Fresh air terminal unit with counterflow opposing flow static heat recovery.

**Construction features**

- Recovery unit: very high yield static type with aluminium plates with counterflow with close step. Side extraction of exchange pack (except for size 40 which is extracted from the bottom).
- 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, made 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.
- 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
- Condensate drain pan made of galvanised sheet steel with condensate drain connection from the bottom.
- Integrated free cooling or thawing by-pass system. Thanks to the presence of a motorised damper next to the heat recovery, a bypass system can be created to manage freecooling or thawing depending on thermohygrometric needs or conventions

**Versions**

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

**Factory fitted accessories**

- BER - Reheating electrical resistance installed inside, complete with filament-type safety thermostats and control relays to contain pressure drops.
- BA - Internal hot water reheating coil.
- BAATG - Antifreeze thermostat installed downstream of the water reheating coil.
- BP - Bypass control for free-cooling (suitable for PCU and KPCUE) including damper actuator and 2 NTC probes on board the machine.
- ERF7-F7 efficiency return filter

**Separately supplied accessories**

- Web code: UTNR3

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**Heat recovery unit UTNR-A Platinum 040÷500**

- Complying with ErP 2018 NRVU
- Very high efficiency 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

**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 including rain cover, 80 mm-high base and an outdoor electrical box
• **KSBFR** - Section containing hot/cold water coil to reheat or recol, placed outside the machine in front of the inlet. 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 set up 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 steel.
• **KRMS** - Section with 3 dampers for air mixing and recirculating (only for horizontal installation).
• **KSPC** - Panel with round fittings.

### Controls

- **KCV2** - Speed selector for wall mounting installation, to select from 3 speeds: Off/heating/cooling switch; 3-speed switch; 230V power supply.
- **PCU-KPCUE** - Control panel for wall mounting installation, allows the winter/summer room temperature to be controlled, gives consent to activate or exclude the water coil or the electrical resistance. Selects the operating speed of the fan from minimum, medium, maximum (excluding model 40 which only offers one speed) or by 0/10 V regulation (KPCUE for EC fans) and controls the free-cooling function.
- **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.

**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.
- **KTOUCH** - Black and white touch screen control panel.
- **KCOLOR** - Colour touch screen control panel.
- **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.
- **KVDM** - 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-A PLATINUM MODEL

<table>
<thead>
<tr>
<th>Type of Unit</th>
<th>Non-residential-Bidirectional</th>
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</thead>
<tbody>
<tr>
<td>Outdoor air filters</td>
<td>F7</td>
</tr>
<tr>
<td>Return air filters</td>
<td>M5</td>
</tr>
<tr>
<td>Bypass</td>
<td>Motorisable side bypass damper</td>
</tr>
</tbody>
</table>

### TECHNICAL SPECIFICATIONS

#### Nominal air flow

<table>
<thead>
<tr>
<th>m³/h</th>
<th>400</th>
<th>750</th>
<th>1000</th>
<th>1500</th>
<th>2050</th>
<th>3200</th>
<th>3800</th>
<th>4700</th>
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</table>

#### STANDARD FANS

<table>
<thead>
<tr>
<th>Nominal available static pressure</th>
<th>Pa</th>
<th>160</th>
<th>120</th>
<th>130</th>
<th>160</th>
<th>120</th>
<th>180</th>
<th>n.d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific fan power (SPF)</td>
<td>W/(m³/s)</td>
<td>740</td>
<td>934</td>
<td>1102</td>
<td>1078</td>
<td>1054</td>
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<td>n.d.</td>
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<tr>
<td>Sound pressure level</td>
<td>dB(A)</td>
<td>59</td>
<td>60</td>
<td>63</td>
<td>63</td>
<td>63</td>
<td>69</td>
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<tr>
<td>Speed No./Regulation Type</td>
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<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n.d.</td>
<td>n.d.</td>
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#### BRUSHLESS EC FANS

<table>
<thead>
<tr>
<th>Nominal available static pressure</th>
<th>Pa</th>
<th>160</th>
<th>120</th>
<th>130</th>
<th>160</th>
<th>120</th>
<th>180</th>
<th>200</th>
<th>200</th>
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</thead>
<tbody>
<tr>
<td>Max available static pressure</td>
<td>Pa</td>
<td>340</td>
<td>210</td>
<td>520</td>
<td>500</td>
<td>540</td>
<td>375</td>
<td>940</td>
<td>760</td>
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<tr>
<td>Specific fan power (SPF)</td>
<td>W/(m³/s)</td>
<td>705</td>
<td>742</td>
<td>1059</td>
<td>1048</td>
<td>898</td>
<td>1040</td>
<td>949</td>
<td>935</td>
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<tr>
<td>Sound pressure level</td>
<td>dB(A)</td>
<td>60</td>
<td>61</td>
<td>62</td>
<td>64</td>
<td>62</td>
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<td></td>
<td></td>
<td></td>
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</table>

#### COUNTERFLOW HEAT RECOVERY

| Winter Efficiency | % | 83,6 | 82,9 | 81,6 | 83,3 | 83,7 | 86,8 | 84,1 | 84,2 |
| Summer Efficiency | % | 75,5 | 75,9 | 74,5 | 75,1 | 75,6 | 76,0 | 76,3 | 75,5 |
| Efficiency Regulation EC 1253/2014 | % | 75,9 | 75,4 | 75,0 | 75,6 | 76,0 | 76,3 | 75,5 | 75,6 |

### DIMENSIONS AND WEIGHTS

<table>
<thead>
<tr>
<th>UTNR-A/PO</th>
<th>40</th>
<th>75</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>320</th>
<th>400</th>
<th>500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>kg</td>
<td>90</td>
<td>140</td>
<td>150</td>
<td>170</td>
<td>200</td>
<td>240</td>
<td>250</td>
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</table>

Data at the following conditions:

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

RHOSS S.P.A. declines all responsibility for possible mistakes in this document and reserves the right to alter the features of their products without notice.