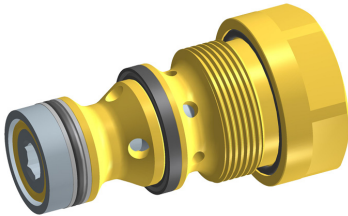


Cartridge Check Valve, Size 10

$Q_{\max} = 120 \text{ l/min}$, $p_{\max} = 350 \text{ bar}$
Pilot operated, two-stage
Series REPB...



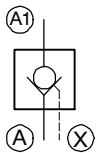
- Seated pilot stage
- With internal pilot drain
- Zero-leakage shut-off in one direction
- High flow rates
- All exposed parts with zinc-nickel plating
- Can be fitted in a line-mounting body

1 Description

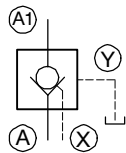
These pilot-operated check valves are size 10, two stage, high performance screw-in cartridges with an M32 x 1.5 mounting thread. The conical-seat design ensures that the cartridges are leak-tight from A1 → A. The check function can be overridden by applying a suitable pilot pressure at port X. In the A → A1 direction, flow can pass freely through the valve (opening pressure in A > 2 bar). These cartridge check valves can be used where the pressure in the A line is a maximum of 20 % of the pilot pressure in X (the A-line pressure acts on the rear side of the pilot piston, opposing the pilot pressure X acting on the front side). If this condition

cannot be met, series REPYB-... cartridge check valves with external leakage-oil drain must be used. These screw-in cartridges are predominantly used in certain mobile and industrial applications to maintain the position of loaded actuators (e.g. cylinders or motors) after the pump pressure has been disconnected. All external parts of the cartridge are zinc-nickel plated to DIN 50 979 and are thus suitable for use in the harshest operating environments. If you intend to manufacture your own cavities or are designing a line-mounting installation, please refer to the section "Related data sheets".

2 Symbol



REPB-10...



REPYB-10...
(Data sheet 400-P-456501-E)

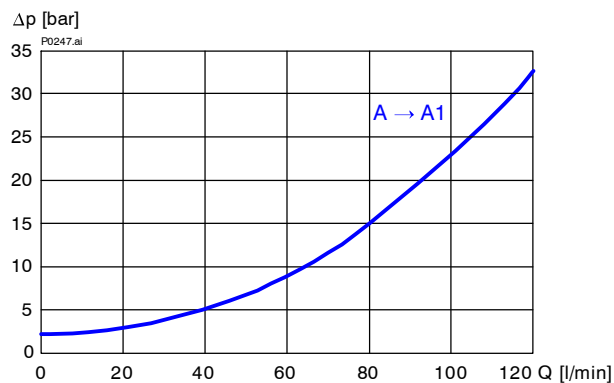
3 Technical data

General characteristics	Description, value, unit
Designation	cartridge check valve
Design	pilot operated, two-stage
Mounting method	screw-in cartridge M32 x 1.5
Tightening torque	200 Nm ± 10 %
Size	size 10, cavity type RC
Weight	0.35 kg
Mounting attitude	unrestricted
Ambient temperature range	-25 °C ... +80 °C

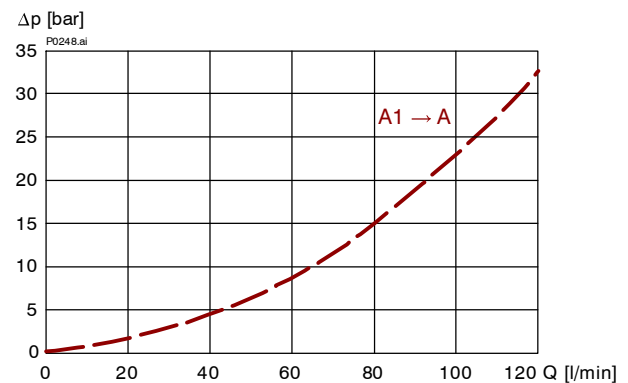
Hydraulic characteristics	Description, value, unit
Maximum operating pressure	350 bar
Maximum flow rate	120 l/min
Flow direction	shut-off direction A1 → A leak-free, A → A1 check-valve function (opening pressure in A > 2 bar)
Pilot pressure at the X port	2...65 bar (permissible ...350 bar)
Opening pressure	> 2 bar (A → A1)
Geometric opening ratio	1 : 6.5
Hydraulic fluid	HL and HLP mineral oil to DIN 51 524; for other fluids, please contact BUCHER
Hydraulic fluid temperature range	-25 °C ... +80 °C
Viscosity range	10...650 mm ² /s (cSt), recommended 15...250 mm ² /s (cSt)
Minimum fluid cleanliness Cleanliness class to ISO 4406 : 1999	class 20/18/15

4 Performance graphs [measured with oil viscosity 33 mm²/s (cSt)]

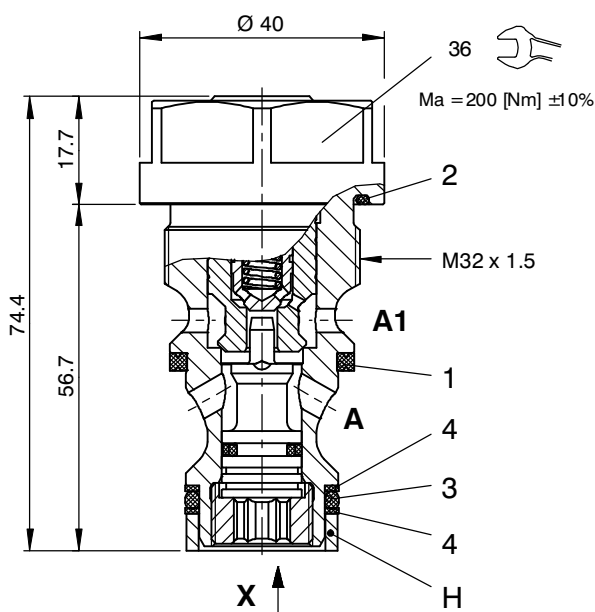
$\Delta p = f(Q)$ Pressure drop - Flow rate characteristic



$\Delta p = f(Q)$ Pressure drop - Flow rate characteristic



5 Dimensions & sectional view



IMPORTANT!

To install the cartridge, first insert the sealing components items H (sealing sleeve), 4 (backup ring), 3 (O-ring) and 4 (backup ring) in that order into the cavity, then screw the cartridge - complete with sealing components items 1 and 2 - into the cavity.

Pilot pressure in port X:

$$p_X = 0.16 p_{A1} + p_{A+2} \text{ [bar]}$$

6 Installation information



IMPORTANT!

To install the cartridge, first insert the sealing components items H (sealing sleeve), 4 (backup ring), 3 (O-ring) and 4 (backup ring) in that order into the cavity, then screw the cartridge - complete with sealing components items 1 and 2 - into the cavity.



IMPORTANT!

When fitting the cartridges, use the specified tightening torque. No adjustments are necessary, since the cartridges are set in the factory.



ATTENTION!

Only qualified personnel with mechanical skills may carry out any maintenance work. Generally, the only work that should ever be undertaken is to check, and possibly replace, the seals. When changing seals, oil or grease the new seals thoroughly before fitting them.

Seal kit NBR no. DS-302-N ¹⁾

Item	Qty.	Description
1	1	Seal ring \varnothing 30,15 x 24,55 x 3,05
2	1	O-ring no. 117 \varnothing 20,29 x 2,62 N90
3	1	O-ring no. 026 \varnothing 31,47 x 1,78 N90
4	2	Backup ring \varnothing 20,60 x 2,20 x 1,00 FI0751



IMPORTANT!

1) Seal kit with FKM (Viton) seals no. DS-302-V

7 Ordering code

R E P B - 10 - 1

- R = cartridge check valve
- E = pilot operated to open
- P = cartridge design
- A ... Q = standard model - see relevant data sheets
- Z ... R = special features - please consult BUCHER
- 10 = nominal size 10
- (blank) = NBR (Nitrile) seals (standard)
- V = FKM (Viton) seals (special seals - please contact BUCHER)
- 1 ... 9 = design stage (omit when ordering new units)

8 Related data sheets

Reference	(Old no.)	Description
400-P-040011	(i-32)	The form-tool hire programme
400-P-060151	(i-45.8)	Cavity type RC
400-P-740201	(G-24.50)	Line-mounting body, type RC-12 (G 1/2")
400-P-456501	(R-7)	Cartridge check valve, type REPYB... (with external-drain)

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Classification: 430.315.345.305.320.325