

T

Air handling unit with capacities from 8.8 to 137.8 kW



The T series constitutes an alternative to the air handling units in the range with flow rates from 3000 to 20000 m³/h in cases where requirements are limited to the filtration, cooling and/or heating for civil and industrial buildings.

T series units are suitable for ducted or non-ducted installations. The appliances can be equipped with numerous accessories on the intake and delivery sides. T series appliances can be installed vertically or horizontally, with intake and delivery sides oriented with the maximum freedom.

Features

- Frame in aluminium profiles with black nylon corner pieces and pre-plastified steel panelling
- Sandwich panels with injected polyurethane core (density 40 kg/m³), total thickness is 25 mm
- Delivery plenum with internal sound insulating lining
- Adjustable speed double suction radial fans
- Vee belt and pulley transmission; adjustable diameter driving pulley
- UNELMEC normalized motors (protection factor IP 55 and insulation class F)
- Modular structure offering the maximum versatility of installation
- Effective static pressure sufficient for connection to extensive duct networks
- Heat exchangers with 2, 3, 4 or 6 rows for heating and/or cooling
- Synthetic G3 class pleated filters
- Elastomer dampers under the motor cradle and on upper side of fan unit

Accessories

- **GC:** Cooling section intake grille. In anodized aluminium with single row of fixed slats.
- **GR:** Heating section intake grille. In anodized aluminium with single row of fixed slats.
- **M:** Delivery plenum. Made using same panelling as basic unit but equipped with an internal layer of sound insulating material. To be adopted in non-ducted installations for the delivery of processed air into the building through a louver with two rows of angle-adjustable slats. Outlet louver in anodized aluminium.
- **MO:** Intake plenum with two dampers (recirculation and fresh air intake) for horizontal installations. The plenum is effectively an air mixing chamber equipped one damper on the front and the other on the top. Opposing slat type dampers made of aluminium.
- **MV:** Intake plenum with two dampers (recirculation and fresh air intake) for vertical horizontal installations. The plenum is effectively an air mixing chamber equipped one damper on the front and the other on the rear. Opposing slat type dampers made of aluminium.
- **P:** Feet kit. Feet in galvanized steel; height of unit increases by 50 mm.
- **RC:** Intake plenum with front grille. Similar to plenum RT but with anodized aluminium grille with single row of fixed slats: used when air is drawn in directly from the room in which the air conditioning unit is installed.
- **RF:** Intake plenum with front grille and partial lateral opening. Similar to plenum RC but with partial opening on one of the side panels to accept a flanged intake duct supplying part of the intake air from a different room or from an external louver.
- **RP:** Intake plenum with front grille and partial flow lateral damper. Similar to plenum RC but equipped with a smaller damper on one of the side panels to adjust intake air flow from another room or from an external louver.
- **RS:** Intake plenum with front grille and full size lateral damper. Similar to plenum RC but one of the side panels is replaced with a damper to adjust the intake air flow from another room or from an external louver.
- **RT:** Intake plenum with front opening for connection to the suction duct. Made using the same panel type as the basic T series conditioning unit.
- **RV:** Intake plenum with front grille and full size lateral opening. Similar to plenum RC but without one of the lateral panels to provide the facility for flanging an intake duct to supply part of the air flow from another room or from an external louver.

Technical data

			T1	T2	T3	T4	T5	T6	T7
Cooling capacity	2R	kW	8.8	12.7	17.6	23.6	33.5	38	69.9
	3R	kW	12.6	17	24.4	32.6	45.6	53	81.4
	4R	kW	15.6	20.6	30.2	39.8	56.6	68.1	98
	6R	kW	20.1	25.8	38.1	53	76.1	95.3	137.8
Heating capacity	2R	kW	20	26.9	37.8	50.8	71.9	98	150
	3R	kW	26.8	35.6	50.4	67.7	95.5	129.3	190.4
	4R	kW	32	42.3	60.1	80.6	114	154.2	224
	6R	kW	39	51.4	73	99.3	141	188.9	274.7
Max. pressure	2R	Pa	164	199	277	259	271	310	297
	3R	Pa	151	185	265	247	258	299	284
	4R	Pa	138	174	253	235	246	290	271
	6R	Pa	117	151	228	210	220	268	249
Nominal air flow rate		m ³ /h	3000	4000	5600	7600	10800	14000	20400
Coil surface area		m ²	0.332	0.432	0.615	0.815	1.141	1.485	2.16
Motor power		kW	0.55	0.75	1.1	1.5	2.2	3	4

Power supply = 3~ 230V 50Hz; 3~ 400V 50Hz.

Performance values refer to the following conditions:

■ Cooling:

- room air temperature 27 °C D.B., 19 °C W.B.;
- water temperature 7 - 12 °C.

■ Heating:

- room air temperature 20 °C;
- water temperature 70 - 60 °C.

- pressure measured with dry coil.
- nominal air flow rate.

Selection

Modularity

The T series is composed of the following sections for each size:

- Ventilating section.
- Housing section for heating coil and filter.
- Housing section for cooling coil, condensate drip tray and filter.
- Delivery plenum section.
- Intake plenum section.

Individual units can be configured as follows (components given in sequence following air flow path).

Heating only:

- Heating coil section + ventilating section
- Heating coil section + ventilating section + delivery plenum
- Intake section + heating coil section + ventilating section
- Intake plenum + heating coil section + ventilating section + delivery plenum

Cooling only or heating/cooling with dual function coil:

- Cooling coil section + ventilating section
- Cooling coil section + ventilating section + delivery plenum
- Intake plenum + cooling coil section + ventilating section
- Intake plenum + cooling coil section + ventilating section + delivery plenum

Cooling and post-heating:

- Cooling coil section + heating coil section + ventilating section
- Cooling coil section + heating coil section + ventilating section + delivery plenum
- Intake plenum + cooling coil section + heating coil section + ventilating section
- Intake plenum + cooling coil section + heating coil section + ventilating section + delivery plenum.

Pre-heating and cooling:

- Heating coil section + cooling coil section + ventilating section
- Heating coil section + cooling coil section + ventilating section + delivery plenum
- Intake plenum + heating coil section + cooling coil section + ventilating section
- Intake plenum + heating coil section + cooling coil section + ventilating section + delivery plenum.

Special designs

The following special designs are available to order:

- 4/6 pole motor
- 4/8 pole motor
- 2R superheated water coil (heavy gauge CuAl)
- 3R superheated water coil (heavy gauge CuAl)
- 4R superheated water coil (heavy gauge CuAl)
- 3R direction expansion coil
- 4R direction expansion coil
- Ventilating section supplied without motor so that customer can install preferred type.

Designation codes for T series units

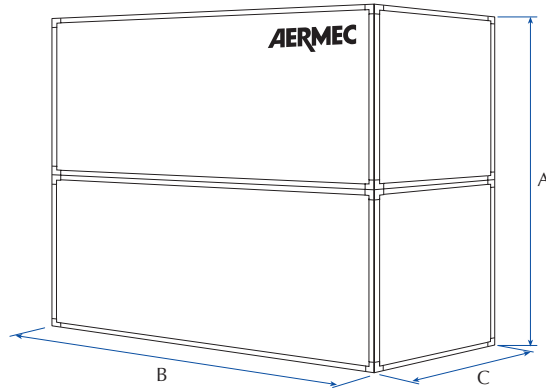
Position	Code	Description
1 st	T	T series
2 nd	1	nominal flow rate 3000 m ³ /h
	2	nominal flow rate 4000 m ³ /h
	3	nominal flow rate 5600 m ³ /h
	4	nominal flow rate 7600 m ³ /h
	5	nominal flow rate 10800 m ³ /h
	6	nominal flow rate 14000 m ³ /h
	7	nominal flow rate 20400 m ³ /h
3 rd	0	no air conditioning sections
	2	air conditioning section with 2-row coil
	3	air conditioning section with 3-row coil
	4	air conditioning section with 4-row coil
	6	air conditioning section with 6-row coil
4 th	0	no heating section
	2	heating section with 2 row coil
	3	heating section with 3 row coil
	4	heating section with 4 row coil
5 th 6 th	GC	conditioning section intake grille
	GR	heating section intake grille
	MO	two-damper inlet plenum for horizontal installation
	MV	two-damper inlet plenum for vertical installation
	RC	intake plenum with recirculation grille and side panel
	RF	intake plenum with recirculation grille and panel with opening for fresh air intake
	RP	intake plenum with recirculation grille and partial size fresh air damper
	RS	intake plenum with recirculation grille and full size fresh air damper
	RT	frontal opening inlet plenum
	RV	intake plenum with recirculation grille and no side panel
	00	no air intake accessories
7 th	M	delivery plenum with double row of slats on louver
	0	no delivery plenum
8 th	P	feet
	0	no feet accessory
9 th	1	vertical position of upper delivery outlet
	2	vertical position of front delivery outlet
	3	horizontal position of upper delivery outlet
	4	horizontal position of front delivery outlet
10 th	A	intake from front
	I	intake from base
	P	intake from rear
11 th	S	left hand connections, with cooling coil or only coil first
	D	right hand connections, with cooling coil or only coil first
	A	left hand connections, with heating coil first (for use only with two coils)
	B	right hand connections, with heating coil first (for use only with two coils)

The 11 character commercial code is made up by selecting the required option from the above table for each position. Configuration of the unit is defined by the last three letters.

Example: a T series unit size 3, composed of a cooling section with 6 row coils, an intake plenum with external partial air intake damper and feet, vertical positioning with delivery outlet at the top, intake of the coil section at the base and right hand water connections (the connection side is considered when facing the machine with the motor on the left hand side and the connections on the opposite side), is designated with code **T3 60 RP 0 P 11D** where:

T	---->	T series unit
3	---->	Air flow rate of 5600 m ³ /h
6	---->	Cooling section with 6 row coil
0	---->	No heating section
RP	---->	Intake grille with partial fresh air intake damper
0	---->	No delivery plenum
P	---->	Feet
1	---->	Vertical type with air expulsion at top
I	---->	Coil section air intake at base
D	---->	Right hand water connections

Dimensions (mm)



		T1	T2	T3	T4	T5	T6	T7
Height	A	1300	1300	1480	1480	1740	1740	2260
Width	B	1100	1350	1500	1900	1900	2560	2560
Depth	C	650	650	740	740	870	870	1130

Orientation

The ventilating sections and cooling coil sections are designed so that they can be oriented by altering the position of the intake side panel and the air transfer partition wall between the two sections. The coils can be turned upside down so that the water connections can be presented on the left or right hand sides. The connection side is defined when observing the unit with the fan motor on the left: the unit connections are left-handed when they are on the same side as the fan motor.

The following figures show all possible configurations for each of the two water connection sides.

In the designation code, orientation is referred to the unit without the delivery and intake plenums; note also that the intake side of the first coil should be considered in the direction of the air flow. For example, in the case of a unit composed of a heating coil, cooling coil and ventilating section, orientation must be selected from among the possibilities shown below.

Note: units in which the first component is the heating section must not be installed on the floor in the vertical version (1xx and 2xx).

