

## 1 Product Details

The pressure relief valve PRV-DBU is a direct operated pressure relief valve that is designed to protect hydraulic actuators against burst or rupture. It may, due to improper connection of quick couplings, cause a hydraulic connection to be not existent or improper. If this affects the tank or drain line of the system, pressure in the connected device may arise so high, that a cylinder or motor will be destroyed. The pressure valve is constructed as a cartridge valve to be fitted in a G1/2 cavity.



When the set pressure is exceeded, the valve opens to the environment.

Caution: Small amounts of hydraulic fluid get in the environment. But this damage is minor compared to a damage caused by a destroyed cylinder / motor!

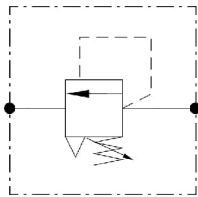
### Recommended Installation

The valve is either connected with the line where pressure intensification can occur (rod side of a cylinder) or with the drain line.

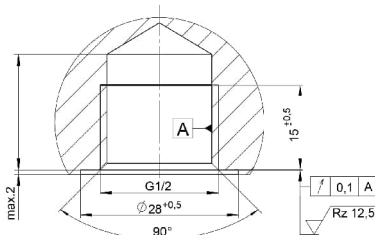
### Features

- Cartridge screwed into the stepped bore of different housings
- Small installation space
- Can be screwed in G1/2 cavities
- Seat valve design, leakage free
- Relief to environment

## 2 Technical Data



Installation position		any
surface protection		Zinc coated
Weight	kg	0,16
Maximum input pressure (P)	bar	550
Adjustable pressure	bar	High pressure applications 440 -550 bar, low pressure applications 20-21bar
Maximum Tankpressure (T)	bar	Relief to environment
Maximum input flow rate (P)	l/min	200 l/min for high pressure, 20 l/min for low pressure
Hydraulic fluid		Mineral oil (HL, HLP) conforming with DIN 51524, other fluids upon request
Hydraulic fluid pressure range	°C	-25 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



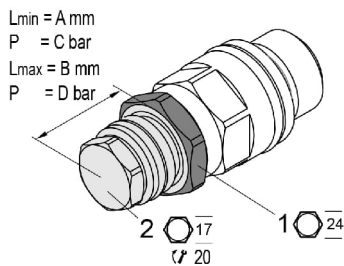
## 3 Stepped cavity 8.00003

The pilot-operated pressure relief valve is a cartridge device and is screwed into a stepped bore according WESSEL standard 8.00003 (G1/2).

## 4 Activation, Setting

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

CAUTION Do not unscrew the set-screws (2) more than B mm out of the housing (see scale). No settings may be done while the valve is pressurized.



- Ensure that the flow control valve is not under pressure
- Undo the counter-nut (1)
- Adjust the maximum operating pressure of the attachment:  
... Increase: Turn the set-screw (2) to the right (CW)  
... Reduce: Turn the set-screw (2) to the left (CCW)
- Secure setting with a counter-nut (1)

Max.permissible pressure P <sub>max</sub> .		A mm	B mm	C bar	D bar	1mm = bar
20bar (adjustable range 7-9bar)	MAN020	≈17,5	≈18,5	≈9	≈7	≈2,2
450bar (adjustable range 440-550bar)	MAN450	≈15,5	≈16,5	≈550	≈440	≈124,5

## Ordering Information

<b>PRV</b> 00	<b>DBU</b> 01	<b>CA</b> 02	<b> </b> 03	<b>500</b> 04	<b> </b> 05	<b>003</b> 06	<b>N</b> 07
00	Product group	Pressure relief valves					PRV
01	Variant	Pilot control					DBU
02	Port / Case	Cartridgeventil					CA
03	Input flow rate Q <sub>max</sub> .	200 l/min for high pressure					200
		20 l/min for low pressure					020
04	Max. permissible pressure P <sub>max</sub> .	500bar					500
05	Activation	Manually adjustable 20-21bar, 440-500bar	e.g. adjustable 450bar (consider adjustable range)			MAN450	
06	Stepped cavity	WESSEL-Patrone 8.00003 (stepped cavity)					003
07	Seal	NBR, temperatur range -25°C bis +80°C					N

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-DBU-CA-200LPM-500BAR-MAN450BAR-003-NBR	PRV-DBU-CA-200-500-MAN450-003-N	412.071.403.9

## 5 Installation

### General Information

- Observe all installation and safety information of the construction machine / attachment tools 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 de-installation, 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 invalidated.

### Installation – Space

The valve is screwed in a block with a torque of 90 Nm. Wrench size 24 is required

- Observe connection names.
- Do not damage seals and flange surface.
- Its hydraulic system must be vented
- Ensure sufficient free space for setting and installation work

## 6 Notes, Standards and Safety Instructions

### 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



### 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