

Heat recovery unit UTNR-HE Platinum 040÷400



Air flow rate: 310÷4.250 m³/h

- ✓ **Very high efficiency hygroscopic heat recovery Eurovent Certificate**
- ✓ **Multi-speed or Brushless EC fans**
- ✓ **F7 and M5 high efficiency filters**
- ✓ **Double sandwich wall with high insulation capacity**
- ✓ **Full control kit**



Web code: UTHE3

Fresh air terminal unit with enthalpy rotary heat recovery.

Construction features

- Recovery unit: high yield rotary type made of aluminium with hygroscopic surface. Electric induction motor with belt and pulley transmission. Recovery unit-motor assembly easily removed from the side for periodic maintenance.
- Fans: fresh air inlet and forward blade double intake centrifugal expulsion type with a continuously adjustable directly coupled electric motor; optionally, EC Brushless technology high efficiency electric motors. Fan unit installed on anti-vibration mountings to prevent the transmission of vibration to the structure. The EC fans can be factory set for operation with constant flow (specification to be provided in order)
- Structure: frame made with extruded aluminium profile with preloaded nylon joints. Sandwich buffer panels, 23 mm thick, with galvanised sheet steel on the inside and pre-painted on the outside with thermal and acoustic insulation made of injected polyurethane, with a density of 45 kg/m³. Integrated free cooling or thawing by-pass system. Thanks to the presence of a motorised damper on the heat recovery side, a bypass system can be created to manage the freecooling or thawing depending on requirements or mm thermohygrometric conventions, with galvanised sheet steel on the inside and pre-painted on the outside with thermal-acoustic insulation made of injected polyurethane, with a density of 45 kg/m³ offering very high thermal and acoustic insulation.
- Filtering section: filtration sections made of compact cell filters with low pressure drop polypropylene media, removable from the side, with F7 efficiency class in fresh flow and M5 in expulsion flow.
- Factory-installed dirty filter differential pressure switches
- Terminal block: already part of the machine to facilitate the electrical connections, fan controls and rotary recovery.

Versions

- UTNR-HE/O PLATINUM - Recovery unit with rotary heat exchanger, installed horizontally and with standard multi-speed fans
- UTNRE-A/O PLATINUM - Recovery unit with rotary heat exchanger, installed horizontally and with Brushless EC fans that reduce the power consumption for ventilation at equal performance.

Available orientation

- 01 - Right-hand connections
- 02 - Left-hand connections

The selected orientation must be specified to process the job order.

Installation

- EXT- Outdoor installation

Factory fitted accessories

- ERF7-F7 efficiency return filter
- BP-Bypass control for free-cooling including: NC relay on board the panel (suitable for PCU and KPCUE) and 2 NTC probes on board the machine

Separately supplied accessories

- KBER - Reheating electrical resistance installed outside in a duct dedicated module, complete with filament-type safety thermostats and control relays to contain pressure drops.
230/1/50 single-phase electrical supply for model 040 and 075.
400/3/50 three-phase for 100÷400 models.

- KSBFR - Section containing hot/cold water coil to reheat or recool, placed outside the machine in front of the intake vent. Includes stainless steel condensate drain pan with drain connection from the bottom.
- KSBFR + ATG - Hot/cold water coil section with mounted antifreeze thermostat
- KSRE - Regulation damper preset for servo-control, consisting of a galvanised sheet steel frame with adjustable fins.
- KSSC - Duct silencer with a rectangular base made of glass wool covered with a protective film of glass fibre and micro-stretched sheet metal.
- KRMS - Section with three dampers for air mixing and recirculation (only for horizontal installation).
- KSPC - 4 circular connections.

Controls

- KCV2-Speed selector for wall mounting installation, to select from 3 speeds (excluding model 40): Off/heating/cooling switch; 3-speed switch; 230V power supply.
- PCU - Control panel for wall mounting installation, allows the winter/summer environment temperature to be controlled, gives consent to activate or exclude the water coil (ON/OFF Valves control) or the electrical resistance. Selects the operating speed of the fan between minimum, medium, maximum and controls the freecooling function.
- PCU - Control panel for wall mounting installation, allows the winter/summer environment temperature to be controlled, gives consent to activate or exclude the water coil (ON/OFF Valves control) or the electrical resistance. Selects the operating speed of the fan through 0/10 V adjustment and controls the freecooling function.
- KPCUEM - Adds a board to interface Modbus with BMS to the KPCUE control functions.
- KPTZ - Rotating potentiometer for wall mounting installation, dedicated to manual fan speed control. The speed of delivery and return fans is calibrated with a single potentiometer (only for the EC Brushless fan version).

Full Controls

- KRFCS - Electrical panel complete with: DDC programmable microprocessor regulator. BMS interfacing Integrated as standard with Modbus RTU protocol, main disconnecting switch, relay to control various users, terminal blocks for quick connection of all machine components, auxiliary circuit supply with suitable transformer 230/12-24V.

Optional first start-up

User panels (for KRFCS)

- KHMIG - Interface terminal with black monochrome graphic display with LED backlighting.
- KHMIR - Interface terminal complete with integrated room temperature probe with black monochrome graphic display with LED backlighting.
- KCW - White decorative plate for control panel.
- KCB - Black decorative plate for control panel.
- KWMS - Wall mounting installation support for control panel.

Valves and actuators

- KV3V - PN40 Mixer/diverter 3-way regulation ball valves, female threaded hydraulic connections.
- KV2V - PN40 2-way regulation ball valves, female threaded hydraulic connections.
- KVMM - Actuator for ball regulation valves with modulating control 0/10 Vdc 24 Vac power supply.
- KVOM - Actuator for 230V On/Off valves.
- KDMA-S - Actuator for modulating damper 0-10V 24V with spring return.
- KDMA - Actuator for modulating damper 0-10V 24V without spring return.
- KDOA - Actuator for ON/OFF damper with spring return.

All the probes, actuators and valves on the Full Control section are also available.

Technical Data

UTNR-HE PLATINUM MODEL		40	75	100	150	200	320	400
Type of Unit		Non-residential- Bidirectional	Non-residential- Bidirectional	Non-residential- Bidirectional	Non-residential- Bidirectional	Non-residential- Bidirectional	Non-residential- Bidirectional	Non-residential- Bidirectional
Outdoor air filters		F7						
Return air filters		M5						
Bypass		Motorisable side bypass damper	Motorisable side bypass damper	Motorisable side bypass damper	Motorisable side bypass damper	Motorisable side bypass damper	Motorisable side bypass damper	Motorisable side bypass damper
TECHNICAL SPECIFICATIONS								
Nominal air flow rate	m³/h	310	640	1000	1650	2400	3200	3800
STANDARD FANS								
❶ Nominal available static pressure	Pa	230	130	190	160	300	180	n.d.
❷ Specific fan power (SFP)	W/(m³/s)	1409	1443	1580	1036	806	1226	n.d.
❸ Sound pressure level	dB(A)	59	60	62	62	63	66	n.d.
Speed N°/Regulation Type		4	3	3	3	3	3	n.d.
Electrical 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
BRUSHLESS EC FANS								
❶ Nominal available static pressure	Pa	230	130	190	160	300	180	100
❷ Max available static pressure	Pa	430	280	560	600	480	460	230
❸ Specific fan power (SFP)	W/(m³/s)	1045	1263	1102	842	617	869	1029
❹ Sound pressure level	dB(A)	60	61	61	63	62	65	66
Speed N°/Regulation Type		0-10 V						
Electrical 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
COUNTERFLOW HEAT RECOVERY								
❶ Winter efficiency temp/enthalpy	%	79/74	74/69	73/58	74/60	75/62	74/60	73,5/59
❷ Summer efficiency temp/enthalpy	%	79/69	74/65	73/59	75/60	81/65	75/59,5	73/59
❸ Efficiency Regulation EC 1253/2014	%	74,2	74	73	73	73,7	74,3	73
DIMENSIONS AND WEIGHT		40	75	100	150	200	320	400
Length/Height/Depth UTNR-A PLATINUM	mm	1075/480/800	1075/480/800	1205/550/1000	1400/550/1000	1720/680/1290	2000/680/1400	2000/680/1400
Weight	kg	70	75	105	140	180	230	250

Data at the following conditions:

- ❶ Values referred to the nominal air flow considering the pressure drops of the heat recovery and the F7 filter
- ❷ Values referred to the nominal air flow and Nominal available static pressure
- ❸ Sound pressure level referring to 1 m from the machine inlet in free field
- ❹ Outdoor air T: -5°C, 80% RH; Ambient air T: 20°C, 50% RH.
- ❺ Outdoor air T: 32°C, 50% RH; Amb. air T: 26°C, 50% RH.
- ❻ Dry nominal conditions, measured according to En 308 in balanced flows. Outdoor air 5°C D.B.; Ambient air 25°C D.B.

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