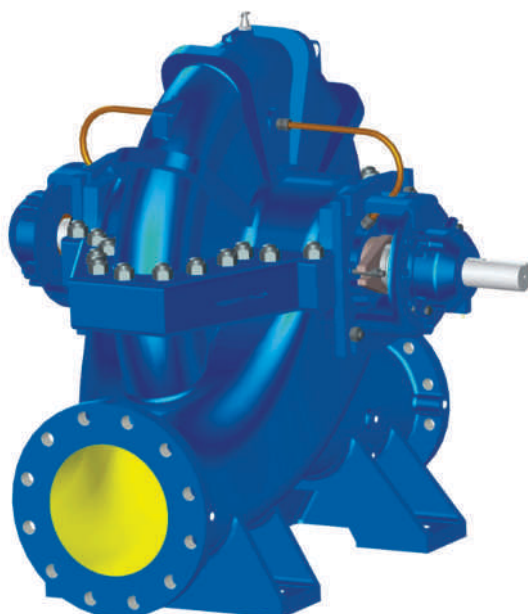




Enriching Lives

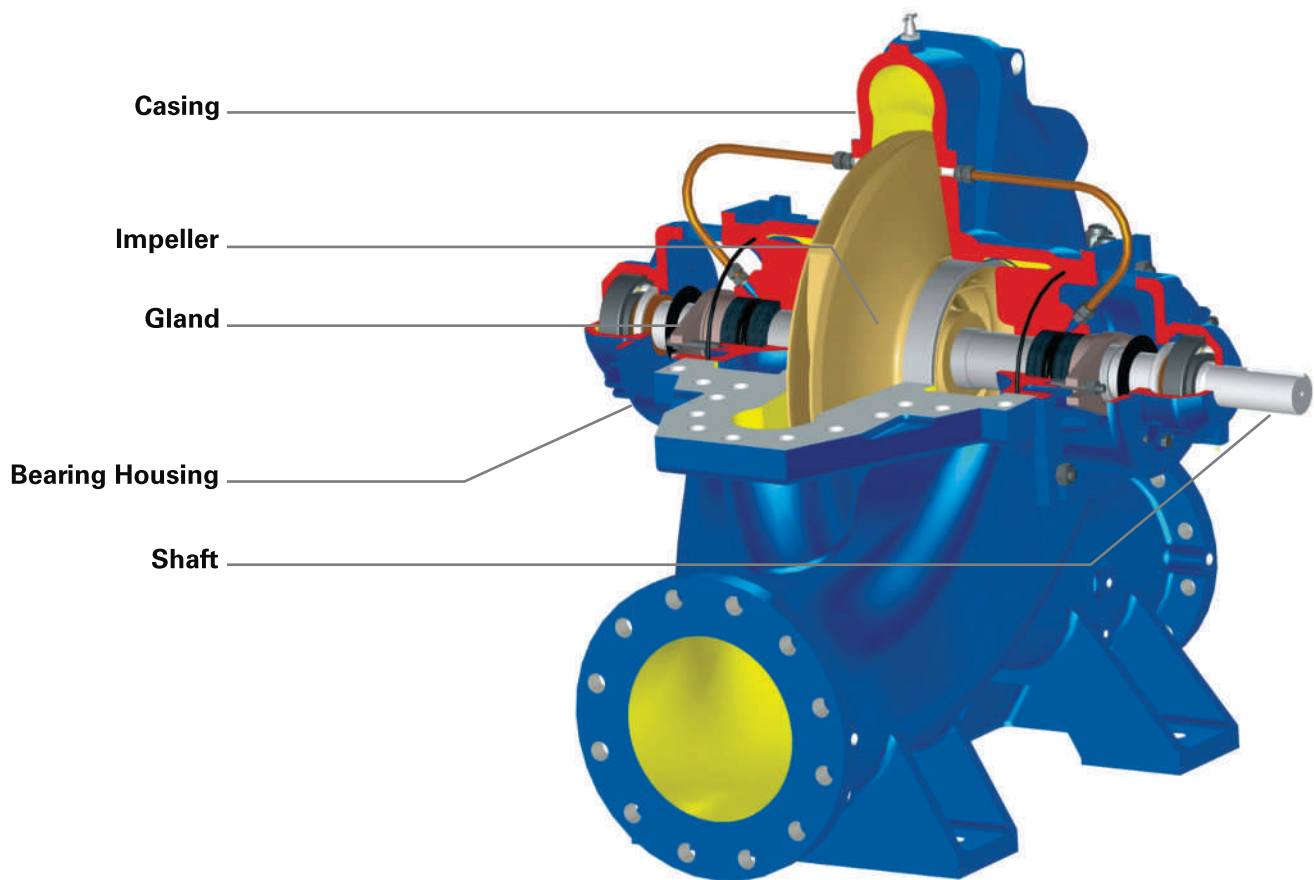
## HORIZONTAL AXIALLY SPLIT-CASING PUMPS

TYPE- SCT (Extended)



**KIRLOSKAR BROTHERS LIMITED**

A Kirloskar Group Company



## RANGE

Delivery size up to 350 mm

Capacity up to 4000 m<sup>3</sup>/hr

Head up to 240 metres

Temperature range (-) 10°C to 100°C

## APPLICATIONS

For handling water / liquids with slight impurities against medium and high heads in general industries, petroleum refineries, air conditioning and refrigeration systems, water works, irrigation, waste water treatment, process plants, fire protection systems and mining. Suitable for liquids having temperature in the range of (-) 10°C to 100°C

## CONSTRUCTIONAL FEATURES

These are horizontal axially split casing, single stage, double suction or single suction pumps with horizontal shaft and detachable stuffing box called Insert. Variety of models are available to operate to 50Hz.

### **Special Features :**

- Direct or gear drive
- Suitable for higher working pressures
- Rotating assembly available for inspection or maintenance by removing only upper half casing without disturbing suction and delivery piping and motor
- Pump axis horizontal or vertical
- Vertical pump, direct drive or with universal shaft arrangement
- Better hydraulic and overall efficiency due to latest design and manufacturing techniques
- High efficiency in the operating range
- Good suction performance and low NPSH
- Stable characteristics
- Minimum maintenance required
- Vibration free performance
- Highest reliability

### **Pump Casing :**

Horizontal axially split volute type. Suction and discharge nozzles and supporting feet are cast integral with lower half casing.

### **Impeller :**

Double or single suction type accurately balanced. Hydraulic thrust is balanced automatically because of pressure equalization on both sides of the impeller.

### **Shafts :**

The high tensile steel shaft accurately machined and ground is supported by antifriction bearings. The shaft is protected by shaft sleeves from wear in stuffing box area.

### **Stuffing Box :**

Can be sealed by gland packing or by mechanical seal and is suitable for liquids having temperature upto 100°C.

### **Bearings :**

Deep groove ball bearings are provided. Standard lubrication is grease.

### **Direction Of Rotation :**

Standard : Clockwise viewed from driving end.

Optional : Anticlockwise viewed from driving end.

### **Drive :**

Suitable for electric motor or diesel engine

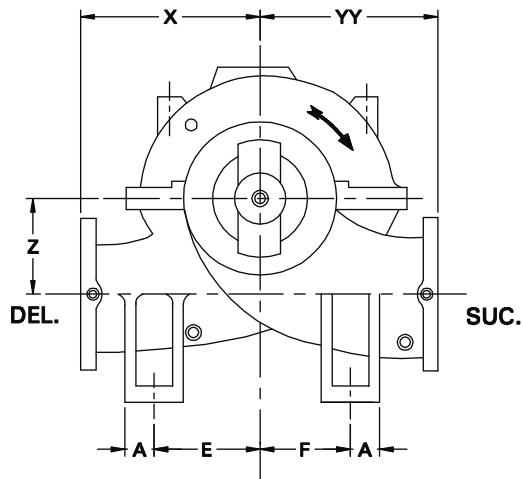
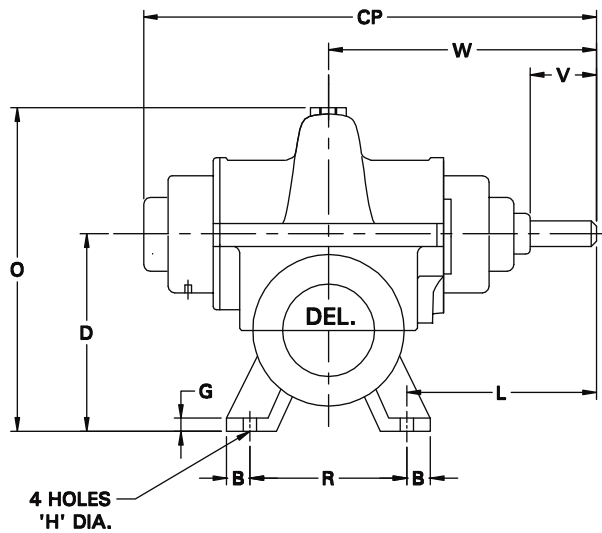
### **Flanges :**

Standard : Drilled to BS : 4504 PN 16 / PN 25

Optional : DIN / ASA with suitable pressure rating depending upon model

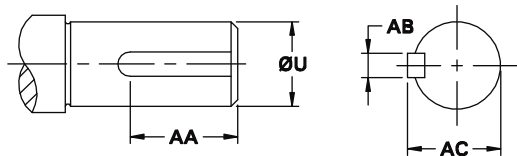
GENERAL DIMENSIONS / MOUNTING DETAILS

Single Stage Pump



VIEW FROM DRIVING END

SHAFT END DETAILS



UNIT NO.	ØU m6	AA	AB	AC
1E	65	80	20	69.9
2E	85	95	22	90.4
3E	95	130	25	100.4

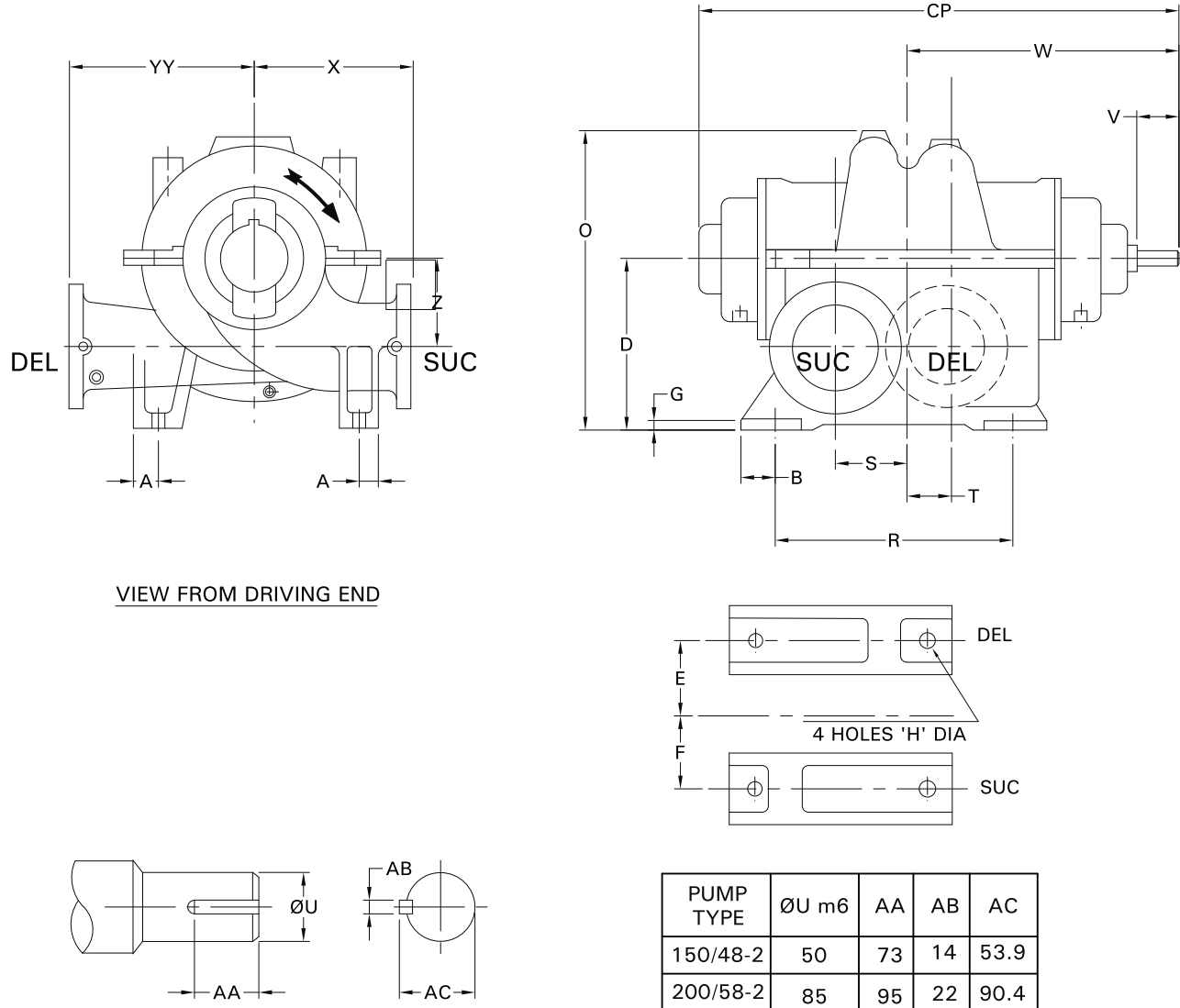
DIMENSIONS

Pump Type	Unit No.	SUC	DEL	A	B	D	E	F	G	H	O	R	V	W	X	Z	CP	YY	L	WT. Kg.						
200/58	1E	250	200	60	50	560	375	375	25	18.5	955	400	105	615	550	335	1110	550	415	740						
300/34		350	300			650	240	380			1005				450	330		600		745						
250/42	2E	300	250	70	55	580	350	350	28	23	935	480	125	740	550	310	1340	650	510	905						
250/51		300	250								960				600			971								
250/68		300	250			700	350	430	30		1180				480	125		740		700	400	700	510	1455		
300/59		350	300																	350	28	1140	500	370	700	1354
350/39		350	350																	330	330	28	1100	500	370	700
300/48	3E	350	300	70	55	650	400	400	28	23	1060	610	150	852	600	345	1535	680	547	1050						
300/77		350	300	100		800	500	500		27	1345	610			150	852		800	450	800	527	2000				
350/44		450	350	70		750	400	400	28		27	1205			650	150		852	600	400	700	527	1429			
350/54		450	350	80								800			1206	1300		750	420	740	1956					
350/66		450	350			800																1300	750	420	740	1956

NOTES:  
1) All dimensions are in mm

GENERAL DIMENSIONS / MOUNTING DETAILS

Two Stage Pump



PUMP TYPE	ØU m6	AA	AB	AC
150/48-2	50	73	14	53.9
200/58-2	85	95	22	90.4

DIMENSIONS

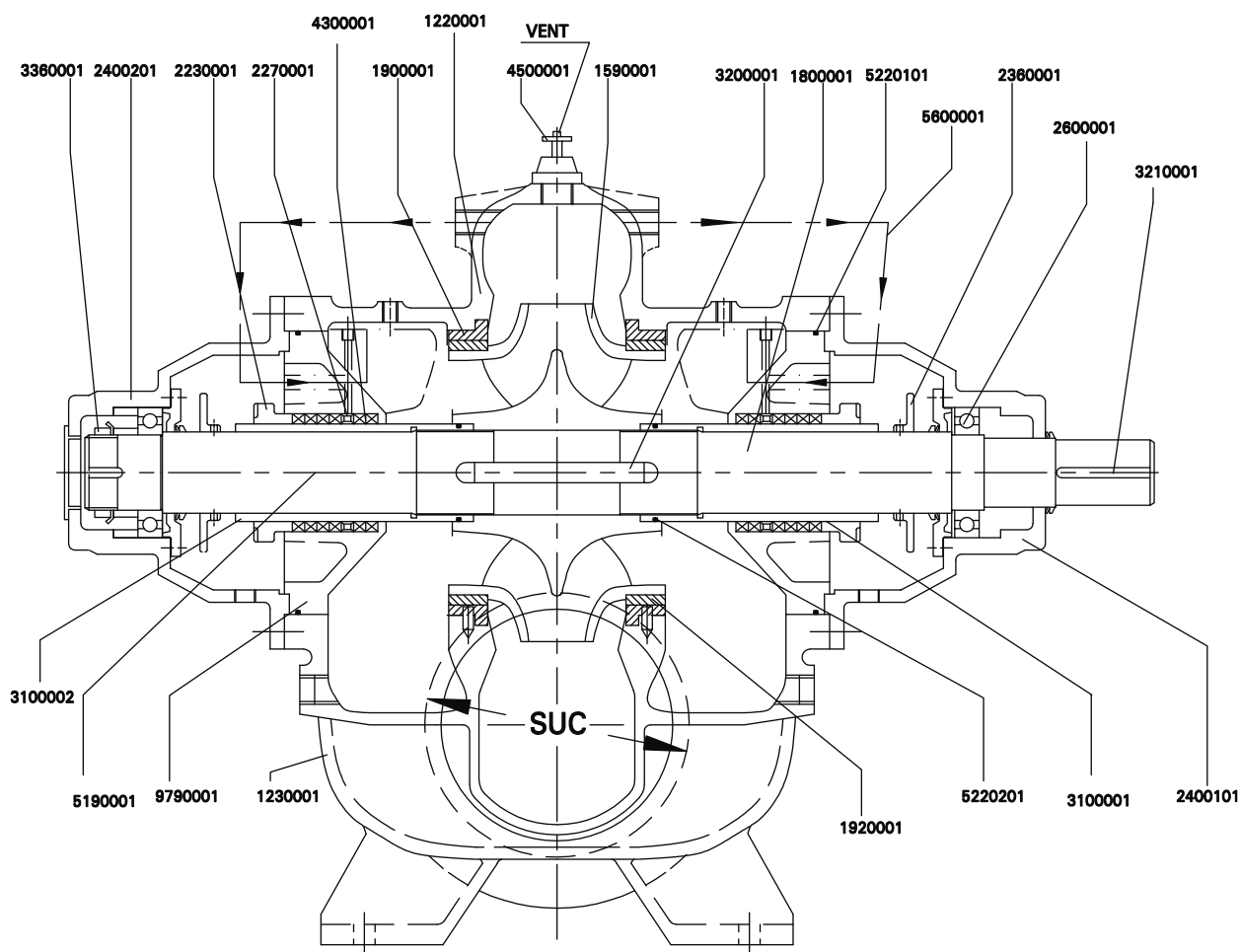
Pump Model	SUC	DEL	A	B	D	E	F	G	H	O	R	V	W	X	Z	CP	YY	L	S	T	Wt Kg
150 / 48-2	200	150	70	50	500	300	300	20	23	870	460	105	615	575	260	1110	550	415	65	65	980
200 / 58-2	250	200	80	50	600	500	500	30	27	1045	620	125	800	750	310	1455	600	490	75	75	1600

NOTES:

1) All dimensions are in mm

## CROSS SECTIONAL VIEW

### Single Stage Pump

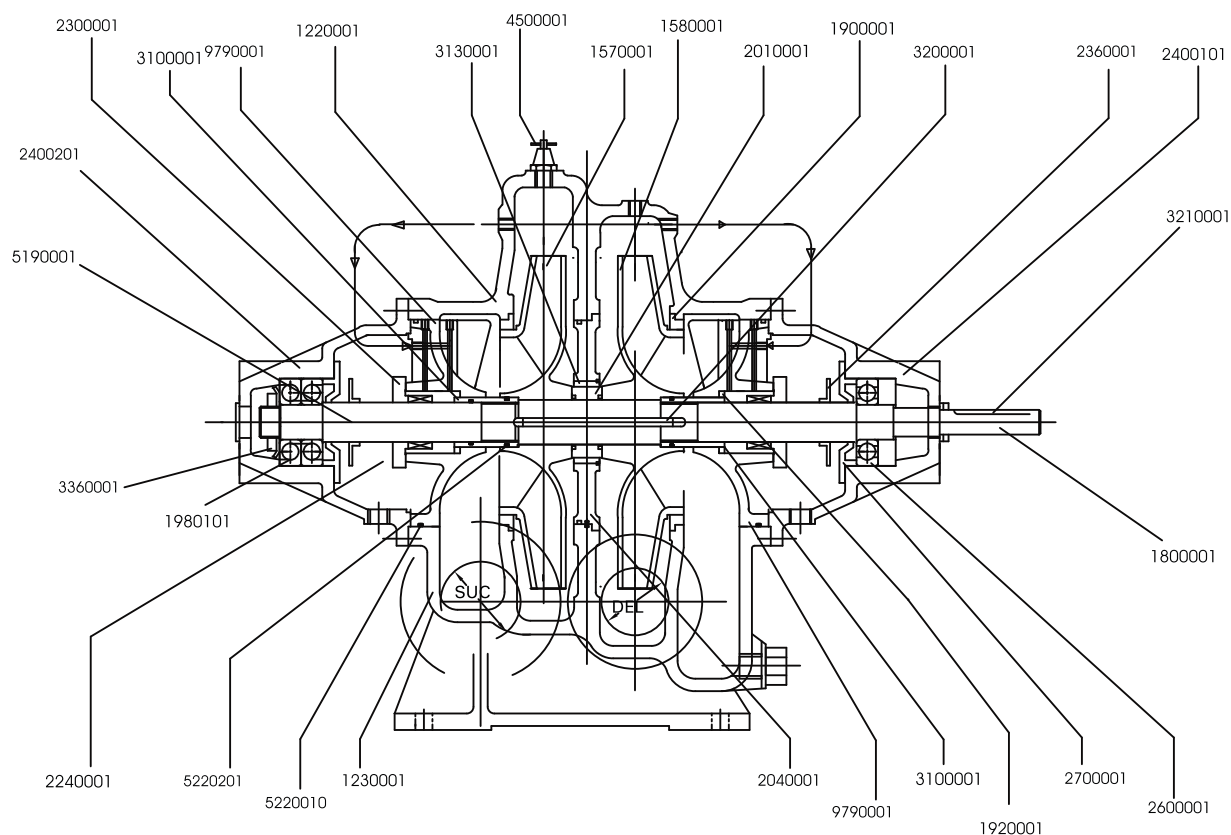


### INTERCHANGEABILITY OF COMPONENTS

PART NO.	NAME OF THE PART	TOTAL NO. OF PARTS	PUMP TYPE											
			200 / 58	300 / 34	250 / 42	250 / 51	250 / 68	300 / 59	350 / 39	300 / 48	300 / 77	350 / 44	350 / 54	350 / 66
12200	Upper Half Casing	12	1	2	3	4	5	6	7	8	9	10	11	12
12300	Lower Half Casing	12	1	2	3	4	5	6	7	8	9	10	11	12
15900	Impeller	12	1	2	3	4	5	6	7	8	9	10	11	12
18000	Pump Shaft	3	1	1	2	2	2	2	2	3	3	3	3	3
19000	Wear Ring	12	1	2	3	4	5	6	7	8	9	10	11	12
22300	Gland	3	1	1	2	2	2	2	2	3	3	3	3	3
22700	Lantern Ring	3	1	1	2	2	2	2	2	3	3	3	3	3
24001	Bearing Housing D.E.	3	1	1	2	2	2	2	2	3	3	3	3	3
24002	Bearing Housing N.D.E.	3	1	1	2	2	2	2	2	3	3	3	3	3
26000	Ball Bearing	3	1	1	2	2	2	2	2	3	3	3	3	3
27000	Brg. Cover N.D.E.	3	1	1	2	2	2	2	2	3	3	3	3	3
27100	Brg. Cover D.E.	3	1	1	2	2	2	2	2	3	3	3	3	3
31000	Shaft Sleeve	3	1	1	2	2	2	2	2	3	3	3	3	3
31001	Locking Sleeve	3	1	1	2	2	2	2	2	3	3	3	3	3
32000	Impeller Key	3	1	1	2	2	2	2	2	3	3	3	3	3
32100	Key / Coupling	3	1	1	2	2	2	2	2	3	3	3	3	3
33600	Brg. Lock Nut	3	1	1	2	2	2	2	2	3	3	3	3	3
43000	Gland Packing	3	1	1	2	2	2	2	2	3	3	3	3	3
97901	Insert D.E.	3	1	1	2	2	2	2	2	3	3	3	3	3
97902	Insert N.D.E.	3	1	1	2	2	2	2	2	3	3	3	3	3

## CROSS SECTIONAL VIEW

### Two Stage Pump



### INTERCHANGEABILITY OF COMPONENTS

PART NO.	NAME OF THE PART	TOTAL NO. OF PARTS	PUMP TYPE			
			100/36-2	125/42-2	150/48-2	200/58-2
12200	Upper Half Casing	4	16	17	18	19
12300	Lower Half Casing	4	16	17	18	19
15700	Impeller 1st Stage	4	19	20	21	22
15800	Impeller 2nd Stage	4	19	20	21	22
18000	Pump Shaft	3	5	5	6	2
19000	Wear Ring	3	5	5	6	2
20100	Spacer	3	5	5	6	2
20400	Inter Stage Ring	3	5	5	6	2
22300	Split Gland	3	5	5	6	2
22400	Gland Plate	3	5	5	6	2
22700	Lantern Ring	3	5	5	6	2
24001	Brg. Housing D.E.	3	5	5	6	2
24002	Brg. Housing N.D.E.	3	5	5	6	2
26000	Ball Bearing	3	5	5	6	2
27000	Brg. Cover D.E.	3	5	5	6	2
27100	Brg. Cover N.D.E.	3	5	5	6	2
31000	Shaft Sleeve	3	5	5	6	2
31001	Locking Sleeve	3	5	5	6	2
31300	Inter Stage Bush	3	5	5	6	2
32000	Impeller Key	3	5	5	6	2
32100	Coupling Key	3	5	5	6	2
33600	Brg. Lock Nut	3	5	5	6	2
43000	Gland Packing	3	5	5	6	2
97900	Insert N.D.E.	3	5	5	6	2

MATERIAL OF CONSTRUCTION

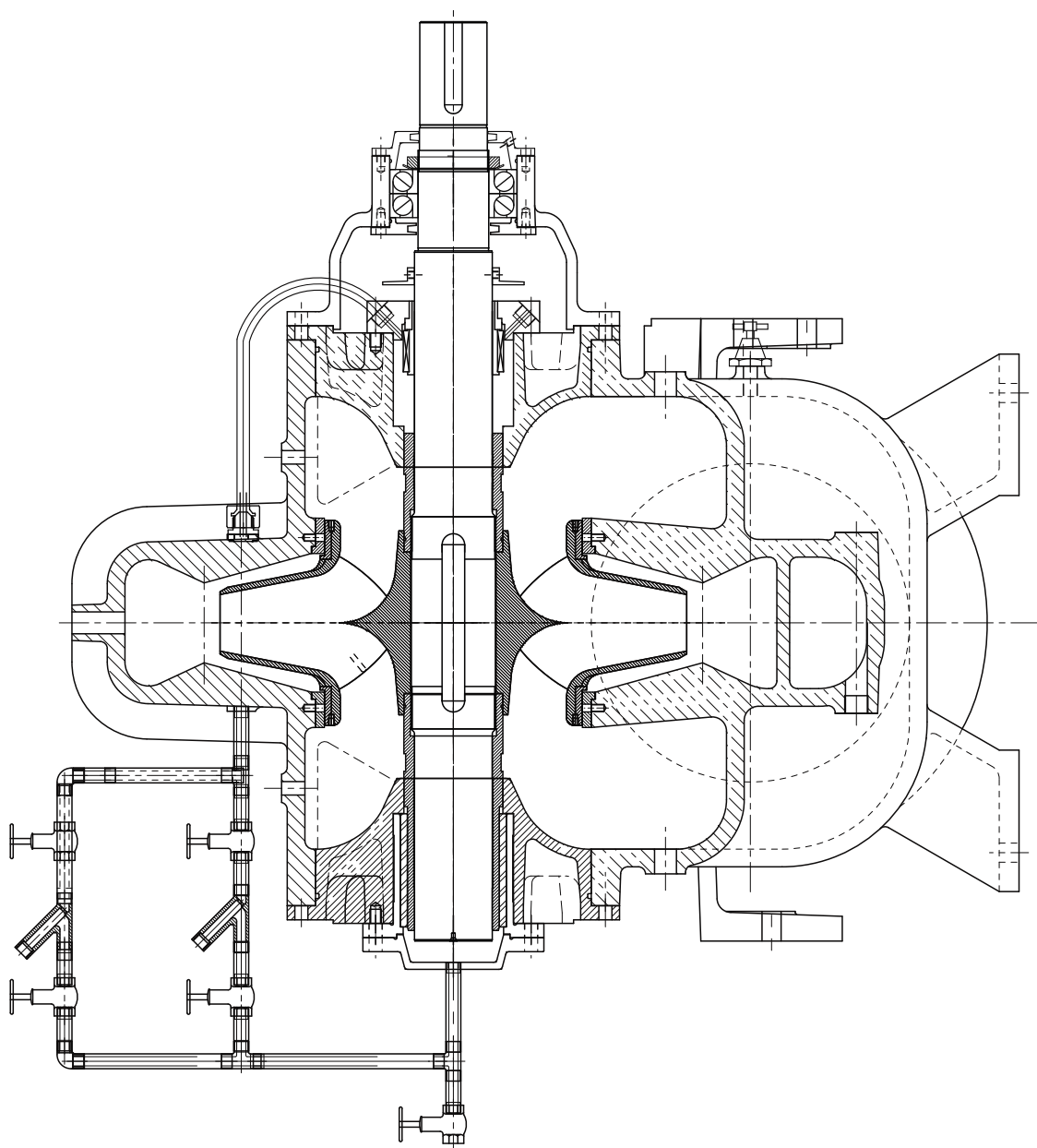
Casing Half Upper / Lower	Cast Iron / Cast Steel / Stainless Steel / Duplex Steel
Impeller	Cast Iron / Bronze / Phosphor Bronze / Cast Steel / Stainless Steel / Chrome Steel / Duplex Steel
Wear Ring	Cast Iron / Bronze / Steel
Shaft	Carbon Steel / Stainless Steel / Duplex Steel
Shaft Sleeve	Stainless Steel / Bronze

MATERIAL STANDARDS - GENERAL INFORMATION

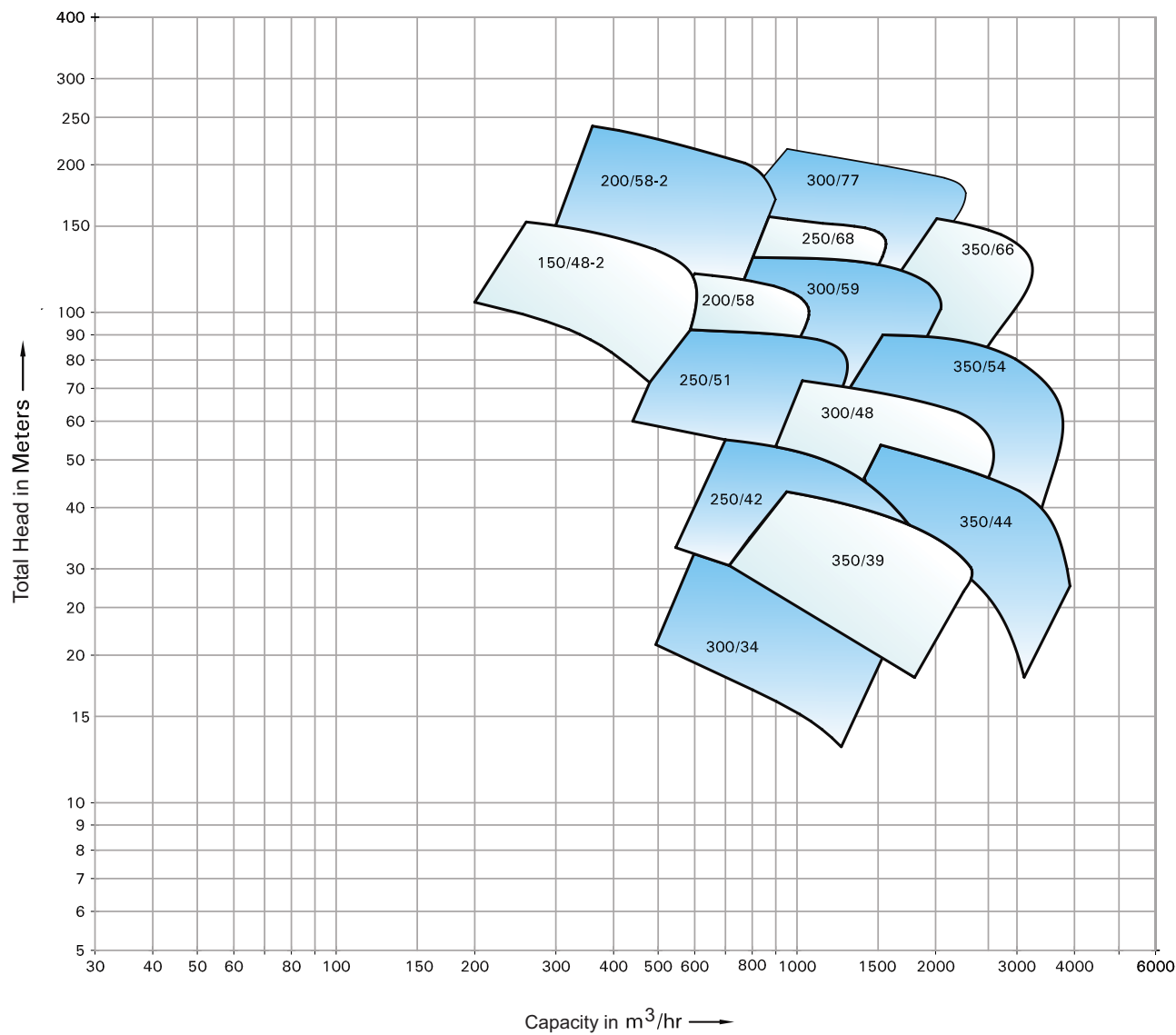
Material Type	Indian Standard (IS)	American standard (ASTM)	DIN
<b>Cast Iron</b>			
Cast Iron	IS 210 Gr. FG 260	ASTM A48 Class 40	(0.6025)DIN 1691 GG25
<b>Spheroidal Graphite Cast Iron</b>			
SG Iron (Ductile Iron)	IS 1865 Gr 400/15	A536, 60-40-18	(0.7040)DIN1693 GGG40
SG Iron (Ductile Iron)	IS 1865 Gr 500/7	A536, 65-45-12	(0.7050)DIN1693 GGG50
<b>Carbon steel</b>			
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
<b>Cast Steel Grades</b>			
Cast steel		ASTMA 216 Gr. WCB	1.0619(GS-C25)
<b>Cast Stainless Steel</b>			
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)
<b>Cast Chromium StainlessSteel</b>			
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)
<b>Chromium StainlessSteel Round Bar Material</b>			
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)
<b>Cast Duplex Steel</b>			
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
<b>Non Ferious Materials</b>			
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)		



**Vertical Execution**



SCT (Extended) Pumps at 1450 rpm - 50 Hz



OUR GLOBAL PRESENCE



# 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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#### OUR COMPANIES

