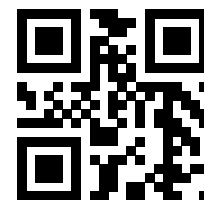


Technical Specification

90040801_1.0



6030.180

Concertor

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1 Product Description

EN

1.1 Pump design

The pump is submersible and based on the Dirigo platform, that consists of an integrated control system and a permanent-magnet synchronous motor. For motor data, see [Technical Reference](#) on page 5.

Impeller material

- Hard-Iron™
- Stainless steel

Pressure class and outlet size

LT/200 mm (8 in)	Low head
MT/150 mm (6 in)	Medium head
HT/100 mm (4 in)	High head
SH/80 mm (3 in)	Super high head

Installation types

The pump can be used in the following installations:

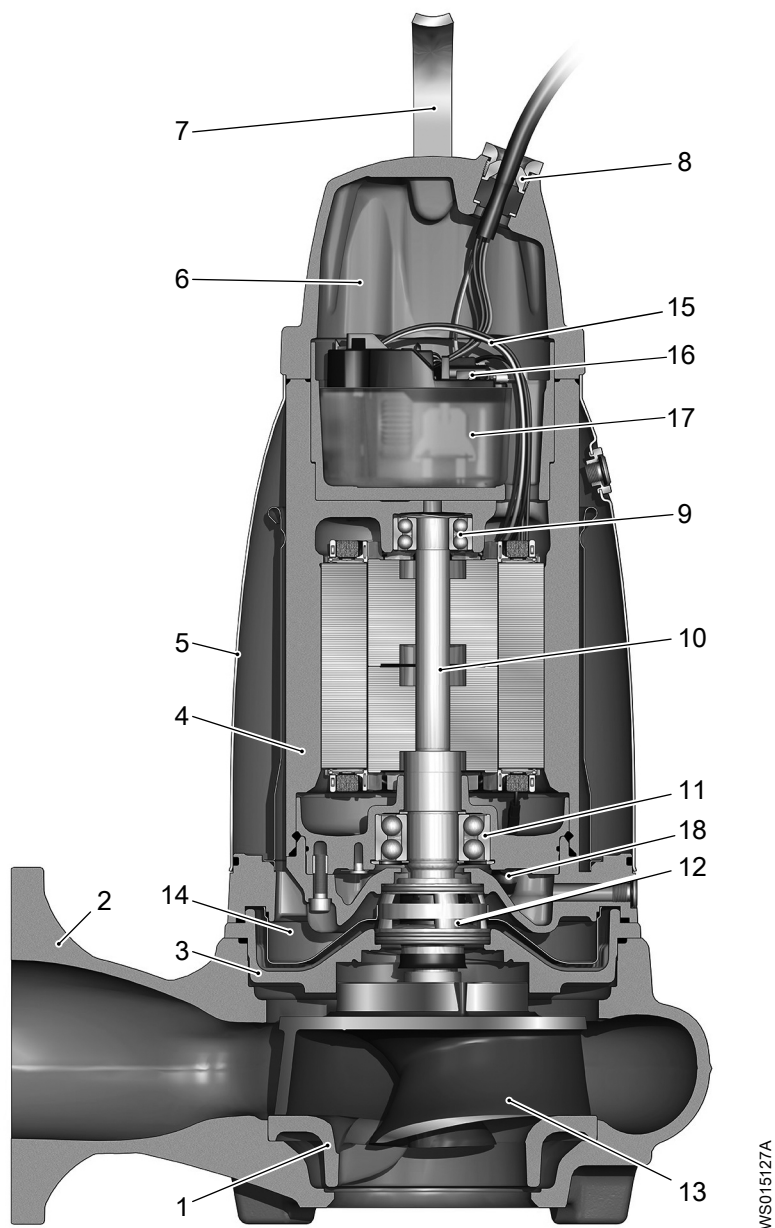
- P Semipermanent, wet well arrangement with the pump installed on two guide bars. The connection to the discharge is automatic.
- S Portable semipermanent, wet well arrangement with hose coupling or flange for connection to the discharge pipeline.
- T Vertical permanent, dry well arrangement with flange connection to the suction and discharge piping.
- Z Horizontal permanent, dry well arrangement with flange connection to the suction and discharge piping.

Products included

Product	Approvals
6030.180	Standard

Illustrations

EN



Parts

Position	Part
1	Insert ring with a guide pin
2	Pump housing, without flush valve connection
3	Seal housing cover
4	Stator housing
5	Cooling jacket / outer casing
6	Entrance cover
7	Lifting handle
8	Cable entry
9	Support bearing
10	Shaft unit with a permanent magnet rotor

Position	Part
11	Main bearing
12	Mechanical seal Plug in seal with active seal design.
13	Adaptive-N impeller
14	Coolant
15	Stator leads
16	I/O unit
17	Base plate unit, with ICS
18	Leakage sensor

1.2 Cables

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.

Cable length

Meter, m	Foot, ft
10	30
16	50
20	65
31	100

1.3 Sensors

- Leakage sensor in the stator housing (FLS)
- Overtemperature sensors in the integrated control system

Explosion-proof version: The stator incorporates three thermal contacts connected in series.

1.4 Options

- Surface treatment (Epoxy)
- Zinc anodes

1.5 Accessories

Example of accessories.

Item	Description
Pump controllers	XPC powered by Nexicon, MultiSmart, MyConnect XCU 411 Pump control unit for Concertor DP
HMI	FOP 315, FOP 402, FOP 422, FOP 432
Monitoring relays	Supplied locally
Level sensors	LTU, ENM 10, Level probe
SCADA systems	AquaView, Avensor
Flow meters	MagFlux

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

2 Technical Reference

2.1 Motor data

EN

The drive unit includes a synchronous motor with IE4 equivalent efficiency.

NOTICE:

Do not connect a starter or an external Variable Frequency Drive (VFD) to this unit.

Feature	Description
Input frequency	50–60 Hz
Input supply	3-phase • 400–480 V
Maximum starts for each hour	Pump only: 60 Pump with gateway or controller: 240
Design in applicable parts	According to IEC 60034–1
Voltage variation	• Continuously running: Maximum $\pm 5\%$ • Intermittently running: Maximum $\pm 10\%$
Voltage imbalance between the phases	Maximum of 2%
Stator insulation class	In accordance with class H (180°C, 356°F)

Motor encapsulation

Motor encapsulation is in accordance with IP68.

2.2 Application limits

Data	Description
Liquid temperature	Maximum 40°C (104°F)
Liquid density	1100 kg/m ³ (9.2 lb for each US gal) maximum
pH of the pumped media (liquid)	5.5–14
Depth of immersion	Maximum 20 m (65 ft)

2.3 Materials

Table 1: Major parts except mechanical seals

Denomination	Material	ASTM	EN
Major castings	Cast iron, gray	A48 class 35 type B	EN 1561: GJL-250
Cooling jacket	Stainless steel	ASTM A240 316L (AISI 316L)	EN 10088: 1.4404 (X2CrNiMo17-12-2)
Pump housing	Cast iron, gray	A48 class 35 type B	EN 1561: GJL-250
Impeller, alternative 1	Hard-Iron™	ASTM A532 Class III Type A	EN 12513: GJN-HB555 (XCr23)
Impeller, alternative 2	Stainless steel, Duplex	ASTM A890 grade 1B (ACI-ASTM CD4MCuN)	EN 10283: 1.4474 (GX4CrNiMoN26-5-2)
Insert ring	Cast iron, Hard-Iron™	A532 Class III Type A	EN 12513: GJN-HB555(XCr23)
Lifting handle	Stainless steel	ASTM A240 316L (AISI 316L)	EN 10088: 1.4404 (X2CrNiMo17-12-2)

Denomination	Material	ASTM	EN
Shaft	Stainless steel	ASTM A276 431 (AISI 431)	EN 10088: 1.4057 - QT800
Screws and nuts	Stainless steel, A4	ASTM A240 316L (AISI 316L)	EN 10088: 1.4404 (X2CrNiMo17-12-2)
O-rings	Nitrile rubber (NBR), 70 IRHD	-	-
Coolant	Deionized water 70%, and glycol 30%, mixture DOWCAL 200E	-	-

Table 2: Mechanical seals

Inner seal	Outer seal
Corrosion resistant cemented carbide (WCCR)/ Corrosion resistant cemented carbide (WCCR)	Corrosion resistant cemented carbide (WCCR)/ Corrosion resistant cemented carbide (WCCR)

2.4 Surface treatment

Priming	Finish
Painted with a primer, see internal standard M0700.00.0003	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.

3 Motor Rating and Performance Curves

EN

3.1 Motor rating

Table 3: Motor rating, 400-480 V - HT

Rated power (kW)	Rated power (Hp)	Voltage (V) / Rated current (A)	Voltage (V) / Starting current (A)	Power factor	Installation
10.6	14	400/17.7 - 480/15.0	400/17.7 - 480/15.0	0.95	P, S
8.2	11	400/13.7 - 480/11.6	400/13.7 - 480/11.6	0.95	P, S
9.4	12.5	400/15.8 - 480/13.2	400/15.8 - 480/13.2	0.95	T, Z
8.2	11	400/13.7 - 480/11.6	400/13.7 - 480/11.6	0.95	T, Z

Table 4: Motor rating, 400-480 V - MT

Rated power (kW)	Rated power (Hp)	Voltage (V) / Rated current (A)	Voltage (V) / Starting current (A)	Power factor	Installation
10.6	14	400/17.7 - 480/14.8	400/17.7 - 480/14.8	0.95	P, S
8.2	11	400/13.9 - 480/11.7	400/13.9 - 480/11.7	0.95	P, S
9.4	12.5	400/15.7 - 480/13.2	400/15.7 - 480/13.2	0.95	T, Z
8.2	11	400/13.9 - 480/11.7	400/13.9 - 480/11.7	0.95	T, Z

Table 5: Motor rating, 400-480 V - LT

Rated power (kW)	Rated power (Hp)	Voltage (V) / Rated current (A)	Voltage (V) / Starting current (A)	Power factor	Installation
10.6	14	400/17.8 - 480/15.0	400/17.8 - 480/15.0	0.95	P, S
8.2	11	400/13.8 - 480/11.7	400/13.8 - 480/11.7	0.95	P, S
9.4	12.5	400/15.6 - 480/13.5	400/15.6 - 480/13.5	0.95	T, Z
8.2	11	400/13.8 - 480/11.7	400/13.8 - 480/11.7	0.95	T, Z

Table 6: Motor rating, 400-480 V - SH

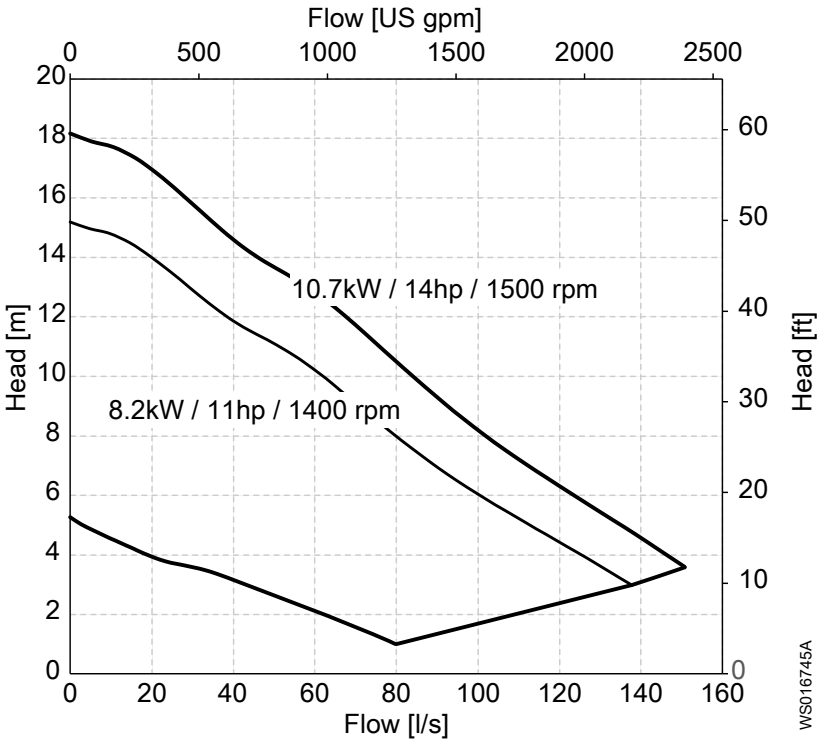
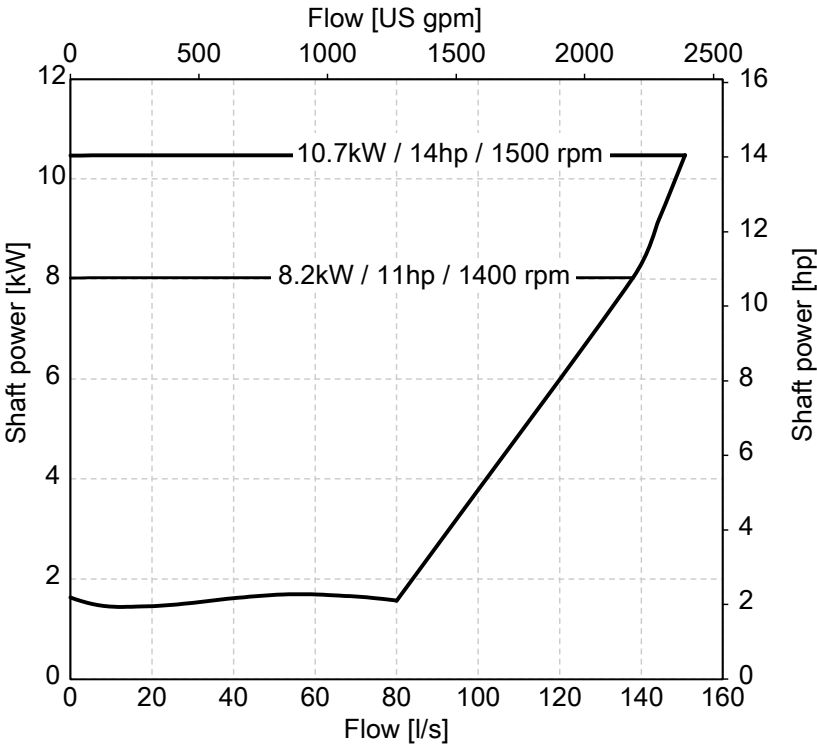
Rated power (kW)	Rated power (Hp)	Voltage (V) / Rated current (A)	Voltage (V) / Starting current (A)	Power factor	Installation
13.4	18	400/22.5 - 480/18.2	400/22.5 - 480/18.2	0.95	P, S
10.6	14	400/17.7 - 480/14.4	400/17.7 - 480/14.4	0.95	P, S
8.2	11	400/13.6 - 480/11.4	400/13.6 - 480/11.4	0.95	P, S
12.0	16	400/20.2 - 480/16.4	400/20.2 - 480/16.4	0.95	T, Z
9.4	12.5	400/15.6 - 480/12.8	400/15.6 - 480/12.8	0.95	T, Z
8.2	11	400/13.5 - 480/11.2	400/13.5 - 480/11.2	0.95	T, Z

3.2 Performance curves

200 (LT), P and S installation

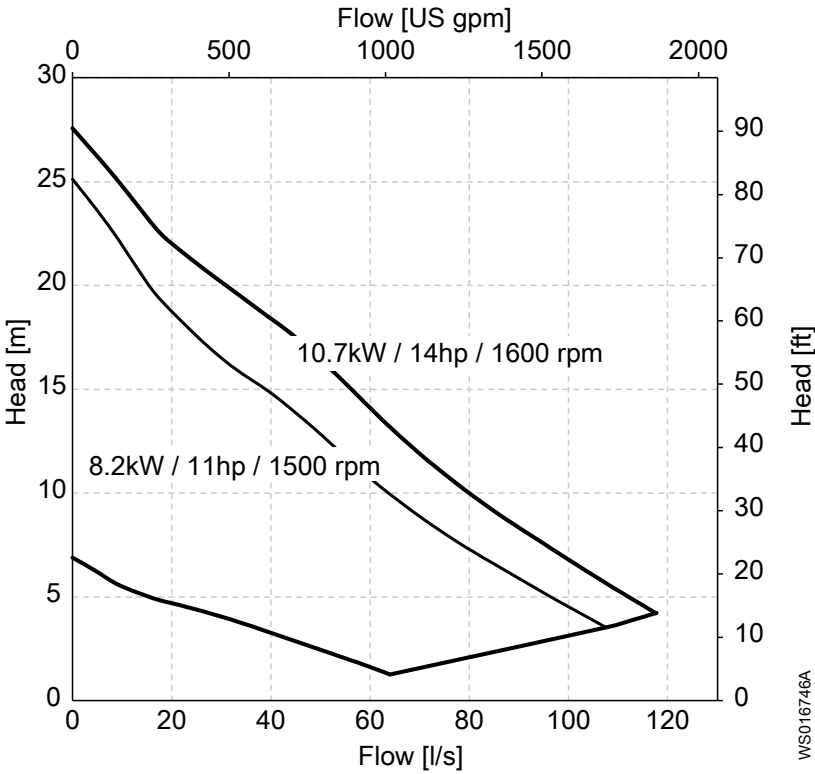
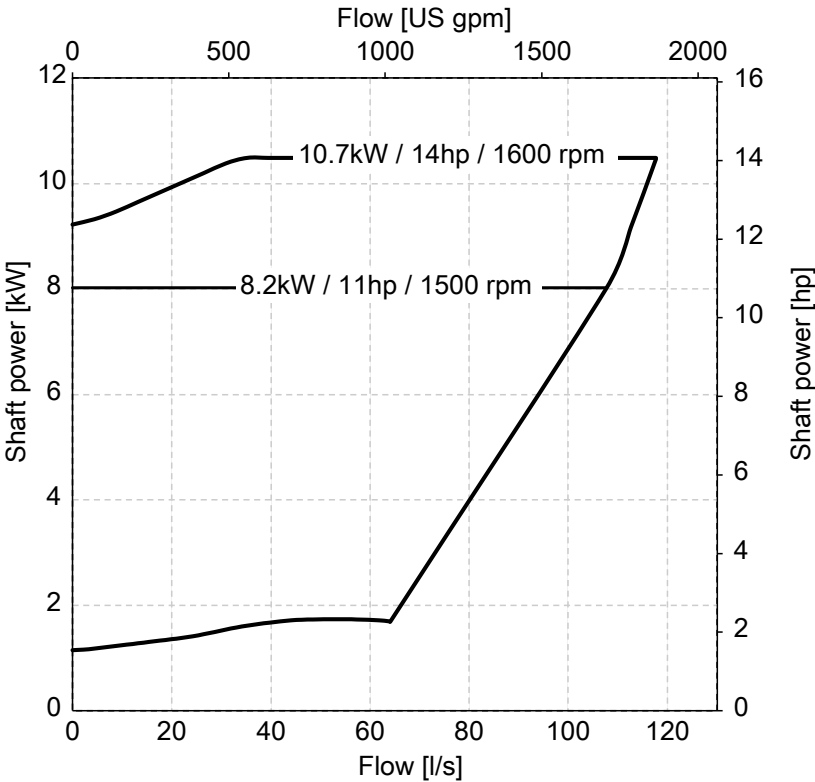
The image shows the available field of operation, and maximum revolutions per minute (rpm) for each rated power value.

EN



150 (MT), P and S installation

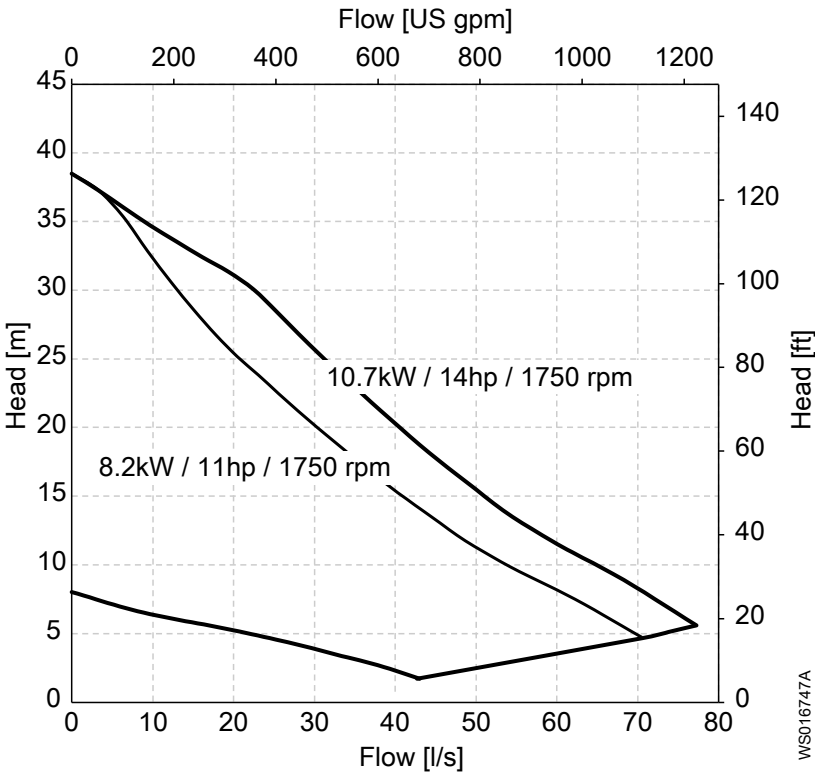
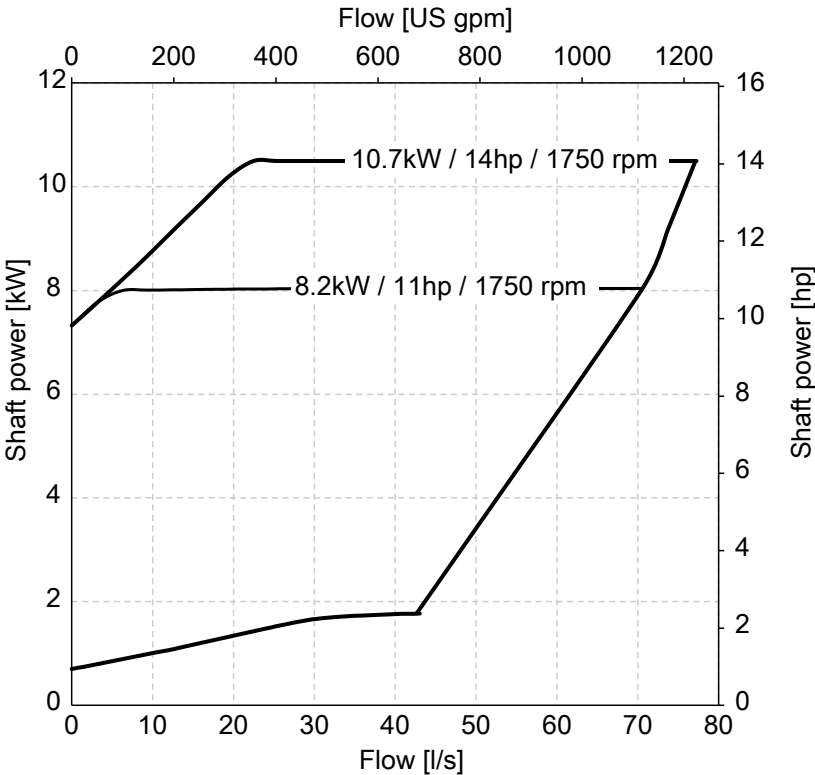
The image shows the available field of operation, and maximum revolutions per minute (rpm) for each rated power value.



100 (HT), P and S installation

The image shows the available field of operation, and maximum revolutions per minute (rpm) for each rated power value.

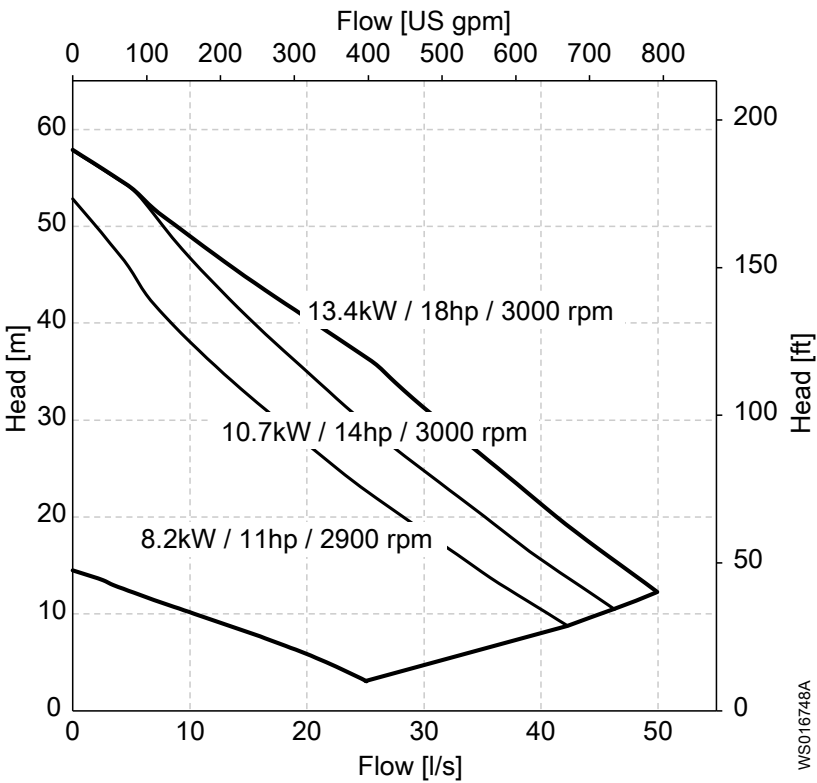
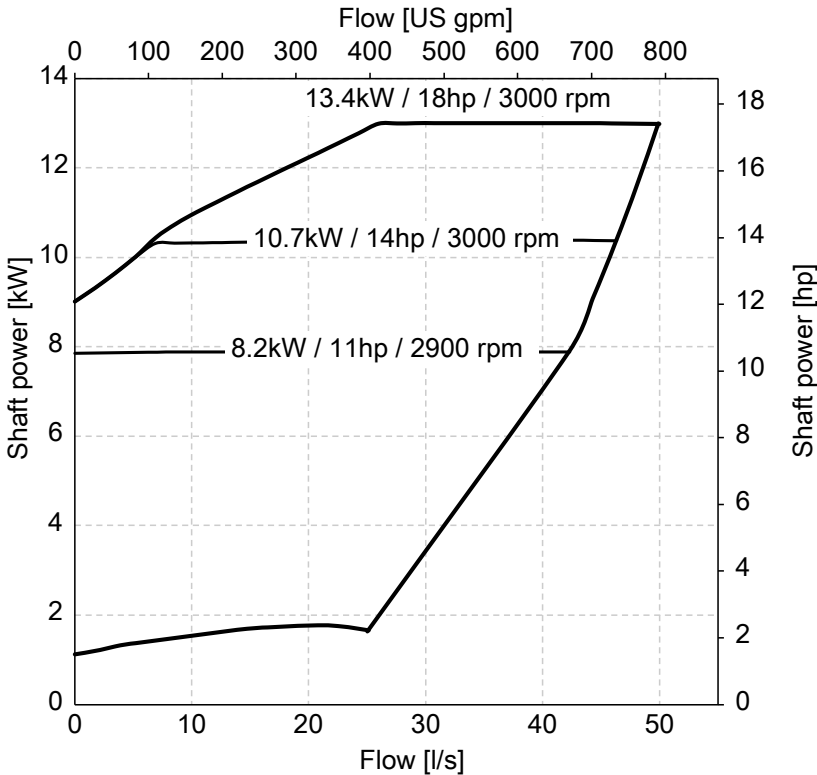
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WS016747A

80 (SH), P and S installation

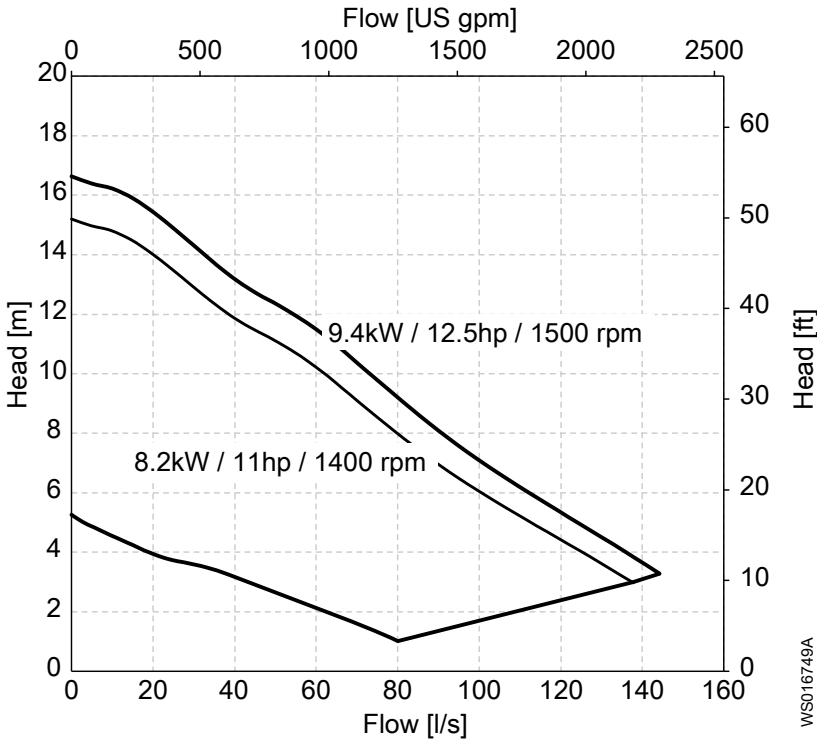
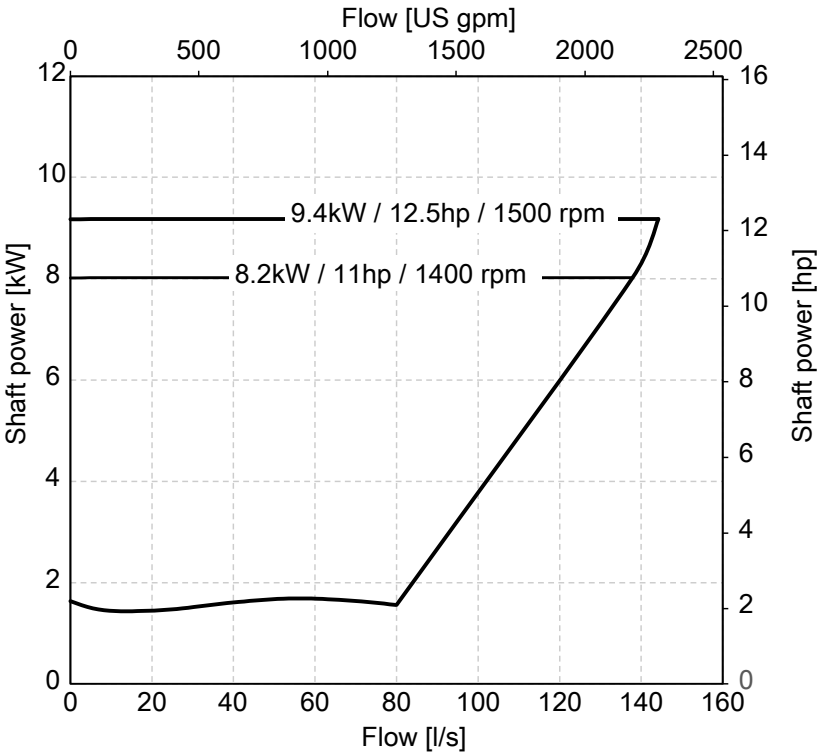
The image shows the available field of operation, and maximum revolutions per minute (rpm) for each rated power value.



200 (LT), T and Z installation

The image shows the available field of operation, and maximum revolutions per minute (rpm) for each rated power value.

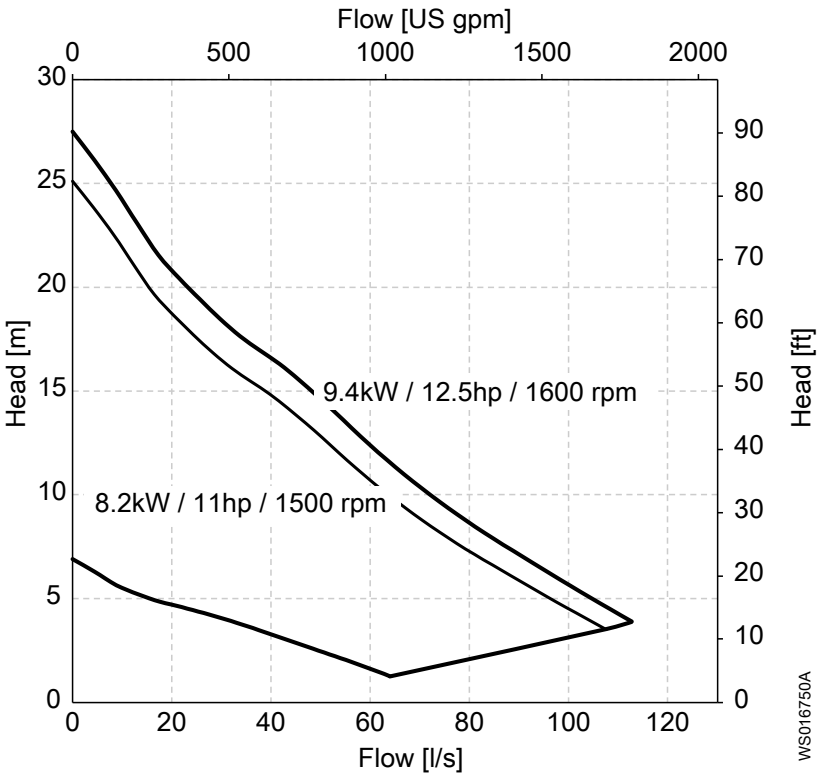
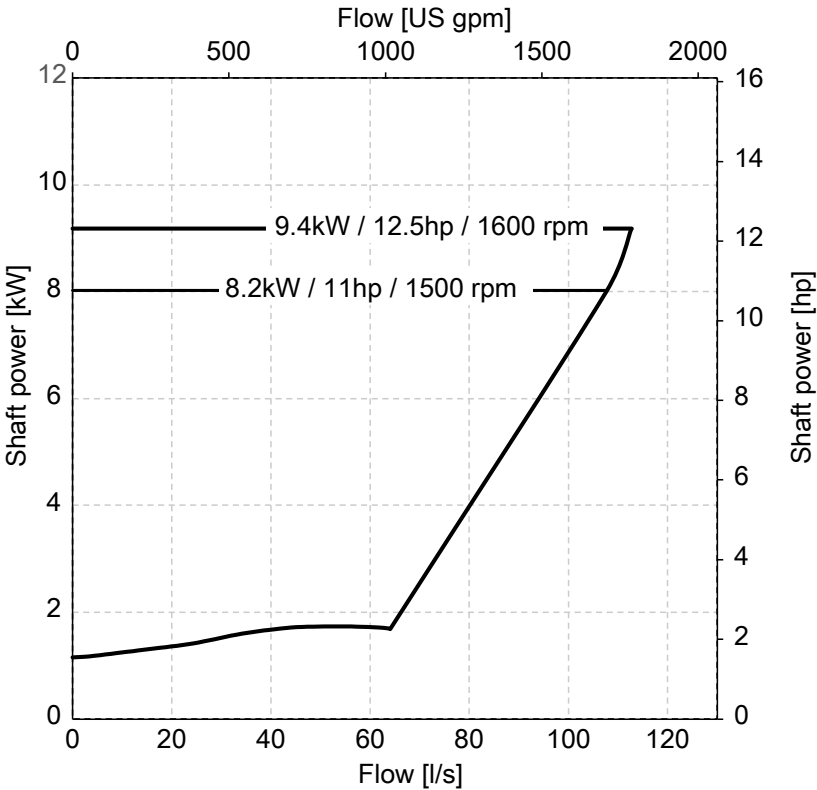
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WS016749A

150 (MT), T and Z installation

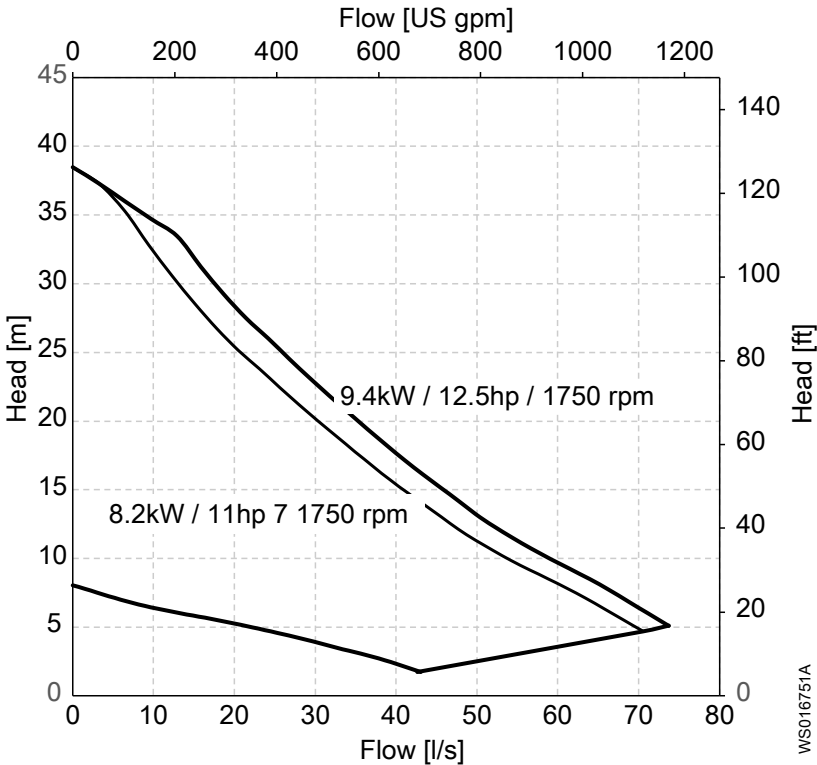
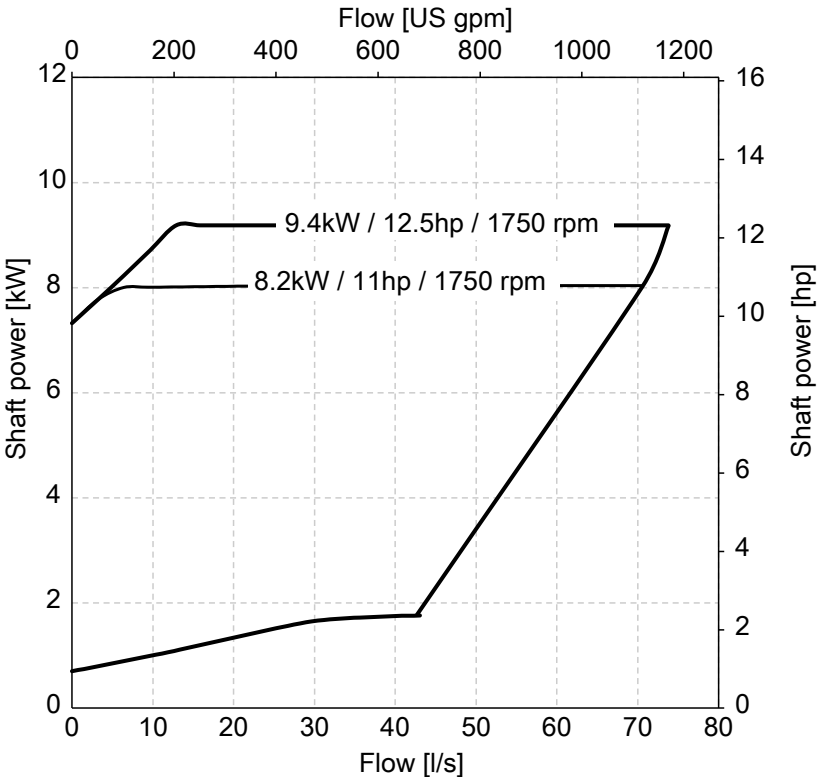
The image shows the available field of operation, and maximum revolutions per minute (rpm) for each rated power value.



100 (HT), T and Z installation

The image shows the available field of operation, and maximum revolutions per minute (rpm) for each rated power value.

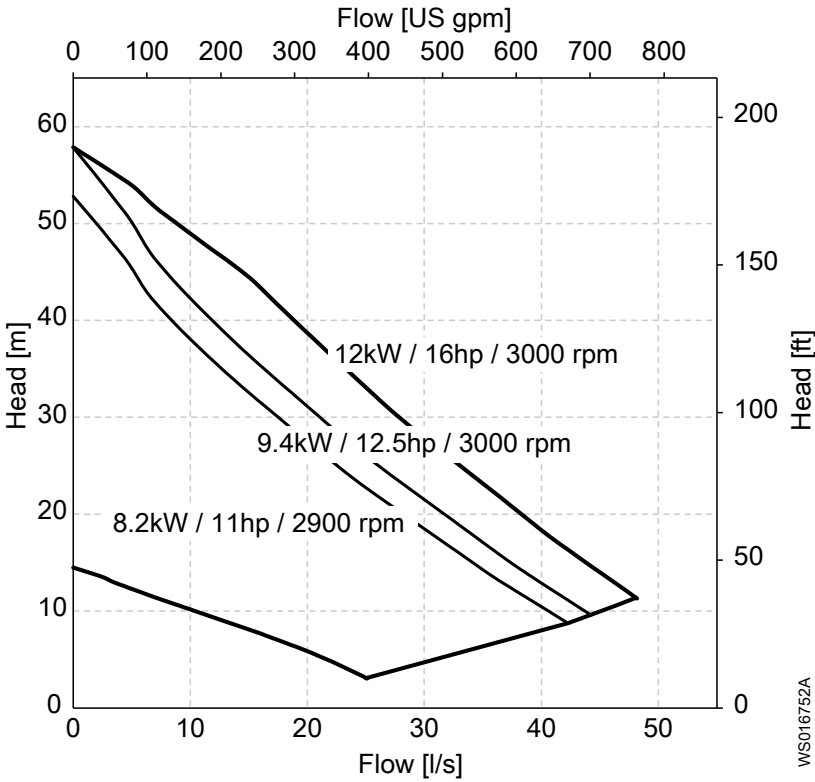
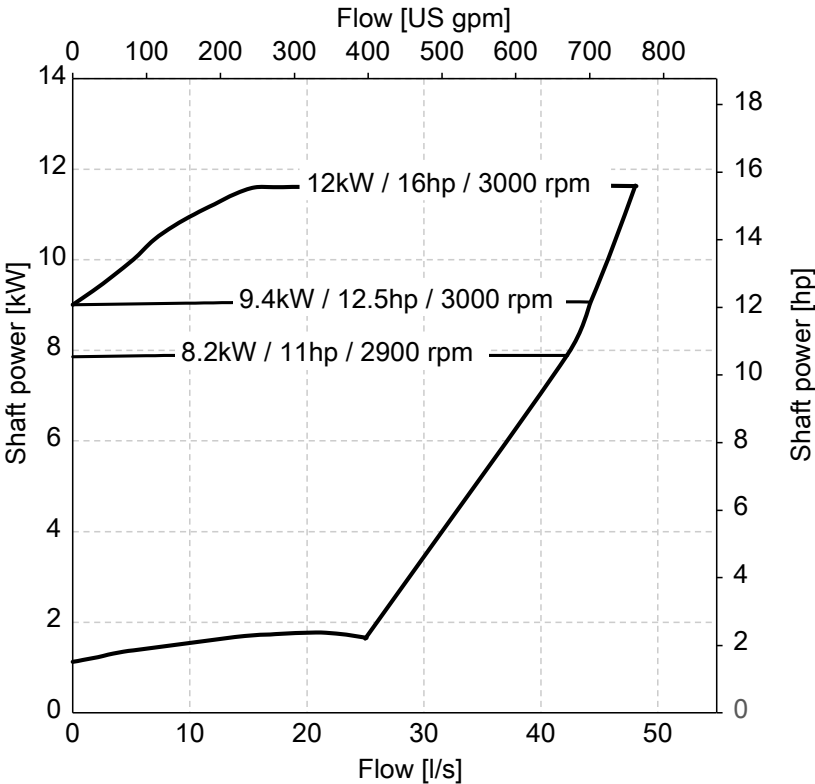
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80 (SH), T and Z installation

The image shows the available field of operation, and maximum revolutions per minute (rpm) for each rated power value.

EN



4 Dimensions and Weight

4.1 Drawings

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

Drawings are found on Xylect or on TPI.

All dimensions are in mm.

Drawing number	Discharge connection	Installation
871 91 00	200 (LT)	P
871 92 00	150 (MT)	P
871 93 00	100 (HT)	P
871 94 00	80 (SH)	P
871 95 00	200 (LT)	S
871 96 00	150 (MT), threaded	S
871 97 00	100 (HT), threaded	S
871 98 00	80 (SH), threaded	S
871 99 00	200 (LT), inlet 250	T
872 00 00	150 (MT), inlet 200	T
872 01 00	100 (HT), inlet 150	T
872 02 00	80 (SH), inlet 150	T
872 03 00	200 (LT), inlet 250	T-stand
872 04 00	150 (MT), inlet 200	T-stand
872 05 00	100 (HT), inlet 150	T-stand
872 06 00	80 (SH), inlet 150	T-stand
872 07 00	200 (LT)	Z
872 07 01	200 (LT), with service cart	Z
872 08 00	150 (MT)	Z
872 08 01	150 (MT)	Z
872 09 00	100 (HT), inlet 150	Z
872 09 01	100 (HT), inlet 150, with service cart	Z
872 10 00	80 (SH), inlet 150	Z
872 10 01	80 (SH), inlet 150, with service cart	Z
872 11 00	200 (LT)	X
872 12 00	150 (MT)	X
872 13 00	100 (HT)	X
872 14 00	80 (SH)	X

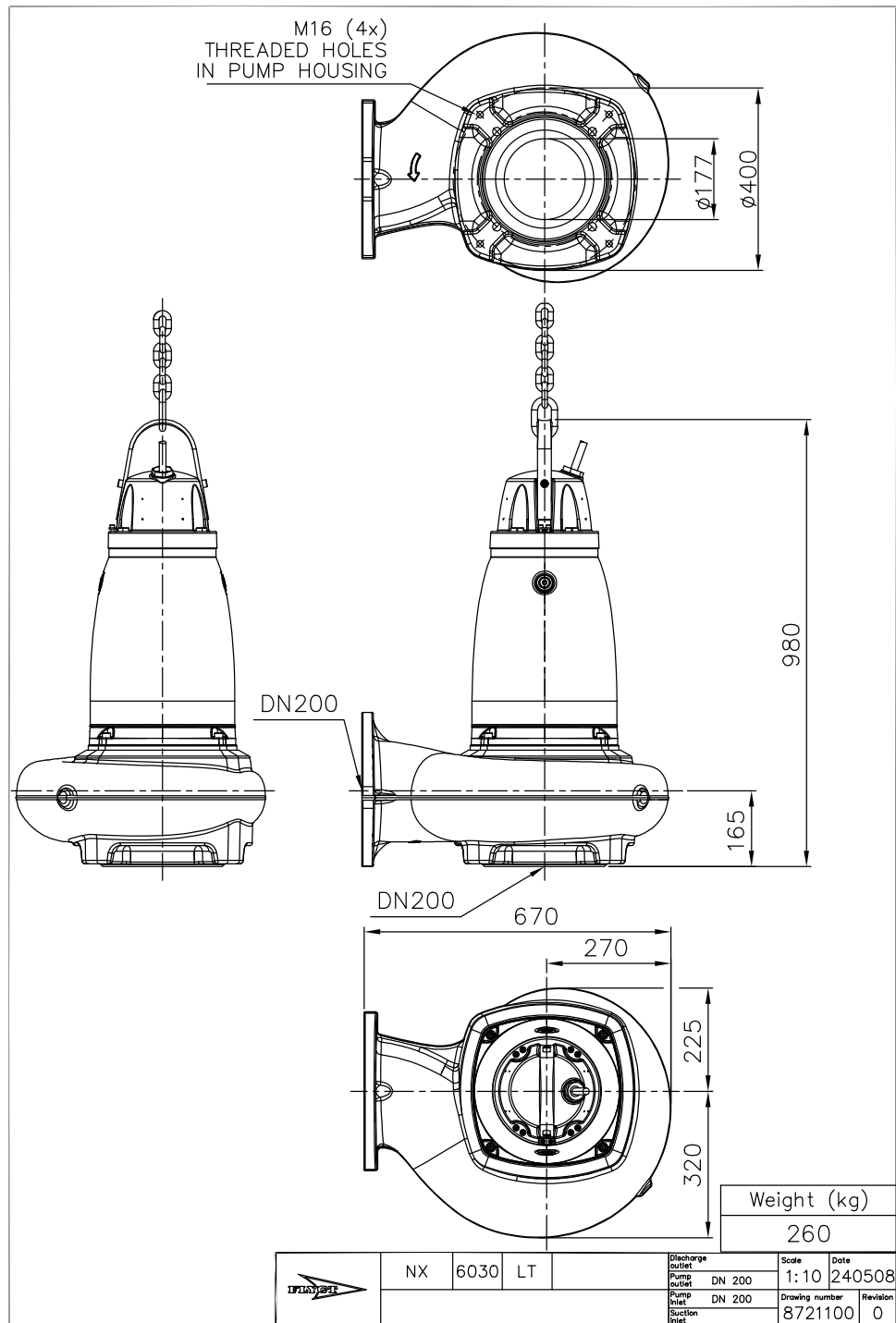


Figure 1: 200 (LT)

EN

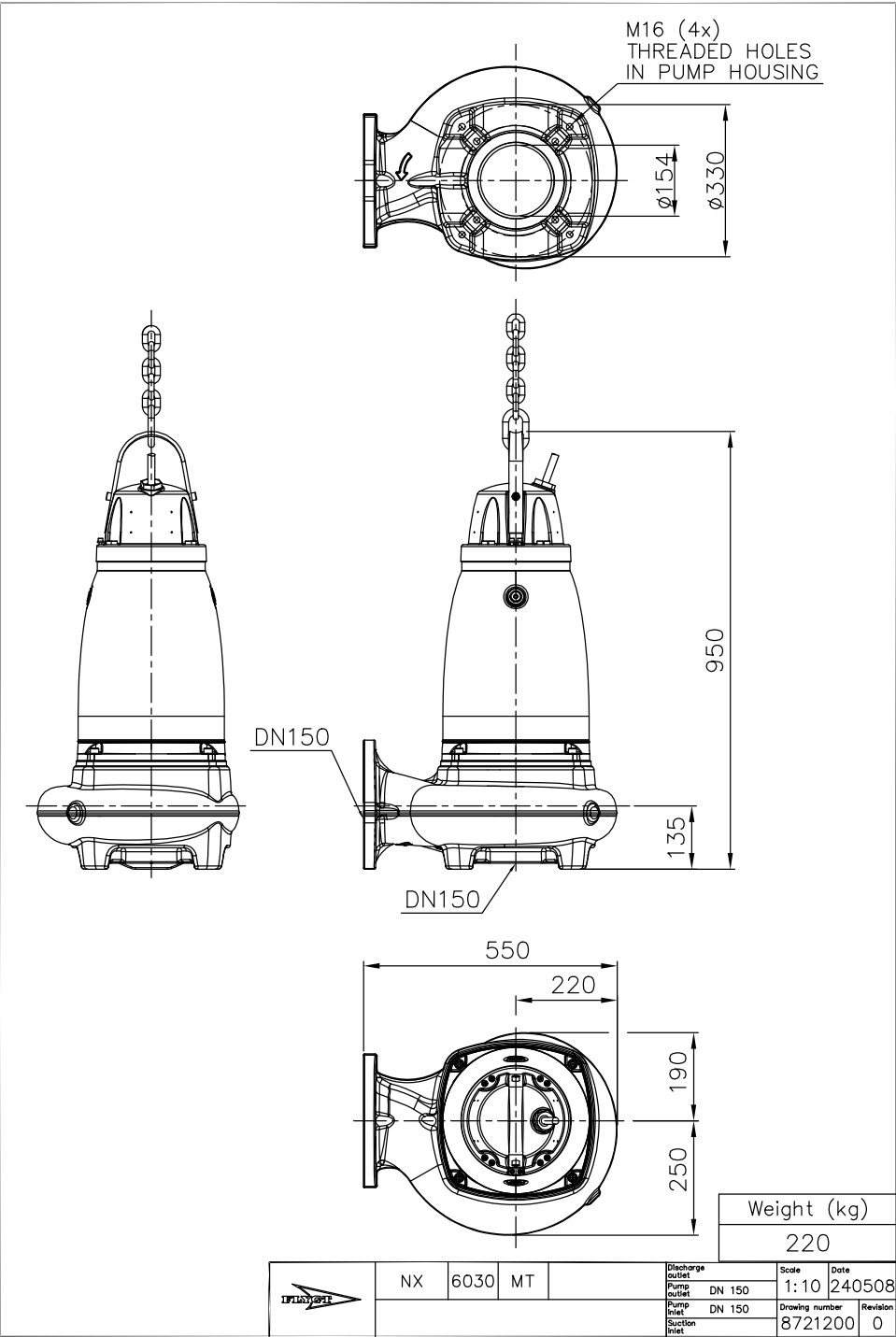


Figure 2: 150 (MT)

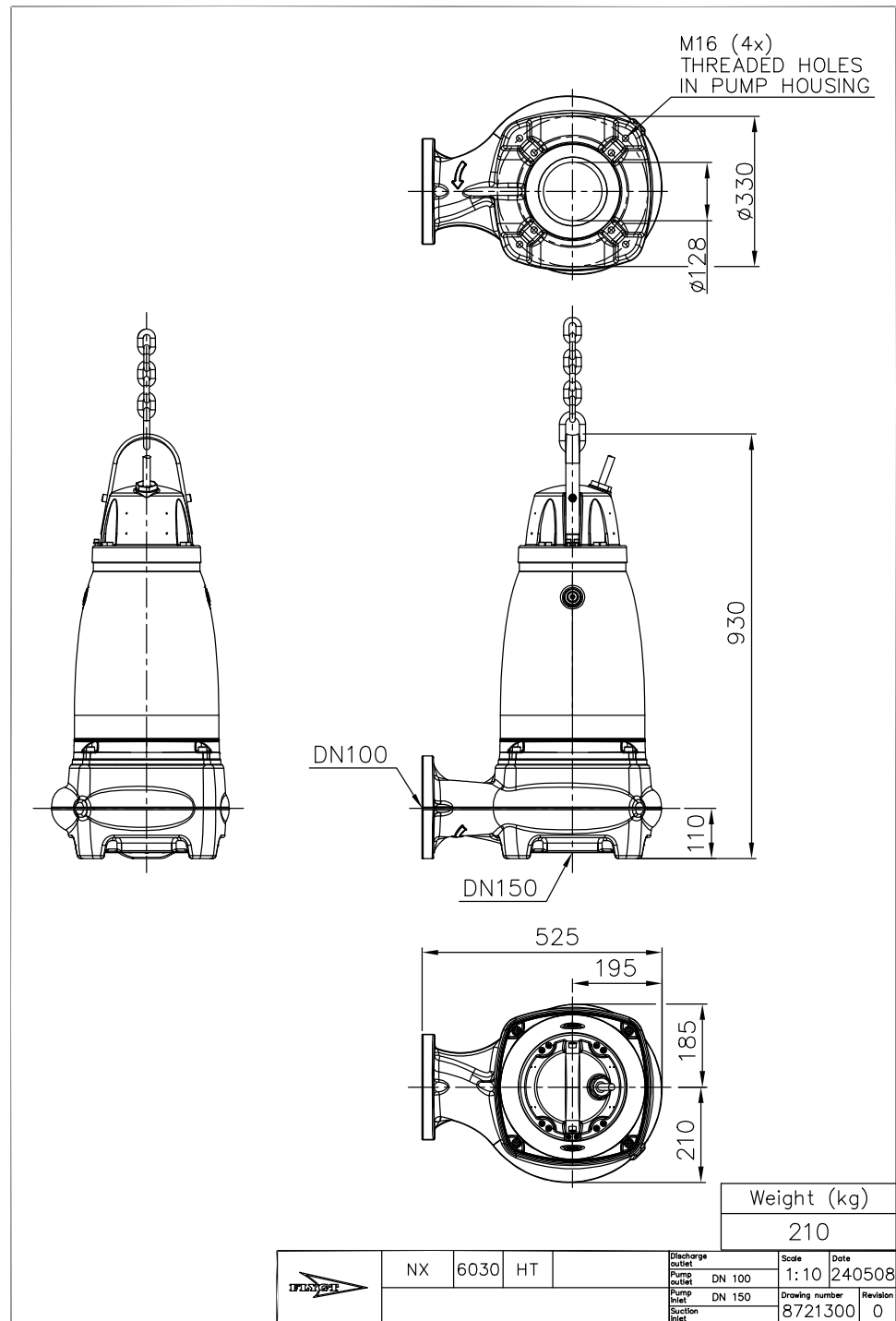


Figure 3: 100 (HT)

EN

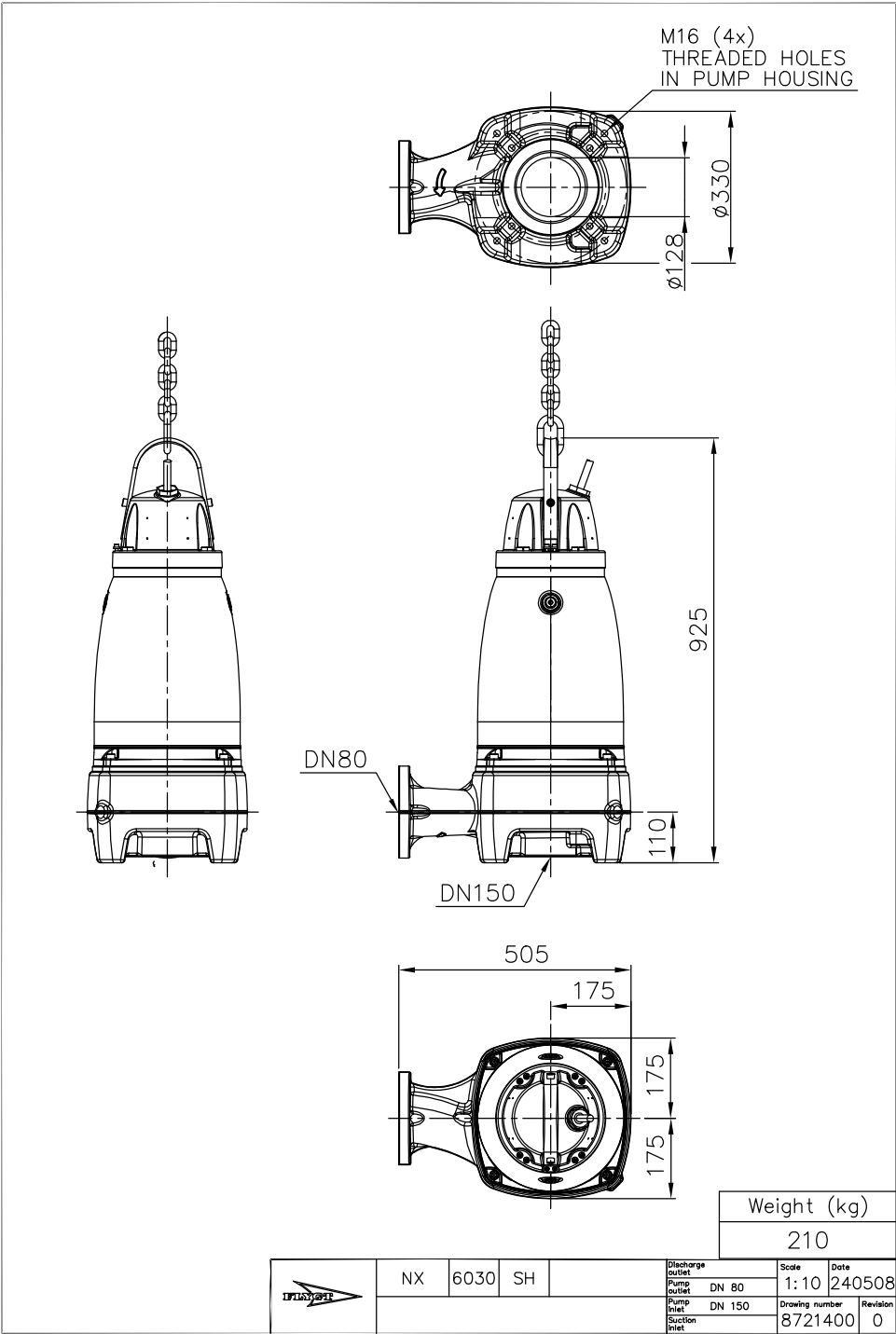


Figure 4: 80 (SH)

Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

For more information on how Xylem can help you, go to www.xylem.com



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