

## TUN

## Air handling unit

- Very quiet
- Available units with heat exchanger with 4-6 rows
- Ductable units



### DESCRIPTION

The air-conditioning units of the TUN series are intended for civil, commercial and hotel systems in small to medium sized environments. They are distinguished by their compactness (a necessary requisite for false ceiling applications) and low noise. The wide range of accessories meets various system requirements.

### STRUCTURE

#### Case

Structure made with 1.5 mm thick hot-dip galvanized sheet metal insulated internally with class V0 insulation. The unit is predisposed for connection with any delivery or intake channels.

**Specific mounts help with the task of fixing the unit to the wall either horizontally or vertically.**

#### Ventilation group

Double suction centrifugal fans with forward blades and directly coupled motor. The single-phase 230V 50Hz motor offers multiple speeds, three of which can be selected using a command.

#### Heat exchanger coil

The 4, 6 row coils, which can be fed with hot or refrigerated water, are made of copper tubing with aluminium fins blocked by the mechanical expansion of the tubes.

They are equipped with threaded sleeves for the plumbing connections and the air breather valve. The coils can be rotated at the work site.

Also available, 2-row post-heating coils made of copper tubing with aluminium fins blocked by mechanical expansion of the tubes.

#### Condensate drip

Insulated internal condensation collection tub made of 1 mm thick hot-dip galvanised sheet metal.

### ACCESSORIES

**AER503IR:** Flush-mounting thermostat with backlit display, capacitive keypad and infrared receiver, for controlling both brushless fan coils and those with an asynchronous motor. In 2-pipe systems, the thermostat can control standard fan coils or those equipped with an electric

heater, with air purifying devices (Cold Plasma and germicidal lamp), with radiant plate or with FCZ-D twin delivery (Dualjet). In addition, it can control systems with radiant panels or mixed (fan coil and radiant floor) systems. Being equipped with an infrared receiver, it can, in turn, be controlled by the VMF-IR remote control.

**SA5:** air probe kit (L = 15 m) with probe-locking cable grommet.

**SIT3:** Thermostat Interface Card allowing the creation of a network of fan coils (max. 10) commanded by a central control panel (selector or thermostat). Commands the 3 fan speeds and must be installed on each fan coil within the network; receives the commands from the selector or the SIT5 card. In case you decide to install Aermec thermostats and current absorbed by the unit exceeds 0.7 A, you're obliged to include SIT3 accessory.

**SW5:** water probe kit (L = 15m) with probe-holder connection point, fixing clip and probe-holder from heat exchanger.

**WMT05:** Electronic thermostat with thermostated ventilation.

**WMT10:** Electronic thermostat, white, with thermostated or continuous ventilation.

**VCT:** These are 3-way ball valves made of bronze, with female/female connections Ø 1/2". That can be servo-activated via servo commands. The valves do not have fittings and pipes for water connections, which are the installer's responsibility.

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**VCTK:** The VCT series valves can be combined with the actuators On-Off 230V. The actuator must be selected according to the type of system/adjustment provided.

**VCTKM:** The VCT series valves can be combined with the actuators 24V modulating. The actuator must be selected according to the type of system/adjustment provided.

**M2S:** Galvanised steel mixing chamber with two dampers for air calibration. Louver pitch 50 mm, the galvanised steel adjustment knob (diameter 8 mm) can be motorised.

**M3S:** Galvanised steel mixing chamber with three air calibration dampers and galvanised steel plates. Must necessarily be paired with the VRF accessory.

**FTF:** Soft bag filters. Section in galvanised steel sheet metal with F6 soft bag filters. Must necessarily be paired in the powered units.

**B2R:** Hot water coil with 2 rows for lines with 4 tubes. Positioned internally at the base of the equipment, downstream from the main coil.

**PBE:** Section with post heating coil composed of armoured heaters equipped with a double safety thermostat.

**SSL:** Module with seven galvanised steel sheet metal silencers and seven stone wool silencers covered by polyethylene film to prevent chipping.

**S2Z:** Galvanised steel opposed louvers dampers for mixing outside air with recirculating air.

**VRF:** Recovery fan unit equipped with electronic variable speed control. The unit is contained in a galvanised steel sheet metal section equipped with flat filters, efficiency level G4 (EN779).

**SAS:** Air calibration damper with galvanised sheet metal louvers to be positioned for intake. Louver pitch 50 mm; the galvanised steel adjustment knob can be motorised.

**GMD:** Air delivery grill with louvers that can be positioned for the delivery of air in the room to be treated. May be installed directly on the device by removing the flanges or installed on the wall.

**GAP:** Intake grille with louvers at a fixed 45° angle. May be installed directly on the device by removing the flanges or installed on the wall.

**FPI:** ISO COARSE 50% filter flange for intake at base.

**FPF:** Filter ISO COARSE 50%.

## ACCESSORIES COMPATIBILITY

### Control panels

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
AERS03IR	.	.	.	.	.	.	.	.	.	.	.	.	.	.
SA5	.	.	.	.	.	.	.	.	.	.	.	.	.	.
SIT3	.	.	.	.	.	.	.	.	.	.	.	.	.	.
SW5	.	.	.	.	.	.	.	.	.	.	.	.	.	.
WMT05	.	.	.	.	.	.	.	.	.	.	.	.	.	.
WMT10	.	.	.	.	.	.	.	.	.	.	.	.	.	.

**With WMT05 and WMT10 control panels:** when paired with units TUN154-156-254-256-404-404P-406-406P use of the SIT3 accessory is mandatory and the 2A fuse must be replaced by a 4A fuse.

### 2 way valve kit

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
VCT102	.	.	.	.										
VCT202					.	.	.	.						
VCT402									.	.				
VCT402P											.	.	.	.

### 3 way valve kit

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
VCT103	.	.	.	.										
VCT203					.	.	.	.						
VCT403									.	.				
VCT403P											.	.	.	.

### Actuator VCTK 230V

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
VCTK	.	.	.	.	.	.	.	.	.	.	.	.	.	.

### Actuator 24V

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
VCTKM	.	.	.	.	.	.	.	.	.	.	.	.	.	.

### 2-damper mixing chamber

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
M2S1	.	.	.	.										
M2S2					.	.								
M2S3							.	.						
M2S4									.	.	.		.	
M2S5												.	.	.

### 3-damper mixing chamber

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
M3S1	.	.	.	.										
M3S2					.	.								
M3S3							.	.						
M3S4									.	.	.		.	
M3S5												.	.	.

**Soft bag filter section**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
FTF1	.	.	.	.										
FTF2					.	.								
FTF3							.	.						
FTF4									.	.	.		.	
FTF5												.		.

**2 row water coil**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
B2R11	.	.	.	.										
B2R21					.	.								
B2R31							.	.						
B2R41									.	.	.		.	
B2R51												.		.

**Section with post-heating coil**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
PBE2	.	.	.	.										
PBE24M	.	.	.	.										
PBE24T	.	.	.	.										
PBE3					.	.								
PBE34M					.	.								
PBE36T					.	.								
PBE4							.	.						
PBE44M							.	.						
PBE46T							.	.						
PBE5									.	.				
PBE6											.		.	
PBE7												.		.

**Silencer baffles module**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
SSL1	.	.	.	.										
SSL2					.	.								
SSL3							.	.						
SSL4									.	.	.		.	
SSL5												.		.

**2 zone damper (70-30%)**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
S2Z1	.	.	.	.										
S2Z2					.	.								
S2Z3							.	.						
S2Z4									.	.	.		.	
S2Z5												.		.

**Recovery fan section with ISO COARSE 50% filter**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
VRF1	.	.	.	.										
VRF3					.	.								
VRF4							.	.						
VRF5									.	.				
VRF6											.		.	
VRF7												.		.

**Plenum with multiple circular deliveries**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
PMM1	.	.	.	.										
PMM2					.	.								
PMM3							.	.						
PMM4									.	.	.		.	
PMM5												.		.

**Delivery plenum**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
TPMC1	.	.	.	.										
TPMC2					.	.								
TPMC3							.	.						
TPMC4									.	.	.		.	
TPMC5												.		.

**Closed delivery plenum**

Accessory	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
PMC1	.	.	.										
PMC2				.	.								
PMC3						.	.						
PMC4								.	.	.		.	
PMC5											.		.

**Suction damper**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
SAS1	.	.	.	.										
SAS2					.	.								
SAS3							.	.						
SAS3									.	.	.		.	
SAS5												.		.

**Outlet grille with adjustable louvers**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
GMD1	.	.	.	.										
GMD2					.	.								
GMD3							.	.						
GMD4									.	.	.		.	
GMD5												.		.

**Intake grids**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
GAP1	.	.	.	.										
GAP2					.	.								
GAP3							.	.						
GAP4									.	.	.		.	
GAP5												.		.

**Filter flange**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
FPI11	.	.	.	.										
FPI12					.	.								
FPI13							.	.						
FPI14									.	.	.		.	
FPI15												.		.

**Filter ISO COARSE 80%**

Accessory	TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
FPF1	.	.	.	.										
FPF2					.	.								
FPF3							.	.						
FPF4									.	.	.		.	
FPF5												.		.

## PERFORMANCE SPECIFICATIONS

		TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206
<b>Cooling performance 7 °C / 12 °C (1)</b>									
Cooling capacity	kW	4,16	4,16	5,60	5,60	9,30	11,10	12,50	14,10
Sensible cooling capacity	kW	3,30	3,30	4,00	4,00	6,60	7,60	8,70	9,80
Latent cooling capacity	kW	0,86	0,86	1,60	1,60	2,70	3,50	3,80	4,30
Water flow rate system side	l/h	715	715	963	963	1599	1910	2141	2420
Pressure drop system side	kPa	3	3	9	9	16	34	33	20
<b>Heating performance 70 °C / 60 °C (2)</b>									
Heating capacity	kW	10,20	10,20	11,30	11,30	19,00	21,10	24,90	27,50
Water flow rate system side	l/h	880	880	975	975	1663	1849	2183	2410
Pressure drop system side	kPa	3	3	6	6	13	24	25	15
<b>Heating performance 45 °C / 40 °C (3)</b>									
Heating capacity	kW	5,07	5,07	5,62	5,62	9,45	10,50	12,39	13,68
<b>Electric heating coil - (accessory)</b>									
Heating capacity	kW	4,00	6,00	4,00	6,00	8,00	8,00	10,00	10,00
Stages	no.	2	2	2	2	2	2	2	2
Power supply		400V~3 50Hz	400V~3 50Hz	400V~3 50Hz	400V~3 50Hz	400V~3 50Hz	400V~3 50Hz	400V~3 50Hz	400V~3 50Hz
<b>Fan</b>									
Type	type	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Fan motor	type	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Number	no.	1	2	1	2	2	2	1	1
Air flow rate	m <sup>3</sup> /h	900	900	900	900	1500	1500	2000	2000
High static pressure	Pa	110	330	110	330	150	150	170	170
<b>Diameter hydraulic fittings</b>									
Main coil	Ø	1"	1"	1"	1"	1"	1"	1"	1"
Secondary coil	Ø	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Condensate discharge diameter	mm	20,5	20,5	20,5	20,5	20,5	20,5	20,5	20,5
		TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P		
<b>Cooling performance 7 °C / 12 °C (1)</b>									
Cooling capacity	kW	16,50	18,50	23,30	26,40	26,60	29,40		
Sensible cooling capacity	kW	11,40	12,70	16,30	18,20	18,50	20,10		
Latent cooling capacity	kW	5,10	5,80	7,00	8,20	8,10	9,30		
Water flow rate system side	l/h	2832	3184	4002	4536	4572	5051		
Pressure drop system side	kPa	33	20	60	37	56	28		
<b>Heating performance 70 °C / 60 °C (2)</b>									
Heating capacity	kW	32,30	35,40	46,70	51,10	52,20	56,10		
Water flow rate system side	l/h	2831	3101	4089	4475	4573	4909		
Pressure drop system side	kPa	24	14	46	41	28	20		
<b>Heating performance 45 °C / 40 °C (3)</b>									
Heating capacity	kW	16,07	17,61	23,23	25,42	25,97	27,91		
<b>Electric heating coil - (accessory)</b>									
Heating capacity	kW	12,00	12,00	20,00	20,00	20,00	20,00		
Stages	no.	2	2	2	2	2	2		
Power supply		400V~3 50Hz	400V~3 50Hz	400V~3 50Hz	400V~3 50Hz	400V~3 50Hz	400V~3 50Hz		
<b>Fan</b>									
Type	type	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal		
Fan motor	type	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous		
Number	no.	1	1	2	2	2	2		
Air flow rate	m <sup>3</sup> /h	2500	2500	4000	4000	4000	4000		
High static pressure	Pa	150	150	120	220	120	220		
<b>Diameter hydraulic fittings</b>									
Main coil	Ø	1"	1"	1"	1"	1"	1"		
Secondary coil	Ø	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"		
Condensate discharge diameter	mm	20,5	20,5	20,5	20,5	20,5	20,5		

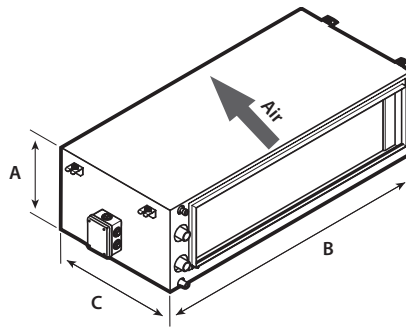
(1) Room air temperature 27 °C d.b./19 °C w.b.; Water (in/out) 7 °C/12 °C;

(2) Room air temperature 10 °C d.b.; Water (in/out) 70 °C/60 °C

(3) Room air temperature 10 °C d.b.; Water (in/out) 45 °C/40 °C;

**Unit designed to operate with all recirculating air or maximum 10% of external air.**

## DIMENSIONS



		TUN104	TUN104P	TUN106	TUN106P	TUN154	TUN156	TUN204	TUN206	TUN254	TUN256	TUN404	TUN404P	TUN406	TUN406P
<b>Dimensions and weights</b>															
A	mm	300	300	300	300	300	300	390	390	390	390	390	390	390	390
B	mm	700	700	700	700	1050	1050	1050	1050	1475	1475	1475	2100	1475	2100
C	mm	700	700	700	700	700	700	850	850	850	850	850	1000	850	1000
D	mm	82	82	82	82	82	82	82	82	82	82	82	82	82	82
Net weight	kg	33	37	35	38	47	49	59	61	88	92	88	108	92	108

Aermec reserves the right to make any modifications deemed necessary.  
All data is subject to change without notice. Aermec does not assume responsibility or liability for errors or omissions.

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