> UT REC DP F

DOUBLE PANEL HEAT RECOVERY UNIT WITH 4 ROWS EXCHANGER

Units Series

Unit type
UT-REC DP F Horizontal unit

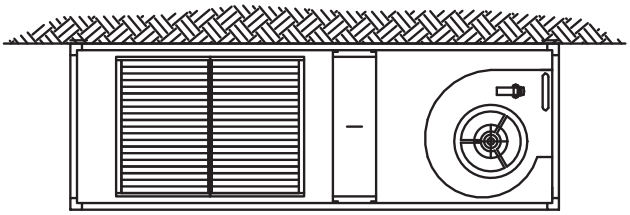
Unit specifications

- 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

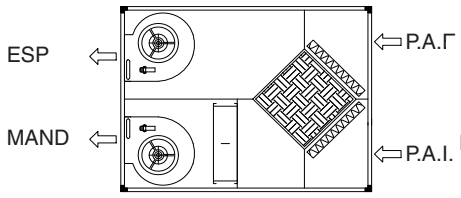
Layout
Unit are available in horizontal layout



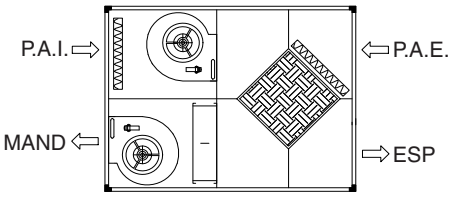
Configuration

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

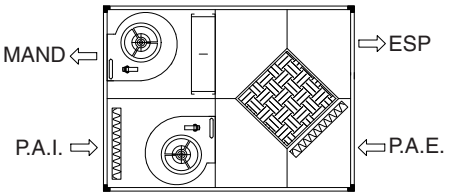
CONFIGURATION 01



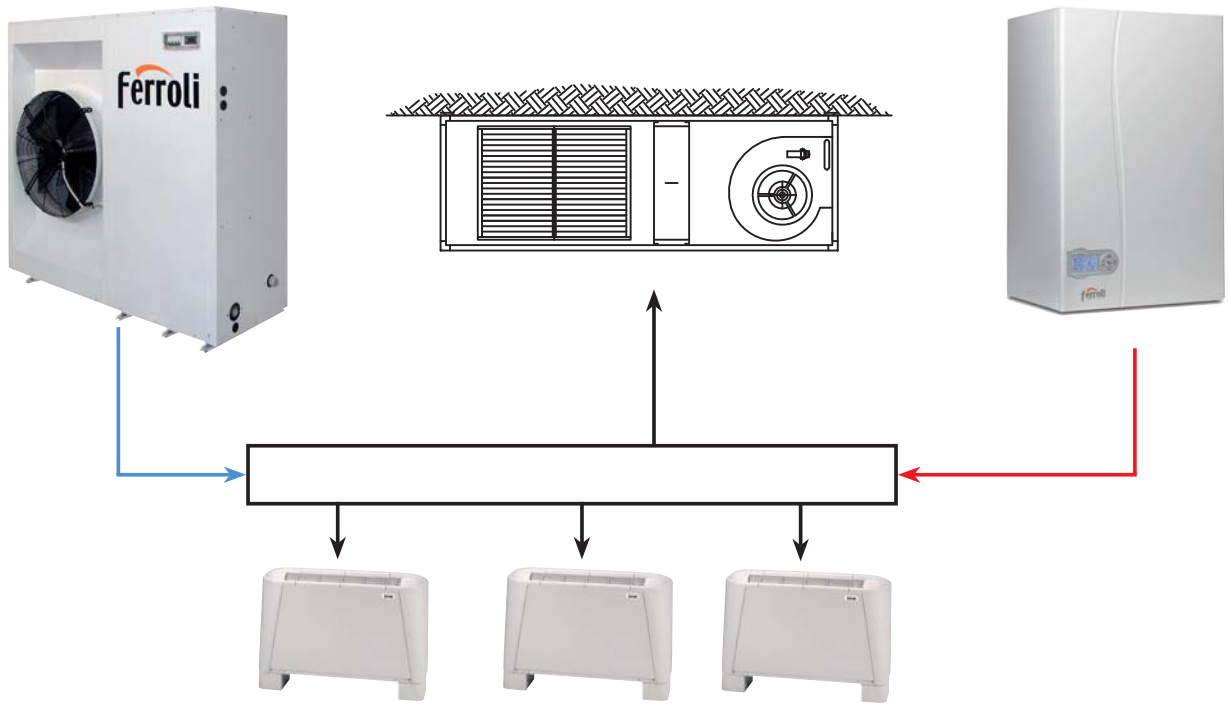
CONFIGURATION 02



CONFIGURATION 03



Note: Always indicate configuration when ordering



NB: For correct operation of the unit in heating, maximum delivery water temperatures up to T=50°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).

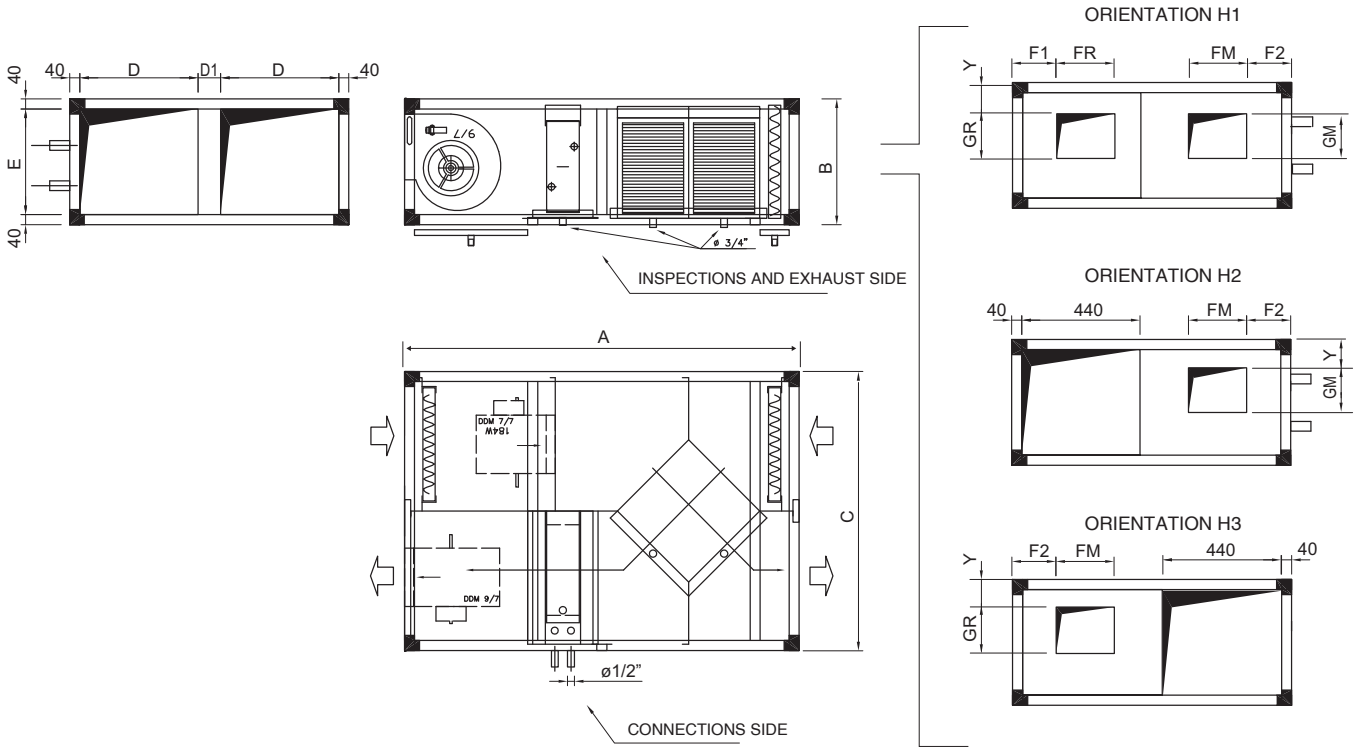
Technical data

Supply fan	005	01	02	03	04	
Air flow	500	1.000	2.000	3.000	4.000	m³/h
Static pressure	92	143	101	117	72	Pa
Absorption max. total	0,72	3,1	5,4	5,7	3,3	A
Power available to the axis	60	350	550	550	750	W
number of speeds	4	3	3	3	2	n°
Poli	2	4	4	4	4	n°
Degree of protection	32	55	55	10	55	IP
Class of insulation	B	F	F	F	F	
Sound pressure level at the mouth of the outlet fan (1 meter away) *	59	63	66	67	69	dB(A)
Sound pressure level on the suction fan (1 meter away) *	58	62	65	66	68	dB(A)
Pressure level radiated sound pressure level (at 1 meter away from carpentry) *	46	46	52	56	57	dB(A)
Supply	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	V/ph/Hz
Return fan	**005**	**01**	**02**	**03**	**04**	
Air flow	500	1.000	2.000	3.000	4.000	m³/h
Static pressure	157	130	115	121	152	Pa
Absorption max. total	0,72	1,7	3,1	7,1	3,3	A
Power available to the axis	60	184	350	550	750	W
number of speeds	4	3	3	3	2	n°
Poli	2	4	4	4	4	n°
Degree of protection	32	55	55	10	55	IP
Class of insulation	B	F	F	F	F	
Sound pressure level at the mouth of the outlet fan (1 meter away) *	59	62	64	65	69	dB(A)
Sound pressure level on the suction fan (1 meter away) *	58	61	63	64	68	dB(A)
Pressure level radiated sound pressure level (at 1 meter away from carpentry) *	46	48	51	54	57	dB(A)
Supply	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	V/ph/Hz
Performance recovery	**005**	**01**	**02**	**03**	**04**	
Recovery type / Recuperator	cross flow and static type / High efficiency aluminium plate exchanger					
Winter conditions						
P.A.I. (Room air)	22/50	22/50	22/50	22/50	22/50	°C/%
ESP (Exhaust air)	9,5/94,8	10,6/91,4	11,0/90,3	10,3/92,8	10,4/92,4	°C/%
P.A.E. (Ambient air)	-5,0/80	-5,0/80	-5,0/80	-5,0/80	-5,0/80	°C/%
MAND (Fresh air)	10,7/24,9	8,8/28,1	8,3/29,1	9,3/27,2	9,1/27,6	°C/%
REC (Heating recovery capacity)	2,62	4,63	8,92	14,4	18,9	kW
Efficiency recovery (sensible/latent)	58	51,2	49,3	53,1	52,3	%
Summer conditions						
P.A.I. (Room air)	28/50	28/50	28/50	28/50	28/50	°C/%
ESP (Exhaust air)	30,1/44,3	29,8/44,9	29,8/45,1	29,9/44,6	29,9/44,7	°C/%
P.A.E. (Ambient air)	32,0/50	32,0/50	32,0/50	32,0/50	32,0/50	°C/%
MAND (Fresh air)	29,9/56,3	30,2/55,5	30,2/55,3	30,1/55,9	30,1/55,8	°C/%
REC (Heating recovery capacity)	0,34	0,61	1,18	1,95	2,56	kW
Efficiency recovery (sensible/latent)	51,5	45,5	43,9	48,5	47,8	%
Exchanger performance	**005**	**01**	**02**	**03**	**04**	
Heat exchanger type	copper / aluminum					
Number of ranks	3	3	3	3	3	3
Coil	1/2"	3/4"	1"	1 1/4"	1 1/4"	ø
Regime summer water 7/12						
Inlet air temperature / humidity	29,9/56	30,2/55	30,2/55	30,1/56	30,1/55	°C/%
Leaving air temperature / humidity	17/100	17,1/100	18,3/97	17,6/100	17,6/98	°C/%
Water temperature in / out	7/12	7/12	7/12	7/12	7/12	°C
Cooling capacity	3,5	6,8	11,8	19,3	25,6	kW
Pressure drop on the air side	65	95	98	113	78	Pa
Pressure drop on the water side	6,7	7,7	10,7	15,9	15	kPa
Water regime winter 45/40						
Inlet air temperature / humidity	10,7/25	8,8/28	8,3/29	9,3/27	9,1/28	°C
Leaving air temperature / humidity	36,9/5	36,9/5	34,2/6	36,3/5	35,8/5	°C
Water temperature in / out	45/40	45/40	45/40	45/40	45/40	°C
Thermal power	4,4	9,5	17,5	27,4	36,1	kW
Pressure drop on the air side	35	53	58	65	43	Pa
Pressure drop on the water side	9,3	11,5	19,1	26,4	25	kPa
Water regime winter 70/60						
Inlet air temperature / humidity	10,7/25	8,8/28	8,3/29	9,3/27	9,1/28	°C
Leaving air temperature / humidity	55,8/2	55,9/2	51,4/2	54,9/2	54,0/2	°C
Water temperature in / out	70/60	70/60	70/60	70/60	70/60	°C
Thermal power	7,6	15,9	29,2	46,4	60,8	kW
Pressure drop on the air side	35	53	58	65	43	Pa
Pressure drop on the water side	6,8	8,5	13,1	18,5	17,5	kPa

* : Theoretical values estimated using a tolerance of 2 [dBA]

DIMENSIONS

(drawing indicative of the series)



Mod.	005	01	02	03	04	
A	1230	1570	1700	1850	1920	mm
B	400	500	500	550	650	mm
C	1040	1110	1400	1790	1990	mm
D	440	470	485	650	650	mm
D1	80	90	350	410	610	mm
E	320	420	420	470	570	mm
FR	160	232	232	298	330	mm
FM	160	232	298	331	330	mm
F1	200	175	150	240	190	mm
F2	200	175	285	400	510	mm
GR	97	208	262	262	290	mm
GM	97	262	262	290	290	mm
G1 (1)	1/2"	3/4"	1"	1 1/4"	1 1/4"	Ø gas
Y	86	60	60	60	60	mm
weight	101	152	191	264	316	kg

(1) Only if there is a water coil reheat BW