

SUBMERSIBLES INDEX

SUBMERSIBLE MOTORS

General Description and Notes UL Motors	2
Single-Phase UL Approved	2
Three-Phase UL Approved	4
Continuous-in-Air UL Approved	6
Premium Efficient UL Approved	8
General Description and Notes Non-UL Approved	9
Three-Phase Non-UL Approved	10

MODIFICATIONS

Modification Features	13
Model Number Section (50 Hz Ratings)	18
Athens Mod Center Modification Prices	19
Athens Quick Mod Program	19
Submersible Stock List	20
Dimension Sheets	24

SUBMERSIBLE MOTORS UL APPROVED, EXPL.-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 • Will withstand 100 psi at the seal • Motor prices include 25 feet 4/C power cable and 25 feet 5/C 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.

SUBMERSIBLE MOTORS



DIMENSION SHEETS:

- 180TY - 66930-17
- 210TY thru 320TY - 66930-18
- 360TY Frame - 66930-60
- 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 Mounting - 66930-122
- 440TY, 360TY Mounting - 66930-130

FOOTNOTES:

- (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 75 feet additional cable - for total cable lengths over 100 feet, contact AC Products.**
- (4) Refer to IMC (Industrial Motor 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 12 for available modifications to submersible motors.

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	\$3,810	\$3,810	\$124	\$38
1	1800	180TY	3,680	3,680	-	-
	1200	180TY (2)	3,852	3,852	-	-
1-1/2	1800	180TY	3,680	3,680	128	50
	1200	180TY (2)	4,404	4,404	304	38
2	1800	180TY (2)	4,080	4,080	284	50
	1200	210TY (2)	5,062	5,062	326	94
3	1800	180TY (2)	5,102	5,102	368	50
	1200	210TY (2)	5,996	5,996	382	94
5	1800	210TY	-	6,794	-	124

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



U/L 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	\$3,280	\$3,280	\$3,280	\$50	\$38	\$38
	1200	180TY	3516	3516	3516	38	38	38
	900	180TY	3940	3940	3940	38	38	38
3/4	1800	180TY	3,280	3,280	3,280	50	38	38
	1200	180TY	3516	3516	3516	38	38	38
	900	180TY	3940	3940	3940	38	38	38
1	1800	180TY	3,280	3,280	3,280	50	38	38
	1200	180TY	3516	3516	3516	38	38	38
	900	180TY	3940	3940	3940	38	38	38
	3600(1)	180TY	3212	3212	3212	50	38	38
1.5	1800	180TY	3360	3360	3360	50	38	38
	1200	180TY	3576	3576	3576	38	38	38
	900	180TY	3940	3940	3940	38	38	38
	3600(1)	180TY	3212	3212	3212	50	38	38
2	1800	180TY	3424	3424	3424	50	38	38
	1200	180TY	4604	4604	4604	38	38	38
	900	180TY	3940	3940	3940	38	38	38
	3600(1)	180TY	3212	3212	3212	50	38	38
3	1800	180TY	3460	3460	3460	50	38	38
	1200	180TY	3516	3516	3516	38	38	38
	900	180TY	5120	5120	5120	38	38	38
	3600(1)	180TY	3512	3512	3512	50	38	38
5	1800	180TY	3489	3489	3489	50	38	38
	1200	180TY	4766	4766	4766	38	38	38
	900	210TY	5886	5886	5886	94	94	38
	3600(1)	180TY	4752	4752	4752	50	38	38
7.5	1800	180TY	4514	4514	4514	50	38	38
	1200	210TY	5266	5266	5266	94	38	38
	900	210TY	7528	7528	7528	94	94	38
	720	250TY	-	8610	8610	-	-	-
	3600(1)	210TY	5090	5090	5090	124	50	38
10	1800	210TY	4866	4866	4866	124	50	38
	1200	210TY	6440	6440	6440	94	38	38
	900	250TY	7852	7852	7852	94	94	82
	720	250TY	-	10216	10216	-	-	-
	3600(1)	210TY	6548	6548	6548	124	50	38
15	1800	210TY	6234	6234	6234	124	50	38
	1200	250TY	8508	8508	8508	160	94	78
	900	250TY	11850	11850	11850	94	94	82
	720	320TY	-	14946	14946	-	-	-
	3600(1)	210TY	7384	7384	7384	124	50	38
20	1800	210TY	6870	6870	6870	124	50	38
	1200	250TY	9382	9382	9382	160	94	78
	900	320TY	15616	15616	15616	-	160	112
	720	320TY	-	19288	19288	-	-	-
	3600(1)	250TY	9658	9658	9658	192	124	112
25	1800	250TY	8778	8778	8778	192	124	78
	1200	250TY	12172	12172	12172	160	94	78
	900	320TY	16962	16962	16962	-	160	112
	720	320TY	-	20426	20426	-	-	-
	3600(1)	250TY	10896	10896	10896	192	124	112
30	1800	250TY	9482	9482	9482	192	124	78
	1200	320TY	13918	13918	13918	-	160	112
	900	320TY	19914	19914	19914	-	160	112
	720	320TY	-	25006	25006	-	-	-
	600	360TY	-	32506	32506	-	-	-

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

Note: For other ratings, contact product marketing.

Data or prices subject to change without notice

SUBMERSIBLE MOTORS



Continuous In Water/Sewage

U/L 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	\$13478	\$13478	\$13478	\$192	\$124	\$112
	1800	250TY	12838	12838	12838	192	124	78
	1200	320TY	17538	17538	17538		160	112
	900	320TY	-	22342	22342	-	160	112
	720	360TY	-	30642	30642	-		
50	1800	320TY	15024	15024	15024		198	160
	1200	320TY	18638	18638	18638	452	160	112
	900	360TY	-	29826	29826	-	390	390
	720	360TY	-	34638	34638	-		
60	1800	320TY	19216	19216	19216		198	160
	1200	320TY	24724	24724	24724	552	160	112
	900	360TY	-	29016	29016	-	390	390
	720	L360TY	-	36432	36432	-		
	600	440TY	-	83350	83350	-		
75	1800	320TY	24908	24908	24908		198	160
	1200	360TY	-	25474	25474	-	390	390
	900	360TY	-	32050	32050	-	390	390
	720	440TY	-	83350	83350	-		
	600	440TY	-	87518	87518	-		
100	1800	360TY	-	26484	26484	-	390	390
	1200	360TY	-	32742	32742	-	390	390
	900	360TY	-	42430	42430	-	390	390
	720	440TY	-	89154	89154	-		
	600	440TY	-	93612	93612	-		
125	1800	360TY	-	31744	31744	-	390	390
	1200	360TY	-	40008	40008	-	390	390
	900	360TY	-	48800	48800	-	390	390
	720	440TY	-	92314	92314	-		
	600	440TY	-	102708	102708	-		
150	1800	440TY++	-	85632	85632	-	842	842
	1200	440TY	-	89020	89020	-	842	842
	900	440TY	-	90516	90516	-	1008	1008
	720	440TY	-	94908	94908	-		
	600	440TY	-	109142	109142	-		
200	1800	440TY	-	88496	88496	-	842	842
	1200	440TY	-	92920	92920	-	842	842
	900	440TY	-	95968	95968	-	1008	1008
	720	440TY	-	100906	100906	-		
250	1800	440TY	-	92920	92920	-	842	842
	1200	440TY	-	97566	97566	-	842	842
	900	440TY	-	101978	101978	-	1008	1008
	720	440TY	-	108492	108492	-		
300	1800	440TY	-	97568	97568	-	842	842
	1200	440TY	-	102444	102444	-	842	842
	900	440TY	-	116472	116472	-	1008	1008
350	1800	440TY	-	99040	99040	-	842	842
	1200	440TY	-	108298	108298	-	842	842
	900	440TY	-	123458	123458	-	1008	1008
400	1800	440TY	-	111118	111118	-	842	842
	1200	440TY	-	118508	118508	-	842	842
450	1800	440TY	-	131296	131296	-	842	842

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

Note: For other ratings, contact product marketing.

U/L 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	\$6152	\$86
1	1800	180TY	5926	86
	1200	210TY	6546	112
1.5	1800	210TY	6596	112
	1200	210TY	7114	112

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	\$4408	\$38
	900	180TY	4802	38
0.75	1800	180TY	4232	38
	1200	180TY	3142	38
	900	180TY	3656	38
1	1800	180TY	4232	38
	1200	180TY	4408	38
	900	180TY	4802	38
1.5	1800	180TY	4232	38
	1200	180TY	4554	38
	900	210TY	5828	94
2	1800	180TY	4304	38
	1200	180TY	5328	38
	900	210TY	6544	94
3	1800	180TY	5094	38
	1200	210TY	5886	94
	900	250TY	9806	94
5	1800	210TY	6036	50
	1200	250TY	8738	94
	900	250TY	12042	94
7.5	1800	250TY	8072	124
	1200	250TY	11160	94
	900	320TY	12874	160
10	1800	250TY	10600	124
	1200	320TY	14108	160
	900	320TY	17264	160
15	1800	320TY	14592	198
	1200	320TY	16222	160
	900	360TY	24346	390
20	1800	320TY	15962	198
	1200	360TY	21756	390
	900	360TY	27538	390
25	1800	360TY	20614	390
	1200	360TY	28500	390
	900	L360TY	34984	390

SUBMERSIBLE MOTORS

Continuous In Air



U/L Approved Division 1, Class 1, Groups C & D, T3C temperature code

Three Phase 230/460 Volts (continued)

Horsepower	RPM	Frame Size	List Price (w/25' of cable)	Additional Cable (Price per 5 Feet)
30	1800	360TY	\$22202	\$390
	1200	440TY	60166	842
40	1800	L360TY	27752	390
	1200	440TY	61518	842
50	1800	440TY	57208	842
	1200	440TY	64256	842
60	1800	440TY	63120	842
	1200	440TY	66994	842
75	1800	440TY	74972	842
	1200	440TY	81760	842
100	1800	440TY	82672	842
	1200	440TY	90156	842
125	1800	440TY	90378	842
	1200	440TY	98558	842
150	1800	440TY	101504	842
	1200	440TY	120196*	842

* Requires blower motor

**PREMIUM EFFICIENT SUBMERSIBLE MOTORS, CONTINUOUS IN WATER/SEWAGE
UL APPROVED, EXPL-PROOF, TENV, CLASS 1, GROUPS C & D DIVISION 1/T3C TEMP.CODE**

Horsepower	Frame/Volt	Speed	Full Load Eff. With Seal Losses	Full Load Eff. W/O Seal Losses	List Price
1	140TY/460	1800	65.3	84.6	\$3412
	140TY/460	1200	70.2	83.6	3591
	180TY/460	900	70.8	83.5	4010
	140TY/460	1800	71.9	86.3	3485
1.5	180TY/460	1200	73.8	86.6	3600
	180TY/460	900	75.7	84.9	4014
	140TY/460	1800	75.6	87.1	3589
2	180TY/460	1200	77.3	87.5	3606
	210TY/460	900	76.7	85.5	4334
	180TY/460	1800	77.5	88.5	3612
3	210TY/460	1200	80.2	89.5	5460
	210TY/460	900	79.6	85.7	6274
	180TY/460	1800	81.9	89.0	3664
5	210TY/460	1200	83.8	89.6	5732
	250TY/460	900	84.9	89.9	7594
	210TY/460	1800	83.6	90.6	9984
7.5	250TY/460	1200	85.3	90.3	7948
	250TY/460	900	87.2	90.6	8344
	210TY/460	1800	85.7	90.7	5230
10	250TY/460	1200	87.8	91.7	8504
	320TY/460	900	85.6	90.3	14314
	250TY/460	1800	88.5	93	9132
15	320TY/460	1200	88.8	93.1	15030
	320TY/460	900	88.3	91.6	15782
	250TY/460	1800	89.7	93.1	9586
20	320TY/460	1200	89.7	93.1	15930
	320TY/460	900	89.1	91.6	16250
	320TY/460	1800	90	94.2	16046
25	320TY/460	1200	90.5	93.1	16842
	320TY/460	900	89.9	91.8	17430
	320TY/460	1800	90.7	94.2	16892
30	320TY/460	1200	91.4	93.6	17254
	360TY/460	900	89.7	92.7	22024
	320TY/460	1800	91.5	94.2	17730
40	360TY/460	1200	91.2	94.2	23126
	360TY/460	900	90.7	93	25358
50	320TY/460	1800	92.3	94.5	18324
	360TY/460	1200	91.8	94.2	25436
60	320TY/460	1800	91.8	95	24988
	360TY/460	1200	N/A	N/A	32106
75	360TY/460	1800	92.5	95.1	28734
100	360TY/460	1800	93.4	95.4	30494
125	360TY/460	1800	89.8	92.4	37458



SUBMERSIBLE MOTORS NON-UL APPROVED, TENV

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. Reliance offers a complete line of UL listed submersible motors for these locations. Refer to page 4 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 200 psi at the seal • Motor equipped with moisture sensing probe (moisture control circuit boxes must be purchased separately) • Motor prices include 25 feet 4/C power cable and 25 feet 5/C 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.

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

DIMENSION SHEETS

- 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 13 thru 16 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: connections, nameplate, seals, cable length, and O-ring changes. See page 19.

Non-UL Approved, Non-Explosion Proof, TENV

HP	RPM	Frame	Voltage	List Price	Additional Cable (Price per 5 Feet)	
					230	460
1/2	1800	180TY	230/460	\$2780	\$38	\$38
	1200	180TY	230/460	3006	38	38
	900	180TY	230/460	2718	38	38
	720	180TY		3260	50	38
3/4	1800	180TY	230/460	2780	38	38
	1200	180TY	230/460	3006	38	38
	900	180TY	230/460	2718	38	38
	720	180TY		3260	50	38
1	1800	180TY	230/460	2780	38	38
	1200	180TY	230/460	3006	38	38
	900	180TY	230/460	2718	38	38
	720	180TY		3260	50	38
	600	210TY		5572	94	38
1.5	1800	180TY	200/400	2856	38	38
	1800	180TY	230/460	2856	38	38
	1200	180TY	230/460	3040	38	38
	900	180TY	230/460	3084	38	38
	720	180TY		3762	50	38
2	600	210TY		5848	94	38
	1800	180TY	200/400	2910	38	38
	1800	180TY	230/460	2910	38	38
	1200	180TY	230/460	3914	38	38
	900	180TY	230/460	3462	38	38
	720	180TY		4224	50	38
3	600	250TY		7718	94	124
	1800	180TY	200/400	2941	38	38
	1800	180TY	230/460	2941	38	38
	1200	180TY	230/460	3006	38	38
	900	180TY	230/460	4030	38	38
	720	180TY		4832	50	38
	600	250TY		8100	128	128
5	1800	180TY	230/460	3088	50	38
	1200	180TY	230/460	3792	50	38
	900	210TY	230/460	4910	94	94
	720	250TY	460	6942	128	128
	600	250TY		8598	128	128
7.5	1800	180TY	230/460	3446	50	38
	1200	210TY	230/460	4478	94	38
	900	210TY	230/460	6242	94	94
	720	250TY	460	7982	94	94
	600	320TY		15600		168
10	1800	210TY	230/460	4136	94	38
	1200	210TY	230/460	5382	94	38
	900	250TY	460	6670	94	94
	720	250TY	460	8414		128
	600	320TY		16452		168
15	1800	210TY	230/460	5210	128	50
	1200	250TY	460	7052	160	94
	900	250TY	460	9988	94	94
	720	320TY	460	13766		
	600	320TY		17270		168
20	1800	210TY	230/460	5844	160	94
	1200	250TY	460	8270	160	94
	900	320TY	460	12882		94
	720	320TY	460	16938		
	600	360TY		17270		168
25	1800	250TY	460	7768	192	124
	1200	250TY	460	10826	160	94
	900	320TY	460	14064		160
	720	320TY	460	17932		
	600	360TY		23278		200

SUBMERSIBLE MOTORS

Continuous In Water/Sewage Non-XP



Non-UL Approved, Non-Explosion Proof, TENV

HP	RPM	Frame	Voltage	List Price	Additional Cable (Price per 5 Feet)	
					230	460
30	1800	250TY	460	\$8530	\$192	\$124
	1200	320TY	460	12376	452	160
	900	320TY	460	17484		160
	720	320TY	460	20736		
	600	360TY		26174		
40	1800	250TY	460	11092	264	124
	1200	320TY	460	15248	264	124
	900	320TY	460	19614		160
	720	360TY	460	26906		
	600	360TY		28796		264
50	1800	320TY	460	13920	452	160
	1200	320TY	460	16202	452	198
	900	360TY	460	26064		390
	720	360TY	460	29596		264
	600	440TY	460	75044		1008
60	1800	320TY	460	18200	552	198
	1200	320TY	460	21024	552	198
	900	360TY	460	26910		390
	720	L360TY	460	31990		264
	600	440TY	460	79258		1008
75	1800	320TY	460	21964	264	264
	1200	360TY	460	23278		390
	900	360TY	460	32210		390
	720	440TY	460	81418		1008
	600	440TY	460	82754		1008
100	1800	360TY	460	24518		264
	1200	360TY	460	28488		264
	900	360TY	460	39266		390
	720	440TY	460	82446		1008
	600	440TY	460	89436		1008
125	1800	360TY	460	27606		390
	1200	360TY	460	34666		390
	900	360TY	460	42850		390
	720	440TY	460	87628		1008
	600	440TY	460	92878		1008
150	1800	360TY	460	33790		842
	1200	440TY	460	86550		842
	900	440TY	460	90516		1008
	720	440TY	460	90566		1008
200	1800	440TY	460	79450		842
	1200	440TY	460	88202		842
	900	440TY	460	90516		1008
	720	440TY	460	95970		1008
250	1800	440TY	460	83884		842
	1200	440TY	460	88080		1008
	900	440TY	460	96530		1008
300	1800	440TY	460	92274		842
	1200	440TY	460	96886		1008
	900	440TY	460	101730		1008
350	1800	440TY	460	94948		1008
	1200	440TY	460	101068		1008
	900	440TY	460	110650		
400	1800	440TY	460	106866		1008
	1200	440TY	460	112238		1008
450	1800	440TY	460	126152		1008

Note: For ratings 150 HP and above, pricing may change due to loading. Please supply all axial and radial loads to your product group.
Note: for ratings in 320TY thru 440TY, please supply radial and axial loads.

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 AC Products – contact AC Products for pricing and availability.

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	\$1050	\$1200	\$1350	\$1970	\$2590	\$3390
65 C to 90 C (1)	750	770	840	970	1050	1200

(1) Must be non explosion proof design

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 Product Marketing for frame size and base pricing.

For continuous in air applications, contact Product Marketing.

CHANGE ORDERS

All change orders requiring engineering review will be assessed a \$100.00 charge plus any additional Mod Adders.

COAL TAR EPOXY (exterior motor protection)

LIST PRICE ADDITIONS

180TY	210TY	250TY	320TY	360TY	440TY
\$2396	\$2396	\$2662	\$3640	\$3640	\$4524

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 production basis. Please contact Reliance Product Marketing.

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.

Kit #	Part Number	Frame	Wire Size	List
K99G100	*700385-20D	140TY	#14 wire	\$1286
K99G102	*700385-21Y	180TY	#10 wire	1594
K99G101	*700385-21N	180TY	#12 wire	1440
K99G103	*700385-22AH	210/250TY	#6 wire	3412
K99G104	*700385-22Y	210/250TY	#8 wire	2570
K99G105	*700385-23N	320/360TY	#4 wire	3700
K99G106	*700385-23Y	320/360TY	#2 wire	5120



EXPORT PACKAGING AND BOXING

The following price addition is to be made to the published prices of motors when standard commercial export packing and/or underdeck export shipment is required.

Add to motor net price (after all modifications have been made) \$150 or 6%, whichever is greater.

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 29-30 for dimension sheets.

STAINLESS STEEL

Contact Product Marketing for pricing.

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 AC Products 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. Standard 60 Hz motor can be renameplated at the Modification Center in Crossville, TN.
4. 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 AC Products for frame size confirmation.

List price adders below are to be made to basic 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

# of Poles	50 Hz Motors With Standard Service Factor
2	20%
4	20%
6	20%
8	28%

RE-NAME PLATE TO 50 HZ

See page 19, Athens Mod Center Modification Prices

INSTRUCTIONS, PRINTS and DATA SHEETS

When motor requisitions call for Instructions or Prints covering the specific motors ordered, materials can be selected from the following tables:

INSULATION (LIST PRICE ADDER)

- Class "H" 185°C Add 25%
- Super "H" 200°C Add 28%
- VPI Add 28%

Note: percent added is to be applied to base price of motor only.

INVERTER DUTY

UL & CSA Approved, Class I Group "D" T2A, Temp. code, PWM, VVI, CSI: 6-60 Hz. Variable Torque for standard submersibles.

Contact Product Marketing for Continuous-in-Air inverter duty.

OIL – FDA APPROVED

Add \$150 net per motor.



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	\$1130	\$1354	\$2082	\$2414	\$2922	\$8386
	Outer Seal	962	1088	1170	2126	2414	4976
Silicon Carbide	Inner seal	2260	2708	4164	4828	5632	15860
	Outer Seal	1940	2500	2688	3964	4994	9784
Viton Elastomers	Inner seal	602	632	758	814	1220	1482
	Outer Seal	568	602	618	800	814	1,292

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	\$3902	\$4360	\$4976	\$6092	\$7602

SILICON CARBIDE ADD 28%

SEAL - SLURRY APPLICATIONS

The slurry seal is specially designed 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 100 psi. Contact product marketing for availability and pricing if not listed below.

LIST PRICE ADDITIONS

Seal	210	250	320	360
Slurry	\$1646	\$1772	\$1906	\$2050

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	\$444	\$444	\$508	\$860	\$984	\$1778

SHAFTS

Standard shaft material is 416 Stainless Steel

LIST PRICE ADDITIONS

	180	210	250	320	360	440
316 SS	\$420	\$588	\$782	\$1338	\$1902	\$2374
Nitronic 50	1,112	1,274	1,857	4,102	4,404	5,505
Alloy 20	1,112	1,274	1,857	4,102	4,404	5,505

For other materials, contact product marketing.

STAINLESS STEEL - HARDWARE

Standard is 316 series stainless steel - materials other than 300 series contact product marketing.

SPARES

The following items can be entered for spares when the motor is ordered.

1 set each	Frame				
	180	210	250	320	360
Carbon/Ceramic Seals	\$100	\$125	\$150	\$400	\$600
Tungsten/Carbide Seals	600	750	950	1675	1825
Bearings	100	125	150	400	600

The prices are NET each set. Seals set consists of one of each inner and outer seal. Bearing set consists of one each front end and back end bearing.

THERMISTORS

Frame	List Price
210	1028
250	10238
320	1336
360	1336
440	1336

TEST

	Non Witnessed	Witnessed
Routine Test with Report	100	550
Mechanical Ren/No Load Vibration	100	550
Polarization Index	1000	2200
Calibration	1730	2870
3 Phase Locked Rotor	500	11150



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 AC Products for availability and pricing.

STANDARD VOLTAGES

60 Hz		50 Hz	
180TY-250TY Frames	320TY-360TY Frames	180TY-250TY Frames	320TY-360TY Frames
200	-	-	-
230	-	190	-
400	400	-	-
460	460	380	380
575	575	-	-

LIST PRICE ADDITIONS (Three-Phase only)

180	210	250	320	360	400
\$258	\$360	\$504	\$700	\$1036	\$1748

WATER JACKETS - 304 STAINLESS STEEL

Water jackets are available for 320TY to 440TY frames only. Clean water must be supplied for cooling. Add 4 weeks to the standard submersible delivery cycle

Qty	320TY	360TY	440TY
1-4	1404	14496	17738
5-9	8834	13692	15548
10 and up	7864	12288	14234

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

Note: Please note frame sizes of 50 Hz ratings.

ATHENS SHORT CYCLE AND QUICK MOD MODIFICATION PRICES

Modifications	Frame	Notes	Pricing	Sub Short Cycle Delivery	**Quick Mod QMOD 5 Day Cycle
Connections - 230/460 volt motor. Reconnect	180 - 250	Max. 25 HP	Add \$50 Net/Motor	20 Days	YES
Nameplate - Special Markings	180 - 360		\$25 Net/Motor	20 Days	YES DCT Only
Rerating UL	180 - 360		\$100 Net/Motor	20 Days	YES DCT Only
Cable Length - Lengths up to 100 feet Increments of 10 feet	180 - 360		Add for Additional Length Per Price Book Plus \$50 Reconnect	20 Days	YES 25, 40, 50 Ft.. ONLY
Seals Tungsten Carbide (Buna) Inner or outer seal	180 - 360		Add for Seal Per Price Book Plus \$200 Net Adder per Motor	20 Days	YES T/C Outer Seal Only

If motor is not in stock, but on order, add the cycle listed to the stock motor due date.

Delivery cycle in working days.

**Available for specified model numbers listed below.

Base UL Model #	Non UL Model #
P18G2701	P18G2764
P18G2702	P18G2798
P18G2703	P18G2766
P18G2704	P18G2799
P18G2784	P18G2800
P18G2787	P18G2801
P18G2791	P18G2802
P18G2794	P18G2803
P21G2701	P21G2723
P21G2702	P21G2764
P21G2704	P21G2725
P21G2710	P21G2726
P21G2735	P21G2765
P21G2736	P21G2766
P21G2737	P21G2767
P21G2738	P21G2768
P25G2702	P25G2722
P25G2704	P25G2724
P25G2706	P25G2709
P32G2701	P32G2710

Submersible Stock List

(Check OMS for Availability)

U/L Listed, 15 Minute in Air, Explosion Proof

Rating	Speed	Final Connect Voltage	Frame	Flange	Shaft	Model Number	Notes	Normally Stock	List Price	Cable Cap P/N 700385-	Wire Size	Approx. Weight
1	1800	230	180	140	140	P18G2784	R	Y	\$3,280	14E	14	165
	1200	230	180	140	140	P18G2785	R	N	3,516	14E	14	165
	1200	200	180	140	140	P18G2786	C	N	3,516	14E	14	165
1.5	1800	230	180	140	140	P18G2787	R	Y	3,360	14E	14	165
	1800	200	180	140	140	P18G2788	C	N	3,360	14E	14	165
	1200	230	180	140	140	P18G2789	R	N	3,576	14E	14	165
	1200	200	180	140	140	P18G2790	C	N	3,576	14E	14	165
2	1800	230	180	140	140	P18G2791	R	Y	3,424	14E	14	165
	1800	200	180	140	140	P18G2792	C	Y	3,424	14E	14	165
	1200	230	180	140	140	P18G2793	R	N	3,604	14E	14	165
3	3600	230	180	180	180	P18G2769	R	N	3,212	14E	14	200
	1800	230	180	140	140	P18G2794	R	Y	3,460	14E	14	165
	1200	230	180	180	180	P18G2707	R	Y	3,650	14E	14	200
5	3600	230	180	Std	Std	P18G2770	R	N	3,512	14F	12	200
	1800	230	180	Std	Std	P18G2701	R	Y	3,280	14F	12	200
	1800	200	180	Std	Std	P18G2739	C	Y	3,280	14G	10	200
	1800	460	180	Std	Std	P18G2702	R	Y	3,280	14F	12	200
	1800	575	180	Std	Std	P18G2742	C	Y	3,280	14E	14	200
	1200	230	180	Std	Std	P18G2709	R	Y	4,766	14F	12	200
	1200	575	180	Std	Std	P18G2779	C	Y	4,766	14E	14	200
	900	460	210	Std	Std	P21G2747	R	N	5,886	14L	8	335
7.5	3600	230	180	Std	Std	P18G2771	R	N	4,752	14G	10	200
	1800	230	180	Std	Std	P18G2703	R	Y	4,514	14G	10	200
	1800	200	180	Std	Std	P18G2728	C	Y	4,514	14G	10	200
	1800	460	180	Std	Std	P18G2704	R	Y	4,514	14G	10	200
	1800	575	180	Std	Std	P18G2743	C	Y	4,514	14E	14	200
	1200	230	210	Std	Std	P21G2705	R	Y	5,266	14L	10	335
	1200	230	210	180 Flg	180 Shaft	P21G2738	R	N	5,266	14L	10	335
	1200	575	210	Std	Std	P21G2745	C	Y	5,266	14J	14	335
10	3600	460	210	Std	Std	P21G2727	C	N	5,090	14K	12	335
	1800	230	210	Std	Std	P21G2701	R	Y	4,866	14M	8	335
	1800	460	210	Std	Std	P21G2702	R	Y	4,866	14M	8	335
	1800	575	210	Std	Std	P21G2715	C	Y	4,866	14J	14	335
	1800	460	210	180 Flg	180 Shaft	P21G2735	R	N	4,866	14M	8	335
	1200	230	210	Std	Std	P21G2707	R	Y	6,440	14M	8	335
	1200	575	210	Std	Std	P21G2746	C	Y	6,440	14K	12	335
15	3600	460	210	Std	Std	P21G2728	F	N	6,548	14L	10	335
	1800	575	210	Std	Std	P21G2716	C	Y	6,234	14L	10	335
	1800	460	210	Std	Std	P21G2704	R	Y	6,234	14M	8	335
	1800	230	210	Std	Std	P21G2703	R	Y	6,234	14M	8	335
	1800	460	210	180 Flg	180 Shaft	P21G2736	C	N	6,234	14M	8	335
	1200	460	250	Std	Std	P25G2707	F	Y	8,508	14M	8	445
	1200	460	250	210 Flg	210 Shaft	P25G2744	R	Y	8,508	14M	8	445
1200	575	250	Std	Std	P25G2740	C	Y	8,508	14K	12	445	

NOTES: C = Cannot Reconnect, Motor Is Single Voltage
 R = Reconnect In the Field, Motor Is Dual Voltage (230/460) and Can Be Reconnected Without A Cable Change
 F = Factory Reconnect With Additional Charge, Motor Is Dual Voltage. Must Be Reconnected With A Cable Change

Data or prices subject to change without notice



Submersible Stock List

U/L Listed, 15 Minute in Air, Explosion Proof (continued)

Rating	Speed	Final Connect Voltage	Frame	Flange	Shaft	Model Number	Notes	Normally Stock	List Price	Cable Cap P/N 700385-	Wire Size	Approx. Weight
20	3600	460	210	Std	Std	P21G2729	F	N	\$7,384	14L	10	335
	1800	575	210	Std	Std	P21G2717	C	Y	6,870	14L	10	335
	1800	460	210	Std	Std	P21G2710	R	Y	6,870	14N	6	335
	1800	460	210	180 Flg	180 Shaft	P21G2737	R	N	6,870	14N	6	335
	1200	460	250	Std	Std	P25G2710	R	Y	9,382	14N	6	445
	1200	460	250	210 Flg	210 Shaft	P25G2745	R	N	9,894	14N	6	445
	1200	575	250	Std	Std	P25G2741	C	Y	9,382	14L	10	445
25	3600	460	250	Std	Std	P25G2726	C	Y	9,658	14M	8	445
	1800	460	250	Std	Std	P25G2702	F	Y	8,778	14DA	4	445
	1200	460	250	Std	Std	P25G2712	F	Y	12,172	14DA	4	445
	1200	460	250	210 Flg	210 Shaft	P25G2746	R	N	12,684	14DA	4	445
30	3600	460	250	Std	Std	P25G2727	C	Y	10,896	14M	8	445
	1800	575	250	Std	Std	P25G2738	C	N	9,482	14M	8	445
	1800	460	250	Std	Std	P25G2704	F	Y	9,482	14M	8	445
	1200	460	320	Std	Std	P32G2700	C	Y	14,608	14Z	8	1150
40	3600	460	250	Std	Std	P25G2728	C	Y	13,478	14N	6	445
	1800	460	250	Std	Std	P25G2706	F	Y	12,838	14N	6	445
	1800	575	250	Std	Std	P25G2739	C	Y	12,838	14M	8	445
	1200	460	320	Std	Std	P32G2707	C	Y	17,538	14AC	6	1150
50	1800	460	320	Std	Std	P32G2701	C	Y	15,024	14AE	4	1150
	1800	460	320	250 Flg	250 Shaft	P32G2724	C	Y	15,024	14AE	4	1150
	1200	460	320	Std	Std	P32G2702	C	Y	18,638	14AE	4	1150
60	1800	460	320	Std	Std	P32G2706	C	Y	19,216	14AA	2	1150
	1200	460	320	Std	Std	P32G2716	C	Y	24,724	14AA	2	1150
75	1800	460	320	Std	Std	P32G2703	C	Y	24,908	14AA	2	1150
	1200	460	360	Std	Std	P36G2700	C	Y	25,474	14AA	2	1500
100	1800	460	360	Std	Std	P36G2701	C	Y	26,484	14AB	1	1500
	1200	460	360	Std	Std	P36G2702	C	Y	32,742	14AB	2/0	1500
125	1800	460	360	Std	Std	P36G2710	C	Y	31,624	14AD	2/0	1500

NOTES: C = Cannot Reconnect, Motor Is Single Voltage

R = Reconnect In the Field, Motor Is Dual Voltage (230/460) and Can Be Reconnected Without A Cable Change

F = Factory Reconnect With Additional Charge, Motor Is Dual Voltage. Must Be Reconnected With A Cable Change

Cable sizes based on 1.0 Service Factor

Submersible Stock List

Non U/L Listed, 15 minutes in air, Non-Explosion Proof

Rating	Speed	Final Connect Voltage	Frame	Flange	Shaft	Model Number	Notes	Normally Stock	List Price	Cable Cap P/N 700385-	Wire Size	Approx. Weight
1	1800	230	180	140	140	P18G2800	R	Y	\$3,280	14E	14	165
1.5	1800	230	180	140	140	P18G2801	R	Y	33,60	14E	14	165
2	1800	230	180	140	140	P18G2802	R	Y	3,424	14E	14	165
3	1800	230	180	140	140	P18G2803	R	Y	3,460	14E	14	165
5	1800	230	180	Std	Std	P18G2764	R	Y	3,088	42F	12	200
	1800	460	180	Std	Std	P18G2798	R	Y	3,088	42F	12	200
	1200	230	180	Std	Std	P18G2765	R	Y	3,792	42F	12	200
7.5	1800	230	180	Std	Std	P18G2766	R	Y	3,446	42G	10	200
	1800	460	180	Std	Std	P18G2799	R	Y	3,446	14G	10	200
	1200	230	210	180 Flg	180 Shaft	P21G2768	R	N	4,478	14L	10	335
	1200	230	210	Std	Std	P21G2722	R	Y	4,478	42L	10	335
10	1800	230	210	Std	Std	P21G2723	R	Y	4,136	42M	8	335
	1800	460	210	180 Flg	180 Shaft	P21G2765	R	N	4,136	14M	8	335
	1200	230	210	Std	Std	P21G2724	R	Y	5,382	42M	8	335
15	1800	460	210	Std	Std	P21G2725	R	Y	5,210	42M	8	335
	1800	460	210	180 Flg	180 Shaft	P21G2766	C	N	5,210	14M	8	335
	1200	460	250	Std	Std	P25G2720	R	Y	7,052	42M	8	335
20	1800	460	210	Std	Std	P21G2726	R	Y	5,844	42N	6	335
	1800	460	210	180 Flg	180 Shaft	P21G2767	R	N	5,844	14N	6	335
	1200	460	250	Std	Std	P25G2721	R	Y	8,270	42M	8	445
25	1800	460	250	Std	Std	P25G2722	R	Y	7,768	42M	8	445
	1200	460	250	Std	Std	P25G2723	R	Y	10,826	42M	8	445
30	1800	460	250	Std	Std	P25G2724	F	Y	8,530	42M	8	445
	1200	460	320	Std	Std	P32G2708	C	Y	12,376	42Z	8	1150
40	1800	460	250	Std	Std	P25G2709	C	Y	15,248	42AC	6	1150
	1200	460	320	Std	Std	P32G2709	C	Y	15,248	42AC	6	1150
50	1800	460	320	Std	Std	P32G2710	C	Y	13,920	42AE	4	1150
	1200	460	320	Std	Std	P32G2711	C	Y	16,202	42AE	4	1150
60	1800	460	320	Std	Std	P32G2712	C	Y	18,200	42AA	2	1150
	1200	460	320	Std	Std	P32G2713	C	Y	21,024	42AA	2	1150
75	1800	460	320	Std	Std	P32G2714	C	Y	21,964	42AA	2	1150
	1200	460	360	Std	Std	P32G2703	C	Y	24,908	42AA	2	1500
100	1800	460	360	Std	Std	P36G2711	C	Y	24,518	42AB	1	1500
	1200	460	360	Std	Std	P36G2704	C	Y	26,488	42AB	1	1500
125	1800	460	360	Std	Std	P32G2705	C	Y	27,606	42AD	2/0	1500
	1200	460	360	Std	Std	P36G2706	C	Y	34,666	42AD	2/0	1500
150	1800	460	360	Std	Std	P36G2707	C	Y	33,790	802385-1P	4/0	1500

NOTES: C = Cannot Reconnect, Motor Is Single Voltage

R = Reconnect In the Field, Motor Is Dual Voltage (230/460) and Can Be Reconnected Without A Cable Change

F = Factory Reconnect With Additional Charge, Motor Is Dual Voltage. Must Be Reconnected With A Cable Change

Cable sizes based on 1.0 Service Factor



Single Phase Model Numbers, U/L Listed, Explosion Proof

Rating	Speed	Final Connect Voltage	Frame	Flange	Shaft	Model Number	Notes	Norm Stock	List Price	Cable Cap P/N 700385-	Wire Size	Approx. Weight
1	1800	230	180	140	140	C18G2730	R	Y	\$3,680	17C	10	165
	1200	230	180	140 Flg	140 Shaft	C18G2700	R	Y	3,852	7E	12	200
1.5	1800	230	180	140	140	C18G2731	R	Y	3,680	17C	10	165
	1200	230	180	140 Flg	140 Shaft	C18G2701	R	Y	4,404	17F	8	200
2	1800	230	180	140 Flg	140 Shaft	C18G2702	R	Y	4,080	17F	8	200
	1800	230	180	Std	Std	C18G2703	R	Y	5,102	17F	8	200
3	1800	230	180	140 Flg	140 Shaft	C18G2704	R	Y	5,102	17F	8	200
	1200	230	210	180 Flg	180 Shaft	C21G2701	R	Y	6,254	17J	8	335
5	1800	230	210	Std	Std	C21G2702	R	Y	6,794	17J	8	335

Cable Caps

Frame	AWG	Feet	700385-	Kit Number	List Price
140	14	50	20D	K99G100	\$ 643
180	10	50	21Y	K99G102	797
	12	50	21N	K99G101	720
210/250	6	50	22AH	K99G103	1,706
	8	50	22Y	K99G104	1,285
320/360	4	50	23N	K99G105	1,850
320/360	2	50	23Y	K99G106	2560

NOTES: C = Cannot Reconnect, Motor Is Single Voltage

R = Reconnect In the Field, Motor Is Dual Voltage (230/460) and Can Be Reconnected Without A Cable Change

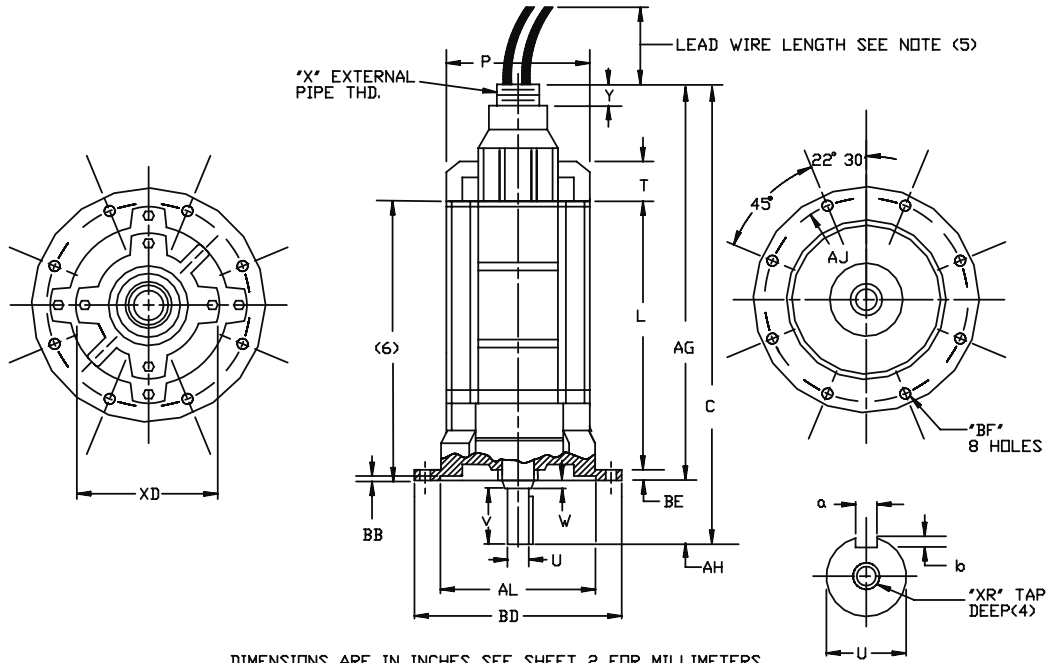
F = Factory Reconnect With Additional Charge, Motor Is Dual Voltage. Must Be Reconnected With A Cable Change

Cable sizes based on 1.0 Service Factor

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 RUNDOUT 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 _____

**RELIANCE
ELECTRIC**
CLEVELAND, OHIO 44117 U.S.A.

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

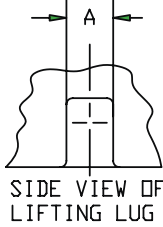
66930-17
ISSUE DATE: MARCH 16, 2000

CODE W

DUTY MASTER ALTERNATING CURRENT MOTORS

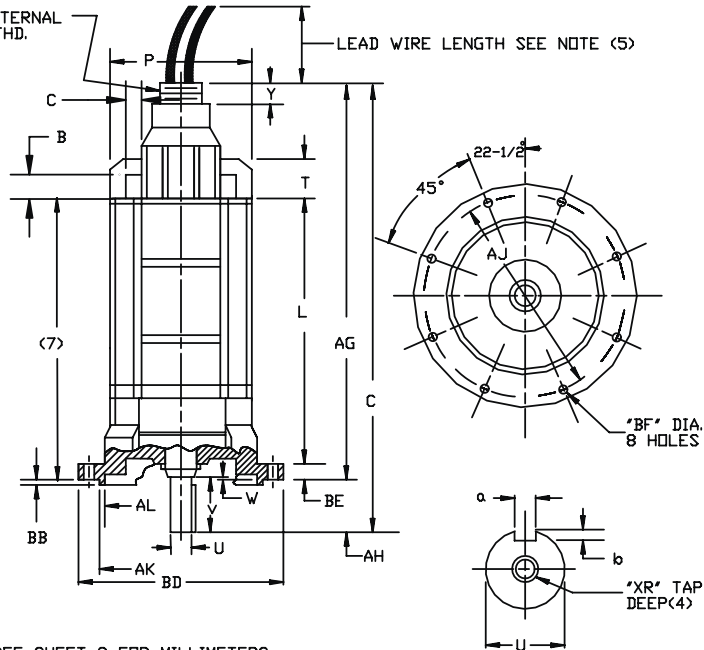
SQUIRREL-CAGE INDUCTION
ENCLOSURE: TOTALLY ENCLOSED
SUBMERSIBLE

FRAMES 210TY THRU 320TY



SIDE VIEW OF LIFTING LUG

(8)
X EXTERNAL
PIPE THD.



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			KEYWAY		WEIGHT	
					X (8)	Y	XD	BB	a		b
210TY	15.250	.75	.56	5/8-11	2-1/2-8	1.25	7.75	.25	.375	.19	315
250TY	17.000	.88	.69	5/8-11	2-1/2-8	1.25	7.75	.25	.375	.19	750
320TY	18.750	.88	.69	3/4-10	3-8	1.25	10.88	.25	.500	.25	1150

(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 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 _____

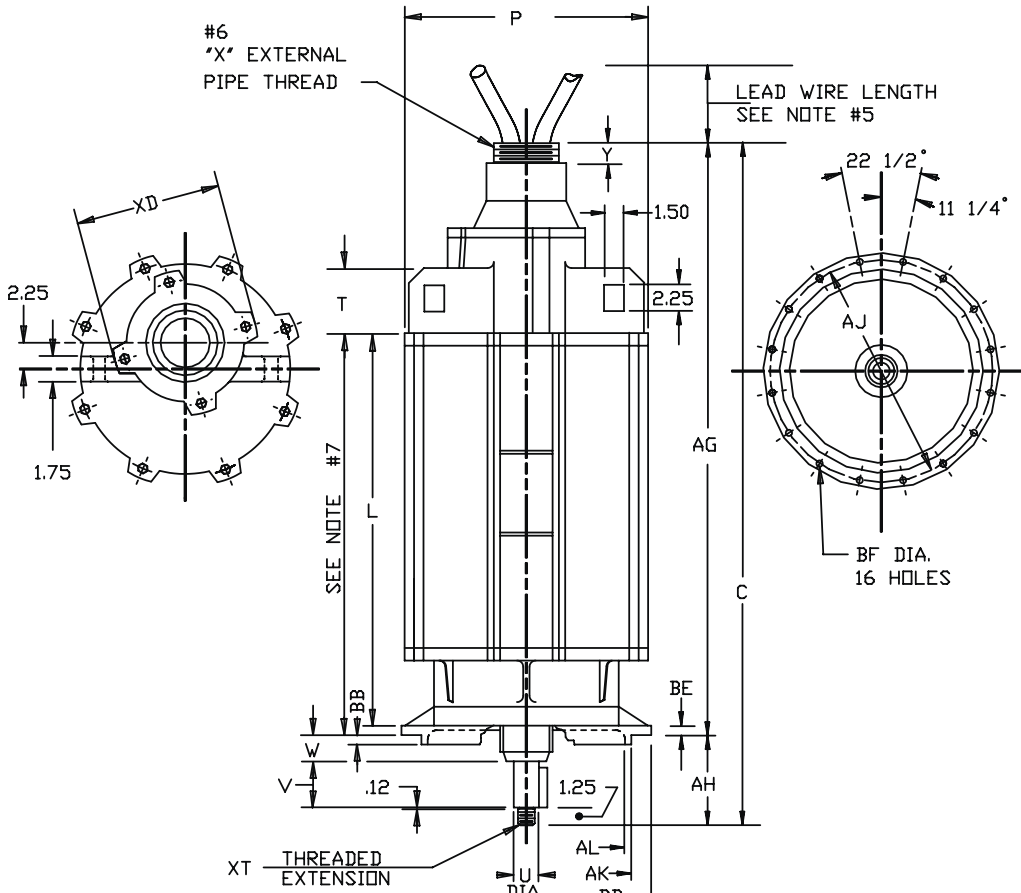
**RELIANCE
ELECTRIC**
CLEVELAND, OHIO 44117 U.S.A.

DR. BY N. JHASSETT
CK. BY V. B. TERSIGNI
APP. BY P. DELVECCHIO
DATE 8-21-68

**DIMENSION
SHEET** **66930-18**
ISSUE DATE SEPTEMBER 4, 1996
SH 1 OF 2

CODE W

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	49.81	31.25	18.38	4.25	2.4997	3.19	2.12	43.25	6.56	18.75	17.500	15.25
L360TY	51.81	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 _____

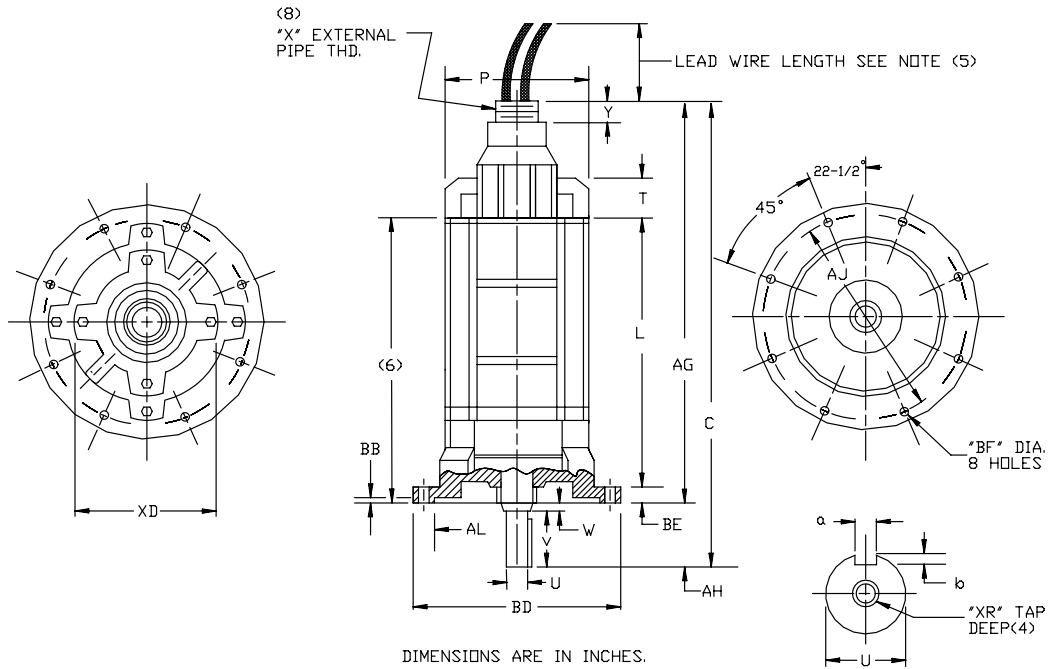
RELIANCE ELECTRIC
 CLEVELAND, OHIO 44117 U.S.A.

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

DIMENSION SHEET **66930-60**
 SHEET 1 OF 1 ISSUE DATE: JULY 29, 1993

DUTY MASTER ALTERNATING CURRENT MOTORS

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



FRAME	C	L	P	T	UC(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	KEYWAY		WEIGHT
					X	Y	XD		a	b	
180TY	11.062	.75	.44	3/8-16	2-1/2-8	1.25	6.75	.12	.187	.09	200
210TY	12.375	.75	.56	1/2-13	2-1/2-8	1.25	7.75	.12	.250	.12	315
(1)											

(1) SPECIAL DIMENSIONS ON THIS LINE.

(2) "BD" VARIES ± .010

(3) "U" VARIES +.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 +.004, -.000

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 _____

RELIANCE
ELECTRIC
CLEVELAND, OHIO 44117 U.S.A.

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

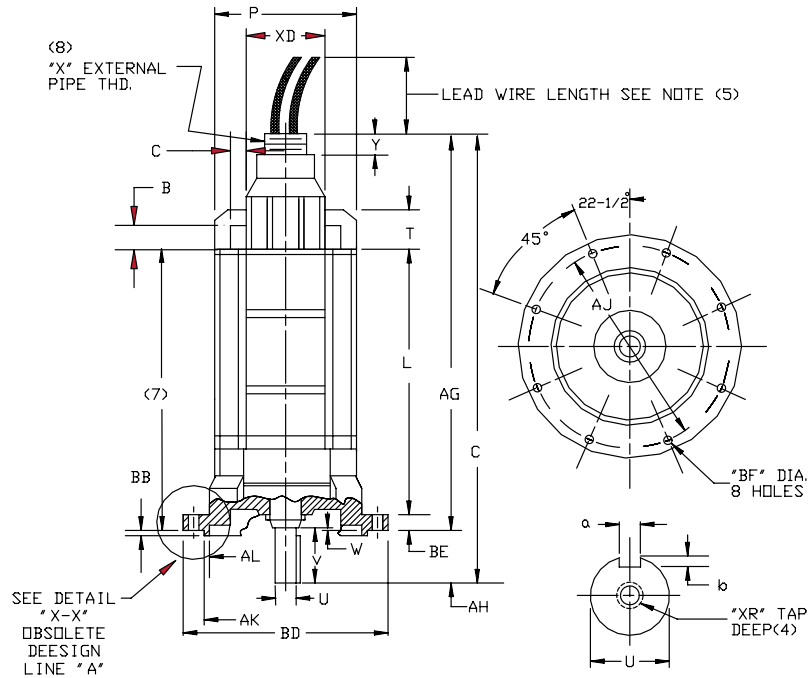
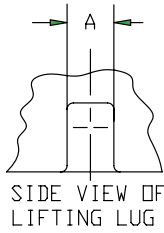
CODE W

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION
ENCLOSURE: TOTALLY ENCLOSED

SUBMERSIBLE

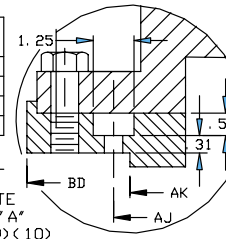
ONE SIZE SMALLER FLANGE AND SHAFT
FRAMES 250TY THRU 320TY



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

DESIGN TYPE	FRAME	C	L	P	T	UK(3)	V	W	AG	AH	AJ	AK (6)	AL	LIFTING LUG DIMENSIONS			REMARKS
														A	B	C	
A	250TY	37.06	24.50	12.75	3.50	1.438	2.00	.25	35.50	1.56	14.12	13.125	14.00	.75	2.25	2.12	OBS. DESIGN SEE NOTE (10)
B	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	CURRENT DESIGN
	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	CURRENT DESIGN

DESIGN TYPE	FRAME	BD(2)	BE	BF	XR(4)	LEAD CONNECTION			KEYWAY		WEIGHT	REMARKS	
						X (8)	Y	XD	BB	a			b
A	250TY	17.50	1.75	.56	5/8-11	2-1/2-8	1.25	7.75	.25	.375	.19	750	OBS. DESIGN SEE NOTE (10)
B	250TY	15.25	1.00	.56	5/8-11	2-1/2-8	1.25	7.75	.25	.375	.19	750	CURRENT DESIGN
	320TY	17.00	.88	.69	5/8-11	3"-8	1.25	10.88	.25	.375	.19	1150	CURRENT DESIGN



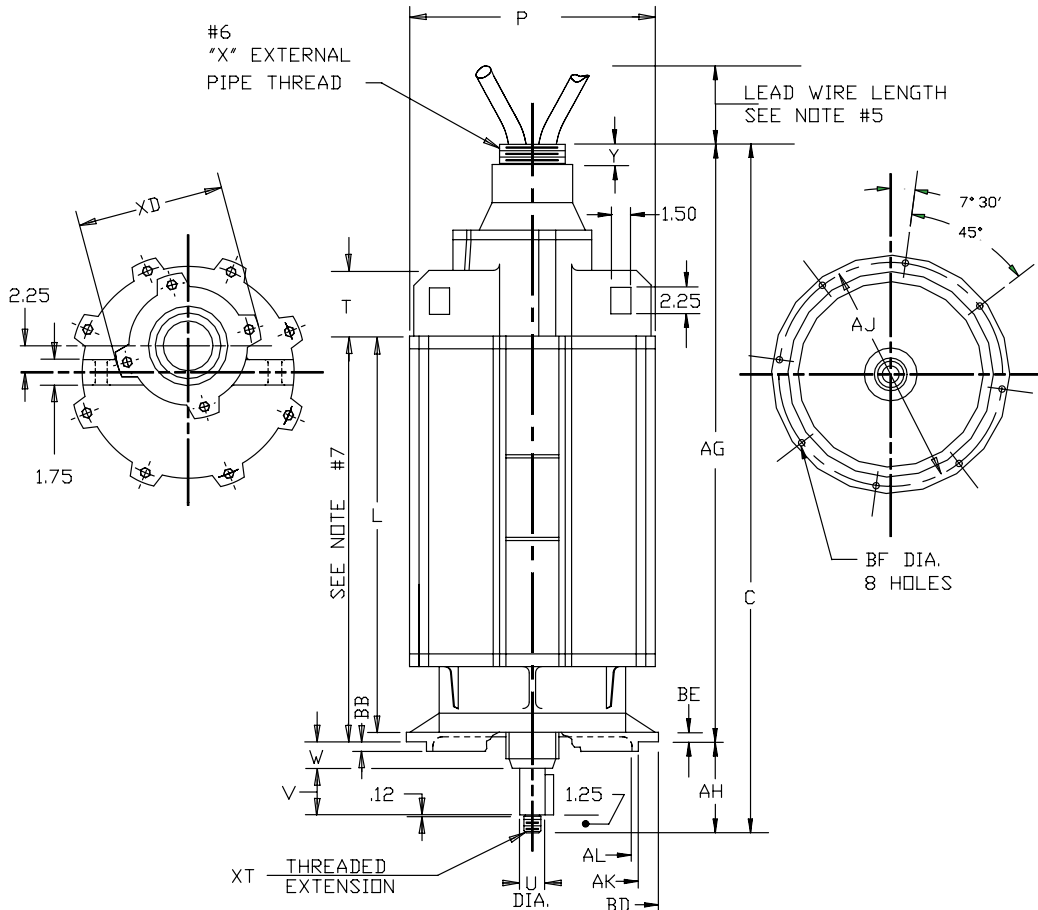
- (1) SPECIAL DIMENSIONS ON THIS LINE.
- (2) "BD" VARIES ± .010
- (3) "U" VARIES — UP TO 1.625 DIA. +.0000, -.0005
1.625 DIA. AND LARGER +.000, -.001
- (4) TAP DEPTH ON 250TY IS 1.38"
TAP DEPTH ON 320TY IS 1.50"
- (5) LEAD WIRE LENGTH AS SPECIFIED ON CERTIFICATION
- (6) "AK" VARIES +.000, -.002
- (7) 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.
- (9) CUSTOMER TO MOUNT PLATE TO PUMP, THEN MOUNT MOTOR TO PLATE. 250TY FRAME ONLY
- (10) DESIGN A SUPERCEDED BY DESIGN B (NO ADAPTER PLATE AS SHOWN DETAIL "AA")

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

<p>RELIANCE ELECTRIC</p> <p>CLEVELAND, OHIO 44117 U.S.A.</p>	<p>DR. BY E.SUGHRI</p> <p>CK. BY J.LLELLIOT</p> <p>APP. BY G.R.KILBORN</p> <p>DATE 8-1-75</p>	<p>DIMENSION SHEET</p> <p>SH. 1 OF 2</p>	<p>66930-28</p> <p>ISSUE DATE: NOVEMBER 12, 1997</p>
---	---	---	---

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* 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 RUNDOUT AND ECCENTRICITY .008 MAX. T.I.R.
PROTECTIVE CONDUIT FURNISHED BY CUSTOMER.

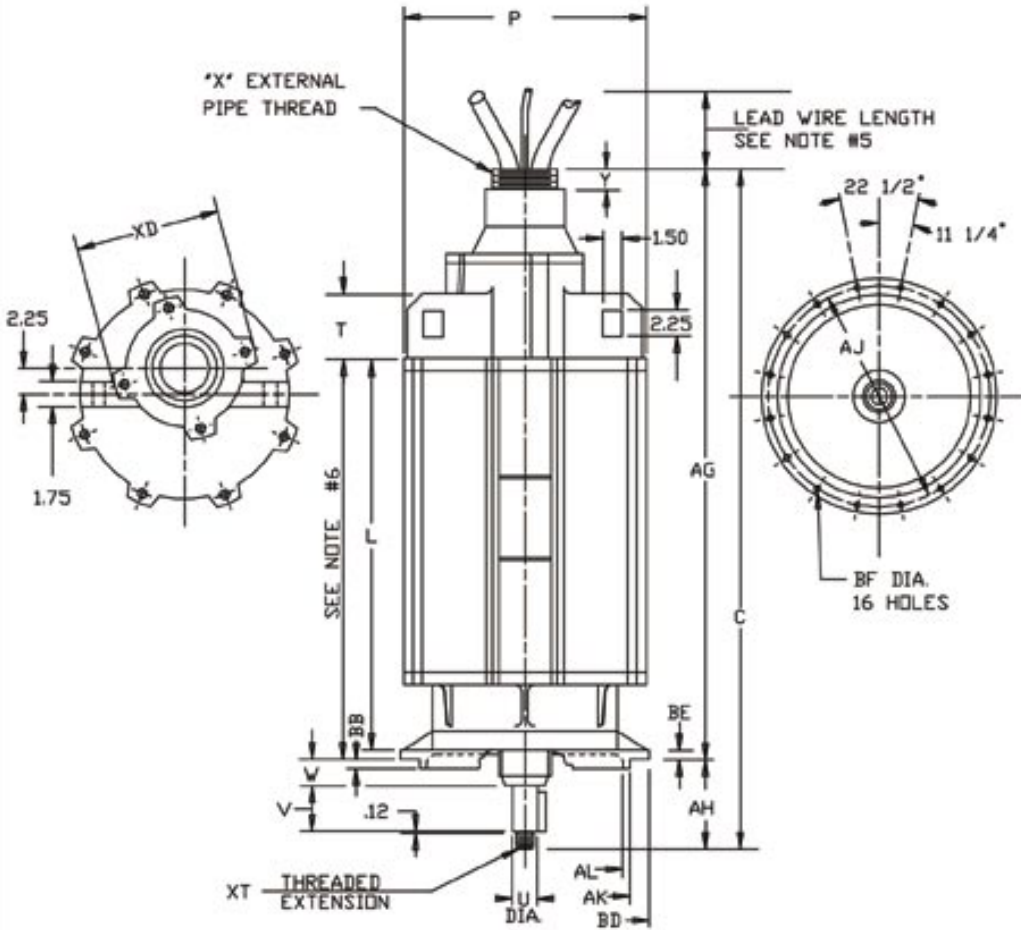
FRAME-_____ TYPE-_____ CERTIFIED FOR-_____
 ORDER-_____ ITEM-_____ HP-_____ RPM-_____ PH-_____ HZ _____ VOLTS-_____
 RELIANCE SALES ORDER-_____ APPROVED BY-_____ DATE _____

RELIANCE ELECTRIC
CLEVELAND, OHIO 44117 U.S.A.

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

DIMENSION SHEET 66930-82
ISSUE DATE: JANUARY 31, 1996
SHEET 1 OF 2

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 RUNDOUT 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 _____

RELIANCE ELECTRIC
 CLEVELAND, OHIO 44117 U.S.A.

DR. BY VERN S. JENSEN
 CK. BY SEN THOMAS
 APP. BY G. KILBORN
 DATE 2-13-86

DIMENSION SHEET
 SHEET 1 OF 2

66930-82
 ISSUE DATE: APRIL 20, 1999

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 stock list)
- Modifications such as outer seal changes, re-nameplate, and longer cable lengths are available through the Athens Mod Shop, QSUB or QMOD. See page 19.
- 65° C ambient and above must be non explosion proof
- 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)

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 (Warwick 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 U/L listing to be valid.

Typical Performance Data

“Submersible Motors, 15 min. in air, continuous water/sewage”
SINGLE phase, 60 HZ

H.P	RPM	FRM 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”

H.P	RPM	FRM SIZE	AMPS.@460v			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	

SUBMERSIBLE MOTORS

Performance Data



Typical Performance Data
“Submersible Motors, 15 min. in air, continuous water/sewage”
“Three phase, 60 HZ”

H.P	RPM	FRM SIZE	AMPS.@460v			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	

