



**CONTINENTAL**

continental immersible motors

*“innovation just below the surface”*

## Engineering Excellence:

Continental Electric is one of the country's oldest, and most highly respected names in the motor industry.

Since initiating business more than 80 years ago, Continental has innovated and pioneered some of the industry's most important advances including explosion-proof motors, and oil lubricated ball bearings in horizontal and vertical motors. Now, we are proud to build on that history of innovation with our new immersible motor products.

The Continental brand name is your assurance of superior efficiency, durability and quality that's backed by unmatched service within the industry.

## The Immersible Design Concept:

Continental in conjunction with our partners wanted a unique motor that could service the waste-water industry without having the need to be submerged 100% of the time. These motors are designed to be used in dry-pit applications where there is a possibility of flooding.

Modifying existing submersible motors for these applications seemed the wrong approach. Why rework a motor designed to be submerged 100% of the time so that it can operate in air 99% of the time? Starting with a motor designed to be operated in air 100% of the time and refining the design for occasional flooding seemed the more logical approach.

Submersible motors are less efficient, require more maintenance, and are far more expensive than their TEFC counterparts. At its core an immersible motor is a modified TEFC motor using a blower fan for air cooling. While in the flooded condition the blower motor is disengaged and the motor takes advantage of the vastly superior heat transfer characteristics of the surrounding media.

## Immersible Features:

- 1) O-rings on all mating surfaces.
- 2) Dedicated blower motor to ensure proper cooling.

- 3) Can be submerged up to 30' for as long as 2 weeks.
- 4) Moisture sensor, thermostats, and space heaters are standard equipment.
- 5) Double lip seal around shaft is maintenance free and requires no re-greasing.
- 6) Main power cable, blower cable, and control cable all come in 30' dimensions and are standard equipment.

## Immersible Advantages:

### 1) Lower operating costs.

Higher efficiencies, lower maintenance, and lower initial capital expenditure are all advantages immersible motors have over submersible motors.

### 2) Safety.

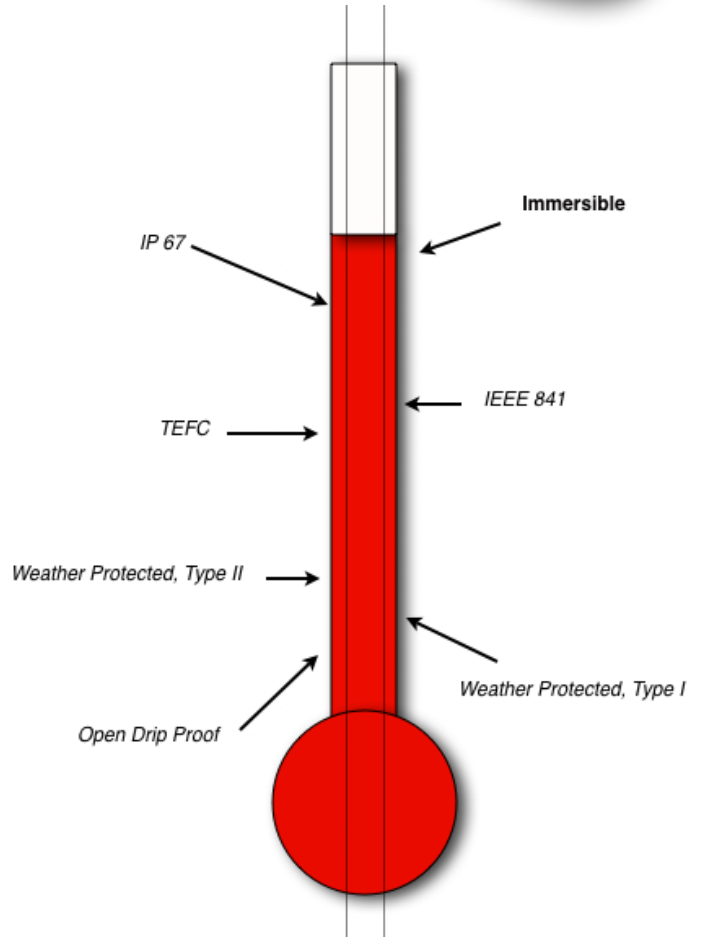
Use of immersible motors eliminates the health and safety risk concerns (such as the possible presence of pathogens like HIV, Hepatitis B. etc... in sewage fluid) present during routine inspection and maintenance procedures. In comparison, other types require either extensive steam cleaning of the motor's outer shell if it is a wet-pit submersible or of the inside of the jacket in dry-pit submersibles, which constitutes a high-risk health hazard due to the nature of the effluents or sewage conveyed.

### 3) Easy Retrofit.

Immersible motors come in standard vertical P-base designs and can replace existing motors without the need to replace the pumps themselves.

# Degrees of Protection

Beyond IP 67



# *Immersible Features at a Glance*

*Blower motor ensure superior cooling at all speed ranges. Allows for fan to shut-off in the immersed condition*

*Space heaters (located internally) turn on when motor is not running, preventing any moisture build up from condensation.*

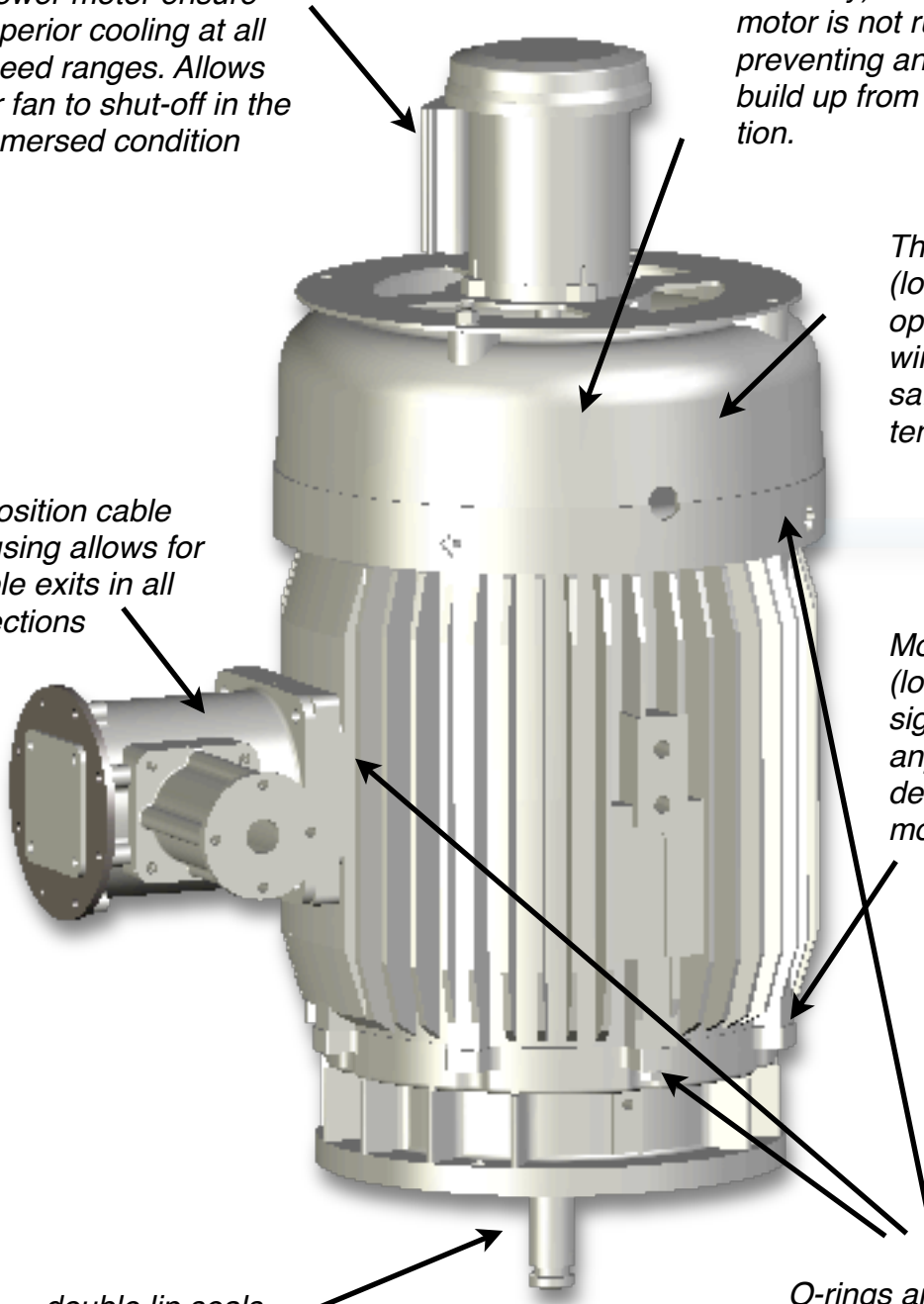
*Thermostats (located internally) open when windings exceed safe operating temperature.*

*5-position cable housing allows for cable exits in all directions*

*Moisture sensors (located internally) signal alarm when any water is detected inside the motor*

*double lip seals around shaft prevent water entry to a depth of 30 feet*

*O-rings are used on all mating surfaces*



# Rating Information

460 Volt, 3 Phase, 1.15 Service Factor

HP	RPM	Frame	Full Load Amps	Full Load Eff.	Full Load PF.	Weight	List Price
50	1175	365LP	58	93.0	87.0	1250	\$13,614
50	870	404LP	67	90.0	78.0	1700	\$18,606
60	1770	364LP	71	93.6	84.1	1250	\$13,128
60	1180	404LP	69	93.6	87.0	1700	\$15,347
60	870	405LP	79	90.9	78.0	1700	\$21,147
75	1770	365LP	88	94.1	84.9	1250	\$15,072
75	1180	405LP	85	93.6	87.9	1700	\$16,728
75	875	444LP	96	92.0	79.9	2200	\$26,267
100	1775	405LP	119	94.5	83.1	1700	\$17,792
100	1180	444LP	121	94.1	82.7	2200	\$21,494
100	875	444LP	127	92.5	80.0	2200	\$30,433
125	1775	444LP	143	94.5	86.7	2200	\$23,642
125	1180	445LP	150	94.1	83.0	2200	\$26,158
125	875	449LP	154	92.5	82.5	3000	\$34,747
150	1780	445LP	168	95.0	88.0	2200	\$25,578
150	1180	447LP	177	94.9	83.5	2200	\$31,944
150	875	449LP	185	93.1	81.5	3000	\$41,025
200	1780	447LP	222	95.0	88.9	2200	\$30,589
200	1185	449LP	235	95.0	84.0	3000	\$33,192
200	880	N315LL	242	94.1	82.2	4500	\$41,511
250	1785	449LP	276	95.0	89.5	3000	\$35,625
250	1185	449LP	292	95.0	84.5	3000	\$40,461
250	880	N315LL	302	94.5	82.0	4500	\$50,519
300	1785	449LP	329	95.4	89.5	3000	\$38,156
300	1175	N315LL	344	95.0	86.0	4500	\$49,703
300	880	N315LL	361	94.5	82.5	4500	\$53,369
300	710	N315LL	384	95.0	77.1	4500	\$61,925
350	1770	N315LL	382	95.4	90.0	4500	\$48,233
350	1175	N315LL	402	95.0	86.0	4500	\$55,594
350	885	N355LL	413	95.2	83.5	8500	\$72,781
350	710	N355LL	442	95.1	78.0	8500	\$96,758
350	590	N400LL	496	94.5	70.0	9250	\$131,133
400	1770	N315LL	435	95.4	90.5	4500	\$61,553
400	1175	N315LL	459	95.0	86.0	4500	\$67,311
400	885	N355LL	465	95.4	84.6	8500	\$97,822
400	710	N355LL	497	95.4	79.1	8500	\$106,281
400	590	N450LL	562	95.4	70.0	11000	\$186,875
450	1773	N315LL	504	95.6	87.5	4500	\$84,139
450	1180	N355LL	514	95.5	86.0	8500	\$100,967
450	885	N355LL	517	95.5	85.5	8500	\$106,281
450	710	N400LL	552	95.5	80.0	9250	\$132,850
450	590	N450LL	631	95.5	70.0	11000	\$194,847
500	1775	N355LL	557	95.7	88.0	8500	\$107,181
500	1180	N355LL	571	95.5	86.0	8500	\$112,819
500	885	N355LL	574	95.5	85.5	8500	\$130,683
500	710	N400LL	613	95.5	80.0	9250	\$154,658
500	590	N450LL	684	95.5	71.8	11000	\$214,358
600	1775	N355LL	668	95.7	88.0	8500	\$112,819
600	1180	N355LL	677	95.6	87.0	8500	\$130,683
600	890	N400LL	685	95.5	86.0	9250	\$152,778
600	710	N450LL	736	95.5	80.0	11000	\$202,136
600	590	N500LL	818	95.5	72.0	14400	\$250,086
700	1780	N355LL	761	95.8	90.0	8500	\$130,683
700	1180	N400LL	775	95.7	88.5	9250	\$140,603
700	890	N450LL	799	95.5	86.0	11000	\$192,736
700	710	N500LL	851	95.5	80.7	14400	\$246,325
700	590	N500LL	954	95.5	72.0	14400	\$257,136
750	1780	N355LL	815	95.8	90.0	8500	\$136,794
750	1180	N400LL	830	95.7	88.5	9250	\$160,769
750	890	N450LL	856	95.5	86.0	11000	\$207,308
750	710	N500LL	909	95.5	81.0	14400	\$251,494
800	1780	N400LL	870	95.8	90.0	9250	\$169,075
800	1183	N400LL	882	95.8	88.8	9250	\$186,897
800	890	N450LL	913	95.5	86.0	11000	\$234,258
800	710	N500LL	969	95.5	81.0	14400	\$275,000
900	1783	N400LL	985	95.8	89.5	9250	\$186,897
900	1185	N450LL	1,009	95.8	87.4	11000	\$229,167
900	890	N500LL	1,055	95.5	83.9	14400	\$269,908
1000	1785	N450LL	1,099	95.8	89.0	11000	\$225,092
1000	1185	N450LL	1,138	95.8	86.0	11000	\$237,825

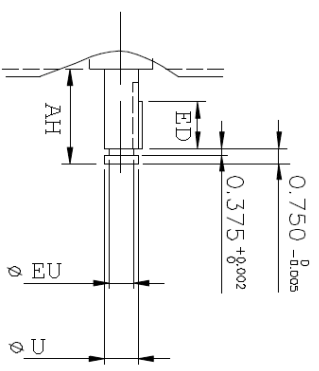
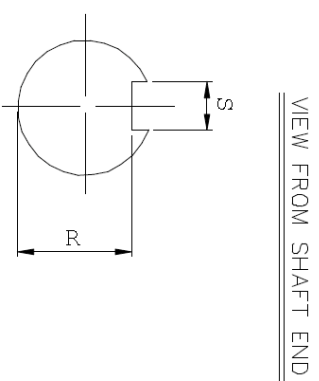
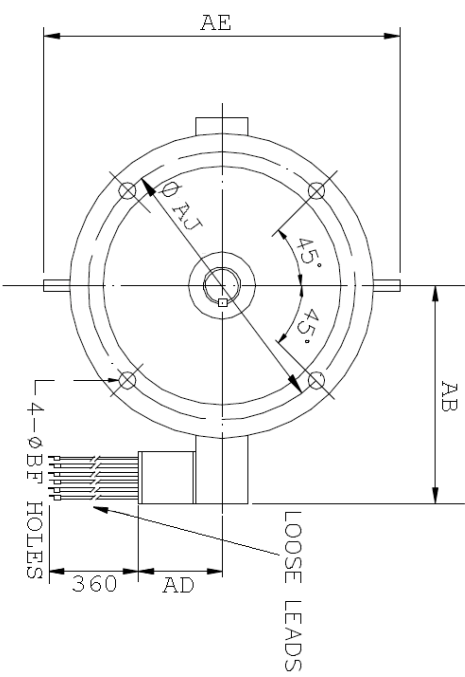
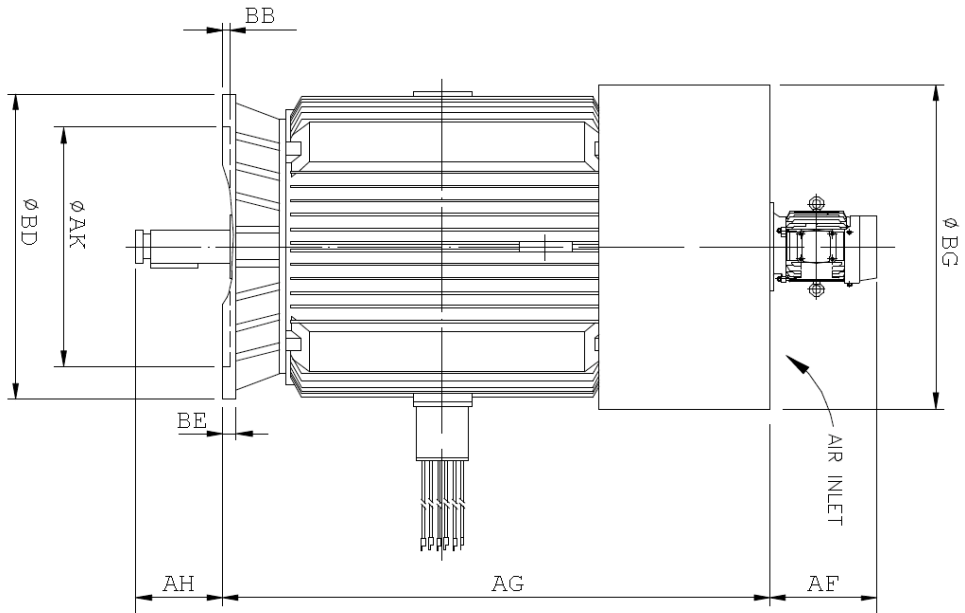
4160 Volt, 3 Phase, 1.15 Service Factor

HP	RPM	Frame	Full Load Amps	Full Load Eff.	Full Load PF.	Weight	List Price
250	1775	N315LL	32	95.0	84.0	4500	\$59,922
250	1180	N315LL	35	95.0	77.9	4500	\$69,769
250	885	N315LL	36	94.5	76.5	4500	\$72,144
300	1776	N315LL	38	95.0	85.1	4500	\$64,931
300	1180	N315LL	42	95.0	78.6	4500	\$73,078
300	885	N355LL	43	94.5	76.5	8500	\$115,000
300	708	N355LL	46	94.0	72.4	8500	\$120,958
300	590	N400LL	50	93.0	67.0	9250	\$140,047
350	1780	N315LL	44	95.2	86.2	4500	\$76,256
350	1180	N355LL	48	95.2	79.3	8500	\$120,008
350	885	N355LL	50	94.7	77.1	8500	\$126,208
350	708	N400LL	53	94.1	72.4	9250	\$146,136
350	590	N400LL	58	93.1	67.4	9250	\$150,564
400	1780	N355LL	50	95.3	86.5	8500	\$120,008
400	1180	N355LL	55	95.2	79.5	8500	\$126,208
400	885	N355LL	56	95.0	78.0	8500	\$130,636
400	708	N400LL	60	94.4	73.3	9250	\$150,564
400	590	N450LL	66	93.4	67.5	11000	\$186,875
450	1780	N355LL	56	95.4	86.8	8500	\$126,208
450	1180	N355LL	61	95.2	80.0	8500	\$130,636
450	885	N355LL	63	95.1	78.3	8500	\$135,064
450	708	N400LL	67	94.5	74.0	9250	\$154,992
450	590	N450LL	74	93.5	67.0	11000	\$194,847
500	1780	N355LL	62	95.5	87.0	8500	\$130,636
500	1180	N355LL	68	95.2	80.0	8500	\$135,064
500	885	N400LL	69	95.2	79.0	9250	\$141,706
500	708	N400LL	73	95.0	74.5	9250	\$162,519
500	590	N450LL	82	94.0	67.0	11000	\$201,933
600	1780	N355LL	75	95.5	86.5	8500	\$135,064
600	1180	N355LL	78	95.5	83.0	8500	\$141,706
600	885	N400LL	81	95.5	80.0	9250	\$179,792
600	708	N450LL	84	95.0	77.9	11000	\$189,975
600	590	N500LL	99	94.0	67.0	14400	\$235,589
700	1780	N355LL	87	95.6	87.1	8500	\$141,706
700	1180	N400LL	89	95.5	85.0	9250	\$164,733
700	885	N450LL	95	95.0	80.0	11000	\$181,561
700	708	N500LL	98	95.0	78.0	14400	\$232,044
700	590	N500LL	115	94.0	67.0	14400	\$242,672
750	1780	N355LL	94	95.8	86.5	8500	\$170,603
750	1180	N400LL	96	95.5	85.0	9250	\$199,631
750	885	N450LL	102	95.0	80.0	11000	\$224,583
750	708	N500LL	105	95.0	78.0	14400	\$272,453
750	590	N500LL	-	-	-	14400	\$282,639
800	1780	N400LL	99	95.5	87.3	9250	\$194,536
800	1183	N400LL	103	95.3	84.5	9250	\$208,797
800	885	N450LL	108	95.1	80.5	11000	\$234,258
800	708	N500LL	113	95.1	77.4	14400	\$275,000
800	590	N500LL	-	-	-	14400	\$285,186
900	1780	N400LL	111	95.2	88.0	9250	\$208,797
900	1185	N450LL	117	95.4	83.5	11000	\$229,167
900	885	N500LL	122	95.2	80.5	14400	\$271,436
900	708	N500LL	127	95.2	77.0	14400	\$282,639
1000	1780	N450LL	123	95.5	88.0	11000	\$225,092
1000	1185	N450LL	130	95.5	83.4	11000	\$237,825
1000	889	N500LL	136	95.5	80.0	14400	\$280,092
1250	1782	N500LL	154	95.5	88.3	14400	\$272,453
1250	1185	N500LL	157	95.5	86.5	14400	\$272,453
1500	1785	N500LL	182	95.5	89.5	14400	\$285,186
1500	1185	N500LL	186	95.5	87.5	14400	\$285,186

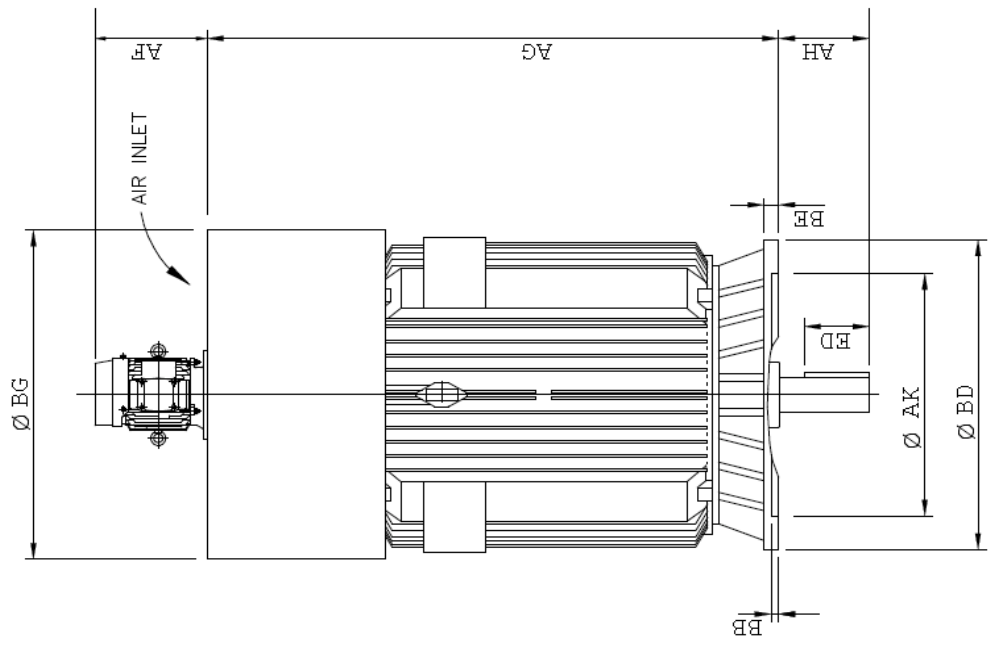
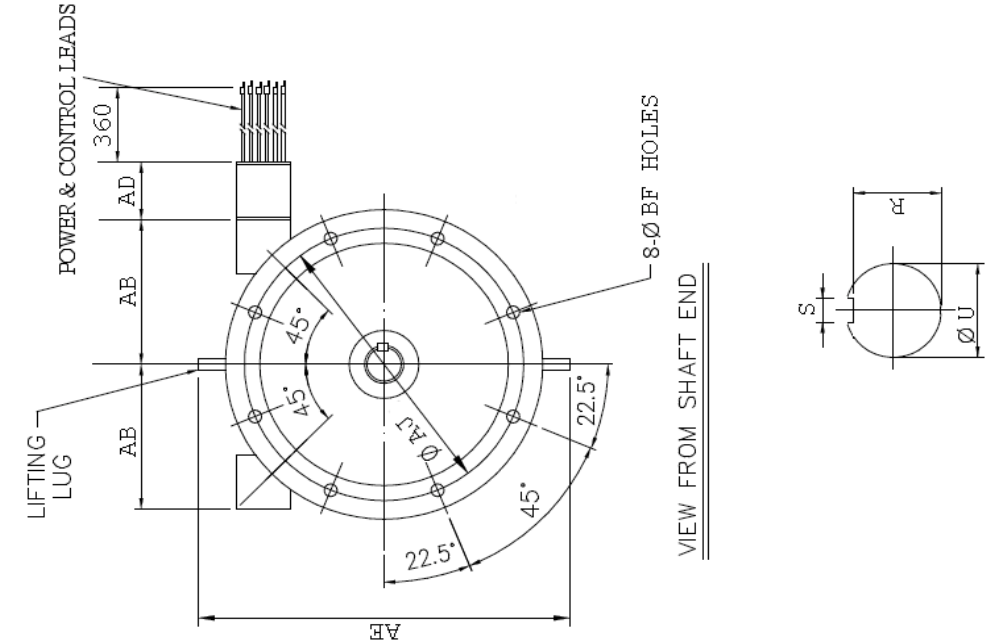
**Notes:**  
Additional lead lengths use a \$1700 dollar list adder per 5 ft increments

Data is for reference only and is not a substitute for submittal data

Quantity discounts available



Frame	AB	AD	AE	AF	AG	AH	AI	AK	BB	BE	BD	BF	BG	U	EU	R	S	ED	DE BEARING	ODE BEARING
364HP	18.70	10	25.32	8.5	30.97	4.50	14.75	13.50	0.25	1	16.50	0.69	NA	1.65	1.25	1.416	0.375	3.00	6313	6312
365HP	18.70	10	25.32	8.5	30.97	4.50	14.75	13.50	0.25	1	16.50	0.69	NA	1.65	1.25	1.416	0.375	3.00	6313	6312
404HP	19.30	10	28.30	8.5	39.17	4.50	14.75	13.50	0.25	1	16.50	0.69	NA	1.65	1.25	1.416	0.375	3.00	6314	6313
405HP	19.30	10	28.30	8.5	39.17	4.50	14.75	13.50	0.25	1	16.50	0.69	NA	1.65	1.25	1.416	0.375	3.00	6314	6313
444HP	20.87	11	NA	12.0	48.50	4.50	14.75	13.50	0.25	1	16.50	0.69	24.4	2.13	1.75	1.845	0.500	3.00	6315	6315
445HP	20.87	11	NA	12.0	48.50	4.50	14.75	13.50	0.25	1	16.50	0.69	24.4	2.13	1.75	1.845	0.500	3.00	6315	6315
447HP	20.87	11	NA	12.0	48.50	4.50	14.75	13.50	0.25	1	16.50	0.69	24.4	2.13	1.75	1.845	0.500	3.00	6315	6315
449HP	20.87	11	NA	12.0	53.00	4.50	14.75	13.50	0.25	1	24.40	0.69	24.4	2.13	1.75	1.845	0.500	3.00	6315	6315



Frame	AB	AD	AE	AF	AG	AH	AJ	AK	BB	BD	BE	BF	BG	U	R	S	ED	DE BEARING	ODE BEARING
N315LL	12.50	9.84	38.15	11.75	62.20	6.69	29.13	26.77	0.24	31.50	0.98	0.94	28.74	3.74	3.39	0.98	5.51	6224	6320
N355LL	14.57	9.84	38.58	11.75	77.66	6.69	37.01	34.65	0.24	39.37	1.50	1.10	30.79	3.74	3.39	0.98	5.51	6220C3	7320
N400LL	17.72	9.84	48.03	12.80	79.53	6.69	37.01	34.65	0.24	39.37	1.50	1.10	34.65	3.74	3.39	0.98	5.51	6220	7324
N450LL	18.90	9.84	45.91	12.80	82.78	6.69	37.01	34.65	0.24	39.37	1.50	1.10	36.65	3.74	3.39	0.98	5.51	6220C3	7324
N500LL	23.62	9.84	55.12	12.80	91.73	9.84	42.52	39.37	0.24	45.28	1.50	1.10	40.75	5.12	4.69	1.26	8.66	6230	7324

# Continental Immersible Motors