F&Q PUMPS INC.
A Pump and Motor Manufacturer

SUBMERSIBLE MOTORS

140TY/180TY/210TY/250TY SUBMERSIBLE MOTORS

MODEL: 140TY, 1-3 HP
180TY,5-7.5HP
210TY,7.5-20HP
250TY,20-50HP

KEY FEATURES:

- Energy efficient and Premium efficient designs
- 1.15 S.F. on Sine Wave, 1.0 S.F. on inverter
- Class F insulation
- Cast Iron Construction
- P-Base mounting flange
- 420 Stainless Steel Shaft
- Type 21 carbon ceramic mechanical shaft seals. O-rings and Sealed fits in stator housing and end plates
- Non-wicking, potted cable cap assembly securely attaches and seals the power leads to the frame. Cable cap design allows for easy removal and reconnection of the power cable.
- Drive end oil chamber provides a barrier against moisture ingress into the bearings as well as lubricating the upper seal. Oil chamber is filled prior to shipment.
- Moisture probes mounted in oil chamber to detect ingress of moisture. Moisture control relay supplied by customer.
- (2) Integral cast in lifting provisions for easy, balanced lifting and mounting of the motor
- Deep groove Conrad type ball bearings, Class 3 fit per AFBMA std. 20
- (2) N.C. Thermostats
- 404 Corrosion resistant stainless steel nameplate and exterior hardware
- 30 foot power & control cables
- Neoprene jacketed power and control cables
- 2 Year Prorated Warranty from date of Manufacture.

Common Options:

- *Class H insulation system*
- *Special paint (Coal tar epoxy paint)*
- *Inner and outer seals options*
- *Cable lengths to 100 feet (Longer lengths require approval)*
- *Shaft materials*
- *Water Jacket Design (to reduce frame size requirements)*
- *One size smaller flange and shaft*

10617 E. Rush Street, South El Monte, CA 91733 Phone: 626-455-0884 Fax: 626-448-9462 www.fqpumps.com

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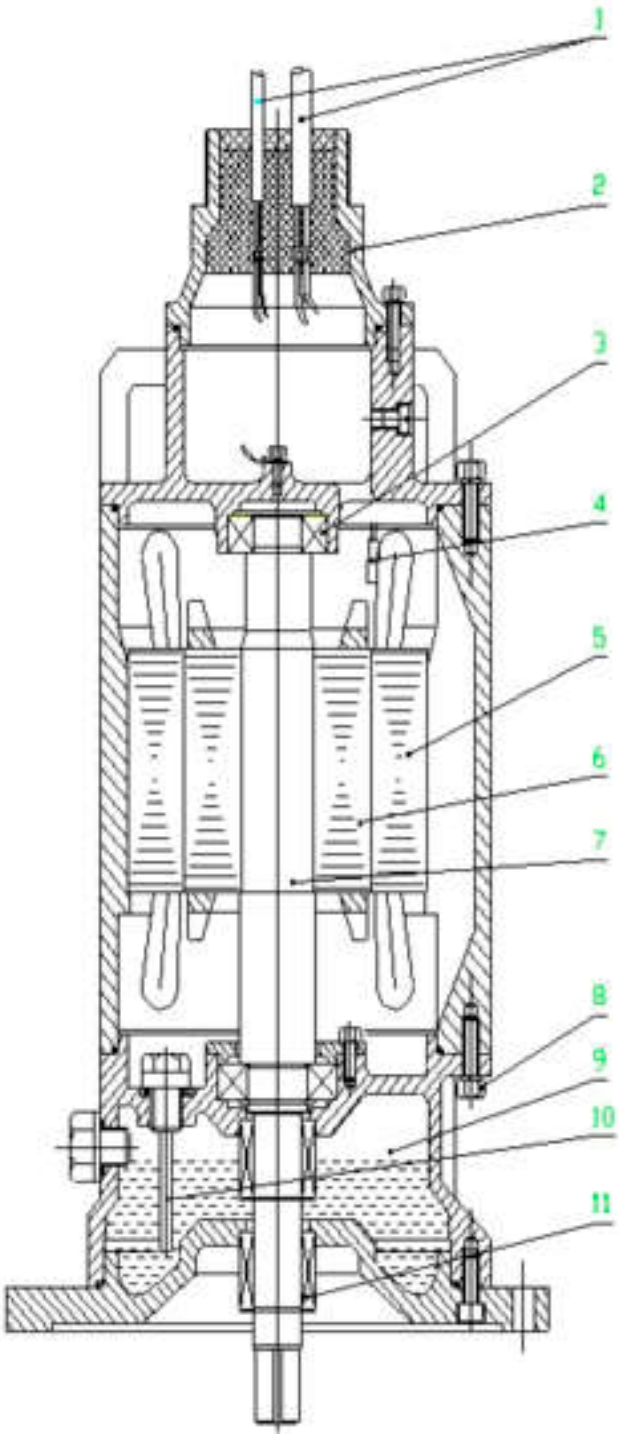
Submersible Motor Construction



1. CABLE
Specifically designed for submersible applications chloroprene cable withstands temperatures of up to 90ºC.

2. CABLE ENTRY POTTING
Epoxy-filled, non-wicking cable cap assembly

3. BEARINGS
Single row, deep groove or double row angular contact, Conrad type

4. THERMAL PROTECTOR
Embedded in the motor windings with three auto-matic-resetting bimetallic thermostats

5.MOTOR
An air filled, three phase squirrel cage induction motor for submersible or dry pit duty.

6. ROTOR
Cast aluminum, dynamically balanced

7. SHAFT
420 stainless steel

8. HARDWARE
304 stainless steel.

9. OIL CHAMBER
Acts as a barrier to trap moisture and provide sufficient time for shut down. Also provides lubrication for upper seal

10. LEAKAGE DETECTOR
A single-electrode or dual-electrode leakage detectors are mounted in oil chamber to detect ingress of water.

11. SHAFT SEALS
Two independently mounted Type 21 mechanical face type seals.

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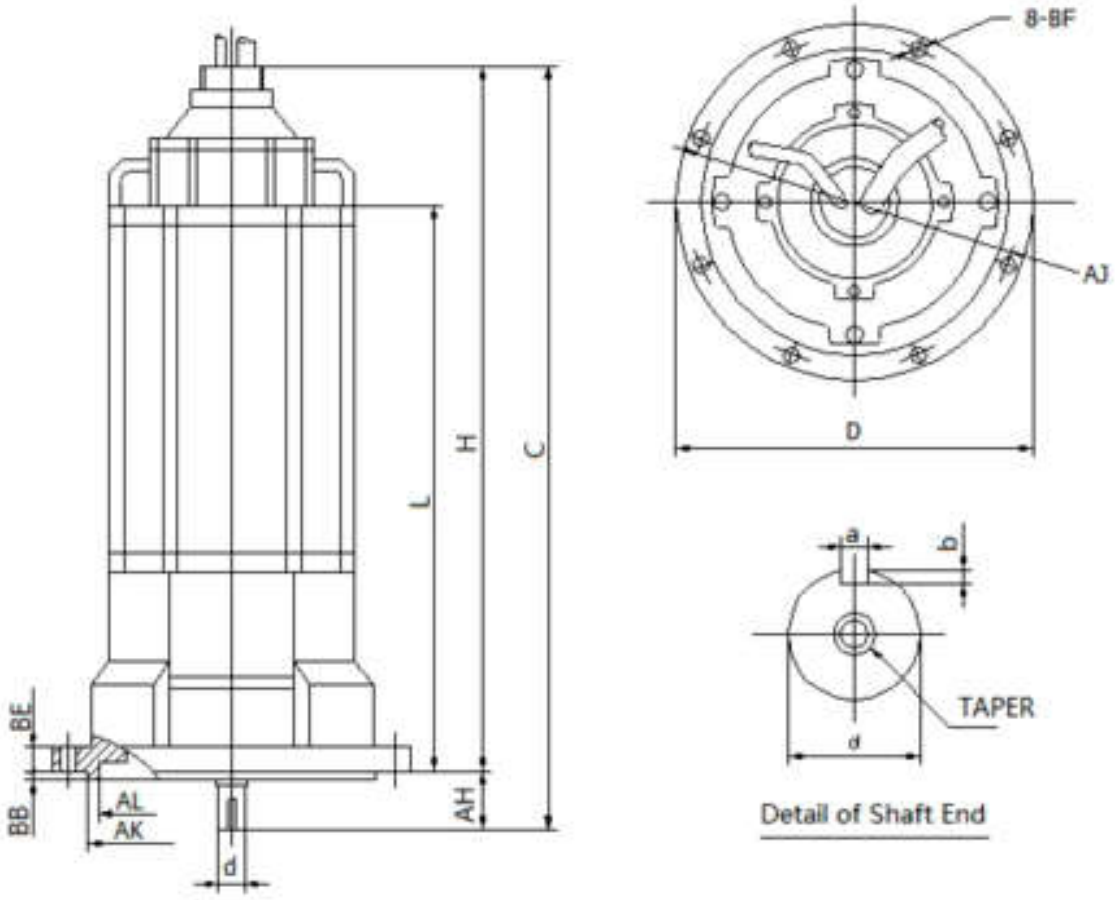
Submersible Motor Size



Detail of Shaft End

DIMENSIONS: (INCHES)

FRAME	C	H	AH	L	BB	BE	AK	AL	D	AJ	BF	d	KEYWAY	
													a	b
140TY	22.82	21.26	1.56	15.3		0.75		9.126	11.062	10.00	.044	0.875	0.187	0.09
180TY	26.66	24.38	2.28	17.3		0.75		10.63	12.375	11.5	0.56	1.25	0.25	0.12
210TY	32.03	30.47	1.56	24.1	0.25	0.75	13.125	12.00	15.25	14.12	0.56	1.438	0.375	0.19
250TY	38.93	36.61	2.32	26.65	0.25	0.88	15.00	14.00	17.00	16.00	0.69	1.75	0.375	0.19

(1)Tolerance is +0.00 inch , -0.06 inch (for"AK"&"d")
(2)L: Minimum submerged depth

Dimensions of flange and shaft extension are optional

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F&Q offers submersible motors serving both municipal and industrial wastewater markets for both wet & dry pit applications. Wet pit motors use the effluent for cooling and can run 15 minutes in air. Dry pit motors are designed to run continuously in air or submerged when properly applied. F&Q also offers designs suitable for rugged slurry pump applications, aerators and mixers.

Frame Size	Model No.	Poles	Out Power (Hp)	Rated C't (A)	Efficiency			Power Factor			Rated Speed (r/min)	Starting Characteristics		
					1/1 (%)	3/4 (%)	1/2 (%)	1/1 (%)	3/4 (%)	1/2 (%)		Is (A)	Ts (%)	Tm (%)
140TY	140TY-2P-3HP	2	3	4.5	74	71	64	85	81	73	3460	31	290	250
	140TY-4P-1HP	4	1	2	73	71	68	76	71	60	1760	13.5	340	260
	140TY-4P-1.5HP	4	1.5	2.7	74	72.5	68	78	73	61.5	1745	19	320	250
	140TY-4P-2HP	4	2	3.1	75	73.5	69	80.5	74	62.5	1735	23	350	270
	140TY-4P-3HP	4	3	4.3	77	76.5	73.5	83.5	77.5	66.5	1725	30	310	250
180TY	180TY-2P-7.5HP	2	7.5	10	76	73.5	67.5	92.5	91.5	88	3450	58	270	260
	180TY-4P-5HP	4	5	6.7	80	79	79	84	83	80	1765	47	290	230
	180TY-4P-7.5HP	4	7.5	10	84	83	81	86	81	70.5	1735	63	270	250
210TY	210TY-4P-10HP	4	10	15.5	87	86	84	85	82.5	75	1754	92	270	250
	210TY-4P-15HP	4	15	19.5	88	87	85	86	82	78	1750	135	250	240
	210TY-4P-20HP	4	20	24	89	87	85.5	88	84	80	1750	165	235	210
	210TY-6P-7.5HP	6	7.5	11.5	80	80	76.5	76	69.5	57.5	1143	62	190	205
	210TY-6P-10HP	6	10	15	81	81	78.5	77	71	59	1140	78	180	200
	210TY-6P-15HP	6	15	20.9	85	84.5	82.5	79	73	61.5	1160	112	190	210
	210TY-8P-10HP	8	10	14.8	82.5	82.5	80	76.5	69.5	57	860	72	170	205
250TY	250TY-2P-50HP	2	50	58	88	87.5	86	91.5	90	85	3460	402	220	250
	250TY-4P-50HP	4	50	61	90	90	88.5	85.5	82.5	74	1760	340	200	210
	250TY-6P-20HP	6	20	26.7	86.5	86	84	81	75.5	64.5	1160	140	180	210
	250TY-6P-25HP	6	25	34.1	87	86.5	84.5	79	73	62	1160	185	200	220
	250TY-6P-40HP	6	40	53	88	88	86.5	81	76.5	66	1165	285	170	200

Note: Starting Characteristics
Is: Locked Rotor Current *Tm: Breakdown Torque*
Ts: Locked Rotor Torque *DOL: Direct on Line Start*

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