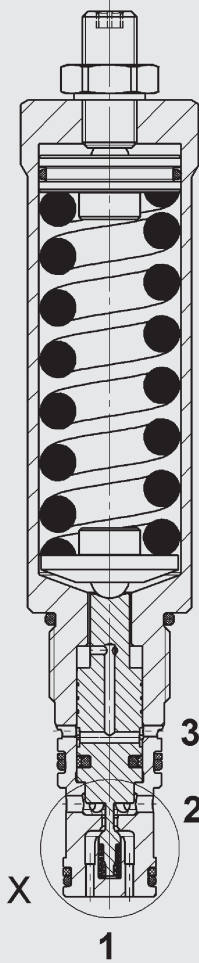


up to 25 l/min
up to 450 bar

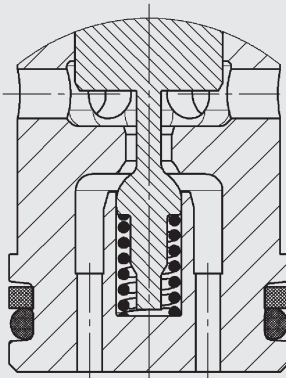
2-way pressure reducing valve **DMM10121-12**

spool type, direct-acting
Metric Cartridge – 450 bar

FUNCTION



X (3 : 1)



PRODUCT ADVANTAGES

- Optimum control behaviour
- Low hysteresis
- High repeatability
- Extremely low leakage in seat-tight control position
- Very compact design
- Adjustable range up to 320 bar
- Also available as a low-temperature version
- Exposed surfaces zinc-nickel plated for increased corrosion protection (1,000 h salt spray test)

FUNCTION DESCRIPTION

The pressure reducing valve is a 2-way pressure valve. It reduces an inlet pressure at port 1 to a lower outlet pressure for the consumer at port 2. The level of the reduced outlet pressure can be set at the valve. When the pressure value at port 2 reaches the pressure setting, the valve closes leak-free at the control point which prevents leakage at the consumer. Port 3 serves to relieve the pressure of the spring chamber to the tank.

NOTICE:

The tank pressure adds to the set pressure.

The valve is primary pressure-dependent.

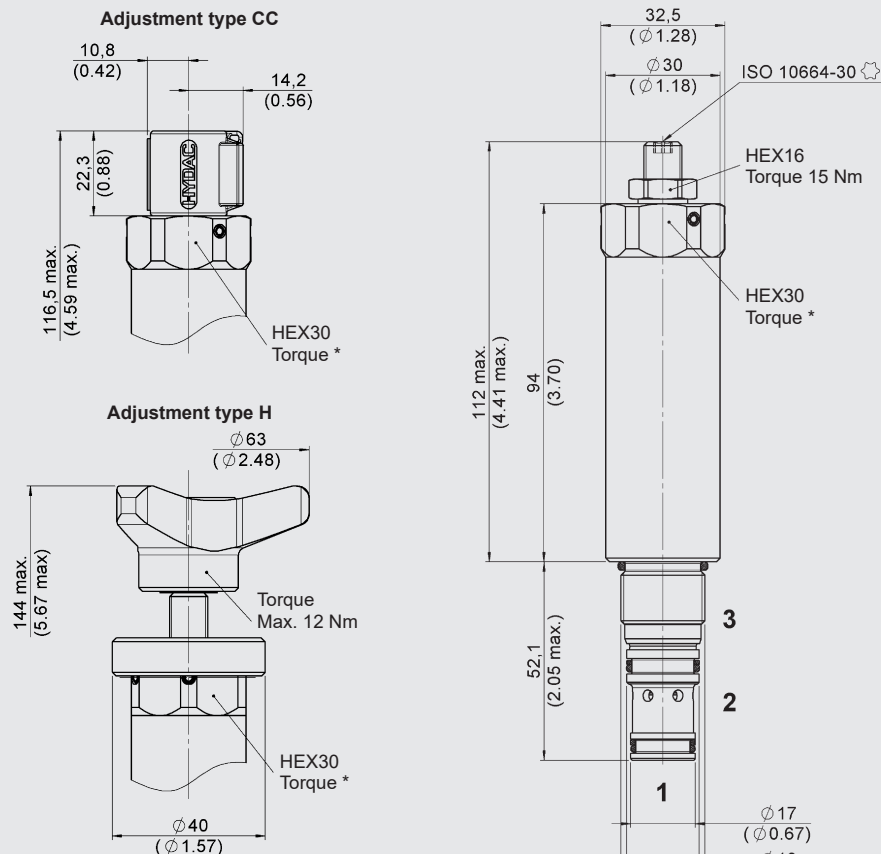
SPECIFICATIONS*

Operating pressure	max. 450 bar (max. supply pressure at port 1)	
Pressure balance	See typical performance	
Tank pressure (port 3)	max. 30 bar	
Flow rate	max. 25 l/min	
Pressure setting range	10 to 70 bar 20 to 110 bar 20 to 250 bar 20 to 320 bar	
Primary pressure dependence	As primary pressure increases, the control pressure drops $8\% \pm 3\%$ of the primary pressure change	
Internal leakage	Leakage-free, approx. 100 cm ³ at port 2	
Media operating temperature range	NBR: min. -30 °C to max. +100 °C FKM: min. -20 °C to max. +120 °C TT NBR: min. -40 °C to max. +80 °C (low temperature)	
Ambient temperature range	NBR: min. -30 °C to max. +100 °C FKM: min. -20 °C to max. +120 °C TT NBR: min. -40 °C to max. +80 °C (low temperature)	
Operating fluid	Hydraulic oil according 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. 20/18/15 > 210 bar: min. 19/17/14	
MTTF _d	150 – 1200 years, measurement according to DIN EN ISO 13849-1	
Installation	No orientation restrictions	
Materials	Valve body:	Steel
	Piston:	Hardened and ground steel
	Seals:	NBR
	Back-up rings:	PTFE
Cavity	10121 metric	
Weight	0.48 kg	

* see "Conditions and Instructions for Valves" in brochure 53.000

DIMENSIONS

The valve must be in a relieved state when the pressure setting is reduced by adjustment.

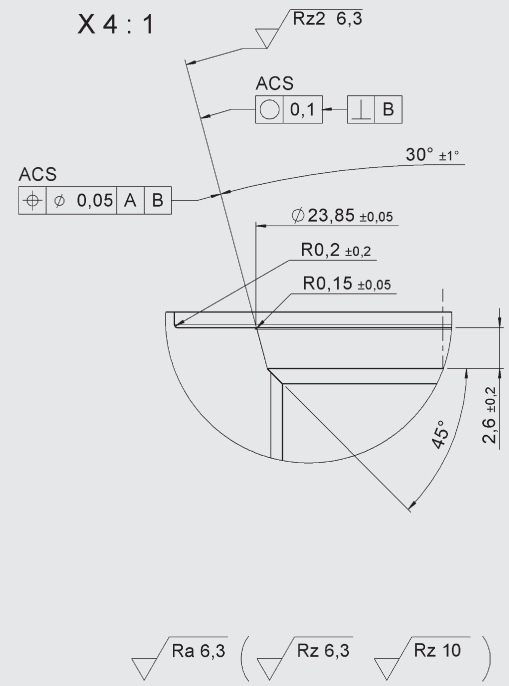
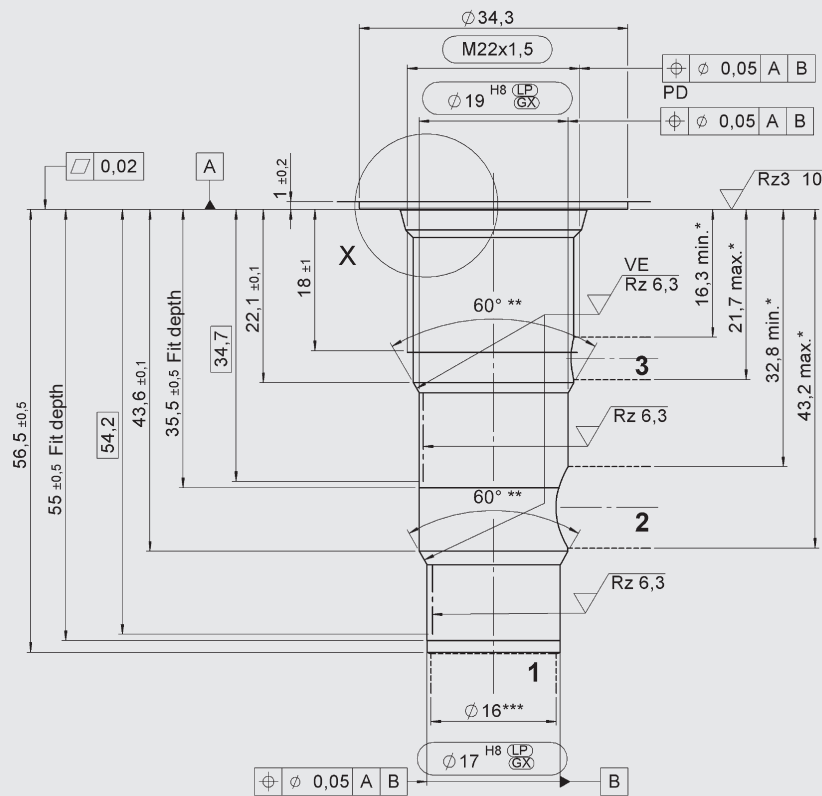


*Torque:
Steel manifold (tensile strength > 360 N/mm²): 70 Nm
Aluminium manifold (tensile strength > 330 N/mm²): 50 Nm
(With torque tool in acc. with DIN EN ISO 6789, tool type II class A or B)
For more information see "Conditions and Instructions for Valves" in brochure 53.000

Millimetre (inch)
Subject to technical modifications

CAVITY

10121



VE = Visual examination
 * Permitted 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)

Millimetre (inch)
 Subject to technical modifications

MODEL CODE

DMM10121 - 12 - C - N - 250 C 250

Basic model

2-way pressure reducing valve, metric

Type

12 = spring chamber relief to the tank (port 3)

Body and ports*

C = cartridge only

Sealing material

N = NBR (standard)

V = FKM

Pressure ranges

070 = 10 to 70 bar

110 = 20 to 110 bar

250 = 20 to 250 bar

320 = 20 to 320 bar

Adjustment type

C = adjustable using tool or sealable

CC = sealed with seal cap

H = with handwheel and locking via knurled nut

Pressure setting

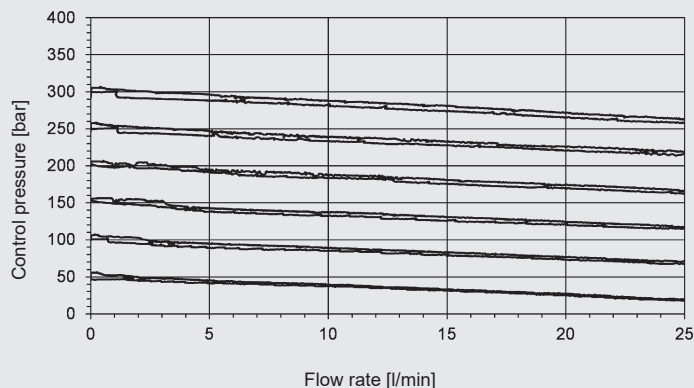
No details = no setting

250 = preset customer-specific pressure setting (specified in bar)

TYPICAL PERFORMANCE

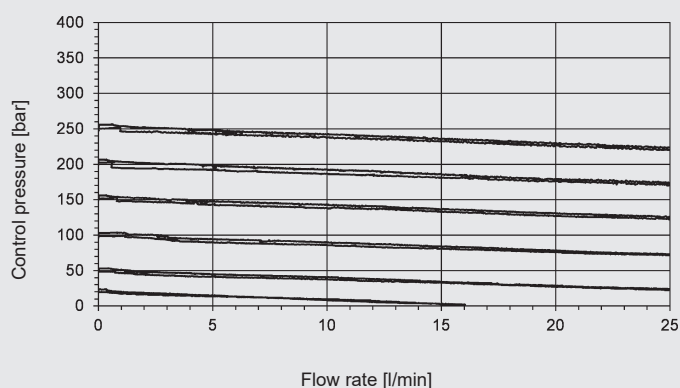
DMM10121-1.-C.-.-320

Measured at $p_1 = 400 \text{ bar}$, $v = 33 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



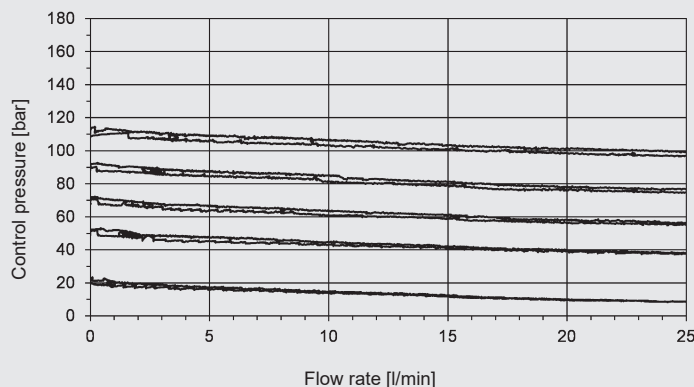
DMM10121-1.-C.-.-250

Measured at $p_1 = 350 \text{ bar}$, $v = 33 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



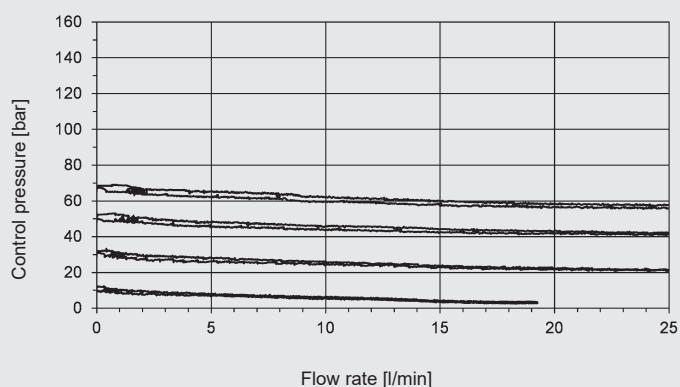
DMM10121-1.-C.-.-110

Measured at $p_1 = 200 \text{ bar}$, $v = 33 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



DMM10121-1.-C.-.-070

Measured at $p_1 = 160 \text{ bar}$, $v = 33 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



MATERIAL OVERVIEW

Standard models

Model code	Part no.
DMM10121-12-C-N-070C	4255718
DMM10121-12-C-N-250C	4228641
DMM10121-12-C-N-320C	4278989

Other versions on request

Spare parts seal kits

Code	Material	Part no.
Seal kit DMM10121	TT-NBR (low temperature)	3676021

Other seal kits on request

Accessories, standard in-line bodies

Code	Material	Ports	Pressure	Part no.
H-R10121-SB4/2	Steel, zinc-plated	G1/4", G1/2"	420 bar	395236

Other housings on request

Accessories, form tools for cavity

Tool	Part no.
Countersink	163910
Reamer	163911

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.

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