



clever  
AIR HANDLING

AIR HANDLING

# MT Series Air Handling Unit



temperzone  
climate innovations

Clever,  
High-Quality  
Air Handling Units

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 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



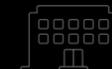
Museums and  
Community Halls



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



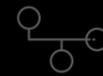
### Double Skin + Thermal Break

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

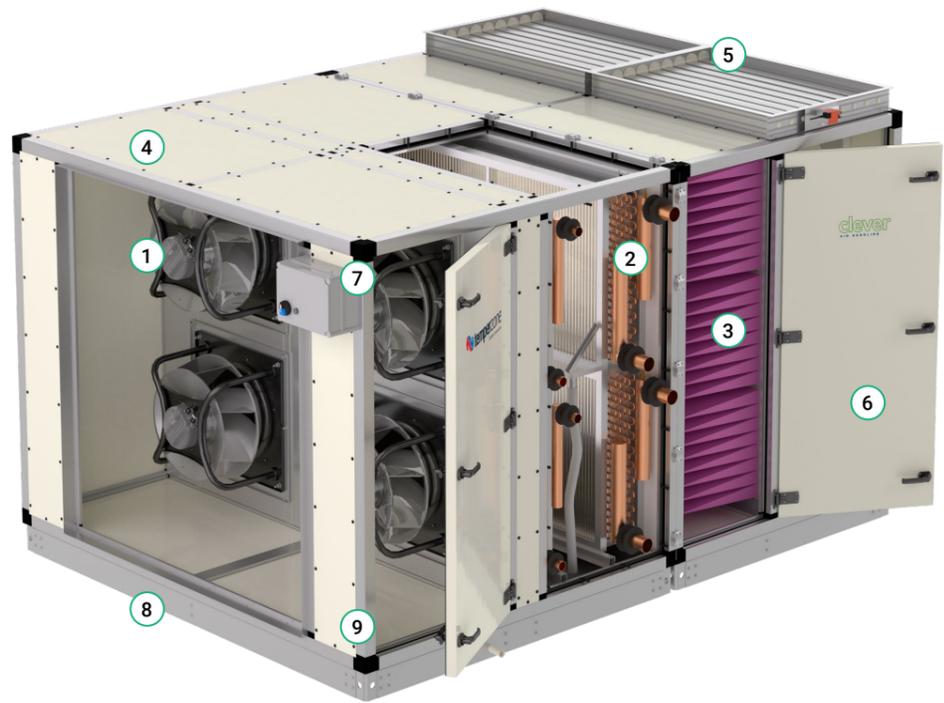
Filters are sold separately (G4, F7 and F9)



# Simple and Compact Without Compromise

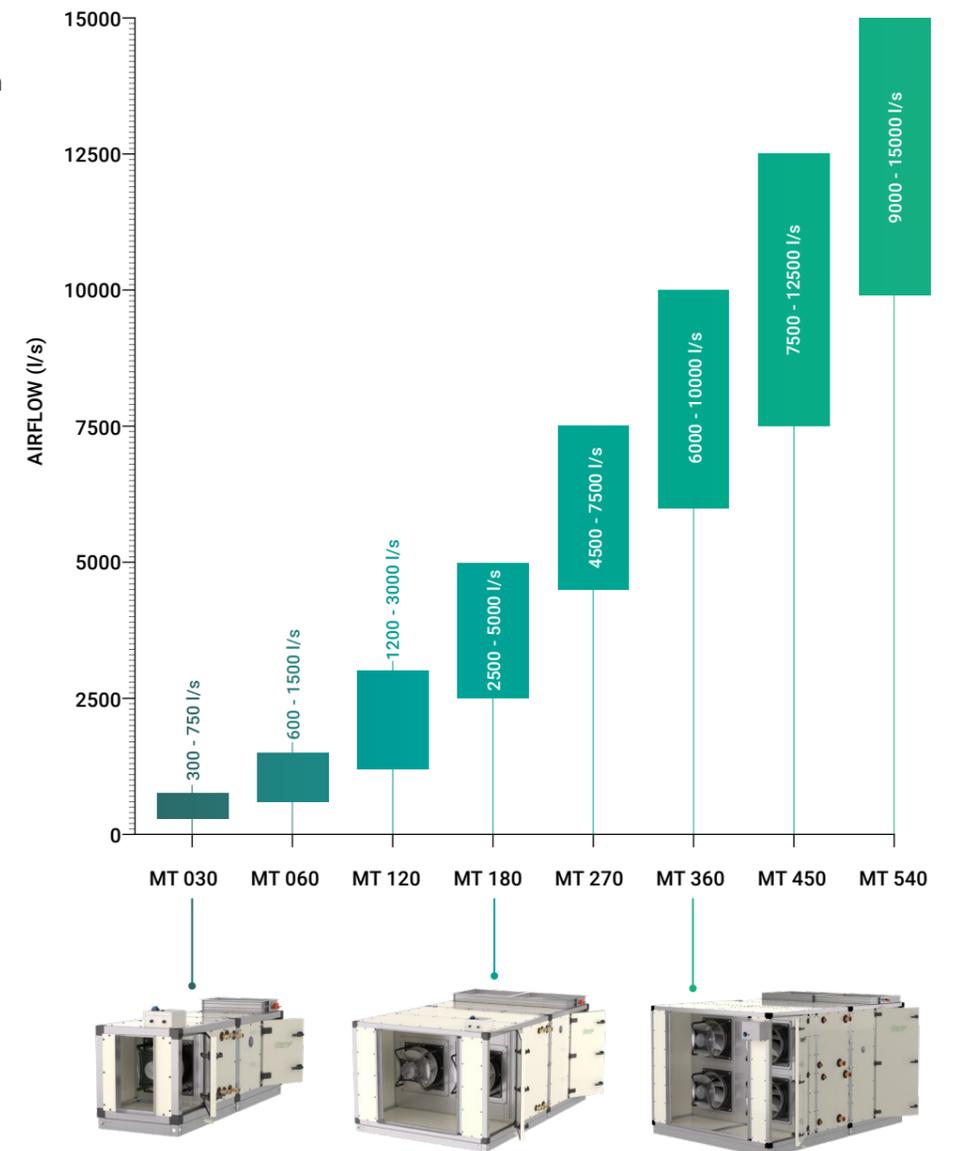
While simplicity of design enables quick and easy installation, in-built functionalities mean that after-sales operation and servicing is also a time-efficient process.

- 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

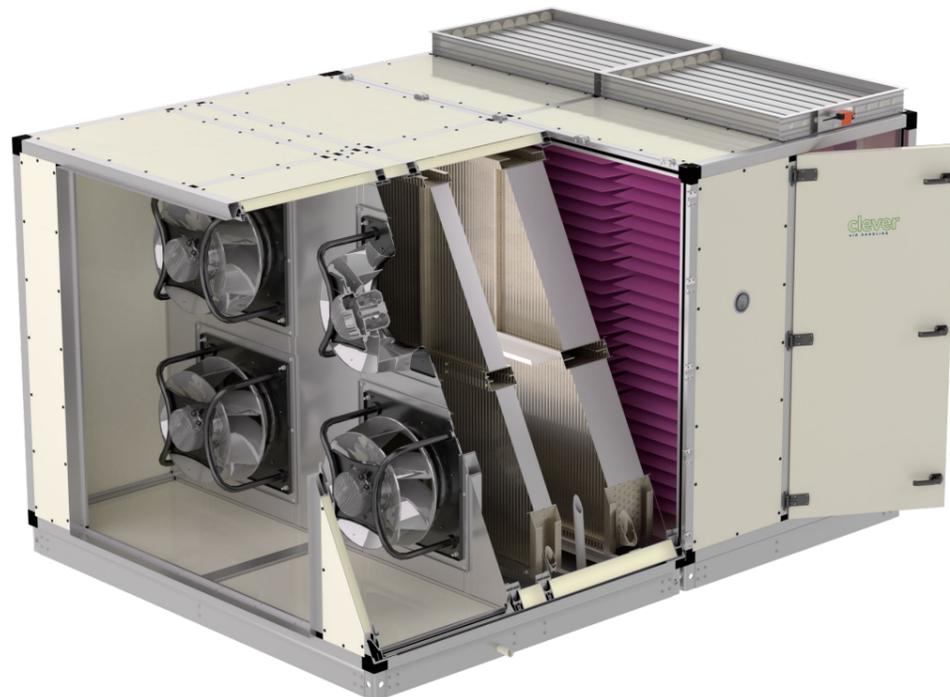
### Standard

External marine grade 5005 aluminium linings

PVC 50mm separator

Injected polyurethane foam insulation, >45kg/m<sup>3</sup>

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

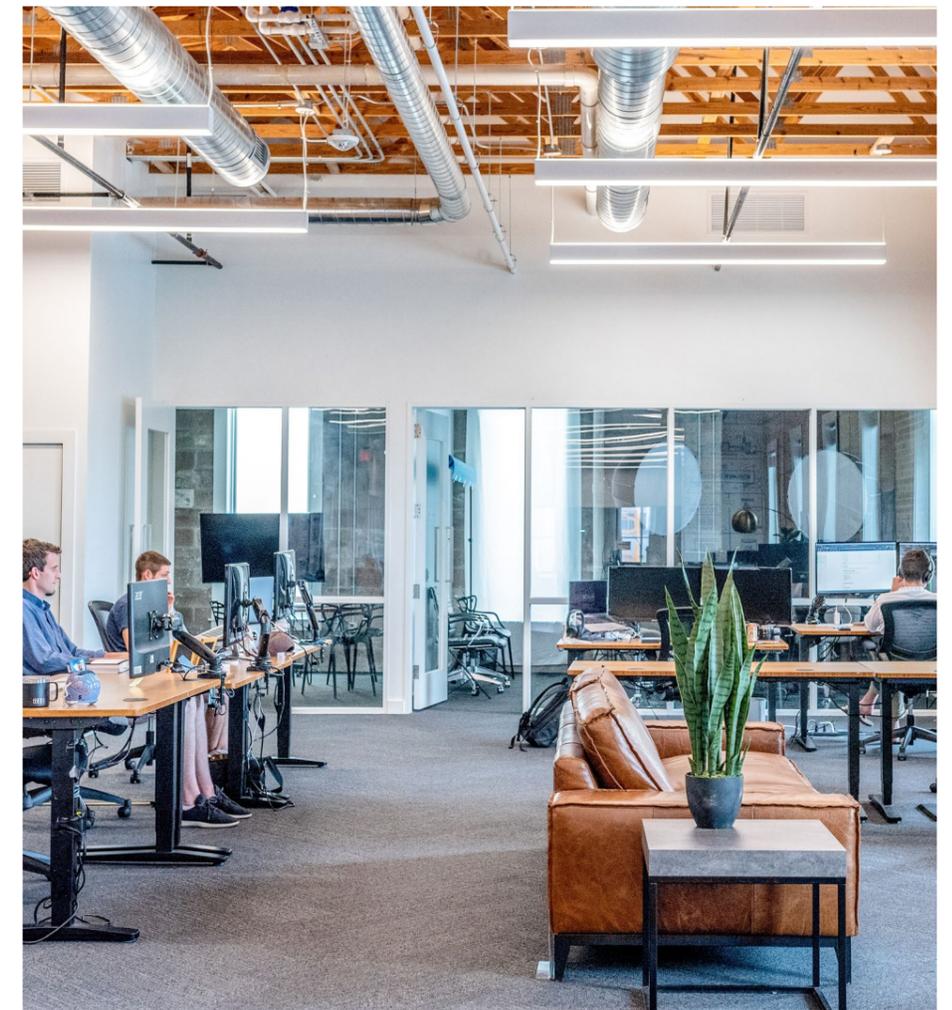
Anodised aluminium

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 m<sup>2</sup> synthetic media

### G4 Panel Filter

46mm aluminium panel

Washable media

1.2 m<sup>2</sup> synthetic media

### F9 Compact Final Filter

292mm cartridge

25mm header

18.8m<sup>2</sup> 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



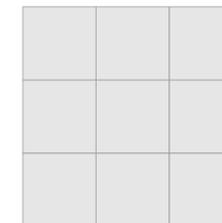
### MT120



### 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



[temperzone.com](http://temperzone.com)



**Australia**

[ausales@temperzone.com](mailto:ausales@temperzone.com)

**New Zealand**

[nzsales@temperzone.com](mailto:nzsales@temperzone.com)

**Singapore**

[sales@temperzone.com.sg](mailto:sales@temperzone.com.sg)

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|-----------|----------------|
| Sydney    | 02 – 8822 5700 |
| Adelaide  | 08 – 8115 2111 |
| Brisbane  | 07 – 3308 8333 |
| Melbourne | 03 – 8769 7600 |

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**New Zealand**

|              |               |
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