

# NCED G.F Energy saving twin circulating pumps with flanges



## Construction

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

## Applications

Heating, conditioning, circulating systems.  
For civil and industrial applications.

## Operating conditions

- Liquid temperature from -10 °C to +110 °C
- Ambient temperature from 0 °C to +40 °C
- Maximum permissible working pressure: 6/10 bar
- Storage: -20°C/+70°C max. relative humidity 95% at 40 °C
- Certifications: in conformity with CE requirements
- Sound pressure  $\leq 54$  dB (A).
- Minimum suction pressure:
  - 0,5 bar at 50 °C.
  - 0,8 bar at 80 °C.
  - 1,4 bar at 110 °C.
- Maximum glycol quantity: 20%.
- EMC according to: EN 55014-1, EN 55014-2  
EN 61000-3-2, EN 61000-3-2.
- Connections: Flanges according to PN 6/10, EN 1092-2, DN 40, 50, 65, 80, 100.
- The benchmark for most efficient circulators is  $EEL \leq 0,20$ .

## Designation

NCED G 40 F - 120 / 250

Series _____	_____
Twin pumps version _____	_____
Version _____	_____
DN ports in mm _____	_____
With flanges _____	_____
Max. head in dm _____	_____
connection size mm _____	_____

## 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
- Overload protection (integrated).
- Cable: phases and neutral.
- Constructed in accordance with: EN 60335-1, EN 60335-2-51.

## Features

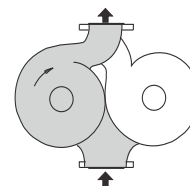
### Smart pump

NCED G.F adapt its functions to the system: the circulator measures the pressure and the flow and adjusts the speed to the selected pressure.

### Easy use

There are different operating modes selectable from the control panel.

## Operation



### Single operation

Operation of a single pump chosen by the customer, with the second pump on stand-by

## Operating modes



### Automatic mode

(factory setting):

In this mode the pump automatically sets the operating pressure, depending on the hydraulic system. This mode is recommended in most systems.



### Proportional pressure mode:

The circulator changes the pressure proportionally to the current flow. The pressure value can be adjusted with the + and - buttons.



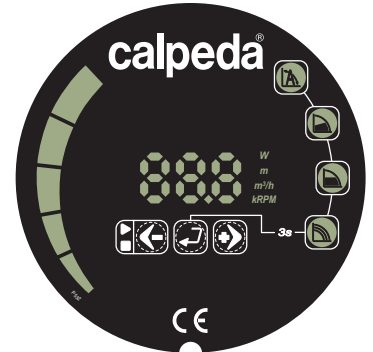
### Constant pressure mode:

The circulator maintains the pressure constant when the reference flow changes. The pressure value can be adjusted with the + and - buttons.



### Fixed speed mode:

The circulator works with constant curve and the curve could be changed using + e - buttons.

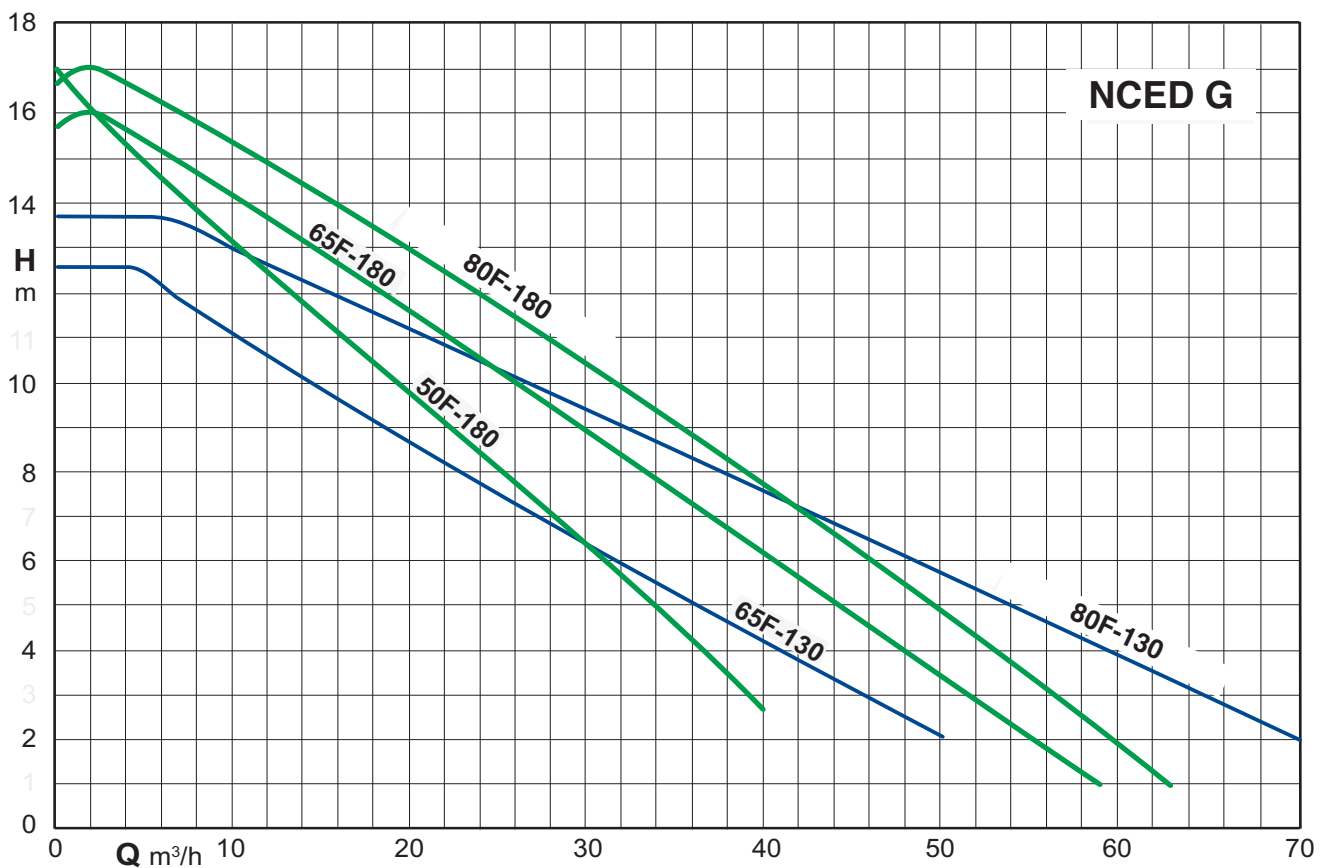


Operating mode-control panel

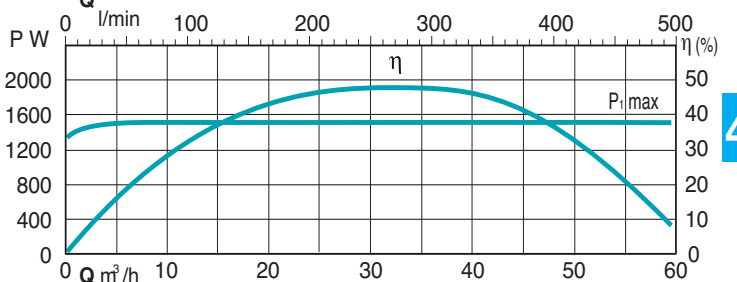
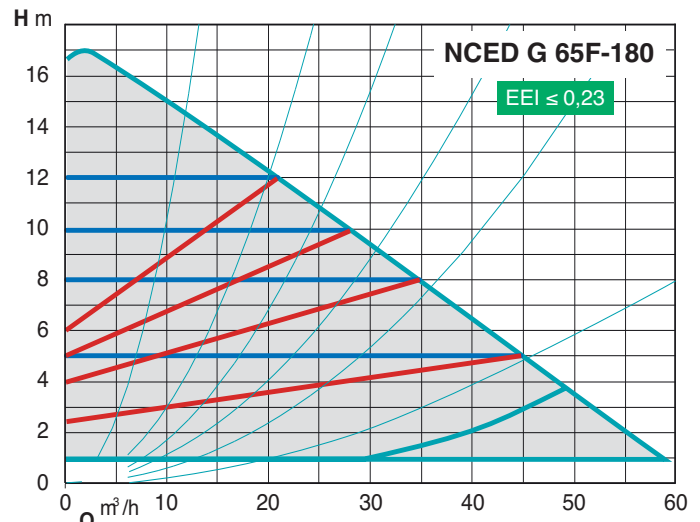
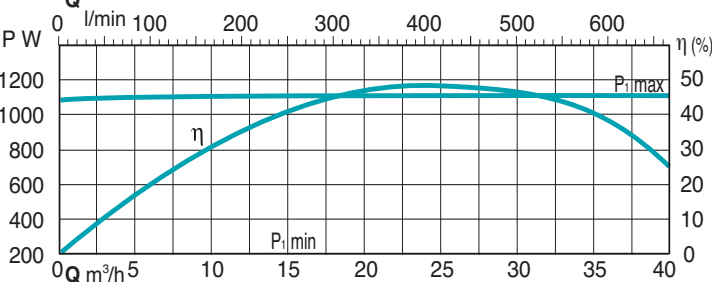
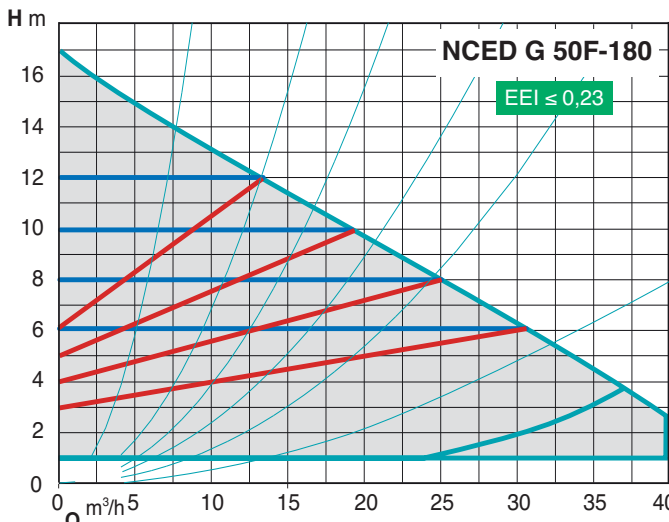
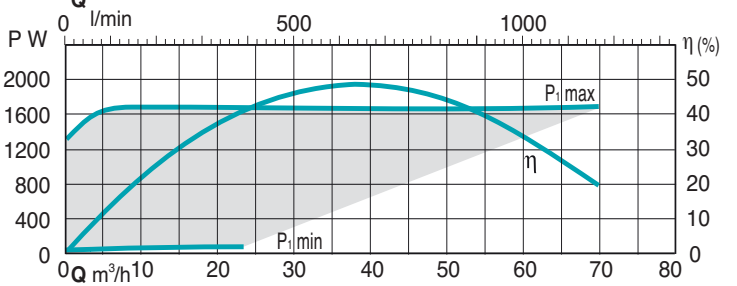
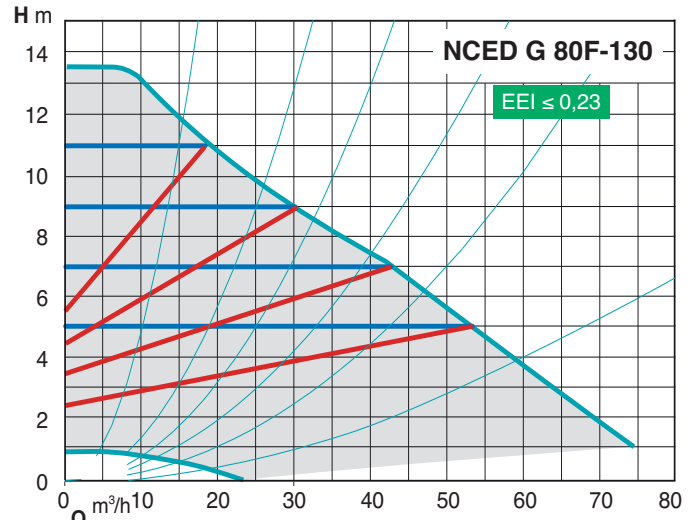
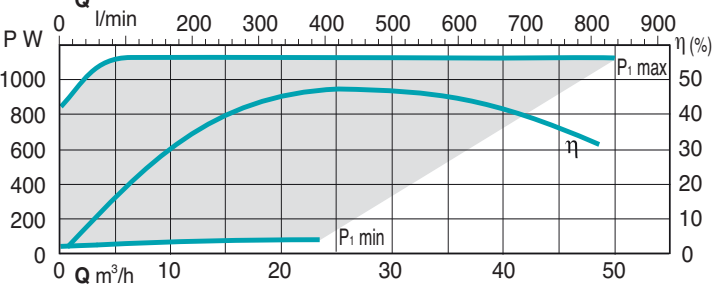
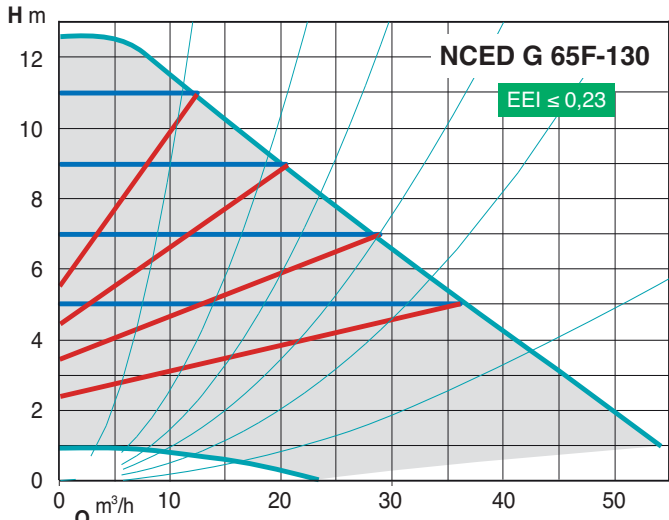
NCED G.F could works in:

- automatic mode
- proportional pressure mode
- constant pressure mode
- fixed speed mode

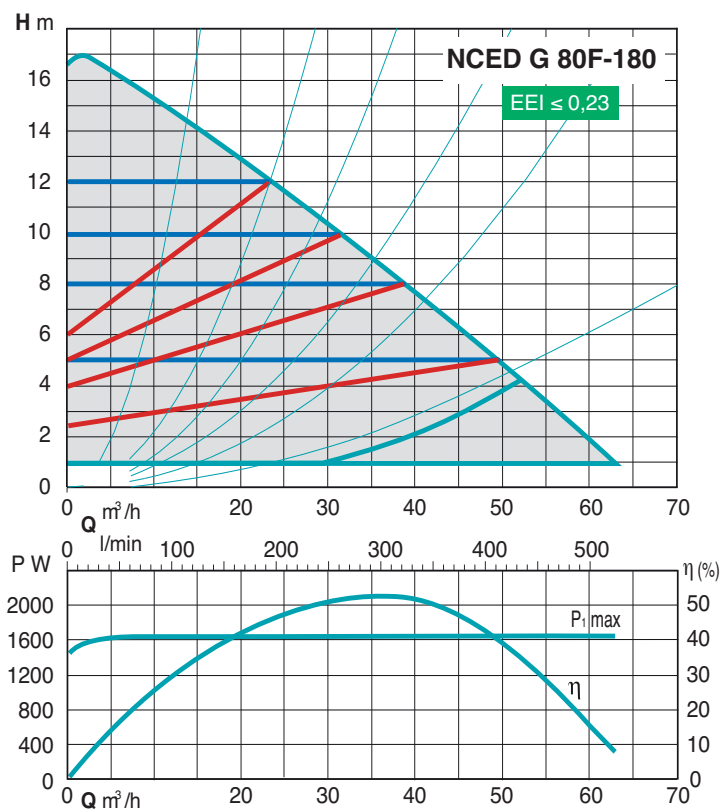
## Coverage chart



## Characteristic curves

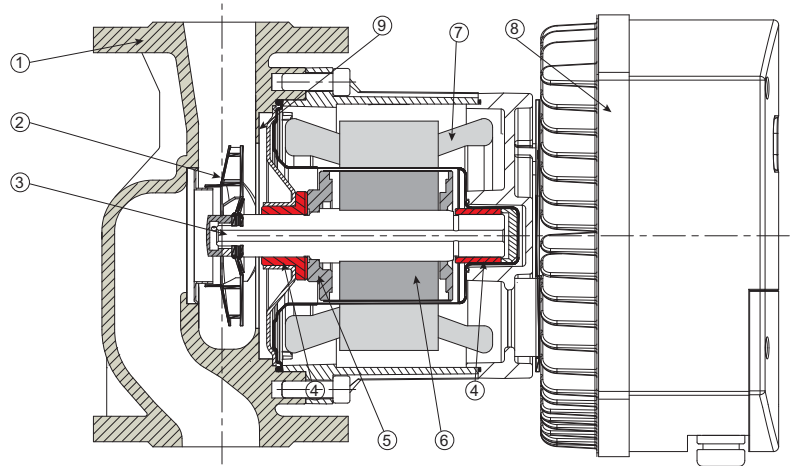


## Characteristic curves

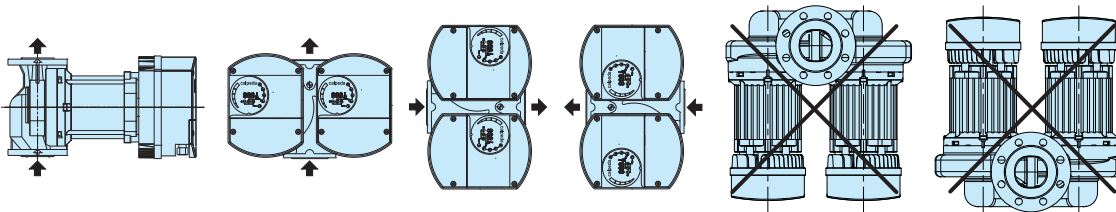


## Materials

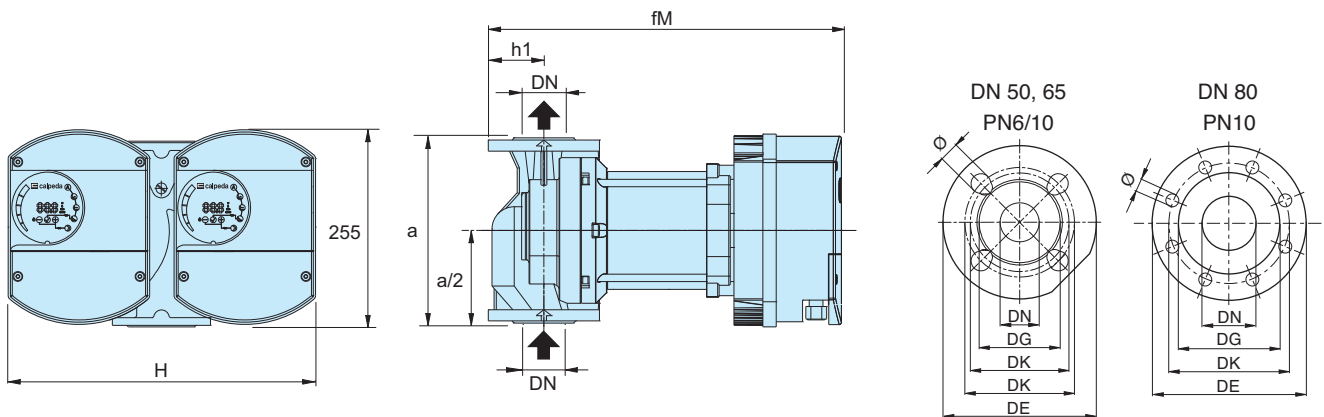
Component	Pos.	Material
Pump casing	1	Cast iron
Impeller	2	Stainless steel
Shaft	3	Stainless steel
Bearings	4	Carbon
Thrust bearing	5	Steel
Rotor	6	Stainless steel jacket
Winding	7	Copper wire
Electronic card	8	-
Gasket	9	EPDM



## Examples of installations



## Dimensions and weights



TYPE	DN	H m	Q m <sup>3</sup> /h	1~ 230 V A max	P <sub>1</sub>		mm				
					W min	W max	a	fM	h1	H	kg
NCED G 50F-180/280	50	17	40	8	10	1100	280	425	70	403	59
NCED G 65F-130/340	65	13	65	8	10	1100	340	449	80	452	64
NCED G 65F-180/340	65	17	60	8	10	1500	340	483	80	452	73
NCED G 80F-130/360	80	13	78	8	10	1600	360	503	100	462	78
NCED G 80F-180/360	80	17	62	8	10	1600	360	503	100	452	76

DN	DE	DK	DG	holes	
				N.	Ø
50	165	110/125	90	4	14/19
65	185	130/145	110	4	14/19
80	200	160	128	8	19