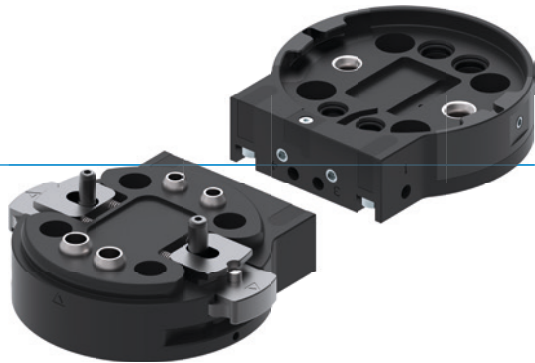


TOOL CHANGERS

SERIES FWR

▶ PRODUCT ADVANTAGES



▶ **Automated tool change without external activation**

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

▶ **Manual tool change**

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

▶ **Optional media transmission**

Adapt the tool changer to your application. With the energy elements of the WER1000 and WER2000 series, you can transmit a variety of media with standard connections!

▶ THE BEST PRODUCT FOR YOUR APPLICATION



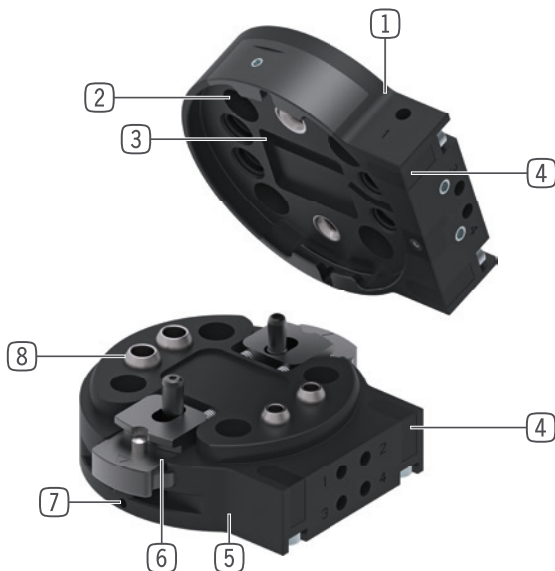
▶ **Our products welcome the challenge!**

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

Find the best product for your specific use:

www.zimmer-group.com

► BENEFITS IN DETAIL



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

► TECHNICAL DATA

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

*The **handling weight** is the maximum weight that may be on the tool changer.

Handling weight = end effector + workpiece

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

Tool weight = end effector + loose part

► FURTHER INFORMATION IS AVAILABLE ONLINE



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

TOOL CHANGERS

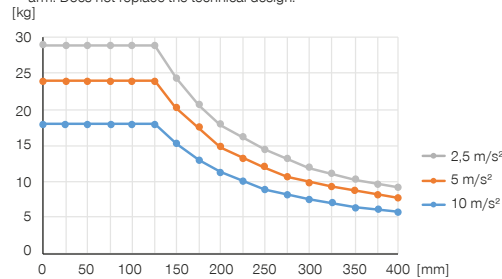
INSTALLATION SIZE FWR80

▶ PRODUCT SPECIFICATIONS



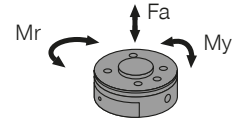
▶ Variable installation position

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



▶ Forces and moments


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



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



▶ INCLUDED IN DELIVERY

	2 [piece] Mounting screw C737903102
	2 [piece] O-Ring COR0050100



	4 [piece] Mounting screw C0912025186
	2 [piece] O-Ring COR0100100

▶ RECOMMENDED ACCESSORIES


ENERGY SUPPLY

	GVM5 Straight Fittings - Quick Connect Style
	WV1-8X8 Angled Fittings - Quick Connect Style

CONNECTIONS / OTHER

	Energy elements and accessories for tool changers
	AFWR1-80-A Storage station

SENSORS

	NJR04-E2SK Inductive Proximity Switch Cable 0,3 m - Connector M8
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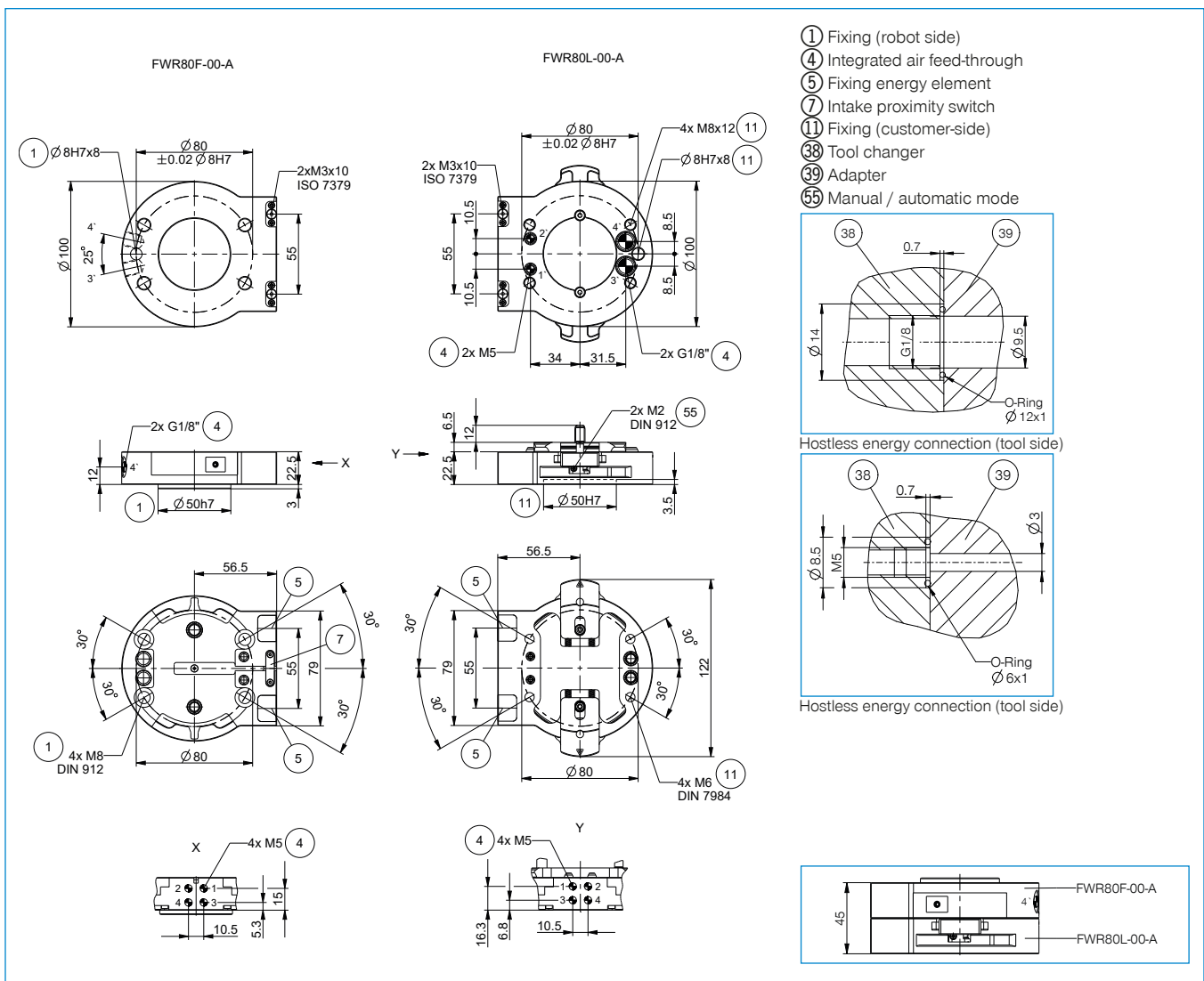
▶ RECOMMENDED ACCESSORY STORAGE STATION

	NJ5-E2SK-01 Inductive Proximity Switch Cable 0,3 m - Connector M8
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Order no.	Technical data	
	FWR80F-00-A	FWR80L-00-A
Connecting flange according EN ISO 9409-1	TK 80	TK 80
Handling weight max. [kg]	29	29
Tool weight max. [kg]	12	12
Pneumatic energy transfer [Quantity]	4	4
Flow per connector M5 [l/min]	170	170
Flow per connector G1/8" [l/min]	650	650
Electrical energy transfer	optional	optional
Locking stroke [mm]	1	
Repetition accuracy in Z [mm]	0.02	
Repetition accuracy in X, Y [mm]	0.03	
Joining force [N]	0	0
Release force [N]	0	0
Offset at coupling max. in X,Y [mm]	2.2	2.2
Offset at coupling max. in X,Y [°]	1.5	1.5
Tightening force [N]*	120	
Tightening torque [Nm]*	6	
Operating pressure for energy transmission [bar]	-0.6 ... 6	-0.6 ... 6
Operating temperature [°C]	5 ... +80	5 ... +80
Moment of inertia [kgcm ²]	8.38	9.97
Protection to IEC 60529	IP44**	IP44**
Weight [kg]	0.52	0.68

*Note the mating force of the energy elements!

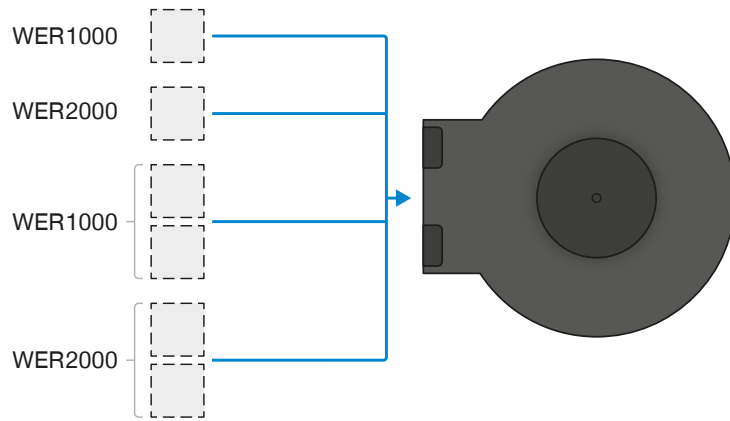
**only in coupled state



ENERGY ELEMENTS FOR TOOL CHANGER

SIZES FWR63 / FWR80

► CONNECTION DIAGRAM



Exception: WER2000FPL02-06-B and WER1000LPL02-06-B cannot be used!