

> Main specification of heat recovery terminal units

UT REC / UT REC C

UT REC R

UT REC DP / UT REC DP F

RECOVERY EFFICIENCY IN WINTER MODE

RECOVERY EFFICIENCY IN SUMMER MODE

FERROLI offers a complete range of heat recovery terminal units, to meet all system requirements.

> UT REC

available in two versions:

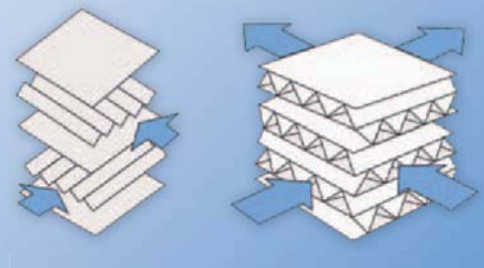
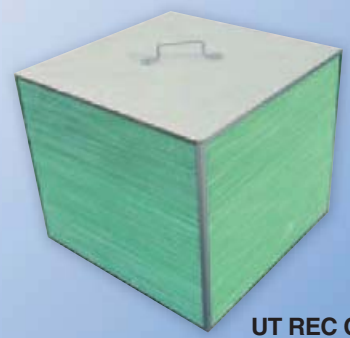
UT REC with static heat recuperator in ALUMINIUM; enables recovery of the sensible heat otherwise lost.

UT REC C with PAPER PACK static heat recuperator: in special treated self-extinguishing stiff paper. The structure consists of a pair of sheets with an interposed corrugated third sheet separating these and creating a triangular air channel (drawing opposite). The paper sheets are permeable to steam, enabling recovery of the sensible as well as latent heat. In this way limited air side pressure losses are obtained, as well as a high exchange area and therefore higher recovery are achieved to values higher than 55-60%.

UT REC



UT REC C



> UT REC R

Available with a high efficiency rotary-type heat recuperator.

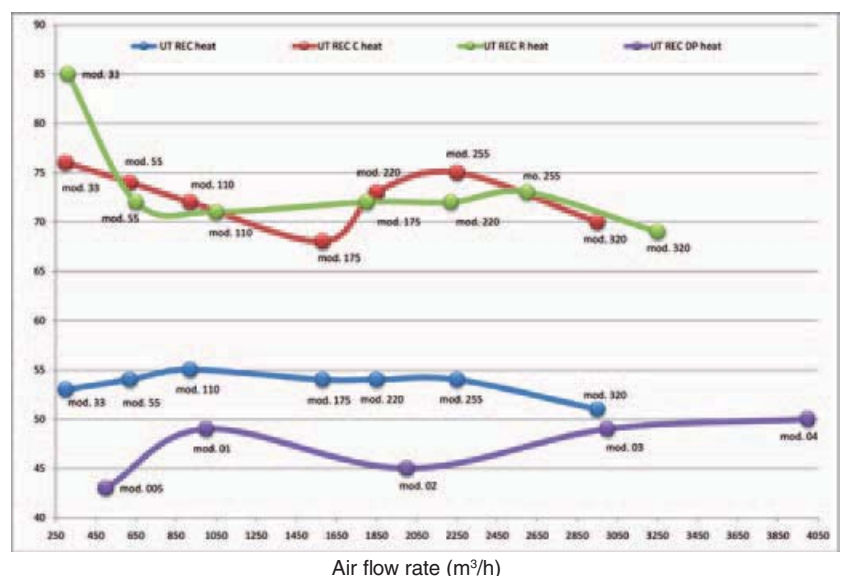
Made in aluminium with a hygroscopic surface.

Exchange efficiency is guaranteed by the quality of the seals that isolate the two air flows.

The rotor consists of alternate flat and corrugated aluminium sheets wrapped around each other.

This creates a "honeycomb" structure in whose channels the two air flows run in an opposed direction.

The surface, made porous by special treatments, allows the humidity to be absorbed, enabling recovery of the sensible and latent heat of the expelled air, resulting in recovery efficiency values above 85-90%.



>>> INDUSTRIAL AIR-CONDITIONING <<<



> UT REC DP and DP F

Available with static-type heat recuperator in ALUMINIUM enabling recovery of the sensible heat otherwise lost. These units have a structure that enables outdoor installation, after application of a covering and suitable positioning.

The **UT REC DP** range features compact sizes < and the available accessories include a 2-row exchanger for heating only (acc. fitted).

The **UT REC DP F** range comes complete with a 4-row exchanger for cooling the air coming out the recovery exchanger. It therefore has larger dimensions than the previous version to enable lower speeds through the coil.

NB: The unit is designed to integrate the room air and ensure its change in a system. Cooling only, and not conditioning, is guaranteed.

> RECOVERY EFFICIENCY IN WINTER MODE

The graphs clearly show how recovery efficiency varies according to the period of operation and even of the type of recuperator.

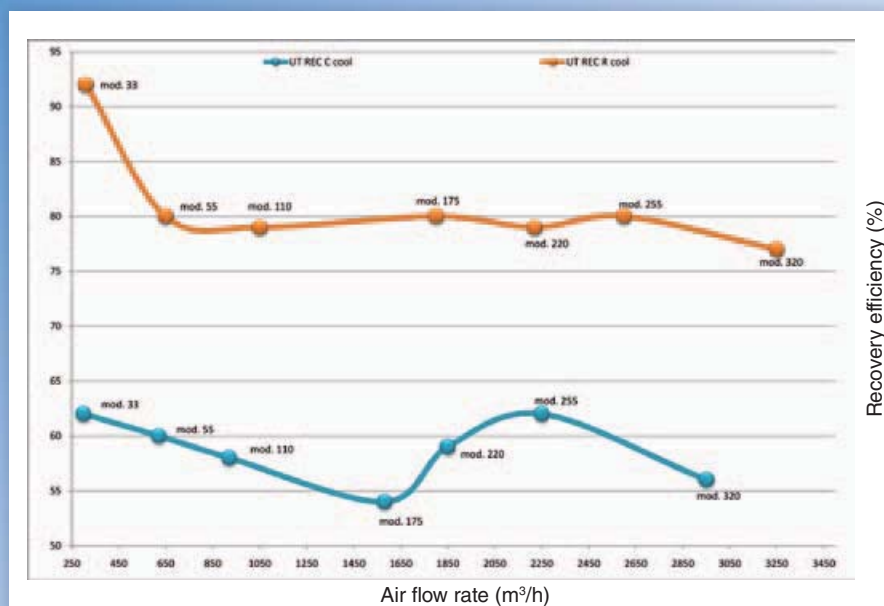
Graph A shows how recovery efficiency increases according to the type of exchanger.

Reference conditions:
Outside Air T= - 5°C 80% R.H.
Room air T= 20°C 50% R.H.
max. speed.

> RECOVERY EFFICIENCY IN SUMMER MODE

In particular, Graph B shows how rotary heat recovery exchangers and paper pack heat recovery exchangers make an important contribution to energy-saving even in summer mode and therefore all year.

Reference conditions:
Outside Air T= 32°C 50% R.H.
Room air T= 26°C 50% R.H.
max. speed.



> UT REC

SINGLE-PANEL HEAT RECOVERY UNITS



Units Series

Unit type

UT REC with recuperator in aluminium

UT REC C with paper pack recuperator

Unit specifications

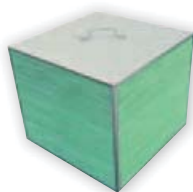
- **STRUCTURE:** in strong aluzink sheet, lined with a suitable thickness of polyethylene and polyester to prevent heat loss, condensation and for increased soundproofing.
- **CONDENSATE TRAY:** in ABS, it is placed under the recuperator to collect condensate during summer and winter operation.
- **AIR FILTER:** situated inside the unit, it is easily removed from side and made from recyclable materials, cleanable by washing.
- **FAN MOTOR:** a directly coupled type, the unit is equipped with a three-speed motor/fan assembly (single-speed for models 33 and 55) with internal thermal protection and startup capacitor always on, with wheel statically and dynamically balanced to reduce noise and vibration.

- **ELECTRIC BOARD:** situated on the unit, it consists of a relay power board to facilitate electrical connections and the control of fans with possible remote controls (not present for models 33 and 55).

■ HEAT RECUPERATOR:



ALUMINIUM: static-type, it only enables recovery of the sensible heat otherwise lost (picture below).



WITH PAPER PACK: Static-type, it enables recovery of the sensible heat and latent heat. In this way a high efficiency is obtained.

Main accessories/Options

Servo motor for damper motorisation

Pressure switch for dirty filter signalling

Antifreeze thermostat

Hot water post-heating coil providing for the use of a 2-row coil.

External section with 3-row water coil for heating or cooling

Equalising damper with fins, arranged for servo control.

1-stage electric post-heating section.

Remote COM3 switch

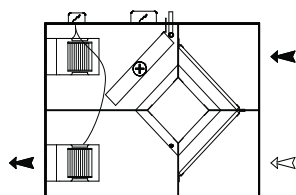
Remote PE+PC thermostat

Single-phase speed variator

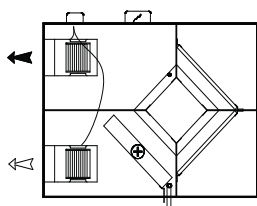
CONFIGURATION

Depending on the configuration of the plant duct are available four possible configuration of recovery.

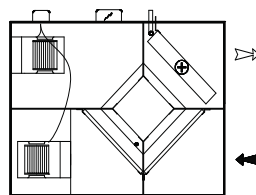
CONFIGURATION 01



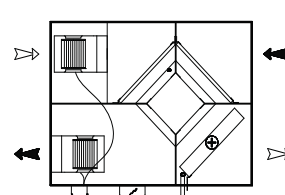
CONFIGURATION 02



CONFIGURATION 03

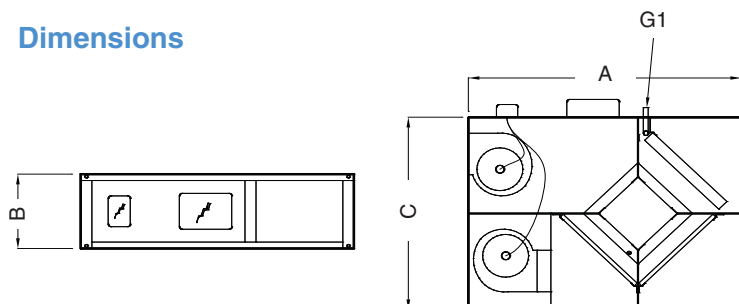


CONFIGURATION 04



Supply fan	33	55	110	175	220	255	320	410		
Power supply	230 / 1 / 50							400 / 3 / 50	V/ph/Hz	
Air flow rate	300	620	920	1580	1850	2250	2950	3920	m³/h	
External static pressure	45	55	65	70	77	80	100	100	Pa	
Sound pressure level 1,5m	40	48	47	46	50	48	50	54	dB(A)	
max. input current	0,75	1,8	2,2	4,4	4,8	5,2	8,3	5	A	
n° speed	3	3	3	3	3	3	3	1	n°	
Performance UT-REC	33	55	110	175	220	255	320	410		
Recovery type/ Recuperator	cross flow and static / Aluminum plate exchanger									
Winter										
P.A.I. (Room air)	20	20	20	20	20	20	20	20	°C	
P.A.E. (Ambient air)	-5/80	-5/80	-5/80	-5/80	-5/80	-5/80	-5/80	-5/80	°C/%	
MAND (Fresh air)	8,3	8,5	8,8	8,15	8,5	8,5	7,8	9,3	°C	
REC (Heating recovery capacity)	1,50	3,10	4,70	7,90	9,20	11,2	13,9	20,6	kW	
Efficiency recovery (sensible/latent)	53	54	55	54	54	54	51	57	%	
Performance UT-REC C	33	55	110	175	220	255	320	410		
Recovery type/ Recuperator	cross flow and static / hygroscopic paper pack									
Winter										
P.A.I. (Room air)	20 / 50	20 / 50	20 / 50	20 / 50	20 / 50	20 / 50	20 / 50	20 / 50	°C	
P.A.E. (Ambient air)	-5/80	-5/80	-5/80	-5/80	-5/80	-5/80	-5/80	-5/80	°C	
MAND (Fresh air)	14,0/39,5	13,5/39,7	13,0/36,7	12,0/42,0	13,3/49,4	13,8/48,8	12,5/50,2	11,0/47,6	°C/%	
REC (Heating recovery capacity)	2,60	5,20	7,20	12,2	16,9	21,1	25,6	30,8	kW	
Efficiency recovery (sensible/latent)	76/62	74/60	72/56	68/55	73/65	75/67	70/62	66/56	%	
Summer										
P.A.I. (Room air)	26 / 50	26 / 50	26 / 50	26 / 50	26 / 50	26 / 50	26 / 50	26 / 50	°C/%	
P.A.E. (Ambient air)	32 / 50	32 / 50	32 / 50	32 / 50	32 / 50	32 / 50	32 / 50	32 / 50	°C/%	
MAND (Fresh air)	28,3/51,2	28,4/51,2	28,5/51,5	28,8/50,8	28,5/50,5	28,3/50,5	28,6/51,0	28,9/50,9	°C/%	
REC (Heating recovery capacity)	1	2	2,9	4,7	6,1	7,9	9,1	11,3	kW	
Efficiency recovery (sensible/latent)	62/60	60/58	58/55	54/53	59/59	62/62	56/55	52/51	%	
Accessories										
BW	33	55	110	175	220	255	320	410		
Coil type	N.A.		Cu/Al							
n° rows			2	2	2	2	2	2	n°	
Coil connection			3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	"	
Winter										
Inlet/outlet air temperature			8,0 / 33,4	8,0 / 30,8	8,0 / 30,2	8,0 / 33,2	8,0 / 31,3	8,0 / 29,7	°C	
Water temperature IN/OUT			70 / 60	70 / 60	70 / 60	70 / 60	70 / 60	70 / 60	°C	
Heating capacity			8,2	12,2	14,4	20,3	24,2	29,9	kW	
Air pressure drop			25	32	35	24	36	36	Pa	
BFW	33	55	110	175	220	255	320	410		
Coil type	N.A.		Cu/Al							
n° rows			3	3	3	3	3	3	n°	
Coil connection			3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	"	
Winter										
Inlet/outlet air temperature			8,0 / 45	8,0 / 43,4	8,0 / 45	8,0 / 46,5	8,0 / 43,7	8,0 / 41,5	°C	
Water temperature IN/OUT			70 / 60	70 / 60	70 / 60	70 / 60	70 / 60	70 / 60	°C	
Heating capacity			12	19,6	23,7	30,5	37	46,2	kW	
Air pressure drop			28	41	39	27	40	53	Pa	
Summer										
Inlet air / UR			30 / 50	30 / 50	30 / 50	30 / 50	30 / 50	30 / 50	°C / %	
Outlet air temperature			19,2	18,9	18,2	17,3	18,3	19,1	°C	
Water temperature IN/OUT			7 / 12	7 / 12	7 / 12	7 / 12	7 / 12	7 / 12	°C	
Cooling capacity total/sensible			5/3,3	8,8/5,8	11,1/7,2	14,7/9,4	17,4/11,4	20,9/13,9	kW	
Air pressure drop			38	50	53	45	48	60	Pa	

Dimensions



Mod.	33	55	110	175	220	255	320	400	
A	990	990	1140	1300	1380	1650	1650	1750	mm
B	290	290	410	500	500	600	600	600	mm
C	750	750	860	860	960	1230	1230	1230	mm
G1 BW			3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	"
Connection BFW			3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	"

> UT REC R

SINGLE PANEL ROTARY HEAT RECOVERY UNITS



Units Series

Unit type

UT REC R Horizontal unit

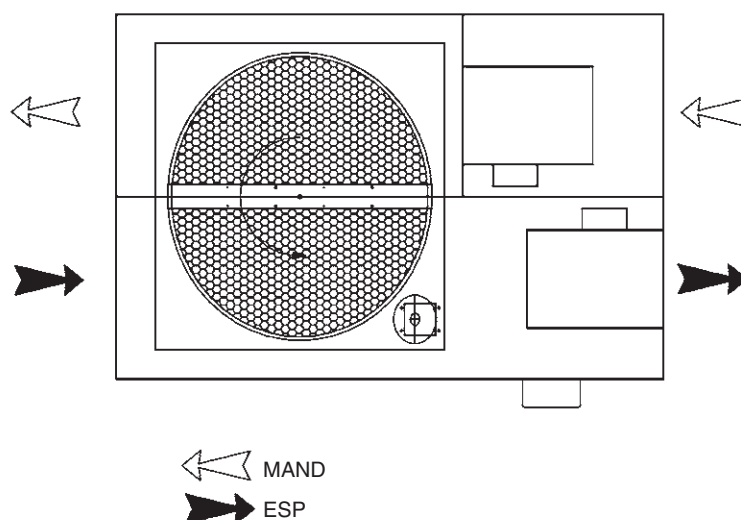
Unit specifications

- **STRUCTURE:** in strong aluzink sheet, lined with polyethylene and polyester sheets of 20 mm average thickness to prevent heat loss, condensation and for increased soundproofing.
- **HEAT RECUPERATOR:** high-efficiency rotary type, enabling recovery of the sensible and latent heat of the expelled air. Complete with condensate tray.
- **AIR FILTER:** situated inside the unit, it is easily removed from side and made from recyclable materials, cleanable by washing (efficiency EU3).
- **FAN MOTOR:** a directly coupled type, the unit is equipped with a three-speed fan/motor assembly with internal thermal protection and startup capacitor always on, with wheel statically and dynamically balanced to minimise noise and vibration.
- **ELECTRIC BOARD:** situated on the unit, it consists of a relay power board to facilitate electrical connections and the control of fans and wheel motor with remote controls.

Main accessories/Options

Servo motor for damper motorisation
 Pressure switch for dirty filter signalling
 Antifreeze thermostat
 Hot water post-heating coil providing for the use of a 2-row coil.
 External section with 3-row water coil for heating or cooling
 Equalising damper with fins, arranged for servo control.
 1-stage electric post-heating section.
 Remote COM3 switch
 Remote PE+PC thermostat
 Single-phase speed variator

CONFIGURATION



Supply fan	33	55	110	175	220	255	320	410	
Power supply	230 / 1 / 50							400 / 3 / 50	V/ph/Hz
Air flow rate	310	650	1050	1800	2220	2600	3250	4290	m³/h
External static pressure	50	65	80	130	100	110	125	130	Pa
Sound pressure level 1,5m	40	48	47	46	50	48	50	54	dB(A)
Motor input power	92	170	147	350	350	350	550	750	W
max. input current	1	2	2,5	4,8	5,2	5,6	8,7	5,4	A
n° speed / Poles	1/4	1/4	3/4	3/4	3/4	3/4	3/4	2/4	n°
Enclosure protection / Insulation class	44 / F	44 / F	44 / F	44 / F	44 / F	55 / F	44 / F	55 / F	IP

Performance UT-REC R	33	55	110	175	220	255	320	410	
Recovery type/ Recuperator	Hentalpic rotary / Aluminium hygroscopic								

Winter

P.A.I. (Room air)	20 / 50	20 / 50	20 / 50	20 / 50	20 / 50	20 / 50	20 / 50	20 / 50	°C/%
P.A.E. (Ambient air)	-5/80	-5/80	-5/80	-5/80	-5/80	-5/80	-5/80	-5/80	°C/%
MAND (Fresh air)	16,3 / 52,5	13 / 57,6	12,7 / 58,5	13 / 57,6	13,0 / 58,3	13,1 / 57,2	12,3 / 60,5	10,8/67,4	°C/%
REC (Heating recovery capacity)	3,6	6,3	10	17,4	21,5	25,2	30,5	37,8	kW
Efficiency recovery (sensible/latent)	85/82	72/69	71/68	72/69	72/69	73/69	69/67	63/63	%

Summer

P.A.I. (Room air)	26 / 50	26 / 50	26 / 50	26 / 50	26 / 50	26 / 50	26 / 50	26 / 50	°C/%
P.A.E. (Ambient air)	32 / 50	32 / 50	32 / 50	32 / 50	32 / 50	32 / 50	32 / 50	32 / 50	°C/%
MAND (Fresh air)	26,5 / 56,0	27,2 / 53,7	27,3 / 53,4	27,2 / 53,7	27,3 / 53,4	27,2 / 53,7	27,4 / 53,1	27,8/51,9	°C/%
REC (Heating recovery capacity)	1,3	2,5	4	6,9	8,6	10	12,4	15,7	kW
Efficiency recovery (sensible/latent)	92/73	80/69	79/69	80/69	79/69	80/69	77/68	70/66	%

Accessories

BFW	33	55	110	175	220	255	320	410	
Coil type	N.A.		Cu/Al						
n° rows			3	3	3	3	3	3	n°
Coil connection			3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	"

Winter

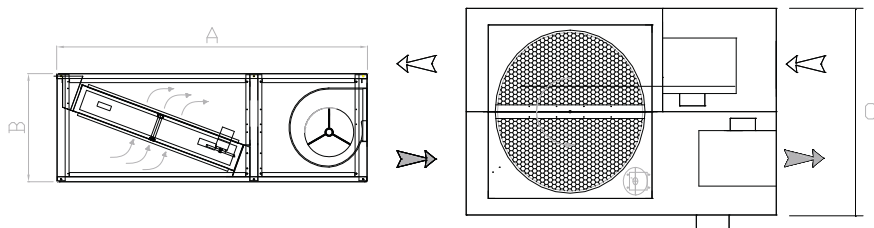
Inlet/outlet air temperature			12 / 45,2	12 / 43,2	12 / 43,8	12 / 46,5	12 / 43,9	12 / 42,4	°C
Water temperature IN/OUT			70 / 60	70 / 60	70 / 60	70 / 60	70 / 60	70 / 60	°C
Heating capacity			10,8	19,2	22,9	30,8	38,1	45,4	kW
Air pressure drop			28	41	39	27	40	53	Pa

Summer

Inlet air / UR			30 / 50	30 / 50	30 / 50	30 / 50	30 / 50	30 / 50	°C / %
Outlet air temperature			19,2	19,3	18,9	17,9	18,8	18,8	°C
Water temperature IN/OUT			7 / 12	7 / 12	7 / 12	7 / 12	7 / 12	7 / 12	°C
Cooling capacity total			4,7	9,8	12,2	15,7	20,5	22,1	kW
Cooling capacity sensible			3,3	6,5	8	10,2	13,3	14,7	kW
Air pressure drop			38	50	53	45	48	60	Pa

BE-R	33	55	110	175	220	255	320	410	
Power supply	230 - 1 - 50		400 - 3 - 50						V-ph-Hz
Power input	1,5	3	3	6	6	12	12	12	kW
n° steps	1	1	1	1	1	1	1	1	n°
Inlet air temperature	12	12	12	12	12	12	12	12	°C
Outlet air temperature	26,2	26,4	21,6	29,5	20,6	26,4	22,4	20,4	°C

Dimensions



Mod.	33	55	110	175	220	255	320	400	
A	1075	1075	1205	1400	1540	1720	1720	1720	mm
B	425	425	460	530	560	600	600	600	mm
C	750	750	860	860	960	1230	1230	1230	mm
G1 BW			3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	"
Connection BFW			3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	"

> UT REC DP

DOUBLE PANEL HEAT RECOVERY UNITS



Units Series

Unit type

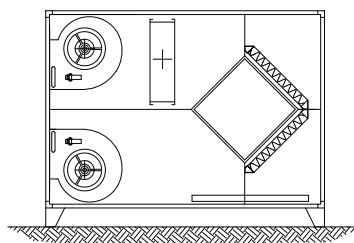
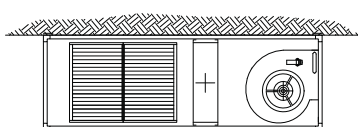
UT-REC DP H **Horizontal unit**
UT-REC DP V **vertical unit**

Unit specifications

■ **SUPPORT STRUCTURE:** in strong extruded aluminium profiles and double panel in galvanised steel sheet inside and prepainted galvanised sheet steel outside, with thermal insulation and soundproofing in hot-injected polyurethane foam, thick. 23 mm.

Layout

Unit are available in horizontal and vertical layout



- **HEAT RECUPERATOR:** static-type in aluminium enabling recovery of the heat otherwise lost. Efficiency is guaranteed by the quality of the insulation.
- **CONDENSATE TRAY:** in sheet steel, it is placed under the recuperator for the condensate in summer mode.
- **AIR FILTER:** made with pleated filter cells, class G4 (ponderal eff. 90.1%), metal frame and electrowelded screen, easily removed from side.
- **FAN MOTOR:** a directly coupled type, three-speed with internal thermal protection and startup capacitor always on, with wheel statically and dynamically balanced to minimise noise and vibration.

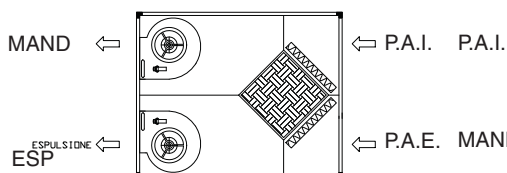
Main accessories/Options

Hot water post-heating coil providing for the use of a 2-row coil.
1-stage electric post-heating section.
Safety microswitch
Speed selector CV3
Protection roof

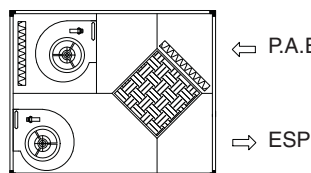
Configuration

Depending on the configuration of the plant duct are available six possible configuration of recovery.

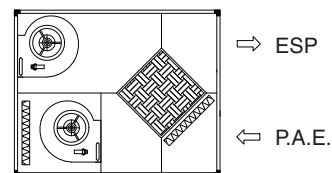
CONFIGURATION 01



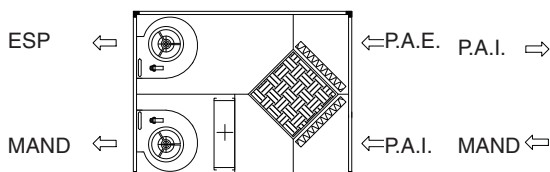
CONFIGURATION 02



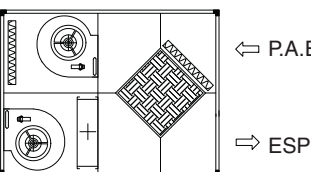
CONFIGURATION 03



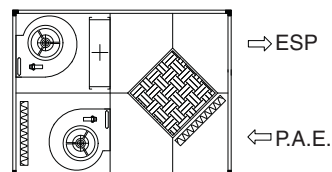
CONFIGURATION 04



CONFIGURATION 05



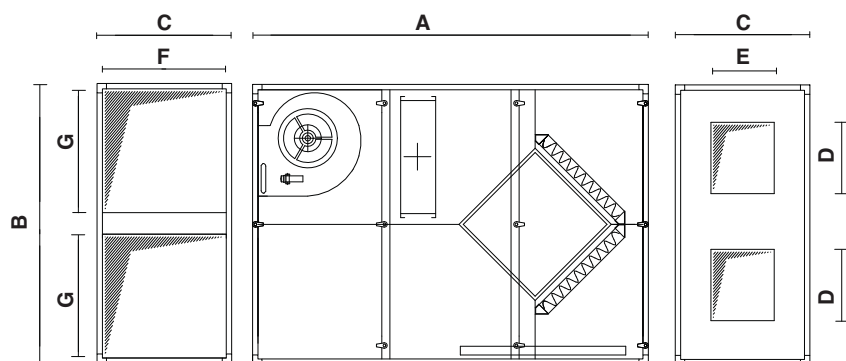
CONFIGURATION 06



Note: Always indicate layout and configuration when ordering

Supply fan	005	01	02	03	04	
Air flow rate	500	1.000	2.000	3.000	4.000	m³/h
External static pressure	80	122	105	153	130	Pa
Power input	45	184	350	550	736	W
n° speed	3	3	3	3	3	n°
Return fan	005	01	02	03	04	
Air flow rate	500	1.000	2.000	3.000	4.000	m³/h
External static pressure	77	119	93	140	120	Pa
Power input	45	184	350	550	736	W
n° speed	3	3	3	3	3	n°
Performance UT REC DP	005	01	02	03	04	
Recovery type	cross flow and static type					
Recuperator	High efficiency aluminium plate exchanger					
P.A.I. (Room air)	22 / 50	22 / 50	22 / 50	22 / 50	22 / 50	°C/%
ESP (Exhaust air)	11,0 / 89	9,8 / 93	10,5 / 91	9,7 / 93	11,0 / 87	°C/%
P.A.E. (Ambient air)	-5 / 80	-5 / 80	-5 / 80	-5 / 80	-5 / 80	°C/%
MAND (Fresh air)	8,3 / 28	10,2 / 25	9,1 / 27	10,4 / 25	8,7 / 28	°C/%
REC (Heating recovery capacity)	2,2	5,1	9,5	15,5	18,4	kW
Efficiency recovery (sensible/latent)	49	57	52	57	51	%
Accessories BW	005	01	02	03	04	
Coil type	Cu/Al					
n° rows	2	2	2	2	2	n°
Coil connection	1/2 "	3/4 "	3/4 "	3/4 "	1"	ø
Inlet air / UR	8,4 / 28	10,0 / 25	9,1 / 27	10,0 / 25	8,7 / 28	°C/%
Outlet air / UR	27,5 / 8	31,9 / 11	25,4 / 13	25,6 / 13	24,9 / 15	°C/%
Water temperature IN/OUT	70 / 60	70 / 60	70 / 60	70 / 60	70 / 60	°C
Heating capacity	3,2	7,4	11,4	15,8	21,8	kW
Air pressure drop	10	17	45	53	55	Pa
Accessories BE	005	01	02	03	04	
Power supply	400 - 3 - 50					
Power input	2,5	5	10	15	15	kW
n° steps	1	1	2	2	2	n°

Dimensions



Mod.	UM	005	01	02	03	04
A	mm	1290	1310	1310	1660	1840
B	mm	1040	1040	1040	1250	1400
C	mm	400	500	500	600	650
D	mm	135	205	265	295	395
E	mm	225	235	235	265	341
F	mm	320	460	460	560	570
G	mm	380	380	380	470	555

> UT REC DP F

DOUBLE PANEL HEAT RECOVERY UNIT
WITH 4 ROWS EXCHANGER



Units Series

Unit type

UT-REC DP F Horizontal unit

Unit specifications

- **SUPPORT STRUCTURE:** in strong extruded aluminium profiles and double panel in galvanised steel sheet inside and prepainted galvanised steel sheet outside, with thermal insulation and soundproofing in hot-injected polyurethane foam, thick. 23 mm.
- **HEAT RECUPERATOR:** static-type in aluminium enabling recovery of the heat otherwise lost. Efficiency is guaranteed by the quality of the insulation.

- **CONDENSATE TRAY:** in steel sheet, it is placed under the recuperator for the condensate in summer mode.
- **AIR FILTER:** made with pleated filter cells, class G4 (ponderal eff. 90.1%), metal frame and electrowelded screen, easily removed from side.
- **FAN MOTOR:** a directly coupled type, three-speed with internal thermal protection and startup capacitor always on, with wheel statically and dynamically balanced to minimise noise and vibration.
- **HEAT EXCHANGER:** made with copper pipes arranged in staggered rows to increase heat exchange and aluminium fins locked by mechanical expansion of the pipes, with 4 rows for air conditioning and heating.

Main accessories/Options

Single-phase speed variator

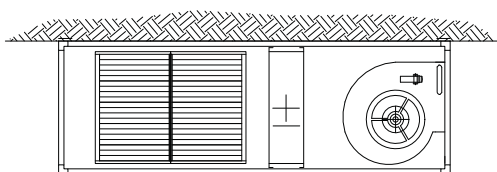
Safety microswitch

Speed selector CV3

Protection roof

Layout

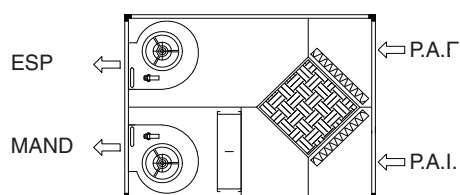
Unit are available in horizontal layout



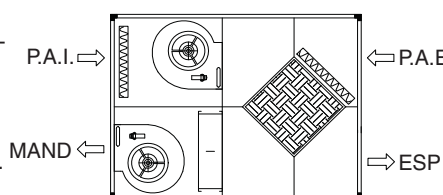
Configuration

Depending on the configuration of the plant duct are available three possible configuration of recovery.

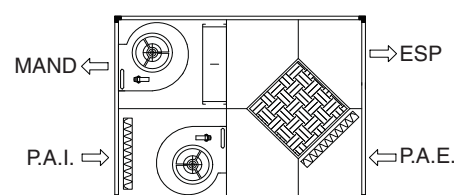
CONFIGURATION 01



CONFIGURATION 02

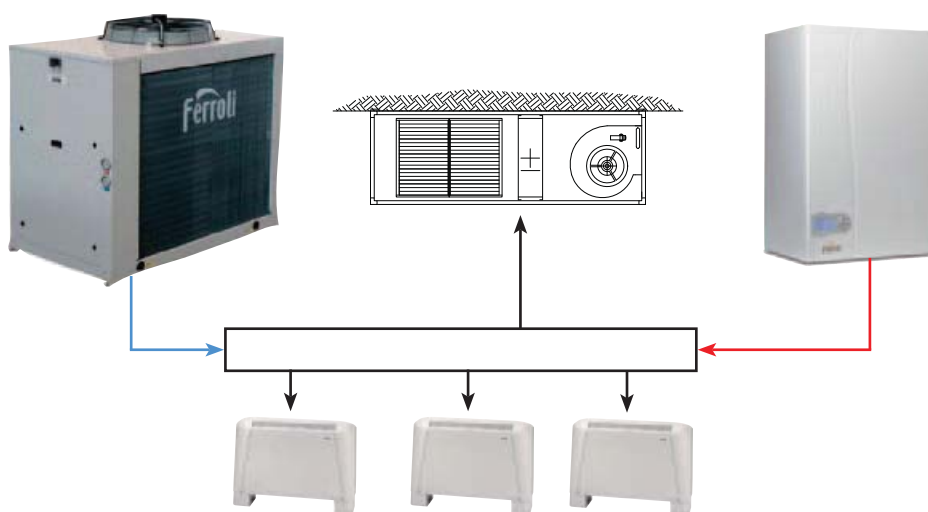


CONFIGURATION 03



Note: Always indicate configuration when ordering

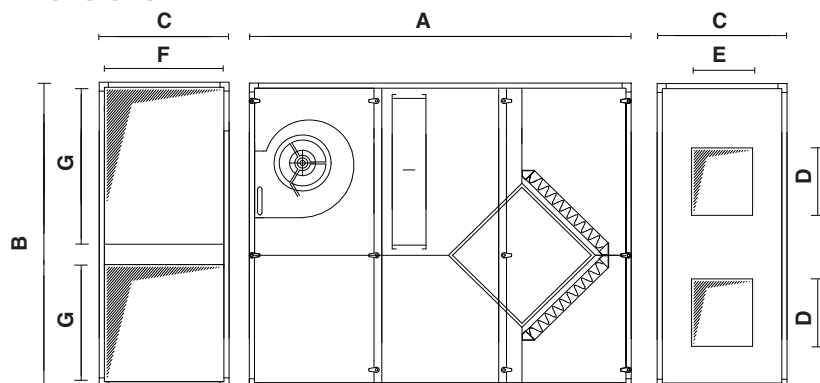
Supply fan	005	01	02	03	04	
Air flow rate	500	1.000	2.000	3.000	4.000	m³/h
External static pressure	55	155	75	95	65	Pa
Power input	45	350	550	550	1.100	W
n° speed	3	3	3	3	1	n°
Return fan	005	01	02	03	04	
Air flow rate	500	1.000	2.000	3.000	4.000	m³/h
External static pressure	90	116	125	142	104	Pa
Power input	45	184	550	550	1.100	W
n° speed	3	3	3	3	1	n°
Performance UT REC DP F	005	01	02	03	04	
Recovery type	cross flow and static type					
Recuperator	High efficiency aluminium plate exchanger					
P.A.I. (Room air)	27 / 48	28 / 50	28 / 50	28 / 50	28 / 50	°C/%
ESP (Exhaust air)	29,4 / 45	29,9 / 44	29,8 / 44	29,9 / 44	30 / 44	°C/%
P.A.E. (Ambient air)	32 / 50	32 / 50	32 / 50	32 / 50	32 / 50	°C/%
MAND (Fresh air)	30 / 57	30 / 55	30 / 55	30 / 55	30 / 56	°C/%
REC (Heating recovery capacity)	0,3	0,7	1,2	2	2,7	kW
Efficiency recovery (sensible/latent)	43	49	45	49	50	%
Performance 4R coil	005	01	02	03	04	
Coil type	Cu/Al					
n° rows	4	4	4	4	4	n°
Coil connection	1/2 "	3/4"	3/4"	1"	1"	ø
Inlet air / UR	30 / 57	30 / 55	30 / 55	30 / 55	30 / 56	°C/%
Outlet air / UR	16,4 / 97	18,8 / 94	19,1 / 92	18,9 / 92	18,5 / 93	°C/%
Water temperature IN/OUT	07/12	07/12	07/12	07/12	07/12	°C
Cooling capacity	4	5,5	11,4	17,1	24,8	kW



NB: For correct operation of the unit in heating, maximum delivery water temperatures up to $T=50^{\circ}\text{C}$ are acceptable. Therefore connection to a condensing-type boiler, as indicated in the diagram opposite, is advisable. If the unit is connected to a conventional boiler, the use of a 3-way valve with adjustment on the temperature of delivery to the system is indispensable.

NB: The unit is designed to integrate the primary air and therefore guarantee the air change in an existing system. It only guarantees cooling, and not conditioning (see example above).

Dimensions



Mod.	UM	005	01	02	03	04
A	mm	1290	1540	1540	1790	2040
B	mm	1040	1040	1400	1790	2040
C	mm	400	500	500	600	650
D	mm	135	205	265	295	395
E	mm	225	235	235	265	341
F	mm	320	420	420	520	570
G	mm	380	380	380	640	640