

RePuro Heat recovery unit



90%
high
efficiency



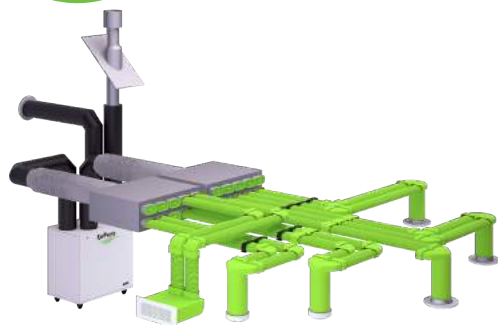
maximum Efficiency
Seasonal Energy
(See Technical Data)



Variable Multi Flow

VMF

RePuroDistribution



Aermec RePuroDistribution

This complete range of products for air distribution, which in association with the innovative series of units for heat and purification recovery RePuro, offers to designers, installators and end-users an efficient solution, easy in the installation and comfortable in all its cycle of life. Examples of plenums for air distribution, which could be equipped of: electric heater, germicidal lamp, water-exchanger.



PLS
with multi-way flange



PLS_M
with one-way flange

Characteristics

RePuro is an innovative counter-flow heat recovery system which ensures the correct renewal of air to indoor environments. Through the use of up to 90% high efficiency heat exchangers **RePuro** allows the introduction of fresh air at a temperature close to that of the room concerned, reducing energy costs that would be incurred in exchanging the air in traditional ways or by mechanical ventilation alone. PLASMACLUSTER ionising filter. Plasmacluster is capable of reducing the level of pollutants, by decomposing the molecules that form them. The result is in the air: you can finally breath clean, odour-free ionised air.

• Version

RePuro standard

RePuro_R with electric pre-heater for continuous operation in cold climates up to -15°C.

• Installation

Wall installation and ceiling: (100÷170)

upright (250÷650)

- Heat exchanger with hexagonal shape to increase the surface area.
- Heat exchanger easily removed from the front for cleaning or replacement.
- Casing in galvanised sheet steel with internal insulation.
- Standard filter on fresh air G4
- Standard filter on extract air G2.
- Filters can be removed for cleaning or replacement.
- All units are equipped with frost protection system for climates > -10°C .
- High efficiency of 90% and above (UNI EN 308).
- Free-cooling in mid-seasons through the automatic by-pass function (RePuro 250-350-450-550-650).
- **By-pass** no frost (RePuro 450-550-650)
- Ionizer filter **PLASMACLUSTER** as standard.
- Flow rate control 0-100% of nominal air flow rate.

- Direct drive centrifugal fans, with "Brushless" EC high efficiency variable speed electric motors (ERP2015).
- Microprocessor controller with interface capability to the VMF System.
- Monitoring of the units with remote wired control panel (supplied as standard). Innovative design, extremely slim, allows control of functions via a touch keypad with LCD display. The panel cable is 6 metres long supplied as standard. Activation of the electric heater in the RePuro_R version. Front in light grey colour PANTONE COOL GRAY 1C.
- Easy to wall mount with standard supplied mounting plate, or floor mount with anti-vibration mounts AVM accessory.
- Adaptable to existing systems.
- Compact size.
- Quiet operation.
- **The installation requires a condensate drain system.**

Accessories

- **AVM** : Anti-vibration mounts
- **SSR** : Bearing bracket (RePuro 250-350-450-550-650)
- **FF7** : Air filters for fresh air with F7 efficiency
- **KSAE** : External air temperature sensor
- **PLS** : Plenum with acoustic lining equipped with multi-way flange to ensure a uniform distribution in all treated areas.
The plenum is configured with:
 - **PLS_E** electric heater
 - **PLS_L** germicidal lamp
 - **PLS_W** water coil (requires accessory valve)
- **PLSM** : Plenum with acoustic lining equipped with one-way flange.
The plenum is configured with:
 - **PLSM_E** electric heater
 - **PLSM_L** germicidal lamp
 - **PLSM_W** Plenum with acoustic lining equipped with one-way flange)
- **VCH** : Kit consisting of powered 3-way valve, copper couplings and pipes. Combined with the accessory PLS/PLSM in the configuration with the water heat exchanger. In cooling recovery it requires an accessory tray BC.
- **VCHR** : such as VCH, but with isolation as.
- **VCHD** : such as VCH, but with 2-way valve instead of 3-way one.
- **BC** :Auxiliary condensate drip tray. BC10 for vertical installation. BC20 for horizontal installation.
- **VMF-E5B** : White recessed panel, with backlit graphic LCD and touch keypad allowing the centralised command/control of a complete hydronic system consisting of:
 - Heat recovery units: up to 3 outputs for heat recovery units programmed according to time-clocks and/or by measuring the air quality obtained with the VMF-VOC accessory;
 - Fan coil units: up to 64 fan coil zones comprising 1 master + maximum 5 slaves;
 - Chiller/heat pump unit equipped with controls Modu_Control, GR3 and pCO² / pCO³ (required accessory RS 485 interface respectively MODU-485A, AER485, AER485P2 / AER485P1),
- Circulators: maximum of 12 configurable zone circulators;
- Boiler: boiler enable for hot water production;
- Domestic hot water module: complete management of the production of domestic hot water through the control of diverting valve/circulator, immersion heater, storage tank temperature sensor, anti-legionella cycle.
- **VMF-E5N** : Variant of the **VMF-E5B** panel but with black coloured plastic.
- **VMF-VOC** : Accessory for measuring air quality (see relevant point in the description of the VMF-E5B panel).
- **VMF-CRP** : Accessory module for the control of the boilers, pumps and heat recovery units.

Mod. RePuro	Vers.	100	170	250	350	450	550	650
AVM	All	-	-	•	•	•	•	•
SSR	All	-	-	•	•	•	•	•
FF7	All	170	170	350	350	650	650	650
KSAE	All	•	•	•	•	•	•	•
Delivery plenum with multiway flange								
PLS350		•	•	•	•	-	-	-
PLS350W	(1)	•	•	•	•	-	-	-
PLS350E		•	•	•	•	-	-	-
PLS350L		•	•	•	•	-	-	-
PLS350WE	(1)	•	•	•	•	-	-	-
PLS350WL	(1)	•	•	•	•	-	-	-
PLS350WLE	(1)	•	•	•	•	-	-	-
PLS350LE		•	•	•	•	-	-	-
PLS650		-	-	-	-	•	•	•
PLS650W	(1)	-	-	-	-	•	•	•
PLS650E		-	-	-	-	•	•	•
PLS650L		-	-	-	-	•	•	•
PLS650WE	(1)	-	-	-	-	•	•	•
PLS650WL	(1)	-	-	-	-	•	•	•
PLS650WLE	(1)	-	-	-	-	•	•	•
PLS650LE		-	-	-	-	•	•	•
Delivery plenum with one-way flange								
PLSM350		•	•	•	•	-	-	-
PLSM350W	(1)(2)	•	•	•	•	-	-	-
PLSM350E		•	•	•	•	-	-	-
PLSM350L		•	•	•	•	-	-	-
PLSM350WE	(1)(2)	•	•	•	•	-	-	-
PLSM350WL	(1)(2)	•	•	•	•	-	-	-
PLSM350WLE	(1)(2)	•	•	•	•	-	-	-
PLSM350LE		•	•	•	•	-	-	-
PLSM650		-	-	-	-	•	•	•
PLSM650W	(1)(2)	-	-	-	-	•	•	•
PLSM650E		-	-	-	-	•	•	•
PLSM650L		-	-	-	-	•	•	•
PLSM650WE	(1)(2)	-	-	-	-	•	•	•
PLSM650WL	(1)(2)	-	-	-	-	•	•	•
PLSM650WLE	(1)(2)	-	-	-	-	•	•	•
PLSM650LE		-	-	-	-	•	•	•
Kit for plenum								
VCH	(3)	•	•	•	•	•	•	•
VCHR	(3)	•	•	•	•	•	•	•
VCHD	(3)	•	•	•	•	•	•	•
BC10		•	•	•	•	•	•	•
BC20		•	•	•	•	•	•	•
VMF-system								
VMF-CRP		•	•	•	•	•	•	•
VMF-VOC		•	•	•	•	•	•	•
VMF-E5N		•	•	•	•	•	•	•
VMF-E5B		•	•	•	•	•	•	•

(1) Combination with three-way valve kit required.

(2) If you intend to use all the after-heating coil system, or in all the situations in which the air temperature inside the pipe could provoke condensation on external surfaces of pipe, it is mandatory to isolate adequately the installation components.

(3) in the cold-functioning they require the accessory BC10 o 20

Technical data

Mod.	RePuro	100	170	250	350	450	550	650
Nominal air flow rate	m ³ /h	100	170	250	350	450	550	650
Available static pressure	Pa	85	20	195	133	100	120	70
Winter recovery efficiency	%	94,4	91,2	91,9	89,4	90,3	88,6	87
Recovered heating capacity	W	957	1573	2329	3171	4118	4940	5734
Winter recovery efficiency	(1) %	90,6	85,3	86,3	82,2	83,7	81	78,4
Recovered heating capacity	(1) W	601	963	1433	1910	2500	2957	3386
Summer recovery efficiency	%	90,6	85,3	86,4	82,2	83,7	81	78,5
Recovered cooling capacity	W	180	289	430	573	750	887	1015

Nominal air flow rate	(2) m ³ /h	75	125	150	200	300	350	450
Available static pressure	Pa	135	110	331	376	210	300	270
Winter recovery efficiency	%	95,7	93,2	94,8	93,3	93	92,1	90,3
Recovered heating capacity	W	728	1181	1441	1891	2830	3267	4118
Winter recovery efficiency	%	92,7	88,6	91,1	88,6	88,2	86,6	83,7
Recovered heating capacity	W	462	735	908	1177	1758	2014	2500
Summer recovery efficiency	%	92,7	88,6	91,2	88,7	88,3	86,7	83,7
Recovered cooling capacity	W	138	220	272	353	527	604	750

Nominal air flow rate	(2) m ³ /h	50	75	75	100	150	175	200
Available static pressure	Pa	185	210	426	526	310	430	485
Winter recovery efficiency	%	97	95,7	97,2	96,4	96,2	95,7	95,1
Recovered heating capacity	W	492	728	739	977	1463	1697	1928
Winter recovery efficiency	(1) %	95	92,7	95,3	93,9	93,6	92,7	91,7
Recovered heating capacity	(1) W	315	462	475	623	932	1077	1218
Summer recovery efficiency	%	95	92,7	95,3	93,9	93,6	92,7	91,7
Recovered cooling capacity	W	95	138	142	187	280	323	365

GENERAL DATA								
SEC	kWh/(m ² a)	-36	-38	-37	-40	-40	-40	-40
CLASS		A	A	A	A	A	A	A
Maximum power input	W	45	65	160	180	220	280	360
Power supply	V/ph/Hz	230V/1/50Hz	230V/1/50Hz	230V/1/50Hz	230V/1/50Hz	230V/1/50Hz	230V/1/50Hz	230V/1/50Hz

Winter recovery

Exhaust air temperature 20°C b.s. 50% u.r.; Fresh air temperature -10°C b.s. 80% u.r.

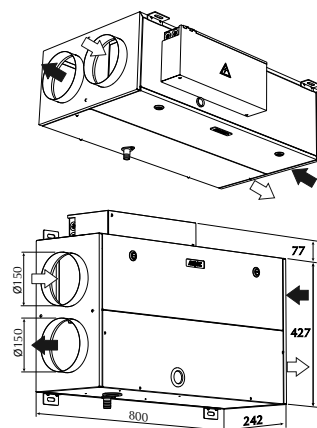
(1) Exhaust air temperature 25°C b.s. 27% u.r.; Fresh air temperature 5°C b.s. 50% u.r. (UNI EN308)

Summer recovery

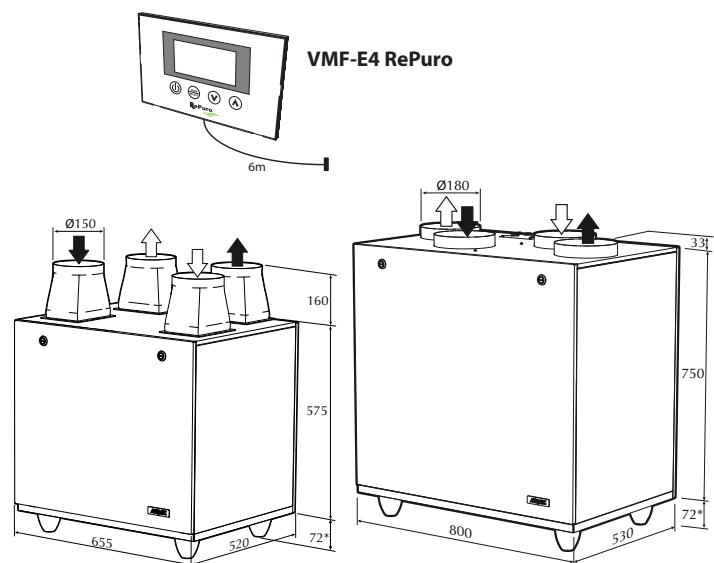
Exhaust air temperature 26°C b.s. 50% u.r.; Fresh air temperature 32°C b.s. 50% u.r.

(2) capacities obtained with air flows different from nominal ones.

Dimensions (mm)



RePuro 100 - RePuro 170



RePuro 250 - RePuro 350

RePuro 450 - RePuro 550 - RePuro 650

* = with AVM accessory

Mod. RePuro	Vers.	100	170	250	350	450	550	650
Weight	(kg)	all	25	25	48	48	55	55