FLYGT
a xylem brand

4670

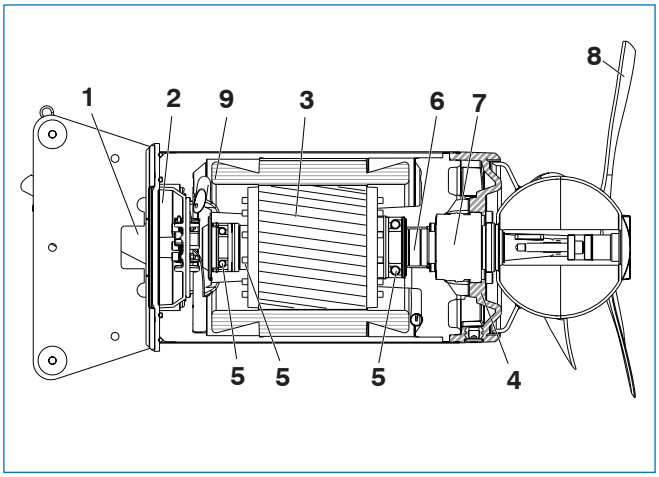
Submersible Mixer

Heavy duty, direct drive mixer

Nominal Thrusts: 2,040 to 4,010 N

Applications:

4670 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

Factory Mutual System Approved

US

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.

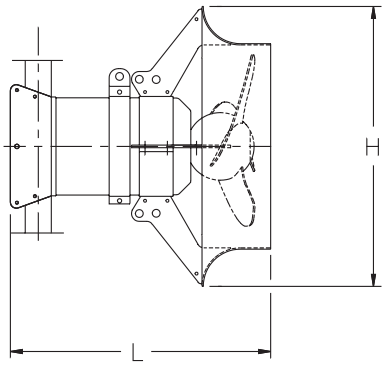
9. Monitoring Equipment

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:

Submersible Wastewater Pump Association SWPA
We Dig America
AEM Association of Equipment Manufacturers
NMA The American Resource
ARA american rental association

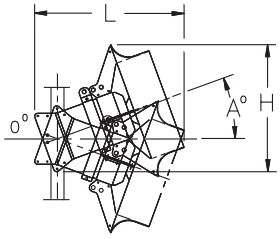
4670



ALL DIMENSIONS IN INCHES

DIMENSIONAL CHART

A°	-20	-10	0	+10	+20
H	39 7/8	41 3/4	42 3/8	41 3/4	39 7/8
L	45 1/4	42 7/8	39 1/2	42 7/8	45 1/4



WEIGHT(LBS)
760

Propeller Performance

Model 4670	*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)
Mixer With Jet Ring	167705SJ	3	16	20.0	11.6	58	10.90	435	30 1/8"	5°	2040
	167707SJ	3	16	20.0	13.0	65	12.30	435	30 1/8"	7°	2670
	167709SJ	3	16	20.0	15.0	75	14.10	435	30 1/8"	9°	3300
	167711SJ	3	16	20.0	17.8	89	16.70	435	30 1/8"	11°	4010
Mixer Without Jet Ring	167705SF	3	16	20.0	14.2	71	13.40	435	30 1/8"	5°	2470
	167707SF	3	16	20.0	16.4	82	15.40	435	30 1/8"	7°	3070

*Propellers also available in high chrome.

Motor Data

Rated Output Power HP (kW)	Ø	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.)
20 (14.9)	3	200	98	276	97	E	18.8	16/435	4G25+S(2x0.5) 33.0 mm (1.30")	94 19 83	*
		230	86	243							215
		460	43	122					4G10+S(2x0.5) 25.0 mm (0.98")	94 19 81	380
		575	34	97							600

*** Contact Flygt for information**

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

HP	Volts	Cable Size	Part No.
20	200	4G25+2x1.5 - 24.6 mm (0.97")	94 20 97
20	230/460	4G16+2x1.5 - 20.5 mm (0.81")	94 20 96
20	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.

Efficiency			Power Factor			Electrical Service Specifications
100% Load	75% Load	50% Load	100% Load	75% Load	50% Load	Voltage Tolerances: ±5% (Rated Output), ±10% (without overheating)
79.0	78.0	74.0	0.55	0.48	0.38	Frequency Tolerance: ±5% Voltage Balance (Phase to Phase): ±1% VFD Compatable

Xylem Inc., U.S.A.

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Leopold, 227 S. Division Street Zelienople, PA 16063 Tel (724) 452-6300 Fax (724) 452-1377,
Sanitaire, 9333 N. 49th Street Brown Deer, WI 53223-1472 Tel (414) 365-2200 Fax (414) 365-2210.

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