



Flygt D 8053, 50 Hz

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Technical Specification

Product description

Usage

A submersible pump for corrosive wastewater containing solids or fibered material.

Denomination

| Type | Non-explosion proof version | Explosion proof version | Pressure class | Installation types |
|-----------------|-----------------------------|-------------------------|---|--------------------|
| Stainless steel | 8053.280 | | <ul style="list-style-type: none"> • LT – Low head • MT – Medium head • HT – High 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) |
| Depth of immersion | Maximum 20 m (65 ft) |
| pH of the pumped liquid | 2 - 14 |
| Liquid density | Maximum 1100 kg/m ³ |

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

Cables

| Application | Type |
|----------------------|--|
| Direct-on-line start | <p>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 mm² with unscreened control cores.</p> <p>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 mm² with unscreened control cores.</p> <p>Flygt HCR (Heat and Chemical Resistant) cable - a heavy duty 7 cores motor power cable. Conductor insulation rating of 150°C, which allows for increased current. Made of FEP and ETFE and resistant to chemicals and solvents, high temperature, and mechanical stress. Used up to 90°C water temperature and where high chemical resistance is required.</p> |
| Y/D start | <p>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 mm² with unscreened control cores.</p> <p>Flygt HCR (Heat and Chemical Resistant) cable - a heavy duty 7 cores motor power cable. Conductor insulation rating of 150°C, which allows for increased current. Made of FEP and ETFE and resistant to chemicals and solvents, high temperature, and mechanical stress. Used up to 90°C water temperature and where high chemical resistance is required.</p> |

Monitoring equipment

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

Materials

Table 1: Major parts except mechanical seals

| Denomination | Material | ASTM | EN |
|-------------------------|----------------------------------|----------------------------|----------------------|
| Major castings | Stainless steel | ASTM A 743 CF-8M | 1.4408,1.4412,1.4581 |
| Pump housing | Stainless steel | ASTM A 743 CF-8M | 1.4408,1.4412,1.4581 |
| Impeller | Stainless steel | ASTM A 743 CF-8M | 1.4408,1.4412,1.4581 |
| Lifting handle/schackle | Stainless steel | ASTM/AISI 316L | 1.4404,1.4432, ... |
| Shaft | Stainless steel | ASTM/AISI 316L | 1.4404,1.4432, ... |
| Screws and nuts | Stainless steel, A4 | AISI 316L, 316, 316Ti, etc | 1.4401,1.4404, ... |
| O-rings | Fluorinated rubber (FPM) 70 IRHD | - | - |

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

Table 2: Mechanical seals

| Inner seal | Outer seal |
|------------------------|----------------------------------|
| Carbon/ Aluminum oxide | Silicon carbide/ Silicon carbide |

Surface treatment

None.

Options

- Other cables
- Flexible protective sheeting for the cables
- Zinc anodes, Surface treatment (Epoxy)
- Water detector in motor and oil housing

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

LT

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

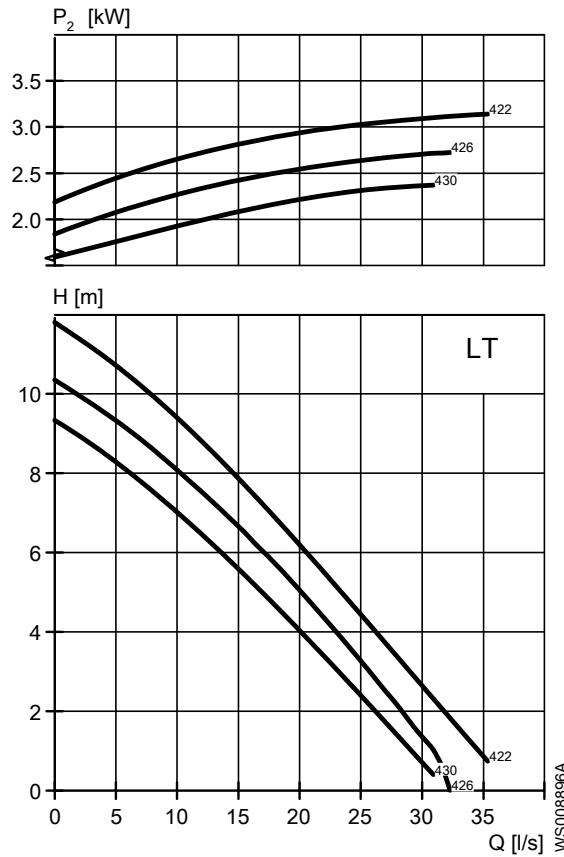


Table 3: 400 V, 50 Hz, 3-phase

| Rated power, kW | Rated power, hp | Curve/ Impeller No | Revolutions per minute, rpm | Rated current, A | Starting current, A | Power factor, cos φ | Installation |
|-----------------|-----------------|--------------------|-----------------------------|------------------|---------------------|---------------------|--------------|
| 3.5 | 4.7 | 422 | 1385 | 8.0 | 36 | 0.82 | P,S |
| 3.5 | 4.7 | 426 | 1385 | 8.0 | 36 | 0.82 | P,S |
| 3.5 | 4.7 | 430 | 1385 | 8.0 | 36 | 0.82 | P,S |

MT

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

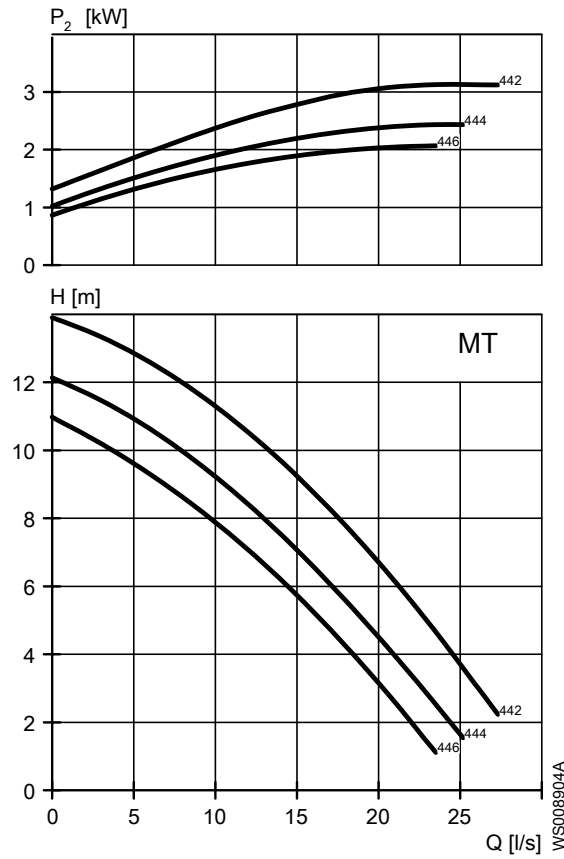


Table 4: 400 V, 50 Hz, 3-phase

| Rated power, kW | Rated power, hp | Curve/ Impeller No | Revolutions per minute, rpm | Rated current, A | Starting current, A | Power factor, $\cos \varphi$ | Installation |
|-----------------|-----------------|--------------------|-----------------------------|------------------|---------------------|------------------------------|--------------|
| 3.5 | 4.7 | 442 | 1385 | 8.0 | 36 | 0.82 | P,S |
| 3.5 | 4.7 | 444 | 1385 | 8.0 | 36 | 0.82 | P,S |
| 3.5 | 4.7 | 446 | 1385 | 8.0 | 36 | 0.82 | P,S |

HT

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

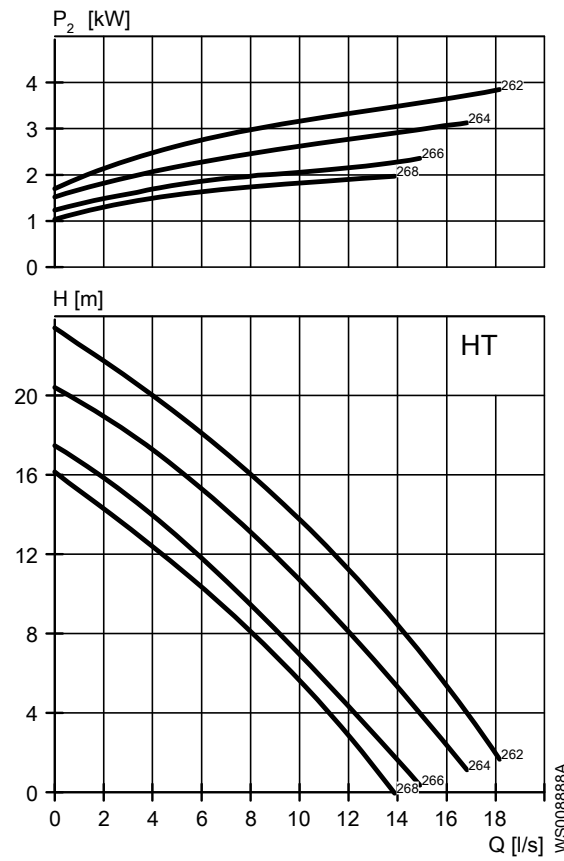


Table 5: 400 V, 50 Hz, 3-phase

| Rated power, kW | Rated power, hp | Curve/ Impeller No | Revolutions per minute, rpm | Rated current, A | Starting current, A | Power factor, cos φ | Installation |
|-----------------|-----------------|--------------------|-----------------------------|------------------|---------------------|-----------------------------|--------------|
| 4.0 | 5.4 | 262 | 2835 | 8.6 | 56 | 0.83 | P,S |
| 4.0 | 5.4 | 264 | 2835 | 8.6 | 56 | 0.83 | P,S |
| 4.0 | 5.4 | 266 | 2835 | 8.6 | 56 | 0.83 | P,S |
| 4.0 | 5.4 | 268 | 2835 | 8.6 | 56 | 0.83 | P,S |

Dimensions and Weight

LT

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

All dimensions are in mm.

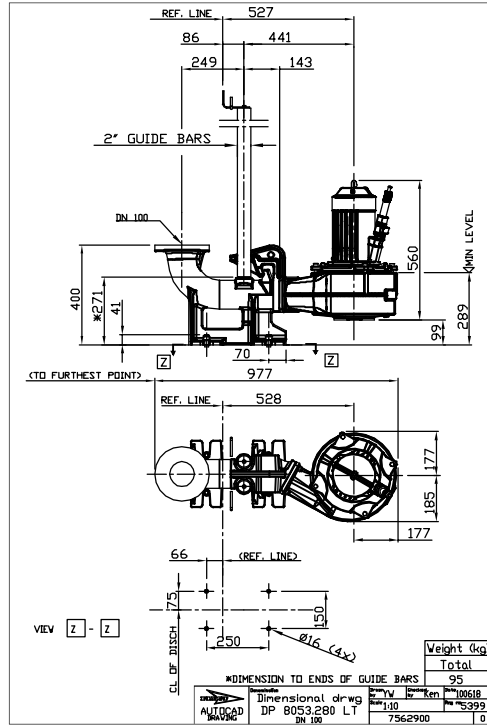


Figure 1: LT, P-installation

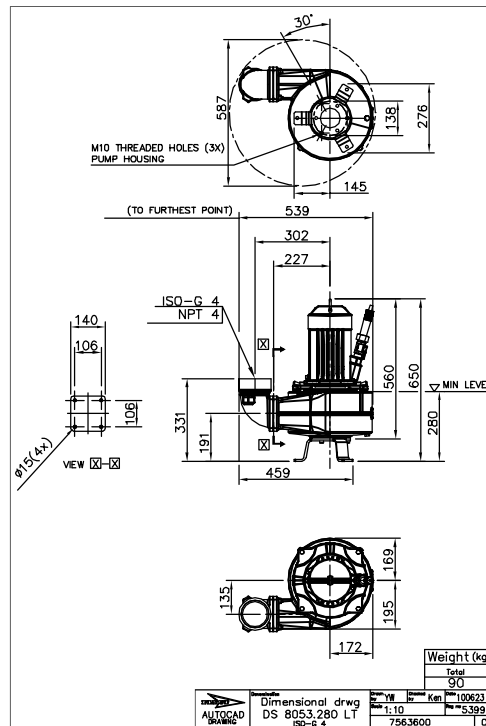


Figure 2: LT, S-installation

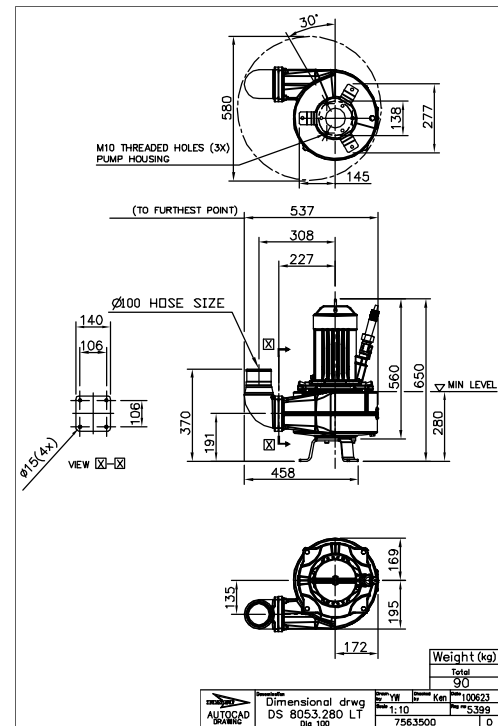


Figure 3: LT, S-installation

MT

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

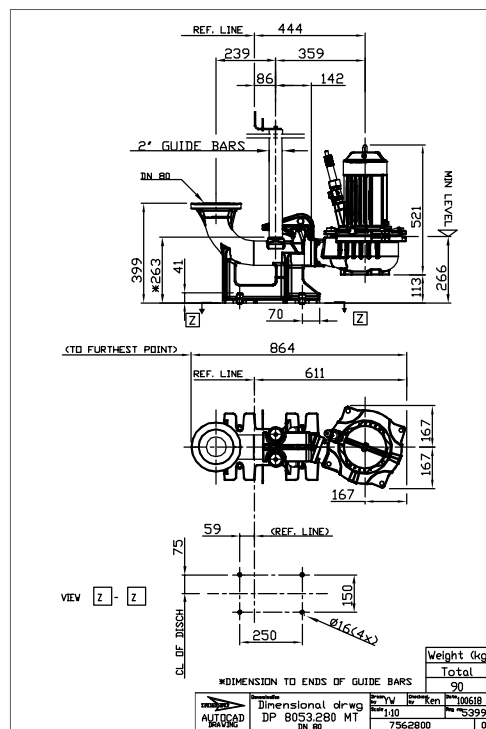


Figure 4: MT, P-installation

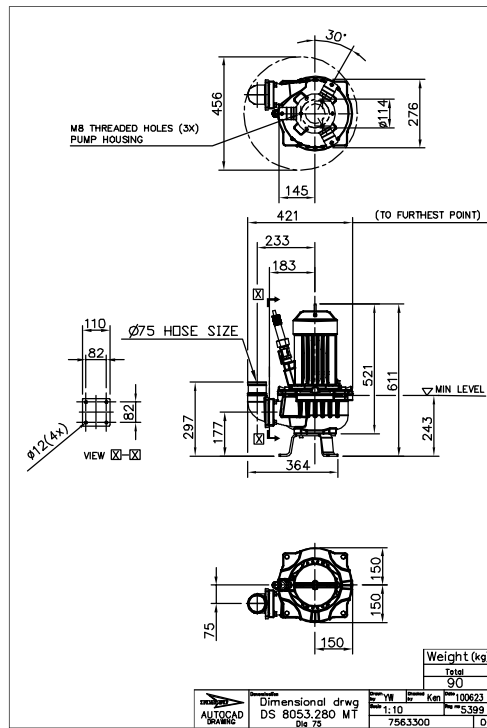


Figure 5: MT, S-installation

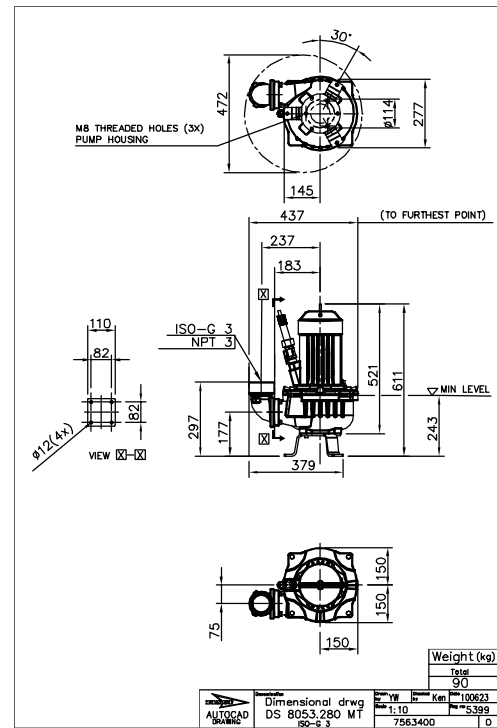


Figure 6: MT, S-installation

HT

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

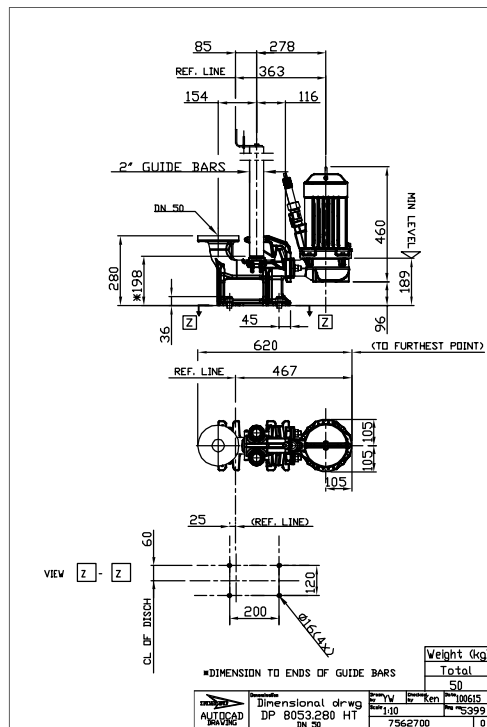


Figure 7: HT, P-installation

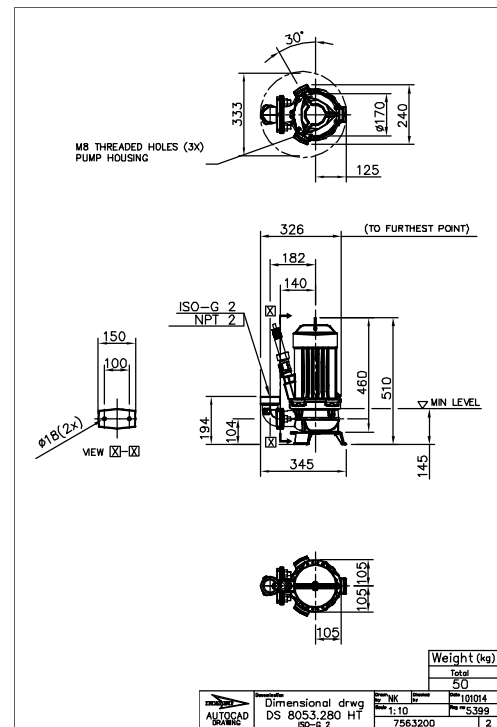


Figure 8: HT, S-installation

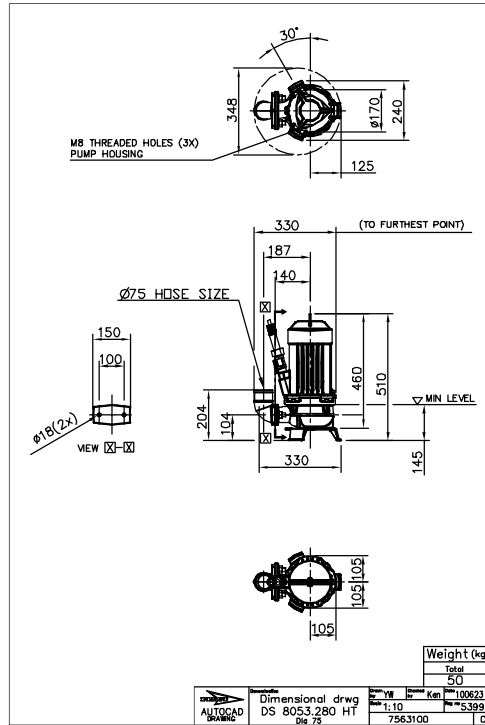


Figure 9: HT, S-installation

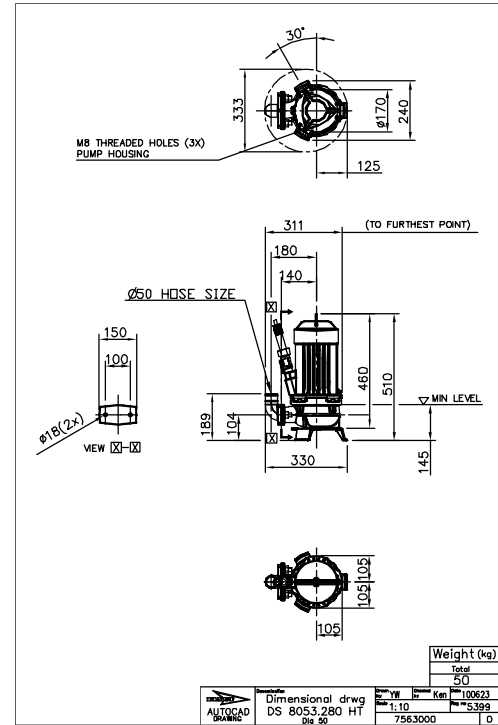


Figure 10: HT, S-installation