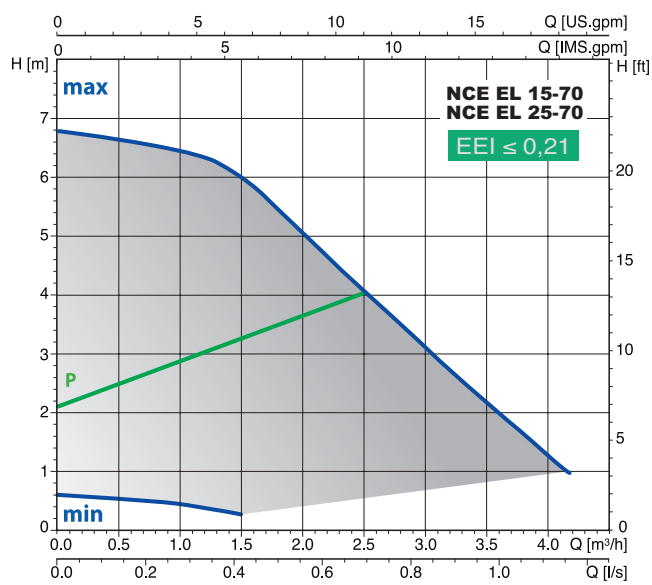
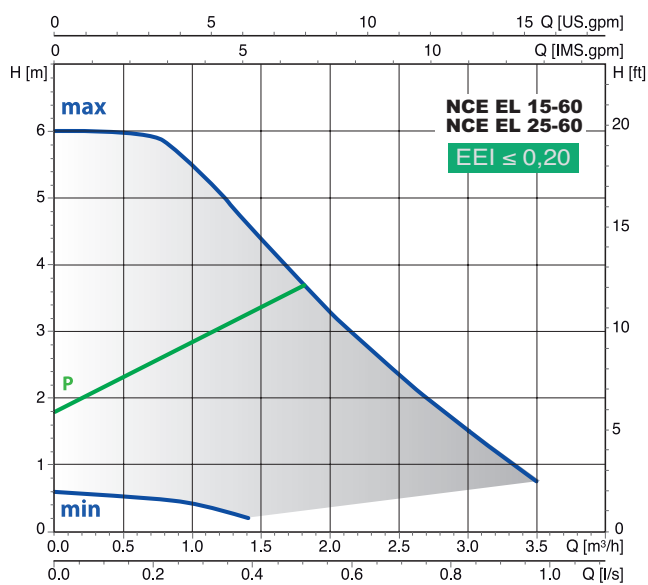


Coverage chart $n \approx 2900$ rpm

Energy saving circulating pumps for solar systems with frequency converter

Construction

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

Applications

Solar thermal systems.

Operating conditions

- Liquid temperature from +2 °C to +110 °C
- Ambient temperature from 0 °C to +40 °C
- Maximum permissible working pressure: 10 bar
- Storage: -20°C/+70°C max. relative humidity 95% at 40 °C
- Certifications: in conformity with CE requirements
- Sound pressure ≤ 43 dB (A).
- Minimum suction pressure: 0.3 bar at 50°C, 1.0 bar at 95°C, 1.5 bar at 110°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 EEI ≤ 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 (integrated).
 - 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 or cast iron unions.
EPP thermal insulation shell.

Designation

NCE EL 25 - 60 / 180
NCE = Series
EL = Version
32 = DN ports in mm
60 = Max. head in dm
180 = connection size mm

Materials

Component	Material
Pump casing	Cast iron GJL 200 EN 1561
Impeller	Composite
Shaft	Ceramic
Ball bearings	Carbon
Thrust bearing	Ceramic
Rotor	Composite / Ferrite
Winding	Copper wire
Electronic card	-
Gasket	EPDM

Operating modes

PROPORTIONAL CURVE PROGRAMMING Δp-v
(GREEN LED)

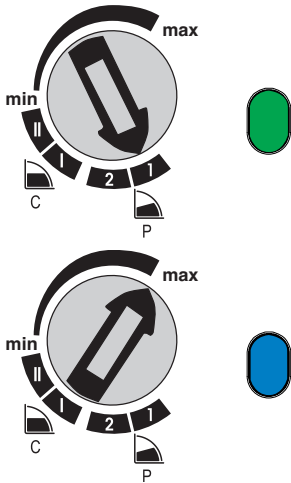


Moving the switch to 1 or 2 setting, the pump operates with the proportional curve.
This mode ensures maximum energy efficiency.

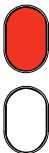
MANUAL PROGRAMMING
(BLUE LED)



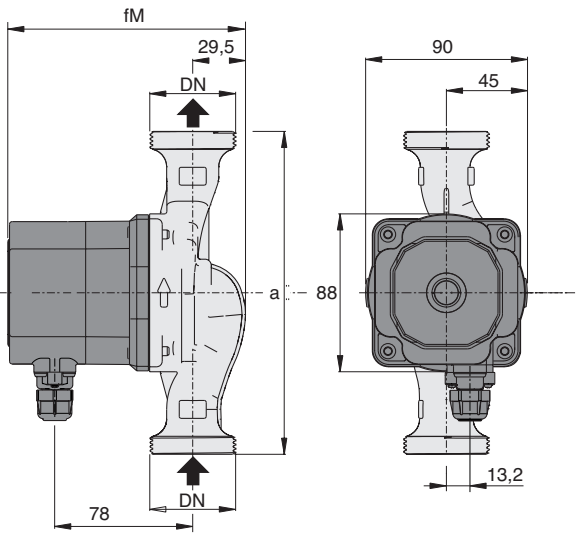
Setting the switch in any position between the MIN and MAX points, the most suitable operating curve for the installation is manually selected.



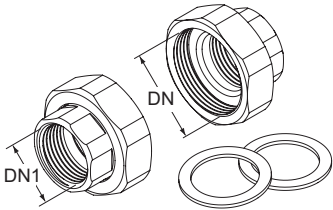
WARNING!
- The red LED indicates that the pump is not rotating but is still under tension.
- White flashing LED : plant degassing requirement, air in the system.



Dimensions and weights



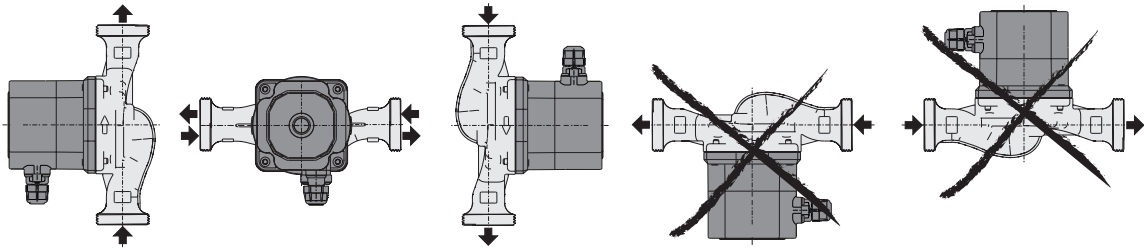
Unions (on request)



TYPE	DN	DN1
KIT G 1 - G 1/2 (NCE . 15..)	G 1	G 1/4
KIT G 1 1/2 - G 1 (NCE . 25..)	G 1 1/2	G 1
KIT G 2 - G 1 1/4 (NCE . 32..)	G 2	G 1 1/4

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

Examples of installations



Terminal box arrangement (on request)

