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SR 4610, SR 4620, 50 Hz



# Technical Specification

## Product Description

### Usage

Direct-drive mixer intended for mixing liquid and sludge containing fibres and solids where high thrust in relation to consumed power is wanted. The mixer is designed to be operated completely immersed in the liquid.

### Denomination

Standard version	Explosion proof version
4610.410	4610.490
4620.410	4620.490

### Installation

- Guide bar system, 50×50 mm (2×2 inches)
- Cantilever bar, 4610: OD 48,3 mm (1.9 inches), 4620: OD 76,1 mm (3.0 inches)

### Application limits

Feature	Description
Liquid temperature	<ul style="list-style-type: none"> <li>• Maximum 40°C, (104°F)</li> <li>• Warm-liquid version 70°C, (158°F). Standard version.</li> <li>• Warm-liquid version 90°C, (194°F). Standard version.</li> </ul>
Liquid viscosity	Maximum 5000 cp
pH	1 - 12
Depth of immersion	Maximum 20 m (65 ft)

### Motor data

Feature	Description
Motor type	Squirrel-cage 4-pole induction motor
Frequency	50 Hz
Supply	1-phase (only 4620) or 3-phase
Starting method	<ul style="list-style-type: none"> <li>• Direct on-line</li> <li>• VFD</li> </ul>
Maximum starts per hour	30 evenly-spaced starts per hour
Voltage variation	<ul style="list-style-type: none"> <li>• Continuously running: Maximum ±5%</li> <li>• Intermittently running: Maximum ±10%</li> </ul>
Voltage imbalance between the phases	Maximum 2%
Stator insulation	In accordance with class F (155°C, 311°F)

### Cables

- SUBCAB® heavy-duty submersible cable
- Silicone cable
- SUBCAB® screened heavy-duty submersible cable

**Monitoring equipment**

- Thermal contacts opening at 140°C, (285°F)
- Leakage sensor in connection chamber (FLS), optional

**Materials**

Item	Material
Stator housing	Stainless steel ASTM 316L
Shaft	Stainless steel, ASTM/AISI 431
Oil housing	Vinyl ester based SMC
Cover	Vinyl ester based SMC
Lifting device	Stainless steel ASTM 316L
Jet ring	Stainless steel ASTM 316L
Oil	Paraffin oil ISO VG32
O-rings	Nitrile rubber as standard, fluorinated rubber for warm liquid versions.

**Surface treatment**

Stainless steel parts are blasted to a dull grey surface.

**Mechanical face seals**

The inner seal uses the patented Active Seal™ technology, which is a zero leakage seal, allowing no liquid to penetrate from the buffer fluid compartment to the stator housing of the mixer.

	Inner seal	Outer seal
Standard	Corrosion resistant cemented carbide (WCCR) / Alumimium oxide (Al <sub>2</sub> O <sub>3</sub> )	WCCR / WCCR
Optional	WCCR / Al <sub>2</sub> O <sub>3</sub>	Silicon carbide (RSiC) / RSiC

**Hydraulic unit**

Double-blade high efficiency clog-free propeller, stainless steel ASTM 316L. Diameter 210 mm.

- Optional version: Jet ring

**Dimensions and weight**

See the dimensional drawing.

**Options and accessories**

- Installation systems
- Lifting equipment
- Special cables
- Zinc anodes
- Electrical equipment such as control panels, monitoring equipment, variable frequency drives

## Motor Rating

**Table 1: 400V, 50 Hz, 3-phase**

Product	Rotations per minute, rpm	Poles	Rated Power, kW	Rated hp	Rated Current, A	Starting Current, A	Power factor cosφ
4610	1380	4	0.90	1.2	2.0	9.0	0.88

Product	Rotations per minute, rpm	Poles	Rated Power, kW	Rated hp	Rated Current, A	Starting Current, A	Power factor $\cos\phi$
4620	1385	4	1.5	2.0	3.8	17	0.80

**Table 2: 230V, 50 Hz, 1-phase**

Product	Rotations per minute, rpm	Poles	Rated Power, kW	Rated hp	Rated Current, A	Starting Current, A	Power factor $\cos\phi$
4620	1405	4	0.75	1.0	4.8	21	0.99

## Thrust Data

### Thrust data tables

The blade angles are valid for a water temperature up to 40°C (104°F). For warm-liquid mixers, check with your sales representative for available blade angles.

Extended Jet ring and Vortex protection shield has added performance tolerance of -5% of  $F_{thrust}$ . Performance in clear water 20°C (68°F).

#### SR 4610, 50 Hz, 4-pole, 3-phase

Allow for a tolerance of +10% on  $P_{in}$  and -12% on  $F_{thrust} < 300N$  or -8% on  $F_{thrust} \geq 300N$ .

**Table 3: ASTM 316L. Rated output power 0.9 kW.**

Blade angle, degrees	With Jet Ring		Without Jet Ring	
	$F_{thrust}$ N	$P_{in}$ kW	$F_{thrust}$ N	$P_{in}$ kW
7	80	0.55	100	0.60
13	200	0.95	200	1.15

#### SR 4620, 50 Hz, 4-pole, 3-phase

Allow for a tolerance of +10% on  $P_{in}$  and -12% on  $F_{thrust} < 300N$  or -8% on  $F_{thrust} \geq 300N$ .

**Table 4: ASTM 316L. Rated output power 1.5 kW.**

Blade angle, degrees	With Jet Ring		Without Jet Ring	
	$F_{thrust}$ N	$P_{in}$ kW	$F_{thrust}$ N	$P_{in}$ kW
7	85	0.70	100	0.85
13	205	1.10	215	1.35
15	265	1.30	270	1.70
18	315	1.50	310	2.00

#### SR 4620, 50 Hz, 4-pole, 1-phase

Allow for a tolerance of +10% on  $P_{in}$  and -12% on  $F_{thrust} < 300N$  or -8% on  $F_{thrust} \geq 300N$ .

**Table 5: ASTM 316L, 50 Hz, rated output power 0.75 kW**

Blade angle, degrees	With Jet Ring		Without Jet Ring	
	$F_{thrust}$ N	$P_{in}$ kW	$F_{thrust}$ N	$P_{in}$ kW
7	90	0.55	110	0.60





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- 2) A leading global water technology company

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The original instruction is in English. All non-English instructions are translations of the original instruction.

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