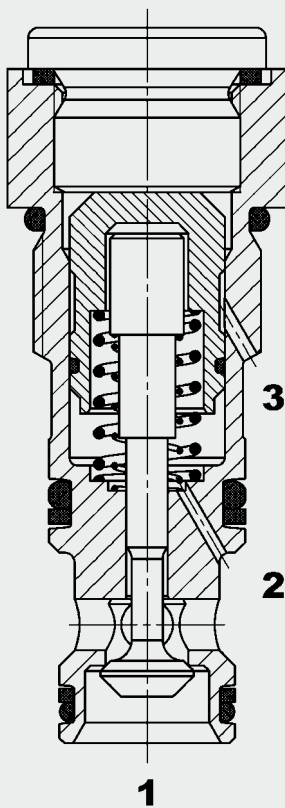


up to 80 l/min  
up to 350 bar

## FUNCTION



The pilot-to-open check valve RP10121 is a direct-acting, spring-loaded poppet valve. There is free flow from port 2 to port 1. In the opposite direction, the poppet is pressed onto the seat and blocks flow. If a sufficiently high control pressure builds at port 3, the poppet is lifted from the valve seat and oil flows from 1 to 2. The necessary pilot pressure at port 3 is dependent on the pressures across port 1 and 2.

The following applies:

$$P_{\text{pilot}} = \frac{P_{\text{port1}} - P_{\text{port2}}}{\varphi} + P_{\text{port2}}$$

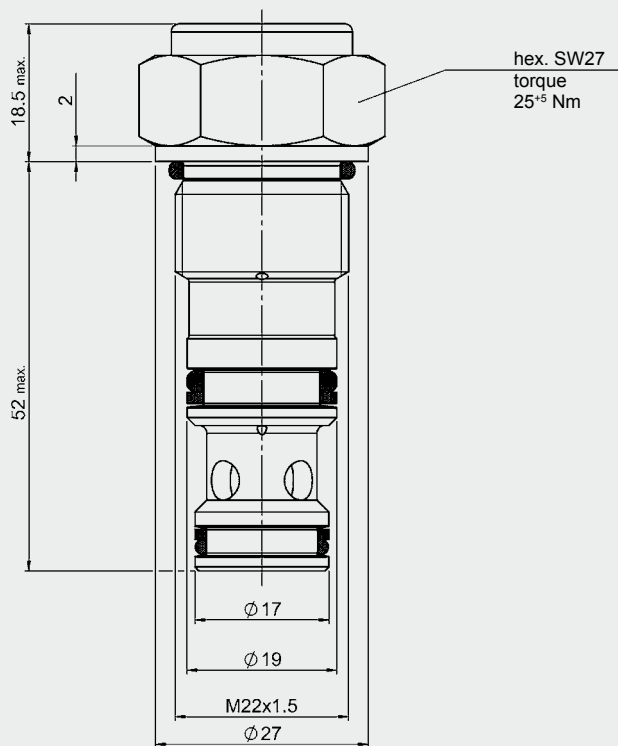
## FEATURES

- Main application is to prevent uncontrolled movement or creeping of loaded cylinders and also to isolate sections of the system
- External surfaces zinc-plated and corrosion proof
- Hardened and ground internal valve components to ensure minimal wear and to extend service life
- Low pressure drop due to CFD optimized flow path
- Consumer is held in position with minimum leakage

## SPECIFICATIONS

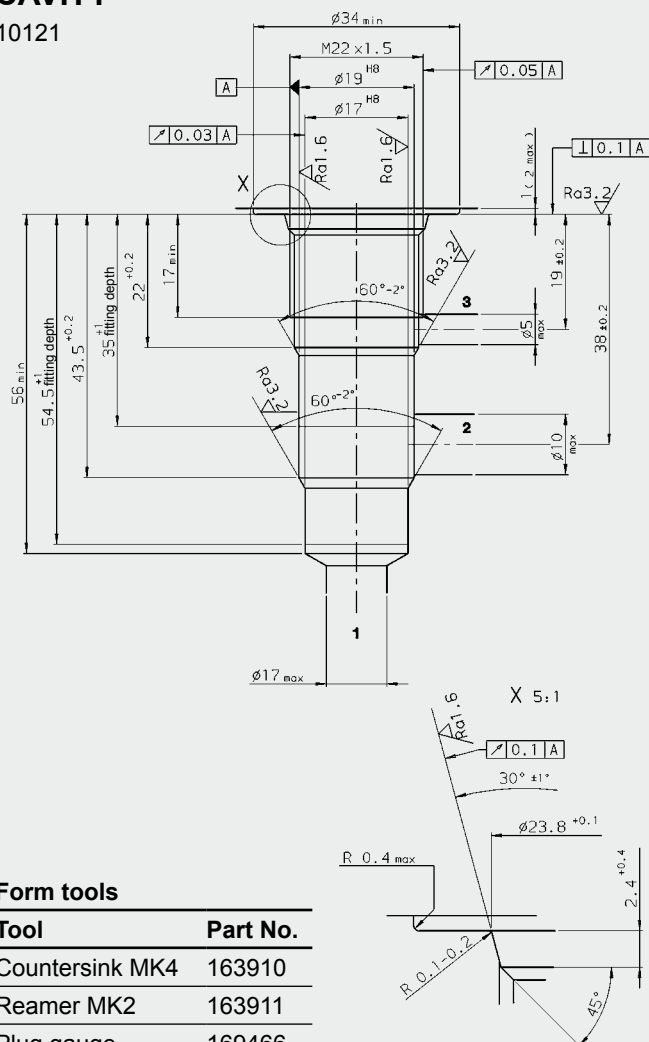
Operating pressure:	max. 350 bar
Nominal flow:	80 l/min
Pilot ratio:	$\varphi = 3.5$
Leakage:	Leakage-free
Media operating temperature range:	min. -20 °C to max. +100 °C
Ambient temperature range:	min. -20 °C to max. +100 °C
Operating fluid:	Hydraulic oil to DIN 51524 Part 1 and 2
Viscosity range:	min. 7.4 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 d:	150 years (see "Conditions and instructions for valves" in brochure 5.300)
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 +120 °C) Back-up rings: PTFE
Cavity:	10121
Weight:	0.145 kg

## DIMENSIONS



## CAVITY

10121



### Form tools

Tool	Part No.
Countersink MK4	163910
Reamer MK2	163911
Plug gauge	169466

## MODEL CODE

RP 10121 - 01 X

**Basic model** \_\_\_\_\_  
Check valve, pilot-to-open

**Cavity** \_\_\_\_\_  
10121 = 3-way, metric

**Type** \_\_\_\_\_  
01 = standard, surface phosphated,  
seals FKM  
10 = surface phosphated, seals NBR,  
with O-ring on control piston  
12 = with pilot and drain bores  
20 = surface phosphated, seals NBR,  
with O-ring on control piston,  
cracking pressure 2 bar

**Series** \_\_\_\_\_  
(to be determined by manufacturer)

### Standard models

Model code	Part No.
RP10121-01X	710006
RP10121-10X	717571
RP10121-12X	3011826
RP10121-20X	3075560

Other models on request

### Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
R10121-01X-01	395236	Steel, zinc-plated	G1/2 G1/4	420 bar
R10121-01X-02	395237	Steel, zinc-plated	M 22x1.5 M 14x1.5	420 bar

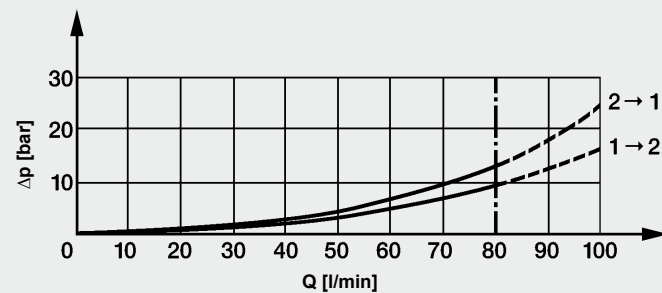
Other housings on request

### Seal kits

Code	Part No.
SEAL KIT RP10121-XX0...FKM	560835

## PERFORMANCE

Measured at  $v = 72 \text{ mm}^2/\text{s}$ ,  $T_{\text{oil}} = 30 \text{ }^\circ\text{C}$



### 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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