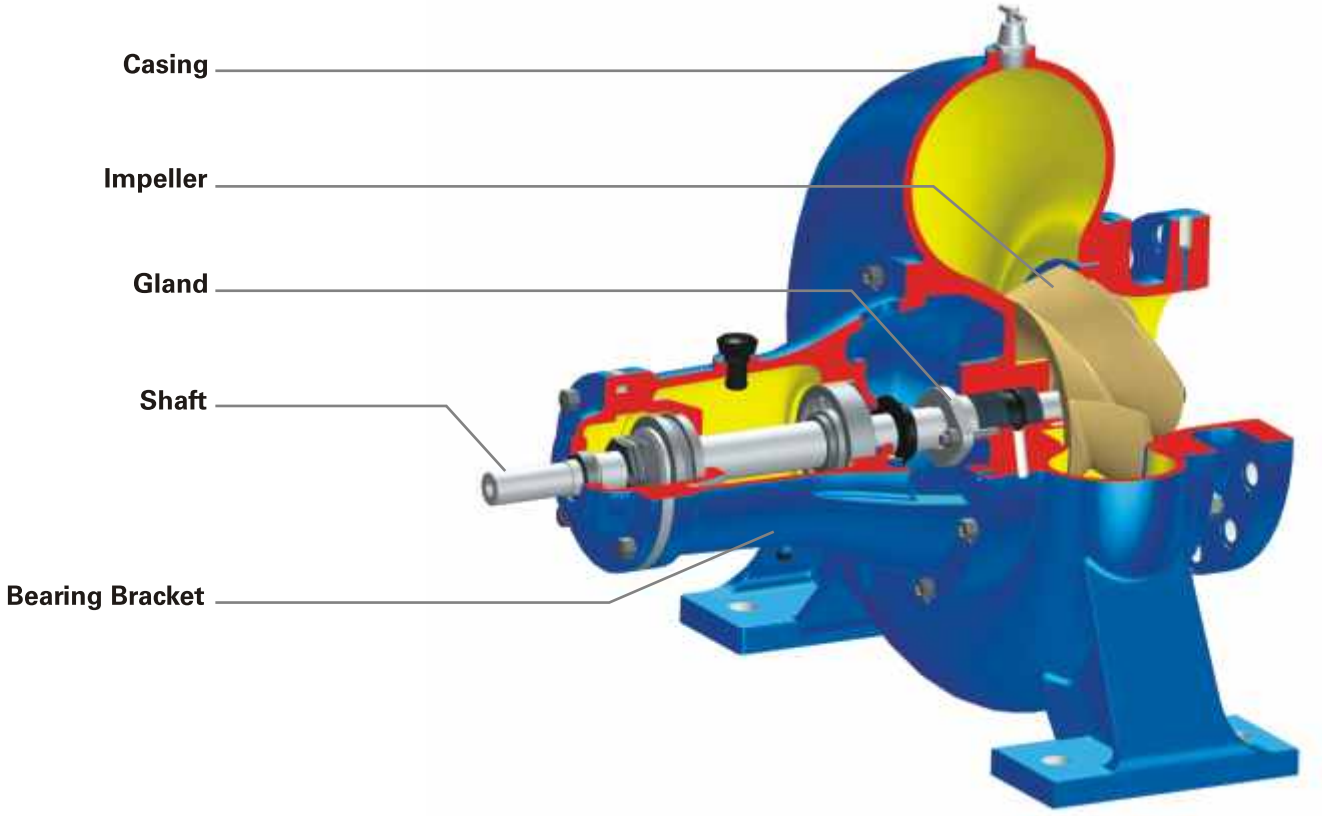
Enriching Lives

MIXED FLOW NON-CLOG PUMPS

Type - MF / MF-E / MF-V

CE

KIRLOSKAR BROTHERS LIMITED



RANGE

Delivery size : up to 650 mm
Capacity : up to 7,000 m^3/hr.
Head : up to 30 m

APPLICATIONS

Pumping drainage water, Storm water, Supplying water from settling tanks in water works, Irrigation and agriculture for lift irrigation, Circulation of hot or cold water in industry, Air-conditioning plants, Power stations, Textile mills, Sewage handling, Flood control

CONSTRUCTIONAL FEATURES

These are end suction single stage, horizontal shaft, volute type pumps. These pumps operate at 50 Hz.

Pump Casing :

Horizontal/Vertical end suction high efficiency volute type with Top/side/45 degrees orientations.
Delivery flange and supporting feet are cast integral with the casing.

Impeller :

Non clog - Semi open / Enclosed type and balanced dynamically.
Hydraulically balanced by balancing holes / back vanes.

Shaft :

Made of high tensile steel, accurately grounded.
Supported by deep groove ball bearings and thrust bearing housed in the bearing housing.

Stuffing Box :

Gland packed supply is standard for liquids having temperature upto 90°C
Mechanical seal, can be supplied against request.

Bearing :

Deep groove ball bearing and thrust bearing.
Standard lubrication - Oil (except MF 200 pump)
MF 200 is with grease lubrication.

Direction of Rotation :

Clockwise viewed from driving end.

Drive :

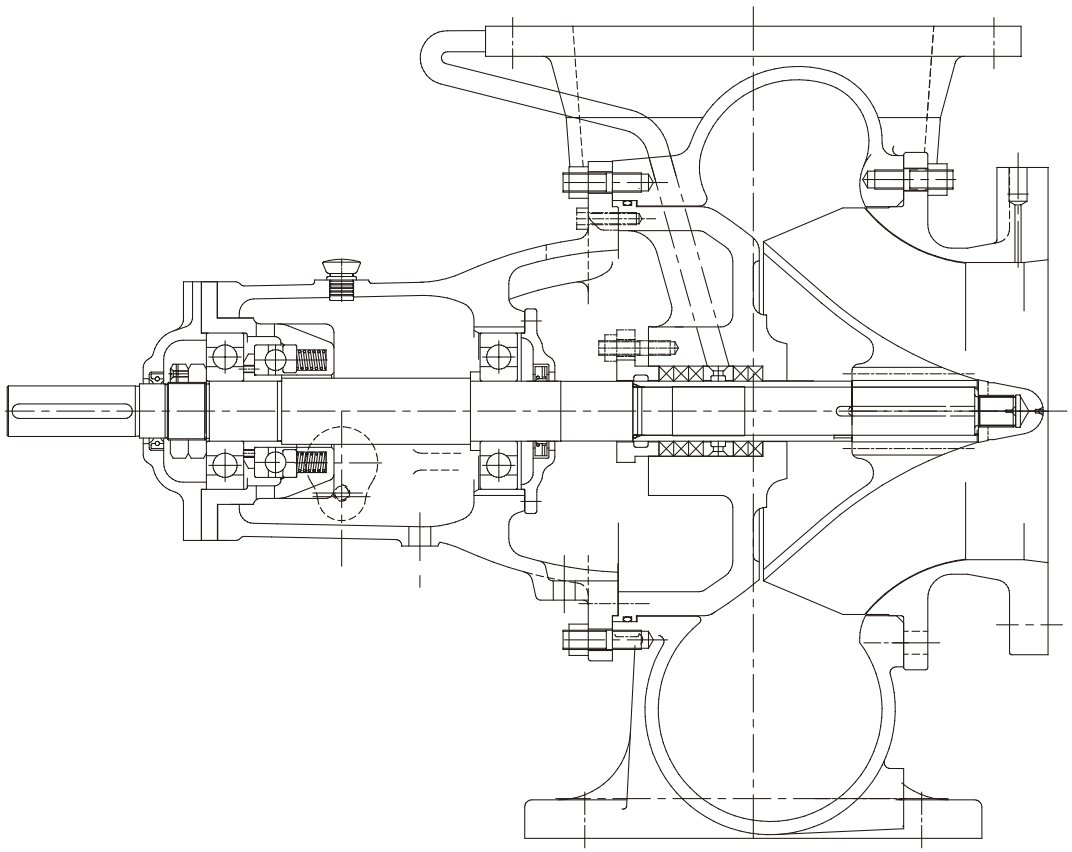
Suitable for coupling with electric motors, I.C. engines either directly or through belt drives/gear box.

Flanges :

Flanges shall be drilled as per BSEN 1092, PN 16 flat face except MF 17 ½ - 20, MF 55-60, MF 60-65 pumps.
For these models drilling will be BS 10 Table D

CROSS - SECTION DRAWING

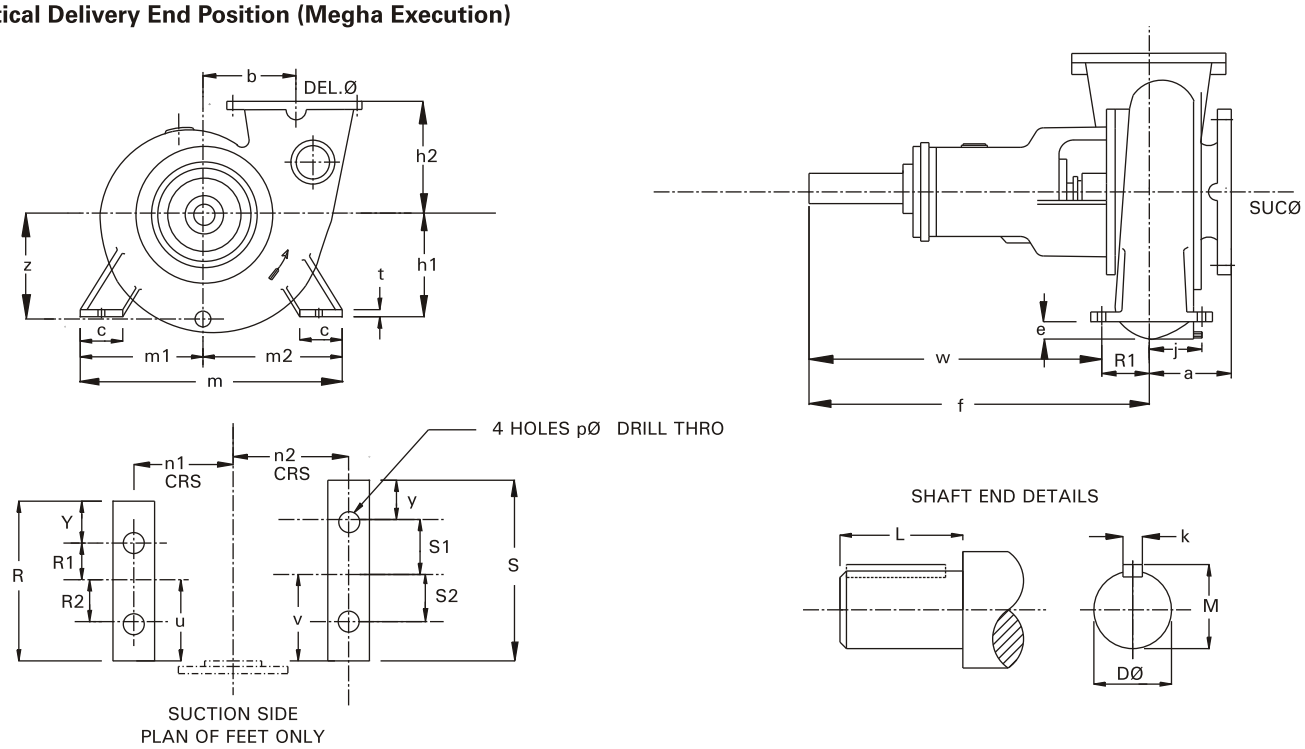
MF Pump



A) MF pumps are also available in Back pull out construction (MF-B)
B) MF pumps can be give with enclosed impeller (MF-E)

GENERAL DIMENSIONS / MOUNTING DETAILS

Vertical Delivery End Position (Megha Execution)



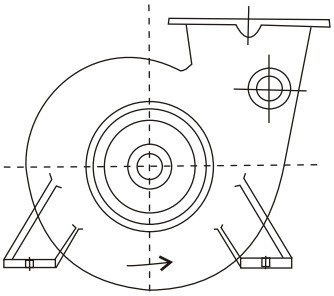
	Pump Type	Pump Measurements									
		SUC.	DEL.	a	f	j	e	h1	h2	z	b
1	MF 17½ - 20	175	200	200	564	102	32	250	230	255	208
2	MF 20-25	200	250	215	545	120	40	280	275	290	240
3	MF 250	250	250	248	545	120	40	280	275	290	240
4	MF 25-25	250	250	245	620	145	31	315	285	315	268
5	MF 25-30, A	250	300	245	620	145	50	355	320	370	300
6	MF 300	300	300	285	620	145	50	355	320	370	300
7	MF 30-35, M1	300	350	295	707	161	85	400	370	435	355
8	MF 30-35, M	350	350	350	707	161	85	400	370	435	355
9	MF 35-35, M	350	350	345	670	176	85	400	400	442	375
10	MF 35-40, M	350	400	345	670	195	10	500	440	520	415
11	MF 40-40	400	400	390	872	182	85	470	450	515	428
12	MF 40-45	400	450	400	862	185	85	600	500	590	475
13	MF 50-50	500	500	490	960	212	140	600	625	648	535
14	MF 55-60	550	600	540	920	260	135	800	680	825	650
15	MF 55-60 E	600	600	540	920	260	135	800	680	825	650
16	MF 60-65	600	650	590	1047	297	214	800	850	890	710

	Pump Type	Feet Measurements																Shaft End Measurements					
		t	c	m1	m2	m	u	v	n1	n2	R1	R2	R	Y	S1	S2	S	Pø	W	DøM6	M	K	L	Net weight In Kg (Approx.)
1	MF 17½ - 20	24	110	270	320	590	140	140	215	265	90	110	260	30	110	110	280	7/8"	474	32	35.5	10	80	175
2	MF 20-25	26	120	310	360	670	155	155	250	300	100	120	290	35	120	120	310	1"	445	32	35.5	10	80	235
3	MF 250	26	120	310	360	670	155	155	250	300	100	120	290	35	120	120	310	1"	445	32	35.5	10	80	235
4	MF 25-25	28	130	330	390	720	175	175	265	325	95	125	320	50	1250	1250	350	11/8"	525	42	45.5	12	110	325
5	MF 25-30, A	32	140	385	450	835	190	190	315	380	120	140	360	50	140	140	380	11/8"	500	42	45.5	12	110	405
6	MF 300	32	140	385	450	835	190	190	315	380	120	140	360	50	140	140	380	11/8"	500	42	45.5	12	110	405
7	MF 30-35 M1	36	170	470	550	1020	225	225	385	465	150	170	430	55	170	170	450	11/4"	557	50	54	14	120	535
8	MF 35-35, M	36	170	470	550	1020	225	225	385	465	140	170	420	55	170	170	450	11/4"	30	50	54	14	120	550
9	MF 35-40, M	40	200	530	620	1150	265	265	430	520	170	200	500	65	200	200	560	13/8"	500	50	54	14	120	720
10	MF 40-40	56	196	663	733	1396	280	280	565	635	170	210	520	70	210	210	560	13/8"	702	70	76	20	170	1150
11	MF 40-45	60	200	625	700	1325	315	300	525	600	225	255	600	60	240	240	600	13/8"	637	70	76	20	170	1375
12	MF 50-50	60	200	660	790	1450	310	310	560	690	195	245	570	65	245	245	600	13/8"	765	80	87	25	170	1700
13	MF 55-60	75	250	800	950	1750	380	380	675	825	265	305	720	75	305	305	765	15/8"	655	80	87	25	170	2450
14	MF 60-65	75	270	925	1075	2000	400	400	790	940	265	325	740	75	325	325	765	15/8"	782	100	108	28	210	2600

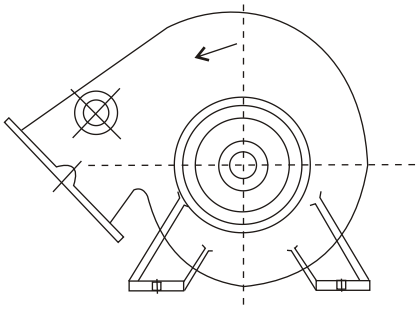
Note:
1) Flanges drilled as per BSEN 1092 PN 16. For MF 17½-20, MF 55-60 and MF 60-65, flange driving will be as per BS 10 table D 2) All dimensions are in mm
3) For MF 250 center line of suction flange is 24 mm below the pump center line 4) For MF 300 center line of suction flange is 24.5 mm below the pump center line

ALTERNATIVE AVAILABLE

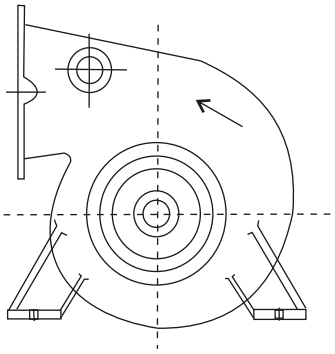
Different Orientation on Delivery Nozzle



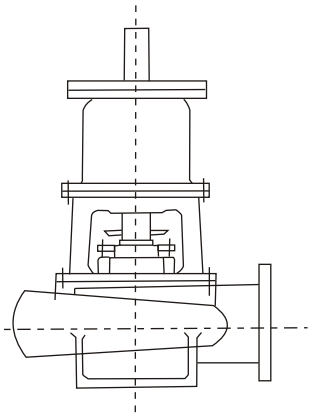
MEGHA (Standard)



TRISHA

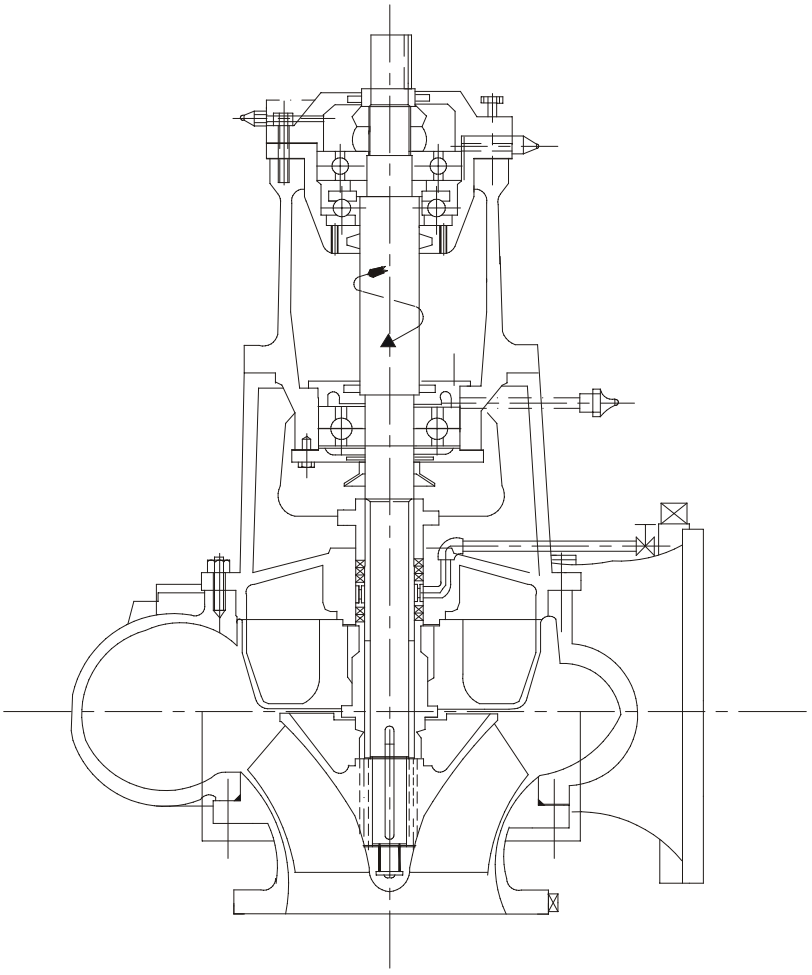


MRUGA



VARSHA

MF - Vertical Execution



MATERIAL OF CONSTRUCTION

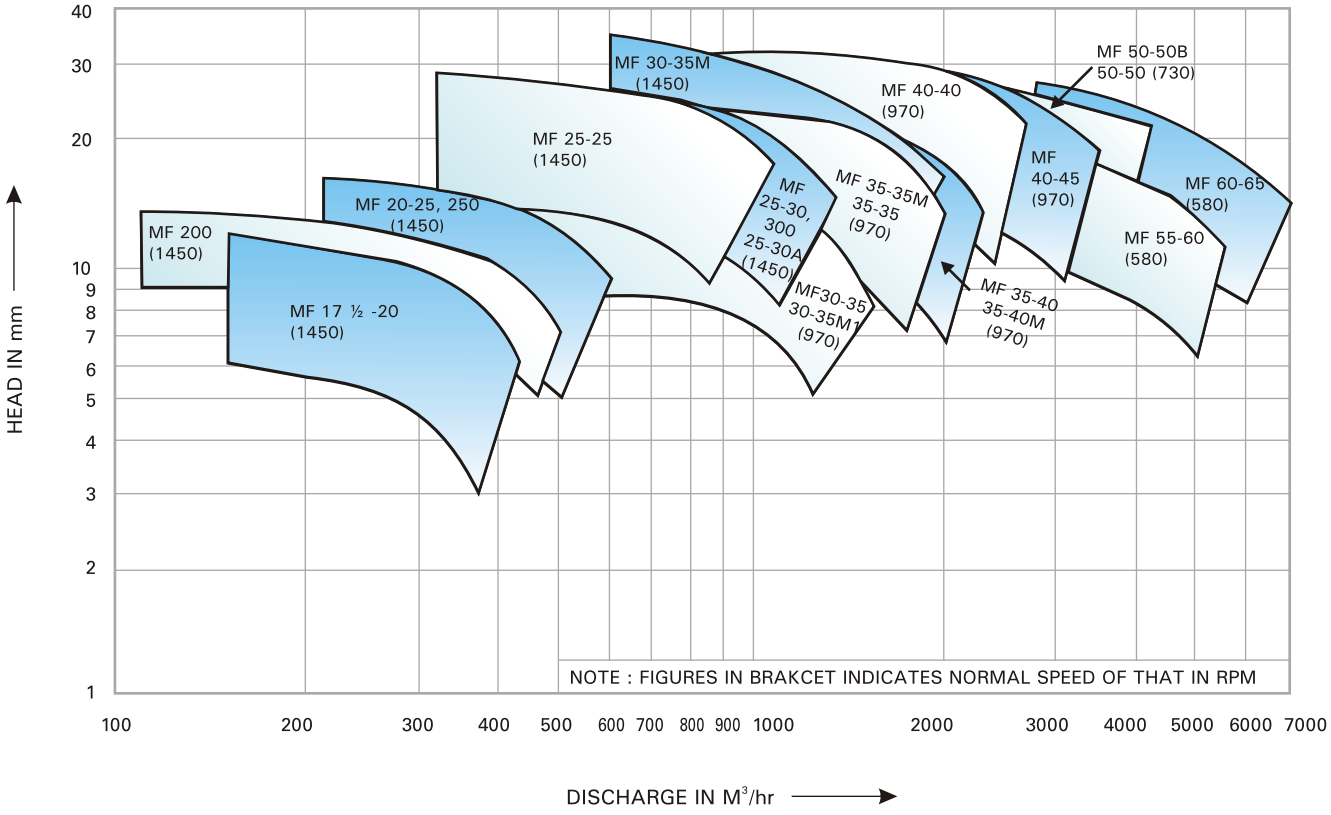
Casing	Cast Iron / Cast Steel / Stainless Steel / Duplex Steel
Casing Cover, Suction Cover	Cast Iron / Cast Steel / Stainless Steel / Duplex Steel
Impeller	Cast Iron / Bronze / Phosphor Bronze / Cast Steel / Stainless Steel / Chrome Steel / Duplex Steel
*Wear Ring	Cast Iron / Bronze/ Steel
Shaft	Carbon Steel / Stainless Steel / Duplex Steel
Shaft Sleeve	Stainless Steel / Bronze
Lantern Ring	Cast Iron / Bronze
Gland	Cast Iron / Bronze

*for 'E' type Impeller only

MATERIAL STANDARDS

Material Type	Indian Standard (IS)	American Standard (ASTM)	DIN
Cast Iron			
Cast Iron	IS 210 Gr. FG 260	ASTM A48 Class 40	(0.6025)DIN 1691 GG25
Spheroidal Graphite Cast Iron			
SG Iron (Ductile Iron)	IS 1865 Gr 400/15	A536, 60-40-18	(0.7040)DIN1693 GGG40
SG Iron (Ductile Iron)	IS 1865 Gr 500/7	A536, 65-45-12	(0.7050)DIN1693 GGG50
Carbon Steel			
Carbon steel (Wrought)	IS 1570 (part II) Gr. 40C8	ASTM A107 Gr. 1040	(1.1186)C40E/CK40
Carbon steel (Wrought)	IS 1570 (part II) Gr. 20C8	ASTM A107 Gr. 1020	(1.0402)C22
MS Steel	MS IS 2062 - Fe 410 W A	ASTM-A283 GR.D	DIN 1700 GR ST4-2 FABRICATED STEEL44
Cast Steel Grades			
Cast steel		ASTMA 216 Gr. WCB	1.0619(GS-C25)
Cast Stainless Steel			
Stainless Steel CF8M	IS 3444 Gr. 4	ASTMA 351 Gr. CF8M	1.4408(GX5CrNiMo19-11-2)
Stainless Steel CF8M	IS 3444 Gr. 4	ASTMA 743 Gr. CF8M	1.4408(GX5CrNiMo19-11-2)
Stainless Steel CF3M	IS 3444 Gr. 16	ASTMA 351 Gr. CF3M	1.4409(GX2CrNiMo19-11-2)
Stainless Steel CF3M	IS 3444 Gr. 16	ASTMA 743 Gr. CF3M	1.4409(GX2CrNiMo19-11-2)
Stainless Steel CF8	IS 3444 Gr. 1	ASTMA 351 Gr. CF8	1.4301(X5CrNi18-10)
Stainless Steel CF3	IS 3444 Gr. 15	ASTMA 351 Gr. CF3	1.4306(X2CrNi19 11)
Cast Chromium Stainless Steel			
Stainless Steel CA15	IS 3444 Gr. 10	ASTMA 217 Gr. CA15	1.4106&1.448(DIN17445 GX12Cr14)
Stainless Steel CA15	IS 3444 Gr. 10	ASTMA 743 Gr. CA15	1.4106&1.448(DIN17445 GX12Cr14)
Stainless Steel CA6NM	IS 3444 Gr. 24	ASTMA 487 Gr. CA6NM	1.4313&1.4317(GX5CrNiMo13-4)
Stainless Steel CA6NM	IS 3444 Gr. 24	ASTMA 743 Gr. CA6NM	1.4313&1.4317(GX5CrNiMo13-4)
Chromium Stainless Steel Round Bar Matterial			
Stainless steel 410	IS 1570 (part V) Gr. X12Cr12	ASTMA 276 type 410	1.4006(X10Cr13)
Stainless steel 420	IS 1570 (part V) Gr. X20Cr13	ASTMA 276 type 420	1.4021(X20Cr13)
Stainless steel 431	IS 1570 (part V) Gr. X15Cr16Ni2	ASTMA 276 type 431	1.4057(X20CrNi17)
Stainless steel 316	IS 1570 (part V) Gr. X04Cr17Ni12Mo2	ASTMA 276 type 316	1.4401(X5CrNiMo17122)
Stainless steel 316L	IS 1570 (part V) Gr. X02Cr17Ni12Mo2	ASTMA 276 type316L	1.4404(X2CrNiMo1810)
Cast Duplex Steel			
Duplex Steel 1A		ASTMA 890 Gr. CD4MCu	25Cr-5Ni-Mo-Cu
Duplex Steel 2A		ASTMA 890 Gr. CE8MN	24Cr-10Ni-Mo-N
Duplex Steel 3A		ASTMA 890 Gr. CD6MN	25Cr-5Ni-Mo-N
Super Duplex steel 4A		ASTMA 890 Gr. CD3MN	25Cr-7Ni-Mo-N
Super Duplex steel 5A		ASTMA 890 Gr. CE3MN	24Cr-10Ni-Mo-N
Non Ferious Materials			
Bronze	IS 318 Gr. LTB2 (CuSn5Zn5Pb5C)	ASTMB 584 - C90500	DIN 1705 Rg 5
Phosphor Bronze	IS 28 Gr. 1 (CuSn11PC)		
Zinc Free Bornze	IS 28 Gr. 1 (CuSn10C)		

Family Curve of MF Pump at 50 Hz rpm



OUR GLOBAL PRESENCE

As we are constantly endeavouring to improve the performance of our products/ equipment, we reserve the right to make alterations from time to time and as such our products/ equipment may differ from that detailed in this publication. For latest information you may get in touch with our Regional Sales Offices.

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