



# 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. Our mission is to provide sophisticated process solutions in twenty areas of technology – not only in development but also in production. Zimmer Group serves all industries and stands ready to solve 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**

#### **COMPONENTS**

More than 45 years of experience and industry knowledge: We are one of the world's leading manufacturers and suppliers of pneumatic, hydraulic and electrical components in the fields of handling, damping and mechanical engineering.



**Handling technology.** The Zimmer Group is a leading manufacturer and supplier of components.

**Robotics.** With a wide range of tool changers, collision protection, axis compensation modules and more.

**Vacuum technology.** Our comprehensive range of vacuum components is the material-saving solution for nearly every industry.

**Industrial communication.** Robot programming made easy with ready-2-connect communications modules, both wired and wireless

Clamping and braking technology.

Innovative components for linear and rotary applications of all kinds.

**Damping technology.** Industrial profile dampers and hydraulic shock absorbers underscore the innovative force of the KNOW-HOW FACTORY.

**SOFT CLOSE.** We are one of the leading development partners for the furniture industry and a strong system partner when it comes to soft-closing mechanisms.

**Machine tooling technology.** Innovative tool and clamping systems for processing metal, wood and composite materials.

#### PROCESS TECHNOLOGY

Metal, plastic or elastomer? The technically and economically optimized production of series components for all industries. Including intelligent system development, a selection of materials, the associated production technologies and a cost-effective product.



**MIM technology.** As a solution for the production of complex-shaped metal parts by injection molding.

**Plastic injection molding.** The right process for series production of a wide range of plasticcomponents.

**Elastomer.** Ideally suited for the production of sophisticated, individual workpieces made of various elastomers.

#### **SYSTEM SOLUTIONS**

Extremely fast integration and commissioning, maximum product availability and optimal productivity – we combine the best from the world of mechanics with the most innovative technology from the IoT.



**System components.** We adapt our components to your specific application, including axis compensation modules, grippers and servo swivel jaws for handling, damping, machinery, clamping and braking technology.

**End-of-arm tools and gripper systems.** The heart of robotic automation. We have solved the most varied tasks across industries with our EOATs: welding, gripping, checking, installing and much more.

**Mobile robotics and transport systems.**Our AMRs, flexible transport systems and mobile robot cells for small and medium batch sizes give you maximum flexibility and make your production efficient and safe.

**Modules and cells.** We develop crossmarket, independent cells and installation-ready modules that integrate perfectly into your production system. Precise, individual solutions for optimized production rates and the highest quality standards.

Machines and lines. Our solutions include turn-key systems, decoupling and assembly cells for the furniture industry, highly flexible systems for batch size 1 and also robot-supported processing solutions including programming with ready-2-connect communications modules, both wired and wireless.

**Engineering.** This goal is our greatest motivation: We want to get your individual system up and running faster, plus make it easier to use and more efficient and reliable to operate.

**Safety and quality.** These two aspects are the core of our corporate philosophy. Through continuous testing by TÜV Süd, certification by Underwriters Laboratories (UL) and consistent compliance with DGUV recommendations, we ensure that our products not only meet the highest standards, but also offer long-term reliability and safety – for impressive solutions that last.



# ROBOTICS OVERVIEW OF SERIES

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# **TOOL CHANGERS MANUAL OVERVIEW OF SERIES**



1	TOOL	CHANGERS MANUAL	8 - 23
		Series HWR2000	10
		Series HWR	18

## **TOOL CHANGERS SERIES HWR2000**

#### PRODUCT ADVANTAGES



#### ► Change in seconds

Reduce your start up costs and minimise downtimes by changing your tool in seconds

#### Integrated air transfer system

For supplying pneumatic actuators. Additional media can be transmitted using optional energy elements.

#### Includes loss protection

Undesired falling of work pieces is eliminated - this means the highest safety for man and machine

#### 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

#### **BENEFITS IN DETAIL**



- 1 Fix part
  - For robot side assembly
- (2) Robot flange
  - partial mounting circle in accordance with EN ISO 9409-1
- 3 Eccentric locking bolt
  - with spring supported snap in function
- 4 Locking bolt
  - adapted to the clamping sleeve
- 5 Mounting for energy element
- 6 Integrated air feed-through
  - Air / vaccum transfer
  - Hoseless control possible
- 7 Loose part
  - For tool side assembly

#### ► TECHNICAL DATA

	Connecting flange according EN ISO 9409-1	Pneumatic energy transfer	Electrical energy transfer
Installation size		[Quantity]	
HWR2031	TK 31.5	4	optional
HWR2040	TK 40	4	optional
HWR2050	TK 50	8	optional

#### ► FURTHER INFORMATION IS AVAILABLE ONLINE



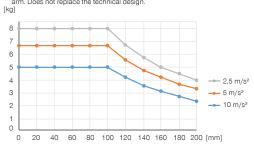
All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

#### **▶ PRODUCT SPECIFICATIONS**



#### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



#### Forces and moments

Shows static forces and moments which may impact on the tool changer when locked.



Mr [Nm]	30
My [Nm]	25
Fa [N]	1000

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**

GVM5



Straight Fittings - Quick Connect Style



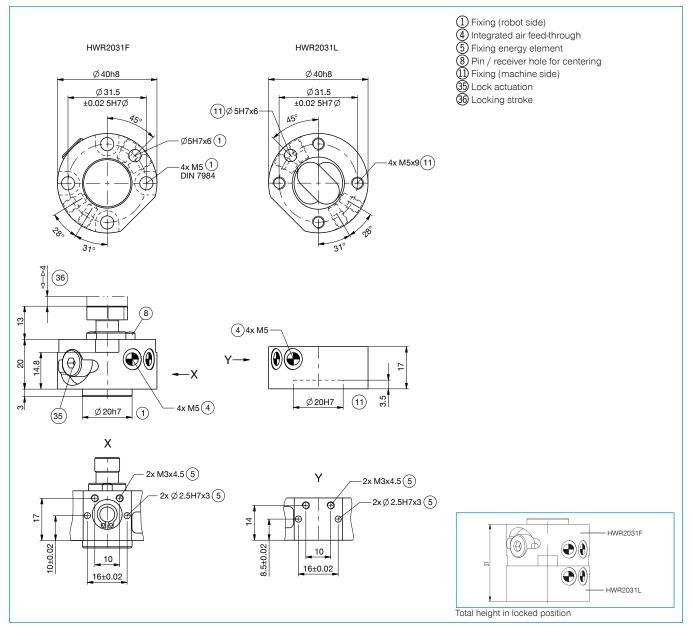


### CONNECTIONS / OTHER



You can find energy elements and accessories for tool changers from page 70

	► Technical data	
Order no.	HWR2031F	HWR2031L
Connecting flange according EN ISO 9409-1	TK 31.5	TK 31.5
Pneumatic energy transfer [Quantity]	4	4
Flow per connector [l/min]	150	150
Electrical energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	4	
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm <sup>2</sup> ]	0.13	0.1
Weight [kg]	0.09	0.04

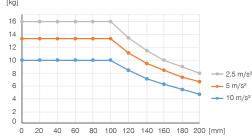


#### **▶ PRODUCT SPECIFICATIONS**



#### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



#### Forces and moments

Shows static forces and moments which may impact on the tool changer when locked.



Mr [Nm]	55
My [Nm]	50
Fa [N]	1200

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



GVM5 Straight Fittings - Quick Connect Style

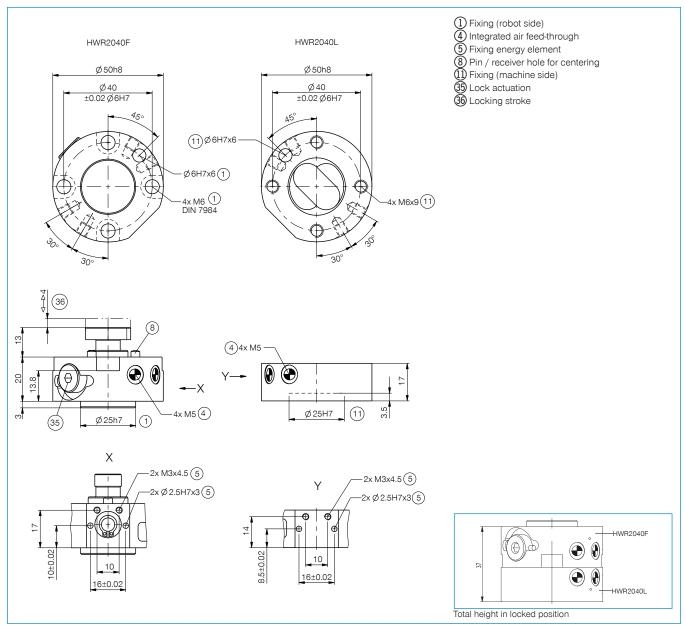


### CONNECTIONS / OTHER



You can find energy elements and accessories for tool changers from page 70

	► Technical data	
Order no.	HWR2040F	HWR2040L
Connecting flange according EN ISO 9409-1	TK 40	TK 40
Pneumatic energy transfer [Quantity]	4	4
Flow per connector [I/min]	150	150
Electrical energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	4	
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm²]	0.33	0.26
Weight [kg]	0.15	0.071

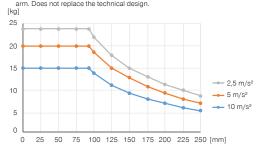


#### **▶ PRODUCT SPECIFICATIONS**



#### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



#### Forces and moments

Shows static forces and moments which may impact on the tool changer when locked.



Mr [Nm]	80
My [Nm]	70
Fa [N]	1600

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



### CONNECTIONS / OTHER

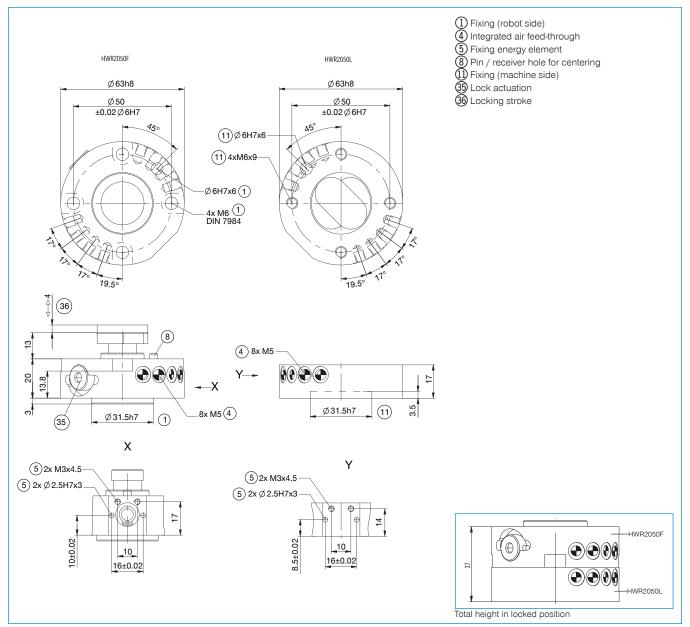


GVM5 Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70

	► Technical data	
Order no.	HWR2050F	HWR2050L
Connecting flange according EN ISO 9409-1	TK 50	TK 50
Pneumatic energy transfer [Quantity]	8	8
Flow per connector [I/min]	150	150
Electrical energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	4	
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm <sup>2</sup> ]	0.86	0.67
Weight [kg]	0.23	0.11





### **TOOL CHANGERS SERIES HWR**

#### PRODUCT ADVANTAGES



#### ► Change in seconds

Reduce your start up costs and minimise downtimes by changing your tool in seconds

#### Integrated air transfer system

For supplying pneumatic actuators. Additional media can be transmitted using optional energy elements.

#### Replacing with no tools required

The locking lever fully integrated into the housing makes it possible to replace tools without any additional tools

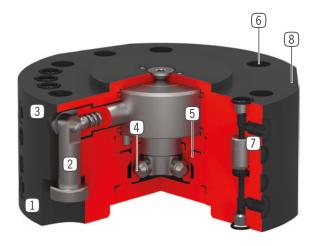
#### ▶ THE BEST PRODUCT FOR YOUR APPLICATION



#### 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

#### **BENEFITS IN DETAIL**



- 1 Loose part
  - For tool side assembly
- (2) Locking lever
  - with spring supported snap in function
- 3 Fix part
  - For robot side assembly
- 4 Locking bolt
  - adapted to the clamping sleeve
- (5) Locking stroke
  - re-adjustable via locking sleeve
- 6 Robot flange
  - partial mounting circle in accordance with EN ISO 9409-1
- (7) Integrated air feed-through
  - Air / vaccum transfer
  - Hoseless control possible
- 8 Mounting for energy element

#### **► TECHNICAL DATA**

	Connecting flange according EN ISO 9409-1	Pneumatic energy transfer	Electrical energy transfer
Installation size		[Quantity]	
HWR63	TK 63	6	optional
HWR80	TK 80	6	optional

#### ► FURTHER INFORMATION IS AVAILABLE ONLINE



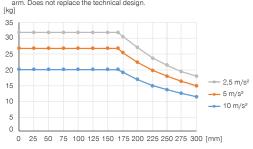
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#### **▶ PRODUCT SPECIFICATIONS**



#### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



#### Forces and moments

Shows static forces and moments which may impact on the tool changer when locked.



Mr [Nm]	200
My [Nm]	200
Fa [N]	1200

#### **► INCLUDED IN DELIVERY**



6 [piece] O-Ring

COR0050100

#### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



### CONNECTIONS / OTHER



GVM5 Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70

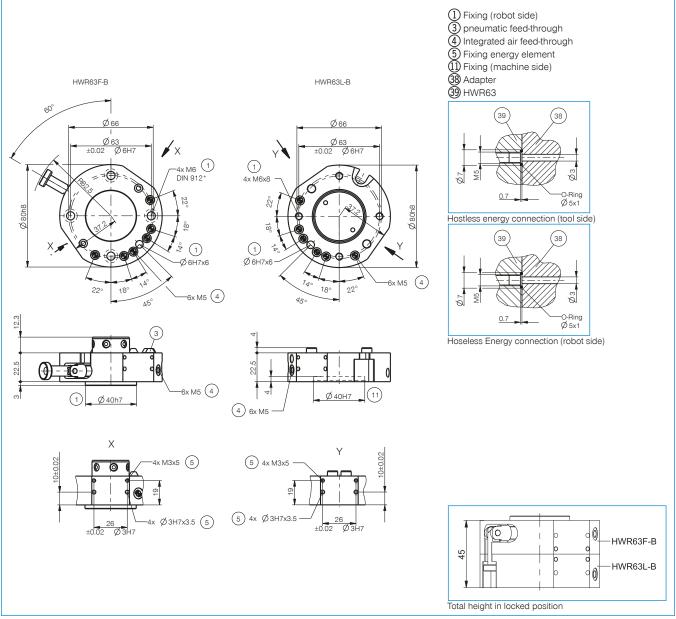


WVM5

Angled Fittings - Quick Connect Style

20

	► Technical data	
Order no.	HWR63F-B	HWR63L-B
Connecting flange according EN ISO 9409-1	TK 63	TK 63
Pneumatic energy transfer [Quantity]	6	6
Flow per connector [I/min]	170	170
Electrical energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	1	
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm <sup>2</sup> ]	3.8	2.6
Weight [kg]	0.49	0.31

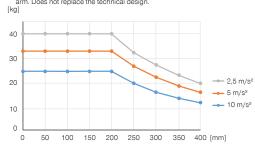


#### **▶ PRODUCT SPECIFICATIONS**



#### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



#### Forces and moments

Shows static forces and moments which may impact on the tool changer when locked.



Mr [Nm]	300
My [Nm]	300
Fa [N]	1500

#### **► INCLUDED IN DELIVERY**



6 [piece] O-Ring

COR0060100

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



### **CONNECTIONS / OTHER**



GVM5 Straight Fittings - Quick Connect Style



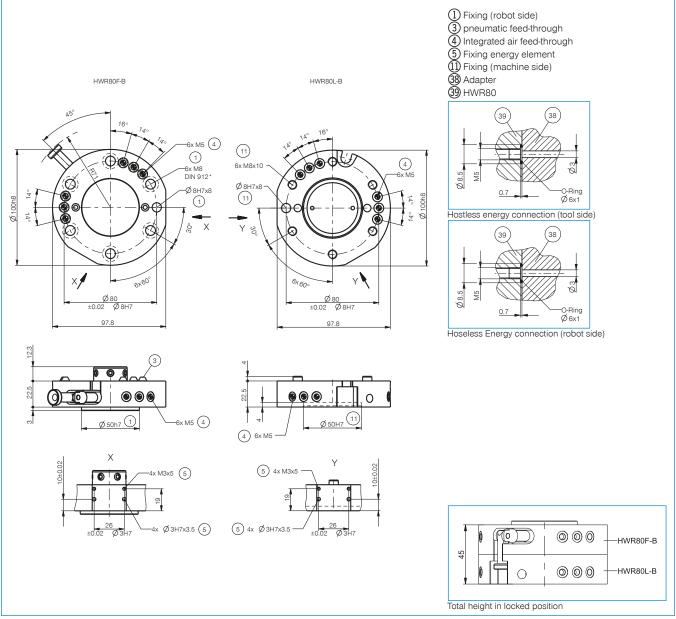
You can find energy elements and accessories for tool changers from page 70

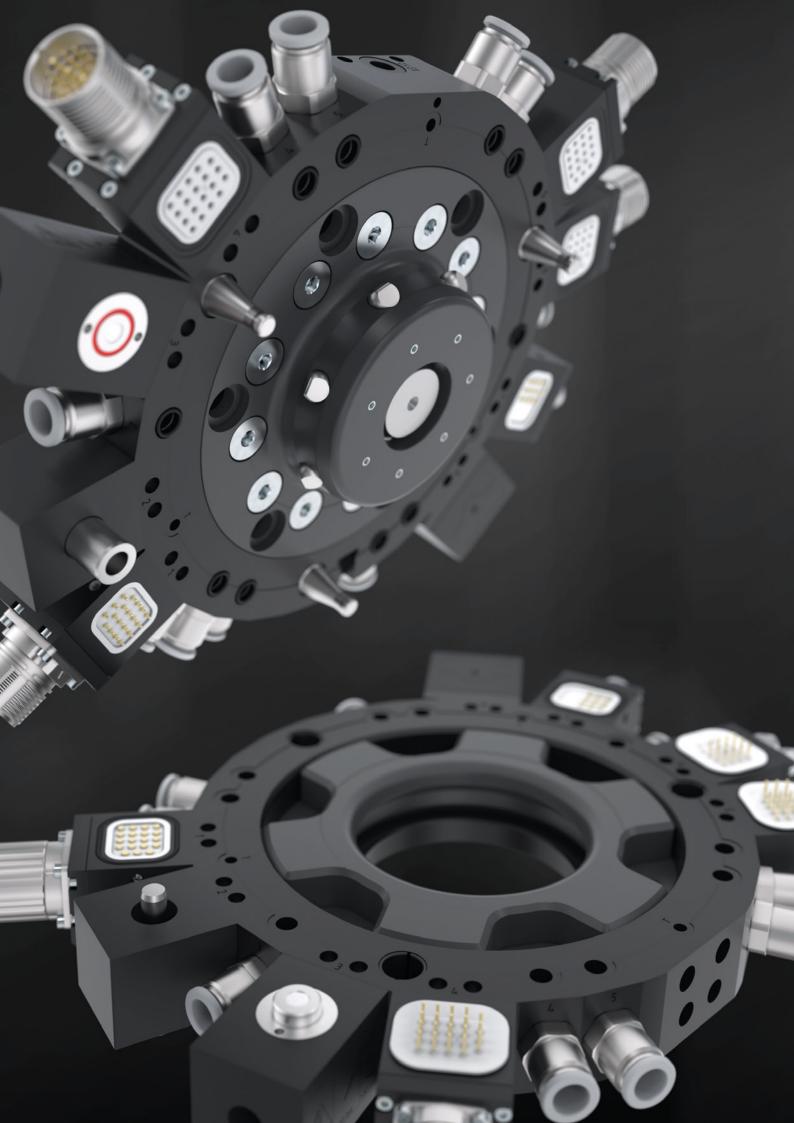


WVM5

Angled Fittings - Quick Connect Style

	Technical data	
Order no.	HWR80F-B	HWR80L-B
Connecting flange according EN ISO 9409-1	TK 80	TK 80
Pneumatic energy transfer [Quantity]	6	6
Flow per connector [I/min]	170	170
Electrical energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	1	
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm <sup>2</sup> ]	3.36	2.8
Weight [kg]	0.67	0.48





# **TOOL CHANGERS PNEUMATIC OVERVIEW OF SERIES**



2	TOOL	CHANGERS PNEUMATIC	24 - 47
		Series WPR5000	26
	-	Series WWR1000	42

### **TOOL CHANGERS SERIES WPR5000**

#### PRODUCT ADVANTAGES



#### Safer tool changer

Maximum safety due to a spring-loaded piston, self-locking mechanism, optional sensors and other accessories. The Zimmer Group tool changer therefore meets the requirements of Performance Level d, Control Category 3.

#### Locking kinematics

The innovative locking kinematics with locking bolts and extreme rigidity is the new benchmark for tool changers. The extremely flat design also minimizes the torque load on the robot, which allows smaller and more cost-effective robots to be used.

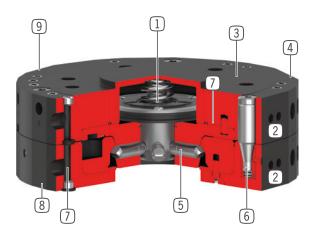
#### Endless variety

Regardless of the medium being transferred, with the right energy elements of the WER1500 and WER3000 series you get a standardized transmission of pneumatics, fluidics, electrical signals, power and communication and much more.

#### SERIES CHARACTERISTICS

Installation size	Vari	ants
WPR5XXX	F-00-A	L-00-A
Self locking mechanism	•	•
5 million maintenance-free cycles (max.)	•	•
+ Magnetic field sensor	•	•
Protected against corrosion	•	•
IP 54 IP54	•	•

#### **BENEFITS IN DETAIL**



#### 1 Drive

- Spring-loaded piston
- Maximum safety thanks to a self-locking mechanism
- Holds the loose part and tool securely even in the event of a pressure drop or an emergency stop

#### 2 Mounting for energy element

 Side connection of the optional energy elements for the transmission of fluidics, electrical signals, power and communication and much more

#### 3 Robot flange

- partial mounting circle in accordance with EN ISO 9409-1

#### 4 Piston position sensing

- Optional integrated sensor system
- Integrated directly in the tool changer, saving installation space and reducing the interference contour

#### (5) Locking bolt

- All locking parts made of hardened steel

#### 6 Centering pins

- Pretensioned centering pins for maximum torsional rigidity

#### 7 Integrated air feed-through

- Air / vaccum transfer
- Hoseless control possible

#### 8 Loose part

- For installation by the customer

#### 9 Fix part

- For robot side assembly

#### TECHNICAL DATA

	Connecting flange according EN ISO 9409-1  Pneumatic energy transfer  Electrical energy transfer		
Installation size		[Quantity]	
WPR5040	TK 40	4	optional
WPR5050	TK 50	4	optional
WPR5063	TK 63	6	optional
WPR5080	TK 80	6	optional
WPR5100	TK 100	8	optional
WPR5125	TK 125	10	optional
WPR5160	TK 160	10	optional

#### ► 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.

#### **▶ PRODUCT SPECIFICATIONS**



#### Variable installation position

Shows the maximum handling weight depending on acceleration and lever [kg] arm. Does not replace the technical design. 40 35 30 25 20 --- 2,5 m/s<sup>2</sup> 15 --- 5 m/s<sup>2</sup> 10 - 10 m/s<sup>2</sup> 5 40 60 80 100 120 140 160 180 200 [mm]

#### Forces and moments

Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	100
My [Nm]	100
Fa [N]	4000

#### INCLUDED IN DELIVERY



4 [piece] COR0040150

#### ► RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



### **CONNECTIONS / OTHER**



GVM5 Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70



WVM5 Angled Fittings - Quick Connect Style



AWPR5040-00-A Storage station



#### **SENSORS**



AWPR5040-10-A Storage station



#### ZUB190815

Piston position sensing



#### ZUB189694 Programming tip



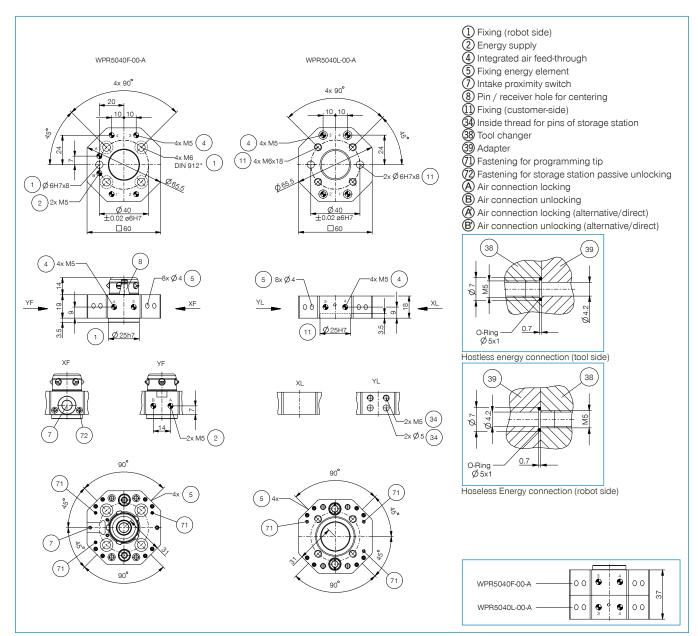
#### NJR04-E2SK

Inductive Proximity Switch Cable 0,3 m - Connec-



### ZUB192291

	► Technical data	
Order no.	WPR5040F-00-A	WPR5040L-00-A
Connecting flange according EN ISO 9409-1	TK 40	TK 40
Type of drive	pneumatic	pneumatic
Pneumatic energy transfer [Quantity]	4	4
Electrical energy transfer	optional	optional
Flow per connector [I/min]	275	275
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	1.5	
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Joining force [N]	10	
Release force [N]	10	
Offset at coupling max. in X,Y [mm]	1.5	1.5
Operating pressure [bar]	4 10	4 10
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Air volume per cycle [cm³]	6	
Moment of inertia [kgcm <sup>2</sup> ]	0.84	0.72
Weight [kg]	0.21	0.13





#### **▶ PRODUCT SPECIFICATIONS**



#### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. 60 50 30 --- 2,5 m/s<sup>2</sup> 20 --- 5 m/s<sup>2</sup> - 10 m/s<sup>2</sup> 10 175 200 [mm] 150

#### Forces and moments

Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	125
My [Nm]	125
Fa [N]	4500

#### INCLUDED IN DELIVERY



4 [piece] COR0040150

#### ► RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



### **CONNECTIONS / OTHER**



GV1-8X4 Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70



GVM5 Straight Fittings - Quick Connect Style



AWPR5050-00-A Storage station



WV1-8X4 Angled Fittings - Quick Connect Style



AWPR5050-10-A Storage station



WVM5 Angled Fittings - Quick Connect Style



ZUB189694 Programming tip



#### **SENSORS**



ZUB190816 Piston position sensing

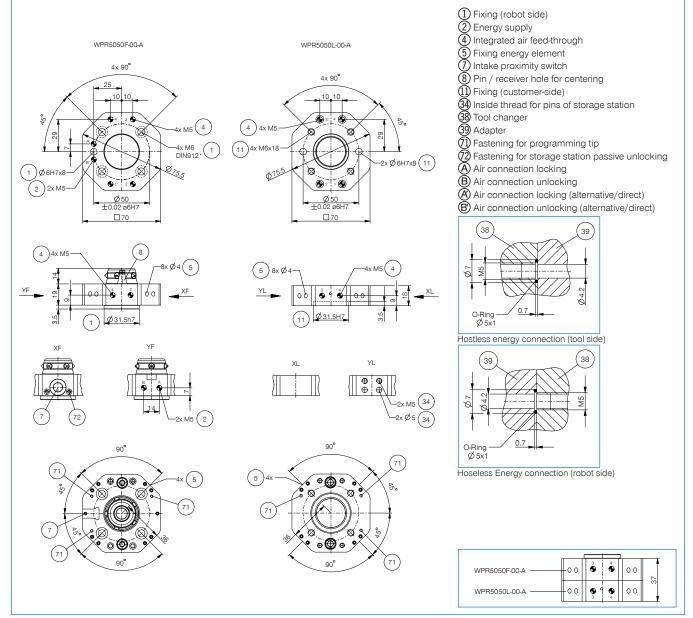


#### NJR04-E2SK





	► Technical data	
Order no.	WPR5050F-00-A	WPR5050L-00-A
Connecting flange according EN ISO 9409-1	TK 50	TK 50
Type of drive	pneumatic	pneumatic
Pneumatic energy transfer [Quantity]	4	4
Electrical energy transfer	optional	optional
Flow per connector [I/min]	275	275
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	1.5	
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Joining force [N]	10	
Release force [N]	10	
Offset at coupling max. in X,Y [mm]	1.5	1.5
Operating pressure [bar]	4 10	4 10
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Air volume per cycle [cm³]	10	
Moment of inertia [kgcm <sup>2</sup> ]	1.52	1.33
Weight [kg]	0.28	0.18



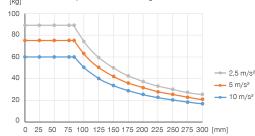


#### **▶ PRODUCT SPECIFICATIONS**



#### Variable installation position

Shows the maximum handling weight depending on acceleration and lever [kg] arm. Does not replace the technical design.



#### Forces and moments

Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	250
My [Nm]	350
Fa [N]	8500

#### INCLUDED IN DELIVERY



6 [piece] COR0090150

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



GV1-8X6

Straight Fittings - Quick Connect Style



### **CONNECTIONS / OTHER**



You can find energy elements and accessories for tool changers from page 70



#### GVM5

Straight Fittings - Quick Connect Style



#### AWPR5063-00-A

Storage station



#### WV1-8X6

Angled Fittings - Quick Connect Style



#### AWPR5063-10-A

Storage station



#### WVM5

Angled Fittings - Quick Connect Style



#### ZUB189694

Programming tip



#### **SENSORS**



#### ZUB190817

Piston position sensing

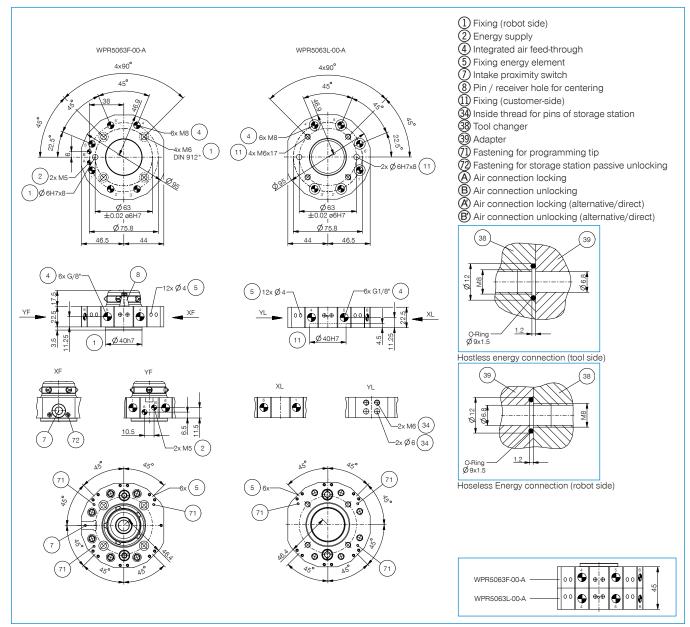


#### NJR04-E2SK

Inductive Proximity Switch Cable 0,3 m - Connec-



	► Technical data	
Order no.	WPR5063F-00-A	WPR5063L-00-A
Connecting flange according EN ISO 9409-1	TK 63	TK 63
Type of drive	pneumatic	pneumatic
Pneumatic energy transfer [Quantity]	6	6
Electrical energy transfer	optional	optional
Flow per connector [I/min]	700	700
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	2	
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Joining force [N]	10	
Release force [N]	10	
Offset at coupling max. in X,Y [mm]	2.0	2.0
Operating pressure [bar]	4 10	4 10
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Air volume per cycle [cm³]	23	
Moment of inertia [kgcm²]	4.97	4.43
Weight [kg]	0.58	0.36





#### **▶ PRODUCT SPECIFICATIONS**



#### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. 140 120 100 80 --- 2,5 m/s<sup>2</sup> 60 --- 5 m/s<sup>2</sup> 40 - 10 m/s<sup>2</sup> 350 400 [mm] 150 200 250 300

#### Forces and moments

Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	450
My [Nm]	700
Fa [N]	10000

#### INCLUDED IN DELIVERY



6 [piece] COR0090150

#### ► RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



### **CONNECTIONS / OTHER**



GV1-8X6 Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70



GVM5 Straight Fittings - Quick Connect Style



AWPR5080-00-A Storage station



WV1-8X6 Angled Fittings - Quick Connect Style



AWPR5080-10-A Storage station



WVM5 Angled Fittings - Quick Connect Style



ZUB189694 Programming tip

ZUB192299

Unlocking latch



#### **SENSORS**



ZUB190818 Piston position sensing



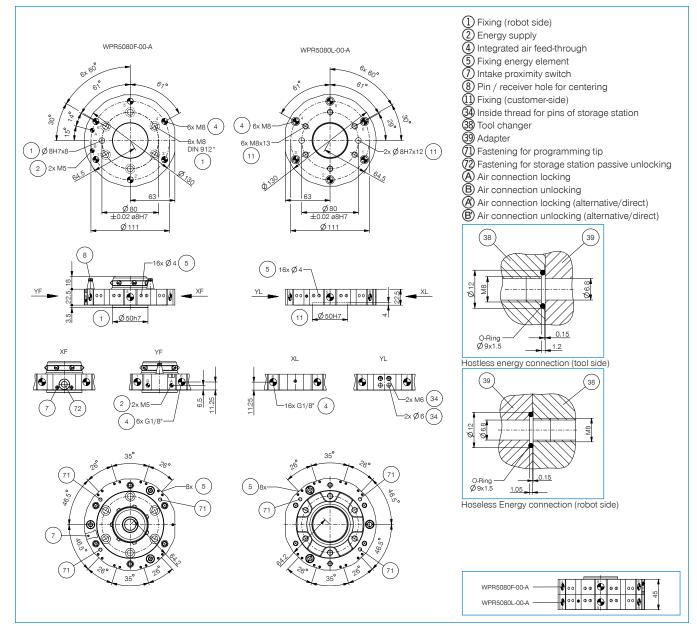


#### NJR04-E2SK

Inductive Proximity Switch Cable 0,3 m - Connec-



	► Technical data	
Order no.	WPR5080F-00-A	WPR5080L-00-A
Connecting flange according EN ISO 9409-1	TK 80	TK 80
Type of drive	pneumatic	pneumatic
Pneumatic energy transfer [Quantity]	6	6
Electrical energy transfer	optional	optional
Flow per connector [I/min]	700	700
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	2	
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Joining force [N]	10	
Release force [N]	10	
Offset at coupling max. in X,Y [mm]	2.0	2.0
Operating pressure [bar]	4 10	4 10
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Air volume per cycle [cm³]	37	
Moment of inertia [kgcm²]	20.2	18.3
Weight [kg]	1.2	0.93



#### **▶ PRODUCT SPECIFICATIONS**



#### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. 250 150 --- 2,5 m/s<sup>2</sup> 100 --- 5 m/s<sup>2</sup> ■ 10 m/s² 50

50 100 150 200 250 300 350 400 450 500 [mm]

#### Forces and moments

Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	750
My [Nm]	1000
Fa [N]	17500

#### INCLUDED IN DELIVERY



8 [piece] COR0090150

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



### **CONNECTIONS / OTHER**



GV1-4X8 Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70



GV1-8X8 Straight Fittings - Quick Connect Style



AWPR5100-00-A Storage station



WV1-4X8 Angled Fittings - Quick Connect Style



AWPR5100-10-A Storage station



WV1-8X8 Angled Fittings - Quick Connect Style



ZUB190938 Programming tip



#### **SENSORS**



ZUB190819



Piston position sensing

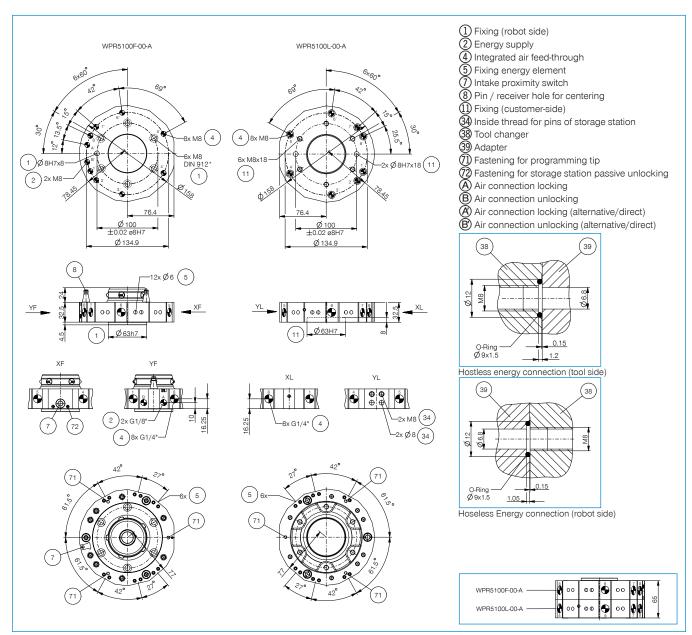


#### NJR04-E2SK

Inductive Proximity Switch Cable 0,3 m - Connec-



	► Technical data	
Order no.	WPR5100F-00-A	WPR5100L-00-A
Connecting flange according EN ISO 9409-1	TK 100	TK 100
Type of drive	pneumatic	pneumatic
Pneumatic energy transfer [Quantity]	8	8
Electrical energy transfer	optional	optional
Flow per connector [l/min]	900	900
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	2.5	
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Joining force [N]	10	
Release force [N]	10	
Offset at coupling max. in X,Y [mm]	2.0	2.0
Operating pressure [bar]	4 10	4 10
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Air volume per cycle [cm³]	85	
Moment of inertia [kgcm <sup>2</sup> ]	61.1	53.8
Weight [kg]	2.6	1.9



### **▶ PRODUCT SPECIFICATIONS**



### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. 450 400 350 300 200 --- 2,5 m/s<sup>2</sup> 150 --- 5 m/s<sup>2</sup> 100 - 10 m/s<sup>2</sup> 50

0 50 100 150 200 250 300 350 400 450 500 550 600 [mm]

### Forces and moments

Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	2000
My [Nm]	2000
Fa [N]	30000

### INCLUDED IN DELIVERY



10 [piece] COR0090150

### ► RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GV1-4X8 Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70



GV1-8X8 Straight Fittings - Quick Connect Style



AWPR5125-00-A Storage station



WV1-4X8 Angled Fittings - Quick Connect Style



AWPR5125-10-A Storage station



WV1-8X8 Angled Fittings - Quick Connect Style



ZUB190938 Programming tip



### **SENSORS**



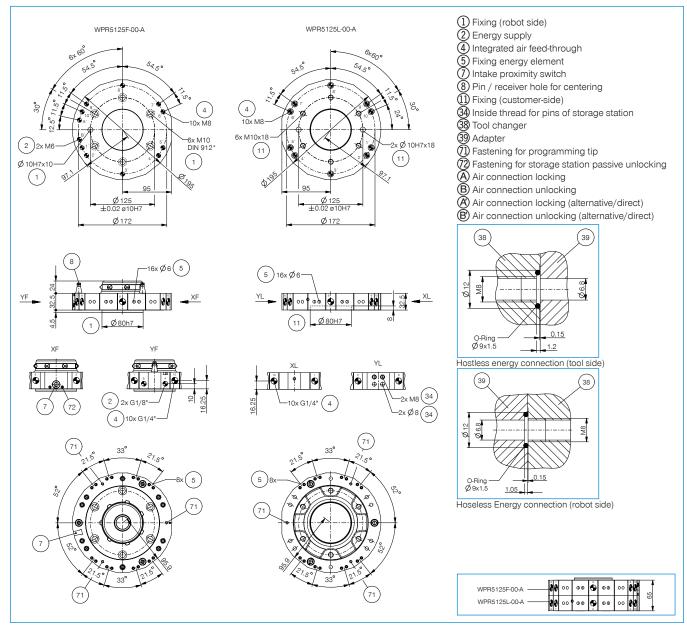
ZUB190820 Piston position sensing





NJR04-E2SK Inductive Proximity Switch Cable 0,3 m - Connec-

	Technical data	
Order no.	WPR5125F-00-A	WPR5125L-00-A
Connecting flange according EN ISO 9409-1	TK 125	TK 125
Type of drive	pneumatic	pneumatic
Pneumatic energy transfer [Quantity]	10	10
Electrical energy transfer	optional	optional
Flow per connector [I/min]	900	900
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	2.5	
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Joining force [N]	10	
Release force [N]	10	
Offset at coupling max. in X,Y [mm]	2.5	2.5
Operating pressure [bar]	4 10	4 10
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Air volume per cycle [cm³]	130	
Moment of inertia [kgcm²]	146	142
Weight [kg]	4	2.9





### **▶ PRODUCT SPECIFICATIONS**



### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. 500 400 300 --- 2,5 m/s<sup>2</sup> 200 --- 5 m/s<sup>2</sup> - 10 m/s<sup>2</sup> 100 75 150 225 300 375 450 525 600 675 750 [mm]

### Forces and moments

Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	2500
My [Nm]	2500
Fa [N]	35000

### INCLUDED IN DELIVERY



10 [piece] O-Rina COR0130150

### ► RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GV1-8X8

Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70



GV3-8X13ID

Straight Fittings - Barb Style Connection



AWPR5160-00-A

Storage station



WV1-8X8

Angled Fittings - Quick Connect Style



AWPR5160-10-A Storage station



### **SENSORS**



ZUB190938 Programming tip



ZUB190821

Piston position sensing

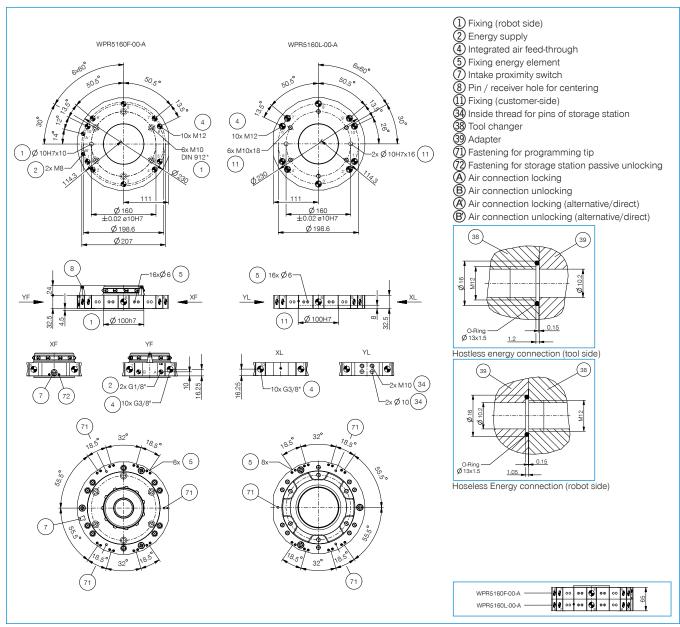


ZUB192664 Unlocking latch



NJR04-E2SK

	► Technical data	
Order no.	WPR5160F-00-A	WPR5160L-00-A
Connecting flange according EN ISO 9409-1	TK 160	TK 160
Type of drive	pneumatic	pneumatic
Pneumatic energy transfer [Quantity]	10	10
Electrical energy transfer	optional	optional
Flow per connector [I/min]	1400	1400
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	2.5	
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Joining force [N]	10	
Release force [N]	10	
Offset at coupling max. in X,Y [mm]	2.5	2.5
Operating pressure [bar]	4 10	4 10
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Air volume per cycle [cm³]	204	
Moment of inertia [kgcm <sup>2</sup> ]	298	269
Weight [kg]	5.8	4.3





## **TOOL CHANGERS SERIES WWR1000**

### PRODUCT ADVANTAGES



### Secure hold during pressure drop

The combination of spring accumulator and mechanical force transmission ensures that the tool is held securely - even in the event of a sudden loss of pressure in the system.

### High loads for major challenges

With load capacities of over 1,000 kg, the tool changer is ideal for use on heavy-duty robots and enables stable, automated changing processes even under the most demanding conditions.

### Inexhaustible variety of media transfer systems

Whether pneumatics, vacuum, hydraulics, coolant, electrical signals or load - our modular system allows the integration of a wide variety of media carriers - flexibly adaptable to the most diverse process requirements.

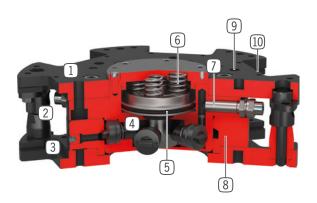
### THE BEST PRODUCT FOR YOUR APPLICATION



### 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

### **BENEFITS IN DETAIL**



- 1 Fix part
  - For robot side assembly
- (2) Centering pins
  - twist protection and positioning for loose part
- 3 Loose part
  - For tool side assembly
- 4 Locking bolt
  - adapted to the clamping sleeve
- (5) Drive
  - double-acting pneumatic cylinder
- 6 Integrated spring
  - energy storage in case of drop in pressure
- 7 Piston position sensing
  - Via inductive proximity switch
- 8 Locking sleeve
- 9 Robot flange
  - partial mounting circle in accordance with EN ISO 9409-1
- $\fbox{1}$   $\fbox{0}$  Mounting for energy element

### **► TECHNICAL DATA**

	Connecting flange according EN ISO 9409-1	Electrical energy transfer	Fluid energy transfer
Installation size			
WWR1160	TK 160	optional	optional
WWR1200	TK 200	optional	optional

### ► FURTHER INFORMATION IS AVAILABLE ONLINE



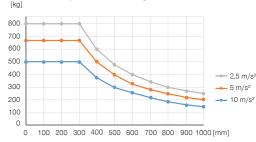
All information just a click away at: <a href="www.zimmer-group.com">www.zimmer-group.com</a>. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

### **▶ PRODUCT SPECIFICATIONS**



### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



### Forces and moments

Shows static forces and moments which may impact on the tool changer when locked.



Mr [Nm]	6000
My [Nm]	6000
Fa [N]	35000

### **► INCLUDED IN DELIVERY**



2 [piece]

Mounting bracket for proximity switch

**ZUB**0014

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



**SENSORS** 

GV1-8X8

Straight Fittings - Quick Connect Style



### **CONNECTIONS / OTHER**



You can find energy elements and accessories for tool changers from page 70



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





NJ8-E2S-17

Inductive proximity switch - Connector M8



ZUB0022

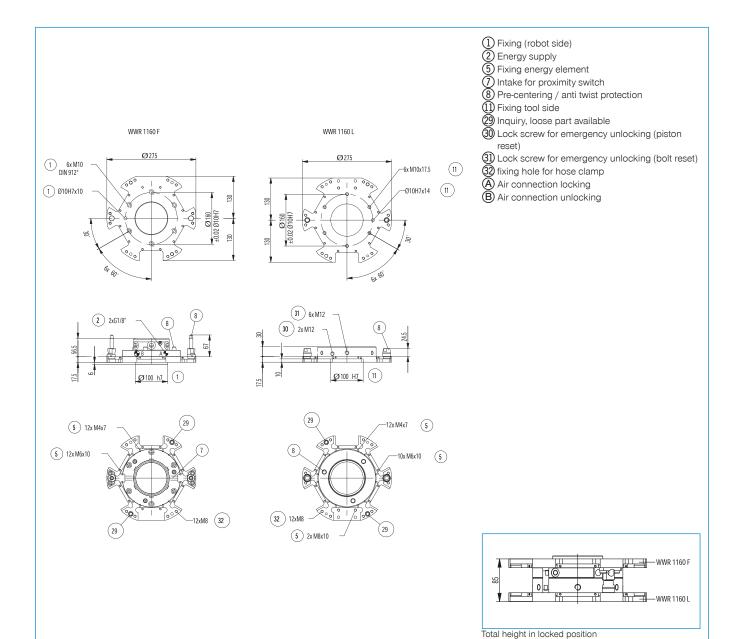
Programming pins





ALSR1-1200 Storage station

	Technical data	
Order no.	WWR1160F	WWR1160L
Connecting flange according EN ISO 9409-1	TK 160	TK 160
Electrical energy transfer	optional	optional
Fluid energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	1	
Repetition accuracy +/- [mm]	0.02	0.02
Offset at coupling max. in X,Y [mm]	3.0	3.0
Operating pressure [bar]	6 8	6 8
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Air volume per cycle [cm³]	48	
Weight [kg]	8.7	5.3



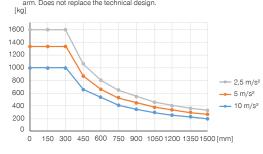


### **▶ PRODUCT SPECIFICATIONS**



### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



### Forces and moments

Shows static forces and moments which may impact on the tool changer when locked.



Mr [Nm]	12000
My [Nm]	12000
Fa [N]	75000

### **► INCLUDED IN DELIVERY**



2 [piece]

Mounting bracket for proximity switch

**ZUB**0014

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



### **CONNECTIONS / OTHER**



GV1-8X8

Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70



### **SENSORS**



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





NJ8-E2S-17

Inductive proximity switch - Connector M8

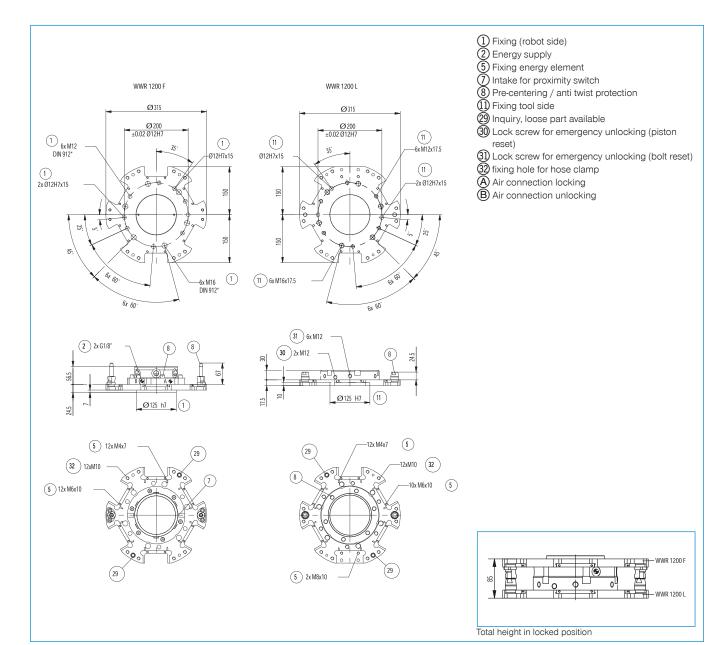


ZUB0022 Programming pins



ALSR1-1200 Storage station

	Technical data	
Order no.	WWR1200F	WWR1200L
Connecting flange according EN ISO 9409-1	TK 200	TK 200
Electrical energy transfer	optional	optional
Fluid energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	1	
Repetition accuracy +/- [mm]	0.02	0.02
Offset at coupling max. in X,Y [mm]	3.0	3.0
Operating pressure [bar]	6 8	6 8
Nominal operating pressure [bar]	6	6
Operating temperature [°C]	5 +80	5 +80
Air volume per cycle [cm³]	83	
Weight [kg]	15	8.6





# **TOOL CHANGERS AUTOMATIC OVERVIEW OF SERIES**





## **TOOL CHANGERS SERIES FWR**

### PRODUCT ADVANTAGES



### Automated tool change without external activation

In interaction with the storage station, the changer is actuated mechanically during retraction. As a result, no additional power supply is required for the change operation.

### Manual tool change

The sizes FWR40 and FWR50 can be opened with just one hand. If this is not desired, you can lock the actuation manually.

### Optional media transmission

Customize the tool changer to your application. With the energy elements of the WER1500 series, you can transfer different media with standard connections!

### 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

### **BENEFITS IN DETAIL**



- 1 Fix part
  - For robot side assembly
- 2 Connecting flange
  - partial mounting circle in accordance with EN ISO 9409-1
- 3 Loose part presence sensing
  - Via inductive proximity switch
- 4 Mounting for energy element
  - Direct connection, without adapter plates
- 5 Loose part
  - For tool side assembly
- (6) Locking
  - Manual actuation
  - Automatic actuation via a storage station
- 7 Lock for manual actuation (optional)
  - Secure against inadvertent loosening
- 8 Integrated air feed-through
  - Air / vaccum transfer
  - Hoseless control possible

### **► TECHNICAL DATA**

	Connecting flange according EN ISO 9409-1	Handling weight max.* Tool weight max.** Pneumatic energy transfer		
Installation size		[kg]	[kg]	[Quantity]
FWR40	TK 40	13	5	4
FWR50	TK 50	16	7	4
FWR63	TK 63	20	10	4
FWR80	TK 80	29	12	4

<sup>\*</sup>The **handling weight** is the maximum weight that may be on the tool changer.

Handling weight = end effector + workpiece

Tool weight = end effector + loose part

### ► 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.

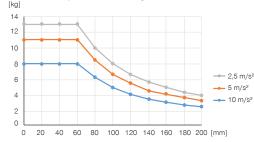
<sup>\*\*</sup>The **tool weight** is the maximum weight of the end effector that may be in the storage station (without workpiece).

### **▶ PRODUCT SPECIFICATIONS**



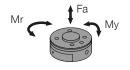
### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg] 14



### Forces and moments

Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	40
My [Nm]	40
Fa [N]	1000

### INCLUDED IN DELIVERY



4 [piece] COR0050100

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GVM5 Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70



### **SENSORS**



AFWR1-40-A Storage station



### NJR04-E2SK

Inductive Proximity Switch Cable 0,3 m - Connector M8

### RECOMMENDED ACCESSORY STORAGE STATION

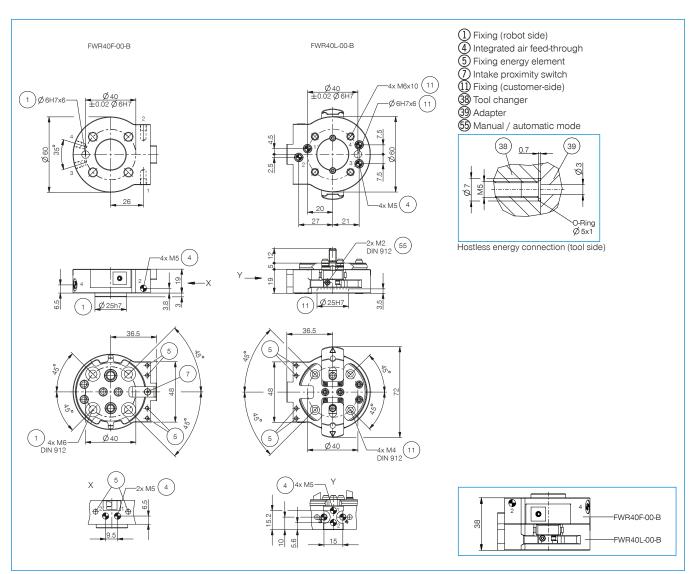


### NJ5-E2SK-01

	Technical data	
Order no.	FWR40F-00-B	FWR40L-00-B
Connecting flange according EN ISO 9409-1	TK 40	TK 40
Handling weight max. [kg]	13	13
Tool weight max. [kg]	5	5
Pneumatic energy transfer [Quantity]	4	4
Flow per connector M5 [I/min]	170	170
Electrical energy transfer	optional	optional
Locking stroke [mm]	0.6	
Repetition accuracy in Z [mm]	0.02	
Repetition accuracy in X, Y [mm]	0.03	
Joining force [N]	0	0
Release force [N]	0	0
Offset at coupling max. in X,Y [mm]	1.8	1.8
Offset at coupling max. in X,Y [°]	1.3	1.3
Tightening force [N]*	50	
Tightening torque [Nm]*	3	
Operating pressure for energy transmission [bar]	-0.6 6	-0.6 6
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm²]	0.95	1.19
Protection to IEC 60529	IP44**	IP44**
Weight [kg]	0.14	0.21

<sup>\*</sup>Note the mating force of the energy elements!

 $<sup>^{\</sup>star\,\star}$  only in coupled state

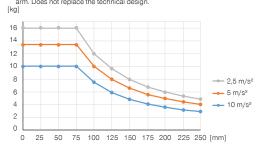


### **▶ PRODUCT SPECIFICATIONS**



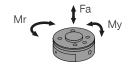
### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



### Forces and moments

Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	60
My [Nm]	60
Fa [N]	1200

### INCLUDED IN DELIVERY



2 [piece] O-Rina COR0060100



2 [piece] O-Rina COR0100100

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GVM5 Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70



WV1-8X8 Angled Fittings - Quick Connect Style



AFWR1-50-A Storage station



### **SENSORS**



### NJR04-E2SK

Inductive Proximity Switch Cable 0,3 m - Connector M8

### RECOMMENDED ACCESSORY STORAGE STATION

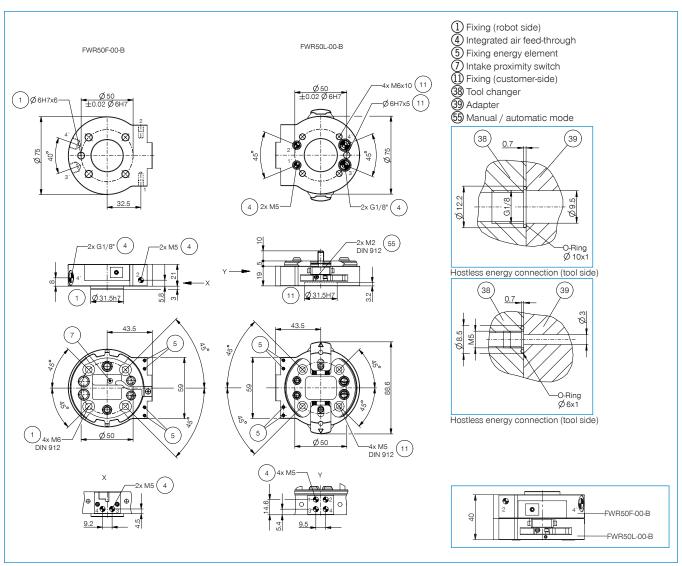


### NJ5-E2SK-01

	► Technical data	
Order no.	FWR50F-00-B	FWR50L-00-B
Connecting flange according EN ISO 9409-1	TK 50	TK 50
Handling weight max. [kg]	16	16
Tool weight max. [kg]	7	7
Pneumatic energy transfer [Quantity]	4	4
Flow per connector M5 [I/min]	170	170
Flow per connector G1/8" [I/min]	650	650
Electrical energy transfer	optional	optional
Locking stroke [mm]	0.6	
Repetition accuracy in Z [mm]	0.02	
Repetition accuracy in X, Y [mm]	0.03	
Joining force [N]	0	0
Release force [N]	0	0
Offset at coupling max. in X,Y [mm]	2.0	2.0
Offset at coupling max. in X,Y [°]	1.5	1.5
Tightening force [N]*	70	
Tightening torque [Nm]*	4	
Operating pressure for energy transmission [bar]	-0.6 6	-0.6 6
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm <sup>2</sup> ]	2.41	2.67
Protection to IEC 60529	IP44**	IP44**
Weight [kg]	0.25	0.32

<sup>\*</sup>Note the mating force of the energy elements!

<sup>\* \*</sup> only in coupled state

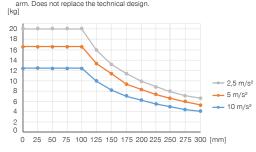


### **▶ PRODUCT SPECIFICATIONS**



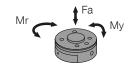
### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



### Forces and moments

Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	100
My [Nm]	100
Fa [N]	1900

### INCLUDED IN DELIVERY



2 [piece] O-Rina COR0060100



2 [piece] O-Ring COR0120100

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GVM5 Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70



WV1-8X8 Angled Fittings - Quick Connect Style



AFWR1-63-A Storage station



### **SENSORS**



### NJR04-E2SK

Inductive Proximity Switch Cable 0,3 m - Connector M8

### RECOMMENDED ACCESSORY STORAGE STATION

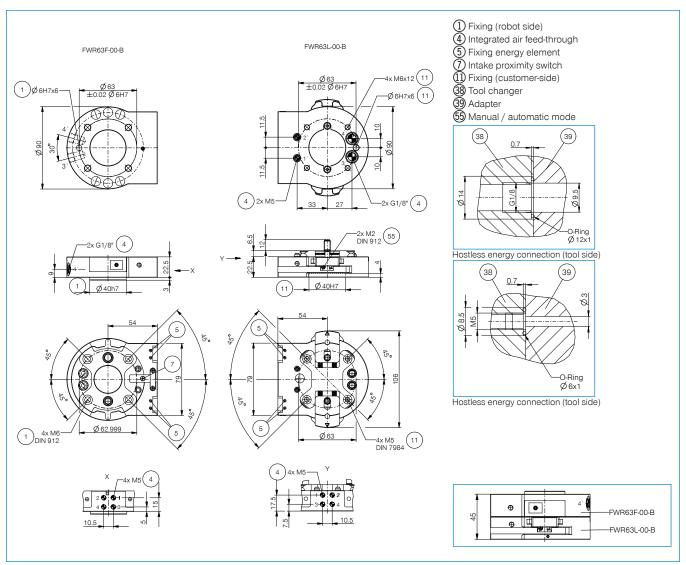


NJ5-E2SK-01

	Technical data	
Order no.	FWR63F-00-B	FWR63L-00-B
Connecting flange according EN ISO 9409-1	TK 63	TK 63
Handling weight max. [kg]	20	20
Tool weight max. [kg]	10	10
Pneumatic energy transfer [Quantity]	4	4
Flow per connector M5 [I/min]	170	170
Flow per connector G1/8" [I/min]	650	650
Electrical energy transfer	optional	optional
Locking stroke [mm]	1	
Repetition accuracy in Z [mm]	0.02	
Repetition accuracy in X, Y [mm]	0.03	
Joining force [N]	0	0
Release force [N]	0	0
Offset at coupling max. in X,Y [mm]	2.2	2.2
Offset at coupling max. in X,Y [°]	1.5	1.5
Tightening force [N]*	100	
Tightening torque [Nm]*	5	
Operating pressure for energy transmission [bar]	-0.6 6	-0.6 6
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm²]	5.98	7.25
Protection to IEC 60529	IP44**	IP44**
Weight [kg]	0.42	0.56

<sup>\*</sup>Note the mating force of the energy elements!

<sup>\* \*</sup> only in coupled state

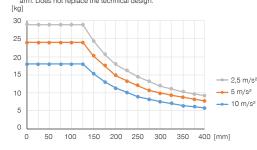


### **▶ PRODUCT SPECIFICATIONS**



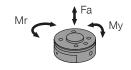
### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



### Forces and moments

Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	160
My [Nm]	160
Fa [N]	3200

### INCLUDED IN DELIVERY



2 [piece] O-Rina COR0060100



2 [piece] O-Ring COR0120100

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GVM5 Straight Fittings - Quick Connect Style



You can find energy elements and accessories for tool changers from page 70



WV1-8X8 Angled Fittings - Quick Connect Style



AFWR1-80-A Storage station



### **SENSORS**



### NJR04-E2SK

Inductive Proximity Switch Cable 0,3 m - Connector M8

### RECOMMENDED ACCESSORY STORAGE STATION

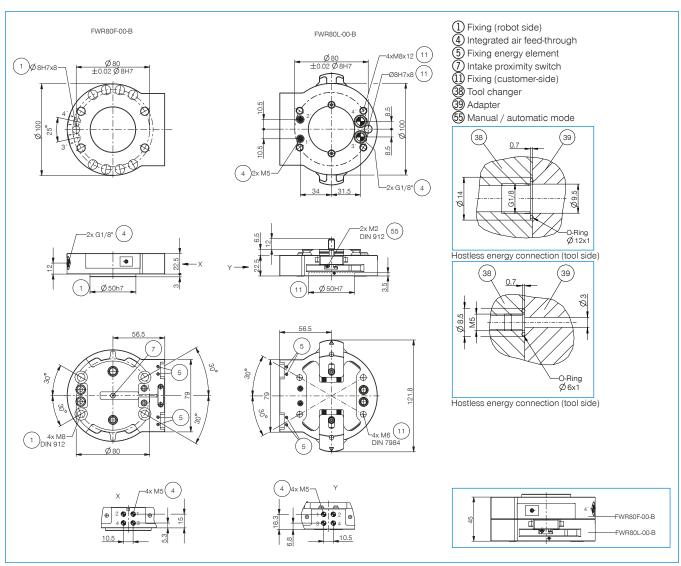


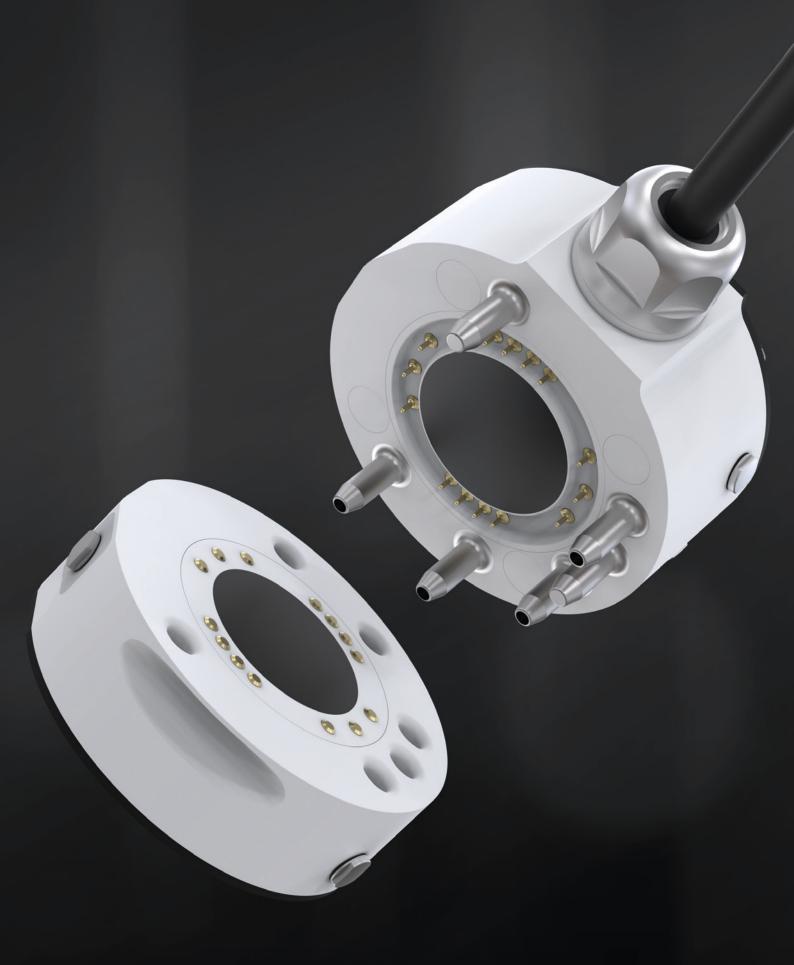
### NJ5-E2SK-01

	► Technical data	
Order no.	FWR80F-00-B	FWR80L-00-B
Connecting flange according EN ISO 9409-1	TK 80	TK 80
Handling weight max. [kg]	29	29
Tool weight max. [kg]	12	12
Pneumatic energy transfer [Quantity]	4	4
Flow per connector M5 [I/min]	170	170
Flow per connector G1/8" [I/min]	650	650
Electrical energy transfer	optional	optional
Locking stroke [mm]	1	
Repetition accuracy in Z [mm]	0.02	
Repetition accuracy in X, Y [mm]	0.03	
Joining force [N]	0	0
Release force [N]	0	0
Offset at coupling max. in X,Y [mm]	2.2	2.2
Offset at coupling max. in X,Y [°]	1.5	1.5
Tightening force [N]*	120	
Tightening torque [Nm]*	6	
Operating pressure for energy transmission [bar]	-0.6 6	-0.6 6
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm <sup>2</sup> ]	8.38	9.97
Protection to IEC 60529	IP44**	IP44**
Weight [kg]	0.51	0.67

<sup>\*</sup>Note the mating force of the energy elements!

<sup>\* \*</sup> only in coupled state





# **TOOL CHANGERS MAGNETIC OVERVIEW OF SERIES**



**TOOL CHANGERS MAGNETIC** 60 - 67 Series WMR2000 62

## **TOOL CHANGERS SERIES WMR2000**

### PRODUCT ADVANTAGES



### Permanent electromagnet

The permanent electromagnet in the NC version ensures a secure hold, even if there is a power failure.

### Integrated media transmission

Up to four integrated compressed air/vacuum transmitters possible. In addition, secure signal transmission is ensured by specially developed and sealed spring pin contacts.

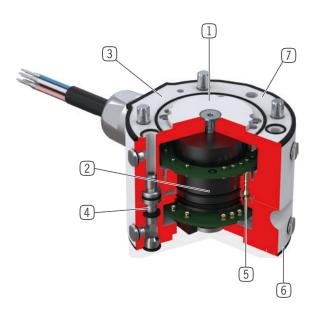
### Resistant materials

The tool changer was designed in accordance with GMP (Good Manufacturing Practice) and ISO 14644 and relies exclusively on FDA-compliant materials to ensure reduced particle emissions. Durable surfaces and materials guarantee resistance to aggressive cleaning agents such as hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) and many others.

SERIES CHARACTERISTICS

Installation size	Variants		
WMR20XX	F-00-A	L-00-A	
IO-Link	•	•	
I/O Digital I/O	•	•	
FDA-compliant materials	•	•	
H <sub>2</sub> O <sub>2</sub> -resistant materials	•	•	
Protected against corrosion	•	•	
Cleanroom-certified	•	•	
IP 68 IP68	•	•	

### **BENEFITS IN DETAIL**



### 1 Certifications

- Developed and constructed in accordance with GMP Class A
- H,O,-resistant materials
- TÜV-certified cleanroom class

### 2 Driv

- Permanent electromagnet (NC version)
- Secure hold even in the event of a power failure

### (3) Robot flange

- partial mounting circle in accordance with EN ISO 9409-1

### 4 Integrated air feed-through

- Air / vaccum transfer
- Hoseless control possible

### (5) Integrated current and signal transmission

- Sealed FDA-compliant spring contacts
- Integrated loose part coding

### 6 Loose part

- For tool side assembly
- Sealed flange

### 7 Fix part

- For robot side assembly
- Sealed flange

### **► TECHNICAL DATA**

	Connecting flange according EN ISO 9409-1	Pneumatic energy transfer	Electrical energy transfer
Installation size		[Quantity]	[Quantity]
WMR2063	TK 63	4	10

### ► FURTHER INFORMATION IS AVAILABLE ONLINE

### **▶ PRODUCT SPECIFICATIONS**



### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. 10 --- 2,5 m/s<sup>2</sup> --- 5 m/s<sup>2</sup> - 10 m/s<sup>2</sup> 2 20 40 60 80 100 120 140 160 180 200 [mm]

### Forces and moments

Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	20
My [Nm]	13
Fa [N]	265

### INCLUDED IN DELIVERY



4 [piece] Plastic cover for screws 173835

### > RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



### **CONNECTIONS / OTHER**



**CPNEU02498** Straight connection



AWMR2063-00-A Storage station



**CPNEU02497** Elbow connection

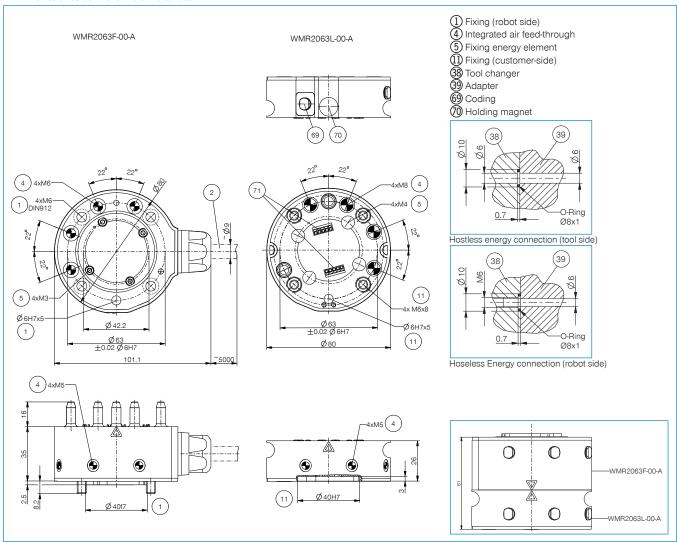
### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK

	► Technical data	
Order no.	WMR2063F-00-A	WMR2063L-00-A
Connecting flange according EN ISO 9409-1	TK 63	TK 63
Type of drive	Magnetic	Magnetic
Supply voltage [V]*	24	
Nominal current [A]*	1.5	
On-time * *	10% ED S3 5 min	
Pneumatic energy transfer [Quantity]	4	4
Electrical energy transfer [Quantity]	10	10
Flow per connector [I/min]	360	360
Energy element operating voltage [V]	24	24
Energy element nominal current [A]	5	5
Data transmission	Digital I/O, IO-Link	Digital I/O, IO-Link
Holding force [N]	265	
Joining force [N]	60	60
Release force [N]	120	120
Repetition accuracy in Z [mm]	0.1	0.1
Repetition accuracy in X, Y [mm]	0.1	0.1
Offset at coupling max. in X,Y [mm]	1.0	1.0
Operating temperature [°C]	5 +60	5 +60
Moment of inertia [kgcm <sup>2</sup> ]	4.3	1.6
Clean room applications according to DIN EN ISO 14644-1	2	2
Protection to IEC 60529	IP68***	IP68***
Weight [kg]	0.5	0.21

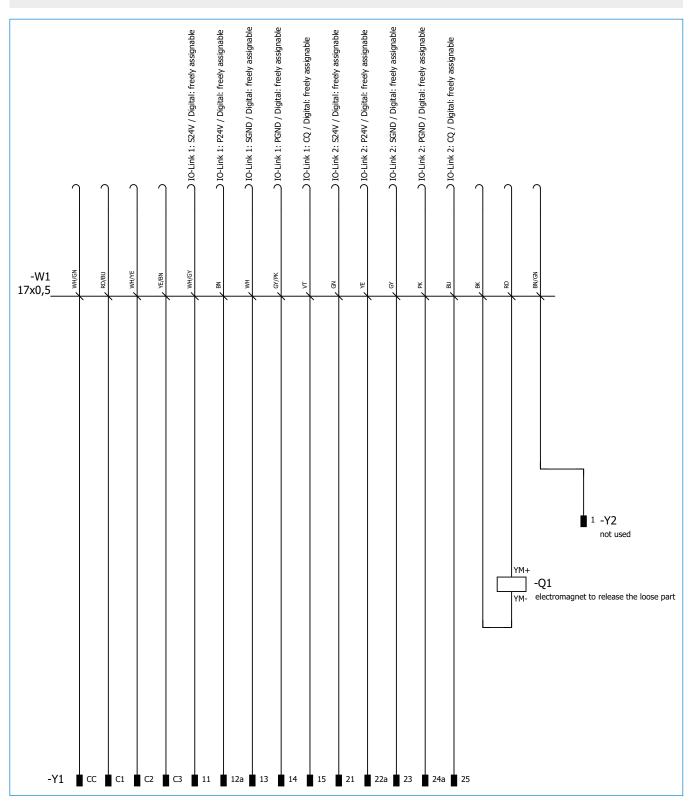
- \*Only needed for releasing.
- \*\*Refers to the permanent electromagnet (to release).
- \* \* \* When screwed down over the entire surface.



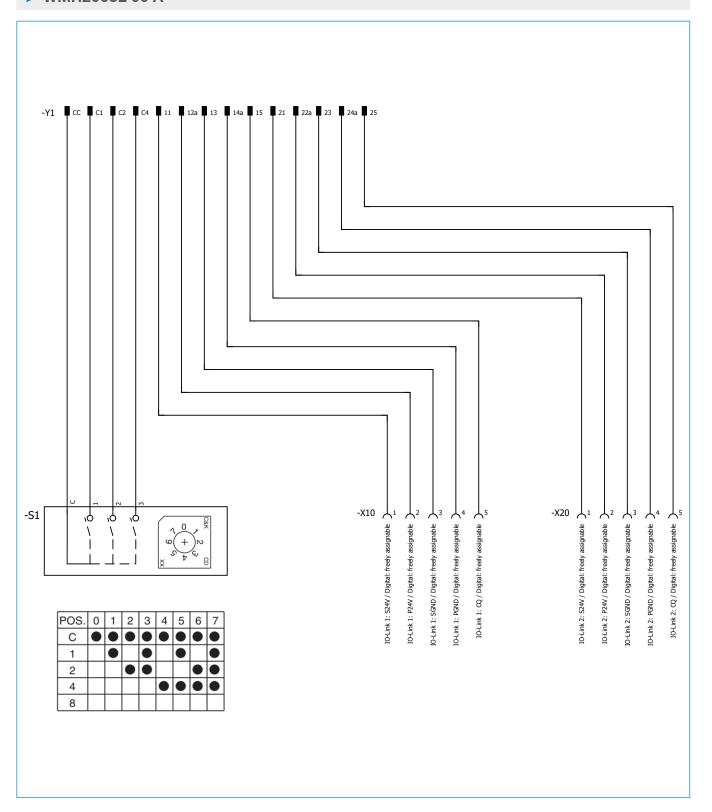


# **CIRCUIT DIAGRAMS WMR2063**

### ➤ WMR2063F-00-A



### ► WMR2063L-00-A





## **ENERGY ELEMENTS AND ACCESSORIES FOR TOOL CHANGER**



**ENERGY ELEMENTS AND ACCESSORIES FOR TOOL CHANGER** 

68 - 79

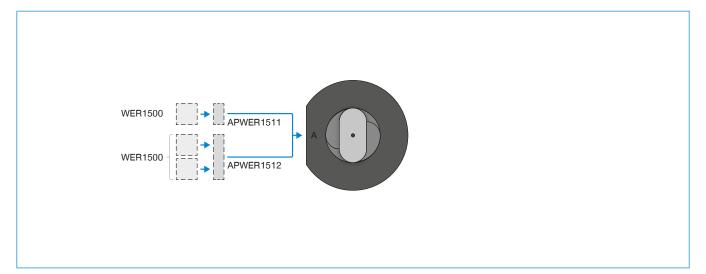


Energy elements and accessories for tool changers

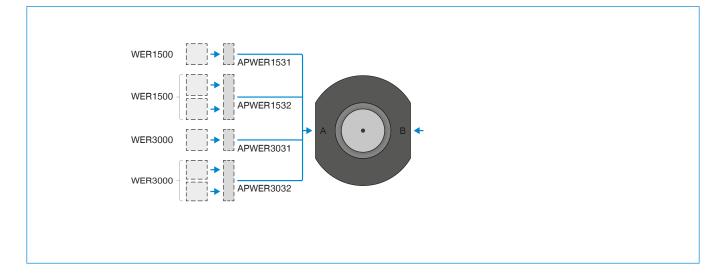
70

# **ENERGY ELEMENTS AND ACCESSORIES FOR TOOL CHANGER**

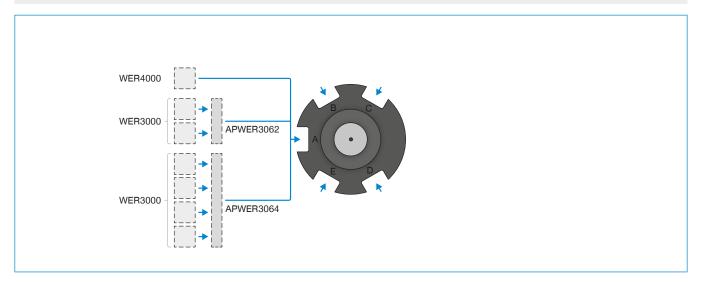
### ► CONNECTION DIAGRAM HWR2031 / HWR2040 / HWR2050



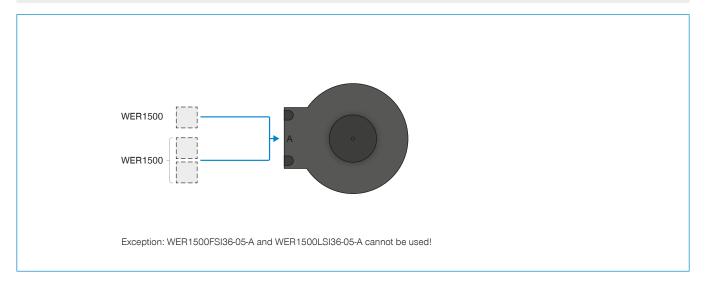
### ► CONNECTION DIAGRAM HWR63 / HWR80



## ► CONNECTION DIAGRAM WWR1160 / WWR1200



### **CONNECTION DIAGRAM FWR**



# **ENERGY ELEMENTS AND ACCESSORIES FOR TOOL CHANGER**

### **▶ WER1500 - ENERGY ELEMENTS**

	Technical data - Pneumatic					
Order no.	WER1500FPL01-03-A	WER1500LPL01-03-A	WER1500FPL01-06-A	WER1500LPL01-06-A	WER1500FPL02-12-A	WER1500LPL02-12-A
Compatible with	Fixed part	Loose part	Fixed part	Loose part	Fixed part	Loose part
Number of fluid couplings	1	1	2	2	2	2
Fixing thread	G1/4"	G1/4"	G1/8"	G1/8"	M5	M5
Operating pressure [bar]	-0.6 10	-0.6 10	-0.6 10	-0.6 10	-0.6 10	-0.6 10
Flow per connector [l/min]	500	500	500	500	150	150
Protection to IEC 60529	IP54	IP54	IP54	IP54	IP54	IP54

	► Technical data - Signal current					
Order no.	WER1500FSI04-00-A	WER1500LSI04-00-A	WER1500FSI08-00-A	WER1500LSI08-00-A	WER1500FSI12-00-A	WER1500LSI12-00-A
Compatible with	Fixed part	Loose part	Fixed part	Loose part	Fixed part	Loose part
No. of contacts	4	4	8	8	12	12
Connection type	Spring contacts	Spring contacts	Spring contacts	Spring contacts	Spring contacts	Spring contacts
Nominal current [A]	3	3	2	2	1.5	1.5
Supply voltage [V]	60	60	30	30	30	30
Fixing thread	M8	M8	M12	M12	M12	M12
Connection type	Male	Socket	Male	Socket	Male	Socket
Connection type	Round plug	Round plug	Round plug	Round plug	Round plug	Round plug
Protection to IEC 60529	IP54	IP54	IP54	IP54	IP54	IP54

			• .	
Order no.	WER1500FSI24-05-A	WER1500LSI24-05-A	WER1500FSI36-05-A	WER1500LSI36-05-A
Compatible with	Fixed part	Loose part	Fixed part	Loose part
No. of contacts	24	24	36	36
Connection type	Spring contacts	Spring contacts	Spring contacts	Spring contacts
Nominal current [A]	3	3	3	3
Supply voltage [V]	60	60	60	60
Fixing thread				
Connection type	Customizable	Customizable	Customizable	Customizable
Connection type	Exposed leads	Exposed leads	Exposed leads	Exposed leads
Protection to IEC 60529	IP40	IP40	IP40	IP40

	Technical data - Signal current with sensor connection on the tool side
Order no.	WER1500LSI04-15-A
Compatible with	Loose part
No. of contacts	2x4
Connection type	Spring contacts
Nominal current [A]	3
Supply voltage [V]	60
Fixing thread	M8
Connection type	Socket
Connection type	Round plug
Protection to IEC 60529	IP54

	Technical data - Signal current with direct connection to UR		
Order no.	WER1500FSI08-10-A	WER1500LSI08-10-A	
Compatible with	Fixed part	Loose part	
No. of contacts	8	8	
Connection type	Spring contacts	Spring contacts	
Nominal current [A]	1.5	1.5	
Supply voltage [V]	30	30	
Fixing thread	M8	M8	
Connection type	Socket	Male	
Connection type	Round plug	Round plug	
Protection to IEC 60529	IP54	IP54	

	Technical da	ata - Hot plug		
Order no.	WER1500FSI04-19-A	WER1500LSI04-19-A	WER1500FSI08-19-A	WER1500LSI08-19-A
Compatible with	Fixed part	Fixed part	Fixed part	Loose part
No. of contacts	4	4	8	8
Connection type	Spring contacts	Spring contacts	Spring contacts	Spring contacts
Nominal current [A]	2	2	2	2
Supply voltage [V]	30	30	30	30
Fixing thread	M8	M8	M8	M8
Connection type	Male	Socket	Socket	Male
Connection type	Round plug	Round plug	Round plug	Round plug
Protection to IEC 60529	IP54	IP54	IP54	IP54

	Technical da	Technical data - Communication					
Order no.	WER1500FIL01-00-A	WER1500LIL01-00-A	WER1500FIL01-19-A	WER1500LIL01-19-A			
Compatible with	Fixed part	Loose part	Fixed part	Loose part			
Data transmission	IO-Link	IO-Link	IO-Link	IO-Link			
Connection type	Spring contacts	Spring contacts	Spring contacts	Spring contacts			
Fixing thread	M12	M12	M12	M12			
Connection type	Male	Socket	Male	Socket			
Connection type	Round plug	Round plug	Round plug	Round plug			
Protection to IEC 60529	IP54	IP54	IP54	IP54			

	Technical da	ata - Protection for the fixed part
Order no.	WER1500LLN00-00-A	WER1500LLN00-19-A
Compatible with	Loose part	Loose part
Protection to IEC 60529	IP54	IP54

### ► WER1500 - ADAPTER PLATES

	Technical D	ata		
Order no.	APWER1511F	APWER1511L	APWER1512F	APWER1512L
Compatible with	Fixed part	Loose part	Fixed part	Loose part
Connection side 1	HWR2031 / HWR2040 / HWR2050	HWR2031 / HWR2040 / HWR2050	HWR2031 / HWR2040 / HWR2050	HWR2031 / HWR2040 / HWR2050
Connection side 2	WER1500	WER1500	WER1500	WER1500
Number of energy elements	1	1	2	2
Weight [kg]	0.006	0.006	0.013	0.012
Order no.	APWER1531	APWER1532		
Compatible with	Fixed part / loose part	Fixed part / loose part		
Connection side 1	HWR63-B / HWR80-B	HWR63-B/ HWR80-B		
Connection side 2	WER1500	WER1500		
Number of energy elements	1	2		
Weight [kg]	0.01	0.035		

# **ENERGY ELEMENTS AND ACCESSORIES FOR TOOL CHANGER**

### ▶ WER1500 – CABLE COMPATIBLE WITH FIXED PART

	► Technical Data					
Order no.	KAG500B4	CSTE01757	KAW500B4	CSTE01758		
No. of contacts	4	8	4	8		
Fixing thread	M8	M8	M8	M8		
Connection type	Socket	Male / wire end	Socket	Male / wire end		
Version	Straight	Straight	Angle	Angle		
Cable length [m]	5	5	5	5		
Protection to IEC 60529	IP67	IP67	IP67	IP67		
Order no.	KAG500IL	CSTE01751	CSTE01752	CSTE01753	CSTE01754	
Order no. No. of contacts	<b>KAG500IL</b> 5	<b>CSTE01751</b>	<b>CSTE01752</b> 12	<b>CSTE01753</b>	<b>CSTE01754</b> 12	
No. of contacts	5	8	12	8	12	
No. of contacts Fixing thread	5 M12-M12	8 M12 Socket / wire	12 M12 Socket / wire	8 M12 Socket / wire	12 M12 Socket / wire	
No. of contacts Fixing thread Connection type	5 M12-M12 Pin / socket Straight/	8 M12 Socket / wire end	12 M12 Socket / wire end	8 M12 Socket / wire end	12 M12 Socket / wire end	

### ▶ WER1500 - CABLE COMPATIBLE WITH LOOSE PART

	► Technical D	ata			
Order no.	CSTE01745	CSTE01755	CSTE01748	CSTE01756	
No. of contacts	4	8	4	8	
Fixing thread	M8	M8	M8	M8	
Connection type	Male / wire end	Socket / wire end	Male / wire end	Socket / wire end	
Version	Straight	Straight	Angle	Angle	
Cable length [m]	2	2	2	2	
Protection to IEC 60529	IP67	IP67	IP67	IP67	
	CSTE01746	CSTE01747	KAG500IL	CSTE01749	CSTE01750
No. of contacts	8	12	5	8	12
Fixing thread	M12	M12	M12-M12	M12	M12
Connection type	Male / wire end	Male / wire end	Pin / socket	Male / wire end	Male / wire end
Version	Straight	Straight	Straight/straight	Angle	Angle
Cable length [m]	2	2	5	2	2
Protection to IEC 60529	IP67	IP67	IP67	IP67	IP67

### ► WER1500 - ROUND PLUG COMPATIBLE WITH FIXED PART

	Technical D	ata		
Order no.	B8-G-4	CSTE01048	B8-W-4	CSTE01765
No. of contacts	4	8	4	8
Fixing thread	M8	M12	M8	M12
Connection type	Socket	Socket	Solder connection	Socket
Version	Straight	Straight	Angle	Angle
Protection to IEC 60529	IP67	IP67	IP67	IP67

### ► WER1500 - ROUND PLUG COMPATIBLE WITH LOOSE PART

	Technical D	ata		
Order no.	S8-G-4	S12-G-8	S8-W-4	\$12-W-8
No. of contacts	4	8	4	8
Fixing thread	M8	M12	M8	M12
Connection type	Screw-cut-terminal	Screw-cut-terminal	Solder connection	Screw displacement connection
Version	Straight	Straight	Angle	Angle
Protection to IEC 60529	IP67	IP67	IP67	IP67

### ► WER3000 - ENERGY ELEMENTS

	Technical da	ata - Pneumatic				
Order no.	WER3000FPL01-04	WER3000LPL01-04	WER3000FPL02-03	WER3000LPL02-03	WER3000FPL04-06-A	WER3000LPL04-06-A
Compatible with	Fixed part	Loose part	Fixed part	Loose part	Fixed part	Loose part
Number of fluid couplings	1	1	2	2	4	4
Fixing thread	G3/8"	G3/8"	G1/4"	G1/4"	G1/8"	G1/8"
Operating pressure [bar]	-0.6 10	-0.6 10	-0.6 10	-0.6 10	-0.6 10	-0.6 10
Flow per connector [l/min]	1100	1100	750	750	270	270
Protection to IEC 60529	IP54	IP54	IP54	IP54	IP54	IP54

	➤ Technical data - Load current						
Order no.	WER3000FLA01-00-A	WER3000LLA01-00-A	WER3000FLA06-00	WER3000LLA06-00	WER3000FLA08-00	WER3000LLA08-00	
Compatible with	Fixed part	Loose part	Fixed part	Loose part	Fixed part	Loose part	
No. of contacts	1	1	5+PE	5+PE	(3+PE) / 4	(3+PE) / 4	
Connection type	Plug-in Connector	Plug-in Connector	Plug-in Connector	Plug-in Connector	Plug-in Connector	Plug-in Connector	
Nominal current [A]	140	140	15	15	15/6	15/6	
Supply voltage [V]	58	58	630	630	630/125	630/125	
Fixing thread	M8	M8	M23	M23	M23	M23	
Connection type	Male	Male	Male	Socket	Male	Socket	
Connection type	Cable lug	Cable lug	Round plug	Round plug	Round plug	Round plug	
Protection to IEC 60529			IP54	IP54	IP54	IP54	

	Technical da	ata - Signal curre	nt			
Order no.	WER3000FSI08-18-A	WER3000LSI08-18-A	WER3000FSI12-00	WER3000LSI12-00	WER3000FSI12-09-A	WER3000LSI12-09-A
Compatible with	Fixed part	Loose part	Fixed part	Loose part	Fixed part	Loose part
No. of contacts	8+2	8+2	12	12	12	12
Connection type	contactless	contactless	Plug-in Connector	Plug-in Connector	Spring contacts	Spring contacts
Nominal current [A]	0.2	0.2	6	6	3	3
Supply voltage [V]	24	24	150	150	60	60
Fixing thread	M12	M12	M23	M23	M23	M23
Connection type	Male	Socket	Male	Socket	Male	Socket
Connection type	Round plug	Round plug	Round plug	Round plug	Round plug	Round plug
Protection to IEC 60529	IP67	IP67	IP54	IP54	IP54	IP54
Order no.	WER3000FSI19-00	WER3000LSI19-00	WER3000FSI19-09-A	WER3000LSI19-09-A		
Compatible with	Fixed part	Loose part	Fixed part	Loose part		
No. of contacts	19	19	19	19		
Connection type	Plug-in Connector	Plug-in Connector	Spring contacts	Spring contacts		
Nominal current [A]	6	6	3	3		
Supply voltage [V]	63	63	60	60		
Fixing thread	M23	M23	M23	M23		
Connection type	Male	Socket	Male	Socket		
Connection type	Round plug	Round plug	Round plug	Round plug		
Protection to IEC 60529	IP54	IP54	IP54	IP54		

# **ENERGY ELEMENTS AND ACCESSORIES FOR TOOL CHANGER**

	► Technical da	ata - Signal curre	ent with shielding	I		
Order no.			WER3000FSI11-21-A	•		
Compatible with	Fixed part	Loose part	Fixed part	Loose part		
No. of contacts	11+1	11+1	11+1	11+1		
Connection type	Plug-in Connector	Plug-in Connector	Spring contacts	Spring contacts		
Nominal current [A]	6	6	3	3		
Supply voltage [V]	150	150	60	60		
Fixing thread	M23	M23	M23	M23		
Connection type	Male	Socket	Male	Socket		
Connection type	Round plug	Round plug	Round plug	Round plug		
Protection to IEC 60529	IP54	IP54	IP54	IP54		
Order no.	WED2000ESI10 20 A	WED20001 8119 20 A	WER3000FSI18-21-A	WED20001 8149 24 A		
Compatible with	Fixed part	Loose part	Fixed part	Loose part		
No. of contacts	18+1	18+1	18+1	18+1		
Connection type						
Nominal current [A]	6	6	Spring contacts	3		
		63	_			
Supply voltage [V]	63 M23	M23	60 M23	60 M23		
Fixing thread		Socket		Socket		
Connection type	Male Round plug		Male			
Connection type	Round plug	Round plug	Round plug	Round plug		
Protection to IEC 60529	IP54	IP54	IP54	IP54		
	N. Tankadad d	-1- 0:1				/D / To all a a allia
Order no.			ent and connection WER3000FSI14-01-A			
Compatible with	Loose part	Loose part	Fixed part	Fixed part	Fixed part	Fixed part
No. of contacts	13+6	13+6	14+5 Sensoric	14+5 Sensoric	14+5 Sensoric	14+5 Sensorio
Connection type	Plug-in Connector		Plug-in Connector		Spring contacts	
Nominal current [A]	6	3	6	6	3	3
Supply voltage [V]	63	60	63	63	60	60
Fixing thread	M23	M23	M23	M23	M23	M23
Connection type	Socket	Socket	Male	Male	Male	Male
Connection type	Round plug	Round plug	Round plug	Round plug	Round plug	Round plug
Sensor linkage			Left	Right	Left	Right
Protection to IEC 60529	IP54	IP54	IP54	IP54	IP54	IP54
Outena			ent with sensor c		tool side	
Order no.			WER3000LSI08-14-A			
Compatible with		Loose part		Loose part		
No. of contacts	4x3	4x3	4x4	4x4		
Connection type			Plug-in Connector			
Nominal current [A]	3	3	3	3		
Supply voltage [V]	60	60	60	60		
Fixing thread	M8	M8	M8	M8		
Connection type	Socket	Socket	Socket	Socket		
Connection type	Round plug	Round plug	Round plug	Round plug		
Protection to IEC 60529	IP54	IP54	IP54	IP54		
	► Technical da	ata - Ultrasonic v	velding			
Order no.	WER3000FLA01-27-A	WER3000LLA01-27-A				
Compatible with	Fixed part	Loose part				
No. of contacts	1	1				
Connection type	Plug-in Connector	Plug-in Connector				
Nominal current [A]	6	6				
Supply voltage [V]	2000	2000				
Fixing thread						
Connection type	Male	Male				
Connection type		BNC High Voltage				
	2.10 mgm voltage	2710 mgm voltage				

Protection to IEC 60529

	Technical da	ata - Communica	tion			
Order no.	WER3000FIL01-00	WER3000LIL01-00	WER3000FIL01-09-A	WER3000LIL01-09-A	WER3000FIL01-18-A	WER3000LIL01-18-A
Compatible with	Fixed part	Loose part	Fixed part	Loose part	Fixed part	Loose part
Data transmission	IO-Link	IO-Link	IO-Link	IO-Link	IO-Link	IO-Link
Connection type	Plug-in Connector	Plug-in Connector	Spring contacts	Spring contacts	contactless	contactless
Fixing thread	M12	M12	M12	M12	M12	M12
Connection type	Male	Socket	Male	Socket	Male	Socket
Connection type	Round plug	Round plug	Round plug	Round plug	Round plug	Round plug
Protection to IEC 60529	IP54	IP54	IP54	IP54	IP67	IP67
Order no.	WER3000FPB01-00	WER3000LPB01-00	WER3000FPN01-00	WER3000LPN01-00	WER3000FPN01-09-A	WER3000LPN01-09-A
Compatible with	Fixed part	Loose part	Fixed part	Loose part	Fixed part	Loose part
Data rate [Mbit/s]	12	12	100	100	100	100
Data transmission	Profibus	Profibus	Profinet/Indus- trial Ethernet	Profinet/Indus- trial Ethernet	Profinet/Indus- trial Ethernet	Profinet/Indus- trial Ethernet
Connection type	Plug-in Con- nector	Plug-in Con- nector	Plug-in Con- nector	Plug-in Con- nector	Spring contacts	Spring contacts
Fixing thread	M12	M12	M12	M12	M12	M12
Connection type	Male	Socket	Socket	Socket	Socket	Socket
Connection type	Round plug	Round plug	Round plug	Round plug	Round plug	Round plug
Protection to IEC 60529	IP54	IP54	IP54	IP54	IP54	IP54

	Technical d	ata - Fluidic
Order no.	WER3000FFL01-03-A	WER3000LFL01-03-A
Compatible with	Fixed part	Loose part
Number of fluid couplings	1	1
Fixing thread	G1/4"	G1/4"
Operating pressure max. [bar]	150	150
Flow per connector max. [l/min]	12	12
Protection to IEC 60529	IP54	IP54

	Technical data - Protection for the fixed part
Order no.	WER3000LLN00-00-A
Compatible with	Loose part
Protection to IEC 60529	IP54

### ► WER3000 – ADAPTER PLATES

	Technical D	ata		
Order no.	APWER3031F	APWER3031L	APWER3032F	APWER3032L
Compatible with	Fixed part	Loose part	Fixed part	Loose part
Connection side 1	HWR63-B/ HWR80-B	HWR63-B/ HWR80-B	HWR63-B/ HWR80-B	HWR63-B / HWR80-B
Connection side 2	WER3000	WER3000	WER3000	WER3000
Number of energy elements	1	1	2	2
Weight [kg]	0.054	0.055	0.09	0.091
Order no.	APWER3062	APWER3064		
Compatible with	Fixed part / loose part	Fixed part / loose part		
Connection side 1	WWR1160 / WWR1200	WWR1160 / WWR1200		
Connection side 2	WER3000	WER3000		
Number of energy elements	2	4		
Weight [kg]	0.15	0.42		

# **ENERGY ELEMENTS AND ACCESSORIES FOR TOOL CHANGER**

### ▶ WER3000 – CABLE COMPATIBLE WITH FIXED PART

	► Technical Data
Order no.	KAG500IL
No. of contacts	5
Fixing thread	M12-M12
Connection type	Pin / socket
Version	Straight/ straight
Cable length [m]	5
Protection to IEC 60529	IP67

### ► WER3000 - CABLE COMPATIBLE WITH LOOSE PART

	Technical D	ata	
Order no.	CSTE01745	KAG500IL	CSTE01748
No. of contacts	4	5	4
Fixing thread	M8	M12-M12	M8
Connection type	Male / wire end	Pin / socket	Male / wire end
Version	Straight	Straight/ straight	Angle
Cable length [m]	2	5	2
Protection to IEC 60529	IP67	IP67	IP67

### WER3000 - ROUND PLUG COMPATIBLE WITH FIXED PART

	Technical D	ata				
Order no.	RSTVLM23G06B-B	RSTVLM23W06B-B	RSTVLM23G08B-B	RSTVLM23W08B-B		
No. of contacts	6	6	8	8		
Fixing thread	M23	M23	M23	M23		
Connection type	Socket	Socket	Socket	Socket		
Version	Straight	Angle	Straight	Angle		
Protection to IEC 60529	IP67	IP67	IP67	IP67		
	·					
Order no.	RSTVSM23G12B-B	RSTVSM23W12B-B	RSTVSM23G19B-B	RSTVSM23W19B-B	CSTE01156	CSTE01157
Order no. No. of contacts	<b>RSTVSM23G12B-B</b> 12	<b>RSTVSM23W12B-B</b> 12	<b>RSTVSM23G19B-B</b> 19	<b>RSTVSM23W19B-B</b> 19	<b>CSTE01156</b>	<b>CSTE01157</b>
No. of contacts	12	12	19	19	4	4
No. of contacts Fixing thread	12 M23	12 M23	19 M23	19 M23	4 M12	4 M12

### ► WER3000 - ROUND PLUG COMPATIBLE WITH LOOSE PART

	Technical D	ata				
Order no.	RSTVLM23G06S-B	RSTVLM23W06S-B	RSTVLM23G08S-B	RSTVLM23W08S-B		
No. of contacts	6	6	8	8		
Fixing thread	M23	M23	M23	M23		
Connection type	Male	Male	Male	Male		
Version	Straight	Angle	Straight	Angle		
Protection to IEC 60529	IP67	IP67	IP67	IP67		
	•					
Order no.	RSTVSM23G12S-B	RSTVSM23W12S-B	RSTVSM23G19S-B	RSTVSM23W19S-B	CSTE01156	CSTE01157
Order no. No. of contacts	<b>RSTVSM23G12S-B</b> 12	<b>RSTVSM23W12S-B</b> 12	<b>RSTVSM23G19S-B</b> 19	<b>RSTVSM23W19S-B</b> 19	<b>CSTE01156</b>	<b>CSTE01157</b>
No. of contacts	12	12	19	19	4	4
No. of contacts Fixing thread	12 M23	12 M23	19 M23	19 M23	4 M12	4 M12

### **▶** WER4000 – ENERGY ELEMENTS

	Technical da	ata - Pneumatic		
Order no.	WER4000FPL06-06-A	WER4000LPL06-06-A	WER4000FPL15-12-A	WER4000LPL15-12-A
Compatible with	Fixed part	Loose part	Fixed part	Loose part
Number of fluid couplings	6	6	15	15
Fixing thread	G1/8"	G1/8"	M5	M5
Operating pressure [bar]	-0.6 10	-0.6 10	-0.6 10	-0.6 10
Flow per connector [I/min]	500	500	150	150
Protection to IEC 60529	IP54	IP54	IP54	IP54

	Technical da	ata - Load current
Order no.	WER4000FLA03-05-A	WER4000LLA03-05-A
Compatible with	Fixed part	Loose part
No. of contacts	3	3
Connection type	Plug-in Con- nector	Plug-in Connector
Nominal current [A]	150	150
Supply voltage [V]	630	630
Fixing thread		
Connection type	Customizable	Customizable
Connection type	Exposed leads	Exposed leads
Protection to IEC 60529	IP65	IP65

	Technical da	ata - Fluidic				
Order no.	WER4000FFL01-13-A	WER4000LFL01-13-A	WER4000FFL02-13-A	WER4000LFL02-13-A	WER4000FFL04-13-A	WER4000LFL04-13-A
Compatible with	Fixed part	Loose part	Fixed part	Loose part	Fixed part	Loose part
Number of fluid couplings	1	1	2	2	4	4
Fixing thread	G1/2"	G1/2"	G1/2"	G1/2"	G1/2"	G1/2"
Operating pressure max. [bar]	250	250	250	250	250	250
Flow per connector max. [I/min]	25	25	25	25	25	25
Protection to IEC 60529	IP54	IP54	IP54	IP54	IP54	IP54



# **ROTARY DISTRIBUTORS**

# **OVERVIEW OF SERIES**



6	ROTA	RY DISTRIBUTORS	80 - 101
		Series DVR	82
		Series DVR1000	100

# **ROTARY DISTRIBUTORS SERIES DVR**

### PRODUCT ADVANTAGES



### Compact media transfer system

This D1 media exchanger makes cable breaks and undefined interference contours through the power supply line a thing of the past

### Flat design

This structure reduces the moment load for your robot to a minimum and makes it possible to use smaller and more affordable sizes

#### Gold contact

Allows flexibility for transmission because you can transfer everything from the smallest flows up to 250 volts and 6 amps with process reliability

### THE BEST PRODUCT FOR YOUR APPLICATION

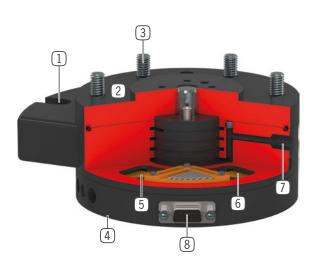


### Our products welcome the challenge!

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

### **BENEFITS IN DETAIL**



### 1 Torque brace

- supports the rotor during rotation (movement)

#### (2) Robust, lightweight housing

- Hard-coated aluminum alloy
- nitrated steel

#### (3) Robot flange

- partial mounting circle in accordance with EN ISO 9409-1

### 4 Direct air connection

- to WWR series

### 5 Spring system

- from size DVR63 double fitting

### 6 Collector ring

- hard gold coated
- transferable to finest currents

### (7) Up to 8 way integrated air feed-through

- for hoseless air transfer
- hose package does not have to be pivoted

### 8 Up to 12 pole energy transfer

- for cable-free signal transfer
- no cables are subjected to torsion

### ► TECHNICAL DATA

	Connecting flange according EN ISO 9409-1	Pneumatic energy transfer	Electrical energy transfer
Installation size		[Quantity]	
DVR40	TK 40	4	4-pole
DVR50	TK 50	4	4-pole
DVR63	TK 63	6	6-pole
DVR80	TK 80	6	6-pole
DVR100	TK 100	4 / 8	8-pole
DVR125	TK 125	4 / 8	12-pole
DVR160	TK 160	4 / 8	12-pole

### ► FURTHER INFORMATION IS AVAILABLE ONLINE



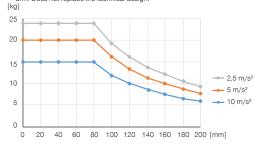
All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

### PRODUCT SPECIFICATIONS



### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



#### Forces and moments

Shows static forces and moments which may impact on the rotary distributor.



Mr [Nm]	60
My [Nm]	60
Fa [N]	800

### INCLUDED IN DELIVERY



4 [piece] Cylinder Screw C7984060129



4 [piece] O-Rina COR0025100

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GVM5 Straight Fittings - Quick Connect Style



### KAG500S4

Plug-in Connector Straight Cable 5m - Connector





### WVM5

Angled Fittings - Quick Connect Style



### KAW500B4

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





### **CONNECTIONS / OTHER**



Plug-in Connector Angled Cable 5m - Connector





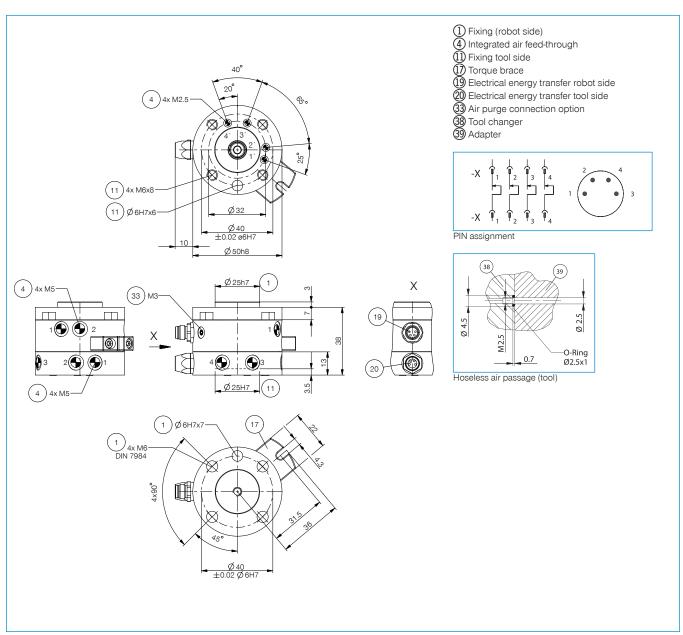
#### KAG500B4

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



	► Technical data
Order no.	DVR40I4
Connecting flange according EN ISO 9409-1	TK 40
Pneumatic energy transfer [Quantity]*	4
Electrical energy transfer	4-pole
Max. current [A]	3
Max. voltage [V]	24
Max. acceleration [m/s <sup>2</sup> ]	22
Maximum speed [1/min.]	120
Maximum speed [°/s]	720
Radial run out +/- [mm]	0.02
Axial run out +/- [mm]	0.02
Constant torque [Nm]	1
Loose torque [Nm]	1.5
Operating pressure max. [bar]	10
Operating temperature [°C]	5 +80
Moment of inertia [kgcm <sup>2</sup> ]	0.7
Protection to IEC 60529	IP40
Weight [kg]	0.39

<sup>\*</sup>Vacuum possible



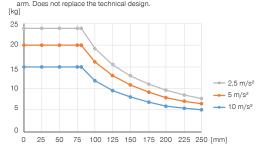


### PRODUCT SPECIFICATIONS



### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



#### Forces and moments

Shows static forces and moments which may impact on the rotary distributor.



Mr [Nm]	60
My [Nm]	60
Fa [N]	800

### INCLUDED IN DELIVERY



4 [piece] Cylinder Screw C7984060129



4 [piece] O-Rina COR0025100

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GVM5 Straight Fittings - Quick Connect Style



### KAG500S4

Plug-in Connector Straight Cable 5m - Connector





WVM5

Angled Fittings - Quick Connect Style



### KAW500B4

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





### **CONNECTIONS / OTHER**



Plug-in Connector Angled Cable 5m - Connector





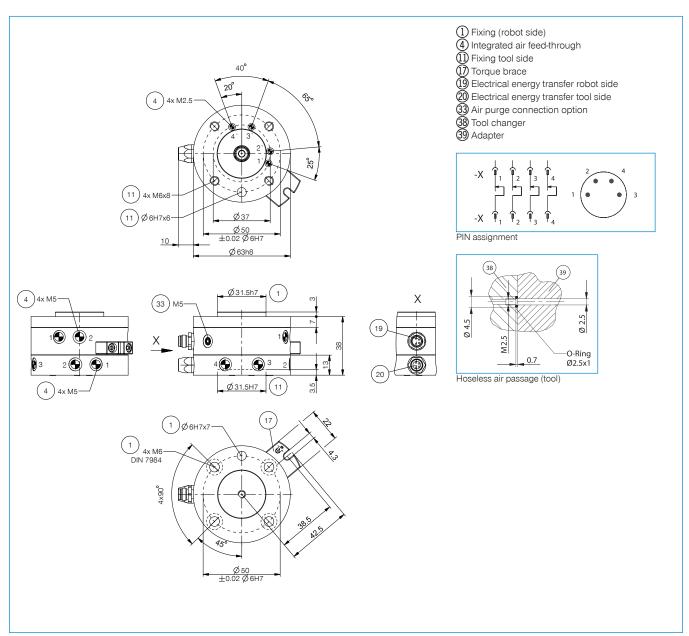
#### KAG500B4

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



	► Technical data
Order no.	DVR50I4
Connecting flange according EN ISO 9409-1	TK 50
Pneumatic energy transfer [Quantity]*	4
Electrical energy transfer	4-pole
Max. current [A]	3
Max. voltage [V]	24
Max. acceleration [m/s²]	22
Maximum speed [1/min.]	120
Maximum speed [°/s]	720
Radial run out +/- [mm]	0.02
Axial run out +/- [mm]	0.02
Constant torque [Nm]	1
Loose torque [Nm]	1.5
Operating pressure max. [bar]	10
Operating temperature [°C]	5 +80
Moment of inertia [kgcm²]	8.1
Protection to IEC 60529	IP40
Weight [kg]	0.62

<sup>\*</sup>Vacuum possible

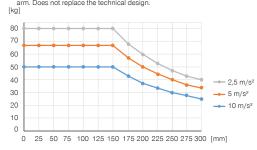


### **▶ PRODUCT SPECIFICATIONS**



### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



### Forces and moments

Shows static forces and moments which may impact on the rotary distributor.



Mr [Nm]	300
My [Nm]	300
Fa [N]	1500

### **► INCLUDED IN DELIVERY**



4 [piece] Cylinder Screw C7984060129



6 [piece] COR0030100

### > RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



# **ENERGY SUPPLY**

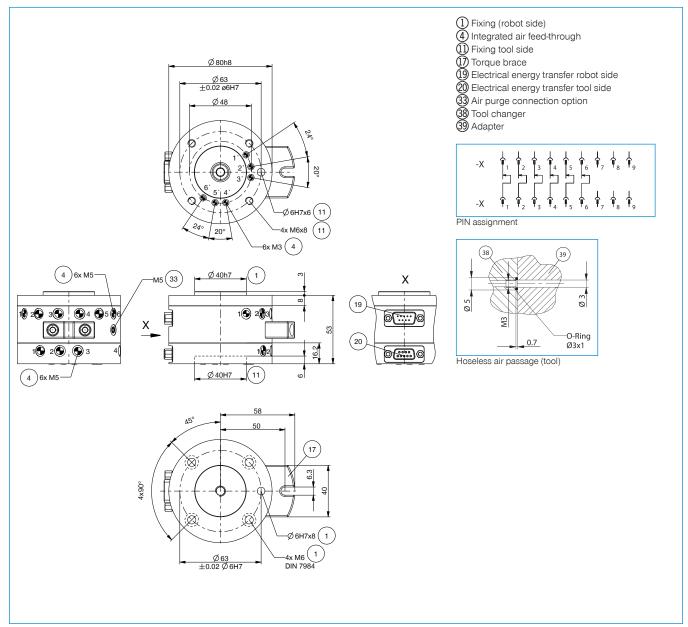


GVM5 Straight Fittings - Quick Connect Style



	► Technical data
Order no.	DVR63I6
Connecting flange according EN ISO 9409-1	TK 63
Pneumatic energy transfer [Quantity]*	6
Electrical energy transfer	6-pole
Max. current [A]	6
Max. voltage [V]	250
Max. acceleration [m/s <sup>2</sup> ]	22
Maximum speed [1/min.]	120
Maximum speed [°/s]	720
Radial run out +/- [mm]	0.03
Axial run out +/- [mm]	0.03
Constant torque [Nm]	2
Loose torque [Nm]	3
Operating pressure max. [bar]	10
Operating temperature [°C]	5 +80
Moment of inertia [kgcm <sup>2</sup> ]	10.5
Protection to IEC 60529	IP64
Weight [kg]	1.3

<sup>\*</sup>Vacuum possible



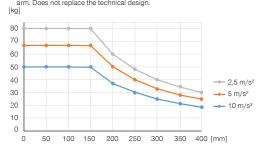


### **▶ PRODUCT SPECIFICATIONS**



### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



### Forces and moments

Shows static forces and moments which may impact on the rotary distributor.



Mr [Nm]	300
My [Nm]	300
Fa [N]	1500

### **► INCLUDED IN DELIVERY**



6 [piece] Cylinder Screw C7984080169



6 [piece] COR0030100

### > RECOMMENDED ACCESSORIES



## **ENERGY SUPPLY**



# **ENERGY SUPPLY**

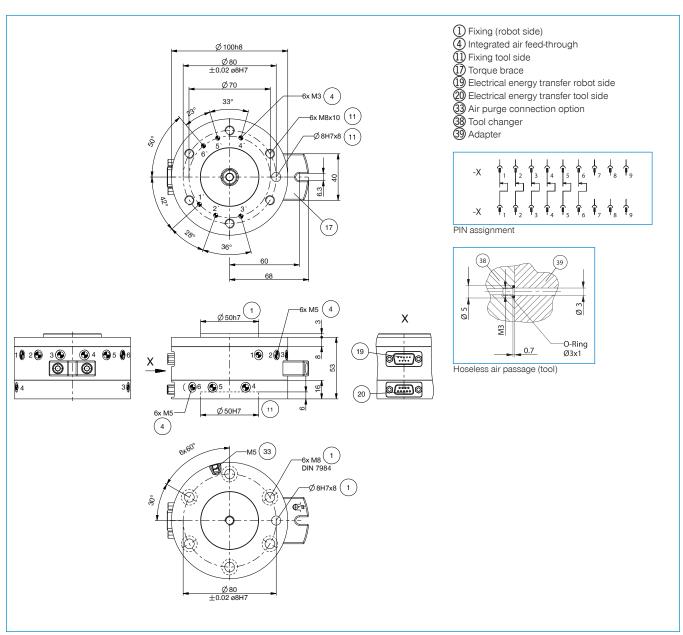


GVM5 Straight Fittings - Quick Connect Style



	► Technical data
Order no.	DVR80I6
Connecting flange according EN ISO 9409-1	TK 80
Pneumatic energy transfer [Quantity]*	6
Electrical energy transfer	6-pole
Max. current [A]	6
Max. voltage [V]	250
Max. acceleration [m/s²]	22
Maximum speed [1/min.]	120
Maximum speed [°/s]	720
Radial run out +/- [mm]	0.03
Axial run out +/- [mm]	0.03
Constant torque [Nm]	2
Loose torque [Nm]	3
Operating pressure max. [bar]	10
Operating temperature [°C]	5 +80
Moment of inertia [kgcm²]	27
Protection to IEC 60529	IP64
Weight [kg]	2

<sup>\*</sup>Vacuum possible



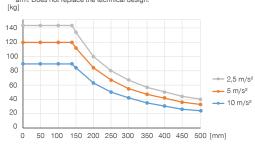


### **▶ PRODUCT SPECIFICATIONS**



### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg]



### Forces and moments

Shows static forces and moments which may impact on the rotary distributor.



Mr [Nm]	500
My [Nm]	500
Fa [N]	2100

### **► INCLUDED IN DELIVERY**



6 [piece] Cylinder Screw C0912080169



4 [piece] O-Ring COR0070150

### > RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



# **ENERGY SUPPLY**

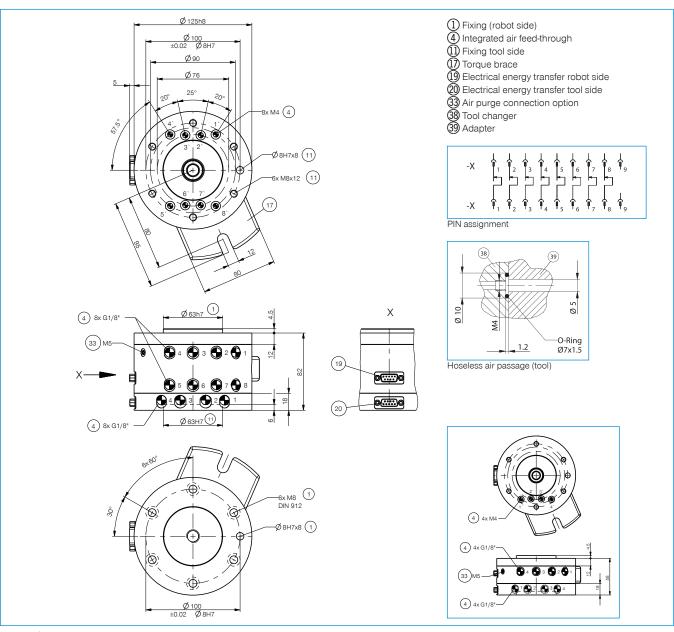


GV1-8X8 Straight Fittings - Quick Connect Style



	Technical data	
Order no.	DVR100I4	DVR100I8
Connecting flange according EN ISO 9409-1	TK 100	TK 100
Pneumatic energy transfer [Quantity]*	4	8
Electrical energy transfer	8-pole	8-pole
Max. current [A]	6	6
Max. voltage [V]	250	250
Max. acceleration [m/s²]	20	20
Maximum speed [1/min.]	100	100
Maximum speed [°/s]	600	600
Radial run out +/- [mm]	0.04	0.04
Axial run out +/- [mm]	0.04	0.04
Constant torque [Nm]	2	4
Loose torque [Nm]	4	6
Operating pressure max. [bar]	10	10
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm <sup>2</sup> ]	86	100
Protection to IEC 60529	IP64	IP64
Weight [kg]	3.8	4.5

<sup>\*</sup>Vacuum possible





### **▶ PRODUCT SPECIFICATIONS**



### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg] 300 250 200 150 --- 2,5 m/s<sup>2</sup> --- 5 m/s<sup>2</sup> 100 - 10 m/s<sup>2</sup> 50 0 50 100 150 200 250 300 350 400 450 500 550 600 [mm]

### Forces and moments

Shows static forces and moments which may impact on the rotary distributor.



Mr [Nm]	900
My [Nm]	900
Fa [N]	7000

### **► INCLUDED IN DELIVERY**



6 [piece] Cylinder Screw C7984100209



4 [piece] O-Ring COR0070150

### > RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



# **ENERGY SUPPLY**

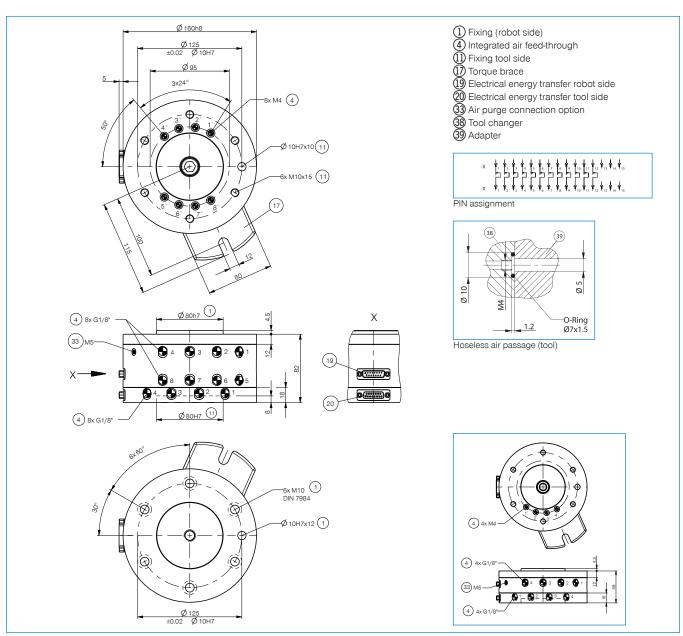


GV1-8X8 Straight Fittings - Quick Connect Style



	Technical data	
Order no.	DVR125I4	DVR125I8
Connecting flange according EN ISO 9409-1	TK 125	TK 125
Pneumatic energy transfer [Quantity]*	4	8
Electrical energy transfer	12-pole	12-pole
Max. current [A]	6	6
Max. voltage [V]	250	250
Max. acceleration [m/s <sup>2</sup> ]	20	20
Maximum speed [1/min.]	100	100
Maximum speed [°/s]	600	600
Radial run out +/- [mm]	0.05	0.05
Axial run out +/- [mm]	0.05	0.05
Constant torque [Nm]	4	5
Loose torque [Nm]	5	6
Operating pressure max. [bar]	10	10
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm <sup>2</sup> ]	220	225
Protection to IEC 60529	IP64	IP64
Weight [kg]	5.9	7.1

<sup>\*</sup>Vacuum possible





### **▶ PRODUCT SPECIFICATIONS**



### Variable installation position

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg] 300 250 200 150 --- 2,5 m/s<sup>2</sup> --- 5 m/s<sup>2</sup> 100 - 10 m/s<sup>2</sup> 50 75 150 225 300 375 450 525 600 675 750 [mm]

### Forces and moments

Shows static forces and moments which may impact on the rotary distributor.



Mr [Nm]	900
My [Nm]	900
Fa [N]	7000

### **► INCLUDED IN DELIVERY**



6 [piece] Cylinder Screw C7984100209



4 [piece] O-Ring COR0070150

### > RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



# **ENERGY SUPPLY**

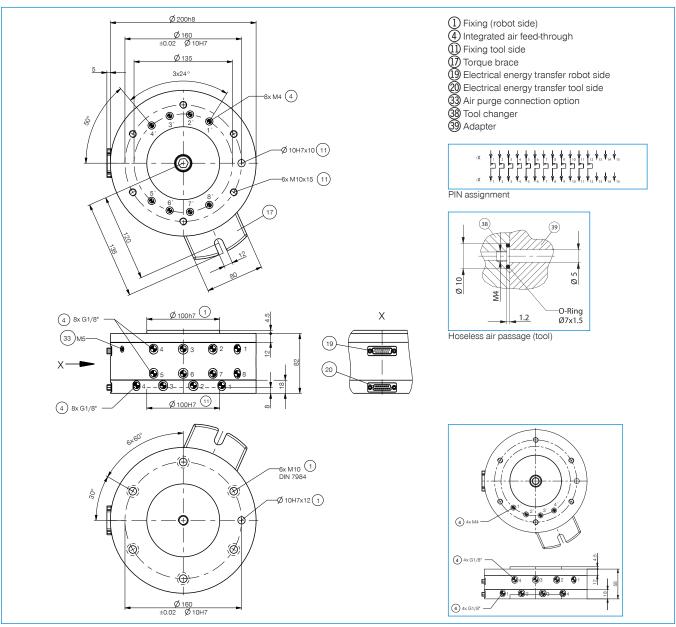


GV1-8X8 Straight Fittings - Quick Connect Style



	Technical data	
Order no.	DVR160I4	DVR160I8
Connecting flange according EN ISO 9409-1	TK 160	TK 160
Pneumatic energy transfer [Quantity]*	4	8
Electrical energy transfer	12-pole	12-pole
Max. current [A]	6	6
Max. voltage [V]	250	250
Max. acceleration [m/s²]	20	20
Maximum speed [1/min.]	100	100
Maximum speed [°/s]	600	600
Radial run out +/- [mm]	0.05	0.05
Axial run out +/- [mm]	0.05	0.05
Constant torque [Nm]	4	5
Loose torque [Nm]	5	6
Operating pressure max. [bar]	10	10
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm <sup>2</sup> ]	480	580
Protection to IEC 60529	IP64	IP64
Weight [kg]	9.1	11

<sup>\*</sup>Vacuum possible





# **ROTARY DISTRIBUTORS SERIES DVR1000**

### PRODUCT ADVANTAGES



### ► Rotary distributor with Industrial Ethernet

The integrated slip ring lets you transmit future-ready Industrial Ethernet to your machine for the first time with complete process reliability

### 8x integrated air-feed-through

Keep wear to a minimum and eliminate undefined interference contours from your hose package in order to use your machine's installation space more eff ectively

### **Double bearings**

The integrated roller bearings provide high stiffness and allows you to maximize the operational dynamics of your robot, improving your cycle times

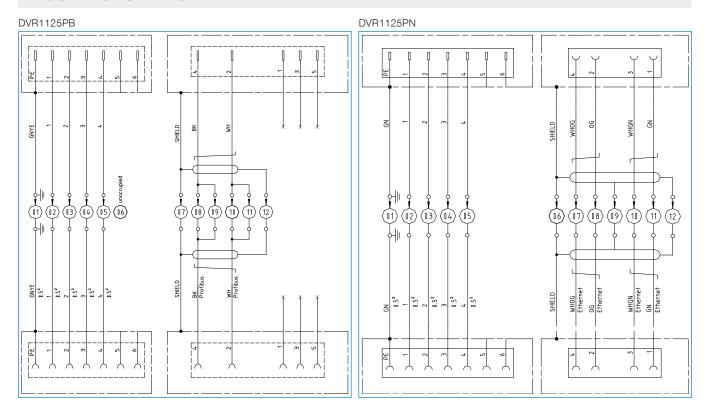
### THE BEST PRODUCT FOR YOUR APPLICATION



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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

### **CONNECTION DIAGRAM**



### **► TECHNICAL DATA**

	Connecting flange according EN ISO 9409-1	Pneumatic energy transfer	Electrical energy transfer
Installation size		[Quantity]	
DVR1125	TK 125	8	4-pole + PE

### ► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: <a href="www.zimmer-group.com">www.zimmer-group.com</a>. 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.

### PRODUCT SPECIFICATIONS



#### Variable installation position

100

50

Shows the maximum handling weight depending on acceleration and lever arm. Does not replace the technical design. [kg] 300 250 200 150 -- 2,5 m/s<sup>2</sup>

0 50 100 150 200 250 300 350 400 450 500 550 600 [mm]

#### Forces and moments

Shows static forces and moments which may impact on the rotary distributor.



Mr [Nm]	900
My [Nm]	900
Fa [N]	7000

### **► INCLUDED IN DELIVERY**



6 [piece] Cylinder Screw C7984100209



8 [piece] O-Ring COR0070150

--- 5 m/s<sup>2</sup> - 10 m/s<sup>2</sup>



1 [piece] O-ring 145x2.5 COR1450250

### RECOMMENDED ACCESSORIES



### ENERGY SUPPLY





### ENERGY SUPPLY



Straight Fittings - Quick Connect Style



WV1-8X8 Angled Fittings - Quick Connect Style

### RECOMMENDED ACCESSORY DVR1125PB



### **CONNECTIONS / OTHER**



### **CONNECTIONS / OTHER**



RSTVLM17G07B-B Round connector straight - female M17





RSTVLM17G07S-B Round connector straight - pin M17



### RECOMMENDED ACCESSORY DVR1125PN



### **CONNECTIONS / OTHER**



## **CONNECTIONS / OTHER**



CSTE01156 Plug-in connector straight - pin M12





RSTVLM17G07B-B Round connector straight - female M17





CSTE01157 Plug-in connector angled - pin M12

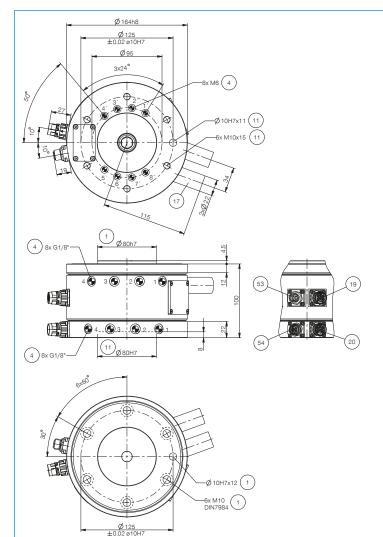




RSTVLM17G07S-B Round connector straight - pin M17

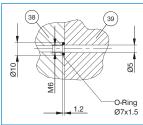


	► Technical data	
Order no.	DVR1125PB	DVR1125PN
Connecting flange according EN ISO 9409-1	TK 125	TK 125
Pneumatic energy transfer [Quantity]	8	8
Flow per connector [I/min]	290	290
Bus protocol	Profibus	Industrial Ethernet
Data rate [Mbit/s]	12	100
Fieldbus connection 53	Pin, M12, 5-pin, B-coded	Socket, M12, 4-pin, D-coded
Connection fieldbus 54	Socket, M12, 5-pin, B-coded	Socket, M12, 4-pin, D-coded
Electrical energy transfer	4-pole + PE	4-pole + PE
Power supply connection 19	Pin, M17, 7-pin	Pin, M17, 7-pin
Power supply connection 20	Socket, M17, 7-pin	Socket, M17, 7-pin
Max. current [A]	9	9
Max. voltage [V]	250	250
Max. acceleration [m/s <sup>2</sup> ]	20	20
Maximum speed [1/min.]	100	100
Maximum speed [°/s]	600	600
Radial run out +/- [mm]	0.05	0.05
Axial run out +/- [mm]	0.05	0.05
Constant torque [Nm]	4	4
Loose torque [Nm]	5	5
Operating pressure max. [bar]	10	10
Operating temperature [°C]	5 +80	5 +80
Moment of inertia [kgcm²]	370	370
Protection to IEC 60529	IP64	IP64
Weight [kg]	8.5	8.5

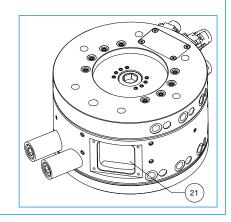


- ① Fixing (robot side)
  ④ Integrated air feed-through
  ⑪ Fixing tool side
- 17 Torque brace
- 19 Electrical energy transfer robot side
- 20 Electrical energy transfer tool side 21 Assembly window

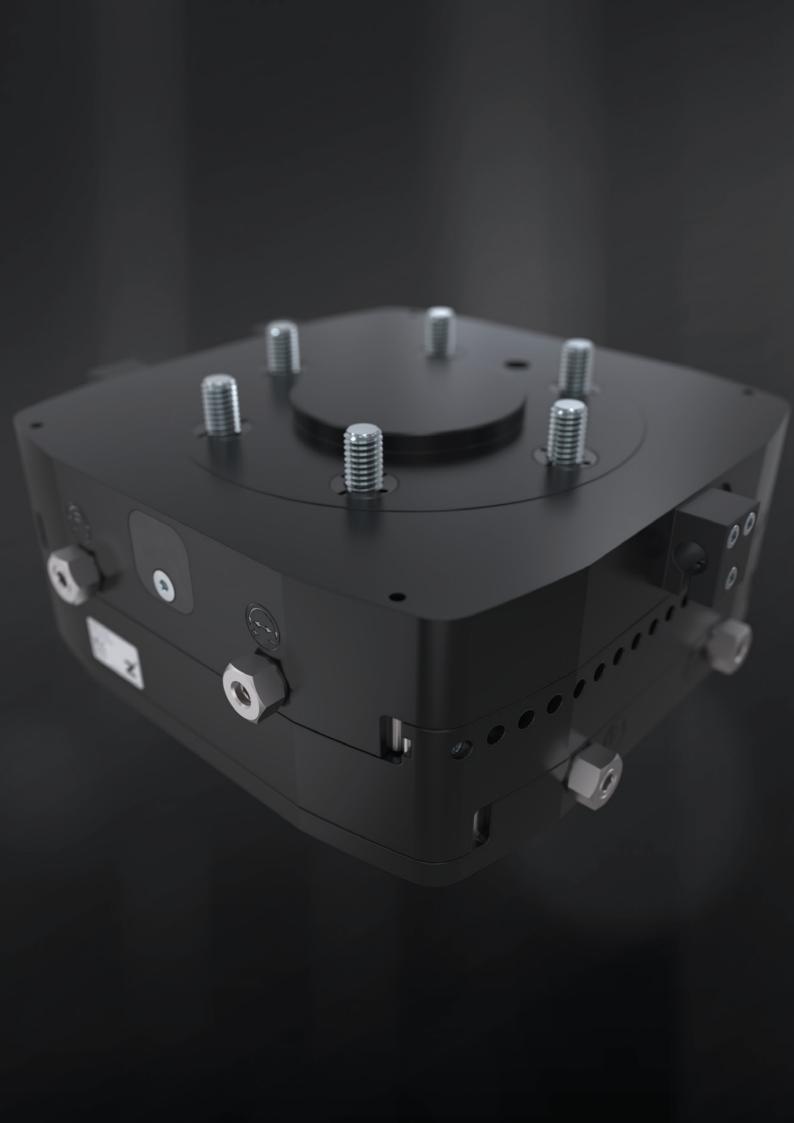
- 38 Tool changer
  39 Adapter
  39 Field bus robot side
  59 Field bus tool side



Hoseless air passage (tool)







# **AXIS COMPENSATION MODULES OVERVIEW OF SERIES**



7	AXIS COMPENSATION MODULES		102 - 161
		Series FGR	104
	10 10	Series XYR1000	110
		Series ZR1000	128
		Series ARP	146

# **AXIS COMPENSATION MODULES SERIES FGR**

### PRODUCT ADVANTAGES



### ► Effortless joining process

The ease of movement makes it possible to carry out even the finest joining processes in the shortest amount of time

### Single-acting pneumatic cylinder

For easy control and a reduced amount of piping required

### Can be fixed in place centrally or de-centrally

For the optimal process sequence, depending on the requirement, you can clamp or centrally lock the equalizer position

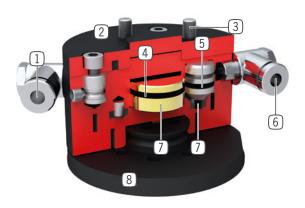
### THE BEST PRODUCT FOR YOUR APPLICATION



### Our products welcome the challenge!

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### **BENEFITS IN DETAIL**



- 1 Energy supply
  - centering
- 2 Robust, lightweight housing
  - Hard-coated aluminum alloy
- (3) Robot flange
  - partial mounting circle in accordance with EN ISO 9409-1
- 4 Drive eccentric mounting
  - single-acting pneumatic cylinder with friction disc
- 5 Drive centering
  - three single-acting pneumatic cylinders with cone pistons at 120° distance
- 6 Energy supply
  - eccentric clamping
- 7 Force transfer
  - direct and low-loss via cone/friction disc
- 8 Compensation
  - force-free compensation of position inaccuracies
  - up to +/- 4 mm compensating stroke

### ► TECHNICAL DATA

	Connecting flange according EN ISO 9409-1	Retention force centred	Retention force decentred
Installation size		[N]	[N]
FGR1040	TK 40	120	50
FGR1050	TK 50	250	140

### ► 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.

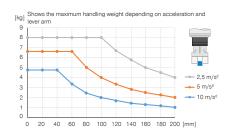
# pneumatic , Axis Compensation Modules Installation size FGR1040 /

# **AXIS COMPENSATION MODULES INSTALLATION SIZE FGR1040**

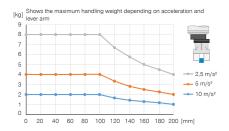
### **▶ PRODUCT SPECIFICATIONS**



Vertical design with centered holding force



Vertical design with decentered holding force



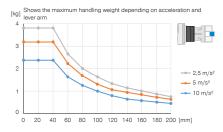
#### Forces and moments

Shows static forces and moments

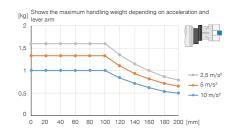


Mr [Nm]	5
My [Nm]	10
Fa [N]	1000

### Horizontal design with centered holding



#### Horizontal design with decentered holding force



### INCLUDED IN DELIVERY



4 [piece] Cylinder Screw C7984060129

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



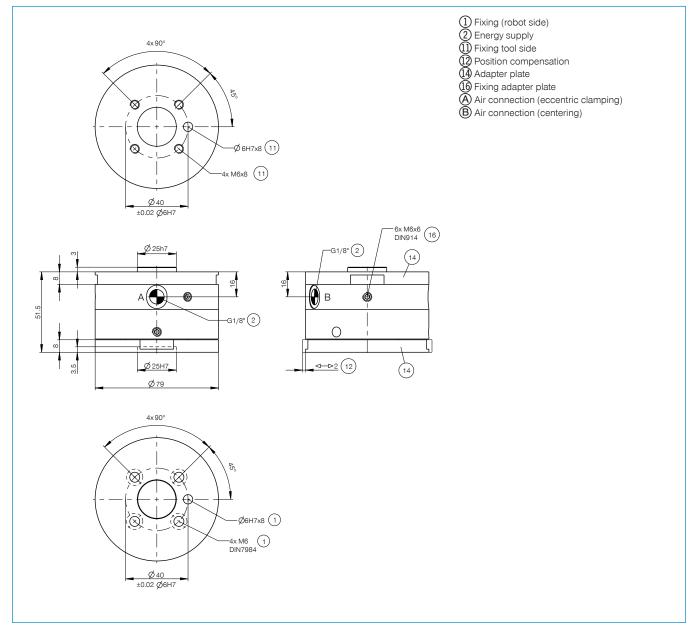
### **ENERGY SUPPLY**



GV1-8X8 Straight Fittings - Quick Connect Style



	► Technical data
Order no.	FGR1040
Connecting flange according EN ISO 9409-1	TK 40
Horizontal deviation +/- [mm]	2
Rotation angle max. [°]	12
Retention force centred [N]	120
Retention force decentred [N]	50
Operating pressure [bar]	4 8
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Weight [kg]	0.84





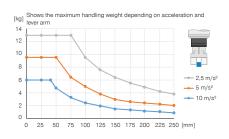
# pneumatic , Axis Compensation Modules nstallation size FGR1050

# **AXIS COMPENSATION MODULES INSTALLATION SIZE FGR1050**

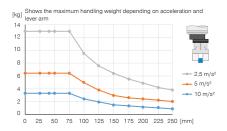
### **▶ PRODUCT SPECIFICATIONS**



Vertical design with centered holding force



Vertical design with decentered holding force



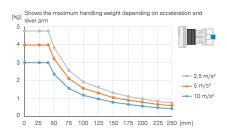
#### Forces and moments

Shows static forces and moments

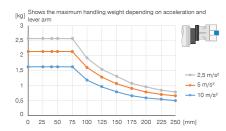


6	
13	
1000	

### Horizontal design with centered holding



#### Horizontal design with decentered holding force



### INCLUDED IN DELIVERY



4 [piece] Cylinder Screw C0912060149

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



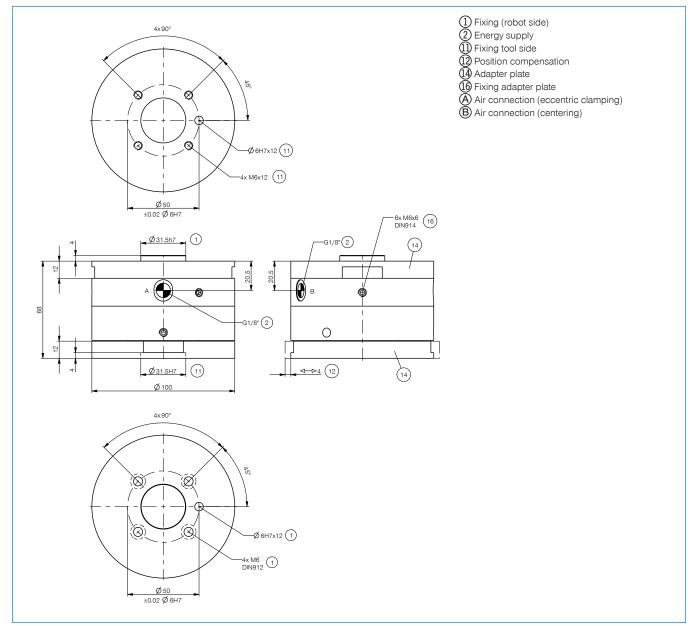
### **ENERGY SUPPLY**



GV1-8X8 Straight Fittings - Quick Connect Style



	► Technical data
Order no.	FGR1050
Connecting flange according EN ISO 9409-1	TK 50
Horizontal deviation +/- [mm]	4
Rotation angle max. [°]	9
Retention force centred [N]	250
Retention force decentred [N]	140
Operating pressure [bar]	4 8
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Weight [kg]	1.8





## **AXIS COMPENSATION MODULES SERIES XYR1000**

#### PRODUCT ADVANTAGES



#### Adjustable balancing force and stroke

Using adjusting screws, you can adjust the properties of the equalizer optimally to your application in the shortest amount of time

#### Flat design

This structure reduces the moment load for your robot to a minimum and makes it possible to use smaller and more affordable sizes

#### ► Can be fixed in place centrally or de-centrally

Depending on the requirement, you can clamp or centrally lock the equalizer position. An aid for optimal processes

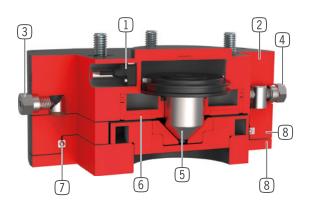
#### THE BEST PRODUCT FOR YOUR APPLICATION



#### 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

#### **BENEFITS IN DETAIL**



#### 1 Piston position sensing

- via magnetic field sensor
- included in scope of delivery

#### 2 Robust, lightweight housing

- Hard-coated aluminum alloy
- partial mounting circle in accordance with EN ISO 9409-1
- lowest overall height

#### 3 Compensation force

- adjustable via adjustment screw

#### 4 Compensation stroke

- infinitely variable (from size 1063 upwards)

#### (5) Locking piston

- centrical via cone

#### 6 Eccentrical locking

- via pneumatic piston with frictional contact

#### 7 Linear guide

- for highest force and moments capacity

#### (8) Compensation plate

- to balance position errors in XY- direction

#### TECHNICAL DATA

_	Connecting flange according EN ISO 9409-1	Stroke X/Y level +/-	Retention force centred	Retention force decentred
Installation size		[mm]	[N]	[N]
XYR1040	TK 40	3	150	30
XYR1050	TK 50	3.5	250	50
XYR1063	TK 63	4.5	400	125
XYR1080	TK 80	5.5	600	250
XYR1100	TK 100	6.0	900	450
XYR1125	TK 125	8.0	1500	600
XYR1160	TK 160	10.0	2000	1000
XYR1200	TK 200	12.5	3000	1250

#### ► FURTHER INFORMATION IS AVAILABLE ONLINE

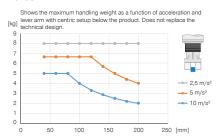


All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

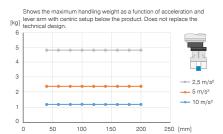
#### PRODUCT SPECIFICATIONS



#### Vertical design with centered holding force



#### Vertical design with decentered holding force



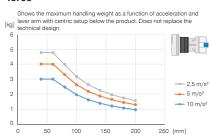
#### Forces and moments

Shows static forces and moments

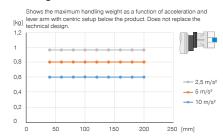


Mr [Nm]	10
My [Nm]	10
Fa [N]	250

## Horizontal design with centered holding



#### Horizontal design with decentered holding force



#### INCLUDED IN DELIVERY



4 [piece] Cylinder Screw C7984060149

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**

GVM5



#### **SENSORS**



Straight Fittings - Quick Connect Style



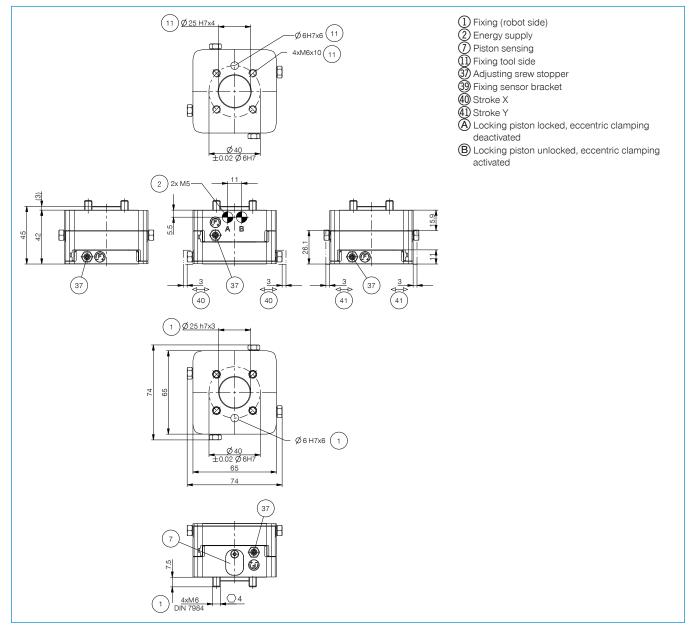
ZUB109817 Piston position sensing



WVM5

Angled Fittings - Quick Connect Style

	► Technical data
Order no.	XYR1040-B
Connecting flange according EN ISO 9409-1	TK 40
Stroke X/Y level +/- [mm]	3
Retention force centred [N]	150
Retention force decentred [N]	30
Repetition accuracy +/- [mm]	0.02
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle centred [cm <sup>3</sup> ]	6
Air volume per cycle decentred [cm³]	3
Moment of inertia [kgcm <sup>2</sup> ]	3.4
Weight [kg]	0.5

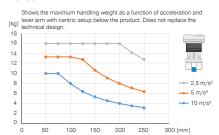




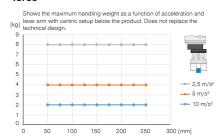
#### PRODUCT SPECIFICATIONS



#### Vertical design with centered holding force



#### Vertical design with decentered holding force



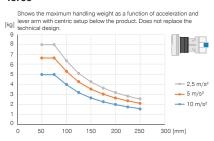
#### Forces and moments

Shows static forces and moments

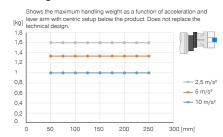


Mr [Nm]	20
My [Nm]	20
Fa [N]	500

## Horizontal design with centered holding



#### Horizontal design with decentered holding force



#### INCLUDED IN DELIVERY



4 [piece] Cylinder Screw C7984060149

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**

GVM5



#### **SENSORS**



Straight Fittings - Quick Connect Style



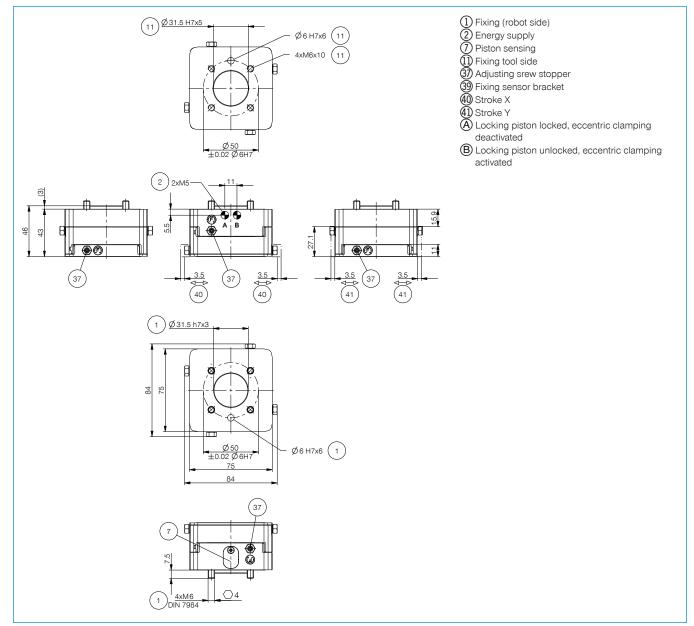
ZUB109835 Piston position sensing



WVM5

Angled Fittings - Quick Connect Style

	► Technical data
Order no.	XYR1050-B
Connecting flange according EN ISO 9409-1	TK 50
Stroke X/Y level +/- [mm]	3.5
Retention force centred [N]	250
Retention force decentred [N]	50
Repetition accuracy +/- [mm]	0.02
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle centred [cm <sup>3</sup> ]	8
Air volume per cycle decentred [cm³]	4
Moment of inertia [kgcm²]	6.2
Weight [kg]	0.66

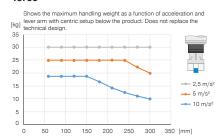




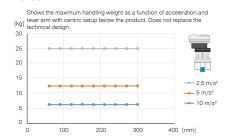
#### PRODUCT SPECIFICATIONS



#### Vertical design with centered holding force



#### Vertical design with decentered holding force



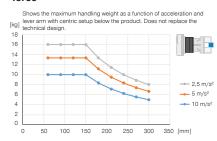
#### Forces and moments

Shows static forces and moments



Mr [Nm]	60
My [Nm]	60
Fa [N]	750

## Horizontal design with centered holding



#### Horizontal design with decentered holding force

→ 2,5 m/s² → 5 m/s² - 10 m/s<sup>2</sup> 100 300 400 [mm]

#### INCLUDED IN DELIVERY



3 [piece] Mounting block KB8K



4 [piece] C7984060149

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**





Straight Fittings - Quick Connect Style



#### **SENSORS**



Inductive proximity switch - Cable 5 m



WVM5 Angled Fittings - Quick Connect Style



NJ8-E2S Inductive proximity switch - Connector M8





#### **SENSORS**

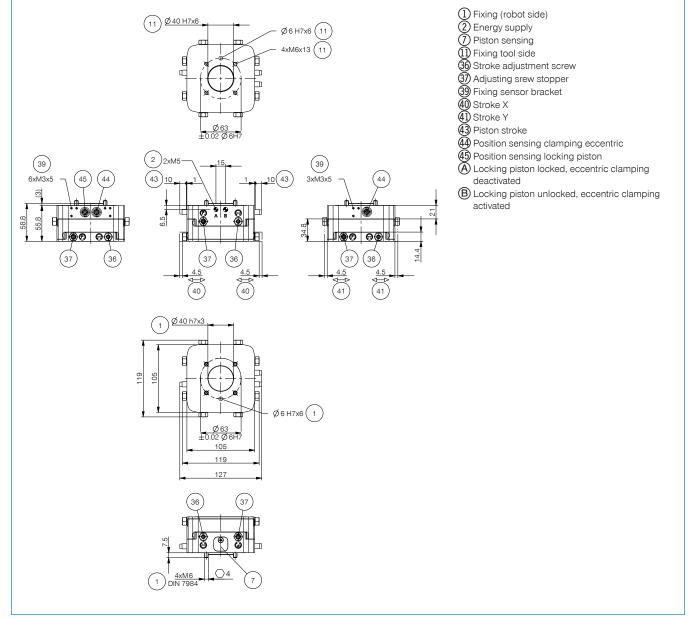


KHA1000-8 Alternate proximity bracket



ZUB109833 Piston position sensing

	Technical data
Order no.	XYR1063-B
Connecting flange according EN ISO 9409-1	TK 63
Stroke X/Y level +/- [mm]	4.5
Retention force centred [N]	400
Retention force decentred [N]	125
Repetition accuracy +/- [mm]	0.02
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle centred [cm <sup>3</sup> ]	16
Air volume per cycle decentred [cm³]	9
Moment of inertia [kgcm <sup>2</sup> ]	32.8
Weight [kg]	1.7





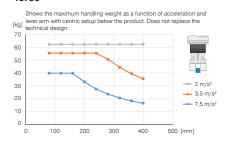
# pneumatic Axis Compensation Modules nstallation size XYR1080

# **AXIS COMPENSATION MODULES INSTALLATION SIZE XYR1080**

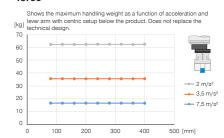
#### PRODUCT SPECIFICATIONS



#### Vertical design with centered holding force



#### Vertical design with decentered holding force



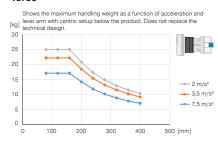
#### Forces and moments

Shows static forces and moments

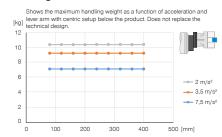


100
100
1500

## Horizontal design with centered holding



#### Horizontal design with decentered holding force



#### INCLUDED IN DELIVERY



3 [piece] Mounting block KB8K



6 [piece] C7984080229

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



GV1-8X8 Straight Fittings - Quick Connect Style



#### **SENSORS**



NJ8-E2 Inductive proximity switch - Cable 5 m



WV1-8X8 Angled Fittings - Quick Connect Style



NJ8-E2S Inductive proximity switch - Connector M8





#### **SENSORS**

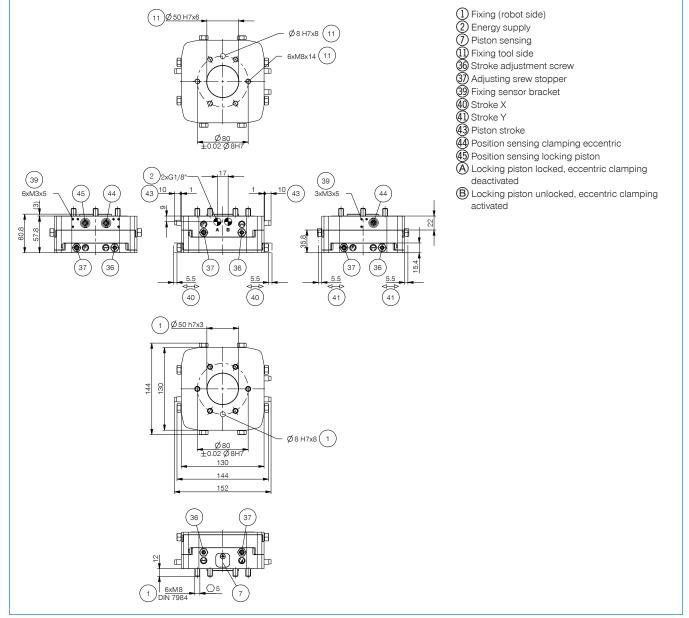


KHA1000-8 Alternate proximity bracket



ZUB109831 Piston position sensing

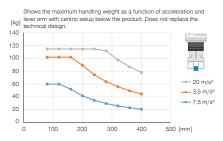
	► Technical data
Order no.	XYR1080-B
Connecting flange according EN ISO 9409-1	TK 80
Stroke X/Y level +/- [mm]	5.5
Retention force centred [N]	600
Retention force decentred [N]	250
Repetition accuracy +/- [mm]	0.02
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle centred [cm3]	36
Air volume per cycle decentred [cm³]	21
Moment of inertia [kgcm²]	73.9
Weight [kg]	2.7



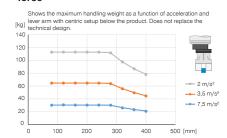
#### PRODUCT SPECIFICATIONS



#### Vertical design with centered holding force



#### Vertical design with decentered holding force



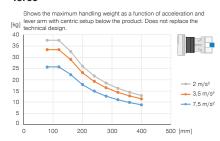
#### Forces and moments

Shows static forces and moments

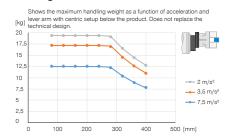


Mr [Nm]	125
My [Nm]	125
Fa [N]	2750

## Horizontal design with centered holding



#### Horizontal design with decentered holding force



#### INCLUDED IN DELIVERY



3 [piece] Mounting block KB8K



6 [piece] C7984080229

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



GV1-8X8 Straight Fittings - Quick Connect Style



#### **SENSORS**



Inductive proximity switch - Cable 5 m



WV1-8X8 Angled Fittings - Quick Connect Style



NJ8-E2S Inductive proximity switch - Connector M8





#### **SENSORS**

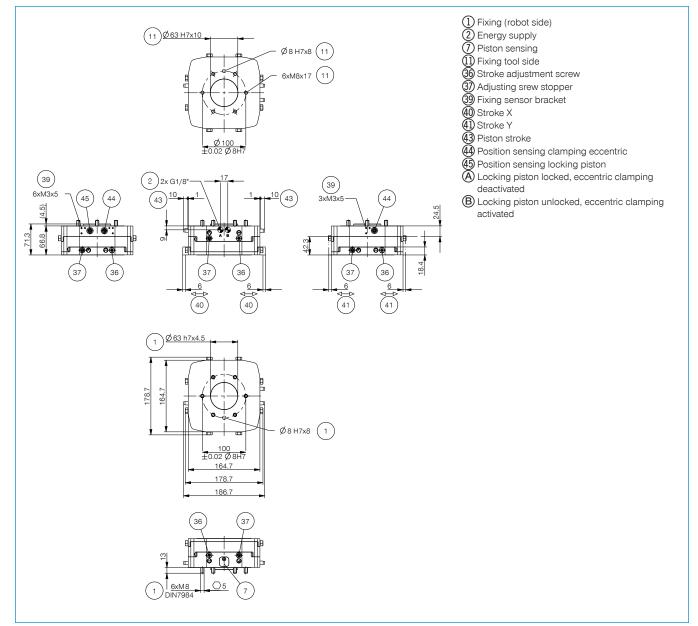


KHA1000-8 Alternate proximity bracket



ZUB109829 Piston position sensing

	► Technical data
Order no.	XYR1100-B
Connecting flange according EN ISO 9409-1	TK 100
Stroke X/Y level +/- [mm]	6.0
Retention force centred [N]	900
Retention force decentred [N]	450
Repetition accuracy +/- [mm]	0.02
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle centred [cm3]	65
Air volume per cycle decentred [cm³]	42
Moment of inertia [kgcm²]	204.0
Weight [kg]	4.6





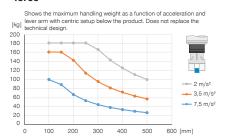
# pneumatic Axis Compensation Modules nstallation size XYR1125

## **AXIS COMPENSATION MODULES INSTALLATION SIZE XYR1125**

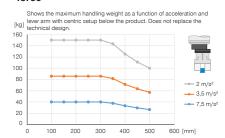
#### PRODUCT SPECIFICATIONS



#### Vertical design with centered holding force



#### Vertical design with decentered holding force



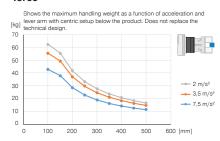
#### Forces and moments

Shows static forces and moments

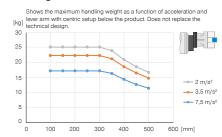


Mr [Nm]	200
My [Nm]	200
Fa [N]	4350

## Horizontal design with centered holding



#### Horizontal design with decentered holding force



#### INCLUDED IN DELIVERY



3 [piece] Mounting block KB8K



6 [piece] Cylinder Screw C7984100309

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



GV1-8X8 Straight Fittings - Quick Connect Style



#### **SENSORS**



Inductive proximity switch - Cable 5 m



WV1-8X8 Angled Fittings - Quick Connect Style



NJ8-E2S Inductive proximity switch - Connector M8





#### **SENSORS**

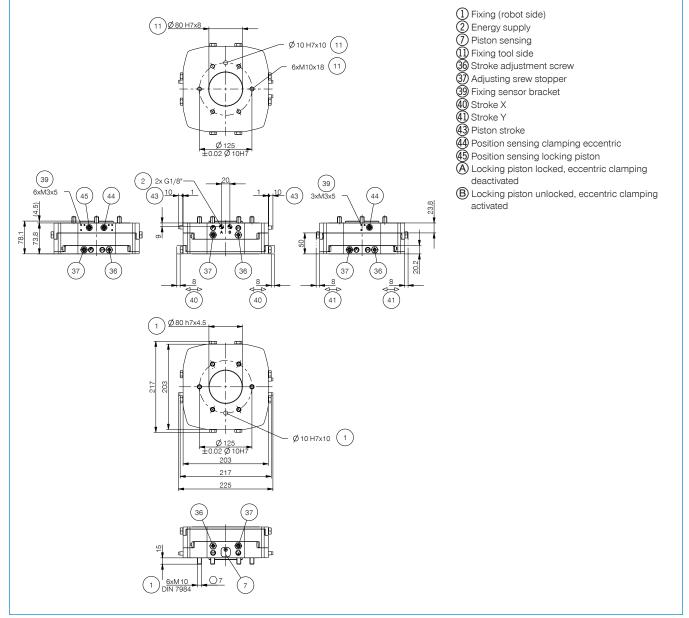


KHA1000-8 Alternate proximity bracket



ZUB109826 Piston position sensing

	► Technical data
Order no.	XYR1125-B
Connecting flange according EN ISO 9409-1	TK 125
Stroke X/Y level +/- [mm]	8.0
Retention force centred [N]	1500
Retention force decentred [N]	600
Repetition accuracy +/- [mm]	0.02
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle centred [cm <sup>3</sup> ]	113
Air volume per cycle decentred [cm³]	64
Moment of inertia [kgcm²]	506.0
Weight [kg]	7.9



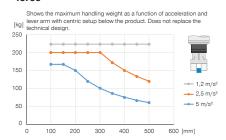
# pneumatic Axis Compensation Modules nstallation size XYR1160

# **AXIS COMPENSATION MODULES INSTALLATION SIZE XYR1160**

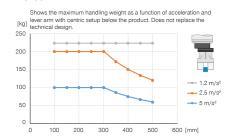
#### PRODUCT SPECIFICATIONS



#### Vertical design with centered holding force



#### Vertical design with decentered holding force



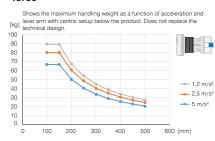
#### Forces and moments

Shows static forces and moments

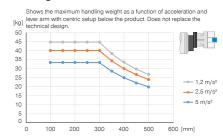


Mr [Nm]	300
My [Nm]	300
Fa [N]	5000

## Horizontal design with centered holding



#### Horizontal design with decentered holding force



#### INCLUDED IN DELIVERY



3 [piece] Mounting block KB8K



6 [piece] Cylinder Screw C7984100309

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



GV1-8X8 Straight Fittings - Quick Connect Style



#### **SENSORS**





Inductive proximity switch - Cable 5 m



WV1-8X8 Angled Fittings - Quick Connect Style



NJ8-E2S Inductive proximity switch - Connector M8





#### **SENSORS**

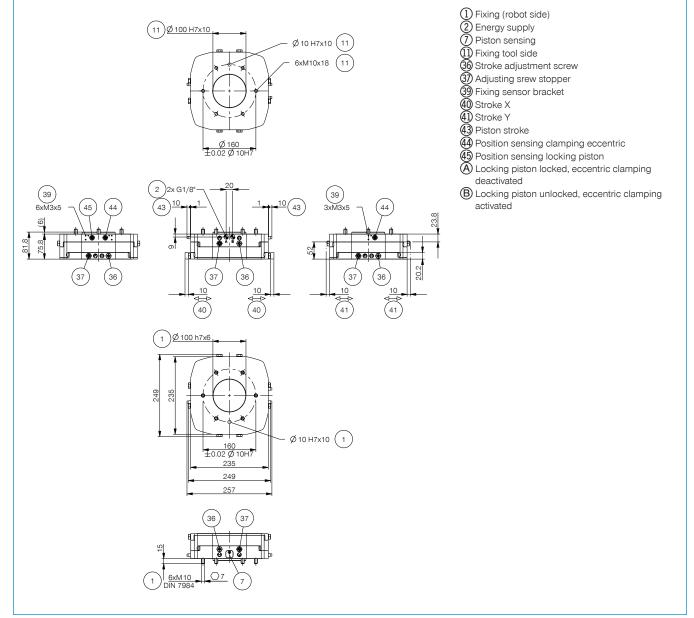


KHA1000-8 Alternate proximity bracket



ZUB109824 Piston position sensing

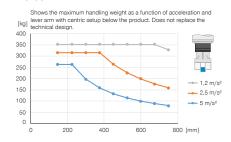
	► Technical data
Order no.	XYR1160-B
Connecting flange according EN ISO 9409-1	TK 160
Stroke X/Y level +/- [mm]	10.0
Retention force centred [N]	2000
Retention force decentred [N]	1000
Repetition accuracy +/- [mm]	0.02
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle centred [cm³]	189
Air volume per cycle decentred [cm³]	111
Moment of inertia [kgcm²]	891.0
Weight [kg]	10



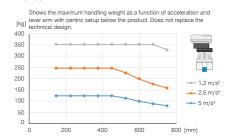
#### PRODUCT SPECIFICATIONS



#### Vertical design with centered holding force



#### Vertical design with decentered holding force



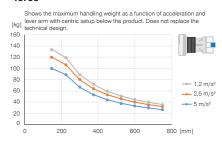
#### Forces and moments

Shows static forces and moments

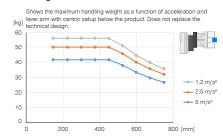


Mr [Nm]	600
My [Nm]	600
Fa [N]	8000

## Horizontal design with centered holding



#### Horizontal design with decentered holding force



#### INCLUDED IN DELIVERY



3 [piece] Mounting block KB8K



6 [piece] Cylinder Screw C7984120309

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**





#### **SENSORS**





NJ8-E2 Inductive proximity switch - Cable 5 m



WV1-8X8 Angled Fittings - Quick Connect Style



NJ8-E2S Inductive proximity switch - Connector M8





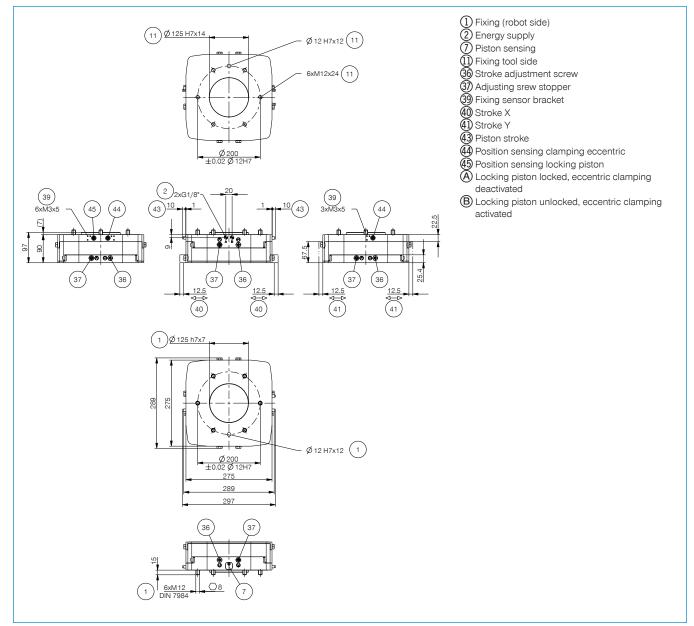


KHA1000-8 Alternate proximity bracket



ZUB109821 Piston position sensing

	► Technical data
Order no.	XYR1200-B
Connecting flange according EN ISO 9409-1	TK 200
Stroke X/Y level +/- [mm]	12.5
Retention force centred [N]	3000
Retention force decentred [N]	1250
Repetition accuracy +/- [mm]	0.02
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle centred [cm <sup>3</sup> ]	323
Air volume per cycle decentred [cm³]	173
Moment of inertia [kgcm²]	2217.0
Weight [kg]	18





## **AXIS COMPENSATION MODULES SERIES ZR1000**

#### PRODUCT ADVANTAGES



#### Adjustable trigger sensitivity

By controlling the air pressure, you can optimally adjust the sensitivity to your application.

#### Integrated sensors

When deflection occurs in the Z direction, the optionally available sensor sends two teachable signals to the controller.

#### Pneumatic locking

After pneumatic actuation, the axis compensation is locked in a defined end position and can be subjected to high dynamic loads.

#### SERIES CHARACTERISTICS

Installation size	Version
ZR1XXX	-A
1 million maintenance-free cycles (max.)	•
Magnetic field sensor	•
Protected against corrosion	•
Purged air	•
IP 40 IP40	•

#### **BENEFITS IN DETAIL**



#### 1 Piston position sensing

- via magnetic field sensor
- optionally available as accessories

#### 2 Robust, lightweight housing

- Hard-coated aluminum alloy
- lowest overall height
- IP40 protection class in standard

#### 3 Connecting flange

- partial mounting circle in accordance with EN ISO 9409-1

#### 4 Locking piston

- single-acting pneumatic cylinder
- with integrated spring
- locks the Z-axis

#### 5 Linear guide

- for highest force and moments capacity
- Steel/steel guide stands for lasting precision

#### TECHNICAL DATA

	Connecting flange according EN ISO 9409-1	Stroke in Z-axis	Holding force	Weight
Installation size		[mm]	[N]	[kg]
ZR1040	TK 40	8	250	0.52
ZR1050	TK 50	8	500	0.67
ZR1063	TK 63	10	1000	1.1
ZR1080	TK 80	10	1500	1.8
ZR1100	TK 100	15	3000	3.1
ZR1125	TK 125	15	4500	5.1
ZR1160	TK 160	20	6500	8.9
ZR1200	TK 200	20	11500	13

#### ► FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: <a href="www.zimmer-group.com">www.zimmer-group.com</a>. 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.

#### PRODUCT SPECIFICATIONS



#### Variable installation position

2 → 5 m/s² 100 125 150 175 200 [mm]

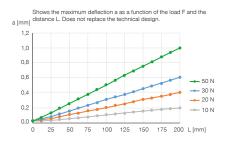
#### Forces and moments

Shows the maximum forces and moments

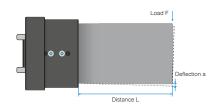


	pressurized	depressurized
Mr [Nm]	20	20
My [Nm]	10	5
Fa [N]	250	250

#### Variable installation position



#### Deflection



#### INCLUDED IN DELIVERY



1 [piece] Sensor holder ZUB000035

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**





#### **CONNECTIONS / OTHER**



GVM5

Straight Fittings - Quick Connect Style



#### KAG500B4

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





WVM5

Angled Fittings - Quick Connect Style



Plug-in connector Angled Cable 5m - Socket M8





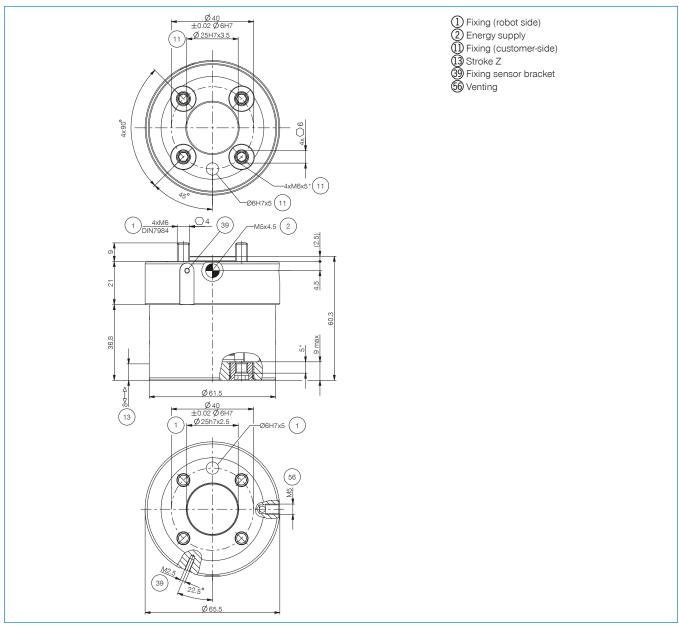
#### **SENSORS**



MFS01-S-KHC-P2-PNP



	► Technical data
Order no.	ZR1040-A
Connecting flange according EN ISO 9409-1	TK 40
Stroke in Z-axis [mm]	8
Holding force [N]	250
Spring force [N]	22 29
Repetition accuracy +/- [mm]	0.01
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle [cm³]	11
Moment of inertia around the Z-axis [kgcm²]	4
Protection to IEC 60529	IP40
Weight [kg]	0.52

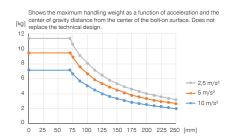




#### PRODUCT SPECIFICATIONS



#### Variable installation position



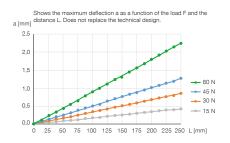
#### Forces and moments

Shows the maximum forces and moments

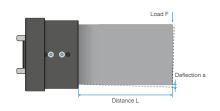


	pressurized	depressurized
Mr [Nm]	40	40
My [Nm]	20	10
Fa [N]	500	500

#### Variable installation position



#### Deflection



#### INCLUDED IN DELIVERY



1 [piece] Sensor holder ZUB000035

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**





#### **CONNECTIONS / OTHER**



GVM5 Straight Fittings - Quick Connect Style



#### KAG500B4







WVM5

Angled Fittings - Quick Connect Style









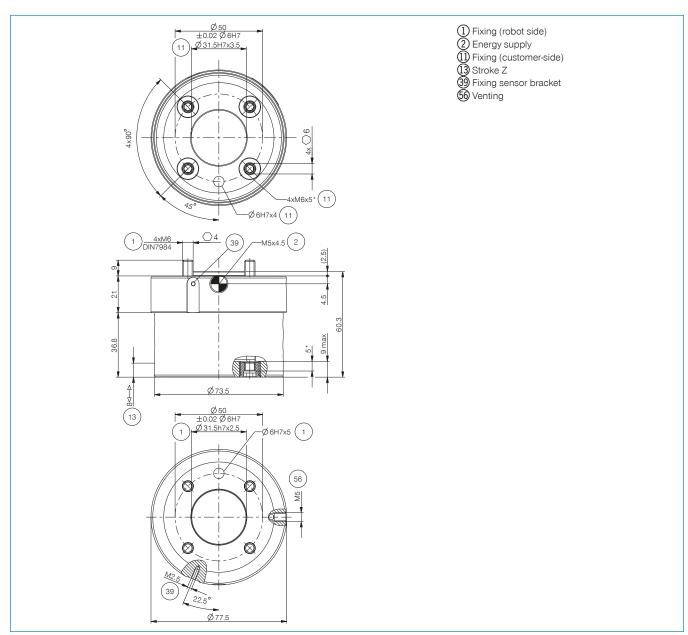
#### **SENSORS**



MFS01-S-KHC-P2-PNP



	► Technical data
Order no.	ZR1050-A
Connecting flange according EN ISO 9409-1	TK 50
Stroke in Z-axis [mm]	8
Holding force [N]	500
Spring force [N]	25 37
Repetition accuracy +/- [mm]	0.01
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle [cm³]	25
Moment of inertia around the Z-axis [kgcm²]	7
Protection to IEC 60529	IP40
Weight [kg]	0.67





#### PRODUCT SPECIFICATIONS



#### Variable installation position

12 → 5 m/s² 25 50 75 100 125 150 175 200 225 250 275 300 [mm]

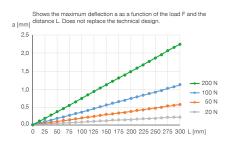
#### Forces and moments

Shows the maximum forces and moments

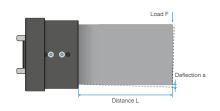


	pressurized	depressurized
Mr [Nm]	120	120
My [Nm]	60	30
Fa [N]	750	750

#### Variable installation position



#### Deflection



#### INCLUDED IN DELIVERY



1 [piece] Sensor holder ZUB000035

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



#### **CONNECTIONS / OTHER**



#### GVM5

Straight Fittings - Quick Connect Style



#### KAG500B4

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





#### WVM5

Angled Fittings - Quick Connect Style



Plug-in connector Angled Cable 5m - Socket M8





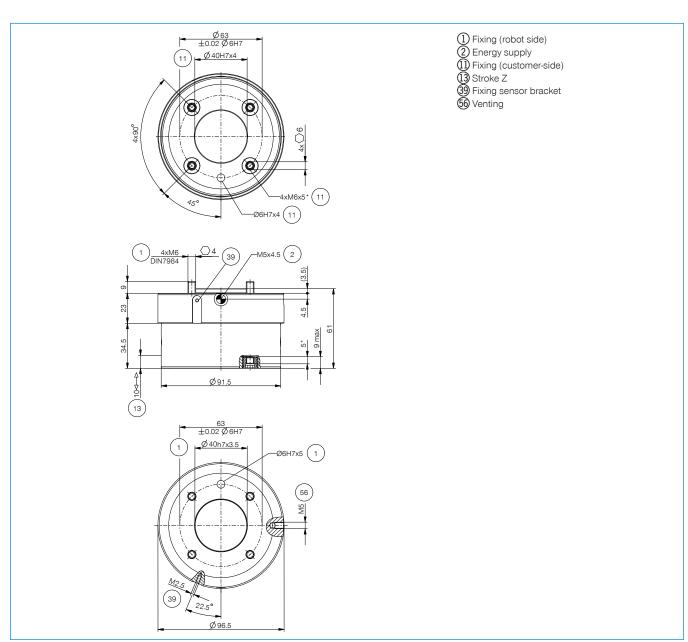
#### **SENSORS**



#### MFS01-S-KHC-P2-PNP



	► Technical data
Order no.	ZR1063-A
Connecting flange according EN ISO 9409-1	TK 63
Stroke in Z-axis [mm]	10
Holding force [N]	1000
Spring force [N]	50 62
Repetition accuracy +/- [mm]	0.01
Operating pressure [bar]	1 8
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle [cm³]	45
Moment of inertia around the Z-axis [kgcm <sup>2</sup> ]	17
Protection to IEC 60529	IP40
Weight [kg]	1.1

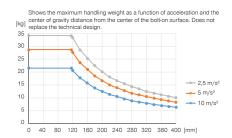




#### PRODUCT SPECIFICATIONS



#### Variable installation position



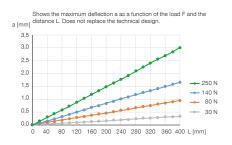
#### Forces and moments

Shows the maximum forces and moments

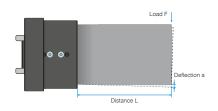


	pressurized	depressurized
Mr [Nm]	200	200
My [Nm]	100	50
Fa [N]	1500	1500

#### Variable installation position



#### Deflection



#### INCLUDED IN DELIVERY



1 [piece] Sensor holder ZUB000035

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**





#### **CONNECTIONS / OTHER**



GVM5

Straight Fittings - Quick Connect Style



#### KAG500B4

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





WVM5

Angled Fittings - Quick Connect Style



Plug-in connector Angled Cable 5m - Socket M8





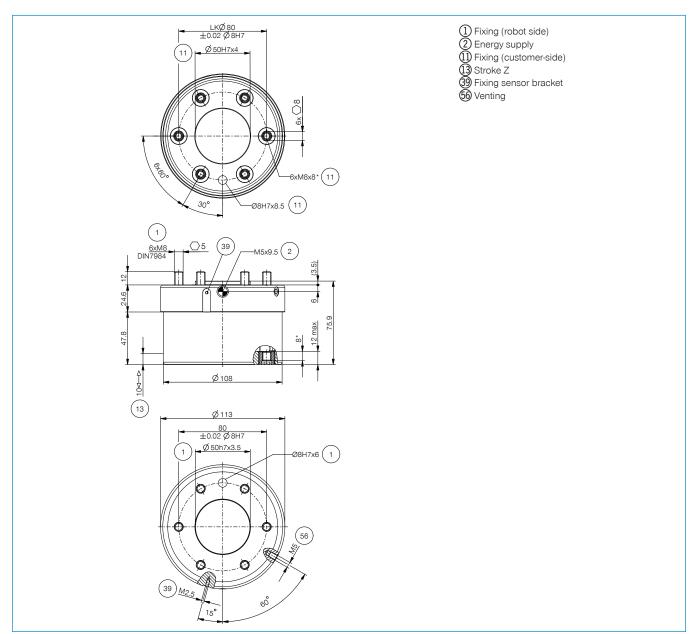
#### **SENSORS**



MFS01-S-KHC-P2-PNP



	► Technical data
Order no.	ZR1080-A
Connecting flange according EN ISO 9409-1	TK 80
Stroke in Z-axis [mm]	10
Holding force [N]	1500
Spring force [N]	60 70
Repetition accuracy +/- [mm]	0.01
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle [cm³]	85
Moment of inertia around the Z-axis [kgcm²]	35
Protection to IEC 60529	IP40
Weight [kg]	1.8

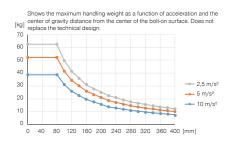




#### PRODUCT SPECIFICATIONS



#### Variable installation position



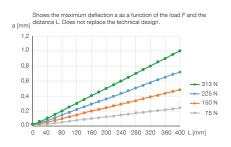
#### Forces and moments

Shows the maximum forces and moments

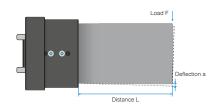


	pressurized	depressurized
Mr [Nm]	250	250
My [Nm]	125	63
Fa [N]	2750	2750

#### Variable installation position



#### **Deflection**



#### INCLUDED IN DELIVERY



1 [piece] Sensor holder ZUB000036

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



#### GVM5

Straight Fittings - Quick Connect Style



#### KAG500B4

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





#### WVM5

Angled Fittings - Quick Connect Style



Plug-in connector Angled Cable 5m - Socket M8





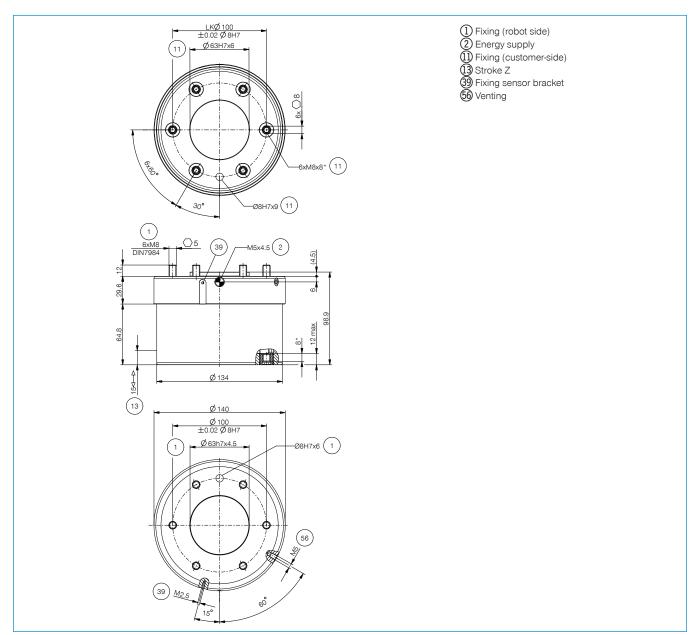
#### **SENSORS**



#### MFS01-S-KHC-P2-PNP



	► Technical data
Order no.	ZR1100-A
Connecting flange according EN ISO 9409-1	TK 100
Stroke in Z-axis [mm]	15
Holding force [N]	3000
Spring force [N]	75 97
Repetition accuracy +/- [mm]	0.01
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle [cm³]	230
Moment of inertia around the Z-axis [kgcm <sup>2</sup> ]	90
Protection to IEC 60529	IP40
Weight [kg]	3.1

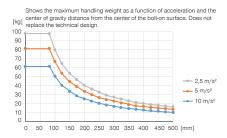




#### PRODUCT SPECIFICATIONS



#### Variable installation position



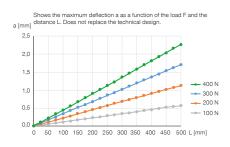
#### Forces and moments

Shows the maximum forces and moments

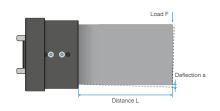


	pressurized	depressurized
Mr [Nm]	400	400
My [Nm]	200	100
Fa [N]	4350	4350

#### Variable installation position



#### Deflection



#### INCLUDED IN DELIVERY



1 [piece] Sensor holder ZUB000036

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



#### GVM5

Straight Fittings - Quick Connect Style



#### KAG500B4

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





#### WVM5

Angled Fittings - Quick Connect Style



Plug-in connector Angled Cable 5m - Socket M8





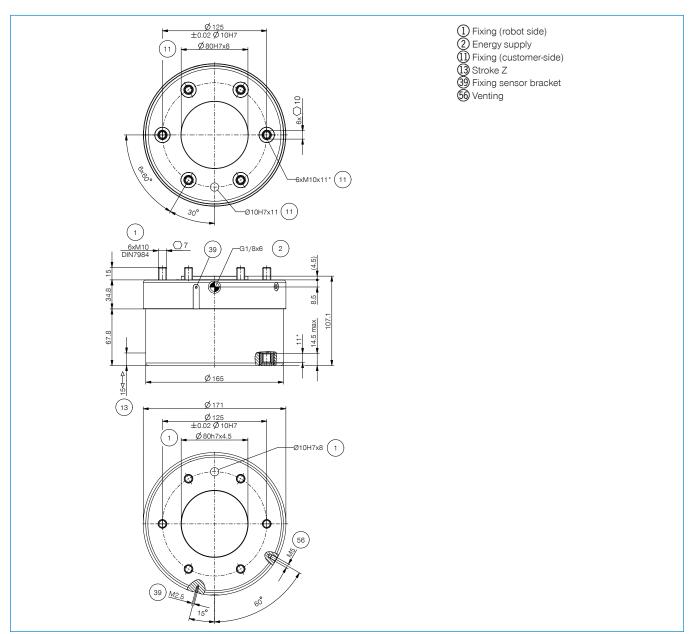
#### **SENSORS**



#### MFS01-S-KHC-P2-PNP



	► Technical data
Order no.	ZR1125-A
Connecting flange according EN ISO 9409-1	TK 125
Stroke in Z-axis [mm]	15
Holding force [N]	4500
Spring force [N]	125 160
Repetition accuracy +/- [mm]	0.01
Operating pressure [bar]	1 8
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle [cm³]	265
Moment of inertia around the Z-axis [kgcm²]	205
Protection to IEC 60529	IP40
Weight [kg]	5.1

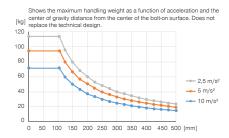




#### PRODUCT SPECIFICATIONS



#### Variable installation position



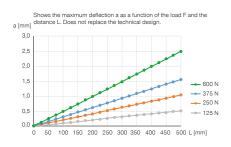
#### Forces and moments

Shows the maximum forces and moments

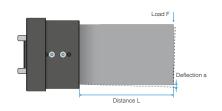


	pressurized	depressurized
Mr [Nm]	600	600
My [Nm]	300	100
Fa [N]	5000	5000

#### Variable installation position



#### **Deflection**



#### INCLUDED IN DELIVERY



1 [piece] Sensor holder ZUB000036

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**



#### **CONNECTIONS / OTHER**



#### GVM5

Straight Fittings - Quick Connect Style



#### KAG500B4

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





#### WVM5

Angled Fittings - Quick Connect Style



Plug-in connector Angled Cable 5m - Socket M8





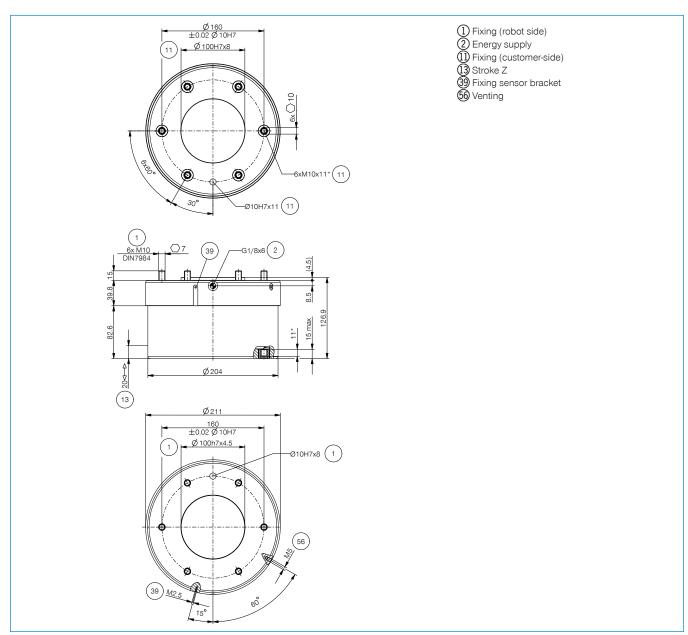
#### **SENSORS**



#### MFS01-S-KHC-P2-PNP



	► Technical data
Order no.	ZR1160-A
Connecting flange according EN ISO 9409-1	TK 160
Stroke in Z-axis [mm]	20
Holding force [N]	6500
Spring force [N]	150 220
Repetition accuracy +/- [mm]	0.01
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle [cm³]	620
Moment of inertia around the Z-axis [kgcm²]	550
Protection to IEC 60529	IP40
Weight [kg]	8.9

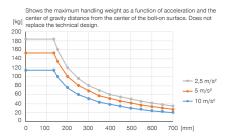




#### PRODUCT SPECIFICATIONS



#### Variable installation position



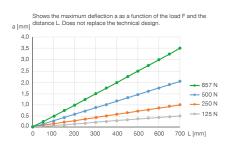
#### Forces and moments

Shows the maximum forces and moments

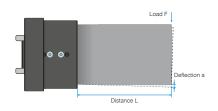


	pressurized	depressurized
Mr [Nm]	1200	1200
My [Nm]	600	200
Fa [N]	8000	8000

#### Variable installation position



#### **Deflection**



#### INCLUDED IN DELIVERY



1 [piece] Sensor holder ZUB000036

#### RECOMMENDED ACCESSORIES



#### **ENERGY SUPPLY**





#### **CONNECTIONS / OTHER**



#### GVM5

Straight Fittings - Quick Connect Style



#### KAG500B4

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





#### WVM5

Angled Fittings - Quick Connect Style



Plug-in connector Angled Cable 5m - Socket M8





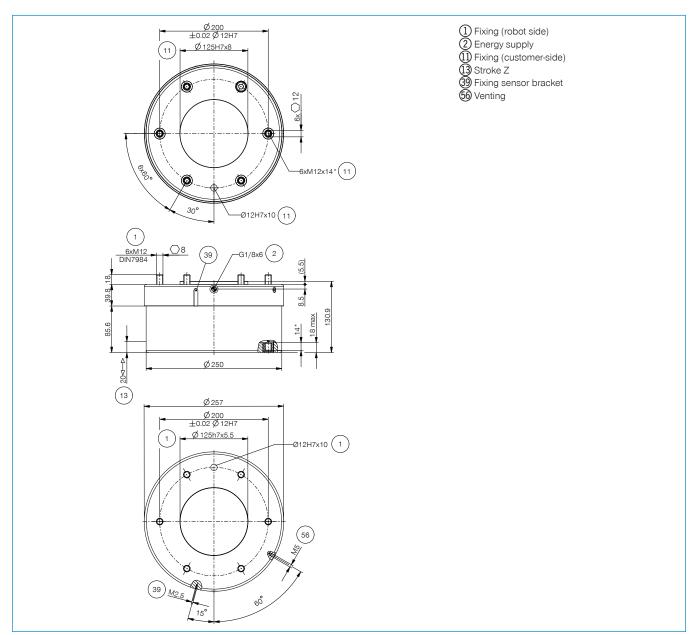
#### **SENSORS**



#### MFS01-S-KHC-P2-PNP



	► Technical data
Order no.	ZR1200-A
Connecting flange according EN ISO 9409-1	TK 200
Stroke in Z-axis [mm]	20
Holding force [N]	11500
Spring force [N]	250 320
Repetition accuracy +/- [mm]	0.01
Operating pressure [bar]	1 8
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle [cm³]	1200
Moment of inertia around the Z-axis [kgcm²]	1240
Protection to IEC 60529	IP40
Weight [kg]	13





# **AXIS COMPENSATION MODULES SERIES ARP**

### **▶ PRODUCT ADVANTAGES**



#### ► Lockable centre placement

When moving your robot, you can fix the equalizer in place so that uncontrolled movements of the workpiece do not take place

#### Extremely flat design

This structure reduces the moment load for your robot to a minimum and makes it possible to use smaller and more affordable sizes

#### Variable balancing force and moment

Adjust the equaliser to your handling weight by mounting a spring package based on desired rigidity

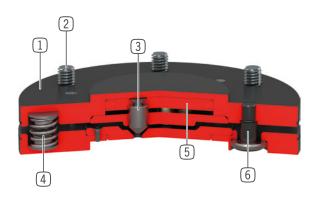
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### **BENEFITS IN DETAIL**



- 1 Robust, lightweight housing
  - Hard-coated aluminum alloy

#### (2) Robot flange

- partial mounting circle in accordance with EN ISO 9409-1

#### 3 Locking

- 3 locking pistons
- nitrated steel

#### 4 Spring package

- version size 63, stronger one is available
- version size 100, 3 springs can be removed

#### 5 Locking drive

- single-acting pneumatic cylinder
- 6 Guiding bolts with ball cup

### TECHNICAL DATA

	Connecting flange according EN ISO 9409-1	Deflection hoirontal +/-	Defletion vertical +/-
Installation size		[mm/°]	[mm/°]
AR40P	TK 40	2 / 1	2 / 1
AR50P	TK 50	2 / 1	2 / 1
AR63P	TK 63	2 / 1	2 / 1
AR80P	TK 80	2 / 1	2 / 1
AR100P	TK 100	2 / 1	2 / 1
AR125P	TK 125	2 / 1	2 / 1
AR160P	TK 160	2 / 1	2 / 1

### ► FURTHER INFORMATION IS AVAILABLE ONLINE



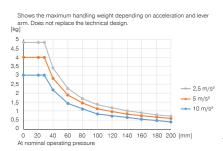
All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

# **AXIS COMPENSATION MODULES INSTALLATION SIZE AR40P**

#### **▶ PRODUCT SPECIFICATIONS**



#### Variable installation position



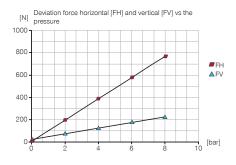
#### Forces and moments

Shows static forces and moments which may impact on the axis compensation module.

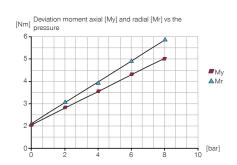


Mr [Nm]	60
My [Nm]	60
Fa [N]	800

#### Spring Pack 1 (pre-assembled)



#### Spring Pack 1 (pre-assembled)



#### INCLUDED IN DELIVERY



4 [piece] Cylinder Screw C7984060129



4 [piece] Spring Pack 1 (pre-assembled) CFED11180

#### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



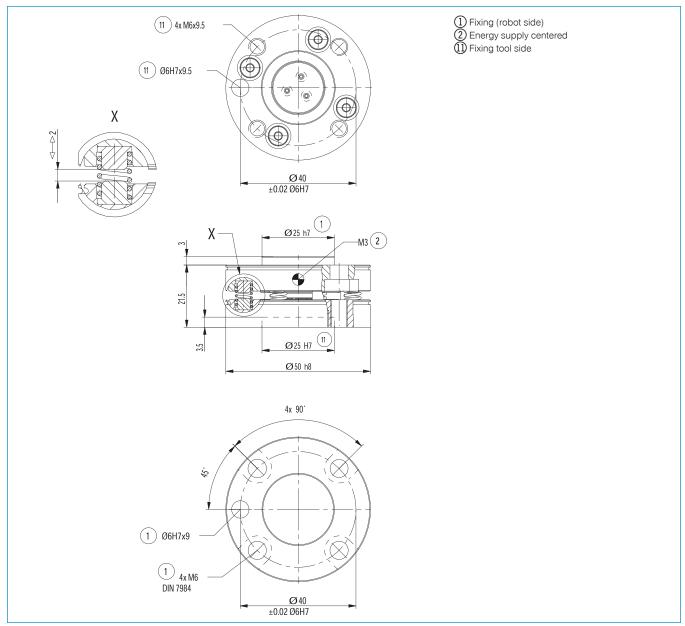
## **ENERGY SUPPLY**



Angled Fittings - Barb Style Connection



	► Technical data
Order no.	AR40P
Connecting flange according EN ISO 9409-1	TK 40
Installation Height [mm]	21.5
Horizontal deviation +/- [mm]	2
Horizontal deviation +/- [°]	1
Vertical deviation +/- [mm]	2
Vertical deviation +/- [°]	1
Centering force when locking [N]	170
Repetition accuracy Horizontal +/- [mm/°]	0.05
Repetition accuracy Vertical +/- [mm/°]	0.05
Air volume per cycle [cm³]	2
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Moment of inertia [kgcm²]	0.5
Weight [kg]	0.14



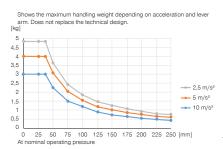


# **AXIS COMPENSATION MODULES INSTALLATION SIZE AR50P**

#### **▶ PRODUCT SPECIFICATIONS**



#### Variable installation position



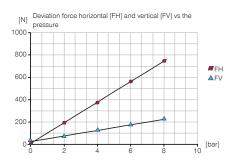
#### Forces and moments

Shows static forces and moments which may impact on the axis compensation module.

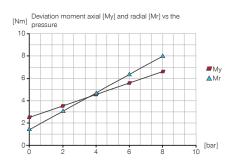


Mr [Nm]	60
My [Nm]	60
Fa [N]	800

#### Spring Pack 1 (pre-assembled)



#### Spring Pack 1 (pre-assembled)



#### INCLUDED IN DELIVERY



4 [piece] Cylinder Screw C7984060129



4 [piece] Spring Pack 1 (pre-assembled) CFED11180

#### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



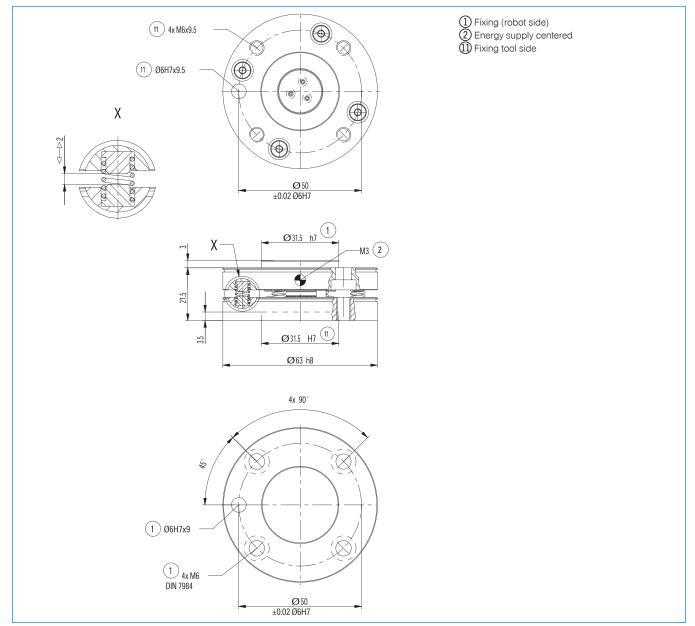
### **ENERGY SUPPLY**



Angled Fittings - Barb Style Connection



	► Technical data
Order no.	AR50P
Connecting flange according EN ISO 9409-1	TK 50
Installation Height [mm]	21.5
Horizontal deviation +/- [mm]	2
Horizontal deviation +/- [°]	1
Vertical deviation +/- [mm]	2
Vertical deviation +/- [°]	1
Centering force when locking [N]	170
Repetition accuracy Horizontal +/- [mm/°]	0.05
Repetition accuracy Vertical +/- [mm/°]	0.05
Air volume per cycle [cm³]	2
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Moment of inertia [kgcm²]	1.1
Weight [kg]	0.2



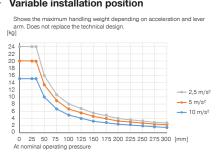


# **AXIS COMPENSATION MODULES INSTALLATION SIZE AR63P**

#### PRODUCT SPECIFICATIONS

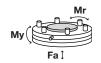


#### Variable installation position



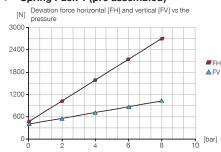
#### Forces and moments

Shows static forces and moments which may impact on the axis compensation module.

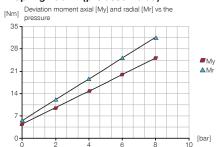


Mr [Nm]	300
My [Nm]	300
Fa [N]	1500

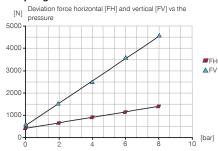
#### Spring Pack 1 (pre-assembled)



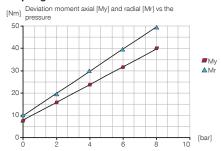
#### Spring Pack 1 (pre-assembled)



#### Spring Pack 2



#### Spring Pack 2



### **► INCLUDED IN DELIVERY**



4 [piece] Cylinder Screw C7984060149



4 [piece] Spring Pack 2 CFED63010



Spring Pack 1 (pre-assembled) CFED63000

#### RECOMMENDED ACCESSORIES



## **ENERGY SUPPLY**



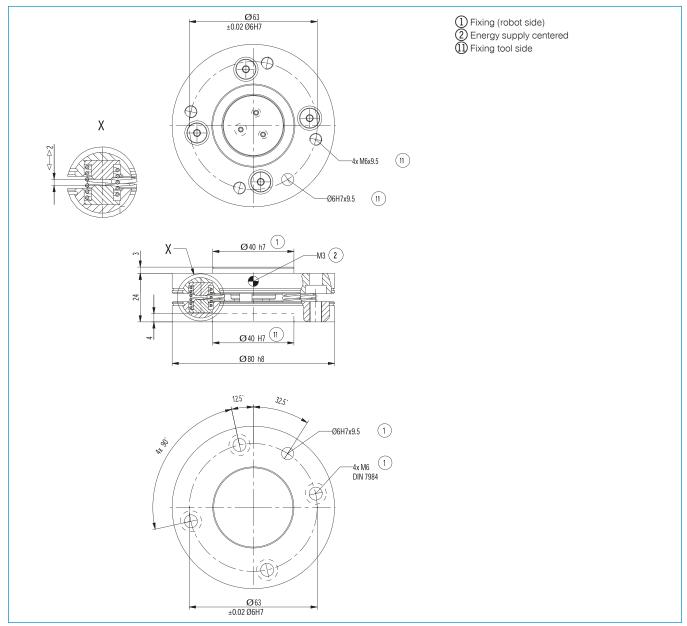
### **ENERGY SUPPLY**



WVM3 Angled Fittings - Barb Style Connection



	► Technical data
Order no.	AR63P
Connecting flange according EN ISO 9409-1	TK 63
Installation Height [mm]	24
Horizontal deviation +/- [mm]	2
Horizontal deviation +/- [°]	1
Vertical deviation +/- [mm]	2
Vertical deviation +/- [°]	1
Centering force when locking [N]	600
Repetition accuracy Horizontal +/- [mm/°]	0.05
Repetition accuracy Vertical +/- [mm/°]	0.05
Air volume per cycle [cm³]	3.6
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Moment of inertia [kgcm²]	2.8
Weight [kg]	0.39



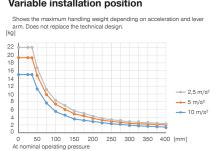


# **AXIS COMPENSATION MODULES INSTALLATION SIZE AR80P**

#### PRODUCT SPECIFICATIONS

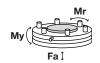


#### Variable installation position



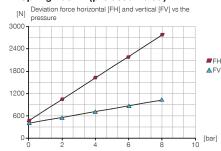
#### Forces and moments

Shows static forces and moments which may impact on the axis compensation module.

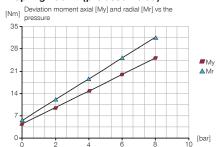


Mr [Nm]	300
My [Nm]	300
Fa [N]	1500

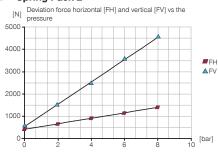
#### Spring Pack 1 (pre-assembled)



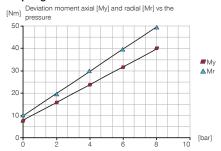
#### Spring Pack 1 (pre-assembled)



### Spring Pack 2



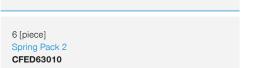
#### Spring Pack 2



### **► INCLUDED IN DELIVERY**



6 [piece] Cylinder Screw C7984080169





Spring Pack 1 (pre-assembled) CFED63000

#### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



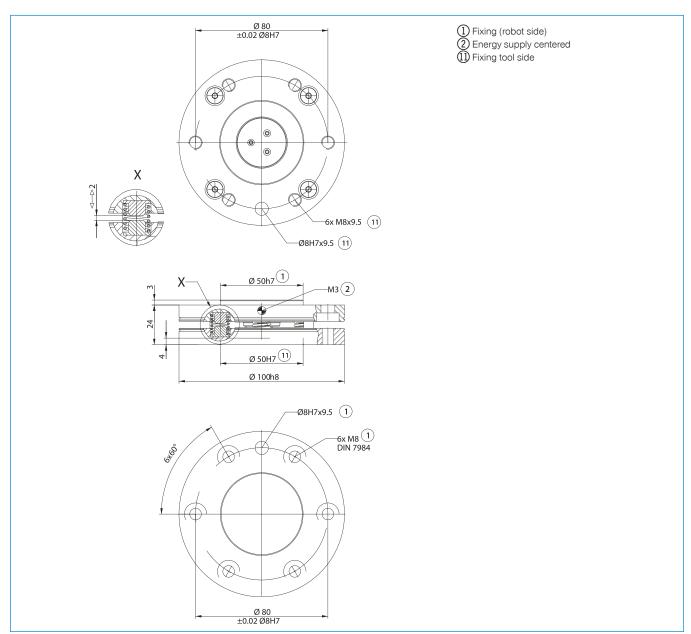
### **ENERGY SUPPLY**



WVM3 Angled Fittings - Barb Style Connection



	► Technical data
Order no.	AR80P
Connecting flange according EN ISO 9409-1	TK 80
Installation Height [mm]	24
Horizontal deviation +/- [mm]	2
Horizontal deviation +/- [°]	1
Vertical deviation +/- [mm]	2
Vertical deviation +/- [°]	1
Centering force when locking [N]	600
Repetition accuracy Horizontal +/- [mm/°]	0.05
Repetition accuracy Vertical +/- [mm/°]	0.05
Air volume per cycle [cm³]	3.6
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Moment of inertia [kgcm²]	6.2
Weight [kg]	0.58





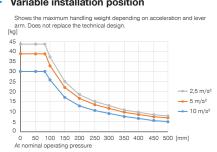
Installation size AR100P /

# **AXIS COMPENSATION MODULES INSTALLATION SIZE AR100P**

#### PRODUCT SPECIFICATIONS



#### Variable installation position



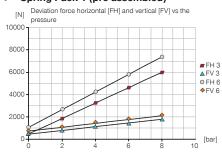
#### Forces and moments

Shows static forces and moments which may impact on the axis compensation module.

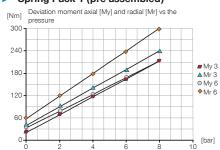


Mr [Nm]	500
My [Nm]	500
Fa [N]	2100

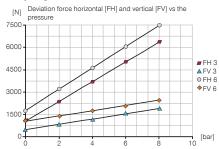
#### Spring Pack 1 (pre-assembled)



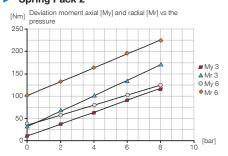
#### Spring Pack 1 (pre-assembled)



#### Spring Pack 2



### Spring Pack 2



### **► INCLUDED IN DELIVERY**



6 [piece] Cylinder Screw C7984080169



6 [piece] Spring Pack 2 CFED10060



Spring Pack 1 (pre-assembled) CFED10050

#### RECOMMENDED ACCESSORIES



## **ENERGY SUPPLY**



### **ENERGY SUPPLY**

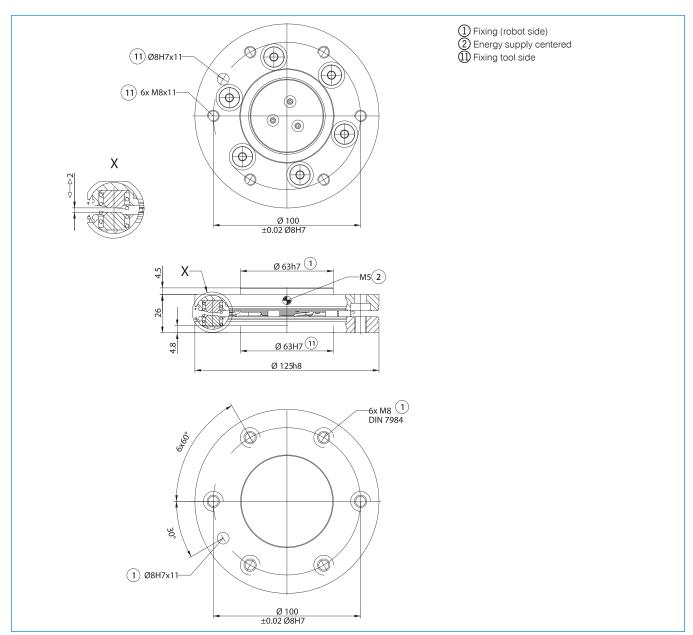


GVM5 Straight Fittings - Quick Connect Style



Angled Fittings - Quick Connect Style

	► Technical data
Order no.	AR100P
Connecting flange according EN ISO 9409-1	TK 100
Installation Height [mm]	26
Horizontal deviation +/- [mm]	2
Horizontal deviation +/- [°]	1
Vertical deviation +/- [mm]	2
Vertical deviation +/- [°]	1
Centering force when locking [N]	1400
Repetition accuracy Horizontal +/- [mm/°]	0.05
Repetition accuracy Vertical +/- [mm/°]	0.05
Air volume per cycle [cm³]	8.5
Operating pressure [bar]	18
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Moment of inertia [kgcm²]	17
Weight [kg]	1.1





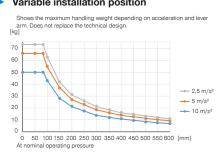
Installation size AR125P /

# **AXIS COMPENSATION MODULES INSTALLATION SIZE AR125P**

#### PRODUCT SPECIFICATIONS

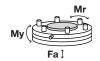


#### Variable installation position



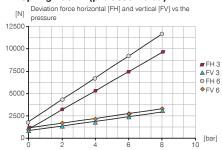
#### Forces and moments

Shows static forces and moments which may impact on the axis compensation module.

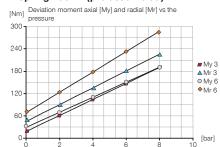


Mr [Nm]	900
My [Nm]	900
Fa [N]	7000

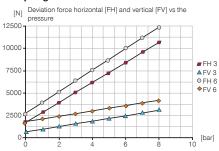
#### Spring Pack 1 (pre-assembled)



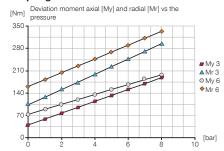
#### Spring Pack 1 (pre-assembled)



#### Spring Pack 2



#### Spring Pack 2



### **► INCLUDED IN DELIVERY**



6 [piece] Cylinder Screw C7984080169



6 [piece] Spring Pack 2 CFED12510



Spring Pack 1 (pre-assembled) CFED12500

#### RECOMMENDED ACCESSORIES



## **ENERGY SUPPLY**



### **ENERGY SUPPLY**

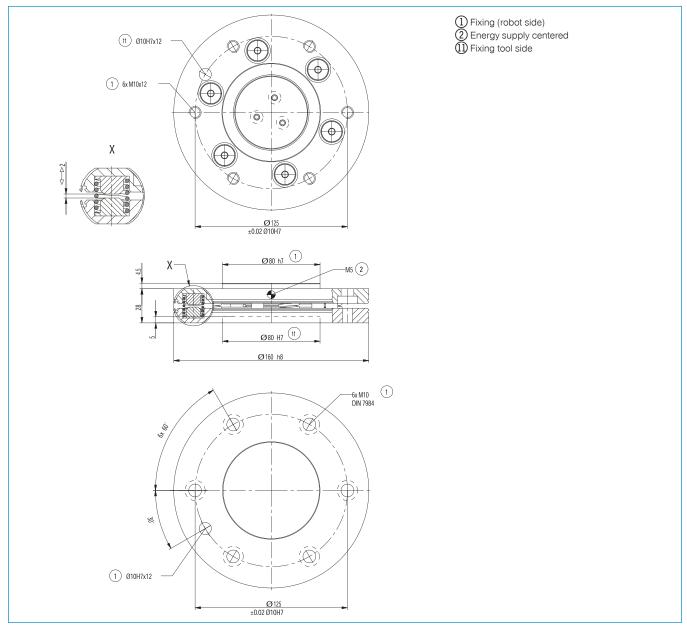


GVM5 Straight Fittings - Quick Connect Style



Angled Fittings - Quick Connect Style

	► Technical data
Order no.	AR125P
Connecting flange according EN ISO 9409-1	TK 125
Installation Height [mm]	28
Horizontal deviation +/- [mm]	2
Horizontal deviation +/- [°]	1
Vertical deviation +/- [mm]	2
Vertical deviation +/- [°]	1
Centering force when locking [N]	3000
Repetition accuracy Horizontal +/- [mm/°]	0.05
Repetition accuracy Vertical +/- [mm/°]	0.05
Air volume per cycle [cm³]	14
Operating pressure [bar]	1 8
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Moment of inertia [kgcm²]	61
Weight [kg]	2



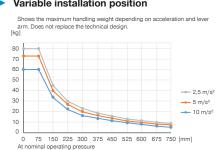


# **AXIS COMPENSATION MODULES INSTALLATION SIZE AR160P**

#### PRODUCT SPECIFICATIONS

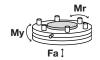


#### Variable installation position



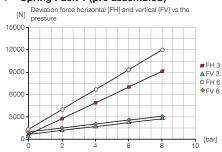
#### Forces and moments

Shows static forces and moments which may impact on the axis compensation module.

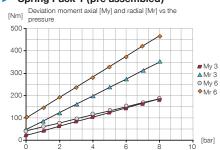


Mr [Nm]	900
My [Nm]	900
Fa [N]	7000

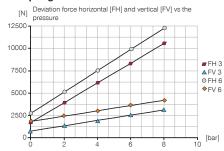
#### Spring Pack 1 (pre-assembled)



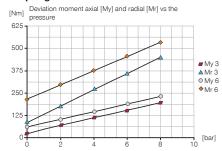
#### Spring Pack 1 (pre-assembled)



#### Spring Pack 2



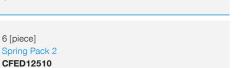
#### Spring Pack 2



### **► INCLUDED IN DELIVERY**



6 [piece] Cylinder Screw C7984100209





Spring Pack 1 (pre-assembled) CFED12500

#### RECOMMENDED ACCESSORIES



## **ENERGY SUPPLY**



### **ENERGY SUPPLY**

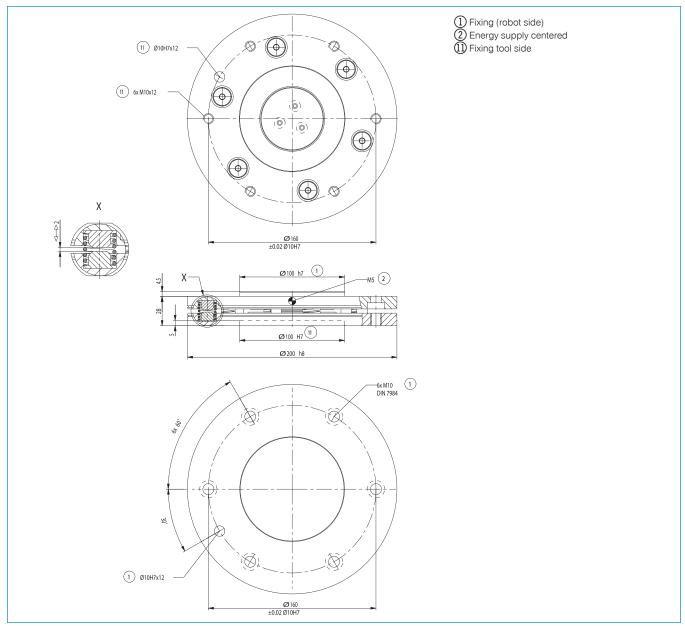


GVM5 Straight Fittings - Quick Connect Style



Angled Fittings - Quick Connect Style

	► Technical data
Order no.	AR160P
Connecting flange according EN ISO 9409-1	TK 160
Installation Height [mm]	28
Horizontal deviation +/- [mm]	2
Horizontal deviation +/- [°]	1
Vertical deviation +/- [mm]	2
Vertical deviation +/- [°]	1
Centering force when locking [N]	3000
Repetition accuracy Horizontal +/- [mm/°]	0.05
Repetition accuracy Vertical +/- [mm/°]	0.05
Air volume per cycle [cm³]	14
Operating pressure [bar]	1 8
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Moment of inertia [kgcm²]	115
Weight [kg]	5.8







# **CRASH PROTECTION OVERVIEW OF SERIES**



8	CRAS	H PROTECTION	162 - 185
		Series CSR	164
		Series CRR	178

# **CRASH PROTECTION SERIES CSR**

#### PRODUCT ADVANTAGES



### Adjustable triggering sensitivity

By controlling the air pressure, you can optimally match the sensitivity to your application.

#### Integrated sensors

If there is a collision, the integrated sensor gives a signal to the control system to trigger an emergency stop.

#### Manual reset

To ensure that the machine and the reason for the emergency stop are examined, the manual reset is suitable.

#### THE BEST PRODUCT FOR YOUR APPLICATION

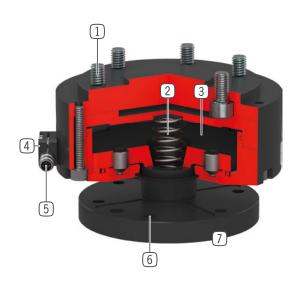


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www.zimmer-group.com

#### **BENEFITS IN DETAIL**



#### 1 Robot connecting flange

- partial mounting circle in accordance with EN ISO 9409-1

#### 2 Drive

- single-acting pneumatic cylinder
- response sensitivity adjustable via operating pressure
- with integrated spring

#### 3 Force transfer

- direct and low-loss at piston surface

#### 4 Pressure differential switch

- indirect overload recognition

#### 5 Sensors

- inductive proximity switch generates a signal which can be used to recognise an overload situation
- generates an automatic emergency off system situation
- included in the delivery inductive proximity switch  $\varnothing$  8 mm with cable connection M8x1

#### 6 Connecting flange

#### 7 Overload recognition and compensation

- in Z-direction up to 28 mm stroke
- angular defection up to 12.5°
- on rotation around the Z-axis 360°

### TECHNICAL DATA

	Connecting flange according EN ISO 9409-1	Z-axis deviation	Horizontal deviation +/-
Installation size		[mm]	[°]
CSR50	TK 50	12.5	12.5
CSR63	TK 63	10.5	12.5
CSR80	TK 80	14	9
CSR100	TK 100	18	9
CSR125	TK 125	23	9
CSR160	TK 160	28	9

#### ► FURTHER INFORMATION IS AVAILABLE ONLINE

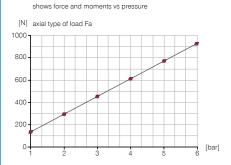


All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

#### **▶ PRODUCT SPECIFICATIONS**



#### Air pressurization

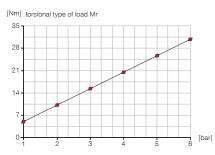


#### Forces and moments

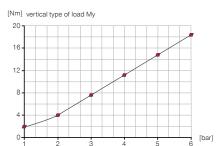
See diagram for max. forces and torques



#### Air pressurization



#### Air pressurization



### ► INCLUDED IN DELIVERY



Inductive proximity switch - Connector M8 NJ8-E2S-05



4 [piece] C0912060169

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GVM5

Straight Fittings - Quick Connect Style









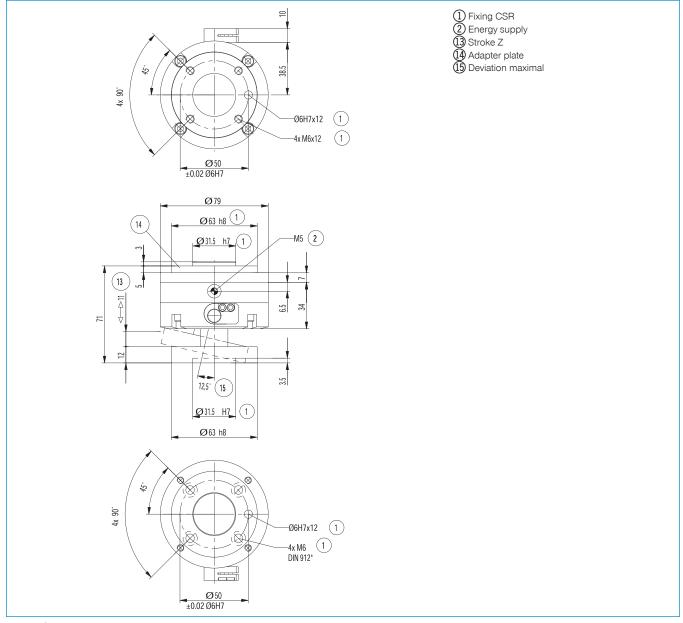
WVM5

Angled Fittings - Quick Connect Style





	► Technical data
Order no.	CSR50
Connecting flange according EN ISO 9409-1	TK 50
Installation Height [mm]	71
Z-axis deviation [mm]	12.5
Repetition accuracy axial +/- [mm]	0.05
Horizontal deviation +/- [°]	12.5
Repetition accuracy radial +/- [mm]	0.05
Operating pressure [bar]	1 6
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Weight [kg]	0.66

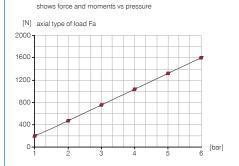




### **▶ PRODUCT SPECIFICATIONS**



#### Air pressurization

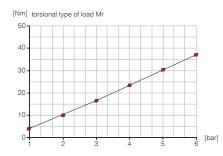


#### Forces and moments

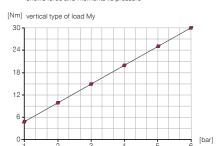
See diagram for max. forces and torques



#### Air pressurization



#### Air pressurization



### ► INCLUDED IN DELIVERY



Inductive proximity switch - Connector M8 NJ8-E2S-05



4 [piece] C0912060169

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GVM5

Straight Fittings - Quick Connect Style



Plug-in connector Straight Cable 5m - Socket M8





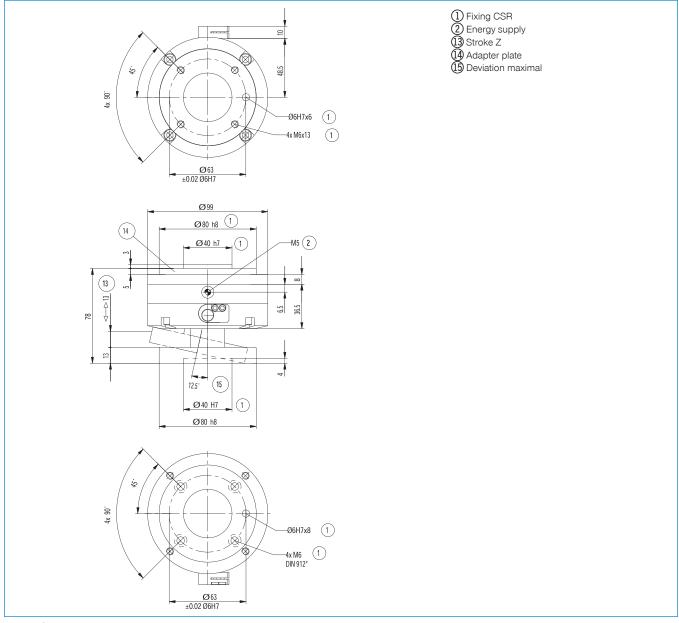
WVM5

Angled Fittings - Quick Connect Style





	► Technical data
Order no.	CSR63
Connecting flange according EN ISO 9409-1	TK 63
Installation Height [mm]	78
Z-axis deviation [mm]	10.5
Repetition accuracy axial +/- [mm]	0.05
Horizontal deviation +/- [°]	12.5
Repetition accuracy radial +/- [mm]	0.05
Operating pressure [bar]	16
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Weight [kg]	1.1



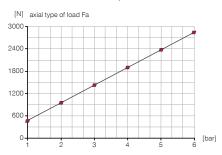


#### **▶ PRODUCT SPECIFICATIONS**



#### Air pressurization

shows force and moments vs pressure

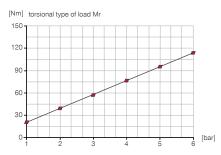


#### Forces and moments

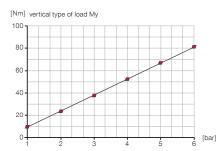
See diagram for max. forces and torques



#### Air pressurization



#### Air pressurization



### ► INCLUDED IN DELIVERY



Inductive proximity switch - Connector M8 NJ8-E2S-05



6 [piece] C0912080169

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GVM5

Straight Fittings - Quick Connect Style









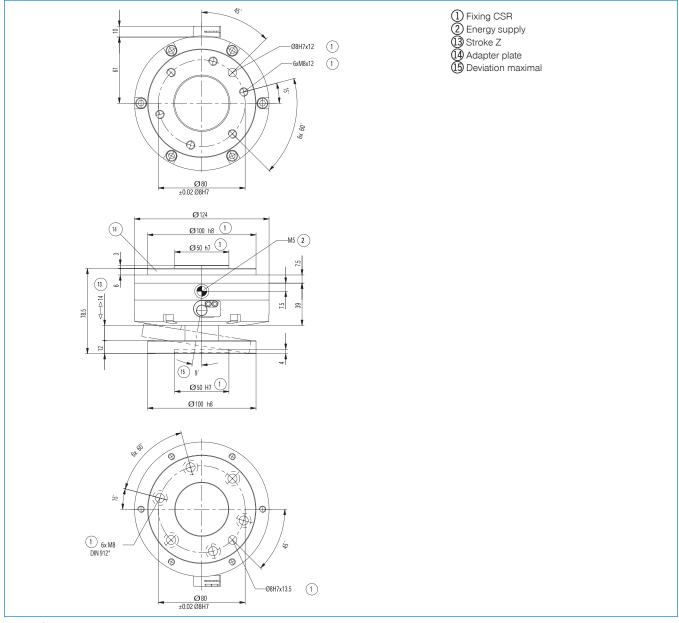
WVM5

Angled Fittings - Quick Connect Style





	► Technical data
Order no.	CSR80
Connecting flange according EN ISO 9409-1	TK 80
Installation Height [mm]	78.5
Z-axis deviation [mm]	14
Repetition accuracy axial +/- [mm]	0.05
Horizontal deviation +/- [°]	9
Repetition accuracy radial +/- [mm]	0.05
Operating pressure [bar]	1 6
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Weight [kg]	1.7

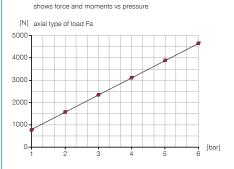




#### **▶ PRODUCT SPECIFICATIONS**



#### Air pressurization

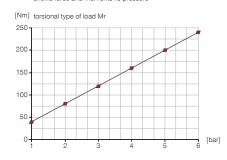


#### Forces and moments

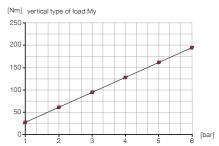
See diagram for max. forces and torques



#### Air pressurization



#### Air pressurization



### ► INCLUDED IN DELIVERY



Inductive proximity switch - Connector M8 NJ8-E2S-05



6 [piece] C0912080209

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GV1-8X8

Straight Fittings - Quick Connect Style



Plug-in connector Straight Cable 5m - Socket M8





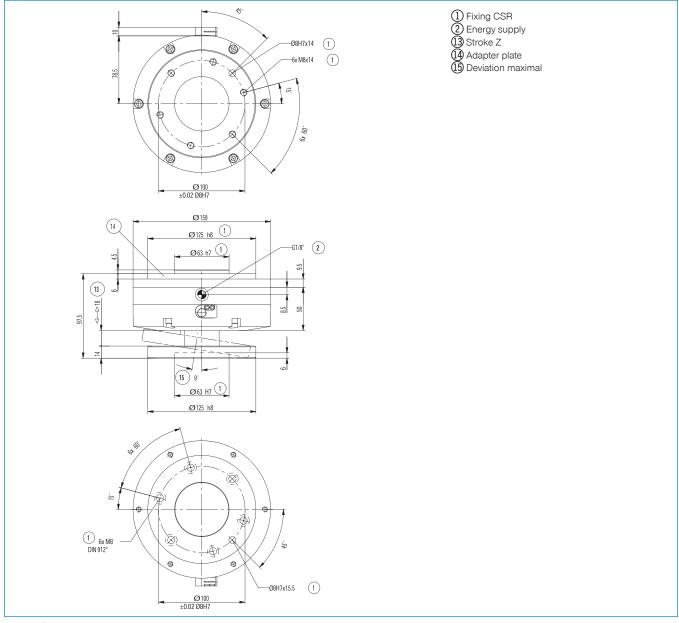
WV1-8X8

Angled Fittings - Quick Connect Style





	► Technical data
Order no.	CSR100
Connecting flange according EN ISO 9409-1	TK 100
Installation Height [mm]	97.5
Z-axis deviation [mm]	18
Repetition accuracy axial +/- [mm]	0.05
Horizontal deviation +/- [°]	9
Repetition accuracy radial +/- [mm]	0.05
Operating pressure [bar]	1 6
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Weight [kg]	3.2



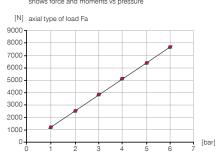


#### **▶ PRODUCT SPECIFICATIONS**



#### Air pressurization

shows force and moments vs pressure

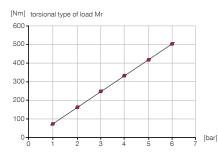


#### Forces and moments

See diagram for max. forces and torques



#### Air pressurization



#### Air pressurization

600 500 400 300 100

### ► INCLUDED IN DELIVERY



Inductive proximity switch - Connector M8 NJ8-E2S-05



6 [piece] C0912100309

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GV1-8X8 Straight Fittings - Quick Connect Style



## Plug-in connector Straight Cable 5m - Socket M8





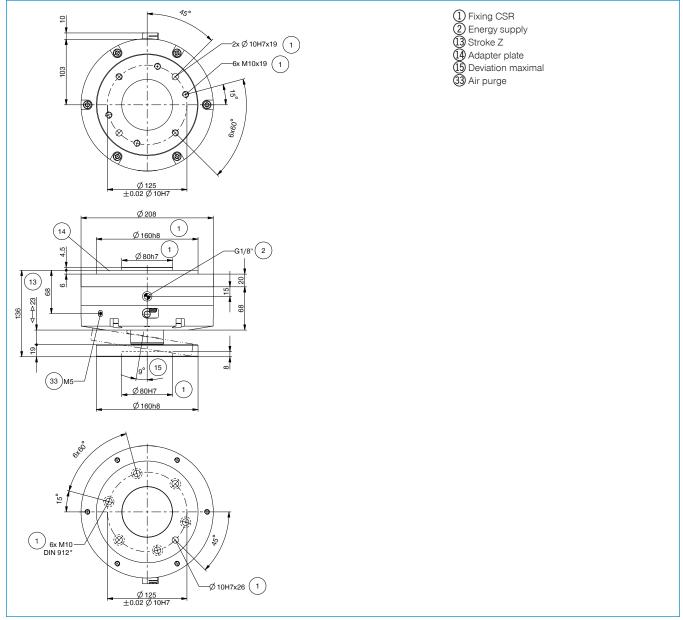
WV1-8X8

Angled Fittings - Quick Connect Style





	► Technical data
Order no.	CSR125
Connecting flange according EN ISO 9409-1	TK 125
Installation Height [mm]	136
Z-axis deviation [mm]	23
Repetition accuracy axial +/- [mm]	0.05
Horizontal deviation +/- [°]	9
Repetition accuracy radial +/- [mm]	0.05
Operating pressure [bar]	1 6
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Weight [kg]	8.1



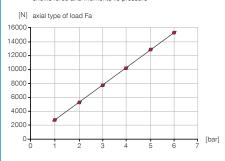


#### **▶ PRODUCT SPECIFICATIONS**



#### Air pressurization

shows force and moments vs pressure

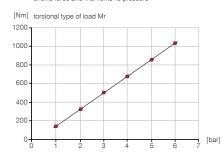


#### Forces and moments

See diagram for max. forces and torques



#### Air pressurization



#### Air pressurization

1200 800 600 200

### ► INCLUDED IN DELIVERY



Inductive proximity switch - Connector M8 NJ8-E2S-05



6 [piece] C0912100309

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GV1-8X8

Straight Fittings - Quick Connect Style









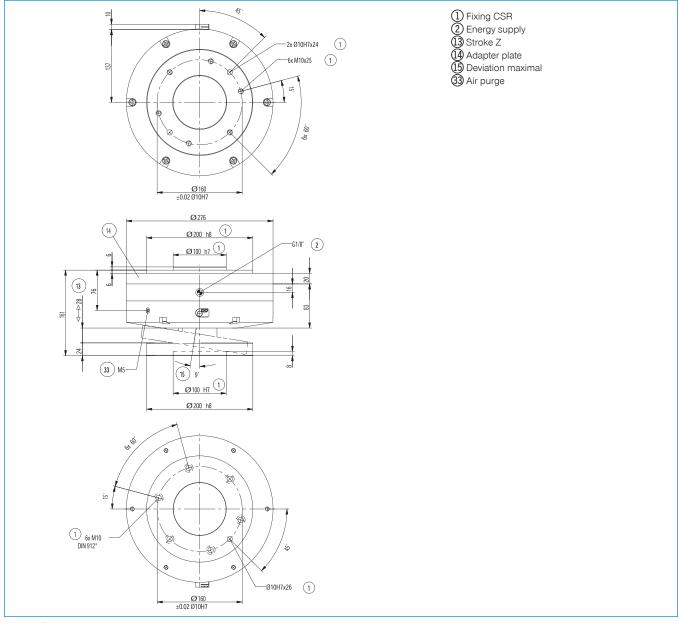
WV1-8X8

Angled Fittings - Quick Connect Style





	► Technical data
Order no.	CSR160
Connecting flange according EN ISO 9409-1	TK 160
Installation Height [mm]	161
Z-axis deviation [mm]	28
Repetition accuracy axial +/- [mm]	0.05
Horizontal deviation +/- [°]	9
Repetition accuracy radial +/- [mm]	0.05
Operating pressure [bar]	16
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Weight [kg]	15





# **CRASH PROTECTION SERIES CRR**

#### PRODUCT ADVANTAGES



### Adjustable triggering sensitivity

By controlling the air pressure, you can optimally match the sensitivity to your application.

#### Integrated sensors

If there is a collision, the integrated sensor gives a signal to the control system to trigger an emergency stop.

#### Automated reset

After an emergency stop, you can reset the collision protection from a safe distance. This is an advantage primarily when entering the system is undesirable, dangerous or is possible only with difficulty.

#### 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:

### **BENEFITS IN DETAIL**



#### 1 Robot connecting flange

- partial mounting circle in accordance with EN ISO 9409-1

#### 2 Piston position sensing

- The sensor generates a signal that can be evaluated to recognize an
- Magnetic field sensor included in delivery

- single-acting pneumatic cylinder
- response sensitivity adjustable via operating pressure
- with integrated spring

### 4 Overload recognition and compensation

- In Z direction
- Tilting in horizontal direction
- Rotation around the Z-axis

#### 5 Connecting flange

- partial mounting circle in accordance with EN ISO 9409-1

- Pistons are used to move the connecting flange to its initial position.

### TECHNICAL DATA

	Connecting flange according EN ISO 9409-1	Z-axis deviation	Repetition accuracy axial +/-
Installation size		[mm]	[mm]
CRR40	TK 40	8	0.01
CRR50	TK 50	12	0.01
CRR63	TK 63	15	0.01

#### ► FURTHER INFORMATION IS AVAILABLE ONLINE



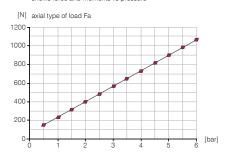
All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

#### **▶ PRODUCT SPECIFICATIONS**



#### Air pressurization

shows force and moments vs pressure

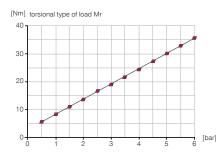


#### Forces and moments

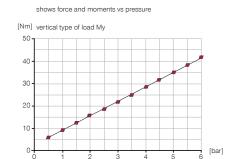
See diagram for max. forces and torques



#### Air pressurization



#### Air pressurization



### ► INCLUDED IN DELIVERY



Magnetic field sensor straight, cable 0.3 m - M8 connector

MFS02-S-KHC-P1-PNP

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



## **CONNECTIONS / OTHER**



GVM5

Straight Fittings - Quick Connect Style



#### KAG500







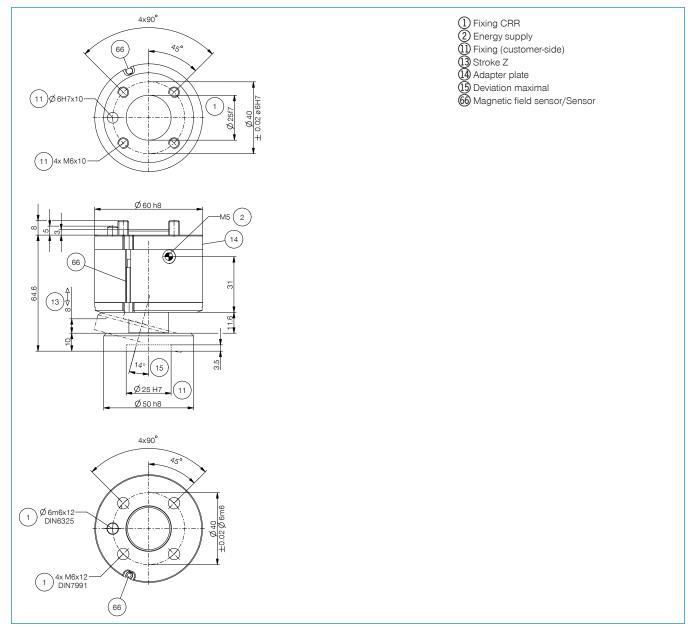
WVM5

Angled Fittings - Quick Connect Style





	► Technical data
Order no.	CRR40N-A
Connecting flange according EN ISO 9409-1	TK 40
Z-axis deviation [mm]	8
Repetition accuracy axial +/- [mm]	0.01
Axial response sensitivity [mm]	0.5
Horizontal deviation +/- [°]	14.0
Repetition accuracy Radial +/- [min]	4
Radial response sensitivity [°]	1.5
Z-axis rotation [°]	21
Repetition accuracy rotatory +/- [min]	4
Response sensitivity rotatory [°]	1
Operating pressure [bar]	0.5 6
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle [cm³]	14.60
Moment of inertia around the Z-axis [kgcm2]	2.64
Weight [kg]	0.61





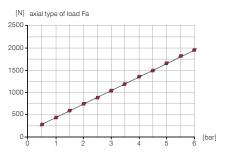
# **CRASH PROTECTION INSTALLATION SIZE CRR50**

### **▶ PRODUCT SPECIFICATIONS**



#### Air pressurization

shows force and moments vs pressure

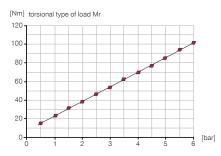


#### Forces and moments

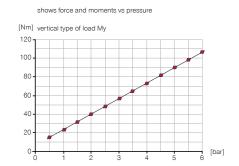
See diagram for max. forces and torques



#### Air pressurization



#### Air pressurization



### ► INCLUDED IN DELIVERY



Magnetic field sensor straight, cable 0.3 m - M8 connector

MFS02-S-KHC-P1-PNP

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



### **CONNECTIONS / OTHER**



GVM5

Straight Fittings - Quick Connect Style



#### KAG500







WVM5

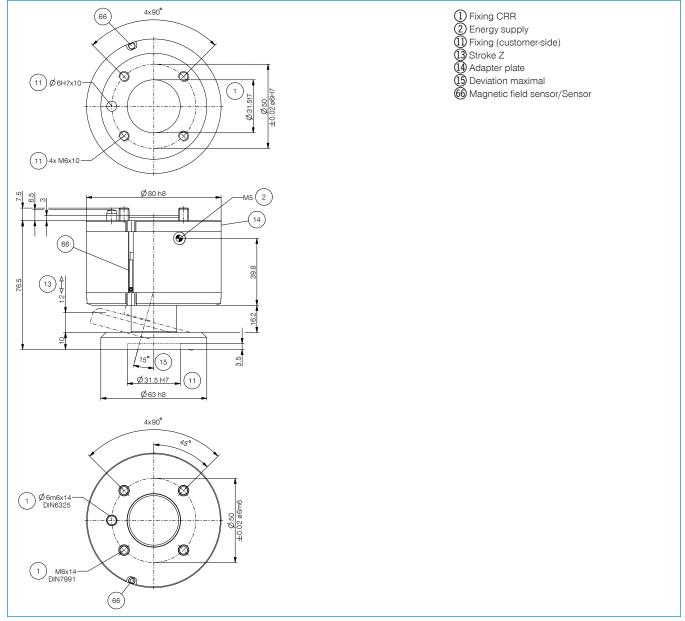
Angled Fittings - Quick Connect Style



Plug-in connector Angled Cable 5m - Socket M8



	► Technical data
Order no.	CRR50N-A
Connecting flange according EN ISO 9409-1	TK 50
Z-axis deviation [mm]	12
Repetition accuracy axial +/- [mm]	0.01
Axial response sensitivity [mm]	0.5
Horizontal deviation +/- [°]	14.0
Repetition accuracy Radial +/- [min]	4
Radial response sensitivity [°]	1.5
Z-axis rotation [°]	22
Repetition accuracy rotatory +/- [min]	4
Response sensitivity rotatory [°]	1
Operating pressure [bar]	0.5 6
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle [cm³]	37.40
Moment of inertia around the Z-axis [kgcm2]	7.69
Weight [kg]	1.1





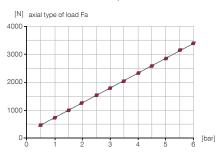
# **CRASH PROTECTION INSTALLATION SIZE CRR63**

### **▶ PRODUCT SPECIFICATIONS**



#### Air pressurization

shows force and moments vs pressure

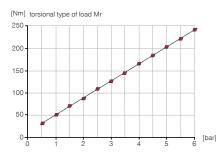


#### Forces and moments

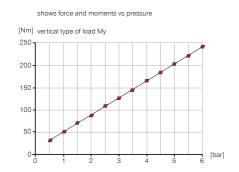
See diagram for max. forces and torques



#### Air pressurization



#### Air pressurization



### ► INCLUDED IN DELIVERY



Magnetic field sensor straight, cable 0.3 m - M8 connector

MFS02-S-KHC-P1-PNP

### RECOMMENDED ACCESSORIES



### **ENERGY SUPPLY**



### **CONNECTIONS / OTHER**



GVM5

Straight Fittings - Quick Connect Style



KAG500







WVM5

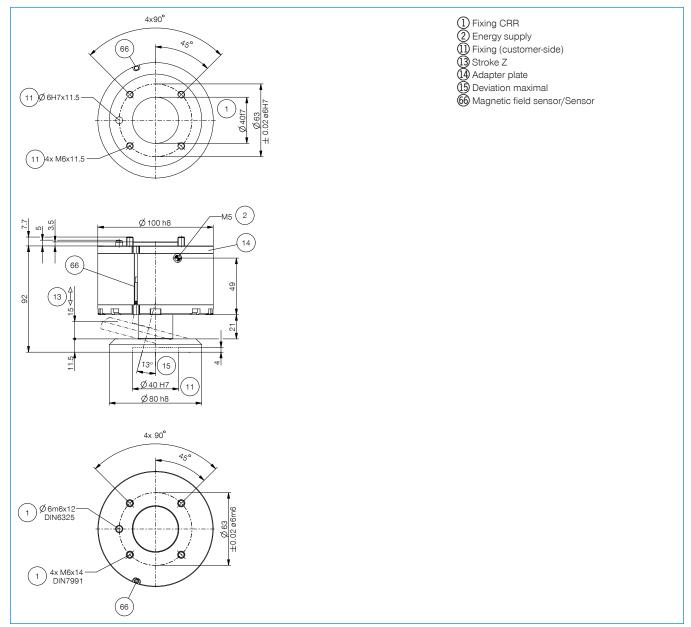
Angled Fittings - Quick Connect Style



Plug-in connector Angled Cable 5m - Socket M8



	► Technical data
Order no.	CRR63N-A
Connecting flange according EN ISO 9409-1	TK 63
Z-axis deviation [mm]	15
Repetition accuracy axial +/- [mm]	0.01
Axial response sensitivity [mm]	0.5
Horizontal deviation +/- [°]	13.0
Repetition accuracy Radial +/- [min]	4
Radial response sensitivity [°]	1.5
Z-axis rotation [°]	22
Repetition accuracy rotatory +/- [min]	4
Response sensitivity rotatory [°]	1
Operating pressure [bar]	0.5 6
Nominal operating pressure [bar]	6
Operating temperature [°C]	5 +80
Air volume per cycle [cm³]	82.80
Moment of inertia around the Z-axis [kgcm <sup>2</sup> ]	21.30
Weight [kg]	1.8







# **MATCH - END-OF-ARM-ECOSYSTEM PRODUCTS AT A GLANCE**





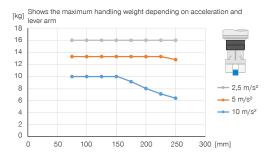
9	MATCH - END-OF-ARM-ECOSYS	STEM 186 - 319
	MATCH - Robot module	188
	MATCH - Grippers	268
	MATCH - Angle flange	316

# LWR50F-00-01-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



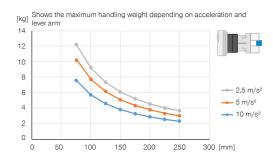
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00002-A



### **CONNECTIONS / OTHER**



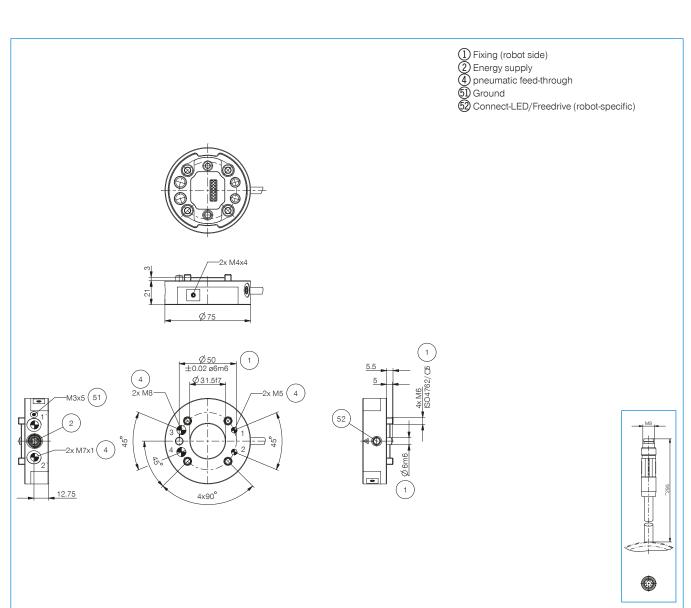
WVM7 Angled Fittings - Quick Connect Style





	Technical data
Order no.	LWR50F-00-01-A
Suitable for robot type	ISO TK 50*
MRK design according to ISO/TS 15066	Yes
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.31

<sup>\*</sup>Mechanical assembly compatible to all robots with standard ISO PCD 50 mm. Electrical connection via standard M8 8-pole socket cable.



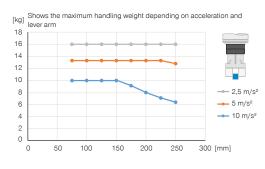


### LWR50F-00-04-A

### PRODUCT SPECIFICATIONS

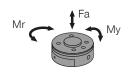


Vertical design with centered holding force



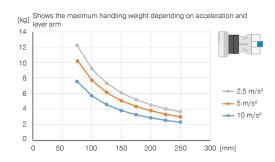
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-02-00001-A



LWR50L-03-00001-A

MATCH - Grippers



LWR50L-22-00001-A

MATCH - Grippers



LWR50L-23-00002-A

MATCH - Grippers



### **CONNECTIONS / OTHER**



Connecting line, straight, 5 m - M12 socket



KAG500IL

Plug-in connector straight 5 m - plug, socket M12



SCM-C-00-00-A

**Smart Communication Module** 



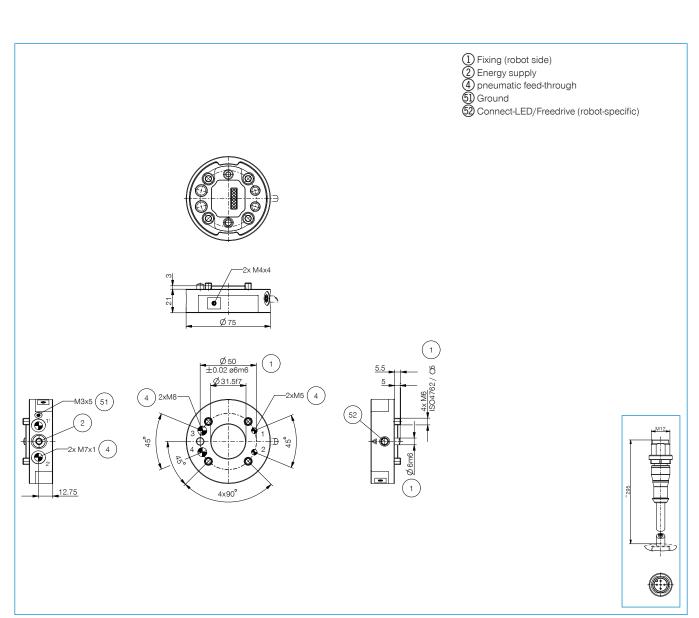
WVM7

Angled Fittings - Quick Connect Style



	► Technical data
Order no.	LWR50F-00-04-A
Suitable for robot type	ISO TK 50*
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 5-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.28

<sup>\*</sup>Mechanical assembly compatible to all robots with standard ISO PCD 50 mm. Electrical connection via standard IO-Link M12-5 female connector.



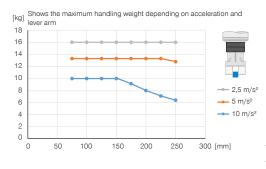


# LWR50F-00-05-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



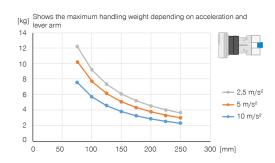
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-02-00001-A





### **CONNECTIONS / OTHER**



Connecting line, straight, 5 m - M12 socket



LWR50L-03-00001-A MATCH - Grippers



KAG500IL

Plug-in connector straight 5 m - plug, socket M12



LWR50L-22-00001-A MATCH - Grippers



SCM-C-00-00-A **Smart Communication Module** 



LWR50L-23-00002-A MATCH - Grippers

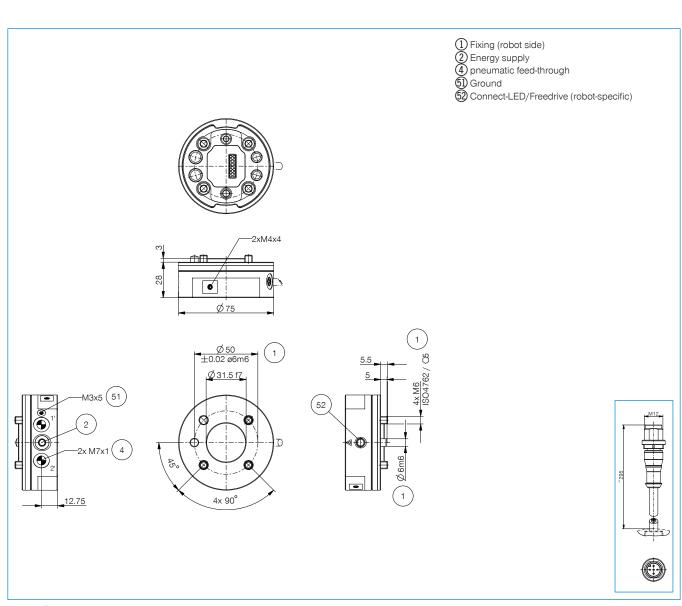


WVM7 Angled Fittings - Quick Connect Style



	► Technical data
Order no.	LWR50F-00-05-A
Suitable for robot type	ISO TK 50*
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 50
Status display	Yes
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 5-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.33

<sup>\*</sup>Mechanical assembly compatible to all robots with standard ISO PCD 50 mm. Electrical connection via standard IO-Link M12-5 female connector.



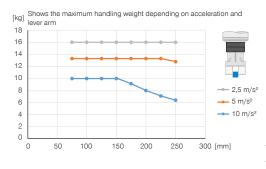


# LWR50F-00-06-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



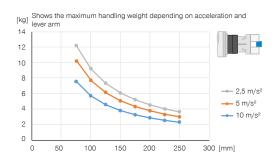
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-02-00001-A



### **CONNECTIONS / OTHER**



Connecting line, straight, 5 m - M12 socket



LWR50L-03-00001-A MATCH - Grippers



KAG500IL

Plug-in connector straight 5 m - plug, socket M12



LWR50L-22-00001-A MATCH - Grippers



SCM-C-00-00-A **Smart Communication Module** 



LWR50L-23-00002-A MATCH - Grippers



WVM7 Angled Fittings - Quick Connect Style

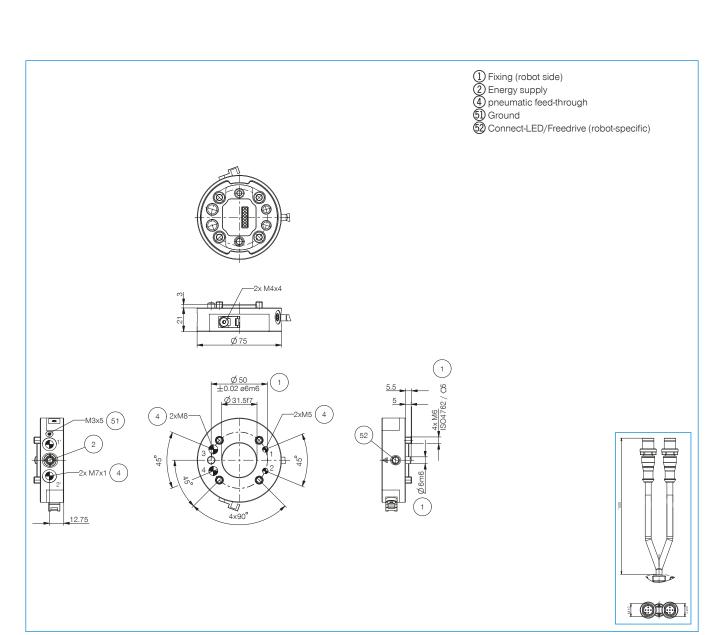


LWR50L-29-00001-A MATCH - Angle flange



	[
	Technical data
Order no.	LWR50F-00-06-A
Suitable for robot type	ISO TK 50*
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 5-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.28

<sup>\*</sup>Mechanical assembly compatible to all robots with standard ISO PCD 50 mm. Electrical connection via standard IO-Link M12-5 female connector.



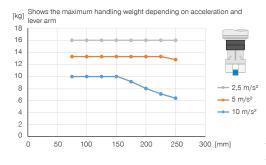


# LWR50F-01-02-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



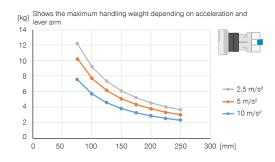
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



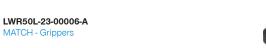
LWR50L-03-00002-A



### **CONNECTIONS / OTHER**

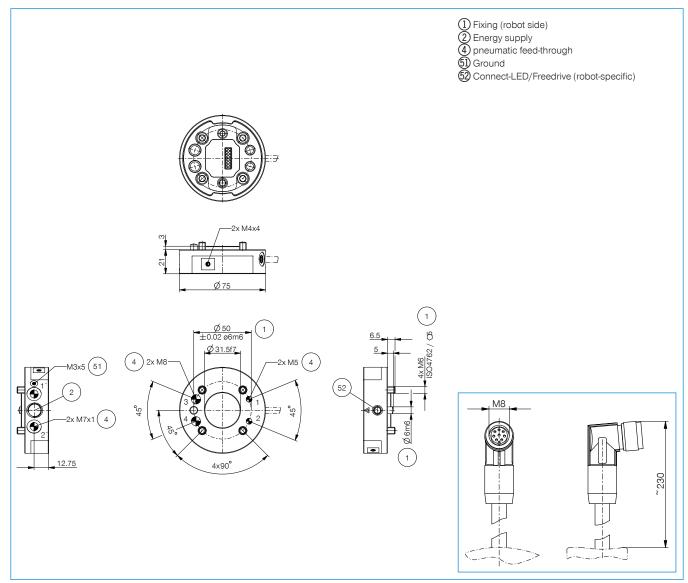


Angled Fittings - Quick Connect Style





	► Technical data
Order no.	LWR50F-01-02-A
Suitable for robot type	Universal Robots e-Series
Control	Digital I/O
IO logic	NPN
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.29



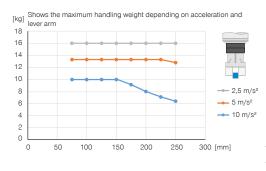


# LWR50F-01-03-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



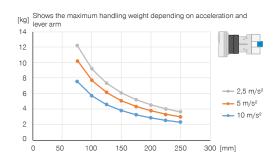
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-02-00001-A



### **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



ZUB123084 Strain relief



LWR50L-03-00001-A MATCH - Grippers

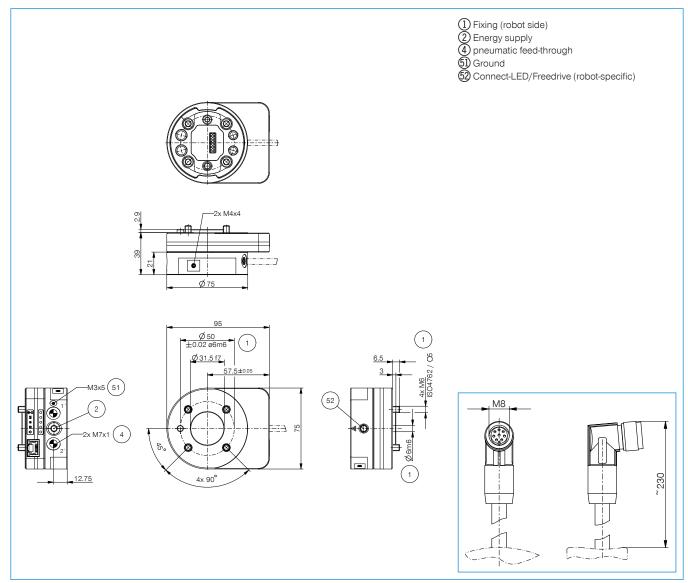


LWR50L-22-00001-A MATCH - Grippers



LWR50L-23-00002-A MATCH - Grippers

	<b></b>
	Technical data
Order no.	LWR50F-01-03-A
Suitable for robot type	Universal Robots e-Series
Configuration for interface	Ethernet RJ45
Control	RS485
Connecting flange according EN ISO 9409-1	TK 50
Status display	Yes
Handling weight max. [kg]	25
Connecting cable	Plug, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.43



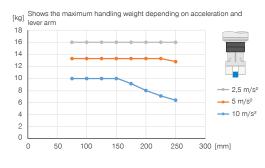


# LWR50F-04-01-A

### **▶ PRODUCT SPECIFICATIONS**

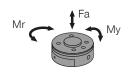


Vertical design with centered holding force



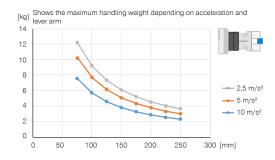
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **CONNECTIONS / OTHER**



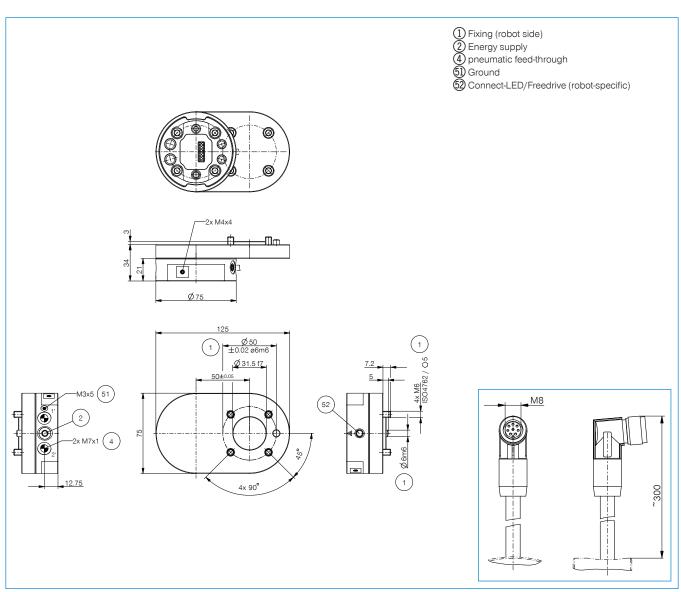
WVM7

Angled Fittings - Quick Connect Style



	► Technical data
Order no.	LWR50F-04-01-A
Suitable for robot type	Techman Release > 3.0 / OMRON TM-Series*
Control	Digital I/O
IO logic	NPN
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.62

<sup>\*</sup>Suitable for all Techman / OMRON TM-Series from hardware revision 3.0 or above



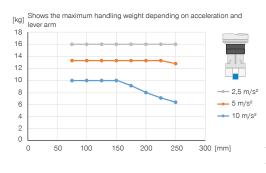


# LWR50F-06-01-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



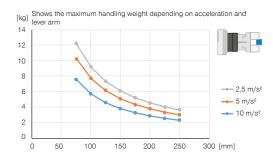
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00002-A



### **CONNECTIONS / OTHER**



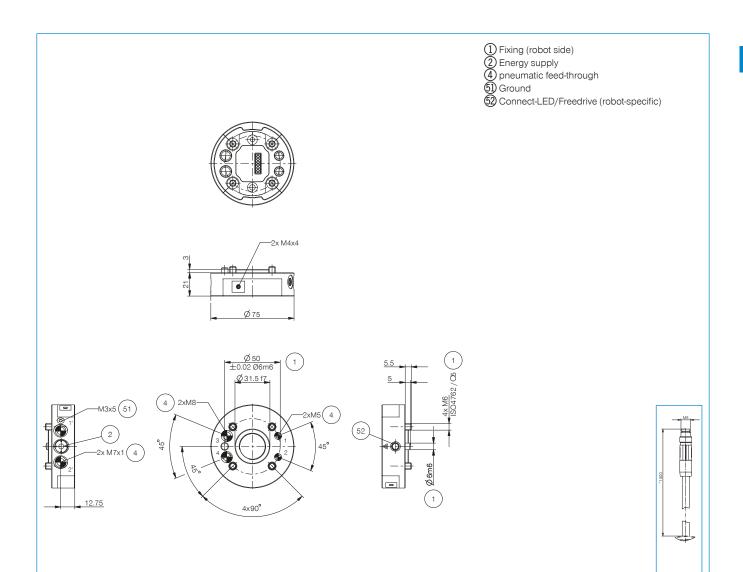
Angled Fittings - Quick Connect Style



ZUB123084 Strain relief

### LWR50L-23-00006-A

	Technical data
Order no.	LWR50F-06-01-A
Suitable for robot type	JAKA Zu / Schneider Electric Lexium Cobot
MRK design according to ISO/TS 15066	Yes
Control	Digital I/O
IO logic	NPN
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.29



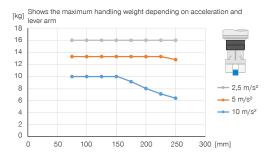


# LWR50F-07-01-A

### PRODUCT SPECIFICATIONS

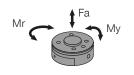


Vertical design with centered holding force



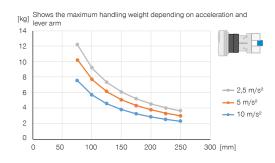
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00002-A



### **CONNECTIONS / OTHER**



Angled Fittings - Quick Connect Style



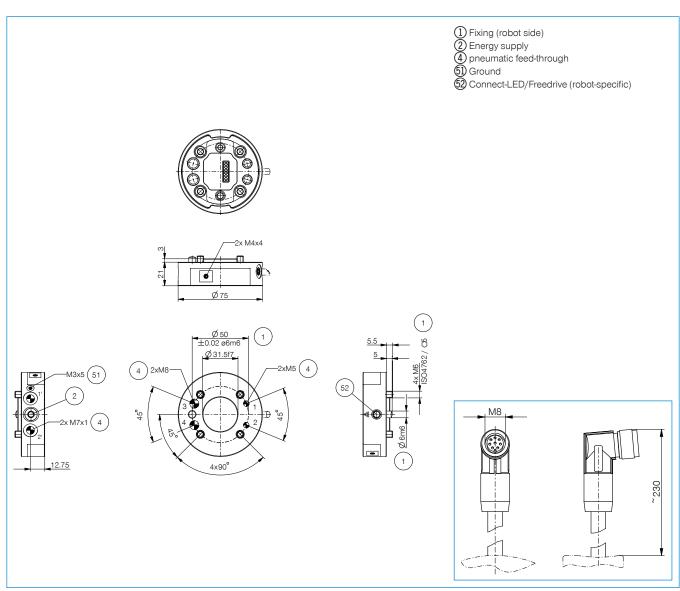
ZUB123084 Strain relief



LWR50L-23-00006-A MATCH - Grippers

	► Technical data
Order no.	LWR50F-07-01-A
Suitable for robot type	HANWHA HCR-3/-5/-12*
Control	Digital I/O
IO logic	NPN
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Socket, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.28

<sup>\*</sup>suitable for all HCR-3, HCR-5 and HCR-12 as of hardware revision Q1/2020



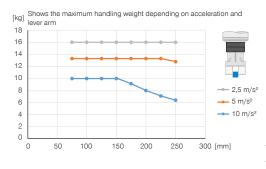


# LWR50F-08-01-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



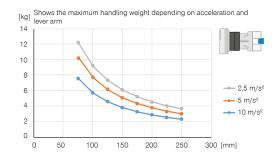
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00003-A



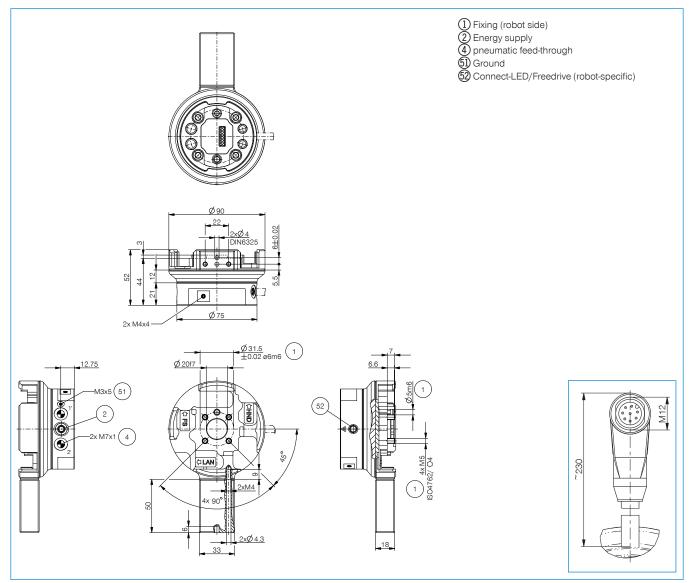
### **CONNECTIONS / OTHER**



Angled Fittings - Quick Connect Style



	► Technical data
Order no.	LWR50F-08-01-A
Suitable for robot type	Mitsubishi Assista
Control	Digital I/O
IO logic	PNP
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.72



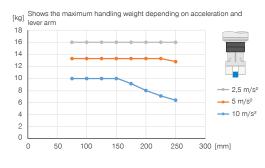


# LWR50F-09-01-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



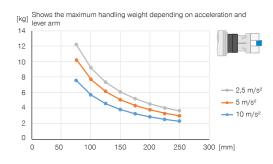
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00002-A



### **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



ZUB123084 Strain relief

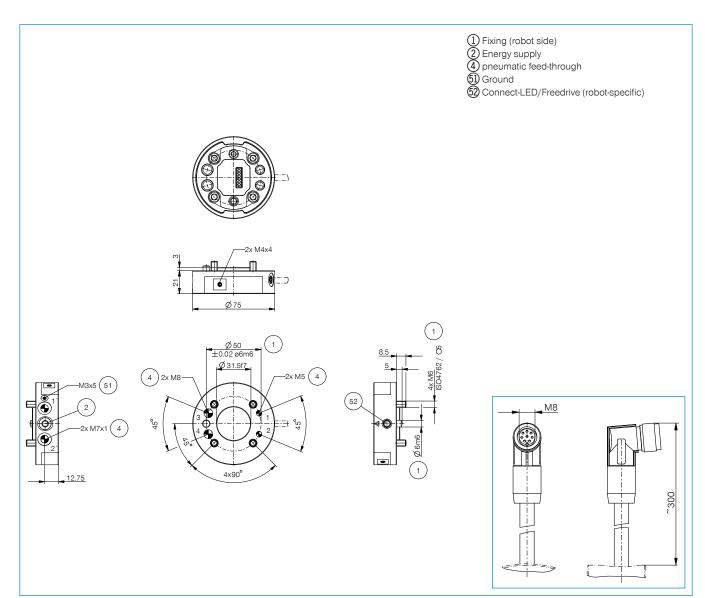


LWR50L-03-00003-A MATCH - Grippers



LWR50L-23-00006-A MATCH - Grippers

	► Technical data
Order no.	LWR50F-09-01-A
Suitable for robot type	FANUC CRX
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Socket, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.29



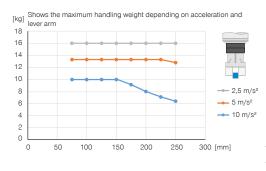


# LWR50F-09-03-A

### PRODUCT SPECIFICATIONS

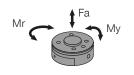


Vertical design with centered holding force



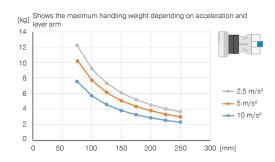
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-02-00001-A



### **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style





ZUB123084 Strain relief

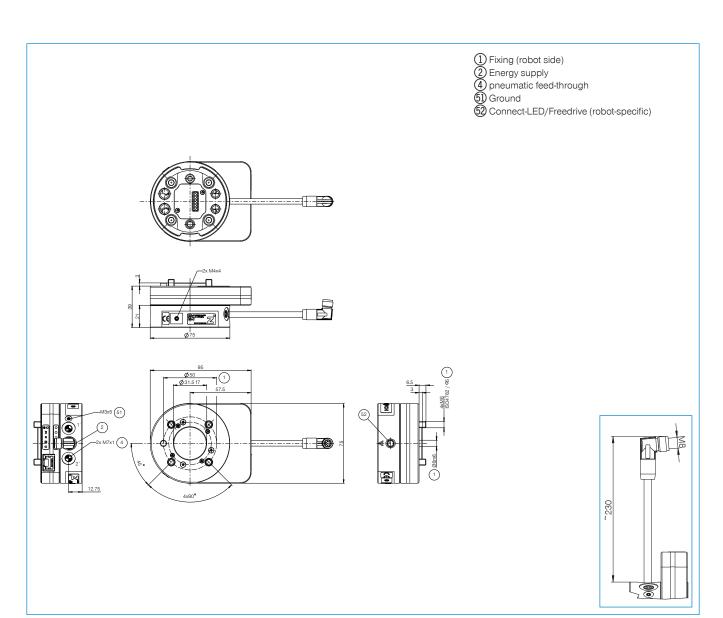


LWR50L-22-00001-A MATCH - Grippers



LWR50L-23-00002-A MATCH - Grippers

	► Technical data
Order no.	LWR50F-09-03-A
Suitable for robot type	FANUC CRX
Configuration for interface	Ethernet RJ45
Control	RS485
Connecting flange according EN ISO 9409-1	TK 50
Status display	Yes
Handling weight max. [kg]	25
Connecting cable	Plug, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.43



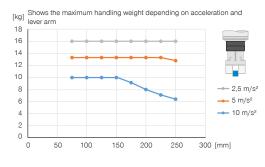


# LWR50F-10-01-A

#### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



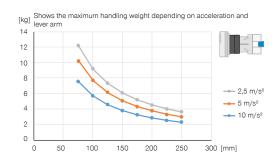
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00003-A



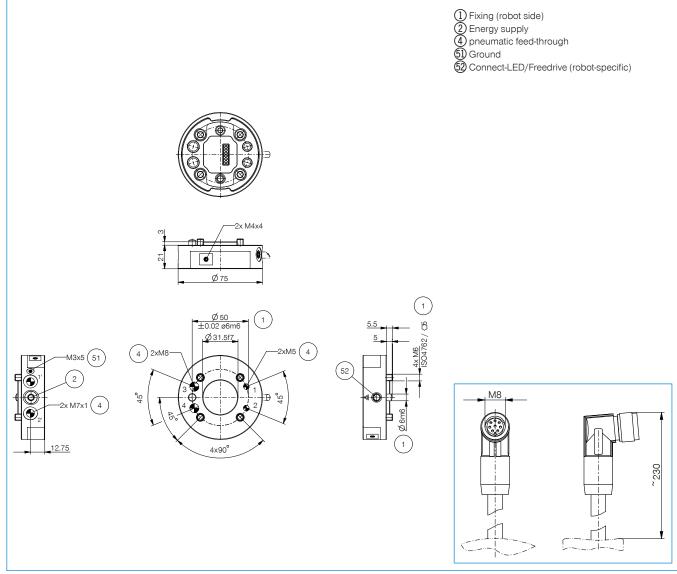
### **CONNECTIONS / OTHER**



Angled Fittings - Quick Connect Style



	► Technical data
Order no.	LWR50F-10-01-A
Suitable for robot type	DOOSAN M- / H- / A-Serie
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.32



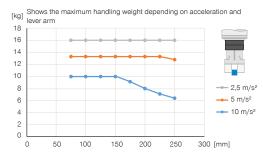


# LWR50F-13-01-A

### PRODUCT SPECIFICATIONS

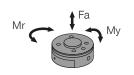


Vertical design with centered holding force



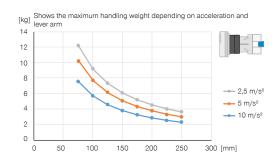
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00003-A



### **CONNECTIONS / OTHER**



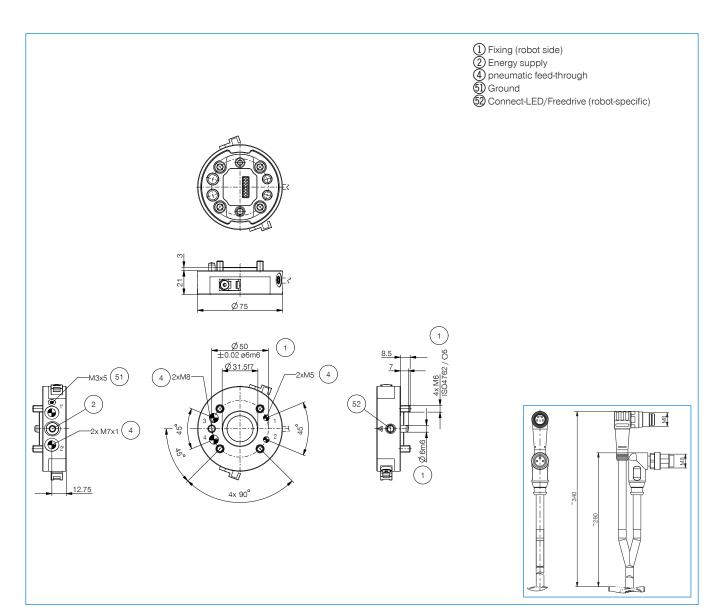
Angled Fittings - Quick Connect Style



ZUB000034 Connecting cable



	► Technical data
Order no.	LWR50F-13-01-A
Suitable for robot type	ABB CRB 15000 GoFa
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug, M8, 3-pole
Connecting cable 2	Plug, M8, 4-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.3



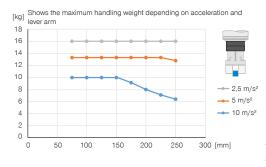


### LWR50F-13-04-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



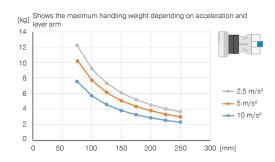
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-02-00001-A



LWR50L-03-00001-A

MATCH - Grippers



LWR50L-22-00001-A

MATCH - Grippers



LWR50L-23-00002-A

MATCH - Grippers



### **CONNECTIONS / OTHER**



Connecting line, straight, 5 m - M12 socket



KAG500IL

Plug-in connector straight 5 m - plug, socket M12



SCM-C-05-00-A

**Smart Communication Module** 



WVM7

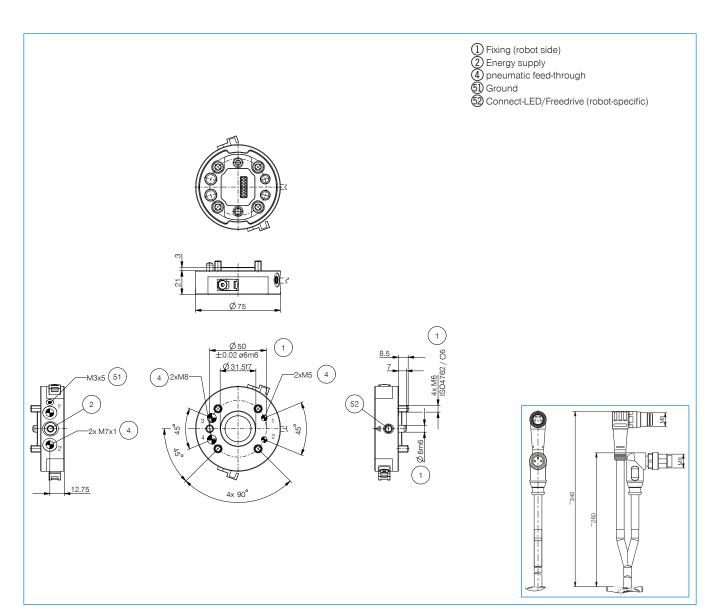
Angled Fittings - Quick Connect Style



ZUB123084

Strain relief

	► Technical data
Order no.	LWR50F-13-04-A
Suitable for robot type	ABB CRB 15000 GoFa
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug, M8, 3-pole
Connecting cable 2	Plug, M8, 4-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.3



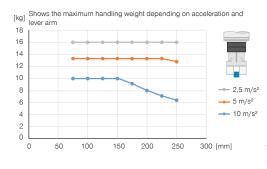


# LWR50F-13-05-A

### PRODUCT SPECIFICATIONS

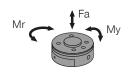


Vertical design with centered holding force



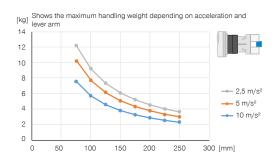
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



## **GRIPPING COMPONENTS**



LWR50L-02-00001-A



LWR50L-03-00001-A MATCH - Grippers



LWR50L-22-00001-A MATCH - Grippers



LWR50L-23-00002-A MATCH - Grippers



## **CONNECTIONS / OTHER**



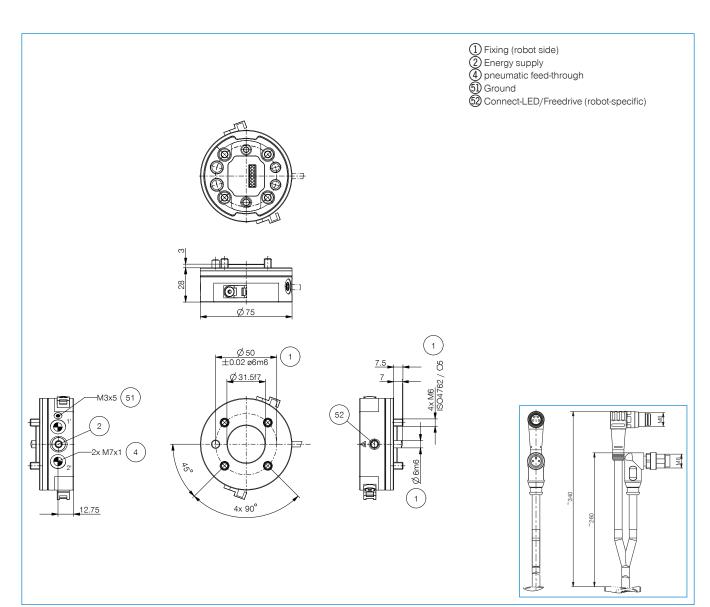
SCM-C-05-00-A Smart Communication Module



WVM7 Angled Fittings - Quick Connect Style



	► Technical data
Order no.	LWR50F-13-05-A
Suitable for robot type	ABB CRB 15000 GoFa
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug, M8, 3-pole
Connecting cable 2	Plug, M8, 4-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.35





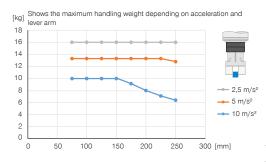
## LWR50F-14-04-A

### PRODUCT SPECIFICATIONS



**MO**TCH

### Vertical design with centered holding force



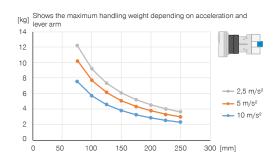
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-02-00001-A



## **CONNECTIONS / OTHER**



Plug-in connector straight 5 m - plug, socket M12



LWR50L-03-00001-A MATCH - Grippers



SCM-C-05-10-A **Smart Communication Module** 



LWR50L-22-00001-A MATCH - Grippers



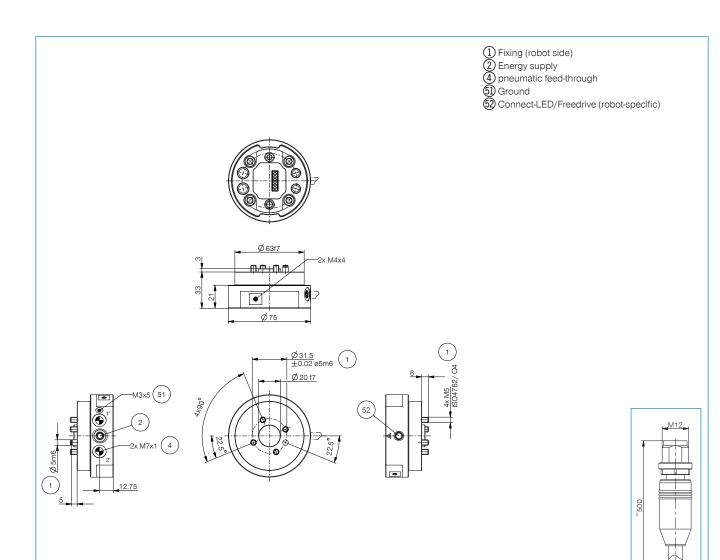
WVM7 Angled Fittings - Quick Connect Style



LWR50L-23-00002-A MATCH - Grippers



	► Technical data
Order no.	LWR50F-14-04-A
Suitable for robot type	ABB CRB 1100 SWIFTI
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 31.5
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.4



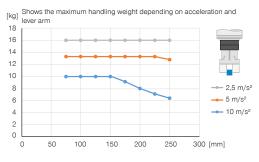


## LWR50F-14-05-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



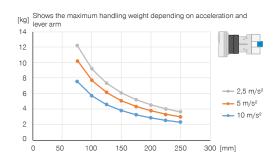
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-02-00001-A



## **CONNECTIONS / OTHER**



Plug-in connector straight 5 m - plug, socket M12



LWR50L-03-00001-A MATCH - Grippers



SCM-C-05-10-A **Smart Communication Module** 



LWR50L-22-00001-A MATCH - Grippers



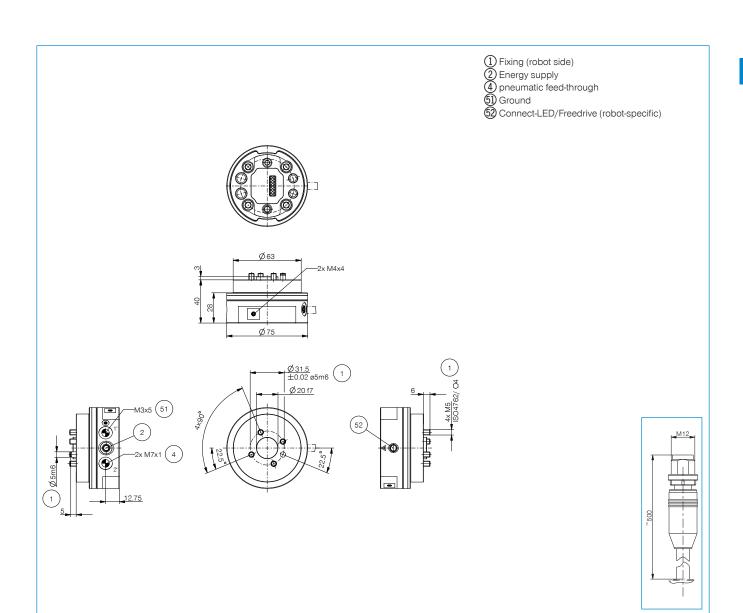
WVM7 Angled Fittings - Quick Connect Style



LWR50L-23-00002-A MATCH - Grippers



	► Technical data
Order no.	LWR50F-14-05-A
Suitable for robot type	ABB CRB 1100 SWIFTI
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 31.5
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.45



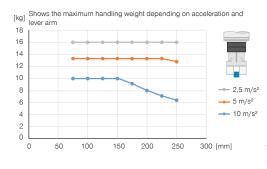


# LWR50F-15-01-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



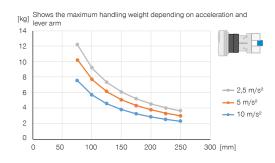
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00002-A



## **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



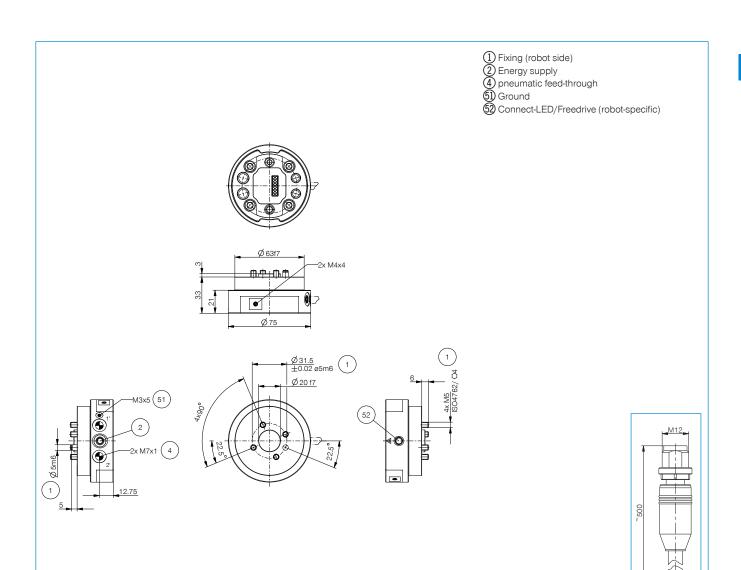
ZUB123084 Strain relief



LWR50L-03-00003-A MATCH - Grippers



	► Technical data
Order no.	LWR50F-15-01-A
Suitable for robot type	ABB IRB1100
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 31.5
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.4



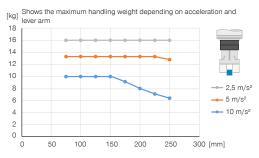


## LWR50F-15-04-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



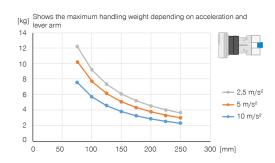
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



## **GRIPPING COMPONENTS**



LWR50L-02-00001-A



## **CONNECTIONS / OTHER**



Connecting line, straight, 5 m - M12 socket



LWR50L-03-00001-A MATCH - Grippers



KAG500IL

Plug-in connector straight 5 m - plug, socket M12



LWR50L-22-00001-A MATCH - Grippers



SCM-C-00-00-A **Smart Communication Module** 



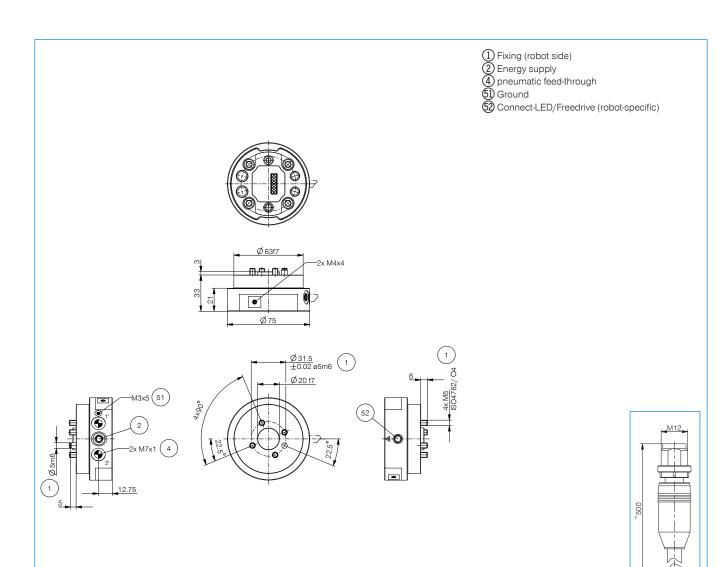
LWR50L-23-00002-A MATCH - Grippers



WVM7 Angled Fittings - Quick Connect Style



	► Technical data
Order no.	LWR50F-15-04-A
Suitable for robot type	ABB IRB1100
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 31.5
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.4



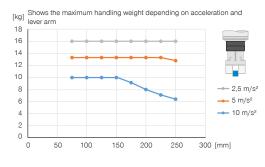


## LWR50F-15-05-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



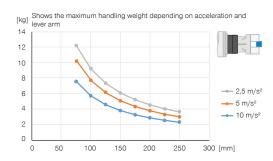
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-02-00001-A



LWR50L-03-00001-A

MATCH - Grippers



LWR50L-22-00001-A

MATCH - Grippers



LWR50L-23-00002-A

MATCH - Grippers



### **CONNECTIONS / OTHER**



Connecting line, straight, 5 m - M12 socket



KAG500IL

Plug-in connector straight 5 m - plug, socket M12



SCM-C-00-00-A

**Smart Communication Module** 

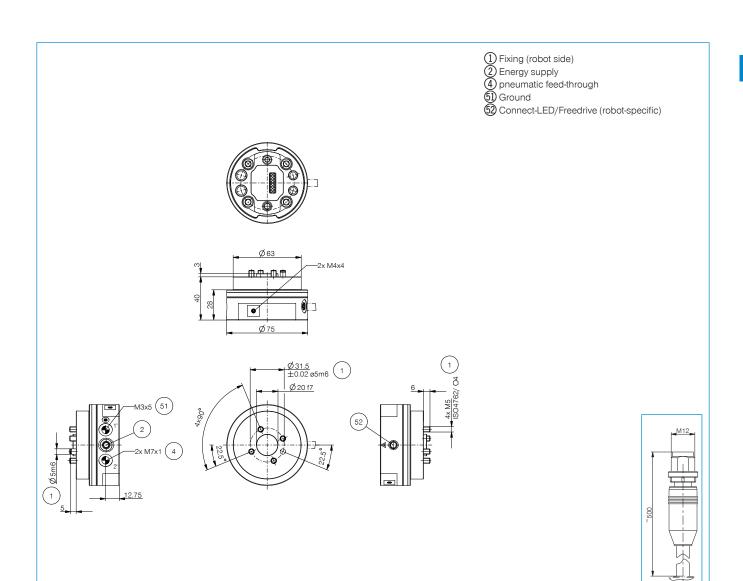


WVM7

Angled Fittings - Quick Connect Style



	► Technical data
Order no.	LWR50F-15-05-A
Suitable for robot type	ABB IRB1100
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 31.5
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.45



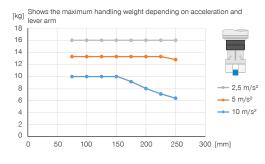


# LWR50F-16-01-A

### PRODUCT SPECIFICATIONS

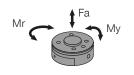


Vertical design with centered holding force



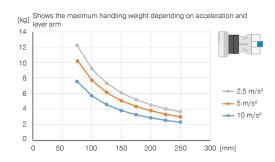
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00003-A



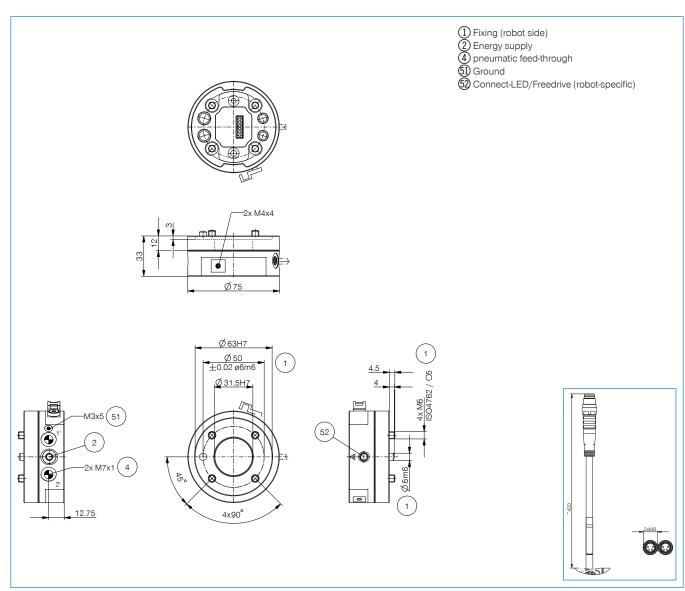
## **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



	Technical data
Order no.	LWR50F-16-01-A
Suitable for robot type	fruitcore HORST
Control	Digital I/O
IO logic	PNP
Handling weight max. [kg]	25
Connecting cable	Plug, M8, 4-pole
Connecting cable 2	Plug, M8, 4-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.41



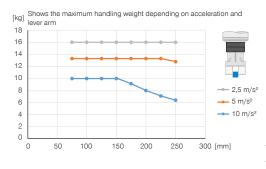


# LWR50F-17-01-A

### **▶ PRODUCT SPECIFICATIONS**

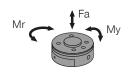


Vertical design with centered holding force



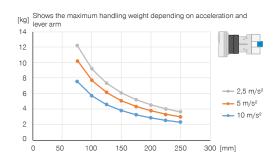
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00003-A



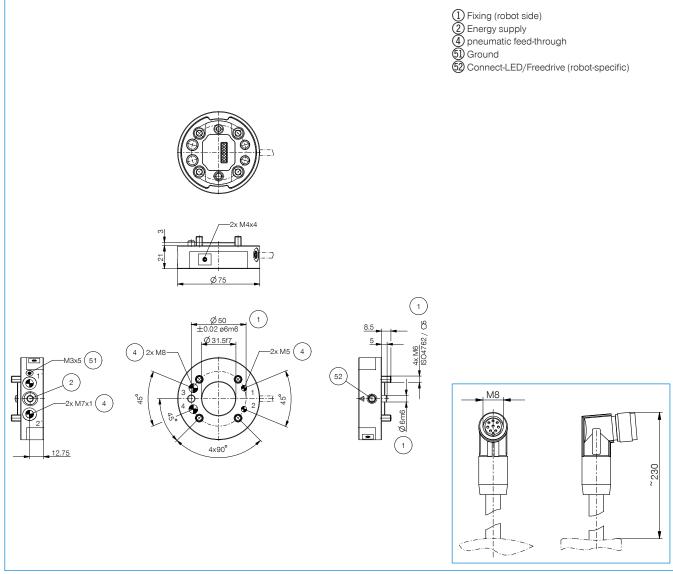
## **CONNECTIONS / OTHER**



Angled Fittings - Quick Connect Style



	► Technical data
Order no.	LWR50F-17-01-A
Suitable for robot type	Yaskawa HC P-Version
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Socket, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.29



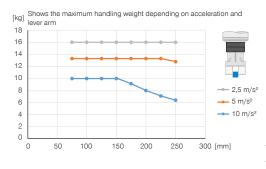


## LWR50F-17-04-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



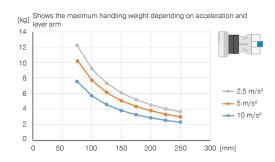
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



## **GRIPPING COMPONENTS**



LWR50L-02-00001-A



## **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



ZUB123084 Strain relief



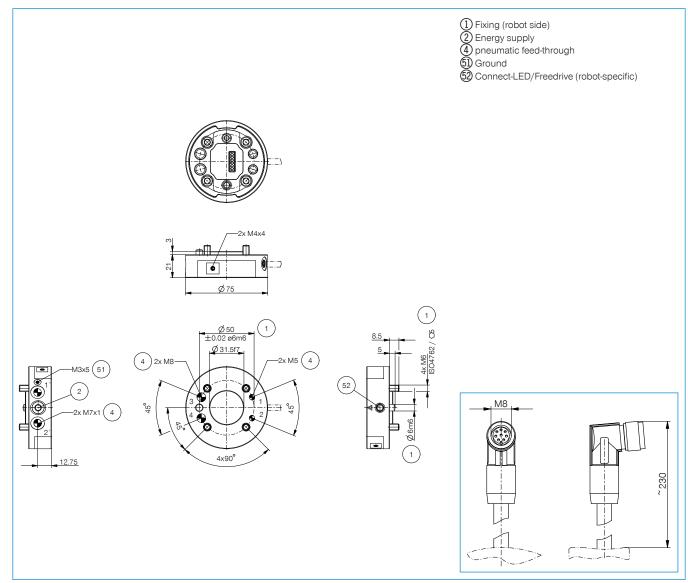
LWR50L-03-00001-A MATCH - Grippers



LWR50L-22-00001-A MATCH - Grippers



	► Technical data
Order no.	LWR50F-17-04-A
Suitable for robot type	Yaskawa HC P-Version
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Socket, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.3



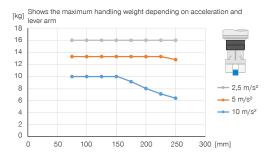


# LWR50F-17-05-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



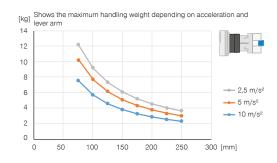
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



## **GRIPPING COMPONENTS**



LWR50L-02-00001-A



## **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



ZUB123084 Strain relief



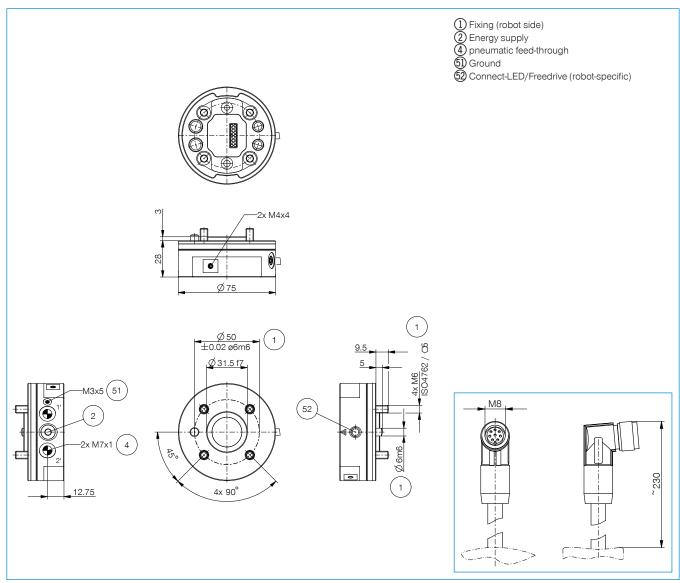
LWR50L-03-00001-A MATCH - Grippers



LWR50L-22-00001-A MATCH - Grippers



	► Technical data
Order no.	LWR50F-17-05-A
Suitable for robot type	Yaskawa HC P-Version
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Socket, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.35



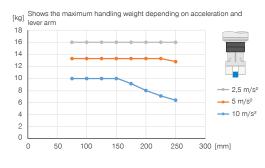


# LWR50F-18-01-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



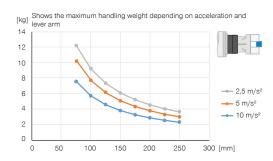
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00002-A



## **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



ZUB123084 Strain relief



LWR50L-23-00005-A MATCH - Grippers



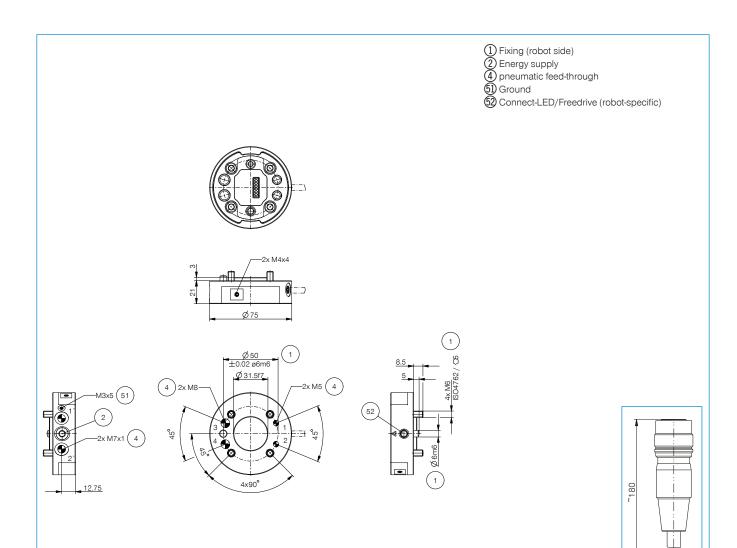
LWR50L-23-00006-A MATCH - Grippers



LWR50L-23-00007-A MATCH - Grippers



	N. Tradesia data
	► Technical data
Order no.	LWR50F-18-01-A
Suitable for robot type	ELITE Robots
Control	Digital I/O
IO logic	NPN
Handling weight max. [kg]	25
Connecting cable	Socket, push-pull, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.32



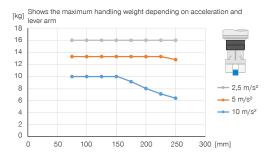


# LWR50F-20-01-A

### **▶ PRODUCT SPECIFICATIONS**



Vertical design with centered holding force



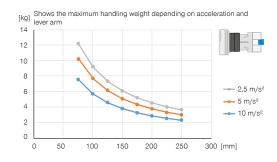
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00003-A



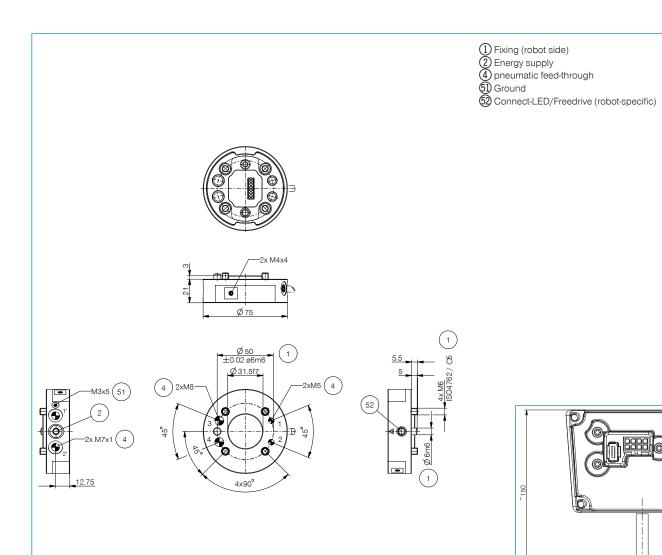
## **CONNECTIONS / OTHER**



Angled Fittings - Quick Connect Style



	► Technical data
Order no.	LWR50F-20-01-A
Suitable for robot type	KUKA LBR iisy Series
Control	Digital I/O
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug KukaLBR iisy
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.29



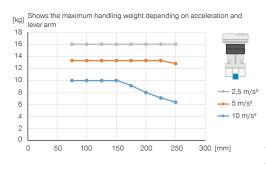


# LWR50F-20-04-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



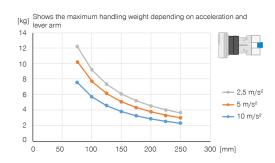
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-02-00001-A



## **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



ZUB123084 Strain relief



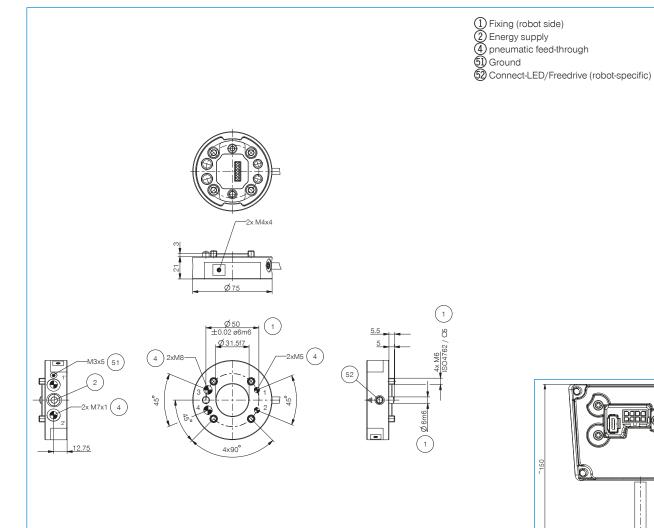
LWR50L-03-00001-A MATCH - Grippers

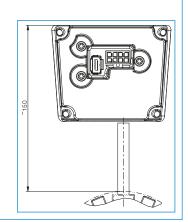


LWR50L-22-00001-A MATCH - Grippers



	► Technical data
Order no.	LWR50F-20-04-A
Suitable for robot type	KUKA LBR iisy Series
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug KukaLBR iisy
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.29





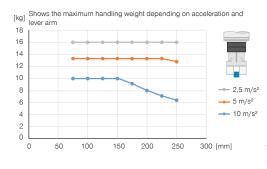


# LWR50F-20-05-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



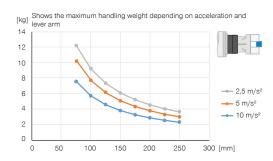
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-02-00001-A



## **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



ZUB123084 Strain relief



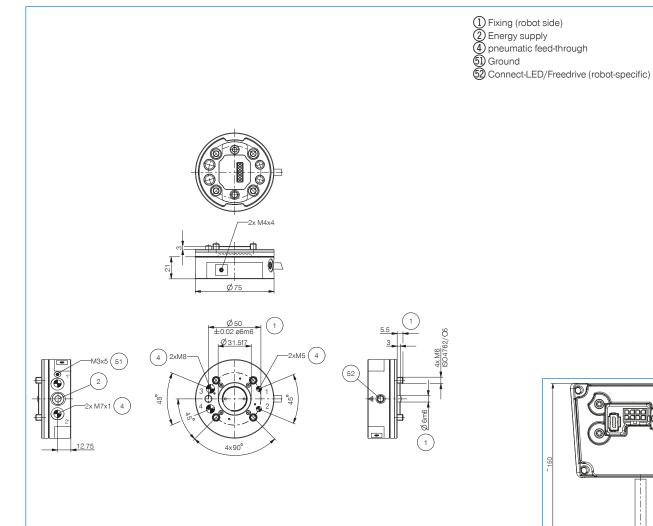
LWR50L-03-00001-A MATCH - Grippers

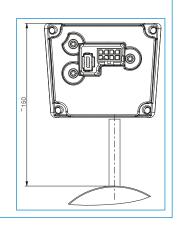


LWR50L-22-00001-A MATCH - Grippers



	► Technical data
Order no.	LWR50F-20-05-A
Suitable for robot type	KUKA LBR iisy Series
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug KukaLBR iisy
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.34







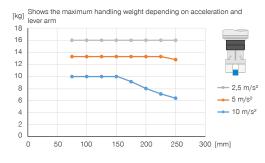
# LWR50F-21-01-A

### PRODUCT SPECIFICATIONS



**MO**TCH

### Vertical design with centered holding force



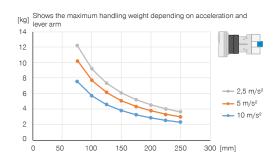
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



LWR50L-03-00002-A



## **CONNECTIONS / OTHER**

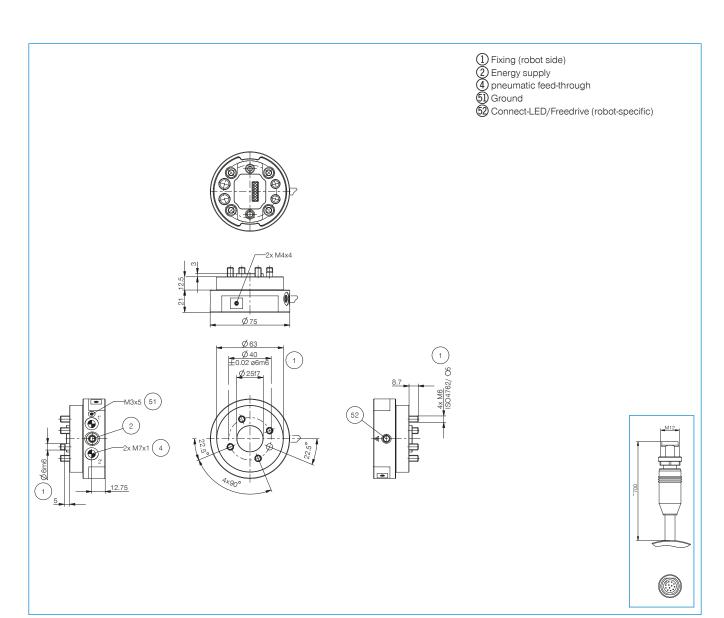


Angled Fittings - Quick Connect Style





	► Technical data
Order no.	LWR50F-21-01-A
Suitable for robot type	ABB IRB 1300
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 40
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.41



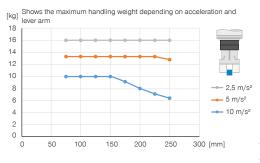


# LWR50F-21-04-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



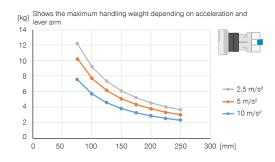
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



**MO**TCH

LWR50L-02-00001-A



## **CONNECTIONS / OTHER**





WVM7 Angled Fittings - Quick Connect Style



LWR50L-03-00001-A MATCH - Grippers



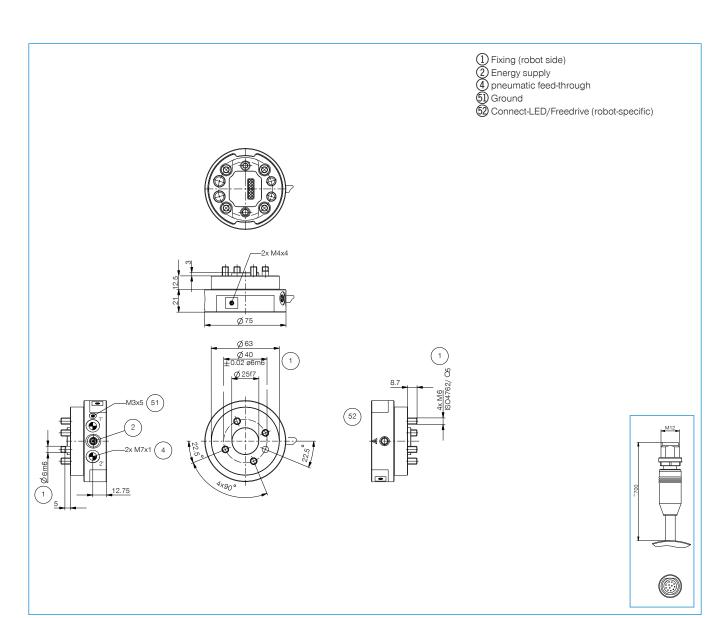
ZUB123084 Strain relief



LWR50L-22-00001-A MATCH - Grippers



	► Technical data
Order no.	LWR50F-21-04-A
Suitable for robot type	ABB IRB 1300
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 40
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.41



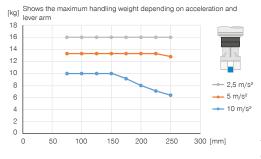


# LWR50F-21-05-A

### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



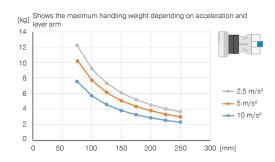
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



## **GRIPPING COMPONENTS**



LWR50L-02-00001-A



## **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



ZUB123084 Strain relief



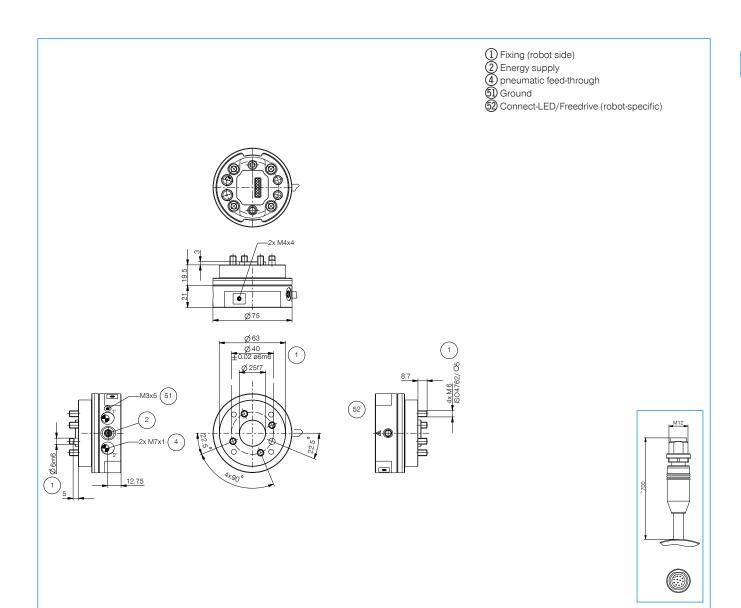
LWR50L-03-00001-A MATCH - Grippers



LWR50L-22-00001-A MATCH - Grippers



	► Technical data
Order no.	LWR50F-21-05-A
Suitable for robot type	ABB IRB 1300
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 40
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.46



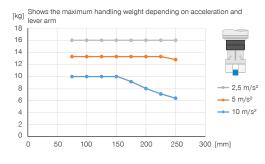


# LWR50F-22-01-A

### **▶ PRODUCT SPECIFICATIONS**



Vertical design with centered holding force



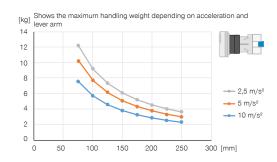
### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

### Horizontal design with centered holding force



### RECOMMENDED ACCESSORIES



### **GRIPPING COMPONENTS**



**MO**TCH

LWR50L-03-00002-A



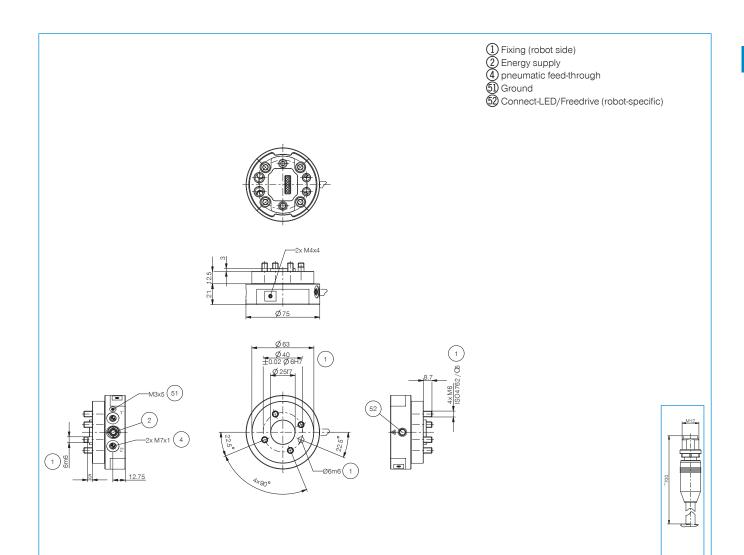
## **CONNECTIONS / OTHER**



Angled Fittings - Quick Connect Style



	► Technical data
Order no.	LWR50F-22-01-A
Suitable for robot type	ABB CRB 1100 SWIFTI
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 40
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.41



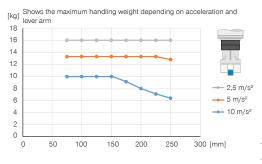


### LWR50F-22-04-A

#### PRODUCT SPECIFICATIONS

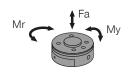


Vertical design with centered holding force



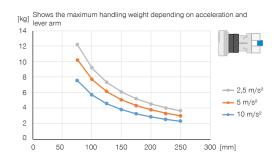
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



#### RECOMMENDED ACCESSORIES



#### **GRIPPING COMPONENTS**



**MO**TCH

LWR50L-02-00001-A



### **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



ZUB123084 Strain relief



LWR50L-03-00001-A MATCH - Grippers

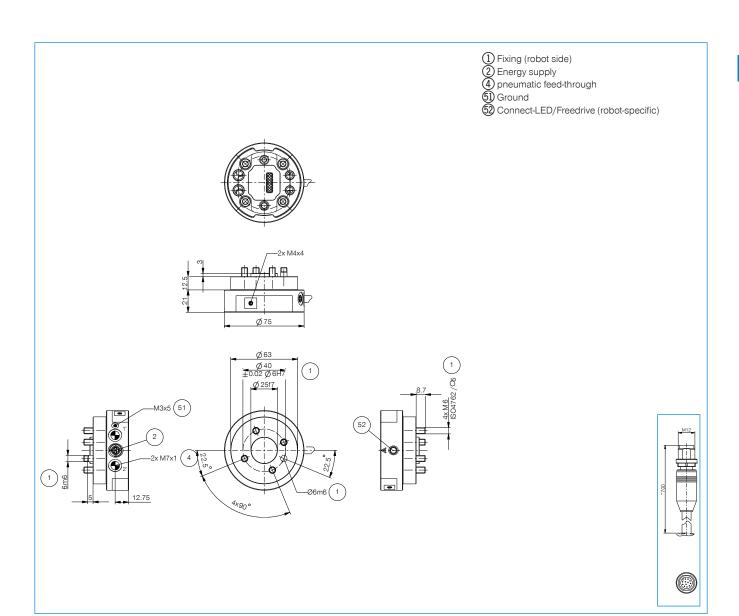


LWR50L-22-00001-A MATCH - Grippers



LWR50L-23-00002-A MATCH - Grippers

	► Technical data
Order no.	LWR50F-22-04-A
Suitable for robot type	ABB CRB 1100 SWIFTI
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 40
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.41



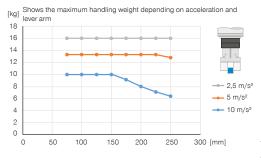


### LWR50F-22-05-A

#### PRODUCT SPECIFICATIONS

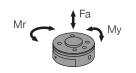


Vertical design with centered holding force



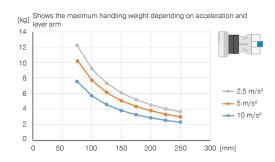
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



#### RECOMMENDED ACCESSORIES



#### **GRIPPING COMPONENTS**



LWR50L-02-00001-A



### **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



ZUB123084 Strain relief



LWR50L-03-00001-A MATCH - Grippers

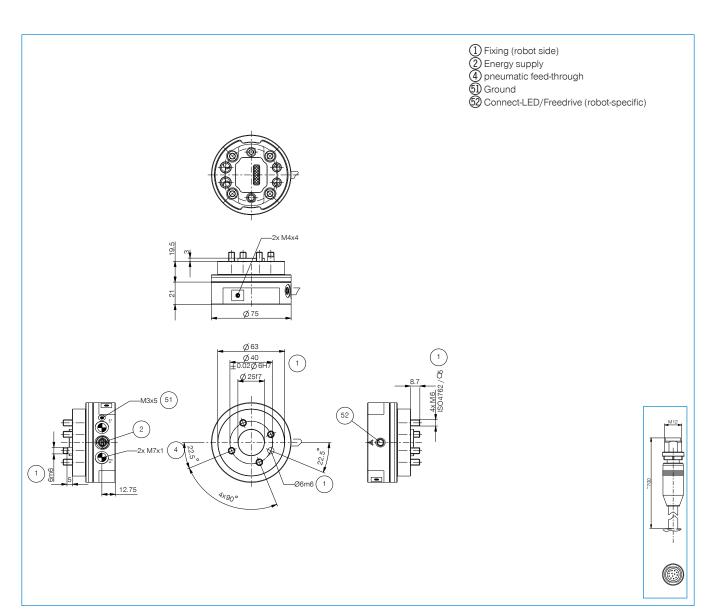


LWR50L-22-00001-A MATCH - Grippers



LWR50L-23-00002-A MATCH - Grippers

	► Technical data
Order no.	LWR50F-22-05-A
Suitable for robot type	ABB CRB 1100 SWIFTI
Control	IO-Link
Connecting flange according EN ISO 9409-1	TK 40
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.46



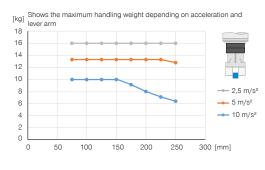


### LWR50F-23-01-A

#### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



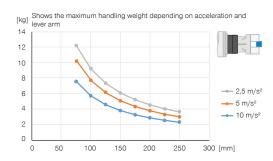
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



#### RECOMMENDED ACCESSORIES



#### **GRIPPING COMPONENTS**



LWR50L-03-00002-A



### **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



ZUB123084 Strain relief



LWR50L-03-00003-A MATCH - Grippers

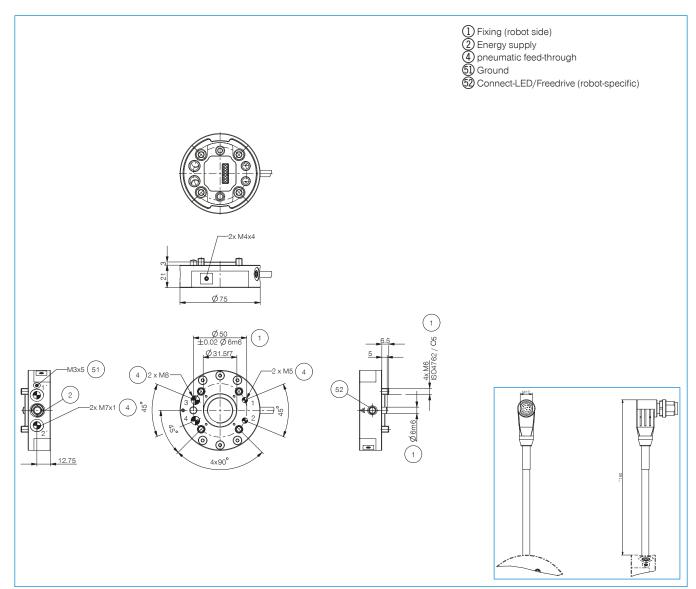


LWR50L-23-00005-A MATCH - Grippers



LWR50L-23-00006-A MATCH - Grippers

	► Technical data
Order no.	LWR50F-23-01-A
Suitable for robot type	NEURA LARA / Kawasaki CL / Delta D-Bot
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.27



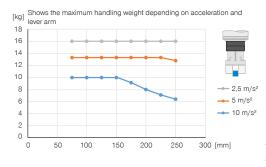


# LWR50F-24-01-A

#### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



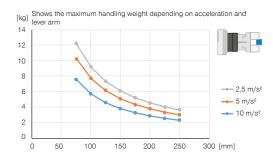
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



#### RECOMMENDED ACCESSORIES



#### **GRIPPING COMPONENTS**





### **CONNECTIONS / OTHER**





WVM7 Angled Fittings - Quick Connect Style



LWR50L-03-00003-A MATCH - Grippers



ZUB123084 Strain relief

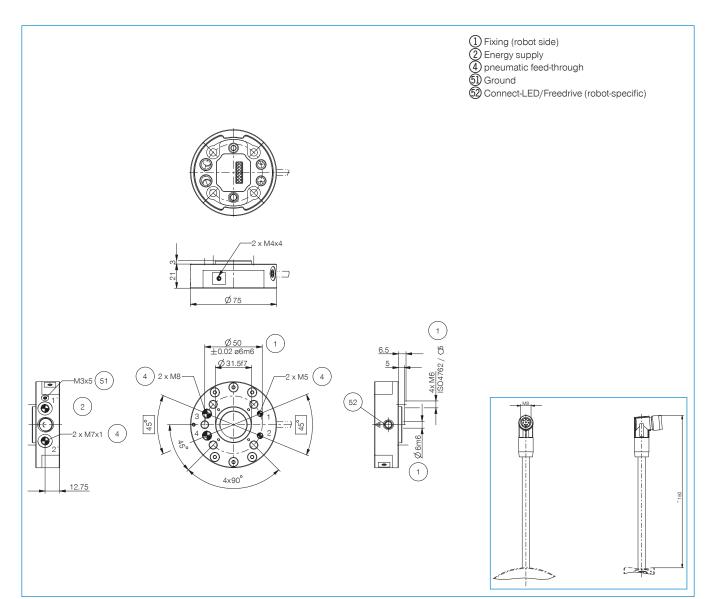


LWR50L-23-00005-A MATCH - Grippers



LWR50L-23-00006-A MATCH - Grippers

	N. Washington data
	Technical data
Order no.	LWR50F-24-01-A
Suitable for robot type	NEURA MAIRA / Omron iCR
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Socket, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.29



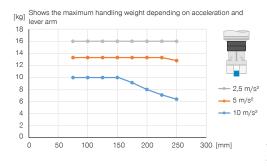


### LWR50F-25-01-A

#### **▶ PRODUCT SPECIFICATIONS**

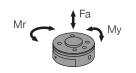


Vertical design with centered holding force



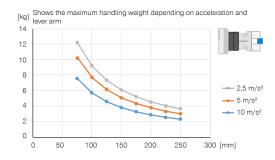
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



#### RECOMMENDED ACCESSORIES



#### **GRIPPING COMPONENTS**



LWR50L-03-00003-A



### **CONNECTIONS / OTHER**



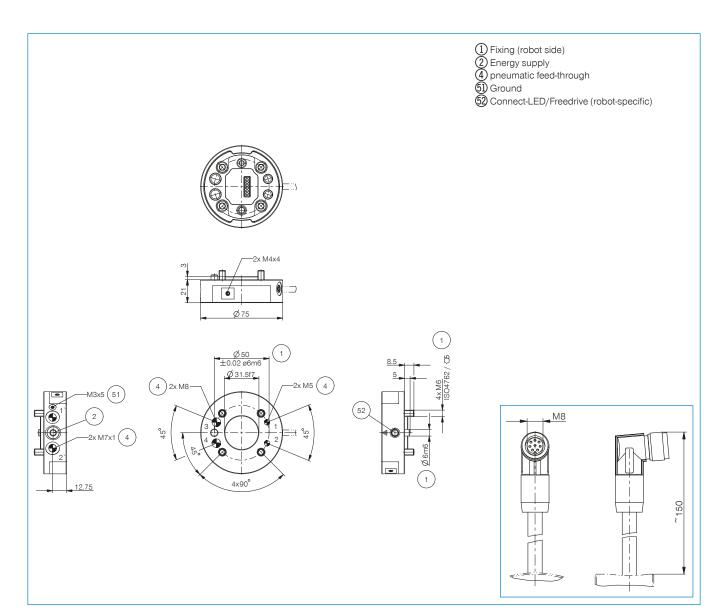
WVM7 Angled Fittings - Quick Connect Style





ZUB123084 Strain relief

	Technical data
Order no.	LWR50F-25-01-A
Suitable for robot type	DENSO COBOTTA PRO
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Socket, M8, 8-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.29



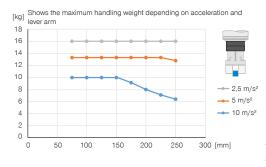


# LWR50F-26-01-A

#### PRODUCT SPECIFICATIONS

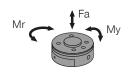


Vertical design with centered holding force



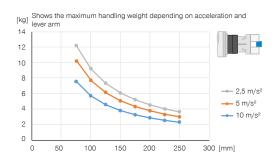
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



#### RECOMMENDED ACCESSORIES



#### **GRIPPING COMPONENTS**



LWR50L-03-00003-A



### **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



ZUB123084 Strain relief

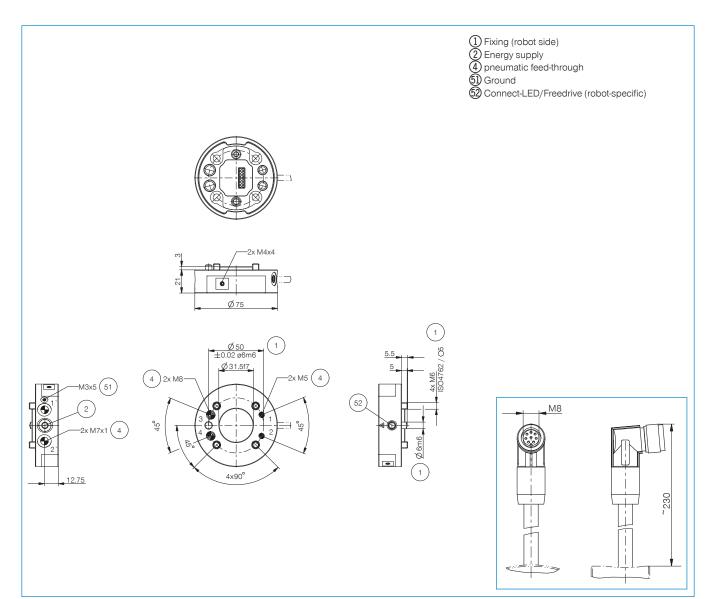


LWR50L-23-00005-A MATCH - Grippers



LWR50L-23-00006-A MATCH - Grippers

	► Technical data
Order no.	LWR50F-26-01-A
Suitable for robot type	Kassow Robots KR series
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Socket, M8, 8-pole
Cable management	internal
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.28



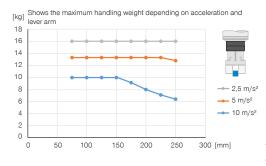


# LWR50F-26-01-A

#### PRODUCT SPECIFICATIONS



Vertical design with centered holding force



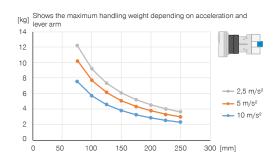
#### Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

#### Horizontal design with centered holding force



#### RECOMMENDED ACCESSORIES



#### **GRIPPING COMPONENTS**



LWR50L-03-00003-A



### **CONNECTIONS / OTHER**



WVM7 Angled Fittings - Quick Connect Style



LWR50L-23-00005-A MATCH - Grippers

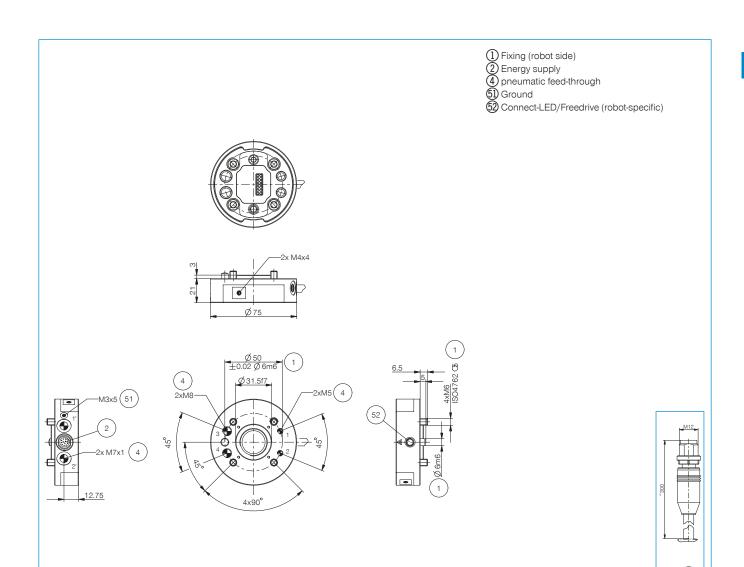


ZUB123084 Strain relief



LWR50L-23-00006-A MATCH - Grippers

	► Technical data
Order no.	LWR50F-29-01-A
Suitable for robot type	Neuromeka Indy
Control	Digital I/O
IO logic	PNP
Connecting flange according EN ISO 9409-1	TK 50
Handling weight max. [kg]	25
Connecting cable	Plug, M12, 12-pole
Cable management	internal
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.29

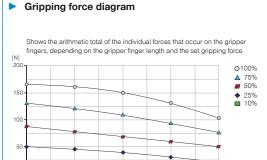




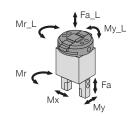
# LWR50L-02-00001-A







#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	25
My_L [Nm]	40	Mx [Nm]	25
Fa_L [N]	500	My [Nm]	25
		Fa [N]	500

	► Technical data
Order no.	LWR50L-02-00001-A
General data	
MRK design according to ISO/TS 15066	Yes
Control	IO-Link
Operating temperature [°C]	5 +50
Protection to IEC 60529	IP40
Weight [kg]	1.6
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-03/04/05
HRC form	collaborative
Cable management	internal
Type of drive	electrical
Integrated position sensing	yes
Stroke per jaw [mm]	40
Stroke per jaw, adjustable [mm]	40
Gripping force min. [N]	15
Nominal gripping force [N]	165
Gripping force in accordance with ISO/TS 15066 [N]	<140
Control time [s]	0.125
Dead weight of mounted gripper finger max. [kg]	0.3
Length of the gripper fingers max. [mm]	80
Gripping speed per jaw max. [mm/s]	24
Positioning speed per jaw max. [mm/s]	55
Repetition accuracy +/- [mm]	0.05
Voltage [V]	24
Current consumption max. [A]	0.6
Minimum positioning path per jaw [mm]	2



### **CONNECTIONS / OTHER**

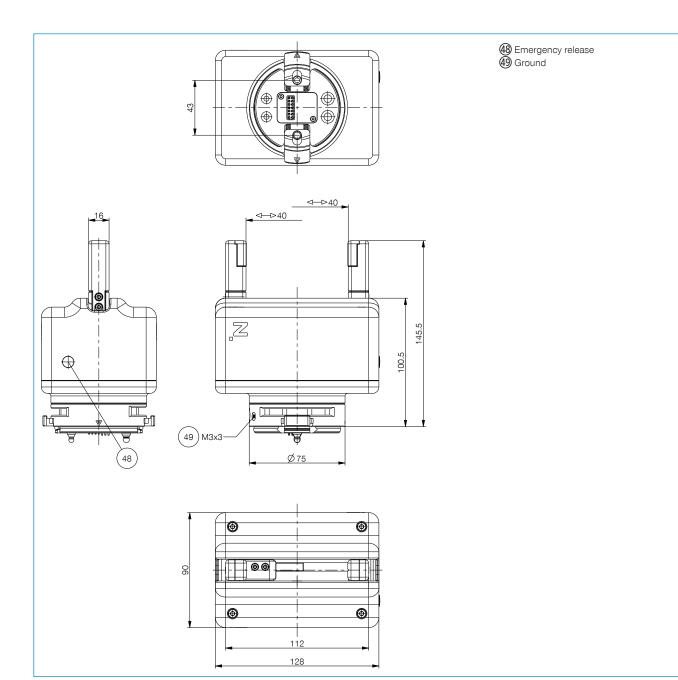


**ALWR1-50-A** MATCH - Storage station

#### **▶** RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01





Gripping force diagram

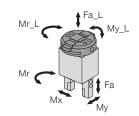
# LWR50L-02-00002-A

#### **▶ PRODUCT SPECIFICATIONS**



# Shows the arithmetic total of the individual forces that occur on the gripper fingers, depending on the gripper finger length and the set gripping force ▲ 75% ■ 50% ♦ 25% ■ 10%

#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	35
My_L [Nm]	40	Mx [Nm]	35
Fa_L [N]	500	My [Nm]	35
		Fa [N]	500

	► Technical data
Order no.	LWR50L-02-00002-A
General data	
MRK design according to ISO/TS 15066	Yes
Control	IO-Link
Operating temperature [°C]	5 +50
Protection to IEC 60529	IP40
Weight [kg]	1.6
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-03/04/05
HRC form	collaborative
Cable management	internal
Type of drive	electrical
Integrated position sensing	yes
Stroke per jaw [mm]	60
Stroke per jaw, adjustable [mm]	60
Gripping force min. [N]	20
Nominal gripping force [N]	180
Gripping force in accordance with ISO/TS 15066 [N]	<140
Control time [s]	0.125
Dead weight of mounted gripper finger max. [kg]	0.3
Length of the gripper fingers max. [mm]	80
Gripping speed per jaw max. [mm/s]	30
Positioning speed per jaw max. [mm/s]	60
Repetition accuracy +/- [mm]	0.05
Voltage [V]	24
Current consumption max. [A]	0.8
Minimum positioning path per jaw [mm]	2



### **CONNECTIONS / OTHER**

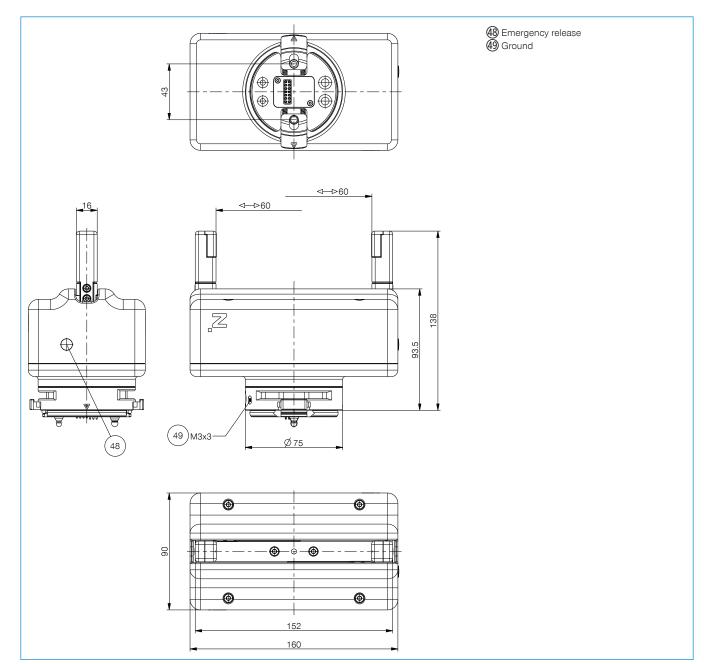


ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01





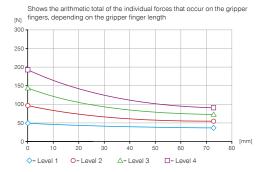
### 2-JAW PARALLEL GRIPPERS

# LWR50L-03-00001-A

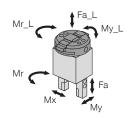
#### **▶ PRODUCT SPECIFICATIONS**



### Gripping force diagram



#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	7
My_L [Nm]	40	Mx [Nm]	7
Fa_L [N]	500	My [Nm]	5.5
		Fa [N]	200

	► Technical data
Order no.	LWR50L-03-00001-A
General data	
MRK design according to ISO/TS 15066	Yes
Control	IO-Link
Operating temperature [°C]	5 +50
Protection to IEC 60529	IP40
Weight [kg]	0.76
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-03/04/05
HRC form	collaborative
Cable management	internal
Type of drive	electrical
Integrated position sensing	Using process data
Stroke per jaw [mm]	10
Gripping force in closing (adjustable) max. [N]	190
Gripping force in opening (adjustable) max. [N]	190
Gripping force in accordance with ISO/TS 15066 [N]	<140
Control time [s]	0.03
Dead weight of mounted gripper finger max. [kg]	0.1
Length of the gripper fingers max. [mm]	80
Repetition accuracy +/- [mm]	0.05
Voltage [V]	24
Current consumption max. [A]	1
Minimum positioning path per jaw [mm]	0.5



### **CONNECTIONS / OTHER**

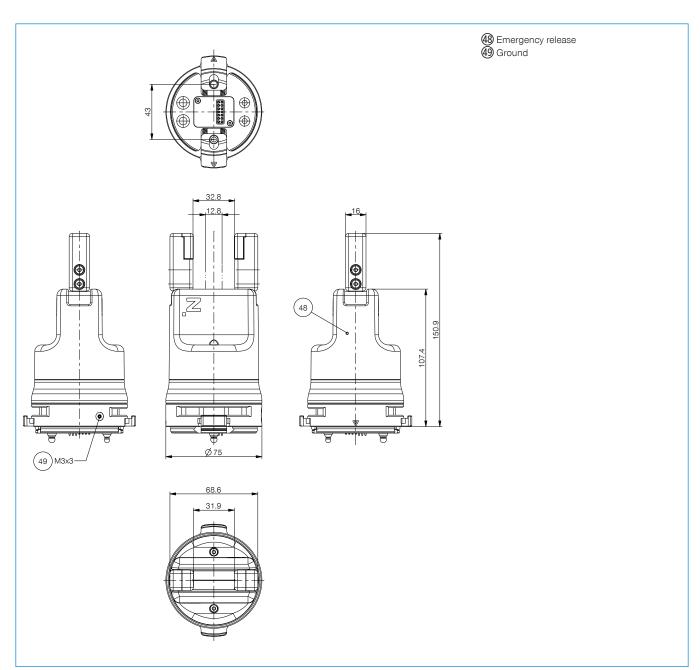


ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01



# 2-JAW PARALLEL GRIPPERS

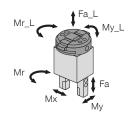
# LWR50L-03-00002-A





### Gripping force diagram Shows the arithmetic total of the individual forces that occur on the gripper fingers, depending on the gripper finger length 250 150 O= Level 2 △- Level 3 □= Level 4

#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	7
My_L [Nm]	40	Mx [Nm]	7
a_L [N]	500	My [Nm]	5.5
		Fa [N]	200

	► Technical data
Order no.	LWR50L-03-00002-A
General data	
MRK design according to ISO/TS 15066	Yes
Control	1/0
Operating temperature [°C]	5 +50
Protection to IEC 60529	IP40
Weight [kg]	0.76
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-01/02
HRC form	collaborative
Cable management	internal
Type of drive	electrical
Integrated position sensing	Analog 0 to 10 V
Stroke per jaw [mm]	10
Gripping force safety device	mechanical
Gripping force in closing (adjustable) max. [N]	190
Gripping force in opening (adjustable) max. [N]	190
Gripping force in accordance with ISO/TS 15066 [N]	<140
Closing time [s]	0.19
Opening time [s]	0.19
Control time [s]	0.03
Dead weight of mounted gripper finger max. [kg]	0.1
Length of the gripper fingers max. [mm]	80
Repetition accuracy +/- [mm]	0.05
Voltage [V]	24
Current consumption max. [A]	1
Minimum positioning path per jaw [mm]	0.5



### **CONNECTIONS / OTHER**

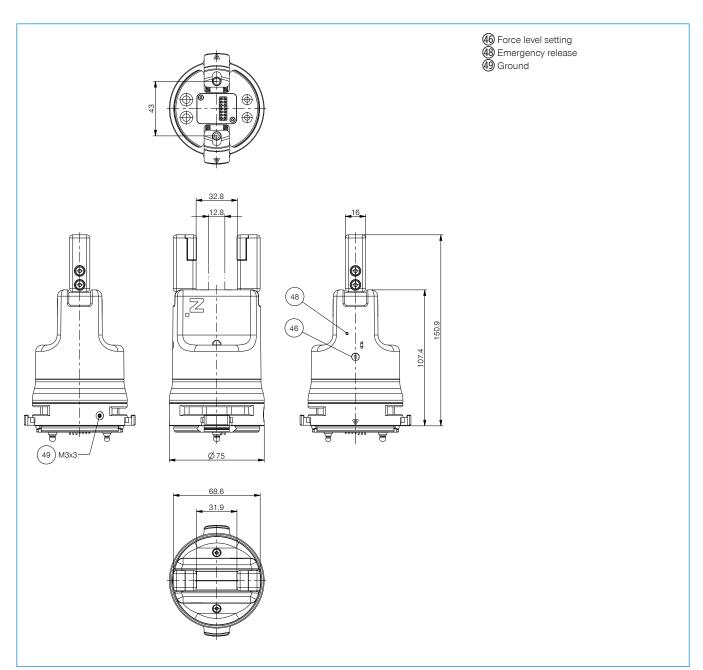


ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01



# 2-JAW PARALLEL GRIPPERS

# LWR50L-03-00003-A

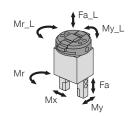
#### **▶ PRODUCT SPECIFICATIONS**



#### Gripping force diagram



#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	7
My_L [Nm]	40	Mx [Nm]	7
Fa_L [N]	500	My [Nm]	5.5
		Fa [N]	200

	► Technical data
Order no.	LWR50L-03-00003-A
General data	
MRK design according to ISO/TS 15066	Yes
Control	1/0
Operating temperature [°C]	5 +50
Protection to IEC 60529	IP40
Weight [kg]	0.76
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-01/02
HRC form	collaborative
Cable management	internal
Type of drive	electrical
Integrated position sensing	digital
Stroke per jaw [mm]	10
Gripping force safety device	mechanical
Gripping force in closing (adjustable) max. [N]	190
Gripping force in opening (adjustable) max. [N]	190
Gripping force in accordance with ISO/TS 15066 [N]	<140
Closing time [s]	0.19
Opening time [s]	0.19
Control time [s]	0.03
Dead weight of mounted gripper finger max. [kg]	0.1
Length of the gripper fingers max. [mm]	80
Repetition accuracy +/- [mm]	0.05
Voltage [V]	24
Current consumption max. [A]	1
Minimum positioning path per jaw [mm]	0.5



### **CONNECTIONS / OTHER**

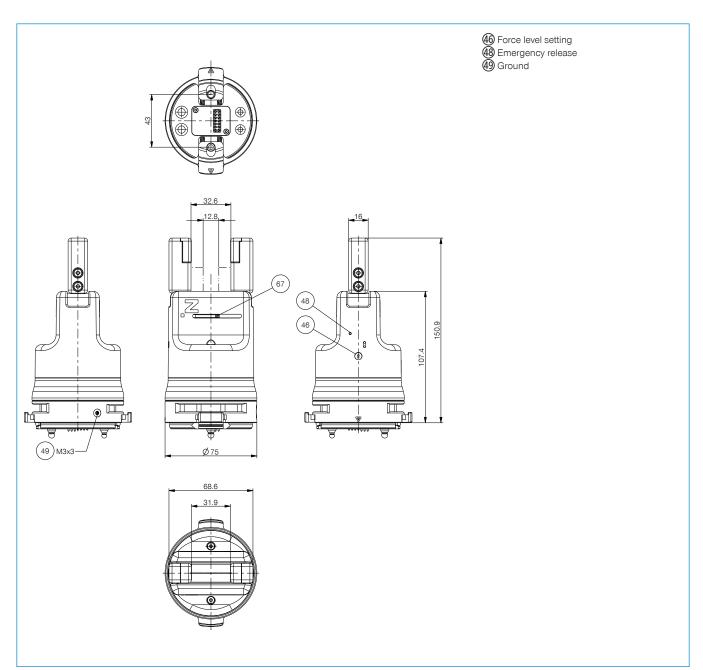


ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01



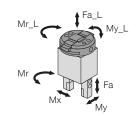
# LWR50L-21-00001-A

#### **▶ 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 and the set gripping force △ 75% ■ 50% ◆ 25% ■ 10% 1000 600

#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	25
My_L [Nm]	40	Mx [Nm]	25
Fa_L [N]	500	My [Nm]	25
		Fa [N]	500

	Technical data
Order no.	LWR50L-21-00001-A
General data	
Control	IO-Link
Operating temperature [°C]	5 +50
Protection to IEC 60529	IP40
Weight [kg]	1.2
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-03/04/05
Cable management	external
Type of drive	electrical
Drive	BLDC motor
Position sensing	integrated
Position sensing using process data	Yes
Stroke per jaw, adjustable [mm]	40
Gripping force min. [N]	100
Nominal gripping force [N]	1000
Control time [s]	0.1
Dead weight of mounted gripper finger max. [kg]	0.3
Length of the gripper fingers max. [mm]	100
Positioning speed per jaw max. [mm/s]	60
Repetition accuracy +/- [mm]	0.02
Voltage [V]	24
Current consumption max. [A]	5
Minimum positioning path per jaw [mm]	3



### **CONNECTIONS / OTHER**

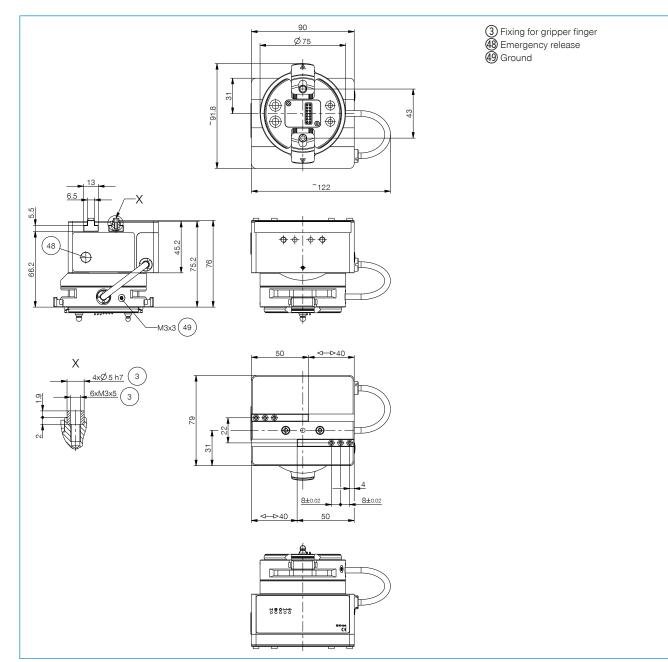


ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01

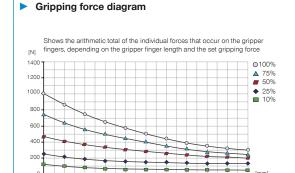


# LWR50L-21-00002-A

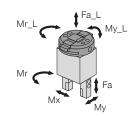
#### **▶ PRODUCT SPECIFICATIONS**







#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	35
My_L [Nm]	40	Mx [Nm]	35
Fa_L [N]	500	My [Nm]	35
		Fa [N]	500

	Technical data
Order no.	LWR50L-21-00002-A
General data	
Control	IO-Link
Operating temperature [°C]	5 +50
Protection to IEC 60529	IP40
Weight [kg]	1.3
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-03/04/05
Cable management	external
Type of drive	electrical
Drive	BLDC motor
Position sensing	integrated
Position sensing using process data	Yes
Stroke per jaw, adjustable [mm]	60
Gripping force min. [N]	100
Nominal gripping force [N]	1000
Control time [s]	0.1
Dead weight of mounted gripper finger max. [kg]	0.3
Length of the gripper fingers max. [mm]	100
Positioning speed per jaw max. [mm/s]	60
Repetition accuracy +/- [mm]	0.02
Voltage [V]	24
Current consumption max. [A]	5
Minimum positioning path per jaw [mm]	3



### **CONNECTIONS / OTHER**

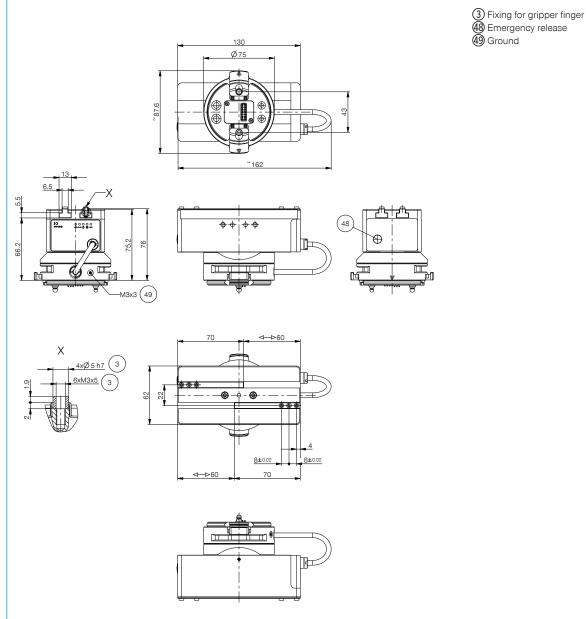


ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01



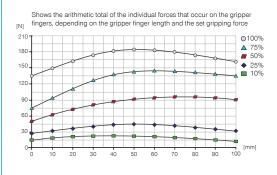


# LWR50L-22-00001-A

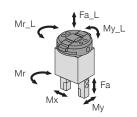
#### **▶ PRODUCT SPECIFICATIONS**



### Gripping force diagram



#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	25
My_L [Nm]	40	Mx [Nm]	25
Fa_L [N]	500	My [Nm]	25
		Fa [N]	500

	► Technical data
Order no.	LWR50L-22-00001-A
General data	
Control	IO-Link
Operating temperature [°C]	5 +50
Protection to IEC 60529	IP40
Weight [kg]	1.2
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-03/04/05
Cable management	external
Type of drive	electrical
Drive	BLDC motor
Integrated position sensing	yes
Stroke per jaw, adjustable [mm]	40
Gripping force min. [N]	10
Nominal gripping force [N]	180
Control time [s]	0.1
Dead weight of mounted gripper finger max. [kg]	0.3
Length of the gripper fingers max. [mm]	100
Positioning speed per jaw max. [mm/s]	120
Repetition accuracy +/- [mm]	0.02
Voltage [V]	24
Current consumption max. [A]	2
Minimum positioning path per jaw [mm]	0



### **CONNECTIONS / OTHER**

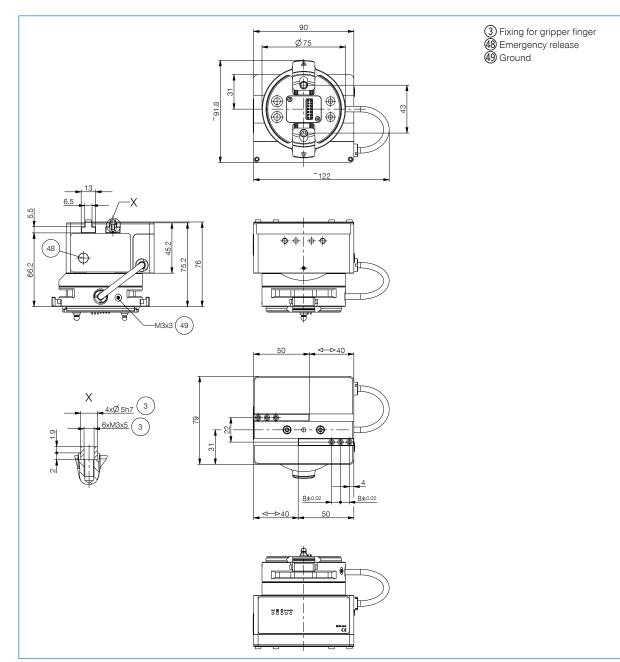


**ALWR1-50-A** MATCH - Storage station

#### **▶** RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01





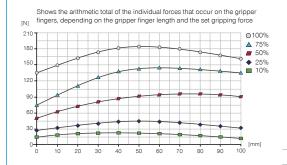
# LWR50L-22-00002-A

#### **▶ PRODUCT SPECIFICATIONS**

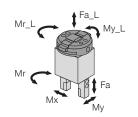




#### Gripping force diagram



#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	35
My_L [Nm]	40	Mx [Nm]	35
Fa_L [N]	500	My [Nm]	35
		Fa [N]	500

	► Technical data
Order no.	LWR50L-22-00002-A
General data	
Control	IO-Link
Operating temperature [°C]	5 +50
Protection to IEC 60529	IP40
Weight [kg]	1.3
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-03/04/05
Cable management	external
Type of drive	electrical
Drive	BLDC motor
Integrated position sensing	yes
Stroke per jaw, adjustable [mm]	60
Gripping force min. [N]	10
Nominal gripping force [N]	180
Control time [s]	0.1
Dead weight of mounted gripper finger max. [kg]	0.3
Length of the gripper fingers max. [mm]	100
Positioning speed per jaw max. [mm/s]	120
Repetition accuracy +/- [mm]	0.02
Voltage [V]	24
Current consumption max. [A]	2
Minimum positioning path per jaw [mm]	0



### **CONNECTIONS / OTHER**

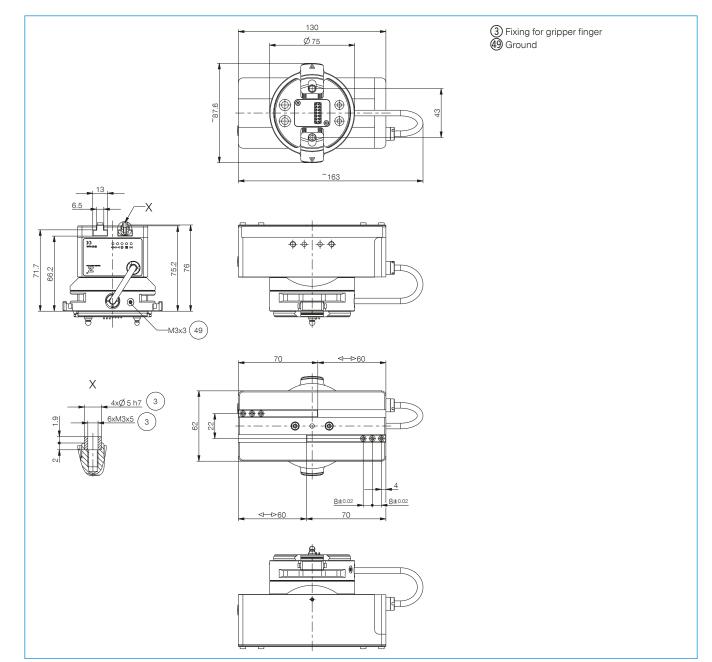


**ALWR1-50-A** MATCH - Storage station

#### **▶** RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01





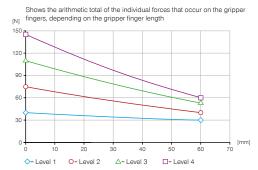
# 2-JAW PARALLEL GRIPPERS

# LWR50L-23-00001-A

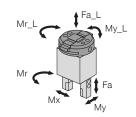
#### **▶ PRODUCT SPECIFICATIONS**



### Gripping force diagram



#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	2.5
My_L [Nm]	40	Mx [Nm]	2.5
Fa_L [N]	500	My [Nm]	2
		Fa [N]	140

	► Technical data
Order no.	LWR50L-23-00001-A
General data	
Control	IO-Link
Operating temperature [°C]	5 +60
Protection to IEC 60529	IP40
Weight [kg]	0.6
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-03/04/05
Positionable	Yes
Integrated position sensing	Using process data
Cable management	external
Type of drive	electrical
Stroke per jaw [mm]	6
Gripping force safety device	mechanical
Gripping force in closing (adjustable) max. [N]	145
Gripping force in opening (adjustable) max. [N]	145
Closing time [s]	0.1
Opening time [s]	0.1
Control time [s]	0.03
Dead weight of mounted gripper finger max. [kg]	0.05
Length of the gripper fingers max. [mm]	60
Repetition accuracy +/- [mm]	0.02
Voltage [V]	24
Current consumption max. [A]	1
Minimum positioning path per jaw [mm]	0.5
LABS-compliant	Yes
RoHS compliant	Yes



### **CONNECTIONS / OTHER**

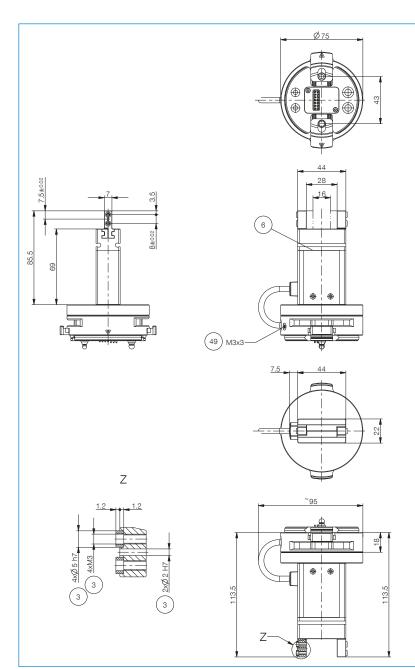


ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01



- (3) Fixing for gripper finger(6) Integrated slot for magnetic field sensor(49) Ground



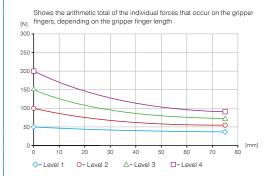
# 2-JAW PARALLEL GRIPPERS

# LWR50L-23-00002-A

#### **▶ PRODUCT SPECIFICATIONS**

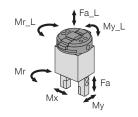


### Gripping force diagram



#### Forces and moments

Shows static forces and moments



5.5

200

Mr_L [Nm]	20	Mr [Nm
My_L [Nm]	40	Mx [Nm
Fa_L [N]	500	My [Nm
		Fa [N]

	► Technical data
Order no.	LWR50L-23-00002-A
General data	
Control	IO-Link
Operating temperature [°C]	5 +60
Protection to IEC 60529	IP40
Weight [kg]	0.73
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-03/04/05
Positionable	Yes
Integrated position sensing	Using process data
Cable management	external
Type of drive	electrical
Stroke per jaw [mm]	10
Gripping force safety device	mechanical
Gripping force in closing (adjustable) max. [N]	200
Gripping force in opening (adjustable) max. [N]	200
Closing time [s]	0.19
Opening time [s]	0.19
Control time [s]	0.03
Dead weight of mounted gripper finger max. [kg]	0.1
Length of the gripper fingers max. [mm]	80
Repetition accuracy +/- [mm]	0.02
Voltage [V]	24
Current consumption max. [A]	1
Minimum positioning path per jaw [mm]	0.5
LABS-compliant	Yes
RoHS compliant	Yes



### **CONNECTIONS / OTHER**



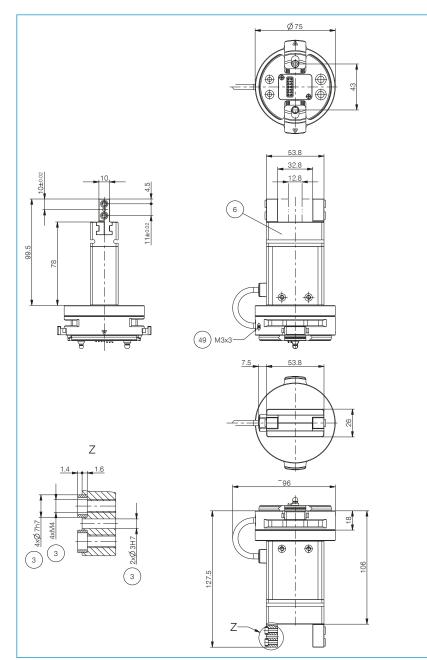
ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m  $\,$  - Connector M8  $\,$ 



- (3) Fixing for gripper finger(6) Integrated slot for magnetic field sensor(49) Ground



### 2-JAW PARALLEL GRIPPERS

# LWR50L-23-00003-A

#### **▶ PRODUCT SPECIFICATIONS**

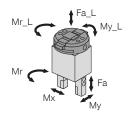


### Gripping force diagram Shows the arithmetic total of the individual forces that occur on the gripper fingers, depending on the gripper finger length 250 200 150 \_

△= Level 3

O= Level 2

#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	13
My_L [Nm]	40	Mx [Nm]	13
Fa_L [N]	500	My [Nm]	10
		Fa [N]	325

	► Technical data
Order no.	LWR50L-23-00003-A
General data	
Control	IO-Link
Operating temperature [°C]	5 +60
Protection to IEC 60529	IP40
Weight [kg]	0.98
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-03/04/05
Positionable	Yes
Integrated position sensing	Using process data
Cable management	external
Type of drive	electrical
Stroke per jaw [mm]	13
Gripping force safety device	mechanical
Gripping force in closing (adjustable) max. [N]	360
Gripping force in opening (adjustable) max. [N]	360
Closing time [s]	0.23
Opening time [s]	0.23
Control time [s]	0.055
Dead weight of mounted gripper finger max. [kg]	0.15
Length of the gripper fingers max. [mm]	100
Repetition accuracy +/- [mm]	0.02
Voltage [V]	24
Current consumption max. [A]	2
Minimum positioning path per jaw [mm]	0.5
LABS-compliant	Yes
RoHS compliant	Yes



### **CONNECTIONS / OTHER**



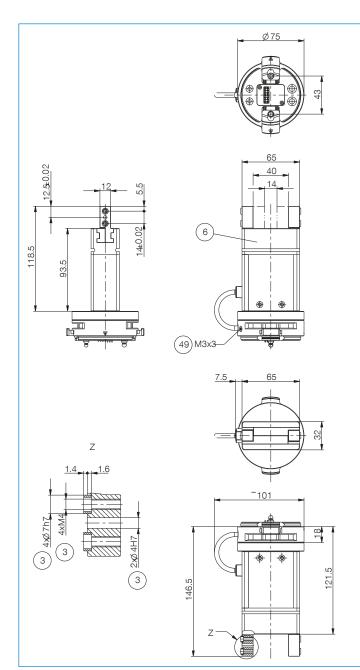
ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m  $\,$  - Connector M8  $\,$ 



- (3) Fixing for gripper finger(6) Integrated slot for magnetic field sensor(49) Ground

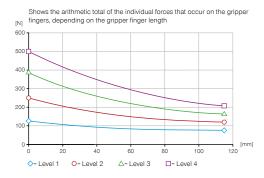
### 2-JAW PARALLEL GRIPPERS

# LWR50L-23-00004-A

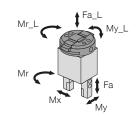
#### **▶ PRODUCT SPECIFICATIONS**



# Gripping force diagram



#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	28
My_L [Nm]	40	Mx [Nm]	28
Fa_L [N]	500	My [Nm]	20
		Fa [N]	450

	► Technical data
Order no.	LWR50L-23-00004-A
General data	
Control	IO-Link
Operating temperature [°C]	5 +60
Protection to IEC 60529	IP40
Weight [kg]	1.4
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-03/04/05
Positionable	Yes
Integrated position sensing	Using process data
Cable management	external
Type of drive	electrical
Stroke per jaw [mm]	16
Gripping force safety device	mechanical
Gripping force in closing (adjustable) max. [N]	500
Gripping force in opening (adjustable) max. [N]	500
Closing time [s]	0.30
Opening time [s]	0.30
Control time [s]	0.055
Dead weight of mounted gripper finger max. [kg]	2.1
Length of the gripper fingers max. [mm]	120
Repetition accuracy +/- [mm]	0.02
Voltage [V]	24
Current consumption max. [A]	2
Minimum positioning path per jaw [mm]	0.5
LABS-compliant	Yes
RoHS compliant	Yes



### **CONNECTIONS / OTHER**



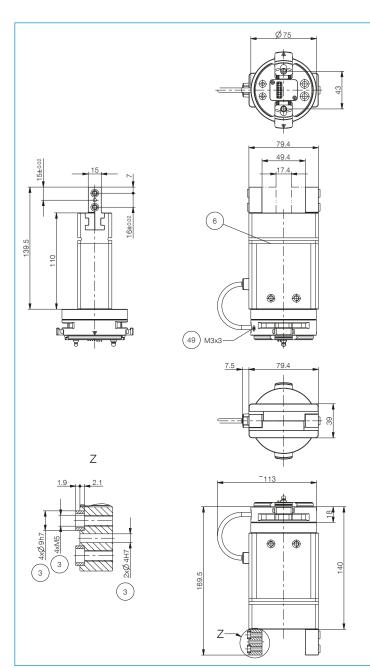
ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m  $\,$  - Connector M8  $\,$ 



- (3) Fixing for gripper finger(6) Integrated slot for magnetic field sensor(49) Ground



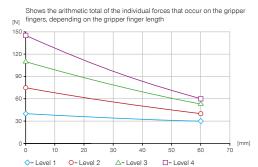
### 2-JAW PARALLEL GRIPPERS

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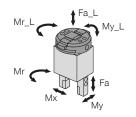
#### **▶ PRODUCT SPECIFICATIONS**



#### Gripping force diagram



#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	2.5
My_L [Nm]	40	Mx [Nm]	2.5
Fa_L [N]	500	My [Nm]	2
		Fa [N]	140

	► Technical data
Order no.	LWR50L-23-00005-A
General data	
Control	1/0
Operating temperature [°C]	5 +60
Protection to IEC 60529	IP40
Weight [kg]	0.6
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-01/02
Integrated position sensing	Analog 0 to 10 V
Cable management	external
Type of drive	electrical
Stroke per jaw [mm]	6
Gripping force safety device	mechanical
Gripping force in closing (adjustable) max. [N]	145
Gripping force in opening (adjustable) max. [N]	145
Closing time [s]	0.1
Opening time [s]	0.1
Control time [s]	0.03
Dead weight of mounted gripper finger max. [kg]	0.05
Length of the gripper fingers max. [mm]	60
Repetition accuracy +/- [mm]	0.02
Voltage [V]	24
Current consumption max. [A]	1
Minimum positioning path per jaw [mm]	0.5



### **CONNECTIONS / OTHER**



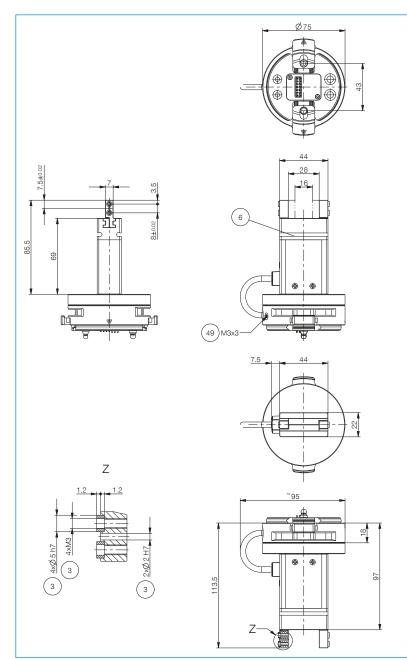
ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m  $\,$  - Connector M8  $\,$ 



- (3) Fixing for gripper finger(6) Integrated slot for magnetic field sensor(49) Ground



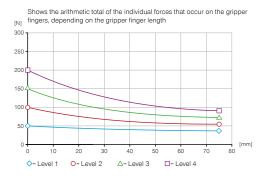
### 2-JAW PARALLEL GRIPPERS

# LWR50L-23-00006-A

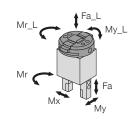
#### **▶ PRODUCT SPECIFICATIONS**



# Gripping force diagram



#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	7
My_L [Nm]	40	Mx [Nm]	7
Fa_L [N]	500	My [Nm]	5.5
		Fa [N]	200

	► Technical data
Order no.	LWR50L-23-00006-A
General data	
Control	1/0
Operating temperature [°C]	5 +60
Protection to IEC 60529	IP40
Weight [kg]	0.72
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-01/02
Integrated position sensing	Analog 0 to 10 V
Cable management	external
Type of drive	electrical
Stroke per jaw [mm]	10
Gripping force safety device	mechanical
Gripping force in closing (adjustable) max. [N]	200
Gripping force in opening (adjustable) max. [N]	200
Closing time [s]	0.19
Opening time [s]	0.19
Control time [s]	0.03
Dead weight of mounted gripper finger max. [kg]	0.1
Length of the gripper fingers max. [mm]	80
Repetition accuracy +/- [mm]	0.02
Voltage [V]	24
Current consumption max. [A]	1
Minimum positioning path per jaw [mm]	0.5



### **CONNECTIONS / OTHER**



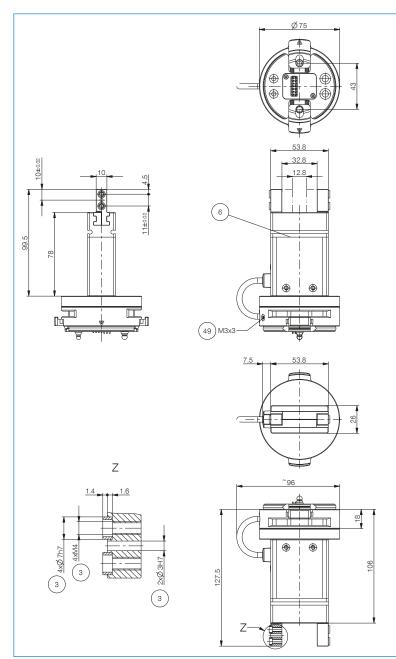
ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m - Connector M8



- (3) Fixing for gripper finger(6) Integrated slot for magnetic field sensor(49) Ground





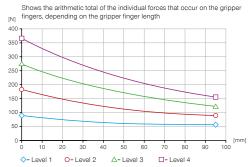
### 2-JAW PARALLEL GRIPPERS

# LWR50L-23-00007-A

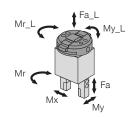
#### **▶ PRODUCT SPECIFICATIONS**



# Gripping force diagram



#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	13
My_L [Nm]	40	Mx [Nm]	13
Fa_L [N]	500	My [Nm]	10
		Fa [N]	325

	► Technical data
Order no.	LWR50L-23-00007-A
General data	
Control	1/0
Operating temperature [°C]	5 +60
Protection to IEC 60529	IP40
Weight [kg]	0.97
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-01/02
Integrated position sensing	Analog 0 to 10 V
Cable management	external
Type of drive	electrical
Stroke per jaw [mm]	13
Gripping force safety device	mechanical
Gripping force in closing (adjustable) max. [N]	360
Gripping force in opening (adjustable) max. [N]	360
Closing time [s]	0.23
Opening time [s]	0.23
Control time [s]	0.055
Dead weight of mounted gripper finger max. [kg]	0.15
Length of the gripper fingers max. [mm]	100
Repetition accuracy +/- [mm]	0.02
Voltage [V]	24
Current consumption max. [A]	2
Minimum positioning path per jaw [mm]	0.5



### **CONNECTIONS / OTHER**



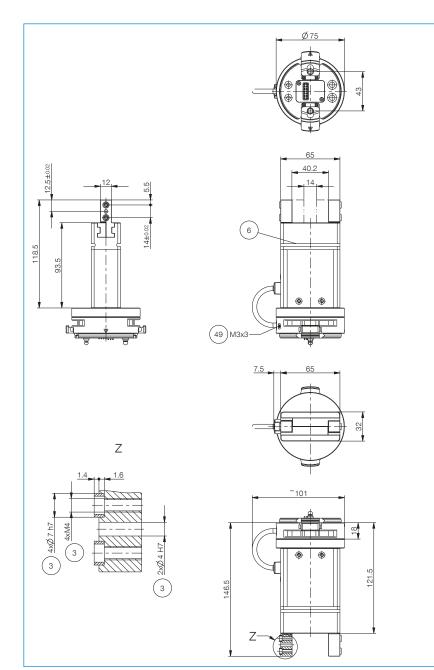
ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m  $\,$  - Connector M8  $\,$ 



- (3) Fixing for gripper finger(6) Integrated slot for magnetic field sensor(49) Ground



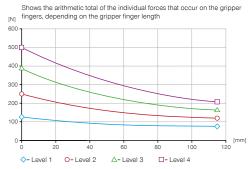
### 2-JAW PARALLEL GRIPPERS

# LWR50L-23-00008-A

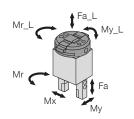
#### **▶ PRODUCT SPECIFICATIONS**



Gripping force diagram



#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	28
My_L [Nm]	40	Mx [Nm]	28
Fa_L [N]	500	My [Nm]	20
		Fa [N]	450

	► Technical data
Order no.	LWR50L-23-00008-A
General data	
Control	1/0
Operating temperature [°C]	5 +60
Protection to IEC 60529	IP40
Weight [kg]	1.4
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F-xx-01/02
Integrated position sensing	Analog 0 to 10 V
Cable management	external
Type of drive	electrical
Stroke per jaw [mm]	16
Gripping force safety device	mechanical
Gripping force in closing (adjustable) max. [N]	500
Gripping force in opening (adjustable) max. [N]	500
Closing time [s]	0.30
Opening time [s]	0.30
Control time [s]	0.055
Dead weight of mounted gripper finger max. [kg]	0.21
Length of the gripper fingers max. [mm]	120
Repetition accuracy +/- [mm]	0.02
Voltage [V]	24
Current consumption max. [A]	2
Minimum positioning path per jaw [mm]	0.5



### **CONNECTIONS / OTHER**



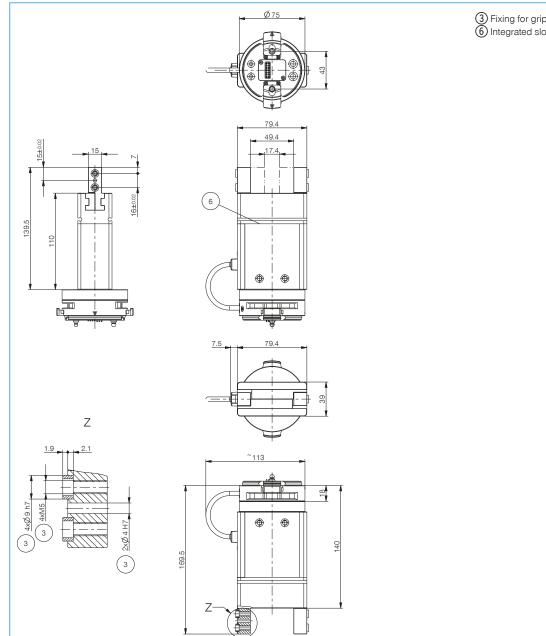
ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m  $\,$  - Connector M8  $\,$ 



- (3) Fixing for gripper finger(6) Integrated slot for magnetic field sensor



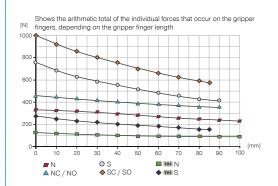
# **MATCH - GRIPPERS**

# LWR50L-24-00001/2/3/4/5/6-A

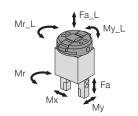
#### **▶ PRODUCT SPECIFICATIONS**



#### Gripping force diagram



#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	43
My_L [Nm]	40	Mx [Nm]	70
Fa_L [N]	500	My [Nm]	46
		Fa [N]	1250

	► Technical data					
Order no.	LWR50L-24-00001-A	LWR50L-24-00002-A	LWR50L-24-00003-A	LWR50L-24-00004-A	LWR50L-24-00005-A	LWR50L-24-00006-A
General data						
Control	IO-Link	IO-Link	IO-Link	IO-Link	IO-Link	IO-Link
Operating temperature [°C]	+5 +50	+5 +50	+5 +50	+5 +50	+5 +50	+5 +50
Protection to IEC 60529	IP40	IP40	IP40	IP40	IP40	IP40
Weight [kg]	1.4	1.4	1.4	1.4	1.4	1.4
Tool changer specific data						
Electrical energy transfer	integrated	integrated	integrated	integrated	integrated	integrated
Locking stroke [mm]	1	1	1	1	1	1
Repetition accuracy in X, Y [mm]	0.05	0.05	0.05	0.05	0.05	0.05
Repetition accuracy in Z [mm]	0.05	0.05	0.05	0.05	0.05	0.05
Tightening force [N]	50	50	50	50	50	50
Release force [N]	0	0	0	0	0	0
Offset at coupling max. in X,Y [mm]	1.0	1.0	1.0	1.0	1.0	1.0
Gripper specific data						
Suitable for series	LWR50F-xx-03/04/05	LWR50F-xx-03/04/05	LWR50F-xx-03/04/05	LWR50F-xx-03/04/05	LWR50F-xx-03/04/05	LWR50F-xx-03/04/05
Type of drive	pneumatic	pneumatically intelligent				
Stroke per jaw [mm]	6	6	6	3	3	3
Gripping force in closing [N]	330	455		740	1020	
Gripping force in opening [N]	360		485	800		1080
Gripping force secured by spring min. [N]		125	125		280	280
Cycle count max. [cycle/min]	360	250	250	360	250	250
Dead weight of mounted gripper finger max.  [kg]	0.4	0.4	0.4	0.4	0.4	0.4
Length of the gripper fingers max. [mm]	100	90	90	90	85	85
Repetition accuracy +/- [mm]	0.01	0.01	0.01	0.01	0.01	0.01
Operating pressure [bar]	3 8	4 7	4 7	3 8	4 7	4 7
Nominal operating pressure [bar]	6	6	6	6	6	6
Air volume per cycle [cm³]	11	24	24	11	24	24
Integrated valve technology	Yes	Yes	Yes	Yes	Yes	Yes
Position sensing	integrated	integrated	integrated	integrated	integrated	integrated
Position sensing using process data	Yes	Yes	Yes	Yes	Yes	Yes
Voltage [V]	24	24	24	24	24	24
Current consumption max. [A]	0.10	0.10	0.10	0.10	0.10	0.10



### **CONNECTIONS / OTHER**



ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION

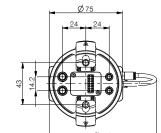


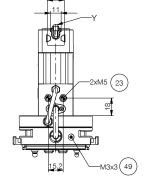
NC/NO/SC/SO

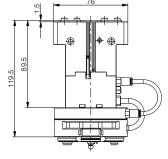
NJ5-E2SK-01

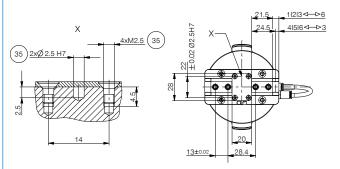
Inductive Proximity Switch Cable 0,3 m - Connector M8

\_4x Ø 6h7 (3 )



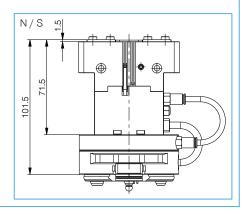








- ③ Fixing for gripper finger② Ventilation (R+S: In dirty environments, replace filters with actual exhaust hoses and move the exhaust air outlet to a clean environment)
- 35 Attachment option for customer-specific fittings
- 49 Ground
- 61 Status display





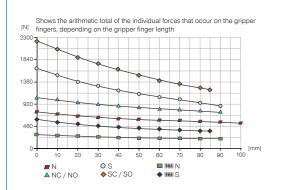
### **MATCH - GRIPPERS**

# LWR50L-25-00001/2/3/4/5/6-A

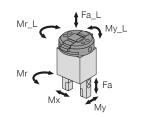
#### **▶ PRODUCT SPECIFICATIONS**



#### Gripping force diagram



#### Forces and moments



Mr_L [Nm]	20	Mr [Nm]	43
My_L [Nm]	40	Mx [Nm]	70
Fa_L [N]	500	My [Nm]	46
		Fa [N]	1250

	► Technical da	ata				
Order no.	LWR50L-25-00001-A	LWR50L-25-00002-A	LWR50L-25-00003-A	LWR50L-25-00004-A	LWR50L-25-00005-A	LWR50L-25-00006-A
General data						
Control	IO-Link	IO-Link	IO-Link	IO-Link	IO-Link	IO-Link
Operating temperature [°C]	+5 +50	+5 +50	+5 +50	+5 +50	+5 +50	+5 +50
Protection to IEC 60529	IP40	IP40	IP40	IP40	IP40	IP40
Weight [kg]	1.7	1.8	1.8	1.7	1.8	1.8
Tool changer specific data						
Electrical energy transfer	integrated	integrated	integrated	integrated	integrated	integrated
Locking stroke [mm]	1	1	1	1	1	1
Repetition accuracy in X, Y [mm]	0.05	0.05	0.05	0.05	0.05	0.05
Repetition accuracy in Z [mm]	0.05	0.05	0.05	0.05	0.05	0.05
Tightening force [N]	50	50	50	50	50	50
Release force [N]	0	0	0	0	0	0
Offset at coupling max. in X,Y [mm]	1.0	1.0	1.0	1.0	1.0	1.0
Gripper specific data						
Suitable for series	LWR50F-xx-03/04/05	LWR50F-xx-03/04/05	LWR50F-xx-03/04/05	LWR50F-xx-03/04/05	LWR50F-xx-03/04/05	LWR50F-xx-03/04/05
Type of drive	pneumatically intelligent					
Stroke per jaw [mm]	6	6	6	3	3	3
Gripping force in closing [N]	740	1020		1620	2240	
Gripping force in opening [N]	800		1080	1750		2370
Gripping force secured by spring min. [N]		280	280		620	620
Cycle count max. [cycle/min]	330	230	230	330	230	230
Dead weight of mounted gripper finger max. [kg]	0.4	0.4	0.4	0.4	0.4	0.4
Length of the gripper fingers max. [mm]	100	90	90	90	85	85
Repetition accuracy +/- [mm]	0.01	0.01	0.01	0.01	0.01	0.01
Operating pressure [bar]	3 8	4 7	4 7	3 8	4 7	4 7
Nominal operating pressure [bar]	6	6	6	6	6	6
Air volume per cycle [cm³]	22	43	43	22	43	43
Integrated valve technology	Yes	Yes	Yes	Yes	Yes	Yes
Position sensing	integrated	integrated	integrated	integrated	integrated	integrated
Position sensing using process data	Yes	Yes	Yes	Yes	Yes	Yes
Voltage [V]	24	24	24	24	24	24
Current consumption max. [A]	0.10	0.10	0.10	0.10	0.10	0.10



### **CONNECTIONS / OTHER**



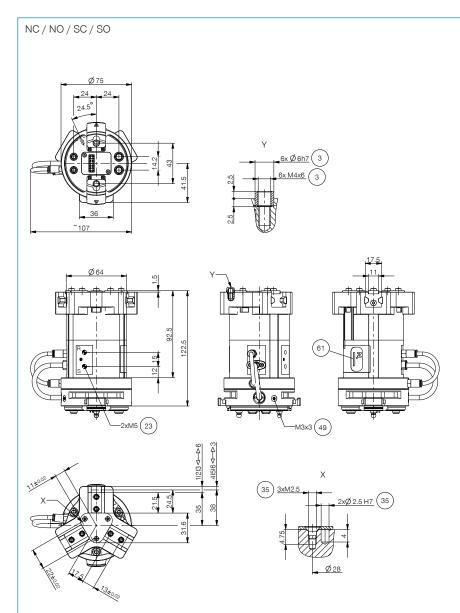
ALWR1-50-A MATCH - Storage station

#### RECOMMENDED ACCESSORY STORAGE STATION

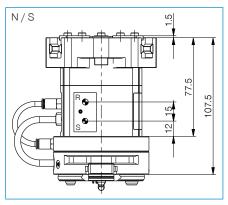


NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m - Connector M8



- ③ Fixing for gripper finger② Ventilation (R+S: In dirty environments, replace filters with actual exhaust hoses and move the exhaust air outlet to a clean environment)
- 35 Attachment option for customer-specific fittings
- (49) Ground
- 61 Status display





# **MAGNETIC GRIPPER**

# LWR50L-26-00001-A

#### **▶ PRODUCT SPECIFICATIONS**



#### Forces and moments Shows static forces and moments



Mr_L [Nm]	20
My_L [Nm]	40
Fa_L [N]	500

	► Technical data
Order no.	LWR50L-26-00001-A
General data	
Operating temperature [°C]	5 +80
Protection to IEC 60529	IP40
Weight [kg]	0.44
Tool changer specific data	
Pneumatic energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F
Adhesive force max. [N]	27
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Air volume per cycle [cm³]	3.5



### **CONNECTIONS / OTHER**



ALWR1-50-A MATCH - Storage station

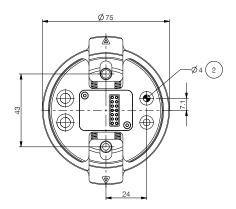
#### RECOMMENDED ACCESSORY STORAGE STATION

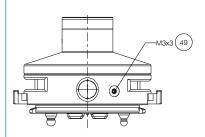


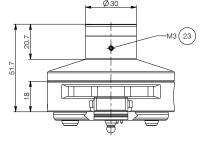
NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m  $\,$  - Connector M8  $\,$ 

② Energy supply ② Filter ④ Ground









# **MAGNETIC GRIPPER**

# LWR50L-26-00002-A

#### **▶ PRODUCT SPECIFICATIONS**



#### Forces and moments



Mr_L [Nm]	20
My_L [Nm]	40
Fa_L [N]	500

	► Technical data
Order no.	LWR50L-26-00002-A
General data	
Operating temperature [°C]	5 +80
Protection to IEC 60529	IP40
Weight [kg]	0.6
Tool changer specific data	
Pneumatic energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F
Adhesive force max. [N]	65
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Air volume per cycle [cm³]	9



### **CONNECTIONS / OTHER**



ALWR1-50-A MATCH - Storage station

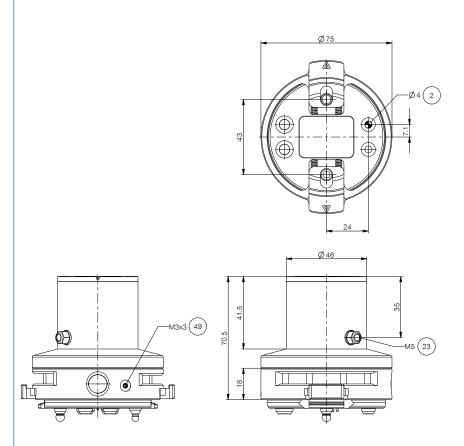
#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m - Connector M8

② Energy supply ② Filter ④ Ground





# **MAGNETIC GRIPPER**

# LWR50L-26-00003-A

#### **▶ PRODUCT SPECIFICATIONS**



### Forces and moments



Mr_L [Nm]	20
My_L [Nm]	40
Fa_L [N]	500

	Technical data
Order no.	LWR50L-26-00003-A
General data	
Operating temperature [°C]	5 +80
Protection to IEC 60529	IP40
Weight [kg]	1.4
Tool changer specific data	
Pneumatic energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F
Adhesive force max. [N]	220
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Air volume per cycle [cm³]	75



### **CONNECTIONS / OTHER**



ALWR1-50-A MATCH - Storage station

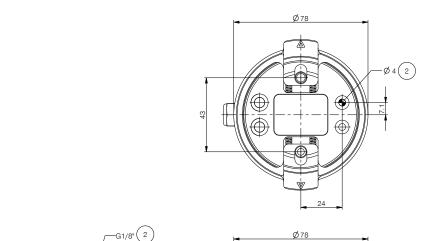
#### > RECOMMENDED ACCESSORY STORAGE STATION

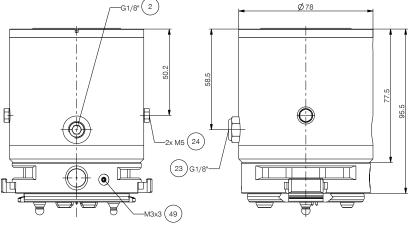


NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m - Connector M8

② Energy supply ③ Filter ④ Safety screw / dummy plug ④ Ground







### **NEEDLE GRIPPER**

# LWR50L-27-00001-A

#### **▶ PRODUCT SPECIFICATIONS**



#### Forces and moments



Mr_L [Nm]	20
My_L [Nm]	40
Fa_L [N]	500

	Technical data
Order no.	LWR50L-27-00001-A
General data	
Operating temperature [°C]	5 +80
Protection to IEC 60529	IP30
Weight [kg]	0.69
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F
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
Air volume per cycle [cm <sup>3</sup> ]	1



### **CONNECTIONS / OTHER**



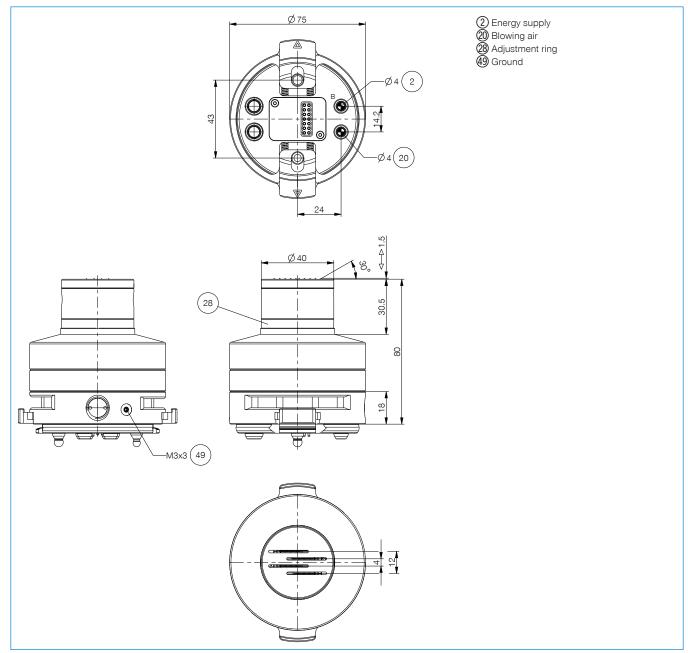
ALWR1-50-A MATCH - Storage station

#### > RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m - Connector M8





# O-RING ASSEMBLY GRIPPERS, OUTER

# LWR50L-28-00001-A

#### **▶ PRODUCT SPECIFICATIONS**



#### Forces and moments



Mr_L [Nm]	20
My_L [Nm]	40
Fa L [N]	500

	► Technical data
Order no.	LWR50L-28-00001-A
General data	
Operating temperature [°C]	5 +80
Protection to IEC 60529	IP30
Weight [kg]	0.99
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
Suitable for series	LWR50F
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



#### **GRIPPING COMPONENTS**



### **CONNECTIONS / OTHER**



**UB65-3** Ejector jaw set aluminium 6 [piece]



ALWR1-50-A MATCH - Storage station



#### UB65-4

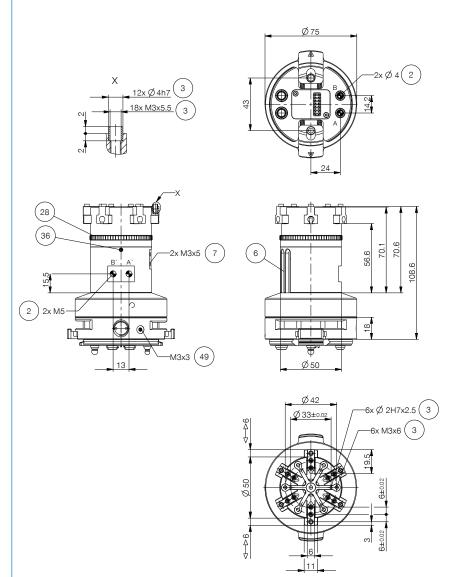
Expanding jaw set steel 6 [piece]

#### ► RECOMMENDED ACCESSORY STORAGE STATION



#### NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m - Connector M8



- Energy supply
   Fixing for gripper finger
   Integrated slot for magnetic field sensor
   Fixing for mounting block

- 28 Adjustment ring
  36 Arrestor for adjustment ring
  49 Ground

# **MATCH - ANGLE FLANGE SERIES LWR**

#### PRODUCT ADVANTAGES



#### Standardized

Angle flange optimized for the MATCH end-of-arm ecosystem. Rapid change within seconds, suitable for all robots.

#### Simplest integration

Direct and simple integration of IO-Link grippers from GEP2000, GEP5000, GEH6000IL and GPD5000IL series.

#### ► Low interference contour

Compressed air and IO-Link control integrated directly. Optionally available with outlet nozzle and programming tip.

#### 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



### ► STEP 1: ROBOT MODULE

Order no.	LWR50F-13-04-A	LWR50F-00-06-A
Suitable for robot type	ABB CRB 15000 GoFa*	ISO TK 50**

<sup>\*</sup>Current draw max. 2 A

#### > STEP 2: ANGLE FLANGE

Order no.	LWR50L-29-00001-A
Suitable for series	LWR50F-xx-06

#### ► STEP 3: ADAPTER PLATE

Suitable for grippers         GEP2006IL-00-B / GEP2016IL-00-B / GEP2016IL-00-B / GEP2016IL-03-B / GEP2016IL-03	Order no.	APRTK50-50	APRTK50-51	APRTK50-52	APRTK50-53
GEH6060IL-31-B	Suitable for grippers	GEP2006IL-03-B / GEP2010IL-00-B / GEP2010IL-03-B /	GEP2016IL-03-B / GEP5006IL-00-A / GEH6040IL-03-B / GEH6040IL-31-B / GEH6060IL-03-B /	,	GPD5006NC-IL-10-A / GPD5006NO-IL-10-A / GPD5006S-IL-10-A /

#### ► STEP 4: ACCESSORIES

Order no.	DUWFR01	SPWFR01
Design	Outlet nozzle	Programming tip

<sup>\*\*</sup>Mechanical assembly compatible to all robots with standard ISO PCD 50 mm. Electrical connection via standard IO-Link M12-5 female connector.

### **MATCH - ANGLE FLANGE**

### LWR50L-29-00001-A

#### PRODUCT SPECIFICATIONS



#### Forces and moments

Shows static forces and moments



Mr_L [Nm]	20
My_L [Nm]	40
Fa_L [N]	500

#### RECOMMENDED ACCESSORIES



#### **GRIPPING COMPONENTS**



### **CONNECTIONS / OTHER**



**MO**TCH

LWR50F-13-04-A MATCH - Robot module



APRTK50-52



LWR50F-00-06-A MATCH - Robot module



APRTK50-53 Adapter plate



### **CONNECTIONS / OTHER**



DUWFR01 Outlet nozzle



WVM5 Angled Fittings - Quick Connect Style



SPWFR01 Programming tip



APRTK50-50 Adapter plate



ALWR1-50-A MATCH - Storage station



APRTK50-51 Adapter plate

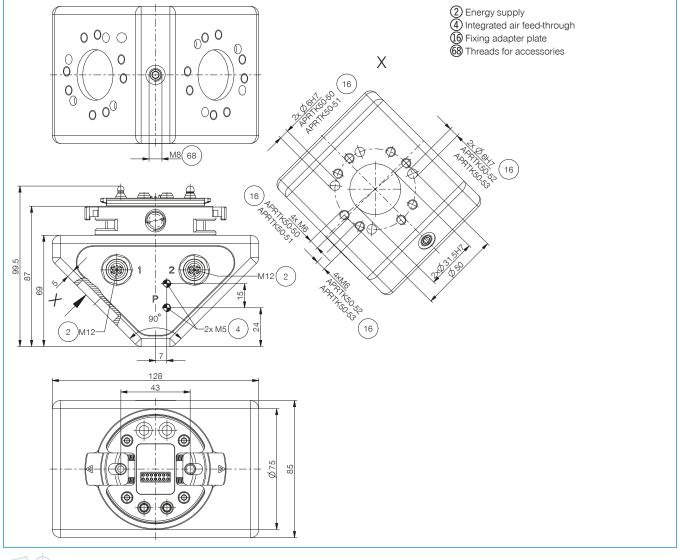
#### RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01

Inductive Proximity Switch Cable 0,3 m - Connector M8

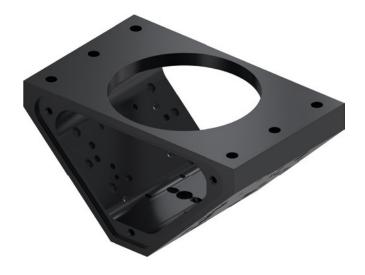
	► Technical data
Order no.	LWR50L-29-00001-A
Suitable for series	LWR50F-xx-06
Pneumatic energy transfer	integrated
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 +50
Protection to IEC 60529	IP40
Weight [kg]	1.2

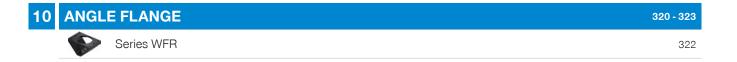






# **ANGLE FLANGE OVERVIEW OF SERIES**





### **ANGLE FLANGE SERIES WFR**



#### Flexible connection to your robot

The adapter plates are manufactured in accordance with EN ISO 9409-1 and therefore fit most robot types from a wide range of manufacturers.

#### Step 1: Select adapter plate

Simply determine the pitch circle diameter of the robot flange and you will receive the appropriate adapter plate.



#### **Over 50 different variants**

Adapter plate and angular flange can be combined with 13 different grippers - resulting in over 50 different variants. Select your suitable gripper from our main catalog. There you will find a wide variety of designs, with or without gripping force safety device, with different protection classes or temperature-resistant.

#### Step 2: Select angular flange

Select the gripper and this will result in the right angle flange.



#### **Extend the functionality of your Angle flange**

Cover plate, discharge nozzle or programming pins, with the extensive accessory, you can quickly and individually integrate additional functions.

3rd step: Select accessories







#### ► STEP 1: ADAPTER PLATE

	Technica	l Data		
Order no.	APR01	APR02	APR03	APR05
Connecting flange according EN ISO 9409-1	TK 40	TK 50	TK 100	TK 31.5



#### > STEP 2: ANGLE FLANGE

	► Technical Data	
Order no.	WFR03	WFR04
Compatible with installation size	GPP5004 / GPP5006 / GEP5006 / GPD5004 / GPD5006 / GED5006	GPP5008 / GPP5010 / GEP5008 / GPD5008 / GPD5010 / GED5008 / GPW5008



#### **► STEP 3: ACCESSORIES**

Order no.

Design	cover plate	cover plate
Compatible with	WFR03	WFR04
Order no.	DUWFR01	
Design	Outlet nozzle	
Compatible with	WFR03 / WFR04	
Order no.	SPWFR01	
Design	Programming tip	
Compatible with	WFR03 / WFR04	

Technical Data ABWFR01

ABWFR02



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All of the products listed in this catalog are designed for their intended use, e.g. machines for automation. The recognized technical regulations for safety and professional work must be followed for use and installation.

Furthermore, the respective laws, guidelines from TÜV, guidelines from the respective trade association and VDE stipulations shall apply.

The technical data listed in this catalog must be observed by the user. The user must not exceed or fail to meet the specified data. If that information is missing, it cannot be assumed that there are no upper or lower limits or no limitations for specific use cases. For unusual applications, please always consult us for advice.

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# USAGE NOTE INDIVIDUAL

# DECLARATION OF INCORPORATION IN TERMS OF THE EC DIRECTIVE 2006/42/EC ON MACHINERY (ANNEX II 1 B)

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.