

**GRN****motralec**

4 rue Lavoisier . ZA Lavoisier . 95223 HERBLAY CEDEX  
 Tel. : 01.39.97.65.10 / Fax. : 01.39.97.68.48  
 Demande de prix / e-mail : service-commercial@motralec.com  
[www.motralec.com](http://www.motralec.com)

## Impeller with grinder system



### General characteristics

- Impeller with grinder system
- 1,8 ÷ 4,1 kW motor power
- 2 / 4 poles
- GAS 1 1/2" - 2" DN32 horizontal DN80 - DN100

### 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. Separate pump body. Series available in explosion-proof version.

### Applications

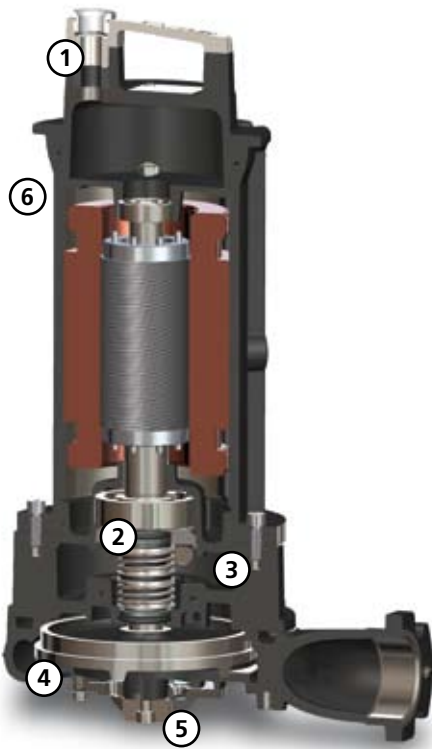
Designed for professional and industrial use, it is suitable for the treatment of liquids containing suspended solids or fibres, and low or medium density activated sludges. The pump is also available in explosion-proof version with ATEX certification. This series is prefitted for installation of the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

### Construction materials

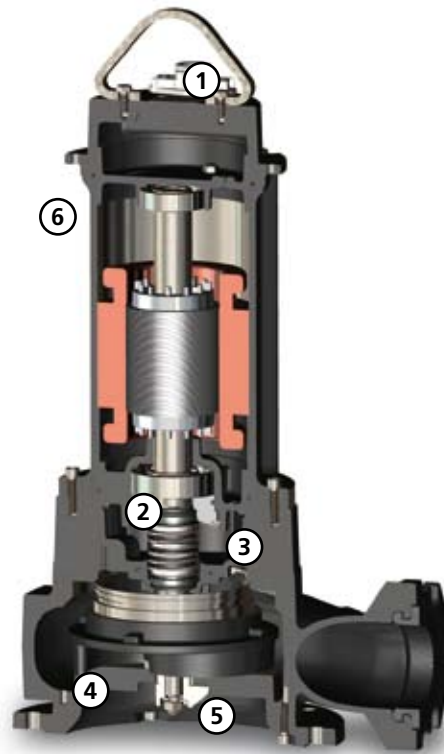
<b>Case</b>	Cast Iron EN-GJL 250
<b>Impeller</b>	Cast iron EN-GJL-250
<b>Nuts and bolts</b>	Stainless Steel - Class A2-70
<b>Standard gasket</b>	Rubber - NBR
<b>Cutter material</b>	Tool Stainless Steel - X102 CrMo17 KU
<b>Cutting disk material</b>	Tool Stainless Steel - X102 CrMo17 KU
<b>Shaft</b>	Stainless Steel - AISI 420
<b>Cooling jacket</b>	Carbon Steel - Fe360 ÷ Fe370
<b>Set of standard mechanical seals</b>	Two Silicon carbide mechanical seals (2SiC)

### operating limits

<b>Maximum operating temperature</b>	40 °C
<b>PH of treated fluid</b>	6 to 10 pH
<b>Viscosity of treated fluid</b>	1 mm <sup>2</sup> /s
<b>Maximum immersion depth</b>	20 m
<b>Density of treated fluid</b>	1 Kg/dm <sup>3</sup>
<b>Maximum acoustic pressure</b>	70 dB
<b>max starts per hour</b>	10



2 poles motor models



4 poles motor models



**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



**Mechanical seals**

Two mechanical seals in Silicon Carbide (2SiC)



**Oil sump**

Large oil sump to guarantee longer mechanical seal lifetime



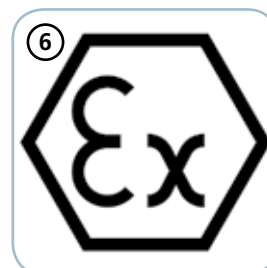
**Anti-clogging system**

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



**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



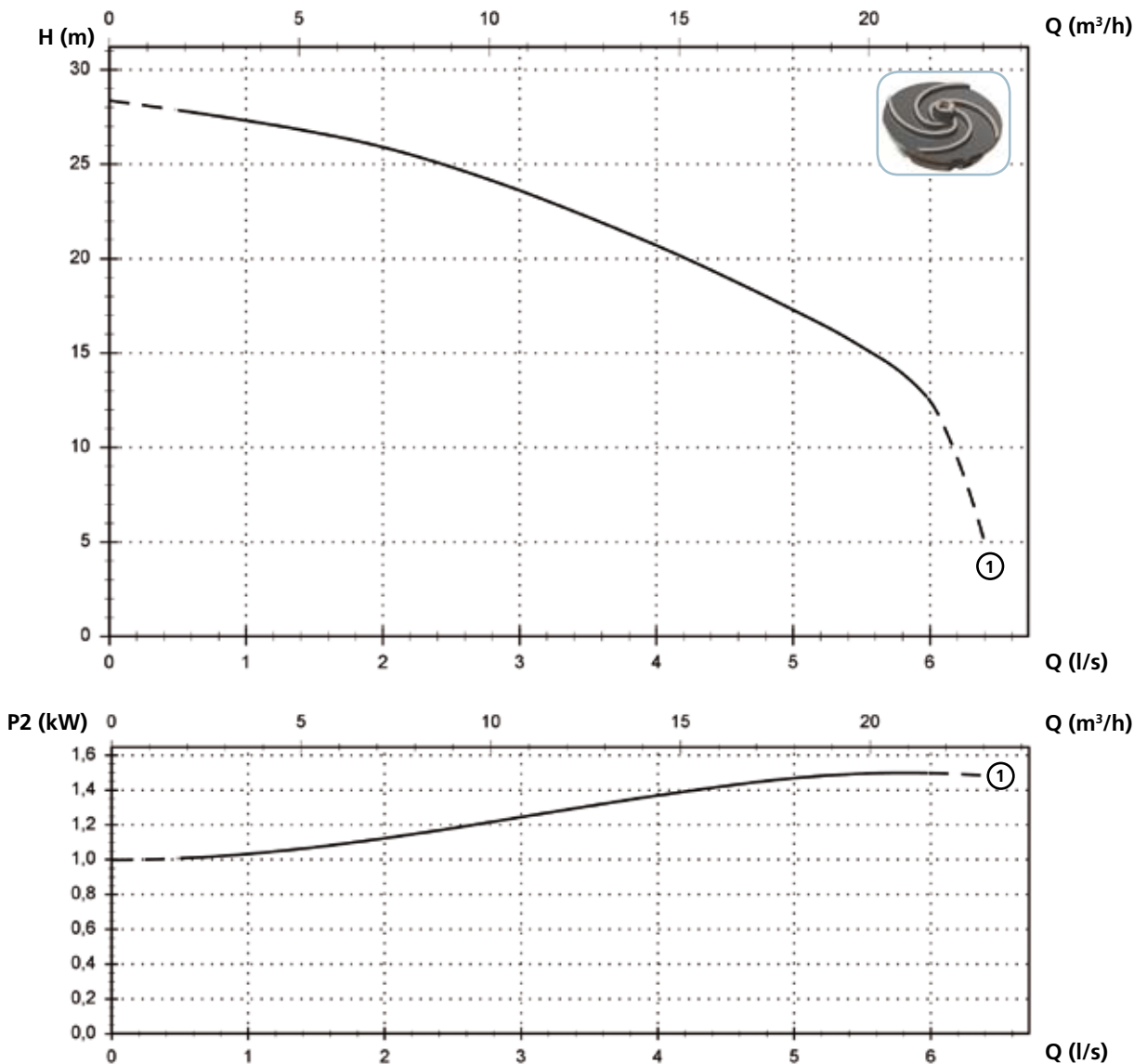
**EX**

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

# GRN

## Models with horizontal GAS 1 1/2" threaded - DN32 PN6 flanged delivery port - 2 poles

### Performances



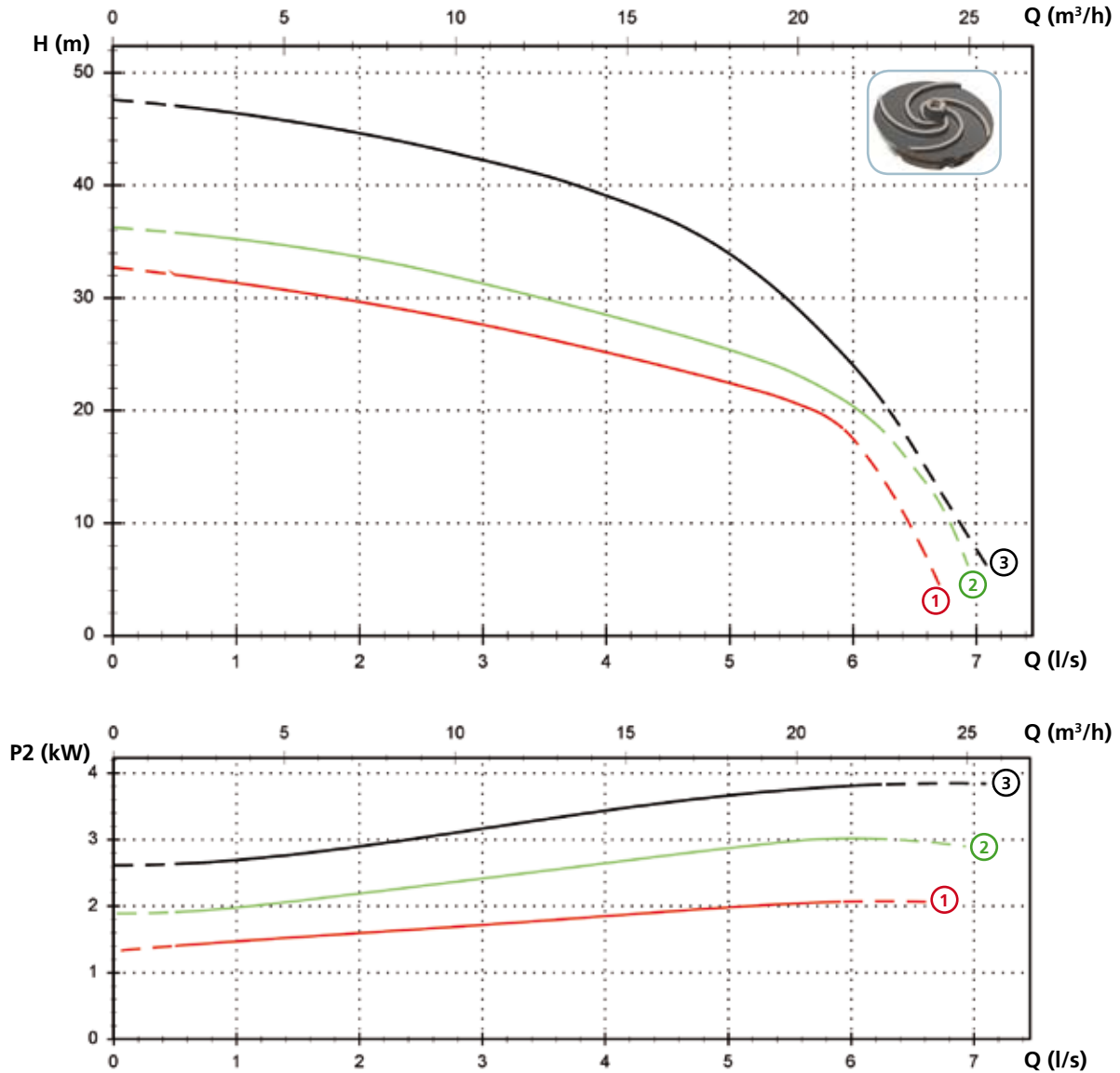
### Technical data

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

(\*) A = 07RN-F 4G1.5+3x1 - 10 m (standard version). Electrical and mechanical features are equal to the cable H07RN-F  
 B = NSSHOU-J 4G1.5+2x0.75 - 10 m (ATEX version)

**Models with horizontal GAS 2" threaded - DN32 PN6 flanged delivery port - 2 poles**

**Performances**



**Technical data**

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

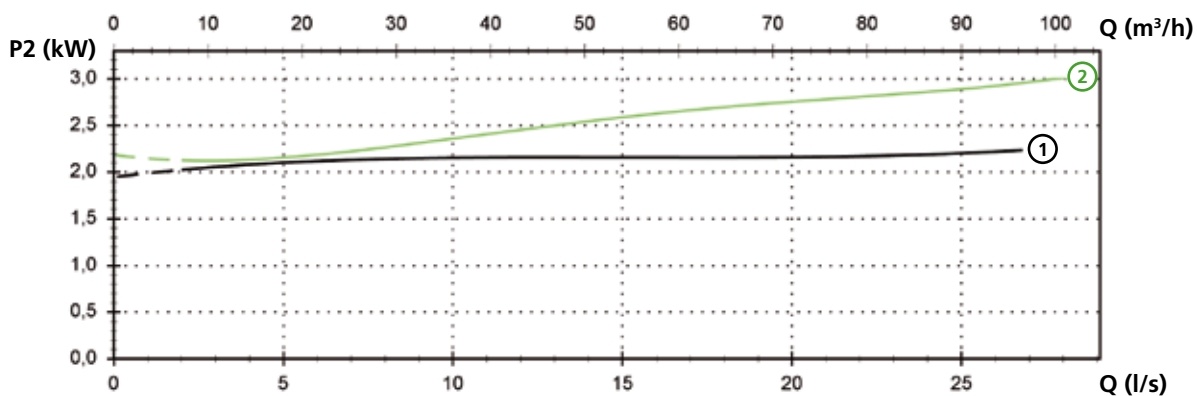
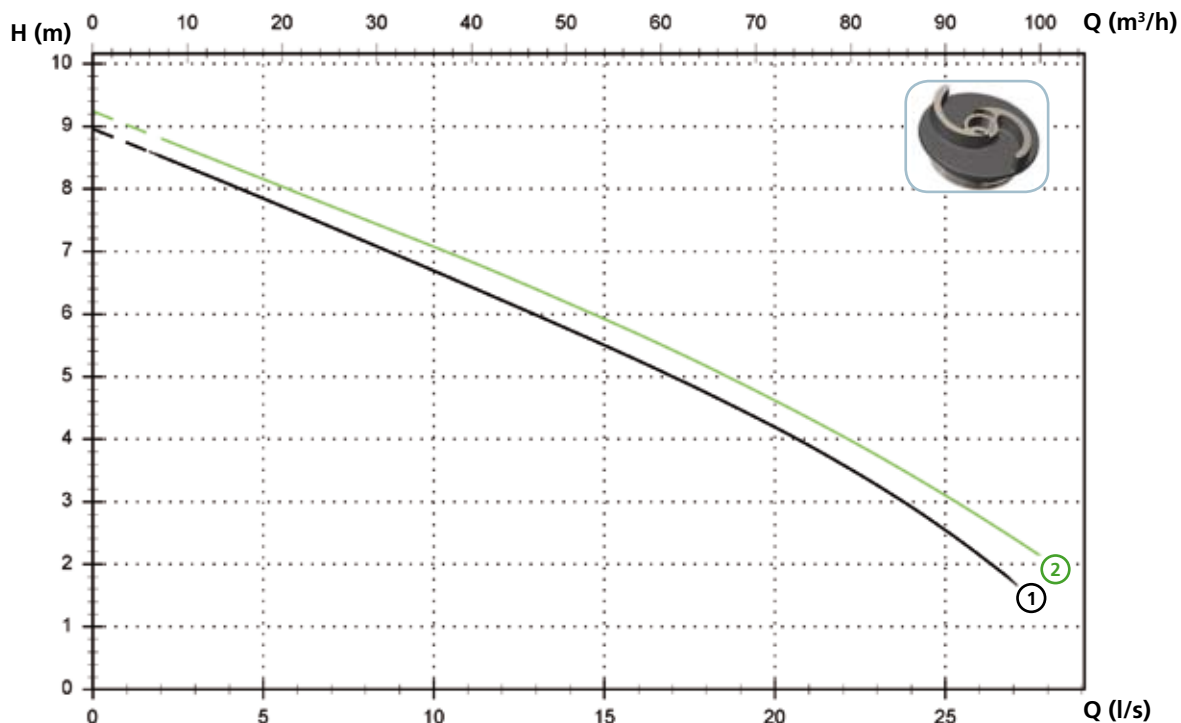
(\*) A = 07RN-F 4G1.5+3x1 - 10 m (standard version). Electrical and mechanical features are equal to the cable H07RN-F  
 B = NSSHOU-J 4G1.5+2x0.75 - 10 m (ATEX version)



# GRN

## Models with horizontal DN80 PN10-16 flanged delivery port - 4 poles

### Performances



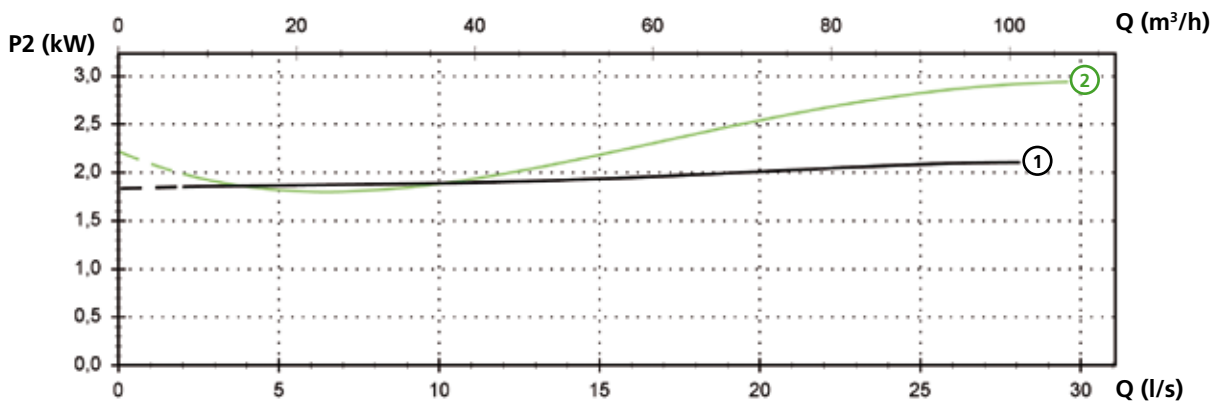
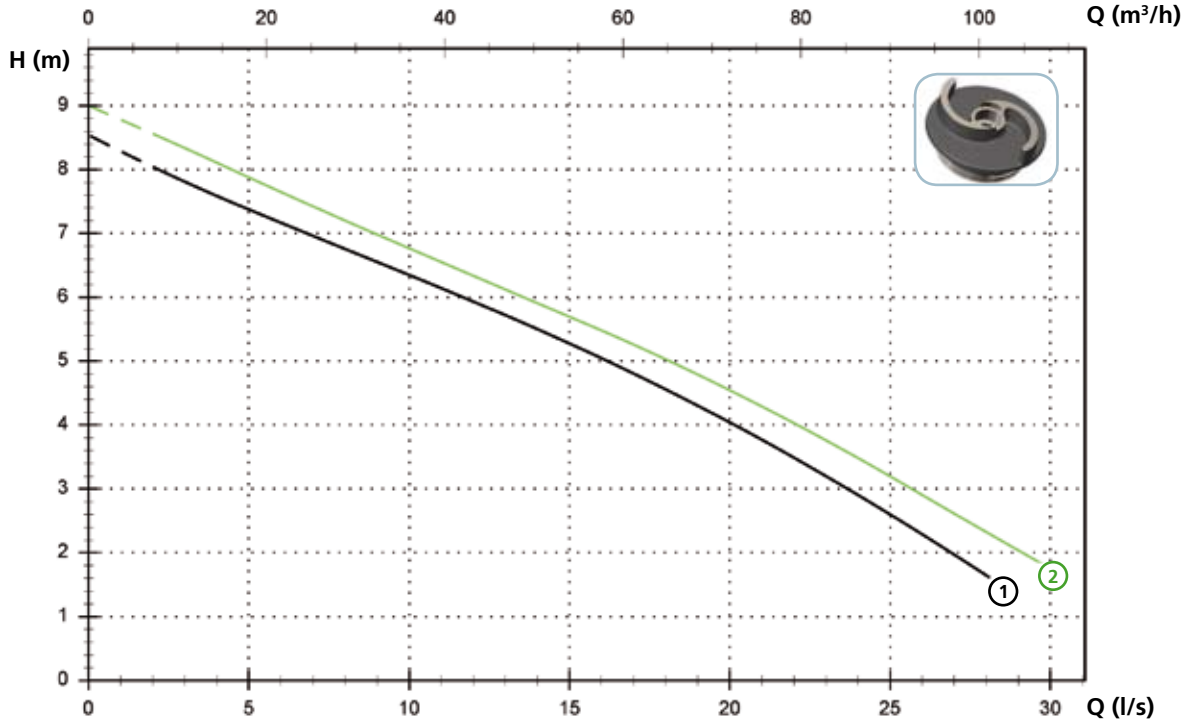
### Technical data

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

(\*) A = 07RN-F 4G1.5+3x1 - 10 m (standard version). Electrical and mechanical features are equal to the cable H07RN-F  
 B = NSSHOU-J 4G1.5+2x0.75 - 10 m (ATEX version)

**Models with horizontal DN100 PN10-16 flanged delivery port - 4 poles**

**Performances**



**Technical data**

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

(\*) A = 07RN-F 4G1.5+3x1 - 10 m (standard version). Electrical and mechanical features are equal to the cable H07RN-F  
 B = NSSHOU-J 4G1.5+2x0.75 - 10 m (ATEX version)

# GRN

## Versions available

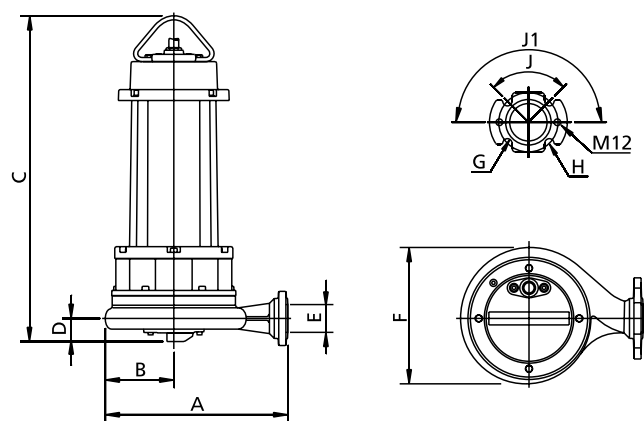
(Key to versions on page 15)

	Electrical variants											Cooling		Mechanical seals				
	N A E	T	T C D	T C D T	T C D G T	T C S T	T C S G T	T S	T R	T R G	F T	C G F T	N	CC	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		●						●					●	●	●			

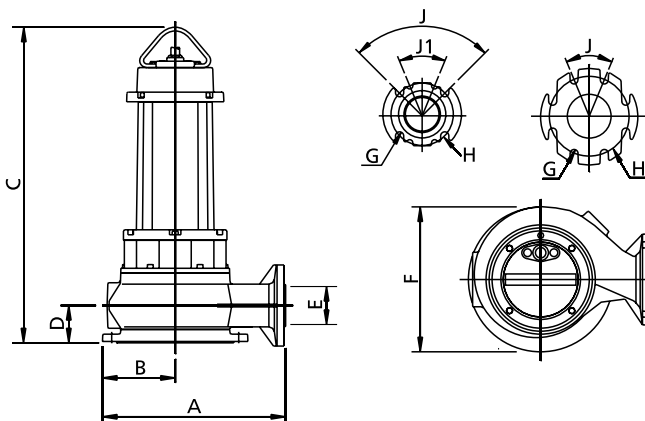
NOTE: For single phase pumps thermal protections into the winding have to be connected to the electrical panel.  
 Start capacitor inside the pump.  
 Circuit breaker supplied but not connected to the pump cable.  
 The use of an electrical panel as circuit breaker housing is mandatory.  
 For installation please see use and maintenance instructions booklet.  
 The version complete with probe is not available with ATEX certificate.

## Overall dimensions and weights

### 2 poles motor models



### 4 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 1 1/2"	215	14	90	90°	180°	44
GRN 250/2/G40H A1DT/50	265	105	495	45	G 1 1/2"	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

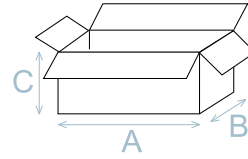
	A	B	C	D	E	F	G	H	J	J1	kg
GRN 300/4/80 A1FT/50	400	160	695	80	80	290	18	160	90°	45°	87
GRN 400/4/80 A1FT/50	400	160	695	80	80	290	18	160	90°	45°	90
GRN 300/4/100 A1FT/50	415	160	700	90	100	310	18	180	45°	-	89
GRN 400/4/100 A1FT/50	415	160	700	90	100	310	18	180	45°	-	92

Measurements in mm



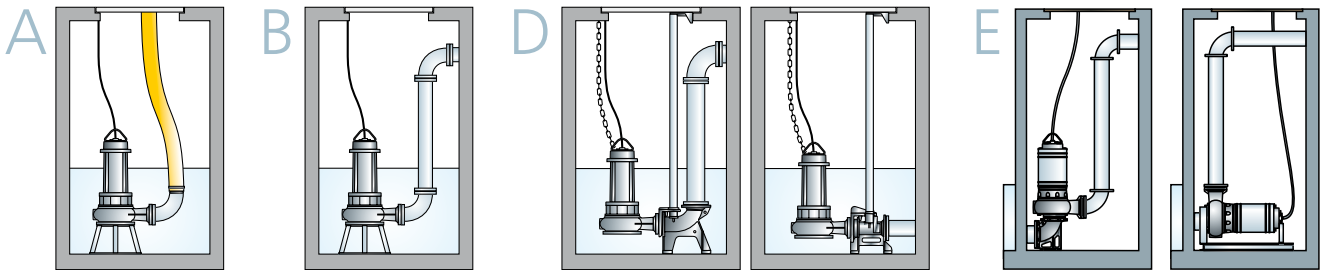
**Packaging dimension**

	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

**Installations available**



**Cooling by means of process liquid**

The rear of the impeller is specially shaped to convey some of the process liquid into the cavity between the body and the jacket to cool the motor. Once the cavity is full, the liquid is drawn into the pump body along a special pipe and then expelled.