

Operating instructions and spare parts list

DOK-265-GB Rev. 0

designation **airless spray appliance**


type **30-20**

Order-No.: 7120-000

- keep for further use -

CE

Krautzberger 

	Dokumentation DOK-265-GB.doc Rev.0	Bezeichnung	HD-Pumpe
		Typ	30-20
		Artikel	7120-000

1 The Airless process

Atomization and agent application are brought about without the use of air, thus the term Airless. The agent is being atomized by squeezing it under an extremely high pressure through the small bore of the material nozzle. In the process the agent is disintegrated into individual particles.

The pressure required for the Krautzberger Airless process may attain up to **480bar** and is generated by compressed air operated positive-displacement piston pumps.

Advantages of the Airless spray

- upgrated spray performances
- instant surface coating due to a full and saturated homogeneous spray pattern and instant film formation
- reduced spray time
- increased material yield due to minimized spray fogs and low material rebound.
- fatigueless working brought about by a light and handy spray gun design equipped with only on material supply hose
- optimized atomisation even of high viscous materials

2 Method of operation of the positive-displacement pump

By means of an independently controlled air motor which is alternately applying pressure onto the motor piston, the recuperator piston of the pump is moved upwards and downwards.

Air motor and recuperator piston are interconnected via an coupling system.

Whilst moving upwards the suction valve is opened and the agent is sucked into the lower chamber of the hydraulic unit. Simultaneously the pressure valve located in the piston is being closed and the recuperator piston feeds the agent into the hydraulic unit.


The set spray pressure and the adopted nozzle size determine the stroke frequency, the air consumption. and thus the respective spray performance of the positive-displacement pump.

All agent conveying pump components consist of special steel 18/8

3 Mounting and installation

The Airless pump is to be installed in such a way as to render it easily accessible for maintenance and cleaning purposes.

The pump holder is provided with an earthing srew to which the ground wire must be connected in order to ground the static charge generated by the agent flowing within the hose.

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Connect the Airless pump only with a heavy duty compressed-air supply net: designed for a maximum compressed air consumption.

PRIOR TO START-UP, CLOSE THE PRESSURE REGULATOR OF THE AIRLESS PUMP BY COUNTER-CLOCKWISE TURNING THE HAND-WHEEL.

The piping supplying compressed air to the Airless-pump should have a nominal width of 9.

Furthermore we recommend to provide the compressed air supply net with an oil- and water separator in order to prevent foreign bodies from penetrating into both air motor and independently operating control system.

If need be a compressed air-oiler with deicing agent maybe installed between airless pump and oil/water separator.

Use only the original suction gear in order to ensure proper pump sucking.

Engage spray gun`s safety catch and connect the material supply hose at the outlet of the high-pressure filter.

WHEN IT COMES TO MATERIAL SUPPLY HOSES WITH SAFETY CONDUCTOR IN ORDER TO PREVENT ELECTROSTATIC CHARGES FROM BEING GENERATED.

CAUTION:


With regard to operating the Airless pump we prefer to the safety rules edited and published by the applicable employers liability insurance.

4 Start-up

- Entirely close pressure regulator at motor
- connect compressed air-hose (max. 8bar)
- in case the pump is provided with a material filter, (strongly recommended by us) a filter mesh matching the nozzle requirements must be used. See table
- Fill rinsing agent into the rinsing chamber, until the sight glass shows a 70% fillin level
- Slowly open pressure regulator until air motor starts working.
- Rinse the Airless pump by means of the rinsing agent in order to get the preservatives out of the pump
- put the suction hose into the spray agent
- open spray gun in order to evacuate the air still contained in the system
- When the spray agent starts to emerging from the spray gun, close spray gun and set the required working pressure at the pressure regulator (max 8bar)

CAUTION!

PAY ATTENTION TO THE PRESSURE TRANSFORMATION RATIO!

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Under no-load conditions the Airless-pump must only be operated for a short time and at a slow running level.

Otherwise motor, suction valve, piston valve and the pump sealing may be damaged.

CAUTION!

The spray jet emerging from the spray gun is dangerous. For this reason aim the spray gun only downwards.

5 Switching off

Switching-off

- Entirely close pressure regulator at motor
- disconnect spray gun and render the system pressureless.
- remove and clean the spray nozzle
- remove suction hose out of the spray agent and put it in a thinner
- slowly open pressure regulator whilst the spray gun is being opened, until the air motor starts working
- rinse spray gun and pump by means of a thinner. In the process make sure that the motor runs at a slow level only
- for rough cleaning of the filter during rinsing , shortly open the cock at filter

Maintenance

Daily check rinsing agent level during operation. Sight glass must show a 70% filling level.


In case the rinsing agent is contaminated by the spray agent, replace the rinsing agent. If, after a short time only, the rinsing agent should again be contaminated or should the rinsing agent level displayed by the sight glass increase, we recommend to replace the gasket set, item 22 and item 30.

By replacing these gasket sets, the recuperator piston prevented from being worn out prematurely.

We recommend to open the material filter at fixed intervals in order to clean the filter housing, mesh inclusive.

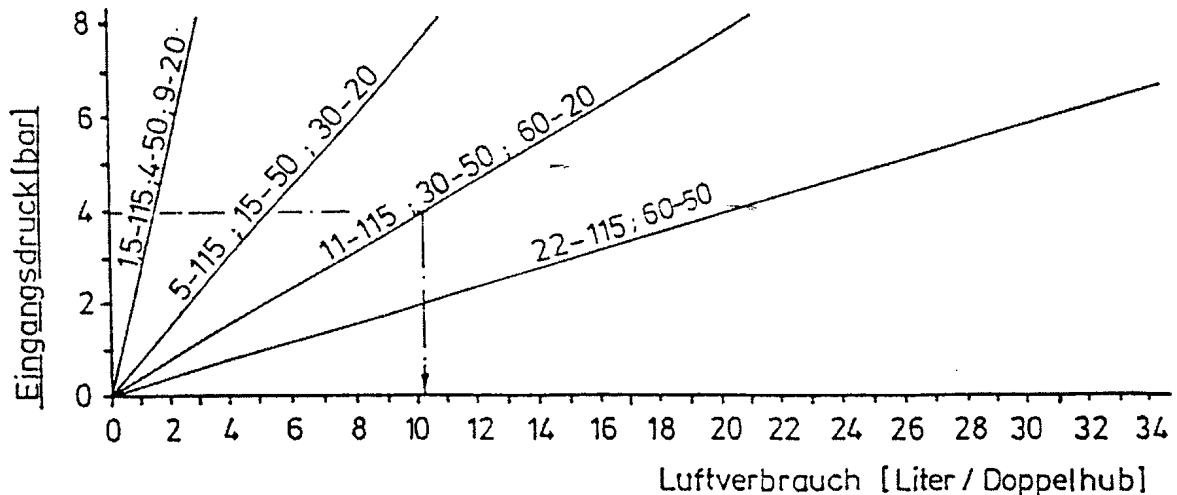
CAUTION!

Prior to opening material filter refer to instructions

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6 Technical data


Air consumption



Example

input air pressure: 4,0bar
pump type: 30-20
air consumption/double stroke: 5.45litres

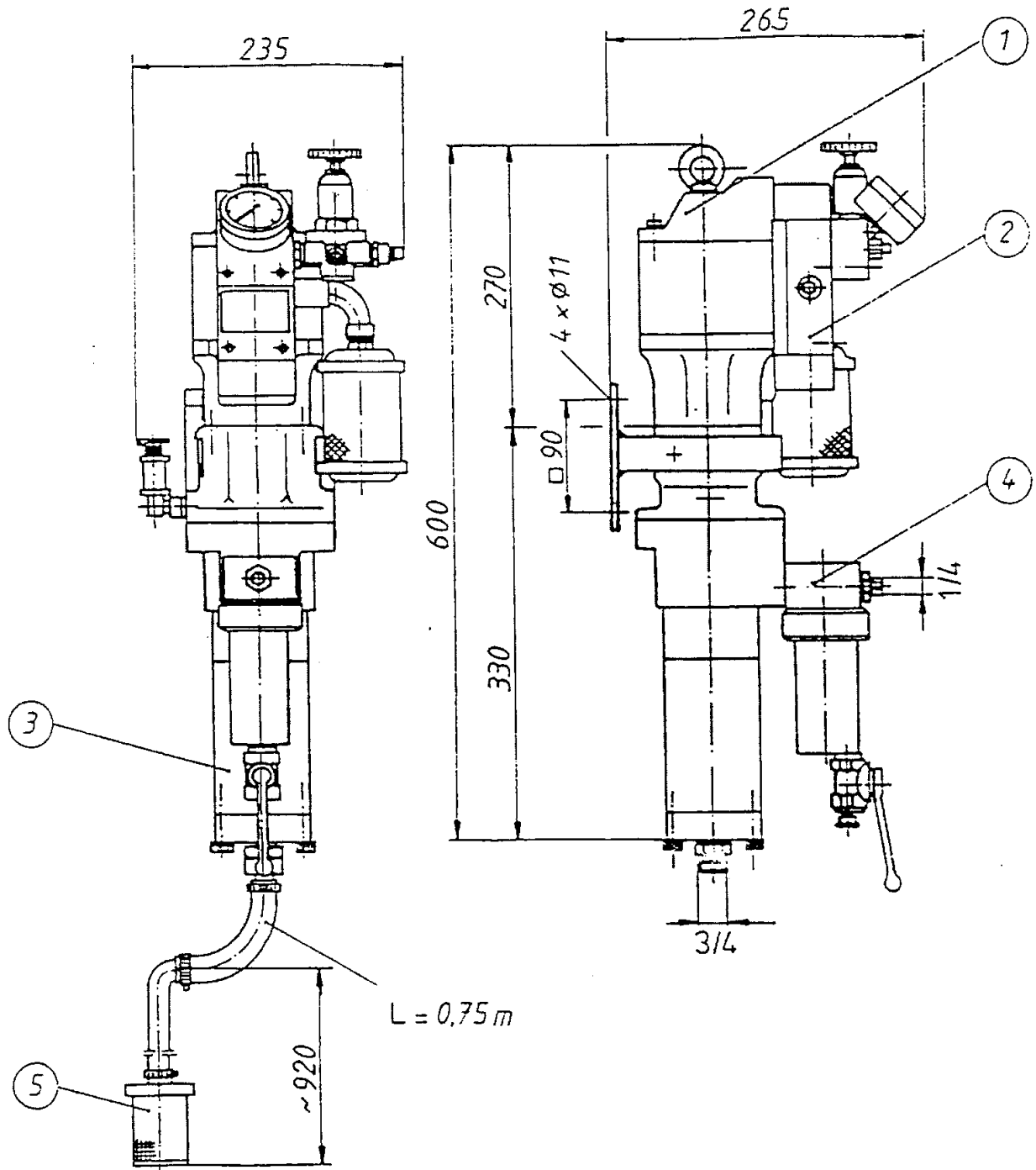
pressure transformation ratio	30:1
delivery volume/double stroke	40ccm
max. recommended double strokes/minute	50
max. air pressure	8bar
max. spray agent pressure in bar	240bar
recommended delivery volume	2,0l/min (50 double strokes/minute)
max. delivery volume	4,0l/min (100 double strokes/minute)


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7 Trouble shooting guide

kind of malfunction origin of malfunction (unit)	pump does not start or Stops running during operation	no or insufficient pump sucking	spray pressure too low	uneven operation of pump	pump continues running even though spray gun is closed	pump feeds agent into rinsing chamber	iced control
drive	clean control and defective parts			clean control and defective parts			pump runs too fast
hydraulic unit		insufficient venting, leaking screwing between hydraulic unit and suction gear		insufficient venting, leaking screwing between hydraulic unit and suction gear			
suction gear		mesh basket obstructed		mesh basket obstructed			
high pressure filter	filter contaminated, check for passage and cleanliness						
high pressure material hose	choked hose, check for passage and cleanliness						
suction/pressure valve	worn or blocked, replace defective parts						
sealing sets	leaking gaskets					upper gasket set leaking	
atomizer nozzle	nozzle bore choked		excessive nozzle bore				excessive nozzle bore
pressure reducing valve	air pressure too low		air pressure too low				
compressed air piping	insufficient air quantity, air pressure too low		insufficient air quantity, air pressure too low				
spray agent	viscosity too high						

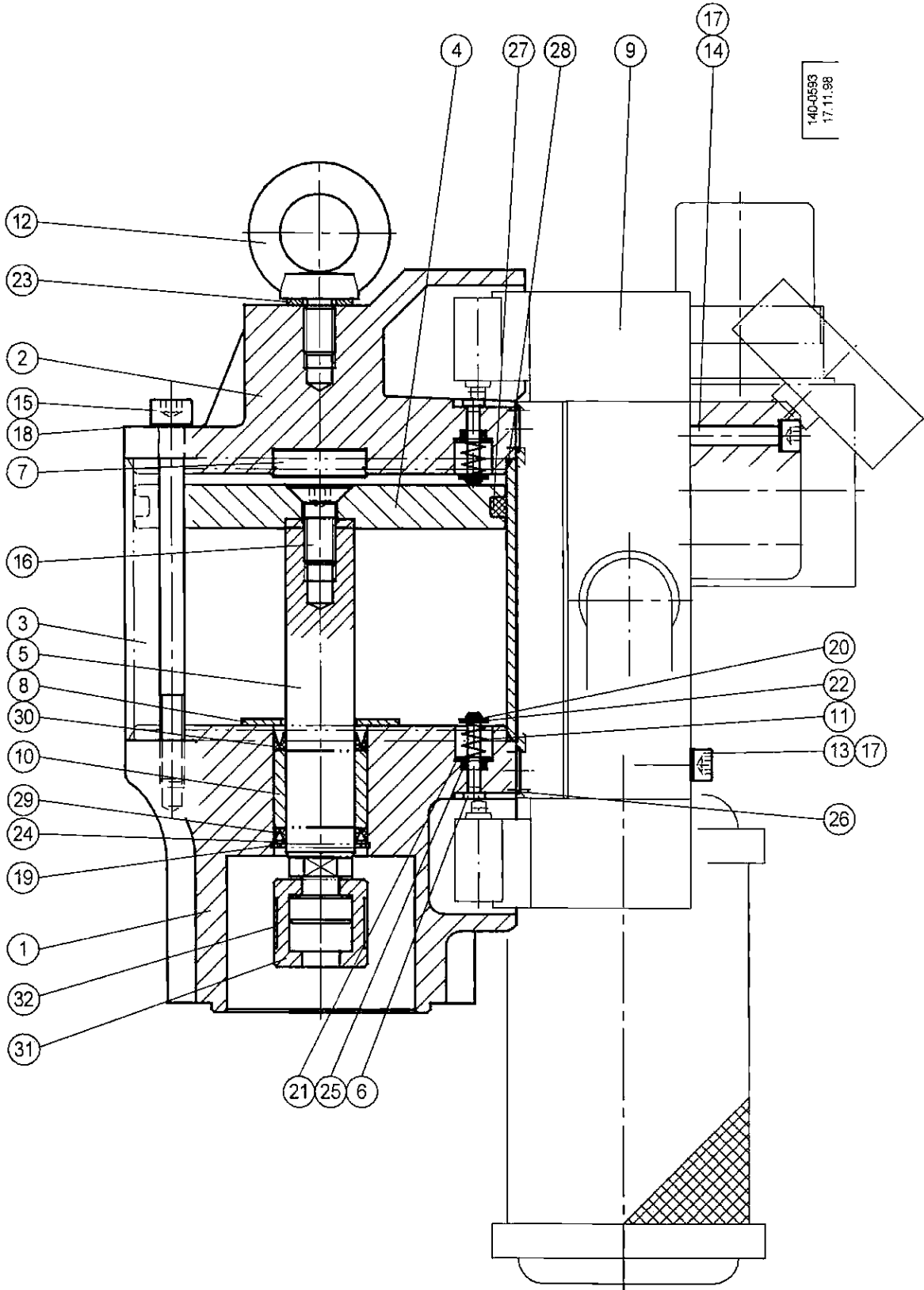
8 Units of the airless-pump 30-20




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Item	designation	Order No.
1	motor, compl.	7120-080-0456
2	control unit, compl.	7120-080-3141
3	pump, compl.	7120-090-0005
4	filter compl.	7120-080-0013
5	suction gear, compl.	7120-080-0298

8.1 spare parts drawing motor 125

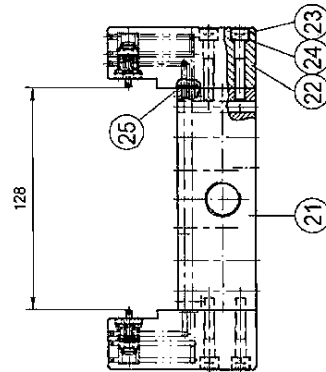
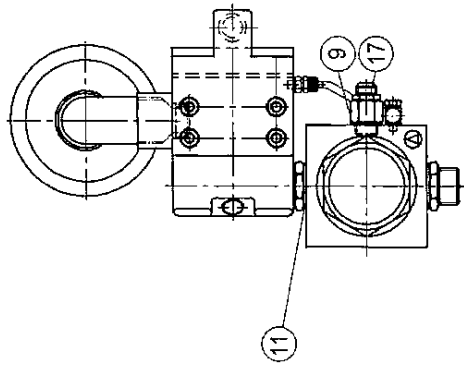


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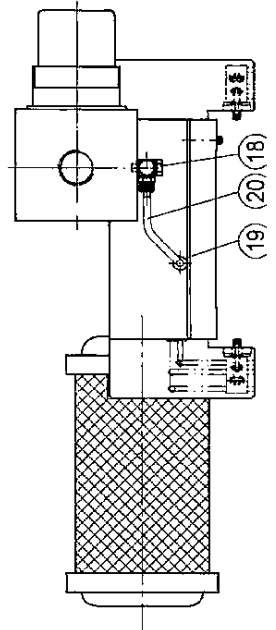
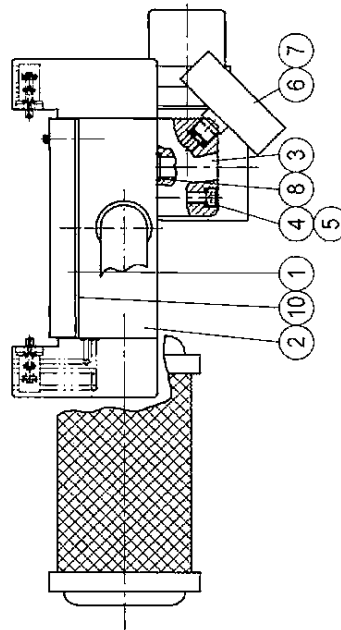
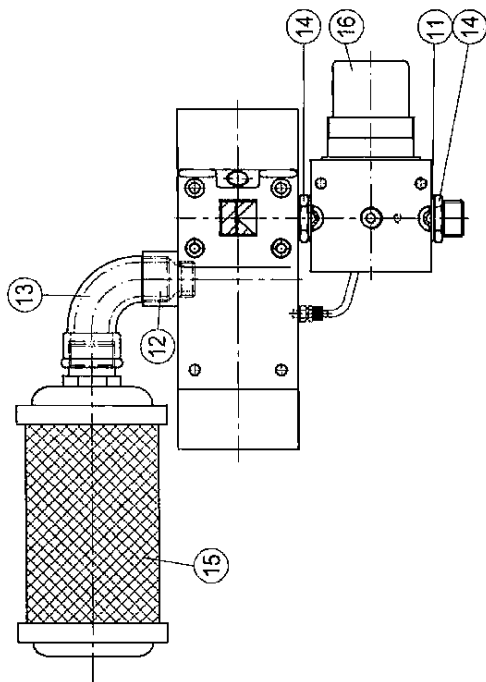
8.1.1 spare parts list motor 125


Item	designation	Order No.
1	lower part	7120-040-438
2	upper part	7120-040-0439
3	cylinder tube	7120-040-0440
4	piston	7120-040-0441
5	piston rod	7120-040-0030
6	tappet rod (2pcs)	7120-040-0034
7		
8		
9	control unit compl. (8bar air pressure)	7120-080-3141
9	control unit compl. (6bar air pressure)	7120-080-3142
10	bushing	7120-040-0041
11	pressure spring (2 pcs)	7120-020-0076
12	ring bolt	7120-030-0143
13	screw (2 pcs)	7120-030-0310
14	screw (2 pcs)	7120-030-0315
15	screw (4 pcs)	7120-030-0512
16	screw	7120-030-0354
17	safety disk (4 pcs)	7120-030-0706
18	safety disk (4 pcs)	7120-030-0714
19	safety ring	7120-030-0718
20	safety dis (2 pcs)	7120-030-0719
21	disk (2 pcs)	7120-030-2857
22	disk (2 pcs)	7120-030-2856
23	disk	7120-030-2867
24	disk	7120-040-0042
*25	gasket (2 pcs)	7120-010-0247
*26	o-ring (2 pcs)	7120-010-0241
*27	o-ring	7120-010-0254
*28	o-ring (2 pcs)	7120-010-0255
*29	gasket	7120-010-0898
*30	gasket	7120-010-0257
31	coupling (2 pcs)	7120-040-0062
32	spring clip	7120-020-0150

8.2 spare parts drawing control unit., 8bar



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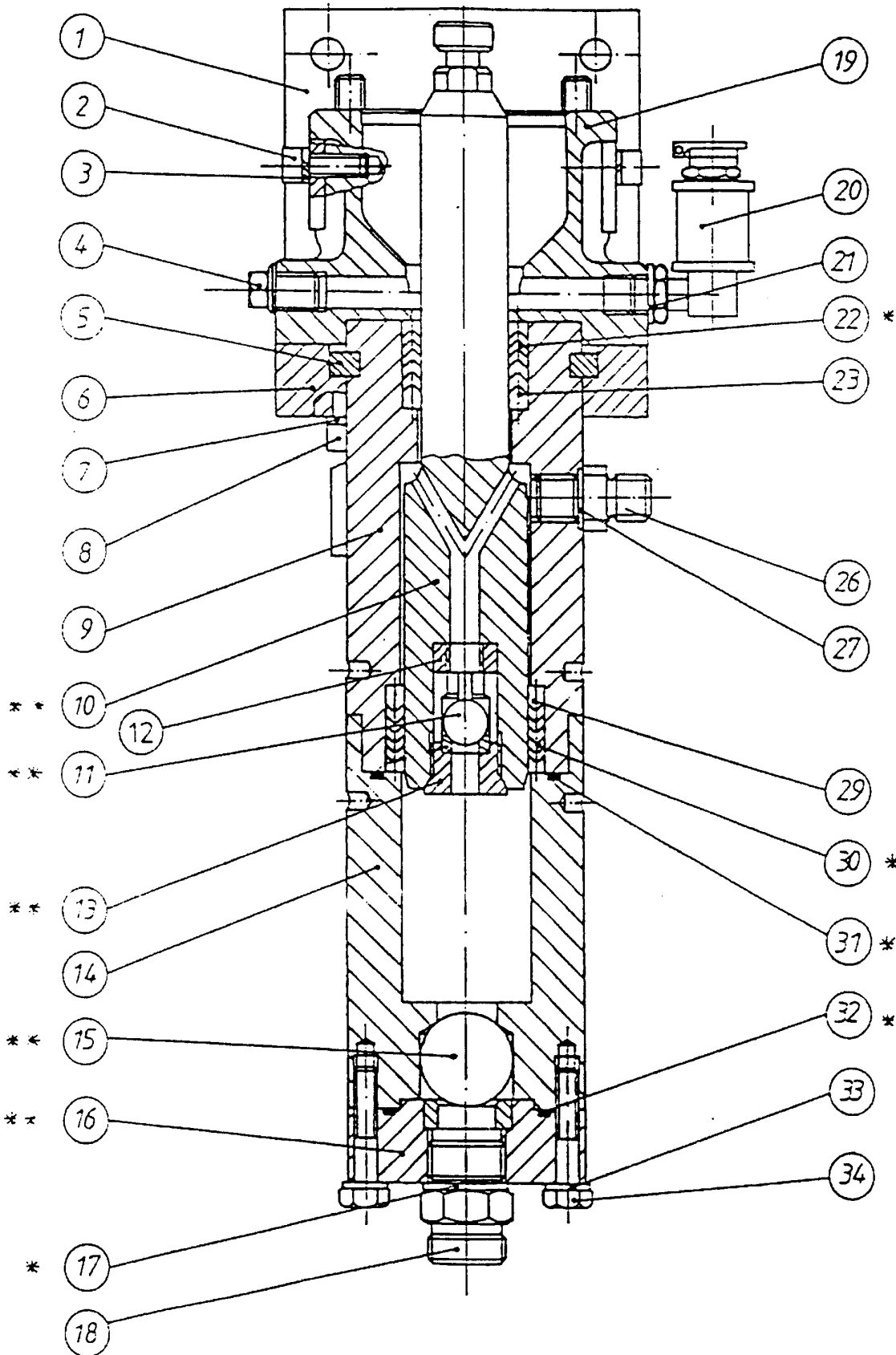



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8.2.1 spare parts list control unit., 8bar

Item	designation	Order-No.
1	air distributor	7120-080-0197
2	control valve, incl. item. 21-25	7120-130-0305
3	connector	7120-040-0446
4	screw (2 pcs)	7120-030-0294
5	safety disk (2 pcs)	7120-030-0706
6	manometer	7120-030-0720
*7	gasket	7120-010-0251
*8	o-ring	7120-010-0243
*9	gasket	7120-010-0244
*10	gasket	7120-010-0245
*11	gasket (2 pcs)	7120-010-0287
12	extension	7120-030-0708
13	bend	7120-030-2020
14	double nipple (2 pcs)	7120-030-1991
15	silencer	7120-030-0711
16	pressure reducer	7120-030-1313
17	safety valve ,8bar	7120-130-0179
18	angle fitting	7120-080-0207
19	fitting	7120-030-2406
20	pipe, length 82mm	7120-100-0439
21	5/2 way valve compl.	7120-080-3017
22	3/2 way valve, compl. (2 pcs)	7120-130-0306
23	screw (8 pcs)	7120-030-0294
24	safety disk (8 pcs)	7120-030-0706
*25	o-ring (6 pcs)	7120-010-0636

8.3 spare parts drawing hydraulic system



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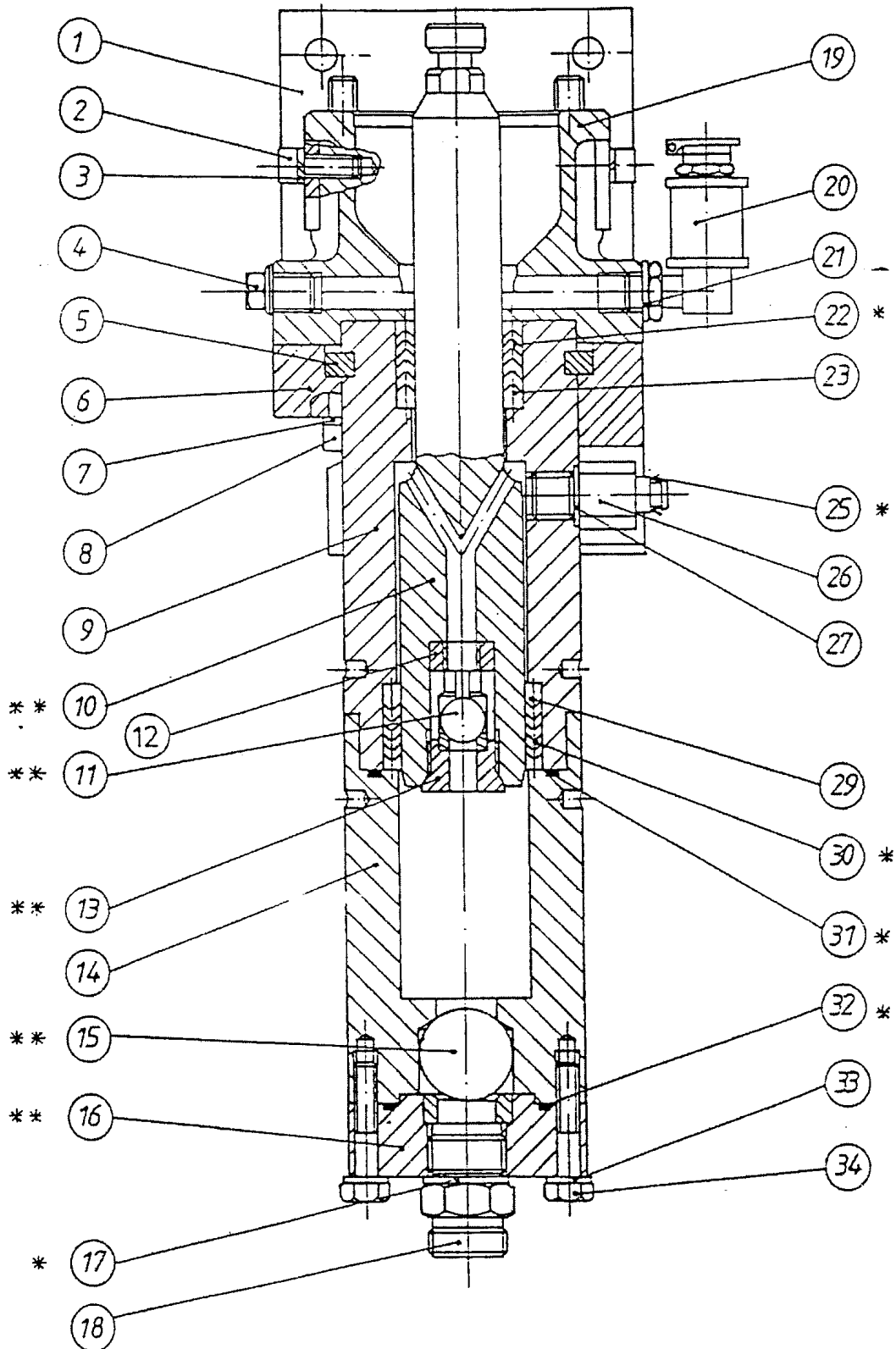
8.3.1 spare parts list hydraulic system


Item	Designation	Order-no.
1	pump holder	7120-080-0006
2	screw	7120-030-0524
3	safety disk	7120-030-0714
4	thread plug	7120-030-0516
5	ring	7120-040-0460
6	clip ring	7120-040-0458
7	disc	7120-030-2869
8	screw	7120-030-0514
9	upper part tube	7120-040-0607
10	piston	7120-040-0611
11	ball	7120-030-2746
12	ball valve seat	7120-040-0598
13	fastener srew	7120-080-0005
14	lower part tube	7120-040-0608
15	ball	7120-030-2749
16	pump fastener	7120-080-0003
17	gasket	7120-010-0287
18	screw in socket	7120-040-0600
19	rinsing chamber	7120-040-0060
20	gauge	7120-030-1879
21	gasket	7120-010-0244
22	gasket, compl. PTFE (standard)	7120-010-0302
22	gasket, compl. PTFE-leather	7120-010-0314
22	gasket. compl. leather	7120-010-0315
23	pressure ring	7120-040-0590
26	double nippel	7120-0040-0601
27	gasket	7120-010--0260
29	pressure ring	7120-040-0591
30	gasket compl. PTFE (standard)	7120-010-0303
30	gasket compl. PTFE-leather	7120-010-0316
30	gasket compl. leather	7120-010-0317
31	gasket	7120-010-0262
32	gasket	7120-010-0263
33	disk	7120-030-2874
34	hexagonal nut	7120-030-0499

* = gasket set 010-0867

** = wearing parts

8.3.2 spare parts drawing hydraulic system (with built-on filter)




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8.3.3 spare parts list hydraulic system (with built-on filter)

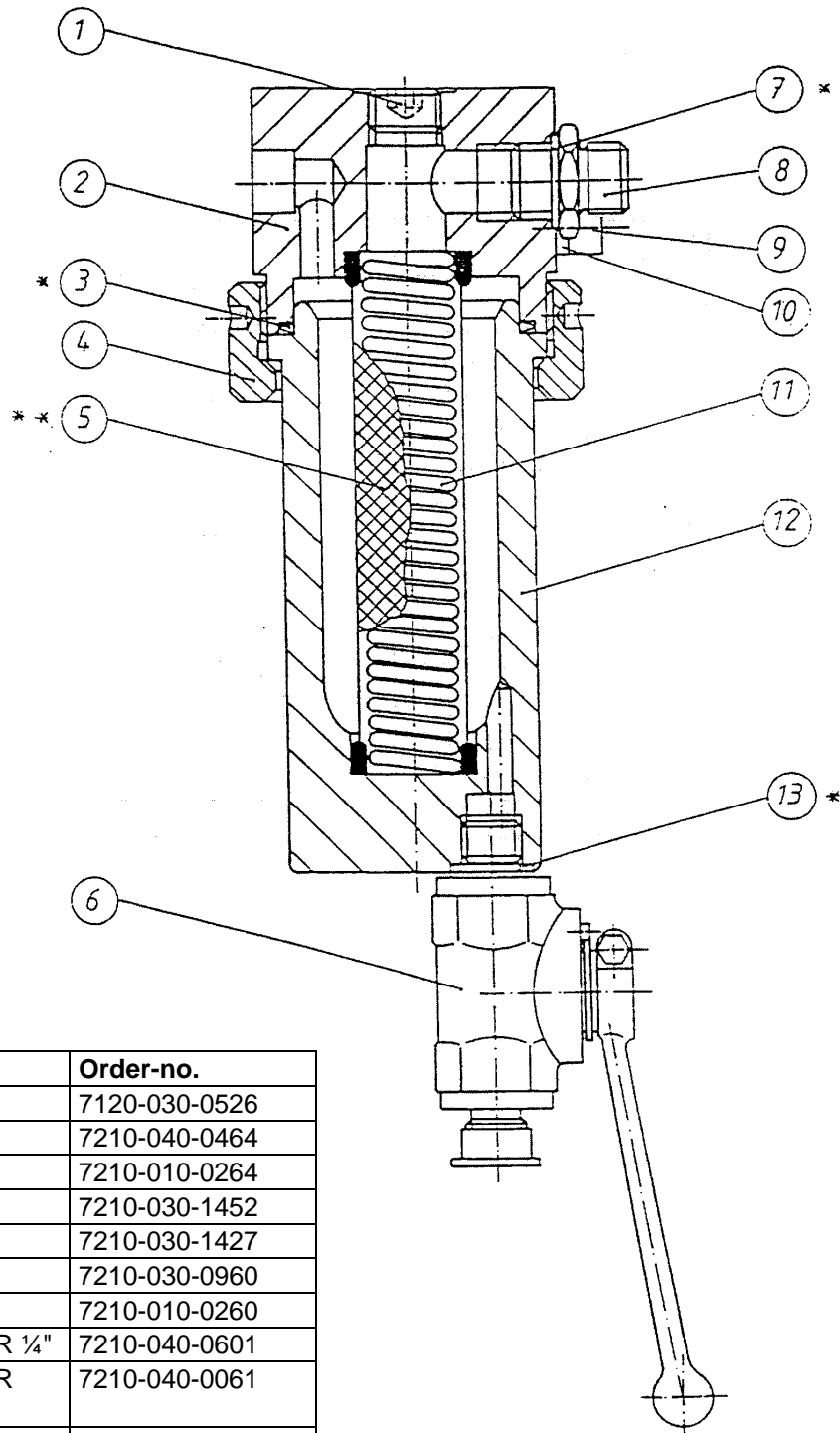
Item	designation	Order-No
1	pump holder	7120-080-0006
2	screw	7120-030-0524
3	safety disk	7120-030-0714
4	thread plug	7120-030-0516
5	ring	7120-040-0460
6	filter panel	7120-040-0456
7	disc	7120-030-2869
8	screw	7120-030-0514
9	upper part tube	7120-040-0607
10	piston	7120-040-0611
11	ball	7120-030-2746
12	ball valve seat	7120-040-0598
13	fastener srew	7120-080-0005
14	lower part tube	7120-040-0608
15	ball	7120-030-2749
16	pump fastener	7120-080-0003
17	gasket	7120-010-0287
18	screw in socket	7120-040-0600
19	rinsing chamber	7120-040-0060
20	gauge	7120-030-1879
21	gasket	7120-010-0244
22	gasket, compl. PTFE (standard)	7120-010-0302
22	gasket, compl. PTFE-leather	7120-010-0314
22	gasket. compl. leather	7120-010-0315
23	pressure ring	7120-040-0590
25	gasket	7120-010-0265
26	filter connection	7120-040-0602
27	gasket	7120-010-0260
29	pressure ring	7120-040-0591
30	gasket, compl. PTFE (standard)	7120-010-0303
30	gasket compl. PTFE-leather	7120-010-0316
30	gasket compl. leather	7120-010-0317
31	gasket	7120-010-0262
32	gasketP	7120-010-0263
33	disk	7120-030-2874
34	hexagonal nut	7120-030-0499

* = gasket set 010-0867

** = wearing parts

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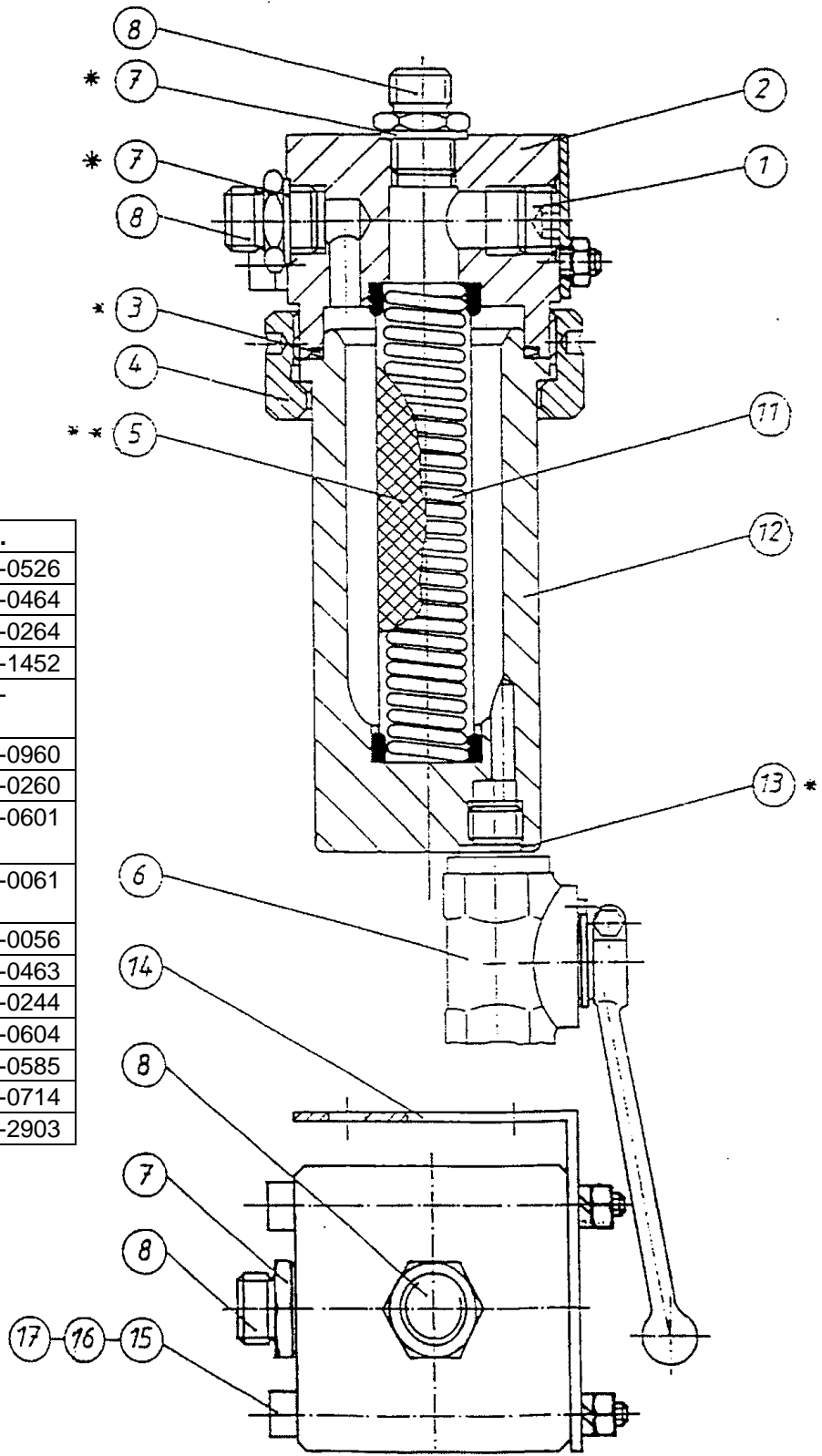
8.4 spare parts drawing built-on filter



spare parts list


Item	Designation	Order-no.
1	locking srew	7120-030-0526
2	intermediate piece	7210-040-0464
3	gasket	7210-010-0264
4	nut	7210-030-1452
5	filter mesh	7210-030-1427
6	Stopp cock	7210-030-0960
7	gasket	7210-010-0260
8	connection nipple R ¼"	7210-040-0601
8	connection nipple R 3/8"	7210-040-0061
11	support spring	7210-020-0056
12	filter housing	7210-040-0463
13	gasket	7210-010-0244
14	fastener	7210-040-0604
15	cylinder screw	7210-030-0585
16	safety ring	7210-030-0714
17	hexagonal nut	7210-030-2903

8.5 spare parts drawing filter (direct mounting)

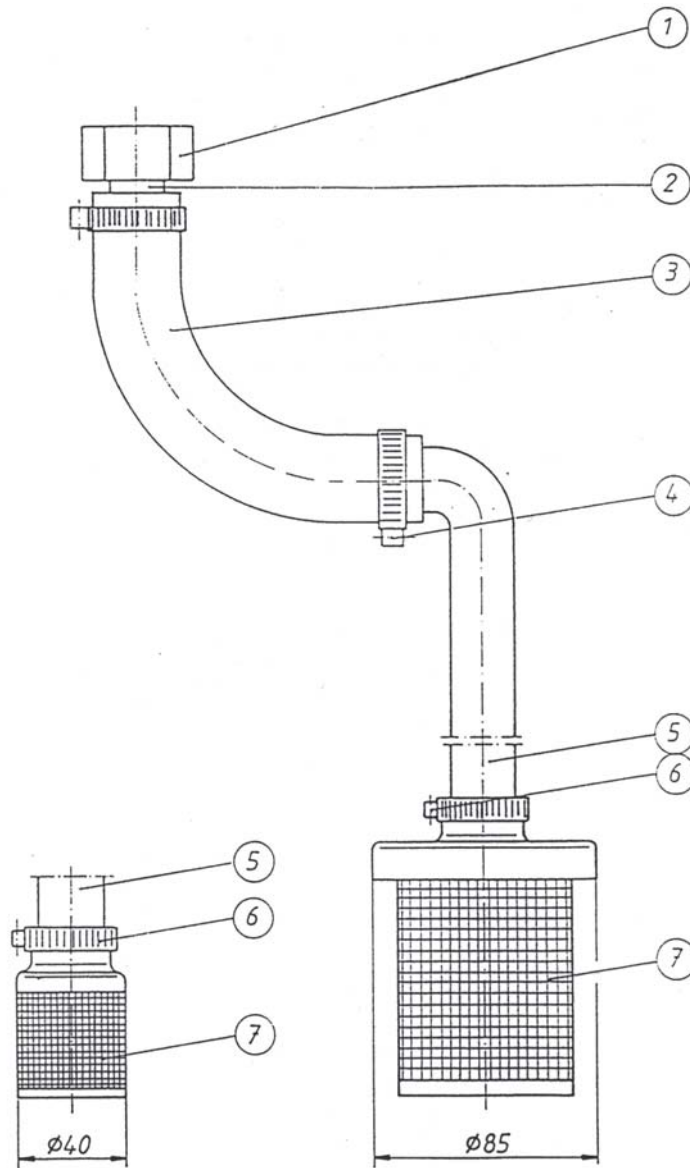


Spare parts list

Item	Designation	Order-no.
1	locking screw	7210-030-0526
2	intermediate piece	7210-040-0464
3	gasket	7210-010-0264
4	nut	7210-030-1452
5	filter mesh	7210-030-1427/35
6	Stopp cock	7210-030-0960
7	gasket	7210-010-0260
8	connection nipple R 1/4"	7210-040-0601
8	connection nipple R 3/8"	7210-040-0061
11	support spring	7210-020-0056
12	filter housing	7210-040-0463
13	dichtung	7210-010-0244
14	fastener	7210-040-0604
15	cylinder screw	7210-030-0585
16	safety ring	7210-030-0714
17	hexagonal nut	7210-030-2903


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8.6 spare parts drawing suction gear



spare parts list

item	Designation	Order-no.
1	srew cap	7210-040-1246
2	sleeve	7210-040-1300
3	hose	7210-110-0005
4	hose clip	7210-030-1397
1-4	Hose, compl.	7210-080-0677
5	tube	7210-040-0886
6	hose clip	7210-030-1396
7	mesh dia. \varnothing 85 (Standard)	7210-080-0066
7	mesh dia \varnothing 40	7210-080-0014

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9 Declaration of conformity

EG-Konformitätserklärung

im Sinne der EG-Maschinenrichtlinie 89/392/EWG, Anhang II A

Hiermit erklären wir, **Krautzberger GmbH, Spritztechnik**
Stockbornstraße 13, Postfach 13 51
65343 Eltville am Rhein (65333 Postfach)

daß die nachfolgend bezeichnete Maschine aufgrund ihrer Konzipierung und Bauart sowie in der von uns in Verkehr gebrachten Ausführung den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der EG-Richtlinien entspricht.
Bei einer nicht mit uns abgestimmten Änderung der Maschine verliert diese Erklärung ihre Gültigkeit.

Bezeichnung der Maschine: *Kolbenpumpe*

Maschinentyp: 30-20

Maschinen-Nr.: 7120-000

Einschlägige EG-Richtlinien: EG-Maschinenrichtlinie (89/392/EWG) i.d.F. 93/44/EWG

Angewandte harmonisierte Normen, insbesondere: DIN 24374 / 1

Angewandte nationale Normen und technische Spezifikationen insbesondere: DIN 24295

Datum/Herstellerunterschrift: 28.12.94 

Angaben zum Unterzeichner: technischer Leiter