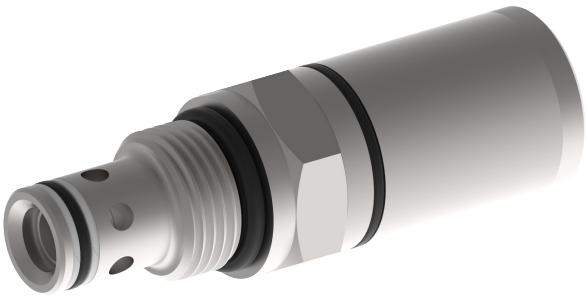
Directional valve 2-way/2-position

Q_{max} = 8 gpm, p_{max} = 5000 psi
direct acting, spool type, pneumatical or hydraulical operation
Type series: AODV-10-_-O1-...

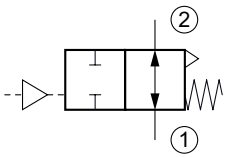


- Screw-in cartridge valve
- For cavity C1020
- All external parts zinc plated, chromited (CrVI-free)
- Installation in threaded port body type B1020
- Hardened precision fitted spool and sleeve provides reliable, long life
- The non-corrosive piston assembly allows this valve to operate by air or any type of hydraulic fluid
- Control spool is isolated from hydraulic fluid with high pressure seals

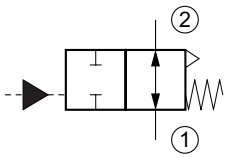
Description

This unit is a normally open, two position, screw-in cartridge style, direct acting spool type, air or hydraulic operated, spring return, hydraulic directional control valve. When pilot piston is not actuated, this valve allows flow between ports 2 to 1. When pilot piston is pressurized, the spool in this valve is shifted and allows no flow between ports 2 to 1. Port 1 can be pressurized to 18.5× pilot port pressure.

Symbol



operated by air



operated by hydraulic fluid

Technical data

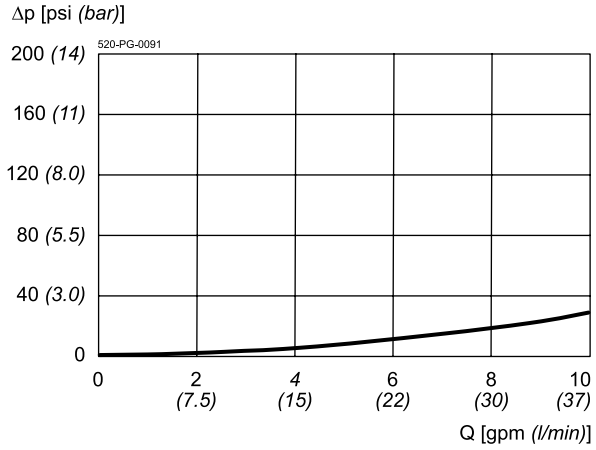
General Characteristics	Description, value, unit
Function group	Directional valve
Function	2-way/2-position
Design	Screw-in cartridge valve
Controls	pneumatical or hydraulical operation
Characteristic	direct acting, spool type
Construction size	SAE 10 / nominal size 8
Thread size	7/8-14 UNF-2A
Mounting attitude	unrestricted
Weight	0.54 lb
Cavity acc. factory standard	For cavity C1020
Tightening torque steel	57.5 ft·lb
Tightening torque aluminium	37.5 ft·lb
Tightening torque tolerance	± 5 %
Minimum ambient temperature	- 40 °F
Maximum ambient temperature	+ 248 °F
Surface protection	All external parts zinc plated, chromited (CrVI-free)
Available seal types	several seal types available, see ordering code
Seal kit order number	NBR: SKN-1022 / FKM: SKV-1022

Hydraulic Characteristics	Description, value, unit
Maximum operating pressure	5000 psi
Maximum flow rate	8 gpm
Flow direction	see symbol
Hydraulic fluid	All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.
Minimum fluid temperature	- 13 °F
Maximum fluid temperature	+ 176 °F
Viscosity range	10 ... 500 mm^2/s (cSt)
Recommended viscosity range	20 ... 130 mm^2/s (cSt)
Minimum fluid cleanliness (cleanlineless class according to ISO 4406:1999)	class 18/16/13
Pilot piston area ratio to system pressure area	18.5:1
Internal leakage flow rate	5 cu.in/min at 5000 psi
Pilot operating media	air or hydraulic fluid
Pilot pressure	pneumatical: 50 ... 250 psi / hydraulical: 50 ... 1000 psi

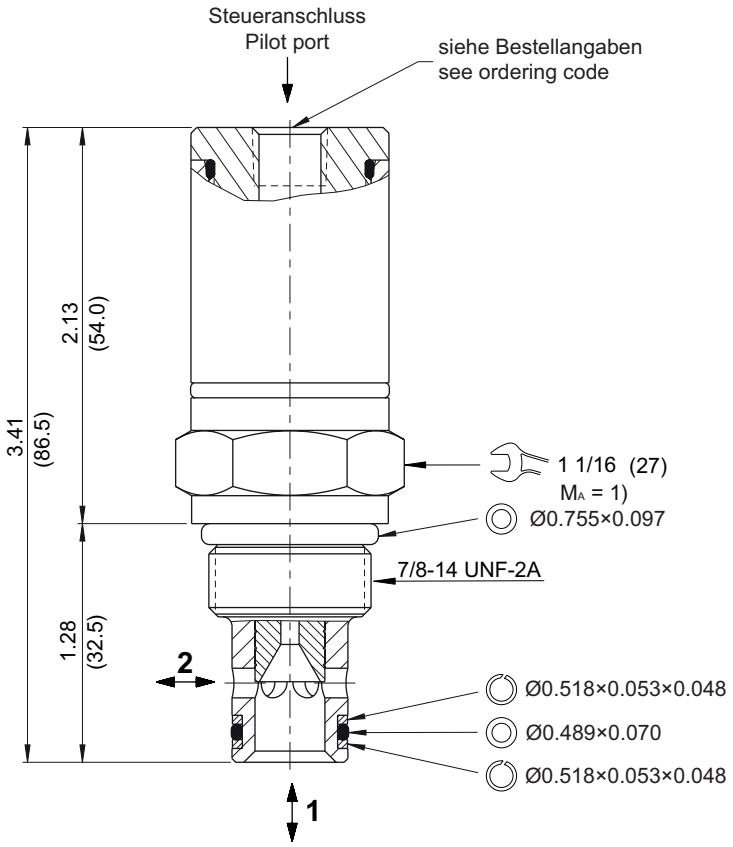
Performance graphs

measured with oil viscosity 28.5 mm²/s (cSt)

Δp = f (Q) Pressure drop-flow rate characteristic



Dimensions and sectional view



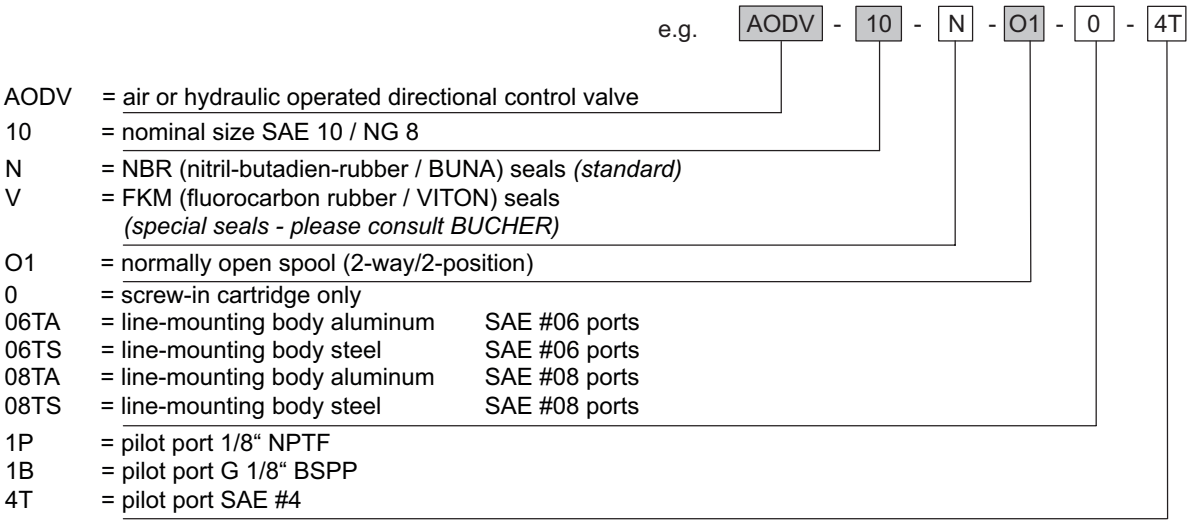
Installation information

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.

NOTE!
The seals are not available individually. The seal kit order number can be found in the chapter "Technical data".

NOTE!
1) When fitting the screw-in cartridge valve, use the specified tightening torque. The value can be found in the chapter "Technical data".

Ordering code



Related data sheets

Reference	Description
520-P-000050	Form tools
520-P-000120	Cavity C1020
520-P-000121	Threaded port body B1020

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