

TRS

Heat recovery unit with enthalpy exchanger



- **QUICK AND EASY INSTALLATION**
- **FANS COUPLED TO BRUSHLESS DC MOTORS WITH LOW ENERGY CONSUMPTION**

Features

The TRS heat recovery units allow to join maximum environmental comfort with sure energy saving. Forced ventilation must be created in current air conditioning and treatment plants, which leads to the expulsion of treated air, determining large energy consumption and increase in costs.

TRS intends to solve these problems using a static heat recovery unit that saves most of the energy that would otherwise be lost.

The unit adopts high-efficiency heat recovery with countercurrent flows which consists of flat sheets of special paper **that allow you to recover both sensible and latent heat (humidity).**

No condensation forms by adopting the enthalpy recovery unit: part of the humidity in a flow of air is absorbed by the porous surface and is then transferred completely to the opposite air flow. **Therefore, no condensate drip tray or the relative drain pipe is required.** The high static pressures available allow ducts to be mounted, thereby al-

lowing the extraction or input of air across multiple environments simultaneously.

- Very compact units **that can only be installed horizontally**, which require simple maintenance of the heat exchanger and filters (both removable from the side).
- Automatic free-cooling function.
- Free-cooling in mid-season thanks to the automatic by-pass function.
- Double suction centrifugal fans coupled directly to the high-efficiency Brushless DC electric motors, equipped with adjustable speeds via an electronic control to vary the flow rate.
- Controlling selectable units between flush control panel with an LCD display (**TRSCP1 accessory**) or a kit with flush control panel with a remote-controlled LCD display (**TRSCPR1 accessory**).
- Hexagonal-shaped enthalpy recovery unit to increase the exchange surface.

- Galvanised sheet metal self-supporting panels with insulation.
- Air filters both on the exhaust air (M5 class filter) and the air renewal (F7 class filter), removable laterally to be cleaned or replaced.
- Silent operation.
- The installation does not require a condensate drain system.

Accessories

The following accessories are available for complete control of the TRS recovery units:

- **TRSCP1: Flush control panel with an LCD display** to control the On-Off, speed selection, programmable weekly timer and the automatic Free-Cooling functions. IR receiver for coupled operation with the IR remote control accessory. **Wall installation recessed in supplied electrical junction boxes "module 502".**
- **TRSCPR1: Remote control and flush control panel with an LCD display** to control the On-Off, speed selection, programmable weekly timer and the automatic Free-Cooling functions. IR receiver for coupled operation with the IR remote control accessory. **Wall installation recessed in supplied electrical**

junction boxes "module 502".

Accessories compatibility						
TRS	250	350	500	800	1000	1200
TRSCP1	•	•	•	•	•	•
TRSCPR1	•	•	•	•	•	•

Technical data

TRS			250	350	500	800	1000	1200
Air flow rate	High-speed	m ³ /h	260	330	500	750	950	1180
	Average speed	m ³ /h	260	330	500	660	740	1080
	Low speed	m ³ /h	170	250	360	560	600	980
Nominal static pressure	(1) High-speed	Pa	70	70	70	70	70	80
	Average speed	Pa	70	70	70	50	40	70
	Low speed	Pa	30	40	35	35	25	55
Sound pressure level	(2) High-speed	dB(A)	27	31	33	38	39	42
	Average speed	dB(A)	26	29	31	36	37	37
	Low speed	dB(A)	22	25	27	32	33	32
Max input current		A	1.1	1.4	2	2.8	3	3.7
Max input power		W	90	120	135	300	310	490
Internal specific fan power	(1)	W/m ³ /s	1043	1032	1178	990	1238	1570
Winter conditions			(3)					
Efficiency in temperature		%	75.4 (75.5)	77.6 (77.6)	76.5 (76.5)	73 (73)	73.5 (73.5)	71 (71)
Efficiency in enthalpy		%	61 (61)	63.7 (64)	62.3 (64)	59 (61)	59.5 (61)	56.2 (56.2)
Recovered power		kW	2.2 (2.4)	3.1 (3.4)	4.3 (4.8)	6.5 (7.3)	8.2 (9.0)	9.1 (10.8)
Summer conditions			(4)					
Efficiency in temperature		%	62	63	62.5	59	59.5	57
Efficiency in enthalpy		%	60	61	60	57	57.5	54
Recovered power		kW	0.8	1.2	1.7	2.5	3.2	3.7
Electric power supply		V/ph/Hz	230 / 1 / 50					

All recovery units have a minimum dry performance of 67%, measured according to EN308, at outside air conditions of 5°C, and extracted air at 25°C, with a balanced mass flow.

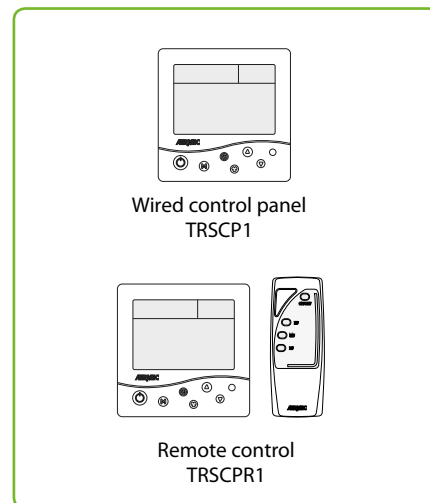
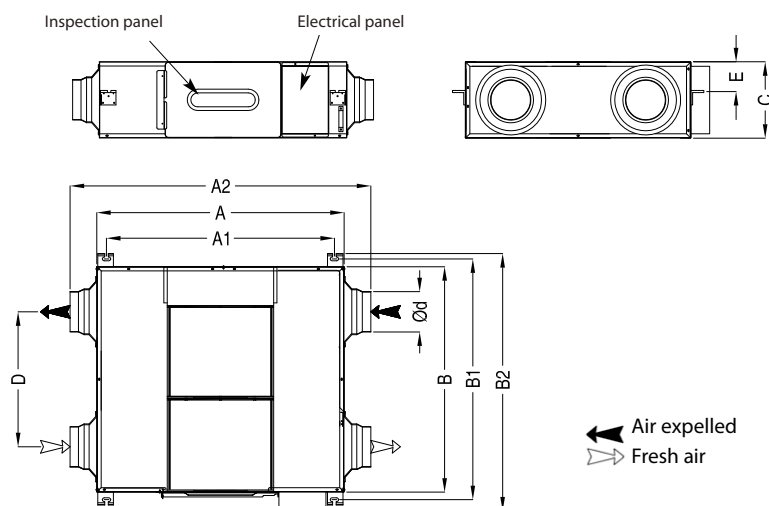
(1) Values referring to the nominal air flow rate including recovery unit and filters.

(2) Referring to 1.5 metres from machine intake in free field.

(3) Winter nominal conditions: Outdoor air: -5°C (-10°C) DB, RH 80%; Ambient air: 20°C DB, RH 50%.

(4) Summer nominal conditions: Outdoor air: 32°C DB, RH 50%; Ambient air: 26°C DB, RH 50%.

Dimensional data (mm)



Model	Size [mm]											Net / gross weight [kg]	Packaging dimensions [mm]
	A	A1	A2	B	B1	B2	C	D	D1	Ød	E		
TRS250	885	815	1074	666	720	779	272	342	342	150	110	27 / 32	1125x830x345
TRS350	885	815	1074	806	860	919	272	482	482	150	110	32 / 38	1125x985x345
TRS500	970	910	1130	997	1053	1112	312	728	728	200	38	42 / 49	1190x1150x386
TRS800	1322	1252	1486	882	936	994	390	431	431	250	169	63 / 70	1545x1030x470
TRS1000	1322	1252	1486	1132	1186	1244	390	681	681	250	169	76 / 86	1545x1280x470
TRS1200	1322	1252	1486	1132	1186	1244	390	681	681	250	169	76 / 86	1545x1280x470