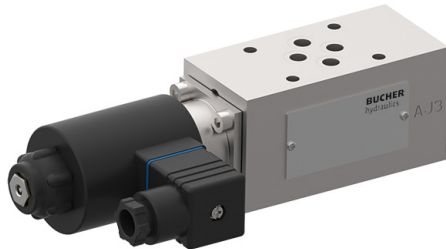


2/2 Solenoid Operated Seat Valve, ISO Size 03

$Q_{\max} = 40 \text{ l/min (10 gpm)}$, $p_{\max} = 315 \text{ bar (4500 psi)}$

Sandwich design, bidirectional leak-proof shutoff, direct acting, electrically operated
 Series SWESD...



- With cartridge valve, type W1C.B...
- Interface to ISO 4401-03-02
- De-energized closed
- Guided valve spool and poppet
- Bidirectional leak-proof shutoff or flow
- With or without manual override
- 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
- External cartridge parts with zinc-nickel plating

1 Description

Series SWESD... sandwich valves are high performance, 2/2 solenoid operated seat valves with a size 03 interface to ISO 4401-03-02. The main components of the valves are a sandwich body (stack-mounting body) and the push-in 2/2 directional seat valve cartridges (type W1C...). The 2/2 solenoid operated cartridge seat valve is designed on the poppet/seat principle, and is therefore virtually leak-free in both directions of flow (bidirectional seat-valve shut-off). These sandwich valves can be supplied as de-energized-closed (see symbols). These 2/2 solenoid operated cartridge seat valve are predominantly used in certain mobile and indus-

trial applications where leak-tight shut-off functions are crucially important. Examples are where loads, tensions, or clamping forces must be held without leakage. 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	2/2 solenoid operated seat valve	
Design	sandwich design, bidirectional leak-proof shutoff, direkt acting, electrically operated	
Mounting method	4 x \varnothing 5.4 holes for M5 cap screws	
Size	size 03 interface to ISO 4401-03-02 / DIN 24 340 A6	
Weight	2.25 kg (1 solenoid) 2.90 kg (2 solenoid)	
Mounting attitude	unrestricted	
MTTF _D values	150 years, see data sheet 400-P-010101-en	
Surface corrosion protection	without	
Hydraulic characteristics	Description, value, unit	
Maximum operating pressure	315 bar	(4500 psi)
Maximum flow rate	40 l/min	(10 gpm)
Flow direction	see symbols	
Hydraulic fluid	HL and HLP mineral oil to DIN 51 524; for other fluids, please contact BUCHER	
Ambient temperature range ¹⁾	-25 °C ... +80 °C	(-13 °F ... 176 °F)

Hydraulic characteristics	Description, value, unit
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) others by consultation
Supply voltage tolerance	± 10 %
Ambient temperature range ¹⁾	-25 °C ... +50 °C (-13 °F ... 122 °F)
Nominal power consumption	V DC = 30 ... 32 W / V AC = 31 ... 32 W
Switching time	refer to cartridge valve - see "Related data sheets"
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"



IMPORTANT!:

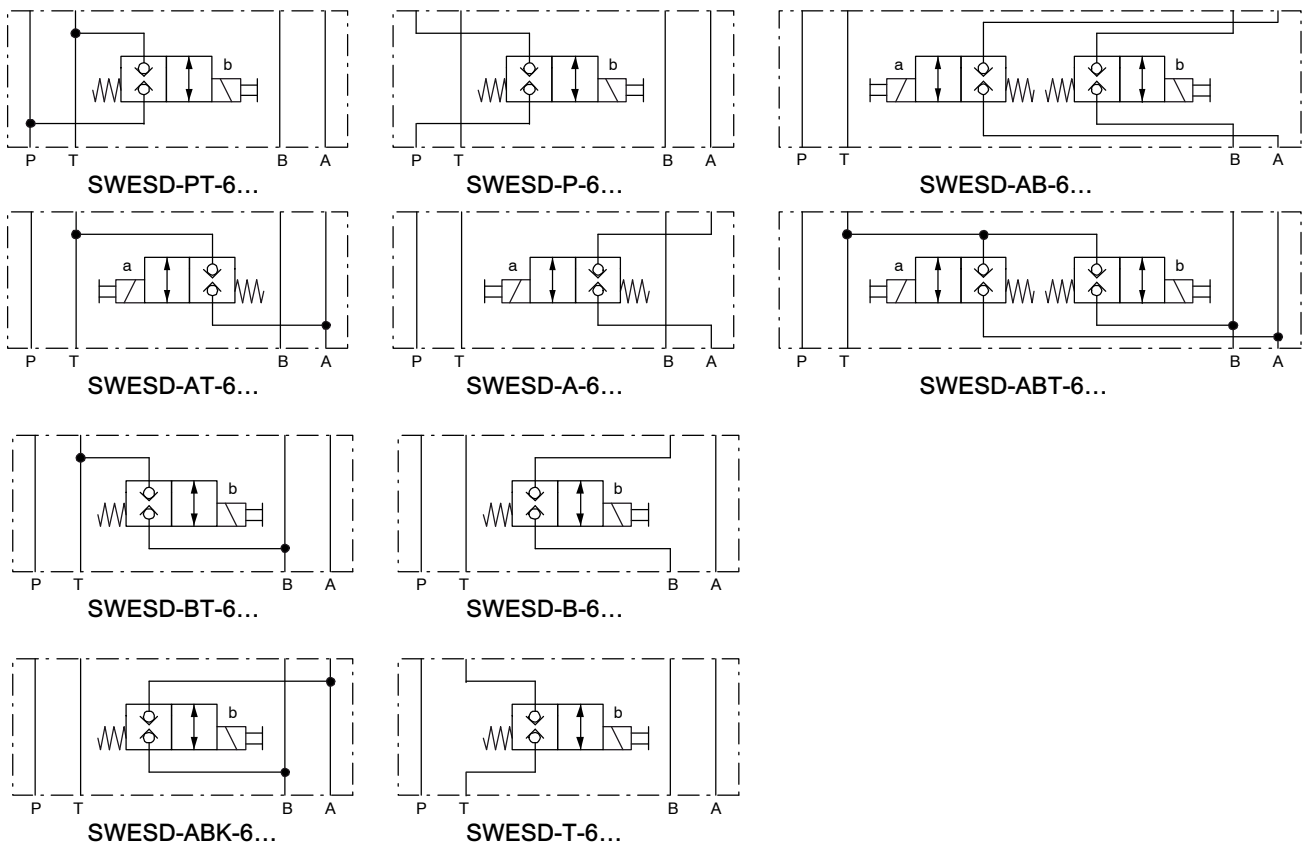
1) The less favourable values from the hydraulic and electrical characteristics determine the temperature range of the whole valve.



IMPORTANT!

To ensure the performance data is not compromised, it is imperative to use coils D45/207 according to data sheet 400-P-120120.

3 Symbol



4 Performance graphs



IMPORTANT!

Detailed performance figures and other hydraulic characteristics can be found in the data sheet for the 2/2 solenoid operated cartridge valve that is fitted (series W1C...). See "Related data sheets".

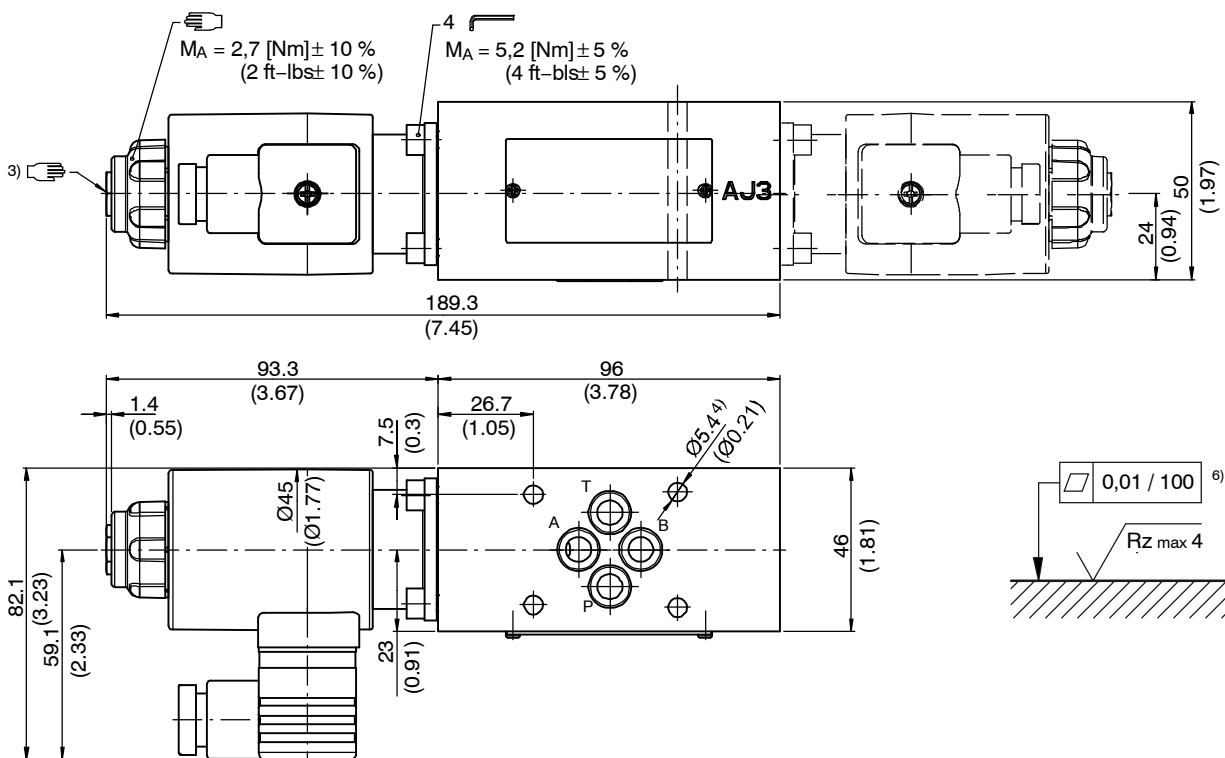


ATTENTION!

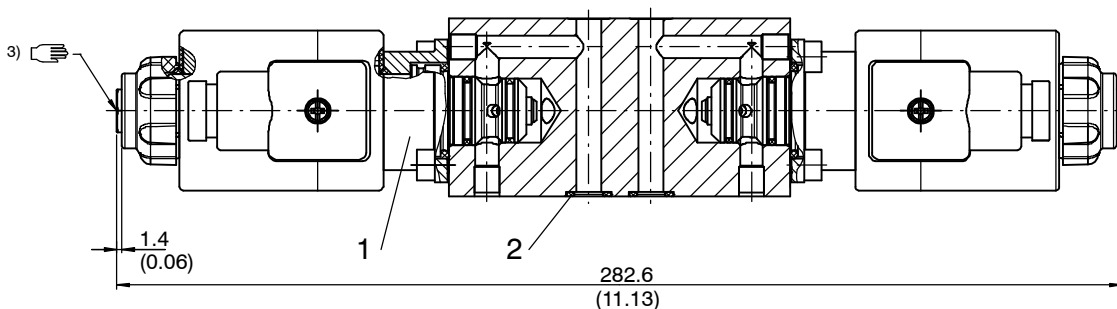
The performance figures in the data sheet for the cartridge valve refer just to the cartridge itself. Take into account the additional pressure drop in the body into which it is fitted.

5 Dimensions & sectional view

2/2 solenoid operated directional seat valve (single-solenoid model - solenoid A- or B-sided)



2/2 solenoid operated directional seat valve (double-solenoid model)



NBR seal kit no. DS-117-N⁵⁾

Item	Qty.	Description
1	4	O-ring no. 012 Ø 9,25 x 1,78 N90
2	2	NBR seal kit no. DS-467-N for seat valve, type W1...



IMPORTANT!

- 3) Can be chosen **with** or **without** manual override. (see ordering code)
- 4) Valve mounting bolts M5 (not included in the delivery)
- 5) Seal kit with Viton seals, no. DS-117-V
- 6) Required surface finish on the mounting face (valve pad)



IMPORTANT!

When replacing an old coil with connection according to DIN 43650/ISO4400 (with other Pin set-up than according to datasheet 400-P-120120), the new coil can be mounted in 180° reversed position so that the existing plug (with 180° earthing-PIN) can be connected. This does not affect the performance data.

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. No adjustments are necessary, since the cartridges are set in the factory.



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.

7 Ordering code

Ex.

S W E S D - P - 6 - - 24D -

- S = sandwich design
- W = directional valve
- E = solenoid operated, V DC = 8 W
- S = seat-valve design (bidirectional shut-off)
- D ... Q = standard model - see relevant data sheets
- Z ... R = special features - please consult BUCHER
- P = function in P
- A = function in A
- B = function in B
- T = function in T
- AB = function in A and B
- ABK = function in A to B and B to A (short circuit function)
- PT = function in P to T
- AT = function in A to T
- BT = function in B to T
- ABT = function in A and B to T
- 6 = ISO size 03 interface
- (blank) = NBR (Nitrile) seals (standard)
- V = FKM (Viton) seals
(special seals - please contact BUCHER)
- ... = voltage e.g. 24 (24 V)
- (blank) = DIN EN 175301-803 connection with mating plug (standard, IP 65)
- M100 = DIN EN 175301-803 connection without mating plug
- DT = Deutsch plug connection DT04-2P (with quenching diode, IP 67/69K)
- JT = Junior Timer radial plug connection (with quenching diode, IP 65)
- F = flying leads (600mm) (IP 65)

} please consult Bucher

8 Related data sheets

Reference	(Old no.)	Description
400-P-030501		Size 03 interface to ISO 4401-03-02
400-P-120120		Solenoid coil, series D45/207
400-P-110111		2/2 solenoid cartridge valve, type W1C.B... size 6
400-P-010101		MTTF _D values for hydraulic valves

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Classification: 430.300. - .330.330.300