

BALDOR® • RELIANCE®

Submersible Motors Pricing Guide

CA466
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BALDOR®
A MEMBER OF THE ABB GROUP

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SUBMERSIBLE MOTORS UL APPROVED, EXPLOSION-PROOF, TENV**GENERAL DESCRIPTION AND NOTES**

- Flange mounted
- 416 stainless steel shaft extension
- 60 Hz
- Ball bearings
- 1.15 service factor (5)
- Class "F" insulation (5)
- Continuous in 40°C liquid
- 15 minutes in air
- Standard tandem seal design will withstand 100 psi at lower/outer seal. 100 psi is the total sum of operating depth and reflected pump pressure
- Motor prices include 25 feet 4 conductor power cable and 25 feet 5 conductor control cable
- Motors equipped with dual moisture sensing probes (moisture control circuit boxes must be purchased separately)
- Carbon ceramic inner and outer seals.

3600 RPM DESIGNS

Two pole designs (3600 RPM) are available in frame sizes 250TY and smaller with application approval. Obtain impeller weight and overhung load data from customer for product department approval. This information is required to calculate shaft deflection and assure seal life.

THERMAL PROTECTORS

UL listing is for Class I, Groups C and D (5) in air or submerged in water and sewage. Prices for motors include two normally closed thermostats connected in series and embedded in adjoining phases and are required by Underwriters Laboratories. A cautionary nameplate may be supplied and is suitable only on applications where vapor or gas ignition temperatures are 280° C or above.

The thermostats are automatic reset for use in a normally closed circuit where the thermostat is connected in series with the holding coil of the magnetic switch. When excessive heat occurs, it causes the thermostat to open the circuit of the holding coil of the magnetic switch, stopping the motor.

Use of thermostats is limited to control circuits in which the maximum current does not exceed the following values:

Volts	Amps	Inrush Amps
110-220	3.0	30.0
200-240	1.5	15.0
440-480	0.75	7.5
550-600	0.60	6.0

440TY Frames: Shaft loading (primary and secondary) must be supplied for Engineering review.
Orders will be accepted ONLY after Engineering approval.

CONTINUOUS IN WATER/SEWAGE

DIMENSION SHEETS: (see pages 18-26)

- | | |
|--|--|
| 180TY - 66930-17 | 250TY Frame, 210TY Mounting - 66930-28 |
| 210TY thru 320TY - 66930-18 | 320TY Frame, 250TY Mounting - 66930-28 |
| 360TY Frame - 66930-60 | 360TY, 320TY Mounting - 66930-61, 66930-82 |
| 180TY Frame, 140TY Mounting - 66930-20 | 440TY Mounting - 66930-122 |
| 210TY Frame, 180TY Mounting - 66930-20 | 440TY, 360TY Mounting - 66930-130 |

NOTES:

- (1) Stock single-phase motors are final connected for 230 volts.
- (2) Ratings stocked with one size smaller mounting flange and shaft extension.
- (3) Up to 95 feet additional cable - for total cable lengths over 100 feet, contact Baldor.
- (4) Refer to 501 Catalog for specific voltage ratings carried in stock.
- (5) Motors less than 1 HP are 1.0 service factor, Class "B" insulation and are labeled Class 1, Group C & D

Refer to page 10 for available modifications to submersible motors.

CONTINUOUS IN WATER/SEWAGE

SINGLE-PHASE UL APPROVED - 115/230 VOLTS (1)

Horsepower	RPM	Frame Size	List Price (1) (w/25' if cable)		Additional Cable (3) (List Price per 5 feet)	
			115 Volt	230 Volt	115 Volt	230 Volt
3/4	1200	180TY	4,546	4,546	149	47
1	1800	180TY	5,001	5,001	149	47
	1200	180TY (2)	5,229	5,229	149	47
1-1/2	1800	180TY	5,001	5,001	153	60
	1200	180TY (2)	5,984	5,984	364	47
2	1800	180TY (2)	5,544	5,544	340	60
	1200	210TY (2)	5,959	5,959	390	114
3	1800	180TY (2)	6,932	6,932	440	60
	1200	210TY (2)	8,497	8,497	457	114
5	1800	210TY	-	9,230	-	149

CONTROL BOXES

Single-phase motor price includes NEMA 1 enclosure control box, wired complete with starting capacitors, wiring diagram and terminal board. Refer to wiring diagram 410961-1-W for dual voltage and 410961-1-Z or 410961-1-X for single voltage. Refer to dimension sheet 600198-2.

Data or prices subject to change without notice

CONTINUOUS IN WATER/SEWAGE

THREE-PHASE – UL APPROVED DIVISION 1, CLASS 1, GROUPS C & D, T3C TEMPERATURE CODE

HP	RPM	Frame Size	List Price (w/25' of cable) (4) (5)			Additional Cable (price per 5 ft.) (3)		
			200, 230 Volt	400, 460 Volt	575 Volt	200, 230 Volt	400, 460 Volt	575 Volt
1/2	1800	180TY	4,457	4,457	4,457	69	53	53
	1200	180TY	4,777	4,777	4,777	53	53	53
	900	180TY	5,354	5,354	5,354	53	53	53
3/4	1800	180TY	4,457	4,457	4,457	69	53	53
	1200	180TY	4,777	4,777	4,777	53	53	53
	900	180TY	5,354	5,354	5,354	53	53	53
1	1800	180TY	4,457	4,457	4,457	69	53	53
	1200	180TY	4,777	4,777	4,777	53	53	53
	900	180TY	5,354	5,354	5,354	53	53	53
1.5	3600(1)	180TY	4,365	4,365	4,365	69	53	53
	1800	180TY	4,566	4,566	4,566	69	53	53
	1200	180TY	4,859	4,859	4,859	53	53	53
	900	180TY	5,354	5,354	5,354	53	53	53
2	3600(1)	180TY	4,365	4,365	4,365	69	53	53
	1800	180TY	4,653	4,653	4,653	69	53	53
	1200	180TY	6,255	6,255	6,255	53	53	53
	900	180TY	5,354	5,354	5,354	53	53	53
3	3600(1)	180TY	4,365	4,365	4,365	69	53	53
	1800	180TY	4,702	4,702	4,702	69	53	53
	1200	180TY	4,777	4,777	4,777	53	53	53
	900	180TY	6,957	6,957	6,957	53	53	53
5	3600(1)	180TY	4,772	4,772	4,772	69	53	53
	1800	180TY	4,740	4,740	4,740	69	53	53
	1200	180TY	6,475	6,475	6,475	53	53	53
	900	210TY	7,997	7,997	7,997	128	128	53
7.5	3600(1)	180TY	6,456	6,456	6,456	69	53	53
	1800	180TY	6,133	6,133	6,133	69	53	53
	1200	210TY	7,154	7,154	7,154	128	53	53
	900	210TY	10,228	10,228	10,228	128	128	53
	720	250TY	–	11,698	11,698	–	129	53
10	3600(1)	210TY	6,916	6,916	6,916	169	69	70
	1800	210TY	6,611	6,611	6,611	169	69	70
	1200	210TY	8,750	8,750	8,750	128	53	53
	900	250TY	10,667	10,667	10,667	128	128	129
	720	250TY	–	13,879	13,879	–	129	129
15	3600(1)	210TY	8,896	8,896	8,896	169	69	70
	1800	210TY	8,470	8,470	8,470	169	69	70
	1200	250TY	11,559	11,559	11,559	218	128	129
	900	250TY	16,099	16,099	16,099	128	128	129
	720	320TY	–	20,304	20,304	–	272	272
20	3600(1)	210TY	10,032	10,032	10,032	169	69	70
	1800	210TY	9,334	9,334	9,334	169	69	70
	1200	250TY	12,746	12,746	12,746	218	128	129
	900	320TY	21,215	21,215	21,215	218	218	218
	720	320TY	–	26,203	26,203	–	272	272
25	3600(1)	250TY	13,121	13,121	13,121	262	169	169
	1800	250TY	11,926	11,926	11,926	262	169	169
	1200	250TY	16,537	16,537	16,537	218	128	128
	900	320TY	23,044	23,044	23,044	218	218	218
	720	320TY	–	27,749	27,749	–	272	272
30	3600(1)	250TY	14,803	14,803	14,803	262	169	169
	1800	250TY	12,883	12,883	12,883	262	169	169
	1200	320TY	18,908	18,908	18,908	617	218	218
	900	320TY	27,054	27,054	27,054	617	218	218
	720	320TY	–	33,972	33,972	–	272	272

++ This rating is available in a 360TY frame for 1.0 service factor

CONTINUOUS IN WATER/SEWAGE

THREE-PHASE – UL APPROVED DIVISION 1, CLASS 1, GROUPS C & D, T3C TEMPERATURE CODE

HP	RPM	Frame Size	List Price (w/25' of cable) (4) (5)			Additional Cable (price per 5 ft.) (3)		
			200, 230 Volt	400, 460 Volt	575 Volt	200, 230 Volt	400, 460 Volt	575 Volt
40	3600(1)	250TY	18,310	18,310	18,310	262	169	169
	1800	250TY	17,441	17,441	17,441	262	169	169
	1200	320TY	23,826	23,826	23,826	615	218	218
	900	320TY	30,352	30,352	30,352	615	218	218
	720	360TY	-	41,628	41,628	-	1,145	1,145
50	1800	320TY	20,411	20,411	20,411	615	270	271
	1200	320TY	25,321	25,321	25,321	615	218	218
	900	360TY	-	40,519	40,519	-	531	531
	720	360TY	-	47,056	47,056	-	1,145	1,145
60	1800	320TY	-	26,106	26,106	-	270	218
	1200	320TY	-	33,588	33,588	-	218	153
	900	360TY	-	39,419	39,419	-	531	531
	720	L360TY	-	49,494	49,494	-	1,378	1,378
	600	440TY	-	113,231	113,231	-	1,378	1,378
75	1800	320TY	-	33,838	33,838	-	270	270
	1200	360TY	-	34,607	34,607	-	531	531
	900	360TY	-	43,540	43,540	-	531	531
	720	440TY	-	113,231	113,231	-	1,378	1,378
	600	440TY	-	118,892	118,892	-	1,378	1,378
100	1800	360TY	-	35,979	35,979	-	531	531
	1200	360TY	-	44,480	44,480	-	531	531
	900	360TY	-	57,641	57,641	-	531	531
	720	440TY	-	121,115	121,115	-	1,374	1,374
	600	440TY	-	127,171	127,171	-	1,378	1,378
125	1800	360TY	-	43,125	43,125	-	531	531
	1200	360TY	-	54,351	54,351	-	531	531
	900	360TY	-	66,295	66,295	-	1,378	1,378
	720	440TY	-	125,407	125,407	-	1,378	1,378
	600	440TY	-	139,528	139,528	-	1,378	1,378
150	1800	440TY++	-	116,330	116,330	-	1,152	1,152
	1200	440TY	-	120,933	120,933	-	1,152	1,152
	900	440TY	-	122,965	122,965	-	1,378	1,378
	720	440TY	-	128,932	128,932	-	1,378	1,378
	600	440TY	-	148,268	148,268	-	1,378	1,378
200	1800	440TY	-	120,221	120,221	-	1,152	1,152
	1200	440TY	-	126,231	126,231	-	1,152	1,152
	900	440TY	-	130,371	130,371	-	1,378	1,378
	720	440TY	-	137,080	137,080	-	1,378	1,378
250	1800	440TY	-	126,231	126,231	-	1,152	1,152
	1200	440TY	-	132,542	132,542	-	1,152	1,152
	900	440TY	-	138,536	138,536	-	1,378	1,378
	720	440TY	-	147,385	147,385	-	1,378	1,378
300	1800	440TY	-	132,545	132,545	-	1,152	1,152
	1200	440TY	-	139,168	139,168	-	1,152	1,152
	900	440TY	-	158,226	158,226	-	1,378	1,378
350	1800	440TY	-	134,545	134,545	-	1,152	1,152
	1200	440TY	-	147,121	147,121	-	1,152	1,152
	900	440TY	-	167,716	167,716	-	1,378	1,378
400	1800	440TY	-	150,952	150,952	-	1,152	1,152
	1200	440TY	-	160,991	160,991	-	1,152	1,152
450	1800	440TY	-	178,364	178,364	-	1,152	1,152

Note: ++ This rating is available in a 360TY frame for 1.0 service factor

(1) Refer to "3600 RPM Designs" information on Page 1.

CONTINUOUS IN AIR*

UL APPROVED DIVISION 1, CLASS 1, GROUPS C & D, T3C TEMPERATURE CODE

SINGLE PHASE 115/230 VOLTS

Horsepower	RPM	Frame Size	List Price (w/25' of Cable)	Additional Cable (Price per 5 Feet)
0.75	1200	180TY	8,358	118
1	1800	180TY	8,052	118
	1200	210TY	8,893	153
1.5	1800	210TY	8,961	153
	1200	210TY	9,666	153

THREE PHASE 230/460 VOLTS

Horsepower	RPM	Frame Size	List Price (w/25' of Cable)	Additional Cable (Price per 5 Feet)
0.5	1200	180TY	5,989	53
	900	180TY	6,524	53
0.75	1800	180TY	5,751	53
	1200	180TY	4,269	53
	900	180TY	4,968	53
1	1800	180TY	5,751	53
	1200	180TY	5,989	53
	900	180TY	6,524	53
1.5	1800	180TY	5,751	53
	1200	180TY	6,187	53
	900	210TY	7,919	128
2	1800	180TY	5,848	53
	1200	180TY	7,239	53
	900	210TY	8,891	128
3	1800	180TY	6,921	53
	1200	210TY	7,997	128
	900	250TY	13,322	128
5	1800	210TY	8,201	69
	1200	250TY	11,871	128
	900	250TY	16,360	128
7.5	1800	250TY	10,967	169
	1200	250TY	15,161	128
	900	320TY	17,491	218
10	1800	250TY	14,400	169
	1200	320TY	19,167	218
	900	320TY	23,454	218
15	1800	320TY	19,824	270
	1200	320TY	22,038	218
	900	360TY	33,074	531
20	1800	320TY	21,685	270
	1200	360TY	29,556	531
	900	360TY	37,410	531
25	1800	360TY	28,005	531
	1200	360TY	38,718	531
	900	L360TY	47,526	531
30	1800	360TY	30,162	531
	1200	440TY	81,735	1,145
40	1800	L360TY	37,701	531
	1200	440TY	83,571	1,145
50	1800	440TY	77,717	1,145
	1200	440TY	87,292	1,145
60	1800	440TY	85,748	1,145
	1200	440TY	91,011	1,145
75	1800	440TY	101,849	1,145
	1200	440TY	111,070	1,145
100	1800	440TY	112,309	1,145
	1200	440TY	122,476	1,145
125	1800	440TY	122,778	1,145
	1200	440TY	133,889	1,145
150	1800	440TY	137,892	1,145
	1200*	440TY	150,379 **	1,145

Note: * Lower seal must be lubricated from pump side.

** Requires blower motor

PREMIUM EFFICIENT SUBMERSIBLE MOTORS, CONTINUOUS IN WATER/SEWAGE
THREE PHASE – UL APPROVED, EXPLOSION-PROOF, TENV, DIVISION 1, CLASS 1, GROUPS C & D,
T3C TEMPERATURE CODE

Horsepower	Frame/Voltage	Speed	Full load Eff. with Seal Losses	Full load Eff. w/o Seal Losses	List Price
1	140TY/460	1800	65.3	84.6	4,656
	140TY/460	1200	70.2	83.6	4,900
	180TY/460	900	70.8	83.5	5,471
	140TY/460	1800	71.9	86.3	4,755
1.5	180TY/460	1200	73.8	86.6	4,912
	180TY/460	900	75.7	84.9	5,476
	140TY/460	1800	75.6	87.1	4,897
2	180TY/460	1200	77.3	87.5	4,920
	210TY/460	900	76.7	85.5	5,914
	180TY/460	1800	77.5	88.5	4,929
3	210TY/460	1200	80.2	89.5	7,450
	210TY/460	900	79.6	85.7	8,560
	180TY/460	1800	81.9	89	4,999
5	210TY/460	1200	83.8	89.6	7,820
	250TY/460	900	84.9	89.9	10,361
	210TY/460	1800	83.6	90.6	13,622
7.5	250TY/460	1200	85.3	90.3	10,843
	250TY/460	900	87.2	90.6	11,383
	210TY/460	1800	85.7	90.7	7,136
10	250TY/460	1200	87.8	91.7	11,602
	320TY/460	900	85.6	90.3	19,528
	250TY/460	1800	88.5	93	12,459
15	320TY/460	1200	88.8	93.1	20,504
	320TY/460	900	88.3	91.6	21,530
	250TY/460	1800	89.7	93.1	13,078
20	320TY/460	1200	89.7	93.1	21,732
	320TY/460	900	89.1	91.6	22,169
	320TY/460	1800	90	94.2	21,890
25	320TY/460	1200	90.5	93.1	22,977
	320TY/460	900	89.9	91.8	23,779
	320TY/460	1800	90.7	94.2	23,045
30	320TY/460	1200	91.4	93.6	23,539
	360TY/460	900	89.7	92.7	30,046
	320TY/460	1800	91.5	94.2	24,188
40	360TY/460	1200	91.2	94.2	31,549
	360TY/460	900	90.7	93	34,594
50	320TY/460	1800	92.3	94.5	24,998
	360TY/460	1200	91.8	94.2	34,700
60	320TY/460	1800	91.8	95	34,090
	360TY/460	1200	N/A	N/A	43,800
75	360TY/460	1800	92.5	95.1	39,199
100	360TY/460	1800	93.4	95.4	41,601
125	360TY/460	1800	89.8	92.4	51,100

SUBMERSIBLE MOTORS NON-UL APPROVED, TENV

Baldor•Reliance standard submersible motors are designed for use in storm drains, dam gates, aeration applications and many other applications that require motors to operate submerged in liquid. They are not intended and should not be used on applications that are UL listed Explosion-Proof for hazardous locations. Baldor•Reliance offers a complete line of UL listed submersible motors for these locations. Refer to page 3 for pricing.

GENERAL DESCRIPTION AND NOTES

- Flange mounted
- 416 stainless steel shaft extension
- 60 Hz
- Ball Bearings
- 1.15 service factor
- Class F insulation
- Continuous in 40°C liquid
- 15 minutes in air
- Will withstand 100 psi at the seal
- Motor equipped with moisture sensing probe (moisture control circuit boxes are not supplied by Baldor and must be purchased separately)
- Motor prices include 25 feet 4 conductor power cable and 25 feet 5 conductor control cable
- Carbon ceramic inner and outer seals.

THERMAL PROTECTORS

Prices for motors include two normally closed thermostats connected in series and embedded in adjoining phases. The thermostats are automatic reset for use in a normally closed circuit where the thermostat is connected in series with the holding coil of the magnetic switch. When excessive heat occurs, it causes the thermostat to open the circuit of the holding coil of the magnetic switch, stopping the motor. The thermostats do not protect motor from locked rotor conditions. Refer to Installation & Operation manual MN414, page 2-3, for additional information.

Use of thermostats is limited to control circuits in which the maximum current does not exceed the following values:

Volts	Amps	Inrush Amps
110-220	3.0	30.0
200-240	1.5	15.0
440-480	0.75	7.5
550-600	0.60	6.0

440TY Frames: Shaft loading (primary and secondary) must be supplied for Engineering review.

Orders will be accepted ONLY after Engineering approval.

DIMENSION SHEETS: (see pages 18-26)

180TY - 66930-17

210TY thru 320TY - 66930-18

360TY Frame - 66930-60

440TY Frame - 66930-122

180TY Frame, 140TY Mounting - 66930-20

210TY Frame, 180TY Mounting - 66930-20

250TY Frame, 210TY Mounting - 66930-28

320TY Frame, 250TY Mounting - 66930-28

360TY, 320TY Mounting - 66930-61, 66930-82

440TY, 360TY Mounting - 66930-130

MODIFICATIONS

Refer to page 10 for available modifications to submersible motors. In general most of these modifications apply.

MODIFICATION CENTER • QUICK MODIFICATION OR SHORT CYCLE DELIVERY

Modification Pricing Guide is to be used for all short cycle modification of stocked submersible products. Modification capabilities include: seals and cable length up to 100 feet. See page 16.

CONTINUOUS IN WATER/SEWAGE

THREE PHASE – NON-UL APPROVED, NON-EXPLOSION PROOF, TENV

HP	RPM	Frame Size	List Price (w/25' of cable) (4) (5)			Additional Cable (price per 5 ft.) (3)		
			200,230 volt	400, 460 volt	575 volt	200,230 volt	400, 460 volt	575 volt
1/2	1800	180TY	3,777	3,777	3,777	69	53	53
	1200	180TY	4,084	4,084	4,084	53	53	53
	900	180TY	3,693	3,693	3,693	53	53	53
3/4	1800	180TY	3,777	3,777	3,777	69	53	53
	1200	180TY	4,084	4,084	4,084	53	53	53
	900	180TY	3,693	3,693	3,693	53	53	53
1	1800	180TY	3,777	3,777	3,777	69	53	53
	1200	180TY	4,084	4,084	4,084	53	53	53
	900	180TY	3,693	3,693	3,693	53	53	53
1.5	3600(1)	180TY	3,710	3,710	3,710	69	53	53
	1800	180TY	3,881	3,881	3,881	69	53	53
	1200	180TY	4,130	4,130	4,130	53	53	53
	900	180TY	4,551	4,551	4,551	53	53	53
2	3600(1)	180TY	3,710	3,710	3,710	69	53	53
	1800	180TY	3,954	3,954	3,954	69	53	53
	1200	180TY	5,317	5,317	5,317	53	53	53
	900	180TY	4,551	4,551	4,551	53	53	53
3	3600(1)	180TY	3,710	3,710	3,710	69	53	53
	1800	180TY	3,996	3,996	3,996	69	53	53
	1200	180TY	4,061	4,061	4,061	53	53	53
	900	180TY	5,913	5,913	5,913	53	53	53
5	3600(1)	180TY	4,056	4,056	4,056	69	53	53
	1800	180TY	4,030	4,030	4,030	69	53	53
	1200	180TY	5,505	5,505	5,505	53	53	53
	900	210TY	6,797	6,797	6,797	128	128	53
7.5	3600(1)	180TY	5,488	5,488	5,488	69	53	53
	1800	180TY	5,214	5,214	5,214	69	53	53
	1200	210TY	6,081	6,081	6,081	128	53	53
	900	210TY	8,693	8,693	8,693	128	128	53
	720	250TY	-	9,943	9,943	-	129	53
10	3600(1)	210TY	5,878	5,878	5,878	169	69	70
	1800	210TY	5,620	5,620	5,620	169	69	70
	1200	210TY	7,437	7,437	7,437	128	53	53
	900	250TY	9,068	9,068	9,068	128	128	129
	720	250TY	-	11,797	11,797	-	129	129
15	3600(1)	210TY	7,562	7,562	7,562	169	69	70
	1800	210TY	7,199	7,199	7,199	169	69	70
	1200	250TY	9,825	9,825	9,825	218	128	129
	900	250TY	13,684	13,684	13,684	128	128	129
	720	320TY	-	17,259	17,259	-	272	272
20	3600(1)	210TY	8,528	8,528	8,528	169	69	70
	1800	210TY	7,934	7,934	7,934	169	69	70
	1200	250TY	10,835	10,835	10,835	218	128	129
	900	320TY	18,033	18,033	18,033	218	218	218
	720	320TY	-	22,273	22,273	-	272	272
25	3600(1)	250TY	11,153	11,153	11,153	262	169	169
	1800	250TY	10,137	10,137	10,137	262	169	169
	1200	250TY	14,056	14,056	14,056	218	128	128
	900	320TY	19,587	19,587	19,587	218	218	218
	720	320TY	-	23,587	23,587	-	272	272

Notes: (1) Refer to "3600 RPM DESIGNS" information on page 1
 ++ This rating is available in a 360TY frame for 1.0 service factor

THREE PHASE – NON-UL APPROVED, NON-EXPLOSION PROOF, TENV

HP	RPM	Frame Size	List Price (w/25' of cable) (4) (5)			Additional Cable (price per 5 ft.) (3)		
			200,230 volt	400, 460 volt	575 volt	200,230 volt	400, 460 volt	575 volt
30	3600(1)	250TY	12,583	12,583	12,583	262	169	169
	1800	250TY	10,950	10,950	10,950	262	169	169
	1200	320TY	16,072	16,072	16,072	617	218	218
	900	320TY	22,996	22,996	22,996	617	218	218
	720	320TY	-	28,876	28,876	-	272	272
40	3600(1)	250TY	15,564	15,564	15,564	262	169	169
	1800	250TY	14,825	14,825	14,825	262	169	169
	1200	320TY	20,252	20,252	20,252	615	218	218
	900	320TY	-	25,799	25,799	615	218	218
	720	360TY	-	35,384	35,384	-	1,145	1,145
50	1800	320TY	17,349	17,349	17,349	615	270	271
	1200	320TY	21,523	21,523	21,523	615	218	218
	900	360TY	-	34,442	34,442	-	531	531
	720	360TY	-	39,998	39,998	-	1,145	1,145
60	1800	320TY	-	22,190	22,190	-	270	218
	1200	320TY	-	28,550	28,550	-	218	153
	900	360TY	-	33,506	33,506	-	531	531
	720	L360TY	-	42,070	42,070	-	1,378	1,378
	600	440TY	-	96,246	96,246	-	1,378	1,378
75	1800	320TY	-	28,763	28,763	-	270	270
	1200	360TY	-	29,416	29,416	-	531	531
	900	360TY	-	37,009	37,009	-	531	531
	720	440TY	-	96,246	96,246	-	1,378	1,378
	600	440TY	-	101,058	101,058	-	1,378	1,378
100	1800	360TY	-	30,582	30,582	-	531	531
	1200	360TY	-	37,808	37,808	-	531	531
	900	360TY	-	48,995	48,995	-	531	531
	720	440TY	-	102,948	102,948	-	1,374	1,374
	600	440TY	-	108,095	108,095	-	1,378	1,378
125	1800	360TY	-	36,656	36,656	-	531	531
	1200	360TY	-	46,198	46,198	-	531	531
	900	360TY	-	56,350	56,350	-	1,378	1,378
	720	440TY	-	106,597	106,597	-	1,378	1,378
	600	440TY	-	118,599	118,599	-	1,378	1,378
150	1800	440TY++	-	98,881	98,881	-	1,152	1,152
	1200	440TY	-	102,793	102,793	-	1,152	1,152
	900	440TY	-	104,520	104,520	-	1,378	1,378
	720	440TY	-	109,592	109,592	-	1,378	1,378
	600	440TY	-	126,028	126,028	-	1,378	1,378
200	1800	440TY	-	102,188	102,188	-	1,152	1,152
	1200	440TY	-	107,296	107,296	-	1,152	1,152
	900	440TY	-	110,816	110,816	-	1,378	1,378
	720	440TY	-	116,518	116,518	-	1,378	1,378
250	1800	440TY	-	107,296	107,296	-	1,152	1,152
	1200	440TY	-	112,661	112,661	-	1,152	1,152
	900	440TY	-	117,756	117,756	-	1,378	1,378
	720	440TY	-	125,277	125,277	-	1,378	1,378
300	1800	440TY	-	112,663	112,663	-	1,152	1,152
	1200	440TY	-	118,294	118,294	-	1,152	1,152
	900	440TY	-	134,492	134,492	-	1,378	1,378
350	1800	440TY	-	114,363	114,363	-	1,152	1,152
	1200	440TY	-	125,053	125,053	-	1,152	1,152
	900	440TY	-	142,559	142,559	-	1,378	1,378
400	1800	440TY	-	128,310	128,310	-	1,152	1,152
	1200	440TY	-	136,842	136,842	-	1,152	1,152
450	1800	440TY	-	151,610	151,610	-	1,152	1,152

Notes: (1) Refer to "3600 RPM DESIGNS" information on page 1
 ++ This rating is available in a 360TY frame for 1.0 service factor

SUBMERSIBLE MOTORS MODIFICATIONS

AMBIENT TEMPERATURE SPECIAL

The standard submersible product is limited to operation within an ambient temperature range of 10° C to 40° C.

Operation in ambient temperatures of -25° C to +10° C and 40° C to 90° C may be accomplished by modifying seals, grease, insulation system, etc. used on the standard product. Ambient temperatures in these ranges require review by Baldor.

Operation in ambient temperatures below -25° C or above 65° C is not permitted for UL listed submersibles. Standard motor ratings having a 1.15 SF in a 40° C ambient will operate satisfactory in a maximum ambient of 60° C at 1.0 SF.

LIST PRICE ADDITIONS

Temperature	180TY	210TY	250TY	320TY	360TY	440TY
-25 C to +10 C	1,436	1,641	1,846	2,693	3,540	4,634
+65 C to +90 C (1)	1,026	1,054	1,148	1,327	1,435	1,641

(1) This must be a non explosion proof design UNLESS the motor is equipped with a water jacket for cooling. XP available 320TY to 440TY frames only. Use the submersible configurator for pricing and contact your Sales Team with questions.

This modification requires the addition of H insulation, viton seals and O rings.

For ratings 1-50 hp, use the next higher HP frame size and base pricing.

Above 50 hp, contact Baldor for frame size and base pricing.

For continuous in air applications, contact Baldor.

CONNECTIONS/CABLE CAPS

Submersible motors are built with three power leads for single voltage connection only to power supply or control panel. External motor connections to power supply or control panel which require additional leads, such as dual voltage, part winding starting, etc. are not available on the standard product line. However, these options are available on a custom order. Please contact Baldor.

Stock submersible motors include 25 feet of cable. Cable caps are also stocked in selected wire sizes with 50 feet of cable. These cable caps are stocked to provide the OEM with the capability to offer motors with longer lead lengths in a short period of time.

Frame	AWG	Length (feet)	Kit number	List price
140	14	50	K99G100	1,882
180	10	50	K99G102	2,331
180	12	50	K99G101	2,106
210/250	6	50	K99G103	4,990
210/250	8	50	K99G104	3,757
320/360	4	50	K99G105	5,411
320/360	2	50	K99G106	7,486

DOCUMENTATION

When specified with the motor order, the following documentation (software) is available for the net price addition for each item from the table below. All data submittals include standard data transmittal and certification sheet - Item #1 below - in standard format. When data is required for Customer Approval add \$66 NET each motor rating.

Motor Software Net Price Table

Description	For Each Motor Rating			
	Initial Copy		Additional Copies	
	Qty	Net \$	Min. Qty	NET\$/ Min Qty
Standard data transmittal and certification sheet	1	N/C	5	\$16
Standard tabulated outline dimension sheet	1	N/C	5	16
Standard wiring/connection diagram	1	N/C	5	16
Standard installation, operation and Maintenance bulletins	1	N/C	5	16
Standard renewal parts bulletins for Standard construction	1	N/C	5	16
Standard performance data - apply addition for each specific voltage condition	1	\$37	1	7
Standard performance curves - speed vs. torque, amps; horsepower vs. power factor, efficiency, amps, speed - apply addition for each specific voltage condition	1	215	1	7
Acceleration Time vs. Current curves - apply addition for each specific voltage condition	1	181	1	7
Acceleration Time vs. Speed curves - apply addition for each specific voltage condition	1	181	1	7
Thermal Limit Curves	1	181	1	7
Completion of customer performance tabular data sheets - using typical performance data only	1	72	N/A	N/A
Special tagging or special marks on software not a part of Baldor Reliance's standard format will be charged on a per sheet basis	1	72	N/A	N/A
Certification of compliance - a copy of the original customer purchase order must accompany order	1	58	1	7
Certified Shaft Material Test Report	1	1492	N/A	N/A
UL certificate	1	658	N/A	N/A

A calculated analysis report is available for the following items.

NEMA Frame	180 - 210	250 - 280	320 - 360	400 - 440	447 - 449
Reed Frequency Analysis	181 net	181 net	239 net	299 net	360 net
Torsional Analysis	172 net	172 net	230 net	286 net	344 net

The data available is provided as quality black print on white paper, suitable for reproduction. AS AN ALTERNATIVE to paper copies, any engineering data, curve and drawing can be supplied in electronic format (.tif or.pdf file only) via e-mail – specify e-mail address on order write-up. If both formats are required, ADD \$37 NET plus the appropriate “ADDITIONAL COPIES” adder from table above.

If less than standard production run, add BASIC SET-UP CHARGE.

EXPORT PACKAGING AND BOXING

- European Standard Pallet: Euro pallet
- Air Freight Crate: An open slatted wood crate. Same as Hog Crate
- Hog Crate: An open slatted wood crate. Same as Air Freight Crate.
- Export Boxing: Totally enclosed shipping crate.

NEMA Frame	European Standard Pallet List Addition	Air Freight Crate (same as Hog Crate) List Addition	Export Boxing List Addition
180-280	\$192	\$580	\$725
320-360	319	811	1082
400-440	382	1010	1443

Data or prices subject to change without notice

FLANGES

ONE SIZE SMALLER THAN STANDARD

Flanges one size smaller can be provided on all frames at no charge on production motors. For 360TY with (1) smaller flange and shaft, specify 8 hole or 16 hole flange. See pages 18-26 for dimension sheets. Special customer mounting plates may be provided. Contact Baldor for more information.

FREQUENCY

Single- and three-phase submersible motors may be built 50 Hz or 60 Hz – other frequencies not available. 50 Hz operation of standard stock three-phase 60 Hz motors may be accomplished by using the following guidelines:

1. Motors rated 60 Hz, 230/460 volts may be operated at 50 Hz, 190/380 volts, and 60 Hz, 575 volt motors may be operated at 50 Hz, 475 volts. If other 50 Hz voltages are required, contact Baldor for application review, availability and pricing.
2. 60 Hz horsepower is multiplied by 8 to obtain equivalent 50 Hz horsepower. Speed at 50 Hz will be 5/6 of original 60 Hz speed.
3. Pricing is per table below.

Three-phase 50 Hz motors with standard service factor are available through production by pricing per table below. 50 Hz frame size may differ from 60 Hz ratings of the same horsepower and number of poles – contact Baldor for frame size confirmation.

List price adders below are to be made to basic list price of 60 Hz motor of same HP and number of poles and with similar voltage ratings as the 50 Hz requirements.

LIST PRICE ADDITIONS

No. of Poles	50 Hz Motors with Standard Service Factor
2	20%
4	20%
6	20%
8	28%

INSULATION

LIST PRICE ADDER

- Class "H" 185°C Add 25%
- Standard VPI Add 28%
- VPI Suitable for IEEE429 Add 32%

NOTE: Percent adder is to be applied to motor Base List price.

INVERTER DUTY

UL & CSA Approved, Class 1 Group D, T2A Temperature Code, PWM, WI, CSI: 6:60 Hz Variable Torque for standard submersibles. Contact Baldor for Continuous-In-Air inverter Duty

OIL - FDA APPROVED

Add \$412 List

PAINT (exterior motor protection)

Paint	180TY	210TY	250TY	320TY	360TY	440TY
2 Coats Epoxy Paint	1,777	1,777	1,777	1,777	1,777	1,777
Coal Tar Epoxy Paint *	3,275	3,275	3,638	4,975	4,975	6,183
Coal Tar Epoxy Paint (2 coats) **	4,912	4,912	5,458	7,462	7,462	9,274
Custom	13,726	13,726	13,726	13,726	13,726	13,726

* Add 5 days to lead time

** Add 9 days to lead time

Data or prices subject to change without notice

SEALS AND O-RINGS – SPECIAL**SEALS**

Standard submersible motors feature inner and outer seals with carbon rotating faces, ceramic stationary faces and BUNA-N elastomers.

To provide solid tungsten carbide seals (both rotating and stationary faces) and/or VITON seal elastomers, make the LIST price addition(s) from the following table.

Note: Viton elastomers are recommended for ambients of 61° C and higher.

LIST PRICE ADDITIONS

Seal	Frame	180	210	250	320	360	440
Tungsten Carbide	Inner seal	1,545	1,851	2,846	3,299	3,993	11,456
	Outer Seal	1,315	1,487	1,599	2,905	3,299	6,798
Silicon Carbide	Inner seal	3,088	3,700	5,689	6,596	7,693	21,665
	Outer Seal	2,651	3,416	3,673	5,416	6,824	13,364
Viton Elastomers	Inner seal	823	864	1,037	1,113	1,668	2,026
	Outer Seal	777	823	845	1,094	1,113	1,766

SEALS – HYDROPAD

This special design seal runs much cooler than the standard design seal and will provide longer life in a dry-run condition. However, it is recommended to run the seal in a wet condition. Make the LIST price addition from the table below. Price includes Viton Elastomers and O-rings on both seal and the special hydropad seal. Available for motors with base speeds of 1800 RPM or less.

LIST PRICE ADDITIONS

Seal	180	210	250	320	360
Hydropad	5,302	5,924	6,761	8,277	10,328

SEAL - SLURRY APPLICATIONS

The slurry seal is specially designed (back to back) to handle tough slurry type applications while providing extended seal life. The seal is not exposed to the effluent. This slurry seal is a non-explosion proof design with maximum allowable seal pressure of 15 psi.

Contact Baldor for availability and pricing if not listed below.

LIST PRICE ADDITIONS

Seal	210	250	320	360
Slurry	5,924	6,761	8,277	10,328

O-RINGS

Standard submersible motors feature BUNA-N O-rings.

To provide VITON O-rings, make the LIST price addition from the following table.

Note: VITON O-rings are recommended for ambients of 61°C and higher

LIST PRICE ADDITIONS

Frame	180	210	250	320	360	440
VITON O-Rings	777	823	926	1,176	1,345	2,429

SHAFTS

CUSTOMER SPECIAL SHAFT EXTENSION

Frame	180	210	250	320	360	440
List Price adder	3,703	3,921	4,140	4,550	4,754	5,164

Note: Requires approval prior to order entry.

Standard shaft material is 416 Stainless Steel.

SPECIAL SHAFT MATERIAL – LIST PRICE ADDER

	180	210	250	320	360	440
316 SS	575	803	1,068	1,828	2,600	3,245
17-4PH	575	803	1,068	1,828	2,600	3,245
Nitronic 50*	3,038	3,482	5,074	11,207	12,033	15,039
Alloy 20*	3,038	3,482	5,074	11,207	12,033	15,039

*Add 5 days to lead time.

TEMPERATURE DETECTORS

Submersible are supplied with quantity (2) normally closed thermostats.

OPTIONS: LIST PRICE ADDITIONS

Frame	210	250	320	360	440
Tthermistors (3 total) Power Control	1,405	1,405	1,825	1,825	1,825
Thermistors (3 total) Siemens	1,405	1,405	1,825	1,825	1,825
Thermistors (6 total) Power Control	2,809	2,809	3,650	3,650	3,650
Thermistors (6 total) Siemens	2,809	2,809	3,650	3,650	3,650
Winding RTD's (6, 2 per phase)	6,011	6,011	6,011	6,011	6,011

TESTS

Routine Motor Test

This is a test reported per IEEE Std. 112 – 2004 Annex B. All data will be taken on a cold motor. Test includes:

- No load current
- No load speed
- Winding Resistance
- Locked rotor current (Single Phase locked rotor test)
- High-Potential

No Load Vibration Data may be added to this test report. ADD \$50 Net per motor.

Tests may also be performed as a witnessed test. Test schedule must be coordinated with the Baldor corporate office.

NEMA Frame	Net Price per Motor	
	Routine Test and Report	Witnessed Routine Test & report
42 – 215	\$238	\$4,513
250 – 440	437	7,278

3 phase Locked Rotor Test

This selection provides an actual 3 Phase Locked Rotor test to be performed on motor instead of the standard single phase locked rotor test which is normally performed with a Routine Test.

NEMA Frame	Net Price per Motor	
	non-Witnessed	Witnessed
140-440	\$598	\$1,373

Calibration Test

This test consists of 0 to 125% rated load test measurement of speed, torque, current, power factor and efficiency at rated voltage. The data is provided as a curve plotted on Baldor-Reliance standard format. Tests may also be performed as a witnessed test. Test schedule must be coordinated with the Baldor corporate office.

NEMA Frame	NET Price per Motor	
	Calibration Test	Witnessed Calibration Test
140 – 210	\$896	\$3,132
250 – 320	1,194	3,580
360 - 440	3,283	5,069

Data or prices subject to change without notice

TESTS (continued)

Polarization Index Test

This is the recommended procedure for the measurement of insulation resistance of rotating machinery rated 1 HP (1 KW) or greater. Testing is done per IEEE #43, latest revision. Polarization Index is the ratio of a 10 min. resistance to the 1 min. resistance with constant test potential applied.

For single speed motors tested at rated voltage add the applicable NET Price Adder from the Table #1. For Multiple speeds or for tests at other than rated voltage, determine the test total NET Price Adder by applying the percentage multiplier from Table #2 to the NET Price adder from Table #1.

TABLE #1 - List Price Additions Per Frame Size

NEMA Frame	NET Price per Motor	
	non-Witnessed	Witnessed
140 – 210	\$517	1314
250 – 360	\$628	1433
440	\$734	1492

TABLE #2 - Percentage For Multispeed/Voltage

Number Of Speeds/ Voltage Conditions Tested	Percentage multiplier applied to NET Adders From Table #1
1	100%
2	150%
3	200%
4	250%

VOLTAGE

The table below shows voltages considered standard for three-phase submersible motors. Standard voltages for single-phase submersibles are 115 and 230 volts at 60 Hz.

Standard-voltage motors will operate successfully, but not necessarily in accordance with standard guarantees, at voltages 10 percent above or below nameplate stamping at maintained frequency, or provided the sum of variation does not exceed 10 percent with a frequency variation of not more than 5 percent.

For special three-phase voltages in the range of 200-600 volts for 180TY-250TY frames and in the range of 400-600 volts for 320TY-360TY frames, make the list price addition from the table below. (Maximum voltage rating available on submersible motors is 600 volts.)

For special single-phase voltages, contact Baldor for availability and pricing.

STANDARD VOLTAGES

60 Hz		50 Hz	
180TY - 250TY Frames	320TY - 360TY Frames	180TY - 250TY Frames	320TY - 360TY Frames
200	–	–	–
230	–	207	–
400	436	–	–
460	502	414	414
575	627	–	–

LIST PRICE ADDITIONS (Three-Phase only)

180	210	250	320	360	440
353	494	689	957	1417	2389

WATER JACKETS - 304 STAINLESS STEEL

Water jackets are available for 320TY to 440TY frames only. When required by application clean water must be supplied for cooling with 40°C maximum temperature and 10 gal./min. flow rate.

Quantity	320TY	360TY	440TY
1 - 4	23,899	30,184	31,694
5 - 9	20389	29087	30542
10 and up	19064	27169	28527

Y-START DELTA RUN

LIST PRICE ADDER

- 180TY-210TY add 25% to base motor price
- 250TY-440TY add 30% to base motor price

TANDEM SEAL SUBMERSIBLE MOTORS**50 HZ RATINGS (FOR REFERENCE ONLY), TENV**

HP	RPM	Voltage	Frame
1	1500	3/50/380	140TY
	1000	3/50/380	140TY
1.5	1500	3/50/380	140TY
	1000	3/50/380	140TY
2	1500	3/50/380	140TY
	1000	3/50/380	180TY
3	1500	3/50/380	180TY
	1000	3/50/380	180TY
5	1500	3/50/380	180TY
	1000	3/50/380	210TY
7.5	1500	3/50/380	180TY
	1000	3/50/380	210TY
10	1500	3/50/380	210TY
	1000	3/50/380	250TY
15	1500	3/50/380	210TY
	1000	3/50/380	250TY
20	1500	3/50/380	250TY
	1000	3/50/380	250TY
25	1500	3/50/380	250TY
	1000	3/50/380	320TY
30	1500	3/50/380	250TY
	1000	3/50/380	320TY
40	1500	3/50/380	320TY
	1000	3/50/380	320TY
50	1500	3/50/380	320TY
	1000	3/50/380	320TY
60	1500	3/50/380	320TY
	1000	3/50/380	320TY
75	1500	3/50/380	360TY
	1000	3/50/380	360TY
100	1500	3/50/380	360TY
	1000	3/50/380	360TY

Note: Please note frame sizes of 50 Hz ratings.

SUBMERSIBLE MOTORS**QUICK MOD – MODIFICATION PRICES
MODIFICATIONS AVAILABLE**

Tungsten carbide inner seal	seal list price plus \$285 net
Tungsten carbide outer seal	seal list price plus \$285 net
Cable lengths to 100 feet	cable adder plus \$205 net

**Quick Mods apply to these model numbers only.
In submersible configurator, choose "Quick Mod" to quote.**

Base UL Model Number

P18G2701, P18G2702, P18G2703, P18G2704, P18G2784, P18G2787, P18G2791, P18G2794, P21G2701,
P21G2702, P21G2704, P21G2737, P25G2702, P25G2704, P25G2706, P32G2701

SUBMERSIBLE STOCK LIST - 15 MINUTES IN AIR

UL APPROVED DIVISION 1, CLASS 1, GROUPS C & D, T3C TEMPERATURE CODE

Hp	RPM	NEMA Frame	Catalog Number	List Price	Mult. Sym.	C Dim.	Aprx. Wgt. (lb)	Full Load Efficiency	Full Load Amps	Final Connect Voltage	Notes
Single Phase											
1	1800	180*	C18G2730	5,001	S1	25.99	245	55	8.1	230	R
	1200	180*	C18G2700	5,233	S1	25.99	245	55.6	8.6	230	R
1.5	1800	180*	C18G2731	5,001	S1	25.99	226	62.5	10.6	230	R
	1200	180*	C18G2701	5,984	S1	25.99	250	57	12.5	230	R
2	1800	180*	C18G2702	5,544	S1	25.99	234	59.2	14	230	R
3	1800	180*	C18G2703	6,932	S1	25.99	253	57	20	230	R
	1800	180*	C18G2704	6,932	S1	25.99	245	59.2	20	230	R
	1200	210*	C21G2701	8,497	S1	32.41	350	65.6	21	230	R
5	1800	210*	C21G2702	9,230	S1	32.41	352	69	30	230	C
Three Phase											
1	1800	180TY*	P18G2784	4,457	S1	26.66	204	63.5	3.4	230	R
1.5	1800	180TY*	P18G2787	4,565	S1	26.66	205	70.5	4.6	230	R
2	1800	180TY*	P18G2791	4,651	S1	26.66	226	73.5	5.8	230	R
	1800	180TY*	P18G2792	4,651	S1	26.66	228	73.5	6.67	200	R
3	1800	180TY*	P18G2794	4,701	S1	26.66	240	78.1	8.8	230	R
	1200	180TY	P18G2707	4,777	S1	26.66	241	78	10.4	230	R
5	1800	180TY	P18G2701	4,457	S1	26.66	235	80.2	14	230	R
	1800	180TY	P18G2702	4,457	S1	26.66	225	80.2	7	460	R
	1800	180TY	P18G2739	4,457	S1	26.66	225	80.2	16.1	200	R
	1200	180TY	P18G2709	6,475	S1	26.66	221	80.9	16	230	R
	900	210TY	P21G2747	7,997	S1	31.69	335	82.6	8.3	460	C
7.5	1800	180TY	P18G2703	6,133	S1	26.66	249	82.7	20.2	230	R
	1800	180TY	P18G2704	6,133	S1	26.66	246	82.7	10.0	460	R
	1200	210TY	P21G2705	7,154	S1	31.69	350	81.7	22.6	230	R
10	1800	210TY	P21G2701	6,610	S1	31.69	267	85.6	26	230	R
	1800	210TY	P21G2702	6,610	S1	31.69	376	85.6	13	460	R
	1200	210TY	P21G2707	8,748	S1	31.69	381	83.8	28.8	460	R
15	1800	210TY	P21G2703	8,468	S1	31.69	372	85.4	40.2	460	R
	1800	210TY	P21G2704	8,468	S1	31.69	374	85.4	20.1	460	R
	1200	250TY	P25G2707	11,556	S1	38.53	472	86.5	20.3	460	R
20	1800	210TY*	P21G2737	9,333	S1	31.69	371	86.6	26.2	460	R
	1800	210TY	P21G2758	9,834	S1	31.69	407	86.6	26.2	460	R
	1200	250TY	P25G2710	12,743	S1	38.53	565	86.7	27.4	460	R
25	1800	250TY	P25G2702	11,924	S1	38.53	495	88.5	32.1	460	C
	1800	250TY*	P25G2747	11,924	S1	37.06	506	88.5	32.1	460	R
	1200	250TY	P25G2712	16,534	S1	38.53	496	86.7	35.2	460	R
30	1800	250TY	P25G2704	12,880	S1	38.53	511	88.7	39.9	460	R
	1200	320TY	P32G2700	19,841	S1	43.12	1150	89.7	40.7	460	C
40	1800	250TY	P25G2706	17,438	S1	38.53	550	89	51.7	460	C
50	1800	320TY	P32G2701	20,407	S1	43.12	875	91.1	64.3	460	C
	1800	320TY*	P32G2724	20,407	S1	43.12	1100	91.1	64.3	460	C
	1200	320TY	P32G2702	20,407	S1	43.12	877	90.5	65	460	C
60	1800	320TY	P32G2706	26,100	S1	43.12	1014	92	74.9	460	C
75	1800	320TY	P32G2703	33,838	S1	43.12	1150	92.6	91.3	460	C
	1200	360TY	P36G2700	34,600	S1	49.81	1500	92.3	90.9	460	C
100	1800	360TY	P36G2701	35,979	S1	49.81	1500	93.7	116	460	C
	1200	360TY	P36G2702	44,471	S1	49.81	1500	91.2	122	460	C

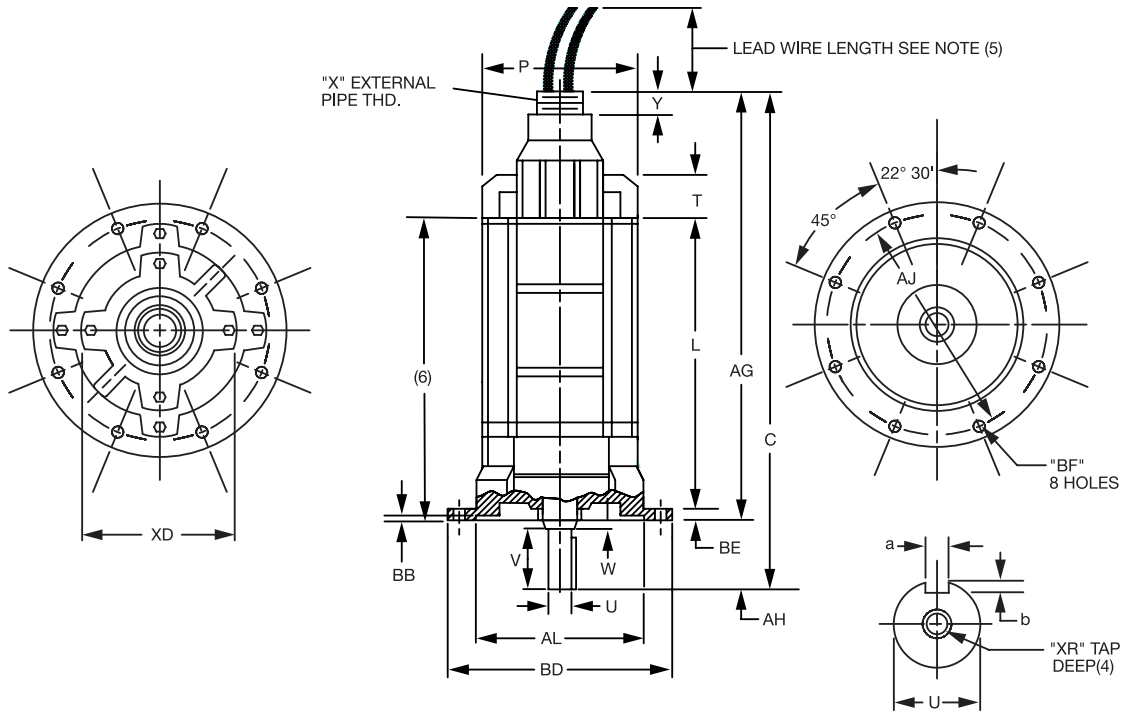
UL APPROVED DIVISION 1, CLASS 1, GROUPS C & D, T3C TEMPERATURE CODE

Hp	RPM	NEMA Frame	Catalog Number	List Price	Mult. Sym.	C Dim.	Aprx. Wgt. (lb)	Full Load Efficiency	Full Load Amps	Final Connect Voltage	Notes
7.5	1800	210TY	P21G2750	4,683	S1	31.69	346	82.8	10.4	230	R
	1800	210TY	P21G2754	4,683	S1	31.69	335	82.8	10.4	460	R
10	1800	210TY	P21G2755	5,620	S1	31.69	362	85.6	13	230	R
	1800	210TY	P21G2756	5,620	S1	31.69	371	85.6	13	460	R
15	1800	210TY	P21G2752	7,079	S1	31.69	373	85.4	20.1	230	R
	1800	210TY	P21G2757	7,079	S1	31.69	388	85.4	20.1	460	R

Notes: * One size smaller flange and shaft
 C = Single voltage motor.
 R = 115/230 volt Single Phase motor or 230/460 volt Three Phase motor connected for voltage show. Can be reconnected for other voltage.

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION
ENCLOSURE: TOTALLY ENCLOSED
SUBMERSIBLE
FRAME 140TY THRU 180TY



DIMENSIONS ARE IN INCHES SEE SHEET 2 FOR MILLIMETERS

FRAME	C	L	P	T	U(3)	V	W	AG	AH	AJ	AL(7)
140TY	25.44	15.38	8.00	2.25	.8750	1.25	.31	23.88	1.59	10.00	9.125
180TY	26.66	16.50	9.62	2.25	1.2500	2.00	.28	24.38	2.28	11.50	10.625

(1)

FRAME	BD(2)	BE	BF	XR(4)	LEAD CONNECTION			BB	KEYWAY		WEIGHT
					X	Y	XD		a	b	
140TY	11.062	.75	.44	3/8-16	2-1/2-8	1.25	5.50	.12	.187	.09	160
180TY	12.375	.75	.56	1/2-13	2-1/2-8	1.25	6.75	.12	.250	.12	200

(1)

(1) SPECIAL DIMENSIONS ON THIS LINE.

(2) "BD" VARIES ± .010.

(3) "U" VARIES + .0000. -.0005.

(4) TAP DEPTH ON 140TY IS .88; 180TY IS 1.38

(5) LEAD WIRE LENGTH AS SPECIFIED ON CERTIFICATION

(6) MINIMUM SUBMERGED DEPTH.

(7) "AL" VARIES +.004, -.000.

FACE RUNOUT AND ECCENTRICITY .008 MAX. T.I.R.
PROTECTIVE CONDUIT FURNISHED BY CUSTOMER.

FRAME- _____ TYPE- _____ CERTIFIED FOR- _____

ORDER- _____ ITEM- _____ HP- _____ RPM- _____ PH- _____ HZ- _____ VOLTS _____

RELIANCE SALES ORDER- _____ APPROVED BY- _____ DATE _____

DR. BY N.J.H.
CK. BY W.R.T.
APP. BY D.C.Y.
DATE 8-21-68

DIMENSION SHEET
SHEET 1 OF 2

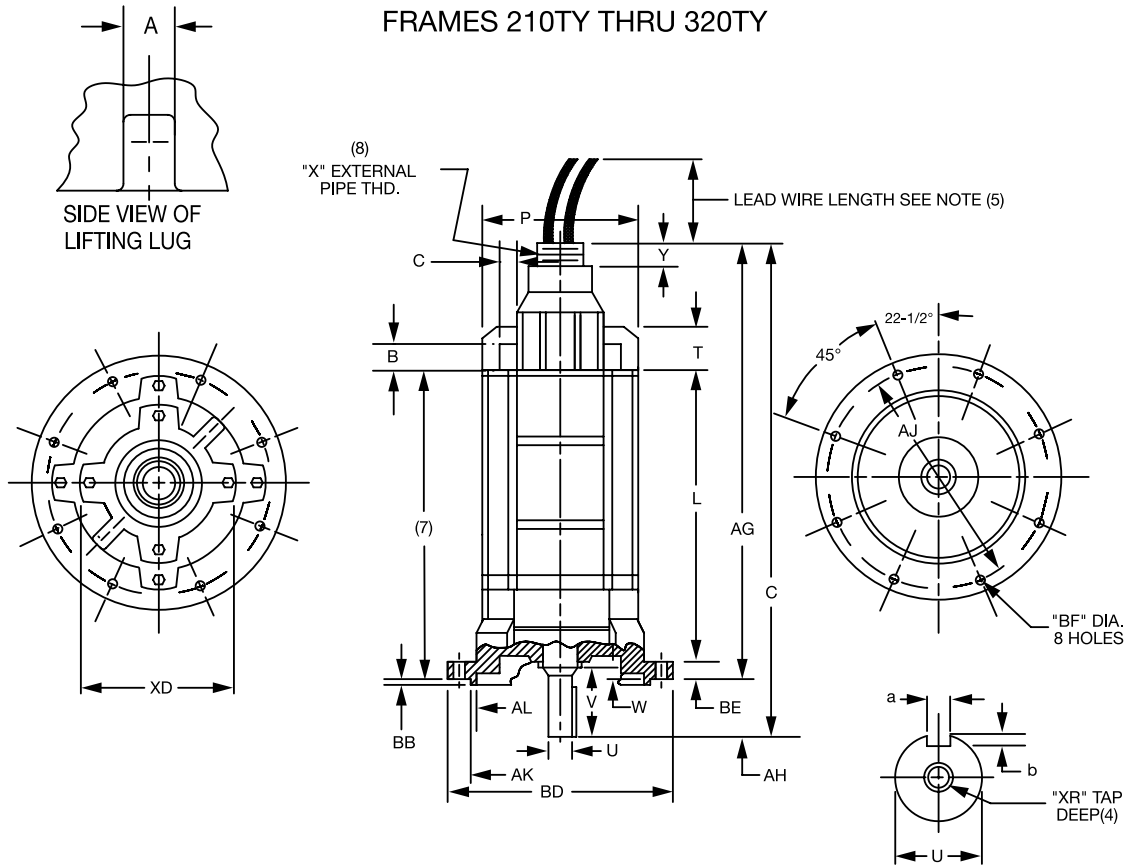
66930-17

ISSUE DATE: MARCH 16, 2000

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION
ENCLOSURE: TOTALLY ENCLOSED
SUBMERSIBLE

FRAMES 210TY THRU 320TY



DIMENSIONS ARE IN INCHES. SEE SHEET 2 FOR MILLIMETERS.

FRAME	C	L	P	T	U (3)	V	W	AG	AH	AJ	AK (6)	AL	LIFTING LUG DIMENSIONS		
													A	B	C
210TY	31.69	21.12	11.50	2.25	1.4380	2.00	.25	30.12	1.56	14.12	13.125	12.00	.88	1.50	1.75
250TY	38.53	24.12	12.75	3.50	1.750	3.31	.25	35.50	3.03	16.00	15.000	14.00	.75	2.25	2.12
320TY	43.12	24.69	15.75	4.25	2.500	3.19	2.12	37.81	5.31	17.25	16.000	15.25	1.25	2.25	1.50
(1)															

FRAME	BD(2)	BE	BF	XR(4)	LEAD CONNECTION			BB	B.E. KEYWAY			WEIGHT
					X (8)	Y	XD		a	b	LENGTH	
210TY	15.250	.75	.56	5/8-11	2-1/2-8	1.25	7.75	.25	.375	.19	1.12	315
250TY	17.000	.88	.69	5/8-11	2-1/2-8	1.25	7.75	.25	.375	.19	2.25	750
320TY	18.750	.88	.69	3/4-10	3-8	1.25	10.88	.25	.500	.25	3.00	1150
(1)												

- (1) SPECIAL DIMENSIONS ON THIS LINE.
- (2) "BD" VARIES ± .010.
- (3) "U" VARIES $\left[\begin{array}{l} \text{UP TO 1.625 DIA. +.0000, } -.0005 \\ \text{1.625 DIA. AND LARGER +.000, } -.001. \end{array} \right.$
- (4) TAP DEPTH ON 210TY THRU 250TY IS 1.38"
TAP DEPTH ON 320TY IS 1.50"
- (5) LEAD WIRE LENGTH AS SPECIFIED ON CERTIFICATION
- (6) "AK" VARIES +.000, -.002
- (7) MINIMUM SUBMERGED DEPTH.
FACE RUNOUT AND ECCENTRICITY .008 MAX. T.I.R.
PROTECTIVE CONDUIT FURNISHED BY CUSTOMER.
- (8) 3" - 8 PIPE THREAD SUPPLIED WITH CABLE
SIZES NO. 4 AND LARGER.

FRAME- _____ TYPE- _____ CERTIFIED FOR- _____
 ORDER- _____ ITEM- _____ HP- _____ RPM- _____ PH- _____ HZ- _____ VOLTS _____
 RELIANCE SALES ORDER- _____ APPROVED BY- _____ DATE _____

DR. BY N.J.HASSETT
 CK. BY W.B.TERSIGNI
 APP. BY P.DELVECCHIO
 DATE 8-21-68

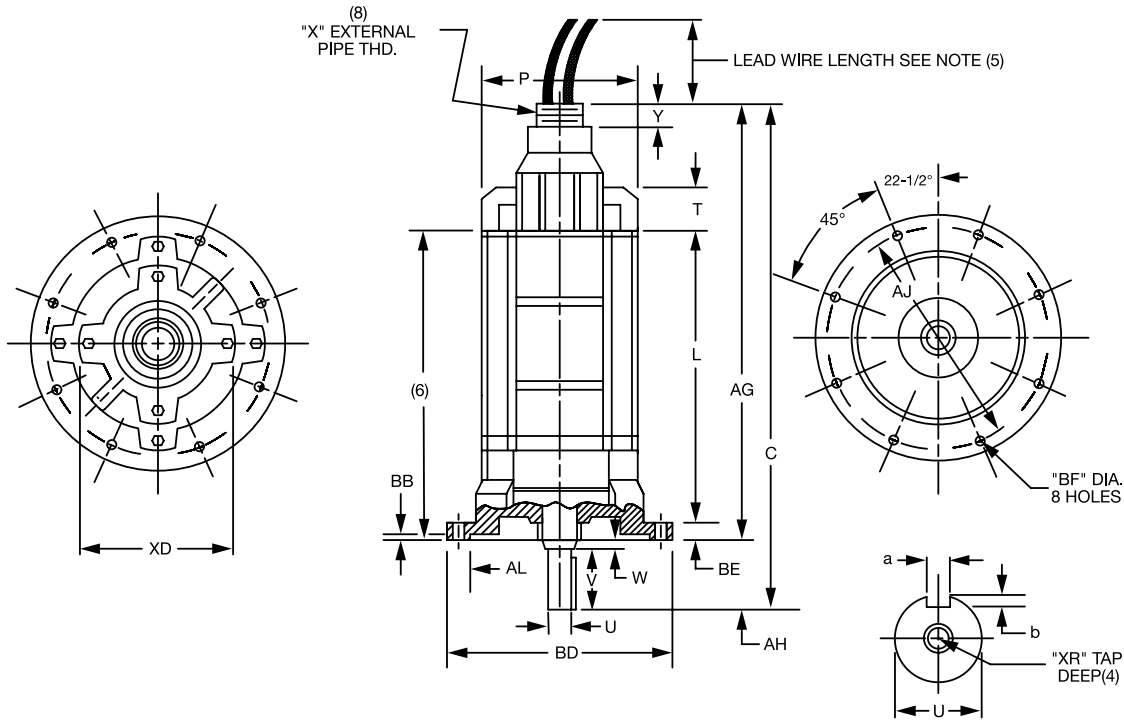
DIMENSION SHEET
SH1 OF 2

66930-18

ISSUE DATE SEPTEMBER 4, 1996

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION
 ENCLOSURE: TOTALLY ENCLOSED
 SUBMERSIBLE
 ONE SIZE SMALLER FLANGE AND SHAFT
 FRAMES 180TY THRU 210TY



DIMENSIONS ARE IN INCHES.

FRAME	C	L	P	T	U(3)	V	W	AG	AH	AJ	AL(7)
180TY	25.94	16.50	9.62	2.25	.8750	1.25	.31	24.38	1.56	10.00	9.125
210TY	32.41	21.12	11.50	2.25	1.2500	2.00	.28	30.12	2.28	11.50	10.625
(1)											

FRAME	BD(2)	BE	BF	XR(4)	LEAD CONNECTION			BB	B.E. KEYWAY			WEIGHT
					X	Y	XD		a	b	LENGTH	
180TY	11.062	.75	.44	3/8-16	2-1/2-8	1.25	6.75	.12	.187	.09	1.12	200
210TY	12.375	.75	.56	1/2-13	2-1/2-8	1.25	7.75	.12	.250	.12	1.12	315
(1)												

(1) SPECIAL DIMENSIONS ON THIS LINE.

(2) "BD" VARIES $\pm .010\phi$

(3) "U" VARIES $\pm .0000, - .0005$

(4) TAP DEPTH ON 180TY THRU 210TY IS 1.38

(5) LEAD WIRE LENGTH AS SPECIFIED ON CERTIFICATION

(6) MINIMUM SUBMERGED DEPTH.

(7) "AL" VARIES $\pm .004, - .000$

FACE RUNOUT AND ECCENTRICITY $\pm .008$ MAX. T.I.R. PROTECTIVE CONDUIT FURNISHED BY CUSTOMER.

(8) 3" - 8 PIPE THREAD SUPPLIED WITH CABLE SIZES NO. 4 AND LARGER.

FRAME- _____ TYPE- _____ CERTIFIED FOR- _____

ORDER- _____ ITEM- _____ HP- _____ RPM- _____ PH- _____ HZ- _____ VOLTS _____

RELIANCE SALES ORDER- _____ APPROVED BY- _____ DATE _____

DR. BY R.L.B.
 CK. BY H.B.T.
 APP. BY D.C.Y.
 DATE 4-16-69

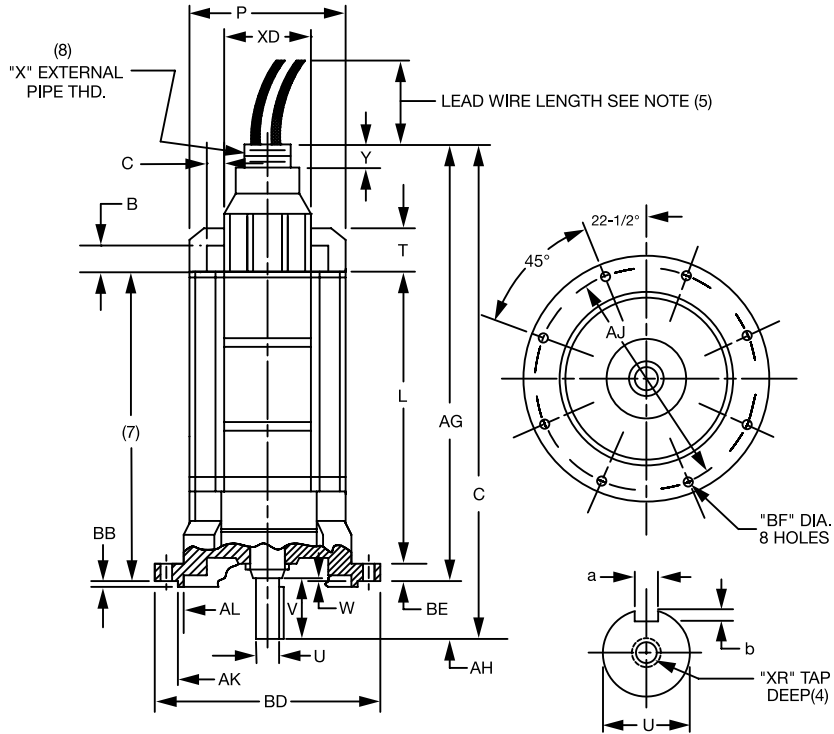
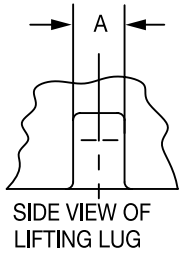
DIMENSION SHEET

66930-20

ISSUE DATE: MAY 14, 1997

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION
ENCLOSURE: TOTALLY ENCLOSED
SUBMERSIBLE
ONE SIZE SMALLER FLANGE AND SHAFT
FRAMES 250TY THRU 320TY



DIMENSIONS ARE IN INCHES; SEE SHEET 2 FOR DIMENSIONS IN MILLIMETERS

FRAME	C	L	P	T	U(3)	V	W	AG	AH	AJ	AK (6)	AL	LIFTING LUG DIMENSIONS		
													A	B	C
250TY	37.06	24.12	12.75	3.50	1.438	2.00	.25	35.50	1.56	14.12	13.125	12.00	.75	2.25	2.12
320TY	42.50	26.31	16.00	4.25	1.750	3.31	.25	39.25	3.03	16.00	15.000	14.25	1.25	2.25	1.50
(1)															

FRAME	BD(2)	BE	BF	XR(4)	LEAD CONNECTION			BB	B.E. KEYWAY			WEIGHT
					X (8)	Y	XD		a	b	LENGTH	
250TY	15.25	1.00	.56	5/8-11	2-1/2-8	1.25	7.75	.25	.375	.19	1.12	750
320TY	17.00	.88	.69	5/8-11	3"-8	1.25	10.88	.25	.375	.19	3.00	1150
(1)												

- (1) SPECIAL DIMENSIONS ON THIS LINE.
- (2) "BD" VARIES ± .010
- (3) "U" VARIES UP TO 1.625 DIA. +.0000, -.0005
1.625 DIA. AND LARGER +.000, -.001
- (4) TAP DEPTH ON 250TY IS 1.38"
TAP DEPTH ON 320TY IS 1.50"
- (5) LEAD WIRE LENGTH AS SPECIFIED ON CERTIFICATION
- (6) "AK" VARIES +.000, -.002
- (7) MINIMUM SUBMERGED DEPTH.
FACE RUNOUT AND ECCENTRICITY .008 MAX. T.I.R.
PROTECTIVE CONDUIT FURNISHED BY CUSTOMER.
- (8) 3" - 8 PIPE THREAD SUPPLIED WITH CABLE
SIZES NO. 4 AND LARGER.

FRAME- _____ TYPE- _____ CERTIFIED FOR- _____
 ORDER- _____ ITEM- _____ HP- _____ RPM- _____ PH- _____ HZ- _____ VOLTS _____
 RELIANCE SALES ORDER- _____ APPROVED BY- _____ DATE _____

DR. BY E.S.UGHRIN
 CK. BY J.L.ELLIOT
 APP. BY G.R.KILBORN
 DATE 8-1-75

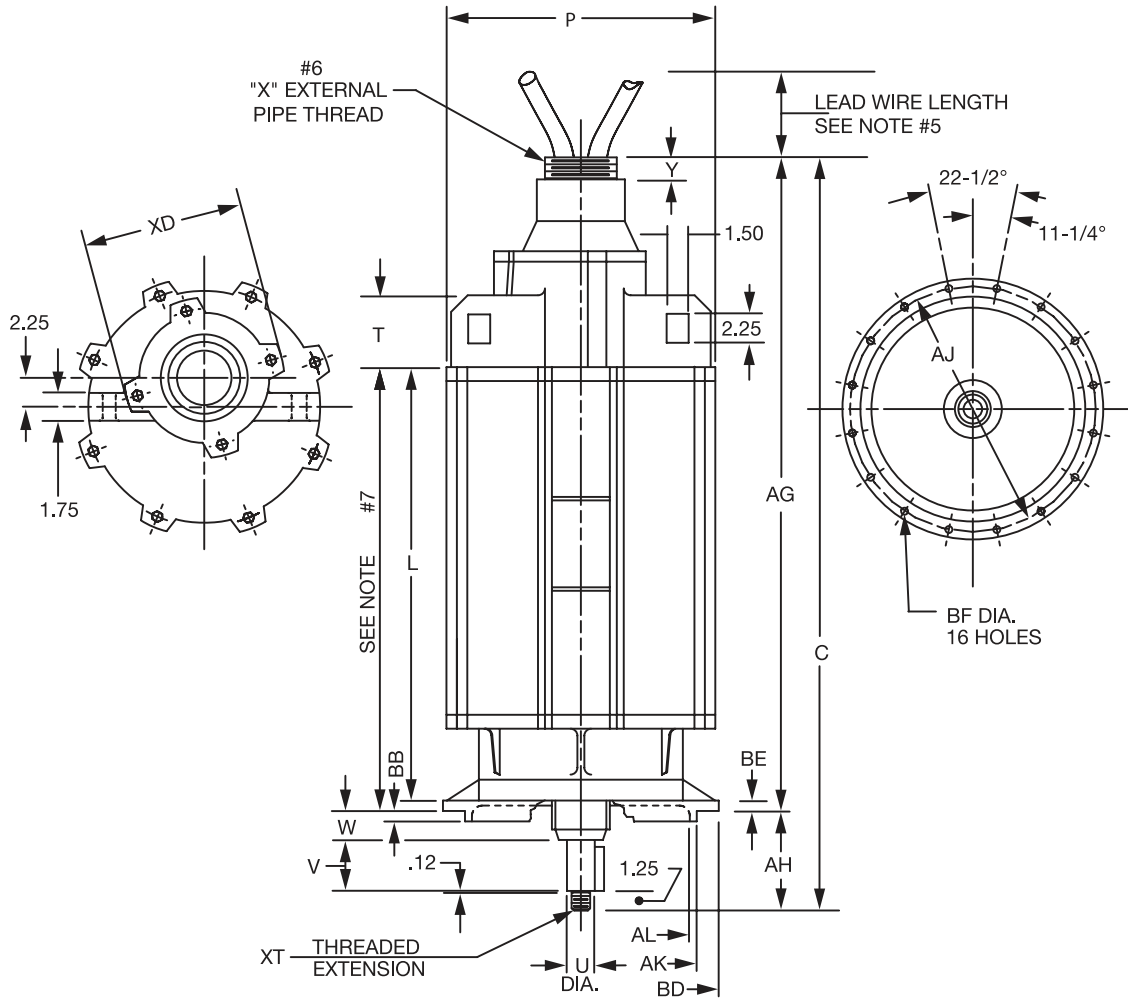
DIMENSION SHEET
SH. 1 OF 2

66930-28

ISSUE DATE: NOVEMBER 20, 2002

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION
ENCLOSURE: TOTALLY ENCLOSED SUBMERSIBLE
FRAME 360TY THRU L360TY



DIMENSIONS ARE IN INCHES

FRAME	C	L	P	T	U (3)	V	W	AG	AH	AJ	AK (4)	AL
360TY	47.1	31.25	18.38	4.25	2.4997	3.19	2.12	43.25	6.56	18.75	17.500	15.25
L360TY	49.1	33.25	18.38	4.25	2.4997	3.19	2.12	45.25	6.56	18.75	17.500	15.25

1.)

FRAME	BB	BD (2)	BE	BF	XT	LEAD CONNECTION			B.E. KEY	
						X	Y	XD	SQ.	LGTH.
360TY	.25	20.25	1.12	.69	1-1/2 - 12	3 - 8	1.25	10.88	.50	3.00
L360TY	.25	20.25	1.12	.69	1-1/2 - 12	3 - 8	1.25	10.88	.50	3.00

1.)

- 1.) SPECIAL DIMENSIONS APPLYING TO THIS ORDER ON THIS LINE.
- 2.) "BD" VARIES +.010..
- 3.) "U" VARIES +.0000, -.0005.
- 4.) "AK" VARIES +.000, -.002
- 5.) LEAD WIRE LENGTH AS SPECIFIED ON SALES ORDER.
- 6.) 3 1/2 - 8 PIPE THREAD SUPPLIED WITH CABLE SIZES LARGER THAN #1/0

- 7.) MINIMUM SUBMERGED DEPTH
FACE RUNOUT AND ECCENTRICITY .008 MAX. T.I.R.
PROTECTIVE CONDUIT FURNISHED BY CUSTOMER.

FRAME-_____ TYPE-_____ CERTIFIED FOR-_____
 ORDER-_____ ITEM-_____ HP-_____ RPM-_____ PH-_____ HZ-_____ VOLTS-_____
 RELIANCE SALES ORDER-_____ APPROVED BY-_____ DATE-_____

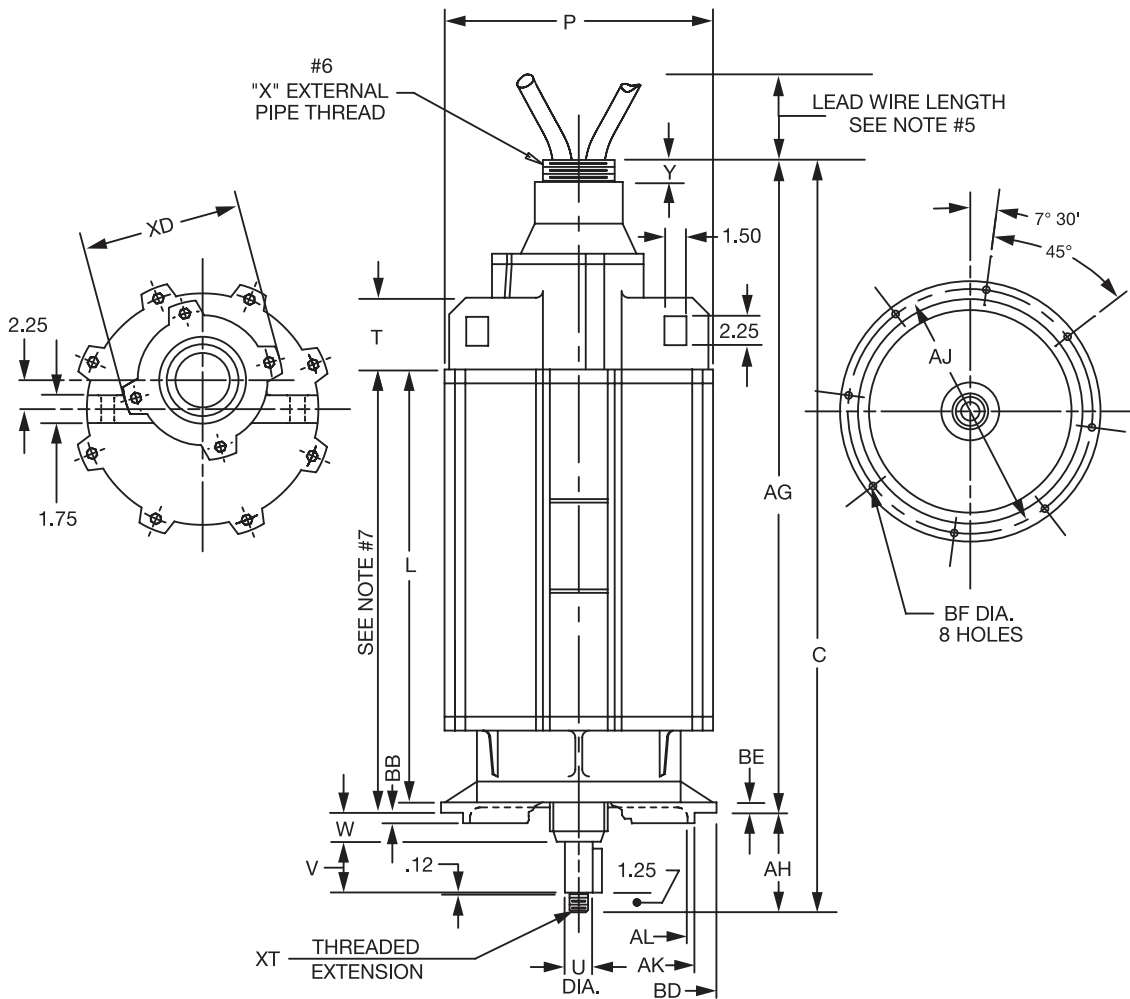
DR. BY E.S.UGHRIN
 CK. BY J.ELLIOT
 APP. BY G.KILBORN
 DATE 10-31-78

DIMENSION SHEET
SHEET 1 OF 1

66930-60
ISSUE DATE: JULY 29, 1993

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION
 ENCLOSURE: TOTALLY ENCLOSED SUBMERSIBLE
 FRAME 360TY ONE SIZE SMALLER FLANGE



DIMENSIONS ARE IN INCHES SEE SHEET 2 FOR MILLIMETERS

FRAME	C	L	P	T	U (3)	V	W	AG	AH	AJ	AK (4)	AL
360TY	49.81	31.25	18.38	4.25	2.4997	3.19	2.12	43.25	6.56	17.25	16.000	15.25
L360TY	51.81	33.25	18.38	4.25	2.4997	3.19	2.12	45.25	6.56	17.25	16.000	15.25

1.)

FRAME	BB	BD (2)	BE	BF	XT	LEAD CONNECTION			B.E. KEY	
						X	Y	XD	SQ.	LGTH.
360TY	.25	18.75	1.12	.69	1-1/2 - 12	3 - 8	1.25	10.88	.50	3.00
L360TY	.25	18.75	1.12	.69	1-1/2 - 12	3 - 8	1.25	10.88	.50	3.00

1.)

- 1.) SPECIAL DIMENSIONS APPLYING TO THIS ORDER ON THIS LINE.
- 2.) "BD" IS A CAST DIMENSION AND MAY VARY.
- 3.) "U" VARIES +.0000, -.0005.
- 4.) "AK" VARIES +.000, -.002
- 5.) LEAD WIRE LENGTH AS SPECIFIED ON SALES ORDER.
- 6.) 3 1/2 - 8 PIPE THREAD SUPPLIED WITH CABLE SIZES LARGER THAN #1/0
- 7.) MINIMUM SUBMERGED DEPTH
 FACE RUNOUT AND ECCENTRICITY .008 MAX. T.I.R.
 PROTECTIVE CONDUIT FURNISHED BY CUSTOMER.

FRAME-_____ TYPE-_____ CERTIFIED FOR-_____
 ORDER-_____ ITEM-_____ HP-_____ RPM-_____ PH-_____ HZ _____ VOLTS _____
 RELIANCE SALES ORDER-_____ APPROVED BY-_____ DATE _____

DR. BY E.S.UGHRIN
 CK. BY J.ELLIOT
 APP. BY G.KILBORN
 DATE 10-31-78

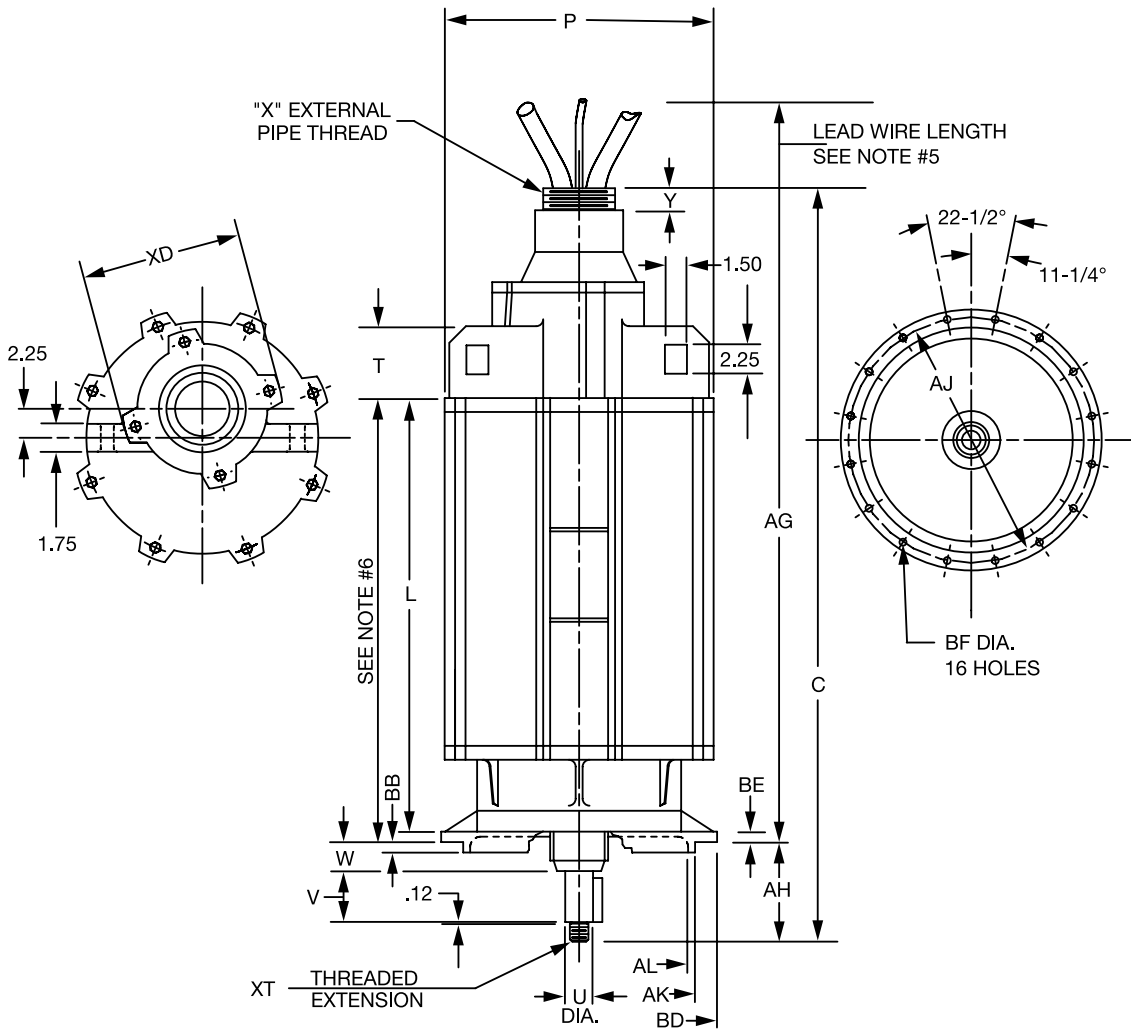
DIMENSION SHEET
 SHEET 1 OF 2

66930-61

ISSUE DATE: JANUARY 31, 1996

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION
 ENCLOSURE: TOTALLY ENCLOSED SUBMERSIBLE
 ONE SIZE SMALLER FLANGE
 FRAME 360TY



DIMENSIONS ARE IN INCHES, SEE SHEET 2 FOR DIMENSIONS IN MILLIMETERS

FRAME	C	L	P	T	U (3)	V	W	AG	AH	AJ	AK (4)	AL
360TY	54.56	31.25	18.38	4.25	2.4997	3.19	2.12	48.00	6.56	17.25	16.000	15.25

1.)

FRAME	BB	BD (2)	BE	BF	XT	LEAD CONNECTION			B.E. KEY	
						X	Y	XD	SQ.	LGTH.
360TY	.25	18.75	1.12	.69	1-1/2 - 12	5 - 8	1.50	10.88	.50	3.00

1.)

- 1.) SPECIAL DIMENSIONS APPLYING TO THIS ORDER ON THIS LINE.
- 2.) "BD" VARIES +.010.
- 3.) "U" VARIES +.0000, -.0005.
- 4.) "AK" VARIES +.000, -.002
- 5.) LEAD WIRE LENGTH AS SPECIFIED ON SALES ORDER.
- 6.) MINIMUM SUBMERGED DEPTH
 FACE RUNOUT AND ECCENTRICITY .008 MAX. T.I.R.
 PROTECTIVE CONDUIT FURNISHED BY CUSTOMER.

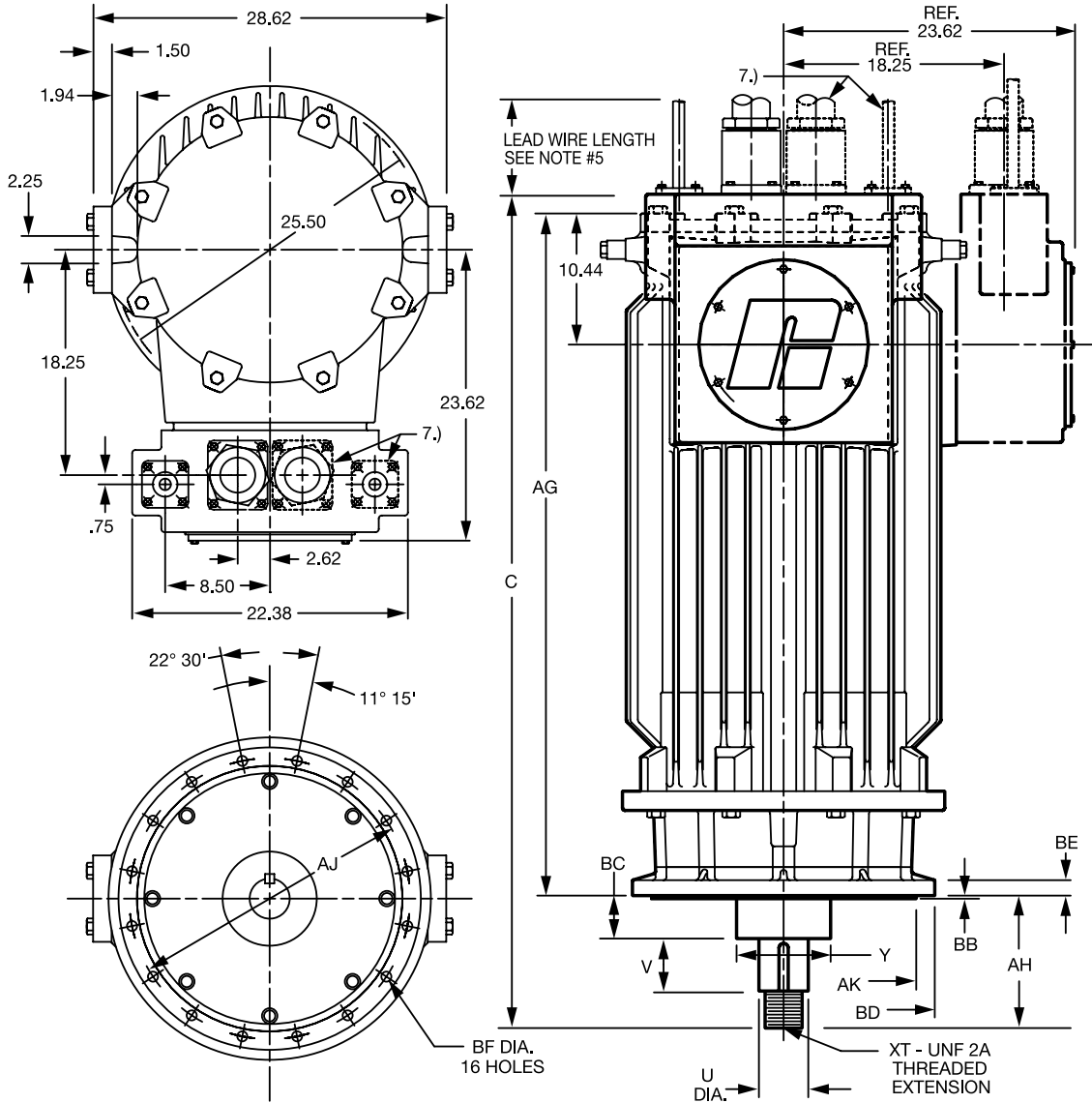
FRAME- _____ TYPE- _____ CERTIFIED FOR- _____
 ORDER- _____ ITEM- _____ HP- _____ RPM- _____ PH- _____ HZ _____ VOLTS _____
 RELIANCE SALES ORDER- _____ APPROVED BY- _____ DATE _____

DR. BY VERN S. JOHNSON
 CK. BY KEN THOMAS
 APP. BY G KILBORN
 DATE 2-13-86

DIMENSION SHEET
 SHEET 1 OF 2
66930-82
 ISSUE DATE: APRIL 20, 1999

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION
ENCLOSURE: TOTALLY ENCLOSED SUBMERSIBLE
FRAME 440TY (445 & 449 LENGTHS)



FRAME LENGTH/BRG. PKG.	C	BC	U (3)	AG	AH	AJ	AK (4)	BB	BD (2)	BE	BF	V	B.E. KEY	XT	Y
449 TRIPLE BRG. H.D. EXT.	69.24	3.55	3.9997	56.71	10.78	22.75	21.500	.25	24.50	1.25	.81	4.25	1.00 SQ. X 3.75 LG.	3-12	7.75
449 DOUBLE BRG. H.D. EXT.	67.47	3.55	3.9997	54.94	10.78	22.75	21.500	.25	24.50	1.25	.81	4.25	1.00 SQ. X 3.75 LG.	3-12	7.75
445 TRIPLE BRG. H.D. EXT.	60.74	3.55	3.9997	48.21	10.78	22.75	21.500	.25	24.50	1.25	.81	4.25	1.00 SQ. X 3.75 LG.	3-12	7.75
445 DOUBLE BRG. H.D. EXT.	58.97	3.55	3.9997	46.44	10.78	22.75	21.500	.25	24.50	1.25	.81	4.25	1.00 SQ. X 3.75 LG.	3-12	7.75
449 STANDARD EXT.	66.47	2.88	2.8747	54.94	9.78	22.75	21.500	.25	24.50	1.25	.81	4.25	.75 SQ. X 3.75 LG.	2-12	5.31
445 STANDARD EXT.	57.97	2.88	2.8747	46.44	9.78	22.75	21.500	.25	24.50	1.25	.81	4.25	.75 SQ. X 3.75 LG.	2-12	5.31

- 1.) SPECIAL DIMENSIONS APPLYING TO THIS ORDER ON THIS LINE.
 2.) "BD" VARIES +.010..
 3.) "U" VARIES +.0000, -.0005.
 4.) "AK" VARIES +.000, -.002
 5.) LEAD WIRE LENGTH AS SPECIFIED ON SALES ORDER.
 6.) FACE RUNOUT AND ECCENTRICITY .008 MAX. T.I.R.
 7.) IF ONLY ONE POWER AND/OR ONE CONTROL CABLE IS NEEDED, IT WILL BE ON THE LEFT SIDE OF CONDUIT BOX.
 8.) "Y" IS THE DIAMETER OF SEAL SHROUD AND NOT THE SHAFT SHOULDER DIAMETER.

FRAME- 440TY TYPE- _____ CERTIFIED FOR- _____
 ORDER- _____ ITEM- _____ HP- _____ RPM- _____ PH- _____ HZ _____ VOLTS _____
 RELIANCE SALES ORDER- _____ APPROVED BY- MMH DATE _____

DR. BY M.B.MUELLER
 CK. BY M.M.HODOWANEC
 APP. BY G.R.KILBORN
 DATE 8-20-92

DIMENSION SHEET
SHEET 1 OF 1

66930-122
ISSUE DATE: MAY 1, 1993

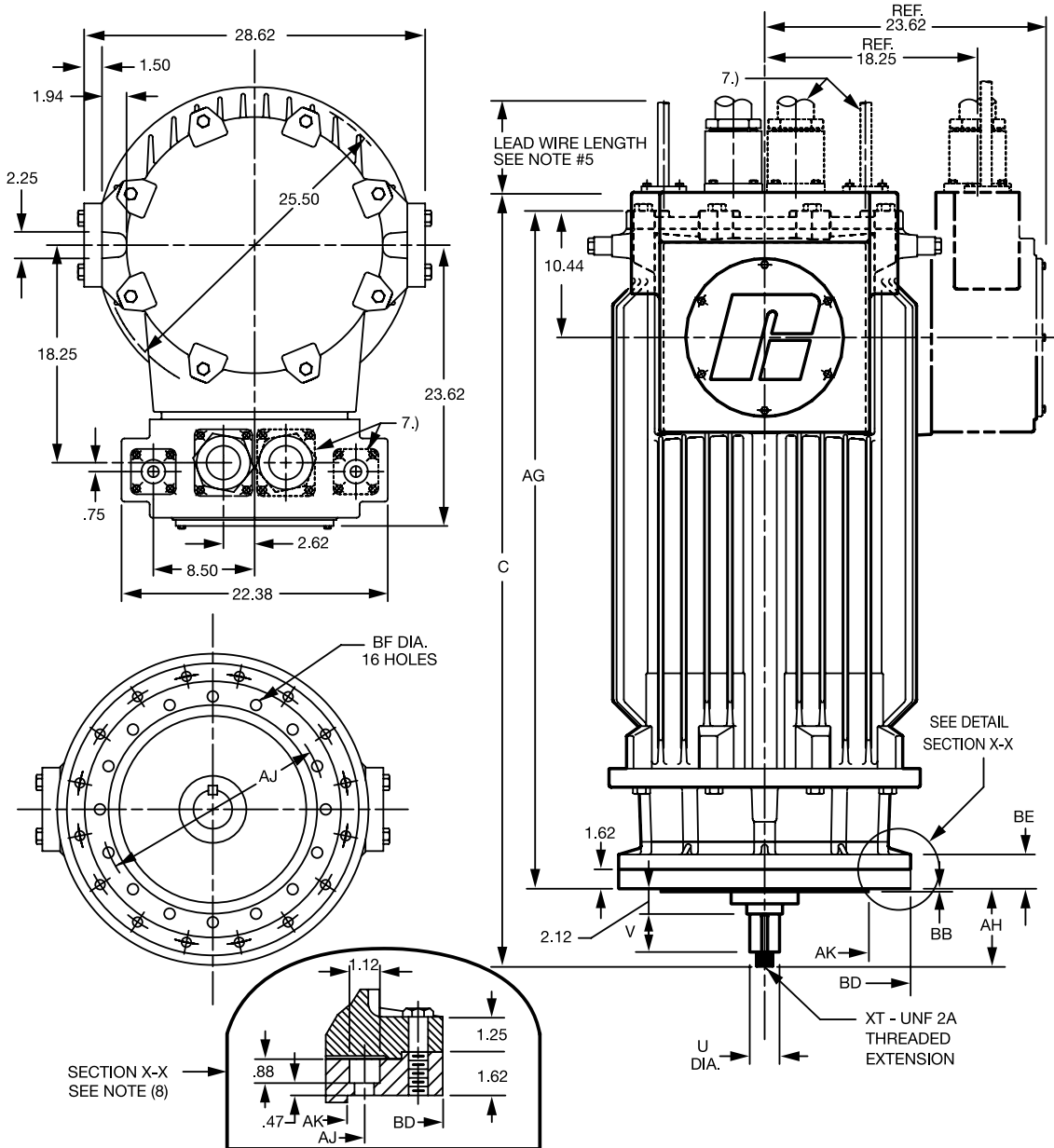
DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

ENCLOSURE: TOTALLY ENCLOSED SUBMERSIBLE

FRAME 440TY (445 & 449 LENGTHS)

ONE SIZE SMALLER FLANGE AND SHAFT



FRAME LENGTH	C	U (3)	AG	AH	AJ	AK (4)	BB	BD (2)	BE	BF	V	B.E. KEY	XT
449	67.47	2.4997	56.56	6.56	18.75	17.500	.25	24.50	2.88	.69	3.19	.50 SQ. X 3.00 LG.	1.5 - 12
445	58.97	2.4997	48.06	6.56	18.75	17.500	.25	24.50	2.88	.69	3.19	.50 SQ. X 3.00 LG.	1.5 - 12

- 1.) SPECIAL DIMENSIONS APPLYING TO THIS ORDER ON THIS LINE.
- 2.) "BD" VARIES ±.010.
- 3.) "U" VARIES +.0000, -.0005.
- 4.) "AK" VARIES +.000, -.002
- 5.) LEAD WIRE LENGTH AS SPECIFIED ON SALES ORDER.
- 6.) FACE RUNOUT AND ECCENTRICITY .008 MAX. T.I.R.
- 7.) IF ONLY ONE POWER AND/OR ONE CONTROL CABLE IS NEEDED, IT WILL BE ON THE LEFT SIDE OF CONDUIT BOX.
- 8.) CUSTOMER TO MOUNT PLATE TO PUMP, THEN MOUNT MOTOR TO PLATE.

FRAME- _____ TYPE- _____ CERTIFIED FOR- _____
 ORDER- _____ ITEM- _____ HP- _____ RPM- _____ PH- _____ HZ _____ VOLTS _____
 RELIANCE SALES ORDER- _____ APPROVED BY- MMH _____ DATE _____

DR. BY M.B.MUELLER
 CK. BY M.M.HODOWANEC
 APP. BY G.R.KILBORN
 DATE 3-23-93

DIMENSION SHEET
 SHEET 1 OF 1

66930-130
 ISSUE DATE: AUGUST 24, 1993

FAST FACTS AND TECHNICAL INFORMATION

- Submersibles are available explosion-proof (Division 1, Class 1, Groups C & D, T3C temperature code) and non-explosion proof
- Standard submersibles are inverter suitable for 10:1 variable torque for Class 1, Group D, T2A temperature code.
- Submersible motors are stocked (see 501 Catalog)
- 65° C ambient and above must be non explosion proof, unless equipped with a water jacket 320TY to 440TY frames only.
- Carbon ceramic inner and outer seals are standard
- 25 feet of cable is standard, other lengths available
- 416 stainless steel shaft is standard
- Motors carry a 5 year pro-rated warranty
- Shaft loading must be supplied and reviewed by engineering for 440TY frames
- Non wicking epoxy cable cap provided (see below)
- Dual moisture sensing probes provided (see below)
- Performance data and dimension sheets for stock product can be found on www.baldor.com.

SUBMERSIBLE MOISTURE PROTECTION SYSTEM:

- The submersible moisture protection system consists on the non-wicking cable cap assembly and the dual moisture sensing probes. The cable cap assembly prevents moisture from wicking through the cable assembly even when the cable jacket has been punctured. Power and control conductors are stripped bare and terminated in butt connectors. The cable and butt connector assemblies are encapsulated in epoxy assuring a positive bond to the conductors. Concentric rings in the cap assembly assure that a positive bond exists between the epoxy and the motor housing.
- Dual moisture sensing probes (Warrick type) extend into the oil chamber located between the tandem mechanical seals. Should the outer seal fail, water will enter the oil chamber through the labyrinth slinger paths and create a water/oil emulsion in the oil chamber. The moisture detection control system applies 500 volts to the moisture probes. The presence of water in the oil chamber increases the conductivity sufficiently to increase current flow through the probe circuit which illuminates a warning light and activates a relay to de-energize the motor. The relay is purchased separately. The moisture detection control system must be so connected for the warranty and the UL listing to be valid. For information on the relay, see www.gemssensors.com. Model 2800/2810 relay.

TYPICAL PERFORMANCE DATA

**SUBMERSIBLE MOTORS, 15 MIN. IN AIR, CONTINUOUS WATER/SEWAGE
SINGLE PHASE, 60 Hz**

HP	RPM	Frame Size	Amps @ 230V			Efficiency Load			Power Factor Load			RPM	Torque I.B.FT.			
			FL	LCK		4/4	3/4	2/4	4/4	3/4	2/4		FL	FL	BD	LR
			4/4	Amps	Code											
1	1800	180TY	8.1	40	L	55.0	50.6	42.7	72.9	67.9	60.8	1730	3.04	6.8	12.5	
	1200	180TY	8.6	36.5	K	55.6	52.1	45.0	68.1	62.2	55.2	1150	4.57	9.6	12.1	
1.5	1800	180TY	10.5	50	m	62.5	58.7	51.3	73.6	68.2	60.2	1735	4.54	10.5	12.5	
	1200	180TY	12.5	51.2	K	57.0	54.9	48.1	68.1	62.2	54.9	1155	6.82	13.8	17.7	
2	1800	180TY	14.0	69	K	59.2	57.3	51.7	78.3	73.1	65.2	1720	6.11	13.4	18.7	
	1200	210TY	15.8	61.2	J	59.9	56.2	49.0	69.6	62.1	51.2	1155	9.09	17.0	18.8	
3	1800	180TY	20.0	97	J	64.7	63.6	58.6	75.3	69.1	59.5	1725	9.13	21.5	28.3	
	1200	210TY	21.0	86.0	J	65.6	62.9	56.7	69.1	63.7	54.1	1160	13.6	29.5	22.5	
5	1800	210TY	30	146	H	69.0	67.5	63.9	80.4	76.1	66.9	1730	15.2	33.3	38.3	

TYPICAL PERFORMANCE DATA

**SUBMERSIBLE MOTORS, 15 MIN. IN AIR, CONTINUOUS WATER/SEWAGE
THREE PHASE, 60 HZ**

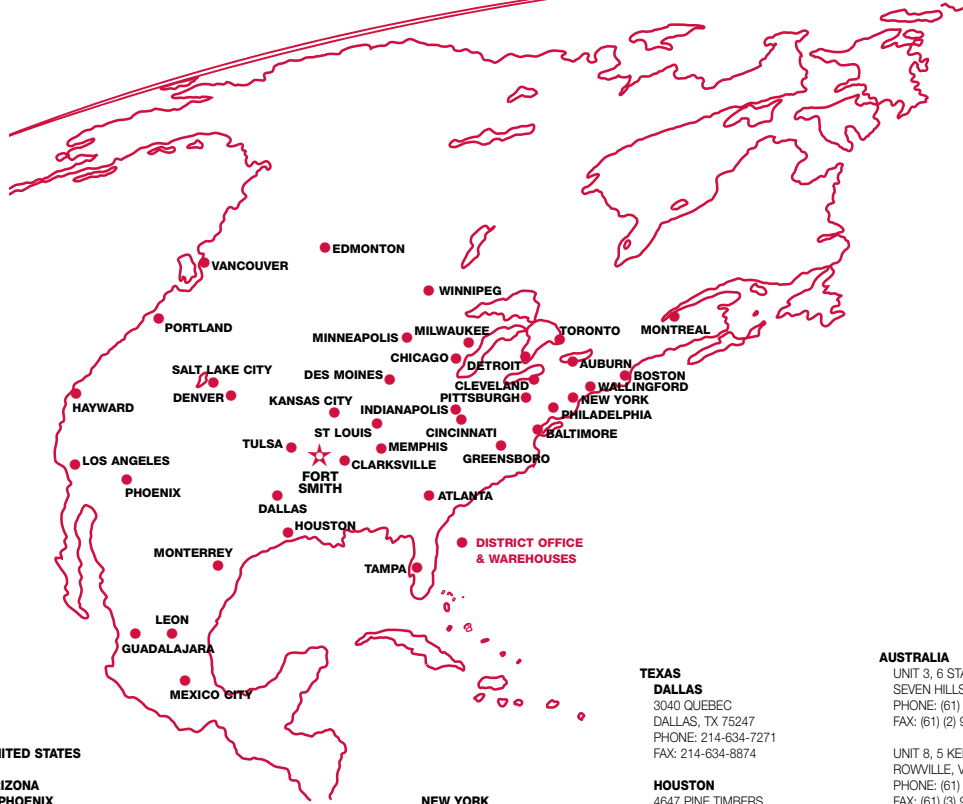
HP	RPM	Frame Size	Amps @ 230V			Efficiency Load			Power Factor Load			RPM	Torque I.B.FT.			
			FL	LCK		4/4	3/4	2/4	4/4	3/4	2/4		FL	FL	BD	LR
			4/4	Amps	Code											
1	1800	180TY	2.3	18.4	L	69.7	66.0	58.8	86.7	83.6	78	1725	4.56	17.6	13.4	
	1200	180TY	1.8	10	J	66.4	62.6	55.2	78.4	73.4	65.2	1150	4.57	14.2	9.5	
1.5	1800	180TY	2.3	18.3	L	70.5	66.7	59.3	86.2	83.1	77.5	1735	4.54	17.5	13.2	
	1200	180TY	2.6	15	J	71.5	68.7	62.2	76.1	69.7	59.5	1150	6.85	22	15	
2	1800	180TY	2.9	22	K	73.5	70.7	64.3	86.4	82.5	74.7	1730	6.06	20	17.5	
	1200	180TY	3.4	18.4	J	72.8	70.9	65.4	75.7	69.2	58.9	1145	9.17	25.8	18	
3	1800	180TY	4.4	31.1	J	78.1	75.9	70.5	81.7	77.2	68.7	1750	9.01	31	21.3	
	1200	180TY	4.8	26.2	H	73.9	72.4	68.5	79.1	73.3	63.5	1155	13.6	33.9	27.0	
5	3600	180TY	7.0	41.8	H	73.3	72.2	68.0	91.1	90.1	87.2	3465	7.57	19.7	15.1	
	1800	180TY	7.4	42.7	H	76.0	74.5	69.8	81.3	76.0	66.4	1735	15.1	43.8	32.7	
	1200	180TY	7.60	38.3	G	76.2	77.1	74.2	80.3	75.8	66.6	1150	22.8	52.8	38.5	
7.5	3600	180TY	9.8	68.2	J	75.1	74.5	70.9	95.6	92.8	87.8	3465	11.3	32.5	25.4	
	1800	180TY	10.5	65.0	H	83.8	82.0	79.6	80.6	77.1	66.8	1740	22.6	64.6	51.6	
	1200	210TY	11.5	57.8	G	78.1	76.5	75.1	77.7	74.4	63.9	1150	34.3	81.0	55.6	
10	3600	210TY	12.5	68.5	G	84.2	84.6	82.9	90.1	89.7	85.1	3490	15	37.2	27.3	
	1800	210TY	13.5	80.0	H	86.2	86.5	84.8	80.5	75.3	64.4	1755	29.9	73.7	63.9	
	1200	210TY	15.5	80.5	H	76.5	77.8	77.5	78.3	72.4	62.3	1140	46.1	115	79.7	
15	3600	210TY	18.3	114	G	82.8	82.4	79.9	90.5	89.5	87.3	3495	22.5	59.2	45.2	
	1800	210TY	21.0	111	G	86.0	85.7	84.1	77.8	74.0	64.1	1755	44.9	107	105	
	1200	250TY	19.5	109	G	84.4	83.5	83.2	84.4	81.3	73.5	1160	67.9	166	122	
20	3600	210TY	23.7	154	G	86.5	85.2	83.9	91	89.0	85.9	3500	30	77.9	65.1	
	1800	210TY	28.0	149	G	84.4	85.7	82.6	80.3	74.3	66.8	1750	60	140	139	
	1200	250TY	27.0	142	G	84.0	85.6	83.0	82.7	79.9	73.3	1155	90.9	217	170	
25	3600	250TY	31.0	172	F	84.7	84.5	82.1	89.2	86.5	80.1	3505	37.5	91.9	68.0	
	1800	250TY	33	179	G	84.8	86.2	84.2	84.1	80.6	72.9	1750	75	185	119	
	1200	250TY	34.0	173	G	83.3	84.2	83.3	81.9	78.6	72.5	1155	114	267	203	
30	3600	250TY	36.4	202	F	85.6	85.8	83.9	90.2	89.0	84.8	3500	45	108	81.2	
	1800	350TY	39.0	207	G	84.1	86.8	87.1	85.4	82.2	77.1	1750	90	201	139	
	1200	320TY	40.0	210	G	86.9	87.5	86.0	80.9	77.1	68.9	1165	135	310	241	

TYPICAL PERFORMANCE DATA

**SUBMERSIBLE MOTORS, 15 MIN. IN AIR, CONTINUOUS WATER/SEWAGE
THREE PHASE, 60 HZ**

HP	RPM	Frame Size	Amps @ 230V			Efficiency Load			Power Factor Load			RPM	Torque I.B.FT.			
			FL	LCK		4/4	3/4	2/4	4/4	3/4	2/4		FL	FL	BD	LR
			4/4	Amps	Code											
40	3600	250TY	48.6	311	G	85.1	84.6	81.9	90.5	86.2	77.7	3505	59.9	167	132	
	1800	250TY	52.0	275	F	86.7	86.9	86.4	84.6	82.2	75.1	1745	120	292	199	
	1200	320TY	53.3	282	G	87.7	88.3	87.0	80.0	76.2	66.6	1170	180	391	362	
50	3600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	1800	320TY	63.0	336	F	90.1	90.2	88.6	83.0	79.4	69.8	1770	148	357	254	
	1200	320TY	67	322	F	88.1	88.7	88.0	81.0	77.0	68.9	1165	225	473	381	
60	3600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	1800	320TY	77.3	410	F	90.0	90.0	89.5	81.2	76.2	65.8	1765	179	417	317	
	1200	320TY	76.9	409	F	88.0	88.7	87.7	83.1	81.0	73.8	1165	271	587	541	
75	3600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	1800	320TY	92.0	504	F	91.4	91.5	89.5	82.9	77.9	70.0	1770	223	532	385	
	1200	360TY	92.0	534	G	89.8	90.0	88.9	86.0	83.2	76.2	1170	337	786	580	
100	3600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	1800	360TY	123	703	G	91.3	91.3	90.5	83.2	81.0	73.0	1775	296	644	539	
	1200	360TY	120	703	G	90.9	90.5	89.5	85.1	82.9	76.6	1170	449	982	786	
125	3600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	1800	360TY	153	864	F	92.0	91.6	89.9	83.2	81.6	75.4	1775	369	819	667	
	1200	360TY	148	812	F	91.8	92.7	92.6	86.2	84.9	79.5	1170	562	1223	806	
150	3600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	1800	360TY	182	1080	G	92.1	92.1	91.1	84.3	81.3	74.6	1770	445	1050	828	
	1200	360TY	180	1097	G	91.0	91.4	90.5	85.7	88.8	87.6	1170	673	1561	1364	
200	3600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	1800	360TY	248	1460	G	92.6	92.9	91.3	81.3	76.7	68.9	1765	595	1469	1182	
	1200	440TY	234	1402	F	94.8	95.1	94.7	84.3	80.7	71.7	1185	884	2121	1219	
250	3600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	1800	440TY	276	1740	G	95.0	95.5	94.2	89.0	87.2	81.6	1785	736	1763	1071	
	1200	440TY	278	1746	G	95.5	95.7	95.4	88.1	86.4	80.8	1190	1105	2546	1389	
300	1800	440TY	326	1883	F	95.8	95.8	95.3	89.9	88.9	84.3	1785	883	1942	1151	
	1200	440TY	337	2070	G	95.5	95.8	95.6	87.4	85.5	79.4	1190	1326	3014	1663	

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