



# DATA CENTER **CASE STUDIES**



*Building the foundation of  
your digital future...*

# Introduction

Prasa is one of India's leading data center and mission-critical infrastructure solutions and service provider. For over 29 years, Prasa is known for delivering innovative turnkey data center solutions that are **highly efficient, Scalable, economic, and agile**. Right from providing consultancy to building, then managing and maintaining, and finally backing it up with resilient products and critical services, we do it all!

Our in-depth knowledge & vast experience of more than 29 years in building data centers has helped us develop an in-house expertise over the data center skill-sets

With a strong team of numerous **CDCP Certified professionals**, designing & deploying multiple Data Centers, we at PRASA are not only helping customers build data centers, we are able to help them build the very foundation of their digital future!

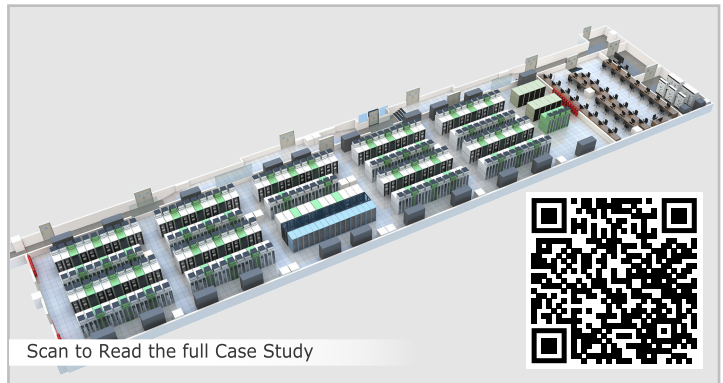


## DC for Prestigious Global E-Commerce and Telecom Infrastructure Company (2023-24)

**"PRASA implementing Turn-key Data Center at Prestigious Global E-Commerce and Telecom Infrastructure Company at Bangalore (Karnataka)"**

### The Prasa Solution:

- Prasa was awarded to design & Implement End-to-End Data Center Solution including Supply, Installation, Commissioning, and 24\*7 Operation for housing a **5G Lab Infrastructure**.
- Design, Implement and Maintain a Turnkey Data Center Comprising DC RACKS, AC RACKS and Network Racks
- Design of Data Center following **TIA 942 Rated-3 Standard**
- Total Area Allocated: **~16000 sq.ft**
- **800W X 1600D Chimney Racks** are being used to cool the Load Efficiently
- Total IT Load: **~2.4MW IT Load**
- Electrical Work: Complete Electrical Work Including **AC Power and DC Power**
- HVAC System: Chilled Water Solution for Data Center cooling
- Chillers: **~300Tr X 4No.**
- Per rack DC Power: **8KW**
- All the Racks are Powered By using Air Insulated **Bus Bar Trunking System (BBT)**
- **Anti Radiation Coating has been Done for Complete DC to Avoid Radiation leakage from LAB**



### About Client:

The Reputed Telecom infrastructure Company is providing Global B2B services for the mobile Telecom Industry and enabling next-generation, cloud-based, international mobile services. Also now started work on its own private 5G network.



# THE INITIATIVE..

The Ministry of Earth Sciences (MoES), Govt. of India, dedicated to providing world-class infrastructure for weather, climate, ocean, and seismological services to the citizens of India, decided to strengthen its supercomputing facility by procuring country's largest supercomputing infrastructure.

Accordingly, the tender was floated for the world's leading supercomputing manufacturers like IBM, Cray, HP, Dell, Atos, Fujitsu, etc.

Out of the prequalified bidders, CRAY Inc. won the bid to supply and implement approximately 8 petaflops computer systems along with the required Data Center (DC) infrastructure for the same. The project was implemented at 2 sites viz. IITM, Pune & NCMRWF, Noida in INDIA.



Scan the Below  
QR Code to Read the  
Complete News



"Timely implementation of the passive infrastructure of the Data Center was extremely crucial for the success of the project.... and PRASA showed the expertise and agility to handle such a complex project."

**CRAY**

- Sudhakar Yerneni  
Country Manager, India



## DC for IITM (2017-18)

### Implementation of India's Largest Data Center for Supercomputers (HPC)



The data centers have been deployed at IITM, Pune and NCMRWF, Noida. They are recognized among the 100 fastest supercomputers in the world.

**The total IT load for IITM, Pune data center is 2500KW and for NCMRWF, Noida is 1440KW.**

The data center has over **50 racks** with per rack load of around **77KW** each. The cooling solutions comprise of 220 TR and 240 TR chillers that allow for an **uptime of >99.5%**. The data centers deliver a **PUE of 1.27**.

The implementation of this extensive data center is completed in the time period of just **120 days**.

## DC for NCMRWF (2020-21)

### Prasa successfully completed and executed the work of Data Center Design, Engineering and Construction project at National Center for Medium Range Weather Forecasting (NCMRWF), Noida

Data Center has been designed with enough redundancy to comply with TIER-3 Data Center Standards.

#### The Prasa Solution:

- Precision Air Conditioners (PAC) (10 TR): **9 Nos.**
- Chillers with Low Side works: **240 TR 4 Nos.** (2W + 2S)
- UPS with Batteries for DC Load: **800 KVA x 3 Nos. 60 KVA x 2 Nos.**
- DG Sets: **1250 KVA x 3 Nos. and 750 KVA x 1 Nos.**
- Transformers: **2500 KVA x 2 Nos. and 2,800 KVA x 1 Nos.**
- HT Panel: **33 KV**
- Racks distribution panels: **6 Nos.**



## DC for India's Reputed Stock Exchange Colo-8 (2021-22)

**"Prasa Implemented 156 Racks Rated- 4 Compliant Data Center At India's Reputed Stock Exchange In Mumbai (Maharashtra) In A Record Time of 120 Days."**

### The Prasa Solution:

Prasa team done complete Civil, Interior, Electrical, UPS Systems (Li-Fe battery), Precision Air-Conditioning System, Comfort Air-conditioning System, IBMS System, Air-Purification System work.

Prasa team follow **TIA – 942** Guidelines and **Rated-4** Data Center Design Standard.

Total area allocated – **15483 sq. ft.**

Racks – **156+ Full Racks**

Total IT Load – **~1.2 MW IT load.**

Electrical Work – Complete Electrical Work done by PRASA.

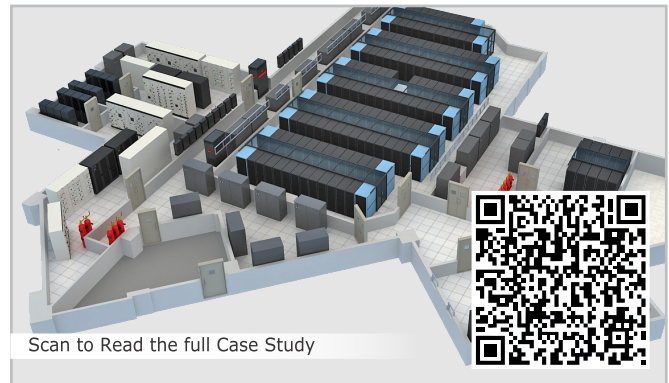
BMS system to monitor the UPS and Battery.

HVAC, UPS Systems, Precision Air- Conditioning.

IBMS: Monitoring System.

Cooling System.

Safety and Security Systems.



## DC for India's Reputed Stock Exchange Colo-7 (2021-22)

**"Prasa Implemented 100 Racks Rated- 3 Compliant Data Center at India's Reputed Stock Exchange in Mumbai (Maharashtra) in a Record Time of 120 Day's"**

### The Prasa Solution:

Prasa team done complete Civil, Interior, Electrical, UPS Systems (Li-Fe battery), Precision Air-Conditioning, IBMS, Air-Purification System work.

PrasaTeam follow **TIA – 942** Guidelines and **Rated-3** Data Center Design Standard.



Total area allocated – **4000 sq. ft.**

Racks – **90+ Full Racks** (6 KW of IT Load per Rack).

Electrical Work – Complete Electrical Work done by PRASA.

BMS system to monitor the UPS and Battery.

HVAC, UPS Systems, Precision Air- Conditioning – 12.

IBMS: Monitoring System.

Cooling System.

Total IT Load – **~500 kW IT load.**

**Safety and Security Systems**

## DC for Animation Render Farm (2021-22)

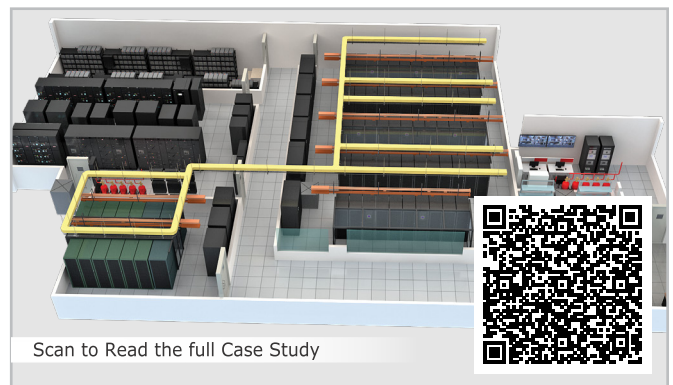
### Prasa Implemented Rated-3 Compliant Data Center at one of India's largest Animation & Gaming Render Farm at Bengaluru (Karnataka) in a Record Time of 120 Day's

PRASA is proud to share the commissioning of 1.2MW high density rack Data Center for one of World's largest color motion picture company. We take pride in sharing that this project was completed in a record time of 4 months in all aspects at Bengaluru.

**Prasa Team follow TIA – 942 Guidelines and Rated-3 Data Center Design Standard**

#### The Prasa Solution:

- Prasa Implemented the new Data Center as per client requirement of Rendering Racks, storage Racks, Server and networking Racks with the Total Data centre area covered around 4500 Sq. ft. As per client requirement setup entire infrastructure for the data centre comprising of Civil, Interior works, Electrical, UPS System along with SMF batteries for the desired backup time, Dx based Precision Air conditioning, IBMS to cater the data center requirement.
- The data center follows Cold Aisle containment solution, which makes the data center safer and smarter.
- The data center is installed with In-row cooling systems that cool efficiently with precision and brings down the energy consumption and hence lowers the PUE.



## DC for Siemens (2020-21)

### Prasa implemented Rated-3 ACP Level-2/Rated-3 Compliant Data center at Siemens Technology and Services, Electronic City, Bangalore.

"Prasa has deployed a modern and energy-efficient data center at the Siemens Technology and Services Pvt. Ltd, Bangalore, The data center is a turnkey integrated smart solution that manages and supports the IT and management services."

**The overall Data Center design energy efficient in line with Green Data Center concepts.**



#### The Prasa Solution:

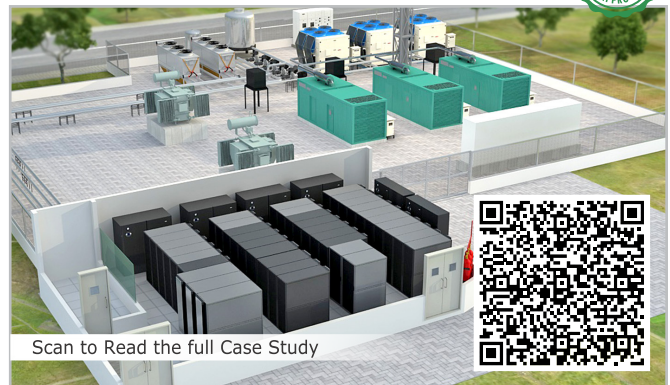
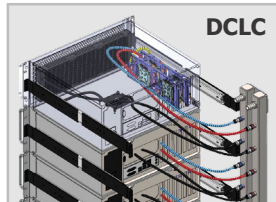
UPS - 400 KVA X 2 Nos  
Racks - 60+  
In-Row Cooling - 12TR x 15 Nos  
Networking **OM5 fiber cable** connectivity to each rack.

## HPC DC for a Prestigious Govt. Research Institute (2022-23)

**PRASA implementing Turn-key Data Center solution for an HPC application being deployed by a prestigious Govt. Research Institute in Bangalore (Karnataka)**

### The Prasa Solution:

- Prasa was awarded to design & Implement End-to-End Data Center Solution including Supply, Installation, Commissioning, and 24\*7 Operation for housing a **High Performance Computing, Artificial Intelligence, and Machine Learning Platform**.
- Per **42U** Rack Load of **>40kW**.
- Total Data Center designed and implemented for **>800KW**.
- Minimize the PUE and Optimize the Power budget.
- Facility Management Services.
- Deploy industry leading direct contact Liquid Cooling solution for cooling of IT Load.
- **Direct Contact Liquid Cooling (DCLC) Technology** used to achieve **<1.25 PUE\***
- Direct Contact Liquid Cooling Solutions is unique cooling Solution for dense, concentrated and targeted cooling.



## DC for an ISP (2020-21)

**Prasa deployed a Rated-3 Data Center at ATRIA CONVERGENCE TECHNOLOGIES LTD (ACT), Hyderabad.**

"Prasa has built a modern and energy-efficient data center at ATRIA CONVERGENCE TECHNOLOGIES LTD (ACT), Hyderabad., ACT are one of the country's most renowned cable and broadband company, bringing state-of the art services to nearly 2 million happy homes".

### The Prasa Solution:

- Prasa has incorporated all the requirements of The ACT Data Center  
Racks: **50+ Nos**  
**Fiber Cable for Networking**  
HVAC: **In Row Cooling**  
UPS: **100 KVA x 02 Nos**  
High Efficiency of Power: **Cold Aisle Containment**
- Prasa has completed all the Civil work required & the Electrical solutions including power backup equipment. Also provided Data Center Security system & BMS system.
- **Data Center Size - ~1400 Sq. ft.**





## DC for an IOCL Assam (2020-21)

### Design, Build, Operation & Maintenance of Rated-3 DC for Indian Oil Corporation Ltd. Bongaigaon Refinery. BGR DATA CENTER WITH RATED-3 ARCHITECTURE

"Prasa has built a modern and energy-efficient data center at IOCL i.e., the largest commercial oil company in India. A rated-3 data center was deployed that increased the efficiency of the data center multifold and reduced the carbon footprint of the company".

#### The Prasa Solution:

**09** Racks, **10** PAC, **04** IP KVM  
Networking, Copper Cable and Fiber Cable,  
In row Cooling Solution: **03**, BMS  
Data Center Size: **960 Sq. Ft.**



## DC for STPI (2018-19)

### First-ever Rated-3 Data Center in the City of Vijayawada

STPI runs on solar power and the IT department needed an innovative solution with the optimal utilization of its power resources. An energy-efficient data center was built that contained tens of racks spanning across an area of 850 sq.ft., without compromising on the performance of the data center as a whole.



#### The Prasa Solution:

The data center is compliant with 5 stars GRIHA rating (Green Rating for Integrated Habitat Assessment), which is a national rating system for green buildings in India, conceived by TERI and developed by Ministry of New and Renewable Energy, India.

The data center uses a smart lighting system. It is a futuristic step which will help in achieving higher energy efficiency and hence reduce the power bills.

## DC for IOCL Gujarat (2018-19)

### A Rated-3 Data Center to Accommodate IT Expansion at IOCL, Vadodara, Gujarat

The largest commercial oil company in India, IOCL, chose Prasa to upgrade their data storage solutions to accommodate new requirements and increase the overall efficiency.

**The data center deployed is the first ever Rated-3 compliant data center inside an oil refinery in India.**

#### The Prasa Solution:

The existing data center had to be shifted to a new data center consisting of BMS room, UPS room, and server room. Prasa implemented it with a shutdown of just 24 hours and no downtime otherwise.

The data center needed aisle containment while supporting in-row air conditioners. The data center follows Hot-aisle containment solution, which makes the data center safer and smarter.



## DC for Film Division, Mumbai (2016-17)

### Turnkey Data Center with an Uptime of 99.997% at Film Division of India

Prasa implemented tier III data center for the Film Division to meet all its storage, processing, managing, and computing needs for the huge amount of data it houses.

**It is the first film archiving data center in India.**



#### The Prasa Solution:

The data center is equipped with 30 kW Modular UPS with hot-swappable battery which allows for all types of maintenance and repair without any shutdowns.

The data center is complete with all security systems. The security systems include - Water Leak Detection, Rodent Repellent System, Fire Detection System, Fire Suppression System (Novec 1230), CCTV, and Physical Access Control System.

## DC for Edelweiss (2015-16)

### Prasa has Completed its 2nd Data Center for the Edelweiss Group.

For its second data center, Edelweiss needed solutions that could support all its technical requirements. The data center had to aid the workload at Edelweiss, which meant multiple server racks had to be deployed in an area of 1000 sq. ft. without compromising on the performance.

#### The Prasa Solution:

The **Rated-3 compliant Data Center** uses static transfer switch for all the racks. Static transfer switch allows for quick and reliable switching by combining functions like swiftly switching between AC power sources, power isolation, monitoring, and grounding into a single solution.

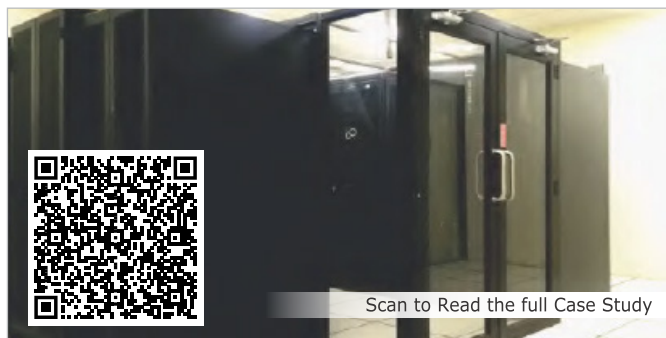
After years of completion, the data center is still up and running with an **uptime of 99.994%**, with the uptime services provided by Prasa.



## DC for Pune University (2015-16)

New-age Data Center Solutions and Mission Critical Equipment at Savitribai Phule Pune University A contemporary and cost-effective data center was deployed to accommodate the data storage requirements of a university that has 46 academic depts., 307 recognized research institutes, and 612 affiliated colleges.

**It is the only high-performance compute data center for University of Pune.**



#### The Prasa Solution:

Prasa delivered quality data center solution to meet the civil, cooling, electrical, and security needs of the data center.

The data center uses 2 different types of cooling methods for precision and efficiency. The two methods used are Chillers and CRVs.

# UPCOMING DATA CENTER PROJECTS

## DC for India's Biggest Defence Research Institute (2023-24)

Prasa is going to implement Rated-3 Compliant Data Center for one of the most advanced missile research institute in Hyderabad.

Estimated Year of Completion:- 2023-2024

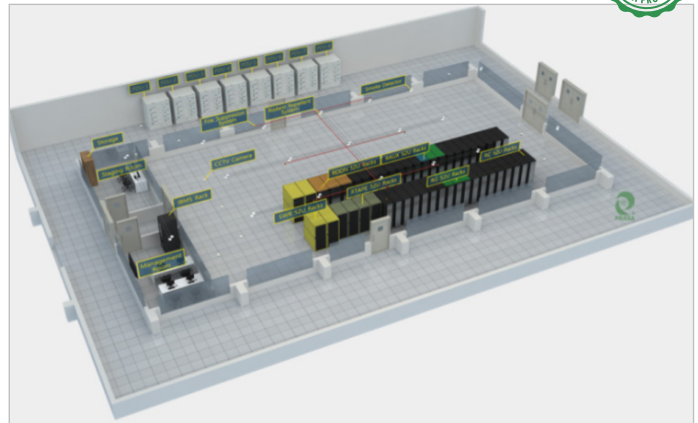
Scope of Work:- Complete Turnkey Solution Including Civil, Interior, Electrical, HVAC (RDHx), IBMS & Necessary Miscellaneous Work along with All the Approvals

### The Prasa Solution:

Total IT Load: **~3000 kW**

No Of Racks: **~40 Racks** (Per Rack Load of ~55kW)

Cooling Technology: **RDHx Doors**

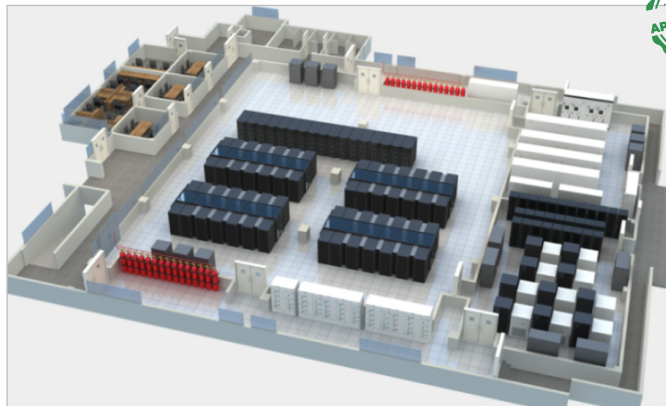


## DC for Development of Advanced Computing (2023-24)

Prasa is going to implement Rated-3 Compliant Data Center for CDAC under NSM mission for 20PF Facility.

Estimated Year of Completion:- 2023-2024

Scope of Work:- Complete Turnkey Solution Including Building Construction, Statutory Approvals, Internal Civil, Interior, Electrical, HVAC (RDHx), IBMS & Necessary Miscellaneous Work along with All the Approvals



### The Prasa Solution:

Total IT Load: **~2400 kW**

No Of Racks: **~80+ Racks** (Per Rack Load of ~30kW)

Cooling Technology: **DCLC + RDHx Doors**

Chillers: **~250Tr X 4Nos**



# PRE-FAB. EDGE DATA CENTER PROJECTS

## EDGE Center for a India's Largest Telecom Network Provider (2023-24)

### Prasa has Implemented Pre-Fabricated Modular Data Center at Largest Telecom Network provider in India

Prasa team did complete Civil, Interior, Electrical, UPS Systems, In Row Cooling System, BMS, Security System Work.

#### The Prasa Solution:

UPS: **IT UPS 175 KVA and Non IT UPS 30 KVA**

Total IT Load: **~150 KW**

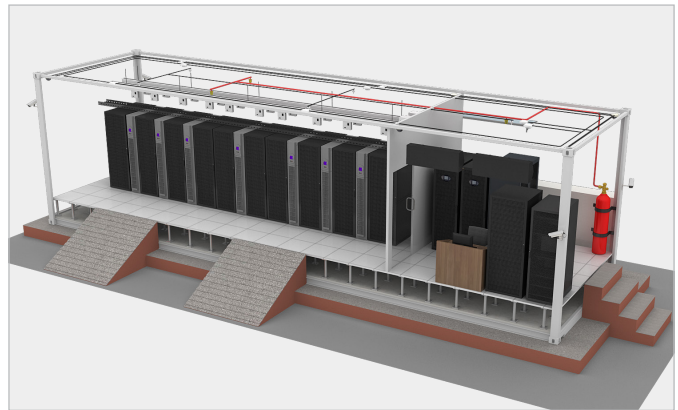
HVAC: **In Row Cooling**

Rack: **42U 10 Nos.**

Container Length: 13.5 M, Height: 4 M, Width: 3.6 M

Electrical Work: Complete Electrical work done by PRASA

The Data Center Security has been taken into account from all aspects including CCTV, fire Suppression System, water leakage safety system, rodent repellent System and BMS.



## EDGE Center for Govt. Research Institute (2023-24)

### Prasa has Implemented India's first ever Government project for Modular Containerized Data Center at Prestigious Government Research Institute situated in Gujarat

#### The Prasa Solution:

- Prasa team did complete Civil, Interior, Electrical, UPS Systems, In Row Cooling System, BMS, Security System Work.



- UPS: **IT UPS 150 KVA and Non IT UPS 120 KVA**
- Total IT Load: **~100 KW**
- HVAC: **In Row Cooling**
- Rack: **42U 06 Nos.**
- Container Length: 12.2 M, Height: 2.9 M, Width: 2.7 M
- Electrical Work: **Complete Electrical work done by PRASA**
- The Data Center Security has been taken into account from all aspects including CCTV, fire Suppression System, water leakage safety system, rodent repellent System and BMS

**About Client:** Government Research Institute is an autonomous R & D organization, under the Government of India situated in Gujarat. This institute is largely involved in theoretical and experimental studies in plasma science including basic plasma physics, magnetically confined hot plasmas and plasma technologies for industrial application.

## About Prasa

Prasa has served more than 100+ Turnkey Data Center clients across various industry verticals. with the help of our in-depth understanding and domain expertise, we strive to provide the solutions and services that cater to your existing needs as well as future business requirements.

### Solutions



End-to-end Data Center Build Solutions



Skid | Modular Data Center Solutions



Data Center Monitoring Solutions



Edge Computing Solutions



Liquid Immersion Cooling Solutions

### Services



Consultancy



PQA and Thermography



Data Center Uptime Services

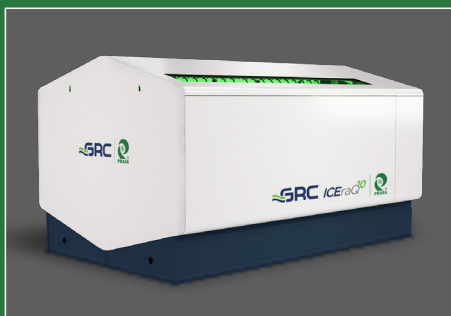


Mission-Critical Equipment Services



Service Van for 24x7 Movement

## Introducing the Sustainable DC Cooling Solution in India



As a pioneer in the Data Center industry, Prasa has undertaken the responsibility of making Data Centers Greener and more Efficient. To further this green initiative, Prasa has partnered with GRC to bring single-phase **Liquid Immersion Cooling Solutions** to India.

The product range includes highly acclaimed solutions by **GRC: ICeraQ®, ICetank®, HashRaQ®, HashTank®**



## Prasa's presence in india

### Head Office (Pune):

001, Casablanca Building, Sangam Press Road,  
Kothrud, Pune, Maharashtra 411038

+91-2025446690 | +91-2025434958

prasapune@prasa-pl.com | enquiry@prasa-pl.com

### Admin Office (Pune):

Unnati, Sr. 4A+4B, Paud Rd, Lokmanya Colony,  
Kothrud, Pune, Maharashtra 411038



www.prasa-pl.com



Scan the QR code to visit  
Prasa's website

