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Technical Specification

Flygt 3127, 50Hz

FLYGT
POMPDIRECT

Table of Contents

1 C-pump, Standard Motor

1.1 Product description

Usage

A submersible pump for wastewater containing solids or fibered material, clean water, or surface water.

Denomination

Type	Non-explosion proof version	Explosion proof version	Pressure class	Installation types
Gray iron	3127.182	3127.091	• LT – Low head • MT – Medium head • HT – High 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
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 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, alternative 1	Cast iron, gray	35B	GJL-250

Denomination	Material	ASTM	EN
Impeller, alternative 2	Cast iron, gray	30B	GJL-200
Wear ring, alternative 1	Nitrile rubber (NBR)	-	-
Wear ring, alternative 2	Bronze	C924	CC491K, CC492K
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, 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 2: 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)
- 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.

1.2 Motor rating and performance curves

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.

LT

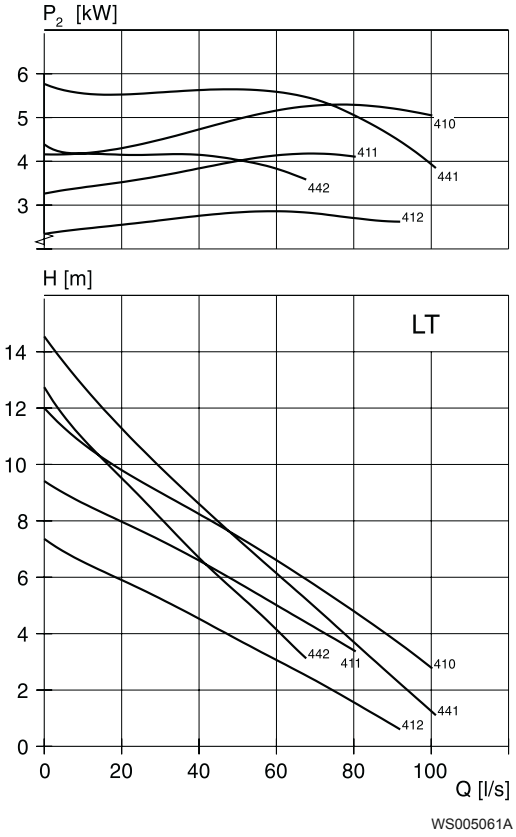

Table 3: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
4	5.4	412	1465	9.4	73	0.74	T,Z
4	5.4	442	1465	9.4	73	0.74	T,Z
4.7	6.3	411	1445	9.6	56	0.86	P,S
4.7	6.3	412	1445	9.6	56	0.86	P,S
4.7	6.3	442	1445	9.6	56	0.86	P,S
4.7	6.3	411	1460	10	73	0.78	P,S
4.7	6.3	412	1460	10	73	0.78	P,S
4.7	6.3	442	1460	10	73	0.78	P,S
4.7	6.3	411	1460	11	76	0.76	T,Z
4.7	6.3	412	1460	11	76	0.76	T,Z
4.7	6.3	442	1460	11	76	0.76	T,Z
5.9	7.9	410	1450	12	77	0.84	P,S
5.9	7.9	411	1450	12	77	0.84	P,S
5.9	7.9	412	1450	12	77	0.84	P,S
5.9	7.9	441	1450	12	77	0.84	P,S
5.9	7.9	442	1450	12	77	0.84	P,S

MT

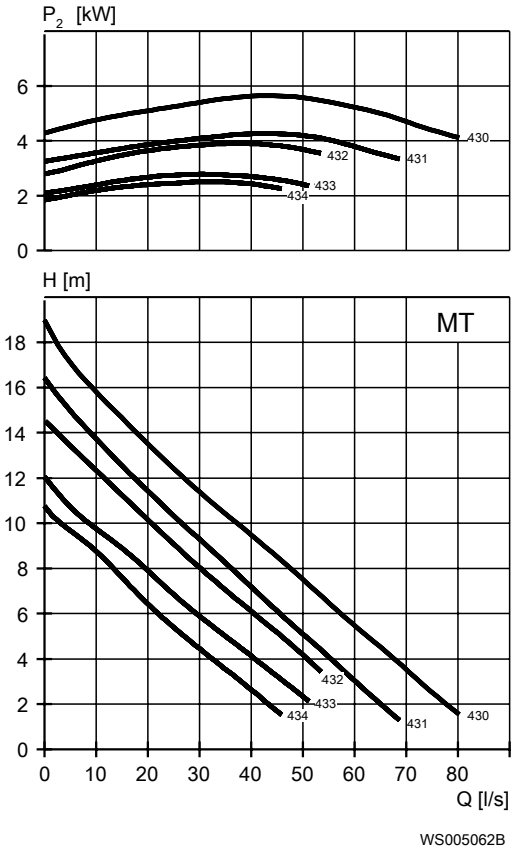

Table 4: 400 V, 50 Hz, 3-phase

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	432	1455	8.3	56	0.84	T,Z
4	5.4	433	1455	8.3	56	0.84	T,Z
4	5.4	434	1455	8.3	56	0.84	T,Z
4.7	6.3	431	1445	9.6	56	0.86	P,S
4.7	6.3	432	1445	9.6	56	0.86	P,S
4.7	6.3	433	1445	9.6	56	0.86	P,S
4.7	6.3	434	1445	9.6	56	0.86	P,S
4.7	6.3	431	1460	11	76	0.76	T,Z
4.7	6.3	432	1460	11	76	0.76	T,Z
4.7	6.3	433	1460	11	76	0.76	T,Z
4.7	6.3	434	1460	11	76	0.76	T,Z
5.9	7.9	430	1450	12	77	0.84	P,S
5.9	7.9	431	1450	12	77	0.84	P,S
5.9	7.9	432	1450	12	77	0.84	P,S
5.9	7.9	433	1450	12	77	0.84	P,S
5.9	7.9	434	1450	12	77	0.84	P,S

HT

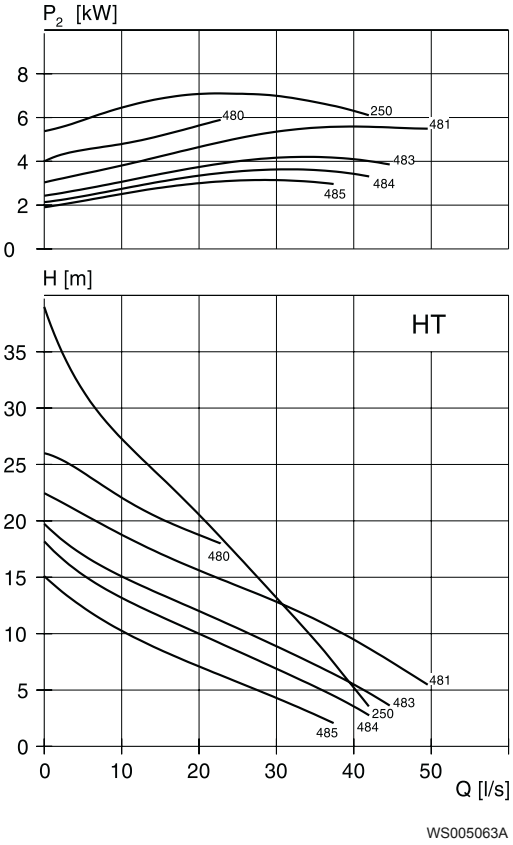

Table 5: 400 V, 50 Hz, 3-phase

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	483	1465	9.4	73	0.74	T,Z
4	5.4	484	1465	9.4	73	0.74	T,Z
4	5.4	485	1465	9.4	73	0.74	T,Z
4.7	6.3	483	1445	9.6	56	0.86	P,S
4.7	6.3	484	1445	9.6	56	0.86	P,S
4.7	6.3	485	1445	9.6	56	0.86	P,S
4.7	6.3	483	1460	11	76	0.76	T,Z
4.7	6.3	484	1460	11	76	0.76	T,Z
4.7	6.3	485	1460	11	76	0.76	T,Z
5.9	7.9	480	1450	12	77	0.84	P,S
5.9	7.9	481	1450	12	77	0.84	P,S
5.9	7.9	483	1450	12	77	0.84	P,S
5.9	7.9	484	1450	12	77	0.84	P,S
5.9	7.9	485	1450	12	77	0.84	P,S
7.4	9.9	250	2900	14	114	0.91	P,S

2 C-pump, Premium Efficiency Motor (IE3)

2.1 Product description

Usage

A submersible pump for wastewater containing solids or fibered material, clean water, or surface water.

Denomination

Type	Non-explosion proof version	Explosion proof version	Pressure class	Installation types
Gray iron	3127.800	3127.810	LT – Low head MT – Medium head HT – High head	P, S, T, Z

Installation types

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)
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	Line started permanent magnet motor (LSPM)
Frequency	50 Hz
Power supply	3-phase
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 6: 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, alternative 1	Cast iron, gray	35B	GJL-250

Denomination	Material	ASTM	EN
Impeller, alternative 2	Cast iron, gray	30B	GJL-200
Wear ring, alternative 1	Nitrile rubber (NBR)	-	-
Wear ring, alternative 2	Bronze	C924	CC491K, CC492K
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, 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 7: 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

- 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.

2.2 Motor rating and performance curves

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.

LT

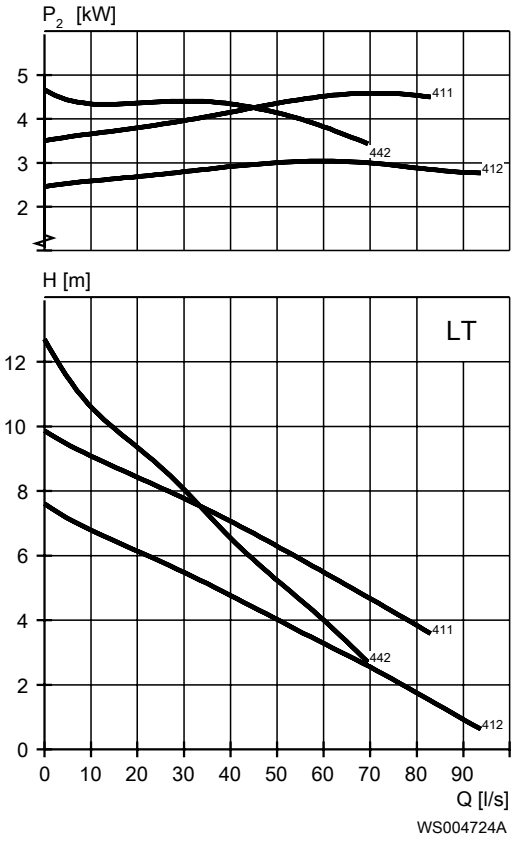

Table 8: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
5	6.7	411	1500	8.9	76	0.89	P,S
5	6.7	412	1500	8.9	76	0.89	P,S
5	6.7	442	1500	8.9	76	0.89	P,S
5.5	7.4	411	1500	9.6	76	0.9	T,Z
5.5	7.4	412	1500	9.6	76	0.9	T,Z
5.5	7.4	442	1500	9.6	76	0.9	T,Z
6.5	8.7	411	1500	11	76	0.91	P,S
6.5	8.7	412	1500	11	76	0.91	P,S
6.5	8.7	442	1500	11	76	0.91	P,S

MT

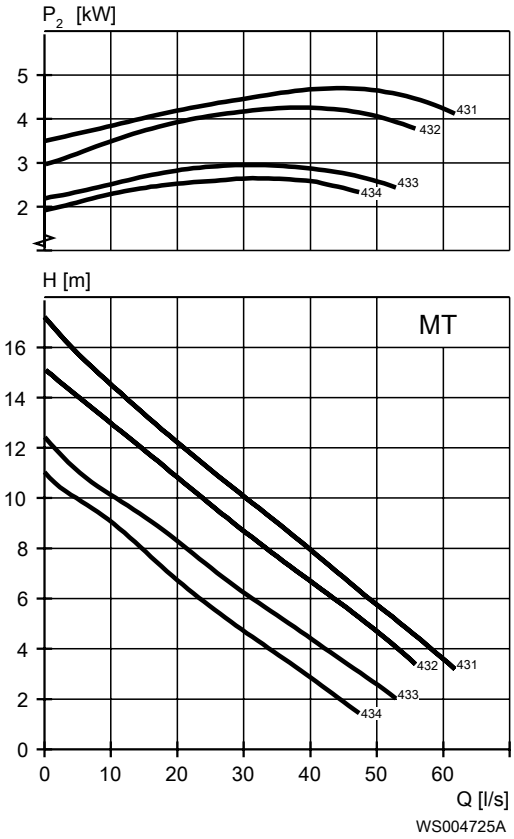

Table 9: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
5	6.7	431	1500	8.9	76	0.89	P,S
5	6.7	432	1500	8.9	76	0.89	P,S
5	6.7	433	1500	8.9	76	0.89	P,S
5	6.7	434	1500	8.9	76	0.89	P,S
5.5	7.4	431	1500	9.6	76	0.9	T,Z
5.5	7.4	432	1500	9.6	76	0.9	T,Z
5.5	7.4	433	1500	9.6	76	0.9	T,Z
5.5	7.4	434	1500	9.6	76	0.9	T,Z
6.5	8.7	431	1500	11	76	0.91	P,S
6.5	8.7	432	1500	11	76	0.91	P,S
6.5	8.7	433	1500	11	76	0.91	P,S
6.5	8.7	434	1500	11	76	0.91	P,S

HT

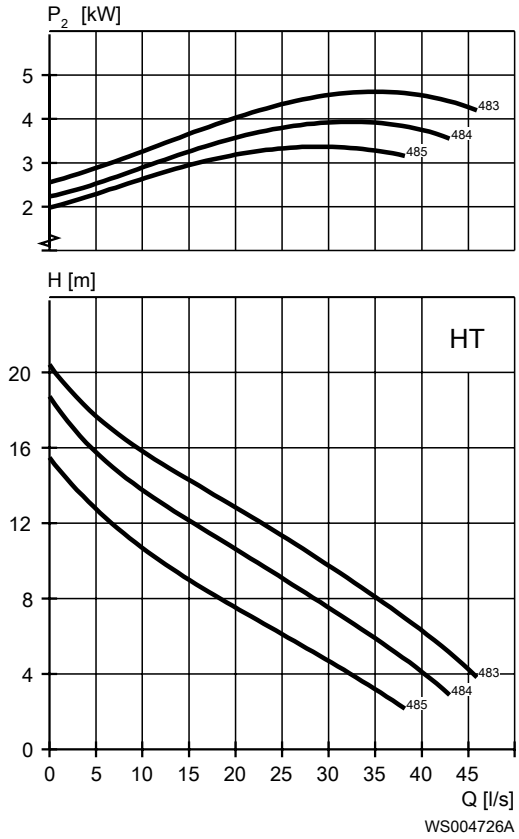

Table 10: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
5	6.7	483	1500	8.9	76	0.89	P,S
5	6.7	484	1500	8.9	76	0.89	P,S
5	6.7	485	1500	8.9	76	0.89	P,S
5.5	7.4	483	1500	9.6	76	0.9	T,Z
5.5	7.4	484	1500	9.6	76	0.9	T,Z
5.5	7.4	485	1500	9.6	76	0.9	T,Z
6.5	8.7	483	1500	11	76	0.91	P,S
6.5	8.7	484	1500	11	76	0.91	P,S
6.5	8.7	485	1500	11	76	0.91	P,S

3 D-pump

3.1 Product description

Usage

A submersible pump, with vortex hydraulic, for liquids containing solids and abrasive media, or light wastewater.

Denomination

Type	Non-explosion proof version	Explosion proof version	Pressure class	Installation types
Gray iron	3127.182	3127.091	• MT – Medium head • HT – High head	P

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.

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
Starting method	• Direct on-line • Star-delta • Soft starter • Variable Frequency Drive (VFD)

Feature	Description
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	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.
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 11: Major parts except mechanical seals

Denomination	Material	ASTM	EN
Major castings	Cast iron, gray	35B	GJL-250
Pump housing, alternative 1	Cast iron, gray	35B	GJL-250
Pump housing, alternative 2	Cast iron, gray	35B	GJL-250
Impeller, alternative 1	Cast iron, gray	35B	GJL-250
Impeller, alternative 2	Cast iron, gray	35B	GJL-250
Impeller, alternative 3	Cast iron, gray	30B	GJL-200
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, alternative 1	Nitrile rubber (NBR) 70° IRH	-	-

Denomination	Material	ASTM	EN
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 12: 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)
- 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.

3.2 Motor rating and performance curves

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

MT

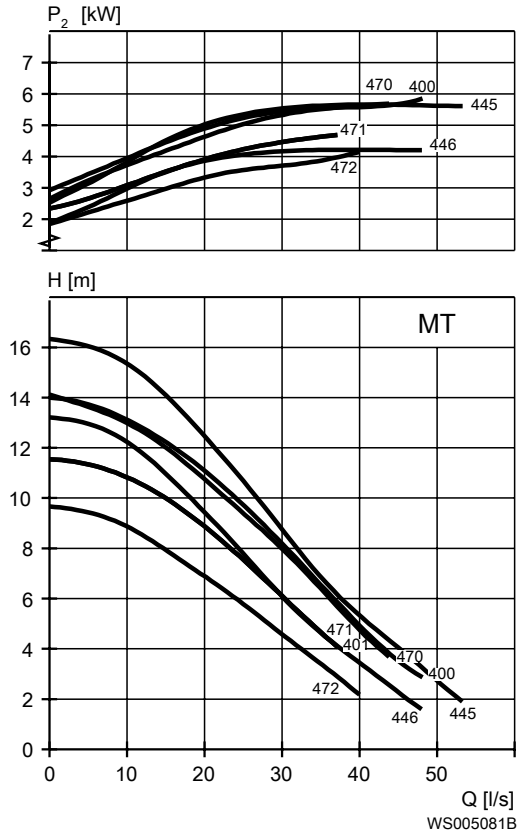


Table 13: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
4.7	6.3	401	1460	10	73	0.78	P
4.7	6.3	446	1460	10	73	0.78	P,S
4.7	6.3	446	1460	11	76	0.76	T,Z
4.7	6.3	471	1460	10	73	0.78	P
4.7	6.3	472	1460	10	73	0.78	P
5.9	7.9	400	1450	13	76	0.81	P
5.9	7.9	401	1450	13	76	0.81	P
5.9	7.9	445	1450	13	76	0.81	P,S
5.9	7.9	446	1450	13	76	0.81	P,S
5.9	7.9	470	1450	13	76	0.81	P
5.9	7.9	471	1450	13	76	0.81	P
5.9	7.9	472	1450	13	76	0.81	P

HT

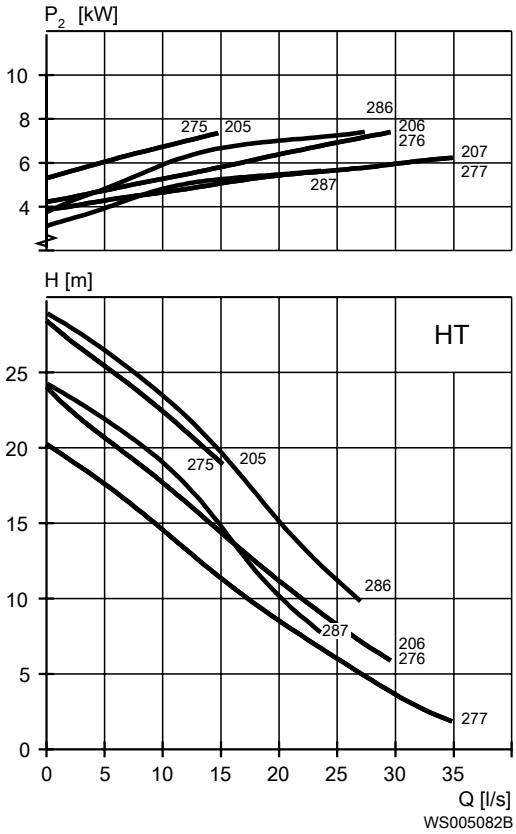


Table 14: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
7.4	9.9	205	2900	14	114	0.89	P,S
7.4	9.9	206	2900	14	114	0.89	P,S
7.4	9.9	207	2900	14	114	0.89	P,S
7.4	9.9	275	2900	14	114	0.89	P,S
7.4	9.9	276	2900	14	114	0.89	P,S
7.4	9.9	277	2900	14	114	0.89	P,S
7.4	9.9	286	2900	14	114	0.89	P,S
7.4	9.9	287	2900	14	114	0.89	P,S

4 F-pump, Standard Motor

4.1 Product description 3127.182/.091

Usage

A submersible pump for liquid manure, or heavily contaminated sewage and sludge. The impeller is S-shaped and has a cutting function. The pump is protected by a break pin.

Denomination

Type	Non-explosion proof version	Explosion proof version	Installation types	Installation types
Chopper Gray iron	3127.182	3127.091	• LT – Low head	J, P, S

The pump can be used in the following installations:

J Semi permanent, wet well arrangement with guide bars or wire for a pump with a jet nozzle intended for mixing. For connection to a discharge stool. Jet nozzle can also be used as a hose connection.

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.

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 15: 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, nodular	-	GJS-400-18-LT
Suction cover, alternative 1	Cast iron, Hard-Iron™	A 532 IIIA	GJN-HB555(XCR23)
Suction cover, alternative 2	Steel	A 572 GR50	S355

Denomination	Material	ASTM	EN
Suction cover, alternative 3	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
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 16: 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 LT
- 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.

4.2 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.

4.3 Motor rating and performance curves 3127.182/.091

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.

LT

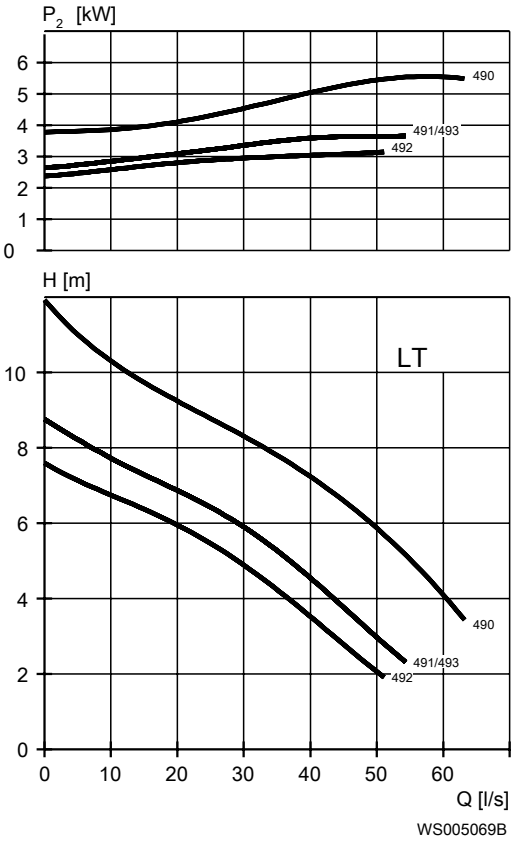


Table 19: 400 V, 50 Hz, 3-phase

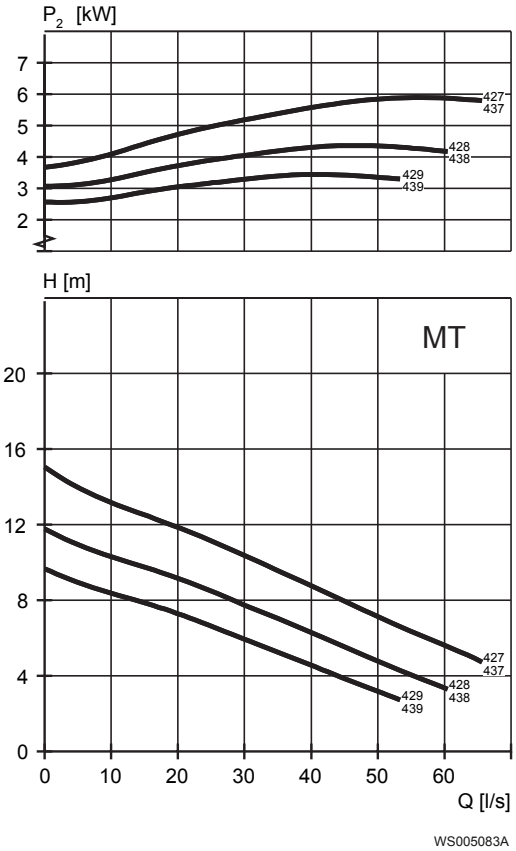
Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
4.7	6.3	491	1460	10	73	0.78	P,S
4.7	6.3	492	1460	10	73	0.78	P,S
5.9	7.9	490	1450	12	77	0.84	J,P,S
5.9	7.9	491	1450	12	77	0.84	P,S
5.9	7.9	492	1450	12	77	0.84	P,S
5.9	7.9	493	1450	12	77	0.84	P,S

4.4 Motor rating and performance curves 3127.350/.390

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

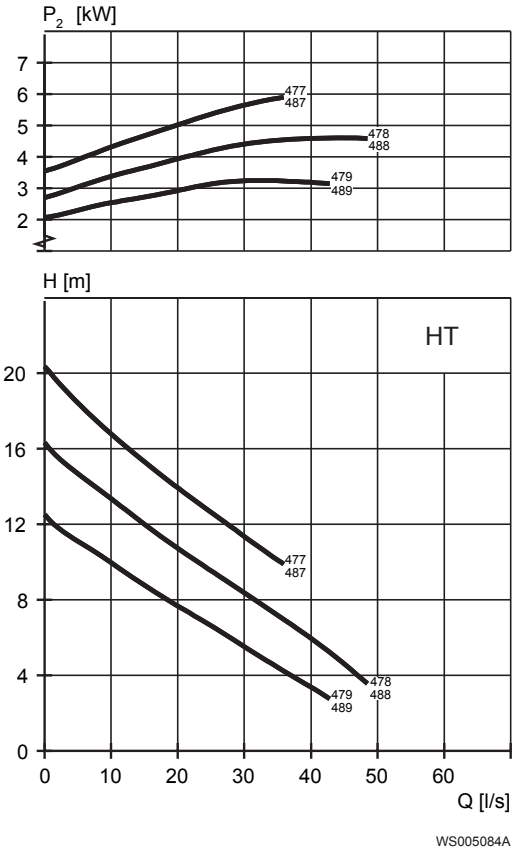


Curves for long fibrous manure: 427, 428, 429

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

HT

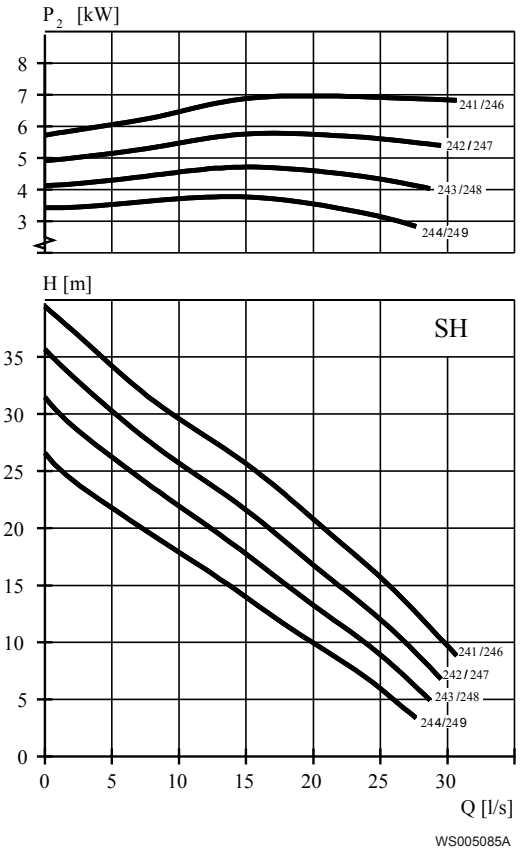


Curves for long fibrous manure: 477, 478, 479

Table 21: 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	479	1455	8.3	56	0.84	T,Z
4	5.4	489	1455	8.3	56	0.84	T,Z
4.7	6.3	478	1445	9.6	56	0.86	P,S
4.7	6.3	479	1445	9.6	56	0.86	P,S
4.7	6.3	488	1445	9.6	56	0.86	P,S
4.7	6.3	489	1445	9.6	56	0.86	P,S
5.9	7.9	477	1440	12	62	0.88	P,S
5.9	7.9	477	1450	13	76	0.81	P,S
5.9	7.9	486	1440	12	62	0.88	P,S
5.9	7.9	486	1450	13	76	0.81	P,S
5.9	7.9	487	1440	12	62	0.88	P,S
5.9	7.9	487	1450	13	76	0.81	P,S

SH



Curves for long fibrous manure: 241, 242, 243, 244

Table 22: 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
7.4	9.9	241	2900	14	114	0.91	P,S
7.4	9.9	242	2900	14	114	0.91	P,S
7.4	9.9	243	2900	14	114	0.91	P,S
7.4	9.9	244	2900	14	114	0.91	P,S
7.4	9.9	246	2900	14	114	0.91	P,S
7.4	9.9	247	2900	14	114	0.91	P,S
7.4	9.9	248	2900	14	114	0.91	P,S
7.4	9.9	249	2900	14	114	0.91	P,S

5 F-pump, Premium Efficiency Motor (IE3)

5.1 Product description

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™	3127.840	3127.850	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)
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	Line started permanent magnet motor (LSPM)
Frequency	50 Hz
Power supply	3-phase
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 23: 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)

Denomination	Material	ASTM	EN
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
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 24: 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

- 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.

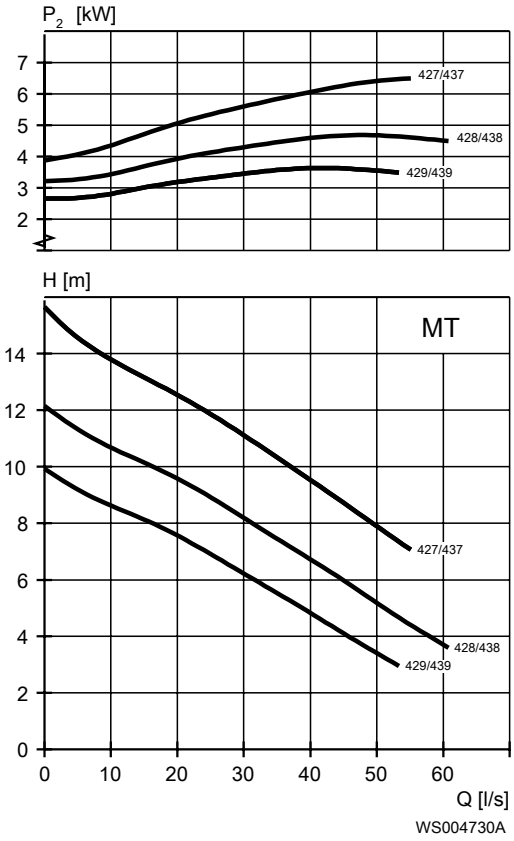
Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

5.1.1 Motor rating and performance curves

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

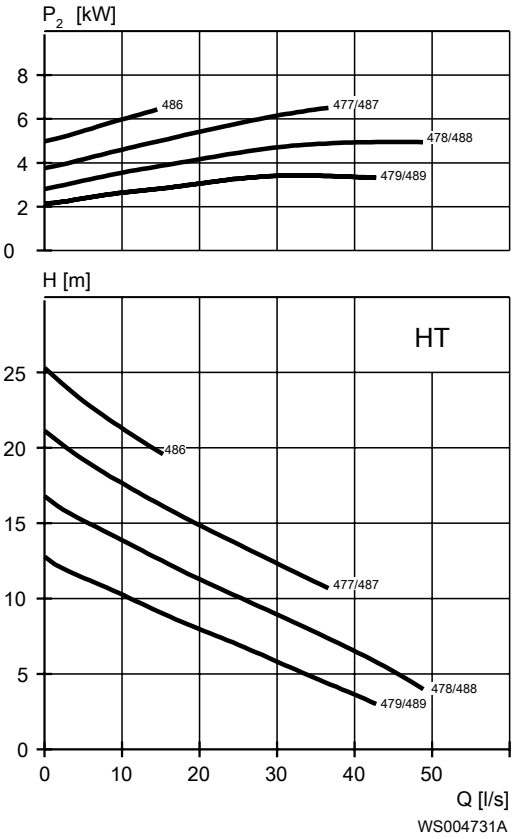


Curves for long fibrous manure: 427, 428, 429

Table 25: 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
5	6.7	428	1500	8.9	76	0.89	P,S
5	6.7	429	1500	8.9	76	0.89	P,S
5	6.7	438	1500	8.9	76	0.89	P,S
5	6.7	439	1500	8.9	76	0.89	P,S
5.5	7.4	428	1500	9.6	76	0.9	T,Z
5.5	7.4	429	1500	9.6	76	0.9	T,Z
5.5	7.4	438	1500	9.6	76	0.9	T,Z
5.5	7.4	439	1500	9.6	76	0.9	T,Z
6.5	8.7	427	1500	11	76	0.91	P,S
6.5	8.7	428	1500	11	76	0.91	P,S
6.5	8.7	429	1500	11	76	0.91	P,S
6.5	8.7	437	1500	11	76	0.91	P,S
6.5	8.7	438	1500	11	76	0.91	P,S
6.5	8.7	439	1500	11	76	0.91	P,S

HT

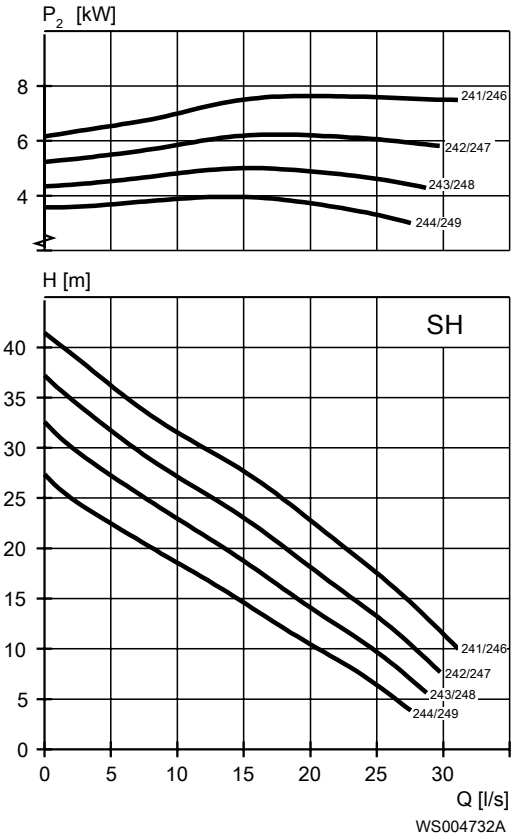


Curves for long fibrous manure: 477, 478, 479

Table 26: 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
5	6.7	478	1500	8.9	76	0.89	P,S
5	6.7	479	1500	8.9	76	0.89	P,S
5	6.7	488	1500	8.9	76	0.89	P,S
5	6.7	489	1500	8.9	76	0.89	P,S
5.5	7.4	478	1500	9.6	76	0.9	T,Z
5.5	7.4	479	1500	9.6	76	0.9	T,Z
5.5	7.4	488	1500	9.6	76	0.9	T,Z
5.5	7.4	489	1500	9.6	76	0.9	T,Z
6.5	8.7	477	1500	11	76	0.91	P,S
6.5	8.7	478	1500	11	76	0.91	P,S
6.5	8.7	479	1500	11	76	0.91	P,S
6.5	8.7	486	1500	11	76	0.91	P,S
6.5	8.7	487	1500	11	76	0.91	P,S
6.5	8.7	488	1500	11	76	0.91	P,S
6.5	8.7	489	1500	11	76	0.91	P,S

SH



Curves for long fibrous manure: 241, 242, 243, 244

Table 27: 400 V, 50 Hz, 3-phase

IE3 compliance is based on Y-connected stator.

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
8.5	11.4	241	3000	16	126	0.85	P,S
8.5	11.4	242	3000	16	126	0.85	P,S
8.5	11.4	243	3000	16	126	0.85	P,S
8.5	11.4	244	3000	16	126	0.85	P,S
8.5	11.4	246	3000	16	126	0.85	P,S
8.5	11.4	247	3000	16	126	0.85	P,S
8.5	11.4	248	3000	16	126	0.85	P,S
8.5	11.4	249	3000	16	126	0.85	P,S

6 H-pump

6.1 Product description

Usage

A submersible pump for water containing abrasive particles, sludge, ground water, or slurries.

Denomination

Type	Non-explosion proof version	Explosion proof version	Pressure class	Installation types
Gray iron	3127.182	3127.091	HT – High head	S

The pump can be used in the following installations:

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

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
Starting method	• Direct on-line • Star-delta • Soft starter • Variable Frequency Drive (VFD)
Number of starts per hour	Maximum 30

Feature	Description
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 28: 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)
Suction cover	Nitrile rubber (NBR)	-	-
Wear ring	Nitrile rubber (NBR)	-	-
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, alternative 1	Nitrile rubber (NBR) 70° IRH	-	-
O-rings, alternative 2	Fluorinated rubber (FPM) 70° IRH	-	-

Denomination	Material	ASTM	EN
Oil Part No 901752	Medical white oil of paraffin type. Fulfills FDA 172.878 (a)	-	-

Table 29: 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)
- 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.

6.2 Motor rating and performance curves

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.

HT

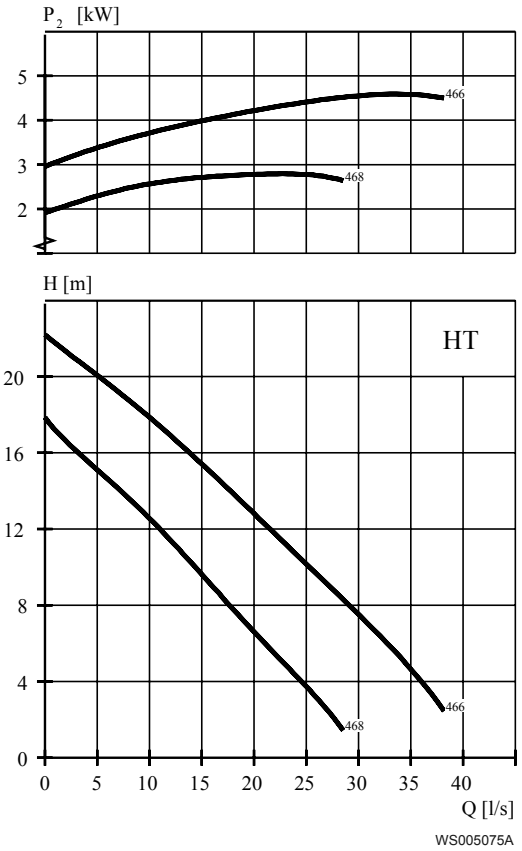


Table 30: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
4.7	6.3	466	1460	10	73	0.78	S
4.7	6.3	468	1460	10	73	0.78	S
5.9	7.9	466	1450	12	77	0.84	S
5.9	7.9	468	1450	12	77	0.84	S

7 L-pump

7.1 Product description

Usage

A submersible pump for a mixed flow of clean water, surface water, or storm water. Intended for high flow and low head applications, in column installation.

Denomination

Type	Non-explosion proof version	Explosion proof version	Pressure class	Installation types
Gray iron	3127.182	3127.091	LT – Low head	L

The pump can be used in the following installations:

L Vertical semi permanent, wet well column pipe arrangement where the well is divided into a suction part and a discharge part. Pump end equipped with guide vanes.

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
Starting method	• Direct on-line • Star-delta • Soft starter • Variable Frequency Drive (VFD)
Number of starts per hour	Maximum 30

Feature	Description
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 31: 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
Insert ring	Cast iron, gray	35B	GJL-250
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, 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 32: 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)
- 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.

7.2 Motor rating and performance curves

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.

LT

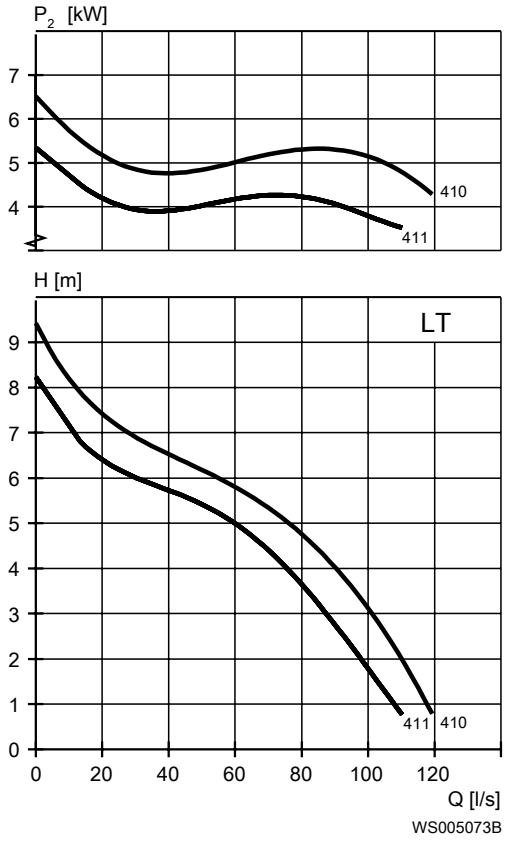


Table 33: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
4.7	6.3	411	1445	9.6	56	0.86	L
5.9	7.9	411	1450	13	76	0.81	L
7.5	10.1	410	1420	16	76	0.84	L
7.5	10.1	411	1420	16	76	0.84	L

8 M-pump

8.1 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
Gray iron Grinder	3127.170	3127.890	LT – Low head HT – High head	F, 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.

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	• Direct on-line • Star-delta • Soft starter
Number of starts per hour	Maximum 30

Feature	Description
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.

Monitoring equipment

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

Materials

Table 34: 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, alternative 1	Cast iron, gray	30B	GJL-200
Impeller, alternative 2	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, …
O-rings	Nitrile rubber (NBR) 70° IRH	-	-
Oil, part no 901752	Medical white oil of paraffin type. Fulfills FDA 172.878 (a)	-	-

Table 35: Mechanical seals

Inner seal	Outer seal
Aluminum oxide/ 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.

8.2 Motor rating and performance curves

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.

LT

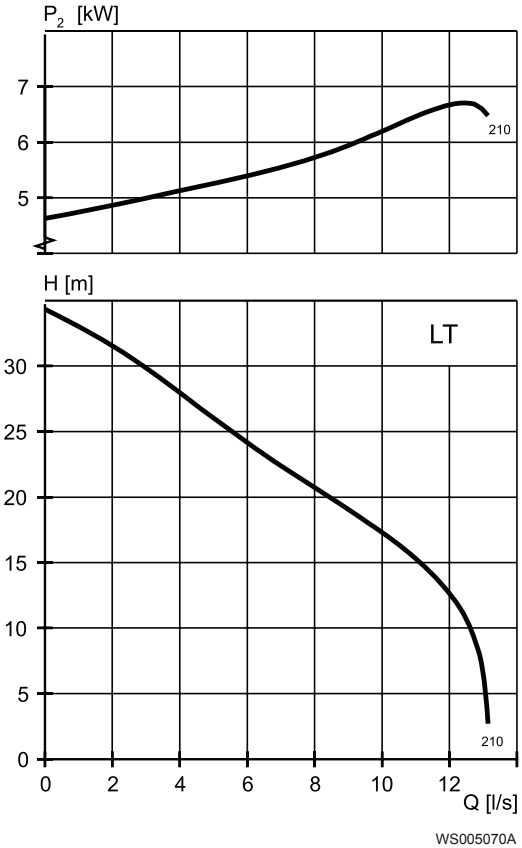


Table 36: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
7.4	9.9	210	2900	14	114	0.91	F,P

HT

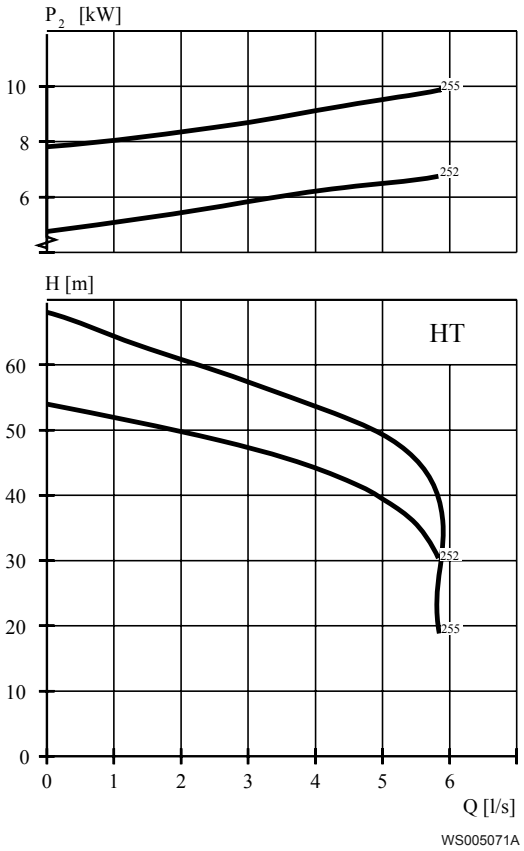


Table 37: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
7.4	9.9	252	2900	14	114	0.91	F,P
10.9	14.6	255	2875	21	137	0.88	F,P

9 N-pump, Standard Motor

9.1 Product description

Usage

Installation type P, S, T, Z	A submersible pump for efficient pumping of clean water, surface water, and wastewater containing solids or long-fibered material. The pump is designed for sustained high efficiency. For abrasive media, Hard-Iron™ is required. Stainless steel N-impeller is available as an option.
Installation type L	A submersible pump for a mixed flow of clean water, surface water, or storm water. Intended for high flow and low head applications, in column installation. The pump is designed for sustained high efficiency.

Denomination

Type	Non-explosion proof version	Explosion proof version	Pressure class	Installation types
Adaptive Gray iron	3127.160	3127.190	LT – Low head MT – Medium head HT – High head SH – Super head	L, P, S, T, Z
Hard-Iron™	3127.185	3127.095	LT – Low head MT – Medium head HT – High head SH – Super head	P, S, T, Z
Adaptive Stainless steel	3127.760	3127.770	LT – Low head MT – Medium head HT – High head	P, S

The pump can be used in the following installations:

L Vertical semi permanent, wet well column pipe arrangement where the well is divided into a suction part and a discharge part. Pump end equipped with guide vanes.

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
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.

Application	Type
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 38: 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, alternative 1	Cast iron, gray	35B	GJL-250
Impeller, alternative 2	Cast iron, Hard-Iron™	A 532 IIIA	GJN-HB555(XCR23)
Impeller, alternative 3	Stainless steel, Duplex	CD-4MCuN	10283:2010 -1.4474
Insert ring, alternative 1	Cast iron, gray	35B	GJL-250
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
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 39: 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)
- 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.

9.2 Motor rating and performance curves 3127.160/.190

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.

LT

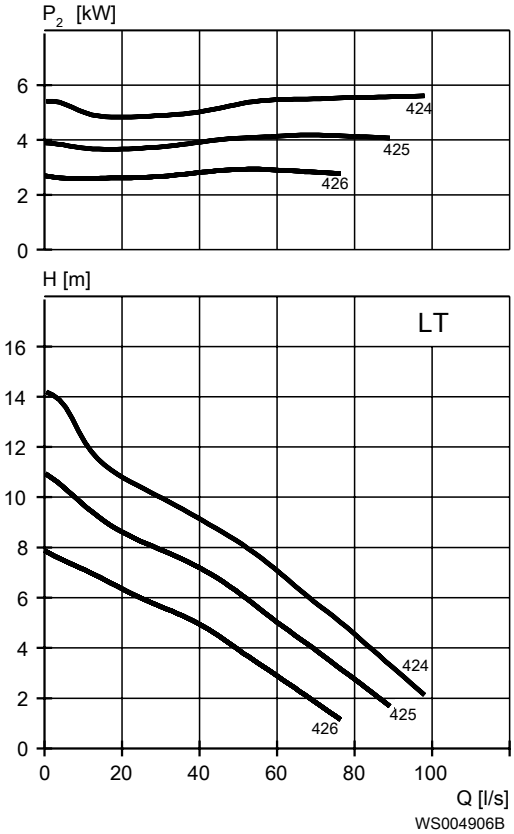


Table 40: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated Current, A	Start current, A	Power Factor, cos φ	Installation
4	5.4	426	1465	9.4	73	0.74	T,Z
4	5.4	426	1450	8	50	0.86	T,Z
4	5.4	426	1455	8.3	56	0.84	T,Z
4.7	6.3	425	1460	10	73	0.78	P,S

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated Current, A	Start current, A	Power Factor, cos φ	Installation
4.7	6.3	425	1440	9.4	50	0.88	P,S
4.7	6.3	425	1460	11	76	0.76	T,Z
4.7	6.3	425	1465	11	91	0.74	T,Z
4.7	6.3	425	1455	9.3	62	0.87	T,Z
4.7	6.3	425	1445	9.6	56	0.86	P,S
4.7	6.3	426	1460	10	73	0.78	P,S
4.7	6.3	426	1460	10	73	0.78	L
4.7	6.3	426	1440	9.4	50	0.88	P,S
4.7	6.3	426	1440	9.4	50	0.88	L
4.7	6.3	426	1460	11	76	0.76	T,Z
4.7	6.3	426	1465	11	91	0.74	T,Z
4.7	6.3	426	1455	9.3	62	0.87	T,Z
4.7	6.3	426	1445	9.6	56	0.86	P,S
4.7	6.3	426	1445	9.6	56	0.86	L
5.9	7.9	424	1450	13	76	0.81	P,S
5.9	7.9	424	1460	13	91	0.79	P,S
5.9	7.9	424	1440	12	62	0.88	P,S
5.9	7.9	425	1450	13	76	0.81	P,S
5.9	7.9	425	1450	13	76	0.81	L
5.9	7.9	425	1460	13	91	0.79	P,S
5.9	7.9	425	1460	13	91	0.79	L
5.9	7.9	425	1440	12	62	0.88	P,S
5.9	7.9	425	1440	12	62	0.88	L
5.9	7.9	426	1450	13	76	0.81	L
5.9	7.9	426	1450	13	76	0.81	P,S
5.9	7.9	426	1460	13	91	0.79	P,S
5.9	7.9	426	1460	13	91	0.79	L
5.9	7.9	426	1440	12	62	0.88	P,S
5.9	7.9	426	1440	12	62	0.88	L
7.5	10.1	424	1435	16	76	0.84	L
7.5	10.1	425	1435	16	76	0.84	L
7.5	10.1	426	1435	16	76	0.84	L

MT

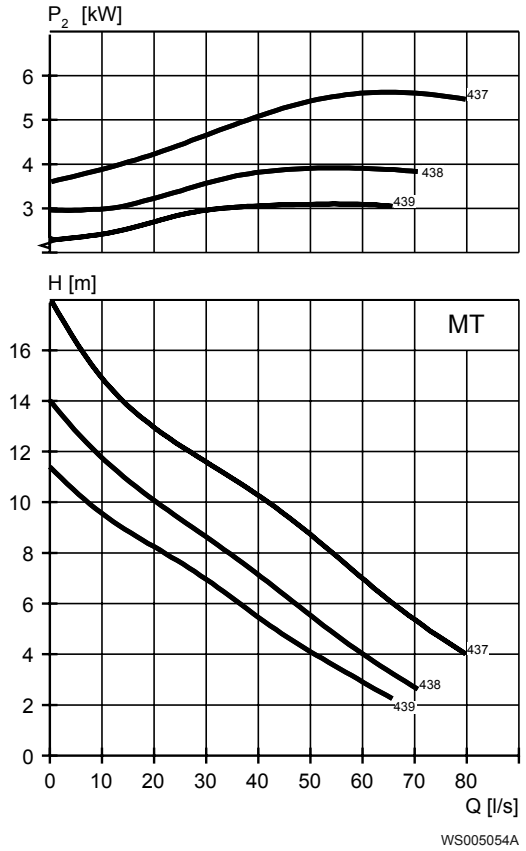


Table 41: 400 V, 50 Hz, 3-phase

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	439	1465	9.4	73	0.74	T,Z
4	5.4	439	1450	8.0	50	0.86	T,Z
4	5.4	439	1455	8.3	56	0.84	T,Z
4.7	6.3	438	1460	10	73	0.78	P,S
4.7	6.3	438	1440	9.4	50	0.88	P,S
4.7	6.3	438	1460	11	76	0.76	T,Z
4.7	6.3	438	1465	11	91	0.74	T,Z
4.7	6.3	438	1455	9.3	62	0.87	T,Z
4.7	6.3	438	1445	9.6	56	0.86	P,S
4.7	6.3	439	1460	10	73	0.78	P,S
4.7	6.3	439	1440	9.4	50	0.88	P,S
4.7	6.3	439	1460	11	76	0.76	T,Z
4.7	6.3	439	1465	11	91	0.74	T,Z
4.7	6.3	439	1455	9.3	62	0.87	T,Z
4.7	6.3	439	1445	9.6	56	0.86	P,S
5.9	7.9	437	1450	13	76	0.81	P,S
5.9	7.9	437	1460	13	91	0.79	P,S
5.9	7.9	437	1440	12	62	0.88	P,S
5.9	7.9	438	1450	13	76	0.81	P,S

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
5.9	7.9	438	1460	13	91	0.79	P,S
5.9	7.9	438	1440	12	62	0.88	P,S
5.9	7.9	439	1450	13	76	0.81	P,S
5.9	7.9	439	1460	13	91	0.79	P,S
5.9	7.9	439	1440	12	62	0.88	P,S

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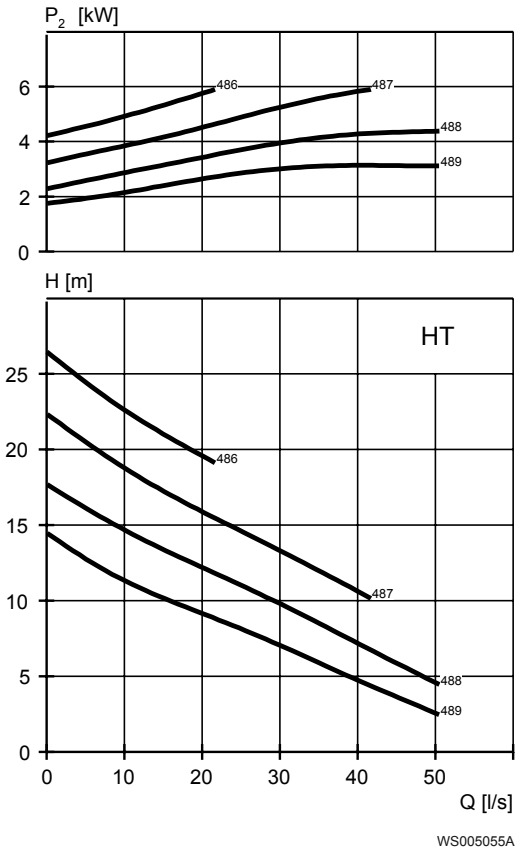

Table 42: 400 V, 50 Hz, 3-phase

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	489	1465	9.4	73	0.74	T,Z
4	5.4	489	1450	8.0	50	0.86	T,Z
4	5.4	489	1455	8.3	56	0.84	T,Z
4.7	6.3	487	1460	10	73	0.78	P,S
4.7	6.3	487	1440	9.4	50	0.88	P,S
4.7	6.3	487	1460	11	76	0.76	T,Z
4.7	6.3	487	1465	11	91	0.74	T,Z
4.7	6.3	487	1455	9.3	62	0.87	T,Z
4.7	6.3	487	1445	9.6	56	0.86	P,S
4.7	6.3	488	1460	10	73	0.78	P,S
4.7	6.3	488	1440	9.4	50	0.88	P,S

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
4.7	6.3	488	1460	11	76	0.76	T,Z
4.7	6.3	488	1465	11	91	0.74	T,Z
4.7	6.3	488	1455	9.3	62	0.87	T,Z
4.7	6.3	488	1445	9.6	56	0.86	P,S
4.7	6.3	489	1460	10	73	0.78	P,S
4.7	6.3	489	1440	9.4	50	0.88	P,S
4.7	6.3	489	1460	11	76	0.76	T,Z
4.7	6.3	489	1465	11	91	0.74	T,Z
4.7	6.3	489	1455	9.3	62	0.87	T,Z
4.7	6.3	489	1445	9.6	56	0.86	P,S
5.9	7.9	486	1450	13	76	0.81	P,S
5.9	7.9	486	1460	13	91	0.79	P,S
5.9	7.9	486	1440	12	62	0.88	P,S
5.9	7.9	487	1450	13	76	0.81	P,S
5.9	7.9	487	1460	13	91	0.79	P,S
5.9	7.9	487	1440	12	62	0.88	P,S
5.9	7.9	488	1450	13	76	0.81	P,S
5.9	7.9	488	1460	13	91	0.79	P,S
5.9	7.9	488	1440	12	62	0.88	P,S
5.9	7.9	489	1450	13	76	0.81	P,S
5.9	7.9	489	1460	13	91	0.79	P,S
5.9	7.9	489	1440	12	62	0.88	P,S

SH

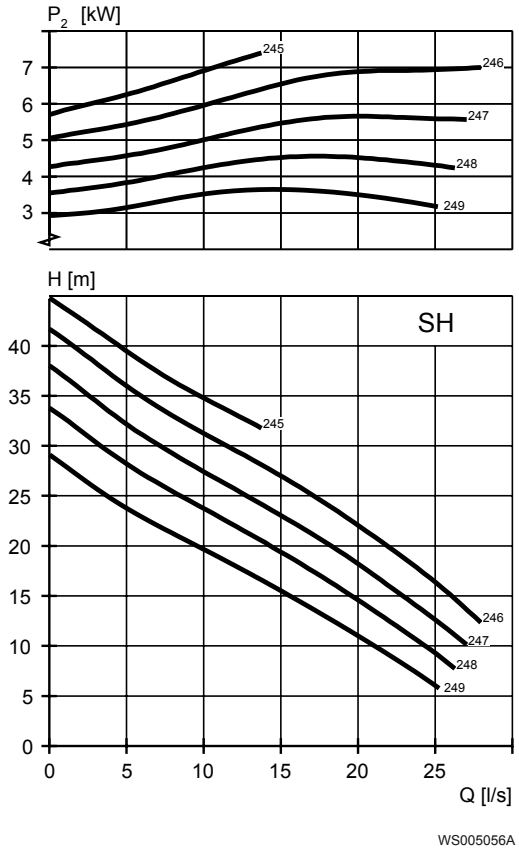

Table 43: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
7.4	9.9	245	2920	15	137	0.84	P,S
7.4	9.9	245	2885	14	94	0.93	P,S
7.4	9.9	245	2900	14	114	0.91	P,S
7.4	9.9	246	2920	15	137	0.84	P,S
7.4	9.9	246	2885	14	94	0.93	P,S
7.4	9.9	246	2900	14	114	0.91	P,S
7.4	9.9	247	2920	15	137	0.84	P,S
7.4	9.9	247	2885	14	94	0.93	P,S
7.4	9.9	247	2900	14	114	0.91	P,S
7.4	9.9	248	2920	15	137	0.84	P,S
7.4	9.9	248	2885	14	94	0.93	P,S
7.4	9.9	248	2900	14	114	0.91	P,S
7.4	9.9	249	2920	15	137	0.84	P,S
7.4	9.9	249	2885	14	94	0.93	P,S
7.4	9.9	249	2900	14	114	0.91	P,S

9.3 Motor rating and performance curves 3127.185/.095

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.

LT

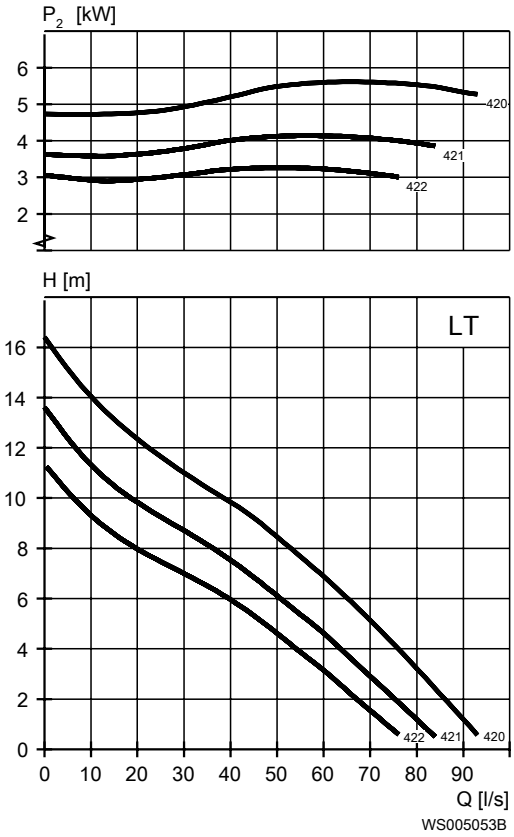

Table 44: 400 V, 50 Hz, 3-phase

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	421	1450	8.0	50	0.86	T,Z
4	5.4	421	1455	8.3	56	0.84	T,Z
4	5.4	422	1450	8.0	50	0.86	T,Z
4	5.4	422	1455	8.3	56	0.84	T,Z
4.7	6.3	421	1440	9.4	50	0.88	P,S
4.7	6.3	421	1460	11	76	0.76	T,Z
4.7	6.3	421	1455	9.3	62	0.87	T,Z
4.7	6.3	421	1445	9.6	56	0.86	P,S
4.7	6.3	422	1440	9.4	50	0.88	P,S
4.7	6.3	422	1460	11	76	0.76	T,Z
4.7	6.3	422	1455	9.3	62	0.87	T,Z
4.7	6.3	422	1445	9.6	56	0.86	P,S
5.9	7.9	420	1450	13	76	0.81	P,S
5.9	7.9	420	1440	12	62	0.88	P,S
5.9	7.9	421	1450	13	76	0.81	P,S
5.9	7.9	421	1440	12	62	0.88	P,S
5.9	7.9	422	1450	13	76	0.81	P,S
5.9	7.9	422	1440	12	62	0.88	P,S

MT

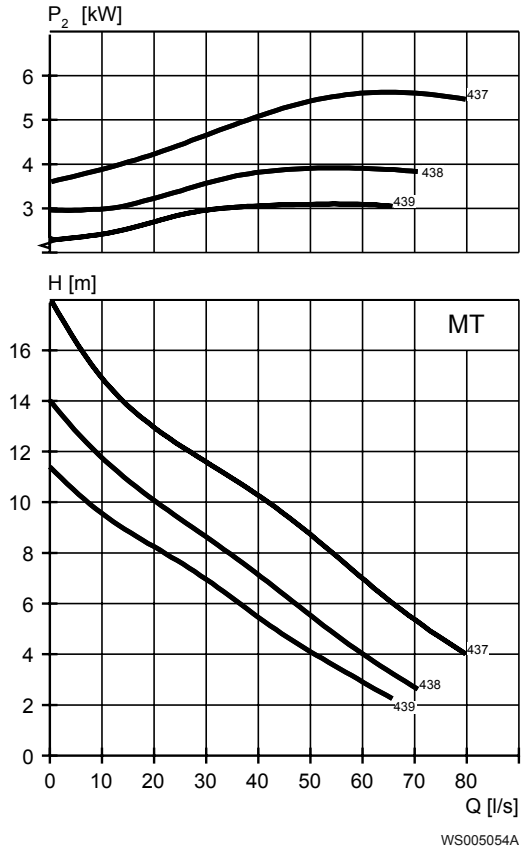

Table 45: 400 V, 50 Hz, 3-phase

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	438	1450	8.0	50	0.86	T,Z
4	5.4	438	1455	8.3	56	0.84	T,Z
4	5.4	439	1450	8.0	50	0.86	T,Z
4	5.4	439	1455	8.3	56	0.84	T,Z
4.7	6.3	438	1440	9.4	50	0.88	P,S
4.7	6.3	438	1460	11	76	0.76	T,Z
4.7	6.3	438	1455	9.3	62	0.87	T,Z
4.7	6.3	438	1445	9.6	56	0.86	P,S
4.7	6.3	439	1440	9.4	50	0.88	P,S
4.7	6.3	439	1460	11	76	0.76	T,Z
4.7	6.3	439	1455	9.3	62	0.87	T,Z
4.7	6.3	439	1445	9.6	56	0.86	P,S
5.9	7.9	437	1450	13	76	0.81	P,S
5.9	7.9	437	1440	12	62	0.88	P,S
5.9	7.9	438	1450	13	76	0.81	P,S
5.9	7.9	438	1440	12	62	0.88	P,S
5.9	7.9	439	1450	13	76	0.81	P,S
5.9	7.9	439	1440	12	62	0.88	P,S

HT

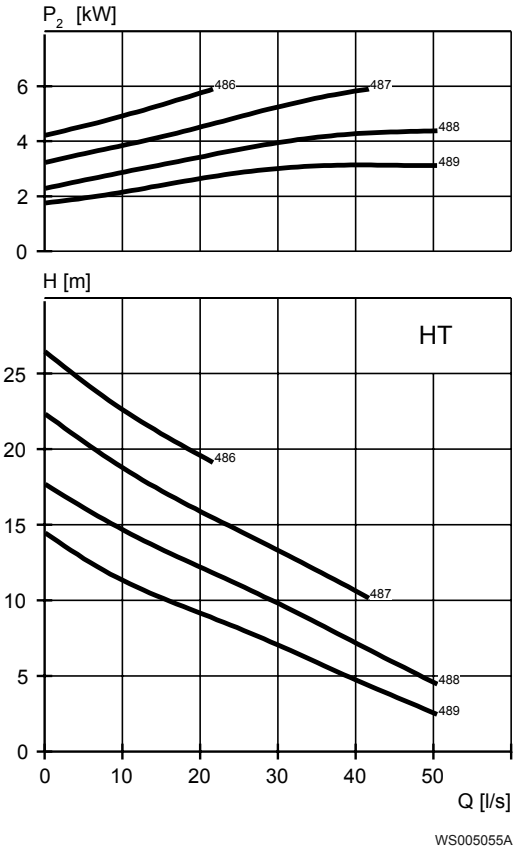

Table 46: 400 V, 50 Hz, 3-phase

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	489	1450	8.0	50	0.86	T,Z
4	5.4	489	1455	8.3	56	0.84	T,Z
4.7	6.3	488	1440	9.4	50	0.88	P,S
4.7	6.3	488	1460	11	76	0.76	T,Z
4.7	6.3	488	1455	9.3	62	0.87	T,Z
4.7	6.3	488	1445	9.6	56	0.86	P,S
4.7	6.3	489	1440	9.4	50	0.88	P,S
4.7	6.3	489	1460	11	76	0.76	T,Z
4.7	6.3	489	1455	9.3	62	0.87	T,Z
4.7	6.3	489	1445	9.6	56	0.86	P,S
5.9	7.9	487	1450	13	76	0.81	P,S
5.9	7.9	487	1440	12	62	0.88	P,S
5.9	7.9	488	1450	13	76	0.81	P,S
5.9	7.9	488	1440	12	62	0.88	P,S
5.9	7.9	489	1450	13	76	0.81	P,S
5.9	7.9	489	1440	12	62	0.88	P,S

SH

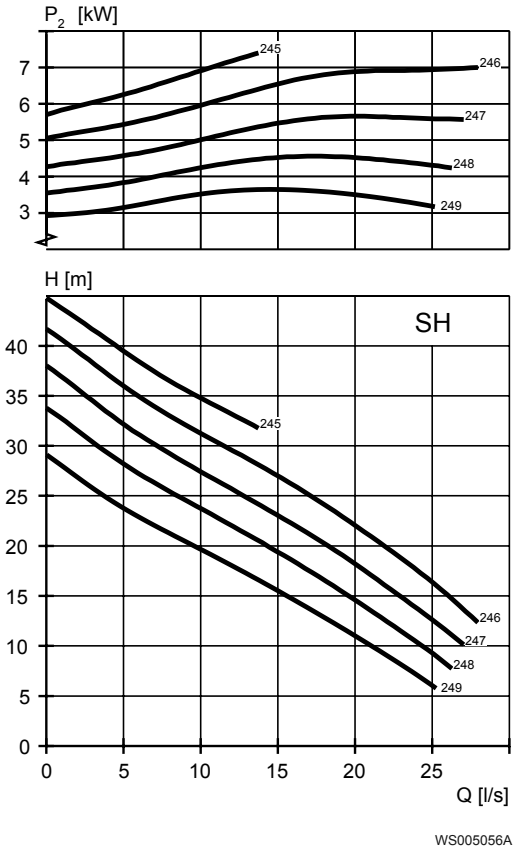

Table 47: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
7.4	9.9	245	2885	14	94	0.93	P,S
7.4	9.9	245	2900	14	114	0.91	P,S
7.4	9.9	246	2885	14	94	0.93	P,S
7.4	9.9	246	2900	14	114	0.91	P,S
7.4	9.9	247	2885	14	94	0.93	P,S
7.4	9.9	247	2900	14	114	0.91	P,S
7.4	9.9	248	2885	14	94	0.93	P,S
7.4	9.9	248	2900	14	114	0.91	P,S
7.4	9.9	249	2885	14	94	0.93	P,S
7.4	9.9	249	2900	14	114	0.91	P,S

9.4 Motor rating and performance curves 3127.760/.770

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.

LT

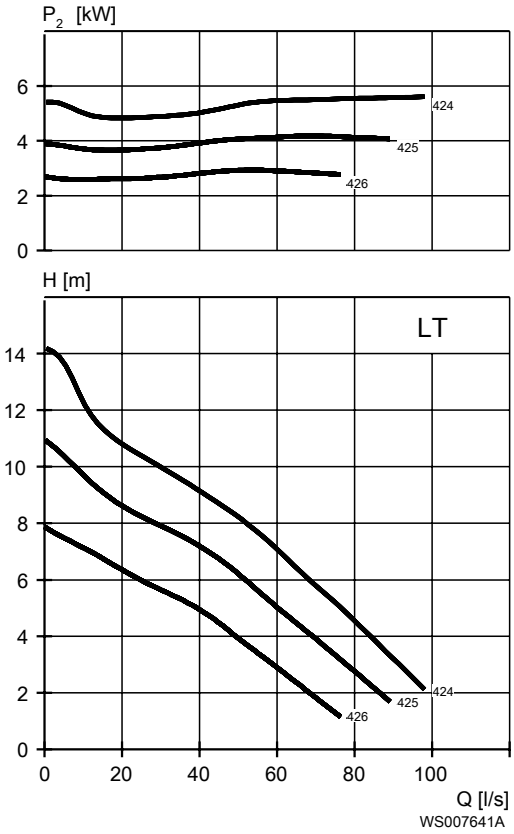

Table 48: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated Current, A	Start current, A	Power Factor, cos φ	Installation
4.7	6.3	425	1460	10	73	0.78	P,S
4.7	6.3	425	1440	9.4	50	0.88	P,S
4.7	6.3	425	1445	9.6	56	0.86	P,S
4.7	6.3	426	1460	10	73	0.78	P,S
4.7	6.3	426	1440	9.4	50	0.88	P,S
4.7	6.3	426	1445	9.6	56	0.86	P,S
5.9	7.9	424	1450	13	76	0.81	P,S
5.9	7.9	424	1460	13	91	0.79	P,S
5.9	7.9	424	1440	12	62	0.88	P,S
5.9	7.9	425	1450	13	76	0.81	P,S
5.9	7.9	425	1460	13	91	0.79	P,S
5.9	7.9	425	1440	12	62	0.88	P,S
5.9	7.9	426	1450	13	76	0.81	P,S
5.9	7.9	426	1460	13	91	0.79	P,S
5.9	7.9	426	1440	12	62	0.88	P,S

MT

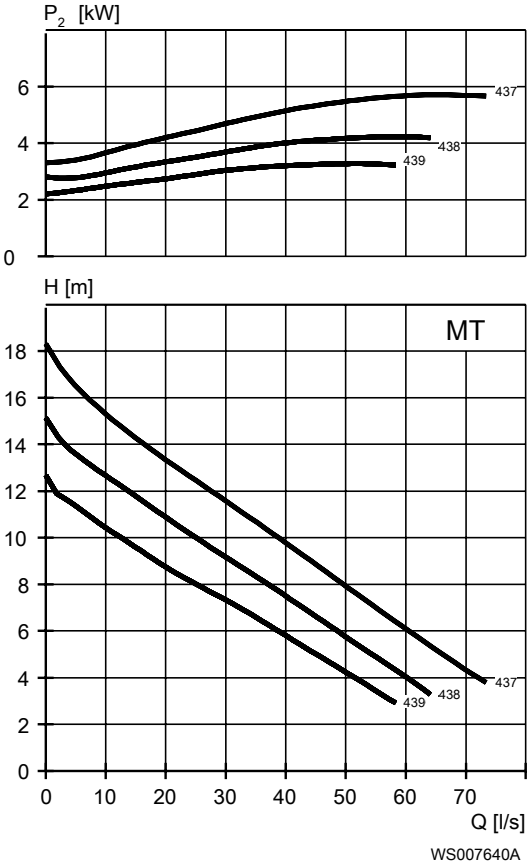

Table 49: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated Current, A	Start current, A	Power Factor, cos φ	Installation
4.7	6.3	438	1460	10	73	0.78	P,S
4.7	6.3	438	1440	9.4	50	0.88	P,S
4.7	6.3	438	1445	9.6	56	0.86	P,S
4.7	6.3	439	1460	10	73	0.78	P,S
4.7	6.3	439	1440	9.4	50	0.88	P,S
4.7	6.3	439	1445	9.6	56	0.86	P,S
5.9	7.9	437	1450	13	76	0.81	P,S
5.9	7.9	437	1460	13	91	0.79	P,S
5.9	7.9	437	1440	12	62	0.88	P,S
5.9	7.9	438	1450	13	76	0.81	P,S
5.9	7.9	438	1460	13	91	0.79	P,S
5.9	7.9	438	1440	12	62	0.88	P,S
5.9	7.9	439	1450	13	76	0.81	P,S
5.9	7.9	439	1460	13	91	0.79	P,S
5.9	7.9	439	1440	12	62	0.88	P,S

HT

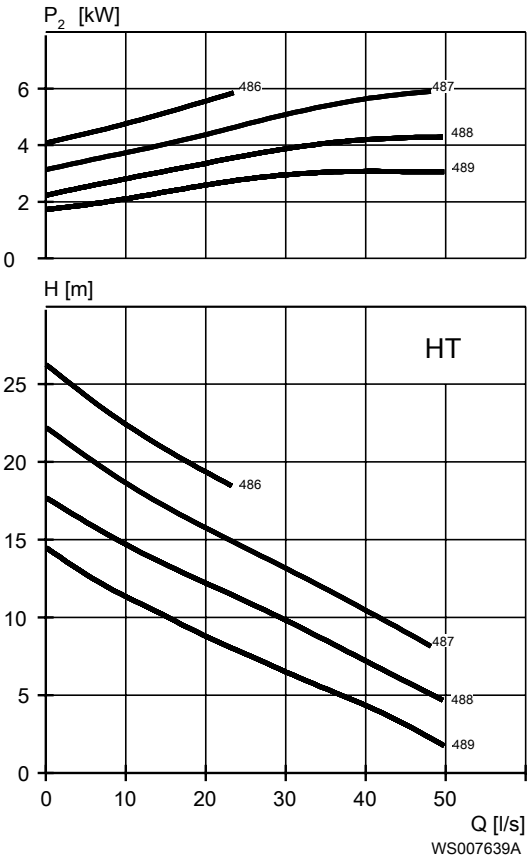

Table 50: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated Current, A	Start current, A	Power Factor, cos φ	Installation
4.7	6.3	488	1460	10	73	0.78	P,S
4.7	6.3	488	1440	9.4	50	0.88	P,S
4.7	6.3	488	1445	9.6	56	0.86	P,S
4.7	6.3	489	1460	10	73	0.78	P,S
4.7	6.3	489	1440	9.4	50	0.88	P,S
4.7	6.3	489	1445	9.6	56	0.86	P,S
5.9	7.9	486	1450	13	76	0.81	P,S
5.9	7.9	486	1460	13	91	0.79	P,S
5.9	7.9	486	1440	12	62	0.88	P,S
5.9	7.9	487	1450	13	76	0.81	P,S
5.9	7.9	487	1460	13	91	0.79	P,S
5.9	7.9	487	1440	12	62	0.88	P,S
5.9	7.9	488	1450	13	76	0.81	P,S
5.9	7.9	488	1460	13	91	0.79	P,S
5.9	7.9	488	1440	12	62	0.88	P,S
5.9	7.9	489	1450	13	76	0.81	P,S
5.9	7.9	489	1460	13	91	0.79	P,S
5.9	7.9	489	1440	12	62	0.88	P,S

10 N-pump, Premium Efficiency Motor (IE3)

10.1 Product description

Usage

Installation type P, S, T, Z	A submersible pump for efficient pumping of clean water, surface water, and wastewater containing solids or long-fibered material. The pump is designed for sustained high efficiency. For abrasive media, Hard-Iron™ is required. Stainless steel N-impeller is available as an option.
Installation type L	A submersible pump for a mixed flow of clean water, surface water, or storm water. Intended for high flow and low head applications, in column installation. The pump is designed for sustained high efficiency.

Denomination

Type	Non-explosion proof version	Explosion proof version	Pressure class	Installation types
Adaptive Gray iron	3127.900	3127.910	LT – Low head MT – Medium head HT – High head SH – Super head	L, P, S, T, Z
Hard-Iron™	3127.820	3127.830	LT – Low head MT – Medium head HT – High head SH – Super head	P, S, T, Z
Stainless steel	3127.960	3127.970	LT – Low head MT – Medium head HT – High head	P, S

The pump can be used in the following installations:

L Vertical semi permanent, wet well column pipe arrangement where the well is divided into a suction part and a discharge part. Pump end equipped with guide vanes.

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)
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	Line started permanent magnet motor (LSPM)
Frequency	50 Hz
Power supply	3-phase
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.

Application	Type
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 51: 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, alternative 1	Cast iron, gray	35B	GJL-250
Impeller, alternative 2	Cast iron, Hard-Iron™	A 532 IIIA	GJN-HB555(XCR23)
Impeller, alternative 3	Stainless steel, Duplex	CD-4MCuN	10283:2010 -1.4474
Insert ring, alternative 1	Cast iron, gray	35B	GJL-250
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
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 52: 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

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

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.

10.2 Motor rating and performance curves 3127.820/.830

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.

LT

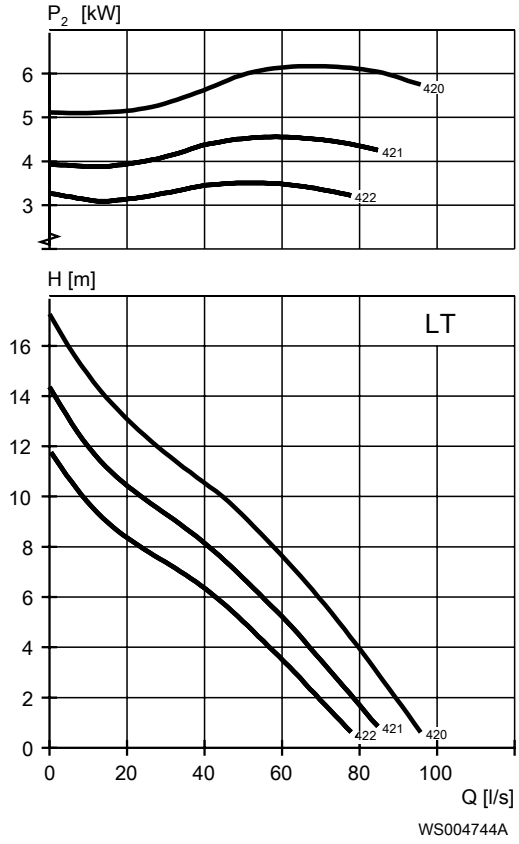

Table 53: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
5	6.7	421	1500	8.9	76	0.89	P,S
5	6.7	422	1500	8.9	76	0.89	P,S
5.5	7.4	421	1500	9.6	76	0.9	T,Z
5.5	7.4	422	1500	9.6	76	0.9	T,Z
6.5	8.7	420	1500	11	76	0.91	P,S
6.5	8.7	421	1500	11	76	0.91	P,S
6.5	8.7	422	1500	11	76	0.91	P,S

MT

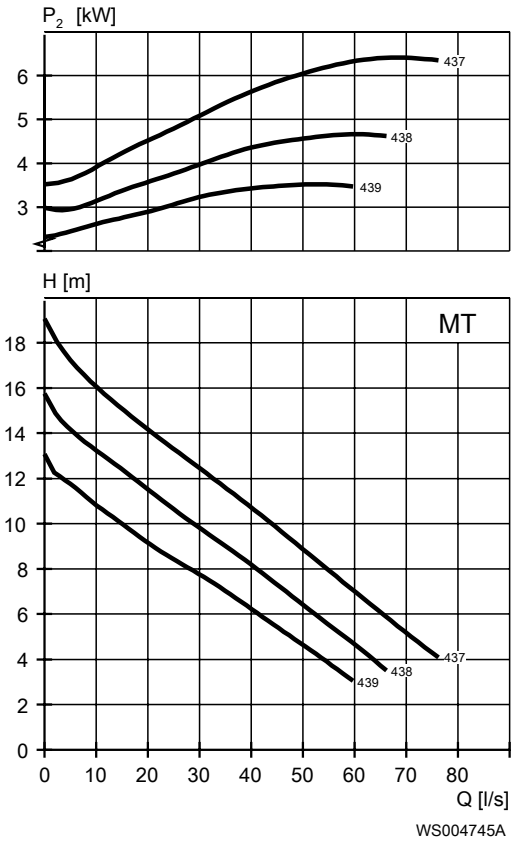

Table 54: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
5	6.7	438	1500	8.9	76	0.89	P,S
5	6.7	439	1500	8.9	76	0.89	P,S
5.5	7.4	438	1500	9.6	76	0.9	T,Z
5.5	7.4	439	1500	9.6	76	0.9	T,Z
6.5	8.7	437	1500	11	76	0.91	P,S
6.5	8.7	438	1500	11	76	0.91	P,S

HT

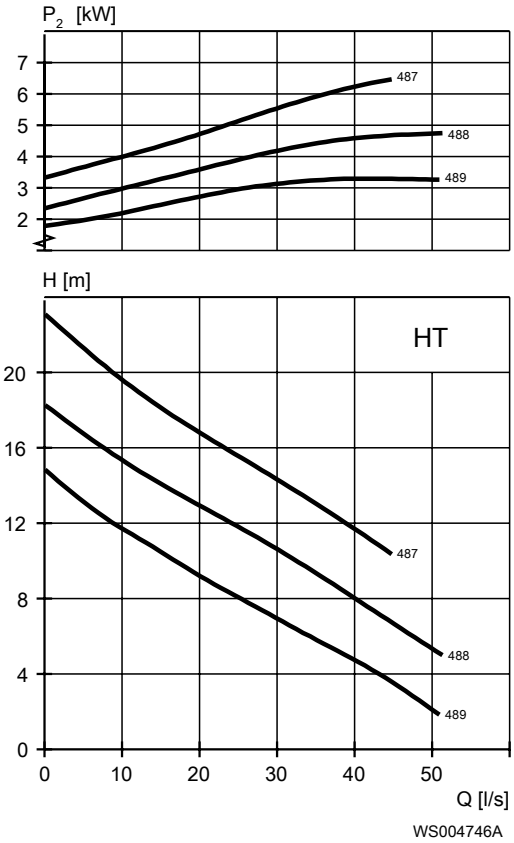

Table 55: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
5	6.7	488	1500	8.9	76	0.89	P,S
5	6.7	489	1500	8.9	76	0.89	P,S
5.5	7.4	488	1500	9.6	76	0.9	T,Z
5.5	7.4	489	1500	9.6	76	0.9	T,Z
6.5	8.7	487	1500	11	76	0.91	P,S
6.5	8.7	488	1500	11	76	0.91	P,S
6.5	8.7	489	1500	11	76	0.91	P,S

SH

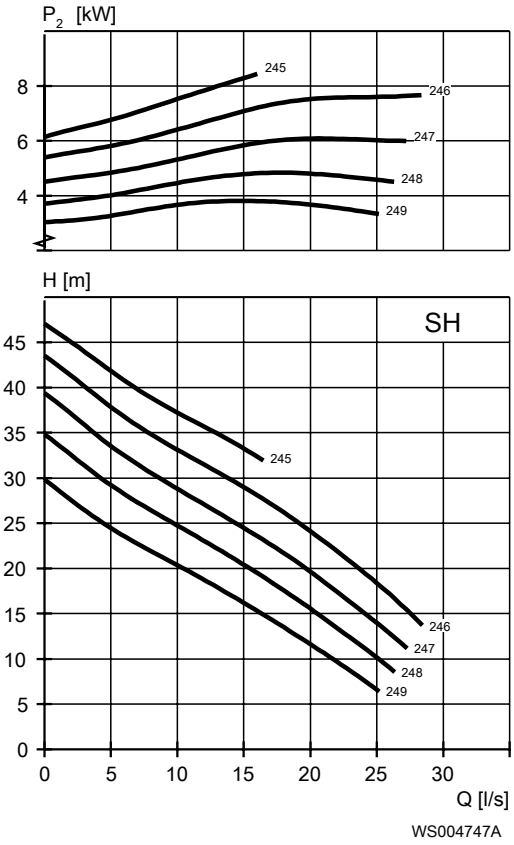

Table 56: 400 V, 50 Hz, 3-phase

IE3 compliance is based on Y-connected stator.

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
8.5	11.4	245	3000	16	126	0.85	P,S
8.5	11.4	246	3000	16	126	0.85	P,S
8.5	11.4	247	3000	16	126	0.85	P,S
8.5	11.4	248	3000	16	126	0.85	P,S
8.5	11.4	249	3000	16	126	0.85	P,S

10.3 Motor rating and performance curves 3127.900/.910

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.

LT

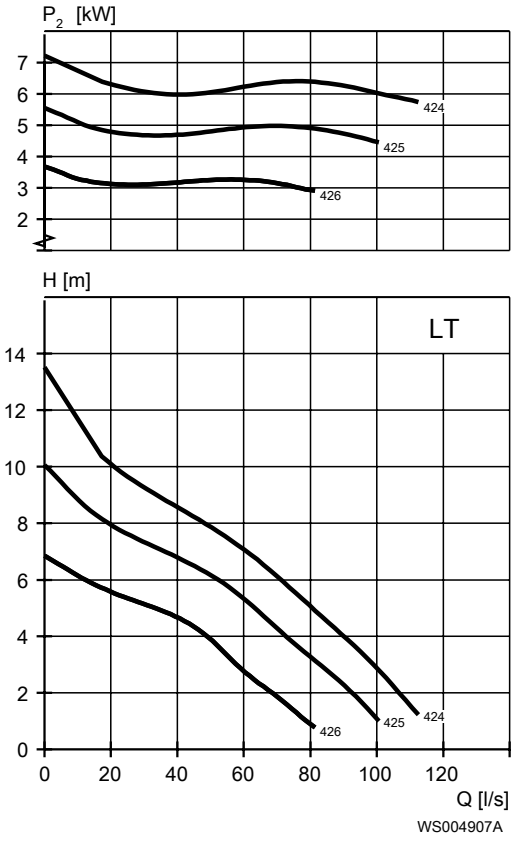

Table 57: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated Current, A	Start current, A	Power factor, cos φ	Installation
5	6.7	425	1500	8.9	76	0.89	P,S
5	6.7	426	1500	8.9	76	0.89	L,P,S
5.5	7.4	425	1500	9.6	76	0.9	T,Z
5.5	7.4	426	1500	9.6	76	0.9	T,Z
6.5	8.7	424	1500	11	76	0.91	L,P,S
6.5	8.7	425	1500	11	76	0.91	L,P,S
6.5	8.7	426	1500	11	76	0.91	L,P,S

MT

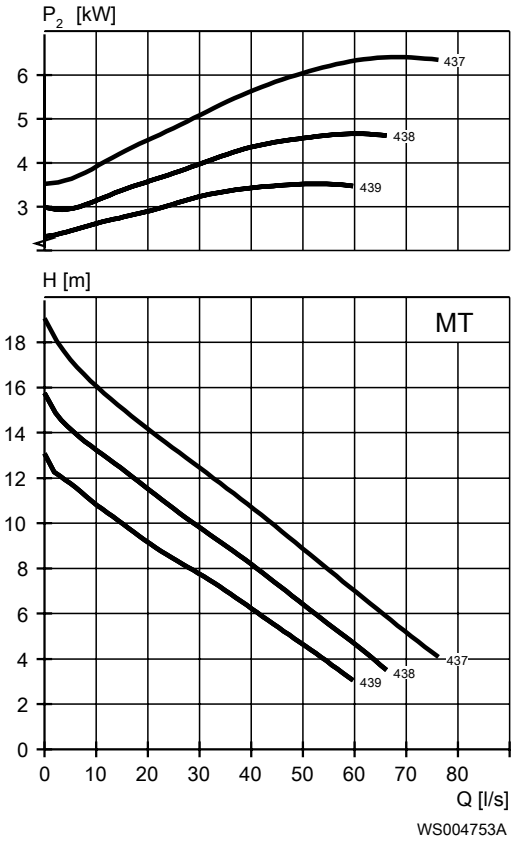

Table 58: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
5	6.7	438	1500	8.9	76	0.89	P,S
5	6.7	439	1500	8.9	76	0.89	P,S
5.5	7.4	438	1500	9.6	76	0.9	T,Z
5.5	7.4	439	1500	9.6	76	0.9	T,Z
6.5	8.7	437	1500	11	76	0.91	P,S
6.5	8.7	438	1500	11	76	0.91	P,S
6.5	8.7	439	1500	11	76	0.91	P,S

HT

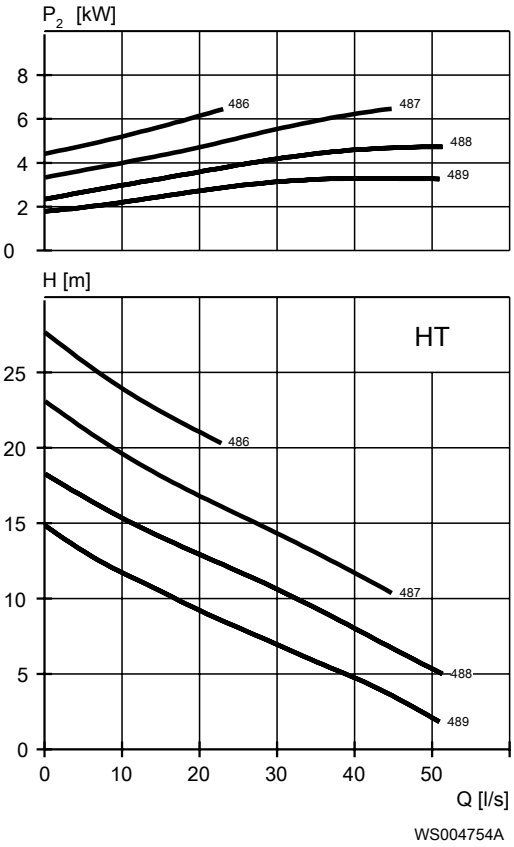

Table 59: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
5	6.7	488	1500	8.9	76	0.89	P,S
5	6.7	489	1500	8.9	76	0.89	P,S
5.5	7.4	488	1500	9.6	76	0.9	T,Z
5.5	7.4	489	1500	9.6	76	0.9	T,Z
6.5	8.7	486	1500	11	76	0.91	P,S
6.5	8.7	487	1500	11	76	0.91	P,S
6.5	8.7	488	1500	11	76	0.91	P,S
6.5	8.7	489	1500	11	76	0.91	P,S

SH

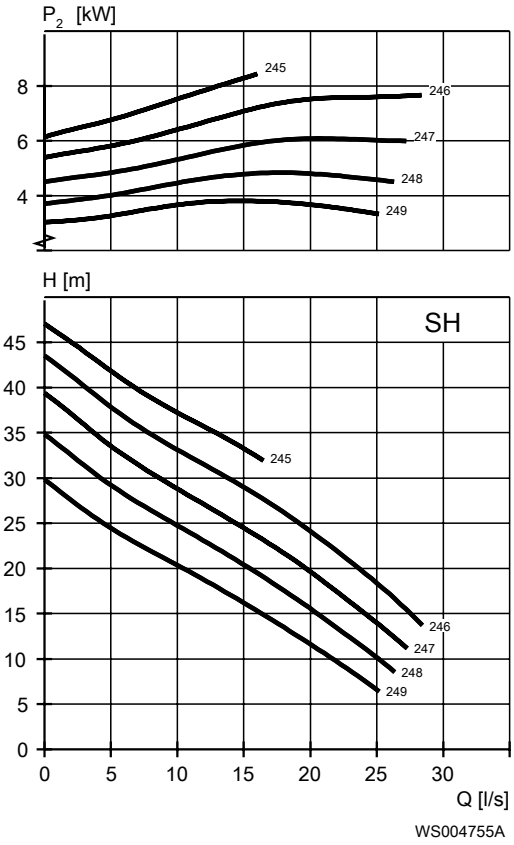

Table 60: 400 V, 50 Hz, 3-phase

IE3 compliance is based on Y-connected stator.

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
8.5	11.4	245	3000	16	126	0.85	P,S
8.5	11.4	246	3000	16	126	0.85	P,S
8.5	11.4	247	3000	16	126	0.85	P,S
8.5	11.4	248	3000	16	126	0.85	P,S
8.5	11.4	249	3000	16	126	0.85	P,S

10.4 Motor rating and performance curves 3127.960/.970

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.

LT

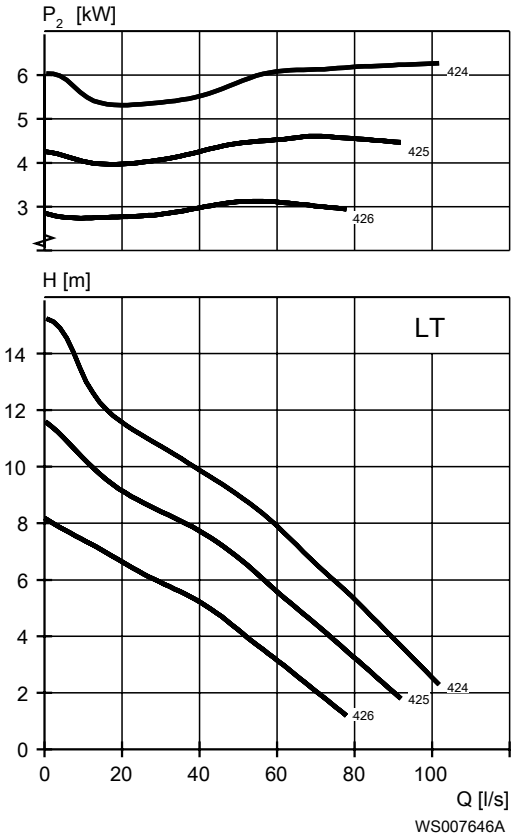

Table 61: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
5	6.7	425	1500	8.9	76	0.89	P,S
5	6.7	426	1500	8.9	76	0.89	P,S
5.5	7.4	425	1500	9.6	76	0.9	T,Z
5.5	7.4	426	1500	9.6	76	0.9	T,Z
6.5	8.7	424	1500	11	76	0.91	P,S
6.5	8.7	425	1500	11	76	0.91	P,S
6.5	8.7	426	1500	11	76	0.91	P,S

MT

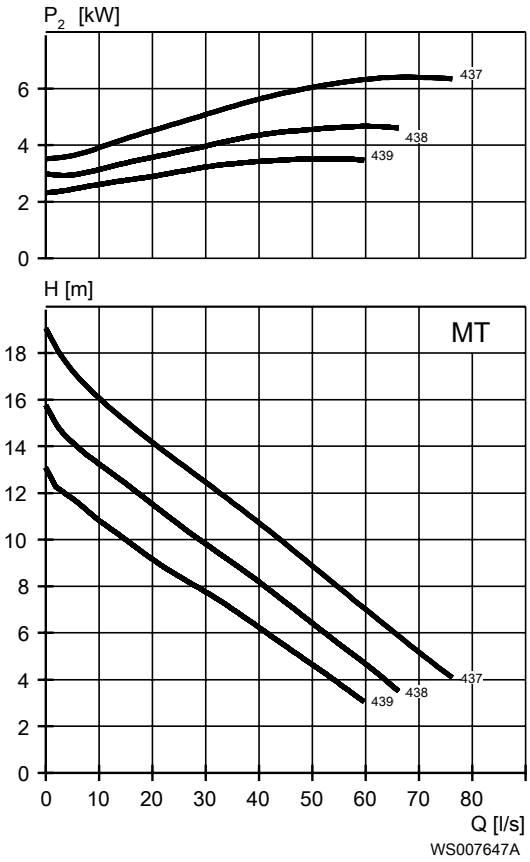

Table 62: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated Current, A	Start current, A	Power Factor, cos φ	Installation
5	6.7	438	1500	8.9	76	0.89	P,S
5	6.7	439	1500	8.9	76	0.89	P,S
6.5	8.7	437	1500	11	76	0.91	P,S
6.5	8.7	438	1500	11	76	0.91	P,S
6.5	8.7	439	1500	11	76	0.91	P,S

HT

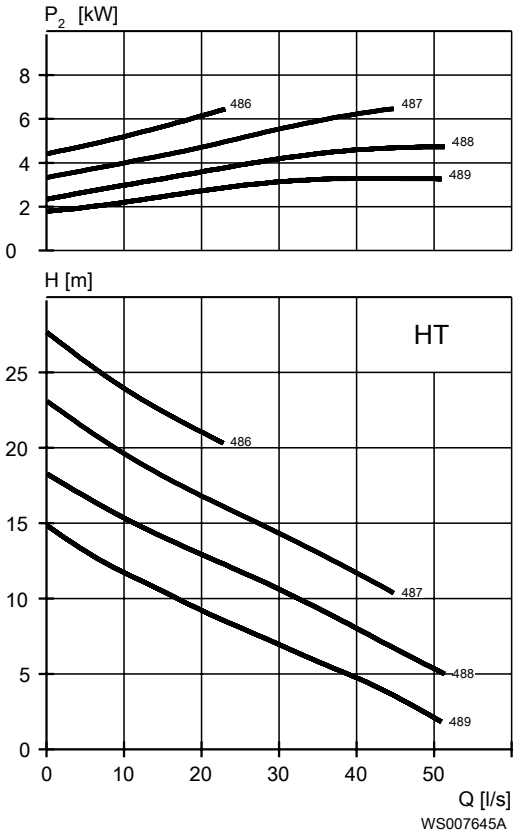

Table 63: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated Current, A	Start current, A	Power Factor, cos φ	Installation
5	6.7	488	1500	8.9	76	0.89	P,S
5	6.7	489	1500	8.9	76	0.89	P,S
6.5	8.7	486	1500	11	76	0.91	P,S
6.5	8.7	487	1500	11	76	0.91	P,S
6.5	8.7	488	1500	11	76	0.91	P,S
6.5	8.7	489	1500	11	76	0.91	P,S

11 P-pump

11.1 Product description

Usage

A submersible propeller pump for clean, surface, or storm water. Intended for high flow and low head applications, in column installation.

Denomination

Type	Non-explosion proof version	Explosion proof version	Pressure class	Installation types
Gray iron	3127.182	3127.091	LT – Low head	L

The pump can be used in the following installations:

L Vertical semi permanent, wet well column pipe arrangement where the well is divided into a suction part and a discharge part. Pump end equipped with guide vanes.

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	• Direct on-line • Star-delta • Soft starter • Variable Frequency Drive (VFD)
Number of starts per hour	Maximum 30
Code compliance	IEC 60034-1

Feature	Description
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 64: 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
Propeller	Aluminum bronze	C 95 500	CC333G
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, 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 65: 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

- 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.

11.2 Motor rating and performance curves

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.

LT

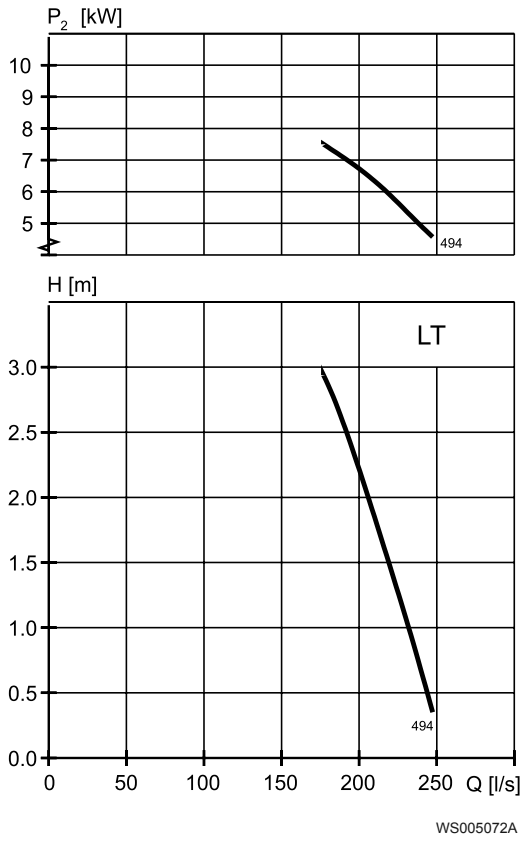

Table 66: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Blade angle, °	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
7.5	10.1	494	16	1435	15	77	0.86	L

12 Dimensions and Weight, C-pump

12.1 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.

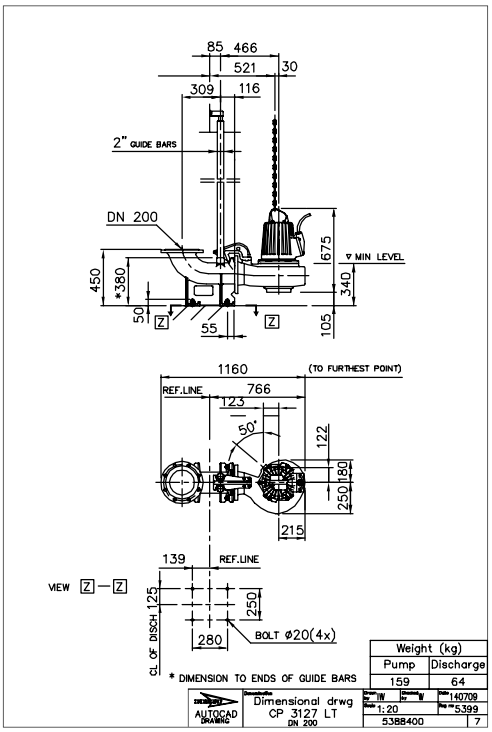

Figure 1: LT, P-installation

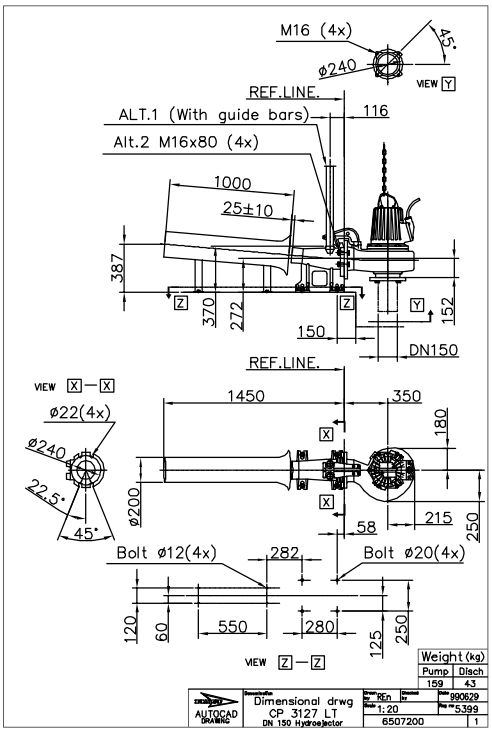

Figure 2: LT, P-installation

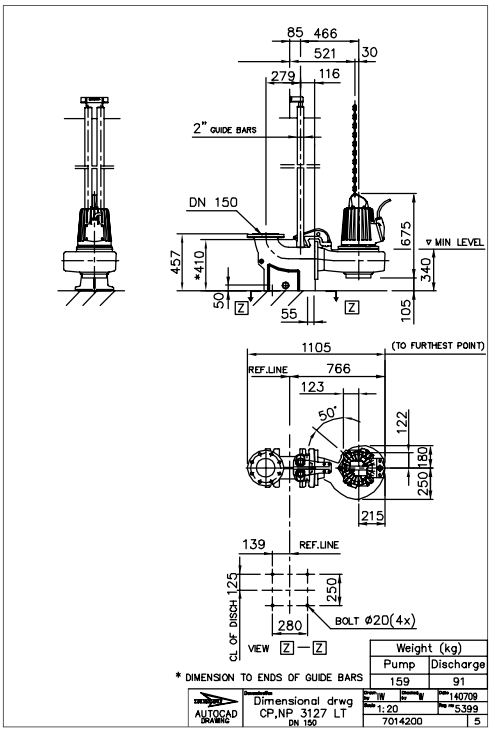

Figure 3: LT, P-installation

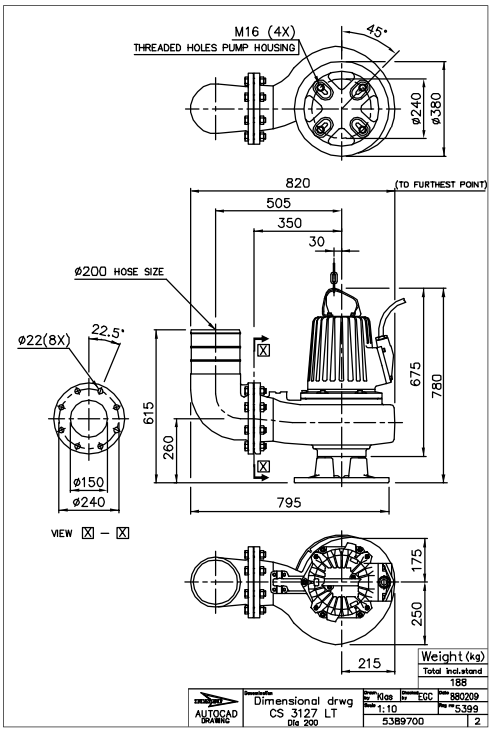

Figure 4: LT, S-installation

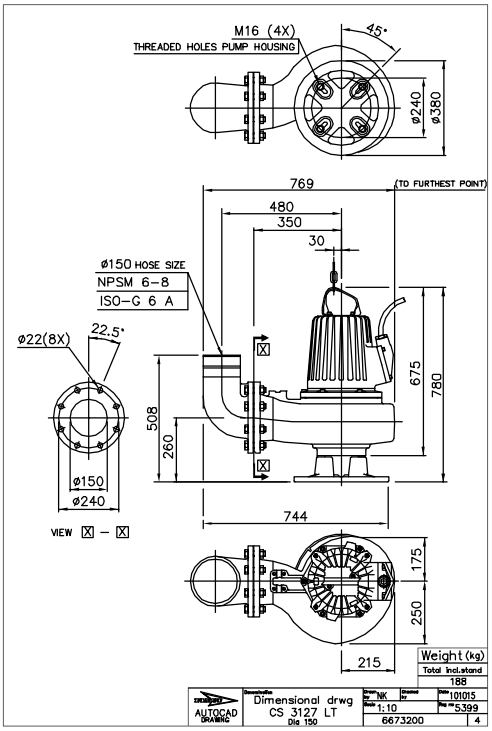

Figure 5: LT, S-installation

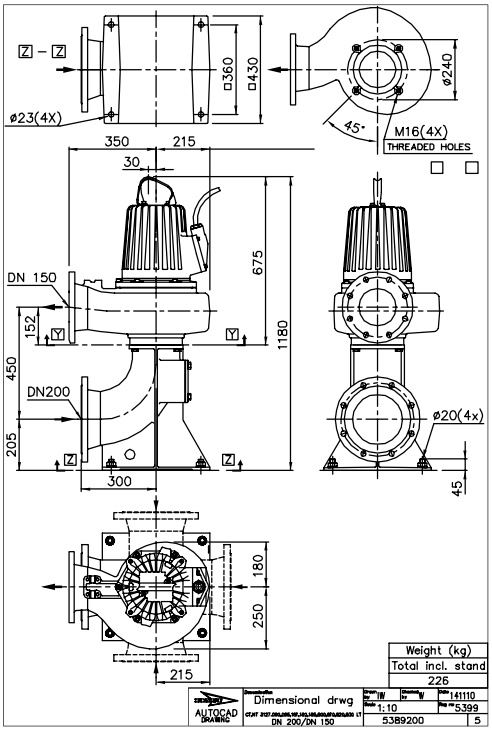

Figure 6: LT, T-installation

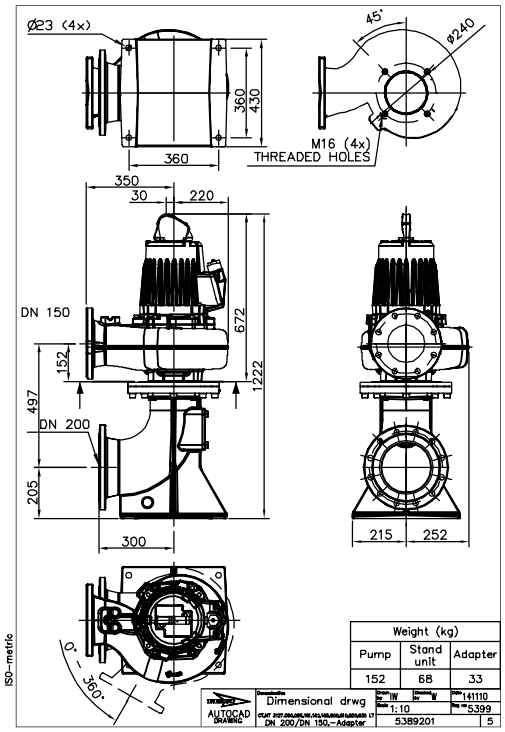

Figure 7: LT, T-installation

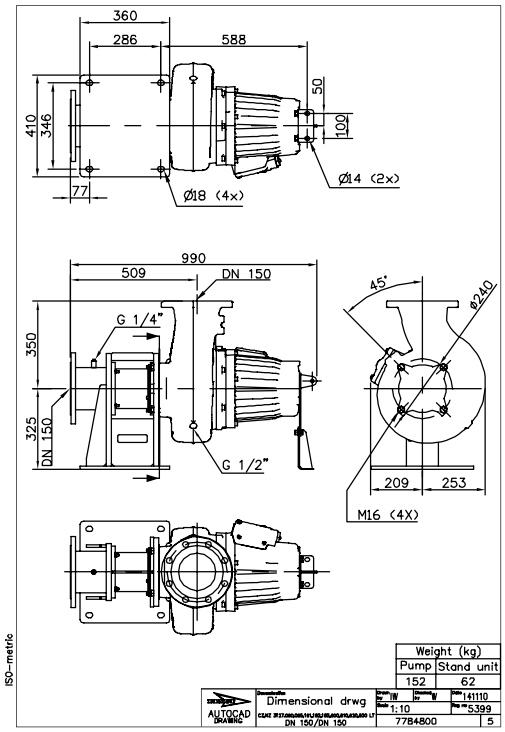

Figure 8: LT, Z-installation

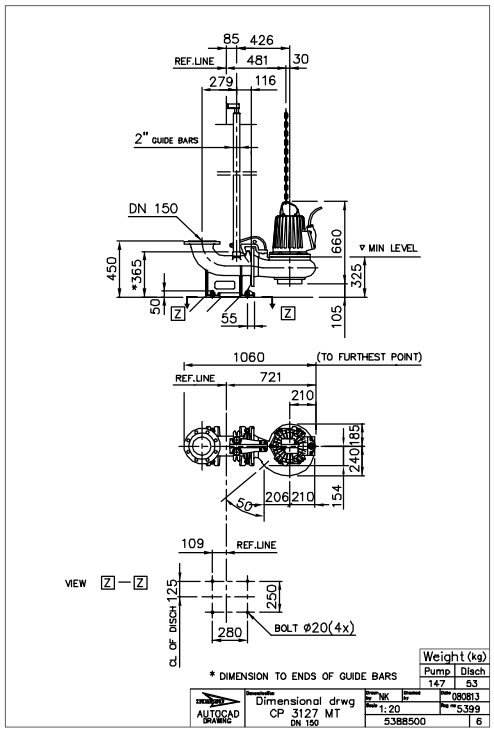

Figure 9: MT, P-installation

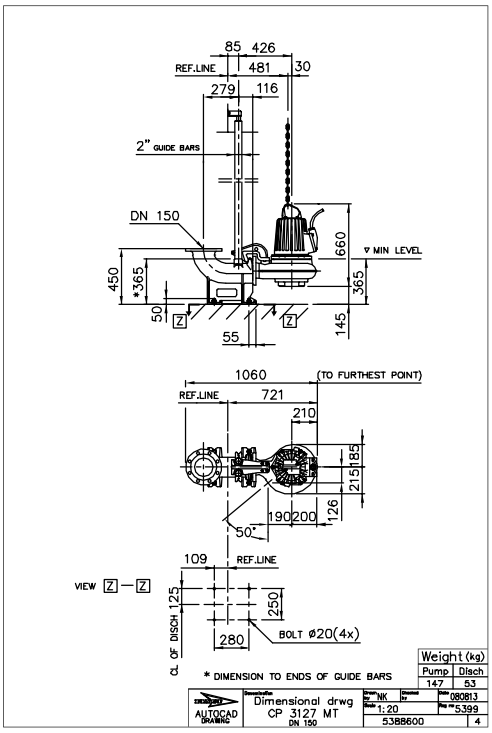

Figure 10: MT, P-installation

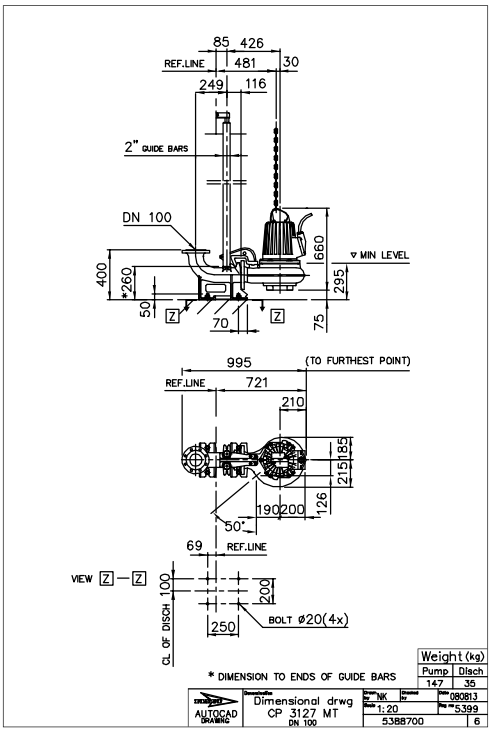

Figure 11: MT, P-installation

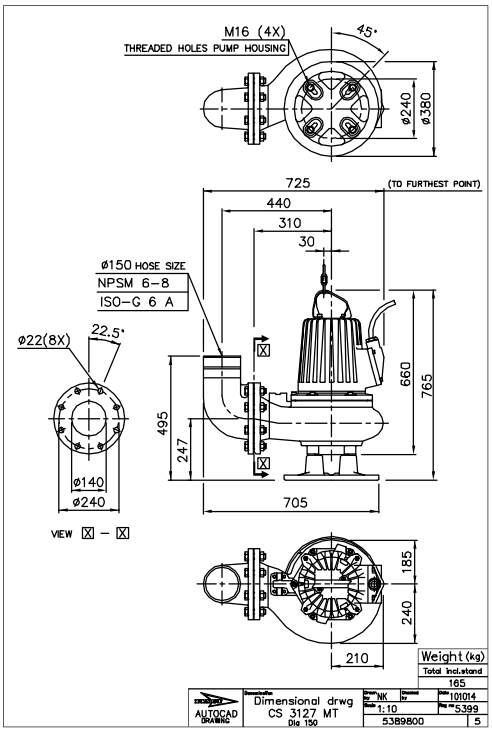

Figure 12: MT, S-installation

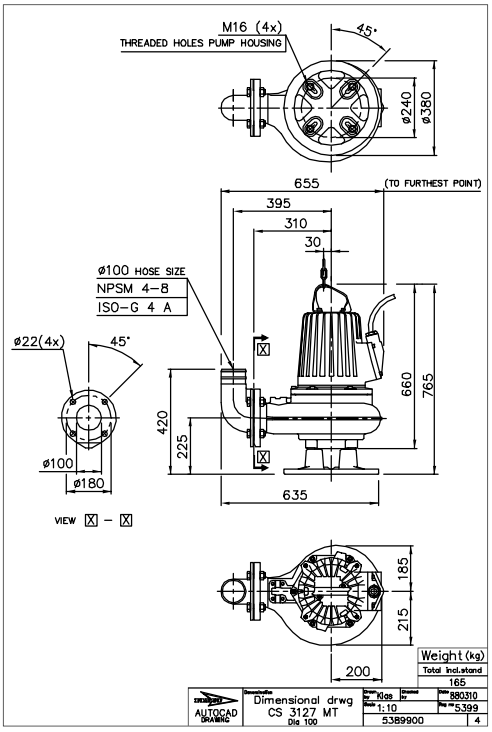

Figure 13: MT, S-installation

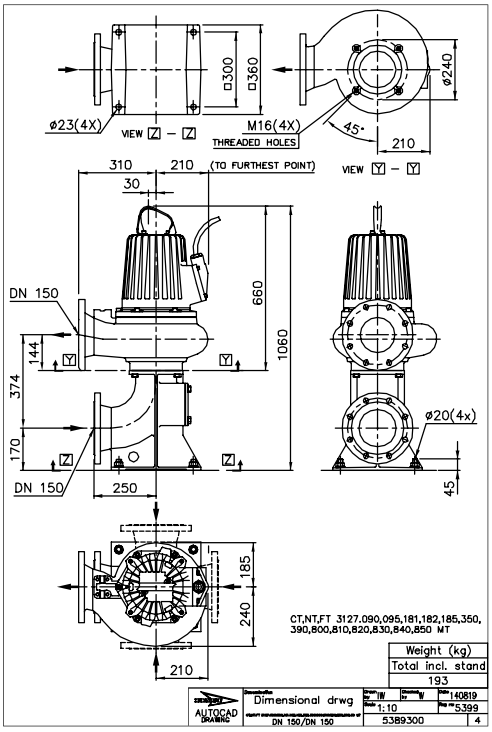

Figure 14: MT, T-installation

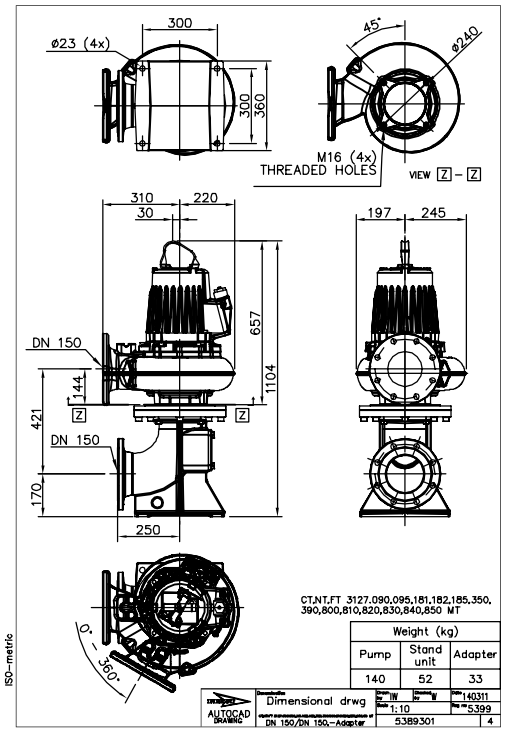

Figure 15: MT, T-installation

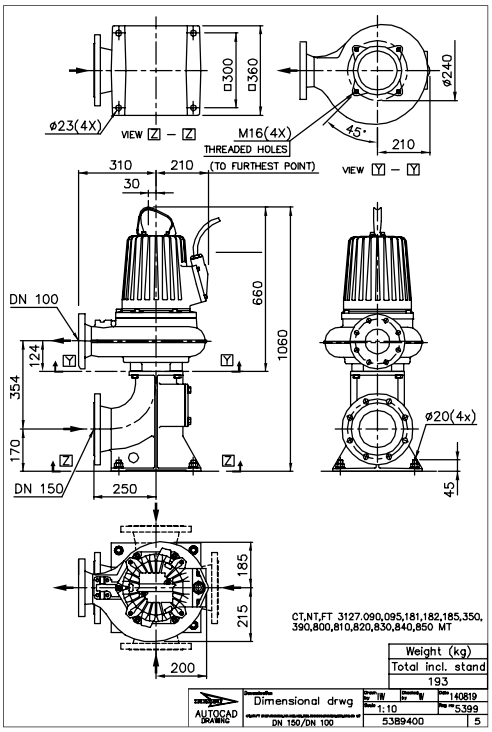

Figure 16: MT, T-installation

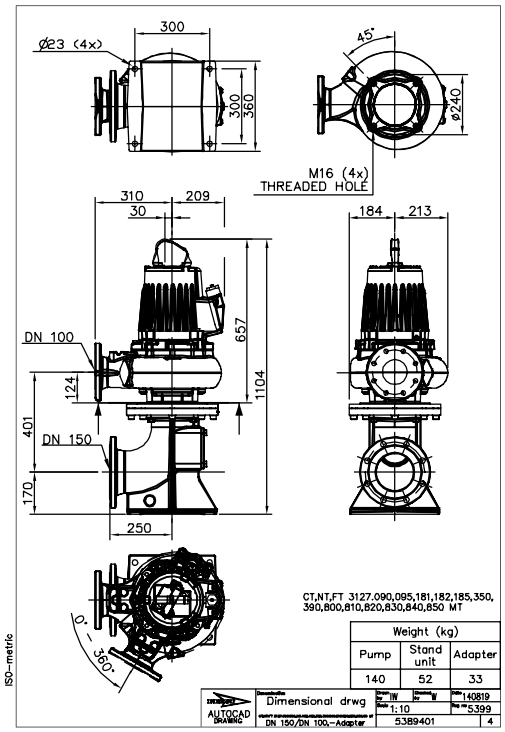

Figure 17: MT, T-installation

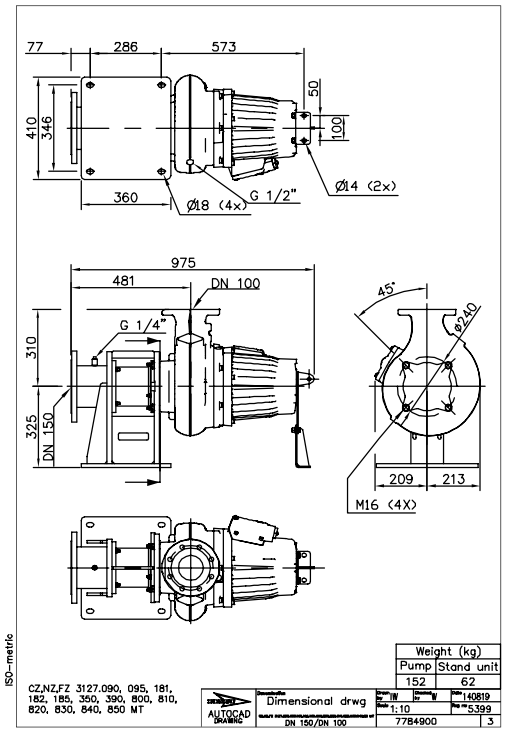

Figure 18: MT, Z-installation

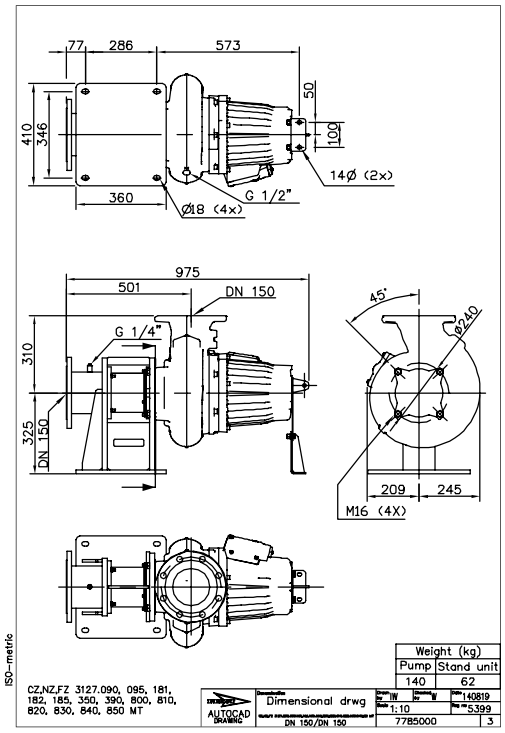

Figure 19: MT, Z-installation

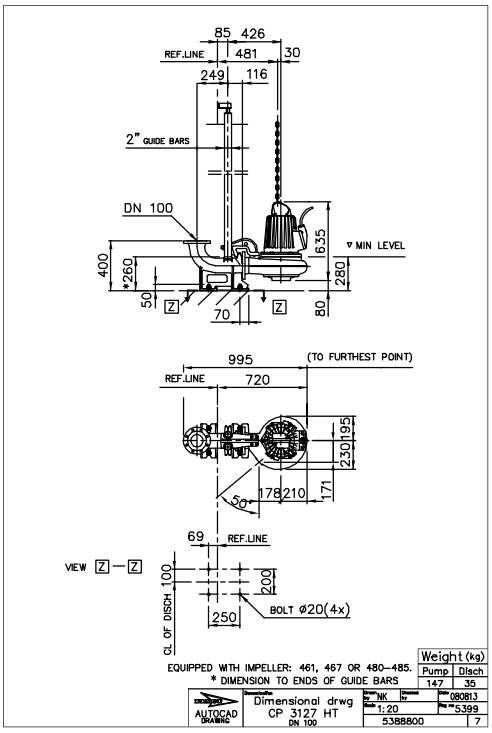

Figure 20: HT, P-installation

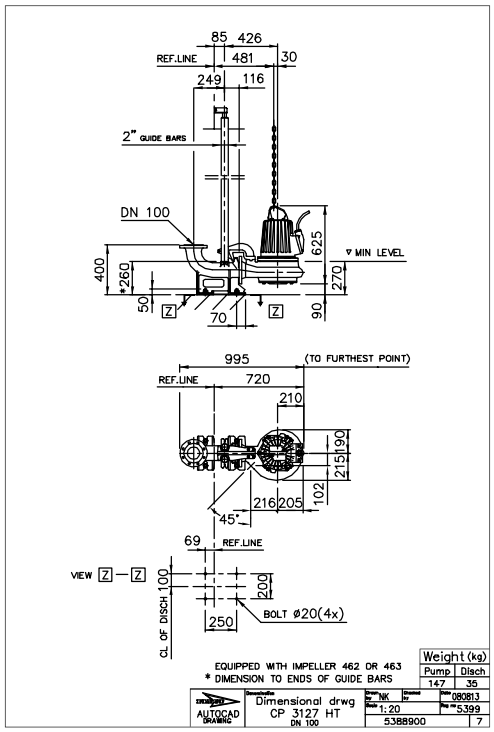

Figure 21: HT, P-installation

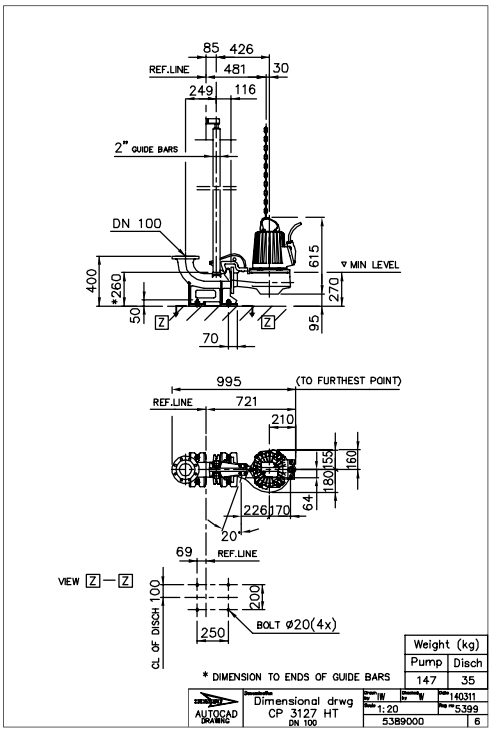

Figure 22: HT, P-installation

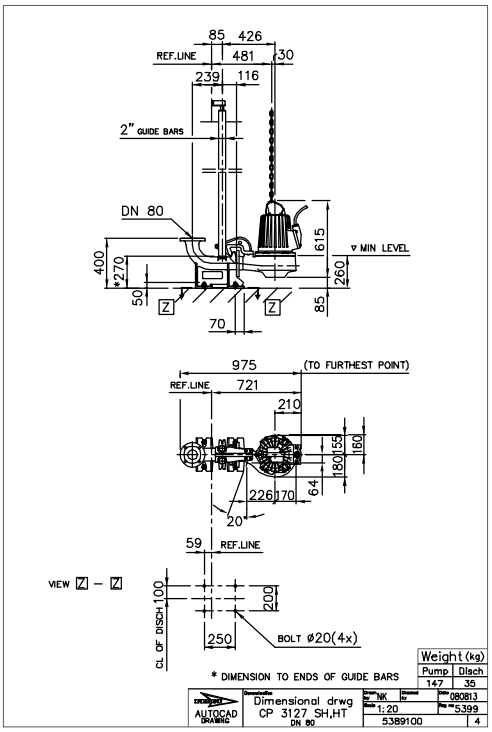

Figure 23: HT/SH, P-installation

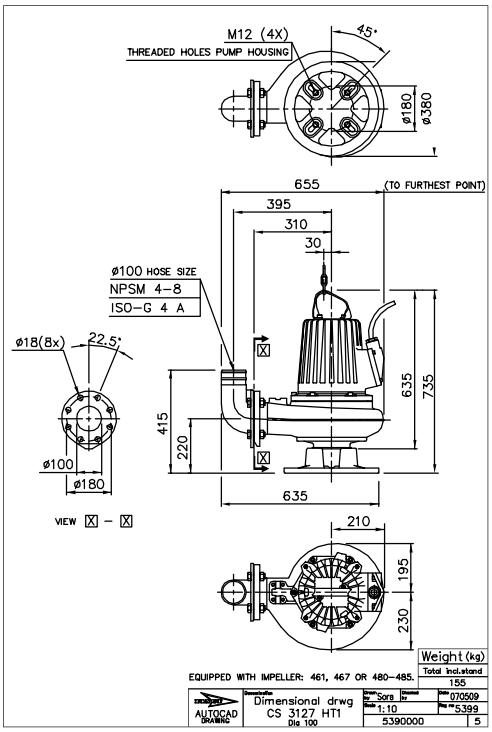

Figure 24: HT, S-installation

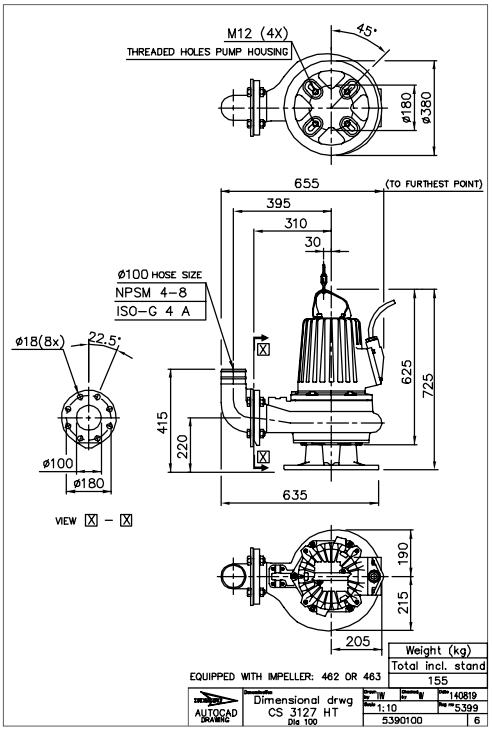

Figure 25: HT, S-installation

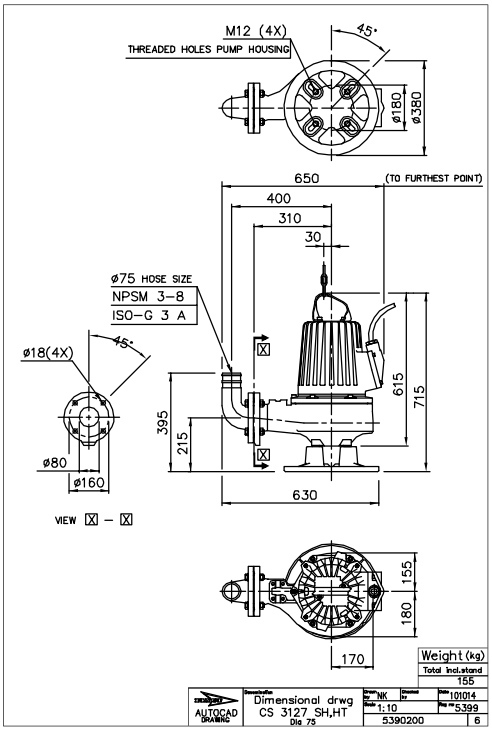

Figure 26: HT/SH, S-installation

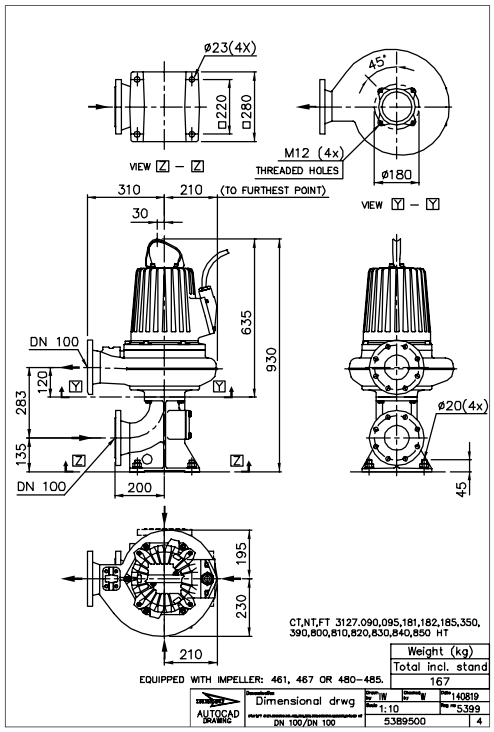

Figure 27: HT, T-installation

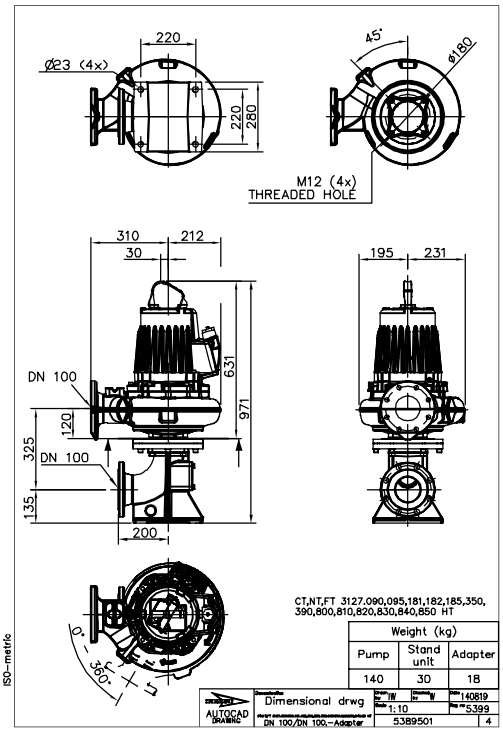

Figure 28: HT, T-installation

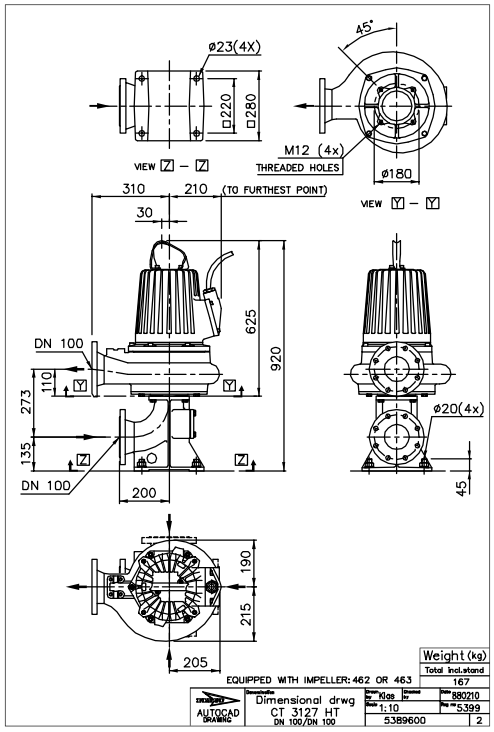

Figure 29: HT, T-installation

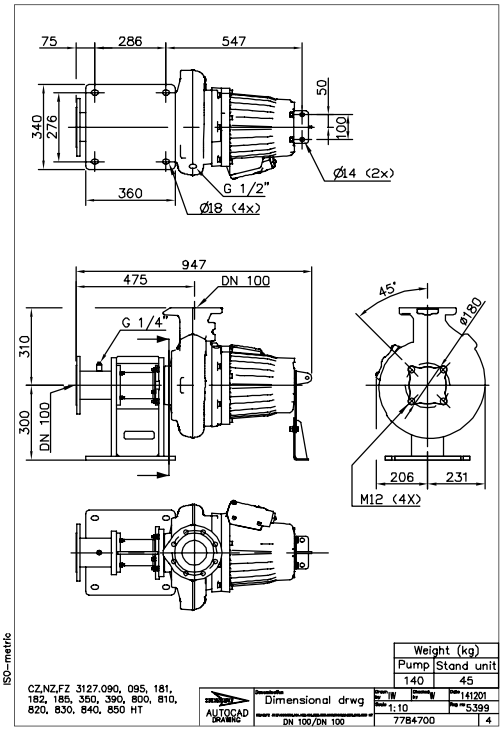

Figure 30: HT, Z-installation

13 Dimensions and Weight, D-pump

13.1 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.

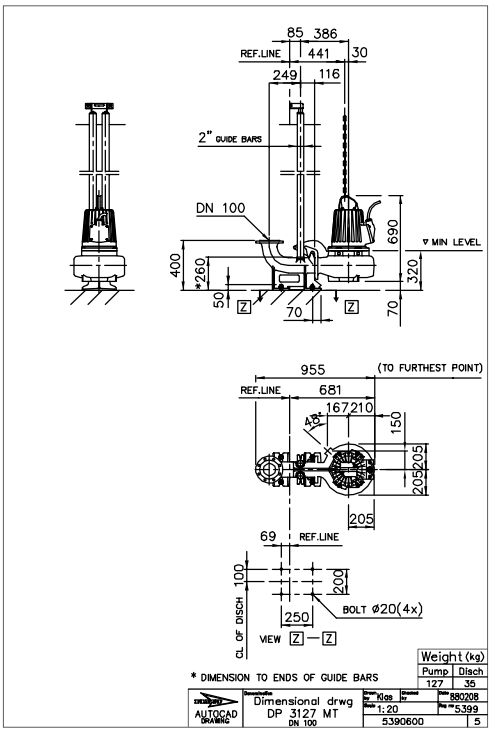

Figure 31: MT, P-installation

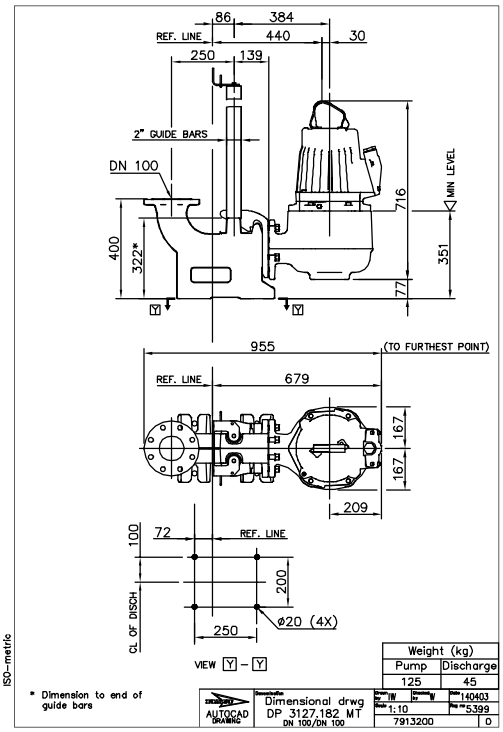

Figure 32: MT, P-installation

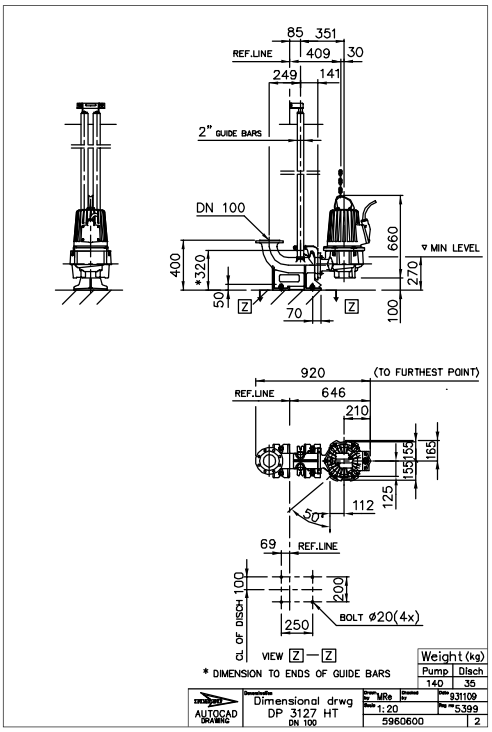

Figure 33: HT, P-installation

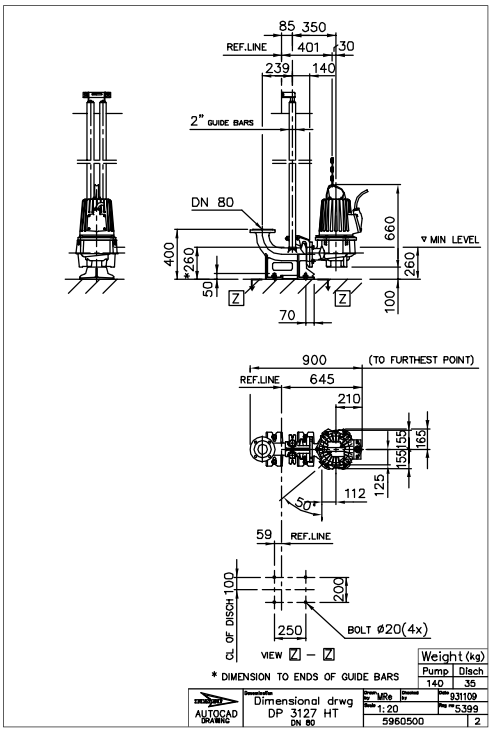

Figure 34: HT, P-installation

14 Dimensions and Weight, F-pump

14.1 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.

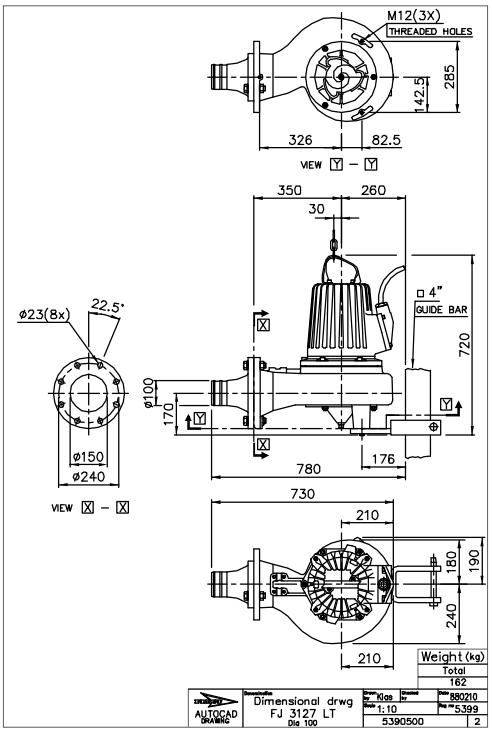

Figure 35: LT, J-installation

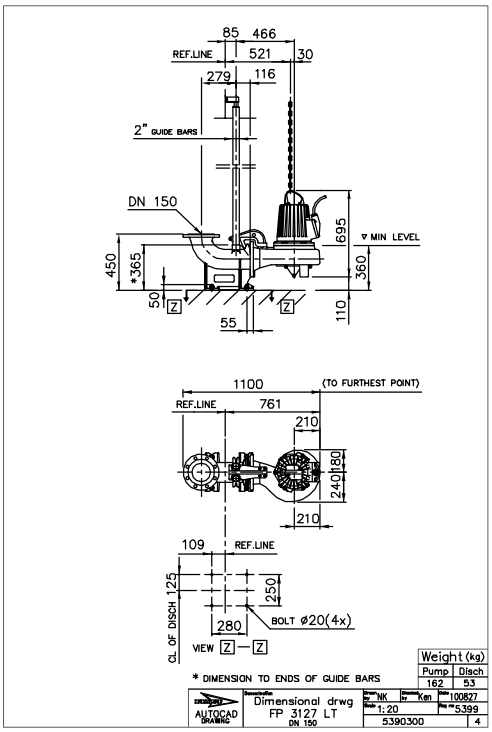

Figure 36: LT, P-installation

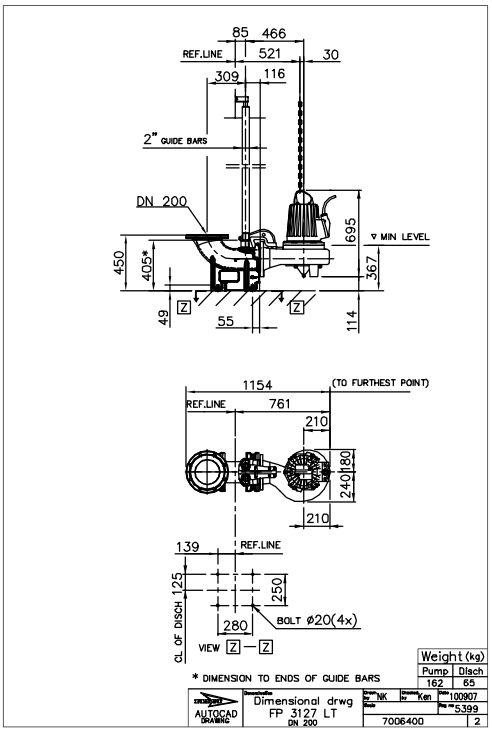

Figure 37: LT, P-installation

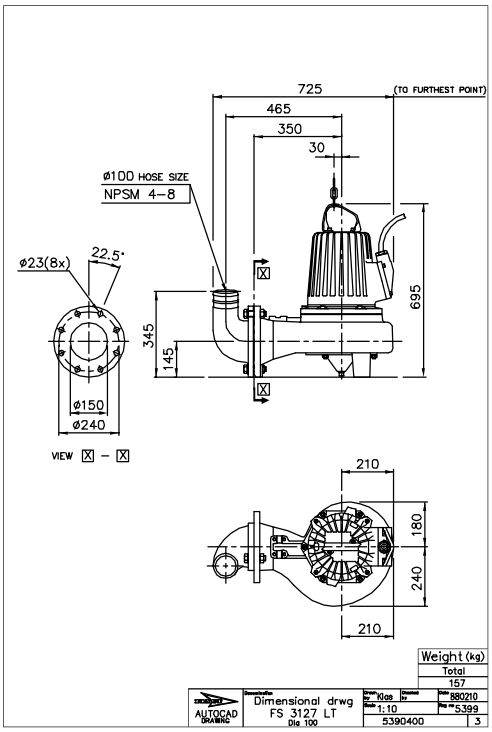

Figure 38: LT, S-installation

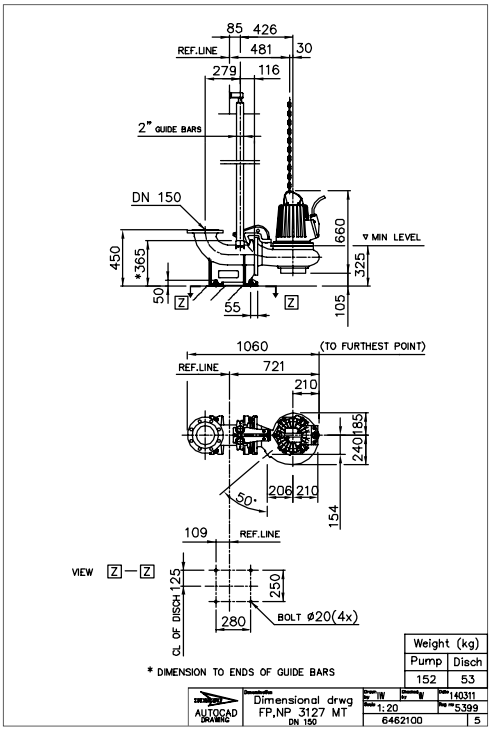

Figure 39: MT, P-installation

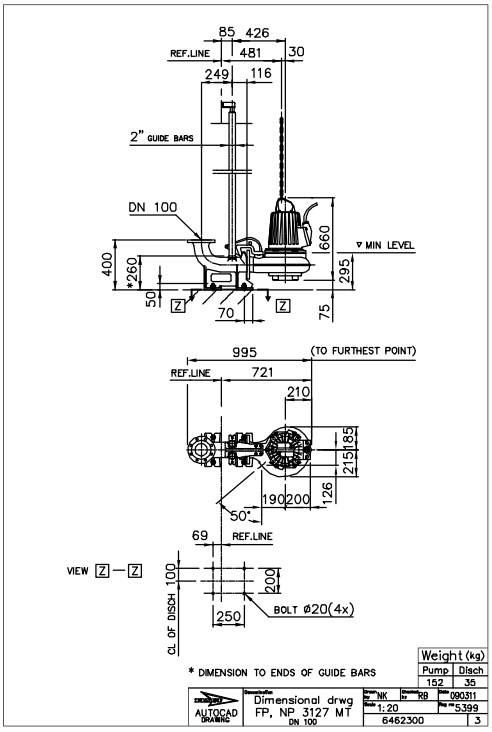

Figure 40: MT, P-installation

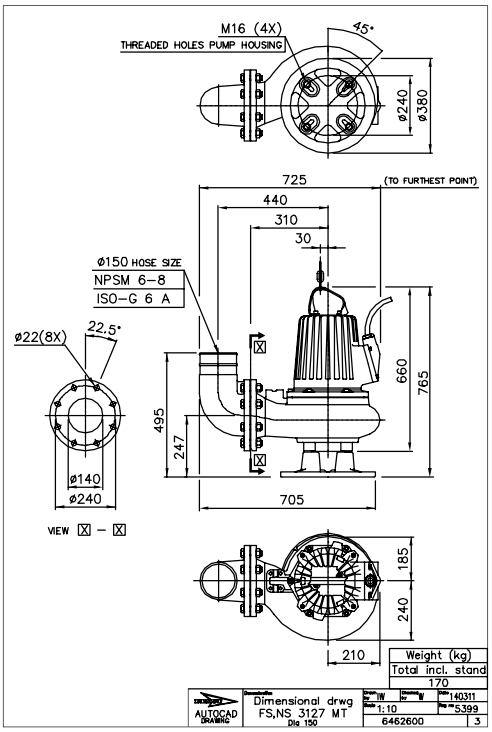

Figure 41: MT, S-installation

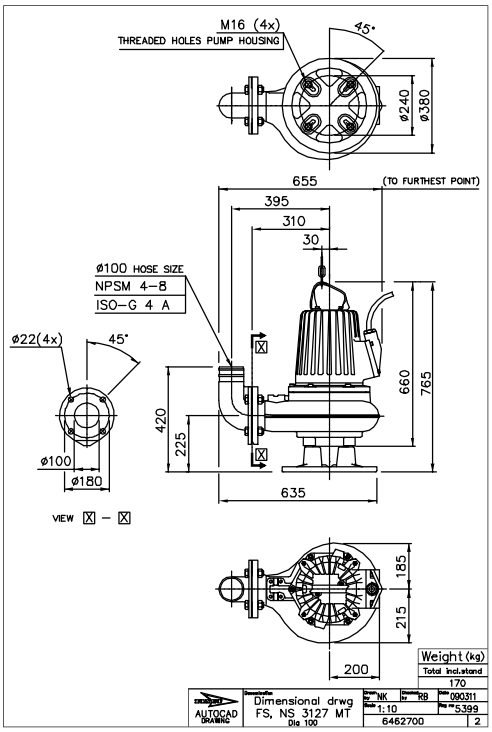

Figure 42: MT, S-installation

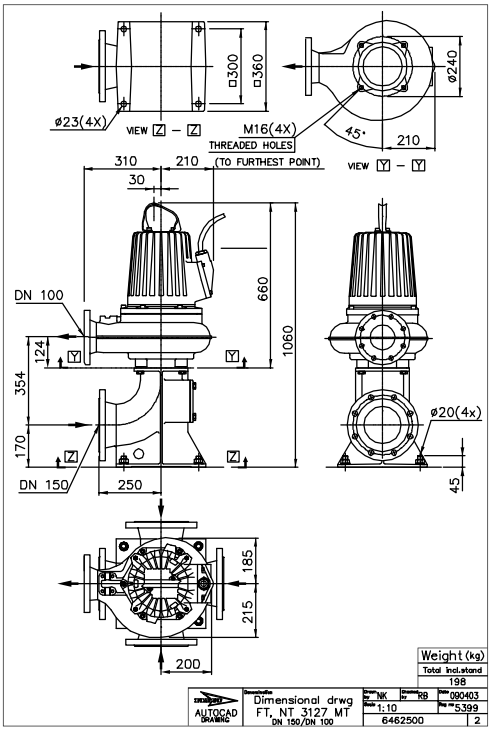

Figure 43: MT, T-installation

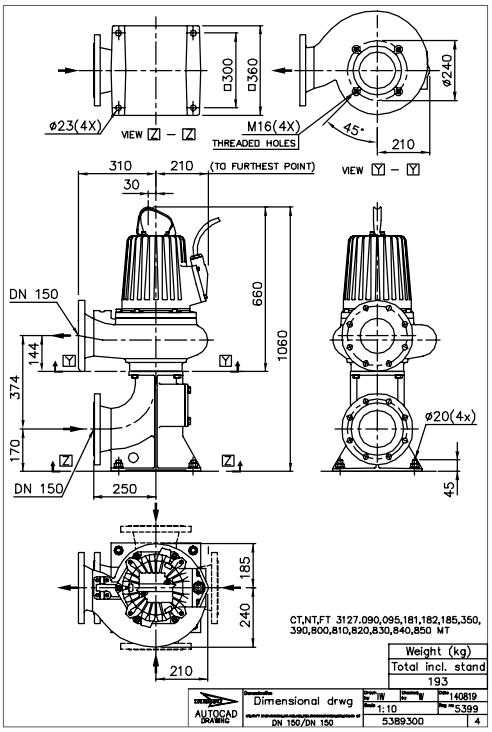

Figure 44: MT, T-installation

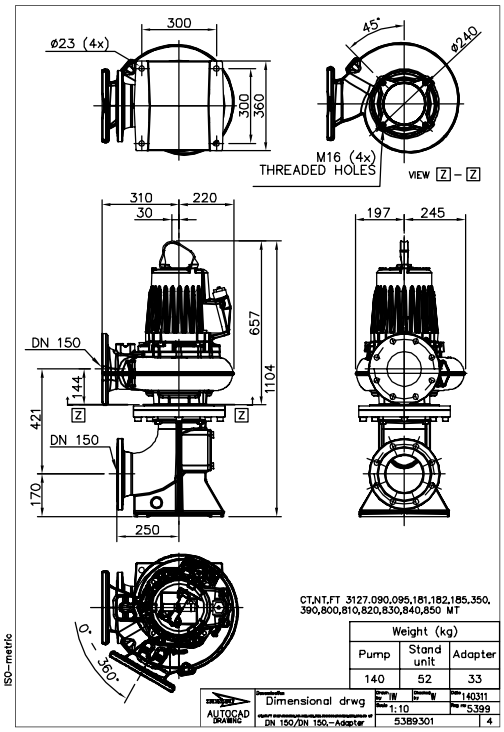

Figure 45: MT, T-installation

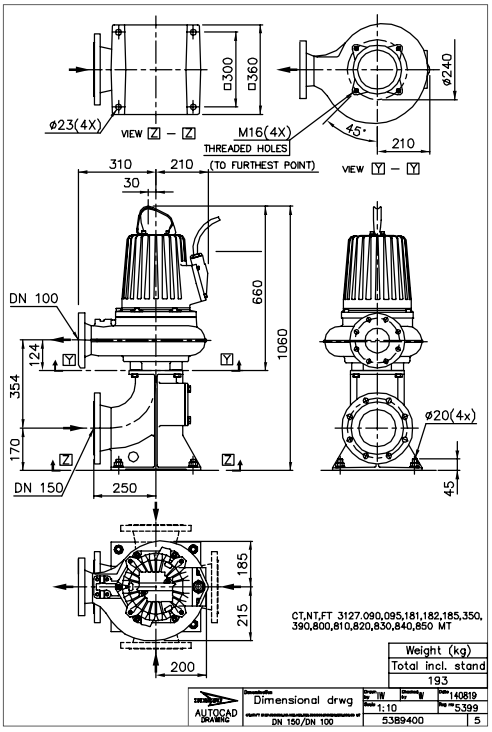

Figure 46: MT, T-installation

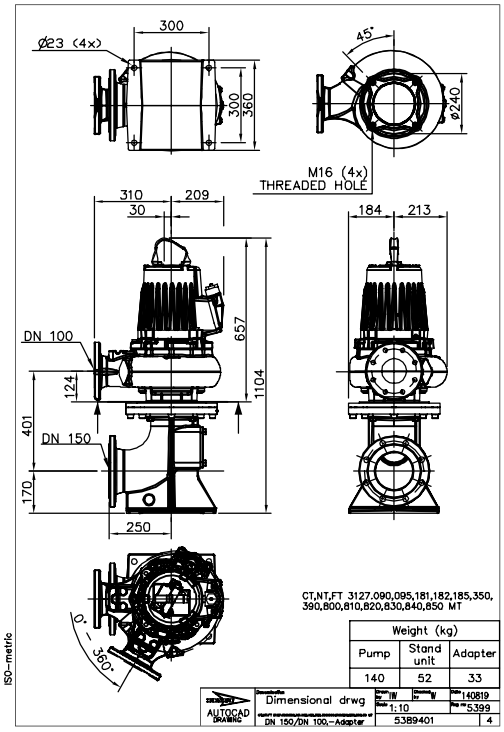

Figure 47: MT, T-installation

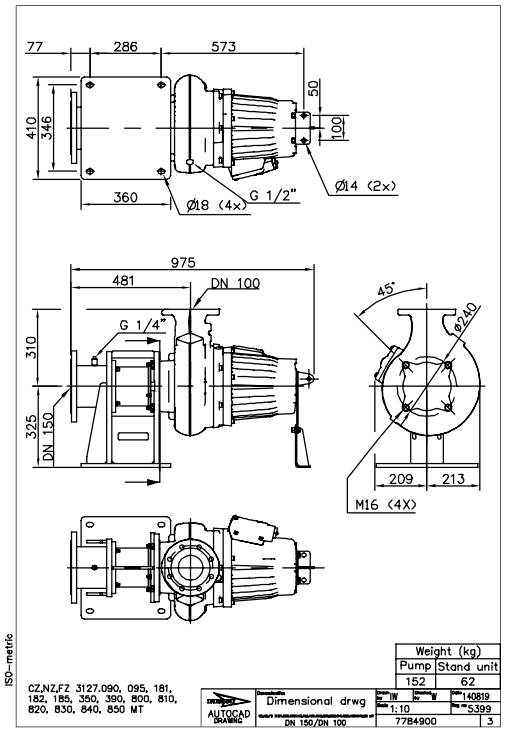

Figure 48: MT, Z-installation

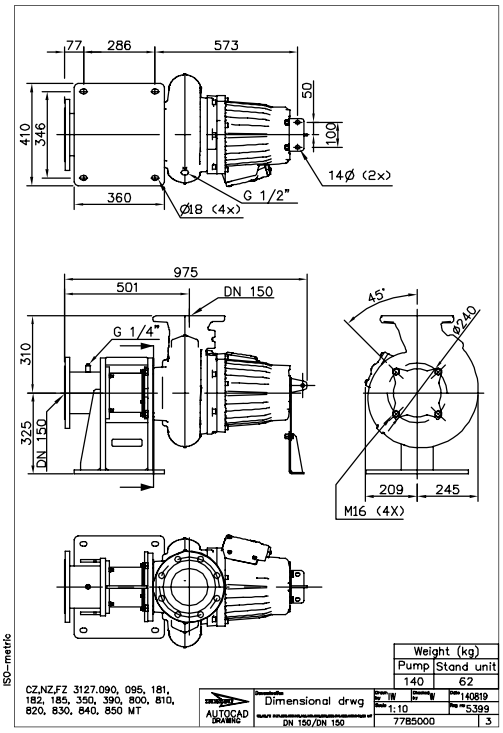

Figure 49: MT, Z-installation

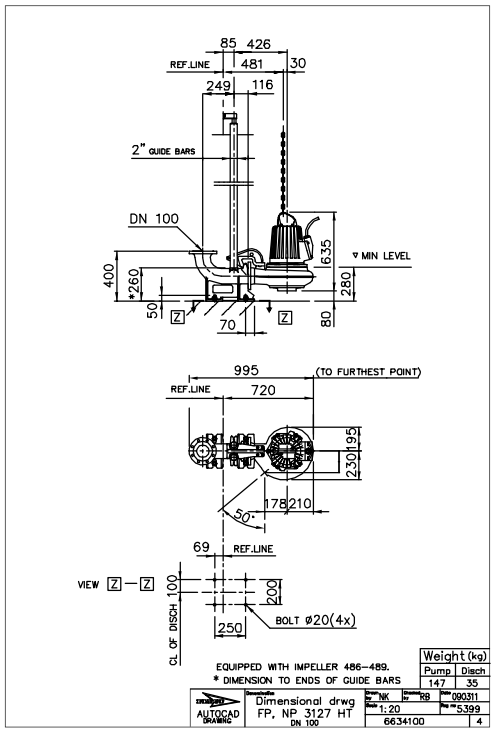

Figure 50: HT, P-installation

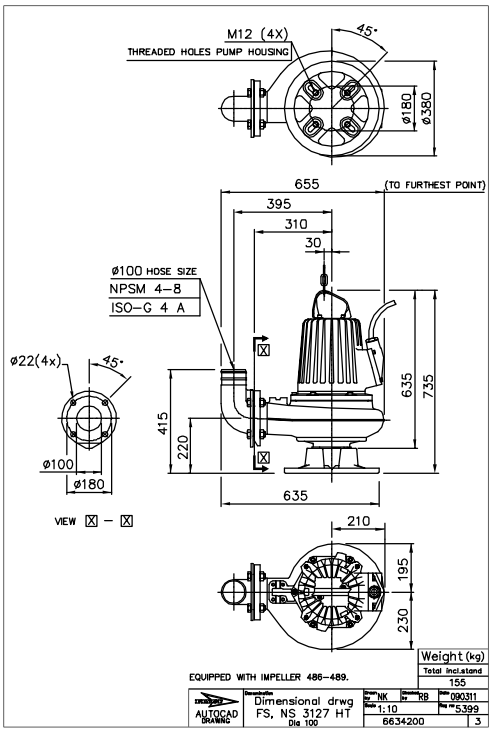

Figure 51: HT, S-installation

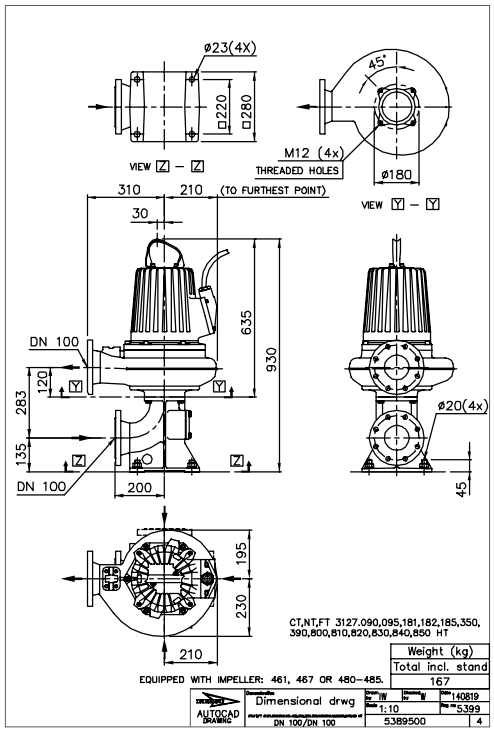

Figure 52: HT, T-installation

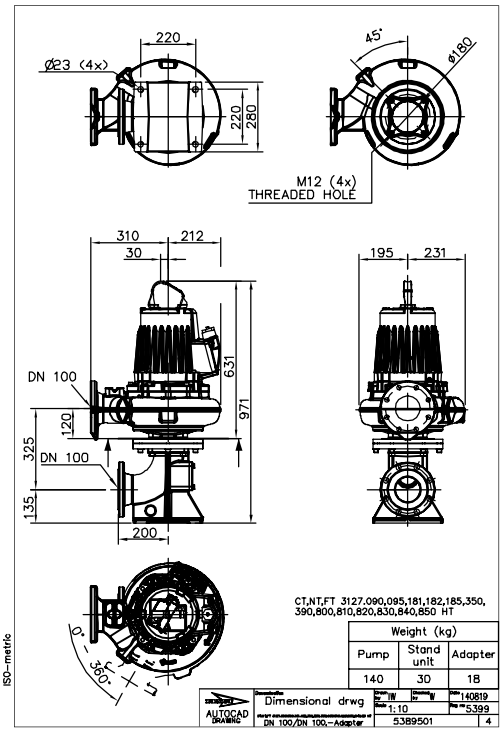

Figure 53: HT, T-installation

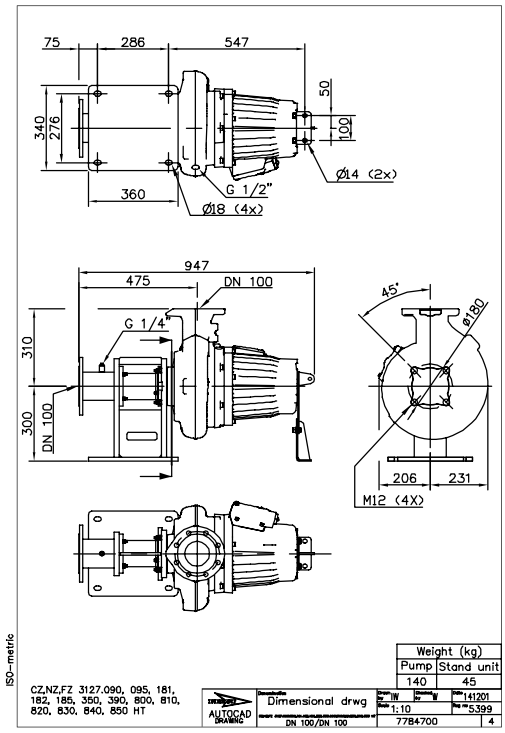

Figure 54: HT, Z-installation

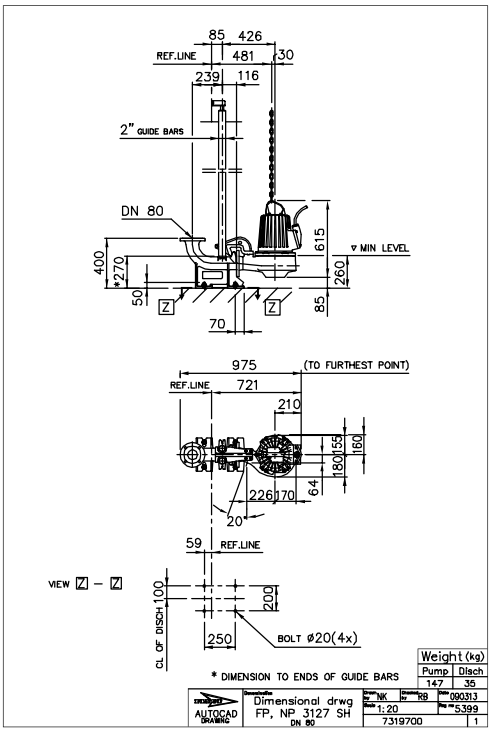

Figure 55: SH, P-installation

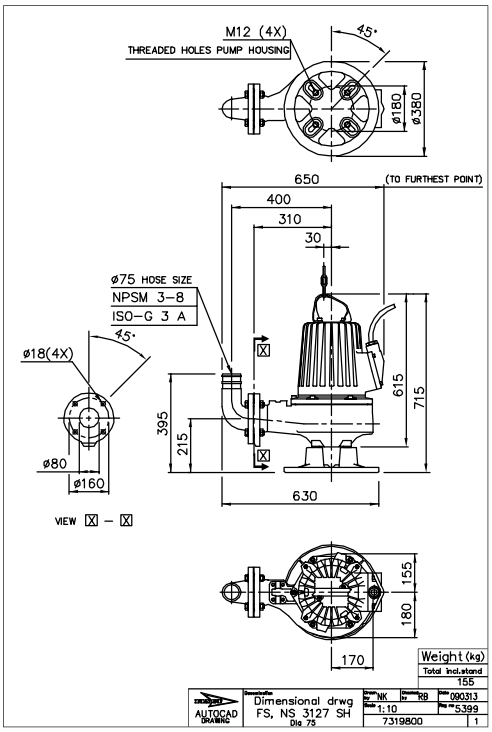

Figure 56: SH, S-installation

15 Dimensions and Weight, H-pump

15.1 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.

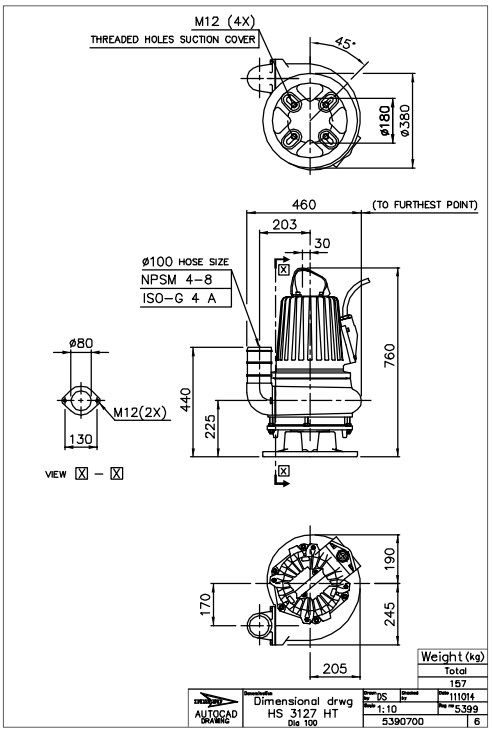

Figure 57: HT, S-installation

16 Dimensions and Weight, M-pump

16.1 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.

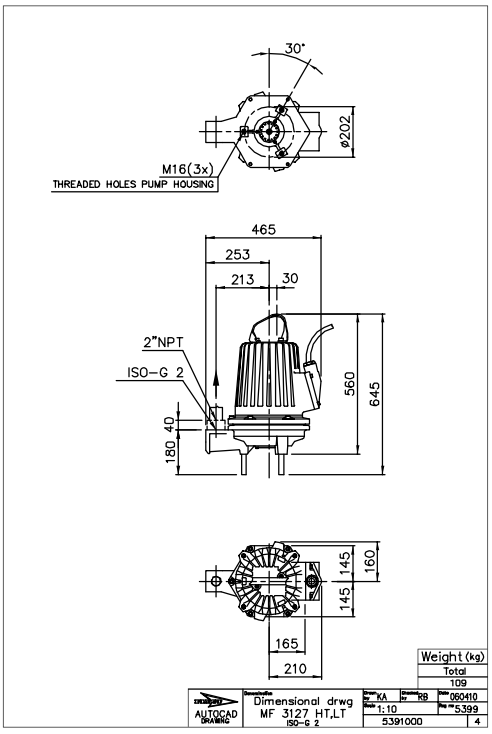

Figure 58: LT/HT, F-installation

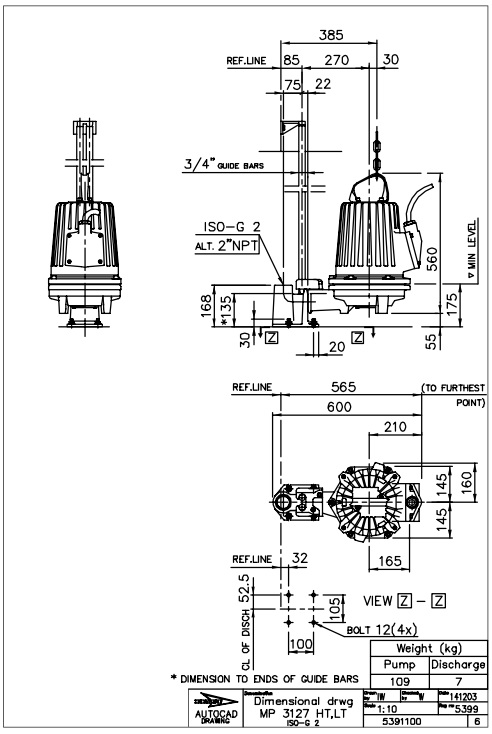

Figure 59: LT/HT, P-installation

17 Dimensions and Weight, N-pump

17.1 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.

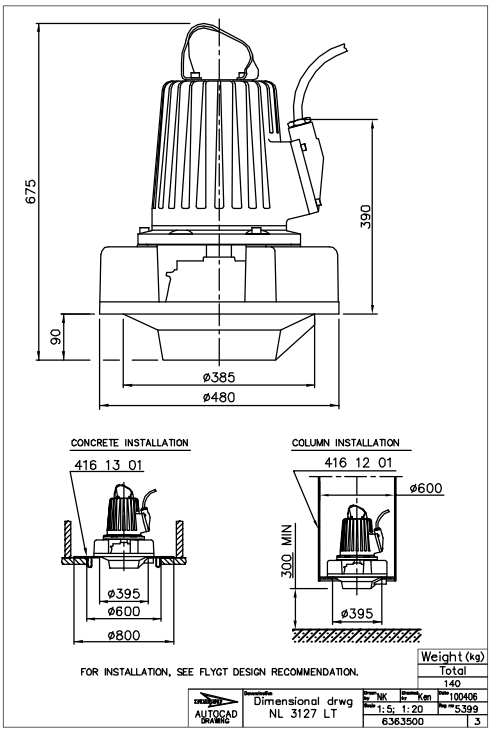

Figure 60: LT, L-installation

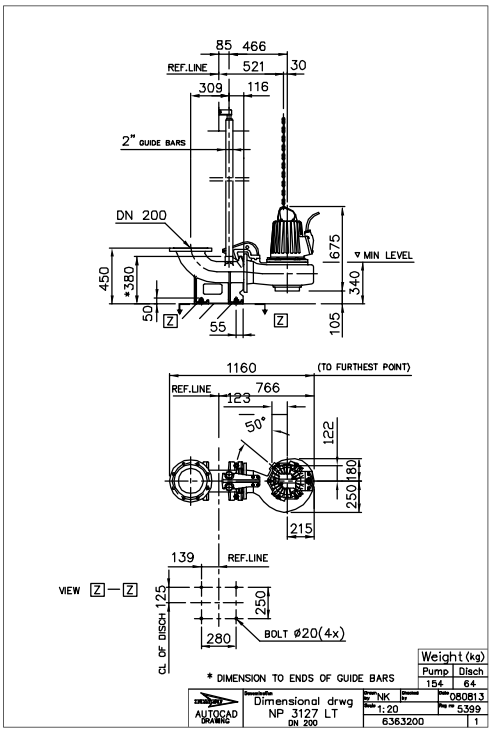

Figure 61: LT, P-installation

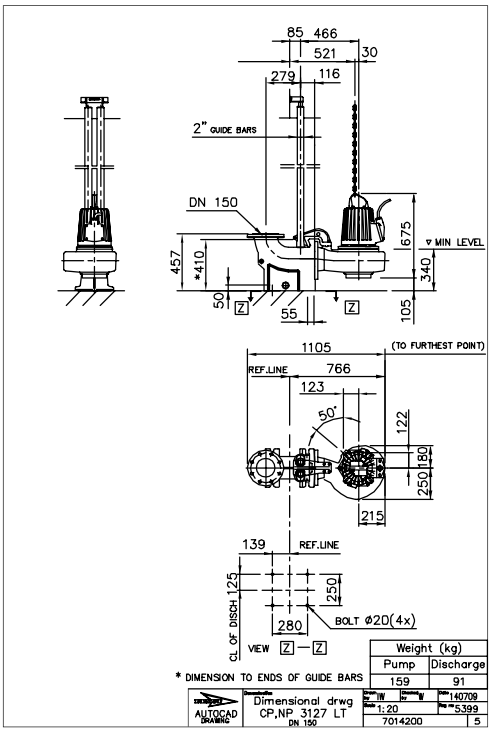

Figure 62: LT, P-installation

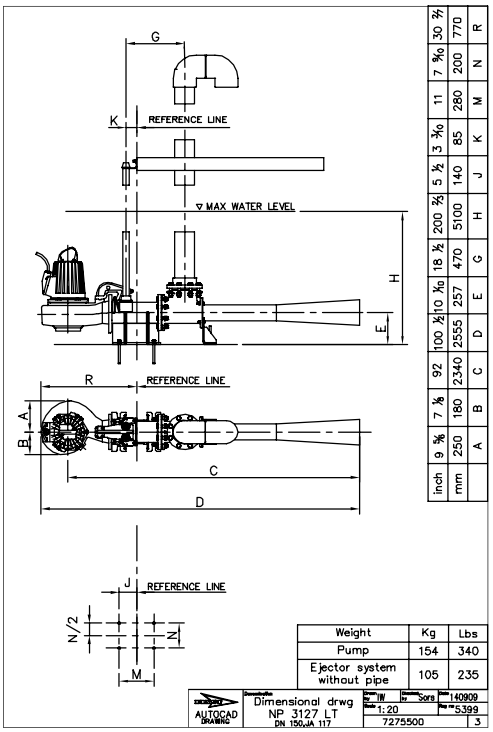

Figure 63: LT, P-installation

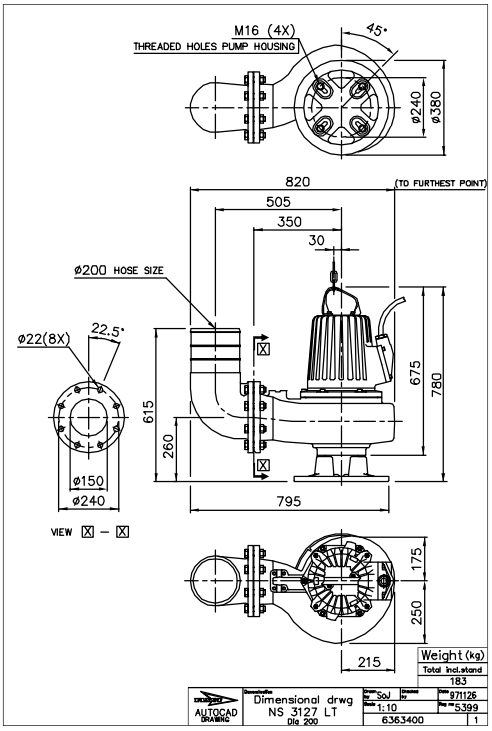

Figure 64: LT, S-installation

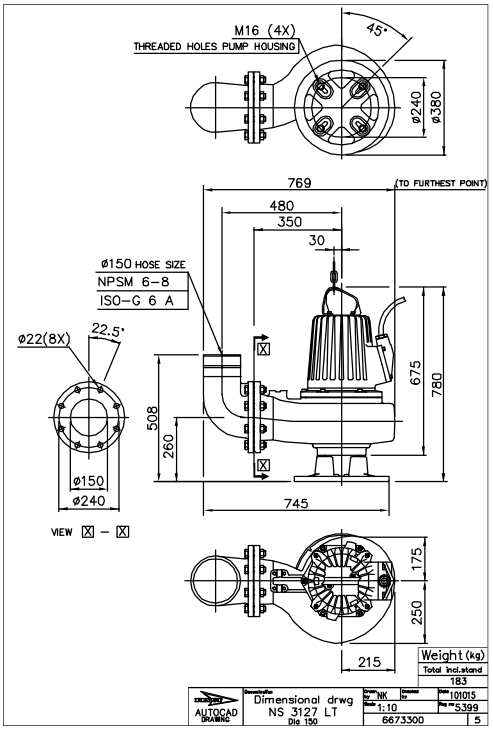

Figure 65: LT, S-installation

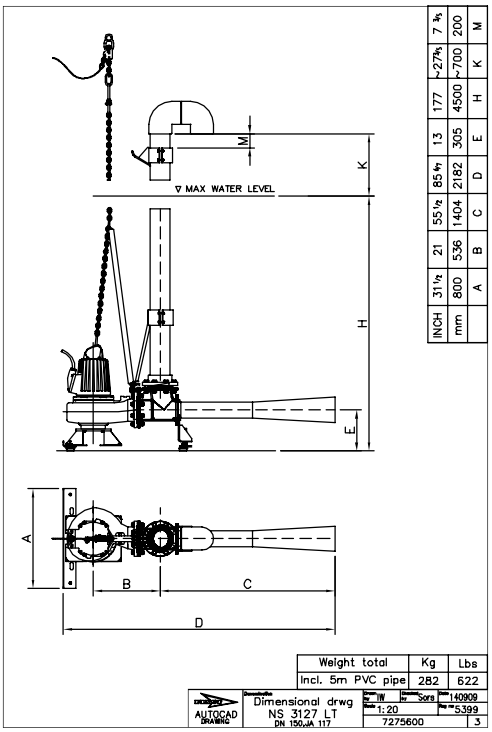

Figure 66: LT, S-installation

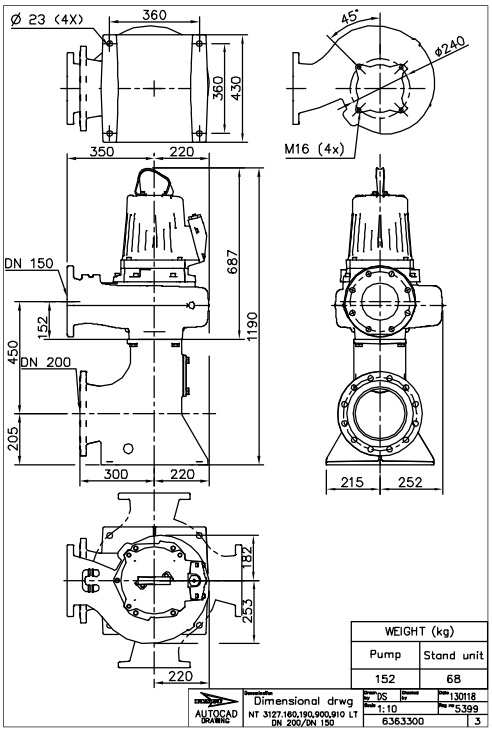

Figure 67: LT, T-installation

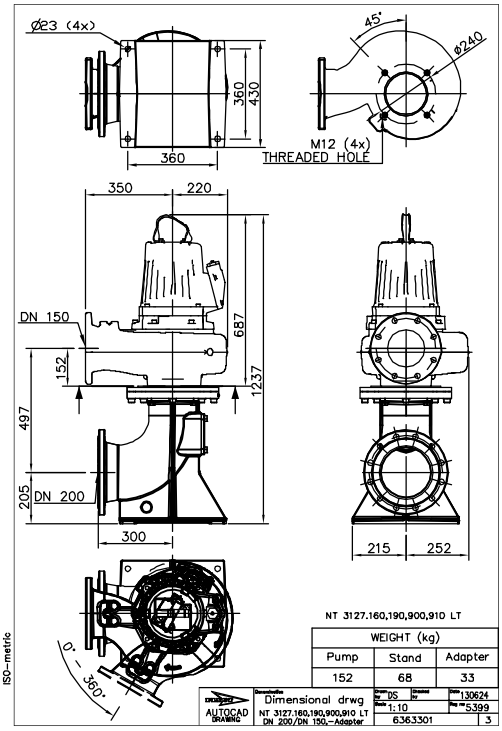

Figure 68: LT, T-installation

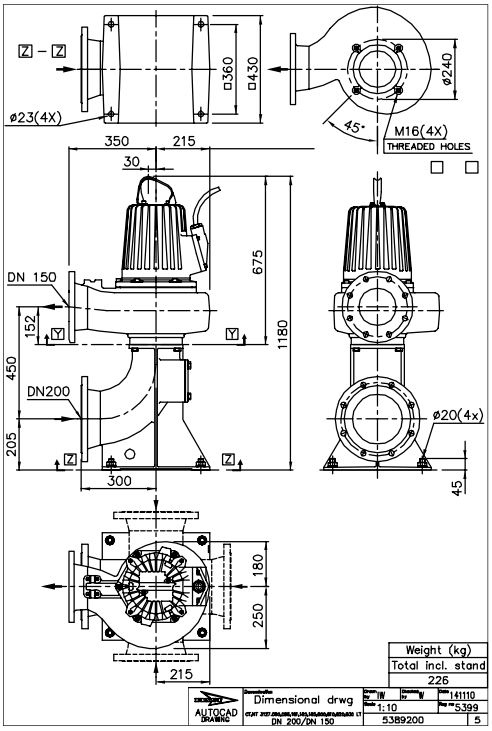

Figure 69: LT, T-installation

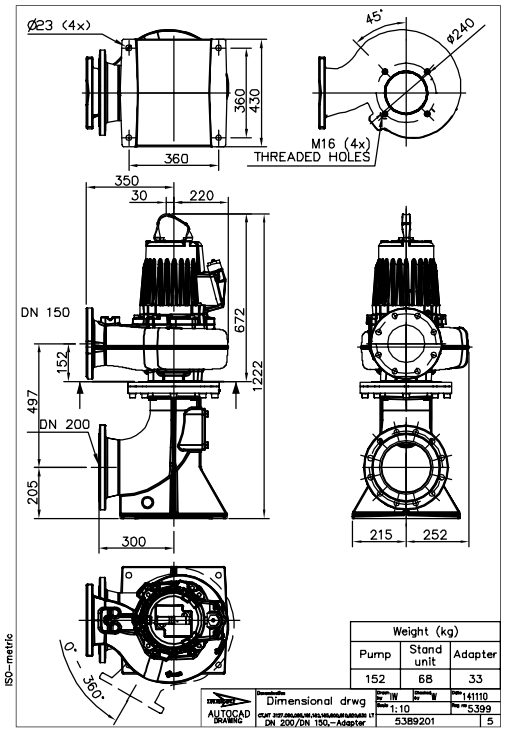

Figure 70: LT, T-installation

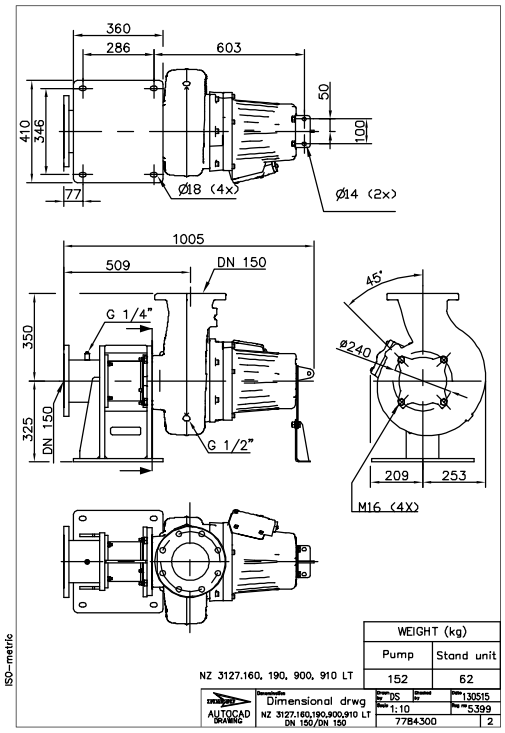

Figure 71: LT, Z-installation

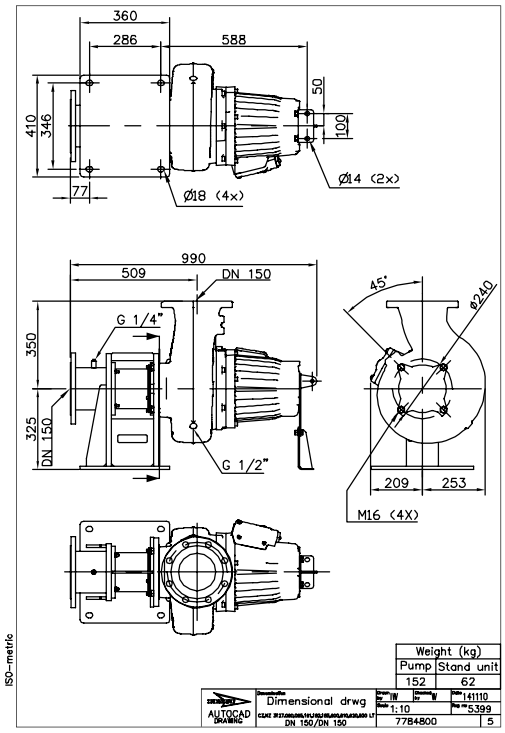

Figure 72: LT, Z-installation

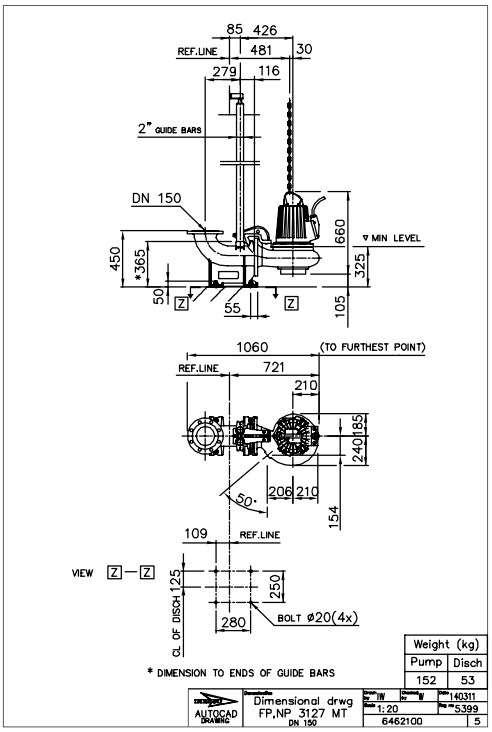

Figure 73: MT, P-installation

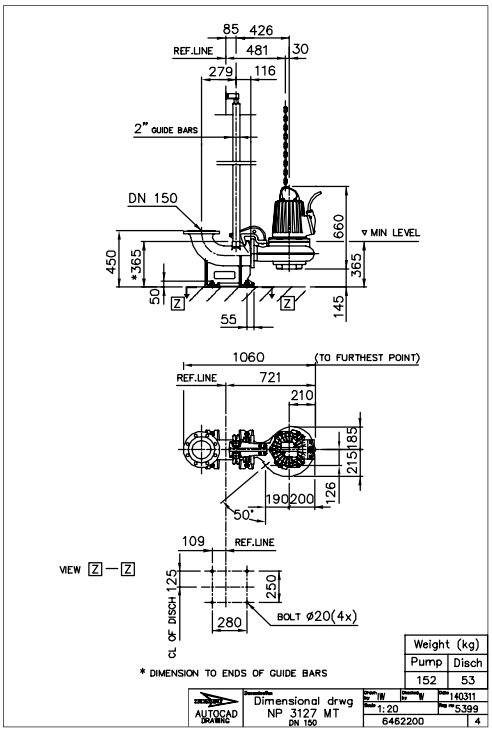

Figure 74: MT, P-installation

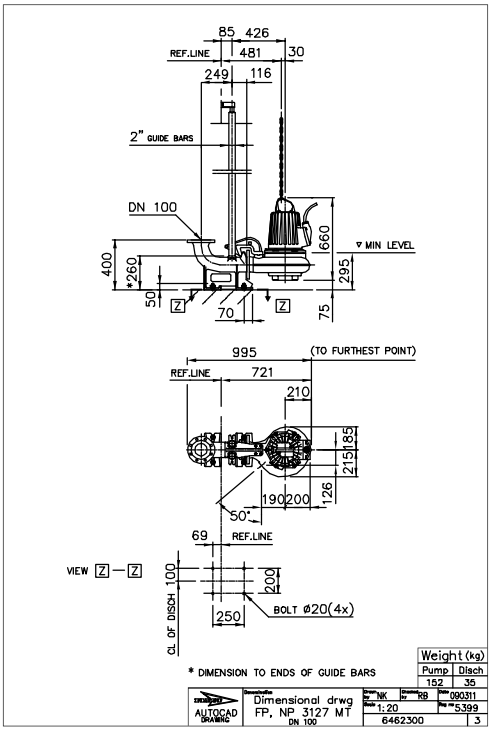

Figure 75: MT, P-installation

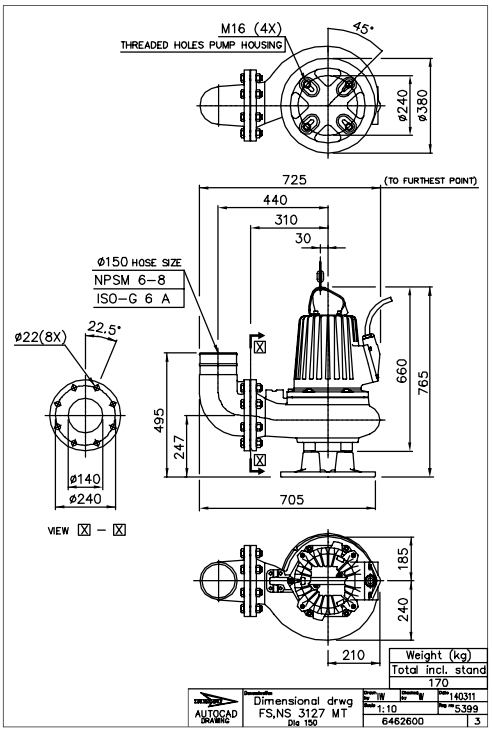

Figure 76: MT, S-installation

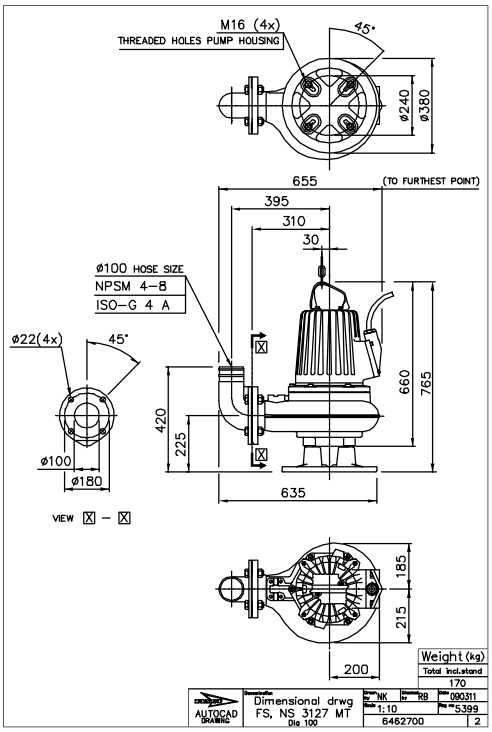

Figure 77: MT, S-installation

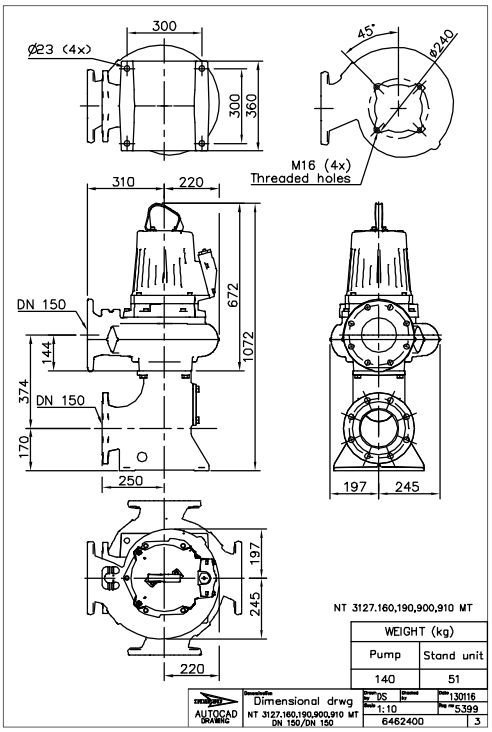

Figure 78: MT, T-installation

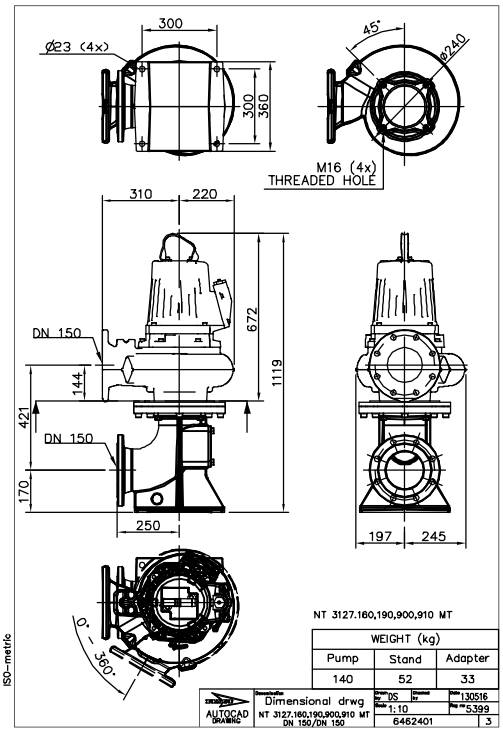

Figure 79: MT, T-installation

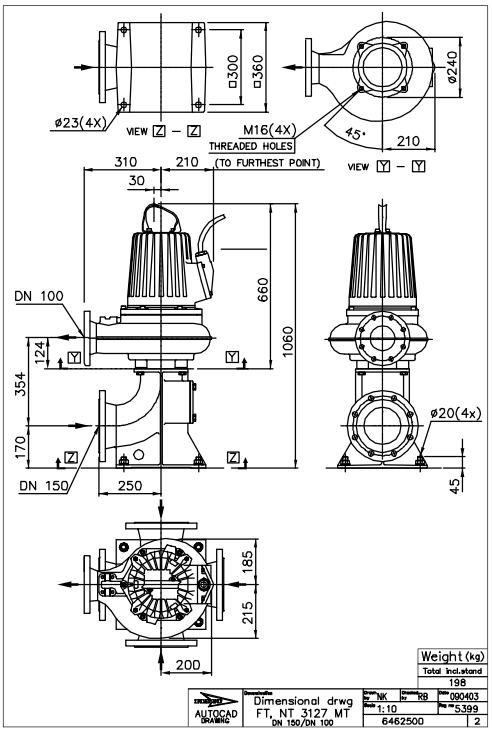

Figure 80: MT, T-installation

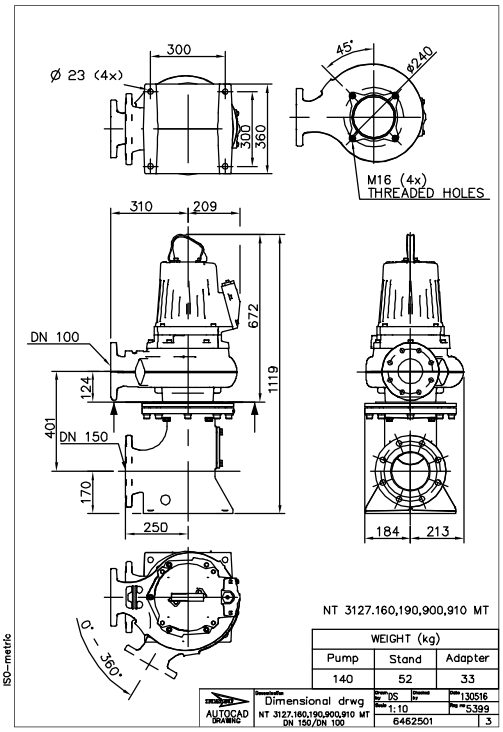

Figure 81: MT, T-installation

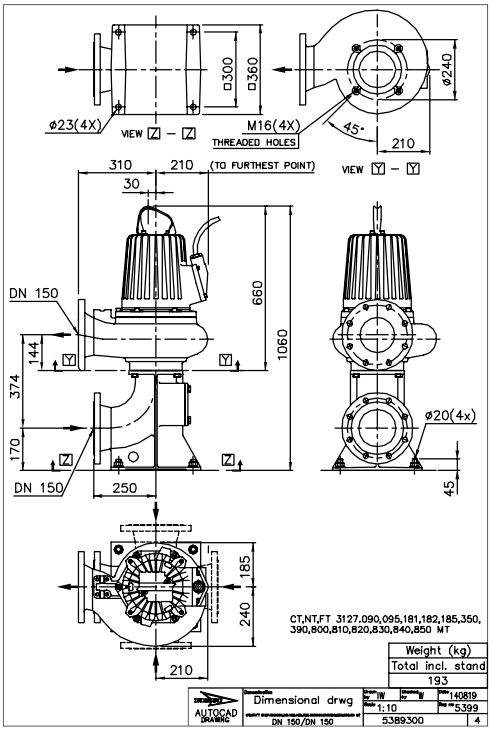

Figure 82: MT, T-installation

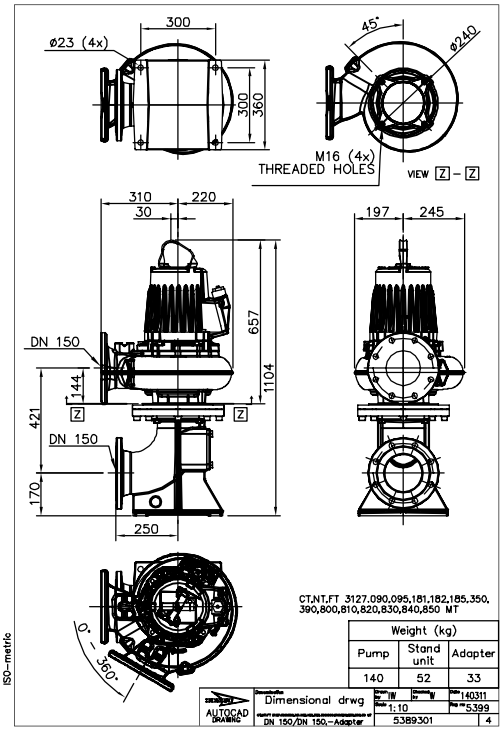

Figure 83: MT, T-installation

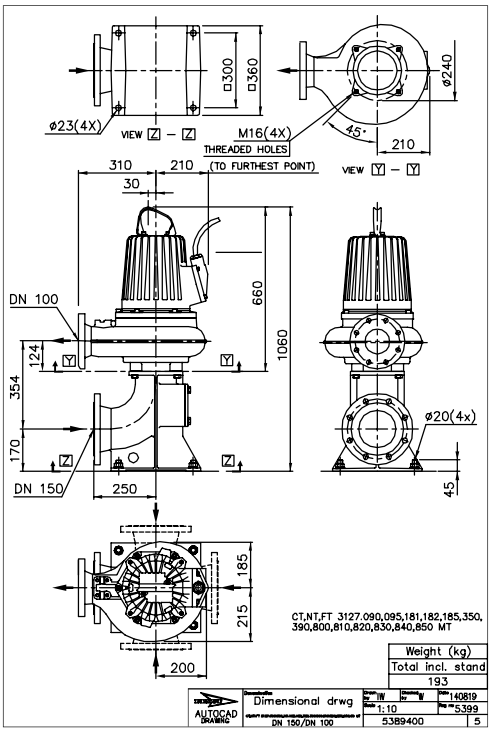

Figure 84: MT, T-installation

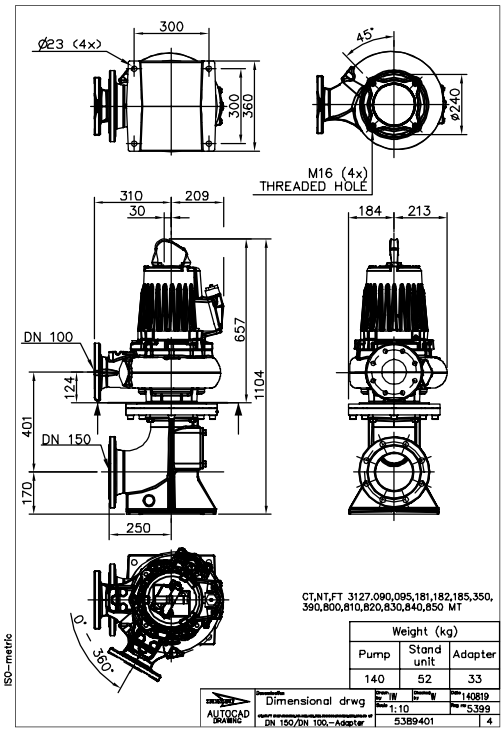

Figure 85: MT, T-installation

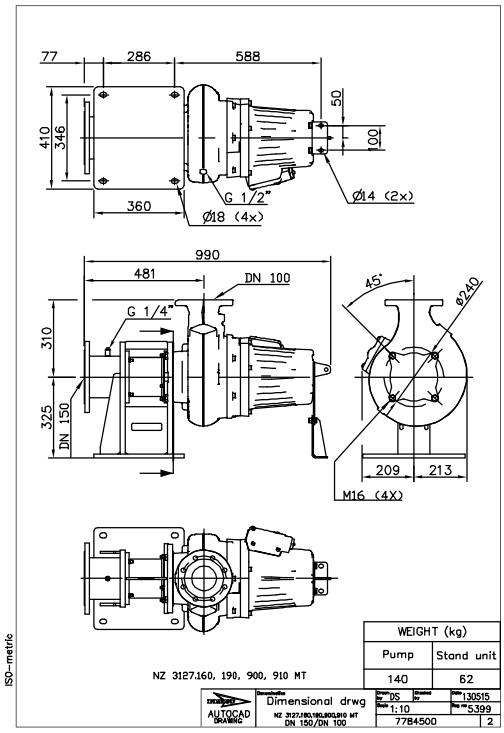

Figure 86: MT, Z-installation

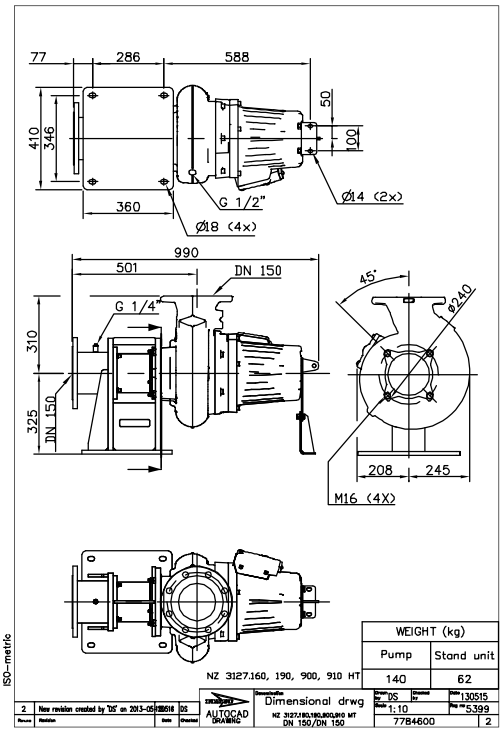

Figure 87: MT, Z-installation

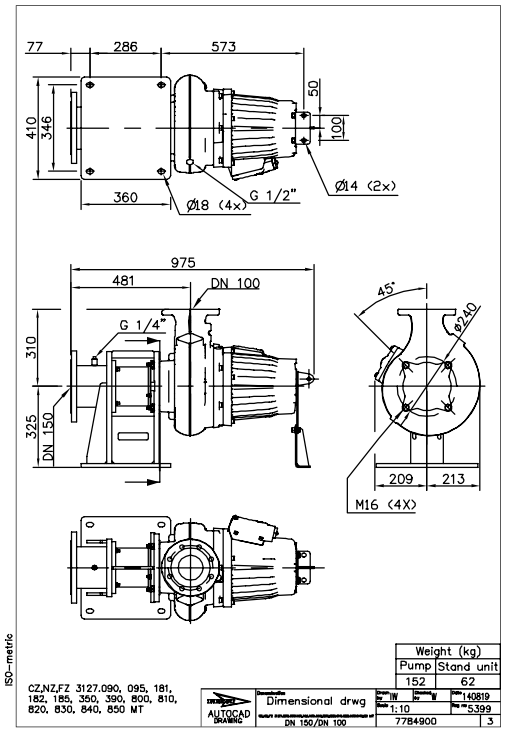

Figure 88: MT, Z-installation

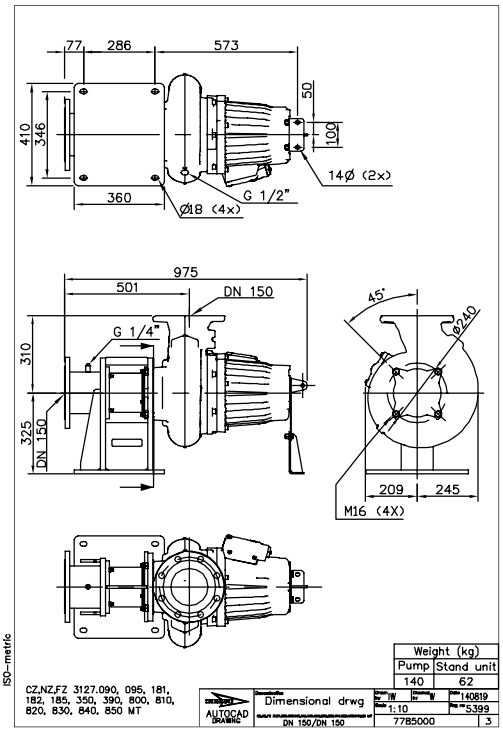

Figure 89: MT, Z-installation

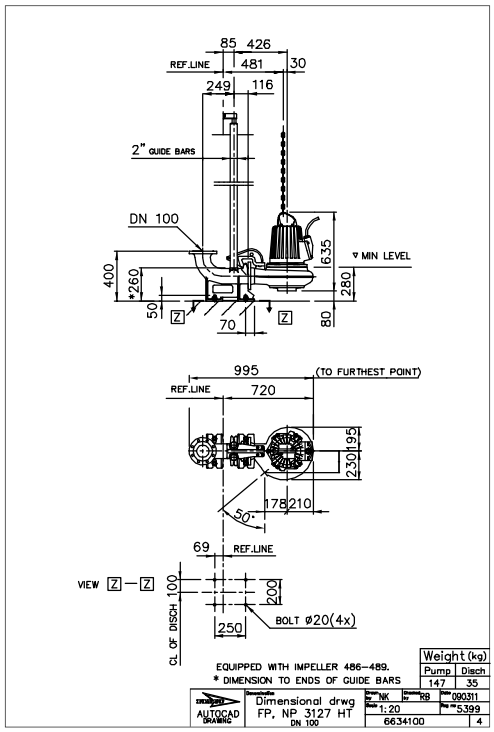

Figure 90: HT, P-installation

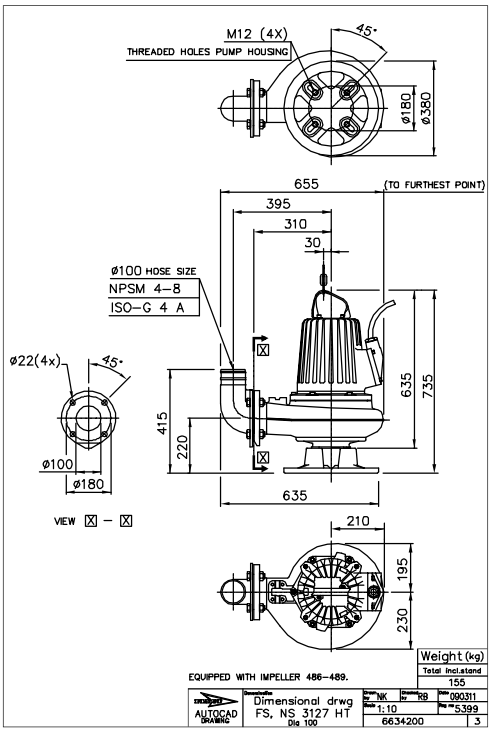

Figure 91: HT, S-installation

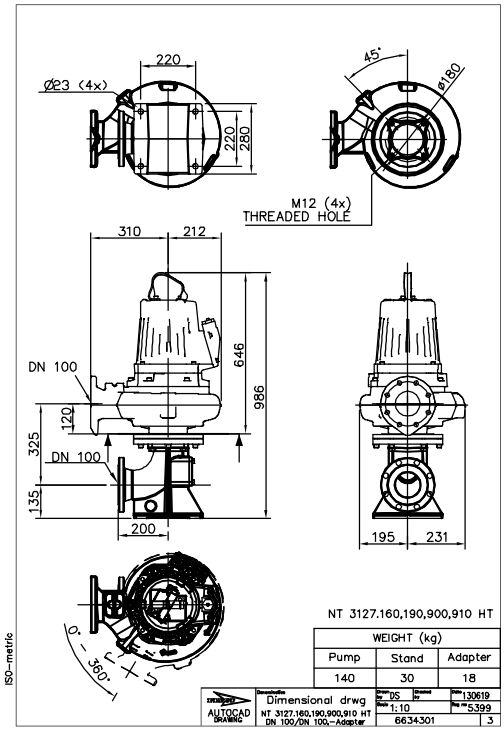

Figure 92: HT, T-installation

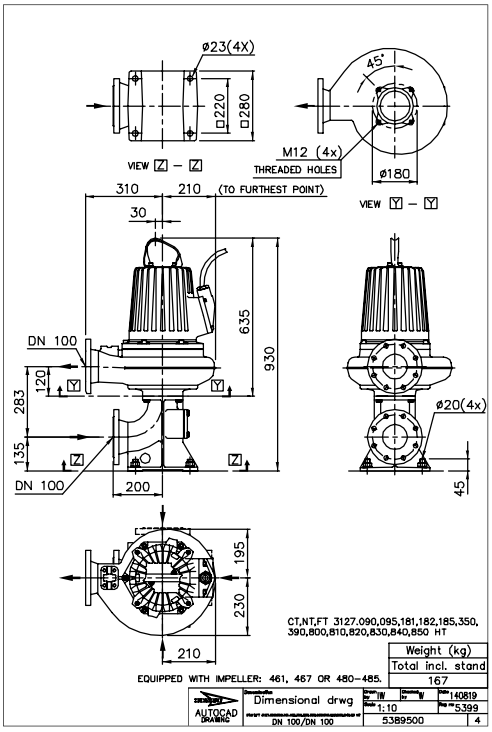

Figure 93: HT, T-installation

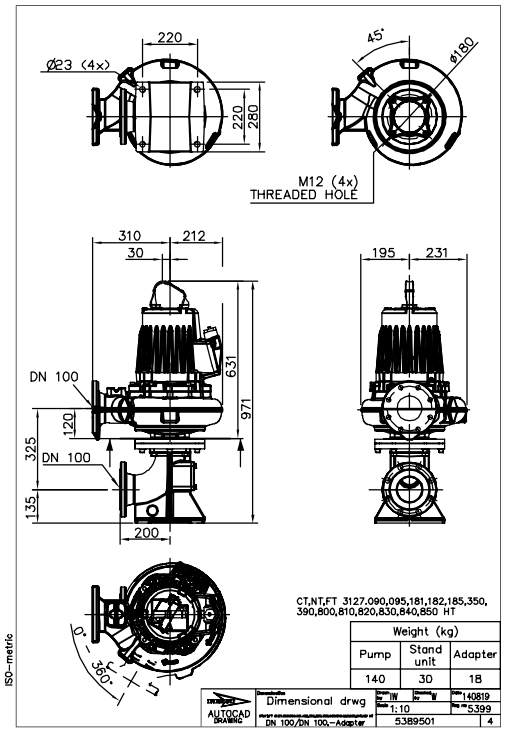

Figure 94: HT, T-installation

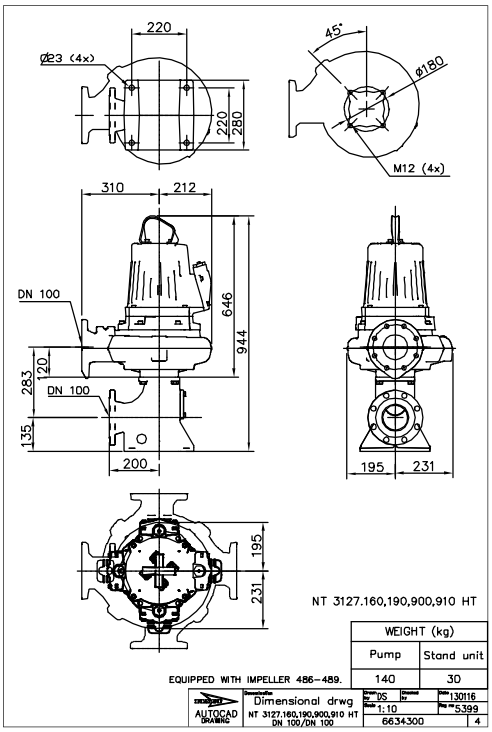

Figure 95: HT, T-installation

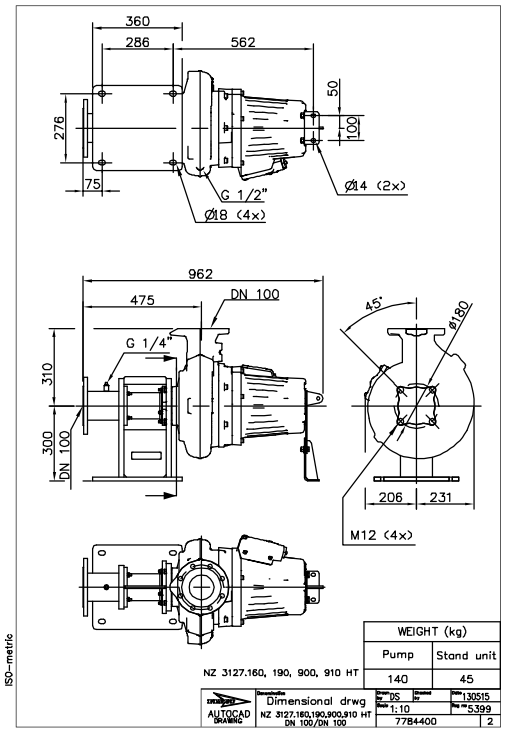

Figure 96: HT, Z-installation

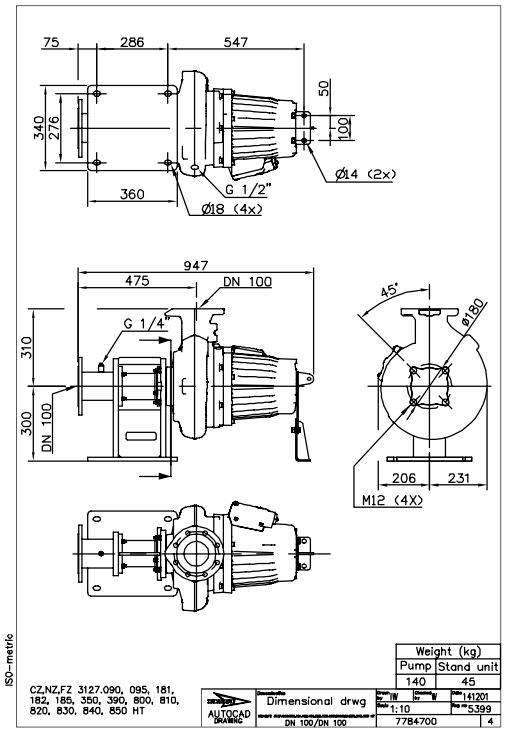

Figure 97: HT, Z-installation

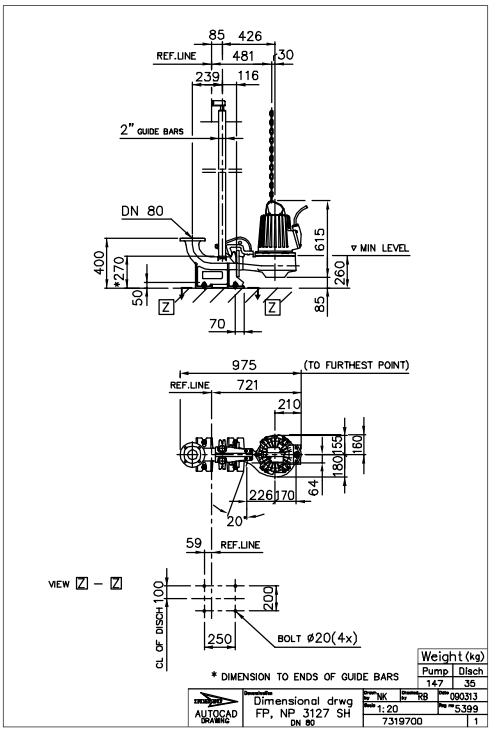

Figure 98: SH, P-installation

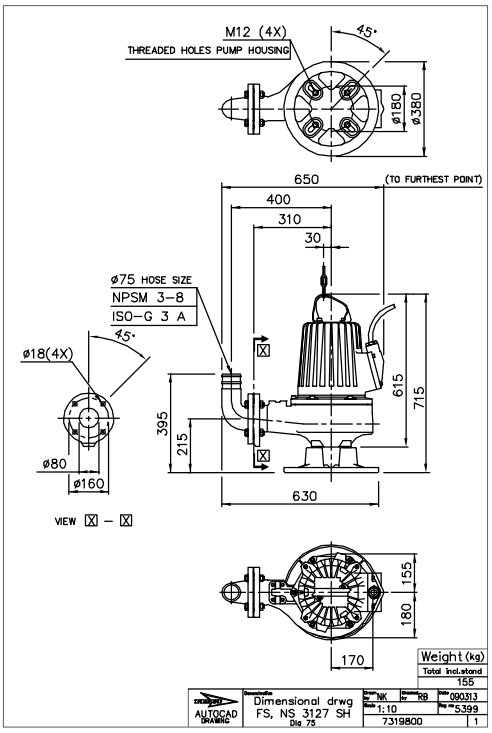

Figure 99: SH, S-installation

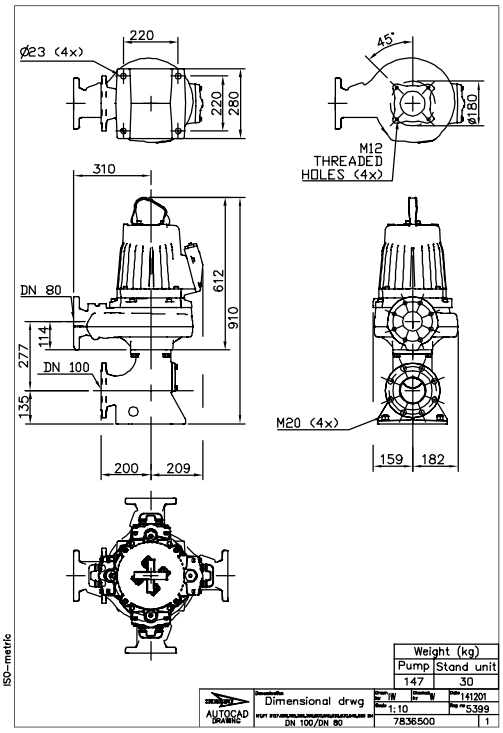

Figure 100: SH, T-installation

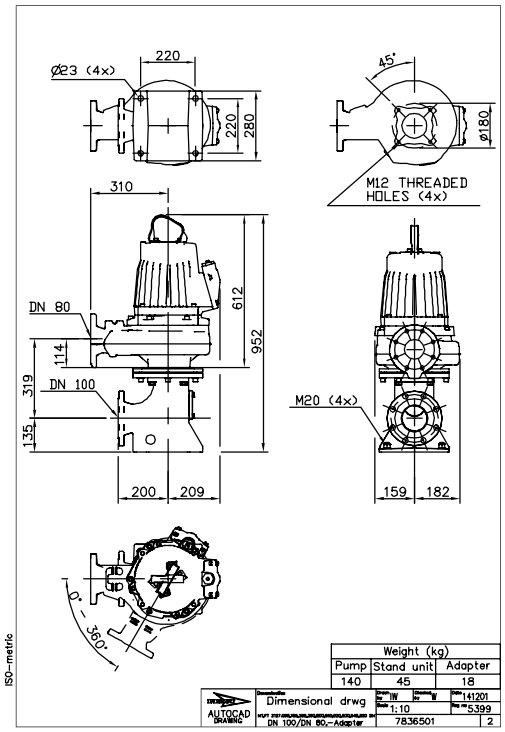

Figure 101: SH, T-installation

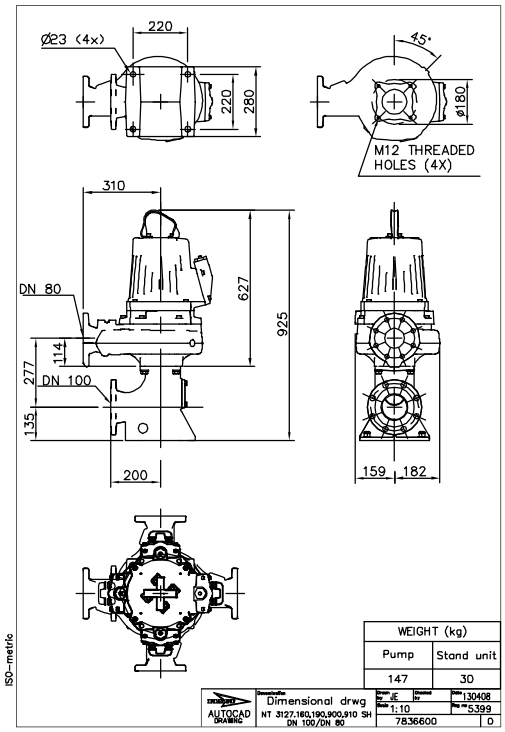

Figure 102: SH, T-installation

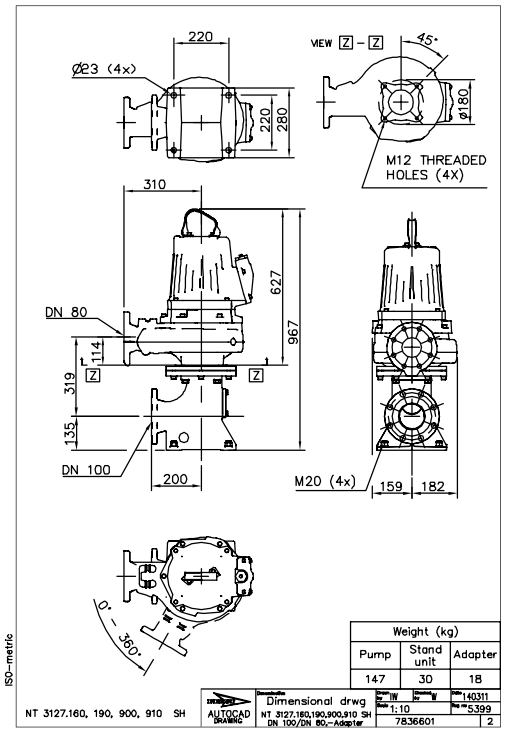

Figure 103: SH, T-installation

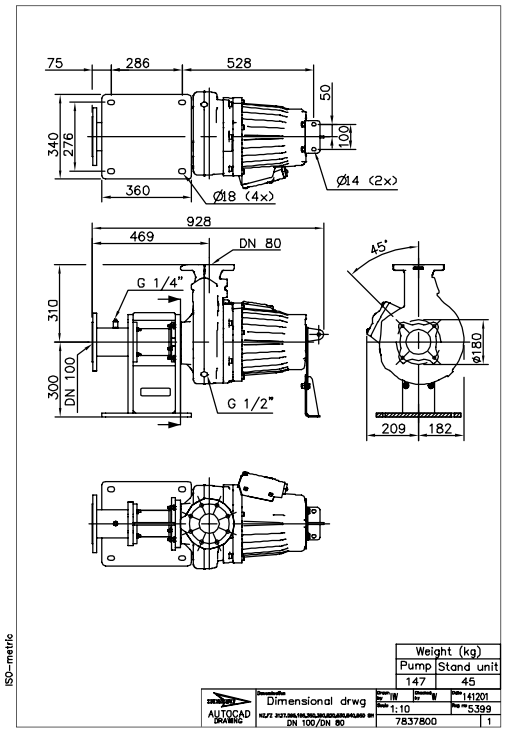

Figure 104: SH, Z-installation

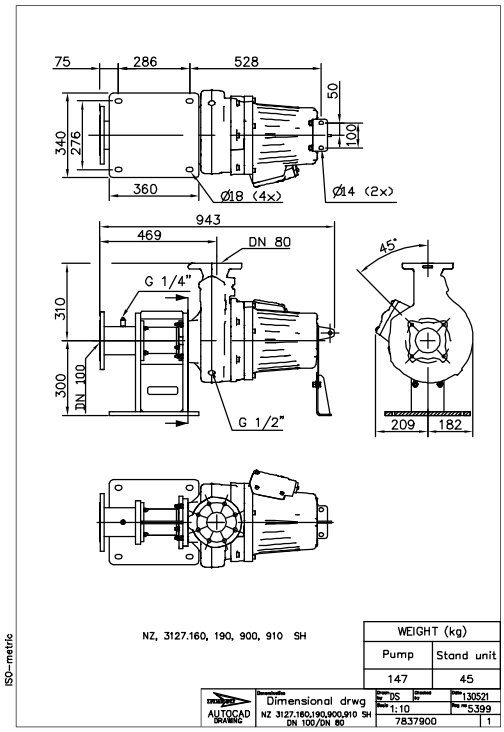

Figure 105: SH, Z-installation

18 Dimensions and Weight, P-pump

18.1 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.

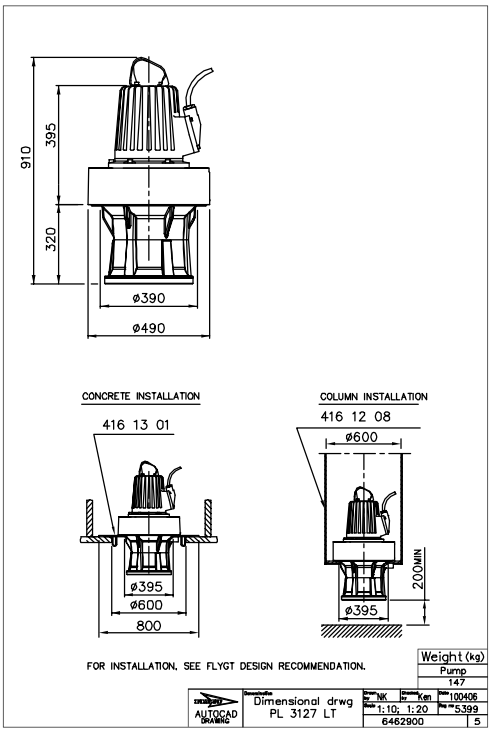

Figure 106: LT, L-installation