

Operating instructions

DOK- 195 Rev. 2

High-pressure material pressure regulator
Regulation range 20-140 bar

Article no.: 6933-090-2587 (tungsten carbide)
 6933-090-2840 (tungsten carbide + pressure pipe)
 6933-090-2588 (stainless steel)
 6933-090-2841 (stainless steel + pressure pipe)

- Keep for future reference -

Krautzberger 

Contents

1. General.....	2
1.1. Hazard and warning notes	2
1.2. Use for intended purpose	3
2. Basic design, functional principle.....	3
3. Mounting.....	3
4. Startup.....	3
5. Operational interruptions.....	3
6. Finishing work.....	3
7. Replacing parts.....	4
8. Cleaning, maintenance.....	4
9. Disposal	4
10. Spare parts list.....	5
11. Technical data.....	6

1. General

1.1. Hazard and warning notes

- ◆ Do not start up the material pressure regulator until you have read the operating instructions in full!
 - ◆ During breaks in operation or when shutting down the equipment as well as prior to dismantling or the start of repair and maintenance work, you should ensure that the material feed is interrupted and the regulator is no longer under pressure! (Close material feed at source)
 - ◆ Only use hoses and hose connections that can withstand the pressures and any other occurring loads!
 - ◆ Always wear the protective equipment (e.g. protective clothing, goggles, breathing protection, gloves etc.) recommended by the supplier of the coating substance during maintenance, cleaning or repair work and when changing materials!
 - ◆ Comply with the explosion protection regulations when using potentially flammable and explosive coating substances! Keep away from sources of ignition and open flames!
 - ◆ Comply with the warning and hazard instructions of the supplier of the coating material (and, if necessary, of the detergent) with regard to emission, fire or explosion hazard or other hazards (where applicable)! In case of doubt, consult the supplier(s)!
- ◆ When mixing different components and/or when using solvents or thinning agents to make coating materials, take steps to ensure that no substances with increased hazard potential are created (e.g. flammability, explosion hazard, increased explosive tendency through spraying with air, toxicity, increased toxicity due to chemical reaction with air etc.)! Avoid increased hazard potential caused by undesired chemical reactions! In case of doubt, consult the supplier(s) of the components! Where necessary, take protective measures and effect special notification of the particular hazard!
 - ◆ The compatibility of the parts of the material pressure regulator which come into contact with the material cannot be guaranteed with all potential coating substances. In case of doubt, consult Krautzberger GmbH!
 - ◆ Ensure adequate earthing (e.g. connection to the building earth!) Radiators or water pipes do not provide sufficient earth contact!
 - ◆ Adhere to the pressures and temperatures listed under "Technical Data"!
 - ◆ Check connections and wearing parts at appropriate intervals and replace if necessary! Check for material fatigue at regular intervals!
 - ◆ Only use spare parts and accessories from Krautzberger GmbH! Krautzberger GmbH does not assume liability for damage if parts from other suppliers are used!

Hazards which exceed those normally expected with the use of pressure regulators have not come to our attention in the handling of the material pressure regulator type 6933. If, however, accidents or hazardous situations occur during practical applications, please notify us accordingly.

1.2. Use for intended purpose

The material pressure regulator type 6933 is designed to maintain built-up liquid pressure at a constant level in the line system or at a tapping point (spray gun, automatic spray gun).

The materials of which the regulator is made allow the use of an extremely wide range of coating materials/substances, such as paints, lacquers (in particular water-soluble lacquers), staining agents, adhesives, dispersions, oils etc.

Note

The coating substances approved by the manufacturer of the coating substance for spraying may be used, however, please contact Krautzberger GmbH in the case of

- substances dissolved in CFC-containing agents as well as
- abrasive or
- corrosive materials!

2. Basic design, functional principle

Connection (A): non-regulated connection (material pump feed)

Connection (F): regulated connection (flow-off to the consumer, e.g. spray gun, automatic spray gun)

Connection (G): for pressure pipe with pressure gauge

The unregulated material pressure prevailing inside the regulator presses the valve needle (5) into the valve seat (6) and blocks the material flow. The pre-tension of the pressure spring (13) is increased by turning the spindle (11) in a clockwise direction, thus reducing the closing force of the valve needle (5). Material can flow between the valve seat (6) and the valve needle (5) and on through the regulated material connection (F) to the consumer. Further turning of the spindle (11) in a clockwise direction increases the regulated material pressure, turning it in the other direction reduces the pressure.

Note

The material pressure regulator only operates if a counter-pressure caused by a processing unit (spray gun, automatic spray gun) is present at the regulated material connection (F). No regulation is possible in the event of free, pressureless flow-off!

3. Mounting

Ensure that connections are correct when installing the regulator in the material feed system:

See previous section as well as Technical Data Sheet 140-0515

If the regulator is equipped with a pressure pipe and pressure gauge (H), the latter must be mounted in such a way that it points upwards. This prevents coating material from entering (and ruining) the pressure gauge.

4. Startup

The desired operating pressure is set on the regulator by turning the spindle (11) in or out (spanner surface SW 22 present; use suitable tool). Turning clockwise increases the pressure, turning anti-clockwise reduces the pressure.

5. Operational interruptions

During breaks in operation, always make sure you are aware of the pot time of the material being processed! Otherwise there is a risk that the regulator may be ruined! During lengthy breaks in operation, rinse the regulator through! See following section.

6. Finishing work

After you have finished work, rinse the regulator as well as the entire material feed system through thoroughly using a detergent that is suitable for the material that has been processed until the detergent is discharged clear at connection (F) or out of the processing unit.

recycling process; the non-metal parts should be disposed of as is appropriate.

7. Replacing parts

Caution! Danger due to high pressure!

Before performing maintenance and repair work, close the material feed at the source! Then activate the consumer (spray gun/automatic spray gun) to ensure that the material feed system is pressureless!

Valve needle / Valve seat

- Unscrew spindle (11) until pressure spring (13) is no longer pre-tensed
- Unscrew the sealing cap (3) from the housing (1)
- Remove gasket (16)
- Unscrew housing (1) from cover (2)
- Remove gasket (16)
- Unscrew screws (20)
- Remove pusher plate (9), fastening plate (8) with material needle (4) as well as spacer pipes (10)
- Remove valve needle (5)
- Unscrew valve seat (6) from housing (1)

Material needle gasket (17)

- Unscrew spindle (11) until pressure spring (13) is no longer pre-tensed
- Unscrew housing (1) from cover (2)
- Remove circlip (15)
- Pull out gasket (17)

Regulator spring

- Unscrew spindle (11)
- Remove pressure spring (13) and spring plate (7)

Assembly is effected in reverse order in each case. Check gaskets for perfect condition, replace if necessary. Make sure the gaskets are not damaged during assembly!

8. Cleaning, maintenance

Wearing parts such as valve needle (5), valve seat (6) and gasket (17) should be checked at appropriate intervals and replaced if necessary.

When cleaning and during material change, the unit should be rinsed through using a detergent recommended by the supplier of the coating substance until it is discharged clear.

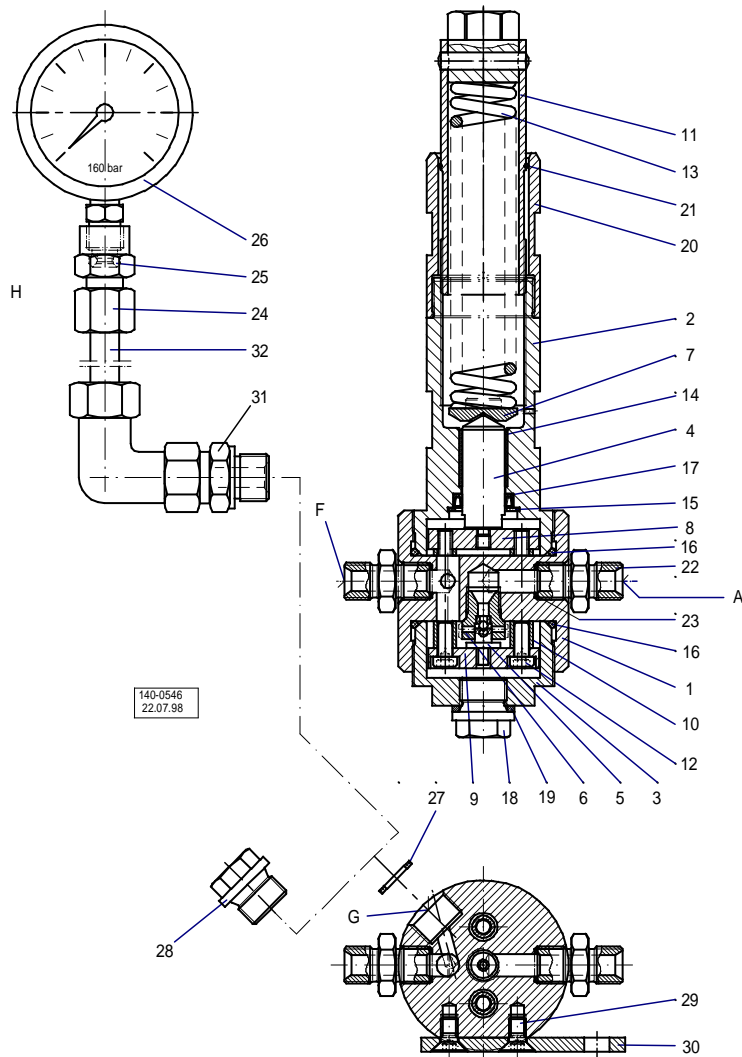
A cloth soaked in detergent is recommended for external cleaning.

9. Disposal

Following dismantling of the regulator, the metal parts can be sorted and forwarded to a

10. Spare parts list

Item	Art. no.	Designation	Item	Art. no.	Designation
1	6933-040-4352	Housing	18	6933-030-2972	Sealing screw
2	6933-040-4353	Cover	19	6933-010-0702	Gasket
3	6933-040-4354	Sealing cap	20	6933-040-4361	Pipe
4	6933-070-2258	Material needle	21	6933-010-0213	Gasket NBR
5	6933-070-2260	Valve needle, cmpl., tungsten carbide (standard)	22	6933-010-0189	Gasket EPDM
	6933-070-2261	Valve needle, cmpl., stainless steel		6933-030-2495	Double nipple (2 pcs)
6	6933-080-2851	Valve seat, cmpl., tungsten carbide (standard)	23	6933-010-0703	Gasket (2 pcs)
	6933-080-2852	Valve seat, cmpl., stainless steel		24	6933-030-3045
7	6933-040-4356	Spring plate	25	6933-010-0301	Gasket
8	6933-040-4357	Fastening plate	26	6933-030-1045	Pressure gauge, 160 bar
9	6933-040-4358	Pusher plate	27	6933-010-0665	Gasket
10	6933-040-4359	Spacer pipe (2 pcs)	28	6933-030-2972	Sealing screw
11	6933-080-2853	Spindle	29	6933-030-0161	Screw (2 pcs)
12	6933-030-4337	Screw (2 pcs)	30	6933-040-4664	Bracket
13	6933-020-0179	Pressure spring	31	6933-030-3046	Angle screw connection
14	6933-030-4336	Bushing	32	6933-040-0551	Pipe
15	6933-030-2790	Circlip			
16	6933-010-0750	Gasket (2 pcs) Viton			
	6933-010-0905	Gasket (2 pcs) PTFE			
17	6933-010-0792	Slotted ring, UHMW-PE (standard)			
	6933-010-0806	Slotted ring, PTFE			



11. Technical data

Operating pressures/temperatures

Max. inlet pressure	20 MPa	200 bar
Regulation range	2-14 MPa	20-140 bar
Max. material temperature	80 °C	

Connections

Inlet (non-regulated)	G1/4" AG
Outlet (regulated)	G1/4" AG

Materials

Parts in contact with the coating material/substance	Stainless steel
Valve seat/Ball	
Type 6933-090-2587/2840	Tungsten carbide
Type 6933-090-2588/2841	Stainless steel

Weight (without accessories) approx. 2.5 kg

140-0515

