Product facts

Product
Novenco jet fans type Novax are produced in unidirectional (AU_) and reversible (AR_) versions.

- AUT/ART – circular Basic jet fans
- AUO/ARO – oval Design jet fans

Application
The jet fans are f.x. used for ventilation of car parks and large spaces where polluted air needs to be removed effectively. Jet fans are therefore often part of concepts for fire fighting and hot smoke removal in connection with fires.

The operating temperature range is as standard -20 to +40 °C. Max. temperature range is from +40 to +120 °C. Hot smoke versions withstand 400 °C for up to two hours.

Sizes and versions
Novenco jet fans are manufactured in four sizes with different rotor diameters and in unidirectional or reversible versions.

<table>
<thead>
<tr>
<th></th>
<th>Diameters [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT/ART</td>
<td>Ø400</td>
</tr>
<tr>
<td>AUO/ARO</td>
<td>Ø290, Ø380, Ø500</td>
</tr>
</tbody>
</table>

Available rotor diameters

Construction
Common to all jet fan types is a circular fan tube. AUT/ART fans are long tubes with cones in the ends. AUO/ARO fans have silencers with cones. The outer fan casing on these is made up of a alu-zinc sheet to make a whole with the silencers. The AUO have wire guards on the inlet sides and ARO have external deflectors. Both types are fitted with external deflectors on the outlet side. AUT and ART have wire guards on both sides and are provided with aerodynamic integrated deflectors instead of external deflectors.

The fans are delivered with suspension brackets for mounting to ceilings or onto walls.

Motors
The motors are two-speed 3x400 V, 50 Hz for direct start.

Motor protection: Min. IP55 in accordance with IEC 34-5
Insulation class: F or H depending on temperature protection
Motor flanges: B14 in accordance with IEC 34-7

Electric isolation
AUO/ARO jet fans have either electric isolating switches integrated in the fan casing or internal terminal boxes. AUT/ART have all external terminal boxes.

The Novax rotor
The rotor consists of two hub discs with cavities, in which four blades are mounted in preset positions.

Silencers
The AUO/ARO fans are fitted with silencers on both sides of the fan casing. Cones designed for minimum pressure loss are mounted on the inlet and outlet sides.

Materials

- Blades: Aluminium alloy
- Hub shells: Steel sheets
- Fan tube: Rolled steel tube in 3 mm sheet
- Wire guard: Stainless steel
- Deflector: Galvanised steel and aluminium
- Suspension brackets: Hot-galvanised 4 mm steel sheet
- Outer casing for fan housing and silencers (AUO/ARO): 0.75 mm sheet in alu-zinc
- Inside tube for silencers (AUO/ARO): Perforated pregalvanised sheet steel
- Sound attenuating material (AUO/ARO): Fireproof and moisture resistant
- Cones (AUO/ARO): Galvanised steel

Classifications
The jet fans meet the requirements for operation in unheated, low corrosive environments according to DS/EN ISO 12944-2, corrosion category C3.

Fans for fire fighting and hot smoke removal are CE approved to operate in the following conditions.

<table>
<thead>
<tr>
<th></th>
<th>F200 200 °C</th>
<th>F300 300 °C</th>
<th>F400 400 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 hours</td>
<td>–</td>
<td>X</td>
<td>–</td>
</tr>
<tr>
<td>2 hours</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Approved temperature ranges

Balancing of rotor units is in accordance with VDI 2060, ISO 1940, 1-1986 class Q 6.3.
Description

**Product description**

**Fan types**

Jet fans are produced in unidirectional and reversible versions with or without silencers. Design jet fans with especially low sound levels are called AUO and ARO. They are available with rotor diameters Ø290, Ø380 or Ø500 mm. Basic jet fans are called AUT and ART. They are only available with rotor diameter Ø400.

**Fan housings**

The fan housing is made of a rolled and welded steel tube in 3 mm sheet. The Design jet fans AUO and ARO have external oval outer casings of alu-zinc sheet.

![Deflector on Novenco ARO Design jet fan](image)

**Motors**

These require 3x400 V, 50 Hz and direct start. Motor protection is IP 55 in accordance with IEC 34-5. Insulation is class F or H.

**Safety switches**

The types AUO/ARO can be delivered with or without safety switches mounted in the terminal boxes. The terminal boxes are integrated in the fan casing. AUT/ART are all delivered with external terminal boxes.

**Installation**

The fans are fitted with brackets for ceiling or wall mounting.

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<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

*Approved temperature ranges*

Needed distances to beams as well as the height of these are relatively small. Thus on inlet sides there must be a minimum of 0.5 m to beams and on outlet sides a minimum of 2.0 m. Maximum beam height is 0.4 m on outlet sides in installations that are just within the minimum requirements.

**Temperature operating range**

The range is as standard -20 to +40 °C.

Fans for fire fighting are CE approved in class F200, F300 or F400 according to EN12101-3 to operate in the following temperature ranges.
# Dimensions and technical specifications

## Dimensions

<table>
<thead>
<tr>
<th>AUT/ART 400</th>
<th>A [mm]</th>
<th>B [mm]</th>
<th>C [mm]</th>
<th>D [mm]</th>
<th>E [mm]</th>
<th>ØR</th>
<th>Total weight [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>854</td>
<td>522</td>
<td>423</td>
<td>779</td>
<td>470</td>
<td>14</td>
<td>63</td>
</tr>
</tbody>
</table>

## Specifications

<table>
<thead>
<tr>
<th></th>
<th>Sizes 400</th>
<th>Sizes 290</th>
<th>Sizes 380</th>
<th>Sizes 500</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AUT</td>
<td>ART 1</td>
<td>AOU</td>
<td>ARO 1</td>
</tr>
<tr>
<td>Volume flow [m³/s]</td>
<td>1.1 / 2.3</td>
<td>1.0 / 2.2</td>
<td>0.5 / 1</td>
<td>0.5 / 0.9</td>
</tr>
<tr>
<td>Voltage</td>
<td>3x400 V, 50 Hz, 2940 RPM</td>
<td>3x400 V, 50 Hz, 2940 RPM</td>
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</tr>
<tr>
<td>Power consumption [kW]</td>
<td>0.25 / 1.1</td>
<td>0.3 / 1.3</td>
<td>0.1 / 0.5</td>
<td>0.1 / 0.5</td>
</tr>
<tr>
<td>Sound pressure [dB(A)]</td>
<td>54 / 72</td>
<td>56 / 75</td>
<td>35 / 46</td>
<td>35 / 47</td>
</tr>
</tbody>
</table>

1. Data for reversible fans is given for air direction blade – motor.  
2. Approximate values for sound pressure levels at 3 m and 45° free field from the fan.
Novenco develops and manufactures ventilation and fire fighting systems that are marketed and distributed world-wide through subsidiaries and agents.

The company was founded in Denmark 1947 and has become one of the world-leading suppliers.

Novenco symbolises quality and environmentally friendly products. The company is certified according to ISO 9001 and ISO 14001.

The headquarters of Novenco is located in Naestved, Denmark.

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Read more about Novenco on the Internet.