

GRN

Impeller with grinder system

All product images are indicative only



General characteristics

| | |
|------------------------------|--|
| Impeller with grinder system | |
| motor power | 1,8 ÷ 4,1 kW |
| poles | 2 / 4 |
| discharge | GAS 1½"-2" DN32 horizontal DN80 - DN100 |
| free passage | - |
| max flow rate | 29.6 l/s |
| max head | 47.6 m |

Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Series available in explosion-proof ATEX version.

Applications

Designed for professional and industrial use, it is suitable for the treatment of liquids containing suspended solids or fibres, and low or medium density activated sludges. The pump is also available in explosion-proof version with ATEX certification. This series is prefitted for installation of the ZENIT cooling system for dry or semi-submerged installation.

Construction materials

| | |
|----------------------------------|--|
| Case | Cast iron EN-GJL 250 |
| Impeller | Cast iron EN-GJL-250 |
| Nuts and bolts | Stainless steel - Class A2-70 |
| Standard gasket | Rubber - NBR |
| Cutter material | Chromium steel - X102 CrMo17 KU |
| Cutting disk material | Chromium steel - X102 CrMo17 KU |
| Shaft | Stainless steel - AISI 420 |
| Cooling jacket | Stainless steel - AISI 304 |
| Paint type | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC) |

Operating limits

| | |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C |
| PH of treated fluid | 6 ÷ 14 |
| Viscosity of treated fluid | 1 mm ² /s |
| Maximum immersion depth | 20 m |
| Density of treated fluid | 1 Kg/dm ³ |
| Maximum acoustic pressure | 70 dB |
| max starts per hour | 30 |

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2 poles motor models



4 poles motor models



Cooling system

Dry installation available using the cooling jacket
(see details to page 17)



1

Cable Gland

Cable gland system to guarantee perfect water-tightness. The universal thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.



2

Mechanical seals

Two silicon carbide (SiC) mechanical seals in oil sump.



3

Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



4

Anti-clogging system

The special design of the hydraulic part ensures the expulsion of suspended solids and prevents fouling of the impeller.



5

Grinder system

Grinder system comprising a revolving cutter and a plate with holes with sharpened edges (2 pole models) or a cast iron flange with saw-tooth edges (4 pole models) that fine-chops filaments, preventing fouling of the impeller.



6

EX

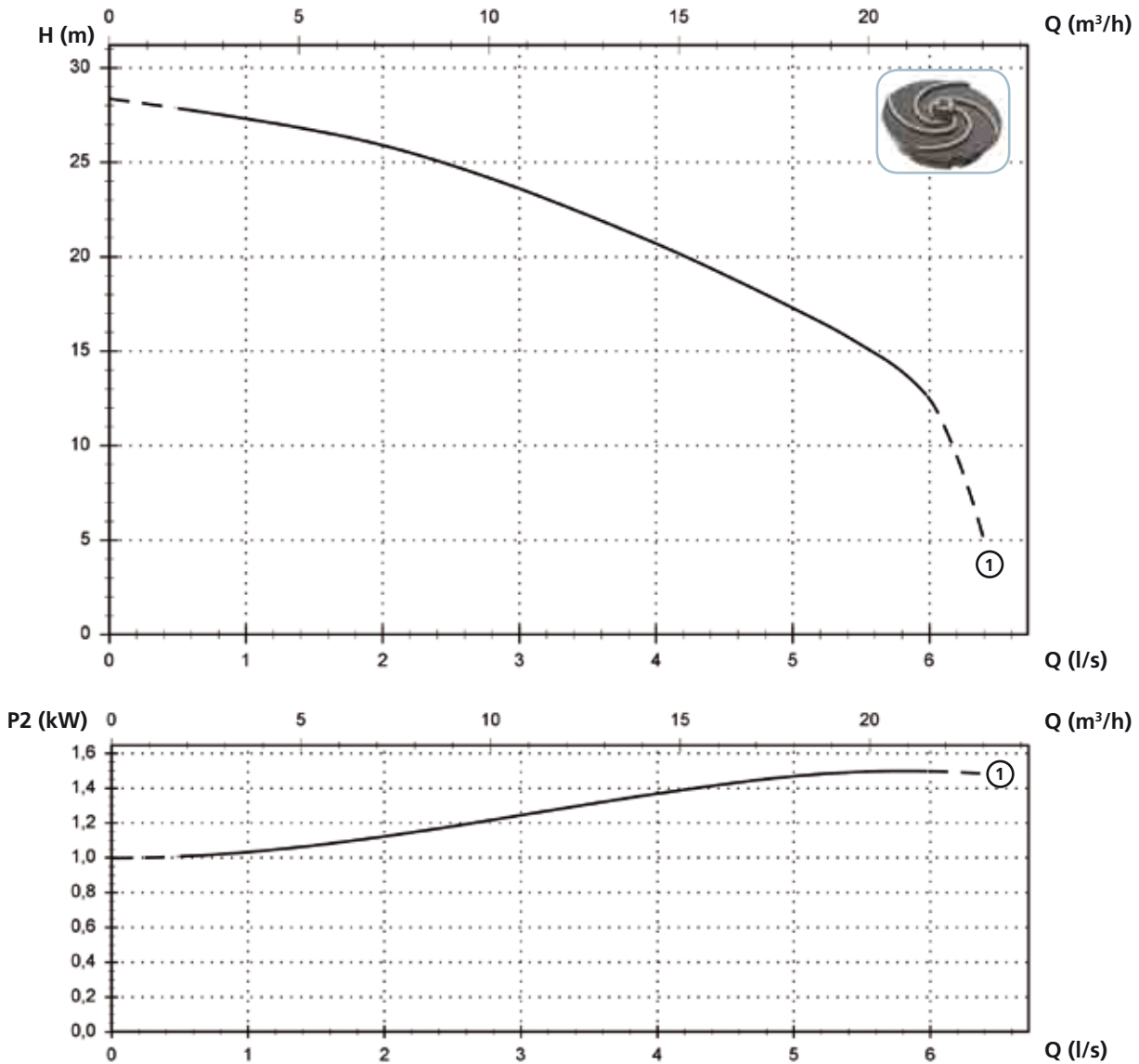
Models available on request with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids.

CE 0496 Ex GD Ex db k c IIB T5 Ex tb IIIC T100°C IP68

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Models with horizontal GAS 1½" threaded - DN32 PN6 flanged discharge - 2 poles

Performances

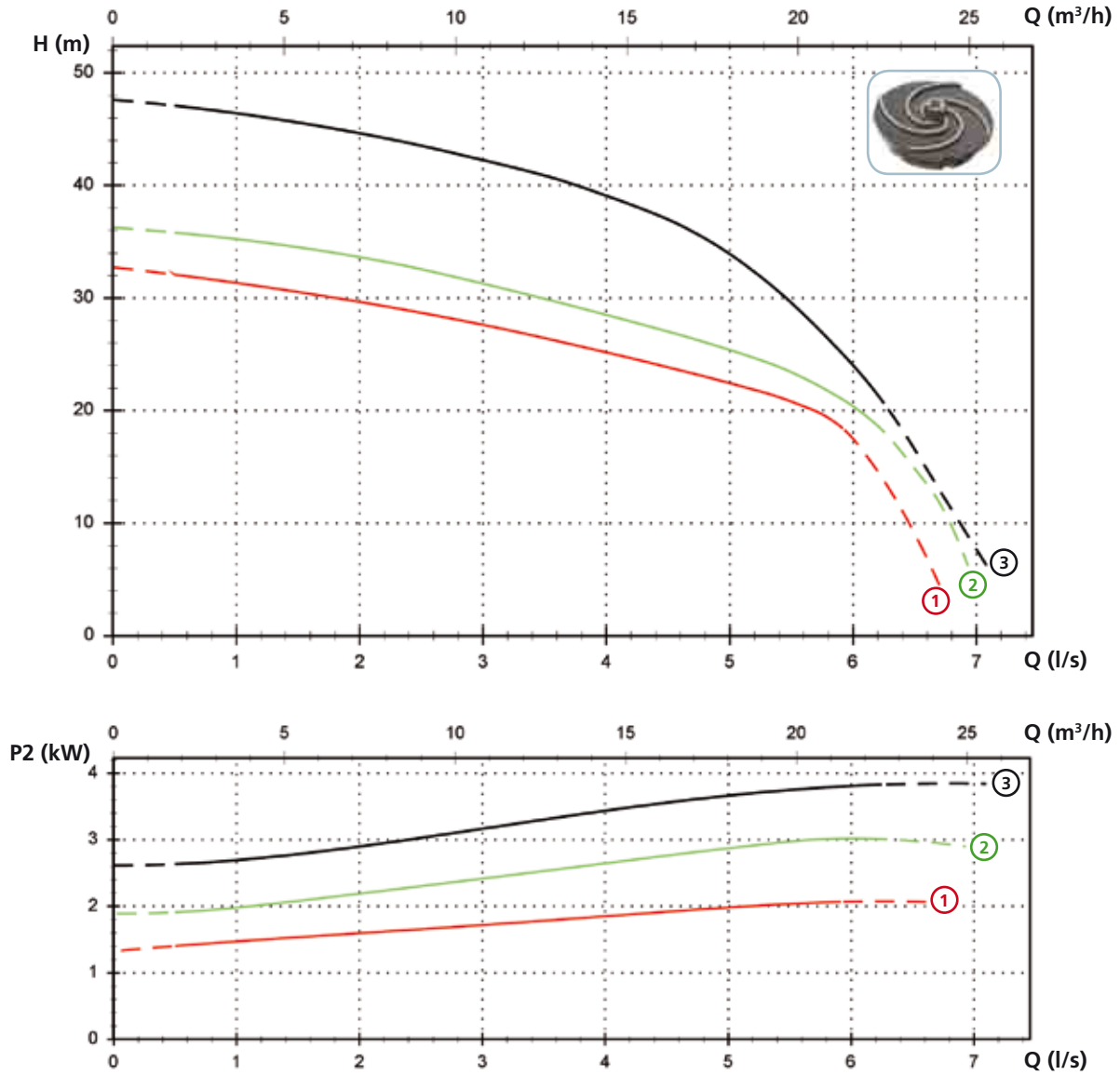


Technical data

| | V | Phases | P1 (kW) | P2 (kW) | A | Rpm | Start | Ø | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|-----------------|--------------|
| ① GRN 250/2/G40H A1DM/50 | 230 | 1 | 2.7 | 1.8 | 12.5 | 2900 | Dir | G 1½"- DN32 PN6 | - |
| | V | Phases | P1 (kW) | P2 (kW) | A | Rpm | Start | Ø | Free passage |
| ① GRN 250/2/G40H A1DT/50 | 400 | 3 | 2.3 | 1.8 | 3.9 | 2900 | Dir | G 1½"- DN32 PN6 | - |

Models with horizontal GAS 2" threaded - DN32 PN6 flanged discharge - 2 poles

Performances



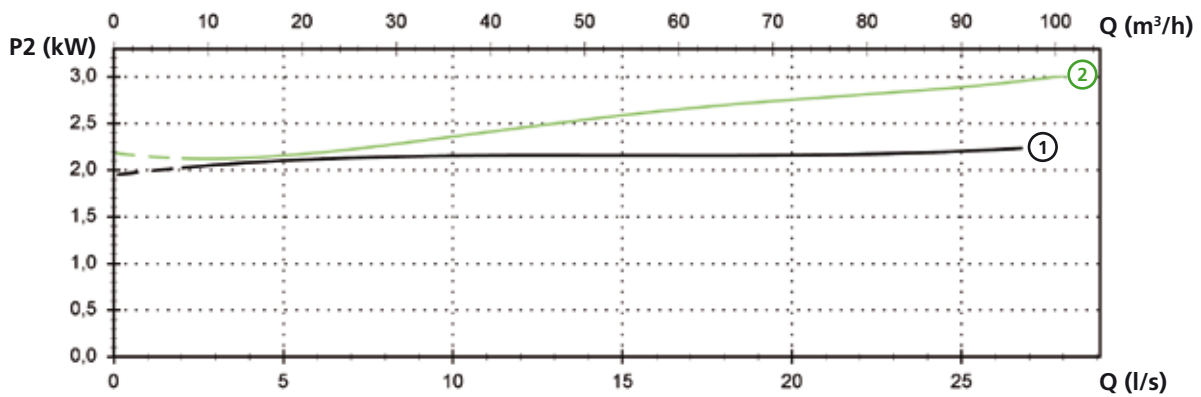
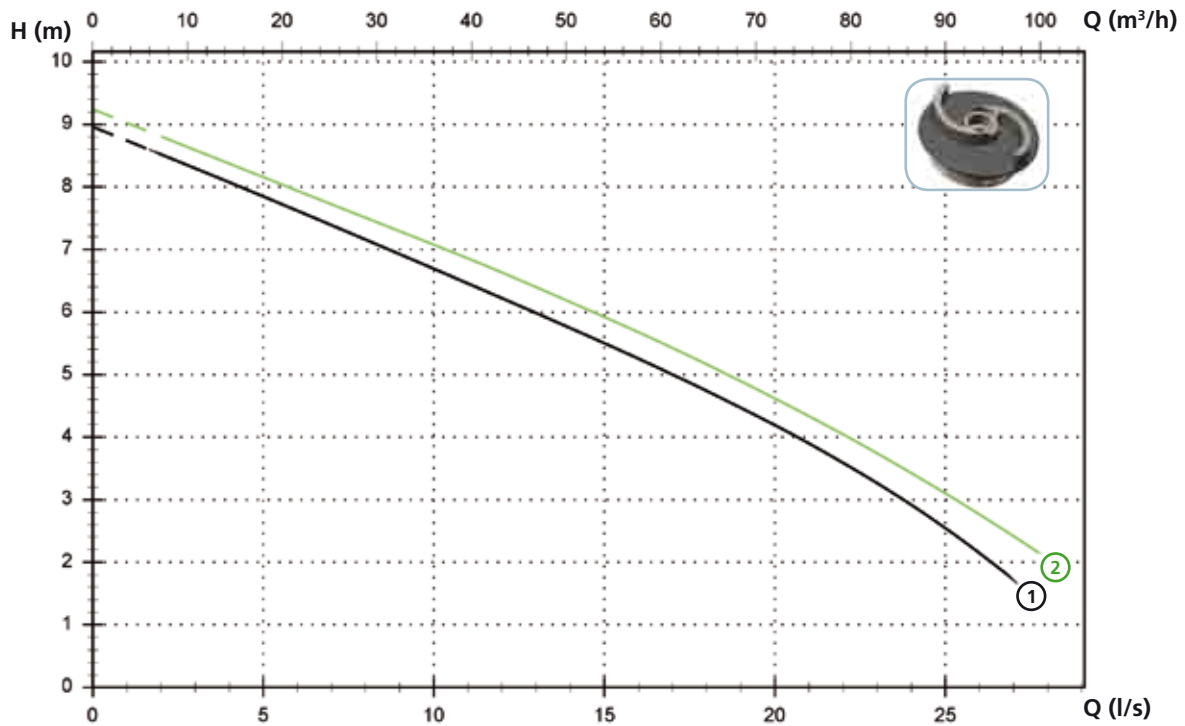
Technical data

| | V | Phases | P1 (kW) | P2 (kW) | A | Rpm | Start | Ø | Free passage | |
|---|------------------------|--------|---------|---------|-----|-----|-------|-----|---------------|---|
| ① | GRN 300/2/G50H A1DT/50 | 400 | 3 | 2.9 | 2.2 | 5.1 | 2900 | Dir | G 2"-DN32 PN6 | - |
| ② | GRN 400/2/G50H A1FT/50 | 400 | 3 | 4.0 | 3 | 6.7 | 2900 | Dir | G 2"-DN32 PN6 | - |
| ③ | GRN 550/2/G50H A1FT/50 | 400 | 3 | 5.0 | 4.1 | 8.7 | 2900 | Dir | G 2"-DN32 PN6 | - |

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Models with horizontal DN80 PN10-16 flanged discharge - 4 poles

Performances

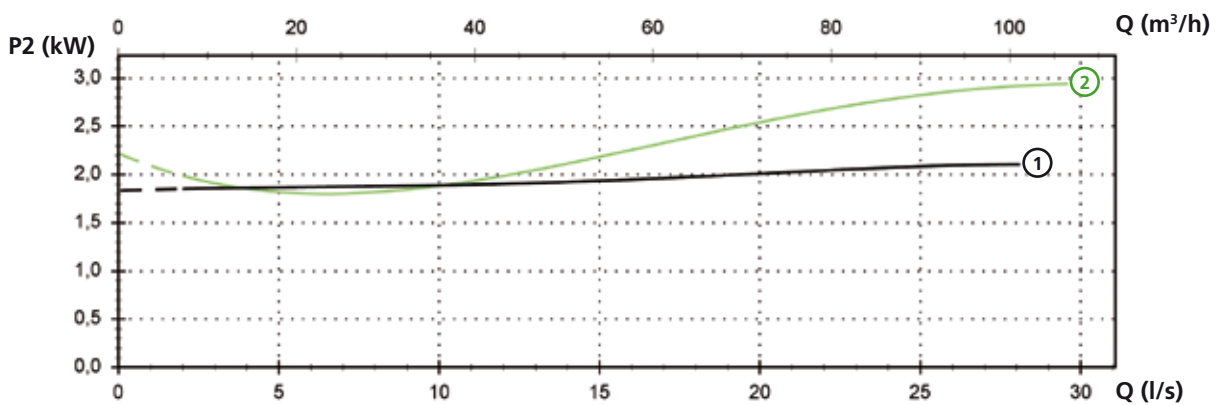
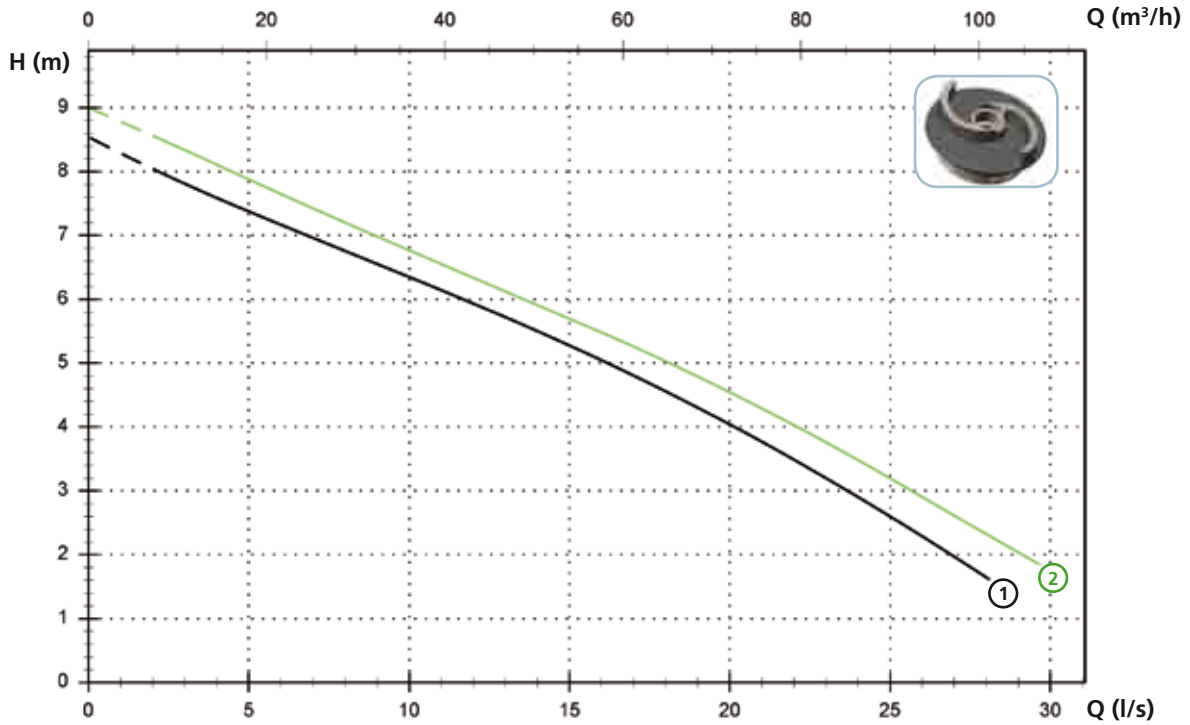


Technical data

| | V | Phases | P1 (kW) | P2 (kW) | A | Rpm | Start | Ø | Free passage | |
|---|----------------------|--------|---------|---------|-----|-----|-------|-----|--------------|---|
| ① | GRN 300/4/80 A1FT/50 | 400 | 3 | 2.9 | 2.2 | 5.8 | 1450 | Dir | DN80 PN10-16 | - |
| ② | GRN 400/4/80 A1FT/50 | 400 | 3 | 3.7 | 3 | 7.3 | 1450 | Dir | DN80 PN10-16 | - |

Models with horizontal DN100 PN10-16 flanged discharge - 4 poles

Performances



Technical data

| | V | Phases | P1 (kW) | P2 (kW) | A | Rpm | Start | Ø | Free passage |
|-------------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① GRN 300/4/100 A1FT/50 | 400 | 3 | 2.9 | 2.2 | 5.8 | 1450 | Dir | DN100 PN10-16 | - |
| ② GRN 400/4/100 A1FT/50 | 400 | 3 | 3.7 | 3 | 7.3 | 1450 | Dir | DN100 PN10-16 | - |

GRN

Versions available

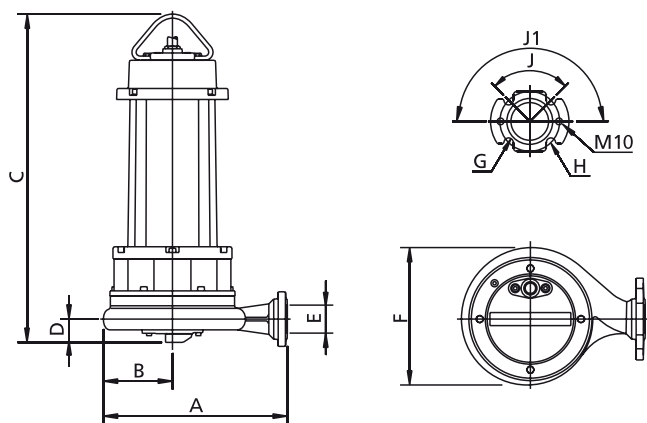
(Key to versions on page 16)

| | Electrical variants | | | | | | | | | | | Cooling | | | | Mechanical seals | | | | |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
| | N A E | T | T C | T C D | T C D T | T C D G T | T C G | T C S T | T C S G T | T S | T R | T R G | N | CC CCE | FT | C G F T | 2SIC | SICM | SICAL | 2SICAL |
| GRN 250/2/G40H A1DM/50 | | | | ● | | | | | | | | ● | ● | | | ● | | | | |
| GRN 250/2/G40H A1DT/50 | | ● | | | | | | | ● | | | ● | ● | | | ● | | | | |
| GRN 300/2/G50H A1DT/50 | | ● | | | | | | | ● | | | ● | ● | | | ● | | | | |
| GRN 400/2/G50H A1FT/50 | | ● | | | | | | | ● | | | ● | ● | | | ● | | | | |
| GRN 550/2/G50H A1FT/50 | | ● | | | | | | | ● | | | ● | ● | | | ● | | | | |
| GRN 300/4/80 A1FT/50 | | ● | | | | | | | ● | | | ● | ● | | | ● | | | | |
| GRN 400/4/80 A1FT/50 | | ● | | | | | | | ● | | | ● | ● | | | ● | | | | |
| GRN 300/4/100 A1FT/50 | | ● | | | | | | | ● | | | ● | ● | | | ● | | | | |
| GRN 400/4/100 A1FT/50 | | ● | | | | | | | ● | | | ● | ● | | | ● | | | | |

NOTE FOR SINGLE PHASE PUMPS: thermal protections into the winding have to be connected to the electrical panel.
 Start capacitor inside the pump.
 Circuit breaker supplied but not connected to the pump cable.
 The use of an electrical panel as circuit breaker housing is mandatory.
 For installation please see use and maintenance instructions booklet.

Overall dimensions and weights

2 poles motor models

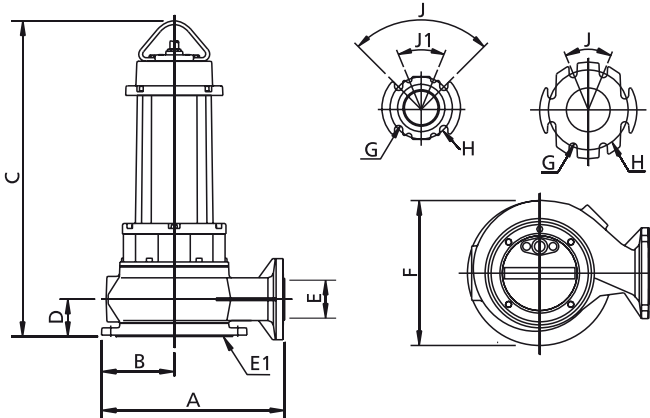


| | A | B | C | D | E | F | G | H | J | J1 | kg |
|------------------------|-----|-----|-----|----|-------|-----|----|----|-----|------|----|
| GRN 250/2/G40H A1DM/50 | 265 | 105 | 495 | 45 | G 1½" | 215 | 14 | 90 | 90° | 180° | 44 |
| GRN 250/2/G40H A1DT/50 | 265 | 105 | 495 | 45 | G 1½" | 215 | 14 | 90 | 90° | 180° | 44 |
| GRN 300/2/G50H A1DT/50 | 305 | 110 | 500 | 45 | G 2" | 225 | 14 | 90 | 90° | 180° | 44 |
| GRN 400/2/G50H A1FT/50 | 350 | 130 | 630 | 45 | G 2" | 265 | 14 | 90 | 90° | 180° | 69 |
| GRN 550/2/G50H A1FT/50 | 350 | 130 | 630 | 45 | G 2" | 265 | 14 | 90 | 90° | 180° | 72 |

Dimensions in mm

All weights and dimensions are indicative only

4 poles motor models



| | A | B | C | D | E | E1 (*) | F | G | H | J | J1 | kg |
|-----------------------|-----|-----|-----|----|-----|--------|-----|----|-----|-----|-----|----|
| GRN 300/4/80 A1FT/50 | 400 | 160 | 695 | 80 | 80 | 200 | 290 | 18 | 160 | 90° | 45° | 87 |
| GRN 400/4/80 A1FT/50 | 400 | 160 | 695 | 80 | 80 | 200 | 290 | 18 | 160 | 90° | 45° | 90 |
| GRN 300/4/100 A1FT/50 | 415 | 160 | 700 | 90 | 100 | 200 | 310 | 18 | 180 | 45° | - | 89 |
| GRN 400/4/100 A1FT/50 | 415 | 160 | 700 | 90 | 100 | 200 | 310 | 18 | 180 | 45° | - | 92 |

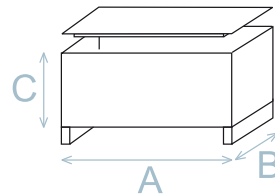
Dimensions in mm

All weights and dimensions are indicative only

(*) DN of the suction flange - PN6

Packaging dimension

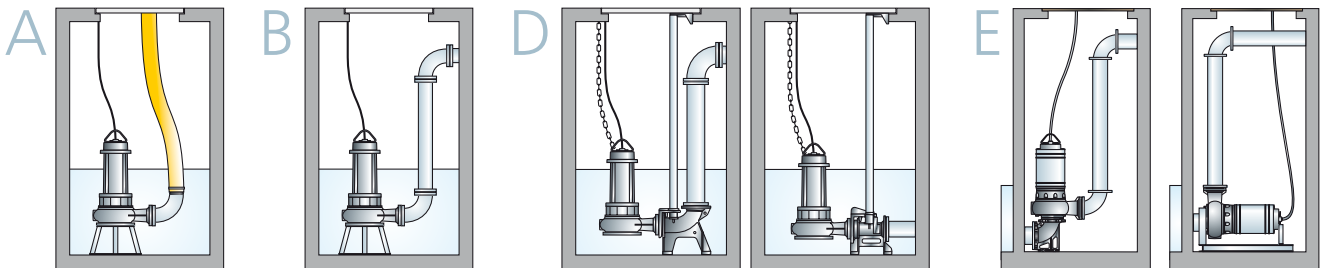
| | A | B | C |
|---------------------------|-----|-----|-----|
| GRN 250/2/G40H A1DM(T)/50 | 725 | 445 | 415 |
| GRN 300/2/G50H A1DT/50 | 725 | 445 | 415 |
| GRN 400/2/G50H A1FT/50 | 725 | 445 | 415 |
| GRN 550/2/G50H A1FT/50 | 725 | 445 | 415 |
| GRN 300/4/80 A1FT/50 | 725 | 445 | 415 |
| GRN 400/4/80 A1FT/50 | 725 | 445 | 415 |
| GRN 300/4/100 A1FT/50 | 725 | 445 | 415 |
| GRN 400/4/100 A1FT/50 | 725 | 445 | 415 |



Dimension in mm

All weights and dimensions are indicative only

Installations available



4 poles motor models