

# > UT REC micro E

## HEAT RECOVERY UNITS



### Unit specification

- Horizontal installation
- Galvanized steel self-supporting panels, internally and externally insulated.
- Synthetic cleanable media, both on fresh air and return air intake.
- Counterflow air-to-air heat recovery device, made of plane sheets of special paper with special sealing to keep airflows separate and only permeable to water vapor. Total heat exchange with very high temperature and enthalpy efficiency.
- Motorised heat recovery by-pass device automatically controlled by unit control to use fresh air free-cooling when convenient.
- Low consumption, high efficiency e low noise direct drivem fans with 3-speed EC motors.
- Duct connection by circular plastic collars.
- Built-in electric box equipped with PCB to control fan and by-pass functions.

### Accessories

- Electric heater - SBE
- Control panel - CVE
- Unit control panel - PCO
- Remote contro - TLCM
- Duct circular sound attenuator - SLC

### Technical data

MODEL		25	35	50	80	100	120	UM
Nominal airflow rate	max vel.	260	330	500	750	950	1180	m³/h
	med vel.	260	330	500	660	740	1080	m³/h
	min vel.	170	250	360	560	600	980	m³/h
Total static pressure - ESP <sup>(1)</sup>	max vel.	70	70	70	70	70	80	Pa
	med vel.	70	70	70	50	40	70	Pa
	min vel.	30	40	35	35	25	55	Pa
Sound level pressure <sup>(4)</sup>	max vel.	27	31	33	38	39	42	dB (A)
	med vel.	26	29	31	36	37	37	dB (A)
	min vel.	22	25	27	32	33	32	dB (A)
Electrical power supply STD fans		230/1/50						V/ph/Hz
Nominal current load		1,1	1,4	2,0	2,8	3,0	3,7	A
Max power input		90	120	135	300	310	490	W
Internal specific fan power		1043	1032	1178	990	1238	1570	W/m³/s
Temperature efficiency exchanger <sup>(3)</sup>		75,4 (75,5*)	77,6 (77,6*)	76,5 (76,5*)	73 (73*)	73,5 (73,5*)	71 (71*)	%
Entalpy efficiency exchanger <sup>(3)</sup>		61 (61*)	63,7 (64*)	62,3 (64*)	59 (61*)	59,5 (61*)	56,2 (56,2*)	%
Heating recovery capacity <sup>(3)</sup>		2,2 (2,4*)	3,1 (3,4*)	4,3 (4,8*)	6,5 (7,3*)	8,2 (9,0*)	9,1 (10,8*)	kW
Temperature efficiency exchanger <sup>(4)</sup>		62	63	62,5	59	59,5	57	%
Entalpy efficiency exchanger <sup>(4)</sup>		60	61	60	57	57,5	54	%
Heating recovery capacity <sup>(4)</sup>		0,8	1,2	1,7	2,5	3,2	3,7	kW

#### NOTA

(1) Figures refer to the air flow and maximum pressure, won the exchanger and the filters

(2) reported 1.5 meters from inlet in free field

(3) in winter conditions (outside air -5 ° C 80% RH, ambient air 20 ° C and 50% RH)

(4) in summer mode (external air 32 ° C and 50% RH, ambient air 26 ° C and 50% RH)

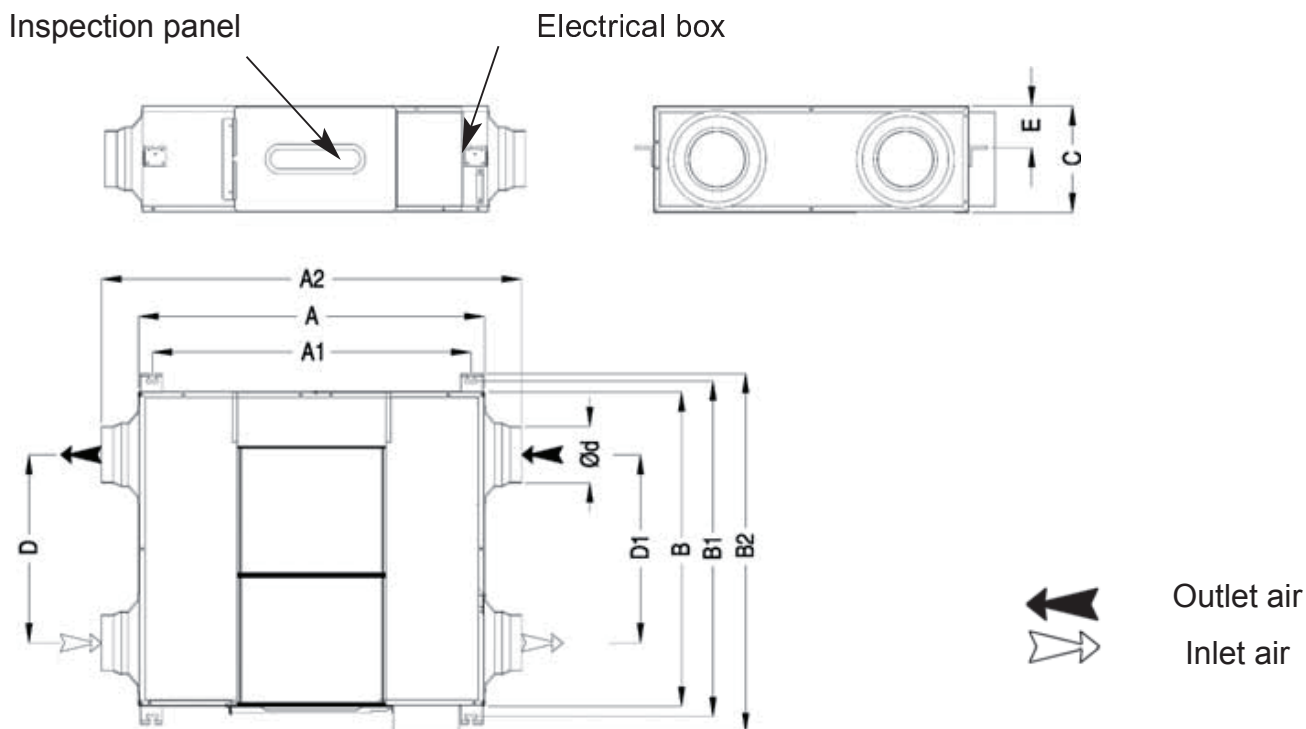
\* - Reported values (external air -10 ° C 80% RH)

#### NOTA

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

**DIMENSIONS, WEIGHT**

(drawing indicative of the series)



Model	Dimension [mm]											Weigh Net / gross [kg]	Packaging [mm]
	A	A1	A2	B	B1	B2	C	D	D1	Ø1	E		
25	885	815	1074	666	720	779	272	342	342	150	110	27/32	1125x830x345
35	885	815	1074	806	860	919	272	482	482	150	110	32/38	1125x985x345
50	970	910	1130	997	1053	1112	312	728	728	200	38	42/49	1190x1150x386
80	1322	1252	1486	882	936	994	390	431	431	250	169	63/70	1545x1030x470
100	1322	1252	1486	1132	1186	1244	390	681	681	250	169	76/86	1545x1280x470
120	1322	1252	1486	1132	1186	1244	390	681	681	250	169	76/86	1545x1280x470

# > UT REC +

## HEAT RECOVERY UNITS



### Units Series

#### Version

UT REC+ with recuperator in aluminium and standard fans  
 UT REC E+ with recuperator in aluminium and EC fans

### Unit specification

- Horizontal installation
- Structure and panels made by Aluzink sheet metal thermal and acoustic insulated
- F7 efficiency class in the renewal flow and M5 efficiency class in the ejection flow.
- Air-air recuperator countercurrent-flow with removable aluminium plates, with thermal by-pass facility
- Centrifugal fans directly coupled to electric motor (multiple speeds for UT REC +, brushless EC type UT REC E+)
- Electrical box on board

### Accessories

- Bypass kit - KBP
- Anti-freeze thermostat - TA
- Electric post-heating section - BER
- Post-heating internal water coil - BCR
- Water coil section - SBFR
- High efficiency filters on exhaust air - F7CF
- Regulation damper - SR
- 3 dampers section for mixing/recirculating - RMS
- Damper actuators - SMISMR
- N. 4 connections for circular ducts kit - SPC
- Duct silencers - SSC
- Signal lamps kit - KLS
- Pressure switch for dirty filter signal - PRF
- Kit for external installation - EXT
- Kit weather hood for external installation - CPA
- Electronic speed controller (only for mod. 40) - VVM
- Unit speed control panel (for mod. 75-500) - COM 3
- Unit control panel - PCU-PCUE

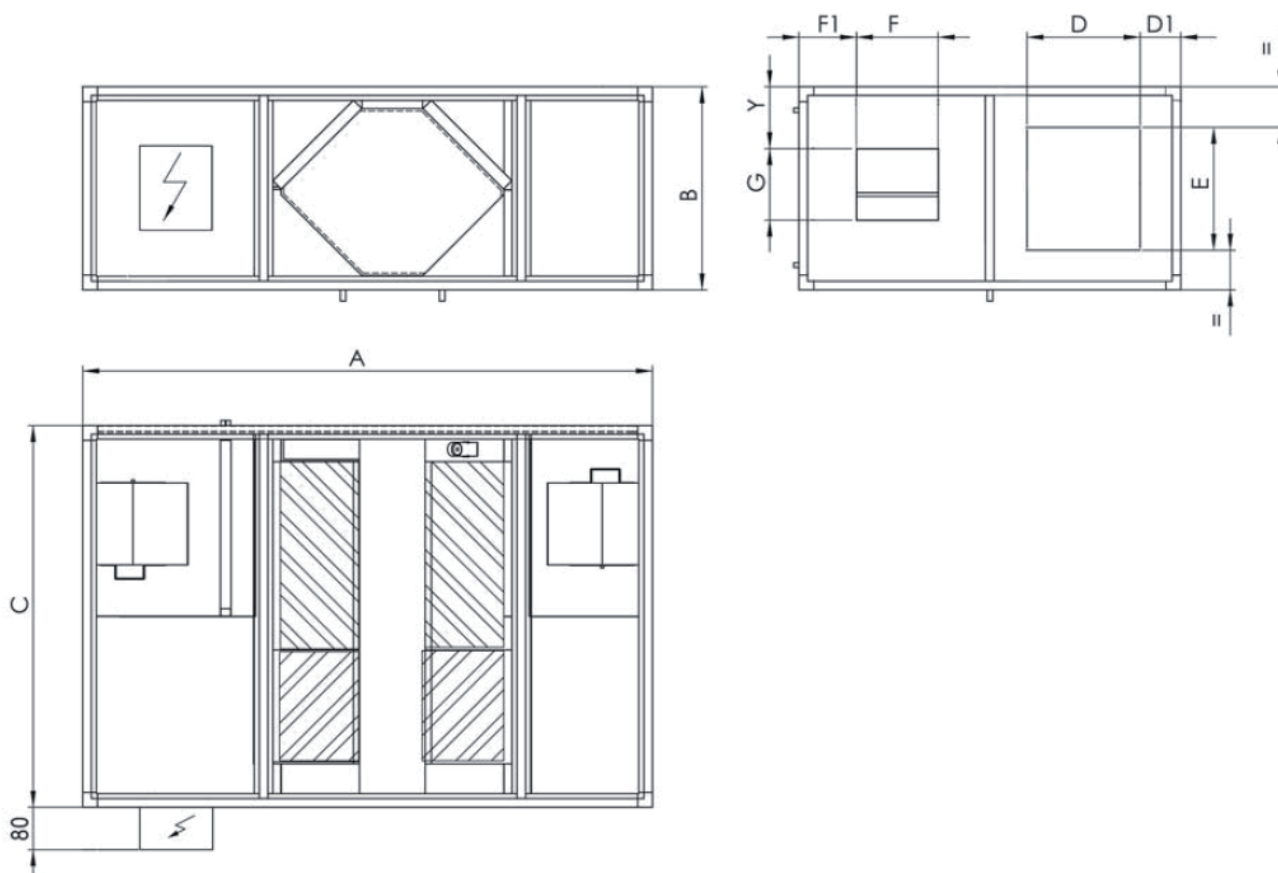
### Technical data

MODEL - UT-REC +	40	75	100	150	200	320	400	500	UM
Airflow rate	400	750	1000	1600	2050	3150	3700	4700	m <sup>3</sup> /h
Total static pressure - ESP <sup>(1)</sup>	100	100	100	100	100	100	100	100	Pa
Electrical power supply STD fans	230/1/50								400/3/50
Nominal current load <sup>(2)</sup>	1,2	1,6	2,7	3,4	4,3	8,3	9,5	6,0	V/ph/Hz
Full load amperage <sup>(3)</sup>	1,5	1,8	3,7	4,0	5,1	9,4	13	6,6	A
Max power input STD fans <sup>(4)</sup>	1544	1021	1349	1333	1100	1725	1703	1876	W/(m <sup>3</sup> s)
N° of speed <sup>(5)</sup> or regulation type <sup>(6)</sup>	VVM	3	3	3	3	3	3	INV <sup>(11)</sup>	-
Sound level pressure <sup>(7)</sup>	59	60	63	63	63	69	69	72	dB (A)
MODEL - UT-REC E+	40	75	100	150	200	320	400	500	UM
Airflow rate	400	750	1000	1600	2050	3150	3700	4700	m <sup>3</sup> /h
Total static pressure - ESP <sup>(1)</sup>	≤ 250	≤ 375	≤ 570	≤ 535	≤ 535	≤ 270	≤ 660	≤ 335	Pa
Electrical power supply EC fans	230/1/50								V/ph/Hz
Nominal current load EC <sup>(2)</sup>	0,5	1,5	2	3,1	3,2	6,5	7,0	10,8	A
Full load amperage EC <sup>(3)</sup>	2,0	3,2	8,2	8,2	9	9	19	19	A
Max power input fans <sup>(4)</sup>	1011	900	1118	1233	832	880	989	1550	W/(m <sup>3</sup> s)
N° of speed <sup>(5)</sup> or regulation type <sup>(6)</sup>	0÷10V	0÷10V	0÷10V	0÷10V	0÷10V	0÷10V	0÷10V	0÷10V	-
Sound level pressure <sup>(7)</sup>	60	61	62	64	62	68	68	69	dB (A)
EXCHANGER	40	75	100	150	200	320	400	500	UM
Winter efficiency <sup>(8)</sup>	81,8	86,8	85,3	81,8	82,3	80,8	81,0	81,1	%
Heating recovery capacity <sup>(8)</sup>	2,7	5,3	6,9	10,7	13,9	20,7	24,4	31,0	kW
Supply air temperature <sup>(8)</sup>	15,5	16,7	16,3	15,4	15,6	15,2	15,2	15,3	°C
Summer efficiency <sup>(9)</sup>	76,6	80,0	77,9	75,4	76,5	75,5	76,3	76,2	%
Heating recovery capacity <sup>(9)</sup>	0,6	1,3	1,7	2,6	3,3	5,0	6,0	7,6	kW
Supply air temperature <sup>(9)</sup>	27,4	27,2	27,3	27,4	27,4	27,5	27,4	27,4	°C
Dry efficiency <sup>(10)</sup>	74,8	81,0	78,9	74,7	76,3	73,6	74,8	75,2	%

- NOTA**
- (1) referred to the nominal air flow and won the heat recovery and standard filters F7
  - (2) total value referred to two fans with nominal air flow and external static pressure of 100 Pa.
  - (3) Maximum total value referred to two fans.
  - (4) Referred to the nominal air flow rate and external static pressure of 100 Pa.
  - (5) Selectionable with PCU / COM3. The model 40 must be regulated by VVM control and the mod. 500 must be regulated by inverter.
  - (6) Adjustable with electronic speed controller PCUE
  - (7) sound pressure level: data referred to 1,0 meters from inlet in free fields. The actual operation noise level generally differs from the values shown in the table, depending on the operation conditionings, on the reflected noise and on the surrounding noise.
  - (8) Nominal winter conditions:  
outside air: -5°C DB, RH 80% - ambient air: 20°C DB, RH 50%
  - (9) Nominal summer conditions:  
outside air: 32°C DB, RH 50% - ambient air: 26°C DB, RH 50%
  - (10) Nominal dry conditions, misured by EN308 with mass flow balanced:  
outside air: 5°C DB - ambient air: 25°C
  - (11) Inverter FUJI mod. FRN4AR1 L-4E

**DIMENSIONS, WEIGHT**

(drawing indicative of the series)



Model	A [mm]	B [mm]	C [mm]	D [mm]	D1 [mm]	E [mm]	F [mm]	F1 [mm]	G [mm]	G1 <sup>(1)</sup> Ø gas	Y [mm]	Weight [kg]
40	1480	380	800	300	70	210	215	90	70	3/4"	115	90
75	1940	480	990	300	100	310	230	140	210	3/4"	140	140
100	1940	480	990	300	100	310	230	140	260	3/4"	140	150
150	2200	550	1000	300	100	410	230	145	260	3/4"	90	170
200	2200	550	1400	500	100	410	330	215	260	3/4"	90	200
320	2500	680	1290	400	130	510	330	170	290	3/4"	155	210
400	2500	680	1400	500	100	510	330	195	290	3/4"	155	240
500	2500	680	1700	500	50	510	330	270	290	1"	155	270

(1) Connection for optional post-heating water coil BCR

# > UT REC C+

## HEAT RECOVERY UNITS



### Units Series

#### Version

UT REC C+ with paper pack recuperator and standard fans

UT REC CE+ with paper pack recuperator and EC fans

### Unit specification

- Horizontal installation
- Structure and panels made by Aluzink sheet metal thermal and acoustic insulated
- F7 efficiency class in the renewal flow and M5 efficiency class in the ejection flow.
- Air-air recuperator countercurrent-flow (removable), with thermal by-pass facility
- Centrifugal fans directly coupled to electric motor (multiple speeds for UT REC C+, brushless EC type UT REC CE+)
- Electrical box on board

### Accessories

- Bypass kit - KBP
- Anti-freeze thermostat - TA
- Electric post-heating section - BER
- Post-heating internal water coil - BCR
- Water coil section - SBFR
- High efficiency filters on exhaust air - F7CF
- Regulation damper - SR
- 3 dampers section for mixing/recirculating - RMS
- Damper actuators - SMISMR
- N. 4 connections for circular ducts kit - SPC
- Duct silencers - SSC
- Signal lamps kit - KLS
- Pressure switch for dirty filter signal - PRF
- Kit for external installation - EXT
- Kit weather hood for external installation - CPA
- Electronic speed controller (only for mod. 40) - VVM
- Unit speed control panel (for mod. 75-500) - COM 3
- Unit control panel - PCU-PCUE

### Technical data

MODEL - UT-REC C+	40	75	100	150	200	320	400	UM
Airflow rate	400	660	1000	1550	2000	3000	4050	m <sup>3</sup> /h
Total static pressure <sup>(1)</sup>	100	100	100	100	100	100	100	Pa
Electrical power supply standard fans	230/1/50						400/3/50	V/ph/Hz
Nominal current load standard fans <sup>(2)</sup>	1,2	1,5	2,7	3,4	4,1	8,7	5,5	A
Full load amperage standard fans <sup>(3)</sup>	1,6	1,8	3,5	3,8	4,8	9,7	5,9	A
Max power input STD fans <sup>(4)</sup>	1133	1114	1500	1282	1122	1774	1842	W/(m <sup>3</sup> s)
N° of speed <sup>(5)</sup> or regulation type <sup>(6)</sup>	VVM	3	3	3	3	3	INV <sup>(11)</sup>	-
Sound level pressure <sup>(7)</sup>	59	60	63	63	63	69	72	dB (A)
MODEL - UT-REC CE+	40	75	100	150	200	320	400	UM
Airflow rate	400	660	1000	1550	2000	3000	4050	m <sup>3</sup> /h
Total static pressure <sup>(1)</sup>	≤ 285	≤ 370	≤ 500	≤ 500	≤ 510	≤ 250	≤ 660	Pa
Electrical power supply EC fans	230/1/50						400/3/50	V/ph/Hz
Nominal current load EC <sup>(2)</sup>	0,9	1,3	2	2,8	3,0	6,5	9,3	A
Full load amperage EC <sup>(3)</sup>	2,1	2,6	8,2	8,2	8,5	16	19	A
Max power input fans <sup>(4)</sup>	793	975	1047	1042	860	1258	1250	W/(m <sup>3</sup> s)
N° of speed <sup>(5)</sup> or regulation type <sup>(6)</sup>	0÷10V	0÷10V	0÷10V	0÷10V	0÷10V	0÷10V	0÷10V	-
Sound level pressure <sup>(7)</sup>	60	61	62	64	62	68	69	dB (A)
EXCHANGER	40	75	100	150	200	320	400	UM
Winter efficiency <sup>(8)</sup>	75,1 / 60,0	69,1 / 53,1	67,2 / 51,2	67,5 / 51,5	68,7 / 57,0	69,2 / 57,6	67,1 / 51,1	%
Heating recovery capacity <sup>(9)</sup>	3,3	4,8	7,0	11,0	15,7	23,8	28,5	kW
Temperature / R.H. <sup>(8)</sup>	13,8 / 37,0	12,3 / 36,0	11,9 / 36,0	12,0 / 36,0	12,2 / 41,1	12,3 / 44,0	11,8 / 36,0	°C / %
Summer efficiency <sup>(9)</sup>	61,1 / 56,7	55,1 / 50,3	53,2 / 48,5	54,0 / 47,0	55,7 / 53,0	56,2 / 53,3	53,1 / 48,5	%
Cooling recovery capacity <sup>(9)</sup>	1,3	1,9	2,8	4,3	6,0	9,1	11,1	kW
Temperature / R.H. <sup>(9)</sup>	28,3 / 51,9	28,7 / 50,4	28,8 / 51,5	28,8 / 51,0	28,7 / 50,5	28,6 / 50,5	28,8 / 51,0	°C / %
Dry efficiency <sup>(10)</sup>	75	69	67,2	67,5	68,7	69	67	%

#### NOTA

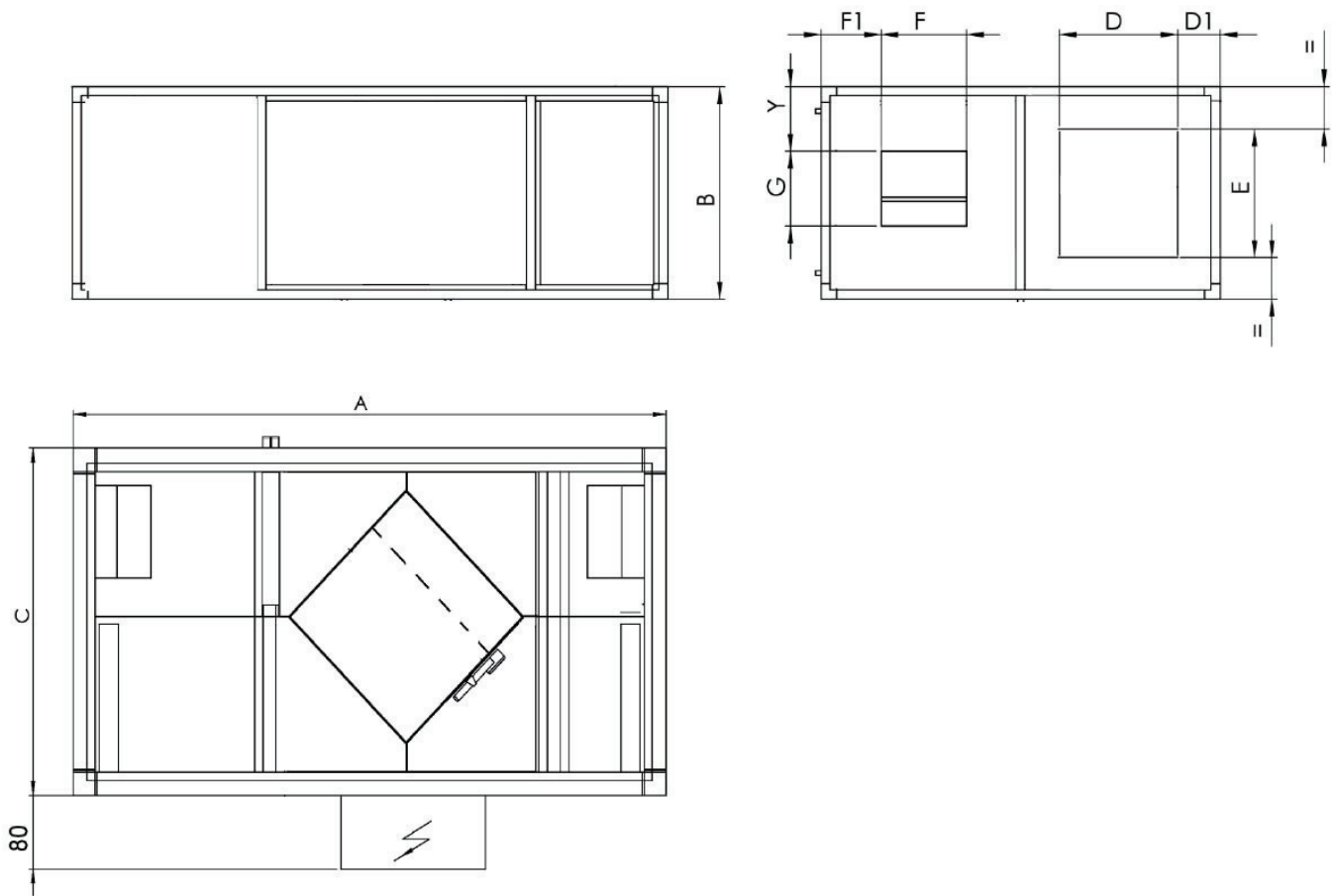
- (1) referred to the nominal air flow and won the heat recovery and standard filters F7
- (2) total value referred to two fans with nominal air flow and external static pressure of 100 Pa.
- (3) Maximum total value referred to two fans.
- (4) Referred to the nominal air flow rate and external static pressure of 100 Pa.
- (5) Selectionable with PCU / COM3. The model 40 must be regulated by VVM control and the mod. 400 must be regulated by inverter.
- (6) Adjustable with electronic speed controller PCUE
- (7) sound pressure level: data referred to 1,0 meters from inlet in free fields. The

actual operation noise level generally differs from the values shown in the table, depending on the operation conditionings, on the reflected noise and on the surrounding noise.

- (8) Nominal winter conditions:  
outside air: -5°C DB, RH 80% - ambient air: 20°C DB, RH 50%
- (9) Nominal summer conditions:  
outside air: 32°C DB, RH 50% - ambient air: 26°C DB, RH 50%
- (10) Nominal dry conditions, measured by EN308 with mass flow balanced:  
outside air: 5°C DB - ambient air: 25°C
- (11) Inverter FUJI mod. FRN4AR1 L-4E

**DIMENSIONS, WEIGHT**

(drawing indicative of the series)



Model	A [mm]	B [mm]	C [mm]	D [mm]	D1 [mm]	E [mm]	F [mm]	F1 [mm]	G [mm]	G1 <sup>(1)</sup> Ø gas	Y [mm]	Weight [kg]
40	1480	380	800	300	70	270	215	90	70	3/4"	115	80
75	1450	480	990	300	100	310	230	140	200	3/4"	140	120
100	1450	480	990	300	100	310	230	140	260	3/4"	140	130
150	1600	550	1000	300	100	410	230	145	260	3/4"	90	150
200	2000	680	1290	400	130	410	300	170	260	3/4"	220	190
320	2000	680	1290	400	50	410	330	170	290	3/4"	155	200
400	2100	680	1400	500	50	510	330	195	290	1"	155	220

(1) Connection for optional post-heating water coil BCR

# > UT REC R+

## ROTARY HEAT RECOVERY UNITS



### Units Series

#### Version

UT REC R+ horizontal unit and standard fans  
 UT REC RE+ horizontal unit EC fans

### Unit specification

- Horizontal installation
- Structure and panels made by Aluzink sheet metal thermal and acoustic insulated
- F7 efficiency class in the renewal flow and M5 efficiency class in the ejection flow.
- Rotary air-air heat recuperator (removable), with thermal by-pass facility
- Centrifugal fans directly coupled to electric motor (multiple speeds for UT REC R+, brushless EC type UT REC RE+)
- Electrical box on board

### Accessories

- Bypass kit - KBP
- Anti-freeze thermostat - TA
- Electric post-heating section - BER
- Water coil section - SBFR
- High efficiency filters on exhaust air - F7CF
- Regulation damper - SR
- 3 dampers section for mixing/recirculating - RMS
- Damper actuators - SMISMR
- N. 4 connections for circular ducts kit - SPC
- Duct silencers - SSC
- Signal lamps kit - KLS
- Pressure switch for dirty filter signal - PRF
- Kit for external installation - EXT
- Kit weather hood for external installation - CPA
- Electronic speed controller (only for mod. 40) - VVM
- Unit speed control panel (for mod. 75-500)- COM 3
- Unit control panel - PCU-PCUE

### Technical data

MODEL - UT-REC R+	40	75	100	150	200	320	400	UM
Airflow rate	310	650	1150	1900	2320	3600	4250	m <sup>3</sup> /h
Total static pressure / ESP <sup>(1)</sup>	100	100	100	100	100	100	100	Pa
Electrical power supply standard fans	230/1/50						400/3/50	V/ph/Hz
Nominal current load standard fans <sup>(2)</sup>	1,1	1,6	2,9	3,9	4,9	10,1	5,0	A
Full load amperage standard fans <sup>(3)</sup>	/	/	3,0	/	/	/	6,0	A
Max power input STD fans <sup>(4)</sup>	1409	1443	1580	1036	806	1226	1516	W/(m <sup>2</sup> s)
N° of speed <sup>(5)</sup> or regulation type <sup>(6)</sup>	VVM	VVM	3	3	3	3	INV <sup>(11)</sup>	-
Sound level pressure <sup>(7)</sup>	59	60	63	63	63	69	69	dB (A)
MODEL - UT-REC RE+	40	75	100	150	200	320	400	UM
Airflow rate	310	650	1150	1900	2320	3600	4250	m <sup>3</sup> /h
Total static pressure / ESP <sup>(1)</sup>	≤ 230	≤ 180	≤ 280	≤ 600	≤ 550	≤ 260	≤ 680	Pa
Electrical power supply EC fans	230/1/50							V/ph/Hz
Nominal current load EC <sup>(2)</sup>	1,1	2,1	2,2	3,2	2,4	6,8	12,2	A
Full load amperage EC <sup>(3)</sup>	1,78	2,5	6,5	9,0	9,0	9,0	18,8	A
Max power input fans <sup>(4)</sup>	1045	1263	1102	842	617	869	1029	W/(m <sup>2</sup> s)
N° of speed <sup>(5)</sup> or regulation type <sup>(6)</sup>	0÷10V	0÷10V	0÷10V	0÷10V	0÷10V	0÷10V	0÷10V	-
Sound level pressure <sup>(7)</sup>	60	61	62	64	62	68	68	dB (A)
EXCHANGER	40	75	100	150	200	320	400	UM
Efficiency (temperature / enthalpy) <sup>(8)</sup>	84 / 81	74 / 71	73 / 71	73 / 70	76 / 73	73 / 71	73 / 71	%
Heating recovery capacity <sup>(8)</sup>	3,2	5,9	10	17	22	32	38	kW
Temperature / R.H. <sup>(8)</sup>	15,9 / 56,3	13,4 / 57,7	13,3 / 57,9	13,2 / 58,2	14,8 / 56,6	13,3 / 57,9	13,4 / 57,9	°C / %
Efficiency (temperature / enthalpy) <sup>(9)</sup>	84 / 78	74 / 69	74 / 69	73 / 69	76 / 72	74 / 69	74 / 69	%
Heating recovery capacity <sup>(9)</sup>	1,4	2,6	4,6	7,5	9,6	14	17	kW
Temperature / R.H. <sup>(9)</sup>	27 / 52,1	27,6 / 52	27,6 / 52	27,6 / 52	27,4 / 52	27,6 / 52	27,6 / 52	°C / %
Dry efficiency <sup>(10)</sup>	84	74	73	73	76	73	73	%

#### NOTA

- (1) referred to the nominal air flow and won the heat recovery and standard filters F7
- (2) total value referred to two fans with nominal air flow and external static pressure of 100 Pa.
- (3) Maximum total value referred to two fans.
- (4) Referred to the nominal air flow rate and external static pressure of 100 Pa.
- (5) Selectionable with PCU / COM3. The model 40, 75 must be regulated by VVM control and the mod. 400 must be regulated by inverter.
- (6) Adjustable with electronic speed controller PCUE
- (7) sound pressure level: data referred to 1,0 meters from inlet in free fields. The actual operation noise level generally differs from the values shown in the

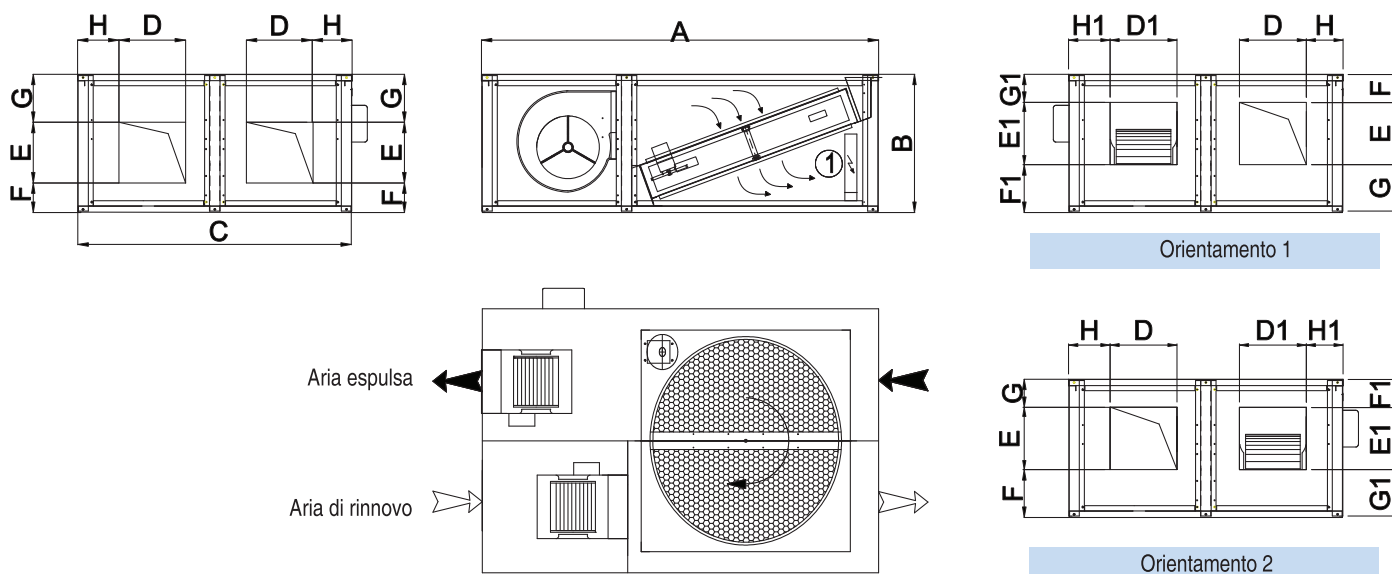
table, depending on the operation conditionings, on the reflected noise and on the surrounding noise.

- (8) Nominal winter conditions:  
outside air: -5°C DB, RH 80% - ambient air: 20°C DB, RH 50%
- (9) Nominal summer conditions:  
outside air: 32°C DB, RH 50% - ambient air: 26°C DB, RH 50%
- (10) Nominal dry conditions, misured by EN308 with mass flow balanced:  
outside air: 5°C DB - ambient air: 25°C
- (11) Inverter FUJI mod. FRN4AR1 L-4E



**DIMENSIONS, WEIGHT**

(drawing indicative of the series)



1 Connection for optional post-heating water coil BCR

Model	A [mm]	B [mm]	C [mm]	D [mm]	D1 [mm]	E [mm]	E1 [mm]	F [mm]	F1 [mm]	G [mm]	G1 [mm]	H [mm]	H1 [mm]	Weight [kg]
<b>40</b>	1075	480	800	200	224	210	100	130	195	140	185	110	96	67
<b>75</b>	1075	480	800	200	224	210	100	130	195	140	185	110	96	71
<b>100</b>	1205	550	1000	260	225	220	200	153	162	177	190	125	145	102
<b>150</b>	1400	550	1000	290	225	310	255	90	170	150	125	110	145	139
<b>200</b>	1720	680	1290	410	288	410	255	157	170	113	255	125	185	178
<b>320</b>	1720	680	1290	410	325	410	280	157	200	113	200	125	165	194
<b>400</b>	1720	680	1400	410	325	410	280	157	200	113	200	155	195	207