MITSUBISHI ELECTRIC HYDRONICS & IT COOLING SYSTEMS S.p.A.

Specifications
w-NEXT3 DF_0008_0015_202012_EN

Serie:	w-NEXT3 DF
Sizes:	All
Capacity:	8 - 15 kW

w-NEXT3 DF
Unit with two distinct cooling sources (Dual Fluid system): Double cooling coil for chilled water feeding for the close control air conditioning in small Data Centre, UPS rooms, Batteries rooms, Distribution rooms and in all areas of the Data Center that need a service of air conditioning.

DOWNFLOW AIR DELIVERY (U - UNDER)
UPFLOW AIR DELIVERY (O - OVER)

The constructive solutions and the internal lay-out allow high application flexibility and the frontal access to the main components for the inspection and routine maintenance. The installation requires electrical and hydraulic connections.

Main components:

FRAMEWORK
Base and frame in galvanized steel, painted with epoxy powders. Colour RAL 7016.The inner frame is provided with seals for the panels. Panels in galvanized steel sheet with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders. Colour RAL 7016 hammered.
Panels insulated with polyurethane foam based on polyester polyol with melted protective film and seals to ensure airtight. Fire resistance HF1 – UL94. Hinged front panels with key fasteners and removable lateral and back side panels.
Total front routine maintenance.
Compartment for electrical panel on unit front for direct access to control and regulation devices.
Air flow UNDER version: Air intake from the top and air delivery from the bottom.
Air flow OVER version: Air intake from the front through honeycomb type grille and air delivery from the top with protection guard grille.

FILTER SECTION
Washable air filters with COARSE 60% efficiency (according to ISO EN 16890), with cells in synthetic fibre and metallic frame.

FAN SECTION
Centrifugal fans with backward curved blades with wing profile, single suction and without scroll housings (Plug-fans), directly coupled to external rotor electric motor.
Impeller in aluminium or in composite material exempt from rust formation.
Brushless type synchronous EC motor with integrated electronic commutated system.
Fans speed control with proportional signal 0-10V.
Fan protection guard grille on discharge side for Over version.
Available external static pressure from 20 Pa up to max, adjustable with air flow rate.

COOLING SECTION
Heat exchanger coil with internally corrugated copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops; two separate circuits - main cooling circuit and Dual Fluid circuit.
Condensate tray in stainless steel with PVC flexible discharge pipe.
2-way motorized valve for water flow regulation of the main cooling circuit with 0÷10 VDC control actuator and emergency manual control.
2-way motorized valve for water flow regulation of the Dual Fluid circuit with 0÷10 VDC control actuator and emergency manual control.
Temperature probe on chilled water inlet of the main cooling circuit.
Temperature probe on chilled water inlet of the Dual Fluid circuit.
ISO 228G/1 chilled water inlet/outlet connection of main circuit and Dual Fluid circuit.

ELECTRICAL PANEL
In accordance with EN60204-1 norms, suitable for indoor installation, complete with:
Main switch with door lock safety on front panel.
Thermal-magnetic circuit breaker for supply fan.
Transformer for auxiliary circuit and microprocessor supply.
Numbered electric cables.
Interface board (PAC IF) for connection to outdoor unit (one board for each outdoor unit).
Terminals for remote enabling, General Alarm signal and machine status.
Power supply: 230/1/50.

CONTROL SYSTEM
Microprocessor control system with graphic display for control and monitor of operating and alarms status. The system includes:
Built-in clock for alarms date and time displaying and storing.
Built-in memory for the storing of the intervened events (up to 200 events recorded).
Main components hour-meter.
Non-volatile “Flash” memory for data storage in case of power supply faulty.
Menu with protection password.
LAN network for max. 15 units.
Provision for connectivity cards housing.

AVAILABLE ACCESSORIES

- Bottom air intake + blind panels
- Back air intake + blind panels
- Hydrophilic treatment of the cooling coil finned pack
- Constant flow
- Constant prevalence
- Power supply 400/3+N/50.
- Power supply 230/1/60.
- Power supply 230/3/60.
- Power supply 380/3+N/60.
- Power supply 460/3+N/60
- Back-up module controller
- Numbered wirings + UK requests
- Serial cards:
    - RS485 serial card.
    - RS232 serial card.
    - Ethernet card.
    - LON card.
- Air flow sensor
- “Evolution touch” graphic display.
- Drain pump
- Water leakage detector
- Water leakage detector + additional sensor
- **Clogged filters sensor**
- Smoke detector
- Fire detector
- Adaptive set point
- Unit control via Kiplink.
- Analogue set-point compensation
- Network analyser
- Free-cooling direct control
- Air temperature control on suction air
- 3-way 0-10V valve
- EPIV 2-way valve
- Hot water coil + 2-way valve
- Electric heater
- Steam humidifier
- Dehumidification function
- T/rH air intake sensor
- External air probe
- Remote T/rH probe
- Dual power supply
- Air filter ePM10 50%
- Damper with spring return
- Empty plenum
- Empty plenum CL. A1 (EN 13501-1)
- Plenum + 3 grilles
- Plenum + 3 grilles CL. A1 (EN 13501-1)
- Silenced plenum
- Silenced plenum + 1 grille
- Empty intake plenum
- Empty intake plenum CL. A1 (EN 13501-1)
- Silenced intake plenum
- Intake free-cooling plenum
- Support frame
- CL. A1 (EN 13501-1) insulation
- Lowered display for Under
- Wooden cage packing
- Anti-seismic fixing kit
- Additional condensate tray in peraluman for Under version size F1.
- Additional condensate tray in peraluman for Under version size F2.
- Unit bind bracket to fix the unit to the wall size F1.
- Unit bind bracket to fix the unit to the wall size F2.

Design data

Return air:
- *Temperature:* °C
- *Relative Humidity* %

Chilled water:
- *Inlet Temperature:* °C
- *Outlet Temperature:* °C
- *Antifreeze* %

Air flow: m³/h
External static pressure: Pa
Total NET cooling capacity: kW
Sensible NET cooling capacity: kW
SPL 1 m free field unit front: dB(A)
Dimensions LxWxH: mm