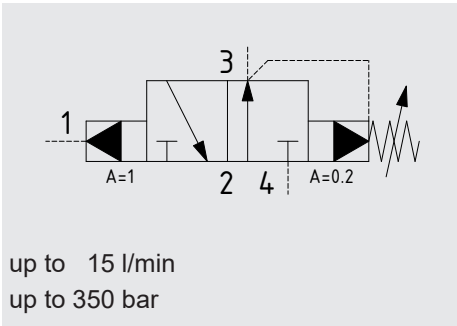


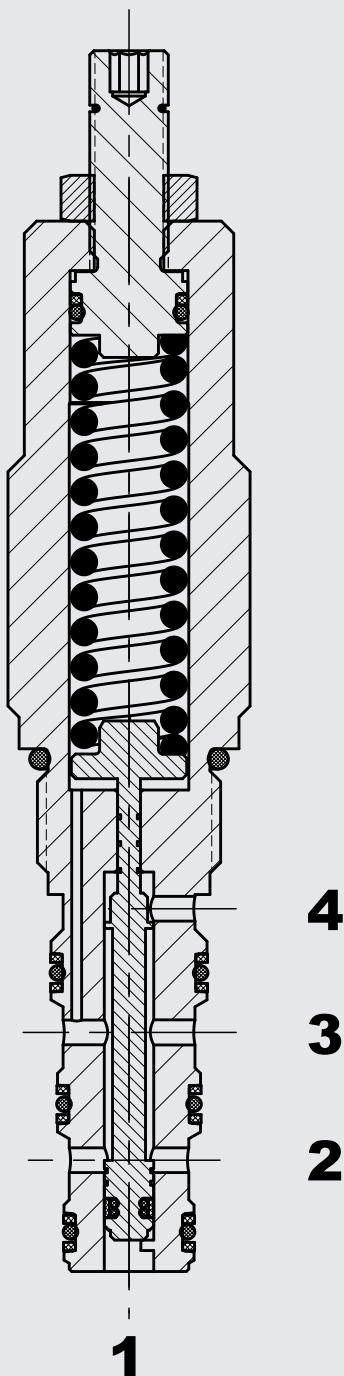
Accumulator charging valve DL10-01



up to 15 l/min
up to 350 bar

spool type, direct-acting
UNF Cartridge – 350 bar

FUNCTION



ADVANTAGES

- For use with load sense accumulator charge systems or similar
- Industry common cavity
- Hardened internal parts to ensure minimal wear and extended service life
- All external surfaces Zinc Nickel plated – corrosion resistant, 1000 hours minimum Salt Fog to red rust protection per ASTM B1117

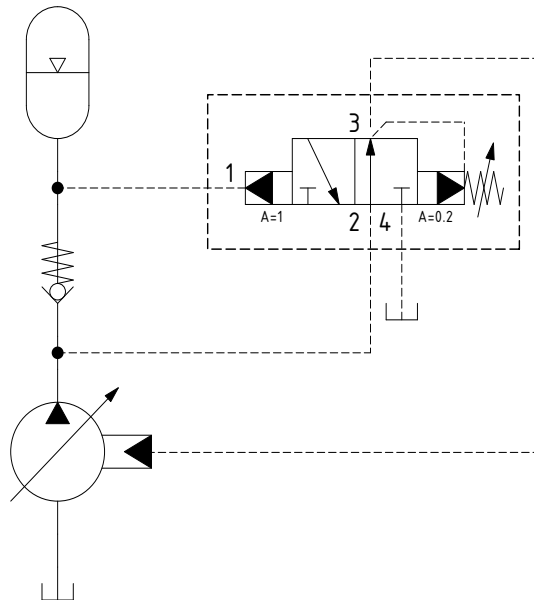
FUNCTION DESCRIPTION

The accumulator charging valve is a hydraulically piloted unloading valve. In the spring biased position, free flow is allowed from port 2 to 3. Increasing pressure at port 1 creates spool movement against the spring. As the spool transitions, pressure at port 2 is blocked and pressure at port 3 is vented to tank at the predetermined unloading pressure. The charged accumulator will keep the valve in the shifted state until the pressure decays to 80% of the unload pressure, at which point the spring will reset the spool to its biased position.

Note

Reloading pressures are influenced by pressure at port T.

APPLICATION EXAMPLE

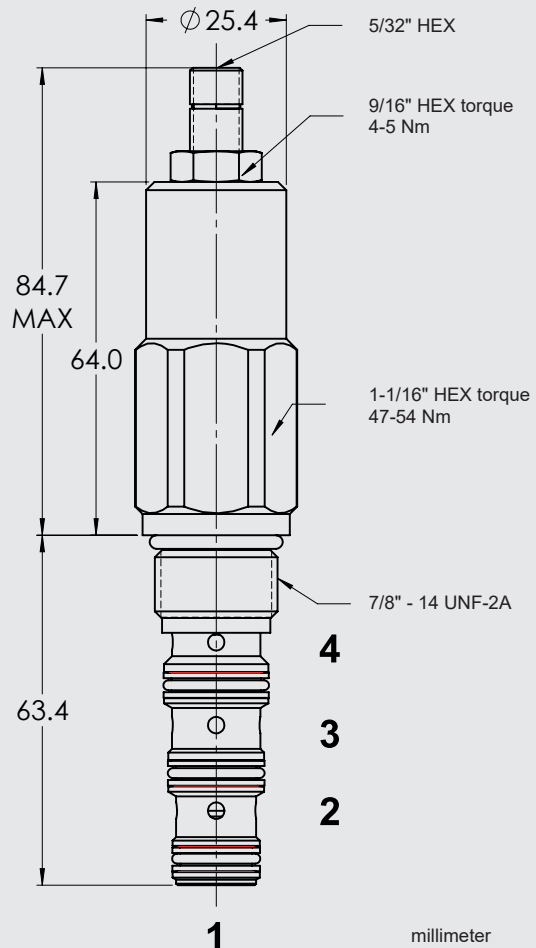


SPECIFICATIONS*

Operating pressure	max. 350 bar	
Nominal flow	max. 15 l/min	
Internal leakage	< 80 ml/min. at 207 bar leakage-free from port 1 to 2	
Reloading differential	20%	
Sensitivity pressure/turn	11.5 % of pressure range	
Media operating temperature range	NBR: min. -30 °C to max. +100 °C FKM: min. -20 °C to max. +120 °C	
Ambient temperature range	NBR: min. -30 °C to max. +120 °C FKM: min. -20 °C to max. +120 °C	
Operating fluid	Hydraulic oil to DIN 51524 Part 1, 2 and 3	
Viscosity range	min. 7,4 mm ² /s to max. 420 mm ² /s	
Filtration	Class 21/19/16 according to ISO 4406 or cleaner	
Installation	No orientation restrictions	
MTTF _d	150 - 1200 years, according to DIN EN ISO 13849-1	
Materials	Valve body and spool	hardened and ground steel
	Seals	NBR (standard) FKM (optional)
	Back-up rings	solid thermoplastic polyester
Cavity	FC10-4	
Weight	0,35 kg	

* see "Conditions and instructions for valves" in brochure 53.000

DIMENSIONS

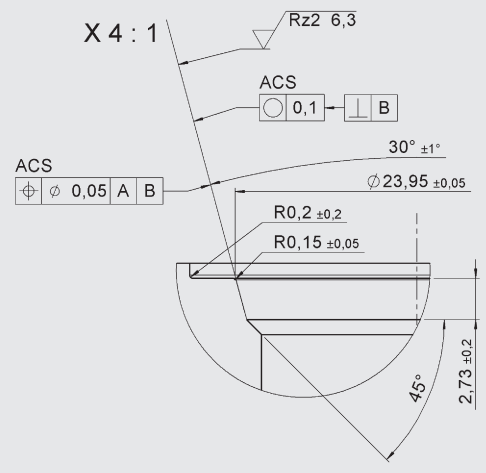
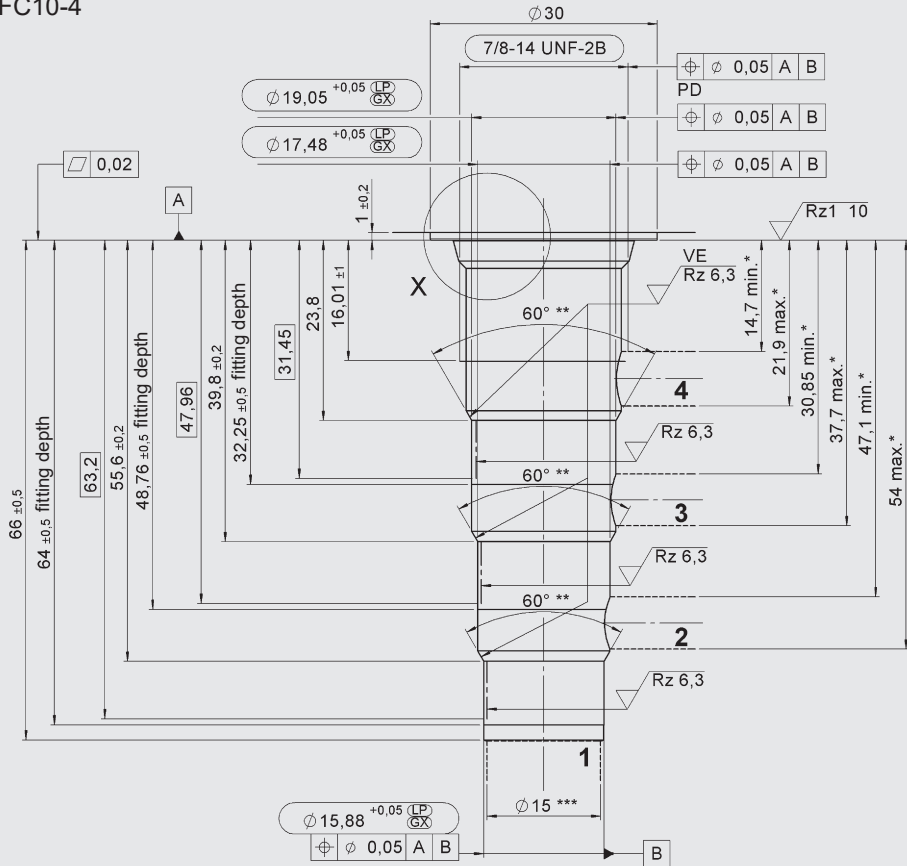


*Torque:
 Steel manifold (ultimate tensile strength < 360 N/mm²): 46 – 50 Nm
 Aluminium manifold (ultimate tensile strength < 330 N/mm²): 36 – 40 Nm
 (tool acc. to DIN EN ISO 6789, tool type II class A or B)
 For further information see brochure No. 53.000
 "Conditions and instructions for valves"

millimeter
 subject to technical modifications

CAVITY

FC10-4



$\sqrt{Ra\ 6,3}$ ($\sqrt{Rz\ 6,3}$ $\sqrt{Rz\ 10}$)

VE = Visual Examination

* Allowed drilling zone (for manifold design)

** Sharp edges should be avoided by rounding to a radius of 0.1 mm to 0.2 mm

*** largest pre-drilling diameter (nominal tool diameter)

millimeter

subject to technical modifications

MODEL CODE

DL10 - 01 - C - N - 20 - 330 V 180

Basic model

Accumulator charging valve, UNF

Type

01 = standard

Body and ports

C = cartridge only
 AS8 = SAE-8, aluminum
 SS8 = SAE-8, steel
 SB4 = G1/2", steel
 AB4 = G1/2", aluminum

Seals

N = NBR (standard)
 V = FKM

Unload and reload pressure range

20 = 20% of pressure setting

Pressure range (in PSI/10)

330 = 35 to 230 bar (3300 PSI)
 other pressure ranges on request

Type of adjustment

V = Allen Head (Hex 5/32")

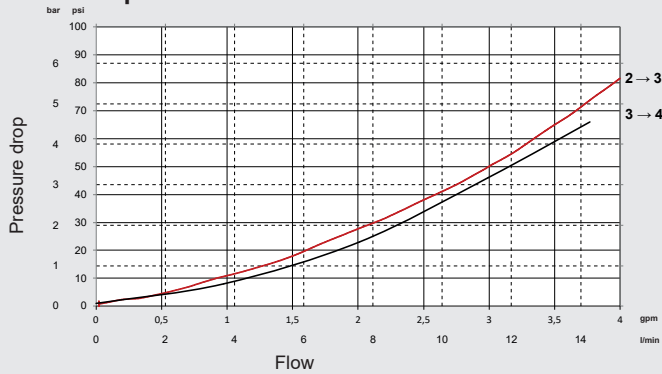
Setting pressure

No details = set at 50% max. pressure for the range
 180 = customized setting (desired PSI/10)

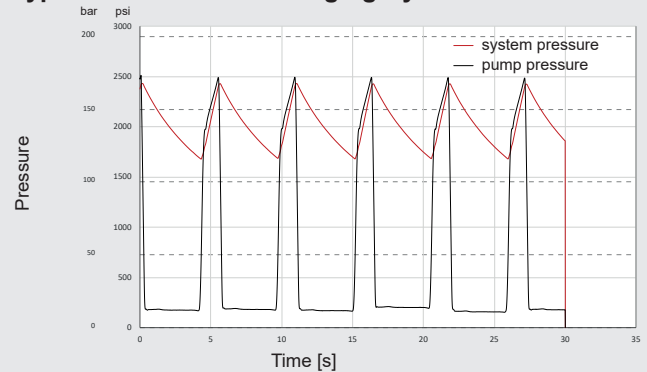
TYPICAL PERFORMANCE

measured at $v = 34 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 38 \text{ }^\circ\text{C}$

Pressure Drop



Typical Accumulator Charging Cycles



MATERIAL OVERVIEW

Standard models

Code	Part No.
DL10-01-C-N-20-330V	2610409
Other models on request	

Standard in-line bodies

Code	Material	Ports	Pressure	Part No.
FH104-AS8	Aluminum, anodized	SAE-8	210 bar	3038110
FH104-SS8	Steel, plated	SAE-8	350 bar	3037868
FH104-SB4	Steel, plated	G1/2"	350 bar	3037784
FH104-AB4	Aluminum, anodized	G1/2"	210 bar	3038097
Other models on request				

Accessories, seal kits

Code	Material	Part No.
FS UNF 10/N	NBR	3651557
FS UNF 10/V	FKM	3651559

Accessories, form tools

Tool	Part No.
Rougher	2580248
Finisher	2580249

NOTE

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.