

Pressure-Reducing Cartridge, Size 5

 Q_{max} = 40 l/min, p_{max} = 315 bar Seated design, direct acting, with manual adjustment Series DDRA-5...



- Compact construction for cavity type
- AL 3/4-16 UNF to Bucher standard
- 4 pressure ranges available
- Excellent stability over the whole pressure and flow range
- Responsive pressure adjustment
- Available with hand-knob or tamper-proof cap
- All exposed parts with zinc-nickel plating
- Can be fitted in a line-mounting body

1 Description

Series DDRA-5... screw-in cartridges are direct acting, seated pilot pressure-reducing valves. They are available in sizes 5 and have a 3/4-16 UNF mounting thread. The straightforward design delivers an outstanding price/performance ratio and good pressure/flow ratings. 4 ressure ranges are available in order to obtain precise pressure settings over the whole of the required pressure range. These

pressure-reducing cartridges are predominantly used in mobile and industrial applications for reducing a system pressure. 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



3 Technical data

General characteristics	Description, value, unit
Designation	pressure-reducing cartridge
Design	seated design, direct acting, with manual adjustment
Mounting method	screw-in cartridge 3/4-16 UNF
Tightening torque	50 Nm ± 10 %
Size	nominal size 5, cavity type AL
Weight	0.20 kg
Mounting attitude	unrestricted
Ambient temperature range	-25 °C +80 °C

Hydraulic characteristics		Description, value, unit
Maximum operating pressure	port 2 port 1	250 bar 315 bar
Maximum flow rate		40 l/min

Reference: 400-P-260301-EN-00

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Hydraulic characteristics		Description, value, unit
Nominal pressure ranges		60 bar, 100 bar, 160 bar, 250 bar
Pressure adjustment range	- 250 bar - 160 bar - 100 bar - 60 bar	0 250 bar (1 turn ≅ 40 bar) 0 160 bar (1 turn ≅ 30 bar) 0 100 bar (1 turn ≅ 20 bar) 0 60 bar (1 turn ≅ 15 bar)
Leakage flow rate		< 0,2 cm ³ /min (max. 5 drops/min) with oil viscosity 33 mm ² /s (cSt)
Flow direction		$1 \rightarrow 2$, see symbol
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		10650 mm ² /s (cSt), recommended 15250 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)

p = f(Q) Pressure - Flow rate characteristic [$p_N = 60$ bar] p_2 [bar]



p = f(Q) Pressure - Flow rate characteristic [$p_N = 160$ bar] p_2 [bar]



p = f(Q) Pressure - Flow rate characteristic [$p_N = 100$ bar] p_2 [bar]









5 Dimensions & sectional view



With hand-knob adjuster "H"



Adjusting screw with tamper-proof cap (order separately in plain language)



Seal kit NBR no. DS-450-N¹⁾

Item	Qty.	Description		
1	1	O-ring	Ø 20,0 x 1,5	V83
2	1	O-ring no. 017	Ø 17,17 x 1,78	N90
3	1	O-ring no. 014	Ø 12,42 x 1,78	N90
4	2	Backup ring	Ø 10,70 x 1,45 x	1,0 FI0751

IMPORTANT!

1) Seal kit with FKM (Viton) seals, no. DS-450-V

IMPORTANT!

E venting the spring chamber to the atmosphere

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6 Installation information

IMPORTANT!

When fitting the cartridges, use the specified tightening torque. Set the required pressure with the adjusting screw (s_1) . After you have set the valve, lock the adjusting screw with the lock nut.



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ATTENTION!

Ordering code

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.

IMPORTANT!

Valve settings can be sealed by fitting the tamperproof cap. To fit the cap, the snap ring $^{2)}$ has to be removed. Subsequent adjustment is only possible by destroying the tamper-proof cap.



8 Related data sheets

Reference	(Old no.)	Description
400-P-040011	(i-32)	The form-tool hire programme
400-P-040171	(i-33.10)	Cavity type AL
400-P-720101	(G-4.10)	Line-mounting body, type GALA (G 3/8")

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