

HIGH POWER RECTIFIERS FOR GREEN HYDROGEN PRODUCTION



Statcon Energiaa, with 37 years of military-grade power electronics expertise, delivers efficient rectifiers built to power electrolyzers that demand pure hydrogen and peak performance.

We deliver precision-engineered rectifier solutions for hydrogen generation—featuring Thyristor, diode, and IGBT topologies—ensuring high efficiency, low harmonics, low ripple, and stable performance for electrolyzers.



320V, 4500A Shore-Supply Rectifier (Indoor Type)
for Defence Application

Optimised to rectify:

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



1.43 MW Rectifier—indoor free-standing panel type—
for Zero Footprint Industries, Moradabad
(328V, 4350A, SCR-controlled)



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

FEATURES & OFFERINGS

- Designed for wide input supply range to withstand harsh weather conditions
- Powers Green Hydrogen Electrolyser Plants using PEM or Alkaline Technology
- Operates in extreme temperatures without power loss – up to 50°C (outdoor) and 45°C (indoor)
- Forced air-cooling eliminates need for air-conditioning (water-cooled option available)
- Isolation transformers (air/oil-cooled) available as required
- High efficiency through single-stage conversion
- Local availability of spares and services ensures a 25-year service life
- Successfully running in Indian and overseas Naval Dockyards for over 20 years
- Intuitive touchscreen with PLC ensures dynamic response, remote control, and data logging
- Rugged, proven Thyristor Converter Tech with 12/24 pulse designs using galvanically isolated transformer and custom Inter-Phase transformers and filters – delivers clean DC and superior input quality (low harmonics, high PF)
- IGBT Chopper-based rectifiers also available in select ratings
- Suitable for both indoor and outdoor setups
- Trolley-mounted models available for mobile outdoor use
- Modular design from 350V to 750V DC; multiple rectifiers can be connected in parallel for redundancy and expansion
- Can operate on 415V LT supply; custom solutions for 6.6kV/11kV/33kV with specially designed transformers available
- Customised components like Distribution Panels also offered



Selecting the right rectifier?



IGBT or Thyristor rectifier?



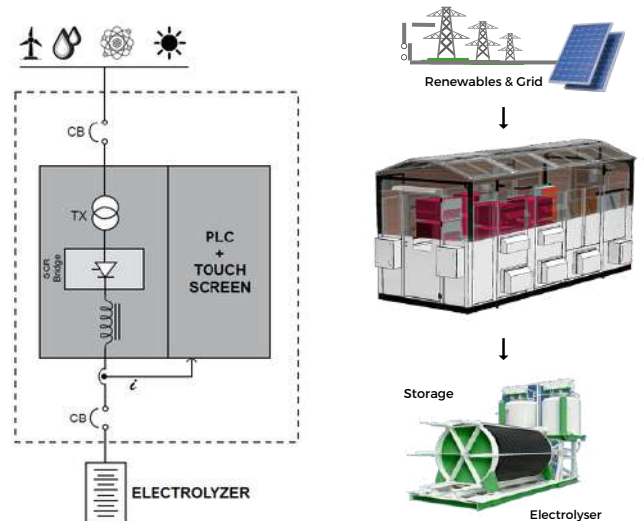
Product Webpage

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 25000A available on request</i>)
Pulse	6/ 12/ 24 pulse systems
Frequency	50/60 Hz
Output Voltage	Up to 750V DC (<i>higher voltages up to 1000 V available on request</i>)
Control Precision	Voltage/Current at +/- 1%
PLC & HMI Control	(Optional)
Current THD	12% / 5%
Ripple	≤ 2%

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 that serves vital industries such as Solar, Defence, Power, Railways, and Green Hydrogen.

We have a legacy of 37+ years of technology excellence in designing and manufacturing equipment for static energy conversion, covering a broad spectrum of power, **especially Static Converters/ Rectifiers.**