

YOU GOT THE  
POWER.



AIRPORT TECHNOLOGIES

**S POWER**

**GROUND POWER UNITS**

**HITZINGER®**   
Power. Anytime. Anywhere.

# RETHINKING POWER SUPPLY

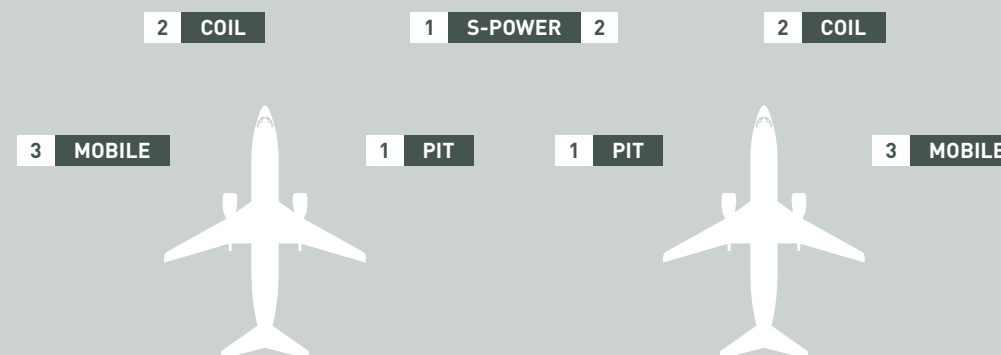
With its S POWER, HITZINGER presents a new standard of ground power generation for all aircraft during the flight preparation phase. Optimized voltage quality and the highest level of supply security in combination with maximum serviceability and simplified operation make the S POWER a reliable unit. The HITZINGER S POWER Stack Technology combines active power factor correction with state of the art inverter technology.

## ADVANTAGES USING HITZINGER 400 HZ SOLUTIONS

- Improved operations efficiency
- Faster turnaround times
- Reduction of CO<sub>2</sub>-emissions
- Improved safety
- Reduction of accidents

## HANGAR

- 1 S POWER 45-180S with PIT POWER at the aircraft
- 2 S POWER 45-180S with S POWER C
- 3 S POWER 45-180 M



## S POWER WITH 28 VDC



S POWER 45-180S-DC

S POWER 45-90M-S-DC

S POWER 45-180M-B-DC

HITZINGER's latest 28 VDC technology can be added to all available S POWER units. Due to the latest inverter technology used, the unit is very lightweight, small and fulfills all technical requirements and overloads. Furthermore, a current limiter is implemented for starting bigger aircrafts.

### MAIN FACTS

- Maximum current of 2500 A
- 50-60 Hz input frequency
- Adjustable output voltage between 24 – 30 VDC



# A NEW STANDARD

S POWER 45 – 180S



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## STACK DESIGN

The S POWER concept is based on encapsulation of critical electrical components into maintenance friendly power stacks. Each stack has a nominal power rating of 45 kVA. With the modular stack concept, we can realize ground power supplies with 45 kVA, 90 kVA, 135 kVA and 180 kVA. Stacks are interchangeable. In case one stack fails, it can be easily interchanged with another one (mean time to repair is less than 10 min) or the S POWER can be used with reduced power.



## TOUCH SCREEN

The touch screen offers a wide range of possibilities including easy operation, optimised user-interface, comfortable setting of line-drop compensation for different cables and different cable lengths and implementing customer-specific requirements.



## ACTIVE POWER FACTOR CORRECTION (PFC)

The active PFC is characterized by lower harmonic content and sinusoidal input currents compared to conventional six-pulse (B6) or twelve-pulse (B12) bridge circuits. Also the phase position of the input current is controlled. Hence, the power factor is close to the ideal value = 1. Through the PWM-control of the IGBT-rectifier, the DC-link voltage deviation is held at a constant level regardless of input voltage or input frequency fluctuations.



## HIGH EFFICIENCY AND LOW STANDBY LOSSES

Extremely low standby and idle losses in combination with high efficiency over the whole range of power guarantee energy efficiency, low cost and environmental friendly operation.



## ENVIRONMENTALLY FRIENDLY

In comparison to diesel driven or rotary ground power units, the static power supply needs less material and energy for production. The environmental pollution is reduced, as only electric power is transformed. Additionally, the noise is significantly lower in comparison to other ground power units.

**The high quality of the 400 Hz-output voltage is produced by the decoupling of input to output. No external multi-pulse transformers or input-filters are required.**

## MAIN FACTS

- Power Range: 45 – 180 kVA
- Up to 400% overload
- Can be used for all aircrafts including B787, A350, A380
- Possible to connect to Building Management Systems (BMS) or SCADA
- Operation possible between -30° C and +52° C (optional between -40° C and +56° C)
- Efficiency > 93% under all load conditions
- Enclosure corrosion-free
- Ventilation regulator including temperature monitoring



# FIT FOR ANY PURPOSE

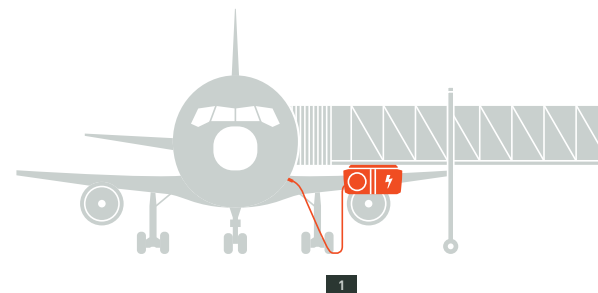
## POWER BRIDGE MOUNTED SYSTEMS

The dynamic style of the HITZINGER bridge mounted systems reflects innovation and technological know-how that gives the product its unique, very modern look. The design is based on the rules of light-weight construction and the use of stainless steel supports our general understanding of reduction of total costs of ownership. With our modular housing concept, we maintain our general perception of modularity!



### POWER BRIDGE MOUNTED IN COMBINATION WITH A CABLE COIL

Our modular housing concept allows not only a quick and easy installation but also good accessibility for maintenance purposes. Optionally, the S POWER C is available as an extractable version to offer even more space to make the exchange of cables simpler and additional parts better reachable.

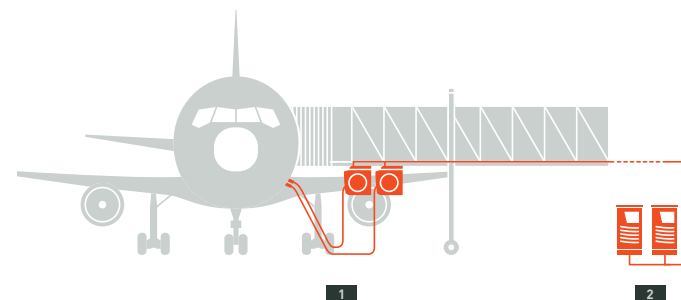


1 S POWER 90-180 B-C

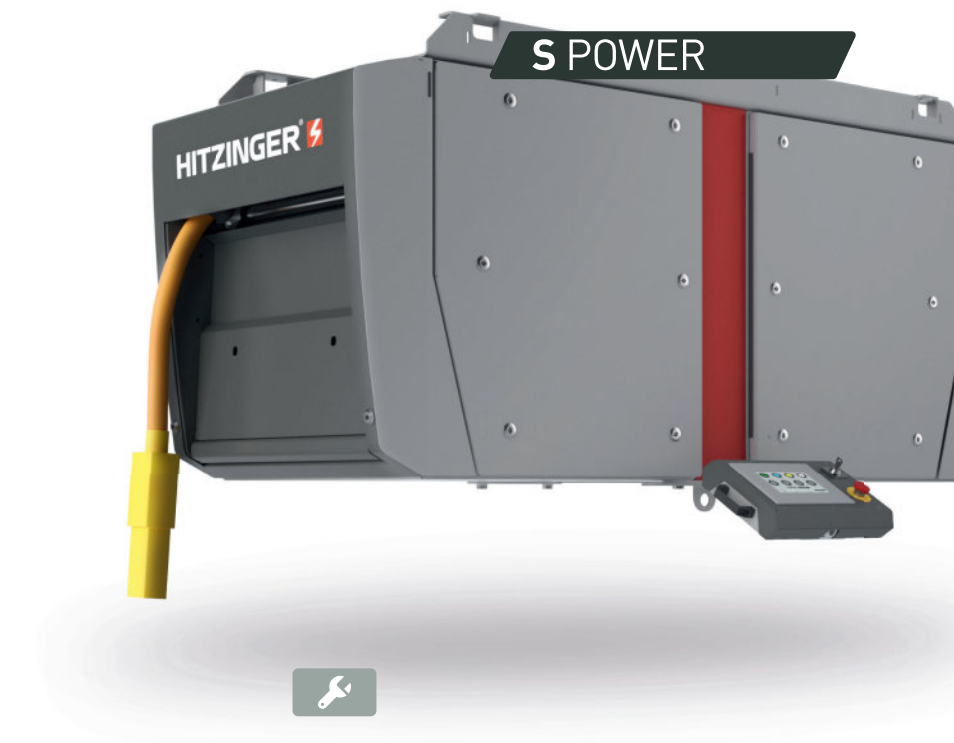


### BRIDGE MOUNTED CABLE COIL

The fixed installed S POWER 45-180 S in combination with the bridge mounted S POWER C is an optional solution for ground power supply integrated underneath passenger boarding bridges. This arrangement of latest inverter technology with a highly reliable coiler system fulfils all your needs according to individual requirements.



1 S POWER C  
2 S POWER 45-180S



### MODULARITY

Due to its modularity the S POWER and the S POWER C can be combined according to customer wishes. Furthermore, it can be perfectly aligned to the structural conditions of the passenger boarding bridge.



### MAINTENANCE

All critical parts can be reached from the front of the S POWER C and the back of the S POWER B. Other parts can be easily reached from the left and the right side. Optionally, the S POWER C can be pulled out to make exchanging cables simpler and additional parts better reachable from the front. Thus, maintenance time can be reduced, which means reducing costs and downtime of the gate.



### OPERATION

The possibility to operate the converter and the cable coil through the power cables increases the usability. Hence, the time to plug in the airplane is reduced. Furthermore, the process is made easier, because the ground handler does not have to run back and forth between the remote control and the plug.



### CONTROL

The S POWER B and the S POWER C can be operated from one remote control panel. This includes all the possibilities like getting the status and errors of both units. Additionally, all the parameters for the S POWER C, like speed and torque, can be adjusted.



# POWER WITH SYSTEM

## PIT POWER

The HITZINGER PIT POWER is a user friendly power supply system which is installed closely to the aircraft to reduce operating time (costs). From aircraft assembling lines, production lines and MRO, we offer all in-ground applications for civil and military customers. Due to our experience and knowledge, we deliver flexible solutions to fulfill all your needs and design requirements.



### RELIABILITY

Due to the use of a counterweight mechanism, the PIT is always ready for use. Additionally, it can go down into the pit at anytime, which means the apron will not be blocked.



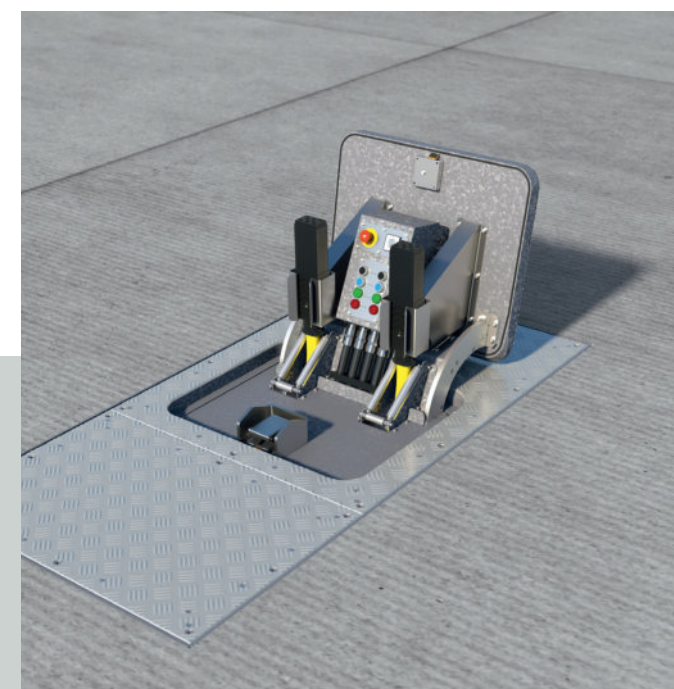
### TIME

As the pit is installed next to the aircraft, the time of using the APU (auxiliary power unit) can be reduced. This means reduction in costs and environmental pollution.



### LESS DAMAGES

No additional vehicles have to be brought near to the aircraft and thus, the risk of damages on the airplane are reduced. Furthermore, in the closed position, the PIT is locked and flush with the ground.



### STANDARD

### EXPLOSION PROOF

### SAND PROOF

### WINTER PROOF

### ADDITIONAL THINGS

- Built according to EN124
- F900 – holds 90 tons of weight
- Cable basket pit
- Other supplies
- High water level warning system
- Sump pump
- Heater for cold areas
- Maintenance cover with ladder



### HATCH PIT SYSTEM

Up to 2 x 400 Hz power cables with plug holder



### POP UP PIT SYSTEM

Up to 4 x 400 Hz power cables with plug holder

# S POWER M

## MOBILE VERSION

The mobile version of the HITZINGER S POWER provides high voltage quality and highest level of supply security anytime, anywhere. The S POWER M is available either for indoor use (S POWER 45-90M-S) or outdoor use (S POWER 45-180M-B).



### HANGAR VERSION S POWER 45-90M-S



- Easy manoeuvrable and light weight
- Touch screen is mounted on a user-friendly height (easy to read and to operate)
- Power range: 45 – 90 kVA



### TOWABLE VERSION S POWER 45-180M-B



- Easy manoeuvrable and light weight
- Small and compact
- Low centre of gravity, which gives the unit high stability
- Power range: 45 – 180 kVA

# OVERVIEW

## S POWER PRODUCTS



**S POWER 90S**  
Fixed installation

**S POWER 180S**  
Fixed installation

**S POWER 90S-DC**  
Fixed installation with integrated DC POWER

**S POWER 180S-DC**  
Fixed installation with integrated DC POWER



**S POWER 90B**  
Bridge mounted

**S POWER 180B**  
Bridge mounted



**S POWER C**  
Bridge mounted

**S POWER C-S**  
Cable coil for ground installation

**S POWER C-W**  
Cable coil for wall installation



**S POWER 90B-C**  
Bridge mounted with coil

**S POWER 180B-C**  
Bridge mounted with coil



**S POWER 90B-C-S**  
Bridge mounted with coil for ground installation



**S POWER 90M-S**  
Mobile hangar version

**S POWER 180M-S**  
Mobile towable version

**S POWER 90M-S-DC**  
Mobile hangar version with integrated DC POWER

**DC POWER 28M**  
Mobile 28 VDC unit



**S POWER 90M-B**  
Mobile towable version

**S POWER 180M-B**  
Mobile towable version

**S POWER 90M-B-DC**  
Mobile towable version with integrated DC POWER



**S POWER 90M-B-C**  
Mobile towable version with coil

**S POWER 90M-B-C-DC**  
Mobile towable version with coil with integrated DC POWER



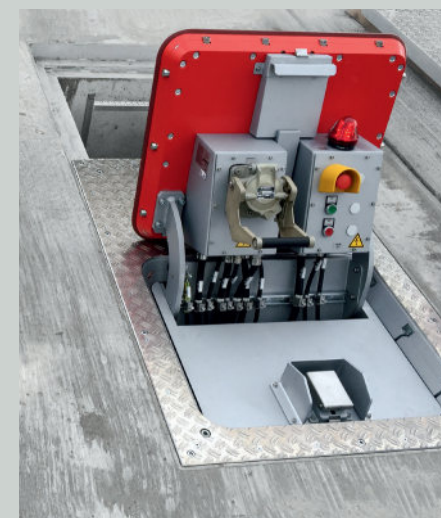
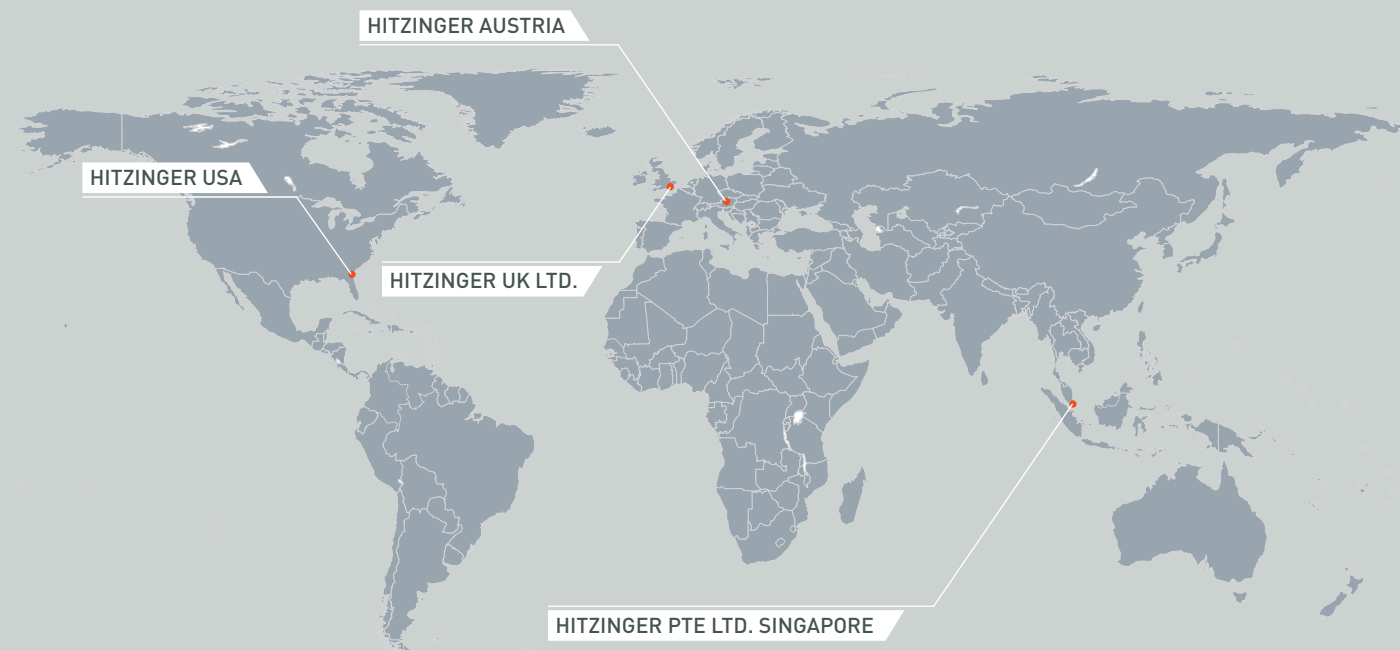
**POP UP PIT**  
In-ground installation



**HATCH PIT**  
In-ground installation



# PROVIDING AIRPORTS WORLDWIDE



We have been developing power solutions for over 70 years. Our experience makes us the trusted partner for our customers all around the world.





# OUR COMMITMENT TO YOUR NEEDS

As the leading expert in the field of uninterruptible power supply, it is our commitment to fully understand our customers needs in all fields of operation and ensure the highest level of operational safety. This can only be achieved with high-quality continuous service measures and tests.



## EXPERIENCE

Innovative technology and design, low-level maintenance and easy handling of HITZINGER 400 Hz ground power systems provide reliability and low operating cost.



## EFFICIENCY

Using a HITZINGER 400 Hz ground power system provides highest efficiency in comparison to an airplane's auxiliary turbine. Operational costs and risk of accidents are significantly reduced.



## FLEXIBILITY

We know about the challenges our customers face if it comes to finding the right ground power system for their particular requirements and needs. Maximum flexibility of our units is key to our customer satisfaction.



FOR OVER 70 YEARS, QUALITY, EFFICIENCY, AND DURABILITY HAVE BEEN THE FOUNDATIONS OF OUR SUCCESS. COUNTLESS INDUSTRIES THROUGHOUT THE WORLD PLACE THEIR TRUST IN US TO PROTECT AND POWER THEIR BUSINESSES AT EVERY MOMENT OF EVERY DAY. AS A WORLD LEADER IN TAILOR-MADE POWER SOLUTIONS, WE ARE YOUR PARTNER FOR INNOVATION, VALUE AND SERVICE. WE ENSURE THAT YOU'VE GOT THE POWER.

POWER. ANYTIME. ANYWHERE.



GENSETS

ALTERNATORS

UPS-SYSTEMS

CONVERTERS

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