

Govt. Of Assam
Office of the Chief Engineer :: Irrigation Department :: Assam :: Chandmari :: Guwahati-3
(Mechanical Branch)

Memo No. CEI(Mech) 9 / 2019 / 25

Dated Guwahati the 12th June, 2024ADDENDUM

The Addendum are made for the SoR (Mechanical Works) for the year 2023-24 for Part-II (LIS) from this end which may be read as follows :

| Sl. No. | Description of works/item | Unit | Rate per unit (in Rs) |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------------------------------------------|
| 2.25 | <p>Supply, Installation and commissioning of 20 H.P Submerged Centrifugal Pump Set of AQUA Make/ Brand (Model : ARS) conforming to relevant IS Specification with 60 LPS minimum discharge at 10.00 metre head (approx.), working efficiently at head range 6.00 metre to 15.00 metre with 150 mm delivery size for both horizontally bottom rested in water body or horizontally suspended in water body from a floating platform like, pontoon having Class-F or appropriate class insulation conforming to relevant IS Specification coupled with 3 ph, 415 V, 50 Hz, 1000 RPM Submerged/ ARS Squirrel Cage Induction motor with overall efficiency of 80 % to be connected to power source of 400/440 volt, 50 Hz, 3-ph complete along with Starter Panel (automatic Star Delta/ Oil Immersed/ ATS Starter with protection as per IP68 against under voltage, overload, etc. in sheet enclosure of relay range 0-30 A), coupling, H.D Base Frame fitted in accurate alignment, Power Cable and Control Cable of requisite rating & length, load chain of required length including fitting, fixing of all necessary accessories and transportation of all materials to the site complete as directed.</p> <p>The job includes necessary electrical connection to Starter Panel with motor, etc. including supply of all necessary materials and installation of Pump Set in proper position with accurate alignment including testing & commissioning at site with full load condition complete as directed.</p> <p>Besides Class-F insulation protection, Starter Panel should provide protection against (a) overload, (b) oil contamination, (c) dry running, (d) high temperature, (e) reverse phasing, (f) under voltage.</p> <p>To avoid Pump dry running Control Panel should be equipped with Ammeter, Auto Manual Selector Switch, Fuse Unit Switch, Float Switches, Voltmeter, Phase Indicator Lamp, etc.</p> <p>NB: Technical Specification of Pump Set is shown in Annexure-I</p> | Job | <p>Rs 10,14,835.75</p> <p>[Rupees Ten Lakh Fourteen Thousand Eight Hundred Thirty Five and Paise Seventy Five only]</p> |

[Signature]
Chief Engineer
Irrigation Deptt.
Assam Chandmari Guwahati-3

[Signature]
12/6
Addl. Chief Engineer (Mech.)
Irrigation Department Assam
Chandmari, Guwahati-781003

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|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------|
| 2.26 | <p>Supply, Installation and commissioning of 20 H.P Submerged Centrifugal Pump Set of KBL (Kirloskar) Make/ Brand (Model : NS100/32Ni) conforming to relevant IS Specification with 60 LPS minimum discharge at 10.00 metre head (approx.), working efficiently at head range 6.00 metre to 20.00 metre with 100 mm delivery size for both vertically bottom rested in water body or vertically suspended in water body from a floating platform like, pontoon having Class-F or appropriate class insulation conforming to relevant IS Specification coupled with 3 ph, 415 V, 50 Hz, 1500 RPM Submerged/ ARS/ Squirrel Cage Induction motor with overall efficiency of 75 % to be connected to power source of 400/440 volt, 50 Hz, 3-ph complete along with Starter Panel (automatic Star Delta/ Oil Immersed/ ATS Starter with protection as per IP68 against under voltage, overload, etc. in sheet enclosure of relay range 0-30 A), coupling, H.D Base Frame fitted in accurate alignment, Power Cable and Control Cable of requisite rating & length, load chain of required length including fitting, fixing of all necessary accessories and transportation of all materials to the site complete as directed.</p> <p>The job includes necessary electrical connection to Starter Panel with motor, etc. including supply of all necessary materials and installation of Pump Set in proper position with accurate alignment including testing & commissioning at site with full load condition complete as directed.</p> <p>Besides Class-F insulation protection, Starter Panel should provide protection against (a) overload, (b) oil contamination, (c) dry running, (d) high temperature, (e) reverse phasing, (f) under voltage.</p> <p>To avoid Pump dry running Control Panel should be equipped with Ammeter, Auto Manual Selector Switch, Fuse Unit Switch, Float Switches, Voltmeter, Phase Indicator Lamp, etc.</p> <p>NB: Technical Specification of Pump Set is shown in Annexure-I</p> | Job | <p>Rs 7,28,477.15</p> <p>[Rupees Seven Lakh Twenty Eight Thousand Four Hundred Seventy Seven and Paise Fifteen only]</p> |
| 2.27 | <p>Supply, Installation and commissioning of 20 H.P Submerged Centrifugal Pump Set of KSB Make/ Brand (Model : KRTK 100-315/164 UG1-P) conforming to relevant IS Specification with 60 LPS minimum discharge at 10.00 metre head (approx.), working efficiently at head range 6.00 metre to 20.00 metre with 100 mm delivery size for both vertically bottom rested in water body or vertically suspended in water body from a floating platform like, pontoon having Class-F or appropriate class insulation conforming to relevant IS Specification coupled with 3 ph, 415 V, 50 Hz, 1500 RPM Submerged/ ARS/ Squirrel Cage Induction motor with overall efficiency of 75 % to be connected to power source of 400/440 volt, 50 Hz, 3-ph complete along with Starter Panel (automatic Star Delta/ Oil Immersed/ ATS Starter with protection as per IP68 against under voltage, overload, etc. in sheet enclosure of relay range 0-30 A), coupling, H.D Base Frame fitted in accurate alignment, Power Cable and Control Cable of requisite rating & length, load chain/ Guide wire of required length, portable</p> | | <p>Rs 7,37,359.88</p> <p>[Rupees Seven Lakh Thirty Seven Thousand Three Hundred Fifty Nine and Paise Eighty Eight only]</p> |

installation Kit including fitting, fixing of all necessary accessories and transportation of all materials to the site complete as directed.

The job includes necessary electrical connection to Starter Panel with motor, etc. including supply of all necessary materials and installation of Pump Set in proper position with accurate alignment including testing & commissioning at site with full load condition complete as directed.

Besides Class-F insulation protection, Starter Panel should provide protection against (a) overload, (b) oil contamination, (c) dry running, (d) high temperature, (e) reverse phasing, (f) under voltage.

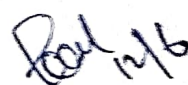
To avoid Pump dry running Control Panel should be equipped with Ammeter, Auto Manual Selector Switch, Fuse Unit Switch, Float Switches, Voltmeter, Phase Indicator Lamp, etc.

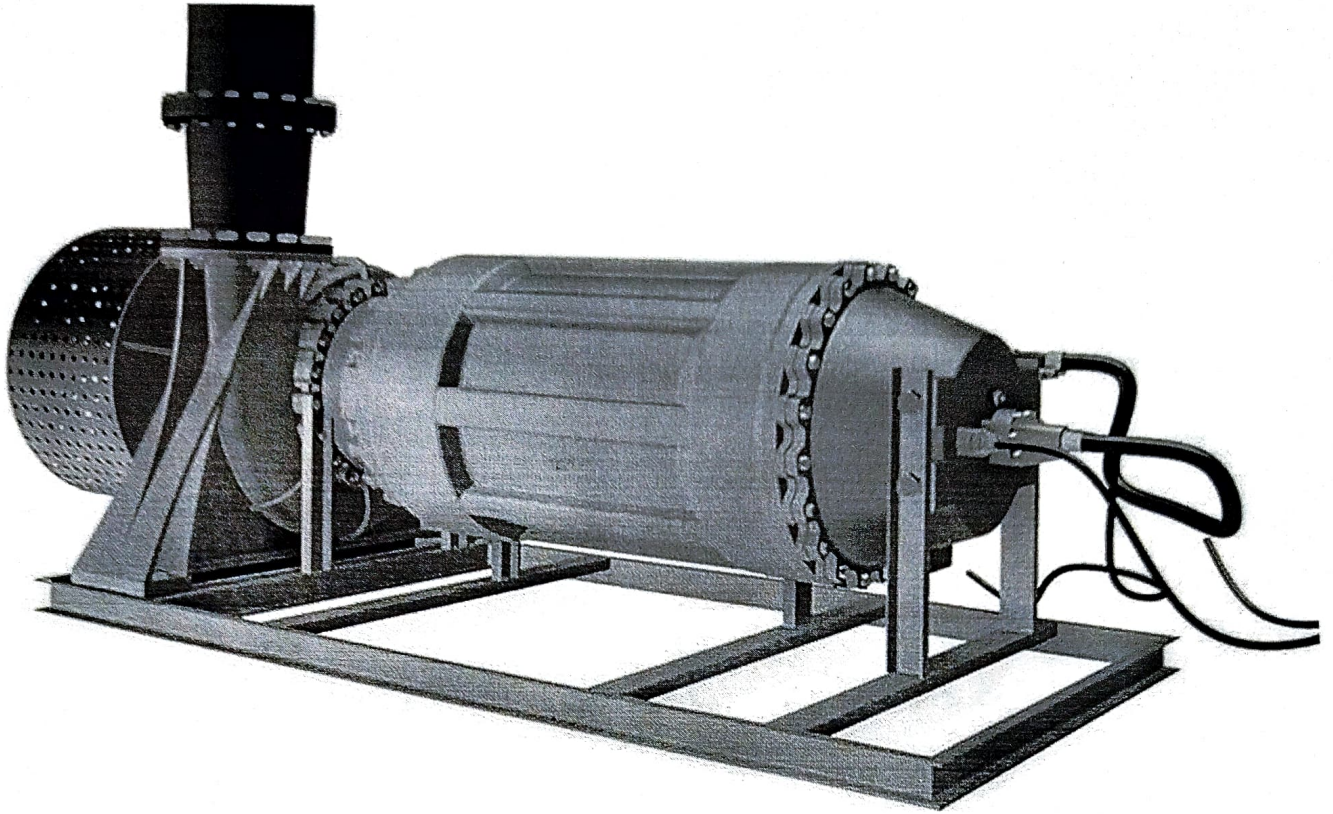
NB: Technical Specification of Pump Set is shown in Annexure-I

Important points for Selection of Pump Set :

- The first of the above Pump Sets is useful for river water, while the rest two are for use in raw water.
- Since the first of the above Pump Sets is installed horizontally as per design, it can be used in shallow water depth.
- But, the rest two Pump Sets are to be installed vertically as per design; so site suitability of the same is to be ascertained keeping in view the minimum submergence level required in respect of them for continuous pump operation prior to their procurement/ installation which is around 900 mm (minimum).


Chief Engineer
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Assam, Chandmari, Guwahati-0.


Additional Chief Engineer (Mech)
Irrigation Department, Assam
Chandmari, Guwahati-3

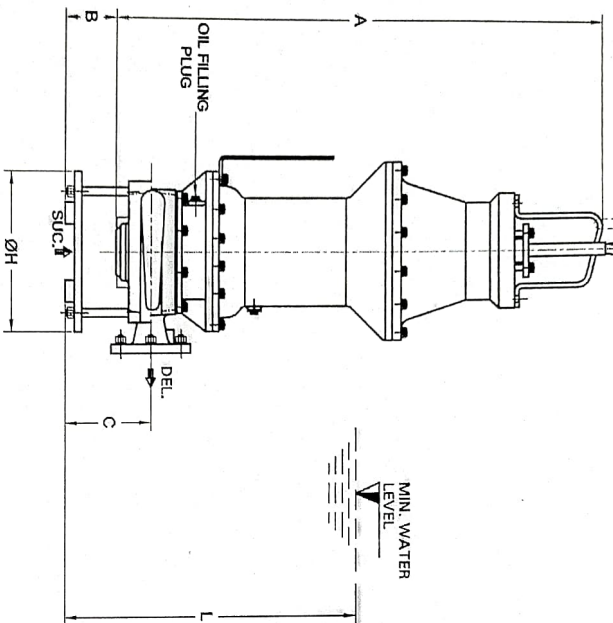


AQUA : Submerged Centrifugal Pump

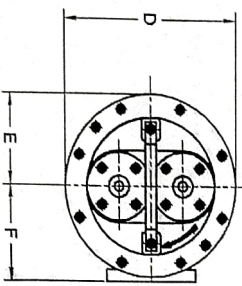
[Handwritten Signature]
Addl. Chief Engineer (Mech.)
Irrigation Department Assam
Chandmari, Guwahati-781003

TO BE SUSPENDED FROM SUITABLE SUPPORT.

CHAIN



FRONT VIEW



PLAN

176
 Addl. Chief Engineer (Mech.)
 Irrigation Department Assam
 Chandmari, Guwahati-781003

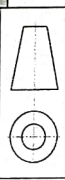


Enriching Lives

| PUMP DUTIES | | OVERALL EFFICIENCY | 64.71 % |
|------------------------------------------------------|----------------------------------|--------------------------------------|---------------------------|
| CAPACITY | 200.0 m ³ /h | | |
| DIFFERENTIAL HEAD | 16.00 m | | |
| DENSITY | 996.9 kg/m ³ | MOTOR INPUT | 13.49 kW |
| SOLID DIA MAX. | 0.00 mm | FLANGE DRILLING STANDARD AND DETAILS | |
| FLANGE DRILLING AS PER IS8382 TABLE 15 FF (Standard) | | | |
| DELIVERY | 100 mm | NOM. SIZE | 8 |
| OIL QTY (Approx.) | 4 Litre | P.C.D. | 18.00 mm |
| OIL GRADE | Sensystem-317 or Enklo-57 or EQ. | NO. OF HOLES | 8 |
| SEAL COOLING OIL DETAILS | | | |
| OIL FILLING PLUG SIZE | | 1/4" BSP | |
| DRIVER DATA | | | |
| MOTOR TYPE | SQUIRREL CAGE INDUCTION MOTOR | POLES | 4Poles |
| MOTOR RATING | 15kW | VOLTAGE | 415V +1-10% |
| NOMINAL SPEED | 1460RPM | FREQUENCY | 50HZ ± 5% |
| SUPPLY | 3PHASE, AC | DEGREE OF PROTECTION | IP88 |
| INSULATION CLASS | F Class | STARTING METHOD | Star Delta |
| ADDITIONAL DATA | | | |
| STATIC LOAD | 335.0 kg | PUMP WT (Approx.) | 335.0 kg |
| DYNAMIC LOAD | 416.8 kg | | |
| INSTALLATION TYPE | PORTABLE | DIRECTION OF ROTATION | CLOCKWISE VIEWED FROM TOP |

- NOTES :-
1. ALL DIMENSIONS ARE IN mm
 2. DO NOT LIFT OR DRAG THE PUMP USING CABLES.
 3. DO NOT RUN THE PUMP DRY.
 4. CHECK THE PHASE SEQUENCE BEFORE SWITCHING ON THE MOTOR.
 5. CHECK THE DIRECTION OF ROTATION BEFORE LOWERING THE PUMP.
 6. KEEP THE PUMP ON FLAT AND RIGID CONCRETE SURFACE.
 7. THIS DRAWING IS THE PROPERTY OF KBL AND MUST NOT BE USED OR COPIED WITHOUT THEIR AUTHORITY IN WRITING.

| PUMP | NS100/32N/15KW/4P | QUANTITY | 1 |
|---------------|-------------------|----------|-----|
| END. NO./DATE | / | TAG NO. | 001 |
| PO. NO./DATE | - | DATE | - |
| QUOTATION NO. | 156152 | MISL | - |
| O/A NO. | - | | |
| CUSTOMER | - | | |
| END USER | - | | |
| PROJECT | Detail | | |
| CONSULTANT | - | | |
| SERVICE | - | | |



Kirloskar Brothers Limited
 KIRLOS(KARVAD) - 416308 DIST. - SANGLI (INDIA)

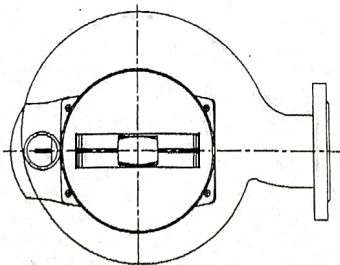
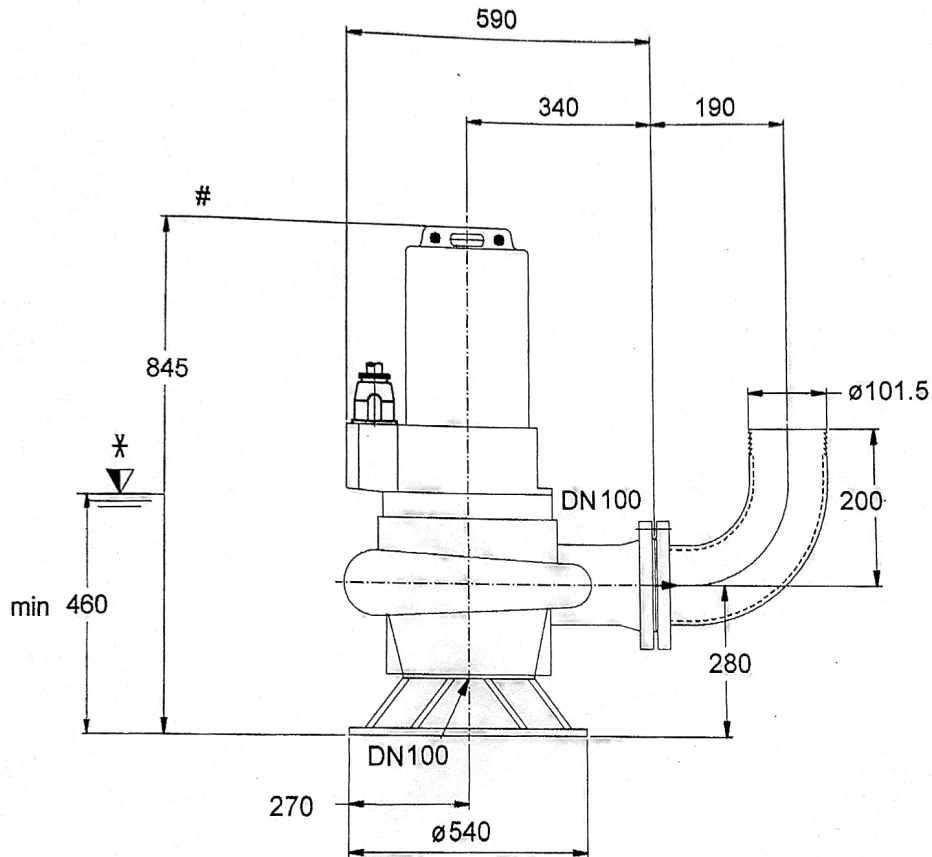
OUTLINE DRAWING

DRAWING NO. TLHS-1-0

| | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|
| A | B | C | D | E | F | H | L |
| 1,230 | 170 | 290 | 500 | 250 | 310 | 500 | 900 |

1 2 3 4 5 6 7 8

KRTK 100-315/164 UG1-P



Min. water level for continuous operation
 * Min. water level for Intermittent operation

Drawing is not to scale

Dimensions in mm

Real n/s
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