



4660

Submersible Mixer

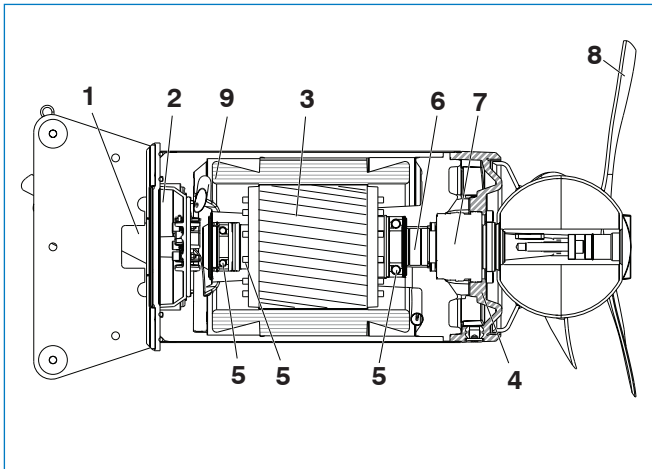
## Heavy duty, direct drive mixer

Nominal Thrusts: 1,320 to 3,300 N



### Applications:

4660 mixers are used in industrial processes such as Pulp & Paper, Chemicals, Food & Beverage and more. Also found in Municipal and Industrial waste treatment, Mining, Marine and Agricultural uses.



### Materials of Construction:

Available in a choice of the following:

- 304 Stainless Steel
- 316 Stainless Steel

### Approvals:

CSA tested and approved to UL Standard for Safety #778.

Factory Mutual Research tested and approved.

Suitable for use in:

Class I Div 1 groups C and D

Class II Div 1 groups E; F and G

Class III Div 1 Hazardous locations



### Specifications

#### 1. Cable Entry

Cable entry consists of two compressible rubber bushings to seal off motor area and relieve strain on the cable. Twice as many sealing bushings as previous designs means high reliability in difficult applications.

#### 2. Junction Box

Box is completely sealed off from surrounding liquid and stator casing via terminal board and an O-ring.

#### 3. Motor

Squirrel cage, 3 phase induction shell type design NEMA B motors are specifically designed for each mixer frame size. Non-overloading for full performance range. Motor insulation is Class H with a maximum working temperature of 180°C (356°F). Combined service factor of 1.10. Motors can be run continuously or intermittently. The stator is cooled by the surrounding mixed media.

#### 4. Oil Casing

An environmentally friendly white paraffin based, FDA approved, non-toxic oil lubricates and cools the seals and acts as an additional barrier to prevent liquid from penetrating the motor area. Pressure build-up within the casing is reduced by an inner and outer oil compartment design which transports any foreign liquids away from rotating components.

#### 5. Bearings

Bearings are of a preloaded design rated in excess of 100,000 hours of operation (B-10 rated life). Shaft is supported by a single row angular contact ball bearing and single row cylindrical roller bearing, plus a heavy duty single row angular contact ball bearing on the propeller side.

#### 6. Shaft

Motor shaft and rotor are a single integral unit. Shaft is completely isolated and cannot come in contact with the mixed media.

#### 7. Active Shaft Seals

Outer mechanical seal isolates the oil housing and surrounding liquids and is tungsten carbide lapped end faced running in oil. Inner mechanical seal operates between oil casing and stator casing. Only seal faces operate in the mixed media, all other components are within motor housing. One seal face of the inner seal pair has laser etched spiral grooves. As the seal rotates, these grooves act to pump any leakage back into the oil casing from out of the stator housing.

#### 8. Propeller

Three bladed, 316 stainless steel or optional high chrome propeller. Blades have large width, thin profile and smooth surface with a back swept design for optimum efficiency and non clogging operation. The blades are laser cut to exacting tolerances.

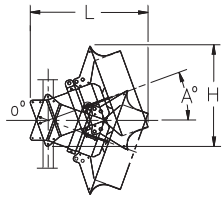
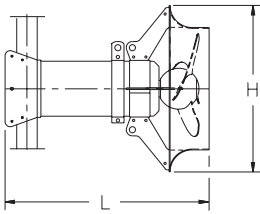
#### 9. Monitoring Equipment

The stator incorporates three thermal switches connected in series (one in each phase) which open at 260°F (125°C).

### Flygt products are affiliated with the following associations:



4660



ALL DIMENSIONS IN INCHES

DIMENSIONAL CHART					
A°	-20	-10	0	+10	+20
H	32½	31	32½	31	32½
L	43½	41½	39½	41½	43½

WEIGHT(LBS)  
460

Propeller Performance

Model	*Prop. Code	Ø	Poles	Max. Motor HP Rating	Shaft HP	% Full Load	Power Input (kW)	Prop. Speed (RPM)	Prop. Dia. (inches)	Blade Angles (Degree)	Nominal Thrust (N)
4660	125803SJ	3	12	11.0	5.6	51	5.27	585	22 13/16"	3°	1320
	125805SJ	3	12	11.0	6.5	59	6.10	585	22 13/16"	5°	1650
	125807SJ	3	12	11.0	7.7	70	7.25	585	22 13/16"	7°	2020
	125809SJ	3	12	11.0	9.4	85	8.72	585	22 13/16"	9°	2420
	Mixer With Jet Ring	125803SJ	3	12	15.0	5.9	39	5.40	575	22 13/16"	3°
125805SJ		3	12	15.0	6.9	46	6.40	575	22 13/16"	5°	1650
125807SJ		3	12	15.0	8.1	54	7.60	575	22 13/16"	7°	2020
125809SJ		3	12	15.0	9.5	63	8.80	575	22 13/16"	9°	2420
125811SJ		3	12	15.0	11.3	75	10.50	575	22 13/16"	11°	2860
125813SJ		3	12	15.0	13.2	88	12.30	575	22 13/16"	13°	3330
Mixer Without Jet Ring	125803SF	3	12	11.0	7.4	67	6.90	585	22 13/16"	3°	1600
	125805SF	3	12	11.0	9.1	83	8.52	585	22 13/16"	5°	1930
Mixer Without Jet Ring	125803SF	3	12	15.0	7.4	49	6.90	575	22 13/16"	3°	1600
	125805SF	3	12	15.0	9.2	61	8.52	575	22 13/16"	5°	1930
	125807SF	3	12	15.0	10.8	72	10.10	575	22 13/16"	7°	2270
	125809SF	3	12	15.0	12.6	84	11.80	575	22 13/16"	9°	2600

Motor Data

\* Propellers also available in high chrome.

Rated Output Power HP (kW)	Volts nom.	Full Load Amps	Locked Rotor Amps	Locked Rotor KVA	NEC Code Letter	Rated Input Power kW	Poles/RPM	Cable Size	Cable Part Number	Max. Cable Length (FT.)	
11 (8.2)	3	200	47	174	60	F	10.3	12/585	4G10+S(2x0.5) 25.0 mm (0.98")	94 19 81	150
		230	41	154	61	F			"	200	
		460	23	90	72	H			4G6+2x1.5 24.0 mm (0.94")	94 20 56	455
		575	18	70	70	H			4G2.5+2x1.5 17.5 mm (0.69")	94 20 59	300
15 (11.2)	3	200	58	178	62	D	14.0	12/575	4G16+S(2x0.5) 27.0mm (1.06")	94 19 82	165
		230	51	156	62	D			"	210	
		460	27	84	67	D			4G6+2x1.5 24.0 mm (0.94")	94 20 56	340
		575	22	71	71	E			"	520	

Power Cable for Warm Liquid Mixers - HCR cable - to 195°F (90°C)

HP	Volts	Cable Size	Part No.
11	200/230	4G16+2x1.5 - 20.5 mm (0.81")	94 20 96
11	460/575	7G6.0 - 16.7 mm (0.66")	94 20 94
15	200/230/460	4G16+2x1.5 - 20.5 mm (0.81")	94 20 96
15	575	7G6.0 - 16.7 mm (0.66")	94 20 94

**Liquid Temperatures:** Mixers constructed in 316SS are assembled using components that will withstand liquid temperatures up to 195°F. Cable sizes shown above are based on max. liquid temperature of 104°F. Choose warm liquid power cable for liquid temperatures exceeding 104°F from the table to the left.

HP	Efficiency			Power Factor			Electrical Service Specifications
	100% Load	75% Load	50% Load	100% Load	75% Load	50% Load	
11.0	79.5	79.5	77.0	0.56	0.47	0.36	Voltage Tolerances: ±5% (Rated Output), ±10% (without overheating) Frequency Tolerance: ±5% Voltage Balance (Phase to Phase): ±1% VFD Compatible
15.0	79.5	78.0	73.0	0.64	0.56	0.44	

Xylem Inc., Flygt products, reserves the right to modify performance, specifications or design without notice.

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