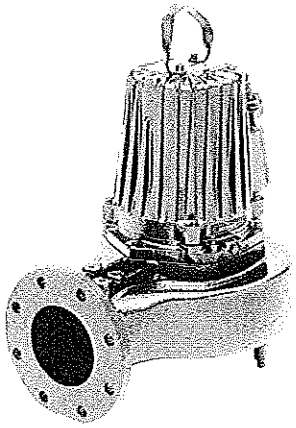
Product description 3127.350/.390



Usage

A submersible chopper pump for liquid manure, fish waste, or heavily contaminated sewage and sludge. The N-hydraulic is fitted with a cutting insert ring. Both impeller and insert ring are manufactured in Hard-Iron™.

Denomination

Type	Non-explosion proof version	Explosion proof version	Pressure class	Installation types
Chopper Hard-Iron™	3127.350	3127.390	MT – Medium head HT – High head SH – Super head	P, S,T,Z

The pump can be used in the following installations:

P Semi permanent, wet well arrangement with pump installed on two guide bars with automatic connection to discharge.

S Portable semi permanent, wet well arrangement with hose coupling or flange for connection to discharge pipeline.

T Vertical permanent, dry well arrangement with flange connection to suction and discharge piping.

Z Horizontal permanent, dry well arrangement with flange connection to suction and discharge piping.

Application limits

Feature	Description
Liquid temperature	Maximum 40°C (104°F)
Liquid temperature, warm water version	Maximum 70°C (158°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	• Direct on-line • Star-delta • Soft starter • Variable Frequency Drive (VFD)
Number of starts per hour	Maximum 30
Code compliance	IEC 60034-1
Voltage variation	• 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.
Variable Frequency drive	Screened Flygt SUBCAB® - a heavy duty 4 screened cores motor power cable with four 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.

Monitoring equipment

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

Materials

Table 17: 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, Hard-Iron™	A 532 IIIA	GJN-HB555(XCR23)
Insert ring, alternative 1	Cast iron, Hard-Iron™	A 532 IIIA	GJN-HB555(XCR23)
Insert ring, alternative 2	Cast iron, Hard-Iron™	A 532 IIIA	GJN-HB555(XCR23)
Lifting handle	Stainless steel	AISI 316L	1.4404,1.4432, ...
Shaft	Stainless steel	AISI 431	1.4057+QT800

Denomination	Material	ASTM	EN
Screws and nuts	Stainless steel, A4	AISI 316L, 316, 316Ti	1.4401,1.4404, ...
O-rings, alternative 1	Nitrile rubber (NBR) 70° IRH	-	-
O-rings, alternative 2	Fluorinated rubber (FPM) 70° IRH	-	-
Oil, part no 901752	Medical white oil of paraffin type. Fulfills FDA 172.878 (a)	-	-

Table 18: Mechanical seals

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

- Warm liquid version (non-explosion proof versions)
- Leakage sensor in the stator housing (FLS)
- Leakage sensor in the oil housing (CLS)
- Aqua cutting knife (chopper)
  pressure class MT
- 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 3127.181/.090

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

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

MT

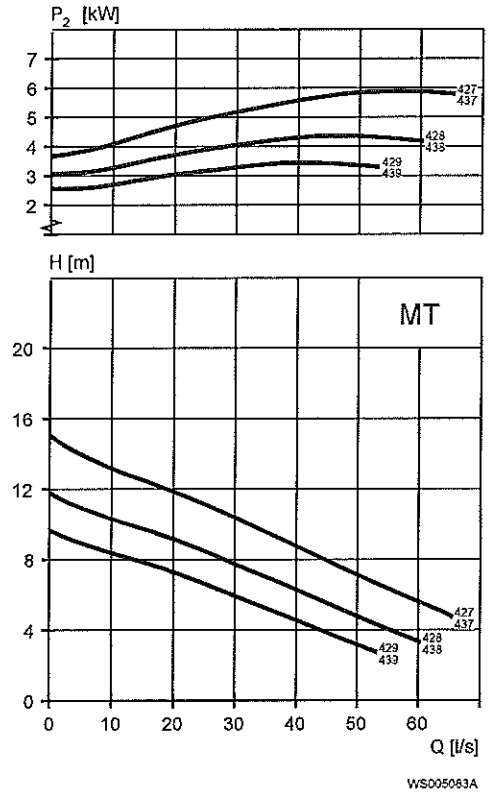


Table 20: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
4	5.4	429	1455	8.3	56	0.84	T,Z
4	5.4	439	1455	8.3	56	0.84	T,Z
4.7	6.3	428	1445	9.6	56	0.86	P,S
4.7	6.3	429	1445	9.6	56	0.86	P,S
4.7	6.3	438	1445	9.6	56	0.86	P,S
4.7	6.3	439	1445	9.6	56	0.86	P,S
5.9	7.9	427	1440	12	62	0.88	P,S
5.9	7.9	427	1450	13	76	0.81	P,S
5.9	7.9	437	1440	12	62	0.88	P,S
5.9	7.9	437	1450	13	76	0.81	P,S

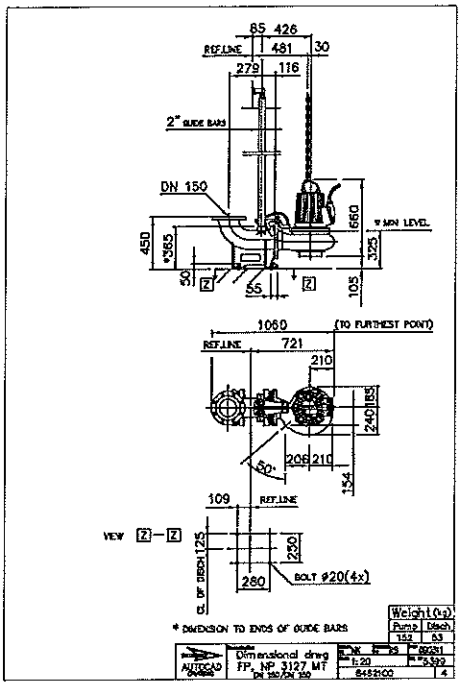


Figure 69: MT, P-installation

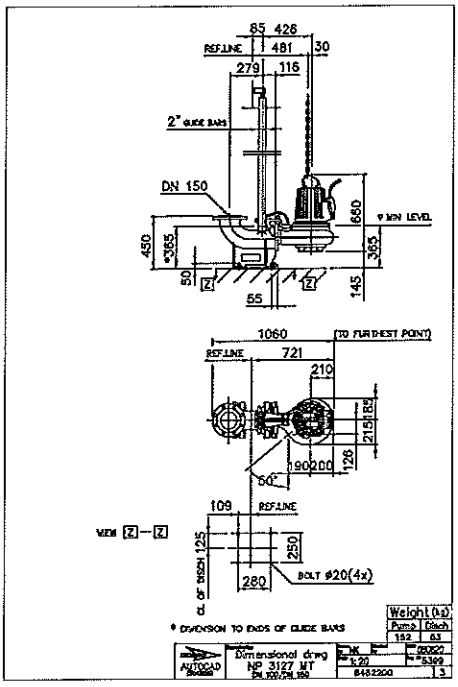


Figure 70: MT, P-installation

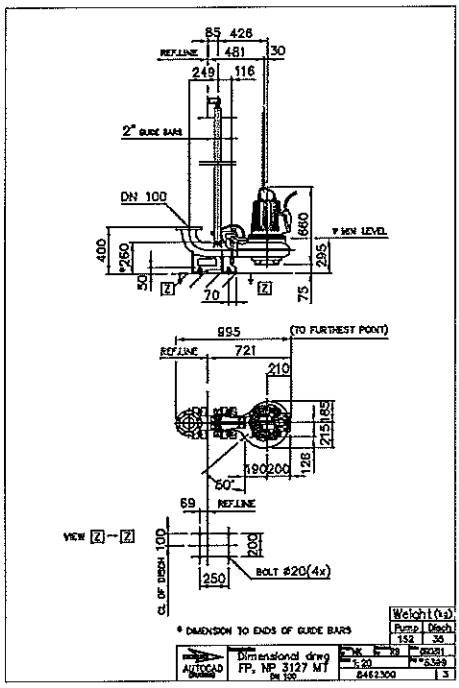


Figure 71: MT, P-installation

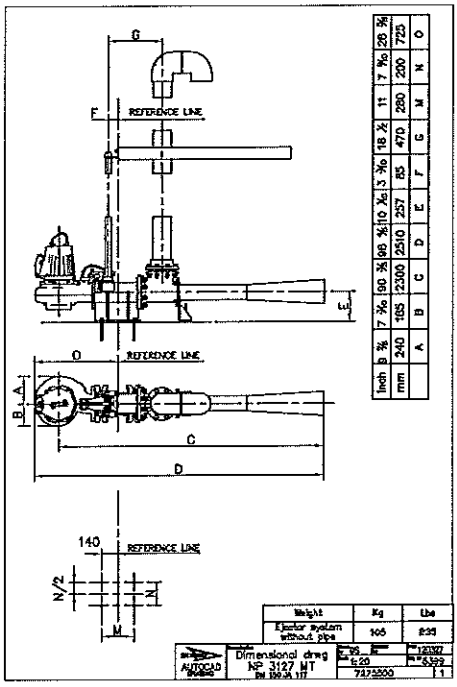


Figure 72: MT, P-installation