



DRUCKGUSS
SERVICE DEUTSCHLAND

Datasheet SV-Valve Series

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1 Technical Description

1.1 General

Series SV 3/3 way, proportional throttle valves are used in applications where high flow has to be precisely controlled at maximum dynamics. These valves can be applied to diecasting machines SC-Seies, Evolution-Series and Carat-Series.

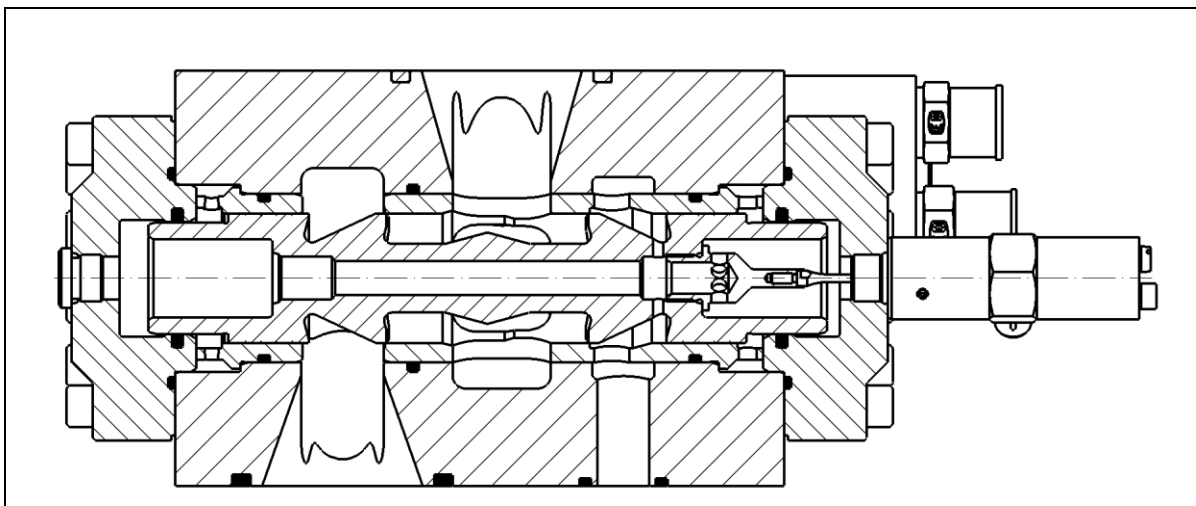
1.2 Function

The SV valve has a 2-stage design consisting of a DFplus pilot valve and a main stage with main spool and LVDT. With the DFplus pilot valve the SV Series achieves extremely fast response times: from 12ms (SV001). The pilot valve actively controls the main spool independent of the pressure conditions in the main ports. It is basically required that the pilot pressure is at the level of the system pressure. At low system pressure the pilot pressure should be min. 140 Bar (2030 PSI), when high valve dynamics are desired. The SV Valve has an integrated electronics controlling both the position of the main spool and the spool position of the DFplus pilot valve.

1.3 Features

- Active pilot operated 3/3 way proportional throttle valve.
- Fast step response.
- Completely mounted and adapted unit with integrated electronics.
- Fail save position in case of electrical and/or hydraulic power down.
- Replaceable spool and sleeve system for extended valve lifetime
- 3 sizes SV001 up to SV003

1.4 Spool Sleeve system



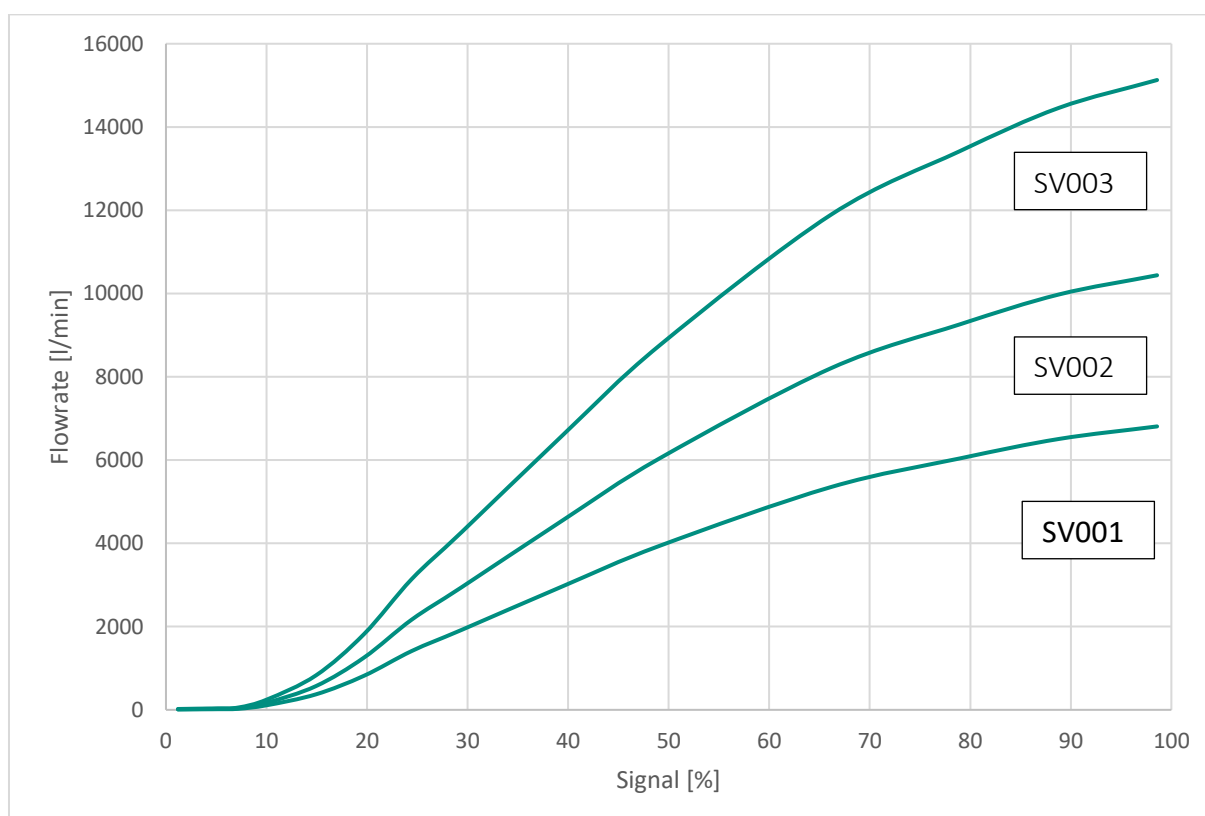
2 Ordering Code

SV	001	–	77	–	13220
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Size	Application
001	SV-Valve for dcm 260-840 [t]
002	1 x for dcm 1050-1400 [t] 2 x for dcm 2500-3500 [t]
002	1 x for dcm 1600-200[t] 2 x for dcm 4200-4400[t]

No.	Item
13220	SV-Valve „version right“
14252	SV-Valve „version left“
13985	Repair kit
14257	Conversion kit
12817	Pilot valve

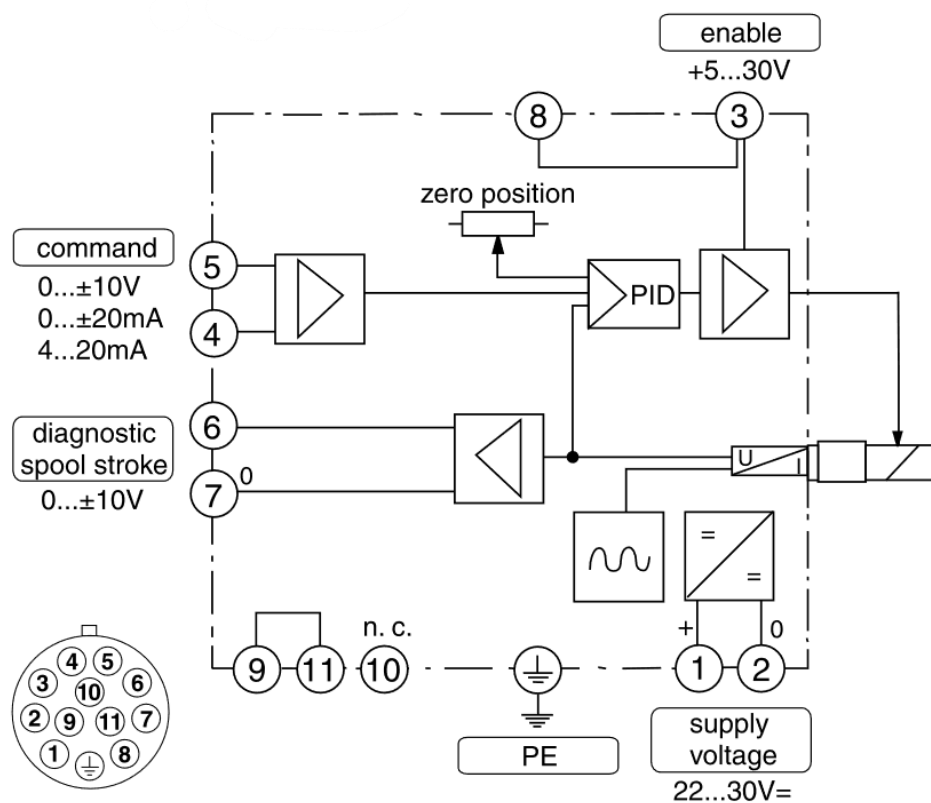
3 Performance Curves



4 Technical Data

General				
Size		001	002	003
Weight	[kg]	63	114	176
Dimensions	[mm]	424/402/160	479/491/200	551/524/240
Hydraulic				
Max. operating pressure	[bar]	350	350	350
Nominal Flow $\Delta p = 10$ Bar	[l/min]	1522	2334	3382
Maximum Flow	[l/min]	6.807	10.438	15.128
Fluid		Hydraulic oil according to DIN 51524 ... 51525		
Fluid Temperature	[°C]	0°C to +60°C (+32°F to +140°F)		
Viscosity Recommended	[cSt]	30 to 80 cSt (mm ² /s)		
Viscosity Permitted	[cSt]	20 to 380 cSt (mm ² /s)		
Pilot Pressure	[bar]	350		
Pilot Oil Supply	[]	External via X port		
Pilot Oil drain	[]	External via Y port		
Pilot Valve size	[]	NG6	NG10	NG10
Electrical				
Duty Ratio	[%]	100% ED		
Supply Voltage	[VDC]	22...30, ripple < 5% eff., surge free		
Current Consumption max.	[A]	3.5		
Pre-Fusing	[A]	4.0 A medium lag		
Enable Signal	[V]	Code 5/7: 5...30, Ri = 9 kOhm		
Diagnostic Signal	[V]	+10...0...-10 / +Ub, rated max. 5 mA		
EMC	[]	EN 61000-6-2, EN 61000-6-4		

5 Block Diagram internal electronics

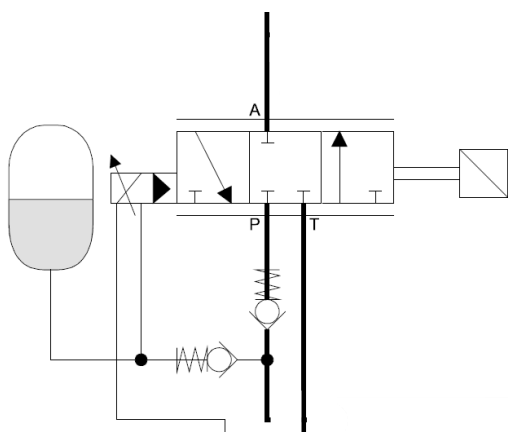


6 Hydraulic schemes

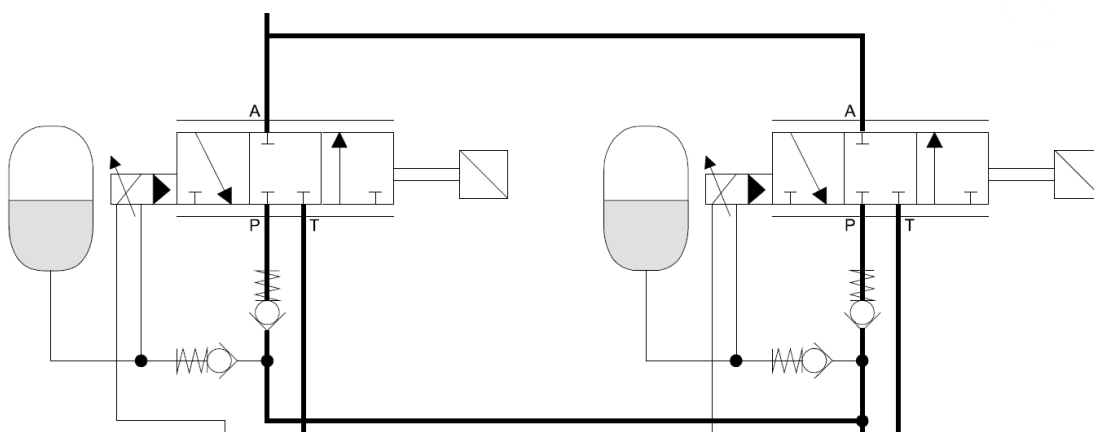
The SV series can be used with various die casting machine series and sizes.

Item No.	Amount of Valves	DCM Size closing force
SV001_77_13220	1 x	260[t] – 840[t]
SV002_77_13220	1 x	1.050[t] – 1.400[t]
SV003_77_13220	1 x	1.600[t] – 2.200[t]
SV002_77_13220	1 x	2.500[t] – 3.500[t]
SV002_77_14252	1 x	
SV003_77_13220	1 x	4.200[t] – 4.400[t]
SV003_77_14252	1 x	

6.1 Hydraulic scheme single valve

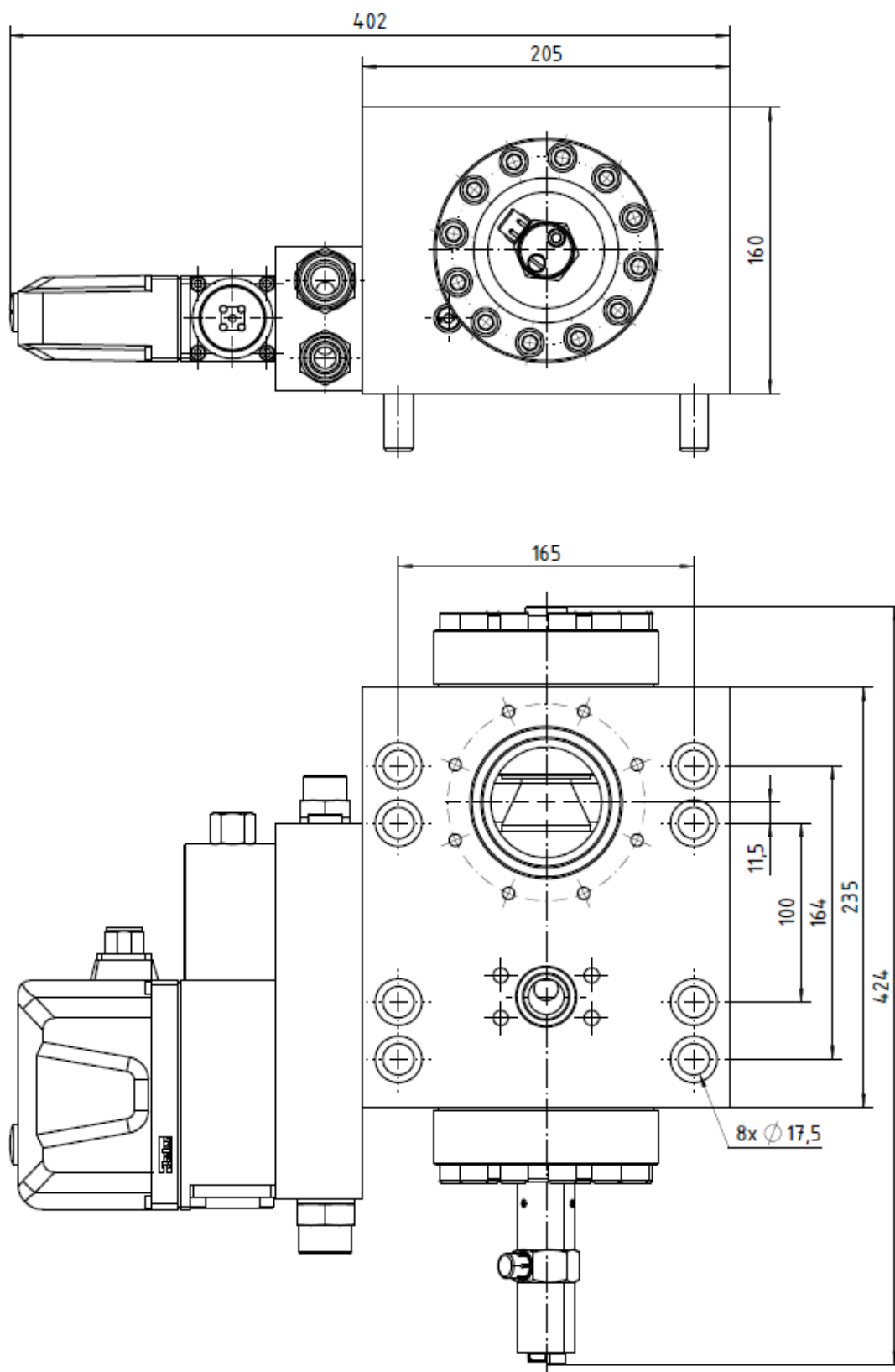


6.2 Hydraulic scheme double valve

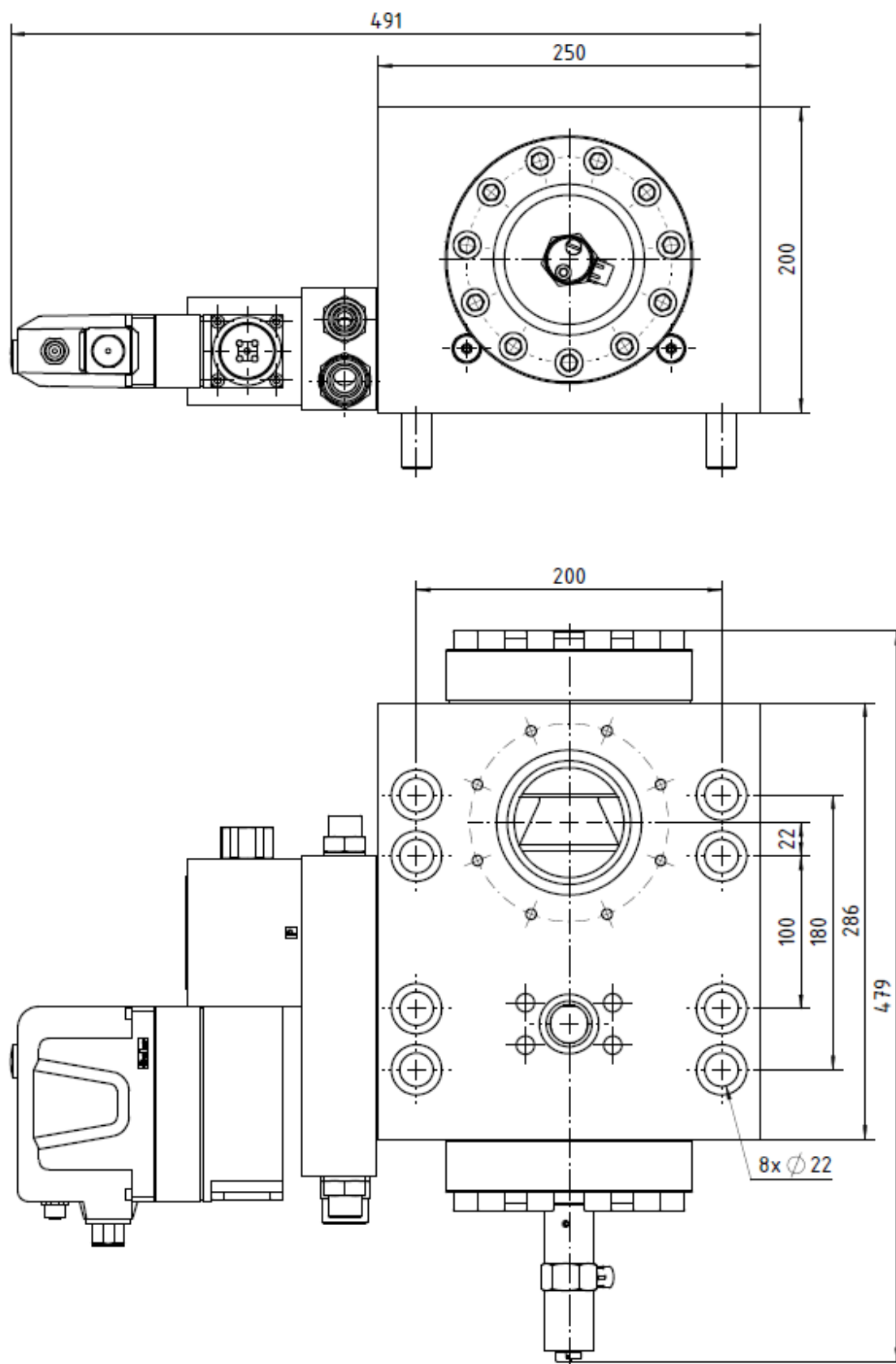


7 Dimensions and mounting pattern

7.1 SV001 Dimensions



7.2 SV002 Dimensions



7.3 SV003 Dimensions

