

Practical Competence

Exceeding Customer Expectations with Knowledge, Experience and Action

No two building facilities we handle are the same; flexible thinking and adaptability are required depending on the building, purpose, and customer needs. We exceed customer expectations through knowledge, experience and action built up over our long history as a general equipment contractor, along with advanced design proposals and construction technology backed by those capabilities. This is the practical competence of Dai-Dan.

Installation Example 1 Singapore General Hospital (SGH H9A)

The Singapore General Hospital Emergency Medical Ward is a state-of-the-art medical facility developed to meet the growing domestic demand for healthcare in Singapore and to improve the country's national response capabilities in times of medical crisis. Under China Construction Development Co., Ltd., we were responsible for electrical and weak-current systems installation.

This facility adopts an N+1 redundant distribution system, enabling continued hospital operations thanks to emergency generators or alternative power supplies even if the normal main power supply stops. Additionally, by thoroughly managing tightening torque at terminal connections, we prevent overheating and contact failures, ensuring highly reliable equipment operation.

Building Overview

Location	1 Hospital Blvd, Singapore 168581
Purpose	Emergency care, acute care wards, offices, etc.
Scale	Total floor area: approx. 58,000 m ² 12 stories above ground, 4 stories underground
Structure	Steel structure + Reinforced Concrete structure
Completion	June 2024

Equipment Overview

Power receiving and transforming equipment	22 kV power reception, 4 lines 12 oil-filled transformers (3.4 MVA x 4 units, 3 MVA x 2 units, 2.5 MVA x 4 units, 1.5 MVA x 2 units, total 32.6 MVA), 38 high-voltage distribution panels, bus ducts 800A–5,000A (approx. 6,000 m)
Emergency power supply	UPS (500 kVA x 4 units, 400 kVA x 2 units, 250 kVA x 1 unit), emergency generators (2.75 MVA x 3 units, 2.5 MVA x 2 units, 2.0 MVA x 3 units, 1.5 MVA x 2 units; total 22.25 MVA)
Weak-current electrical equipment	Nurse call system, security, CCTV, emergency broadcasting, electric clocks, parking lot monitoring system



Seah Peng Siong
MOH Holdings Pte Ltd
Deputy Director

Customer Feedback

We requested your company to install electrical systems, including weak-current equipment (security, emergency broadcasting, electric clock systems, etc.) for this project's Emergency Medical Building. This project was particularly challenging due to surrounding hospitals being operational during construction, but the TOP (temporary occupation permit) was obtained as planned in December 2023. You also responded appropriately to corrections requested during inspections. Finally, we appreciate your timely responses to various requests from consultants and the Ministry of Health during construction.



Hu Zhong
Singapore Branch
Assistant Project Director

Staff Comments

This was the largest electrical installation project ever undertaken by our Singapore Branch, requiring procurement of massive equipment and materials as well as complex process and cost management. Despite facing a construction period extended by more than two years due to the COVID-19 pandemic and significant rises in material and equipment prices, we worked to improve efficiency through methods such as offsite unitization. These efforts were highly regarded by the client, and we are currently involved in additional electrical and other engineering works. We sincerely appreciate the cooperation of all parties involved.

Installation Example 2

CHUGAI PHARAMA Manufacturing Co., LTD. FJ3 Synthetic API Facility for Late-Stage Development and Early-Phase Production

Chugai Pharmaceutical Co., Ltd., which takes charge of production for the Chugai Pharmaceutical Group, completed the Late-stage Development and Early-Phase Clinical Manufacturing Facility (FJ3) in January 2025. We carried out air conditioning and plumbing installations under JGC JAPAN CORPORATION.

This facility follows the synthetic API manufacturing building for low- and mid-molecular pharmaceuticals (FJ2) constructed in 2022, aiming to enable manufacturing of high-pharmacological-activity mid-molecular APIs for late-phase clinical trials and initial commercial production. Each manufacturing area is a pressure-controlled cleanroom for containment, preventing entry of external contaminants and suppressing the spread of internal contaminants, while requiring an HVAC system that allows transfer between areas without negatively affecting each room's pressure environment.

Building Overview

Location	2500 Takayanagi, Fujieda City, Shizuoka Prefecture
Purpose	Pharmaceutical Plant
Scale	Building area: 2,205 m ² Total floor area: 10,489 m ² Five stories above ground
Structure	Steel structure, seismic isolation design

Equipment Overview

Air conditioning equipment	Chilled water source: NH3 screw chiller; brine source: CO ₂ refrigerant air-cooled chiller; heat source: plate-type steam heat exchanger; total outside air handling unit; direct-drive single inlet turbo fan for exhaust; exhaust gas scrubber Individual zone control using variable air volume units and room pressure control dampers
Sanitary facilities	Water storage tank + pressurized pump system, local water heating, special gases
Firefighting equipment	Foam fire extinguishing system, outdoor fire hydrant system



Eisuke Nagaike
JGC JAPAN CORPORATION
Building Environment Systems
Design Department

Customer Feedback

The FJ3 Project is the largest-ever achievement of our Life Sciences Division, having built a commercial production plant for medium-molecule pharmaceutical active ingredients with world-class containment performance for highly potent substances in Fujieda City, Shizuoka Prefecture. After completing ten months of basic design work, construction began in March 2022. Following 24 months of construction, the building was completed in March 2024, after which over six months of trial runs and qualification work were carried out, leading to a successful completion and handover in November 2024. The air conditioning systems in the pharmaceutical ingredient factory required not only the execution of a precise on-site construction plan, but also demanded high energy efficiency, advanced room pressure control and commissioning technology, and strict GMP validation. From the initial design phase through to project completion, Dai-Dan consistently demonstrated outstanding technical prowess and responded with sincerity and positivity. This project left a deeply inspiring and proud impression on all of us—one that will remain in our memories. We express our heartfelt gratitude. Thank you very much.



Yoshimasa Nakao
Nagoya
Manager of Engineering
Department 2

Staff Comments

At this site, under the leadership of JGC, pre-confirmation of interference among architectural, plant equipment, plant electrical, building equipment, and building electrical elements was shared and managed collaboratively across affiliated companies using a 3D model. The editing work was challenging, but during construction, work planning and construction management went smoothly. Although the construction period was short, the cooperation of everyone involved—including the client—enabled us to complete the project. Once again, I would like to take this opportunity to thank everyone.

Installation Example 3 Nakanoshima Qross

Nakanoshima Qross is a one-of-a-kind hub for the industrialization of future medicine, bringing together medical institutions, corporations, startups, and support organizations under one roof.

Our company performed air conditioning work across all buildings for 15 clients, including Nippon Life, Keihan Holdings, and Kanden Realty & Development.

Building Overview

Location	4-3-51 Nakanoshima, Kita-ku, Osaka City, Osaka Prefecture
Purpose	Medical and research facilities
Scale	Total floor area: 58,163 m ² 17 stories above ground
Structure	Steel structure
Completion	January 2024 (Grand opening June 2024)

Equipment Overview

Heat source facilities	Geothermal cooling, modular chillers (geothermal subplant), plate heat exchangers
Air conditioning equipment	Cooling towers, air handling units, building multi-air conditioners, fans, air conditioning ventilators, automatic control systems



Shuichi Okawa
Osaka Head Office
Deputy Manager of
Engineering Department 2

Staff Comments

To complete this project for 15 clients and six contracted companies within just ten months from the start of full-scale interior work, we prioritized onsite communication and strived to create an open work environment. Thanks to the support of clients and cooperating companies, as well as everyone involved, we were able to complete the project safely. We are deeply grateful.

Enhancing Our Installation Expertise and Ability to Provide Design Solutions

Identified at technology presentations to promote expertise and ingenuity company-wide

We held our FY2024 Case Study Presentations awards ceremony in January 2025. This event publicizes exceptional achievements and ideas that are examples of our employees' expertise and ingenuity in their day-to-day work,



and that have gone through a company-wide application and demanding review process that includes examples from workers overseas. This time, out of 105 entries, a total of three awards—one President's Award and two Head of Technical Division Awards—were presented and announced at a hotel in Tokyo. In addition, five Excellence Awards and fourteen Encouragement Awards were selected and presented at each business location.

Presentations from the event are available for on-demand viewing via the company portal. By sharing outstanding results and making them accessible to all, we are helping employees grow and raising Dai-Dan's levels of technology, safety, and quality.



Keita Jozuka
Shikoku Branch
Assistant Manager of
Engineering Department

Comments from President's Award Winners

We are truly honored to have received the President's Award for the FY2024 Case Study Presentations from among many design and construction cases and improvement ideas submitted from across the country.

This case is one where we leveraged our accumulated experience and technology to meet customer requirements.

Additionally, while maintaining our company's quality, it has contributed to addressing major industry trends such as work style reforms and labor shortages.

For relocation work of an open-type expansion tank in existing heat source equipment, the original plan required a stoppage of the heat source, but the customer requested that we relocate the tank without shutting down the plant's operation or production.

As a solution, we constructed a temporary closed circuit designed to maintain constant pressure within the air conditioning piping of the open-type expansion tank, allowing us to disconnect the expansion tank circuit without stopping the heat source.

Finally, as digital technology continues to evolve daily, we will continue to strive to address industry challenges through ever higher technical capabilities and innovation.