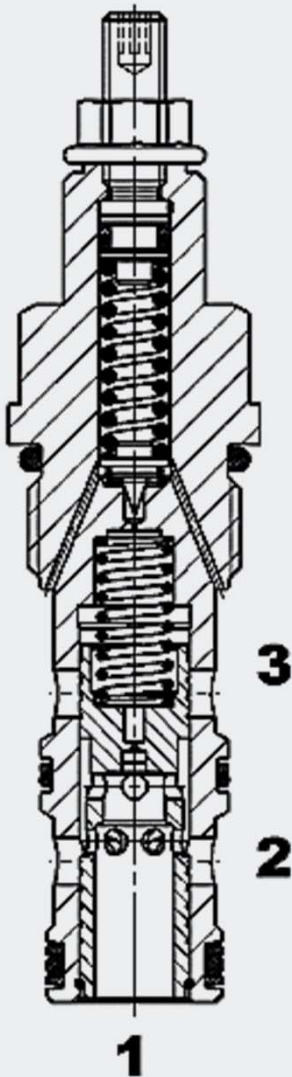


up to 180 l/min
up to 350 bar

3-way pressure reducing valve DR12P-01

spool type, pilot-operated
UNF Cartridge – 350 bar

FUNCTION



PRODUCT ADVANTAGES

- Screen-protected metering orifice enhances safety
- Quick response times
- Optional pressure ranges up to 345 bar
- Stability throughout the entire flow range
- Identical modules allow expansion of nominal sizes and installation of proportional valves of the same product group
- External surfaces with Zn-Ni coating for advanced corrosion protection (1 000 h salt spray test)

FUNCTION DESCRIPTION

The 3-way pressure reducing valve is a pilot-operated, spring-loaded spool type valve. Its purpose is to keep the pressure at consumer port 1 constant.

If the inlet pressure at port 2 rises and exceeds the pre-set spring tension, the pilot stage opens and oil flows from behind the main spool to the tank port 3. The resulting pressure differential causes the main spool to move against the return spring and allows oil to flow from port 2 to port 1. This continues until the system pressure at port 2 is equal to the pre-set value of the pressure spring and the pilot stage closes again.

The return spring moves the main spool to the closing position.

If the pressure at port 1 suddenly rises due to external force, the valve is relieved to tank port 3 (maximum pressure relief).

Hint

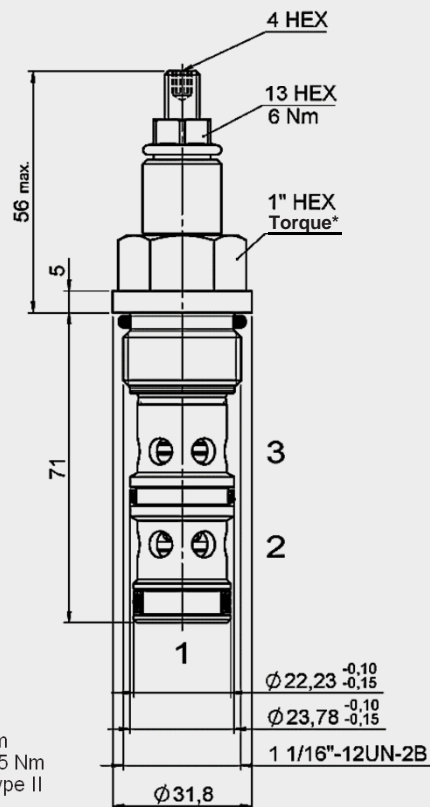
Any pressure at port 3 is additive to the valve pressure setting.

KENNGRÖSSEN*

Operating pressure	max. 350 bar
Pressure ranges	15 up to 35 bar 15 up to 62 bar 15 up to 124 bar 15 up to 228 bar 15 up to 345 bar
Flow rate	max. 180 l/min
Internal leakage	< 0,5 l/min. at 350 bar
Temperature range of operating fluid	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. +100 °C FKM: min. -20 °C to max. +100 °C
Operating fluid	Hydraulic oil to DIN 51524 part 1, 2 and 3
Viscosity range	min. 10 mm ² /s to max. 420 mm ² /s
Filtration (to ISO 4406)	< 210 bar: min. class 20/18/15 > 210 bar: min. class 19/17/14
MTTFd	150 – 1200 years, according to DIN EN ISO 13849-1
Installation	No orientation restrictions
Werkstoffe	Valves body: steel Piston: Hardened and ground steel Seals: NBR (standard) FKM Back-up rings: PTFE
Cavity	FC12-3
Weight	0,275 kg

* see „Conditions and Instructions for Valves“ in brochure 53.000

DIMENSIONS

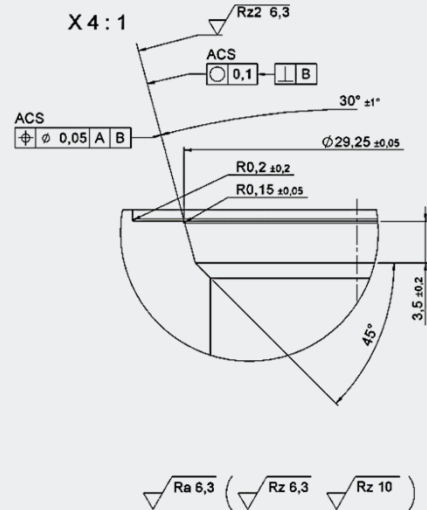
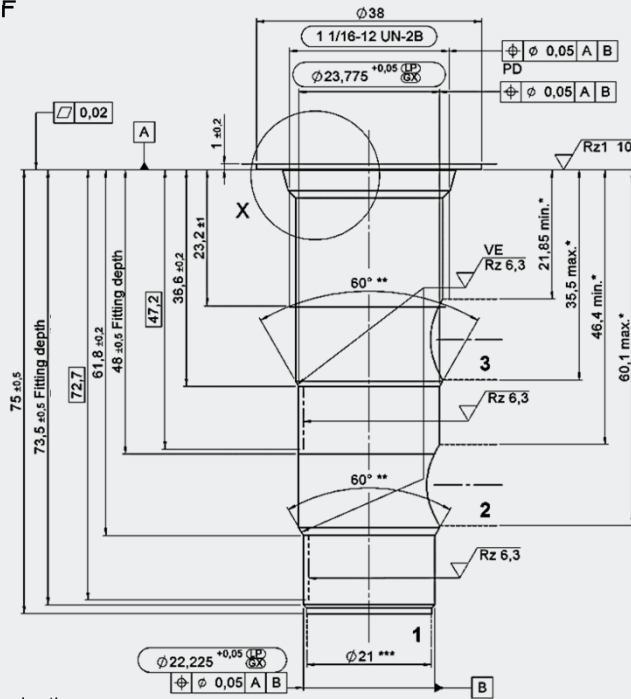


*Torque:
Steel manifold (tensile strength > 360 N/mm²): 120 Nm
Aluminium manifold (tensile strength > 330 N/mm²): 85 Nm
(With torque tool in acc. with DIN EN ISO 6789, tool type II class A or B)
For more information see "Conditions and Instructions for Valves" in brochure 53.000

millimetre (inch)
subject to technical modifications

CAVITY

FC12-3 UNF



VE = Visual examination
 * Permitted boring zone (for block design)
 ** Sharp edges should be avoided by using a radius of 0.1 mm to 0.2 mm
 *** Largest pre-drilling diameter (nominal tool diameter)

millimetre (inch)
 subject to technical modifications

MODEL CODE

DR12P - 01 - C - N 330 V 330

Basic model

3-way pressure reducing valve, UNF

Type

01 = standard

Body and ports

C = Cartridge only

Sealing material

N = NBR (standard)

V = FKM

Pressure range (specified in PSI/10)

050 = 500 PSI (35 bar)

090 = 900 PSI (62 bar)

180 = 1800 PSI (124 bar)

330 = 3300 PSI (228 bar)

500 = 5000 PSI (345 bar)

Adjustment type

V = adjustable using tool

other types of adjustment on request

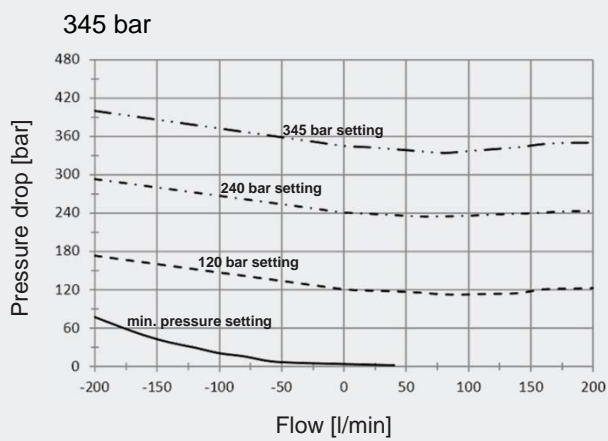
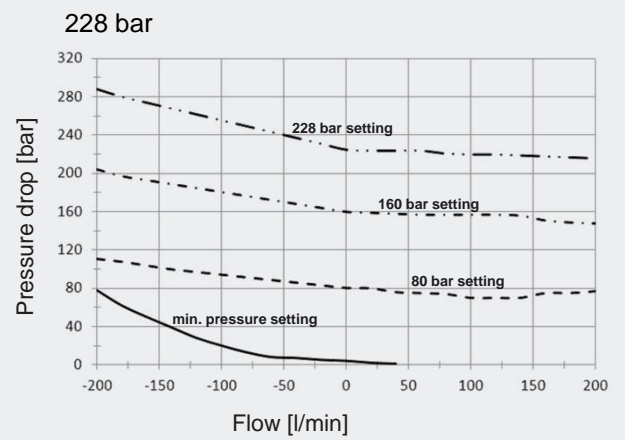
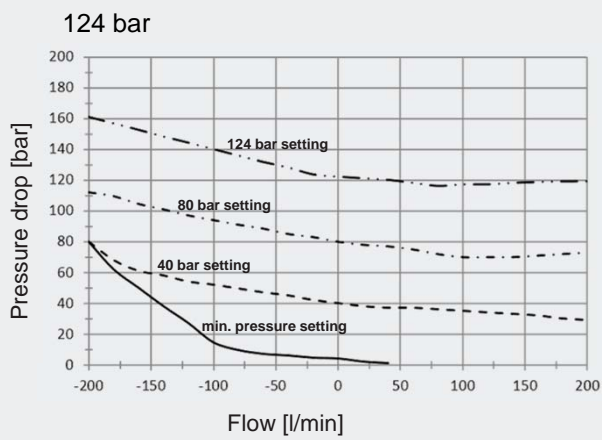
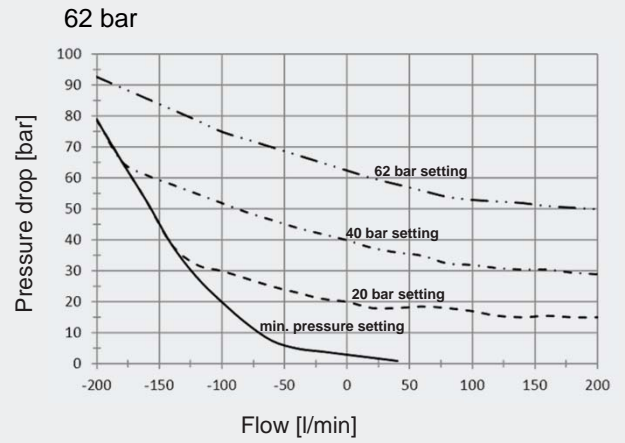
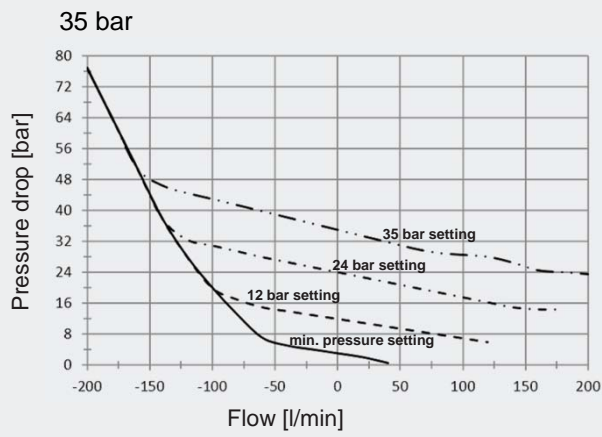
Cracking pressure

Not specified = no cracking pressure

330 = customer-specific cracking pressure (specified in PSI/10)

TYPICAL PERFORMANCE

measured at $v = 46 \text{ mm}^2/\text{s}$ and $T_{\text{oil}} = 40^\circ\text{C}$



MATERIAL OVERVIEW

Standard models

Model code	Part no.
DR12P-01-C-N-050V	4010482
DR12P-01-C-N-090V	4010481
DR12P-01-C-N-180V	4010480
DR12P-01-C-N-330V	4010479
DR12P-01-C-N-500V	3914739

Other versions on request

Spare parts, Seal kits

Code	Material	Part no.
FS UNF 12/N	NBR	3651563
FS UNF 12/V	FKM	3919374

Accessories, standard in-line bodies

Code	Material	Ports	Pressure	Part no.
FH123-SB6	Steel, zinc-plated	G1/2"	350 bar	3053908
FH123-AB6	Aluminium, anodised	G1/2"	210 bar	3053872

Andere Gehäuse auf Anfrage

Accessories, form tools for cavity

Tool	Part no.
On request	

NOTE

The information in this brochure relates to the operating conditions and applications described.
For applications not described, please contact the relevant technical department.
Subject to technical modifications.

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