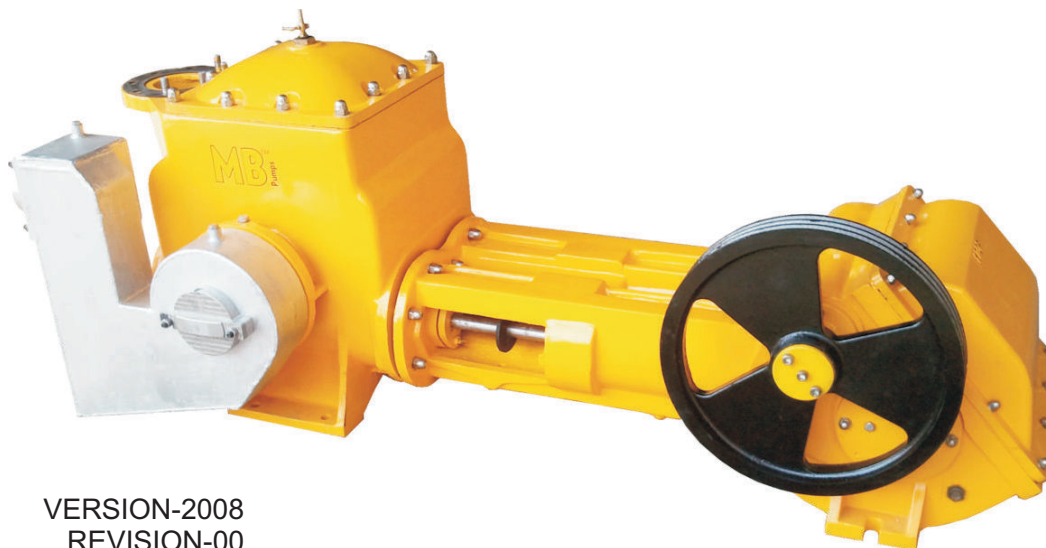


# MB<sup>TM</sup> Pumps

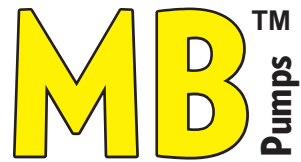
Service Manual with Part List

## *Dewatering Double Piston Pump*



VERSION-2008  
REVISION-00

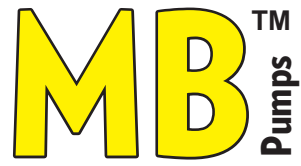
Manufactured by :  
**M.B. Exports Limited**  
Ludhiana, India



# Dewatering Double Piston Pump

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## Dewatering Double Piston Pump

### Suction Valve Assy.

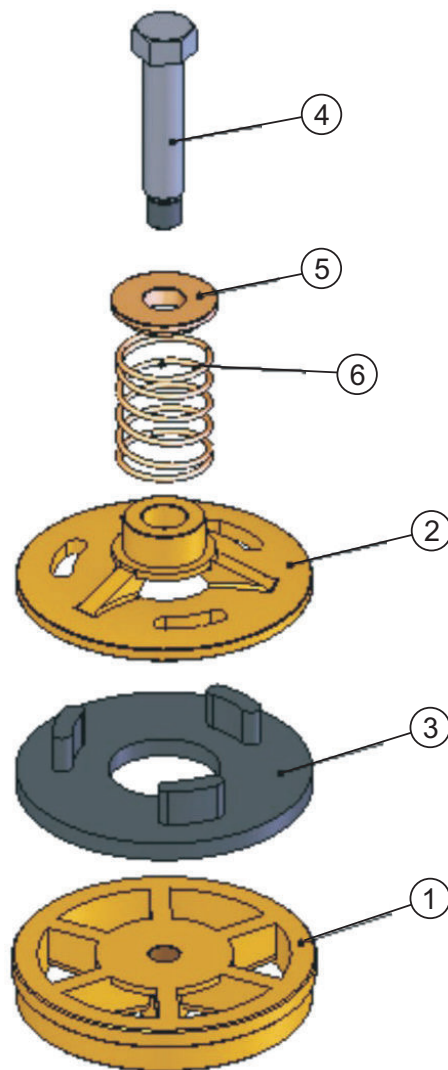
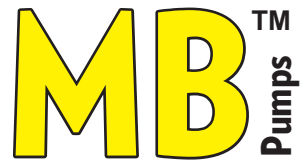


Fig. 1.1.1



## 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	SS
5	WASHER FOR GUIDE SCREW	MB - WP - 5	1	BRASS
6	VALVE SPRING	MB - WP - 6	1	



## Dewatering Double Piston Pump

### Discharge Valve Assy.

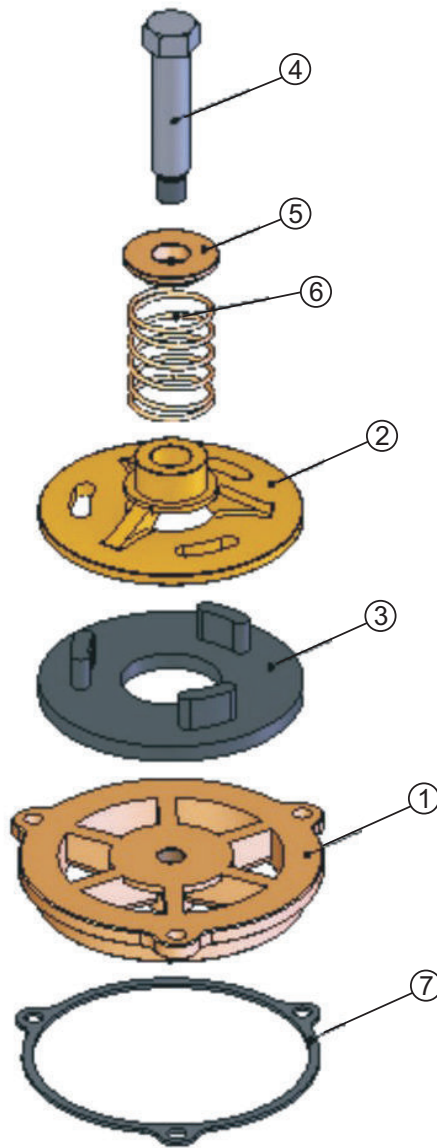
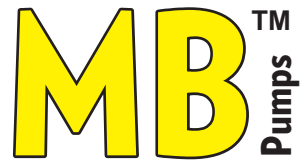


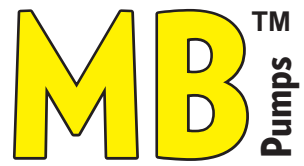
Fig. 1.2.1



## Dewatering Double Piston Pump

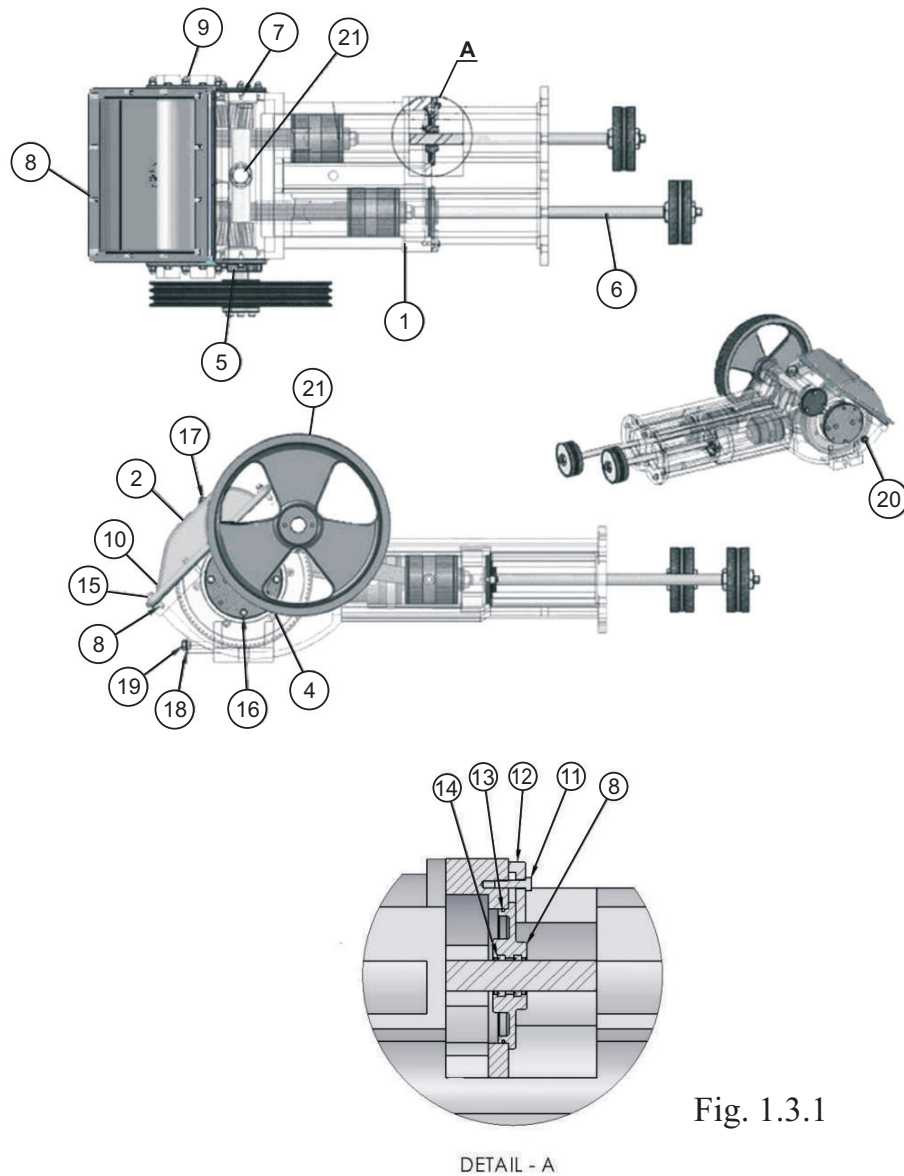
### Discharge Valve Assy.

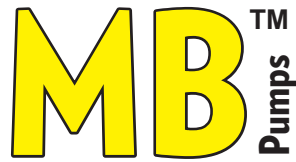
Item No.	Part Name	Part No.	Qty.	Material
1	DISCHARGE VALVE SEAT	MB - WP - 7	1	BRASS
2	VALVE WEIGHT	MB - WP - 2	1	BRASS
3	VALVE	MB - WP - 3	1	RUBBER
4	VALVE STEM GUIDE SCREW	MB - WP - 4	1	S S
5	WASHER FOR GUIDE SCREW	MB - WP - 5	1	BRASS
6	VALVE SPRING	MB - WP - 6	1	
7	DISCHARGE VALVE SEAT RUBBER	MB -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



# Dewatering Double Piston Pump

## Gear Case Assy.



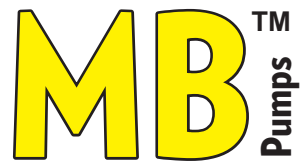


## Dewatering Double Piston Pump

### 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	SS
8	STUD M10 x 45	MB - WP - 13	12	SS
9	STUD M12 x 50	MB - WP - 14	8	SS
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.

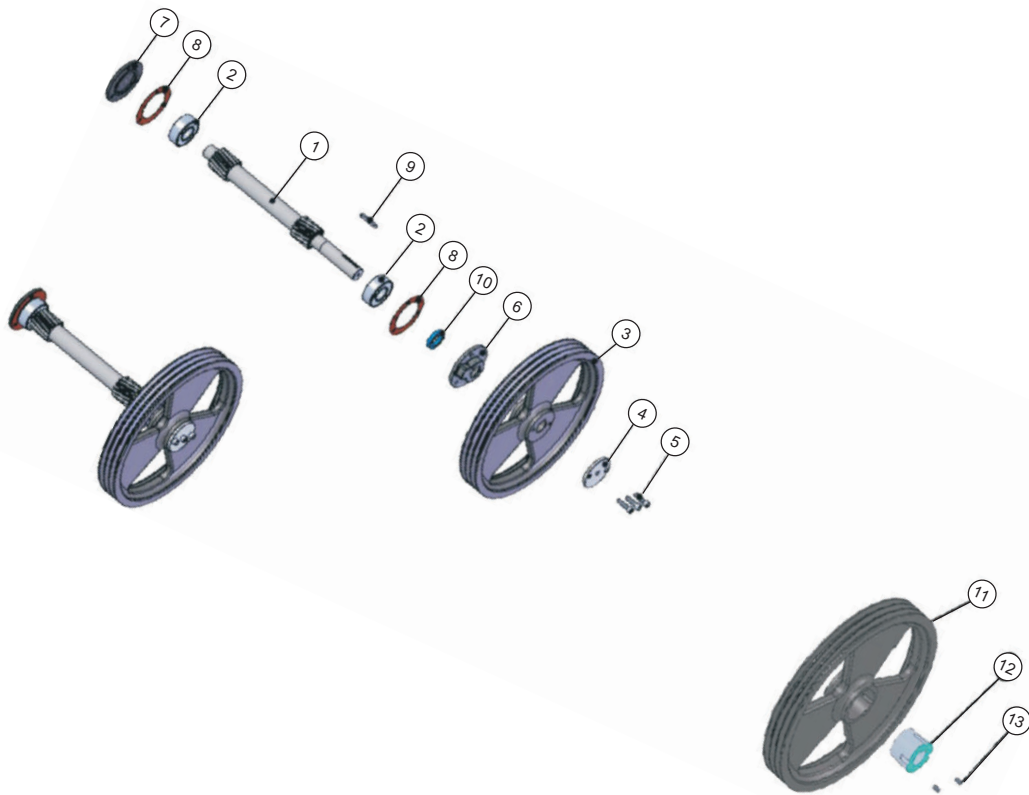
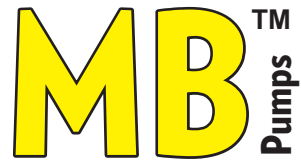


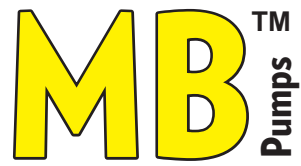
Fig. 1.4.1



## 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.

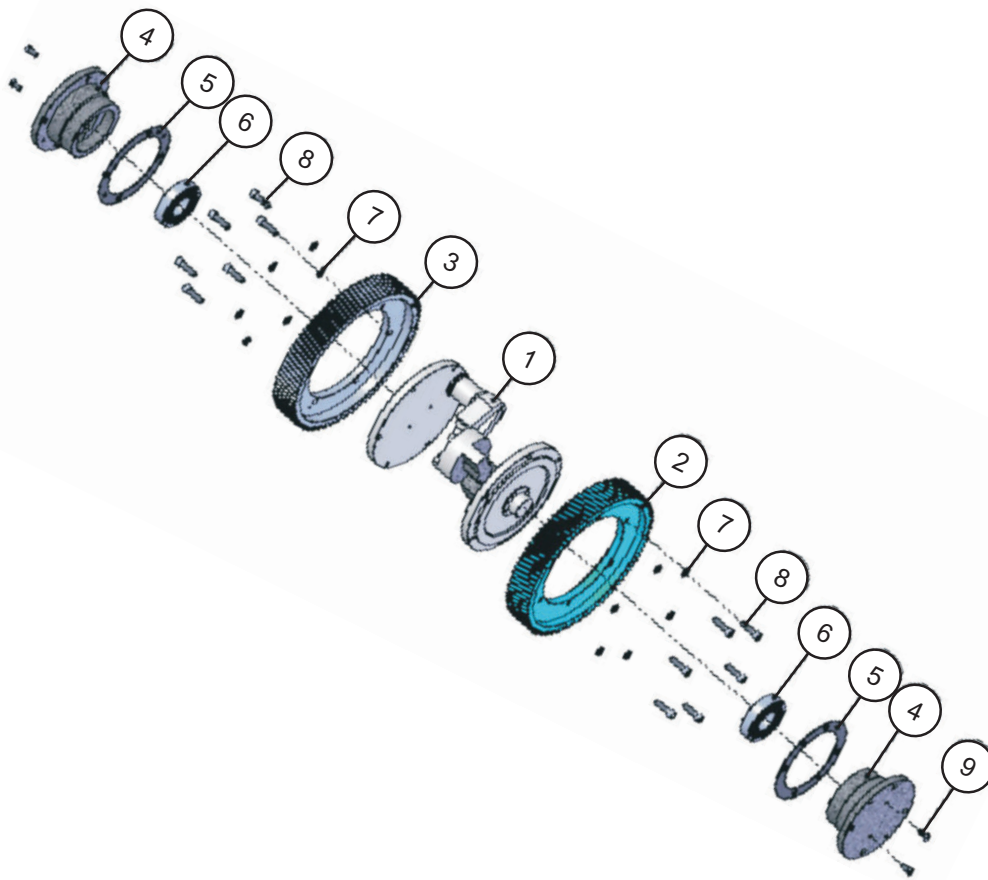


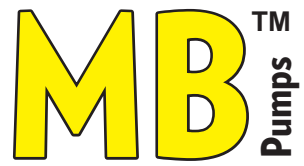
Fig. 1.5.1



## 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)

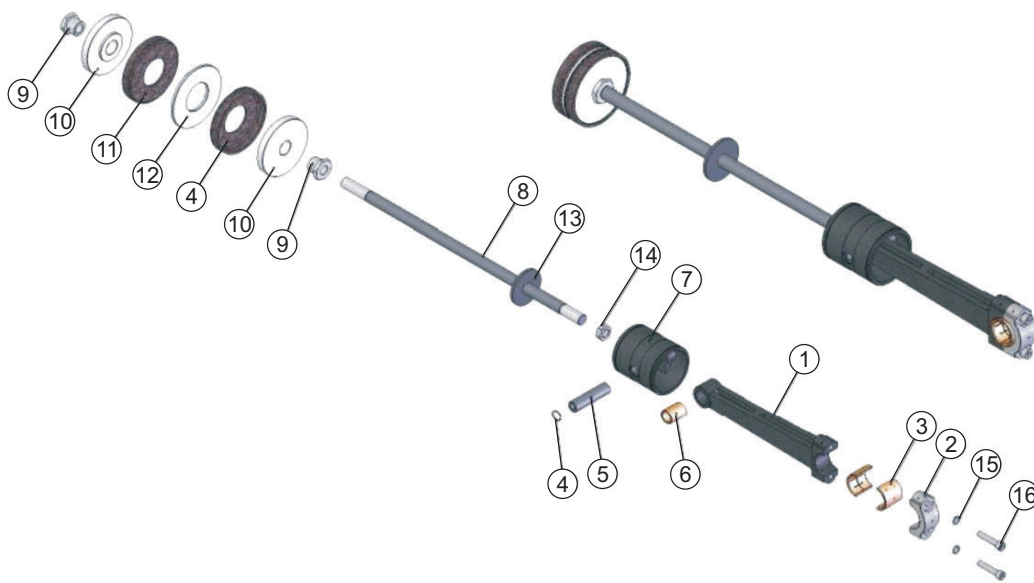
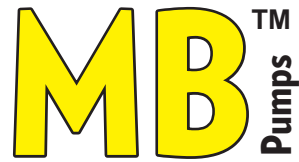


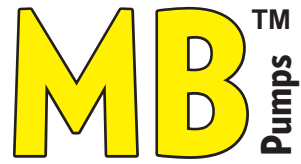
Fig. 1.6.1



## 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



# Dewatering Double Piston Pump

## Pump Body Assy.

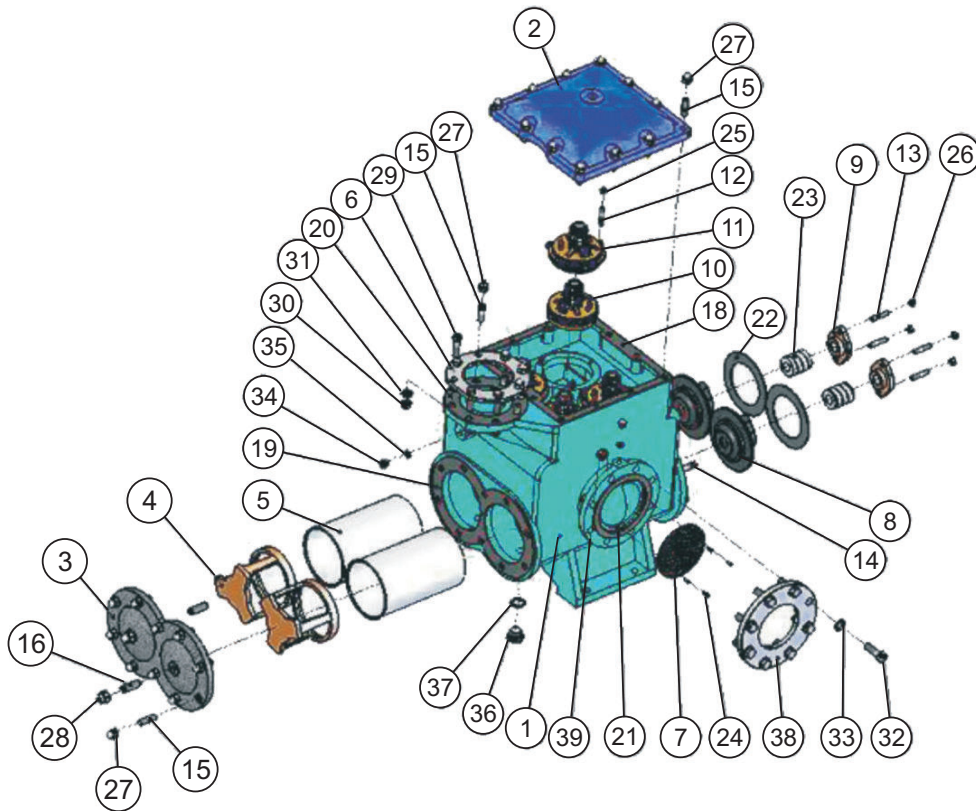
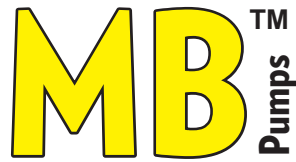


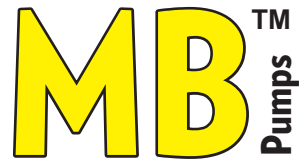
Fig. 1.7.1



## Dewatering Double Piston Pump

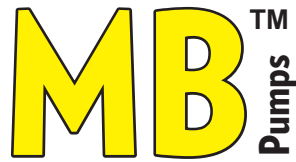
Pump Body Assy.				
Item No.	Part Name	Part No.	Qty.	Material
1	PUMP BODY	MB - WP - 61		C. I
2	DISCHARGE VALVE COVER	MB - WP - 62	1	ALUMINIUM
3	CYLINDER COVER	MB - WP - 63	1	C. I
4	BRASS CAGE	MB - WP - 64	2	BRASS
5	CYLINDER LINER	MB - WP - 65	2	S.S
6	DISCHARGE FLANGE	MB - WP - 66	1	,,S
7	FILTER PLATE	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 <sup>3</sup> /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 $\Phi$ 23, P.C.D. 242 (See fig. 6.1.1)
Discharge Flange Mounting	8 Holes $\Phi$ 19, P.C.D. 210 (See fig. 6.1.1)

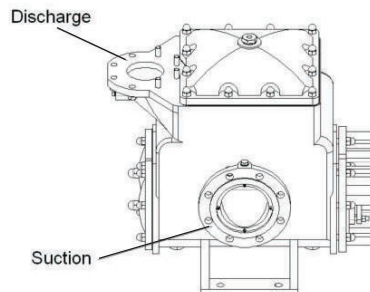
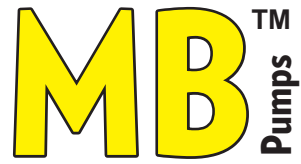


Fig. 2.1.1



## Dewatering Double Piston Pump

Outline Sketch of Pump Assembly

Overall Dimensions of Pump

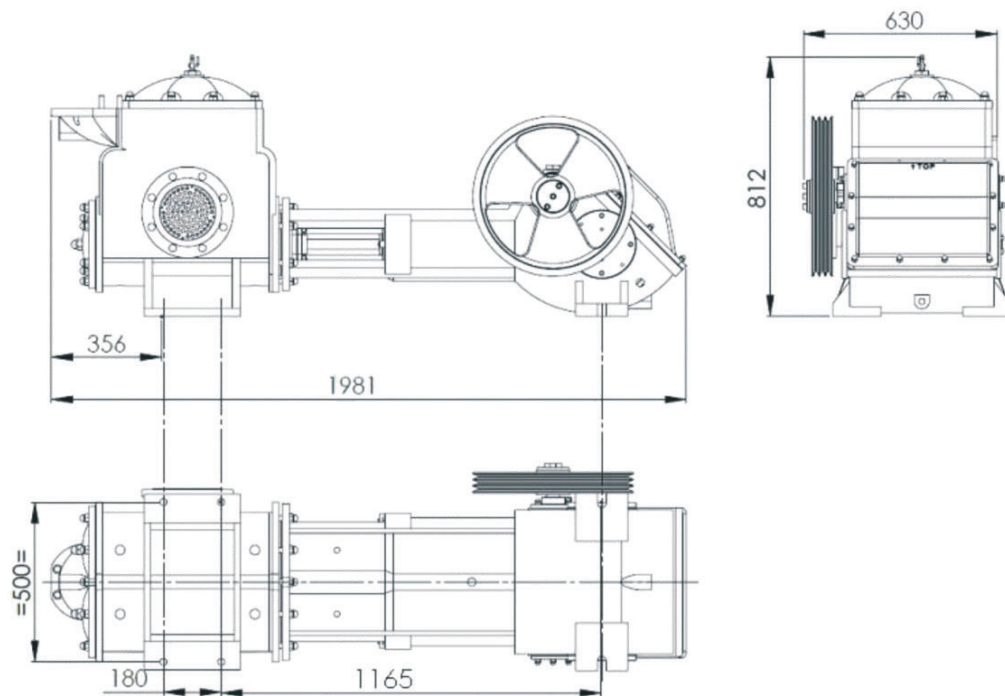
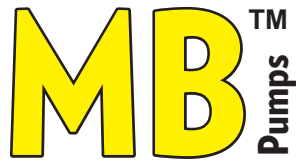
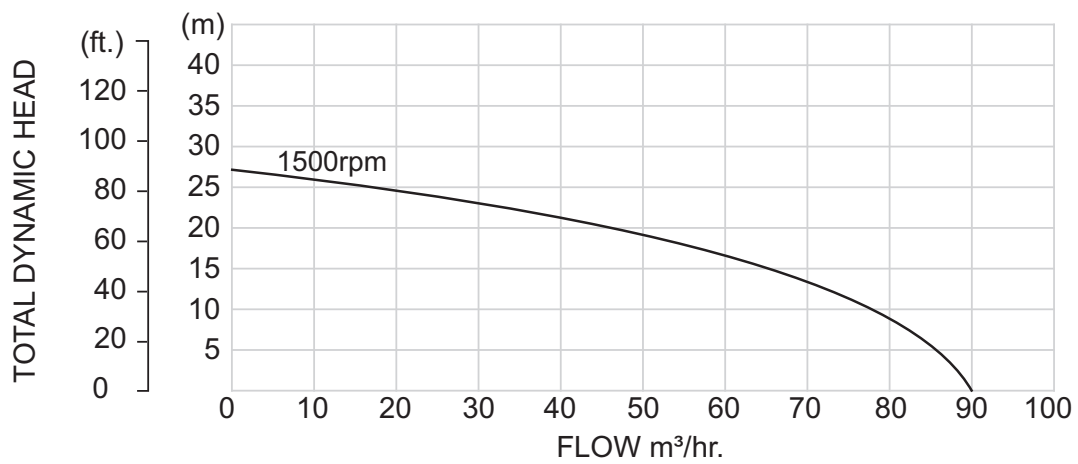


Fig. 2.2.1



## Dewatering Double Piston Pump

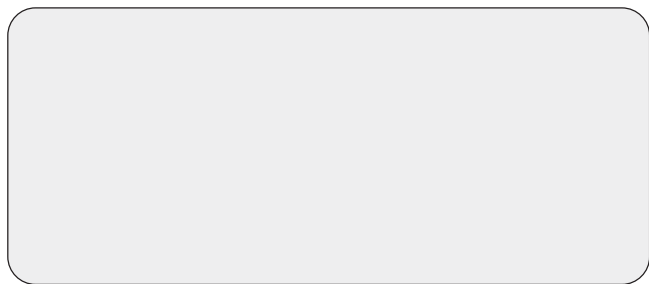
### PERFORMANCE CURVE



2.3.1



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



An **MB Group** Company