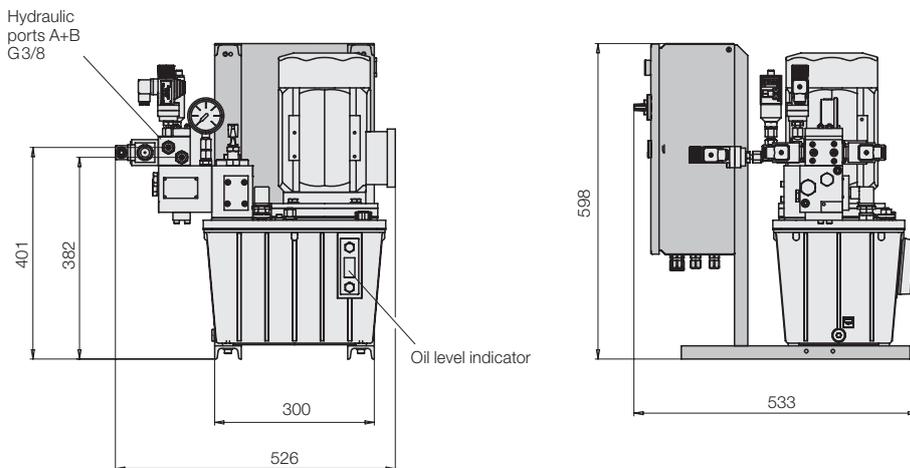
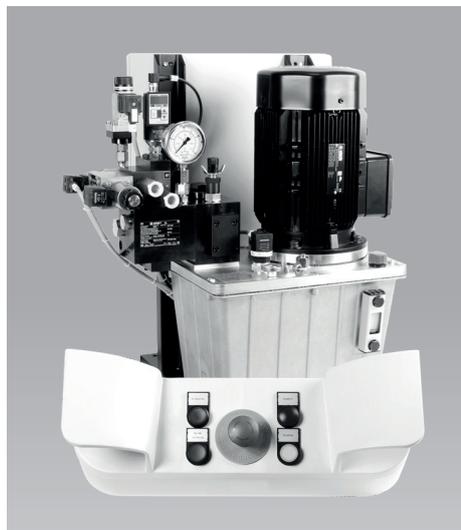




**Power Units**

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



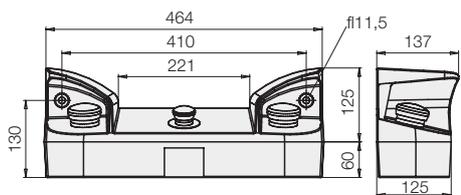
**Two-hand operator console**

The two-hand operator consoles are required for fixtures and installations with dangerous applications to keep hands from the effective area of the dangerous movement.

Both mushroom push-buttons have to be operated simultaneously 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 to the electric control with a 3 m long cable.

The two-hand operator consoles correspond to the demands as per EN ISO 13851.



**Electric control**

The electric control is installed in a control box 300x400x155 mm, which is connected by a mounting frame to the power unit.

The control box contains a safety control for evaluating and controlling all components.

**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
- Luminous plugs on the valve solenoids
- Luminous plugs on the pressure switches
- Screw-in filters in the ports A + B for fixture type 2

**Hydraulics**

The hydraulic control of these power units 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 a voltage drop, the cylinder motion will be interrupted.

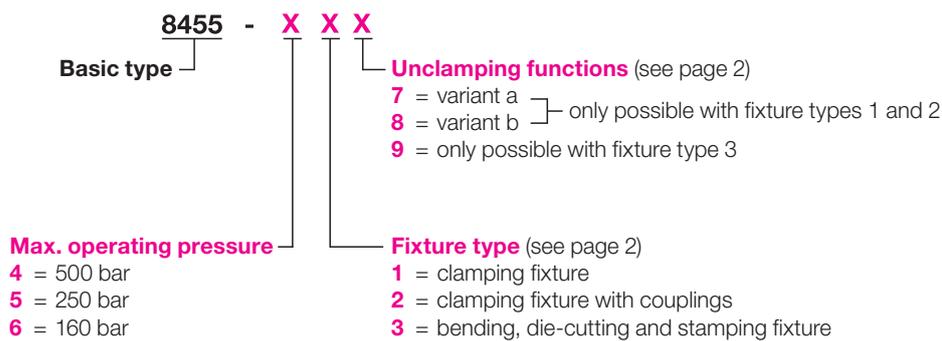
**Technical data**

Operating voltage	3/PE 400V 50Hz
Control voltage	24 V DC
Reservoir volume	11 l
Usable volume	6 l
Oil	HLP22 (piston pump) HLP32 (gear pump) DIN 51519 / 51524

Max. operating pressure	[bar]	500	250	160
Flow rate	[cm <sup>3</sup> /s]	15	41	75
	[l/min]	0.9	2.5	4.5
Rating	[kW]	0.75	1.1	1.1

Hydraulic ports	
A+B	G 3/8
(in case of single-acting clamping cylinders, port B will be closed with the enclosed screw plug G 3/8)	

**Code for part numbers**



## Fixture type

### Clamping fixture, type 1

#### 8455-X1X

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 lamp lights 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".

When the system pressure has been reached, pressure switch B1 switches off the pump motor, and switches it on again, if pressure drops by more than 10%. For machine tool interlock, pressure switch B1 is set to 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.

## Unclamping functions

### Variant a:

#### 8455-XX7

For unclamping, the signal lamp "Unclamping" has to be operated and pushed as long as the cylinder is retracted and the blue luminous push-button "Unclamped" is lit.

### Variant b:

#### 8455-XX8

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 cylinder is retracted and the blue luminous push-button "Unclamped" is switched to permanent light.

### Clamping fixture with couplings, type 2

#### 8455-X2X

The power unit has the 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 separated from the power unit by a coupling unit (see data sheet F 9.425).

In the ports A + B a filter element is screwed in.

### Bending, die-cutting and stamping fixture, type 3

#### 8455-X39

Initial 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 B1 reverses the valve (function effected) and the cylinder is retracted (luminous push-buttons change again).

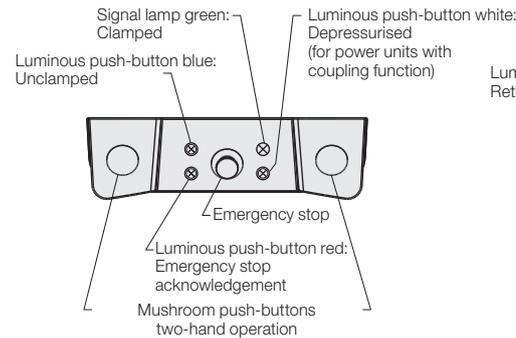
If the mushroom push-buttons are released during the cylinder motion, the cylinder stops immediately. The luminous push-button is lit, which indicates the direction in which the cylinder will move after renewed operation of the mushroom push-buttons.

If the direction has to be reversed, the other luminous push-button has to be operated.

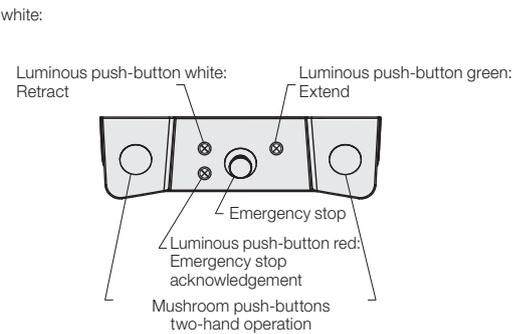
The direction changes again with every operation and is indicated by the green or white signal lamp.

## Two-hand operator console

### Fixture type 1 and 2



### Fixture type 3



## Hydraulic circuit diagram

