

## TS

## Air handling unit

- Very quiet
- Available units with heat exchanger with 3-4-6 rows
- Ductable units



### DESCRIPTION

The air-conditioning units of the TS 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 of Galvanized steel 10/10 sheet steel and internally covered with sheets of polyethylene and polyester to obtain improved thermal and acoustic insulation.

#### Ventilation group

Statically and dynamically balanced centrifugal fans:

- Three-speed electrical motor with running capacitor permanently activated and internal thermal protection
- Transmission system relay card for each speed (excluding the models TS13 and TS16)
- Useful static pressure available for any canalisation

#### Heat exchanger coil

3, 4 or 6 row coils, powered with hot or cold water and made of copper piping with aluminium louvered fins blocked by mechanical expansion of the pipes. The threaded sleeves for the hydraulic connections and the air bleeding valve are supplied. The coils can be rotated on site. The coil is not suitable for use in corrosive atmosphere or in environments where aluminium may be subject to corrosion.

#### Condensate drip

Condensate drip tray in stainless steel AISI 304 with insulation.

### 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.

**FMT10:** Electronic thermostat for fan coil in to 2/4 pipe systems.

**PXAE:** Electronic thermostat with thermostated or continuous ventilation.

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

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

**TX:** Wall-mounting thermostat for controlling either brushless fan coils or those with asynchronous motors. In 2-pipe systems, the thermostat can control standard fan coils or those equipped with an electric heater, with air purifying devices, radiant plate or FCZ-D twin delivery (Dualjet).

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

**WMT06:** Electronic thermostat with continuous ventilation.

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

**TSBA:** 2-row coil for post-heating, contained in a delivery installation plenum.

**TSFA:** Air filter class Coarse 50%

**TSGA:** Horizontal suction grille with fixed louvers to produce suction from below together with the TSPA accessory.

**TSMX:** Section that mixes the recirculating air and the external air. Calibration of the mix via the damper, motorisation is possible.

**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.

**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.

**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.

**TSFM:** Delivery flange with rectangular section.

**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.

## ACCESSORIES COMPATIBILITY

### Control panels

Model	13	16	23	34	36	43	46	53	56	63	74	76
AER503IR (1)	.	.	.	.	.	.	.	.	.	.	.	.
FMT10	.	.	.	.	.	.	.	.	.	.	.	.
PXAE	.	.	.	.	.	.	.	.	.	.	.	.
SA5 (2)	.	.	.	.	.	.	.	.	.	.	.	.
SW5 (2)	.	.	.	.	.	.	.	.	.	.	.	.
TX (1)	.	.	.	.	.	.	.	.	.	.	.	.
WMT05	.	.	.	.	.	.	.	.	.	.	.	.
WMT06	.	.	.	.	.	.	.	.	.	.	.	.
WMT10	.	.	.	.	.	.	.	.	.	.	.	.

(1) Wall-mounting. If the unit intake exceeds 0.7A, or several units need to be managed with a single thermostat, board SIT3 and/or SIT5 is required.

(2) Probe for AER503IR-TX thermostats, if fitted.

### 2-row coil for post-heating

13	16	23	34	36	43	46	53	56	63	74	76
TSBA10	TSBA10	TSBA20/30	TSBA20/30	TSBA20/30	TSBA40	TSBA40	TSBA50	TSBA50	TSBA60/70	TSBA60/70	TSBA60/70

### Air filter

13	16	23	34	36	43	46	53	56	63	74	76
TSFA10	TSFA10	TSFA20/30	TSFA20/30	TSFA20/30	TSFA40	TSFA40	TSFA50	TSFA50	TSFA60/70	TSFA60/70	TSFA60/70

### Section that mixes

13	16	23	34	36	43	46	53	56	63	74	76
TSMX10	TSMX10	TSMX20/30	TSMX20/30	TSMX20/30	TSMX40	TSMX40	TSMX50	TSMX50	TSMX60/70	TSMX60/70	TSMX60/70

### Plenum with suction

13	16	23	34	36	43	46	53	56	63	74	76
TSPA10	TSPA10	TSPA20/30	TSPA20/30	TSPA20/30	TSPA40	TSPA40	TSPA50	TSPA50	TSPA60/70	TSPA60/70	TSPA60/70

### Delivery plenum

13	16	23	34	36	43	46	53	56	63	74	76
TSPM10	TSPM10	TSPM20/30	TSPM20/30	TSPM20/30	TSPM40	TSPM40	TSPM50	TSPM50	TSPM60/70	TSPM60/70	TSPM60/70

### 2 way valve kit

13	16	23	34	36	43	46	53	56	63	74	76
VCT102	VCT102	VCT102	VCT102	VCT102	VCT402	VCT402	VCT402	VCT402	VCT402	VCT402P	VCT402P

### 3 way valve kit

13	16	23	34	36	43	46	53	56	63	74	76
VCT103	VCT103	VCT103	VCT103	VCT103	VCT203	VCT203	VCT203	VCT403	VCT403	VCT403P	VCT403P

### Actuator VCTK 230V

13	16	23	34	36	43	46	53	56	63	74	76
VCTK	VCTK	VCTK	VCTK	VCTK	VCTK	VCTK	VCTK	VCTK	VCTK	VCTK	VCTK

### Actuator 24V

13	16	23	34	36	43	46	53	56	63	74	76
VCTKM	VCTKM	VCTKM	VCTKM	VCTKM	VCTKM	VCTKM	VCTKM	VCTKM	VCTKM	VCTKM	VCTKM

## PERFORMANCE SPECIFICATIONS

### 2-pipe

	TS13			TS16			TS23			TS34			TS36			TS43			
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
Cooling performance 7 °C / 12 °C (1)																			
Cooling capacity	kW	4,39	4,65	4,85	4,44	5,21	5,81	7,18	7,65	7,98	8,59	9,20	9,61	9,40	10,08	10,52	7,14	9,35	11,11
Sensible cooling capacity	kW	3,39	3,60	3,75	3,41	3,99	4,45	5,82	6,20	6,46	6,80	7,28	7,61	7,43	7,96	8,31	5,75	7,54	8,96
Water flow rate system side	l/h	754	800	835	764	896	999	1235	1315	1372	1478	1583	1653	1617	1733	1809	1227	1608	1912
Pressure drop system side	kPa	17	19	21	6	7	9	20	23	24	20	22	24	13	15	16	10	17	23
Heating performance 70 °C / 60 °C (2)																			
Heating capacity	kW	8,89	9,43	9,83	9,75	11,34	12,61	14,14	15,04	15,67	17,71	18,92	19,76	19,36	20,71	21,60	14,24	18,33	21,67
Water flow rate system side	l/h	780	827	862	856	995	1106	1240	1319	1375	1553	1660	1733	1698	1816	1894	1249	1068	1900
Pressure drop system side	kPa	10	12	13	5	7	8	10	12	12	17	19	21	11	13	14	8	13	18
Fan																			
Air flow rate	m <sup>3</sup> /h	810	877	930	656	803	930	1316	1432	1518	1376	1507	1600	1376	1510	1601	1170	1631	2050
High static pressure	Pa	68	80	90	27	41	55	77	91	102	62	75	85	33	40	45	37	72	114
Input power	kW	0,1	0,1	0,2	0,1	0,1	0,2	0,2	0,3	0,3	0,2	0,3	0,3	0,2	0,3	0,3	0,3	0,3	0,4
Type	type	Centrifugal																	
Fan motor	type	On-Off																	
Number	no.	1			1			2			2			2			2		
Diameter hydraulic fittings																			
Type	type	Gas																	
Main coil	Ø	3/4"			1"			3/4"			3/4"			1"			3/4"		
Power supply																			
Power supply		230V~50Hz																	
	TS46			TS53			TS63			TS74			TS76						
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3				
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H				
Cooling performance 7 °C / 12 °C (1)																			
Cooling capacity	kW	8,57	11,27	13,44	8,05	11,06	13,86	8,11	12,84	16,62	17,47	20,65	21,92	19,79	23,38	24,93			
Sensible cooling capacity	kW	6,90	9,06	10,81	5,68	7,80	9,77	6,40	10,12	13,11	14,20	16,78	17,82	16,04	18,95	20,21			
Water flow rate system side	l/h	1474	1938	2311	1385	1902	2384	1395	2208	2858	3006	3551	3771	3405	4022	4289			
Pressure drop system side	kPa	8	13	17	12	21	32	7	16	26	19	25	28	17	23	26			
Heating performance 70 °C / 60 °C (2)																			
Heating capacity	kW	18,17	23,45	27,83	15,55	20,82	25,89	18,32	27,78	35,61	37,33	43,80	46,45	42,00	49,25	52,44			
Water flow rate system side	l/h	1593	2056	2440	1364	1826	2270	1607	2436	3123	3274	3841	4073	3683	4319	4599			
Pressure drop system side	kPa	6	10	14	9	15	22	6	13	21	16	22	24	15	20	22			
Fan																			
Air flow rate	m <sup>3</sup> /h	1173	1642	2076	1211	1775	2387	1493	2570	3599	3117	3869	4200	3119	3869	4225			
High static pressure	Pa	24	48	76	26	57	104	20	61	120	63	97	115	41	63	75			
Input power	kW	0,3	0,3	0,4	0,3	0,4	0,5	0,3	0,4	0,6	0,7	0,8	0,8	0,7	0,8	0,8			
Type	type	Centrifugal																	
Fan motor	type	On-Off																	
Number	no.	2			2			2			2			2					
Diameter hydraulic fittings																			
Type	type	Gas																	
Main coil	Ø	1"			3/4"			1"			1"			1" 1/4					
Power supply																			
Power supply		230V~50Hz																	

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

(2) Room air temperature 20 °C d.b.; Water (in/out) 70 °C/60 °C;

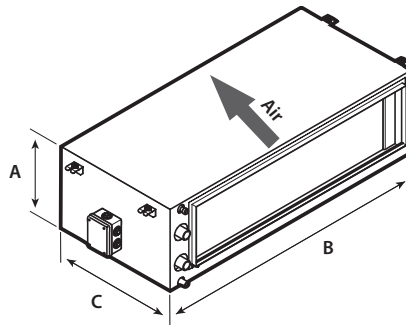
## 2-pipe

	TS435V			TS465V			TS535V			TS565V			TS745V			TS765V			
	1	3	5	1	3	5	1	3	5	1	3	5	1	3	5	1	3	5	
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
<b>Heating performance 70 °C / 60 °C (1)</b>																			
Heating capacity	kW	14,24	18,33	21,67	18,17	23,44	27,83	15,55	20,82	25,89	19,63	26,46	32,90	28,91	37,33	46,45	32,56	41,99	52,44
Water flow rate system side	l/h	1249	1607	1900	1593	2056	2440	1364	1826	2270	1722	2321	2886	2535	3274	4073	2856	3683	4599
Pressure drop system side	kPa	8	13	18	6	10	14	9	15	22	9	15	22	10	16	24	9	15	21
<b>Cooling performance 7 °C / 12 °C (2)</b>																			
Cooling capacity	kW	7,14	9,35	11,11	8,57	11,26	13,43	8,05	11,05	13,86	9,49	13,13	16,47	13,25	17,47	21,92	15,02	19,79	24,93
Sensible cooling capacity	kW	5,75	7,54	8,96	6,89	9,06	10,81	5,67	7,79	9,77	6,73	9,31	11,68	10,76	14,20	17,81	12,16	16,04	20,20
Water flow rate system side	l/h	1227	1609	1911	1474	1938	2311	1385	1902	2384	1634	2260	2833	2279	3005	3771	2585	3405	4289
Pressure drop system side	kPa	10	17	23	8	13	17	12	21	32	10	18	27	11	19	28	10	17	26
<b>Fan</b>																			
Air flow rate	m³/h	1170	1631	2050	1173	1642	2076	1211	1775	2387	1202	1777	2391	2230	3117	4200	2234	3119	4200
High static pressure	Pa	38	72	115	25	48	75	27	57	105	18	38	70	32	63	115	21	41	75
Input power	W	261	336	441	261	337	446	265	355	517	264	355	518	534	656	831	534	656	836
Type	type	Centrifugal			Centrifugal			Centrifugal			Centrifugal			Centrifugal			Centrifugal		
Fan motor	type	Asynchronous			Asynchronous			Asynchronous			Asynchronous			Asynchronous			Asynchronous		
Number	no.	2			2			2			2			2			2		
<b>Diameter hydraulic fittings</b>																			
Main coil	Ø	3/4"			1"			3/4"			1"			1"			1" 1/4		
<b>Power supply</b>																			
Power supply		230V~50Hz			230V~50Hz			230V~50Hz			230V~50Hz			230V~50Hz			230V~50Hz		

(1) Room air temperature 20 °C d.b.; Water (in/out) 70 °C/60 °C;  
(2) Room air temperature 27 °C d.b./19 °C w.b.; Water (in/out) 7 °C/12 °C;

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

## DIMENSIONS



Size		13	16	23	34	36	43	46	53	56	63	74	76
<b>Dimensions and weights</b>													
A	mm	295	295	295	295	295	325	325	325	325	375	375	375
B	mm	645	645	1000	1000	1000	1100	1100	1345	1345	1345	1345	1345
C	mm	520	520	520	520	520	600	600	600	600	600	600	600
Empty weight	kq	25	27	35	38	42	42	46	48	52	56	61	67

Aermec si riserva la facoltà di apportare in qualsiasi momento tutte le modifiche ritenute necessarie per il miglioramento del prodotto con eventuale modifica dei relativi dati tecnici.

**Aermec S.p.A.**  
Via Roma, 996 - 37040 Bevilacqua (VR) - Italia  
Tel. 0442633111 - Telefax 044293577  
www.aermec.com

Numero Verde  
**800-843085**