mechatron

ELECTRICAL CABINETS

plug‘n‘play | all-in-one

„PLUG-AND-PLAY“ ELECTRICAL CABINETS

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Overview of your advantages

Significant time and cost savings made by easy mounting and connection

All control cabinets are ready to use out of the box – you only have to mount it to the machine and connect it to the control unit.

No need to design and produce the control cabinet will lead to time and cost savings

In cooperation with long-standing customers we developed a compact, modular and expandable control cabinet system, which can be adapted to the requirements of each process. We will produce, install and test the whole system before we ship it.

Proven, reliable system for high industrial demands

By using high class components of considerable manufacturers (Rittal, Omron, Festo etc.) and a complete function check before shipping our control cabinets comply with the high requirements of industrial use. Programming the control cabinet in accordance to the particular HF-spindle guarantees optimum drive parameters for efficient use.

Warranry extension on request

To make sure your operation is completely carefree, we optionally offer you an extension of your warranty over the standard 12 months. Thus you are perfectly secured and if you have problem, you can contact our excellent service personnel for free.

Air conditioning

To ensure that all electronic parts can function reliably, we use different concepts for air conditioning depending on the control cabinet. For most of the systems a simple fan cooling is enough to regulate the heat.

Custom products and system expansion

Our accessories make our systems suitable for nearly every requirement. We would like to help you find the best option for your particular wishes. As we produce the control cabinets on our own, we are very flexible and fast when it comes to special wishes concerning format, equipment and ports.

1. ELECTRONICS

The electrical components in our control cabinets are used to control and monitor the spindle drive, they are also used to communicate with the machine control. A thought out security concept protects the user and the machine from damages and injuries.

Standardized connection interface

We deliver our control cabinets in the standard version with 3 or 4 standard signal interfaces. One of them is a 25-pin main plug, which is the communication interface between the control unit and the cabinet (start-stop, rotational speed signal, error signal etc.), there are also plugs for the emergency stop circuit and pneumatic valves.

Careful choice of components

Our control cabinets are consequently equipped with components of considerable manufacturers (Omron, Schneider Electric, Eaton etc.) in order to guarantee the highest possible level of reliability.

Additional options

Due to the modular structure of our cabinets, we can offer you many additional options at low cost and expense. Here are some examples:

- USB-Port to connect the inverter to your computer
- RJ45 interface for bus-or I7O-signals
- External LCD control console
- Various fieldbus interfaces
- Many more customer specific wishes

Security concept

Based on a risk analysis we made on spindle drives we developed security concepts to guarantee a very high level of security.

This means that all control cabinets for spindles with speeds over 24000 rpm and powers above 1,5 kW with a certified security module up to performance level PLd (ISO 13849-1).

When the emergency stop is activated, the drive is braked down as fast as possible and set to a safe condition. A restart is only possible after the reset button is pressed.

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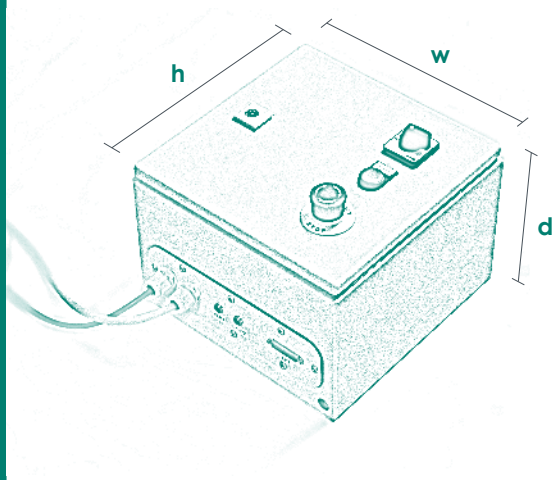
Control voltage and amplifier circuit

We offer integrated amplifier circuits with optocouplers as an additional module for control units working with a TTL signal level (e.g. Computer interfaces etc.), which make it possible to directly control the electrical components and consumers (e.g. valves) with 24V working voltage.

2. TECHNICAL SPECIFICATIONS



Design and dimensions

Generally we offer control cabinets in 3 different dimensions, depending on the equipment:

Variant	height (h)	width (w)	depth (d)
A	300	300	210
B	380	600	210
C	500	500	300

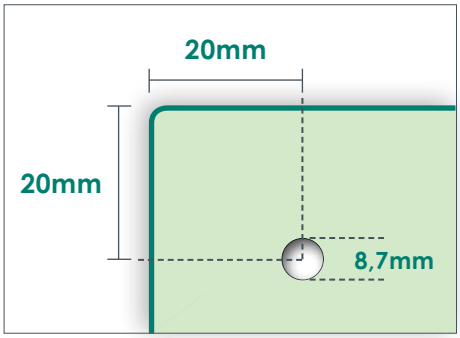
all specifications in mm

Cable length (standard)

- Mains cable and separate protective conductor for stationary connection **5m**
- Spindle power supply **6m**

Mounting

We offer you mounting material for easy assembly.



Holes

The distance between the mounting holes and the outer edges is 20mm on all our cabinets.

Hinge position

The standard hinge position is on the right (changes on request).

Ventilation Gaps

The standard ventilation is made from the left and from above.
The distances here should be at least 60mm to the wall or other parts.

3. PNEUMATICS

The pneumatic components of our cabinets control valves for our spindles with sealing air, pneumatic cone change or direct tool chance. You can also control special equipment like minimum lubrication or tool magazines.

High quality components

To guarantee a reliable operation at all time, we only use considerable brand products like FESTO or Riegler.

System expansion

Many of our control cabinet systems can be expanded. This offers the advantage that you first can get a low-price system, which can be upgraded quickly and easily by adding pneumatic modules if required.

Connections

Our system is provided with compressed air with a standard quick coupling (NW 7,2), which is lead through an internal maintenance unit, where it is dried and filtered, and then it is distributed to the outputs. The outputs are push-in bulkhead fittings and therefore fast and easy to use.

Control voltage and amplifier circuit

The pneumatics are controlled with 24V by the machine control. If the control only provides less voltage, we offer suitable integrated amplifier units.

4. INDIVIDUAL CUSTOMIZATION AND SPECIAL EQUIPMENT

RJ45-port
Interface for bus-or I/O-signals and an external display

USB-connection
Interface for connecting the inverter to a computer

Your competent partner

Are you convinced by the various advantages of our individual control cabinets and you would like to have a concrete offer? Our experts would like to inform you about your possibilities.

Each project is unique and demands special requirements according the system components. Thus we would like to advise you concerning the possibilities and individual configurations our control cabinet holds for you. Take advantage of our long time experience in the field of mechatronics and especially spindle technology to configure an optimum system for you.

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Systematically to your perfect HF-spindle.

Your project will take advantage of our long-term experience and simple implementation. Thanks to our modular system, no wish is left unfulfilled:

- Drives from 0,1kW to 50 kW
- Drives with very high power density
- Eco-drives with attractive price-performance ratio
- Torque characteristics are configurable
- Different tool interfaces
- Complete systems from one provider.

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