# MC8000

The MC8000 series is a new generation of prefabricated modular data center infrastructure solution, which integrates all the subsystems like cabinets, refrigeration, power supply and distribution system, airflow management, firefighting, cabling, security, monitoring and lighting of the traditional data center into one container. Different from the traditional way of starting with architecture and then designing and constructing, it is container data center module prefabricated in the factory. All equipment and systems are pre-assembled in the factory. After positioning and the foundation laying, the container data center is transported to the site as a whole to be installed in place, and then it can be put into use after connecting the water, electricity and network.

The MC8000 container data center system prefabricated in the factory is featured with sufficient quality assurance, high reliability, low operating cost, high efficiency, low carbon, green energy saving, rapid deployment, capacity expansion on demand.
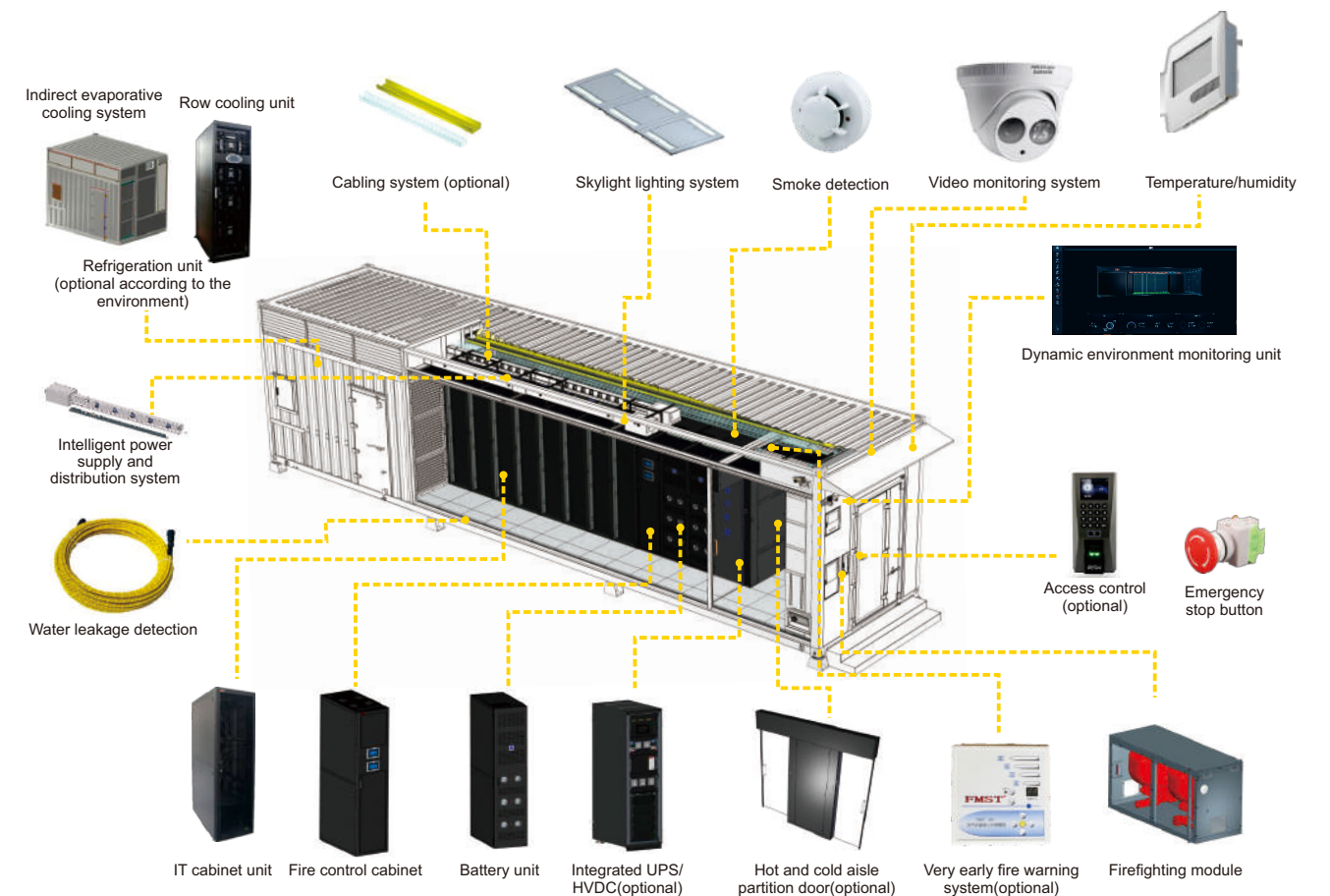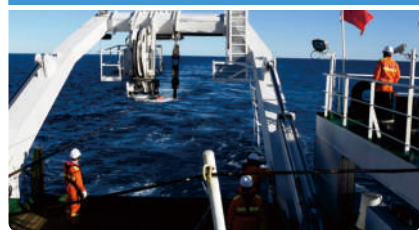
Applications

State grid	Post-disaster communications	Cloud computing, IDC
Marine research	Oil-gas exploration	Military cooperation

Indirect evaporative cooling system — Row cooling unit — Cabling system (optional) — Skylight lighting system — Smoke detection — Video monitoring system — Temperature/humidity — Refrigeration unit (optional according to the environment) — Dynamic environment monitoring unit — Intelligent power supply and distribution system — Access control (optional) — Emergency stop button — Water leakage detection

IT cabinet unit · Fire control cabinet · Battery unit · Integrated UPS/HVDC(optional) · Hot and cold aisle partition door(optional) · Very early fire warning system(optional) · Firefighting module

Features

Reliability

- 25-year cabinet design life, IP55 protection grade.
- Standardized design of the overall container system to avoid system design problems.
- The overall system is factory prefabricated, and all the assembly and commissioning pass the quality test of the factory, which greatly reduces the workload and the uncontrollable factors of on-site construction.
- Strong and weak current separation design makes less electromagnetic interference.
- Very early fire warning system (optional).

Flexibility

- The overall system is factory prefabricated. The container data center can be put into use after it is transported to the site and connected with the water, electricity and network.
- Container-type overall design, easy to move, can be deployed quickly and flexibly according to data center's needs.
- The container modules can be expanded one by one and constructed in phases.

High efficiency

- Efficient integrated power supply and distribution, enclosed hot and cold aisles, high power density and energy efficiency.
- Support single container or multi-container assembly mode, and increase land utilization rate through stacking.
- The cold and hot aisles inside the overall container are isolated from the outside to improve the utilization efficiency of refrigeration.

Intelligence

- MC8000 has built-in monitoring and management system and is configured with 21-inch industrial large touch screen that can be used to view the parameters of the power supply and distribution, air conditioner, environment and UPS. With its own unattended automatic operation platform, remote monitoring of the operating parameters inside MC8000 can be performed without leaving home. Moreover, it can be connected to the upper level monitoring platform via the internet for multi-network centralized monitoring and intelligent management.

Technical Data

| Subsystem		Specification
Container system	Dimensions	40 feet(12192x2438/3000x2896/3000/3200mm)(L×W×H); Multiple container assembly solution needs to be customized
		20 feet(6058X2438/3000X2896/3000/3200mm)(L×W×H)
Power supply and distribution(Integrated UPS/HVDC)	Input voltage	380/400/415Vac, 50/60Hz, 3Ph+N+PE
	Input power factor	Full load>0.99, half load>0.98
	Rated capacity	50~200kVA
	Efficiency	≥96%
	AC lightning protection	Class B, C
Battery	Built-in battery cabinet	5~20 minutes backup time
Air cooled in-row air conditioner	Refrigerating capacity (single air conditioner)	12kW/25kW/40kW
	Dimensions of internal machine	300/600x1000/1100/1200x2000/2200mm(W×D×H)
	Input power supply	380/400/415Vac, 50/60Hz, 3Ph+N+PE
	Refrigerant	R410A
	Fluorine pump	Optional
Chilled water in-row air conditioner	Refrigerating capacity (single air conditioner)	12kW/25kW/40kW
	Dimensions of internal machine	300/600x1000/1100/1200x2000/2200mm(W×D×H)
	Input power supply	380/400/415Vac, 50/60Hz, 3Ph+N+PE
	Refrigerant	Water/Ethylene glycol aqueous solution
Indirect evaporative refrigeration unit	Refrigerating capacity	65kW/120kW
	Dimensions	2400X3000X3200mm/4100X3000X3200mm(L×W×H)
	Input power supply	380/400/415Vac, 50/60Hz, 3Ph+N+PE
	Refrigerant	R410A
Cabinet system	Dimensions	600x1000/1100/1200x2000/2200mm(W×D×H)
	20 feet Number of supported IT cabinets	5~6
	40 feet Number of supported IT cabinets	9~13
Firefighting system	Firefighting system	Automatic fire detection and fire extinguishing system
	Firefighting module	Rack-mounted firefighting module(13U), can be installed into a standard 19-inch
	Firefighting gas	Heptafluoropropane
	Very early smoke detection system	Optional
Security system	Access control	Standard access control system, optional fingerprint, password, swipe card and other multi-functional access control management methods
	Escape system	The container is equipped with fire escape door for quick escape from the inside
	Video monitoring	IP high-definition camera, connected to the dynamic environment system
Work environment	IP rating	IP55
	Temperature	-40 °C~+52 °C
	Humidity	10%~100%
	Altitude	Derating for above 1000 m

MC8000 Air-cooled Temperature Control Solution

The row air-cooled temperature control solution is recommended. When this solution is adopted, the air conditioner external unit or the centralized condenser is installed in the compartment, and all the subsystems are assembled in the factory to realize the prefabrication of the whole system, which is simple and convenient, and has a wide range of use; Fluorine pump can be selected according to needs, which is more energy-saving.
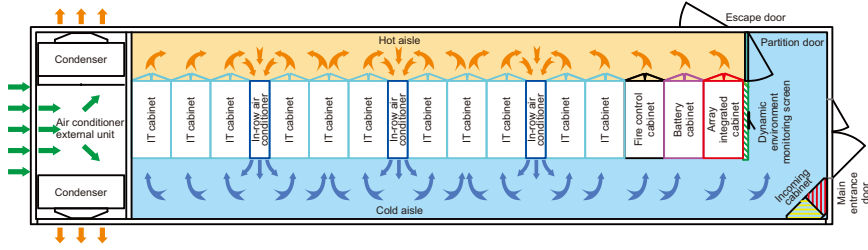
MC8000 Indirect Evaporative Temperature Control Solution

For areas with high air cleanliness and dust-free weather, indirect evaporative cooling temperature control solution is recommended. The solution is divided into three working conditions, indirect evaporative cooling(with spray)+DX refrigeration, indirect evaporative cooling(with spray, wet conditions), indirect cooling(no spray, dry conditions). The system can automatically change the working mode according to the change of external temperature and humidity environment, so as to save energy.
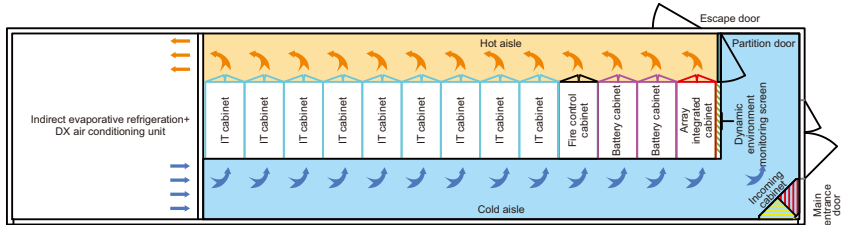
MC8000 Chilled Water Temperature Control Solution

For data center parks that have redundant chilled water resources available, chilled water temperature control solution is recommended. The original cooling tower and chiller are used to improve the utilization rate of resources. The chilled water solution can improve the maximum power density of a single cabinet, improve the utilization rate of containers and save resources.