Production Range

Direct driven axial fans, with housing in welded steel, casing with double flange and impeller with adjustable blades in aluminium, GRP, or GRN. These fans are particularly suitable for the removal of stale air, for ventilation, drying and for all those applications which entail moving large volumes of air at low and medium pressures. Sizes from 500 up to 1250.

Air Performance

Air performance ratings of the fans described by this catalogue have been derived from performance tests made with installation type “D”, with ducted inlet and ducted outlet. These tests were carried out in accordance with AMCA 210-99 standard (Fig. 12, for sizes up to size 1120 and Fig. 15 above). Ratings are referred to the standard air density of 1.2 Kg/m³.

Sound Power Level

Noise ratings are calculated starting from sound power level measurements made in accordance with the AMCA 300-96 standard, fig. 2D or 3D. The test results keep into consideration the presence of the motor inside the fan.

Construction Specifications

Impellers:
Breezax aerfoil blades are available in four types of material:
- **Glass Reinforced Polypropylene (GRP)**, whose chemical resistance is good when exposed to some diluted acids and alkali, satisfactory with oil at normal temperature and good with various organics.
  Recommended max. Tip Speed = 105m/sec.
- **Glass Reinforced Nylon (GRN)**, with greater strength and higher temperature capability.
  Recommended max. Tip Speed = 115m/sec.
- **Anti-static (GRN)**, whose main application is for installations defined as “potentially explosive atmosphere” and where the risk of ignition of gas dust or vapours through sparking must be prevented.
- **Aluminium (ALU)**, proven for use in emergency smoke and fume extract applications up to 200°C.
  Recommended max. Tip Speed = 100m/sec.

Working temperature:
-40°C to 70°C: GRP
-40°C to 150°C: GRN
-40°C to 200°C: ALU

Balance:
All Nicotra axial impellers and fans are balanced according to ISO1940 with grade G6.3

Hub System
Our range of axial fans has fully adjustable blades and there are 5 hub systems, as shown below:

<table>
<thead>
<tr>
<th>HUB TYPE</th>
<th>NO. OF BLADES</th>
</tr>
</thead>
<tbody>
<tr>
<td>110 Hub</td>
<td>5</td>
</tr>
<tr>
<td>160 Hub</td>
<td>5 &amp; 10</td>
</tr>
<tr>
<td>230 Hub</td>
<td>3, 6 &amp; 12</td>
</tr>
<tr>
<td>250 Hub</td>
<td>3, 6 &amp; 12</td>
</tr>
<tr>
<td>330 Hub</td>
<td>4, 8, 12 &amp; 16</td>
</tr>
</tbody>
</table>

Fan Casing
All casings are rolled and double-flanged from 2.5 mm to 5 mm mild steel or EG plate. Standard finishing is powder coating to Green RAL 6011 or equivalent coating, or galvanised finishes can be provided upon request.

Motor
Three-phase, 220 / 380 / 415 / 460V, 50/60 Hz, other frequencies and voltages on demand.

Direction of the Air
ADTA fans are normally supplied with the air flowing from the impeller to the motor (B).
ADTA 500/110/5B/25°
Air Density ($\gamma$): 1.20 kg/m³

Installation Type "D": Ducted Inlet - Ducted Outlet

Fan Type: ADTA 500/110/5B/25°
Motor type: IEC B3
Speed (rpm): 1390 (nominal)

Hub: 110
Number of blades: 5
Blade type: B
Pitch: 25°

Motor:
- kW: 0.37
- Poles: 4
- Size: 71
- V: 415 / 3~
- Prot.: IP 55
- Ins. Cl.: F

Performance certified is for Installation Type D: Ducted Inlet - Ducted Outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).

Power rating W is motor input power.

The Sound Power Level ratings shown are in decibels referred to 10⁻¹² watts calculated per AMCA 301. Values shown are for Inlet Lwi & LwiA sound power levels for Installation type D: Ducted Inlet - Ducted Outlet. Ratings include the effect of duct end correction. dBA levels are not licensed by AMCA International.

NICOTRA FANS & BLOWERS MFG SDN BHD certifies that the fan shown herein is licensed to bear the AMCA Seal for Sound and Air Performance. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Catalogue CN0050C01/500/a May 2008
ADTA 560/230/12B/15°

12 HOLES #10

#605

500

#230

15°

Hub Dia.

Blade Angle and size
Air Density (\(\gamma\)): 1.20 kg/m\(^3\)
Installation Type "D": Ducted Inlet - Ducted Outlet

Fan Type: ADTA 560/230/12B/15°
Hub: 230
Number of blades: 12
Blade type: B
Pitch: 15°

Motor type: IEC B3
kW: 1.5
Poles: 4
Size: 80L
V: 380 / 3~
Hz: 60
Prot.: IP 55
Ins. Cl.: F

Absorbed Power [W]: 1765 (nominal)

Performance certified is for Installation Type D: Ducted Inlet - Ducted Outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).

Power rating W is motor input power.

The Sound Power Level ratings shown are in decibels referred to 10^{-12} watts calculated per AMCA 301. Values shown are for Inlet Lwi & LwiA sound power levels for Installation type D: Ducted Inlet - Ducted Outlet. Ratings include the effect of duct end correction. dBA levels are not licensed by AMCA International.
ADTA 630/160/10B/22.5°
Air Density ($\gamma$): 1.20 kg/m³

Installation Type "D": Ducted Inlet - Ducted Outlet

Fan Type: ADTA 630/160/10B/22.5°

Motor type: IEC B3

Speed (rpm): 1440 (nominal)

Hub: 160

Number of blades: 10

Blade type: B

Pitch: 22.5°

Motor type:
- kW: 1.5
- Size: 90L
- V: 415 / 3~
- Hz: 50
- Amp Max: 3.7
- Prot.: IP 55

Ins. Cl.: F

Motor type: 1.5 kW 415 V 60 Hz 3 ph. 4 poles

Performance certified is for Installation Type D: Ducted Inlet - Ducted Outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).

Power rating W is motor input power.

The Sound Power Level ratings shown are in decibels referred to 10⁻¹² watts calculated per AMCA 301. Values shown are for Inlet Lwi & LwiA sound power levels for Installation type D: Ducted Inlet - Ducted Outlet. Ratings include the effect of duct end correction. dBA levels are not licensed by AMCA International.
Air Density ($\gamma$): 1.20 kg/m$^3$

Installation Type "D": Ducted Inlet - Ducted Outlet

Fan Type: ADTA 710/230/12B/17.5°
Hub: 230
Number of blades: 12
Motor type: IEC B3
Blade type: B
Pitch: 17.5°

Motor:
- kW: 4
- Size: 112M
- Poles: 4
- Amp Max: 9
- Prot.: IP 55
- Ins. Cl.: F

Speed (rpm): 1765 (nominal)

Volume Flow Rate [m$^3$/s]

Static Pressure [Pa]

Absorbed Power [W]

## Performance Table

| Ref. | Pat. | Q [m$^3$/s] | 63 | 125 | 250 | 500 | 1K | 2K | 4K | 8K | $L_{wA}$ [dB] | $L_{w}$ [dB] |
|------|------|------------|----|-----|-----|-----|----|----|----|----|---|---|---|
| a    | 0    | 6.31       | 80 | 86  | 84  | 86  | 88 | 87 | 87 | 87 | 94 | 95 |
| b    | 161  | 5.52       | 82 | 86  | 91  | 93  | 90 | 87 | 90 | 87 | 98 | 99 |
| c    | 286  | 4.58       | 87 | 87  | 95  | 98  | 100| 98 | 91 | 85 | 104| 105|
| d    | 397  | 3.07       | 98 | 92  | 104 | 98  | 95 | 92 | 86 | 80 | 101| 107|

(1) Inlet Sound Power Level, A - weighted
(2) Inlet Sound Power Level, un - weighted

NICOTRA FANS & BLOWERS MFG SDN BHD certifies that the fan shown herein is licensed to bear the AMCA Seal for Sound and Air Performance. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Performance certified is for Installation Type D: Ducted Inlet - Ducted Outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).

Power rating W is motor input power.

The Sound Power Level ratings shown are in decibels referred to 10$^{-12}$ watts calculated per AMCA 301. Values shown are for Inlet Lwi & LwiA sound power levels for Installation type D: Ducted Inlet - Ducted Outlet. Ratings include the effect of duct end correction. dBA levels are not licensed by AMCA International.
ADTA 800/250M/12T/20°

- Hub Dia.: ø 800
- ø 900
- Blade Angle: 20°
- ø 250
- 18 x ø12

Catalogue CN005C01/800/a May 2008
Air Density ($\gamma$): 1.20 kg/m$^3$

Installation Type "D": Ducted Inlet - Ducted Outlet

Fan Type: ADTA 800/250M/12T/20°  
Motor type: IEC B3  
Speed (rpm): 1450 (nominal)

Hub: 250M  
Number of blades: 12  
Blade type: T  
Pitch: 20°

Motor type: 5.5 kW  
Size: 132S  
Amp Max: 11  
Prot.: IP 55  
Ins. Cl.: F

Performance certified is for Installation Type D: Ducted Inlet - Ducted Outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).

Power rating W is motor input power.

The Sound Power Level ratings shown are in decibels referred to 10$^{-12}$ watts calculated per AMCA 301. Values shown are for Inlet Lwi & LwiA sound power levels for Installation type D: Ducted Inlet - Ducted Outlet. Ratings include the effect of duct end correction. dBA levels are not licensed by AMCA International.
Air Density ($\gamma$): 1.20 kg/m$^3$
Installation Type "D": Ducted Inlet - Ducted Outlet

<table>
<thead>
<tr>
<th>Fan Type: ADTA 900/400T/8C/22.5°</th>
<th>Motor type: IEC B3</th>
<th>Speed (rpm): 1188 (nominal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hub: 400</td>
<td>kW: 11</td>
<td>Poles: 6</td>
</tr>
<tr>
<td>Number of blades: 8</td>
<td>Size: 160L</td>
<td>Amp Max: 23.2</td>
</tr>
<tr>
<td>Blade type: C</td>
<td>V: 380 / 3~</td>
<td>Prot.: IP 55</td>
</tr>
<tr>
<td>Pitch: 22.5°</td>
<td>Hz: 60</td>
<td>Ins. Cl.: F</td>
</tr>
</tbody>
</table>

Performance certified is for Installation Type D: Ducted Inlet - Ducted Outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).

Power rating $W$ is motor input power.

The Sound Power Level ratings shown are in decibels referred to 10^{-12} watts calculated per AMCA 301. Values shown are for Inlet $L_{wi}$ & $L_{wiA}$ sound power levels for Installation type D: Ducted Inlet - Ducted Outlet. Ratings include the effect of duct end correction. dBA levels are not licensed by AMCA International.

NICOTRA FANS & BLOWERS MFG SDN BHD certifies that the fan shown herein is licensed to bear the AMCA Seal for Sound and Air Performance. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Catalogue CN0050C01/900/a May 2008
ADTA 1000/330M/16AL/20°

Hub Dia. and size

Blade Angle

Catalogue CN0050C01/1000/a May 2008
Air Density (γ): 1.20 kg/m³
Installation Type "D": Ducted Inlet - Ducted Outlet

Fan Type: ADTA 1000/330M/16AL/20° Motor type: IEC B3
Hub: 330M kW: 15
Number of blades: 16 Size: 160L
Blade type: AL V: 415 / 3~
Pitch: 20° Hz: 50

Performance certified is for Installation Type D: Ducted Inlet - Ducted Outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).

The Sound Power Level ratings shown are in decibels referred to 10⁻¹² watts calculated per AMCA 301. Values shown are for Inlet Lwi & LwiA sound power levels for Installation type D: Ducted Inlet - Ducted Outlet. Ratings include the effect of duct end correction. dBA levels are not licensed by AMCA International.
ADTA 1120/250M/12T/7.5°

Catalogue CN0050C3011120/a May 2008
Air Density ($\gamma$): 1.20 kg/m\(^3\)

Installation Type "D": Ducted Inlet - Ducted Outlet

Fan Type: ADTA 1120/250M/12T/7.5°
Motor type: IEC B3
Speed (rpm): 1173 (nominal)

Hub: 250
Number of blades: 12
Blade type: T
Pitch: 7.5°

Motor:
- kW: 5.5
- Poles: 6
- Size: 132M
- Amp Max: 12.4
- Prot.: IP 55

Protection:
- Ins. Cl.: F
- Ins. Cl.: 380 / 3~

Speed (rpm):
- 3400
- 3600
- 3800
- 4000
- 4200
- 4400
- 4600
- 4800
- 5000
- 5200
- 5400

Volume Flow Rate [m\(^3/s\)]

Absorbed Power [W]

Performance certified is for Installation Type D: Ducted Inlet - Ducted Outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).

Power rating W is motor input power.

The Sound Power Level ratings shown are in decibels referred to 10\(^{-12}\) watts calculated per AMCA 301. Values shown are for Inlet Lw & LwA sound power levels for Installation type D: Ducted Inlet - Ducted Outlet. Ratings include the effect of duct end correction. dBA levels are not licensed by AMCA International.

Catalogue CN0050C01/1120/a May 2008
Air Density ($\gamma$): 1.20 kg/m$^3$

Installation Type "D": Ducted Inlet - Ducted Outlet

Fan Type: ADTA 1250/250M/12T/20°
Motor type: IEC B3
Speed (rpm): 1186 (nominal)
Hub: 250
Number of blades: 12
Blade type: T
Pitch: 20°

Motor type:
- kW: 22
- Poles: 6
- Size: 200L
- Amp Max: 43.8
- V: 380 / 3~
- Prot.: IP 55
- Ins. Cl.: F

Volume Flow Rate [m$^3$/s]

<table>
<thead>
<tr>
<th>Static Pressure [Pa]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Static Pressure [Pa]

<table>
<thead>
<tr>
<th>Absorbed Power [W]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1600</td>
</tr>
</tbody>
</table>

Performance certified is for Installation Type D: Ducted Inlet - Ducted Outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).

Power rating W is motor input power.

The Sound Power Level ratings shown are in decibels referred to 10$^{-12}$ watts calculated per AMCA 301. Values shown are for Outlet Lwo & LwoA sound power levels for Installation type D: Ducted Inlet - Ducted Outlet. Ratings include the effect of duct end correction. dBA levels are not licensed by AMCA International.

NICOTRA FANS & BLOWERS MFG SDN BHD certifies that the fan shown herein is licensed to bear the AMCA Seal for Sound and Air Performance. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Catalogue CN0050C01/1250/a May 2008