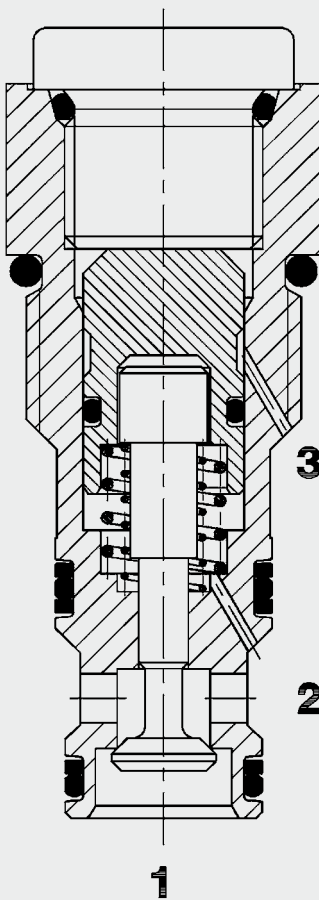


## Check Valve Poppet Type, Pilot-to-Open Direct-Acting SAE-10 Cartridge – 420 bar RP10A-01

### FUNCTION



The pilot-to-open check valve RP10A 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 pressure across port 1 and 2.

The following applies:  $p_{\text{control}} = \frac{p_{\text{port 1}} - p_{\text{port 2}}}{\phi} + p_{\text{port 2}}$

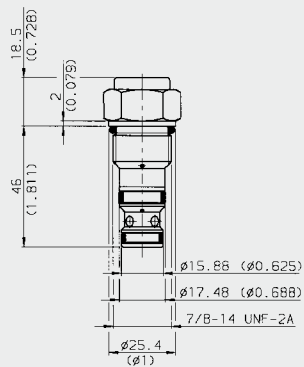
### FEATURES

- 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
- Spring return at pilot stage for safe valve operation
- Quick response
- Low leakage design
- Optional sealed pilot

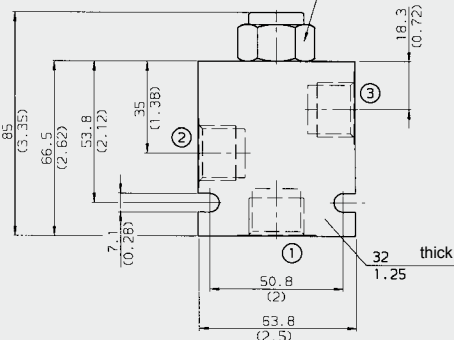
### SPECIFICATIONS

Operating pressure:	max. 420 bar
Nominal flow:	max. 60 l/min
Internal leakage:	0.1 cm <sup>3</sup> /min at 420 bar
Cracking pressure:	1.00 bar
Pilot ratio:	3 = 3:1 4 = 4:1
Media operating temperature range:	min. -30 °C to max. +100 °C
Ambient temperature range:	min. -30 °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 <sub>d</sub>	150 years (see "Conditions and instructions for valves" in brochure 5.300)
Installation:	No orientation restrictions
Materials:	Valve body: free-cutting steel Piston: hardened and ground steel Seals: NBR (standard) FKM (optional, media temperature range -20 °C to +120 °C) Back-up rings: PTFE
Cavity:	FC10-3
Weight:	0.14 kg

## DIMENSIONS



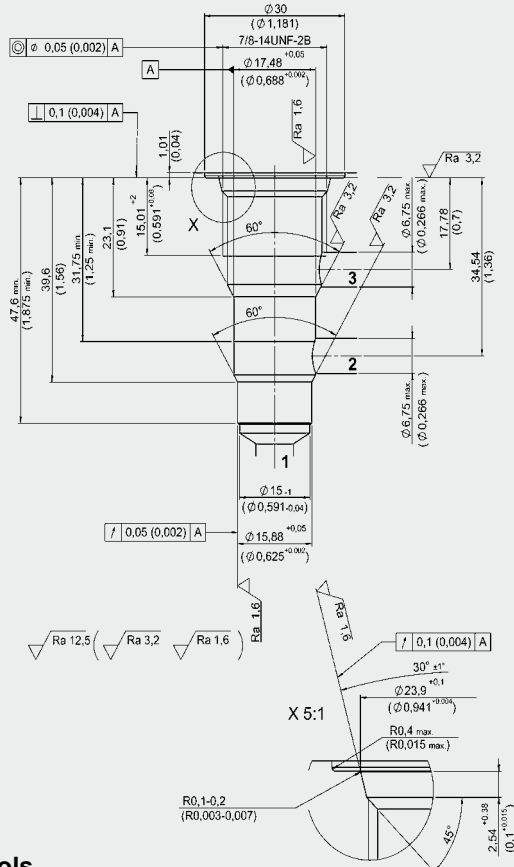
hex. 1"  
torque  
47 - 54 Nm



millimeter (inch)  
subject to technical modifications

## CAVITY

FC10-3



## Form tools

Tool	Part No.
Countersink FC10-3	176282
Reamer FC10-3	176283

millimeter (inch)  
subject to technical modifications

## MODEL CODE

**RP10A-01 - C - NS - 15 - 3**

Basic model

Check valve UNF

Body and ports\*

C = cartridge only

SB4 = G1/2 ports, steel body

AB4 = G1/2 ports, aluminium body

Seals

N = NBR

NS = NBR with piston seal

V = FKM

VS = FKM with piston seal

Cracking pressure

1 bar (15 PSI)

Pilot ratio

3 = 3:1

4 = 4:1

## Standard models

Model code	Part No.
RP10A-01-C-N-15-3	561206
RP10A-01-C-N-15-4	561208
RP10A-01-C-NS-15-3	561207
RP10A-01-C-NS-15-4	561209

## \*Standard in-line bodies

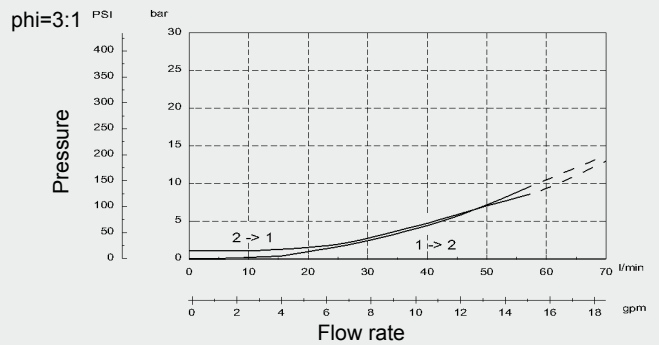
Code	Part No.	Material	Ports	Pressure
FH103-SB4	3037697	Steel, zinc-plated	G1/2	420 bar
FH103-AB4	3038092	Aluminium, clear anodized	G1/2	210 bar

## Seal kits

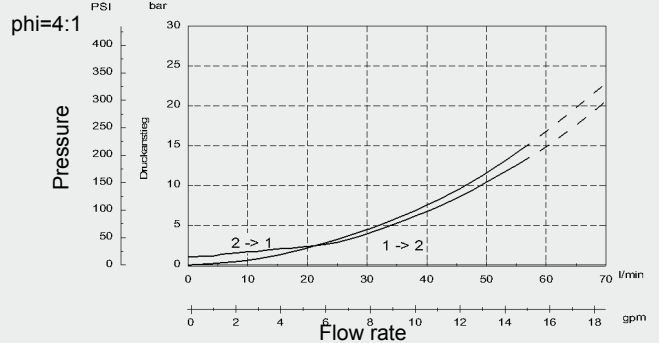
Code	Material	Part No.
FS103-N Seal kit	NBR	3071274
FS103-V Seal kit	FKM	3049443

## PERFORMANCE

Measured at  $v = 34 \text{ mm}^2/\text{s}$ ,  $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



Measured at  $v = 34 \text{ mm}^2/\text{s}$ ,  $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



## 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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