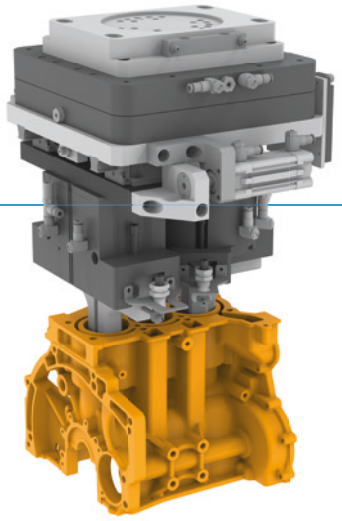
HANDLING SYSTEM FOR CYLINDER BLOCKS
Z01SYS114180

▶ PRODUCT INFORMATION



- Loading and unloading machining centers with different types of 3-cylinder crankcases.
  To move to the different pitches of the cylinder bores, the axial distance of the individual grippers is changed pneumatically. To align the workpieces in the gripper, a combination of parallel and concentric grippers is used. When loading and unloading the device, positional inaccuracies are compensated by an integrated pneumatically centerable twin-axis compensation. Due to the variety of types, the part presence was implemented using a touchless, stroke-independent sensor system.

▶ CHALLENGE

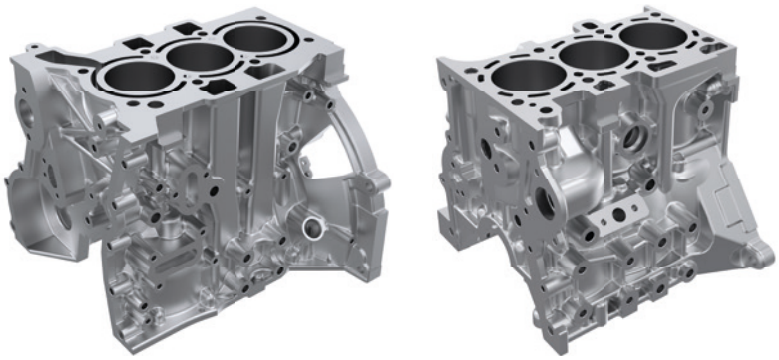
- Different cylinder bore distances
- Frictional fit gripping with a gripping force safety device
- Preventing unwanted tension when loading and unloading on the positioning pins

▶ SOLUTION

- Pneumatic pitch adjustment
- XY standard compensation
- Increased friction value due to tempered gripper pins (suitable for loading unfinished parts only)

▶ WORKPIECE

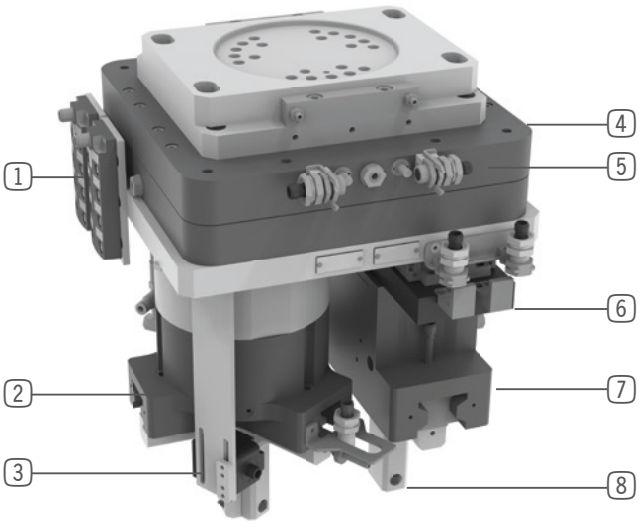
- Handling 3-way and 4-way cylinder crankcases with up to 2 different borehole spacings (pitch adjustment max. 25 mm)



▶ TECHNICAL DATA

Product	Cylinder block
Gripping technology	Frictional fit inside gripping
Workpiece weight [kg]	30
System weight [kg]	65
Drive type	Pneumatic

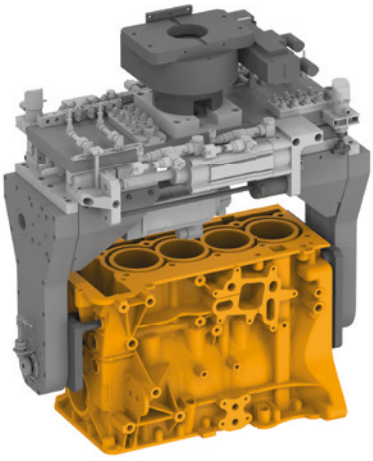
▶ FUNCTIONS IN DETAIL



1. Distributor for sensors (available upon request)
2. 3-jaw concentric gripper GPD5016NO, stroke 16 mm; spring opening
3. Cuboid switch for part sensing
4. Axis compensation module AGL000002 X/Y = +/-10 mm
5. Sensing on the axis compensation module
6. End position sensing of the pitch adjustment
7. Parallel gripper GPP5025SO, stroke 13 mm; spring opening
8. Tempered gripper pins

▶ MORE INFORMATION/CROSS REFERENCES

▷ Cylinder block
Z01SYS118154



▷ Cylinder block
Z01SYS114155