

Solar package

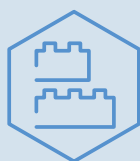
NIBE PV

NIBE PV is an integrated solution which is based on a fully modular system with following sizes: 4 / 8 / 12 / 16 / 20 kW. Each size consists of a number of base package with 10 panels and a nominal power of 4 kW, mounting parts and a suitable inverter with communication module, all of which are ready for installation.

NIBE PV comprises of monocrystalline silicon cell panels which use PERC technology, with an output of 400 Wp. The solar panels are elegant, all-black panels. NIBE PV harnesses sunlight all year round and converts it into electricity. NIBE PV can be connected to your NIBE heat pump* for maximum energy efficiency.

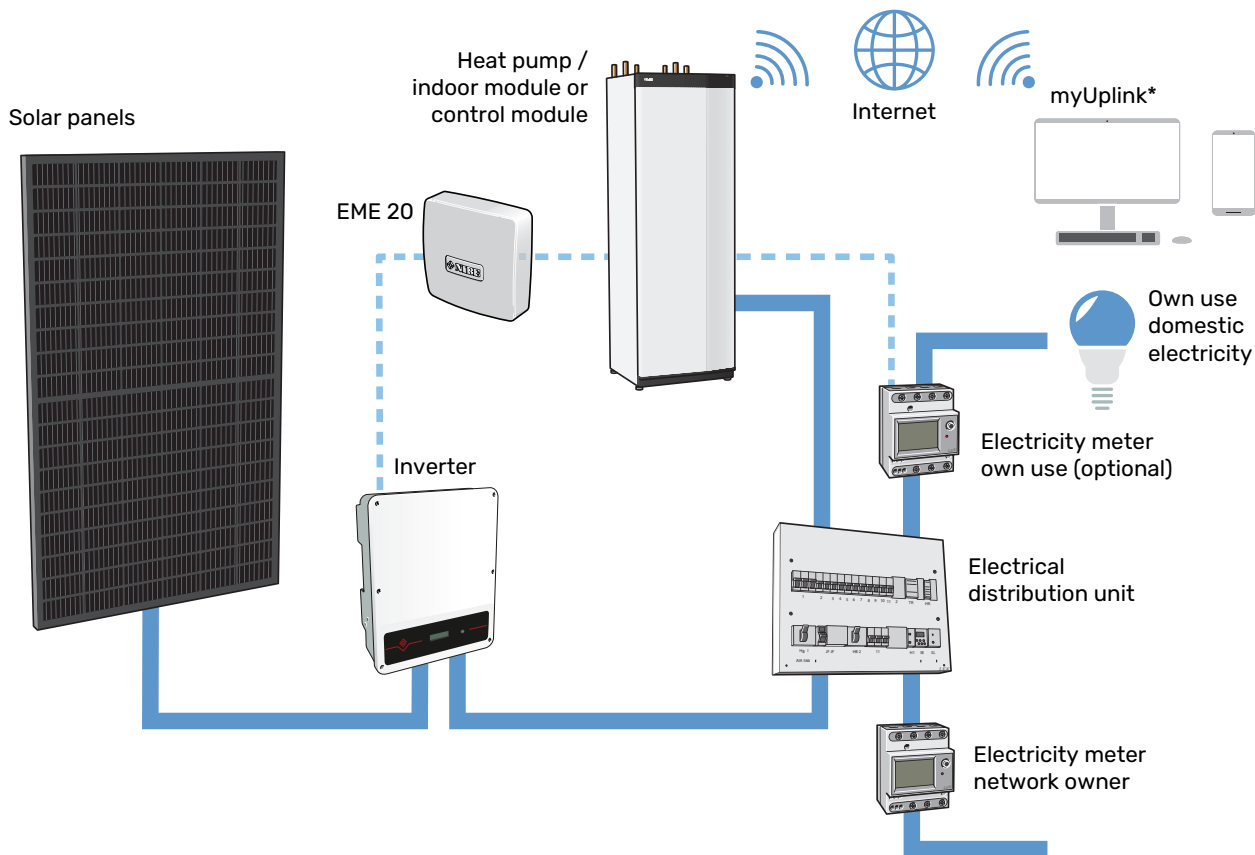
Thanks to smart technology, the product gives you control over your energy consumption and will be a key part of your connected home. The efficient control system automatically adjusts the indoor climate for maximum comfort, and you do nature a favour at the same time.

* applies to systems which can be connected to myUplink / NIBE Uplink.



- **Flexible modular system which can be easily expanded.**
- **Elegant, all-black panels which use PERC technology for maximum efficiency.**
- **Connect to a NIBE heat pump for maximum energy efficiency.**

This is how NIBE PV works



* myUplink for the S-series and NIBE Uplink for the F-series.

Factory-fitted junction boxes prepared with cables for positive and negative connections can be found on the reverse of the solar panels. The cables are fitted with quick-release connectors.

The electrical cables between the panels and the inverter must be double insulated and UV/weather-resistant photovoltaic cables, 4 mm² up to 100 m length (not supplied).

The inverter is connected and fused to the fuse panel as if it was a load with the same output. The inverter includes a factory-fitted 300 mA residual current device. If the inverter is to be connected to an external residual current device, this must be 300 mA or larger and of type A.

On an annual basis, you obtain the maximum possible benefit from your solar panel package when it is used together with a NIBE heat pump.

NIBE PV connected to your NIBE heat pump via a supplied communication module, which in turn can be connected to myUplink / NIBE Uplink. This system solution means that the inverter's information is shown in the heat pump. Thanks to smart technology, this system solution provides you with control over your energy consumption via myUplink / NIBE Uplink.

With the heat pump's efficient control system and smart communication, the heat pump can adapt to the free solar energy that is produced.

The surplus portion is supplied to the national grid for use in the neighbourhood. When you produce your own solar electricity from solar cells, you are producing renewable energy without any emissions, and with no worry about rising electricity prices.

INSTALLATION

General

The installation must only be carried out by competent personnel.

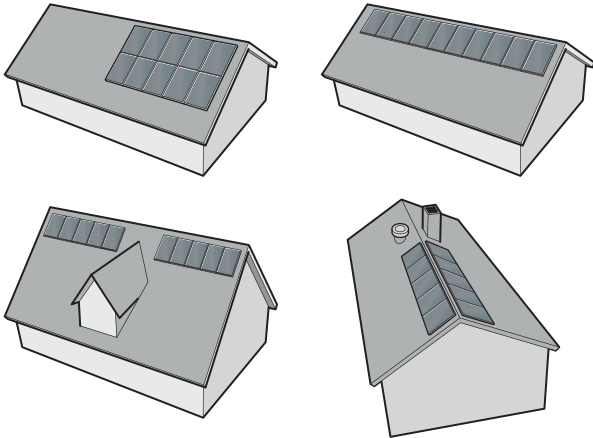
The enclosed materials are those required for the installations described. In special cases, these may need to be supplemented. If in doubt, contact your supplier. Information on the applicable standards and regulations must be obtained prior to installation and commissioning. The electrical installation, as well as the notification to the network operator, must be carried out by a qualified electrician.

Please note that commissioning the installation before the network operator has given its approval is not permitted.

Mounting

Examples of possible combinations

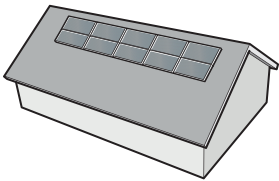
Examples of possible combinations per ten panels:



Horizontal installation

The rails are installed vertically in the case of horizontal mounting. Remember that extra roof brackets and clamps are required.

Horizontal installation on a tiled roof also requires a retrofit kit PRM 61-20.



Specially adapted roof brackets for tiled roofs, sheet metal roofs, felt roofs or seamed sheet metal roofs. The type of roof bracket to be used must be specified when ordering. If the panels are installed in a different formation, additional mounting materials may be required.

Additional connectors and mounting materials may be required to install solar panels in different groupings.

Additional panels

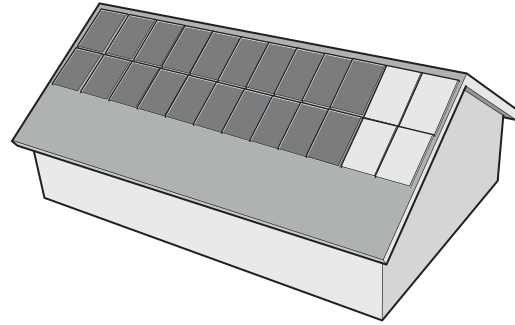
Each package can be expanded with additional panels (PVK 40-1).

This means that you have extremely good flexibility, allowing attractive roof installation.

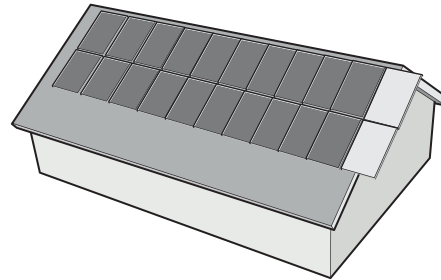
Check that the inverter can cope with the total power with additional panels.

Example

8 kW package installed on roof that is expanded by e.g. four solar panels (9.6 kW)



8 kW package installed on roof where it was decided not to install e.g. two panels (7.2 kW).



Number of solar panels per string and per package

The table shows how many panels you can have per string, as well as how many panels are standard and how many the inverter can cope with. The inverter has dual trackers, allowing the installation of different numbers of panels per string. If the number of panels is not sufficient to achieve the minimum number for two strings, you have to install all the panels in one string.

String = a number of panels connected in series.

PVI	Inverter rec. max. DC:	Min./ string	Max./ string	Std./ no.	Min. total	Rec. max. total
10-3 ¹	3.9 kW	4	9	-	4	9
20-4	5.2 kW	6	13	10	6	13
20-6	8 kW	6	20	20	6	20
20-10	13 kW	6	20	30	6	32
20-12	16 kW	6	2x20 ²	40	6	40
20-15	20 kW	6	2x20 ²	50	6	50

¹ 1x230 V.

² Tracker one can manage one string or two equally long strings.

Good to know about NIBE PV

Installation and positioning

Using the map and the diagram, it is possible to estimate the annual value of the insolation on the surface where the solar panels are placed.

100% is the insolation at a horizontal surface. The angle of inclined surfaces is 45°.

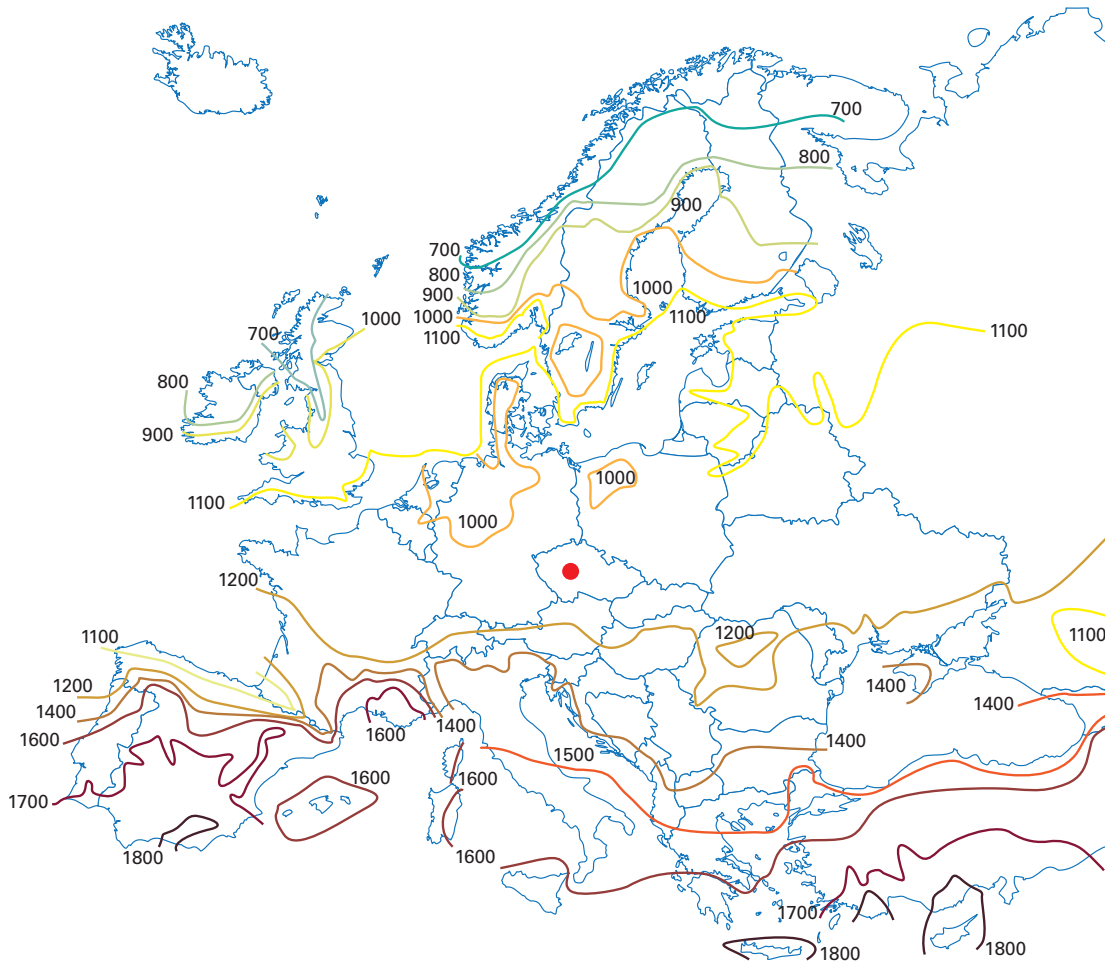
The diagram shows insolation as a percentage of global radiation in relation to surfaces at various orientations and angles.

The map shows lines with the same global radiant flux, i.e. the insolation measured at horizontal surfaces.

1. Calculate the annual solar radiation using the map. The specific solar radiation for the installation is obtained as a percentage, based on the location of the solar panel according to the diagram.
2. Multiply the results by the installation's peak output (e.g. 4 / 8 / 12 / 16 / 20 kW).
3. Multiply the result 2 by a constant 0.9 to calculate the energy production in kWh/year (with a reservation for shade, dirt and snow coverage).

Example: Prague, 8 kW, 45°, installation south (112 %).

$$1120 \times (112/100) \times 8 \times 0.9 = 9032 \text{ kWh/year}$$



Technical specifications

Technical specifications

Solar panel		kW	4	8	12	16	20	
Number of panels			10	20	30	40	50	
Panel area	m ²		20	40	60	80	100	
Rated output at STC (P _{MPP})	Wp		400					
Rated voltage (V _{MPP})	V		37.1					
Rated current (I _{MPP})	A		10.8					
External; dimensions (LxWxH)	mm		1879x1045x32					
Version with aluminium frame			Anodised black					
Weight panel	kg		22					
Connection cables with pre-installed connectors	mm		2x1250					
Basic kit PVK			40-10			40-20		
Part No.			057 315			057 314		
Inverter			PVI 10-3	PVI 20-4	PVI 20-6	PVI 20-10	PVI 20-12	PVI 20-15
Voltage	V		1x230	3x400				
Outer dimensions (Wx-HxD)	mm		347x432x145	354x433x147		354x433x155		
Weight	kg		14	15		16	18	
Max. number of strings			2				3	
Colour			White					
Number of trackers (MPPT)			2					
Enclosure class			IP65					
Max. power output ¹	kW		3	4	6	10	12	15
Max. rec. DC power	kW		3.9	5.2	8.0	13.0	16.0	20.0
Recommended fuse size	A		16			25	32	
Part No.			057 200	057 276	057 277	057 278	057 279	057 281
EME 20 (only included in inverter PVI 10/20)								
External dimensions (LxWxH)	mm		81x81x28					
Enclosure class			IP22					
Part No.			057 188					

¹ Has to be fused according to the max. power output or the max. rec. DC power, if that is lower.

Accessories

Not all accessories are available on all markets.

Detailed information about the accessories and complete accessories list available at nibe.eu.

Solar package NIBE PV

CMO 11 Wifi communication module (1 x) for the PVI 10-series

Part no. 057 252



CMO 22 Wifi communication module (1 x) for the PVI 20/30-series

Part no. 057 283



Sustainable energy solutions since 1952

NIBE has been manufacturing energy-efficient and sustainable climate solutions for your home for 70 years. It all began in Markaryd, in the southern Swedish province of Småland, and we recognise our Nordic heritage by utilising the power of nature. We combine renewable energy with smart technology to offer efficient solutions, allowing us to work together to create a more sustainable future.

Regardless of whether it is a chilly winter's day or a warm afternoon in the summer sun, we need a balanced indoor climate that allows us to enjoy a comfortable life, whatever the weather. Our extensive range of products supply your home with cooling, heating, ventilation and hot water, making it possible for you to create a pleasant indoor climate with little impact on the environment.

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