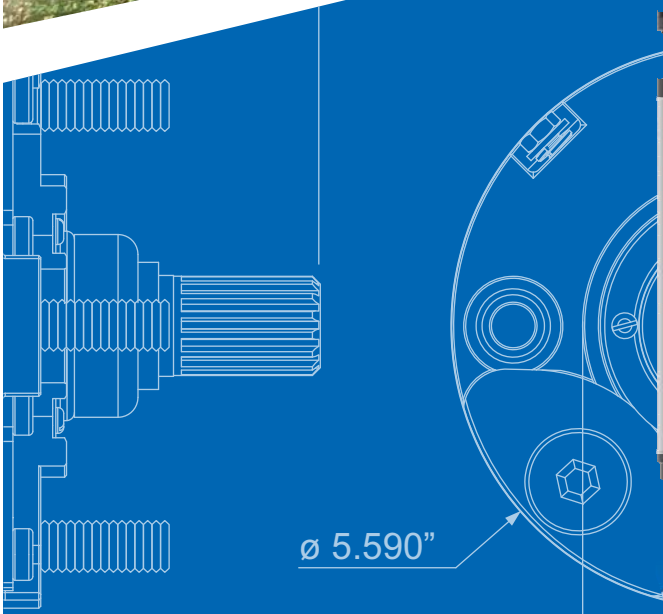


**NM SERIES**



# SUBMERSIBLE MOTORS



**PRODUCT CATALOGUE**

**60Hz**

[www.northam-inc.com](http://www.northam-inc.com)

## SUBMERSIBLE MOTORS

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## SUBMERSIBLE MOTORS

0.5 HP to 250 HP

MODEL CODE

MOTOR SIZE: 4", 6", 8", 10"

NM

C

8

1000

6

3

D

2

X

### Cable arrangement

| Code | Cable arrangement       |
|------|-------------------------|
|      | Standard cable          |
| X    | Removable plug-in cable |

### Pole

| Code | Pole |
|------|------|
| 2    | 2    |
| 4    | 4    |

### Volts

| Code | Volts |
|------|-------|
| A    | 115V  |
| B    | 230V  |
| C    | 380V  |
| D    | 460V  |

### Phase

| Code | Phase   |
|------|---------|
| 1    | 1 Phase |
| 3    | 3 Phase |

### Frequency

| Code | Hz |
|------|----|
| 6    | 60 |

### Motor HP

| Code | HP     |
|------|--------|
| 0005 | 0.5 HP |
| 0010 | 1 HP   |
| 0100 | 10 HP  |
| 1000 | 100 HP |

### Motor size

| Code | Size |
|------|------|
| 4    | 4"   |
| 6    | 6"   |
| 8    | 8"   |
| 1    | 10"  |

### Material of construction

| Code | Material                      |
|------|-------------------------------|
| B    | 316 Stainless steel (Premium) |
| C    | Cast iron (Standard)          |

### Series name

| Code | Series                       |
|------|------------------------------|
| NM   | Submersible rewindable motor |

## SUBMERSIBLE MOTORS

5 HP to 60 HP

GENERAL DATA

MOTOR SIZE: 6"

### SUITABLE WELL SIZE

- These motors are designed and sized for installation in 6" diameter or larger water wells.

### FEATURES

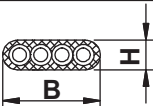
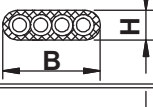
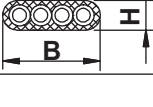
- Heavy duty, rewindable, water filled submersible motor.
- Stainless steel splined shaft
- Equipped with Carbon/SiC mechanical shaft seal.
- Water lubricated heavy duty radial and axial thrust bearings.
- Counter thrust bearing.
- Motors are factory-filled with clean water + Glycol mixture.
- High efficiency electrical design (lower operating cost).
- Tropicalized design (lower winding temperature).
- 6" NEMA coupling flange.
- Pressure compensation diaphragm.



### SPECIAL FEATURES ON-REQUEST

- PT 100 temperature sensor.
- 50 Hz, voltage and HPs not listed in this catalog.
- Double cable for Star - Delta operation.

### CABLE DATA

| HP      | Phase | Type of start | Cable x Lead x Size (AWG) | Length [ft] | H [inch] | B [inch] |                                                                                       |
|---------|-------|---------------|---------------------------|-------------|----------|----------|---------------------------------------------------------------------------------------|
| 5 - 25  | 3     | DOL           | 1 x 4 x 10 AWG            | 13          | 0.37     | 1.04     |  |
| 30 - 60 | 3     | DOL           | 1 x 4 x 8 AWG             | 13          | 0.45     | 1.22     |  |
| 5 - 15  | 1     | DOL           | 1 x 4 x 10 AWG            | 13          | 0.37     | 1.04     |  |

## SUBMERSIBLE MOTORS

5 HP to 60 HP

GENERAL DATA

MOTOR SIZE: 6"

### SPECIFICATIONS

|                                      | Motor construction                                |                                                   |
|--------------------------------------|---------------------------------------------------|---------------------------------------------------|
|                                      | Standard                                          | Premium stainless steel                           |
| Frequency                            | 60 Hz                                             | 60 Hz                                             |
| Motor ratings                        | 3 phase - 5 to 60 HP<br>1 phase - 5 to 15 HP      | 3 phase - 5 to 60 HP                              |
| Voltage<br>(Tolerance +10% / -15%)   | 3 phase - 230 V, 460 V, 575V<br>1 phase - 230 V   | 3 phase - 230 V, 460 V, 575V                      |
| Pole/RPM                             | 2 Pole / 3450 RPM                                 | 2 Pole / 3450 RPM                                 |
| Degree of protection                 | IP 68                                             | IP 68                                             |
| Duty rating                          | Continuous                                        | Continuous                                        |
| Ambient temperature                  | 104 °F / 40 °C                                    | 104 °F / 40 °C                                    |
| Rotation                             | 3 phase - CCW & CW<br>1 phase - CCW & CW          | 3 phase - CCW & CW                                |
| Maximum nos. of starts/hour          | 5 to 30 HP - 20<br>40 to 60 HP - 15               | 5 to 30 HP - 20<br>40 to 60 HP - 15               |
| Minimum cooling flow along the motor | 5 to 20 HP - 0.5 ft/sec<br>25 to 60 HP - 1 ft/sec | 5 to 20 HP - 0.5 ft/sec<br>25 to 60 HP - 1 ft/sec |
| Maximum submerged depth              | 820 feet / 250 metres                             | 820 feet / 250 metres                             |
| Mounting                             | Vertical                                          | Vertical                                          |

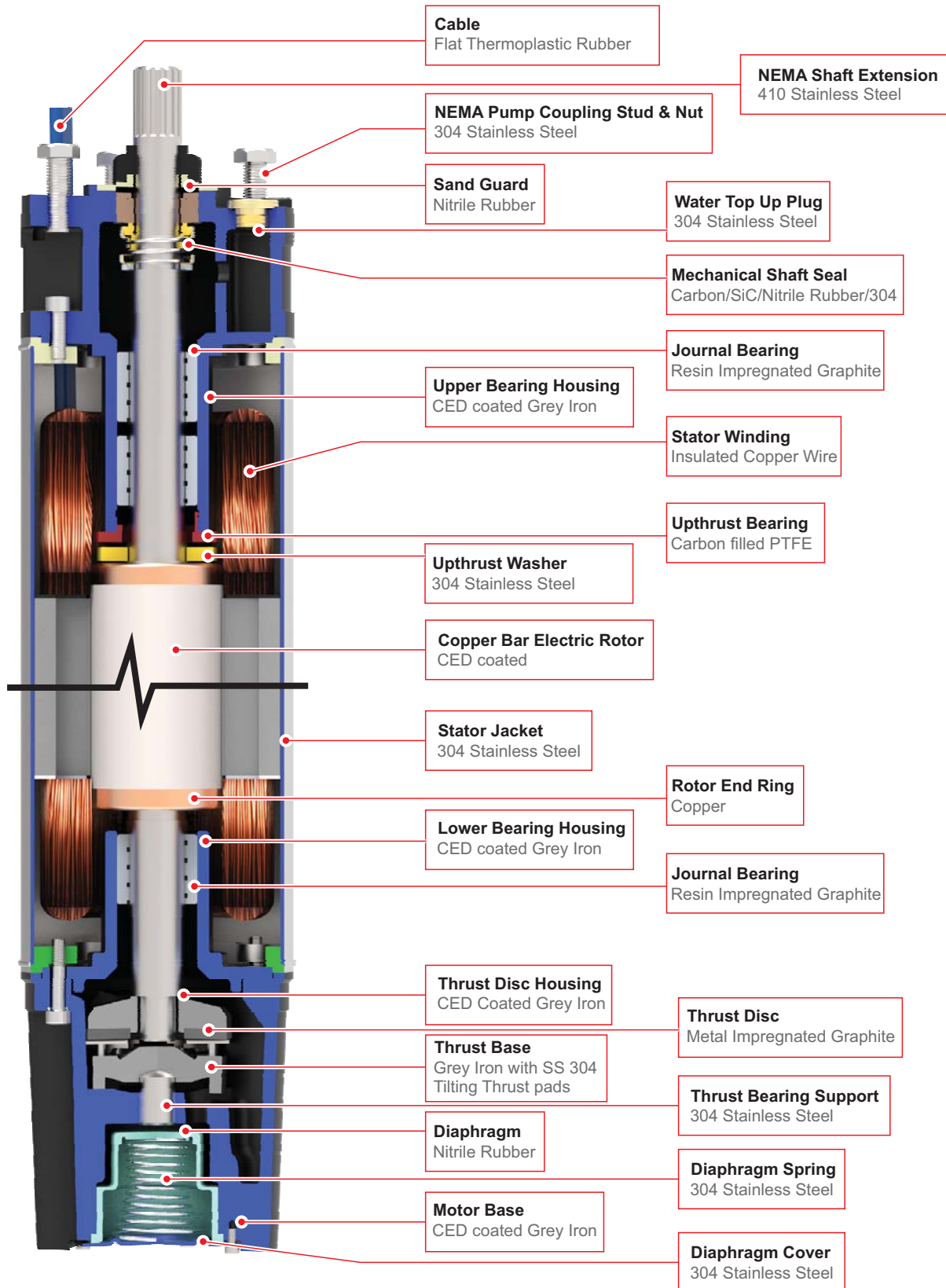
NOTE: SPECIFICATIONS ARE SUBJECT TO PERIODIC CHANGES DUE TO CONTINUOUS IMPROVEMENTS.

## STANDARD SUBMERSIBLE MOTORS

5 HP to 25 HP

MATERIAL OF CONSTRUCTION

MOTOR SIZE: 6"

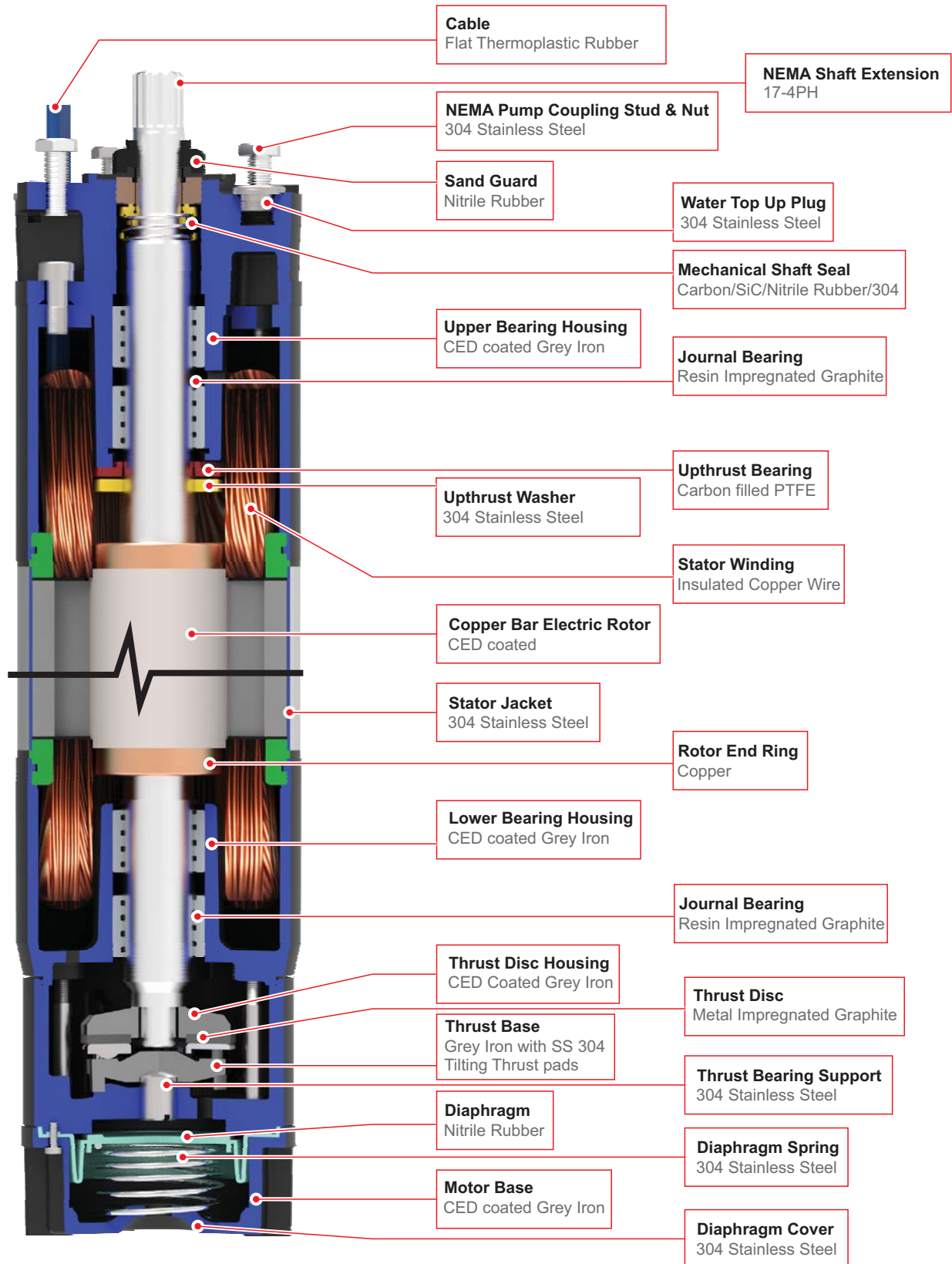


## STANDARD SUBMERSIBLE MOTORS

30 HP to 60 HP

MATERIAL OF CONSTRUCTION

MOTOR SIZE: 6"

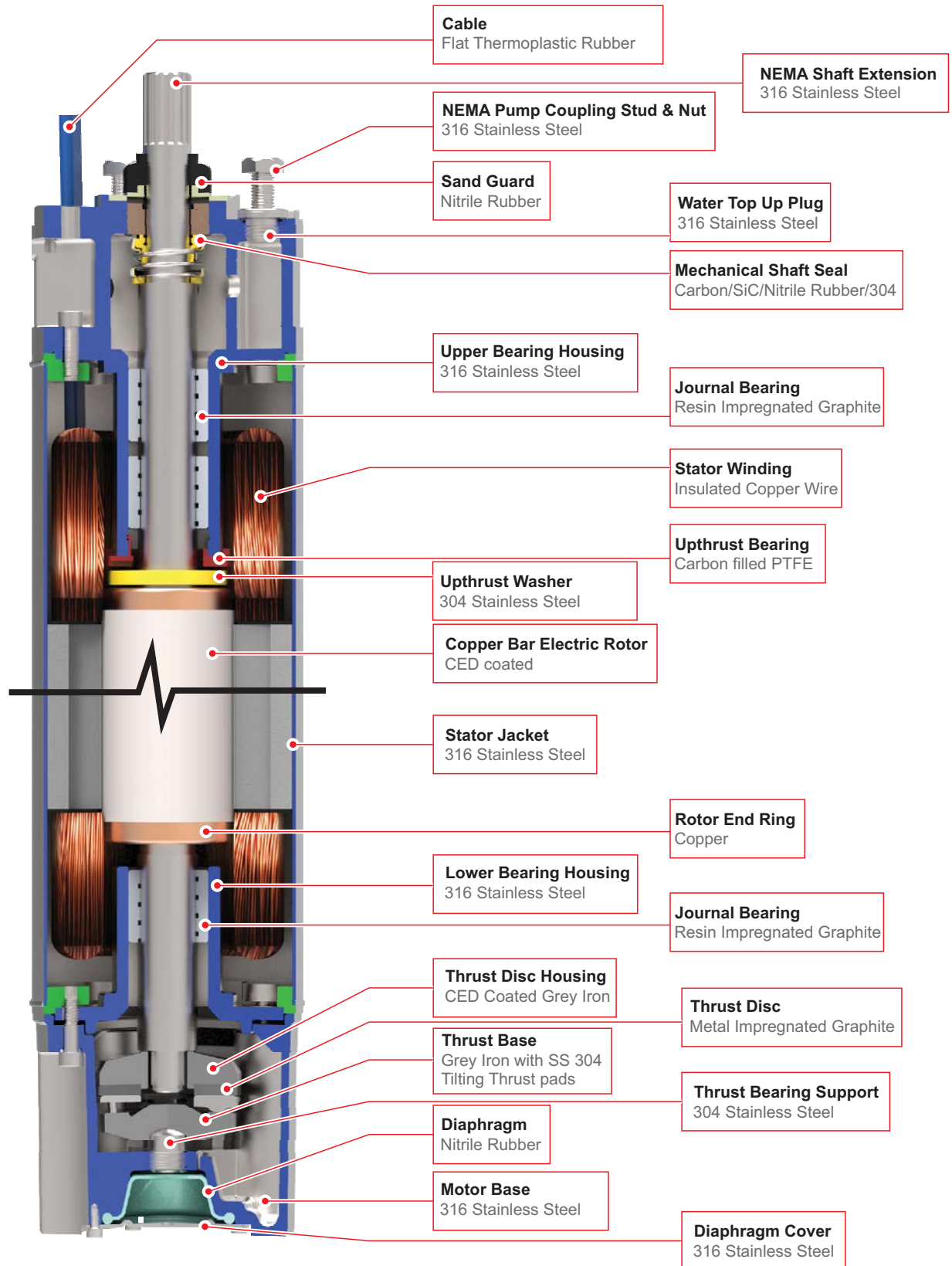


## PREMIUM STAINLESS STEEL SUBMERSIBLE MOTORS

5 HP to 25 HP

MATERIAL OF CONSTRUCTION

MOTOR SIZE: 6"

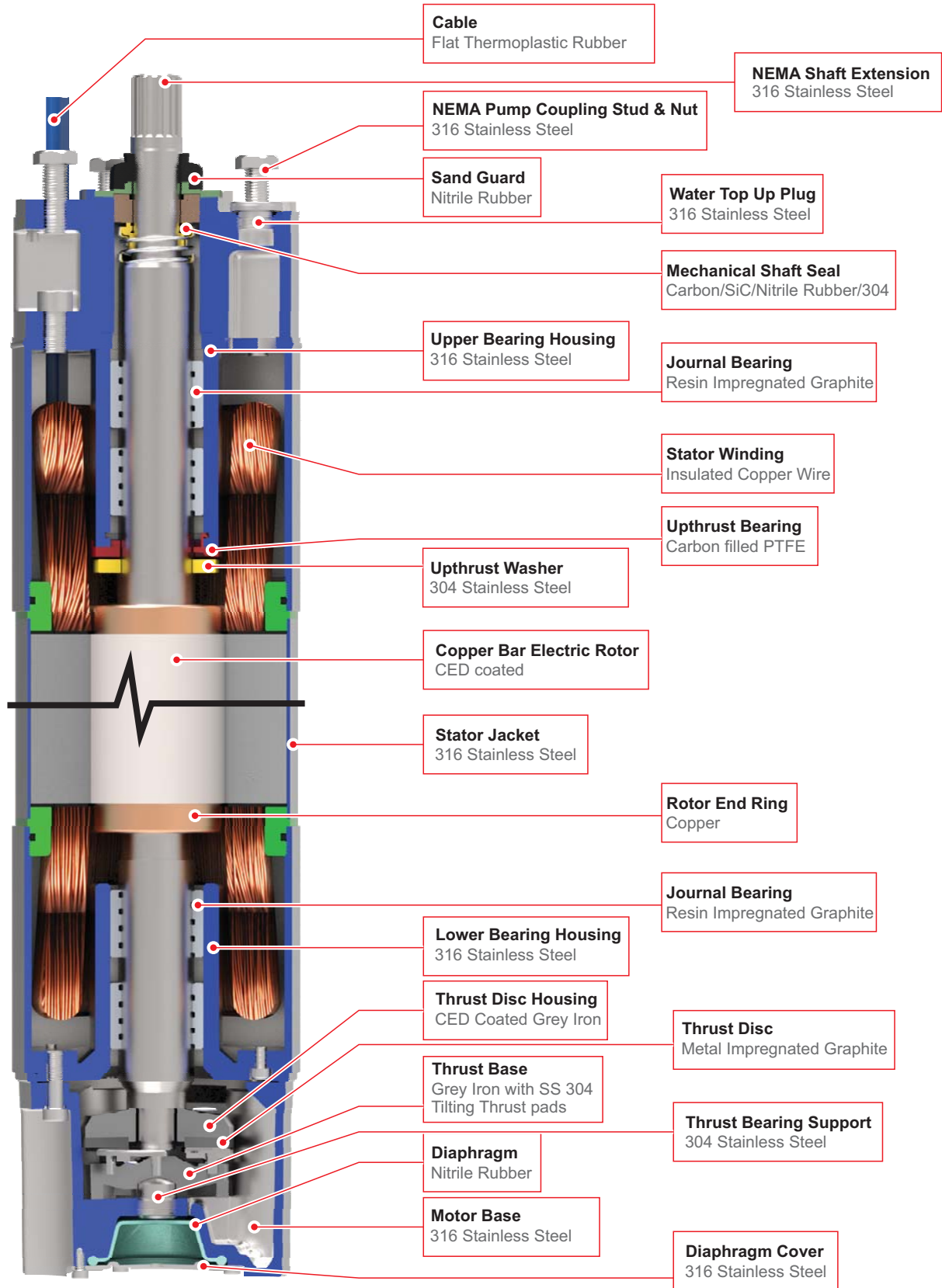


## PREMIUM STAINLESS STEEL SUBMERSIBLE MOTORS

30 HP to 60 HP

MATERIAL OF CONSTRUCTION

MOTOR SIZE: 6"



## SUBMERSIBLE MOTORS

5 HP to 60 HP

ORDER INFORMATION

MOTOR SIZE: 6"

| HP | Hz | PHASE | VOLTS | POLE | MOTOR SIZE | ORDER NO. / MODEL CODE* |                         |
|----|----|-------|-------|------|------------|-------------------------|-------------------------|
|    |    |       |       |      |            | STANDARD                | PREMIUM STAINLESS STEEL |
| 5  | 60 | 3     | 230   | 2    | 6"         | NM-C-6-0050-6-3-B-2     | NM-B-6-0050-6-3-B-2     |
|    | 60 | 3     | 460   | 2    | 6"         | NM-C-6-0050-6-3-D-2     | NM-B-6-0050-6-3-D-2     |
| 7½ | 60 | 3     | 230   | 2    | 6"         | NM-C-6-0075-6-3-B-2     | NM-B-6-0075-6-3-B-2     |
|    | 60 | 3     | 460   | 2    | 6"         | NM-C-6-0075-6-3-D-2     | NM-B-6-0075-6-3-D-2     |
| 10 | 60 | 3     | 230   | 2    | 6"         | NM-C-6-0100-6-3-B-2     | NM-B-6-0100-6-3-B-2     |
|    | 60 | 3     | 460   | 2    | 6"         | NM-C-6-0100-6-3-D-2     | NM-B-6-0100-6-3-D-2     |
|    | 60 | 3     | 575   | 2    | 6"         | NM-C-6-0100-6-3-E-2     | NM-B-6-0100-6-3-E-2     |
| 15 | 60 | 3     | 230   | 2    | 6"         | NM-C-6-0150-6-3-B-2     | NM-B-6-0150-6-3-B-2     |
|    | 60 | 3     | 460   | 2    | 6"         | NM-C-6-0150-6-3-D-2     | NM-B-6-0150-6-3-D-2     |
|    | 60 | 3     | 575   | 2    | 6"         | NM-C-6-0150-6-3-E-2     | NM-B-6-0150-6-3-E-2     |
| 20 | 60 | 3     | 230   | 2    | 6"         | NM-C-6-0200-6-3-B-2     | NM-B-6-0200-6-3-B-2     |
|    | 60 | 3     | 460   | 2    | 6"         | NM-C-6-0200-6-3-D-2     | NM-B-6-0200-6-3-D-2     |
|    | 60 | 3     | 575   | 2    | 6"         | NM-C-6-0200-6-3-E-2     | NM-B-6-0200-6-3-E-2     |
| 25 | 60 | 3     | 230   | 2    | 6"         | NM-C-6-0250-6-3-B-2     | NM-B-6-0250-6-3-B-2     |
|    | 60 | 3     | 460   | 2    | 6"         | NM-C-6-0250-6-3-D-2     | NM-B-6-0250-6-3-D-2     |
|    | 60 | 3     | 575   | 2    | 6"         | NM-C-6-0250-6-3-E-2     | NM-B-6-0250-6-3-E-2     |
| 30 | 60 | 3     | 230   | 2    | 6"         | NM-C-6-0300-6-3-B-2     | NM-B-6-0300-6-3-B-2     |
|    | 60 | 3     | 460   | 2    | 6"         | NM-C-6-0300-6-3-D-2     | NM-B-6-0300-6-3-D-2     |
|    | 60 | 3     | 575   | 2    | 6"         | NM-C-6-0300-6-3-E-2     | NM-B-6-0300-6-3-E-2     |
| 40 | 60 | 3     | 230   | 2    | 6"         | NM-C-6-0400-6-3-B-2     | NM-B-6-0400-6-3-B-2     |
|    | 60 | 3     | 460   | 2    | 6"         | NM-C-6-0400-6-3-D-2     | NM-B-6-0400-6-3-D-2     |
|    | 60 | 3     | 575   | 2    | 6"         | NM-C-6-0400-6-3-E-2     | NM-B-6-0400-6-3-E-2     |
| 50 | 60 | 3     | 230   | 2    | 6"         | NM-C-6-0500-6-3-B-2     | NM-B-6-0500-6-3-B-2     |
|    | 60 | 3     | 460   | 2    | 6"         | NM-C-6-0500-6-3-D-2     | NM-B-6-0500-6-3-D-2     |
|    | 60 | 3     | 575   | 2    | 6"         | NM-C-6-0500-6-3-E-2     | NM-B-6-0500-6-3-E-2     |
| 60 | 60 | 3     | 230   | 2    | 6"         | NM-C-6-0600-6-3-B-2     | NM-B-6-0600-6-3-B-2     |
|    | 60 | 3     | 460   | 2    | 6"         | NM-C-6-0600-6-3-D-2     | NM-B-6-0600-6-3-D-2     |
|    | 60 | 3     | 575   | 2    | 6"         | NM-C-6-0600-6-3-E-2     | NM-B-6-0600-6-3-E-2     |
| 5  | 60 | 1     | 230   | 2    | 6"         | NM-C-6-0050-6-1-B-2     | NM-B-6-0050-6-1-B-2     |
| 7½ | 60 | 1     | 230   | 2    | 6"         | NM-C-6-0075-6-1-B-2     | NM-B-6-0075-6-1-B-2     |
| 10 | 60 | 1     | 230   | 2    | 6"         | NM-C-6-0100-6-1-B-2     | NM-B-6-0100-6-1-B-2     |
| 15 | 60 | 1     | 230   | 2    | 6"         | NM-C-6-0150-6-1-B-2     | NM-B-6-0150-6-1-B-2     |

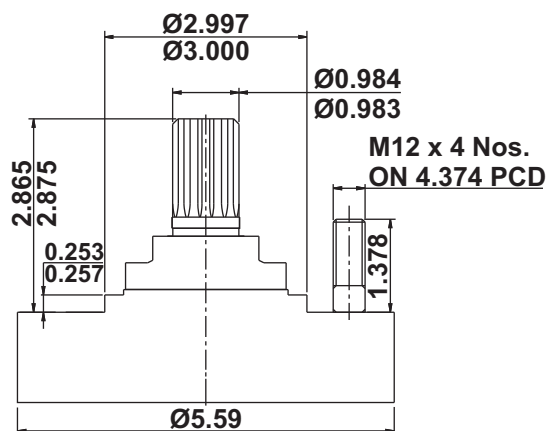
\* Note: Add subscript "-X" on the above mentioned model code for ordering submersible motor with plug-in cable arrangement.

## SUBMERSIBLE MOTORS

5 HP to 60 HP

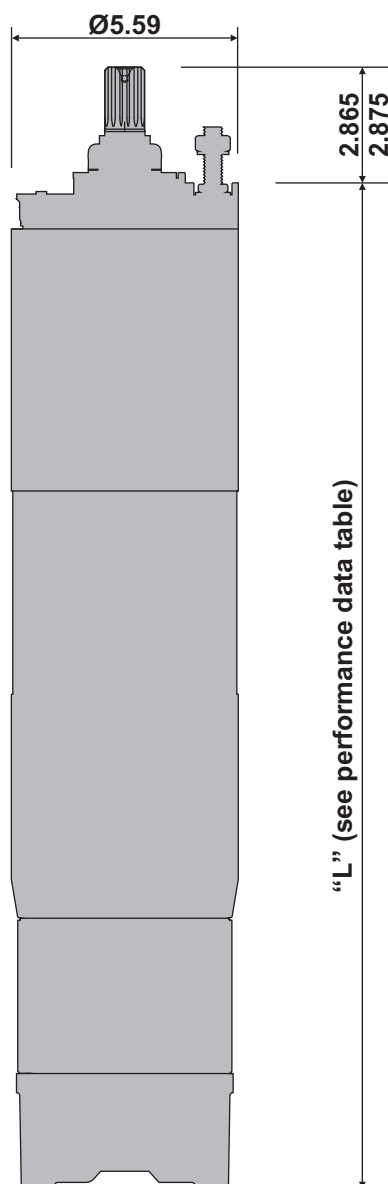
DIMENSIONS

MOTOR SIZE: 6"



### Shaft

Spline shaft: 15 teeth,  
16/32 pitch, module 1.5875,  
30° pressure angle,  
coupling tolerance 5 as per  
ANSI B.92.1,  
confirming with NEMA 6"



## SUBMERSIBLE MOTORS

5 HP to 60 HP

PERFORMANCE DATA-60 Hz

MOTOR SIZE: 6"

| P <sub>N</sub><br>[HP] | Phase | S.F  | U <sub>N</sub><br>[V] | Thrust<br>Load<br>[N] | n <sub>N</sub><br>[min <sup>-1</sup> ] | I <sub>N</sub><br>[A] | I <sub>ST</sub> /I <sub>N</sub><br>[A] | η (Eff.) [%]<br>at % load |      |      | Cos φ PF<br>at % load |      |      | T <sub>N</sub><br>[Nm] | Length<br>[L]<br>[inch] | Shipping<br>Weight<br>[lbs] |
|------------------------|-------|------|-----------------------|-----------------------|----------------------------------------|-----------------------|----------------------------------------|---------------------------|------|------|-----------------------|------|------|------------------------|-------------------------|-----------------------------|
|                        |       |      |                       |                       |                                        |                       |                                        | 50                        | 75   | 100  | 50                    | 75   | 100  |                        |                         |                             |
| 5                      | 3     | 1.15 | 230                   | 27500                 | 3480                                   | 18.5                  | 5.30                                   | 69.8                      | 75.8 | 77.0 | 0.63                  | 0.74 | 0.81 | 10.98                  | 22.36                   | 109                         |
| 5                      | 3     | 1.15 | 460                   | 27500                 | 3500                                   | 9.3                   | 4.63                                   | 70.3                      | 76.8 | 78.0 | 0.66                  | 0.75 | 0.80 | 10.92                  | 22.36                   | 109                         |
| 7½                     | 3     | 1.15 | 230                   | 27500                 | 3480                                   | 25.8                  | 5.30                                   | 74.8                      | 77.8 | 79.0 | 0.62                  | 0.74 | 0.82 | 15.10                  | 22.95                   | 116                         |
| 7½                     | 3     | 1.15 | 460                   | 27500                 | 3500                                   | 12.6                  | 4.72                                   | 74.8                      | 77.8 | 79.0 | 0.65                  | 0.75 | 0.82 | 15.00                  | 22.95                   | 116                         |
| 10                     | 3     | 1.15 | 230                   | 27500                 | 3480                                   | 32.6                  | 5.40                                   | 75.8                      | 78.8 | 80.0 | 0.64                  | 0.76 | 0.83 | 20.59                  | 24.13                   | 126                         |
| 10                     | 3     | 1.15 | 460                   | 27500                 | 3500                                   | 16.5                  | 5.06                                   | 75.8                      | 78.8 | 80.0 | 0.66                  | 0.76 | 0.82 | 20.47                  | 24.13                   | 126                         |
| 10                     | 3     | 1.15 | 575                   | 27500                 | 3500                                   | 12.5                  | 5.00                                   | 75.5                      | 78.5 | 80.0 | 0.64                  | 0.74 | 0.80 | 20.45                  | 24.13                   | 126                         |
| 15                     | 3     | 1.15 | 230                   | 27500                 | 3480                                   | 46.7                  | 5.60                                   | 77.8                      | 80.3 | 81.0 | 0.64                  | 0.77 | 0.84 | 30.20                  | 27.68                   | 146                         |
| 15                     | 3     | 1.15 | 460                   | 27500                 | 3500                                   | 23.3                  | 5.26                                   | 77.8                      | 81.3 | 82.0 | 0.67                  | 0.77 | 0.83 | 30.00                  | 27.68                   | 146                         |
| 15                     | 3     | 1.15 | 575                   | 27500                 | 3500                                   | 17.0                  | 5.20                                   | 77.5                      | 81.0 | 82.0 | 0.65                  | 0.75 | 0.81 | 29.90                  | 24.68                   | 146                         |
| 20                     | 3     | 1.15 | 230                   | 27500                 | 3480                                   | 61.4                  | 5.65                                   | 78.3                      | 82.0 | 83.0 | 0.64                  | 0.76 | 0.85 | 41.18                  | 30.75                   | 172                         |
| 20                     | 3     | 1.15 | 460                   | 27500                 | 3500                                   | 31.1                  | 5.38                                   | 78.3                      | 81.8 | 83.0 | 0.67                  | 0.77 | 0.84 | 40.95                  | 30.75                   | 172                         |
| 20                     | 3     | 1.15 | 575                   | 27500                 | 3500                                   | 22.5                  | 5.35                                   | 78.0                      | 81.5 | 83.0 | 0.65                  | 0.75 | 0.82 | 40.90                  | 30.75                   | 172                         |
| 25                     | 3     | 1.15 | 230                   | 27500                 | 3480                                   | 79.4                  | 5.66                                   | 78.1                      | 82.9 | 84.0 | 0.64                  | 0.77 | 0.85 | 50.79                  | 33.50                   | 188                         |
| 25                     | 3     | 1.15 | 460                   | 27500                 | 3500                                   | 37.8                  | 5.69                                   | 78.3                      | 82.9 | 84.0 | 0.68                  | 0.78 | 0.84 | 50.50                  | 33.50                   | 188                         |
| 25                     | 3     | 1.15 | 575                   | 27500                 | 3500                                   | 27.5                  | 5.60                                   | 78.0                      | 82.5 | 84.0 | 0.66                  | 0.76 | 0.82 | 50.40                  | 33.50                   | 188                         |
| 30                     | 3     | 1.15 | 230                   | 27500                 | 3480                                   | 92.7                  | 5.60                                   | 79.1                      | 83.9 | 85.0 | 0.65                  | 0.76 | 0.85 | 60.40                  | 39.09                   | 230                         |
| 30                     | 3     | 1.15 | 460                   | 27500                 | 3500                                   | 45.0                  | 5.80                                   | 78.9                      | 82.9 | 84.0 | 0.68                  | 0.78 | 0.84 | 60.00                  | 39.09                   | 230                         |
| 30                     | 3     | 1.15 | 575                   | 27500                 | 3500                                   | 32.5                  | 5.70                                   | 78.5                      | 82.5 | 84.0 | 0.66                  | 0.73 | 0.82 | 59.90                  | 39.09                   | 230                         |
| 40                     | 3     | 1.15 | 230                   | 27500                 | 3480                                   | 125.4                 | 5.75                                   | 79.9                      | 83.7 | 85.0 | 0.67                  | 0.79 | 0.86 | 82.37                  | 45.59                   | 281                         |
| 40                     | 3     | 1.15 | 460                   | 27500                 | 3500                                   | 60.0                  | 6.19                                   | 80.1                      | 83.9 | 85.0 | 0.70                  | 0.80 | 0.85 | 81.90                  | 45.59                   | 281                         |
| 40                     | 3     | 1.15 | 575                   | 27500                 | 3500                                   | 43.5                  | 6.15                                   | 80.0                      | 83.5 | 85.0 | 0.68                  | 0.78 | 0.83 | 81.80                  | 45.59                   | 281                         |
| 50                     | 3     | 1.15 | 230                   | 27500                 | 3480                                   | 150.4                 | 5.75                                   | 80.1                      | 83.9 | 85.0 | 0.66                  | 0.79 | 0.86 | 101.60                 | 45.87                   | 305                         |
| 50                     | 3     | 1.15 | 460                   | 27500                 | 3500                                   | 74.0                  | 5.62                                   | 79.9                      | 83.7 | 85.0 | 0.69                  | 0.79 | 0.85 | 101.00                 | 45.87                   | 305                         |
| 50                     | 3     | 1.15 | 575                   | 27500                 | 3500                                   | 54.0                  | 5.60                                   | 79.5                      | 83.5 | 85.0 | 0.67                  | 0.77 | 0.83 | 100.50                 | 45.87                   | 305                         |
| 60                     | 3     | 1.15 | 230                   | 27500                 | 3480                                   | 177.7                 | 5.77                                   | 80.1                      | 83.9 | 85.0 | 0.65                  | 0.78 | 0.86 | 123.55                 | 48.62                   | 329                         |
| 60                     | 3     | 1.15 | 460                   | 27500                 | 3500                                   | 89.9                  | 5.64                                   | 79.9                      | 83.7 | 85.0 | 0.68                  | 0.78 | 0.85 | 122.84                 | 48.62                   | 329                         |
| 60                     | 3     | 1.15 | 575                   | 27500                 | 3500                                   | 65.5                  | 5.60                                   | 79.5                      | 83.5 | 85.0 | 0.66                  | 0.76 | 0.83 | 122.50                 | 48.62                   | 329                         |
| 5                      | 1     | 1.15 | 230                   | 15500                 | 3500                                   | 25.0                  | 6.90                                   | 57.0                      | 67.9 | 74.0 | 0.73                  | 0.83 | 0.94 | 10.10                  | 22.60                   | 126                         |
| 7½                     | 1     | 1.15 | 230                   | 15500                 | 3500                                   | 35.0                  | 6.85                                   | 58.2                      | 68.9 | 75.0 | 0.73                  | 0.84 | 0.94 | 15.01                  | 23.10                   | 135                         |
| 10                     | 1     | 1.15 | 230                   | 15500                 | 3500                                   | 45.0                  | 6.70                                   | 56.1                      | 67.5 | 76.0 | 0.75                  | 0.85 | 0.96 | 20.47                  | 26.20                   | 146                         |
| 15                     | 1     | 1.15 | 230                   | 15500                 | 3500                                   | 63.0                  | 6.75                                   | 62.6                      | 72.4 | 78.0 | 0.75                  | 0.85 | 0.96 | 30.02                  | 29.30                   | 168                         |

## SUBMERSIBLE MOTORS

40 HP to 150 HP

GENERAL DATA

MOTOR SIZE: 8"

### SUITABLE WELL SIZE

- ▶ These motors are designed and sized for installation in 8" diameter or larger water wells.

### FEATURES

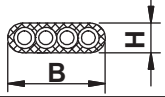
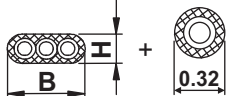
- ▶ Heavy duty, rewindable, water filled submersible motor.
- ▶ Stainless steel splined shaft
- ▶ Equipped with Carbon/SiC mechanical shaft seal.
- ▶ Water lubricated heavy duty radial and axial thrust bearings.
- ▶ Counter thrust bearing.
- ▶ Motors are factory-filled with clean water + Glycol mixture.
- ▶ High efficiency electrical design (lower operating cost).
- ▶ Tropicalized design (lower winding temperature).
- ▶ 8" NEMA coupling flange.
- ▶ Pressure compensation diaphragm.



### SPECIAL FEATURES ON-REQUEST

- ▶ PT 100 temperature sensor.
- ▶ 50 Hz, voltage and HPs not listed in this catalog.
- ▶ Double cable for Star - Delta operation.
- ▶ PE2/PA winding insulation.

### CABLE DATA

| HP       | Phase | Type of start | Cable x Lead x Size (AWG)     | Length [ft] | H [inch] | B [inch] |                                                                                       |
|----------|-------|---------------|-------------------------------|-------------|----------|----------|---------------------------------------------------------------------------------------|
| 40 - 125 | 3     | DOL           | 1 x 4 x 6 AWG                 | 16.4        | 0.55     | 1.48     |  |
| 150      | 3     | DOL           | 1 x 3 x 2 AWG + 1 x 1 x 6 AWG | 16.4        | 0.60     | 1.38     |  |

## SUBMERSIBLE MOTORS

40 HP to 150 HP

GENERAL DATA

MOTOR SIZE: 8"

### SPECIFICATIONS

|                                      | Motor construction                                  |                                                     |
|--------------------------------------|-----------------------------------------------------|-----------------------------------------------------|
|                                      | Standard                                            | Premium stainless steel                             |
| Frequency                            | 60 Hz                                               | 60 Hz                                               |
| Motor ratings                        | 3 phase - 40 to 150 HP                              | 3 phase - 40 to 150 HP                              |
| Voltage<br>(Tolerance +10% / -15%)   | 3 phase - 230 V, 460 V                              | 3 phase - 230 V, 460 V                              |
| Pole/RPM                             | 2 Pole / 3450 RPM                                   | 2 Pole / 3450 RPM                                   |
| Degree of protection                 | IP 68                                               | IP 68                                               |
| Duty rating                          | Continuous                                          | Continuous                                          |
| Ambient temperature                  | 104 °F / 40 °C                                      | 104 °F / 40 °C                                      |
| Rotation                             | 3 phase - CCW & CW                                  | 3 phase - CCW & CW                                  |
| Maximum nos. of starts/hour          | 40 to 75 HP - 25<br>100 to 150 HP - 20              | 40 to 75 HP - 25<br>100 to 150 HP - 20              |
| Minimum cooling flow along the motor | 40 to 50 HP - 0.5 ft/sec<br>60 to 150 HP - 1 ft/sec | 40 to 50 HP - 0.5 ft/sec<br>60 to 150 HP - 1 ft/sec |
| Maximum submerged depth              | 656 feet / 200 metres                               | 656 feet / 200 metres                               |
| Mounting                             | Vertical                                            | Vertical                                            |

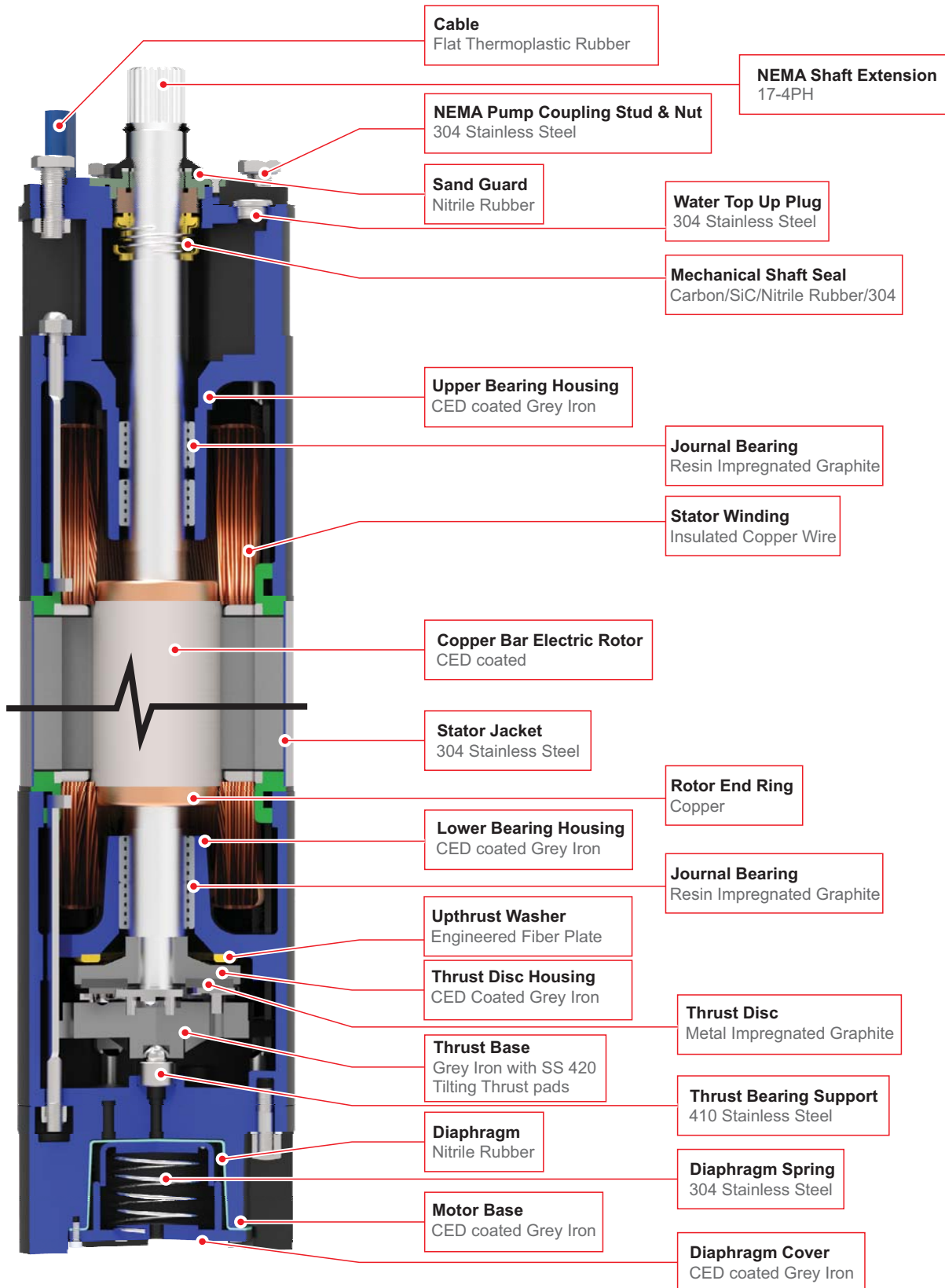
NOTE: SPECIFICATIONS ARE SUBJECT TO PERIODIC CHANGES DUE TO CONTINUOUS IMPROVEMENTS.

## STANDARD SUBMERSIBLE MOTORS

40 HP to 150 HP

MATERIAL OF CONSTRUCTION

MOTOR SIZE: 8"

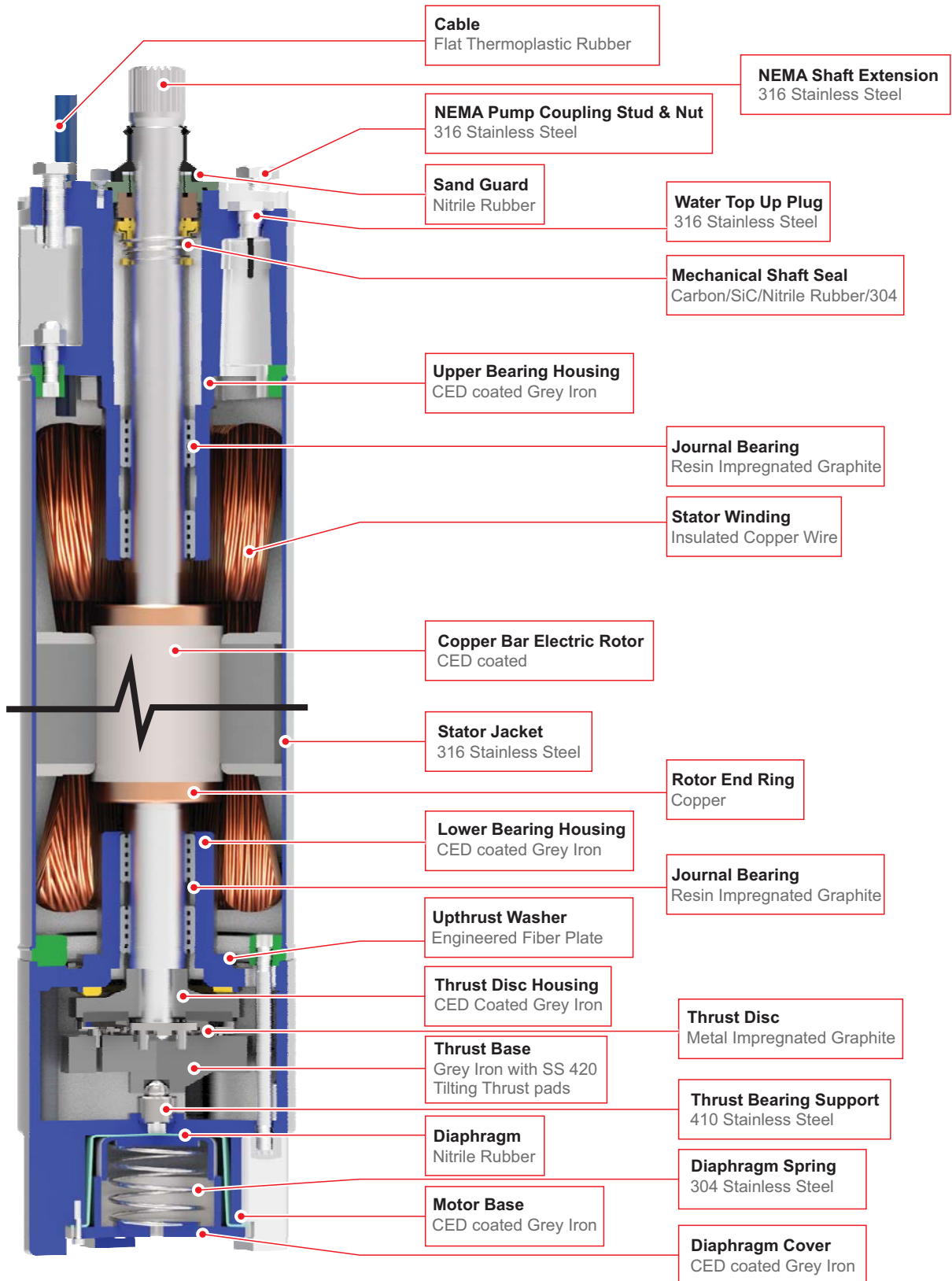


## PREMIUM STAINLESS STEEL SUBMERSIBLE MOTORS

40 HP to 150 HP

MATERIAL OF CONSTRUCTION

MOTOR SIZE: 8"



## SUBMERSIBLE MOTORS

40 HP to 150 HP

ORDER INFORMATION

MOTOR SIZE: 8"

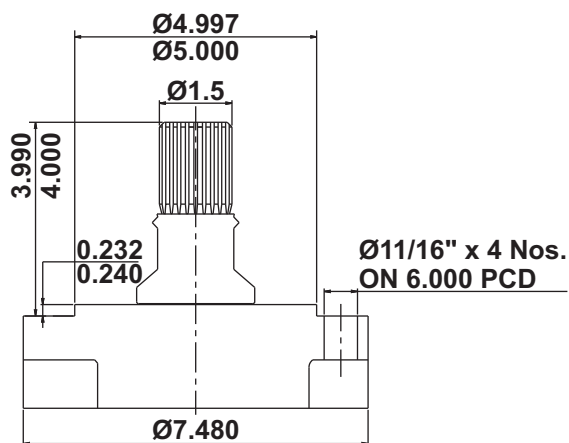
| HP  | Hz | PHASE | VOLTS | POLE | MOTOR SIZE | ORDER NO. / MODEL CODE |                         |
|-----|----|-------|-------|------|------------|------------------------|-------------------------|
|     |    |       |       |      |            | STANDARD               | PREMIUM STAINLESS STEEL |
| 40  | 60 | 3     | 230   | 2    | 8"         | NM-C-8-0400-6-3-B-2    | NM-B-8-0400-6-3-B-2     |
|     | 60 | 3     | 460   | 2    | 8"         | NM-C-8-0400-6-3-D-2    | NM-B-8-0400-6-3-D-2     |
| 50  | 60 | 3     | 230   | 2    | 8"         | NM-C-8-0500-6-3-B-2    | NM-B-8-0500-6-3-B-2     |
|     | 60 | 3     | 460   | 2    | 8"         | NM-C-8-0500-6-3-D-2    | NM-B-8-0500-6-3-D-2     |
| 60  | 60 | 3     | 230   | 2    | 8"         | NM-C-8-0600-6-3-B-2    | NM-B-8-0600-6-3-B-2     |
|     | 60 | 3     | 460   | 2    | 8"         | NM-C-8-0600-6-3-D-2    | NM-B-8-0600-6-3-D-2     |
| 75  | 60 | 3     | 230   | 2    | 8"         | NM-C-8-0750-6-3-B-2    | NM-B-8-0750-6-3-B-2     |
|     | 60 | 3     | 460   | 2    | 8"         | NM-C-8-0750-6-3-D-2    | NM-B-8-0750-6-3-D-2     |
| 100 | 60 | 3     | 230   | 2    | 8"         | NM-C-8-1000-6-3-B-2    | NM-B-8-1000-6-3-B-2     |
|     | 60 | 3     | 460   | 2    | 8"         | NM-C-8-1000-6-3-D-2    | NM-B-8-1000-6-3-D-2     |
| 125 | 60 | 3     | 230   | 2    | 8"         | NM-C-8-1250-6-3-B-2    | NM-B-8-1250-6-3-B-2     |
|     | 60 | 3     | 460   | 2    | 8"         | NM-C-8-1250-6-3-D-2    | NM-B-8-1250-6-3-D-2     |
| 150 | 60 | 3     | 230   | 2    | 8"         | NM-C-8-1500-6-3-B-2    | NM-B-8-1500-6-3-B-2     |
|     | 60 | 3     | 460   | 2    | 8"         | NM-C-8-1500-6-3-D-2    | NM-B-8-1500-6-3-D-2     |

## SUBMERSIBLE MOTORS

40 HP to 150 HP

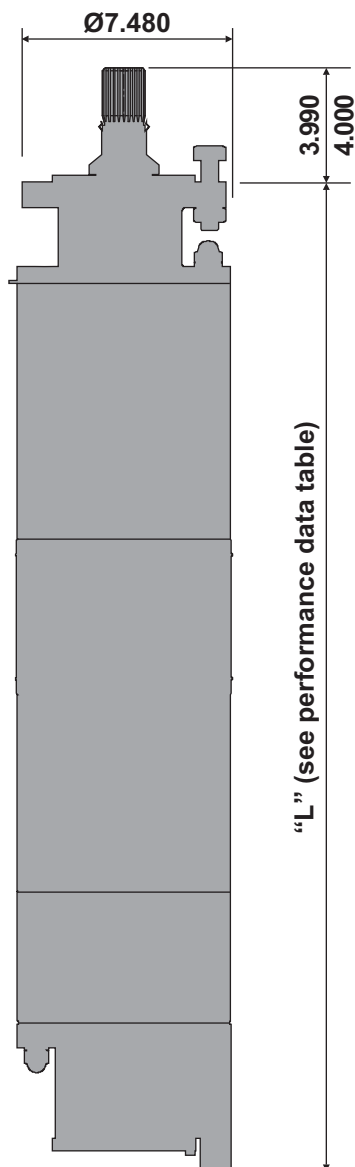
DIMENSIONS

MOTOR SIZE: 8"



### Shaft

Spline shaft: 23 teeth,  
16/32 pitch, module 1.5875,  
30° pressure angle,  
coupling tolerance 5 as per  
ANSI B.92.1,  
confirming with NEMA 8"



## SUBMERSIBLE MOTORS

40 HP to 150 HP

PERFORMANCE DATA-60 Hz

MOTOR SIZE: 8"

| P <sub>N</sub><br>[HP] | Phase | S.F  | U <sub>N</sub><br>[V] | Thrust<br>Load<br>[N] | n <sub>N</sub><br>[min <sup>-1</sup> ] | I <sub>N</sub><br>[A] | I <sub>ST</sub> /I <sub>N</sub><br>[A] | η (Eff.) [%]<br>at % load |      |      | Cos φ PF<br>at % load |      |      | T <sub>N</sub><br>[Nm] | Length<br>[L]<br>[inch] | Shipping<br>Weight<br>[lbs] |
|------------------------|-------|------|-----------------------|-----------------------|----------------------------------------|-----------------------|----------------------------------------|---------------------------|------|------|-----------------------|------|------|------------------------|-------------------------|-----------------------------|
|                        |       |      |                       |                       |                                        |                       |                                        | 50                        | 75   | 100  | 50                    | 75   | 100  |                        |                         |                             |
| 40                     | 3     | 1.15 | 460                   | 45000                 | 3480                                   | 57.2                  | 5.8                                    | 82.1                      | 84.3 | 85.0 | 0.78                  | 0.84 | 0.89 | 82.4                   | 44.90                   | 394                         |
| 50                     | 3     | 1.15 | 230                   | 45000                 | 3480                                   | 149.6                 | 5.8                                    | 82.1                      | 83.9 | 85.0 | 0.75                  | 0.81 | 0.84 | 101.6                  | 48.44                   | 431                         |
| 50                     | 3     | 1.15 | 460                   | 45000                 | 3480                                   | 72.2                  | 5.8                                    | 82.1                      | 84.5 | 85.0 | 0.77                  | 0.84 | 0.87 | 101.6                  | 48.44                   | 431                         |
| 60                     | 3     | 1.15 | 230                   | 45000                 | 3500                                   | 179.8                 | 5.8                                    | 83.1                      | 84.9 | 86.0 | 0.75                  | 0.81 | 0.84 | 122.9                  | 52.38                   | 473                         |
| 60                     | 3     | 1.15 | 460                   | 45000                 | 3500                                   | 86.5                  | 5.8                                    | 83.3                      | 85.5 | 86.3 | 0.76                  | 0.82 | 0.87 | 122.9                  | 52.38                   | 473                         |
| 75                     | 3     | 1.15 | 230                   | 45000                 | 3500                                   | 217.3                 | 5.8                                    | 83.2                      | 85.3 | 87.0 | 0.75                  | 0.80 | 0.84 | 150.0                  | 54.35                   | 506                         |
| 75                     | 3     | 1.15 | 460                   | 45000                 | 3500                                   | 104.9                 | 5.8                                    | 83.7                      | 85.9 | 87.0 | 0.76                  | 0.82 | 0.87 | 150.0                  | 54.35                   | 506                         |
| 100                    | 3     | 1.15 | 230                   | 45000                 | 3500                                   | 286.1                 | 5.8                                    | 83.5                      | 85.9 | 88.0 | 0.75                  | 0.82 | 0.86 | 204.7                  | 59.78                   | 568                         |
| 100                    | 3     | 1.15 | 460                   | 45000                 | 3500                                   | 139.8                 | 6.0                                    | 84.2                      | 86.9 | 88.0 | 0.77                  | 0.83 | 0.88 | 204.7                  | 59.78                   | 568                         |
| 125                    | 3     | 1.15 | 230                   | 45000                 | 3500                                   | 363.2                 | 5.8                                    | 83.7                      | 85.7 | 88.0 | 0.75                  | 0.81 | 0.84 | 253.8                  | 65.30                   | 634                         |
| 125                    | 3     | 1.15 | 460                   | 45000                 | 3500                                   | 174.7                 | 6.0                                    | 84.5                      | 86.9 | 88.3 | 0.76                  | 0.82 | 0.87 | 253.8                  | 65.30                   | 634                         |
| 150                    | 3     | 1.15 | 460                   | 45000                 | 3480                                   | 214.0                 | 6.0                                    | 82.4                      | 84.9 | 86.2 | 0.76                  | 0.82 | 0.86 | 302.0                  | 70.41                   | 735                         |

## SUBMERSIBLE MOTORS

150 HP to 250 HP

GENERAL DATA

MOTOR SIZE: 10"

### SUITABLE WELL SIZE

- These motors are designed and sized for installation in 10" diameter or larger water wells.

### FEATURES

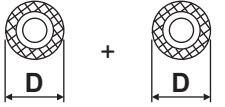
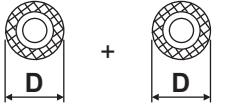
- Heavy duty, rewindable, water filled submersible motor.
- PE insulated windings.
- Stainless steel splined shaft.
- Equipped with Carbon/SiC mechanical shaft seal.
- Water lubricated heavy duty radial and axial thrust bearings.
- Counter thrust bearing.
- Motors are factory-filled with clean water + Glycol mixture.
- High efficiency electrical design (lower operating cost).
- Tropicalized design (lower winding temperature).
- 10" NEMA coupling flange.
- Pressure compensation diaphragm.



### SPECIAL FEATURES ON-REQUEST

- PT 100 temperature sensor.
- 50 Hz, voltage and HPs not listed in this catalog.
- Double cable for Star - Delta operation.
- PE2/PA winding insulation.

### CABLE DATA

| HP        | Phase | Type of start | Cable x Lead x Size (AWG)      | Length [ft] | D [inch]    |                                                                                       |
|-----------|-------|---------------|--------------------------------|-------------|-------------|---------------------------------------------------------------------------------------|
| 150 - 250 | 3     | DOL           | 3 x 1 x 00 AWG + 1 x 1 x 0 AWG | 16.4        | 0.55 + 0.55 |  |
| 150 - 250 | 3     | YΔ            | 6 x 1 x 2 AWG + 1 x 1 x 6 AWG  | 16.4        | 0.55 + 0.28 |  |

## SUBMERSIBLE MOTORS

150 HP to 250 HP

GENERAL DATA

MOTOR SIZE: 10"

### SPECIFICATIONS

|                                      | Motor construction                |                                   |
|--------------------------------------|-----------------------------------|-----------------------------------|
|                                      | Standard                          | Premium stainless steel           |
| Frequency                            | 60 Hz                             | 60 Hz                             |
| Motor ratings                        | 3 phase, 150 to 250 HP            | 3 phase, 150 to 250 HP            |
| Voltage<br>(Tolerance +10% / -15%)   | 230 V, 460 V                      | 230 V, 460 V                      |
| Pole/RPM                             | 2 Pole / 3450 RPM                 | 2 Pole / 3450 RPM                 |
| Degree of protection                 | IP 68                             | IP 68                             |
| Duty rating                          | Continuous                        | Continuous                        |
| Ambient temperature                  | 104 °F / 40 °C                    | 104 °F / 40 °C                    |
| Rotation                             | 3 phase, CCW & CW                 | 3 phase, CCW & CW                 |
| Maximum nos. of starts/hour          | 150 HP - 20<br>175 to 250 HP - 15 | 150 HP - 20<br>175 to 250 HP - 15 |
| Minimum cooling flow along the motor | 150 to 250 HP - 1.6 ft/sec        | 150 to 250 HP - 1.6 ft/sec        |
| Maximum submerged depth              | 656 feet / 200 metres             | 656 feet / 200 metres             |
| Mounting                             | Vertical                          | Vertical                          |

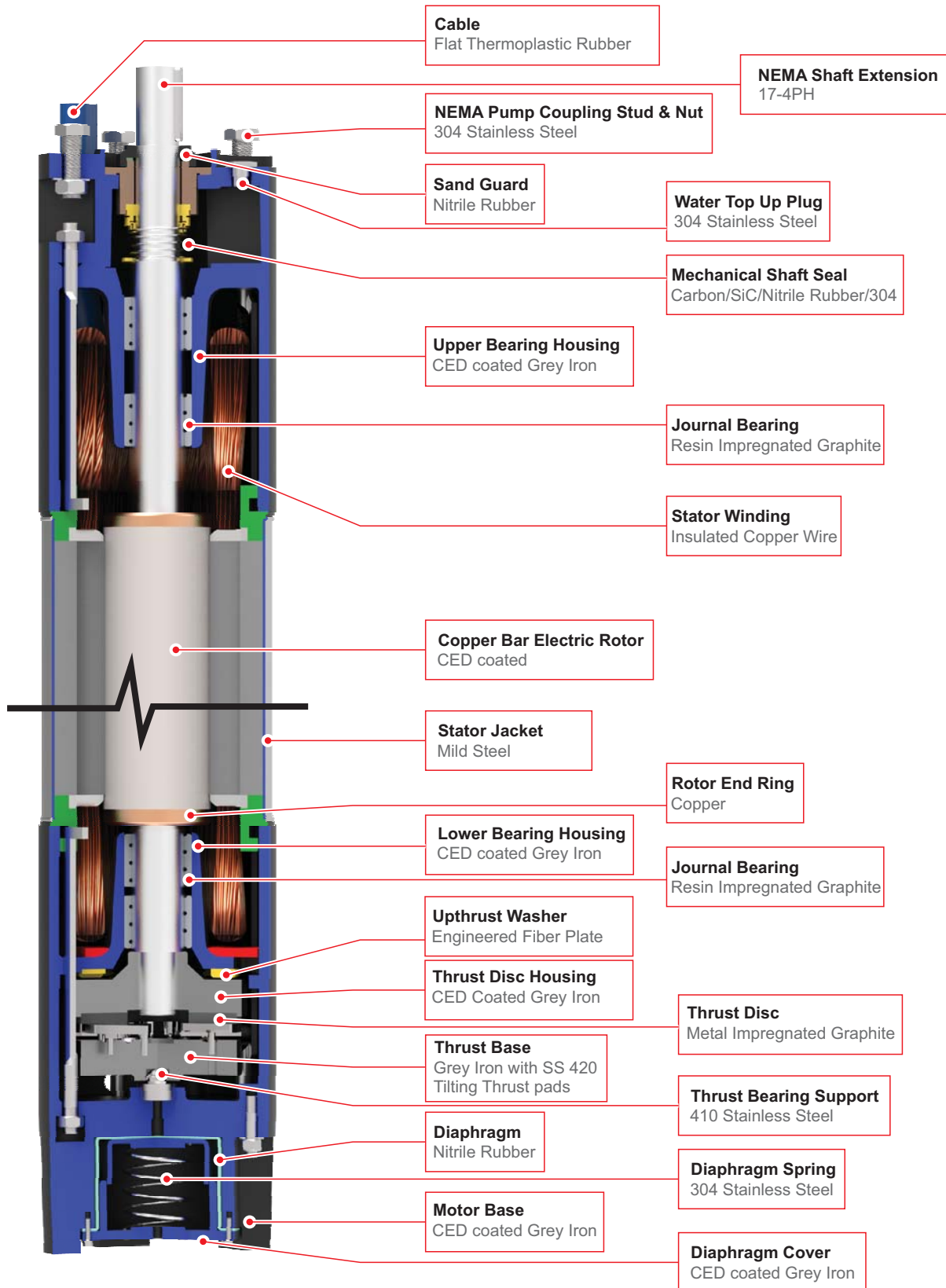
NOTE: SPECIFICATIONS ARE SUBJECT TO PERIODIC CHANGES DUE TO CONTINUOUS IMPROVEMENTS.

## STANDARD SUBMERSIBLE MOTORS

150 HP to 250 HP

MATERIAL OF CONSTRUCTION

MOTOR SIZE: 10"



## SUBMERSIBLE MOTORS

150 HP to 250 HP

ORDER INFORMATION

MOTOR SIZE: 10"

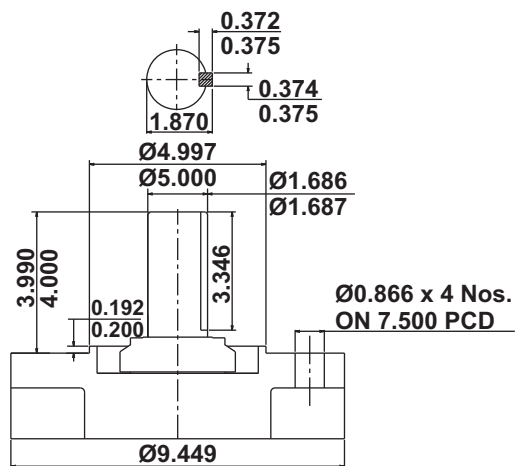
| HP  | Hz | PHASE | VOLTS | POLE | MOTOR SIZE | ORDER NO. / MODEL CODE |                         |
|-----|----|-------|-------|------|------------|------------------------|-------------------------|
|     |    |       |       |      |            | STANDARD               | PREMIUM STAINLESS STEEL |
| 150 | 60 | 3     | 460   | 2    | 10"        | NM-C-1-1500-6-3-D-2    | NM-B-1-1500-6-3-D-2     |
| 175 | 60 | 3     | 460   | 2    | 10"        | NM-C-1-1750-6-3-D-2    | NM-B-1-1750-6-3-D-2     |
| 200 | 60 | 3     | 460   | 2    | 10"        | NM-C-1-2000-6-3-D-2    | NM-B-1-2000-6-3-D-2     |
| 250 | 60 | 3     | 460   | 2    | 10"        | NM-C-1-2500-6-3-D-2    | NM-B-1-2500-6-3-D-2     |

## SUBMERSIBLE MOTORS

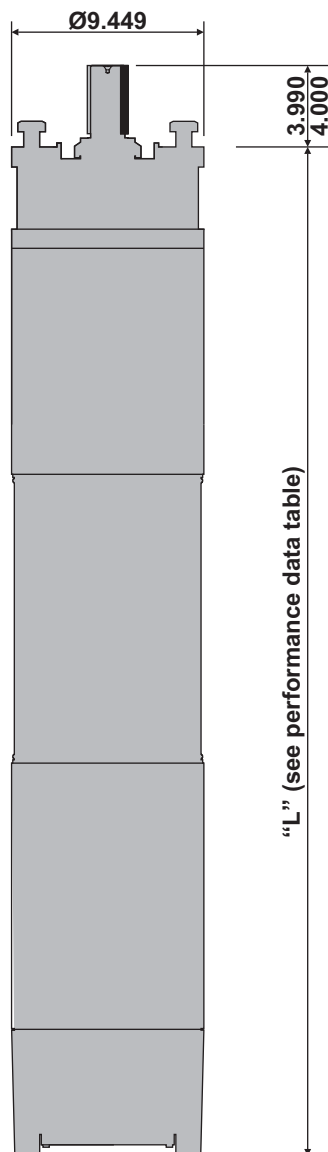
150 HP to 250 HP

DIMENSIONS

MOTOR SIZE: 10"



Shaft  
Cylindrical shaft with key



"L" (see performance data table)

## SUBMERSIBLE MOTORS

150 HP to 250 HP

PERFORMANCE DATA-60 Hz

MOTOR SIZE: 10"

| P <sub>N</sub><br>[HP] | Phase | S.F  | U <sub>N</sub><br>[V] | Thrust<br>Load<br>[N] | n <sub>N</sub><br>[min <sup>-1</sup> ] | I <sub>N</sub><br>[A] | I <sub>ST</sub> /I <sub>N</sub><br>[A] | η (Eff.) [%]<br>at % load |      |      | Cos φ PF<br>at % load |      |      | T <sub>N</sub><br>[Nm] | Length<br>[L]<br>[inch] | Shipping<br>Weight<br>[lbs] |
|------------------------|-------|------|-----------------------|-----------------------|----------------------------------------|-----------------------|----------------------------------------|---------------------------|------|------|-----------------------|------|------|------------------------|-------------------------|-----------------------------|
|                        |       |      |                       |                       |                                        |                       |                                        | 50                        | 75   | 100  | 50                    | 75   | 100  |                        |                         |                             |
| 150                    | 3     | 1.15 | 460                   | 60000                 | 3500                                   | 224.5                 | 5.16                                   | 84.1                      | 86.1 | 86.0 | 0.70                  | 0.79 | 0.84 | 300.2                  | 69.61                   | 1056                        |
| 175                    | 3     | 1.15 | 460                   | 60000                 | 3500                                   | 253.5                 | 5.15                                   | 85.1                      | 87.1 | 87.0 | 0.76                  | 0.83 | 0.87 | 368.5                  | 73.48                   | 1144                        |
| 200                    | 3     | 1.15 | 460                   | 60000                 | 3500                                   | 293.5                 | 5.30                                   | 85.1                      | 87.1 | 87.0 | 0.76                  | 0.83 | 0.87 | 409.5                  | 78.60                   | 1214                        |
| 250                    | 3     | 1.15 | 460                   | 60000                 | 3500                                   | 376.0                 | 5.64                                   | 85.1                      | 87.1 | 87.0 | 0.69                  | 0.78 | 0.84 | 505.0                  | 82.54                   | 1324                        |

## NOTE

[illegible]

## Limited Warranty for Deep Well Submersible Products

Northam Inc. offers limited Warranty on its Deep Well Submersible Products to be free from any defects in material or workmanship under normal intended use for the period as shown below.

Our Warranty shall not apply to any product that has been;

1. Subjected to misuse or misapplication.
2. Altered or modified without authorization from Northam Inc. or failure to use Northam Original Replacement Parts.
3. Improperly installed or installed with improper controls and protection against power irregularities.
4. Subjected to Dry Run or full Flow Shut Off condition.
5. Operated in liquids other than Potable Water.
6. Operated in liquid temperature higher than 86 degrees Fahrenheit.
7. Pumps which are clogged with mud, sand, gravel or any other foreign material.
8. Damaged due to accidental damage, fire, acts of God, or any other circumstances outside the control of Northam.
9. Repaired by persons who are not authorized by Northam.

This warranty does not cover normal wear and tear of products or parts thereof. It also does not cover change in performance of products due to normal wear and tear.

Northam Inc. shall not be responsible for removing or reinstallation of the products covered under this warranty nor shall be responsible for any charges associated with removal and reinstallation.

Northam Inc.'s obligation under this Warranty is limited to either repair or replace the product at Northam's sole discretion for any product found to Northam's reasonable satisfaction to have been found defective upon examination by Northam. The product shall have to be returned to Northam Inc.'s Clarks Summit facility or any other place that Northam Inc. shall designate within 30 days of failure for evaluation.

Northam is not responsible under this warranty for any cost of shipping or transportation of the product or parts thereof to or from Northam facility or any other place that Northam shall designate for product to be sent for evaluation or repairs.

This warranty is applicable only if the product is received by Northam Inc. without any damage during shipment back to Northam Inc. It does not cover products that are lost or cannot be returned to Northam Inc.

Northam Inc. does not warrant any parts or products that were not manufactured by them. Northam shall extend the warranty provided by the manufacturer of such parts or products under such circumstances.

Northam Inc. shall not cover drop cables, lead wires, control boxes or any accessories under Warranty.

This Warranty applies to products sold only in USA.

Northam Inc. shall not be liable for any consequential, incidental, or contingent damages or loss to persons or property whatsoever. The foregoing warranties are exclusive and in lieu of any written or implied warranties including but not limited to the implied warranties of merchantability or fitness for a particular purpose covering any product manufactured by Northam Inc. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above may not apply to you. Also some states do not allow a limitation on how long an implied warranty will last so the above limitation may not apply to you and during the period of this limited warranty any implied warranties of merchantability or fitness for particular purpose may not be excluded.

### Limited Warranty Period for Deep well Submersible Products

4", 6", 8", 10 " Submersible Pumps or Motors or Complete Units.

Northam shall offer Limited warranty of above mentioned products for a period of 12 months from the date of installation or 18 months from the date of dispatch from Northam Inc. whichever comes first. The warranty shall cover only mechanical defects in material and workmanship.

### Warranty Service

For products purchased directly from Northam kindly e mail to [service@northam-inc.com](mailto:service@northam-inc.com) with the following information. For Northam products purchased from our Authorised Dealers/Distributors kindly contact them directly with the following information.

1. Invoice number.
2. Date of purchase.
3. Product Type or Model number available on the name plate.
4. Product Serial number from the nameplate
5. Description of Defect with the product.
6. Your contact telephone number and address.

Once Northam will receive the above information, they shall promptly provide by return email a "Return Authorisation Form" and address to which the product shall be shipped by customer for evaluation of manufacturing defect by Northam. The customer shall then ship the product, freight prepaid to the address indicated, together with a Return Authorisation Form obtained from Northam. Unauthorised Returns and products sent without prepaid freight will not be accepted by Northam.

Once Product is received at Northam it shall be evaluated by Technical Service at Northam for any manufacturing defect and the customer shall be notified of the final outcome and any corrections that Northam shall be initiating if a manufacturing defect is found. Once a repaired or replacement product is ready it shall be shipped to the customer with freight charges to be paid by the customer.



## **Northam Inc.**

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*Product Improvement and changes are a continuous process at 'Northam'. The data given in this publication is therefore subject to revision.*