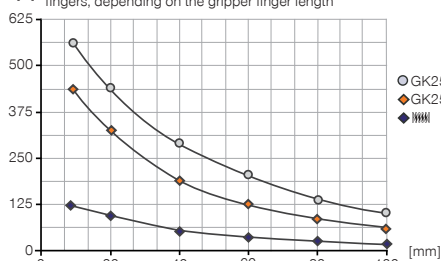
INSTALLATION SIZE GK25

PRODUCT SPECIFICATIONS



Gripping force diagram

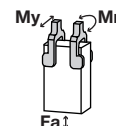
Shows the arithmetic total of the individual forces that occur on the gripper fingers, depending on the gripper finger length



Measured at 10mm starting from the upper edge of the housing and at a 1° opening angle

Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	2.5
My [Nm]	4
Fa [N]	250

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



PB25N
Buffer stop



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



DRV5X4
Flow Control Valves - with Swivel joint



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



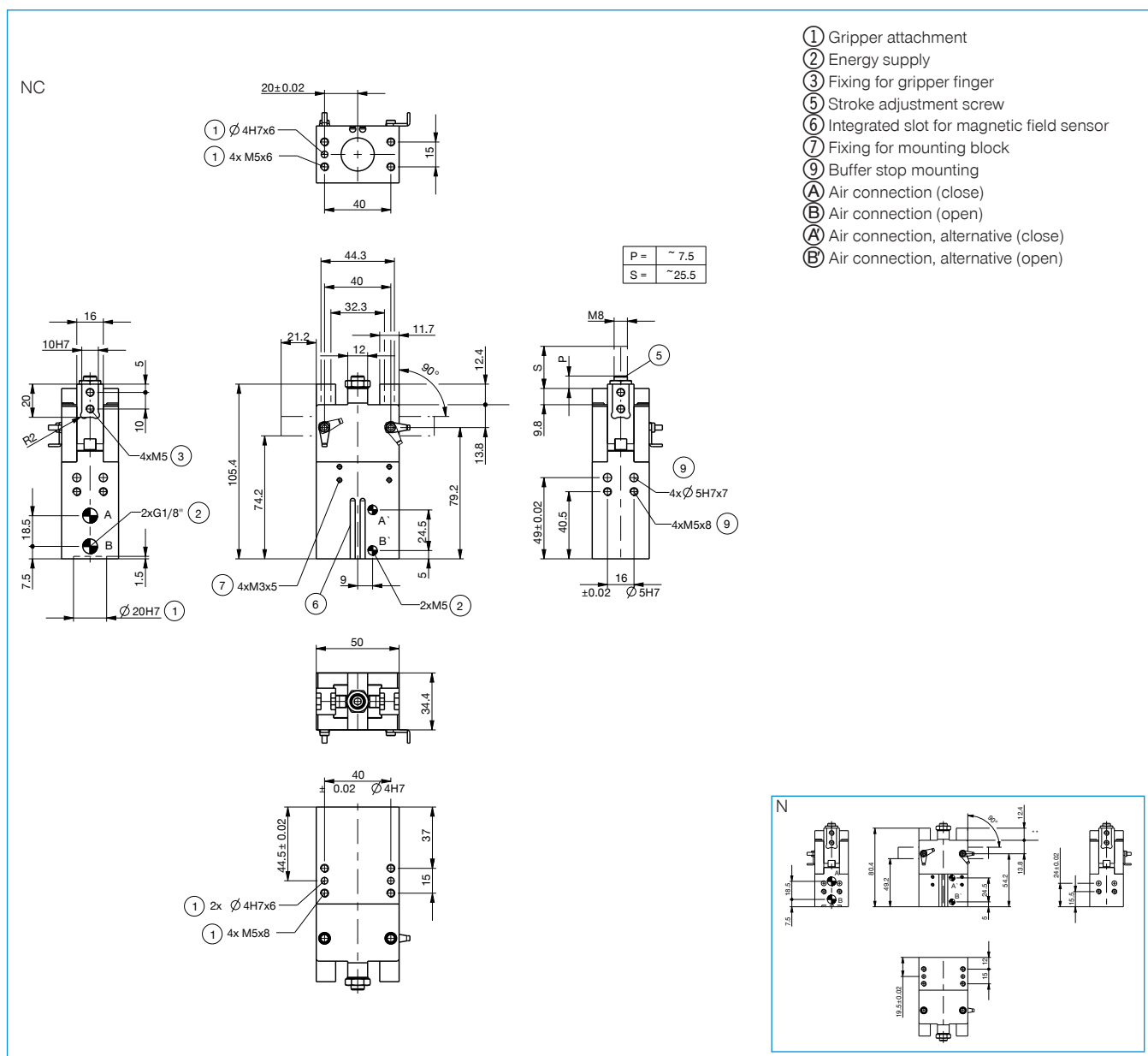
NJ8-E2S
Inductive proximity switch - Connector M8



ZE20H7X4
Centering Disc

Order no.	Technical data	
	GK25N-B	GK25NC-B
Stroke per jaw [°]	90	90
Gripping moment in closing [Nm]	10.5	14.5
Gripping moment secured by spring min. [Nm]		4
Gripping force in closing [N]*	440	610
Closing time [s]	0.15	0.25
Opening time [s]	0.15	0.25
Repetition accuracy +/- [mm]	0.05	0.05
Operating pressure min. [bar]	3	5
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	18	21
Weight [kg]	0.42	0.58

*Measured from top edge of housing



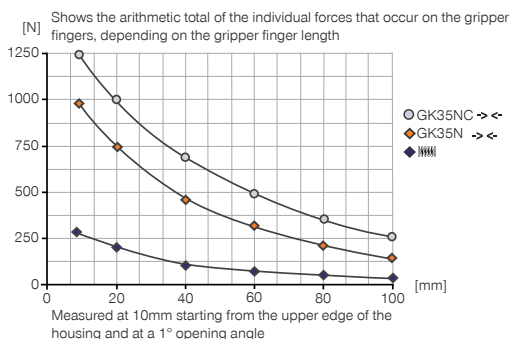
2-JAW RADIAL GRIPPER

INSTALLATION SIZE GK35

PRODUCT SPECIFICATIONS

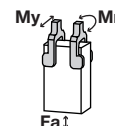


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	12
My [Nm]	20
Fa [N]	400

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



PB35N
Buffer stop



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



ENERGY SUPPLY



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



GVM5
Straight Fittings - Quick Connect Style



CONNECTIONS / OTHER



DRV5X4
Flow Control Valves - with Swivel joint



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



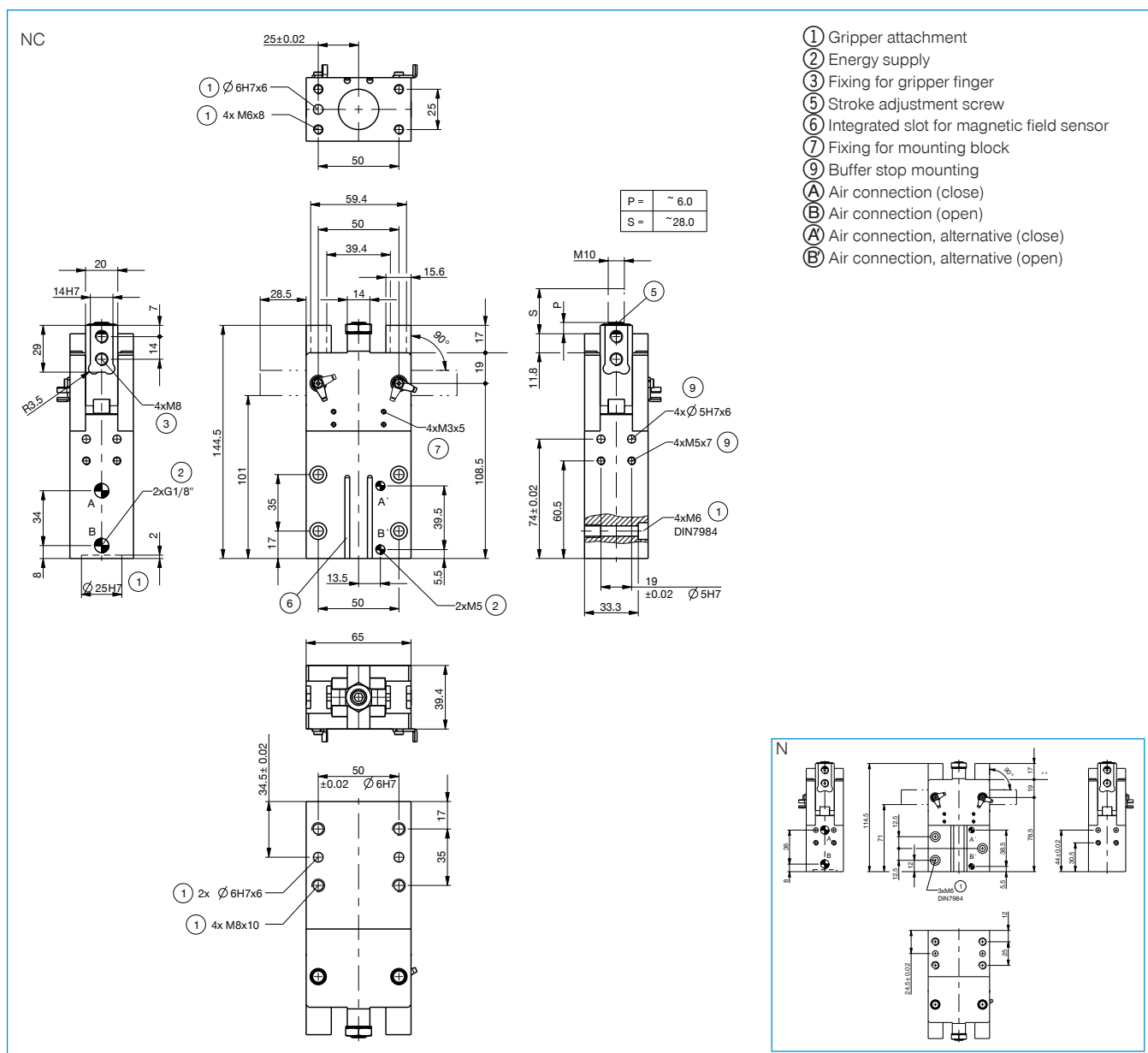
NJ8-E2S
Inductive proximity switch - Connector M8



ZE25H7X6
Centering Disc

Order no.	► Technical data	
	GK35N-B	GK35NC-B
Stroke per jaw [°]	90	90
Gripping moment in closing [Nm]	27.5	36.5
Gripping moment secured by spring min. [Nm]		9
Gripping force in closing [N]*	950	1250
Closing time [s]	0.25	0.35
Opening time [s]	0.25	0.35
Repetition accuracy +/- [mm]	0.05	0.05
Operating pressure min. [bar]	3	5
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm ³]	43	50
Weight [kg]	0.9	1.2

*Measured from top edge of housing



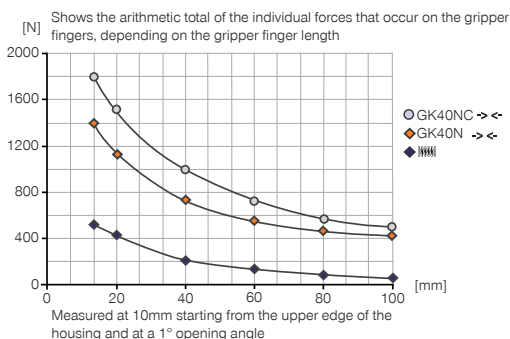
2-JAW RADIAL GRIPPER

INSTALLATION SIZE GK40

PRODUCT SPECIFICATIONS

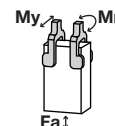


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	17
My [Nm]	30
Fa [N]	600

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



PB40N
Buffer stop



SENSORS



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



ENERGY SUPPLY



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



GVM5
Straight Fittings - Quick Connect Style



CONNECTIONS / OTHER



DRV5M5X4
Flow Control Valves - with Swivel joint



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ8-E2S
Inductive proximity switch - Connector M8

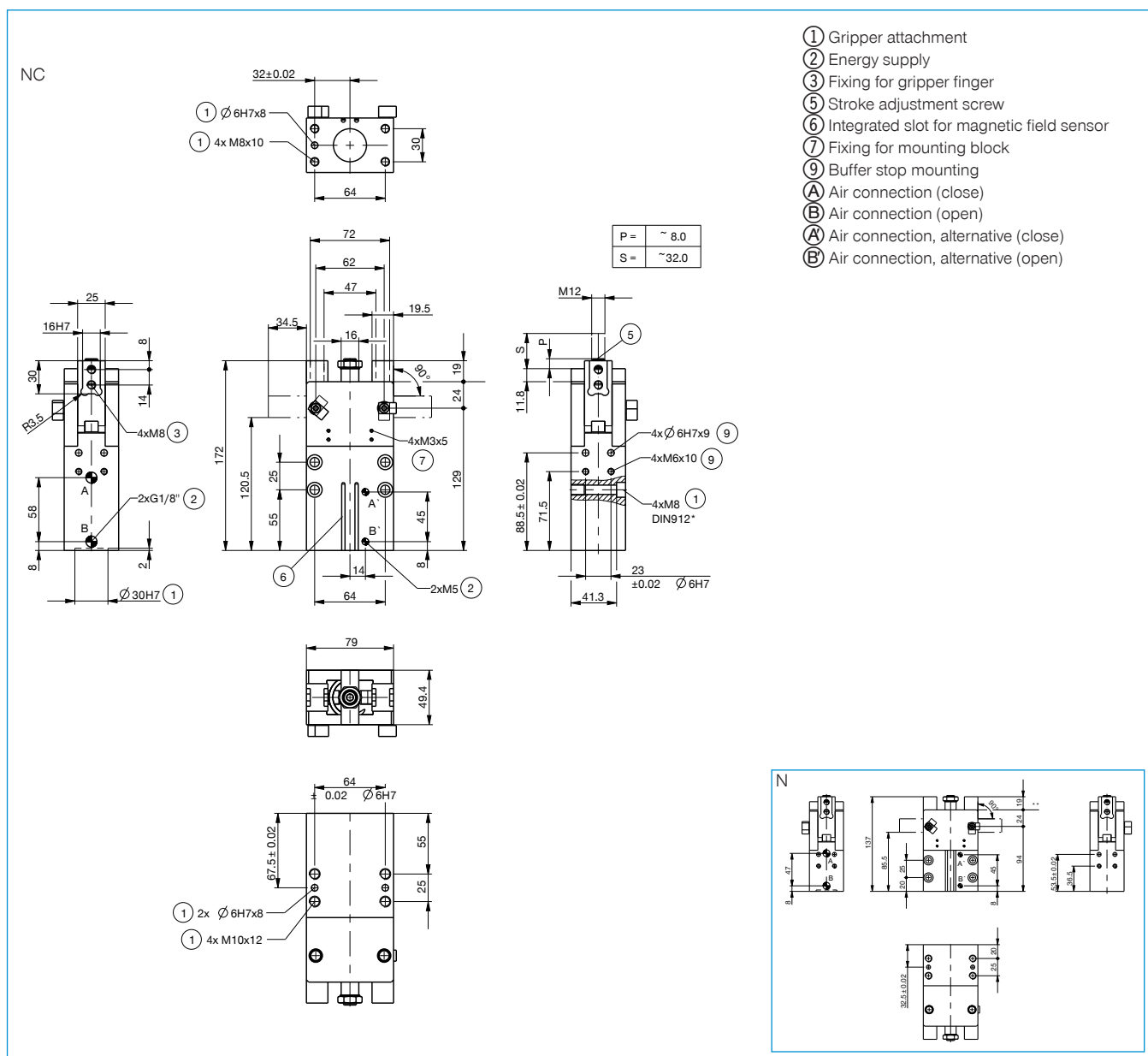


ZE30H7X4
Centering Disc



Order no.	Technical data	
	GK40N-B	GK40NC-B
Stroke per jaw [°]	90	90
Gripping moment in closing [Nm]	47	62
Gripping moment secured by spring min. [Nm]		15
Gripping force in closing [N] *	1400	1820
Closing time [s]	0.25	0.35
Opening time [s]	0.25	0.35
Repetition accuracy +/- [mm]	0.05	0.05
Operating pressure min. [bar]	3	5
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm ³]	78	90
Weight [kg]	1.7	2.2

*Measured from top edge of housing



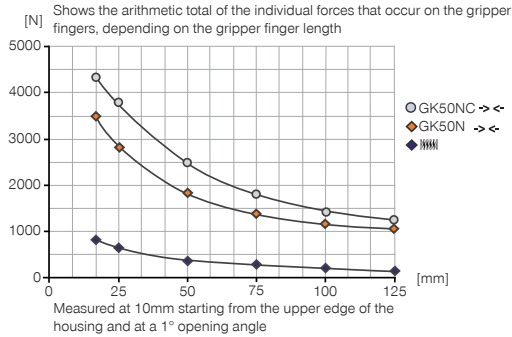
2-JAW RADIAL GRIPPER

INSTALLATION SIZE GK50

PRODUCT SPECIFICATIONS

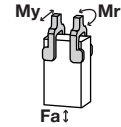


Gripping force diagram



Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	28
My [Nm]	40
Fa [N]	800

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GV1-8X8
Straight Fittings - Quick Connect Style



DRV1-8X6
Flow Control Valves - with Swivel joint



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-S-KHC-P1-PPN
Magnetic field sensor Angled Cable 0,3 m - Connector M8



SENSORS



MFS02-S-KHC-P1-PPN
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



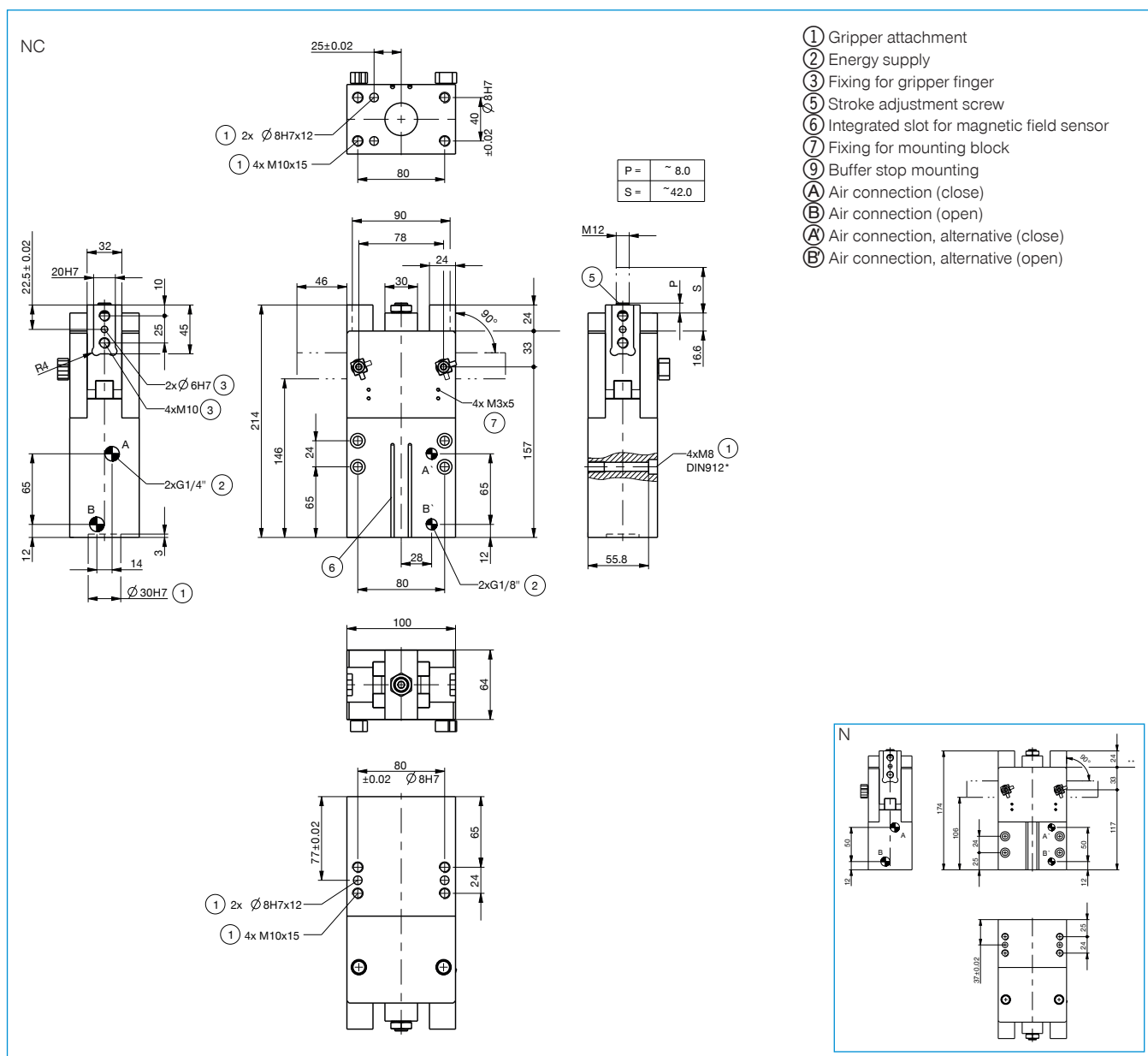
S8-G-3
Plug-in connector customizable Straight - Connector M8



ZE30H7X6
Centering Disc

Order no.	Technical data	
	GK50N-B	GK50NC-B
Stroke per jaw [°]	90	90
Gripping moment in closing [Nm]	150	183
Gripping moment secured by spring min. [Nm]		33
Gripping force in closing [N] *	3500	4250
Closing time [s]	0.4	0.5
Opening time [s]	0.4	0.5
Repetition accuracy +/- [mm]	0.05	0.05
Operating pressure min. [bar]	3	5
Operating pressure max. [bar]	8	8
Nominal operating pressure [bar]	6	6
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	160	200
Weight [kg]	3.5	4.1

*Measured from top edge of housing



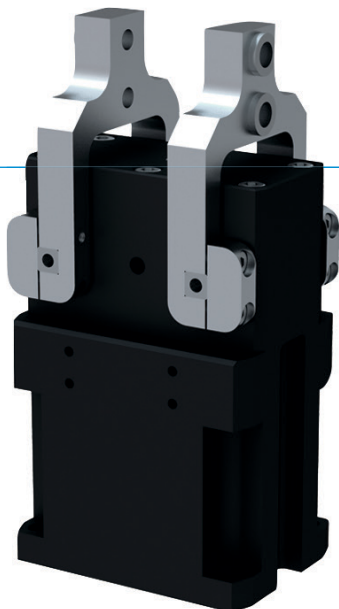
2-JAW RADIAL GRIPPER

SERIES GG4000

1

Series GG4000 / 2-jaw radial gripper / pneumatic / Grippers

▶ PRODUCT ADVANTAGES



“The sealed”

▶ Suitable for use under extreme conditions

The sealed rotation axis guarantees process reliability even under the harshest conditions








▶ Smooth stroke configuration

You can adjust the 180° opening angle to be unique to your application using an adjusting screw

▶ Failure-free continuous operation

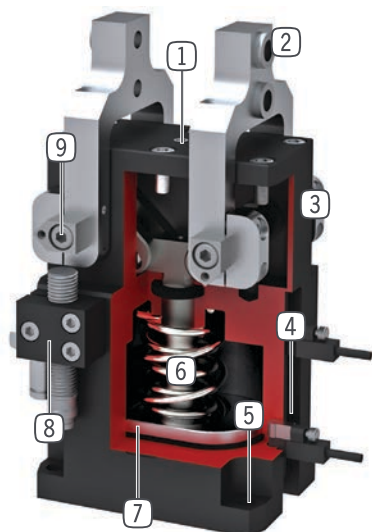
Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free cycles

▶ SERIES CHARACTERISTICS

Installation size	Version	
GG40XX	NC	SC
 Spring closing C	•	•
 High-strength S		•
 10 million maintenance-free cycles (max.)	•	•
 Inductive sensor	•	•
 Magnetic field sensor	•	•
 Purged air	•	•
 IP 64	•	•



► BENEFITS IN DETAIL



- ① **Stroke adjustment screw**
- Infinitely adjustable opening stroke
- ② **Removable centering sleeves**
- individual gripper finger mounting
- ③ **Robust, lightweight housing**
- Hard-coated aluminum alloy
- ④ **Sensing slot**
- mounting and positioning of magnetic field sensors
- ⑤ **Mounting and positioning**
- mounting possible from several sides for versatile positioning
- ⑥ **Integrated gripping force safety device**
- spring integrated into cylinder as energy storage
- ⑦ **Position sensing**
- permanent magnet for direct monitoring of piston movement
- ⑧ **Mounting block**
- mounting for inductive proximity switch
- ⑨ **Sealed rotation point**
- for use under extreme conditions

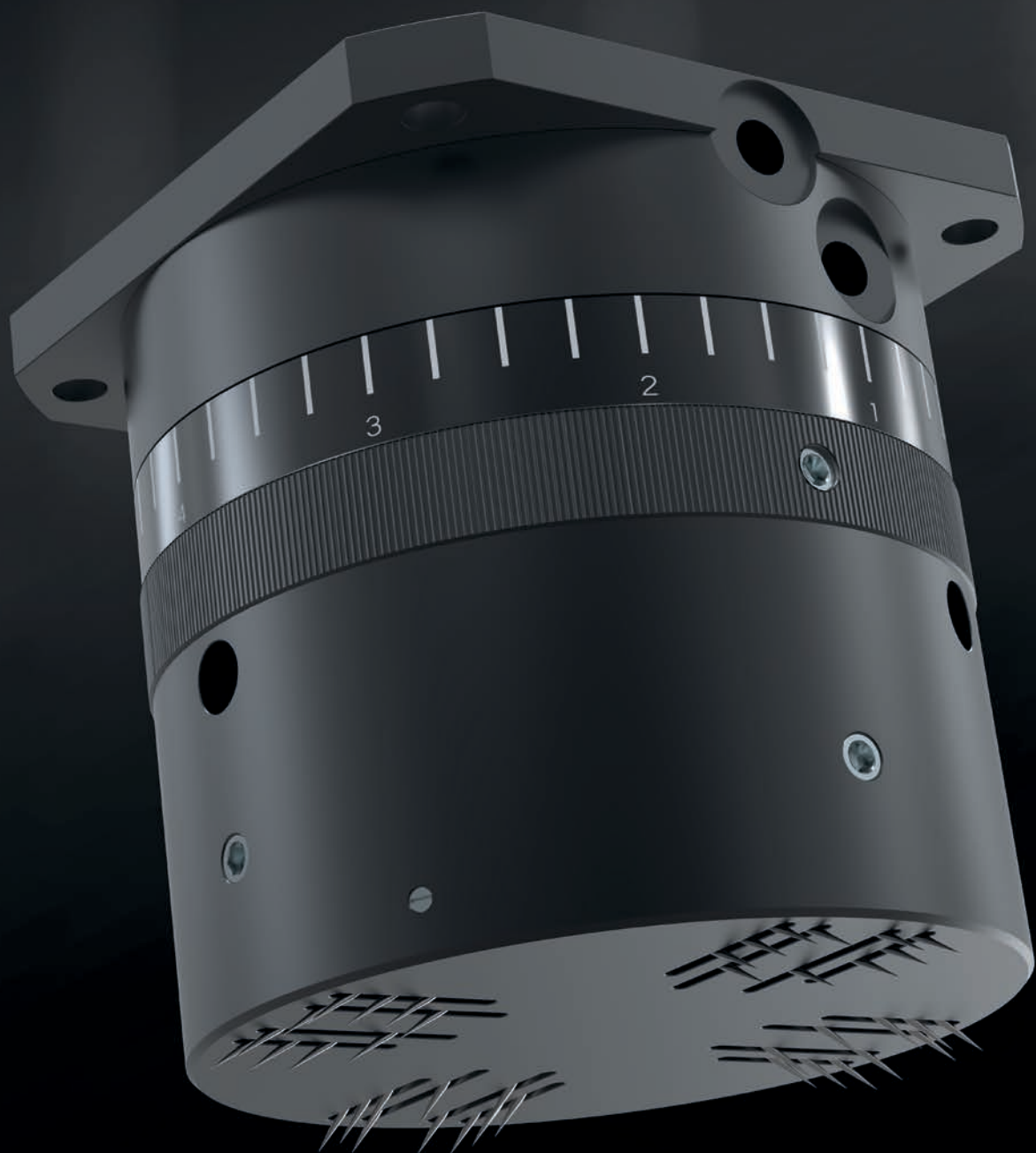
► TECHNICAL DATA

Installation size	Stroke per jaw [°]	Gripping force [N]	Weight [kg]	IP class
GG4032	20 - 90	430 - 460	0,25	IP64
GG4040	20 - 90	700 - 800	0,5	IP64
GG4049	20 - 90	1000 - 1150	0,85	IP64
GG4058	20 - 90	1650 - 1900	1,4	IP64
GG4072	20 - 90	1950 - 2700	2,45	IP64
GG4084	20 - 90	3500 - 4000	4,5	IP64

► FURTHER INFORMATION IS AVAILABLE ONLINE













All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



GRIPPERS FOR SPECIFIC TASKS

OVERVIEW OF SERIES



	PNEUMATIC
	Series ST 238
	Series GS 246
	Series GSI 258
	Series LGS 264
	Series LG1000 266
	Series LGG 268
	Series RG 270
	Series SCH 272
	Series HM1000 274

NEEDLE GRIPPER

SERIES ST

1

Series ST / Needle gripper / pneumatic / Grippers

▶ PRODUCT ADVANTAGES



▶ **Smooth stroke configuration**

Customise the stroke for your application with infinitely variable adjustment using an adjusting dial




▶ **Workpiece drain function**

This function guarantees the quick and reliable deposit of the workpiece and prevents disruptions to the process sequence

▶ **Query about magnetic field sensor technology**

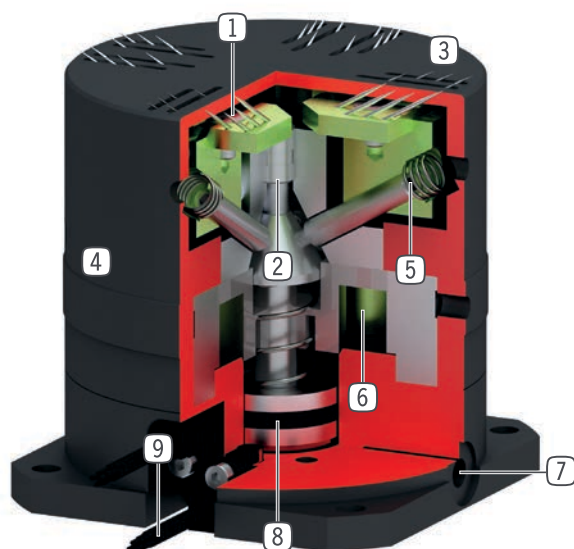
Detecting the end position allows you to have shorter cycle times and an integrated control system

▶ SERIES CHARACTERISTICS

Installation size		
STXX		
 5 million maintenance-free cycles (max.)		●
 Magnetic field sensor		●
 IP 30		●



► BENEFITS IN DETAIL



- ① **Extending needles**
 - gripping by penetration
- ② **Force transfer**
 - via hardened steel taper pin
- ③ **Needle wiper**
 - helps wiping the workpiece
- ④ **Stroke adjustment**
 - adjustment of the needle stroke
- ⑤ **Integrated spring**
 - for return
- ⑥ **Blow off air connection**
 - to reject the workpiece with air
- ⑦ **Energy supply**
 - possible from several sides (size ST40)
- ⑧ **Drive**
 - single-acting pneumatic cylinder with spring return
- ⑨ **Sensing slot**
 - mounting and positioning of magnetic field sensors

► TECHNICAL DATA

Installation size	Needle stroke adjustable	Needle diameter	Weight	IP class
	[mm]	[mm]	[kg]	
ST36	0 - 1,5	0.7	0.21	IP30
ST40	0 - 2	0.7	0.49	IP30

► FURTHER INFORMATION IS AVAILABLE ONLINE



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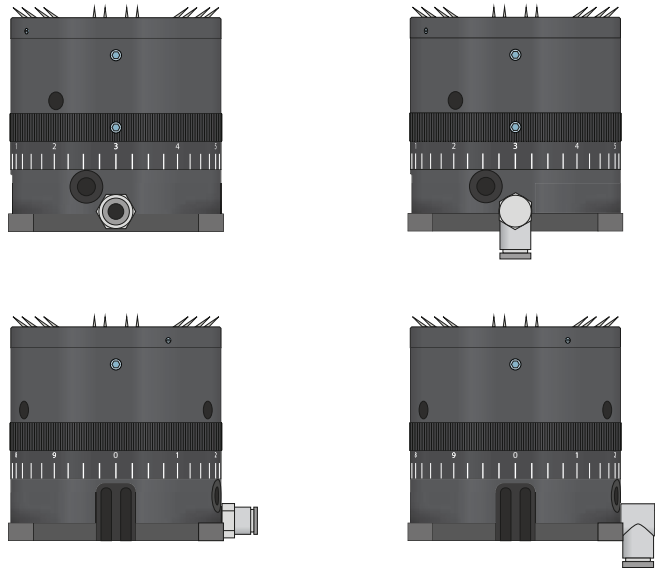
NEEDLE GRIPPERS

SERIES ST FUNCTIONAL DESCRIPTION

1



ENERGY SUPPLY



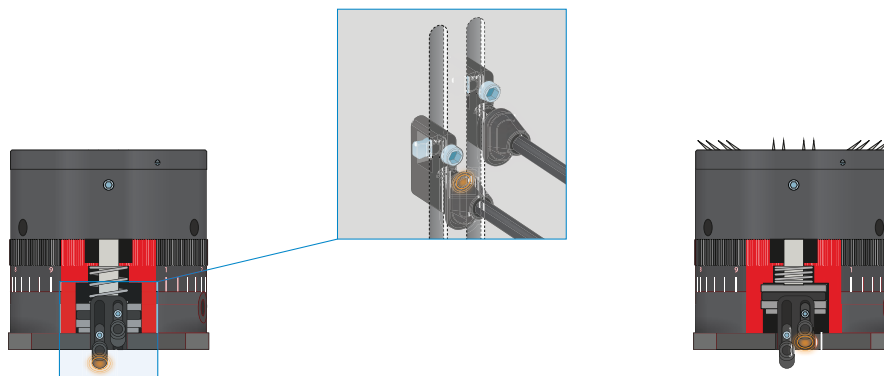
Pneumatic threaded connections

Available in straight and angled design. Can be chosen freely depending on the space conditions or installation situation.



SENSORS

MFS01



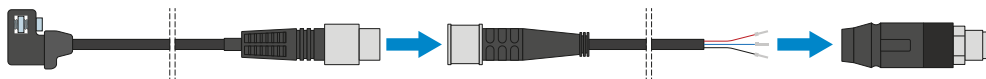
1-point magnetic field sensors – MFS

For non-contact sensing of the piston position

The sensor is clamped in the C-groove of the gripper and detects the magnet attached to the gripper jaws. The MFS01 is available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.



CONNECTIONS / OTHER



Plug-in connectors

For extending and fabricating the connection lines for the sensors

Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12.

NEEDLE GRIPPER

INSTALLATION SIZE ST36

▶ PRODUCT SPECIFICATIONS



▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



SENSORS



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



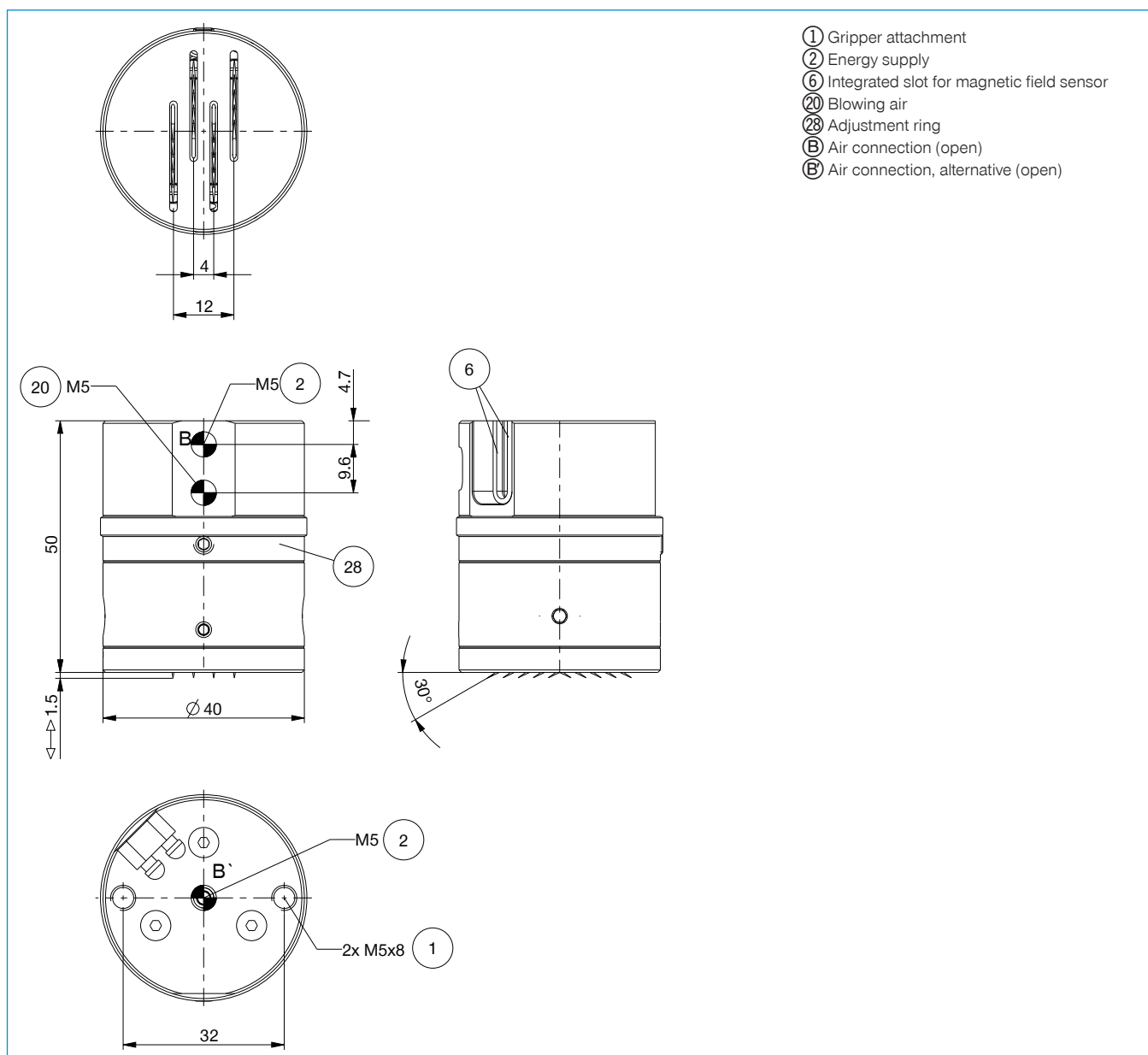
S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12



Order no.	Technical data
	ST36-B
Needle stroke adjustable min. [mm]	0
Needle stroke adjustable max. [mm]	1.5
Number of needles [piece]	20
Needle diameter [mm]	0.7
Retract time / Extend time [s]	0.03
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	4
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	1
Weight [kg]	0.21



NEEDLE GRIPPER

INSTALLATION SIZE ST40

▶ PRODUCT SPECIFICATIONS



▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



SENSORS



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



S8-G-3
Plug-in connector customizable Straight - Connector M8



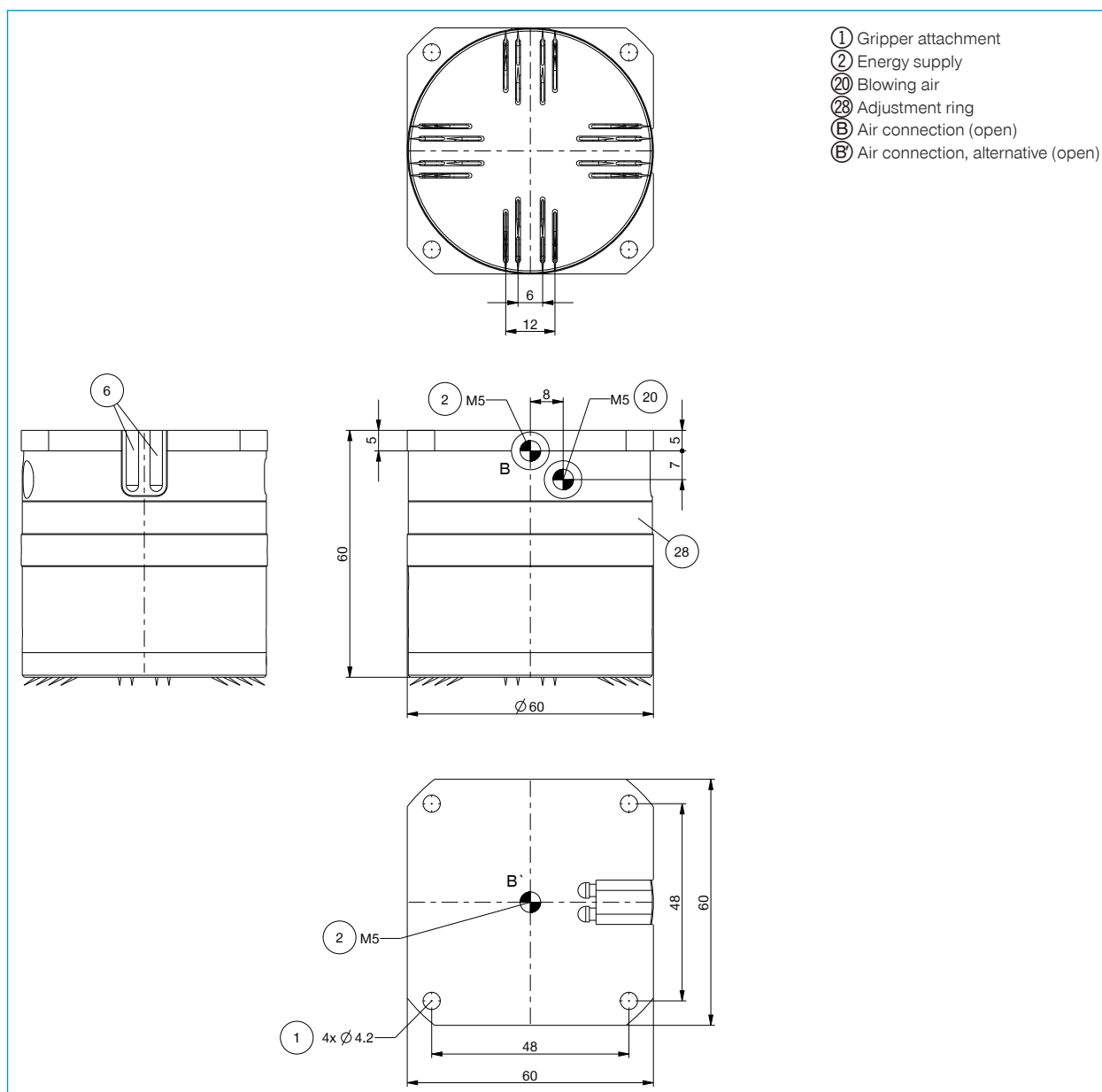
S12-G-3
Plug-in connector customizable Straight - Connector M12



Order no.	ST40-B
Needle stroke adjustable min. [mm]	0
Needle stroke adjustable max. [mm]	2
Number of needles [piece]	40
Needle diameter [mm]	0.7
Retract time / Extend time [s]	0.03
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	4
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm ³]	3
Weight [kg]	0.49

► Technical data

ST40-B



O-RING ASSEMBLY GRIPPER, OUTER

SERIES GS





1

▶ PRODUCT ADVANTAGES



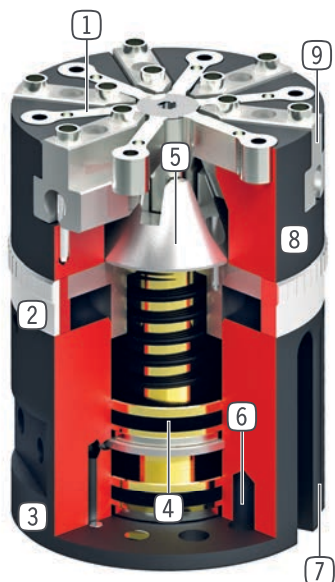
- ▶ **Proven technology**
We have more than 20 years of proven reliability, which ensures uninterrupted production for you
- ▶ **Adjustable expanding stroke**
Prevents the O-ring from overexpanding and ensures consistent production quality
- ▶ **Query about magnetic field sensor technology**
Detecting the end position allows you to have shorter cycle times and an integrated control system

▶ SERIES CHARACTERISTICS

Installation size	
GSXXX	
 5 million maintenance-free cycles (max.)	•
 Inductive sensor	•
 Magnetic field sensor	•
 IP 30	•



► BENEFITS IN DETAIL



- ① **Ejector jaw**
 - to shift off the O-ring
- ② **Stroke adjustment**
 - for adjustment of the spread stroke
- ③ **Energy supply**
 - possible from several sides
- ④ **Drive**
 - two single-acting pneumatic cylinders
- ⑤ **Force transfer**
 - direct via taper
- ⑥ **Mounting and positioning**
 - axial, on the gripper bottom
- ⑦ **Sensing slot**
 - mounting and positioning of magnetic field sensors
- ⑧ **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ⑨ **Gripper jaw**
 - individual gripper finger mounting

► TECHNICAL DATA

Installation size	Opening stroke adjustable per jaw	Recommended O-ring diameter	Weight	IP class
	[mm]	[mm]	[kg]	
GS65	3 - 6	4 - 60	0.5	IP30
GS810	4 - 8	30 - 120	2.5	IP30
GS1015	1.6 - 10	40 - 150	5.4	IP30

► FURTHER INFORMATION IS AVAILABLE ONLINE



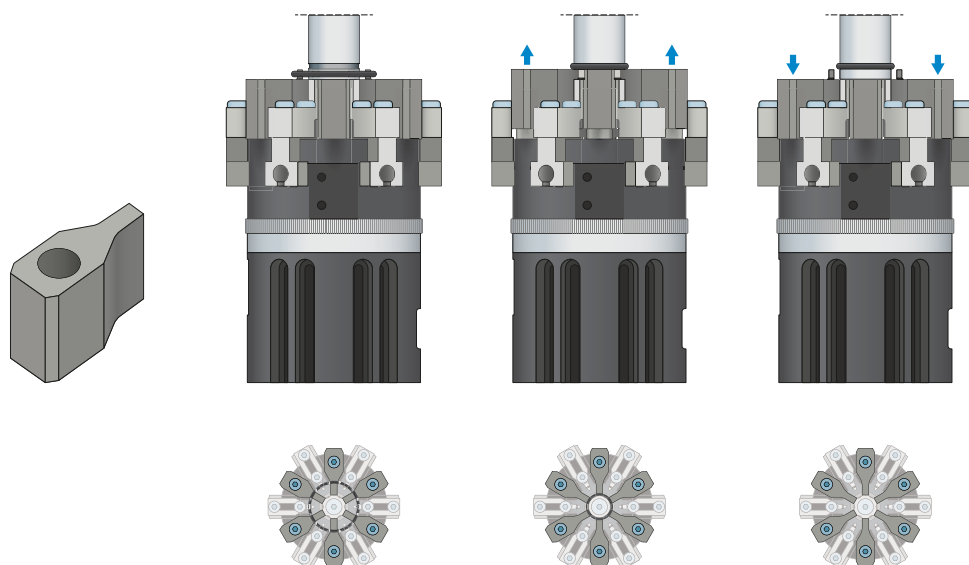
All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

O-RING ASSEMBLY GRIPPER, OUTER SERIES GS FUNCTIONAL DESCRIPTION

1

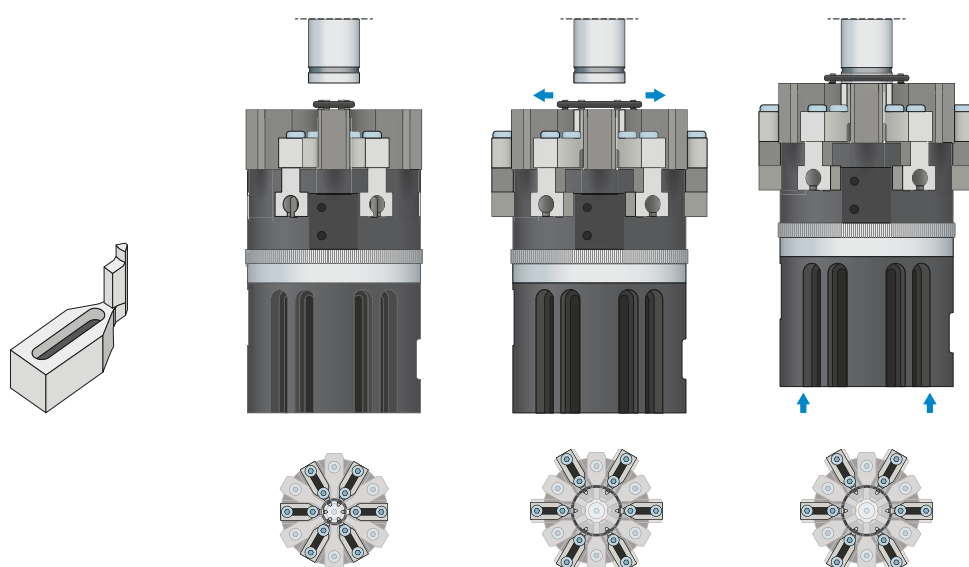


GRIPPING COMPONENTS



Removal jaws

The removal jaws remove the spread O-ring on the workpiece.

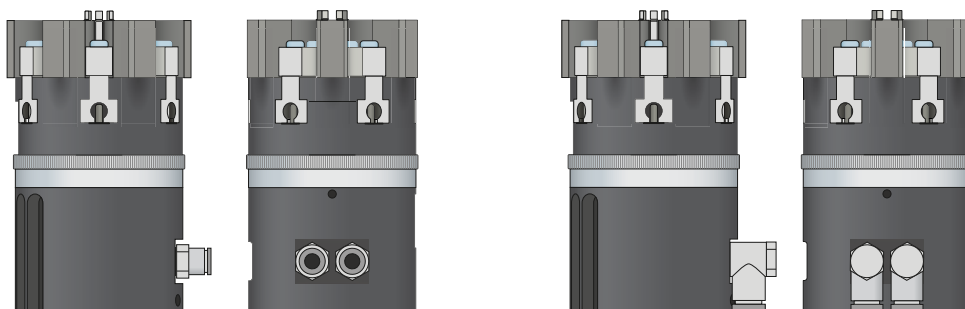


Clamping jaws

Using the clamping jaws, the O-ring is expanded to the expanding stroke set previously on the gripper via the adjustment ring.



ENERGY SUPPLY

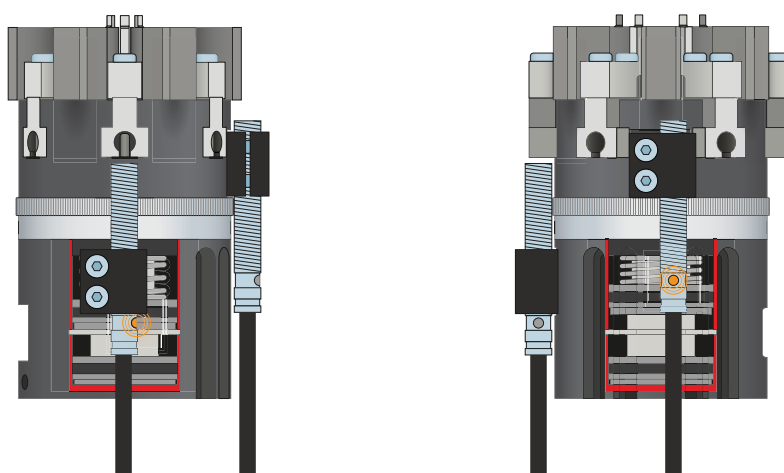


Pneumatic threaded connections

Available in straight and angled design. Can be chosen freely depending on the space conditions or installation situation.



SENSORS



Inductive sensors – NJ

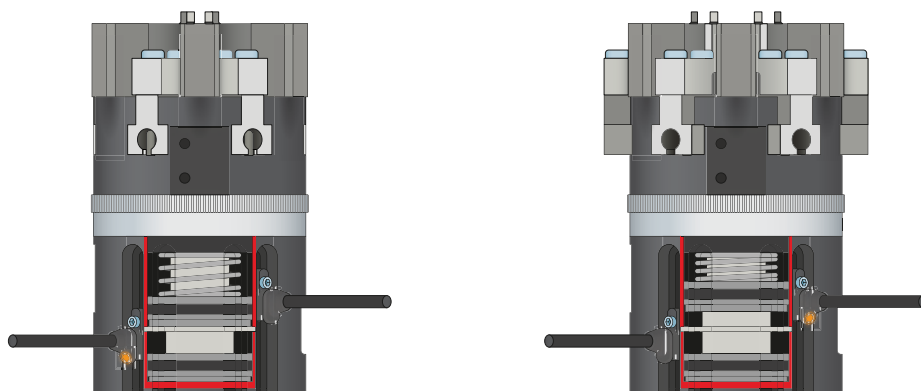
The expanding stroke can be sensed using an inductive sensor in combination with a mounting block. The cam switch must be manufactured on an application-specific basis.

O-RING ASSEMBLY GRIPPER, OUTER

SERIES GS FUNCTIONAL DESCRIPTION

SENSORS

MFS01

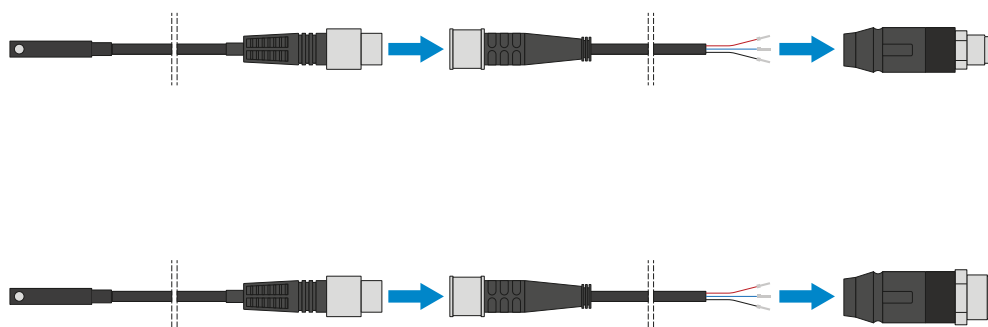


1-point magnetic field sensors – MFS

For non-contact sensing of the piston position

The sensor is clamped in the C-groove of the gripper and detects the magnet attached to the gripper jaws. The MFS01 is available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.

CONNECTIONS / OTHER



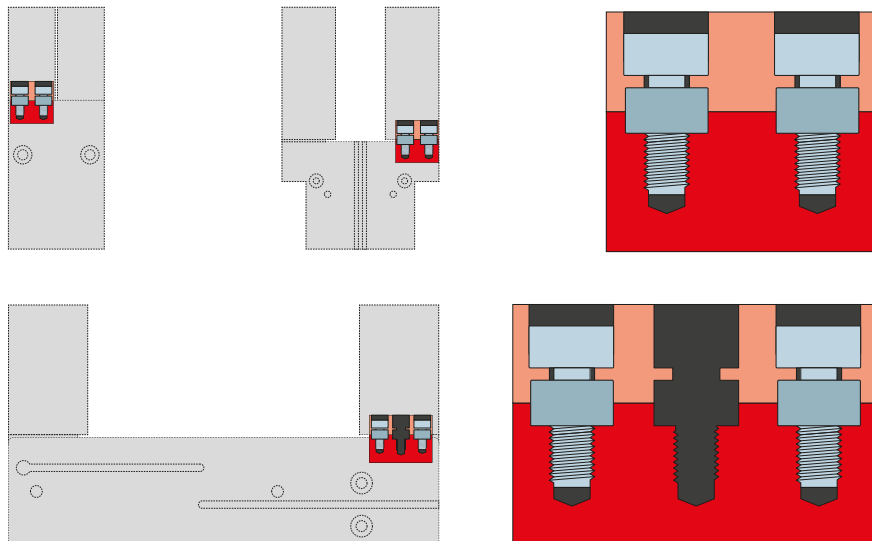
Plug-in connectors

For extending and fabricating the connection lines for the sensors

Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12.



CONNECTIONS / OTHER



Centering sleeves

For defined position measurement of the spread jaws

The centering sleeves are inserted into the fits of the gripper jaws to define the position of the spread jaws. The centering sleeves are comparable to a pin connection.

O-RING ASSEMBLY GRIPPER, OUTER INSTALLATION SIZE GS65

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



12 [piece]
Centering Disc
DST06510

▶ RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB65-3
Ejector jaw set aluminium



UB65-4
Expanding jaw set steel



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



SENSORS



KB6.5-02
Mounting block



NJ6.5-E2-01
Inductive proximity switch - Cable 5 m



SENSORS



NJ6.5-E2S
Inductive proximity switch - Connector M8



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



CONNECTIONS / OTHER

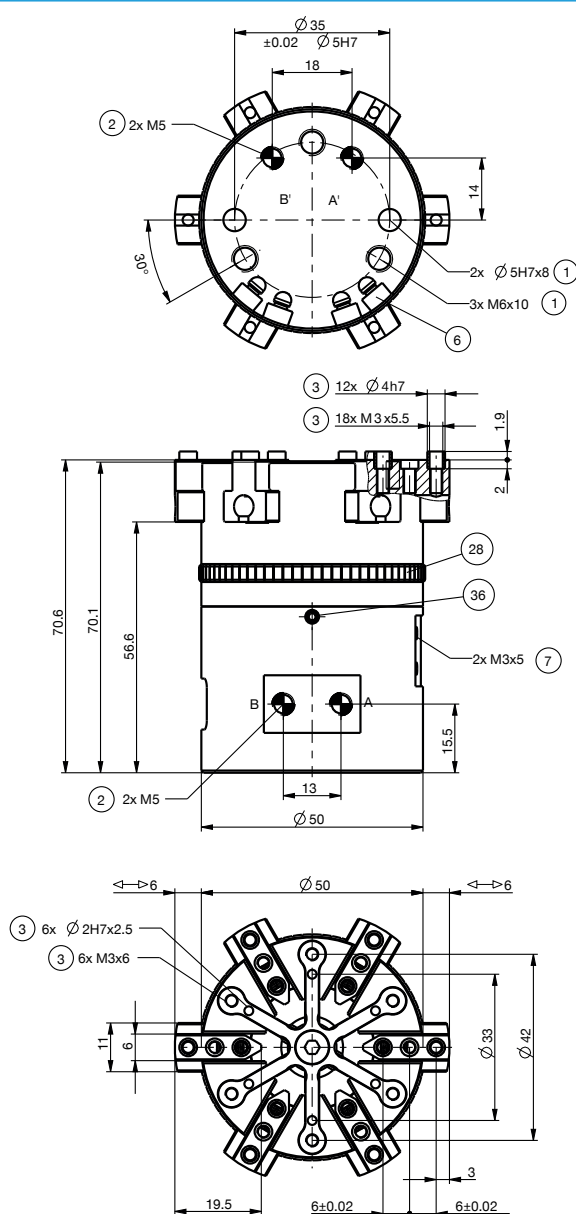


KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

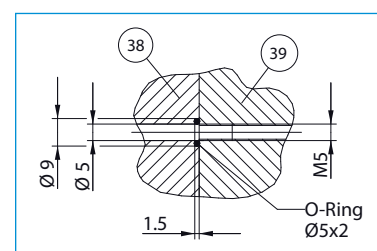


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

Order no.	Technical data
	GS65-B
Opening stroke adjustable per jaw min. [mm]	3
Opening stroke adjustable per jaw max. [mm]	6
Stripping stroke [mm]	5
Opening force [N]	300
Recommended O-ring diameter min. [mm]	4
Recommended O-ring diameter max. [mm]	60
Number of gripping jaws [Quantity]	6
Closing time [s]	0.05
Opening time [s]	0.05
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	4
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Weight [kg]	0.5



- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ②⑧ Adjustment ring
- ③⑥ Arrestor for adjustment ring
- ③⑧ Adapter
- ③⑨ Gripper
- Ⓐ Air connection (expanding stroke)
- Ⓑ Air connection (ejector stroke)
- Ⓑ Air connection alternate (expanding stroke)
- Ⓐ Air connection alternate (ejector stroke)



Hoseless air feed-through

O-RING ASSEMBLY GRIPPER, OUTER

INSTALLATION SIZE GS810

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



16 [piece]
Centering Disc
DST40600

▶ RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB810-3
Ejector jaw set aluminium



UB810-4
Expanding jaw set steel



ENERGY SUPPLY



GV1-8X8
Straight Fittings - Quick Connect Style



SENSORS



KB6.5-02
Mounting block



NJ8-E2
Inductive proximity switch - Cable 5 m



SENSORS



NJ8-E2S
Inductive proximity switch - Connector M8



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



CONNECTIONS / OTHER

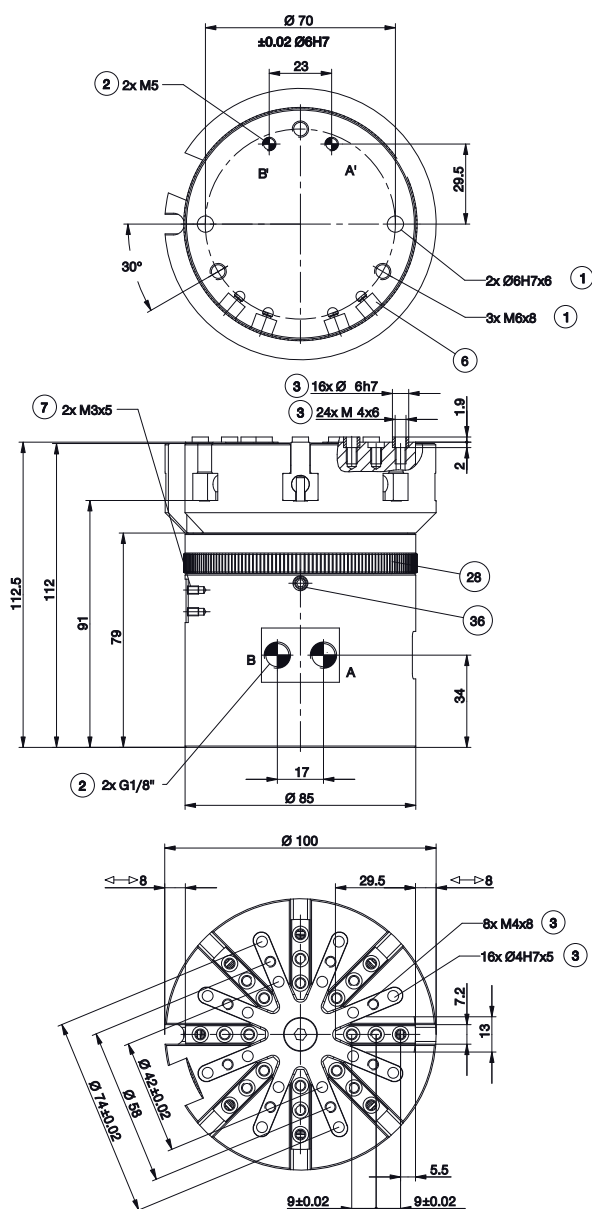


KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

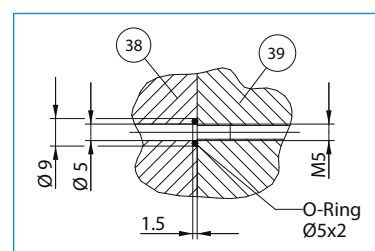


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

Order no.	Technical data
	GS810-B
Opening stroke adjustable per jaw min. [mm]	4
Opening stroke adjustable per jaw max. [mm]	8
Stripping stroke [mm]	10
Opening force [N]	1200
Recommended O-ring diameter min. [mm]	30
Recommended O-ring diameter max. [mm]	120
Number of gripping jaws [Quantity]	8
Closing time [s]	0.05
Opening time [s]	0.05
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Weight [kg]	2.5



- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ⑧ Adjustment ring
- ⑩ Arrestor for adjustment ring
- ⑪ Adapter
- ⑫ Gripper
- ⑬ Air connection (expanding stroke)
- ⑭ Air connection (ejector stroke)
- ⑮ Air connection alternate (expanding stroke)
- ⑯ Air connection alternate (ejector stroke)



Hoseless air feed-through

O-RING ASSEMBLY GRIPPER, OUTER

INSTALLATION SIZE GS1015

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K



20 [piece]
Centering Disc
DST60800

▶ RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB1015-3
Ejector jaw set aluminium



UB1015-4
Expanding jaw set steel



SENSORS



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



ENERGY SUPPLY



GV1-8X8
Straight Fittings - Quick Connect Style



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



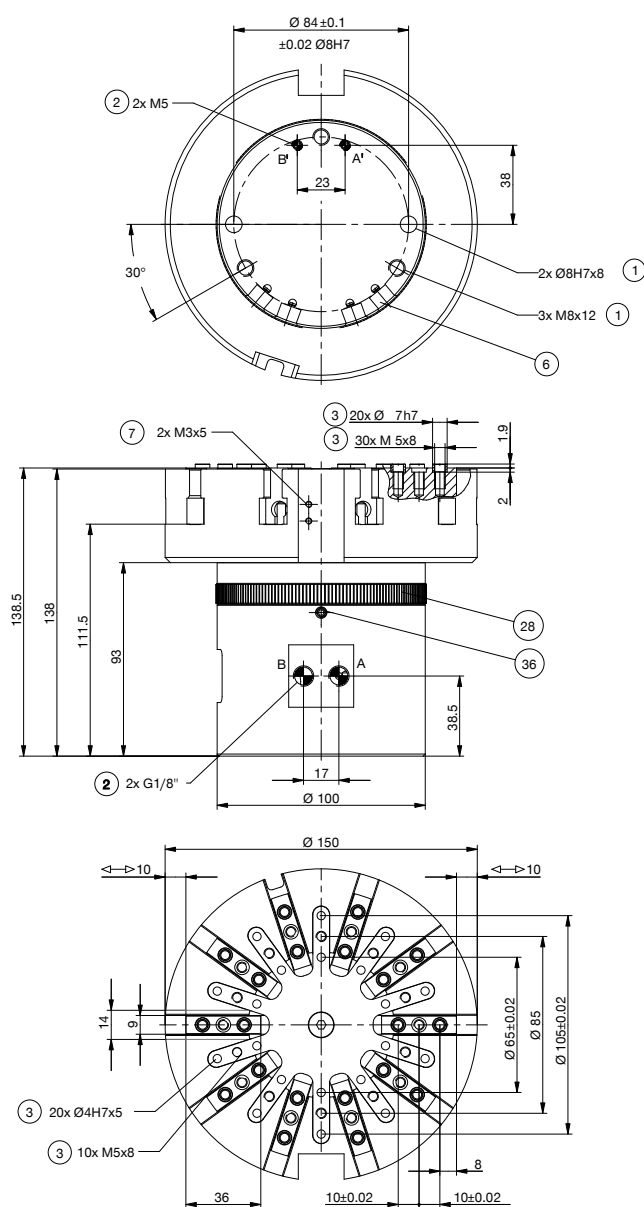
KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



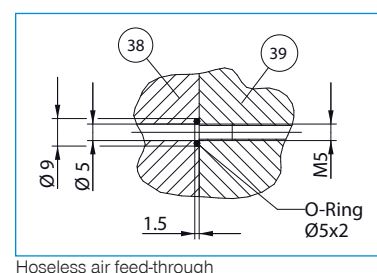
S8-G-3
Plug-in connector customizable Straight - Connector M8



Order no.	Technical data
	GS1015-B
Opening stroke adjustable per jaw min. [mm]	1.6
Opening stroke adjustable per jaw max. [mm]	10
Stripping stroke [mm]	15
Opening force [N]	1450
Recommended O-ring diameter min. [mm]	40
Recommended O-ring diameter max. [mm]	150
Number of gripping jaws [Quantity]	10
Closing time [s]	0.05
Opening time [s]	0.05
Repetition accuracy +/- [mm]	0.05
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Weight [kg]	5.4



- ① Gripper attachment
- ② Energy supply
- ③ Fixing for gripper finger
- ⑥ Integrated slot for magnetic field sensor
- ⑦ Fixing for mounting block
- ②⑧ Adjustment ring
- ③⑥ Arrestor for adjustment ring
- ③⑧ Adapter
- ③⑨ Gripper
- ① Air connection (expanding stroke)
- ② Air connection (ejector stroke)
- ③ Air connection alternate (expanding stroke)
- ④ Air connection alternate (ejector stroke)



Hoseless air feed-through

O-RING ASSEMBLY GRIPPER, INNER




SERIES GSI

▶ PRODUCT ADVANTAGES



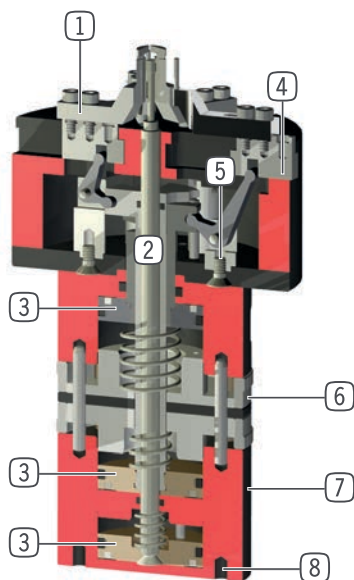
- ▶ **Concentration on the essentials**
Only pay for what you need - individual standard gripper specific to O-ring inside assembly
- ▶ **Adjustable expanding stroke**
Prevents the O-ring from overexpanding and ensures consistent production quality
- ▶ **Query about magnetic field sensor technology**
Detecting the end position allows you to have shorter cycle times and an integrated control system

▶ SERIES CHARACTERISTICS

Installation size		
GSIXXX		
 5 Mio	5 million maintenance-free cycles (max.)	●
	Magnetic field sensor	●
	IP30	●



► BENEFITS IN DETAIL



- 1 Spread jaws**
 - to position the O-ring in the groove of the workpiece
- 2 Ejector (piston rod)**
 - to remove the O-ring
- 3 Driven by three single-acting pneumatic cylinders**
 - drive for grabber jaws
 - drive for spread jaws
 - drive for ejector
- 4 Grabber jaw**
 - to grab the O-ring
- 5 Force transfer**
 - via lever and connecting rod
- 6 Stroke adjustment on grabber jaws**
 - prevents overstretching of O-ring during assembly
- 7 Stroke on spread jaws**
 - adjustable to fit bore diameter of workpiece
- 8 Mounting and positioning**
 - axial, on the gripper bottom

► TECHNICAL DATA

Installation size	Opening stroke adjustable per jaw	Recommended O-ring diameter	Weight	IP class
	[mm]	[mm]	[kg]	
GSI206	1 - 6	11 - 130	1.1	IP30

► FURTHER INFORMATION IS AVAILABLE ONLINE



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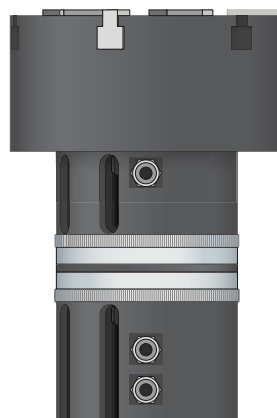
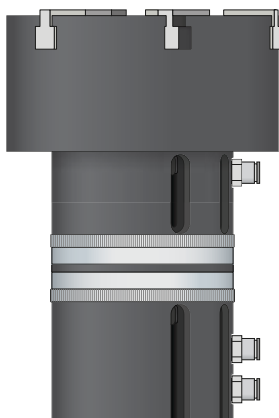
O-RING ASSEMBLY GRIPPER, INNER

SERIES GSI FUNCTIONAL DESCRIPTION

1



ENERGY SUPPLY



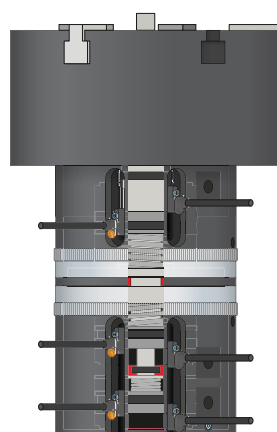
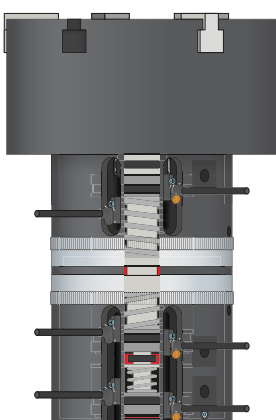
Pneumatic threaded connections

Available in straight and angled design. Can be chosen freely depending on the space conditions or installation situation.



SENSORS

MFS01



1-point magnetic field sensors – MFS

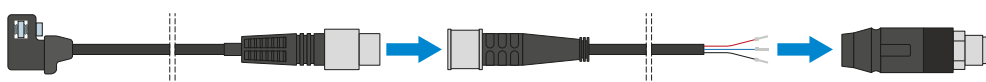
For non-contact sensing of the piston position

The sensor is clamped in the C-groove of the gripper and detects the magnet attached to the gripper jaws. The MFS01 is available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.



CONNECTIONS / OTHER

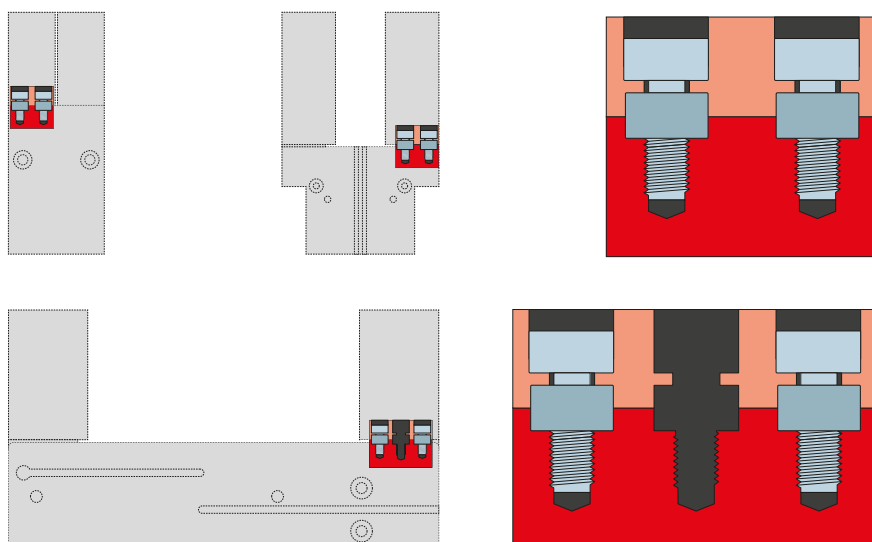
1



Plug-in connectors

For extending and fabricating the connection lines for the sensors

Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12.



Centering sleeves

For defined position measurement of the gripper fingers

The centering sleeves are inserted into the fits of the gripper jaws to define the position of the gripper fingers. The centering sleeves are comparable to a pin connection.

O-RING ASSEMBLY GRIPPER, INNER

INSTALLATION SIZE GSI206

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



12 [piece]
Centering Disc
DST06510

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



GVM5
Straight Fittings - Quick Connect Style



SENSORS



MFS01-K-KHC-P1-PNP
Magnetic field sensor Angled Cable 5 m



MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



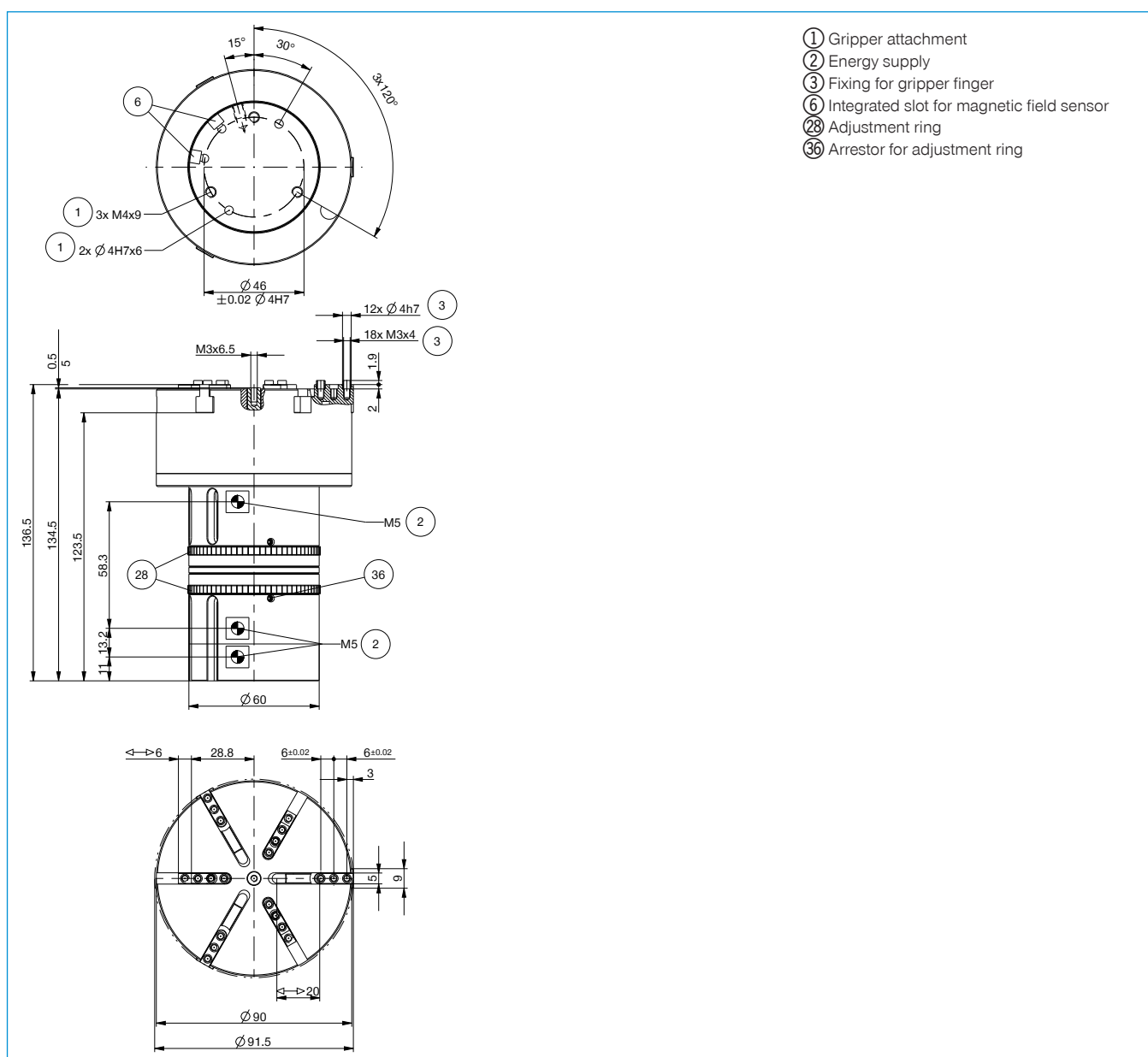
S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12



Order no.	Technical data
	GSI206
Stroke adjustable per jaw min. [mm]	6
Stroke adjustable per jaw max. [mm]	20
Opening stroke adjustable per jaw min. [mm]	1
Opening stroke adjustable per jaw max. [mm]	6
Stripping stroke [mm]	5
Opening force [N]	240
Possible O-ring diameter at cord size 1 [mm]	11-45
Possible O-ring diameter at cord size 2 [mm]	20-130
Possible O-ring diameter at cord size 3 [mm]	32-130
Possible O-ring diameter at cord size 4 [mm]	42-100
Number of gripping jaws [Quantity]	6
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Weight [kg]	1.1



INTERNAL GRIPPER

SERIES LGS

1

Series LGS / Internal gripper / pneumatic / Grippers

▶ PRODUCT ADVANTAGES



▶ Concentration on the essentials

The most economic type of gripping: This is how you reduce your production costs



▶ Individually machinable clamping jaws

You have never adjusted a gripper to your application this quickly and easily

▶ Direct drive

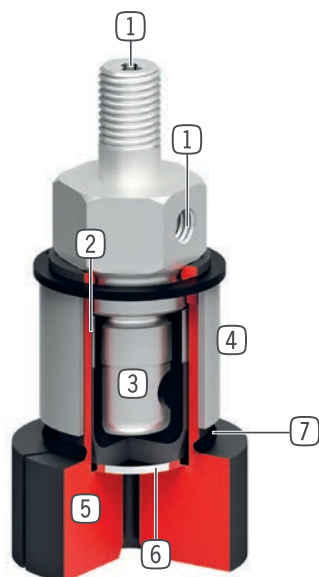
The control system with only one pneumatic line reduces installation effort and interference contours

▶ SERIES CHARACTERISTICS

Installation size		Version	
LGXX-XX		-	V
 Collet Chuck		•	
 Extended collet chuck			•
 Maintenance free		•	•
 IP 40	IP40	•	•



► BENEFITS IN DETAIL



- ① **Energy supply**
 - axial and radial possible
- ② **Protective membrane**
 - between collet chuck and function membrane
- ③ **Direct drive with membrane**
 - only one pneumatic line required
- ④ **Stroke limit**
 - prevents damage by overstretching with empty strokes
- ⑤ **Collet chuck**
 - for individual machining
- ⑥ **Steel protective cover**
 - protects the membrane against puncturing
- ⑦ **O-ring for backstroke**
 - gripper close movement after venting

► TECHNICAL DATA

Installation size	Total stroke in Ø [mm]	Gripping moment [Nm]	Weight [kg]	IP class
LG4-20	1	0,5	0,075 - 0,115	IP40
LG20-30	1	2	0,16 - 0,29	IP40
LG30-50	1	3	0,46	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE



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INTERNAL GRIPPER





SERIES LG1000

▶ PRODUCT ADVANTAGES



- ▶ **Individually adjustable**
The design of the gripper enables you to grip not only cylindrical gripping surfaces, but also conical and square ones with process reliability
- ▶ **Integrated air or vacuum feedthrough**
Use this option for applications such as leak tests, purging or vacuuming your part
- ▶ **Surface protection provided by silicone membrane**
In addition to covering a vast range of gripping diameters, the membrane provides ideal protection from damage

▶ SERIES CHARACTERISTICS

Installation size	Version	
LG10XX	-01SI	-02SI
 Axial energy supply	●	
 Radial energy supply, through-hole		●
 Maintenance free	●	●
 IP 54	●	●

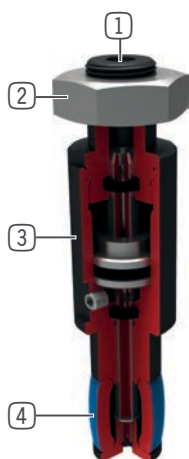


► BENEFITS IN DETAIL

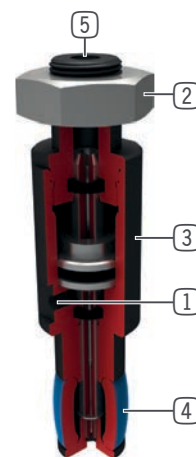
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Series LG1000 / Internal gripper / pneumatic / Grippers

Version-01

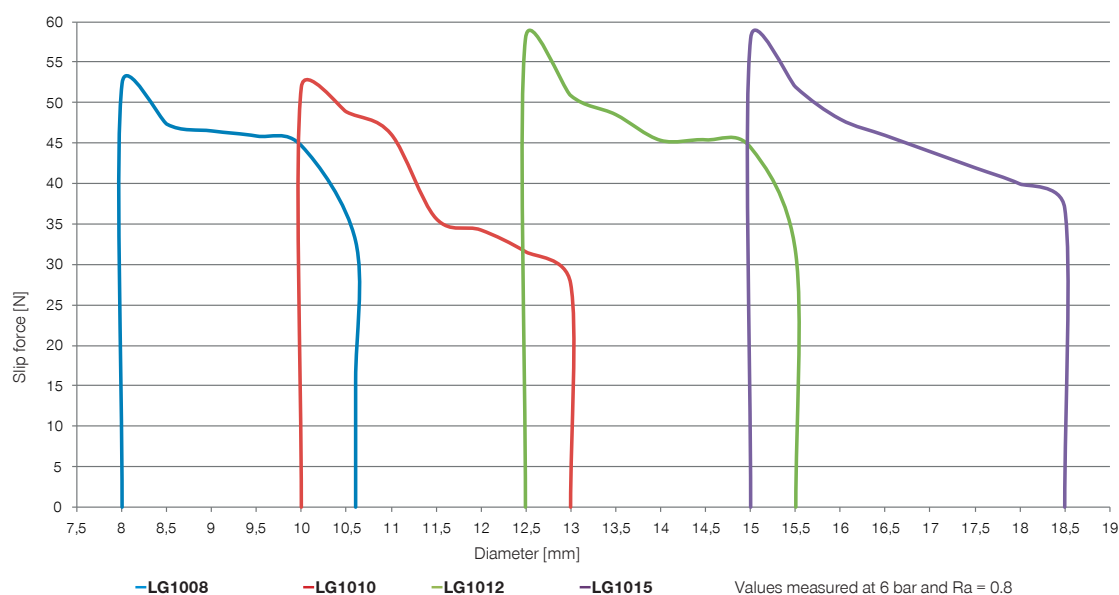


Version-02



- ① **Energy supply**
 - Axial (version-01) or radial (version-02)
- ② **Mounting and positioning**
 - via fit, thread and lock nut
- ③ **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ④ **Direct gripping with rubber membrane**
 - High holding force due to high friction value
 - reset when venting
- ⑤ **Through-hole**
 - Compressed air or vacuum connection for cooling the workpieces or testing them for leaks (version-02)

► SLIP FORCE DIAGRAM



INTERNAL GRIPPER

SERIES LGG

▶ PRODUCT ADVANTAGES



▶ Surface protection with rubber knobs

Continuously protect the surface of your workpieces and minimise rejections in the process

▶ Secure hold

The coefficient of friction ensures your workpiece stays held reliably, even under high dynamics

▶ Direct drive

The control system with only one pneumatic line reduces installation effort and interference contours

▶ SERIES CHARACTERISTICS

Installation size

LGXX-XX



Maintenance free

•

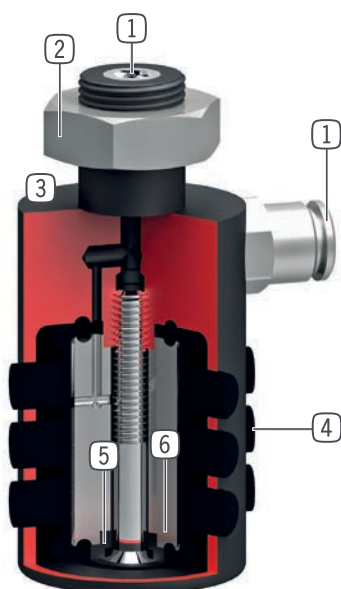


IP54

•



► BENEFITS IN DETAIL



- 1 Energy supply**
 - radial
 - axial and radial from LG35-39
- 2 Fixing**
 - by fit, thread and locknut
- 3 Robust, lightweight housing**
 - Hard-coated aluminum alloy
 - no overstretching of the rubber membrane at empty stroke
- 4 Direct gripping with rubber knobs**
 - high retention force due to good friction value, approx. 0.5 with rubber
- 5 Gripping with single-acting rubber membranes**
 - low actuate effort
 - reset when venting
 - adjustable force with operating pressure (2 - 6 bar)
- 6 Inner core**
 - saves air volume and cycle time (from LG35-39)

► TECHNICAL DATA

Installation size	Total stroke in Ø [mm]	Gripping force [N]	Weight [kg]	IP class
LG15-18	2.5	100	0.031	IP54
LG18-22	4	100	0.035	IP54
LG22-26	4	150	0.051	IP54
LG26-30	4	150	0.071	IP54
LG30-35	5	200	0.09	IP54
LG35-39	4.5	300	0.13	IP54
LG40-45	6.5	400	0.178	IP54
LG46-51	6	500	0.26	IP54
LG51-56	7	750	0.37	IP54
LG56-62	7.5	900	0.373	IP54
LG63-70	8	1100	0.53	IP54
LG71-80	10.5	1500	0.69	IP54
LG76-84	8.5	1700	0.8	IP54
LG81-90	11	2000	1	IP54
LG91-100	10	2500	1.3	IP54
LG100-110	11	2800	1.9	IP54
LG110-120	11	3500	2.3	IP54
LG120-135	16	3500	2.7	IP54

EXTERNAL GRIPPER

SERIES RG

▶ PRODUCT ADVANTAGES



▶ Surface protection with rubber knobs

Continuously protect the surface of your workpieces and minimise rejections in the process

▶ Secure hold

The coefficient of friction ensures your workpiece stays held reliably, even under high dynamics

▶ Direct drive

The control system with only one pneumatic line reduces installation effort and interference contours

▶ SERIES CHARACTERISTICS

Installation size

RGXX-XX



Maintenance free

•



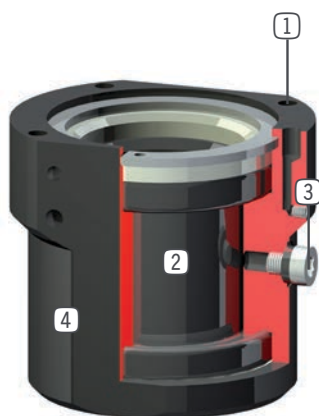
IP 67

IP67

•



► BENEFITS IN DETAIL



- ① **Mounting and positioning**
- ② **Drive**
 - direct via rubber membrane
- ③ **Energy supply**
 - possible from several sides
- ④ **Robust, lightweight housing**
 - Hard-coated aluminum alloy

► TECHNICAL DATA

Installation size	Gripper hole diameter	Gripping force [N]	Weight [kg]	IP class
RG0-30	0 - 28	350	0.28	IP67
RG10-60	10 - 58	1000	0.85	IP67

► FURTHER INFORMATION IS AVAILABLE ONLINE



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NEEDLE GRIPPER




SERIES SCH

▶ PRODUCT ADVANTAGES



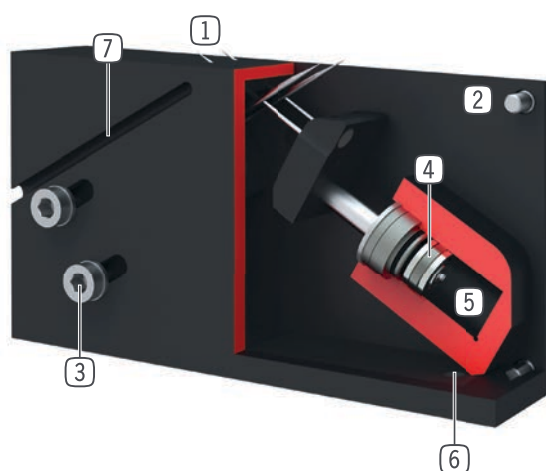
- ▶ **Smooth stroke configuration**
Adjust the needle stroke individually and smoothly via the direct needle setting
- ▶ **Flat structure**
Due to its compact design, you save precious space in your machine
- ▶ **Query about magnetic field sensor technology**
Detecting the end position allows you to have faster cycle times and an integrated control system

▶ SERIES CHARACTERISTICS

Installation size		
SCHXX		
 5 million maintenance-free cycles (max.)		●
 Magnetic field sensor		●
 IP 30		●



► BENEFITS IN DETAIL



- ① **Extending needles**
 - gripping by penetration
- ② **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ③ **Stroke adjustment**
 - by shifting in an elongated hole
- ④ **Drive**
 - two double-acting pneumatic cylinders
- ⑤ **Energy supply**
- ⑥ **Mounting and positioning**
- ⑦ **Sensing slot**
 - mounting and positioning of magnetic field sensors

► TECHNICAL DATA

Installation size	Needle stroke adjustable	Needle diameter	Weight	IP class
	[mm]	[mm]	[kg]	
SCH20	0 - 6	1.2	0.35	IP30
SCH23	0 - 6	3	0.37	IP30

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MAGNETIC GRIPPER

SERIES HM1000

▶ PRODUCT ADVANTAGES



▶ **Secure hold during EMERGENCY STOP**

Magnets attached to springs ensure your workpiece remains secure, even during a drop in pressure



▶ **Contact plate that increases friction value**

The replaceable O-ring ensures the high dynamics in your application and protection of your workpiece

▶ **Residual holding force < 1N**

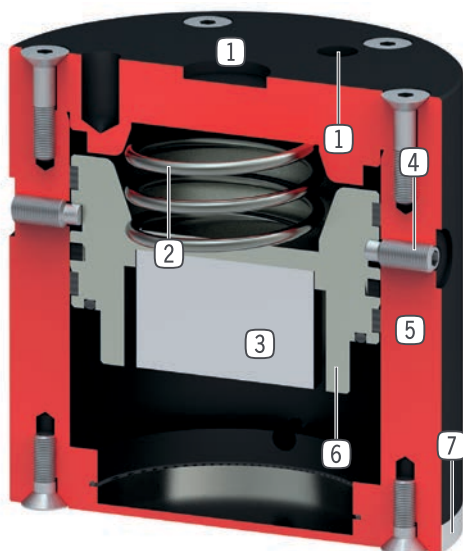
The demagnetised contact surface safeguards the process reliability of dropping off your workpiece

▶ SERIES CHARACTERISTICS

Installation size		Version	
HM10XX		NC	
 5 Mio	5 million maintenance-free cycles (max.)	●	
 IP 30	IP30	●	



► BENEFITS IN DETAIL



- ① Mounting and positioning**
 - via centering sleeve and thread
- ② Spring**
 - for piston return
 - secured holding even in drop pressure
- ③ Permanent magnet**
 - requires no power supply
 - high holding forces
- ④ Transport safeguarding**
- ⑤ Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ⑥ single-acting pneumatic cylinders**
 - only one pneumatic line required
 - Spring return
- ⑦ Contact plate**
 - easy replaceable
 - embedded O-ring to increase the friction coefficient

► TECHNICAL DATA

Installation size	Adhesive force max.	Weight	IP class
	[N]	[kg]	
HM1030	27	0.06	IP30
HM1046	65	0.28	IP30
HM1078	220	1.2	IP30
HM1097	450	2.2	IP30

► FURTHER INFORMATION IS AVAILABLE ONLINE






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GRIPPERS FOR SPECIFIC TASKS

OVERVIEW OF SERIES



 ELECTRICAL		
	Series GEN9100	278
	Series HEM1000	280

NEEDLE GRIPPER

SERIES GEN9100

1



Series GEN9100 / Needle gripper / electrical / Grippers

▶ PRODUCT ADVANTAGES



- ▶ **Plug and play**
Reduce programming and assembly costs to a minimum with the integrated control system and the 2 position query
- ▶ **Saving energy with pulse control**
You only have to supply current briefly when retracting and extending the needle; no energy is required when transporting the workpiece
- ▶ **Smooth stroke configuration**
The needle stroke is displayed via a scale. You can smoothly adjust the needle stroke to fit your application

▶ SERIES CHARACTERISTICS

Installation size		
GEN9102		
I/O	Digital I/O	•
	5 million maintenance-free cycles (max.)	•
	Integrated sensing	•
IP 50	IP50	•



► BENEFITS IN DETAIL



- ① Energy supply**
 - standardized interface M12 round connector
- ② Drive**
 - via Pot magnet and coil bobbin according to the coil system principle
 - energy consumption only at impulse <25 ms
- ③ Position sensing**
 - integrated Hallsensor
 - 2 positions monitorable
- ④ Status control**
 - optical LED position display
 - Needles retracted, needles extended
- ⑤ Stroke adjustment**
 - infinitely variable
 - Can be read off the scale
- ⑥ Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- ⑦ Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ⑧ Extending needles**
 - gripping by penetration

► TECHNICAL DATA

Installation size	Needle stroke adjustable [mm]	Pulse time [ms]	Weight [kg]	IP class
GEN9102	0 - 2	20 -25	0.33	IP50

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

MAGNETIC GRIPPER

SERIES HEM1000

1

Series HEM1000 / Magnetic gripper / electrical / Grippers

▶ PRODUCT ADVANTAGES



▶ Plug and play

Reduce your installation effort to a minimum by using the single cable solution and the simple control system via plus and minus buttons




▶ Saving energy with pulse control

You only have to supply current briefly when releasing the workpiece; no energy is required when transporting the workpiece

▶ Secure hold during EMERGENCY STOP

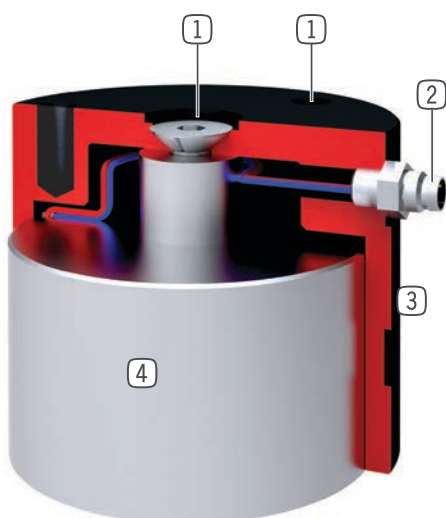
The magnet provides full holding force when it is not powered, preventing the loss of the workpiece if there is a voltage drop

▶ SERIES CHARACTERISTICS

Installation size		Version	
HEM10XX		NC	
 I/O	Digital I/O		•
 5 Mio	5 million maintenance-free cycles (max.)		•
 IP 30	IP30		•



► BENEFITS IN DETAIL



- ① **Mounting and positioning**
 - via centering sleeve and thread
- ② **Energy supply**
 - standardized interface M8 round plug
- ③ **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ④ **Holding solenoid**
 - with electrical switch off

► TECHNICAL DATA

Installation size	Adhesive force max. *	Max. residual retention force	Weight	IP class
	[N]	[N]	[kg]	
HEM1030	40	1.2	0.09	IP30
HEM1042	160	4.8	0.28	IP30
HEM1062	420	12.6	0.66	IP30
HEM1080	720	21.6	1.3	IP30

*St37-100%, St34 -88%, St 50-81%, St70-75%, GT-65%, 20MnCr5-55%, GG-35%

► FURTHER INFORMATION IS AVAILABLE ONLINE

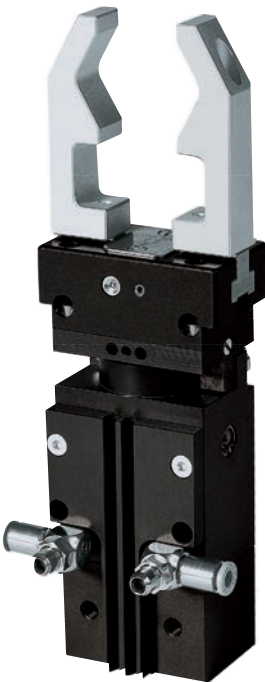


All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



ANGULAR GRIP & ROTATE MODULES

OVERVIEW OF SERIES



PNEUMATIC

	Series DGK	284
	Series DGP400	286

2-JAW ANGULAR ROTARY GRIPPERS

SERIES DGK





▶ PRODUCT ADVANTAGES



“TWO in ONE”

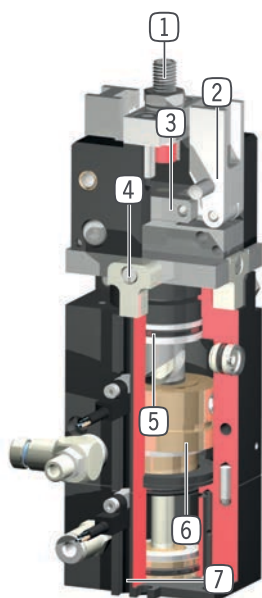
- ▶ **Smooth stroke configuration**
You can adjust the 180° opening angle to be unique to your application using an adjusting screw
- ▶ **2 in 1**
Gripping and swivelling in a module allows optimum utilisation of the installation space
- ▶ **Individually adjustable**
How you stay flexible: 90° or 180° swivel angle - You decide what your application requires on site

▶ SERIES CHARACTERISTICS

Installation size	
DGK20N	
 1.5 Mio	1.5 million maintenance-free cycles (max.)
	Spring closing C
	Spring opening O
	IP40



► BENEFITS IN DETAIL



- ① **Stroke adjustment screw**
 - Infinitely adjustable opening stroke
- ② **Gripper jaw**
 - individual gripper finger mounting
- ③ **Guided toggle lever mechanism**
 - synchronized the movement of the gripper jaws
 - mechanically self-locking
- ④ **Endposition 0°/90°/180° adjustment**
 - endstops for 0°/90°/180° included with purchase
- ⑤ **Rotating-drive mechanism**
 - robust, wear-resistant
- ⑥ **Drive**
 - two double-acting pneumatic cylinders
- ⑦ **Slot for magnetic field sensor**
 - sensing of the rotational position and gripper jaw position

► TECHNICAL DATA

Installation size	Stroke [°]	Gripping force [N]	Weight [kg]	IP class
DKG20	90	150	0.55	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE

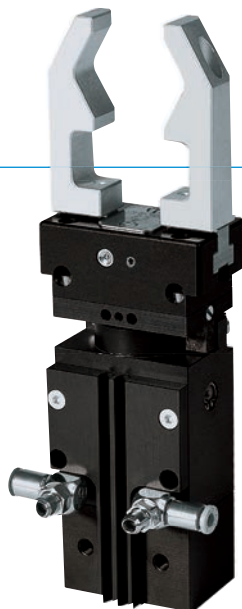


All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

2-JAW PARALLEL ROTARY GRIPPERS

SERIES DGP400





▶ PRODUCT ADVANTAGES



“TWO in ONE”

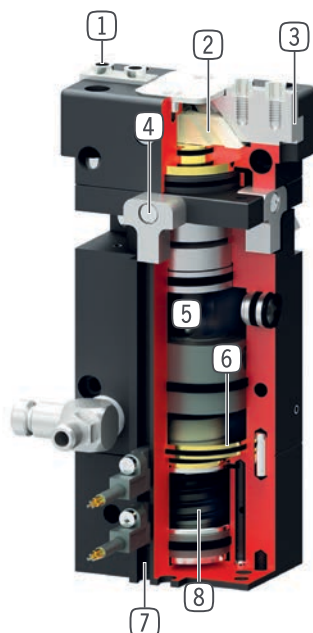
- ▶ **Proven T slot guide**
This established and proven guiding technology stands for the highest process reliability like no other
- ▶ **2 in 1**
Gripping and swivelling in a module allows optimum utilisation of the installation space
- ▶ **Individually adjustable**
How you stay flexible: 90° or 180° swivel angle - You decide what your application requires on site

▶ SERIES CHARACTERISTICS

Installation size		Version		
DGP40X		N	NC	NO
 1.5 Mio	1.5 million maintenance-free cycles (max.)	•	•	•
	Spring closing C		•	
	Spring opening O			•
	IP40	•	•	•



► BENEFITS IN DETAIL



- ① **Removable centering sleeves**
 - quick and economical positioning of the gripper fingers
- ② **Wedge hook mechanism**
 - synchronized the movement of the gripper jaws
- ③ **Precise T-Slot guide**
 - high forces and moments capacity
- ④ **Endposition 0°/90°/180° adjustment**
 - endstops for 0°/90°/180° included with purchase
- ⑤ **Rotating-drive mechanism**
 - robust, wear-resistant
- ⑥ **Drive**
 - two double-acting pneumatic cylinders
- ⑦ **Slot for magnetic field sensor**
 - sensing of the rotational position and gripper jaw position
- ⑧ **Integrated gripping force safety device**
 - optional via integrated spring (C or O models)

► TECHNICAL DATA

Installation size	Stroke per jaw [mm]	Gripping force [N]	Weight [kg]	IP class
DGP404	4	115 - 155	0,44 - 0,48	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

SWIVEL- AND ROTARY MODULES

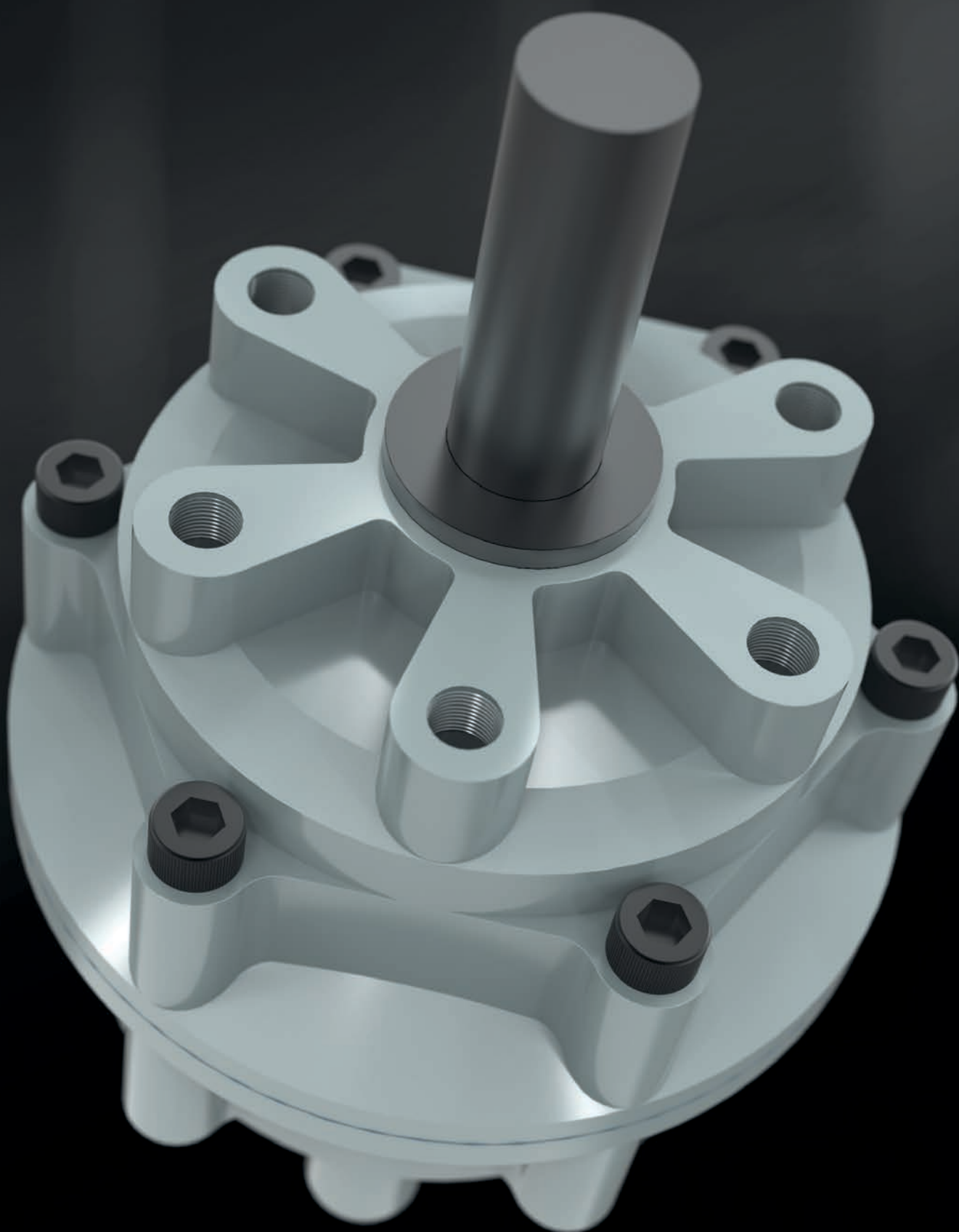
OVERVIEW OF SERIES

3

Products	Torque [Nm]	Swivel angle [°]	Number of installation sizes
Rotary Cylinders pneumatic Page 290			
Series PRN	0,15 247	90 270	● ● ● ● ● ● ● ● ● ●
Series SH	0,59-7,2	0 360	● ●
Flat Swivel Units pneumatic Page 296			
Series SF-C	1,5 130	0 180	● ● ● ● ● ●
Series MSF	0,3-1,2	90-180	● ● ●
Flat Swivel Units electric Page 374			
Series DES	10 64	∞	● ●
Angle Pivot Units pneumatic Page 378			
Series SW	1,5 120	180	● ● ● ● ● ●
Series SWM1000	7 150	90	● ● ● ● ● ●
Swivel Jaws pneumatic Page 400			
Series SB *	0,1-1,6	90-180	● ● ●
Series SBZ	1,2 57	90-180	● ● ● ● ● ●

*Specifications for setup in pairs

Control	Position sensing			Positionability				Options						Safety characteristics	Maintenance	
Multibus	Inductive sensor	Magnetic field sensor	Integrated sensing	Positionability, 2 positions	Positionability, 3 positions	Positionability, 4 positions	Positionability freely selectable	Elastomer end position damping	PowerStop end position damping	Adjustable swivel angle	IP class	Fluid feed-through	Electrical feed-through	Self locking mechanism	Maintenance-free cycles (max.)	Maintenance-free revolutions (max.)
	•			•		•				•	54				1.5 million	
											54				1.5 million	
	•	•		•	•				•	•	64	•			10 million	
		•		•				•	•	•	41	•			10 million	
•			•				•			•	54	•	•	•		5 million
	•	•		•					•		64	•			10 million	
		•		•					•		30				10 million	
	•			•				•			54				10 million	
	•			•					•		54				10 million	



ROTARY CYLINDERS

OVERVIEW OF SERIES



PNEUMATIC



Series PRN

292



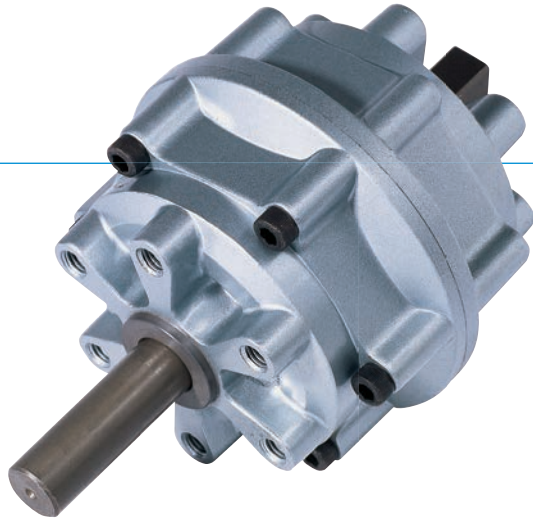
Series SH

294

ROTARY CYLINDERS

SERIES PRN

▶ PRODUCT ADVANTAGES



“The economical”

▶ Concentration on the essentials

The most economic type of swivelling reduces your production costs










▶ Dampened end position

Using the hydraulic brake allows you to move up to the end positions gently, increasing the process reliability and durability of your application

▶ Forged drive shaft

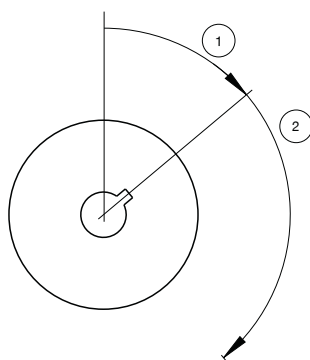
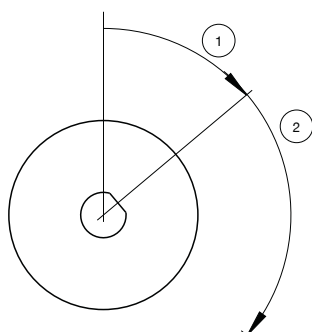
This shaft is not only robust, but can be individually adjusted

▶ SERIES CHARACTERISTICS

Installation size		Version				
LIXX		-90	-100	-180	-270	-280
 1.5 Mio	1.5 million maintenance-free cycles (max.)	•	•	•	•	•
 IP 54	IP54	•	•	•	•	•
 +	Inductive sensor	•	•	•	•	•
	Positionability - 2 positions	•	•	•	•	•
 90°	Rotation angle 90°	•				
 100°	Rotation angle 100°		•			
 180°	Rotation angle 180°			•		
 270°	Rotation angle 270°				•	
 280°	Rotation angle 280°					•



► STARTING ANGLE



- ① Starting angle
- ② Swivel angle



Installation size

PRN1
PRN3
PRN10

PRN20
PRN30
PRN50
PRN150
PRN300
PRN800

► TECHNICAL DATA

Installation size	Swivel angle [°]	Torque [Nm]	Weight [kg]	IP class
PRN1	90 - 270	0,15	0,04	IP54
PRN3	90 - 270	0,38	0,07	IP54
PRN10	90 - 270	1,2	0,14	IP54
PRN20	90 - 270	2,1	0,25	IP54
PRN30	90 - 270	4,1	0,5	IP54
PRN50	90 - 270	5,9 - 12,8	0,75 - 0,8	IP54
PRN150	90 - 270	18 - 41,5	1,6 - 1,9	IP54
PRN300	90 - 270	34,5 - 83	3,6 - 4,1	IP54
PRN800	90 - 270	123 - 247	11 - 12,5	IP54

► FURTHER INFORMATION IS AVAILABLE ONLINE



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ROTARY CYLINDERS

SERIES SH

3
Series SH / Rotary Cylinders / pneumatic / Swivel- and Rotary Modules

▶ PRODUCT ADVANTAGES



“The flexible”

▶ **Movable to four positions**

The two separately or jointly controlled rotors provide you with the greatest flexibility in positioning your work-pieces





▶ **High torque rating**

The optimal ratio of installation space and torque reduces interference contours and creates precious space in your application

▶ **360° swivel angle**

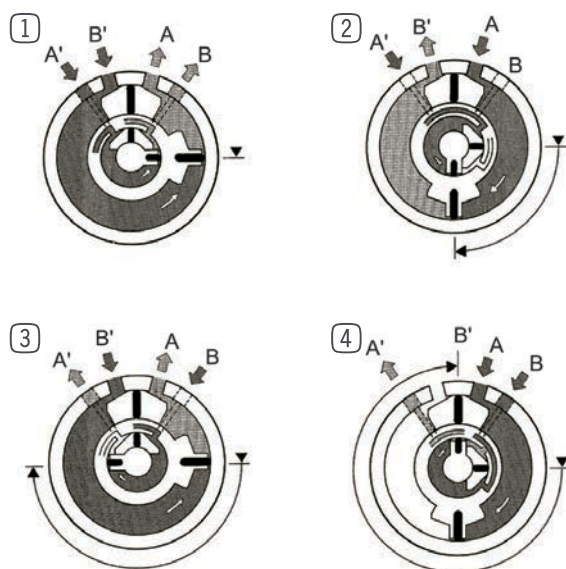
Do you want your application to be flexible and individualised? The infinitely variable 360° adjustable swivel angle lets you!

▶ SERIES CHARACTERISTICS

Installation size		
SH-XX		
 1.5 million maintenance-free cycles (max.)		•
 IP 54		•
 Positionability - 4 positions		•
 Adjustable swivel angle		•



► BENEFITS IN DETAIL



- ① **0-position**
 - High-pressure air in 1B and 2B: Internal- and external blades go to the 0-position
- ② **First 90°-intermediate adjustment**
 - High-pressure air A and A': The external blade swivel up to the external limit stop (Stopper) at 90°.
- ③ **Second 90°-intermediate setting**
 - High-pressure air B and B': The external blade swivels with the internal 90° limit stop to the 0-position. The internal blade swivel 180° set opposite each other.
- ④ **Third 90°-intermediate adjustment**
 - High-pressure air A and B: The external blade swivels with the internal blade in the movement direction at 90°.

► TECHNICAL DATA

Installation size	Swivel angle [°]	Torque [Nm]	Weight [kg]	IP class
SH-5	360	0,59 - 2,73	0.52	IP54
SH-20	360	2,35 - 7,2	1.13	IP54

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FLAT SWIVEL UNITS

OVERVIEW OF SERIES



PNEUMATIC



Series SF-C

298



Series MSF

372

FLAT SWIVEL UNITS

SERIES SF-C

▶ PRODUCT ADVANTAGES



“The superior”

▶ Up to 100% more performance than the benchmark

Superior end position damping lets you swivel more mass in the shortest amount of time, increasing your machine's component output

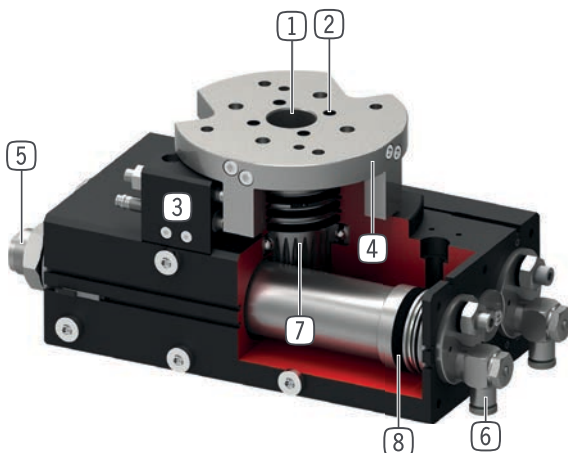
▶ Large centre bore

Reduce the interference contours in your application by placing your power supply line directly through the middle of the rotary flange

▶ More than 100% higher radial bearing load than the benchmark

The generously scaled bearings stand for robustness and long service life and provide the highest process reliability for your application

▶ BENEFITS IN DETAIL



① Two way ball bearing hollow shaft

- for feedthrough cables and hoses
- high forces and moments capacity

② Up to 8 way integrated air feed-through

- for hoseless air transfer
- hose package does not have to be pivoted

③ Adjustable end position

- +/- 3° adjustable end position

④ Large, precise locating flange

- simple tool connection

⑤ Integrated shock absorbers with spiral groove technology

- adjustable end position damping
- heating is prevented through installation in pneumatic pressure chamber

⑥ Air flow control valve

- for speed regulation (included in the delivery)

⑦ Force transfer















- rack and pinion

⑧ Drive

- two double-acting pneumatic cylinders
- high torque rating



► SERIES CHARACTERISTICS

Installation size		Version									
SFXXX		-90N	-180N	N	-90DX	-180DX	DX	ML	MLDX	M	MDX
	10 million maintenance-free cycles (max.)	●	●	●	●	●	●	●	●	●	●
	IP64	●	●	●	●	●	●	●	●	●	●
	Inductive sensor	●	●	●	●	●	●	●	●	●	●
	Magnetic field sensor	●	●	●	●	●	●	●	●	●	●
	Flange	●	●	●	●	●	●	●	●	●	●
	Powerstop end position damping	●	●	●	●	●	●	●	●	●	●
	End positions adjustable +/- 3	●	●	●	●	●	●	●	●	●	●
	Positionability - 2 positions	●	●	●	●	●	●				
	Positionability - 3 positions							●	●		
	Positionability - 3 positions locked									●	●
	Rotation angle 90°	●			●			●	●	●	●
	Rotation angle 180°		●			●		●	●	●	●
	Swivel angle 180° freely adjustable			●			●				
	Fluid feed-through				●	●	●		●		●

► TECHNICAL DATA

Installation size	Swivel angle [°]	Torque [Nm]	Weight [kg]	IP class
SF50	0 - 180	1,5 - 2,4	0,6 - 1,14	IP64
SF74	0 - 180	4,5 - 7,3	1,6 - 2,6	IP64
SF100	0 - 180	13 - 20	3,7 - 5,8	IP64
SF125	0 - 180	32 - 38	8,8 - 12,9	IP64
SF155	0 - 180	54 - 62	15 - 21,8	IP64
SF195	0 - 180	120 - 130	27,5 - 41,1	IP64

► FURTHER INFORMATION IS AVAILABLE ONLINE



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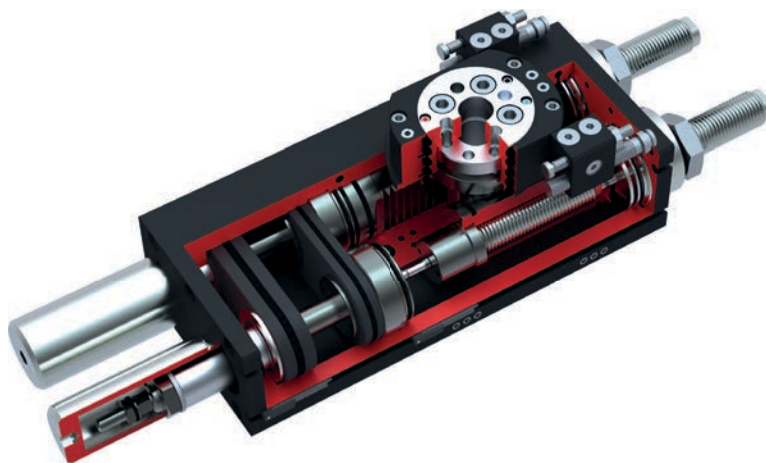
FLAT SWIVEL UNITS

SERIES SF-C

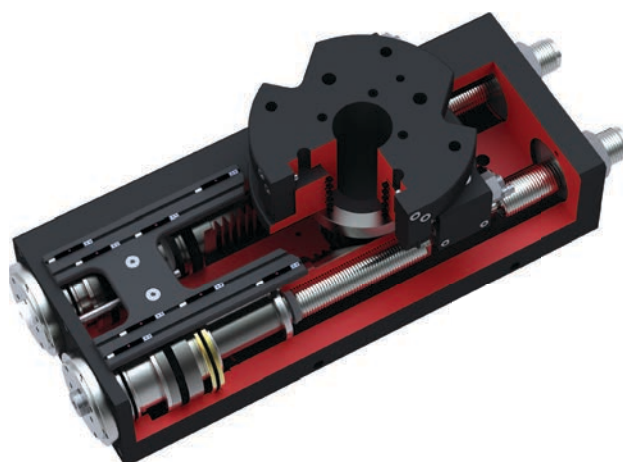
► HOW TO ORDER CORRECTLY

Order no.	SF	<input type="checkbox"/>	<input type="checkbox"/>	-C
Flat swivel units				
Installation size	50			
Installation size	74			
Installation size	100			
Installation size	125			
Installation size	155			
Installation size	195			
Swivel angle 0° - 180°, infinitely variable			N	
Integrated hoseless pneumatic feed-through, 4-way			D4	
Integrated hoseless pneumatic feed-through, 6-way			D6	
Integrated hoseless pneumatic feed-through, 8-way			D8	
Rotation angle 90°			-90N	
Integrated hoseless pneumatic feed-through, 4-way			-90D4	
Integrated hoseless pneumatic feed-through, 6-way			-90D6	
Integrated hoseless pneumatic feed-through, 8-way			-90D8	
Rotation angle 180°			-180N	
Integrated hoseless pneumatic feed-through, 4-way			-180D4	
Integrated hoseless pneumatic feed-through, 6-way			-180D6	
Integrated hoseless pneumatic feed-through, 8-way			-180D8	
Version: ML (Size SF50 / SF74 / SF100)				
<ul style="list-style-type: none"> ► At -90° and +90° position, mechanical and shock-absorbed fixed stop ► 0° position is not locked, as opposed to the M version ► For these units, the driven pistons move against dominant limit stop pistons and, like for the locked center position, undergo shock absorption while moving into end position ► Simplified activation for horizontal rotary movements 				
Swivel angle -90° - 0° - +90°			ML	
Integrated hoseless pneumatic feed-through, 4-way			MLD4	
Integrated hoseless pneumatic feed-through, 6-way			MLD6	
Integrated hoseless pneumatic feed-through, 8-way			MLD8	
Version: M (Size SF125 / SF155 / SF195)				
<ul style="list-style-type: none"> ► All three positions for mechanical and shock-mounted fixed stop ► 0° center position using two stopper pistons with integrated shock absorbers ► A mechanical fixed stop is generated using ratchet bolts that are pushed through arrester pistons into the ring groove of the stopper piston 				
Swivel angle -90° - 0° - +90°			M	
Integrated hoseless pneumatic feed-through, 4-way			MD4	
Integrated hoseless pneumatic feed-through, 6-way			MD6	
Integrated hoseless pneumatic feed-through, 8-way			MD8	

► **VERSION: ML (SIZE SF50 / SF74 / SF100)**



► **VERSION: M (SIZE SF125 / SF155 / SF195)**

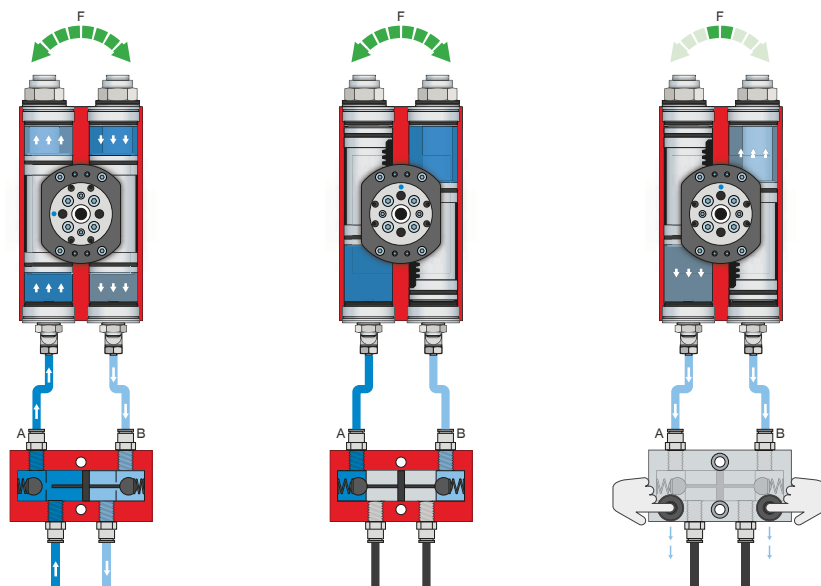


FLAT SWIVEL UNITS

SERIES SF-C FUNCTIONAL DESCRIPTION



ENERGY SUPPLY



Pressure safety valve – DSV

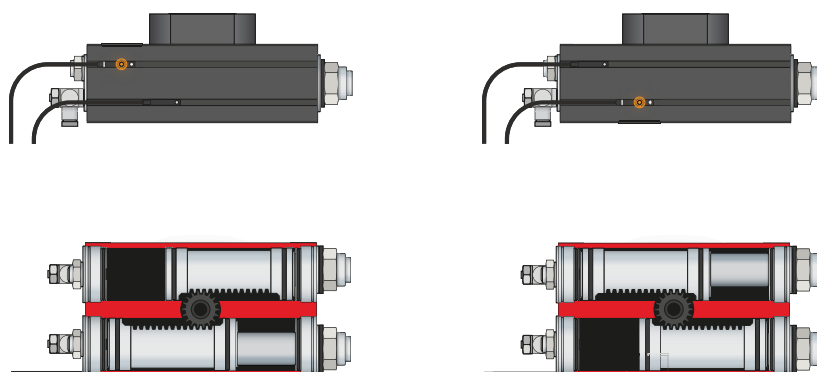
Ensures safe retention of force and position if the system pressure drops

The integrated double check valve, which can be unlocked, retains the system pressure of the swivel unit in case of EMERGENCY STOP. To ensure the function, the valve must be installed as close to the swivel unit's air connection as possible. In variant E, two pushbuttons are installed that allow for controlled bleeding of the swivel unit.



SENSORS

MFS02



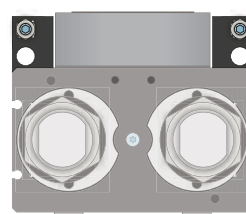
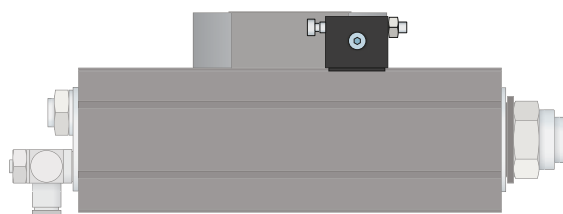
1-point magnetic field sensors – MFS

For non-contact sensing of the piston position

These sensors are clamped in the C-groove of the swivel unit and detect the magnet attached to the piston of the swivel unit. To ensure use in a wide variety of space conditions, the sensors are available in two versions. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the swivel unit almost completely, the vertical MSF01 is taller, but has a cable outlet that is offset at an angle of 90°. The variants are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.

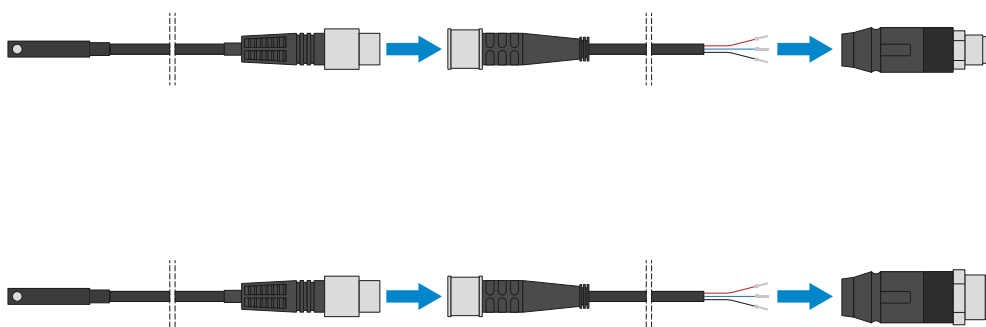


CONNECTIONS / OTHER



Attachment kit

The attachment kit is installed on the gripper using the fastening material included in the scope of delivery. The attachment kit enables sensing of the gripper positions via inductive proximity switches.



Plug-in connectors

For extending and fabricating the connection lines for the sensors

Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12.

FLAT SWIVEL UNITS

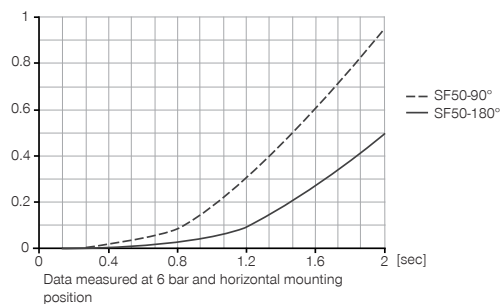
INSTALLATION SIZE SF50N-C

PRODUCT SPECIFICATIONS



Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRVM5X4

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0006
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m

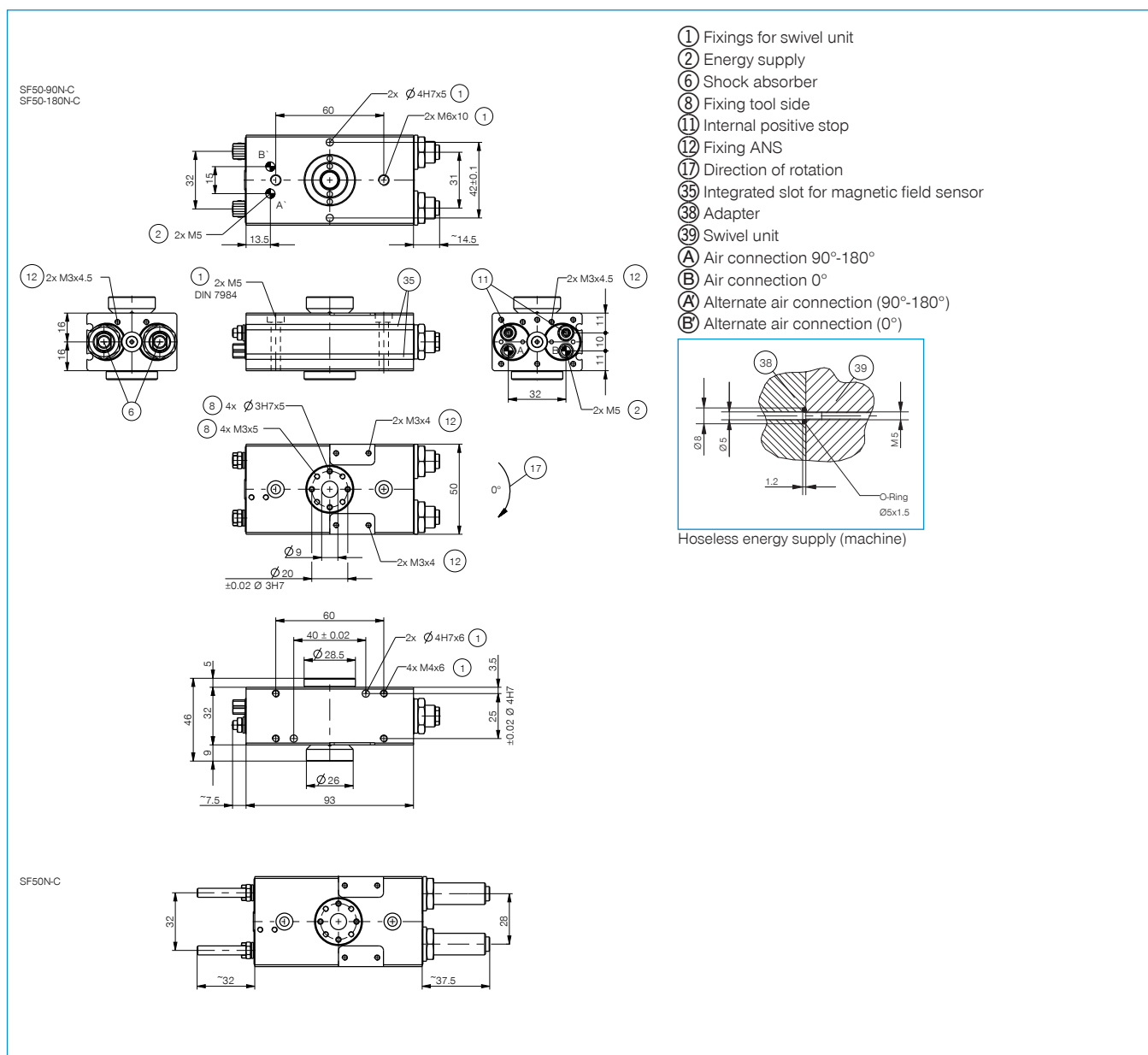


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ8-E2S
Inductive proximity switch - Connector M8

Order no.	Technical data		
	SF50-90N-C	SF50-180N-C	SF50N-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	2.4	2.4	2.4
Swivel angle regulable +/- [°]	3	3	180
Passage bore Ø [mm]	9	9	9
Axial bearing load [N]	490	490	490
Radial bearing load [Nm]	24	24	24
Repetition accuracy +/- [°]	0.01	0.01	0.01
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	14	28	28
Weight [kg]	0.6	0.6	0.6



FLAT SWIVEL UNITS

INSTALLATION SIZE SF50D4-C

► PRODUCT SPECIFICATIONS



► Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



► INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRVM5X4



4 [piece]
O-Ring
COR0020100

► RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0008
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

► RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m

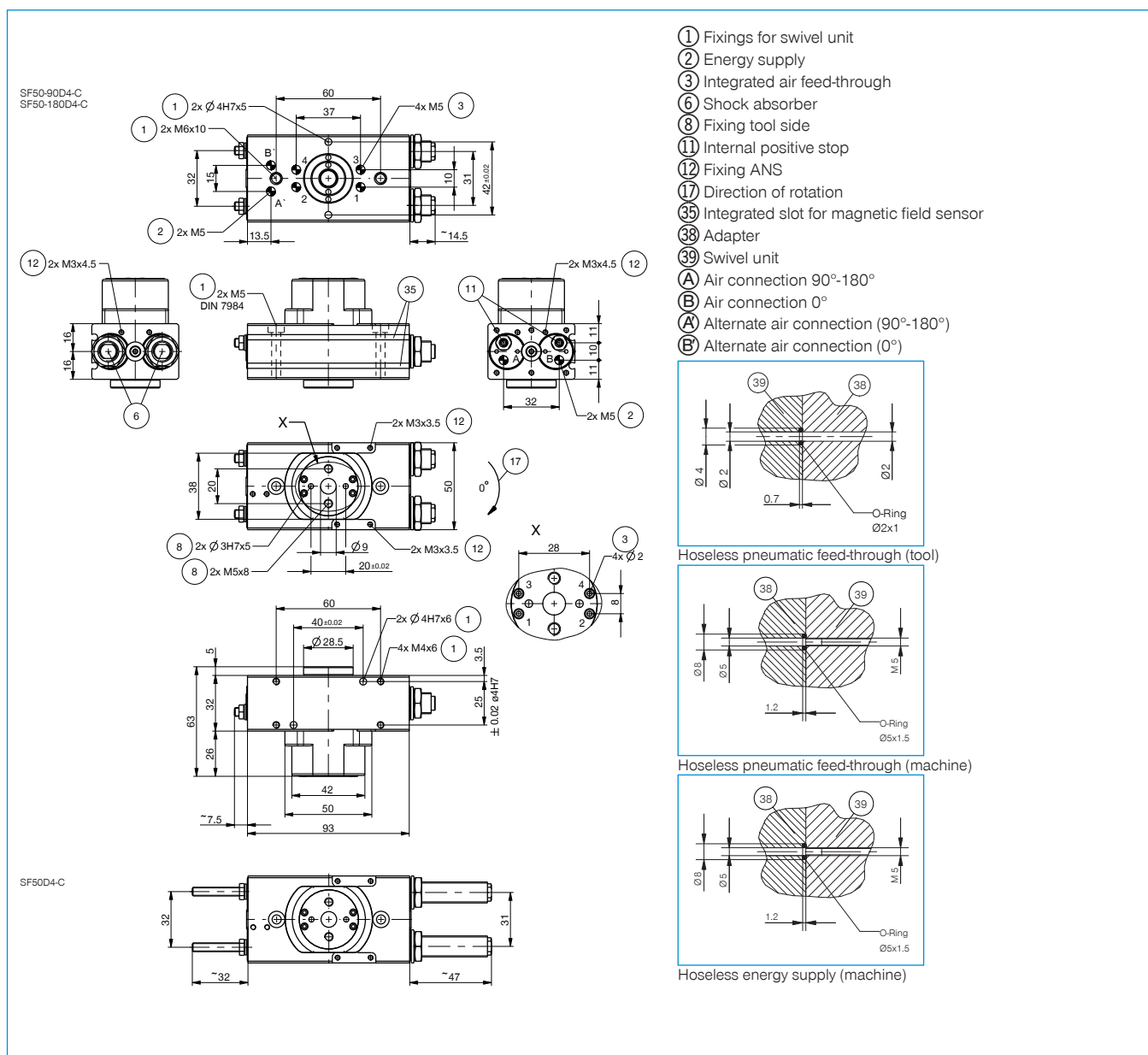


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ8-E2S
Inductive proximity switch - Connector M8

Order no.	Technical data		
	SF50-90D4-C	SF50-180D4-C	SF50D4-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	1.5	1.5	1.5
Swivel angle regulable +/- [°]	3	3	180
Passage bore Ø [mm]	9	9	9
Pneumatic energy transfer [Quantity]	4	4	4
Axial bearing load [N]	490	490	490
Radial bearing load [Nm]	24	24	24
Repetition accuracy +/- [°]	0.01	0.01	0.01
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	14	28	28
Weight [kg]	0.76	0.76	0.76



FLAT SWIVEL UNITS

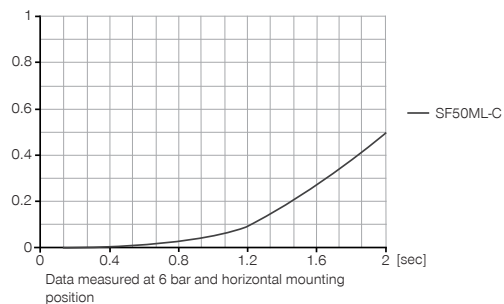
INSTALLATION SIZE SF50ML-C

PRODUCT SPECIFICATIONS



Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRVM5X4



1 [piece]
Attachment Kit
ANS0066



1 [piece]
Commissioning USB
052650

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ3-E2
Inductive proximity switch - Cable 5 m

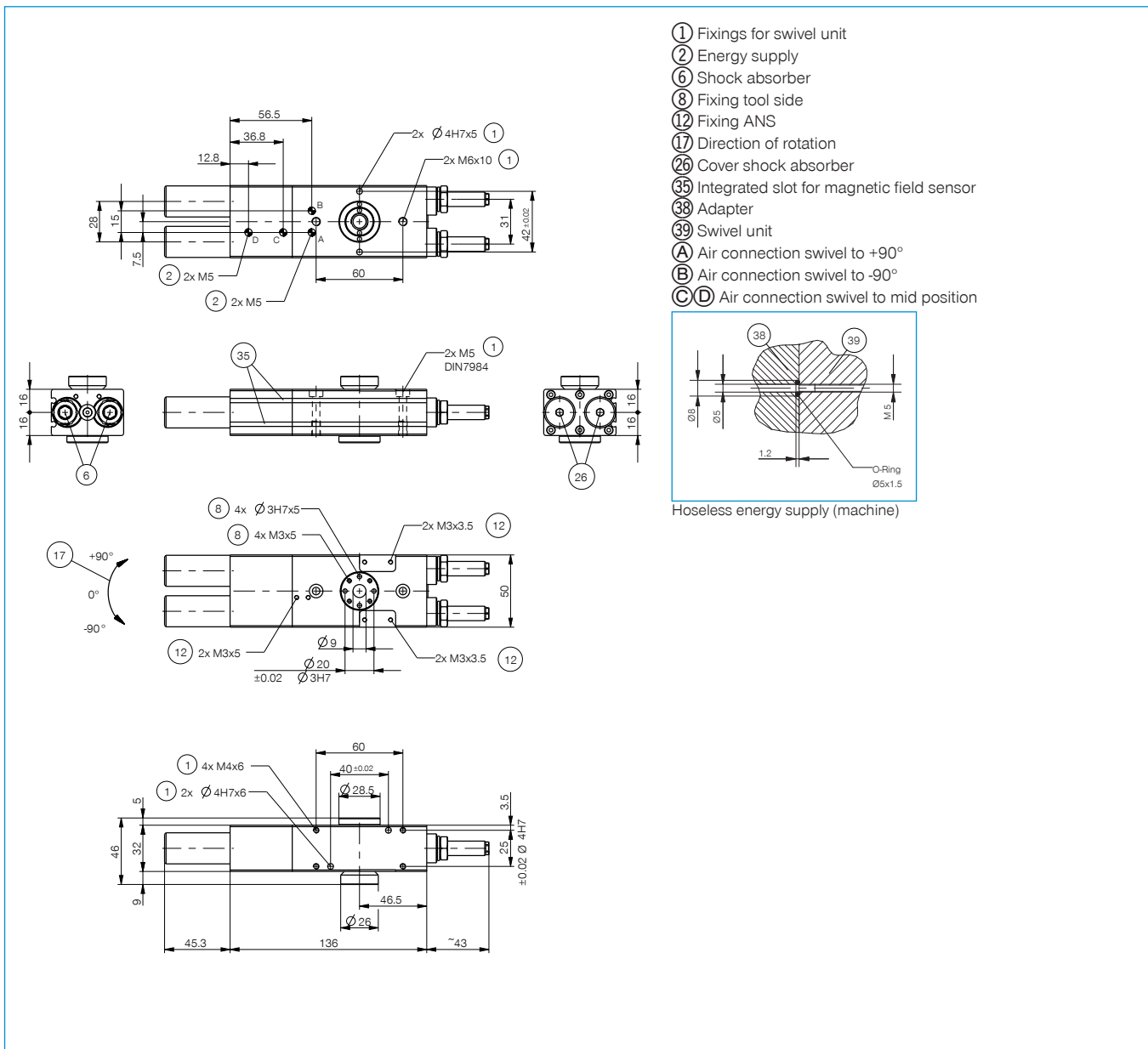


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ3-E2SK
Inductive Proximity Switch Cable 0,3 m - Connector M8

	► Technical data
Order no.	SF50ML-C
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	2.4
Swivel angle regulable +/- [°]	3
Passage bore Ø [mm]	9
Axial bearing load [N]	490
Radial bearing load [Nm]	24
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	44
Weight [kg]	0.98



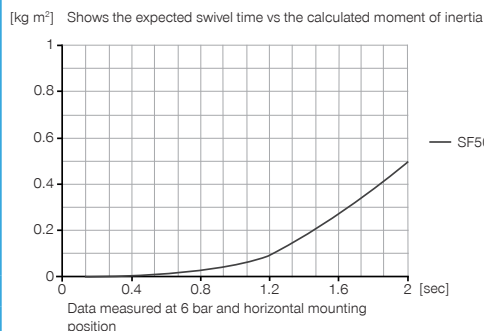
FLAT SWIVEL UNITS

INSTALLATION SIZE SF50MLD4-C

PRODUCT SPECIFICATIONS



Moment of inertia



INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRVM5X4



4 [piece]
O-Ring
COR0020100



1 [piece]
Attachment Kit
ANS0067



1 [piece]
Commissioning USB
052650

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m

RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ3-E2
Inductive proximity switch - Cable 5 m

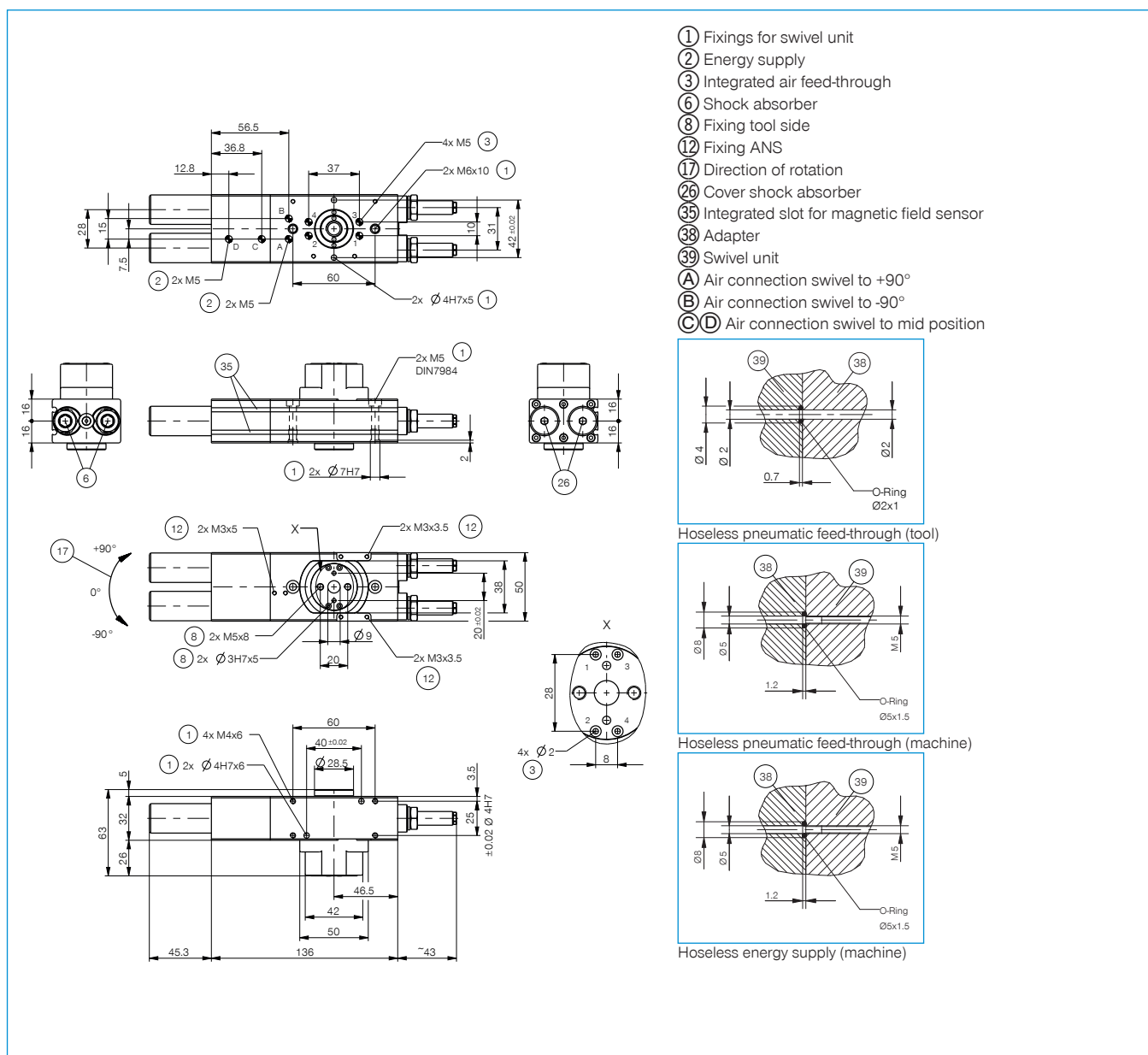


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ3-E2SK
Inductive Proximity Switch Cable 0,3 m - Connector M8

Order no.	Technical data
	SF50MLD4-C
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	1.5
Swivel angle regulable +/- [°]	3
Passage bore Ø [mm]	9
Pneumatic energy transfer [Quantity]	4
Axial bearing load [N]	490
Radial bearing load [Nm]	24
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	44
Weight [kg]	1.14



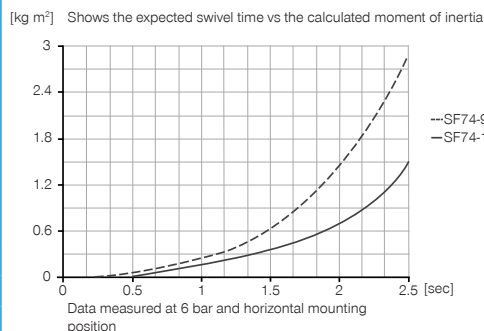
FLAT SWIVEL UNITS

INSTALLATION SIZE SF74N-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
 Flow Control Valves - with Swivel joint
DRV1-8X6

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
 Pressure safety valve



DSV1-8E
 Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
 Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
 2-Position-Sensor Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0010
 Attachment Kit



KAG500
 Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
 Plug-in connector Angled Cable 5m - Socket M8 (female)

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ6.5-E2-01
 Inductive proximity switch - Cable 5 m



NJ8-E2
 Inductive proximity switch - Cable 5 m

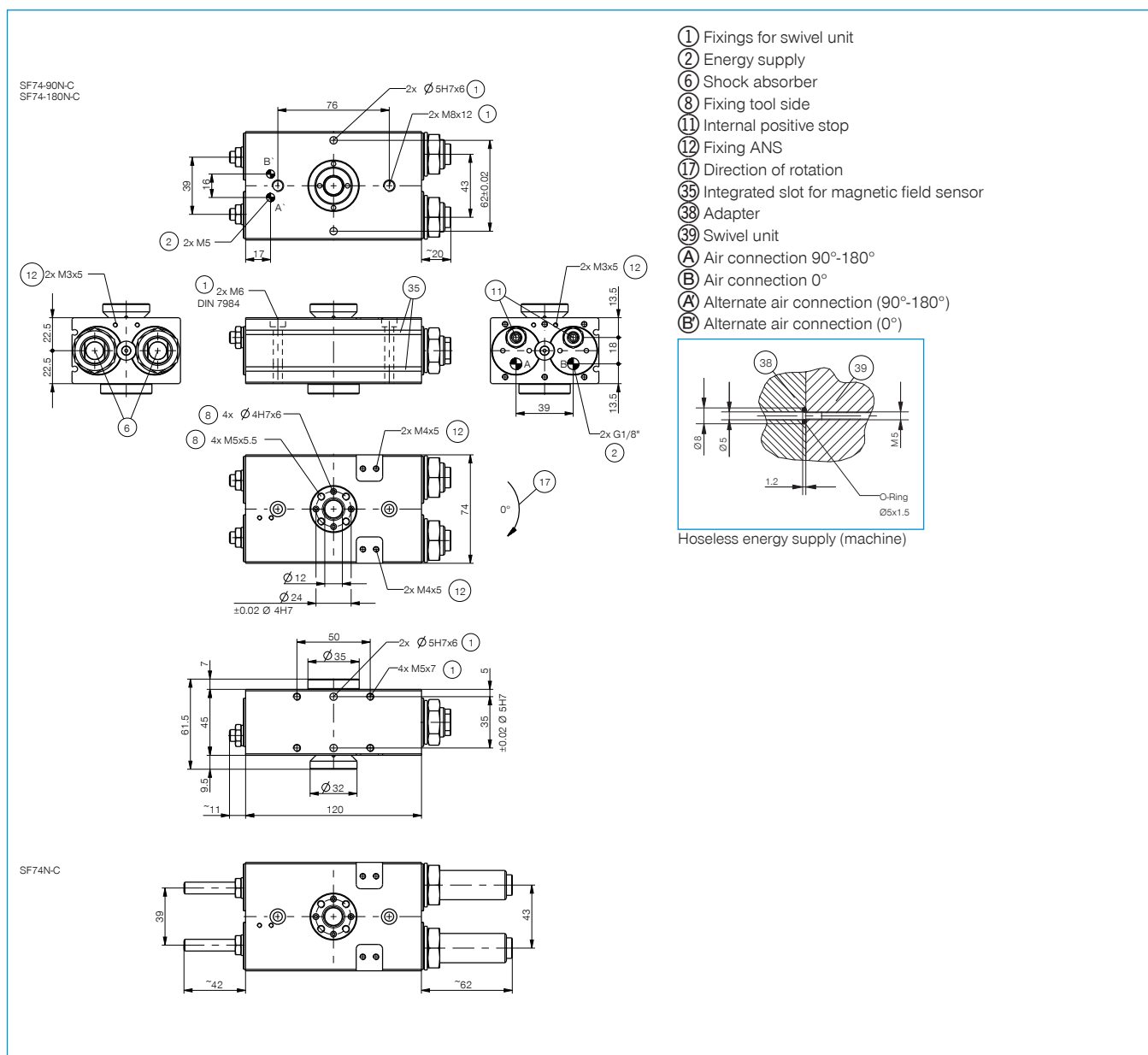


NJ6.5-E2S
 Inductive proximity switch - Connector M8



NJ8-E2S
 Inductive proximity switch - Connector M8

Order no.	Technical data		
	SF74-90N-C	SF74-180N-C	SF74N-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	7.3	7.3	7.3
Swivel angle regulable +/- [°]	3	3	180
Passage bore Ø [mm]	12	12	12
Axial bearing load [N]	1120	1120	1120
Radial bearing load [Nm]	88	88	88
Repetition accuracy +/- [°]	0.01	0.01	0.01
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	42	84	84
Weight [kg]	1.6	1.6	1.6



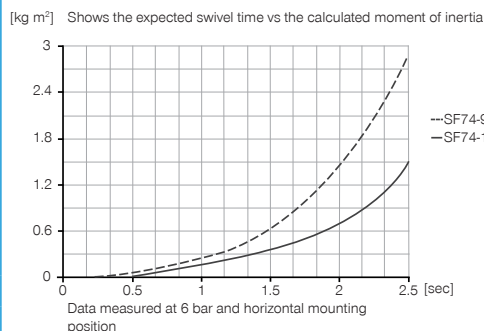
FLAT SWIVEL UNITS

INSTALLATION SIZE SF74D4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
 Flow Control Valves - with Swivel joint
DRV1-8X6



4 [piece]
 O-Ring
COR0020100

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
 Pressure safety valve



DSV1-8E
 Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
 Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
 2-Position-Sensor Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0012
 Attachment Kit



KAG500
 Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
 Plug-in connector Angled Cable 5m - Socket M8 (female)

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ6.5-E2-01
 Inductive proximity switch - Cable 5 m



NJ8-E2
 Inductive proximity switch - Cable 5 m



NJ6.5-E2S
 Inductive proximity switch - Connector M8



NJ8-E2S
 Inductive proximity switch - Connector M8

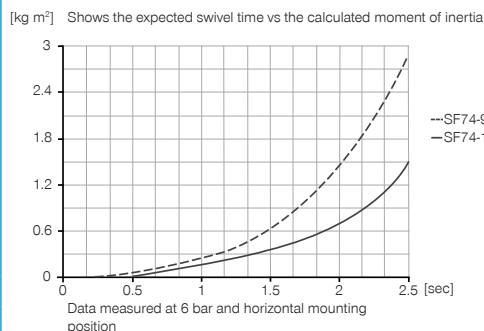
FLAT SWIVEL UNITS

INSTALLATION SIZE SF74D6-C

PRODUCT SPECIFICATIONS



Moment of inertia



INCLUDED IN DELIVERY



2 [piece]
 Flow Control Valves - with Swivel joint
DRV1-8X6



6 [piece]
 O-Ring
COR0020100

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
 Pressure safety valve



DSV1-8E
 Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
 Magnetic field sensor Straight Cable 0,3 m - Connector M8



MFS02-S-KHC-P2-PNP
 2-Position-Sensor Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0012
 Attachment Kit



KAG500
 Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
 Plug-in connector Angled Cable 5m - Socket M8 (female)

RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ6.5-E2-01
 Inductive proximity switch - Cable 5 m



NJ8-E2
 Inductive proximity switch - Cable 5 m

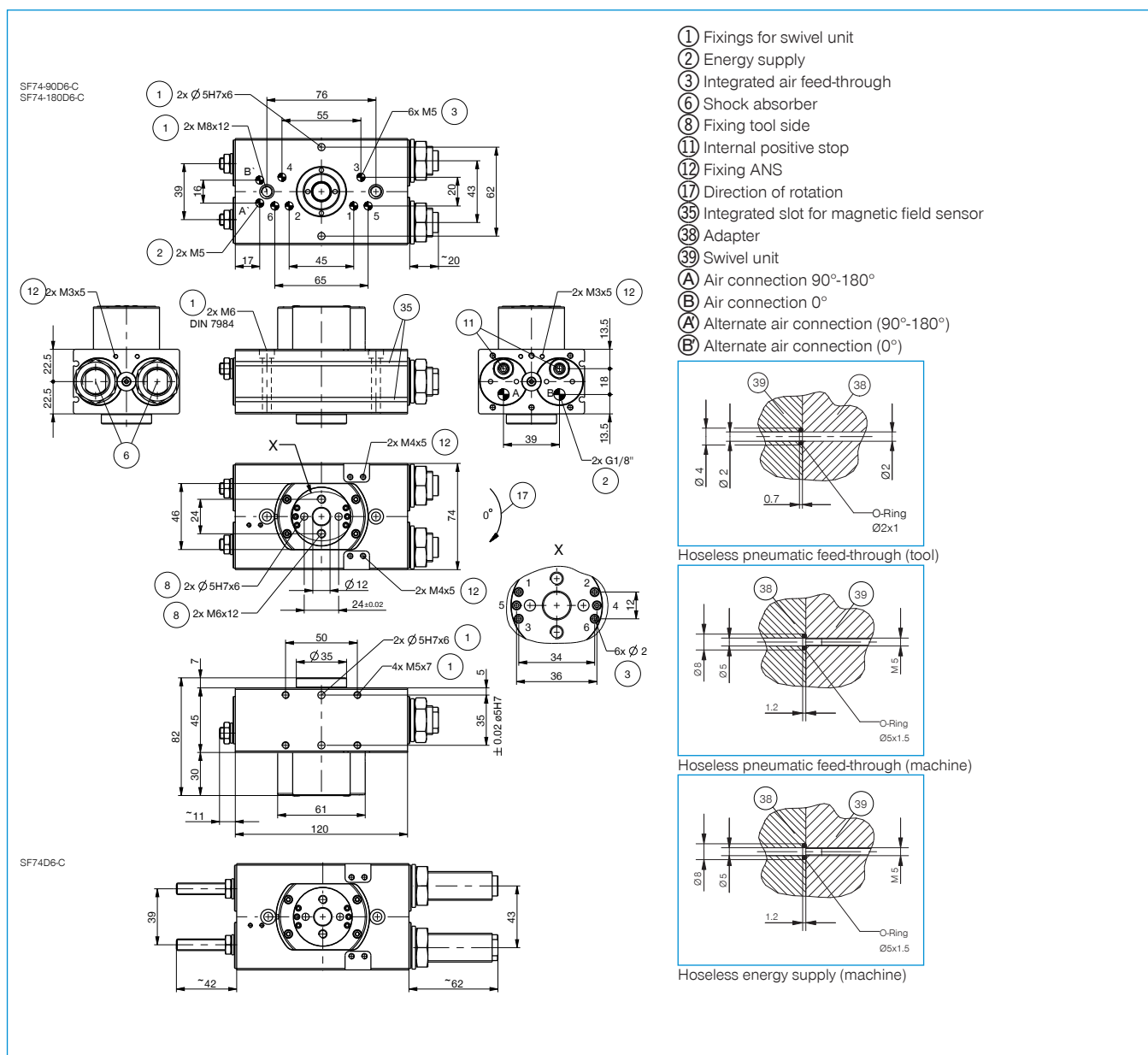


NJ6.5-E2S
 Inductive proximity switch - Connector M8



NJ8-E2S
 Inductive proximity switch - Connector M8

Order no.	Technical data		
	SF74-90D6-C	SF74-180D6-C	SF74D6-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	4.5	4.5	4.5
Swivel angle regulable +/- [°]	3	3	180
Passage bore Ø [mm]	12	12	12
Pneumatic energy transfer [Quantity]	6	6	6
Axial bearing load [N]	1120	1120	1120
Radial bearing load [Nm]	88	88	88
Repetition accuracy +/- [°]	0.01	0.01	0.01
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	42	84	84
Weight [kg]	1.8	1.8	1.8



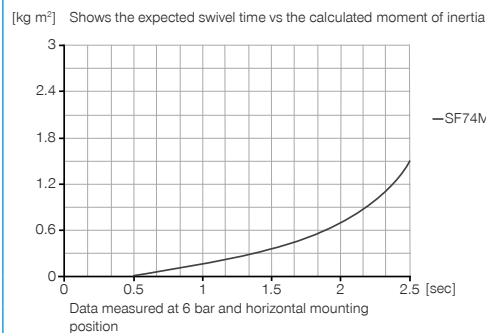
FLAT SWIVEL UNITS

INSTALLATION SIZE SF74ML-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-8X6



1 [piece]
Attachment Kit
ANS0068



1 [piece]
Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ6.5-E2-01
Inductive proximity switch - Cable 5 m



NJ8-E2
Inductive proximity switch - Cable 5 m

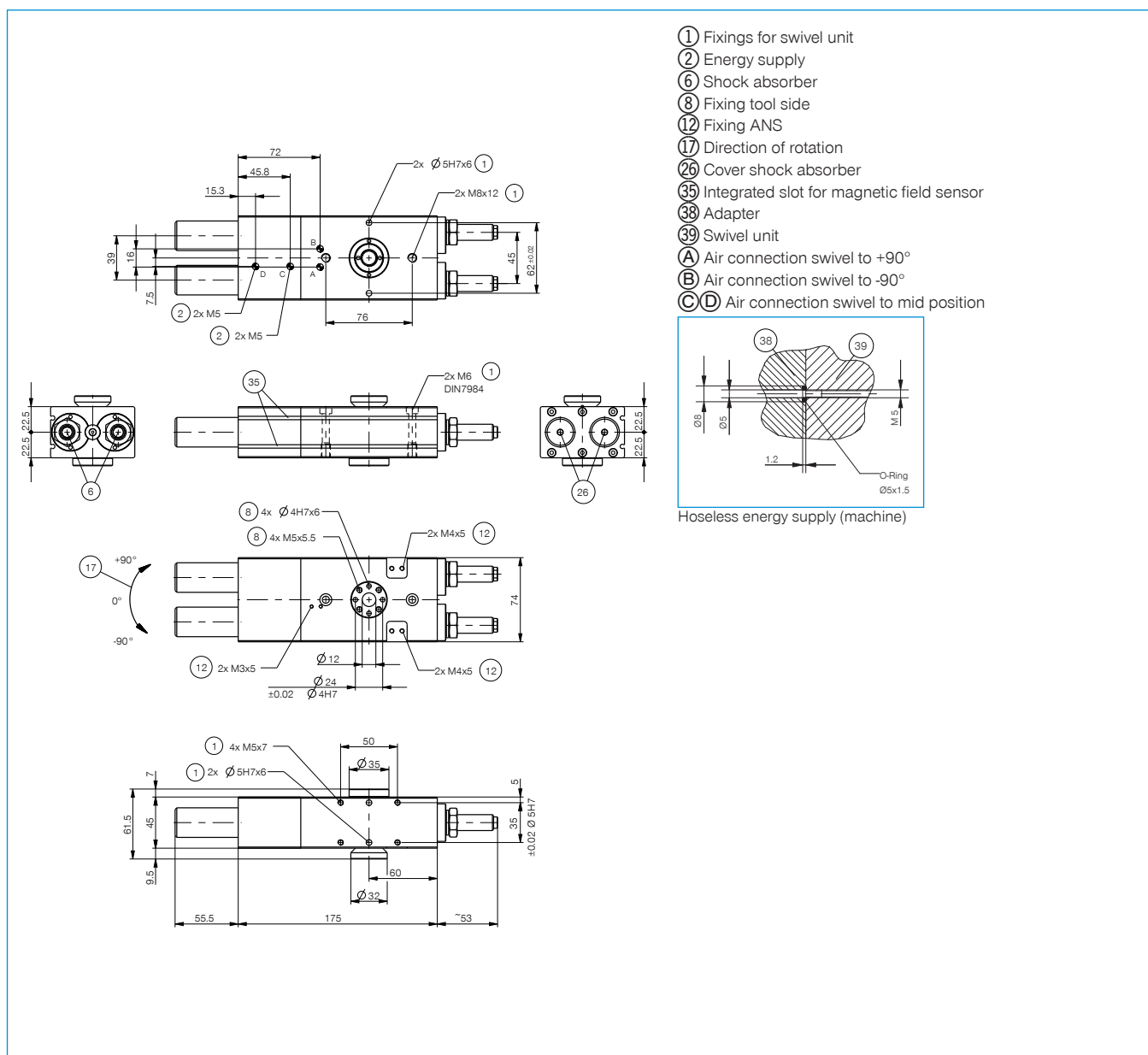


NJ6.5-E2S
Inductive proximity switch - Connector M8



NJ8-E2S
Inductive proximity switch - Connector M8

Order no.	Technical data
	SF74ML-C
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	7.3
Swivel angle regulable +/- [°]	3
Passage bore Ø [mm]	12
Axial bearing load [N]	1120
Radial bearing load [Nm]	88
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	125
Weight [kg]	2.4



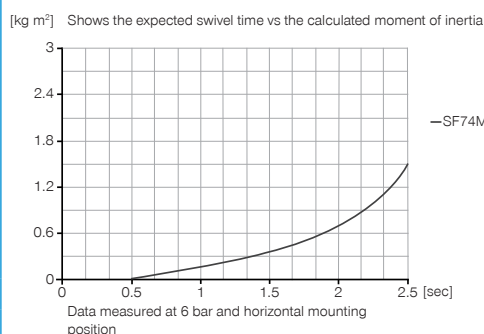
FLAT SWIVEL UNITS

INSTALLATION SIZE SF74MLD4-C

PRODUCT SPECIFICATIONS



Moment of inertia



INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-8X6



4 [piece]
O-Ring
COR0020100



1 [piece]
Attachment Kit
ANS0069



1 [piece]
Commissioning USB
052650

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m

RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ6.5-E2-01
Inductive proximity switch - Cable 5 m



NJ8-E2
Inductive proximity switch - Cable 5 m

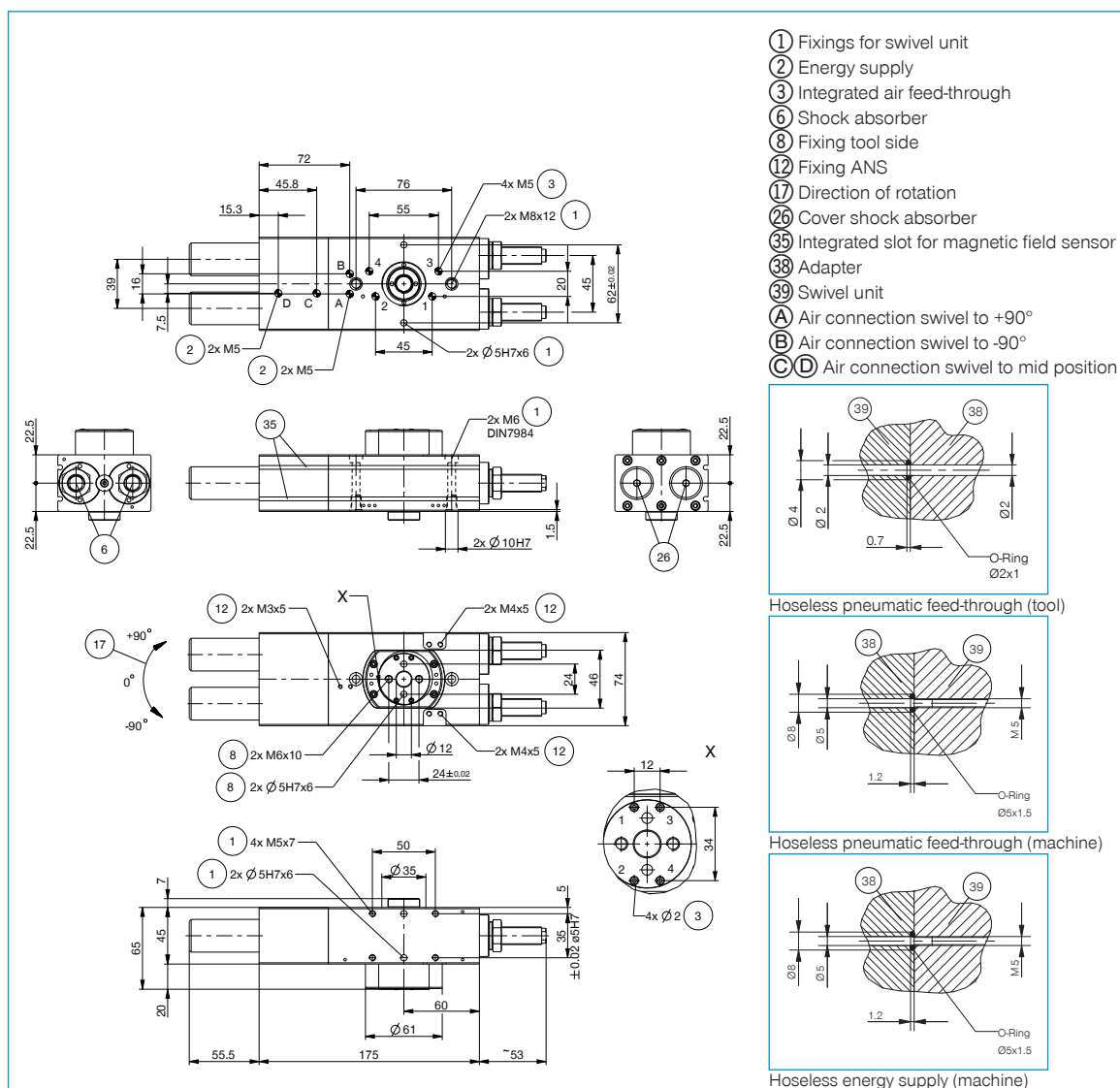


NJ6.5-E2S
Inductive proximity switch - Connector M8



NJ8-E2S
Inductive proximity switch - Connector M8

Order no.	Technical data
	SF74MLD4-C
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	5.5
Swivel angle regulable +/- [°]	3
Passage bore Ø [mm]	12
Pneumatic energy transfer [Quantity]	4
Axial bearing load [N]	1120
Radial bearing load [Nm]	88
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	125
Weight [kg]	2.6



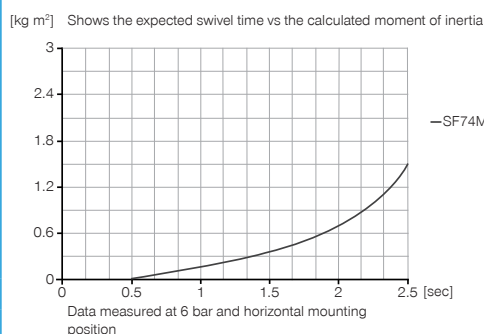
FLAT SWIVEL UNITS

INSTALLATION SIZE SF74MLD6-C

PRODUCT SPECIFICATIONS



Moment of inertia



INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-8X6



6 [piece]
O-Ring
COR0020100



1 [piece]
Attachment Kit
ANS0070



1 [piece]
Commissioning USB
052650

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m

RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ6.5-E2-01
Inductive proximity switch - Cable 5 m



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ6.5-E2S
Inductive proximity switch - Connector M8



NJ8-E2S
Inductive proximity switch - Connector M8

FLAT SWIVEL UNITS

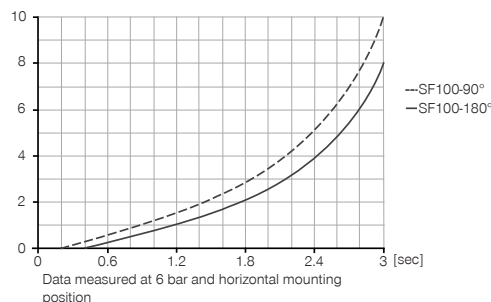
INSTALLATION SIZE SF100N-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-8X6

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0015
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m

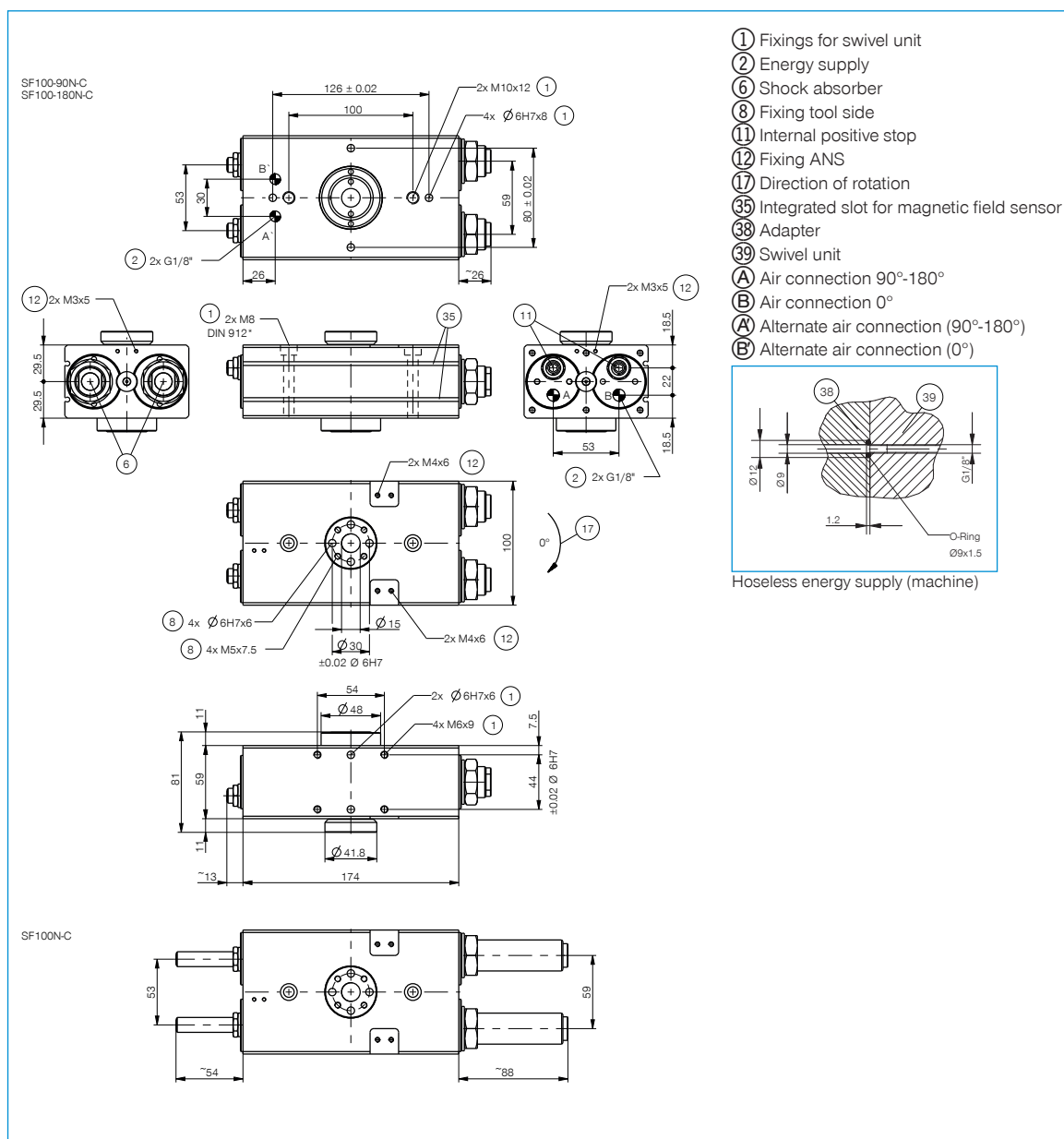


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ8-E2S
Inductive proximity switch - Connector M8

Order no.	Technical data		
	SF100-90N-C	SF100-180N-C	SF100N-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	20	20	20
Swivel angle regulable +/- [°]	3	3	180
Passage bore Ø [mm]	15	15	15
Axial bearing load [N]	2500	2500	2500
Radial bearing load [Nm]	155	155	155
Repetition accuracy +/- [°]	0.01	0.01	0.01
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	103	206	206
Weight [kg]	3.7	3.7	3.7



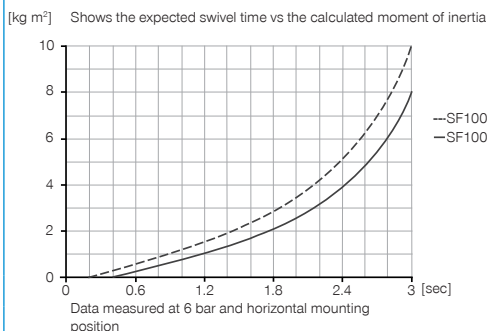
FLAT SWIVEL UNITS

INSTALLATION SIZE SF100D4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
 Flow Control Valves - with Swivel joint
DRV1-8X6



4 [piece]
 O-Ring
COR0030100

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
 Pressure safety valve



DSV1-8E
 Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
 Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
 Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0017
 Attachment Kit



KAG500
 Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
 Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
 Inductive proximity switch - Cable 5 m



KAW500
 Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ8-E2S
 Inductive proximity switch - Connector M8

FLAT SWIVEL UNITS

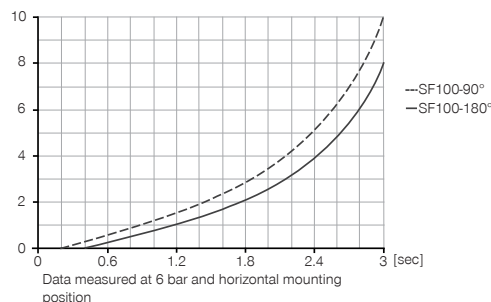
INSTALLATION SIZE SF100D6-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-8X6



6 [piece]
O-Ring
COR0030100

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0017
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m

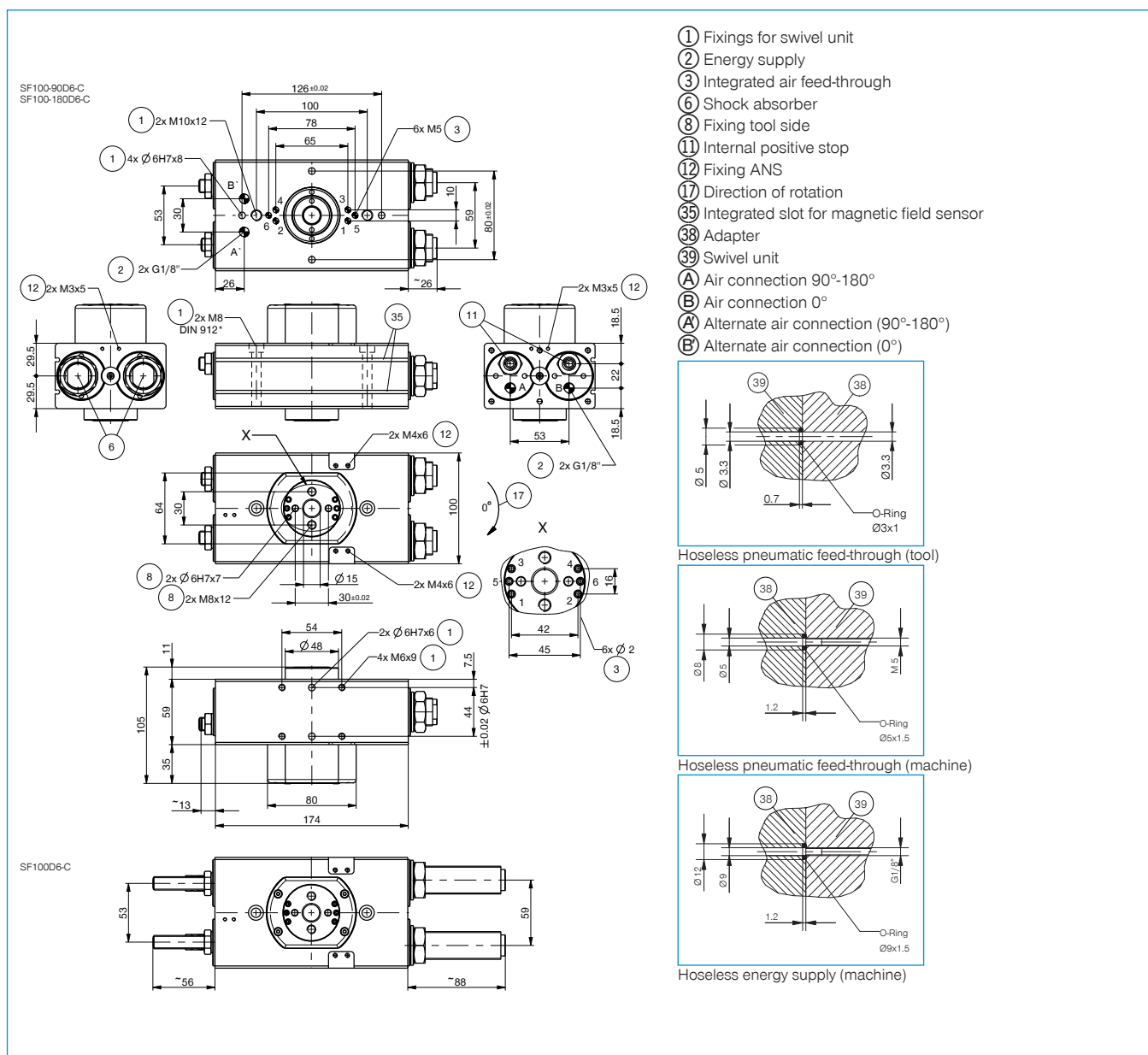


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ8-E2S
Inductive proximity switch - Connector M8

Order no.	Technical data		
	SF100-90D6-C	SF100-180D6-C	SF100D6-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	13	13	13
Swivel angle regulable +/- [°]	3	3	180
Passage bore Ø [mm]	15	15	15
Pneumatic energy transfer [Quantity]	6	6	6
Axial bearing load [N]	2500	2500	2500
Radial bearing load [Nm]	155	155	155
Repetition accuracy +/- [°]	0.01	0.01	0.01
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	103	206	206
Weight [kg]	4.1	4.1	4.1



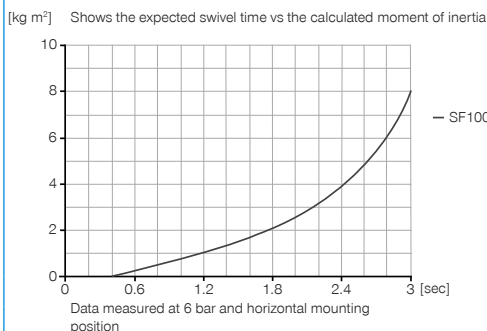
FLAT SWIVEL UNITS

INSTALLATION SIZE SF100ML-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-8X6



1 [piece]
Attachment Kit
ANS0071



1 [piece]
Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



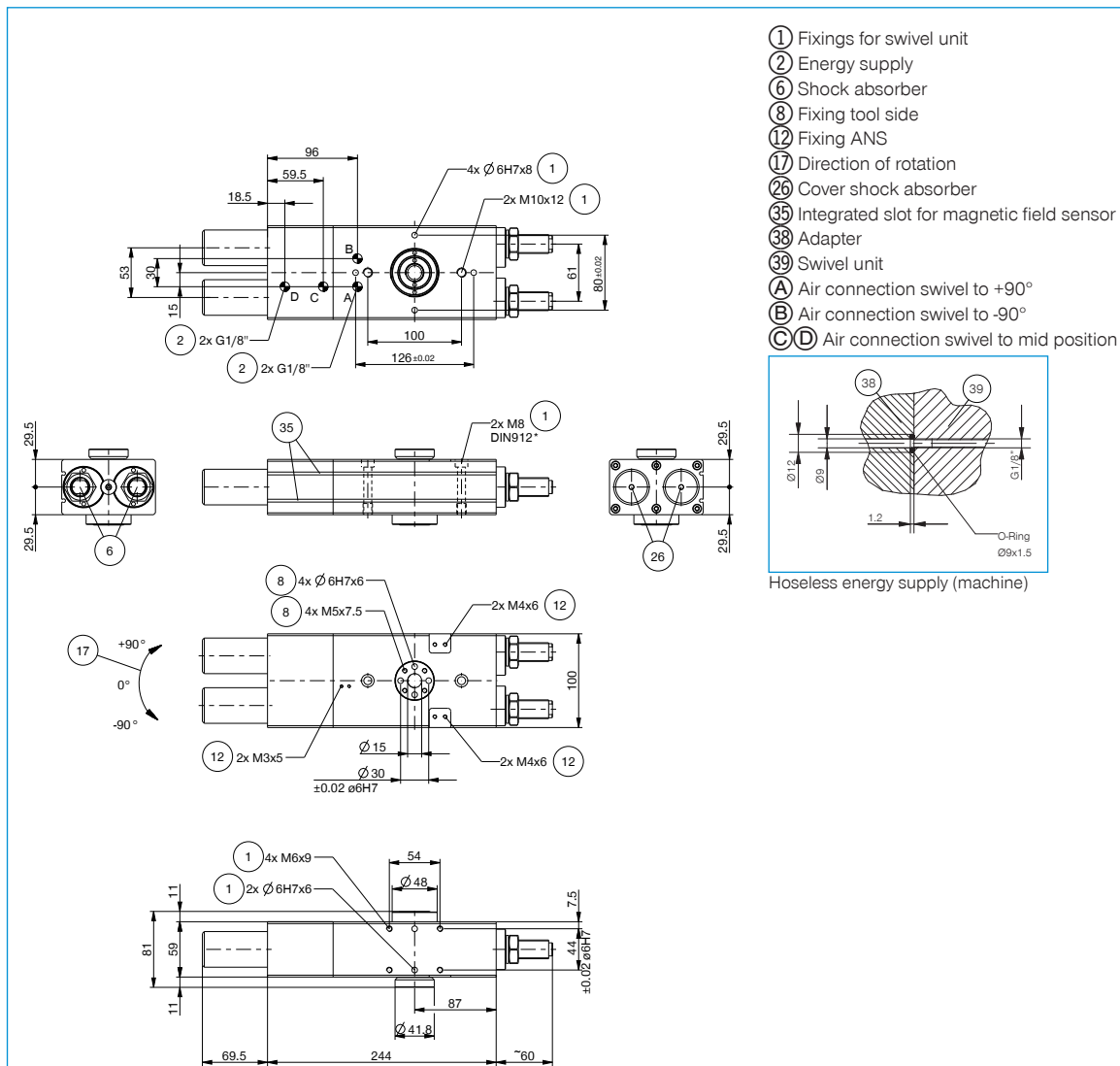
NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8

KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

Order no.	Technical data
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	20
Swivel angle regulable +/- [°]	3
Passage bore Ø [mm]	15
Axial bearing load [N]	2500
Radial bearing load [Nm]	155
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	304
Weight [kg]	5.4



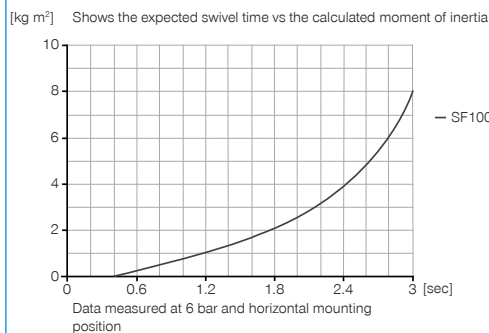
FLAT SWIVEL UNITS

INSTALLATION SIZE SF100MLD4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-8X6



4 [piece]
O-Ring
COR0030100



1 [piece]
Attachment Kit
ANS0072



1 [piece]
Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m

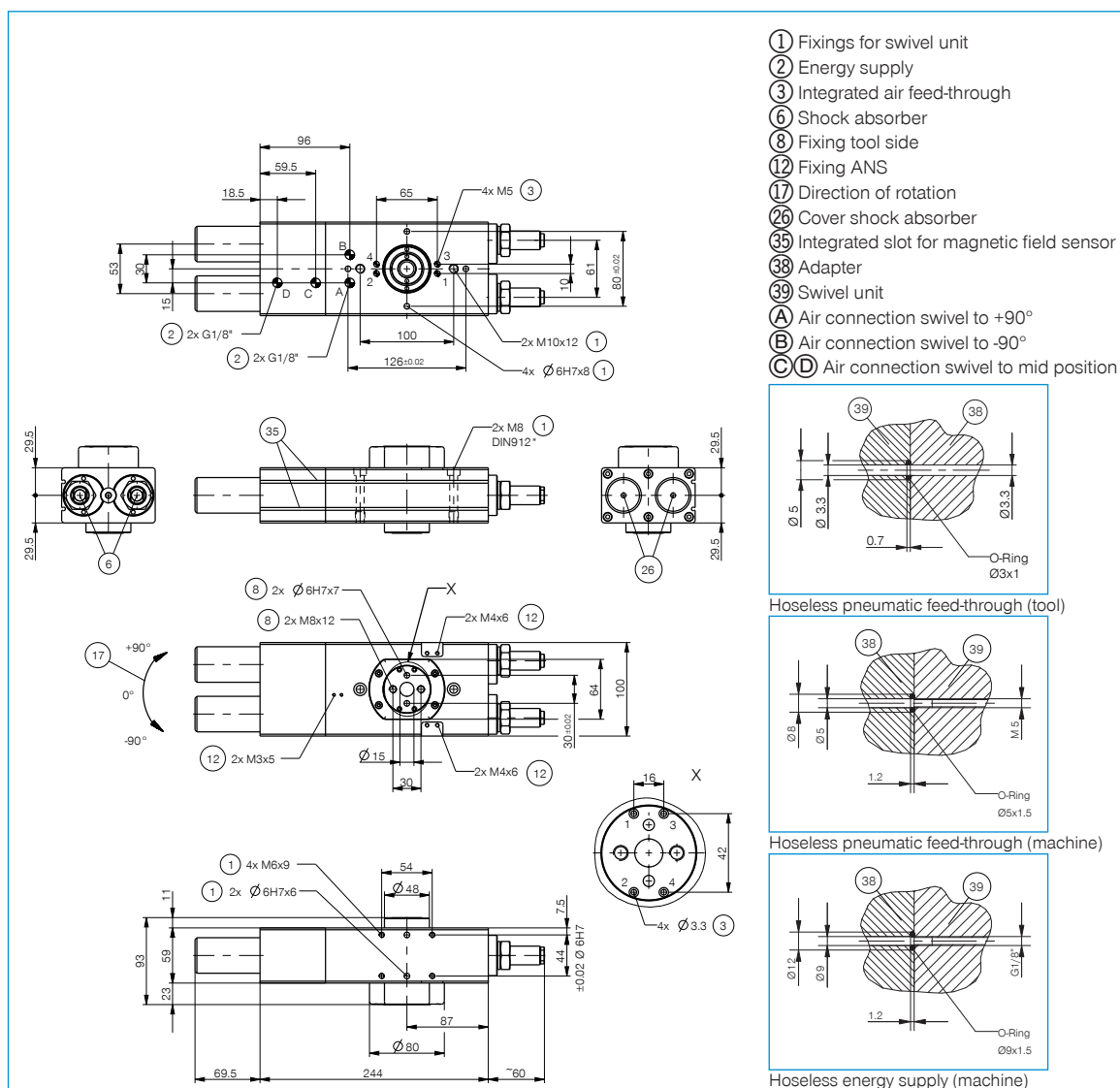


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ8-E2S
Inductive proximity switch - Connector M8

Order no.	Technical data
	SF100MLD4-C
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	15
Swivel angle regulable +/- [°]	3
Passage bore Ø [mm]	15
Pneumatic energy transfer [Quantity]	4
Axial bearing load [N]	2500
Radial bearing load [Nm]	155
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	304
Weight [kg]	5.7



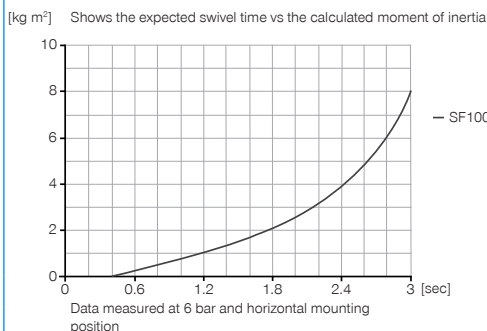
FLAT SWIVEL UNITS

INSTALLATION SIZE SF100MLD6-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-8X6



6 [piece]
O-Ring
COR0030100



1 [piece]
Attachment Kit
ANS0073



1 [piece]
Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ8-E2S
Inductive proximity switch - Connector M8

FLAT SWIVEL UNITS

INSTALLATION SIZE SF125N-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0035
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT

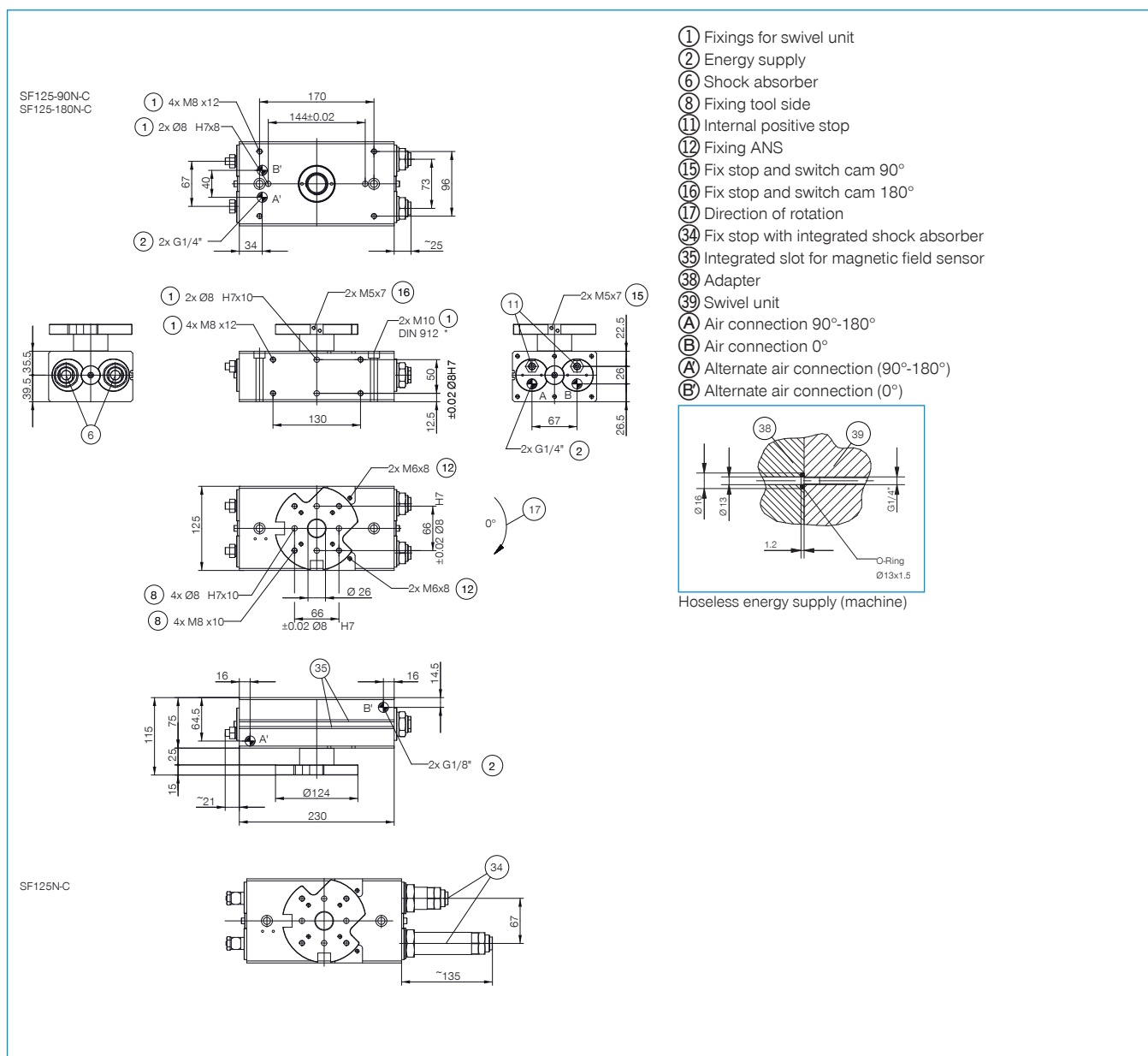


NJ8-E2
Inductive proximity switch - Cable 5 m



NJ12-E2
Inductive proximity switch - Cable 5 m

Order no.	Technical data		
	SF125-90N-C	SF125-180N-C	SF125N-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	38	38	38
Swivel angle regulable +/- [°]	3	3	180
Passage bore Ø [mm]	26	26	26
Axial bearing load [N]	3400	3400	3400
Radial bearing load [Nm]	391	391	391
Repetition accuracy +/- [°]	0.01	0.01	0.01
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	220	440	440
Weight [kg]	8.8	8.8	9.8



FLAT SWIVEL UNITS

INSTALLATION SIZE SF125D4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



4 [piece]
O-Ring
COR0040150

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0036
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ12-E2
Inductive proximity switch - Cable 5 m

FLAT SWIVEL UNITS

INSTALLATION SIZE SF125D8-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



8 [piece]
O-Ring
COR0040150

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0037
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ12-E2
Inductive proximity switch - Cable 5 m

FLAT SWIVEL UNITS

INSTALLATION SIZE SF125M-C

PRODUCT SPECIFICATIONS



Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



1 [piece]
Attachment Kit
ANS0074



1 [piece]
Commissioning USB
052650

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m

RECOMMENDED ACCESSORY ATTACHMENT KIT

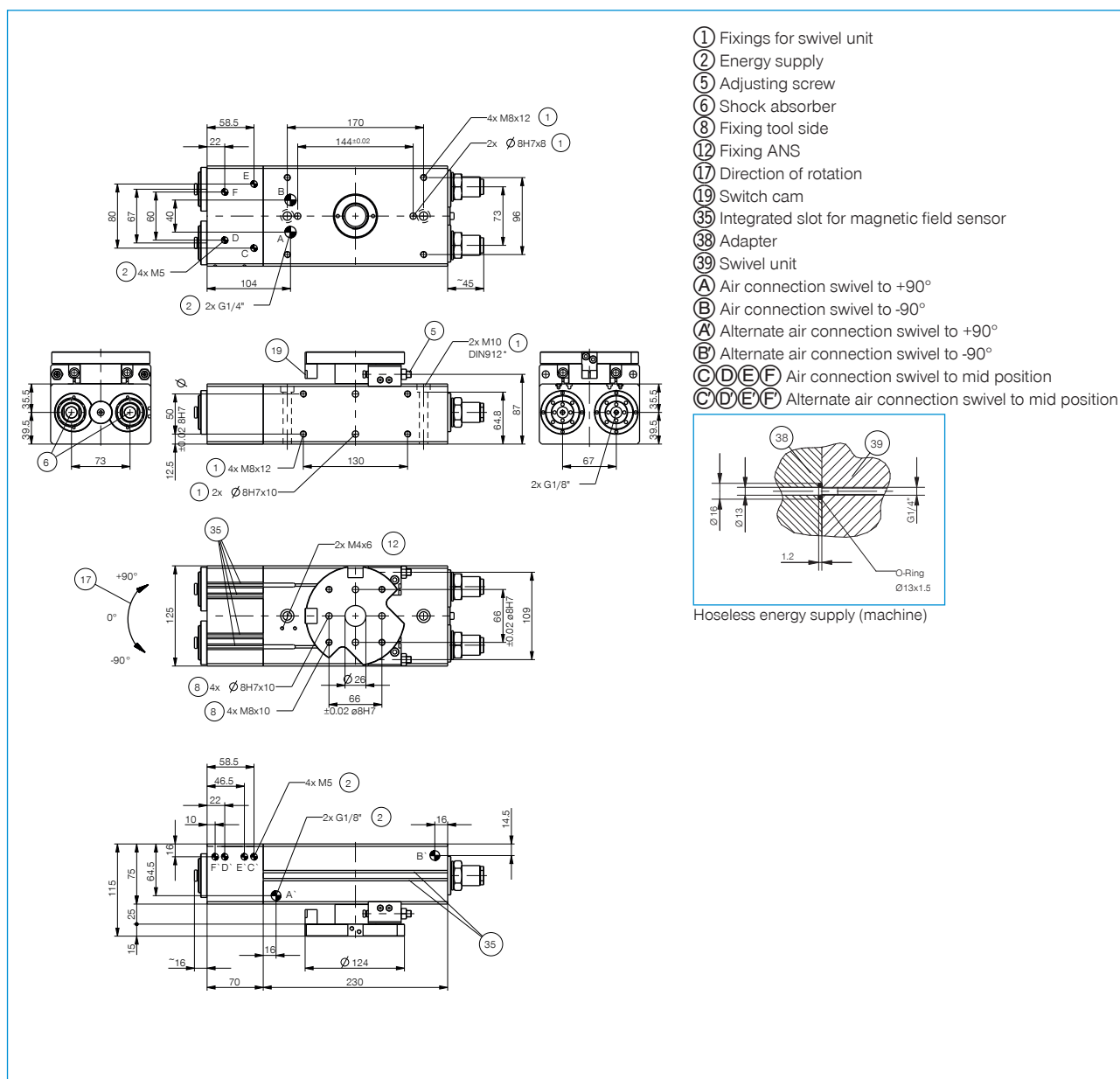


NJ8-E2
Inductive proximity switch - Cable 5 m



NJ12-E2
Inductive proximity switch - Cable 5 m

Order no.	Technical data
	SF125M-C
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	38
Swivel angle regulable +/- [°]	3
Passage bore Ø [mm]	26
Axial bearing load [N]	3400
Radial bearing load [Nm]	391
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	540
Weight [kg]	11.9



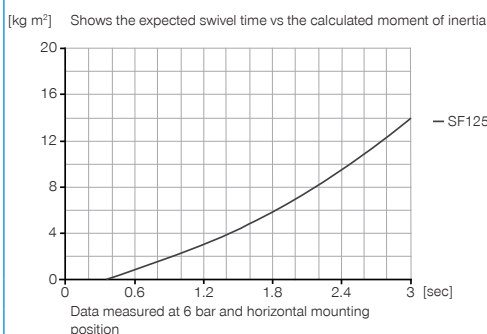
FLAT SWIVEL UNITS

INSTALLATION SIZE SF125MD4-C

► PRODUCT SPECIFICATIONS



► Moment of inertia



► INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



4 [piece]
O-Ring
COR0040150



1 [piece]
Attachment Kit
ANS0075



1 [piece]
Commissioning USB
052650

► RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Con-
nector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8
(female)



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



S8-G-3
Plug-in connector customizable Straight - Con-
nector M8

► RECOMMENDED ACCESSORY ATTACHMENT KIT

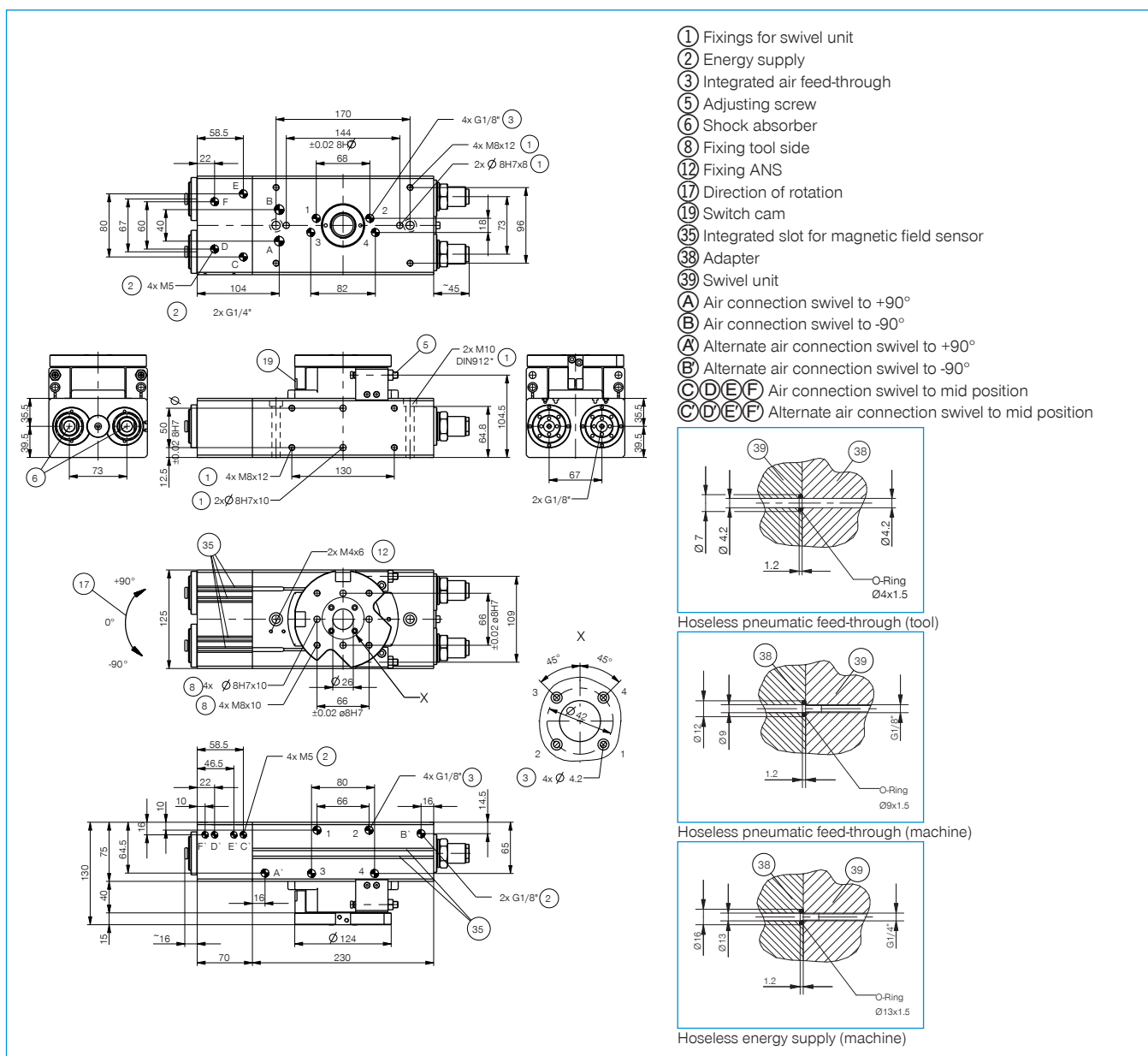


NJ8-E2
Inductive proximity switch - Cable 5 m



NJ12-E2
Inductive proximity switch - Cable 5 m

Order no.	Technical data
	SF125MD4-C
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	34
Swivel angle regulable +/- [°]	3
Passage bore Ø [mm]	26
Pneumatic energy transfer [Quantity]	4
Axial bearing load [N]	3400
Radial bearing load [Nm]	391
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	540
Weight [kg]	12.9



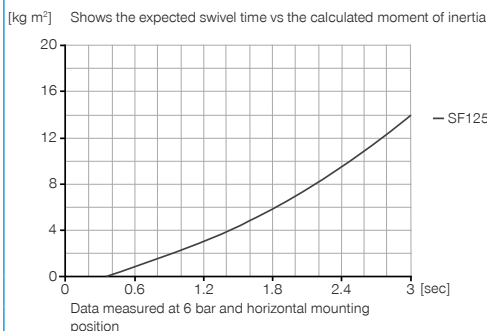
FLAT SWIVEL UNITS

INSTALLATION SIZE SF125MD8-C

PRODUCT SPECIFICATIONS



Moment of inertia



INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



8 [piece]
O-Ring
COR0040150



1 [piece]
Attachment Kit
ANS0076



1 [piece]
Commissioning USB
052650

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m

RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ12-E2
Inductive proximity switch - Cable 5 m

FLAT SWIVEL UNITS

INSTALLATION SIZE SF155N-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0038
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ12-E2
Inductive proximity switch - Cable 5 m

FLAT SWIVEL UNITS

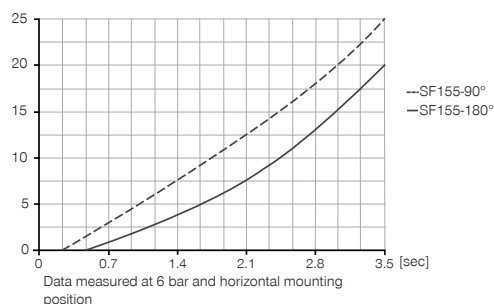
INSTALLATION SIZE SF155D4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



4 [piece]
O-Ring
COR0040150

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0039
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ12-E2
Inductive proximity switch - Cable 5 m

FLAT SWIVEL UNITS

INSTALLATION SIZE SF155D8-C

► PRODUCT SPECIFICATIONS



► Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



► INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



8 [piece]
O-Ring
COR0040150

► RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0040
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

► RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m

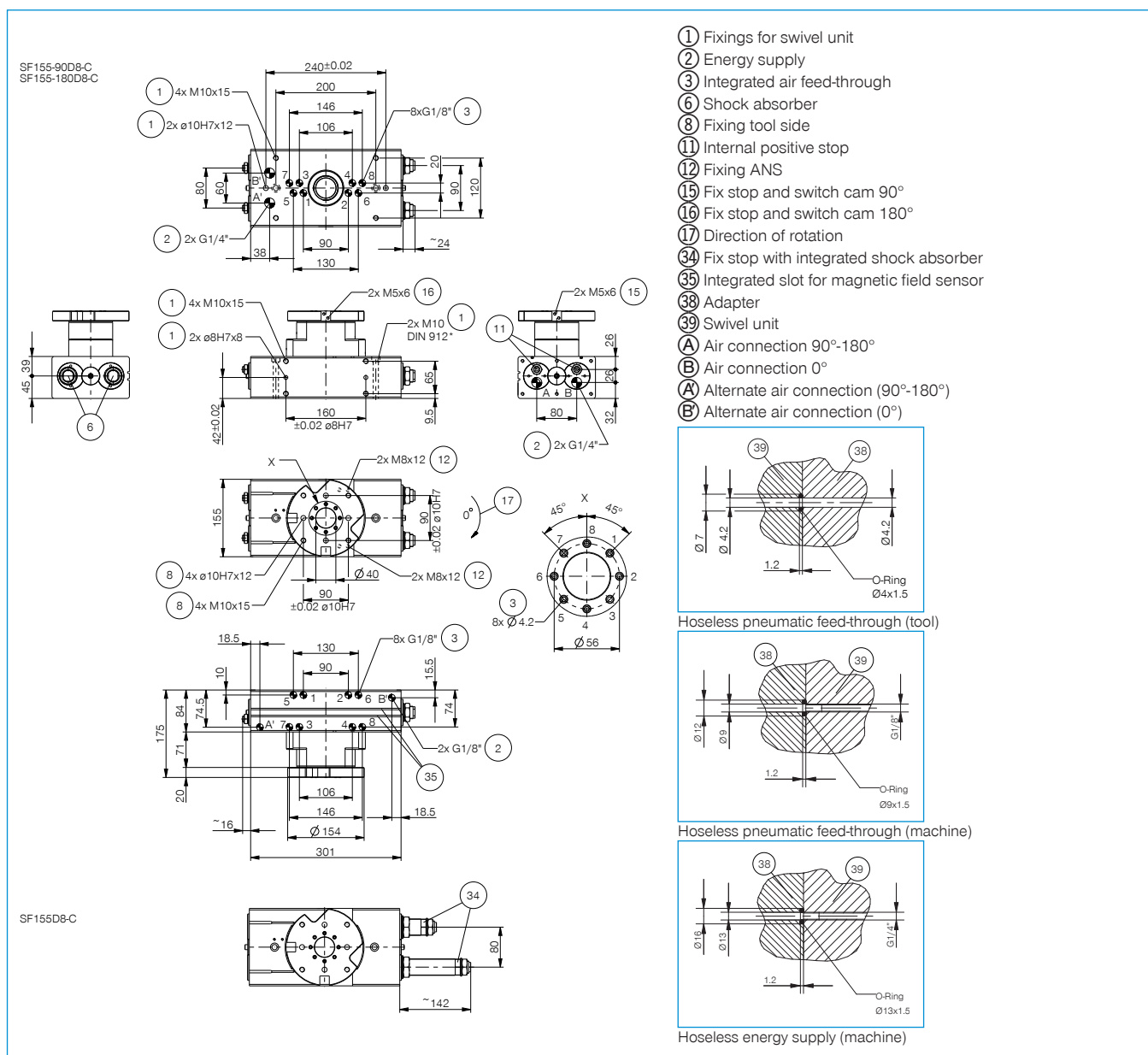


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ12-E2
Inductive proximity switch - Cable 5 m

Order no.	Technical data		
	SF155-90D8-C	SF155-180D8-C	SF155D8-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	54	54	54
Swivel angle regulable +/- [°]	3	3	180
Passage bore Ø [mm]	40	40	40
Pneumatic energy transfer [Quantity]	8	8	8
Axial bearing load [N]	5900	5900	5900
Radial bearing load [Nm]	761	761	761
Repetition accuracy +/- [°]	0.01	0.01	0.01
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	350	700	700
Weight [kg]	17.5	17.5	19



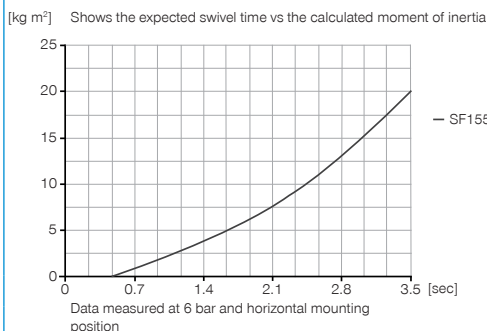
FLAT SWIVEL UNITS

INSTALLATION SIZE SF155M-C

PRODUCT SPECIFICATIONS



Moment of inertia



INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



1 [piece]
Attachment Kit
ANS0077



1 [piece]
Commissioning USB
052650

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m

RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m

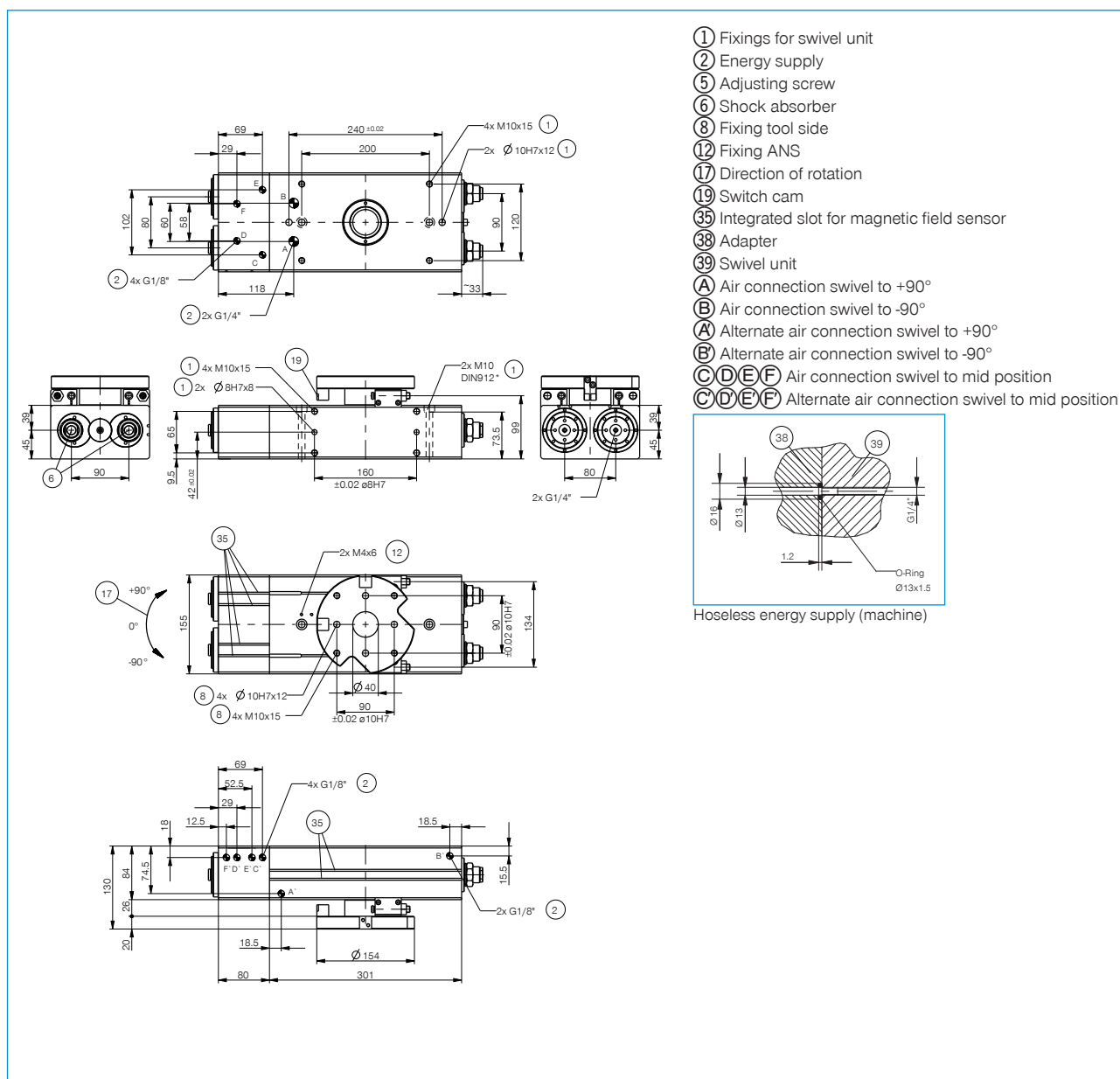


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ12-E2
Inductive proximity switch - Cable 5 m

Order no.	Technical data
	SF155M-C
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	62
Swivel angle regulable +/- [°]	3
Passage bore Ø [mm]	40
Axial bearing load [N]	5900
Radial bearing load [Nm]	761
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm ³]	1010
Weight [kg]	19.3



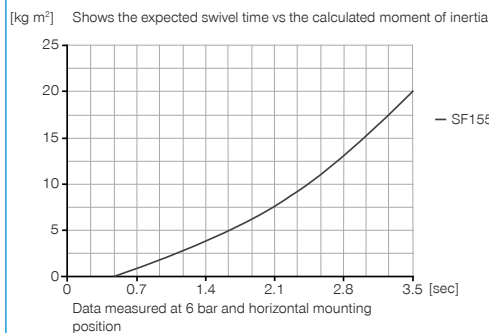
FLAT SWIVEL UNITS

INSTALLATION SIZE SF155MD4-C

PRODUCT SPECIFICATIONS



Moment of inertia



INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



4 [piece]
O-Ring
COR0040150



1 [piece]
Attachment Kit
ANS0078



1 [piece]
Commissioning USB
052650

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m

RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m

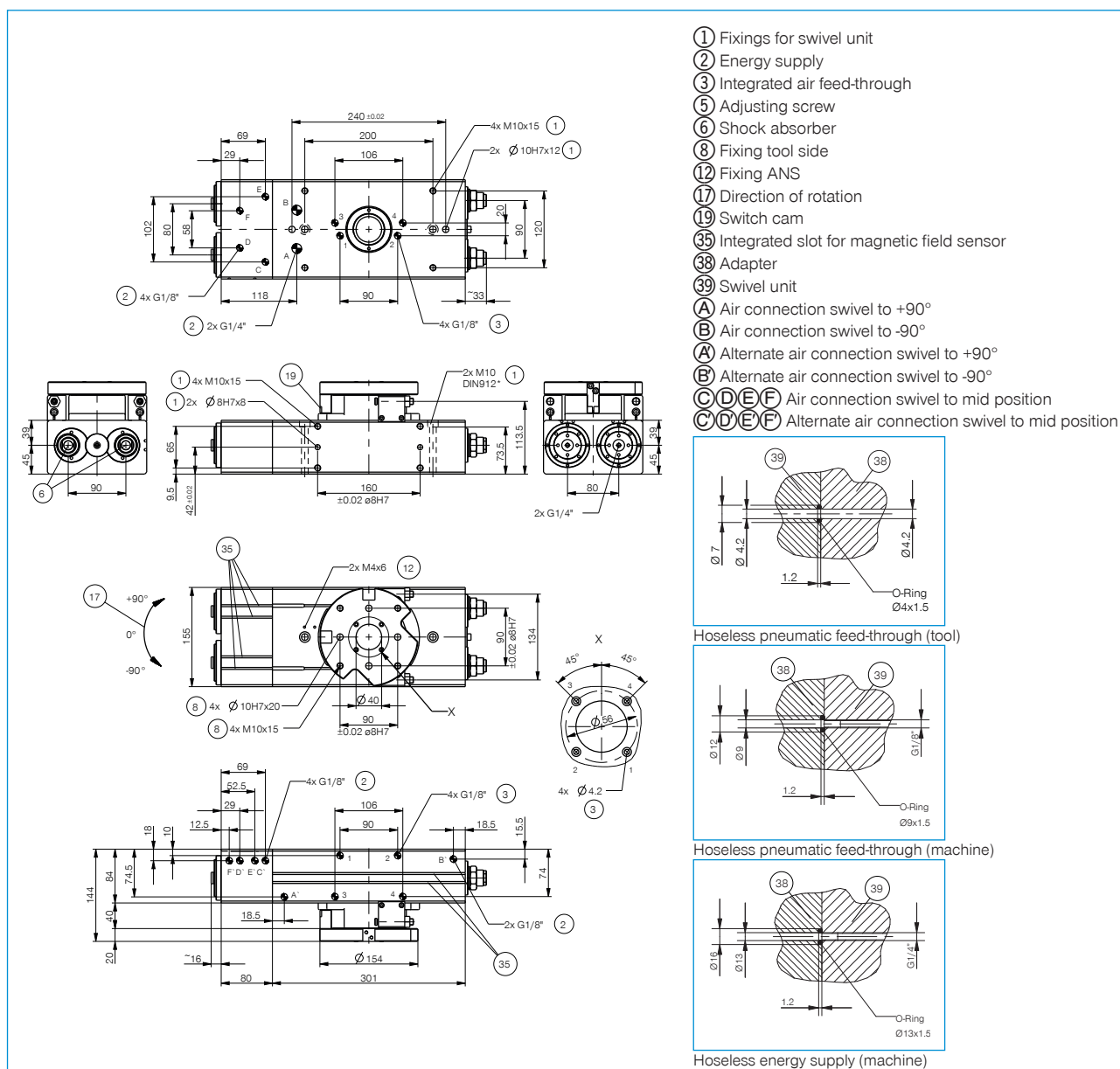


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ12-E2
Inductive proximity switch - Cable 5 m

Order no.	Technical data
	SF155MD4-C
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	58
Swivel angle regulable +/- [°]	3
Passage bore Ø [mm]	40
Pneumatic energy transfer [Quantity]	4
Axial bearing load [N]	5900
Radial bearing load [Nm]	761
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	1010
Weight [kg]	20.3



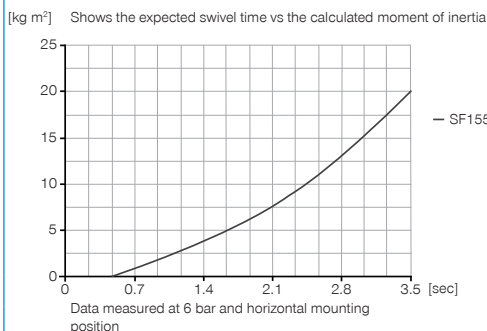
FLAT SWIVEL UNITS

INSTALLATION SIZE SF155MD8-C

PRODUCT SPECIFICATIONS



Moment of inertia



INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



8 [piece]
O-Ring
COR0040150



1 [piece]
Attachment Kit
ANS0079



1 [piece]
Commissioning USB
052650

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m

RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m

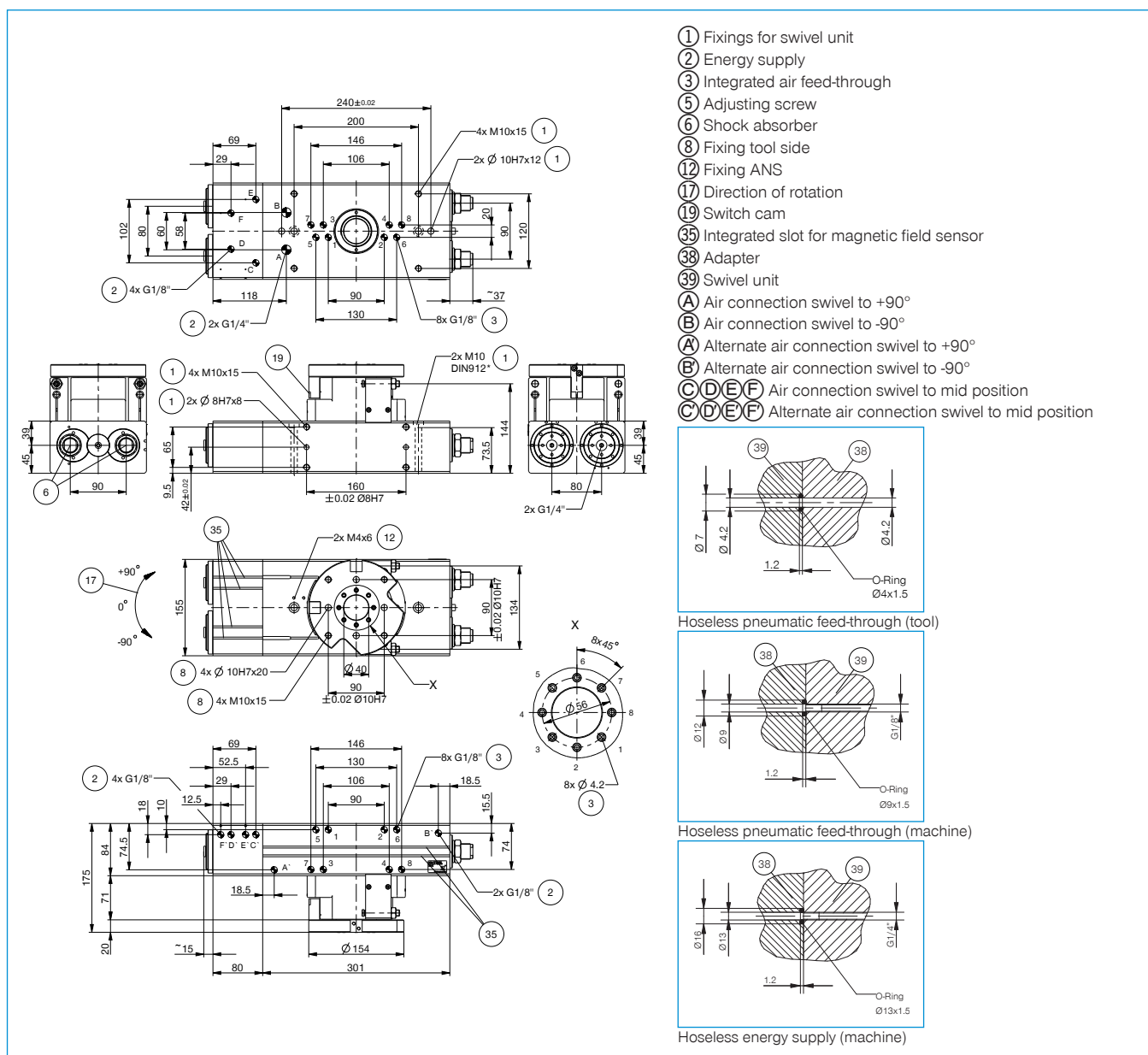


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ12-E2
Inductive proximity switch - Cable 5 m

Order no.	Technical data
	SF155MD8-C
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	54
Swivel angle regulable +/- [°]	3
Passage bore Ø [mm]	40
Pneumatic energy transfer [Quantity]	8
Axial bearing load [N]	5900
Radial bearing load [Nm]	761
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	1010
Weight [kg]	21.8



FLAT SWIVEL UNITS

INSTALLATION SIZE SF195N-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0041
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m

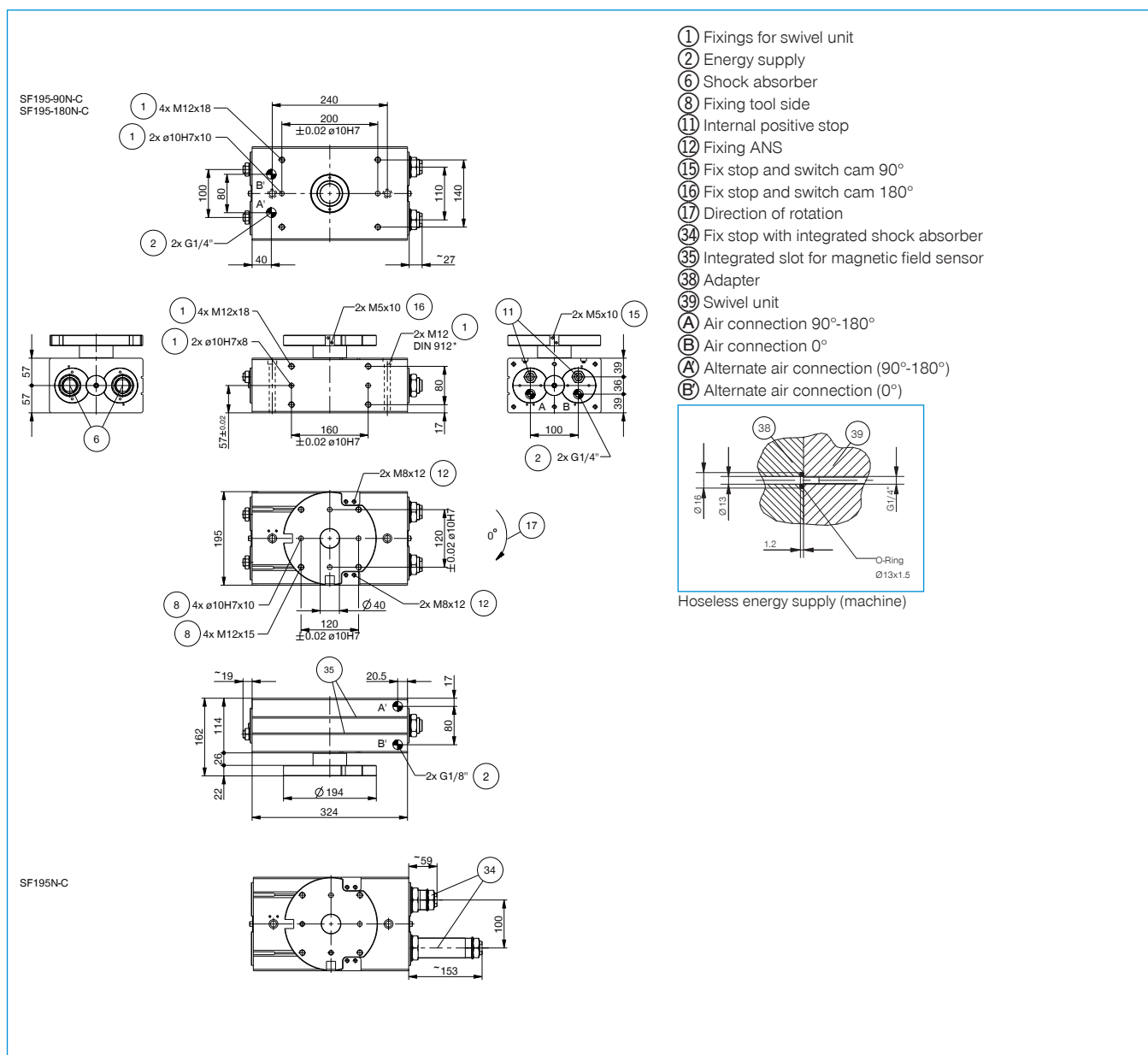


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ12-E2
Inductive proximity switch - Cable 5 m

Order no.	► Technical data		
	SF195-90N-C	SF195-180N-C	SF195N-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	130	130	130
Swivel angle regulable +/- [°]	3	3	180
Passage bore Ø [mm]	40	40	40
Axial bearing load [N]	7000	7000	7000
Radial bearing load [Nm]	1253	1253	1253
Repetition accuracy +/- [°]	0.01	0.01	0.01
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	740	1480	1480
Weight [kg]	27.5	27.5	29.5



FLAT SWIVEL UNITS

INSTALLATION SIZE SF195D4-C

PRODUCT SPECIFICATIONS



Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



4 [piece]
O-Ring
COR0050100

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0042
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ12-E2
Inductive proximity switch - Cable 5 m

FLAT SWIVEL UNITS

INSTALLATION SIZE SF195D8-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



8 [piece]
O-Ring
COR0050100

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0043
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m

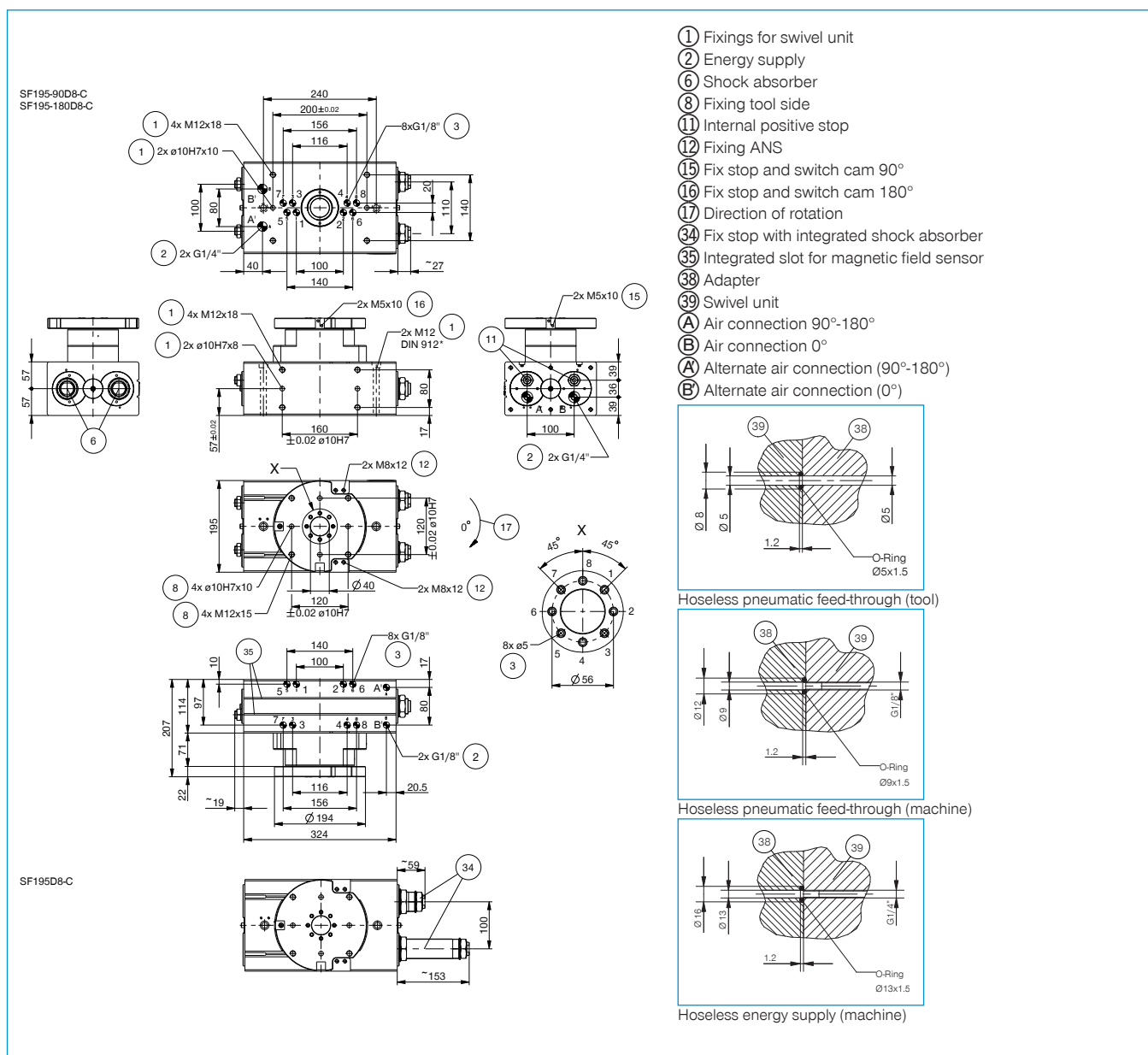


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ12-E2
Inductive proximity switch - Cable 5 m

Order no.	Technical data		
	SF195-90D8-C	SF195-180D8-C	SF195D8-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	120	120	120
Swivel angle regulable +/- [°]	3	3	180
Passage bore Ø [mm]	40	40	40
Pneumatic energy transfer [Quantity]	8	8	8
Axial bearing load [N]	7000	7000	7000
Radial bearing load [Nm]	1253	1253	1253
Repetition accuracy +/- [°]	0.01	0.01	0.01
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	740	1480	1480
Weight [kg]	31.5	31.5	33.5



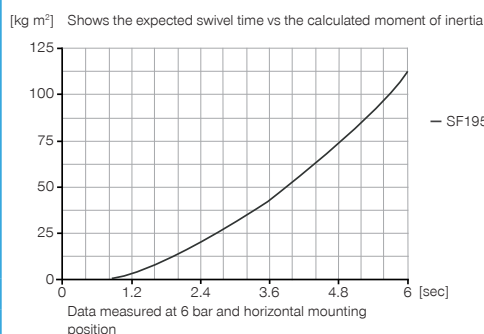
FLAT SWIVEL UNITS

INSTALLATION SIZE SF195M-C

PRODUCT SPECIFICATIONS



Moment of inertia



INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



1 [piece]
Attachment Kit
ANS0088



1 [piece]
Commissioning USB
052650

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m

RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ12-E2
Inductive proximity switch - Cable 5 m

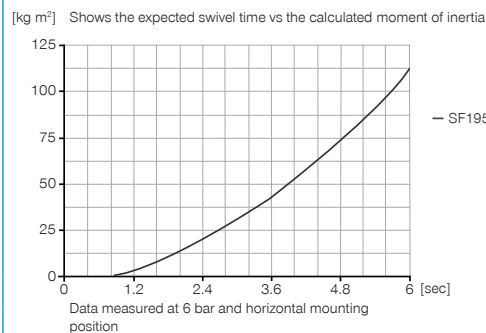
FLAT SWIVEL UNITS

INSTALLATION SIZE SF195MD4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



4 [piece]
O-Ring
COR0050100



1 [piece]
Attachment Kit
ANS0081



1 [piece]
Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ12-E2
Inductive proximity switch - Cable 5 m

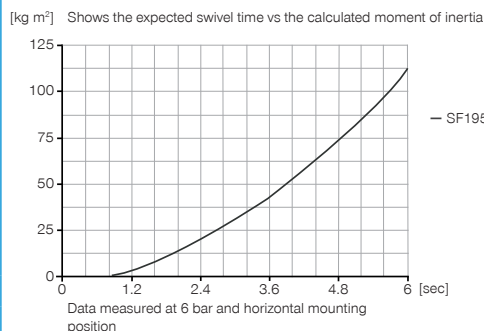
FLAT SWIVEL UNITS

INSTALLATION SIZE SF195MD8-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



8 [piece]
O-Ring
COR0050100



1 [piece]
Attachment Kit
ANS0082



1 [piece]
Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m

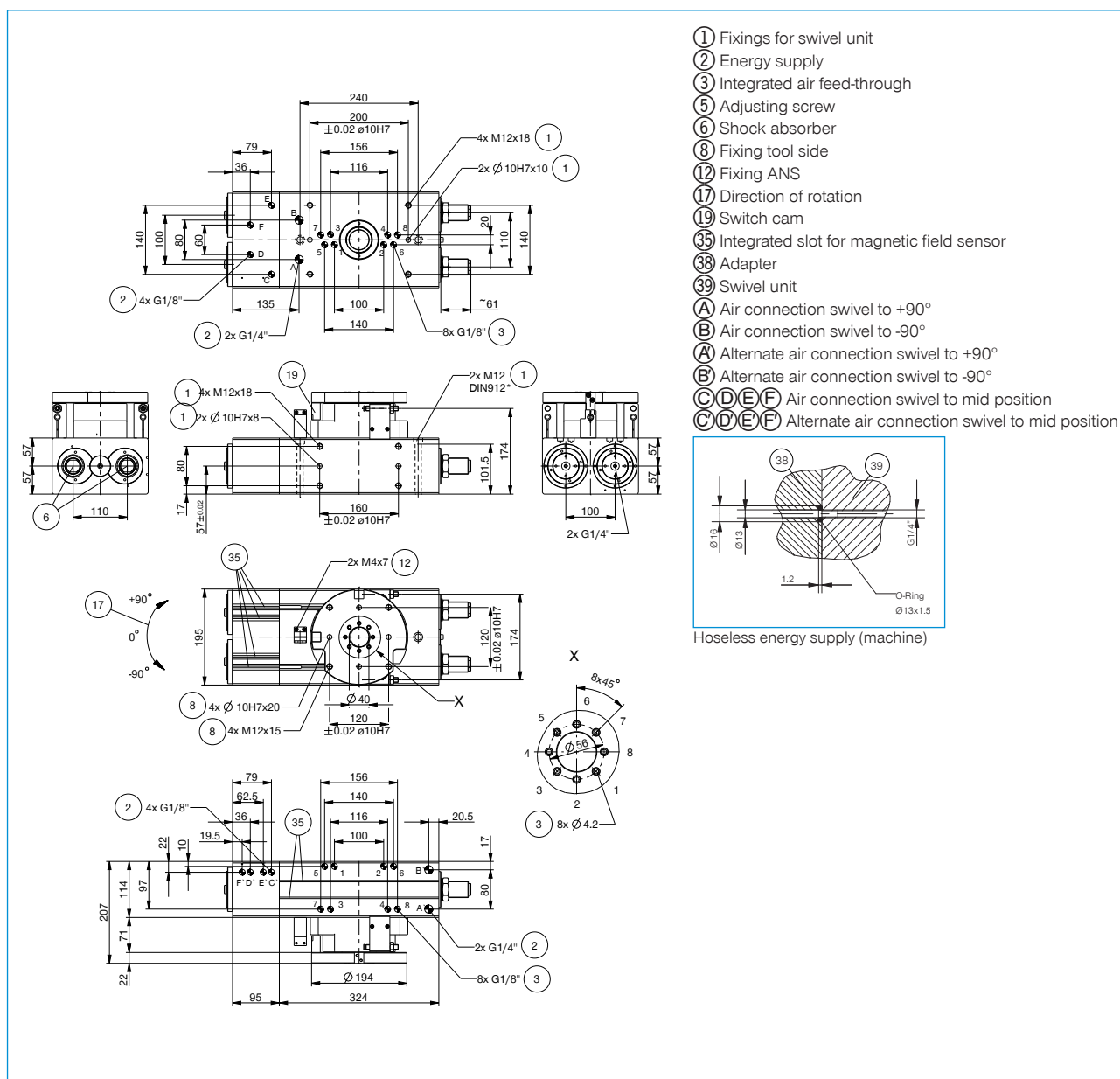


KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



NJ12-E2
Inductive proximity switch - Cable 5 m

Order no.	Technical data
	SF195MD8-C
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	120
Swivel angle regulable +/- [°]	3
Passage bore Ø [mm]	40
Pneumatic energy transfer [Quantity]	8
Axial bearing load [N]	7000
Radial bearing load [Nm]	1253
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	2035
Weight [kg]	41.1



FLAT SWIVEL UNITS

SERIES MSF

▶ PRODUCT ADVANTAGES



“The unique”

▶ Decide for yourself!

Flange connection or journal shaft, with or without shock absorbers: The multitude of variants ensure you always find what you need

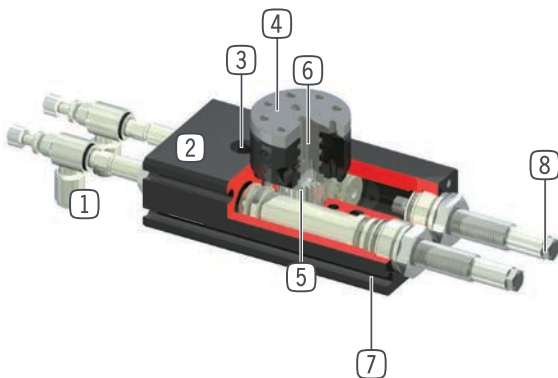
▶ Flat structure

Thanks to the reverse double piston drive, the unit can work in operations requiring flat conditions. This is how you can build your application to save more space

▶ Infinitely adjustable swivel angle

Become flexible and unique with the completely adjustable swivel angle that also reduces set up times

▶ BENEFITS IN DETAIL



① Air flow control valve

- for speed regulation
- included in scope of delivery

② Robust, lightweight housing

- Hard-coated aluminum alloy

③ Mounting and positioning

- mounting possible from several sides for versatile positioning

④ Tool intake

- with shaft extension or flange available

⑤ Force transfer

- rack and pinion

⑥ Up to 2 way integrated air feed-through

- for hoseless air transfer
- hose package does not have to be pivoted

⑦ Sensing slot

- mounting and positioning of magnetic field sensors

⑧ Integrated shock absorbers with spiral groove technology

- adjustable end position damping



► SERIES CHARACTERISTICS

Installation size		Version					
MSFXX		N-F001	S-F001	N-F002	S-F002	N-D2	S-D2
	10 million maintenance-free cycles (max.)	•	•	•	•	•	•
	IP41	•	•	•	•	•	•
	Magnetic field sensor	•	•	•	•	•	•
	Flange	•	•			•	•
	Shaft extension			•	•		
	Fluid feed-through					•	•
	Elastomer end position damping	•		•		•	
	Powerstop end position damping		•		•		•
	Positionability - 2 positions	•	•	•	•	•	•
	Adjustable swivel angle	•	•	•	•	•	•

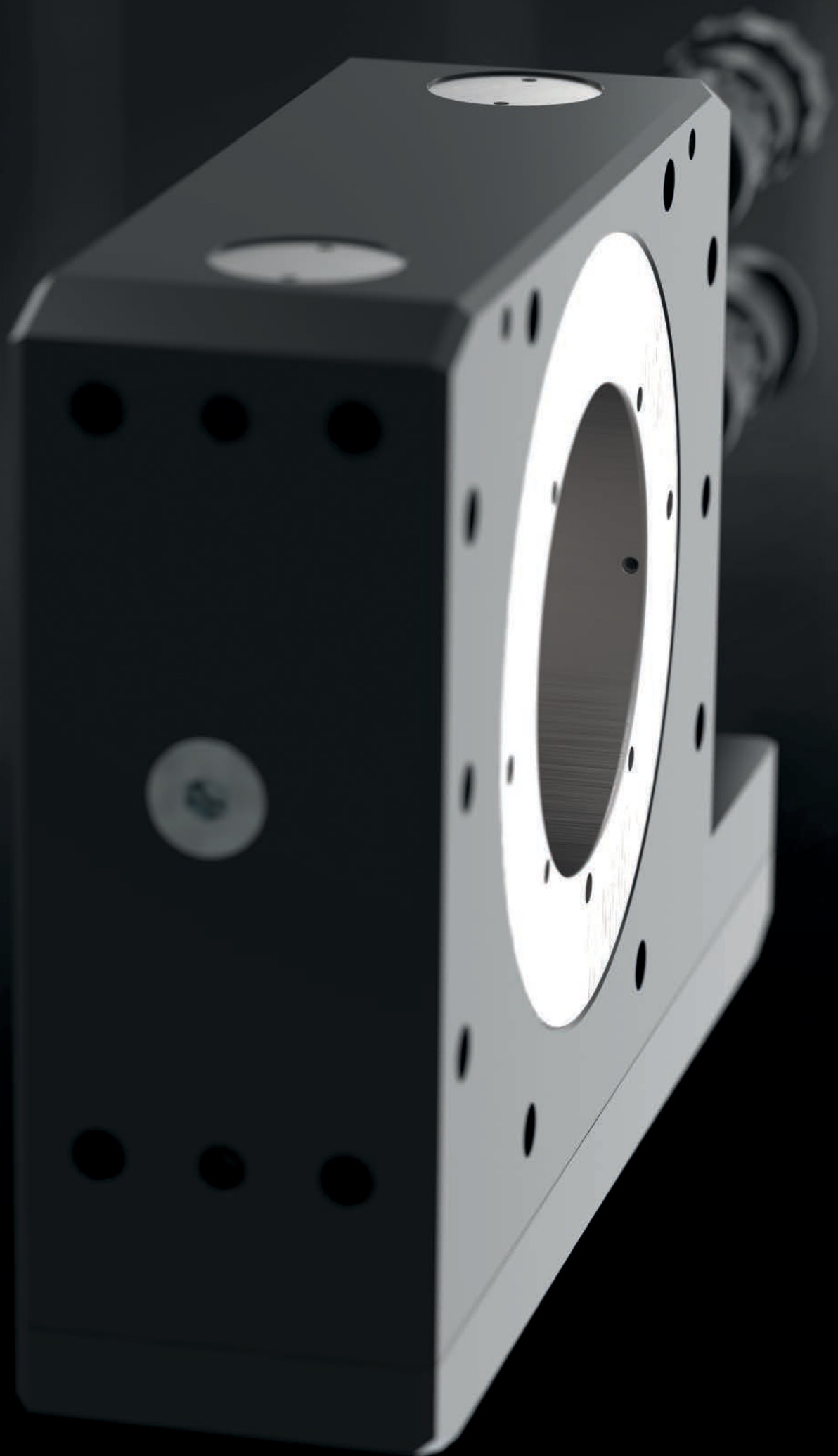
► TECHNICAL DATA

Installation size	Swivel angle [°]	Torque [Nm]	Weight [kg]	IP class
MSF34	90-180	0,3 - 0,4	0,17 - 0,21	IP41
MSF40	90-180	0,6 - 0,7	0,26 - 0,29	IP41
MSF44	90-180	1 - 1,2	0,41 - 0,46	IP41

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



FLAT SWIVEL UNITS

OVERVIEW OF SERIES



ELECTRICAL



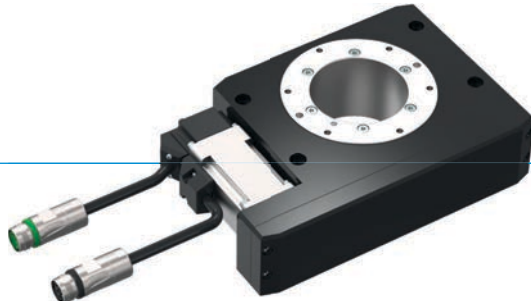
Series DES

376

FLAT SWIVEL UNITS

SERIES DES

▶ PRODUCT ADVANTAGES



“The unique”

▶ Decide for yourself!

With the standard motor or motors from another manufacturer - You decide what harmonises the best with your system

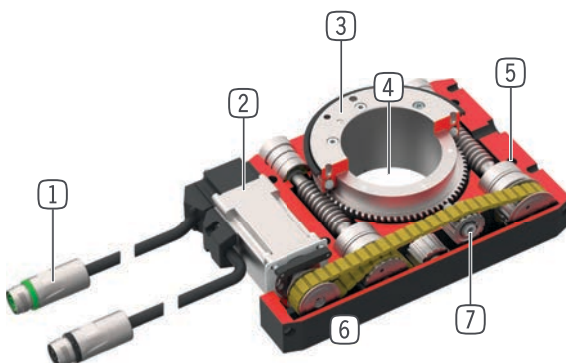
▶ Integrated media transmission

The D1 media exchanger makes cable breaks and undefined interference contours through the power supply line a thing of the past

▶ Freely positionable

No matter whether your task involves rotating, lifting or cycling: The unit is universally usable and can be uniquely adjusted to your application

▶ BENEFITS IN DETAIL



① Energy supply

- motor cable, female
- encoder cable, male

② Drive

- AC servo motor

③ Intake flange

- for connection to application-specific adapter plate (to be produced by the customer)
- simple tool connection

④ Central bore

- for cable feed-through

⑤ Mounting and positioning

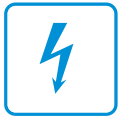
- mounting possible from several sides for versatile positioning

⑥ Robust, lightweight housing













- Hard-coated aluminum alloy

⑦ Force transfer

- tooth belt/gear rack/worm gear



► SERIES CHARACTERISTICS

Installation size		Version		
DESXXX		-B	D1-B	-99
	Profibus	•	•	
	Profinet, EtherCat, EtherNet/IP, Sercos	•	•	
	with drive	•	•	
	unpowered; installation provided by customer			•
	5 million maintenance-free revolutions (max.)	•	•	•
	Self locking mechanism	•	•	•
	IP54	•	•	•
	Integrated sensing	•	•	
	Continuously variable positions	•	•	
	Adjustable swivel angle	•	•	
	Electrical feed-through		•	
	Fluid feed-through		•	

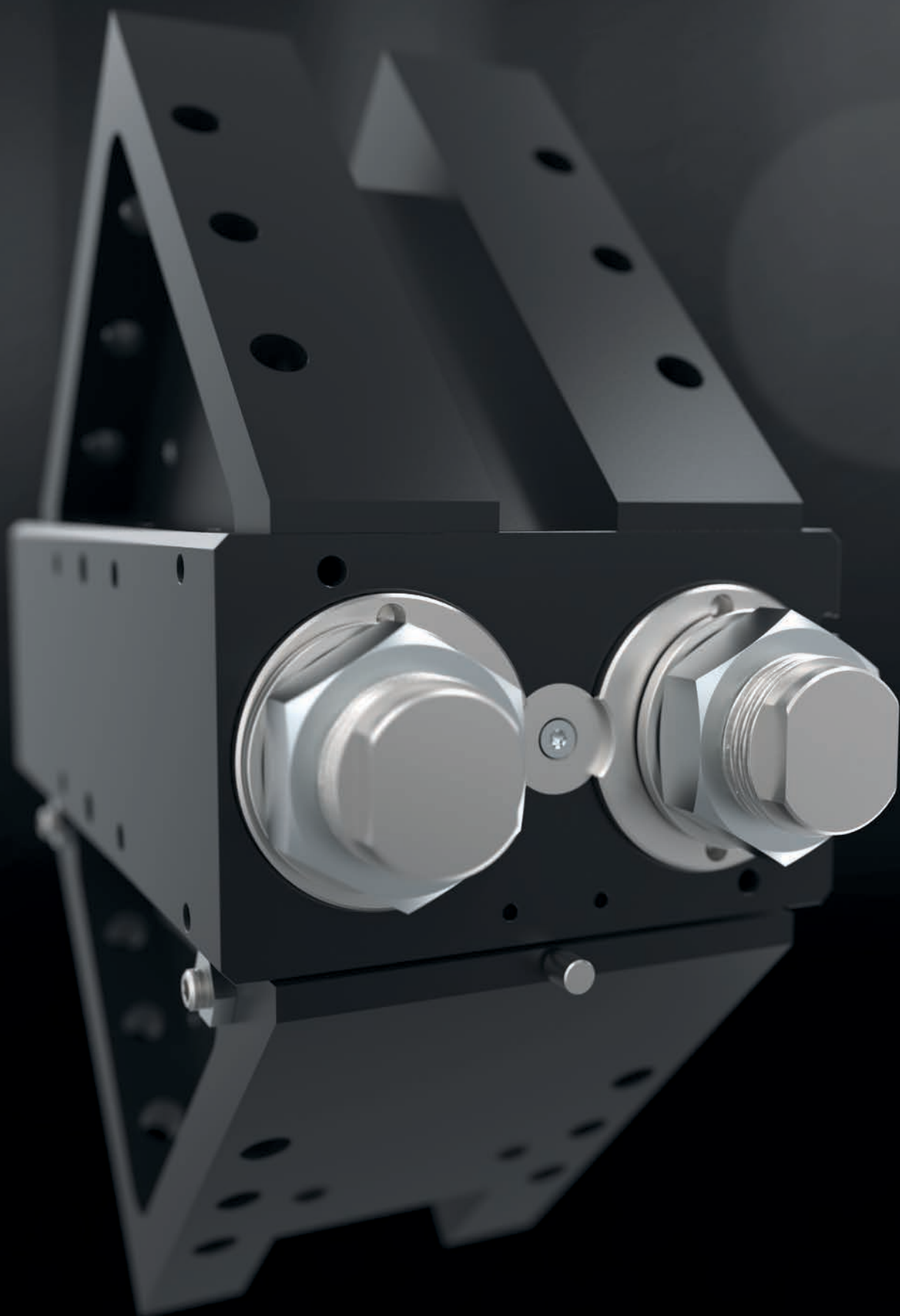
► TECHNICAL DATA

Installation size	Swivel angle [°]	Torque [Nm]	Weight [kg]	IP class
DES140	∞	10 - 12	4 - 7	IP54
DES190	∞	62 - 64	10,8 - 15,9	IP54

► FURTHER INFORMATION IS AVAILABLE ONLINE



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ANGLE PIVOT UNITS

OVERVIEW OF SERIES



PNEUMATIC



Series SW

380



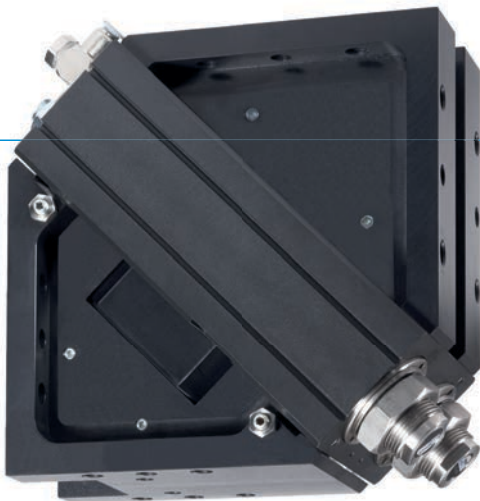
Series SWM1000

398

ANGLE PIVOT UNITS

SERIES SW











▶ PRODUCT ADVANTAGES



“The superior”

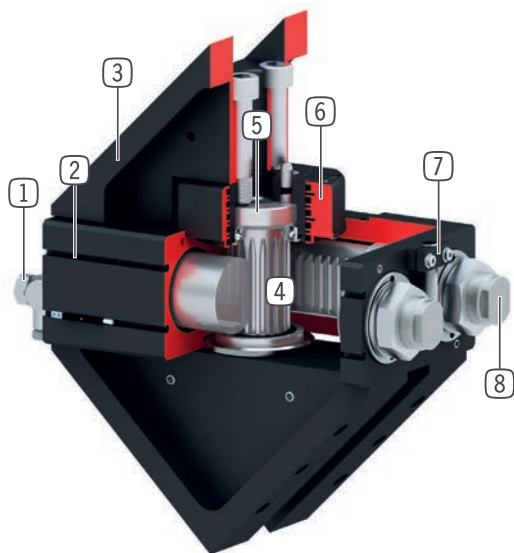
- ▶ **Up to 100% more performance than the benchmark**
Superior end position damping lets you swivel more mass in the shortest amount of time, increasing your machine's component output
- ▶ **Includes two angle flanges**
Reduce your design and manufacturing efforts with the angle pivot unit aligned on the machine loading system
- ▶ **More than 100% higher radial bearing load than the benchmark**
The generously scaled bearings stand for robustness and long service life and provide the highest process reliability for your application

▶ SERIES CHARACTERISTICS

Installation size		Version	
SWXXX		DX	
	10 million maintenance-free cycles (max.)		•
	IP64		•
	Inductive sensor		•
	Magnetic field sensor		•
	Flange		•
	Powerstop end position damping		•
	End positions adjustable +/- 3°		•
	Positionability - 2 positions		•
	Rotation angle 180°		•
	Fluid feed-through		•



► BENEFITS IN DETAIL



- ① **Air flow control valve**
- for speed regulation (included in the delivery)
- ② **Sensing slot**
- mounting and positioning of magnetic field sensors
- ③ **Robust, lightweight housing**
- Hard-coated aluminum alloy
- ④ **Force transfer**
- rack and pinion
- ⑤ **Two way ball bearing hollow shaft**
- for feedthrough cables and hoses
- high forces and moments capacity
- ⑥ **Up to 8 way integrated air feed-through**
- for hoseless air transfer
- hose package does not have to be pivoted
- ⑦ **Mounting block**
- mounting for inductive proximity switch
- ⑧ **Integrated and patented hydraulic shock absorbers**
- adjustable end position damping
- heating is prevented through installation in pneumatic pressure chamber

► TECHNICAL DATA

Installation size	Swivel angle [°]	Torque [Nm]	Weight [kg]	IP class
SW50	180	1.5	1.2	IP64
SW74	180	5.5	2.6	IP64
SW100	180	15	6.3	IP64
SW125	180	34	15.3	IP64
SW155	180	58	25.3	IP64
SW195	180	120	48.2	IP64

► FURTHER INFORMATION IS AVAILABLE ONLINE



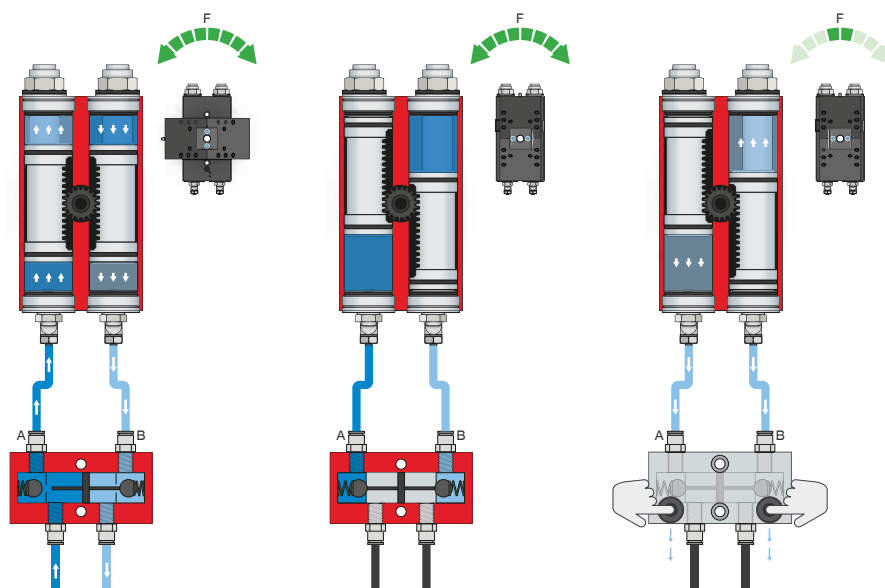
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ANGLE PIVOT UNITS

SERIES SW FUNCTIONAL DESCRIPTION



ENERGY SUPPLY



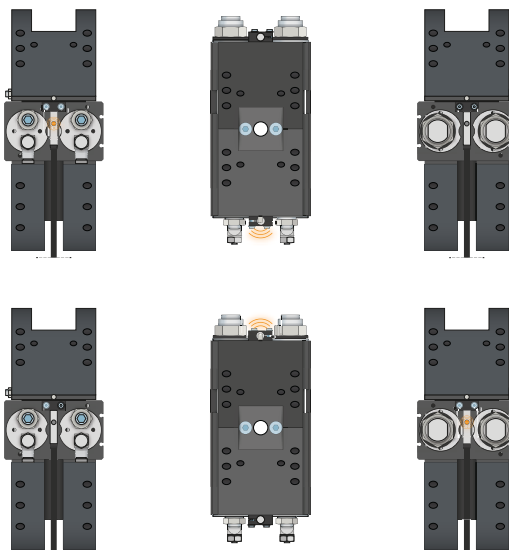
Pressure safety valve – DSV

Ensures safe retention of force and position if the system pressure drops

The integrated double check valve, which can be unlocked, retains the system pressure of the swivel unit in case of EMERGENCY STOP. To ensure the function, the valve must be installed as close to the swivel unit's air connection as possible. In variant E, two pushbuttons are installed that allow for controlled bleeding of the swivel unit.



SENSORS



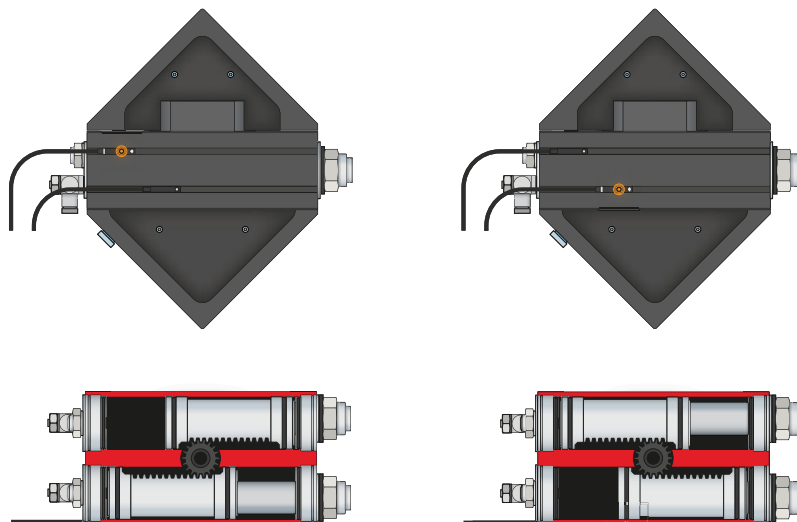
Inductive sensors – NJ

The sensor is inserted into the mounting block as far as it will go and secured. Tuning to the desired position then takes place by adjusting the cam switch. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector, as well as with direct plug orientation.



SENSORS

MFS02



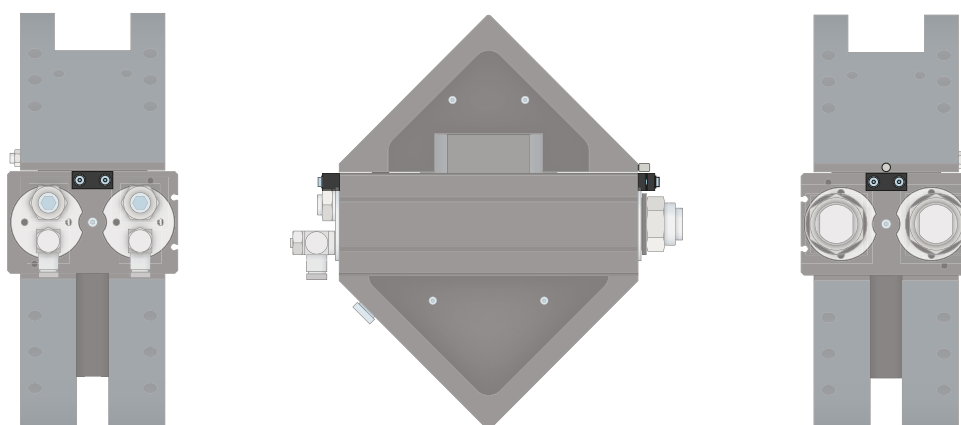
1-point magnetic field sensors – MFS

For non-contact sensing of the piston position

These sensors are clamped in the C-groove of the swivel unit and detect the magnet attached to the piston of the swivel unit. To ensure use in a wide variety of space conditions, the sensors are available in two versions. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the swivel unit almost completely, the vertical MSF01 is taller, but has a cable outlet that is offset at an angle of 90°. The variants are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.



CONNECTIONS / OTHER



Attachment kit

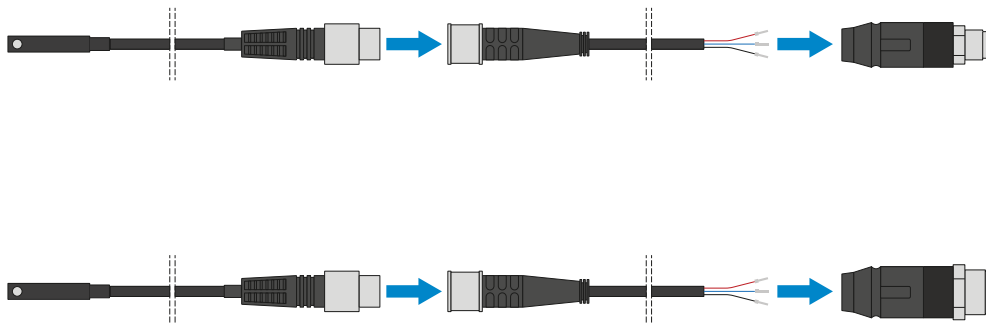
The attachment kit is installed on the gripper using the fastening material included in the scope of delivery. The attachment kit enables sensing of the gripper positions via inductive proximity switches.

ANGLE PIVOT UNITS

SERIES SW FUNCTIONAL DESCRIPTION



CONNECTIONS / OTHER



Plug-in connectors

For extending and fabricating the connection lines for the sensors

Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12.

ANGLE PIVOT UNITS

INSTALLATION SIZE SW50

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRVM5X4



4 [piece]
O-Ring
COR0050100

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0062
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S12-G-3
Plug-in connector customizable Straight - Connector M12



▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8

* without extension load



ANGLE PIVOT UNITS

INSTALLATION SIZE SW74

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-8X6



4 [piece]
O-Ring
COR0050100

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0063
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S12-G-3
Plug-in connector customizable Straight - Connector M12

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8

* without extension load



ANGLE PIVOT UNITS

INSTALLATION SIZE SW100

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-8X6



4 [piece]
O-Ring
COR0050100

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



ANS0064
Attachment Kit



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



S12-G-3
Plug-in connector customizable Straight - Connector M12



▶ RECOMMENDED ACCESSORY ATTACHMENT KIT

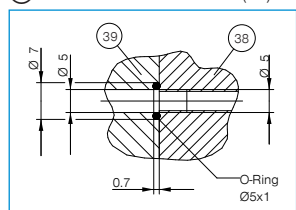
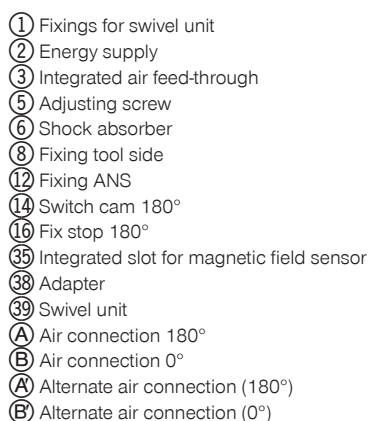


NJ8-E2
Inductive proximity switch - Cable 5 m

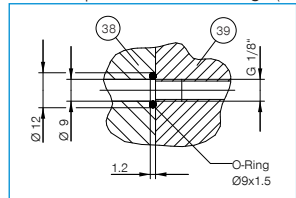


NJ8-E2S
Inductive proximity switch - Connector M8

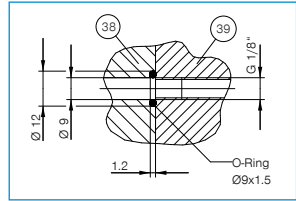
* without extension load



Hoseless pneumatic feed-through (tool)



Hoseless pneumatic feed-through (machine)



Hoseless energy supply (machine)

ANGLE PIVOT UNITS

INSTALLATION SIZE SW125

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



4 [piece]
O-Ring
COR0090150

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ12-E2
Inductive proximity switch - Cable 5 m



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



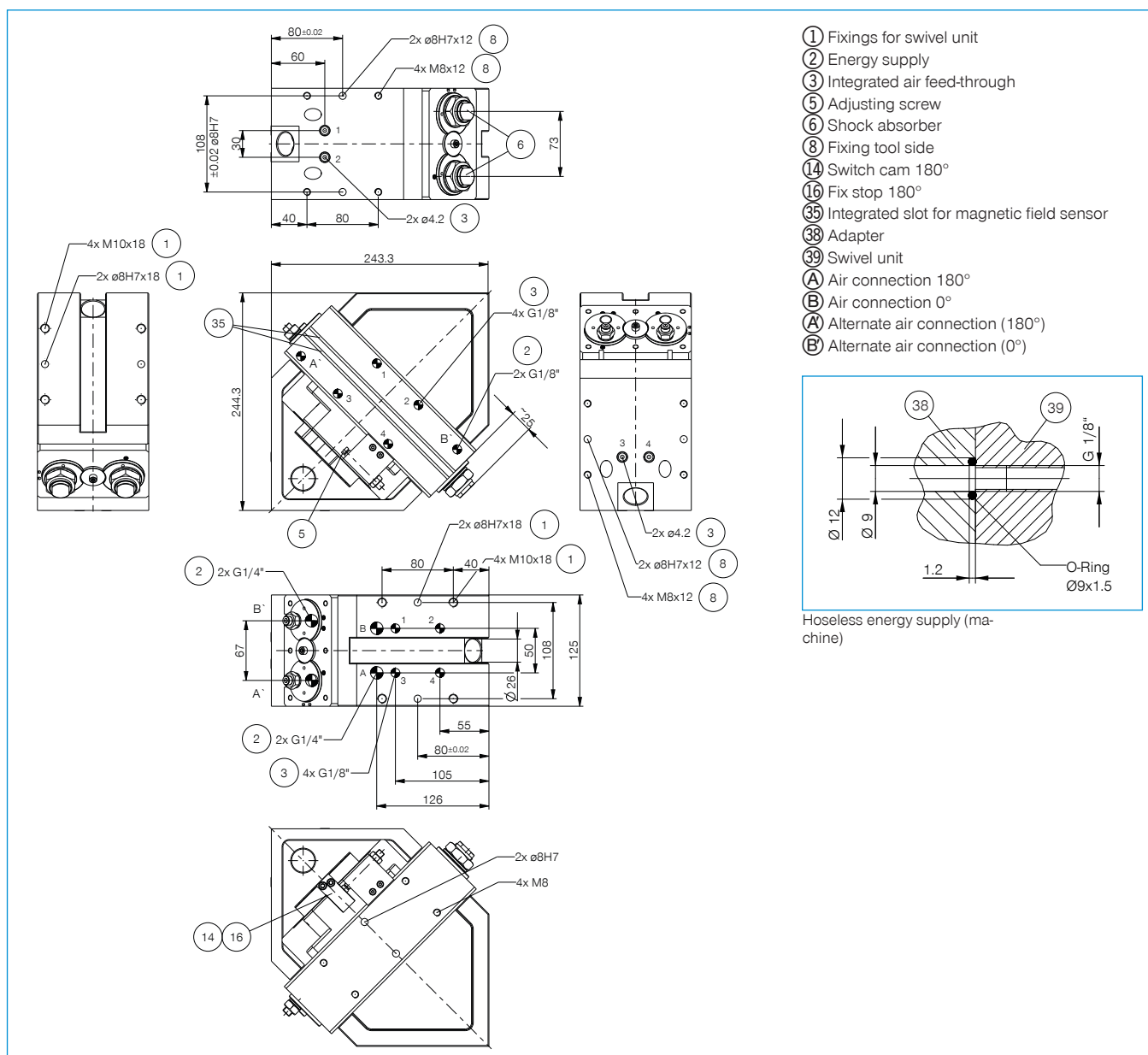
S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12

Order no.	Technical data
	SW125D4-C
Swivel angle [°]	180
Torque [Nm]	34
Swivel time [s]*	0.6
Passage bore Ø [mm]	26
Pneumatic energy transfer [Quantity]	4
Axial bearing load [N]	3400
Radial bearing load [Nm]	390
Repetition accuracy +/- [°]	0.01
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	440
Weight [kg]	15.3

*without extension load



ANGLE PIVOT UNITS

INSTALLATION SIZE SW155

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



4 [piece]
O-Ring
COR0090150

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ12-E2
Inductive proximity switch - Cable 5 m



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

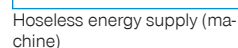


S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12

*without extension load



ANGLE PIVOT UNITS

INSTALLATION SIZE SW195

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8



8 [piece]
O-Ring
COR0120150

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ12-E2
Inductive proximity switch - Cable 5 m



MFS02-K-KHC-P1-PNP
Magnetic field sensor Straight Cable 5 m



SENSORS



MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



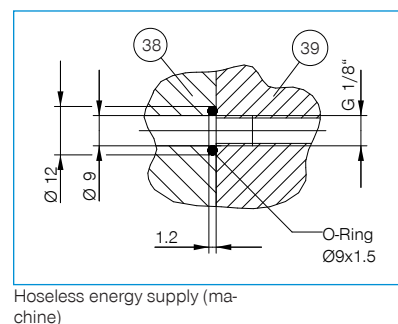
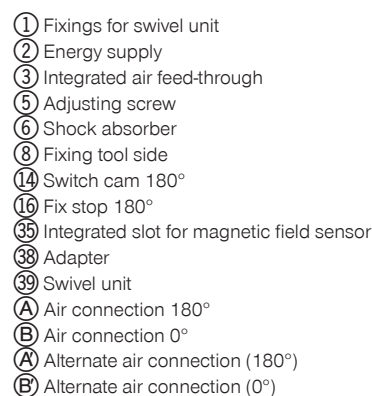
S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12



* without extension load



ANGLE PIVOT UNITS

SERIES SWM1000

3 Swivel- and Rotary Modules / pneumatic / Angle Pivot Units / Series SWM1000






▶ PRODUCT ADVANTAGES



“The slim”

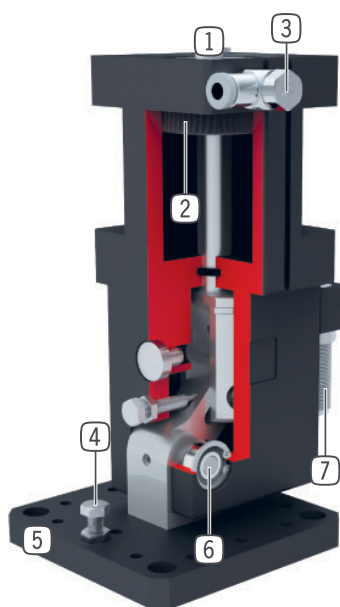
- ▶ **Optimised design**
Adjusted to a gantry axle, you can integrate the unit in your machine loading system to save space
- ▶ **Large locating flange**
The large mounting surface simplifies your design and allows secure attachment of follow-on tools
- ▶ **Failure-free continuous operation**
Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free cycles

▶ SERIES CHARACTERISTICS

Installation size		
SWM10XX		
 10 million maintenance-free cycles (max.)		●
 IP30		●
 Magnetic field sensor		●
 Powerstop end position damping		●
 Positionability - 2 positions		●



► BENEFITS IN DETAIL



- ① **Mounting and positioning**
- ② **Drive**
 - double-acting pneumatic cylinder
- ③ **Air flow control valve**
 - for speed regulation
 - included in scope of delivery
- ④ **Adjustable end position**
 - +/- 3° adjustable end position
- ⑤ **Intake flange**
 - for connection to application-specific adapter plate (to be supplied by the customer)
- ⑥ **Force transfer 90° pivoting**
 - toggle lever principle
- ⑦ **Patented, hydraulic shock absorber**
 - adjustable end position damping

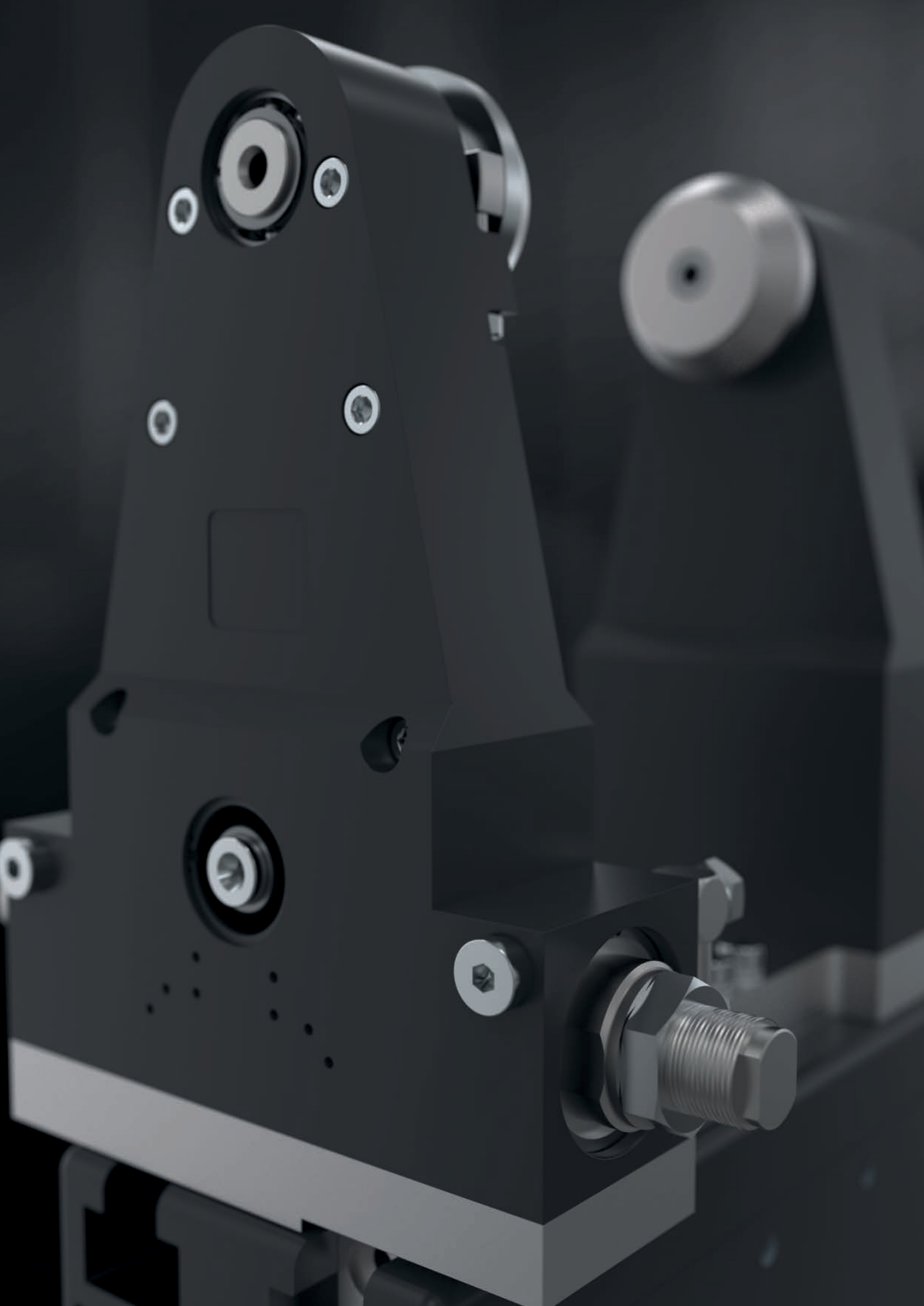
► TECHNICAL DATA

Installation size	Swivel angle [°]	Torque [Nm]	Weight [kg]	IP class
SWM1035	90	7 - 10	0.65	IP30
SWM1045	90	14 - 21	1.2	IP30
SWM1054	90	29 - 40	2.3	IP30
SWM1063	90	39 - 64	3.5	IP30
SWM1080	90	88 - 150	5.8	IP30

► FURTHER INFORMATION IS AVAILABLE ONLINE

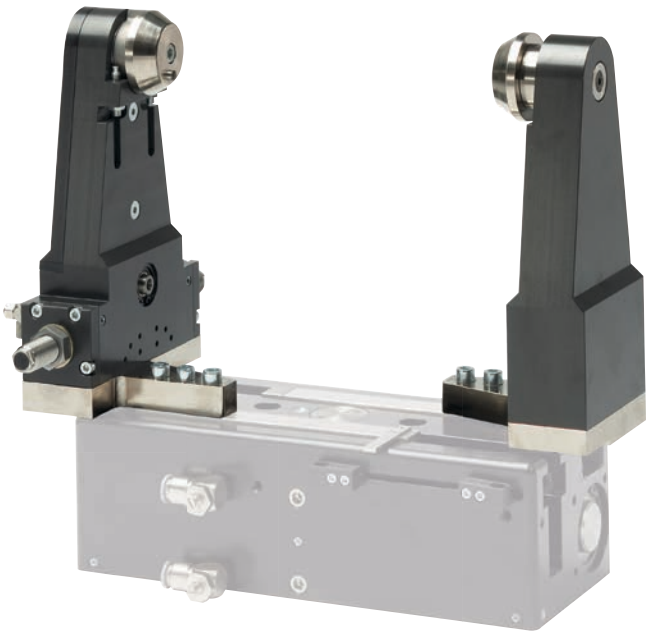


All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



SWIVEL JAWS

OVERVIEW OF SERIES



PNEUMATIC



Series SB

402



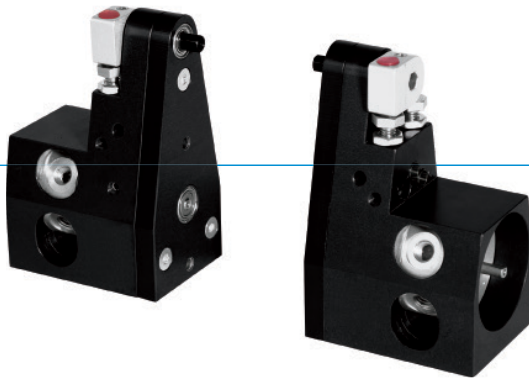
Series SBZ

412

SWIVEL JAWS

SERIES SB

▶ PRODUCT ADVANTAGES



“The economical”

▶ Concentration on the essentials

The most cost-effective type of swivelling reduces your production costs










▶ Proven technology

We have more than 20 years of proven reliability, which ensures uninterrupted production for you

▶ Flexible swivel angle

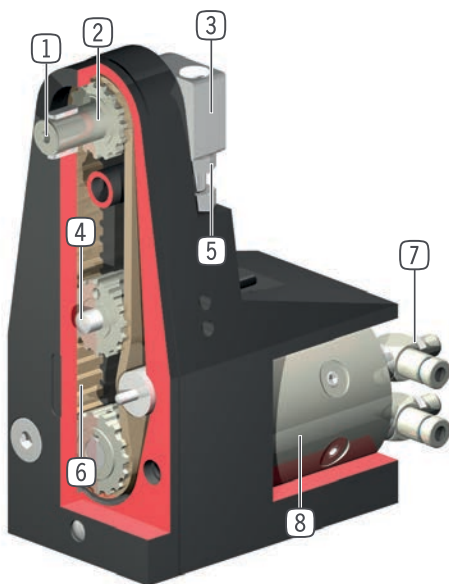
90° or 180°; you decide which using the provided limit stops. This allows you to be flexible while only needing to maintain one product in your system

▶ SERIES CHARACTERISTICS

Installation size		
SBXX		
 10 million maintenance-free cycles (max.)		•
 IP54		•
 Inductive sensor		•
 Shaft extension		•
 Elastomer end position damping		•
 End positions adjustable +/- 3°		•
 Positionability - 2 positions		•
 Rotation angle 90°		•
 Rotation angle 180°		•



► BENEFITS IN DETAIL



- ① **Drive shaft**
 - as hexagonal or round shaft with feather key, depending on design
 - quick and cost effective positioning of application-specific workpiece intakes
- ② **Two way bearing drive shaft**
 - high forces and moments capacity
- ③ **Stop**
 - swivel angle of 90 and 180°
 - stable, with Fibroflex stop surface
- ④ **Position sensing**
 - inquiry of end positions 0° and 90° (or 180°) via inductive proximity switch
 - integrated in housing, therefore no additional interference contour
- ⑤ **End position**
 - +/- 3° adjustable end position
- ⑥ **Force transfer**
 - stable toothed belt with steel reinforcement
 - quiet, reliable, durable
- ⑦ **Energy supply**
 - possible from several sides
- ⑧ **Drive**
 - double-acting rotor cylinder

► TECHNICAL DATA

Installation size	Swivel angle [°]	Torque [Nm]	Weight (pair) [kg]	IP class
SB32	90 - 180	0.1	0.3	IP54
SB40	90 - 180	0.3	0.7	IP54
SB54	90 - 180	1.6	2.2	IP54

► FURTHER INFORMATION IS AVAILABLE ONLINE



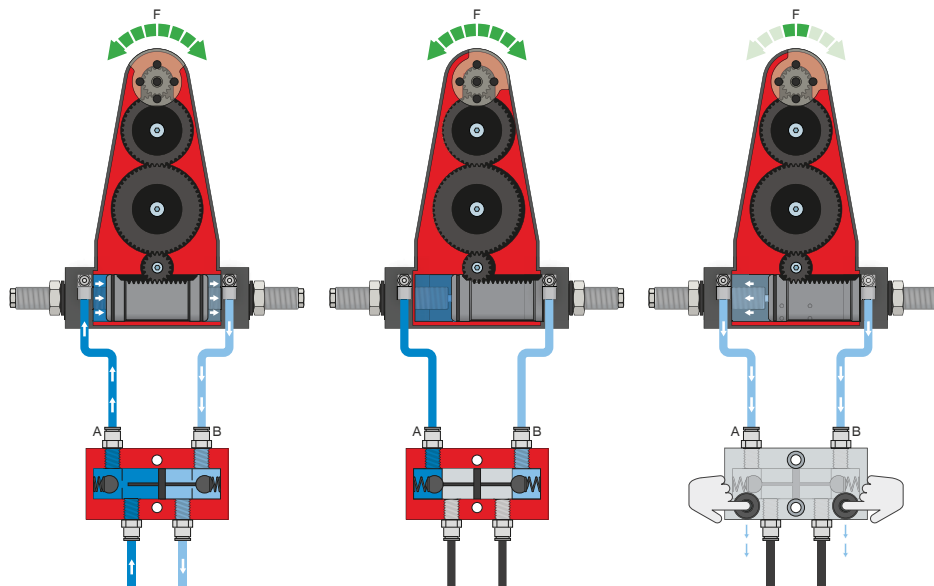
All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

SWIVEL JAWS

SERIES SB FUNCTIONAL DESCRIPTION



ENERGY SUPPLY



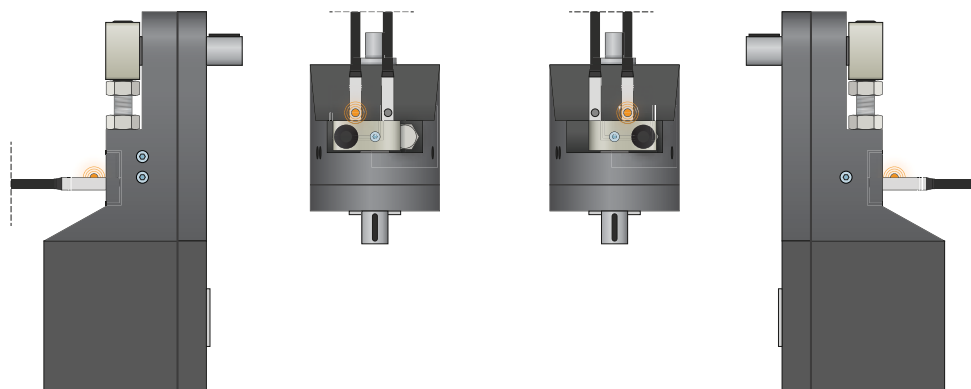
Pressure safety valve – DSV

Ensures safe retention of force and position if the system pressure drops

The integrated double check valve, which can be unlocked, retains the system pressure of the swivel jaw in case of EMERGENCY STOP. To ensure the function, the valve must be installed as close to the swivel jaw's air connection as possible. In variant E, two pushbuttons are installed that allow for controlled bleeding of the swivel jaw.



SENSORS

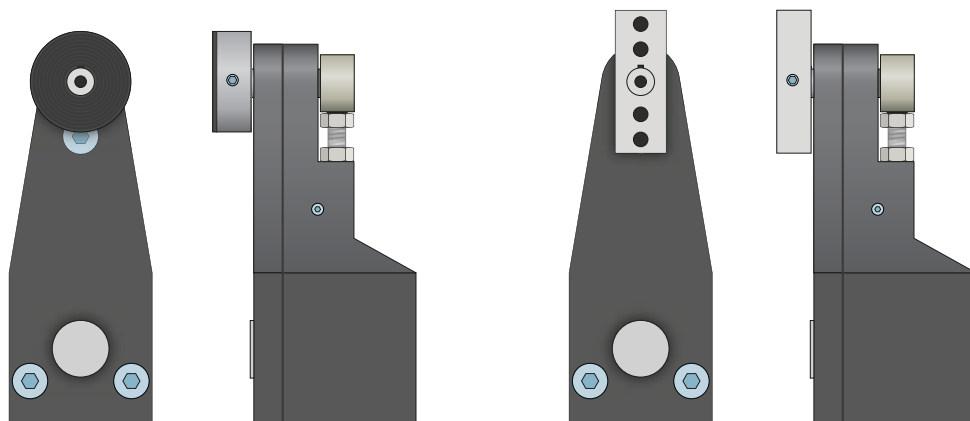


Inductive sensors – NJ

The sensor is inserted into the mounting block as far as it will go and secured. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector, as well as with direct plug orientation.

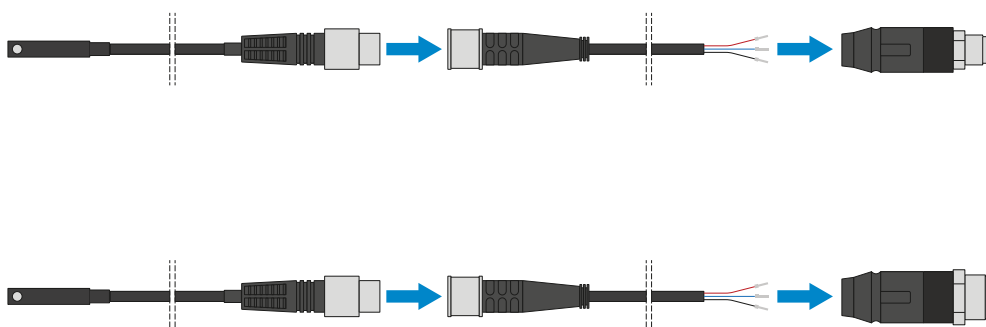


CONNECTIONS / OTHER



Base jaws

The base jaws enable fast and easy adaptation to the workpiece and/or the attachment of custom jaws.



Plug-in connectors

For extending and fabricating the connection lines for the sensors

Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12.

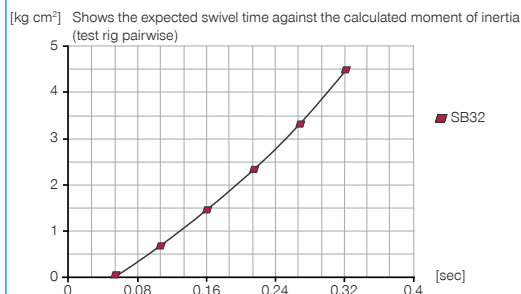
SWIVEL JAWS

INSTALLATION SIZE SB32

PRODUCT SPECIFICATIONS

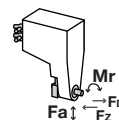


Moment of inertia



Forces and moments

Indicates the static load on the bearing.



Fa [N]	180
Mr [Nm]	2.1
FD [N] *	90
FZ [N] *	90

INCLUDED IN DELIVERY



2 [piece]
Stop 90°
GEH03350



6 [piece]
Sleeve For Proximity Switch
DMS03210



2 [piece]
Stop 180°
GEH03340



6 [piece]
Cylinder Pin
C632504100

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ4-E2-01
Inductive proximity switch - Cable 5 m



NJ4-E2SK-01
Inductive Proximity Switch Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



SB32-1-B
Basic jaw



CONNECTIONS / OTHER



SB32-1-B-01
Basic jaw



SB32-2-B
Basic Jaw Rubberized



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12

* Observe the gripper force



SWIVEL JAWS

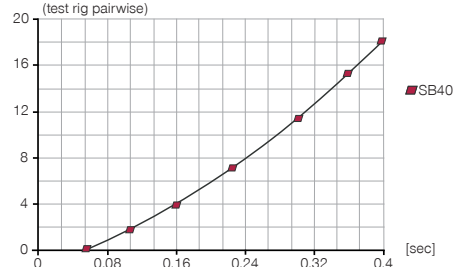
INSTALLATION SIZE SB40

▶ PRODUCT SPECIFICATIONS



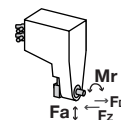
▶ Moment of inertia

[kg cm²] Shows the expected swivel time against the calculated moment of inertia (test rig pairwise)



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	770
Mr [Nm]	10.8
FD [N] *	385
FZ [N] *	385

▶ INCLUDED IN DELIVERY



2 [piece]
Stop 90°
GEH04160



6 [piece]
Sleeve For Proximity Switch
DMS03210



2 [piece]
Stop 180°
GEH04150



6 [piece]
Cylinder Pin
C632504100

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ4-E2-01
Inductive proximity switch - Cable 5 m



NJ4-E2SK-01
Inductive Proximity Switch Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



SB40-1
Basic jaw



SB40-2
Basic Jaw Rubberized



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



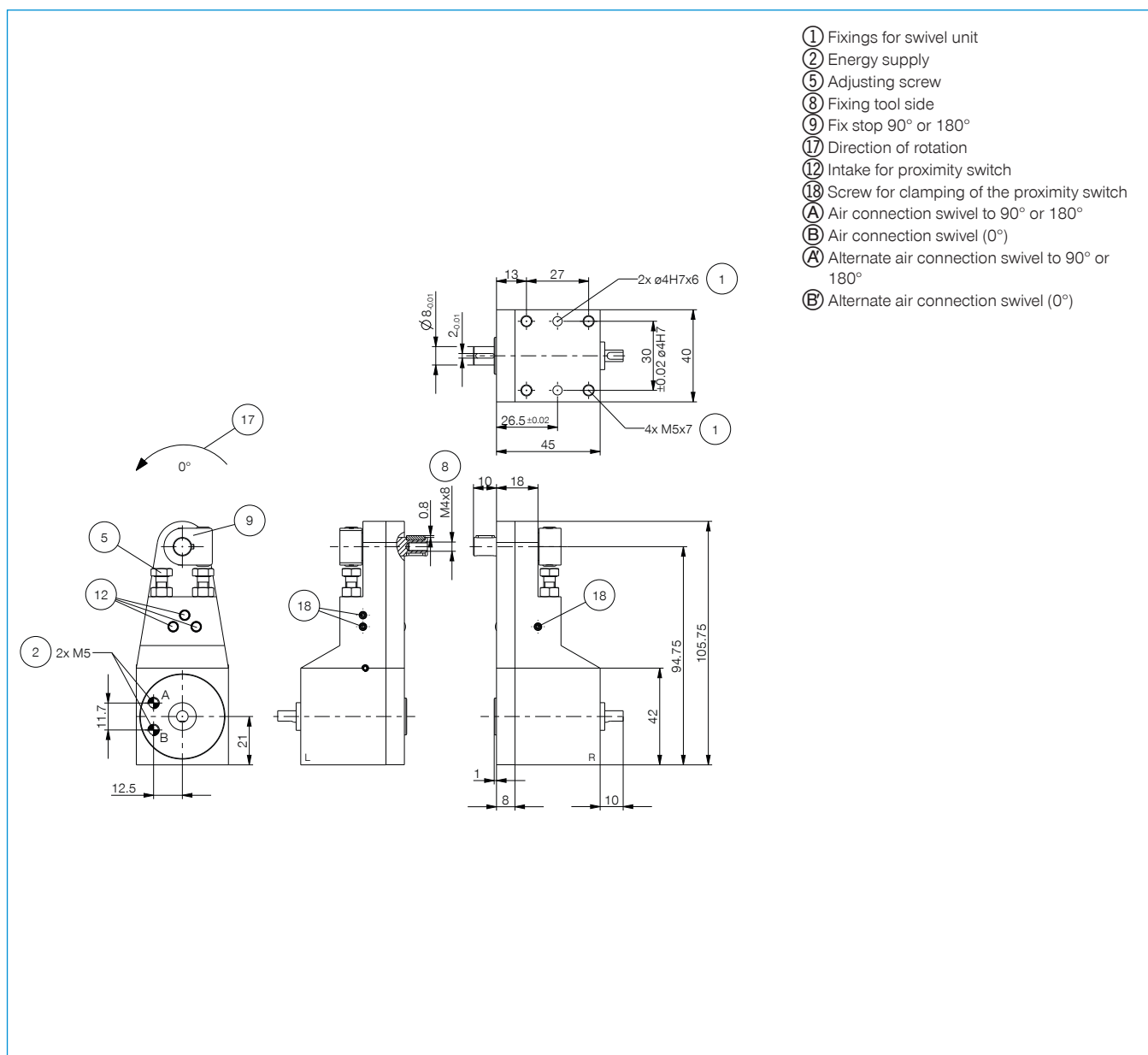
S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12

Order no.	SB40-B
Swivel angle [°]	90 / 180
Torque per jaw [Nm]	0.3
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.5
Operating pressure min. [bar]	3
Operating pressure max. [bar]	7
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	4
Weight (pair) [kg]	0.7
FD [N]*	385
FZ [N]*	385

*Observe the gripper force



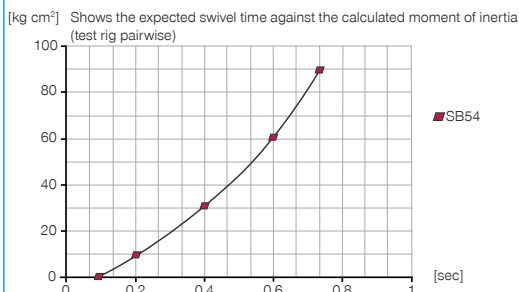
SWIVEL JAWS

INSTALLATION SIZE SB54

▶ PRODUCT SPECIFICATIONS

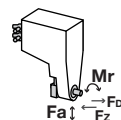


▶ Moment of inertia



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	850
Mr [Nm]	15.3
FD [N] *	425
FZ [N] *	425

▶ INCLUDED IN DELIVERY



2 [piece]
Stop 90°
GEH05501



6 [piece]
Sleeve For Proximity Switch
DMS03210



2 [piece]
Stop 180°
GEH05491



6 [piece]
Straight pin
KUN05410

▶ RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ4-E2-01
Inductive proximity switch - Cable 5 m



NJ4-E2SK-01
Inductive Proximity Switch Cable 0,3 m - Connector M8



CONNECTIONS / OTHER



SB54-1
Basic jaw



SB54-2
Basic Jaw Rubberized



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



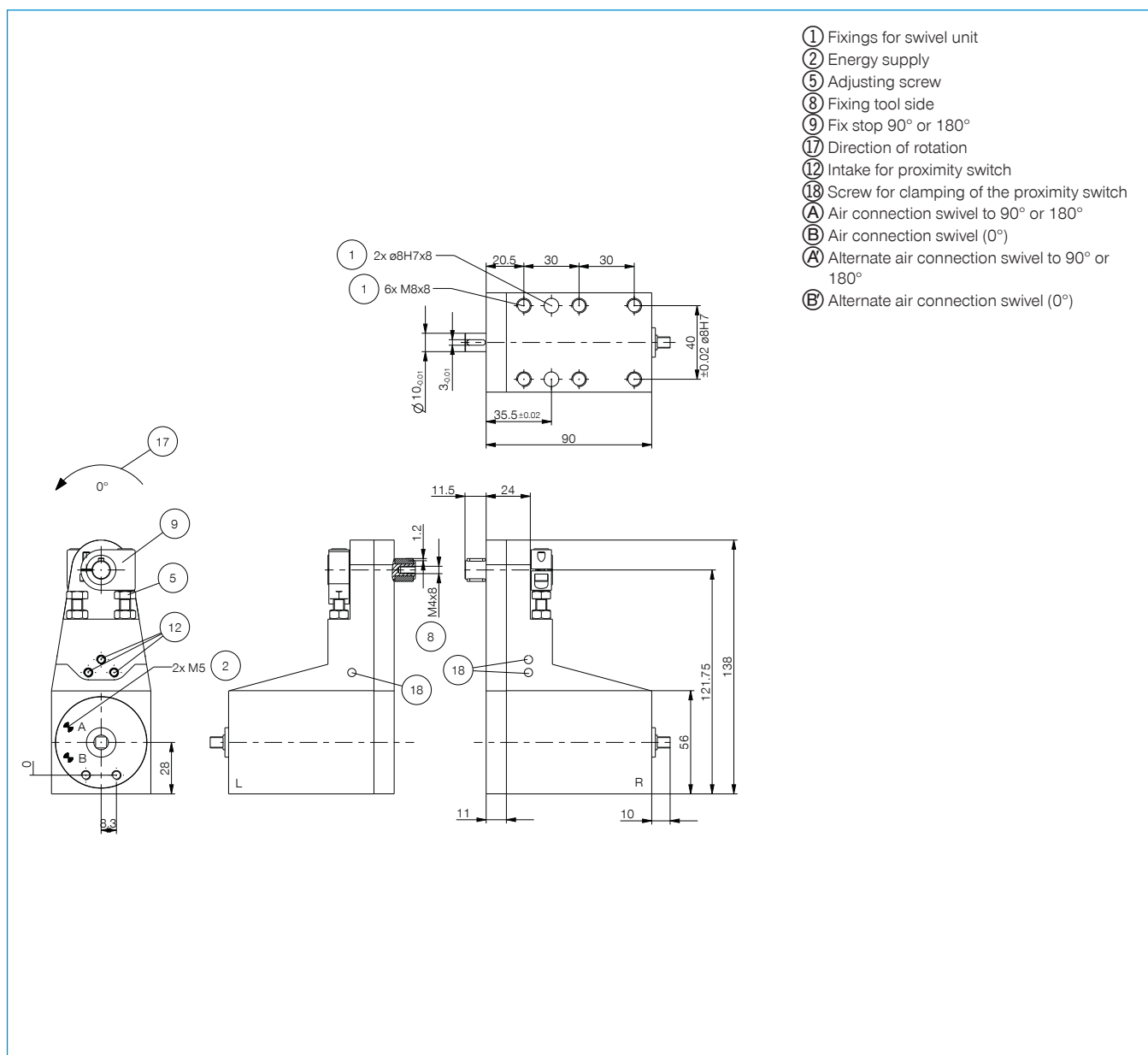
S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12

Order no.	SB54-B
Swivel angle [°]	90 / 180
Torque per jaw [Nm]	1.6
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.5
Operating pressure min. [bar]	3
Operating pressure max. [bar]	7
Nominal operating pressure [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	16
Weight (pair) [kg]	2.2
FD [N]*	425
FZ [N]*	425

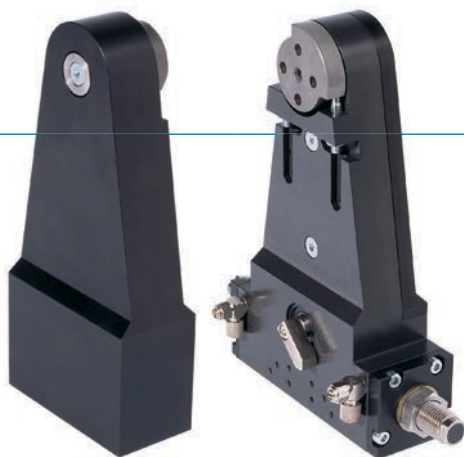
*Observe the gripper force



SWIVEL JAWS

SERIES SBZ

► PRODUCT ADVANTAGES



“The superior”

► Shock absorber with spiral groove technology

Superior end position damping lets you swivel more mass in the shortest amount of time, increasing your machine's component output











► Force transmission via gear wheel set

The robust gear wheels stand for precision, reliability and long service life and guarantee smooth operation

► Failure-free continuous operation

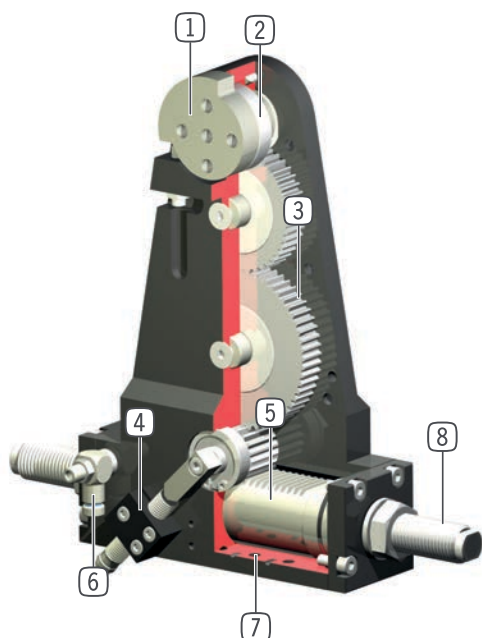
Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free cycles

► SERIES CHARACTERISTICS

Installation size		Version		
SBZXXX		-90	-180	G
 10 million maintenance-free cycles (max.)		•	•	
 IP54		•	•	
 Inductive sensor		•	•	
 Flange		•	•	•
 Powerstop end position damping		•	•	
 End positions adjustable +/- 3°		•	•	
 Positionability - 2 positions		•	•	
 Rotation angle 90°		•		•
 Rotation angle 180°			•	•
 Counter bearing without drive				•



► BENEFITS IN DETAIL



- 1 Two way bearing drive shaft**
 - high forces and moments capacity
- 2 Drive flange**
 - large size drive flange with end stop and large central hole (from SB150)
- 3 Force transfer**
 - stable gear wheel set
 - precise, reliable, durable
- 4 Position sensing**
 - inquiry of end positions 0° and 90° (or 180°) via inductive proximity switch
 - adjustable on rotatable switch cam
- 5 Drive**
 - double-acting pneumatic cylinder
- 6 Air flow control valve**
 - for speed regulation (included in the delivery)
- 7 Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- 8 Integrated and patented hydraulic shock absorbers**
 - adjustable end position damping

► TECHNICAL DATA

Installation size	Swivel angle [°]	Torque [Nm]	Weight [kg]	IP class
SB50	90 - 180	1,2	0,45 - 0,75	IP54
SB74	90 - 180	3,5	1,1 - 1,7	IP54
SB100	90 - 180	10	1,5 - 4	IP54
SB150	90 - 180	23	6,5 - 11	IP54
SB190	90 - 180	57	19,5 - 28	IP54

► FURTHER INFORMATION IS AVAILABLE ONLINE



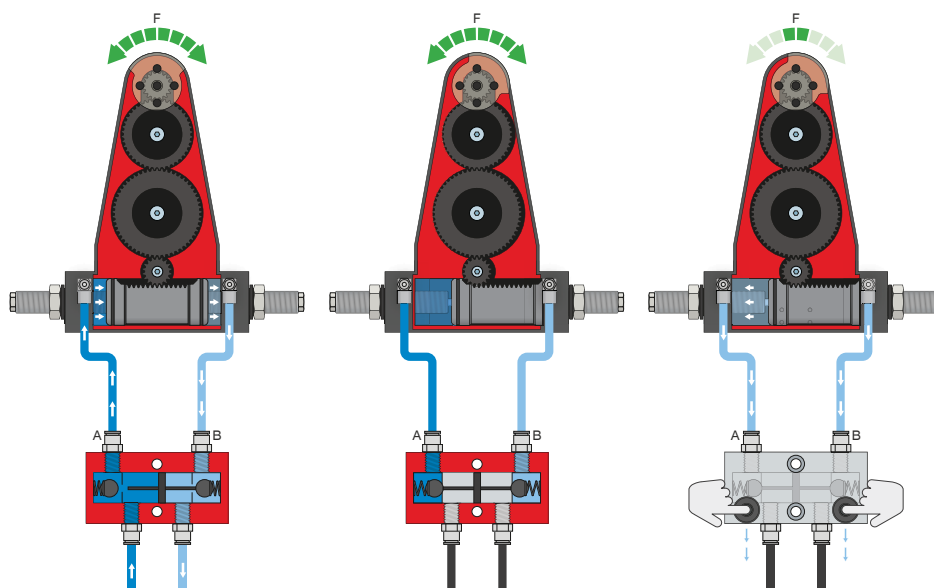
All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

SWIVEL JAWS

SERIES SBZ FUNCTIONAL DESCRIPTION



ENERGY SUPPLY



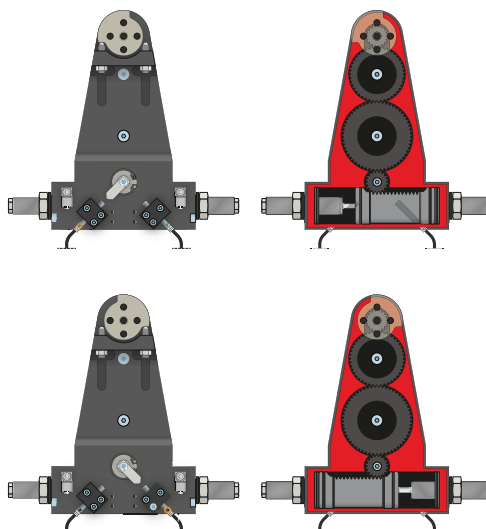
Pressure safety valve – DSV

Ensures safe retention of force and position if the system pressure drops

The integrated double check valve, which can be unlocked, retains the system pressure of the swivel jaw in case of EMERGENCY STOP. To ensure the function, the valve must be installed as close to the swivel jaw's air connection as possible. In variant E, two pushbuttons are installed that allow for controlled bleeding of the swivel jaw.



SENSORS

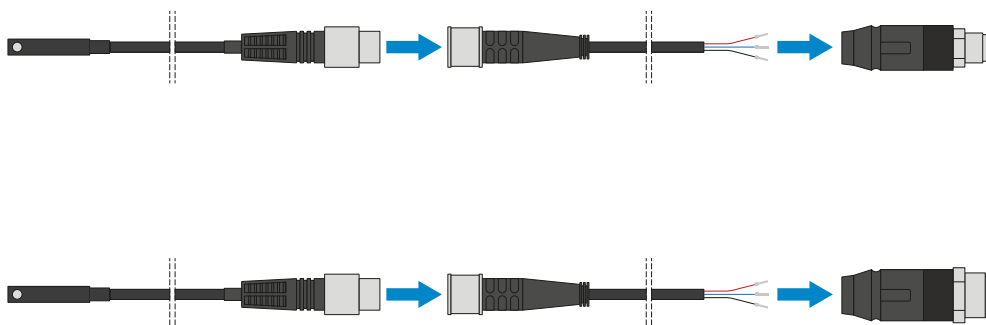


Inductive sensors – NJ

The sensor is inserted into the mounting block as far as it will go and secured. Tuning to the desired position then takes place by adjusting the cam switch. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector, as well as with direct plug orientation.



CONNECTIONS / OTHER



Plug-in connectors

For extending and fabricating the connection lines for the sensors

Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12.

SWIVEL JAWS

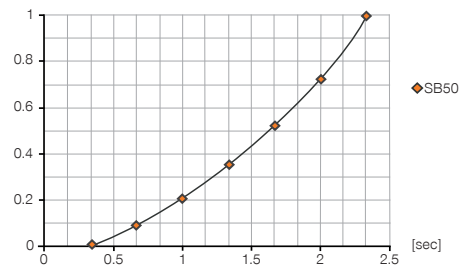
INSTALLATION SIZE SB50

► PRODUCT SPECIFICATIONS



► Moment of inertia

[kg m²] Shows the expected swivel time against the calculated moment of inertia



► Forces and moments

Indicates the static load on the bearing.



Fa [N]	1720
Mr [Nm]	15
FD [N] *	860
FZ [N] *	630

► INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K-02



2 [piece]
Flow Control Valves - with Swivel joint
DRVM5X4

► RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



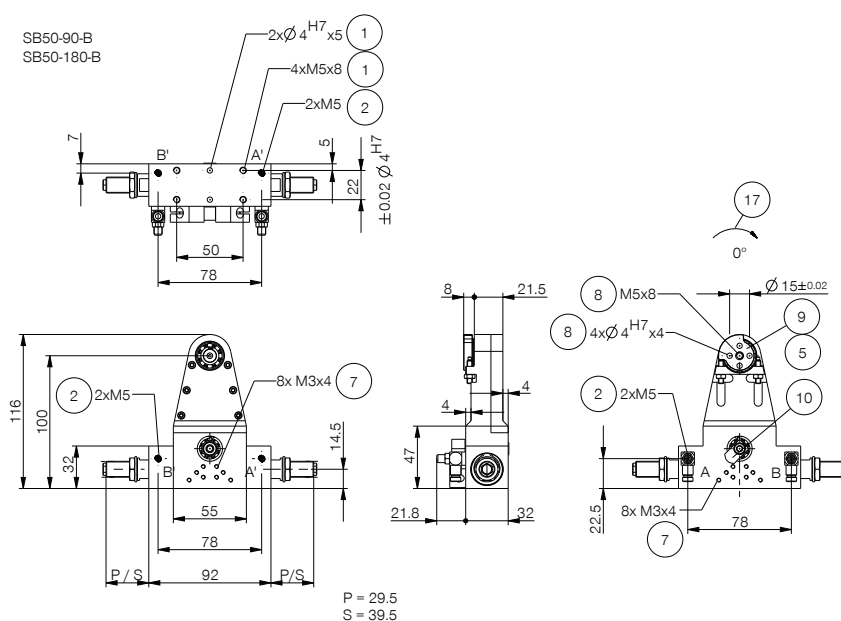
S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12

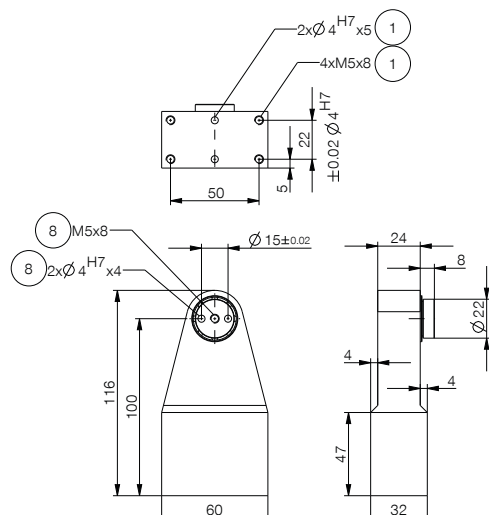
Order no.	► Technical data		
	SB50-90-B	SB50-180-B	SB50G
Swivel angle [°]	90	180	
Torque per jaw [Nm]	1.2	1.2	
Swivel angle regulable +/- [°]	3	3	
Repetition accuracy +/- [°]	0.01	0.01	
Operating pressure min. [bar]	3	3	
Operating pressure max. [bar]	8	8	
Nominal operating pressure [bar]	6	6	6
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	5.5	7.5	
Weight [kg]	0.75	0.75	0.45
FD [N]*	860	860	860
FZ [N]*	630	630	630

*Observe the gripper force



- ① Fixings for swivel unit
- ② Energy supply
- ⑤ Adjusting screw
- ⑦ Attachment for mounting block
- ⑧ Fixing tool side
- ⑨ Fix stop 90° or 180°
- ⑩ Switch cam 90° or 180°
- ⑪ Direction of rotation
- ⑫ Air connection swivel to 90° or 180°
- ⑬ Air connection swivel (0°)
- ⑭ Alternate air connection swivel to 90° or 180°
- ⑮ Alternate air connection swivel (0°)

SB50G



SWIVEL JAWS

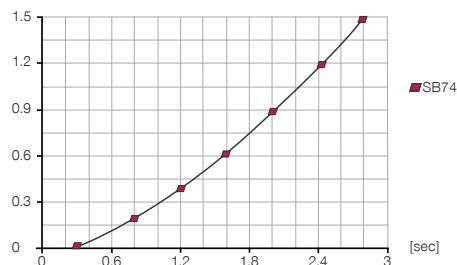
INSTALLATION SIZE SB74

► PRODUCT SPECIFICATIONS



► Moment of inertia

[kg m²] Shows the expected swivel time against the calculated moment of inertia



► Forces and moments

Indicates the static load on the bearing.



Fa [N]	2400
Mr [Nm]	20
FD [N] *	1200
FZ [N] *	630

► INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K-02



2 [piece]
Flow Control Valves - with Swivel joint
DRVM5X4

► RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

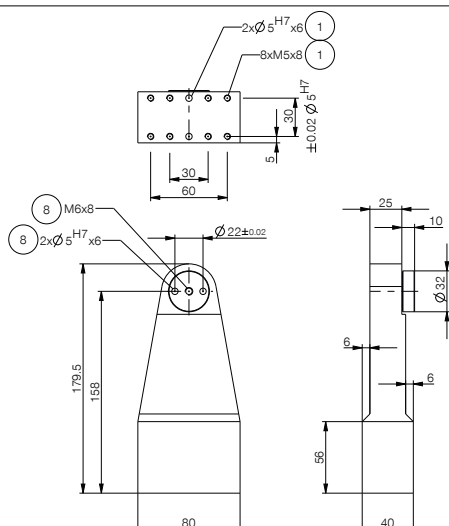
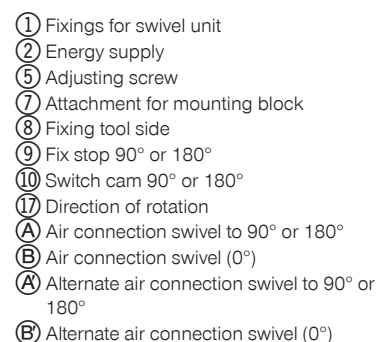


S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12

* Observe the gripper force



SWIVEL JAWS

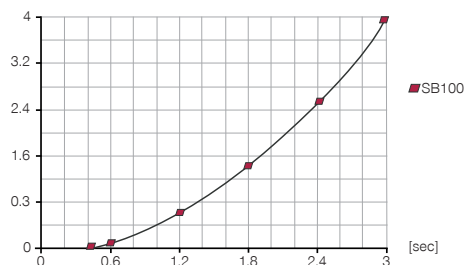
INSTALLATION SIZE SB100

► PRODUCT SPECIFICATIONS



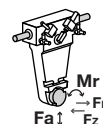
► Moment of inertia

[kg m²] Shows the expected swivel time against the calculated moment of inertia



► Forces and moments

Indicates the static load on the bearing.



Fa [N]	4000
Mr [Nm]	70
FD [N] *	2000
FZ [N] *	1200

► INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K-02



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-8X6

► RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)



S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12

SWIVEL JAWS

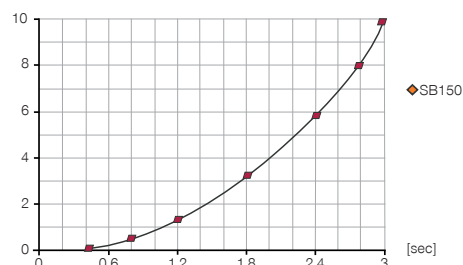
INSTALLATION SIZE SB150

► PRODUCT SPECIFICATIONS



► Moment of inertia

[kg m²] Shows the expected swivel time against the calculated moment of inertia



► Forces and moments

Indicates the static load on the bearing.



Fa [N]	15000
Mr [Nm]	270
FD [N] *	7500
FZ [N] *	3700

► INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB8K



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

► RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ8-E2
Inductive proximity switch - Cable 5 m



NJ8-E2S
Inductive proximity switch - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

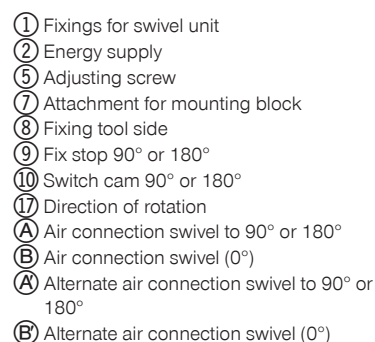


S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12

* Observe the gripper force



SWIVEL JAWS

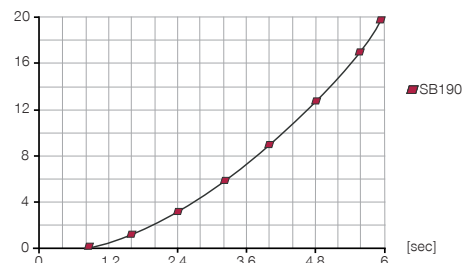
INSTALLATION SIZE SB190

PRODUCT SPECIFICATIONS



Moment of inertia

[kg m²] Shows the expected swivel time against the calculated moment of inertia



Forces and moments

Indicates the static load on the bearing.



Fa [N]	25000
Mr [Nm]	600
FD [N] *	12500
FZ [N] *	6100

INCLUDED IN DELIVERY



2 [piece]
Mounting block
KB12-03



2 [piece]
Flow Control Valves - with Swivel joint
DRV1-4X8

RECOMMENDED ACCESSORIES



ENERGY SUPPLY



DSV1-8
Pressure safety valve



DSV1-8E
Pressure safety valve with quick exhaust



SENSORS



NJ12-E2
Inductive proximity switch - Cable 5 m



NJ12-E2S
Inductive proximity switch - Connector M8



CONNECTIONS / OTHER



KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)



KAW500
Plug-in connector Angled Cable 5m - Socket M8 (female)

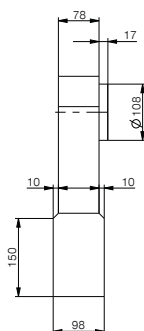
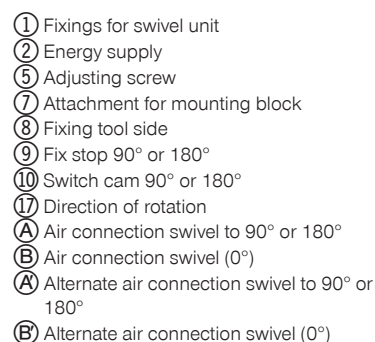


S8-G-3
Plug-in connector customizable Straight - Connector M8



S12-G-3
Plug-in connector customizable Straight - Connector M12

* Observe the gripper force





LINEAR CYLINDERS

OVERVIEW OF SERIES



PNEUMATIC



Series SHX

428



Series LI

430

LINEAR CYLINDERS

SERIES SHX

Series SHX / Linear Cylinders / pneumatic / Linear Modules





4

▶ PRODUCT ADVANTAGES



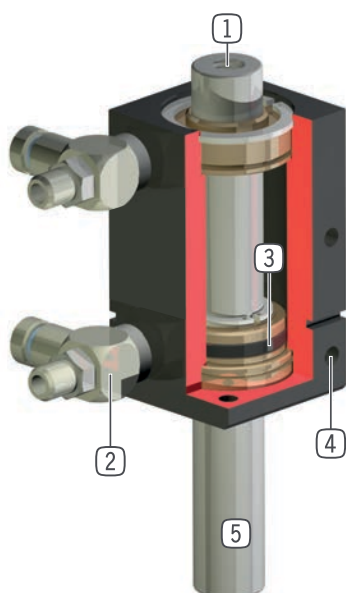
- ▶ **Proven technology**
We have more than 20 years of proven reliability, which ensures uninterrupted production for you
- ▶ **Constant drive force**
Equal force and travel time when retracting and extending increases your machine's process reliability
- ▶ **Failure-free continuous operation**
Our uncompromising "Made in Germany" quality guarantees up to 10 million maintenance-free cycles

▶ SERIES CHARACTERISTICS

Installation size		Version	
SH-X		-	D
	Continuous piston rod		•
	10 million maintenance-free cycles (max.)	•	•
	Inductive sensor	•	•
	IP54	•	•



► BENEFITS IN DETAIL



- ① **Connection to customer specific application**
 - possible from several sides on XD series
- ② **Energy supply**
 - reducing exhaust air is recommended
- ③ **Drive**
 - double-acting pneumatic cylinder
- ④ **Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- ⑤ **Piston rod**
 - polished, hard chrome plated steel
 - continuous in design XD

► TECHNICAL DATA

Installation size	Stroke [mm]	Retraction force [N]	Weight [kg]	IP class
SH-X	7 - 50	100	0,09 - 0,18	IP54
SH-XD	25 - 50	100	0,19 - 0,27	IP54

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

LINEAR CYLINDERS

SERIES LI

▶ PRODUCT ADVANTAGES



▶ Large locating flange

The large mounting surface simplifies your design and allows secure attachment of follow-on tools









▶ Dampened end position

By using PowerStop shock absorbers, you can gently move up to the end positions, increasing the process reliability and durability of your application

▶ Failure-free continuous operation

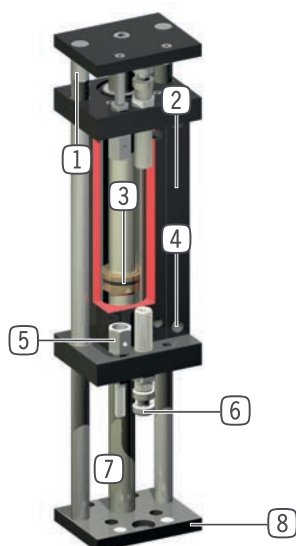
Our uncompromising "Made in Germany" quality guarantees up to 10 million maintenance-free cycles

▶ SERIES CHARACTERISTICS

Installation size		Version		
LIXX			D	S
	2 way guiding			•
	3 way guiding		•	
	Continuous piston rod		•	
	10 million maintenance-free cycles (max.)	•	•	•
	Inductive sensor	•	•	•
	Elastomer end position damping	•	•	•
	Powerstop end position damping	•	•	•
	IP 54	•	•	•



► BENEFITS IN DETAIL



- ① **Guide rod**
 - hardened, polished steel shaft
- ② **Mounting block**
 - mounting for inductive proximity switch
- ③ **Drive**
 - double-acting pneumatic cylinder
- ④ **Energy supply**
 - reducing exhaust air is recommended
- ⑤ **End stop confirmation screw**
 - direct flange position sensing
 - included in scope of delivery
- ⑥ **End position damping**
 - with elastomer absorber or patented hydraulic shock absorber
- ⑦ **Piston rod**
 - polished, hard chrome plated steel
 - continuous in design D
- ⑧ **Intake flange**
 - for connection to application-specific adapter plate (to be supplied by the customer)

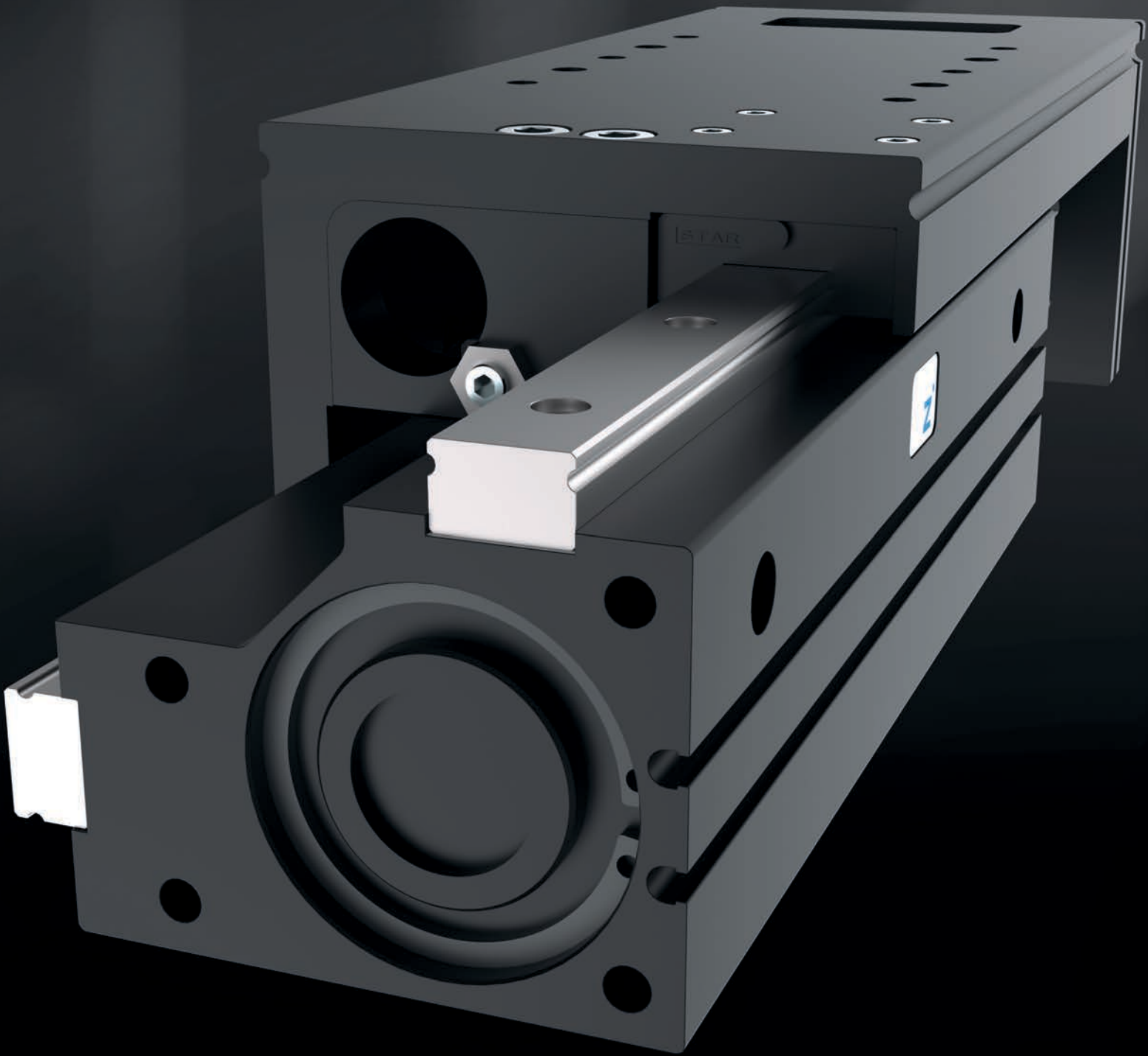
► TECHNICAL DATA

Installation size	Stroke [mm]	Pressure force max. [N]	Retraction force [N]	Weight [kg]	IP class
LI16	20 - 50	80 - 100	80	0,05 - 0,1	IP54
LI30	15 - 90	200 - 270	200	0,05 - 0,1	IP54
LI40	40 - 300	270 - 450	270	0,05 - 0,3	IP54
LI50	50 - 300	950	950	0,03 - 0,2	IP54

► FURTHER INFORMATION IS AVAILABLE ONLINE

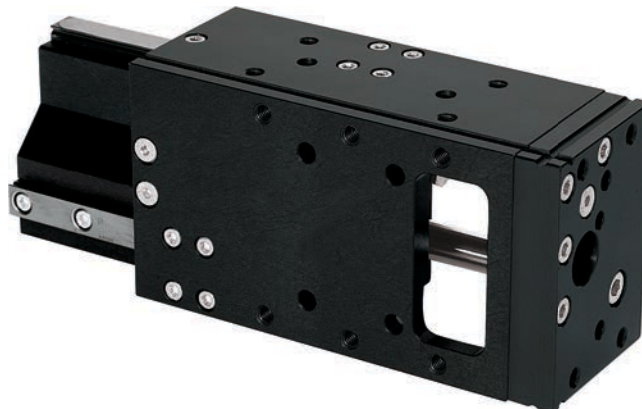


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LINEAR RAIL SLIDES

OVERVIEW OF SERIES



PNEUMATIC



Series LS

434



Series LSF

436



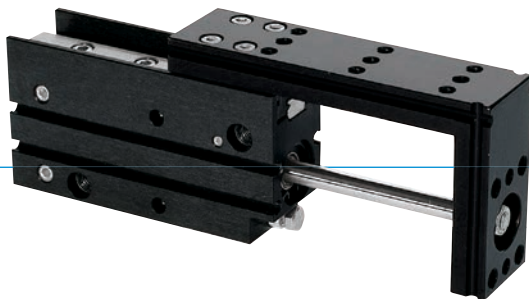
Series LSX

438

LINEAR RAIL SLIDES

SERIES LS

▶ PRODUCT ADVANTAGES



▶ **Precise profile guide**

The linear guide with ball bearing circulation and scrapers provides high precision and rigidity




▶ **Standardised adapter plate**

Reduce your manufacturing effort and ensure standardisation for your follow-on tools

▶ **Modular layout**

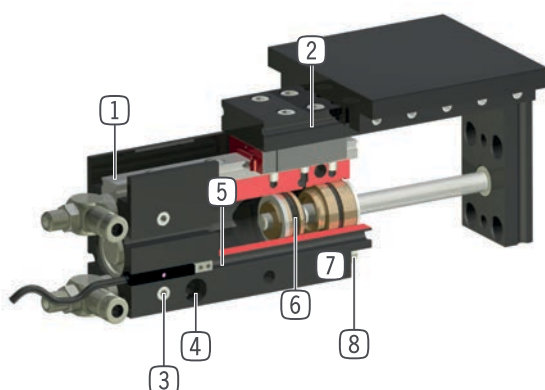
Makes it possible to combine several units directly to each other and to minimise your design effort

▶ SERIES CHARACTERISTICS

Installation size		
LSXX-XX		
 10 Mio	10 million maintenance-free cycles (max.)	●
	Magnetic field sensor	●
	IP40	●



► BENEFITS IN DETAIL



- ① **Linear guide with recirculating ball and wiper**
 - dual linear guidance for high forces and moments capacity
- ② **Mounting groove**
 - quick and cost-effective positioning of adapter plates: Accessory, Art. No. AP...G
- ③ **Energy supply**
 - possible from several sides
- ④ **Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- ⑤ **Mounting groove for magnetic field sensor integrated, space saving position sensing**
- ⑥ **Drive**
 - double-acting pneumatic cylinder
- ⑦ **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ⑧ **Stroke limiting screw**

► TECHNICAL DATA

Installation size	Stroke [mm]	Pressure force max. [N]	Retraction force [N]	Weight [kg]	IP class
LS10	25 - 50	40	30	0,15 - 0,2	IP40
LS16	25 - 50	100	85	0,25 - 0,3	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE

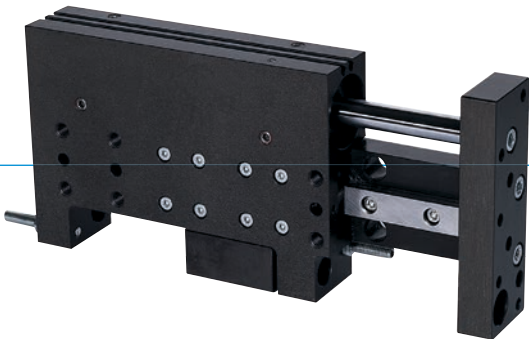


All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

LINEAR RAIL SLIDES






SERIES LSF

▶ PRODUCT ADVANTAGES



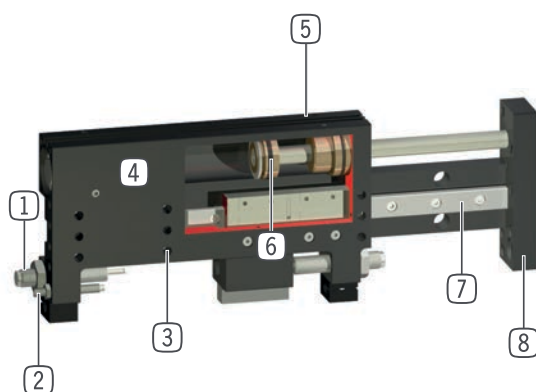
- ▶ **Precise profile guide**
The linear guide with ball bearing circulation and scrapers provides high precision and rigidity
- ▶ **Dampened end position**
By using PowerStop shock absorbers, you can gently move up to the end positions, increasing the process reliability and durability of your application
- ▶ **Flat structure**
Reduces the interference contours for your application

▶ SERIES CHARACTERISTICS

Installation size	
LSFXX-XX	
 10 million maintenance-free cycles (max.)	●
 Inductive sensor	●
 Magnetic field sensor	●
 Powerstop end position damping	●
 IP 40	●



► BENEFITS IN DETAIL



- ① **Patented, hydraulic shock absorber**
 - adjustable end position damping
 - included in scope of delivery
- ② **Stroke limiting screw**
- ③ **Mounting and positioning**
 - possible from several sides
- ④ **Robust, lightweight and extremely flat structure housing**
 - Hard-coated aluminum alloy
- ⑤ **Mounting groove for magnetic field sensor**
 - integrated, space saving position sensing
- ⑥ **Drive**
 - double-acting pneumatic cylinder
- ⑦ **Linear guide with recirculating ball and wiper**
 - dual linear guidance for high forces and moments capacity
- ⑧ **Intake flange**
 - simple application connection

► TECHNICAL DATA

Installation size	Stroke [mm]	Pressure force max. [N]	Retraction force [N]	Weight [kg]	IP class
LSF25	50 - 100	265	220	1 - 1,3	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

LINEAR RAIL SLIDES

SERIES LSX

PRODUCT ADVANTAGES



► **Precise double rail profile guide**

The linear guide with ball bearing circulation and scrapers provides high precision and rigidity





► **Dampened end position**

By using PowerStop shock absorbers, you can gently move up to the end positions, increasing the process reliability and durability of your application

► **Failure-free continuous operation**

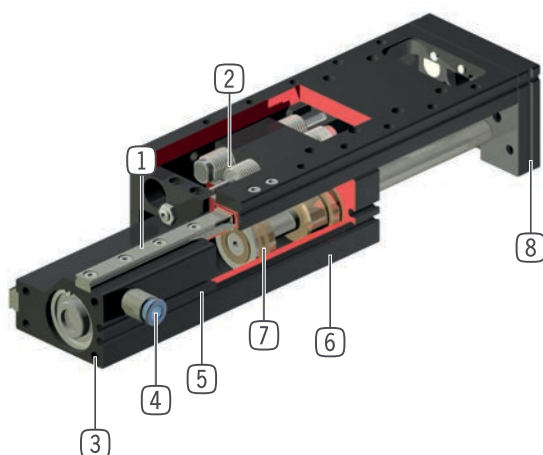
Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free cycles

SERIES CHARACTERISTICS

Installation size	
LSXYY-YY	
 10 million maintenance-free cycles (max.)	●
 Magnetic field sensor	●
 Powerstop end position damping	●
 IP40	●



► BENEFITS IN DETAIL



- ① **Linear guide with recirculating ball and wiper**
 - two way linear guide for forces and moments capacity
- ② **Patented, hydraulic shock absorber**
 - adjustable end position damping
 - included in scope of delivery
- ③ **Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- ④ **Energy supply**
 - possible from several sides
- ⑤ **Mounting groove for magnetic field sensor**
 - integrated, space saving position sensing
- ⑥ **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ⑦ **Drive**
 - double-acting pneumatic cylinder
- ⑧ **Intake flange**
 - quick and cost-effective positioning of adapter plates: Accessory, Art. No. AP...G and AP...V

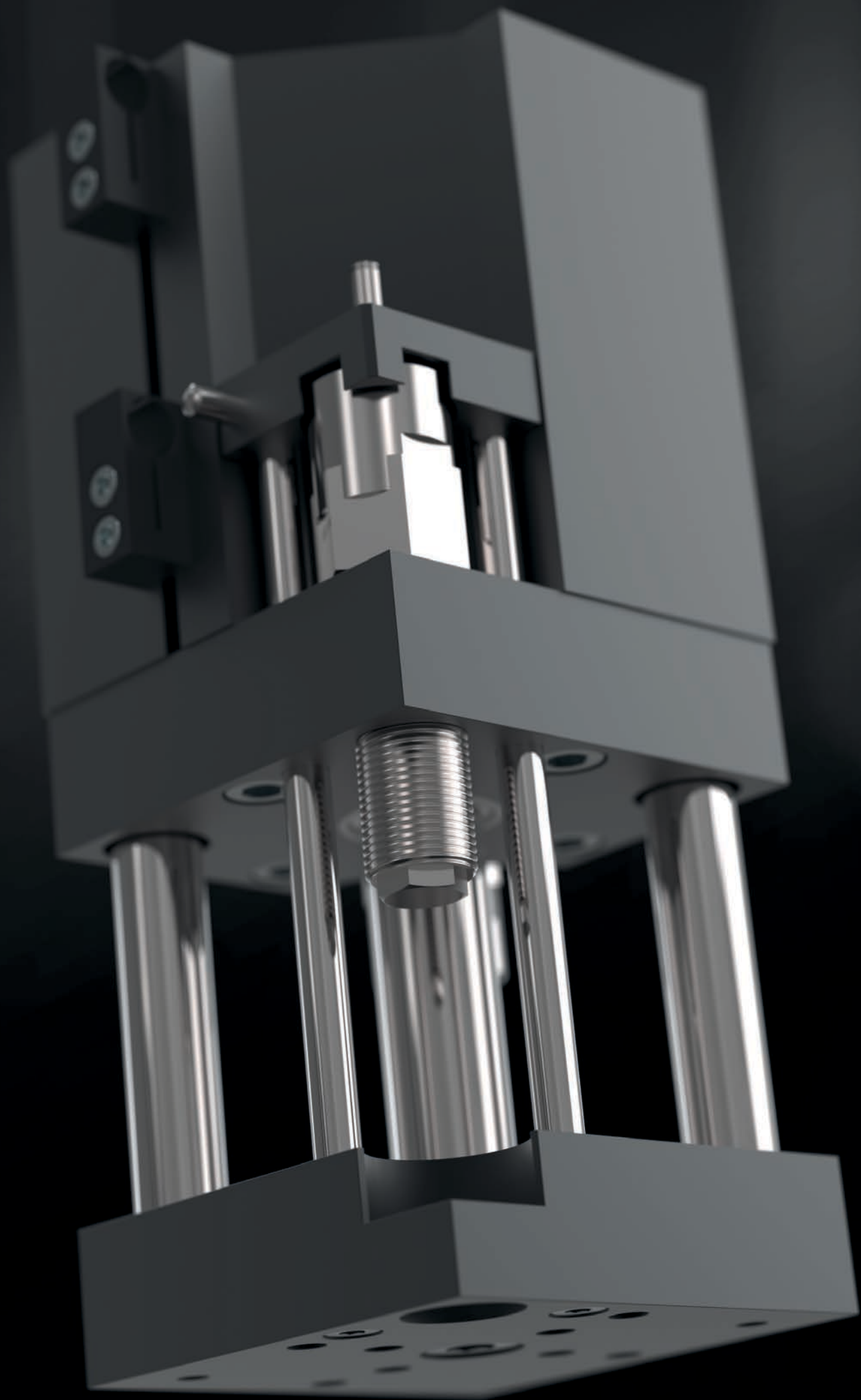
► TECHNICAL DATA

Installation size	Stroke [mm]	Pressure force max. [N]	Retraction force [N]	Weight [kg]	IP class
LSX25	50 - 200	265	220	1 - 1,9	IP40
LSX40	100 - 200	750	680	3,2 - 4,4	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE

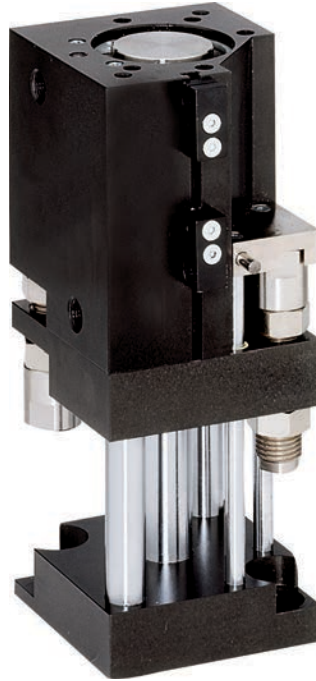


All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



LIFTING CYLINDERS

OVERVIEW OF SERIES



PNEUMATIC



Series HZ

442

LIFTING CYLINDERS

SERIES HZ





4
Series HZ / Lifting Cylinders / pneumatic / Linear Modules

▶ PRODUCT ADVANTAGES



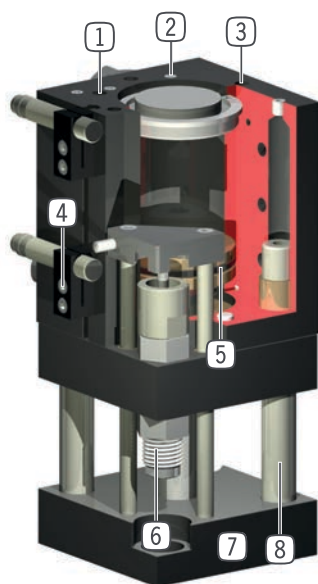
- ▶ **Hoseless air passage**
Eliminates undefined interference contours and wear-prone hoses and increases the safety of your application in the process
- ▶ **Dampened end position**
By using PowerStop shock absorbers, you can gently move up to the end positions, increasing the process reliability and durability of your application
- ▶ **Very robust**
Two ground and hard chrome-plated guide rods guarantee a secure process sequence with their rigidity and long service life

▶ SERIES CHARACTERISTICS

Installation size		
HZXX-XXXD2		
 10 million maintenance-free cycles (max.)		●
 Inductive sensor		●
 Powerstop end position damping		●
 IP40		●



► BENEFITS IN DETAIL



- ① **Integrated air feed-through**
 - for hoseless air transfer
- ② **Energy supply**
 - possible from several sides
- ③ **Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- ④ **Mounting block**
 - mounting for inductive proximity switch
- ⑤ **Drive**
 - double-acting pneumatic cylinder
- ⑥ **Patented, hydraulic shock absorber**
 - adjustable end position damping
- ⑦ **Intake flange**
 - for fixing to the customer specific application
- ⑧ **Two guide rods**
 - high forces and moments capacity

► TECHNICAL DATA

Installation size	Stroke [mm]	Pressure force max. [N]	Retraction force [N]	Weight [kg]	IP class
HZ40	50 - 100	720	600	0,1 - 0,15	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



CUTTING TONGS

OVERVIEW OF SERIES



PNEUMATIC



Series ZK1000

446



Series ZK

448

CUTTING TONGS

SERIES ZK1000

▶ PRODUCT ADVANTAGES



▶ **Extremely lightweight**

This light weight generally allows the use of a smaller moving axis, reducing the overall costs of the application in the process





▶ **Integrated magnetic field sensing**

One of the few cutting tongs on the market that can have its position queried and transferred to the control system with process reliability

▶ **Decide for yourself!**

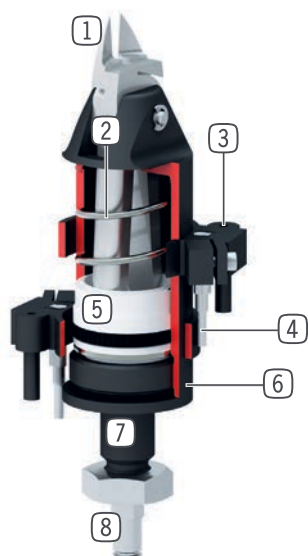
Sprue or steel wire: The variety of cutting geometries and materials ensure you always find the correct cuttings

▶ SERIES CHARACTERISTICS

Installation size	
ZK10XX	
 5 Mio	5 million maintenance-free cycles (max.)
	Spring opening O
	Magnetic field sensor
	IP30



► BENEFITS IN DETAIL



- ① **Cutting insert**
 - flexible applicable due to specific cutting geometry
- ② **Return spring**
 - to open the cuttings
- ③ **Mounting clamp**
 - mounting and positioning of magnetic field sensors
- ④ **Magnetic field sensor**
 - for position sensing
- ⑤ **Drive**
 - single-acting pneumatic cylinder
- ⑥ **Housing**
 - Hard-coated aluminum alloy
- ⑦ **Mounting and positioning**
 - via fit, thread and lock nut
- ⑧ **Energy supply**

► TECHNICAL DATA

Installation size	Stroke [°]	Gripping moment [Nm]	Weight [kg]	IP class
ZK1030	4.25	14	0.08	IP30
ZK1036	5	40	0.13	IP30
ZK1045	8.5	98	0.24	IP30
ZK1065	13	400	0.67	IP30

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

CUTTING TONGS

SERIES ZK




5 Series ZK / Cutting Tongs / pneumatic / Cutting Tongs

▶ PRODUCT ADVANTAGES



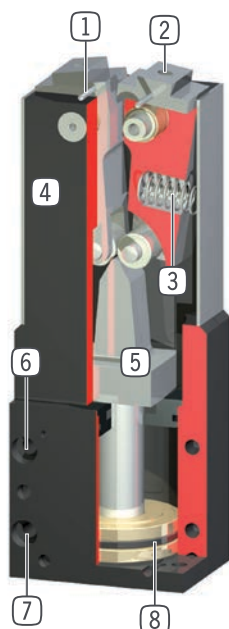
- ▶ **Flat structure**
Reduces the interference contours and enables simple integration into your machine design
- ▶ **Decide for yourself!**
The gripper jaw holder provides the option to adapt standard cutting, gripper jaws or your own design
- ▶ **Failure-free continuous operation**
Our uncompromising “Made in Germany” quality guarantees up to 5 million maintenance-free gripping cycles

▶ SERIES CHARACTERISTICS

Installation size		
ZKXX		
 5 million maintenance-free cycles (max.)		●
 Inductive sensor		●
 IP 40		●



► BENEFITS IN DETAIL



- ① **Switch cam**
 - for position sensing
- ② **Mounting**
 - for individual jaws, knives, chucks and similar
- ③ **Integrated spring**
 - supports jaw return (ZK33)
- ④ **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ⑤ **Force transfer**
 - via wedge and rollers
- ⑥ **Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- ⑦ **Energy supply**
 - possible from several sides
- ⑧ **Drive**
 - double-acting pneumatic cylinder

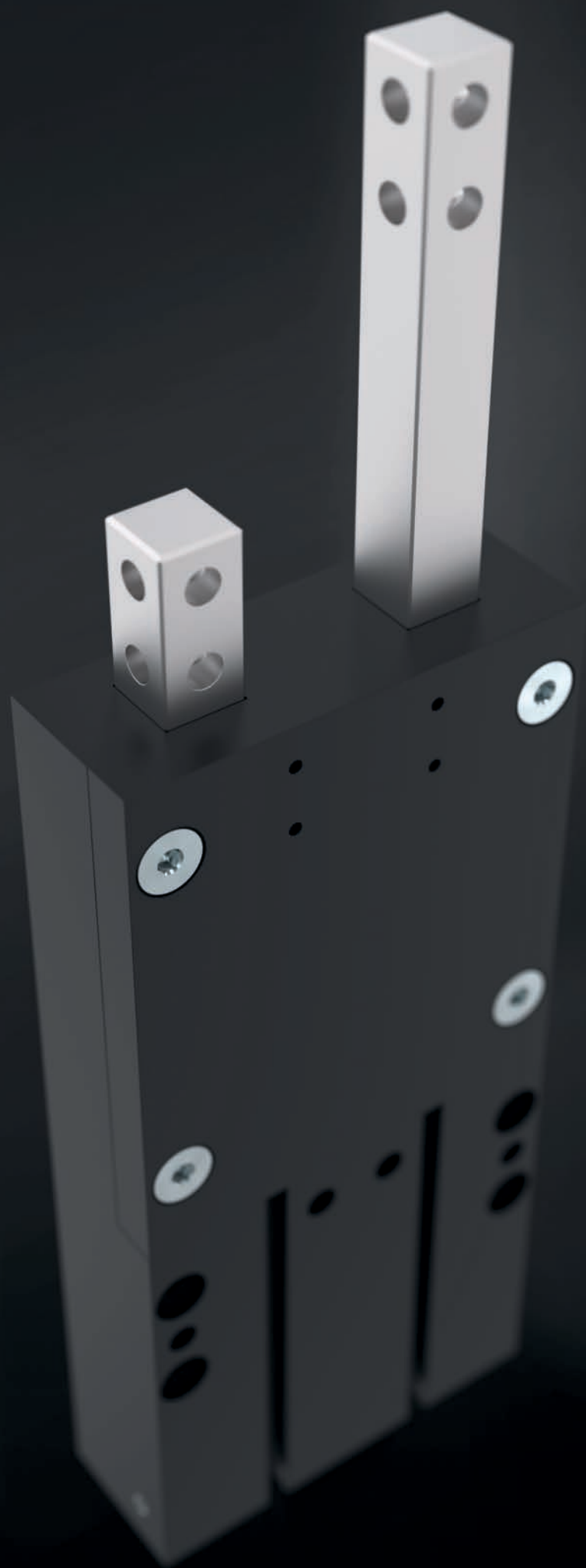
► TECHNICAL DATA

Installation size	Stroke [°]	Gripping moment [Nm]	Weight [kg]	IP class
ZK22	7.5	54	0.79	IP40
ZK33	9	110	1.3	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE

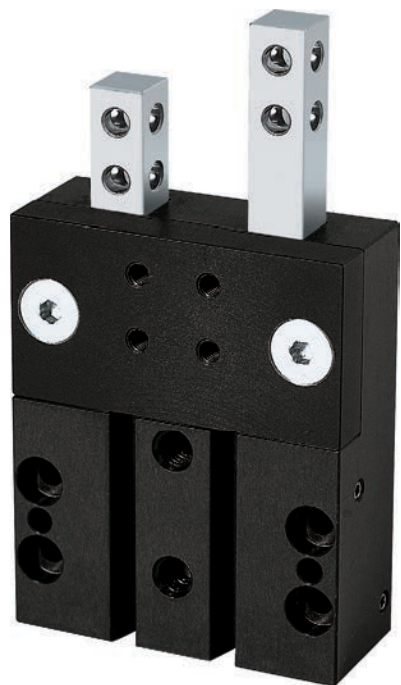


All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.



SEPARATORS

OVERVIEW OF SERIES



PNEUMATIC



Series VEG

452



Series VE

454

SEPARATORS

SERIES VEG

▶ PRODUCT ADVANTAGES



▶ **Hardened stainless steel guide**

This guide is robust, reliable and durable: Exactly what you need for your application!





▶ **Decide for yourself!**

Sensing via magnetic field sensors or inductive proximity switches: Unlike the benchmark, you are free to choose!

▶ **Failure-free continuous operation**

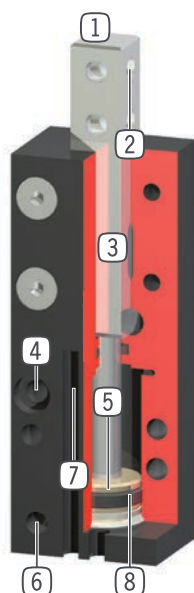
Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free cycles

▶ SERIES CHARACTERISTICS

Installation size		
VEGXX		
 10 million maintenance-free cycles (max.)		●
 Inductive sensor		●
 Magnetic field sensor		●
 IP40		●



► BENEFITS IN DETAIL



- ① **Tapped rod**
- hardened steel
- ② **Mounting**
- individual separator finger mounting
- ③ **Square guide**
- rugged, high forces and moments capacity
- ④ **Mounting and positioning**
- mounting possible from several sides for versatile positioning
- ⑤ **Drive**
- double-acting pneumatic cylinder
- ⑥ **Energy supply**
- ⑦ **Sensing**
- groove for positioning of the magnetic field sensor
- ⑧ **Permanent magnet**
- installed in piston area

► TECHNICAL DATA

Installation size	Stroke [mm]	Force in retract [N]	Force in extend [N]	Weight [kg]	IP class
VEG10	10	30	40	0.075	IP40
VEG14	20	65	80	0.142	IP40
VEG15	40	65	80	0.2	IP40
VEG22	30	170	220	0.5	IP40
VEG23	60	170	220	0.75	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE

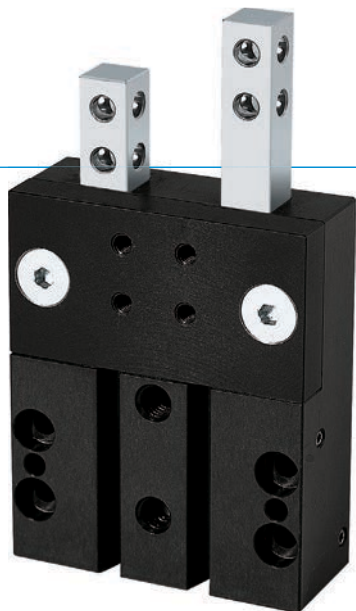


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SEPARATORS

SERIES VE

▶ PRODUCT ADVANTAGES



▶ Mechanical forced control

Guarantees process reliability for your application since only one workpiece can be separated and guided through at a time





▶ Decide for yourself!

Sensing via magnetic field sensors or inductive proximity switches: Unlike the benchmark, you are free to choose!

▶ Failure-free continuous operation

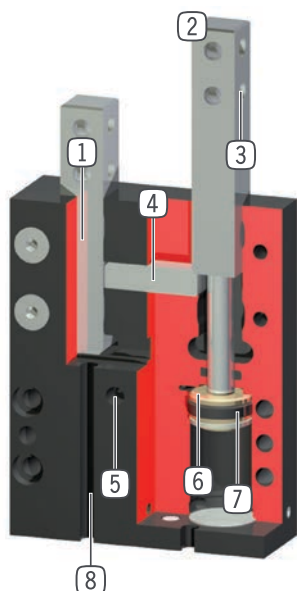
Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free cycles

▶ SERIES CHARACTERISTICS

Installation size		
VEXX		
 10 million maintenance-free cycles (max.)		●
 Inductive sensor		●
 Magnetic field sensor		●
 IP40		●



► BENEFITS IN DETAIL



- ① **Square guide**
- rugged, high forces and moments capacity
- ② **Tapped rod**
- hardened steel
- ③ **Mounting**
- individual separator finger mounting
- ④ **Locking**
- integrated, mechanical locking
- ⑤ **Energy supply**
- possible from several sides
- ⑥ **Drive**
- two double-acting pneumatic cylinders
- ⑦ **Permanent magnet**
- installed in piston area
- ⑧ **Sensing**
- groove for positioning of the magnetic field sensor

► TECHNICAL DATA

Installation size	Stroke [mm]	Force in retract [N]	Force in extend [N]	Weight [kg]	IP class
VE10	10	30	40	0.12	IP40
VE14	20	65	80	0.3	IP40
VE15	40	65	80	0.48	IP40
VE22	30	170	220	0.915	IP40
VE23	60	170	220	1.5	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE



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SEPARATORS

OVERVIEW OF SERIES



ELECTRICAL



Series VEE9200

458

SEPARATORS

SERIES VEE9200

▶ PRODUCT ADVANTAGES



▶ 250 cycles per minute

If speed is the key, nothing beats this unit. This lets you increase your component output and lower your unit costs,





▶ Saving energy with pulse control

You only have to supply current briefly when retracting and extending the plunger. No energy is required at the end positions

▶ Plug and play

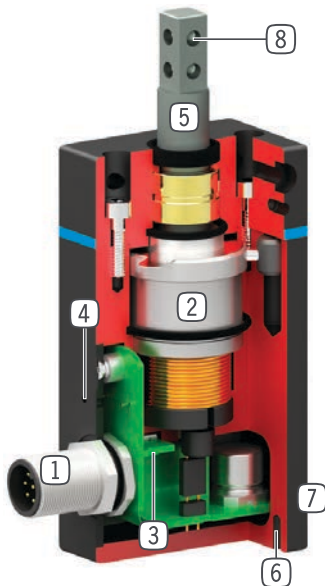
Reduce your design and programming effort to a minimum with the integrated control system and the 2-position query

▶ SERIES CHARACTERISTICS

Installation size		
VEE92XX		
 I/O	Digital I/O	•
 30 Mio	30 million maintenance-free cycles (max.)	•
	Integrated sensing	•
 IP 40	IP40	•



► BENEFITS IN DETAIL



- 1 Energy supply**
 - standardized interface M12 round connector
- 2 Drive**
 - via Pot magnet and coil bobbin according to the coil system principle
 - energy consumption only at impulse <25 ms
- 3 Position sensing**
 - integrated Hallsensor
 - 2 positions monitorable
- 4 Status control**
 - optical LED position display
- 5 Tapped rod**
 - Aluminium hardcoated
- 6 Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- 7 Robust, lightweight housing**
 - Hard-coated aluminum alloy
- 8 Mounting**
 - individual separator finger mounting

► TECHNICAL DATA

Installation size	Stroke [mm]	Force in retract [N]	Force in extend [N]	Weight [kg]	IP class
VEE9200	10 - 20	8 - 10	8 - 10	0,24 - 0,3	IP40

► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

BALL JOINTS

SERIES KG

▶ PRODUCT ADVANTAGES



▶ Lockable displacement position

Be flexible in your application, customise the handling to your workpiece and lock the displacement position with process reliability

▶ Large locating flange

The large mounting surface simplifies your design and allows secure attachment of add-on components

▶ Steel design

The highest force and torque measurement enables flexible for maximum dynamics

▶ THE BEST PRODUCT FOR YOUR APPLICATION



▶ Our products welcome the challenge!

Extreme conditions, all over the world—our tried and tested components and systems give you endless possibilities.

Find the best product for your specific use:

www.zimmer-group.com

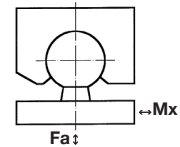


► PRODUCT SPECIFICATIONS



► Forces and moments

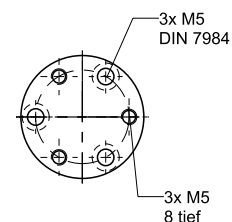
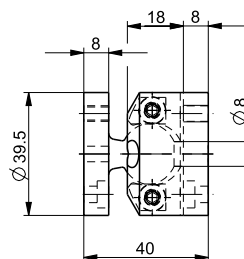
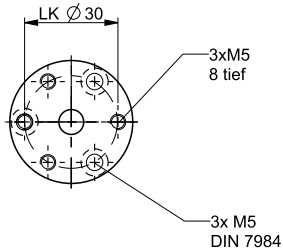
Shows static forces and torques which may impact on the ball joint



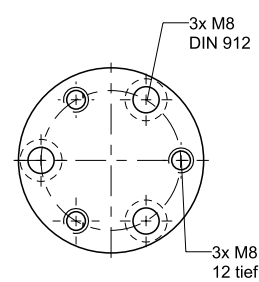
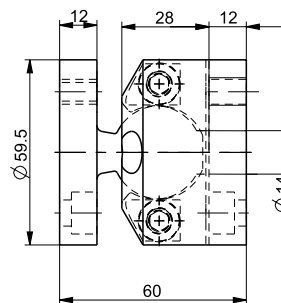
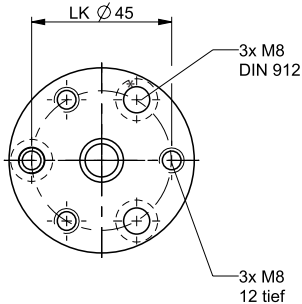
► Technical data

Order no.	KG40	KG40ST	KG60	KG60ST	KG80	KG80ST
Swivel angle [°]	30	30	30	30	30	30
Mx [Nm]	18	18	55	55	124	124
Fa [N]	7500	18000	15000	45000	28000	70000
Weight [kg]	0.1	0.3	0.3	0.9	0.8	2.3

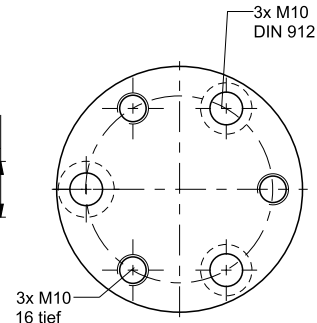
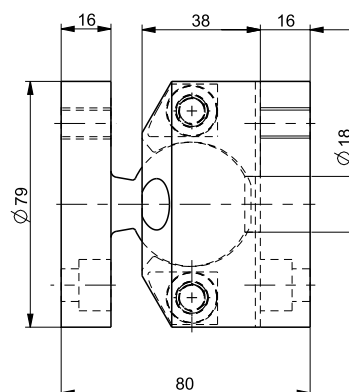
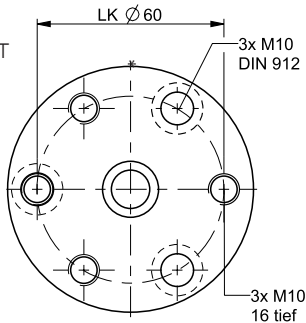
KG40
KG40ST

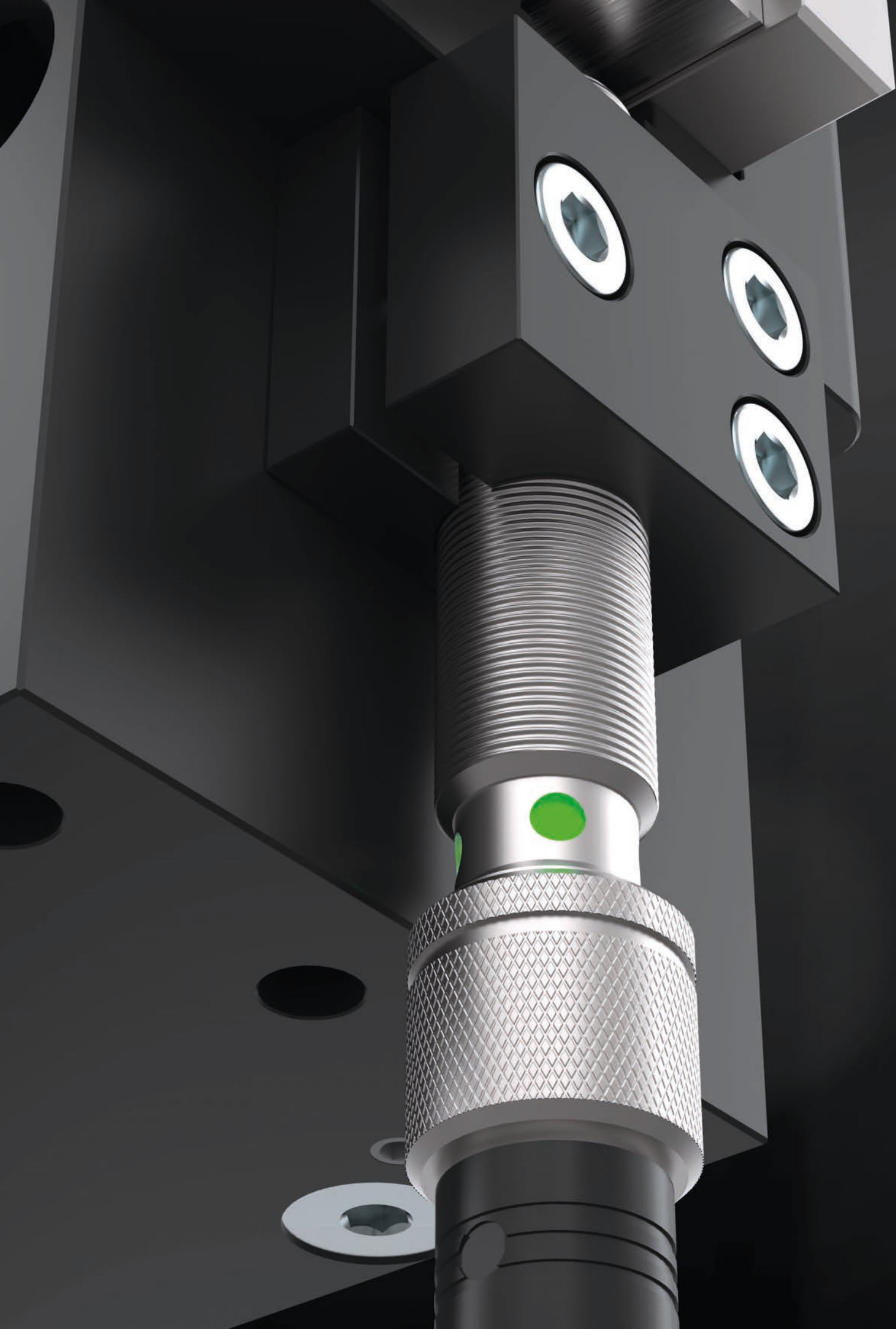


KG60
KG60ST



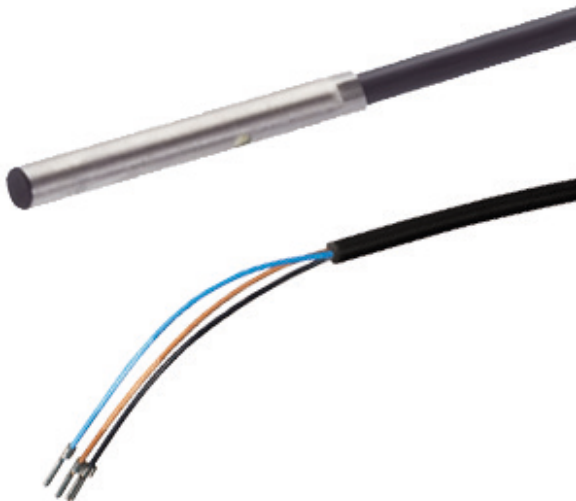
KG80
KG80ST













SENSORS & HOLDERS

OVERVIEW OF SERIES

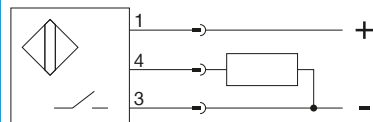


INDUCTIVE PROXIMITY SWITCHES		
	Series NJ	464
MAGNETIC FIELD SENSORS		
	Series MFS	468
SENSOR CABLES		
	Series KAG	474
	Series KAW	475
	Series S	475
STOP STROKE ADJUSTMENT SCREWS		
	Series AI	477
	Series AO	477
HOLDERS		
	Series KB	478

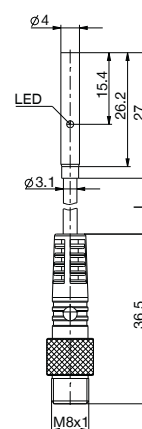
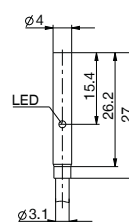
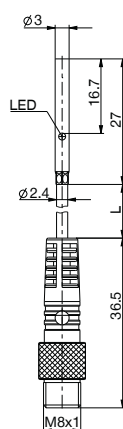
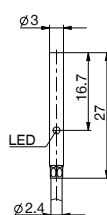
SENSORS AND HOLDERS

INDUCTIVE PROXIMITY SWITCHES

► SERIES NJ - INDUCTIVE PROXIMITY SWITCHES



PNP
Normally open (NO)

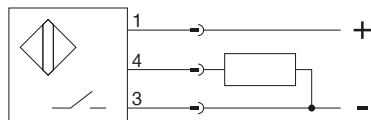


► Technical data

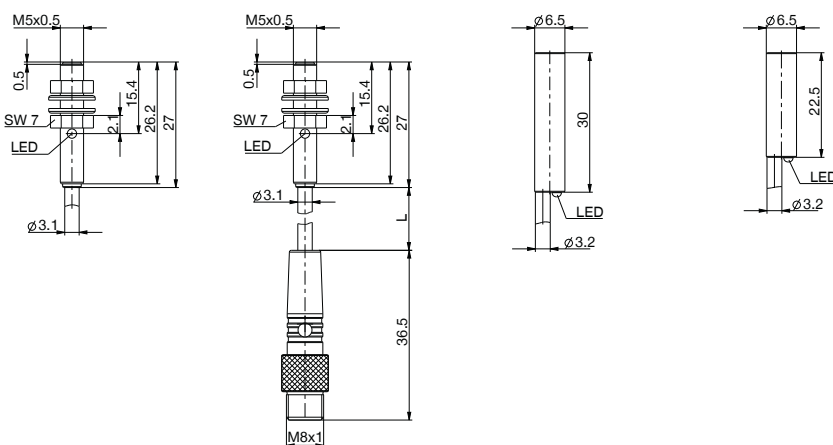
Order no.	NJ3-E2	NJ3-E2SK	NJ4-E2-01	NJ4-E2SK-01
Connection type	Cable	Cable/Connector M8	Cable	Cable/Connector M8
Sensor-Ø [mm]	3.0	3.0	4.0	4.0
Installation type	flush	flush	flush	flush
Rated operating distance S_n [mm]	1.00	1.00	1.50	1.50
Assured switching distance S_a [mm]	0.80	0.80	1.21	1.21
Supply voltage [V DC]	10 ... 30	10 ... 30	10 ... 30	10 ... 30
Load current capacity [mA]	100	100	100	100
Current consumption max. [mA]	<12	<12	<12	<12
Protected against polarity reversal	Yes	Yes	Yes	Yes
Short-circuit-proof	Yes	Yes	Yes	Yes
Function display	Yes	Yes	Yes	Yes
Repetition accuracy [%]	<5	<5	<5	<5
Ambient temperature range [°C]	-25 ... +70	-25 ... +70	-25 ... +70	-25 ... +70
Switching frequency [Hz]	3500	3500	5000	5000
Protection to IEC 60529	IP67	IP67	IP67	IP67
Cable length [m]	5	0.3	5	0.3
Cable-Ø D [mm]	2.4	2.4	3.1	3.1
Bending radius for fixed routing, min.	3xØ	3xØ	3xØ	3xØ
Bending radius when using a drag chain, min.	5xØ	5xØ	5xØ	5xØ
Housing Material	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Active surface material	PBT	PBT	PBT	PBT
Certification	CE	CE	CE	CE



► SERIES NJ - INDUCTIVE PROXIMITY SWITCHES



PNP
Normally open (NO)



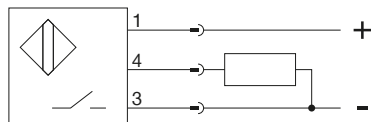
► Technical data

Order no.	NJ5-E2	NJ5-E2SK	NJ6.5-E2-01	NJ6.5-E2-02
Connection type	Cable	Cable/Connector M8	Cable	Cable
Sensor-Ø [mm]	M5x0.5	M5x0.5	6.5	6.5
Installation type	flush	flush	flush	flush
Rated operating distance S_n [mm]	0.80	0.80	1.50	1.50
Assured switching distance S_a [mm]	0.65	0.65	1.20	1.20
Supply voltage [V DC]	10 ... 30	10 ... 30	10 ... 30	10 ... 30
Load current capacity [mA]	100	100	200	200
Current consumption max. [mA]	<12	<12	<25	<25
Protected against polarity reversal	Yes	Yes	Yes	Yes
Short-circuit-proof	Yes	Yes	Yes	Yes
Function display	Yes	Yes	Yes	Yes
Repetition accuracy [%]	<5	<5	<5	<5
Ambient temperature range [°C]	-25 ... +70	-25 ... +70	-25 ... +70	-25 ... +70
Switching frequency [Hz]	5000	5000	3000	4000
Protection to IEC 60529	IP67	IP67	IP68	IP67
Cable length [m]	5	0.3	5	5
Cable-Ø D [mm]	3.1	3.1	3.2	3.2
Bending radius for fixed routing, min.		3xØ	3xØ	3xØ
Bending radius when using a drag chain, min.		5xØ	5xØ	5xØ
Housing Material	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Active surface material	PBT	PBT	PBT	PBT
Certification	CE	CE	CE	CE

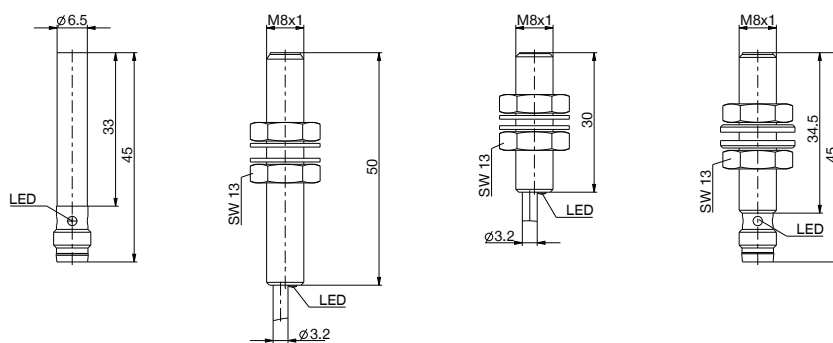
SENSORS AND HOLDERS

INDUCTIVE PROXIMITY SWITCHES

► SERIES NJ - INDUCTIVE PROXIMITY SWITCHES



PNP
Normally open (NO)

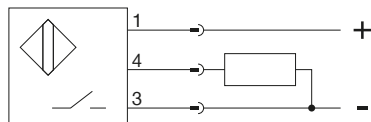


► Technical data

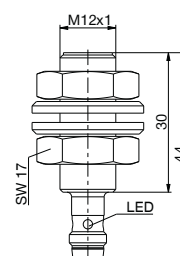
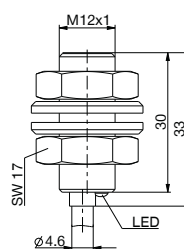
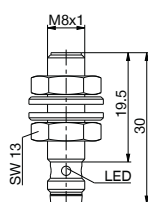
Order no.	NJ6.5-E2S	NJ8-E2	NJ8-E2-01	NJ8-E2S
Connection type	Connector M8	Cable	Cable	Connector M8
Sensor-Ø [mm]	6.5	M8x1	M8x1	M8x1
Installation type	flush	flush	flush	flush
Rated operating distance S_n [mm]	1.50	1.50	2.00	2.00
Assured switching distance S_a [mm]	1.20	1.20	1.60	1.60
Supply voltage [V DC]	10 ... 30	10 ... 30	10 ... 30	10 ... 30
Load current capacity [mA]	200	200	200	200
Current consumption max. [mA]	<25	<8	<25	<25
Protected against polarity reversal	Yes	Yes	Yes	Yes
Short-circuit-proof	Yes	Yes	Yes	Yes
Function display	Yes	Yes	Yes	Yes
Repetition accuracy [%]	<5	<5	<5	<5
Ambient temperature range [°C]	-25 ... +70	-25 ... +70	-25 ... +70	-25 ... +70
Switching frequency [Hz]	3000	1000	1500	1500
Protection to IEC 60529	IP67	IP67	IP68	IP68
Cable length [m]		5	5	
Cable-Ø D [mm]		3.2	3.2	
Bending radius for fixed routing, min.		3xØ	3xØ	
Bending radius when using a drag chain, min.		5xØ	5xØ	
Housing Material	Stainless steel	CuZn nickel plated	Stainless steel	Stainless steel
Active surface material	PBT	PA12	PBT	PBT
Certification	CE	CE	CE	CE



► SERIES NJ - INDUCTIVE PROXIMITY SWITCHES



PNP
Normally open (NO)



► Technical data

Order no.	NJ8-E2S-05	NJ12-E2	NJ12-E2S
Connection type	Connector M8	Cable	Connector M8
Sensor-Ø [mm]	M8x1	M12x1	M12x1
Installation type	flush	flush	flush
Rated operating distance S_n [mm]	1.50	2.00	2.00
Assured switching distance S_a [mm]	1.20	1.60	1.60
Supply voltage [V DC]	10 ... 30	10 ... 30	10 ... 30
Load current capacity [mA]	200	200	130
Current consumption max. [mA]	<8	<12	<25
Protected against polarity reversal	Yes	Yes	Yes
Short-circuit-proof	Yes	Yes	Yes
Function display	Yes	Yes	Yes
Repetition accuracy [%]	<5	<5	<5
Ambient temperature range [°C]	-25 ... +70	-25 ... +70	-25 ... +70
Switching frequency [Hz]	3000	5000	1000
Protection to IEC 60529	IP68	IP68	IP67
Cable length [m]		5	
Cable-Ø D [mm]		4.6	
Bending radius for fixed routing, min.		3xØ	
Bending radius when using a drag chain, min.		5xØ	
Housing Material	Stainless steel	CuZn nickel plated	CuZn nickel plated
Active surface material	PBT	PBT	PA12
Certification	CE	CE	CE

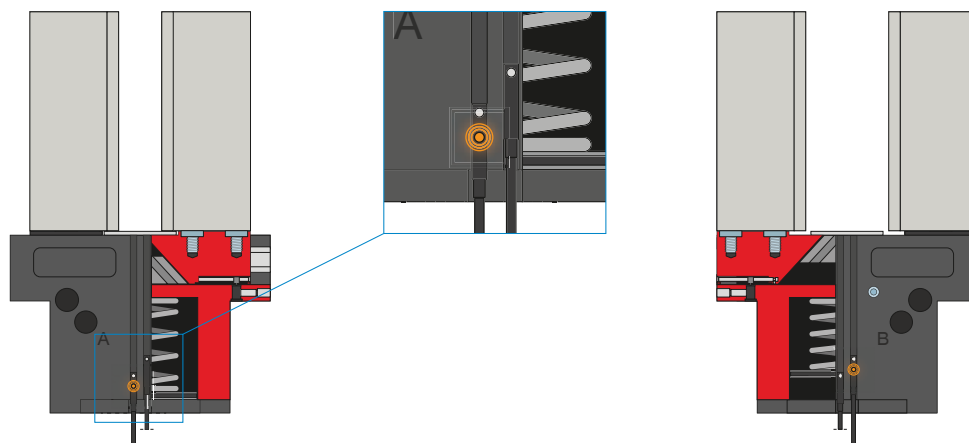
SENSORS & HOLDERS

MAGNETIC FIELD SENSORS FUNCTIONAL DESCRIPTION

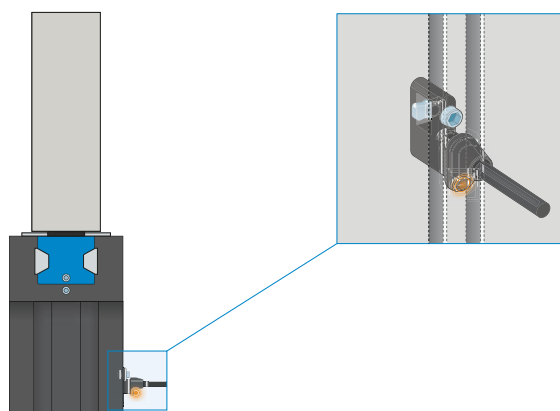


SENSORS

MFS02



MFS01



1-point magnetic field sensors – MFS

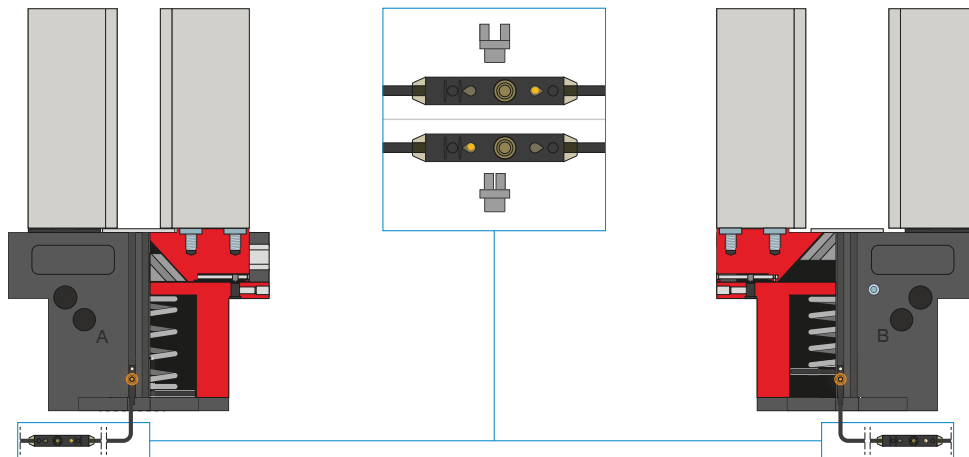
For non-contact sensing of the piston position

These sensors are installed in the C-groove of the gripper and detect the magnet attached to the piston of the gripper. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MFS01 is taller, but has a cable outlet that is offset at an angle of 90°. The variants are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.

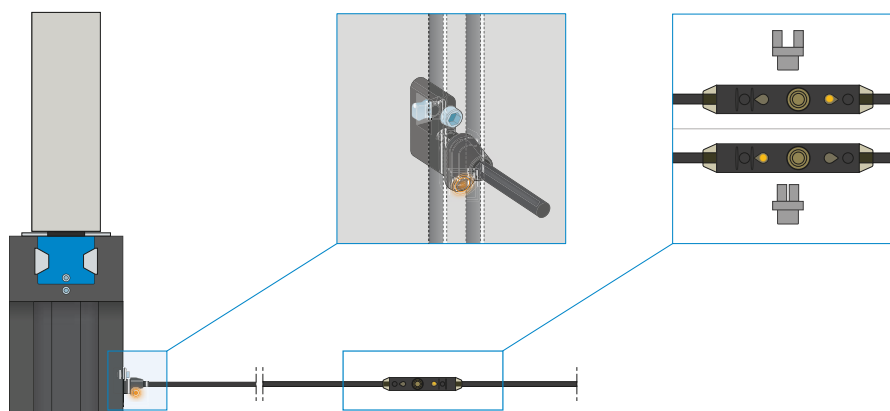


SENSORS

MFS02



MFS01



2-point magnetic field sensors – MFS

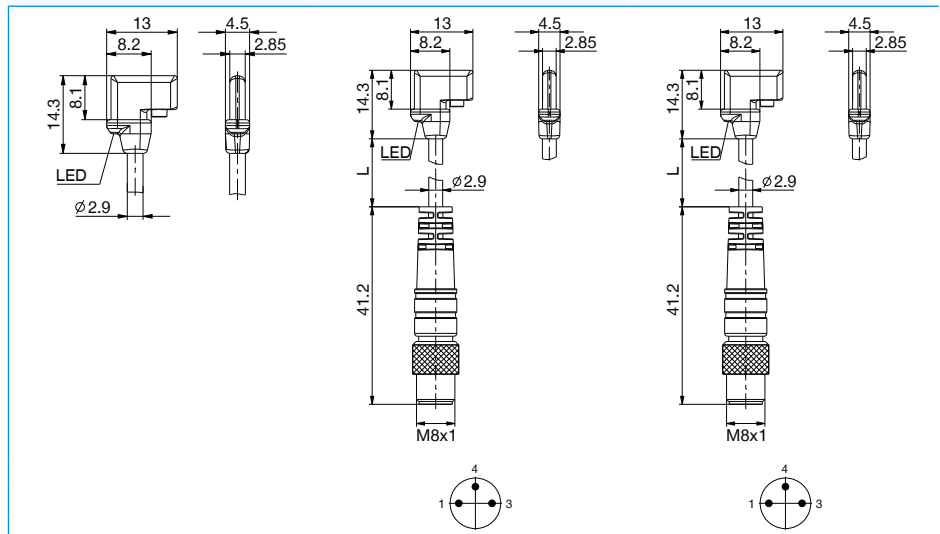
With two freely programmable switching points

Using the programming unit integrated in the cable, two switch points can be freely defined for this sensor. To do so, the sensor is clamped in the C-groove, the gripper approaches position one and the position is taught in using the teach button. Afterwards, the second position is approached with the gripper and programmed. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MSF01 is taller, but has a cable outlet that is offset at an angle of 90°. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.

SENSORS AND HOLDERS

MAGNETIC FIELD SENSORS

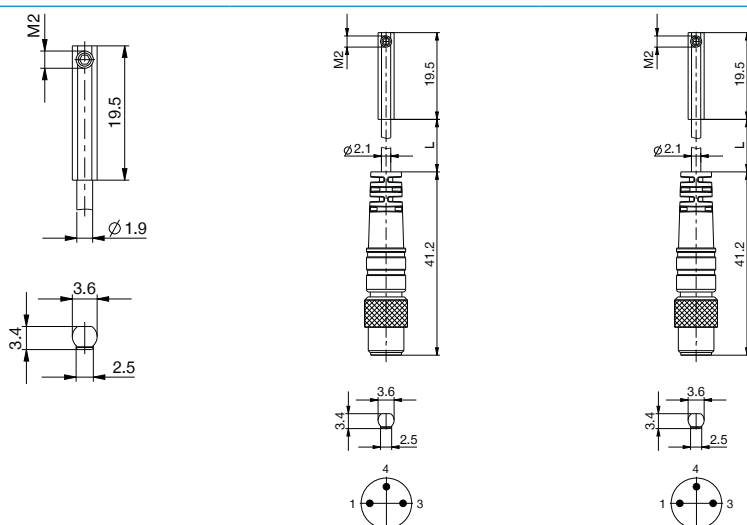
► SERIES MFS - 1-POSITION-MAGNETIC FIELD SENSORS



Order no.	► Technical data		
	MFS01-K-KHC-P1-PNP	MFS01-S-KHC-P1-PNP	MFS01-S-KHC-P1-NPN
Switching output	PNP	PNP	NPN
Switching function	Normally open (NO)	Normally open (NO)	Normally open (NO)
Cylinder design	C-slot	C-slot	C-slot
Housing length [mm]	13	13	13
Switching frequency [Hz]	1000	1000	1000
Electrical version	DC 3-wire	DC 3-wire	DC 3-wire
Protection to IEC 60529	IP68	IP68	IP68
Certification	CE	CE	CE
Supply voltage [V DC]	10 ... 30	10 ... 30	10 ... 30
Current consumption [mA]	≤8	≤8	≤8
Voltage drop [V]	≤2.5	≤2.5	≤2.5
Continuous current [mA]	≤100	≤100	≤100
Response sensitivity typ. [mT]	1.7	1.7	1.7
Overrun distance typ. [mm]	2	2	2
Hysteresis typ. [mT]	≤0.4	≤0.4	≤0.4
Reproducibility [mT]	≤0.1	≤0.1	≤0.1
Protected against polarity reversal	Yes	Yes	Yes
Short-circuit-proof	Yes	Yes	Yes
Power-up pulse protection	Yes	Yes	Yes
Ambient temperature range [°C]	-30 ... +80	-30 ... +80	-30 ... +80
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm	30 g, 11 ms / 10 ... 55 Hz, 1 mm	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Housing Material	Plastics	Plastics	Plastics
Connection type	Cable	Cable/Connector	Cable/Connector
Fixing thread		M8	M8
Cable length [m]	5	0.3	0.3
Nr. of wires x diameter [mm²]	3x0.14	3x0.14	3x0.14
Cable sheath material	PUR	PUR	PUR
Bending radius for fixed routing, min.	3xØ	3xØ	3xØ
Bending radius when using a drag chain, min.	5xØ	5xØ	5xØ



► SERIES MFS - 1-POSITION-MAGNETIC FIELD SENSORS

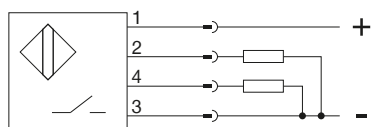


Order no.	► Technical data		
	MFS02-K-KHC-P1-PNP	MFS02-S-KHC-P1-PNP	MFS02-S-KHC-P1-NPN
Switching output	PNP	PNP	NPN
Switching function	Normally open (NO)	Normally open (NO)	Normally open (NO)
Cylinder design	C-slot	C-slot	C-slot
Housing length [mm]	19.5	19.5	19.5
Switching frequency [Hz]	1000	1000	1000
Electrical version	DC 3-wire	DC 3-wire	DC 3-wire
Protection to IEC 60529	IP67	IP67	IP67
Certification	CE	CE	CE
Supply voltage [V DC]	10 ... 30	10 ... 30	10 ... 30
Current consumption [mA]	≤8	≤8	≤8
Voltage drop [V]	≤2.5	≤2.5	≤2.5
Continuous current [mA]	≤100	≤100	≤100
Response sensitivity typ. [mT]	1.7	1.7	1.7
Overrun distance typ. [mm]	2	2	2
Hysteresis typ. [mT]	≤0.4	≤0.4	≤0.4
Reproducibility [mT]	≤0.1	≤0.1	≤0.1
Protected against polarity reversal	Yes	Yes	Yes
Short-circuit-proof	Yes	Yes	Yes
Power-up pulse protection	Yes	Yes	Yes
Ambient temperature range [°C]	-25 ... +75	-25 ... +75	-25 ... +75
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm	30 g, 11 ms / 10 ... 55 Hz, 1 mm	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Housing Material	Plastics	Plastics	Plastics
Connection type	Cable	Cable/Connector	Cable/Connector
Fixing thread		M8	M8
Cable length [m]	5	0.3	0.3
Nr. of wires x diameter [mm²]	3x0.09	3x0.09	3x0.09
Cable sheath material	PUR	PUR	PUR
Bending radius for fixed routing, min.	3xØ	3xØ	3xØ
Bending radius when using a drag chain, min.	5xØ	5xØ	5xØ

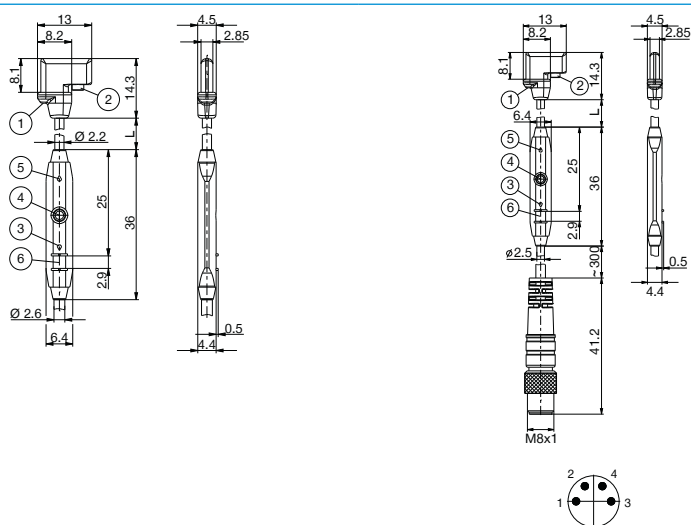
SENSORS AND HOLDERS

MAGNETIC FIELD SENSORS

► SERIES MFS - 2-POSITION-MAGNETIC FIELD SENSORS



2 x PNP
Normally open (NO)



1 Center of sensor element
2 Fixing screw
3 Display LED

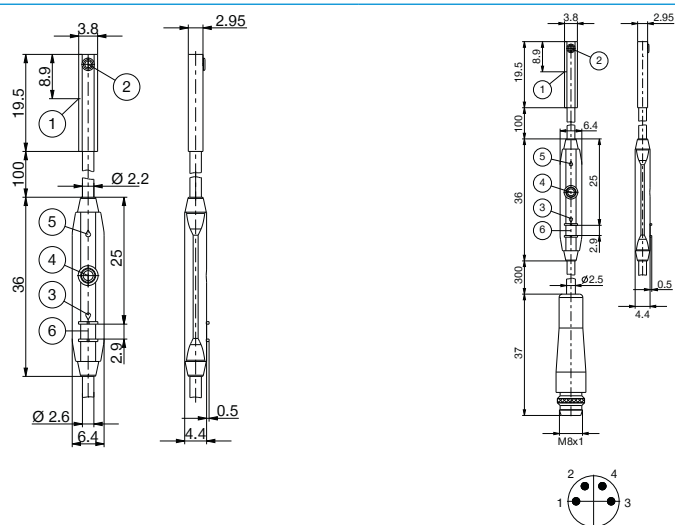
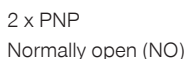
4 Teach-in button
5 Display LED
6 Ribs for cable ties

► Technical data

Order no.	MFS01-K-KHC-P2-PNP	MFS01-S-KHC-P2-PNP
Cylinder design	C-slot	C-slot
Housing length [mm]	13	13
Switching frequency [Hz]	7000	7000
Electrical version	DC 4-wire	DC 4-wire
Protection to IEC 60529	IP67	IP67
Certification	CE	CE
Supply voltage [V DC]	12 ... 30	12 ... 30
Current consumption [mA]	≤15	≤15
Voltage drop [V]	≤2.2	≤2.2
Continuous current [mA]	≤100	≤100
Detection zone [mm]	0 ... 20	0 ... 20
Hysteresis typ. [mT]	1	1
Reproducibility [mT]	≤0.1	≤0.1
Protected against polarity reversal	Yes	Yes
Short-circuit-proof	Yes	Yes
Power-up pulse protection	Yes	Yes
Ambient temperature range [°C]	-20 ... +75	-20 ... +75
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Housing Material	Plastics	Plastics
Connection type	Cable	Cable/Connector
Fixing thread		M8
Cable length [m]	5	0.3
Nr. of wires x diameter [mm²]	4x0.08	4x0.08
Cable sheath material	PUR	PUR
Bending radius for fixed routing, min.	3xØ	3xØ
Bending radius when using a drag chain, min.	5xØ	5xØ



► **SERIES MFS - 2-POSITION-MAGNETIC FIELD SENSORS**



- | | |
|----------------------------|-----------------------|
| 1 Center of sensor element | 4 Teach-in button |
| 2 Fixing screw | 5 Display LED |
| 3 Display LED | 6 Ribs for cable ties |

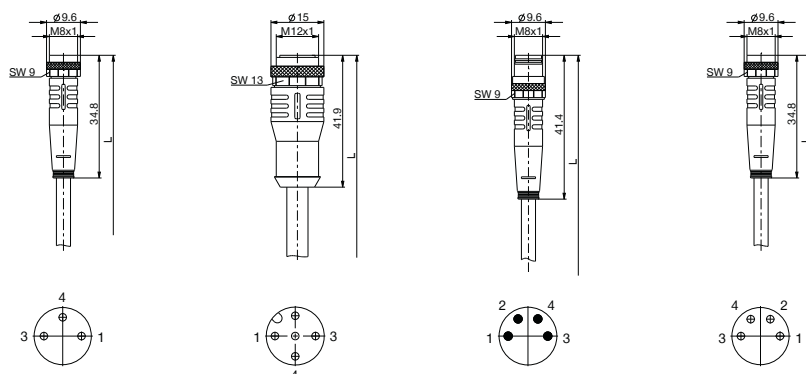
► Technical data

Order no.	MFS02-K-KHC-P2-PNP	MFS02-S-KHC-P2-PNP
Cylinder design	C-slot	C-slot
Housing length [mm]	19.5	19.5
Switching frequency [Hz]	7000	7000
Electrical version	DC 4-wire	DC 4-wire
Protection to IEC 60529	IP67	IP67
Certification	CE	CE
Supply voltage [V DC]	12 ... 30	12 ... 30
Current consumption [mA]	≤15	≤15
Voltage drop [V]	≤2.2	≤2.2
Continuous current [mA]	≤100	≤100
Detection zone [mm]	0 ... 50	0 ... 50
Hysteresis typ. [mT]	1	1
Reproducibility [mT]	≤0.1	≤0.1
Protected against polarity reversal	Yes	Yes
Short-circuit-proof	Yes	Yes
Power-up pulse protection	Yes	Yes
Ambient temperature range [°C]	-20 ... +75	-20 ... +75
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Housing Material	Plastics	Plastics
Connection type	Cable	Cable/Connector
Fixing thread		M8
Cable length [m]	5	0.3
Nr. of wires x diameter [mm²]	4x0.08	4x0.08
Cable sheath material	PUR	PUR
Bending radius for fixed routing, min.	3xØ	3xØ
Bending radius when using a drag chain, min.	5xØ	5xØ

SENSORS AND HOLDERS

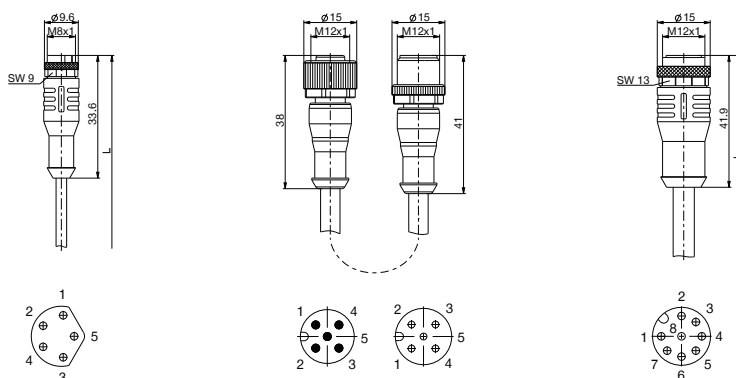
SENSOR CABLES

► SERIES KAG - PLUG-IN CONNECTOR STRAIGHT WITH CABLE



► Technical data				
Order no.	KAG500	KAG500-02	KAG500S4	KAG500B4
Connection type	Female	Female	Connector	Female
Version [Type]	Straight	Straight	Straight	Straight
Fixing thread	M8	M12	M8	M8
No. of contacts	3	3	4	4
Current load (at 40°C) [A]	4	4	4	4
Temperature range (fixed) [°C]	-40 ... +90	-40 ... +90	-40 ... +90	-40 ... +90
Temperature range (drag chain) [°C]	-25 ... +60	-25 ... +60	-25 ... +60	-25 ... +60
Protection to IEC 60529	IP67	IP67	IP67	IP67
Cable length [m]	5	5	5	5
Cable-Ø [mm]	4.0	4.3	4.3	4.3
Bend radius, fixed cable installation	10xØ	10xØ	10xØ	10xØ
Cable sheath material	PUR	PUR	PUR	PUR
Certification	UL /CSA	UL /CSA	UL /CSA	UL /CSA

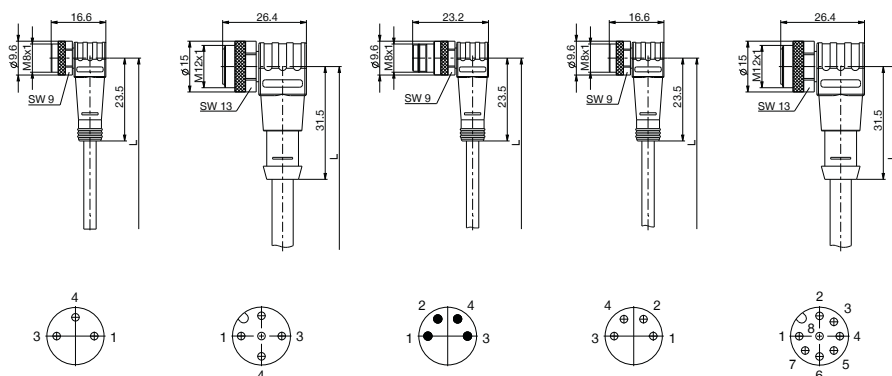
► SERIES KAG - PLUG-IN CONNECTOR STRAIGHT WITH CABLE



► Technical data			
Order no.	KAG500B5	KAG500IL	KAG1000B8
Connection type	Female	Connector / female	Female
Version [Type]	Straight	Straight	Straight
Fixing thread	M8	M12	M12
No. of contacts	5	5	8
Current load (at 40°C) [A]	3	4	2
Temperature range (fixed) [°C]	-40 ... +90	-40 ... +90	-40 ... +90
Temperature range (drag chain) [°C]	-25 ... +60	-25 ... +60	-25 ... +60
Protection to IEC 60529	IP67	IP67	IP67
Cable length [m]	5	5	10
Cable-Ø [mm]	5.6	5	6.7
Bend radius, fixed cable installation	12xØ	5xØ	10xØ
Cable sheath material	PUR	PUR	PUR
Certification	UL /CSA	UL /CSA	UL /CSA



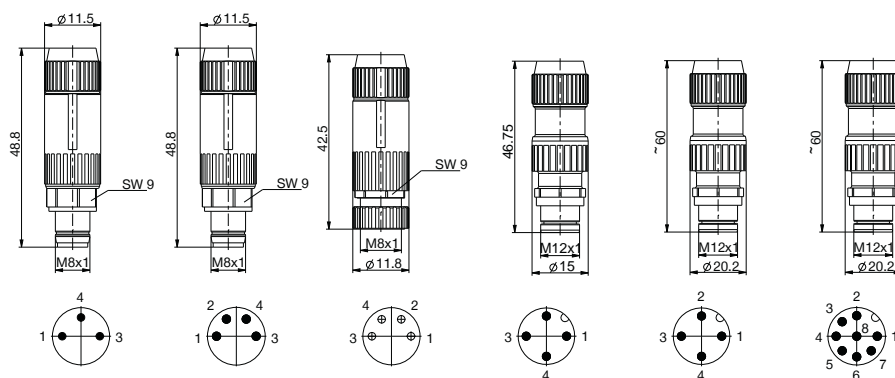
► SERIES KAW - PLUG-IN CONNECTOR ANGLED WITH CABLE



► Technical data

Order no.	KAW500	KAW500-12	KAW500S4	KAW500B4	KAW1000B8
Connection type	Female	Female	Connector	Female	Female
Version [Type]	Angle	Angle	Angle	Angle	Angle
Fixing thread	M8	M12	M8	M8	M12
No. of contacts	3	3	4	4	8
Current load (at 40°C) [A]	4	4	4	4	2
Temperature range (fixed) [°C]	-40 ... +90	-40 ... +90	-40 ... +90	-40 ... +90	-40 ... +90
Temperature range (drag chain) [°C]	-25 ... +60	-25 ... +60	-25 ... +60	-25 ... +60	-25 ... +60
Protection to IEC 60529	IP67	IP67	IP67	IP67	IP67
Cable length [m]	5	5	5	5	10
Cable-Ø [mm]	4.0	4.3	4.3	4.3	6.7
Bend radius, fixed cable installation	10xØ	10xØ	10xØ	10xØ	10xØ
Cable sheath material	PUR	PUR	PUR	PUR	PUR
Certification	UL /CSA	UL /CSA	UL /CSA	UL /CSA	UL /CSA

► SERIES S - PLUG-IN CONNECTOR CUSTOMIZABLE WITH SCREW-CUT-TERMINAL



► Technical data

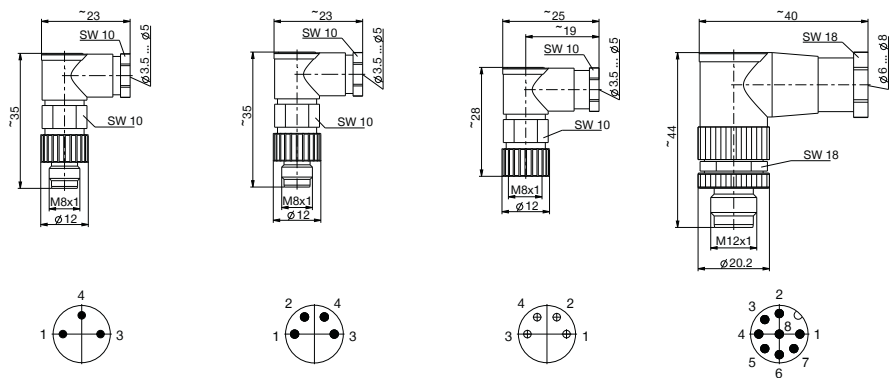
Order no.	S8-G-3	S8-G-4	B8-G-4	S12-G-3	S12-G-4	S12-G-8
Connection type	Connector	Connector	Female	Connector	Connector	Connector
Version [Type]	Straight	Straight	Straight	Straight	Straight	Straight
Fixing thread	M8	M8	M8	M12	M12	M12
No. of contacts	3	4	4	3	4	8
Protection to IEC 60529	IP67	IP67	IP67	IP67	IP67	IP67



SENSORS AND HOLDERS

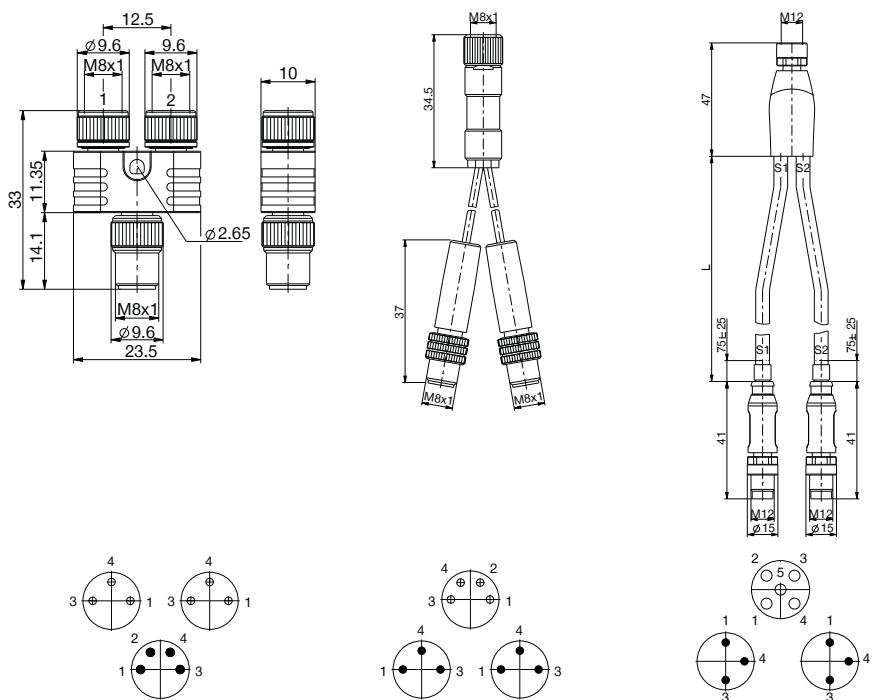
SENSOR CABLES

► SERIES S - PLUG-IN CONNECTOR CUSTOMIZABLE WITH SOLDER CONNECTION



Order no.	► Technical data			
	S8-W-3	S8-W-4	B8-W-4	S12-W-8
Connection type	Connector	Connector	Female	Connector
Version [Type]	Angle	Angle	Angle	Angle
Fixing thread	M8	M8	M8	M12
No. of contacts	3	4	4	8
Protection to IEC 60529	IP67	IP67	IP67	IP67

► SERIES S - Y-PLUG-IN CONNECTOR



Order no.	► Technical data		
	S8-Y-4	B8-Y-4	B12-Y-5IL
Connection type	Socket / plug / socket	Plug / socket / plug	Plug / socket / plug
Version [Type]	Y-Plug-in Connector	Y-Plug-in Connector	Y-Plug-in Connector
Fixing thread	M8	M8	M12
No. of contacts	3 / 4 / 3	3 / 4 / 3	3 / 3 / 5
Protection to IEC 60529	IP67	IP67	IP67



SENSORS AND HOLDERS

STOP STROKE ADJUSTMENT SCREWS

► SERIES AI - STOP STROKE ADJUSTMENT SCREWS



- Stop stroke adjustment screw for M12 sensor mount
- Stop stroke adjustment screw with customizable sensor mount

Order no.	► Technical Data		
	AI-M8X1-38	AI-M8X1-53	AI-M10X1-70
Fixing thread	M8X1	M8X1	M10X1
to match for Sensors-Ø [mm]	M12X1	M12X1	M12X1

► SERIES AO - STOP STROKE ADJUSTMENT SCREWS



- Stop stroke adjustment screw with customizable sensor mount

Order no.	► Technical Data		
	AO-M8X1-38	AO-M8X1-53	AO-M10X1-70
Fixing thread	M8X1	M8X1	M10X1
to match for Sensors-Ø [mm]	customizable	customizable	customizable

SENSORS & HOLDERS

HOLDERS

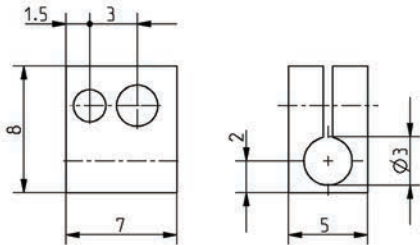
► SERIES KB - MOUNTING BLOCK



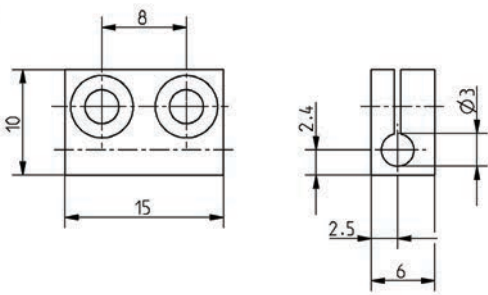
- Mounting for inductive proximity switch
- Available starting at Ø 3 mm

Order no.	► Technical Data						
	KB3	KB3M	KB4	KB5	KB6.5	KB8	KB12
to match for Sensors-Ø [mm]	3	3	4	5	6.5	8	12

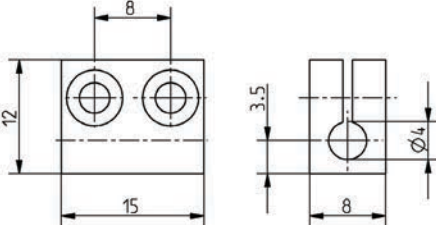
KB3M



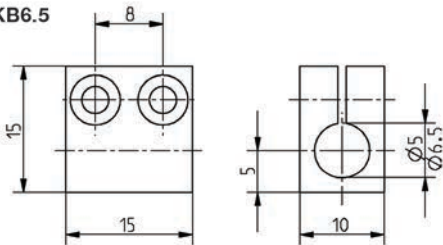
KB3



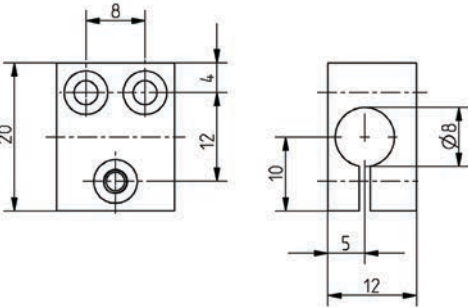
KB4



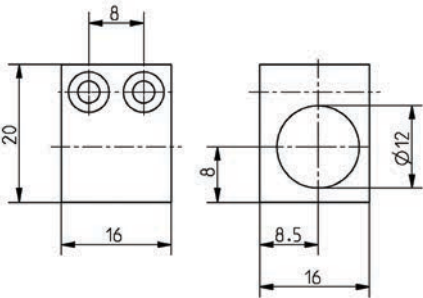
KB5 / KB6.5

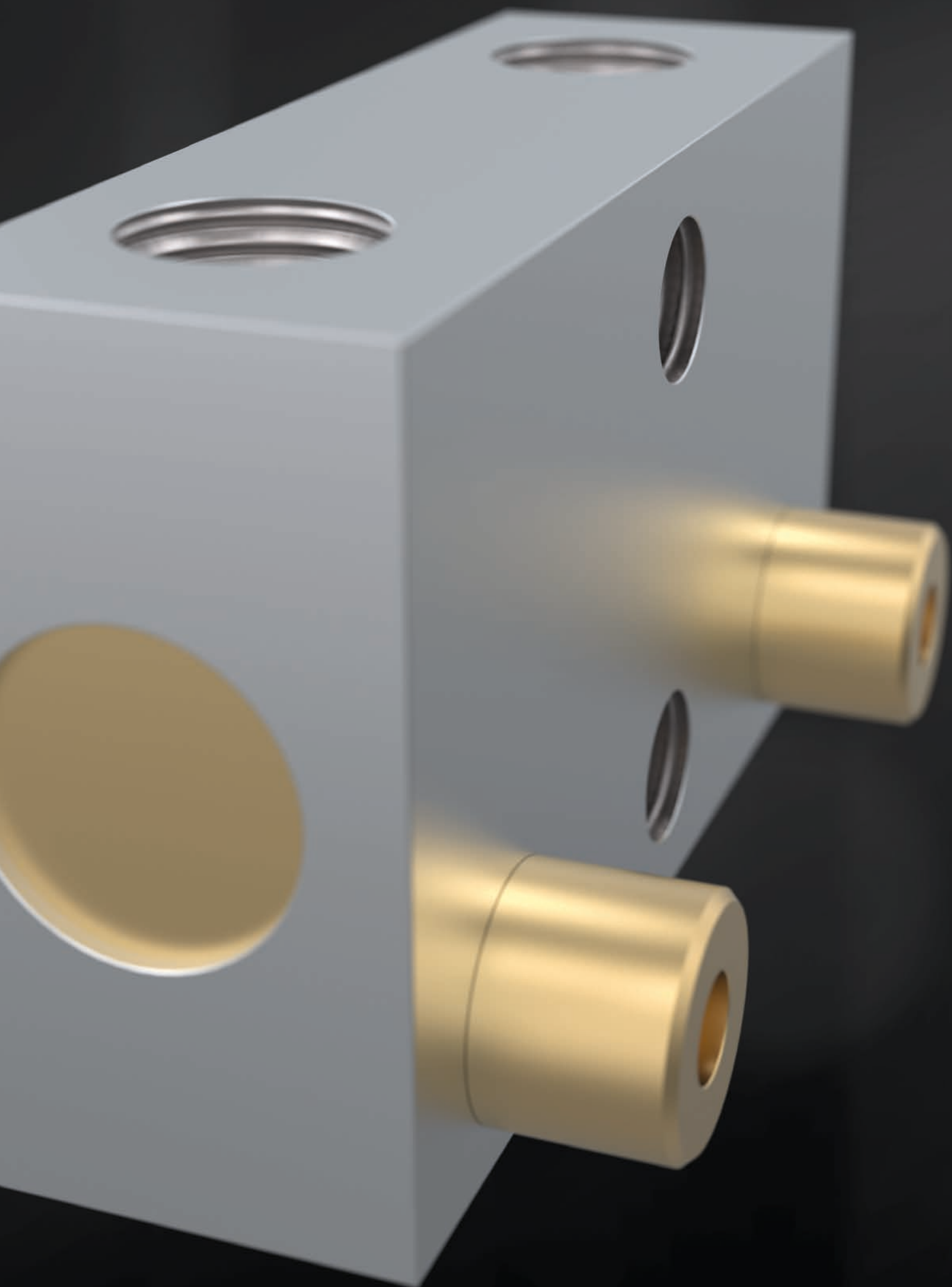


KB8



KB12





VALVES, FITTINGS, ACCESSORIES

OVERVIEW OF SERIES

VALVES



Series DSV

482



Series DEV

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FITTINGS



Series GV

486



Series WV

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JAW ACCESSORIES



Series DG

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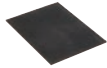
Series GR

488



Series J

488



Series GU

489



Series KF

490



Series BGM

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Series BN

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Series GU800

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JAW EXTENSIONS



Series GBV

492

ROTARY DISTRIBUTORS



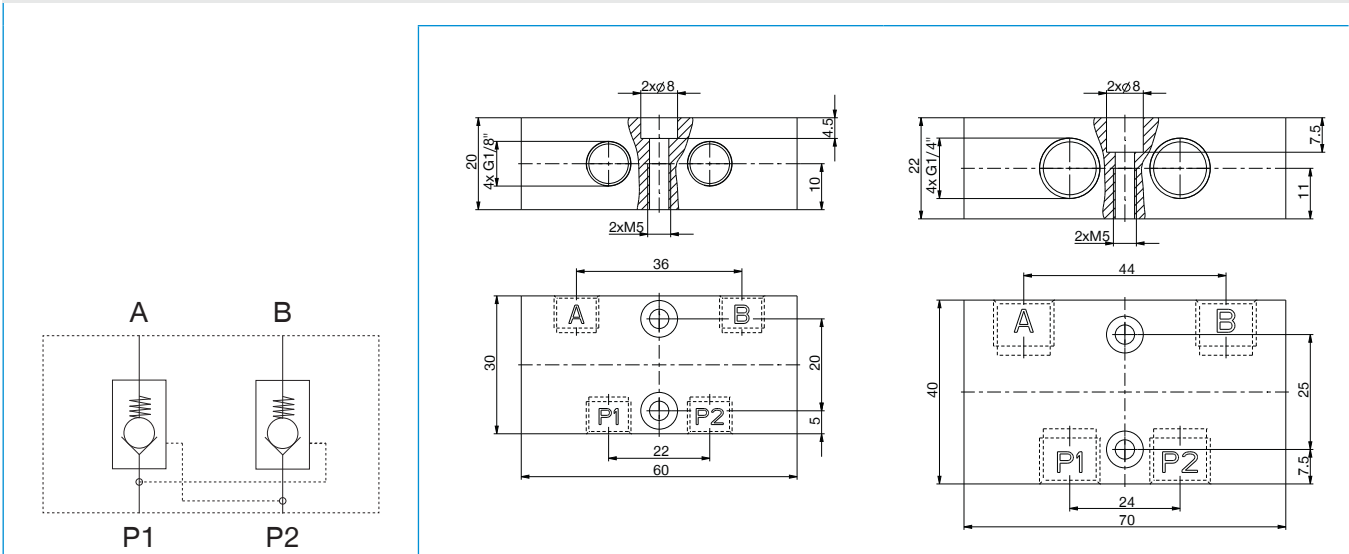
Series DV

494

VALVES, FITTINGS, ACCESSORIES

VALVES

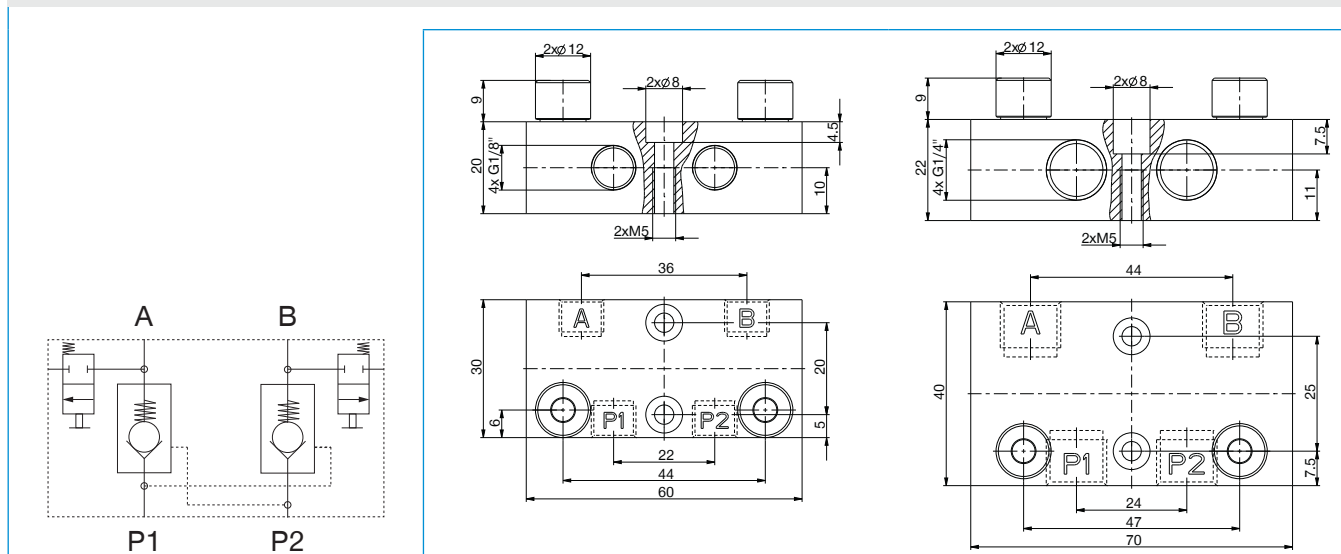
► SERIES DSV - PRESSURE SAFETY VALVE



Order no.	► Technical data	
	DSV1-8	DSV1-4
Fixing thread	G1/8"	G1/4"
Quick Exhaust	No	No
Nominal diameter [mm]	4	7
Nominal flow rate A-P1	360	1000
Nominal flow rate B-P2	360	1000
Nominal flow rate P1-A	230	650
Nominal flow rate P2-B	230	650
Operating pressure [bar]	1 ... 10	1 ... 10
Operating temperature [°C]	-10 ... +70	-10 ... +70
Weight [kg]	0.1	0.2



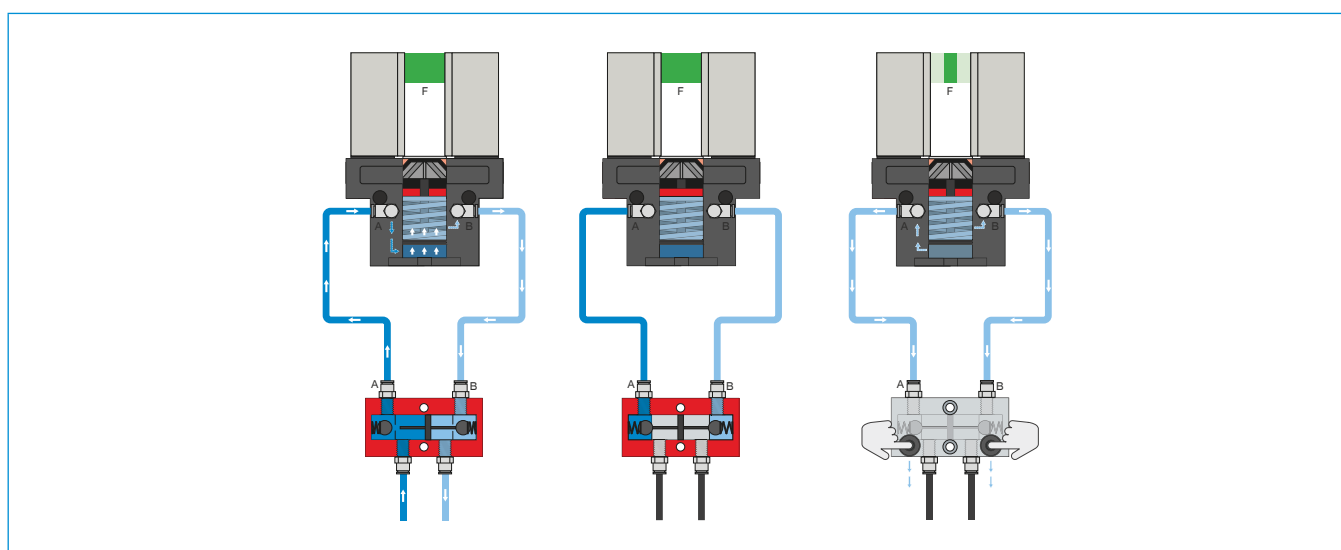
DSV SERIES – PRESSURE SAFETY VALVES WITH QUICK EXHAUST



Technical data

Order no.	DSV1-8E	DSV1-4E
Fixing thread	G1/8"	G1/4"
Quick Exhaust	Yes	Yes
Nominal diameter [mm]	4	7
Nominal flow rate A-P1	360	1000
Nominal flow rate B-P2	360	1000
Nominal flow rate P1-A	230	650
Nominal flow rate P2-B	230	650
Operating pressure [bar]	1 ... 10	1 ... 10
Operating temperature [°C]	-10 ... +70	-10 ... +70
Weight [kg]	0.1	0.2

FUNCTIONAL DESCRIPTION DSV



Pressure safety valve – DSV

Ensures safe retention of force and position if the system pressure drops

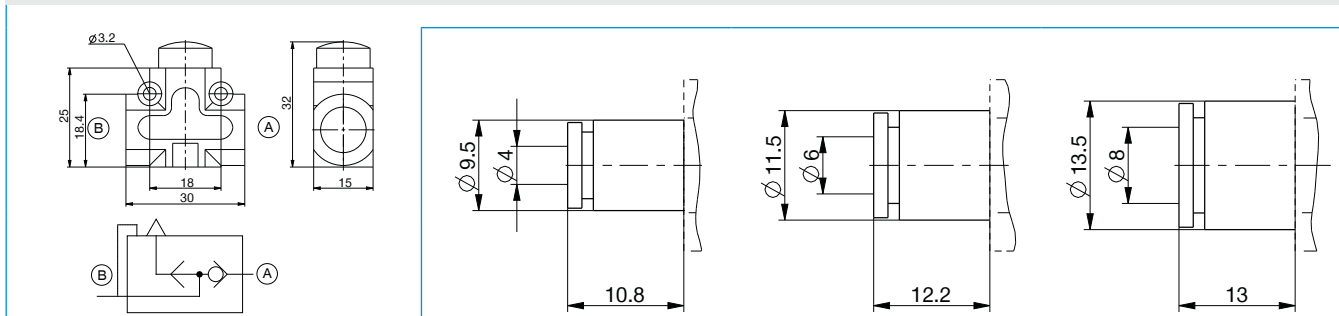
The integrated double check valve, which can be unlocked, retains the system pressure of the gripper in case of EMERGENCY STOP. To ensure the function, the valve must be installed as close to the gripper's air connection as possible. In variant E, two pushbuttons are installed that allow for controlled bleeding of the gripper.



VALVES, FITTINGS, ACCESSORIES

VALVES

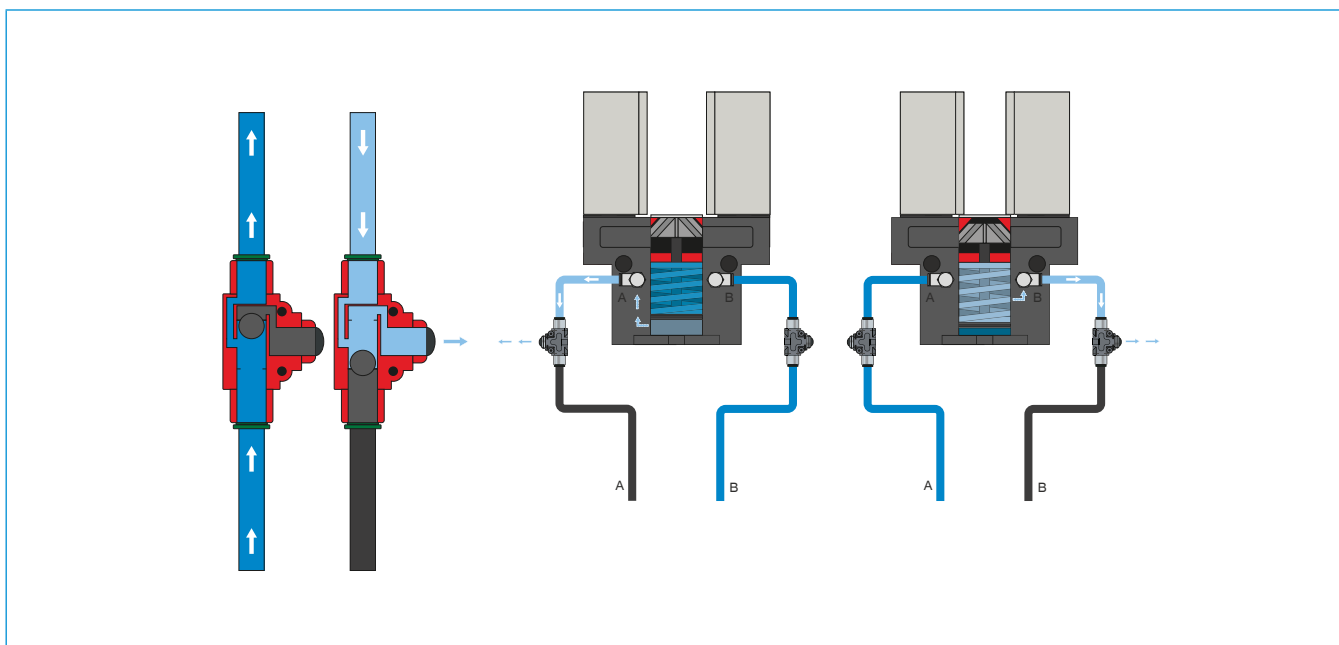
► SERIES DEV - QUICK EXHAUST VALVE



► Technical data

Order no.	DEV04	DEV06	DEV08
Outside-Ø for hose [mm]	4	6	8
Operating pressure max. [bar]	10	10	10
Nominal operating pressure [bar]	6	6	6
Operating temperature [°C]	-5 ... +50	-5 ... +50	-5 ... +50
Flow in the case of aeration	250	250	250
Flow in the case of ventilation	500	500	500
Weight [kg]	0.015	0.015	0.015

► FUNCTIONAL DESCRIPTION DEV



Quick exhaust valve – DEV

For rapid bleeding of the compressed air and preventing back pressure

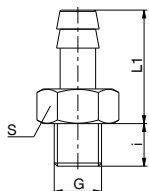
The inline valves make a faster cycle time possible and prevent the formation of condensate in grippers with a small cylinder volume. To ensure the function, the valve must be installed as close to the gripper's air connection as possible.



VALVES, FITTINGS, ACCESSORIES

FITTINGS

► SERIES GV - STRAIGHT FITTINGS - BARB-STYLE CONNECTION

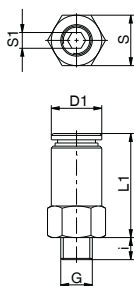


- For assembling with hose clips
- Straight version

Order no.	Technical data				
	GVM3	GV1-8X5ID	GV1-8X6ID	GV1-8X8ID	GV1-4X8ID
Fixing thread	M3	G1/8"	G1/8"	G1/8"	G1/4"
Inside-Ø for hose [mm]	2	5	6	8	8
Length [mm]	9.9	30	30	30	32.5
Dimension i [mm]	2.7	6	6	6	8
Dimension L1 [mm]	7.2	24	24	24	24.5
S [mm]	4.5	13	13	13	17

Order no.	Technical data			
	GV1-4X10ID	GV3-8X13ID	GV1-2X13ID	GV1-2X16ID
Fixing thread	G1/4"	G3/8"	G1/2"	G1/2"
Inside-Ø for hose [mm]	10	13	13	16
Length [mm]	32.5	33.5	35	39.5
Dimension i [mm]	8	9	10	10
Dimension L1 [mm]	24.5	24.5	25	29.5
S [mm]	17	19	24	24

► SERIES GV - STRAIGHT FITTINGS - QUICK CONNECT STYLE

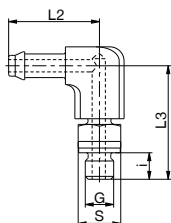


- Cost reduction through quick assembly and disassembly
- Straight version

Order no.	Technical data					
	GVM5	GV1-8X4	GV1-8X6	GV1-8X8	GV1-4X6	GV1-4X8
Fixing thread	M5	G1/8"	G1/8"	G1/8"	G1/4"	G1/4"
Length [mm]	20	19	20	25	21.5	23
Dimension i [mm]	3.5	5	5	5	7	7
Dimension L1 [mm]	16.5	14	15	20	14.5	16
Dimension D1 [mm]	8	10	12	14	12	14
S1 [mm]	2.5	3	4	5	4	6
S [mm]	8	13	13	14	17	17



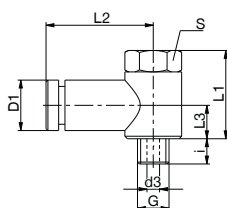
► SERIES WV - ANGLED FITTING, BARB STYLE CONNECTION



- For assembling with hose clips
- Angled version

Order no.	Technical data
	WVM3
Fixing thread	M3
Inside-Ø for hose [mm]	2
Dimension i [mm]	2.7
Dimension L2 [mm]	13.3
Dimension L3 [mm]	11.4
S [mm]	4.5

► WV SERIES - ANGLED FITTINGS- QUICK CONNECT STYLE



- Cost reduction through quick assembly and disassembly
- Angled and swivel-mounted

Order no.	Technical data					
	WVM5	WV1-8X4	WV1-8X6	WV1-8X8	WV1-4X6	WV1-4X8
Fixing thread	M5	G1/8"	G1/8"	G1/8"	G1/4"	G1/4"
Dimension i [mm]	4	6.5	6.5	6.5	8	8
Dimension L1 [mm]	14	20	20	20	21	21
Dimension L2 [mm]	17	20.5	21.5	23.5	23.5	25.5
Dimension L3 [mm]	5.3	8	8	8	8	8
Dimension d3 [mm]	2	5	5	5	7	7
Dimension D1 [mm]	8	10	12	14	12	14
S [mm]	8	14	14	14	17	17

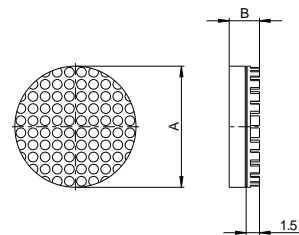
VALVES, FITTINGS, ACCESSORIES

JAW ACCESSORIES

► SERIES DG - RUBBER JAW PADS



- Available in different versions
- A packaging unit includes 6 pcs.

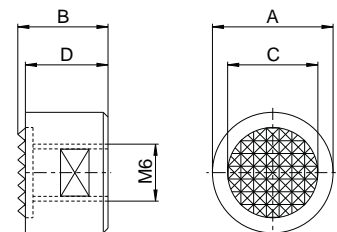


► Technical Data								
Order no.	DG6	DG6SI	DG10	DG10SI	DG16	DG16SI	DG20	DG20SI
A [mm]	6	6	10	10	16	16	20	20
B [mm]	5	5	5	5	5	5	5	5
Material	NBR	Silicone	NBR	Silicone	NBR	Silicone	NBR	Silicone

► SERIES GR - HARD JAW INSERTS



- Available in different versions

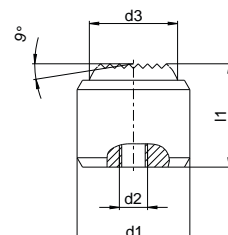


► Technical Data					
Order no.	GR4	GR4A	GR4C	GR5	GR6
A [mm]	12.7	12.7	12.7	15.8	19
B [mm]	9.5	12.7	16.5	9.5	9.5
C [mm]	9.5	9.5	9.5	12.7	15.8
D [mm]	8.7	11.9	15.8	8.7	8.7

► SERIES J - HARD JAW INSERTS, FLOATING



- Available in different versions



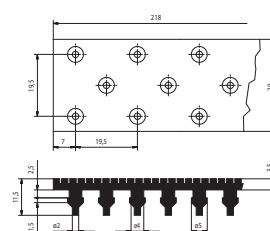
► Technical Data				
Order no.	J712	J718	J728	
Ø- d1	12n6	18n6	28n6	
Ø- d2 [mm]	M3	M4	M5	
Ø- d3 [mm]	7	10	20	
L1 [mm]	10	16	25	



► SERIES GU - RUBBER JAW LINERS



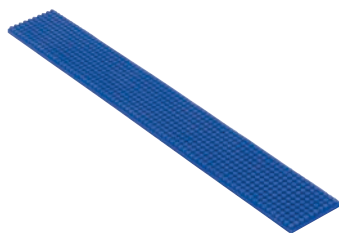
- Available in different versions
- GU1: Basic jaw with infeed knobs
- Receiver holes for infeed knobs - 4.5 mm



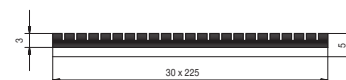
► Technical Data

Order no.	GU1	GU1SI
Resistance DIN53504 min. [N/mm ²]	10	10
Material	NBR	Silicone
Color	Black	Blue
Operating temperature max. [°C]	120	200
Shore hardness	65 +/- 3	60 +/- 5

► SERIES GU - RUBBER JAW LINERS



- Available in different versions
- Rubber jaw with baseplate made of aluminum



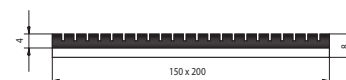
► Technical Data

Order no.	GU2	GU2SI
Resistance DIN53504 min. [N/mm ²]	10	10
Material	NBR	Silicone
Color	Black	Blue
Operating temperature max. [°C]	120	200
Shore hardness	65 +/- 3	60 +/- 5

► SERIES GU - RUBBER JAW LINERS



- Available in different versions
- Rubber jaw with baseplate made of aluminum



► Technical Data

Order no.	GU2G	GU2GSI
Resistance DIN53504 min. [N/mm ²]	10	10
Material	NBR	Silicone
Color	Black	Blue
Operating temperature max. [°C]	120	200
Shore hardness	65 +/- 3	60 +/- 5

VALVES, FITTINGS, ACCESSORIES

JAW ACCESSORIES

► SERIES KF - RUBBER COATED TAPE



- Smooth surface or knobbed surface Adjusts itself optimally to the shape of the gripper jaw ideal coefficients of friction and compensates for variation in tolerances
- Resistant against adhesive materials

Order no.	► Technical Data	
	KF50G	KF50N
Size [mm]	500 x 100	500 x 100
Material	Impregnated cotton fabric with special coating	Impregnated cotton fabric with special coating
Surface	smooth	knobbed
Material thickness [mm]	0,48	0,48
Max. permitted temperature range [°C]	+60 (briefly up to +100 °C)	+60 (briefly up to +100 °C)
Tensile strength	0.9	0.9
Adhesive strength	22	22

► SERIES BGM - EPOXY JAW COMPOUND

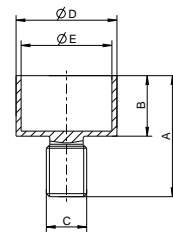


- For your individual gripper jaws in a few steps
- Hard as metal and can be used for the most sensitive parts due to silicone filling
- Sufficient for approximately 10 medium-sized jaw cups

► SERIES BN - JAW CUPS FOR EPOXY JAW COMPOUND



- Jaw Cups for Epoxy Jaw Compound (BGM)



Order no.	► Technical Data			
	BN8	BN12	BN16	BN20
A [mm]	8	12	16	20
B [mm]	4	6	8	10
C1	M3	M4	M5	M6
Ø- D [mm]	6	10	16	20
Ø- E [mm]	5	9	15	19

► SERIES GU800 - RUBBER MOULDING COMPOUND



- For complicated gripper fingers with boreholes, seals and roller coatings
- Repairs to conveyor belts, solid rubber tires, transport casters, pipes, vibration protection on machines and insulation protection

Order no.

Mix ratio	100:50
Shore hardness level after hardening (ISO 868)	80
Sealed	1.04
Tensile strength (ISO 37) [N/mm ²]	8,5
Elongation at break (ISO 37)	900
Tear resistance (DIN 53356)	17
Permitted temperature range [°C]	-60 ... +90

► Technical Data

GU800

100:50
80
1.04
8,5
900
17
-60 ... +90

VALVES, FITTINGS, ACCESSORIES

JAW EXTENSIONS

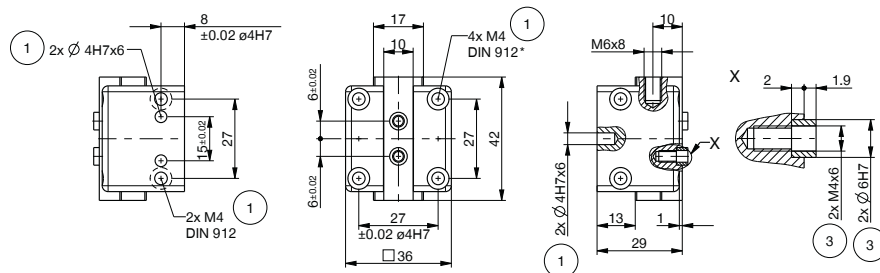
► SERIES GBV - JAW EXTENSIONS



- GBV guide elements can be positioned at any desired distance from the gripper, including different distances
- Connection to gripper is made via threaded rods

Order no.	Technical Data		
	GBV36	GBV50	GBV72
Weight [kg]	0.14	0.4	1.3
Mr [Nm]	20	45	80
Mx [Nm]	50	110	160
My [Nm]	32	65	120
Fa [N]	650	1500	4000

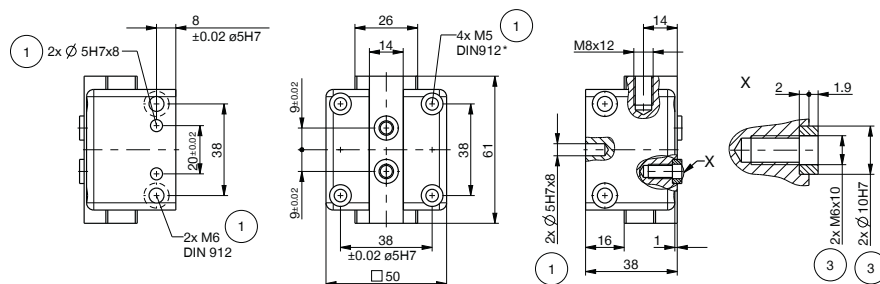
GBV36



① GBV attachment

③ Fixing for gripper finger

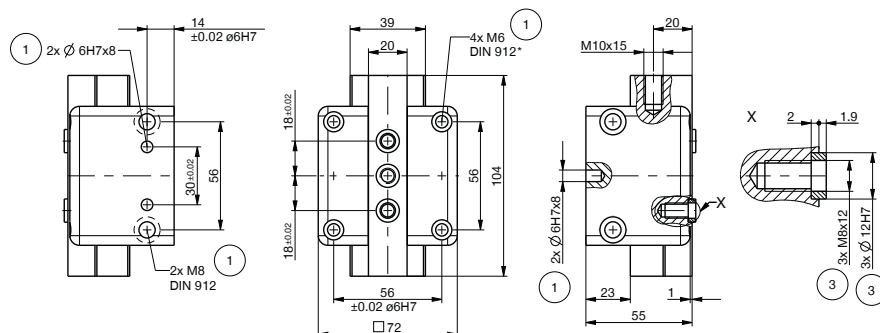
GBV50



① GBV attachment

③ Fixing for gripper finger

GBV72

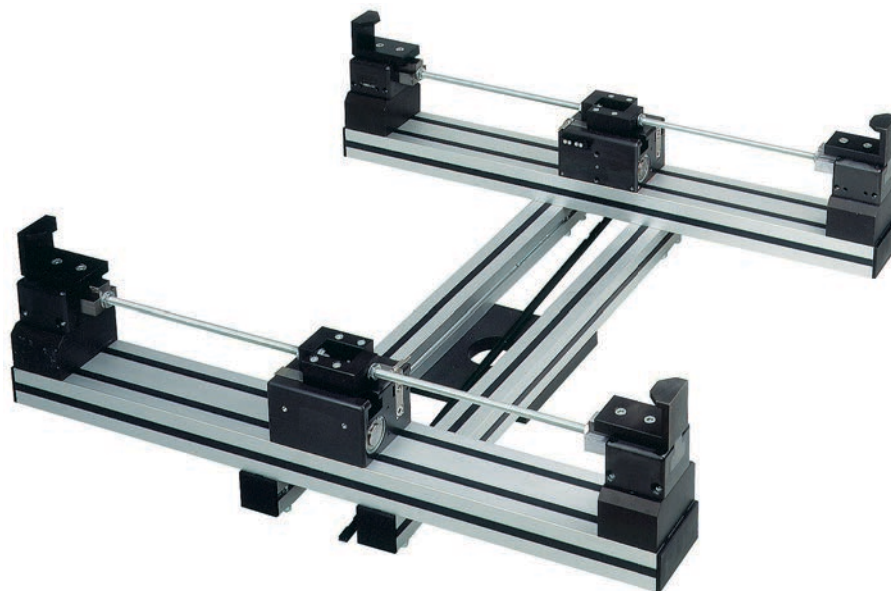


① GBV attachment

③ Fixing for gripper finger



► APPLICATION EXAMPLE



VALVES, FITTINGS, ACCESSORIES

PNEUMATIC ROTARY MANIFOLDS

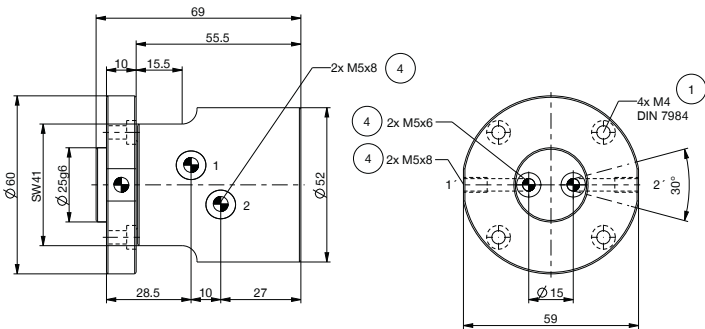
ORDER NO.



available with 2 or 4 pneumatic feedthroughs

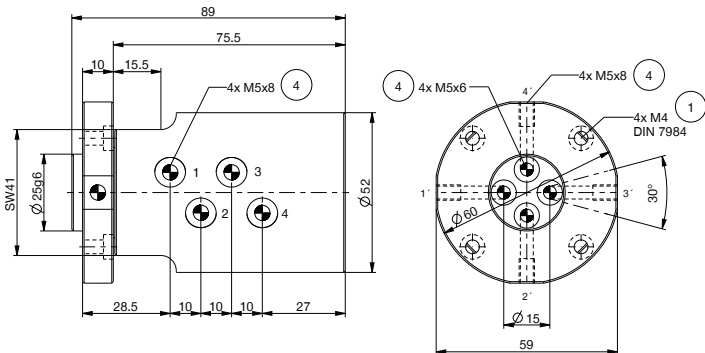
Serie DV - Rotary distributor		
Technical Data	DV2N-B	DV4N-B
Air feed-through [Quantity]	2	4
Maximum acceleration [m/s²]	22	22
Maximum speed [°/s]	720	720
Axial bearing load [N]	1300	1300
Radial bearing load [Nm]	104	156
Operating pressure max. [bar]	10	10
Operating temperature [°C]	5 ... +80	5 ... +80
Weight [kg]	0.45	0.55

DV2N-B



- ① Rotary distributor attachment
- ④ pneumatic feed-through

DV4N-B



- ① Rotary distributor attachment
- ④ pneumatic feed-through



CHECKLIST

GRIPPERS

Customer number Telephone number
Company Fax number
Contact E-mail
☐ Mr. ☐ Mrs.

☐ Request Desired date Request No.
☐ Order Order No.
☐ Parallel grippers ☐ Concentric grippers ☐ Angular Grippers
☐ Other / if yes, which type

Drive

☐ Pneumatic ☐ Electrical ☐ Hydraulic
Operating pressure [bar] Voltage [V]

Required stroke

Per jaw [mm] or Total stroke [mm]

Gripper finger length

Gripper top edge to force application point [mm]

Ambient conditions

☐ Clean / Dry ☐ Small amount of swarf / Coolant overspray ☐ Large amount of swarf / Coolant under pressure / Grinding agent
☐ Chemical substances / if yes, which
Temperature [°C] Cycles per minute

Required force

Gripping force [N] or Workpiece weight kg ☐ g ☐

Gripping type

☐ Internal gripping ☐ External gripping
☐ Frictional fit ☐ Form fit
Prism angle [°] Friction coefficient Axis acceleration [m/s²]

Self-locking

☐ Not required ☐ In closing ☐ In opening ☐ Pressure safety valve

Desired accessories

☐ Inductive sensor ☐ Magnetic field sensor ☐ With Cable ☐ Plugable

☐ Separate cable / if yes, how long [m]

☐ Pressure safety valve

☐ Pneumatic fittings / if yes, which

☐ Straight fitting

☐ Angled fitting

☐ Air flow control valve

Notes / Comments

Editor / Date

Attachment

☐ Sketch

☐ 3D model

☐ Others

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USAGE NOTE

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We hereby declare that our elements meet the following basic requirements of the Machinery Directive 2006/42/EC as an incomplete machine

No.1.1.2., No.1.1.3., No.1.1.5., No.1.3.2, No. 1.3.4, No. 1.3.7, No.1.5.3, No.1.5.4, No.1.5.8., No.1.6.4, No.1.7.1, No.1.7.3, No.1.7.4.

We also declare that the specific technical documents were produced in accordance with Annex VII Part B of this Directive. We undertake to provide the market supervisory bodies with electronic versions of the incomplete machine's special documents via our documentation department should they have reason to request them.

The incomplete machine may only be commissioned if the machine or system in which the incomplete machine is to be installed has been determined to satisfy the conditions of the Machinery Directive 2006/42/EC and the EC Declaration of Conformity has been produced in accordance with Annex II A.

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