



WINNER
**MOST EFFICIENT PV-
STORAGE SYSTEM**



Smart
connections.

Technical Specification

PLENTICORE plus with BYD Battery-Box HV

Energy efficiency of PV storage systems

Technical data according to the efficiency guideline for PV storage systems

| PLENTICORE plus power class | | 4.2 | 5.5 | 7.0 | 8.5 | 10 | |
|--|--|---------|-------------|-------------|-------------|-------------|-------------|
| Energy conversion (paths ¹⁾) | PV2AC / PV2BAT / BAT2AC / AC2BAT | ✓/✓/✓/- | ✓/✓/✓/- | ✓/✓/✓/- | ✓/✓/✓/- | ✓/✓/✓/- | |
| | System Performance Index (SPI) - Load reference profile 1 ²⁾ | % | --- | 91.4 | --- | --- | --- |
| | System Performance Index (SPI) - Load reference profile 2 ³⁾ | % | --- | --- | --- | --- | --- |
| | Efficiency PV2AC ($\eta_{PV2AC,t} U_{MPP,nom}$) | % | 94.8 | 95.4 | 95.6 | 95.8 | 95.8 |
| | Efficiency PV2BAT ($\eta_{PV2BAT,t} U_{MPP,nom}$) ⁴⁾ | % | 95.7 | 95.7 | 95.5 | 95.5 | 95.5 |
| | Efficiency BAT2AC ($\eta_{BAT2AC,t} U_{MPP,nom}$) ⁴⁾ | % | 94.6 | 95.1 | 95.1 | 95.1 | 95.1 |
| | Idle consumption ($P_{neutral, AC + DC}$) | W | 9.03 | 9.03 | 9.18 | 9.18 | 9.18 |
| | Mean dead time / settling time | s | 0.98 / 4.97 | 0.98 / 4.97 | 1.08 / 4.20 | 1.08 / 4.20 | 1.08 / 4.20 |
| | Rated power ($P_{AC,r}$) | kWp | 4.2 | 5.5 | 7.0 | 8.5 | 10 |
| | Rated power ($P_{AC,r discharge}$) | kWp | 4.2 | 5.5 | 5.8 | 5.8 | 5.8 |
| | Rated power ($P_{BAT,r}$) | kWp | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 |
| Input side (DC) | Max. PV power ($\cos \varphi = 1$) | kWp | 6.3 | 8.25 | 10.5 | 12.75 | 15 |
| | Nominal DC power | kW | 4.33 | 5.67 | 7.22 | 8.76 | 10.31 |
| | Input voltage range ($U_{DCmin} - U_{DCmax}$) | V | 120...1000 | | | | |
| | MPP working voltage range ($U_{MPPworkmin} - U_{MPPworkmax}$) | V | 120...720 | | | | |
| | Number of DC inputs | | 3 | | | | |
| | Number of combined DC inputs (PV or battery) | | 1 | | | | |
| | Number of independent MPP trackers | | 3 | | | | |
| | DC 3 – battery input optional - Activation code battery available at: shop.kostal-solar-electric.com | | | | | | |
| | Working voltage for battery input ($U_{DCworkbatmin} - U_{DCworkbatmax}$) | V | 120...500 | | | | |
| | Max. charging current/discharging current at battery input | A | 13/13 | | | | |

| BYD Battery-Box HV power class | | H 6.4 | H 7.7 | H 9.0 | H 10.2 | H 11.5 | |
|--------------------------------|--|-------|---|-----------|-----------|-----------|-----------|
| System data | Max. Power consumption in connection with PLENTICORE plus 4.2-10 ⁵⁾ | kW | 3.33 | 4.00 | 4.65 | 5.32 | 6.00 |
| | Usable capacity ⁶⁾ | kWh | 6.08 | 7.30 | 8.51 | 9.73 | 10.94 |
| | Number of battery modules | | 5 | 6 | 7 | 8 | 9 |
| | Battery type | | Lithium iron phosphate (LiFePO ₄) | | | | |
| | Nominal voltage | V | 256 | 307 | 358 | 409 | 460 |
| | Voltage range | V | 200...282 | 240...338 | 280...395 | 320...451 | 360...500 |

Subject to technical changes. Errors excepted. You can find current information at www.kostal-solar-electric.com. Manufacturer: KOSTAL Industrie Elektrik GmbH, Hagen, Germany

¹⁾ Measurement results determined according to the efficiency guideline for PV storage systems. Battery system consisting of PLENTICORE plus with BYD Battery-Box HV 11.5

²⁾ Load reference profile 1 = Standard 4 persons household with approx. 5010 kWh annual consumption

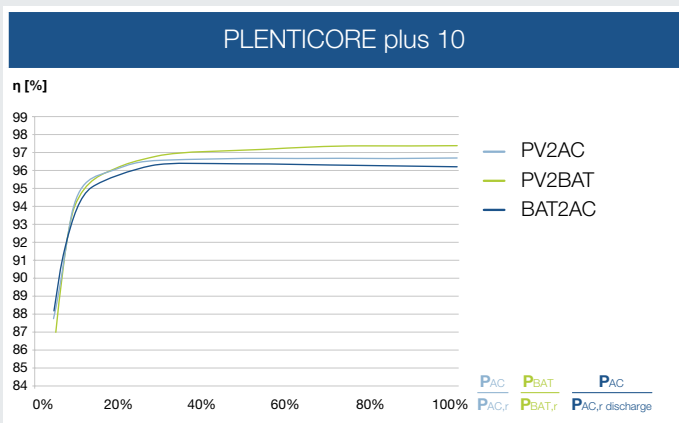
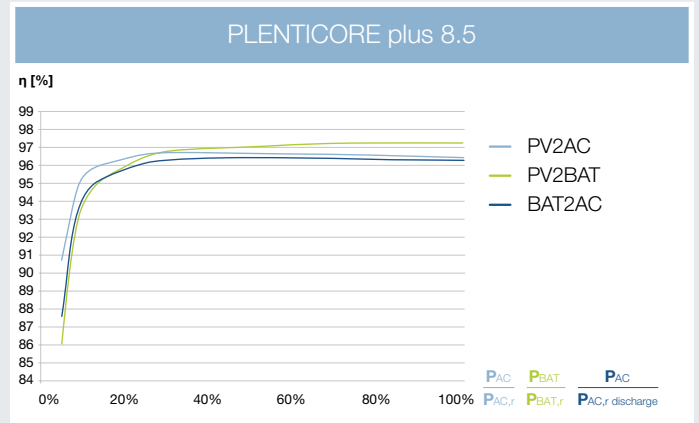
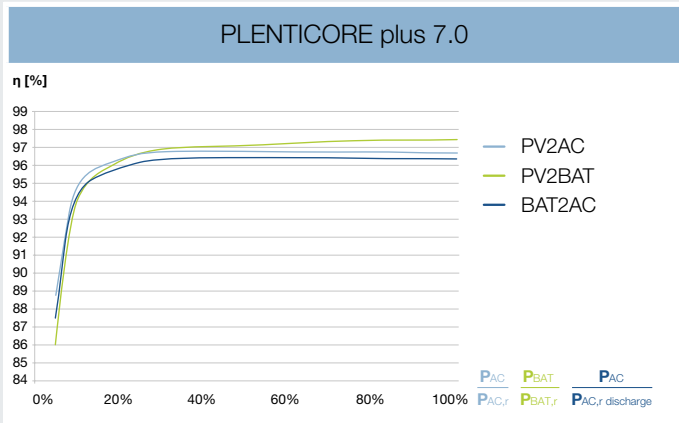
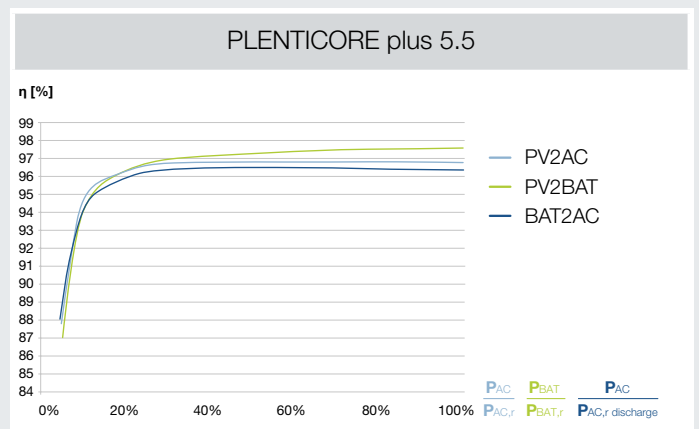
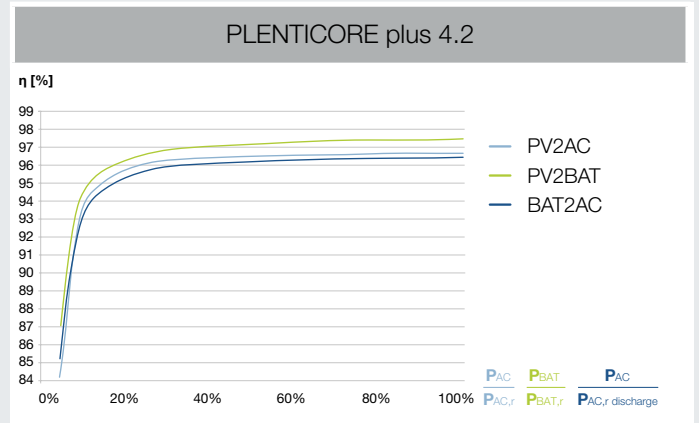
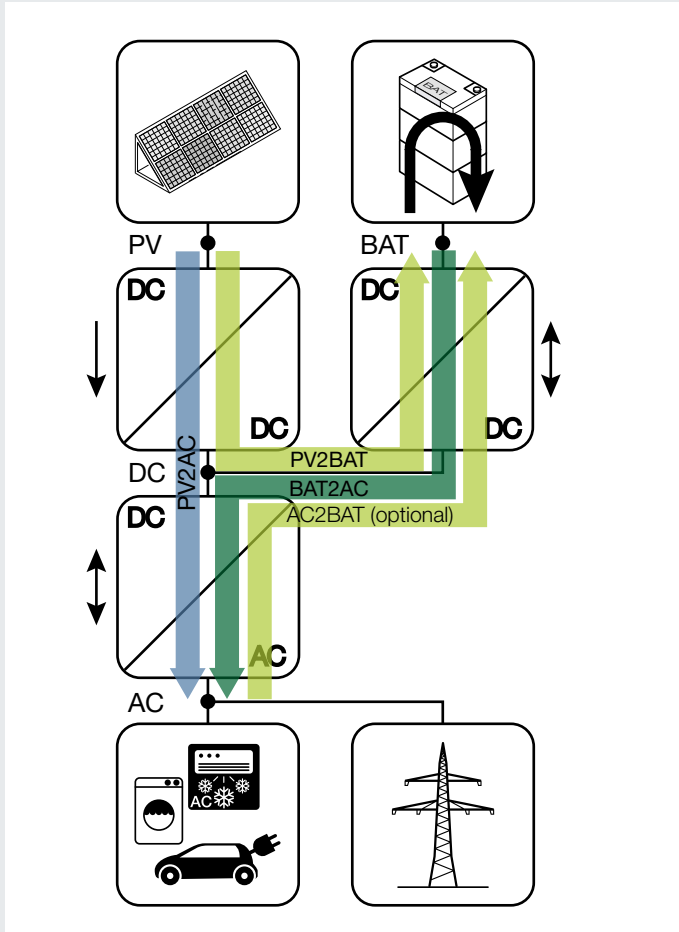
³⁾ Load reference profile 2 = Standard 4 persons household with approx. 10010 kWh annual consumption including heat pump and electric vehicle

⁴⁾ Measured at a battery voltage of 470 V

⁵⁾ Depending on the max. rated power AC of the inverter (4.2 max 4.2 kW and 5.5 max 5.5 kW)

⁶⁾ Test Conditions: 95% DOD, 0,2 C charge and discharge at + 25 ° C

Efficiency curves of energy conversion paths



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Product registration, warranty extension,
 activation code battery or purchase of accessories:
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