# StecaGrid 2020, StecaGrid 3000, StecaGrid 3600 and StecaGrid 4200









StecaGrid 2020
StecaGrid 3000
StecaGrid 3600
StecaGrid 4200

## Inverter topology

The new „coolcept" inverter topology, with an innovative circuit design that achieves highest efficiency, has now been integrated into these StecaGrid inverters.

The „coolcept" inverter topology is based on a single-stage transformerless switching concept that uses proven standard components to implement symmetric step-down converters with downstream pole-reversing circuits.

## Highest efficiency with longer service life

The high efficiency results in a peak efficiency of 98.6 % and a European efficiency of up to 98.2 %, which results in less lost power that must be dissipated into the environment. This improves your yields.

The efficiencies of these inverters are only very slightly dependent on the module input voltage. This allows the number and type of modules to be freely selected without resulting in a yield loss.

In addition to this, a new and unique cooling concept inside the inverter ensures an even distribution of the dissipated heat and a long service life for the device.

## Product design and visualisation

For the first time, the very high efficiency allows the use of a design housing made of plastic. This offers many advantages, for example in the installation. The overall surface temperature of the StecaGrid remains very low. The inverters have protection class II.

The StecaGrid has a graphical LCD display for visualising the energy yield values, current performance and operating parameters of the system. Its innovative menu allows individual selection of the various measurements.

The guided, pre-programmed menu allows easy final commissioning of the device.

## Installation

The lightweights weigh only 9 kg and can be easily and safely mounted on a wall. The supplied wall bracket and practical recessed grips for right and left handed installers make mounting of the device simple and convenient. The device does not need to be opened for installation. All connections and the DC circuit breaker are externally accessible.

## Product features

- Highest efficiency
- Simple installation
- Integrated data logger
- Firmware update possible
- Low housing temperature at full load
- Functionally perfect, environmentally-friendly plastic housing
- Lowest possible own consumption
- Integrated DC circuit breaker
- Protective insulation according to protection class II
- Very long service life
- Droop Mode for integration in hybrid systems (further information: Catalogue Steca PV Off Grid / Single-phase and three-phase AC hybrid systems)
- Fixed voltage mode for other energy sources
- Service menu for parameter adjustment
- 7-year warranty after registration

## Displays

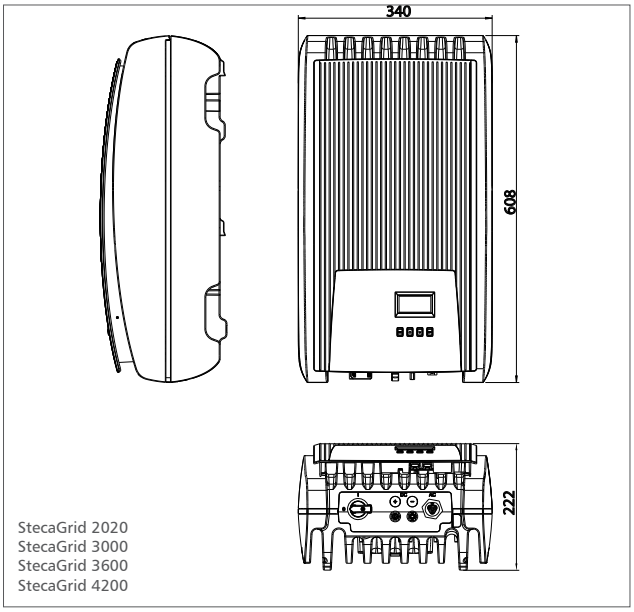
- Multifunction graphical LCD display with backlighting
- Animated representation of yield

## Operation

- Simple menu-driven operation
- Multilingual menu navigation

## Options

- System monitoring with Solar-Log™ and WEB'log
- Can be connected to the StecaGrid Vision display unit or a large-format display




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## System monitoring and accessories



**StecaGrid User**
Visualisation software



**StecaGrid Vision**
Display unit



**Meteocontrol WEB'log and Meteocontrol WEB'log Comfort**
Data logger



**Solar-Log 500/1000™**
Data logger

| | StecaGrid 2020 (125 V AC) | StecaGrid 3000 | StecaGrid 3600 | StecaGrid 4200 |
|---|---|---|---|---|
| **DC input side (PV-generator)** | | | | |
| Maximum start voltage | 450 V | 845 V | | |
| Maximum input voltage | 450 V | 845 V | | |
| Minimum input voltage | 190 V | 350 V | | |
| Minimum input voltage for rated output | 210 V | 350 V | 365 V | 430 V |
| MPP voltage | 190 V ... 400 V | 350 V ... 700 V | | |
| Maximum input current | 10 A | | | |
| Maximum input power at maximum active output power | 2,090 W | 3,060 W | 3,690 W | 4,310 W |
| Maximum recommended PV power | 2,400 Wp | 3,800 Wp | 4,500 Wp | 5,200 Wp |
| **AC output side (Grid connection)** | | | | |
| Grid voltage | 90 V ... 150 V (depending on regional settings) | 185 V ... 276 V (depending on regional settings) | | |
| Rated grid voltage | 125 V | 230 V | | |
| Maximum output current | 18 A | 16 A | | 18.5 A |
| Maximum active power (cos phi = 1) | 2,000 W | 3,000 W | 3,600 W [1] | 4,200 W [1] |
| Maximum active power (cos phi = 0.95) | - | 3,000 W | 3,530 W | 3,990 W |
| Maximum apparent power (cos phi = 0.95) | - | 3,130 VA | 3,680 VA | 4,200 VA |
| Rated power | 2,000 W | 3,000 W | 3,600 W [2] | 4,200 W [3] |
| Rated frequency | 50 Hz and 60 Hz | | | |
| Frequency | 45 Hz ... 65 Hz (depending on regional settings) | | | |
| Night-time power loss | < 0.9 W | | | |
| Feeding phases | single-phase | | | |
| Distortion factor (cos phi = 1) | < 2 % | | | |
| Power factor cos phi | > 0.99 | 0.95 capacitive ... 0.95 inductive | | |
| **Characterisation of the operating performance** | | | | |
| Maximum efficiency | 97.5 % | 98.6 % | | |
| European efficiency | 96.7 % | 98.2 % | 98.1 % | 98.2 % |
| Californian efficiency | 96.8 % | 98.3 % | 98.2 % | 98.3 % |
| MPP efficiency | > 99.7 % (static), > 99 % (dynamic) | | | |
| Own consumption | < 8 W | | | |
| Power derating at full power | from 50 °C ($T_{amb}$) | | from 45 °C ($T_{amb}$) | |
| Standby power | 6 W | | | |
| **Safety** | | | | |
| Isolation principle | no galvanic isolation, transformerless | | | |
| Grid monitoring | yes, integrated | | | |
| Residual current monitoring | yes, integrated [4] | | | |
| **Operating conditions** | | | | |
| Area of application | indoor rooms with or without air conditioning | | | |
| Ambient temperature | -15 °C ... +60 °C | | | |
| Storage temperature | -30 °C ... +80 °C | | | |
| Relative humidity | 0 % ... 95 %, non-condensating | | | |
| Noise emission | < 39 dBA | | | |
| **Fitting and construction** | | | | |
| Degree of protection | IP 21 (casing: IP 51; display: IP 21) | | | |
| Overvoltage category | III (AC), II (DC) | | | |
| DC Input side connection | MultiContact MC 4 (1 paar) | | | |
| AC output side connection | Wieland RST25i3 plug, mating connector included | | | |
| Dimensions (X x Y x Z) | 340 x 608 x 222 mm | | | |
| Weight | 9 kg | | | |
| Communication interface | RS485; 2 x RJ45 sockets; connectable to StecaGrid Vision, Meteocontrol WEB'log or Solar-Log™ | | | |
| Integrated DC circuit breaker | yes, compliant with VDE 0100-712 | | | |
| Cooling principle | temperature-controlled fan, variable speed | | | |
| Test certificate | CE mark | certificate of compliance as per DIN VDE 0126-1-1, CE mark, VDE AR N 4105, DK 5940, G83, UTE C 15-712-1, AS4777, CEI 0-21 | | |

[1] Belgium: 3,330 W [2] Portugal: 3,450 W [3] Portugal: 3,680 W [4] The design of the inverter prevents it from causing DC leakage current.