

M-pump

Product description

Usage

Submersible pump for pumping waste water containing solids that need to be macerated. The impeller is equipped with a grinder device.

Denomination

Type	Non explosion proof version	Explosion proof version	Pressure class	Installation types
Standard	3102.170	3102.890	<ul style="list-style-type: none"> • LT – Low head • HT – High head 	F, H, P

The pump can be used in the following installations:

- F** Free standing semi permanent, wet well arrangement where the pump is placed on a firm surface.
- H** Semi permanent, wet well quick connection suspended arrangement, incorporating integral non-return valve.
- P** Semi permanent, wet well arrangement with pump installed on two guide bars with automatic connection to discharge.

Application Limits

Feature	Description
Liquid temperature	Maximum 40°C, (104°F)
Depth of immersion	Maximum 20 m (65 ft)
pH of the pumped liquid	5.5 - 14
Liquid density	Maximum 1100 kg/m ³

Motor data

Feature	Description
Motor type	Squirrel-cage induction motor
Frequency	50 Hz
Power supply	3-phase
Starting method	<ul style="list-style-type: none"> • Direct on-line • Star-delta
Number of starts per hour	Maximum 30
Code compliance	IEC 60034-1
Rated output variation	±10%
Voltage variation	<ul style="list-style-type: none"> • Continuously running: Maximum ±5% • Intermittent running: Maximum ±10%
Voltage imbalance between phases	Maximum 2%

Feature	Description
Insulation class	H (180°C, 356°F)

Cables

Application	Type	Denomination
Direct-on-line start	SUBCAB® heavy-duty submersible cable	4G2.5 mm ² 4G2.5+2×1.5 mm ²
Y/D start	SUBCAB® heavy-duty submersible cable	7G2.5 mm ² 7G2.5+2×1.5 mm ²

Monitoring Equipment

Thermal contacts opening temperature 125° C (257° F)

Materials

Denomination	Material	ASTM	EN
Major castings	Cast iron, gray	35B	GJL-250
Pump housing	Cast iron, gray	35B	GJL-250
Impeller	Cast iron, gray	30B	GJL-200
Cutter wheel	Cast iron, Hard-Iron™	A 532 IIIA	GJN-HB555(XCR23)
Cutter plate	Stainless steel	-	-
Lifting handle	Stainless steel	AISI 316L	1.4404, 1.4432, ...
Shaft	Stainless steel	AISI 431	1.4057+QT800
Screws and nuts	Stainless steel, A4	AISI 316L, 316, 316Ti	1.4401, 1.4404, ...
O-rings	Nitrile rubber (NBR) 70° IRH	-	-
Oil, part no 901752	Medical white oil of paraffin type. Fulfills FDA 172.878 (a)	-	-

Table 10: Mechanical face seals

Alternative	Inner seal	Outer seal
1	Aluminum oxide/ Corrosion resistant cemented carbide	Aluminum oxide/ Corrosion resistant cemented carbide
2	Aluminum oxide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
3	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Aluminum oxide/ Corrosion resistant cemented carbide
4	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide

Surface Treatment

Priming	Finish
Painted with a primer, see internal standard M0700.00.0002	Navy gray color NCS 5804-B07G. Two-component high-solid top coating, see internal standard M0700.00.0004 for standard painting and M0700.00.0008 for special painting.

Options

- Leakage sensor in the stator housing (FLS)
- Leakage sensor in the oil housing (CLS)
- Surface treatment (Epoxy)
- Zinc anodes
- Other cables

Accessories

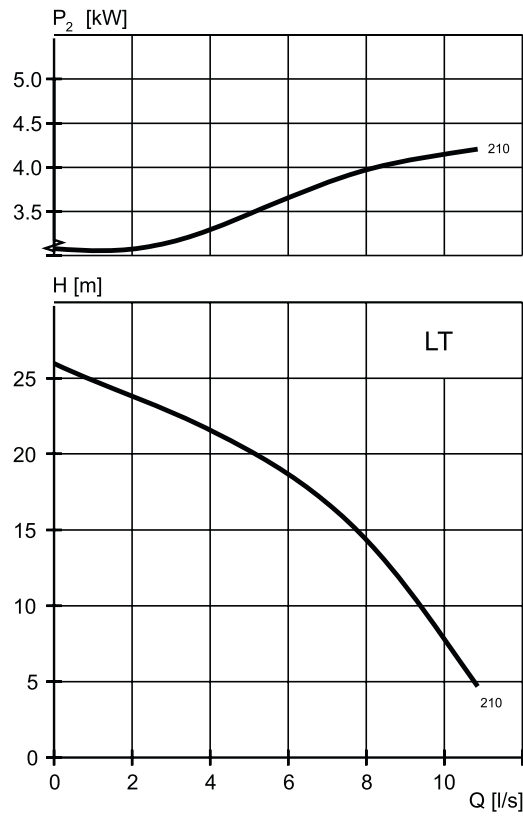
Discharge connections, adapters, hose connections, and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

Motor rating and performance curves

Star-delta starting current is 1/3 of Direct on-line starting current.

LT



WS005036A

Table 11: 400 V, 50 Hz, 3-phase

Rated power kW	Rated power hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, $\cos \varphi$	Installation
4,4	5,9	210	2885	8,7	72	0,89	F,H,P