

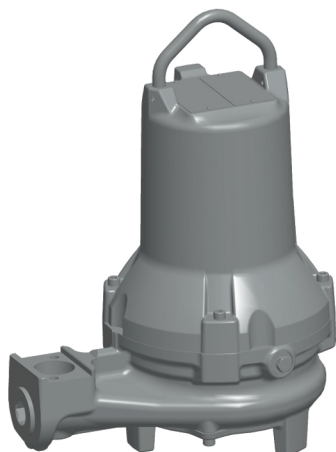
Flygt 3090, 50Hz

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M-pump

Product description



Usage

A submersible pump for wastewater 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
Grinder	3090.170	3090.890	• HT – High head	H, P

The pump can be used in the following installations:

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

Feature	Description
Starting method	<ul style="list-style-type: none"> • Direct on-line • Star-delta • Soft starter
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%
Stator insulation class	H (180°C, 356°F)

Cables

Application	Type
Direct-on-line start or Y/D start with two cables	Flygt SUBCAB® - a heavy duty 4 cores motor power cable with two twisted pair screened control cores. Conductor insulation rating of 90°C, which allows for increased current. Superior mechanical strength and high abrasion and tear resistant. Chemical resistant within pH 3-10 and ozone, oil, and flame resistant. Used up to 70°C water temperature. Cables < 10 mm ² with unscreened control cores.
Y/D start	Flygt SUBCAB® - a heavy duty 7 cores motor power cable with two twisted pair screened control cores. Conductor insulation rating of 90°C, which allows for increased current. Superior mechanical strength and high abrasion and tear resistant. Chemical resistant within pH 3-10 and ozone, oil, and flame resistant. Used up to 70°C water temperature. Cables < 7G6 mm ² with unscreened control cores.

Monitoring equipment

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

Materials

Table 1: Major parts except mechanical seals

Denomination	Material	ASTM	EN
Major castings	Cast iron, gray	35B	GJL-250
Pump housing	Cast iron, gray	35B	GJL-250
Impeller	Cast iron, gray	35B	GJL-250
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, ...

Denomination	Material	ASTM	EN
O-rings	Nitrile rubber (NBR) 70° IRH	-	-
Oil, part no 901752	Medical white oil of paraffin type. Fulfills FDA 172.878 (a)	-	-

Table 2: Mechanical seals

Inner seal	Outer seal
Carbon/ Aluminum oxide	Aluminum oxide/ 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)
- Surface treatment (Epoxy)
- Zinc anodes
- Other cables

Accessories

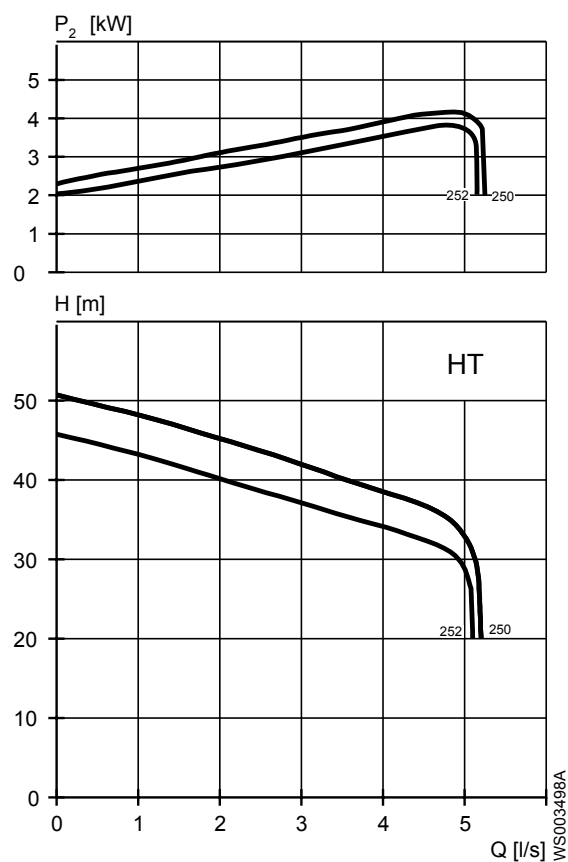
Discharge connections, adapters, hose connections, and other mechanical accessories.
Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

Motor rating and performance curves

These are examples of motor rating and curves, for more information contact your local sales and service representative.

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

HT

**Table 3: 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
4.30	5.76	250	2845	8.40	49.0	0.90	P, H
4.30	5.76	252	2845	8.40	49.0	0.90	P, H

Dimensions and Weight, M-pump

Drawings

All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg).
Contact your local sales and service representative for more information.
All dimensions are in mm.

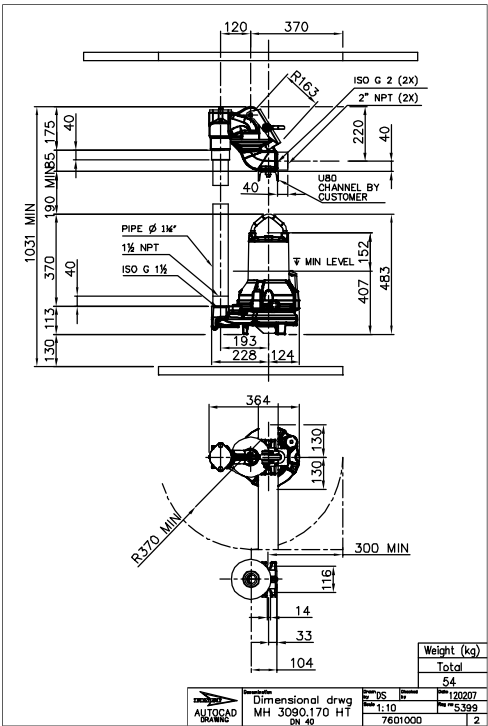


Figure 1: HT, H-installation

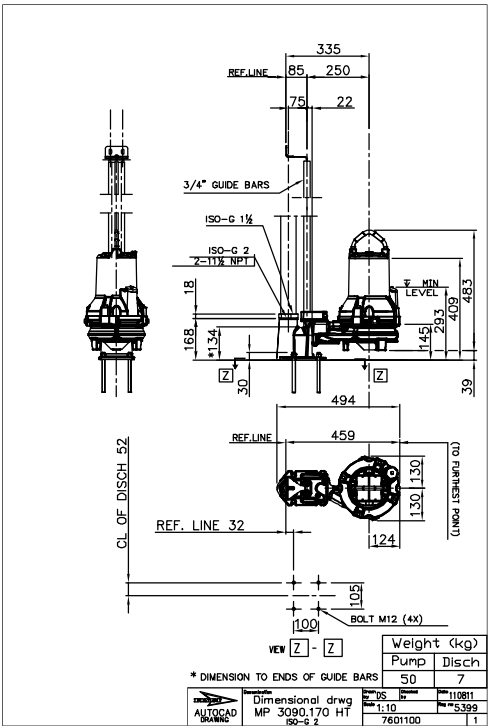


Figure 2: HT, P-installation

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

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