

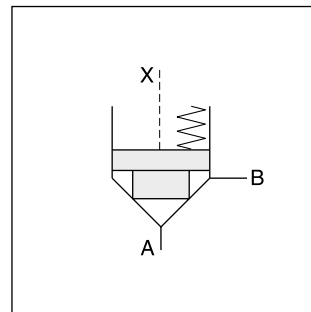
# Parker Series D4S 22-Way Seat Valve for In-line Mounting Service Manual

Seat valves series D4S are designed for directional control functions. A large variety of poppets, springs and covers – including shuttle valves, stroke limiters, solenoid valves (VV01) and position control – allows to design individual hydraulic solutions for nominal flow up to 600 l/min.

A complete program is offered under the Parker brand: subplate mounted valves (D4S - chapter 6), SAE flange valves (D5S - chapter 9), pipe mounted valves (D4S - chapter 10), slip-in cartridges (CAR - on request).



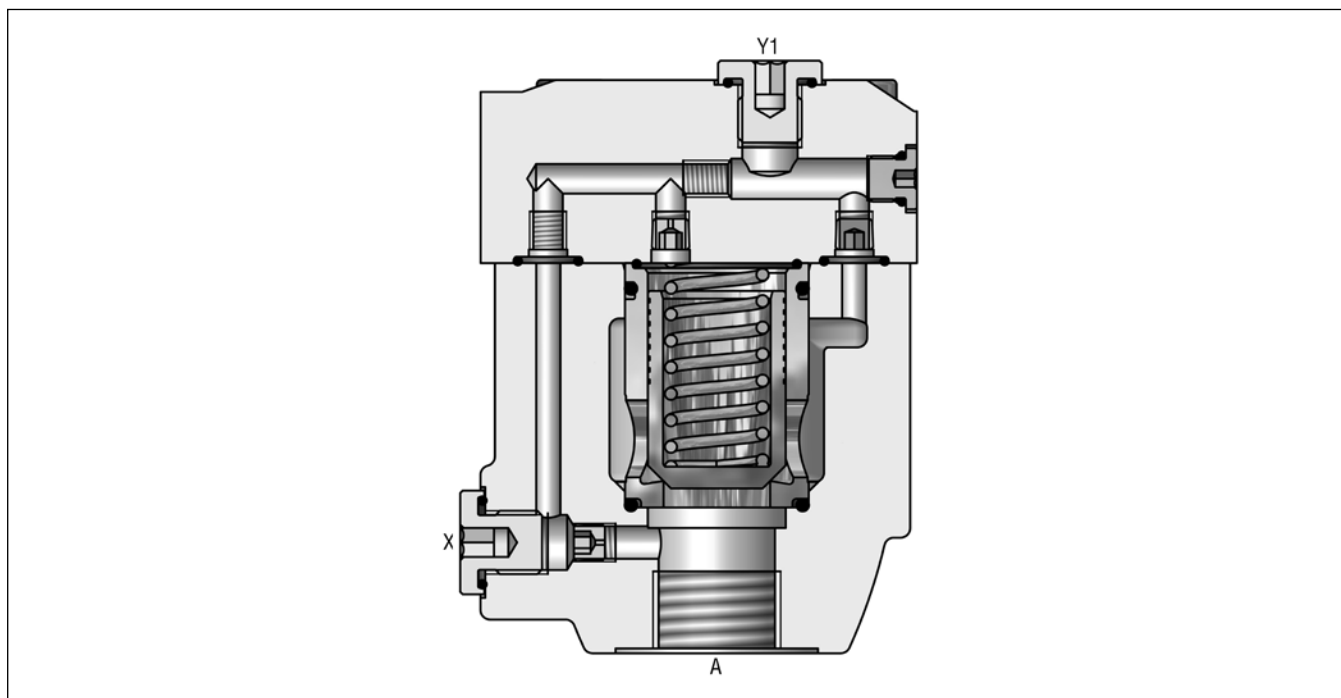
D4S10 L-body



## Features

- Leak-free seat valve design
- 2 body designs
  - L-body (2-port)
  - T-body (3-port)
- Numerous pilot options
- 4 port sizes
  - G 1/2", G 1" for T-body
  - G 3/4", G 1 1/4" for L-body
- 6 poppet types

## D4S06 L-body



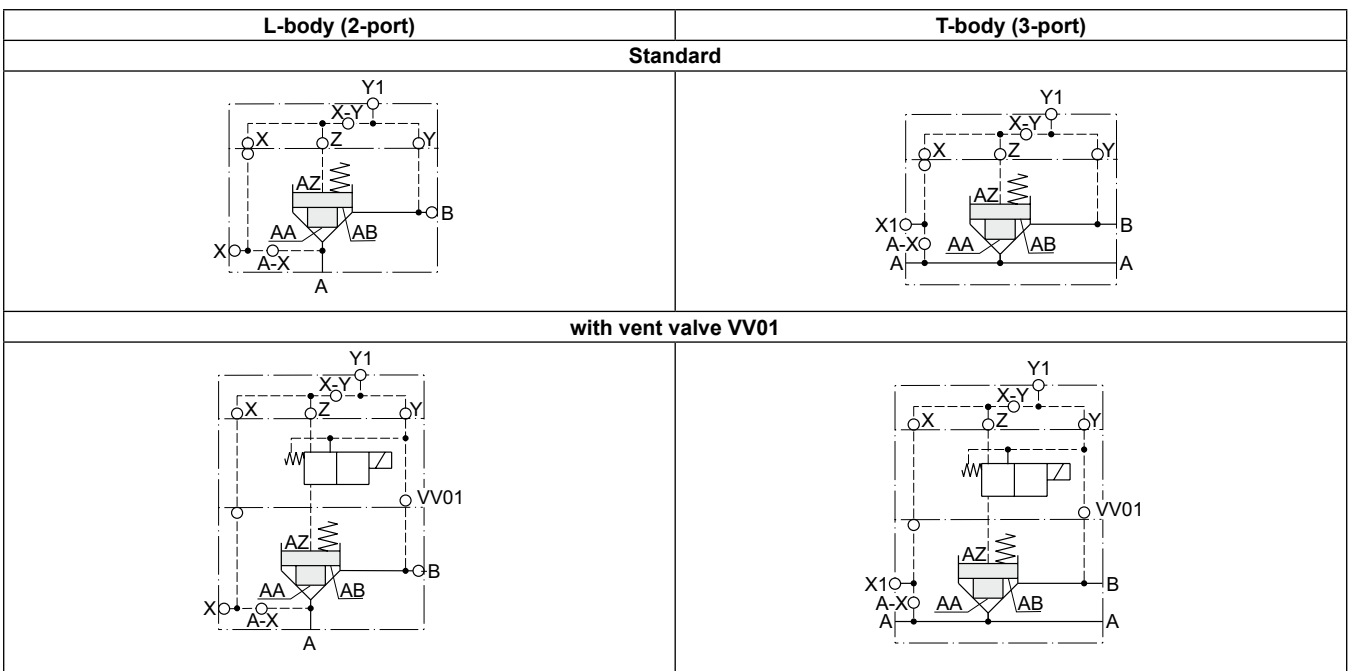


# Technical Data

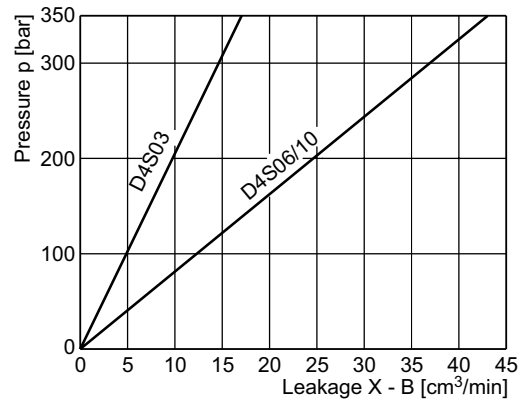
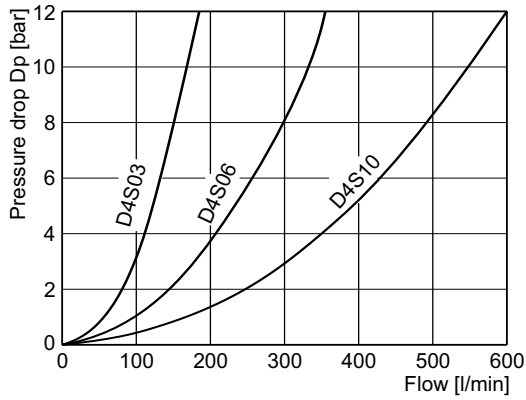
## Technical data

General			T-body		L-body			
Design								
Size			03 (1/2")	06 (1")	06 (3/4")	10 (1 1/4")		
Mounting			Threaded body					
Mounting position			unrestricted					
Ambient temperature	[°C]		-20...+60					
MTTF <sub>D</sub> value	[years]		150					
Weight	D4S T-body	[kg]	3.2	6.6	—	—		
	D4S L-body	[kg]	—	—	3.3	5.6		
Hydraulic								
Max. operating pressure	[bar]		Ports A, B up to 350; Port Y 140 (with VV01)					
Nominal flow	[l/min]		180	360	360	600		
Fluid			Hydraulic oil according to DIN 51524					
Fluid temperature	[°C]		-20...+70 (NBR: -25...+70)					
Viscosity,	permitted	[cSt]/[mm <sup>2</sup> /s]	20...400					
	recommended	[cSt]/[mm <sup>2</sup> /s]	30...80					
Filtration			ISO 4406 (1999); 18/16/13					
Electrical (solenoid)								
Duty ratio			100 % ED; CAUTION: coil temperature up to 150 °C possible					
Protection class			IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)					
		Code						
Supply voltage		[V]	G0R	G0Q	GAR	GAG	W30	W31
		[V]	12 V =	24 V =	98 V =	205 V =	110 at 50 Hz 120 at 60 Hz	230 at 50 Hz 240 at 60 Hz
Tolerance supply voltage		[%]						
Current consumption	hold	[A]	±10	±10	±10	±10	±5	±5
	in rush	[A]	2.72	1.29	0.33	0.13	0.6 / 0.55	0.3 / 0.27
Power consumption	hold	[W]	2.72	1.29	0.33	0.13	2.5 / 2.4	1.25 / 1.2
	in rush	[W]	32.7	31	31.9	28.2	70/70 VA	70/70 VA
Solenoid connection			Connector as per EN175301-803, solenoid identification as per ISO 9461					
Wiring min.		[mm <sup>2</sup> ]	3 x 1.5 recommended					
Wiring length max.		[m]	50 recommended					

## D4S pilot configuration



**$\Delta p/Q$  performance curves**



All characteristic curves measured with HLP46 at 50 °C.

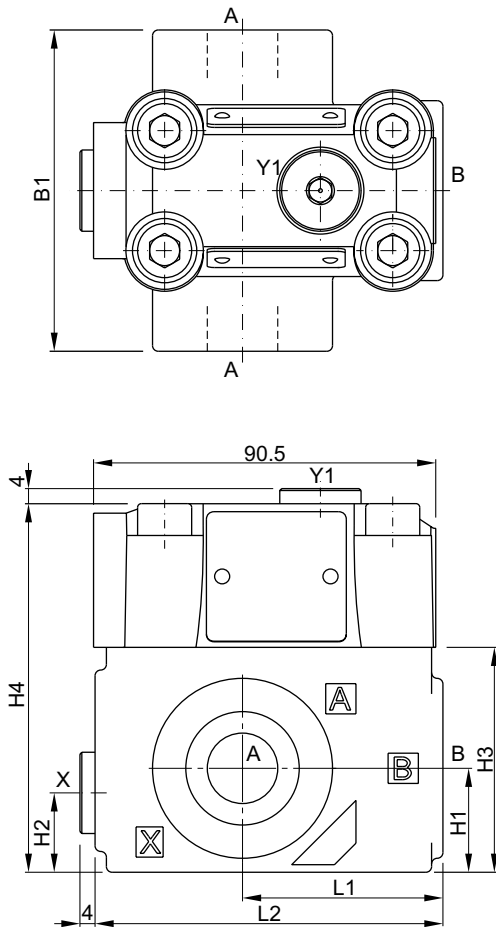
**Selection of cartridges**

Sleeve 1, poppet 1	Sleeve 1, poppet 2	Sleeve 1, poppet 4	Sleeve 3, poppet 4	Sleeve 3, poppet A	Sleeve 3, poppet B/C
1 : 1.05 $A_A = 0.95 A_C$ $A_B = 0.05 A_C$ 15° chamfer	1 : 1.05 $A_A = 0.95 A_C$ $A_B = 0.05 A_C$ 15° chamfer orifice	1 : 1.05 $A_A = 0.95 A_C$ $A_B = 0.05 A_C$ 45° chamfer	1 : 1.67 $A_A = 0.6 A_C$ $A_B = 0.4 A_C$ 45° chamfer	1 : 1.67 $A_A = 0.6 A_C$ $A_B = 0.4 A_C$ 45° chamfer safety spool	1 : 1.67 $A_A = 0.6 A_C$ $A_B = 0.4 A_C$ 45° chamfer throttle spool

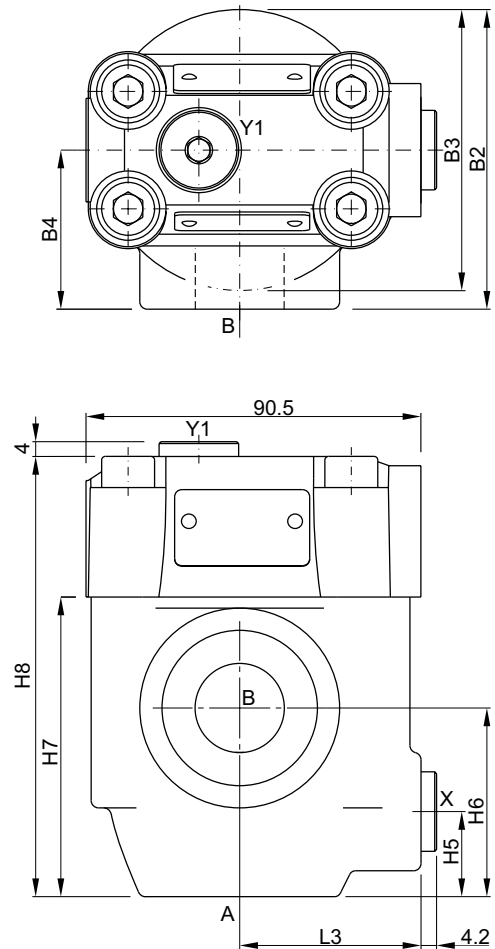
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# Dimensions

## D4S 03/06 T-body



## D4S 06/10 L-body



Seal kits		
NG	NBR	FPM
03	S26-58507-0	S26-58507-5
06	S26-58475-0	S26-58475-5
10	S26-58508-0	S26-58508-5

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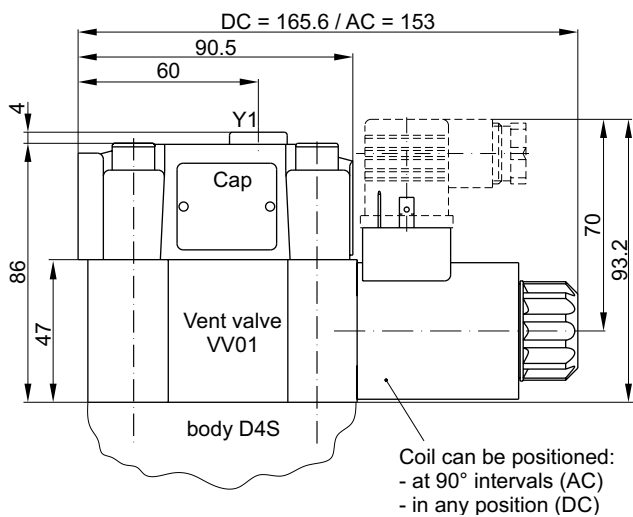
Size	L1	L2	B1	H1	H2	H3	H4
03 (T-body)	53	92	85	27.5	21	59.5	97.5
06 (T-body)	66.5	117.5	136	38	28	93	131

Size	L3	B2	B3	B4	H5	H6	H7	H8
06 (L-body)	49	81	76	43	23	51	81	119
10 (L-body)	49.8	120.7	85.6	77.8	38.1	50.8	96	134

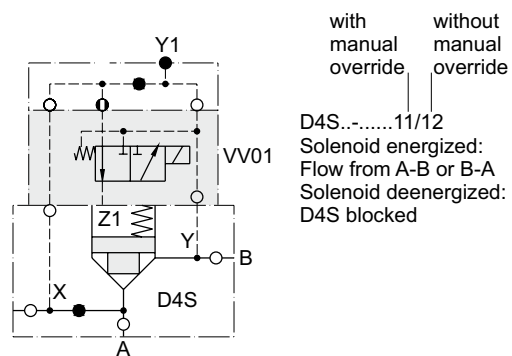
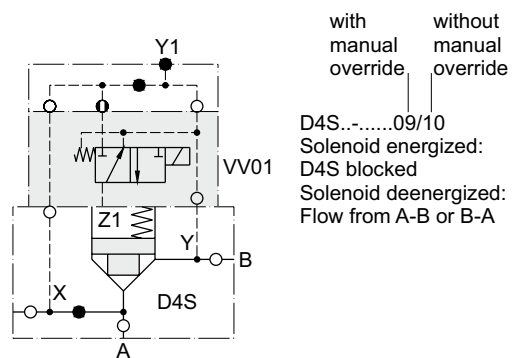
Ports	Function	Port size			
		D4S03 T-body	D4S06 L-body	D4S06 T-body	D4S10 L-body
A	inlet or outlet	G½"	G¾"	G1"	G1¼"
B	outlet or inlet	G½"	G¾"	G1"	G1¼"
X1	external pilot port			G¼"	
Y1	external drain <sup>1)</sup>			G¼"	

<sup>1)</sup> With VV01 only

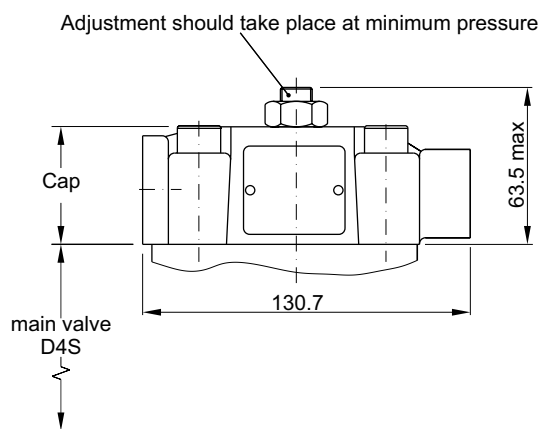
**D4S with VV01**



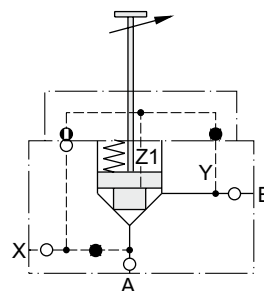
Seal kits	
NBR	FPM
DC solenoid	
S56-40609-0	S56-40609-5
AC solenoid	
S26-35237-0	S26-35237-5



**D4S stroke limiter**



Example: D4S<sub>10</sub><sup>06</sup>-.233B.

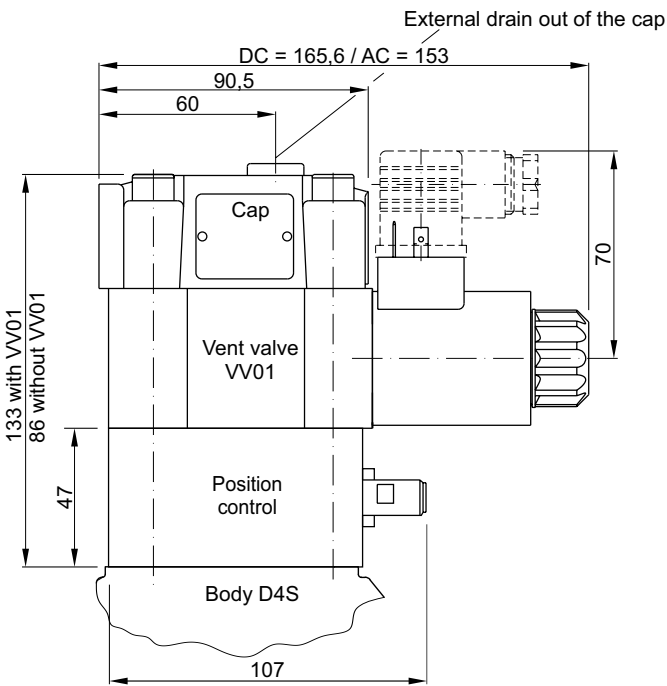


**Note:**

Stroke limiter not for use with D4S03, VV01, shuttle valve and positon control.

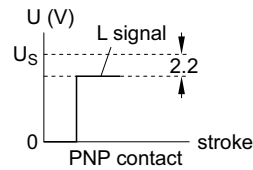
# Dimensions

## D4S position control



## Position control as per IEC 61076-2-101 (M12x1)

Protection class	IP65 in accordance with EN 60529
Ambient temperature	[°C] -20...+60
Supply voltage $U_s$ / ripple	[V] 10...30 / $\pm 10\%$
Current consumption without load	[mA] $\leq 10$
Max. output current per channel, ohmic	[mA] 200
Min. output load per channel, ohmic	[kOhm] 100
Max. output drop at 0.2 A	[V] $\leq 2$
EMC	EN61000-6-4 / EN61000-6-2
Min. distance to next AC solenoid	[m] $> 0.1$
Interface	M12x1 acc. to IEC 61076-2-101
Wiring min.	[mm <sup>2</sup> ] 3 x 0.14 brad shield recommended
Wiring length max.	[m] 50 recommended



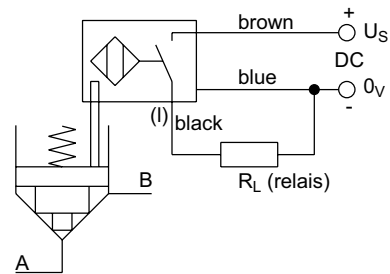
## Position control by proximity switch (incl. amplifier)

Valve open: proximity switch activated.

This proximity switch is pressure proof and has no wearing parts.

### Note

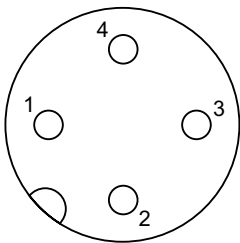
Position control for D4S06 and D4S10 only.



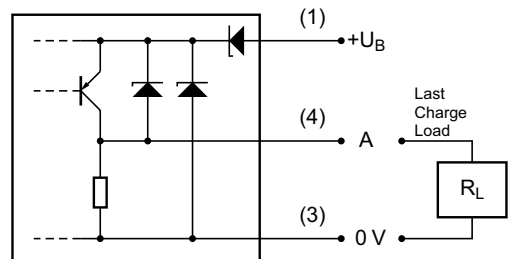
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Please order plug M12 x 1 separately. Straight plug recommended – no defined position possible for angled plug.

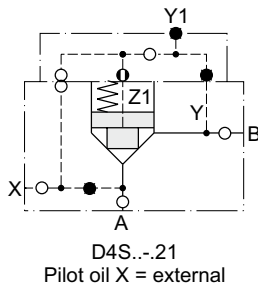
## M12 pin assignment



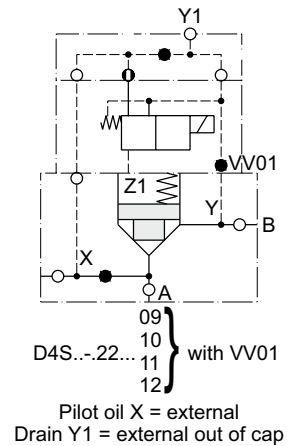
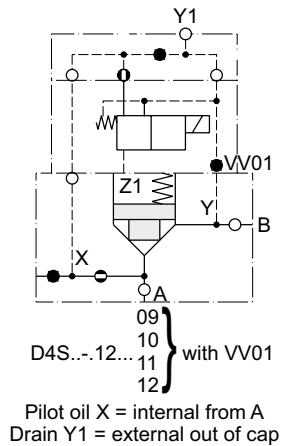
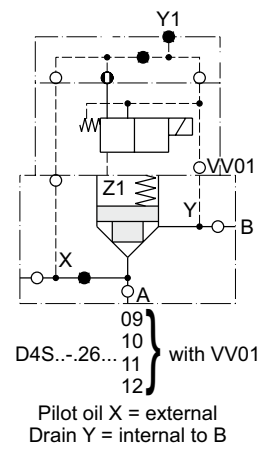
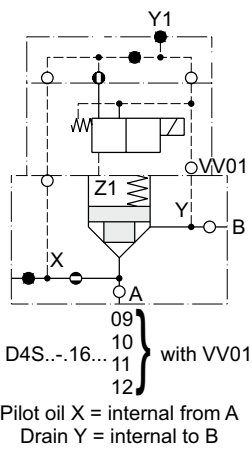
- 1  $U_s$  10...30 V
- 2 not connected
- 3 0 V
- 4 Out A: normally open



**D4S direct operated**



**D4S with solenoid valve VV01**

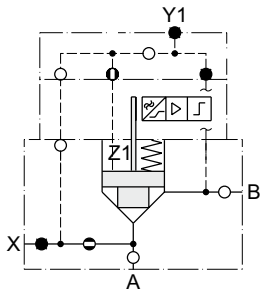


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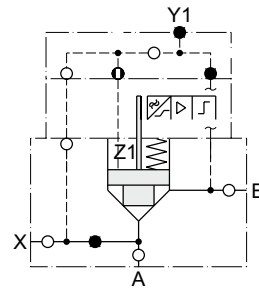


# Ordering Code Explanation (Examples)

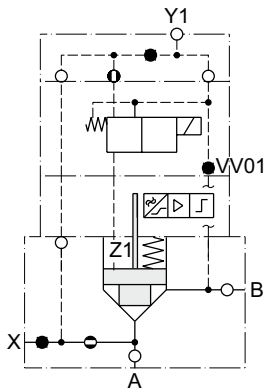
## D4S with position control



D4S...-113A.EA  
(with position control)  
Pilot oil X = intern from A

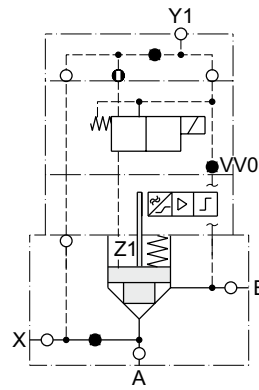


D4S...-213A.EA  
(with position control)  
Pilot oil X = external



D4S...-123A.  $\left. \begin{matrix} EC \\ EE \end{matrix} \right\}$  with position control  
and VV01

Pilot oil X = intern from A  
Drain Y1 = external out of cap

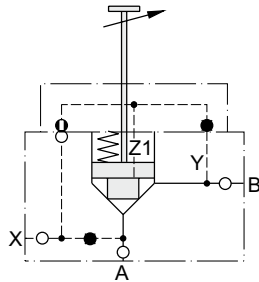


D4S...-223A.  $\left. \begin{matrix} EC \\ EE \end{matrix} \right\}$  with position control  
and VV01

Pilot oil X = external  
Drain Y1 = external out of cap

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## D4S with stroke limiter



D4S...-233B. with stroke limiter  
Pilot oil X = external  
(Note: for D4S06 and D4S10 only)