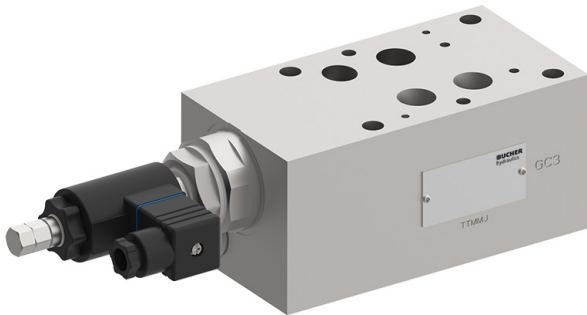


Stacking Pressure-Relief Valve, ISO Size 07

$Q_{\max} = 300 \text{ l/min (79 gpm)}$, $p_{\max} = 350 \text{ bar (5000 psi)}$
 Sandwich design, electrically operated, seated pilot stage
 Series SWUVPB-1...



- With cartridge valve, type WUVPB-1...-16...
- Interface to ISO 4401-07-07
- Bypass circuit ON/OFF
- 2-pressure switching HI/LO
- Bypass function in the PT, AT, or BT connection
- Internal pilot-oil drain to port T
- 4 pressure ranges available
- High flow rates
- Excellent stability over the whole pressure and flow range
- External cartridge parts are zinc-nickel plating
- The slip-on coil can be rotated, and it can be replaced without opening the hydraulic envelope
- Various plug-connector systems and voltages are available

1 Description

Series SWUVPB-1... sandwich valves are high performance, electrically operated pressure-relief valves with a size 07 interface to ISO 4401-07-07. The main components of the valves are a sandwich body (stack-mounting body) and the screw-in cartridge (type WUVPB-1...-16...). The pressure-relief cartridges have a seated pilot stage, and the main stage is designed on the sliding-spool principle. Four pressure ranges are available for each of the bypass functions in PT, AT or BT. Using the external pressure adjustment, the higher pressure p_1 (relief setting / energized) and the lower pressure p_2 (a second relief setting, or the vented pressure / de-energized) can be varied smoothly and independently of one another without opening the hydraulic en-

velope, and either pressure can be selected. The pilot oil is internally drained to port T, which should preferably be routed directly to tank because any pressure at this port is additive to the valve setting. These sandwich valves are used in mobile and industrial applications. All external parts of the cartridge are zinc-nickel plated according to DIN EN ISO 19 598 and are thus suitable for use in the harshest operating environments. The slip-on coils can be replaced without opening the hydraulic envelope and can be positioned at any angle through 360°. The sandwich body is sealed at its manifold side (the connections side) by means of O-rings fitted in counterbores.

2 Technical data

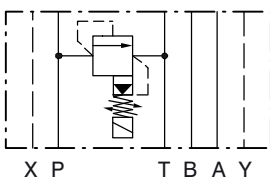
General characteristics	Description, value, unit
Designation	pressure-relief valve
Design	sandwich design, electrically operated, seated pilot stage
Mounting method	4 x $\varnothing 10.5$ holes for M10 cap screws 2 x $\varnothing 7$ holes for M6 cap screws
Size	size 07 interface to ISO 4401-07-07 / DIN 24 340 A16
Weight	8.75 kg (19.3 lb)
Mounting attitude	unrestricted
Ambient temperature range	-25 °C ... +50 °C (-13 °F ... +122 °F)
Surface corrosion protection	without

Hydraulic characteristics		Description, value, unit	
Maximum operating pressure	- in ports P, A, B - in port T	350 bar 250 bar	(5000 psi) (3600 psi)
Flow range		1...300 l/min	(0.25...79 gpm)
Nominal pressure ranges		...100 bar, ...160 bar, ...250 bar, ...350 bar (...1400 psi, ...2300 psi, ...3600 psi, ...5000 psi)	
Flow direction		see symbol	
Hydraulic fluid		HL and HLP mineral oil to DIN 51 524; for other fluids, please contact BUCHER	
Hydraulic fluid temperature range		-25 °C ... +80 °C	(-13 °F ... +176 °F)
Viscosity range		10...500 mm ² /s (cSt), recommended 15...250 mm ² /s (cSt)	
Minimum fluid cleanliness Cleanliness class to ISO 4406 : 1999		class 20/18/15	

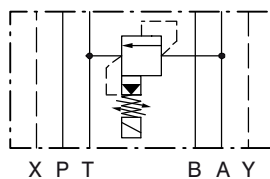
Electrical characteristics		Description, value, unit	
Supply voltage		12 V DC, 24 V DC 115 V AC, 230 V AC (50 ... 60 Hz)	
Supply voltage tolerance		± 10 %	
Nominal power consumption		V DC = 27 W V AC = 25 W	
Relative duty cycle		100 %	
Protection class to ISO 20 653 / EN 60 529		IP 65 / IP 67 / IP 69K, see "Ordering code" (with appropriate mating connector and proper fitting and sealing)	
Electrical connection		DIN EN 175301-803, 3-pin 2 P+E (standard) for other connectors, see "Ordering code"	

3 Symbol

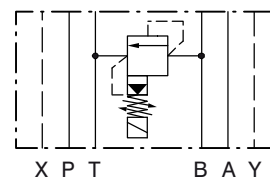
Function in PT, AT or BT (bypass model)



SWUVPB-1...-PT-16...



SWUVPB-1...-AT-16...



SWUVPB-1...-BT-16...

4 Performance graphs



IMPORTANT!

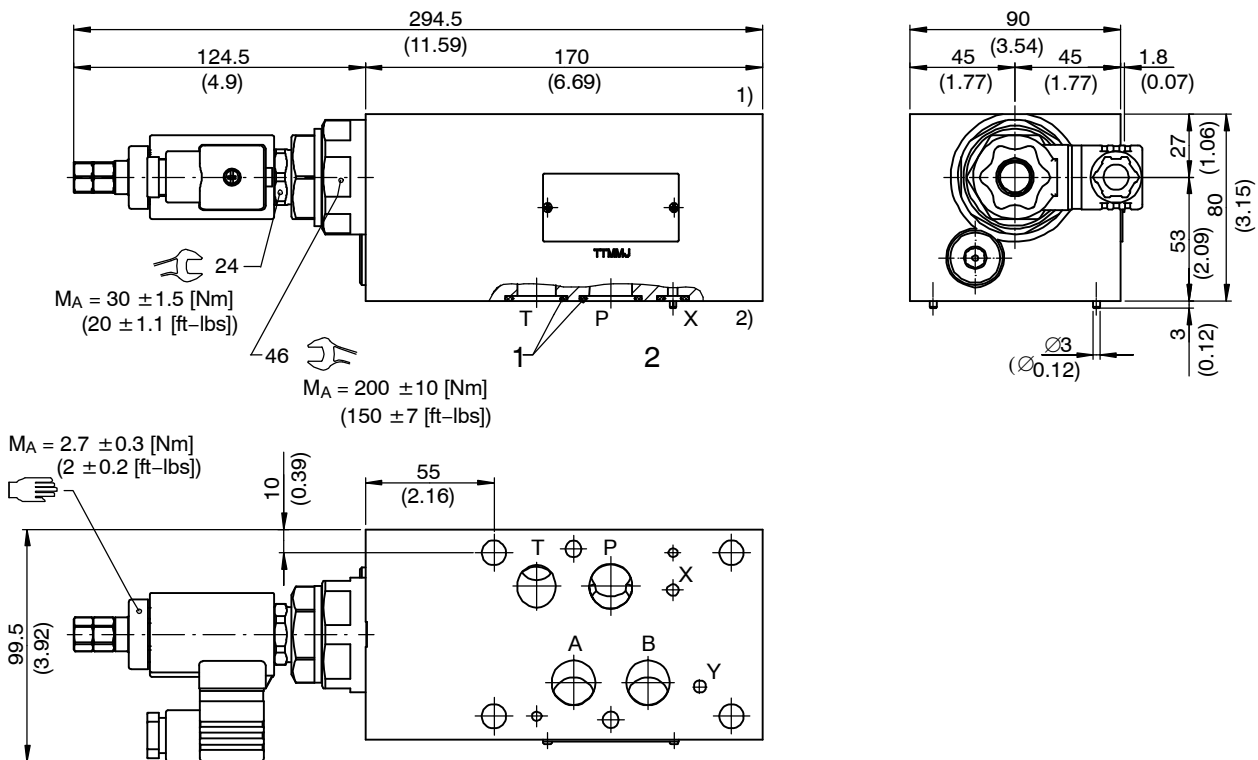
Detailed performance data and other hydraulic characteristics can be found in the data sheet for the pressure-relief cartridge that is fitted (data sheet ref. no. 400-P-295301-E).



ATTENTION!

The performance figures in the data sheet for the cartridge valve refer just to the cartridge itself. Take into account the additional pressure drop in the body into which it is fitted.

5 Dimensions & sectional view



- 1) Valve side
- 2) Connections side (manifold side)

6 Installation information



IMPORTANT!

When installing the valve, make sure that the mating face (the manifold interface) aligns with the valve interface. Do not confuse the sandwich valve's manifold side and directional-valve side. Information on setting the pressures can be found in the data sheet for the pressure-relief cartridge that is fitted (ref. no. 400-P-295301-E).



ATTENTION!

Only qualified personnel with mechanical skills may carry out any maintenance work. Generally, the only work that should ever be undertaken is to check, and possibly replace, the seals. When changing seals, oil or grease the new seals thoroughly before fitting them.

NBR seal kit no. DS-380-N ³⁾

Item	Qty.	Description
1	4	O-ring no. 118 \varnothing 21.89 x 2.62 N90
2	2	O-ring no. 110 \varnothing 9,19 x 2,62 N90
3	1	NBR seal kit no. DS-357-N for pressure-relief cartridge WUVP-1...



IMPORTANT!

³⁾ Seal kit with FMK (Viton) seals, no. DS-380-V

7 Ordering code

Ex.

S	WUVP	B	-	1	35	-	PT	-	16	-	24	-	-
---	------	---	---	---	----	---	----	---	----	---	----	---	---

S	= sandwich design	
WUVP	= electrically operated, pressure relief, two stage	
A ... Q	= standard model - see relevant data sheets	
Z ... R	= special features - please consult BUCHER	
1	= pressure function 1 (internal pilot-oil drain to T)	
35	= pressure range ...350 bar	
25	= pressure range ...250 bar	
16	= pressure range ...160 bar	
10	= pressure range ...100 bar	
PT	= function from P to T	
AT	= function from A to T	
BT	= function from B to T	
16	= ISO size 07 interface	
(blank)	= NBR (Nitrile) seals (standard)	
V	= FKM (Viton) seals (special seals - please contact BUCHER)	
...	= voltage e.g. 24 (24 V)	
D	= current DC	
A	= current AC	
(blank)	= DIN EN 175301-803 connection with mating plug (standard, IP 65)	
M100	= DIN EN 175301-803 connection without mating plug	
C	= Kostal plug connection (IP 65)	} mating plug not supplied
JT	= Junior Timer radial plug connection (with protection diode, IP65)	
IT	= Junior Timer axial plug connection (with protection diode, IP65)	
D	= Deutsch plug connection 45° DT04-2P (IP67/69K)	
DT	= Deutsch plug connection 45° DT04-2P (with protection diode, IP67/69K)	
S	= AMP Superseal 1.5 (IP67) / Metri-Pack 150 (IP65) plug connection	
F	= flying leads (500 mm)	

8 Related data sheets

Reference	(Old no.)	Description
400-P-070101	(i-51)	Size 07 interface to ISO 4401-07-07
400-P-120110	(W-2.141)	Coils for screw-in cartridge valves
400-P-295301	(D-6.51)	Electrically operated pressure-relief cartridge, size 16, series WUVPB-1...
400-P-287101	(D-6.10)	Pilot pressure-relief cartridge, size 1, series WUVA-1LO...

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Classification: 430.305.300.330.330.300