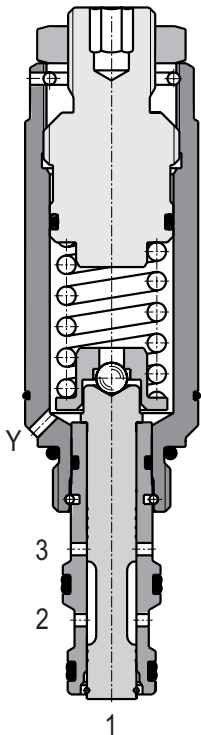


2/2 Hydraulically operated directional control valve, screw-in cartridge design

**SD6H-AY3**

3/4-16 UNF •  $Q_{max}$  30 l/min (8 GPM) •  $p_{max}$  350 bar (5100 PSI)



**Technical Features**

- › 2-way hydraulically operated screw-in cartridge valve
- › Two basic spool types
- › Two pressure ranges for pressure setting
- › Adjustable pressure needed for changeover of spool position
- › External drainage of spring chamber – stable setting
- › The surface of the valve body and the adjusting screw are zinc-coated for 240 h protection acc. to ISO 9227

**Functional Description**

The valve is intended to a distribution of working hydraulic fluid with the help of spool moving in the steel bush by pressure acting on the front surface of spool (1). The pressure needed for the changeover of the spool position is set by spring compression with the help of adjusting screw. The point transfer of spring force to the front surface of spool by means of a hardened steel ball eliminates the effect of radial forces and protects the spool against jamming in the bush. Two basic spool connections are available. In the basic spool position the ports 2↔3 are connected (211) or closed (212). The fluid from the spring chamber is unloaded through the external drain outlet (Y) and cannot influence the set pressure value.



The spool is fully shifted within the control pressure (1) increase range 3 bars above the cracking pressure value. When moving the spool back to its initial position due the spring force after the control pressure drop, a hysteresis must be taken into account.

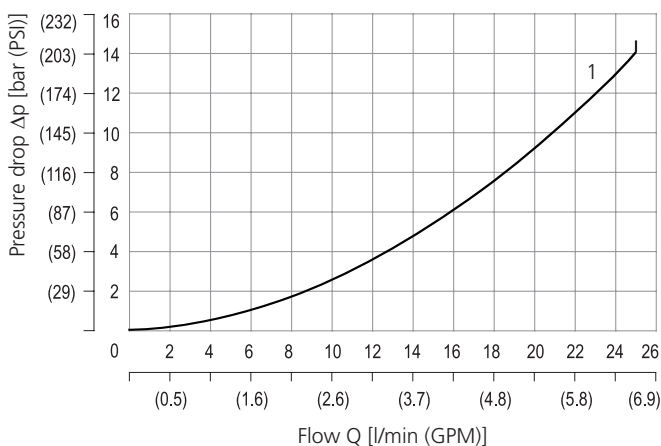
Model Code	2111	2112
Symbol		

**Technical Data**

Valve size / Cartridge cavity	3/4-16 UNF-2A / AY3	
Max. flow	l/min (GPM)	30 (7.9)
Max. operating pressure	bar (PSI)	350 (5080)
Max. pressure in the spring space (Y)	bar (PSI)	30 (435)
Fluid temperature range (NBR)	°C (°F)	-30 ... 100 (-22 ... 212)
Fluid temperature range (FPM)	°C (°F)	-20 ... 120 (-4 ... 248)
Pressure for changeover of spool position		6                      13
	bar (PSI)	10 - 60 (145 - 870)    35 - 130 (508 - 1885)
Pressure drop	see $\Delta p$ -Q Charakteristic	
Weight		2111                      2112
	kg (lbs)	0.28 (0.62)            0.39 (0.86)
	Datasheet	Type
General information	GI_0060	Products and operating conditions
Cavity details / Form tools	SMT_0019	SMT-AY3*
Spare parts	SP_8010	

**Characteristics** measured at  $v = 32 \text{ mm}^2/\text{s}$  (156 SUS)

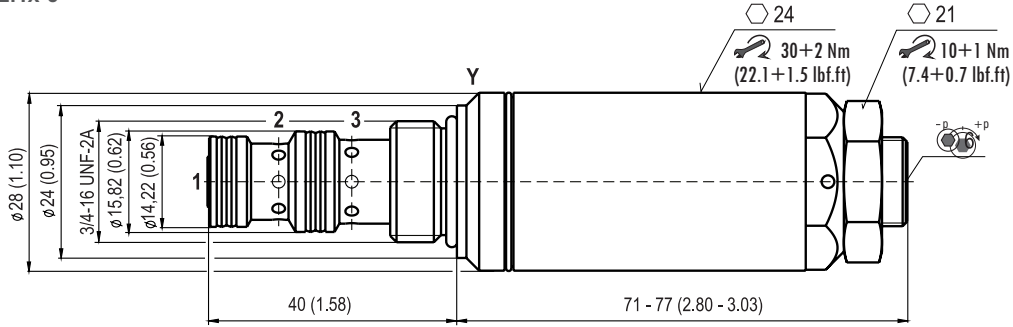
**Pressure drop related to flow rate**



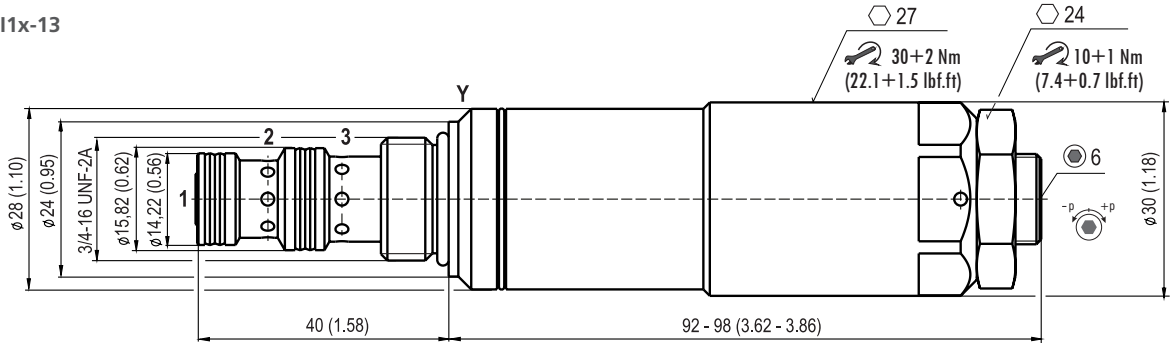
	Model	Connection
1	2111	1→2
1	2112	1→2

Dimensions in millimeters (in)

SD6H-AY3/H211x-6



SD6H-AY3/H211x-13



Ordering Code

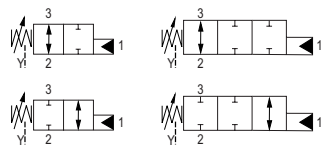
SD6H - AY3 / H  -  S  - A

2/2 Hydraulically operated directional control valve screw-in cartridge design

Valve cavity  
3/4-16 UNF-2B

Model  
High performance

Functional symbol



Surface treatment  
zinc-coated (ZnCr-3), ISO 9227 (240 h)

No designation  
V

Seals  
NBR  
FPM (Viton)

Adjustment option  
allen key (hex. 6)

Range of adjustable pressure for changeover of spool position  
6 10 - 60 bar (145 - 870 PSI)  
13 35 - 130 bar (508 - 1885 PSI)