



clever
AIR HANDLING

AIR HANDLING

MT Series Air Handling Unit



temperzone
climate innovations

Clever,
New Zealand's
Highest Quality
Air Handling Unit

Nominal Airflow
750 l/s - 15,000 l/s



Air Handling Units, Without Compromise

MT Air Handling units offer the same high quality as the Clever MC Series with the added benefit of standardisation.

Temperzone air handling units have been leading the New Zealand market with the highest quality, most customisable air handlers available. The MT standardised air handling unit range offers the same high quality features you've come to expect while giving you the certainty to aid quick and easy HVAC system design, and the flexibility to rely on shorter lead times and optimum savings.

Temperzone Expertise

With over 65 years of expertise in the design of leading climate innovations, trust Temperzone to offer the most efficient and reliable solutions for local conditions.

Be assured that any of the models selected will meet Temperzone's long established reputation for quality. Temperzone has several decades of experience as the market leader in manufacturing hydronic air conditioning systems in the Australasian region.

A Flexible Solution For Multiple Spaces



Supermarkets



Shopping Centres



Industrial Facilities



Laboratories



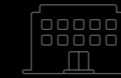
Museums and
Community Halls



Schools and Universities



Restaurants, Pubs
and Clubs



Office Buildings
and Data Centres



Food Processing or
Manufacturing Plants



Features



Full Aluminium Design

For added corrosion protection and lighter weights, anodised aluminium framework and base channel



Air Filtration Options

G4 rated panel filters, F7 filter bags and F9 cartridge filters



High Efficiency EC Plug Fans

EC plug fans that precisely adjust airflow to change in static pressure



Dampers

High quality aluminium fresh air and return air manual / motorised opposed blade dampers



Heating & Cooling Coils

Multiple coil combinations available using 1, 2 and 4 row coils



Tropical Profiles

Tropical profile and thermal break panels as standard for exceptional thermal performance



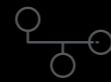
Double Skin + Thermal Break

Marine-grade aluminium 50mm panels with high density foam infill for exceptional thermal performance



Epoxy Coated Coils

Temperzone standard for added coil protection



Ebox Wiring Integration

Wiring can be easily done via the Ebox with integrated terminal blocks



Durable Compact Design

Robust and high quality commercial construction with compact foot-print



Easy Service Access

Internal components easily accessible through service doors



Moulded ABS Drain Tray

Corrosion resistant drain tray. Moulded ABS tray with 2-way slope to a single point



Standardised Pre-Engineered Design

MT Air Handling units offer pre-engineered standardised options that allow you to configure your unit to suit your requirements.

Fan Coil Section Configurations

Standard Options

Standard or opposite hand (all piping, access doors, drainage, gauges and electrical)

Horizontal or vertical supply air

Chilled Water and/or Hot Water Coils

Eleven Combination Available

1 & 2 row hot water

4, 6 & 8 row chilled water



Plenum Section Configurations

Standard Options

Horizontal or vertical return air plenum

Return air / outside air mixing dampers

Accessories

Standard Options

Optional filter pressure drop, Magnahelic gauge

Internal lighting

Inspection windows

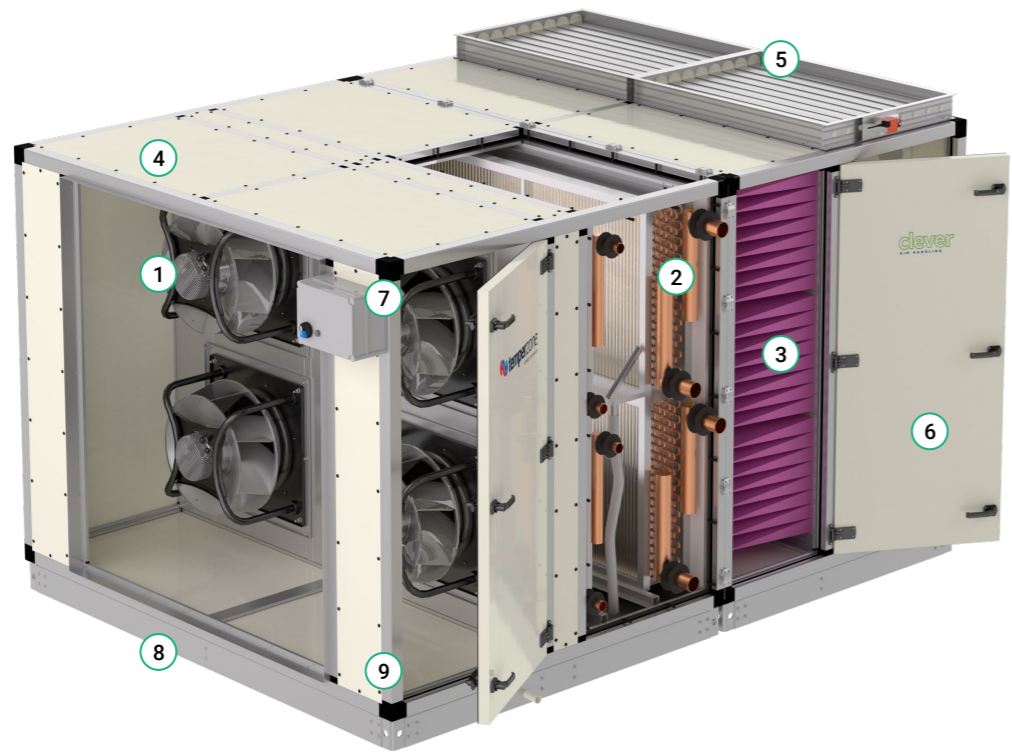
Filters are sold separately (G4, F7 and F9)



Simple and Compact Without Compromise

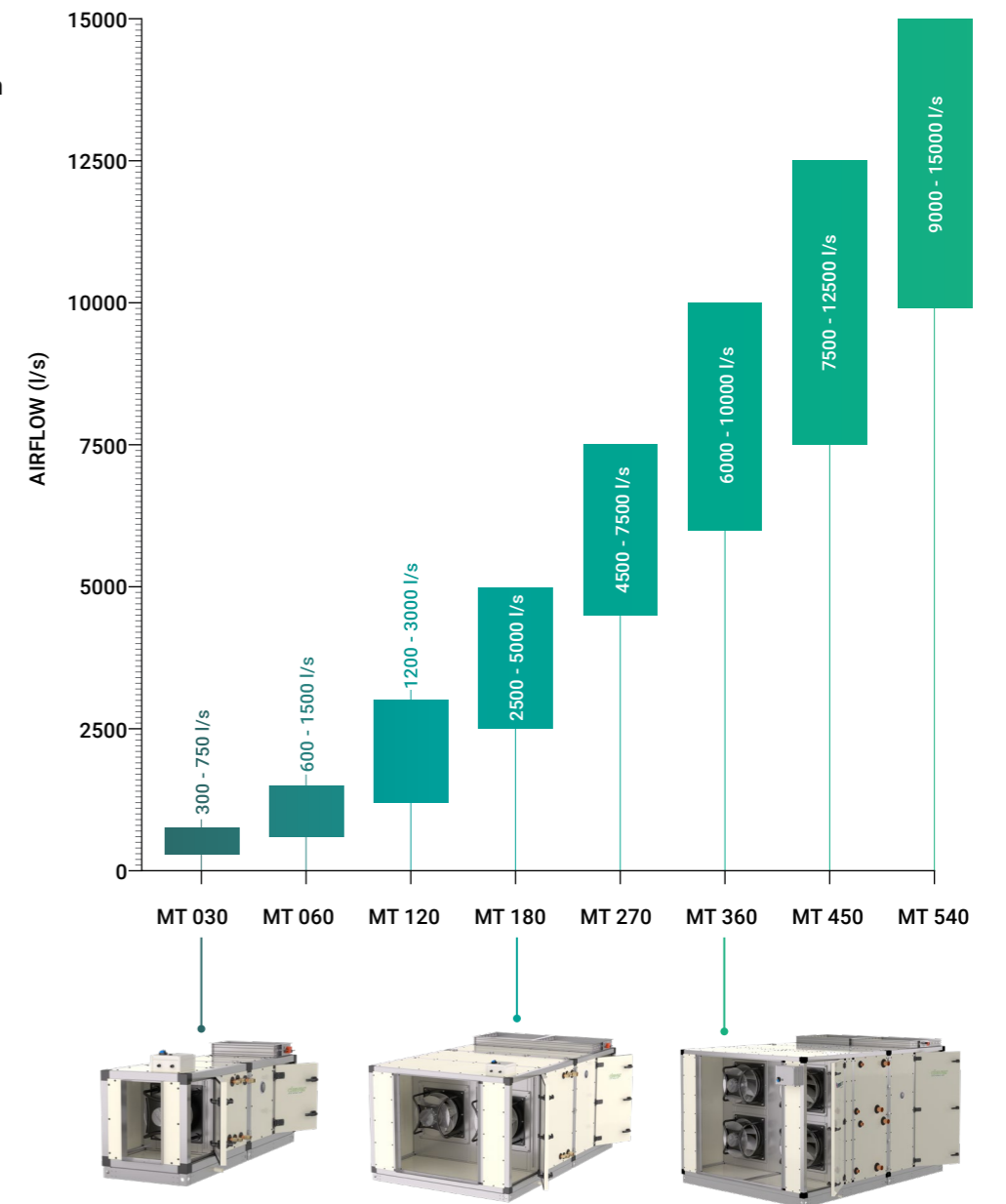
While simplicity of design enables quick and easy installation, in-built functionalities mean that after-sales operation and servicing is also a time-efficient process.

- 1** High efficiency EC plug fans that precisely adjust airflow to change in static pressure
- 2** Epoxy coated coils. 4, 6 & 8 row cooling coils. 1 & 2 row heating coils
- 3** G4 rated panel filters, F7 filter bags and F9 cartridge filters within stainless steel frames
- 4** Complete aluminium design, panel skin, frame and base channel for added corrosion protection and lighter weights
- 5** High quality aluminium fresh air and return air manual or motorised opposed blade dampers with rubber seals
- 6** Internal components easily accessible through service doors with external and internal door handles
- 7** Ebox location with wiring integration for easy access and setup
- 8** 100mm or 140mm anodised aluminium base channels with profile-cut corner bracket
- 9** Thermal break 65mm profile and 50mm panels with nylon corner nodes



8 Models Covering a Wide Range of Airflows

Air Flow Range Minimum to Nominal Maximum



Superior Design

MT Air Handling units are of superior design, being lightweight, corrosion resistant and have exceptional performing thermal barrier properties.

Tropical Profile, Thermal Break

T2 / TB2 Tropical 65 x 50

Thermal break 65mm profile & 50mm panels

Nylon corner node

Anodised profiles and base channel

Features

Exceptional thermal performance available

Tropical system to prevent condensation in high humidity locations or with very low supply air temperature

Double Skin Panels

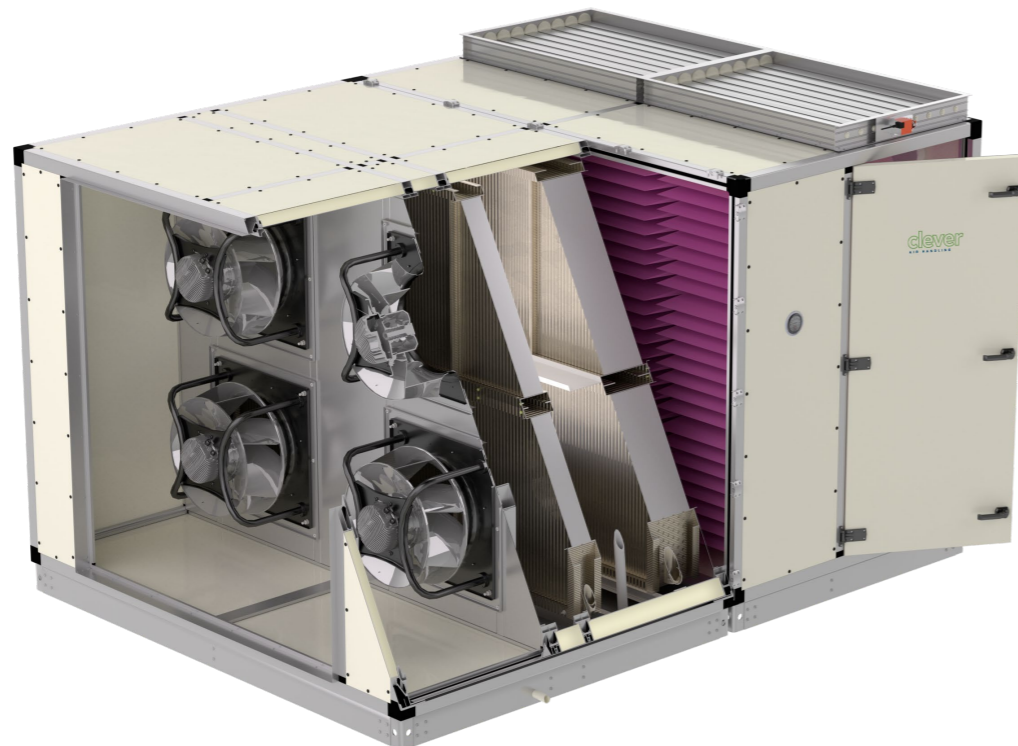
Standard

External marine grade 5005 aluminium linings

PVC 50mm separator

Injected polyurethane foam insulation, >45kg/m³

Panel thermal conductivity <0.024 W(m-K)



Panel Linings

Standard

Outer and inner marine grade aluminium pre-painted panels

Protected with easy removable plastic film

Standard colour is "Titania"

Base Channel

100mm Channel

Anodised aluminium

100 x 36mm channel

3.0mm profile-cut aluminium corner bracket

Anodised finish

140mm Channel

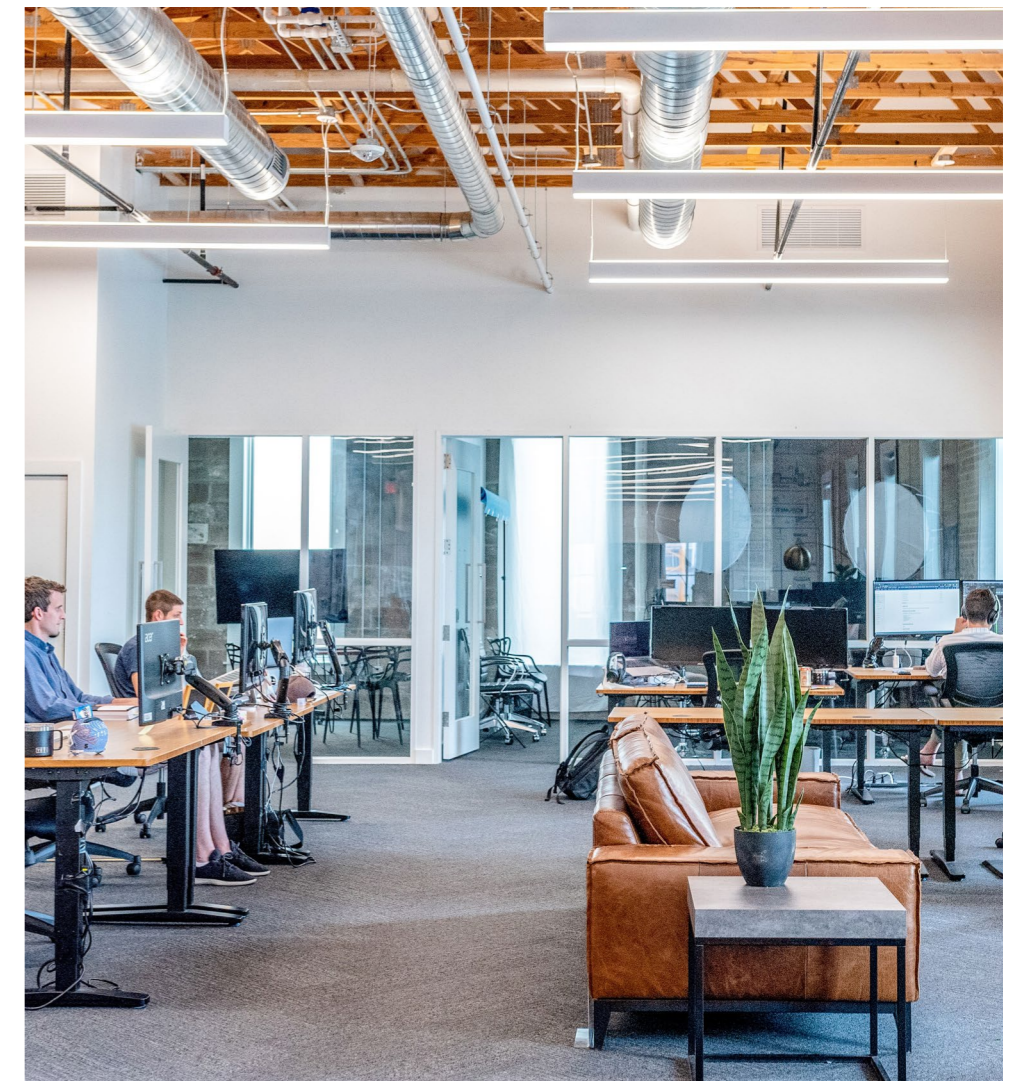
Anodised aluminium

140 x 37mm channel

6.0mm profile-cut aluminium corner bracket

Anodised finished

A Flexible Solution For Multiple Spaces



Superior Performance

MT Air Handling units utilise energy-efficient, reliable componentry to ensure the delivery of superior performance.

Coils

Coil Options

Multiple coil combinations available using 1, 2 and 4 row coils for chilled water or LTHW applications options

Optional PAC-AH digital controllers with electronic control valves (ELV) and thermocouple sensors fitted

Features

1/2" tube water coils on models MT030 - MT270.
5/8" tube water coils on models MT360 - MT540.

Aluminium fins & framework

Fins are epoxy coated aluminium

Copper tubes and headers

Brass BSP connection nipples

EC Motors

Impeller

Backward curve centrifugal impeller EC Motor

Operated via 0 - 10 VDC signal

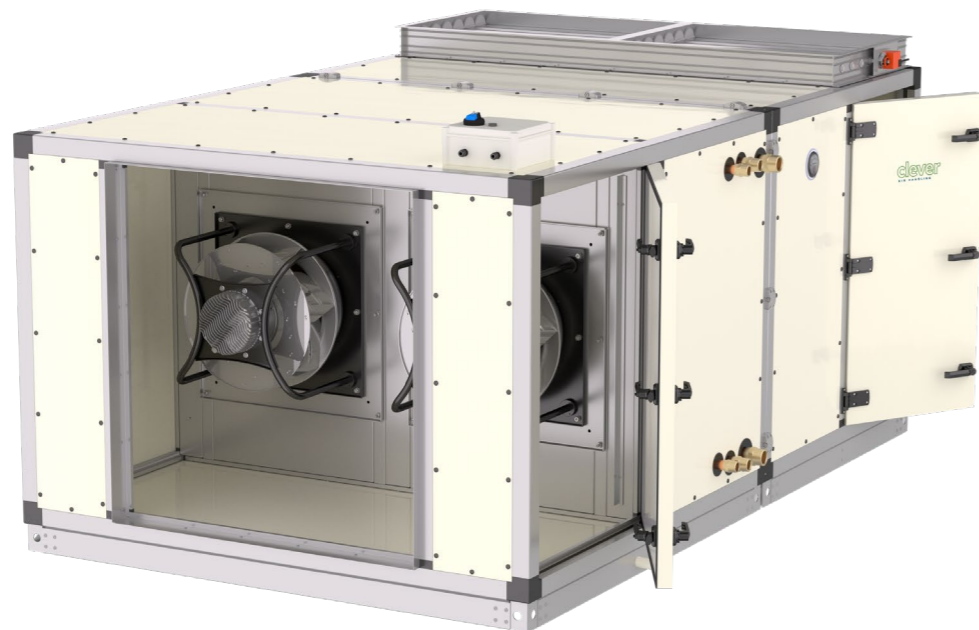
Potentiometer or BMS or Digital Controller

On / Off relay facility

Alarm fault relay

Fault LED indicator

All fans wired to external terminal block



Wiring and Fan Controllers

EBox Wiring Integration as a Standard

Single power / controls connection point

Main fan isolation switch

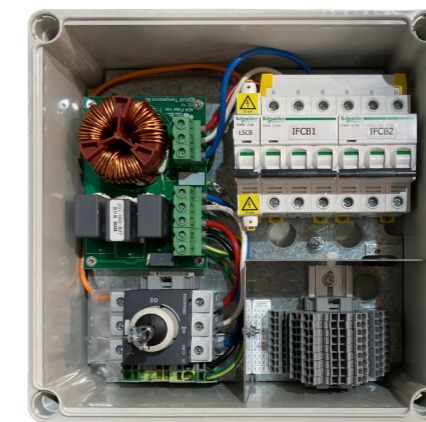
Power supply's MCB's

EMC compliance - passed to CISPR 14-1 (Residential)

Safety compliance - Passed appliance safety AS/NZS 60335-1,-2-40

230V light switch MCB

Internal controls wiring terminations



Controller Modules

CPG-AV Controller - Pressure and volume

CTG-AV Controller - Temperature

Modbus serial communication protocol

Bluetooth mobile app



Dampers

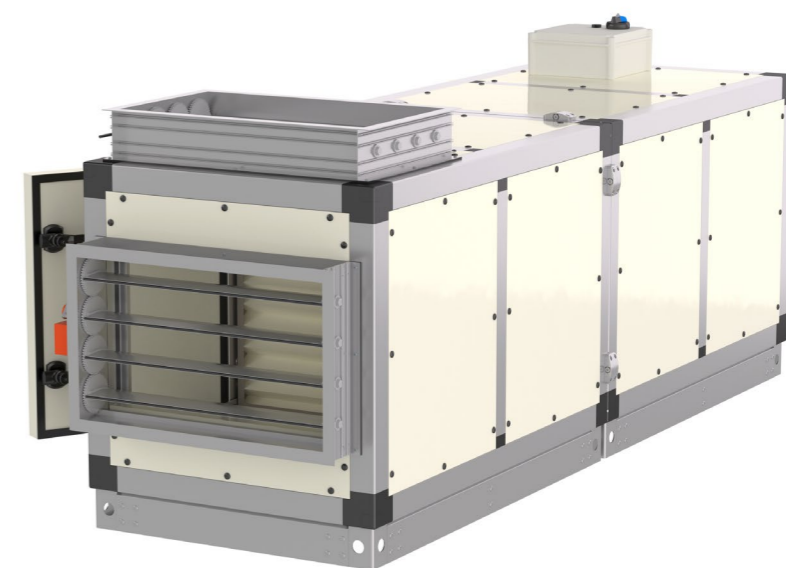
EL100 Opposed Blade Dampers

Manual quadrant

Motorised with shaft for actuator

Rubber blade seals

Made from extruded aluminium



Air Filtration

Standard MT Air Handling units offer high specification filtration for clean hygienic, indoor air.

CLASS	ISO ePM1	ISO ePM2.5	ISO ePM10	ISO Coarse
G4	-	-	-	>90%
F7	50 - 65%	65 - 80%	>85%	-
F9	>90%	>95%	>95%	-

Filter Media

Features

ISO 16890 standard certified media

F7 Bag Filter

600mm 6 pocket

25mm header

5.7 m² synthetic media

G4 Panel Filter

46mm aluminium panel

Washable media

1.2 m² synthetic media

F9 Compact Final Filter

292mm cartridge

25mm header

18.8m² glass fibre media



Holding Filter Frames

Features

#304 stainless steel - rust resistant

Factory poured integral seal

97mm depth with multiple filter depth capacity

Standard 607x607 frames suits all filter media brands

M8 stainless steel filter retaining bolts with guaranteed filter seal

Optional

Stainless steel clips

Designed Around Full Size 600x600 Filter Module

Filter Aspect Ratio of each AHU

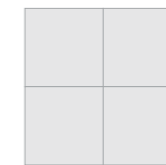
MT030



MT060



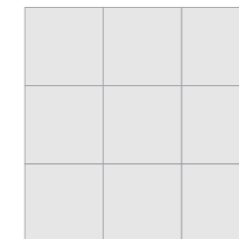
MT120



MT180



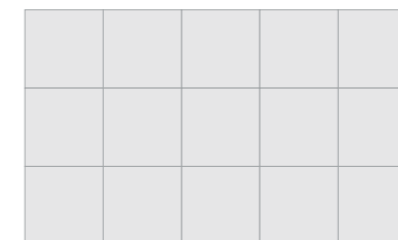
MT270



MT360



MT450



MT540



Designed For Easy Access And Installation

MT Air Handling units are designed for safe and easy access for maintenance. Installation flexibility makes the MT range a superior offering.

Componentry

Door Guard

Mechanically fixed aluminium mesh door guard

Sloping Drain Trays

Moulded ABS tray

2 way slope to single point - zero water ponding

PVC condensate connection

Internal Doors

Outwards opening doors with multiple nylon handles for airtight seal

Door handles have internal handles

Lockable fan door handle for added safety

Kit Set Site Assembly

Partial or complete kit set knockdown

Delivered to site. Contractor handles parts into plant-room

Site safe certified site staff

Assembly installation typically 1 day / AHU

Packaging

Full wooden pallet for freight protection

Location

Suitable for indoor location only



MT Air Handling Range Specifications

Model

● MT 030 ● MT 060 ● MT 120 ● MT 180 ● MT 270 ● MT 360 ● MT 450 ● MT 540

Specifications

Air Flow (L/s) *1	750	1,500	3,000	5,000	7,500	10,000	12,500	15,000
Power supply	400V / 3 ph / 50Hz							
Number of fans	1	1	1	2	2	3	4	4
Motor rating (total) (kW)	1.3	1.7	2.8	5.6	7	10.5	14	14
Full load current (A/ph) *2	2.1	2.7	4.4	8.8	11.4	17.1	22.8	22.8

Nominal Cooling Capacity (kW) *3

4 row	15.0	33.3	66.6	114	171	225	305	370
6 row	19.2	40.5	82.7	140	210	295	385	465
8 row	22.0	46.7	93.5	157	235	335	425	520

Nominal Heating Capacity (kW) *4

1 row	18.0	40.0	79.9	128	199	216	277	305
2 row	31.7	64.6	133	222	334	363	464	519

Dimensions (mm)

Length Fan / Coil Section	1245	1445	1845	1845	2195	2045	2045	2045
Length Filter / Plenum	1245	1445	1445	1445	1645	1645	1645	1645
Width	800	1400	1400	2050	2050	2720	3370	4020
Height (incl. base)	900	900	1500	1500	2150	2190	2190	2190
Optional Filters Cells	1	2	4	6	9	12	15	18
FCU weight *5 (kg)	162	233	400	511	791	1043	1242	1442
Inlet plenum weight - bare (kg)	86	120	157	184	343	346	387	426

*1. Nominal Air flow based on approximately 2.5m/s coil face velocity

*2. Motor name plate rating not necessarily current draw at nominal operating point.

*3. Nominal Cooling capacity at nominal air flow, air entry 27/19, water in6/out13

*4. Nominal Heating capacity at nominal air flow, air entry 15, water in80/out60

*5. Nominal weight based on 6 row cooling coil plus 1 row heating coil, no other accessories fitted



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AND MANUFACTURED



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