



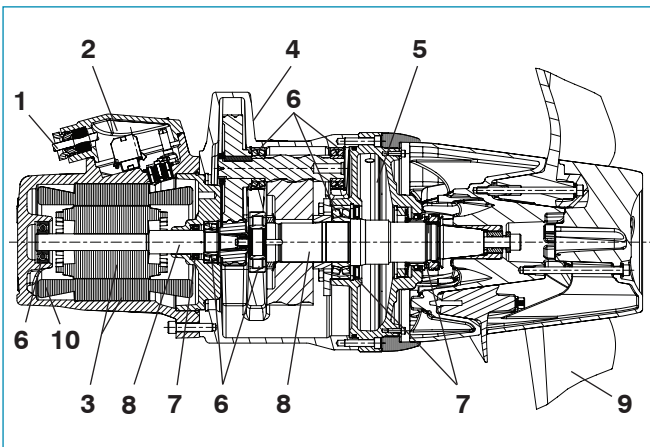
Mid - Size, Gear Driven Mixer

Nominal Thrusts: 790 to 2,230 N



Applications:

The submersible 4530 mixer is used for high-efficiency mixing of wastewater and sludge containing solids and fibers, in municipal and industrial applications. Ideally suited to anoxic and anaerobic treatment steps, it is also used for MBBR, blending, flocculation and de-icing in other applications. The mixer is equipped with three blade propeller and reduction gear and designed to be operated completely immersed in the liquid. Available in standard and explosion-proof versions.



Materials of Construction:

Major castings: Cast Iron ASTM A48 Class 35B
 Propeller: Epoxy coated Aluminum
 Shafts: ASTM/AISI 431 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 SubCab cable. Jacket is Chlorinated Polyethylene rubber, Insulation is high density Ethylene Propylene rubber. Bushing and strain relief on the cable prevent leakage into the motor.

2. Junction box The junction box is completely sealed off from the surrounding mixed media by utilizing an O-ring around the perimeter of the junction box sealing interface.

3. Motor

Flygt motors are tested according to IEC 34-1. Dry shell type, NEMA design B, induction squirrel cage motor. Motor insulation is class H with a maximum working temperature of 180°C (356°F) using the trickle impregnation method. The stator is cooled by the mixed media surrounding the stator casing.

4. Gear box

The gear box is a two-stage cylindrical helical gear box equipped with high precision low loaded gears. The gears are designed, according to AGMA for 50,000 hours of operation.

5. Oil casing

An environmentally friendly white paraffin based, FDA approved non-toxic, oil lubricates and cools the seals between the liquid and the gearbox. Pressure build-up within the oil casing is reduced by means of a built-in air volume.

6. Bearings

The motor shaft is supported by an inner single-row deep-groove ball bearing and an outer double-row roller bearing. The intermediate shaft is supported by two double-row roller bearings. The propeller shaft is supported by an inner single-row deep-groove ball bearing and an outer double-row angular contact ball bearing. All bearings are designed for more than 50,000 hours of operation.

7. Shaft seals

The mixer has one corrosion resistant cemented carbide WCCR / WCCR mechanical seal and two lip seals.

8. Shafts

The motor is delivered with the rotor as an integral part. Shaft material is stainless steel, ASTM/AISI 431. The shafts are completely sealed and will not come into contact with the mixed media.

9. Propeller

The propeller is non-clogging and designed with three generous back swept propeller blades. It is designed to deliver the greatest possible mixing effect in relation to motor output. The propeller blade is made of epoxy coated aluminum. The propeller shaft is constructed of 431 stainless steel.

10. Monitoring system

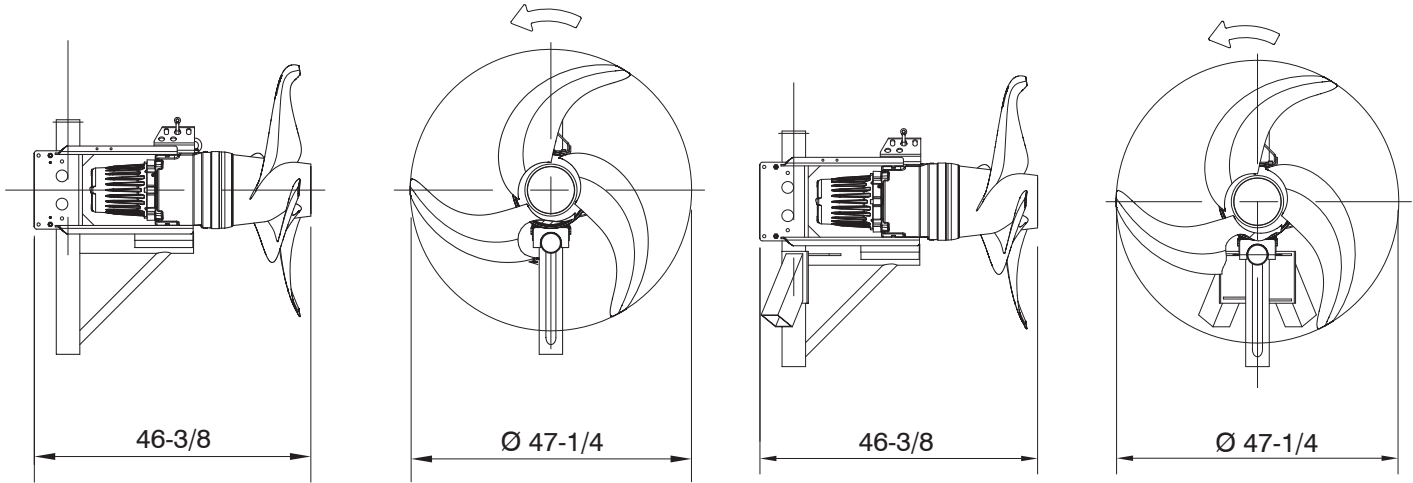
The stator incorporates three thermal switches, connected in series. The thermal switches open at 125°C (257°F). Optional stator housing leakage sensor (FLS) available.

Flygt products are affiliated with the following associations:



4530

Mixer can be installed on a single guide bar or tripod mounting system.



• Single guide bar,
4" x 4" or 4" x 6"

WEIGHT (LBS.)
TOTAL 460

• Tripod guide bar
system, 4" x 4"

WEIGHT (LBS.)
TOTAL 460

Propeller Performance Range (Best-in-class efficiency per ISO 21630)

Prop. Code	Ø	Poles	Shaft *HP	Power Input (kW)	Motor Speed (RPM)	Prop. Speed (RPM)	Prop. Dia. (inches)	Nominal Thrust (N)
400	3	4	1.2	1.07	1765	88	47-1/4	790
460	3	4	5.1	4.52	1695	148	47-1/4	2,230

*Horsepower consumed at the motor shaft between motor and gear in clear water.

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.)
3.5(2.6)	3	230	11.0	83.0	33.1	L	3.1	4/1765	4G2.5+2x1.5	94 20 59	150
		460	5.1	41.0	32.7	L	3.1	4/1765	4G2.5+2x1.5	94 20 59	640
		575	3.9	29.0	28.9	K	3.0	4/1760	4G2.5+2x1.5	94 20 59	1,045
6.2(4.6)	3	230	17.0	83.0	33.1	F	5.5	4/1765	4G2.5+2x1.5	94 20 59	85
		460	8.2	39.0	32.7	F	5.5	4/1730	4G2.5+2x1.5	94 20 59	350
		575	6.5	29.0	28.9	E	5.6	4/1720	4G2.5+2x1.5	94 20 59	555

HP	Efficiency (460v)			Power Factor			Electrical Service Specifications
	100% Load	75% Load	50% Load	100% Load	75% Load	50% Load	
3.5	85.5	84.0	80.5	0.74	0.66	0.53	Voltage Tolerances: ±5% (Rated Output), ±10% (without overheating) Frequency Tolerance: ±5% Voltage Balance (Phase to Phase): ±1% VFD Compatible
6.2	84.0	85.5	85.0	0.84	0.80	0.70	

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

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