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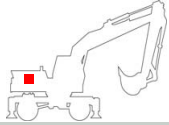
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## 1 Product Details

### 1.1 Application

The pressure relief valves ensure hydraulic systems and / or protect consumers against overload.

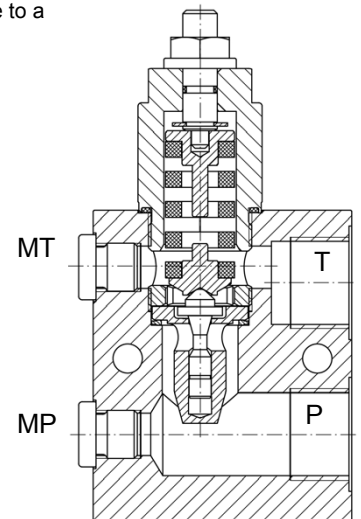
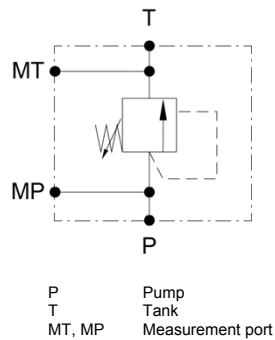
### 1.2 Recommended Installation



The circuit takes place in the bypass to the protected system or consumers.

### 1.3 Function

The valve is installed in bypass to the pressure line to the attachment and limits the maximum pressure to a mechanically adjustable level.



### 1.4 Features

- direct operated
- hardened valve seats and cones
- damped
- large adjustment

## 2 Technical Data

Criteria	Unit	Value
Installation position		any
Weight (without case)	kg	Depending on the size
Maximum input pressure (P, A)	bar	420
Adjustable pressure	bar	20-70, 100-200, 150-300, 200-420
Maximum Tankpressure (T)	bar	10
Maximum input flow rate (P)	l/min	60
Hydraulic fluid		Mineral oil (HL, HLP) conforming with DIN 51524, other fluids upon request
Hydraulic fluid pressure range	°C	-20 bis +80
Ambient temperature	°C	< +50
Viscosity range	mm <sup>2</sup> /s	2,8 - 500
Contamination grade		Filtering conforming with NAS 1638, class 9, with minimum retention rate $\beta_{10} \geq 75$
Hysteresis	%	$\geq 5$

## 3 Ordering Information

### 3.1 Type Code

PRV	1DI					N
00	01	02	03	04	05	07
00	Product group	Pressure relief valves				<b>PRV</b>
01	Variant	Directly operated, damped				<b>1DI</b>
02	Port / Case	Connecting block G3/4 Manifold SAE1" (6000PSI)				<b>03E</b> <b>05E</b>
03	Input flow rate $Q_{max}$ .	60 l/min				<b>060</b>
04	Max. permissible pressure $P_{max}$ .	<b>70 bar</b> (adjustable range 20-70bar) <b>200bar</b> (adjustable range 50-200bar) <b>300bar</b> (adjustable range 150-300bar) <b>420bar</b> (adjustable range 200-420bar)				<b>070</b> <b>200</b> <b>300</b> <b>420</b>
05	Seal	NBR, temperatur range -25°C bis +80°C				<b>N</b>

XXX – Permanent preset characteristics    XXX – Characteristics selectable by customer  
■ Available    ○ Not available

### 3.2 Aktuell verfügbare Versions currently available

The versions listed below are available as standard. Further versions as part of the options given on the type code can be configured upon request.

Designation	Type Code	Part Nr.
PRV -1DI SAE1" 60LPM 420BAR MAN200 NBR	PRV -1DI -05E -60 -420 -N	417.063.404.9
PRV -1DI G3/4 60LPM 420BAR MAN200 NBR	PRV -1DI -03E -60 -420 -N	413.001.026.9

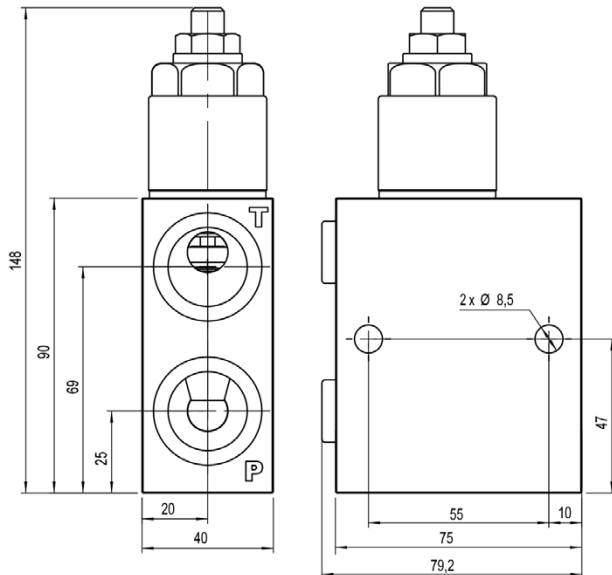
## 4 Description of Characteristics in Accordance with Type Code

### 4.1 Characteristic 1: Variant PRV-1DI

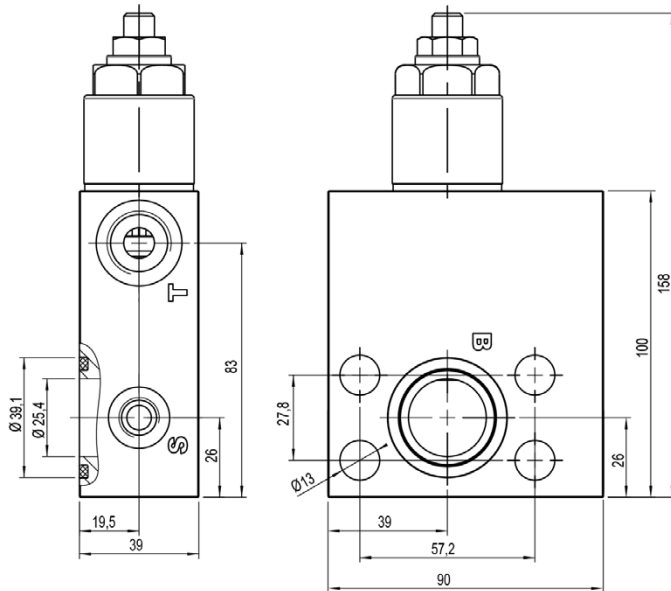
The pressure relief valves are directly operated, damped

### 4.2 Characteristic 2: Port / Case

#### 4.2.1 Variant 03E: connecting block G3/4

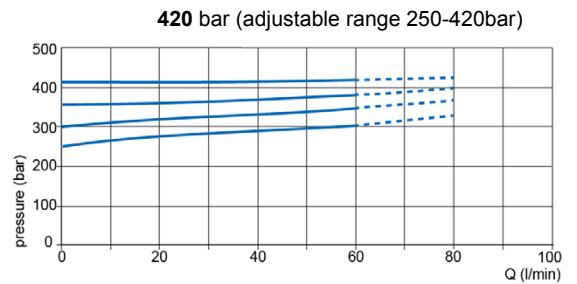
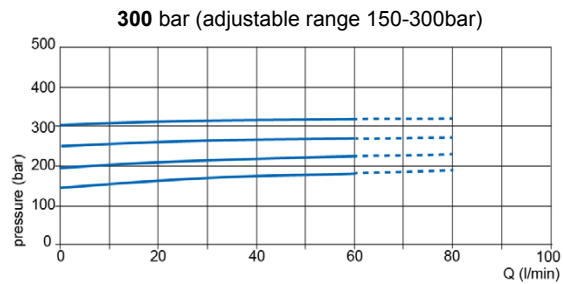
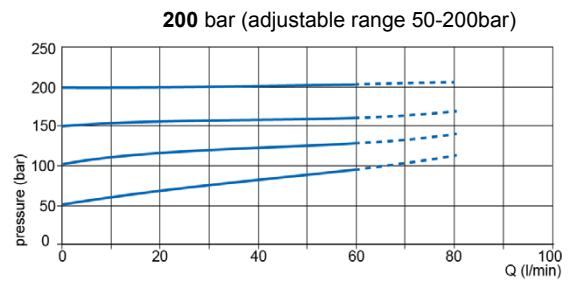
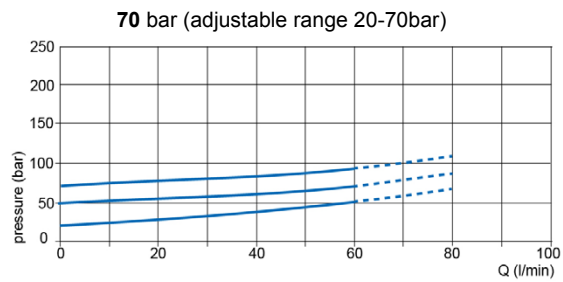


#### 4.2.2 Variant 05E: manifold SAE1" (6000PSI)



#### 4.3 Variant 3: input flow rate

Valve characteristic: flow behavior P – T



#### 4.4 Variant 4: Max. permissible pressure

The maximum allowable pressure results from the spring.

- 70 bar (adjustable range 20-70bar)
- 200bar (adjustable range 50-200bar)
- 300bar (adjustable range 150-300bar)
- 420bar (adjustable range 200-420bar)

#### 4.5 Variant 5: Activation

Pressure Setting mechanical



**CAUTION:** No further than X mm Unscrew  
When adjusting from the housing. ( see 5.4 Setting the pressure relief)

#### 4.6 Variant 7: Seal

NBR, temperature range -25°C bis +80°C

## 5 Installation

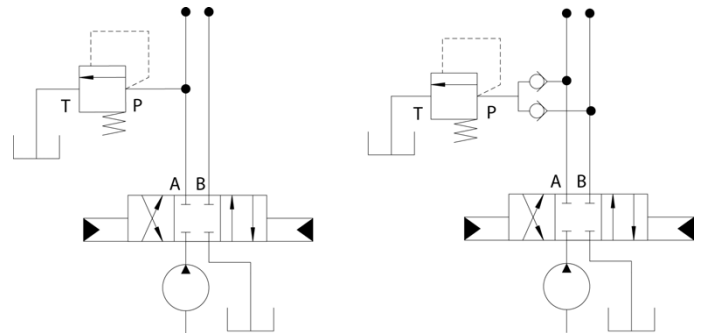
### 5.1 General information

- Observe all installation and safety information of the construction machine manufacturer.
- Only technically permitted changes are to be made on the construction machine.
- The user has to ensure that the device is suitable for the respective application.
- Application exclusively for the range of application specified by the manufacturer.
- Before installation or deinstallation, the hydraulic system is to be depressurized.
- Settings are to be made by qualified personnel only.
- Opening is only to be performed with the approval of the manufacturer, otherwise the warranty is invalid.

### 5.2 General Instructions

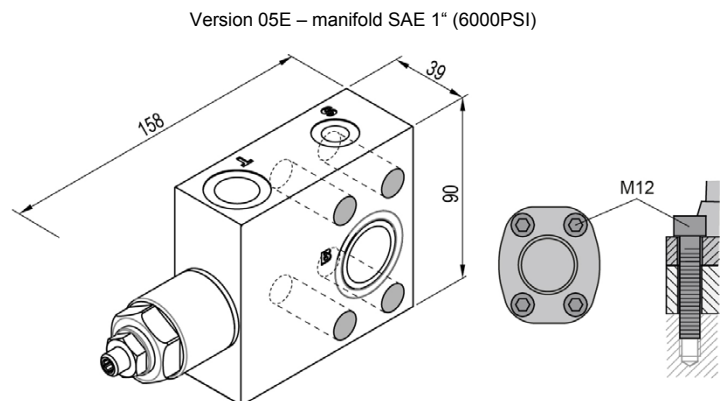
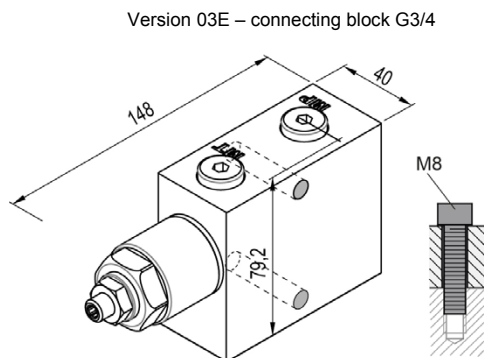


**NOTE:** Enclosed proposed resolution is not always guaranteed. The functionality and the technical details of the construction machine must be checked. It must be ensured that the machinery for the operation of the attachment can be technically and safely suitable. See notes under Characteristic Case.



### 5.3 Installation – space

- Observe connection names.
- Note strength class and tightening the mounting screws.
- Do not damage seals and flange surface.
- Its hydraulic system must be vented
- Pay attention to the flatness of the support member
- Ensure a tension-free assembly
- Ensure sufficient free space for setting and installation work



5.4 Setting the pressure relief



**ATTENTION**

During operation, the valve can heat up to the oil temperature.



**CAUTION**

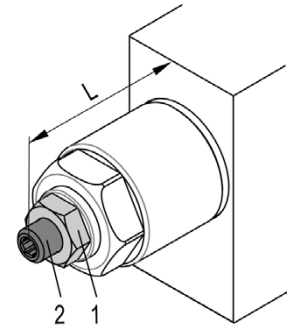
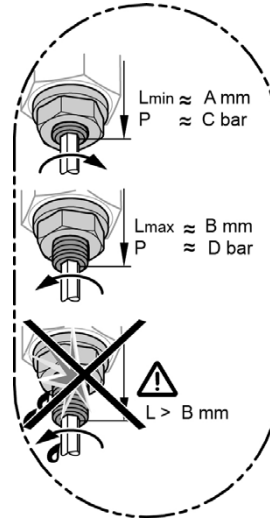
Do not unscrew the set-screws (2) more than **B** mm (see schedule) out of the housing. Do not make any settings while the flow control valve is under pressure.



**NOTE**

The counter-nut (1) is to be replaced after being used five times.

- a. Make sure that the valve is depressurized
- b. Undo the counter-nut (1)
- c. Adjust the maximum operating pressure of the attachment...  
 ... **Increase**: Turn the set-screw (2) to the right  
 ... **Decrease**: Turn the set-screw (2) to the left
- d. **Secure settings with a counter-nut (1)**

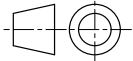


Max.permissible pressure P <sub>max.</sub>		A mm	B mm	C bar	D bar	1mm = bar
70 bar (adjustable range 20-70bar)	<b>70</b>	≈57	≈60	≈70	≈20	≈17
200bar (adjustable range 50-200bar)	<b>200</b>	≈56	≈60,5	≈200	≈50	≈34
300bar (adjustable range 150-300bar)	<b>300</b>	≈55	≈58,1	≈300	≈150	≈50
420bar (adjustable range 200-420bar)	<b>420</b>	≈59	≈61,2	≈420	≈250	≈80

## 6 Notes, Standards and Safety Instructions

### 6.1 General Instructions

- The views in drawings are shown in accordance with the European normal projection variant



- A comma ( , ) is used as a decimal point in drawings
- All dimensions are given in mm

### 6.2 Standards

The following standards must be observed when installing and operating the valve:

- DIN EN ISO 13732-1:2008-12, Temperatures on accessible surfaces

## 7 Accessories

Mounting screws:

Cap screws DIN912-8,8 - M12x50: 113.270.006.6

Cap screws DIN912-8,8 - M12x60: 113.275.006.6

Cap screws DIN912-8,8 - M8x50: 113.175.006.6

Cap screws DIN912-8,8 - M8x60: 113.180.006.6