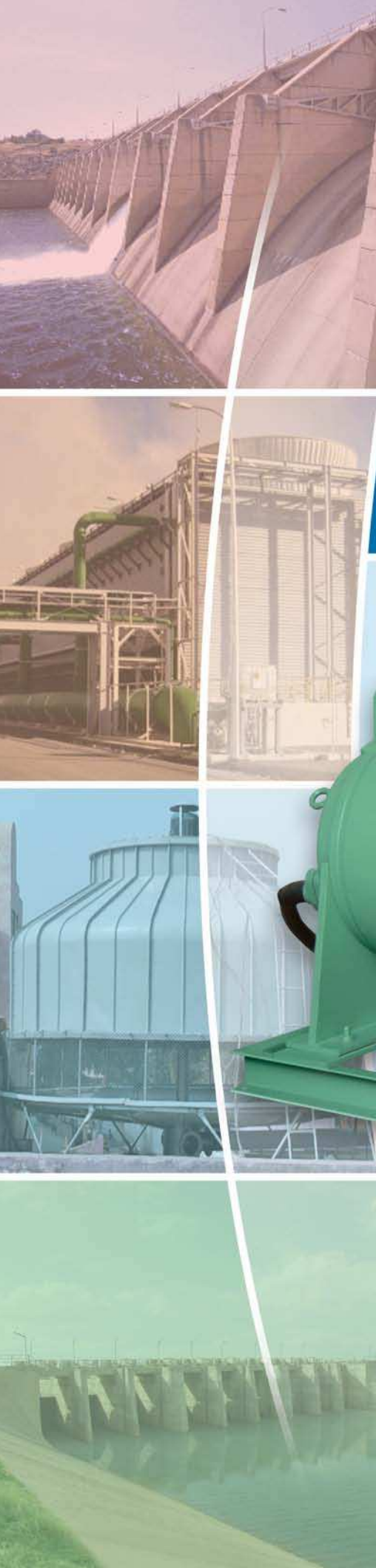




MBH[®] **PUMPS**

SUBMERGED CENTRIFUGAL PUMPSET



Energy Efficient Pumps



SUBMERGED CENTRIFUGAL PUMPSET

"MBH" Submerged Centrifugal Pumps offer simple, the most economical and most reliable way of solving the pumping water. "MBH"s rich experience over several years in the field of designing and manufacturing of varieties of pump sets has built up technical know-how and expertise in designing of reliable and efficient pumps which need practically no maintenance. These compactly designed pumps are easy to handle and can be installed permanently with the help of horizontal standard / automatic couplings in a small sump from where water is to be pumped or can be used for portable duty. Being submersible they do not require any pump house. Pump is designed to handle clear & raw water in the canal, river or dam site.

PUMPSET FEATURES :

- The motor is submersible squirrel cage, induction type and dry type with class 'F' or 'H' insulation and IP 68 enclosure fitted with ball bearing & mechanical sealing to ensure in high depth submergence condition. It is rated for $415 \pm 10\%$ V, 3ph $50 \pm 5\%$ C/S A.C. supply.
- Winding with 'H' class insulation*(withstanding winding hot spot temperature upto 185°C respectively) while the nominal temperature rise of winding hot spot will not exceed of class 'B'.
- Common shaft of pump and motor is fitted with angular contact ball or roller bearing gives the best result. (Minimum life of ball bearing is 75000 hours in accordance with BS 5512.)
- The pump casing is volute casing which is suitable both horizontal / vertical installation. The Impeller is mounted directly to the extended motor shaft.
- The Impeller has narrow passage with multi channel enclosed type (except specific speed ≥ 4500 USCS – where semi open impellers are used) and designed for high efficiency.
- The motor's Rotor is dual cage copper bar brazed type/ aluminium die cast.
- Thermal overload protectors (bimetallic over load relays) is embedded in each phase of stator windings to detect overheating and trip the motor, from control panel while temperature exceeds above 130°C .
- Moisture sensor also provides to detect primary mechanical seal's leakage.
- Oil chamber is provided for cooling and lubrication of mechanical seal (tandem). The primary (inboard) seal is of silicon carbide or tungsten carbide faces to withstand erosive wear due to any silt particles. The secondary (outboard) seal of carbon v/s cast chrome molybdenum steel or silicon carbide or tungsten carbide.

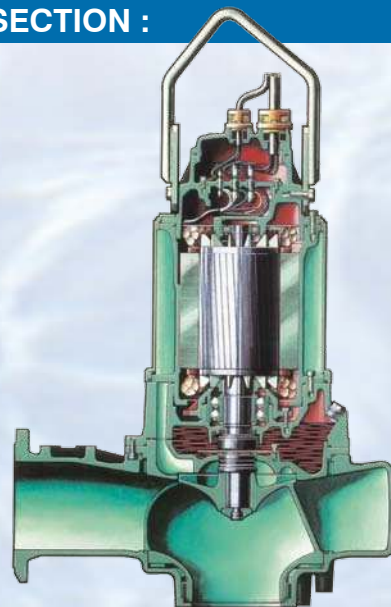
TECHNICAL SPECIFICATION :

Capacity	: upto $2500 \text{ m}^3 / \text{hr.}$
Head	: upto 100 mtr.
H.P.	: 2 to 250 hp
RPM	: 960 / 1450 / 2900

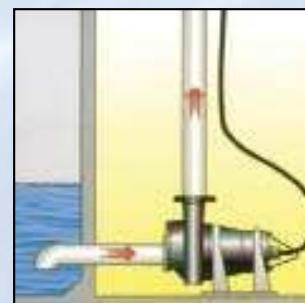
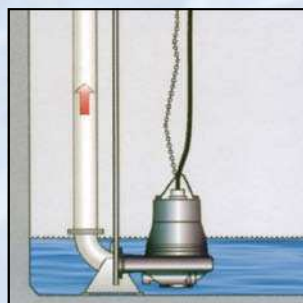
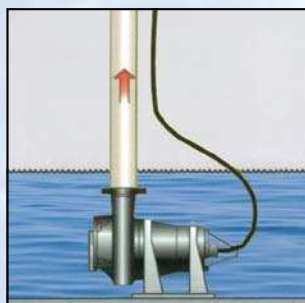
MATERIAL OF CONSTRUCTION :

Pump Casing (Volute)	: CI / SS
Motor Body	: CI / SS
Oil Chamber	: CI / SS
Impeller	: CI/SS / Bronze / NI hard
Shaft	: SS-410
Cable	: PVC insulated multi core

CROSS SECTION :



INSTALLATION OPTIONS :



Highlight of Submerged Centrifugal Pumps in Comparison with Centrifugal / Vertical Turbine Pumps

Submerged Centrifugal Pumps	Centrifugal Pumps	Vertical Turbine Pumps
Could Completely / Partially be submerged in water.	Not Possible, since motor not sealed and is wound with enameled winding wire.	Pump is of course submerged, but needs pump house, in well, jack-well etc.
Since very much portable, no permanent structure is needed. A simple pit/tank filled with water is quite sufficient and could be discharged with flexible rubber / PVC pipe / M.S. pipe.	The nature of pump needs permanent structure, Suction pipe, foot valve etc. making it cumbersome.	Pumps needs permanent structure like pump house, pump foundation etc. and installation is quite cumbersome.
An absolutely trouble free Compact design pump.	a) Gland leakage b) Air locking c) Foot valve chocking (clogging) are regular and need constant attention.	a) Needs column pipe assembly, shaft assembly and bowl assembly and because of lengthy column shaft assembly continues vibration occurs resulting in more wear and tear. As a result of this, there would be constant gland leakage from the shaft sleeve. b) Proper alignment is must.
Self priming (Submerged).	Priming is necessary.	Self-Priming (submerged) Constant attention is a must.
Needs no extra man-power.	Constant attention is a must.	Needs regular replacement of parts and repairing costs are quite exorbitant.
Quite a longer life.	Needs regular replacement of parts. Particularly, horizontal pumps need proper alignment and periodical check-up is must.	Bowl bearing bushes are regularly getting worn out as they are directly coming in to contact with water duly mixed with slit/mud/sludge.

APPLICATIONS :

- ◆ Canal
- ◆ Dam Site
- ◆ Clear Water & Drinking Water
- ◆ Cooling Tower
- ◆ Steel Plants
- ◆ Sugar Industries
- ◆ Power Plant and many more...





Manufacturing Facility at Ahmedabad (Gujarat) India



**ISO 9001:2008
Certified Company**



Our Other Products



*As improvements are made in design from time to time, specifications and performance are subject to change without prior notice.
Installation photographs shown in catalogue are for illustration only.*

**MBH[®]
PUMPS**

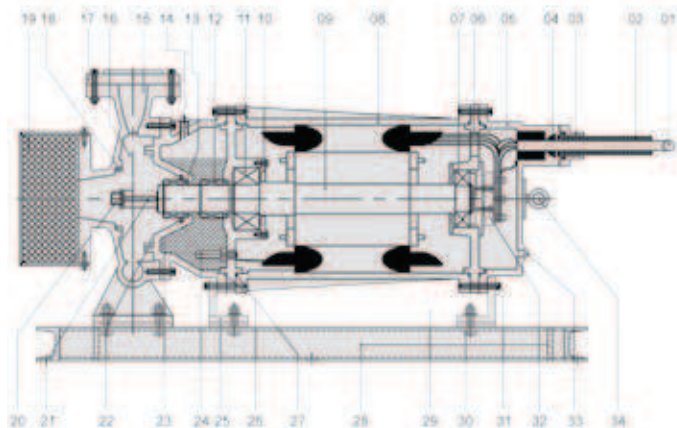
mbh pumps (gujarat) pvt. ltd.

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Fax : +91-79-2282 1511
E-mail : marketing@mbhpumps.com
Website : www.mbhpumps.com

Authorised Dealer :



Cross Section

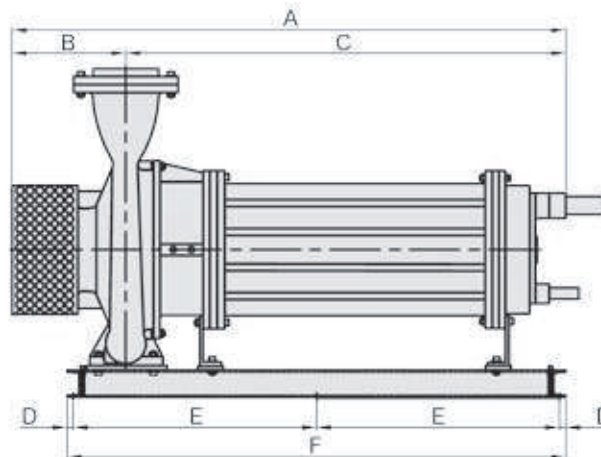
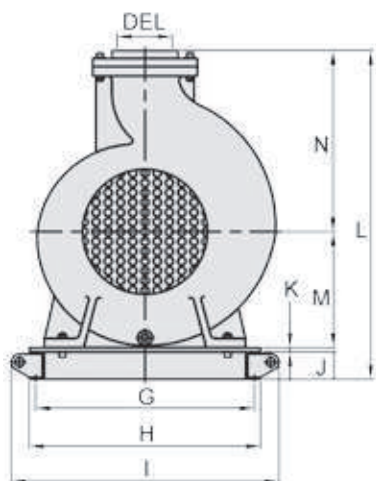


NO.	DESCRIPTION	MATERIAL
1	CABLE	PVC. INSU. SHEATHED
2	CABLE PROTECTOR	NITRILE RUBBER
3	GLAND COVER	C.I. IS-210, FG260
4	CABLE GROMMET	NITRILE RUBBER
5	TOP COVER	C.I. IS-210, FG260
6	TOP BEARING COVER	C.I. IS-210, FG260
7	BALL BEARING (N.D.E.)	STD. MAKE
8	MOTOR BODY	C.I. IS-210, FG260
9	ROTOR SHAFT	S.S.410

NO.	DESCRIPTION	MATERIAL
10	BEARING COVER	C.I. IS-210, FG260
11	BALL BEARING (D.E.)	STD. MAKE
12	MECH. SEAL (UPPER)	C/ Cr. Steel
13	MECH. SEAL (LOWER)	Si.C./ Si.C.
14	OIL PLUG	S.S.
15	VOLUTE	C.I. IS-210, FG260
16	IMPELLER	C.I. IS-210, FG260
17	DELIVERY FLANGE	C.I.
18	CASING RING	C.I.
19	PUMP STRAINER	S.S.
20	IMPELLER LOCK NUT WASHER	S.S.
21	IMPELLER KEY	S.S.
22	NECK RING	G.M.
23	OIL	HY. LUBE. MILCY-Gr-40
24	ELECTRODE WITH BUSH	ALU./ RUBBER
25	PUMP FOOT	M.S.
26	BEARING HOUSING	C.I. IS-210, FG260
27	PUMP 'O' RING	NITRILE RUBBER
28	BASE FRAME	M.S.
29	PUMP LIFTING HOOK	M.S.
30	BASE FRAME HARDWARE	M.S.
31	PUMP HARDWARE	S.S.
32	TERMINAL PLATE	BAKELITE / DMC
33	AIR PLUG	S.S.
34	EYE BOLTS	S.S.



GA Drawing



All Dimension are in mm

MODEL	HP	Del.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Weight in KG.
4W15C332	15	80	1023	230	793	17	493	1020	446	480	580	75	10	675	250	340	258
4W15C426	15	100	1020	227	793	17	493	1020	446	480	580	75	10	630	225	320	258
4W20C332	20	80	1053	230	823	17	487	1008	446	480	580	75	10	675	250	340	355
4W20C426	20	100	1075	227	819	17	506	1046	446	480	580	75	10	630	225	320	355
4W20C432	20	100	1070	250	820	17	494	1022	451	485	585	75	10	705	265	355	355
4W20C532	20	125	1091	265	826	17	528	1090	546	580	680	75	10	765	280	400	355
4W25C432	25	100	1115	250	865	17	517	1068	451	485	585	75	10	705	265	355	372
4W25C440	25	100	1097	224	873	17	532	1098	496	530	630	75	10	760	280	395	372
4W25C526	25	125	1138	265	873	17	551	1136	446	480	580	75	10	735	250	400	372
4W25C532	25	125	1136	265	871	17	551	1136	546	580	680	75	10	765	280	400	372
4W30C440	30	100	1157	224	933	17	562	1158	496	530	630	75	10	760	280	395	385
4W30C532	30	125	1196	265	931	17	581	1196	546	580	680	75	10	765	280	400	385
4W35S440	35	100	1109	224	885	17	473	980	496	530	630	75	10	760	280	395	585
4W35S532	35	125	1115	256	859	17	541	1116	546	580	680	75	10	765	280	400	585
4W35C540	35	125	1150	265	885	17	588	1150	546	580	680	75	15	850	315	445	585
4W40S440	40	100	1194	224	970	17	516	1066	496	530	630	75	10	760	280	395	626
4W40C540	40	125	1235	265	970	17	600	1234	546	580	680	75	15	850	315	445	626
4W40C632	40	150	1292	334	958	17	520	1074	596	630	730	75	15	814	280	444	626
4W45S440	45	100	1194	224	970	17	516	1066	496	530	630	75	10	760	280	395	646
4W45C540	45	125	1235	265	970	17	600	1234	546	580	680	75	15	850	315	445	646
4W45C632	45	150	1292	334	958	17	520	1074	596	630	730	75	15	814	280	444	646
4W50S440	50	100	1194	224	970	17	516	1066	496	530	630	75	10	760	280	395	661
4W50C540	50	125	1235	265	970	17	600	1234	546	580	680	75	15	850	315	445	661
4W50C632	50	150	1292	334	958	17	520	1074	596	630	730	75	15	814	280	444	661
4W50C640	50	150	1306	330	976	17	531	1136	596	630	730	75	15	896	315	491	661
4W60S440	60	100	1254	224	1030	17	546	1126	496	530	630	75	10	760	280	395	680
4W60C540	60	125	1293	265	1030	17	630	1294	546	580	680	75	15	850	315	445	680
4W60C632	60	150	1352	334	1018	17	520	1074	596	630	730	75	15	814	280	444	680
4W60C640	60	150	1366	330	1036	17	581	1196	596	630	730	75	15	896	315	491	680
4W70C640	70	150	1406	330	1076	17	601	1236	596	630	730	75	15	896	315	491	698
4W80C640	80	150	1440	330	1110	17	618	1270	596	630	730	75	15	896	315	491	773
4W100C640	100	150	1530	330	1200	17	663	1360	596	630	730	75	15	896	315	491	808

Performance Chart • 1450 RPM

MODEL	Back Model	HP	Outlet Size mm		HEAD IN METERS																											
					14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58					
4W15C332	80/32	15	80	DISCHARGE IN LPM				2250	2000	1850	1625	1400	1200	1000																		
4W15C426	100/26	15	100		2710	2620	2400	2280	2050	1730	1150																					
4W20C332	80/32	20	80							2400	2250	2100	1900	1800	1667																	
4W20C426	100/26	20	100				3100	2900	2650	2400	1800	1600																				
4W20C432	100/32	20	100						2830	2710	2600	2400	2100	1800	1400	1000																
4W20C532	125/32	20	125			3800	3510	3000	2690	1200																						
4W25C432	100/32	25	100						3100	3000	2920	2850	2700	2500	2000	1667	1250															
4W25C440	100/40	25	100										2420	2350	2000	1800	1500	1300	533													
4W25C526	125/26	25	125			5500	5220	4800	4130	3500	2800	2460	1700																			
4W25C532	125/32	25	125							4010	3670	2990	2680	1600	900																	
4W30C440	100/40	30	100											2490	2370	2230	2100	1990	1760	1600												
4W30C532	125/32	30	125							4580	4390	4010	3890	3630	2920	2630	2140	1720	1010													
4W35C440	100/40	35	100													2660	2540	2470	2330	2010	1450	1020										
4W35C532	125/32	35	125								4660	4400	4240	4160	3800	3200	2760	2100	1500													
4W35C540	125/40	35	125										4334	4100	3720	3334	3000	2580	2067	1500												
4W40C440	100/40	40	100													2940	2850	2780	2670	2340	1760	1300										
4W40C540	125/40	40	125								4500	4380	4090	3870	3330	2640	1420	730														
4W40C632	150/32	40	150					6660	6020	5350	4850	4160	3340	1670	900																	
4W45C440	100/40	45	100														3040	2910	2860	2740	2690	2640	2510	2380	1890	1740	1530					
4W45C540	125/40	45	125										4660	4200	3980	3790	3450	3090	2830	2330	1620	870										
4W45C632	150/32	45	150						7030	6370	5780	5160	4230	2340	1320																	
4W50C440	100/40	50	100															3340	3200	3170	3030	2920	2840	2700	2200	1780	1230	900				
4W50C540	125/40	50	125											5000	4870	4760	4630	4120	3750	2890	1760	1510										
4W50C632	150/32	50	150							7520	7130	6630	5450	4900	3760	2530	1240															
4W50C640	150/40	50	150						6830	6540	6180	5320	5000	4310	4010	3680	3300	1230														
4W60C440	100/40	60	100																4400	4280	4100	3980	3870	3700	3320	3170	2900					
4W60C540	125/40	60	125															5330	5160	4670	4110	3400	2800	1600								
4W60C632	150/32	60	150										7500	6900	5890	5200	4370	2840	1330													
4W60C640	150/40	60	150								7000	6240	5870	5420	5170	4460	3300	2810	1130													
4W75C640	150/40	75	150									7670	7280	6830	6240	5830	4980	3780	2670	1660												
4W85C640	150/40	85	150										8160	7820	7250	6810	6420	5880	5460	5000	3800	1250										
4W100C640	150/40	100	150											8500	8350	8220	8010	7830	7670	7340	7000	5890	4670	3330	1520							

MODEL IDENTIFICATION

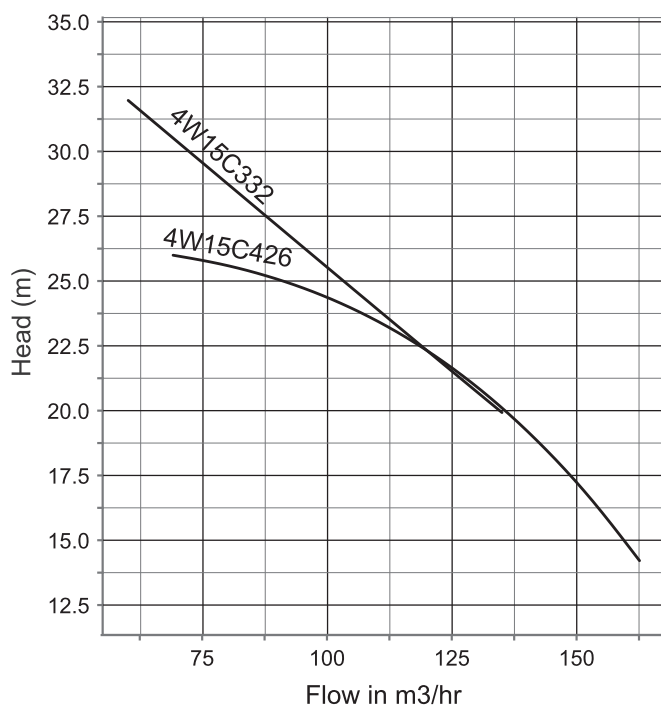
Example : PUMP MODEL 4W15C332

4	W	15	C	3	32
2 - Poles 4 - Poles	Submerged	HP	M.O.C. of Impeller C - C.I. S - S.S.	Outlet - 3"	Impeller Dia in CM

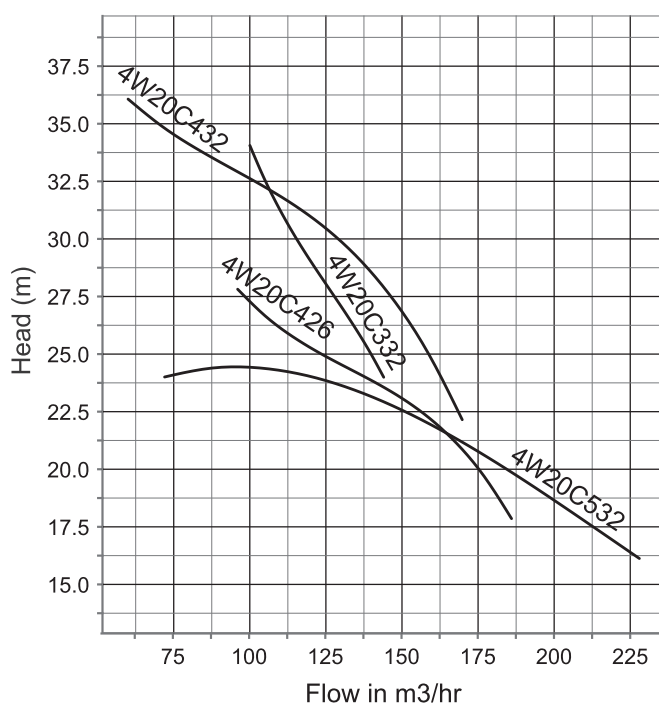
Submerged Centrifugal Pumps

Performance Curves • 1450 RPM (400/440 V, 3 Phase, 50 Hz, A.C. Supply)

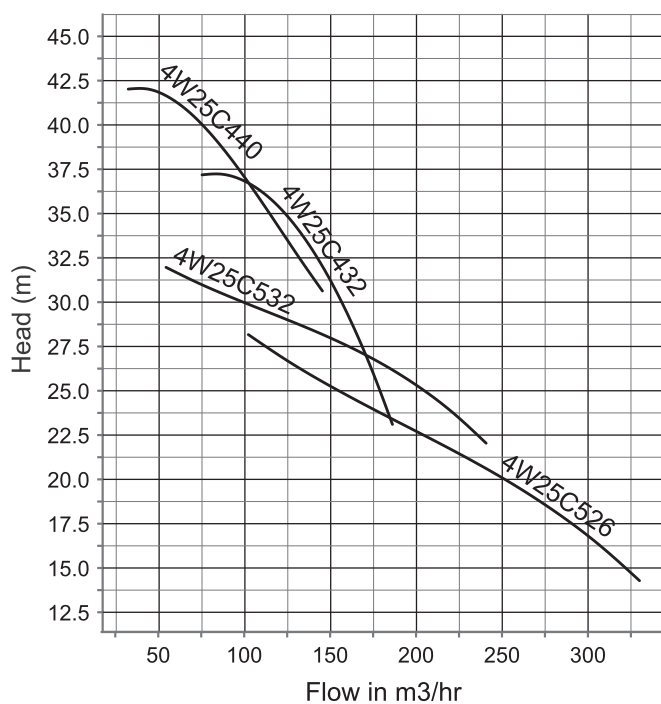
15 HP



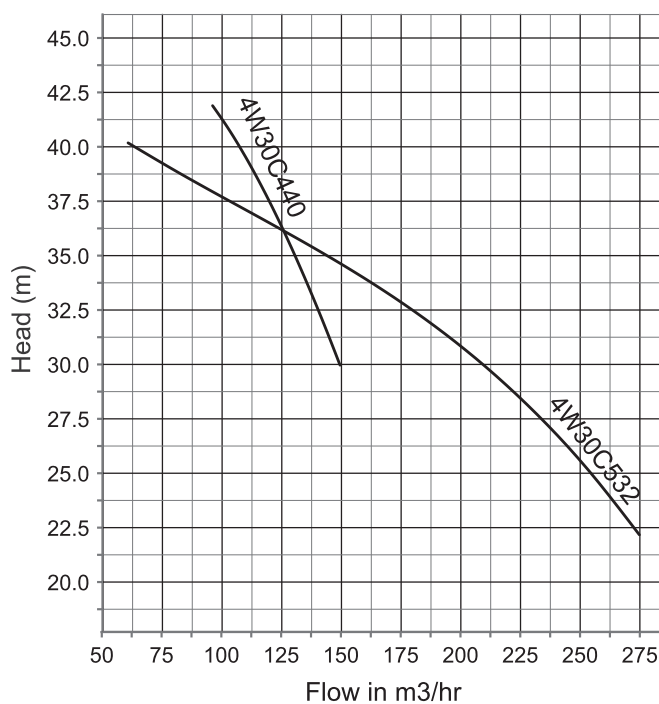
20 HP



25 HP



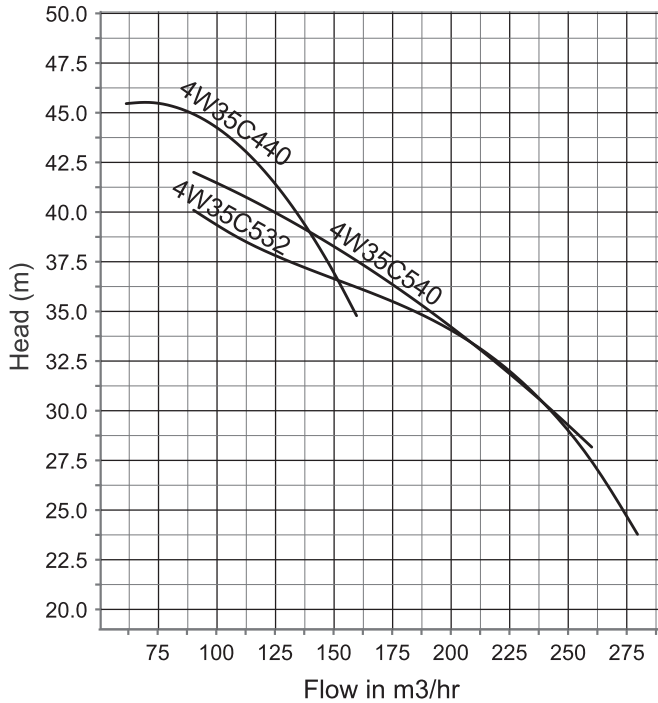
30 HP



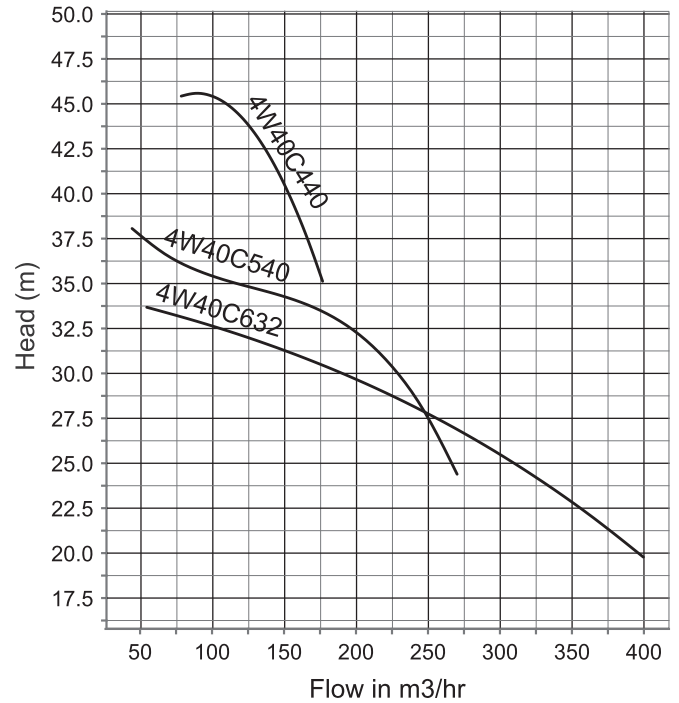
Submerged Centrifugal Pumps

Performance Curves • 1450 RPM (400/440 V, 3 Phase, 50 Hz, A.C. Supply)

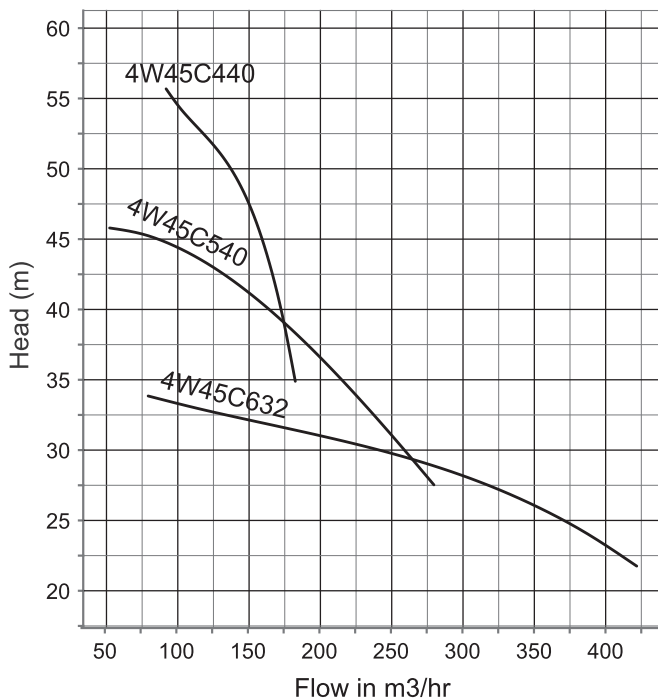
35 HP



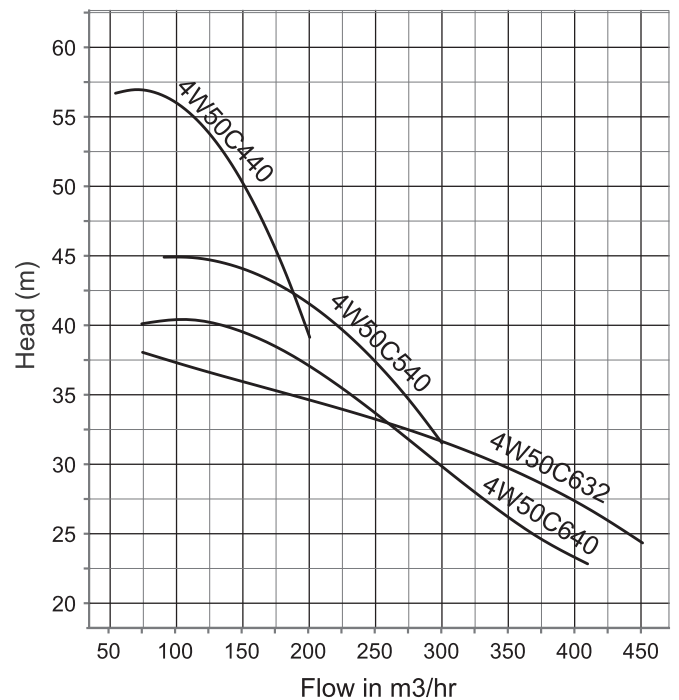
40 HP



45 HP



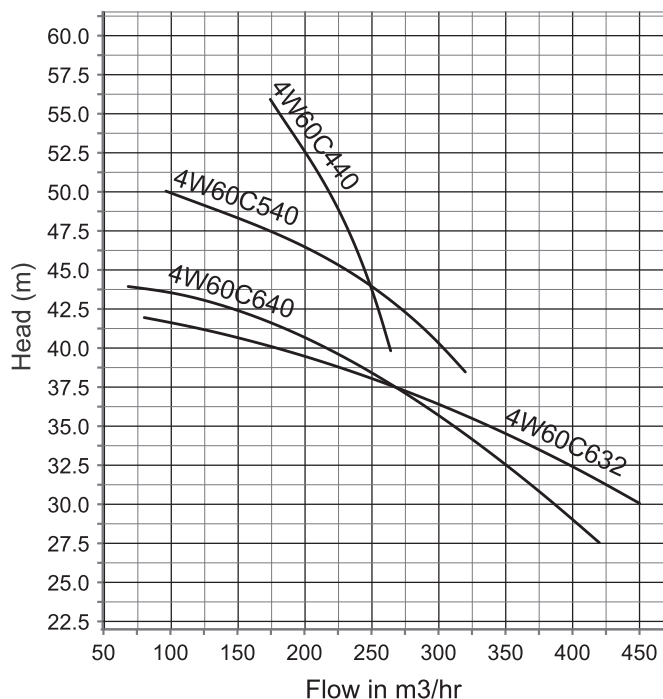
50 HP



Submerged Centrifugal Pumps

Performance Curves • 1450 RPM (400/440 V, 3 Phase, 50 Hz, A.C. Supply)

60 HP



75 HP, 85 HP, 100 HP

