

NCE EI

Energy saving circulating pumps



Construction

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

Applications

Small domestic heating systems.
Floor heating systems.

Operating conditions

- Liquid temperature from +2 °C to +95 °C
- Ambient temperature from 0 °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 50 °C
1,0 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, G 1 1/2, G 2
- The benchmark for most efficient circulators is $EEL \leq 0,20$.
- Minimum power: 3 W.

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: 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.

Designation

NCE EI 32 - 60 / 180

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

Special features on request

Brass or cast iron unions.
EPP thermal insulation shell.

Features

Compact design

The space saving **NCE EI** is a very compact circulating pump, allows inr easy installation in small domestic heating systems.

Easy to install and to adjust

Installing the **NCE EI** is considerably simplified by the quick setting and power installation plug.

Reliable

Like all our electronic circulating pumps, the **NCE EI** features the patented self-cleaning square chamber design, which eliminates any possibility of rotor blockage.

Ceramic shaft

Hydraulics components are completely painted with cataphoresis.

Easy use

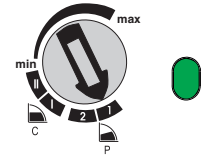
Operating range with fixed curves from 0,5 m to 7 m; possibility to choose 2 (1-2) proportional pressure curves and 2 (I-II) constant pressure curves.

Operating modes



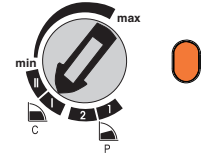
PROPORTIONAL CURVE PROGRAMMING $\Delta p-v$
(GREEN LED)

Moving the switch to 1 or 2 setting, the pump operates with the proportional curve. This mode ensures maximum energy efficiency.



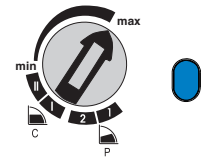
CONSTANT CURVE PROGRAMMING $\Delta p-c$
(ORANGE LED)

Moving the switch to I or II setting, the pump operates with a constant curve according to the selected flow rates.



MANUAL PROGRAMMING
(BLUE LED)

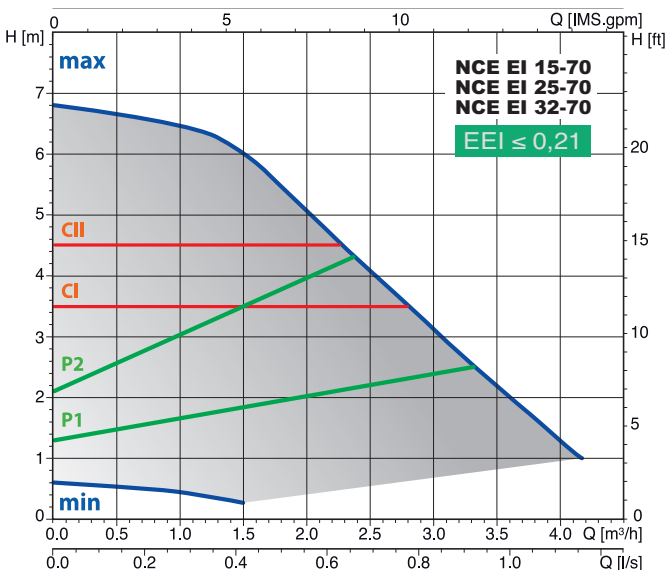
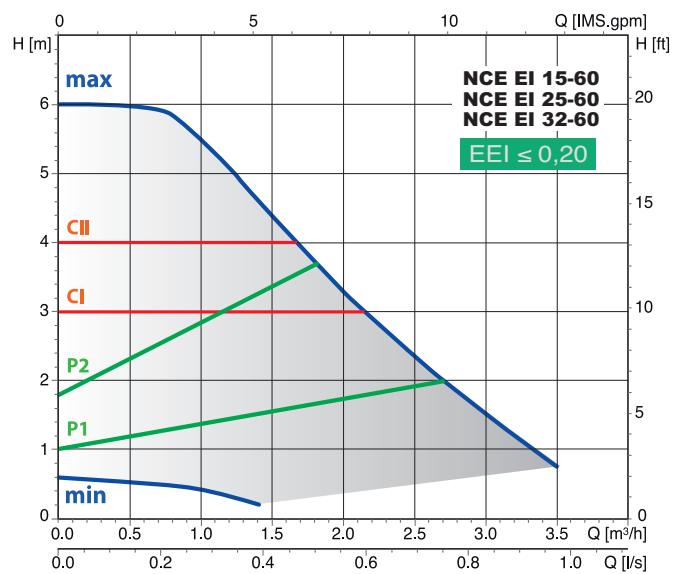
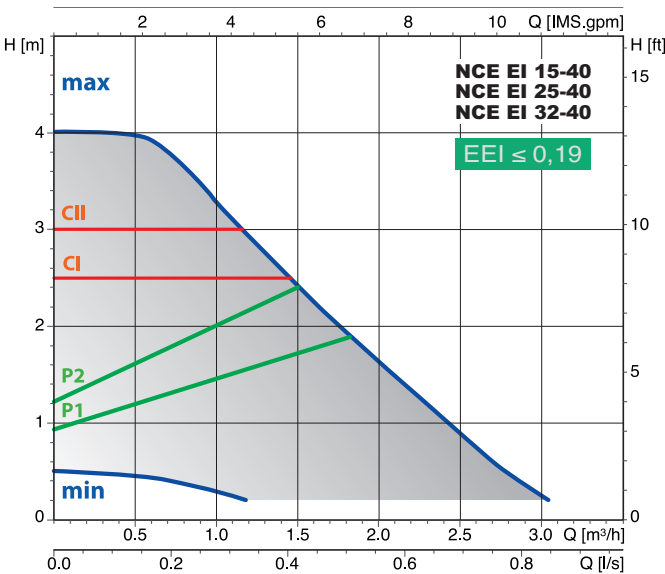
Setting the switch in any position between the MIN and MAX points, the most suitable operating curve for the installation is manually selected.



WARNING!

- The red LED indicates that the pump is not rotating but is still under tension.
- White flashing LED : plant degassing requirement, air in the system.

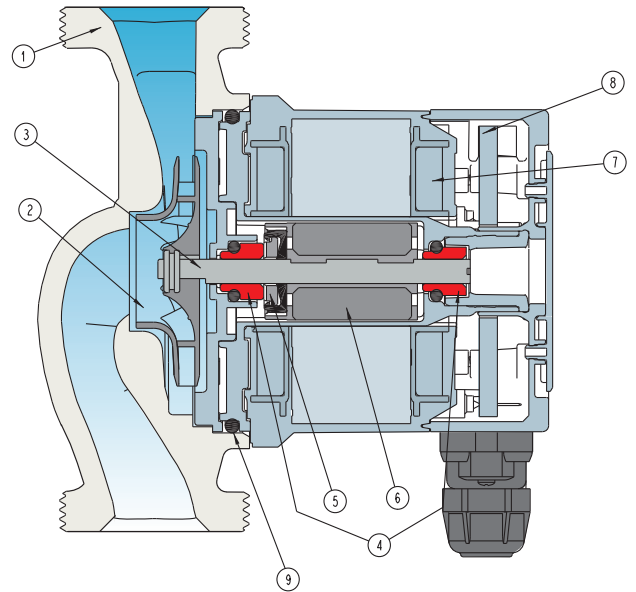
Characteristic curves



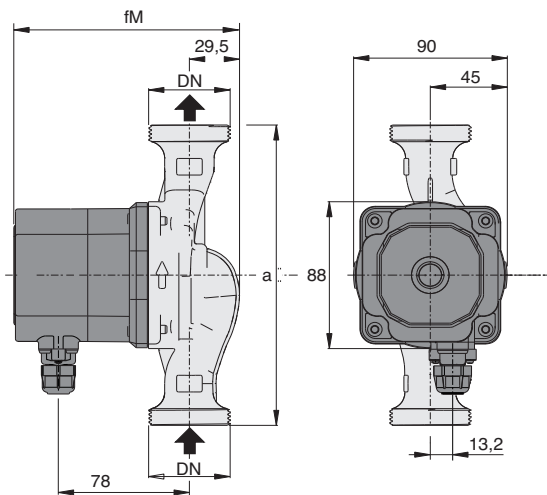
CI-CII constant curve
P1-P2 proportional curve
min-max n fixed curves

Materials

Component	Pos.	Material
Pump casing	1	Cast iron GJL 200 EN 1561
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

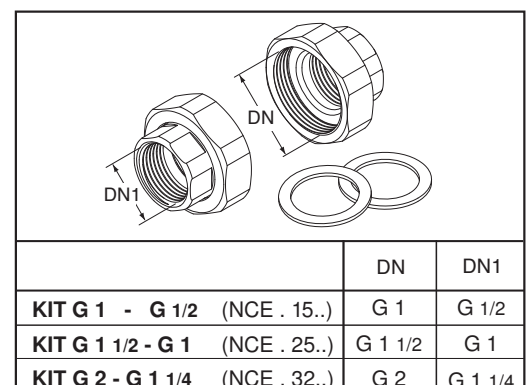


Dimensions and weights



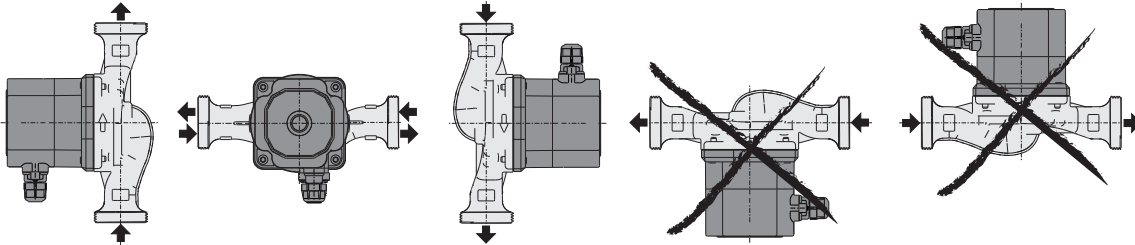
TYPE	DN	230V		P1		mm		kg
		A max	A min	W max	W min	fm	a	
NCE EI 15-40/130	G 1	0,17	0,03	22	3	134	130	1,67
NCE EI 25-40/130	G 1 1/2							1,81
NCE EI 25-40/180	G 1 1/2	0,17	0,03	22	3	134	180	1,96
NCE EI 32-40/180	G 2							2,10
NCE EI 15-60/130/A	G 1	0,33	0,03	42	3	134	130	1,67
NCE EI 25-60/130/A	G 1 1/2							1,81
NCE EI 25-60/180/A	G 1 1/2	0,33	0,03	42	3	134	180	1,96
NCE EI 32-60/180/A	G 2							2,10
NCE EI 15-70/130	G 1	0,44	0,03	56	3	144	130	1,91
NCE EI 25-70/130	G 1 1/2							2,05
NCE EI 25-70/180	G 1 1/2	0,44	0,03	56	3	144	180	2,20
NCE EI 32-70/180	G 2							2,34

Unions (on request)



Examples of installations

Installation



Terminal box arrangement (on request)

