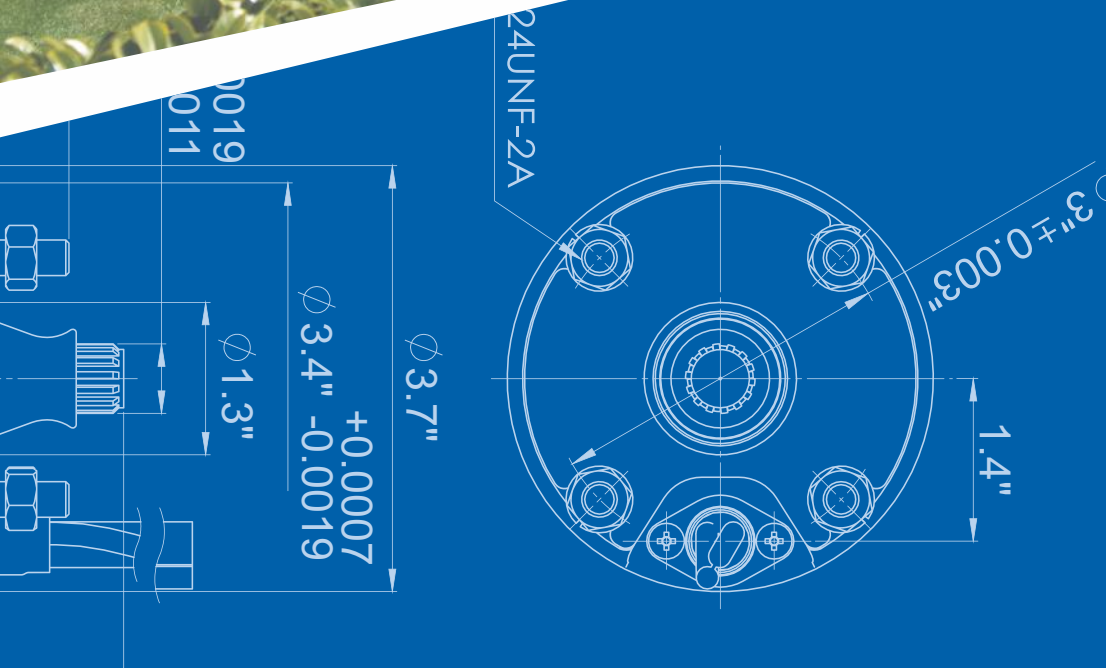


NC SERIES



# ENCAPSULATED WATER FILLED MOTORS



## ENCAPSULATED WATER FILLED MOTORS

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## ENCAPSULATED WATER FILLED MOTORS

0.5 HP to 10 HP

MODEL CODE

MOTOR SIZE: 4"

**NC C 4 - 0005 6 2W - A 2 M**

### Seal Type

Code	Seal Type
L	Lip Seal
M	Mechanical Seal

### Thrust Load

Code	Thrust Load
2	2000N
3	3000N
4	4000N
6	6000N
7	6500N

### Volts

Code	Volts
A	115V
B	230V
D	460V
E	575V

### Power Supply

Code	Power Supply
2W	2-wire single phase
3W	3-wire single phase, without control box
3P	3 Phase
3C	3-wire single phase, with control box

### Frequency

Code	Hz
6	60

### Motor HP

Code	HP
0005	0.5 HP
0007	0.75 HP
0010	1 HP
0075	7.5 HP

### Motor size

Code	Size
4	4"

### Material of construction

Code	Material
B	316 Stainless steel*
C	304 Stainless steel over iron**

### Series name

Code	Series
NC	Encapsulated motor - UL

\* Offered Mechanical seal.

\*\* Offered Lip seal as well as Mechanical seal.

**SAMPLE CODE - NCC4-000562W-A2M**

## ENCAPSULATED WATER FILLED MOTORS

0.5 HP to 10 HP

GENERAL DATA

MOTOR SIZE: 4"

### SUITABLE WELL SIZE

- ▶ These motors are designed and sized for installation in 4" diameter or larger water wells.

### FEATURES

- ▶ Hermetically canned stator with antitrack resin to prevent motor burn out.
- ▶ High efficiency electrical design.
- ▶ Removable lead connector.
- ▶ Water lubricated thrust and radial bearing enable maintenance free operation.
- ▶ Standard NEMA mounting dimensions.
- ▶ 3-wire submersible motor control boxes are available.
- ▶ All motors are inspected and tested at factory before dispatch.

### SPECIFICATIONS

Motor construction	
Frequency	60 Hz
Motor ratings	1 phase - 0.5 to 5.0 HP 3 phase - 0.5 to 10 HP
Voltages	1 phase : 115, 230V 3 phase : 230V, 460V, 575V
Pole/RPM	2 Pole / 3450 RPM
Degree of protection	IP 68
Insulation class	F
Duty rating	Continuous
Ambient temperature	86°F / 30°C
Rotation	1 phase - CCW 3 phase - CCW
Maximum nos. of starts/hour	20
Minimum cooling flow along the motor	0.08 m/s
Mounting	Vertical

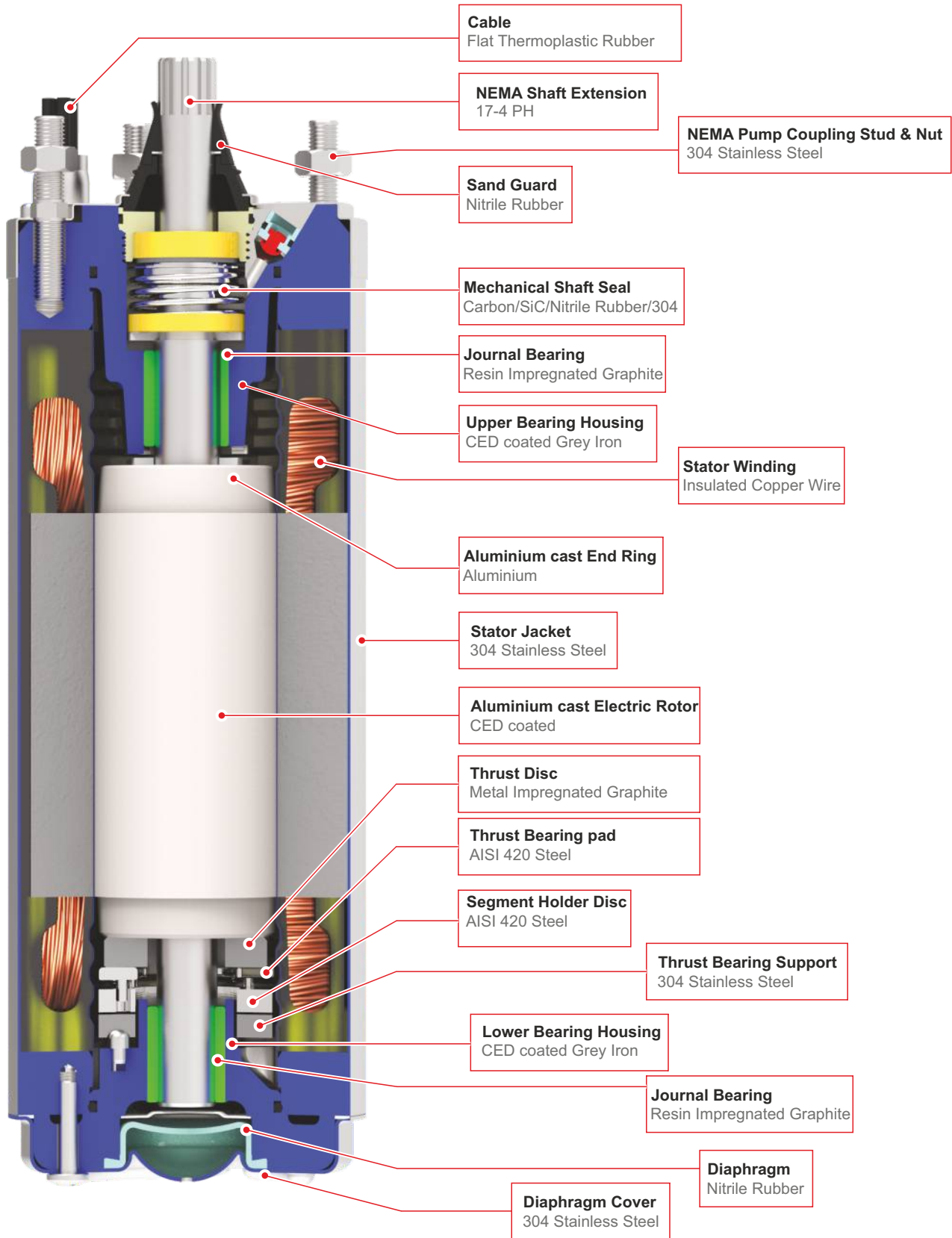
NOTE: SPECIFICATIONS ARE SUBJECT TO PERIODIC CHANGES DUE TO CONTINUOUS IMPROVEMENTS.

## STANDARD MECHANICAL SEAL ENCAPSULATED WATER FILLED MOTORS

0.5 to 3 HP, 3-WIRE, 1 PHASE

MATERIAL OF CONSTRUCTION

0.5 HP to 3 HP, 3 PHASE

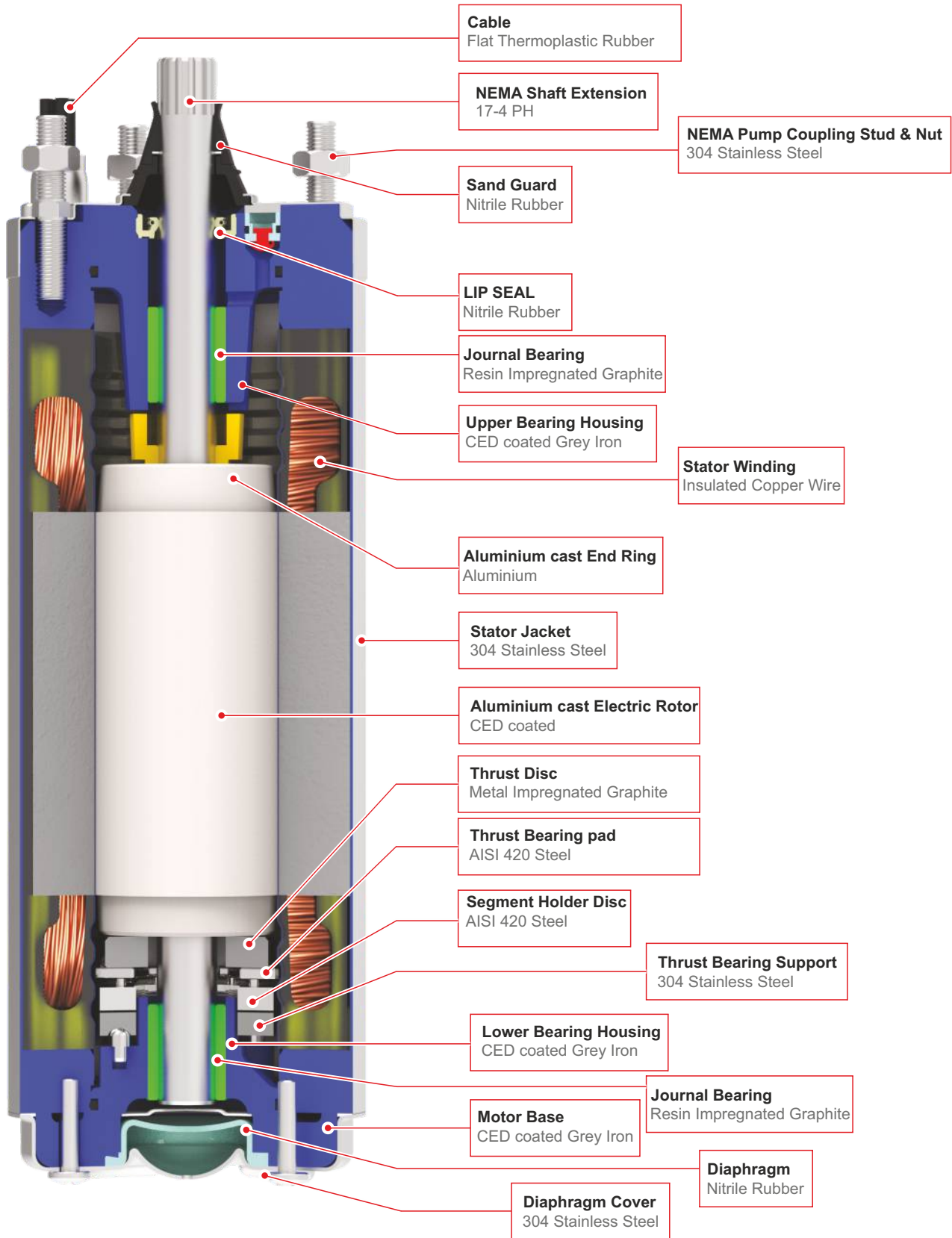


## STANDARD LIP SEAL ENCAPSULATED WATER FILLED MOTORS

0.5 to 3 HP, 3-WIRE, 1 PHASE

MATERIAL OF CONSTRUCTION

0.5 HP to 3 HP, 3 PHASE

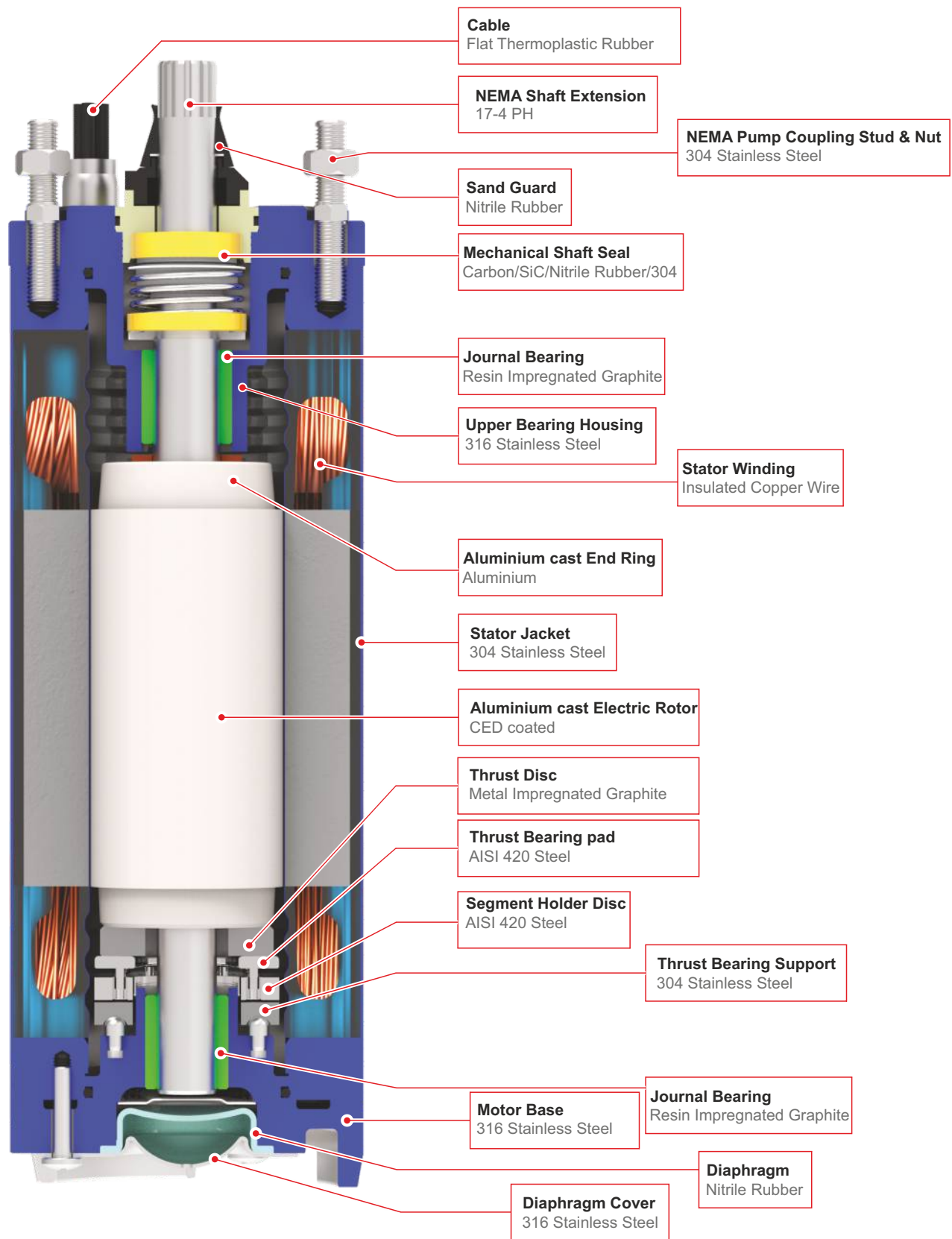


## STANDARD MECHANICAL SEAL SS ENCAPSULATED WATER FILLED MOTORS

0.5 to 3 HP, 3-WIRE, 1 PHASE

MATERIAL OF CONSTRUCTION

0.5 HP to 3 HP, 3 PHASE

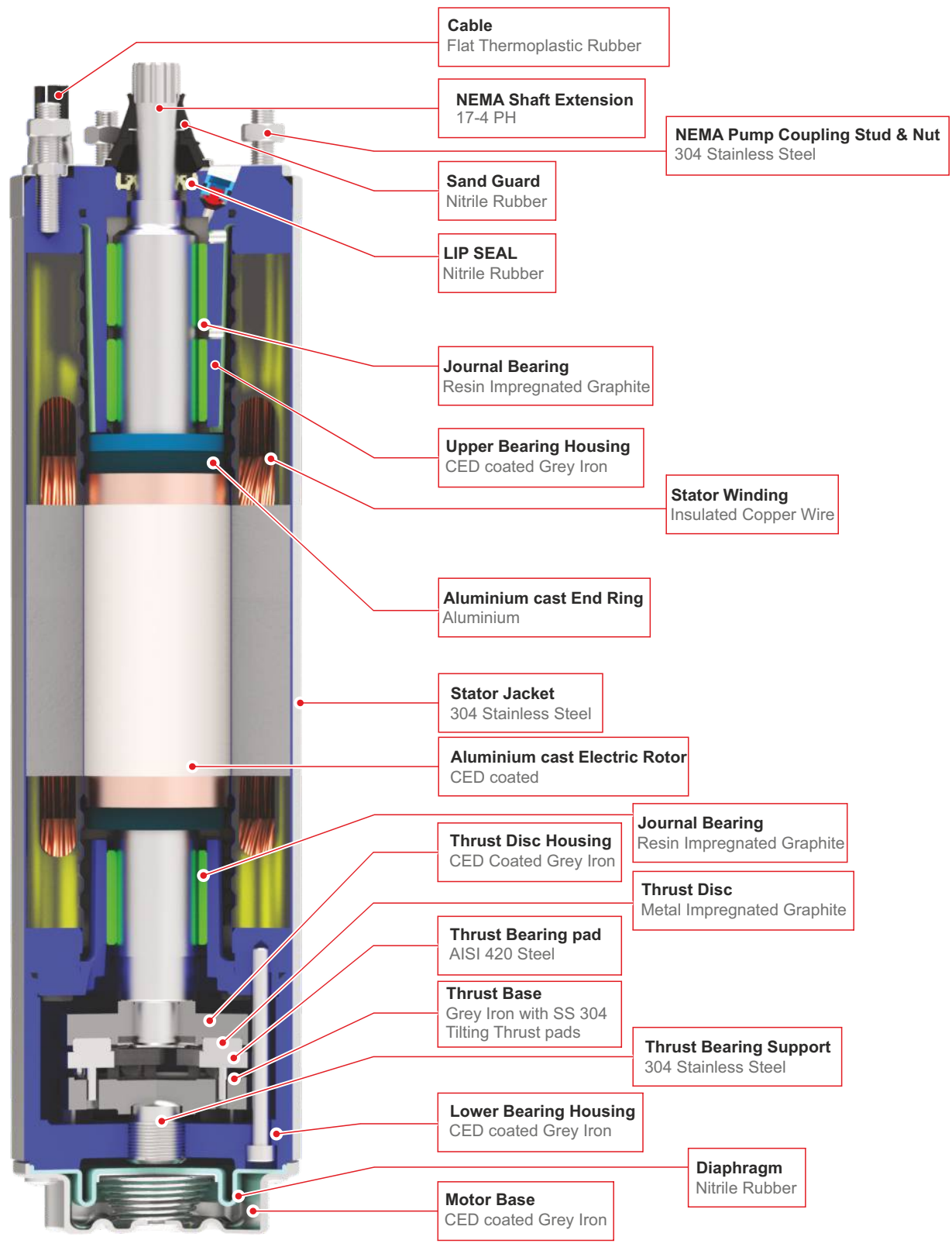


## HIGH THRUST LIP SEAL ENCAPSULATED WATER FILLED MOTORS

5 HP, 3-WIRE, 1 PHASE

MATERIAL OF CONSTRUCTION

5 HP to 10 HP, 3 PHASE

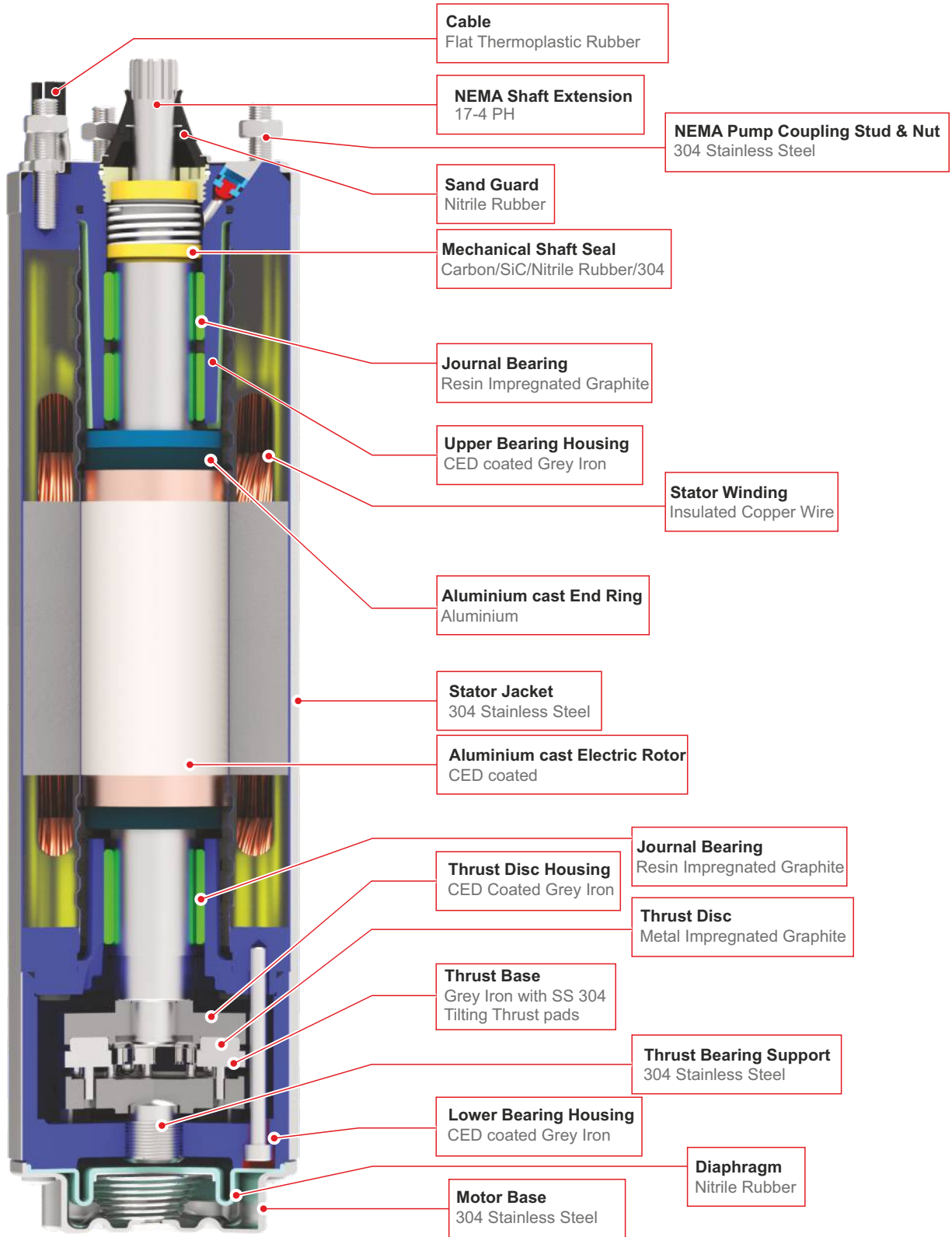


## HIGH THRUST MECHANICAL SEAL ENCAPSULATED WATER FILLED MOTORS

5 HP, 3-WIRE, 1 PHASE

MATERIAL OF CONSTRUCTION

5 HP to 10 HP, 3 PHASE

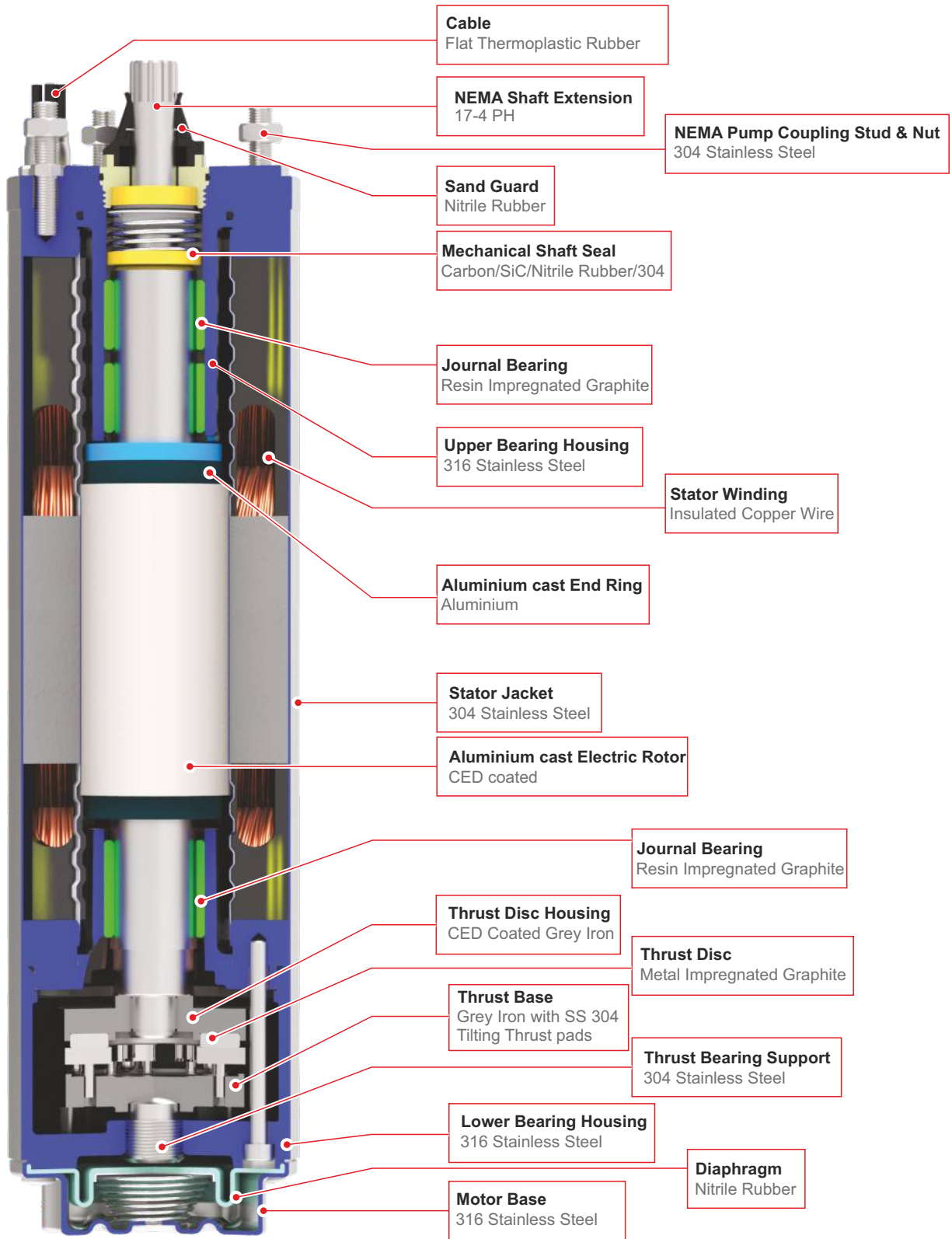


## HIGH THRUST MECHANICAL SEAL SS ENCAPSULATED WATER FILLED MOTORS

5 HP, 3-WIRE, 1 PHASE

MATERIAL OF CONSTRUCTION

5 HP to 10 HP, 3 PHASE

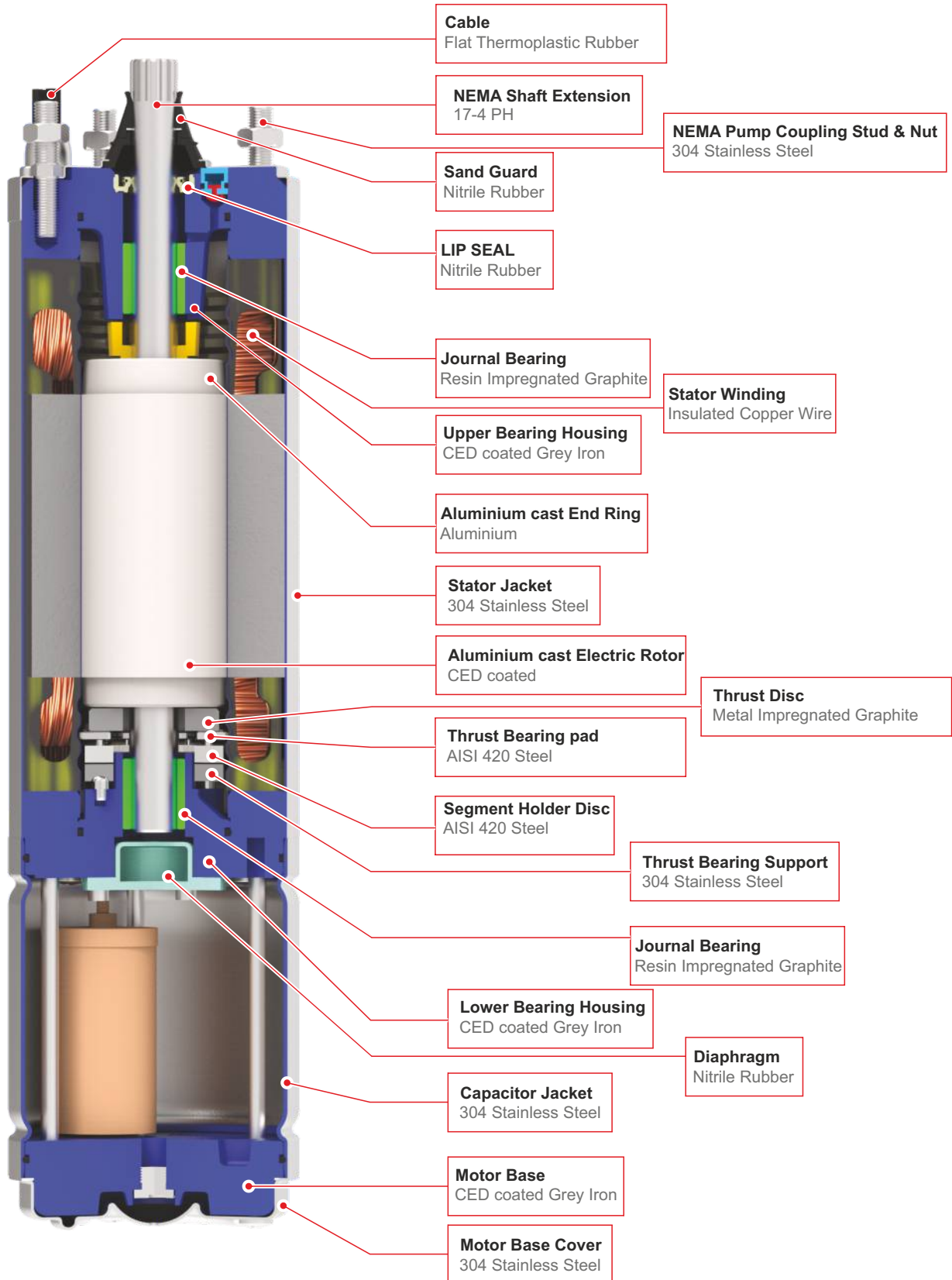


## STANDARD LIP SEAL ENCAPSULATED WATER FILLED MOTORS

0.5 HP to 1.5 HP

MATERIAL OF CONSTRUCTION

2-WIRE, 1 PHASE

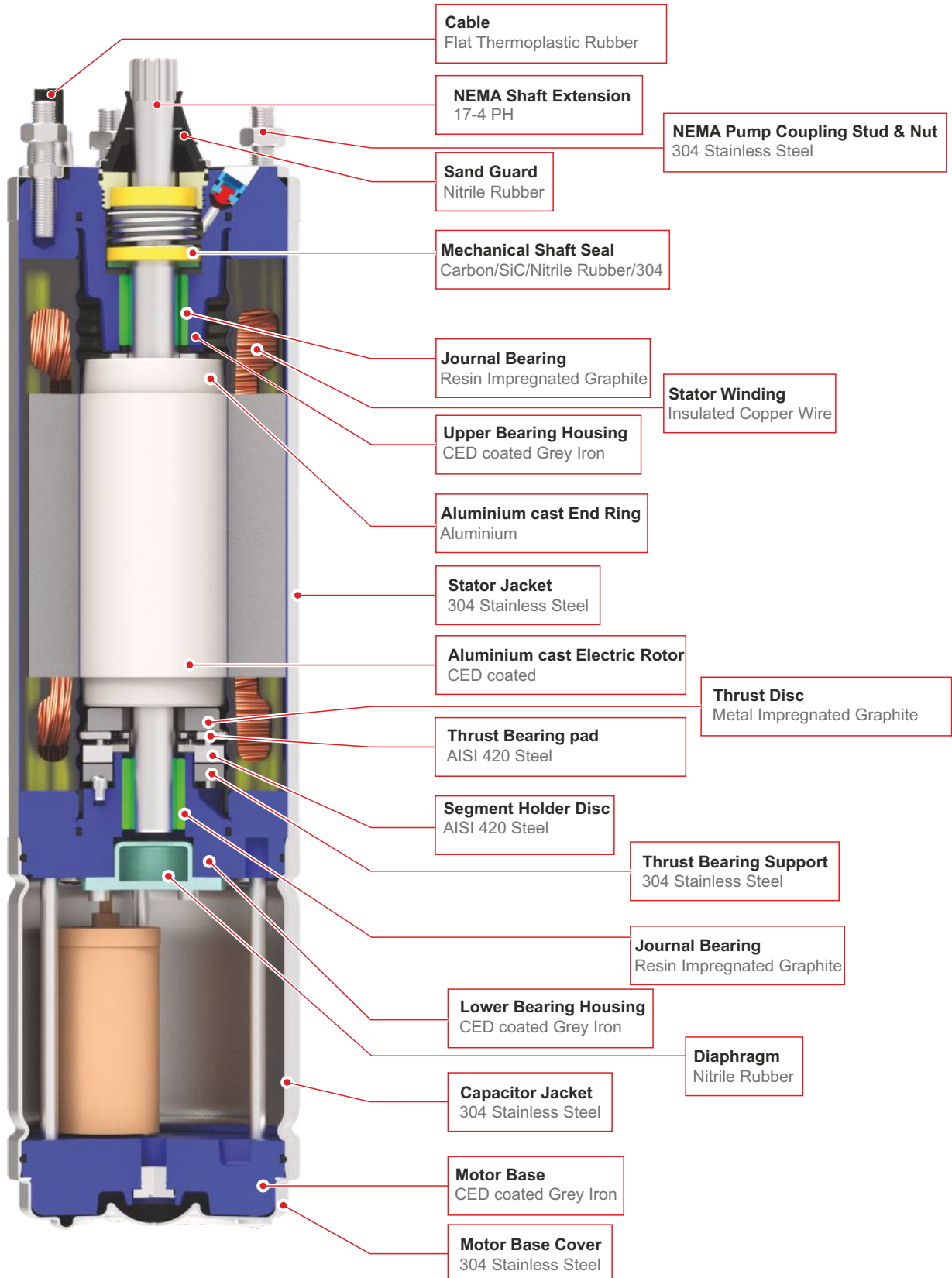


## STANDARD MECHANICAL SEAL ENCAPSULATED WATER FILLED MOTORS

0.5 HP to 1.5 HP

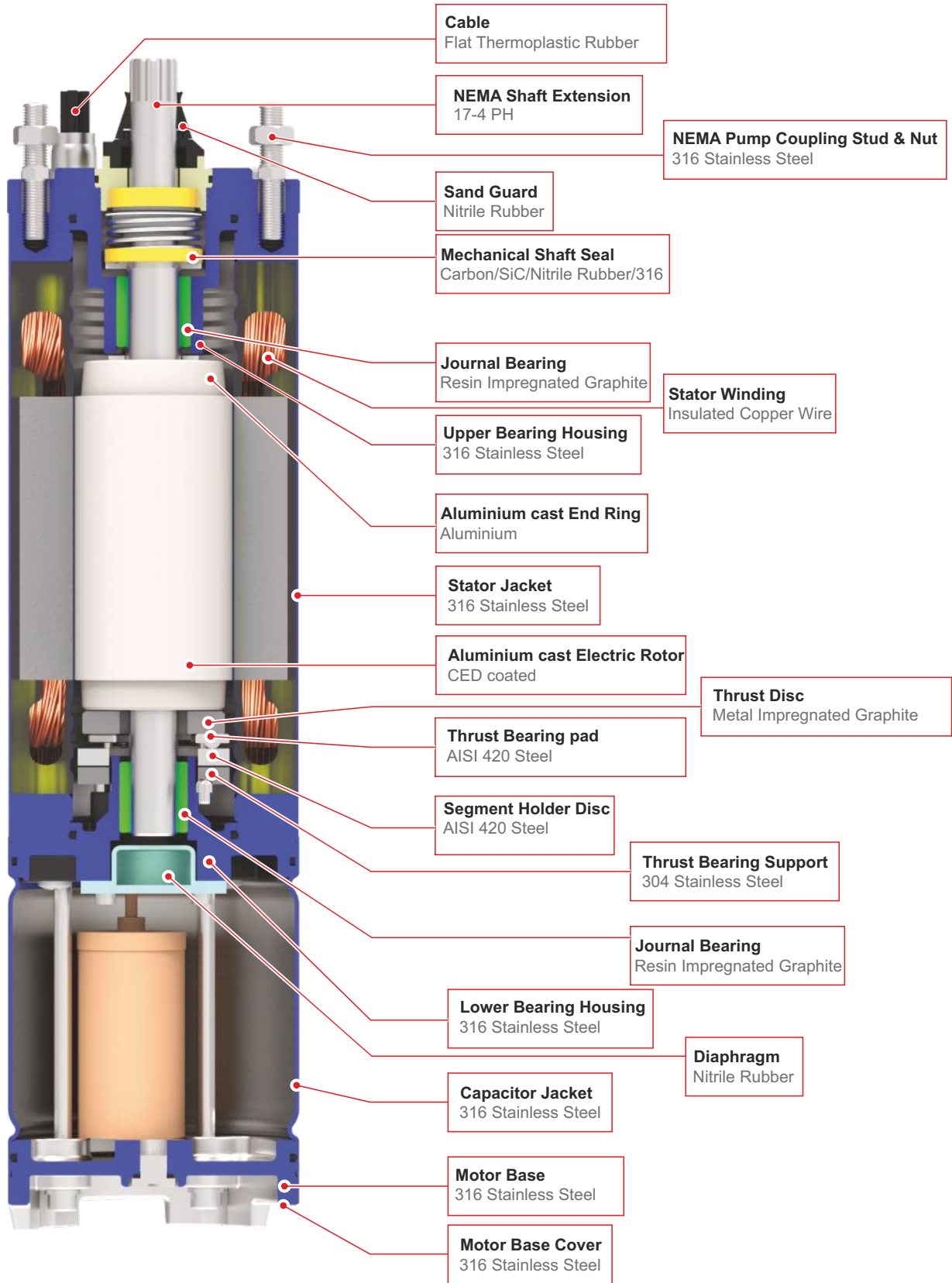
MATERIAL OF CONSTRUCTION

2-WIRE, 1 PHASE



## STANDARD MECHANICAL SEAL SS ENCAPSULATED WATER FILLED MOTORS

0.5 HP to 1.5 HP      MATERIAL OF CONSTRUCTION      2-WIRE, 1 PHASE



## ENCAPSULATED WATER FILLED MOTORS

0.5 HP to 10 HP

ORDER INFORMATION

MOTOR SIZE: 4"

HP	Hz	MOTOR TYPE	VOLTS	POLE	RPM	ORDER NO. / MODEL CODE		
						304 STAINLESS STEEL OVER IRON		316 STAINLESS STEEL
						LIP SEAL	MECHANICAL SEAL	MECHANICAL SEAL
0.5	60	3-wire single phase	115	2	3400	NCC4-000563W-A2L	NCC4-000563W-A2M	NCB4-000563W-A2M
0.5	60	3-wire single phase	230	2	3400	NCC4-000563W-B2L	NCC4-000563W-B2M	NCB4-000563W-B2M
0.75	60	3-wire single phase	230	2	3400	NCC4-000763W-B2L	NCC4-000763W-B2M	NCB4-000763W-B2M
1	60	3-wire single phase	230	2	3400	NCC4-001063W-B3L	NCC4-001063W-B3M	NCB4-001063W-B3M
1.5	60	3-wire single phase	230	2	3400	NCC4-001563W-B3L	NCC4-001563W-B3M	NCB4-001563W-B3M
2	60	3-wire single phase	230	2	3400	NCC4-002063W-B3L	NCC4-002063W-B3M	NCB4-002063W-B3M
3	60	3-wire single phase	230	2	3400	NCC4-003063W-B4L	NCC4-003063W-B4M	NCB4-003063W-B4M
5	60	3-wire single phase	230	2	3400	NCC4-005063W-B6L	NCC4-005063W-B6M	NCB4-005063W-B6M
0.5	60	2-wire single phase	115	2	3400	NCC4-000562W-A2L	NCC4-000562W-A2M	NCB4-000562W-A2M
0.5	60	2-wire single phase	230	2	3400	NCC4-000562W-B2L	NCC4-000562W-B2M	NCB4-000562W-B2M
0.75	60	2-wire single phase	230	2	3400	NCC4-000762W-B2L	NCC4-000762W-B2M	NCB4-000762W-B2M
1	60	2-wire single phase	230	2	3400	NCC4-001062W-B3L	NCC4-001062W-B3M	NCB4-001062W-B3M
1.5	60	2-wire single phase	230	2	3400	NCC4-001562W-B3L	NCC4-001562W-B3M	NCB4-001562W-B3M
0.5	60	3 Phase	230	2	3450	NCC4-000563P-B2L	NCC4-000563P-B2M	NCB4-000563P-B2M
0.5	60	3 Phase	460	2	3450	NCC4-000563P-D2L	NCC4-000563P-D2M	NCB4-000563P-D2M
0.5	60	3 Phase	575	2	3450	NCC4-000563P-E2L	NCC4-000563P-E2M	NCB4-000563P-E2M
0.75	60	3 Phase	230	2	3450	NCC4-000763P-B2L	NCC4-000763P-B2M	NCB4-000763P-B2M
0.75	60	3 Phase	460	2	3450	NCC4-000763P-D2L	NCC4-000763P-D2M	NCB4-000763P-D2M
0.75	60	3 Phase	575	2	3450	NCC4-000763P-E2L	NCC4-000763P-E2M	NCB4-000763P-E2M
1	60	3 Phase	230	2	3450	NCC4-001063P-B3L	NCC4-001063P-B3M	NCB4-001063P-B3M
1	60	3 Phase	460	2	3450	NCC4-001063P-D3L	NCC4-001063P-D3M	NCB4-001063P-D3M
1	60	3 Phase	575	2	3450	NCC4-001063P-E3L	NCC4-001063P-E3M	NCB4-001063P-E3M
1.5	60	3 Phase	230	2	3450	NCC4-001563P-B3L	NCC4-001563P-B3M	NCB4-001563P-B3M
1.5	60	3 Phase	460	2	3450	NCC4-001563P-D3L	NCC4-001563P-D3M	NCB4-001563P-D3M
1.5	60	3 Phase	575	2	3450	NCC4-001563P-E3L	NCC4-001563P-E3M	NCB4-001563P-E3M
2	60	3 Phase	230	2	3450	NCC4-002063P-B3L	NCC4-002063P-B3M	NCB4-002063P-B3M
2	60	3 Phase	460	2	3450	NCC4-002063P-D3L	NCC4-002063P-D3M	NCB4-002063P-D3M
2	60	3 Phase	575	2	3450	NCC4-002063P-E3L	NCC4-002063P-E3M	NCB4-002063P-E3M
3	60	3 Phase	230	2	3450	NCC4-003063P-B4L	NCC4-003063P-B4M	NCB4-003063P-B4M
3	60	3 Phase	460	2	3450	NCC4-003063P-D4L	NCC4-003063P-D4M	NCB4-003063P-D4M
3	60	3 Phase	575	2	3450	NCC4-003063P-E4L	NCC4-003063P-E4M	NCB4-003063P-E4M
5	60	3 Phase	230	2	3450	NCC4-005063P-B6L	NCC4-005063P-B6M	NCB4-005063P-B6M
5	60	3 Phase	460	2	3450	NCC4-005063P-D6L	NCC4-005063P-D6M	NCB4-005063P-D6M
5	60	3 Phase	575	2	3450	NCC4-005063P-E6L	NCC4-005063P-E6M	NCB4-005063P-E6M
7.5	60	3 Phase	230	2	3450	NCC4-007563P-B6L	NCC4-007563P-B6M	NCB4-007563P-B6M
7.5	60	3 Phase	460	2	3450	NCC4-007563P-D6L	NCC4-007563P-D6M	NCB4-007563P-D6M
7.5	60	3 Phase	575	2	3450	NCC4-007563P-E6L	NCC4-007563P-E6M	NCB4-007563P-E6M
10	60	3 Phase	460	2	3450	NCC4-010063P-D7L	NCC4-010063P-D7M	NCB4-010063P-D7M
10	60	3 Phase	575	2	3450	NCC4-010063P-E7L	NCC4-010063P-E7M	NCB4-010063P-E7M

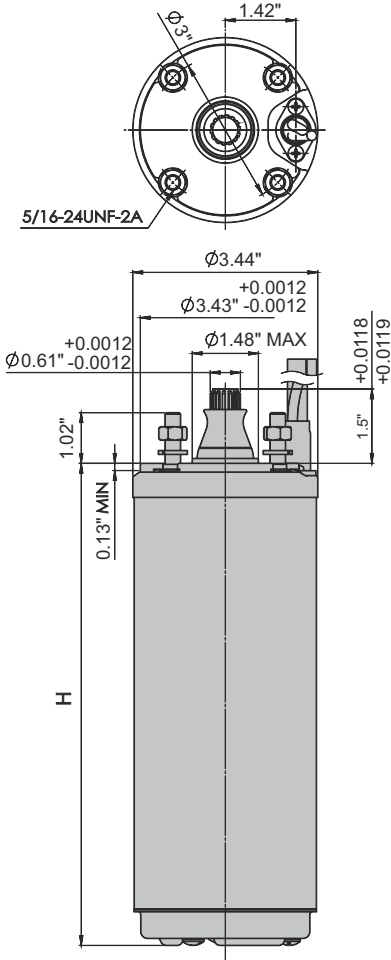
## ENCAPSULATED WATER FILLED MOTORS

**0.5 HP to 5 HP**

**DIMENSIONS**

**MOTOR SIZE: 4"**

### 2-wire single phase motor



HP	U <sub>N</sub> [V]	Dimension H (in)		Cable (ft)	Cable (AWG)	Shipping Weight (lbs)
		304 STAINLESS STEEL OVER IRON	316 STAINLESS STEEL			
0.5	115	14.84	14.84	6	14	26
0.5	230	13.43	13.43	6	14	24
0.75	230	15.63	15.63	6	14	27
1	230	17.01	17.01	6	14	30
1.5	230	18.78	18.78	6	14	33

### 3-wire single phase motor

HP	U <sub>N</sub> [V]	Dimension H (in)		Cable (ft)	Cable (AWG)	Shipping Weight (lbs)
		304 STAINLESS STEEL OVER IRON	316 STAINLESS STEEL			
0.5	115	10.12	10.27	6	14	27
0.5	230	10.12	10.27	6	14	27
0.75	230	10.91	10.34	6	14	29
1	230	12.28	12.43	6	14	32
1.5	230	14.06	14.21	6	14	36
2	230	16.02	16.17	6	14	41
3	230	19.57	19.72	15	14	49
5	230	28.58	28.58	15	14	70

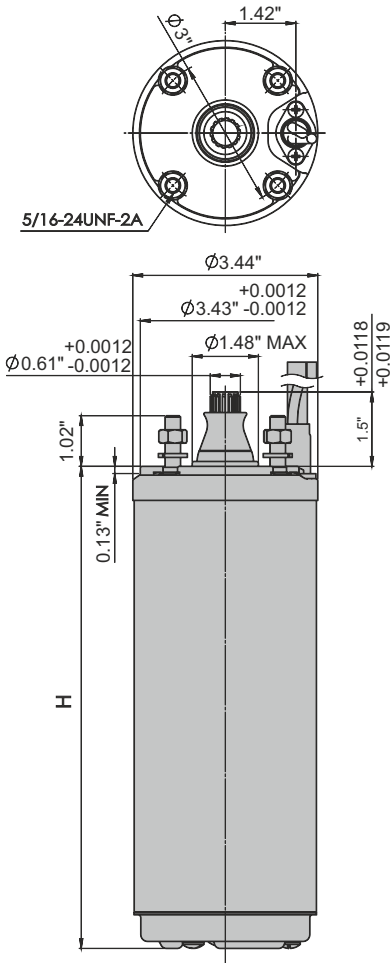
## ENCAPSULATED WATER FILLED MOTORS

**0.5 HP to 10 HP**

**DIMENSIONS**

**MOTOR SIZE: 4"**

### Three phase motor



HP	U <sub>N</sub> [V]	Dimension H (in)		Cable (ft)	Cable (AWG)	Shipping Weight (lbs)
		304 STAINLESS STEEL OVER IRON	316 STAINLESS STEEL			
0.5	230	10.51	10.66	6	14	24
0.5	460	10.51	10.66	6	14	24
0.5	575	10.51	10.66	6	14	24
0.75	230	11.30	11.45	6	14	26
0.75	460	11.30	11.45	6	14	26
0.75	575	11.30	11.45	6	14	26
1	230	12.68	12.83	6	14	29
1	460	12.68	12.68	6	14	29
1	575	12.68	12.68	6	14	29
1.5	230	13.27	13.42	6	14	30
1.5	460	13.27	13.27	6	14	30
1.5	575	13.27	13.27	6	14	30
2	230	14.45	14.60	6	14	33
2	460	14.45	14.60	6	14	33
2	575	14.45	14.60	6	14	33
3	230	16.42	16.57	15	14	37
3	460	16.42	16.57	15	14	37
3	575	16.42	16.57	15	14	37
5	230	25.04	25.04	15	14	58
5	460	25.04	25.04	15	14	58
5	575	25.04	25.04	15	14	58
7.5	230	28.58	28.58	15	14	66
7.5	460	28.58	28.58	15	14	66
7.5	575	28.58	28.58	15	14	66
10	460	32.13	32.13	15	14	74
10	575	32.13	32.13	15	14	74

## ENCAPSULATED WATER FILLED MOTORS

0.5 HP to 5 HP

PERFORMANCE DATA-60 Hz

MOTOR SIZE: 4"

### 2-wire single phase motor

HP	S.F.	U <sub>N</sub> [V]	n <sub>N</sub> [min <sup>-1</sup> ]	I <sub>N</sub> [A]	I <sub>max</sub> [A]	I <sub>start</sub> [A]	Cos φ PF[%]	Effi.[%]	Thrust Load [N]
							100% load	100% load	
0.5	1.6	115	3400	8.2	10.4	33	0.83	46	1500
0.5	1.6	230	3400	4.5	5.6	15	0.87	42	1500
0.75	1.5	230	3400	6.1	7.2	27	0.84	46	1500
1	1.4	230	3400	7.0	8.6	28	0.96	48	3000
1.5	1.3	230	3400	12.5	13.2	47	0.78	49	3000

### 3-wire single phase motor

HP	S.F.	U <sub>N</sub> [V]	n <sub>N</sub> [min <sup>-1</sup> ]	I <sub>N</sub> [A]	I <sub>max</sub> [A]	I <sub>start</sub> [A]	Cos φ PF[%]	Effi.[%]	Thrust Load [N]
							100% load	100% load	
0.5	1.6	115	3400	7.9	9.1	30	0.85	42	1500
0.5	1.6	230	3400	3.9	5.0	20	0.81	45	1500
0.75	1.5	230	3400	4.7	6.2	28	0.90	52	1500
1	1.4	230	3400	6.0	7.6	35	0.91	54	1500
1.5	1.30	230	3400	8.7	9.9	42	0.83	59	3000
2	1.25	230	3400	10.2	12.4	57	0.95	62	3000
3	1.15	230	3400	15.3	16.7	67	0.95	64	3000
5	1.15	230	3400	24.2	29.3	90	0.97	65	3000

## ENCAPSULATED WATER FILLED MOTORS

0.5 HP to 10 HP

PERFORMANCE DATA-60 Hz

MOTOR SIZE: 4"

### Three phase motor

HP	S.F.	U <sub>N</sub> [V]	n <sub>N</sub> [min <sup>-1</sup> ]	I <sub>N</sub> [A]	I <sub>max</sub> [A]	I <sub>start</sub> [A]	Cos φ PF[%]	Effi.[%]	Thrust Load [N]
							100% load	100% load	
0.5	1.6	230	3450	2.52	3.07	16	0.70	50	1500
0.5	1.6	460	3450	1.24	1.52	5.8	0.70	52	1500
0.5	1.6	575	3450	0.99	1.22	5	0.70	51	1500
0.75	1.5	230	3450	3.15	3.96	19	0.73	56	1500
0.75	1.5	460	3450	1.71	2.09	10	0.71	55	1500
0.75	1.5	575	3450	1.22	1.53	7	0.73	58	1500
1	1.4	230	3450	4.02	4.84	25	0.71	62	3000
1	1.4	460	3450	2.16	2.55	12	0.76	56	3000
1	1.4	575	3450	1.59	1.93	9	0.75	59	3000
1.5	1.3	230	3450	4.55	6.20	40	0.75	64	3000
1.5	1.3	460	3450	2.74	3.19	21	0.70	66	3000
1.5	1.3	575	3450	2.21	2.57	14	0.75	63	3000
2	1.25	230	3450	6.56	7.70	45	0.79	68	3000
2	1.25	460	3450	3.67	4.15	27	0.71	67	3000
2	1.25	575	3450	2.83	3.23	17	0.79	64	3000
3	1.15	230	3450	9.68	10.64	62	0.76	68	4000
3	1.15	460	3450	4.70	5.23	29	0.81	71	4000
3	1.15	575	3450	3.82	4.19	23	0.79	70	4000
5	1.15	230	3450	15.16	16.85	95	0.79	71	6000
5	1.15	460	3450	7.93	8.75	47	0.76	72	6000
5	1.15	575	3450	6.41	7.00	43	0.76	71	6000
7.5	1.15	230	3450	22.32	24.63	103	0.82	72	6000
7.5	1.15	460	3450	11.33	12.60	62	0.80	73	6000
7.5	1.15	575	3450	9.34	10.50	54	0.78	73	6000
10	1.15	460	3450	15.61	17.21	92	0.76	73	6000
10	1.15	575	3450	12.39	13.58	61	0.80	73	6000

## CONTROL BOX

0.5 HP to 5 HP
MODEL CODE
MOTOR SIZE: 4"

NB
C
4
S
0005
A

### Volts

Code	Volts
A	110-115V
B	220-230V

### Motor HP

Code	HP
0005	0.5 HP
0007	0.75 HP
0010	1 HP
0050	5 HP

### Capacitor Type

Code	Capacitor Type
S	Start capacitor
D	Start & Run capacitor

### Motor size

Code	Size
4	4"

### Submersible Motor Type

Code	Submersible Motor Type
C	Encapsulated water filled motor

### Series name

Code	Series
NB	Control box

## CONTROL BOX

Single Phase

ORDER INFORMATION

MOTOR SIZE: 4"

Model	Capacitor Type	HP	Voltage [V]	Start Capacitor MFD	Run Capacitor UF
NB-C-4-D-0005-A	START & RUN	0.5	115	80 - 100 MFD 400V	20UF 440V
NB-C-4-D-0005-B	START & RUN	0.5	230	60 - 80 MFD 400V	15UF 440V
NB-C-4-D-0007-B	START & RUN	0.75	230	120 - 150 MFD 400V	20UF 440V
NB-C-4-D-0010-B	START & RUN	1.0	230	100 - 120 MFD 400V	25UF 440V
NB-C-4-D-0015-B	START & RUN	1.5	230	150 - 200 MFD 400V	20UF 440V
NB-C-4-D-0020-B	START & RUN	2.0	230	200 - 250 MFD 400V	30UF 440V
NB-C-4-D-0030-B	START & RUN	3.0	230	200 - 250 MFD 400V	60UF 440V
NB-C-4-D-0050-B	START & RUN	5.0	230	250 - 300 MFD 400V	72UF 440V

## CONTROL BOX

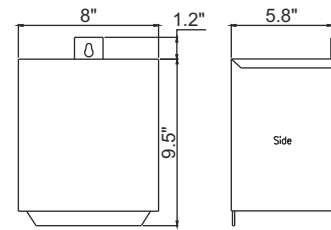
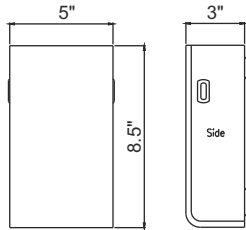
Single Phase

DIMENSIONS

MOTOR SIZE: 4"

Start & Run Capacitor Control box

Start & Run Capacitor Control box



HP	kW	Voltage [V]	Capacitor Type	Carton Box Size			Bottom Knockouts Quantity	Side Knockouts Diameter	Volume
				L	W	H			
0.5	0.37	115	START & RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"
0.5	0.37	230	START & RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"
0.75	0.55	230	START & RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"
1.0	0.75	230	START & RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"
1.5	1.1	230	START & RUN	11.5"	8.5"	6.5"	2	Ø1.3"	40.9" x 34.6" x 55.1"
2.0	1.5	230	START & RUN	11.5"	8.5"	6.5"	2	Ø1.3"	40.9" x 34.6" x 55.1"
3.0	2.2	230	START & RUN	11.5"	8.5"	6.5"	2	Ø1.3"	40.9" x 34.6" x 55.1"
5.0	3.7	230	START & RUN	11.5"	8.5"	6.5"	2	Ø1.3"	40.9" x 34.6" x 55.1"







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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.*