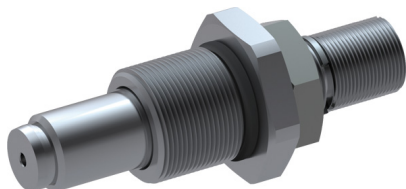


# Throttle and Shut-off Cartridges, Size 10

$Q_{\max} = 140 \text{ l/min}$ ,  $p_{\max} = 350 \text{ bar}$

Semi-cartridge / screw-in cartridge, seat-valve design

Series MDPAA... / MDPCA



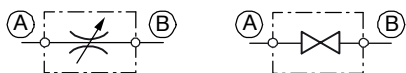
- Throttle and shut-off function in both directions
- Compact design for cavity types CA or DC to Bucher standards
- Leak-free shut-off function
- For space-saving direct mounting in manifold blocks or housings
- Available with adjusting screw or hand-knob
- All exposed parts with zinc-nickel plating
- Can be fitted in a line-mounting body

## 1 Description

Series MDPAA... throttle/shut-off valves are size 10, high performance screw-in cartridges with an M18x1.5 mounting thread. With this semi-cartridge design, the valve seat is formed by the bottom part of the stepped cavity. In series MDPCA..., however, the semi-cartridge is fitted in a cartridge body with an M24x1.5 mounting thread, and the valve seat is part of the cartridge body. Due to the conical seat design, the cartridges are leak-free in both directions (A → B / B → A) in the closed position (drain valve function). Both flow directions are also possible when functioning as a

throttle cartridge. Pressure (the pump) should preferably be connected to port A. The flow is set, or the valve is shut, by means of an adjusting screw or a hand-knob. Please note: above approximately 150 bar, adjustment by hand-knob becomes increasingly difficult. In this situation we recommend that you use an Allen key (6 A/F). The throttle and shut-off cartridges (drain valves) can be used in manifold blocks and line-mounting bodies. 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.

## 2 Symbol



## 3 Technical data

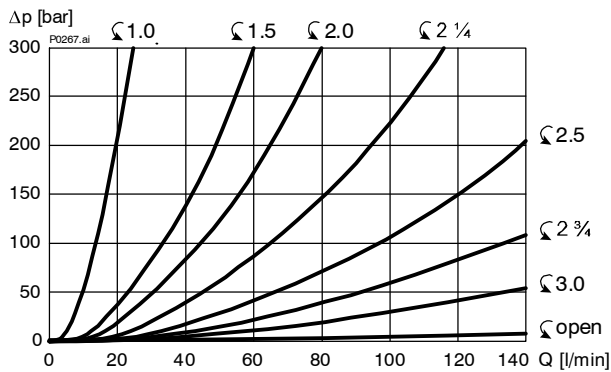
General characteristics		Description, value, unit
Designation		throttle and shut-off cartridge
Design		semi-cartridge / screw-in cartridge, seat-valve design
Mounting method	- MDPAA... - MDPCA...	screw-in cartridge M18 x 1.5 (semi-cartridge) screw-in cartridge M24 x 1.5
Tightening torque		70 Nm ± 10 %
Size		nominal size 10 mm, cavity types CA or DC to Bucher standards
Weight	- MDPAA... - MDPCA...	0,10 kg 0,19 kg
Mounting attitude		unrestricted
Ambient temperature range		-25 °C ... +80 °C

Hydraulic characteristics	Description, value, unit
Maximum operating pressure	350 bar
Maximum flow rate	140 l/min
Flow direction	both directions, but preferably A → B
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 <sup>2</sup> /s (cSt), recommended 15...250 mm <sup>2</sup> /s (cSt)
Minimum fluid cleanliness Cleanliness class to ISO 4406 : 1999	class 20/18/15

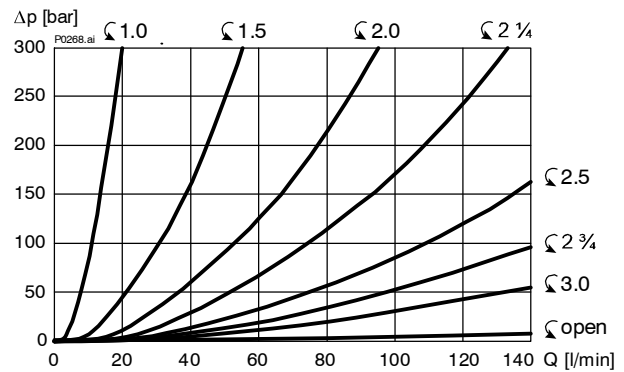
## 4 Performance graphs

measured with oil viscosity 33 mm<sup>2</sup>/s (cSt)

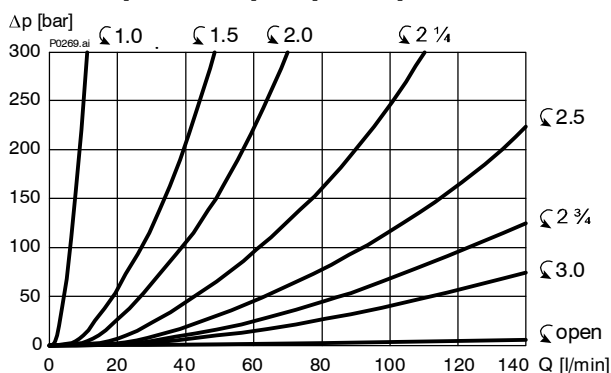
$\Delta p = f(Q)$  Pressure drop - Flow rate characteristic  
[MDPAA... ] [A → B]



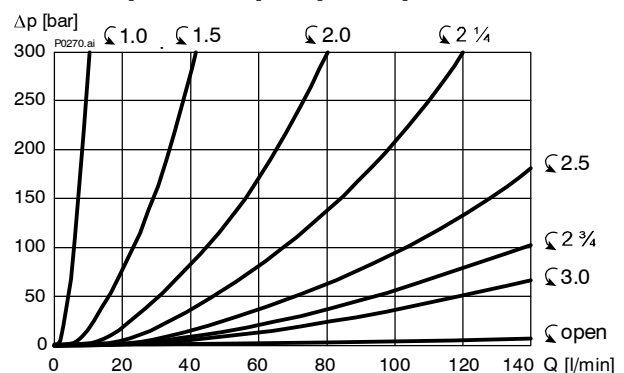
$\Delta p = f(Q)$  Pressure drop - Flow rate characteristic  
[MDPAA... ] [B → A]



$\Delta p = f(Q)$  Pressure drop - Flow rate characteristic  
[MDPCA... ] [A → B]

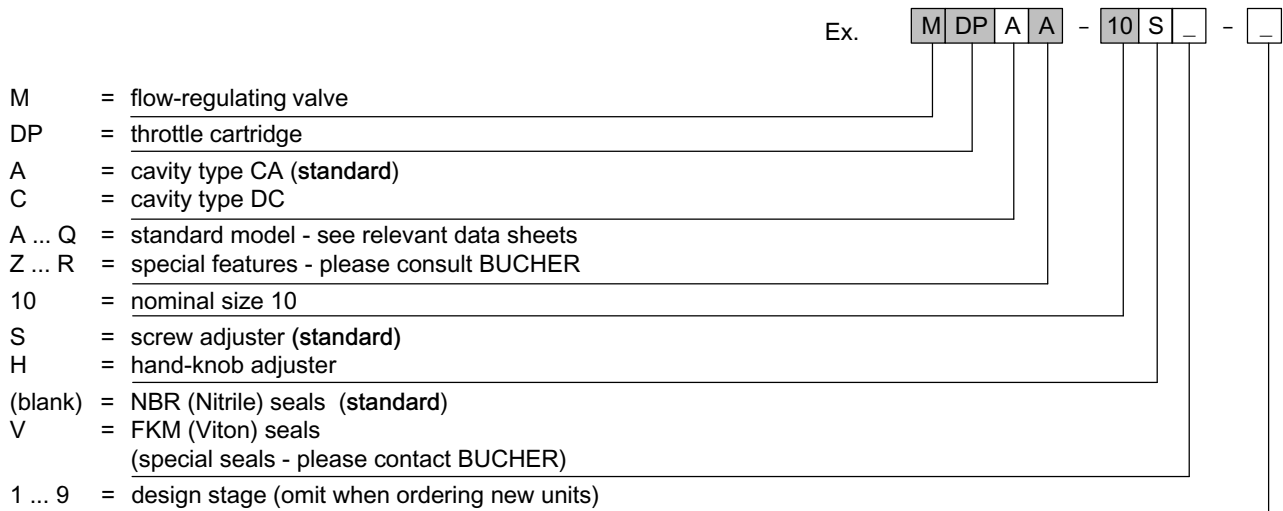


$\Delta p = f(Q)$  Pressure drop - Flow rate characteristic  
[MDPCA... ] [B → A]





### 7 Ordering code



### 8 Related data sheets

Reference	(Old no.)	Description
400-P-040011	(i-32)	The form-tool hire programme
400-P-060101		Cavity type CA
400-P-060111		Cavity type DC
400-P-740101	(G-24.20)	Line- and manifold-mounting body, type DC-12 (G 1/2")

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