



Handling technology 2

Robot accessories

- + Manual tool changers
- + Pneumatic tool changers
- + Rotary distributors
- + Axis compensation modules
- + Crash protection

THE KNOW-HOW FACTORY



“WE ARE PLEASED TO BE TAKING A MAJOR STEP INTO THE FUTURE WITH ZIMMER GROUP. THE UMBRELLA BRAND ZIMMER GROUP SYMBOLIZES OUTWARDLY WHAT WE HAVE ALREADY INTERNALIZED – THE UNITY OF PREVIOUSLY SEPARATE COMPANIES.

AS ZIMMER GROUP, OUR FAMILY-RUN ENTERPRISE CAN DELIVER EVEN GREATER VALUE AND SUPPORT FOR OUR CUSTOMERS.

NOW AND IN THE FUTURE. CONTINUING OUR INTERNATIONALIZATION, ENGAGING WITH ALL INDUSTRIES, AND SOLVING ALL TYPES OF DEVELOPMENT TASKS ARE SOME OF THE CHALLENGES THAT WE WILL OVERCOME AS THE KNOW-HOW FACTORY.”

GÜNTHER ZIMMER, MARTIN ZIMMER AND ACHIM GAUSS

Managing Directors, from left to right



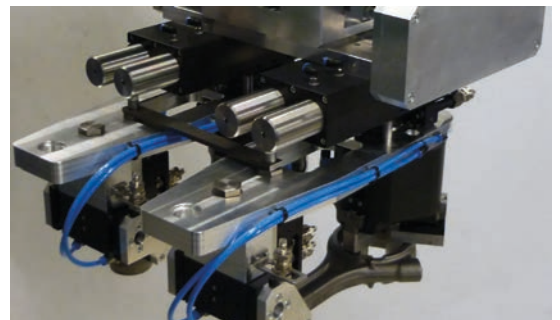
ZIMMER GROUP COMMITTED TO OUR CUSTOMERS

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

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

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

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



TECHNOLOGIES



HANDLING TECHNOLOGY

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

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

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



DAMPING TECHNOLOGY

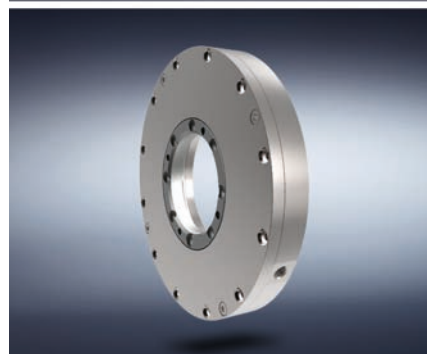
INDUSTRIAL DAMPING TECHNOLOGY AND SOFT CLOSE PRODUCTS EXEMPLIFY THE INNOVATION AND PIONEERING SPIRIT OF THE KNOW-HOW FACTORY.

Industrial damping technology.

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

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

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



LINEAR TECHNOLOGY

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

Clamping and braking elements.

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

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



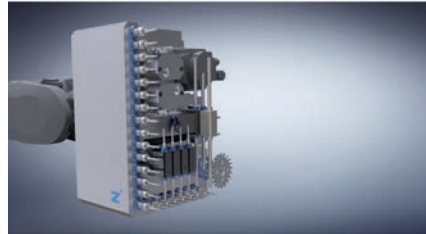
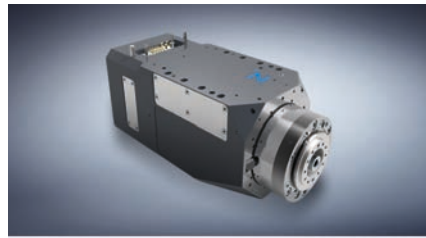
PROCESS TECHNOLOGY

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

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

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

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



MACHINE TECHNOLOGY

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

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

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

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



SYSTEM TECHNOLOGY

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












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

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

ROBOT ACCESSORIES

OVERVIEW OF SERIES



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TOOL CHANGERS MANUAL

OVERVIEW OF SERIES



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TOOL CHANGERS

SERIES HWR2000

1

▶ 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



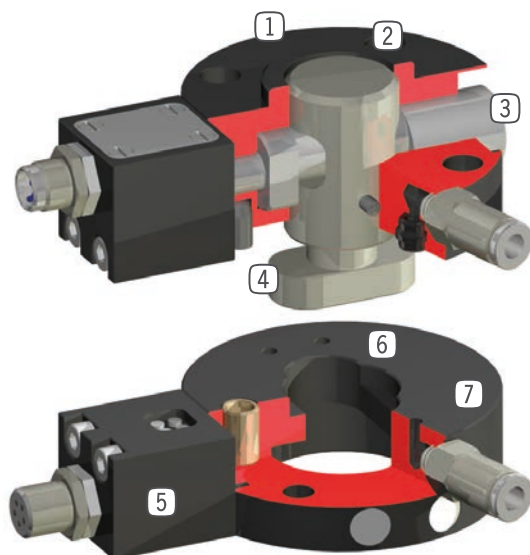
▶ **Our products welcome the challenge!**

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.de

► 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 **Pre-assembled standard energy element**
- ⑥ **Integrated air feed-through**
- air / vacuum transfer from fix to loose part, hoseless control possible
- ⑦ **Loose part**
- for tool side assembly

► FURTHER INFORMATION IS AVAILABLE ONLINE



► Technical Information

All information just a click away at: www.zimmer-group.com

Find data, illustrations, 3-D models and operating instructions for your installation size using the order number for your desired product.

Quick, clear and always up-to-date.



TOOL CHANGERS

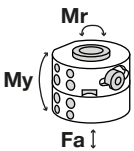
INSTALLATION SIZE HWR2031

▶ PRODUCT SPECIFICATIONS



▶ 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

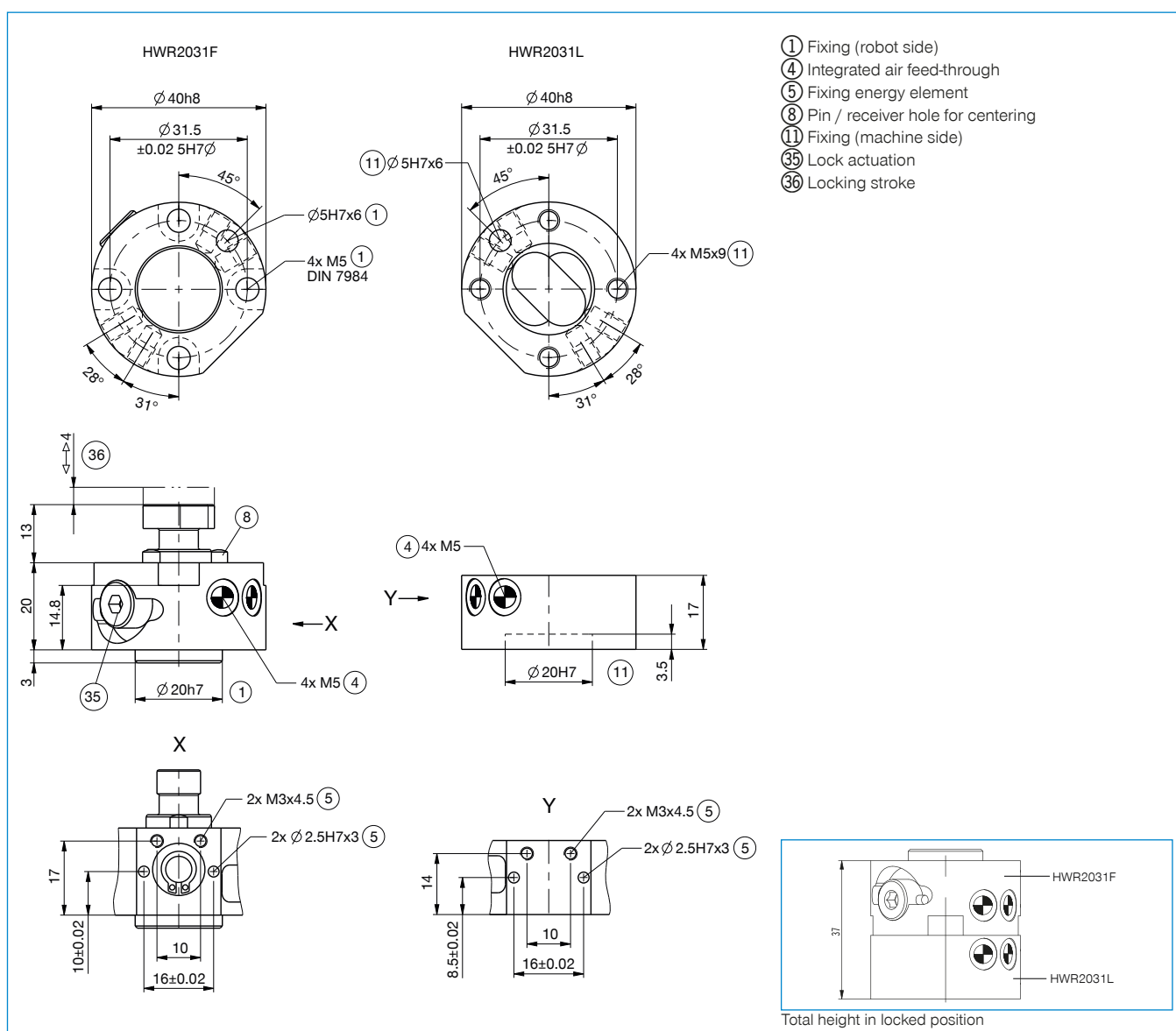


Straight Fittings - Quick Connect Style
GVM5



Energy Elements see page 18

Order no.	Technical Data	
	HWR2031F	HWR2031L
Connecting flange according EN ISO 9409-1	TK31,5	TK31,5
Recommended handling weight [kg]	5	5
Pneumatic energy transfer [Quantity]	4	4
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
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Moment of inertia [kg/cm ²]	0.13	0.1
Weight [kg]	0.09	0.04



TOOL CHANGERS

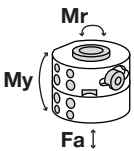
INSTALLATION SIZE HWR2040

▶ PRODUCT SPECIFICATIONS



▶ 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



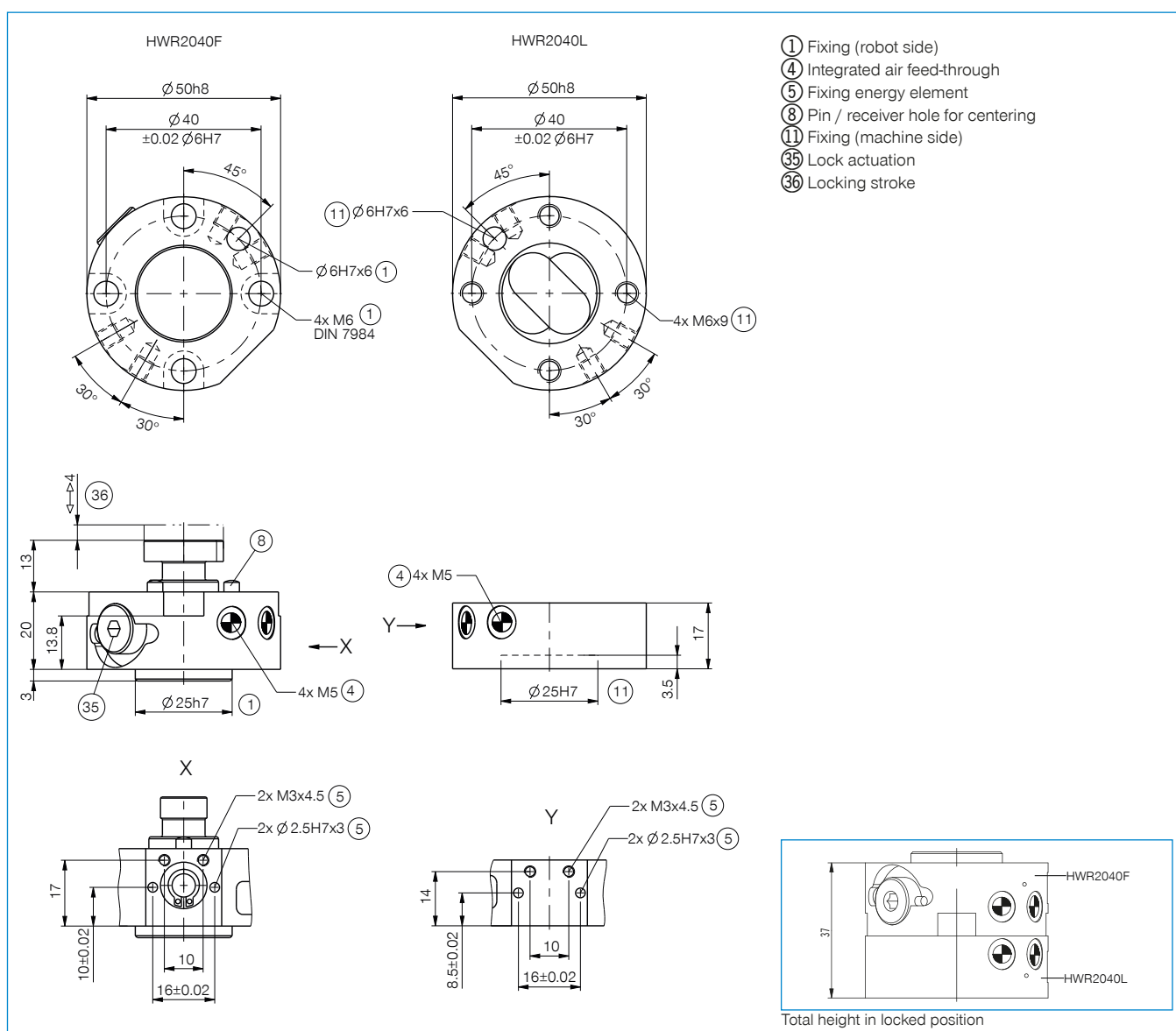
Straight Fittings - Quick Connect Style

GVM5



Energy Elements see page 18

Order no.	Technical Data	
	HWR2040F	HWR2040L
Connecting flange according EN ISO 9409-1	TK40	TK40
Recommended handling weight [kg]	10	10
Pneumatic energy transfer [Quantity]	4	4
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
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Moment of inertia [kg/cm ²]	0.33	0.26
Weight [kg]	0.145	0.07



TOOL CHANGERS

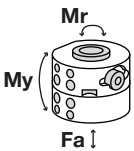
INSTALLATION SIZE HWR2050

▶ PRODUCT SPECIFICATIONS



▶ 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

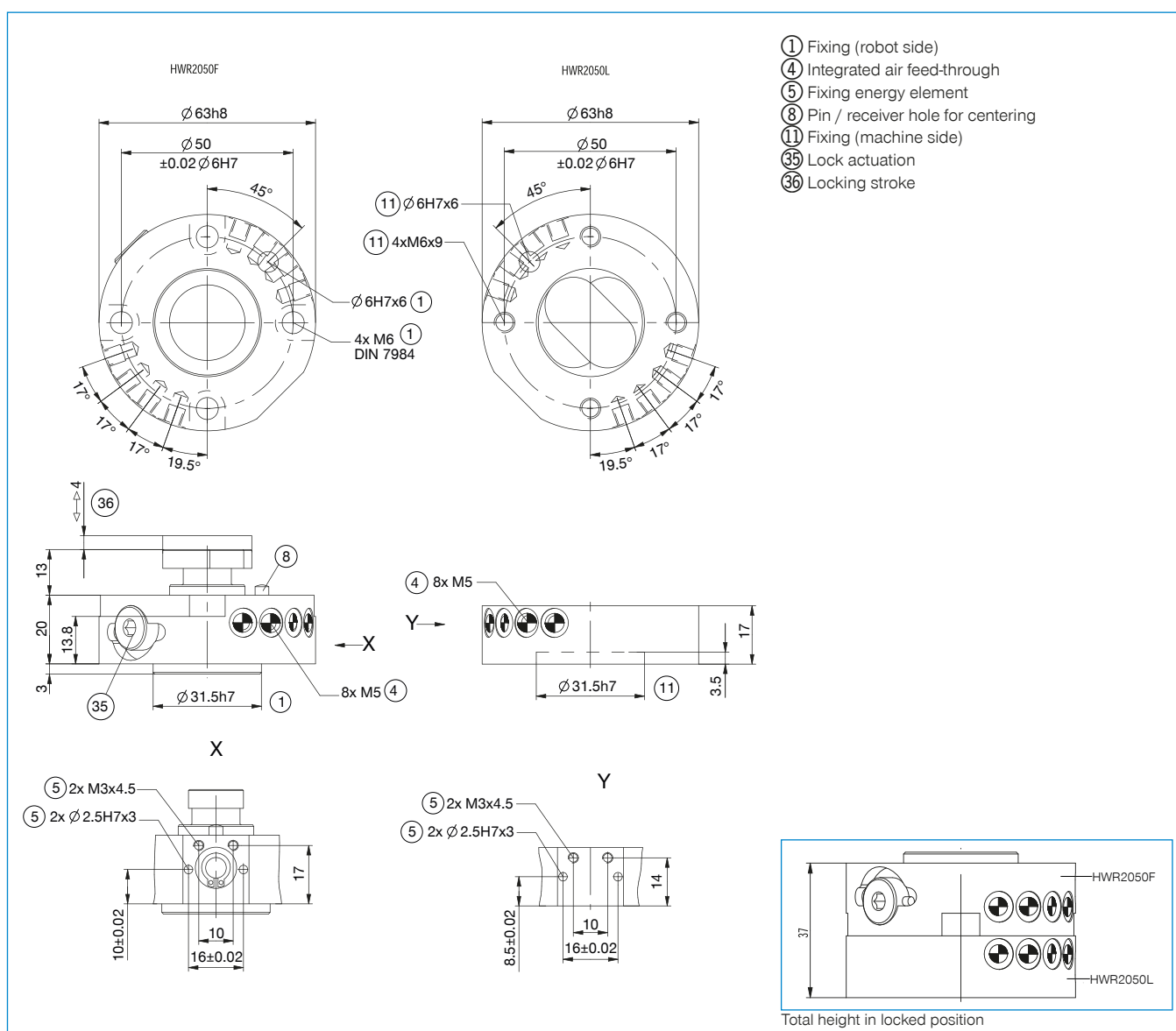


Straight Fittings - Quick Connect Style
GVM5



Energy Elements see page 18

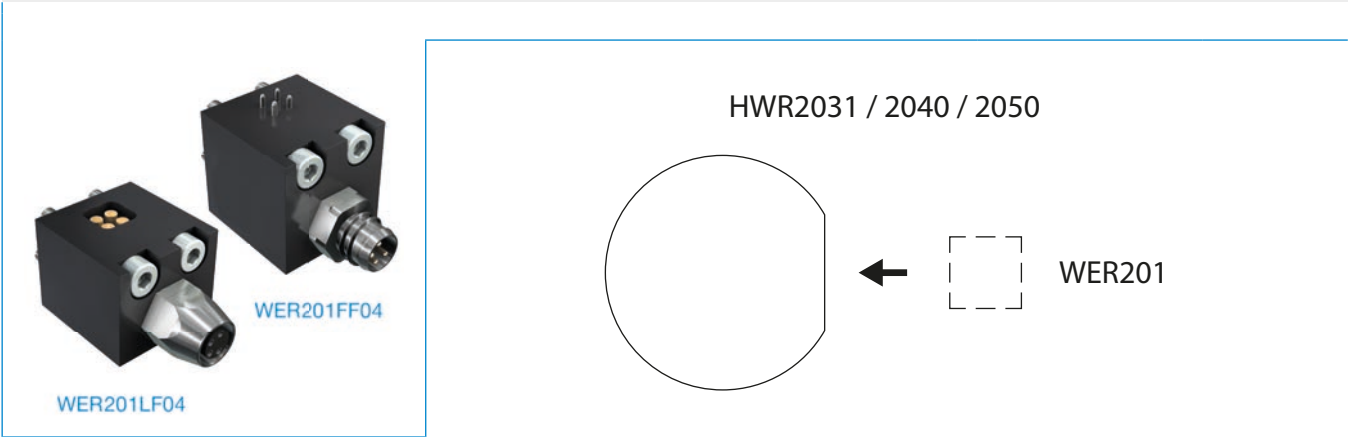
Order no.	Technical Data	
	HWR2050F	HWR2050L
Connecting flange according EN ISO 9409-1	TK 50	TK 50
Recommended handling weight [kg]	20	20
Pneumatic energy transfer [Quantity]	8	8
Electrical energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	4	-
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Moment of inertia [kg/cm ²]	0.86	0.67
Weight [kg]	0.23	0.115



ENERGY ELEMENTS FOR TOOL CHANGER

SIZES HWR2031 / HWR2040 / HWR2050

PRODUCT SPECIFICATIONS



ELECTRICAL

Order no.	Technical Data	
	WER201FF04	WER201LF04
compatible with	Fix part	Loose part
Connection type	Spring contact	Spring contact
Round Connector [Straight] *	KAG500B4	KAG500S4
Round Connector [Angle] *	KAW500B4	KAW500S4
Fixing thread	M8	M8
No. of contacts	4	4
Nominal current [A]	3	3
Supply voltage [V AC]	60	60
Supply voltage [V DC] **	75	75
Weight [kg]	0.03	0.03
Connection type	Male	Socket

*als Zubehör erhältlich see page 63
 **Specifications for on-site grounding, 60V without grounding

TOOL CHANGERS

SERIES HWR

1

► 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



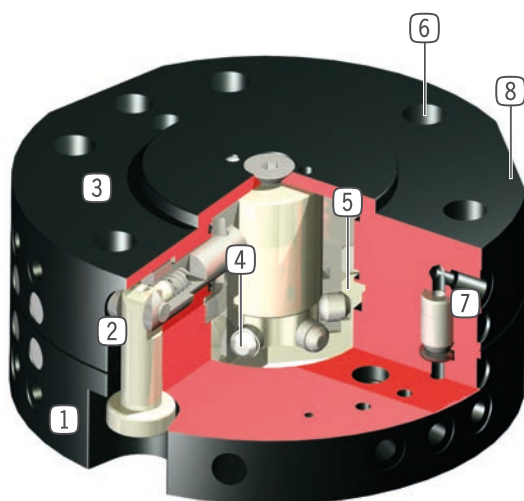
► Our products welcome the challenge!

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.de

► 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 / vacuum transfer from fix to loose part, hoseless control possible
- ⑧ **Mounting for energy element**

► FURTHER INFORMATION IS AVAILABLE ONLINE



► Technical Information

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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.



TOOL CHANGERS

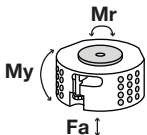
INSTALLATION SIZE HWR63

▶ PRODUCT SPECIFICATIONS



▶ 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



O-Ring

COR0050100

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style
GVM5

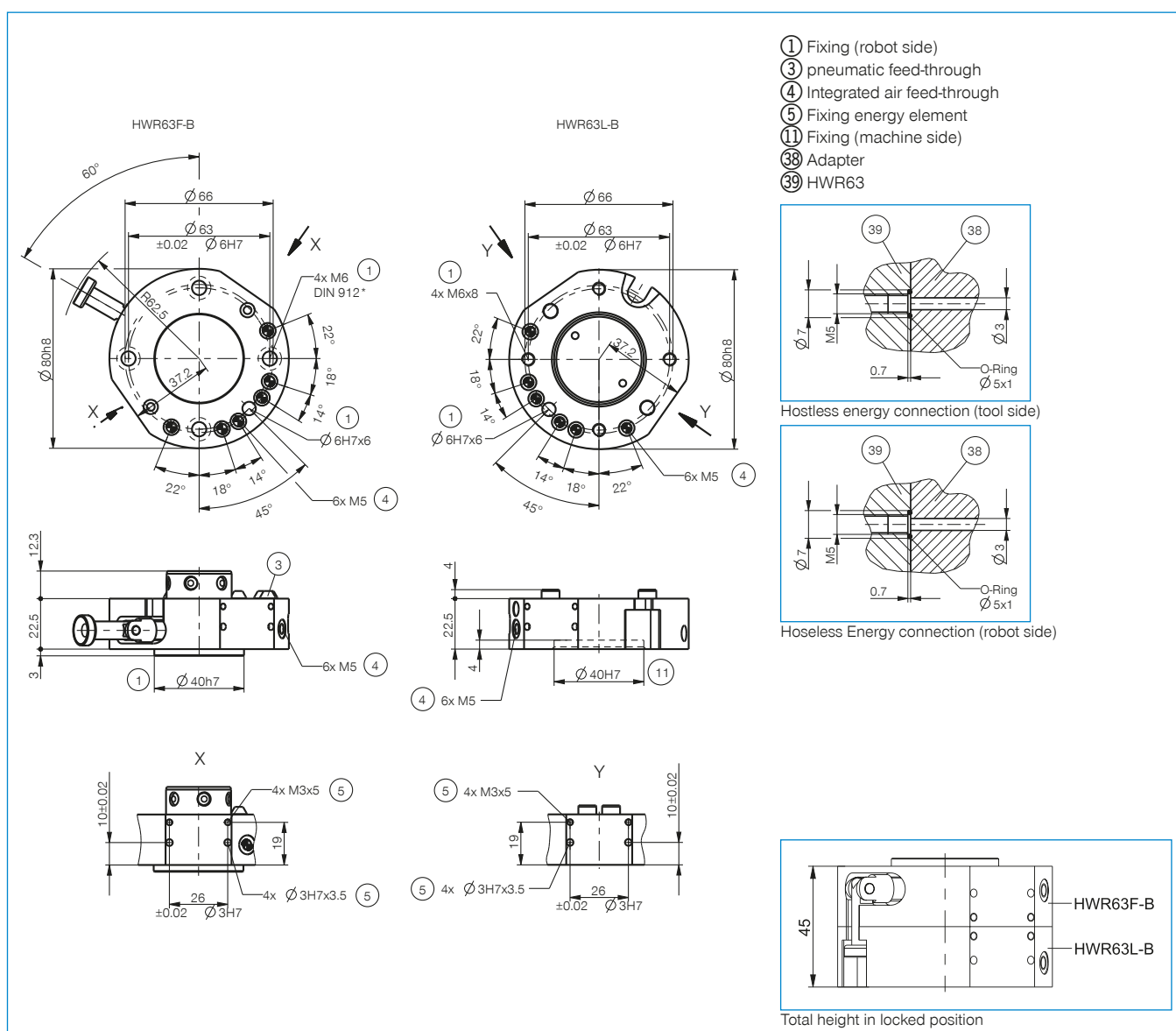


Angled Fittings - Quick Connect Style
WVM5



Energy Elements see page 26

Order no.	Technical Data	
	HWR63F-B	HWR63L-B
Connecting flange according EN ISO 9409-1	TK 63	TK 63
Recommended handling weight [kg]	50	50
Pneumatic energy transfer [Quantity]	6	6
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
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Moment of inertia [kg/cm ²]	3.8	2.6
Weight [kg]	0.45	0.3



TOOL CHANGERS

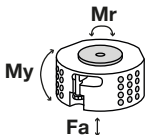
INSTALLATION SIZE HWR80

▶ PRODUCT SPECIFICATIONS



▶ 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



O-Ring

COR0025100

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style
GVM5

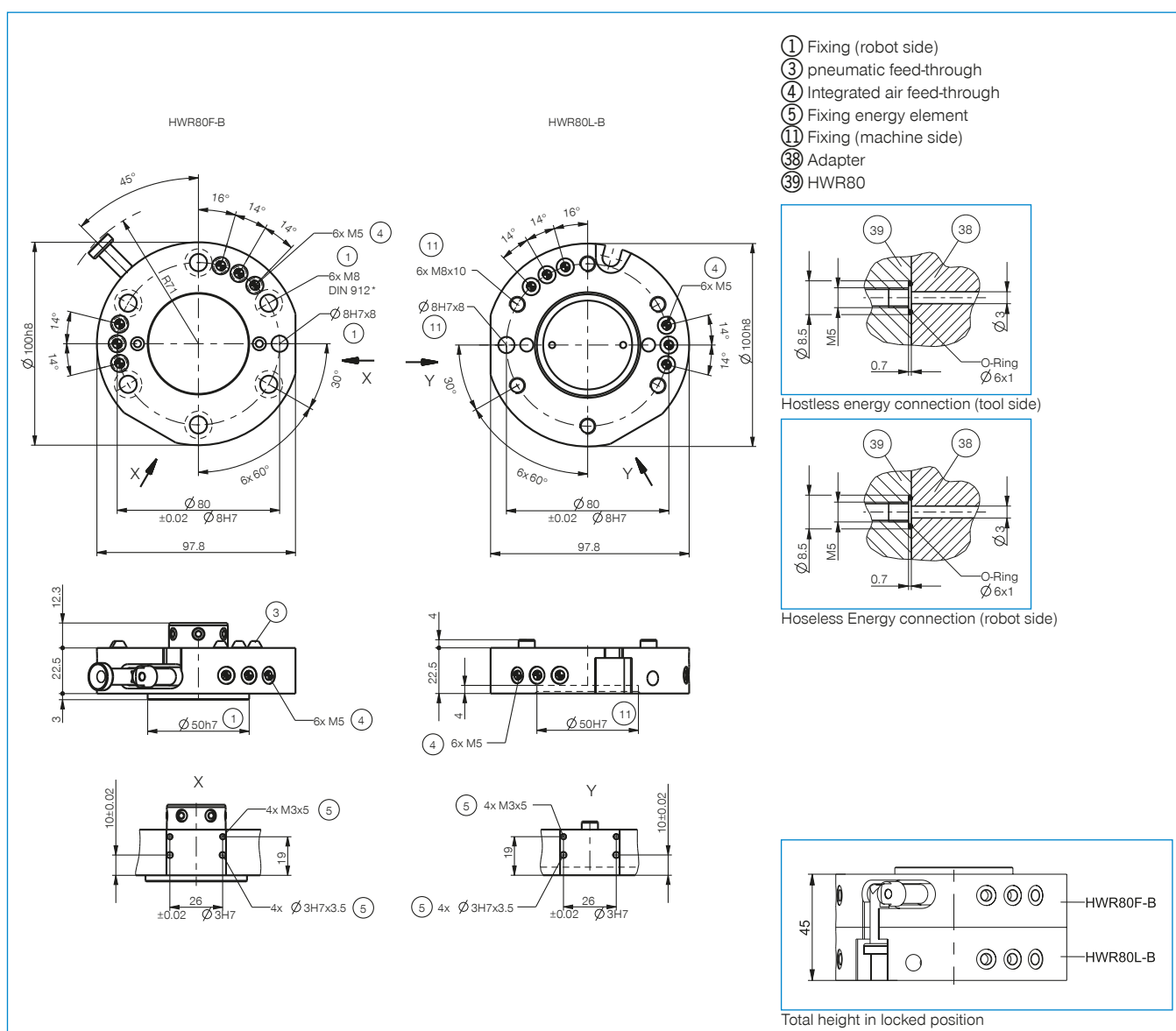


Angled Fittings - Quick Connect Style
WVM5



Energy Elements see page 26

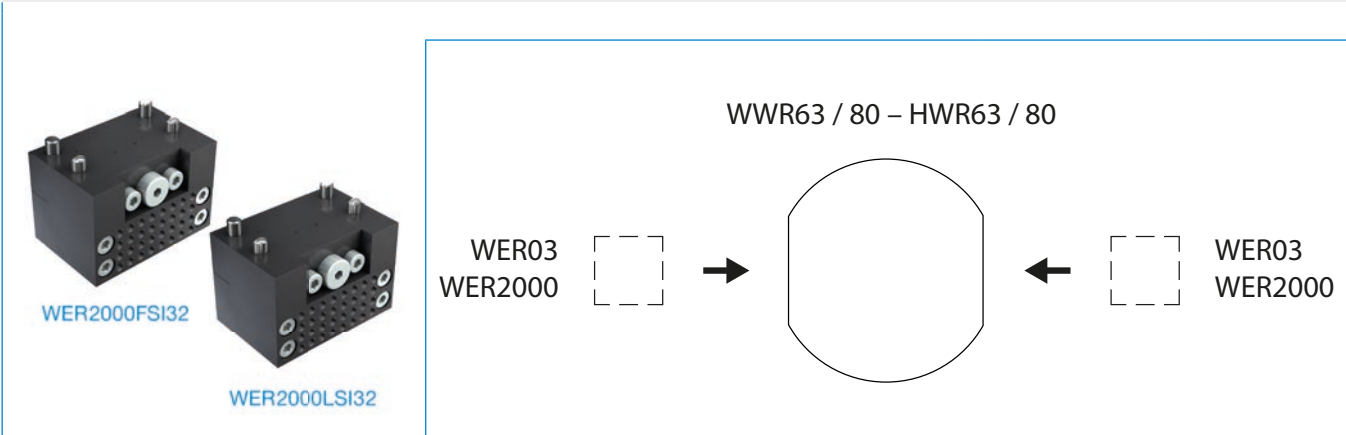
Order no.	Technical Data	
	HWR80F-B	HWR80L-B
Connecting flange according EN ISO 9409-1	TK 80	TK 80
Recommended handling weight [kg]	50	50
Pneumatic energy transfer [Quantity]	6	6
Electrical energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	1	-
Repetition accuracy in Z [mm]	0.01	0.01
Repetition accuracy in X, Y [mm]	0.02	0.02
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Moment of inertia [kg/cm ²]	3.36	2.8
Weight [kg]	0.66	0.48



ENERGY ELEMENTS FOR TOOL CHANGER

SIZES HWR63 / HWR80

▶ PRODUCT SPECIFICATIONS



▶ FLUIDIC

Order no.	▶ Technical Data					
	WER2000FPL06-00	WER2000LPL06-00	WER2000FPL02-06	WER2000LPL02-06	WER2000FPL01-03	WER2000LPL01-03
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Fixing thread	M5	M5	G1/8"	G1/8"	G1/4"	G1/4"
Number of fluid couplings	6	6	2	2	1	1
Operating pressure [bar]	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10
Weight [kg]	0.05	0.05	0.06	0.07	0.06	0.06

▶ ELECTRICAL

Order no.	▶ Technical Data					
	WER2000FSI32-05	WER2000LSI32-05	WER03FF04	WER03LF04	WER03FF09-B	WER03LF09-B
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Connection type	Spring contact	Spring contact	FST	FST	Spring contact	Spring contact
Round Connector [Straight] *	-	-	-	-	-	-
Round Connector [Angle] *	-	-	-	-	-	-
Fixing thread	-	-	-	-	-	-
No. of contacts	32	32	4	4	9	9
Nominal current [A]	3	3	3	3	3	3
Supply voltage [V AC]	60	60	60	60	60	60
Supply voltage [V DC] **	75	75	75	75	75	75
Weight [kg]	0.04	0.04	0.06	0.06	0.06	0.06
Connection type	Customizable	Customizable	Male	Socket	Plug / SUB-D	Socket / SUB-D

*als Zubehör erhältlich see page 63

**Specifications for on-site grounding, 60V without grounding

TOOL CHANGERS PNEUMATIC

OVERVIEW OF SERIES



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ENERGY ELEMENTS FOR TOOL CHANGER	60
Energy elements for tool changers of size WWR1160 / WWR1200	60
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TOOL CHANGERS

SERIES WWR

► PRODUCT ADVANTAGES



► **Secure hold during pressure drop**

A redundant system, created by the combination of spring accumulator and a self locking mechanism, guarantees a safe machine

► **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

► **Inexhaustible variety of media transfer systems**

No matter which medium you would like to transmit, we will draw from our wealth of experience in implementing projects and find a solution to suit your needs!

► THE BEST PRODUCT FOR YOUR APPLICATION



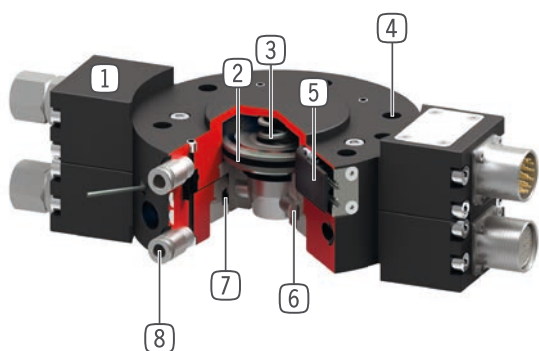
► **Our products welcome the challenge!**

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.de

► BENEFITS IN DETAIL



- ① **Energy element**
- included in scope of delivery
- ② **Drive**
- double-acting pneumatic cylinder
- ③ **Integrated spring**
- energy storage in case of drop in pressure
- ④ **Robot flange**
- partial mounting circle in accordance with EN ISO 9409-1
- ⑤ **Piston position sensing**
- via magnetic field sensors
- ⑥ **Locking bolt**
- adapted to the clamping sleeve
- ⑦ **Locking sleeve**
- high moment capacity
- ⑧ **Integrated air feed-through**
- air / vacuum transfer from fix to loose part, hoseless control possible

► FURTHER INFORMATION IS AVAILABLE ONLINE



► Technical Information

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TOOL CHANGERS

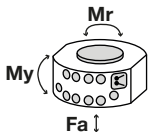
INSTALLATION SIZE WWR40

▶ PRODUCT SPECIFICATIONS



▶ Forces and moments

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



Mr [Nm]	70
My [Nm]	90
Fa [N]	3800

▶ INCLUDED IN DELIVERY



O-Ring

COR0025100

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GVM5



Angled Fittings - Quick Connect Style

WVM5



Piston position sensing

ZUB0015



Inductive Proximity Switch
Cable 0,3 m - Connector M8

NJR04-E2SK



Energy Elements see page 48

▶ RECOMMENDED ACCESSORY STORAGE STATION



Storage station

ALSR1-40-B



Inductive proximity switch
- Cable 5 m

NJ5-E2



Inductive Proximity Switch
Cable 0,3 m - Connector M8

NJ5-E2SK

TOOL CHANGERS

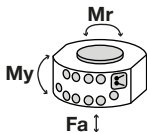
INSTALLATION SIZE WWR50

PRODUCT SPECIFICATIONS



Forces and moments

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



Mr [Nm]	100
My [Nm]	105
Fa [N]	4000

INCLUDED IN DELIVERY



O-Ring

COR0025100

RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GVM5



Angled Fittings - Quick Connect Style

WVM5



Piston position sensing

ZUB0016



Inductive Proximity Switch
Cable 0,3 m - Connector M8

NJR04-E2SK



Energy Elements see page 48

RECOMMENDED ACCESSORY STORAGE STATION



Storage station

ALSR1-50-B



Inductive proximity switch
- Cable 5 m

NJ5-E2

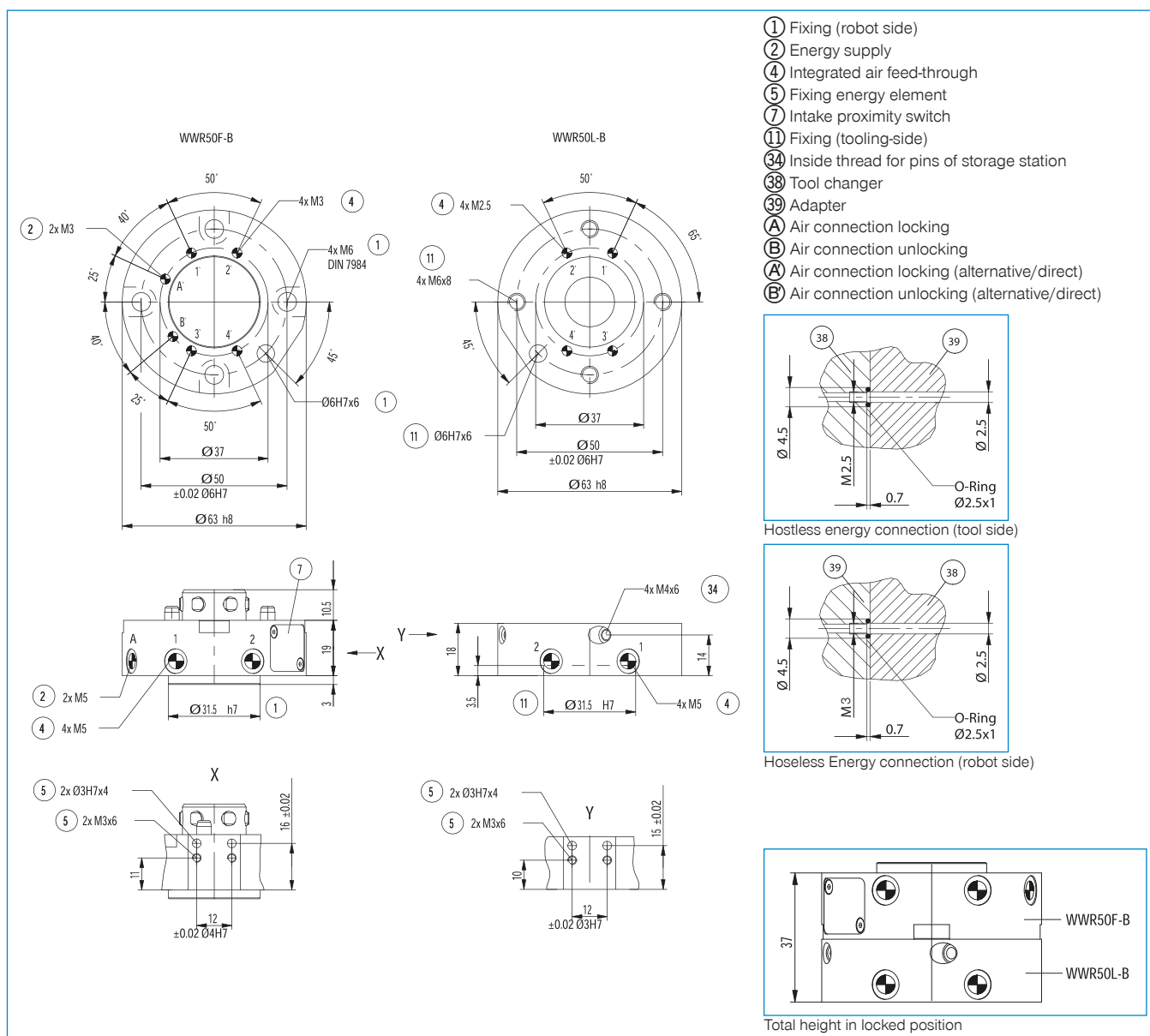


Inductive Proximity Switch
Cable 0,3 m - Connector M8

NJ5-E2SK

Order no.	Technical Data*	
	WWR50F-B	WWR50L-B
Connecting flange according EN ISO 9409-1	TK 50	TK 50
Recommended handling weight [kg]	30	-
Pneumatic energy transfer [Quantity]	4	4
Electrical energy transfer	optional	optional
Hydraulic energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	0.3	-
Repetition accuracy in Z [mm]	0.01	-
Repetition accuracy in X, Y [mm]	0.02	-
Joining force [N]	50	-
Release force [N]	30	-
Offset at coupling max. in X,Y [mm]	1.5	1.5
Operating pressure [bar]	4 ... 10	4 ... 10
Operating temperature [°C]	5 ... +80	5 ... +80
Air volume per cycle [cm³]	3	-
Moment of inertia [kg/cm²]	0.8	0.7
Weight [kg]	0.19	0.15

*All data measured at 6 bar



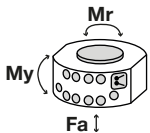
TOOL CHANGERS INSTALLATION SIZE WWR63

▶ PRODUCT SPECIFICATIONS



▶ Forces and moments

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



Mr [Nm]	200
My [Nm]	300
Fa [N]	7600

▶ INCLUDED IN DELIVERY



O-Ring

COR0030100

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GVM5



Angled Fittings - Quick Connect Style

WVM5



Piston position sensing

ZUB0017



Inductive Proximity Switch Cable 0,3 m - Connector M8

NJR04-E2SK



Energy Elements see page 49

▶ RECOMMENDED ACCESSORY STORAGE STATION



Storage station

ALSR1-63-B



Inductive proximity switch - Cable 5 m

NJ8-E2

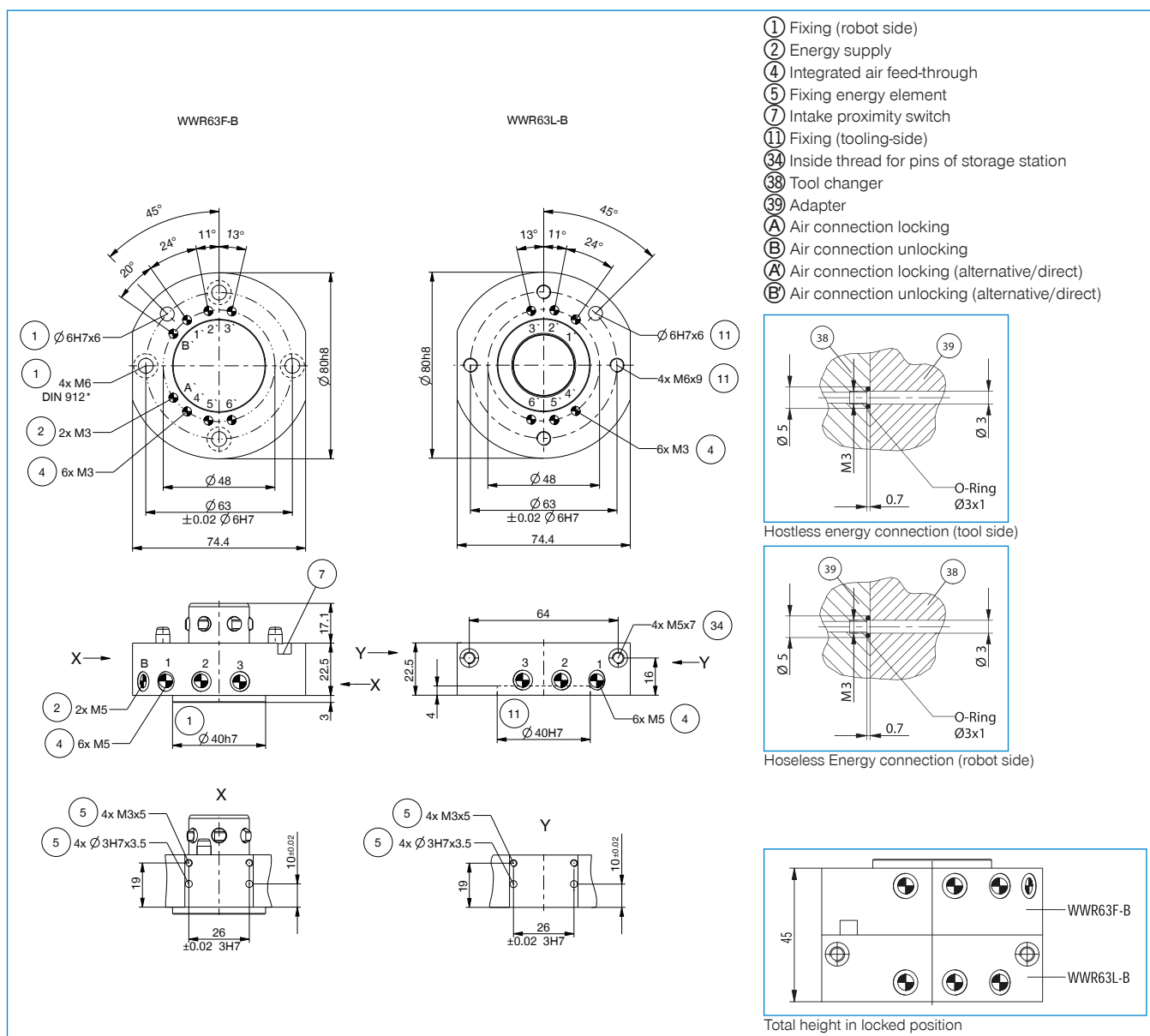


Inductive proximity switch - Connector M8

NJ8-E2S

Order no.	Technical Data*	
	WWR63F-B	WWR63L-B
Connecting flange according EN ISO 9409-1	TK 63	TK 63
Recommended handling weight [kg]	50	-
Pneumatic energy transfer [Quantity]	6	6
Electrical energy transfer	optional	optional
Hydraulic energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	1	-
Repetition accuracy in Z [mm]	0.01	-
Repetition accuracy in X, Y [mm]	0.02	-
Joining force [N]	110	-
Release force [N]	60	-
Offset at coupling max. in X,Y [mm]	1.65	1.65
Operating pressure [bar]	4 ... 10	4 ... 10
Operating temperature [°C]	5 ... +80	5 ... +80
Air volume per cycle [cm³]	9	-
Moment of inertia [kg/cm²]	2.3	2.2
Weight [kg]	0.37	0.28

*All data measured at 6 bar



TOOL CHANGERS

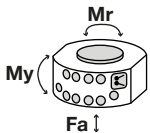
INSTALLATION SIZE WWR80

▶ PRODUCT SPECIFICATIONS



▶ Forces and moments

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



Mr [Nm]	300
My [Nm]	600
Fa [N]	9150

▶ INCLUDED IN DELIVERY



O-Ring

COR0030100

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GVM5



Angled Fittings - Quick Connect Style

WVM5



Piston position sensing

ZUB0018



Inductive Proximity Switch
Cable 0,3 m - Connector M8

NJR04-E2SK



Energy Elements see page 49

▶ RECOMMENDED ACCESSORY STORAGE STATION



Storage station

ALSR1-80-B



Inductive proximity switch
- Cable 5 m

NJ8-E2



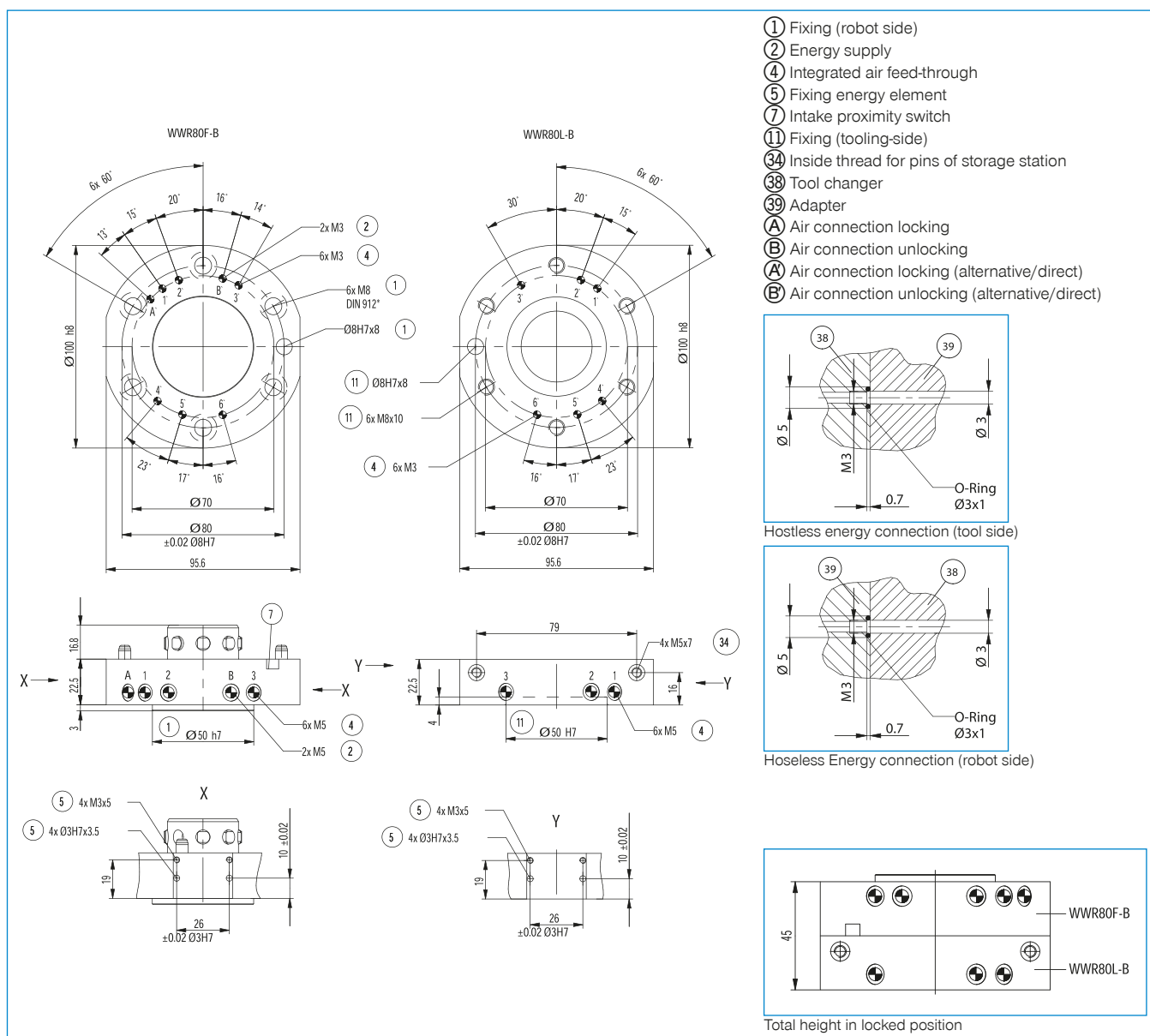
Inductive proximity switch
- Connector M8

NJ8-E2S

► Technical Data*

Order no.	WWR80F-B	WWR80L-B
Connecting flange according EN ISO 9409-1	TK 80	TK 80
Recommended handling weight [kg]	70	-
Pneumatic energy transfer [Quantity]	6	6
Electrical energy transfer	optional	optional
Hydraulic energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	1	-
Repetition accuracy in Z [mm]	0.01	-
Repetition accuracy in X, Y [mm]	0.02	-
Joining force [N]	100	-
Release force [N]	60	-
Offset at coupling max. in X,Y [mm]	1.65	1.65
Operating pressure [bar]	4 ... 10	4 ... 10
Operating temperature [°C]	5 ... +80	5 ... +80
Air volume per cycle [cm³]	16	-
Moment of inertia [kg/cm²]	5.6	5.5
Weight [kg]	0.58	0.45

*All data measured at 6 bar



TOOL CHANGERS

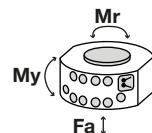
INSTALLATION SIZE WWR100

▶ PRODUCT SPECIFICATIONS



▶ Forces and moments

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



Mr [Nm]	600
My [Nm]	850
Fa [N]	16000

▶ INCLUDED IN DELIVERY



O-Ring

COR0070150

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GV1-8X6



Angled Fittings - Quick Connect Style

WV1-8X6



Piston position sensing

ZUB0019



Inductive Proximity Switch
Cable 0,3 m - Connector M8

NJR04-E2SK



Energy Elements see page 50

▶ RECOMMENDED ACCESSORY STORAGE STATION



Base module for storage station

ALSR13100



Inductive proximity switch - Cable 5 m

NJ8-E2

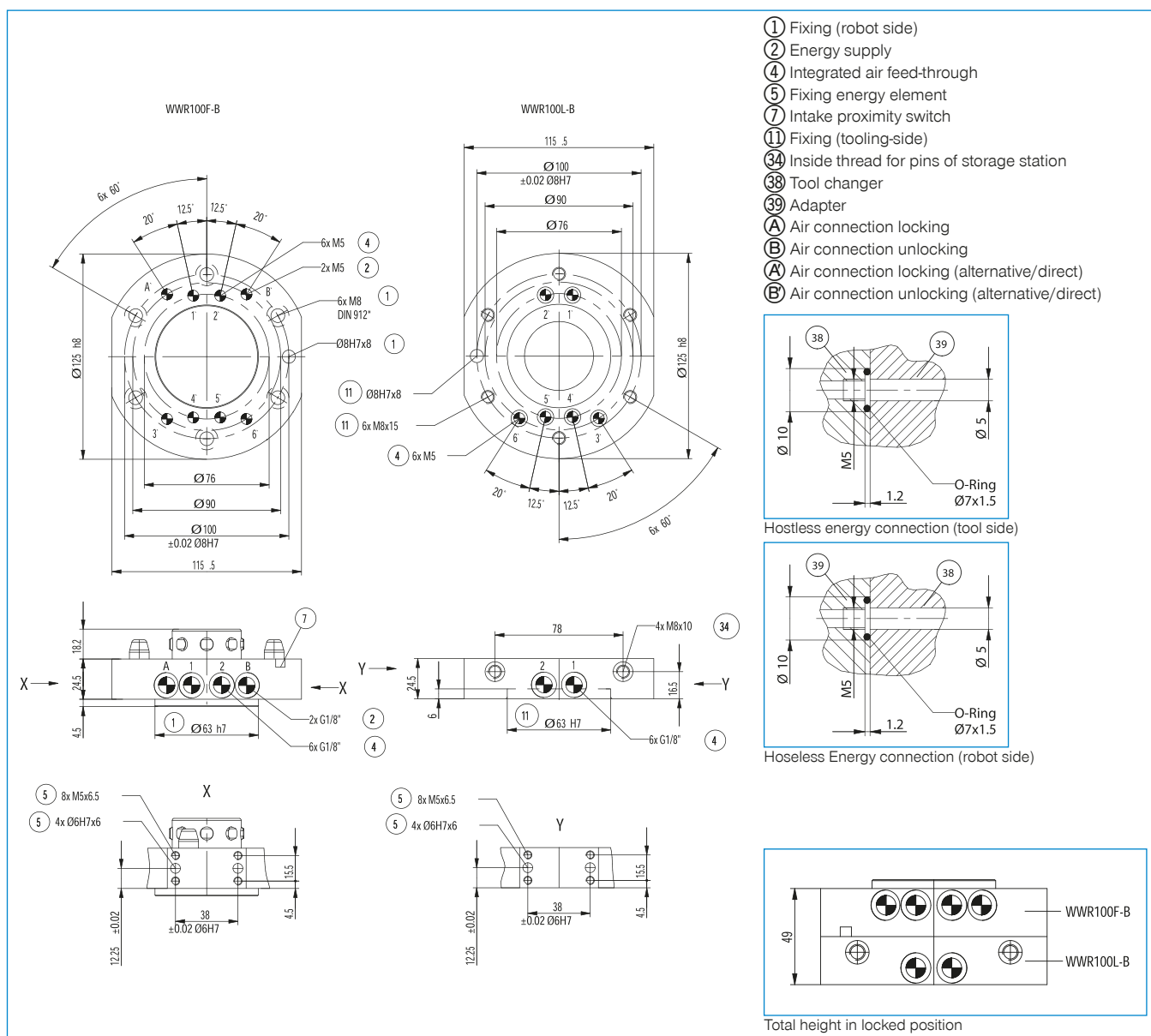


Inductive proximity switch - Connector M8

NJ8-E2S

Order no.	Technical Data*	
	WWR100F-B	WWR100L-B
Connecting flange according EN ISO 9409-1	TK 100	TK 100
Recommended handling weight [kg]	120	-
Pneumatic energy transfer [Quantity]	6	6
Electrical energy transfer	optional	optional
Hydraulic energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	1.2	-
Repetition accuracy in Z [mm]	0.01	-
Repetition accuracy in X, Y [mm]	0.02	-
Joining force [N]	120	-
Release force [N]	75	-
Offset at coupling max. in X,Y [mm]	1.85	1.85
Operating pressure [bar]	4 ... 10	4 ... 10
Operating temperature [°C]	-	5 ... +80
Air volume per cycle [cm³]	25	-
Moment of inertia [kg/cm²]	14	13.9
Weight [kg]	0.96	0.725

*All data measured at 6 bar



TOOL CHANGERS

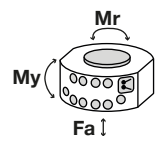
INSTALLATION SIZE WWR125

▶ PRODUCT SPECIFICATIONS



▶ Forces and moments

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



Mr [Nm]	1500
My [Nm]	1700
Fa [N]	26000

▶ INCLUDED IN DELIVERY



O-Ring

COR0070150

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GV1-8X6



Angled Fittings - Quick Connect Style

WV1-8X6



Piston position sensing

ZUB0020



Inductive Proximity Switch
Cable 0,3 m - Connector M8

NJR04-E2SK



Energy Elements see page 52

▶ RECOMMENDED ACCESSORY STORAGE STATION



Base module for storage station

ALSR13125



Inductive proximity switch - Cable 5 m

NJ8-E2



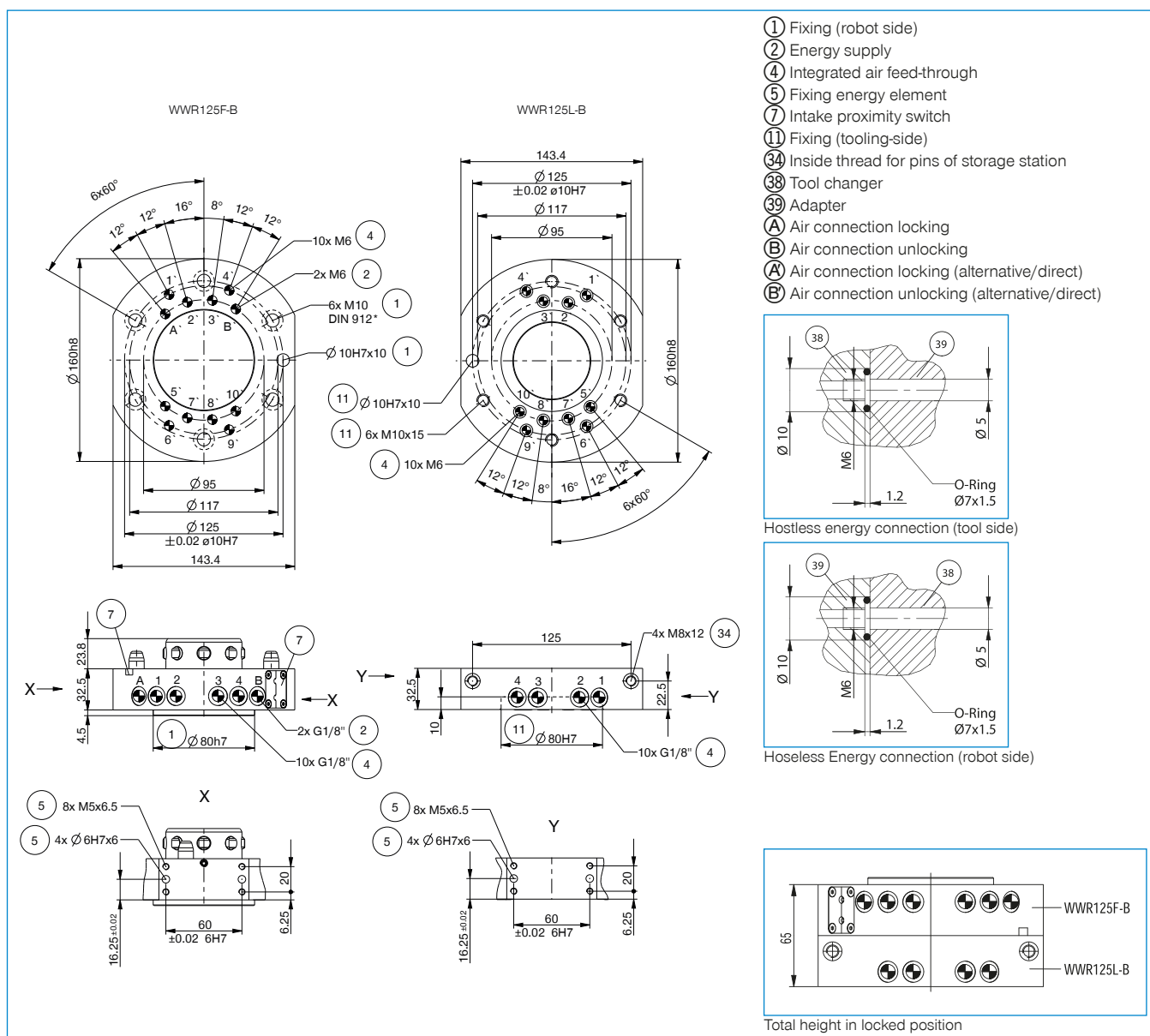
Inductive proximity switch - Connector M8

NJ8-E2S

► Technical Data*

Order no.	WWR125F-B	WWR125L-B
Connecting flange according EN ISO 9409-1	TK 125	TK 125
Recommended handling weight [kg]	230	-
Pneumatic energy transfer [Quantity]	10	10
Electrical energy transfer	optional	optional
Hydraulic energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	1.3	-
Repetition accuracy in Z [mm]	0.01	-
Repetition accuracy in X, Y [mm]	0.02	-
Joining force [N]	150	-
Release force [N]	80	-
Offset at coupling max. in X,Y [mm]	2.85	2.85
Operating pressure [bar]	4 ... 10	4 ... 10
Operating temperature [°C]	5 ... +80	5 ... +80
Air volume per cycle [cm³]	80	-
Moment of inertia [kg/cm²]	48	42
Weight [kg]	2.1	1.45

*All data measured at 6 bar



TOOL CHANGERS

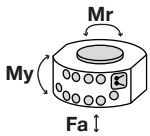
INSTALLATION SIZE WWR160

PRODUCT SPECIFICATIONS



Forces and moments

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



Mr [Nm]	2000
My [Nm]	2200
Fa [N]	30000

INCLUDED IN DELIVERY



O-Ring

COR0070150

RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GV1-4X8



Angled Fittings - Quick Connect Style

WV1-8X6



Piston position sensing

ZUB0021



Inductive Proximity Switch
Cable 0,3 m - Connector M8

NJR04-E2SK



Energy Elements see page 52

RECOMMENDED ACCESSORY STORAGE STATION



Base module for storage station

ALSR13160



Inductive proximity switch - Cable 5 m

NJ8-E2



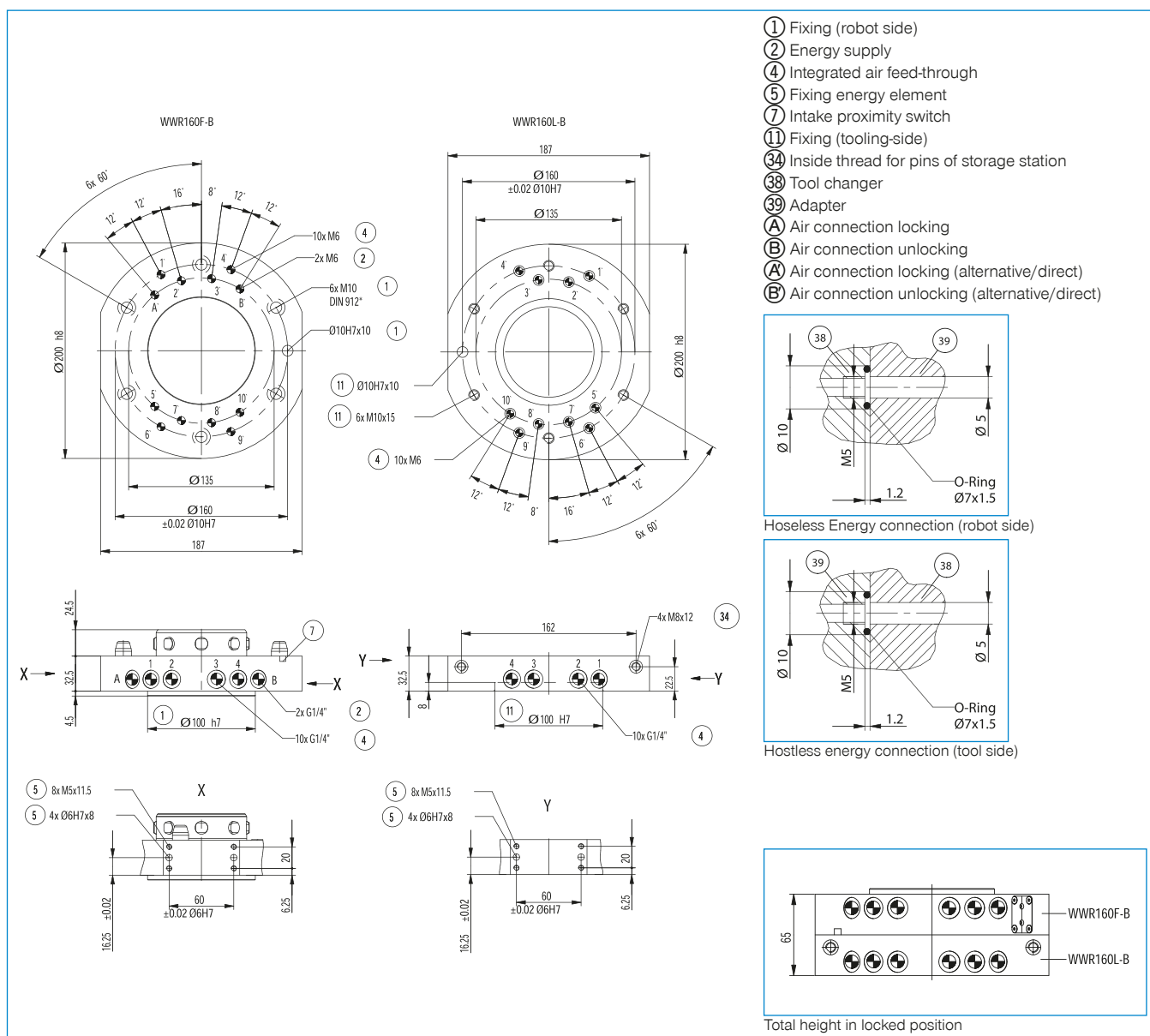
Inductive proximity switch - Connector M8

NJ8-E2S

► Technical Data*

Order no.	WWR160F-B	WWR160L-B
Connecting flange according EN ISO 9409-1	TK 160	TK 160
Recommended handling weight [kg]	300	-
Pneumatic energy transfer [Quantity]	10	10
Electrical energy transfer	optional	optional
Hydraulic energy transfer	optional	optional
Self locking mechanism when locking	mechanical	mechanical
Locking stroke [mm]	1.3	-
Repetition accuracy in Z [mm]	0.01	-
Repetition accuracy in X, Y [mm]	0.02	-
Joining force [N]	150	-
Release force [N]	80	-
Offset at coupling max. in X,Y [mm]	2.85	2.85
Operating pressure [bar]	4 ... 10	4 ... 10
Operating temperature [°C]	5 ... +80	5 ... +80
Air volume per cycle [cm³]	97	-
Moment of inertia [kg/cm²]	134	132
Weight [kg]	3.7	2.6

*All data measured at 6 bar



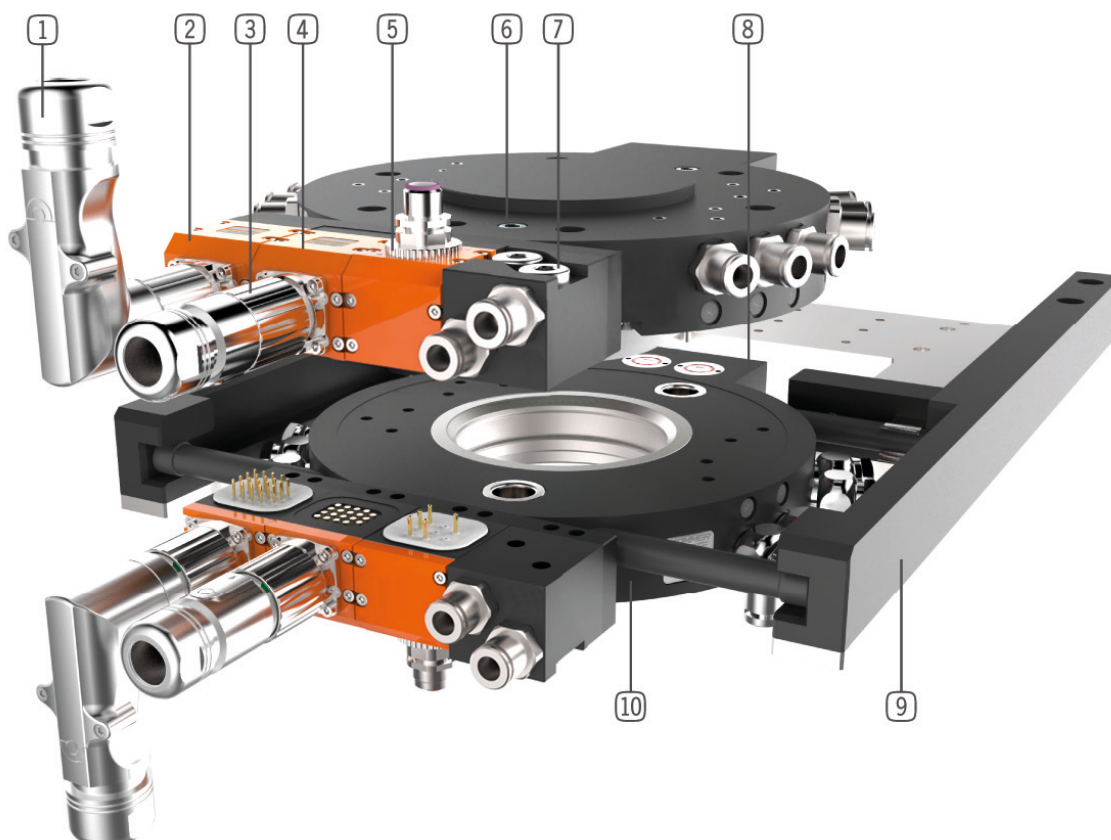
ENERGY ELEMENTS FOR TOOL CHANGER

SERIES WER1000 / WER2000 / WER3000

► HOW TO ORDER CORRECTLY

Order no.	WER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>
Series	1000						
Series	2000						
Series	3000						
Fixed part (robot side)	F						
Loose part (at tool)	L						
Profibus	PB						
Profinet	PN						
Pneumatic/vacuum	PL						
Load current	LA						
Signal current	SI						
Number of connectors (fluidic, electrical)	XX						
No additional specifications							00
Sensor connection for WWR fixed part, outflow left							01
Sensor connection for WWR fixed part, outflow right							02
Fixing threads G1/4"							03
Fixing threads G3/8"							04
Solder cups							05
Fixing threads G1/8"							06
Coding Pin 1							07
Coding Pin 8							08
Spring-loaded contacts							09

► BENEFITS IN DETAIL



- | | |
|---|--|
| <p>① RSTV angled round plug</p> <ul style="list-style-type: none"> - For producing customer-specific cables - Pre-made cables available on request <p>② WER energy element RST plug-in connector</p> <ul style="list-style-type: none"> - SI signal current for up to 150V and 6A - LA load current for up to 630V and 150A <p>③ RSTV straight round plug</p> <ul style="list-style-type: none"> - For producing customer-specific cables - Pre-made cables available on request <p>④ WER energy element FST spring contact connection</p> <ul style="list-style-type: none"> - SI signal current for up to 60V and 3A | <p>⑤ WER field bus energy element</p> <ul style="list-style-type: none"> - PN - Industrial Ethernet, PB - Profibus ad IL - I/O link <p>⑥ WWR F tool changer fixed part</p> <ul style="list-style-type: none"> - Without adapter, may be mounted on robot flange EN ISO 9409-1 <p>⑦ WER energy element PL pneumatic/vacuum</p> <ul style="list-style-type: none"> - Connection options for screw fittings M5 to G3/8" <p>⑧ WER energy element fluidic</p> <ul style="list-style-type: none"> - Max. operating pressure 350 bar, max. coupling pressure 300 bar <p>⑨ ALSR storage station for WWR L loose part (10)</p> <ul style="list-style-type: none"> - Includes 4 rack bolts for tool changer loose part |
|---|--|

► SERIES WER3000 - VARIABLE SPATIAL ORIENTATION OF THE PLUG



Radial plug orientation



Rotate plug

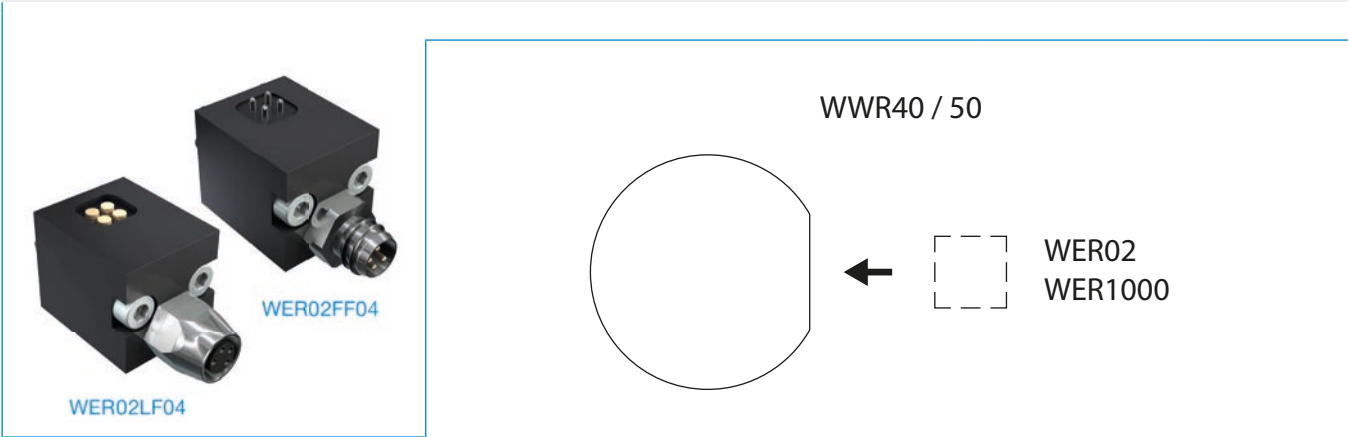


Axial plug orientation

ENERGY ELEMENTS FOR TOOL CHANGER

SIZES WWR40 / WWR50

▶ PRODUCT SPECIFICATIONS



▶ ELECTRICAL

Order no.	▶ Technical Data							
	WER02FS04	WER02LS04	WER02FF04	WER02LF04	WER1000FSI20-05	WER1000LSI20-05	WER1000FIL01-00-A	WER1000LIL01-00-A
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Connection type	Plug-in Connector	Plug-in Connector	Spring contact	Spring contact	Spring contact	Spring contact	-	-
Round Connector [Straight] *	KAG500B4	KAG500S4	KAG500B4	KAG500S4	-	-	-	-
Round Connector [Angle] *	KAW500B4	KAW500S4	KAW500B4	KAW500S4	-	-	-	-
Fixing thread	M8	M8	M8	M8	-	-	M12	M12
No. of contacts	4	4	4	4	20	20	-	-
Nominal current [A]	4	4	3	3	3	3	-	-
Supply voltage [V AC]	60	60	60	60	60	60	-	-
Supply voltage [V DC] **	75	75	75	75	75	75	-	-
Weight [kg]	0.03	0.03	0.03	0.03	0.02	0.02	0.036	0.038
Connection type	Male	Socket	Male	Socket	Customizable	Customizable	Male	Socket

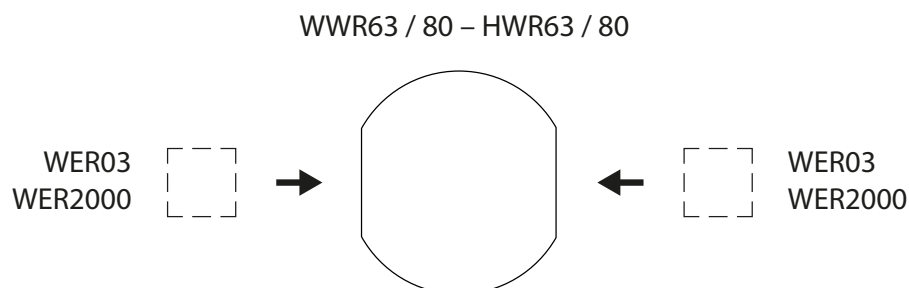
*als Zubehör erhältlich see page 63

**Specifications for on-site grounding, 60V without grounding

ENERGY ELEMENTS FOR TOOL CHANGER

SIZES WWR63 / WWR80

▶ PRODUCT SPECIFICATIONS



▶ FLUIDIC

Order no.	▶ Technical Data					
	WER2000FPL06-00	WER2000LPL06-00	WER2000FPL02-06	WER2000LPL02-06	WER2000FPL01-03	WER2000LPL01-03
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Fixing thread	M5	M5	G1/8"	G1/8"	G1/4"	G1/4"
Number of fluid couplings	6	6	2	2	1	1
Operating pressure [bar]	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10
Weight [kg]	0.05	0.05	0.06	0.07	0.06	0.06

▶ ELECTRICAL

Order no.	▶ Technical Data					
	WER03FS04	WER03LS04	WER2000FSI32-05	WER2000LSI32-05	WER03FF09-B	WER03LF09-B
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Connection type	Plug-in Connector	Plug-in Connector	Spring contact	Spring contact	Spring contact	Spring contact
Round Connector [Straight] *	KAG500B4	KAG500S4	-	-	-	-
Round Connector [Angle] *	KAW500B4	KAW500S4	-	-	-	-
Fixing thread	M8	M8	-	-	-	-
No. of contacts	4	4	32	32	9	9
Nominal current [A]	4	4	3	3	3	3
Supply voltage [V AC]	60	60	60	60	60	60
Supply voltage [V DC] **	75	75	75	75	75	75
Weight [kg]	0.06	0.06	0.04	0.04	0.06	0.06
Connection type	Male	Socket	Customizable	Customizable	Plug / SUB-D	Socket / SUB-D

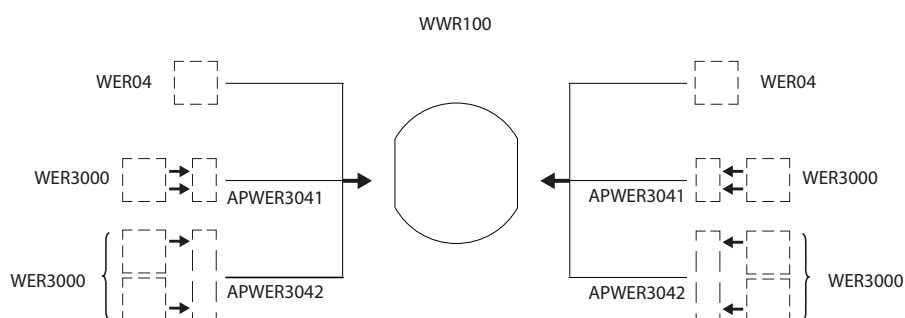
*als Zubehör erhältlich see page 63

**Specifications for on-site grounding, 60V without grounding

ENERGY ELEMENTS FOR TOOL CHANGER

SIZE WWR100

PRODUCT SPECIFICATIONS



FLUIDIC

Order no.	Technical Data							
	WER04FH1	WER04LH1	WER04FH2	WER04LH2	WER04FH1D	WER04LH1D	WER04FH2D	WER04LH2D
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Fixing thread	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"
Number of fluid couplings	1	1	2	2	1	1	2	2
Operating pressure max. [bar]*	350	350	350	350	350	350	350	350
Operating pressure max. [bar]**	15	15	15	15	350	350	350	350
Weight [kg]	0.20	0.20	0.35	0.35	0.20	0.20	0.35	0.35

* At pressures of approximately 50 bar and higher, there must be external locking of the elements.

** Observe coupling force

Order no.	Technical Data			
	WER3000FPL02-03	WER3000LPL02-03	WER3000FPL01-04	WER3000LPL01-04
compatible with	Fix part	Loose part	Fix part	Loose part
Fixing thread	G1/4"	G1/4"	G3/8"	G3/8"
Number of fluid couplings	2	2	1	1
Operating pressure [bar]	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10
Weight [kg]	0.13	0.13	0.13	0.13

ELECTRICAL

Order no.	Technical Data					
	WER3000FLA06-00	WER3000LLA06-00	WER3000FLA08-00	WER3000LLA08-00	WER3000FSI12-00	WER3000LSI12-00
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Connection type	Plug-in Connector	Plug-in Connector	Plug-in Connector	Plug-in Connector	Plug-in Connector	Plug-in Connector
Round Connector [Straight] *	RSTVLM23G06B-B	RSTVLM23G06S-B	RSTVLM23G08B-B	RSTVLM23G08S-B	RSTVSM23G12B-B	RSTVSM23G12S-B
Round Connector [Angle] *	RSTVLM23W06B-B	RSTVLM23W06S-B	RSTVLM23W08B-B	RSTVLM23W08S-B	RSTVSM23W12B-B	RSTVSM23W12S-B
Fixing thread	M23	M23	M23	M23	M23	M23
No. of contacts	5+PE	5+PE	(3+PE) / 4	(3+PE) / 4	12	12
Nominal current [A]	15	15	15/6	15/6	6	6
Supply voltage [V AC]	600	600	600/150	600/150	150	150
Weight [kg]	0.35	0.41	0.35	0.40	0.12	0.15
Connection type	Male	Socket	Male	Socket	Male	Socket

* als Zubehör erhältlich see page 63

► ELECTRICAL

	► Technical Data			
Order no.	WER3000FSI19-00	WER3000LSI19-00	WER3000FSI19-09	WER3000LSI19-09
compatible with	Fix part	Loose part	Fix part	Loose part
Connection type	Plug-in Connector	Plug-in Connector	Spring contact	Spring contact
Round Connector [Straight] *	RSTVSM23G19B-B	RSTVSM23G19S-B	RSTVSM23G19B-B	RSTVSM23G19S-B
Round Connector [Angle] *	RSTVSM23W19B-B	RSTVSM23W19S-B	RSTVSM23W19B-B	RSTVSM23W19S-B
Fixing thread	M23	M23	M23	M23
No. of contacts	19	19	19	19
Nominal current [A]	6	6	3	3
Supply voltage [V AC]	150	150	60	60
Weight [kg]	0.13	0.15	0.13	0.15
Connection type	Male	Socket	Male	Socket

*als Zubehör erhältlich see page 63

► ELECTRICAL + 3 CONNECTION OPTIONS FOR WWR SENSORS

	► Technical Data		
Order no.	WER3000FSI19-01	WER3000FSI19-02	WER3000LSI19-00
compatible with	Fix part	Fix part	Loose part
Connection type	Plug-in Connector	Plug-in Connector	Plug-in Connector
Round Connector [Straight] *	RSTVSM23G19B-B	RSTVSM23G19B-B	RSTVSM23G19S-B
Round Connector [Angle] *	RSTVSM23W19B-B	RSTVSM23W19B-B	RSTVSM23W19S-B
Fixing thread	M23	M23	M23
No. of contacts	14+5 Sensoric	14+5 Sensoric	19
Nominal current [A]	6	6	6
Supply voltage [V AC]	150	150	150
Sensor linkage	Left	Right	-
Weight [kg]	0.16	0.16	0.15
Connection type	Male	Male	Socket

*als Zubehör erhältlich see page 63

► FIELDBUS

	► Technical Data					
Order no.	WER3000FPN01-00	WER3000LPN01-00	WER3000FPB01-00	WER3000LPB01-00	WER3000FIL01-00	WER3000LIL01-00
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Data transmission	Profinet/Industrial Ethernet	Profinet/Industrial Ethernet	Profibus	Profibus	IO-Link	IO-Link
Data rate	100	100	12	12	-	-
Fixing thread	M12	M12	M12	M12	M12	M12
Weight [kg]	0.11	0.11	0.13	0.12	0.11	0.11

► ADAPTER PLATES

	► Technical Data	
Order no.	APWER3041	APWER3042
compatible with	1xWER3000	2xWER3000
Weight [kg]	0.05	0.14

► TECHNICAL INFORMATION

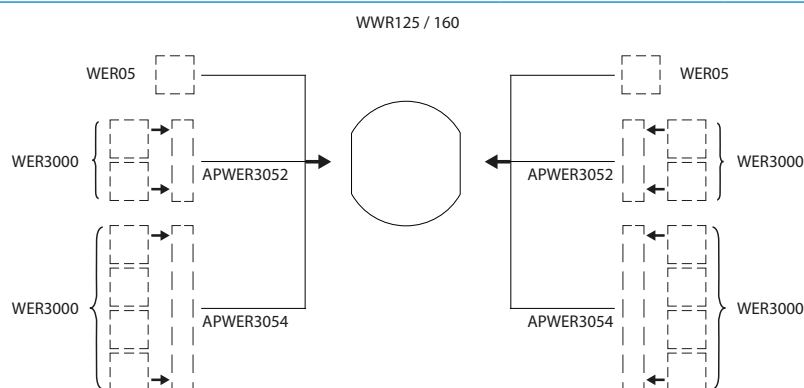


► Information about round plugs and plug-in connectors for the WER3000 is provided on page 63

ENERGY ELEMENTS FOR TOOL CHANGER

SIZES WWR125 / WWR160

PRODUCT SPECIFICATIONS



FLUIDIC

Technical Data

Order no.	WER05FH2	WER05LH2	WER05FH2D	WER05LH2D
compatible with	Fix part	Loose part	Fix part	Loose part
Fixing thread	G1/4"	G1/4"	G1/4"	G1/4"
Number of fluid couplings	2	2	2	2
Operating pressure max. [bar]*	350	350	350	350
Operating pressure max. [bar]**	15	15	350	350
Weight [kg]	0.30	0.30	0.30	0.30

*At pressures of approximately 50 bar and higher, there must be external locking of the elements.

** Observe coupling force

Technical Data

Order no.	WER3000FPL02-03	WER3000LPL02-03	WER3000FPL01-04	WER3000LPL01-04
compatible with	Fix part	Loose part	Fix part	Loose part
Fixing thread	G1/4"	G1/4"	G3/8"	G3/8"
Number of fluid couplings	2	2	1	1
Operating pressure [bar]	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10
Weight [kg]	0.13	0.13	0.13	0.13

ELECTRICAL

Technical Data

Order no.	WER3000FLA06-00	WER3000LLA06-00	WER3000FLA08-00	WER3000LLA08-00	WER3000FSI12-00	WER3000LSI12-00
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Connection type	Plug-in Connector	Plug-in Connector	Plug-in Connector	Plug-in Connector	Plug-in Connector	Plug-in Connector
Round Connector [Straight] *	RSTVLM23G06B-B	RSTVLM23G06S-B	RSTVLM23G08B-B	RSTVLM23G08S-B	RSTVSM23G12B-B	RSTVSM23G12S-B
Round Connector [Angle] *	RSTVLM23W06B-B	RSTVLM23W06S-B	RSTVLM23W08B-B	RSTVLM23W08S-B	RSTVSM23W12B-B	RSTVSM23W12S-B
Fixing thread	M23	M23	M23	M23	M23	M23
No. of contacts	5+PE	5+PE	(3+PE) / 4	(3+PE) / 4	12	12
Nominal current [A]	15	15	15/6	15/6	6	6
Supply voltage [V AC]	600	600	600/150	600/150	150	150
Weight [kg]	0.35	0.41	0.35	0.40	0.12	0.15
Connection type	Male	Socket	Male	Socket	Male	Socket

*als Zubehör erhältlich see page 63

► ELECTRICAL

	► Technical Data			
Order no.	WER3000FSI19-00	WER3000LSI19-00	WER3000FSI19-09	WER3000LSI19-09
compatible with	Fix part	Loose part	Fix part	Loose part
Connection type	Plug-in Connector	Plug-in Connector	Spring contact	Spring contact
Round Connector [Straight] *	RSTVSM23G19B-B	RSTVSM23G19S-B	RSTVSM23G19B-B	RSTVSM23G19S-B
Round Connector [Angle] *	RSTVSM23W19B-B	RSTVSM23W19S-B	RSTVSM23W19B-B	RSTVSM23W19S-B
Fixing thread	M23	M23	M23	M23
No. of contacts	19	19	19	19
Nominal current [A]	6	6	3	3
Supply voltage [V AC]	150	150	60	60
Weight [kg]	0.13	0.15	0.13	0.15
Connection type	Male	Socket	Male	Socket

*als Zubehör erhältlich see page 63

► ELECTRICAL + 3 CONNECTION OPTIONS FOR WWR SENSORS

	► Technical Data		
Order no.	WER3000FSI19-01	WER3000FSI19-02	WER3000LSI19-00
compatible with	Fix part	Fix part	Loose part
Connection type	Plug-in Connector	Plug-in Connector	Plug-in Connector
Round Connector [Straight] *	RSTVSM23G19B-B	RSTVSM23G19B-B	RSTVSM23G19S-B
Round Connector [Angle] *	RSTVSM23W19B-B	RSTVSM23W19B-B	RSTVSM23W19S-B
Fixing thread	M23	M23	M23
No. of contacts	14+5 Sensoric	14+5 Sensoric	19
Nominal current [A]	6	6	6
Supply voltage [V AC]	150	150	150
Sensor linkage	Left	Right	-
Weight [kg]	0.16	0.16	0.15
Connection type	Male	Male	Socket

*als Zubehör erhältlich see page 63

► FIELDBUS

	► Technical Data					
Order no.	WER3000FPN01-00	WER3000LPN01-00	WER3000FPB01-00	WER3000LPB01-00	WER3000FIL01-00	WER3000LIL01-00
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Data transmission	Profinet/Industrial Ethernet	Profinet/Industrial Ethernet	Profibus	Profibus	IO-Link	IO-Link
Data rate	100	100	12	12	-	-
Fixing thread	M12	M12	M12	M12	M12	M12
Weight [kg]	0.11	0.11	0.13	0.12	0.11	0.11

► ADAPTER PLATES

	► Technical Data	
Order no.	APWER3052	APWER3054
compatible with	2xWER3000	4xWER3000
Weight [kg]	0.07	0.13

► TECHNICAL INFORMATION

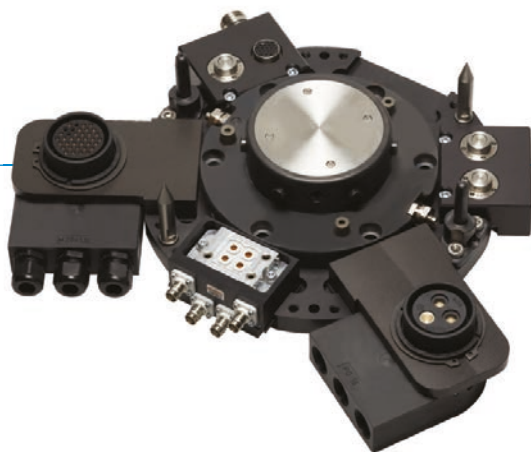


► Information about round plugs and plug-in connectors for the WER3000 is provided on page 63

TOOL CHANGERS

SERIES WWR1000

► PRODUCT ADVANTAGES



► **Secure hold during pressure drop**

A redundant system, created by the combination of spring accumulator and a self locking mechanism, guarantees a safe machine

► **Handling weight from up to one tonne**

Automated changes can be carried out by this changer with process reliability even with the largest robots

► **Inexhaustible variety of media transfer systems**

No matter which medium you would like to transmit, we will draw from our wealth of experience in implementing projects and find a solution to suit your needs!

► THE BEST PRODUCT FOR YOUR APPLICATION



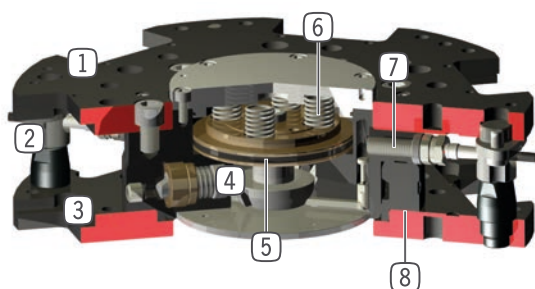
► **Our products welcome the challenge!**

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.de

► BENEFITS IN DETAIL



- ① **Fix part**
- for robot side assembly
- ② **Centering bolts**
- 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**

► FURTHER INFORMATION IS AVAILABLE ONLINE



► Technical Information

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.



TOOL CHANGERS

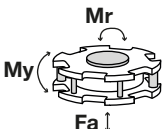
INSTALLATION SIZE WWR1160

PRODUCT SPECIFICATIONS



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



Mounting bracket for proximity switch
ZUB0014

RECOMMENDED ACCESSORIES



Programming pins
ZUB0022



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



Straight Fittings - Quick Connect Style
GV1-8X8



Inductive proximity switch - Connector M8
NJ8-E2S-17



Storage station
ALSR1-1200



Energy Elements see page 60

* All data measured at 6 bar



TOOL CHANGERS

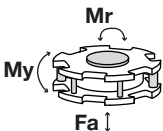
INSTALLATION SIZE WWR1200

PRODUCT SPECIFICATIONS



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



Mounting bracket for proximity switch
ZUB0014

RECOMMENDED ACCESSORIES



Programming pins
ZUB0022



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



Straight Fittings - Quick Connect Style
GV1-8X8



Inductive proximity switch - Connector M8
NJ8-E2S-17



Storage station
ALSR1-1200

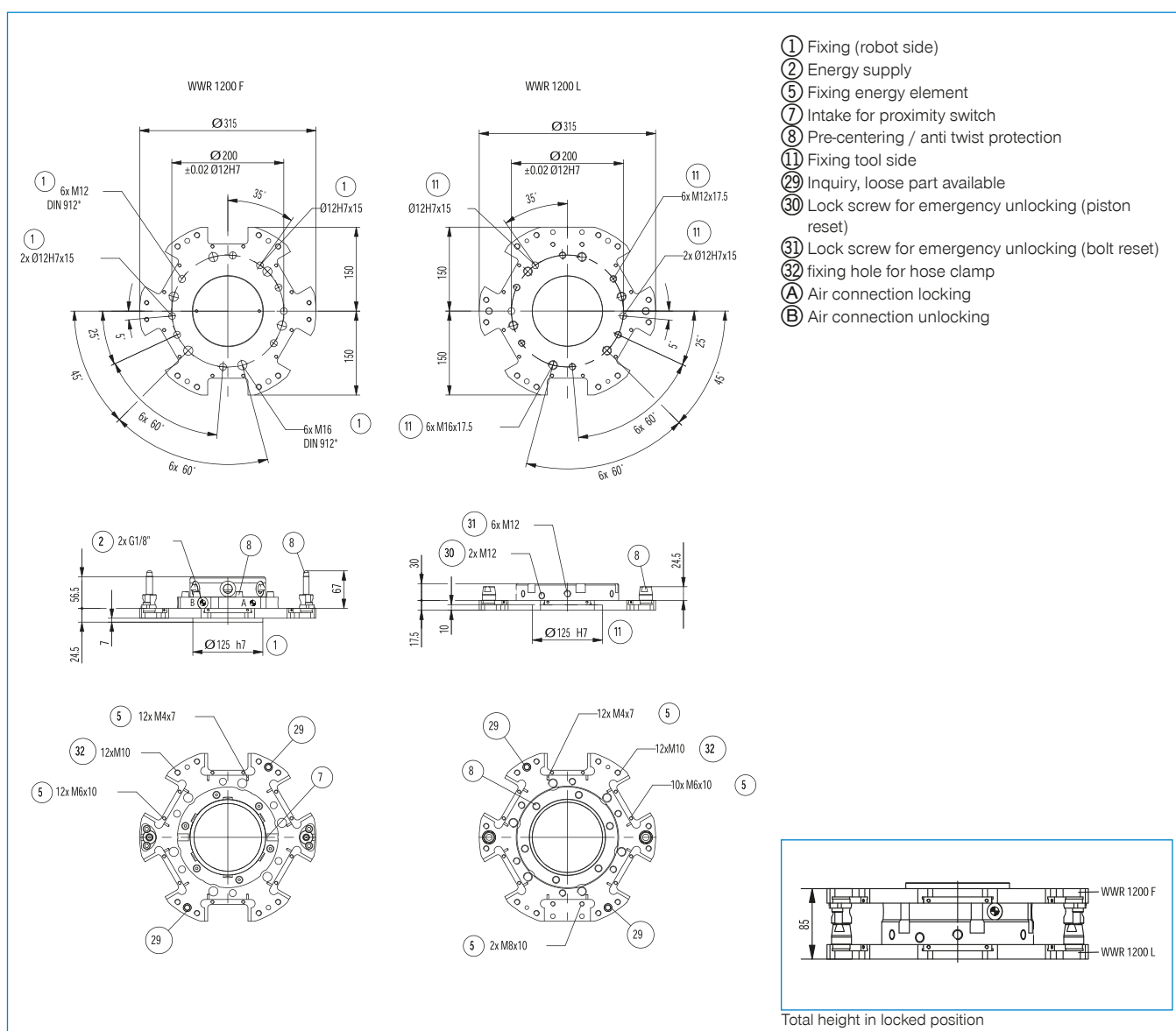


Energy Elements see page 60

► Technical Data*

Order no.	WWR1200F	WWR1200L
Locking stroke [mm]	1	-
Recommended handling weight [kg]	1000	-
Self locking mechanism when locking	mechanical	mechanical
Fluid energy transfer	optional	optional
Electrical energy transfer	optional	optional
Operating pressure min. [bar]	6	6
Operating pressure max. [bar]	8	8
Repetition accuracy +/- [mm]	0.02	0.02
Offset at coupling max. in X,Y [mm]	3	3
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+80	+80
Air volume per cycle [cm³]	83	-
Weight [kg]	15	8.5

* All data measured at 6 bar



ENERGY ELEMENTS FOR TOOL CHANGER

SIZES WWR1160 / WWR1200

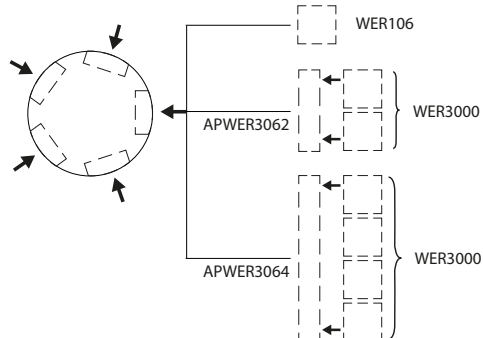
PRODUCT SPECIFICATIONS

WER106FH4DNW8



WER106LH4DNW8

WWR1160 / 1200



FLUIDIC

Technical Data

Order no.	WER106FP06	WER106LP06	WER106FP15	WER106LP15	WER106FH1DNW8	WER106LH1DNW8
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Fixing thread	G1/8"	G1/8"	M5	M5	G1/2"	G1/2"
Number of fluid couplings	6	6	15	15	1	1
Nominal diameter	1/8"	1/8"	5	5	8	8
Flow per connector max. [l/min]	-	-	-	-	25	25
Operating pressure max. [bar]*	10	10	10	10	250	250
Operating pressure max. [bar]**	-	-	-	-	10	10
Weight [kg]	0.25	0.25	0.25	0.25	0.35	0.35

*At pressures of approximately 50 bar and higher, there must be external locking of the elements.

**Observe coupling force

Technical Data

Order no.	WER106FH2DNW5	WER106LH2DNW5	WER106FH2DNW8	WER106LH2DNW8	WER106FH4DNW8	WER106LH4DNW8
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Fixing thread	G1/4"	G1/4"	G1/2"	G1/2"	G1/2"	G1/2"
Number of fluid couplings	2	2	2	2	4	4
Nominal diameter	5	5	8	8	8	8
Flow per connector max. [l/min]	12	12	25	25	25	25
Operating pressure max. [bar]*	350	350	250	250	250	250
Operating pressure max. [bar]**	15	15	10	10	10	10
Weight [kg]	0.35	0.35	0.69	1.00	1.40	2.10

*At pressures of approximately 50 bar and higher, there must be external locking of the elements.

**Observe coupling force

Technical Data

Order no.	WER3000FPL02-03	WER3000LPL02-03	WER3000FPL01-04	WER3000LPL01-04
compatible with	Fix part	Loose part	Fix part	Loose part
Fixing thread	G1/4"	G1/4"	G3/8"	G3/8"
Number of fluid couplings	2	2	1	1
Operating pressure [bar]	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10	-0.6 ... 10
Weight [kg]	0.13	0.13	0.13	0.13

► ELECTRICAL

	► Technical Data	
Order no.	WER106FL0335	WER106LL0335
compatible with	Fix part	Loose part
Connection type	Plug-in Connector	Plug-in Connector
Round Connector [Straight]	-	-
Round Connector [Angle]	-	-
Fixing thread	-	-
No. of contacts	3	3
Nominal current [A]	150	150
Supply voltage [V AC]	630	630
Weight [kg]	0.95	0.90
Connection type	Customizable	Customizable

	► Technical Data					
Order no.	WER3000FLA06-00	WER3000LLA06-00	WER3000FLA08-00	WER3000LLA08-00	WER3000FSI12-00	WER3000LSI12-00
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Connection type	Plug-in Connector	Plug-in Connector	Plug-in Connector	Plug-in Connector	Plug-in Connector	Plug-in Connector
Round Connector [Straight] *	RST-VLM23G06B-B	RST-VLM23G06S-B	RST-VLM23G08B-B	RST-VLM23G08S-B	RST-VSM23G12B-B	RST-VSM23G12S-B
Round Connector [Angle] *	RSTVLM-23W06B-B	RSTVLM-23W06S-B	RSTVLM-23W08B-B	RSTVLM-23W08S-B	RSTVSM-23W12B-B	RSTVSM-23W12S-B
Fixing thread	M23	M23	M23	M23	M23	M23
No. of contacts	5+PE	5+PE	(3+PE) / 4	(3+PE) / 4	12	12
Nominal current [A]	15	15	15/6	15/6	6	6
Supply voltage [V AC]	600	600	600/150	600/150	150	150
Weight [kg]	0.35	0.41	0.35	0.40	0.12	0.15
Connection type	Male	Socket	Male	Socket	Male	Socket

*als Zubehör erhältlich see page 63

	► Technical Data			
Order no.	WER3000FSI19-00	WER3000LSI19-00	WER3000FSI19-09	WER3000LSI19-09
compatible with	Fix part	Loose part	Fix part	Loose part
Connection type	Plug-in Connector	Plug-in Connector	Spring contact	Spring contact
Round Connector [Straight] *	RSTVSM23G19B-B	RSTVSM23G19S-B	RSTVSM23G19B-B	RSTVSM23G19S-B
Round Connector [Angle] *	RSTVSM23W19B-B	RSTVSM23W19S-B	RSTVSM23W19B-B	RSTVSM23W19S-B
Fixing thread	M23	M23	M23	M23
No. of contacts	19	19	19	19
Nominal current [A]	6	6	3	3
Supply voltage [V AC]	150	150	60	60
Weight [kg]	0.13	0.15	0.13	0.15
Connection type	Male	Socket	Male	Socket

*als Zubehör erhältlich see page 63

ENERGY ELEMENTS FOR TOOL CHANGER

SIZES WWR1160 / WWR1200

► ELECTRICAL + 3 CONNECTION OPTIONS FOR WWR SENSORS

Order no.	► Technical Data		
	WER3000FSI19-01	WER3000FSI19-02	WER3000LSI19-00
compatible with	Fix part	Fix part	Loose part
Connection type	Plug-in Connector	Plug-in Connector	Plug-in Connector
Round Connector [Straight] *	RSTVSM23G19B-B	RSTVSM23G19B-B	RSTVSM23G19S-B
Round Connector [Angle] *	RSTVSM23W19B-B	RSTVSM23W19B-B	RSTVSM23W19S-B
Fixing thread	M23	M23	M23
No. of contacts	14+5 Sensoric	14+5 Sensoric	19
Nominal current [A]	6	6	6
Supply voltage [V AC]	150	150	150
Sensor linkage	Left	Right	-
Weight [kg]	0.16	0.16	0.15
Connection type	Male	Male	Socket

*als Zubehör erhältlich see page 63

► FIELDBUS

Order no.	► Technical Data					
	WER3000FPN01-00	WER3000LPN01-00	WER3000FPB01-00	WER3000LPB01-00	WER3000FIL01-00	WER3000LIL01-00
compatible with	Fix part	Loose part	Fix part	Loose part	Fix part	Loose part
Data transmission	Profinet/Industrial Ethernet	Profinet/Industrial Ethernet	Profibus	Profibus	IO-Link	IO-Link
Data rate	100	100	12	12	-	-
Fixing thread	M12	M12	M12	M12	M12	M12
Weight [kg]	0.11	0.11	0.13	0.12	0.11	0.11

► ADAPTER PLATES

Order no.	► Technical Data	
	APWER3062	APWER3064
compatible with	2xWER3000	4xWER3000
Weight [kg]	0.15	0.42





PLUG-IN CONNECTOR FOR ENERGY ELEMENTS





SUITABLE FOR WER201 / WER02 / WER03 / WER3000

► PLUG-IN CONNECTOR FOR ENERGY ELEMENTS WER201 / WER02 / WER03



Order no.	► Technical Data							
	KAG500B4	KAW500B4	B8-G-4	B8-W-4	KAG500S4	KAW500S4	S8-G-4	S8-W-4
Fixing thread	M8	M8	M8	M8	M8	M8	M8	M8
No. of contacts	4	4	4	4	4	4	4	4
Cable length [m]	5	5	-	-	5	5	-	-
Cable-Ø [mm]	4.3	4.3	-	-	4.3	4.3	-	-
Cable sheath material	PUR	PUR	-	-	PUR	PUR	-	-
Bend radius	10xØ	10xØ	-	-	10xØ	10xØ	-	-
Protection to IEC 60529	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67
Connection type	Socket	Socket	Socket	Socket	Male	Male	Plug	Plug
Version [Type]	Straight	Angle	Straight	Angle	Straight	Angle	Straight	Angle

► ROUND PLUG FOR WER3000

Order no.	► Technical Data			
	RSTVLM23G06B-B	RSTVLM23W06B-B	RSTVLM23G06S-B	RSTVLM23W06S-B
Fixing thread	M23	M23	M23	M23
No. of contacts	6	6	6	6
Protection to IEC 60529	IP67	IP67	IP67	IP67
Connection type	Socket	Socket	Male	Male
				

Order no.	► Technical Data			
	RSTVLM23G08B-B	RSTVLM23W08B-B	RSTVLM23G08S-B	RSTVLM23W08S-B
Fixing thread	M23	M23	M23	M23
No. of contacts	8	8	8	8
Protection to IEC 60529	IP67	IP67	IP67	IP67
Connection type	Socket	Socket	Male	Male
				

Order no.	► Technical Data			
	RSTVSM23G12B-B	RSTVSM23W12B-B	RSTVSM23G12S-B	RSTVSM23W12S-B
Fixing thread	M23	M23	M23	M23
No. of contacts	12	12	12	12
Protection to IEC 60529	IP67	IP67	IP67	IP67
Connection type	Socket	Socket	Male	Male
				

Order no.	► Technical Data			
	RSTVSM23G19B-B	RSTVSM23W19B-B	RSTVSM23G19S-B	RSTVSM23W19S-B
Fixing thread	M23	M23	M23	M23
No. of contacts	19	19	19	19
Protection to IEC 60529	IP67	IP67	IP67	IP67
Connection type	Socket	Socket	Male	Male
				

ROTARY DISTRIBUTORS

OVERVIEW OF SERIES



► ROTARY DISTRIBUTORS SERIES DVR	66
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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



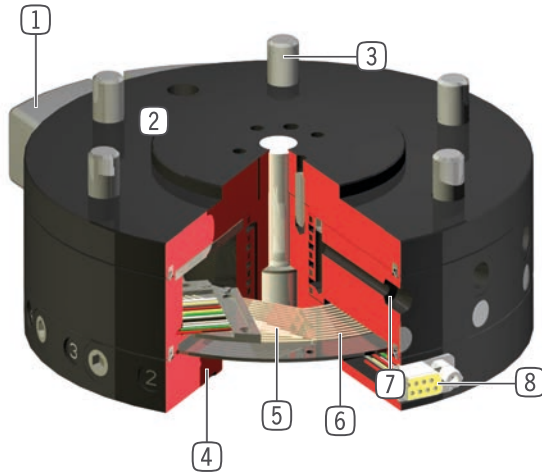
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► BENEFITS IN DETAIL



- 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

► FURTHER INFORMATION IS AVAILABLE ONLINE



► Technical Information

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.

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ROTARY DISTRIBUTORS

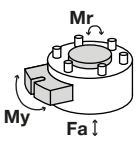
INSTALLATION SIZE DVR40

▶ PRODUCT SPECIFICATIONS



▶ 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



Cylinder Screw

C7984060129



O-Ring

COR0025100

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GVM5



Angled Fittings - Quick Connect Style

WVM5



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

KAW500B4



Plug-in Connector Angled Cable 5m - Connector M8

KAW500S4



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

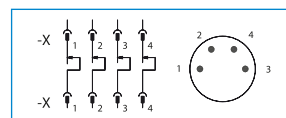
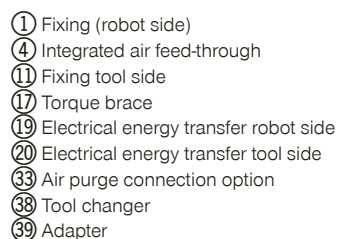
KAG500B4



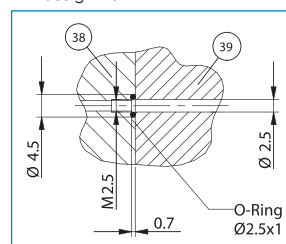
Plug-in Connector Straight Cable 5m - Connector M8

KAG500S4

*Vacuum possible



PIN assignment



Hoseless air passage (tool)

ROTARY DISTRIBUTORS

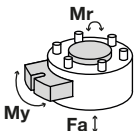
INSTALLATION SIZE DVR50

▶ PRODUCT SPECIFICATIONS



▶ 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



Cylinder Screw

C7984060129



O-Ring

COR0025100

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GVM5



Angled Fittings - Quick Connect Style

WVM5



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

KAW500B4



Plug-in Connector Angled Cable 5m - Connector M8

KAW500S4



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

KAG500B4



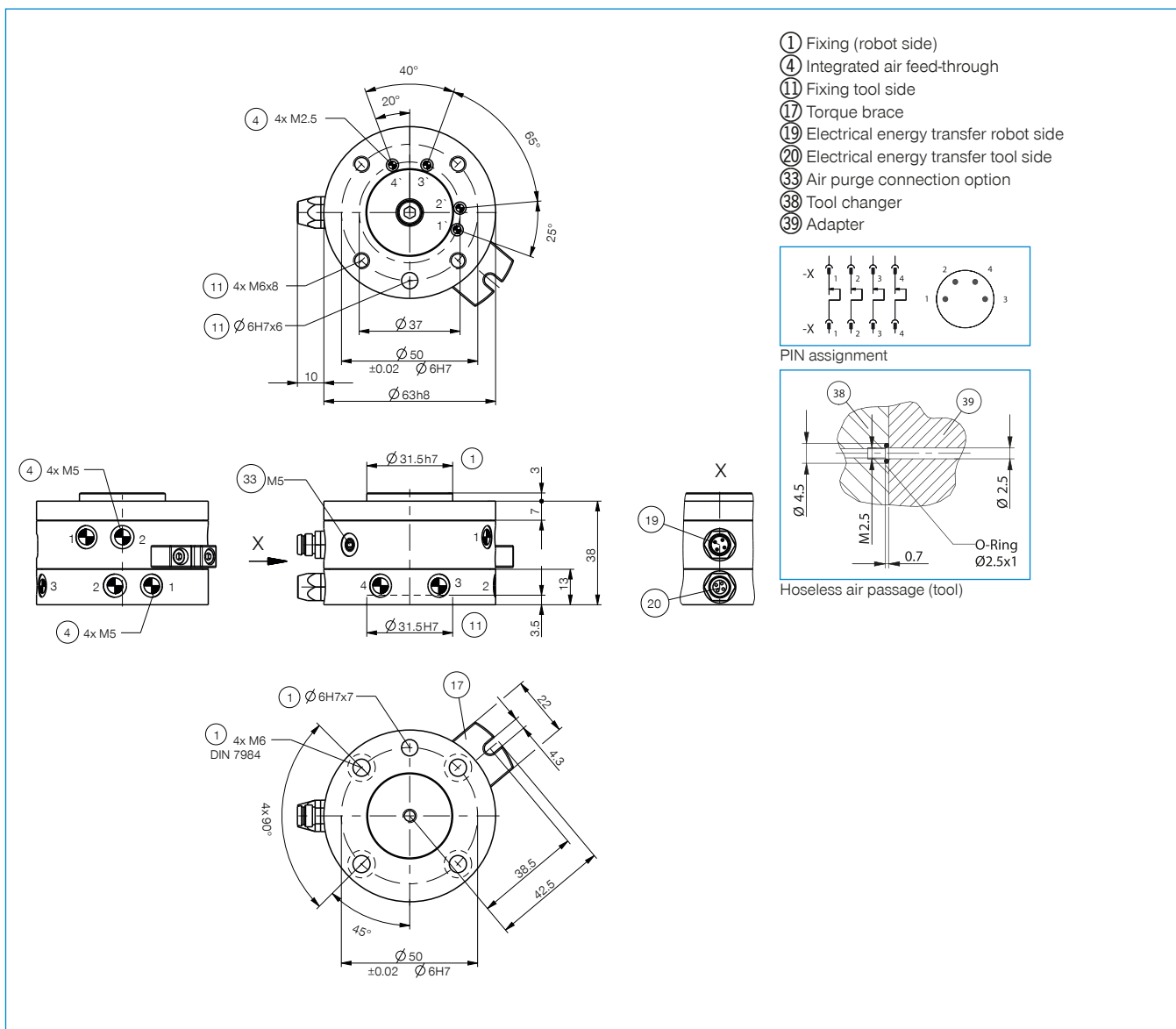
Plug-in Connector Straight Cable 5m - Connector M8

KAG500S4

► Technical Data

Order no.	DVR50I4
Connecting flange according EN ISO 9409-1	TK 50
Recommended handling weight [kg]	15
Pneumatic energy transfer [Quantity]*	4
Electrical energy transfer	4-pole
Max. current [A]	3
Max. voltage [V]	24
Maximum acceleration [m/s ²]	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 [kg/cm ²]	8.1
Protection to IEC 60529	IP40
Weight [kg]	0.6

*Vacuum possible



ROTARY DISTRIBUTORS

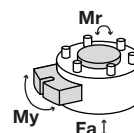
INSTALLATION SIZE DVR63

▶ PRODUCT SPECIFICATIONS



▶ 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



Cylinder Screw

C7984060129



O-Ring

COR0030100

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GVM5

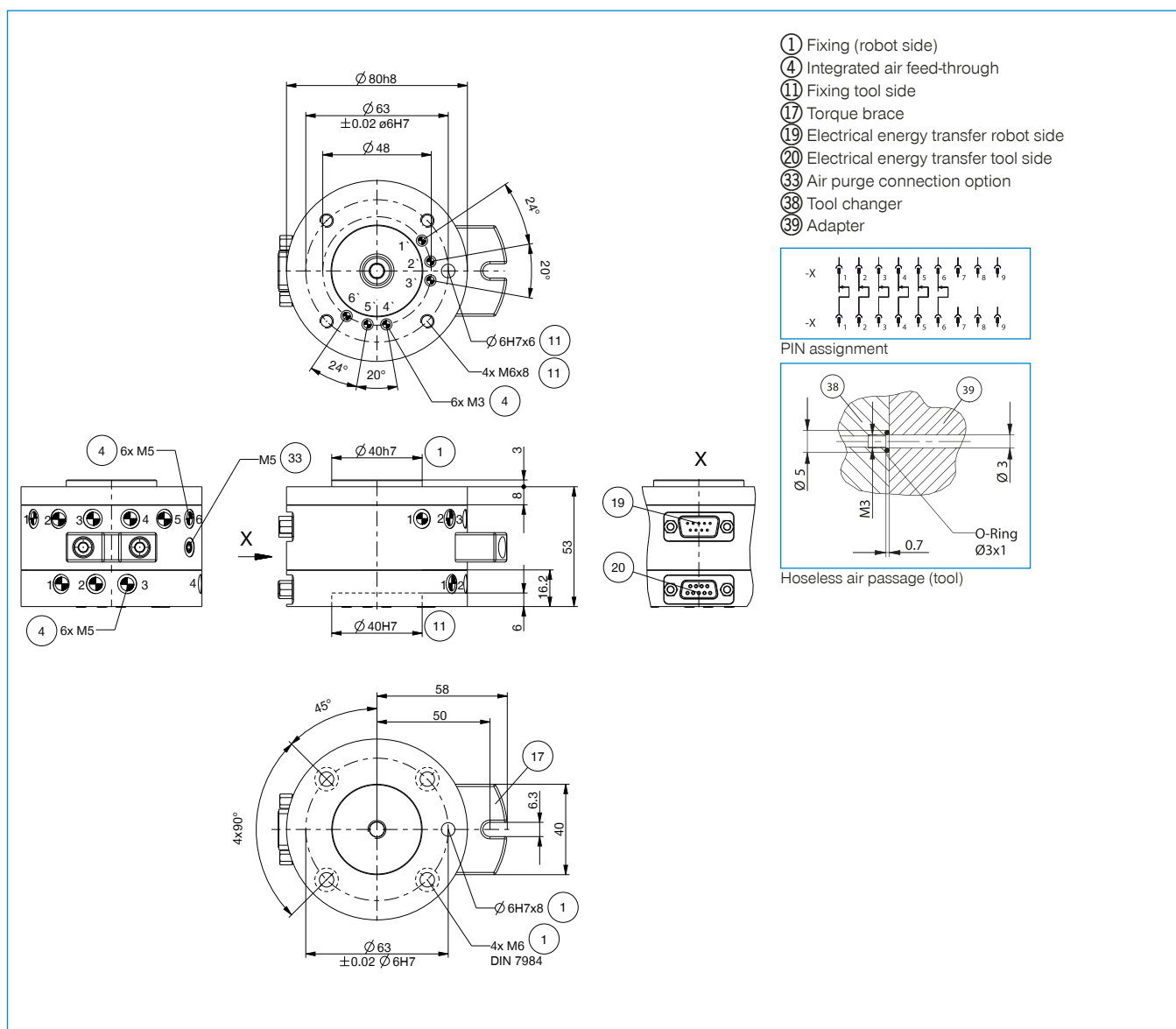


Angled Fittings - Quick Connect Style

WVM5

Order no.	Technical Data
	DVR63I6
Connecting flange according EN ISO 9409-1	TK 63
Recommended handling weight [kg]	50
Pneumatic energy transfer [Quantity]*	6
Electrical energy transfer	6-pole
Max. current [A]	6
Max. voltage [V]	250
Maximum acceleration [m/s ²]	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 [kg/cm ²]	10.5
Protection to IEC 60529	IP64
Weight [kg]	1.2

*Vacuum possible



ROTARY DISTRIBUTORS

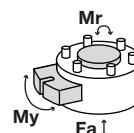
INSTALLATION SIZE DVR80

► PRODUCT SPECIFICATIONS



► 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



Cylinder Screw

C7984080169



O-Ring

COR0030100

► RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GVM5



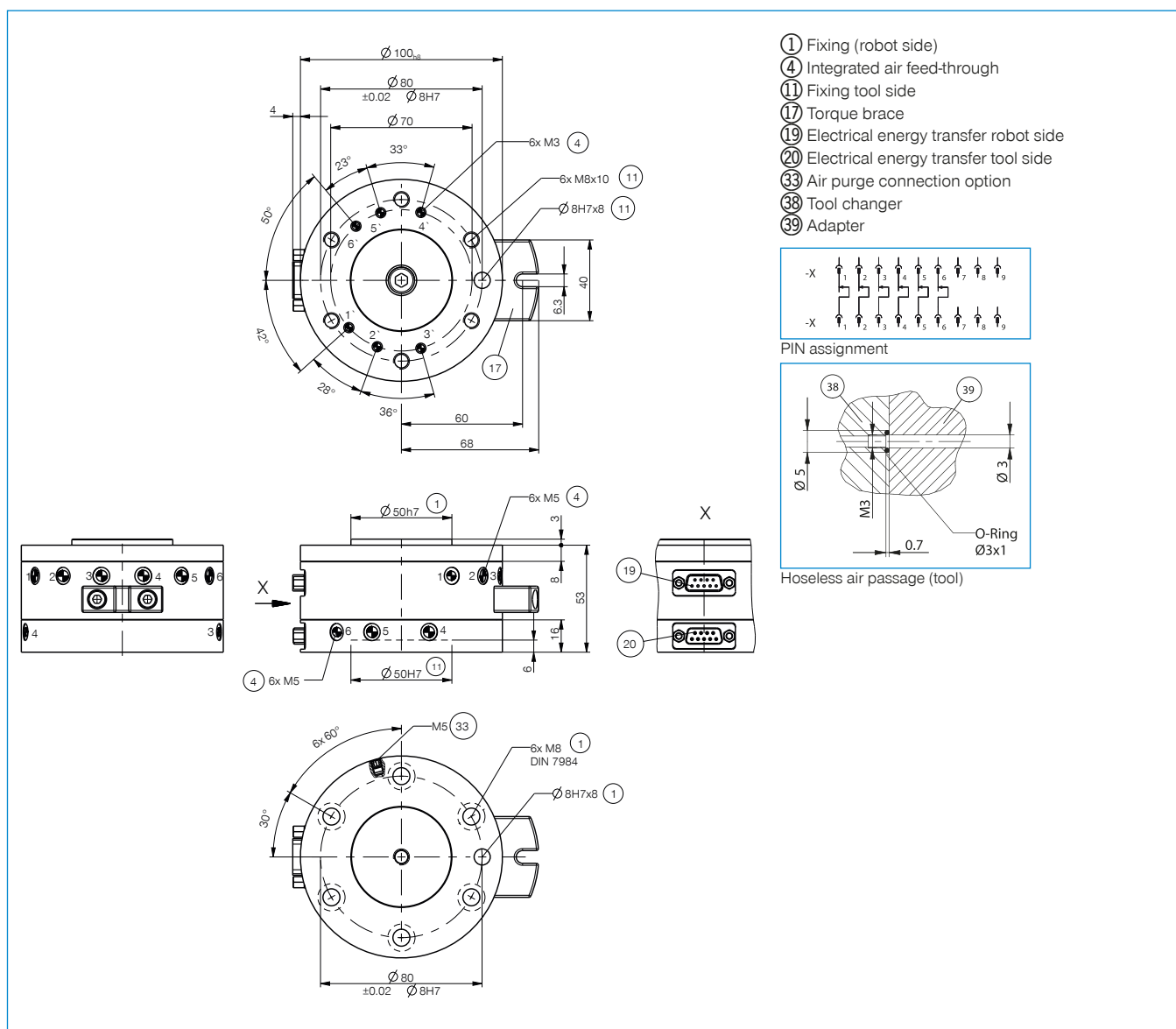
Angled Fittings - Quick Connect Style

WVM5

Technical Data

Order no.	DVR80I6
Connecting flange according EN ISO 9409-1	TK 80
Recommended handling weight [kg]	50
Pneumatic energy transfer [Quantity]*	6
Electrical energy transfer	6-pole
Max. current [A]	6
Max. voltage [V]	250
Maximum acceleration [m/s ²]	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 [kg/cm ²]	27
Protection to IEC 60529	IP64
Weight [kg]	2

*Vacuum possible



ROTARY DISTRIBUTORS

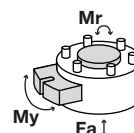
INSTALLATION SIZE DVR100

▶ PRODUCT SPECIFICATIONS



▶ 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



Cylinder Screw

C0912080169



O-Ring

COR0070150

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GV1-8X6

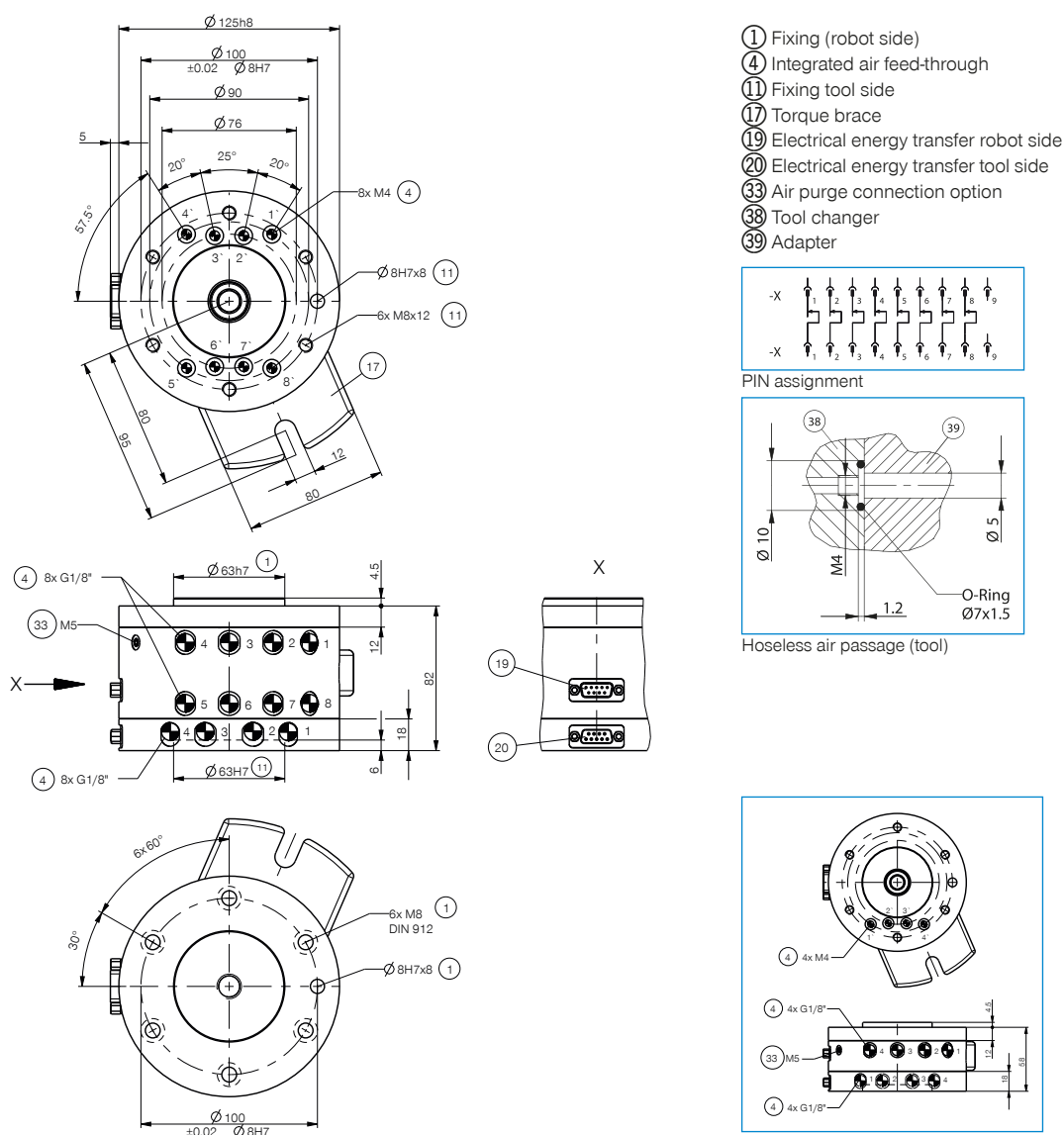


Angled Fittings - Quick Connect Style

WV1-8X6

Order no.	Technical Data	
	DVR100I4	DVR100I8
Connecting flange according EN ISO 9409-1	TK 100	TK 100
Recommended handling weight [kg]	90	90
Pneumatic energy transfer [Quantity]*	4	8
Electrical energy transfer	8-pole	8-pole
Max. current [A]	6	6
Max. voltage [V]	250	250
Maximum acceleration [m/s ²]	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 [kg/cm ²]	86	100
Protection to IEC 60529	IP64	IP64
Weight [kg]	3.8	4.5

*Vacuum possible



ROTARY DISTRIBUTORS

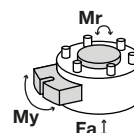
INSTALLATION SIZE DVR125

▶ PRODUCT SPECIFICATIONS



▶ 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



Cylinder Screw

C7984100209



O-Ring

COR0070150

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GV1-8X6

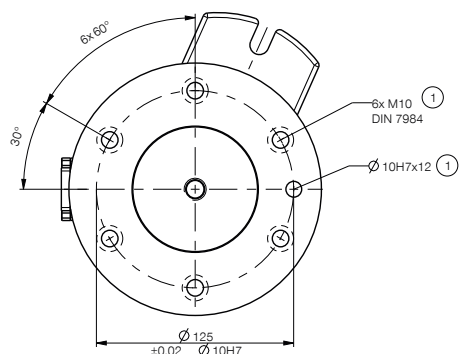
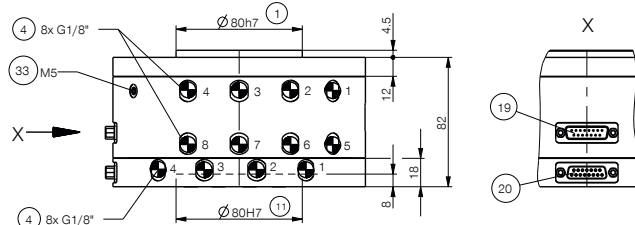
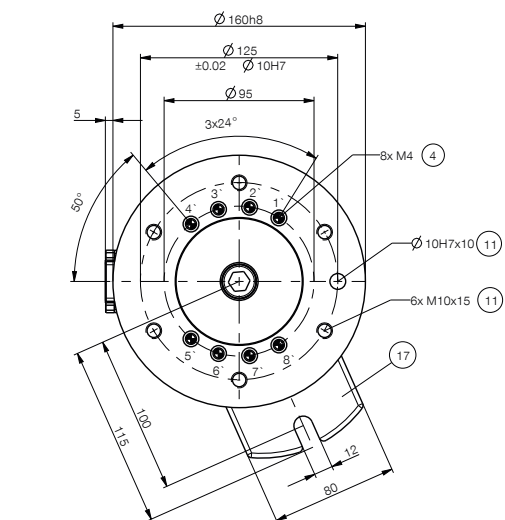


Angled Fittings - Quick Connect Style

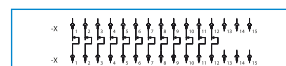
WV1-8X6

Order no.	Technical Data	
	DVR125I4	DVR125I8
Connecting flange according EN ISO 9409-1	TK 125	TK 125
Recommended handling weight [kg]	200	200
Pneumatic energy transfer [Quantity]*	4	8
Electrical energy transfer	12-pole	12-pole
Max. current [A]	6	6
Max. voltage [V]	250	250
Maximum acceleration [m/s ²]	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 [kg/cm ²]	220	225
Protection to IEC 60529	IP64	IP64
Weight [kg]	5.9	7

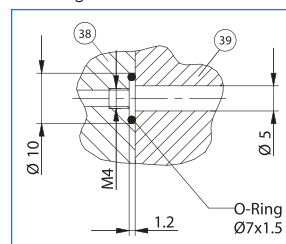
*Vacuum possible



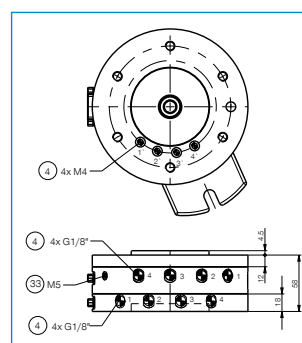
- ① Fixing (robot side)
- ④ Integrated air feed-through
- ⑪ Fixing tool side
- ⑰ Torque brace
- ⑲ Electrical energy transfer robot side
- ⑳ Electrical energy transfer tool side
- ③③ Air purge connection option
- ③⑧ Tool changer
- ③⑨ Adapter



PIN assignment



Hoseless air passage (tool)



ROTARY DISTRIBUTORS

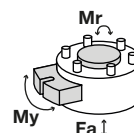
INSTALLATION SIZE DVR160

▶ PRODUCT SPECIFICATIONS



▶ 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



Cylinder Screw

C7984100209



O-Ring

COR0070150

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GV1-8X6

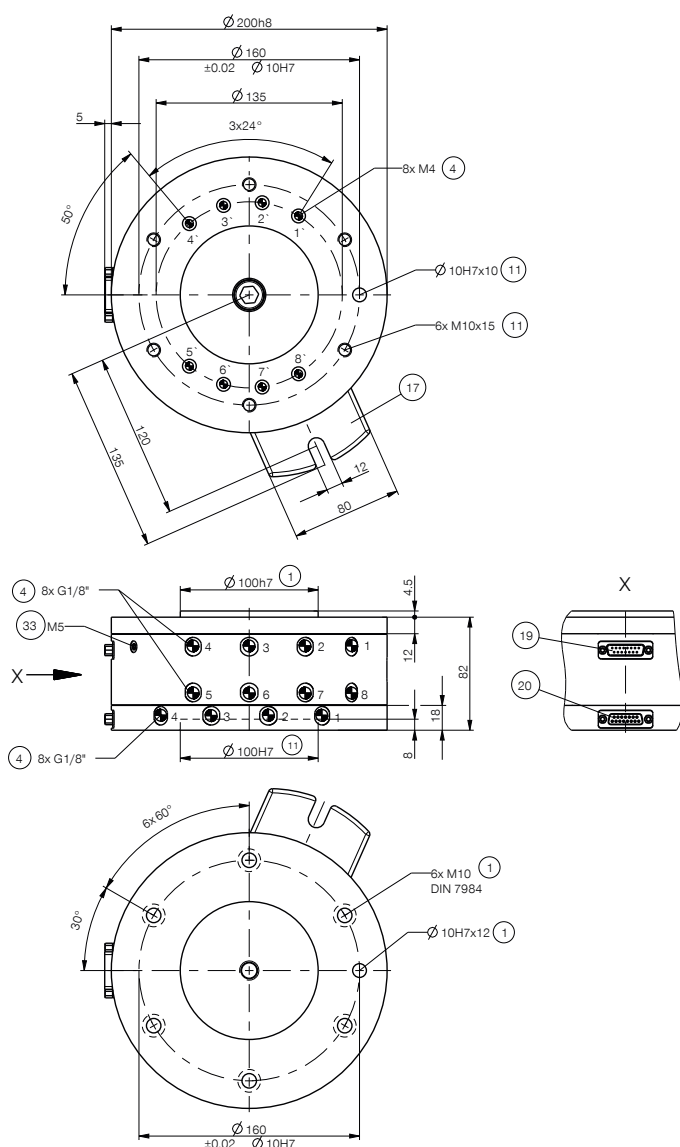


Angled Fittings - Quick Connect Style

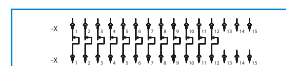
WV1-8X6

Order no.	Technical Data	
	DVR160I4	DVR160I8
Connecting flange according EN ISO 9409-1	TK 160	TK 160
Recommended handling weight [kg]	200	200
Pneumatic energy transfer [Quantity]*	4	8
Electrical energy transfer	12-pole	12-pole
Max. current [A]	6	6
Max. voltage [V]	250	250
Maximum acceleration [m/s ²]	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 [kg/cm ²]	480	580
Protection to IEC 60529	IP64	IP64
Weight [kg]	9.1	11

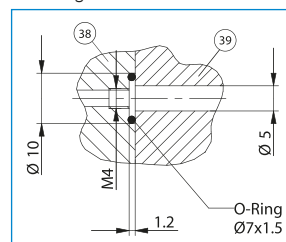
*Vacuum possible



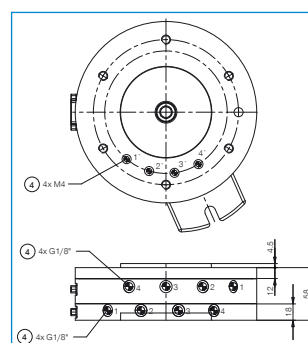
- ① Fixing (robot side)
- ④ Integrated air feed-through
- ⑪ Fixing tool side
- ⑰ Torque brace
- ⑲ Electrical energy transfer robot side
- ⑳ Electrical energy transfer tool side
- ③③ Air purge connection option
- ③⑧ Tool changer
- ③⑨ Adapter



PIN assignment



Hoseless air passage (tool)



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 effectively

► 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



► Our products welcome the challenge!

Extreme conditions, all over the world—our tried and tested components and systems give you endless possibilities.

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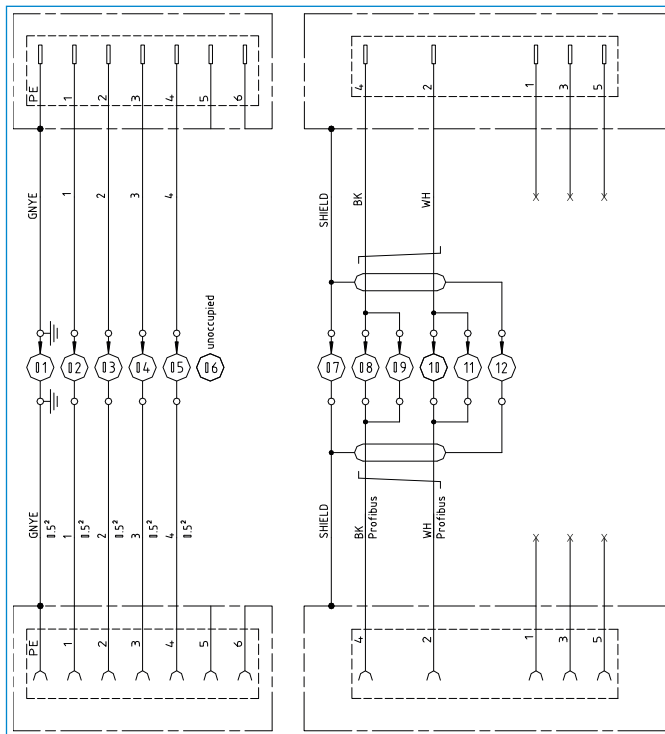
HOW TO ORDER CORRECTLY

- The product order numbers are arranged according to this diagram:

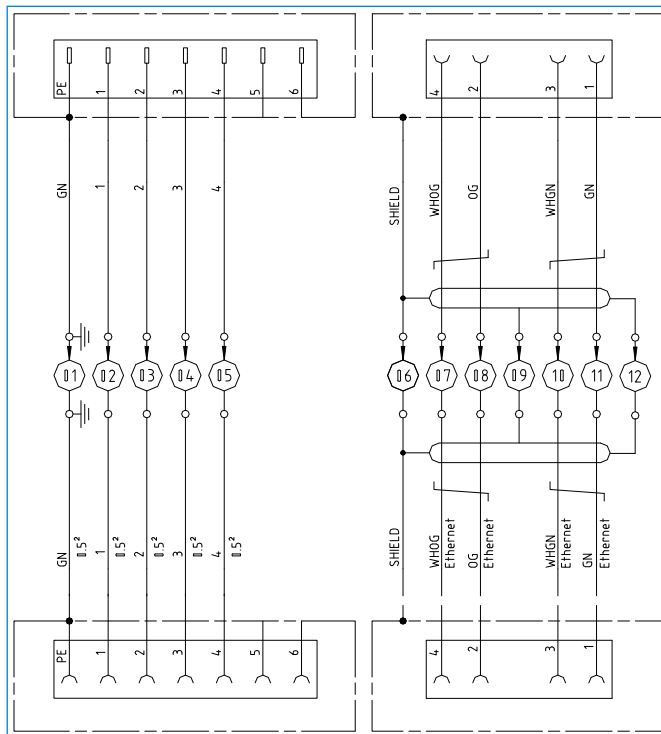
Order no.	DVR1125	<input type="checkbox"/>		
Profibus	PB			
Industrial Ethernet	PN			

► CONNECTION DIAGRAM

DVR1125PB



DVR1125PN



► FURTHER INFORMATION IS AVAILABLE ONLINE



► Technical Information

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.

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ROTARY DISTRIBUTORS

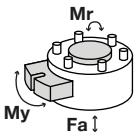
INSTALLATION SIZE DVR1125

▶ PRODUCT SPECIFICATIONS



▶ 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



Cylinder Screw

C7984100209



O-Ring

COR0070150



O-ring
145x2.5

COR1450250

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick
Connect Style

GV1-8X6

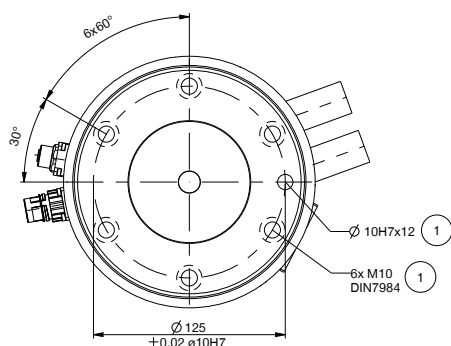
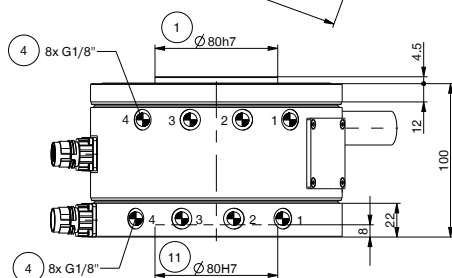
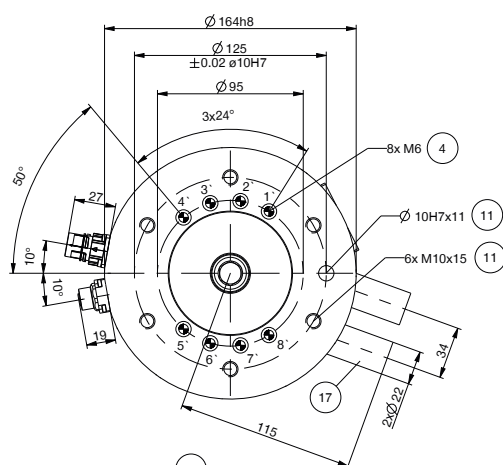


Angled Fittings - Quick
Connect Style

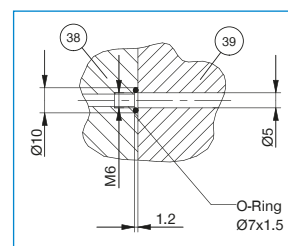
WV1-8X6

Order no.	Technical Data	
	DVR1125PB	DVR1125PN
Connecting flange according EN ISO 9409-1	TK 125	TK 125
Recommended handling weight [kg]	200	200
Pneumatic energy transfer [Quantity]*	8	8
Bus protocol	Profibus	Industrial Ethernet
Data rate	12	100
Electrical energy transfer	4 + PE	4 + PE
Max. current [A]	9	9
Max. voltage [V]	250	250
Maximum acceleration [m/s ²]	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 [kg/cm ²]	370	370
Protection to IEC 60529	IP64	IP64
Weight [kg]	8.5	8.5

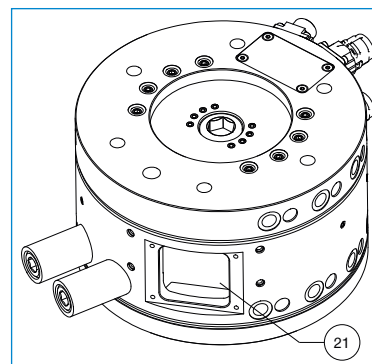
*Vacuum possible



- 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
- ㉔ Tool changer
- ㉙ Adapter



Hoseless air passage (tool)



AXIS COMPENSATION MODULES

OVERVIEW OF SERIES



4

Axis Compensation Modules / pneumatic / Robot Accessories

▶ AXIS COMPENSATION MODULES SERIES FGR	88
Installation size FGR1040	90
Installation size FGR1050	92
▶ AXIS COMPENSATION MODULES SERIES XYR	94
Installation size XYR1063	96
Installation size XYR1080	98
Installation size XYR1100	100
Installation size XYR1125	102
Installation size XYR1160	104
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Installation size AR40P	108
Installation size AR50P	110
Installation size AR63P	112
Installation size AR80P	114
Installation size AR100P	116
Installation size AR125P	118
Installation size AR160P	120

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



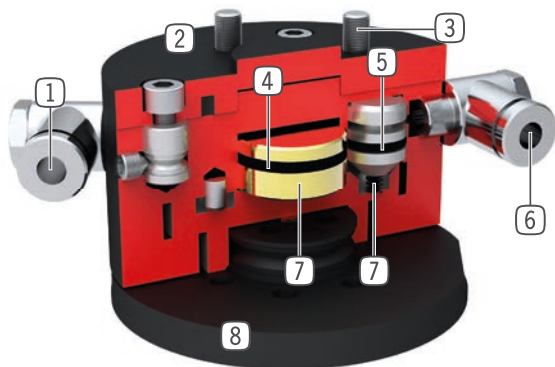
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Find the best product for your specific use:

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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

► FURTHER INFORMATION IS AVAILABLE ONLINE



► Technical Information

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Find data, illustrations, 3-D models and operating instructions for your installation size using the order number for your desired product.

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AXIS COMPENSATION MODULES

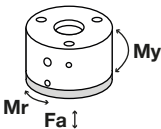
INSTALLATION SIZE FGR1040

▶ PRODUCT SPECIFICATIONS



▶ Forces and moments

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



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

▶ INCLUDED IN DELIVERY



Cylinder Screw

C7984060129

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GV1-8X6



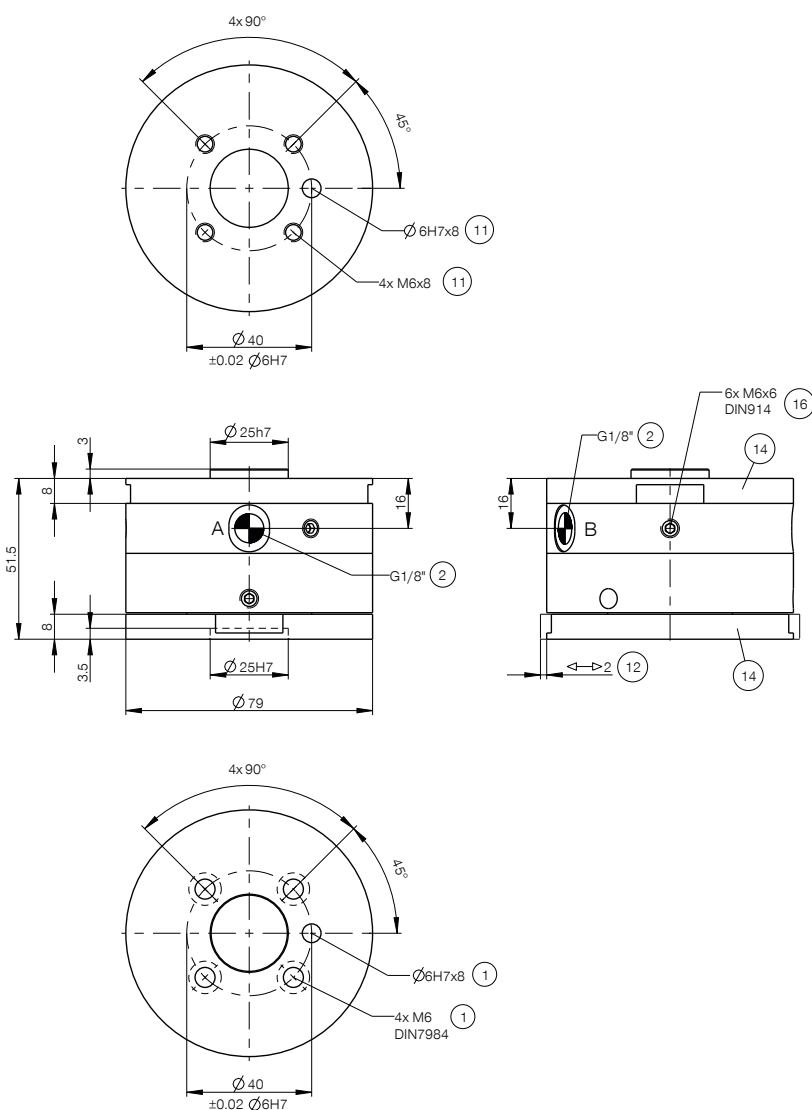
Angled Fittings - Quick Connect Style

WV1-8X6

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK40
Recommended handling weight [kg]**	10
Horizontal deviation +/- [mm]	2
Rotation angle max. [°]	12
Retention force centred [N]	120
Retention force decentred [N]	50
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Weight [kg]	0.9

*All data measured at 6 bar

**with central attachment



- ① Fixing (robot side)
- ② Energy supply
- ⑪ Fixing tool side
- ⑫ Position compensation
- ⑭ Adapter plate
- ⑯ Fixing adapter plate
- A Air connection (eccentric clamping)
- B Air connection (centering)

AXIS COMPENSATION MODULES

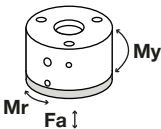
INSTALLATION SIZE FGR1050

PRODUCT SPECIFICATIONS



Forces and moments

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



Mr [Nm]	6
My [Nm]	13
Fa [N]	1000

INCLUDED IN DELIVERY



Cylinder Screw

C0912060149

RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GV1-8X6



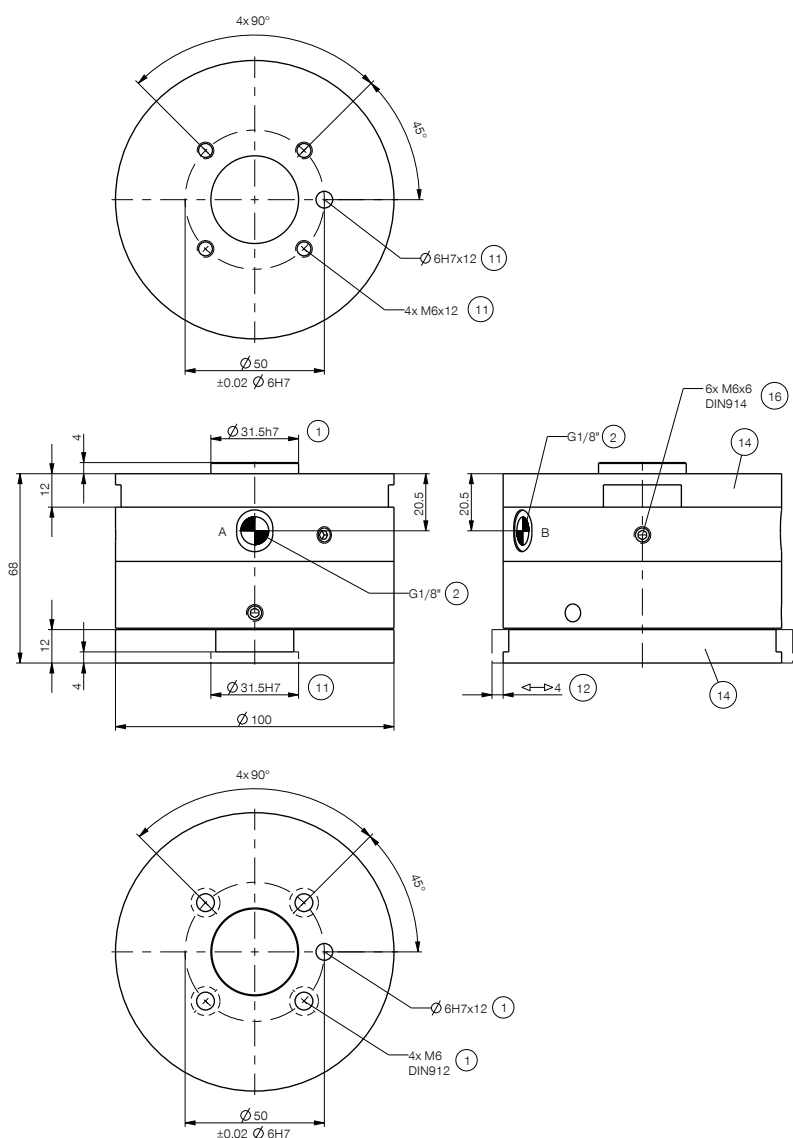
Angled Fittings - Quick Connect Style

WV1-8X6

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 50
Recommended handling weight [kg]**	20
Horizontal deviation +/- [mm]	4
Rotation angle max. [°]	9
Retention force centred [N]	250
Retention force decentred [N]	140
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Weight [kg]	1.7

*All data measured at 6 bar

**with central attachment



- ① Fixing (robot side)
- ② Energy supply
- ⑪ Fixing tool side
- ⑫ Position compensation
- ⑭ Adapter plate
- ⑯ Fixing adapter plate
- A Air connection (eccentric clamping)
- B Air connection (centering)

AXIS COMPENSATION MODULES

SERIES XYR

► 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

4

► THE BEST PRODUCT FOR YOUR APPLICATION



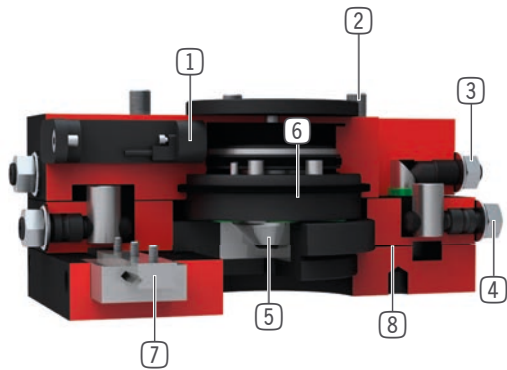
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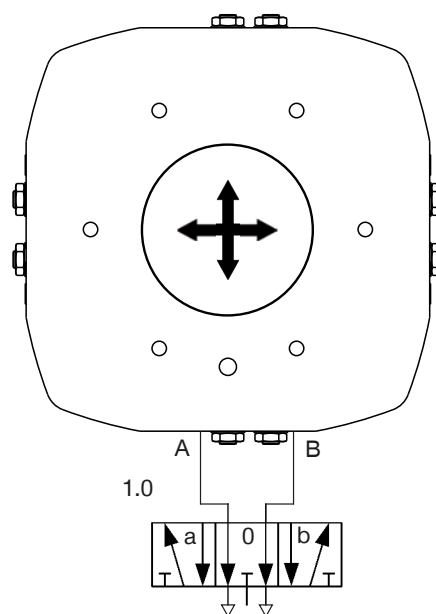
www.zimmer-group.de

► BENEFITS IN DETAIL



- ① **Piston position sensing**
 - via magnetic field sensors
 - 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
- ⑤ **Locking piston**
 - central via cone
- ⑥ **Eccentric 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

► PNEUMATIC PLANS



Valve	Status	Locking piston locked	Locking piston unlocked	Eccentric clamping activated	Eccentric clamping deactivated
1.0	a	1	0	1	0
	0	0	1	0	1
	b	0	0	0	1

AXIS COMPENSATION MODULES

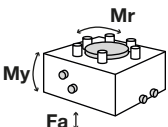
INSTALLATION SIZE XYR1063

PRODUCT SPECIFICATIONS



Forces and moments

Shows static forces and moments



Mr [Nm]	50
My [Nm]	50
Fa [N]	625

INCLUDED IN DELIVERY



Mounting block

KB8K



Cylinder Screw

C7984060129

RECOMMENDED ACCESSORIES



Alternate proximity bracket

KHA1000-8



Inductive proximity switch - Connector M8

NJ8-E2S



Straight Fittings - Quick Connect Style

GVM5



Piston position sensing

ZUB0046



Inductive proximity switch - Cable 5 m

NJ8-E2



Angled Fittings - Quick Connect Style

WVM5

AXIS COMPENSATION MODULES

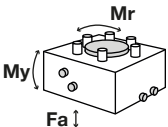
INSTALLATION SIZE XYR1080

PRODUCT SPECIFICATIONS



Forces and moments

Shows static forces and moments



Mr [Nm]	70
My [Nm]	70
Fa [N]	1150

INCLUDED IN DELIVERY



Mounting block

KB8K



Cylinder Screw

C7984080169

RECOMMENDED ACCESSORIES



Alternate proximity bracket

KHA1000-8



Inductive proximity switch - Connector M8

NJ8-E2S



Straight Fittings - Quick Connect Style

GV1-8X6



Piston position sensing

ZUB0047



Inductive proximity switch - Cable 5 m

NJ8-E2



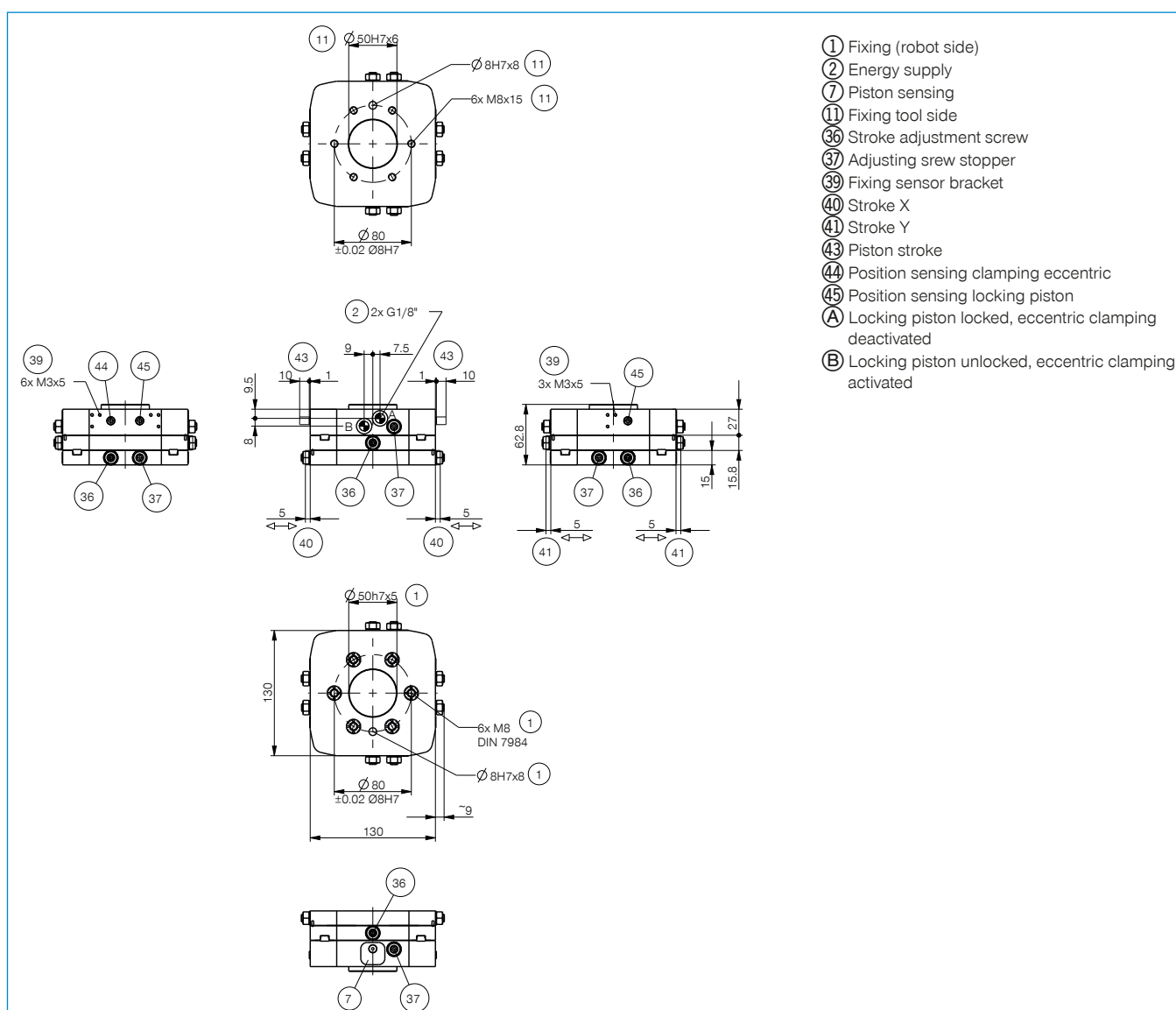
Angled Fittings - Quick Connect Style

WV1-8X6

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 80
Recommended handling weight [kg]**	15
Stroke X/Y level +/- [mm]	5
Retention force centred [N]	450
Retention force decentred [N]	200
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	10
Moment of inertia [kg/cm²]	82.5
Weight [kg]	3

* All data measured at 6 bar

** with central attachment



AXIS COMPENSATION MODULES

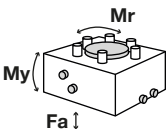
INSTALLATION SIZE XYR1100

PRODUCT SPECIFICATIONS



Forces and moments

Shows static forces and moments



Mr [Nm]	100
My [Nm]	100
Fa [N]	2300

INCLUDED IN DELIVERY



Mounting block

KB8K



Cylinder Screw

C7984080169

RECOMMENDED ACCESSORIES



Alternate proximity bracket

KHA1000-8



Inductive proximity switch - Connector M8

NJ8-E2S



Straight Fittings - Quick Connect Style

GV1-8X6



Piston position sensing

ZUB0048



Inductive proximity switch - Cable 5 m

NJ8-E2



Angled Fittings - Quick Connect Style

WV1-8X6

AXIS COMPENSATION MODULES

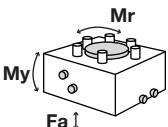
INSTALLATION SIZE XYR1125

PRODUCT SPECIFICATIONS



Forces and moments

Shows static forces and moments



Mr [Nm]	150
My [Nm]	150
Fa [N]	3600

INCLUDED IN DELIVERY



Mounting block

KB8K



Cylinder Screw

C7984100209

RECOMMENDED ACCESSORIES



Alternate proximity bracket

KHA1000-8



Inductive proximity switch - Connector M8

NJ8-E2S



Straight Fittings - Quick Connect Style

GV1-8X6



Piston position sensing

ZUB0049



Inductive proximity switch - Cable 5 m

NJ8-E2



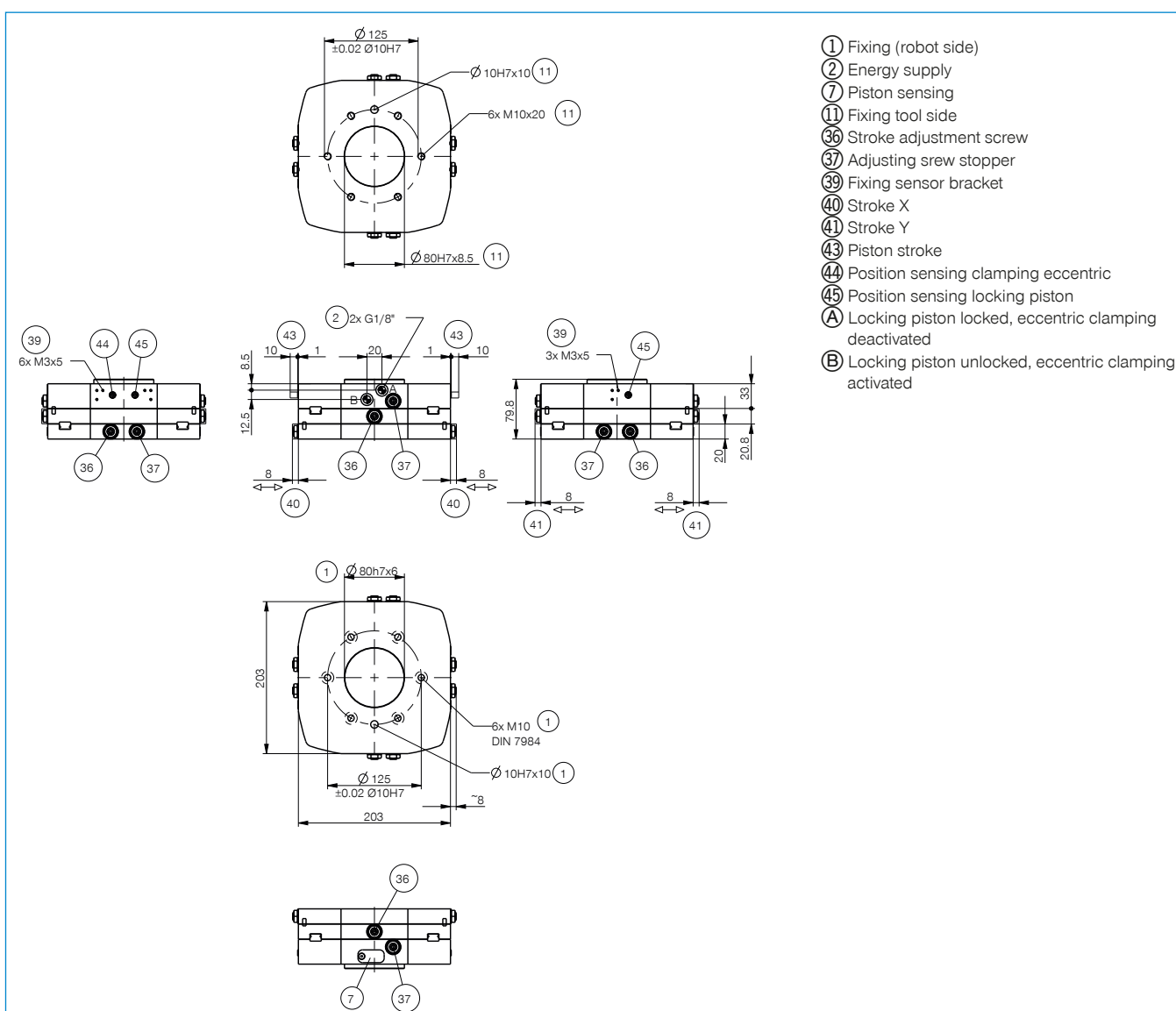
Angled Fittings - Quick Connect Style

WV1-8X6

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 125
Recommended handling weight [kg]**	45
Stroke X/Y level +/- [mm]	8
Retention force centred [N]	900
Retention force decentred [N]	500
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	31
Moment of inertia [kg/cm²]	585
Weight [kg]	8.9

* All data measured at 6 bar

** with central attachment



AXIS COMPENSATION MODULES

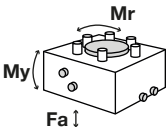
INSTALLATION SIZE XYR1160

PRODUCT SPECIFICATIONS



Forces and moments

Shows static forces and moments



Mr [Nm]	250
My [Nm]	250
Fa [N]	3600

INCLUDED IN DELIVERY



Mounting block

KB8K



Cylinder Screw

C7984100209

RECOMMENDED ACCESSORIES



Alternate proximity bracket

KHA1000-8



Inductive proximity switch - Connector M8

NJ8-E2S



Straight Fittings - Quick Connect Style

GV1-8X6



Piston position sensing

ZUB0050



Inductive proximity switch - Cable 5 m

NJ8-E2



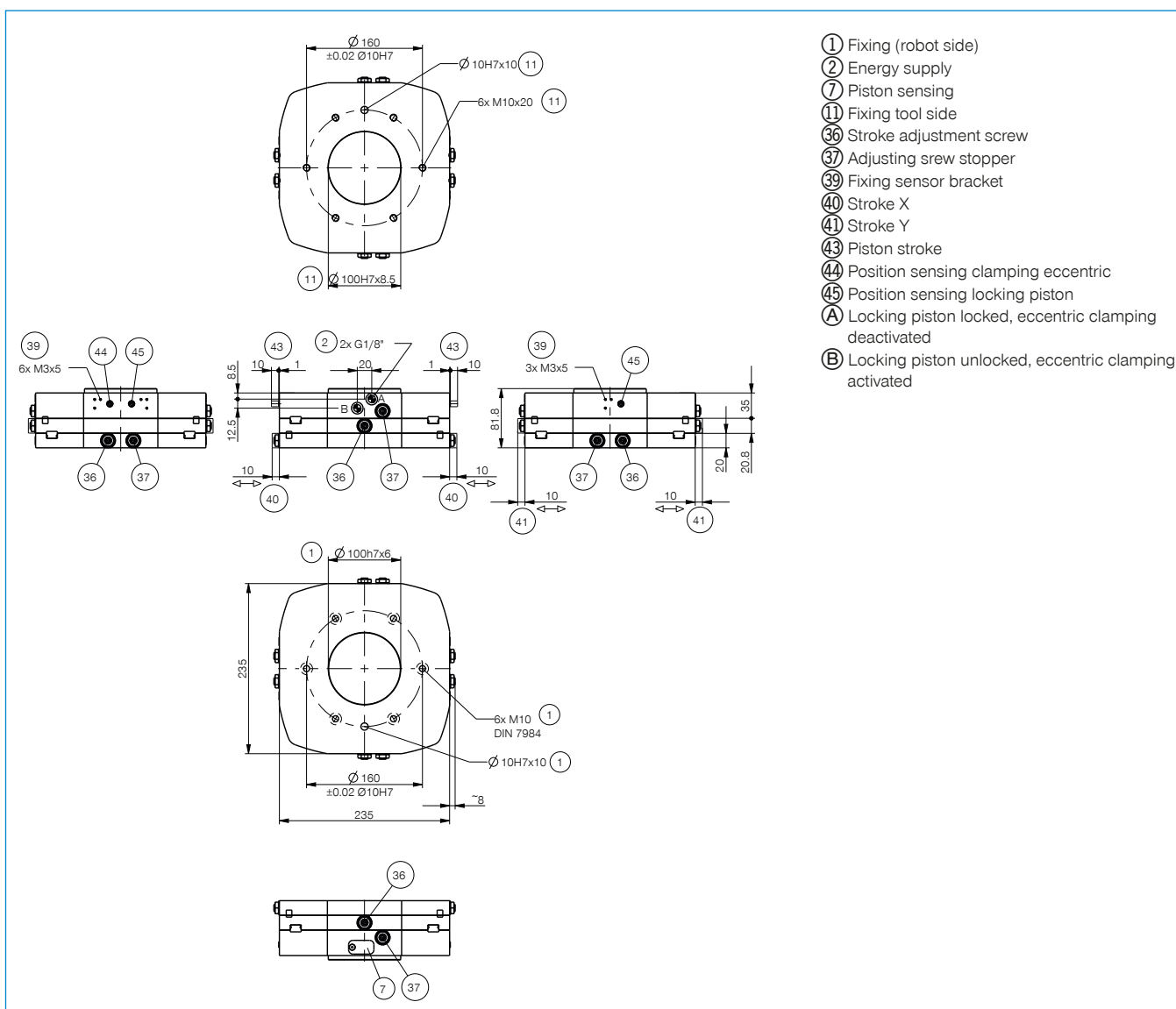
Angled Fittings - Quick Connect Style

WV1-8X6

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 160
Recommended handling weight [kg]**	75
Stroke X/Y level +/- [mm]	10
Retention force centred [N]	1200
Retention force decentred [N]	800
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	48
Moment of inertia [kg/cm²]	1005
Weight [kg]	11.7

*All data measured at 6 bar

**with central attachment



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

► THE BEST PRODUCT FOR YOUR APPLICATION



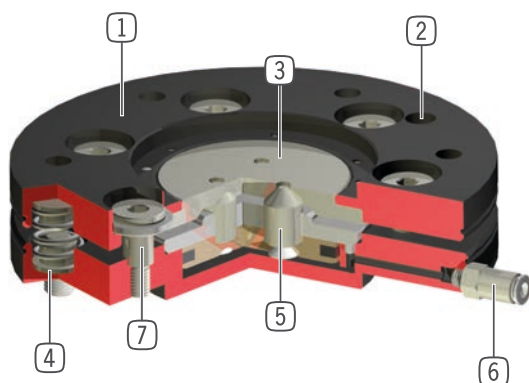
► Our products welcome the challenge!

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.de

► BENEFITS IN DETAIL



- ① **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ② **Robot connecting 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 **Energy supply**
- ⑦ **Guiding bolts with ball cup**

► FURTHER INFORMATION IS AVAILABLE ONLINE



► Technical Information

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.



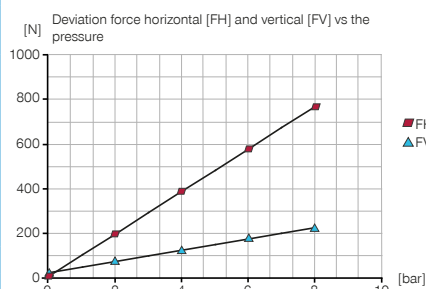
AXIS COMPENSATION MODULES

INSTALLATION SIZE AR40P

PRODUCT SPECIFICATIONS

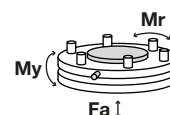


Spring Pack 1 (pre-assembled)



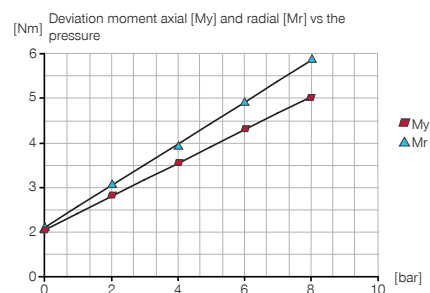
Forces and moments

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)



INCLUDED IN DELIVERY



Cylinder Screw

C7984060129



Spring Pack 1 (pre-assembled)

CFED11180

RECOMMENDED ACCESSORIES



Angled Fittings - Barb Style Connection

WVM3

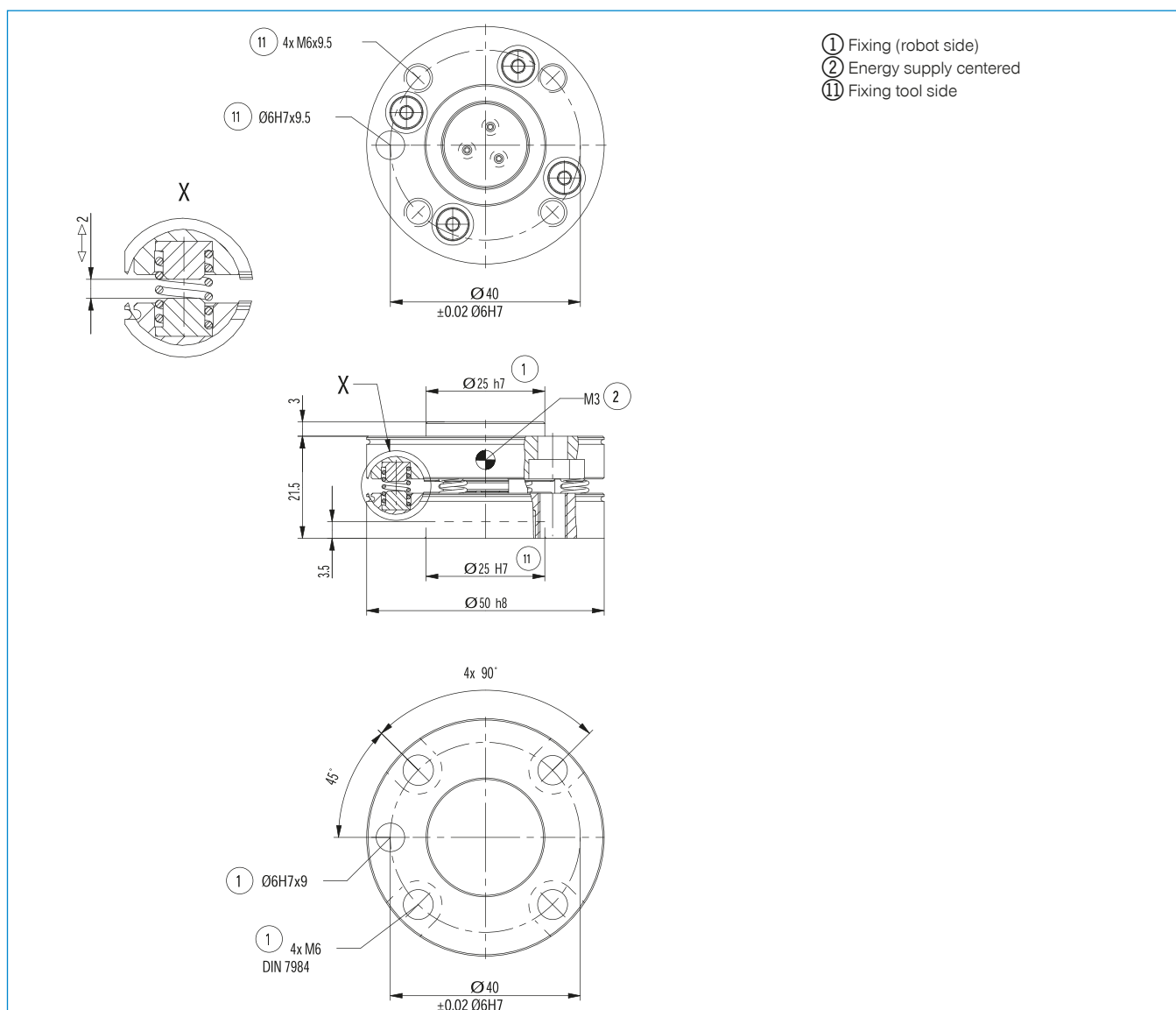


Straight Fittings - Barb Style Connection

GVM3

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK40
Installation Height [mm]	21.5
Recommended handling weight [kg]	3
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 min. [bar]	1
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Moment of inertia [kg/cm²]	0.5
Weight [kg]	0.15

*All data measured at 6 bar



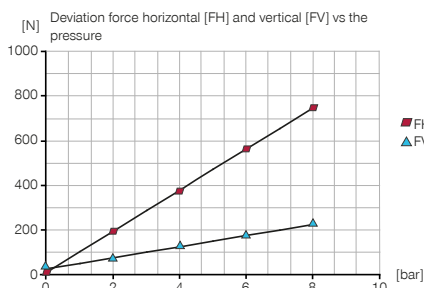
AXIS COMPENSATION MODULES

INSTALLATION SIZE AR50P

PRODUCT SPECIFICATIONS

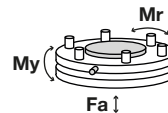


Spring Pack 1 (pre-assembled)



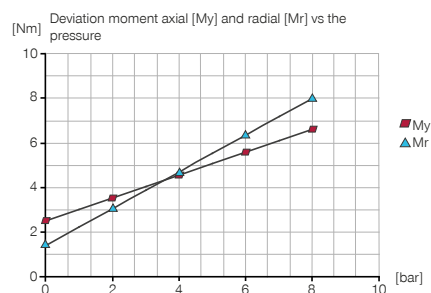
Forces and moments

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)



INCLUDED IN DELIVERY



Cylinder Screw

C7984060129



Spring Pack 1 (pre-assembled)

CFED11180

RECOMMENDED ACCESSORIES



Angled Fittings - Barb Style Connection

WVM3

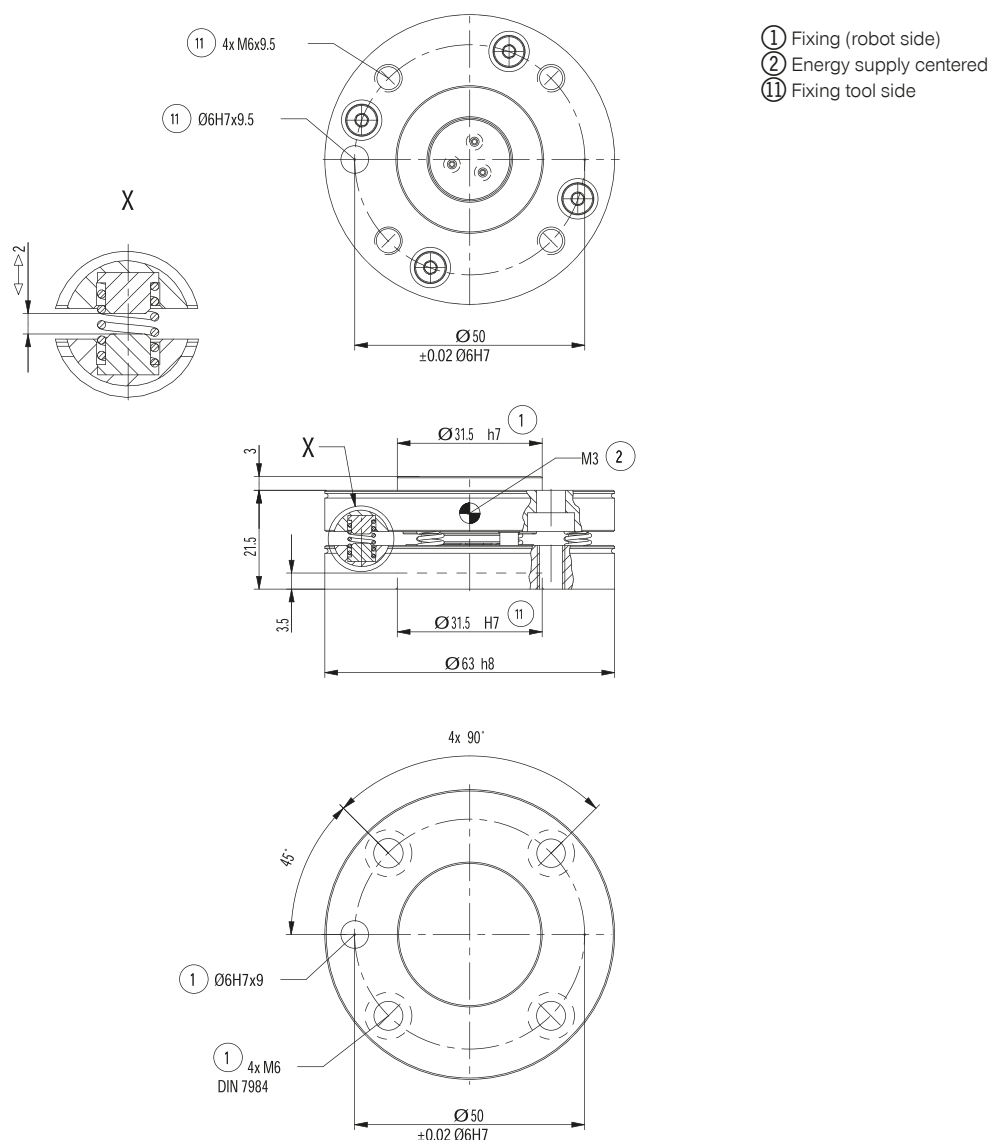


Straight Fittings - Barb Style Connection

GVM3

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 50
Installation Height [mm]	21.5
Recommended handling weight [kg]	4
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 min. [bar]	1
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Moment of inertia [kg/cm²]	1.1
Weight [kg]	0.22

*All data measured at 6 bar



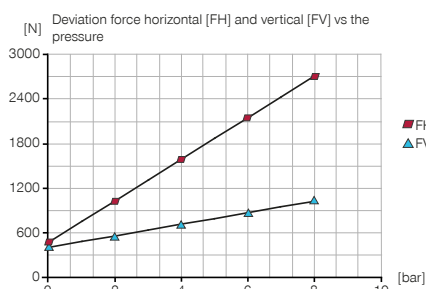
AXIS COMPENSATION MODULES

INSTALLATION SIZE AR63P

PRODUCT SPECIFICATIONS

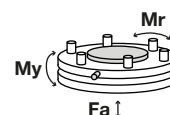


Spring Pack 1 (pre-assembled)



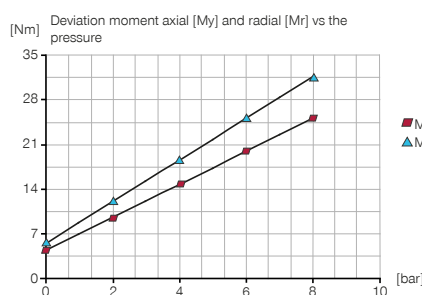
Forces and moments

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

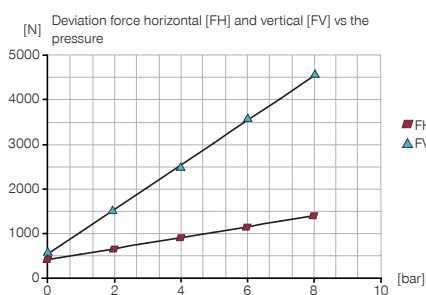


Mr [Nm]	300
My [Nm]	300
Fa [N]	1500

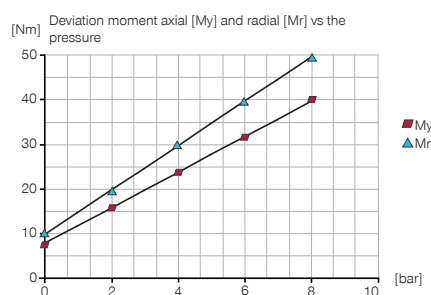
Spring Pack 1 (pre-assembled)



Spring Pack 2



Spring Pack 2

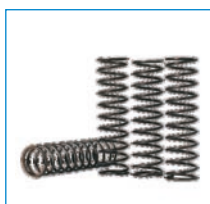


INCLUDED IN DELIVERY



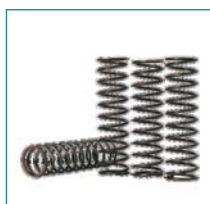
Cylinder Screw

C7984060149



Spring Pack 1 (pre-assembled)

CFED63000



Spring Pack 2

CFED63010

RECOMMENDED ACCESSORIES



Angled Fittings - Barb Style Connection

WVM3

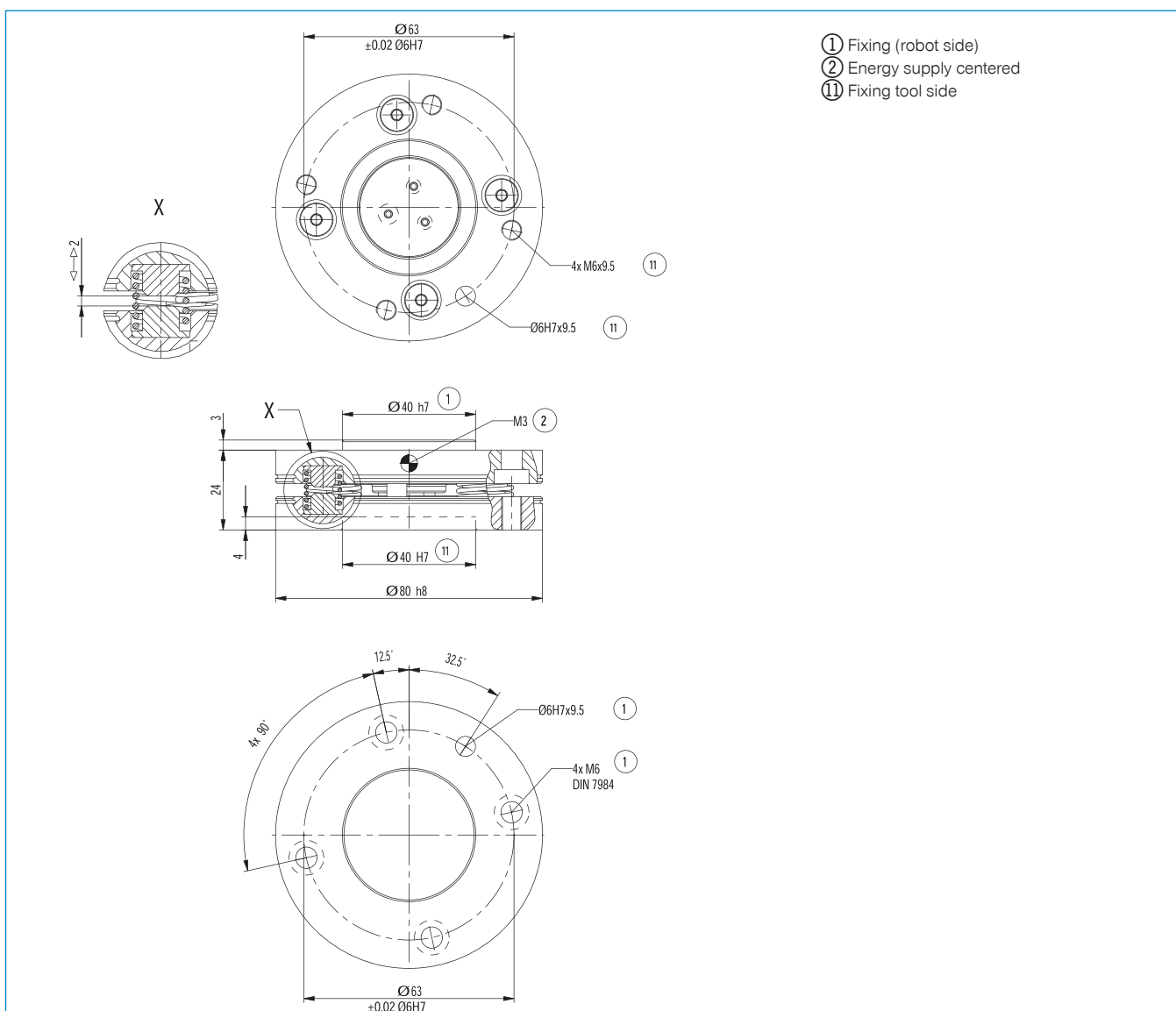


Straight Fittings - Barb Style Connection

GVM3

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 63
Installation Height [mm]	24
Recommended handling weight [kg]	15
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 min. [bar]	1
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Moment of inertia [kg/cm²]	2.8
Weight [kg]	0.36

*All data measured at 6 bar



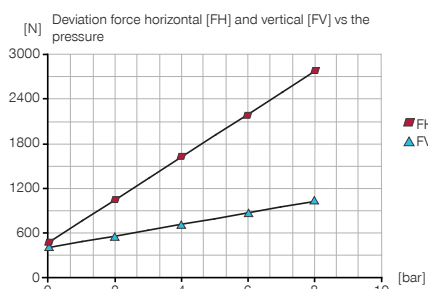
AXIS COMPENSATION MODULES

INSTALLATION SIZE AR80P

PRODUCT SPECIFICATIONS

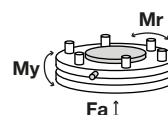


Spring Pack 1 (pre-assembled)



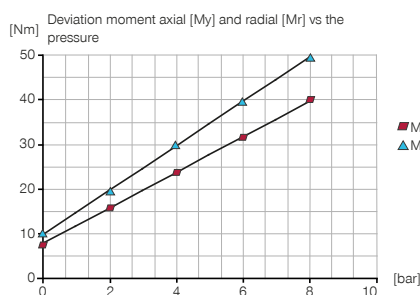
Forces and moments

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

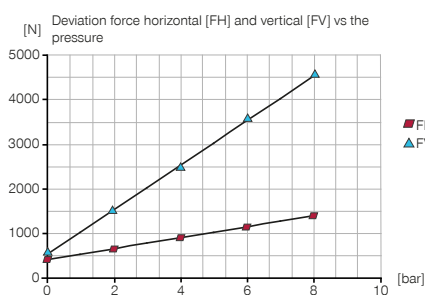


Mr [Nm]	300
My [Nm]	300
Fa [N]	1500

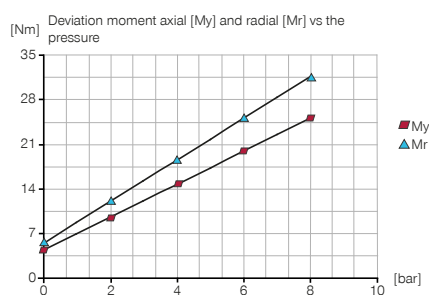
Spring Pack 1 (pre-assembled)



Spring Pack 2



Spring Pack 2



INCLUDED IN DELIVERY



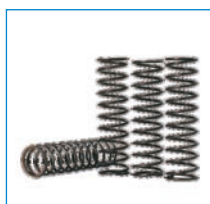
Cylinder Screw

C7984080169



Spring Pack 1 (pre-assembled)

CFED63000



Spring Pack 2

CFED63010

RECOMMENDED ACCESSORIES



Angled Fittings - Barb Style Connection

WVM3

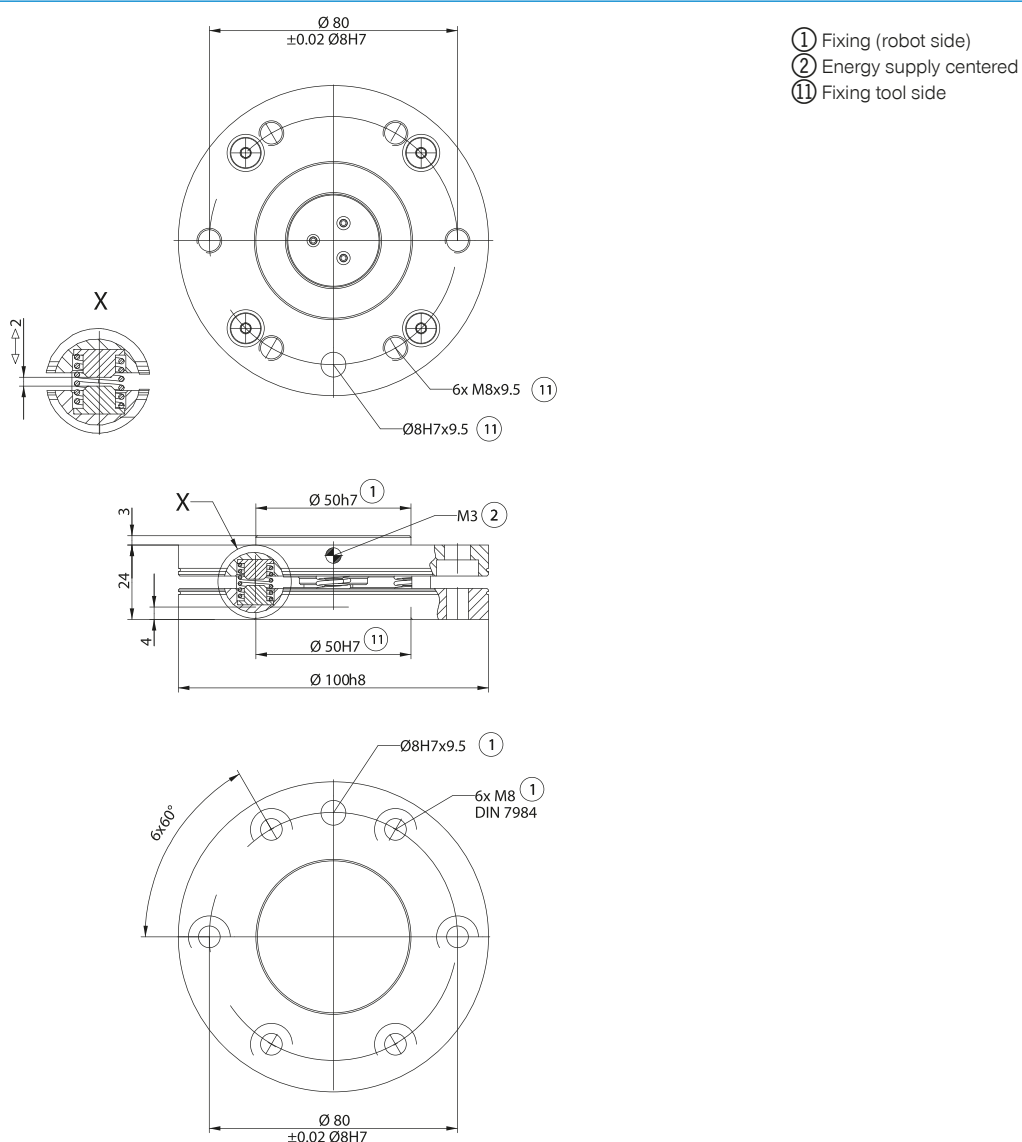


Straight Fittings - Barb Style Connection

GVM3

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 80
Installation Height [mm]	24
Recommended handling weight [kg]	15
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 min. [bar]	1
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Moment of inertia [kg/cm²]	6.2
Weight [kg]	0.5

*All data measured at 6 bar



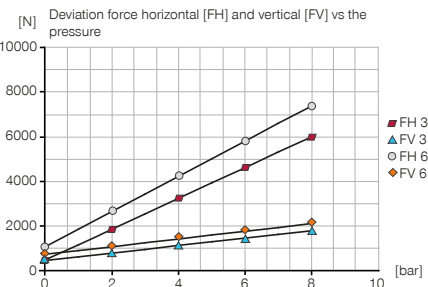
AXIS COMPENSATION MODULES

INSTALLATION SIZE AR100P

PRODUCT SPECIFICATIONS

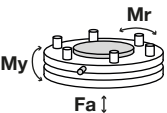


Spring Pack 1 (pre-assembled)



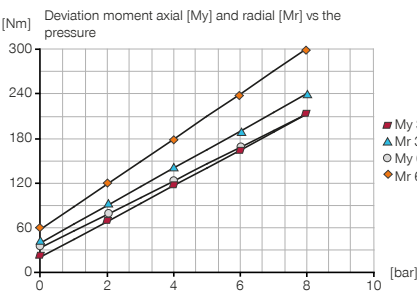
Forces and moments

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

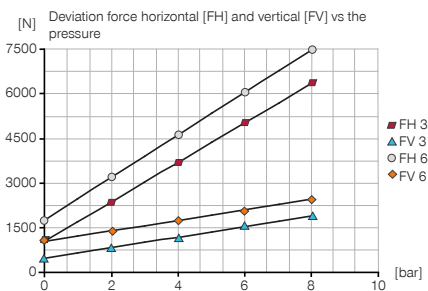


Mr [Nm]	500
My [Nm]	500
Fa [N]	2100

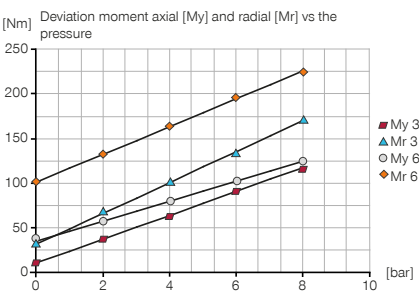
Spring Pack 1 (pre-assembled)



Spring Pack 2



Spring Pack 2



INCLUDED IN DELIVERY



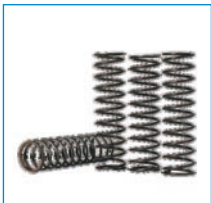
Cylinder Screw

C7984080169



Spring Pack 1 (pre-assembled)

CFED10050



Spring Pack 2

CFED10060

RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GVM5

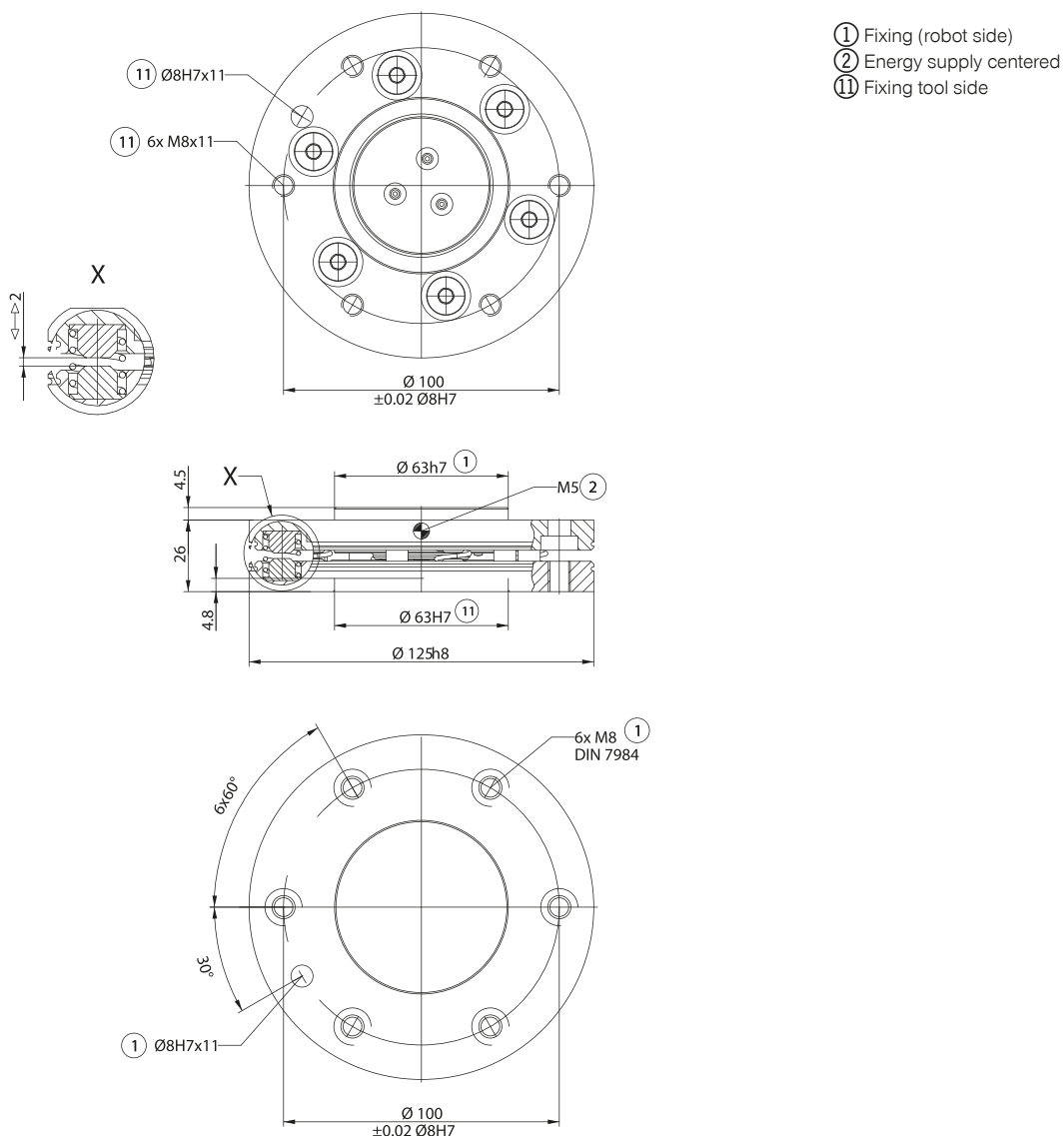


Angled Fittings - Quick Connect Style

WVM5

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 100
Installation Height [mm]	26
Recommended handling weight [kg]	30
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 min. [bar]	1
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Moment of inertia [kg/cm²]	17
Weight [kg]	0.85

*All data measured at 6 bar



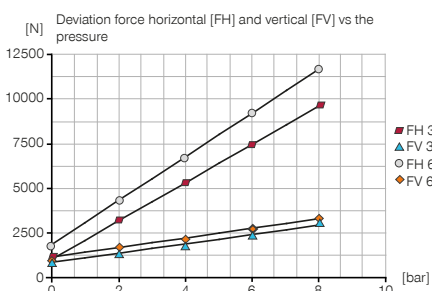
AXIS COMPENSATION MODULES

INSTALLATION SIZE AR125P

PRODUCT SPECIFICATIONS

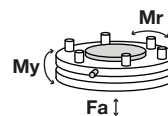


Spring Pack 1 (pre-assembled)



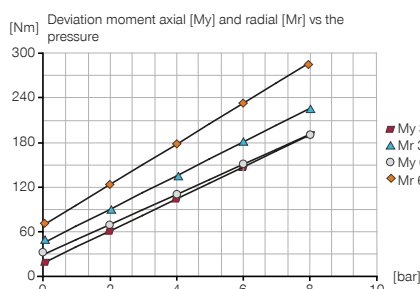
Forces and moments

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

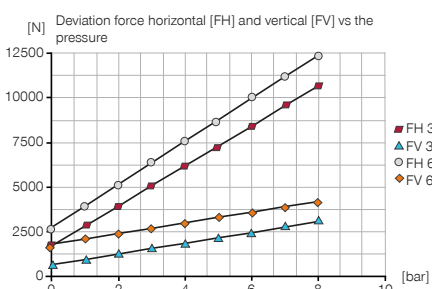


Mr [Nm]	900
My [Nm]	900
Fa [N]	7000

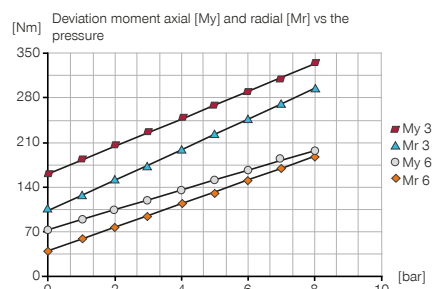
Spring Pack 1 (pre-assembled)



Spring Pack 2



Spring Pack 2

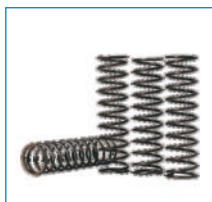


INCLUDED IN DELIVERY



Cylinder Screw

C7984100209



Spring Pack 2

CFED12510



Spring Pack 1 (pre-assembled)

CFED12500

RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GVM5

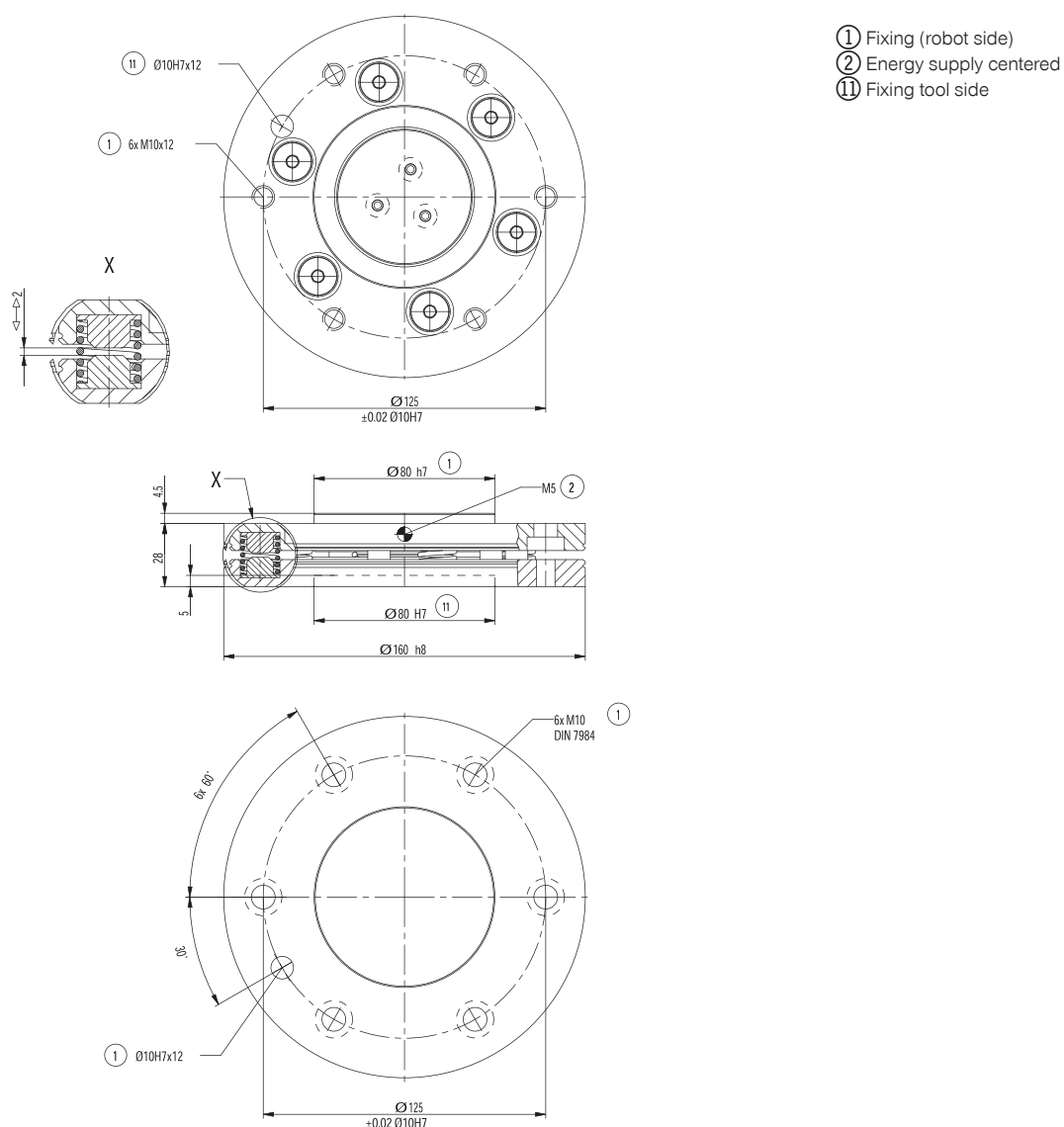


Angled Fittings - Quick Connect Style

WVM5

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 125
Installation Height [mm]	28
Recommended handling weight [kg]	50
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 min. [bar]	1
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Moment of inertia [kg/cm²]	61
Weight [kg]	1.9

*All data measured at 6 bar



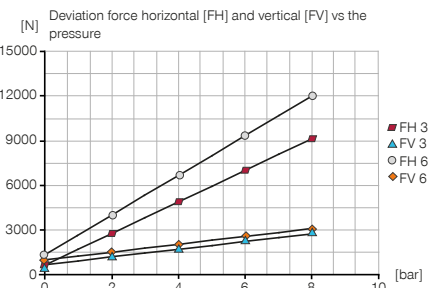
AXIS COMPENSATION MODULES

INSTALLATION SIZE AR160P

PRODUCT SPECIFICATIONS

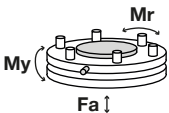


Spring Pack 1 (pre-assembled)



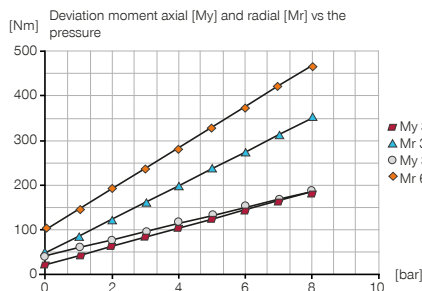
Forces and moments

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

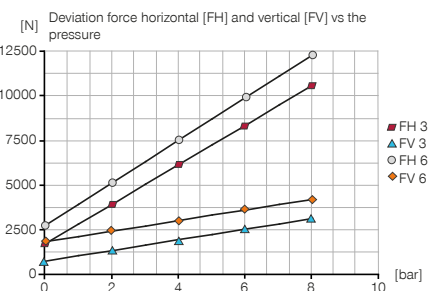


Mr [Nm]	900
My [Nm]	900
Fa [N]	7000

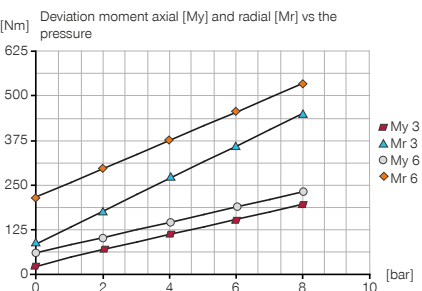
Spring Pack 1 (pre-assembled)



Spring Pack 2



Spring Pack 2



INCLUDED IN DELIVERY



Cylinder Screw

C7984100209



Spring Pack 1 (pre-assembled)

CFED12500



Spring Pack 2

CFED12510

RECOMMENDED ACCESSORIES



Straight Fittings - Quick Connect Style

GVM5

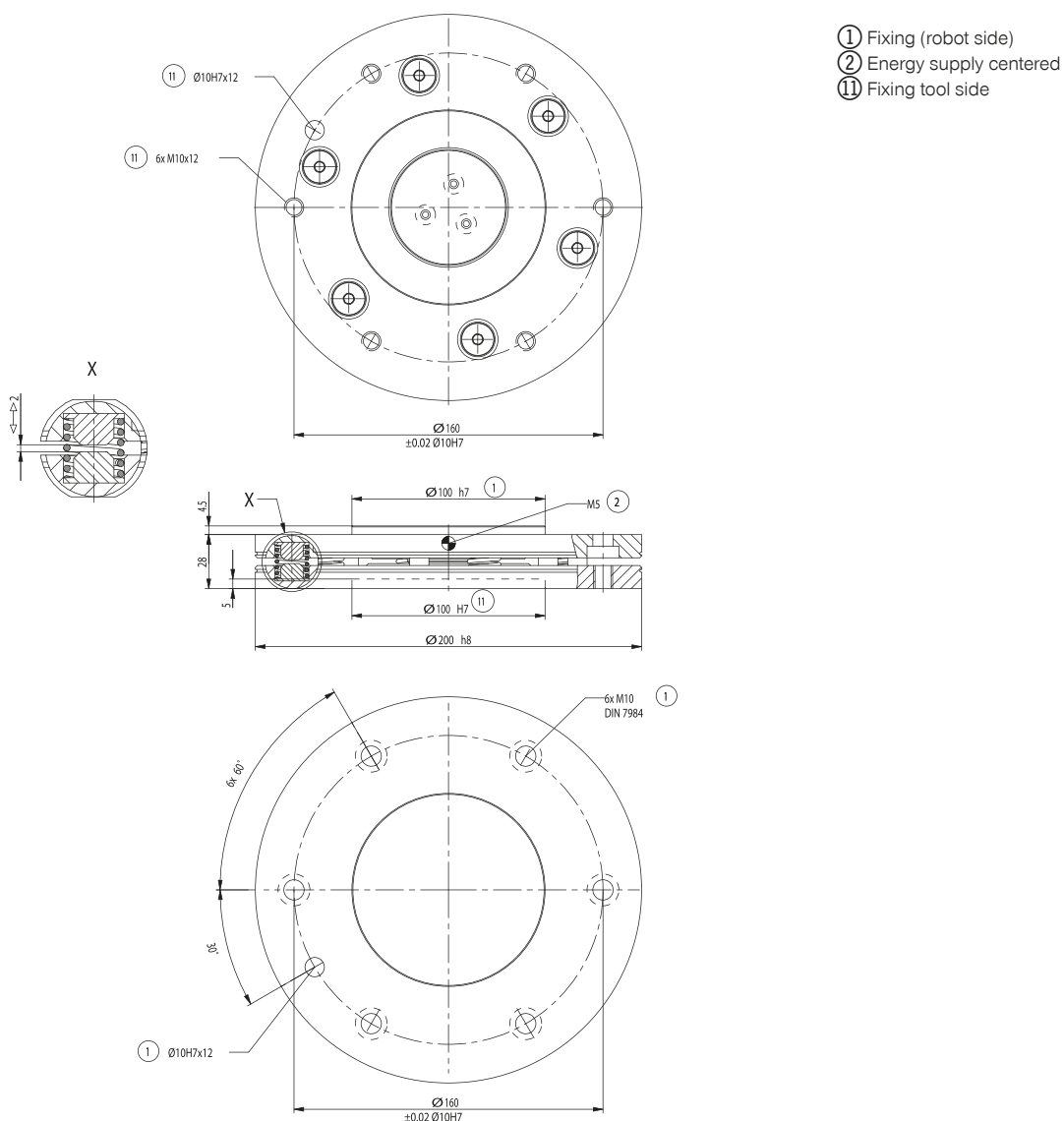


Angled Fittings - Quick Connect Style

WVM5

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 160
Installation Height [mm]	28
Recommended handling weight [kg]	60
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 min. [bar]	1
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Moment of inertia [kg/cm²]	115
Weight [kg]	5.6

*All data measured at 6 bar



CRASH PROTECTION

OVERVIEW OF SERIES



► CRASH PROTECTION SERIES CSR	124
Installation size CSR50	126
Installation size CSR63	128
Installation size CSR80	130
Installation size CSR100	132
Installation size CSR125	134
Installation size CSR160	136

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.

► More safety due to manual return

We forgo an automatic return and ensure that the operator inspects the machine and the reason for the emergency stop

► THE BEST PRODUCT FOR YOUR APPLICATION



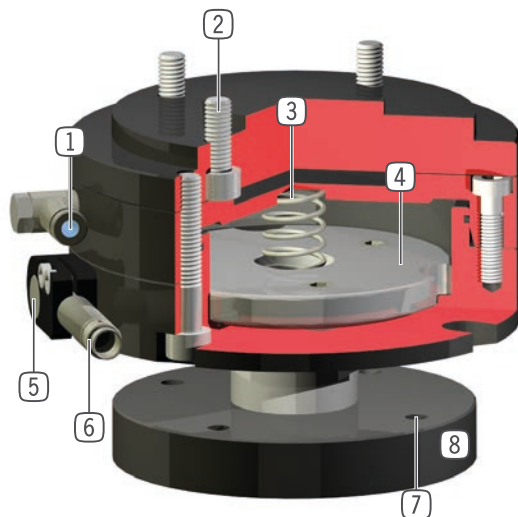
► Our products welcome the challenge!

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.de

► BENEFITS IN DETAIL



- ① **Energy supply**
- ② **Robot connecting flange**
 - partial mounting circle in accordance with EN ISO 9409-1
- ③ **Drive**
 - single-acting pneumatic cylinder
 - response sensitivity adjustable via operating pressure
 - with integrated spring
- ④ **Force transfer**
 - direct and low-loss at piston surface
- ⑤ **Pressure differential switch**
 - indirect overload recognition
- ⑥ **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 Ø 8 mm with cable connection M8x1
- ⑦ **Connecting flange**
- ⑧ **Overload recognition and compensation**
 - in Z-direction up to 28 mm stroke
 - angular deflection up to 12.5°
 - on rotation around the Z-axis 360°

► FURTHER INFORMATION IS AVAILABLE ONLINE



► Technical Information

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.



CRASH PROTECTION

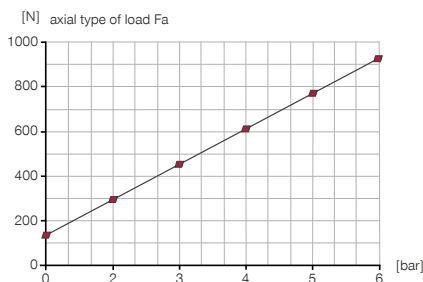
INSTALLATION SIZE CSR50

PRODUCT SPECIFICATIONS



Air pressurization

shows force and moments vs pressure

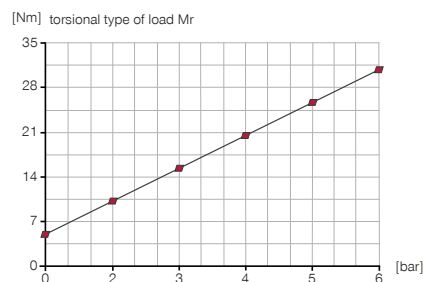


Forces and moments

See diagram for max. forces and torques

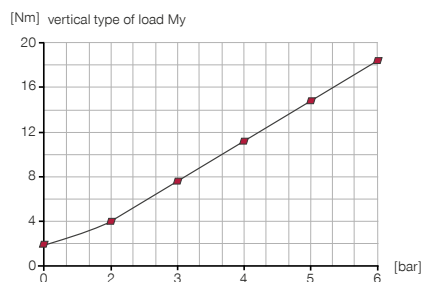
Air pressurization

shows force and moments vs pressure



Air pressurization

shows force and moments vs pressure



INCLUDED IN DELIVERY



Inductive proximity switch
- Connector M8
NJ8-E2S-05



Cylinder Screw
C0912060169

RECOMMENDED ACCESSORIES



Straight Fittings - Quick
Connect Style
GVM5



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



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

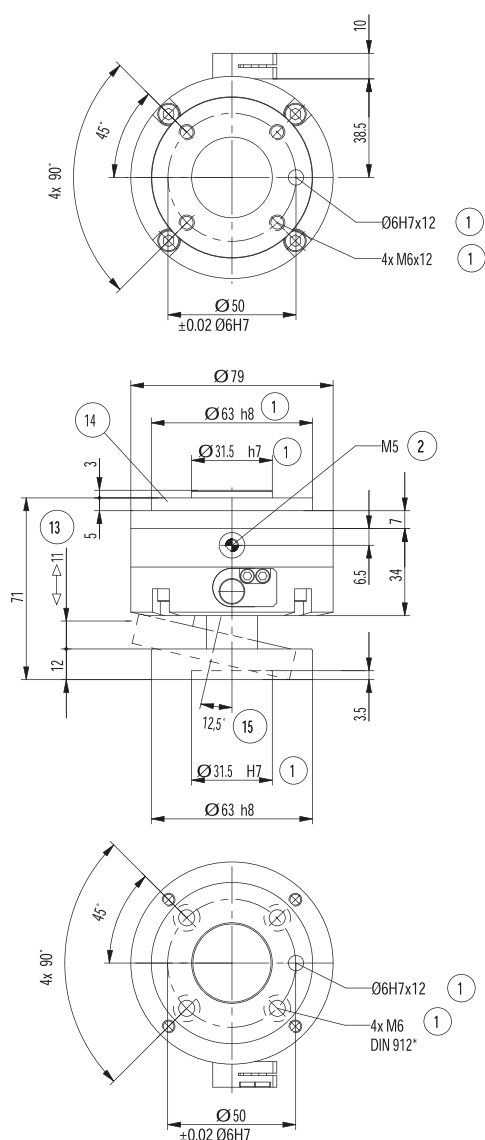


Angled Fittings - Quick
Connect Style
WVM5

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 50
Installation Height [mm]	71
Recommended handling weight [kg]**	6
Z-axis deviation [mm]	12.5
Repetition accuracy Axial +/- [mm]	0.05
Horizontal deviation +/- [°]	12.5
Repetition accuracy Radial +/- [mm]	0.05
Operating pressure min. [bar]	1
Operating pressure max. [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Weight [kg]	0.7

*All data measured at 6 bar

**with central attachment



CRASH PROTECTION

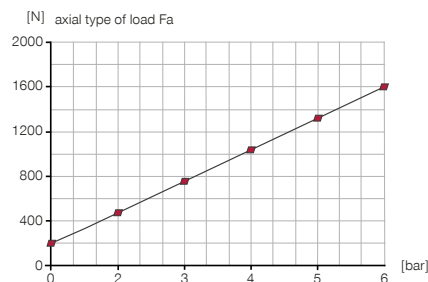
INSTALLATION SIZE CSR63

PRODUCT SPECIFICATIONS



Air pressurization

shows force and moments vs pressure

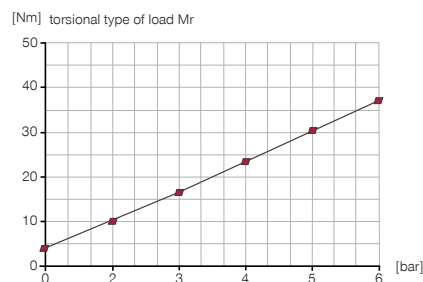


Forces and moments

See diagram for max. forces and torques

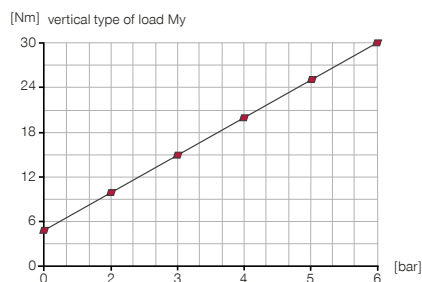
Air pressurization

shows force and moments vs pressure



Air pressurization

shows force and moments vs pressure



INCLUDED IN DELIVERY



Inductive proximity switch
- Connector M8
NJ8-E2S-05



Cylinder Screw
C0912060169

RECOMMENDED ACCESSORIES



Straight Fittings - Quick
Connect Style
GVM5



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



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

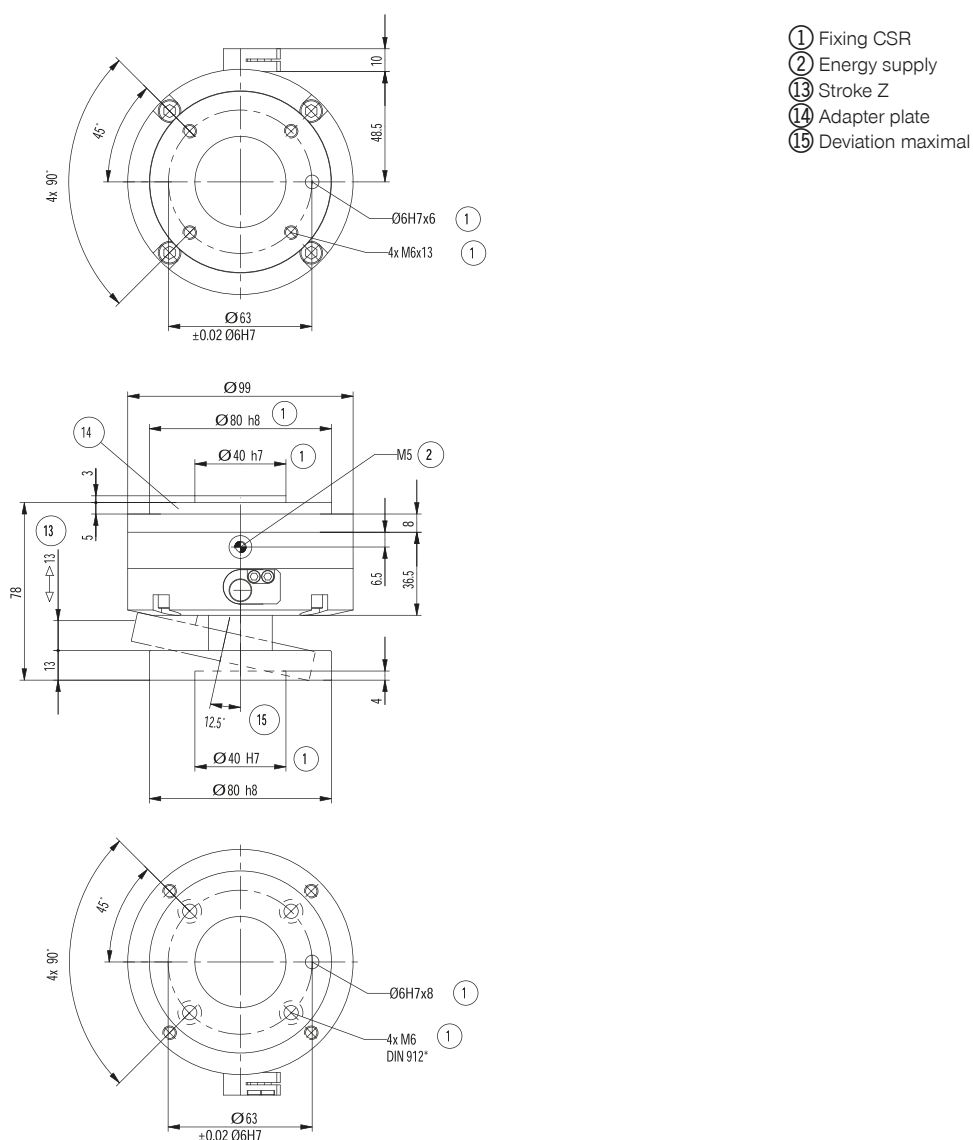


Angled Fittings - Quick
Connect Style
WVM5

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 63
Installation Height [mm]	78
Recommended handling weight [kg]**	12
Z-axis deviation [mm]	10.5
Repetition accuracy Axial +/- [mm]	0.05
Horizontal deviation +/- [°]	12.5
Repetition accuracy Radial +/- [mm]	0.05
Operating pressure min. [bar]	1
Operating pressure max. [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Weight [kg]	1.1

*All data measured at 6 bar

**with central attachment



CRASH PROTECTION

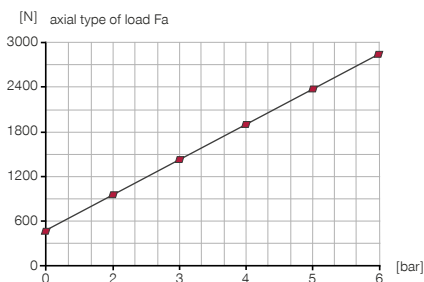
INSTALLATION SIZE CSR80

PRODUCT SPECIFICATIONS



Air pressurization

shows force and moments vs pressure

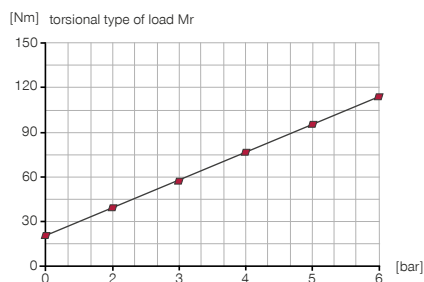


Forces and moments

See diagram for max. forces and torques

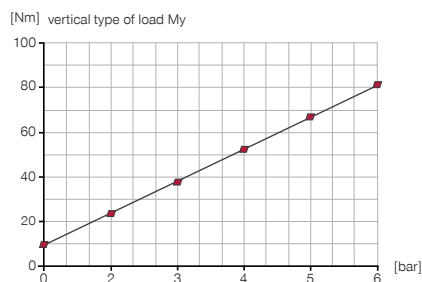
Air pressurization

shows force and moments vs pressure



Air pressurization

shows force and moments vs pressure



INCLUDED IN DELIVERY



Inductive proximity switch
- Connector M8
NJ8-E2S-05



Cylinder Screw
C0912080169

RECOMMENDED ACCESSORIES



Straight Fittings - Quick
Connect Style
GVM5



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



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

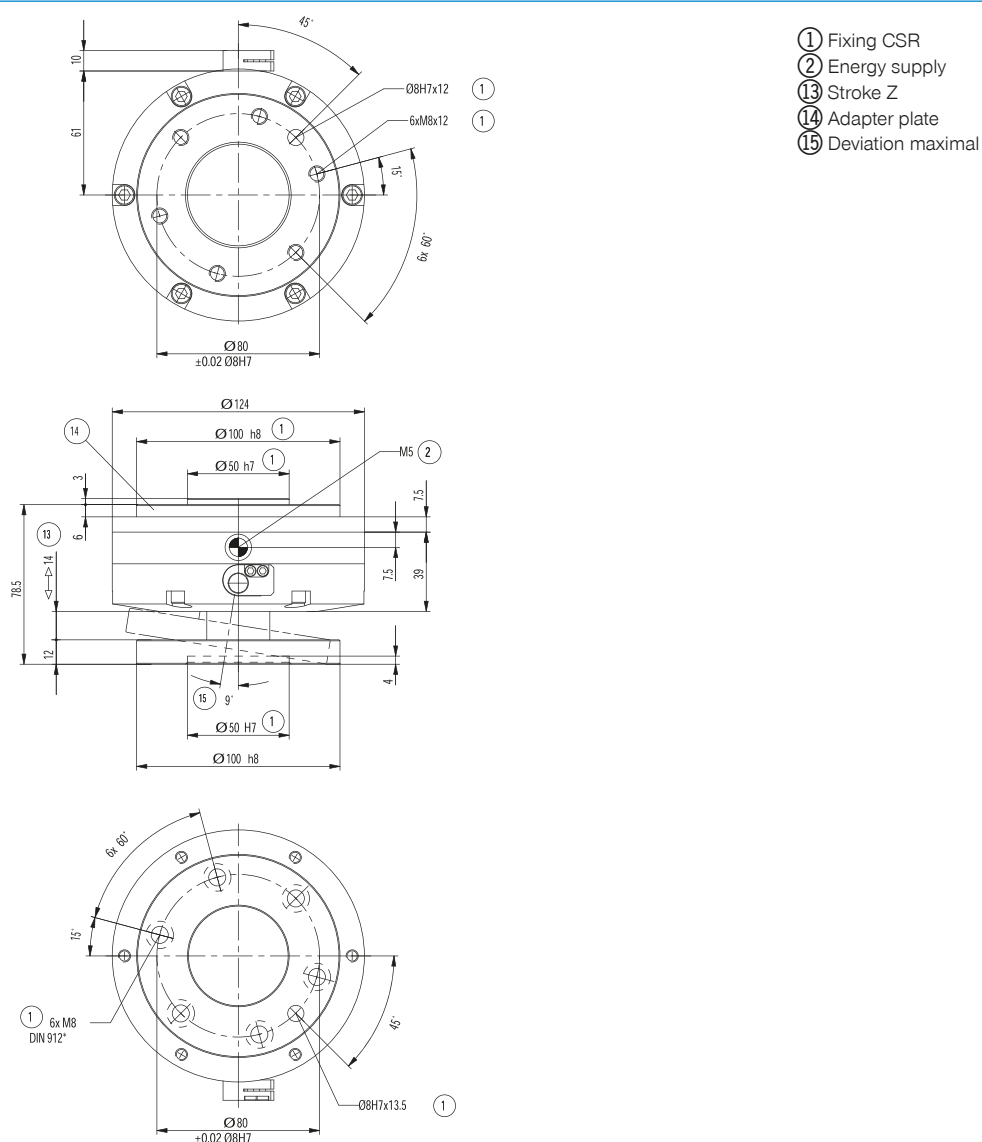


Angled Fittings - Quick
Connect Style
WVM5

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 80
Installation Height [mm]	78.5
Recommended handling weight [kg]**	35
Z-axis deviation [mm]	14
Repetition accuracy Axial +/- [mm]	0.05
Horizontal deviation +/- [°]	9
Repetition accuracy Radial +/- [mm]	0.05
Operating pressure min. [bar]	1
Operating pressure max. [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Weight [kg]	1.5

*All data measured at 6 bar

**with central attachment



CRASH PROTECTION

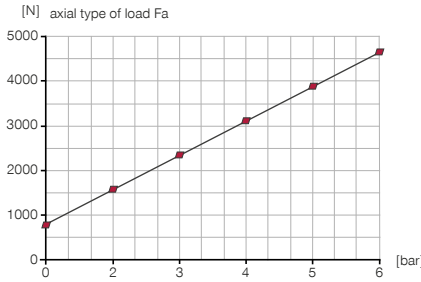
INSTALLATION SIZE CSR100

PRODUCT SPECIFICATIONS



Air pressurization

shows force and moments vs pressure

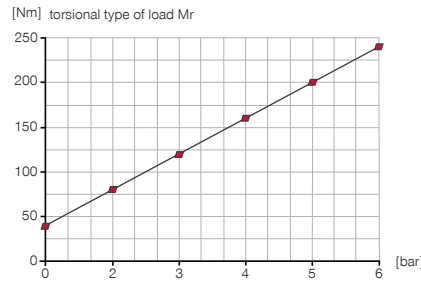


Forces and moments

See diagram for max. forces and torques

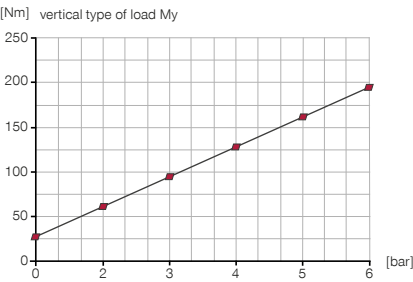
Air pressurization

shows force and moments vs pressure



Air pressurization

shows force and moments vs pressure



INCLUDED IN DELIVERY



Inductive proximity switch
- Connector M8
NJ8-E2S-05



Cylinder Screw
C0912080209

RECOMMENDED ACCESSORIES



Straight Fittings - Quick
Connect Style
GV1-8X8



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



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

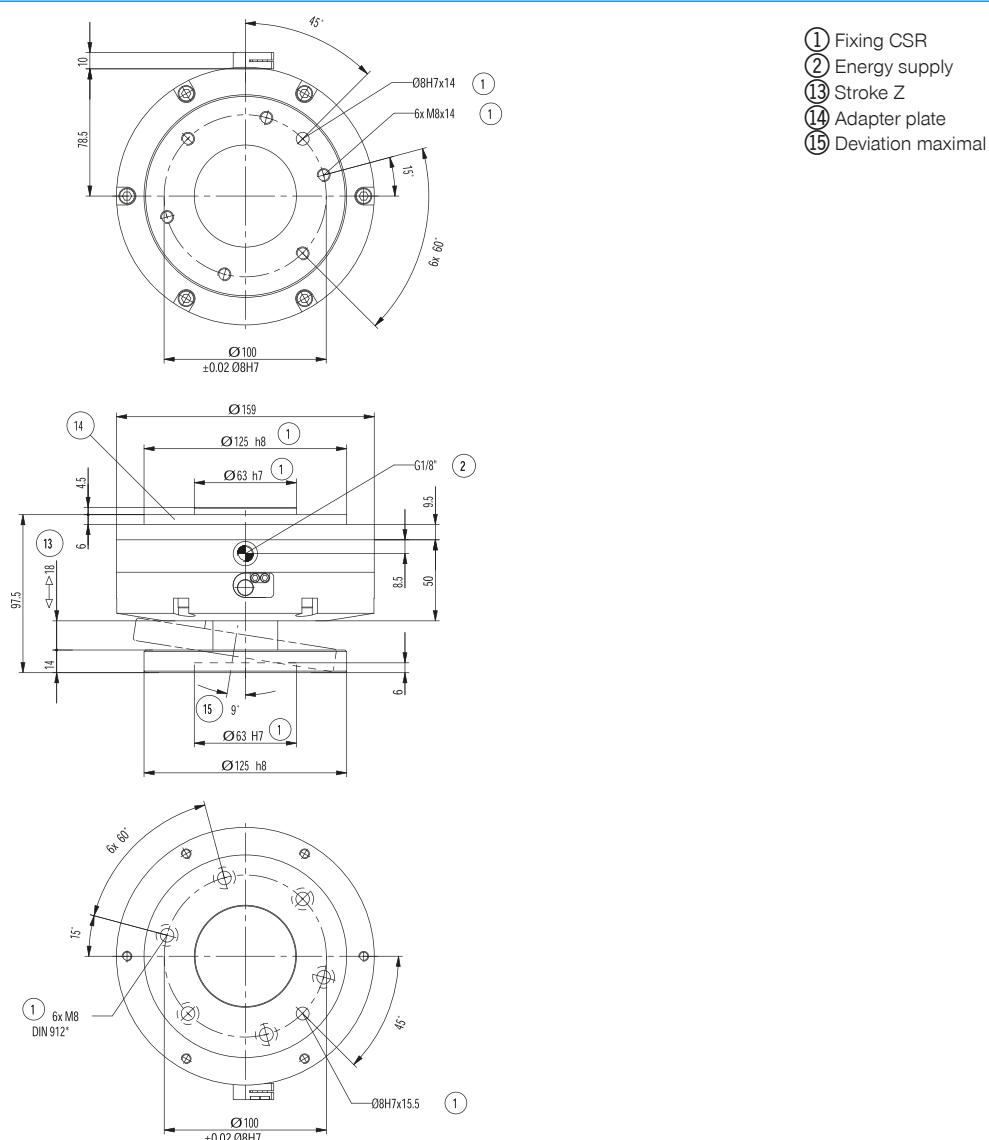


Angled Fittings - Quick
Connect Style
WV1-8X6

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 100
Installation Height [mm]	97.5
Recommended handling weight [kg]**	60
Z-axis deviation [mm]	18
Repetition accuracy Axial +/- [mm]	0.05
Horizontal deviation +/- [°]	9
Repetition accuracy Radial +/- [mm]	0.05
Operating pressure min. [bar]	1
Operating pressure max. [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Weight [kg]	3.3

*All data measured at 6 bar

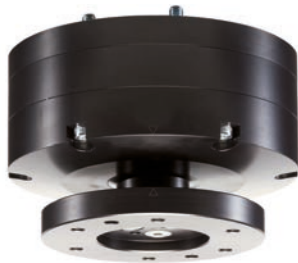
**with central attachment



CRASH PROTECTION

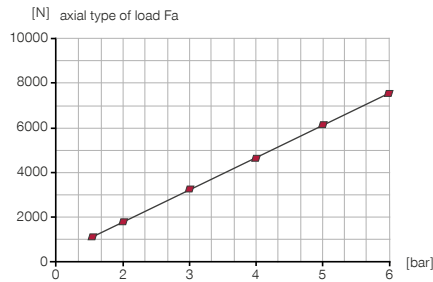
INSTALLATION SIZE CSR125

PRODUCT SPECIFICATIONS



Air pressurization

shows force and moments vs pressure

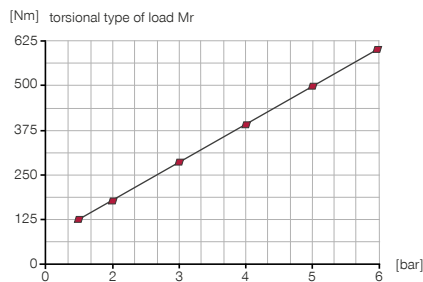


Forces and moments

See diagram for max. forces and torques

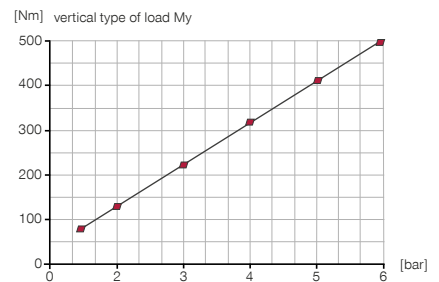
Air pressurization

shows force and moments vs pressure



Air pressurization

shows force and moments vs pressure



INCLUDED IN DELIVERY



Inductive proximity switch
- Connector M8
NJ8-E2S-05



Cylinder Screw
C0912100309

RECOMMENDED ACCESSORIES



Straight Fittings - Quick
Connect Style
GV1-8X8



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



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

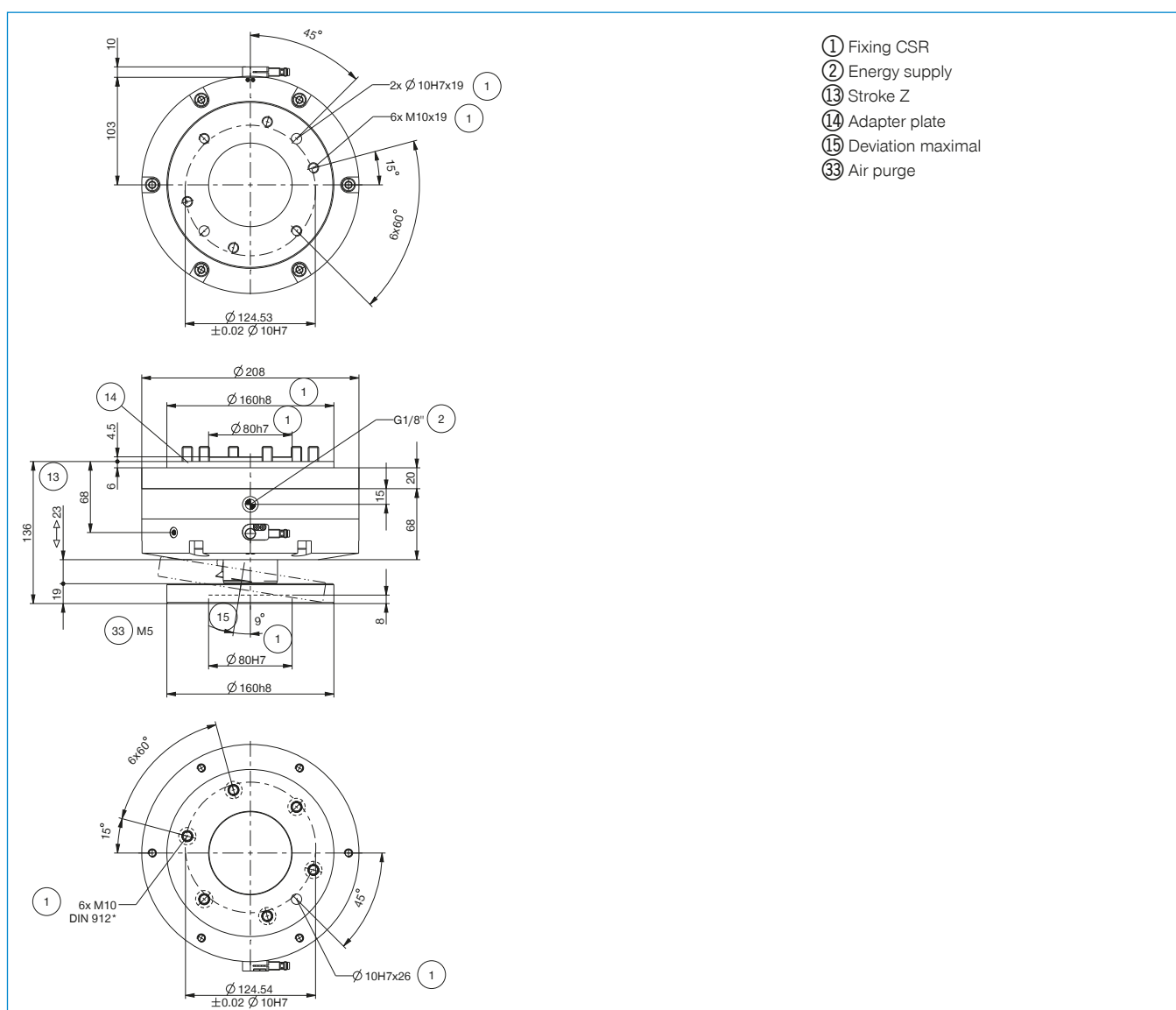


Angled Fittings - Quick
Connect Style
WV1-8X6

Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 125
Installation Height [mm]	136
Recommended handling weight [kg]**	100
Z-axis deviation [mm]	23
Repetition accuracy Axial +/- [mm]	0.05
Horizontal deviation +/- [°]	9
Repetition accuracy Radial +/- [mm]	0.05
Operating pressure min. [bar]	1
Operating pressure max. [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Weight [kg]	8

*All data measured at 6 bar

**with central attachment



CRASH PROTECTION

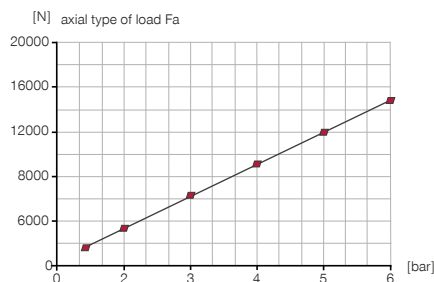
INSTALLATION SIZE CSR160

PRODUCT SPECIFICATIONS



Air pressurization

shows force and moments vs pressure

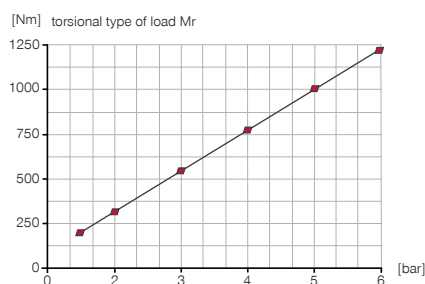


Forces and moments

See diagram for max. forces and torques

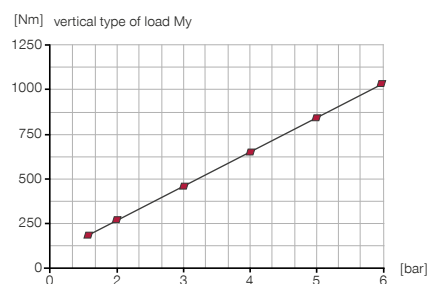
Air pressurization

shows force and moments vs pressure



Air pressurization

shows force and moments vs pressure



INCLUDED IN DELIVERY



Inductive proximity switch
- Connector M8
NJ8-E2S-05



Cylinder Screw
C0912100309

RECOMMENDED ACCESSORIES



Straight Fittings - Quick
Connect Style
GV1-8X8



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



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

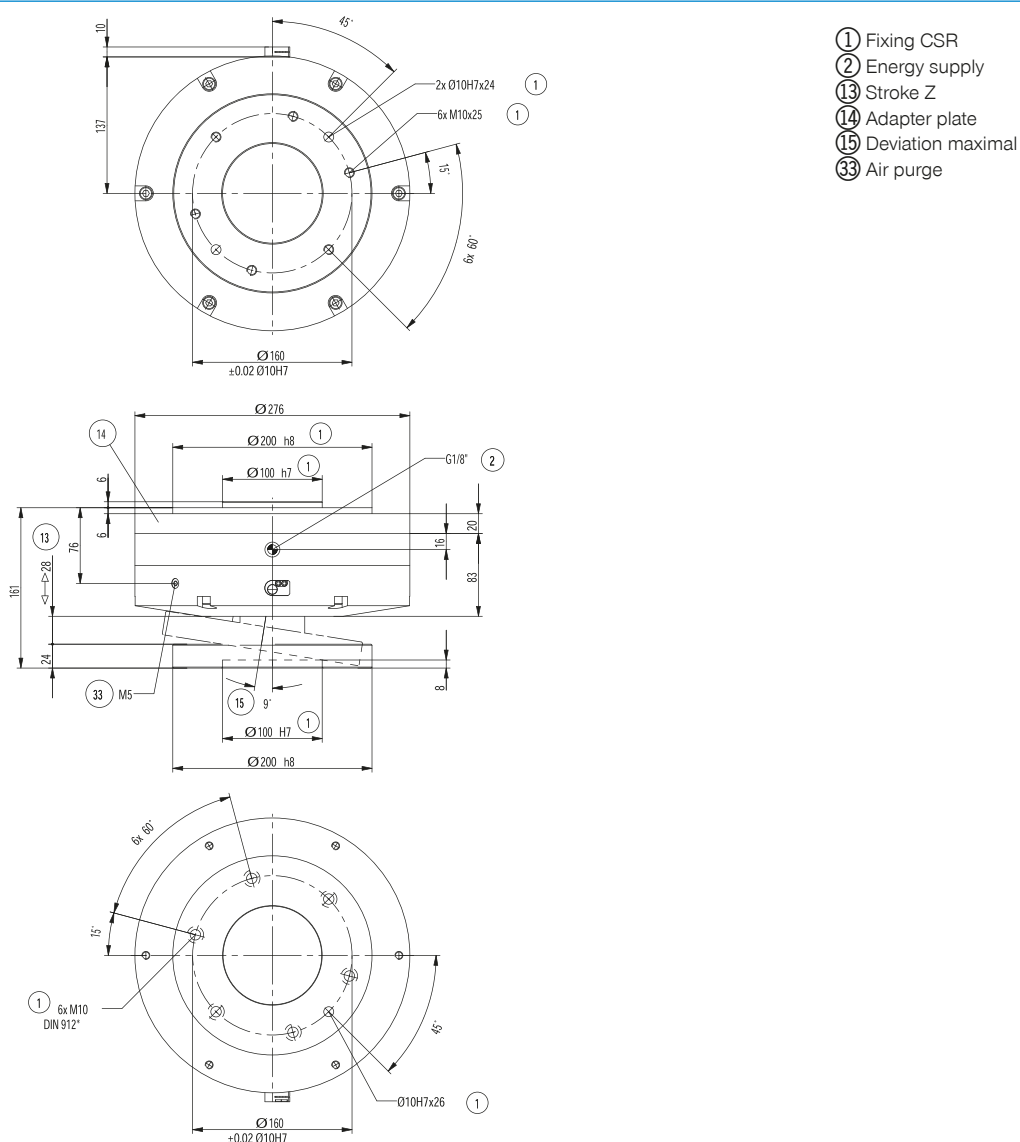


Angled Fittings - Quick
Connect Style
WV1-8X6

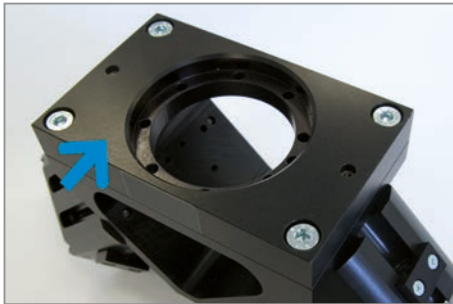
Order no.	Technical Data*
Connecting flange according EN ISO 9409-1	TK 160
Installation Height [mm]	161
Recommended handling weight [kg]**	150
Z-axis deviation [mm]	28
Repetition accuracy Axial +/- [mm]	0.05
Horizontal deviation +/- [°]	9
Repetition accuracy Radial +/- [mm]	0.05
Operating pressure min. [bar]	1
Operating pressure max. [bar]	6
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Weight [kg]	15.2

*All data measured at 6 bar

**with central attachment



ANGLE FLANGE SERIES WFR



Flexible connection to your robot

Adapter plate manufactured according to EN ISO 9409-1 matches for a variety of 40 different types of robot manufacturers. In addition, also available for robots with hollow axle.

1st step: Select adapter plate

Simply define the type of robot and you get the appropriate adapter plate.



About 100 different variants

Adapter plates and angle flanges can be combined with 16 different grippers - with the result of more than 100 different varieties. Choose from our main catalog your appropriate gripper. There you will find the most diverse designs: some with other without gripping force safety device, protected from dust or temperature resistant.

2nd step: Select Angle flange

Choose a gripper and there follows 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



1st step:



Adapter plate

adept
EPSON
FANUC
KUKA
MITSUBISHI
MOTOMAN
STÄUBLI

ABB
adept
COMAU
FANUC
Kawasaki
KUKA
MITSUBISHI
MOTOMAN
STÄUBLI

KUKA
PEIS
STÄUBLI

COMAU
FANUC
KUKA
PEIS

FANUC

Connecting flange EN-ISO9409-1 TK 31,5

ViperS650
Pro Six
LR mate 200
KR5 sixx
RV1, RV2, RV3, RV4, RV5, RV6
HP3, HP5, HP6
RX60, TX40, TX60, RS20, RS40, RS60, RS80

Connecting flange EN-ISO9409-1 TK 40

140, 2400L, 1600-5, 1600-7
viper S13400
smart six
M-6iB, M16iB, M710iC/20L
FS06, FC06, FA06, FS10C, FC10C
KR16L6 (KS)
RV12
UP6, HP6, HP20, IA20
RX90, RX130XL

Connecting flange EN-ISO9409-1 TK 50

KR6, KR16, KR30L16
RV10-6, RV20-6
RX130, TX90, RX160

Connecting flange EN-ISO9409-1 TK 100

NM 16-3.1, NM 25-2.2, NM 45-2.0
M-420iA, M710iC/50/70
KR30, KR60
RV60-40, RV60-60

M10iA

Order no.:
Adapter plate

APR05

APR01

APR02

APR03

APR04

2nd step:



Angle flange

All other informations about your gripper, you will find in our catalog or online at: www.zimmer-group.com

Grippers to match for WFR01:

GD304
GD306
GP404
GP406

Grippers to match for WFR02:

GD308
GD310
GP408
GP410

Grippers to match for WFR03:

GPP5004
GPP5006
GPD5004
GPD5006

Grippers to match for WFR04:

GPP5008
GPP5010
GPD5008
GPD5010
GPW5008

Order no.:
Angle flange

WFR01

WFR02

WFR03

WFR04

3rd step:



Cover plate



Discharge nozzle



Programming pins

for WFR01 + WFR03

for WFR02 + WFR04

for WFR01 + WFR02 + WFR03 + WFR04

for WFR01 + WFR02 + WFR03 + WFR04

Order no.:
Accessories

ABWFR01

ABWFR02

DUWFR01

SPWFR01

USAGE NOTE

GENERAL

The contents of this catalog are not legally binding and are intended solely for informational purposes. Any final agreement will be in the form of a written order confirmation from Zimmer GmbH, which occurs only subject to the respective current General Terms and Conditions of Sale and Delivery of Zimmer GmbH. These can be found online at **www.zimmer-group.com**.

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 conditions of use may not fall below or exceed the specified data. If information is missing, it cannot be assumed that there are no upper or lower limits or no limitations for specific use cases. Consultation is required in these cases.

Disposal is not included in the price, which would have to be taken into account accordingly in the event of return to or disposal by Zimmer GmbH.

TECHNICAL DATA AND FIGURES

The technical data and figures have been compiled with great care and to the best of our knowledge. We cannot guarantee that the information is up to date, correct or complete.

The specifications and information—such as figures, drawings, descriptions, dimensions, weights, materials, technical and other performance data and the described products and services—contained in general product descriptions, Zimmer GmbH catalogs, brochures and price lists in any form are subject to change and may be modified or updated at any time without prior notification. They are binding only to the extent expressly specified in a contract or order confirmation. Slight deviations from such descriptive product information shall be considered approved and shall not affect fulfillment of agreements insofar as they are reasonable for the customer.

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STANDARDS

Zimmer Group has a quality management system certified in accordance with ISO 9001:2008. Zimmer Group has an environmental management system certified in accordance with ISO 14001:2004.

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.

The contents and data correspond to the status as of printing. Edition 03/2019.

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