



**URPX  
HEAT RECOVERY  
UNITS WITH  
VERY HIGH  
EFFICIENCY  $\geq 90\%$**

3 sizes for adjustable air flow  
rates from 1350 to 5500 m<sup>3</sup>/h

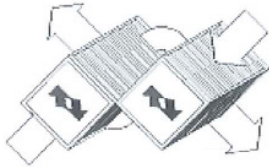


**URPX** air recovery units with very high efficiency are designed to forcibly recycle air and recover a great deal of the expelled heat. The units are made up of:

- Aluminium section with twin panel sheet metal structure (galvanised internally/plasticised externally) insulated with 25mm of polyurethane. The panels have a transmission coefficient of 1.05 W°C m<sup>2</sup> and a soundproofing level as shown on the following table:

F Hz	63	125	250	500	1000	2000	4000
R db	19	19	21	23	32	34	34

- Double aluminium plate cross-flow static heat recovery unit with very high efficiency (above 90%) and additional sealing on the exchanger to prevent clean and exhaust air flows from mixing. Performances according to ENV308.



- Total recuperator by-pass.
- AISI 304 stainless steel condensate collection tray with  $\varnothing\frac{1}{2}$ " drain pipe.
- Filter sections on the external air inlet and on the room air suction inlet with 85% efficient maintainable pleated cells, Ashrae 52/76-EU 3-UNI 7832 FIRE CLASSIFIC DIN 53438 FI
- Possibility to install F7 compact bag filters, with 98mm thickness and 85% efficiency or F9 with efficiency 95%;
- High efficiency backward-curved blades direct-driven fans, with brushless motors. An electronic system automatically adjusts the number of rpms depending on the set air flow rate. This means that the fan automatically changes its rotation speed to adjust to the system pressure losses, thus guaranteeing the pre-set flow rate. This also means that the required air flow rate is ensure at all times regardless of circuit load loss, as long as the

latter is not higher than the maximum pressure value which the fan can provide (see Table). Therefore not even the filter clogging causes a reduction in the air flow rate and the consequent reduction in the system performance. Another important advantage, particularly in units with two-way air flows such as the URP, is that the problem of performance imbalance between return and supply has been eliminated. This imbalance, caused by different pressure losses, within the two circuits, results in a low heat recovery performances and, above all, unwanted pressure or depressions in the rooms where the unit is installed. The various air flow rates available for each fan are easily programmed using a terminal board located on the fan itself. Table 2 shows, for each size of unit, three available nominal air flow rates, to which the standard performance data refer, but each fan can be programmed for 12 different air flow rates.



- Ideal for ceiling installations thanks to its side-by-side low profile design
- Inspection from the side or from the bottom (to be specified in order phase).
- Separate module (optional) to host the water heat exchanger (hot, cold, mixed) or electric battery.
- Module (optional) for the steam humidification system with possibility to supply also the steam producer (not mounted).
- Power and control board integrated in the unit, already wired and tested.
- Option for remote control panel.



## TECHNICAL DATA

URPX Model		1			2			3		
description of feature		min.	med.	max.	min.	med.	max.	min.	med.	max.
Air volume	m <sup>3</sup> /h	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500	5.000
Max. static available pressure <sup>(1)</sup>	Pa	380	420	460	435	475	545	440	490	550
Max. static available pressure <sup>(2)</sup>	Pa	300	300	300	300	300	300	300	300	300
Pressure drop for hot water coil	Pa	5	10	20	15	20	30	10	20	30
Pressure drop for cold water coil	Pa	30	50	75	60	75	100	70	90	110
Pressure drop for bag filters	Pa	40	60	70	60	80	110	60	80	110
Recuperator efficiency in winter <sup>(3)</sup>	%	93	92	91	91	90	90	90	90	89
Recuperated capacity in winter	kW	7,8	11,6	15,2	19,0	22,5	26,3	30,0	33,5	37,0
Recuperator efficiency in summer <sup>(4)</sup>	%	78	77	76	77	76	76	76	75	75
Recuperated capacity in summer	kW	2,1	3,1	4,1	5,1	6,1	7,2	8,1	9,1	10,0
Number of fans	n°	2	2	2	2	2	2	2	2	2
Nominal power for each fan	kW	2,5	2,5	2,5	2,5	2,5	2,5	3,6	3,6	3,6
Absorbed current for each fan at the maximum performances	kW	0,45	0,65	0,9	0,75	1,0	1,4	1,4	1,7	2,2
Nominal current	A	4	4	4	4	4	4	5,8	5,8	5,8
Voltage		380V - 3 f - 50Hz								
AHU sound pressure level <sup>(5)</sup>	dB(A)	44	45	46	46	47	50	49	50	52
Return sound pressure level <sup>(6)</sup>	dB(A)	56	56	58	58	59	62	61	62	64
Supply sound pressure level <sup>(7)</sup>	dB(A)	58	58	60	60	61	64	63	64	66
<b>Integration hot water coil</b>		<b>10</b>	<b>10</b>	<b>10</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>30</b>	<b>30</b>	<b>30</b>
Performance with water 70/60°C <sup>(8)</sup>	kW	10	13	16	22	25	28	33	36	39
Pressure drop with water 70/60°C	kPa	7	9	11	10	12	13	8	9	10
Performance with water 50/40°C <sup>(8)</sup>	kW	5,7	7,6	9,3	12	14	15	18	20	21
Pressure drop with water 50/40°C	kPa	5	6	7	6	7	8	7	8	8
<b>Integration cold water coil</b>		<b>10</b>	<b>10</b>	<b>10</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>30</b>	<b>30</b>	<b>30</b>
Performance with water 7/12°C <sup>(9)</sup>	kW	4,3	5,7	7	9,2	10,5	11,5	13	14	15
Pressure drop with water 7/12°C	kPa	9	12	16	13	16	19	11	13	15
Performance with water 45/40°C (heat pump)	kW	8	11	13	18	20	23	27	30	33
Pressure drop with water 45/40°C	kPa	16	30	40	25	35	40	18	21	25
<b>Integration electric battery</b>		<b>10</b>	<b>10</b>	<b>10</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>30</b>	<b>30</b>	<b>30</b>
Capacity / Voltage		6kW / 380V			9kW / 380V			12kW / 380V		

(1) In standard configuration

(2) In full-options configuration

(3) Data referred to the conditions: fresh air -5°C/80% and room air 20°C/50%, air volumes FA-EXH 1/1

(4) Data referred to the conditions: fresh air +33°C/60% and room air 25°C/50%, air volumes FA-EXH 1/1

(5) Sound pressure calculated at 2 metres from the unit in free field, directionality factor 2, aeratic performances in standard configuration, tolerance ±3dB

(6) Sound pressure calculated at 2 metres from the suction vent, aeratic performances in standard configuration

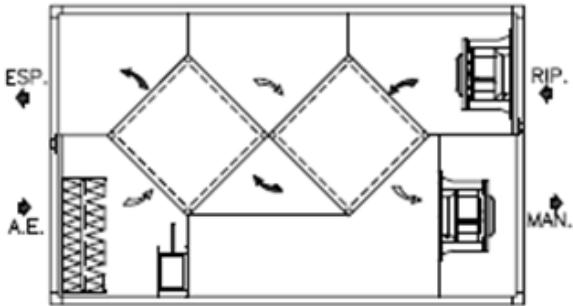
(7) Sound pressure calculated at 2 metres from the supply vent, aeratic performances in standard configuration

(8) Performances calculated with air inlet temperature +11°C

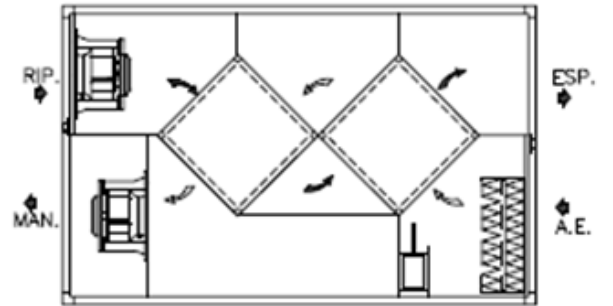
(9) Performances calculated with air inlet temperature +28°C/80%

**POSSIBLE CONFIGURATIONS**

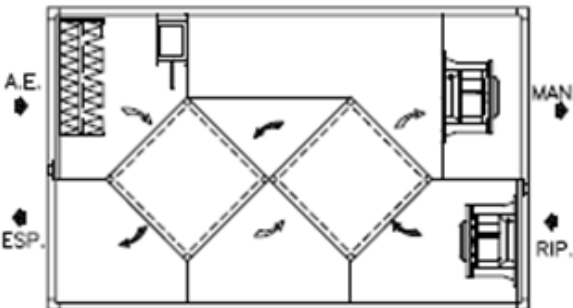
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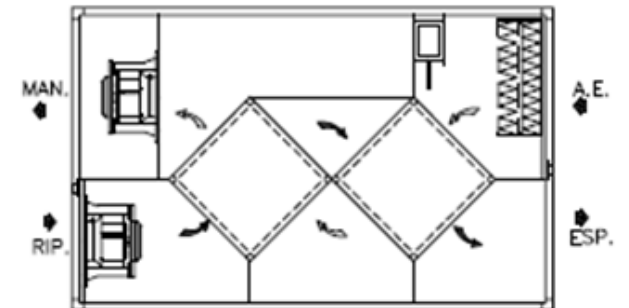
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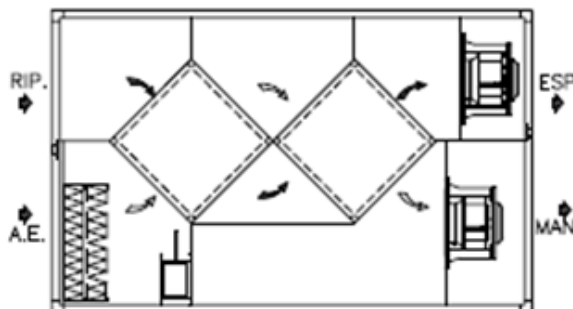
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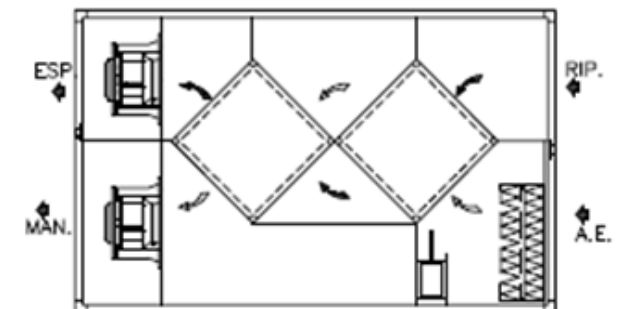
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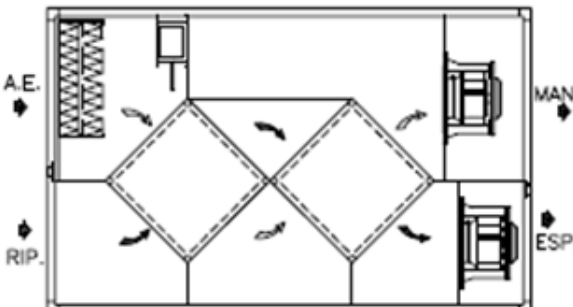
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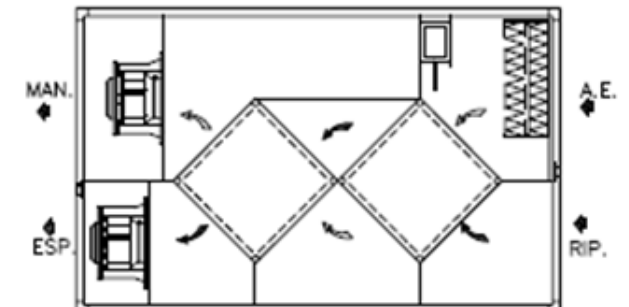
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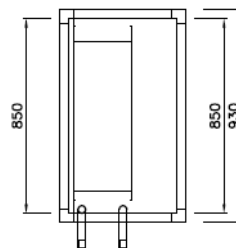
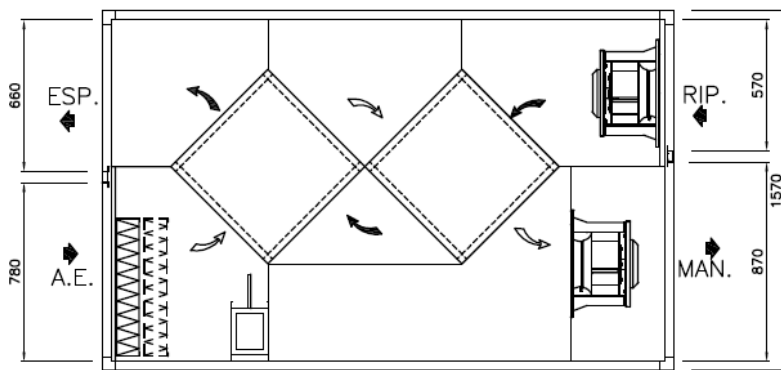
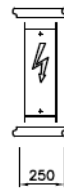
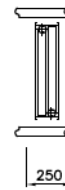
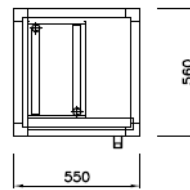
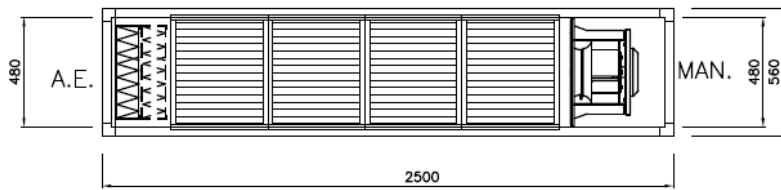
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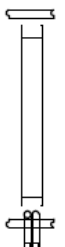
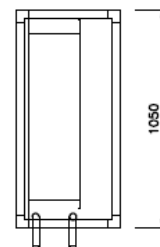
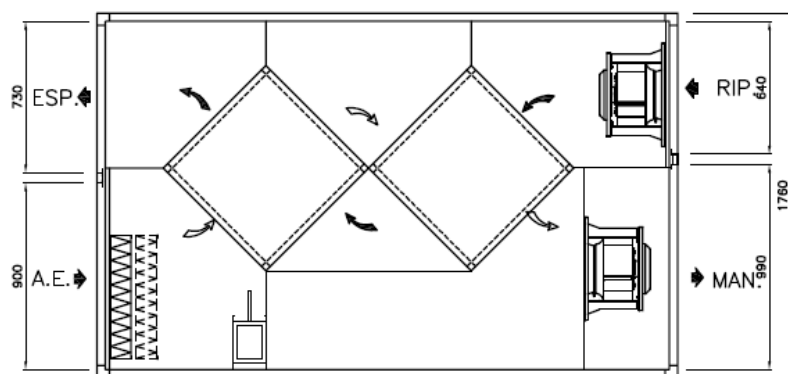
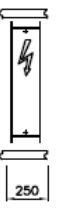
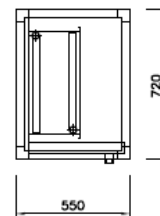
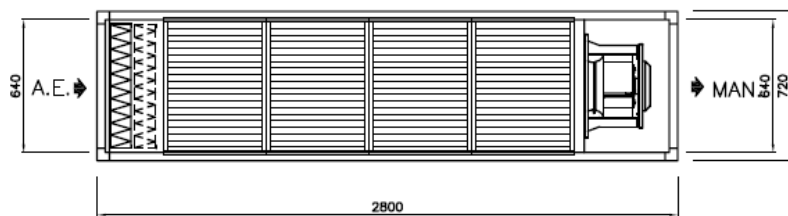
**Standard Configuration:**  
**Configurations on request:**

**n°1**  
**vertical execution**  
**outdoors execution**

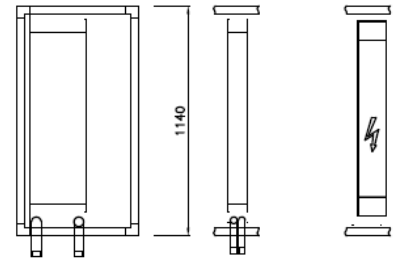
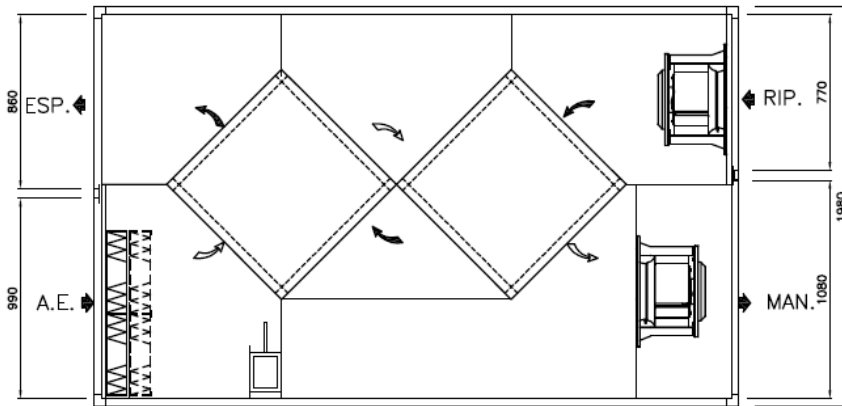
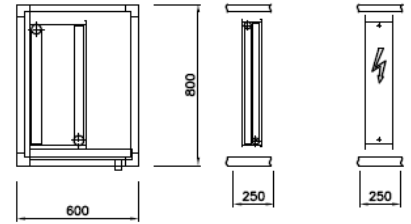
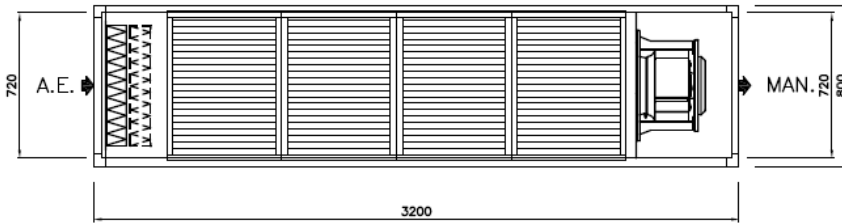
### DIMENSIONS - URPX 1



### DIMENSIONS - URPX 2



## DIMENSIONS - URPX 3



## WEIGHTS

URPX Model		1	2	3
description of feature				
Weight of base unit	kg	322	378	434
Weight of heating coil module	kg	19	26	33
Weight of cooling coil module	kg	44	56	68
Weight of electric battery module	kg	15	22	30

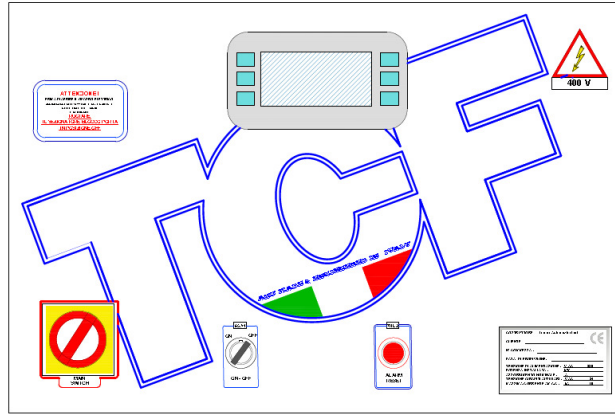
## AVAILABLE ACCESSORIES

- Hot water heat exchanger with specifically-optimised fin-pipe geometry, fin spacing 2.1mm or 2.5mm
- Cold water heat exchanger, fin spacing 2.1mm or 2.5mm in a separate module
- Air inlet dampers
- Air by-pass dampers (free-cooling option)
- Modules with silencers (supply, exhaust, supply & exhaust)
- Complete control board with microprocessor



## AVAILABLE CONTROL SYSTEMS

The available control systems for the URP units include a control board, one 3-way mixing valve for each water heat exchanger, 2 temperature sensors, anti-freeze function in presence of the hot water coil and 1 differential pressure switch for detection of filters clogging. All will be installed and wired on board the unit and totally factory-tested.



The air volume is set by means of a switch on the standard card (1 or 2 fans) wired within the control box :



On request, a controller is also available for the setting, visualisation and control of the air flow. This controller may be supplied wired on board the unit or as a remote panel.



**TERMOVENTILATORI  
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