

Operating instructions

DOK-023 Rev. 1

Designation Material changeover valve

Type 200 bar

Article no. 6956-090-....

- Keep for future reference -

Contents

1. USE FOR INTENDED PURPOSE.....	2
2. MODE OF OPERATION	2
3. STARTUP.....	2
4. MATERIAL CHANGEOVER.....	2
5. REPLACING PARTS	3
6. SPARE PARTS LIST FOR MATERIAL CHANGEOVER VALVE BLOCK.....	4
7. SPARE PARTS LIST FOR MATERIAL CHANGEOVER VALVE.....	7
8. TECHNICAL DATA.....	9

1. Use for intended purpose

The material changeover valves allow processing of different materials in rapid succession with intermediate rinsing routines.

One material changeover valve is required for each type of material that is to be processed, and a further valve for the detergent. (Total number of valves = number of materials to be changed over plus one rinsing valve)

2. Mode of operation

The materials to be processed and the detergent are fed to the material changeover valve under pressure (pump, pressure feeding container).

One 3/2-way valve is required for OPEN/CLOSE control of each material changeover valve by means of compressed air. When the 3/2-way valve is activated, the material flow in the material changeover valve in question is released; if this (permanent) signal is cancelled, the material changeover valve closes.

Each material changeover valve is equipped with a nonreturn device to ensure

that the materials do not mix if the valve/valve seat is defective.

3. Startup

The material changeover valves are delivered pre-assembled in the form of a valve block and are ready for use after the material and control air connections have been made. Material circulation is possible using the appropriate connections.

The valve block must be fitted at the planned location in such a way that the material changeover valves are in an upright position. (Material outlet situated at the bottom.) This greatly facilitates/accelerates purging and rinsing during material changeover.

The material inlet (G1/4i) of the material changeover valves is connected to the supply system; the material outlet (G1/4a) is connected to a processing unit (e.g. spray gun).

The control air connection (G1/8i) is connected to the outlet of a 3/2-way valve.

Please note that the end valve of a valve block is always selected as rinsing valve (see dimensional drawing of the valve block)! This is the only way to ensure correct rinsing of all sequenced material changeover valves during material changeover.

4. Material changeover

Close the material changeover valve feeding the present material.

After opening the end valve, allow detergent to flow through the valve block until it is discharged clean from the processing unit. Close the rinsing valve.

Then gradually open the material changeover valve for the next coating material to be applied.

Operating breaks, cleaning, maintenance

During breaks in operation and when shutting down or cleaning the unit, clean the

entire valve block free of the processed materials by opening the rinsing valve. If the unit is not to be used for a lengthy period of time, leave the detergent in the valve block.

A cloth soaked in detergent is recommended for external cleaning.

The material changeover valves should never be completely immersed in detergent! This could destroy the gaskets and rinse out the lubricant.

If necessary, cover the material changeover valves to protect them from heavy external soiling.

5. Replacing parts

If material enters the material duct when the material changeover valve is closed, this indicates that the valve seat (6) and/or the needle reinforcement (7) are defective and need to be replaced.

The gaskets (14) may also become defective and may require replacing. They should be changed every time the material changeover valves are dismantled.

If material leaks from the seal screw (8), the gasket (22) is worn and must be replaced.

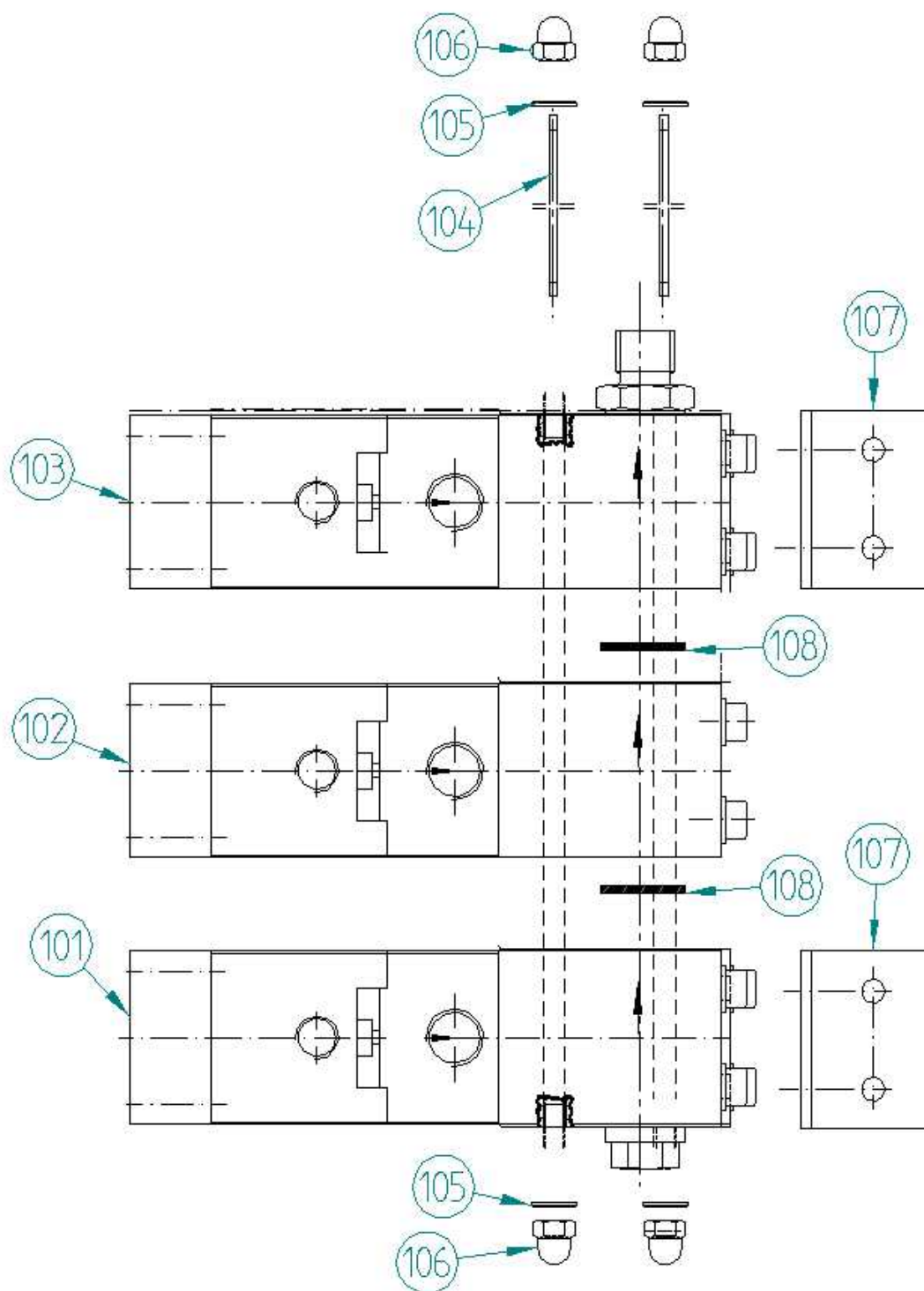
If control air is emitted from the control section (3), the needle guide (9) must be replaced; if air is emitted from the cover (4), the gasket (12) needs to be changed.

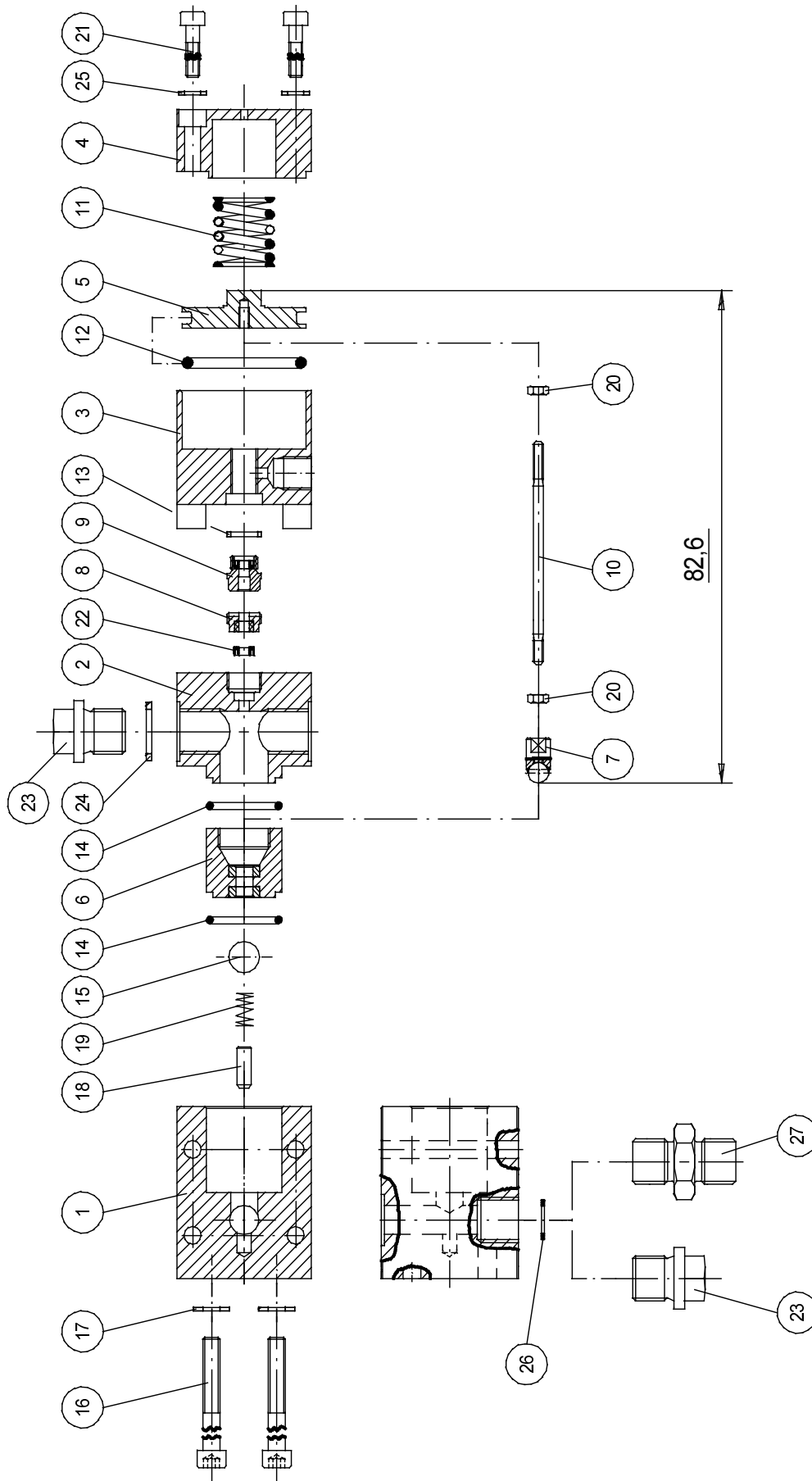
The procedure for dismantling/assembly of a material changeover valve is shown in the spare parts drawing. During assembly, ensure that the distance between control piston (5) and needle reinforcement (7) is correct!

When joining several material changeover valves to form a valve block, always use new gaskets (108) and ensure that the valves are screwed together level and evenly using clamping rods (104).

6. Spare parts list for material changeover valve block

Item	Article no.	Designation
101	6956-090-0054	Material changeover valve, compl. (end valve)
102	6956-090-0056	Material changeover valve, compl. (through valve)
103	6956-090-0556	Material changeover valve, compl. (outlet valve)
104	6956-040-2172	Clamping rod for 2 valves (4 pcs)
	6956-040-2109	Clamping rod for 3 valves (4 pcs)
	6956-040-2110	Clamping rod for 4 valves (4 pcs)
	6956-040-2111	Clamping rod for 5 valves (4 pcs)
	6956-040-2112	Clamping rod for 6 valves (4 pcs)
	6956-040-2113	Clamping rod for 7 valves (4 pcs)
	6956-040-2114	Clamping rod for 8 valves (4 pcs)
	6956-040-2115	Clamping rod for 9 valves (4 pcs)
	6956-040-2116	Clamping rod for 10 valves (4 pcs)
105	6956-030-0707	Washer (8 pcs)
106	6956-030-2927	Cap nut (8 pcs)
107	6956-040-2117	Angle (2 pcs)
108	6956-010-0297	Gasket (1 to 9 pcs)





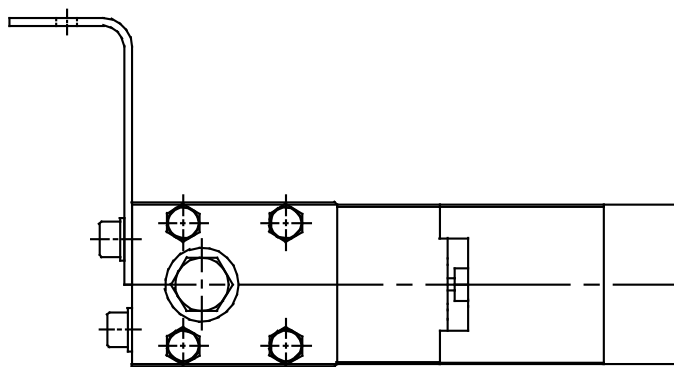
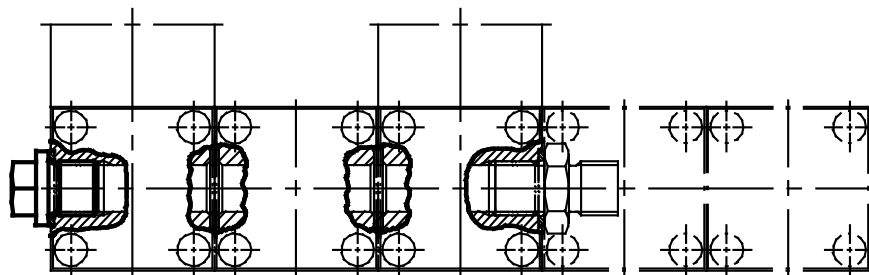
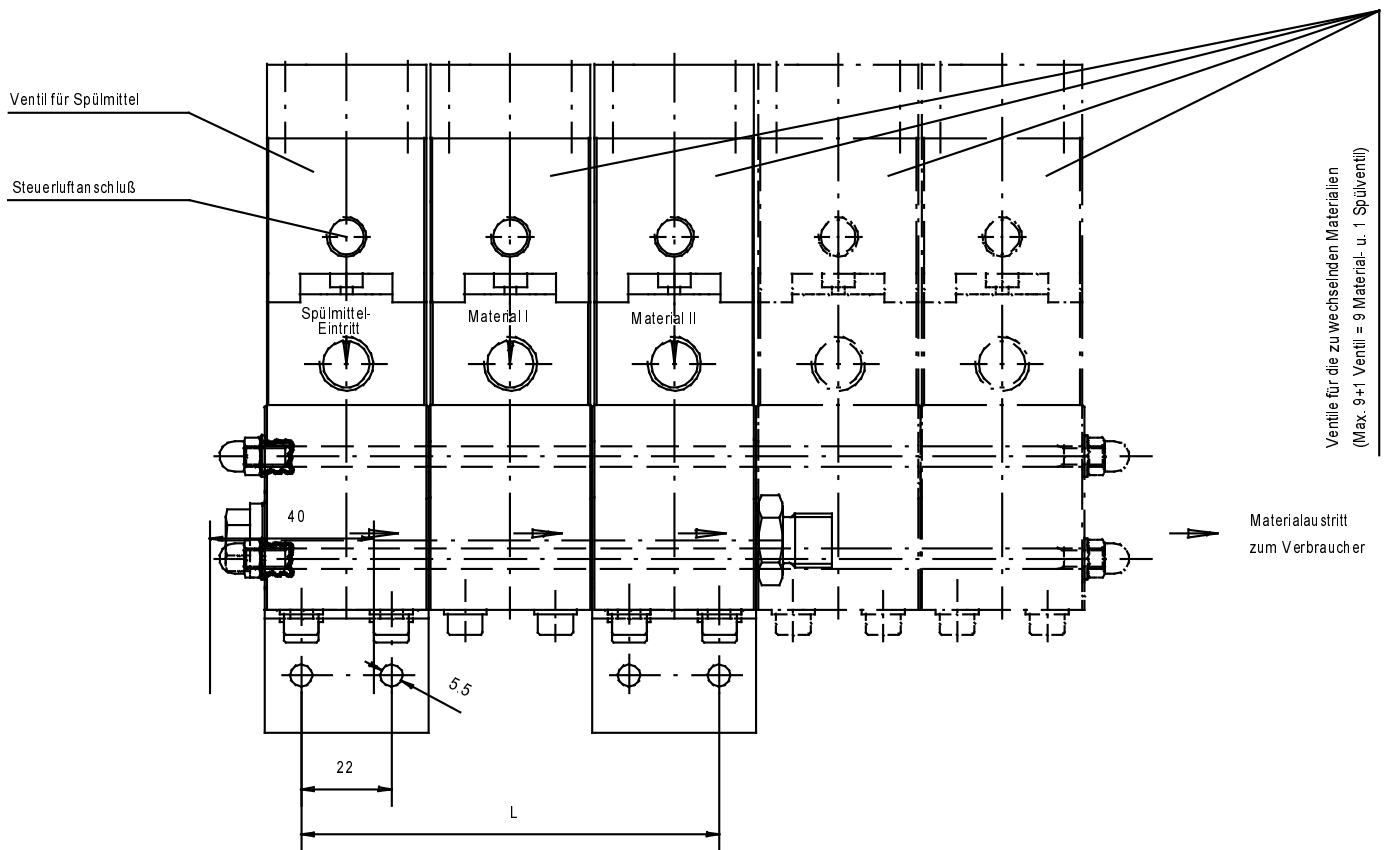
140-0070
27.06.96

7. Spare parts list for material changeover valve

Item	Article no.	Designation
1	6956-040-0530	Valve housing (through valve)
	6956-040-0528	Valve housing (outlet/end valve)
2	6956-040-0553	Connecting piece
3	6956-080-0300	Control section, compl.
4	6956-040-0555	Cover
5	6956-040-0524	Control piston
° 6	6956-080-0295	Valve seats, compl.
° 7	6956-080-0031	Needle reinforcement, compl.
* 8	6956-080-0294	Seal screw, compl.
* 9	6956-080-0045	Needle guide, compl.
° 10	6956-070-0862	Threaded needle
11	6956-020-0008	Spring
* 12	6956-010-0294	Gasket
* 13	6956-010-0034	Gasket
* 14	6956-010-0285	Gasket (2 pcs)
15	6956-030-1895	Ball
16	6956-030-0521	Screw (4 pcs)
17	6956-030-0707	Washer (4 pcs)
18	6956-030-1871	Pin
19	6956-020-0047	Spring
° 20	6956-030-2913	Nut (2 pcs)
21	6956-030-0527	Screw (4 pcs)
* 22	6956-010-0035	Gasket
23	6956-030-2843	Sealing screw (2 pcs)
* 24	6956-010-0701	Gasket
25	6956-030-1897	Washer (4 pcs)
* 26	6956-010-0703	Gasket
27	6956-030-2495	Double nipple G 1/4
°	6956-010-0712	Gasket set
	6956-080-1617	Wearing parts set (incl. 6956-010-0712)

Maßzeichnung Ventilblock

Endventil Durchgangventil Ausgangsventil



Anzahl Ventileinheiten	L mm
2	62
3	102
4	142
5	182
6	222
7	262
8	302
9	342
10	382

8. Technical data

Pressures / Temperatures	
Max. material pressure	200 bar
Min. material pressure	0.4 bar
Max. material temperature	50° C
Control air pressure	4-8 bar
Connections	
Material (inlet valve)	G 1/4 i
Material (outlet block)	G 1/4 a
Control air	G 1/8 i
General	
Flow width	DN 5
Material viscosity	< 50 s / outlet cup 4 DIN 53211
Weight	
Standard version	ca. 1,1 Kg

