

## HIGH POWER RECTIFIERS FOR GREEN HYDROGEN PRODUCTION



Statcon Energiaa's High-Power Rectifiers are designed for high-voltage and high-current industrial downstream applications like Electroplating and Hydrogen Production.

Our Military-Grade power electronics assure long operability, minimal maintenance, and cutting-edge technology. We offer efficient and reliable DC Power Supplies for industrial water electrolysis.

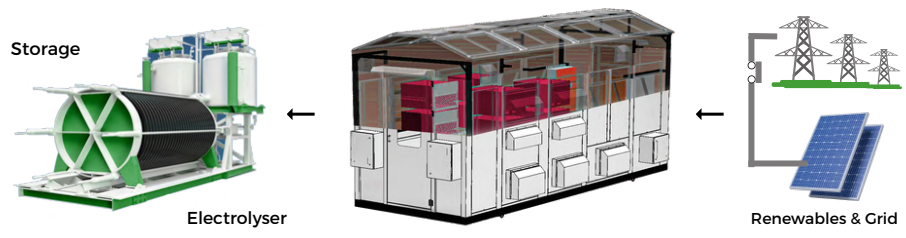


320V, 4500A Rectifier (Indoor Type)

### Optimised to rectify:

- A.** Input Side Power quality (including Harmonics and PF), and
- B.** Output Side DC Power quality (in terms of the stability, regulation (both against Line and Load variations) and output AC ripples in DC voltage).

These products are also designed in a modular fashion that can be extended to meet high ratings demand up to 550V, 6000A in a single unit, and then parallelly extendable along such units.



2x558kW Rectifiers Containerised - 3600A/ 155V for NTPC, Leh Green Hydrogen Mobility Pilot Project (Forced Air-Cooled; Outdoor Container Type)

## FEATURES

- Designed for a wide input supply range to withstand harsh tropical weather conditions
- Can power Green Hydrogen Electrolyser Plants that use Proton Exchange Membrane (**PEM**) or Alkaline Technology
- These units are designed to operate in high and low temperatures without output power degradation - outdoor units up to 50°C and indoor units up to 45°C
- Works with forced air-cooling, eliminating the use of air-conditioning (water-cooled available on request)
- Air-cooled or oil-cooled isolation transformers available as per requirement
- High conversion efficiency owing to single conversion
- All spares/ services available locally for a guaranteed service life of 25 years
- Our rectifiers are already running successfully across Indian and foreign Naval Dockyards - with some for >20 years.
- Comprises Intuitive Touchscreen Controller integrated with Programmable Logic Controller (PLC) to achieve dynamic response, and remote operation along with data history storage facility availability
- Rugged and time-tested Thyristor Converter Technology along with 12/24 pulse designs, using 'galvanically isolated transformer' and specially designed Inter-Phase transformers and filters. This ensures a clean DC output and high-quality input line parameters like harmonics and PF.

## OFFERINGS

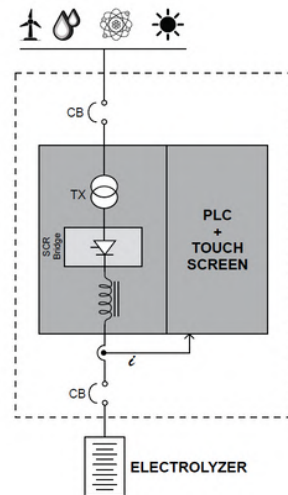
- Rectifiers with IGBT Chopper also available in limited ratings
- Available for both Indoor and Outdoor applications
- Trolley-mounted rectifiers available for outdoor use
- Available from 350V to 750V DC range - the unit design is modular and numbers of identical rectifiers can be connected in parallel - for built-in redundancy and expandability
- Can be designed to work on a 415V LT supply (As shown in figure)
- Solutions working on 6.6KV/ 11KV/ 33KV with specialised designed transformers also available
- Other customised, specialised items like Distribution Panels also available

## TECHNICAL SPECIFICATIONS

ELECTRICAL	
Input Voltage	415V (6.6kV/ 11kV/ 33kV also available on request)
Regulation Range	Stepless at constant voltage or current 10-100%
Duty Cycle	Designed for continuous operation at rated load
Output Amps	Up to 10,000A DC ( <i>higher currents upto 40000A available on request</i> )
Pulse	Up to 24 pulse system
Frequency	50/60 Hz
Output Voltage	Up to 750V DC ( <i>higher voltages up to 950 V available on request</i> )
Control Precision	Voltage/Current at +/- 1%
PLC & HMI Control	(Optional)
THD Current	12% (5% optional)

ENVIRONMENTAL	
Max Ambient	45°C Indoor and 50°C Outdoor
Enclosure	Indoor/ Outdoor
Cooling	Forced Air-Cooled/ Water-Cooled

AVAILABLE PROTECTIONS	
Over Current	
Short Circuit	
Over Voltage	
Over Temperature	



## ABOUT STATCON ENERGIAA

Statcon Energiaa is an Indian power electronics manufacturer catering to vital industries like Solar, Defence, Power and Railways.

We have a legacy of 35+ years of technology excellence in designing and manufacturing equipment for static energy conversion, covering a broad spectrum of power, especially Static Converters/ Rectifiers.

