

# Pump bypass valve H30, H300 Pilot valve V300 and control pcb with filter

## Features

- Mechanically - hydraulically actuated valve
- Pump bypass valve consisting of the 2/2-way valve and the non-return valve
- Pilot valve as a separate unit to be attached to the pump bypass valve
- Control pcb with filter inserts in an intermediate plate design
- The valve seats seal hermetically preventing internal leaks
- All parts are made of corrosion-resistant materials, and they are easily replaceable
- Attachment, flange design to be mounted directly to pumps

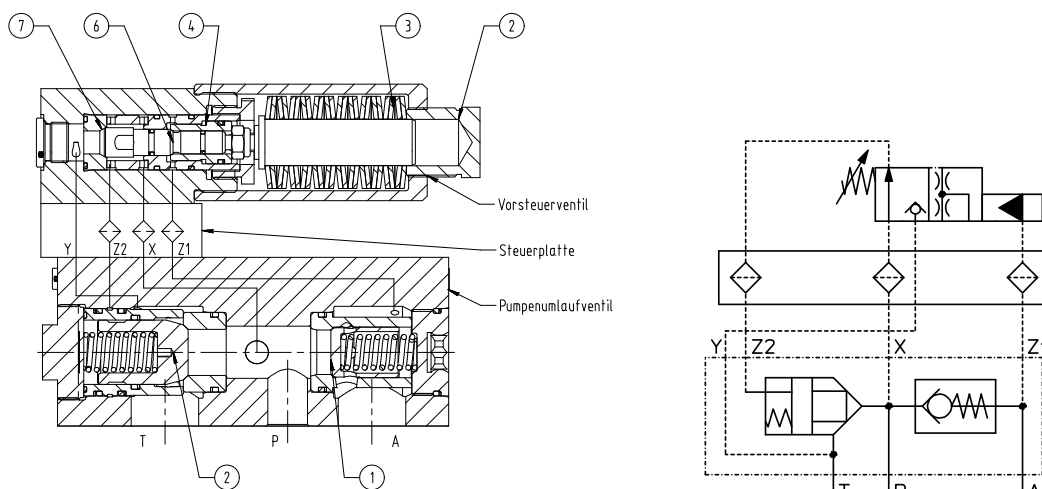
## Control function

The pump bypass valve, the control pcb and the pilot valve form a valve unit controlling a pump in a pressure supply system with a pressure accumulator. Depending on the system pressure, the valve controls the working cycle of the pump, "load accumulator" or "depressurised bypass". The P-connector is connected to the pressure port of the pump, the A-connector to the pressure line of the system and the T-connector to the pressure-free tank.

The flow of the pump enters the pump bypass valve at the P-connector. In the basic position, the pressure generated by the pump is used to close the 2/2-way valve (2) via the X- and the Z2-line. This has the effect that the non-return valve (1) opens, and the pump flow is supplied to the system via the A – connector.

At the pilot valve, the required pressure value "PE" is set by means of the adjusting screw (3). Depending on the setting value, the springs (4) generate a force pressing the valve piston (6) into the valve seat (7). Thus, the Y-line is shut-off from the X- and Z2-line, and the generated pump pressure closes the 2/2-way valve. The pilot valve changes over, when the hydraulic power resulting from the pressure exceeds the power set at the springs (4) at the A- and thus at the Z1-connector. Then, the piston valve (5) lifts the valve piston (6) off the valve seat (7). Thus, the control surface of the 2/2-way valves (2) is depressurised, it opens and connects the lines "P, T" with each other. Thus, the pump flow is carried pressureless to the tank. Simultaneously, the non-return valve (1) closes and shuts off the backflow from the system. The valve piston (6) remains in the open position until the system pressure at the A-connector falls short of the set pressure value "PE" minus the value of the switching hysteresis; the 2/2-way valve (2) also remains open for this period.

## Valve group for the pump control



Deutsch	Englisch
Vorsteuerventil	Pilot valve
Steuerplatte	Control pcb
Pumpenumlaufventil	Pump bypass valve

## Pump bypass valve H30, H300

### Technical data

measured with HFA medium 97/3%, at 20°C

#### general

Weight	see Order information
Installation position	any
Ambient temperature	-10 to 50°C (hydraulic fluids, heed standard requirements)
Material	
- Valve parts	Stainless steel, bronze
- Seals	NBR, PTFE, PUR

#### hydraulic

##### Pump bypass valve H30, H300

hydraulic pressure connector <b>P, A, M</b>	≤ 400 bar
hydraulic pressure connector <b>X, Z1, Z2</b>	≤ 400 bar
hydraulic pressure connector <b>Y</b>	≤ 10 bar
Direction of flow	P→T, P→A

##### Pilot valve V300

hydraulic pressure connector <b>X, Z1, Z2</b>	≤ 400 bar
hydraulic pressure connector <b>Y</b>	≤ 10 bar
Pressure fluid	<b>Water, HFA</b>
- Medium - Quality	see Hauhinco requirements on water and HFA
- Medium - Temperature range	5 – 40°C
- filter fineness connector P,A,T	Filter fineness 100µm
- Filter fineness connector X,Z1,Z2	Filter fineness 25µm (control pcb with filter inserts)

##### Pressure fluid

- Medium - Quality	<b>Mineral oil HLP according to DIN51624-2</b> Cleanliness class -/19/16 according to ISO 4406
- Medium - Temperature range	5 – 50°C
max. switching rate of the valve unit	0.2Hz

Note: The maximum decrease volume flow of the consumer and the size of the pressure accumulator control the switching rate of the pump circulation control system.

Use of other pressure fluids on request

#### Included in the scope of supply

Mounting screws of the valves

#### Valve data

Designation	Art. No.	NG	Weight	Connec- tion dia- gram	Setting range [bar]	Switching hystere- sis
Pump bypass valve H300	6264956	DN25	20	6566456		
Pump bypass valve H30	6264948	DN30	20	6566421		
Pilot valve V300/10	5100682		10	6568947	230-400	10%
Pilot valve V300/20	5100658		10	6568947	200-400	20%
Control pcb with filter	6328423		3	6568947		

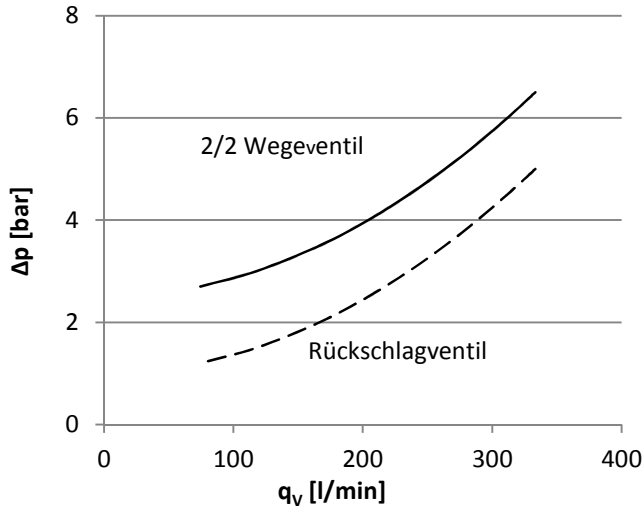
# Pump bypass valve H30, H300

## Pump bypass valve H300

### Valve characteristics

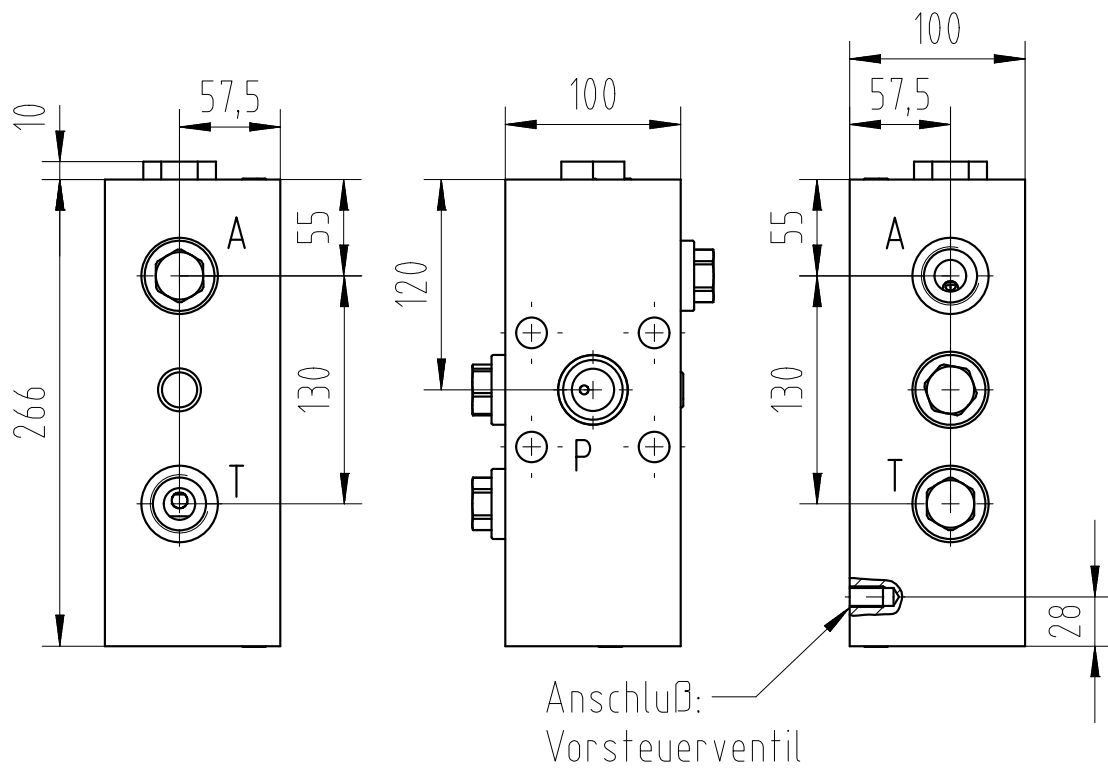
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$\Delta p$  –  $q_v$  characteristic curves



Deutsch	Englisch
2/2 Wegeventil	2/2-way valve
Rückschlagventil	Non-return valve

**Dimensional drawing**



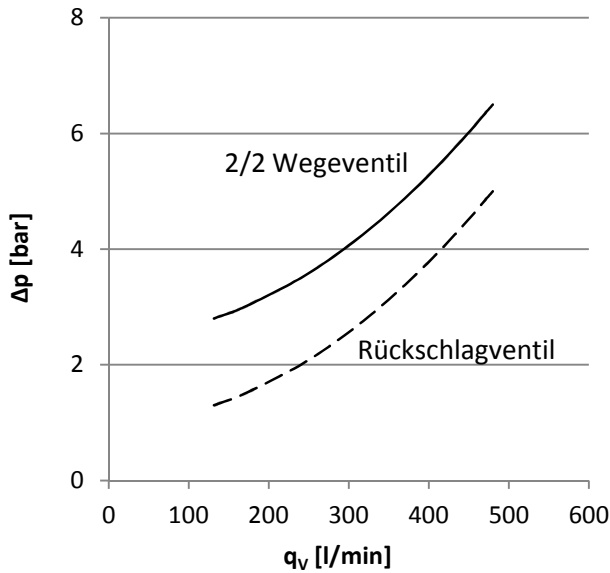
Deutsch	Englisch
Anschluss: Vorsteuerventil	Connector: Pilot valve

# Pump bypass valve H30, H300

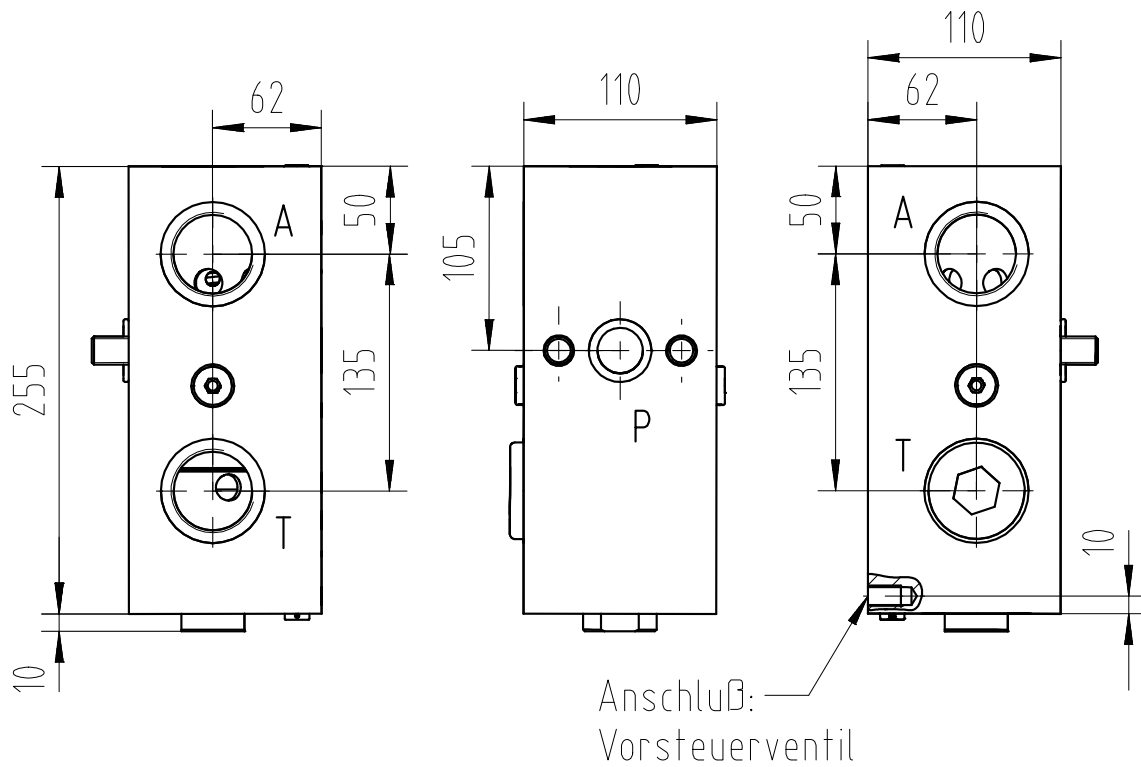
## Pump bypass valve H30

### Valve characteristics

#### $\Delta p - q_v$ characteristic curves



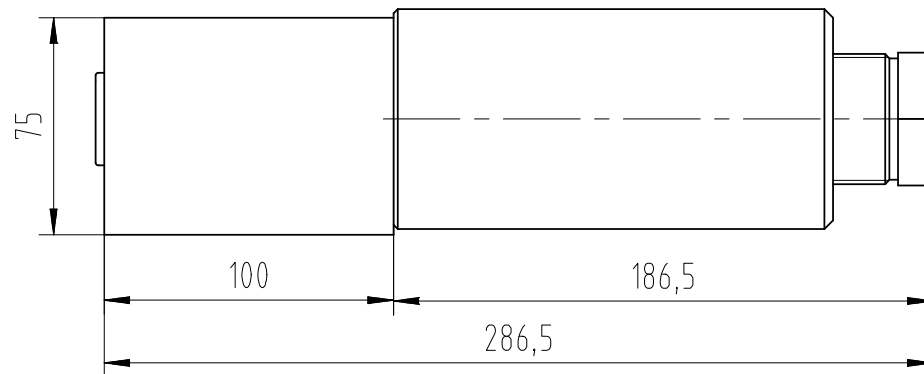
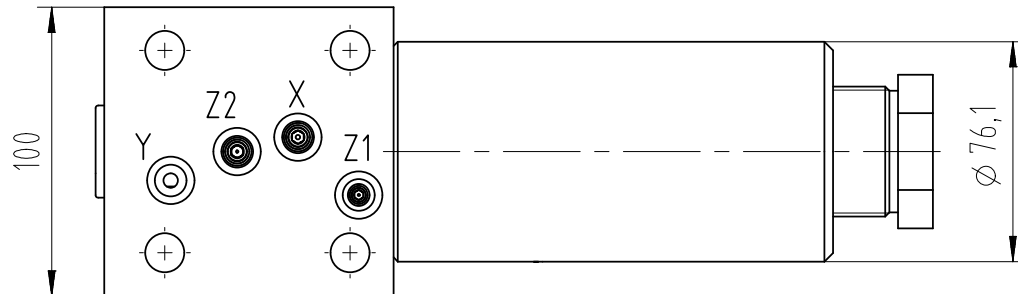
### Dimensional drawing



# Pump bypass valve H30, H300

## Pilot valve V300

### Dimensional drawing



### Control pcb with filter

#### Dimensional drawing

