



Enriching Lives

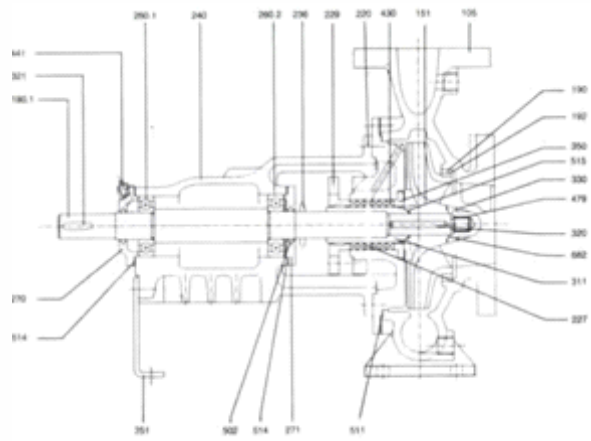
## CENTRIFUGAL PUMPS

TYPE - CPHM

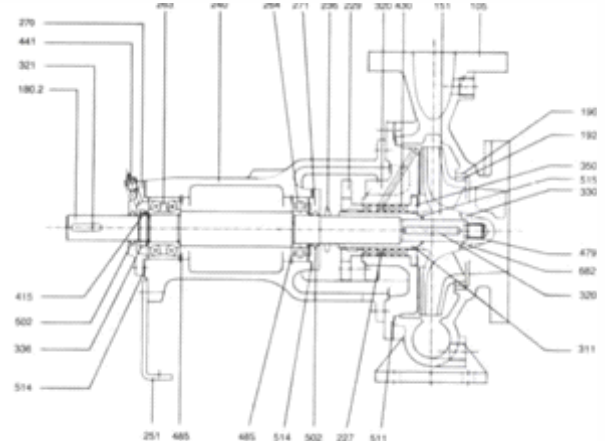


**KIRLOSKAR BROTHERS LIMITED**  
A Kirloskar Group Company

## Cross Sectional View of CPHM Pump



Unit 5



Unit 7 & 9

### RANGE

Delivery size :	up to 150 mm
Capacity up to :	up to 470 m <sup>3</sup> /hr
Head up to :	up to 150 meters

### APPLICATIONS

- For continuous service in pumping or turbid water upto 3000 ppm. Ideally suitable in circulating systems in industry, irrigation, sprinkler system, booster service, fire fighting, air-conditioning etc. (— 30°C to 100°C).

### **Constructional features :**

Pumps are as per DIN 24256 and ISO 2858. The design is of back pull out type. Large variety of models are available to operate at 1450 rpm and 2900 rpm.

### **Casing :**

The casing has axial suction and top centre line delivery. Smooth hydraulic passages ensure high efficiency.

### **Impeller :**

The impellers are of enclosed type. Hydraulic balancing of impellers is achieved either by back vanes or by balancing holes. The impellers are statically and dynamically balanced. Reliable fixing of the impeller on shaft is achieved by using helicoil insert under impeller nut.

### **Shaft :**

The shaft is supported by two antifriction bearings to take residual axial thrust and prevent axial float or radial run out. It is fully protected from the liquid handled by means of a shaft sleeve and gaskets between impeller nut, impeller hub and shaft sleeve.

### **Stuffing box :**

The stuffing box is sealed by gland packing or by mechanical seal. Conversion from gland packing to mechanical seal is achieved by changing some standardised parts. Re-machining of stuffing box is not necessary.

### **Bearings :**

The bearings are grease lubricated.

### **Direction of rotation :**

Clockwise viewed from driving end.

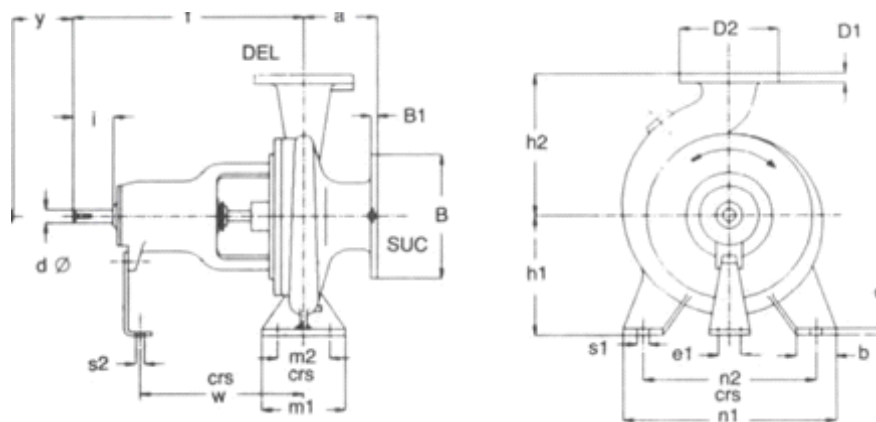
### **Drive :**

Pumps can be driven by electric motor or engine.

### **Flanges :**

Standard	Optional
Drilling as per ND 16	DIN ND 10, ND 25
DIN 2533 (Cast Iron-Raised face)	ASA 150
DIN 2543 (Steel-Plain face)	8S 10 Table F
	BS 4504- 16 bar or 25 bar

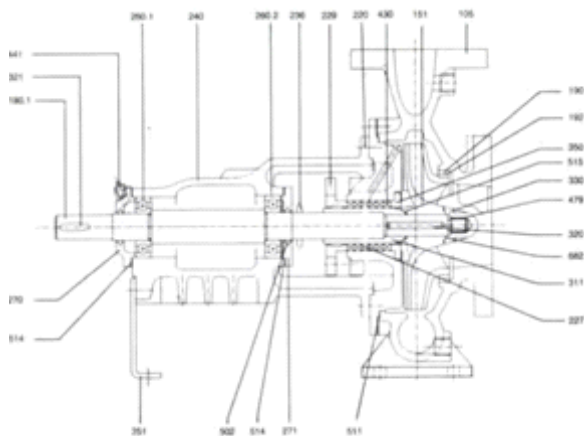
# GENERAL DIMENSIONS/MOUNTING DETAILS



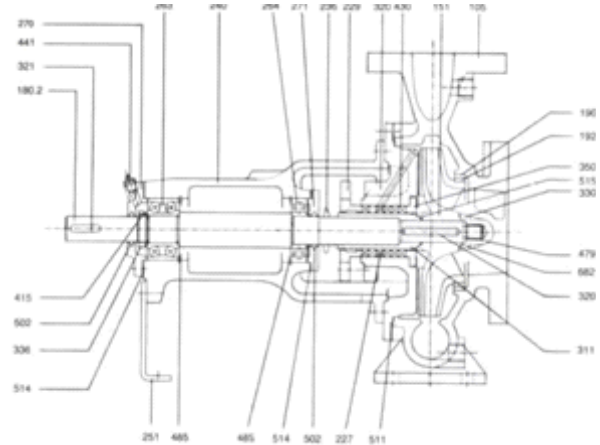
## DIMENSIONS

PUMP SIZE	DRIVING UNIT	PUMP DIMENSIONS						FOOT DIMENSIONS										SHAFT END					FLANGE DIN NO.16				NET WEIGHT																																				
		DEL	SUC	a	l	hl	62	b	c	ml	m2	n1	n2	w	sl	s2	el	d.:	l	1	u	y	D2	D1	B	13l	kg.																																				
32/13	5	32	50	ø	132	112	140																																																								
32/16						160	180																								190	140																															
32/20		160	180			240	190																																																								
40/13		40	65		385	112	140																								210	160																															
40/16						132	160																								240	190																															
40/20						160	180																								265	212																															
50/13				132		160	240																								190																																
50/16		50	80	100		160	180																								265	212																															
						200																																																									
50/20		65	100		160	180	65																								125	95	280	212																													
65/13	32	50	100		500	180	225																																																								
40/26	200	250				320	250																																																								
40/32	200	250				345	280																																																								
50/26	180	225		65		14	125																								95	320	250	14																													
50/32	225	280		345		280																																																									
65/16	160	200		280		212																																																									
7	65	100		100		500	180																								225																																
							700																								250																										80	16	160	120	360	280	18
							225																								280																										370	250	14				
							1E0																								225																										65	14	125	95	345	280	18
	225	280	400		315		18																																																								
	200	280	80		16		160	120	360	780	18																																																				
	65/20	180	225	370	212		370	15	110	32	BO	35	10	140	185	20	220	24	67																																												
	65/26	700	250	80	16		160	120	360	280	18	82																																																			
80/16	225	280	370	250	14		73																																																								
80/20	225	280	65	14	125		95	345	280	18	99																																																				
80/26	225	280	400	315	18	90																																																									
100/20	200	280	80	16	160	120	360	780	18	119																																																					
9	65	100	125	530	225	280																																																									
					250	315																									400	315	124																														
					280	355																									BO	16	160	120	435	355	370	18	114																								
					225	280																									225	280	400	315	133																												
	250	315			250	315																									400	315	165																														
	280	355			100	18																									200	150	500	400	23	15	110	42	110	45	12	140	720	24	250	26	165																
	250	355	80		16	160																									120	400	315	18	152																												
	280	355	250		26	285																									26	180																															
	315	400	100		18	200																									ISO	500	400	23	221																												
	315	400	22		221																																																										

# CROSS SECTIONAL VIEW UNIT 5, 7 & 9



Unit 5



Unit 7 & 9

## INTERCHANGEABILITY CHART FOR CPHM PUMPS

DESCRIPTION	PART NO	PUMPSIZE																															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
CASING	105	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
IMPELLER	151	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
CASING COVER	220					2		3					5		6												9					10	
IMPELLER RING SUC	192	1	2	3	4	1	2	3	2	2	3	5	11	10	6	12	7	B	9	9	6	7	16	14	15	13	13	14	14	17	18	12	11
IMPELLER RING DEL	193																					7	16			13	13	11	14	17	14	14	14
CASING RING SUC	190	1	12	13	14	1	12	13	2	12	3	5	11	10	6	12	7	18	19	4	10	7	17	15	116	13	13	15	15	18	19	14	15
CASING RING DEL	191																					7	17			13	13	15	15	15	15	15	15
GASKET FOR CASING COVER	511		1			2		1	3			a		3		4								4		5					6		
SUPPORT FOOT	251	1	1	2	3	2		3				4	3	15		3	15	16			5	6		5	16	5	6	7	6		7		
STUFFING BOX BUSH	350					1																2										3	
LANTERN RING	727					1																2										3	
DEFLECTOR	736					1																2										3	
IMPELLER NUT	330					1																2										3	
GASKET FOR SLEEVE	515					1																2										3	
GASKET FOR IMPELLER NUT	682					1																2										3	
STUFFING BOX PACKING	430					1																2										3	
BEARING HOUSING	240					1																7										3	
BEARING COVER D E	270					1																2										3	
BEARING COVER N D E	271					1																2										3	
GASKET FOR BRG COVERS	511					1																2										3	
PUMP SHAFT	190					1																2										3	
SHAFT SLEEVE	311					1																2										3	
DEEP GROOVE BALL BRG	260																																
DOUBLE ROW ANGULAR	763																					1										2	
CONTACT BALL BRG	264																																
CYLINDRICAL ROLLER BRG	279																					1											
SPLIT GLAND	731					1																2										3	
MECHANICAL SEAL COVER	507					1																2											
FELT RINGS DE & NOE	441					1																2										3	
GREASE NIPPLE	15					1																1										1	
LOCK WASHER	336					1																1										1	
LOCK NUT	479					1																1										1	
HEUCOIL LOCK INSERT	479					1																1										1	

## MATERIAL OF CONSTRUCTION

Casing	CUSG1	CI/SGI Bronze	CI/SGI	CI/SGI	CI/SGI	Cast Steel	CI/SGI	CF8M
Casing Cover	CI	CI/Bronze	CI/SGI	CI/SGI	CI/SGI	Cost Steel	CI/SGI	CF8M
Impeller	CI/ACI	Bronze/ZFB	Ph. Br.	CI	Cast Steel	Cast Steel	CF8M	CF8M
Wear Ring	CI/ACI	Bronze	Ph. Br.	CI	AISI 410H	AISI 410H	CF8M	CF8M
Shaft	CS/St. St.	CS/Si. St.	CS/St. Si.	CS/St. Si.	CS/St. St.	CS/St. St.	CS/St. St.	St. St.
Shaft sleeve	AISI 410H	AISI 410H	AISI 410H/ Ph. Br.	AISI 410H	AISI 410H	AISI 410H	AISI 316	AISI 316
Lantern Ring	CI/St. St.	Bronze	Ph. Br.	CI	CS	CS	AISI 316	A151316
Gland	CI	CI	CI	CI	CI	Cost Steel	CI	CF8M

Other materials ore also available

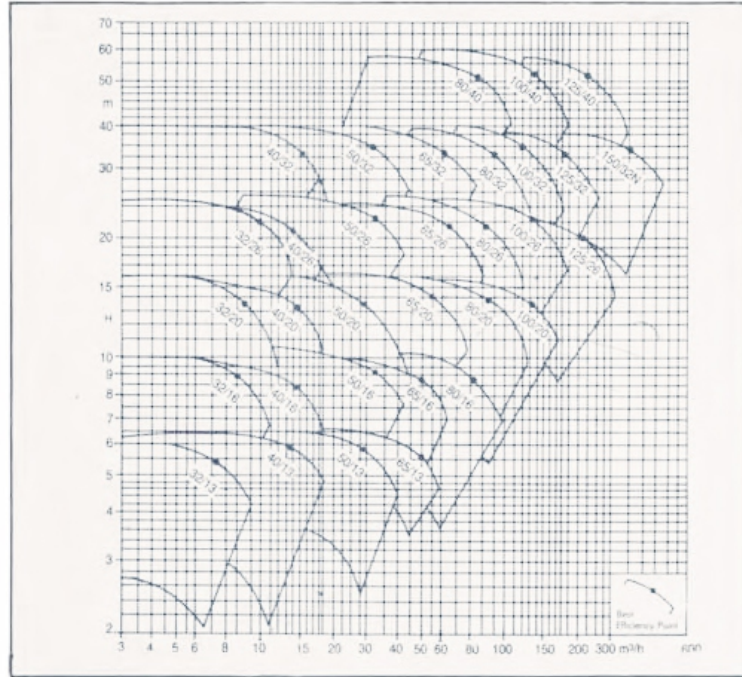
## MATERIAL STANDARDS

à	IS	Equivalent International Standards	
		BS	ASTM
Cast Iron (CI)	IS 210 (1978) Gr. FG 260	B.S. 1452 Gr. 250	ASTM-A 48 CL 35
S.G. Iron (SGI)	IS 1865 (1974) Gr. SG 500/7	B.S. 2789 SNG 500/7	ASTM-A 536 60-40-18 & 65-45-12
Austenitic Cast Iron (ACI)	IS 2749 Gr. AFG Ni 15 Cu 6 Cr. 3	B.S. 3468 AUS 101 Gr. B	ASTM-A-436 Type 1
Carbon Steel (CS)	IS 1570 Gr. 40 C-8	B.S. 970 080 M 40	ASTM-A 107 Gr. 1040
CF8M	IS 3444 Gr. 9	B.S. 1632 Gr. B	ASTM-A 351 Gr. CF8M
AISI 316 (St. St.)	IS 1570 Gr. 05 Cr. 18 Ni 11 Mo 3	8.5. 970 316 S16	ASTM-A 276 Type 316
AISI 304 (St St.)		B.S 970 304 S 15	ASTM-A 276 Type 304
AISI 410 (St. St.)		B.S. 3100 410 S 21	ASTM-A 276 Type 410
Bronze	IS 318 Gr. LTB2	B.S. 1400 LG2C	ASTM-B 62, B 145 Alloy 4A
Phosphor Bronze (Ph. Br.)	IS 28 Gr. 1	B.S. 1400P.B. 4	
Zinc Free Bronze (ZFB)		B.S. 1400 Gr. CT1	
Cast Steel		B.S. 1504-101A	ASTM-A 216 74 d Gr. WCB

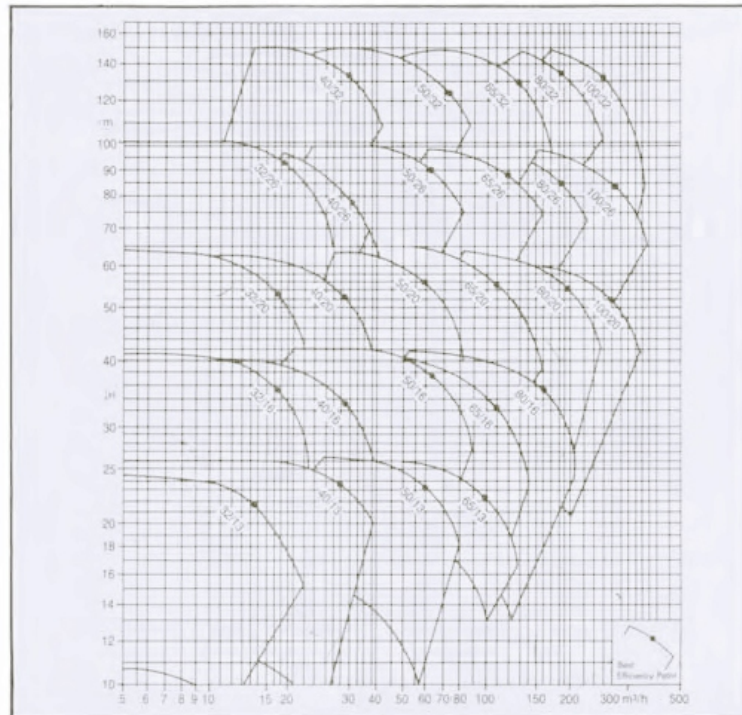
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# FAMILY CURVE

## FAMILY CURVE OF CPHM PUMP AT 1450 RPM - 50 HZ



## FAMILY CURVE OF CPHM PUMP AT 2900 RPM - 50 HZ



# ABOUT KBL

Kirloskar Brothers Limited (KBL) is a world class pump manufacturing company with expertise in engineering and manufacture of systems for fluid management. Established in 1888 and incorporated in 1920, KBL is the flagship company of the \$ 2.1 billion Kirloskar Group. KBL, a market leader, provides complete fluid management solutions for large infrastructure projects in the areas of water supply, power plants, irrigation, oil & gas and marine & defence. We engineer and manufacture industrial, agriculture and domestic pumps, valves and hydro turbines.

In 2003, KBL acquired SPP Pumps, United Kingdom and established SPP INC, Atlanta, USA, as a wholly owned subsidiary of SPP, UK to expand its international presence. In 2007, Kirloskar Brothers International B.V., The Netherlands and Kirloskar Brothers (Thailand) Ltd., a wholly owned subsidiary in Thailand, were incorporated. In 2008, KBL incorporated Kirloskar Brothers Europe B.V. (Kirloskar Pompen B.V. since June 2014), a joint venture between Kirloskar International B.V. and Industrial Pump Group, The Netherlands. In 2010, KBL further consolidated its global position by acquiring Braybar Pumps, South Africa. SPP MENA was established in Egypt in 2012. In 2014, KBL acquired SyncroFlo Inc., the largest independent fabricator of commercial and municipal domestic water booster pumps.

To further strengthen its global position, in 2015, Kirloskar Pompen B.V. acquired Rodelta Pumps International, The Netherlands.

KBL has joint venture cooperation with Ebara, Japan since 1988 for the manufacture of API 610 standard pumps. Kirloskar Corrocoat Private Limited is a joint venture cooperation with Corrocoat, UK since 2006. KBL acquired The Kolhapur Steel Limited in 2007 and Hematic Motors in 2010.

KBL has eight manufacturing facilities in India at Kirloskarvadi, Dewas, Kondhapuri, Shirwal, Sanand, Kaniyur, Kolhapur and Karad. In addition, KBL has global manufacturing and packaging facilities in Egypt, South Africa, Thailand, The Netherlands, United Arab Emirates, United Kingdom and United States of America. KBL has 12,700 channel partners in India and 80 overseas and is supported by best-in-class network of Authorised Centres and Authorised Refurbishment Centres across the country.

All the manufacturing facilities at KBL are certified for ISO 9001, ISO 14001, ISO 50001, BS OHSAS 18001 and SA8000. In addition, the Kirloskarvadi plant is also certified for N & NPT Stamp. KBL's corporate office in Pune is certified for ISO 9001 & Sa8000.

The factories deploy Total Quality Management tools using European Foundation for Quality Management (EFQM) model. The Kirloskarvadi plant of KBL is a state-of-the-art integrated manufacturing facility having Asia's largest hydraulic research centre with testing facility upto 5000 kW and 50,000 m<sup>3</sup>/hr.

KBL is the ninth pump manufacturing company in the world to be accredited with the N and NPT certification by American Society of Mechanical Engineers (ASME).

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Pumps | Valves | Hydro Turbines | Turnkey Projects

Water Resource Management | Irrigation | Power | Industry | Oil & Gas | Marine & Defence | Building & Construction | |  
Distribution (Small Pumps) | Valves | Customer Service & Spares

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## KIRLOSKAR BROTHERS LIMITED

### A Kirloskar Group Company

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#### OUR COMPANIES

