

### Construction

Circulating pumps with a permanent magnet Synchronous motor. Pump casing with suction and delivery connections with the same diameter and on the same axis (in-line). Brass or cast iron unions on request.

### Applications

For clean liquids, without abrasives, which are non-aggressive for the pump materials.  
For heating plants.  
For circulation plants.

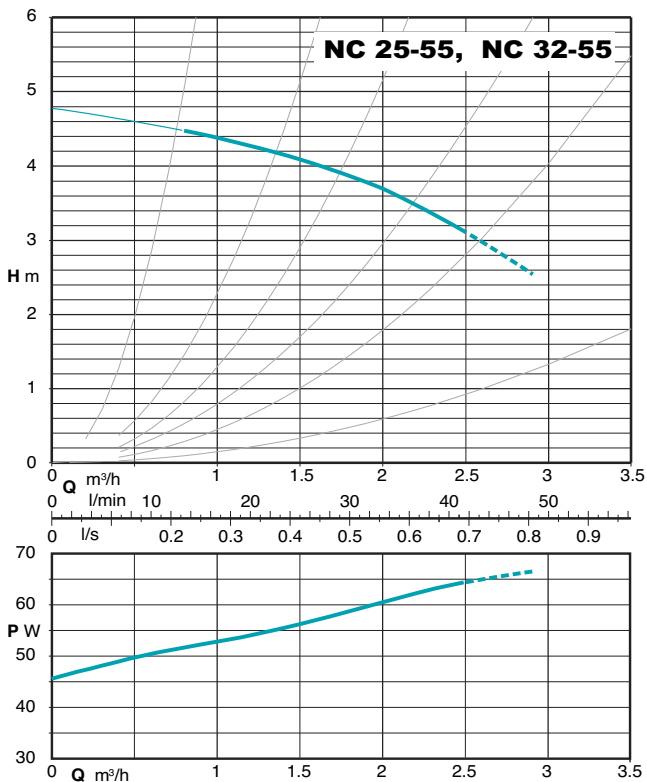
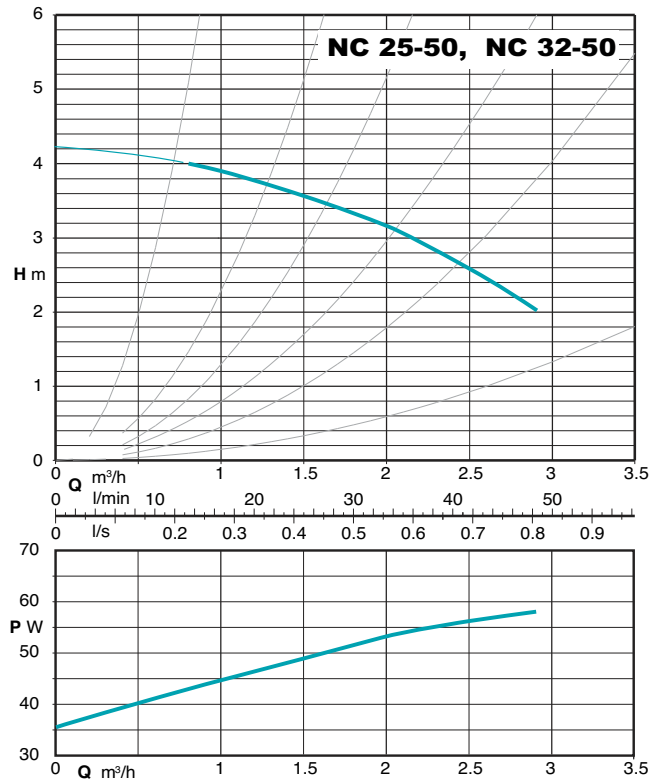
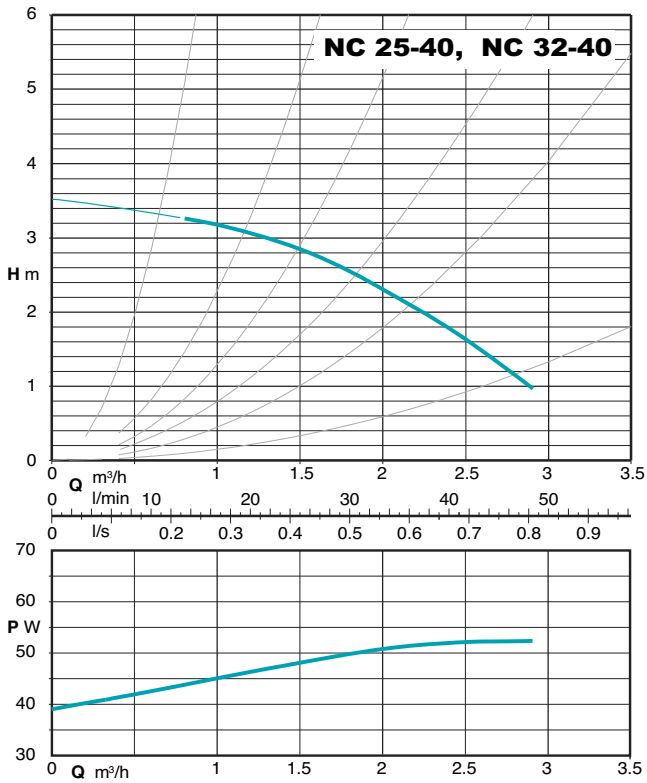
### Technical data

- Liquid temperature from +2 °C to +95 °C
- Ambient temperature from +2 °C to +40 °C
- Maximum permissible working pressure: 6 bar
- Storage: -20°C/+70°C max. relative humidity 95% at 40 °C
- Certifications: in conformity with CE requirements
- Sound pressure  $\leq$  43 dB (A).
- Minimum suction pressure: 0,3 bar at 95 °C
- Maximum glycol quantity: 40%
- EMC according to: EN 55014-1,  
EN 61000-3-2,  
EN 55014-2
- Connections: threaded ports ISO 228: G 1 1/2, G 2

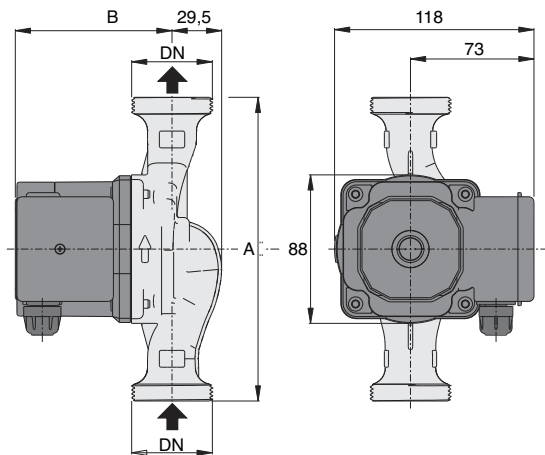
### Motor

- Synchronous motor with permanent magnet.
- Motor: 3000 rpm constant
  - Standard voltage: single-phase 230 V (-10%;+6%)
  - Frequency: 50 Hz
  - Protection: IP 44
  - Insulation class: H
  - Class II appliance
  - Overload protection (jammed rotor):
    - 1) automatic protection with electronic rotor release
    - 2) Overload thermal protector
  - Cable : phases and neutral
  - Constructed in accordance with: EN 60335-1, EN 60335-2-51

### Characteristic curves



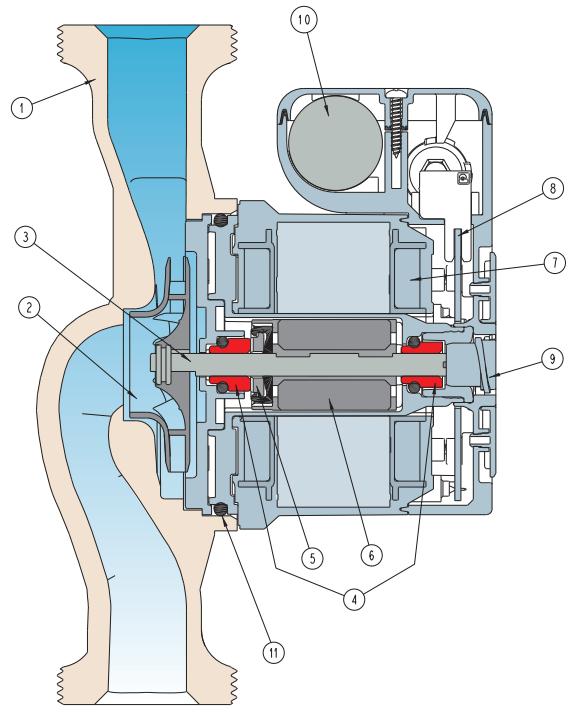
### Dimensions and weights



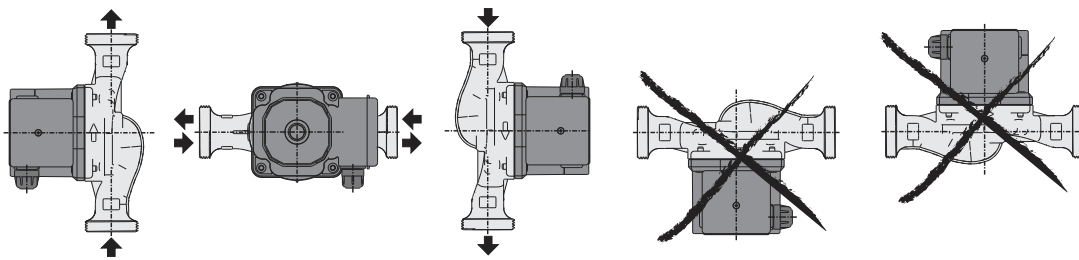
TYPE	DN	230V A	P1 W	mm		kg
				A	B	
NC 25-40/130	G 1 1/2	0,23	53	130	93	2,10
NC 25-40/180	G 1 1/2	0,23	53	180	93	2,25
NC 32-40/180	G 2	0,23	53	180	93	2,38
NC 25-50/130	G 1 1/2	0,26	58	130	103	2,39
NC 25-50/180	G 1 1/2	0,26	58	180	103	2,53
NC 32-50/180	G 2	0,26	58	180	103	2,67
NC 25-55/130	G 1 1/2	0,29	65	130	103	2,39
NC 25-55/180	G 1 1/2	0,29	65	180	103	2,53
NC 32-55/180	G 2	0,29	65	180	103	2,67

### Materials

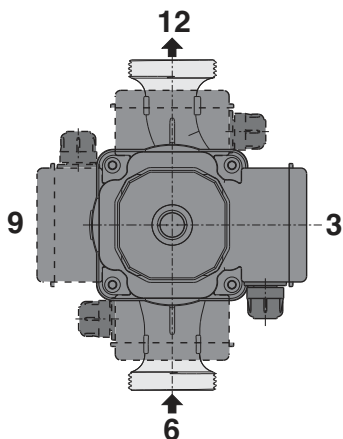
Component	Pos.	Material
Pump casing	1	Cast iron GJL 200 EN 1561
Impeller	2	Composite
Shaft	3	Stainless steel
Bearings	4	Spezialkohle
Thrust bearing	5	Ceramic
Rotor	6	Composite / Ferrite
Winding	7	Copper wire
Electronic card	8	-
Plug	9	Composite
Capacitor	10	-
Gasket	11	EPDM



### Installation



### Terminal box arrangement



### Unions

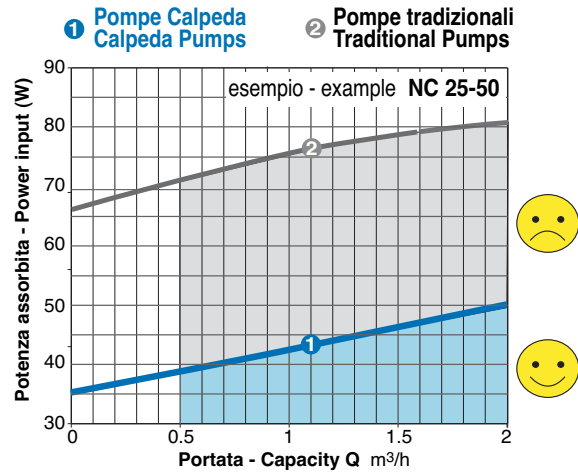
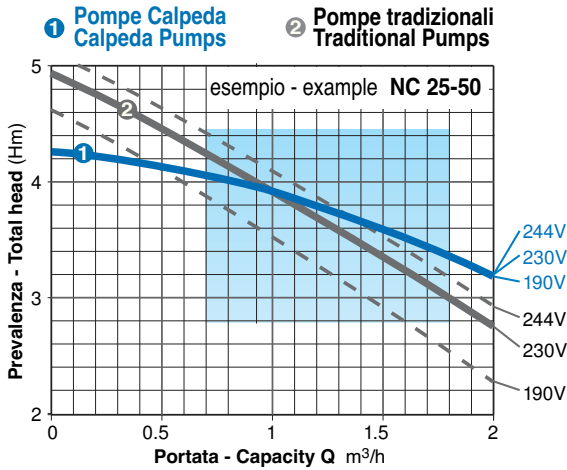
TYPE	DN	DN1
<b>KIT G 1 1/2 - G 1</b> (NC. 25..)	G 1 1/2	G 1
<b>KIT G 2 - G 1 1/4</b> (NC. 32..)	G 2	G 1 1/4

### PERFORMANCE

The constant rotation speed of the synchronous motor allows for a reduction of the pressure variations under varying load losses. Moreover, the CALPEDA pumps are not affected by the temperature and the voltage mains. The traditional pumps can do it only by using sophisticated and expensive electronics.

### CONSUMPTION

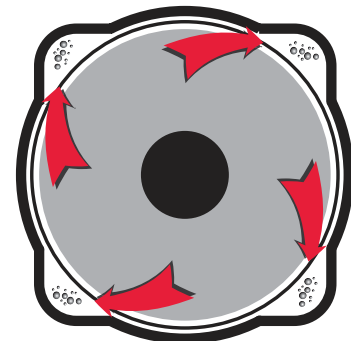
Consumption cut out by over 40%  
With higher efficiency resulting in a lower absorbed current  
This means lower consumption, guaranteed savings.



### RELIABILITY

- The **patented** "squared chamber" eliminates any possibility of rotor stoppage.
- 1- The operational characteristics of the synchronous motor allow to larger gap between stator and rotor, compared to an asynchronous motor, without any reduction of efficiency.
  - 2- Being a permanent ceramic magnet, the rotor is less subject to limestone deposit than traditional metal rotors.
  - 3- The "intelligent" electronics can sense any rotation difficulties: in such circumstances the motor is turned over several times at a higher torque than in traditional motors.

**Always guaranteeing proper starting.**



**Patented**

Escape routes for impurities inside the rotor chamber

### SAFETY AND PRACTICALITY

Reliable electronics guarantee the perfect operation of the electropump with double electrical insulation Class II motor for greatest safety for users. The reduced temperatures of the motor provide for the use of materials, which allow for an electropump with high electrical insulation, by eliminating the risk of dangerous electrical losses when compared to traditional pumps.

### Interchangeability

The CALPEDA circulating pump has the same axis base of other traditional pumps.

### QUALITY/PRICE

An extraordinarily advantageous quality/price ratio.

