

# 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



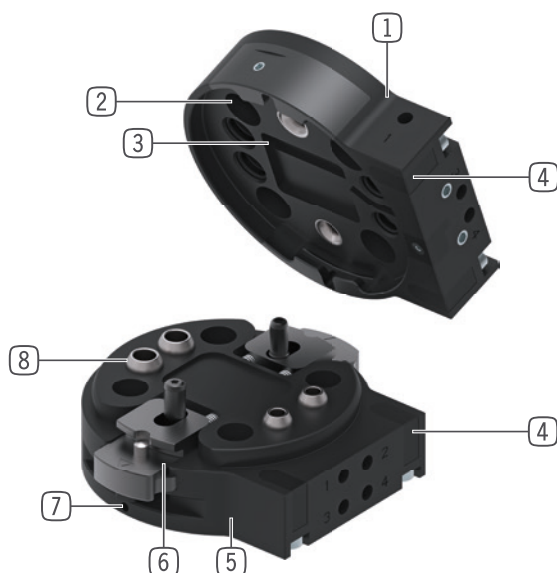
#### ▶ Our products welcome the challenge!

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](http://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]                |
| <b>FWR40</b>      | TK 40                                     | 13                    | 5                  | 4                         |
| <b>FWR50</b>      | TK 50                                     | 16                    | 7                  | 4                         |
| <b>FWR63</b>      | TK 63                                     | 20                    | 10                 | 4                         |
| <b>FWR80</b>      | 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](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

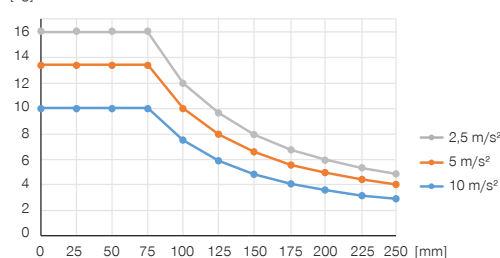
## INSTALLATION SIZE FWR50

### ▶ PRODUCT SPECIFICATIONS



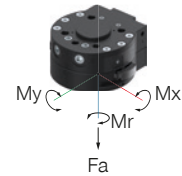
#### ▶ Variable installation position

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



#### ▶ Forces and moments

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



|         |      |
|---------|------|
| Mr [Nm] | 60   |
| Mx [Nm] | 60   |
| My [Nm] | 60   |
| Fa [N]  | 1200 |

### ▶ INCLUDED IN DELIVERY



2 [piece]  
Mounting screw  
**C737903062**



2 [piece]  
O-Ring  
**COR0060100**



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



**AFWR1-50-A**  
Storage station



#### SENSORS



**NJR04-E2SK**  
Inductive Proximity Switch Cable 0,3 m - Connector M8



### ▶ RECOMMENDED ACCESSORY STORAGE STATION

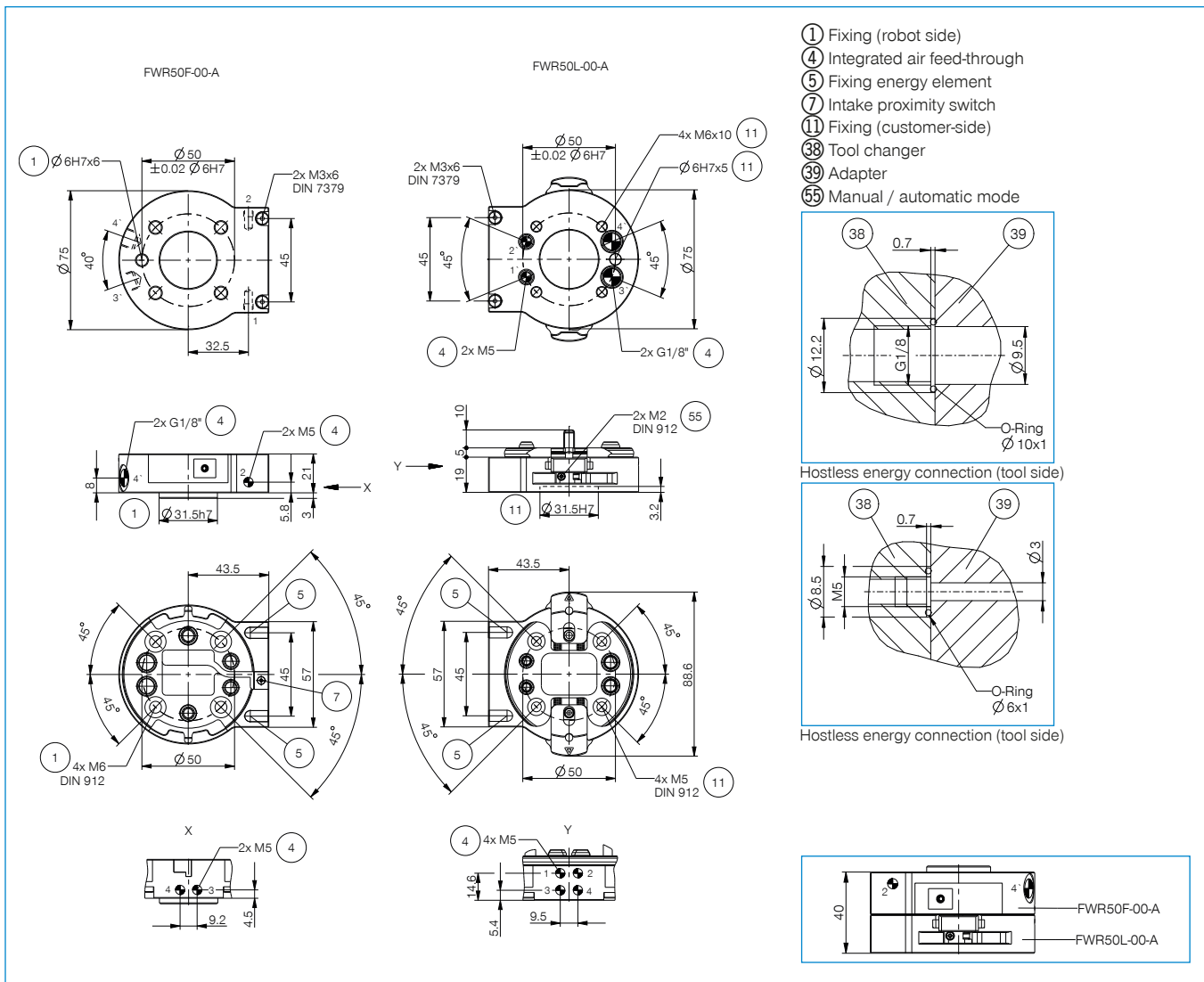


**NJ5-E2SK-01**  
Inductive Proximity Switch Cable 0,3 m - Connector M8

| Order no.                                        | ► Technical data |             |
|--------------------------------------------------|------------------|-------------|
|                                                  | FWR50F-00-A      | FWR50L-00-A |
| Connecting flange according EN ISO 9409-1        | TK 50            | TK 50       |
| Handling weight max. [kg]                        | 16               | 16          |
| Tool weight max. [kg]                            | 7                | 7           |
| Pneumatic energy transfer [Quantity]             | 4                | 4           |
| Flow per connector M5 [l/min]                    | 170              | 170         |
| Flow per connector G1/8" [l/min]                 | 650              | 650         |
| Electrical energy transfer                       | optional         | optional    |
| Locking stroke [mm]                              | 0.6              |             |
| Repetition accuracy in Z [mm]                    | 0.02             |             |
| Repetition accuracy in X, Y [mm]                 | 0.03             |             |
| Joining force [N]                                | 0                | 0           |
| Release force [N]                                | 0                | 0           |
| Offset at coupling max. in X,Y [mm]              | 2.0              | 2.0         |
| Offset at coupling max. in X,Y [°]               | 1.5              | 1.5         |
| Tightening force [N]*                            | 70               |             |
| Tightening torque [Nm]*                          | 4                |             |
| Operating pressure for energy transmission [bar] | -0.6 ... 6       | -0.6 ... 6  |
| Operating temperature [°C]                       | 5 ... +80        | 5 ... +80   |
| Moment of inertia [kgcm <sup>2</sup> ]           | 2.41             | 2.67        |
| Protection to IEC 60529                          | IP44**           | IP44**      |
| Weight [kg]                                      | 0.26             | 0.33        |

\*Note the mating force of the energy elements!

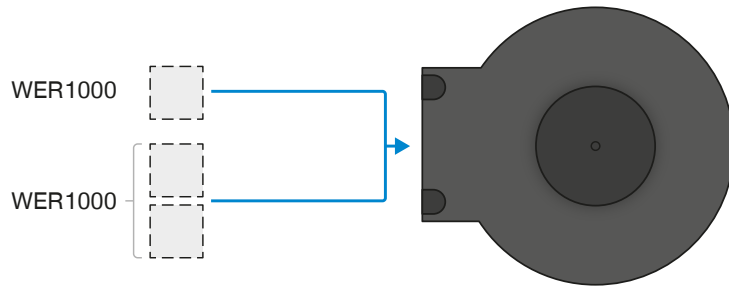
\*\*only in coupled state



# ENERGY ELEMENTS FOR TOOL CHANGER

## SIZES FWR40 / FWR50

### ► CONNECTION DIAGRAM



Exception: WER1000FPL04-12-B and WER1000LPL04-12-B cannot be used!