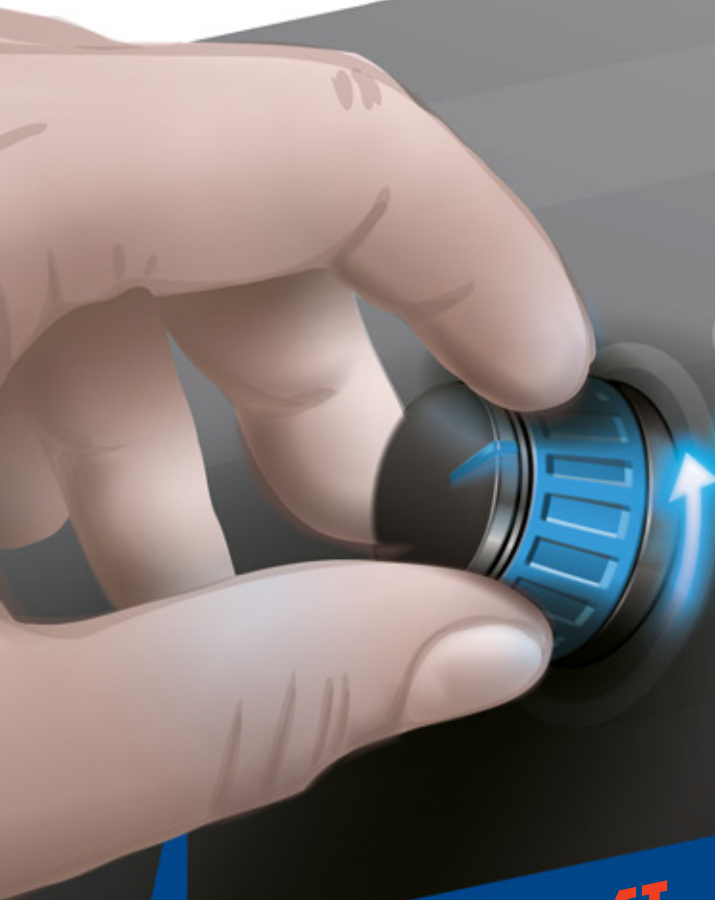


ZASCHE

smart handling

**Ready
to
switch?**



Why SEMI-Automation?

- » high flexibility in planning & application
- » implementation of complex motion sequences
- » high process reliability
- » achievement of short cycle times
- » higher range and load capacity than industrial robots
- » lower total costs

SEMI-Automation

Today, a handling device not only has to move goods from A to B, but also has to guarantee a high level of process reliability. Flexibility and adaptability, shorter cycle times and repeat accuracy become increasingly important. The tasks are becoming increasingly complex and purely manually powered applications reach their limits. Robots, on the other hand, are often unsuitable due to their high space requirements with a relatively short range as well as by high implementation and investment costs.



Fig. semi-automatic installation of the rear seat bench.

High flexibility through combination of manual handling with SEMI-Automation

The SEMI automatic mode enables the operator to actively intervene in the workflow and, if necessary, to initiate manual process steps. Complex sub-processes, on the other hand, can be carried out fully automatically using fixed movement sequences. Immediate as well as fluid and precise movements allow high cycle times while still under constant control of the operator.

The design of the handling device as well as the ergonomically arranged control elements enable the operation of the device in both automatic and manual mode.



Fig. standardized control panel

Due to the lower degree of automation and its modular structure, SMART handling is substantially easier to configure for new tasks. Basic components can be reused and adapted to the new environmental and process-related requirements.

Lower space requirements and acquisition costs



Fig. high-payload semi-automatic device (1.5 to)

In the so-called “hand-operated automatic mode”, the current norms for fully automated systems are not applicable. The space required by protective devices such as fences and light curtains as well as their costs and maintenance can be dispensed with entirely.

Significantly reduced commissioning times or new requirements for the system can be implemented quickly using the standardized modular system and simple programming. The latter enables a short-term teach-in of the device by the operator by simply moving the device manually and reprogramming the newly selected position at the push of a button. Therefore, downtimes are reduced and expensive specialist staff are no longer required.

Since most of the devices are ceiling-mounted, significantly higher payloads and work areas are possible than with conventional industrial robots. Limitations of robots in terms of payload and work range can be circumvented using tried and tested components from crane construction. This decisive advantage over conventional automatic systems is – within the framework of physics – scalable as required.

Coexistence Human – Handling device

The coexistence between the operator and the handling device lets non-productive times be used more productively or several stations can be operated simultaneously, depending on the workflow. This means that the operator continues to cover the tasks that cannot be automated. Be it a complex or imprecise placement of the workpieces, or a work process where the operator’s cognitive skills are irreplaceable. These tasks will be carried out in manual mode.

Tasks, however, that include long travel distances or part placement in defined positions, for example, will be done in automatic mode.

The process time that is, for example, used for the handling device’s movement to the placement destination, releasing the part and returning to pick up the next workpiece can be either used for different tasks by the operator or to operate multiple stations simultaneously, depending on the overall cycle time.



Fig.: rear hatch assembly automotive

Standardized 6-axis handling system

SMART – Programming

Intuitive programming like the direct teach-in on the device for new reference points as well as a straightforward user interface and operability enables the quick adaptation to new tasks.

Data exchange/Industry 4.0

The data exchange with external programs allows for uncomplicated adaptation of the workflow, i.e. container positions can be approached automatically or gripper settings can be made without loss of time and with a high level of process reliability. Various data such as QR- or barcodes can also be read out and sent directly to other recipients for further processing.

WLAN

The data transmission to the HMI can be done wirelessly. Depending on the operating concept, a central control unit can be replaced with a wireless hand-held device that can carry out the complete parameterization of the system. Further information about the process or the status of the system can be easily accessed or adapted via remote maintenance when linked up to the Internet.

Operation

The handling system can be operated either directly on the device or via a wireless hand-held device. With all the necessary functions and operating parameters on display, you are always in control.

Everything from a single source

As a system supplier, we can offer you a complete solution for your application, ranging from steel construction to on-site commissioning.

X-/Y-Axis

In order to cover work areas far beyond those of a classic industrial robot, standardized and well-tried components from crane technology are utilized.

Drive System

Depending on the force and acceleration requirements frequency controlled or servo drives are used.

Positioning System

An application-specific length measuring system ensures the position of the device in the work area is securely determined.

Z-Axis

The vertical stroke can be realized electrically or – in case of very delicate applications – pneumatically.

Pivoting/turning movements

Movements in all three axes are carried out by small and compact actuators.

End effector

The largely custom-made design of the gripper enables the operator to pick up the workpieces both manually or in human-robot collaboration.



Handling 4.0

Through constant further development of our products as well as the needs of our customers for a higher degree of automation, be it for cycle time or process security reasons, our manipulators are subject to constant improvement in both performance and usability.



Fig: freely programmable interface

Freely selectable operating modes allow you to choose between a manual, partially automated or fully automatic mode. Major focus lies on simple programming, such the direct teach-in for new reference points, as well as an intuitive HMI and usability.

Competitive advantage through our standardized modular design

Handling devices are generally used in the industry in the low to high payload range. They support the employee with those activities which would otherwise cause inappropriate biomechanical stress or which cannot be permanently conducted in ergonomic posture. ZASCHE handling has developed a broad spectrum for a wide variety of devices, which enables us to create the ideally tailored handling device for your application. Ranging from a simple slewing crane up to automated manipulators. Due to the high degree of standardization of our devices, you as the end user have the decisive advantage that you can fall back on tried and tested components and thereby safely maintain your processes.

Thanks to the standardized modular system and the flexible structure of the devices, especially in the area of automation, you as the consumer receive a decisive price advantage.

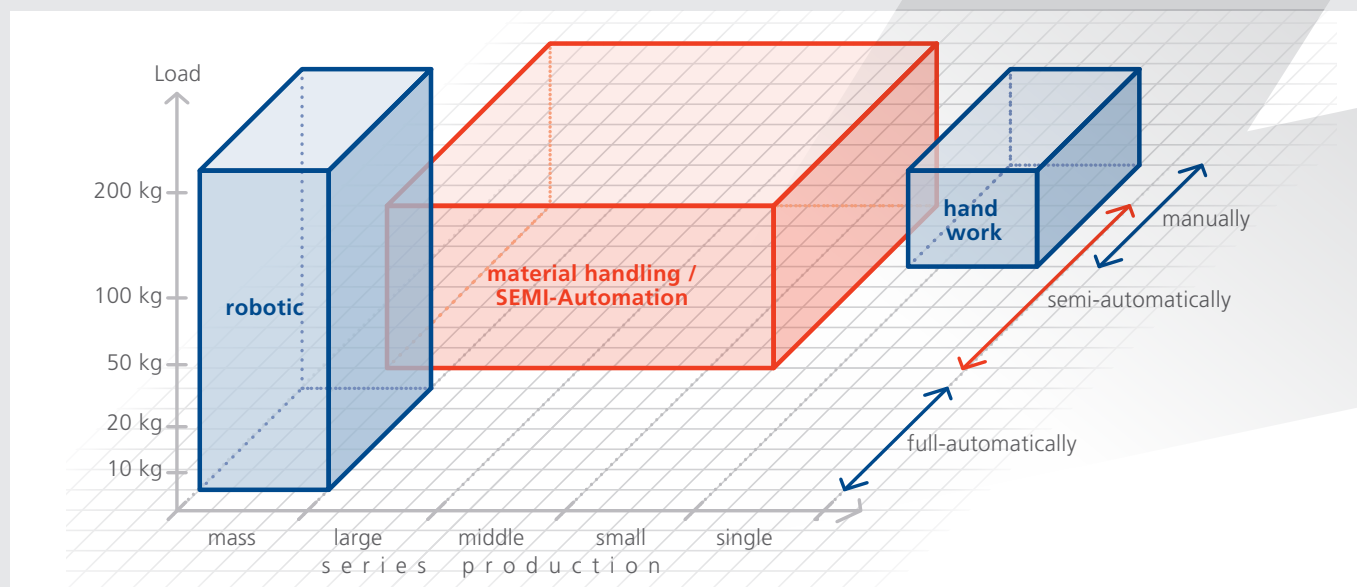


Fig. classification of manual handling in the production process

Your partner for ergonomic manual material handling

Founded in 1932, ZASCHE handling develops and supplies customized, ergonomic solutions that caters to every industry and application.

With more than 120 employees, ZASCHE handling develops, sells, designs and manufactures highly developed manipulators for customers from all over the world on an area of approx. 7000 square meters.

The portfolio includes a broad spectrum, ranging from simple hand-held handling devices to semi-automatic manipulators, slewing cranes, light crane systems, hoists or steel construction. Zasche handling offers solutions for every product and for all industrial sectors.



SERVICE is of utmost importance to us!

Through preventive and regular maintenance hazardous spots can be recognized and eliminated in advance.

Our experienced and qualified staff is gladly available to answer your questions regarding technical issues, repairs, safety checks, training courses as well as spare and wear parts.

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