

PRESSURE REGULATION VALVE P50-VM

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

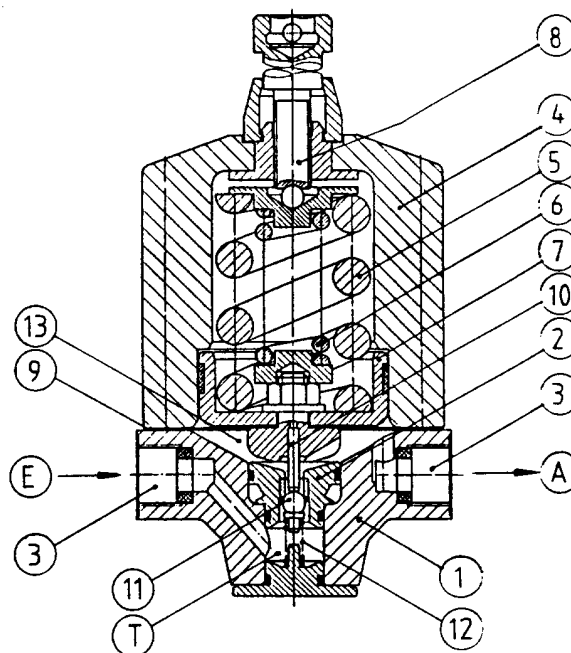
The pressure regulation valve essentially consists of the housing bottom part ① with valve seat ② and fluid connection holes ③, as well as the housing top part ④ with two pressure springs ⑤, ⑥, spring guide (spring cap) ⑦ and regulating screw ⑧.

A diaphragm ⑨ is fitted as a separating element (fluid space/spring space) between the housing top part and bottom part.

The valve tappet ⑩ connects the diaphragm to the spring cap and ensures the transmission of the diaphragm movement to the valve ball ⑪ and pressure spring.

During operation, the fluid under pressure flows from the inlet (E) through the spring-loaded ball valve (support spring ⑫), into the diaphragm space ⑬ and from there to the outlet (A).

Changes in pressure as the result of fluid being removed at the consumer end, are transmitted by the diaphragm to the pressure spring and have a regulatory effect (opening or closing the valve) through the spring coupling (pressure spring, spring cap, diaphragm, valve tappet, ball and support spring).



The pressure regulation valve is designed for straight pipeline construction with the shortest throttle path and best possible flushing capacity.

- Internal threads have been avoided. The fluid path in the pressure regulation valve passes from the inlet via a turbulence zone (in order to avoid deposits) (T) rising from below via the ball valve to the diaphragm. The outlet starts directly underneath the diaphragm.

Technical data

Model range

Pressure regulation valve Model	Regulation pressure range [bar]	Materials of the parts in contact with the material fluid *)	Weight [g]	Article No.
P50-VM	10 - 50	Stainless steel 1.4305/ Stainless steel 1.4310	2130	79635 014002

*) An aluminum construction is not possible for reasons of rigidity.

Fluid

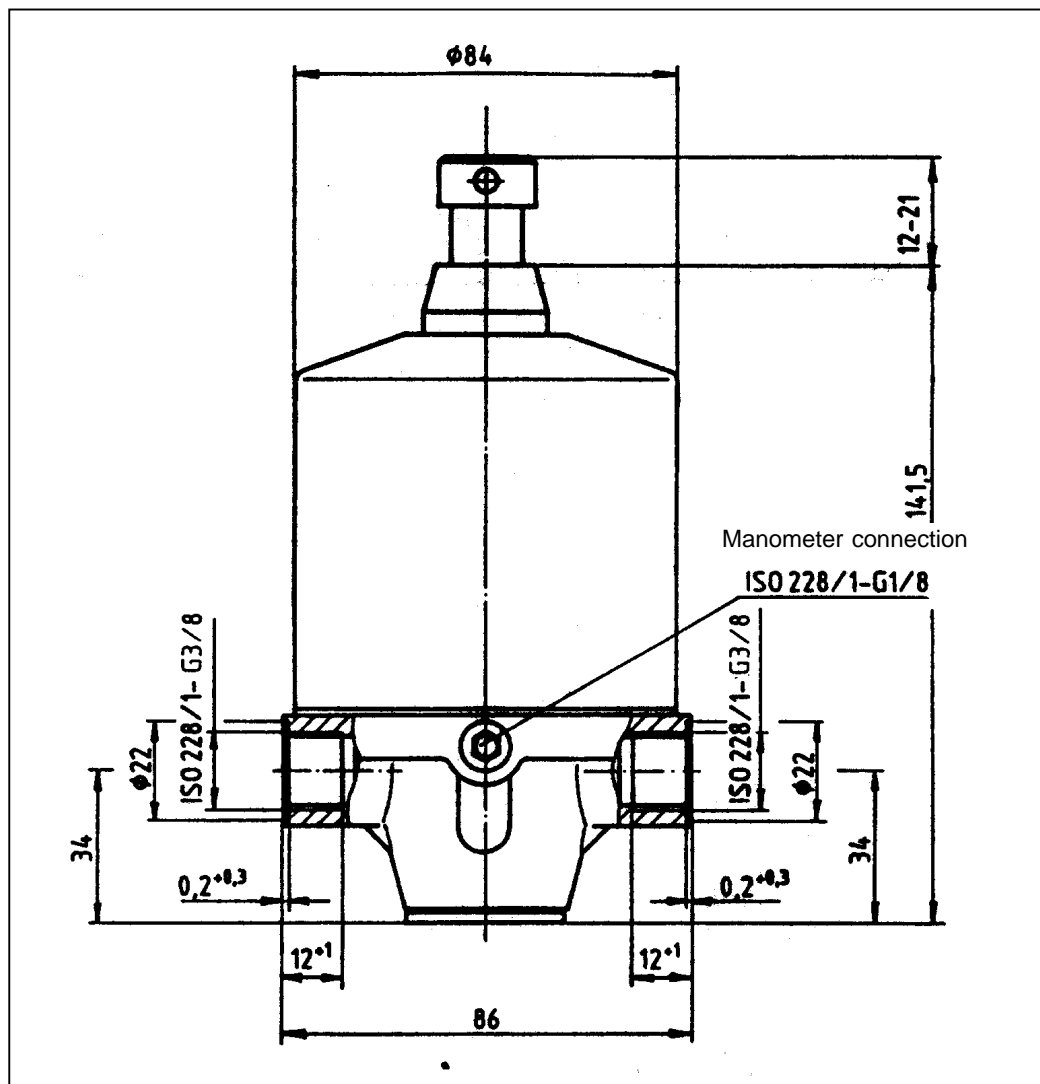
- Temperature range 0 °C to 90 °C
- Max. permissible inlet pressure 70 bar

Flow rate 7 l/min under the following conditions:
30 bar regulated at the pressure regulation valve
Viscosity 45 mm²/s (cSt)
Spray gun with nozzle of 5.3 mm² (Ø 2.6 mm)

Construction materials

Valve tappet, ball, seat	Hardened steel
Membrane	PTFE (rubber-lined)
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 valve should be flushed and the detergent left in the system until the next time it is used.

Faults and their causes

Fault location	Fault	
	Outlet pressure reaches the value of the inlet pressure	Fluid escapes from the aeration hole of the housing top part
Valve	Foreign bodies (e.g. paint residues in the valve). Replace defective parts	
Diaphragm		Replace defective diaphragm

GRACO	DUISBURGER STR. 7
VERFAHRENSTECHNIK GMBH	D-33647 BIELEFELD
DRUCKREGELVENTIL <input type="text"/> A <input type="text"/> I	HERSTELL-NR.
MATERIALTEMPERATUR MAX [B] °C	<input type="text"/>
MATERIALEINGANGSDRUCK MAX [C] bar	<input type="text"/>
EINSTELLDRUCKBEREICH <input type="text"/> 0 <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

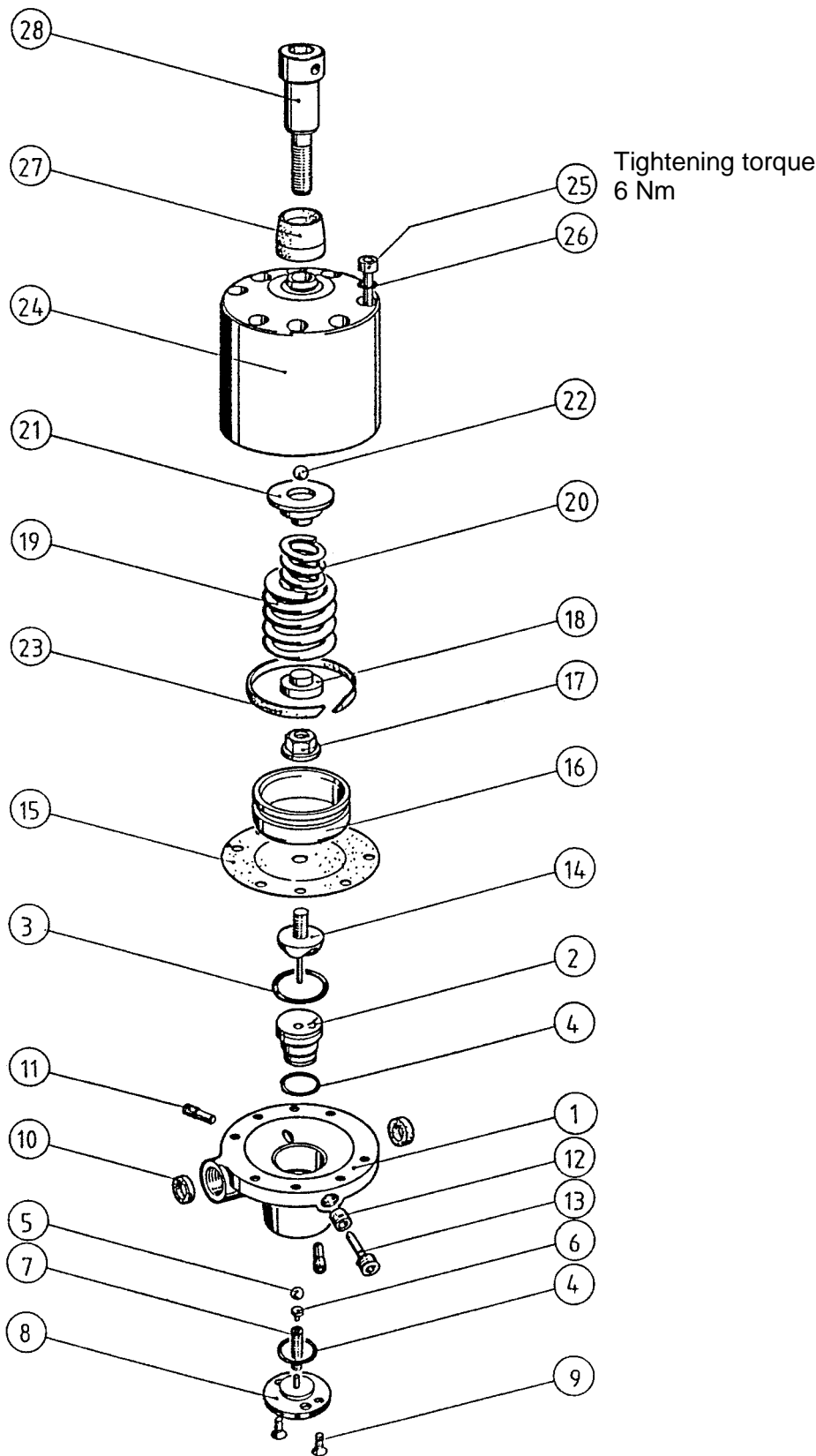
This technical product description also serves as operating instructions.

Associated documentation

For accessories	see sales catalogue
List of replacement parts	B.12.35.01-E

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Note protection mark in accordance with DIN 34

Subject to change

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PARTS

B.12.35.01-E

Ref. nbr.	Qty	Part Nbr.	Description	Dimensions	Identification.					
					A	D	K	M	V	W
1	1	76504 003002	Housing bottom part	-						
2	1	77275 010003	Valve seat	D 5			X		X	
3	1	74186 030020	O-ring	20 x 2 B		X				
4	2	74186 025020	O-ring	12 x 2 B		X				
5	1	74824 014090	Ball	6 mm II					X	
6	1	76660 002001	Ball support							
7	1	76313 027001	Spring	4.5 x 1 x 18.5						
8	1	76530 002003	Cover	D 16						
9	2	74107 021013	Countersunk screw	M 4 x 10						
10	2	76104 118001	Seal	9 x 14.8 x 4		X				
11	2	76051 001001	Set screw	M 6 x 15.5						
12	1	76188 007001	Seal	4 x 8.5 x 5		X				
13	1	76051 011002	Set screw	G 1/8 x 25						
14	1	77277 001003	Valve tappet				X		X	
15	1	76196 065001	Flat diaphragm	D 83 x T 0,65		X			X	
16	1	76561 028002	Spring guide	D 43						
17	1	75083 001006	Hexagonal collar nut	Seal Lock M 8						
18	1	76642 017002	Spring support	D 10						
19	1	76313 094001	Spring	32 x 10 x 58.6						
20	1	76313 063001	Spring	15.5 x 4.5 x 42.5						
21	1	76642 027002	Spring support	D 21						
22	1	74824 013090	Ball	6 mm III						
23	1	75739 078010	Packing	8 x 1.55 x 153					X	
24	1	77502 003002	Housing top part					X		
25	8	74006 078033	Cheese head screw	M 5 x 80						
26	8	74094 009003	Washer	B 5,3						
27	1	76128 025002	Wiper ring	16 x 27 x 17						
28	1	76007 022002	Cheese head screw	M 10 x 40						

Subject to change

A = Replacement part

M = Assembly tool

D = Seal

V = Wear part

K = Supplied as complete set

W = Maintenance part

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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