

PRESSURE REGULATION VALVE P50-RM
(RETURN FLOW)

Manually regulated pressure regulation valve for liquid materials. In particular for paints at operating temperature within a viscosity range of 30 to 1500 mm²/s (cSt).

In special cases and with agreement the range can be extended.

Description

The pressure regulation valve essentially consists of the housing bottom part ① with valve seat ② and a fluid connection hole ③ as well as the housing top part ④ with pressure springs ⑤ and spring guide (spring cap) ⑥ and regulating key ⑦.



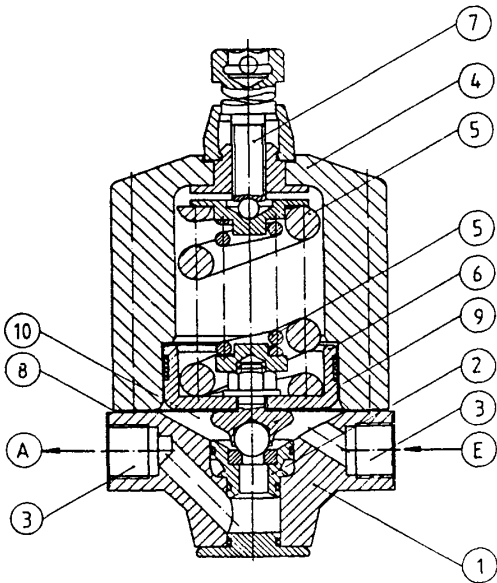
A diaphragm ⑧ is fitted as a separating element (fluid space/spring space) between the housing top part and bottom part.

The valve tappet ⑨ connects the diaphragm to the spring cap and ensures the transmission of the diaphragm movement to the pressure spring.

The pressure regulation valve is fitted in circulation circuits. During operation, the fluid under pressure flows from the inlet (E) into the fluid space ⑩ and from there through the valve seat to the outlet (A).

Changes in the fluid inlet pressure, e.g. due to removal, are transmitted to the pressure spring by the movement of the diaphragm and have an effect on the cross-section in the valve seat via the valve tappet.

In this way consumers connected to the system are protected from interruptions, and large pressure fluctuations in the ring circuit can be avoided.



Replacement for issue of 04.94

Subject to change

Prepared by 22.09.99 Stengele	USER INFORMATION - TECHN. PRODUCT DESCRIPTION	Issued 10.99
Checked by 19.10.99 Kuhn		B.12.45.09-P

Note protection mark in accordance with DIN 34

The pressure regulation valve does not close completely. It is designed for straight pipeline construction with the shortest throttle path and best possible flushing capacity.

- Internal threads have been avoided.

Technical data

Model range

Pressure regulation valve Model	Regulation pressure range [bar]	Construction materials, valve tappet, valve seat	Weight [kg]	Article No.
P50-RM	5 - 50	Stainless steel 1.4305 Hardened steel G10	2,1	79636 016002

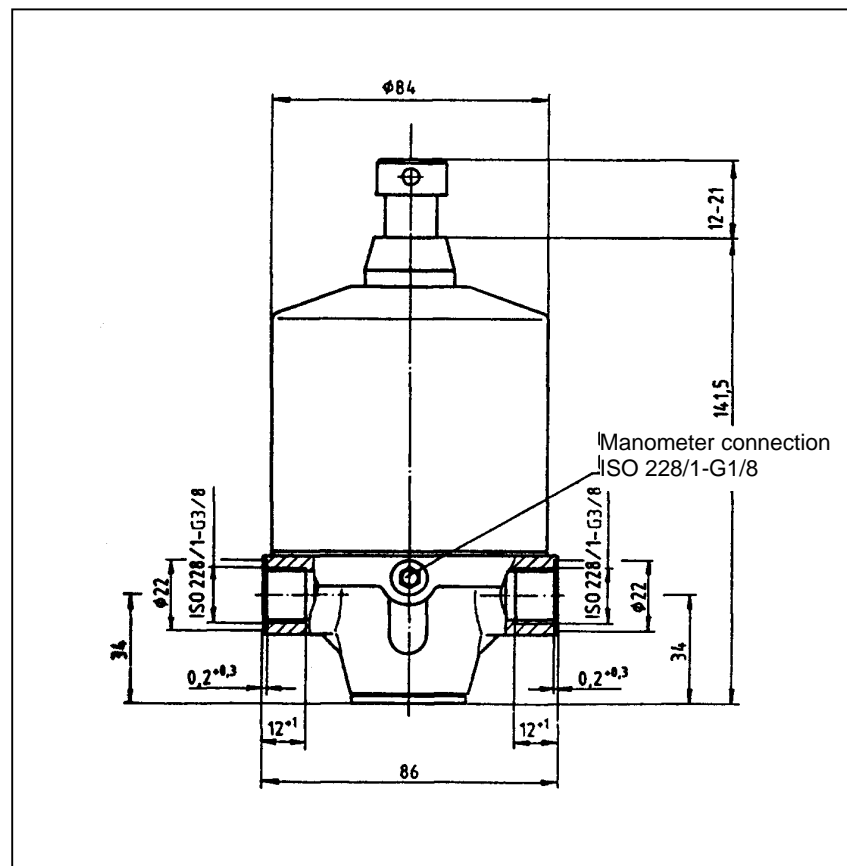
Fluid

- Temperature range 10 to 80 °C
- Max. permissible inlet pressure 50 bar

Construction materials

Parts in contact with the fluid material	1.4305/Hardened steel G10
Diaphragm	PTFE (rubber-lined on the spring side)
Seals	FPM

Dimensions



Build-up position Vertical, regulating key points upwards

Commissioning, Operation

All pressure regulation valves are tested for operation with an anti-corrosion liquid after factory assembly.

When commissioning, the residues of this anti-corrosion liquid as well as contaminants that are unavoidable during the assembly of the system, should be thoroughly flushed out with a suitable solvent (detergent).

Before prolonged shutdown (holidays), the pressure regulation valves should also be flushed and the detergent left in the system until the next time it is used.

Faults and their causes

Fault	Inlet pressure exceeds the set value.	Inlet pressure is falling.	Fluid escapes from the aeration hole of the housing top part.
Fault location			
Fluid removal points (consumer)	Too little fluid removal. Reset inlet pressure accordingly.	Too much fluid removal. Reset inlet pressure accordingly.	
Lines	Check the lines to see whether there is free discharge behind the valve; clean if necessary.		
Pump		Check whether the pump is working properly.	
Diaphragm			Replace defective diaphragm.

GRACO	DUISBURGER STR. 7
VERFAHRENSTECHNIK GMBH	D-33647 BIELEFELD
DRUCKREGELVENTIL <input type="checkbox"/> A <input type="checkbox"/> I	HERSTELL-NR.
MATERIALTEMPERATUR MAX [B] °C	<input type="text"/>
MATERIALEINGANGSDRUCK MAX [C] bar	<input type="text"/>
EINSTELLDRUCKBEREICH <input type="text"/> - <input type="text"/> bar	<input type="text"/>

We recommend that the data of the supplied pressure regulation valve on the original nameplate should be recorded here.

Footnote

This technical product description also serves as operating instructions.

Associated documentation

For accessories see separate catalogue
List of replacement parts B.12.45.09-E

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Technical cross-section drawing of a mechanical assembly, likely a bearing housing or similar component. The drawing includes the following labels and callouts:

- Filled with grease**: Label pointing to the central cavity of the assembly.
- 230**, **220**: Callouts for components on the left side.
- Tightening torque 6 Nm**: Specification for the fasteners on the left side.
- 160**, **170**, **200**, **110**: Callouts for internal components on the left side.
- 30**, **70**, **40**, **10**, **50**: Callouts for components at the bottom left.
- 240**, **250**, **210**, **190**, **180**: Callouts for components on the top right.
- 150**, **140**, **130**, **120**, **90**, **100**: Callouts for components on the right side.
- 80**, **20**, **60**: Callouts for components at the bottom right.
- Tightening torque 6 Nm**: Specification for the fasteners on the bottom right.



Prepared	09.11.94
Checked	09.11.94

USER INFORMATION - PARTS -

B.12.45.09-E

Ref. nbr.	Qty	Part Nbr.	Description	Identification
10	1	76504 002002	HOUSING BOTTOM PART -	KV
20	1	77275 011003	VALVE SEAT D 6,5	
30	1	74186 030020	O-RING 20X 2 B	
40	2	74186 025020	O-RING 12X 2 B	D
50	1	76530 001003	COVER D 16	D
60	2	74017 021013	COUNTERSUNK SCREW M 4 X10	
70	2	76104 118001	SEAL 9 X 14.8X 5	
80	2	76051 001001	SET SCREW M 6 X 15.5	D
90	1	76188 007001	SEAL 4 X 8.5X 5	
100	1	76051 011002	SET SCREW G 1/8 X 25	
110	1	77277 002003	VALVE TAPPET -	KV
120	1	76196 065001	FLAT DIAPHRAGM D 83 XT 0.65	D V
130	1	76561 028002	SPRING GUIDE D 43	
140	1	75083 001006	HEXAGONAL COLLAR NUT SEAL LOCK M 8	
150	1	76642 017002	SPRING SUPPORT D 10	V
160	1	76313 094001	SPRING 32 X10 X 58.6	
170	1	76313 063001	SPRING 15.5X 4.5 X 42.5	
180	1	76642 027002	SPRING SUPPORT D 21	K
190	1	74824 019090	BALL 8 MM I	
200	1	75739 078010	PACKING 8 X 1.55X153	
210	1	77502 003002	HOUSING TOP PART -	K
220	8	74006 078033	CHEESE HEAD SCREW M 5 X 80	
230	8	74094 009003	WASHER B 5,3	
240	1	76128 025002	WIPER RING , spreader 16 X27 X17	V
250	1	76007 022002	CHEESE HEAD SCREW M 10 X 40	
* END OF THE PART LIST*				

A = Replacement part
D = Seal
K = Supplied as complete set

M = Assembly tool
V = Wearing part
W = Maintenance part

Subject to change

GRACO STANDARD WARRANTY

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the repaid return of equipment claimed to be defective to an authorized Graco distributor for verification of claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

Graco does not extend its warranty to accessories, appliances, materials or components which are sold by Graco but are not manufactured by Graco and makes no guarantee, however implied, with regard to the brand capability and suitability for a certain purpose. These parts sold by Graco but not manufactured by Graco (such as electric motors, switches, hoses, etc.) are covered by the warranties of the respective manufacturers. Graco will support the buyer in enforcing any warranty claim with the proviso that in no event can Graco be made liable for indirect, incidental, special or consequential damages which arise from the supply of appliances by Graco under the conditions governed by these provisions, or the supply, performance or use of any products or other goods which are sold under the conditions governed by these provisions, whether as the result of breach of contract, breach of warranty, negligence on the part of Graco or for any other reason.

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