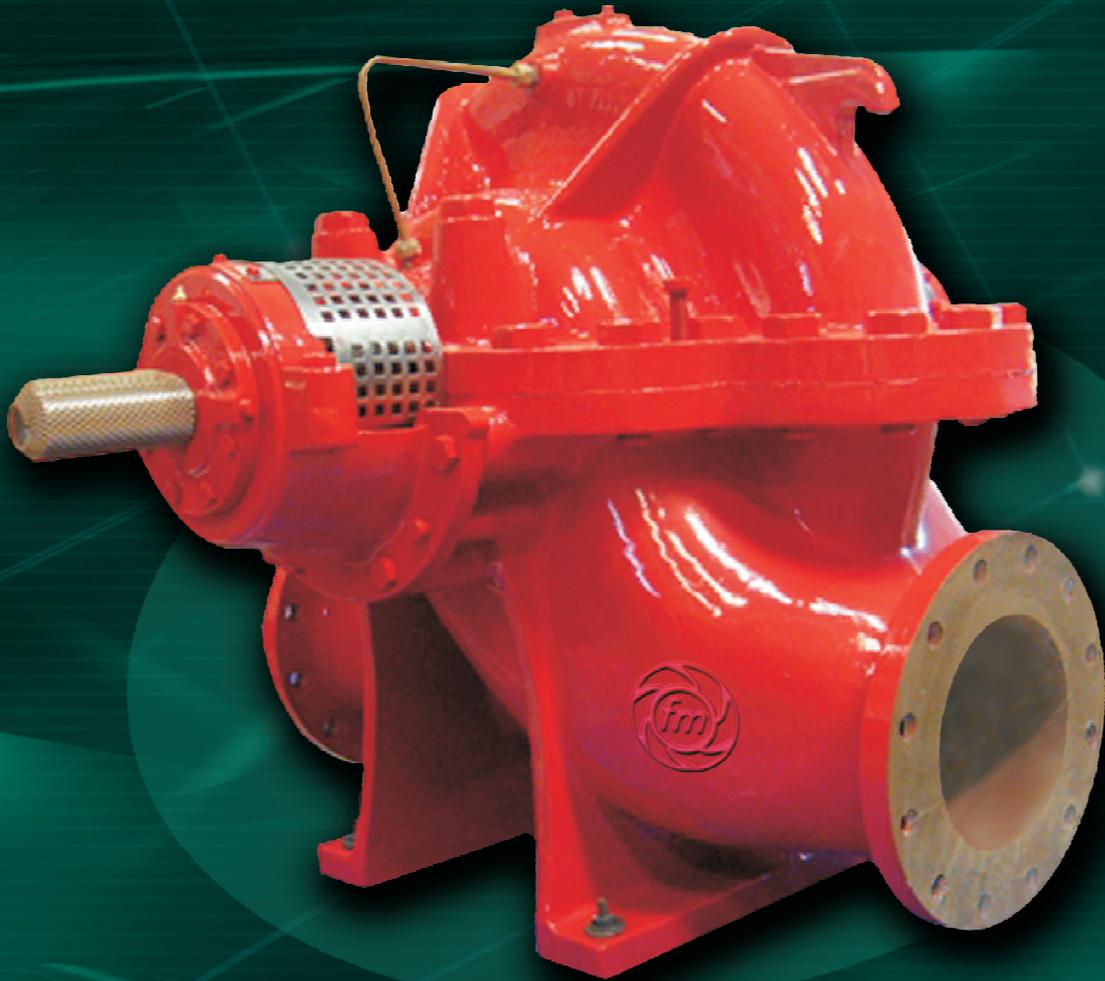


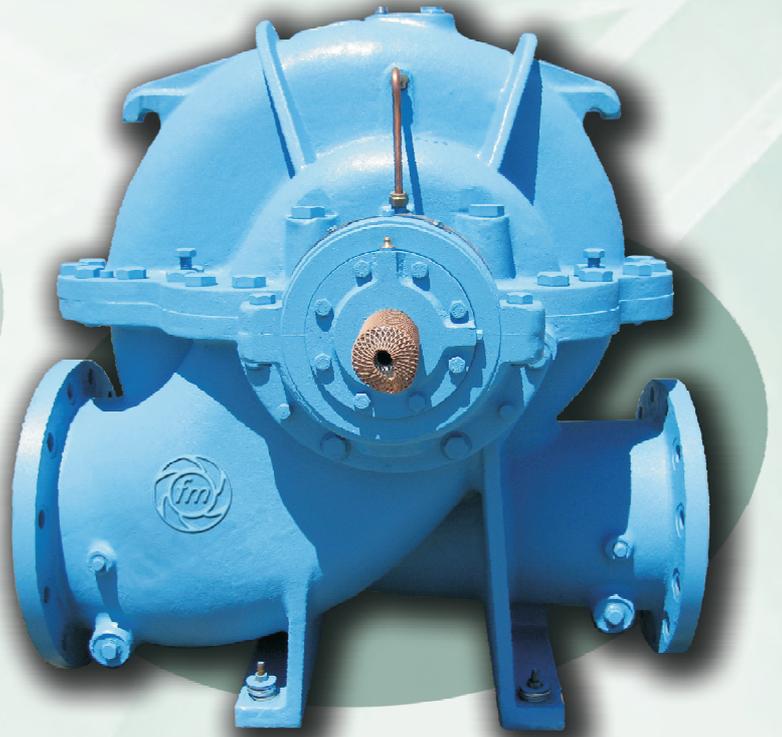
EMTIVAC



**FM/FMV-AXIALLY SPLIT CENTRIFUGAL PUMPS
DOUBLE SUCTION
HORIZONTAL & VERTICAL EXECUTION
SINGLE & TWO STAGE**



FLO-MASTER
PUMPS AUSTRALIA



FLO-MASTER - FM / FMV

Applications in the following segments:

General Industry and process, Building services and HVAC, Fire protection, Irrigation - Water supply and Booster pumps, Marine applications.

FM/FMV are of an advance hydraulic design, with precision construction in materials to suit most applications.

FM/FMV will give trouble free efficient operation with the minimum of maintenance over many years. This is due to good efficiency zones which produce low noise and vibration characteristics, plus they are energy efficient.

Range: A comprehensive range spanning over 50 models, designed around seven shaft groups. Nominal impeller diameters range from 300mm to 660mm. Duties can reach to 800l/sec with heads up to 230m.

Low NPSHR: Ensures high suction lift capability and protects the pump from cavitation erosion without compromising efficiency or smooth operation at part flows.

Impellers: Are designed for optimum efficiency. They are double suction for single stage pumps and are dynamically balanced.

Casing Wear rings: Fitted as standard, simple heavy rectangular cross-section with "tongue & groove" arrangement to prevent rotation. Impeller wear rings are optional on all models.

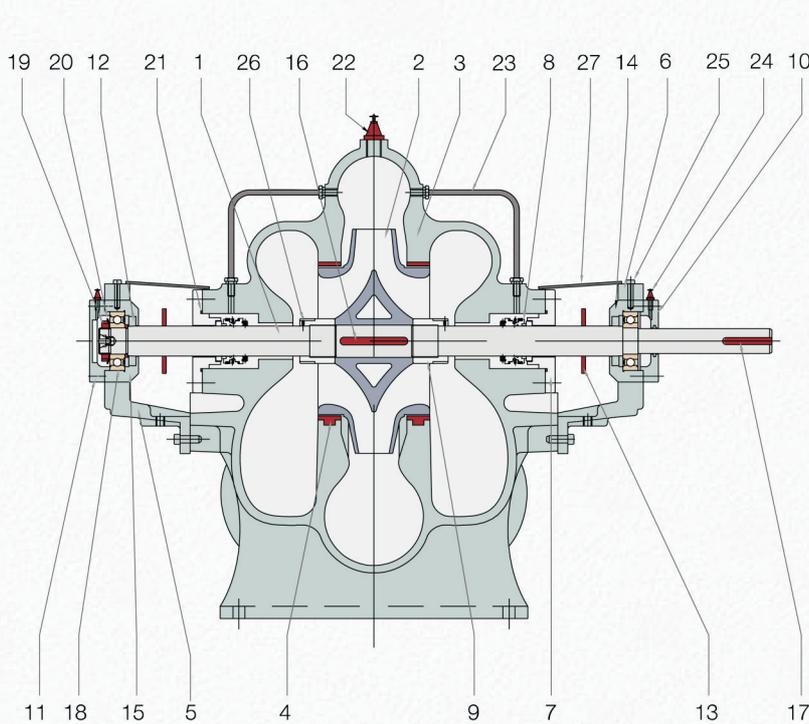
High Strength shaft: The shaft is generously sized to cover maximum loading and supported by two grease lubricated deep groove ball bearings. Shaft design ensures minimum deflection and improved life for bearings, wear rings and shaft seals. Shafts are protected by shaft sleeves in packed gland pumps.

Stuffing Box: Easily converted for use with soft-packing or mechanical seals. All pump casings are pre-drilled and tapped to easily facilitate either option.

Double Volute Casings: All high head pumps have double volute casings to minimize radial loading during part flow operation

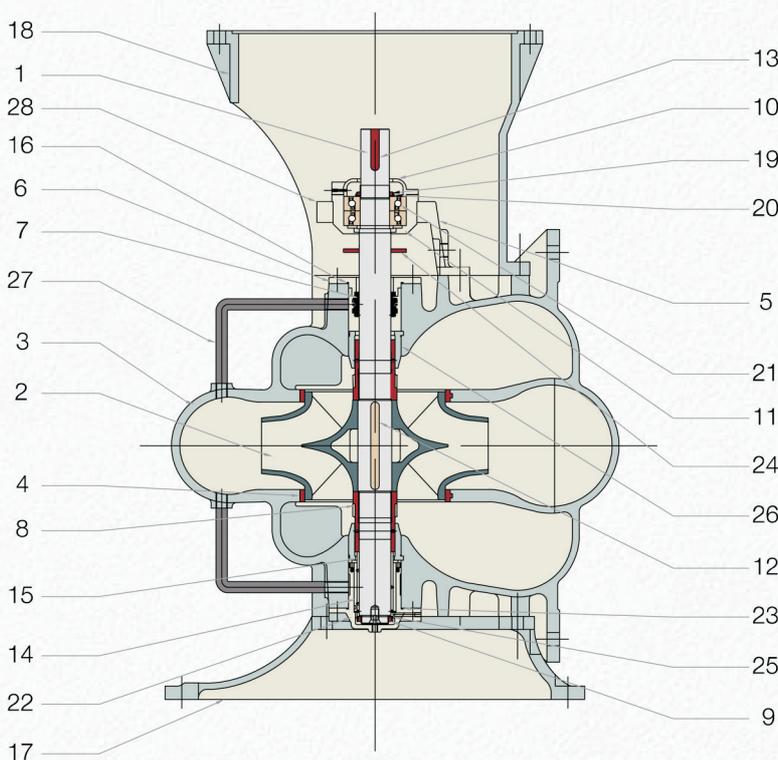
Optional Arrangements: One of our major strengths is our ability to provide customized designs and product variants quickly and economically. Bottom suction, vertical dry pit and side suction/top discharge arrangements can all be provided against specific customer requirements.

Cross Section of Single Stage Horizontal Splitcase Pump with Mechanical Seals - Series FM



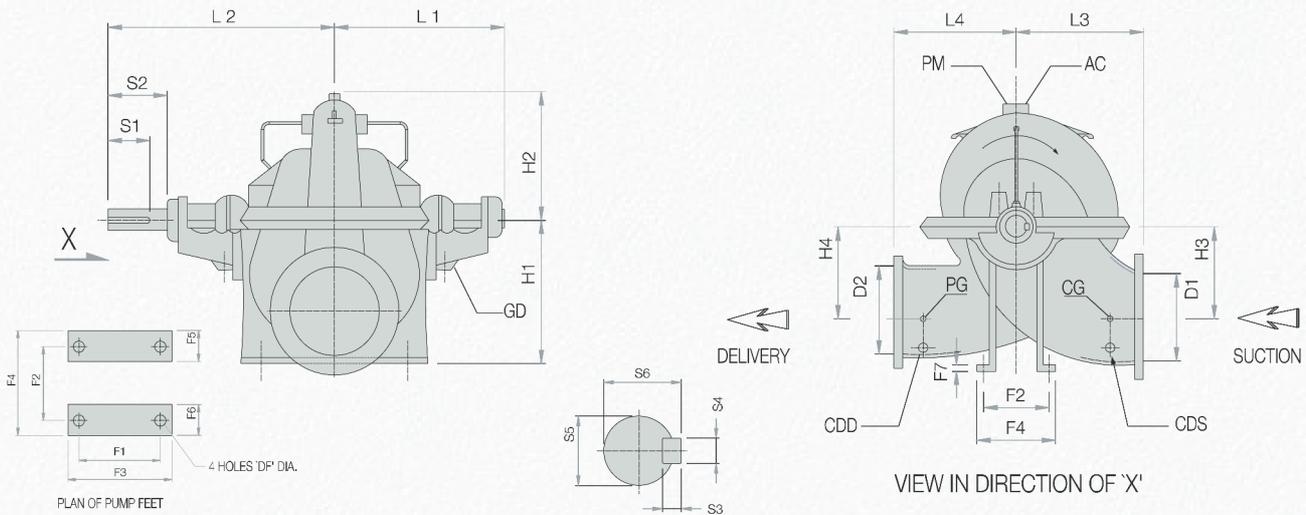
Ref.No	Description	Qty.	Standard Material
1	SHAFT	1	AISI 410
2	IMPELLER	1	BRONZE LG2
3	CASING	1SET	CI GR.FG260
4	CASING WEAR RING	2	BRONZE LB2
5	BEARING BRACKET	2	CI GR.FG260
6	BEARING TOP CLAMP	2	CI GR.FG260
7	GLAND PLATE	2	CI GR.FG260
8	MECHANICAL SEAL	2	FLOW SERVE OR EQUAL
9	IMPELLER NUT	2	BRONZE LG2
10	Bearing End Cover Outer (PE)	1	CI GR.FG260
11	Bearing End Cover Outer (FE)	1	CI GR.FG260
12	THRUST COLLAR	1	AISI 304
13	WATER THROWER	2	NEOPRENE
14	BEARING HOUSING (PE)	1	CI GR.FG260
15	BEARING HOUSING (FE)	1	CI GR.FG260
16	IMPELLER KEY	1	AISI 410
17	COUPLING KEY	1	AISI 410
18	DEEP GROOVE BALL BEARING	2	SKF 63xx
19	LOCK NUT	1	AISI 304
20	LOCK WASHER	1	AISI 304
21	O-RING FOR GLAND PLATE	2	VITON
22	AIR COCK	1	AISI 304
23	SEAL WATER PIPE	2	COPPER
24	GREASE NIPPLE	2	AISI 304
25	LOCKING PIN	2	AISI 304
26	GRUB SCREW	2	AISI 304
27	SHAFT GUARD	2	AISI 304

Cross Section of Single Stage Vertical Splitcase Pump with Mechanical Seals - Series FM



Ref.No	Description	Qty.	Standard Material
1	SHAFT	1	AISI 410
2	IMPELLER	1	BRONZE LG2
3	CASING	1SET	CI FG260
4	CASING WEAR RING	2	BRONZE LB2
5	BRG. BRACKET	1	CI FG260
6	GLAND PLATE	1	CI FG260
7	MECHANICAL SEAL	1	FLOW SERVE OR EQUAL
8	IMPELLER NUT	2	AISI 304
9	SLEEVE NUT	1	BRONZE CT1
10	BRG. END COVER OUTER (DE)	1	CI FG260
11	BRG. HOUSING	1	CI FG260
12	IMPELLER KEY	1	AISI 410
13	COUPLING KEY	1	AISI 410
14	BOTTOM BEARING BUSH	1	BRONZE LB2
15	SLEEVE UNDER BUSH	1	BRONZE CT1
16	O-RING FOR GLAND PLATE	1	VITON
17	PUMP STOOL	1	CI FG260
18	MOTOR STOOL	1	CI FG260
19	LOCK NUT	1	AISI 304
20	LOCK WASHER	1	AISI 304
21	ANGULAR CONTACT BALL BEARING	1SET	MAKE SKF
22	BOTTOM BUSH CARRIER	1	CI FG260
23	O-RING FOR BOTTOM BUSH CARRIER	1	VITON
24	WATER THROWER	1	NEOPRENE
25	LOCK WASHER	1	AISI 304
26	STUFFING BOX BUSH	2	BRONZE LB2
27	COOLING WATER LINE	2	COPPER
28	BEARING BRACKET TOP CLAMP	1	CI FG260

Dimensions of Single Stage Horizontal Splitcase Pumps - Series FM



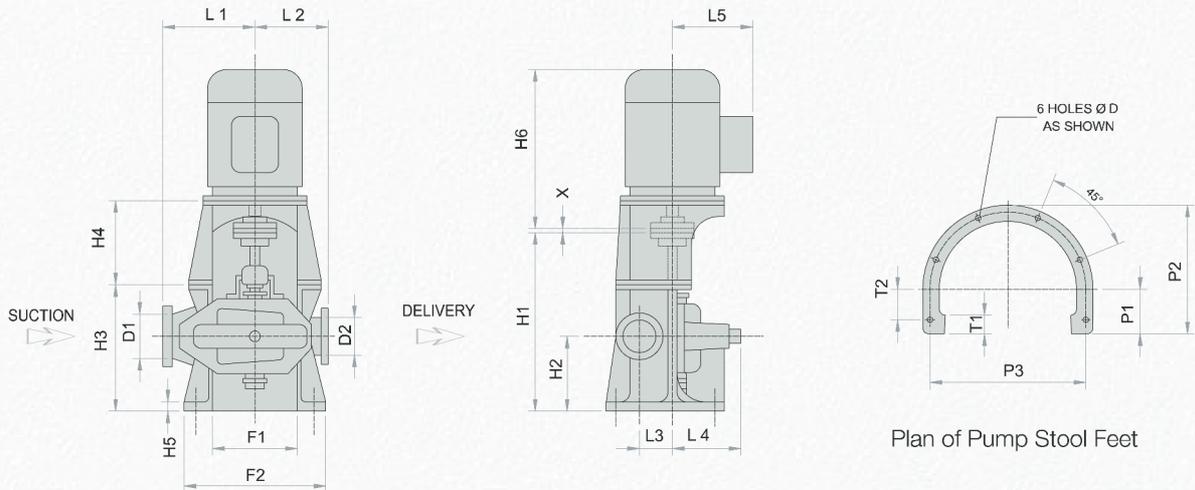
CONNECTION		SHAFT GROUP						
ITEM	DESCRIPTION	1	2	3	4	5	6	7
GD	Gland Drain	1/2"	1/2"	3/4"	1"	1"	1"	1"
CG	Comp. Gauge for Suction	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
PG	Pr. Gauge For Delivery	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
AC	Air cock	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
PM	Priming	1/2"	3/4"	1 1/2"	1"	1 1/4"	1"	1 1/2"
CDS	Casing Drain (Suc. Side)	1/2"	3/4"	3/4"	1"	1"	1"	1"
CDD	Casing Drain (Del. Side)	1/2"	3/4"	3/4"	1"	1"	1"	1"

SHAFT END DETAILS						
GROUP	S1	S2	S3	S4	S5	S6
1	80	89.5	7	8	29	32
2	95	100	8	12	39	42
3	110	125	10	16	54	58
4	130	147.5	12	20	69	74
5	115	135	14	22	79	85
6	120	211	14	25	89	94
7	150	190	14	25	94	99

SL NO.	PUMP MODEL	SIZE		SHAFT GROUP	OVERALL DIMENSIONS								MOUNTING DIMENSIONS							SHAFT END						APPROX. WT(Kg)	
		D1	D2		H1	H2	H3	H4	L1	L2	L3	L4	F1	F2	F3	F4	F5	F6	F7	DF	S1	S2	S3	S4	S5		S6
1	100-275	125	100	1	310	215	195	195	372	459.5	270	220	250	285	310	350	82.5	82.5	16	18	80	89.5	7	8	29	32	190
2	100-275L	125	100	1	310	215	195	195	372	459.5	270	220	250	285	310	350	82.5	82.5	16	18	80	89.5	7	8	29	32	190
3	100-380	125	100	1	330	260	230	230	372	459.5	370	300	285	285	350	350	82.5	82.5	16	18	80	89.5	7	8	29	32	210
4	100-410	125	100	1	345	275	245	245	372	459.5	385	315	315	315	370	380	82.5	82.5	16	18	80	89.5	7	8	29	32	250
5	125-300	150	125	1	330	245	210	210	372	459.5	330	265	280	285	340	350	82.5	82.5	25	18	80	89.5	7	8	29	32	235
6	125-335	150	125	1	330	240	213	213	372	459.5	350	280	285	285	340	350	70	70	25	18	80	89.5	7	8	29	32	270
7	125-360	150	125	1	350	250	230	230	372	459.5	375	315	315	315	370	350	82.5	82.5	16	18	80	89.5	7	8	29	32	273
8	125-440	150	125	2	390	300	270	270	452	552	420	305	330	285	400	350	82.5	82.5	16	18	95	100	8	12	39	42	350
9	125-490	150	125	2	415	318	295	295	452	552	420	400	360	360	420	425	82.5	82.5	20	22	95	100	8	12	39	42	390
10	150-300	200	150	1	380	255	220	220	372	459.5	350	265	280	285	340	350	82.5	82.5	16	18	80	89.5	7	8	29	32	285
11	150-360	200	150	2	400	290	250	250	452	552	390	320	360	360	420	425	82.5	82.5	20	22	95	100	8	12	39	42	415
12	150-440	200	150	2	410	315	270	270	452	552	410	360	360	360	420	425	82.5	82.5	20	22	95	100	8	12	39	42	450
13	150-530	200	150	3	460	365	320	320	480	605	440	430	400	360	460	425	82.5	82.5	25	26	110	125	10	16	54	58	600
14	150-580	200	150	3	500	390	360	360	480	605	500	400	440	360	500	425	82.5	82.5	25	26	110	125	10	16	54	58	650
15	200-300	200	200	2	410	290	250	250	452	552	400	320	360	360	420	425	82.5	82.5	20	22	95	100	8	12	39	42	370
16	200-360	250	200	2	465	330	285	285	452	552	440	350	440	360	500	425	82.5	82.5	20	22	95	100	8	12	39	42	520
17	200-370	200	200	2	430	330	270	270	452	552	420	350	360	360	420	425	82.5	82.5	20	22	95	100	8	12	39	42	475
18	200-440	250	200	3	490	340	295	295	480	605	450	365	440	360	550	425	82.5	82.5	25	26	110	125	10	16	54	58	615
19	200-450	200	200	3	500	345	300	300	480	605	450	400	440	360	500	425	82.5	82.5	30	26	110	125	10	16	54	58	615
20	200-535	200	200	3	555	385	360	360	480	605	500	400	440	360	500	425	82.5	82.5	30	26	110	125	10	16	54	58	840
21	200-560	250	200	4	550	395	360	360	550	685	520	400	455	500	520	570	100	100	28	28	130	147.5	12	20	69	74	900
22	200-660	250	200	4	615	450	430	430	550	685	580	480	455	500	520	570	100	100	28	28	130	147.5	12	20	69	74	1240
23	250-305	300	250	3	520	340	295	295	480	605	500	365	470	360	530	425	82.5	82.5	25	26	110	125	10	16	54	58	575
24	250-330	300	250	3	520	340	295	295	480	605	500	365	470	360	530	425	82.5	82.5	25	26	110	125	10	16	54	58	500
25	250-330L	250	250	2	505	323	275	275	452	552	475	380	470	360	530	425	100	100	25	26	95	100	8	12	39	42	486
26	250-390	300	250	3	520	355	320	320	480	605	500	400	440	360	500	425	82.5	82.5	25	26	110	125	10	16	54	58	715
27	250-445	300	250	3	540	375	335	335	480	605	500	400	470	360	530	425	82.5	82.5	25	26	110	125	10	16	54	58	890
28	250-570	300	250	4	555	410	355	355	550	685	584	492	470	500	530	570	100	100	25	28	130	147.5	12	20	69	74	1000
29	250-690	300	250	5	650	470	407	407	618	753	640	560	400	620	500	750	175	175	30	28	115	135	14	22	79	85	1600
30	300-325	350	300	3	550	355	305	305	505	630	545	400	470	470	530	535	82.5	82.5	25	26	110	125	10	16	54	58	800
31	300-380	350	300	3	550	375	335	335	480	605	550	365	470	470	530	535	82.5	82.5	25	26	110	125	10	16	54	58	740
32	300-400	400	300	3	610	385	350	350	530	665	550	350	470	500	530	570	100	100	25	28	110	125	10	16	54	58	655
33	300-460	350	300	4	600	378	345	345	550	685	575	475	455	640	520	720	125	125	28	28	130	147.5	12	20	69	74	1095
34	300-555	350	300	7	700	466	470	470	760	950	750	650	650	600	800	700	150	150	36	30	150	190	14	25	94	99	1800
35	300-595	350	300	7	700	466	470	470	760	950	750	650	650	600	800	700	150	150	36	30	150	190	14	25	94	99	1800
36	300-660	350	300	6	725	465	445	445	656	861	660	610	400	620	530	750	175	175	30	28	120	211	14	25	89	94	1540
37	350-475	450	350	4	660	445	380	380	569	704	650	547	555	550	620	620	100	100	25	28	130	147.5	12	20	69	74	1100
38	350-530	400	350	5	750	466	450	450	618	753	700	550	555	550	655	650	150	150	30	28	115	135	14	22	79	85	2700
39	350-600	400	350	5	750	490	450	450	618	753	710	655	500	500	630	630	175	175	30	28	115	135	14	22	79	85	1540
40	350-625	400	350	5	750	475	470	470	618	753	750	600	555	550	620	620	100	100	35	28	115	135	14	22	79	85	2185
41	400-540	500	400	4	435	490	428	428	620	755	635	432	930	380	1040	540	125	125	30	32	130	147.5	12	20	69	74	1320
42	400-540L	500	400	4	435	490	428	428	620	755	635	432	930	380	1040	540	125	125	30	32	130	147.5	12	20	69	74	1400
43	400-540H	500	400	4	780	450	425	425	686	865	700	450	500	500	630	630	175	175	30	28	130	147.5	12	20	69	74	2000
44	400-660	500	400	7	825	535	490	490	760	950	770	650	600	700	700	820	185	185	40	28	150	190	14	25	94	99	2740
45	400-700	450	400	5	800	577	521	521	678	825	864	762	440	800	540	1000	200	200	32	28	115	135	14	22	79	85	2285

All dimensions are in mm

Dimensions of Single Stage Vertical Splitcase Pumps - Series FM



Sl No.	Pump Model	Motor In Kw	Frame Size	Size		Shaft Group	OVER ALL DIMENSIONS										BASE DIMENSIONS						APPROX. WEIGHTS (kg.)						
				D1	D2		L1	L2	L3	L4	L5	H1	H2	H3	H4	H5	H6	X	F1	F2	P1	P2	P3	D	T1	T2	Bare Pump	Pump Stool	Motor Stool
1	100-275	7.5	132M	125	100	1	270	220	195	215	166	781	340	560	346	25	587	5	520	660	190	520	600	23	70	130	190	40	60
		247	346								671																		
		247	346								671																		
		247	346								671																		
2	100-380	15.0	160M	125	100	1	370	300	230	260	247	781	340	560	346	25	706	5	520	660	190	520	600	23	70	130	210	40	60
		266	346								706																		
		266	346								706																		
		284	346								731																		
3	100-410	18.5	180M	125	100	1	385	315	245	275	362	781	340	560	376	25	910	5	520	660	190	520	600	23	70	130	250	40	65
		448	376								1040																		
		448	376								1040																		
		448	376								1040																		
4	125-300	15.0	160M	150	125	1	330	265	210	245	247	781	340	560	346	25	706	5	520	660	190	520	600	23	70	130	235	40	60
		266	346								706																		
		266	346								706																		
		247	346								706																		
5	125-335	18.5	180M	150	125	1	350	280	213	240	266	781	340	560	346	25	706	5	520	660	190	520	600	23	70	130	270	40	60
		266	346								706																		
		266	346								706																		
		284	346								731																		
6	150-360	22.0	180M	150	125	1	375	315	230	250	266	781	340	560	346	25	706	5	520	660	190	520	600	23	70	130	273	40	65
		284	346								731																		
		337	376								833																		
		337	376								833																		
7	125-440	37.0	225S	150	125	2	420	305	270	300	337	971	340	560	376	25	833	5	520	660	190	520	600	23	70	130	275	40	65
		362	376								910																		
		362	376								910																		
		448	376								1040																		
8	125-490	55.0	250M	150	125	2	420	400	295	318	362	971	420	720	416	26	910	5	580	720	190	550	660	23	70	130	390	110	100
		448	416								1040																		
		448	416								1040																		
		557	448								1199																		
9	150-300	18.5	180M	200	150	1	350	265	220	255	266	781	340	560	346	25	706	5	520	660	190	520	600	23	70	130	285	40	60
		284	346								731																		
		284	346								731																		
		337	376								833																		
10	150-360	30.0	200M	200	150	2	390	320	250	290	284	971	420	720	386	26	731	5	580	720	190	550	660	23	70	130	415	110	100
		337	416								833																		
		337	416								833																		
		362	416								910																		
11	150-440	37.0	225S	200	150	2	410	360	270	315	362	971	420	720	416	26	910	5	580	720	190	550	660	23	70	130	450	110	100
		448	416								1040																		
		448	416								1040																		
		448	473								1040																		
12	150-530	90.0	280S	200	150	3	440	430	320	365	448	1086	535	920	473	28	1040	5	670	830	270	685	750	23	70	190	600	130	165
		557	503								1199																		
		557	503								1199																		
		557	503								1245																		
13	150-580	110.0	315S	200	150	3	500	400	360	390	557	1086	535	920	503	28	1199	5	670	830	270	685	750	23	70	190	650	145	165
		557	503								1245																		
		557	503								1245																		
		557	503								1245																		
14	200-300	30.0	200M	200	200	2	400	320	250	290	284	971	420	720	386	26	731	5	580	720	190	550	660	23	70	130	370	110	100
		337	416								833																		
		337	416								833																		

Sl No.	Pump Model	Motor In Kw	Frame Size	Size		Shaft Group	OVER ALL DIMENSIONS										BASE DIMENSIONS								APPROX. WEIGHTS (kg)			
				D1	D2		L1	L2	L3	L4	L5	H1	H2	H3	H4	H5	H6	X	F1	F2	P1	P2	P3	D	T1	T2	Bare Pump	Pump Stool
15	200-360	55.0	250M	250	200	2	440	350	285	330	362	971	420	720	416	910	5	580	720	190	550	660	23	70	130	520	110	100
		75.0	280S								448				416	1040												
		90.0	280S								448				416	1040												
		110.0	315S								557				448	1199												
16	200-370	45.0	225S	200	200	2	420	350	270	330	337	971	420	720	416	833	5	580	720	190	550	660	23	70	130	475	110	100
		55.0	250M								362				416	910												
		75.0	280S								448				416	1040												
		90.0	280S								448				416	1040												
17	200-450	110.0	315S	250	200	3	450	365	295	340	448	1086	535	920	473	1040	5	670	830	270	685	750	23	70	190	615	145	165
		132.0	315S								557				503	1199												
		150.0	315M								557				503	1199												
		160.0	315M								557				503	1245												
		180.0	315M								557				503	1245												
		200.0	315M								557				503	1245												
18	200-440	75.0	280S	200	200	3	450	400	300	345	448	1086	535	920	473	1040	5	670	830	270	685	750	23	70	190	615	145	165
		90.0	280S								448				473	1040												
		110.0	315S								557				503	1199												
		132.0	315S								557				503	1199												
		150.0	315M								557				503	1245												
19	200-535	160.0	315M	200	200	3	500	400	360	385	557	1086	535	920	503	1245	5	670	830	270	685	750	23	70	190	840	145	165
		200.0	315M								557				503	1245												
		225.0	355S								610				533	1575												
		250.0	355S								610				533	1575												
		150.0	315M								557				548	1245												
20	200-560	160.0	315M	250	200	4	520	400	360	395	557	1232	540	880	548	1245	5	840	1000	-	1000	920	28	-	-	900	175	250
		200.0	315M								557				548	1245												
		225.0	355S								610				588	1575												
		250.0	355S								610				588	1575												
		315.0	355M								610				588	1650												
21	200-660	250.0	355S	250	200	4	580	480	430	450	610	1232	540	880	588	1575	5	840	1000	-	1000	920	28	-	-	1240	175	150
		315.0	355M								610				588	1575												
22	250-330	75.0	280S	300	250	3	500	365	295	340	448	1136	535	920	473	1040	5	670	830	270	685	750	23	70	190	575	145	150
		110.0	315S								557				503	1199												
23	250-305	37.0	225S	250	250	2	475	380	275	323	337	971	420	720	416	833	5	580	720	190	550	660	23	70	130	486	110	100
		45.0	225S								337				416	833												
		55.0	250M								362				416	910												
24	250-390	75.0	280S	300	250	3	500	400	320	355	448	1086	465	780	416	1040	5	670	830	270	685	750	23	70	190	715	145	165
		132.0	315S								557				503	1199												
		150.0	315M								557				503	1245												
		160.0	315M								557				503	1245												
		180.0	315M								557				503	1245												
25	250-445	200.0	315M	300	250	3	500	400	335	375	610	1086	465	780	533	1575	5	670	830	270	685	750	23	70	190	890	145	170
		250.0	355S								610				533	1650												
		315.0	355M								610				533	1650												
		150.0	315M								557				548	1245												
		160.0	315M								557				548	1245												
26	250-570	180.0	315M	300	250	4	584	492	355	410	557	1232	540	880	548	1245	5	840	1000	-	1000	920	28	-	-	1000	175	250
		200.0	315M								557				548	1245												
		225.0	355S								610				588	1575												
		250.0	355S								610				588	1575												
		315.0	355M								610				588	1650												
27	300-325	90.0	280S	350	300	3	545	400	305	355	448	1124	490	830	460	1040	5	670	830	270	685	750	23	70	190	800	145	160
		110.0	315S								557				490	1199												
		132.0	315S								557				490	1199												
		150.0	315M								557				490	1245												
		160.0	315M								557				490	1245												
28	300-380	180.0	315M	350	300	3	550	365	335	375	557	1086	465	780	490	1199	5	670	830	270	685	750	23	70	190	740	145	165
		200.0	315M								557				503	1245												
		225.0	355S								610				533	1575												
		250.0	355S								610				533	1575												
		315.0	355M								610				533	1575												
29	300-400	132.0	315S	400	300	3	550	350	350	385	557	1184	520	890	490	1199	5	670	830	270	685	750	23	70	190	655	145	160
		150.0	315M								557				490	1245												
		160.0	315M								557				490	1245												
		180.0	315M								557				490	1245												
		200.0	315M								557				490	1245												
30	300-460	225.0	355S	350	300	4	575	475	345	380	610	1232	540	880	530	1575	5	840	1000	-	1000	920	28	-	-	1095	175	250
		250.0	355S								610				530	1575												
		315.0	355M								610				530	1575												
		160.0	315M								557				548	1245												
		180.0	315M								557				548	1245												

Note: General Arrangement drawing of vertical two stage pumps (Series HST) on request

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