



COMPANY PRESENTATION

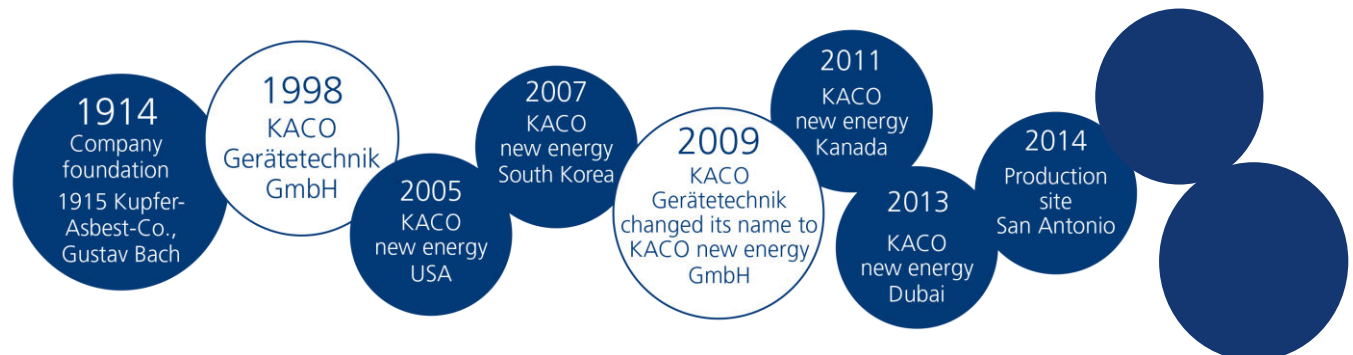


Company

History



- 1914 Company founded in Heilbronn**
Gustav Bach, Albert Hirth and Gustav Klein establish a company to manufacture engine seals.
- 1950 KACO is the world's largest manufacturer**
of electromechanical choppers: the predecessors of today's inverters.
- 1953 KACO produces the first thyristor inverter**
- 1964 Transistors drive the choppers out of the market**
New focus on: relays, plugs, inverters
- 1998 Management buy out: KACO Gerätetechnik founded**
Ralf Hofmann becomes the CEO .



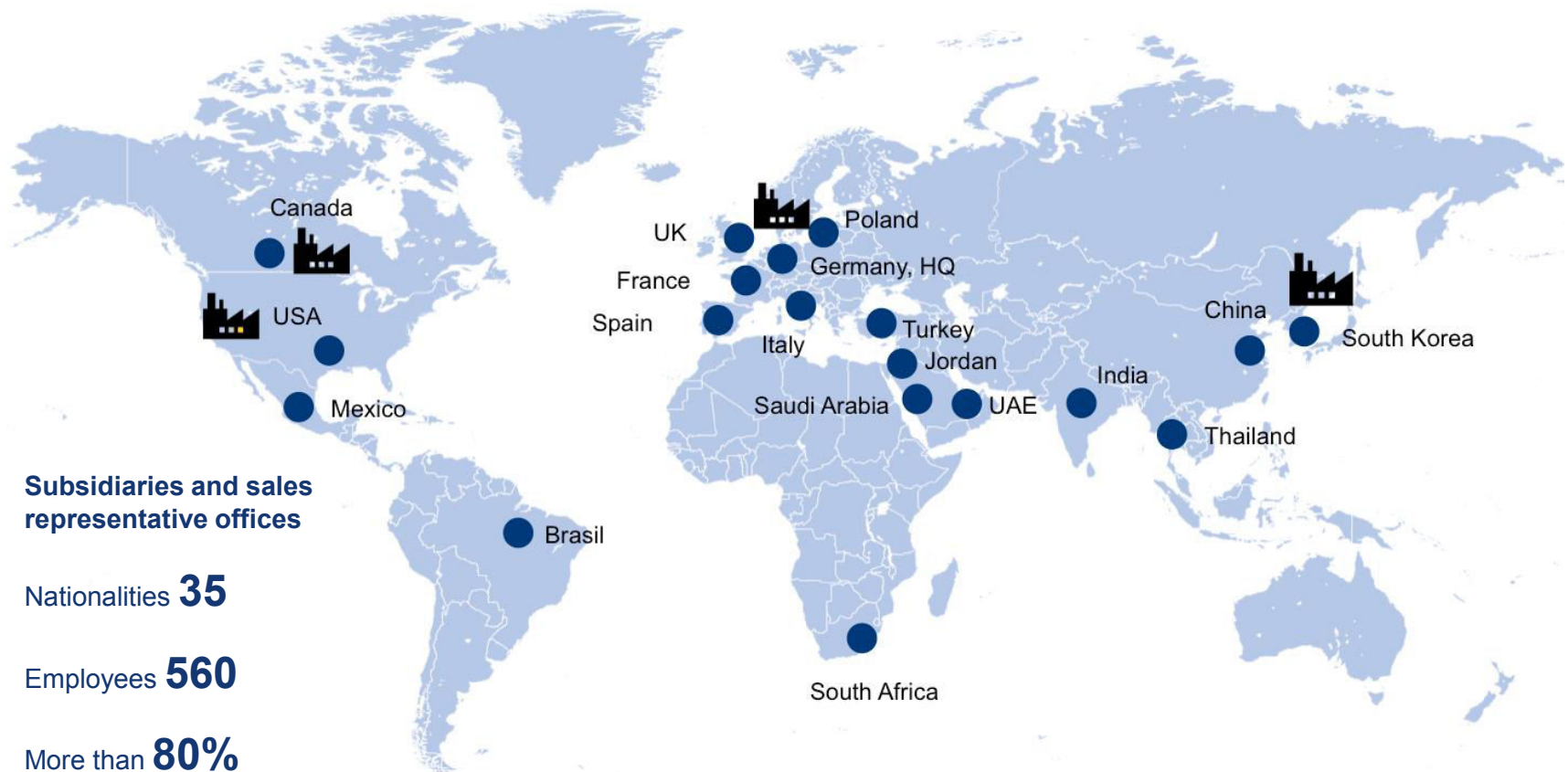
Company

Management



Company

Worldwide performance



**Subsidiaries and sales
representative offices**

Nationalities **35**

Employees **560**

More than **80%**
of international projects

Company

Worldwide performance

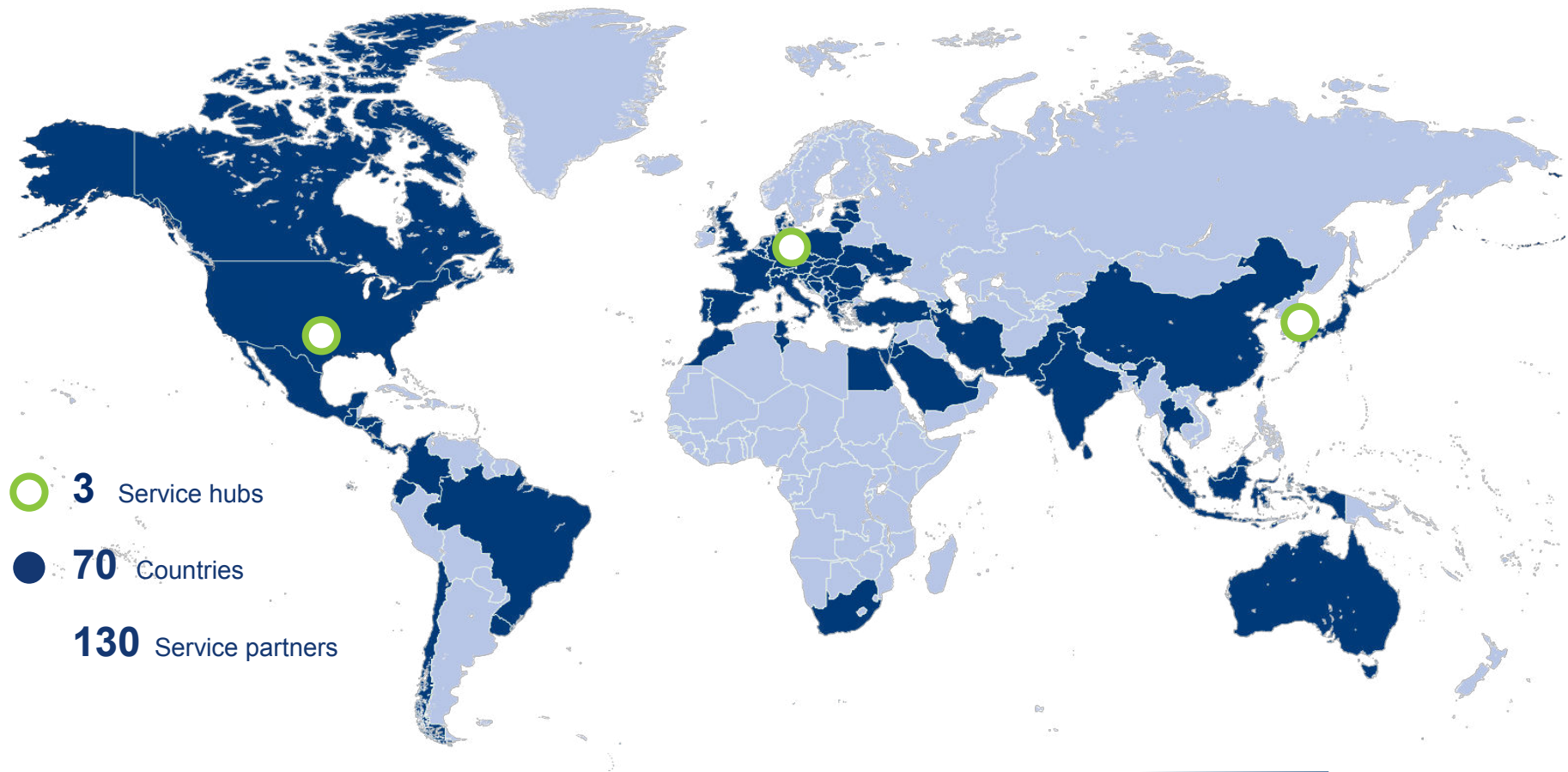


USA, San Antonio

South Korea,
Seongnam,
Gyeonggi-do

Company

Worldwide service network



Company

Sales Performance



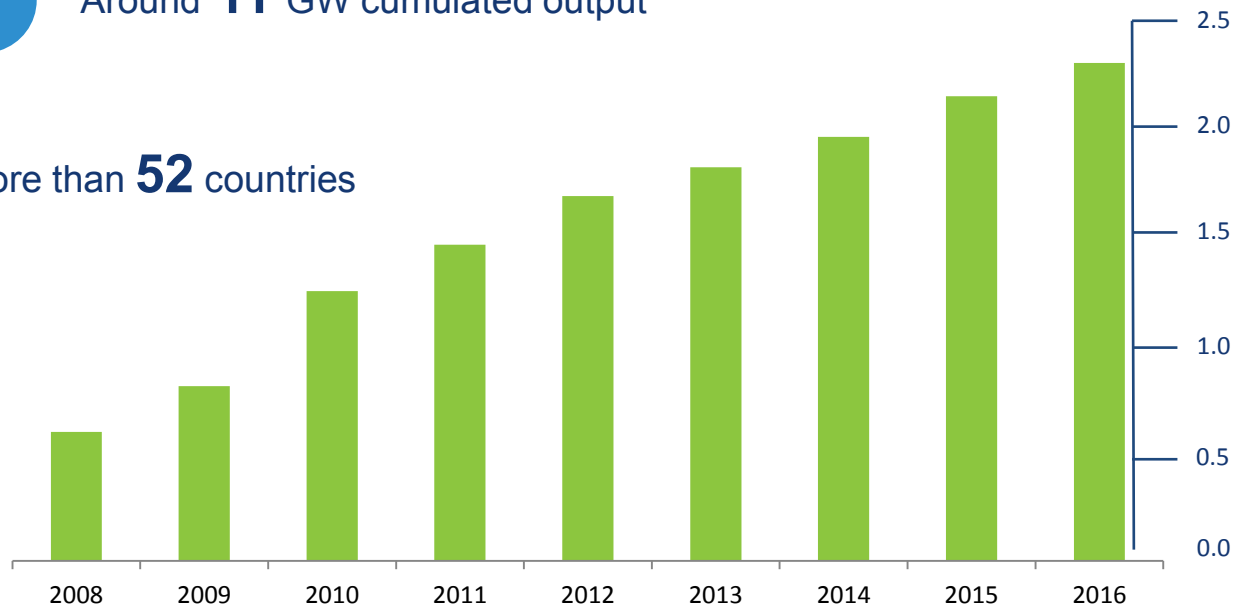
Cumulative sales reach **2.3** billion €



Around **11** GW cumulated output



More than **52** countries



■ Cumulative sales in billion €

Company

Business Fields

RESIDENTIAL



COMMERCIAL



POWER STATIONS



FUEL SAVE



STORAGE SYSTEMS



INDUSTRIAL AND ROLLING STOCK TECHNOLOGY



Products

Product Portfolio

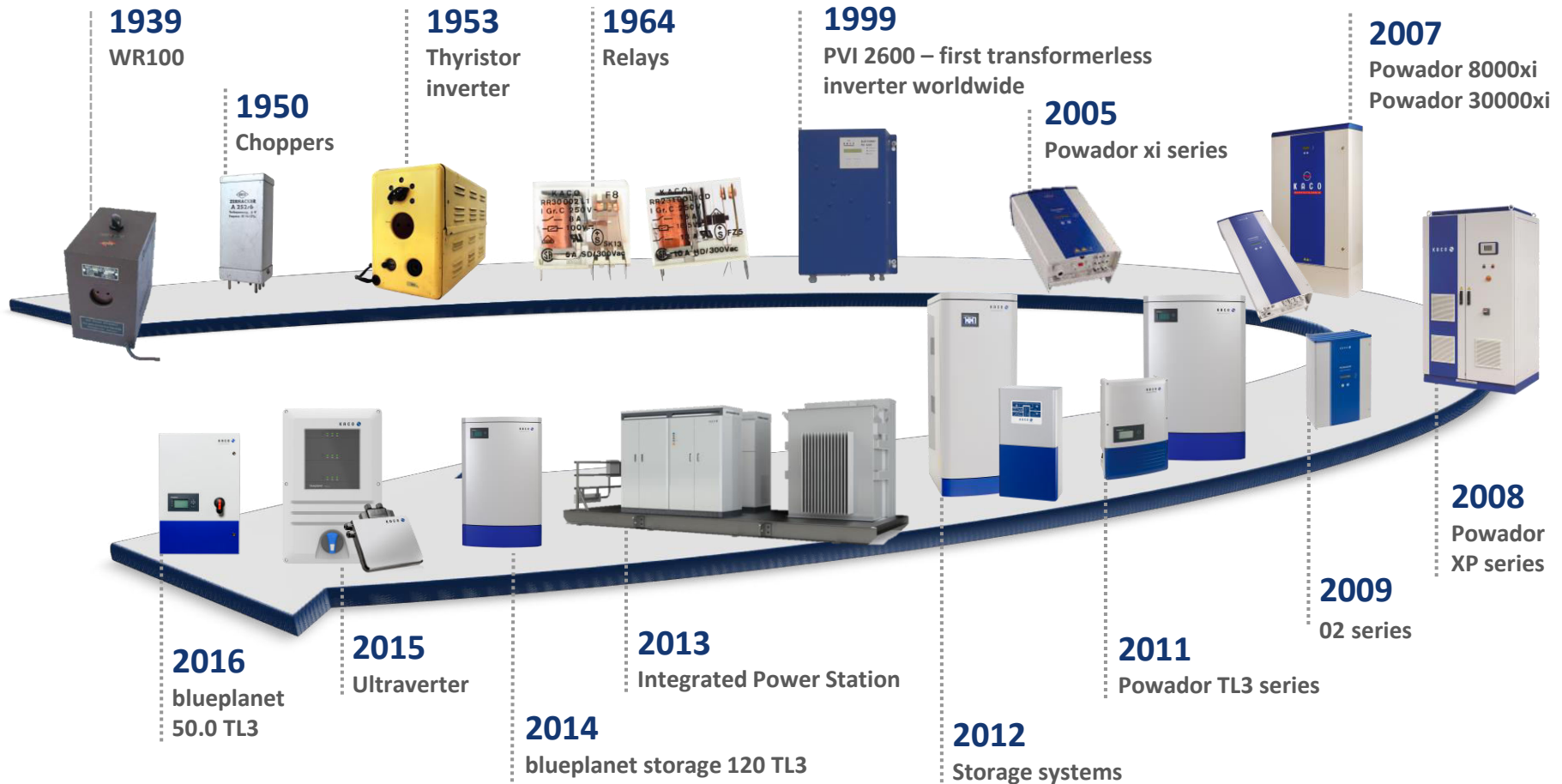


PV solutions from single family homes right up to megawatt parks.



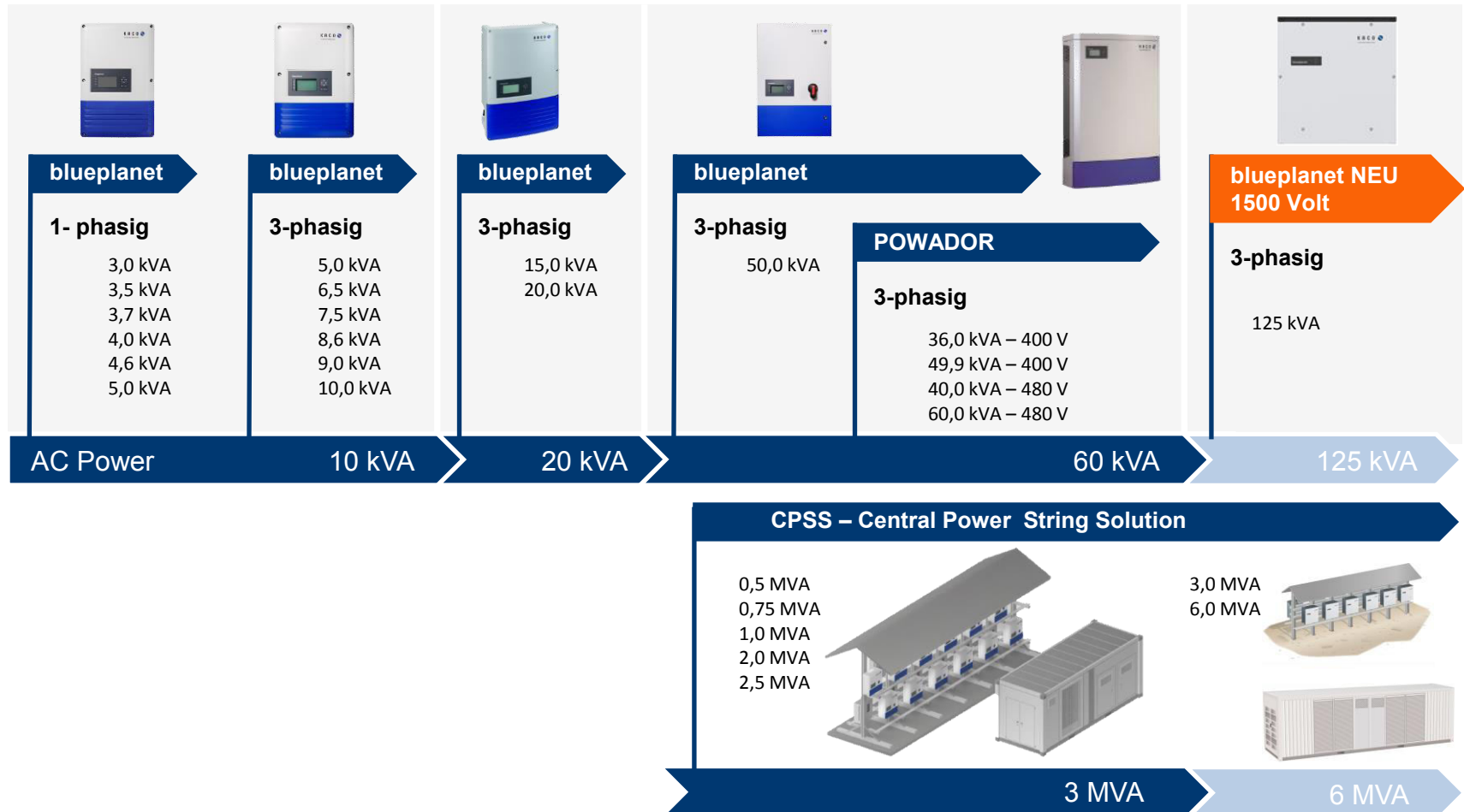
Products

Inverters since 1939



Portfolio & Solutions

Stringwechselrichter

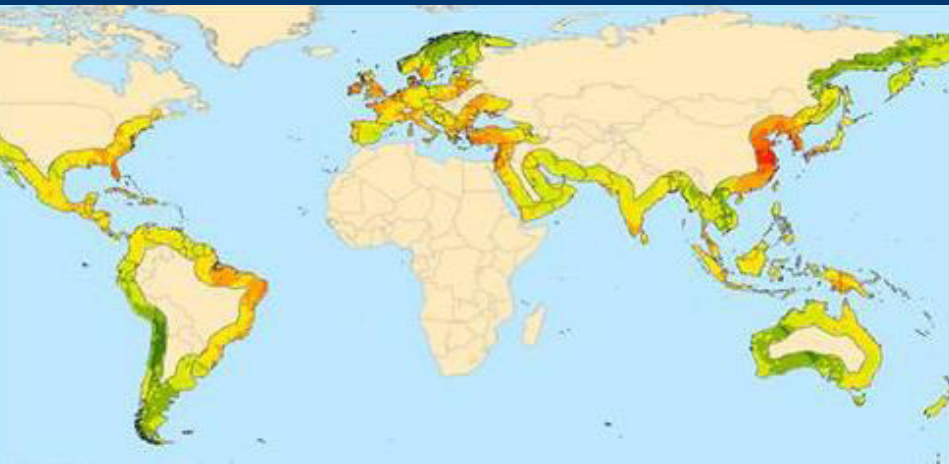


blueplanet 50.0 TL3

NEW blueplanet 50.0 TL3 | OD+

For coast regions and
harsh environment

Reference Project Corsica:
(0,5 km distance from
the coast)



COMPONENTS

DESIGN UPGRADE

Enclosure OD+



Two-stage powder coating for
better protection

Heat Sink OD+



Heat sink with anodizing, with
gasket sealing

Fan Guards



Two-layer coating

Small Parts
(screws, nuts)



Stainless Steel

Internal DC Cable



Double Isolated cable design

blueplanet 50.0 TL3

NEW blueplanet 50.0 TL3 | RPO only

- Inverter only for reactive power
- Functional during day and night
- AC Coupled system which helps to stabilise grid
- Wall mounted
- Can be used in new solar parks and also can be retrofitted in existing solar parks
- Maximises AC Power output & improves solar inverter lifetime
- Possible with KACO and other inverters too
- No of inverters depend on the reactive power requirement
- Also for other inverters with similar AC voltage level (400V), such as Powador 60.0 TL3
- Coming soon for 480V and 277V

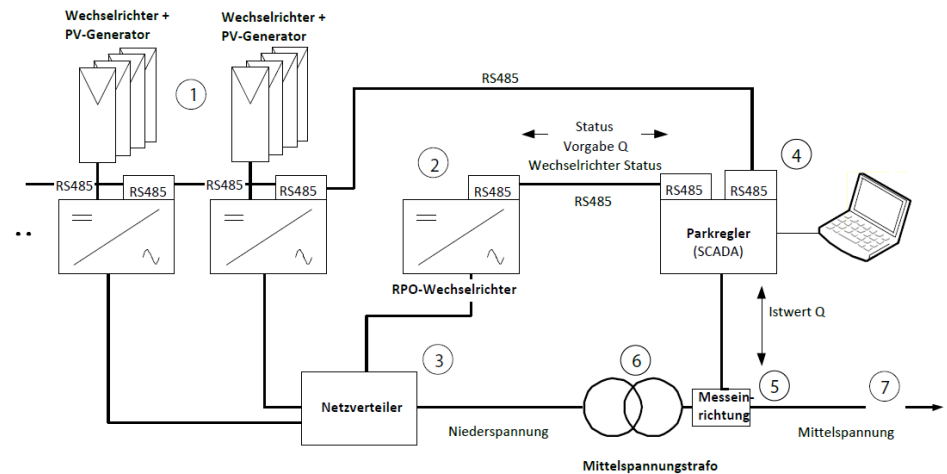


Abbildung 1. Anlagenübersicht

blueplanet 50.0 TL3

NEW blueplanet 50.0 TL3 | RPO only

USAGE

Can be used in new solar parks and also can be retrofitted in existing solar parks

POSSIBILITIES

Possible with KACO and other inverters too

Coming soon for 480V and 277V

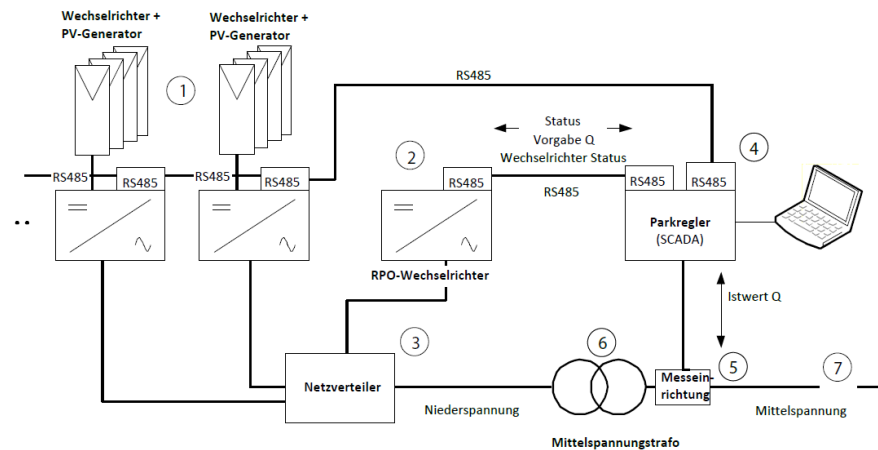


Abbildung 1. Anlagenübersicht

VARIATIONS

Also for other inverters with similar AC voltage level (400V), such as Powador 60.0 TL3

NO. OF INVERTERS

Depend on the reactive power requirement

POWER

Inverter only for reactive power

FUNCTIONALITY

Functional during day and night

SYSTEM

AC Coupled System

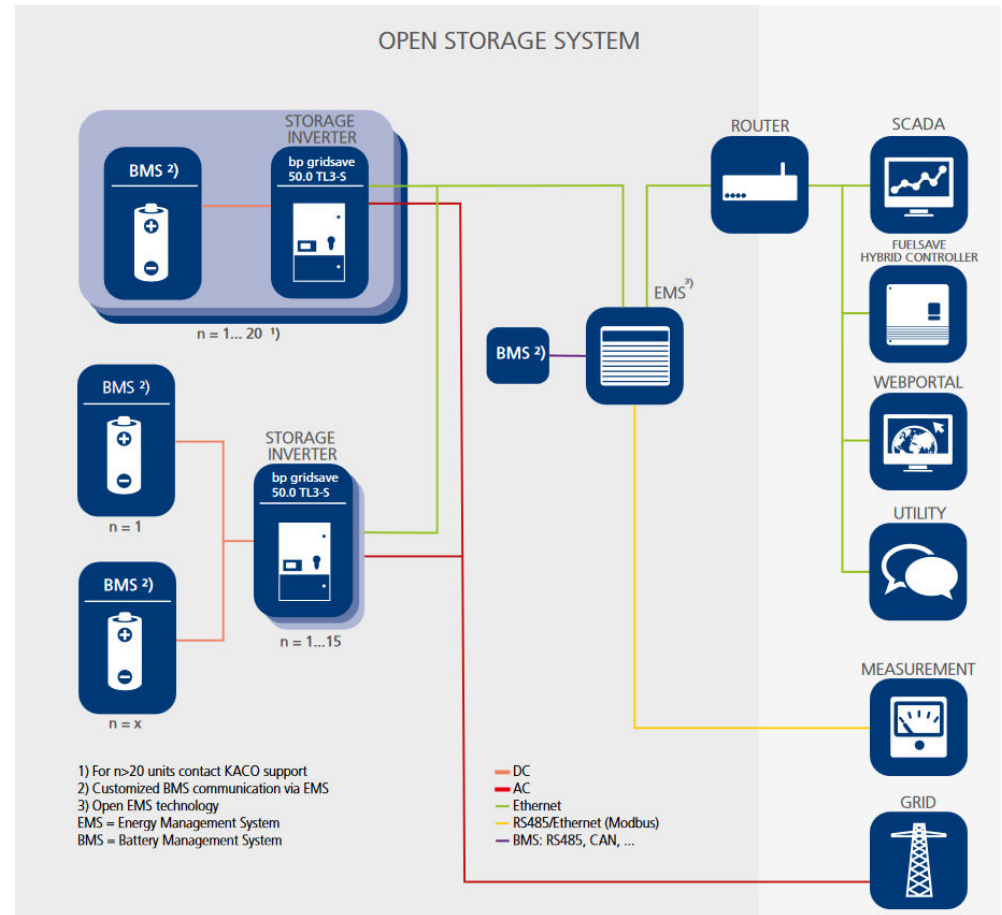
MOUNTING

Wall mounted

blueplanet gridsave 50.0 TL3 - S

bidirectional battery inverter - 50kVA rated power

- First phase release is without selling EMS, BMS or battery with the inverter
- KACO recommends the following battery manufacturers
 - ADS Tec
 - Samsung
 - LG Chem
 - Tesvolt
 - Varta
- Easily scalable
- AC coupled system
- Capable of reactive power
- Modbus communication interface for use with different controllers



System Components

blueplanet 50.0 TL3 | 0.5 / 0.75 / 1.0 / 2.0 / 2.5 MVA CPSS

50 X bp 50
Inverters

20 ft. Container
including

Rack for mounting
bp 50

Low voltage AC
distribution board

Medium Voltage
Transformer

Switch gear



System Components

blueplanet 125.0 TL3 | 2.5 / 3.0 / 5.0 / 6.0 MVA CPSS

48 X bp 125
Inverters

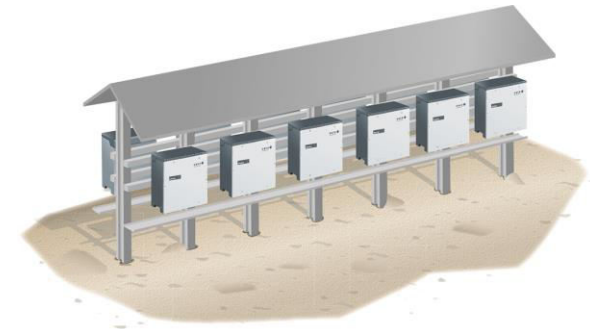
blueblock 125 6.0
40 ft. Container

Rack specification
for bp 125

Low voltage AC
distribution boards

Medium Voltage
Transformers

Switch gears



Portfolio & Solutions

Zentralwechselrichter



REFERENCES

Power Stations

USA, San Antonio, TX



1.1 and 2.0 MVA
Integrated Power Station

- System size: 400 MW
- Commissioned: 2013/2014/2015

Commercial

UK, Castle Donington



Powador 60.0 TL 3

- System size: 6.1 MW
- Commissioned: 2015

Residential

Germany, Billigheim

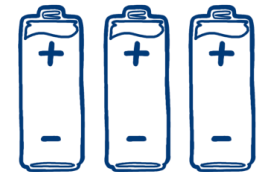


blueplanet 9.0 TL3

- System size: 9.4 KW
- Commissioned: 2011

Storage Systems

Germany, Weinsberg

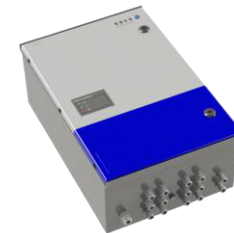
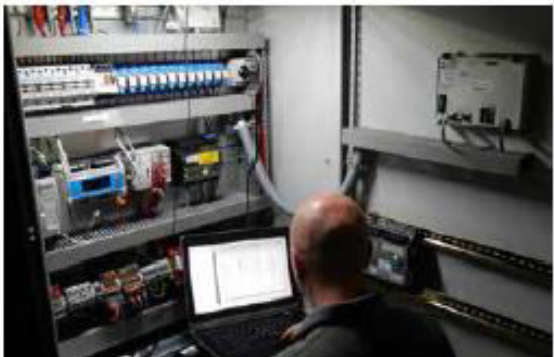


bluestorage 120 TL3

- System size: 145 kW PV power, 150 kWh battery storage, 20,000 ltr. thermic storage for 23 households
- Commissioned: 2014

FuelSave system PV-Diesel hybrid solution

Worldwide in regions far from any power grid



FuelSave Controller

- Photovoltaics and diesel – the power of two.

Storage Systems

South Korea, Seoul, Yongin



blueplanet gridsave
1000 TL3

- Battery capacity: 4.0 MWh
- Battery inverter: 8x blueplanet gridsave 1000 TL3
- Commissioned: 2016

Industrial and rolling stock technology



K 3000

- Continuous 3kW on-board power supply
- Input voltage range from 24 V to 230 V

Company

Driving the energy turnaround



We produce with our own solar power:
CO₂-neutrally and without any
atomic power.



We support the "my climate" initiative and
compensate all CO₂ emissions caused by
business trips.

Company

Take home message

We manufacture on 3 continents
for the global market: PV solar
inverters, solar storage systems,
energy management systems and
converters for industrial & rolling
stock technology



We are founded on 100 years of
technological experience and the
"Made in Germany" quality
promise



We are working for the success of
the global energy turnaround

„We turn passion into power“





THANK YOU FOR YOUR
ATTENTION!

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