

2/2 and 3/2 Way Size 6 Seat Valves



**Systemtechnik
GmbH**

Directly operated

Interface and subplate dimensions according to DIN 24340 and ISO

Line connection port size G 3/8"

Cartridge design

PN [p_{max.}] = 315 bar

7501856.06.12.08

Description (standard units)

Application

Directional valves are used to influence the flow of oil in hydraulic systems (start, stop and change direction).

Design

These directional seat valves are designed as poppet valve. Both the cone and the valve seat are made from hardened steel, making the units suitable for rough operating conditions.

Actuation

The directional seat valves are operated by direct current solenoids and springs.

Mounting

The valves are bolted on subplates and sealed by O-rings. The line connector, subplate and subplate dimensions are according to DIN 24340 and ISO; the threaded connection is G 3/8" (BSP).



Characteristics

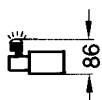
- Bi-directional flow
- Flow rate up to 20 l/min
- Proven cone seat principle
- High pressure wet-armature solenoid can be changed without opening the hydraulic system

Type Codes

Directional control valve

S	C	6	001	...	O	...
			1	2	3	4		5		6

- 1 Actuation:
- VH** – DC-type solenoid, pressure-tight, with manual override
 - VG** – DC-type solenoid, pressure-tight, with manual override and rectifier on solenoid
 - ¹⁾**HM** – Hand lever with detent device
 - ¹⁾**N** – Pneumatic
 - ¹⁾**Y** – Hydraulic
 - ²⁾**V** – Without manual override
- 2 Electrical connection:
- 10** – Connector Pg 11 to DIN 43650 on solenoid
 - 13** – Connector Pg 11 to DIN 43650 on solenoid, plug socket provided with signal indicator



- 3 Line connector:
- E** – Cartridge design
 - G** – Interface and subplate dimensions according to DIN 24340 and ISO
 - S3** – Port size G 3/8" (BSP)
- 4 Symbol: – see Configuration
- 5 Engineering version: **1**
- 2** – only **5200454.7060** and **5200890.7060**
- 6 Seal material:
- O** – NBR (e.g. Perbunan)
 - V** – FKM (e.g. Viton)

Mounting plate

P	S	6	G	...	001	...	O	O
				1		2		

- 1 Line connector:
- 2** – G 1/4 (Internal thread according to DIN ISO228/1)
 - 3** – G 3/8
- 2 Revision: **2**

¹⁾ Only deliverable on request

²⁾ See blind insert (spare part no. 6)

Parameter to VDI 3267

Type Description	S C 6 VH 10 G ... S C 6 VG 10 G ...	S C 6 VH 10 S3 ... S C 6 VG 10 S3 ...	S C 6 VH 10 E ... S C 6 VG 10 E ...
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General parameters

Designation	Directional seat valve			
Symbol	See type survey			
Design	Poppet valve			
Type of mounting	Flange			
Line connection	Subplate			
Mounting position	any, preverable horizontal			
Weight of valve	[kg]	1.75	1.65	0.85
Weight of subplate	G 1/4"	[kg]	0.7	
	G 3/8"		1.0	
Ambient temperature range	ϑ_u	[°C]	-20 ... +50	
Size	NG		6	

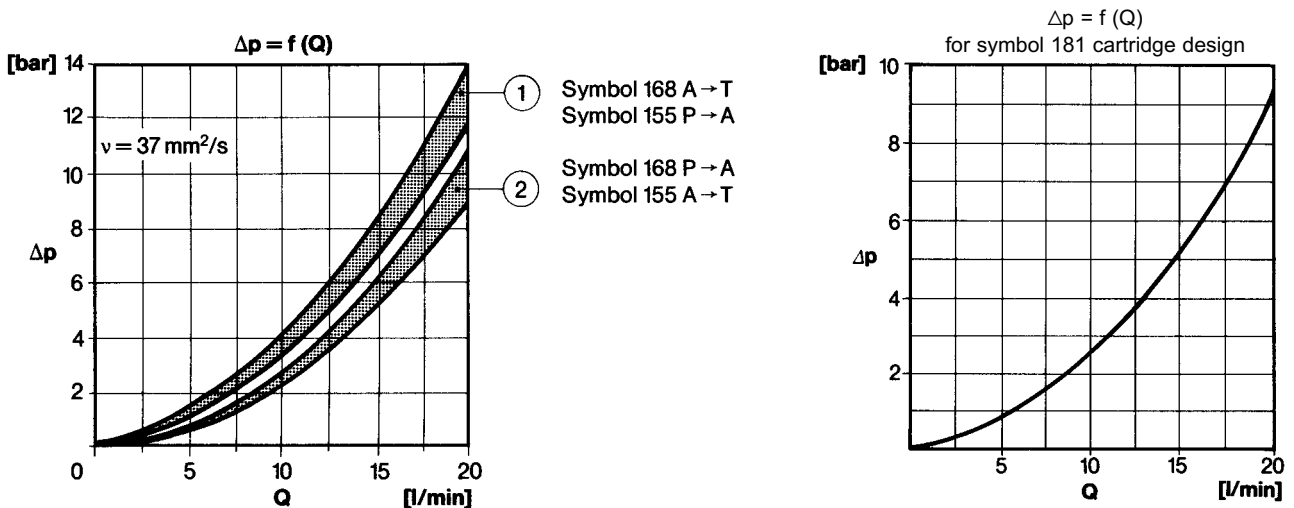
Hydraulic Characteristics

Operating pressure	at port P, A, and T			p_e max. [bar]	... 315
Pressure fluid temperature	ϑ_m max.	[°C]	-20 ... +70		
Viscosity range	ν	[mm ² /s]	3 ... 300		
Flow rate	Q_{max}	[l/min]	see characteristic curve		
Flow direction	any				

Further characteristics

Switching times, approx.	[ms]	t_e t_a	60 ... 250 (depends on direction of flow, 10 ... 160 flow rate and pressure)		
Number of switchings/h, approx.	up to 600 at 315 bar up to 11 000 at 210 bar				
Rated voltage	U_N	[V] ±5%	Standard voltages: DC 12; 24; 190 AC 24; 110; 220; 40 ... 60 Hz		
(Special voltages on request)					
Power consumption	P_{20}	[W] (---)	38		
Duty rating	ED_{rel}	[%]	100		
Degree of protection for solenoid and electrical connection to. DIN 40050	IP 65				

Characteristic curves



Ordering

The units are designated by their type number. The composition of this number can be drawn from the type code. The standard versions are listed in the type survey. When ordering any of the standard versions, please state type number as well as catalog number to preclude possible misinterpretations.

When inquiring about ordering units not listed in our type survey of this publication, the type number by you by means of the type code, however, will do. The corresponding catalog number will be than stated in our confirmation order.

Flange valves are provided with O-rings. Subplate and mounting screws must be ordered separately.

Example of order

3/2 way directional seat valve size 6, 24 V DC, connector on solenoid, symbol 155, along with corresponding subplate.

Directional control valve:

Type No.: S C 6 VH 10 G 155 001 2 O O
Cat. No.: **5200454.7060**

Subplate

Type No.: P S 6 G 2 024 2 O O
Cat. No.: **1065173**

Mounting screws: (4pcs. required)
Socket-head screw (M 5 x 30 DIN 912-10.9)
Cat. No.: **0700387**

Configuration (Standard configurations)

Symbol	Symbol No.	Actuation	Electrical connection	Line connection	Voltage Type	Type	Order No.:	
							Valve	Solenoid
	155	solenoid operated, pressure-tight	Type 10 connector to DIN 43650 (Pg 11) mounted on solenoid	Flange mounted Subplate G 1/4" P S 6 G 2 024 2 O O Cat. no. 1065173	≡ ~	S C 6 VH 10 G 155 001 2 O O S C 6 VG 10 G 155 001 1 O O	≡	5200454.7060
	168							Subplate G 3/8" P S 6 G 3 001 2 O O Cat. no. 1065183
	155			Line connection Port size G 3/8" (BSP)	≡ ~	S C 6 VH 10 S3 155 001 1 O O S C 6 VG 10 S3 155 001 1 O O	≡	1065118.7060 1065120.7061
	155			Cartridge design				≡ ~
	181			Cartridge design	≡ ~	S C 6 VH 10 E 181 001 1 O O S C 6 VG 10 E 181 001 1 O O	≡	

The 'G' thread code (acc. to DIN ISO 228/1) replaces the 'R' code (acc. to DIN 259) used up until now.

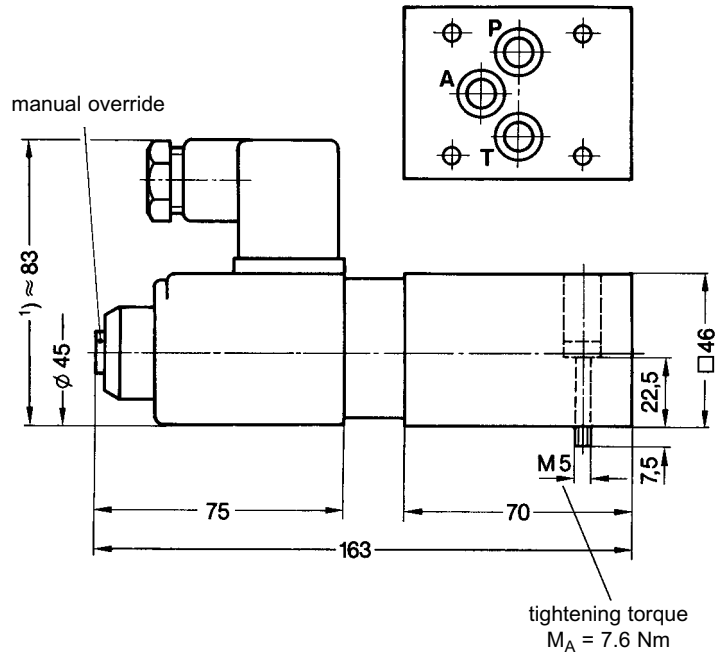
The following switching functions are achieved by closing the T or P connections or by exchanging the inlet and outlet line connections.

Symbol	Symbol No.	Possible switching functions	Line connection	Voltage Type	Order No.:	
					Valve	Solenoid
	181	From symbol 155 User to close connection T.	Flange mounted	≡ ~	≡	5200454.7060 1065096.7061
	182	From symbol 168 User to close connection T.				Threaded mounting
	181	From symbol 155 User to close connection T.	Threaded mounting	≡ ~	≡	
	182	From symbol 155 Supply pressure to be connected to connection T and load to connection A. User to close connection P.				Threaded mounting
	168	From symbol 155 Supply pressure to be connected to connection T and output to connection P. Load remains on connection A.	Cartridge design	≡ ~	≡	
	181	From symbol 155 Connection T is not to be opened by the user.				Cartridge design
	182	From symbol 155 Input to be connected to connection T and load to connection A. Connection P is not to be bored out by the user.	Cartridge design	≡ ~	≡	

Dimensional Drawings

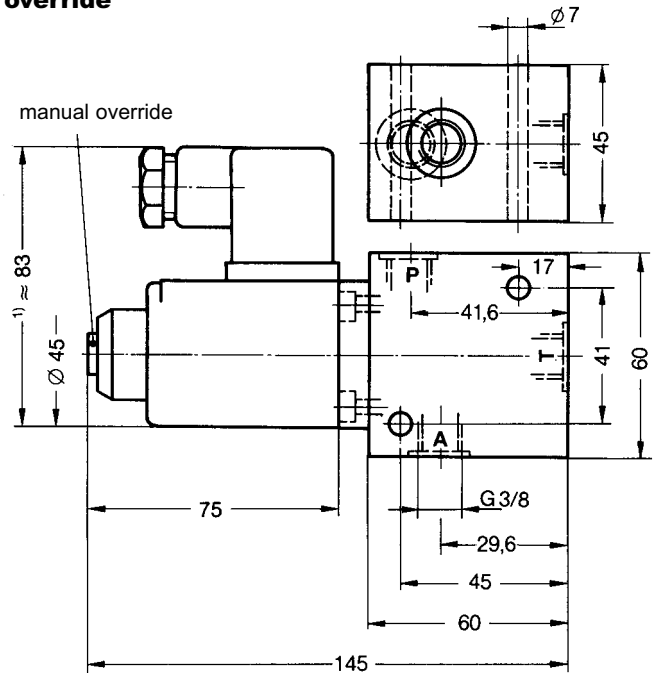
Directional seat valve **S C 6 VH 10 G 155 (168) 001 2 O O**
S C 6 VG 10 G 155 (168) 001 1 O O

2/2 way seat valve flange mounted
 3/2 way seat valve flange mounted



Directional seat valve **S C 6 VH 10 S3 155 001 2 O O**
S C 6 VG 10 S3 155 001 1 O O

2/2 way seat valve line port connection manual override



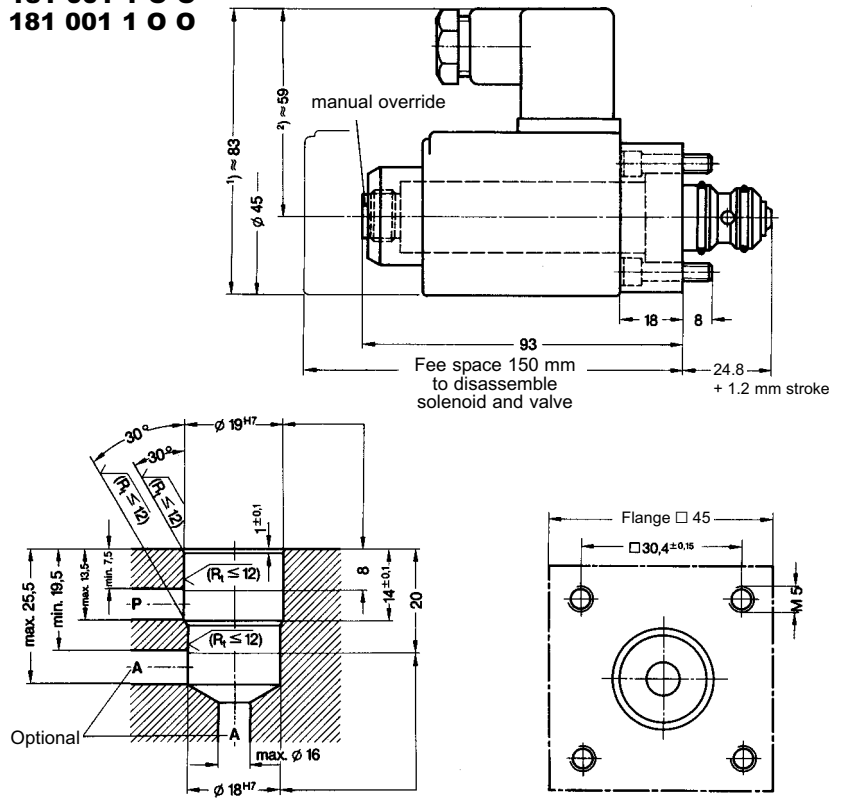
¹⁾ with signal indicator in socket: size = 86 mm

²⁾ with signal indicator in socket: size = 62 mm

Dimensional Drawings

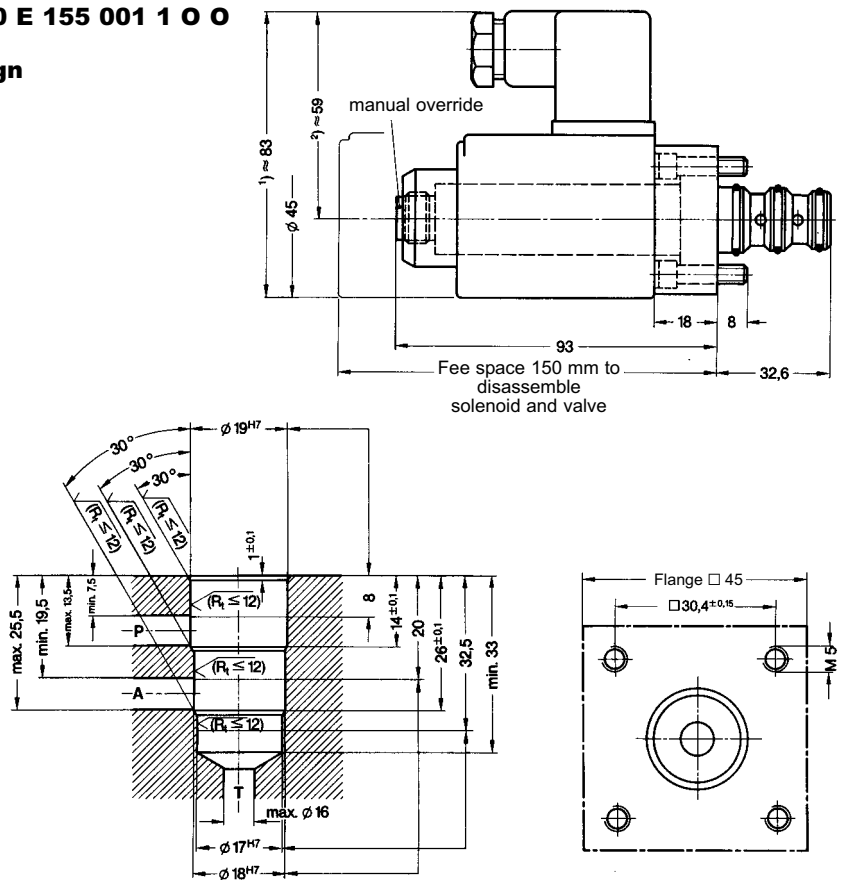
Directional seat valve S C 6 VH 10 E 181 001 1 O O
 S C 6 VG 10 E 181 001 1 O O

2/2 way seat valve cartridge design



Directional seat valve S C 6 VH 10 E 155 001 1 O O
 S C 6 VG 10 E 155 001 1 O O

3/2 way seat valve cartridge design

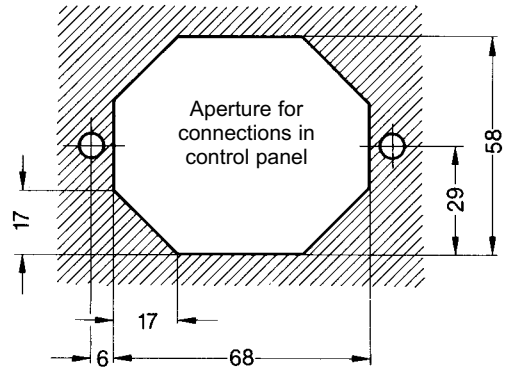
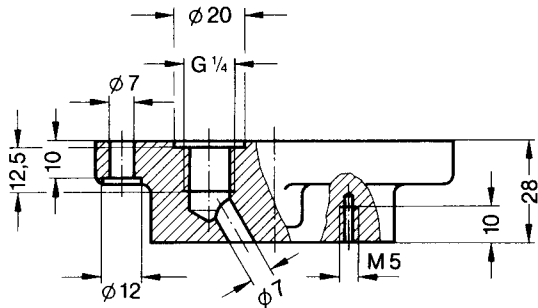
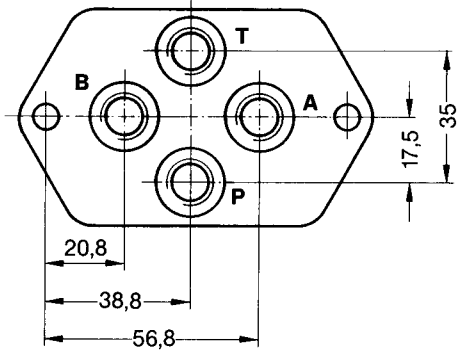
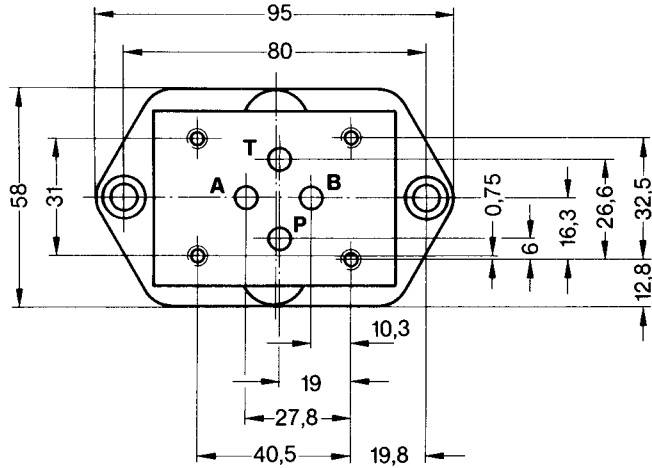


1) with signal indicator in socket: size = 86 mm

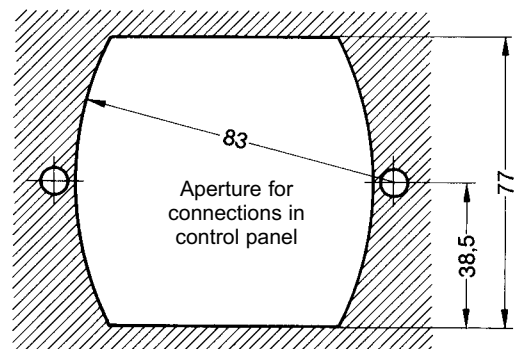
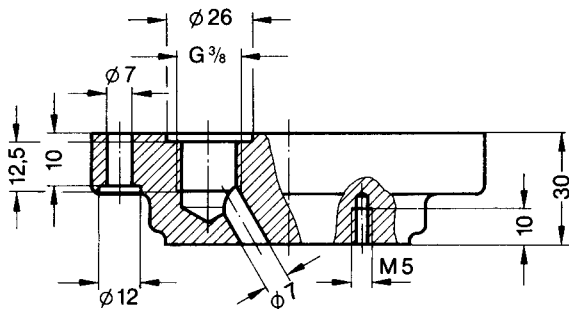
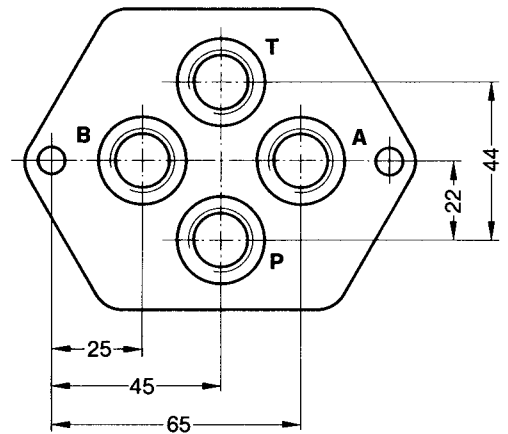
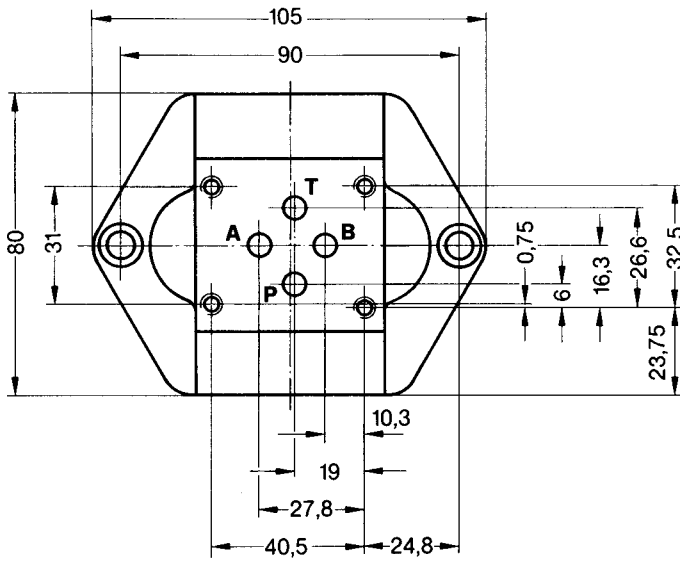
2) with signal indicator in socket: size = 62 mm

Dimensional Drawings

Subplates with interface to DIN 24 340-A 6 and ISO 4401-AB-03-4-A
G 1/4"



G 3/8"

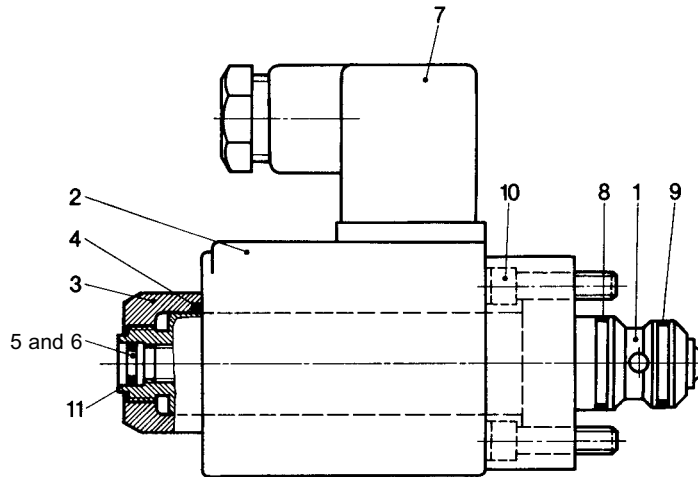


Spareparts drawings

2/2 way seat valve

S C 6 V H 10 E 181 001 2 0 0

S C 6 V G 10 E 181 001 2 0 0



3/2 way seat valve

S C 6 V H 10 G 155 001 2 0 0

S C 6 V G 10 G 155 001 1 0 0

S C 6 V H 10 G 168 001 2 0 0

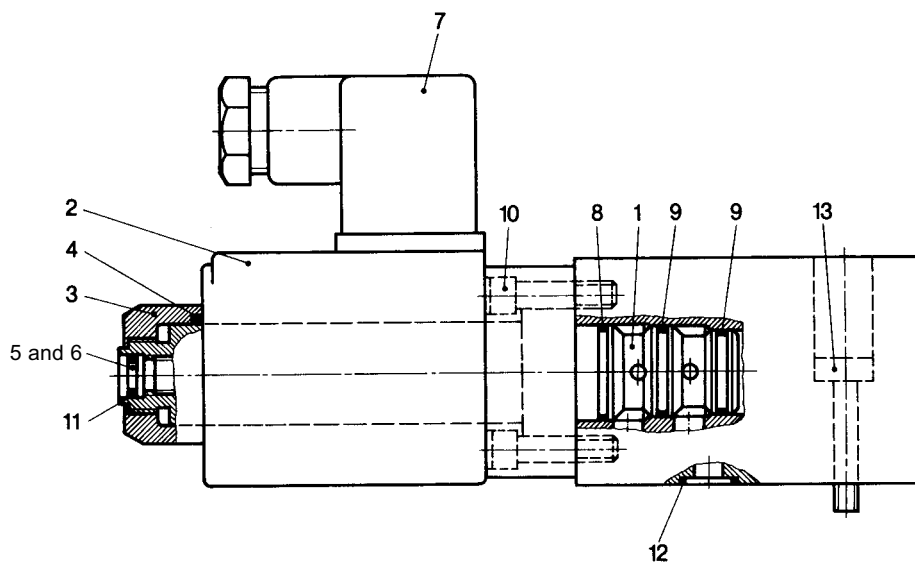
S C 6 V G 10 G 168 001 1 0 0

S C 6 V H 10 S3 155 001 1 0 0

S C 6 V G 10 S3 155 001 1 0 0

S C 6 V H 10 E 155 001 1 0 0

S C 6 V G 10 E 155 001 1 0 0



Individual Spare Parts

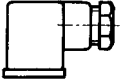
Part	Description	Type				Order No.:
		SC 6 VH 10 G 155 SC 6 VG 10 G 155 SC 6 VH 10 G 168 SC 6 VG 10 G 168	SC 6 VH 10 S3 155 SC 6 VG 10 S3 155	SC 6 VH 10 E 155 SC 6 VG 10 E 155	SC 6 VH 10 E 181 SC 6 VG 10 E 181	
1	3/2 way valve insert (complete)	1	1	1	-	0724842
1	2/2 way valve insert (complete)	--	-	-	1	0724843
2	DC solenoid (specify voltage)	1	1	1	1	7060
2	DC solenoid with rectifier (specify voltage)	1	1	1	1	7061
3	Knurled nut	1	1	1	1	0724844
4	Ring	1	1	1	1	0724845
5	Manual override (complete)	1	1	1	1	0724846
6	Plug	1	1	1	1	0724847
7	Connector	1	1	1	1	0657859
8	O-ring (15.6 x 1.8)	1	1	1	1	0701489
9	O-ring (14 x 1.8)	2	2	2	1	0701488
10	Socket head screw (M 5 x 10)	-	4	-	-	0700381
10	Socket head screw (M 5 x 20)	4	-	4	4	0700385
11	O-ring (6.1 x 1.8)	1	1	1	1	0701483
12	O-ring (9.2 x 1.8)	3	-	-	-	0701485

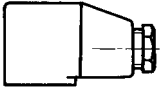
Mounting screws (must be ordered separately)

13	Socket head screws (M 5 x 30 DIN 912-10.9)	4	-	-	-	0700387
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1 Set wearing parts consists of parts 8, 9, 11 and 12.

Electrical Spare Parts

Electrical connection, Symbol 10	Cat. No.:
 <p>Connector: Version A (grey)</p>	0657859

Electrical connection, Symbol 13	Cat. No.:
 <p>Connector: Version A (grey)</p> <p>Indicator lamp unit 12 to 28 V \equiv and \sim 90 to 130 V \equiv or 80 to 130 V \sim</p>	0657833 0659319 0659320 0659321