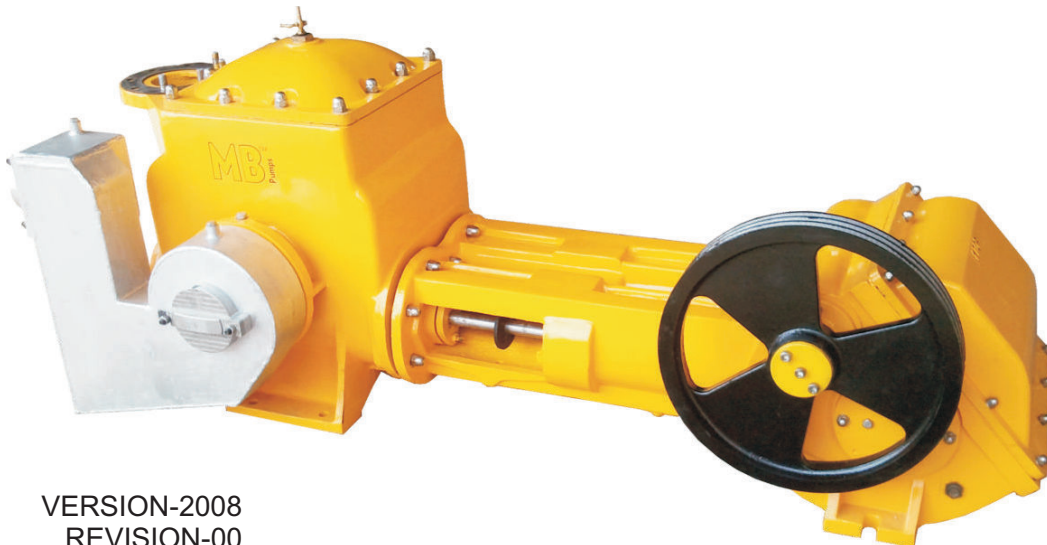


Service Manual with Part List

Dewatering Double Piston Pump



VERSION-2008
REVISION-00

Manufactured by :
M.B. Exports Limited
Ludhiana, India



Dewatering Double Piston Pump

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Dewatering Double Piston Pump

Suction Valve Assy.

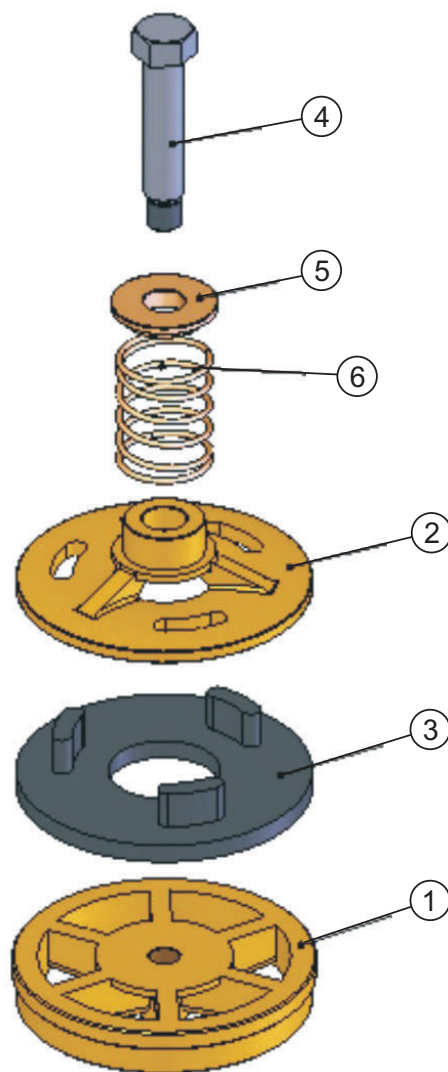


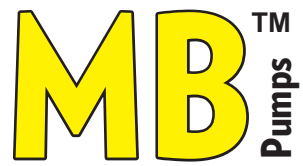
Fig. 1.1.1



Dewatering Double Piston Pump

PART LIST AND DRAWINGS

Suction Valve Assy.				
Item No.	Part Name	Part No.	Qty.	Material
1	SUCTION VALVE SEAT	MB - WP - 1	1	BRASS
2	VALVE WEIGHT	MB - WP - 2	1	BRASS
3	VALVE	MB - WP - 3	1	RUBBER
4	VALVE STEM GUIDE SCREW	MB - WP - 4	1	S S
5	WASHER FOR GUIDE SCREW	MB - WP - 5	1	BRASS
6	VALVE SPRING	MB - WP - 6	1	



Dewatering Double Piston Pump

Discharge Valve Assy.

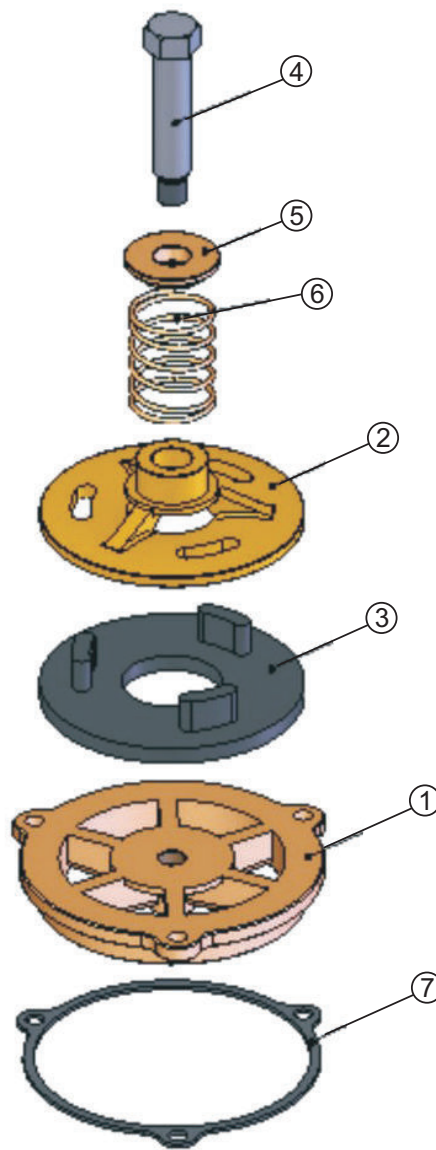
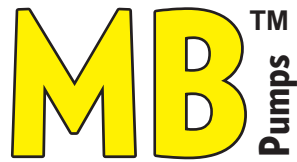
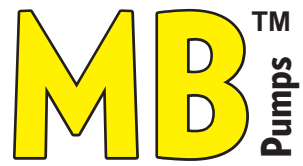


Fig. 1.2.1



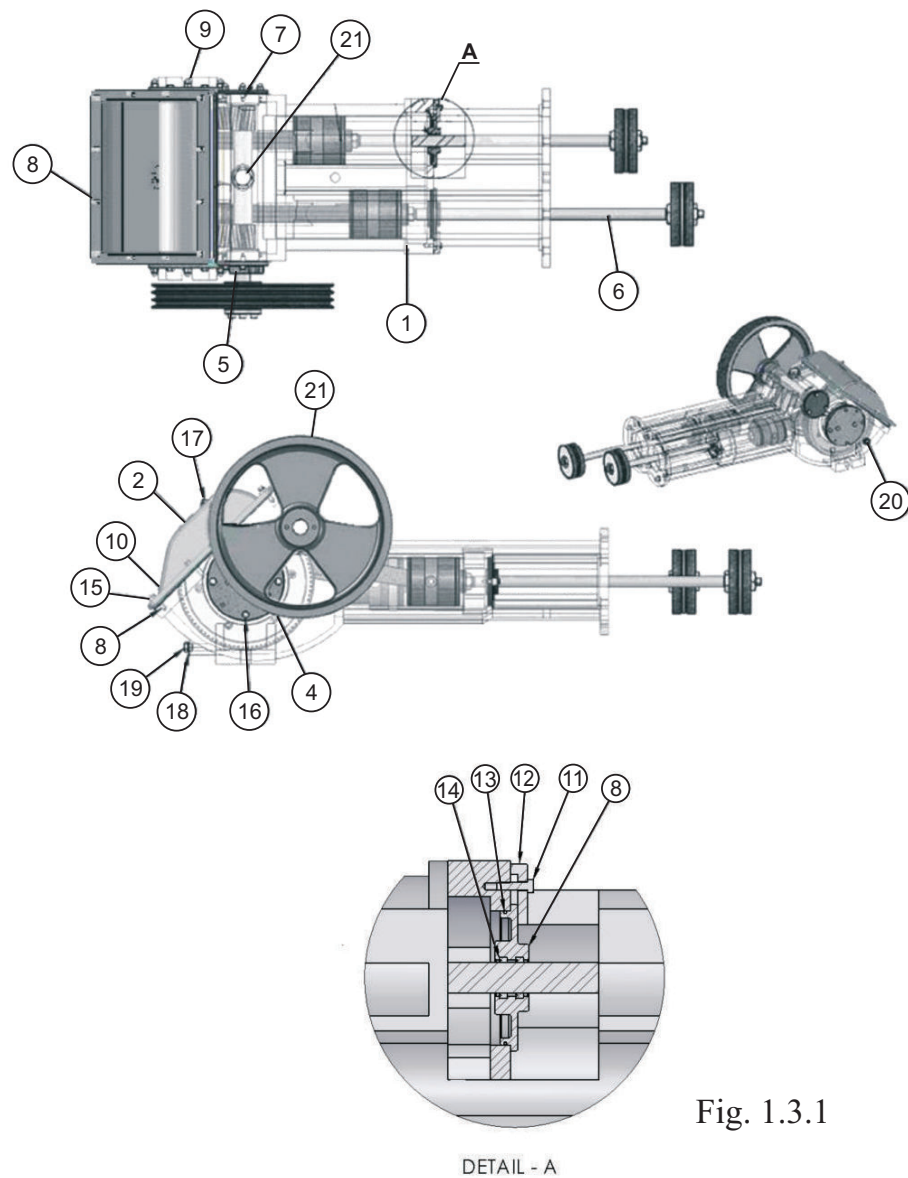
Dewatering Double Piston Pump

Discharge Valve Assy.				
Item No.	Part Name	Part No.	Qty.	Material
1	DISCHARGE VALVE SEAT	MB - WP - 7	1	BRASS
2	VALVE WEIGHT	MB - WP - 2	1	BRASS
3	VALVE	MB - WP - 3	1	RUBBER
4	VALVE STEM GUIDE SCREW	MB - WP - 4	1	S S
5	WASHER FOR GUIDE SCREW	MB - WP - 5	1	BRASS
6	VALVE SPRING	MB - WP - 6	1	
7	DISCHARGE VALVE SEAT RUBBER	MB - WP - 8	1	RUBBER



Dewatering Double Piston Pump

Gear Case Assy.

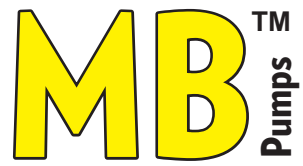




Dewatering Double Piston Pump

Gear Case Assy.

Item No.	Part Name	Part No.	Qty.	Material
1	GEAR CASE	MB - WP - 9	1	CI
2	GEAR CASE COVER	MB - WP - 10	1	ALUMINIUM
3	DUST CAP	MB - WP - 11	2	S.G IRON
4	CRANK ASSEM (Fig. 5.5.1)	MB - WP -	1	
5	PISTON SHAFT ASSEM (Fig. 5.4.1)	MB - WP -	1	
6	PISTON ASSEM	MB - WP -	2	
7	STUD M10 x 35	MB - WP - 12	6	S S
8	STUD M10 x 45	MB - WP - 13	12	S S
9	STUD M12 x 50	MB - WP - 14	8	S S
10	GEAR CASE COVER RUBBER GASKET	MB - WP - 15	1	RUBBER
11	HEX BOLT M8 x 30	MB - WP - 16	2	G R 8.8
12	DUST CAP RETAINER STRIP	MB - WP - 17	2	EN 8/M.S.
13	O RING 126 x 132	MB - WP - 18	2	RUBBER
14	OIL SEAL 30 x 40 x 8	MB - WP - 19	4	RUBBER
15	DOME NUT M10	MB - WP - 20	18	BRASS
16	DOME NUT M12	MB - WP - 21	8	BRASS
17	PLUG 3/8" BSP	MB - WP - 22	1	M.S
18	DOWTY WASHER 1-2 in BSP	MB - WP - 22.5	1	M.S
19	B.S.P. PLUG 1/2"	MB - WP - 23	1	M.S
20	OIL LEVEL INDICATOR	MB - WP - 24	1	ALUMINIUM
21	B.S.P. PLUG 1"	MB - WP - 25	1	M.S



Dewatering Double Piston Pump

Pinion Shaft Assy.

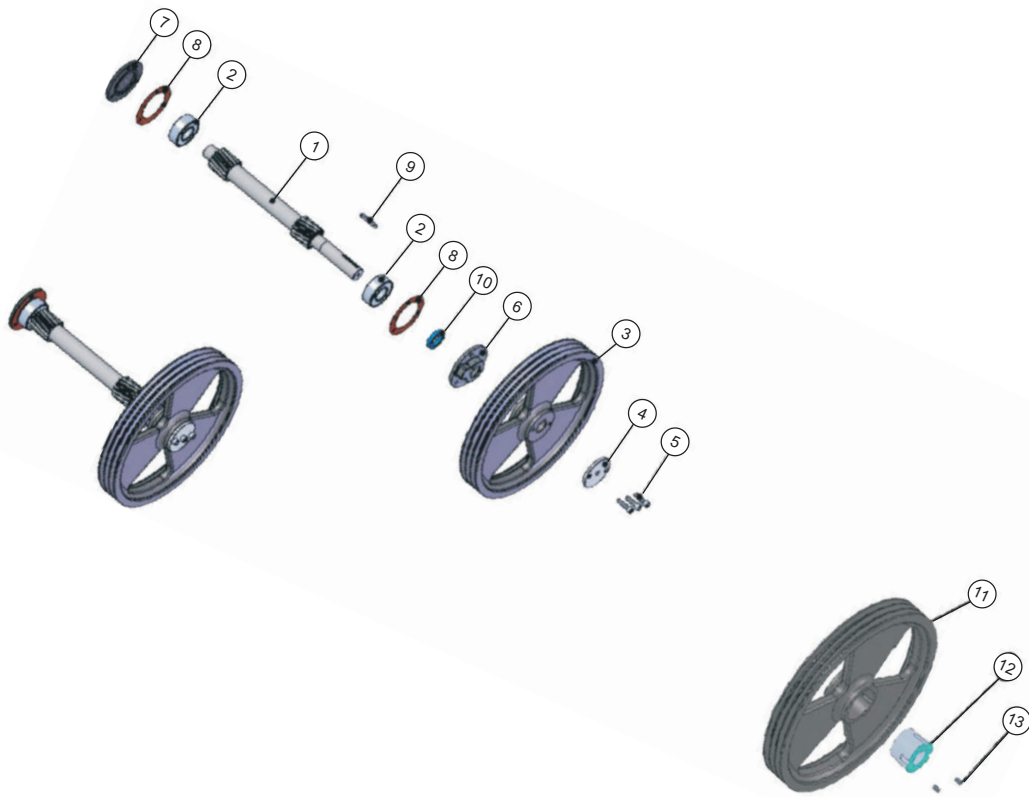
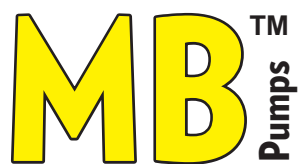


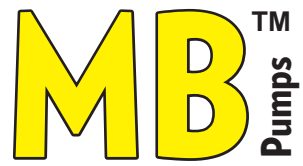
Fig. 1.4.1



Dewatering Double Piston Pump

Pinion Shaft Assy.

Item No.	Part Name	Part No.	Qty.	Material
1	PINION SHAFT	MB - WP - 26	1	EN-19
2	BEARING 2308	MB - WP - 27	2	
3	PULLEY	MB - WP - 28	1	CAST IRON
4	PULLEY LOCK DISC	MB - WP - 29	1	MILD STEEL
5	ALLEN BOLT M12x40	MB - WP - 30	3	
6	BEARING COVER LH PINION SHAFT	MB - WP - 31	1	S.G IRON
7	BEARING COVER RH PINION SHAFT	MB - WP - 32	1	S.G IRON
8	BEARING COVER PINION SHAFT GASKET	MB - WP - 33	2	PAPER GASKET
9	KEY PINION SHAFT	MB - WP - 34	1	EN-8/M.S
10	OIL SEAL 40 x 60 x 12	MB - WP - 35	1	RUBBER
11	TAPER PULLEY	MB - WP - 98	1	CAST IRON
12	TAPER LOCK BUSH	MB - WP - 99	1	CAST IRON
13	GRUBE SCREW 7/16"	MB - WP - 100	1	G.R 8.8



Dewatering Double Piston Pump

Crank Assy.

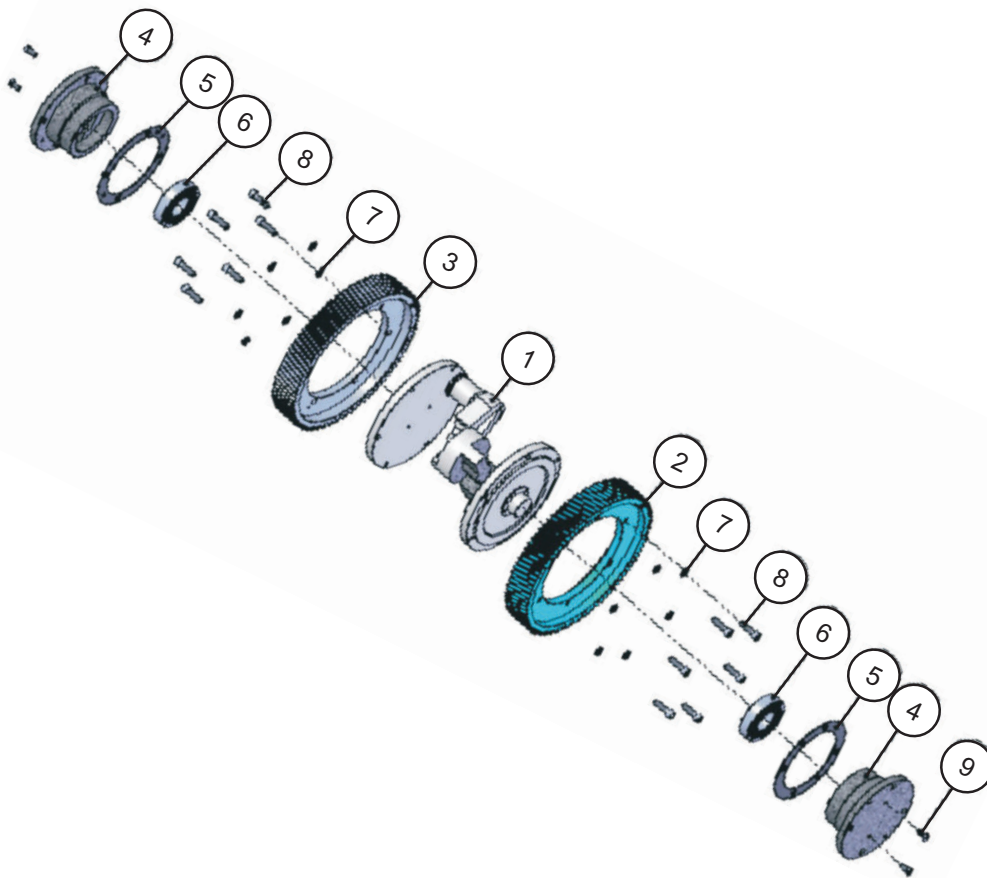
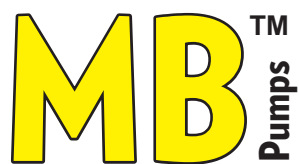
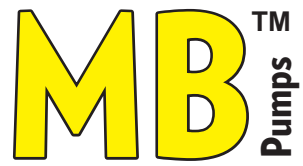


Fig. 1.5.1



Dewatering Double Piston Pump

Crank Assy.				
Item No.	Part Name	Part No.	Qty.	Material
1	CRANK	MB - WP - 36	1	S.G IRON
2	BULL GEAR LH	MB - WP - 37	1	S.G IRON
3	BULL GEAR RH	MB - WP - 38	1	S.G IRON
4	BEARING COVER	MB - WP - 39	2	S.G IRON
5	BEARING COVER GEAR CASHING RUBBER	MB - WP - 40	2	RUBBER
6	ROLLER BEARING NU 310 / NJ 310	MB - WP - 41	2	
7	SPRING WASHER M12	MB - WP - 42	12	Gr 8.8
8	ALLEN BOLT M12 x 40	MB - WP - 43	12	Gr 8.8
9	HEX BOLT M10 x 20	MB - WP - 44	4	Gr 8.8



Dewatering Double Piston Pump

Piston Assy. (Fig. 5.6.1)

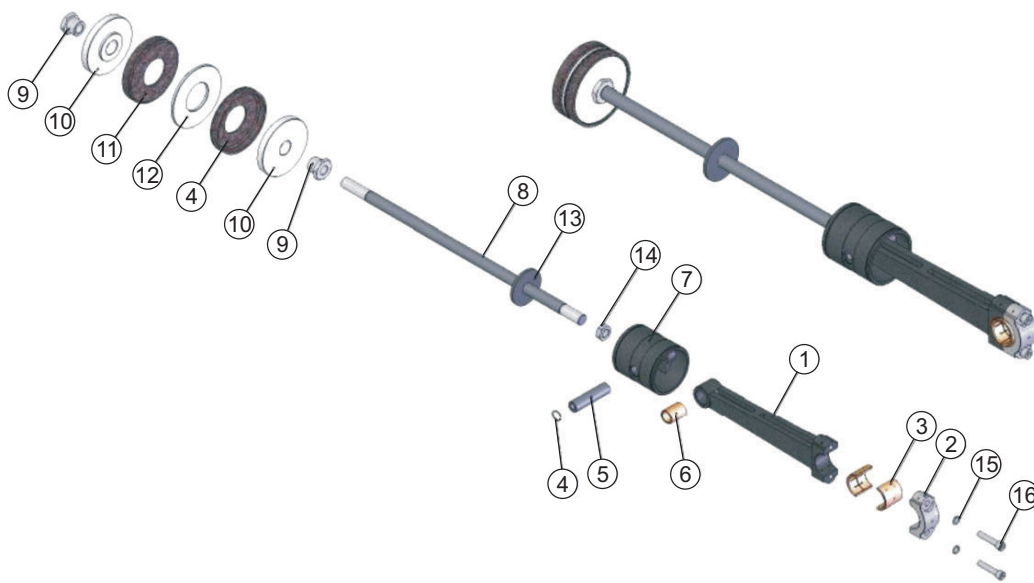


Fig. 1.6.1



Dewatering Double Piston Pump

Piston Assy. (Fig. 5.6.1)

Item No.	Part Name	Part No.	Qty.	Material
1	CONNECTING ROD	MB - WP - 45	1	S.G IRON
2	CONNECTING ROD UPPER HALF	MB - WP - 46	1	S.G IRON
3	CONNECTING ROD BUSH	MB - WP - 47	2	BRASS
4	INTERNAL CIRCLIP DIA.	MB - WP - 48	1	SS
5	GUDGEON PIN	MB - WP - 49	1	EN-8
6	CONNECTING ROD BUSH SMALL	MB - WP - 50	1	BRASS
7	PISTON	MB - WP - 51	1	S.G IRON
8	PISTON SHAFT	MB - WP - 52	2	S S 202
9	PISTON LOCK NUT	MB - WP - 53	2	BRASS
10	PISTON BODY	MB - WP - 54	2	NYLON
11	PISTON COLLAR	MB - WP - 55	1	LEATHER
12	INTERMEDIATE DISC	MB - WP - 56	1	NYLON
13	RUBBER DISC FOR SHAFT	MB - WP - 57	2	RUBBER
14	HEX LOCK NUT 1-1/8" x 7 TPI	MB - WP - 58	2	G r 8.8
15	SPRING WASHER M14	MB - WP - 59	4	MS
16	ALLEN BOLT M14 x 70	MB - WP - 60	4	G r 8.8



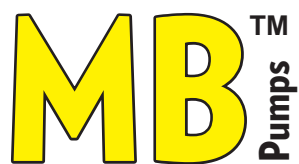
This exploded view diagram illustrates the assembly of a mechanical component, likely a pump or valve. The central part is a light blue rectangular housing (1). To its left is a complex assembly including a flange (3), a bracket (4), and a valve mechanism (5) with two white cylindrical components. Above the housing is a blue square plate (2) with four mounting points (15, 27). To the right of the housing are various seals and rings (8, 9, 13, 23, 26), a black cap (7), and a circular flange (38). Numerous screws and bolts (1, 6, 10, 11, 12, 14, 16, 18, 19, 20, 21, 24, 25, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37) are shown in their respective positions. The diagram uses solid lines for the main components and dashed lines to indicate the assembly path for the fasteners.

(13)



Dewatering Double Piston Pump

Pump Body Assy.				
Item No.	Part Name	Part No.	Qty.	Material
1	PUMP BODY	MB - WP - 61		C. I
2	DISCHARGE VALVE COVER	MB - WP - 62	1	ALUMINIUM
3	CYLINDER COVER	MB - WP - 63	1	C. I
4	BRASS CAGE	MB - WP - 64	2	BRASS
5	CYLINDER LINER	MB - WP - 65	2	S.S
6	DISCHARGE FLANGE	MB - WP - 66	1	,,S
7	FILTER PLATE	MB - WP - 67	1	
8	STUFFING BOX	MB - WP - 68	2	S.G. IRON
9	GLAND	MB - WP - 69	2	BRASS
10	SUCTION VALVE ASSEMBLY (Fig. 5.1.1)	MB - WP -		
11	DISCHARGE VALVE ASSEMBLY (Fig. 5.2.1)	MB - WP -		
12	STUD M10 x 62	MB - WP - 70	13	S.S
13	STUD M12 x 62	MB - WP - 71	4	S.S
14	STUD M16 x 64	MB - WP - 72	10	S.S
15	STUD M16 x 58	MB - WP - 73	26	S.S
16	STUD M20 x 2.5 x 68	MB - WP - 74	2	S.S
17	B.S.P. PLUG 1" x 3/8"	MB - WP - 75	1	
18	DISCHARGE VALVE COVER RUBBER	MB - WP - 76	1	RUBBER
19	CYLINDER COVER RUBBER	MB - WP - 77	1	RUBBER
20	DISCHARGE FLANGE RUBBER	MB - WP - 78	1	RUBBER
21	SUCTION FLANGE RUBBER	MB - WP - 79	1	RUBBER



Dewatering Double Piston Pump

22	RUBBER GASKET FOR STUFFING BOX	MB - WP - 80	2	RUBBER
23	GLAND ROPE	MB - WP - 81	3	
24	ALLEN BOLT M5 x 16	MB - WP - 82	4	Gr 8.8
25	HEX NUT M10	MB - WP - 83	24	Gr 8.8
26	HEX NUT M12	MB - WP - 84	4	Gr 8.8
27	DOME NUT M16	MB - WP - 85	27	SS 304
28	DOME NUT M20	MB - WP - 86	2	SS 304
29	HEX BOLT 5/8" x 2.5"	MB - WP - 87	4	Gr 8.8
30	HEX NUT 5/8"	MB - WP - 88	4	Gr 8.8
31	WASHER 5/8"	MB - WP - 89	4	M.S
32	HEX BOLT 3/4" x 2.5"	MB - WP - 90	8	Gr 8.8
33	WASHER 3/4"	MB - WP - 91	8	M.S
34	PLUG 3/8" BSP	MB - WP - 92	2	M.S
35	DOWTY WASHER 3/8" BSP	MB - WP - 93	2	M.S
36	B.S.P. PLUG 1"	MB - WP - 94	4	M.S
37	DOWTY WASHER 1" BSP	MB - WP - 95	4	M.S
38	SUCTION FLANGE1	MB - WP - 96	1	M.S
39	HEX NUT 3/4"	MB - WP - 97	8	Gr 8.8



Dewatering Double Piston Pump

TECHNICAL DATA

Technical Specifications	
Bore Diameter	174mm
Stroke	215mm
No. of pistons	2
Displacement per stroke (In Lit.)	5.11Lit.
Piston Type	Double Acting
Electric Motor Power Required Power	10 H.P.
Electric Motor Rpm-Pump Pulley	360 rpm
Pulley Ratio	0.25
Gear Ratio	0.166
Pump (Crank Shaft) Rpm	60 rpm
Pump Efficiency	Up to 90%
Max. Discharge capacity	90 m ³ /h
Intake and Discharge Ports	150mm
Max. Suction depth	9.0 m (27ft.)
Max. Delivery Head	27 m
Max. Suction Pressure	0.9 bar
Suction Flange Mounting	8 Holes Φ 23, P.C.D. 242 (See fig. 6.1.1)
Discharge Flange Mounting	8 Holes Φ 19, P.C.D. 210 (See fig. 6.1.1)

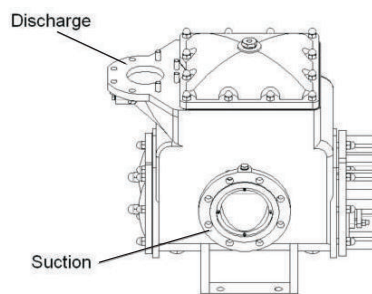
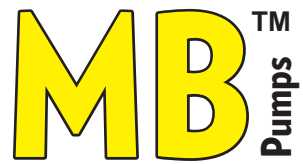


Fig. 2.1.1



Dewatering Double Piston Pump

Outline Sketch of Pump Assembly

Overall Dimensions of Pump

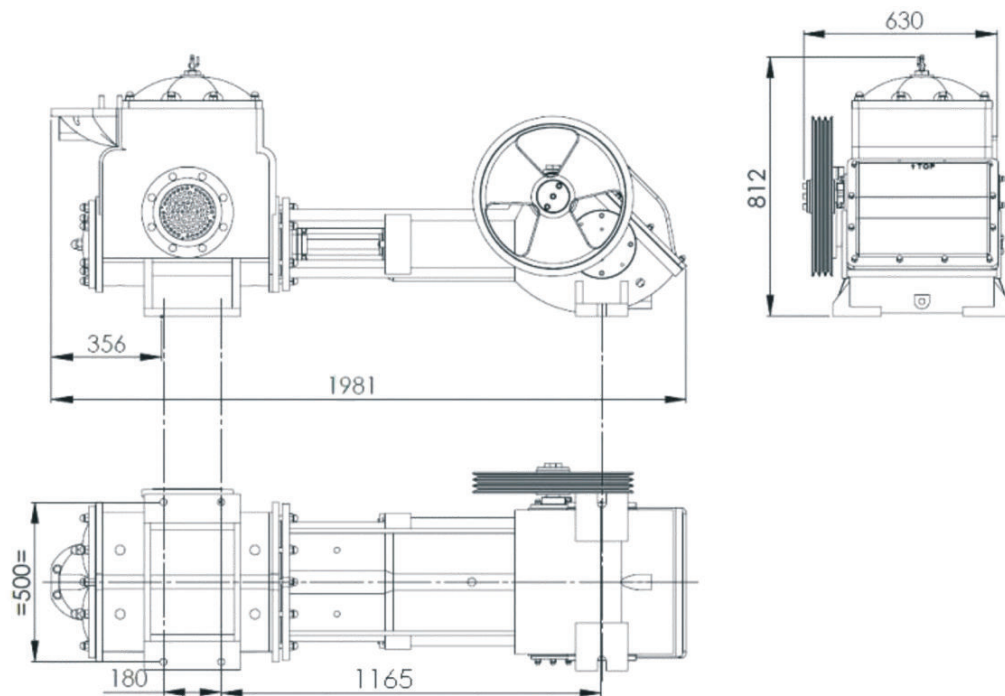
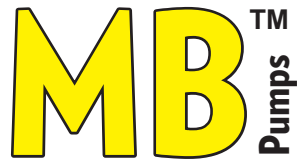
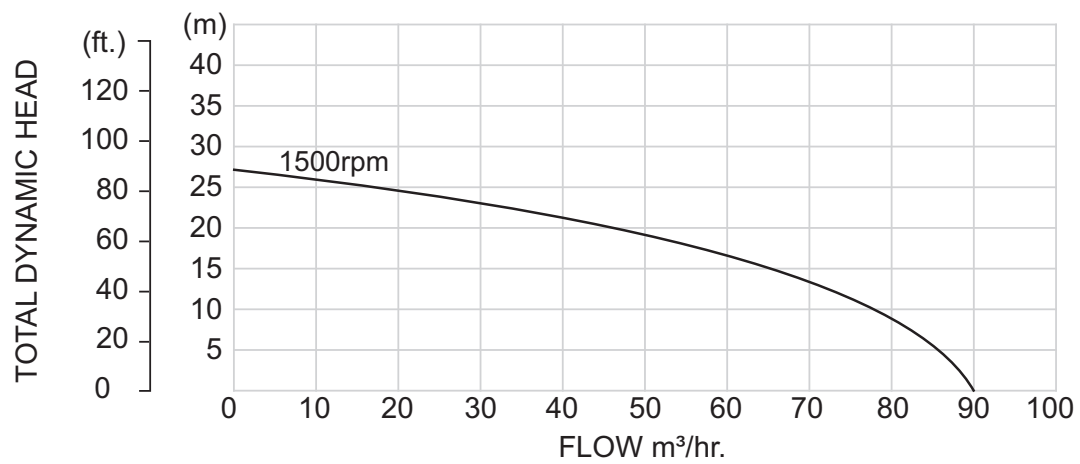


Fig. 2.2.1



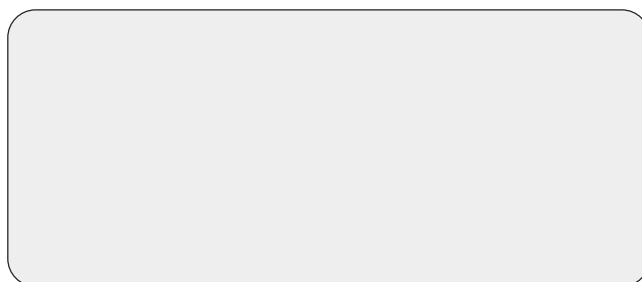
Dewatering Double Piston Pump

PERFORMANCE CURVE



2.3.1

Manufactured by :
M.B. Exports Limited
Ludhiana, India



An **MB Group** Company