

# Heat recovery unit

## UTNR-T FRESH

Air flow rate 400-3.300 m<sup>3</sup>/h

Features



**High efficiency heat recovery**

**Low-noise Brushless EC fans**

**F7 and M5 high efficiency filters**

**Sandwich panels – thickness 40 mm**

**Mineral wool insulation class A1 fire reaction**

**Compact size**

**Competitive solution**



**Tax incentives\***

### Fresh air units with counterflow static heat recovery. Class A1 mineral wool insulation.

#### Construction features

- Recovery unit: very high efficiency static heat recovery, with aluminum plates with counter-current flows.
- Fans: supply and exhaust fans with highly efficient EC Brushless electric motors with 6 speeds.
- Structure: insulating sandwich panels 40mm thick. Coated externally in corrosion-resistant pre-painted galvanised steel and internally in galvanised steel. Insulation in mineral wool with high thermal and acoustic properties. Fire reaction class A1.
- Air tightness: EPDM gaskets on the panels and balloon gaskets on the inspection doors to ensure full air tightness.
- Stainless steel condensate drain pan, fully integrated in the panel. Side connection drain.
- Filters: compact cell filters with low pressure drop polypropylene media, removable from the side, with ISO ePM10 50%(M5) + ISO ePM1 50% (F7) class efficiency on supply side and ISO ePM10 50% (M5) on exhaust side.
- Factory-installed dirty filter differential pressure switches.
- Integrated defrosting / free-cooling by-pass system.

Thanks to the presence of a motorised damper on the heat recovery side, a bypass system can be created to manage freecooling or defrosting depending on thermo-hygrometric requests.

- Integrated control system with electrical box, regulator and user panel that can be remote-controlled up to 100m. No additional power and protection components required.

#### Separately supplied accessories

- KBEP – Single stage electric heater with antifreeze/pre-heating function, complete with safety thermostat.
- KBER – 3-stage post-heating electric heater, complete with safety thermostat.
- KBA – 2 rows hot water post-heating coil.
- KC5H1 – 5-rows water cooling coil and 1-row water post-heating coil.
- KSRE – Damper with ON/OFF servo control.

## Controls

- Mode selection (Auto Heat, Auto Cool, Man. Heat, Man. Cool, Fan Mode).
- Room temperature measurement thanks to the probe integrated in the user panel.
- Fans speed control with 0-10V signal at 6 speed steps.
- Heat recovery bypass management in antifreeze/freecooling/freeheating mode.
- Weekly and daily programming.
- Modbus RTU serial interface via RS485 connection.
- Dirty filter monitoring.
- Automatic restart after power failure.
- Automatic fans speed control based on air quality probe (optional).
- Automatic electrical coil management by steps (optional).
- Management of heating/cooling/summer dehumidification functions (optional).
- Management of ON/OFF or modulating water coils valves (optional).
- Management of ON/OFF dampers (optional).

## Technical data

MODEL UTNR-T FRESH		40	60	80	100	150	205	260	330
Supply filters		M5 + F7	M5 + F7	M5 + F7	M5 + F7	M5 + F7	M5 + F7	M5 + F7	M5 + F7
Return filters		M5	M5	M5	M5	M5	M5	M5	M5
<b>TECHNICAL SPECIFICATIONS</b>									
Nominal air flow rate	m <sup>3</sup> /h	400	600	800	1000	1500	2050	2600	3300
<b>STANDARD FANS</b>									
Motor type		EC	EC	EC	EC	EC	EC	EC	EC
❶ Supply available static pressure	Pa	75	75	100	100	100	125	125	150
❷ Specific fan power (SFP)	W/(m <sup>3</sup> /s)	570	611,2	578,6	576,1	844,8	586,2	589,8	628,5
❸ Sound pressure level	dB(A)	35	43	35	41	52	46	51	53
Speed No./Control Type		6 / 0-10V	6 / 0-10V	6 / 0-10V	6 / 0-10V	6 / 0-10V	6 / 0-10V	6 / 0-10V	6 / 0-10V
Power supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
<b>COUNTERFLOW HEAT RECOVERY</b>									
❹ Winter Efficiency	%	88,5	88,5	87,4	87,6	88,6	88,7	89,2	88,6
❺ Summer Efficiency	%	82,8	82,8	80,9	81,3	83,4	83,6	84,2	83,5
❻ Efficiency EcoDesign CE 1253/2014	%	82,9	82,9	81	81,4	83,5	83,7	84,3	83,6
<b>OPERATING LIMITS</b>									
Outdoor air inlet temperature limit	°C	-24<T<46	-24<T<46	-24<T<46	-24<T<46	-24<T<46	-24<T<46	-24<T<46	-24<T<46
<b>DIMENSIONS AND WEIGHTS</b>									
Length	mm	721	845	915	965	1015	1290	1720	1780
Height	mm	397	397	479	479	618	618	618	759
Depth	mm	1346	1346	1638	1638	1937	1937	1937	2219
❼ Weight	kg	92,3	104,2	137,3	144,5	193,9	233,1	291	368,3
Connections drain pan	inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"

Data at the following conditions:

- ❶ Values refer to the nominal air flow rate considering the pressure drops of the unit without accessories.
- ❷ Data according to CE 1253/2014 at nominal air flow rate and available static pressure without accessories.
- ❸ Sound pressure level at 1 m distance in open field.
- ❹ Winter conditions: outdoor air -5°C, 80% RH and room air 22°C, 50% RH.
- ❺ Summer conditions: outdoor air 35°C, 40% RH and room air 24°C, 50% RH.
- ❻ Values refer to CE 1253/2014 at balanced air flow rates.
- ❼ Unit weight without accessories.



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