Pumping happiness across the Globe

Tormac PUMPS

RUGGED CONSTRUCTION. SOLID PERFORMANCE

SUBMERSIBLE MOTORS - **50 Hz**

CE

Products from an ISO 9001 COMPANY

INDEX

GENERAL DATA

BOREHOLE SUBMERSIBLE MOTORS › **ECO & ELEGANT** SERIES

Model Designation › BOREHOLE SUBMERSIBLE MOTORS

□□ - □□□ □□ - □ □ - □

Submersible Motor Series
D = Water Filled
N = Non - Toxic Liquid Filled

Nominal Motor Diameter
4" = 100mm, 6" = 150mm,
8" = 200mm, 10" = 250mm

Motor Power (kW)
03 = 0.37, 05 = 0.55, 11 = 1.1, 75 = 7.5, 110 = 11
185 = 18.5, 370 = 37, 750 = 75, 930 = 93,
1000 = 100, 1250 = 125, 1500 = 150, 1750 = 175
2000 = 200, 2250 = 225, 2500 = 250, 3000 = 300
3500 = 350, 4000 = 400.

Optional
R - Aluminium Motor, H - High Temp. Motor with PT Sensor, M - Mechanical Seal

Voltage (A=110, B=180, C=200, D=220, E=230, F=240, G=300, H=350, I=380, J=400, K=415, L=440, M=460, N=525, P=575, Z=415 / 450)

Phase / Connection / Frequency
S - 1Ph / CSR/CSCR - 3 wire / 50Hz
T - 3Ph / DOL (△) / 50Hz
D - 3Ph / SD (Y - △) / 50Hz

Materials of Construction
(Version TA, TN, TB, TS & TL)
TAA = S.S 304 Housings with top shell
TN = S.S 316 Housings with top shell
(ECO & ELEGANT Series)
TS = Top Housing Casted S.S 304
TT = Top Housing Casted S.S 316
TBB = CI Body with S.S Stator casing

TA SERIES

TS SERIES

Shaft Extension Height & Free End Play

S.No.	Description	Position	4"	6"	8"	10"
01	Lift Condition	Maximum	1.55	2.93	4.05	4.05
		Minimum	1.54	2.91	4.40	4.40
02	Rest Condition	Maximum	1.508	2.875	4.0	4.0
		Minimum	1.498	2.860	3.99	3.99

* All dimensions are in inches

During every servicing, the free end play must be checked with the above values. If the shaft extension height measured differs, the motor thrust bearing could possibly be damaged and should be replaced.

The company reserves the right to modify the technical specifications & illustrations without prior notice.

GENERAL DATA

BOREHOLE SUBMERSIBLE MOTORS › **ECO** SERIES

Construction

Tormac ECO series submersible motors are ingeniously designed and developed employing latest engineering softwares, high-tech machinery & tools with the complement of cutting edge technology for hardwearing and maintenance free operations and to ensure relentless performance.

The electrical conditions such as voltage, frequency and the operating conditions are taken into account in designing the winding and cooling system. The profound experience of the company facilitate to meet out the demanding technological challenges across the world. Tried and trusted indigenously improved design, combined with the most optimized efficiency in electromagnetic design exceptionally ensures trouble free performance. The integrated and most modern quality assurance systems used at every stage of production and flawless workmanship lead to sustained and consistent operation.

Tormac ECO series motors are squirrel cage, water filled and water cooled rewindable type. The winding of these two pole motors are made of a special water proof wire of pure electrolytic copper insulated with synthetic film or thermoplastic material. All single phase motors are fitted with thermal protector to avoid winding burnouts. The stator shell, housings shell & motor base are made of fabricated S.S 304/316 which prevents the motor from corrosion.

These motors are pre-filled with environmentally safe deionised water which acts as a lubricant & coolant. The prefilled water level to be ensured at the time of installation. A uniquely designed thrust bearing with high thrust capacity and good quality shaft seals are used to enhance the strength & durability. All single phase motors are supplied with suitable control boxes. The main advantage of rewindable motor construction is making the repair and rewinding easier and hassle free at field levels. All Tormac motors are produced in accordance with ISO 9001 standards and mounting dimensions with NEMA standard.

Applications	Characteristics
Public & Industrial Water Supply	Highly reliable, tried & tested.
Sumps / Reservoirs	High efficiency
Fire Fighting Equipments	Stainless steel stator shell, motor base & housings shell to prevent corrosion.
Pressure Boosting Systems	The high quality shaft seal and sand guard prevent ingress of liquid and sand.
Irrigation & Fountains	Uniquely designed thrust bearing to withstand high down thrust loads.
Water Treatment Plants	Higher starting torque to run in tough conditions.
High Rise Buildings	The shaft is designed for optimal power transmission.
Agricultural Lands	End connections & shaft extension are designed according to NEMA standards.
Stock Breeding, Laboratories	
Sprinkler Systems and Mining	

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GENERAL DATA

Construction Features › **ECO** SERIES - 4" & 6"

Components	4"		6"	
	Version - TA	Version - TN	Version - TA / TS	Version - TN / TT
Seal Housing	Cast Iron with S.S.304 Shell	Cast Iron with S.S.316 Shell	S.S 304 / Casted S.S 304	S.S 316 / Casted S.S 316
Upper & Lower Support	Cast Iron	Cast Iron	S.S 304	S.S 316
Shaft Seal	NBR	NBR	NBR	NBR
Wound Stator Shell	S.S 304	S.S 316	S.S. 304	S.S 316
Spline Shaft	417-4Ph	417-4Ph	S.S.17-4 Ph	S.S 417-17Ph
Rotor Shaft	EN-8/EN-9	EN-8/EN-9	EN-8 (or) EN-9	EN-8 (or) EN-9
Radial Bearings	Graphite Carbon	Graphite Carbon	Graphite Carbon	Graphite Carbon
Thrust Segment Carrier/Segments	SG Iron / S.S 420	SG Iron / S.S 420	SG Iron (or) S.S. 420	SG Iron (or) S.S 420
Thrust Disc	Graphite Carbon	Graphite Carbon	Graphite Carbon	Graphite Carbon
Pressure Equalizing Diaphragm	HNBR	HNBR	EPDM	EPDM
Diaphragm Cover	S.S 304	S.S 316	S.S. 304	S.S 316

Construction Features › **ECO** SERIES - 7" & 8"

Components	7"	8"		
	Version - TBB	Version - TBB	Version - TS	Version - TT
Seal Housing	Cast Iron	Cast Iron	Casted S.S 304	Casted S.S 316
Upper & Lower Support	Cast Iron	Cast Iron	Casted S.S 304	Casted S.S 316
Shaft Seal	NBR	Carbon Vs Ceramic	Carbon Vs Ceramic	Carbon Vs Ceramic
Wounded Stator Shell	S.S. 304	SS 304	SS 304	SS 316
Spline Shaft	S.S.17-4 Ph	SS 410	SS 410	SS 410
Rotor Shaft	EN-8 (or) EN-9	EN-8	EN-8	EN-8
Radial Bearings	Graphite Carbon	Graphite Carbon	Graphite Carbon	Graphite Carbon
Thrust Segment Carrier/Segments	SG Iron (or) S.S. 420	SS 420	SS 420	SS 420
Thrust Disc	Graphite Carbon	Graphite Carbon	Graphite Carbon	Graphite Carbon
Pressure Equalizing Diaphragm	EPDM	High Nitrile Rubber	High Nitrile Rubber	High Nitrile Rubber
Diaphragm Cover	S.S. 304	SS 304	SS 304	SS 316

Construction Features › **ECO** SERIES - 10"

Components	10"
	Version - TBB
Seal Housing	Cast Iron
Upper & Lower Support	Cast Iron
Shaft Seal	Carbon Vs Ceramic
Wounded Stator Shell	SS 304
Spline Shaft	SS 410
Rotor Shaft	EN-8
Radial Bearings	Graphite Carbon
Thrust Segment Carrier/Segments	SS 420
Thrust Disc	Graphite Carbon
Pressure Equalizing Diaphragm	High Nitrile Rubber
Diaphragm Cover	SS 304

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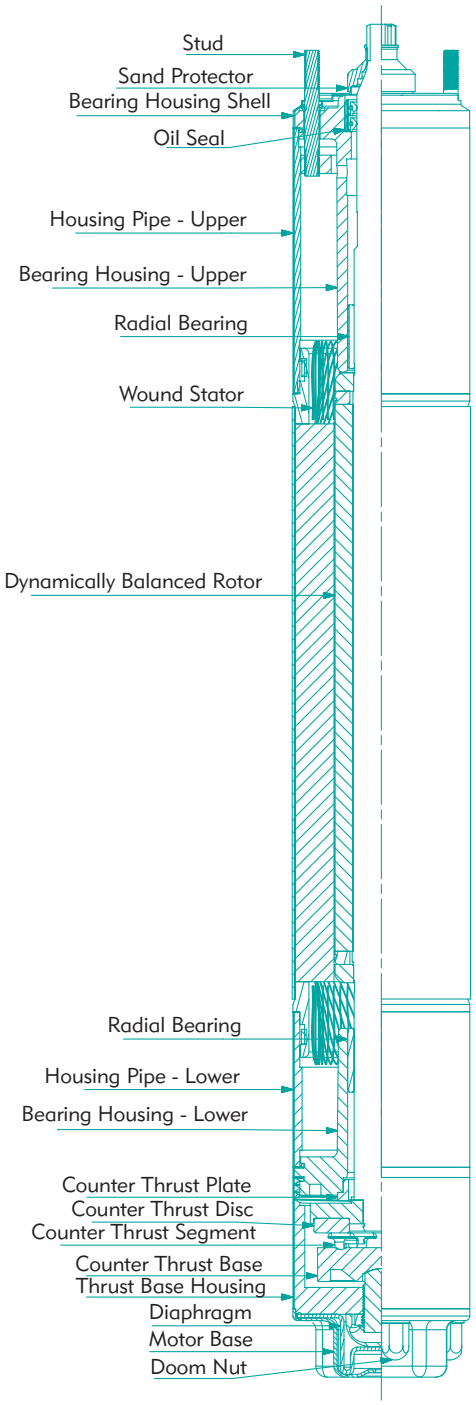
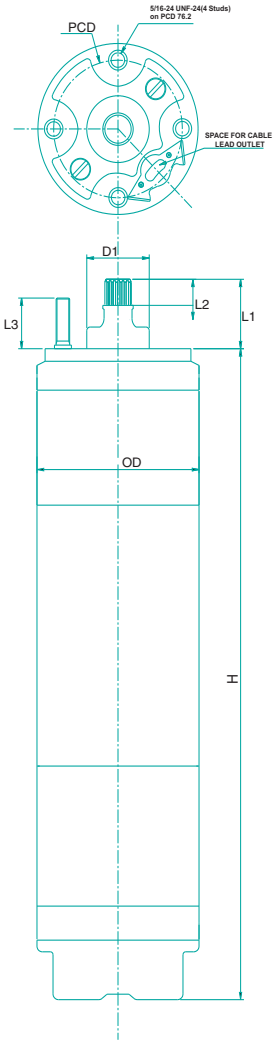
ECO SERIES (4")

CROSS SECTIONAL DRAWING



MOUNTING DIMENSIONS



Spline Data-14 teeth, 24/48 Pitch, 30 Degree pressure angle,
Hator fillet root, Side fit, tolerance Class-5,
In accordance with ANSI B92-1

	Dimensions in inches						
	L1	L2	L3	L4	OD	ODI	OD2
4"	1.50	0.5	1.0	-	3.8	1.45	-

All the Mounting dimensions are in accordance with NEMA standards.

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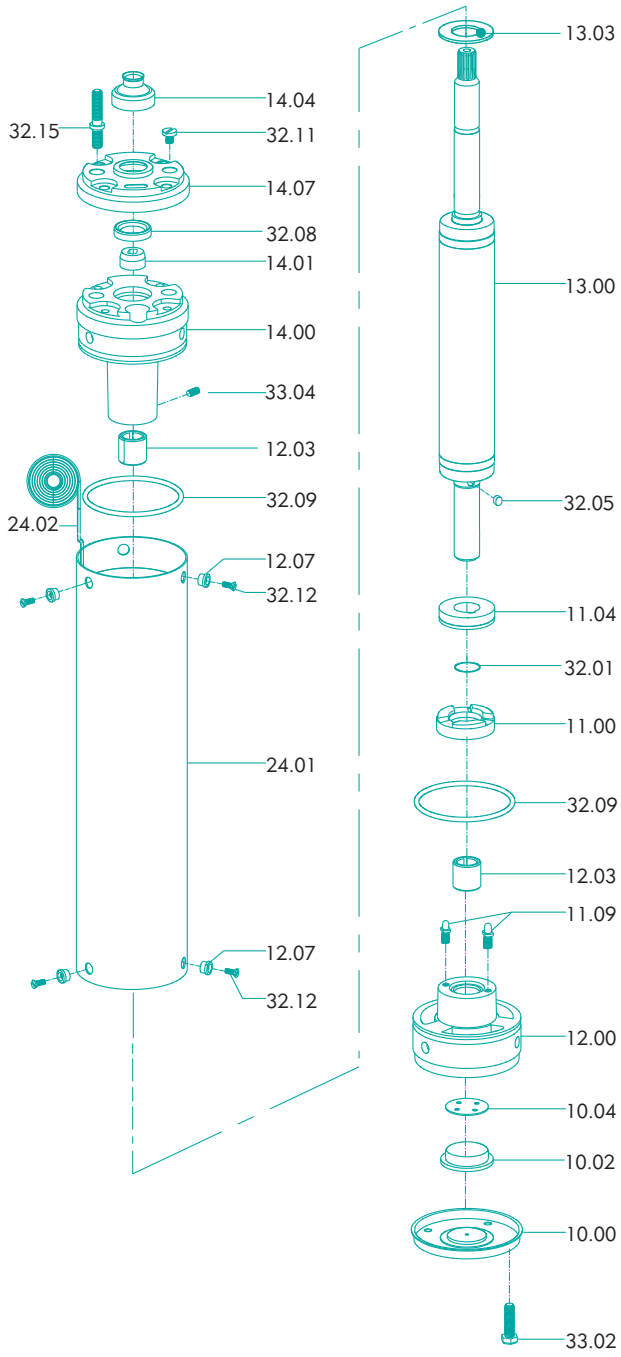
EXPLODED VIEW

(0.37 kW - 1.5 kW)



Part No.	Part Name
10.00	Motor Base
10.02	Diaphragm
10.04	Diaphragm guide Plate
11.00	Thrust Base
11.04	Thrust Pad
11.09	Rocker Screw
12.00	Lower Housing
12.03	Bush
12.07	Guide Bush
13.00	Rotor
13.03	Upthrust washer
14.00	Upper Housing
14.01	Cable Grommet
14.04	Rubber Sand Guard
14.07	Upper Housing Shell
24.01	Wound Stator
24.02	Lead out cable
32.01	Circlip
32.05	Pad key
32.08	Oil seal
32.09	O - Ring
32.11	Drain plug
32.12	Screw
32.15	Stud
33.02	Bolt
33.04	Earth screw

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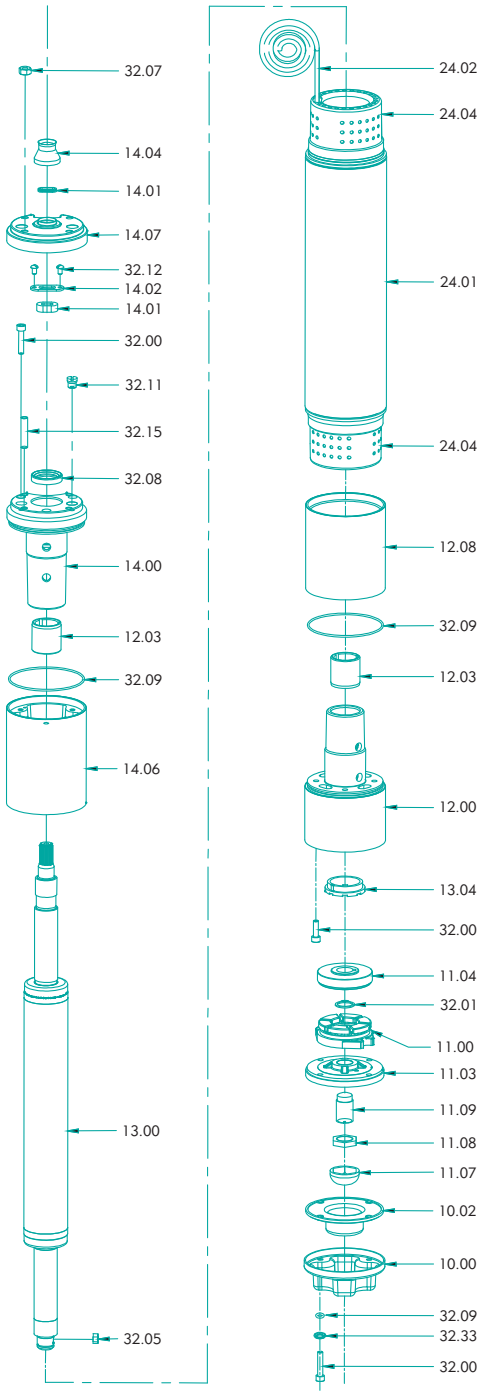
EXPLODED VIEW

(2.2 kW - 7.5 kW)



Part No.	Part Name
32.00	Bolt
32.33	Cap Washer
32.09	O Ring
10.00	Motor Base
10.02	Diaphragm
11.07	Rocker Screw Cap
11.08	Rocker Screw Nut
11.09	Rocker Screw
11.03	Thrust Base Plate
11.00	Thrust Base
32.01	Circlip
11.04	Thrust Pad
13.04	Counter Thrust Pad
12.00	Lower Housing
12.03	Carbon Bush
12.08	Lower Pipe
24.04	Winding Guard
24.01	Wound Stator
24.02	Lead Out Cable
32.05	Key
13.00	Rotor
14.06	Upper Pipe
14.00	Upper Housing
32.08	Oil Seal
32.15	Stud
32.11	Drain Plug
14.01	Cable Grommet
14.02	Grommet Clamp
32.12	Screw
14.07	Upper Housing Shell
14.04	Rubber Sand Guard
32.07	Nut

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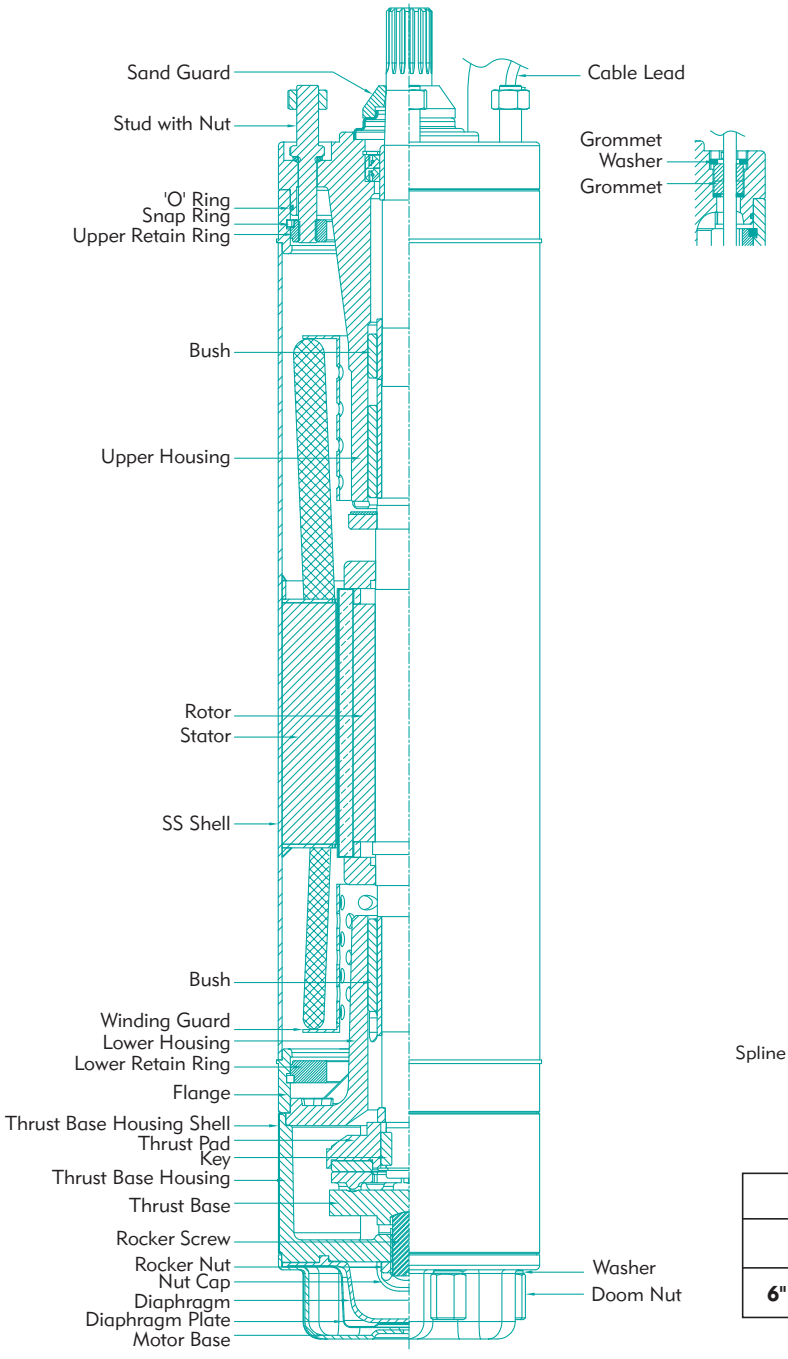
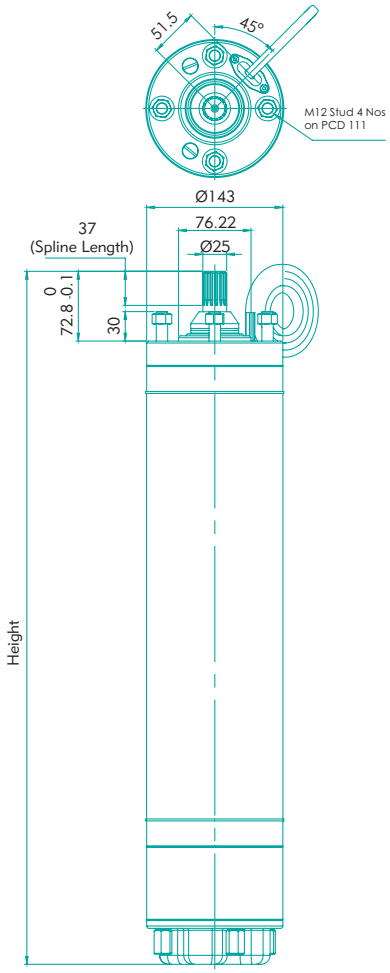
ECO SERIES (6")

CROSS SECTIONAL DRAWING



MOUNTING DIMENSIONS



Spline Data-15 teeth, 16/32 Pitch, 30 Degree pressure angle,
Hator fillet root, Side fit, tolerance Class-5,
In accordance with ANSI B92-1

	Dimensions in inches					
	L1	L2	L3	OD	DI	D2
6"	2.87	1.45	0.19	5.6	0.99	30

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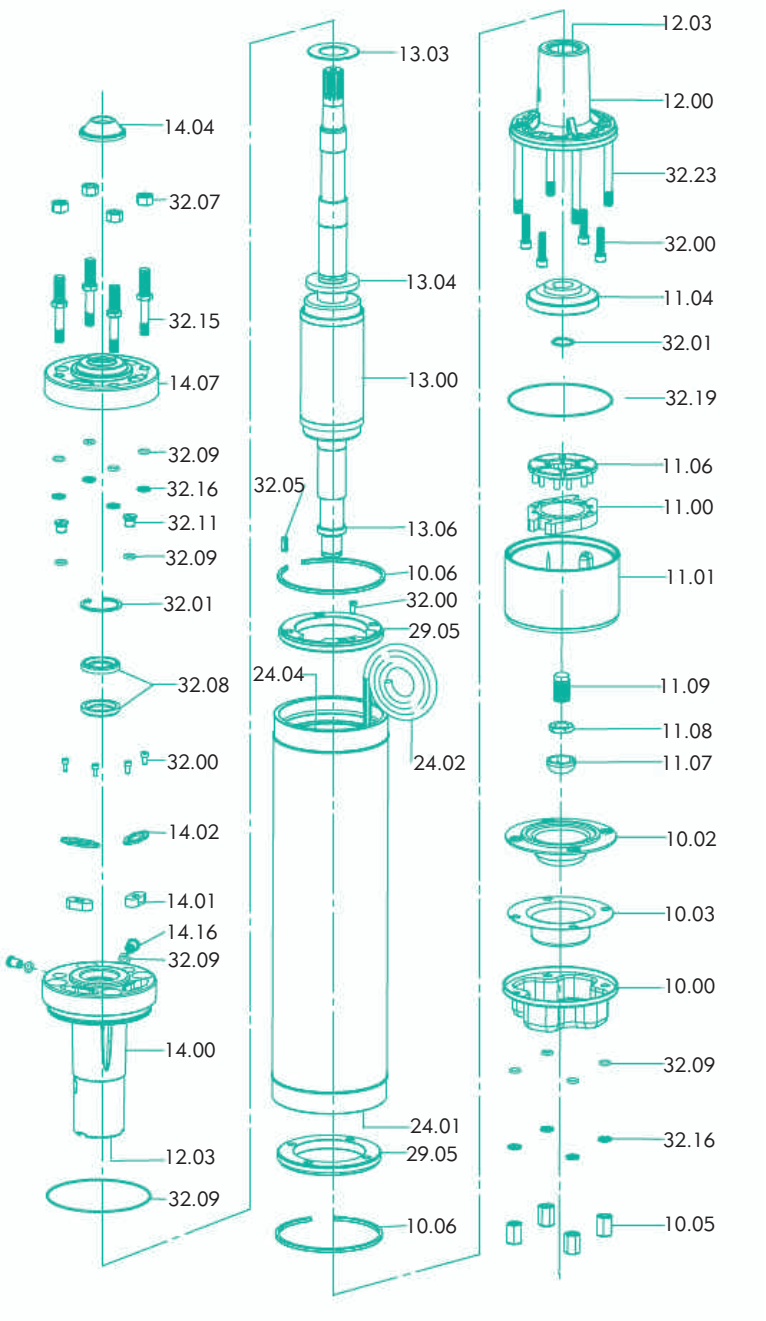
EXPLODED VIEW

Standard Flange type Motor (2.2 kW - 22 kW)



Part No.	Part Name
10.00	Motor Base
10.02	Diaphragm
10.03	Diaphragm Bottom Plate
10.05	Doom Nut
10.06	Snap Ring
11.00	Thrust Base
11.01	Thrust Base Housing
11.04	Thrust pad
11.06	Thrust Segment
11.07	Rocker cap
11.08	Rocker Lock Nut
11.09	Rocker Screw
12.00	Lower Housing
12.03	Bush-Carbon
13.00	Rotor
13.03	Up Thrust Washer
13.04	Counter Thrust Pad
13.06	Pad Supporting Ring
14.00	Upper Housing
14.01	Cable Grommet
14.02	Cable Grommet Lock Plate
14.04	Sand Guard Rubber
14.07	Upper Housing Shell
14.16	Inlet / Outlet Valve
24.01	Wound Stator
24.02	Cable
24.04	Winding Guard
29.05	Retaining Ring
32.00	Bolt
32.01	Circlip
32.05	Key
32.07	Nut
32.08	Oil Seal
32.09	O-Ring
32.11	Plug
32.15	Stud
32.16	Washer
32.19	Gasket
32.23	Tie Rod

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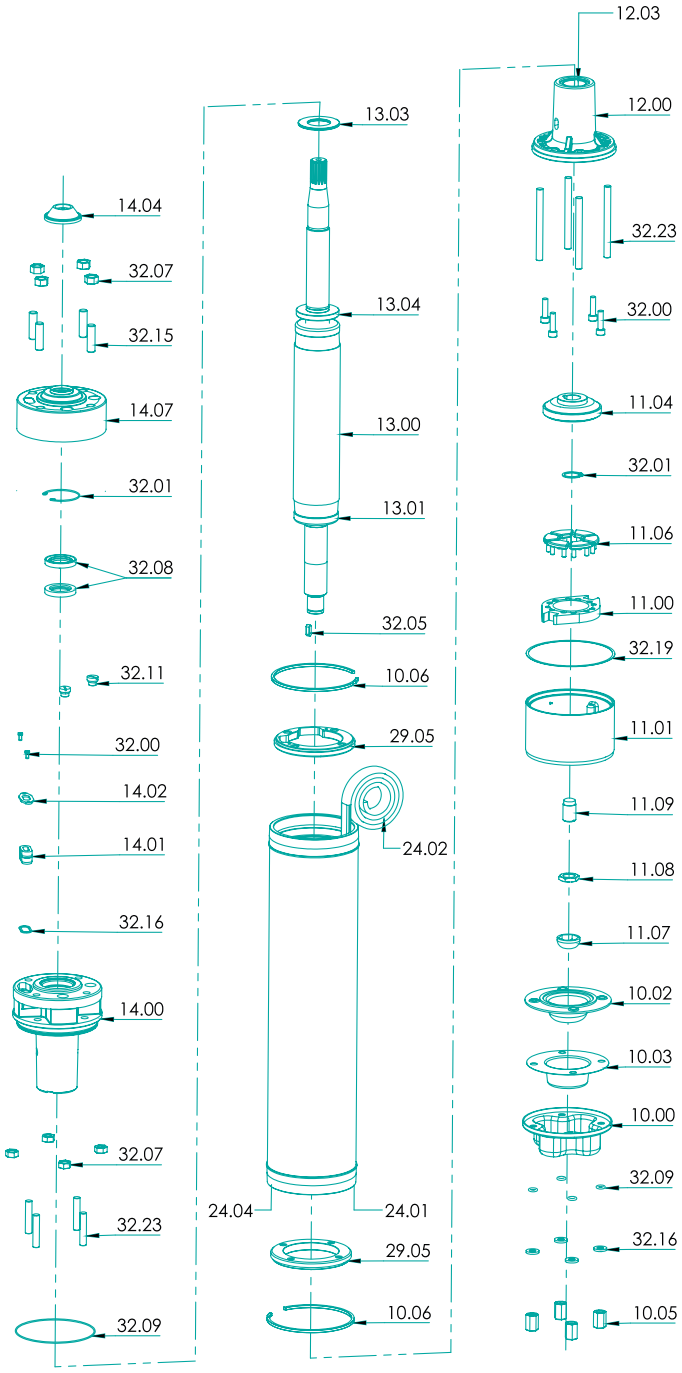
EXPLODED VIEW

Reduced Diametr Flange type Motor (OD 137mm) : 2.2 kW - 18.5 kW



Part No.	Part Name
10.00	Motor Base
10.02	Diaphragm
10.03	Diaphragm Bottom Plate
10.05	Doom Nut
10.06	Snap Ring
11.00	Thrust Base
11.01	Thrust Base Housing
11.04	Thrust pad
11.06	Thrust Segment
11.07	Rocker cap
11.08	Rocker Lock Nut
11.09	Rocker Screw
12.00	Lower Housing
12.03	Bush-Carbon
13.00	Rotor
13.01	Balancing Ring
13.03	Up Thrust Washer
13.04	Counter Thrust Pad
14.00	Upper Housing
14.01	Cable Grommet
14.02	Cable Grommet Lock Plate
14.04	Sand Guard Rubber
14.07	Upper Housing Shell
24.01	Wound Stator
24.02	Cable
24.04	Winding Guard
29.05	Retaining Ring
32.00	Bolt
32.01	Circlip
32.05	Key
32.07	Nut
32.08	Oil Seal
32.09	O-Ring
32.11	Plug
32.15	Stud
32.16	Washer
32.19	Gasket
32.23	Tie Rod

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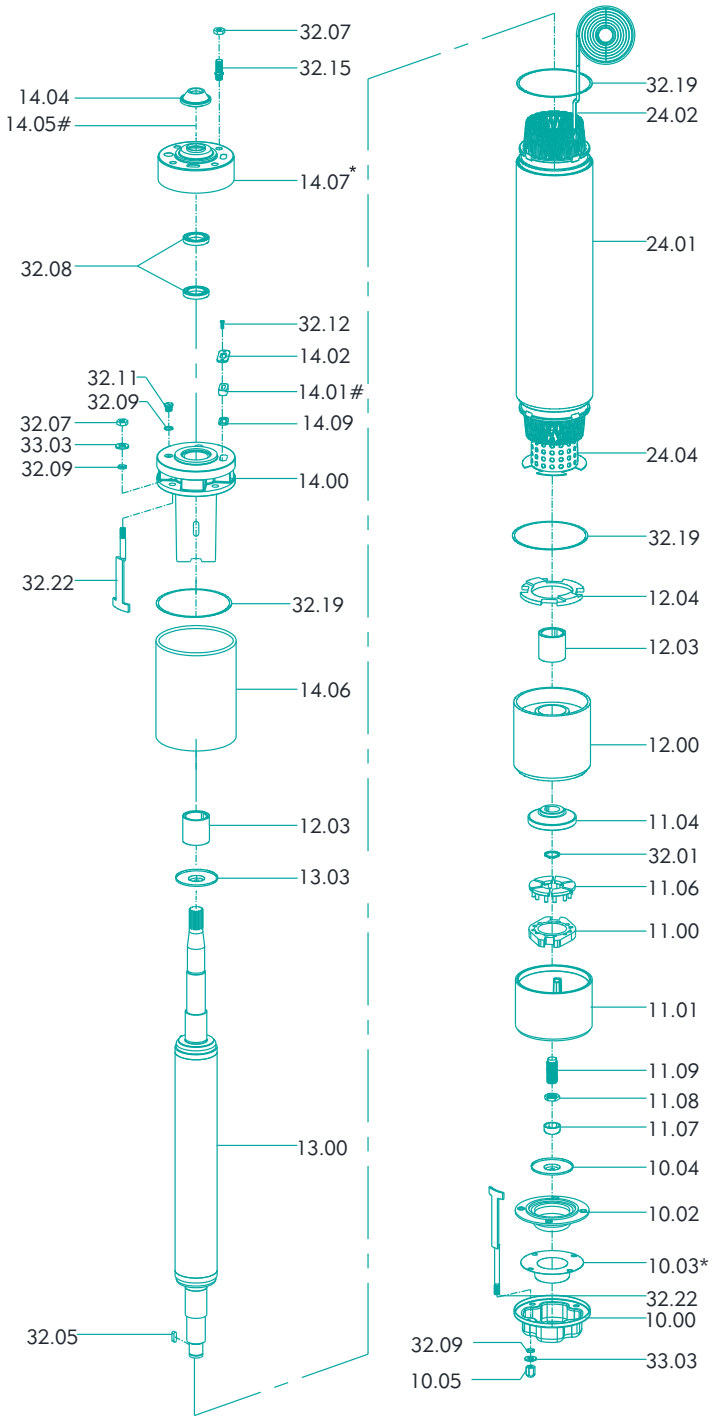
EXPLODED VIEW

T-Bolt Motor (Type - A) : 26 kW - 45 kW



Part No.	Part Name
10.00	Motor base
10.02	Diaphragm
10.03*	Diaphragm bottom plate
10.04	Diaphragm guide plate
10.05	Doom nut
11.00	Thrust Base
11.01	Thrust base housing
11.04	Thrust Pad
11.06	Thrust segment
11.07	Rocker screw cap
11.08	Rocker screw nut
11.09	Rocker screw
12.00	Lower housing
12.03	Bush
12.04	Supporting ring
13.00	Rotor
13.03	Upthrust washer
14.00	Upper housing
14.01#	Cable grommet
14.02	Grommet locking plate
14.04	Rubber sand guard
14.05#	Sand guard
14.06	Upper housing Pipe
14.07	Upper housing shell
14.09*	Grommet washer
24.01	Wound stator
24.02	lead out cable
24.04	Winding guard
32.01	Circlip
32.05	Pad key
32.07	Nut
32.08	Oil seal
32.09	O - Ring
32.11	Drain plug
32.12	Screw
32.15	Stud
32.16	Washer
32.19	Gasket
32.22	T' bolt
33.03	Bend washer

Applicable only for Type 'B' motors.
*Applicable only for Type 'A' motors.

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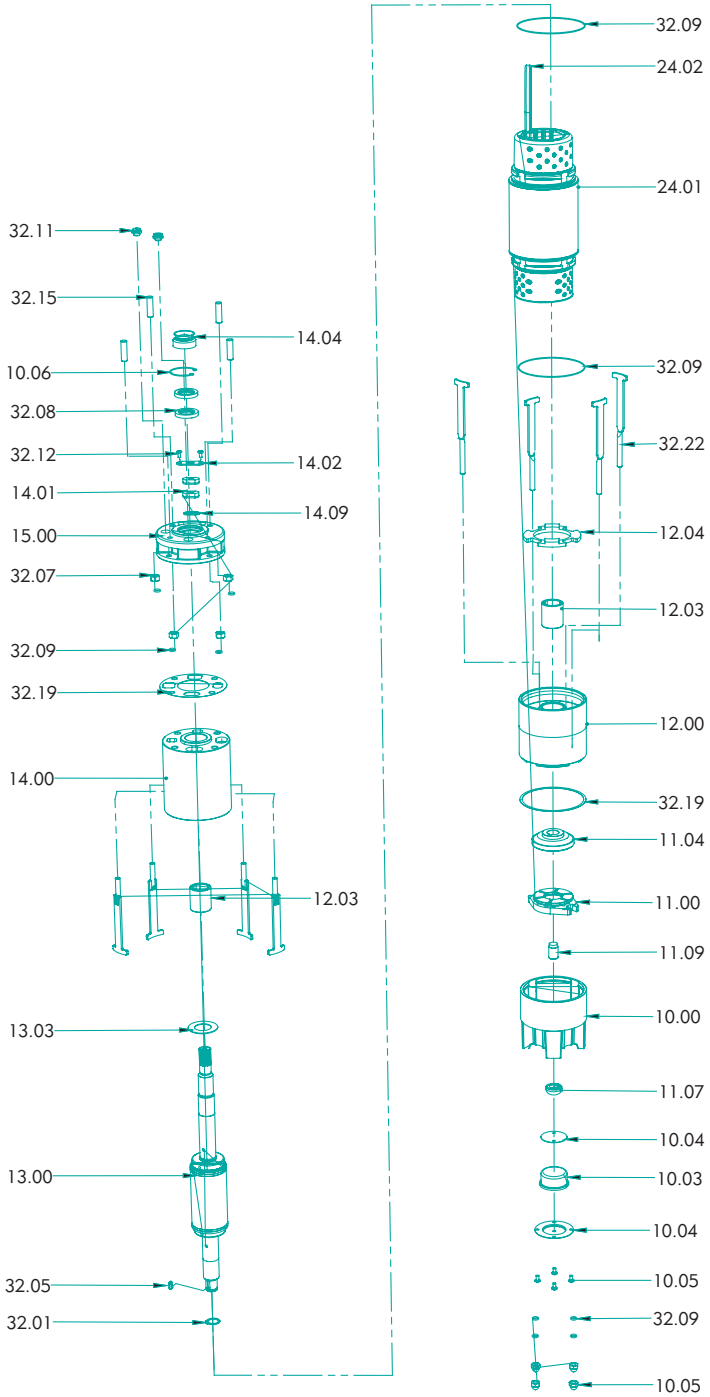
EXPLODED VIEW

T-Bolt Motor (Type - B) : 3.7 kW - 18.5 kW



Part No.	Part Name
10.00	Motor base
10.03	Diaphragm
10.04	Diaphragm plate
10.05	Doom nut
10.06	Snap Ring
11.00	Thrust Base
11.04	Thrust Pad
11.07	Nut with Rocker cap
11.09	Rocker screw
12.00	Lower housing
12.03	Bush - Carbon
12.04	Supporting ring
13.00	Rotor
13.03	Upthrust washer
14.00	Upper housing
14.01	Cable grommet
14.02	Cable Grommet lock plate
14.04	Sand guard - rubber
14.09	Groomet Washer
15.00	Oil seal housing
24.01	Wound stator
24.02	Cable
32.01	Circlip
32.05	Key
32.07	Nut
32.08	Oil seal
32.09	O - Ring
32.11	Plug
32.12	Screw
32.15	Stud
32.19	Gasket
32.22	Tie bolt

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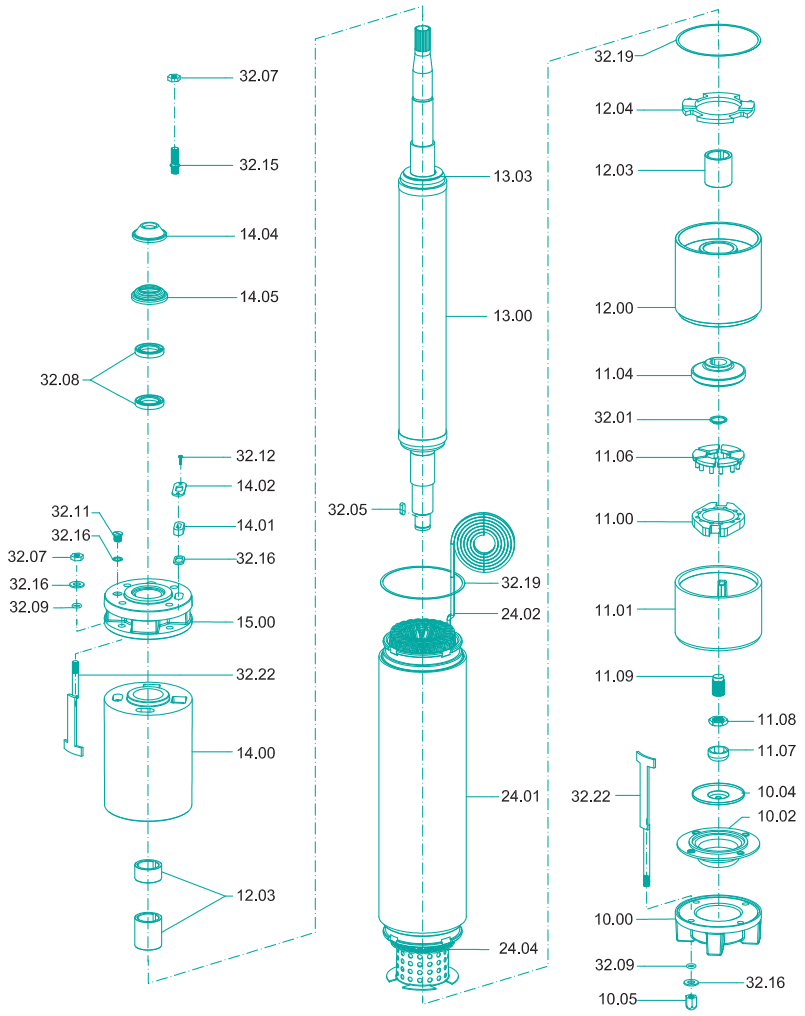
EXPLODED VIEW

T-Bolt Motor (Type - B) : 22 kW - 45 kW



Part No.	Part Name
10.00	Motor base
10.02	Diaphragm
10.04	Diaphragm plate
10.05	Doom nut
11.00	Thrust Base
11.01	Thrust base housing
11.04	Thrust Pad
11.06	Thrust segment
11.07	Rocker cap
11.08	Rocker Lock nut
11.09	Rocker screw
12.00	Lower housing
12.03	Bush - Carbon
12.04	Supporting ring
13.00	Rotor
13.03	Upthrust washer
14.00	Upper housing
14.01	Cable grommet
14.02	Cable Grommet lock plate
14.04	Rubber sand guard
14.05	Sand guard - SS/Bakelite
15.00	Oil seal housing
24.01	Wound stator
24.02	Cable
24.04	Winding guard
32.01	Circlip
32.05	Key
32.07	Nut
32.08	Oil seal
32.09	O - Ring
32.11	Plug
32.12	Screw
32.15	Stud
32.16	Washer
32.19	Gasket
32.22	Tie bolt

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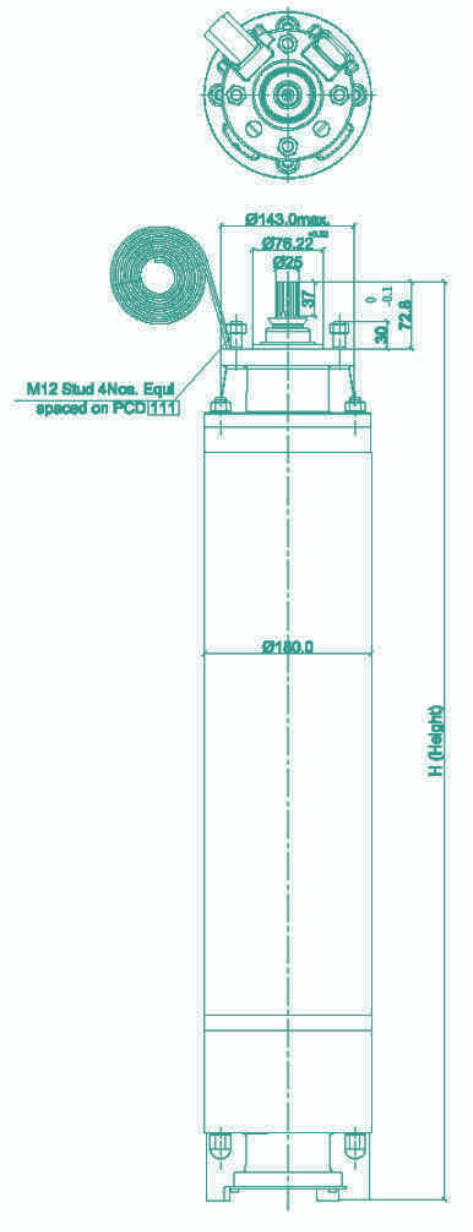
ECO SERIES (7")

CROSS SECTIONAL DRAWING

MOUNTING DIMENSIONS



All Dimensions are in mm
Splined Shaft : 15 Teeth - Module 1.5875
Pressure Angle 30°
A.N.S.I.B - 92 - 1 - 1970
Tolerance Class 5

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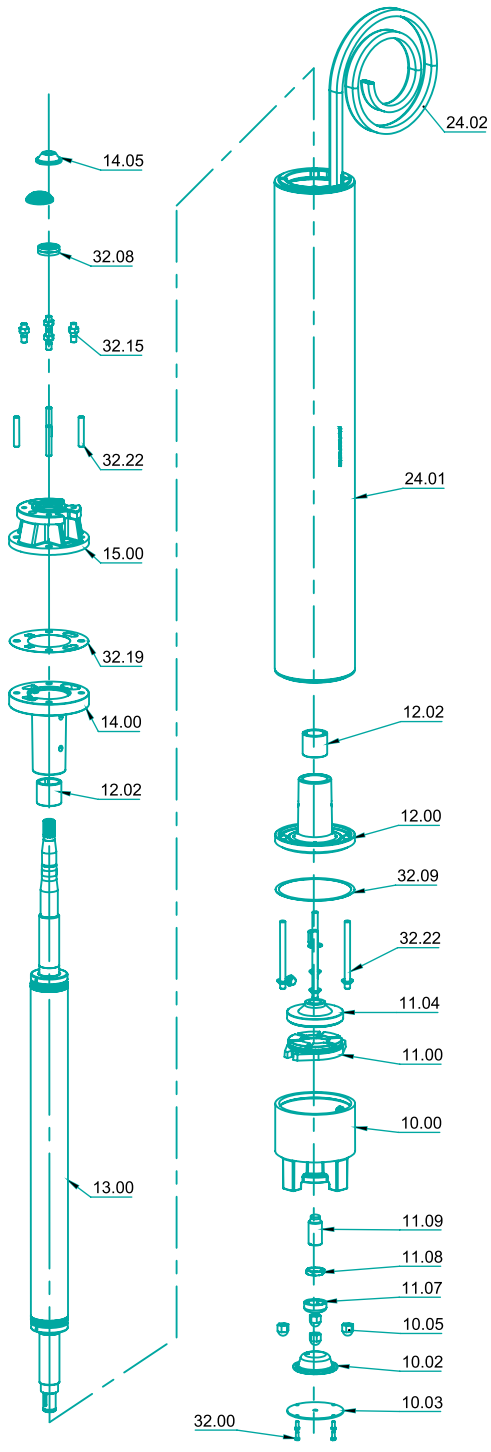
EXPLODED VIEW

(37 kW - 75 kW)



Part No.	Part Name
10.00	Motor Base
10.02	Diaphragm
10.03	Diaphragm Plate
10.05	Doom nut
11.00	Thrust Base
11.04	Thrust Pad
11.07	Rocker Cap
11.08	Rocker Lock nut
11.09	Rocker Screw
12.00	Lower Housing
12.02	Bush-LTB
13.00	Rotor
14.00	Upper Housing
14.05	Sand Guard-SS/Bakelite
15.00	Oil Seal housing
24.01	Wound Stator
24.02	Cable
32.00	Bolt
32.08	Oil Seal
32.09	O-ring
32.15	Stud
32.19	Gasket
32.22	Tie Rod

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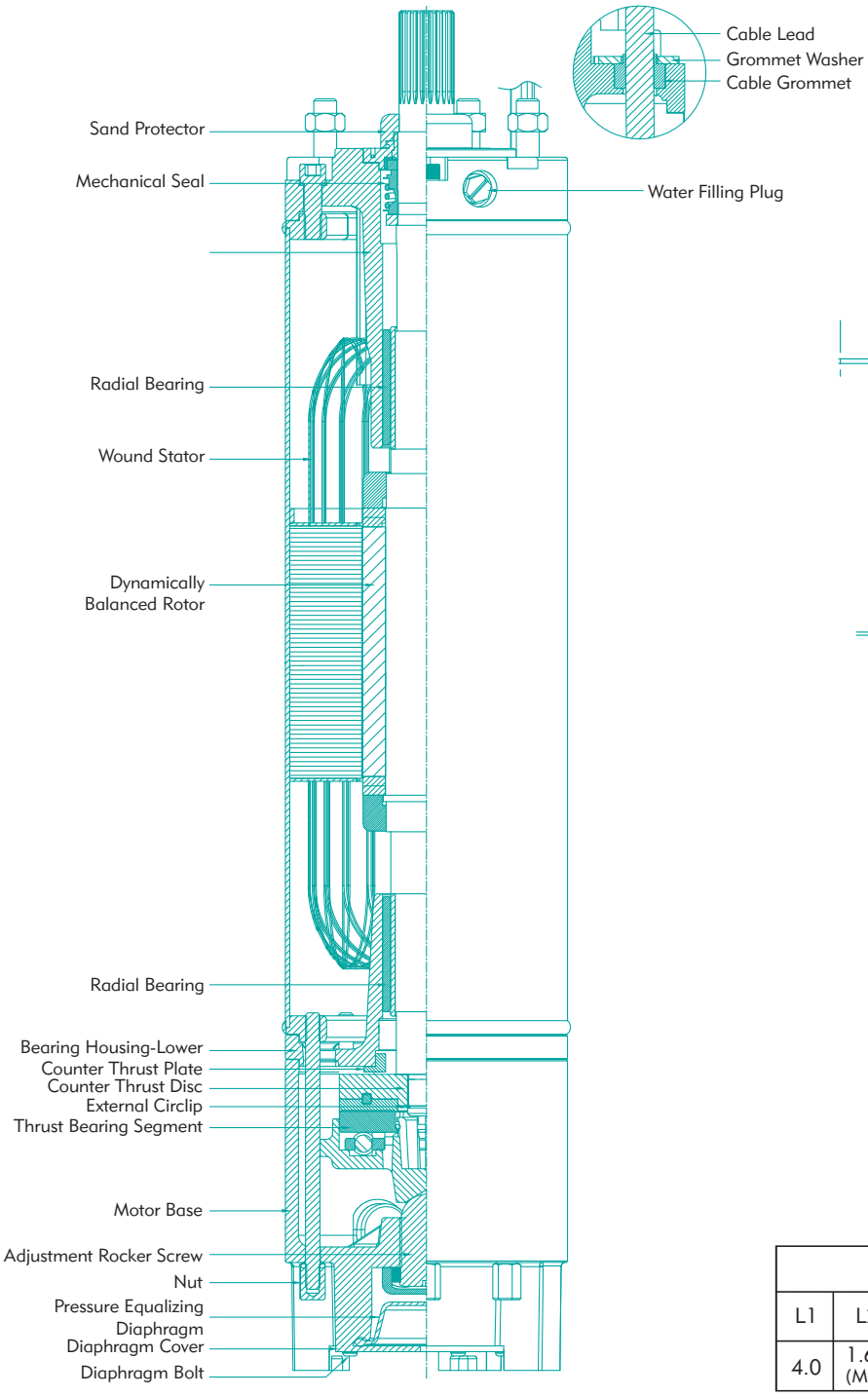
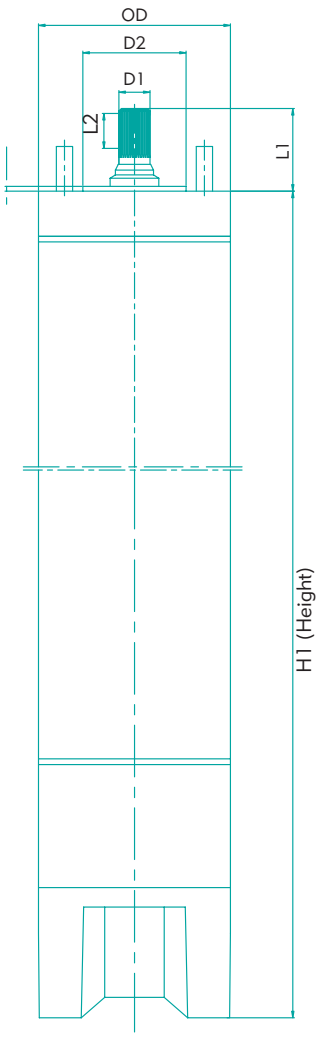
ECO SERIES (8")

CROSS SECTIONAL DRAWING



MOUNTING DIMENSIONS



Dimensions in inches					
L1	L2	L3	OD	D1	D2
4.0	1.68 (Min)	0.25	9.3	1.50	5.0

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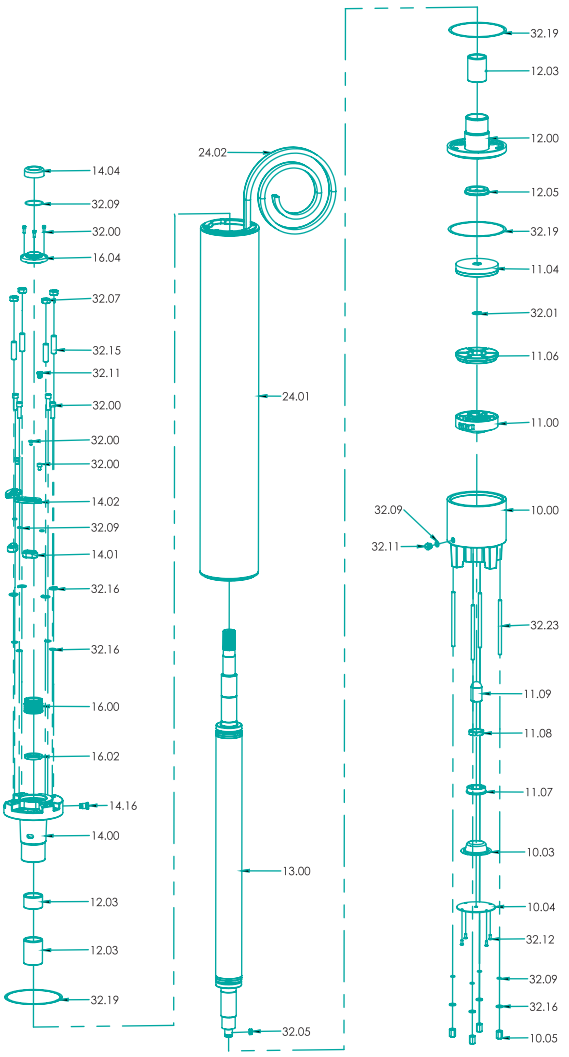
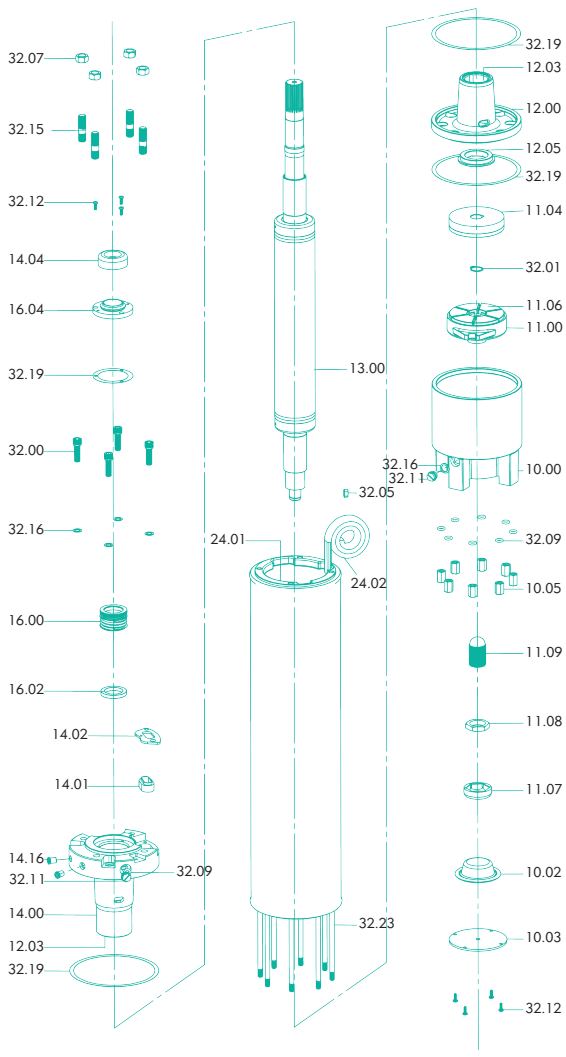
EXPLODED VIEW

(37 kW - 110 kW)

37 kW - 93 kW



110 kW



Part No.	Part Name
10.00	Motor Base
10.02	Diaphragm
10.03	Diaphragm Bottom Plate
10.05	Doom nut
11.00	Thrust Base
11.04	Thrust Pad
11.06	Thrust Segment
11.07	Rocker Cap
11.08	Rocker Lock nut
11.09	Rocker Screw
12.00	Lower Housing
12.03	Bush-Carbon

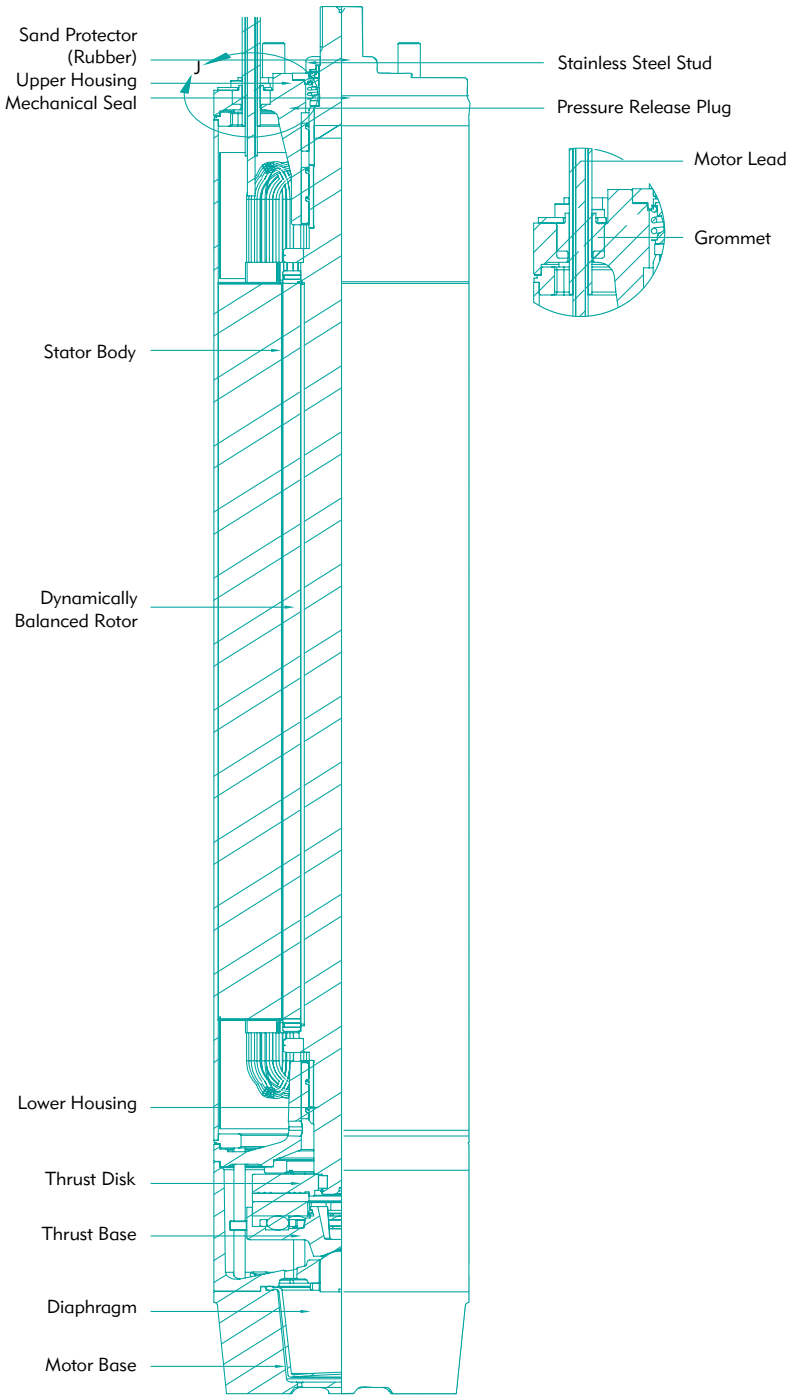
Part No.	Part Name
12.05	Counter Thrust Ring
13.00	Rotor
14.00	Upper Housing
14.01	Cable Grommet
14.02	Cable Grommet Lock Plate
14.04	Sand Guard-Rubber
14.16	Inlet / Outlet Valve
16.00	Mechanical Seal
16.02	Mechanical Seal Rest Washer
16.04	Mechanical Seal Guide Plate
24.01	Wound Stator
24.02	Cable

Part No.	Part Name
32.00	Bolt
32.01	Circlip
32.05	Key
32.07	Nut
32.09	O-ring
32.11	Plug
32.12	Screw
32.15	Stud
32.16	Washer
32.19	Gasket
32.23	Tie Rod

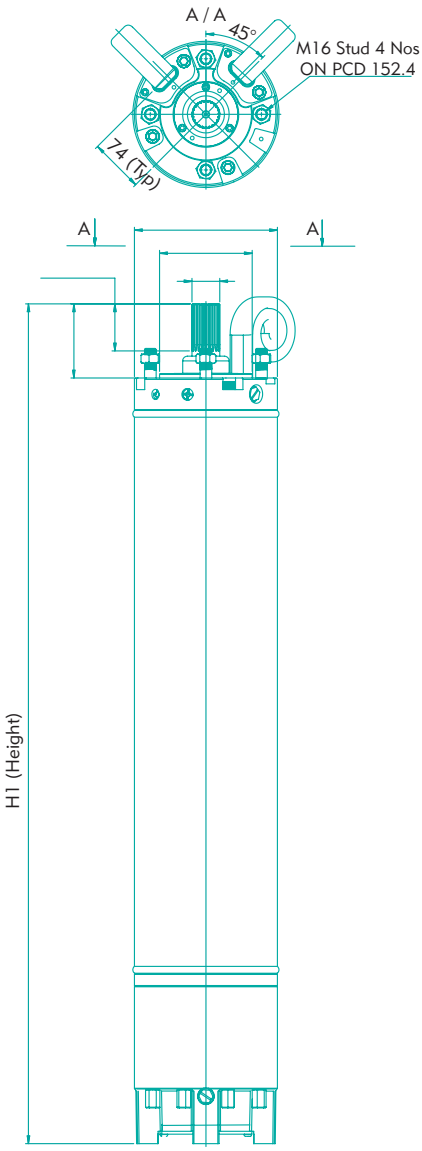
The company reserves the right to modify the technical specifications & illustrations without prior notice.

ECO SERIES (10")

CROSS SECTIONAL DRAWING



MOUNTING DIMENSIONS



Spline Data-23 teeth, 16/32 Pitch, 30 Degree pressure angle, Hator fillet root, Side fit, tolerance Class-5, In accordance with ANSI B92-1

Dimensions in inches					
L1	L2	L3	OD	D1	D2
4.0	2.36	0.25	7.3/7.6	1.50	5.0

All the Mounting dimensions are in accordance with NEMA standards.

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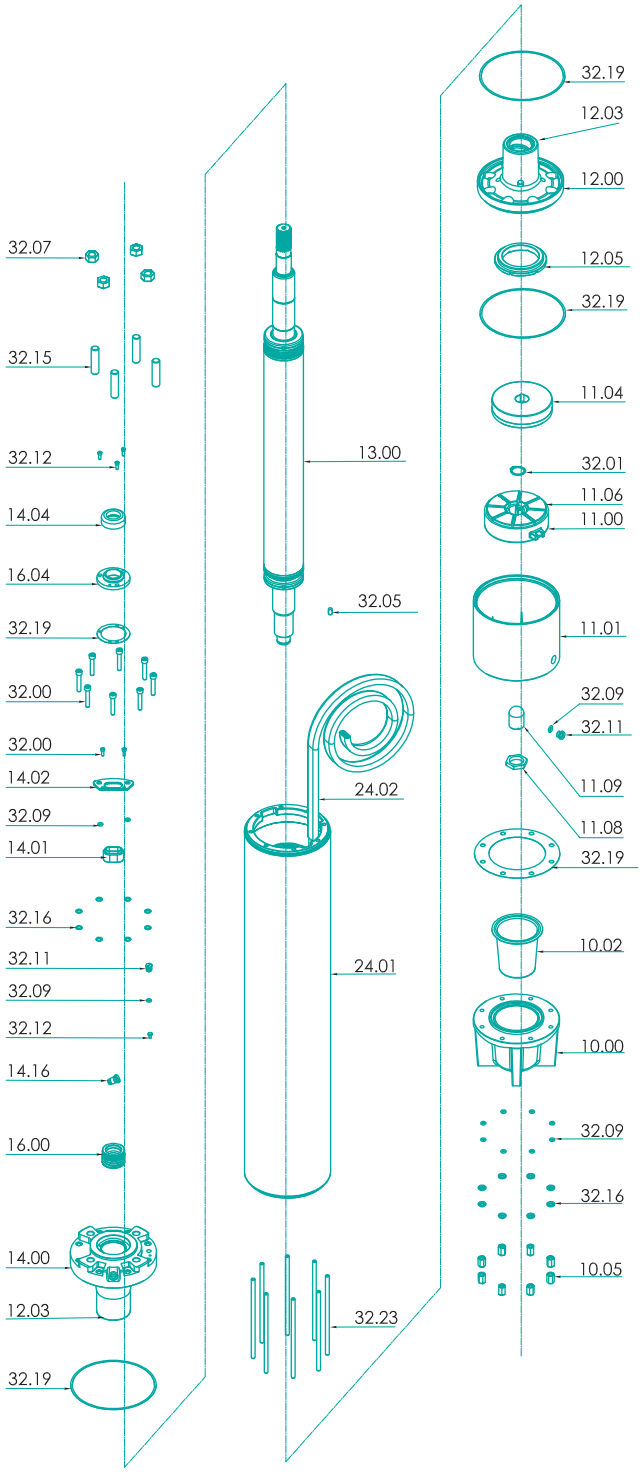
EXPLODED VIEW

(110 kW - 185 kW)



Part No.	Part Name
10.00	Motor Base
10.02	Diaphragm
10.05	Doom Nut
11.00	Thrust Base
11.01	Thrust Base Housing
11.04	Thrust Pad
11.06	Thrust Segment
11.08	Rocker Lock Nut
11.09	Rocker Screw
12.00	Lower Housing
12.03	Bush - Carbon
12.05	Counter Thrust Ring
13.00	Rotor
14.00	Upper Housing
14.01	Cable Grommet
14.02	Cable Grommet Lock Plate
14.04	Sand Guard Rubber
14.16	Inlet / Outlet Valve
16.00	Mechanical Seal
16.04	Mechanical Seal Guide Plate
24.01	Wound Stator
24.02	Cable
32.00	Bolt
32.01	Circlip
32.05	Key
32.07	Nut
32.09	O-Ring
32.11	Plug
32.12	Screw
32.15	Stud
32.16	Washer
32.19	Gasket
32.23	Tie Rod

The company reserves the right to modify the technical specifications & illustrations without prior notice.

TECHNICAL DATA

ECO SERIES 〉 50Hz

Specifications	Nominal Diameter (4")	Nominal Diameter (6")
Rated Output & Voltage	0.37 to 2.2kW - 1Ph, 230V, 3Wire 0.37 to 7.5kW - 3Ph, 380/415V, (△)	4 to 45kW - 3Ph, 380/415V
Rated Speed	2900 rpm	2900 rpm
Voltage Tolerance	-15% + 6%	-15% + 6%
Protection	IP 58	IP 58 / IP 68
Rotation Sequence	CCW - 1Ph CW, CCW - 3Ph	CW, CCW - 3Ph
Outer Diameter	98mm	143mm
Duty	S1 (Continuous)	S1 (Continuous)
Linear flow	0.15m/sec	0.15m/sec
Liquid Temperature	38°C max.	38°C max.
Switching Frequency	20 Times / hour	20 Times / hour
Thrust load	0.37 to 1.5kW - 3000N/650lbs 2.2 to 7.5kW - 6500N/1500lbs	4 to 22kW - 15500N/3000lbs 26 to 45kW - 27500N/6000lbs
Mounting Dimensions	NEMA Standard	NEMA Standard
Starting Method	1 Ph - CSCR 3 Ph - DOL	4 to 45kW - DOL 5.5 to 45kW - SD
Motor Lead out type	3/4 core Rubber Insulated Flat Cable leads, internally connected with the windings.	3/4 core Rubber Insulated Flat Cable leads, internally Connected with the windings
Class of Insulation	Y	Y
Thermal Protection	-	High Temperature Motors for 70°C / 90°C can be supplied with PT Sensor & PE2 / XLPE / PA Winding

Capacitor Details for 4" Single Phase 230V Submersible Motors (CSCR)

kW	Motor Type	Running Capacitor (µfd)	Starting Capacitor (µfd)
0.37	D4 - 03 TA-SE	30	60 / 80
0.55	D4 - 05 TA-SE	40	80 / 100
0.75	D4 - 07 TA-SE	30+25	100 / 120
1.1	D4 - 11 TA-SE	36+40	120 / 150
1.5	D4 - 15 TA-SE	40+45	200 / 250
2.2	D4 - 22 TA-SE	50+50	200 / 250

The company reserves the right to modify the technical specifications & illustrations without prior notice.

TECHNICAL DATA

ECO SERIES 〉 50Hz

Specifications	Nominal Diameter (7")	Nominal Diameter (8")
Rated Output & Voltage	37 to 75kW - 380/415V, 3Ph, (WYE-DELTA)	37 to 93kW - 380/415V, 3Ph, (WYE-DELTA)
Rated Speed	2900 rpm	2900 rpm
Voltage Tolerance	-15% + 6%	-15% + 6%
Protection	IP 68	IP 58 / IP 68
Rotation Sequence	CW, CCW - 3Ph	CW, CCW - 3Ph
Outer Diameter	180mm	196mm
Duty	S1 (Continuous)	S1 (Continuous)
Linear flow	0.16m/sec	0.16m/sec
Liquid Temperature	38°C max.	38°C max.
Switching Frequency	4 Times / hour	15 Times / hour
Thrust load	45500N/10000lbs	45500N/10000lbs
Mounting Dimensions	NEMA Standard	NEMA Standard
Starting Method	37 to 75kW - DOL & SD	37 to 93kW - DOL & SD
Motor Lead out type	3/4 core Rubber Insulated Flat Cable leads, internally Connected with the windings	3/4 core Rubber Insulated Flat Cable leads, internally Connected with the windings
Class of Insulation	Y	Y
Thermal Protection	High Temperature Motors for 70°C / 90°C can be supplied with PT Sensor & PE2 / XLPE / PA Winding	High Temperature Motors for 70°C / 90°C can be supplied with PT Sensor & PE2 / XLPE / PA Winding

The company reserves the right to modify the technical specifications & illustrations without prior notice.

TECHNICAL DATA

ECO SERIES 〉 50Hz

Specifications	Nominal Diameter (10")
Rated Output & Voltage	81 to 220kW - 380/415V, 3Ph, (WYE-DELTA)
Rated Speed	2900 rpm
Voltage Tolerance	-15% + 6%
Protection	IP 68
Rotation Sequence	CW, CCW - 3Ph
Outer Diameter	81 to 185 kW - 236mm 220 kW - 240mm
Duty	S1 (Continuous)
Linear flow	0.16m/sec
Liquid Temperature	38^{0}C max.
Switching Frequency	10 Times / hour
Thrust load	60000N/13500lbs
Mounting Dimensions	NEMA Standard / International
Starting Method	81 to 220kW - DOL & SD
Motor Lead out type	3/4 core Rubber Insulated Flat Cable leads, internally Connected with the windings
Class of Insulation	Y
Thermal Protection	High Temperature Motors for 70°C / 90°C can be supplied with PT Sensor & PE2 / XLPE / PA Winding

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ELECTRICAL DATA AND DIMENSIONS & WEIGHTS

ECO SERIES 〉 50Hz

4", Single phase, 230V, Submersible Motors

Motor Type*	kW	HP	Current (A)	Locked Rotor Amps	Full Load		Thrust Capacity (N)	Starting Torque (Nm)	Rated Torque (Nm)
					Eff%	Phase Angle			
D4-03 TA-SE	0.37	0.5	5	16	40	0.89	3000	2	1.2
D4-05 TA-SE	0.55	0.75	6	21	52	0.90	3000	2.9	1.8
D4-07 TA-SE	0.75	1	7.5	26	54	0.90	3000	4.1	2.5
D4-11 TA-SE	1.1	1.5	9	40	57	0.95	3000	6.1	3.7
D4-15 TA-SE	1.5	2	12	48	60	0.95	3000	8.3	4.9
D4-22 TA-SE	2.2	3	15	66	62	0.95	6500	13.3	7.4

4", Single phase, 230V, Submersible Motors

Motor Type*	kW	HP	Diameter (OD) in inches	Height (H) in inches	Nett. Wt. in lbs	Standard Motor Leads	
						(mm^2)	Length (m)
D4 - 03 TA-SE	0.37	0.5	3.8	20	29	4 x 1.5	1.5
D4 - 05 TA-SE	0.55	0.75	3.8	20	31	4 x 1.5	1.5
D4 - 07 TA-SE	0.75	1.0	3.8	22	35	4 x 1.5	1.5
D4 - 11 TA-SE	1.1	1.5	3.8	23	44	4 x 2.5	1.5
D4 - 15 TA-SE	1.5	2.0	3.8	25	64	4 x 2.5	1.5
D4 - 22 TA-SE	2.2	3.0	3.8	32	73	4 x 2.5	2

4", Three phase, 380 - 415V / WYE-DELTA, Submersible Motors

Motor Type*	kW	HP	Current (A)	Locked Rotor Amps	Full Load		Thrust Capacity (N)	Starting Torque (Nm)	Rated Torque (Nm)
					Eff%	Phase Angle			
D4-03 TA-TK	0.37	0.5	1.9	5	48	0.74	3000	2.2	1.2
D4-05 TA-TK	0.55	0.75	2.4	7	57	0.72	3000	3.4	1.9
D4-07 TA-TK	0.75	1	2.8	9	64	0.66	3000	4.5	2.5
D4-11 TA-TK	1.1	1.5	3.9	15	67	0.67	3000	6.7	3.7
D4-15 TA-TK	1.5	2	4.7	19	68	0.78	3000	9	5
D4-22 TA-TK	2.2	3	7.1	32	70	0.77	6500	14.1	7.5
D4-30 TA-TK	3	4	9.1	42	72	0.76	6500	19	10
D4-37 TA-TK	3.7	5	10.1	50	71	0.78	6500	22	12.4
D4-40 TA-TK	4	5.5	10.3	52	69	0.78	6500	23	12.4
D4-55 TA-TK	5.5	7.5	14.2	71	71	0.70	6500	33.7	18.7
D4-75 TA-TK	7.5	10	18.2	93	72	0.80	6500	45.2	25.1

* For AISI 316 models replace TA with TN.

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ELECTRICAL DATA AND DIMENSIONS & WEIGHTS

ECO SERIES 〉 **50Hz**

4", Three phase, 380 - 415V, Submersible Motors

Motor Type*	kW	HP	Diameter (OD) in inches	Height (H) in inches	Nett. Wt. in lbs	Standard Motor Leads	
						(mm^2)	Length (m)
D4 - 03 TA-TK	0.37	0.5	3.8	20	26	4 x 1.5	1.5
D4 - 05 TA-TK	0.55	0.75	3.8	20	29	4 x 1.5	1.5
D4 - 07 TA-TK	0.75	1.0	3.8	22	33	4 x 1.5	1.5
D4 - 11 TA-TK	1.1	1.5	3.8	23	40	4 x 1.5	1.5
D4 - 15 TA-TK	1.5	2.0	3.8	25	44	4 x 1.5	1.5
D4 - 22 TA-TK	2.2	3.0	3.8	31	34	4 x 1.5	1.5
D4 - 30 TA-TK	3.0	4.0	3.8	32	73	4 x 1.5	2
D4 - 37 TA-TK	3.7	5.0	3.8	33	77	4 x 2.5	2
D4 - 40 TA-TK	4.0	5.5	3.8	33	77	4 x 2.5	2
D4 - 55 TA-TK	5.5	7.5	3.8	38	88	4 x 4	2.5
D4 - 75 TA-TK	7.5	10	3.8	47	108	4 x 4	2.5

* For AISI 316 models replace TA with TN.

6", Three phase, 415V / WYE-DELTA, Submersible Motors (TA SERIES)

Motor Type*	kW	HP	Current (A)	Locked Rotor Amps	Full Load		Thrust Capacity (N)	Starting Torque (Nm)	Rated Torque (Nm)
					Eff%	Phase Angle			
D6-40 TA-TK	4	5.5	10.8	43	76	0.70	15500	20	14
D6-45 TA-TK	4.5	6	12.0	48	76	0.75	15500	21	15
D6-55 TA-TK	5.5	7.5	13.5	52	78	0.77	15500	24	18
D6-75 TA-TK	7.5	10	18.5	70	82	0.75	15500	27	25
D6-93 TA-TK	9.3	12.5	21	84	82	0.79	15500	35	31
D6-110 TA-TK	11	15	25	102	82	0.80	15500	43	37
D6-130 TA-TK	13	17.5	29.5	118	83	0.80	15500	51	43
D6-150 TA-TK	15	20	33	148	83	0.81	15500	62	49
D6-185 TA-TK	18.5	25	42.5	188	83	0.81	15500	98	61
D6-220 TA-TK	22	30	49.2	225	83	0.81	15500	118	74
D6-260 TA-TK	26	35	56.5	270	83	0.82	27500	138	86
D6-300 TA-TK	30	40	67.2	355	83	0.82	27500	196	98
D6-370 TA-TK	37	50	83	420	82	0.82	27500	245	123
D6-450 TA-TK	45	60	93	465	82	0.83	27500	396	151

The company reserves the right to modify the technical specifications & illustrations without prior notice.

ELECTRICAL DATA AND DIMENSIONS & WEIGHTS

ECO SERIES 〉 50Hz

6", Three phase, 415V, / WYE-DELTA Submersible Motors (TA Series)

Motor Type*	kW	HP	Diameter (OD) in inches	Height (H) in inches	Nett. Wt. in lbs	Standard Motor Leads		
						DOL (mm^2)	SD (mm^2)	Length (m)
D6 - 40 TA-TK	4.0	5.5	5.6	29	92.5	4 x 2.5	-	3
D6 - 45 TA-TK	4.5	6.0	5.6	29	96.8	4 x 4	-	3
D6 - 55 TA-TK	5.5	7.5	5.6	31.3	110	4 x 4	4 x 2.5	3
D6 - 75 TA-TK	7.5	10	5.6	33.3	121	4 x 6	4 x 2.5	3
D6 - 93 TA-TK	9.3	12.5	5.6	34.4	128	4 x 6	4 x 2.5	3
D6 - 110 TA-TK	11	15	5.6	36	139	4 x 6	4 x 4	3
D6 - 130 TA-TK	13	17.5	5.6	37.5	147	4 x 6	4 x 4	3
D6 - 150 TA-TK	15	20	5.6	39.1	156	4 x 10	4 x 4	3
D6 - 185 TA-TK	18.5	25	5.6	42.2	176	4 x 10	4 x 4	3.5
D6 - 220 TA-TK	22	30	5.6	45	189	4 x 10	4 x 4	3.5
D6 - 260 TA-TK	26	35	5.6	46	196	4 x 10	4 x 6	4.25
D6 - 300 TA-TK	30	40	5.6	48	207	4 x 10	4 x 6	4.25
D6 - 370 TA-TK	37	50	5.6	51	216	4 x 16	4 x 6	5.25
D6 - 450 TA-TK	45	60	5.6	54	231	4 x 16	4 x 10	5.25

7", Three Phase, 415V / DOL, Submersible Motors (TB SERIES)

Model	kW	HP	Current (A)	Locked Rotor Amps	Full Load		Thrust Capacity (N)	Starting Torque (Nm)	Rated Torque (Nm)
					Eff%	Phase Angle			
D7-370 TA-TB	37	50	256	69	83.6	0.82	45500	160	122
D7-450 TA-TB	45	60	288	94.5	84	0.88	45500	225	148
D7-550 TA-TB	55	75	375	116	84.5	0.88	45500	310	182
D7-630 TA-TB	63	85	467	130	85	0.85	45500	350	208
D7-750 TA-TB	75	100	542	156	85	0.84	45500	420	248

7", Three Phase, 400V / DOL, Submersible Motors (TB SERIES)

Model	kW	HP	Current (A)	Locked Rotor Amps	Full Load		Thrust Capacity (N)	Starting Torque (Nm)	Rated Torque (Nm)
					Eff%	Phase Angle			
D7-370 TA-TB	37	50	270	75	84.5	0.81	45500	180	122
D7-450 TA-TB	45	60	303	90	85	0.87	45500	250	148
D7-550 TA-TB	55	75	395	114	85.8	0.87	45500	348	181
D7-630 TA-TB	63	85	491	127	86	0.84	45500	380	207
D7-750 TA-TB	75	100	570	148	85	0.86	45500	480	247

* The penultimate digit of the model identification "T" denotes DOL and which will be replaced with "D" in case of 3 phase SD Motors
* For AISI 316 models replace TA with TN.
* For Casted AISI 304 models replace TA with TS.
* For Casted AISI 316 models replace TA with TT.

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ELECTRICAL DATA AND DIMENSIONS & WEIGHTS

ECO SERIES 〉 50Hz

7", Three Phase, 415V / DOL & SD, Submersible Motors (TB SERIES)

Model	kW	HP	Current (A)	Locked Rotor Amps	Full Load		Thrust Capacity (N)	Starting Torque (Nm)	Rated Torque (Nm)
					Eff%	Phase Angle			
D7-370 TA-TB	37	50	280	80	86	0.80	45500	200	122
D7-450 TA-TB	45	60	315	92	85	0.85	45500	268	149
D7-550 TA-TB	55	75	410	112	87	0.85	45500	370	180
D7-630 TA-TB	63	85	510	126	88	0.84	45500	410	206
D7-750 TA-TB	75	100	592	151	89	0.84	45500	520	246

7", Three phase, 415V, / WYE-DELTA Submersible Motors (TA Series)

Motor Type*	kW	HP	* Method of Starting	Diameter (OD) in inches	Height (H) in inches	Nett. Wt. in lbs	Standard Motor Leads		
							DOL (mm^2)	SD (mm^2)	Length (m)
D7 - 370 TA-TK	37	50	T / D	180	1181	153	16	10	4
D7 - 450 TA-TK	45	60	T / D	180	1411	179	16	10	4
D7 - 550 TA-TK	55	75	T / D	180	1531	199	25	16	5
D7 - 630 TA-TK	63	85	T / D	180	1591	201	35	16	5
D7 - 750 TA-TK	75	100	T / D	180	1641	220	35	25	5

8", Three phase, 415V / WYE-DELTA, Submersible Motors

Motor Type*	kW	HP	Current (A)	Locked Rotor Amps	Full Load		Thrust Capacity (N)	Starting Torque (Nm)	Rated Torque (Nm)
					Eff%	Phase Angle			
D8-370 TB-TK	37	50	80	280	86	0.80	45500	200	122
D8-450 TB-TK	45	60	92	315	85	0.85	45500	268	149
D8-550 TB-TK	55	75	112	410	86	0.85	45500	370	180
D8-630 TB-TK	63	85	126	510	88	0.84	45500	410	206
D8-750 TB-TK	75	100	151	592	87	0.84	45500	520	246
D8-930 TB-TK	93	125	188	636	88	0.83	45500	680	306
D8-1100 TB-TK	110	150	225	785	87	0.81	45500	884	361

* The penultimate digit of the model identification "T" denotes DOL and which will be replaced with "D" in case of 3 phase SD Motors
* For Casted AISI 304 models replace TB with TS.
* For Casted AISI 316 models replace TB with TT.

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ELECTRICAL DATA AND DIMENSIONS & WEIGHTS

ECO SERIES 50Hz

8", Three phase, 415V, / WYE-DELTA Submersible Motors

Motor Type*	kW	HP	Diameter (OD) in inches	Height (H) in inches	Nett. Wt. in lbs	Standard Motor Leads		
						DOL(mm^2)	SD(mm^2)	Length (m)
D8-370 TB-TK	37	50	7.6	46	337	4 x 16	4 x 10	4
D8-450 TB-TK	45	60	7.6	48	361	4 x 16	4 x 10	4
D8-550 TB-TK	55	75	7.6	50	396	4 x 25	4 x 16	5
D8-630 TB-TK	63	85	7.6	53	425	4 x 35	4 x 16	5
D8-750 TB-TK	75	100	7.6	57.1	473	4 x 35	4 x 25	5
D8-930 TB-TK	93	125	7.6	61	517	4 x 35	4 x 35	5
D8-1100 TB-TK	110	150	7.6	65	580	4 x 35	4 x 35	5

* The penultimate digit of the model identification "T" denotes DOL and which will be replaced with "D" in case of 3 phase SD Motors
* For Casted AISI 304 models replace TB with TS.
* For Casted AISI 316 models replace TB with TT.

10", Three phase, 415V / WYE-DELTA, Submersible Motors

Motor Type*	kW	HP	Current (A)	Locked Rotor Amps	Full Load		Thrust Capacity (N)
					Eff%	Phase Angle	
D10-810 TB-TK	81	110	166	824	86	0.87	75000
D10-930 TB-TK	93	125	181	1102	87	0.89	75000
D10-1100 TB-TK	110	150	220	1326	87	0.89	75000
D10-1300 TB-TK	130	175	255	1628	87	0.89	75000
D10-1500 TB-TK	150	200	290	1813	88	0.89	75000
D10-1650 TB-TK	165	225	315	2043	88	0.88	75000
D10-1850 TB-TK	185	250	330	2343	89	0.88	75000

10", Three phase, 415V, / WYE-DELTA Submersible Motors

Motor Type*	kW	HP	Diameter (OD) in inches	Height (H) in inches	Nett. Wt. in lbs	Standard Motor Leads		
						DOL(mm^2)	SD(mm^2)	Length (m)
D10-810 TB-TK	81	110	9.1	50	572	4 x 35	4 x 16	5.45
D10-930 TB-TK	93	125	9.1	51	603	4 x 35	4 x 16	5.45
D10-1100 TB-TK	110	150	9.1	57	691	4 x 50	4 x 16	5.45
D10-1300 TB-TK	130	175	9.1	61	755	4 x 50	4 x 25	5.45
D10-1500 TB-TK	150	200	9.1	69	805	4 x 70	4 x 35	5.45
D10-1650 TB-TK	165	225	9.1	74	900	4 x 95	4 x 35	5.45
D10-1850 TB-TK	185	250	9.1	78	966	4 x 95	4 x 35	5.45

* The penultimate digit of the model identification "T" denotes DOL and which will be replaced with "D" in case of 3 phase SD Motors

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GENERAL DATA

BOREHOLE SUBMERSIBLE MOTORS › **ELEGANT** SERIES

Construction Tormac Elegant series submersible motors are ingeniously designed and developed employing latest engineering softwares, high-tech machinery & tools with the complement of cutting edge technology for hardwearing and maintenance free operations and to ensure relenTTess performance.

The electrical conditions such as voltage, frequency and the operating conditions are taken into account in designing the winding and cooling system. The profound experience of the company facilitate to meet out the demanding technological challenges across the world. Tried and trusted indigenously improved design, combined with the most optimized efficiency in electromagnetic design exceptionally ensures trouble free performance. The integrated and most modern quality assurance systems used at every stage of production and flawless workmanship lead to sustained and consistent operation.

Tormac Eelegant series motors are squirrel cage, Non toxic liquid filled and liquid cooled non rewindable type. The winding of these two pole motors are made of high quality enameled copper wire. The stator shell, housings shell & motor base are made of fabricated S.S 304/316 which prevents the motor from corrosion.

These motors are pre-filled with environmentally safe edible grade oil which acts as a lubricant. A uniquely designed angular contact ball bearing to with stand high thrust capacity and good quality shaft seals are used to enhance the strength & durability. All single phase motors are supplied with suitable control boxes. All Tormac motors are produced in accordance with ISO 9001 standards and mounting dimensions with NEMA standard.

Applications	Characteristics
Public & Industrial Water Supply	Highly reliable, tried & tested.
Sumps / Reservoirs	High efficiency
Fire Fighting Equipments	Stainless steel stator shell, motor base & housings shell to prevent corrosion.
Pressure Boosting Systems	The high quality shaft seal and sand guard prevent ingress of liquid and sand.
Irrigation & Fountains	Uniquely designed thrust bearing to withstand high down thrust loads.
Water Treatment Plants	Higher starting torque to run in tough conditions.
High Rise Buildings	The shaft is designed for optimal power transmission.
Agricultural Lands	End connections & shaft extension are designed according to NEMA standards.
Stock Breeding, Laboratories	
Sprinkler Systems and Mining	

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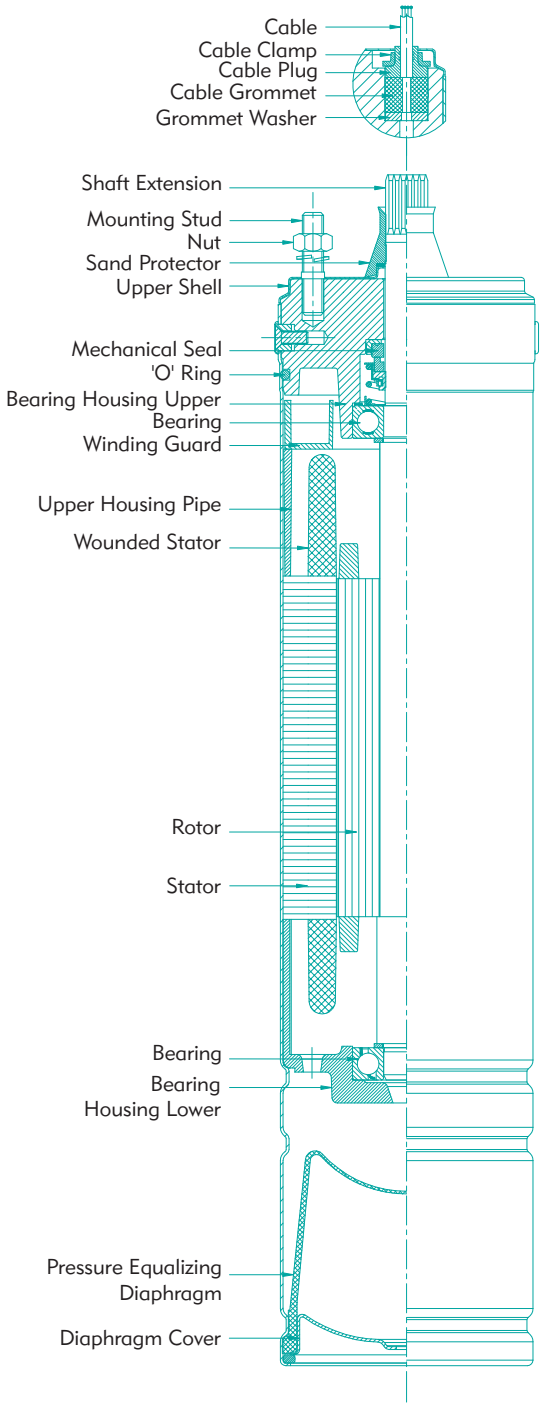
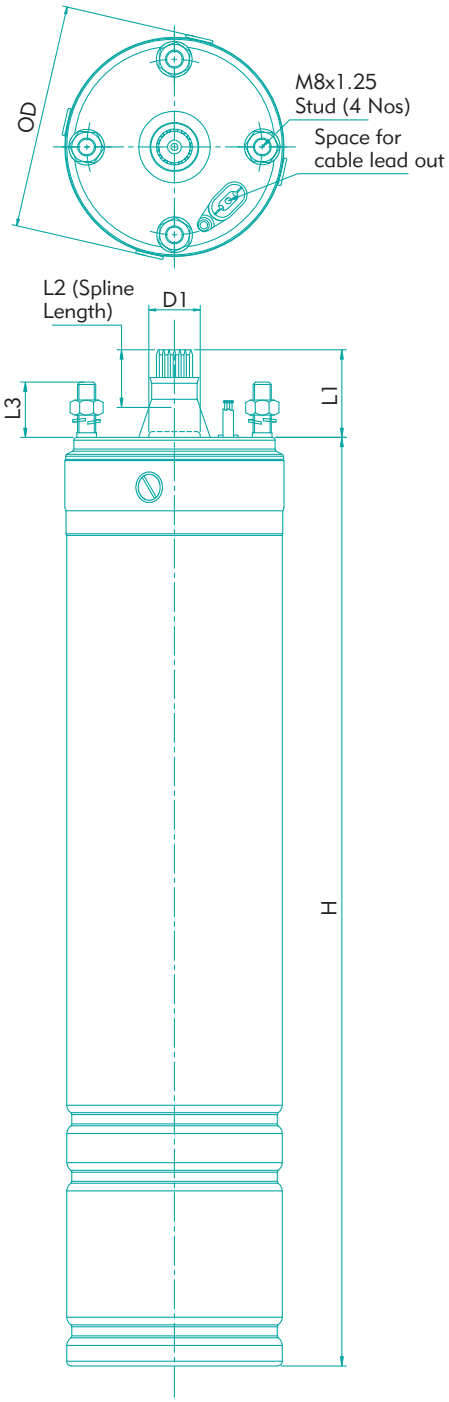
ELEGANT SERIES (4")

CROSS SECTIONAL DRAWING



MOUNTING DIMENSIONS



Dimensions are in Inches

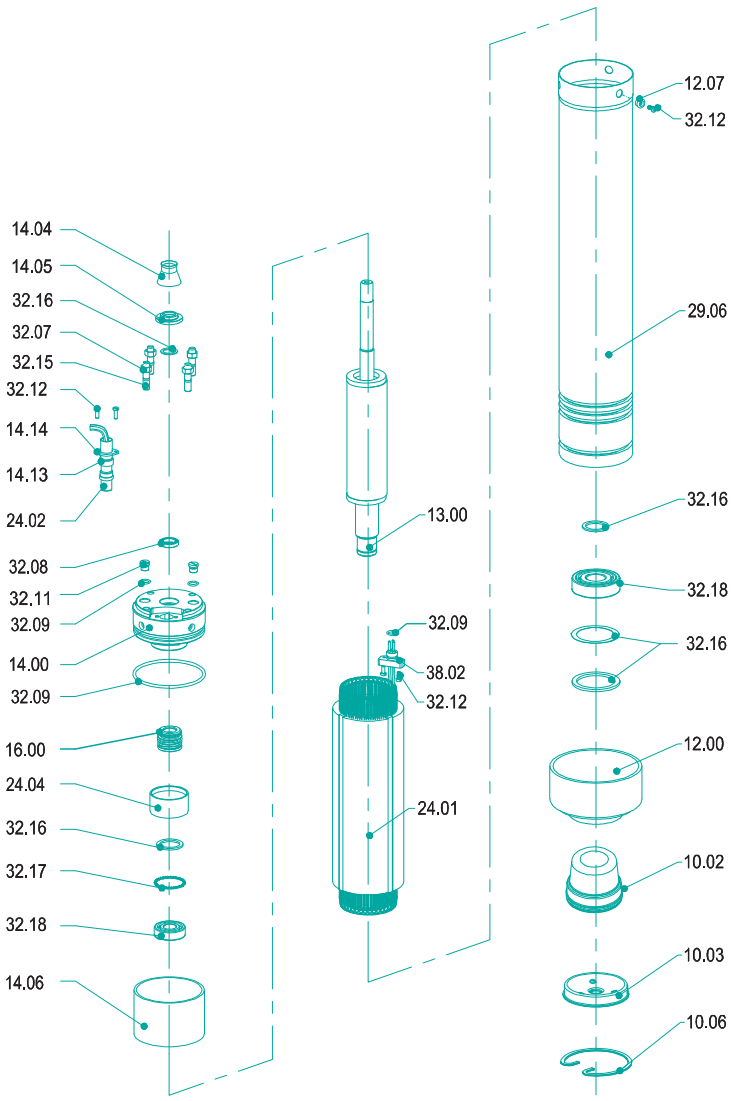
	L1	L2	L3	D1	OD	PCD
4"	1.49	0.5	0.96	0.87	3.83	3

The company reserves the right to modify the technical specifications & illustrations without prior notice.

EXPLODED VIEW

(0.37 kW - 4 kW)

Single Phase : 0.37 kW - 2.2 kW
Three Phase : 0.37 kW - 4 kW



Part No.	Part Name
10.02	Diaphragm
10.03	Diaphragm Bottom Plate
10.06	Snap ring
12.00	Lower housing
12.07	Guide bush
13.00	Rotor
14.00	Upper Housing
14.04	Sand Guard - Rubber
14.05	Sand Guard - SS

Part No.	Part Name
14.06	Upper housing Pipe
14.13	Cable plug shell
14.14	Cable Clamp
16.00	Mechanical seal
24.01	Wound stator
24.02	Cable
24.04	Winding guard
29.06	Outer shell
32.07	Nut

Part No.	Part Name
32.08	Oil Seal
32.09	O-Ring
32.11	Plug
32.12	Screw
32.15	Stud
32.16	Washer
32.17	Wave washer
32.18	Bearing
38.02	Cable plug Assembly

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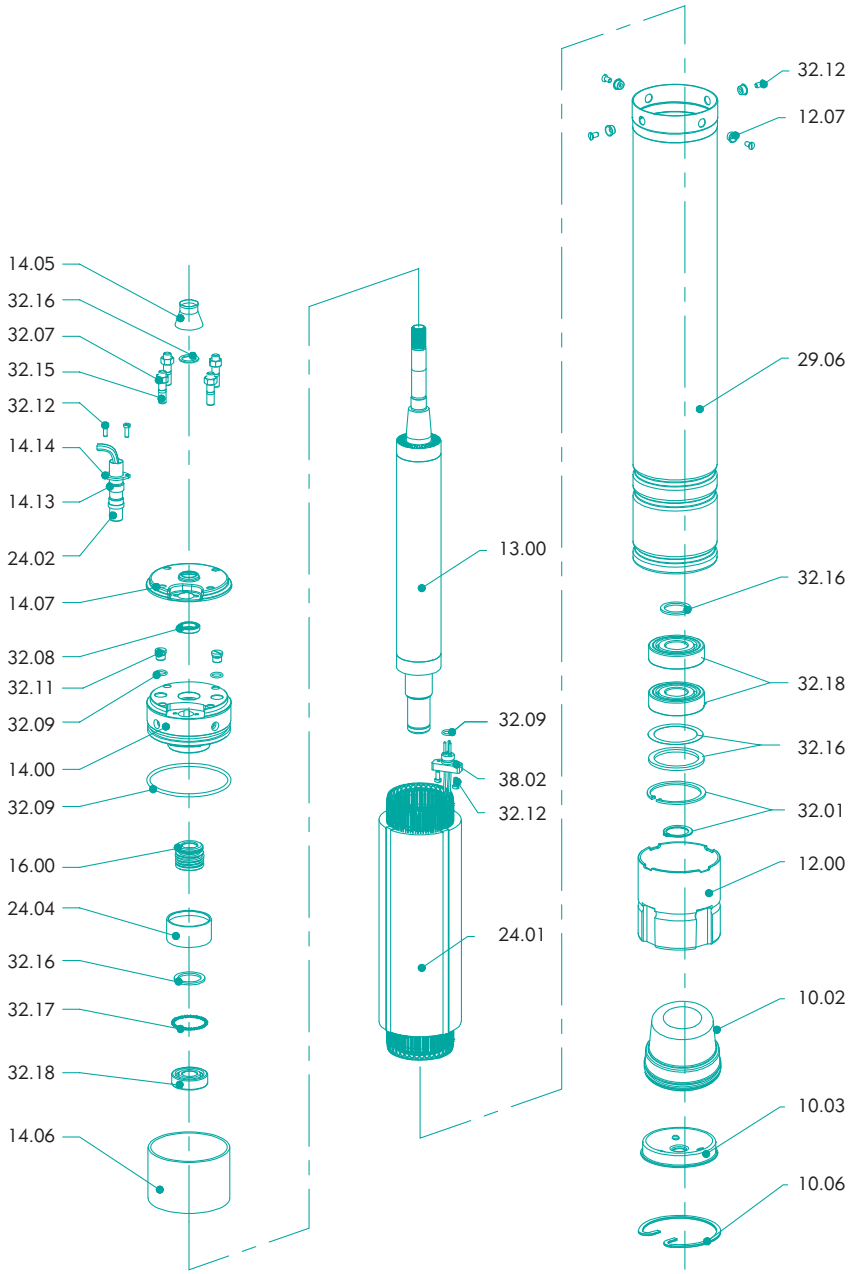
EXPLODED VIEW

(0.5.5 kW - 7.5 kW)



Part No.	Part Name
10.02	Diaphragm
10.03	Diaphragm Bottom Plate
10.06	Snap ring
12.00	Lower housing
12.07	Guide bush
13.00	Rotor
14.00	Upper Housing
14.05	Sand Guard
14.06	Upper housing Pipe
14.07	Upper housing shell
14.13	Cable Plug Shell
14.14	Cable Clamp
16.00	Mechanical seal
24.01	Wound stator
24.02	Cable
24.04	Winding guard
29.06	Outer shell
32.01	Circlip
32.07	Nut
32.08	Oil Seal
32.09	O-ring
32.11	Plug
32.12	Screw
32.15	Stud
32.16	Washer
32.17	Wave Washer
32.18	Bearing
38.02	Cable Plug Assembly

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ELEGANT SERIES 50Hz

Construction Features

Components	Version - TA
Seal Housing	Cast Iron with SS 304 Shell
Upper & Lower Support	Cast Iron
Shaft Seal	Carbon Vs Ceramic
Wounded Stator Shell	SS 304
Spline Shaft	SS 420
Rotor Shaft	SS 420 / EN-8D
Pressure Equalizing Diaphragm	High Nitrile Rubber
Diaphragm Bottom Plate	SS 304

Technical Data

Specifications	Nominal Diameter (4")
Rated Output & Voltage	0.37kW to 1.5 kW - 1Ph, 230V, 0.37kW to 7.5kW - 3 Ph, 380V
Rated Speed	2900 rpm
Voltage Tolerance	+6%
Protection	IP 68
Rotation Sequence	1Ph - CCW, 3Ph - Electrically reversible
Outer Diameter	96mm
Duty	S1 (Continuous)
Linear flow	0.15m/sec
Liquid Temperature	38°C
Switching frequency	30 starts / hour
Thrust Load	0.37kW to 0.75kW - 1500N 1.1kW to 4kW - 2500N 5.5kW to 7.5kW - 4500N
Mounting Dimensions	NEMA standard
Starting Method	1 Ph - CSR / CSCR, 3 Ph - DOL
Motor Lead Out Type	Removable type - 4 core
Class of Insulation	" F "

Capacitor Details for 4" Single Phase 230V Submersible Motors (CSCR)

kW	Motor Type	Running Capacitor (µfd)	Starting Capacitor (µfd)
0.37	N4 - 03 TA-SE	36	60 / 80
0.55	N4 - 05 TA-SE	40	80 / 100
0.75	N4 - 07 TA-SE	45	100 / 120
1.1	N4 - 11 TA-SE	30 + 36	120 / 150
1.5	N4 - 15 TA-SE	60	200 / 250

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ELECTRICAL DATA AND DIMENSIONS & WEIGHTS

ELEGANT SERIES › **50Hz**

4", Single phase, 230V, Non-Toxic Liquid filled Submersible Motors

Motor Type	kW	HP	Current (A)	Locked Rotor Amps	Full Load		Thrust Capacity (N)	CSR Capacitor (µfd)
					Eff%	Phase Angle		
N4-03 TA-SE	0.37	0.5	3.6	10.4	53	0.92	1500	15
N4-05 TA-SE	0.55	0.75	4.8	13.6	58	0.92	1500	20
N4-07 TA-SE	0.75	1	6.3	17.6	60	0.96	1500	30
N4-11 TA-SE	1.1	1.5	8.6	21.1	64	0.98	2500	40
N4-15 TA-SE	1.5	2	11.5	35.0	72	0.98	2500	50
N4-22 TA-SE	2.2	3	15	52.0	70	0.95	2500	60

4", Single phase, 230V, Non-Toxic Liquid filled Submersible Motors

Motor Type	kW	HP	Diameter (OD) in Inches	Height in Inches	Net Weight in lbs	Standard Motor Leads	
						mm^2	Length (m)
N4-03 TA-SE	0.37	0.5	3.83	15	16	4 x 1.5	1.5
N4-05 TA-SE	0.55	0.75	3.83	15	18	4 x 1.5	1.5
N4-07 TA-SE	0.75	1	3.83	17	21	4 x 1.5	1.5
N4-11 TA-SE	1.1	1.5	3.83	17	23	4 x 1.5	1.5
N4-15 TA-SE	1.5	2	3.83	18	25	4 x 1.5	1.5
N4-22 TA-SE	2.2	3	3.83	20	26	4 x 1.5	1.5

4", Three phase, 380V, Non-Toxic Liquid filled Submersible Motors

Motor Type	kW	HP	Current (A)	Locked Rotor Amps	Full Load		Thrust Capacity (N)
					Eff%	Phase Angle	
N4-03 TA-TJ	0.37	0.5	1.1	5.2	63	0.80	1500
N4-05 TA-TJ	0.5	0.75	1.9	9.3	63	0.80	1500
N4-07 TA-TJ	0.75	1	2.4	11.1	64	0.81	1500
N4-11 TA-TJ	1.1	1.5	3.15	13.0	68	0.82	2500
N4-15 TA-TJ	1.5	2	4.2	19.5	72	0.82	2500
N4-22 TA-TJ	2.2	3	6	28	72	0.83	2500
N4-30 TA-TJ	3.0	4	7.8	40.2	75	0.83	2500
N4-37 TA-TJ	3.7	5	9.6	48	75	0.83	2500
N4-40 TA-TJ	4.0	5.5	10	51	77	0.83	2500
N4-55 TA-TJ	5.5	7.5	13.6	71.1	78	0.85	4500
N4-75 TA-TJ	7.5	10	17.6	87.8	79	0.85	4500

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ELECTRICAL DATA AND DIMENSIONS & WEIGHTS

ELEGANT SERIES › 50Hz

4", Three phase, 380V, Non-Toxic Liquid filled Submersible Motors

Motor Type	kW	HP	Diameter (OD) in Inches	Head in Inches	Net Weight in lbs	Standard Motor Leads	
						mm^2	Length (m)
N4-0.37 TA-TJ	0.37	0.5	3.83	15	16	4 x 1.5	1.5
N4-0.55 TA-TJ	0.55	0.75	3.83	15	18	4 x 1.5	1.5
N4-0.75 TA-TJ	0.75	1	3.83	17	21	4 x 1.5	1.5
N4-11 TA-TJ	1.1	1.5	3.83	17	23	4 x 1.5	1.5
N4-15 TA-TJ	1.5	2	3.83	18	25	4 x 1.5	1.5
N4-22 TA-TJ	2.2	3	3.83	19	27	4 x 1.5 / 2.5	2
N4-30 TA-TJ	3	4	3.83	22	43	4 x 2.5	2
N4-37 TA-TJ	3.7	5	3.83	24	43	4 x 2.5	2.5
N4-40 TA-TJ	4	5.5	3.83	28	52	4 x 2.5	2.5
N4-55 TA-TJ	5.5	7.5	3.83	33	66	4 x 2.5	3
N4-75 TA-TJ	7.5	10	3.83	37	74	4 x 2.5	3

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CABLE SELECTION CHART

For Single Phase 3 wire (D.O.L.) Motor Maximum Length of Copper Cable

Motor Rating			CABLE SIZE IN SQUARE MILLIMETRES											
VOLTS	kW	HP	1.5	2.5	4	6	10	16	25	35	50	70	95	
230 VOLT 50Hz	0.37	0.5	120	200	320	480	810	1260	1900	2590	3580	4770	5920	**MAXIMUM LENGTH IN METRES**
	0.55	0.75	80	1030	220	320	550	850	1290	1760	2430	3230	4000	
	0.75	1.0	60	100	170	250	430	670	1010	1380	1910	2550	3460	
	1.1	1.5	40	70	120	180	300	470	710	980	1360	1850	2320	
	1.5	2.0	30	60	90	130	230	360	550	760	1060	1440	1820	
	2.2	3.0		40	60	90	150	230	350	490	680	920	1160	

For Three Phase 3 wire (D.O.L.) Motor Maximum Length of Copper Cable

Motor Rating			CABLE SIZE IN SQUARE MILLIMETRES																		
VOLTS	kW	HP	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400	500	630
380 - 415 VOLT 50Hz	0.37	0.5	473	788	1260																
	0.55	0.75	398	660	1050																
	0.75	1	311	518	825																
	1.1	1.5	203	338	533	795															
	1.5	2	161	270	428	638															
	2.2	3	113	188	300	450	731														
	3	4	86	143	233	345	566	885													
	3.7	5	71	120	188	285	465	735													
	4	5.5	67	113	176	263	435	683	1043												
	4.5	6	64	105	169	255	420	653	998	1358											
	5.5	7.5	53	83	135	203	330	518	795	1088											
	7.5	10	38	60	98	150	233	375	563	773											
	9.3	12.5		53	83	128	210	330	503	683	938										
	11	15		45	75	105	173	278	413	563	795	1058									
	13	17.5			60	83	150	233	353	488	668	885									
	15	20			53	75	128	203	308	428	593	788	1005								
	18.5	25				60	105	158	248	338	461	615	788	938							
	22	30					90	135	210	285	398	533	675	810	953						
	26	35					75	113	173	233	330	458	578	705	825	953					
	30	40					68	98	158	210	300	390	503	585	698	803	938				
	37	50						83	128	173	240	315	405	480	563	645	758	863			
	45	60							105	143	195	270	345	420	503	585	698	795			
	55	75								120	165	218	285	353	413	480	570	656			
	63	85								109	150	173	255	315	368	428	503	578			
	75	100									120	165	218	263	308	353	420	480	563		
	93	125										135	173	210	248	285	338	383	450		
	110	150											150	180	218	248	300	345	405	454	
	130	175											128	154	188	218	255	300	345	398	439
	150	200												135	161	188	225	263	311	349	386
	166	225													135	165	195	225	263	300	334
	185	250														150	180	210	248	278	311
	220	300															143	165	191	215	237
	260	350																143	165	188	206
	300	400																124	143	158	180

MAXIMUM LENGTH IN METRES

The given cable lengths are the maximum one from POWER TO MOTOR, Exceeding the lengths mentioned will void warranty.

CABLE SELECTION CHART

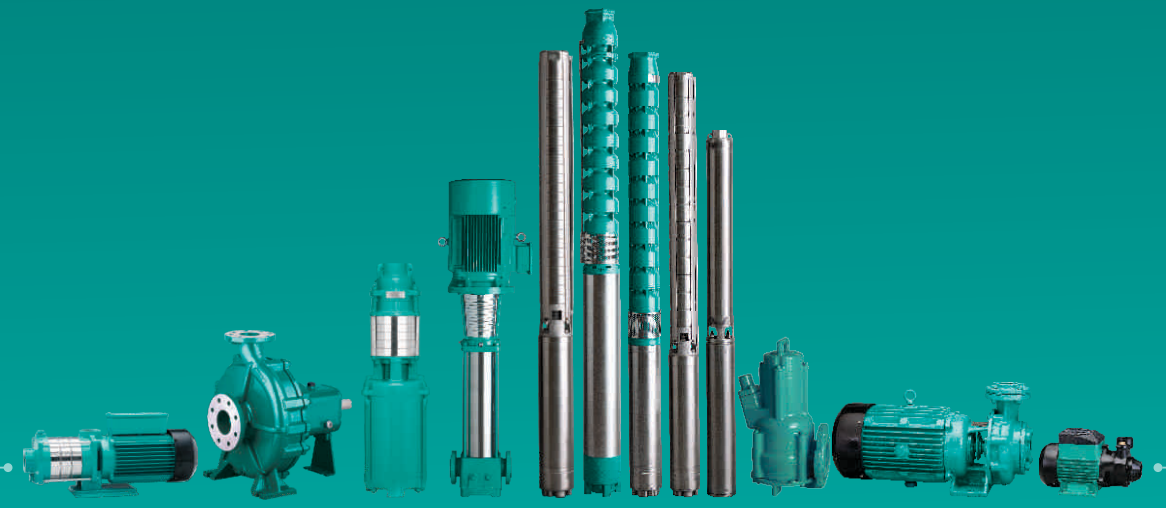
For Three Phase 6 wire (S.D.) Motor Maximum Length of Copper Cable

Motor Rating			CABLE SIZE IN SQUARE MILLIMETRES																		
VOLTS	kW	HP	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400	500	630
380 - 415 VOLT 50Hz	5.5	7.5	91	143	234	351	572	896	1377	1884											
	7.5	10	65	104	169	260	403	650	974	1338											
	9.3	12.5		91	143	221	364	572	870	1182	1624										
	11	15		78	130	182	299	481	714	974	1377	1832									
	13	17.5			104	143	260	403	611	844	1156	1533									
	15	20			91	130	221	351	533	740	1026	1364	1741								
	18.5	25				104	182	273	429	585	799	1065	1364	1624							
	22	30					156	234	364	494	688	922	1169	1403	1650						
	26	35					130	195	299	403	572	792	1000	1221	1429	1650					
	30	40					117	169	273	364	520	675	870	1013	1208	1390	1624				
	37	50						143	221	299	416	546	701	831	974	1117	1312	1494			
	45	60							182	247	338	468	598	727	870	1013	1208	1377			
	55	75								208	286	377	494	611	714	831	987	1137			
	63	85								188	260	299	442	546	637	740	870	1000			
	75	100									208	286	377	455	533	611	727	831	974		
	93	125										234	299	364	429	494	585	662	779		
	110	150											260	312	377	429	520	598	701	786	
	130	175											221	266	325	377	442	520	598	688	760
	150	200												234	279	325	390	455	539	604	669
	166	225													234	286	338	390	455	520	578
	185	250														260	312	364	429	481	539
	220	300															247	286	331	372	410
	260	350																247	286	325	357
	300	400																214	247	273	312

MAXIMUM LENGTH IN METRES

The given cable lengths are the maximum one from POWER TO MOTOR, Exceeding the lengths mentioned will void warranty.

Notes :



THE POWER BEHIND THE FORCE

Naargo Industries Private Limited, one of the leading manufacturers of latest state of art, large range of pumps and motors, is managed by veterans who are in the pump industry for almost half a century. The products are employed in various applications like irrigation, domestic, civil construction, de-watering etc; The Company has a strong distribution network in India for sales & service and a strong global presence.

Quality is the key factor in Naargo's products. The expansive infrastructure and environment accredited with ISO 9001 quality certification, latest engineering softwares, high-tech machinery, futuristic pumping technology and high caliber workforce facilitate the production of flawless and efficient products on par with international standards under the brand name of "Tormac". The well equipped R & D wing stays alive to the changing global trends and comes out with viable solutions for innovative product development and upgradation.

The Products currently available include Stainless Steel Submersible Pumps, 4" Thermoplastic Submersible Pumps, 6" & 8" Cast Iron Submersible Pumps, Submersible Motors, Submersible cables, uPVC pipes, and control panels, Centrifugal Pumps, Inline Booster Pumps, Jet Self-priming Pumps Sewage pumps, Induction Pumps and Peripheral Pumps.

The power, performance and endurance of the products backed by the uncompromising teamwork and value systems will certainly propel the company's growth towards new horizons in the pump industry.

IC-SMF-K/19-E7

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Tormac PUMPS