

Kirloskar

Enriching Lives

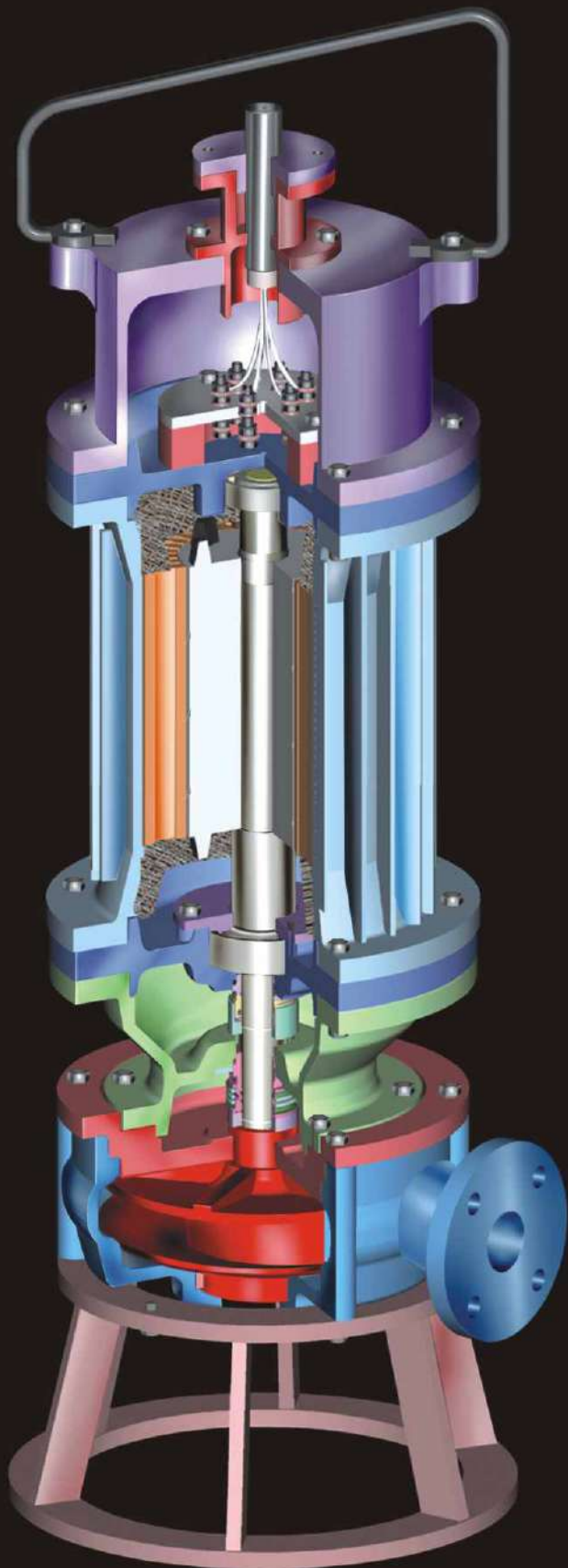
SUBMERSIBLE SEWAGE *PUMPS*



type
NS



KIRLOSKAR BROTHERS LIMITED



RANGE

Delivery size upto 300 mm

Capacity upto 1800 m³/hr (Max.)

Head upto 90 m (Max.)

Max. permissible solid size up to 300 mm

APPLICATIONS

Screened sewage

Raw sewage

Contaminated effluents

Industrial waste water

Storm water

Trench and Tunnel water

Drain water, Mine water etc.

SUBMERSIBLE SEWAGE PUMPS TYPE - NS

CONSTRUCTIONAL FEATURES

These are single stage, single suction pumps with overhung non-clogging impeller. Pumps can be offered in stationary as well as transportable arrangements. The stationary arrangement is supplied with pump connector unit and the connector unit is connected to pump support bracket with rubber diaphragm to make it leak proof joint.

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. Wide volute passage ensures non-clogging operation of the pump.

IMPELLER

Impellers are of non-clog type which allow smooth passage of solids.

Impellers are with single or multi vanes in semi-open, enclosed, or free flow designs to cater to wide applications.

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 monoblock design.

MECHANICAL SEALS

Two mechanical seals in tandem arrangement are provided to ensure no ingress of water or sewage in motor.

OPTIONAL FEATURES

- Pumps can be supplied with "Cutter Fan" arrangement at suction to agitate the liquid
- Semi-open impellers can be provided with specially designed wear plate for cutting and tearing of soft, long fibrous material.

BEARINGS

Bearings are grease lubricated and sealed for life, hence maintenance free.

DIRECTION OF ROTATION

Clockwise when viewed from motor top.

DRIVE

Motor is dry type submersible and cooled by liquid being handled. Motors are air tested for leakfree operation.

Degree of protection for motor is IP68 as per IS:2147

Class of insulation : F

Voltage : 415V $\pm$ 10%

Frequency : 50 Hz. $\pm$ 5%

Type of starting : As per requirement (DOL/Star Delta/ATS)

CABLE

A specially designed cable, 1.1 kV grade having annealed tinned copper conductor, insulated with Electron Beam Irradiated cross-linked elastomeric compound (compatible for continuous operation at 120° C) cores laid up with a proof cotton binder tape and sheathed overall with Electron Beam Irradiated Cross-linked HD HOFR elastomeric compound and generally conforming to IS 9968 Part I. The cable with this unique combination of insulating and sheathing material offers best resistance to acidic or alkaline sewage medium and to the effluent gases coming out of the sump. The cable is more flexible than PVC cable making coiling and handling easier and light in weight compared to PVC cable of the same size.

CONTROL PANEL

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

Safety features are:

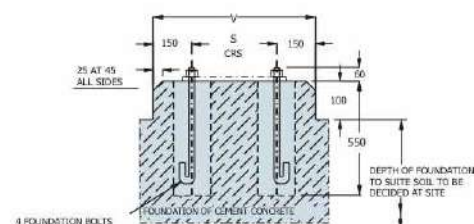
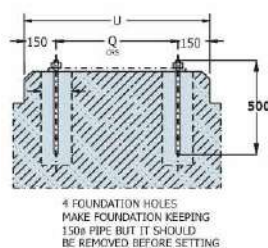
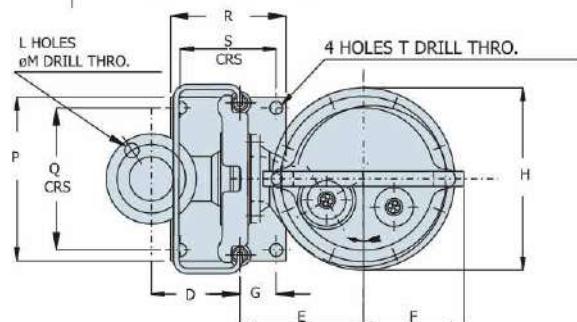
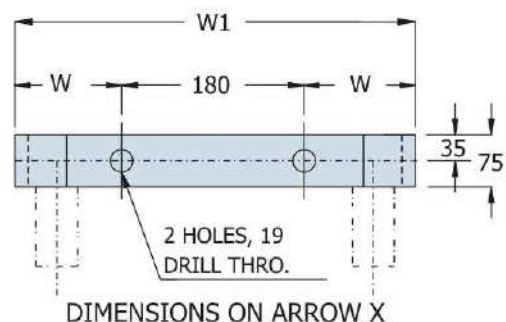
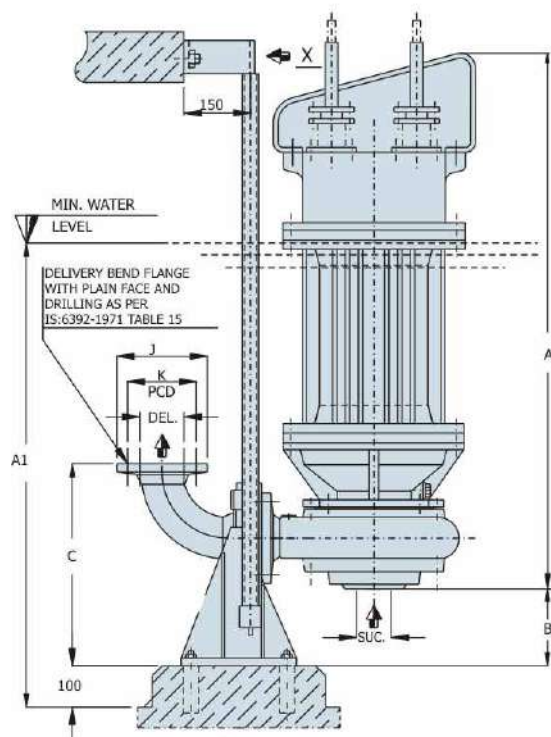
-  Single phasing prevention
-  Overload relays
-  Moisture sensing unit for detecting ingress of moisture or water into oil chamber.
-  Liquid level controllers to avoid dry running.
-  Under voltage / Reverse phasing

FLANGES

Standard drilling to IS 6392 table 15.

SUBMERSIBLE SEWAGE PUMPS TYPE - NS

STATIONARY INSTALLATION I & II

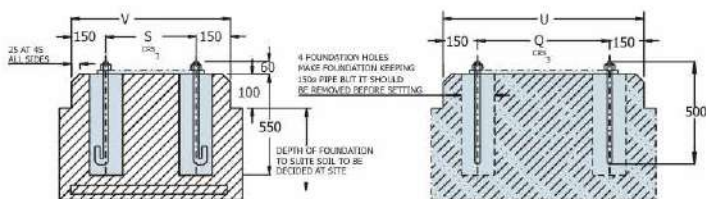
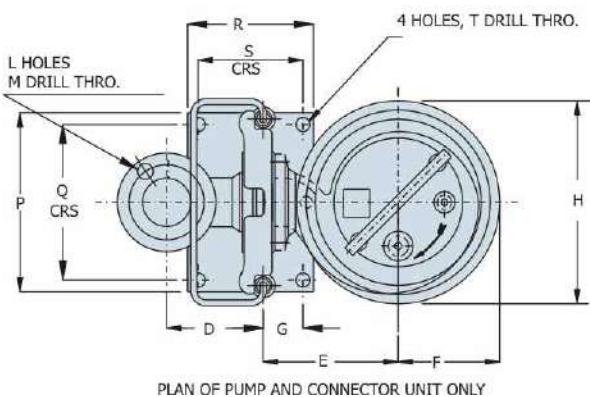
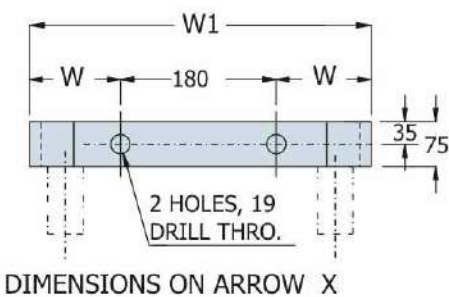
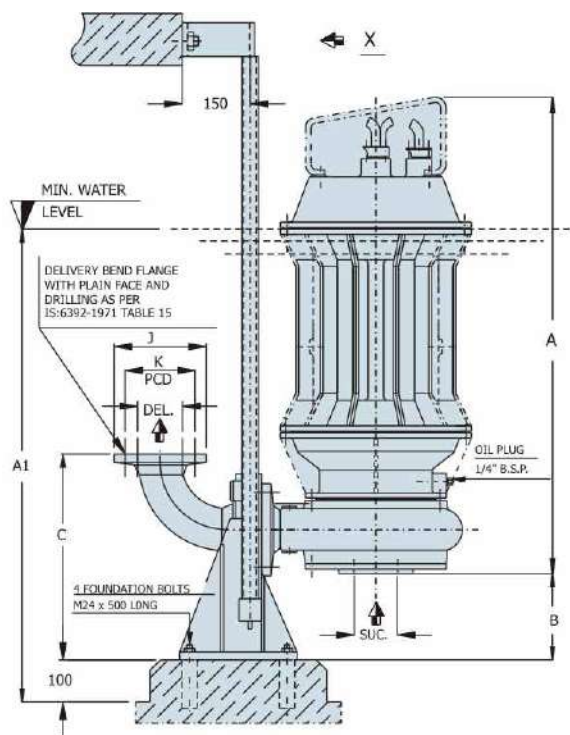


PLAN OF PUMP AND CONNECTOR UNIT ONLY

PUMP TYPE	MOTOR UNIT	SUC. & DEL. SIZE																								GUIDE PIPE I.D./O.D	FOUNDATION BOLT SIZE	
		NOMINAL SIZE		OPENING SIZE		A	B	C	D	E	F	G	H	J	K	L/M	P	Q	R	S	T	U	V	W	W1			A1
		NWS	NWD	NWS	NWD									DIA	P.C.D		CRS		CRS									
NS 50/20	I	80	50	82	50	985	173	491	256	239	225	55	460	165	125	4/18	320	260	200	150	24	560	450	70	320	900	32/43	M20 x 500 L.
NS 50/20	II	80	50	82	50	1085	173	491	256	239	225	55	460	165	125	4/18	320	260	200	150	24	560	450	70	320	900		
NS 50/26	I	65	50	75	50	1020	150	491	256	284	225	55	460	165	125	4/18	320	260	200	150	24	560	450	70	320	900		
NS 50/32	II	65	50	65	50	1030	135	491	256	309	225	55	460	165	125	4/18	320	260	200	150	24	560	450	70	320	900		
NS 65/32	I	80	65	84	65	1030	140	542	312	309	225	55	460	185	145	4/18	330	270	225	175	24	570	475	80	340	900	51 / 61	M20 x 500 L.
NS 65/32	II	80	65	84	65	1130	140	542	312	309	225	55	460	185	145	4/18	330	270	225	175	24	570	475	80	340	900		
NS 80/26	I	100	80	105	80	1035	150	595	350	279	225	60	460	200	160	8/18	360	300	250	200	24	600	500	110	400	900		
NS 80/26	II	100	80	105	80	1135	150	595	350	279	225	60	460	200	160	8/18	360	300	250	200	24	600	500	110	400	900		
NS 100/26	I	125	100	130	100	1050	170	468	198	309	225	80	460	220	180	8/18	385	325	280	230	24	625	530	130	440	900	66/77	M24 x 500 L.
NS 100/26	II	125	100	130	100	1150	170	468	198	309	225	80	460	220	180	8/18	385	325	280	230	24	625	530	130	440	1000		
NS 100/32	II	125	100	130	100	1150	170	468	198	344	225	80	460	220	180	8/18	385	325	280	230	24	625	530	130	440	1000		
NS 150/26	II	150	150	165	150	1180	185	553	248	390	245	100	510	285	240	8/23	500	420	355	280	30	720	580	205	590	1000		
NS 150/32	II	150	150	165	150	1180	190	553	248	435	245	100	510	285	240	8/23	500	420	355	280	30	720	580	205	590	1000		

SUBMERSIBLE SEWAGE PUMPS TYPE - NS

STATIONARY INSTALLATION III



PUMP TYPE			SUC. & DEL. SIZE																						GUIDE PIPE I.D./O.D	FOUNDATION BOLT SIZE	
	NOMINAL SIZE		OPENING 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
	NWS	NWD	NWS	NWD																							
NS 80/40	100	80	100	80	1305	165	595	350	384	265	60	530	200	160	8/18	360	300	250	200	24	600	500	110	400	1200	51/61	M20X 500L
NS 100/32	125	100	130	100	1325	170	468	198	344	265	80	530	220	180	8/18	385	325	280	230	24	625	530	130	440	1225		
NS 100/40	125	100	125	100	1335	170	468	198	384	265	80	530	220	180	8/18	385	325	280	230	24	625	530	130	440	1235		
NS 150/26	150	150	165	150	1355	185	553	248	390	265	100	530	285	240	8/23	500	420	355	280	30	720	580	205	590	1270	66/77	M24X 500L
NS 150/32	150	150	165	150	1350	190	553	248	435	265	100	530	285	240	8/23	500	420	355	280	30	720	580	205	590	1270		
NS 150/40	150	150	160	150	1350	190	553	248	435	285	100	560	285	240	8/23	500	420	355	280	30	720	580	205	590	1270		
NS 200/32	200	200	202	200	1360	215	640	300	435	280	110	550	340	295	12/23	560	480	380	300	30	780	600	225	630	1300	66/77	M24X 500L
NS 200/40	200	200	185	200	1370	210	640	300	435	285	110	560	340	295	12/23	560	480	380	300	30	780	600	225	630	1300		