

# Modular T Pro & Smart

Air Handling Unit



Top connected Air Handling Unit

# About Daikin AHU's

Daikin air handling units, with their plug-and-play design and inherent flexibility, can be configured and combined specifically to meet the exact requirements of any building, no matter what it is used for or who is to work there. Our systems are designed to be the most environmentally friendly and the most energy efficient on the market, thus reducing their ecological impact while at the same time keeping costs down through the minimization of energy consumption. When combined with the small physical footprint of the system, these features make our air handling units ideal for all markets.



## Modular T Pro & Smart

**Modular T is Daikin's new decentralized ventilation solution, featuring an energy efficient & optimized design, for an excellent Indoor Air Quality (IAQ) and a low power consumption.**

### IAQ matters

An excellent IAQ improves people's performance and well-being, and decreases risk factors for various diseases. Modular T satisfies the ventilation and filtration needs of the indoor environment, guaranteeing an outstanding level of IAQ.

### The future of ventilation

The Modular T, with its unique features, represents the latest product developed by Daikin for fresh air treatment and not only. Thanks to its optimized design, it can be easily transported and installed into new projects or existing buildings.

### Highlights



Duct connections are located at the top, reducing the unit's footprint



Low power consumption and low SFP (Specific Fan Power) for a very efficient unit operation



Superior IAQ level: up to three stage filtration on supply side (more than the 90% of PM1 is removed from outdoor air)



Plug&Play control solution, for a quick and easy start-up



Very compact unit, starting from 550 mm width, for an air flow up to 1100 m<sup>3</sup>/h



DX coil integration for a unique Daikin fresh air package available for connection to VRV or ERQ



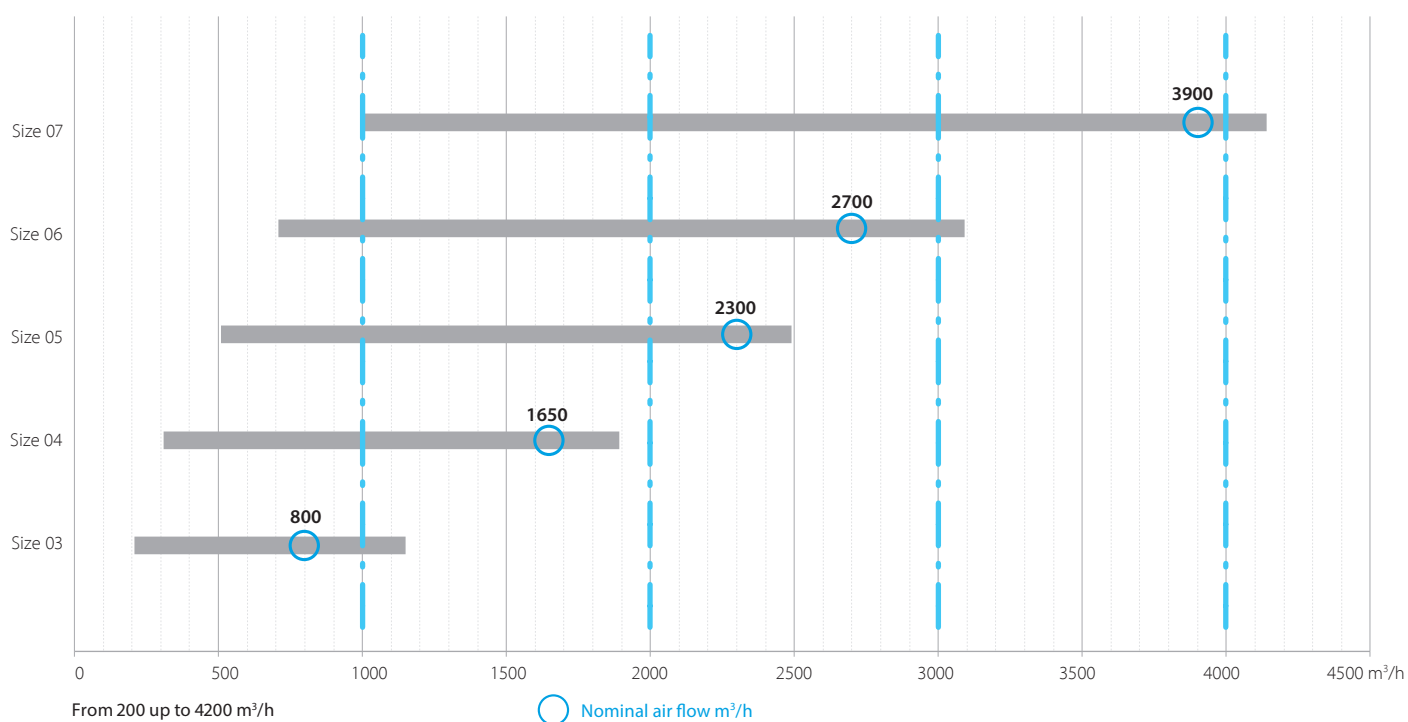


## Air flow range

Modular T is available in 5 sizes covering a wide range of applications such as hotels, offices, schools, gyms and light commercial buildings.

## Sectioning

To ensure an easy and quick installation Modular T size 05 will be provided in two sections, while size 06 and 07 in three sections to pass smoothly through standard doors<sup>1</sup>.



1. Please refer to technical data table at page 6 for more details

# Flexibility to meet your needs

## Circular Duct Flange



### Filter

- › ePM1 50% (F7) on supply side and ePM10 75% (M5) on return side as standard
- › Second filtration stage available as option



### Control

- › Plug and play controls for an easy and quick start-up and unit operation



### Bypass Damper

- › Energy efficient bypass damper
- › 0-100% modulating by-pass, fully automated
- › Antifreeze and free cooling operation



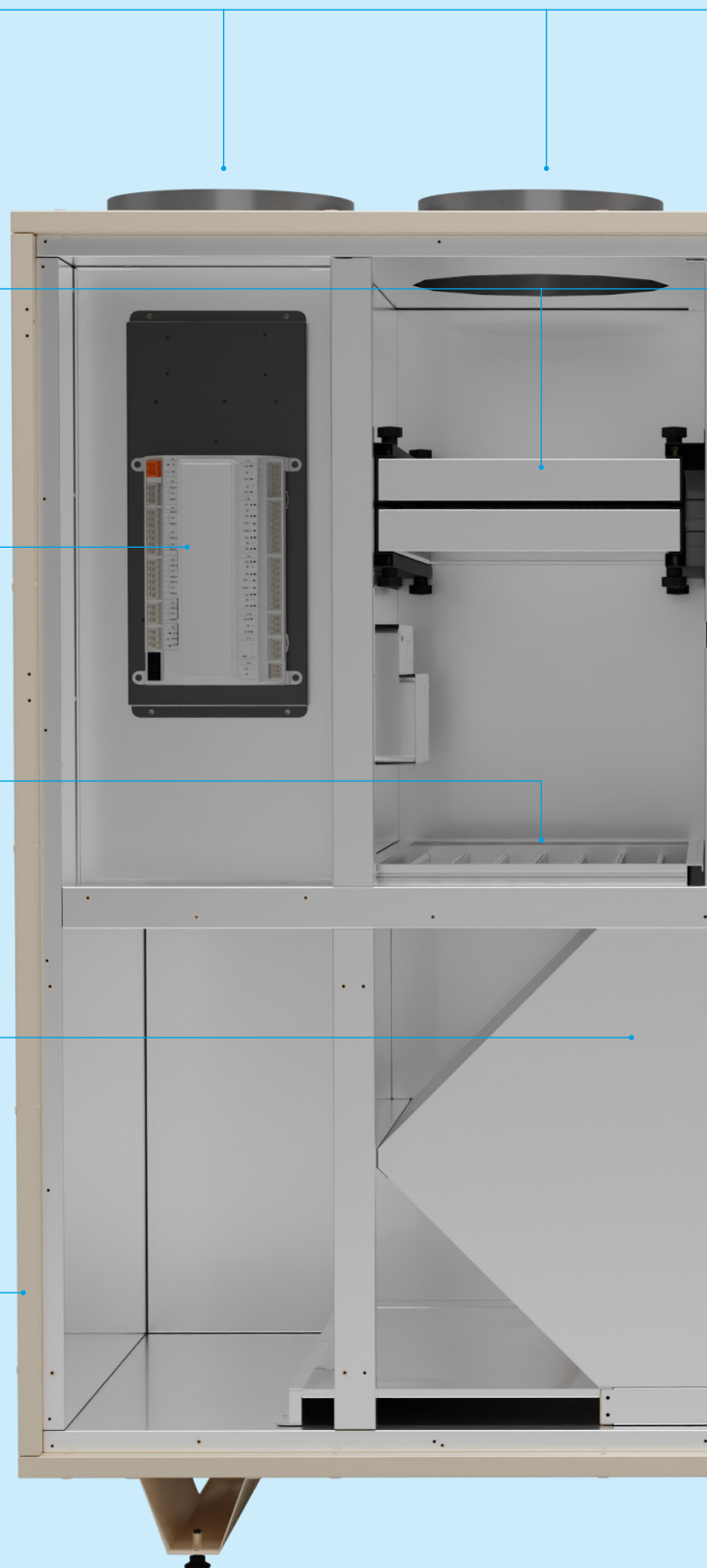
### Heat Exchanger

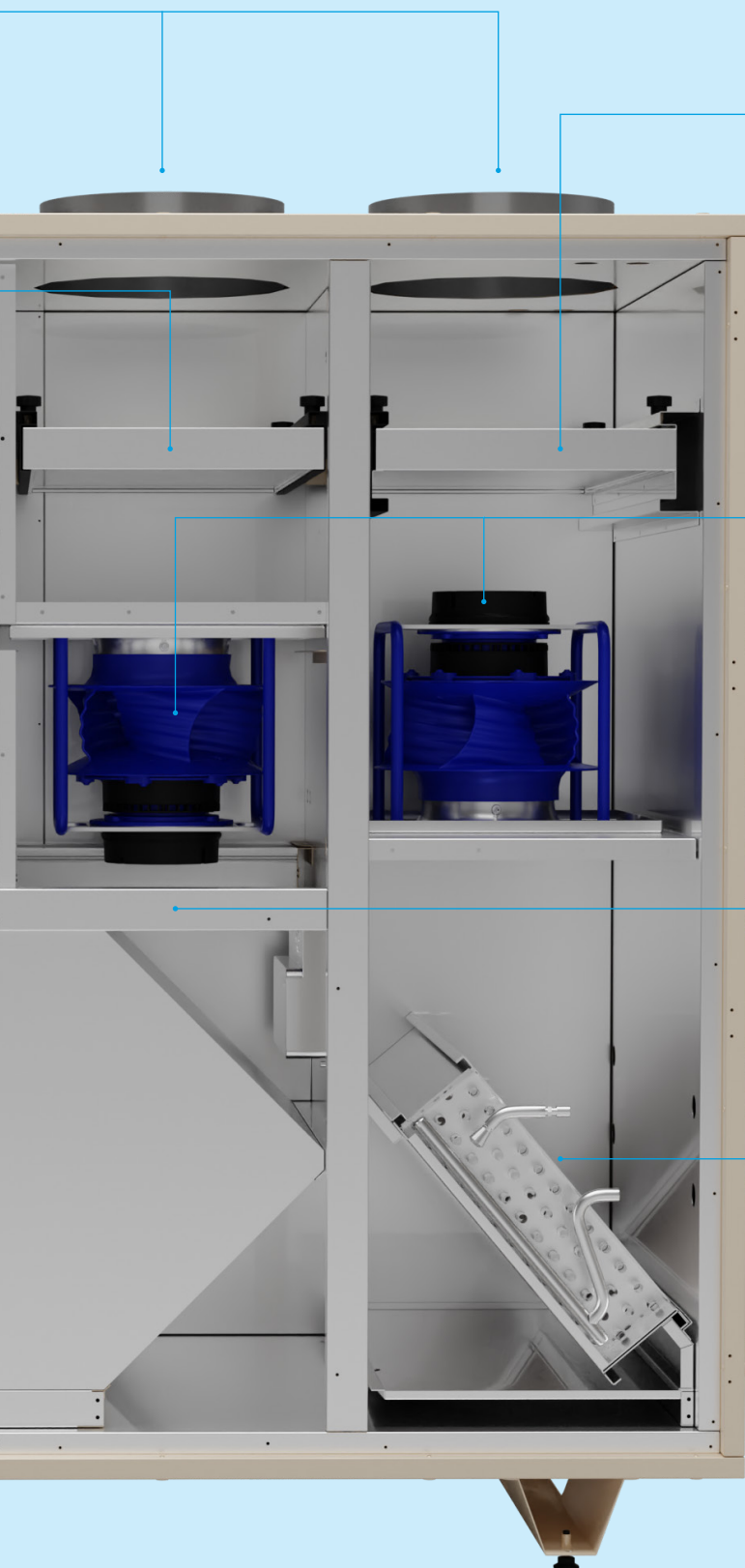
- › High-efficiency counter flow plate heat exchanger
- › Up to 93% of the thermal energy is recovered



### Casing & Insulation

- 50 mm double skin panel, mineral wool insulation for an excellent sound attenuation and thermal insulation
- › Internal Panel: Aluzinc
- › External Panel: Pre-painted





### Filter

- › Up to three filtration stage on supply air side (two available as option)
- › F9 (ePM1 80%) filter available as option



### Coil\*

Post heating water



### Fan

EC Fans, motor class IE5 for high efficiency and low power consumption



### Mixing Damper\*

Allows total space air conditioning, available as option



### Coil\*

- › DX/Water coil to guarantee the thermal comfort
- › Pre heating water or electric coil to avoid defrosting
- › Post heating electric coil



### Maintenance

- › Easy maintenance: each component can be removed through few and simple actions
- › Hinged and removable doors allowing full maintenance access

\* Optional

For the main accessory list please refer to page 7

# Modular T

## Pro & Smart

### Selection tools

- › Astra Web offers a quick and accurate selection of the best ventilation units
- › Get the access to the selection tool <http://tools.daikinapplied.eu> to select your air handling units in a few clicks.
- › Also available on Air Design App



Watch the Modular T promotional video on the Daikin YouTube channel

### Connection side

All the units are available with right or left connection side.

### Modular T control versions

- › Modular T Pro
- › Modular T Smart

### Control logic Modular T Pro

#### Open control platform

- › Advanced, fully programmable control system featuring the patented Daikin Digital Controls solution
- › Constant Air Volume or Variable Air Volume fans control
- › Air quality control through an optional CO<sub>2</sub> sensor (accessory)
- › Continuous filter status monitoring
- › Optional water, DX or electrical coil operation
- › Open communication protocol (BACnet and Modbus) guarantees BMS connectivity
- › Daikin On Site compatibility



### Control logic Modular T Smart

#### Daikin communication protocol

- › Plug&Play integration within the Daikin communication platform
- › Direct integration with Daikin centralised controllers (F1/F2) and room interfaces (P1/P2)
- › Air quality control through an optional CO<sub>2</sub> sensor (accessory)
- › De-frost operation through optional electrical pre-heater (accessory)
- › DIII-net integration through Daikin building air conditioning control systems (D-BACS)
- › BMS integration through dedicated interfaces (Modbus, BACnet)



### Technical Data

MODULAR T Pro & Smart		Size <sup>1</sup>	03	04	05	06	07
Airflow	m <sup>3</sup> /h		800	1,650	2,300	2,700	3,900
HE Thermal efficiency <sup>2</sup>	%		89.3	88.3	85.1	85.5	90.8
External static pressure	Pa		100				
Current	A		1.70	3.39	4.61	5.17	7.87
Power input	kW		0.39	0.78	1.06	1.19	1.81
SFPv <sup>2</sup>	kW/m <sup>3</sup> /s		1.47	1.5	1.49	1.41	1.5
Electrical supply	Phase (ph)		1				
	Frequency (Hz)		50/60				
	Voltage (V)		220/240 Vac				
Main unit Dimensions	Width (mm)		550		790		890
	Height <sup>3</sup> (mm)		1,600		1,900	1,850	2,050
	Length (mm)		1,580	1,650	2,170 <sup>4</sup>	2,620 <sup>5</sup>	2,950 <sup>5</sup>
Circular duct flange	Diameter (mm)		255	315	355	400	500
Unit sound power level	dB(A)		57	52	55		58
Unit sound pressure level <sup>6</sup>	dB(A)		50	45	48		51
Weight unit	Kg		200	250	400	500	620

1. All size available in Smart or Pro version and right or left handing | 2. Outdoor condition: -5°C, 90% Indoor condition: 25°C, 50% | 3. Including feet and duct connections | 4. Size 05 is provided in two sections | 5. Size 06 and 07 are provided in three sections | 6. Simple source reference value at 1 meter, directivity factor Q=4 (quarter sphere) and non-reverberant field. Allowances on declared values: +/- 3dB



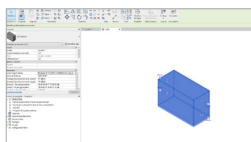
## Daikin IAQ sensor



Modular T connects wirelessly to the Daikin IAQ Sensor to measure your well-being, monitoring indoor air quality values, environmental comfort and electromagnetic pollution.



## BIM



BIM (Building Information Modeling) files allow to quickly insert Daikin AHUs into projects. Modular T BIM files are available at [bim.daikin.eu](http://bim.daikin.eu). Scan the QR Code and download the Modular T BIM models with few clicks.



## Main Accessory list

Main Accessories	Control platform		Accessory location			
	Pro	Smart	Fresh	Exhaust	Return	Supply
Filter iso Coarse (G4), ePM10 75% (M5) ePM1 50% (F7) and ePM1 75% (F9)						
DX/Water Coil						
Pre Heating electric coil						
Pre Heating water coil						
Post Heating electric coil						
Post Heating water coil						
Mixing Damper						
External Damper						
Valves (2 or 3 way cooling/heating)						
Silencers (Fresh, Exhaust, Return, Supply)						
Probes (Temperature, CO <sub>2</sub> , Humidity)						
Frost Switch						

Please refer to databook or Astra selection software for the whole accessory list





For more information visit: [www.daikinapplied.uk](http://www.daikinapplied.uk)

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9493/3 and 9493/4



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