

Operating Instructions

DOK-183-GB.doc Rev. 2

Material back pressure regulator

Item no.:	6935-080-2759	Hand-regulated up to 10 bar
	6935-080-2766, 080-2767	Pneum. regulated up to 10 bar
	6936-080-2760	Hand-regulated up to 20 bar

- Retain for future use -

CE

Krautzberger 

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Hazard warnings and instructions

- ◆ Do not place the material back pressure regulator in operation before you have completely read the Operating Instructions!
- ◆ Pipelines and hose lines and their connections must safely and reliably meet the requirements to be expected in operation in terms of pressure and mechanical and chemical loads.
- ◆ Always heed the instructions in the safety data sheets of the coating manufacturer. Be especially attentive of information regarding personal safety equipment to be worn.
- ◆ When processing coating materials subject to hazards of fire or explosion, observe the Ex safety instructions! Ensure adequate ventilation. Keep ignition sources and open fire well away!
- ◆ When mixing different components and/or using solvents or thinning agents together to produce coating materials, take precautions to ensure that no substances with increased potential for danger can be produced (for example flammable, explosive or toxic substances)! Avoid increasing the potential for danger through unintended chemical reactions! In cases of doubt, please direct inquiries to the component supplier(s)! If necessary, take preventive measures and be especially attentive to special dangers!

- ◆ The compatibility of parts of the material back pressure regulator that are in contact with the material cannot be guaranteed for every possible coating material. In cases of doubt, please direct inquiries to Krautzberger GmbH!
- ◆ When interruptions in operation occur or the system is taken out of operation, also before disassembly or before starting repairs and maintenance work, always ensure that the supply of material has been cut off! (shut off the supply of material at the source)
- ◆ The pressures and temperatures specified under "Technical data" must be observed!
- ◆ Check connections and wear parts at appropriate intervals and replace if necessary! Check for material fatigue at appropriate intervals!
- ◆ Use only spare and accessory parts from Krautzberger GmbH! Krautzberger GmbH shall not be liable for damages if any third-party parts are used!

Intended Use

Material back pressure regulator type: 6935 / 6936 is used to maintain a defined material pressure in a material circulation line system **after** a removal point (manual or automatic spray gun).

The materials used in the regulator make it possible to use a wide variety of materials for paints and lacquers (especially water-based paints), staining, adhesives, etc.

<p>i</p> <ul style="list-style-type: none"> • materials dissolved in solvents containing chlorinated hydrocarbon • abrasive or • corrosive materials <p>Krautzberger GmbH offers special designs.</p>	<p>The coating materials approved by the manufacturer for spraying can be processed. However for</p>
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Basic design and operating principle

Connection **(A)**: Regulated connection (circulation line **from** the consumer)

Connection **(F)**: Non-regulated connection (return to storage tank)

Connection **(G)**: For pitot tube with pressure gauge

The pressure force of material on connection (A) acts against the membrane (B), thereby counteract-

ing the pretension force of the compression spring (C).

If the force of the membrane resulting from the material pressure is stronger, the membrane moves upward against the force of the spring.

The body of the screw (D), which is firmly connected to the membrane, is raised from its seat (E) so that material flows back through the connection (F) into the storage tank.

This reduces the pressure on the membrane. As a result, the force of the spring again prevails and the body of the screw is pushed back into its seat, which interrupts the flow of material back into the storage tank.

The next control cycle can then begin.

Installation

During installation of the regulator in the material supply system, make certain the connections are correct:

See the previous section and Technical datasheet 140-0501/2.

If the regulator will be equipped with a pitot tube (H), it must always be installed pointing up. This will prevent material from getting into the pressure gauge and making it unusable. Therefore, depending on the installation position of the regulator (standing or lying), either a straight or an angled pitot tube should be used.

Start-up

The desired operating pressure can be regulated on the regulator after the nut (19) is loosened by turning the hand wheel (20) or spindle (20). Turn clockwise: pressure increases; anticlockwise: pressure decreases. Once a setting has been found in this manner, it can easily be held in place by slightly tightening the nut (19).

In the pneumatically regulated design, a compressed air line is connected to the quick screw connection (item 9).

The regulator is adjusted with compressed air. The regulator changes the pressure of the coating material similar to the way in which the air pressure is adjusted. The air pressure present on the compressed air connection must be about 1.0 bar above the desired pressure of the coating material.

Interruption in operation

If there is an interruption in operation, always be attentive to the potlife of the material being processed! Otherwise the regulator may become unusable! For longer interruptions in operation, flush the regulator! See the following section.

Completing work

After work is complete, thoroughly flush the regulator as well as the entire material supply system with a suitable cleaning solution for the previously processed material until the solution emerging at the connection (F) is clear.

Replacing parts

Caution!

During maintenance and repair work, shut off the supply of material at the source! Then activate the consumers (manual or automatic spray gun) to relieve the pressure from the material supply system!

Membranes and screw bodies

- Release tension on the regulator spring (17) by turning the hand wheel (20) or spindle (20) anti-clockwise
- Unscrew the screws (15)
- Remove the cover (13)
- Remove the screw bodies (7) with membranes (8; 9), membrane plate (10) and nut (11)
- Unscrew the nut (11) from the screw body (7)

Valve seat housing with ball seat

- Unscrew the valve seat housing (1) from the housing (6)

Note: Always replace screw bodies (7) and valve seat housing (1) together!

Regulator spring

- Unscrew the closing cap (18)
- Remove the regulator spring (17) and pressure disks (16)

Assembly is in the opposite order (lightly grease sliding parts with a suitable grease, for example item No. 7026-120-0351 from Krautzberger GmbH; delivered in 250-g cans)

Cleaning and maintenance

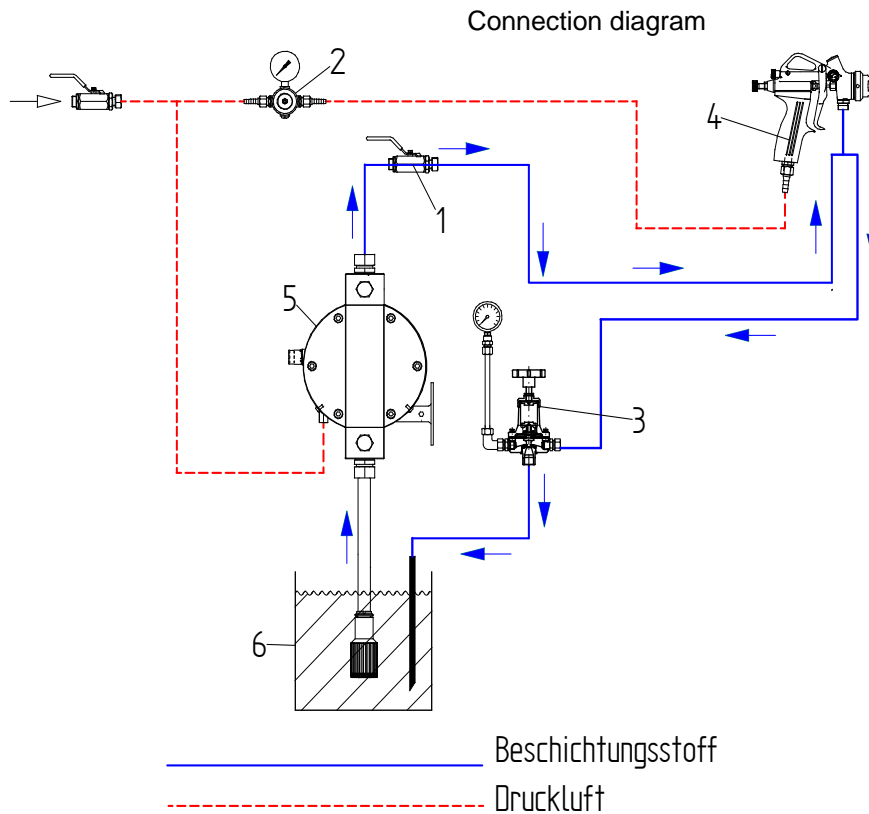
Check wear parts such as the ball seat in the valve seat housing (1), screw bodies (7) and membranes (8; 9) at appropriate intervals and replace if necessary.

For cleaning as well as changing material, flush with a cleaning solution recommended or specified by the supplier of the previously used material until it runs out clean.

A cloth soaked in cleaning solution is recommended for external cleaning.

Disposal

Metal parts can be sorted out after the regulator is removed and sent to a recycling process. Non-metal parts should be disposed of in a manner suitable for the material.



Spare parts list 080-2759, 080-2760

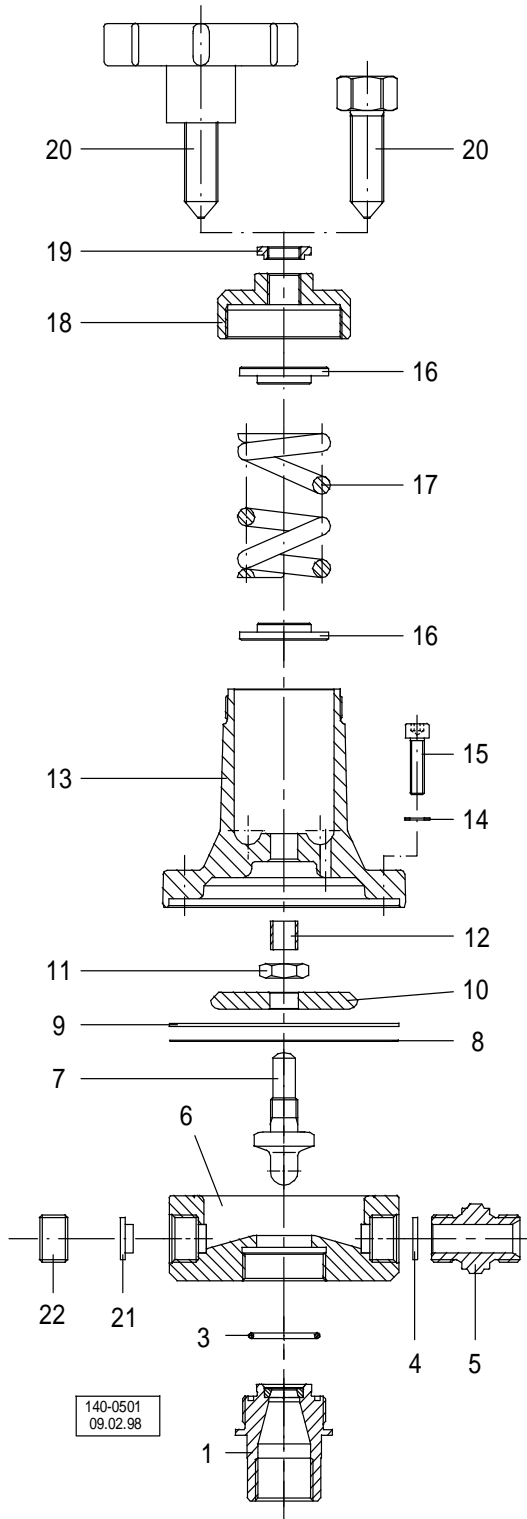
Item	Item No.	Designation	Item	Item No.	Designation
1	6935-080-3023	Valve seat housing, carbide	13	6935-040-0585	Cover
	6935-080-3024	Valve seat housing, vanadium steel	14	6935-030-0707	Lock washer, 6 pieces
3	6935-010-0404	Seal	15	6935-030-0154	Screw, 6 pieces
4	6935-010-0665	Seal	16	6935-040-0809	Pressure disk, 2 pieces
5	6935-040-0061	Double nipple	17	6935-020-0049	Compression spring, maximum 10 bar
				6936-020-0051	Compression spring, maximum 20 bar
6	6935-040-4231	Housing	18	6935-040-0583	Closing cap
7	6935-040-4229	Screw body, tempered	19	6935-040-0808	Nut
	6935-040-4226	Screw body, chrome plated			
8	6935-010-0444	Membrane, PTFE	20	6935-080-0026	Hand wheel for regulator, 10 bar
				6936-040-0497	Spindle, for regulator, 20 bar
9	6935-040-0543	Membrane, rubber	21	6935-040-4603	Filling piece
10	6935-040-0543	Membrane plate	22	6935-030-2970	Sealing screw
11	6935-030-2920	Nut			

12	6935-030-0036	Socket			
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Spare Parts Drawing

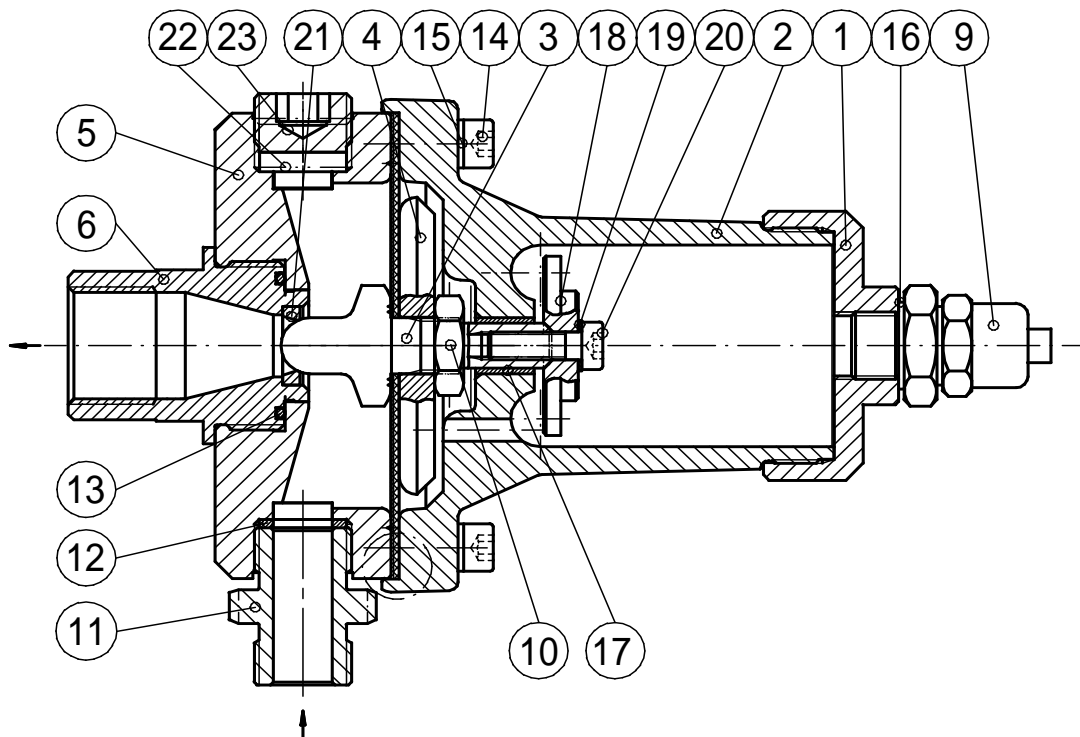
080-2759, 080-2760

1	Ball valve
2	Regulator, compressed air
3	Back pressure regulator
4	Consumer, manual/automatic spray gun, etc.
5	Pressure generator, pump etc.
6	Storage tank



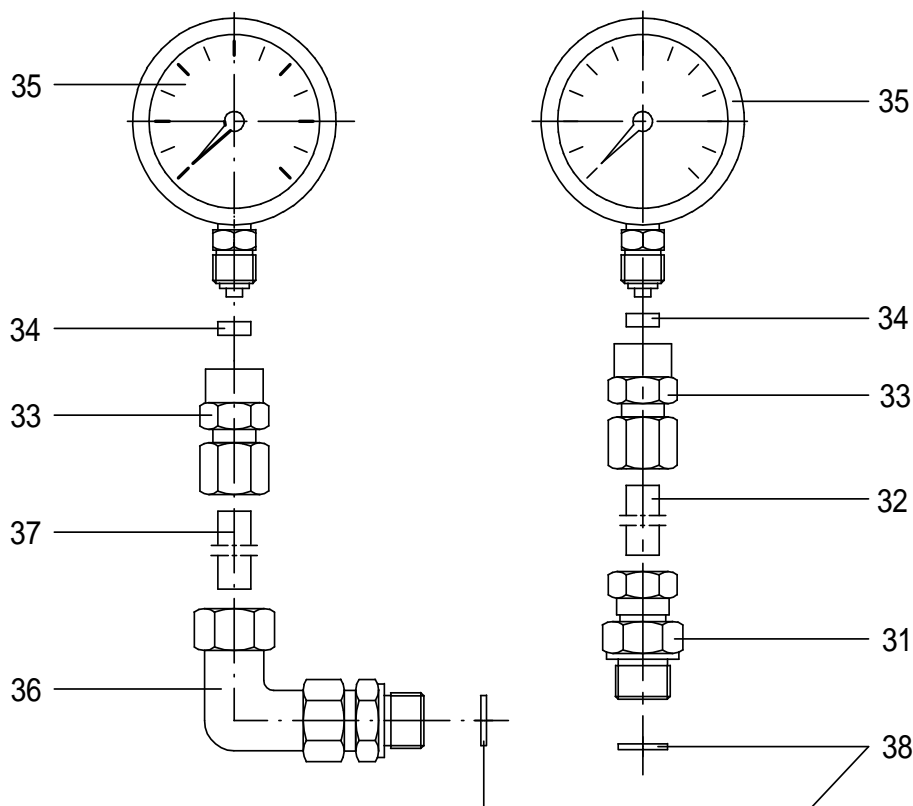
Spare Parts Drawing

080-2766 (carbide seat) 080-2767 (VA)



Item	Item No.	Designation	Item	Item No.	Designation
1	040-0583	Closing cap	13	010-0404	O-ring
2	040-0585	Cover	14	030-0154	Cylinder head screw
3	040-5254	Screw bodies	15	030-0707	Retaining ring
4	040-0543	Membrane plate	16	010-0187	Flat seal
5	040-4231	Housing	17	030-0036	Socket
6	040-4227	Valve seat housing	18	040-0125	Pressure disk
7	010-0444	Membrane seal	19	030-0707	Retaining ring
8	010-0445	Membrane seal, rubber	20	030-0245	Cylinder head screw
9	040-0820	Quick screw connection	21	040-2790	Valve seat VA
10	030-2920	Hex nut	21	040-0494	Valve seat, carbide
11	040-0061	Double nipple			
12	010-0665	Flat seal			

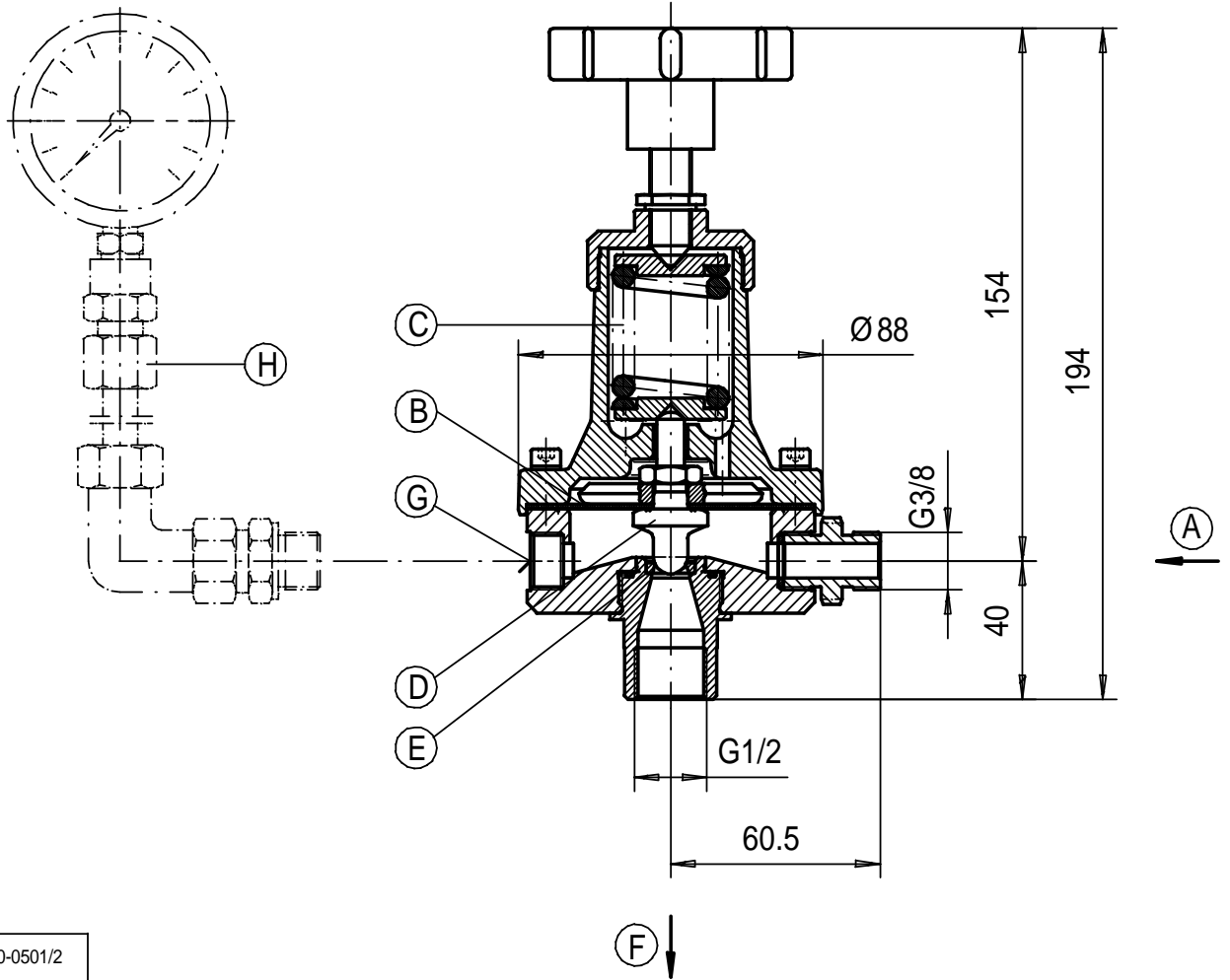
List of accessories



Item	Item No.	Designation
31	6935-030-0086	Straight screw connection
32	6935-040-0548	Pipe
33	6935-030-3045	Screw connection
34	6935-010-0301	Seal
35	6825-030-1036	Pressure gauge, 0-2.5 bar
	6825-030-1037	Pressure gauge, 0-4 bar
	6825-030-1040	Pressure gauge, 0-16 bar
	6825-030-1041	Pressure gauge, 0-25 bar
	6825-030-1043	Pressure gauge, 0-60 bar
36	6935-030-3046	Angle screw connection
37	6935-040-0551	Pipe
38	6935-010-0665	Seal
Not shown	040-2119	Support for wall mounting

Technical data / dimensional drawing

Working pressures and temperature	
Max. regulating pressure (type 6935)	1MPa (10 bar)
Max. air pressure (pneum. control)	0.8 MPa (8 bar)
Transmission ratio	1:1
Max. regulating pressure (type 6936)	2 MPa (20 bar)
Max. material temperature	80°C
Connections	
Input, regulated (A)	G3/8a
Output, unregulated (F)	G1/2i
Pitot tube (G)	G3/8i
Materials	
Membranes	PTFE/rubber
Parts in contact with material	Stainless steel
Valve seat	Stainless steel or carbide
Weight	About 2.5 kg



140-0501/2