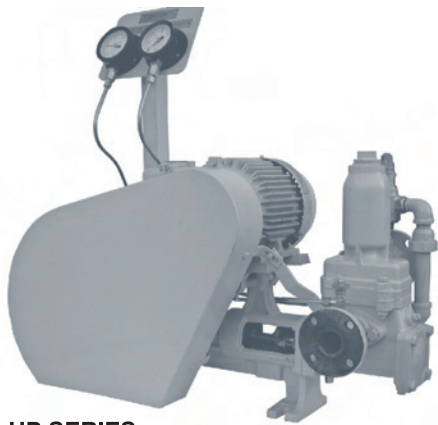


## PISTON PUMP HP Series



HP SERIES

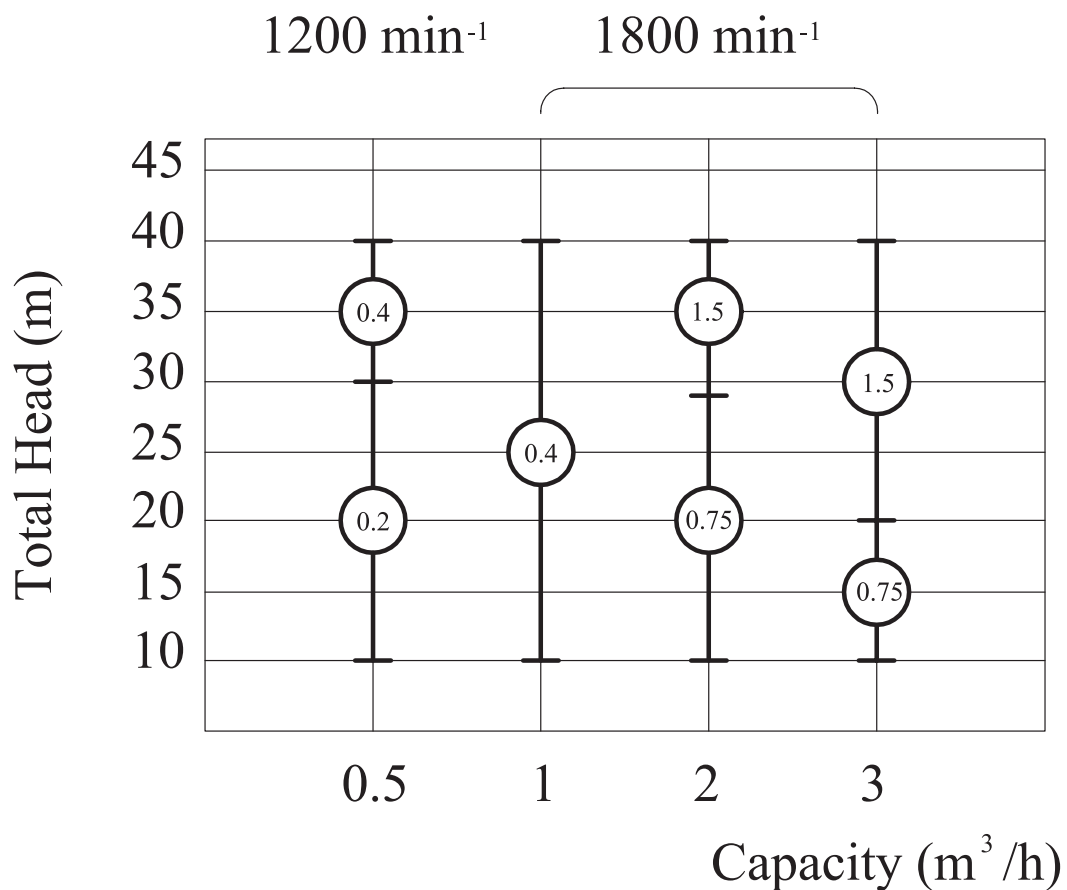
### Application

- \* ビルジポンプ                      \* Bilge Pump
- \* スラッジポンプ                \* Sludge Pump
- \* その他                            \* others

### Note:

- \* Simple structure and Easy maintenance.
- \* Pressure adjust valve (relief valve): fitted in.
- \* Light weight and High performance.

## PERFORMANCE CHART



Model    HP-05A    HP-1A    HP-2A    HP-3A

Suction Head Max.

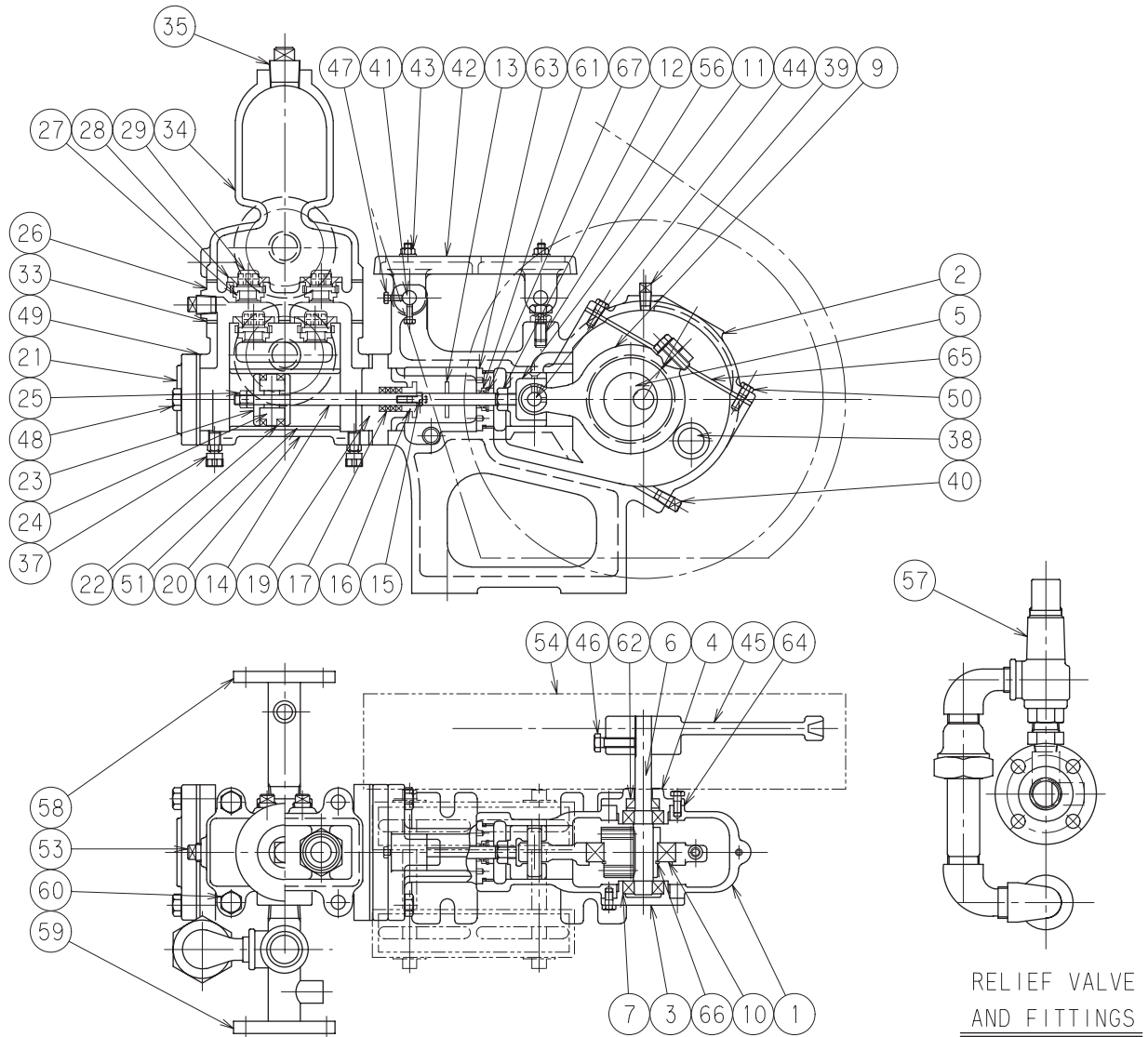
HP-05A : -3m

HP-1A~3A : -5m



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# HP-05A MODEL SECTIONAL DRAWING



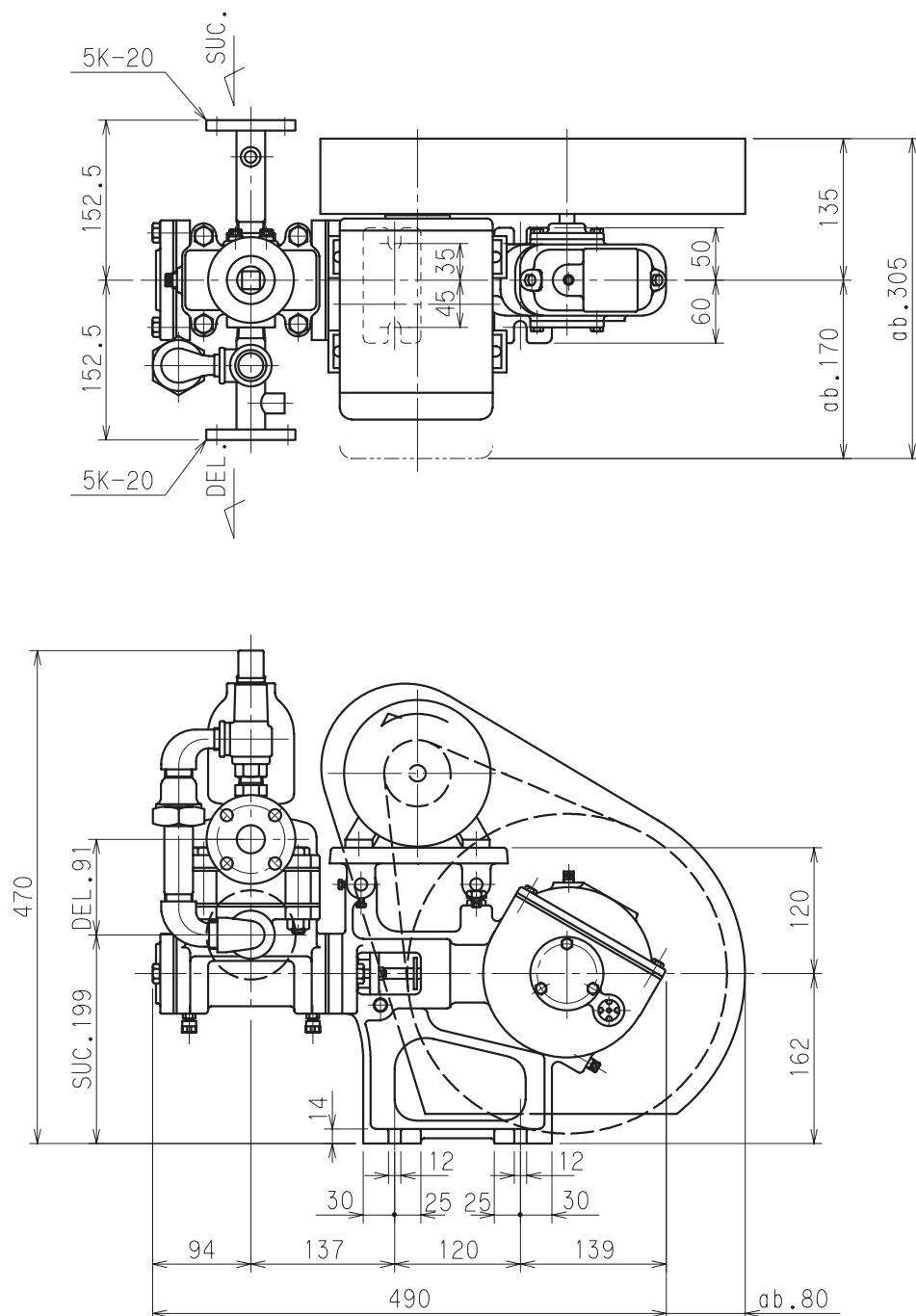
PART NO.	NAME OF PART	MATERIAL NOMINATION	QTY.
1	Frame	Cast Iron	1
2	Frame Cover	Cast Iron	1
3	Bearing Case (1)	Cast Iron	1
4	Bearing Case (2)	Cast Iron	1
5	Crank Pin	Carbon Steel	1
6	Crank Shaft	Carbon Steel	1
7	Bearing (1)		2
9	Connecting Rod	Ductile Cast Iron	1
10	Bearing (2)		1
11	Slide Block	Cast Iron	1
12	Nut (1)	Mild Steel	1
13	Drainer	Synthetic Rubber	1
14	Piston Rod	Stainless Steel	1
15	Gland Set Bolt	Stainless Steel	2
16	Gland	Bronze Casting	1
17	Gland Packing	CARBON FIBER	4
19	Gland Case	Cast Iron	1
20	Cylinder	Cast Iron	1
21	Cylinder Cover	Cast Iron	1
22	Piston Ring	BKELITE	2
23	Piston (B)	Bronze Casting	2
24	Piston (A)	Bronze Casting	1
25	Lock Nut	Stainless Steel	2
26	Valve Plate	Cast Iron	1
27	Valve Seat (1)	High Tension Brass	4
28	Valve Seat (2)	High Tension Brass	4
29	Valve	Stainless Steel + Synthetic Rubber	4
33	Seat Packing	Synthetic Rubber	2
34	Delivery Chamber	Cast Iron	1
35	Plug (1)	Malleable Iron Casting	1

PART NO.	NAME OF PART	MATERIAL NOMINATION	QTY.
37	Drain Plug	High Tension Brass	2
38	Oilpot Window		1
39	Plug (2)	Malleable Iron Casting	1
40	Plug (3)	Malleable Iron Casting	1
41	Motor Rail Pin	Mild Steel	2
42	Motor Rail	Cast Iron	2
43	Motor Set Bolt	Mild Steel	4
44	Slide Block Pin	Carbon Steel	1
45	Pump Pulley	Cast Iron	1
46	Pulley Set Bolt	Mild Steel	1
47	Rail Set Bolt	Mild Steel	5
48	Cylinder Vover Bolt	Mild Steel	4
49	Cylinder Cover Packing	Synthetic Rubber	2
50	Frame Cover Bolt	Mild Steel	2
51	Cylinder Sleeve	Mild Steel	1
53	Plug (4)	Malleable Iron Casting	3
54	Belt Cover	Mild Steel	1
56	Adjusting Bolt	Mild Steel	1 Set
57	Relief Valve	Bronze Casting	1
58	Suction Fitting		1 Set
59	Delivery Fitting		1 Set
60	Set Bolt	Mild Steel	1 Set
61	Dust Seal		1
62	Oil Seal	Synthetic Rubber	1
63	Seal Attachment	Cast Iron	1
64	Seal Packing	PAPER	2
65	Cover Packing	Synthetic Rubber	1
66	Retaining Ring (1)	Carbon Tool Steel	1
67	Retaining Ring (2)	Carbon Tool Steel	1

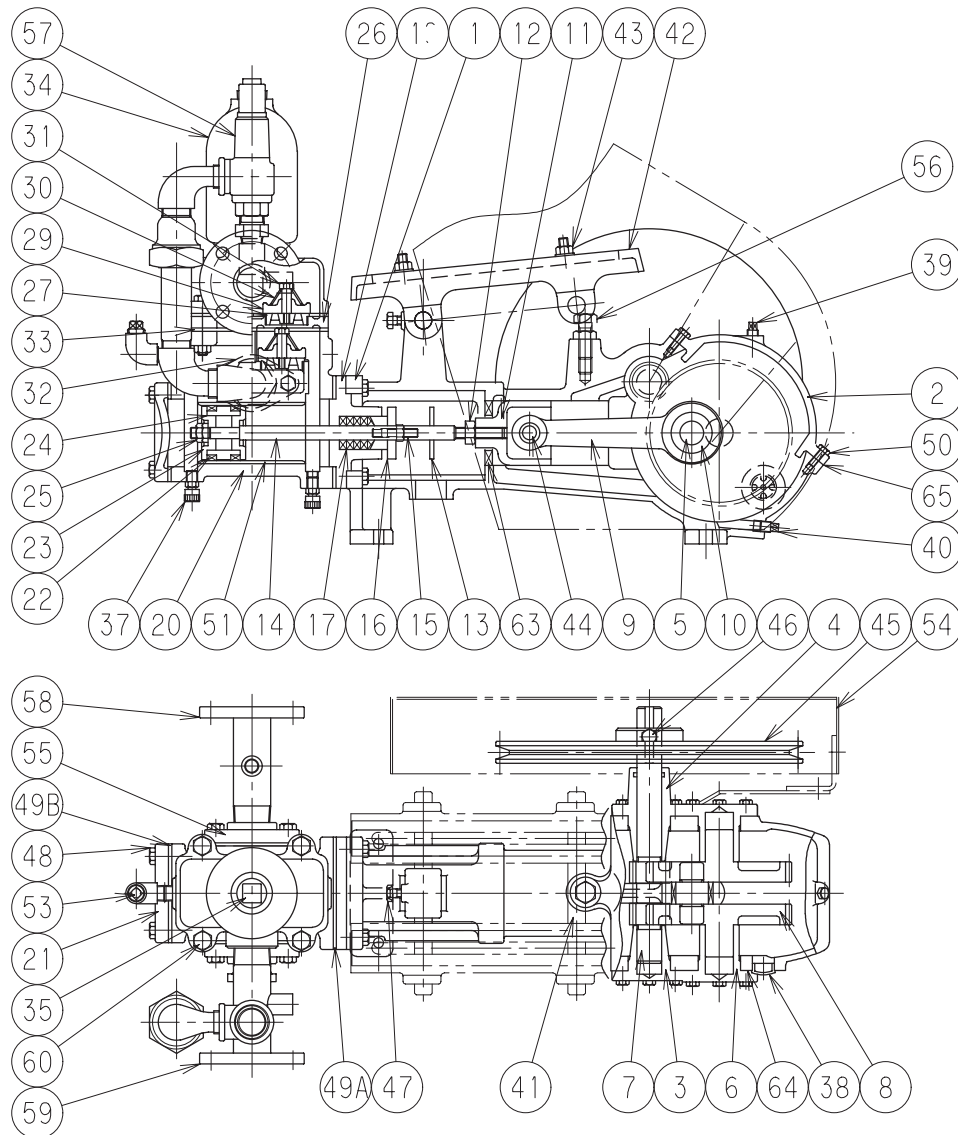


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# HP-05A MODEL OUTLINE DRAWING



# HP-1A MODEL SECTIONAL DRAWING



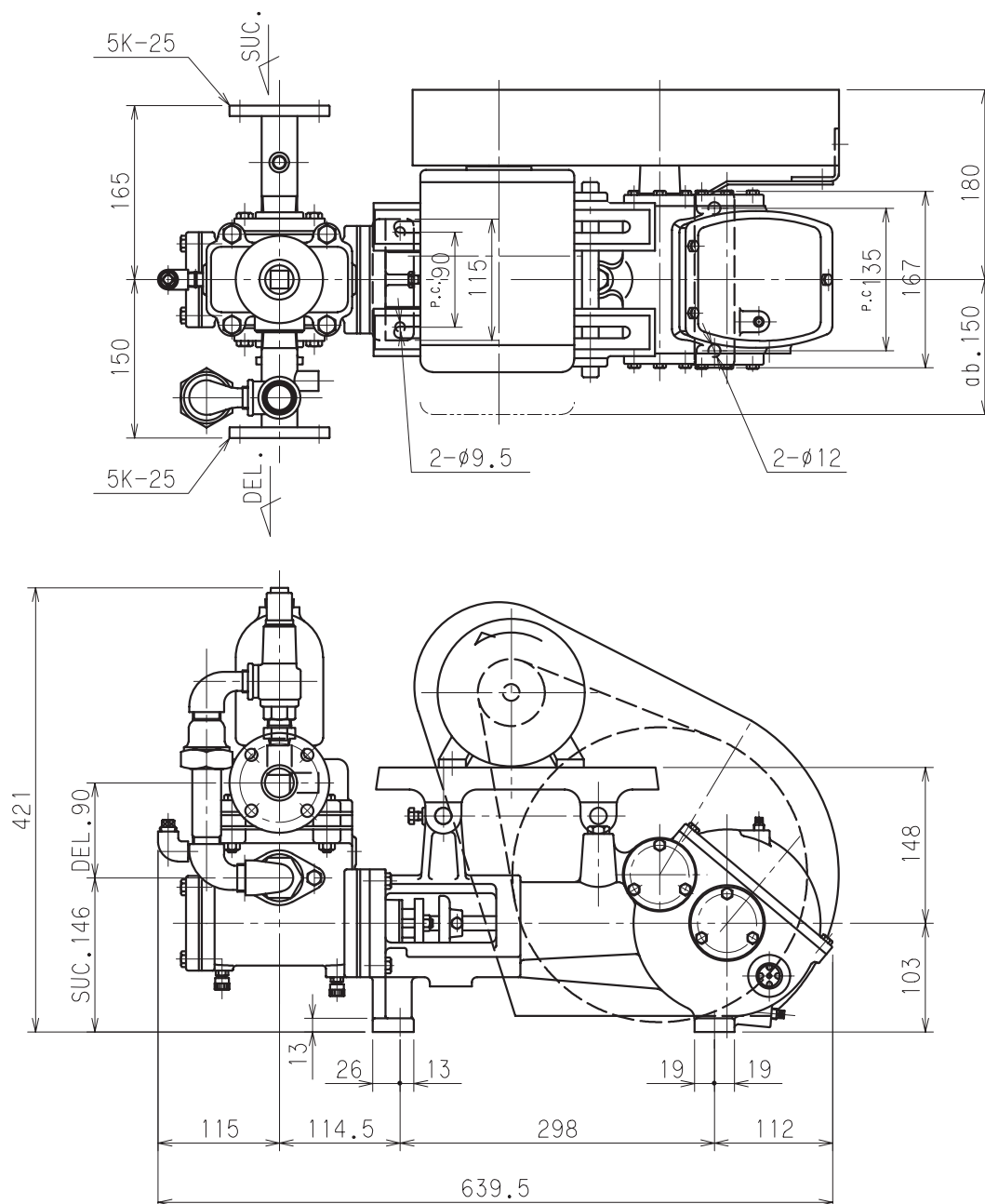
PART NO.	NAME OF PART	MATERIAL NOMINATION	QTY.
01	Frame	Cast Iron	1
02	Frame Cover	Cast Iron	1
03	Pinion Bearing (1)	Cast Iron	1
04	Pinion Bearing (2)	Cast Iron	1
05	Crank Pin	Carbon Steel	1
06	Main Bearing	Cast Iron	2
07	Pinion Gear	Carbon Steel	1
08	Main Gear	Cast Iron	2
09	Connecting Rod	Ductile Cast Iron	1
10	Needle Bearing		1
11	Slide Block	Cast Iron	1
12	Nut (1)	Mild Steel	1
13	Drainer	Synthetic Rubber	1
14	Piston Rod	Stainless Steel	1
15	Gland Set Bolt	Stainless Steel	2
16	Gland	Bronze Casting	1
17	Gland Packing		1 Set
19	Gland Case	Cast Iron	1
20	Cylinder	Cast Iron	1
21	Cylinder Cover	Cast Iron	1
22	Piston Ring	BAKELITE	2
23	Piston (B)	Free Cutting Brass	2
24	Piston (A)	Free Cutting Brass	1
25	Lock Nut	Stainless Steel	2
26	Valve Plate	Cast Iron	1
27	Valve Seat	Bronze Casting	4
29	Valve	Bronze Casting	4
30	Valve Spring	Phosphor bronze Wire	4
31	Valve stem	Free Cutting Brass	4
32	Relief Flange	Cast Iron	1

PART NO.	NAME OF PART	MATERIAL NOMINATION	QTY.
33	Valve Plate Packing	Synthetic Rubber	2
34	Delivery Chamber	Cast Iron	1
35	Plug (1)	Malleable Iron Casting	1
37	Drain Plug	Free Cutting Brass	2
38	Oil Pot Window		1
39	Plug (2)	Malleable Iron Casting	1
40	Plug (3)	Malleable Iron Casting	1
41	Motor Rail Pin	Stainless Steel	2
42	Motor Rail	Cast Iron	2
43	Motor Set Bolt	Mild Steel	4
44	Slide Block Pin	Carbon Steel	1
45	Pump Pulley	Cast Iron	1
46	Pulley Set Bolt	Mild Steel	1
47	Rail Set Bolt	Mild Steel	5
48	Cylinder Cover Bolt	Mild Steel	4
49 A	Cylinder Packing	Synthetic Rubber	1
49 B	Cylinder Cover Bolt	Synthetic Rubber	1
50	Frame Cover Bolt	Mild Steel	3
51	Cylinder Sleeve	Brass Tube	1
53	Plug (4)	Malleable Iron casting	1
54	Belt Cover	Mild Steel	1
55	Suction Flange	Casting Iron	1
56	Adjusting Bolt	Mild Steel	1
57	Relief Valve	Bronze Casting	1
58	Suction Fitting	Mild Steel	1 Set
59	Delivery Fitting	Mild Steel	1 Set
60	Set Bolt	Mild Steel	1 Set
63	Seal Attachment	Synthetic Rubber	1
64	Seal Packing		4
65	Cover Packing	Synthetic Rubber	1

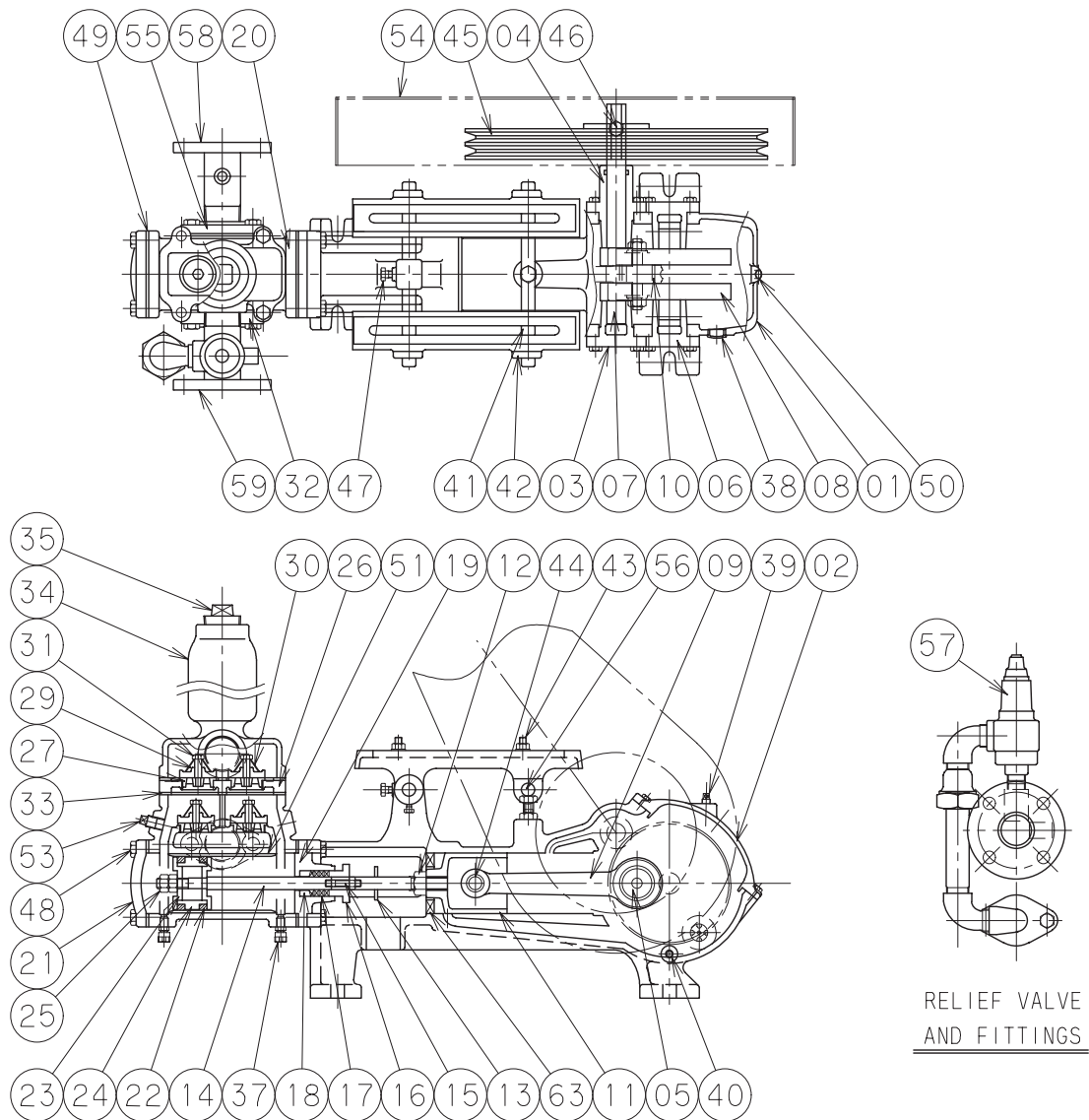


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# HP-1A MODEL OUTLINE DRAWING



# HP-2A MODEL SECTIONAL DRAWING



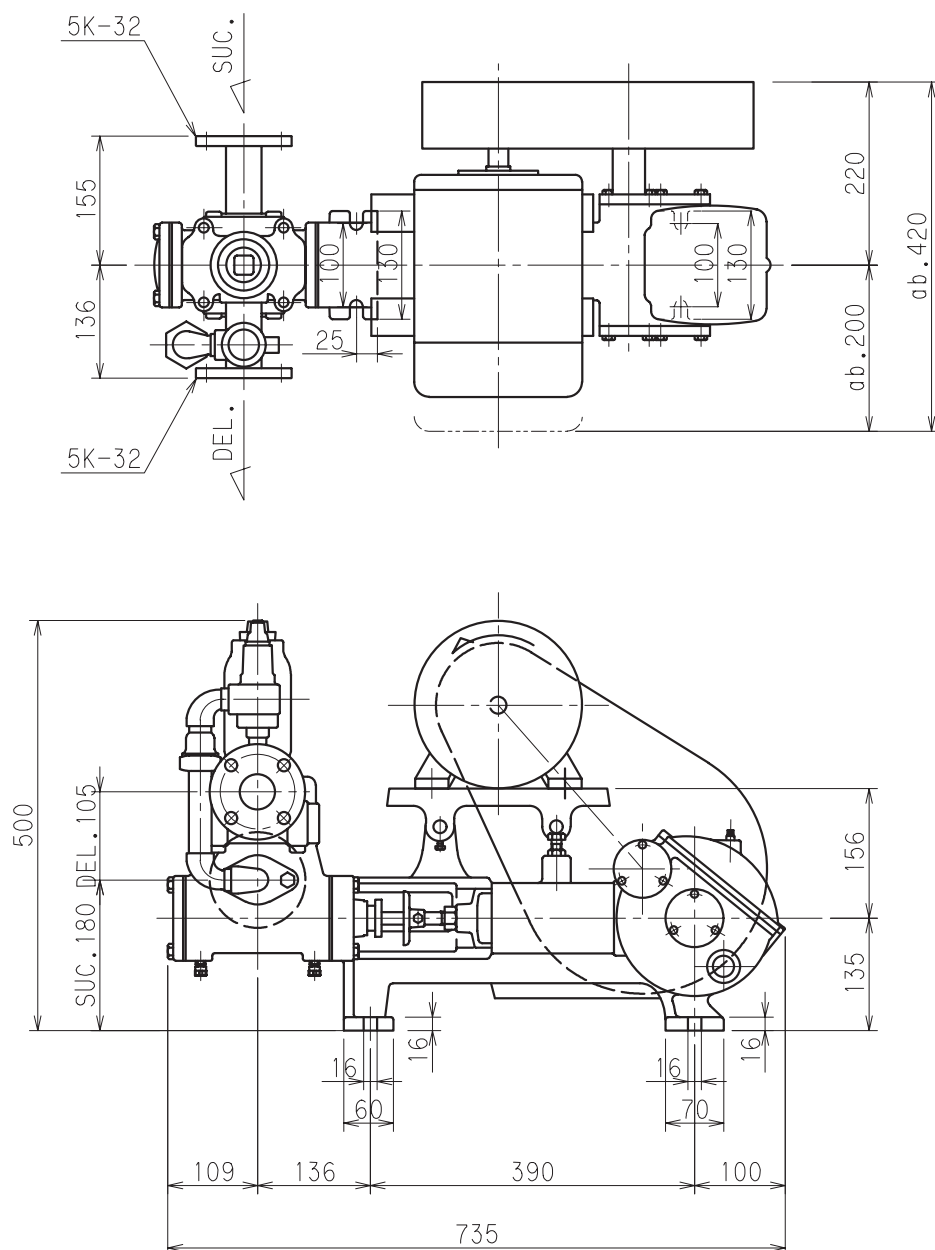
PART NO.	NAME OF PART	MATERIAL NOMINATION	QTY.
01	Frame	Cast Iron	1
02	Frame Cover	Cast Iron	1
03	Pinion Bearing (1)	Cast Iron	1
04	Pinion Bearing (2)	Cast Iron	1
05	Crank Pin	Carbon Steel	1
06	Main Bearing	Cast Iron	2
07	Pinion Gear	Carbon Steel	1
08	Main Gear	cast Iron	2
09	Connecting Rod	Ductile Cast Iron	1
10	Bearing		1
11	Slide Block	Cast Iron	1
12	Nut (1)	Mild Steel	1
13	Drainer	Synthetic Rubber	1
14	Piston Rod	Stainless Steel	1
15	Gland Set Bolt	Stainless Steel	2
16	Gland	Bronze Casting	1
17	Gland Packing	Carbonized Fiber Packing	1 Set
18	Neck Bushing	Bronze Casing	1
19	Gland Case	Cast Iron	1
20	Cylinder	Cast Iron	1
21	Cylinder Cover	Cast Iron	1
22	Piston Ring	BAKELITE	2
23	Piston (B)	Bronze Casing	2
24	Piston (A)	Bronze Casing	1
25	Lock Nut	Stainless Steel	2
26	Valve Plate	Cast Iron	4
27	Valve Seat	Bronze Casting	4
29	Valve	Bronze Casting	4
30	Valve Spring	Phosphor bronze Wire	4

PART NO.	NAME OF PART	MATERIAL NOMINATION	QTY.
31	Valve stem	Free Cutting Brass	1
32	Relief Flange	Cast Iron	2
33	Valve Plate Packing	Synthetic Rubber	1
34	Delivery Chamber	Cast Iron	1
35	Plug (1)	Malleable Iron Casting	2
37	Drain Plug	Free Cutting Brass	1
38	Oilpot Window		1
39	Plug (2)	Malleable Iron Casting	1
40	Plug (3)	Malleable Iron Casting	2
41	Motor Rail Pin	Mild Steel	2
42	Motor Rail	Cast Iron	4
43	Motor Set Bolt	Mild Steel	1
44	Slide Block Pin	Carbon Steel	1
45	Pump Pulley	Cast Iron	1
46	Pulley Set Bolt	Mild Steel	5
47	Rail Set Bolt	Mild Steel	4
48	Cylinder Cover Bolt	Mild Steel	2
49	Cylinder Cover Packing	Synthetic Rubber	3
50	Frame Cover Bolt	Mild Steel	1
51	Cylinder Sleeve	Brass Tube	1
53	Plug (4)	Malleable Iron casting	1
54	Belt Cover	Mild Steel	1
55	Suction Flange	Cast Iron	1
56	Adjusting Bolt	Mild Steel	1
57	Relief Valve	Bronze Casting	1
58	Suction Fitting	Mild Steel	1 Set
59	Delivery Fitting	Mild Steel	1 Set
63	Seal Attachment	Synthetic Rubber	1



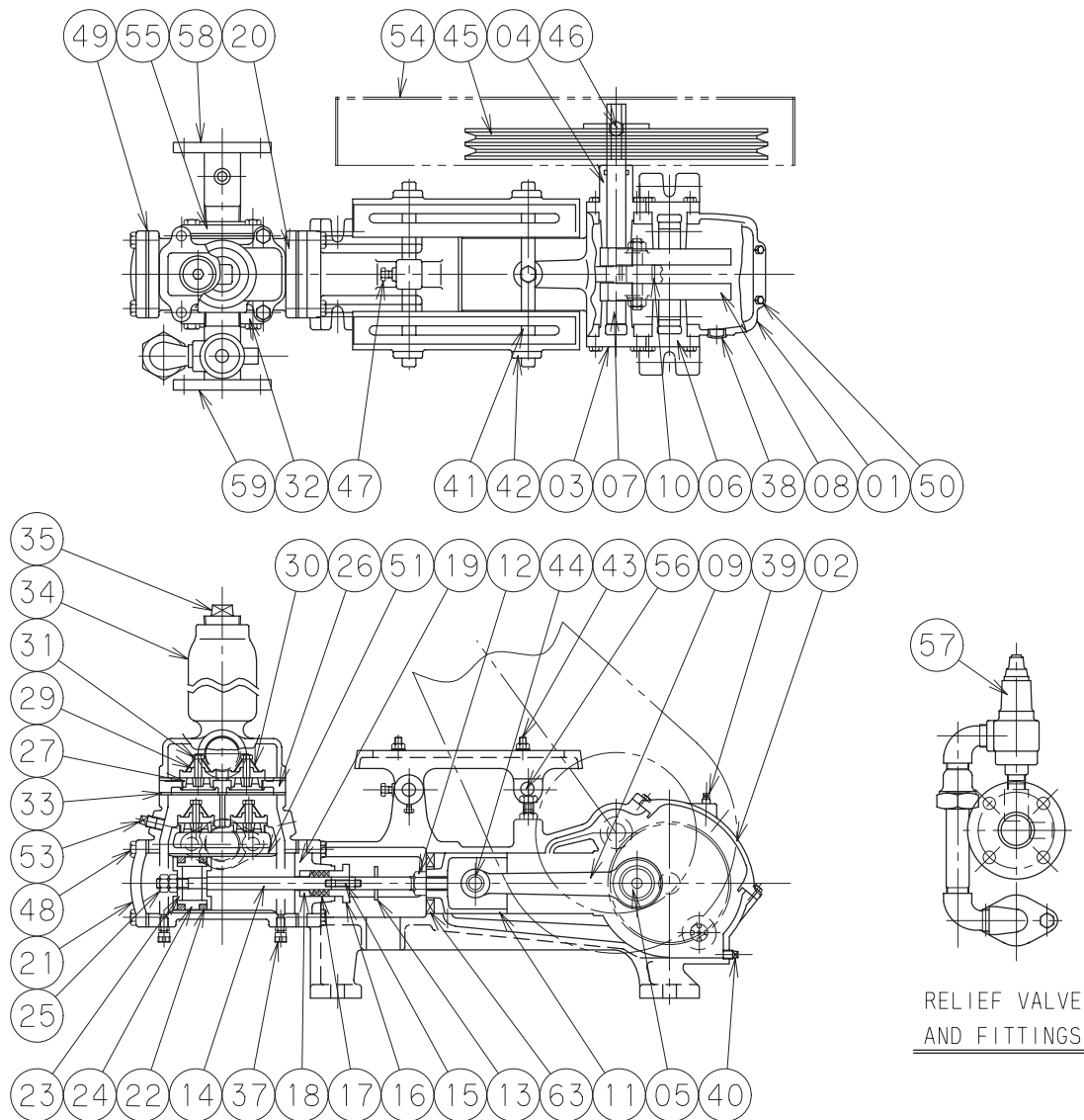
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# HP-2A MODEL OUTLINE DRAWING



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# HP-3A MODEL SECTIONAL DRAWING



PART NO.	NAME OF PART	MATERIAL NOMINATION	QTY.
01	Frame	Cast Iron	1
02	Frame Cover	Cast Iron	1
03	Pinion Bearing (1)	Cast Iron	1
04	Pinion Bearing (2)	Cast Iron	1
05	Crank Pin	Carbon Steel	1
06	Main Bearing	Cast Iron	2
07	Pinion Gear	Carbon Steel	1
08	Main Gear	Cast Iron	1
09	Connecting Rod	Ductile Cast Iron	1
10	Needle Bearing		1
11	Slide Block	Cast Iron	1
12	Nut (1)	Mild Steel	1
13	Drainer	Synthetic Rubber	1
14	Piston Rod	Stainless Steel	1
15	Gland Set Bolt	Stainless Steel	2
16	Gland	Bronze Casting	1
17	Gland Packing	Carbonized Fiber Packing	1 Set
18	Neck Bushing	Bronze Casting	1
19	Gland Case	Cast Iron	1
20	Cylinder	Cast Iron	1
21	Cylinder Cover	Cast Iron	1
22	Piston Ring	BAKELITE	2
23	Piston (B)	Bronze Casting	2
24	Piston (A)	Bronze Casting	1
25	Lock Nut	Stainless Steel	2
26	Valve Plate	Cast Iron	1
27	Valve Seat	Bronze Casting	4
29	Valve	Bronze Casting	4
30	Valve Spring	Phosphor bronze Wire	4

PART NO.	NAME OF PART	MATERIAL NOMINATION	QTY.
31	Valve stem	Stainless Steel	4
32	Relief Flange	Cast Iron	1
33	Valve Plate Packing	Synthetic Rubber	2
34	Delivery Chamber	Cast Iron	1
35	Plug (1)	Malleable Iron Casting	1
37	Drain Plug	Free Cutting Brass	2
38	Oilpot Window		1
39	Plug (2)	Malleable Iron Casting	1
40	Plug (3)	Malleable Iron Casting	1
41	Motor Rail Pin	Mild Steel	2
42	Motor Rail	Cast Iron	2
43	Motor Set Bolt	Mild Steel	4
44	Slide Block Pin	Carbon Steel	1
45	Pump Pulley	Cast Iron	1
46	Pulley Set Bolt	Mild Steel	1
47	Rail Set Bolt	Mild Steel	5
48	Cylinder Cover Bolt	Mild Steel	4
49	Cylinder Cover Packing	Synthetic Rubber	2
50	Frame Cover Bolt	Mild Steel	4
51	Cylinder Sleeve	Brass Tube	1
53	Plug (4)	Malleable Iron Casting	1
54	Belt Cover	Mild Steel	1
55	Suction Flange	Casting Iron	1
56	Adjusting Bolt	Mild Steel	1
57	Relief Valve	Bronze Casting	1
58	Suction Fitting	Mild Steel	1 Set
59	Delivery Fitting	Mild Steel	1 Set
63	Seal Attachment	Synthetic Rubber	1

RELIEF VALVE  
AND FITTINGS



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# HP-3A MODEL OUTLINE DRAWING

