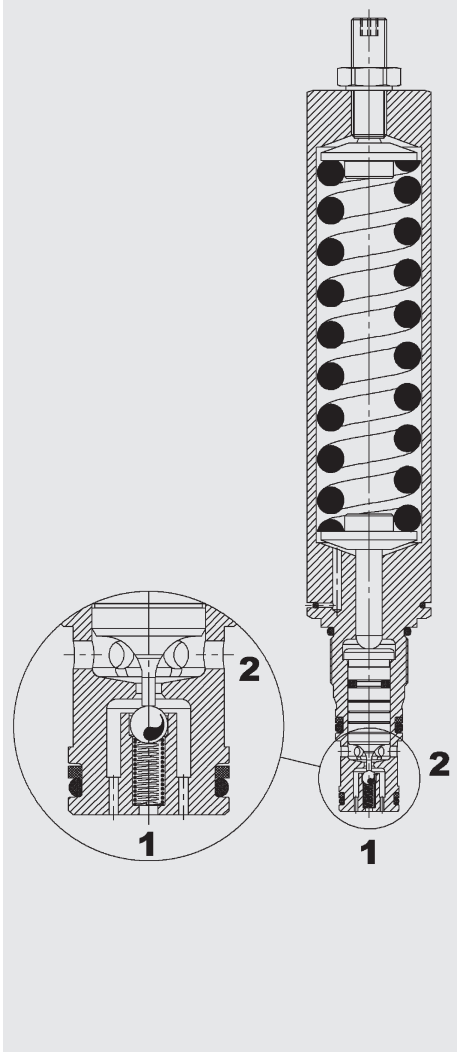


## Pressure Reducing Valve Poppet Type, Direct-Acting, Normally Open, with atmospheric Spring Chamber Relief Metric Cartridge – 450 bar DMM10121

### FUNCTION



The pressure reducing valve DMM10121 is a direct-acting, spring-loaded poppet valve which is leakage-free. Its function is to control the pressure at port 2. In the normal position, the main piston pushes the ball off the seat and there is free flow from port 1 to port 2. When the pre-set pressure is achieved at port 2, the pressure increase forces the main piston up, the ball moves with it and seals leakage-free. When the pressure at port 1 falls below the pressure at port 2, the poppet valve opens and oil can flow from port 2 to port 1.

### FEATURES

- Automatic readjustment if there is a pressure drop in the cylinder
- External surfaces zinc-plated
- Hardened and ground valve components to ensure minimal wear and extended service life
- Adjustable throughout flow range
- Various pressure ranges up to 450 bar
- Atmospheric spring chamber release
- Separation of oilside to atmosphere by dynamic seal

### SPECIFICATIONS\*

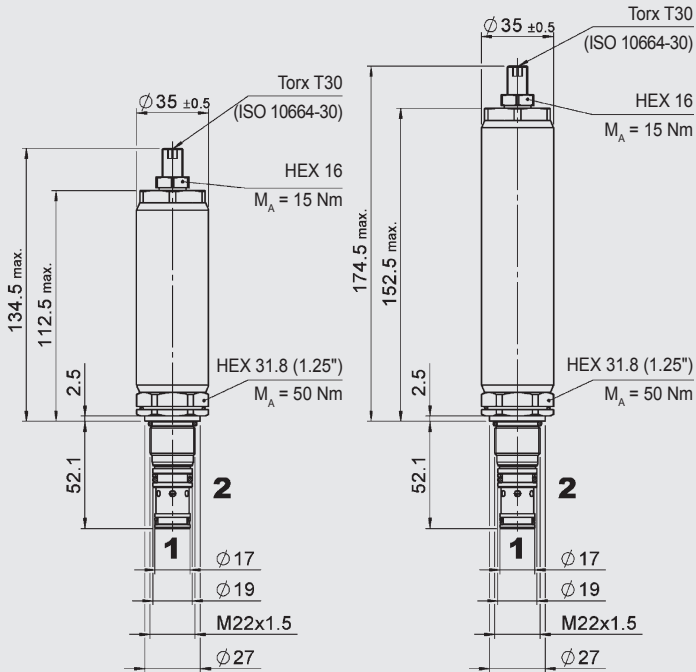
Operating pressure:	min. 0 to max. 450 bar	
Nominal flow:	max. 22 l/min	
Pressure setting ranges:	20 - 110, 20 - 250, 50 - 410, 50 - 450 bar	
Leakage:	Leakage-free (max. 5 drops $\approx$ 0,25 cm <sup>3</sup> /min at 350 bar)	
Media operating temperature range:	min. -20 °C to max. +120 °C	
Ambient temperature range:	min. -20 °C to max. +120 °C	
Operating fluid:	Hydraulic oil to DIN 51524 Part 1 and 2	
Viscosity range:	min. 10 mm <sup>2</sup> /s to max. 420 mm <sup>2</sup> /s	
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner	
MTTF <sub>d</sub> :	150 years	
Installation:	No orientation restrictions	
Materials:	Valve body:	high tensile steel
	Piston:	hardened and ground steel
	Seals:	FKM (standard) NBR (optional, media temperature range -30 °C to +100 °C)
	Back-up rings:	PTFE
Cavity:	10121 (port 3 not used)	
Weight:	0.9 kg	

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

## DIMENSIONS

110 bar Pressure range  
250 bar Pressure range

410 bar Pressure range  
450 bar Pressure range



Millimeter (Inch)  
Subject to technical modifications

## MODEL CODE

**DMM 10121 - 01 - C - V - 450 C 420**

**Basic model**  
2-way pressure reducing valve

**Cavity**  
10121 = 3-way cavity, metric

**Type**  
01 = standard  
02 = increased sealing  
(special requirement)

**Body and ports**  
C = cartridge only  
(housings on request)

**Seals**  
V = FKM (standard)  
N = NBR (optional)

**Pressure setting range**  
110 = 20 – 110 bar  
250 = 20 – 250 bar  
410 = 50 – 410 bar  
450 = 50 – 450 bar

**Type of adjustment**  
C = adjustable by tool, optional seal cap  
H = handwheel  
Other types of adjustment on request

**Cracking pressure setting**  
No details = no setting, spring relaxed  
Pressure value = customer-specific cracking pressure

### Standard models

Model code	Part No.
DMM10121-01-C-V-110C	3479985
DMM10121-01-C-V-250C	3479986
DMM10121-01-C-V-410C	3480034
DMM10121-01-C-V-450C	3465581

Other models on request

### Inline connection housings

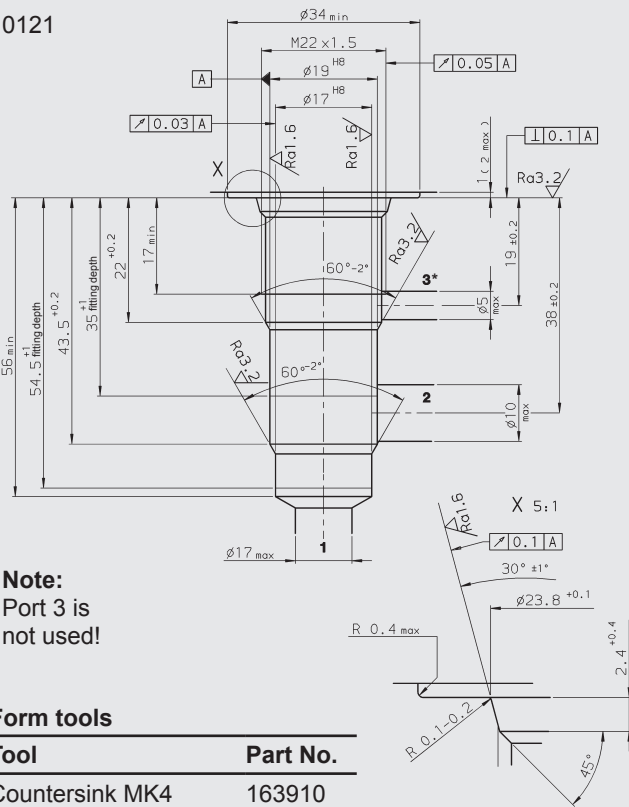
Code	Part No.	Material	Ports	Pressure
R10121	395236	Steel	G1/2	420 bar

### Seal kits

Code	Part No.
FS METRISCH 1012./V	3651296
FS METRISCH 1012./N	3651295

## CAVITY

10121



**\* Note:**  
Port 3 is  
not used!

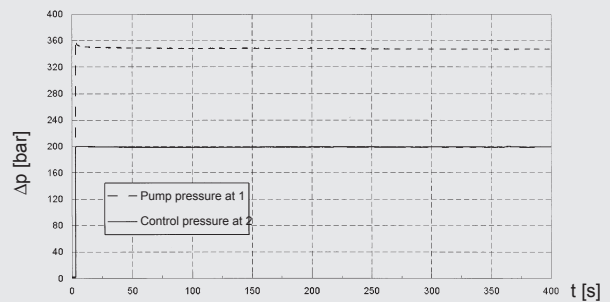
### Form tools

Tool	Part No.
Countersink MK4	163910
Reamer MK2	163911

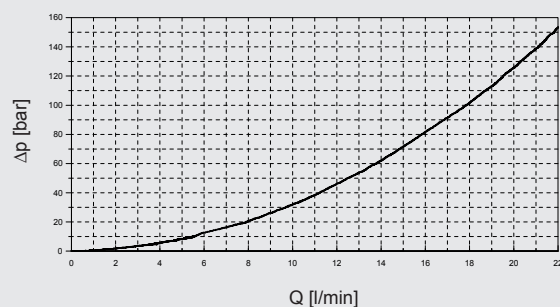
Millimeter (Inch)  
Subject to technical modifications

## PERFORMANCE

$v = 33 \text{ mm}^2/\text{s}, T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



$v = 44 \text{ mm}^2/\text{s}, T_{\text{oil}} = 40 \text{ }^\circ\text{C}$



### 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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