NCES

Energy saving circulating pumps for sanitary hot water

Construction
Energy saving variable speed circulating pump driven by a permanent magnet synchronous motor (pm) controlled by on board inverter. Bronze pump casing.

Applications
Hot sanitary water systems.

Operating conditions
- Liquid temperature from +2 °C to +95 °C
- Ambient temperature from +2 °C to +40 °C
- Maximum working pressure: 10 bar
- Storage: -20°C/+70°C UR 95% a 40 °C
- Certifications: in conformity with CE requirements
- Sound pressure ≤ 43 dB (A).
- Minimum suction pressure: 0,6 bar at 95 °C
- EMC according to: EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3.
- Threated ports ISO 228: G 1, G 1 1/4, G 1 1/2.

Designation

NCE S 32 - 60 / 180

- Series
- Version
- DN ports in mm
- Max. head in dm
- connection size mm

Motor
Synchronous motor with permanent magnets.
- Motor: variable speed
- 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.

Special features on request
Brass unions.

Features

Energy saving
NCES is an high energy efficiency product : 80% of energy saving compared to a traditional circulating pump.

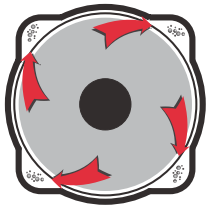
Compact design
The space saving **NCES** facilitate the installation in the smaller systems.

Easy to install and to adjust
Installing the **NCES** is considerably simplified by the quick setting and power installation plug. The adjustment is simple and intuitive thanks to the ability to be able to select the optimum working point or mode via a simple LED indicator and switch.

Reliability
NCES features the patented self-cleaning square chamber design, which eliminates any possibility of rotor blockage.

Easy use
Two reference curves (positions 1 and 2); maximum head curve (Max) and minimum head curve (Min).
Selection of the optimum working point.

Patented



Escape routes for impurities inside the rotor chamber

Operating modes

Display

- GREEN led: regular operation.
- Blinking GREEN led : adjustment of working point.

- RED led: possible fault (ex. locked rotor).

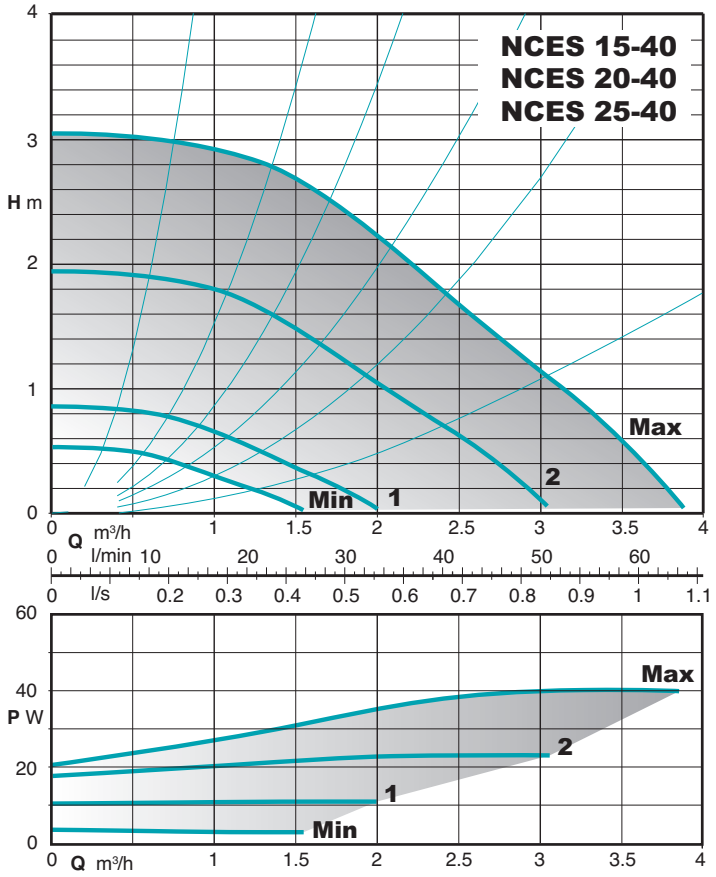
Selector

To modify the pump performances (head) rotate the selector according to the following table:

Chosing the optimal working point

- Position (Min): head from 0,3 m to 1.000 l/h.
- Position (1): head from 0,63 m to 1.000 l/h.
- Position (2): head from 1,8 m to 1.000 l/h.
- Position (Max): head from 3 m to 1.000 l/h.

Characteristic curves



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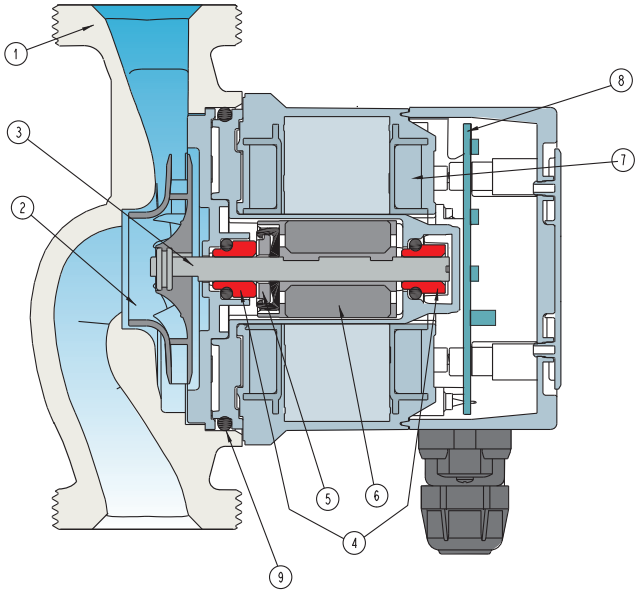
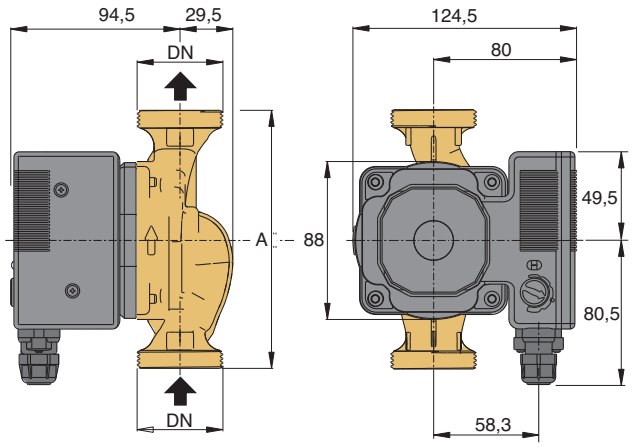
calpeda®

Materials

Component	Pos.	Material
Pump casing	1	Brass
Impeller	2	Composite
Shaft	3	Ceramic
Bearings	4	Carbon
Thrust bearing	5	Ceramic
Rotor	6	Composite / Ferrite
Winding	7	Copper wire
Electronic card	8	-
Gasket	9	EPDM

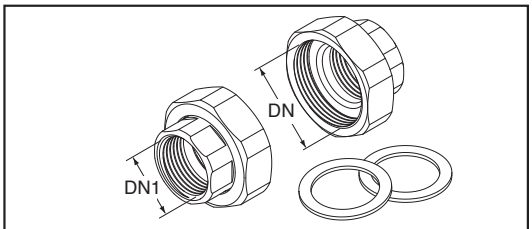


Dimensions and weights



TYPE	DN	230V A max	230V A min	P1 W max	P1 W min	mm A	Net weight kg
NCES 15-40/130	G 1	0,41	0,08	48	8	130	2,15
NCES 20-40/130	G 1 1/4	0,41	0,08	48	8	130	2,25
NCES 25-40/130	G 1 1/2	0,41	0,08	48	8	130	2,35

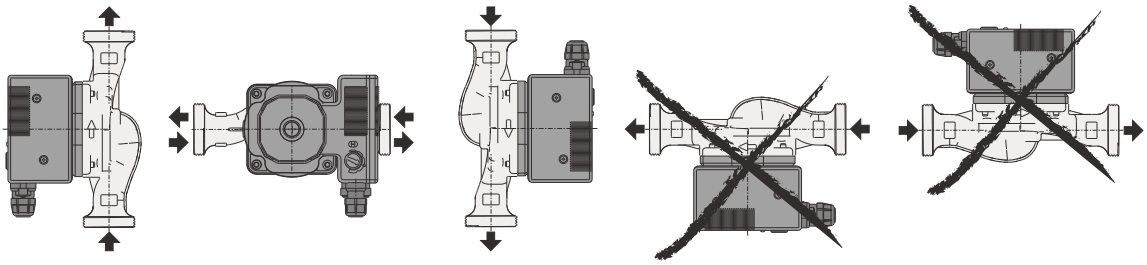
Unions (on request)



TYPE		DN	DN1
KIT G 1 - G 1/2	(NCES 15..)	G 1	G 1/2
KIT G 1 1/4 - G 3/4	(NCES 20..)	G 1 1/4	G 3/4
KIT G 1 1/2 - G 1	(NCES 25..)	G 1 1/2	G 1

Examples of installations

Installation



Terminal box arrangement (on request)