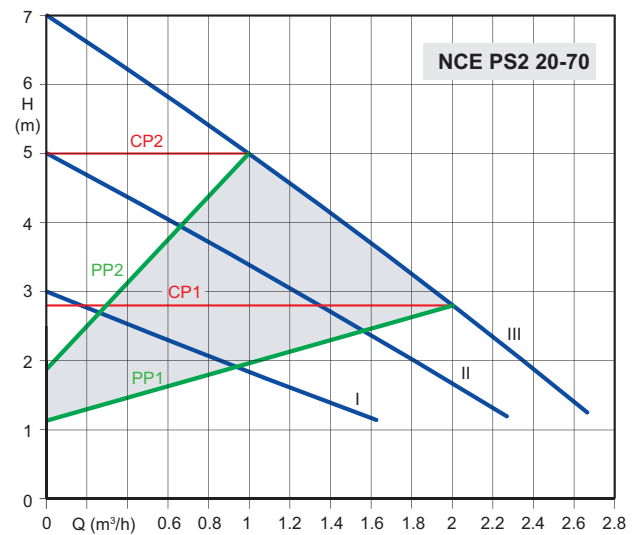
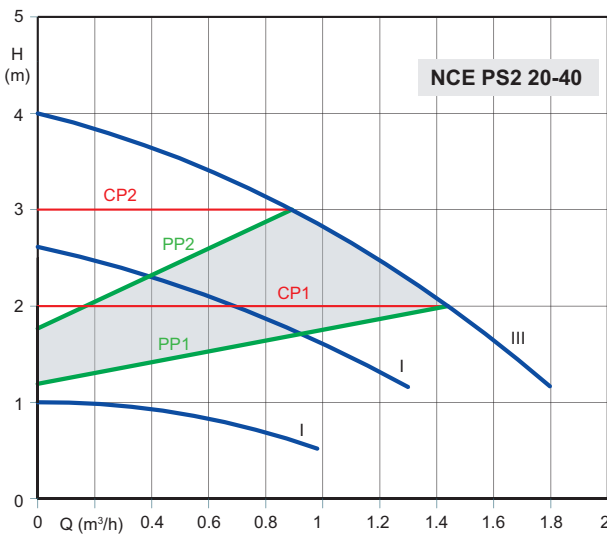


# NCE PS2



Coverage chart



High efficiency energy circulating pumps for sanitary hot water

# NCE PS2



## Construction

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

## Applications

Impianti di circolazione di acqua calda sanitaria.

## Operating conditions

Liquid temperature from +5 °C to +65 °C  
 - Ambient temperature from 0 °C to +40 °C  
 Maximum permissible working pressure: 3 bar  
 Storage: -10°C/+50°C max. relative humidity 95% at 40 °C  
 - Certifications: in conformity with CE requirements  
 Sound pressure ≤ 45 dB (A).  
 - Minimum suction pressure: - 0,05 bar at 75 °C 0,28 bar a 90 °C.  
 EMC secondo: EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3.  
 Connections: threaded ports ISO 228: G 1.

## Motor

Synchronous motor with permanent magnet.  
 - Motor: variable speed  
 - Standard voltage: single-phase 230 V (-10%;+6%)  
 Frequency: 50-60 Hz  
 - Protection: IP 44  
 - Insulation class: F  
 - Class II appliance  
 Overload protection (integrated).  
 - Cable: phases and neutral.  
 Constructed in accordance with EN 60335-1, EN 60335-2-51.

## Designation

**NCE PS2 20 - 40 / 130**  
**NCE** = Series  
**PS2** = Version for sanitary hot water  
**20** = DN ports in mm  
**40** = Max. head in dm  
**130** = connection size mm

## Materials

Component	Material
Pump casing	Bronze
Impeller	Composite PES
Shaft	Ceramic
Ball bearings	Ceramic
Thrust bearing	Ceramic
Rotor	jacket
Winding	Copper wire
Gasket	EPDM

## Operating modes



Proportional pressure mode:  
 PP1 Lowest proportional pressure curve  
 PP2 Highest proportional pressure curve  
 The duty point of the pump will move up or down on the higher proportional pressure curve, depending on the heating demand.  
 The head (pressure) is reduced as the heating demand decreases and increases as the heating demand increases



Constant pressure mode:  
 (CP1 Lowest constant pressure curve)  
 (CP2 Highest constant pressure curve)  
 The duty point of the pump will move outwards or along a constant pressure curve, depending on the heating demand.  
 The head (pressure) is kept constant, regardless of the heating demand.



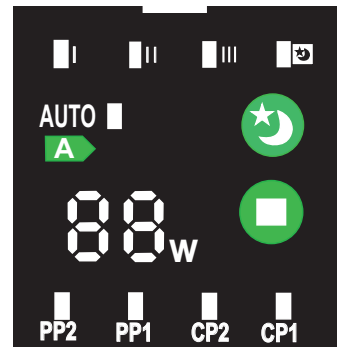
Fixed speed mode:  
 (III) Pump runs at a constant speed and consequently on a constant curve. In speed III, the pump is set to run on the Max. curve under all operating conditions. Quick venting of the pump can be obtained by setting the pump to speed III for a short period.  
 (II) Pump runs at a constant speed and consequently on a constant curve. In speed II, the pump is set to run on the Medium curve under all operating conditions.  
 (I) Pump runs at a constant speed and consequently on a constant curve. In speed I, the pump is set to run on the Min. curve under all operating conditions.



Automatic mode  
 In "AUTO" mode, pump power automatically increases or decreases based on system flow under certain conditions.



Night mode:  
 The pump works by selecting the night mode, after one hour the power turns off automatically, after two hours it will drop to a minimum between 5 and 10 watts, after seven hours the automatic mode of the pump is eliminated and restored to the original conditions.

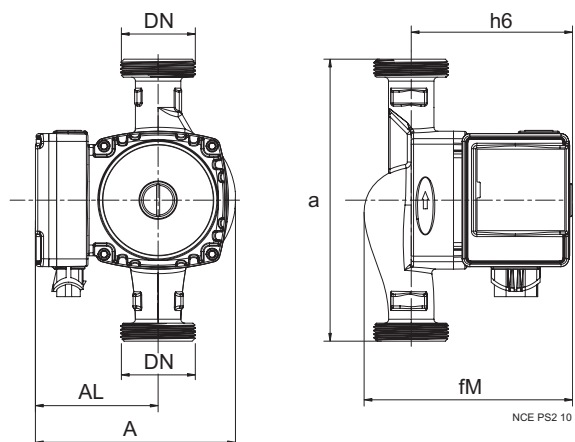


Operating functions - control buttons.  
 NCE PS circulator could work:  
 with curves at proportional pressure  
 with curves at constant pressure  
 with curves at fixed speed  
 - automatic mode  
 - night mode

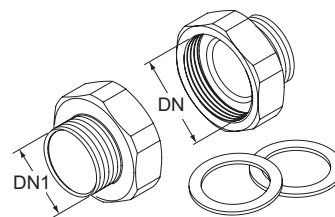
# NCE PS2



## Dimensions and weights



## Unions



TYPE	DN	DN1
KIT G 1 - G 3/4 (NCE PS . 20..)	G 1	G 3/4

TYPE	DN	H	Q	P1	a	fM	h6	A	AL	kg
		m	m <sup>3</sup> /h	W max	mm	mm	mm	mm	mm	kg
NCE PS2 20-40/130	G 1	4	1.8	22	130	129	101	128	78	2.1
NCE PS2 20-70/130	G 1	7	2.7	47	130	129	101	128	78	2.1

## Examples of installations

