

Technical  
Specification



Flygt 3085, 50Hz

**FLYGT**  
a xylem brand



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# C-pump

## Product description

### Usage

Submersible pump for pumping clean water, surface water and waste water containing solids or fibred material.

### Denomination

Type	Non explosion proof version	Explosion proof version	Pressure class	Installation types
Standard	3085.183	3085.092	MT – Medium head	F, P, S, T, Z

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.
- 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 <sup>3</sup>

### Motor data

Feature	Description
Motor type	Squirrel-cage induction motor
Frequency	50 Hz
Power supply	1-phase or 3-phase
Starting method	<ul style="list-style-type: none"> <li>• Direct on-line</li> <li>• Star-delta</li> </ul>
Number of starts per hour	Maximum 30
Code compliance	IEC 60034-1
Rated output variation	±10%

Feature	Description
Voltage variation	<ul style="list-style-type: none"> <li>Continuously running: Maximum <math>\pm 5\%</math></li> <li>Intermittent running: Maximum <math>\pm 10\%</math></li> </ul>
Voltage imbalance between phases	Maximum 2%
Insulation class	H (180°C, 356°F)

### Cables

Application	Type	Denomination
Direct-on-line start	SUBCAB® heavy-duty submersible cable	4G1.5 mm <sup>2</sup> 4G1.5+2×1.5 mm <sup>2</sup> 4G2.5 mm <sup>2</sup> 4G2.5+2×1.5 mm <sup>2</sup>
Y/D start	SUBCAB® heavy-duty submersible cable	7G2.5 mm <sup>2</sup>

### Monitoring Equipment

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

### Materials

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, gray	30B	GJL-200
Wear ring	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 1: Mechanical face seals**

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

C-pump

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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

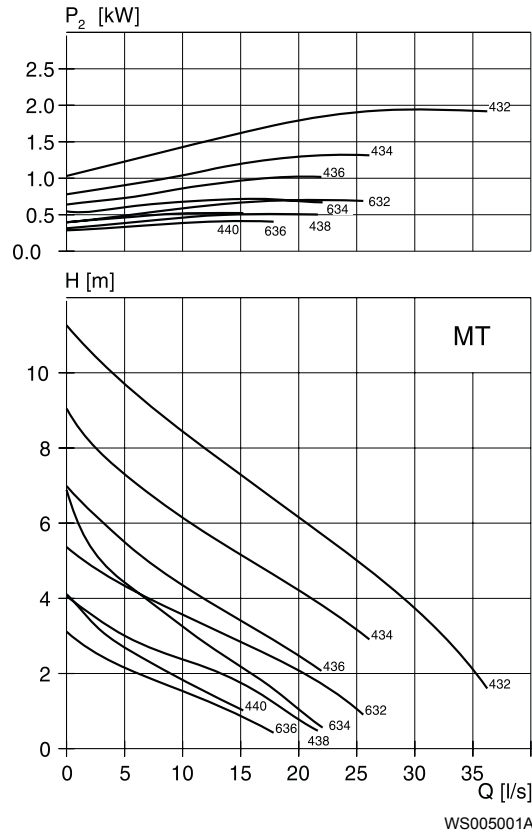
Accessories

Discharge connections, adapters, hose connections, and other mechanical accessories.  
Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

## Motor rating and performance curves

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

MT



**Table 2: 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
0,9	1,2	632	940	2,9	11	0,65	F,P,S
0,9	1,2	634	940	2,9	11	0,65	F,P,S
0,9	1,2	636	940	2,9	11	0,65	F,P,S
1	1,3	436	1455	3,2	23	0,6	T,Z
1	1,3	438	1455	3,2	23	0,6	T,Z
1	1,3	440	1455	3,2	23	0,6	T,Z
1,3	1,7	434	1440	3,6	23	0,68	F,P,S
1,3	1,7	436	1440	3,6	23	0,68	F,P,S
1,3	1,7	438	1440	3,6	23	0,68	F,P,S
1,3	1,7	440	1440	3,6	23	0,68	F,P,S
1,4	1,9	434	1435	3,7	23	0,7	T,Z
1,4	1,9	436	1435	3,7	23	0,7	T,Z
1,4	1,9	438	1435	3,7	23	0,7	T,Z
1,4	1,9	440	1435	3,7	23	0,7	T,Z
2	2,7	432	1400	4,8	23	0,8	F,P,S
2	2,7	434	1400	4,8	23	0,8	F,P,S

C-pump

Rated power kW	Rated power hp	Curve/Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos $\varphi$	Installation
2	2,7	436	1400	4,8	23	0,8	F,P,S
2	2,7	438	1400	4,8	23	0,8	F,P,S
2	2,7	440	1400	4,8	23	0,8	F,P,S

**Table 3: 230 V, 50 Hz, 1-phase**

Rated power kW	Rated power hp	Curve/Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos $\varphi$	Installation
0,95	1,3	436	1410	7,2	28	0,86	F,P,S
0,95	1,3	438	1410	7,2	28	0,86	F,P,S
0,95	1,3	440	1410	7,2	28	0,86	F,P,S
1,5	2	434	1425	9,4	43	0,9	F,P,S
1,5	2	436	1425	9,4	43	0,9	F,P,S
1,5	2	438	1425	9,4	43	0,9	F,P,S
1,5	2	440	1425	9,4	43	0,9	F,P,S



# D-pump

## Product description

### Usage

Submersible pump for pumping liquids containing solids, abrasive media or low volumes at high heads.

### Denomination

Type	Non explosion proof version	Explosion proof version	Pressure class	Installation types
Cast iron	3085.183	3085.092	<ul style="list-style-type: none"> <li>• MT – Medium head</li> <li>• HT – High head</li> </ul>	P, S

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.

### 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 <sup>3</sup>

### Motor data

Feature	Description
Motor type	Squirrel-cage induction motor
Frequency	50 Hz
Power supply	1-phase or 3-phase
Starting method	<ul style="list-style-type: none"> <li>• Direct on-line</li> <li>• Star-delta</li> </ul>
Number of starts per hour	Maximum 30
Code compliance	IEC 60034-1
Rated output variation	±10%
Voltage variation	<ul style="list-style-type: none"> <li>• Continuously running: Maximum ±5%</li> <li>• Intermittent running: Maximum ±10%</li> </ul>
Voltage imbalance between phases	Maximum 2%

D-pump

Feature	Description
Insulation class	H (180°C, 356°F)

Cables

Application	Type	Denomination
Direct-on-line start	SUBCAB® heavy-duty submersible cable	4G1.5 mm <sup>2</sup> 4G1.5+2×1.5 mm <sup>2</sup> 4G2.5 mm <sup>2</sup> 4G2.5+2×1.5 mm <sup>2</sup>
Y/D start	SUBCAB® heavy-duty submersible cable	7G2.5 mm <sup>2</sup>
	NSSHÖU../3E+St	3x2.5+3x2.5/3E+3x1.5 St

Monitoring Equipment

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

Materials

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, 45 HRC	35B	GJL-250
Impeller, alternative 1	Cast iron, gray	35B	GJL-250
Impeller, alternative 2	Cast iron, gray	30B	GJL-200
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		
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 4: Mechanical face seals**

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

- Warm liquid version (non-explosion proof versions)
- Leakage sensor in the stator housing (FLS)
- Leakage sensor in the oil housing (CLS)
- Surface treatment (Epoxy)
- Other cables

**Accessories**

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

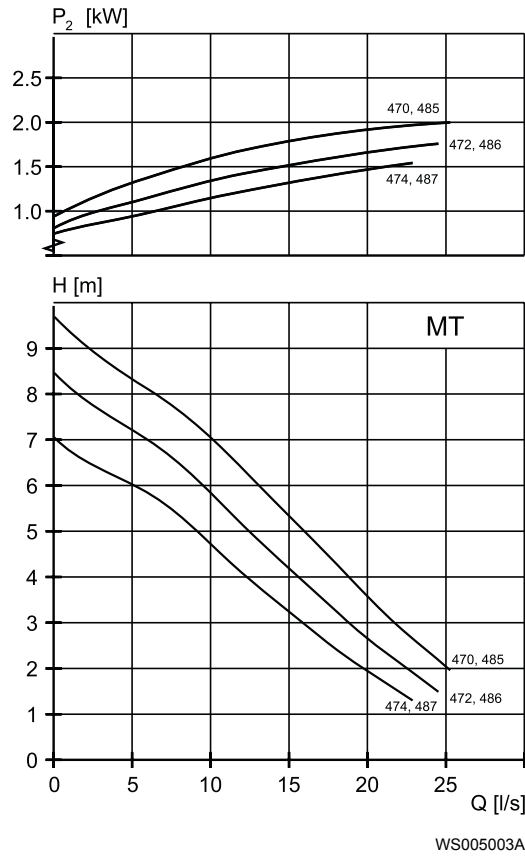
Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

**Motor rating and performance curves**

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

D-pump

MT



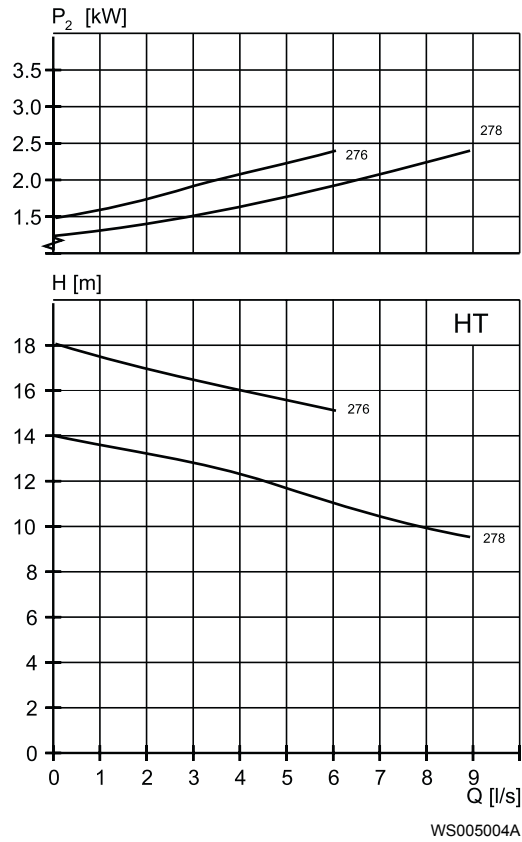
**Table 5: 400 V, 50 Hz, 3-phase**

Rated power kW	Rated power hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
2	2,7	470	1400	4,8	23	0,8	P,S
2	2,7	472	1400	4,8	23	0,8	P,S
2	2,7	474	1400	4,8	23	0,8	P,S
2	2,7	485	1400	4,8	23	0,8	P,S
2	2,7	486	1400	4,8	23	0,8	P,S
2	2,7	487	1400	4,8	23	0,8	P,S

**Table 6: 230 V, 50 Hz, 1-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
1,5	2	472	1425	9,4	43	0,9	P,S
1,5	2	474	1425	9,4	43	0,9	P,S
1,5	2	486	1425	9,4	43	0,9	P,S
1,5	2	487	1425	9,4	43	0,9	P,S

HT



**Table 7: 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, $\cos \varphi$	Installation
2,4	3,2	276	2845	4,8	29	0,9	P,S
2,4	3,2	278	2845	4,8	29	0,9	P,S

F-pump

# F-pump

## Product description

### Usage

Submersible pump for pumping liquid manure, or heavily contaminated sewage and sludge. The impeller is S-shaped and fitted with a cutting device.

### Denomination

Type	Non explosion proof version	Explosion proof version	Pressure class	Installation types
Cast iron	3085.183	3085.092	• LT – Low head	P, S

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.

### 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 <sup>3</sup>

### Motor data

Feature	Description
Motor type	Squirrel-cage induction motor
Frequency	50 Hz
Power supply	1-phase or 3-phase
Starting method	<ul style="list-style-type: none"> <li>• Direct on-line</li> <li>• Star-delta</li> </ul>
Number of starts per hour	Maximum 30
Code compliance	IEC 60034-1
Rated output variation	±10%
Voltage variation	<ul style="list-style-type: none"> <li>• Continuously running: Maximum ±5%</li> <li>• Intermittent running: Maximum ±10%</li> </ul>
Voltage imbalance between phases	Maximum 2%
Insulation class	H (180°C, 356°F)

## Cables

## Cables

Application	Type	Denomination
Direct-on-line start	SUBCAB® heavy-duty submersible cable	4G1.5 mm <sup>2</sup> 4G1.5+2×1.5 mm <sup>2</sup> 4G2.5 mm <sup>2</sup> 4G2.5+2×1.5 mm <sup>2</sup>
Y/D start	SUBCAB® heavy-duty submersible cable	7G2.5 mm <sup>2</sup>
	NSSHÖU../3E+St	3x2.5+3x2.5/3E+3x1.5 St

## Monitoring Equipment

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

## Materials

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	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 8: Mechanical face seals**

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

F-pump

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.

## Motor rating and performance curves

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

LT

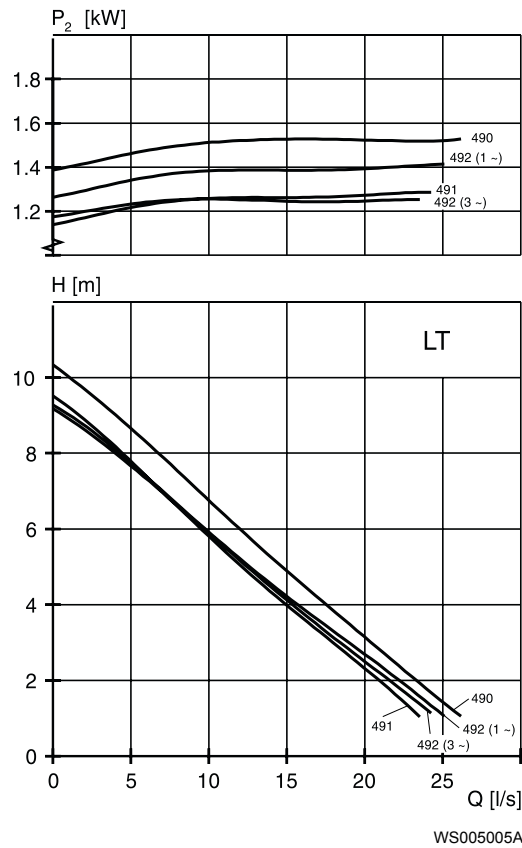


Table 9: 400 V, 50 Hz, 3-phase

Rated power kW	Rated power hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, $\cos \varphi$	Installation
2	2,7	490	1400	4,8	23	0,8	P,S
2	2,7	491	1400	4,8	23	0,8	P,S



Rated power kW	Rated power hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, $\cos \varphi$	Installation
2	2,7	492	1400	4,8	23	0,8	P,S

**Table 10: 230 V, 50 Hz, 1-phase**

Rated power kW	Rated power hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, $\cos \varphi$	Installation
1,5	2	492	1425	9,4	43	0,9	P,S

G-pump

# G-pump

## Product description

### Usage

A submersible pump designed for pumping raw water.

### Denomination

Type	Non explosion proof version	Explosion proof version	Pressure class	Installation types
Standard	3085.183	3085.092	MT – Medium head	F

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.

### 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	1-phase or 3-phase
Starting method	<ul style="list-style-type: none"> <li>• Direct on-line</li> <li>• Star-delta</li> </ul>
Number of starts per hour	Maximum 30
Code compliance	IEC 60034-1
Rated output variation	±10%
Voltage variation	<ul style="list-style-type: none"> <li>• Continuously running: Maximum ±5%</li> <li>• Intermittent running: Maximum ±10%</li> </ul>
Voltage imbalance between phases	Maximum 2%
Insulation class	H (180°C, 356°F)

## Cables

Application	Type	Denomination
Direct-on-line start	SUBCAB® heavy-duty submersible cable	4G1.5 mm <sup>2</sup> 4G1.5+2×1.5 mm <sup>2</sup> 4G2.5 mm <sup>2</sup> 4G2.5+2×1.5 mm <sup>2</sup>
Y/D start	SUBCAB® heavy-duty submersible cable	7G2.5 mm <sup>2</sup>
	NSSHÖU../3E+St	3x2.5+3x2.5/3E+3x1.5 St

## Monitoring Equipment

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

## Materials

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
Strainer bottom	Stainless steel	AISI 304	1.4301
Cutter plate	Steel, 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 11: Mechanical face seals**

Alternative	Inner seal	Outer seal
1	Carbon/ Aluminum oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
2	Carbon/ Aluminum oxide	Silicon carbide/ Silicon carbide
3	Corrosion resistant cemented carbide/ 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 oil housing (CLS)
- Leakage sensor in the stator housing (FLS)

G-pump

- Surface treatment (Epoxy)
- Other cables

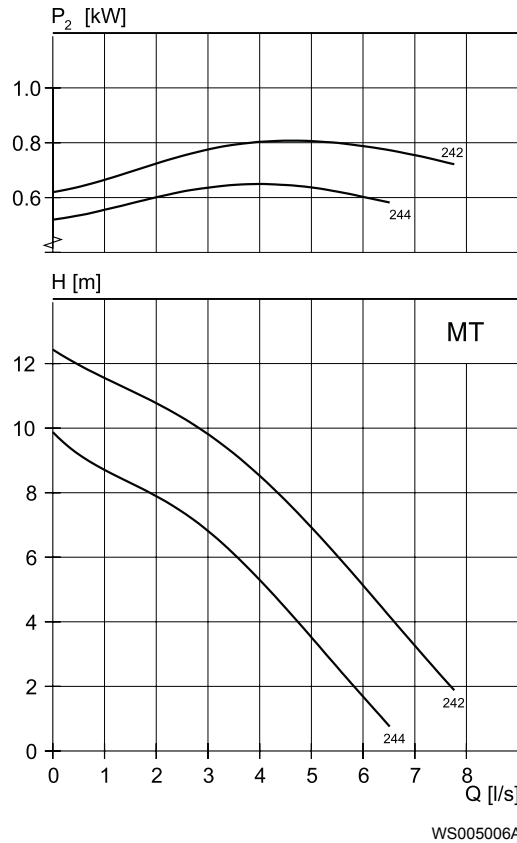
Accessories

Discharge connections, adapters, hose connections, and other mechanical accessories.  
Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

## Motor rating and performance curves

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

MT



**Table 12: 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, $\cos \varphi$	Installation
0,77	1	242	2775	1,7	7,5	0,9	F
0,77	1	244	2775	1,7	7,5	0,9	F

**Table 13: 230 V, 50 Hz, 1-phase**

Rated power kW	Rated power hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, $\cos \varphi$	Installation
0,77	1	242	2785	3	13	0,9	F
0,77	1	244	2785	3	13	0,9	F

# M-pump

## Product description

### Usage

Submersible pump for pumping waste water 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
Cast iron	3085.172	3085.891	HT – High head	F, H, 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.
- H** Semi permanent, wet well quick connection suspended arrangement, incorporating integral non-return valve.
- 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 <sup>3</sup>

### Motor data

Feature	Description
Motor type	Squirrel-cage induction motor
Frequency	50 Hz
Power supply	1-phase or 3-phase
Starting method	<ul style="list-style-type: none"> <li>• Direct on-line</li> <li>• Star-delta</li> </ul>
Number of starts per hour	Maximum 30
Code compliance	IEC 60034-1
Rated output variation	±10%
Voltage variation	<ul style="list-style-type: none"> <li>• Continuously running: Maximum ±5%</li> <li>• Intermittent running: Maximum ±10%</li> </ul>
Voltage imbalance between phases	Maximum 2%

M-pump

Feature	Description
Insulation class	H (180°C, 356°F)

Cables

Application	Type	Denomination
Direct-on-line start	SUBCAB® heavy-duty submersible cable	4G1.5 mm <sup>2</sup> 4G1.5+2×1.5 mm <sup>2</sup> 4G2.5 mm <sup>2</sup> 4G2.5+2×1.5 mm <sup>2</sup>
Y/D start	SUBCAB® heavy-duty submersible cable	7G2.5 mm <sup>2</sup>
	NSSHÖU../3E+St	3x2.5+3x2.5/3E+3x1.5 St

Monitoring Equipment

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

Materials

Denomination	Material	ASTM	EN
Major castings	Cast iron, gray	35B	GJL-250
Pump housing	Cast iron, gray	35B	GJL-250
Impeller	Cast iron, gray	30B	GJL-200
Cutter wheel	Cast iron, Hard-Iron™	A 532 IIIA	GJN-HB555(XCR23)
Cutter plate	Steel, 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 14: Mechanical face seals**

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

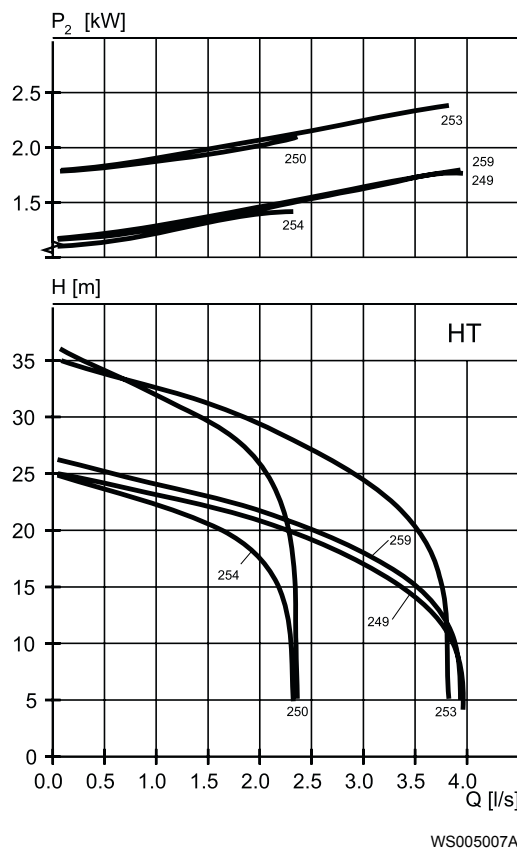
Accessories

Discharge connections, adapters, hose connections, and other mechanical accessories.  
Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

## Motor rating and performance curves

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

HT



**Table 15: 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
2,4	3,2	250	2845	4,8	29	0,9	F,H,P
2,4	3,2	253	2845	4,8	29	0,9	F,H,P
2,4	3,2	254	2845	4,8	29	0,9	F,H,P
2,4	3,2	259	2845	4,8	29	0,9	F,H,P

M-pump

Rated power kW	Rated power hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, $\cos \varphi$	Installation
1,8	2,4	254	2890	3,6	29	0,87	F,H,P
1,8	2,4	259	2890	3,6	29	0,87	F,H,P

**Table 16: 230 V, 50 Hz, 1-phase**

Rated power kW	Rated power hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, $\cos \varphi$	Installation
1,9	2,5	249	2915	12	61	0,87	F,H,P
1,9	2,5	254	2915	12	61	0,87	F,H,P



# N-pump

## Product description

### Usage

The submersible pump is designed for pumping clean water, surface water, and wastewater containing solids or long-fibred material.

### Denomination

Type	Non explosion proof version	Explosion proof version	Pressure class	Installation types
Adaptive	3085.160	3085.190	<ul style="list-style-type: none"> <li>• MT – Medium head</li> <li>• SH – Super head</li> </ul>	F, P, S, T, Z
Cast iron Curve 460, 461, 463, and 253-256	3085.183	3085.092		
Hard-Iron™ Curve 464, 465, 466	3085.183	3085.092	<ul style="list-style-type: none"> <li>• MT – Medium head</li> </ul>	

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.
- 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 <sup>3</sup>

### Motor data

Feature	Description
Motor type	Squirrel-cage induction motor
Frequency	50 Hz
Power supply	1-phase or 3-phase

N-pump

Feature	Description
Starting method	<ul style="list-style-type: none"> <li>• Direct on-line</li> <li>• Star-delta</li> </ul>
Number of starts per hour	Maximum 30
Code compliance	IEC 60034-1
Rated output variation	±10%
Voltage variation	<ul style="list-style-type: none"> <li>• Continuously running: Maximum ±5%</li> <li>• Intermittent running: Maximum ±10%</li> </ul>
Voltage imbalance between phases	Maximum 2%
Insulation class	H (180°C, 356°F)

Cables

Application	Type	Denomination
Direct-on-line start	SUBCAB® heavy-duty submersible cable	4G1.5 mm <sup>2</sup> 4G1.5+2×1.5 mm <sup>2</sup> 4G2.5 mm <sup>2</sup> 4G2.5+2×1.5 mm <sup>2</sup>
Y/D start	SUBCAB® heavy-duty submersible cable	7G2.5 mm <sup>2</sup>

Monitoring Equipment

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

Materials

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)
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	-	-

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

**Table 17: Mechanical face seals**

Alternative	Inner seal	Outer seal
1	Carbon/ Aluminum oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
2	Carbon/ Aluminum oxide	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.

**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.

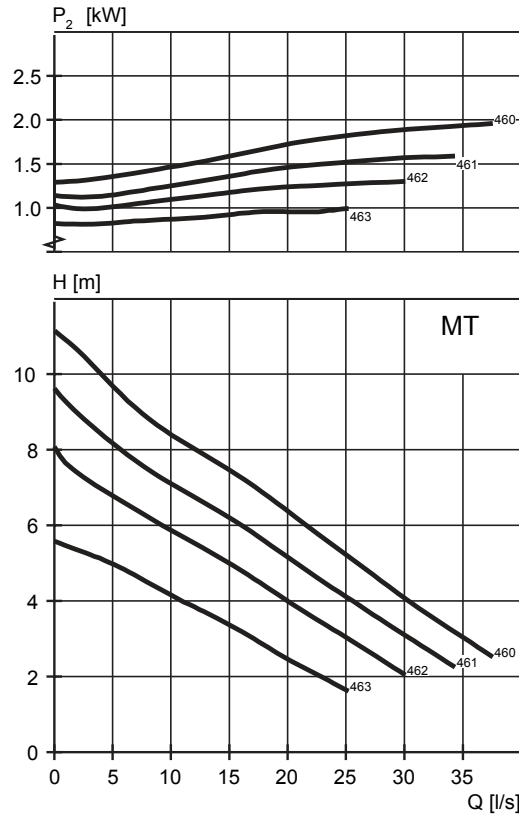
Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

**Motor rating and performance curves 3085.160/.190**

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

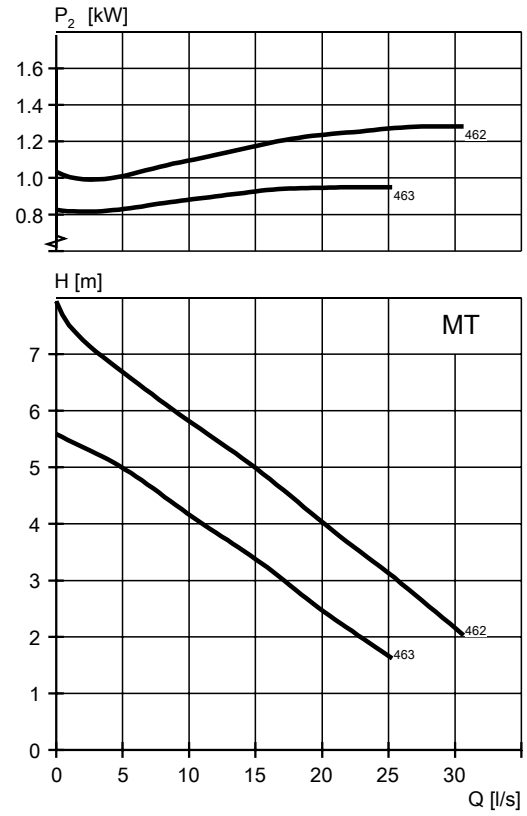
N-pump

MT



WS005022A

Figure 1: 3-phase



WS004116A

Figure 2: 1-phase

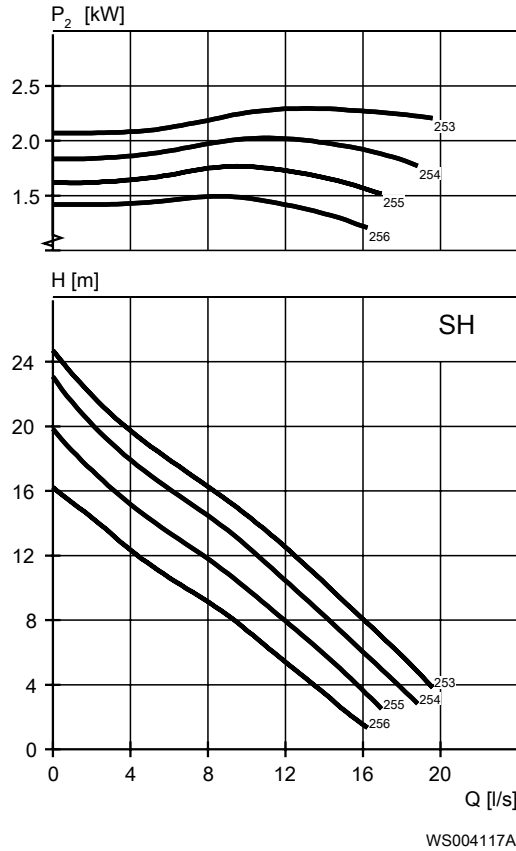
**Table 18: 400 V, 50 Hz, 3-phase**

Rated power kW	Rated power hp	Curve/Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, cos φ	Installation
1	1,3	463	1455	3,2	23	0,6	T,Z
1,3	1,7	462	1440	3,6	23	0,68	F,P,S
1,3	1,7	463	1440	3,6	23	0,68	F,P,S
1,4	1,9	462	1435	3,7	23	0,7	T,Z
1,4	1,9	463	1435	3,7	23	0,7	T,Z
2	2,7	460	1400	4,8	23	0,8	F,P,S
2	2,7	461	1400	4,8	23	0,8	F,P,S
2	2,7	462	1400	4,8	23	0,8	F,P,S
2	2,7	463	1400	4,8	23	0,8	F,P,S

**Table 19: 230 V, 50 Hz, 1-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
1.5	2.0	462	1425	9.4	43	0.9	F,P,S
1.5	2.0	463	1425	9.4	43	0.9	F,P,S

SH



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

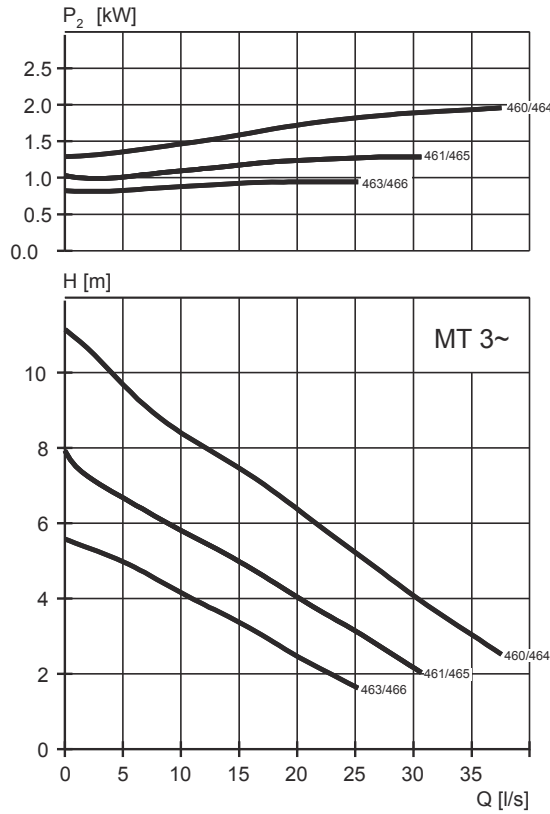
Rated power kW	Rated power hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, $\cos \varphi$	Installation
2,4	3,2	253	2845	4,8	29	0,91	P,S
2,4	3,2	254	2845	4,8	29	0,91	P,S
2,4	3,2	255	2845	4,8	29	0,91	P,S
2,4	3,2	256	2845	4,8	29	0,91	P,S
2,4	3,2	253	2870	4,9	34	0,87	P,S
2,4	3,2	254	2870	4,9	34	0,87	P,S
2,4	3,2	255	2870	4,9	34	0,87	P,S
2,4	3,2	256	2870	4,9	34	0,87	P,S

## Motor rating and performance curves 3085.183/.092

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

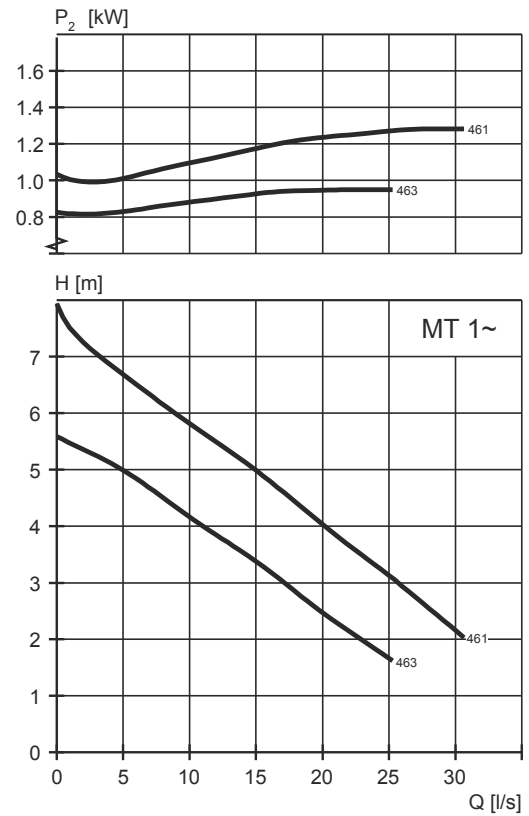
N-pump

MT



WS005008A

Figure 3: 3-phase



WS005009A

Figure 4: 1-phase

Table 21: 400 V, 50 Hz, 3-phase

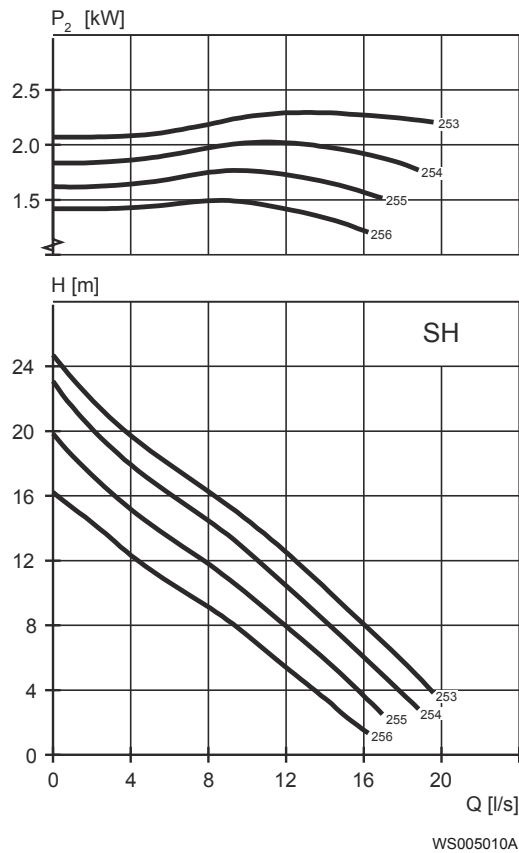
Rated power kW	Rated power hp	Curve/ Impeller No	Revolutions per minute, rpm	Rated current, A	Starting current, A	Power factor, $\cos \varphi$	Installation
1	1,3	463	1455	3,2	23	0,6	T,Z
1	1,3	466	1455	3,2	23	0,6	T,Z
1,3	1,7	461	1440	3,6	23	0,68	F,P,S
1,3	1,7	463	1440	3,6	23	0,68	F,P,S
1,3	1,7	465	1440	3,6	23	0,68	F,P,S
1,3	1,7	466	1440	3,6	23	0,68	F,P,S
1,4	1,9	461	1435	3,7	23	0,7	T,Z
1,4	1,9	463	1435	3,7	23	0,7	T,Z
1,4	1,9	465	1435	3,7	23	0,7	T,Z
1,4	1,9	466	1435	3,7	23	0,7	T,Z
2	2,7	460	1415	5,2	27	0,73	F,P,S
2	2,7	461	1415	5,2	27	0,73	F,P,S
2	2,7	463	1415	5,2	27	0,73	F,P,S
2	2,7	464	1415	5,2	27	0,73	F,P,S
2	2,7	465	1415	5,2	27	0,73	F,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
2	2,7	466	1415	5,2	27	0,73	F,P,S

**Table 22: 230 V, 50 Hz, 1-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
1,5	2	461	1425	9,4	43	0,9	P,S
1,5	2	463	1425	9,4	43	0,9	P,S

SH



**Table 23: 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
2,4	3,2	253	2845	4,8	29	0,9	P,S
2,4	3,2	254	2845	4,8	29	0,9	P,S
2,4	3,2	255	2845	4,8	29	0,9	P,S
2,4	3,2	256	2845	4,8	29	0,9	P,S

# Dimensions and Weight

## Drawings, C-pump

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

All dimensions are in mm.

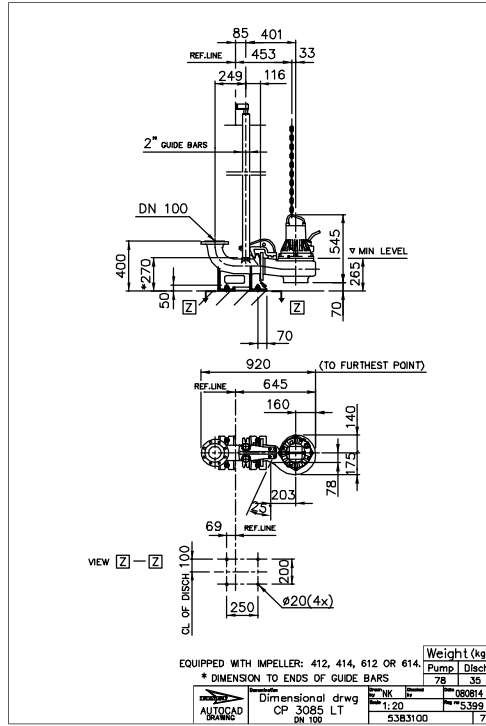


Figure 5: LT, P-installation

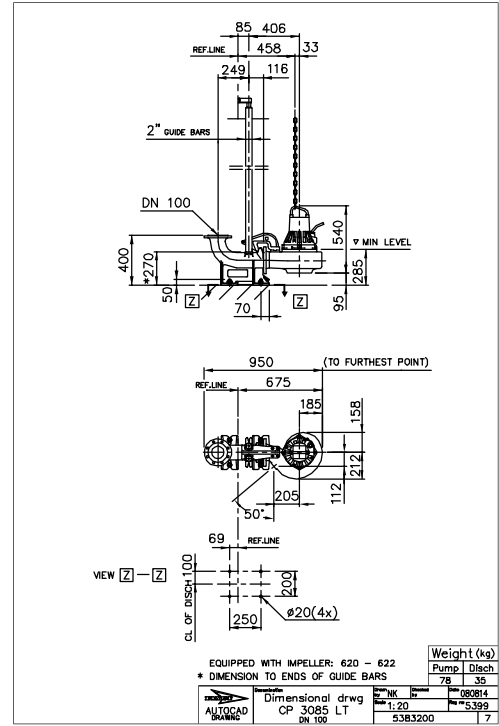


Figure 6: LT, P-installation



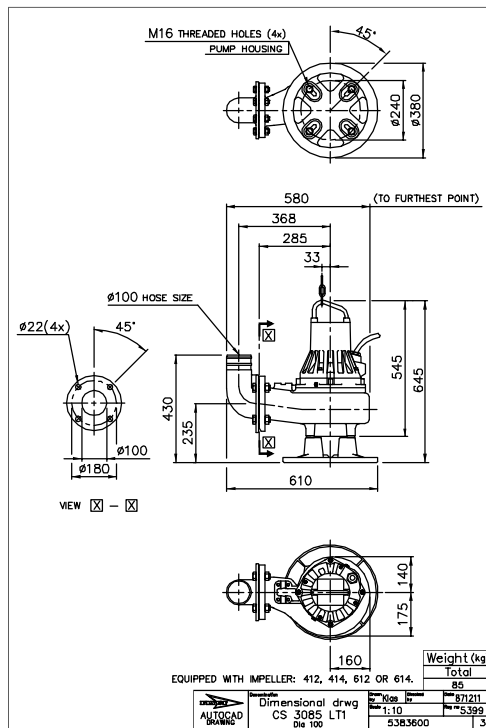


Figure 7: LT, S-installation

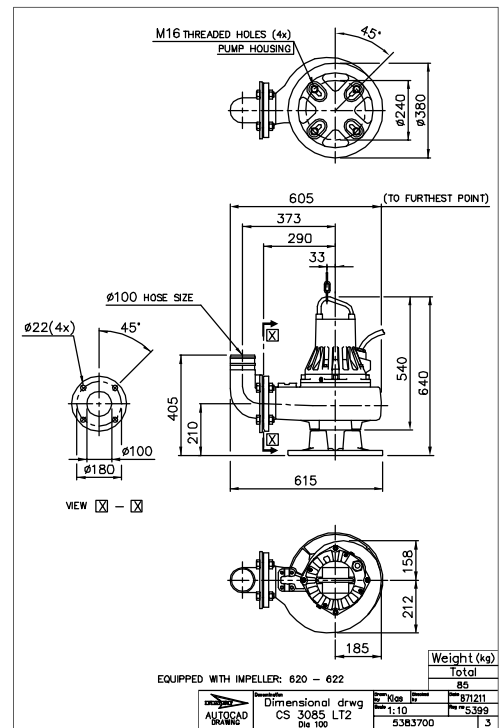


Figure 8: LT, S-installation

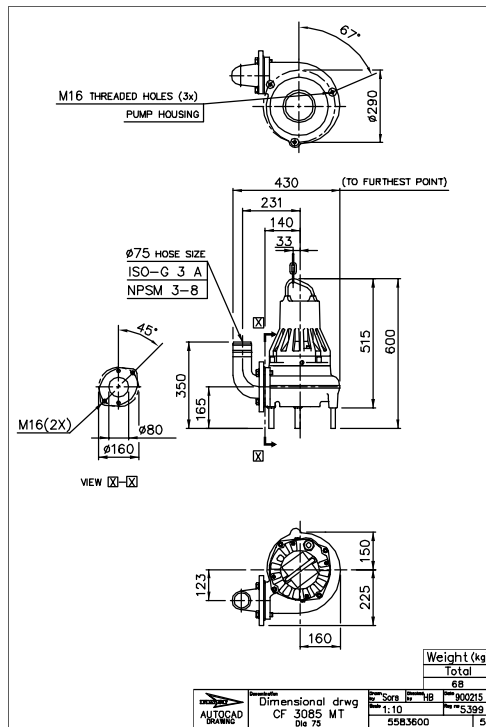


Figure 9: MT, F-installation

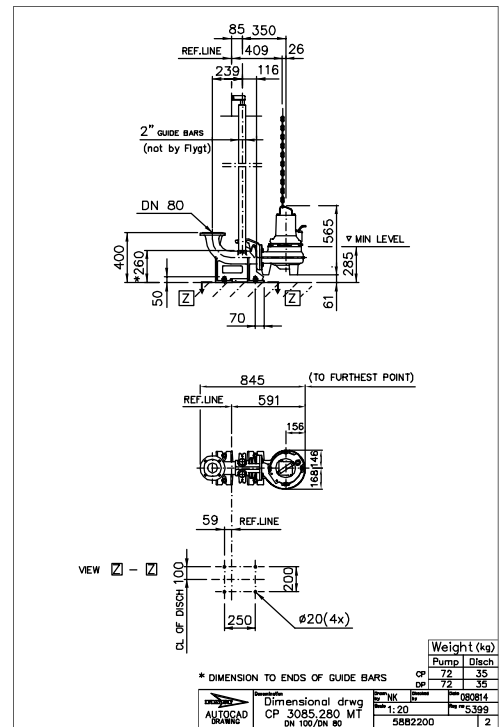


Figure 10: MT, P-installation

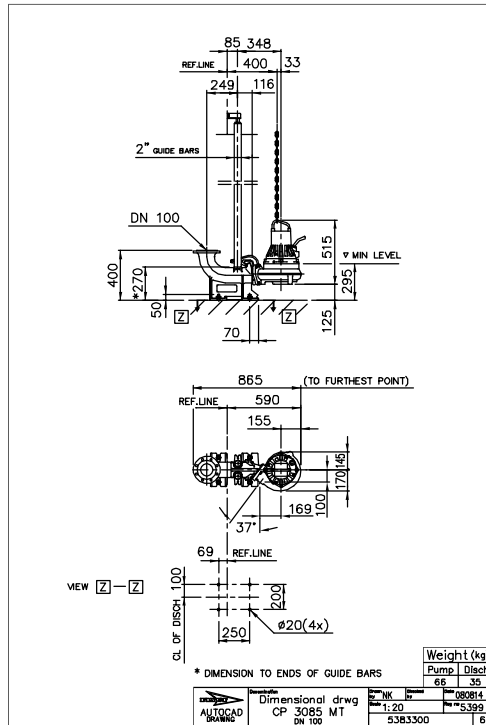


Figure 11: MT, P-installation

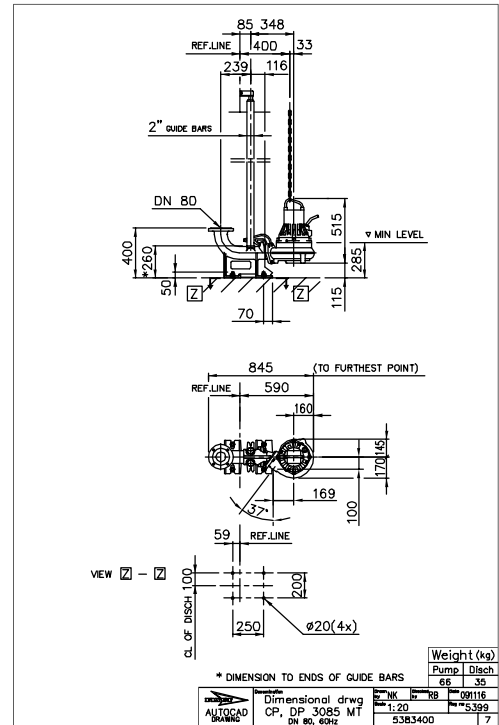


Figure 12: MT, P-installation

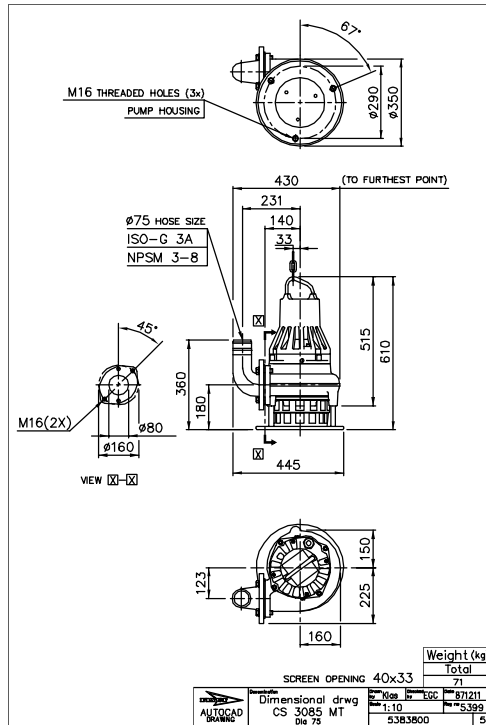


Figure 13: MT, S-installation

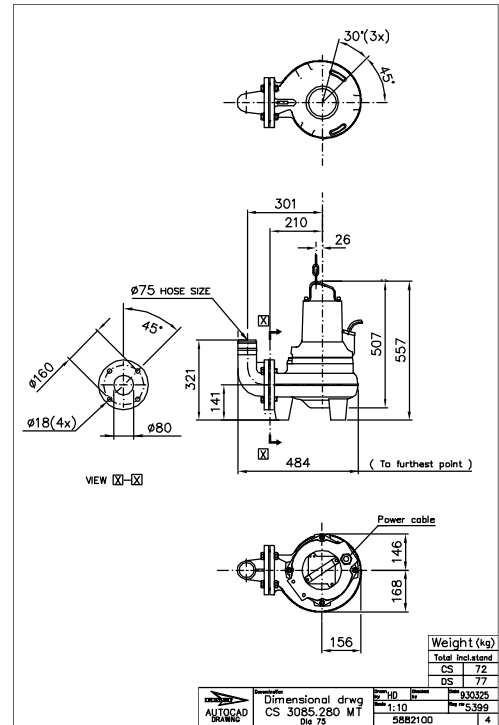


Figure 14: MT, S-installation

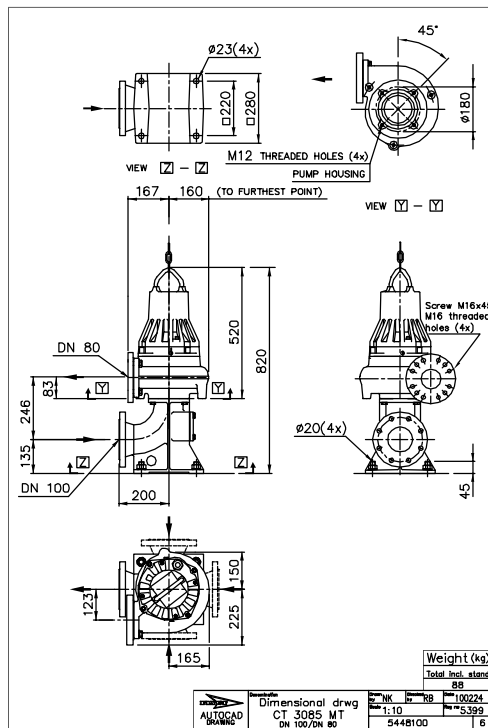


Figure 15: MT, T-installation

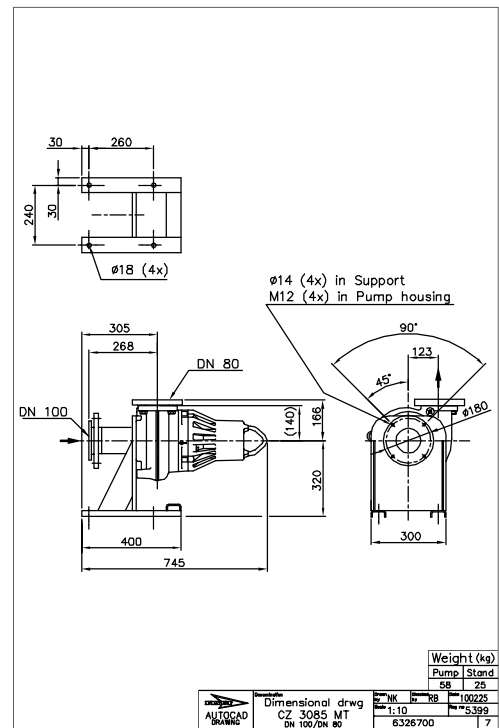


Figure 16: MT, Z-installation

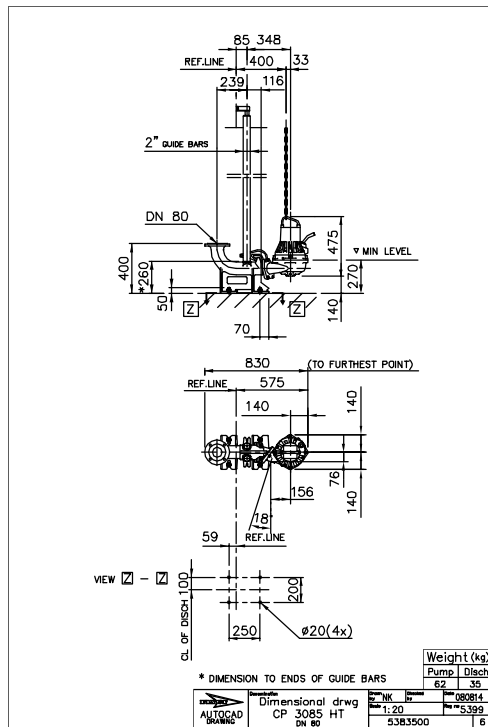


Figure 17: HT, P-installation

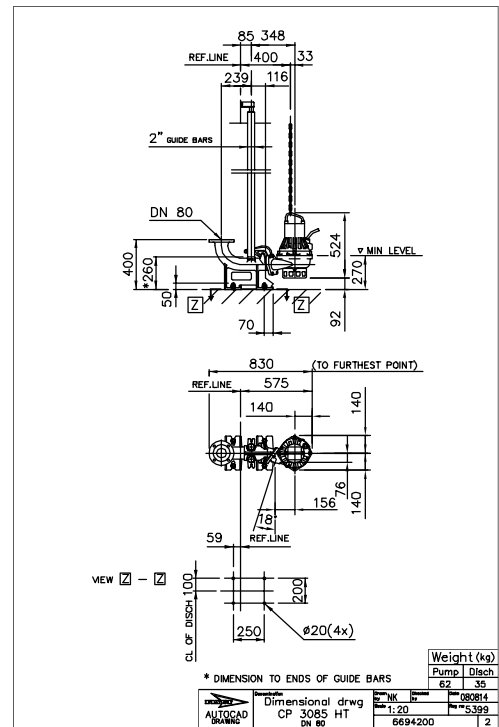


Figure 18: HT, P-installation

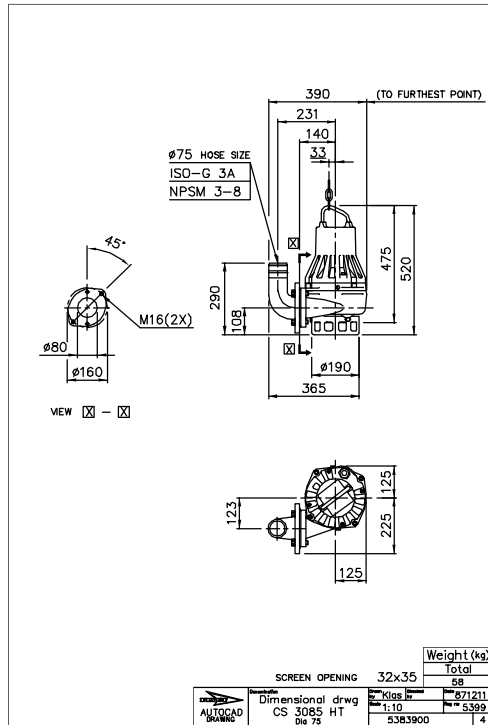


Figure 19: HT, S-installation

## Drawings, D-pump

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

All dimensions are in mm.

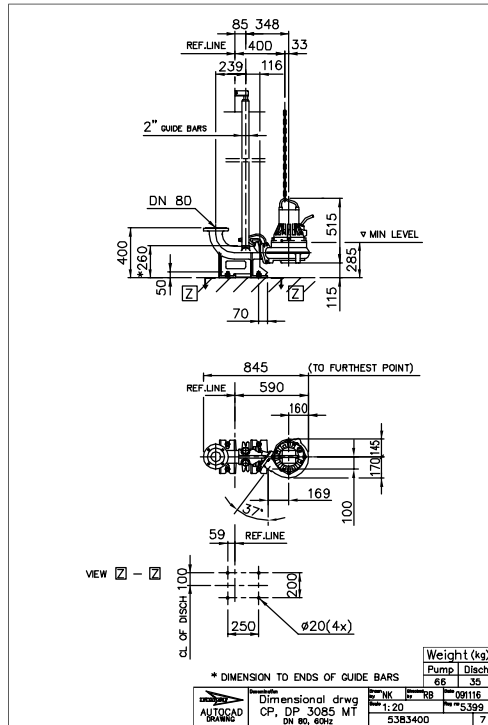


Figure 20: MT, P-installation

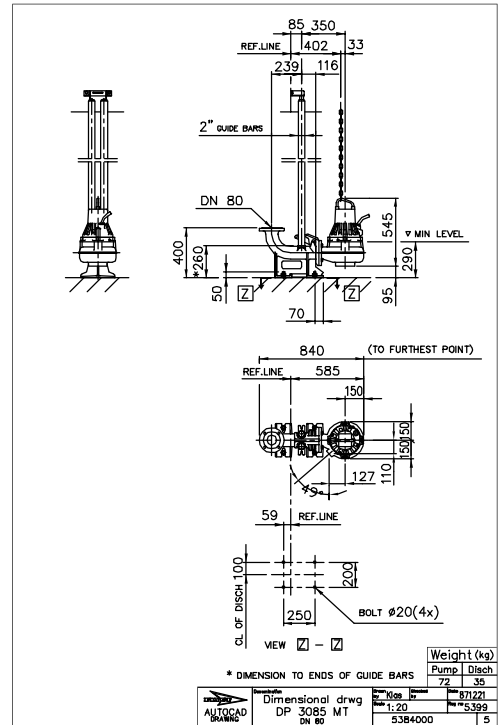


Figure 21: MT, P-installation

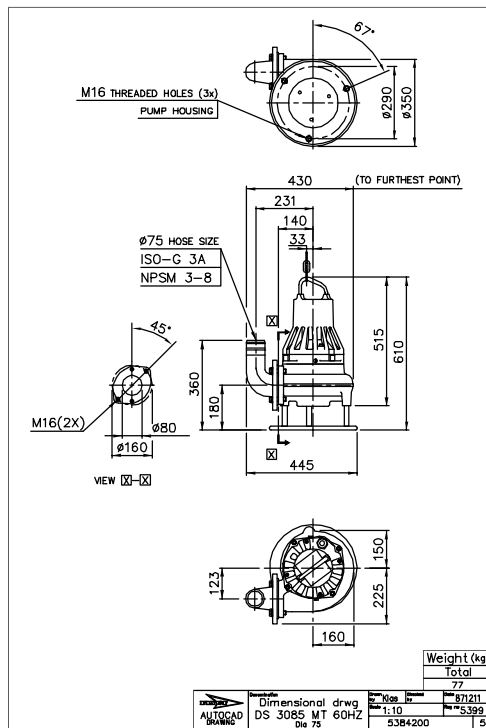


Figure 22: MT, S-installation

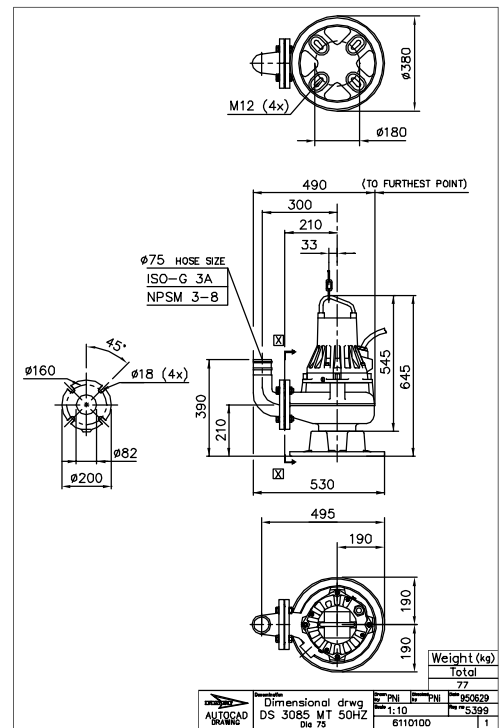


Figure 23: MT, S-installation

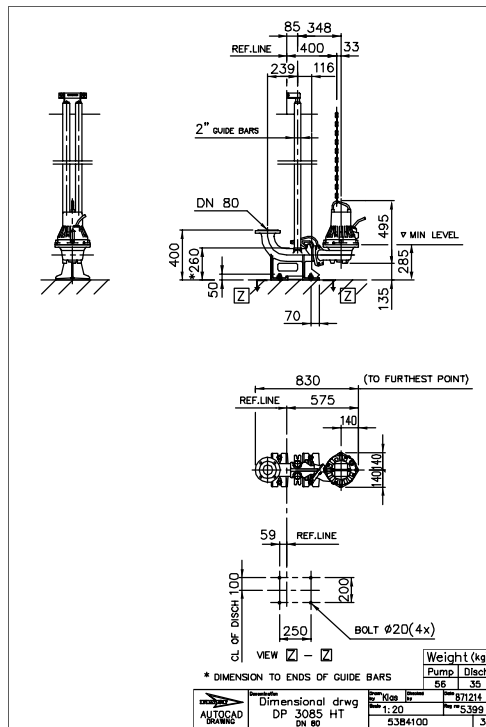


Figure 24: HT, P-installation

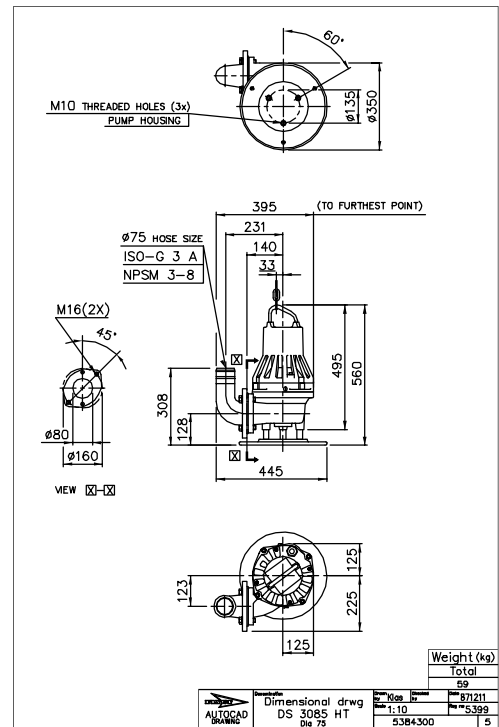


Figure 25: HT, S-installation

## Drawings, F-pump

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

All dimensions are in mm.

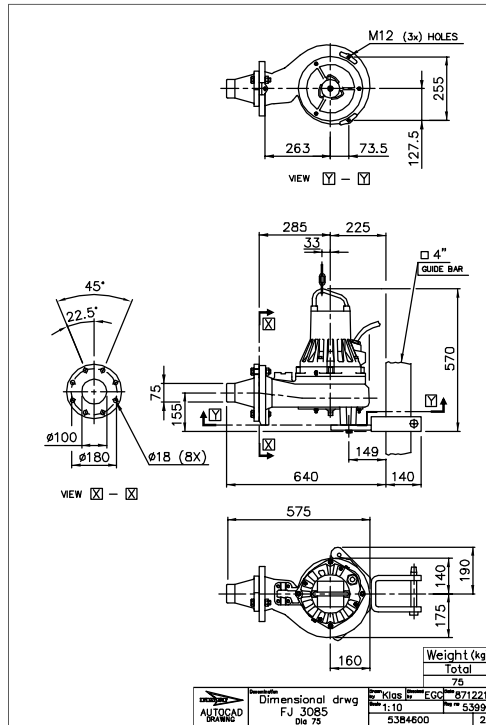


Figure 26: J-installation

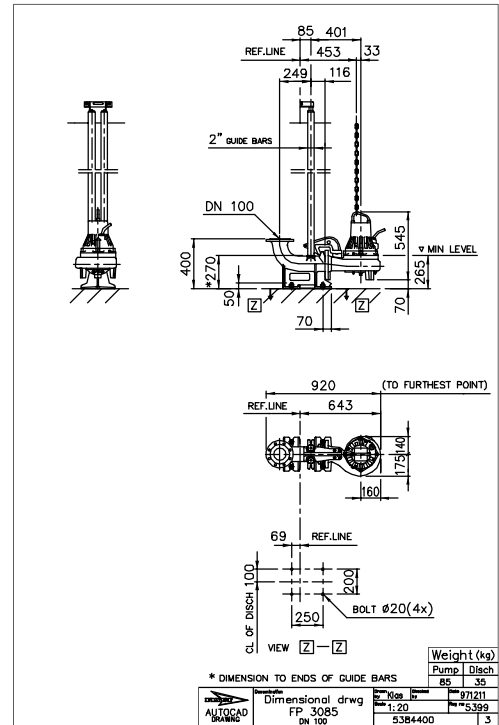


Figure 27: P-installation

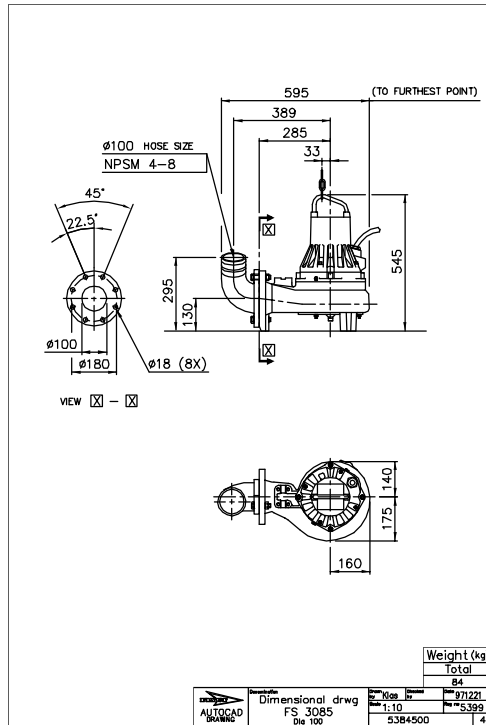


Figure 28: S-installation

## Drawings, G-pump

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

All dimensions are in mm.

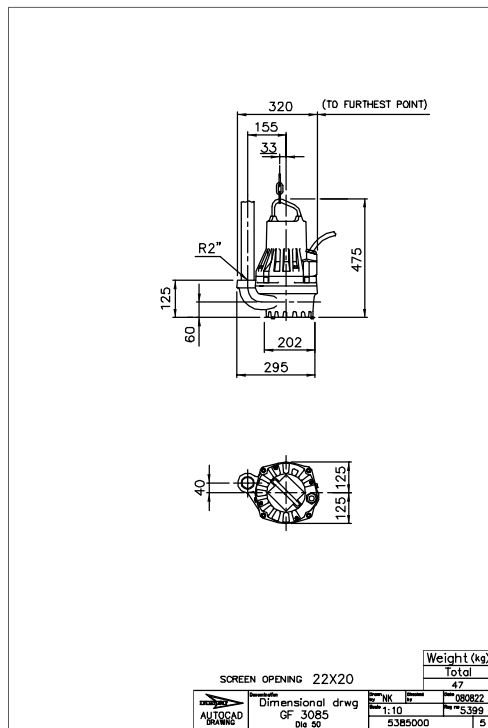


Figure 29: F-installation

## Drawings, M-pump

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

All dimensions are in mm.

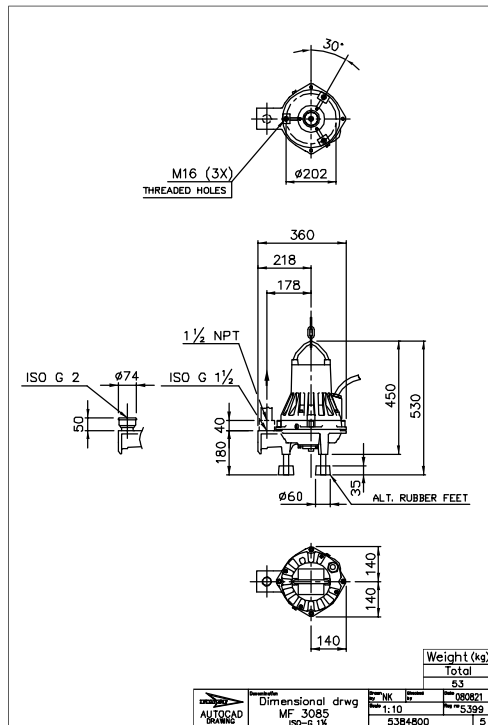


Figure 30: F-installation

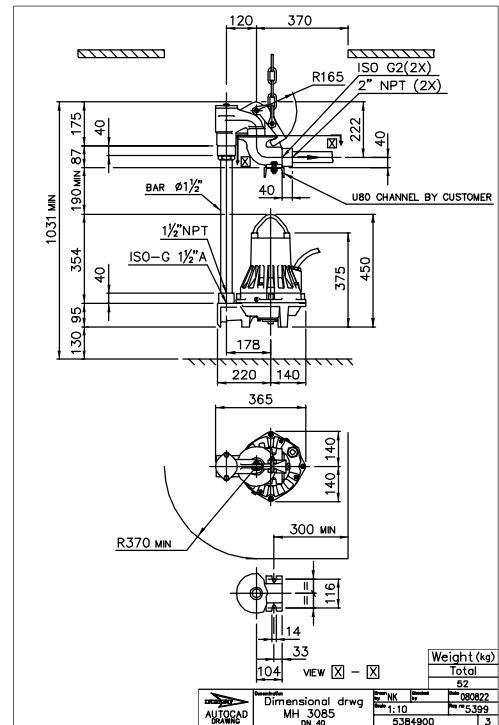


Figure 31: H-installation

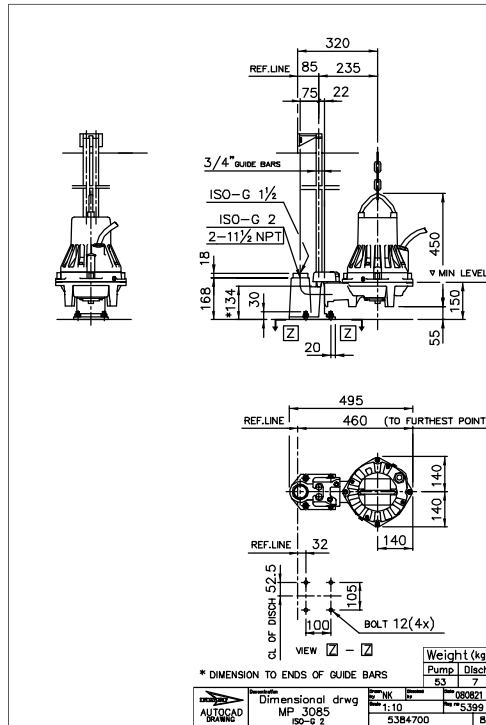


Figure 32: P-installation

## Drawings, N-pump

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

All dimensions are in mm.

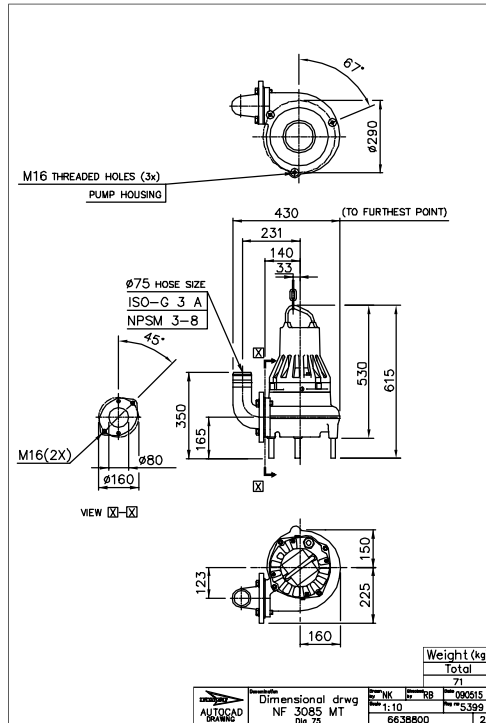


Figure 33: MT, F-installation

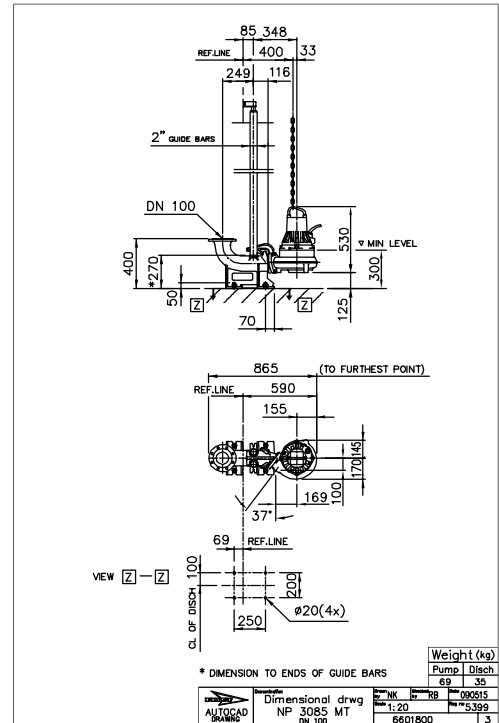


Figure 34: MT, P-installation





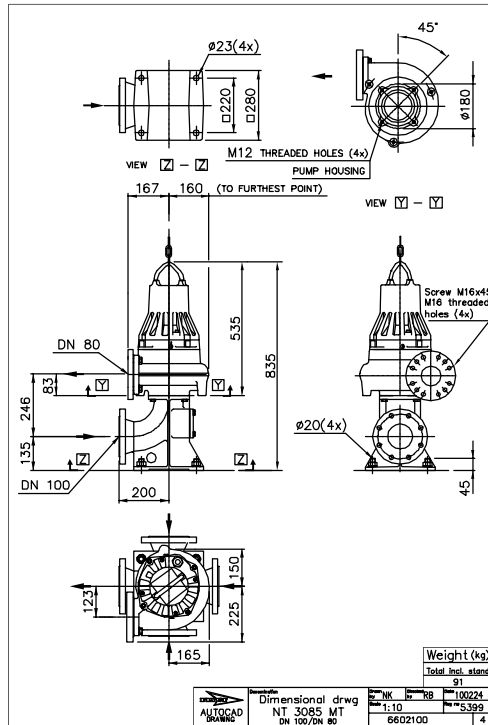


Figure 39: MT, T-installation

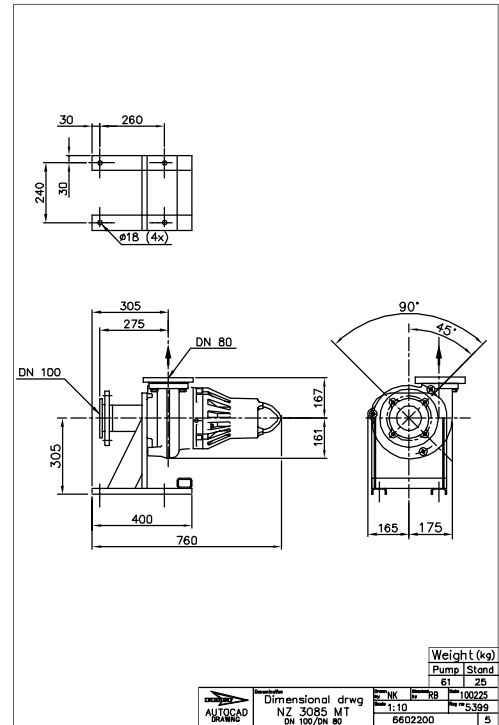


Figure 40: MT, Z-installation

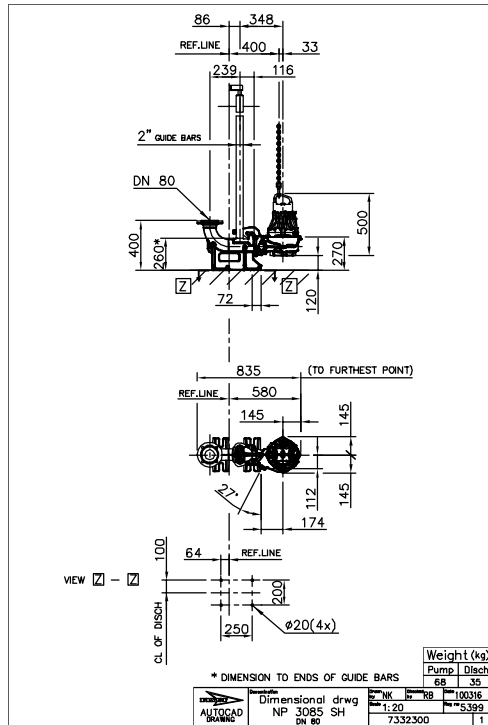


Figure 41: SH, P-installation

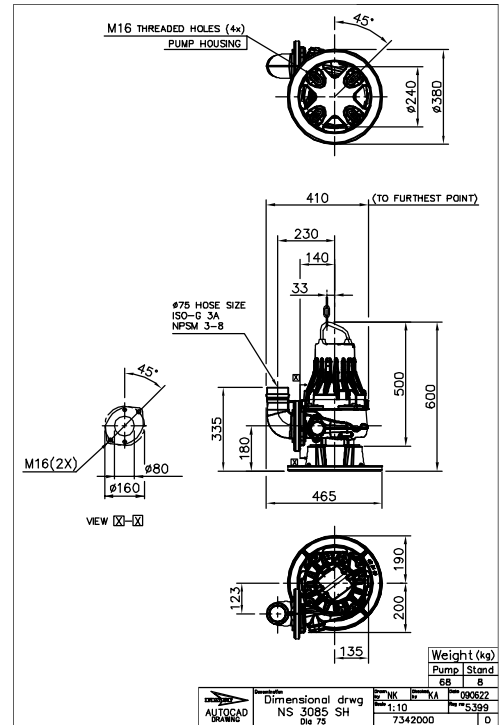


Figure 42: SH, S-installation

