



PENTEK[®]
6" SUBMERSIBLE
MOTORS

6" Submersible Motors

For high-thrust water well applications

5-30hp, 230V, 60hz, 3 phase

5-50hp, 460/380V, 60/50hz, 3 phase

Pentair's line of Pentek® motors are designed for long service life and years of dependable operation. Innovative design and robust characteristics make this the perfect motor for your pumping applications.

ENCAPSULATED, WATER-FILLED DESIGN

The Pentek submersible motor combines internal lubrication (a cooling blend of water, glycol, and propylene), along with superior materials, to provide the industry with innovative and advanced design features that will extend the serviceable life of your installation. The encapsulated design provides superior insulation, heat transfer properties, and stability to the motor's windings (protecting the windings from "flexing" or "vibration").

ADDITIONAL FEATURES

Exceptional insulation rating (Class F) and temperature rating (95°F / 35°C)

Vertical or horizontal mounting orientation

VFD-compatible

IP 68 protection rating



Thrust Bearing

Water lubricated, Kingsbury-Type – industry-accepted standard for thrust bearing construction.



Mechanical Seal

Silicone Carbide – excellent abrasion, wear, and corrosion resistance; resists deflection in high-pressure, high heat, and high-speed conditions; high thermal conductivity (heat dissipation). Provides superior protection against sand intrusion.



Pressure Equalizing Diaphragm

Minimizes expansion pressure inside the motor due to changes in temperature and pressure.



Motor lead – 157" / 4m – potted connection, including ground wire. Non-jacketed wire assembly for easier handling and connections. Fully replaceable.

Shaft – standard NEMA-splined, 431 stainless steel; excellent tensile and torque strength, and corrosion resistance

External sand slinger – added protection against sand and other abrasives

Upper bracket – "dual-flange"-style; easier and faster assembly to the pump

Upper bracket – epoxy-coated cast iron; applied via electrodeposition – provides better adhesion of the coating and more consistent coverage, delivering a longer lasting, more durable coating

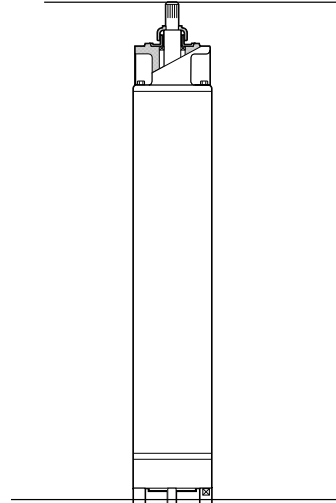
Motor casing – 304 stainless steel; excellent forming and welding characteristics, and corrosion resistance

Lower bracket – epoxy-coated cast iron; applied via electrodeposition – provides better adhesion of the coating and more consistent coverage, delivering a longer lasting, more durable coating

MATERIALS OF CONSTRUCTION

PARTS	MATERIALS
Motor sleeve, fasteners	304 stainless steel
Castings	cast iron - epoxy coated (applied via electrodesposition)
Shaft	NEMA splined, 431 stainless steel
Thrust bearings	Kingsbury-type disc - carbon (resin impregnated) pad - 420 stainless steel
Mechanical seal	silicon carbide
Diaphragm, sand slinger	nitrile rubber

MOTOR DIMENSIONS



PENTEK 6" encapsulated - motor data sheet

Nominal diameter 6"/152.4 mm
 Effective diameter 5.43"/138 mm
 Shaft extension length 2.87" / 73 mm

MOTOR TYPE	PHASE	NOTE	PENTEK		HP	KW	HZ	VOLTS	AMPS	RATED EFF.		SERVICE FACTOR 1.15		LOCKED ROTOR AMPS	KVA CODE	THRUST LOAD (LBS)	INSULATION CLASS	WINDING RESISTANCE (OHM)		LENGTH				WEIGHT			
			MODEL #							%	P.F. %	AMPS	%					P.F. %	RPM	IN*	MM*	IN**	MM**	LBS	KG		
6"	Three	Motors are 60 Hz only	6PM2-5-2	5	3.7	60	230	15.8	77	78	17.4	77	81	97.5	J	1763	F	0.79	3445	22.7	577	21.1	535	90	41		
				7-1/2	5.5			22.0	79	82	24.4	79	84	147.9	J			0.54	3450	24.9	632	22.7	577	102	46		
			6PM2-5-2-01	5	3.7	15.8	77	78	17.4	77	81	97.5	J	0.79	3445	22.7		577	21.1	535	90	41					
				7-1/2	5.5	22.0	79	82	24.4	79	84	147.9	J	0.54	3450	24.9		632	22.7	577	102	46					
			6PM2-10-2	10	7.5	30.8	77	81	33.0	78	83	187.6	J	0.40	3440	29.2		741.5	24.9	632	116	53					
				15	11.0	43.2	78	84	47.0	78	86	281.8	J	0.28	3450	31.8		807.5	27.5	698	121	55					
			6PM2-20-2	20	15.0	57.4	79	85	63.0	79	87	394.5	J	0.21	3450	35.1		892.5	35.1	892.5	147	67					
				25	18.5	69.0	81	86	76.0	80	88	480.2	J	0.16	3450	38.0		964.5	38.0	964.5	165	75					
			6PM2-30-2	30	22.0	76.6	84	88	85.0	84	89	614.2	K	0.14	3500	41.8		1060.5	41.1	1044.5	190	86					
				6PM2-5-4	5	3.7	50	380	9.1	76	84							45.5	G	1763	2.97	2800	22.7	577	21.1	535	90
			60		460	7.9	77	78	8.7	77	81	48.8	J	3445													
			6PM2-7-4	7-1/2	5.5	50	380	12.8	78	86						67.9		G	1763	1.98	2810	24.9	632	22.7	577	102	46
				60	460	11.0	79	82	12.2	79	84	74.0	J	3450													
			6PM2-5-4-01	5	3.7	50	380	9.1	76	84						45.5		G	3485	2.97	2800	22.7	577	21.1	535	90	41
				60	460	7.9	77	78	8.7	77	81	48.8	J	3445													
			6PM2-7-4-01	7-1/2	5.5	50	380	12.8	78	86						67.9		G	3485	1.98	2810	24.9	632	22.7	577	102	46
				60	460	11.0	79	82	12.2	79	84	74.0	J	3450													
			6PM2-10-4	10	7.5	50	380	17.8	78	85						85.6		G	3485	1.46	2800	29.2	741.5	24.9	632	116	53
		60		460	15.4	77	81	16.5	78	83	93.8	J	3440														
		6PM2-15-4	15	11.0	50	380	25.6	77	87						127.0	F		3485	0.99	2810	31.8	807.5	27.5	698	131	55	
			60	460	21.6	78	84	23.5	78	86	140.9	J	3450														
		6PM2-20-4	20	15.0	50	380	34.0	78	89						170.2	G		3485	0.72	2810	35.1	892.5	35.1	892.5	147	67	
			60	460	28.5	79	85	31.5	79	87	197.3	J	3450														
		6PM2-25-4	25	18.5	50	380	41.0	79	89						219	G		3485	0.56	2820	38.0	964.5	38.0	964.5	165	75	
			60	460	34.5	81	86	38.0	80	88	240.1	J	3450														
		6PM2-30-4	30	22.0	50	380	46.0	83	90						276.8	G		3485	0.50	2880	41.8	1060.5	41.1	1044.5	190	86	
			60	460	38.0	84	88	42.5	84	89	307.1	J	3500														
		6PM2-40-4	40	30	50	380	62.5	83	90						393.1	H		6182	0.40	2860	47.1	1197	44.7	1134.5	209	95	
			60	460	52.7	84	88	58.0	84	89	439.7	K	3490														
		6PM2-50-4	50	37	50	380	77.6	83	90						449.8	G		6182	0.33	2840	49.9	1267	47.4	1204.5	292	132	
			60	460	64.3	85	87	70.8	85	89	500.5	J	3480														

* = Motors with serial numbers beginning with 200, and serial numbers between 20105213xxxx and 20109113xxxx, are equipped with a 4-stud, "single-flange"-style mounting bracket.

** = Motors with serial numbers beginning with 20109213xxxx are equipped with a "dual-flange"-style mounting bracket.

50 Hz performance numbers are at a service factor of 1.0.



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