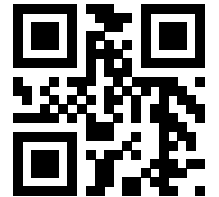




Technical Specification

882626_3.0



Flygt PP 4630-4680

50 Hz

1 Technical specification

1.1 Product Description

Usage

The PP pump is mainly used in recirculation in Biological Nutrient Removal processes in treatment plants. Other areas of use:

- Emptying of rainwater retention basins
- Creating streams, for example for boat rides
- Pumping sea water to fish, shrimp, and oyster farms
- Pumping water to irrigation ditches
- Pumping cooling water to power plants

Denomination

Standard version	Explosion proof version
4630.412	4630.492
4640.412	4640.492
4650.412	4650.492
4660.412	4660.492
4670.412	4670.492
4680.412	4680.492

Installation

Guide bars, diameter 2 inches (50.8 mm).

Application limits

Feature	Description
Liquid temperature	<ul style="list-style-type: none"> • Maximum 40°C (104°F) • Warm-liquid version 60°C (140°F), or 90°C (194°F)
Liquid viscosity	Maximum 5000 cp
pH	1 – 12
Depth of immersion	Maximum 20 m (65 ft)

Motor data

Feature	Description
Motor type	Squirrel-cage induction motor
Frequency	50 Hz
Supply	3-phase
Starting method	<ul style="list-style-type: none"> • Direct on-line • Variable Frequency Drive (VFD)
Maximum starts per hour	30 evenly-spaced starts per hour
Voltage variation	<ul style="list-style-type: none"> • Continuously running: Maximum $\pm 5\%$ • Intermittently running: Maximum $\pm 10\%$
Voltage imbalance between the phases	Maximum 2%

Cables

- SUBCAB® heavy-duty submersible cable
- SUBCAB® screened heavy-duty submersible cable
- HCR, heavy-duty heat and chemical resistant submersible cable

Monitoring equipment

- Thermal contacts opening at 140°C, (285°F)
- Leakage sensor in stator housing (FLS), optional

Dimensions and weight

See the dimensional drawing.

Installation equipment

The available installation equipment depends on product version and type of installation.

- Discharge connection
- Lifting equipment

Accessories

- Electrical equipment: Starter, monitoring relay, controller, variable frequency drive, and control panel
- Zinc anodes
- Cable protection hose

Materials

Item	Material
Motor casing	Stainless steel ASTM 316L
Stator housing	Cast iron
Shaft	Stainless steel, ASTM/AISI 431
Oil housing	Vinyl ester based SMC
Lifting device	Stainless steel ASTM 316L
Inlet cone	Stainless steel ASTM 304, optional: ASTM 316L
Fixing plate	Stainless steel ASTM 304, optional: ASTM 316L
Oil	Paraffin oil ISO VG32

Surface treatment

Stainless steel parts are blasted to a dull grey surface.

O-rings

Nitrile rubber as standard, fluorinated rubber for warm liquid versions.

Hydraulic unit

Three-blade high efficiency clog-free propeller, stainless steel ASTM 316L.

Propeller diameter	<ul style="list-style-type: none"> • 4630–4640: 368 mm (14.5 in) • 4650–4660: 580 mm (22.8 in) • 4670–4680: 766 mm (30.2 in)
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Mechanical face seals

The inner seal uses the patented Active Seal™ technology, which is a zero leakage seal, allowing no liquid to penetrate from the buffer fluid compartment to the stator housing.

	Inner seal	Outer seal
Standard, 4630–4640	Corrosion resistant cemented carbide (WCCR) / Aluminum oxide (Al ₂ O ₃)	WCCR / WCCR

	Inner seal	Outer seal
Standard, 4650–4680	Corrosion resistant cemented carbide (WCCR) / WCCR	WCCR / WCCR
Optional, 4630–4640	WCCR / Al ₂ O ₃	Silicon carbide (RSiC) / RSiC
Optional, 4650–4680	WCCR / WCCR	Silicon carbide (RSiC) / RSiC

1.2 Motor ratings and performance curves

Motor ratings

Table 1: 400V, 50 Hz, 3-phase

Product	Rotations per minute, rpm	Poles	Rated Power, kW	Rated hp	Rated Current, A	Starting Current, A	Power factor cosφ
4630	710	8	1.5	2.0	4.2	14	0.7
4640	705	8	2.5	3.4	7.0	22	0.7
4650	485	12	3.7	5.0	15	49	0.50
4650	475	12	5.5	7.4	18	49	0.62
4660	480	12	7.5	10.1	25	84	0.55
4660	475	12	10	13.4	30	84	0.63
4670	365	16	13	17.4	44	117	0.55
4680	365	16	18.5	24.8	69	225	0.48
4680	365	16	25	34	80	225	0.56

Performance curves

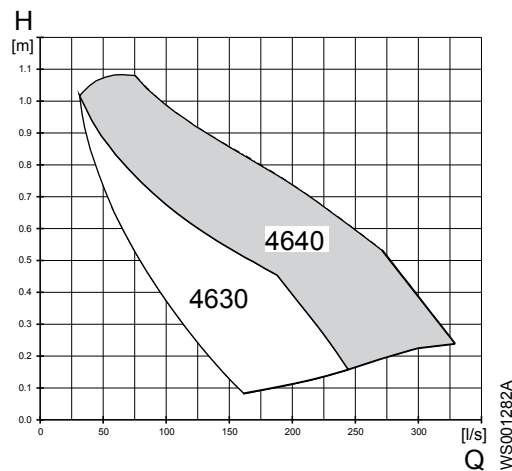


Figure 1: 4630, 4640

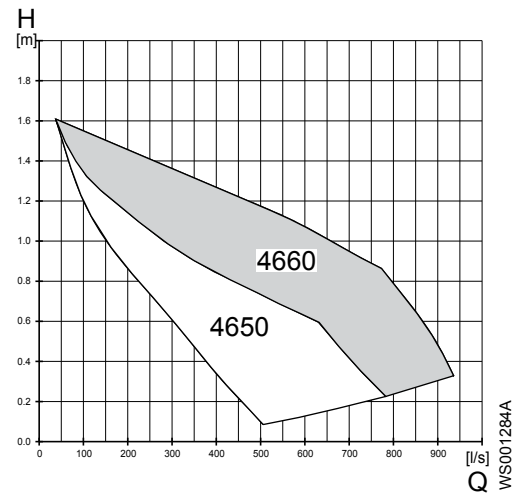


Figure 2: 4650, 4660

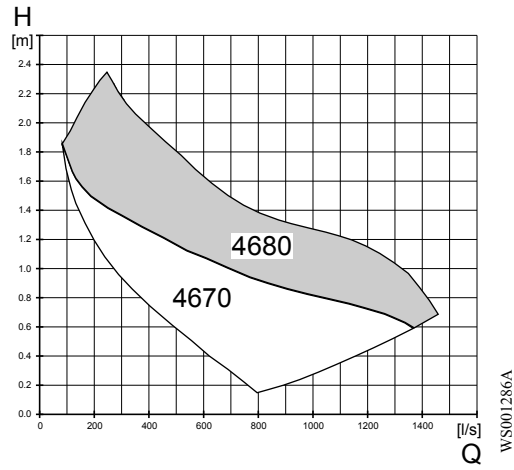


Figure 3: 4670, 4680

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.

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

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