

# 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



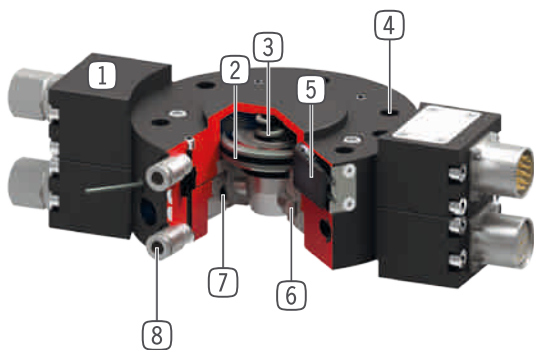
#### ▶ **Our products welcome the challenge!**

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.com](http://www.zimmer-group.com)

## ► 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

All information just a click away at: [www.zimmer-group.com](http://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

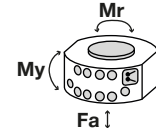
## INSTALLATION SIZE WWR100

### ▶ 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

GV1-8X8



Angled Fittings - Quick Connect Style

WV1-8X8



Piston position sensing

ZUB088924



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



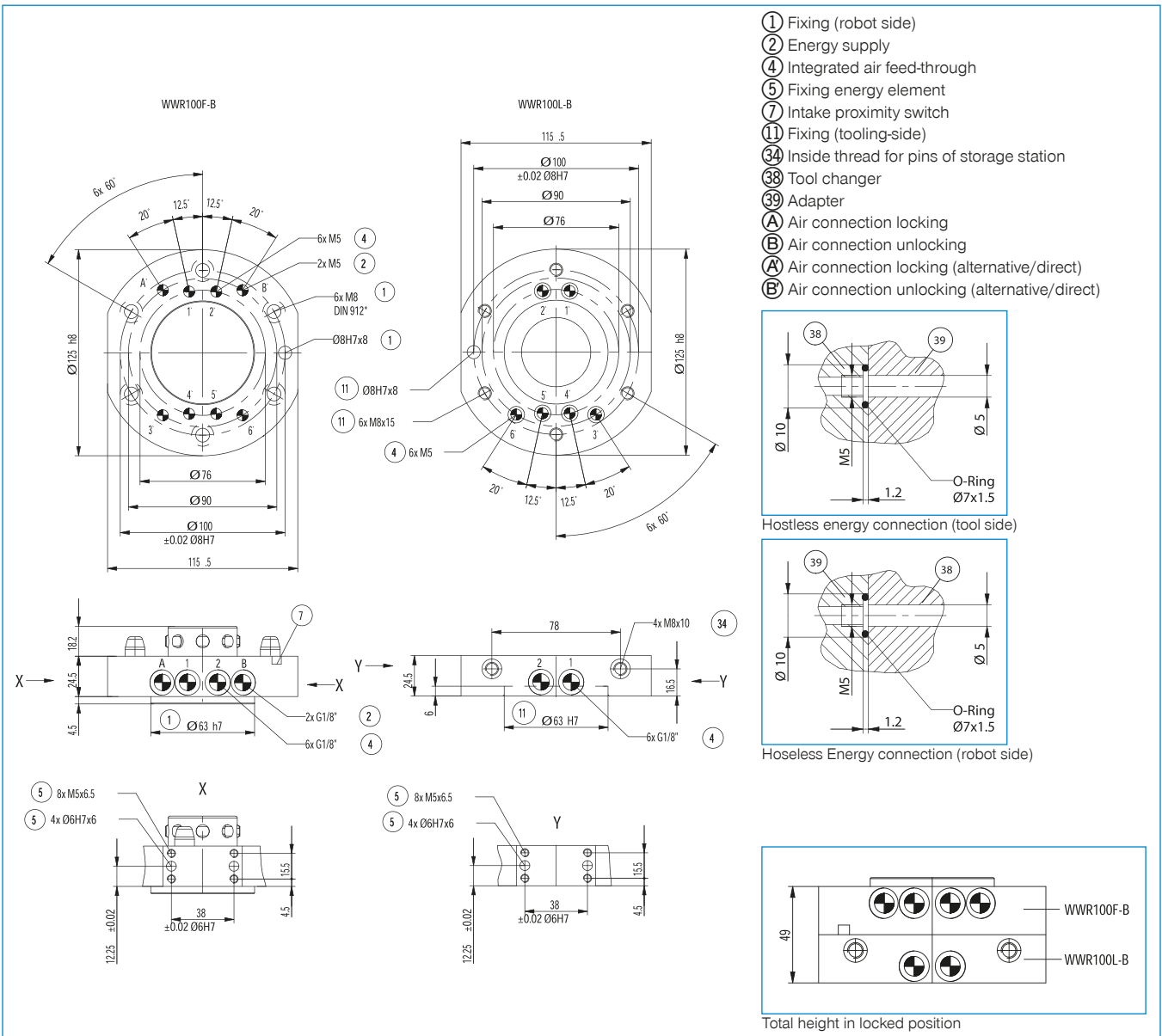
Inductive proximity switch  
- Connector M8

NJ8-E2S

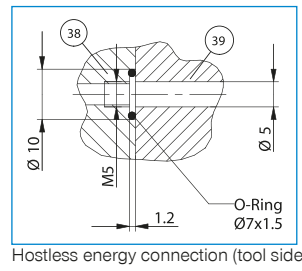
► Technical Data\*

Order no.	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 [cm <sup>3</sup> ]	25	-
Moment of inertia [kg/cm <sup>2</sup> ]	14	13.9
Weight [kg]	0.96	0.725

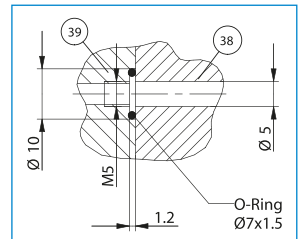
\*All data measured at 6 bar



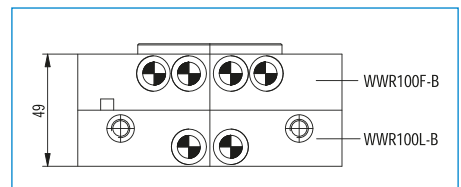
- ① Fixing (robot side)
- ② Energy supply
- ④ Integrated air feed-through
- ⑤ Fixing energy element
- ⑦ Intake proximity switch
- ⑪ Fixing (tooling-side)
- ③④ Inside thread for pins of storage station
- ③⑧ Tool changer
- ③⑨ Adapter
- Ⓐ Air connection locking
- Ⓑ Air connection unlocking
- Ⓐ Air connection locking (alternative/direct)
- Ⓑ Air connection unlocking (alternative/direct)



Hostless energy connection (tool side)



Hoseless Energy connection (robot side)

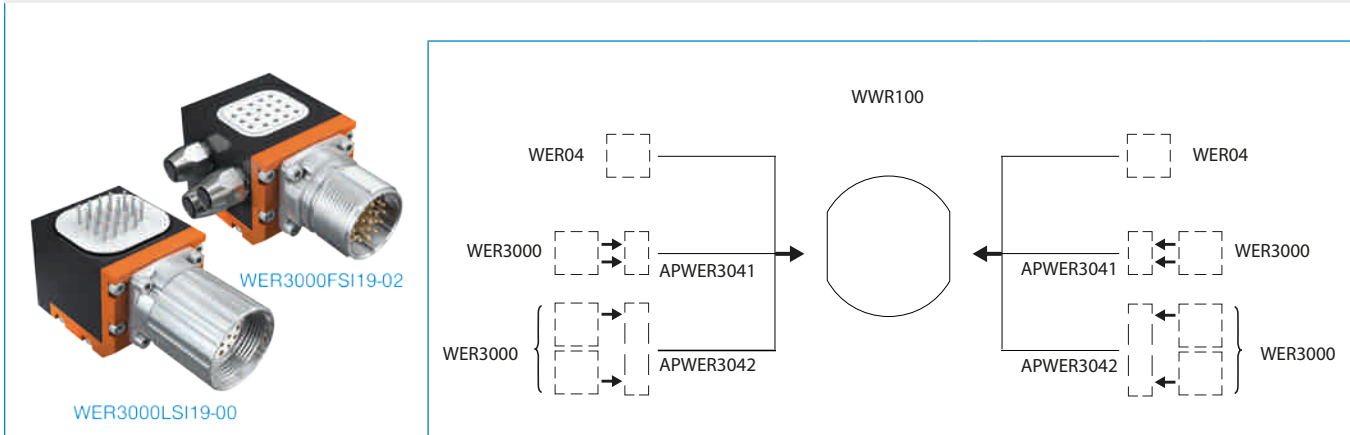


Total height in locked position

# ENERGY ELEMENTS FOR TOOL CHANGER

## SIZE WWR100

### ▶ PRODUCT SPECIFICATIONS



### ▶ FLUIDIC

#### ▶ Technical Data

Order no.	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

#### ▶ 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

Order no.	▶ Technical Data			
	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

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	
	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





# 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	Female	Female	Female	Female	Connector	Connector	Connector	Connector
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
	