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Flygt 3057, 50Hz

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# C-pump

## Product description

### Usage

Submersible pump for pumping waste water and sludge. It can also be used for pumping ground water and other liquids containing solids.

### Denomination

Type	Non explosion proof version	Explosion proof version	Pressure class	Installation types
Standard	3057.181	3057.091	HT – High head	F, P, S

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.

### 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 15
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>

Feature	Description
Voltage imbalance between phases	Maximum 2%
Insulation class	F (+155°C)

**Cables**

Application	Type	Denomination
Direct-on-line start	SUBCAB® heavy-duty submersible cable	4G1.5 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> 7G2.5+2×1.5 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	30B	GJL-200
Impeller	Stainless steel	AISI 304	1,4301
Suction cover	Stainless steel	AISI 304	1,4301
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
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	Aluminum oxide/ Corrosion resistant cemented carbide
2	Carbon/ Aluminum oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented 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)
- Zinc anodes
- Other cables

**Accessories**

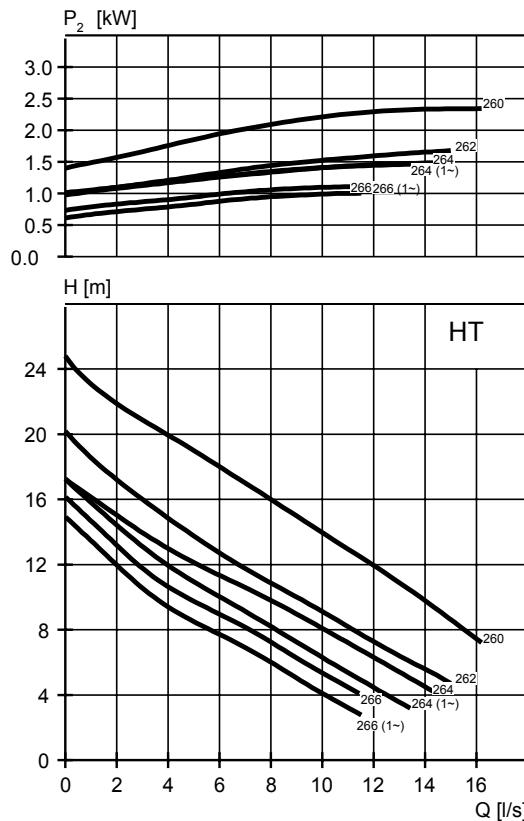
Discharge connections, adapters, hose connections, and other mechanical accessories.

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



WS005181A

**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	Impeller thoughtlet, mm	Installation
1.7	2.3	262	2695	3.8	17	.87	48	F,P,S
1.7	2.3	264	2695	3.8	17	.87	48	F,P,S
1.7	2.3	266	2695	3.8	17	.87	48	F,P,S
2.4	3.2	260	2775	5.1	27	.86	48	F,P,S
2.4	3.2	262	2775	5.1	27	.86	48	F,P,S
2.4	3.2	264	2775	5.1	27	.86	48	F,P,S
2.4	3.2	266	2775	5.1	27	.86	48	F,P,S
2.4	3.2	266	2775	5.1	27	.86	48	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 φ	Impeller thoughtlet, mm	Installation
1.5	2	264	2695	9.4	27	1	48	F,P,S
1.5	2	268	2695	9.4	27	1	48	F,P,S

# D-pump

## Product description

### Usage

Submersible pump for pumping waste water and sludge. It can also be used for pumping ground water and other liquids containing solids. A special version, ARV (Abrasion Resistant Version), is available for pumping media containing light or medium concentrations of abrasive solids.

### Denomination

Type	Non explosion proof version	Explosion proof version	Pressure class	Installation types
Standard	3057.181	3057.091	MT – Medium head	F, P, S

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.

### 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 15
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>

Feature	Description
Voltage imbalance between phases	Maximum 2%
Insulation class	F (+155°C)

**Cables**

Application	Type	Denomination
Direct-on-line start	SUBCAB® heavy-duty submersible cable	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> 7G2.5+2×1.5 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, alternative 1	Cast iron, gray	30B	GJL-200
Pump housing, alternative 2	Cast iron, nodular		GJS-700-2
Impeller, alternative 1	Cast iron, gray	30B	GJL-200
Impeller, alternative 2	Cast iron, nodular		GJS-700-2
Suction cover	Stainless steel	AISI 304	1,4301
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
O-rings	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	Aluminum oxide/ Corrosion resistant cemented carbide
2	Carbon/ Aluminum oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented 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)
- 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

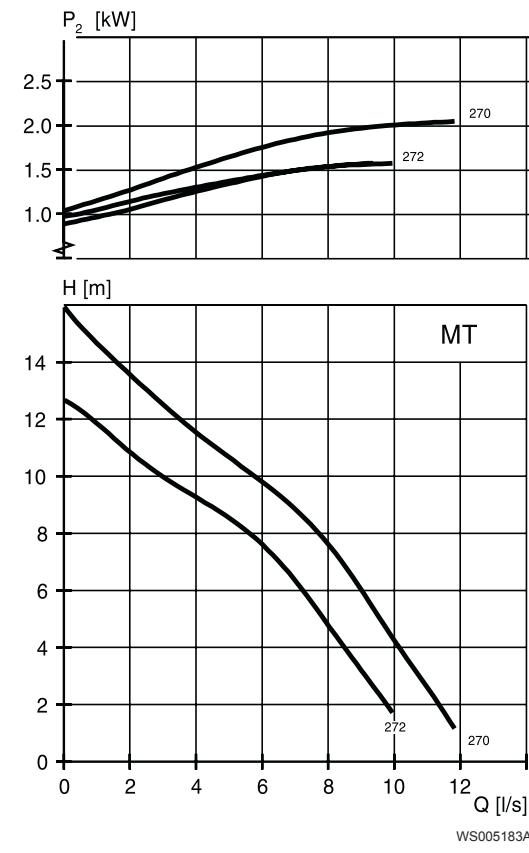
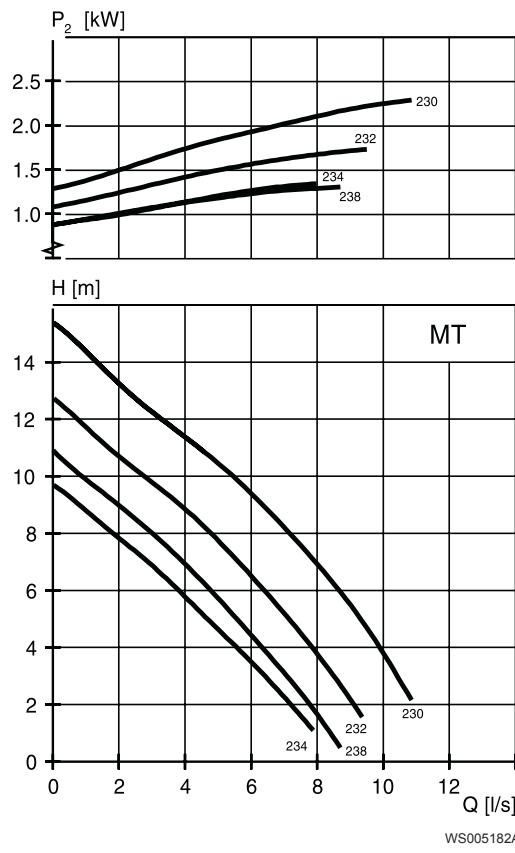


Figure 1: Abrasion Resistant Version

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	Impeller thoughlet, mm	Installation
1.7	2.3	232	2695	3.8	17	.87	48	F,P,S
1.7	2.3	234	2695	3.8	17	.87	48	F,P,S
2.4	3.2	230	2775	5.1	27	.86	48	F,P,S
2.4	3.2	232	2775	5.1	27	.86	48	F,P,S
2.4	3.2	234	2775	5.1	27	.86	48	F,P,S
2.4	3.2	270	2775	5.1	27	.86	24	F,S
2.4	3.2	272	2775	5.1	27	.86	24	F,S

# Dimensions and Weight

## 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.

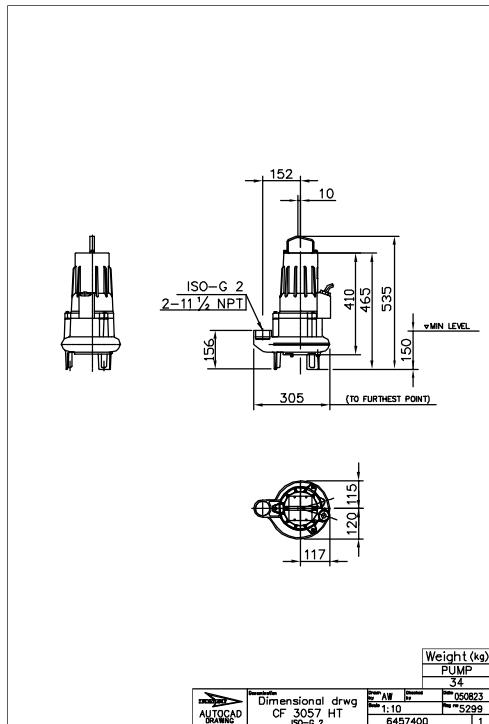


Figure 2: HT, F-installation

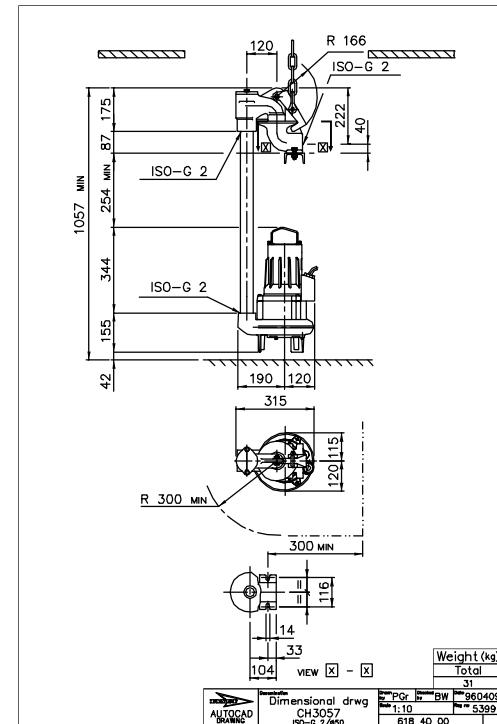


Figure 3: HT, H-installation

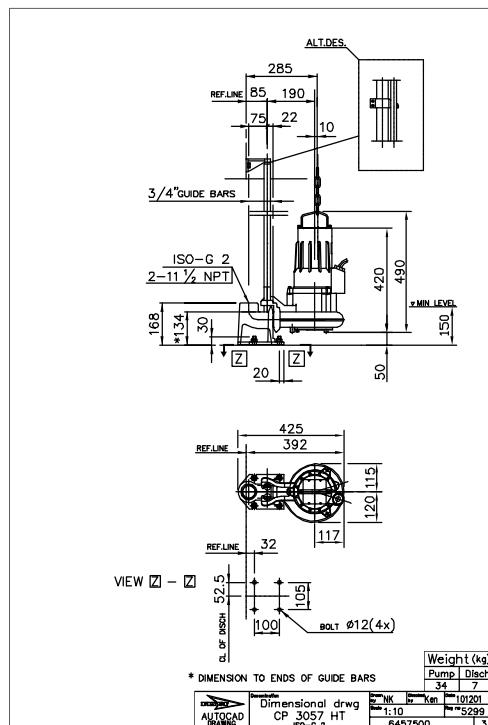


Figure 4: HT, P-installation

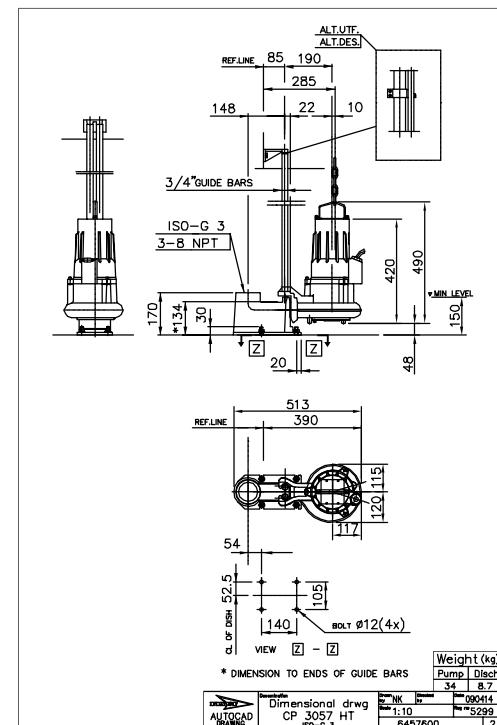


Figure 5: HT, P-installation

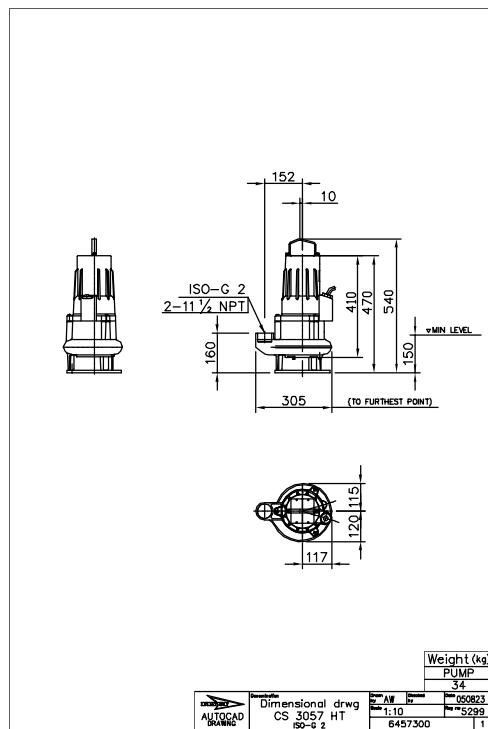


Figure 6: HT, S-installation

## 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.

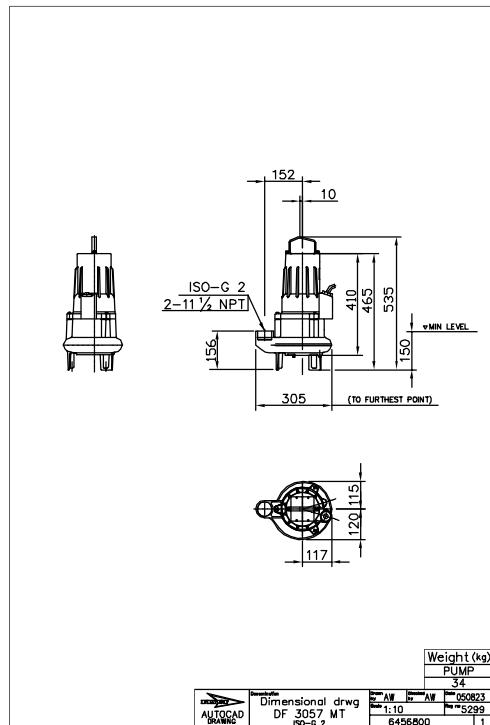


Figure 7: MT, F-installation

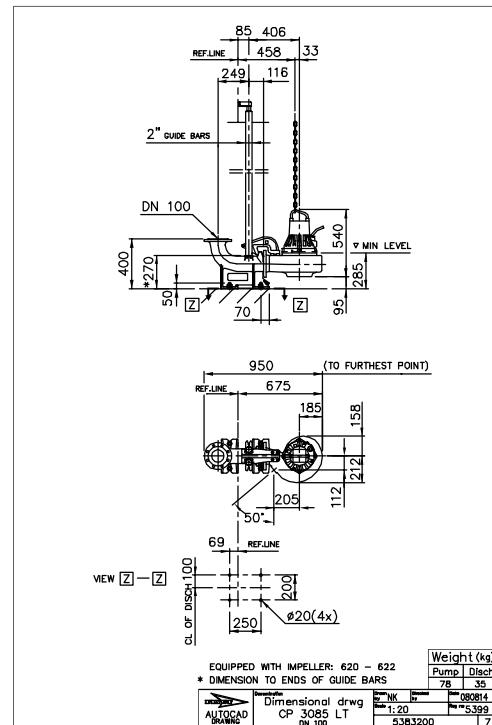


Figure 8: MT, F-installation

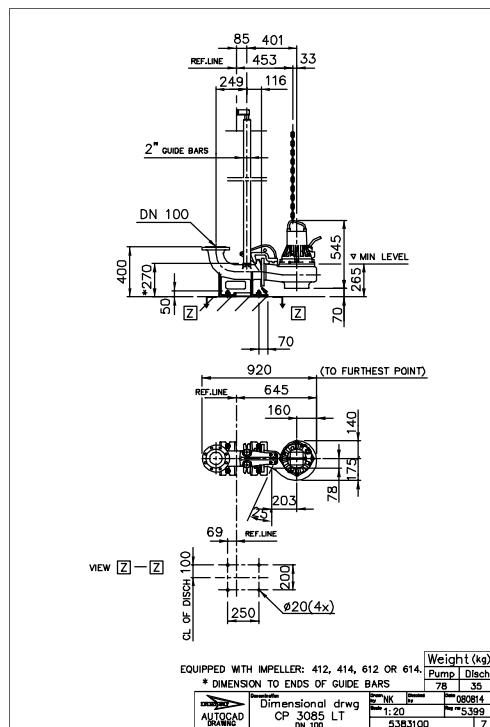


Figure 9: MT, F-installation

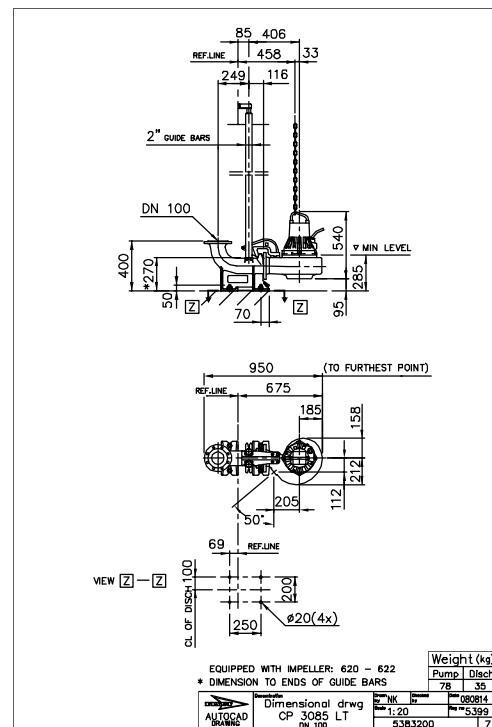


Figure 10: MT, H-installation

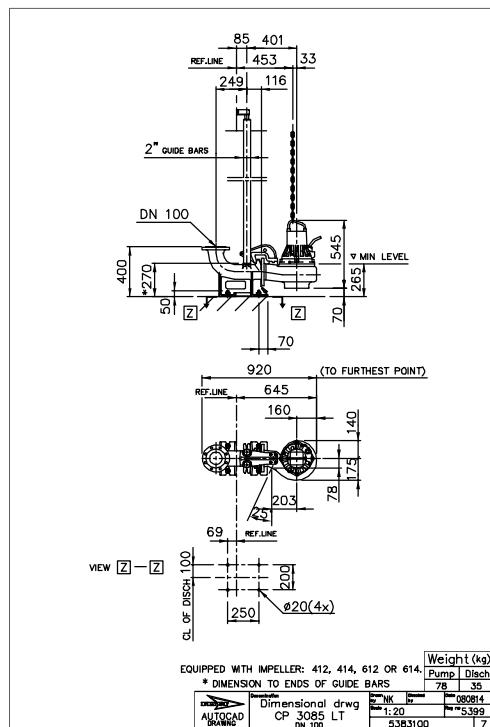


Figure 11: MT, P-installation

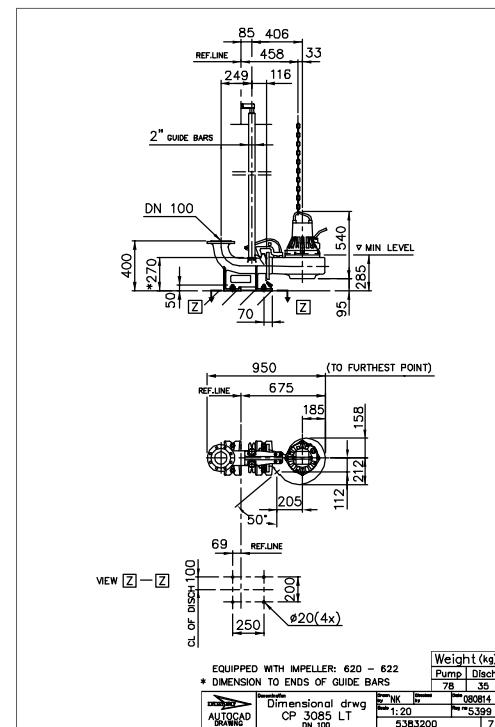


Figure 12: MT, S-installation

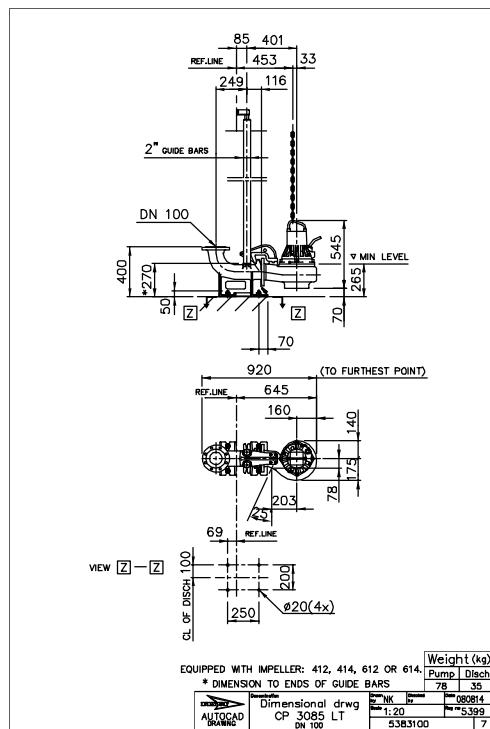


Figure 13: MT, S-installation





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- 2) A leading global water technology company

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