

Hutchison-Hayes Separators, Inc.

Model MSD 200-01-076 Parts List With Diagrams

P.O. Box 2965 ♦ Houston, Texas 77252
3520 East Belt ♦ Houston, Texas 77015
(713) 455-9600 ♦ Fax (713) 455-7753

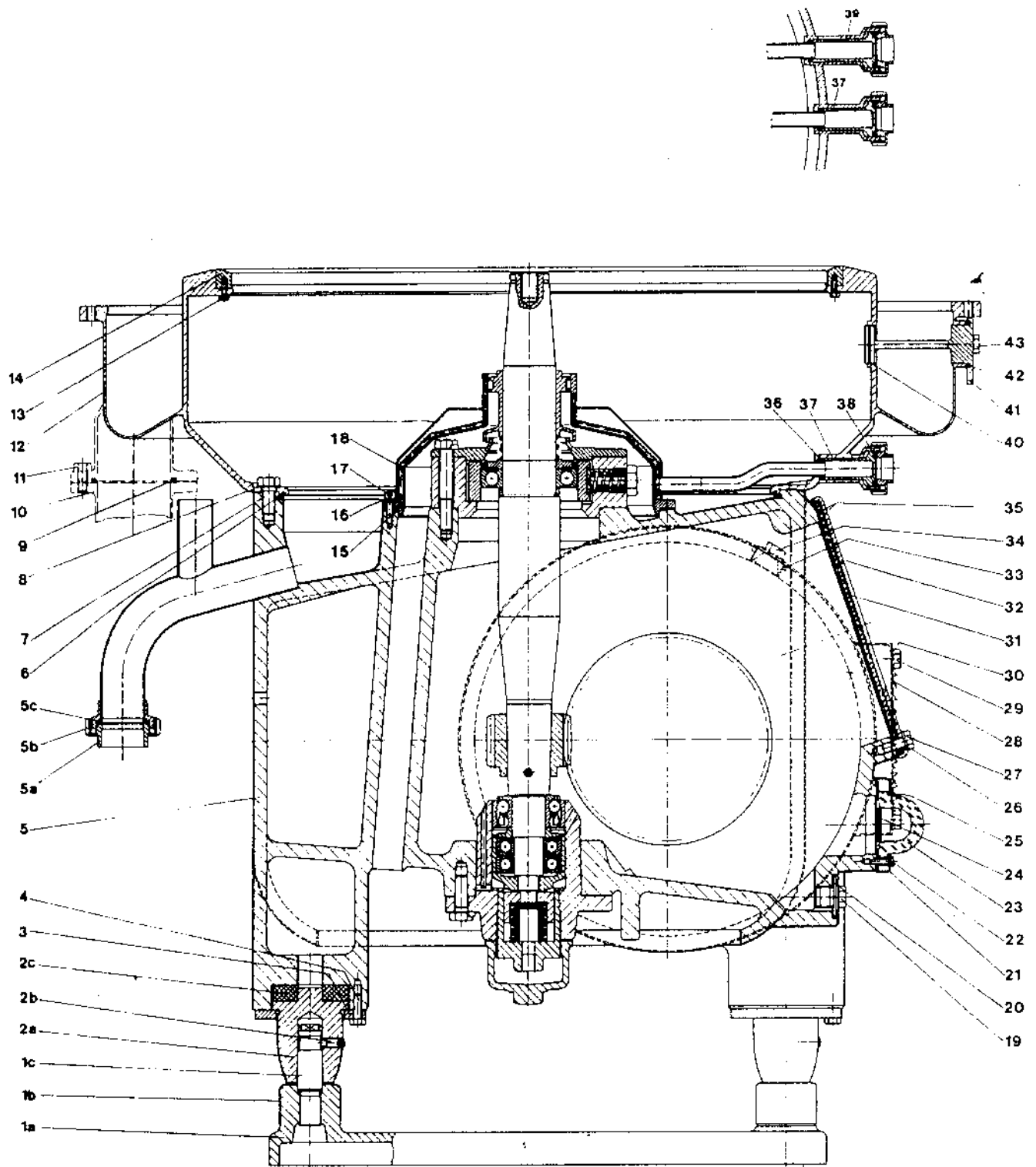


Fig. 13

Frame

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 AM 12x28 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	1166-1006-030	1	Lower section of frame, complete
5a	0018-3955-300	1	* Cone connection D 50 DIN 11851
5b	0013-2845-300	1	* Grooved coupling nut F 50 DIN 11851
5c	0007-2211-750	1	* Gasket G 50 DIN 11851
6	0007-2954-750	1	Gasket 590/4
7	0019-7036-400	8	Hex head screw M16x35 DIN 933
8	0004-2290-400	8	Gasket 16.7x24x1.5
9	0007-2113-750	1	Gasket 94/104x6
10	1167-1045-000	1	Pipe connection
11	0019-6968-300	3	Hex head screw M12x25 DIN 933
12	1231-1018-000	1	Sediment collector
13	0019-6841-400	8	Hex head screw M6x16 DIN 933
14	0007-3061-840	1	Gasket 732x760x24
15	0007-2571-750	1	Gasket 297/4
16	0026-1325-300	8	Lock washer DIN 127-B8
17	0019-6124-400	8	Allen screw M8x25 DIN 912
18	1231-1219-000	1	Operating-water feeding device
19	0019-0840-400	1	Plug R3/4"
20	0004-5037-710	1	Gasket 38/50x1.5
21	0001-0022-400	1	Sight glass frame
22	0019-6845-400	3	Hex head screw M6x25 DIN 933
23	0001-0027-830	1	Sight glass
24	0004-5406-750	1	Gasket 110x3
25	0004-5056-740	1	Gasket 70/80x2
26	0026-1371-400	4	Washer 13 DIN 125
27	0019-6970-400	4	Hex head screw M12x30 DIN 933
28	3050-1085-010	1	Ventilation grid
29	0019-6966-400	4	Hex head screw M12x20 DIN 933
30	0026-1375-300	4	Washer
31	0001-0925-870	1	Sight glass 322x8
32	1166-1157-020	1	Ring
33	0007-2229-750	1	Gasket 40/48x5
34	0019-1748-400	1	Plug
35	0004-5762-700	2	Gasket 273/322x2
36	0007-2521-750	2	Gasket G 15 DIN 11851
37	1167-1074-000	1	Bush
38	0007-2208-750	2	Gasket G 25 DIN 11851
39	1168-1074-000	1	Bush
40	0007-2580-750	1	Gasket 42/2.5
41	1165-1183-000	1	Plug
42	0007-2320-750	1	Gasket 45/55x5
43	0013-0278-300	2	Hexagon nut M8 DIN 934

* This part is included in the previous complete part, but it can also be ordered separately.

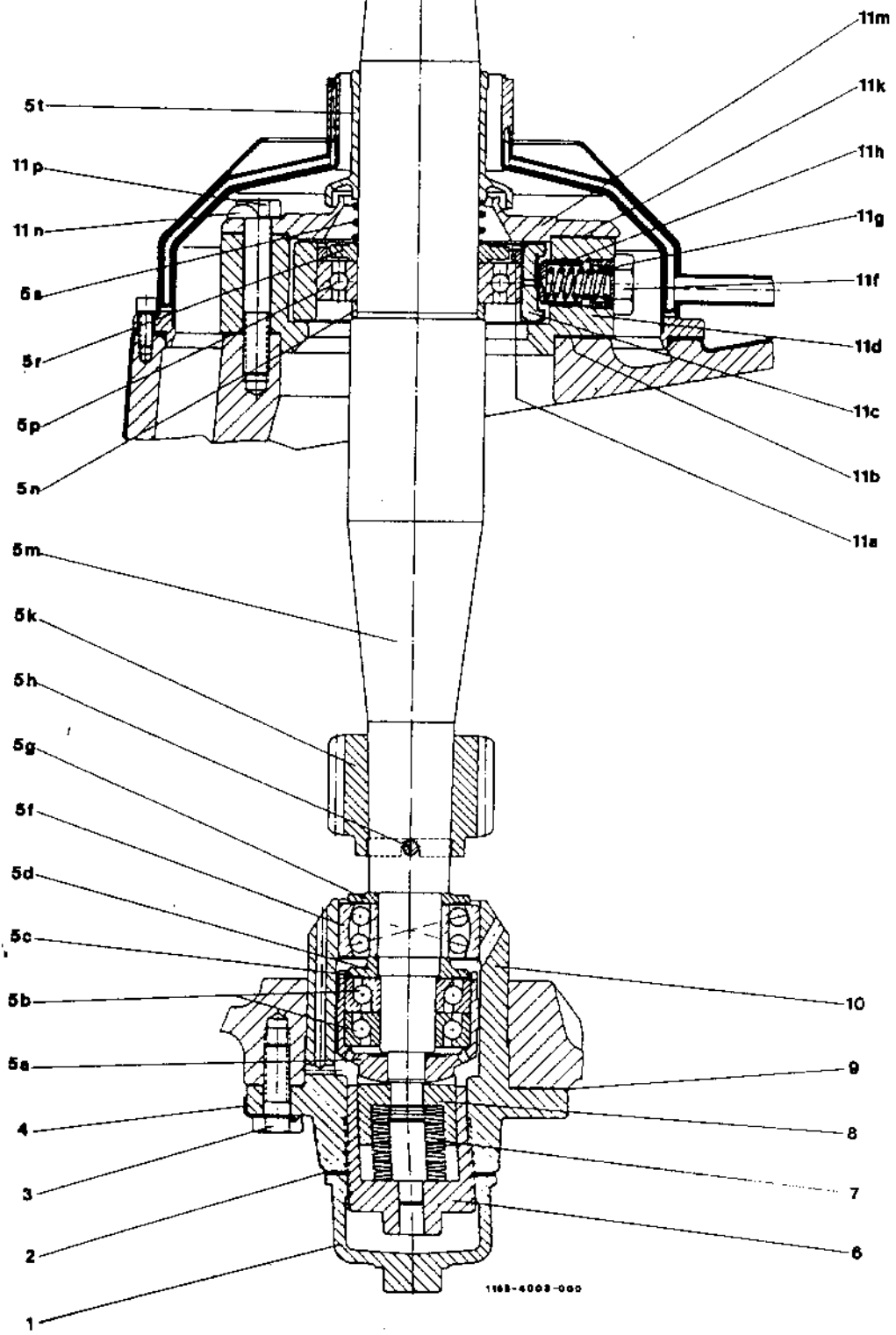


Fig. 14

Vertical Gear Parts (f = 50 Hz)

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 - 8.8
4	0026-5894-600	4	Tab washer 17 DIN 93
-	1231-3429-020	1	Worm spindle assembly (5a-t)
5a	0010-8012-020	1	Bottom bearing pressure housing
5b	0011-7307-100	2	Angular contact ball bearing 7307 BGM/P6 DIN 628
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	Straight grooved pin 10x70 DIN 1473 - 6.8
5k	1166-3423-000	1	*
5m	1231-3410-000	1	Worm Spindle
5n	0008-6512-050	1	Ring
5p	0011-6213-110	1	Grooved ball bearing 6213/P6 DIN 625
5r	0008-6508-050	1	Ball bearing protection ring
5s	0006-4383-160	1	Cylindrical pressure spring
5t	0008-6501-810	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 130/204x0.3
10	3050-1112-020	1	Bottom bearing housing
-	0008-6500-090	1	Neck bearing bridge assembly with covering (11a-p)
11a	0008-6509-050	1	Distance ring
11b	0004-5851-770	1	Gasket 176/235x0.3
-	0008-6510-070	1	Neck bearing bridge assembly (11c-h)
11c	0008-6507-000	1	Pressure ring
11d	0008-6506-000	1	Neck bearing bridge
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	0004-5852-770	1	Gasket 156/235x0.3
11m	0008-6502-120	1	Protection cap
11n	0026-5894-600	3	Tab washer 17 DIN 93
11p	0019-6616-150	3	Hex head screw M 16x100 DIN 931 - 8.8

* When this part needs replacement, the worm wheel assembly with clamp plates, 11, fig. 15, should be replaced as well.

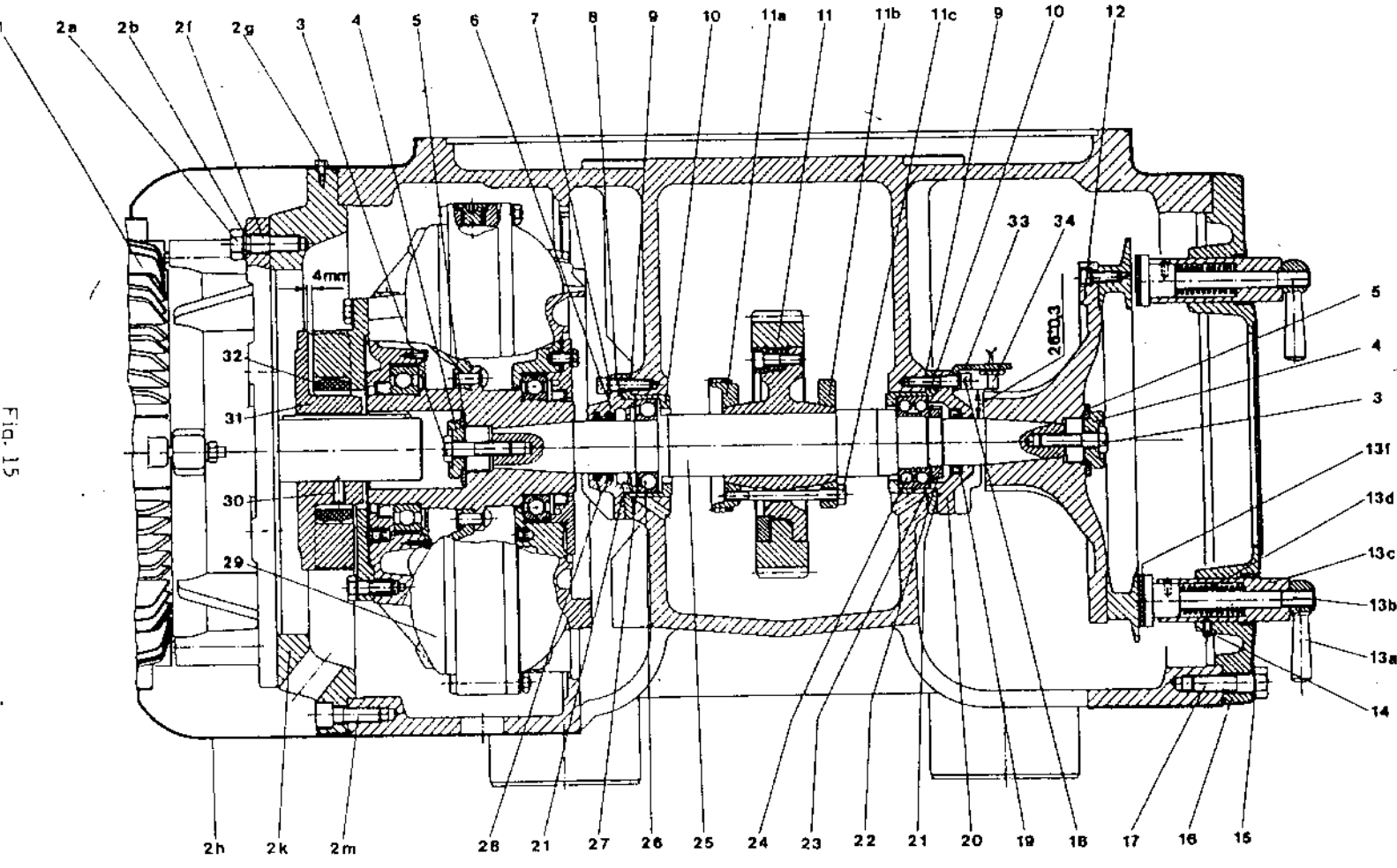


Fig. 15

Horizontal Gear Parts (f = 50 Hz)

No. in Fig.	Part - No.	Qty.	Part description
1	5970-L	1	* Motor
-	NU 312 C3 DIN 5412	1	Cylindrical roller bearing (clutch side) } for Grooved ball bearing (fan side) } item 1
-	6312 C3 DIN 625	1	
-	1166-1021-000	1	Intermediate flange assembly (2a-m)
2a	0013-0282-400	4	Hexagon nut DIN 934 - M 16
2b	0026-1330-190	4	
2f	0019-7726-090	4	Lock washer DIN 127 - A 16
2g	0019-6839-300	4	Stud DIN 939 - M 16x40
2h	1080-1475-060	8	Hex head screw DIN 933 - M 6x10
2k	1166-1028-000	1	Cover
2m	0019-6202-150	8	Flange
3	0019-9371-150	2	Allen screw DIN 912 - M 16x45
4	0026-1834-030	2	Hex head screw M 14x1.5x60 - 10.9
5	0006-4404-010	2	Centering disc
6	2231-3375-010	2	Cup spring
7	0026-1337-190	1	Bearing cover
8	0019-6146-150	3	Lock washer DIN 127 - A 10
9	0004-1850-740	3	Allen screw DIN 912 - M 10x35 - 8.8
10	1166-3131-000	2	Gasket 99/140x1
11	1166-3449-020	2	Bearing housing
11a	1166-3447-000	1	Worm wheel assembly with clamp plates
11b	1166-3446-000	1	** Clamp plate with toothing
11c	0019-6525-150	1	** Clamp plate
12	1229-3368-000	4	** Hex head screw DIN 931 - M 10x110 - 8.8
-	3170-1043-000	1	Brake pulley, complete
13a	0021-3514-300	2	Brake assembly (13a-f)
13b	3170-1031-000	2	Handle M16
13c	0021-3537-300	2	Brake bolt (with lining)
13d	0006-4208-160	2	Brake housing
13f	0021-4096-850	2	Cylindrical pressure spring
-	0026-1263-550	2	Brake lining
14	0019-9063-150	8	Countersunk rivet
15	0026-1353-400	2	Threaded pin AM 8x10 DIN 916 - 10.9
16	3170-1065-010	4	Washer
17	0019-6608-400	1	Cover
18	0019-6149-150	4	Hex head screw DIN 931 - M 16x60
18	0019-6147-150	1	Allen screw DIN 912 - M 10x50 - 8.8
-	0026-1337-190	2	Allen screw DIN 912 - M 10x40 - 8.8
19	0004-5566-750	3	Lock washer DIN 127 - A10
20	2231-3375-020	1	Sealing ring DIN 3760 - A 45x65x8
21	0007-1996-750	1	Bearing cover
22	0013-0448-090	2	Gasket 96/4
23	0026-0915-170	1	Grooved nut M 50x1.5
24	0011-3210-470	1	Tab washer DIN 5406 - MB 10
25	2231-3400-020	1	Angular contact ball bearing DIN 628 - 3210
26	0011-6210-000	1	Worm wheel shaft
27	0006-4398-010	1	Grooved ball bearing DIN 625 - 6210
28	0004-1957-830	2	Cup spring
29	see page 16/1	2	Felt ring DIN 5419 - 50
30	0019-8984-150	1	Fluid clutch (see fig. 16)
31	3158-3389-010	1	Threaded pin DIN 914 - M 10x25 - 10.9
32	3158-3282-000	1	Cam hub
33	1168-1192-000	1	Cam ring
34	0005-0964-000	1	Bracket
		1	Proximity switch

* When ordering this part, please state voltage and frequency.

** This part is included in worm wheel assembly with clamp plates (11), but it is also available as separate item.

Pneumatic Brake

On special order only.

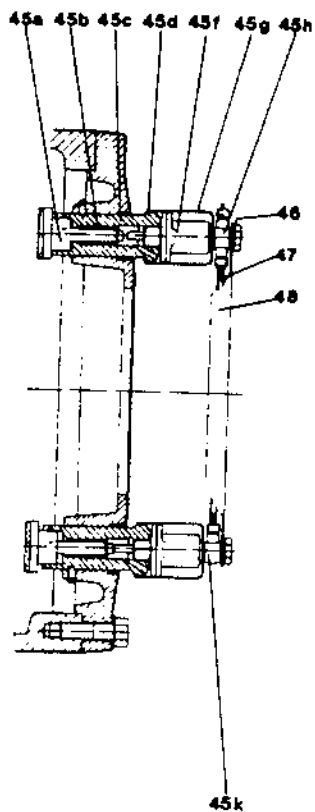
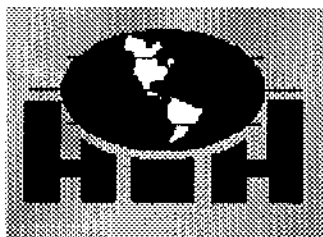


Fig. 15/1

No. in Fig.	Part - No.	Qty.	Part description
45a	1166-1031-000	2	Brake bolt (with lining), complete
-	0021-4096-850	2	* Brake lining
-	0026-1263-550	8	* Countersunk rivet
45b	0006-4120-300	2	Cylindrical pressure spring
45c	0021-3555-300	2	Brake housing
45d	0007-2580-750	2	Gasket 42/2.5
45f	0021-3690-010	2	Compressed-air cylinder
45g	0026-2144-400	2	Cap
45h	0018-3740-640	1	T-type hose connection R 1/4"
45k	0018-3730-640	1	Angular hose connection R 1/4"
46	0004-2245-770	2	Gasket 15/21x0.25
47	0018-0585-848	1	Pipe
48	1166-1044-000	1	Protecting sheet

* This part is included in the previous complete part, but it can also be ordered separately.



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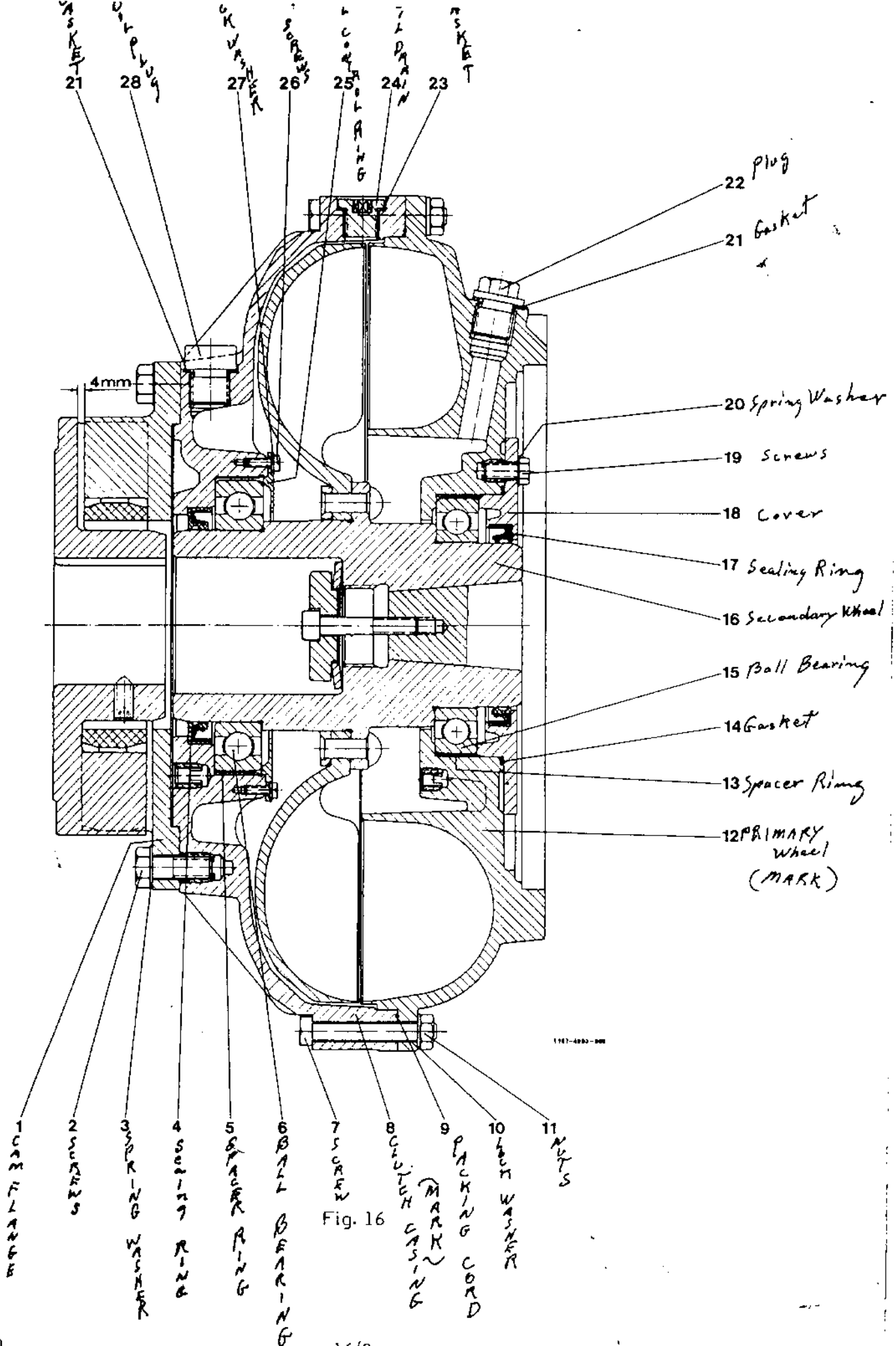


Fig. 16

Fluid Clutch

No.in Fig.	Part - Number	Qty.	Part Description
-	1166-3280-000	1	Fluid clutch assembly (1-28)
1	-	1	* Cam flange
2	0019-6971-150	8	Hex head screw M 12x35 DIN 933 - 8.8
3	0026-0772-170	8	Spring washer B 12 DIN 137
4	0004-2913-830	1	Sealing ring 105x130x13 BAFS
5	0026-0182-170	1	Spacer ring ANS 160/163x26
6	0011-6021-400	1	Grooved ball bearing 6021 M/C4 DIN 625
7	0019-6518-150	36	Hex head screw M 10x70 DIN 931 - 8.8
8	-	1	* Clutch casing \varnothing 470
9	0004-2385-858	1	Packing cord \varnothing 1 mm, 1400 mm long
10	0026-0771-170	36	Spring washer B 10 DIN 137
11	0013-0279-150	36	Hexagon nut M 10 DIN 934 - 8
12	-	1	* Primary wheel \varnothing 470
13	0026-0180-170	1	Spacer ring AN 140/143x24
14	0007-2944-830	1	Gasket 140/3
15	0011-6018-400	1	Grooved ball bearing 6018 M/C4 DIN 625
16	-	1	* Secondary hub with secondary wheel \varnothing 425
17	0004-2912-830	1	Sealing ring 90x110 BASL
18	-	1	** Sealing ring cover
19	0019-6903-150	8	Hex head screw M 8x20 DIN 933 - 8.8
20	0026-0770-170	8	Spring washer B8 DIN 137
21	0007-1741-280	2	Gasket DIN 7603 - A22x29
22	-	1	** Plug M 22x1.5 x 20
23	0004-2131-280	1	Gasket DIN 7603 - A18x24
24	0019-1490-000	1	Threaded plug M 18x1.5x15
25	3158-3287-010	1	Oil control ring \varnothing 119/192 x 4.5
26	0019-2234-030	8	Fillister head screw AM 5x16 DIN 84 - 4.6
27	0026-0750-170	8	Lock washer 5 DIN 7980
28	0019-1551-090	1	Oil fill plug

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

** Instead of the part-number, state the number in figure (first column).

No. in Fig.	Part - No.	Qty.	Part description
-	1165-2350-000	1	Pressure switch, complete (47-48)
47	0018-1870-000	1	Low-pressure hose
47a	0018-3465-400	1	* Screw connection DL 8 DIN 2353 R 1/4"
47b	0018-3560-400	1	* Screw connection DL 8 R 3/8"
48	0005-0675-900	1	Pressure switch F 5

* This part is included in item 47, but it is also available as separate item.

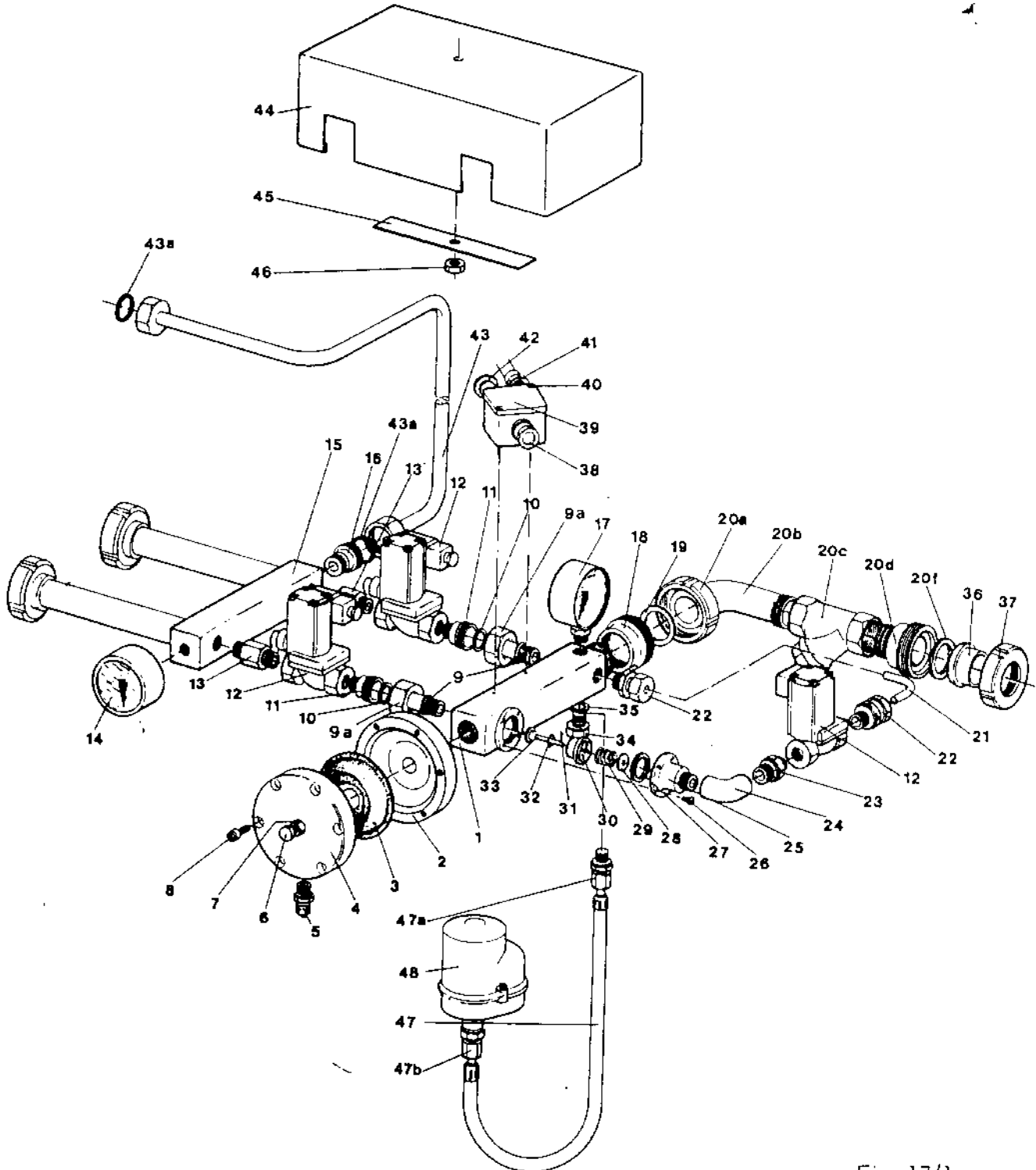


Fig. 17/1

Operating - water Connection

No. in Fig.	Part - No.	Qty.	Part description
-	8134-2100-630	1	Operating-water connection with protecting case (1-46)
-	8134-2120-240	1	Operating-water connection, complete (1-35)
1	8134-2195-040	1	Connection piece
2	8134-2311-090	1	Housing
3	0004-2313-750	1	Diaphragm
4	8134-2354-010	1	Cover
5	0018-3725-600	1	Hose connection R1/4"
6	8134-2161-000	1	Hex head screw M8x35 DIN 933
7	0013-0278-400	1	Hexagon nut M8x DIN 934
8	0019-6108-300	6	Allen screw M6x20 DIN 912
9	0018-3854-300	2	Connection piece 10/R3/8"
9a	0013-2818-400	2	Coupling nut
10	0007-2230-750	2	Gasket 15.5/21.5x4
11	0018-4645-300	2	Threaded connection R3/4" / R3/8"
12	0018-3711-610	3	Solenoid valve
13	8134-2315-000	2	Double nipple
14	0001-0299-610	1	Pressure gauge 0-6 bar AR6316 DIN 19063
15	8134-2195-030	1	Connection piece
16	0018-4645-300	1	Threaded connection R3/4" / R3/8"
17	0001-0298-610	1	Pressure gauge 0-6 bar AR6316 DIN 16063
18	0018-4086-400	1	Threaded connection 25/R1"
19	0007-2208-750	1	Gasket 625 DIN 11851
-	8134-2201-010	1	Pipe assembly (20a-f)
20a	0013-2842-300	1	Grooved coupling nut F25 DIN 11851
20b	0018-1609-300	1	Bend
20c	0018-2525-640	1	Strainer
-	0018-2525-300	1	Strainer insert (for item 20c)
20d	0018-4502-400	1	Threaded connection R3/4" / R3/8"
20f	0007-2208-750	1	Gasket G25 DIN 11851
21	8134-2472-060	1	Bend
22	0018-3560-400	2	Screw coupling R3/8"
23	0018-0961-300	1	Double nipple R3/8"
24	0018-0003-300	1	Elbow 3/8" DIN 2987
25	8134-2194-070	1	Connection piece
26	0019-2218-400	4	Cheese head screw AM4x10 DIN 84
27	0007-2501-750	1	Gasket 23/3
28	8134-2313-000	1	Disk
29	0006-4080-400	1	Cylindrical pressure spring
30	8134-2462-050	1	Sleeve
31	0026-0973-400	1	Cylindrical pin
32	0007-2923-860	1	Gasket 9.3/2.4
33	8134-2278-000	1	Cone
34	0019-0137-300	1	Hex head screw R1/4"x12
35	0004-5268-880	1	Gasket 13/19x1.5
36	0018-3939-300	1	Cone connection D25 DIN 11851
37	0013-2842-300	1	Grooved coupling nut F25 DIN 11851
38	0005-0203-630	1	Cable gland C4 Pg 11x6-9 DIN 46320
39	0005-0862-900	1	Branch box
40	0019-2376-630	2	Cheese head screw M4x16 DIN 84
41	0005-3358-630	1	Hose coupling Pg 9
42	0005-0222-630	1	Plug Pg 9 DIN 46320
43	8134-2201-040	1	Pipe, complete
43a	0007-2402-750	2	Gasket 17/23x3
44	8134-2355-030	1	Protecting case
45	8134-2449-020	1	Flat iron

Solenoid valve

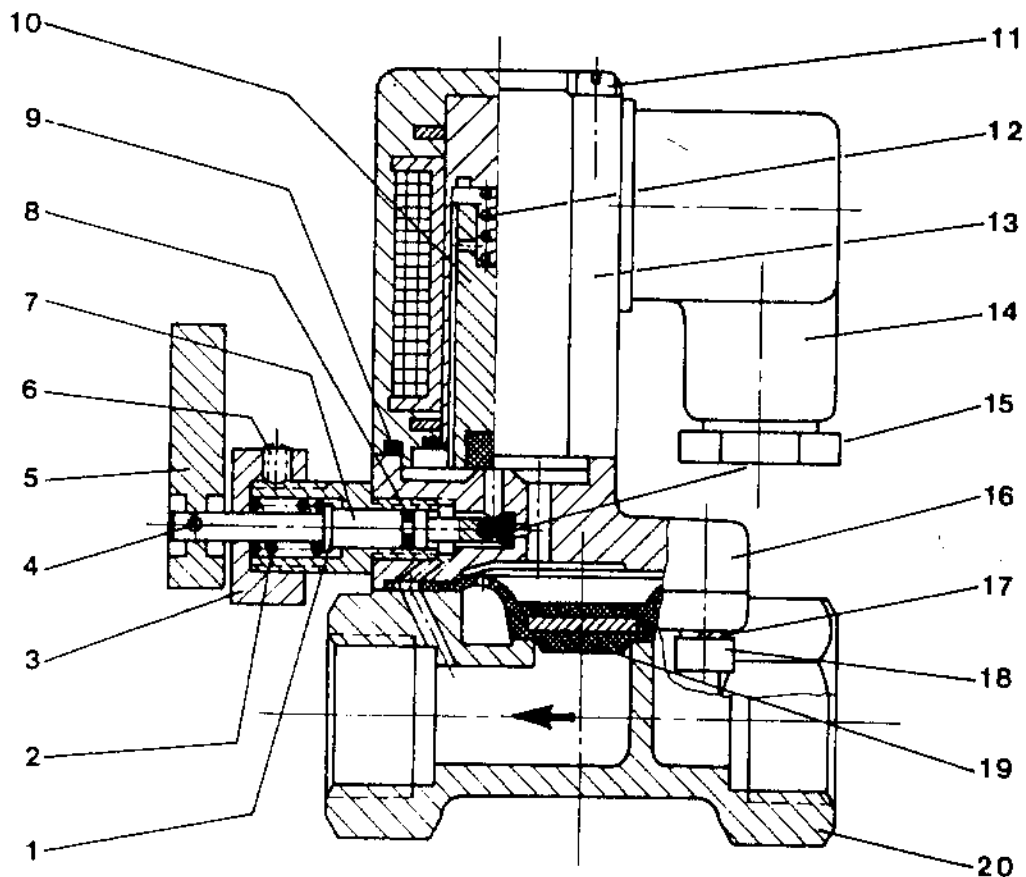
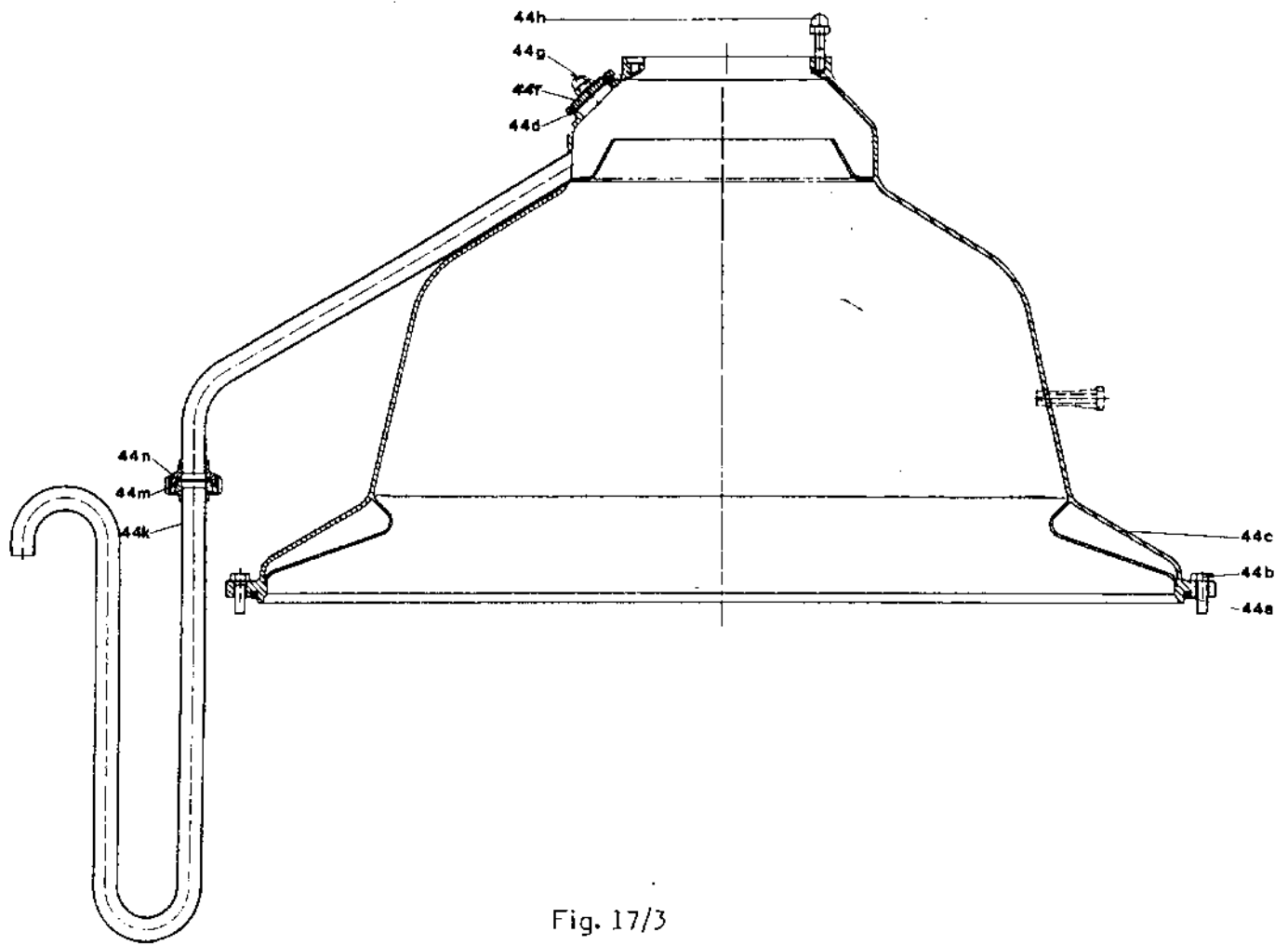


Fig. 17/2

No.in Fig.	Part - Number	Qty.	Part Description
-	0018-3711-610	1	Solenoid valve assembly R 3/8" (1-20)
1	0018-3710-000	1	Ring
2	0006-4084-170	1	Pressure spring
3	0018-3710-010	1	Screw part
4	0026-1557-300	1	Cylindrical notched pin 2x14
5	0018-3710-020	1	Lever
6	0019-3950-400	1	Threaded pin DIN 438 - M 4x4
7	0018-3710-030	1	Valve spindle
8	0007-1910-750	1	Gasket 4x1
9	0007-1946-750	1	Gasket 25x1.5
10	0018-3710-040	1	Solenoid core
11	0019-2387-030	4	Fillister head screw DIN 84 - M 4x55 - 4.8
12	0006-4279-160	1	Pressure spring
13	0018-3710-800	1	Solenoid head, complete 50/60 Hz
14	0018-3710-050	1	Coupler socket
15	0018-3710-060	1	Plug 4D 612
16	0018-3710-070	1	Valve housing cover
17	0026-1322-170	6	Lock washer DIN 127 - A4
18	0019-6077-400	6	Allen screw DIN 912 - M 4x10
19	0018-3711-750	1	Diaphragm
20	0018-3711-080	1	Valve housing



No. in Fig.	Part - No.	Qty.	Part description
-	1170-7759-020	1	Hood assembly (44a-n)
44a	0004-2364-758	1	Packing cord 8x8x3300
44b	0019-6971-400	8	Hex head screw M12x35 DIN 933
44c	1170-7765-020	1	Hood
44d	0007-2262-750	1	Gasket 45/57x6
44f	1165-1061-000	1	Inspection cover
44g	0013-0405-400	2	Cap nut DIN 1587-M10
44h	0013-0406-400	4	Cap nut DIN 1587-M12
-	0026-0165-400	4	Washer 13 DIN 433 (for item 44h)
44k	1165-2775-000	1	Siphon
44m	0013-2842-300	1	Grooved coupling nut F25 DIN 11851
44n	0007-2208-750	1	Gasket G25 DIN 11851

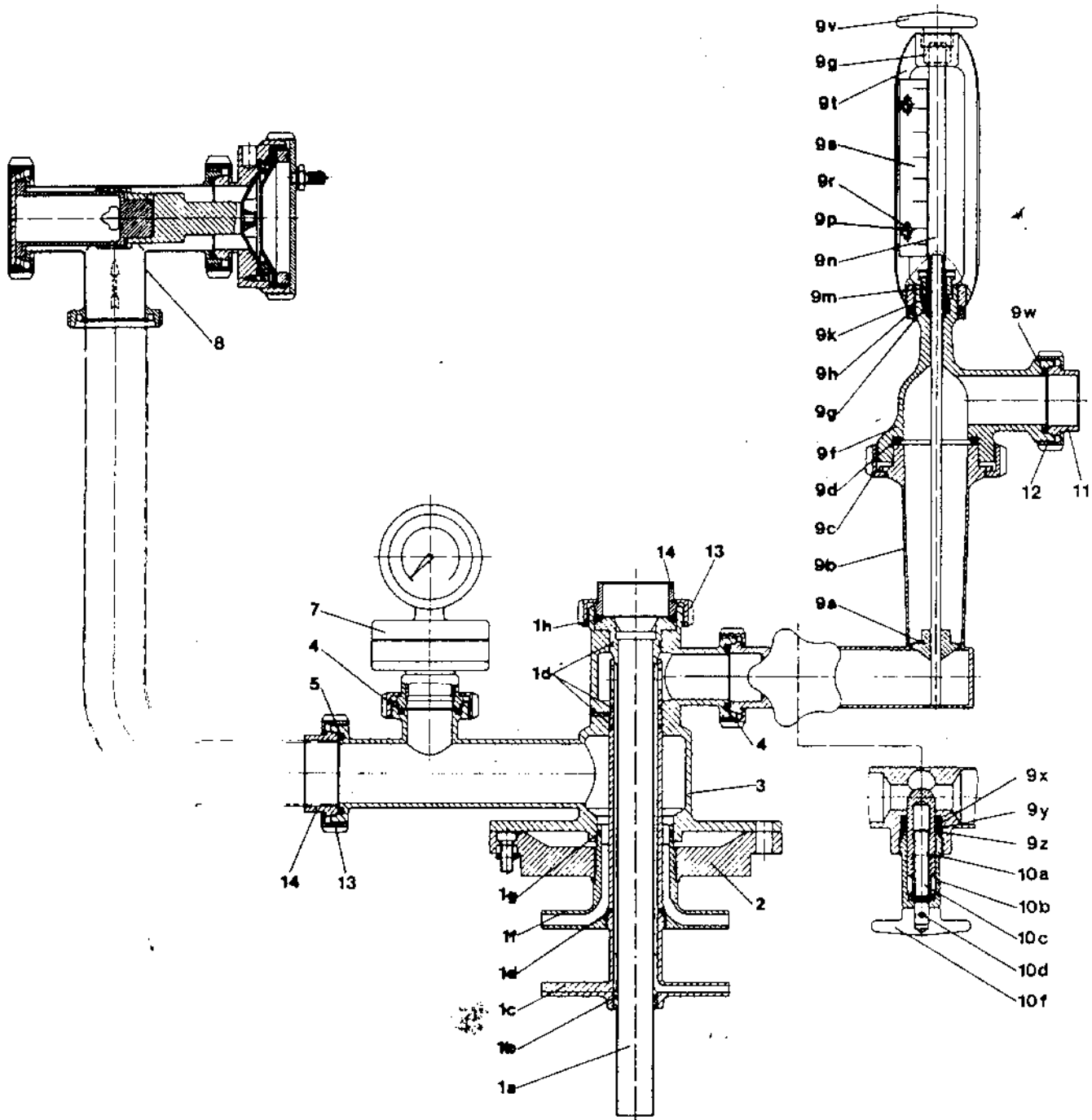


Fig. 18

Feed and Discharge Connections and Centripetal Pump

No.in Fig.	Part - No.	Qty.	Part Description
-	1231-2213-000	1	Double centripetal pump, complete (1a-h)
1a	1231-2246-000	1	Feed tube
1b	0007-1936-750	1	Gasket 29.2/3
1c	1231-2241-000	1	Lower centripetal pump (up to max. 5 bar)
1d	0007-2925-750	4	Gasket 36.2/3
1f	1231-2252-000	1	Upper centripetal pump (up to max. 5 bar)
1g	0007-2929-750	1	Gasket 55.2/3
1h	0007-2211-750	1	Gasket G50 DIN 11851
-	1170-2296-030	1	Feed and discharge connections, compl. (2-10f)
2	1170-2217-000	1	Disc
3	1170-2301-000	1	Feed and discharge housing
4	0007-2210-750	2	Gasket G40 DIN 11851
5	0007-2211-750	1	Gasket G50 DIN 11851
8918-2100-060 7	XXXXXXXXXX	1	Pressure gauge <i>Tri Clamp connection</i>
8	see special IM	1	Constant pressure valve
-	8021-2000-150	1	Flowmeter, complete (9a-10f)
9a	8021-2012-000	1	Float
9b	8021-2001-190	1	Inlet cup
9c	0013-2846-300	1	Grooved coupling nut F65 DIN 11851
9d	0007-2279-750	1	Gasket 56/68x6
9f	8021-2003-120	1	Outlet pipe
9g	0007-2298-750	2	Gasket 13.5/22x10
9h	0013-3010-300	1	Nut M 33x1.5
9k	0026-1375-300	1	Washer
9m	0019-1380-300	1	Threaded bush
9n	0001-0083-820	1	Cylindrical sight glass
9p	0004-5261-720	2	Gasket 4.8/9.0x1
9r	0019-2478-300	2	Cheese head screw M 4x8 DIN 85
9s	8021-2017-000	1	Scale 700 - 4,000 l/h
9t	8020-2002-030	1	Intermediate piece
9v	0019-1732-400	1	Handle screw
9w	0007-2210-750	1	Gasket G40 DIN 11851
9x	0007-2285-750	2	Gasket 22/32x5
9y	0026-5508-300	1	Washer
9z	0026-1445-300	1	Snap ring
-	1072-2273-020	1	Stuffing box, complete (10a-f)
10a	1072-2279-020	1	Round-slide valve
10b	1072-2284-000	1	Stuffing box housing
10c	0019-1590-610	1	Threaded bolt
10d	0026-1062-400	1	Cylindrical pin
10f	0021-3096-300	1	Handle
11	0018-3949-300	1	Cone connection D40 DIN 11851
12	0013-2844-300	1	Grooved coupling nut F40 DIN 11851
13	0013-2845-300	2	Grooved coupling nut F50 DIN 11851
14	0018-3955-300	2	Cone connection D50 DIN 11851

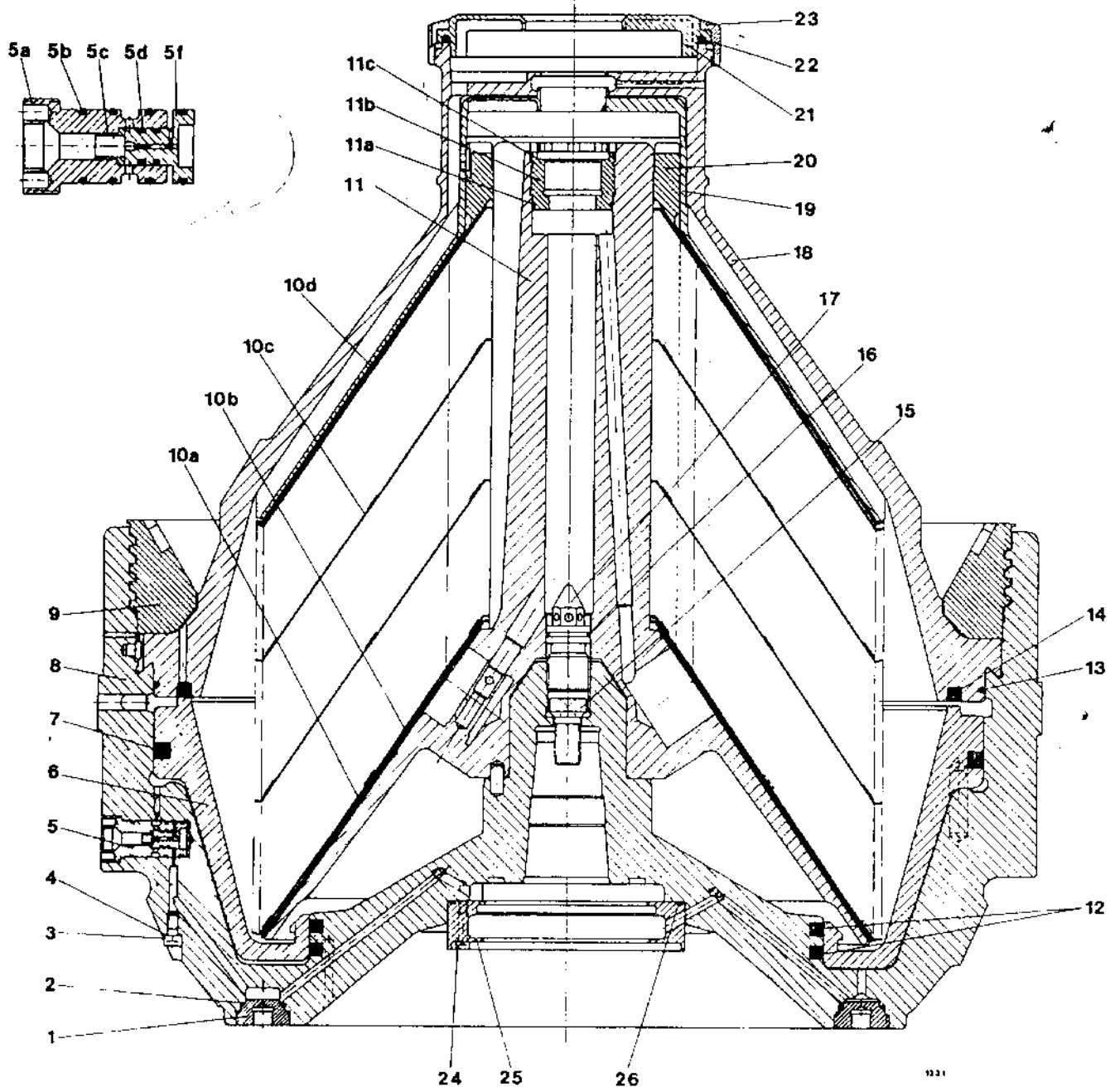


Fig. 19

Bowl

No. in Fig.	Part - No.	Qty.	Part description
-	1231-6600-000	1	Bowl, complete (1-26)
1	0019-1450-400	4	Threaded plug
2	0007-1970-840	4	Gasket 26.5/35x5.25
3	0019-6120-400	1	Allen screw DIN 912-M8x16
-4	0004-2289-400	1	Gasket 9.3x13.3x1 -
5	3159-6280-000	1	Valve assembly (5a-f)
5a	3159-6281-000	1	Valve housing
5b	0007-2920-750 -	4	Gasket 23.3/2.4
5c	0004-2341-840	1	Gasket 6/9.9x10.5
5d	0007-2923-750 -	2	Gasket 9.3/2.4
5f	3159-6276-000	1	Valve piston
6	1231-6501-000	1	* Sliding piston
7	0007-2960-750	1	Gasket 611/635x12 2960-750
8	1231-6604-000	1	* Bowl bottom
9	1167-6631-030	1	* Lock ring
-	1231-6660-000	1	Set of discs (10a-d)
10a	1231-6662-000	1	Bottom disc
10b	1231-6663-000	4	Disc
10c	1231-6663-010	250	Disc
10d	1231-6663-000	1	Disc
11	1231-6620-000	1	* Distributor, complete
11a	0007-2927-750	1	** Gasket 50.2/3
11b	1231-6526-010	1	** Threaded sleeve
11c	0007-2929-750	1	** Gasket 55.2/3
-12	0007-3055-750	2	Gasket 370x390x10
13	0007-2546-750	1	Gasket 600/5
-14	0007-3002-920	1	Gasket 579.7x11
15	0019-0320-420	1	Spindle screw
16	0007-1942-750	1	Gasket 28/2.5
17	0019-0390-420	1	Plug
18	1231-6610-000	1	* Bowl top
19	1231-6650-000	1	Separating disc
20	1231-6670-000	1	Upper disc
21	1167-6645-060	1	Centripetal pump chamber cover
-22	0007-2854-750	1	Gasket 190/6
23	1165-6631-010	1	Lock ring
24	0019-6113-400	4	Allen screw M6x40 DIN 912
25	1231-6597-000	1	Ring
26	0007-2564-750	1	Gasket 170/3

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

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

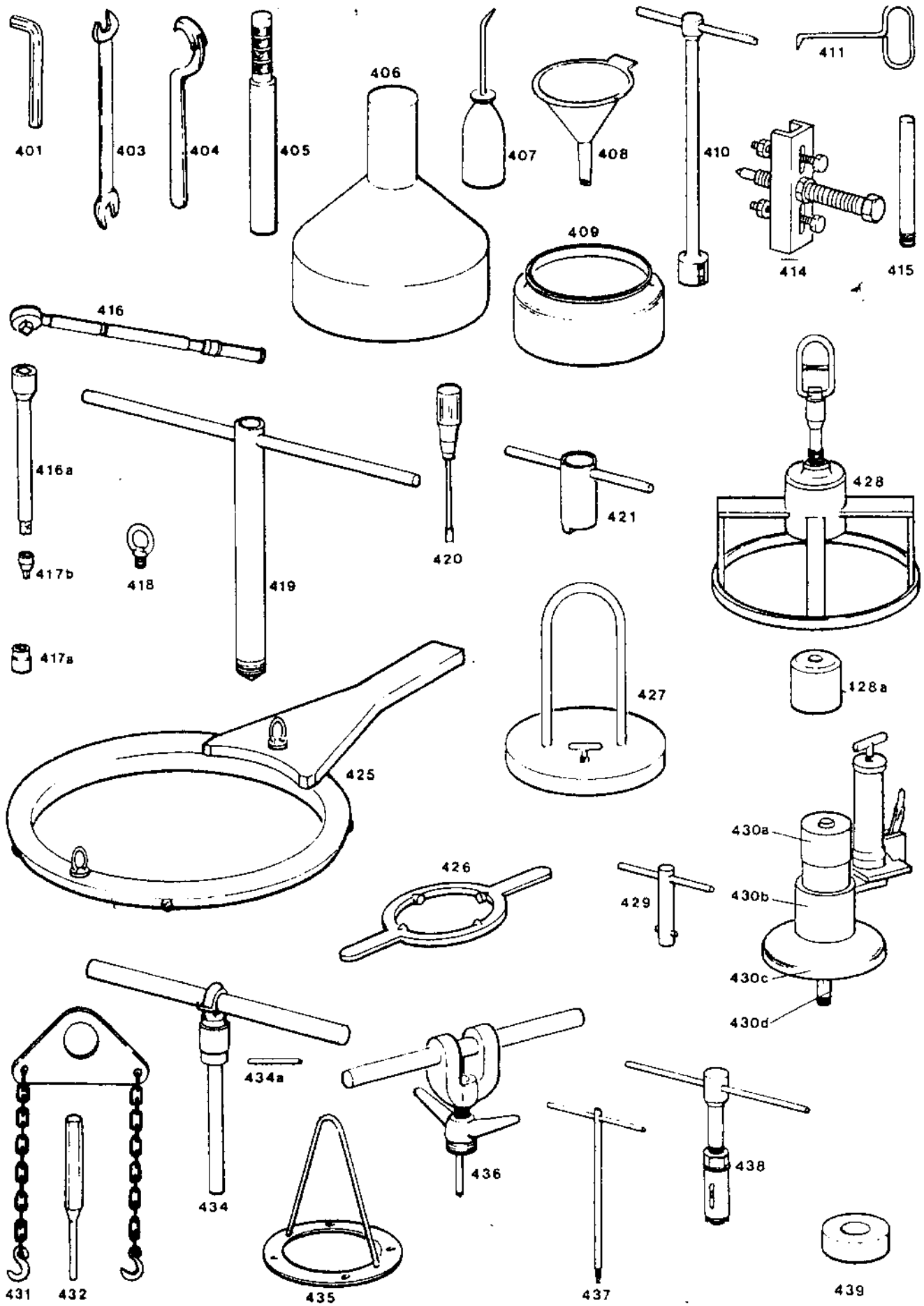


Fig. 20

Tools and Accessories

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
-	0003-3791-320	1	Allen wrench 8 DIN 6911
-	0003-3778-320	1	Allen wrench 10 DIN 911
-	0003-3780-320	1	Allen wrench 14 DIN 911
403	0003-4202-320	1	Double-ended wrench 10x13 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 90/155
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	0003-0277-800	1	Oil cup
410	0003-4276-030	1	Socket wrench 22 (for spindle screw)
411	0003-0156-000	1	Hook (for gaskets in bowl bottom)
414	1171-9910-000	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 20 - 150 Nm
416a	0003-0615-000	1	Extension B 12.7x250 DIN 3123
417a	0003-0601-320	1	Hexagon socket 8
417b	0003-0581-320	1	Socket DIN 3124-22x12.7
418	1231-9862-000	1	Lifting device for spindle
419	1166-9910-010	1	Puller (for fluid clutch and brake pulley)
420	0003-4636-050	1	Screwdriver 5x125
-	0003-4637-050	1	Screwdriver 8x150
421	0003-3955-100	1	Wrench (for centripetal pump)
425	0003-0353-000	1	Annular wrench (for large lock ring)
426	0003-4002-000	1	Annular wrench (for small lock ring)
427	1166-9840-000	1	Lifting device (for bowl top)
428	1231-9960-000	1	Jack (for sliding piston)
428a	1231-9935-000	1	Pressure piece (included in item 428)
429	0003-4148-030	1	Wrench (for feed tube)
430	1231-9820-000	1	Disc stack compressing device (430a-d)
430a	1231-9851-000	1	Threaded ring
430b	1167-9770-000	1	Hydraulic unit
430c	1167-9939-000	1	Disc
430d	1231-9877-000	1	Bolt
431	0003-0065-030	1	Lifting device (for annular wrench with lock ring)
432	0003-0575-000	1	Pin punch C5 DIN 6450
-	0003-0574-000	1	Pin punch C4 DIN 6450
434	1231-9970-000	1	Lifting device
434a	0026-1599-300	1	Cylindrical pin 10x64
435	1175-9839-000	1	Lifting device (for hood)
436	1231-9930-000	1	Jack (for bowl bottom)
437	0003-3727-030	1	Wrench M4 (for valve piston)
438	1165-9895-010	1	Wrench (for bowl valve)
439	1168-9823-000	1	Adjusting ring
-	0015-0014-080	5	2.5-litre can of separator lubricating oil CLP 220
-	0015-0050-090	2	5-litre can of clutch oil TDL 32
-	0015-0113-010	2	Tube of special grease (for bowl threads)
-	0015-0121-000	1	0.85-kg can of ball and roller bearing grease

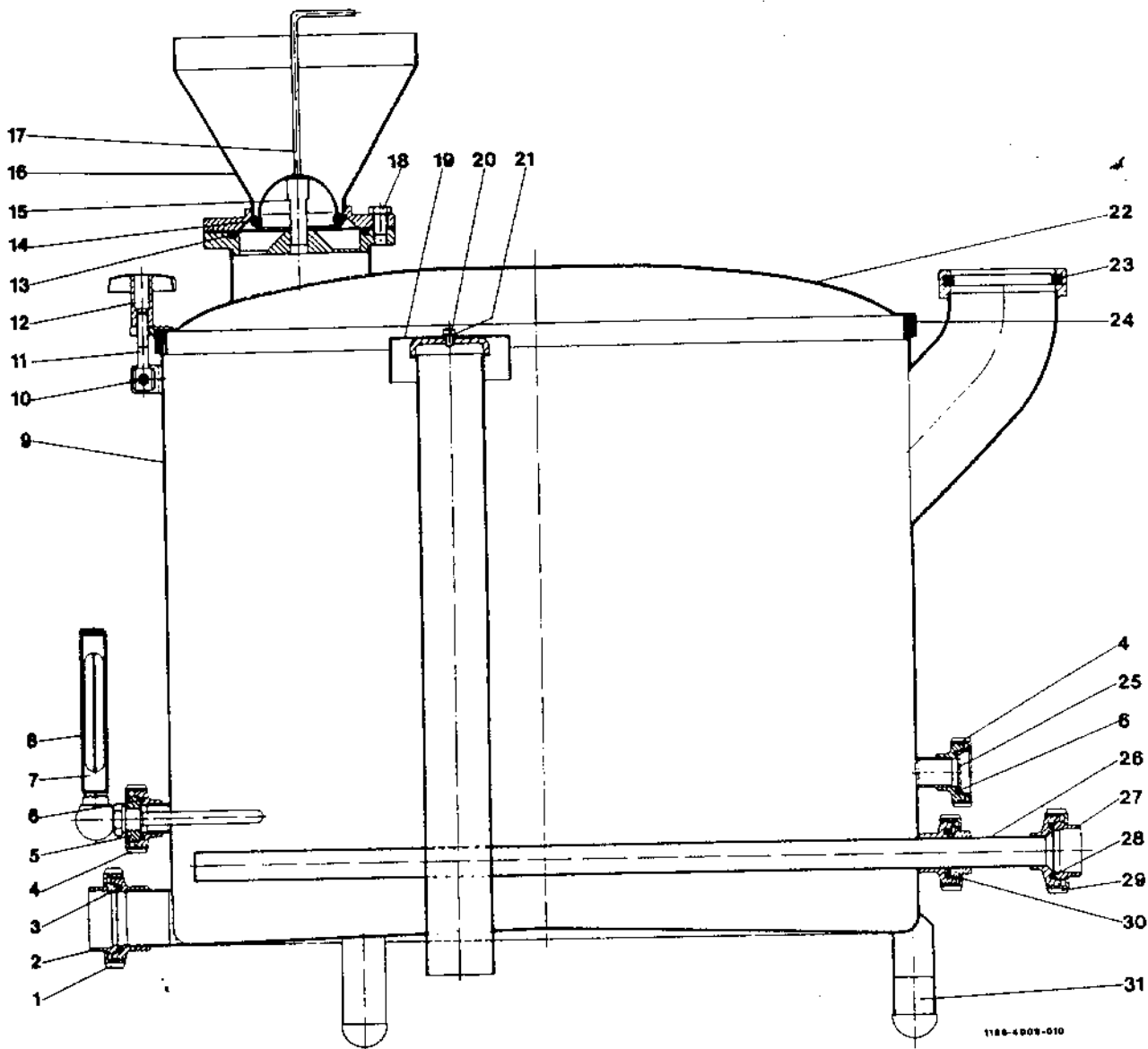


Fig. 21

Sterilizing Tank

(on special order)

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 F50 DIN 11851
2	0018-3955-300	1	Cone connection D50 DIN 11851
3	0007-2211-750	1	Gasket G50 DIN 11851
4	0013-2842-300	2	Grooved coupling nut F25 DIN 11851
5	0018-4269-400	1	Cone connection R 1/2"
6	0007-2208-750	2	Gasket G25 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	0006-4365-300	1	Cylindrical pressure spring
16	1169-9698-000	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	0026-1324-300	1	Lock washer DIN 127 - B6
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 D40 DIN 11851
28	0007-2210-750	1	Gasket G40 DIN 11851
29	0013-2844-300	1	Grooved coupling nut F40 DIN 11851
30	0007-2209-750	1	Gasket G32 DIN 11851
31	0021-3155-700	3	Foot

Flow Constrictor

Maximum throughput rate: 25,000 l/h

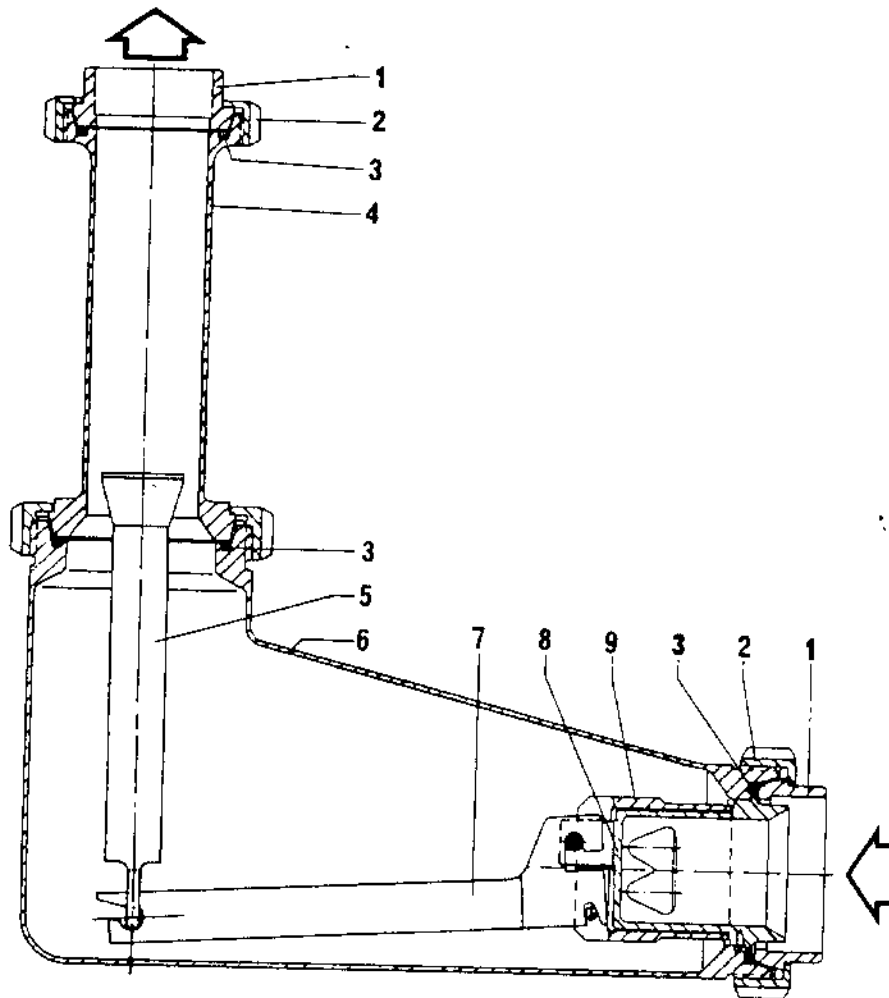


Fig. 22

NOTE: 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	0018-4261-300	2	Cone connection D65 DIN 11851
2	0013-2846-300	2	Grooved coupling nut
3	0007-2212-750	3	Gasket G65 DIN 11851
4	-	1 *	Control tube
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 one of our factory engineers or by a special repair shop authorized by us, because its replacement requires re-adjustment of the flow constrictor. Therefore, when ordering this part, the flow constrictor must be returned to the factory.