

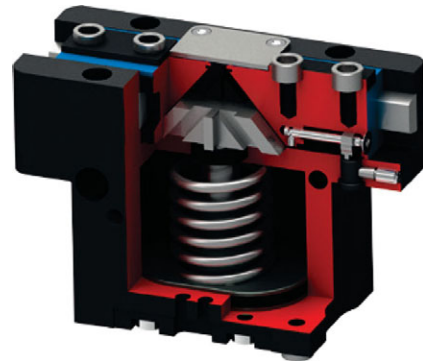
## ROBOTIC COMPONENTS Series ZIMMER

### HANDLING TECHNOLOGY GRIPPERS

**SOMMER**  
automatic

**ZIMMER**  
group

- ▶ Up to 30 % more gripping force than the Benchmark
- ▶ 10 % higher static forces and torques than the Benchmark
- ▶ Gripper fingers up to 10 % longer than the Benchmark
- ▶ Gripper finger weight up to 15 % higher than the Benchmark
- ▶ Sealed IP64 guide / IP67 protector version (with sealing air)
- ▶ Protected against corrosion
- ▶ Up to 30 million cycles without maintenance



#### DURABLE

Our product portfolio is coordinated to the needs of our customers and provides the perfect solution for any application. The 5000 series provides you with a comprehensive worry-free package – including corrosion protection, IP67 and **30 million cycles without maintenance**.

#### UNIVERSAL

Mechatronic grippers make any type of production more flexible. Since 1992, they have been an established part of our supply product range, as they combine maximum performance with simple operation. The 5000 series combines features from **pneumatics, electrical systems and hybrid technology**.

#### PRECISE

We have been continually developing and improving our grippers since 1980. These years of experience are reflected in each gripper, and especially in our **premium GPP5000 universal grippers**.



Pneumatic



Electric



Hybrid



# HANDLING TECHNOLOGY

## GRIPPERS



### GRIPPERS

#### 2-JAW PARALLEL GRIPPERS

##### PNEUMATIC

##### GPP1000



Stroke per jaw: 4 mm - 16 mm  
Gripping force: 100 N  
Weight: 0.16 kg - 0.20 kg  
IP class: 30  
Maintenance free (max.): 2 million cycles

##### MGP800



Number of installation sizes: 8  
Stroke per jaw: 1 mm - 12 mm  
Gripping force: 6 N - 400 N  
Weight: 0.008 kg - 0.46 kg  
IP class: 40  
Maintenance free (max.): 10 million cycles

##### GP400



Number of installation sizes: 9  
Stroke per jaw: 3 mm - 30 mm  
Gripping force: 85 N - 19,275 N  
Weight: 0.08 kg - 18.9 kg  
IP class: 40  
Maintenance free (max.): 10 million cycles

##### GPP5000



Number of installation sizes: 11  
Stroke per jaw: 2.5 mm - 45 mm  
Gripping force: 140 N - 26,950 N  
Weight: 0.08 kg - 50 kg  
IP class: 64/67  
Maintenance free (max.): 30 million cycles

##### ELECTRICAL

##### GEP9000



Number of installation sizes: 2  
Stroke per jaw: 2 mm - 4 mm  
Gripping force: 11 N - 50 N  
Weight: 0.25 kg - 0.57 kg  
IP class: 40  
Maintenance free (max.): 30 million cycles

##### GEP2000



Number of installation sizes: 3  
Stroke per jaw: 10 mm - 16 mm  
Gripping force: 50 N - 500 N  
Weight: 0.79 kg - 1.66 kg  
IP class: 40  
Maintenance free (max.): 10 million cycles

##### GEP5000



Number of installation sizes: 3  
Stroke per jaw: 6 mm - 10 mm  
Gripping force: 540 N - 1,900 N  
Weight: 0.79 kg - 1.66 kg  
IP class: 64  
Maintenance free (max.): 30 million cycles

#### 2-JAW PARALLEL GRIPPERS WITH LONG STROKE

##### PNEUMATIC

##### MGH8000



Number of installation sizes: 3  
Stroke per jaw: 10 mm - 100 mm  
Gripping force: 60 N - 910 N  
Weight: 0.35 kg - 7.3 kg  
IP class: 64  
Maintenance free (max.): 10 million cycles

##### GH6000



Number of installation sizes: 5  
Stroke per jaw: 20 mm - 200 mm  
Gripping force: 120 N - 3,400 N  
Weight: 0.3 kg - 23.8 kg  
IP class: 40  
Maintenance free (max.): 10 million cycles

##### ELECTRICAL

##### GEH6000IL



Number of installation sizes: 2  
Stroke per jaw (max.): 80 mm  
Gripping force: 60 N - 2,400 N  
Weight: 0.76 kg - 2.6 kg  
IP class: 40/54  
Maintenance free (max.): 5 million cycles

#### 3-JAW CONCENTRIC GRIPPERS

##### PNEUMATIC

##### MGD800



Number of installation sizes: 8  
Stroke per jaw: 1 mm - 12 mm  
Gripping force: 30 N - 1,420 N  
Weight: 0.025 kg - 2 kg  
IP class: 40  
Maintenance free (max.): 10 million cycles

##### GPD5000



Number of installation sizes: 11  
Stroke per jaw: 2.5 mm - 45 mm  
Gripping force: 310 N - 72,500 N  
Weight: 0.14 kg - 100 kg  
IP class: 64/67  
Maintenance free (max.): 30 million cycles

##### ELECTRICAL

##### GED5000



Number of installation sizes: 3  
Stroke per jaw: 6 mm - 10 mm  
Gripping force: 540 N - 1,900 N  
Weight: 1.09 kg - 2.33 kg  
IP class: 64  
Maintenance free (max.): 30 million cycles

#### 3-JAW CONCENTRIC GRIPPERS WITH LONG STROKE

##### PNEUMATIC

##### GD500



Number of installation sizes: 3  
Stroke per jaw: 30 mm - 160 mm  
Gripping force: 1,300 N - 2,480 N  
Weight: 7.4 kg - 29 kg  
IP class: 40  
Maintenance free (max.): 10 million cycles

#### 2-JAW ANGULAR GRIPPERS

##### PNEUMATIC

##### GZ1000



Number of installation sizes: 3  
Stroke per jaw: 8° - 10°  
Gripping force: 62 N - 315 N  
Weight: 0.015 kg - 0.125 kg  
IP class: 30  
Maintenance free (max.): 10 million cycles

Technical modifications keep in reserve !

(2021/04)

## GRIPPERS

### MGW800



Number of installation sizes: 8  
Stroke per jaw: 37.5°  
Gripping force: 5 N - 325 N  
Weight: 0.01 kg - 0.45 kg  
IP class: 30  
Maintenance free (max.): 10 million cycles

### GG1000



Number of installation sizes: 4  
Stroke per jaw: 20°  
Gripping force: 2,910 N - 29,110 N  
Weight: 1.3 kg - 13 kg  
IP class: 40  
Maintenance free (max.): 10 million cycles

### GPW5000



Number of installation sizes: 3  
Stroke per jaw: +15° / -2°  
Gripping force: 1,330 N - 14,500 N  
Weight: 0.9 kg - 12.1 kg  
IP class: 64  
Maintenance free (max.): 30 million cycles

## 2-JAW RADIAL GRIPPERS

### PNEUMATIC

### GK



Number of installation sizes: 6  
Stroke per jaw: 90°  
Gripping force: 70 N - 4,250 N  
Weight: 0.1 kg - 4.1 kg  
IP class: 20  
Maintenance free (max.): 10 million cycles

### GG4000



Number of installation sizes: 6  
Stroke per jaw: 90°  
Gripping force: 430 N - 4,000 N  
Weight: 0.25 kg - 4.5 kg  
IP class: 64  
Maintenance free (max.): 10 million cycles

## GRIPPERS FOR SPECIAL TASKS

### INTERNAL GRIPPERS

### PNEUMATIC

### LGS

### LG1000

### LGG



Number of installation sizes: 25  
Full stroke in Ø: 1 mm - 16 mm  
Gripper hole diameter: 4 mm - 135.5 mm  
Weight: 0.031 kg - 2.7 kg

## OUTER O-RING ASSEMBLY GRIPPERS

### PNEUMATIC

### GS

### GS1



Number of installation sizes: 4  
O-ring Ø: 4 mm - 130 mm  
Expanding force: 240 N - 1,450 N  
Weight: 0.5 kg - 5.4 kg

## NEEDLE GRIPPERS

### PNEUMATIC

### ST SCH



Number of installation sizes: 4  
Adjustable needle stroke: 0 mm - 6 mm  
Weight: 0.21 kg - 0.45 kg

### ELECTRICAL

### GEN9100



Adjustable needle stroke: 0 mm - 2 mm  
Weight: 0.33 kg  
IP class: 50

## MAGNETIC GRIPPERS

### PNEUMATIC

### HM1000



Number of installation sizes: 4  
Adhesive force (max.): 27 N - 450 N  
Weight: 0.06 kg - 2.2 kg

### ELECTRICAL

### HEM1000



Number of installation sizes: 4  
Adhesive force (max.): 40 N - 720 N  
Weight: 0.09 kg - 1.3 kg

## ROTARY GRIPPERS

### 2-JAW ANGULAR ROTARY GRIPPERS

### PNEUMATIC

### DGK



Stroke per jaw: 90°  
Gripping force: 150 N  
Weight: 0.55 kg

### 2-JAW PARALLEL ROTARY GRIPPERS

### PNEUMATIC

### DGP400



Stroke per jaw: 4 mm  
Gripping force: 115 N - 155 N  
Weight: 0.44 kg - 0.48 kg

# HANDLING TECHNOLOGY

## SWIVEL AND ROTARY MODULES

### OUR EXPERTISE – YOUR ADVANTAGES

#### “Superior”

##### ► Up to 100% more performance than the Benchmark

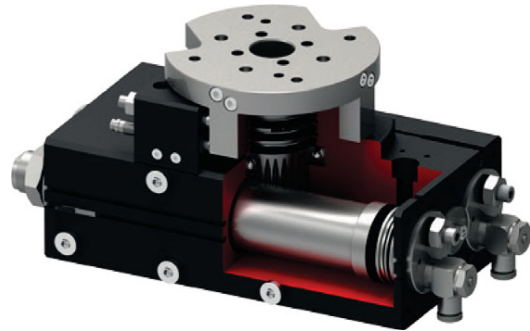
Superior end position damping lets you swivel more mass in the shortest amount of time, increasing your machine's component output

##### ► Large center bore

Reduce the interference contours in your application by placing your power supply line directly through the middle of the rotary flange

##### ► More than 100% higher radial bearing load than the Benchmark

The generously scaled bearings stand for robustness and long service life and provide the highest process reliability for your application



### HIGH-PERFORMANCE

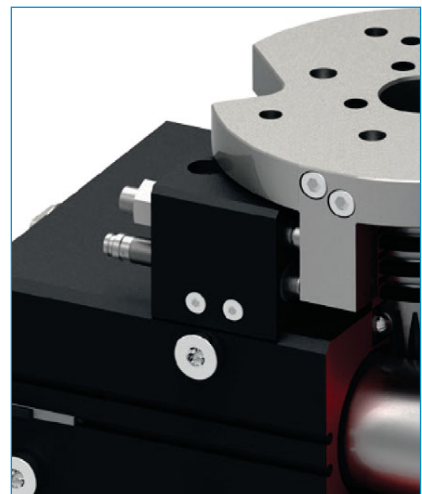
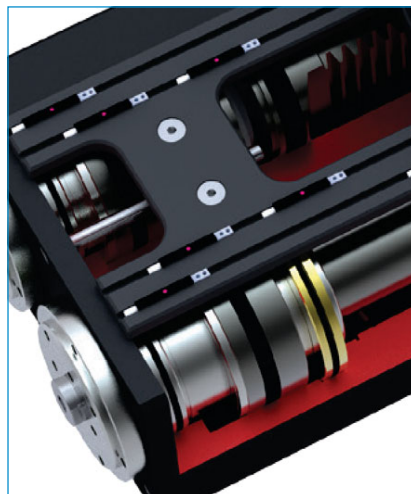
When it comes to swiveling, the shortest possible cycle time is the first priority. Our in-house developed shock absorbers with spiral groove technology provide the market's best end position damping – perfect for our [high-performance swivel units](#) with their extremely short cycle times.

### TRIED AND TESTED

As a pioneer from the very beginning, we are offering you a comprehensive product range that is constantly raising the bar. In addition to the world's first shock-absorbed angle pivot unit, we also developed products such as the first flat swivel unit with a [locking middle position](#).

### ROBUST

Generously scaled bearings make it possible for our units to handle a great deal. Where others may lose a tooth now and then, we can offer you a virtually wear-free gear drive with [external stops](#).



## SWIVEL AND ROTARY MODULES

### ROTOR CYLINDER

#### PNEUMATIC

##### PRN



Number of installation sizes: 9  
Swivel angle: 90° - 270°  
Torque: 0.15 Nm - 247 Nm  
Weight: 0.04 kg - 12.5 kg  
IP class: 54  
Maintenance free (max.): 1.5 million cycles

### SWIVEL JAWS

#### PNEUMATIC

##### SB



Number of installation sizes: 3  
Swivel angle: 90° - 180°  
Torque: 0.1 Nm - 1.6 Nm  
Weight: 0.3 kg - 2.2 kg  
IP class: 54  
Maintenance free (max.): 10 million cycles

### FLAT SWIVEL UNITS

#### PNEUMATIC

##### MSF



Number of installation sizes: 3  
Swivel angle: 90° - 180°  
Torque: 0.3 Nm - 1.2 Nm  
Weight: 0.17 kg - 0.46 kg  
IP class: 41  
Maintenance free (max.): 10 million cycles

##### SBZ



Number of installation sizes: 5  
Swivel angle: 90° - 180°  
Torque: 1.2 Nm - 57 Nm  
Weight: 0.45 kg - 28 kg  
IP class: 54  
Maintenance free (max.): 10 million cycles

##### SF



Number of installation sizes: 6  
Swivel angle: 0° - 180°  
Torque: 1.5 Nm - 130 Nm  
Weight: 0.6 kg - 41.1 kg  
IP class: 64  
Maintenance free (max.): 10 million cycles

#### ELECTRICAL

##### DES



Number of installation sizes: 2  
Swivel angle: unlimited  
Torque: 12 Nm - 64 Nm  
Weight: 4 kg - 15.9 kg  
IP class: 54  
Maintenance free (max.): 5 million revs

### ANGLE PIVOT UNITS

#### PNEUMATIC

##### SWM1000



Number of installation sizes: 4  
Swivel angle: 90°  
Torque: 10 Nm - 64 Nm  
Weight: 0.65 kg - 3.5 kg  
IP class: 30  
Maintenance free (max.): 10 million cycles

##### SW



Number of installation sizes: 6  
Swivel angle: 180°  
Torque: 1.5 Nm - 120 Nm  
Weight: 1.2 kg - 48.2 kg  
IP class: 64  
Maintenance free (max.): 10 million cycles



# HANDLING TECHNOLOGY

## ROBOT ACCESSORIES

### OUR EXPERTISE – YOUR ADVANTAGES

#### ► Secure hold during pressure drop

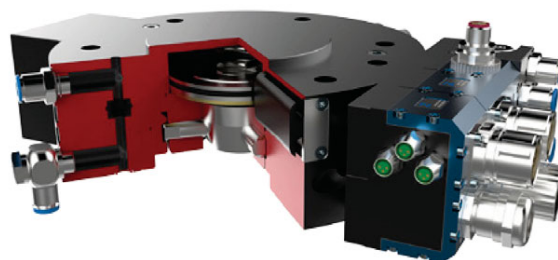
A redundant system, created by the combination of a spring accumulator and a self-locking mechanism, guarantees a safe machine

#### ► 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



### VARIETY

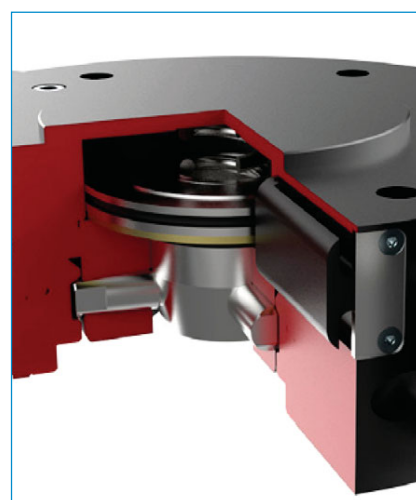
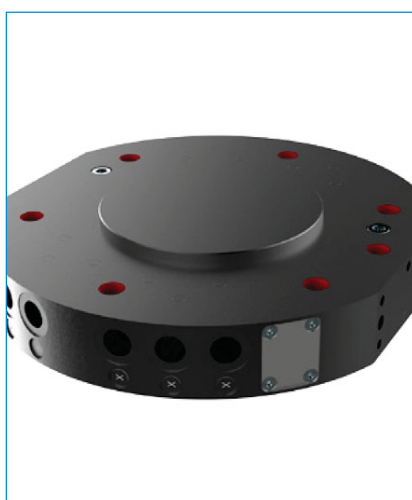
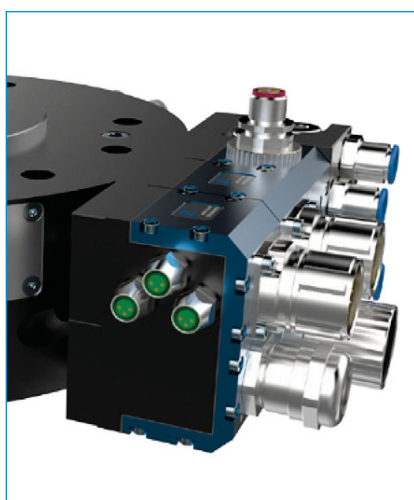
Do you want to custom-build your machine and have freedom in media transmission? Working with us allows you to select from a wide variety of standardized energy elements. We are also experienced to develop a [custom solution](#) for you.

### STANDARDIZED

The height of the structure reduces the load capacity of your robot. That is why our robotic components form structures with minimal height and can be combined together without additional adapter plates. Direct mounting onto the robot takes place using the [mounting flange in accordance with EN ISO 9409-1](#).

### SAFE

Production safety is a priority for us. That is why our tool changers offer you maximum reliability, with the integrated sensor technology, the spring installed for maintaining force and the extremely robust, [line contacting locking bolts](#).



## ROBOT ACCESSORIES



### CHANGE

### MANUAL

**HWR2000**  
**HWR**



Connection flange: TK31 - TK80  
Recommended handling weight: 5 kg - 50 kg  
Pneumatic energy transfer: 4 - 8 ports  
Electrical energy transfer: Optional via energy element



### TRANSMIT

### MANUAL

**DVR1000**



Connection flange: TK125  
Recommended handling weight: 200 kg  
Pneumatic energy transfer: 8 ports  
Electrical energy transfer: 4pin + PE



## PNEUMATIC

**WWR**



Connection flange: TK40 - TK160  
Recommended handling weight: 20 kg - 300 kg  
Pneumatic energy transfer: 4 - 10 ports  
Electrical energy transfer: Optional via energy element

**DVR**



Connection flange: TK40 - TK160  
Recommended handling weight: 15 kg - 200 kg  
Pneumatic energy transfer: 4 - 8 ports  
Electrical energy transfer: 4 - 12pin

**WWR1000**



Connection flange: TK160 - TK200  
Recommended handling weight: 500 kg - 1,000 kg  
Pneumatic energy transfer: Optional via energy element  
Electrical energy transfer: Optional via energy element



## ENERGY ELEMENTS

## ELECTRICAL / COMMUNICATION

**WER**

For transmitting signal and load currents



**IO-Link**



**EtherCAT**



## COMPENSATE

## PNEUMATIC

**FGR**  
**XYR**



Connection flange: TK40 - TK160  
Recommended handling weight: 7 kg - 75 kg  
Deflection in X/Y: 2 mm - 10 mm

## FLUID

**WER**

For transmitting hydraulics, pneumatics and vacuum



## PROTECT

## PNEUMATIC

**CSR**



Connection flange: TK50 - TK125  
Recommended handling weight: 6 kg - 150 kg  
Z-axis deflection: 6 mm - 23 mm  
Horizontal deflection +/-: 9° - 12.5°

## ANGLE FLANGE

**WFR**



Suitable for more than 40 different robot types and combinable with 16 different grippers for machine loading

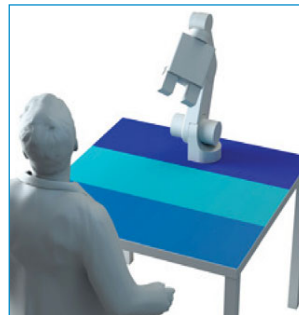
# HANDLING TECHNOLOGY

## HUMAN ROBOT COLLABORATION



### HRC FROM THE EXPERTS

Zimmer Group is a pioneer and one of the world's leading manufacturers of components in the area of human/robot collaboration. We develop our products in pursuit of our goal to increase the efficiency of work processes by fostering the type of collaboration between humans and machines that makes optimal use of their potential.



Cooperation



Collaboration

### 2-JAW PARALLEL GRIPPERS

#### COOPERATIVE

##### ELECTRICAL

#### HRC-EP-017388

IO-Link



Stroke per jaw: 60 mm  
Gripping force: 950 N  
Weight: 1.8 kg  
IP class: 40  
Maintenance free (max.): 5 million cycles

Safety functions STO + mechanical self-locking mechanism in case of power failure

#### HRC-EP-017823

IO-Link



Stroke per jaw: 60 mm  
Gripping force: 320 N  
Weight: 1.8 kg  
IP class: 40  
Maintenance free (max.): 5 million cycles

Safety functions STO + maximum current consumption 1 A

#### COLLABORATIVE

##### ELECTRICAL

#### HRC-EP-014654

IO-Link



Stroke per jaw: 60 mm  
Gripping force (max.): < 140 N  
Weight: 2.0 kg  
IP class: 40  
Maintenance free (max.): 5 million cycles

Safety functions STO + mechanical self-locking mechanism in case of power failure + safety gripper jaws prevent the excess of 140 N

#### HRC-EP-012433

IO-Link



Stroke per jaw: 60 mm  
Gripping force (max.): < 140 N  
Weight: 2.0 kg  
IP class: 40  
Maintenance free (max.): 5 million cycles

Safety functions STO + maximum current consumption 1 A + safety gripper jaws prevent the excess of 140 N

#### HRC-EP-027988

IO-Link



Stroke per jaw: 10 mm  
Gripping force (max.): < 140 N  
Weight: 0.68 kg  
IP class: 40  
Maintenance free (max.): 10 million cycles

Mechanical self-locking mechanism in case of power failure

#### PNEUMATIC

#### HRC-PP-048748

IO-Link



Stroke per jaw: 6 mm  
Gripping force (max.): < 140 N  
Weight: 0.76 kg  
IP class: 40  
Maintenance free (max.): 10 million cycles

Gripping force safety device in case of pressure failure via integrated spring

### 2-JAW ANGULAR GRIPPERS

#### PNEUMATIC

#### HRC-PW-055639

IO-Link



Stroke per jaw: 37.5°  
Gripping force (max.): < 140 N  
Weight: 0.82 kg  
IP class: 40  
Maintenance free (max.): 10 million cycles

Gripping force safety device in case of pressure failure via integrated spring

Technical modifications keep in reserve !

(2022/04)

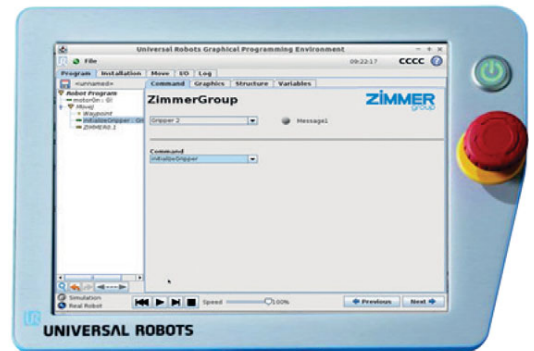


# HANDLING TECHNOLOGY

## HUMAN MACHINE INTERFACE

### Simple operation

- ▶ The operation of our Industrie 4.0 components has now been integrated into the control system of the robots from YASKAWA and Universal Robots. The integration of additional manufacturers is in progress and can be requested as needed. The components can be set up manually using the robot control panel and integrated into the program sequence. The intuitive operating interface allows the user to activate the entire IO-Link gripper portfolio from Zimmer Group and uses all pneumatic, electrical, hybrid, servoelectric and digital components on the robots.



HMI using the example of Universal Robots

### Because simple is just better

- ▶ This integration makes it possible to use application profiles flexibly and to adjust and save the device parameters very easily. Complete implementation and commissioning takes only a few minutes. Furthermore, Zimmer HMI supports condition monitoring or predictive maintenance of the components.

## HANDLING TECHNOLOGY

### INDUSTRIE 4.0

### Components

- ▶ In the future, production systems and machines will build upon autonomously acting and intelligent mechatronic components and assemblies. More and more functions will be integrated directly into the assemblies and data processing will take place remotely in the components at an increasing rate. These functions will network, organize and configure themselves in order to take over functions from the higher-level control level or to take over some of its workload. The Zimmer Industrie 4.0 components communicate via IO-Link, which ensures the connection is made easily using an M12 connector that carries all of the signals as well as the power.



### IO-Link, the interface of Industrie 4.0 components

- ▶ IO-Link is the first standardized IO-technology worldwide for communication from the control system to the lowest level of automation. This IO-Link standard is used as a fieldbus-independent point-to-point connection. Zimmer Group uses IO-Link to integrate intelligent components into virtually any automation environment.



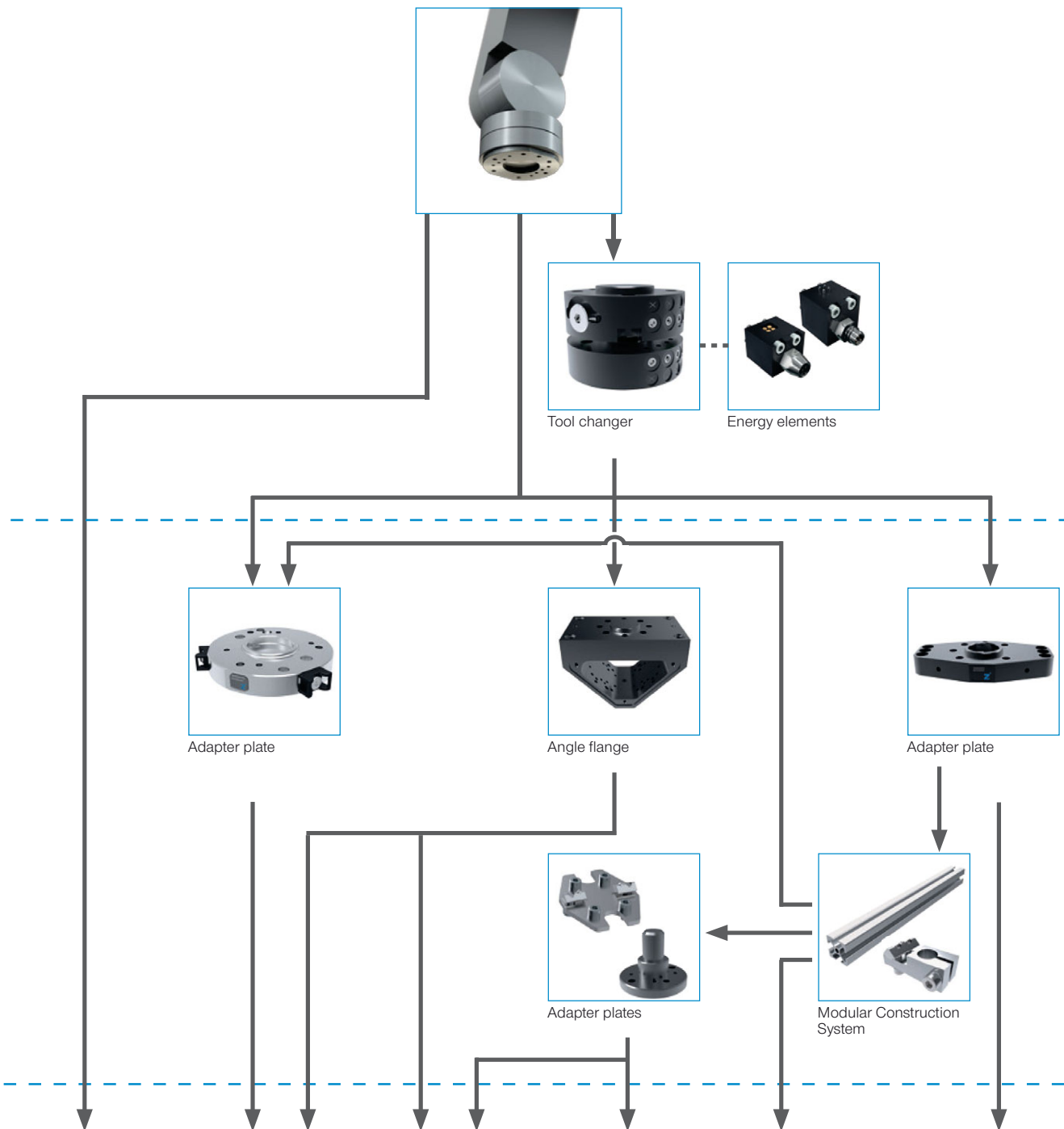
### Easily installed with many advantages

- ▶ IO-Link is easy to install and integrate. Moreover, it reduces and standardizes wiring effort. A standardized, unshielded 5-wire cable is sufficient for producing the point-to-point connection. Previous investments are protected as a result of keeping tried-and-tested cabling structures and compatibility with your existing, conventional wiring.



# HANDLING TECHNOLOGY

## ROBOT MODULES



Technical modifications keep in reserve !

(2021/04)

# HANDLING TECHNOLOGY SERIES AT A GLANCE

## LINEAR MODULES

### PNEUMATIC

SHX  
LI  
LS  
LSX  
HZ



Stroke: 15 mm - 300 mm  
Force: 40 N - 950 N

## CUTTING TONGS

### PNEUMATIC

ZK1000  
ZK



Closing torque: 54 Nm - 400 Nm  
Stroke per jaw: 4.25 ° - 13 °  
Screw diameter (max.): 11 mm

## SEPARATORS

### PNEUMATIC

VEG  
VE



Stroke per plunger: 10 mm - 60 mm  
Extension force: 40 N - 220 N

## BALL JOINTS

### MANUAL

KG



Swivel angle: 30 °  
Materials: Steel, aluminum

## ELECTRICAL

VEE9200

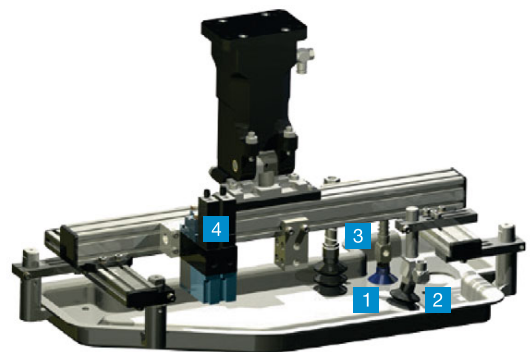


Stroke: 10 mm  
Extension force: 10 N

# HANDLING TECHNOLOGY VACUUM COMPONENTS

## MCS MODULAR CONSTRUCTION SYSTEM

The modular construction system (MCS) can be used to create a workpiece specific solution without increased engineering efforts. This is made possible by the modular individual components. The product portfolio includes profiles, compensation modules, suction cup mounts as well as gripper fingers that guarantee a secure grip of the workpiece during motion.



## SUCTION CUPS

1



## ADAPTERS

2



## COMPENSATION MODULES

3



## VACUUM GENERATOR

4

