



Enriching Lives

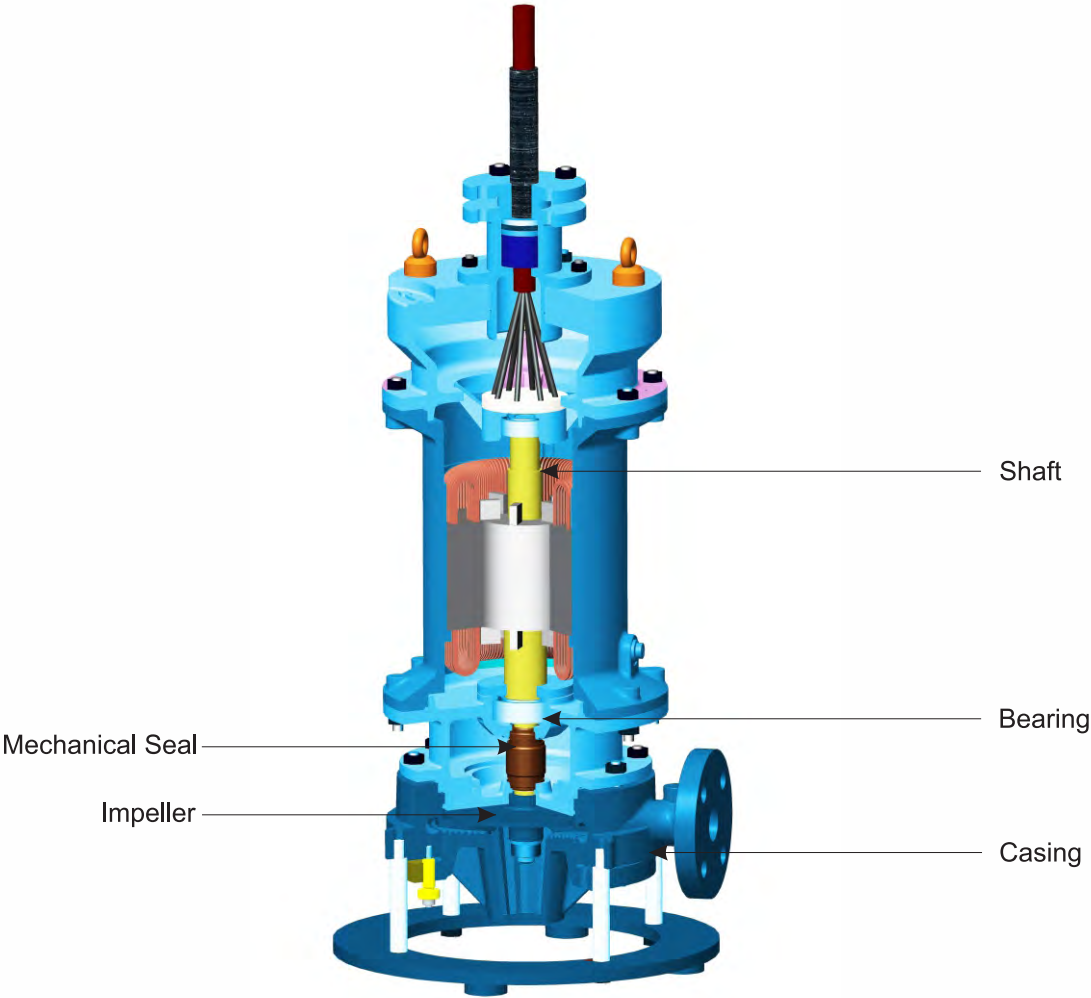
## SUBMERSIBLE SEWAGE PUMPS

TYPE - NS (HIGH SPEED)



**KIRLOSKAR BROTHERS LIMITED**

SUBMERSIBLE SEWAGE PUMP TYPE -NS



RANGE		APPLICATIONS	FEATURES
Delivery size	: up to 65 mm	Contaminated Effluents	Compact design with better submergence Pump with cutting and tearing arrangement Portable and stationary installation
Capacity (Max)	: up to 120 m³/hr	Industrial waste water	
Head (Max)	: up to 65 m	Storm water	
Max.		Trench and tunnel water	
Permissible solid size	: up to 50 mm	Drain water	
Speed	: 2900 rpm	Saline water	
Frequency	: 50 Hz	Drainage water	
		Sewage water	

Note: For higher range please refer Product Engineering Division (PED)

## CONSTRUCTIONAL FEATURES

Single suction pumps with semi-open impeller. Pump can be offered in stationary as well as portable arrangements. The stationary arrangement is supplied with pump connector unit and connector unit is connected to pump support bracket with rubber diaphragm to make it leak proof joint. All pumps are supplied with cutting and tearing arrangement.

### Pump Casing

The radially split casing is provided with delivery nozzle cast integral with it. Suction is axial and delivery nozzle is central and horizontal. Specially designed semi concentric casing results in reduced radial thrust and ensures vibration free performance.

### Impeller

Impellers are of semi open type.

### Shaft

The high tensile steel shaft accurately machined and ground is supported by two ball bearings in the motor above the impeller. Shaft is designed to transmit the power without undue vibrations and deflections. The shaft is common for pump and motor of mono-block design.

### Mechanical Seal

Double mechanical seal with back to back arrangement is provided to ensure no ingress of pumping liquid in the motor.

### Bearings

Bearing are grease lubricated and sealed .

### Direction of Rotation

Direction of rotation is clockwise when viewed from motor top.

### Drive

Motor is dry type submersible and cooled by liquid being handled.

Motors are air tested for leak proof operation.

Degree of Protection for Motor: IP68 as per IS: 2147

Class of Insulation: F / H (optional)

Voltage: 415 V +/-10%

Frequency: 50Hz +/- 5%

Type of Starting: DOL up to 9.3 KW and SDS beyond 9.3 KW rating.

### Cable

Cable for the pump is EBXL type [Electron Beam radiated] which is suitable for working in pumping media like sewage and is having higher current capacity than conventional cables of PVC type.

### Control Panel

Control panel consist of starter, switch, fuse and safety features.

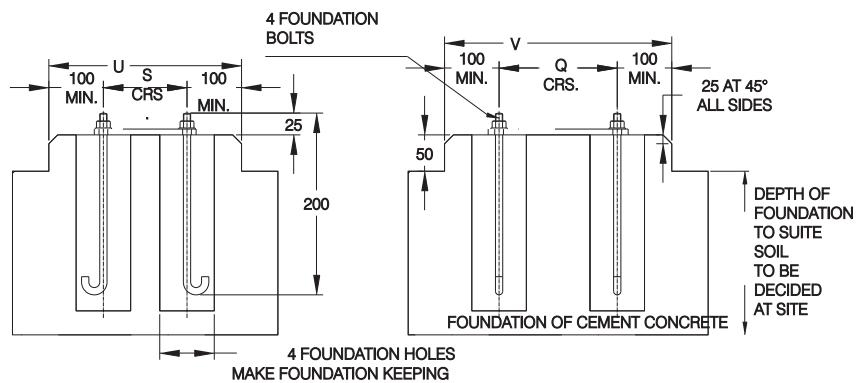
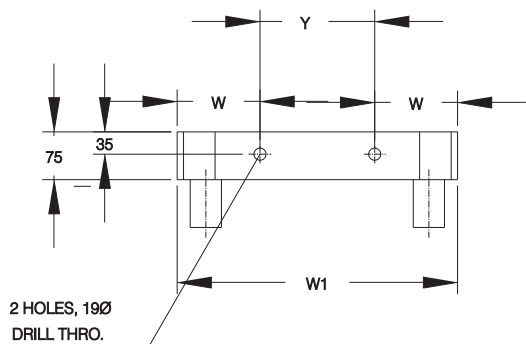
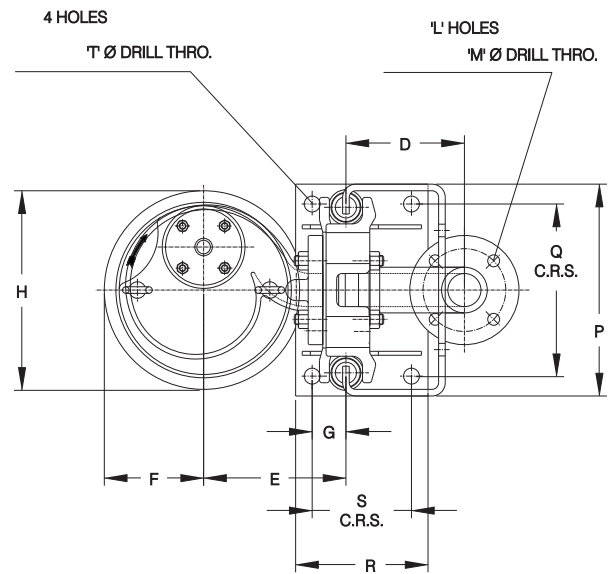
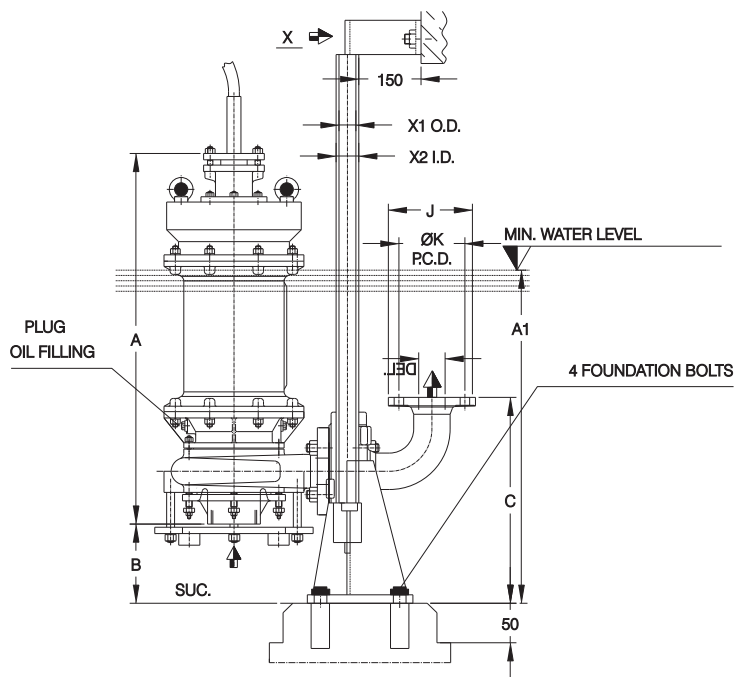
Safety features are:

- Single phasing prevention
- Overload /under voltage/ reverse phasing relays
- Moisture sensing unit for detecting ingress of moisture or water into the oil chamber
- Liquid level controllers to avoid dry running
- Thermister sensing unit for High temperature at the motor winding.

### Flanges

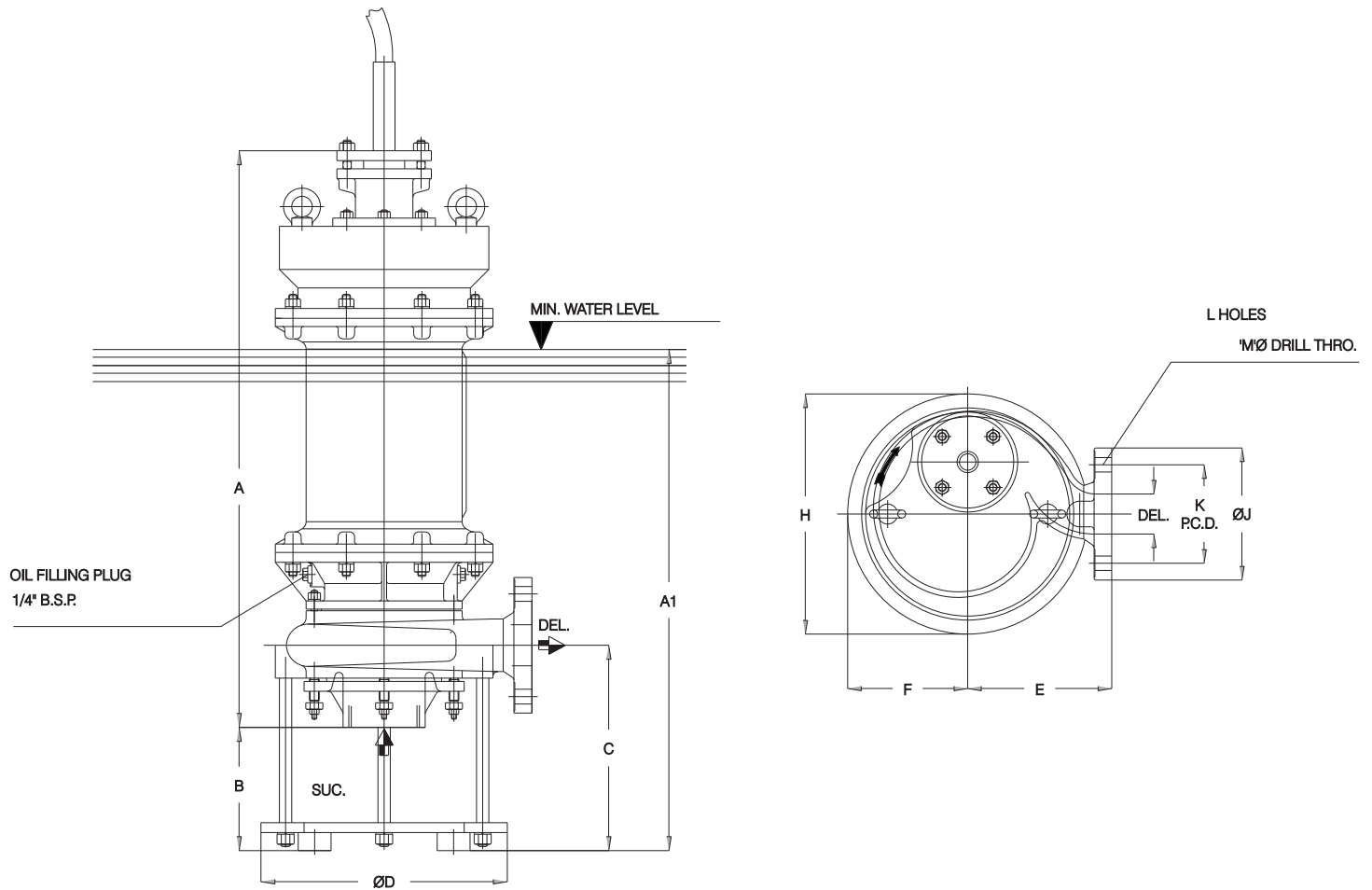
Standard drilling to IS: 6392 table 15 / PN16

# FOUNDATION PLAN DRAWING (STATIONARY INSTALLATION)



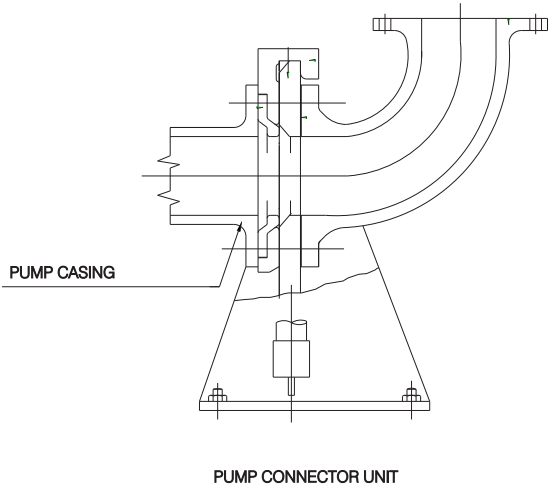
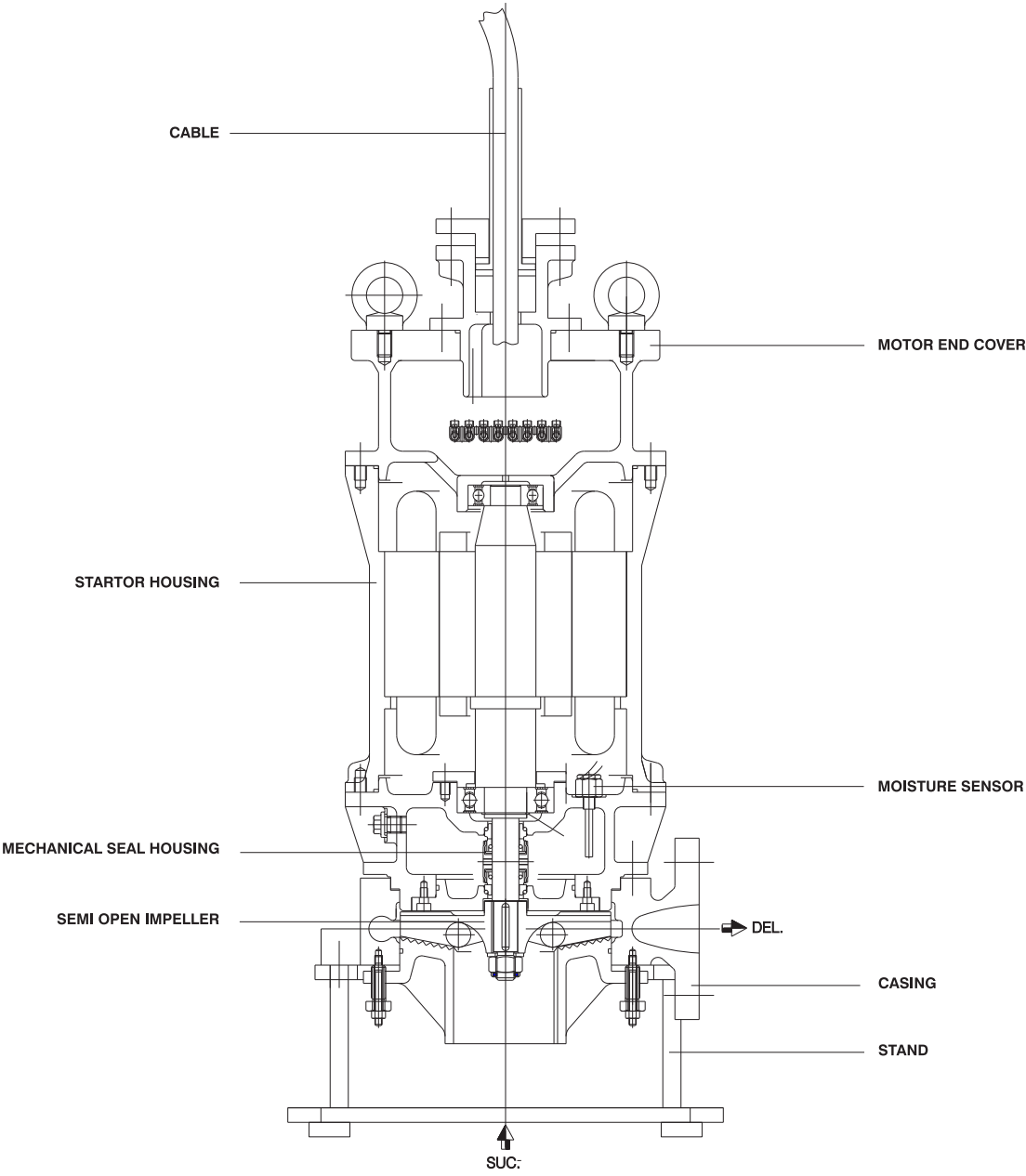
SR. NO.	PUMP TYPE	MOTOR KW	SUCTION & DELIVERY NOMINAL SIZE		A	B	C	D	E	F	G	H	J DIA.	K P.C.D.	L M	P	Q CRS.	R	S CRS.	T	U	V	W	W1	A1	GUIDE PIPE X1 / X2	Y	FOUNDATION BOLT SIZE
			NWS	NWD																								
01	NS 20/20QT	3.7 5.5	60	20	682	60	215	103	208	178	62	355	105	75	$\frac{4}{14}$	230	180	175	125	14	325	380	47	245	500	25/34	150	M12 x 150 LONG
02	NS 20/13QT	0.75 1.1	55	20	475	76	215	103	178	143	62	285	105	75	$\frac{4}{14}$	230	180	175	125	14	325	380	47	245	400	25/34	150	M12 x 150 LONG
03	NS 20/13QT	1.5 2.2	55	20	486	76	215	103	178	143	62	285	105	75	$\frac{4}{14}$	230	180	175	125	14	325	380	47	245	450	25/34	150	M12 x 150 LONG
04	NS 32/13QT	1.5 2.2	55	32	510	80	258	128	185	133	51	265	140	100	$\frac{4}{18}$	320	260	200	150	14	350	460	70	320	500	32 / 43	180	M12 x 150 LONG
05	NS 32/13QT	3.7 5.5	55	32	672	80	258	128	185	133	51	265	140	100	$\frac{4}{18}$	320	260	200	150	14	350	460	70	320	550	32 / 43	180	M12 x 150 LONG
06	NS 32/16QT	3.7 5.5	55	32	697	55	258	128	215	145	51	290	140	100	$\frac{4}{18}$	320	260	200	150	14	350	460	70	320	550	32 / 43	180	M12 x 150 LONG
07	NS 32/16QT	7.5	55	32	680	55	258	128	215	145	51	290	140	100	$\frac{4}{18}$	320	260	200	150	14	350	460	70	320	550	32 / 43	180	M12 x 150 LONG
08	NS 40/16QT	3.7 5.5	80	40	694	105	314	130	209	160	55	320	150	110	$\frac{4}{18}$	320	260	200	150	14	350	460	70	320	550	32 / 43	180	M12 x 150 LONG
09	NS 40/16QT	7.5	80	40	682	105	314	130	209	160	55	320	150	110	$\frac{4}{18}$	320	260	200	150	14	350	460	70	320	550	32 / 43	180	M12 x 150 LONG
10	NS 40/20QT	7.5	65	40	675	105	314	130	209	190	55	380	150	110	$\frac{4}{18}$	320	260	200	150	14	350	460	70	320	550	32 / 43	180	M12 x 150 LONG
11	NS 50/13QT	3.7 5.5	80	50	700	150	491	257	219	145	51	290	165	125	$\frac{4}{18}$	320	260	200	150	14	350	460	70	320	550	32 / 43	180	M12 x 150 LONG
12	NS 50/13QT	7.5	80	50	687	150	491	257	219	145	51	290	165	125	$\frac{4}{18}$	320	260	200	150	14	350	460	70	320	550	32 / 43	180	M12 x 150 LONG
13	NS 50/16QT	7.5	90	50	750	150	491	257	239	160	51	320	165	125	$\frac{4}{18}$	320	260	200	150	14	350	460	70	320	550	32 / 43	180	M12 x 150 LONG
14	NS 65/13QT	7.5	90	65	690	150	542	312	234	150	51	300	185	145	$\frac{4}{18}$	330	270	225	175	14	350	460	80	340	600	32 / 43	180	M12 x 150 LONG
15	NS 65/16QT	15	Please Refer PED																									

## OUTLINE DRAWING (PORTABLE PUMP)



SR. NO.	PUMP TYPE	MOTOR KW	SUCTION & DELIVERY NOMINAL SIZE		A	B	C	D	E	F	H	J DIA.	K P.C.D.	L M	A1
			NWS	NWD											
01	NS 20/20QT	3.7 5.5	60	20	682	60	125	350	180	175	350	105	75	$\frac{4}{14}$	500
02	NS 20/13QT	0.75 1.1	50	20	475	76	125	275	150	137.5	275	105	75	$\frac{4}{14}$	400
03	NS 20/13QT	1.5 2.2	50	20	486	76	125	275	150	137.5	275	105	75	$\frac{4}{14}$	400
04	NS 32/13QT	1.5 2.2	50	32	510	80	150	300	150	150	300	140	100	$\frac{4}{18}$	450
05	NS 32/13QT	3.7 5.5	50	32	672	80	150	300	150	150	300	140	100	$\frac{4}{18}$	500
06	NS 32/16QT	3.7 5.5	50	32	697	80	150	360	180	180	360	140	100	$\frac{4}{18}$	550
07	NS 32/16QT	7.5	50	32	680	80	150	360	180	180	360	140	100	$\frac{4}{18}$	550
08	NS 40/16QT	3.7 5.5	80	40	694	75	150	360	170	180	360	150	110	$\frac{4}{18}$	550
09	NS 40/16QT	7.5	80	40	682	75	150	360	170	180	360	150	110	$\frac{4}{18}$	550
10	NS 40/20QT	7.5	65	40	675	76	150	400	200	200	400	150	110	$\frac{4}{18}$	550
11	NS 50/13QT	3.7 5.5	80	50	662	90	150	350	180	175	350	165	125	$\frac{4}{18}$	550
12	NS 50/13QT	7.5	80	50	650	90	150	350	180	175	350	165	125	$\frac{4}{18}$	550
13	NS 50/16QT	7.5	90	50	750	85	150	400	200	200	400	165	125	$\frac{4}{18}$	550
14	NS 65/13QT	7.5	90	65	690	105	250	400	200	175	350	185	145	$\frac{4}{18}$	600
15	NS 65/16QT	15	Please Refer PED												

OUTLINE DRAWING (PORTABLE PUMP)

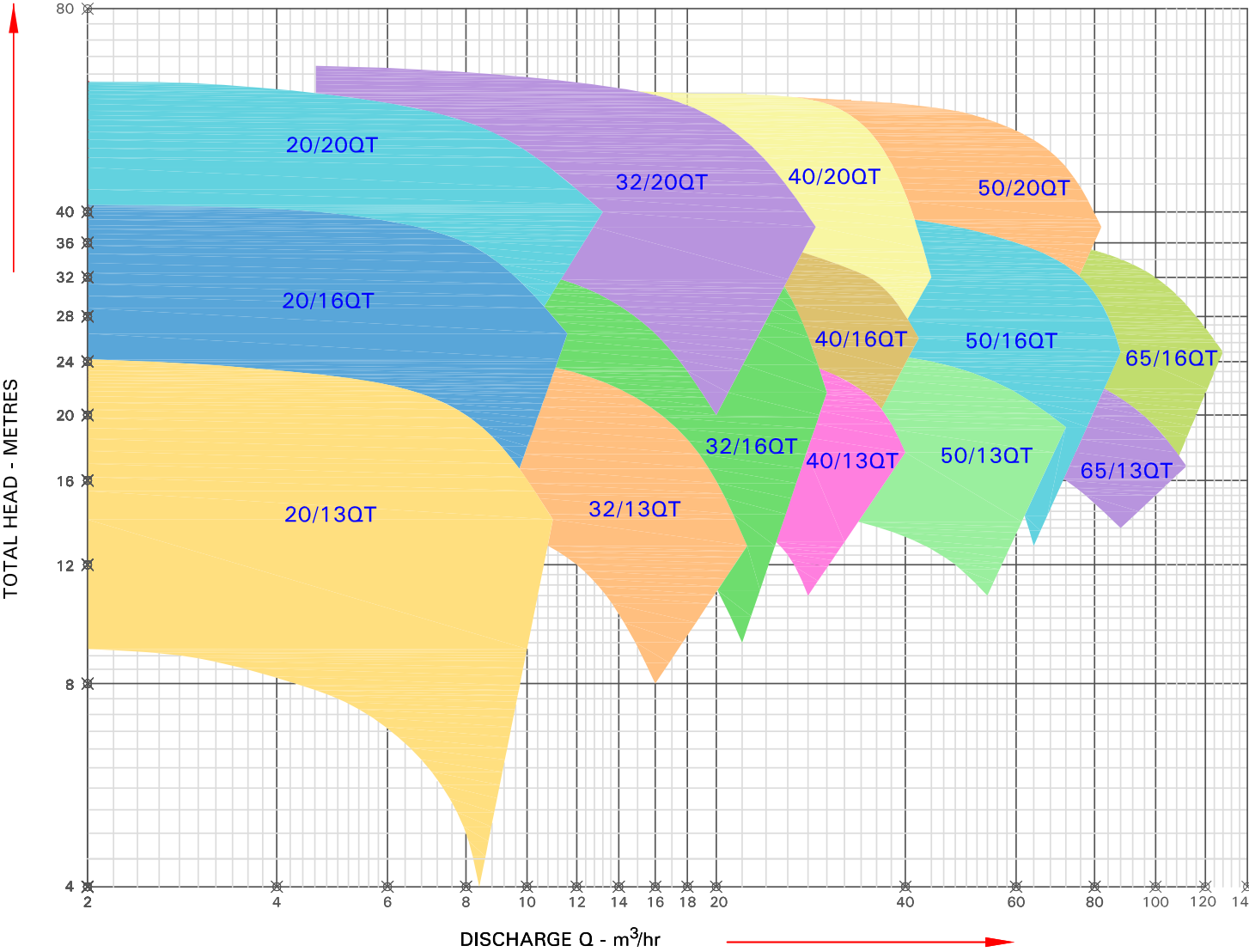


MATERIAL OF CONSTRUCTION (MOC)

Component	Standard MOC	Optional MOC
Pump Casing	CI	CI
Impeller	CS	CF8M
Shaft	SS 410	SS 410

FAMILY CURVE

NS HIGH SPEED PUMP SERIES (2900RPM)



Note: Higher range against request is available.

## 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. As the market leader in fluid management, KBL 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 & 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 and expanded 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 BV (Kirloskar Pompen BV since June 2014), a joint venture between Kirloskar Brothers International BV 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. KBL has a joint venture company with Ebara Corporation, Japan since 1988 for the manufacture of API 610 standard pumps. Kirloskar Corrocoat Private Limited is joint venture cooperation with Corrocoat Ltd., UK since 2006. KBL acquired The Kolhapur Steel Limited in 2007 and Hematic Motors in 2010. In 2014, KBL acquired SyncroFlo, Inc, the largest independent fabricator of commercial and municipal domestic water.

KBL has eight manufacturing facilities in India at Kirloskarvadi, Dewas, Kondhapuri, Shirval, Sanand, Kaniyur, Kolhapur and Karad. In addition, KBL has seven 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 plants of KBL are ISO 9001, ISO 14001 and OHSAS 18001 standards certified. They apply Total Quality Management tools using European Foundation for Quality Management (EFQM) model. The Kirloskarvadi plant of KBL is a state of art integrated manufacturing facility having one of Asia's largest hydraulic research centre with testing facility up to 5000 kW and 50,000 m<sup>3</sup>/hour.

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



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Enriching Lives

### KIRLOSKAR BROTHERS LIMITED

A Kirloskar Group Company

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