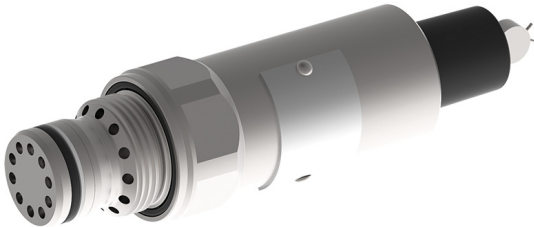


# Pressure-Relief Cartridge Valve, Size 10

$Q_{max} = 100 \text{ l/min}$ ,  $p_{max} = 330 \text{ bar}$

Leak-proof shut-off, CE type-approved acc. Pressure Equipment Directive 2014/68/EU  
Series DDPSVA-1-10...



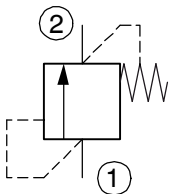
- Leak-proof shut-off from 1 → 2
- Extremely low leakage
- CE type-approved according Pressure Equipment Directive 2014/68/EU
- Security-sealed in the factory
- Compact design with M30x1.5 screw-in thread
- High flow rates
- All exposed parts with zinc-nickel plating

## 1 Description

Series DDPSVA-1-10 ... safety pressure-relief cartridges are size 10 valves with a M30x1.5 screw-in thread. They are direct acting with a seated design and feature extremely low leakage. These safety valves comply with the Pressure Equipment Directive 2014/68/EU and are set at the required response pressure and security-sealed. The preferred response pressures are 330, 315 and 100 bar and CE type-approved. Additional response pressures are available on application. These safety valves are typically used in hy-

draulic systems with pressure accumulators or pressure vessels. They safeguard the maximum allowable operating pressure by relieving oil from the protected line 1 to tank line 2. At  $Q_{max}$  (100 l/min), the back pressure in the tank line must not exceed 3 bar. All external parts of the cartridge are zinc-nickel plated according to DIN EN ISO 19 598 and are thus suitable for use in the harshest operating environments. If you intend to manufacture your own cavities, please refer to chapter 6 "cavity".

## 2 Symbol



## 3 Technical data

General characteristics	Description, value, unit
Designation	pressure-relief cartridge valve
Design	leak-proof shut-off, CE type-approved according Pressure Equipment Directive 2014/68/EU
Mounting method	screw-in cartridge M30 x 1.5 – see chapter 6
Tightening torque	160 Nm $\pm$ 5 %
Size	nominal size 10
Weight	0.66 kg
Mounting attitude	unrestricted
Ambient temperature range	-30 °C ... +70 °C

Hydraulic characteristics	Description, value, unit
Maximum operating pressure - port 2 - port 1	3 bar <sup>1)</sup> 330 bar
Maximum flow rate	100 l/min
Response pressure	80 ... 330 bar
Flow direction	1 → 2, see symbols
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	12...230 mm <sup>2</sup> /s (cSt)
Minimum fluid cleanliness Cleanliness class to ISO 4406 : 1999	class 21/19/16



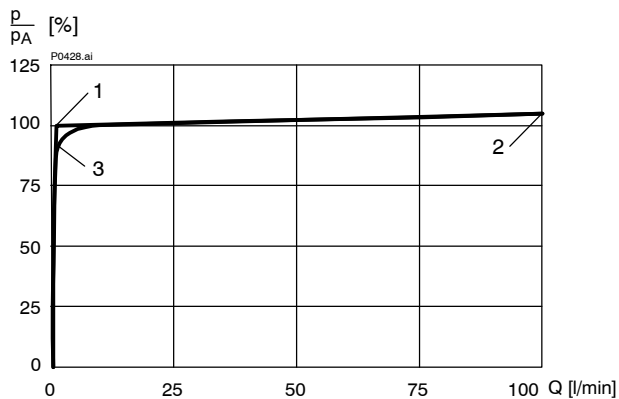
### ATTENTION!

<sup>1)</sup> Any tank pressure acting at port 2 is additive to the pressure setting at the port 1.

## 4 Performance graphs

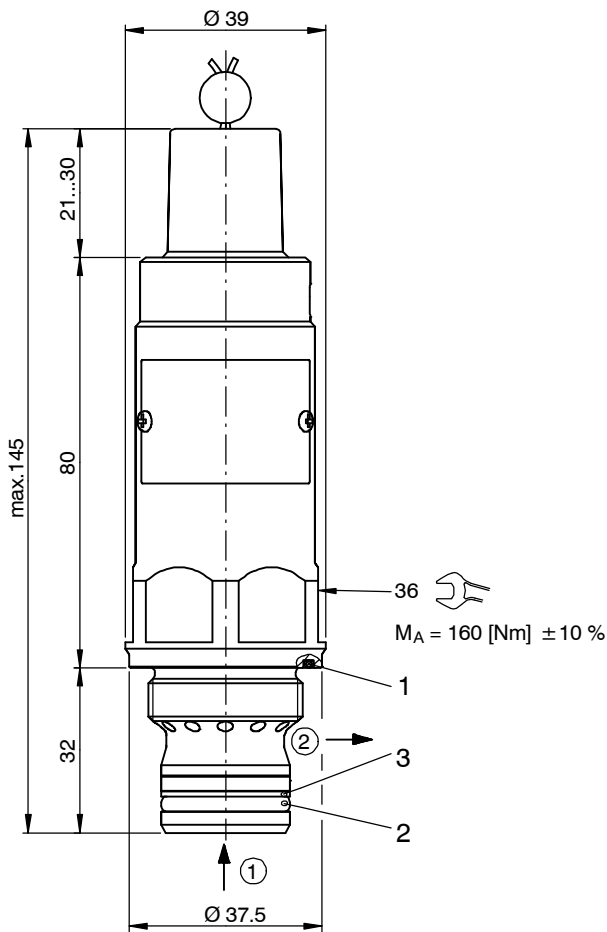
measured with oil viscosity 33 mm<sup>2</sup>/s (cSt)

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

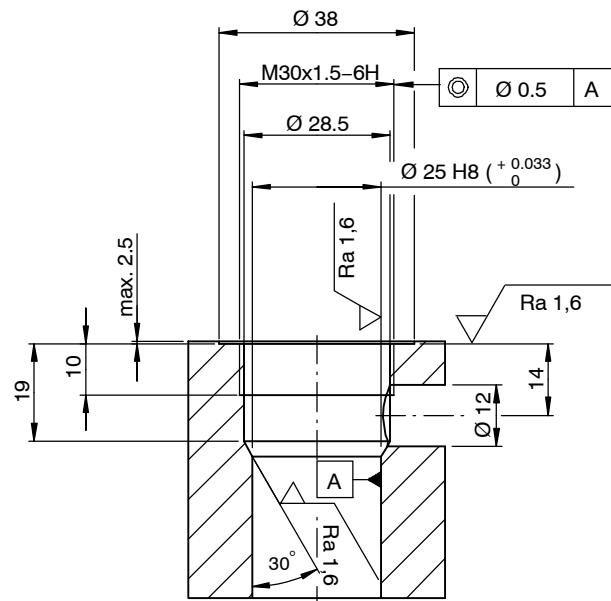


- 1.) Response pressure  $p_A$
- 2.) Relieving pressure  $p_{ab}$  (maximum 10 % above  $p_A$ )
- 3.) Closing pressure  $p_s$  (maximum 15 % below  $p_A$ )

## 5 Dimensions & sectional view



## 6 Cavity



Cavity is manufactured with conventional tools (no form-tools available).



### IMPORTANT!

We strongly recommend that pilot drilling, boring, reaming and cavity thread-cutting are performed in one setup.

## 7 Installation information



### IMPORTANT!

When fitting the cartridges, use the specified tightening torque and refer to the instruction manual.



### 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.



### IMPORTANT!

These safety pressure-relief cartridges are security-sealed in the factory. If the sealing wire is damaged, the safety of the cartridges can no longer be guaranteed.

### Seal kit NBR no. DS-478-N <sup>2)</sup>

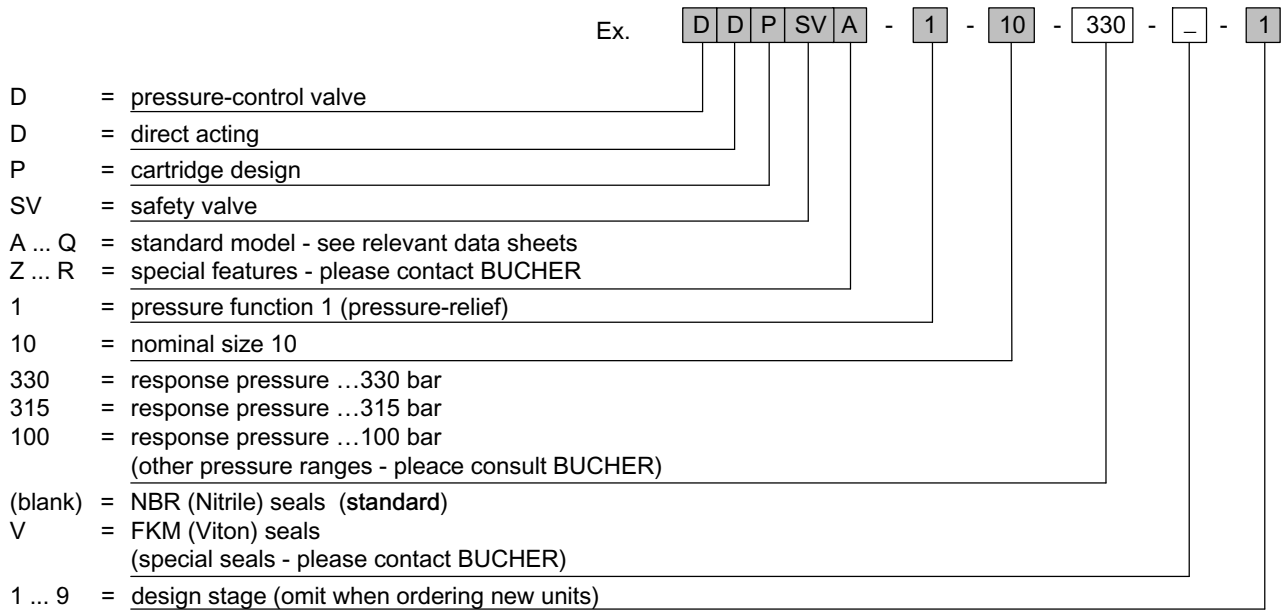
Item	Qty.	Description
1	1	O-ring no. 026 $\varnothing 31,47 \times 1,78$ N90
2	1	O-ring no. 117 $\varnothing 20,29 \times 2,62$ N90
3	1	Backup ring $\varnothing 19,90 \times 2,20 \times 1,00$ FI0751



### IMPORTANT!

<sup>2)</sup> Seal kit with FKM (Viton) seals, no. DS-478-V

### 8 Ordering code



### 9 Related data sheets

Reference	Description
...	Certificate of conformity to notified body (according to module F) – on request

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Classification: 430.305.300.305.320.360