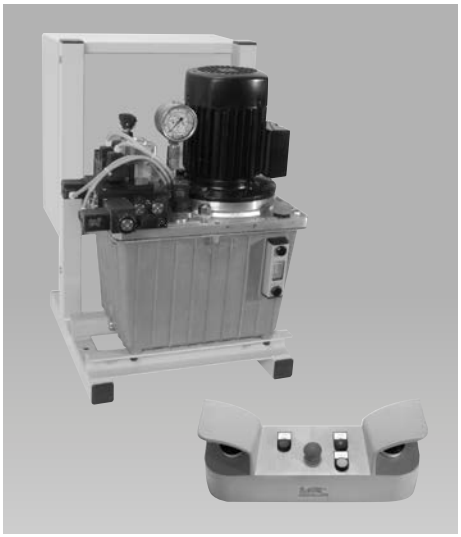
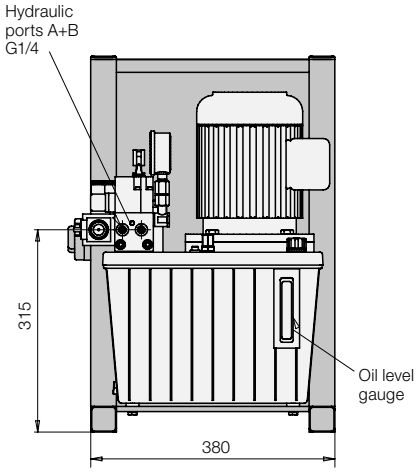
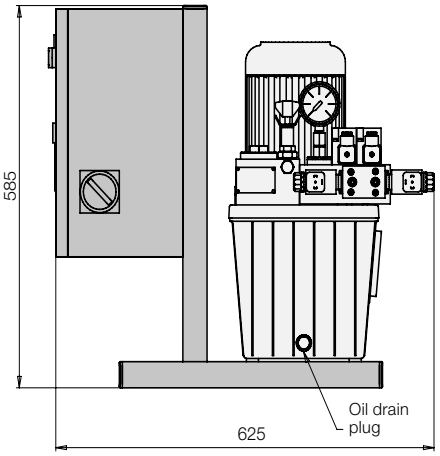
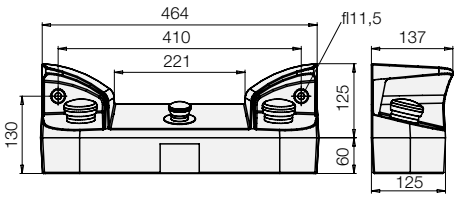
Power Units
with two-hand operator console
max. operating pressure 500/250/160 bar







Two-hand operator console
Two-hand operator console is required for fixtures and installations with dangerous applications, in order to keep hands from the effective area of the dangerous movement.
Both mushroom push-buttons have to be operated simoultaneously within 0.5 seconds.
The basic housing of the two-hand operator console is made of plastics (Lexan 503R colour RAL 7035) and equipped with two mushroom push-buttons and one emergency palm button.
The console is connected with a 3 m long cable to the electric control.
The two-hand operator consoles correspond to the demands as per EN 574.



Electric control
The electric control is installed in a control box 380x380x210 mm, which is connected by a mounting frame to the power unit.
The electric control corresponds to VDE 0100.

Delivery
- Ready for operation after connection of the cable and filling in of the hydraulic oil
- High-pressure filter 10 µm
- Pressure gauge
- Pressure relief valve
- Control voltage lamp in the door of the control box
- Temperature and oil level control with an indication lamp in the door of the control box
- Luminuous plugs on the valve solenoids
- Luminuous plugs on the pressure switches

Hydraulic
The hydraulic control of this power unit is adapted to the function safety of the two-hand operator console and the electric control.
The control is designed for double-acting cylinders.
A cylinder motion by the 4/3 directional control valve is only possible if the valve solenoid is energized. In case of voltage drop the cilinder motion will be interrupted.

Technical data

Supply voltage	400V 3PE 50Hz
Control voltage	24V DC
Oil volume	11 l
Useable volume	6 l
Oil	HLP 32 DIN 51519 / 51524

Hydraulic ports

A + B	G1/4

(in case of single-acting clamping cylinders port B will be closed with the enclosed screw plug G 1/4)

Max. operating pressure	[bar]	500	250	160
Flow rate	[cm³/s]	15	41	75
	[l/min]	0.9	2.5	4.5
Rating	[kW]	0.75	1.1	1.1

Functionality and operation
(see also page 2)
Functionality and operation of power units with two-hand operator console are designed as per customer's specification.
In principle the following fixture types are differentiated:

- **Clamping fixtures without couplings**
- **Clamping fixtures with couplings**
- **Bending, die-cutting and stamping fixtures**

While clamping fixtures allow 3 different variants for unclamping, this is firmly defined for bending, die-cutting and stamping fixtures.

Please ask for the desired version.

Fixture type

Clamping fixtures without couplings

To trigger the clamping cycle both mushroom push-buttons have to be pushed simultaneously. The mushroom push-buttons have to be depressed until the cylinder is extended and the green pilot light “Clamped” lights up. Then the clamping pressure is monitored by a pressure switch.
If the mushroom push-buttons are released before the signal lamps light up, the cylinder stops. Further extending or retracting of the cylinder is now possible by touch control of the two mushroom push-buttons or by the luminous push-button “Unclamping”.
The pressure switch S0 switches off the pump motor after system pressure has been obtained and switches on again after a pressure drop of 10 %. For machine tool interlock, pressure switch S2 is set to approx. 80 % of the clamping pressure. This signal is made available free of potential at the binders in the electric control and can be electrically controlled for linkages.

Clamping fixture with couplings

The power unit has tahe additional function coupling or depressurise.
By an additional white luminous push-button “Depressurised” both cylinder ports are depressurised. This function is required if the clamping fixture has to be seperated from the power unit by a coupling unit. (see page F 9.425)
In the ports A + B a filter element is screwed in.

Unclamping functions

Variant 1:

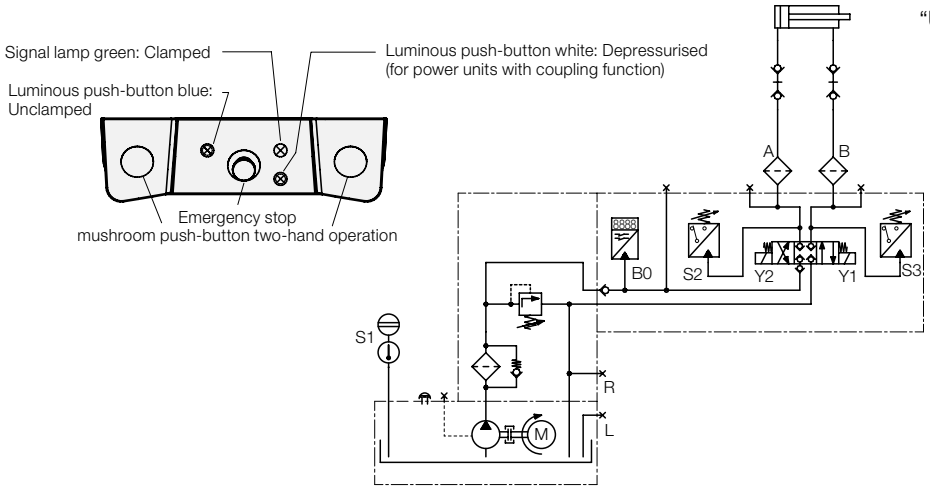
For unclamping the luminous push-button “Unclamping” has to be operated and pushed as long as the cylinder is retracted and the blue luminous push-button “Unclamped” is lit.

Variant 2:

The luminous push-button „Unclamping” is only pushed for a short time. The cylinder retracts automatically until the blue luminous push-button “Unclamped” is lit.

Variant 3:

The luminous push-button “Unclamping” is only pushed for a short time. The blue luminous push-button “Unclamped” is blinking.
Now the mushroom push-buttons have to be operated and pushed as long as the clylinder is retracted and the blue luminous push-button “Unclamped” is switched to permanent light.



Fixture type

Bending, die-cutting and stamping fixtures

Alnitial state:
Cylinder retracted, the green luminous push-button “Extend” is lit.
After operation of both mushroom push-buttons the cylinder extends.
The mushroom push-buttons have to be pushed as long as the cylinder is extended (the green signal lamp of luminous push-button goes out, the white signal lamp of luminous push-button is lit), the pressure switch S2 reverses the valve (function effected) and the cylinder is retracted (luminous push-buttons change again).
If the mushroom push-buttons are released during the cylinder motion, the cylinder stops immediately. The luminous push-button is lit, which indicates the direction in which the cylinder will move after renewed operation of the mushroom push-buttons. If the direction has to be reversed, the other luminous push-button has to be operated.
The direction changes again with every operation and is indicated by the green or white signal lamp.