

Hutchison-Hayes Separators, Inc.

Model MSA 200-01-076 Parts List With Diagrams

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Frame and Hood

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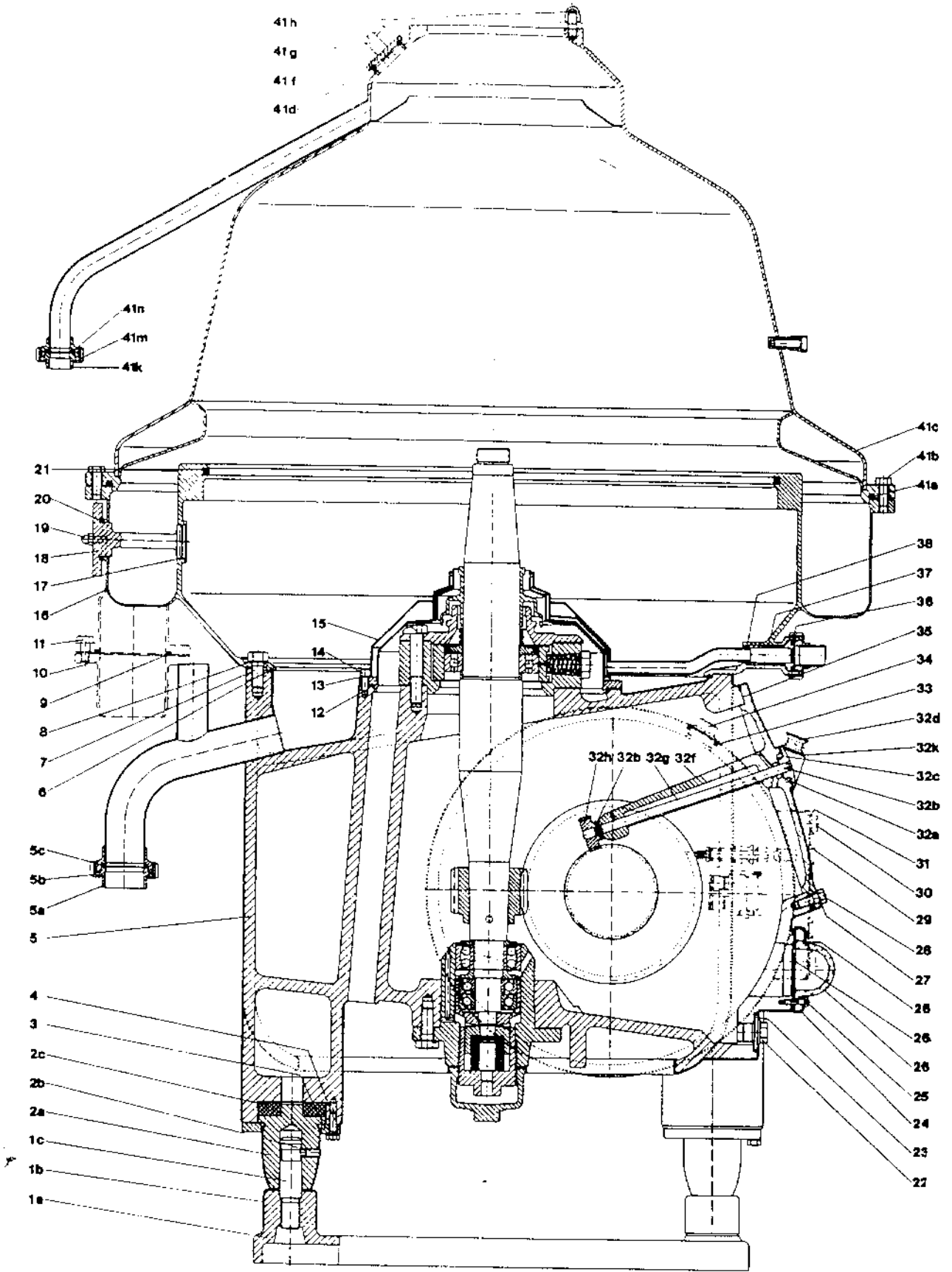


Fig. 13/1

No. in Fig.	Part - No.	Qty.	Part Description
-	3170-1020-010	1	Foundation frame assembly (1a-c)
1a	3170-1003-010	1	Foundation frame
1b	0026-2031-300	4	Cap
1c	3157-1033-000	4	Bolt
-	2315-1015-010	4	Foot assembly (2a-c)
2a	2315-1011-000	4	Foot, stainless steel coated
2b	0019-6387-400	4	Threaded pin M 12x20 DIN 915
2c	0021-3018-750	4	Rubber cushion
3	0001-0516-300	4	Flange
4	0019-6937-400	12	Hex head screw M 10x30 DIN 933
5	1166-1006-020	1	Lower section of frame
5a	0018-3955-300	1	Cone connection D50 DIN 11851
5b	0013-2845-300	1	Grooved coupling nut F50 DIN 11851
5c	0007-2211-750	1	Gasket G50 DIN 11851
6	0007-2954-750	1	Gasket 590/4
7	0019-7036-400	8	Hex head screw M 16x35 DIN 933
8	0004-2290-400	8	Gasket 16,7/24x1,5
9	0007-2113-750	1	Gasket 94/104x6
10	1167-1045-000	1	Pipe connection
11	0019-6968-300	3	Hex head screw M 12x25 DIN 933
12	0007-2571-750	1	Gasket 297/4
13	0026-1325-400	8	Lock washer A8 DIN 127
14	0019-6122-400	8	Allen screw M 8x20 DIN 912
15	1167-1219-010	1	Operating-water feed
16	1168-1018-000	1	Sediment collector
17	0007-2580-750	1	Gasket 42/2,5
18	1166-1183-000	1	Plug
19	0013-0404-400	2	Cap nut M 8 DIN 1587
20	0007-2320-750	1	Gasket 45/55x5
21	0007-2803-840	1	Gasket 770/788x9,8
22	0019-0840-400	1	Oil drain screw
23	0004-5037-710	1	Gasket 38/50x1,5
24	0001-0022-400	1	Sight glass frame
25	0019-6845-400	3	Hex head screw M 6x25 DIN 933
26	0001-0027-830	1	Sight glass
26a	0004-5406-750	1	Gasket 110x3
26b	0004-5056-740	1	Gasket 70/80x2
27	0026-1371-400	4	Washer
28	0019-6970-400	4	Hex head screw M 12x30 DIN 933
29	3050-1085-010	1	Ventilation grid
30	0019-6966-400	4	Hex head screw M 12x20 DIN 933
31	0026-1375-300	4	Washer
-	3170-3495-010	1	Revolution indicator assembly (32a-h)
32a	0004-5523-750	1	Sealing ring A 12x22x7 DIN 3760
32b	0026-1049-030	2	Cylindrical pin 30x24 DIN 7
32c	3117-3497-020	1	Revolution indicator disc
32d	0019-1543-400	1	Oil fill screw
32f	3170-3510-000	1	Housing
32g	0026-5694-030	1	Cylindrical pin 12h8x302
32h	3117-3487-000	1	Worm wheel
33	0007-2229-750	1	Gasket 40/48x5
34	0019-1548-400	1	Plug
35	0004-5762-700	1	Gasket 273/322 x 2
36	0007-2208-750	1	Gasket G 25 DIN 11851
37	1167-1074-000	1	Bush
38	0007-2521-750	1	Gasket G 15 DIN 11851
-	1168-7759-000	1	Hood assembly (41a-41n)
41a	0004-2364-758	1	Packing cord 8x8x3300
41b	0019-6970-400	8	Hex head screw M 12x30 DIN 933
41c	1168-7765-000	1	Hood
41d	0007-2262-750	1	Gasket 45/57x6
41f	1165-1061-000	1	Inspection cover
41g	0013-2646-300	2	Cap nut M 10
41h	0013-0406-400	4	Cap nut M 12 DIN 1587
-	0026-0165-400	4	Washer 13 DIN 433
41k	0018-3939-300	1	Cone connection D 25 DIN 11851
41m	0013-2842-300	1	Grooved coupling nut F25 DIN 11851
41n	0007-2208-750	1	Gasket G 25 DIN 11851

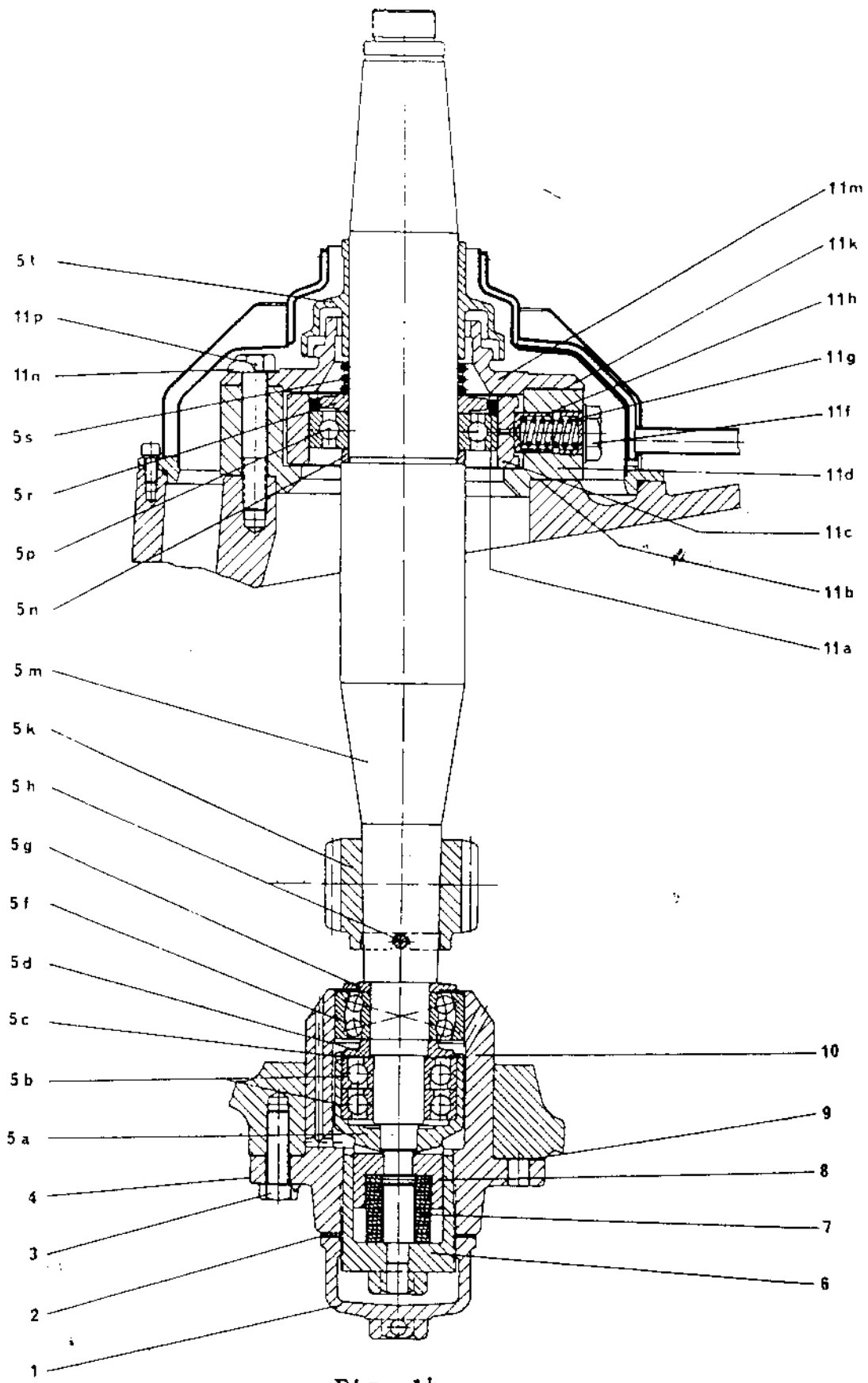


Fig. 14

Vertical Gear Parts
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No. in Fig.	Part - No.	Qty.	Part Description
1	0010-8003-210	1	Bottom bearing cap
2	0004-2221-740	1	Gasket 80/108x2
3	0019-7038-150	4	Hex head screw M 16x45 DIN 933
4	0026-5894-600	4	Safety washer 17 DIN 93
-	1166-3429-000	1	Worm spindle assembly (5a-t)
5a	0010-8012-020	1	Bottom bearing pressure housing Angular contact ball bearing 7307 BGM /P6 DIN 628
5b	0011-7307-100	2	
5c	0026-2109-170	1	Snap ring
5d	0008-4008-030	1	Ball bearing protection ring
5f	0011-2308-120	1	Pendulum ball bearing 2308 M/P6 DIN 630
5g	0008-4008-020	1	Ball bearing protection ring
5h	0026-1563-120	1	Cylindrical notched pin 10x70 DIN 1473
5k	1166-3423-000	1	Worm
5m	1166-3410-000	1	Spindle
5n	0008-7512-010	1	Ring
5p	0011-6215-110	1	Grooved ball bearing 6215 / P6 DIN 625
5r	0008-7508-000	1	Ball bearing protection ring
5s	0006-4311-160	1	Cylindrical pressure spring
5t	0008-7501-670	1	Spindle cap
6	0010-8002-040	1	Bottom bearing threaded piece
7	0006-4440-160	1	Spring column
8	0010-8001-200	1	Bottom bearing pressure piece
9	0004-5793-770	1	Gasket 130/204 x 0,3
48901 10	3050-1112-020	1	Bottom bearing housing
15002 -	0008-7500-000	1	Neck bearing bridge assembly with covering (11a-p)
11a	0008-7509-000	1	Distance ring Gasket 176/235 x 0,3
11b	0004-5851-770	1	
-	0008-7510-000	1	Neck bearing bridge assembly (11c-h)
11c	0008-7507-020	1	Pressure ring Neck bearing bridge
11d	0008-7506-030	1	
11f	0019-1423-030	9	Threaded plug
11g	0006-4380-090	1	Set of neck bearing springs
11h	0026-2220-110	9	Spring piston
11k	0004-5854-770	1	Gasket 167/250 x 0,3
11m	0008-7502-030	1	Protection cap
11n	0026-5894-600	3	Safety washer 17 DIN 93
11p	0019-6616-150	3	Hex head screw M 16x100 DIN 933

* When worm is worn and needs replacement, it is recommended to replace the worm wheel assembly with clamp plates 10 (fig. 15) at the same time, because the latter is no longer in perfect condition either and can thus lead to premature wear of the new worm.

Horizontal Gear Parts

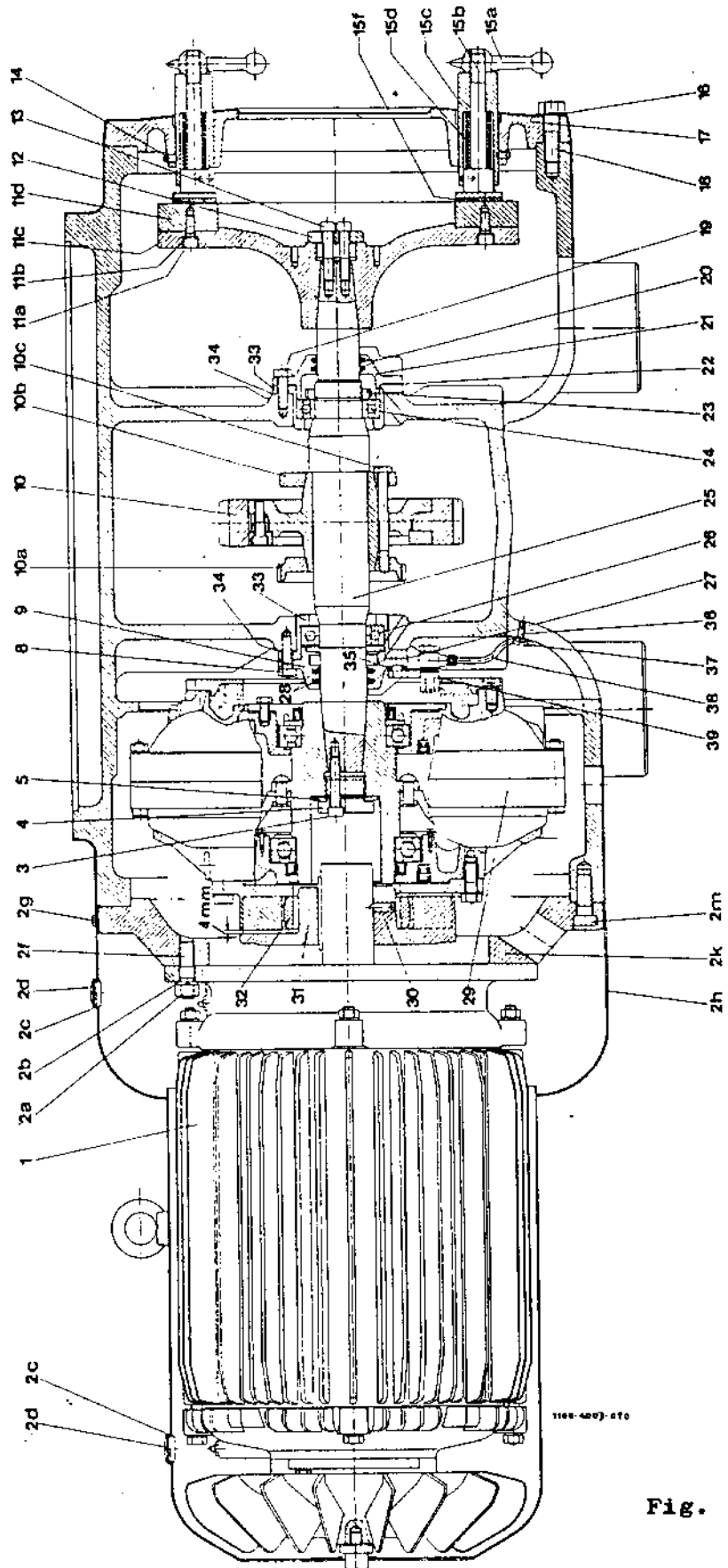


Fig. 15

No. in fig.	Part - No.	Qty.	Part Description
1	5970-L	1	* Motor, type A 225 SA-4f, B5, 37 kW
-	1166-1021-010	1	Flange assembly (2a-m)
2a	0013-0282-400	4	Hexagon nut M 16 DIN 934
2b	0026-1330-190	4	Lock washer A 16 DIN 127
2c	0007-2501-750	2	Gasket 23/3
2d	0005-0226-300	2	Plug Pg 21
2f	0019-7727-090	4	Stud M 16x45 DIN 938
2g	0019-6839-300	8	Hex head screw M 6x10 DIN 933
2h	1080-1475-060	1	Cover
2k	1166-1028-000	1	Flange
2m	0019-6202-150	8	Allen screw M 16x45 DIN 912
3	0019-6150-150	3	Allen screw M 10x55 DIN 912
4	0026-1640-030	1	Washer
5	0006-4404-010	1	Cup spring
8	0019-6938-150	3	Hex head screw M 10x35 DIN 933
9	3050-3375-010	1	Bearing cover
10	1166-3449-020	1	Worm wheel assembly with clamp plates
10a	1166-3447-000	1	** Clamp plate with toothing
10b	1166-3446-000	1	** Clamp plate
10c	0019-6525-150	4	** Hex head screw M 10x110 DIN 931
-	1166-3368-010	1	Brake drum assembly (11a-d)
11a	0019-6144-150	6	Hex head screw M 10x25 DIN 912
11b	0026-1337-170	6	Lock washer A 10 DIN 127
11c	1166-3371-010	1	Brake drum
11d	3170-3371-000	1	Brake ring
12	0026-0405-030	1	Washer
13	0019-6150-150	2	Allen screw M 10x55 DIN 912
14	0019-8974-150	2	Threaded pin AM 8x15 DIN 914
-	3170-1043-000	2	Brake assembly (15a-f)
15a	0021-3514-300	2	Brake handle
15b	3170-1031-000	2	Brake bolt (with lining)
15c	0021-3537-300	2	Brake housing
15d	0006-4208-160	2	Cylindrical pressure spring
15f	0021-4096-850	2	Brake lining
-	0026-1263-550	8	Countersunk rivet
16	0026-1353-400	4	Washer
17	1168-1065-010	1	Fan cover
18	0019-6608-400	4	Hex head screw M 16x60 DIN 931
19	0019-6938-150	3	Hex head screw M 10x35 DIN 933
20	0004-1956-830	2	Felt ring 45 DIN 5419
21	3170-3375-000	1	Bearing cover
22	0004-1822-740	1	Gasket 90/140 ϕ x 1
23	0013-0448-090	1	Grooved nut M 50x1,5
24	0011-6210-000	1	Grooved ball bearing 6210 DIN 625
25	1166-3400-000	1	Worm wheel shaft
26	0011-6210-000	1	Grooved ball bearing 6210 DIN 625
27	0004-1822-740	1	Gasket 90/140 ϕ x 1
28	0004-1957-830	2	Felt ring 50 DIN 5419
29	see page 16/1	1	Fluid clutch (see fig. 16)
30	0019-8984-150	1	+) Threaded pin M 10x25 DIN 914
31	3158-3389-020	1	Cam hub
32	3158-3282-000	1	Cam ring
33	1166-3131-000	2	Bearing housing
34	0004-1850-740	2	Gasket 99/140x1
35	0026-1369-030	2	Washer 10,5 DIN 433
36	0019-2507-400	1	Hex head screw AM 6x10 DIN 85
37	0018-1276-400	1	Pipe clamp
38	0018-0585-848	1	Pipe
39	1166-3710-000	1	Nozzle

3

2

2

* When ordering this part, please state also voltage and frequency.
 ** This part is included in worm wheel assembly with clamp plates, but is also available as separate item. When worm wheel is worn and needs replacement, it is recommended to replace the worm spindle Sk (fig. 14) at the same time (see sect. 8.5, No. 4).
 +) This part is included in cam hub 31, but it is also available as separate item.

Fluid Clutch

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No. in Fig.	Part - No.	Qty.	Part Description
-	1166-3280-020	1	Fluid clutch assembly (1-32) (see also fig. 15, No. 29)
1	-	1	* Cam flange
2	-	8	** Hex head screw M 12x35 DIN 931
3	-	8	** Spring washer 8 12 DIN 137
4	0004-2913-830	1	Sealing ring 105x130x13
5	0026-0182-170	1	Spacer ring AMS 160x26
6	0011-6021-380	1	Grooved ball bearing 6021 MA/C4 DIN 625
7	-	36	** Hex head screw M 70x70 DIN 931
8	-	1	* Clutch casing 470 ϕ
9	0004-2385-858	1	Packing cord 1 ϕ , 1400 long
10	0026-0771-170	36	Spring washer 8 10 DIN 137
11	-	36	** Hexagon nut M 10 DIN 934
12	-	1	* Primary wheel 470 ϕ
13	0026-0180-170	1	Spacer ring AN 140x24
14	0007-2944-830	1	Gasket 140/3 ϕ
15	0011-6018-400	1	Grooved ball bearing 6018 M/C4 DIN 625
16	-	1	* Secondary hub with secondary wheel 425 ϕ
17	0004-2912-830	1	Sealing ring 90x110x13
18	-	1	** Sealing ring cover
19	-	8	** Hex head screw M 8x20 DIN 933
20	0026-0770-170	8	Spring washer 8 8 DIN 137
21	0004-2144-280	2	Gasket 22/29 ϕ x 1,5
22	-	1	** Lock screw M 22x1,5x20
23	0004-2131-280	1	Gasket 18/24 ϕ x 1,5
24	0019-1490-000	1	Threaded plug M 18x1,5x15
25	-	1	** Oil control ring 119/192 ϕ x 4,5
26	-	8	** Cylindrical screw AM 5x15 DIN 84
27	-	8	** Lock washer 5 DIN 7980
29	0019-1551-090	1	Oil fill screw M 22x1,5
30	0019-8385-150	4	Cylindrical screw M 12x25 DIN 7984
31	0007-2035-750	1	Gasket 280/3
32	1166-3367-000	1	Ring

* If this part needs replacement, the complete clutch must be returned to the factory for repair. Instead of part-number state item-number (see first column).

** Instead of part-number state item-number (see first column).

Safety Device for electro-mechanical Locking of the Hood

(On special Order only!)

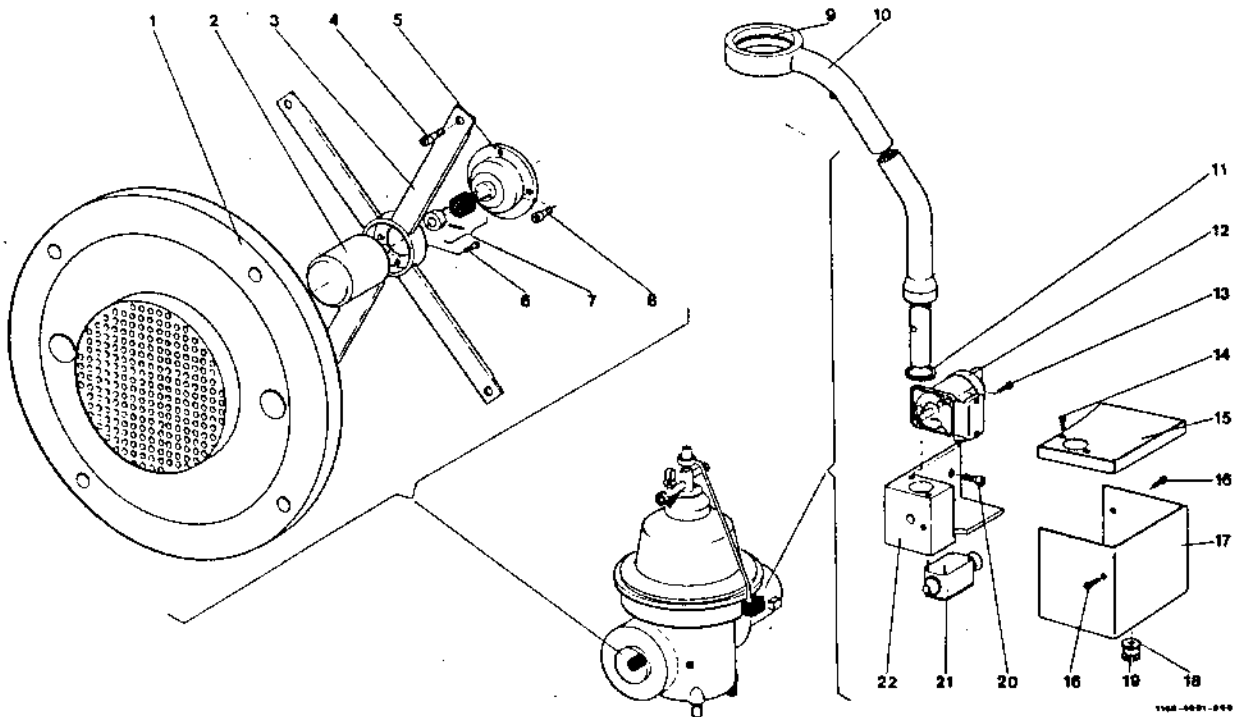
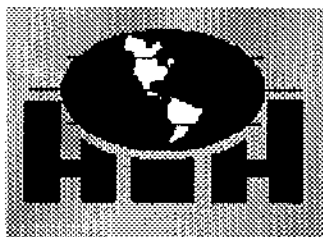


Fig. 15/1

No. in Fig.	Part - No.	Qty.	Part Description
1	1168-1065-	1	Ventilation cover
2	0005-1172-000	1	Speed guard DW 107/K6
3	1168-1145-010	1	Holder
4	0019-6122-150	4	Allen screw M6x20 DIN 912
5	1168-3438-000	1	Driver
6	0019-2248-400	4	Cylindrical screw AM 6x12 DIN 84
7	0005-1177-000	1	Coupling K6
8	0019-6122-150	4	Allen screw M 8x20 DIN 912
9	0007-2149-750	1	Gasket 80/96 x 8
10	1168-1248-000	1	Bow
11	0007-2246-750	1	Gasket 30/38x4
12	0005-1165-000	1	Solenoid 41 034-05 E 5
13	0019-2248-400	2	Cylindrical screw AM 6x12 DIN 84
14	0019-2507-400	2	Cylindrical lens head screw AM 6x10 DIN 85
15	1168-1061-000	1	Cover
16	0019-2507-400	2	Cylindrical lens head screw AM 6x10 DIN 85
17	1168-1076-000	1	Protecting case
18	0013-2868-630	2	Hexagon nut A Pg 11 DIN 46258
19	0005-0203-630	2	Cable gland Pg 11 DIN 46258
20	0019-8371-400	2	Allen screw M 10x12 DIN 6912
21	0005-0643-280	1	Limit switch
22	1168-1145-000	1	Mounting support
-	1166-1125-000	1	Terminal box complete (for safety device)
-	0004-5400-750	1	Cover
-	0019-3218-400	4	Gasket 60 x 2
-	0005-0203-630	2	Lens head screw M4x8 DIN
-	0005-0204-630	1	Cable gland P11
			Plug Pg 13,5



Hutchison-Hayes Separators, Inc.

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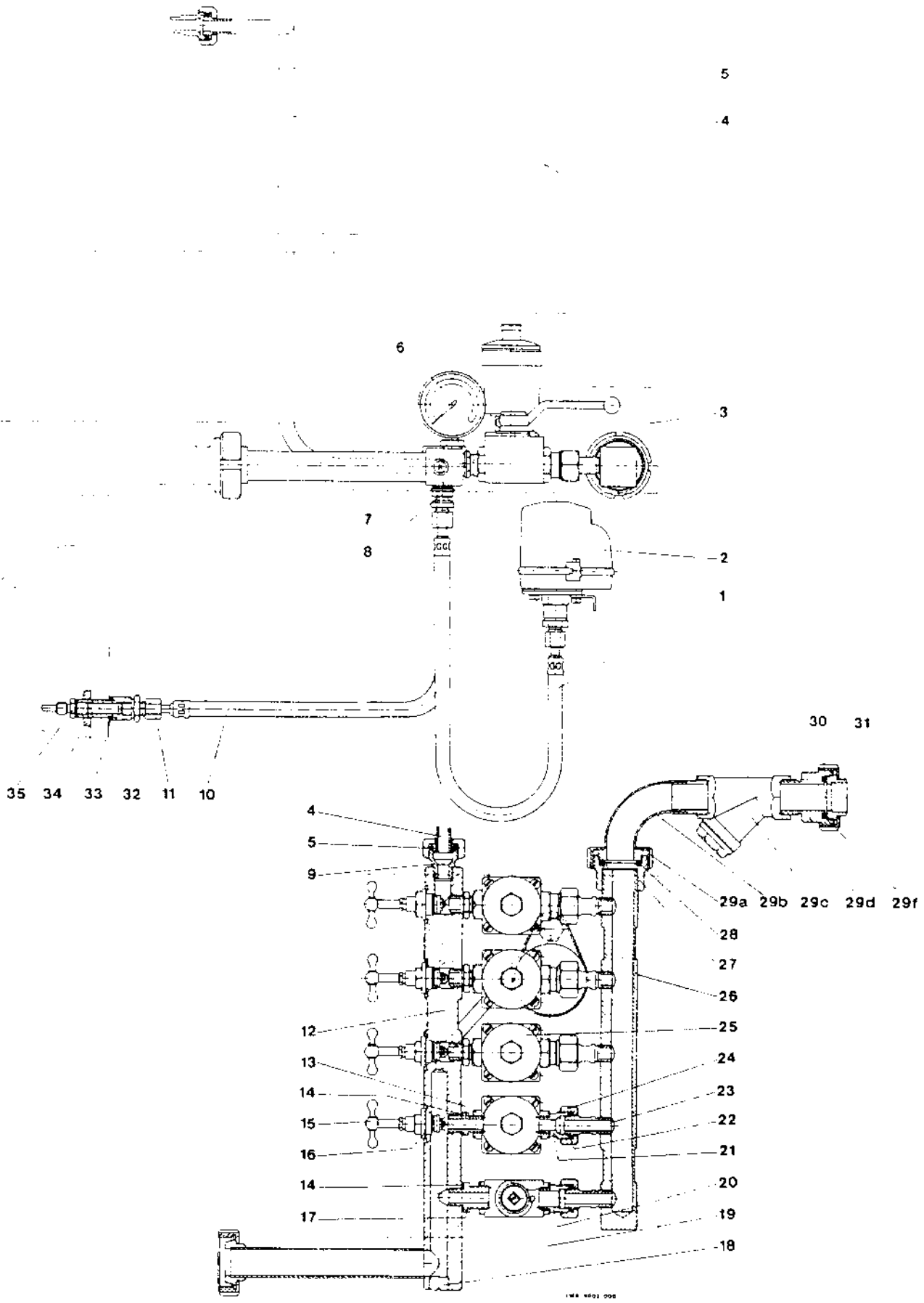


Fig. 17/1

No. in Fig.	Part - No.	Qty.	Part Description
-	1165-2350-000	1	Pressure switch assembly (1-2)
1	0018-1870-000	1	[Low-pressure hose 6x600
2	0005-0675-900	1	[Pressure switch F5
-	0004-5268-880	1	Gasket 13/19ø x 1,5
-	0019-0137-300	1	Hex head screw R 1/4" x 12
-	8134-2100-170		Operating-water connection with protecting case (3-31)
3	8134-2355-000	1	Protecting case assembly
-	1165-2210-000	4	* Pipe clamp
-	0019-6841-400	8	* Hex head screw M 6x15 DIN 933
-	0026-1343-300	8	* Washer
-	0013-0276-300	8	* Hexagon nut M 6 DIN 934
4	8134-2201-000	1	Pipe line
5	0007-2402-750	1	Gasket 17/23x3
-	8134-2099-020		Operating-water connection assembly (6-29f)
6	0001-0298-640	1	Pressure gauge
7	0004-5268-880	4	Gasket 13/19x1,5
8	0019-0137-300	1	Hexagon screw R 1/4" x 12
9	0018-4645-300	1	Threaded connection R 3/4" / R 3/8"
10	0018-1871-010	1	Low-pressure hose
11	0018-3465-400	1	Screw coupling DL 8 DIN 2358
12	8134-2193-020	1	Connection piece
13	0018-0961-640	4	Double nipple 3/8"
14	0004-5285-760	5	Gasket 17/23,5x1
15	0018-1299-640	4	Upper part of valve 1/2" DIN 3519
16	0007-2024-750	4	Gasket 17/24x2
17	0018-1786-640	1	Reducing nipple 1/2" / 3/8"
18	0019-0641-400	1	Threaded plug R 3/4" x 12
19	0018-1710-640	1	Ball valve 1/2"
20	0018-4646-300	1	Threaded connection R 3/4" - R 1/2"
21	0018-4645-300	4	Threaded connection R 3/4" - R 3/8"
22	0007-2188-750	5	Gasket 15,5/21,5x1,5
23	0018-3854-300	5	Connection piece 10/R 3/8"
24	0013-2818-400	5	Hexagon coupling nut R 3/4"
25	see page 17/3	4	Straight-way diaphragm valve
26	8134-2194-020	1	Connection piece
27	0018-4086-400	1	Threaded connection 25/R1"
28	0007-2208-750	1	Gasket G 25 DIN 11851
-	8134-2201-010	1	Pipe line assembly (29a-f)
29a	0013-2842-300	1	[Grooved coupling nut F 25 DIN 11851
29b	0018-1609-300	1	[Bend 25/R1"
29c	0018-2525-630	1	[Strainer
29d	0018-4502-300	1	[Threaded connection 25/R1"
29f	0007-2208-750	1	[Gasket G 25 DIN 11851
30	0013-2842-300	1	Grooved coupling nut F 25 DIN 11851
31	0018-3939-300	1	Cone connection O 25 DIN 11851
32	1166-3308-000	1	Threaded piece
33	0007-2184-750	1	Gasket 15/22x3
34	0013-1023-250	1	Lock nut 3/8" - F 4 DIN 2950
35	0018-3725-600	1	Hose coupling R 1/4" / 4x6

* This part is included in protecting case 3, but it is also available as separate item.

Straight-way Diaphragm Valve R 3/8"

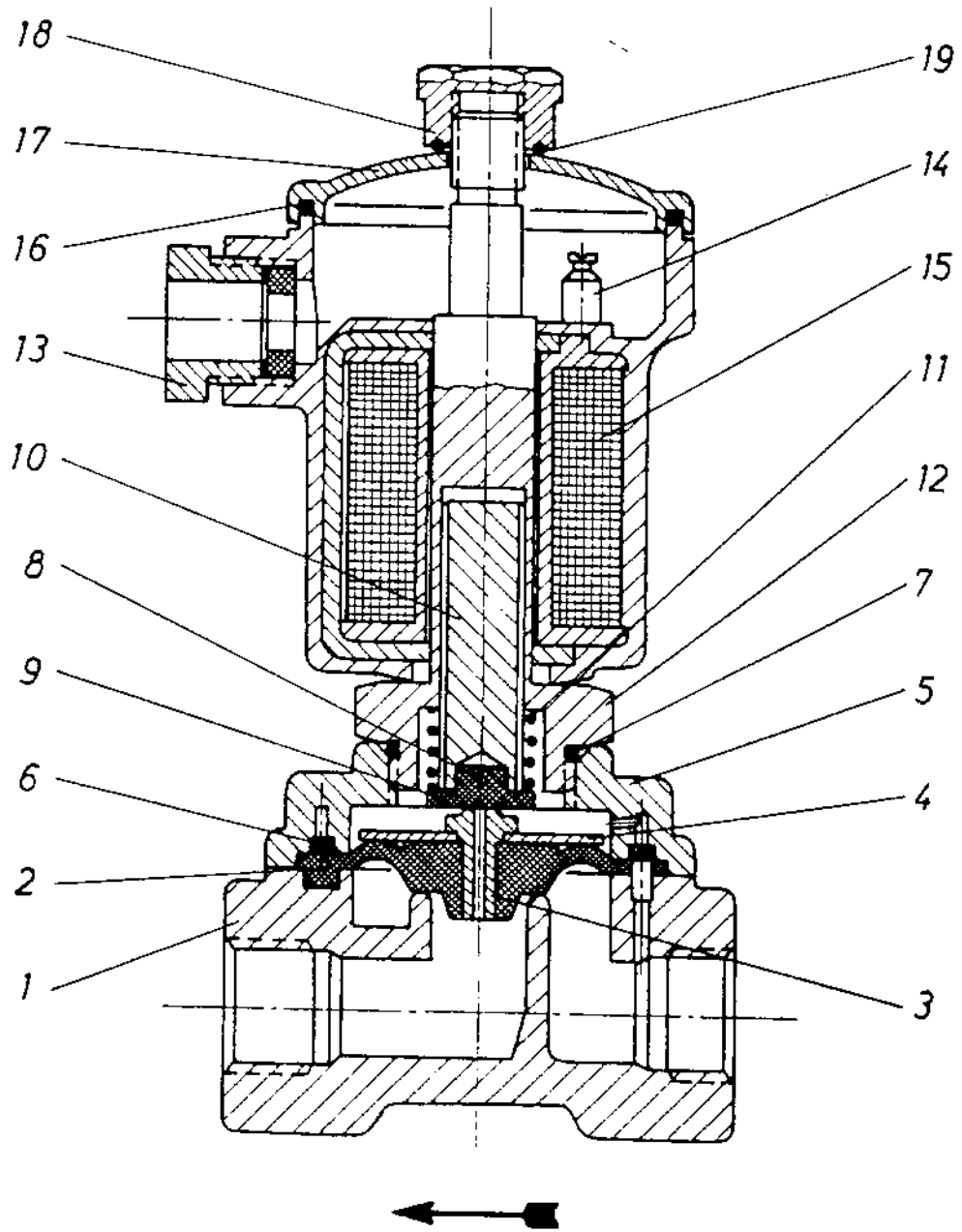


Fig. 17/2

Straight-way Diaphragm Valve 3/8"
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No. in Fig.	Part - No.	Qty.	Part Description
-	0018-4445-500	1	Straight-way diaphragm valve, complete, 3/8" (1-19)
1	0018-1988-500	1	Valve housing
2	0018-1989-500	1	Diaphragm
3	0018-1990-500	1	Pilot valve seat
4	0018-1991-500	1	Supporting disc
5	0018-1992-500	1	Valve housing cover
6	0018-1993-500	1	Filter ring
7	0007-2408-750	1	Gasket 22/25 ϕ x 1,5
-	0018-1982-000	1	Magnet core assembly (items 8-9-10)
8	0026-1577-120	1	Notched pin 2,5 x 10
9	0018-2542-750	1	Plug
10	0018-1982-410	1	Magnet core
11	0006-4080-400	1	Pressure spring
12	0018-1980-510	1	Bush
-	0018-4446-830	1	Magnet head, compl., (50 cycles)
-	0018-4446-840	1	Magnet head, compl., (60 cycles)
			Items 13-14-15 } Optional, depending on frequency
13	0005-0202-630	1	Cable gland
14	0018-1954-510	1	Set of two terminals
15	0018-1985-530	1	* Magnet coil (50 cycles)
15	0018-1985-540	1	* Magnet coil (60 cycles)
16	0007-2257-750	1	Gasket 48/51 ϕ x 115
17	0018-1987-500	1	Magnet housing cover
18	0018-1955-520	1	Lock nut
19	0007-1932-750	1	Gasket 12/1,5 ϕ
			} Optional, depending on frequency

* The magnet coil is cast integral with the magnet housing. Therefore, if the coil needs replacement, the complete magnet head assembly (items 13-14-15) will have to be replaced.

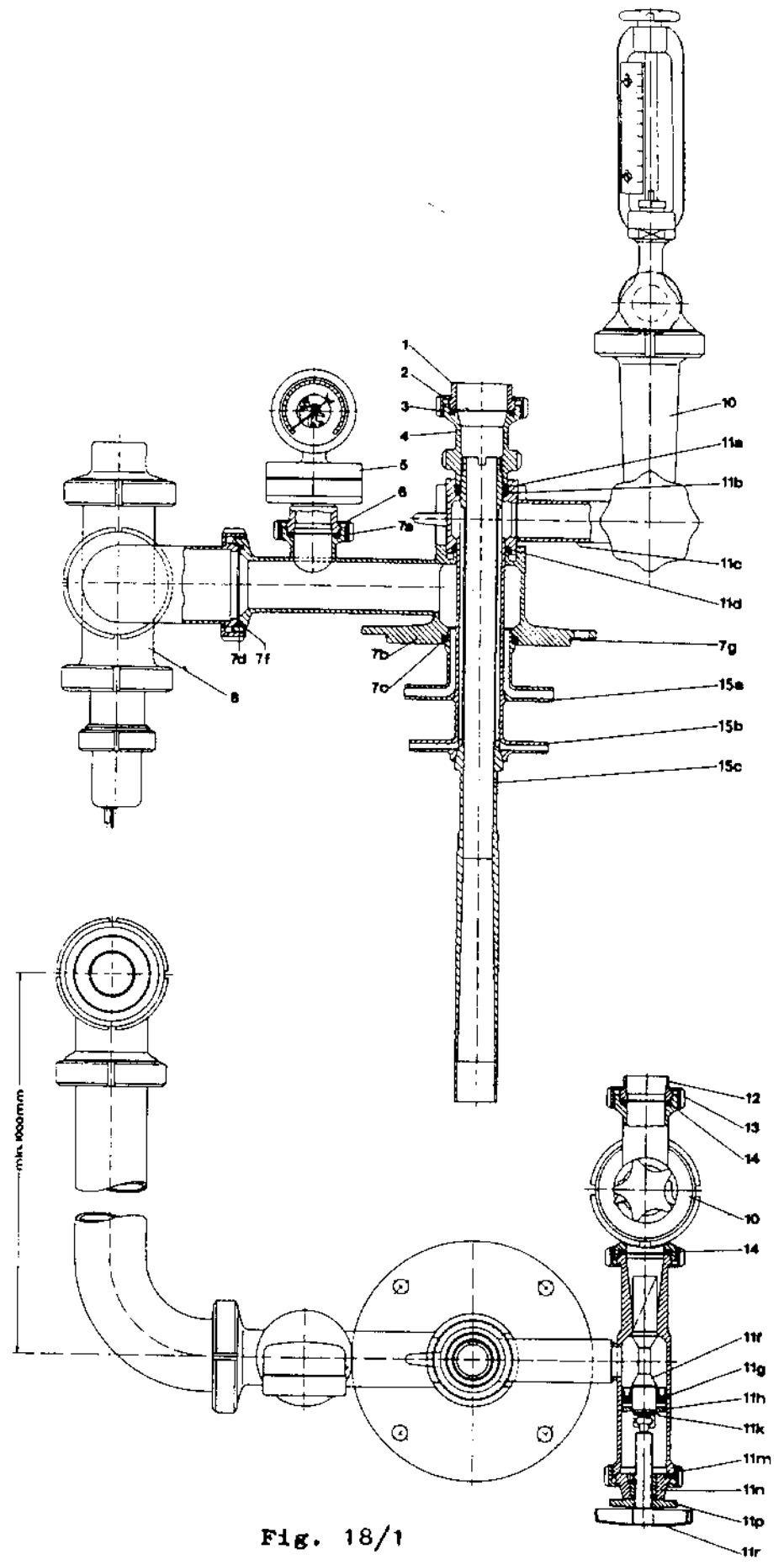


Fig. 18/1

100-2000-000

Feed and Discharge Connections and Centripetal Pump
 =====

No. in Fig.	Part - No.	Qty.	Part Description
-	1168-2296-020	1	Feed and discharge connections (1-14)
1	0018-3955-300	1	Cone connection D 50 DIN 11851
2	0013-2845-300	1	Grooved coupling nut F 50 DIN 11851
3	0007-2211-750	1	Gasket G 50 DIN 11851
4	1168-2189-010	1	Connection piece
5	8918-2100-050	1	Pressure gauge
6	0013-3348-300	1	Grooved coupling nut 40
-	1166-2295-030	1	Lower discharge assembly (7a-g)
7a	0007-2210-750	1	Gasket G 40 DIN 11851
7b	1166-2285-030	1	Lower discharge
7c C	0007-2163-750	1	Gasket 63/75 x 6
7d	0013-2846-300	1	Grooved coupling nut F 65 DIN 11851
7f	0007-2212-750	1	Gasket G 65 DIN 11851
7g x	0007-2564-750	1	Gasket 170/3
8	8266-2310-120	1	Constant-pressure valve
10	see page 18/3	1	Flowmeter (see fig. 18/2)
-	1168-2289-020	1	Upper discharge assembly (11a-r)
11a	0007-2661-840	1	Gasket 41.5/53 x 5
11b	0007-2880-750	1	Gasket 41/53 x 6
11c	1168-2386-000	1	Upper discharge with valve housing
11d C	0007-2890-750	1	Gasket 47/59 x 6
-	1166-2272-010	1	Valve cone assembly (11f-k)
11f	1166-2278-010	1	Valve cone
11g	0004-5720-840	1	Grooved ring 24/45
11h	1166-2268-000	1	Washer
11k	0026-2118-300	1	Snap ring
-	1166-2202-000	1	Adjusting screw assembly (11m-r)
11m	0013-2844-300	1	Grooved coupling nut F 40 DIN 11851
11n	1166-2217-000	1	Guide ring
11p	0013-0085-300	1	Knurled nut M 18 x 1.5
11r	1166-2276-000	1	Adjusting screw
12	0018-3949-300	1	Cone connection D 40 DIN 11851
13	0013-2844-300	1	Grooved coupling nut F 40 DIN 11851
14	0007-2210-750	2	Gasket G 40 DIN 11851
-	1168-2213-010	1	Centripetal pump assembly (15a-c)
15a	1166-2252-010	1	Skim milk pump 150 # (up to 71 per max.)
15b	1168-2241-010	1	Cream pump 150 # (up to 71 per max.)
15c	1166-2246-010	1	Feed tube

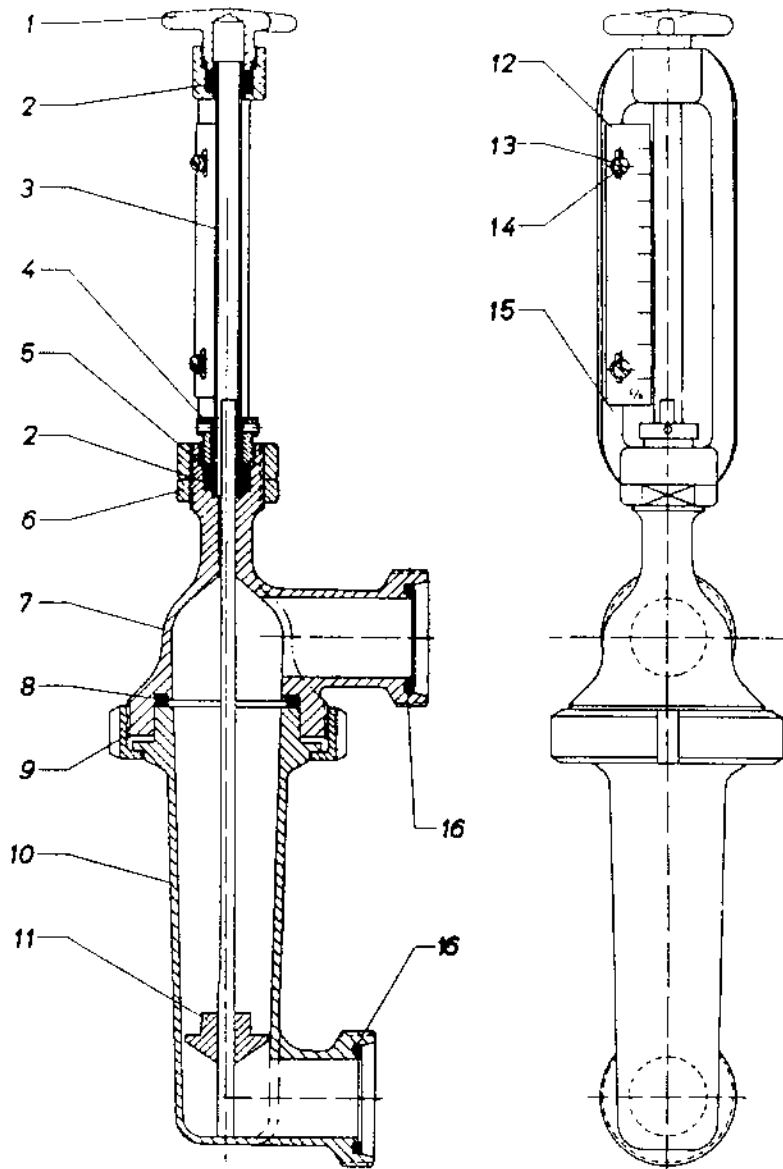


Fig. 18/2

Flowmeter
=====

No. in Fig.	Part - No.	Qty.	Part Description
	Measuring range		
	700 - 4000 1/h f. cream discharge	6000 - 30000 1/h for feed	
-	8021-2000-090	8022-2100-080	1 Flowmeter assembly (1-16)
1	0019-1731-300	0019-1731-300	1 Handle screw
2	0007-2298-750	0007-2298-750	2 Gasket 13,5/22 ϕ x 10
3	0001-0083-820	0001-0082-820	1 Cylindrical sight glass
4	0019-1380-300	0019-1380-300	1 Threaded bush
5	0026-1375-300	0026-1375-300	1 Washer
6	0013-3010-300	0013-3010-300	1 Nut M 35x1,5
7	8021-2003-120	8022-2003-080	1 Outlet pipe
8	-	0007-2341-750	1 Gasket 85/95 ϕ x 6
8	0007-2279-750	-	1 Gasket 56/68 ϕ x 6
9	0013-2846-300	0013-2847-300	1 Grooved coupling nut
10	8021-2001-150	8022-2001-110	1 Inlet cup
11	8021-2012-010	8022-2112-000	1 Float
12	-	8022-2117-000	1 Scale 6000 - 30000 1/h
-	8021-2017-000	-	1 Scale 700 - 4000 1/h
13	0004-5261-720	0004-5261-720	2 Gasket 4,5/8,5 x 1
14	0019-2478-300	0019-2478-300	2 Lens head screw AM 4x8 DIN 85
15	8020-2002-000	8022-2002-000	1 Intermediate piece
16	-	0007-2211-750	2 Gasket G 50 DIN 11851
16	0007-2210-750	-	2 Gasket G 40 DIN 11851

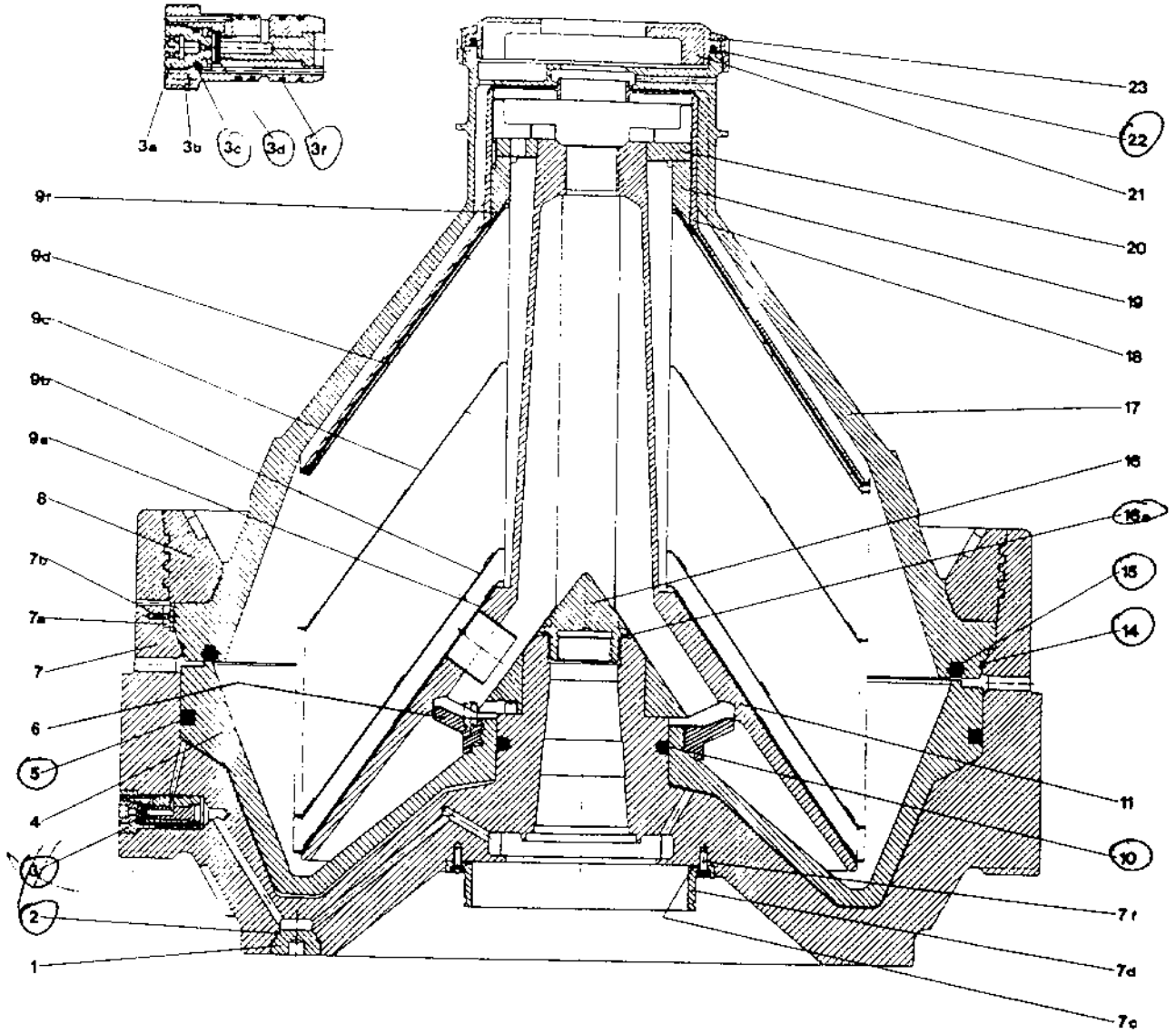


Fig. 19

Bowl
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No. in Fig.	Part - No.	Qty.	Part Description
-	1168-6600-000	1	Bowl, complete (1-23)
1	0019-1450-400	1	Threaded plug M 42x1,5
2	0007-1970-690	1	Gasket 26,5/35 ϕ x 5,25
3	3158-6280-010	1	Valve in bowl bottom (3a-f)
3a	3158-6279-000	1	[Threaded plug Valve housing Gasket 11,3/2,4 ϕ Sealing disc Gasket 23,3/2,4 ϕ
3b	3158-6282-000	1	
3c	0007-2503-750	1	
3d	0004-5502-850	1	
3e	0007-2920-750	4	
4	1168-6501-000	1	
5 C	0007-2964-750	1	Gasket 636/660 ϕ x 12
6	1168-6597-000	1	Ring
7	1168-6604-000	1	* Bowl bottom, complete (7a-f)
7a	3117-6609-010	1	** Arresting piece
7b	0019-2233-400	1	** Cylindrical screw AM 5x12 DIN 84
7c	0007-2640-750	1	** Gasket 150/3 ϕ
7d	1168-6598-000	1	** Ring
7f	0019-6108-400	4	** Allen screw M 6x20 DIN 912
8	1168-6631-000	1	* Lock ring S 700x14
-	1168-6660-000	1	* Set of discs (9a-f)
9a	1168-6662-000	1	[Bottom disc Disc Disc Compensating disc Top disc
9b	1168-6663-010	4	
9c	1168-6663-000	218	
9d	1168-6664-000	1	
9e	1168-6664-000	1	
9f	1166-6666-000	1	
10	0007-2647-750	1	Gasket 119/10 ϕ
11	1168-6620-000	1	* Distributor
12	0007-2546-750	1	Gasket 600/ 5 ϕ
13 C	0007-2466-840	1	Gasket 606/627 x 14
16	0013-3116-400	1	Spindle nut, complete
16a	0007-2382-850	1	** Gasket 60/70 ϕ x 4
17	1168-6610-000	1	* Bowl top
18	1168-6650-000	1	Separating disc
19	1168-6670-000	1	Upper disc (specially shaped)
20	1168-6420-010	1	Retaining ring
21	1168-6645-000	1	Centripetal pump chamber cover
22 C	0007-2854-750	1	Gasket 190/202 ϕ x 6
23	1165-6631-000	1	Lock ring Tr 215x6

* This part can only be replaced by a WESTFALIA factory engineer or by a special repair shop authorized by WESTFALIA, because of special re-fitting to machine and possible re-balancing of bowl.

** This part is included in the preceding "complete" part but it is also available as separate item.

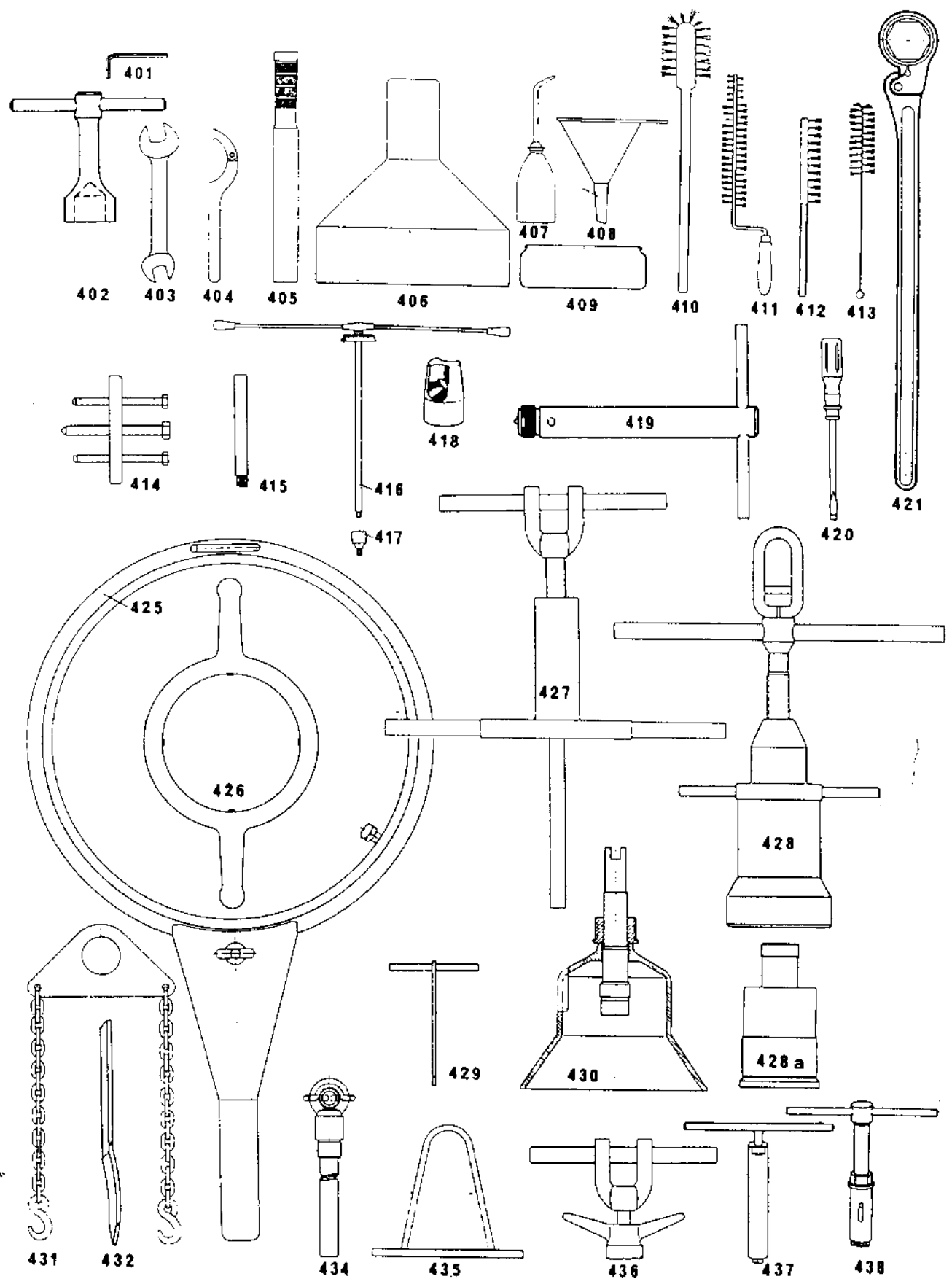


Fig. 20

1166-4009-020

All the parts mentioned in the packing list furnished with the separator should be found in the packing case.

No. in Fig.	Part - No.	Qty.	Part Description
401	0003-3774-320	1	Allen wrench 4 DIN 911
-	0003-3775-320	1	Allen wrench 5 DIN 911
-	0003-3776-320	1	Allen wrench 6 DIN 911
-	0003-3777-320	1	Allen wrench 8 DIN 911
-	0003-3778-320	1	Allen wrench 10 DIN 911
-	0003-3780-320	1	Allen wrench 14 DIN 911
402	0003-3720-000	1	Wrench 55 (for spindle nut)
403	0003-4202-320	1	Double-ended wrench 12x13 DIN 3110
-	0003-4205-320	1	Double-ended wrench 17x19 DIN 3110
-	0003-4208-320	1	Double-ended wrench 22x27 DIN 3110
-	0003-4209-320	1	Double-ended wrench 24x30 DIN 3110
-	0003-4211-320	1	Double-ended wrench 27x32 DIN 3110
-	0003-4222-320	1	Double-ended wrench 36x41 DIN 3110
404	0003-3846-000	1	Pivoted hook wrench NW 25-90
405	0003-0200-000	1	Mallet
406	0003-0303-000	1	Splash cover
407	0003-0256-890	1	Oil gun
408	0003-0168-890	1	Funnel
409	0003-0274-000	1	Oil cup
410	0003-4695-960	1	Brush 70x100x500
411	0003-4667-800	1	Rotary brush 26/41x216
412	0003-4690-960	1	Brush 50x125x285
413	0003-4540-960	4	Cylindrical brush 10x40x160
-	0003-4544-960	4	Cylindrical brush 15x85x285
-	0003-4551-800	1	Cylindrical brush 20x100x800
-	0003-4552-960	1	Cylindrical brush 45x110x270
414	1087-9910-010	1	Pulling device (for cam hub, fluid clutch)
415	0018-3430-030	1	Pipe M 22x1.5x200 (for fluid clutch)
416	0003-0590-000	1	Torque wrench
417	0003-0601-320	1	Socket 8
418	1166-9972-000	1	Spindle lifting device
419	1166-9910-010	1	Pulling-off device (for fluid clutch)
420	0003-4636-050	1	Screwdriver 4.5x125
-	0003-4637-050	1	Screwdriver 8x150
421	0003-4297-110	1	Wrench 60
425	0003-0345-000	1	Annular wrench (for large lock ring)
426	0003-4002-000	1	Annular wrench (for small lock ring)
427	1168-9930-000	1	Jack (for bowl top)
428	1166-9960-000	1	Jack (for sliding piston)
428a	1166-9805-000	1	* Pressure piece
429	0003-0124-000	1	Wrench (for feed tube)
430	1166-9820-000	1	Disc stack compressing device
431	2301-9970-000	1	Lifting device (for annular wrench with lock ring)
432	0003-0217-030	1	Chisel
434	1168-9970-000	1	Mounting tool
435	1165-9840-010	1	Lifting device (for hood)
436	3050-9930-000	1	Jack (for bowl bottom)
437	1165-9855-000	1	Wrench (for valve in bowl bottom)
438	1165-9895-010	1	Socket wrench (for valve in bowl bottom)
-	0015-0014-080	5	2.5-litre can of lubricating oil C-1P 114 Viscosity at 50°C: 114cSt
-	0015-0050-090	2	5-litre can of Shell oil Turbo 27 Viscosity at 50°C: 27cSt-3E (for fluid clutch)
-	0015-0113-000	2	100-gram tube of special type grease (for threaded areas of bowl)
-	0015-0106-060	1	0.5-kg can of roller bearing grease

* This part is included in Jack 428, but it is also available as separate item.

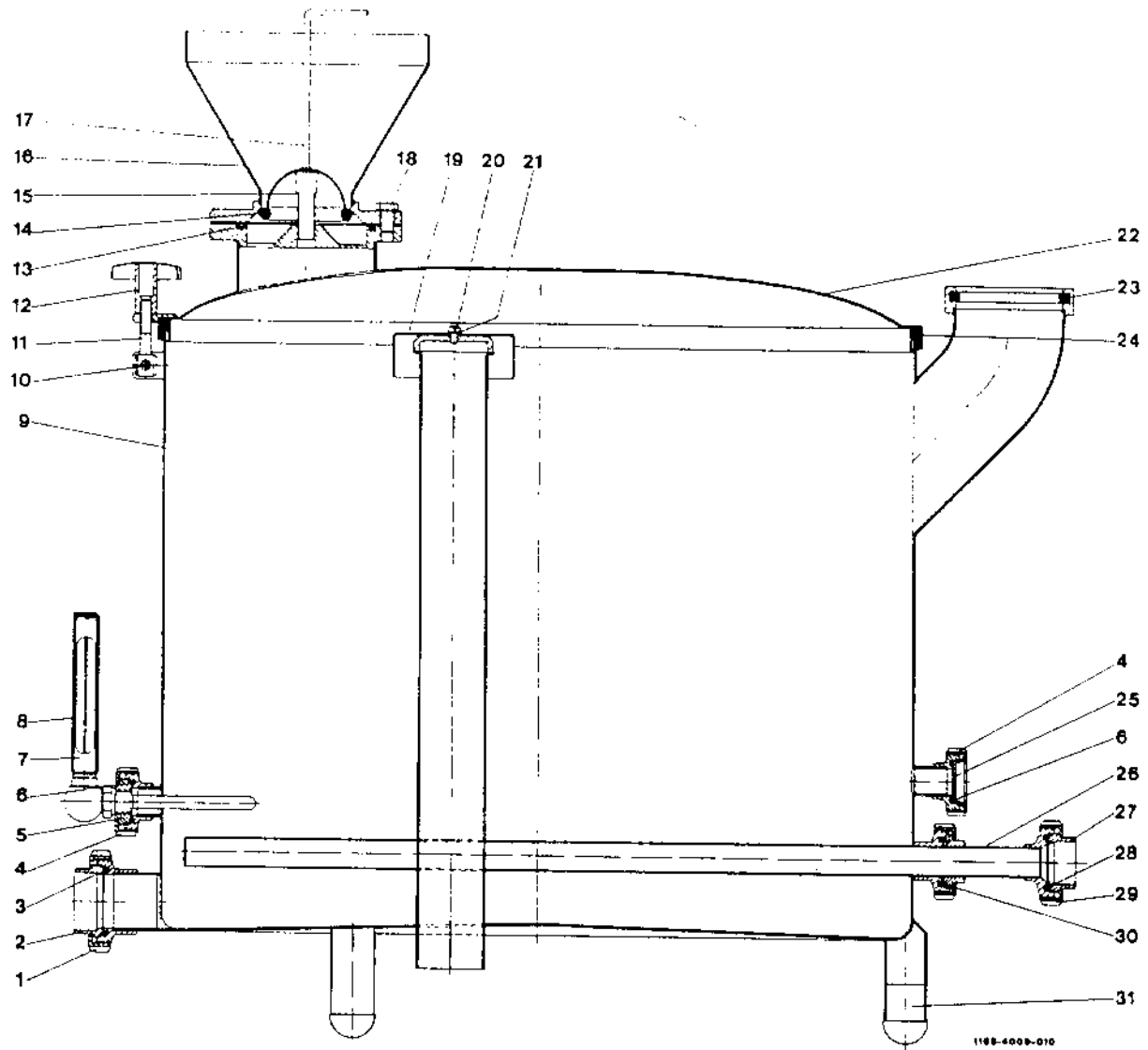


Fig. 21

Sterilizing Tank

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No. in Fig.	Part - No.	Qty.	Part Description
-	1165-9200-040	1	Sterilizing tank assembly (1-31)
1	0013-2845-300	1	Grooved coupling nut F 50 DIN 11851
2	0018-3955-300	1	Cone connection D 50 DIN 11851
3	0007-2211-750	1	Gasket G 50 DIN 11851
4	0013-2842-300	2	Grooved coupling nut F 25 DIN 11851
5	0018-4269-400	1	Cone connection R 1/2"
6	0007-2208-750	2	Gasket G 25 DIN 11851
7	0001-0675-400	1	Angle thermometer
8	1165-9462-000	1	Bush
9	1165-9210-030	1	Sterilizing tank
10	0026-1102-400	6	Cylindrical pin
11	0019-1363-300	6	Hinge screw
12	0021-3128-300	6	Handle screw
13	0007-2121-750	1	Gasket 118/130x7
14	0007-2483-750	1	Gasket 65/10
15	0006-4081-400	1	Cylindrical pressure spring
16	1165-9698-010	1	Funnel
17	1165-9277-000	1	Cap
18	0019-6966-400	3	Hex head screw M 12x20 DIN 933
19	0026-2108-400	1	Cap
20	0019-2507-300	1	Lens head screw M 6x10 DIN 85
21	0026-1382-400	1	Washer 6,4 DIN 125
22	1165-9208-020	1	Cover
23	0007-2309-750	1	Gasket 92/112x10
24	0004-2364-758	1	Packing cord 8x8x2200
25	0001-0261-300	1	Blind cap
26	1165-9205-000	1	Flush pipe
27	0018-3949-300	1	Cone connection D 40 DIN 11851
28	0007-2210-750	1	Gasket G 40 DIN 11851
29	0013-2844-300	1	Grooved coupling nut F 40 DIN 11851
30	0007-2209-750	1	Gasket G 32 DIN 11851
31	0021-3155-700	3	Foot

Flow Constrictor

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On special order only.

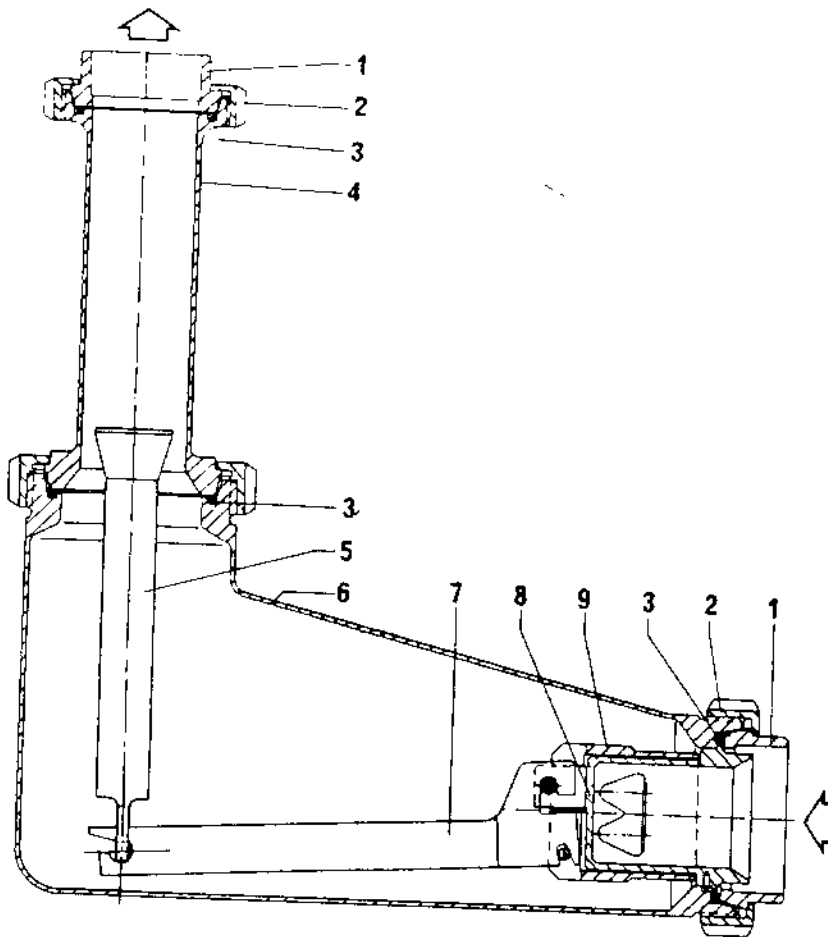


Fig. 22

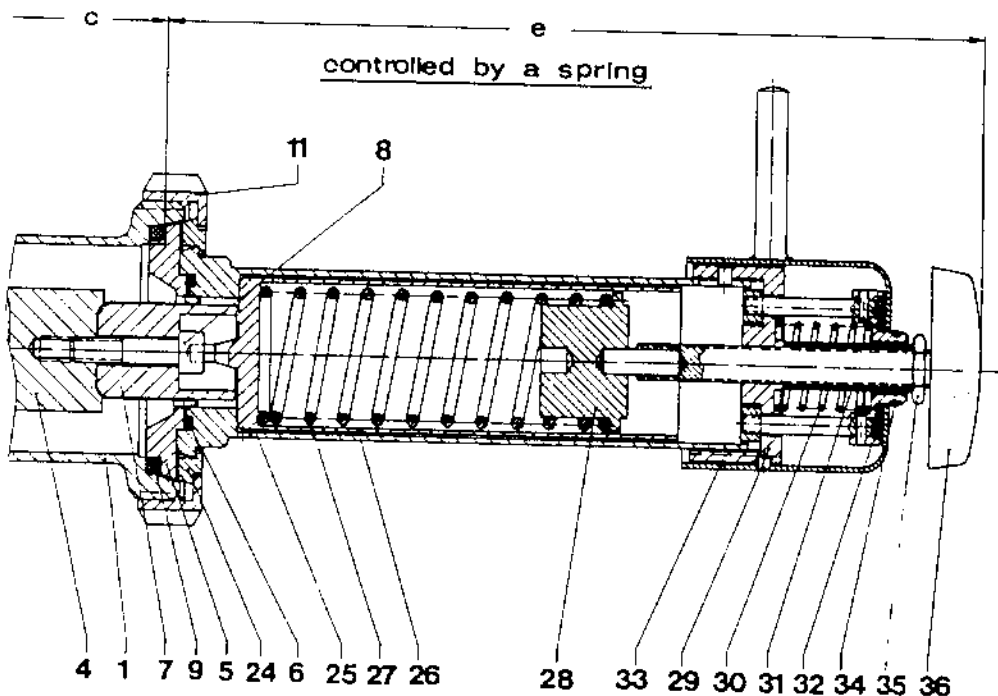
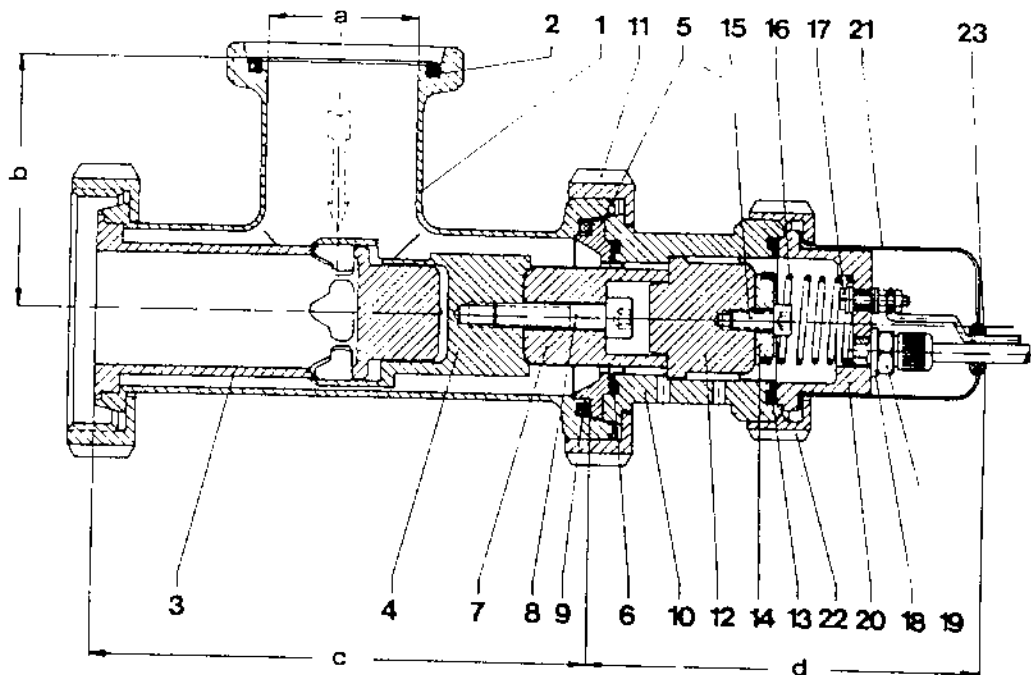
IMPORTANT: Be sure to install the flow constrictor in such a manner that the inlet is fitted to a horizontal piece of pipe and the control tube 4 is directed vertically upwards.

No. in Fig.	Part - No.	Qty.	Part Description
-	8251-2250-050	1	Flow constrictor, complete (1-9)
1	0018-4636-400	2	Cone connection 65/50
2	0013-2846-300	2	Grooved coupling nut
3	0007-2212-750	3	Gasket G 65 DIN 11851
4	-	1	* Pipe
5	-	1	* Float
6	-	1	* Housing
7	-	1	* Throttling lever
8	-	1	* Throttling housing
9	-	1	* Regulating piece

* This part can only be replaced by a WESTFALIA factory engineer or by a special repair shop authorized by WESTFALIA, because its replacement requires re-adjustment of the flow constrictor. Therefore, when ordering this part, the flow constrictor must be returned to the factory.

Constant Pressure Valve

controlled by compressed air



Valve size	Sizes				
	a	b	c	d	e
		in.	in.	in.	in.
40	NW40	2,78	5,52	4,45	approx. 8,67
50	NW50	3,16	6,31	5,13	approx. 11,31
65	NW65	3,62	7,25	5,13	approx. 11,31

LIST OF PARTS

No. in Fig.	Part Description	Qty.	Valve Size		
			NW 65/2 1/2"	NW 50/2"	NW 40/1 1/2"
1	1-piece	1	0018-1648-400	0018-1647-400	0018-1646-400
2	Gasket	1	0007-2212-750	0007-2211-750	0007-2210-750
3	Throttle piece	1	8266-2163-010	8267-2163-020	8268-2163-030
3	Throttle piece for Tri-clamp fitting	-	-	8267-2163-040	-
3	Throttle piece for 100 - 2000 litres/h	-	-	-	8268-2163-010
4	Slide	-	8266-2279-010	8267-2279-010	8268-2279-020
4	Slide for 100 - 2000 litres/h	-	-	-	8268-2279-010
5	Ring	1	8266-2257-000	8267-2257-000	8268-2257-000
6	Rolling diaphragm	1	0004-2120-890	0004-2120-890	0004-2118-730
7	Piston	1	8267-2278-000	8267-2278-900	8268-2278-000
8	Cylindrical screw	1	0019-6126-400	0019-6126-400	0019-6108-400
9	Gasket	1	0007-2212-750	0007-2211-750	0007-2210-750
10	Housing	1	8267-2331-010	8267-2331-010	8268-2331-010
11	Grooved coupling nut	1	0013-2846-300	0013-3349-300	0013-3347-300
12	Piston	1	8267-2278-010	8267-2278-010	8268-2278-010
13	Rolling diaphragm	1	0004-2121-750	0004-2121-750	0004-2119-750
14	Pressure piece	1	0026-1341-400	8267-2268-010	0026-1341-400
15	Cylindrical screw	1	0019-6105-400	0019-6105-400	0019-6839-300
16	Cylindrical pressure spring	1	-	0006-4152-300	-
17-20	Connection cap, complete	1	8267-2040-010	8267-2040-010	8268-2040-010
17	Contact screw	1	0019-2222-300	0019-2222-300	0019-2222-300
-	Sleeve	1	8267-2239-000	8267-2239-000	8267-2239-000
-	Gasket	2	0004-5261-720	0004-5261-720	0004-5261-720
-	Washer	2	0026-1362-600	0026-1362-600	0026-1362-600
-	Hexagon nut	2	0013-0274-300	0013-0274-300	0013-0274-300
18	Washer	1	0026-2073-400	0026-2073-400	0026-2073-400
19	Hose coupling	1	0018-3724-280	0018-3724-280	0018-3724-280
20	Connection cap	1	8267-2041-010	8267-2041-010	8268-2041-010
21	Cap	1	8267-2277-000	8267-2277-000	8268-2277-000
22	Grooved coupling nut	1	0013-2844-300	0013-2844-300	0013-2842-300
23	Cable inlet	1	0005-0646-700	0005-0646-700	0005-0646-700
24	Ring	1	8266-2257-010	-	-
25	Housing	1	8267-2331-000	8267-2331-000	8268-2331-000
26	Guide bush	1	8267-2146-000	8267-2146-000	8268-2146-000
27	Cylindrical pressure spring	1	-	-	0006-4300-170
	for pressure ranging between 1,25 - 5 kp/cm ²	1	0006-4350-170	0006-4350-170	-
	for pressure ranging between 4,5 - 6 kp/cm ²	1	0006-4356-170	0006-4356-170	-
28	Pressure piece	1	8267-2168-000	8267-2268-000	8268-2268-000
29	Screw cap	1	8267-2166-000	8267-2166-000	8268-2166-000
30	Cylindrical pressure spring	1	0006-4151-300	0006-4151-300	0006-4145-300
31	Pipe	1	0018-0823-300	0018-0823-300	0018-0823-300
32	Gasket	1	0004-2156-850	0004-2156-850	0004-2843-850
33	Cap	1	8267-2276-000	8267-2276-000	8268-2276-000
34	Snap ring	1	0026-5553-300	0026-5553-300	0026-5553-300
35	Hexagon nut	1	0013-3038-300	0013-3038-300	0013-3038-300
36	Screw	1	0019-1225-400	0019-1225-400	0019-1225-400
-	Gasket	1	0004-2069-700	0004-2067-700	0004-2058-700
-	Snap ring	1	0026-1490-170	0026-1489-170	0026-1485-170
Connection parts					
	Gasket	1	0007-2212-750	0007-2211-750	0007-2210-750
	Grooved coupling nut	1	0013-2846-300	0013-2845-300	0013-2844-300
	Cone connection NW	1	0018-4261-400	0018-3955-400	0018-3949-400
	Cone connection, Inch	1	0018-3962-400	0018-4161-400	0018-3947-400
	Reducing cone connection 65/50	1	0018-4636-400	-	-
	Threaded connection NW	1	0018-4125-400	0018-4119-400	0018-4114-400
	Threaded connection, Inch	1	0018-4203-400	0018-4202-400	0018-4201-400
	Reducing threaded connection 65/50	1	0018-4535-400	-	-

Compressed-air controlled valve

Pressure range kp/cm ²	Pipe connection metric (NW)	Part - Number	Pipe connection Inch	Part - Number	without pipe connection Part - Number	Capacity litres/hour
1 - 7	40	8268-2310-110	1 1/2"	8268-2310-150	8268-2310-070	100 - 2000
1 - 7	40	8268-2310-090	1 1/2"	8268-2310-130	8268-2310-050	1500 - 6000
1 - 7	50	8267-2310-120	2"	8266-2310-150	8267-2310-080	5000 - 15000
1 - 7	65	8266-2310-120	2 1/2"	8266-2310-180	8266-2310-090	10000 - 30000
1 - 7	65/50 *	8266-2310-150				10000 - 30000
1 - 7	Tri-Clamp	8267-2310-090				5000 - 15000

Spring-controlled valve

Pressure range kp/cm ²	Pipe connection metric (NW)	Part - Number	Pipe connection Inch	Part - Number	without pipe connection Part - Number	Capacity litres/hour
1 - 6	40	8268-2310-100	1 1/2"	8268-2310-140	8268-2310-060	100 - 2000
1 - 6	40	8268-2310-080	1 1/2"	8268-2310-120	8268-2310-040	1500 - 6000
4,5 - 6	50	8267-2310-110	2"	8267-2310-140	8267-2310-070	5000 - 15000
1,25 - 5	50	8267-2310-130	2"	8267-2310-160	8267-2310-100	5000 - 15000
4,5 - 6	65	8266-2310-130	2 1/2"	8266-2310-190	8266-2310-100	10000 - 30000
1,25 - 5	65	8266-2310-140	2 1/2"	8266-2310-200	8266-2310-110	10000 - 30000
4,5 - 6	65/50 *	8266-2310-160				10000 - 30000
1,25 - 5	65/50 *	8266-2310-170				15000 - 30000

* Valve housing NW 65, pipe connection however reduced to NW 50

For pressure drop and minimum capacity see graph below (values refer to water).

