

# Hitachi Hi-Rel Power Electronics Private Limited Pioneer in Power Electronics



# **About Hitachi Hi-Rel Power Electronics**



Founded & established in 1983 as Hi-Rel Electronics Pvt. Ltd., which later on in year 2015 had become the 100% subsidiary company of Hitachi, Japan which is one of the Global fortune 500 companies with a new name as Hitachi Hi-Rel Power Electronics Private Limited, which is being recognized as one of the pioneers in power electronics domain. Hitachi Hi-Rel, today, is a leading manufacturer of Industrial UPS, IT & Infra UPS, Medium & Low Voltage Variable Frequency Drives, Grid Tied Solar Inverters, Air Compressors and Railway Inverters.

Hitachi Hi-Rel has state-of-the art manufacturing facility at Sanand near Ahmedabad in Gujarat-India. Hitachi Hi-Rel is helping a wide array of industries and organizations to meet the mission critical demands through technologically superior, low polluting and innovative products Solutions and continue to offer world class power electronics products, value added services & customized solutions.

With a vision of "To be recognized as the most trusted Power Electronics Company by supplying superior products and services", Hitachi Hi-Rel has garnered a significant level of trust in Indian power electronics market segment wherein it serves the entire gamut of Industries, particularly in mission critical applications for Refineries, Petro-Chemicals, Power Generation, Steel & Metals, and Process Industries as well as Critical Data Processing Applications. Besides offering greater energy efficiency & lower carbon footprint, each of the company product streams bears the hallmark of excellence with company accreditations. Hitachi Hi-Rel is an ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 certified company having export house status. Hitachi Hi-Rel sales network & service infrastructure expands out to the world & with this network, we have made strong inroad in Global markets like South East Asia, Middle East, Africa and Brazil. Also, with a presence of strategically located skilled service engineers in India helps us to score high in terms of customer expectations on service deliverables & uptime of the product.

Hitachi Hi-Rel's UPS and power conditioning back-up systems, the flagship product, works as an exceptional safeguard against power disruption and reflects the industry's ultimate in advanced technology with proven track record in mission critical applications. Its variable frequency drives represent the most energy efficient means of process control and reflect the best in process control. Hitachi Hi-Rel's Grid Tied Solar Inverters are based on the contemporary technology of Hitachi Ltd, Japan. Currently Hitachi branded Solar Inverters are generating more than 5.5 GW renewable power in Global Solar Domain as well as more than 3 GW+ renewable power in Indian Solar Domain.

Sprawling across an area of 26,000 sq. meter and modelled on Hitachi's Omika Works in Japan, Hitachi Hi-Rel's Sanand manufacturing works is the world class and one of the most modern power electronics manufacturing facility in India. All aspects of manufacturing, testing and quality assurance are supported by highly experienced Japanese Expats stationed at the facility. Sanand Works employs Hitachi Omika Works (Japan) based software tools for engineering and manufacturing and has one of the most advanced product testing facilities in the country. Innovation through research & development has been rooted in its DNA. Hitachi Hi-Rel also has an additional facility at Gandhinagar near Ahmedabad in Gujarat which is sprawled across an area of 5,000 sq. meter. Its in-house research & development facility has enabled it to develop and market products that have become industry standards.

With expertise, experience and an efficient product line, Hitachi Hi-Rel will always try to be your power electronics partner. When you choose to do business with Hitachi Hi-Rel, you are partnering with a company who cares.

# **Company Statement**



### Vision

To be recognized as the most trusted Power Electronics Company by supplying superior products and services.

## **Mission**

Provide a wide range of power electronics solutions using our knowledge and technologies to meet specific needs of customers and to contribute towards social infrastructure growth

#### **Values**

**Customer Delight:** Make customers and their needs a primary focus of activities

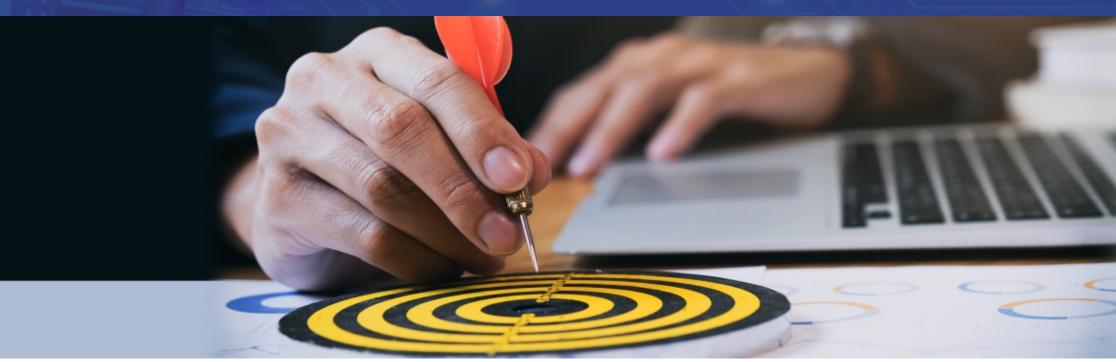
**Quality Orientation:** Accurately and carefully follow procedures for ensuring high quality output consistently

Harmony: Respect diversity and ensure trust amongst all stakeholders

**Sincerity:** Exhibit fairness and integrity in all our business endeavors

Pioneering Spirit: Lead the way in innovation and technology

**Growth :** Provide development opportunities for all employees and encourage self – improvement



# **Manufacturing Works**





# **Manufacturing Works**



Our State-of-the-Art Manufacturing Facility is based at Sanand, near Ahmedabad, in Gujarat, India, which is modelled on Hitachi's Omika Works, Japan. It is spreading over total area of about 26,000 sq. meter and manufactures wide range of power electronics products like UPS, Variable Frequency Drives, Solar Inverters, Railway Inverters and Air Compressors. Our modern Sanand Manufacturing works with facilities like designing & engineering, manufacturing and testing of power electronics products ensures highest product quality standards. Our manufacturing techniques ensure efficient and time saving method of manufacturing to meet customer requirement on shorter lead time.

Sanand manufacturing works is the world class and one of the most modern power electronics manufacturing facility in India. It is the state-of-the-art manufacturing facility and is the heart of Hitachi Hi-Rel Power Electronics. It is located at Sanand, one of the fastest developing Industrial hub of India and a dedicated Industrial park mainly for manufacturing facilities of MNCs. Neighboring plants include major MNCs like Ford Motors, Colgate, Allied Refractories, etc. Within short span of 10 months' time, Sanand manufacturing works got set th up and was inaugurated on 12 December 2012 by Hiroaki Nakanishi-san, Chairman, Representative Executive Officer and President of Hitachi Ltd. Facilities includes designing, engineering, manufacturing and testing of power electronics products.

All aspects of manufacturing, testing and quality assurance are supported by highly experienced Japanese Expats stationed at the facility. Sanand Works employs Hitachi Omika Works (Japan) based software tools for engineering and manufacturing and has one of the most advanced product testing facilities in the country.

Sanand manufacturing works is divided into five major zones named receiving area, material inward and store area, main assembly/manufacturing area, shipping area and load bank area for testing facility.

Manufacturing shop floor is with anti-static epoxy flooring, and completely air-conditioned environment (with energy saving technology), being maintained with filters, to control dust particles of size more than 5 microns. Roof & walls are being insulated to prevent heat losses & provide comfortable working environment. Ducts within the plant are circular in shape to minimize dust accumulation & improve aesthetics. Highly efficient cell manufacturing process is being assisted by 3D CAD viewer system. Specially designed "Customer Witness area" is also available for inspection by the customers. These drives products manufactured here represent the most energy efficient means of process control. Hitachi Hi-Rel's medium voltage variable frequency drives, low voltage variable frequency drives and engineered drive system (steel automation drives & process automation) reflect the best in process control.

This unit is also manufacturing UPS and power conditioning back-up systems i.e. Industrial UPS systems which is our flagship product, works as an exceptional safeguard against power disruption in the power electronics industry. It reflects the industry's ultimate in advanced technology having cutting edge IGBT based design and rugged performance. Proving themselves in mission critical applications, these industrial UPS systems lead by example.

Company also manufactures the Grid Tied Solar Inverters locally in India at this Sanand manufacturing works, which is based on the contemporary technology of Hitachi Ltd, Japan. It is suitable for multi-megawatt solar power plants and currently generating 3 GW+ renewable power in Indian Solar Domain.

Hitachi Hi-Rel also has an additional facility at Gandhinagar near Ahmedabad in Gujarat, India which is sprawled across an area of 5,000 sq. meter.



# In-house Testing Facility for Drives & Solar Products

- 5 nos. of MV drives test bays
- 3 nos. of LV drives test bays
- Automatic cell testing facility
- Test 11 kW to 550 kW ratings at 340 V and 415 V drives on full power with motor load
- Full characterization up to 1460 kW ratings at 3.3 kV and 6.6 kV drives on full power with regenerative motor load facility
- Test up to 700A ratings at 3.3 kV, 6.6 kV and 11 kV drives on full current with reactor load, 11 kV motor test setup for 11 kV drive
- Customer can conduct witness test from automated test command center
- For VFDs
  - All LV and MV test field's input and output breakers & contractors are PLC controlled
  - Load selection also PLC controlled
  - Drive input and output parameters available on PC through PLC
- For Solar Inverters
  - 4 test benches for 1.25 MW Solar PCS testing at full capacity
  - ◆ 2 test benches for 2.5 MW Solar PCS testing at full capacity
  - 1 test bench for 3 kW to 255 kW String Inverters
  - Full load testing done with the Back to Back configuration.

# **Fully Automated UPS Testing Facility**

- 12 test benches, can test up to 500 kVA, 750kVA Maximum load capacity
- Can be configured for and up to 0.7PF to UPF
- I/P voltage variation from 380 VAC to 480 VAC possible
- Each test bench interfaced with PC through PLC/SCADA system
- All testes complying IEC-62040 part-III
- Temperature rise test results recorded automatically
- Oven room for testing / validating products at higher ambient

#### **R&D Centre**

Innovation through R&D has been a hallmark of Hi-Rel since the inception of the company. At Hitachi Hi-Rel new products are developed by the R&D team which are on par with global standards. Along with indigenisation of products from Hitachi, original design of UPS and railway products are done regularly by the in-house R&D team.









# **UPS for Mission Critical Industrial Applications**

































Project Consultancy



Customized Solutions with Technical Support & Value Added Services



Dedicated & Decentralized 24x7 After-Sales-Services



Spare Parts & Consumable Support



Warranty Services



Preventive Maintenance



Customer Training



Annual Maintenance Contract



Battery Maintenance



Product Upgrades

Company offices are located in different parts of the country, working with qualified, trained and experienced engineers, and they carry inventory of spares & components and stay in constant touch with its manufacturing works to offer on time every - time services.

Mozambique

Malawi

#### **Registered Office:**

B-52, Corporate House, Near Judges Bunglow, Bodakdev, Ahmedabad - 380 054, Gujarat, India. Tel: +91-79-6604 6200, Fax: +91-79-6604 6243

#### Manufacturing Works:

Plot No. SM 3 & 4, Sanand GIDC - II, Industrial Estate, Bol Village, Sanand - 382 110, Guiarat, India, Tel: +91-2717-678 777, Fax: +91-2717-678 700

#### **Gandhinagar Facility:**

B - 14/1 & 171, GIDC Electronics Zone, Sector - 25, Gandhinagar - 382 028, Gujarat, India. Tel: +91-79-6170 0500

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In the spirit of innovation, specifications and features are subject to change without notice.

