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1330, 50Hz

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# 1 Non-clog

## 1.1 Product description



### Usage

A submersible pump for efficient pumping of clean water, surface water, and wastewater containing solids. The pump is designed for sustained efficiency over time.

### Denomination

Type	Non-explosion proof version	Explosion proof version	Model variant	Installation types
Non-clog	1330.181	1330.090	<ul style="list-style-type: none"><li>• H - High head</li><li>• L - Low head</li><li>• M - Medium head</li><li>• S - Super high head</li></ul>	<ul style="list-style-type: none"><li>• Free-standing</li><li>• Wet-well</li></ul>

The pump can be used in the following installations:

Free-standing    Portable semipermanent, wet well arrangement with hose coupling or flange for connection to the discharge pipeline.

Wet-well    Semipermanent, wet well arrangement with the pump installed on two guide bars. The connection to the discharge is automatic.

### 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 <sup>3</sup>

## Motor data

Feature	Description
Motor type	Squirrel-cage induction motor
Frequency	50 Hz
Power supply	3-phase
Starting method	<ul style="list-style-type: none"> <li>• Direct on-line</li> <li>• Star-delta</li> <li>• Variable Frequency Drive (VFD)</li> </ul>
Number of starts per hour	Maximum 15
Code compliance	IEC 60034-1
Voltage variation without overheating	±10%, if it does not run continuously at full load
Voltage imbalance between phases	Maximum 2%
Stator insulation class	F (155°C [311°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 <sup>2</sup> 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 <sup>2</sup> with unscreened control cores.

## Monitoring equipment

Motor	Thermal contacts opening temperature
25-18-2Z, 25-18-6Z, 25-19-4Z	140°C (284°F)

## Materials

Table 1: Major parts except mechanical seals

Denomination	Material	ASTM	EN
Major castings	Cast iron, gray	30B	GJL-200
Pump housing	Cast iron, gray	30B	GJL-200
Impeller	Cast iron, gray	30B	GJL-200
Lifting eye bolt	Steel electro zinc coated	-	EN 10084 - C15E
Lifting handle	Stainless steel	AISI 304	1,4301
Shaft	Stainless steel	AISI 431	1.4057+QT800
Screws and nuts	Stainless steel, A2	AISI 304	1.4301, 1.4306, 1.4307, 1.4311

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

Table 2: Mechanical seals

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

#### Surface treatment

Finish
Black or blue two-component high-solid top coating. See internal standard M 0700.00.0004 for standard painting.

#### Options

- Leakage sensor in the stator housing (FLS)

#### Accessories

- Installation equipment  
Sold in kits
- Mechanical accessories such as discharge connections, adapters, and hose connections
- Electrical accessories such as pump controller, control panels, starters, monitoring relays, and 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.

H

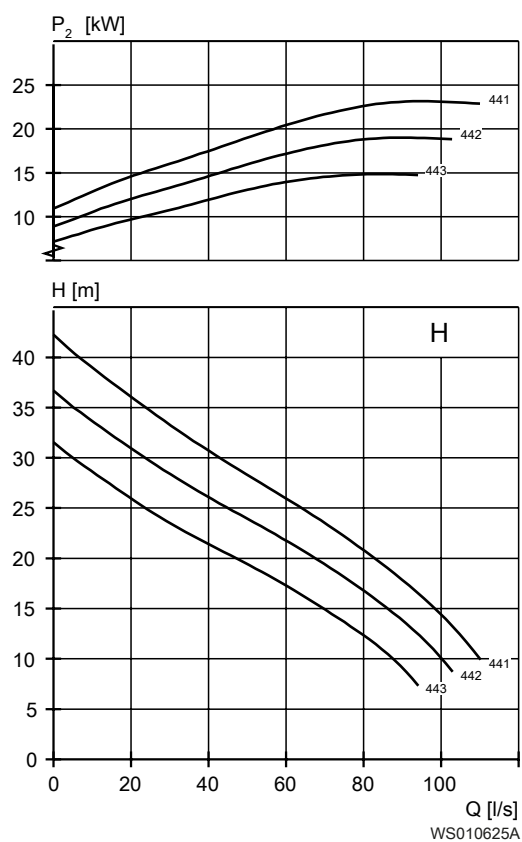


Table 3: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated Current, A	Start current, A	Power Factor, $\cos \varphi$	Installation
24	32	441	1455	45	251	0.88	FS, WW
21	28	442	1460	39	251	0.87	FS, WW
18	24	443	1465	34	251	0.85	FS, WW

- FS= Free-standing
- WW=Wet-well

L

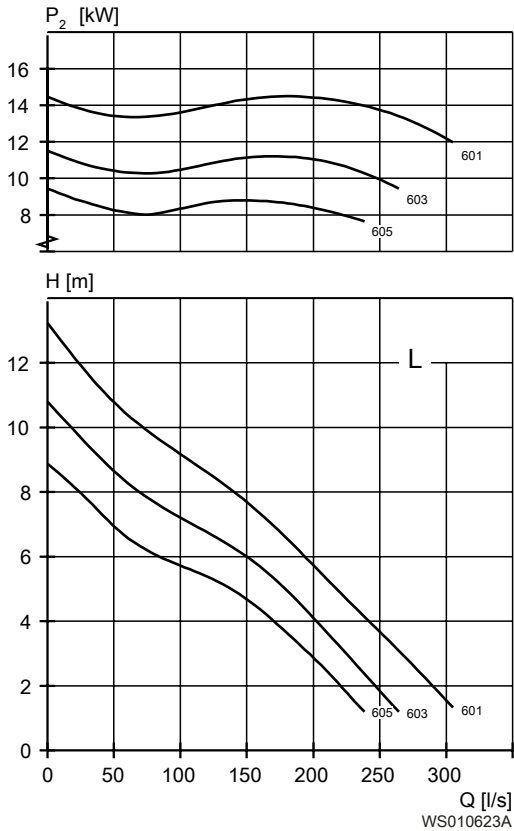


Table 4: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated Current, A	Start current, A	Power Factor, cos $\varphi$	Installation
15	20	601	965	30	166	0.85	FS, WW
12	16.1	603	975	25	166	0.81	FS, WW
10	13.4	605	980	22	166	0.76	FS, WW

- FS= Free-standing
- WW=Wet-well



M

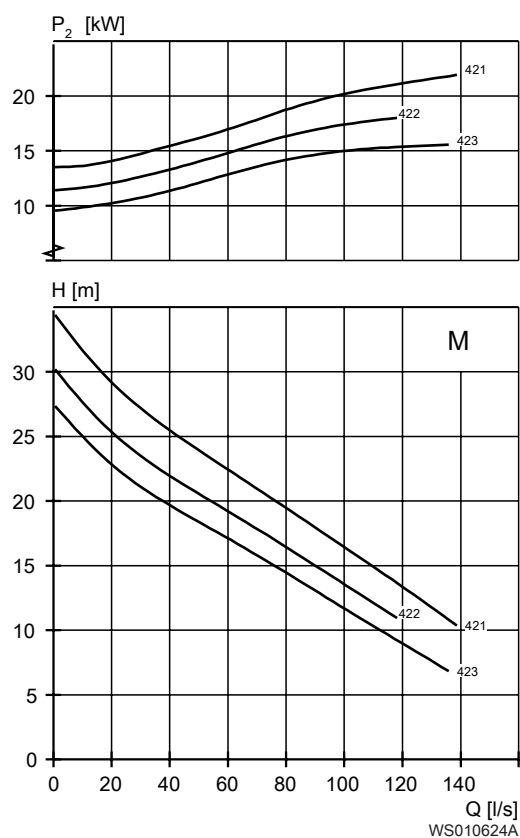


Table 5: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated Current, A	Start current, A	Power Factor, cos $\varphi$	Installation
24	32	421	1455	45	251	0.88	FS, WW
18	24	422	1465	34	251	0.85	FS, WW
16	21	423	1470	31	251	0.83	FS, WW

- FS= Free-standing
- WW=Wet-well

S

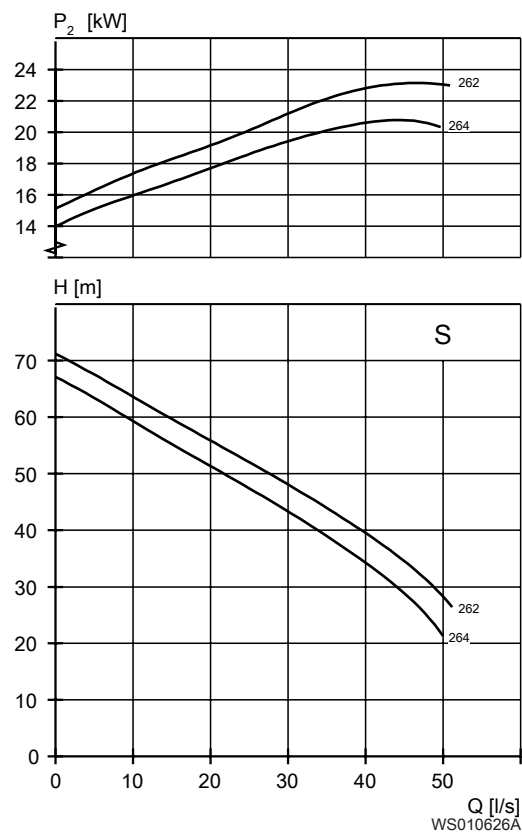


Table 6: 400 V, 50 Hz, 3-phase

Rated power, kW	Rated power, hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated Current, A	Start current, A	Power Factor, cos φ	Installation
24	32	262	2920	42	269	0.93	FS, WW
22	30	264	2925	38	269	0.93	FS, WW

- FS= Free-standing
- WW=Wet-well



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- 2) a leading global water technology company.

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