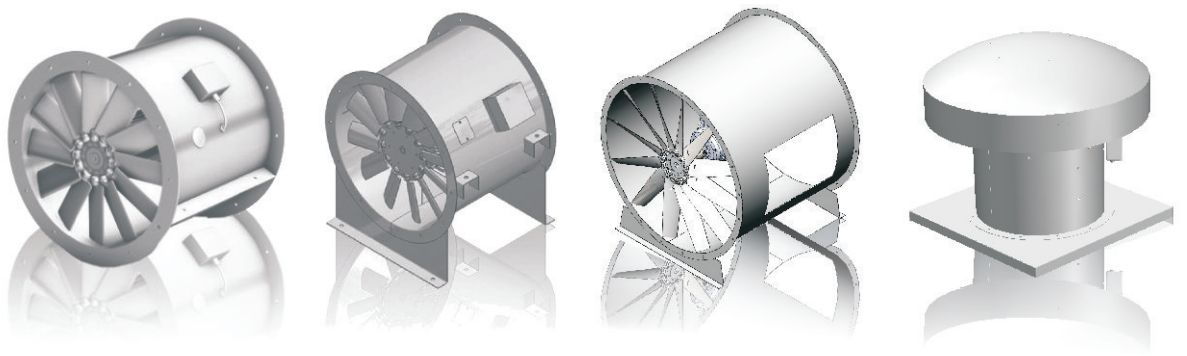


# AXIAL FAN SERIES

ADTA • ADTA-F • ADB • ADTA-RD

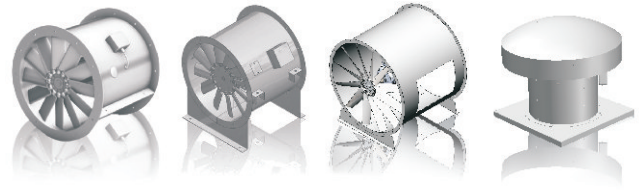
**NICOTRA** | Gebhardt



fan|tastic solutions

AXIAL FAN ADTA/NI/50HZ/APRIL/2020

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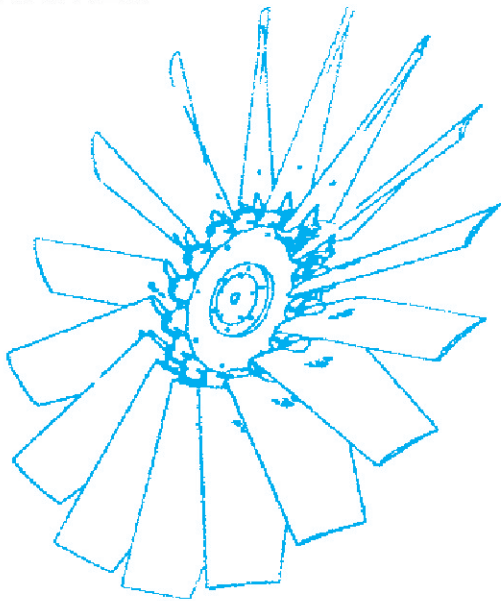


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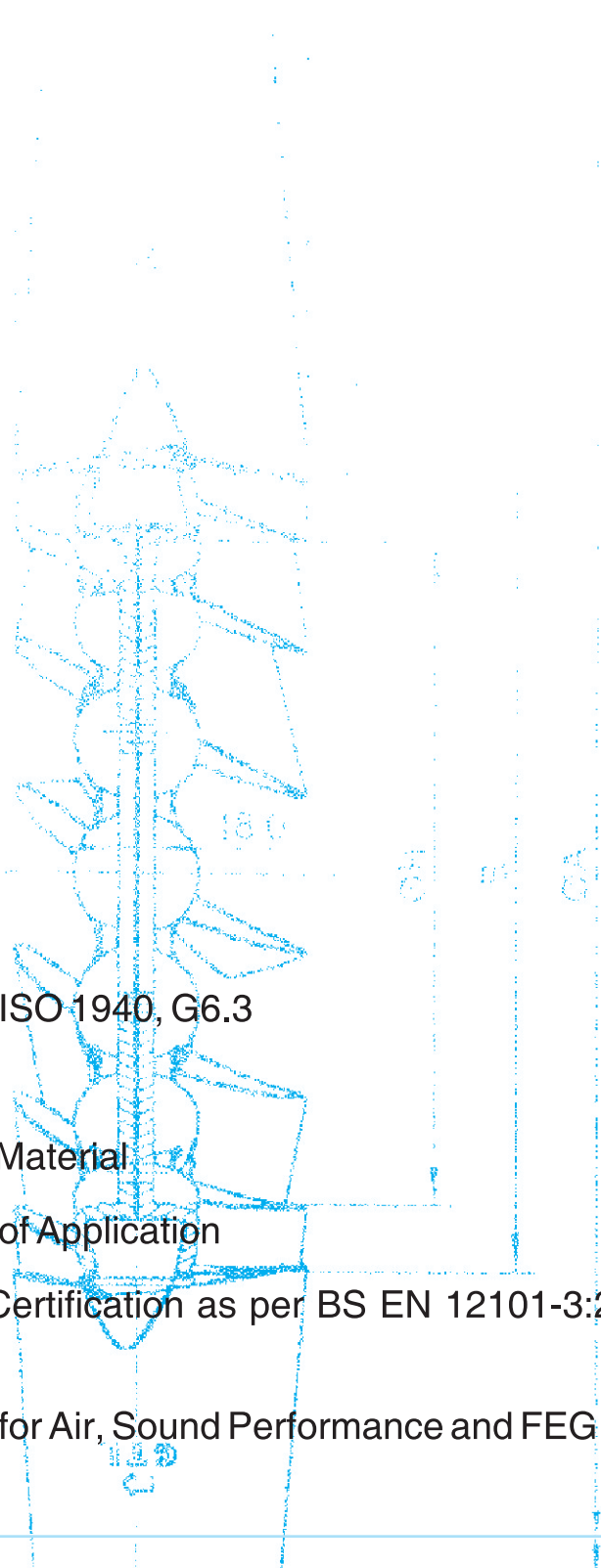
## Introduction

The Nicotra Gebhardt axial fan provide wide range of air volume from 360 m<sup>3</sup>/hr to 216,000 m<sup>3</sup>/hr, at static pressure up to 1000 Pa, for complete fan system with most diversified applications. Remarkably high fan efficiencies are the direct result of rigorously developed aerodynamically profiled impeller blades and advanced manufacturing techniques.

## FEATURES



- High Efficiency
- Fully Adjustable Blade
- Versatile
- High Quality Material
- Interchangeable Components
- The Axial Impeller is Balanced as per ISO 1940, G6.3
- Robust Construction
- GRN & Pressure Die Cast Aluminum Material
- Anti-Static GRN Blades for Spark Proof Application
- ADTA-F Series having Third Party Certification as per BS EN 12101-3:2015, for Smoke Spill Application
- ADTA & ADTA-F are AMCA Certified for Air, Sound Performance and FEG



## Test Standard

Our performances ratings are for standard units. Fans have been tested in accordance to method 1, BS 848 Part 1 : 1980. Under this standard, test results are corrected to standard air density of 1.2kg/m<sup>3</sup>.

Any variation in individual fan performance due to manufacturing variations falls within class B tolerances of the British Standard. Fan sound levels are given on performance curves together with octave band spectrum, according to in-duct method specified in BS 848 Part 2.

## Impeller

Aerofoil blades are available in three types of material. They are Glass Reinforced Nylon (GRN), Aluminium (AL) and Anti-static GRN (ASTAT).

## GRN, Glass Reinforced Nylon

Glass reinforced Nylon 66 has greater strength and high temperature capability (-40°C to + 150°C of non-radiant heat). Higher speeds are acceptable for standard impeller when GRN blades are fitted. Recommended maximum tip speed for GRN is 115m/sec.

## Aluminium, AL

Blades are available in aluminium LM6, Proven for use in emergency smoke and fume extract applications up to 400°C. It is also suitable for continuous operation -40°C to +200°C. Maximum tip speed for AL blades is 100m/sec.

## Anti-Static Blades

GRN Blades specially formulated to provide anti-static properties are available. The principle application is for installations which are categorised as “potentially explosive atmosphere” and where the risk of ignition of gas or dust vapours through a spark incident are a possibility.

These anti-static blades which are made with 20% glass filling (as a standard) have a percentage of carbon black added to control the surface resistivity.

The anti-static blades have a slightly lower tensile strength than the normal GRN blades,

We recommend continuous operating temperature limited to -30°C to 110°C.



## Balancing

All Nicotra Gebhardt axial impellers and fans are statically and dynamically balanced to ISO Std No 1940 edition using balancing grade of G6.3 (Displacement Amplitude = 6.3 mm/s).

## Hub System

Our range of axial fan, comes with fully adjustable blades. We have 5 hubs systems as shown below :

Hub Size	Number of Blades
110	5 Blades
160	5 & 10 Blades
230	3, 6 & 12 Blades
250	3, 6 & 12 Blades
400	4, 8, 12 & 16 Blades

## Blades Design / Types

Basically, we have the following design of impellers :

Design Type	Material	Hub System
B	ALU	110, 160, 230
T	ALU	250
C	ALU	400

## Casing Surface Finishing

All standard axial fan tube casing's surface are applied with paint - RAL 7030 by an effective powder coating method. Coating thickness is minimum 60µm.

By this method, tube casing surface appears to be wrinkle free and provide better protection against chemical wear.

Long case axial casings are rolled from 2.0 mm to 5.0 mm mild steel. The double flanged L bracket mounting is provided as a standard. Foot mounted support can also be provided as optional. Our tube casings come with a standard view port. The access doors are provided as optional.

## **Electric Motor**

Nicotra Gebhardt use standard three phase motors TEFC, foot mounted insulation in accordance with IEC standard EN 60034, Enclosure IP55, insulation Class "F". Other medium temperatures, protection classes, two speed motor (poles switch) etc can be provided as optional.

## **Computer selection**

Our user-friendly fan selection software allows you to select the most suitable model to your needs. Performance data and fan curve will be generated by the state of art software.

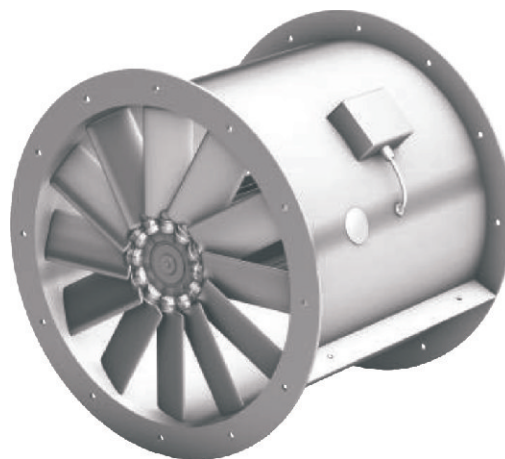
## ADTA Series

### APPLICATION

Nicotra Gebhardt ADTA are particularly suitable for the extraction of stale air, for general ventilation, drying process and all those applications which require moving large volumes of air.

### CONSTRUCTION

The housing is made of heavy-gauge mild steel long casing with seamless double flanges at both end. Powder coated bake enamel finishing (minimum 60 micron) is provided as a standard option. The high efficiency impeller are made of adjustable pitch aerofoil blade; ALU type or GRN type. Foot mounting are provided as optional.



### WORKING TEMPERATURE

-40°C to 150°C : GRN

-40°C to +200°C : ALU

### MOTOR

Three-phase, Totally Enclosed Fan Cooled (TEFC), horizontal foot mounted Squirrel Cage Induction Motor is provided, featured with class F insulation system with Class B temperature rise (80°C). Voltage supply includes 400V/50Hz, motor standards comply with IEC 60034 or BS 4999 / IS 325. Other motor requirements can be offered as per requirement.

Motor are wired to an external terminal box with cable, through PVC or steel flexible conduit.

### DIRECTION OF THE AIR

The standard air flow direction shall be from the impeller to the motor (B). As per demand, the fans can also be supplied with air flow direction from the motor to the impeller (A).

## **Air Performance**

Air performance ratings of the ADTA fans described by ADTA catalogue have been derived from performance tests made with installation type "A (Free inlet & Free outlet) & D (with ducted inlet and ducted outlet)". These tests were carried out in accordance with AMCA standard 210-07 (Fig. 12, and Fig. 15). Ratings are referred to the standard air density.

## **Sound Power Level**

Noise ratings are calculated starting from sound power level measurements made in accordance with the AMCA standard 300-08, (Fig. 2D and Fig. 3D). The test results keep into consideration the presence of the motor inside the fan.

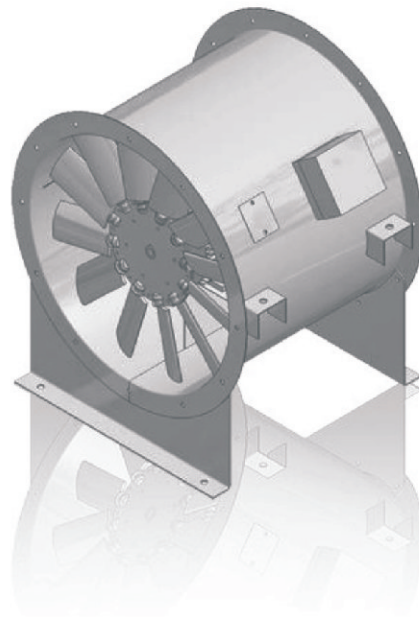
## ADTA-F Series

### APPLICATION

Nicotra Gebhardt ADTA-F smoke spill axial fans are particularly designed for the removal of hot toxic smoke in order to remove the smoke at the escape passage and assist firefighters by providing better visibility. It also provides ventilation to the area.

### CONSTRUCTION

The housing is made of heavy-gauge mild steel casing, seamless double flanges at both end, with powder coated bake enamel finishing. High efficiency impellers with adjustable pitch aerofoil blades are made out of pressure die cast Aluminium.



### MOTOR

High temperature resistance motor is provided in compliance with EN 120101-3 : 2015 directive. Three phase, Totally Enclosed Air Over (TEAO), horizontal foot mounted, Squirrel Cage Induction Motor is provided, featured with class H insulation system and Class B temperature rise (80°C). Voltage supply includes 400V/50Hz, motor standards comply with IEC 60034 or BS 4999. Other motor requirements can be offered as per requirement

Motor are wired to an external terminal box with high temperature cable, through flexible Metal conduit.

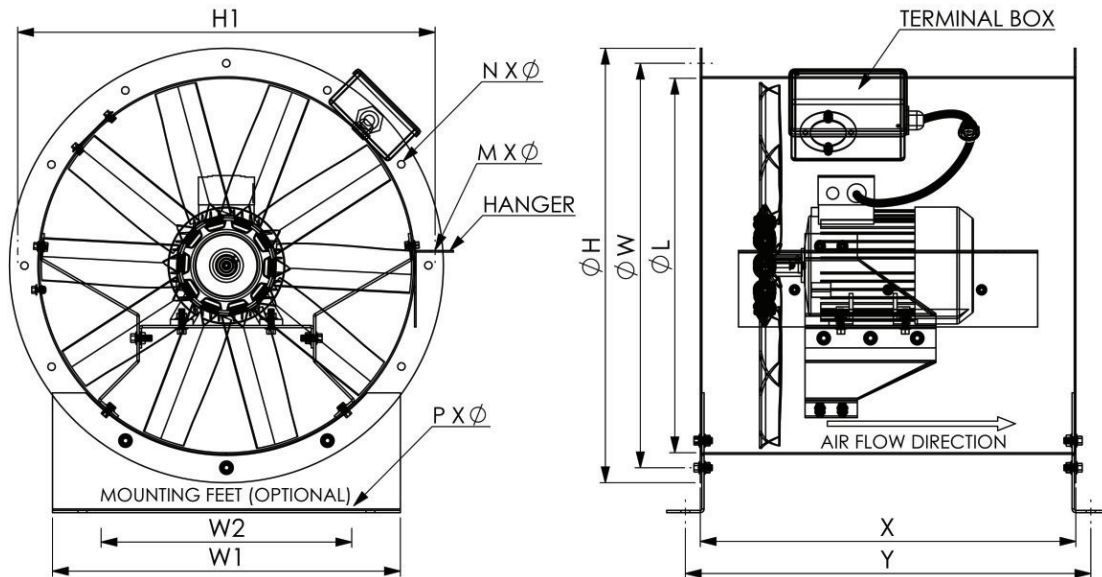
### TESTING

ADTA-F axial fans have been tested in accordance to EN 12101-3:2015.

### DIRECTION OF THE AIR

The standard air flow direction shall be from the impeller to the motor (B). As per demand, the fans can also be supplied with air flow direction from the motor to the impeller (A).

## ADTA, ADTA-F General Dimension



ADTA/ADTA-F GENERAL DIMENSIONS

MODEL	Ø L	Ø W	W1	W2	Ø H	H1	X	Y	N x Ø	M x Ø	P x Ø
315	315	355	340	190	395	365	355	405	8 x 10	2 x 13	2 x 13
400	400	440	340	190	480	450	355	405	12 x 10	2 x 13	2 x 13
500	500	540	485	335	580	550	500	550	12 x 10	2 x 13	2 x 13
560	560	605	485	335	660	610	500	550	12 x 10	2 x 13	2 x 13
630	630	675	485	335	730	680	500	550	12 x 10	2 x 13	2 x 13
710	710	755	485	335	810	760	500	550	16 x 12	2 x 13	2 x 13
800	800	845	545	395	900	850	530	610	16 x 12	2 x 13	2 x 13
900	900	945	615	465	1000	950	630	680	16 x 12	2 x 13	2 x 13
1000	1000	1045	615	465	1100	1050	630	680	24 x 12	2 x 13	2 x 13
1120	1120	1185	885	735	1250	1170	900	950	24 x 12	3 x 13	3 x 13
1250	1250	1315	985	835	1380	1300	1000	1050	24 x 12	3 x 13	3 x 13
1400	1400	1465	1150	1000	1530	1465	1007	1072	32 x 14	4 x 20	3 x 19
1600	1600	1665	1250	1100	1730	1665	1120	1185	32 x 14	4 x 20	3 x 19

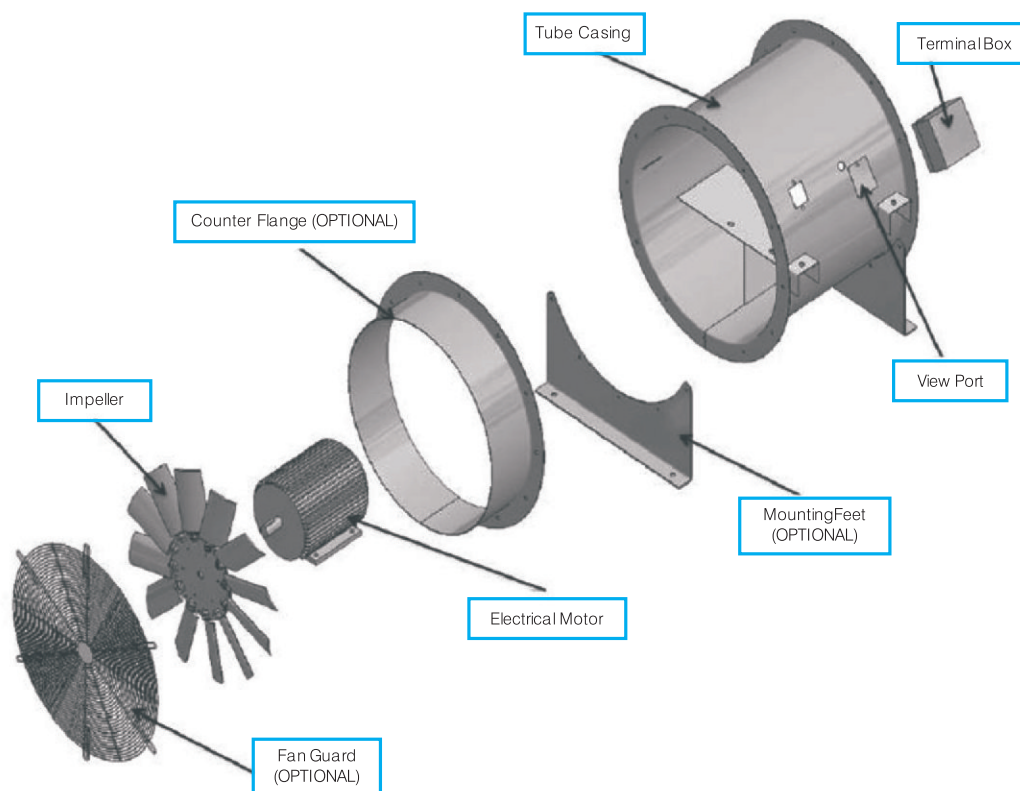
Due to a policy of continuous development and improvement the right is reserved to supply product which may differ from those illustrated and described in this publications.

Certified dimensions will be supplied on receipt of order

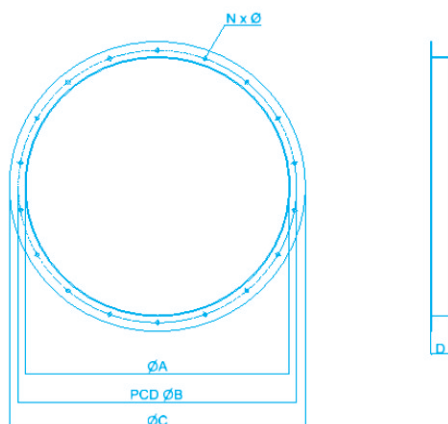
## ADTA, ADTA-F Exploded View

### Part List, Specification, Arrangement

Part Description		Specification
1	Tube Casing	Painted (RAL 7030), and powder coated
2	Terminal Box	PVC, Cast Iron, etc
3	Viewport Cover	Depend on t/casing material
4	Mouting Feet (Optional)	Depend on t/casing material
5	Counter Flange (Optional)	Depend on t/casing material
6	Electrical Motor	Specification as per requested
7	Impeller	ALU, GRN, GRN-antistatic
8	Fan Guard	Painted



## AXIAL COUNTER FLANGE (OPTIONAL)



MODEL	ØA	ØB (PCD)	ØC	D	N x Ø
315	315	355	395	40	8 X 10
400	400	440	480	40	12 X 10
500	500	540	580	40	12 X 10
560	560	605	660	40	12 X 10
630	630	675	730	40	12 X 10
710	710	755	810	40	16 X 12
800	800	845	900	40	16 X 12
900	900	945	1000	60	16 X 12
1000	1000	1045	1100	60	24 X 12
1120	1120	1185	1250	60	24 X 12
1250	1250	1315	1380	60	24 X 12
1400	1400	1465	1530	60	32 X 14
1600	1600	1663	1730	60	32 X 14

## **Axial Fan Accessories**

### **Vanes**

For Vane Axial fan requirements, we supply guide Vanes along with Axial Fans.

The Vanes are made of mild steel sheet duly powder coated. Powder coating thickness is minimum 60 µm.

### **Sound Attenuators**

We offer Circular Dissipative Silencers of different length, both at the inlet and exit of the Axial Fans, to reduce the airborne noise. The end caps have matching holes to exactly match the flange of the Fan.

### **Bird Screen**

We also offer matching Bird screen along with the Axial Fans. The mesh wire is made of mild steel with necessary crossing support.

### **Gravity Louver**

Gravity louver can be offered at Axial Fan outlet with a matching flange.

The flange & louvers are made of Steel.

### **Canvas**

Canvas can be offered for flexible connection at inlet or outlet.



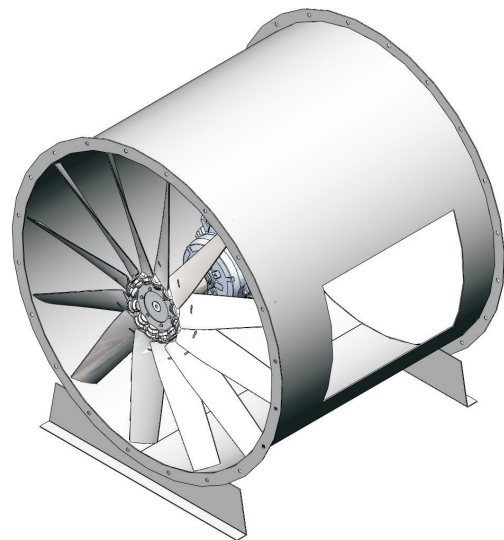
## Type ADB

### APPLICATION

Nicotra Gebhardt ADB series fans are particularly suitable for the extraction removal of hot, dusty laden, corrosive fumes or gaseous. Widely used in the kitchen fumes extraction and other dusty environment, where the electrical motor is isolated from the hazardous air stream.

### CONSTRUCTION

The housing is made of heavy-gauge mild steel casing, seamless double flanges at both end, duly powder coated. High efficiency impellers are made of adjustable pitch aerofoil blades either ALU or GRN type.



### WORKING TEMPERATURE

-40°C to 150°C : GRN

-40°C to +200°C : ALU

### MOTOR

Three-phase, Totally Enclosed Fan Cooled (TEFC), horizontal foot mounted Squirrel Cage Induction Motor, featured with class F insulation system and class B temperature rise (80°C). Voltage supply includes 400V/50Hz, 400V/60Hz or 440V/60Hz. Motor Standards comply with IEC 60034 or BS 4999. Other motor requirements can be offered as per requirement

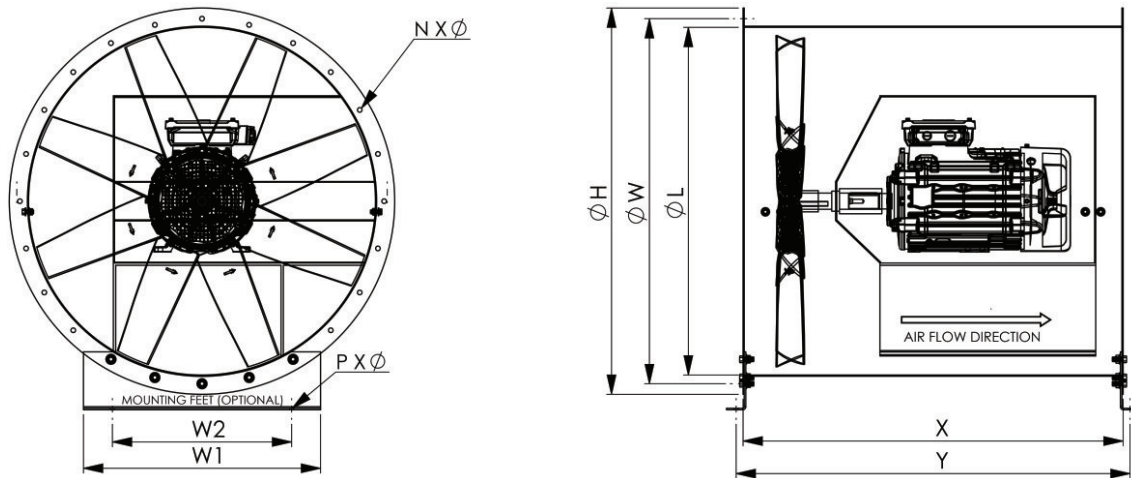
Motor are wired to an external terminal box with cable and flexible conduit.

Please refer to page 17 Appendix for wire connection diagram.

### DIRECTION OF THE AIR

The standard air flow direction shall be from the impeller to the motor (B). As per demand, the fans can also be supplied with air flow direction from the motor to the impeller (A).

## ADB General Dimension



**ADB GENERAL DIMENSIONS**

MODEL	$\varnothing L$	$\varnothing W$	$W_1$	$W_2$	$\varnothing H$	$H_1$	$X$	$Y$	$N \times \varnothing$	$P \times \varnothing$
400	400	440	340	190	480	450	460	510	12 x 10	2 x 13
500	500	540	485	335	580	550	650	700	12 x 10	2 x 13
560	560	605	485	335	660	610	650	700	12 x 10	2 x 13
630	630	675	485	335	730	680	650	700	12 x 10	2 x 13
710	710	755	485	335	810	760	700	750	16 x 12	2 x 13
800	800	845	545	395	900	850	750	850	16 x 12	2 x 13
900	900	945	615	465	1000	950	950	1000	16 x 12	2 x 13
1000	1000	1045	615	465	1100	1050	950	1000	24 x 12	2 x 13
1120	1120	1185	885	735	1250	1170	1100	1150	24 x 12	3 x 13
1250	1250	1315	985	835	1380	1300	1100	1150	24 x 12	3 x 13

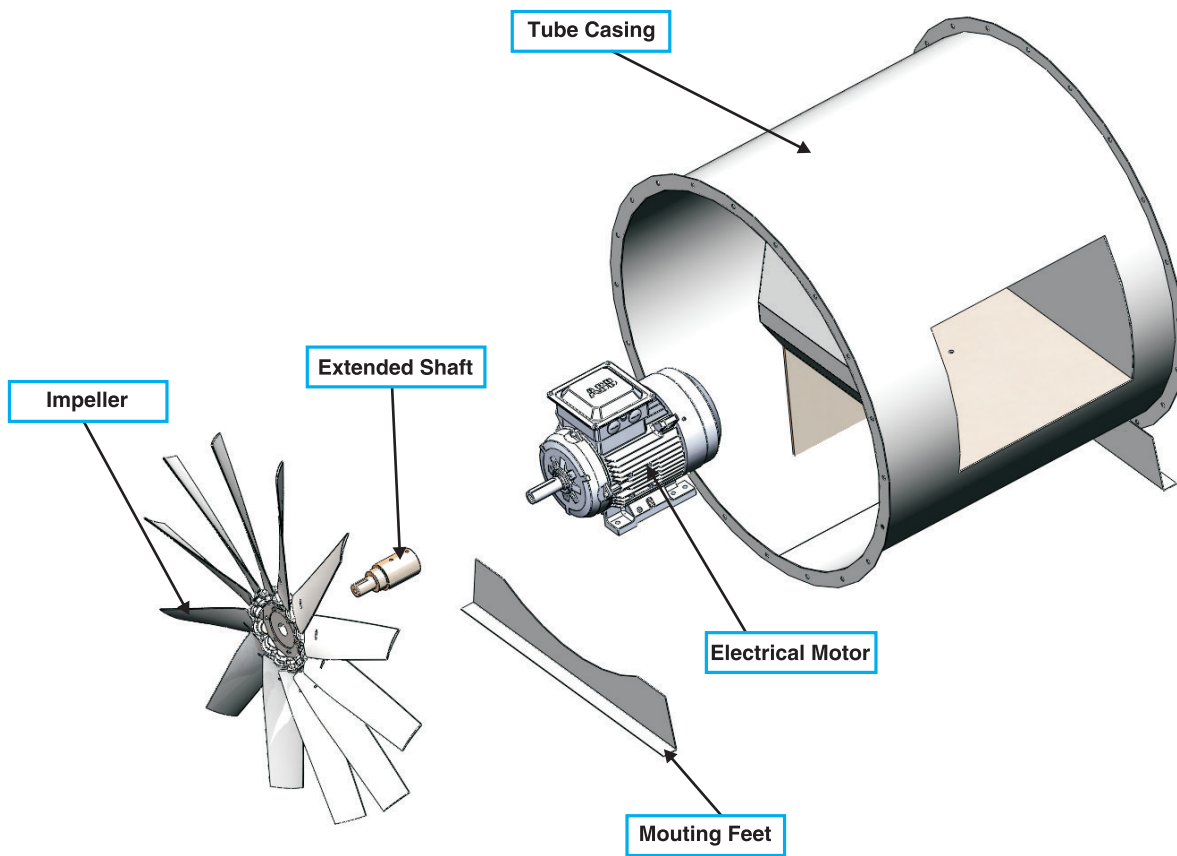
Due to a policy of continuous development and improvement the right is reserved to supply product which may differ from those illustrated and described in this publications.

Certified dimensions will be supplied on receipt of order

## ADB Exploded View

### Part List, Specification, Arrangement

	Part Description	Specification
1	Tube Casing	Powder Coated
2	Electrical Motor	Specification as per requested
3	Mouting Feet	Powder Coated
4	Extended Shaft	Steel C45
5	Impeller	ALU, GRN, GRN-antistatic



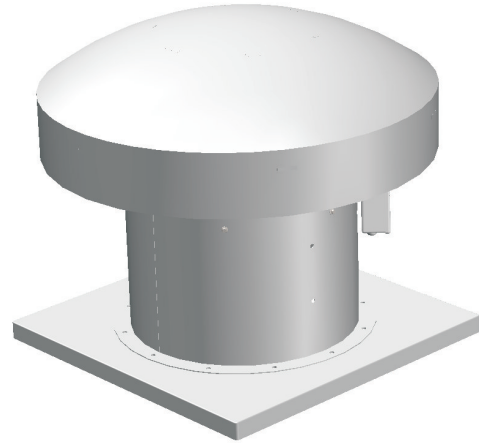
## Type ADTA - RD

### APPLICATION

Nicotra Gebhardt ADTA - RD are particularly suitable for the roof extraction of stale air, for general ventilation, and all those applications which require moving large volumes of air and limited tenure space, especially factory, Hyper-market and etc.

### CONSTRUCTION

The housing is made of heavy-gauge mild steel casing, seamless double flanges at both end, duly powder coated baked enamel finishing (about 60 micron). High efficiency impeller is made of adjustable pitch aerofoil blades, either ALU or GRN type. Cylindrical housing is stacked with square base plate facing on to horizontal base or tilted to suit the roof pitch. Rain hood provides protection against adverse outdoor weather condition.



### WORKING TEMPERATURE

-40°C to 150°C : GRN

-40°C to +200°C : ALU

### MOTOR

Three-phase, Totally Enclosed Fan Cooled (TEFC & TEAO), horizontal foot mounted Squirrel Cage Induction Motor is provided, featured with class F insulation system and class B temperature rise (80°C). Voltage supply includes 400V/50Hz. Motor Standards comply with IEC 60034 or BS 4999. Other motor requirements can be offered as per requirement.

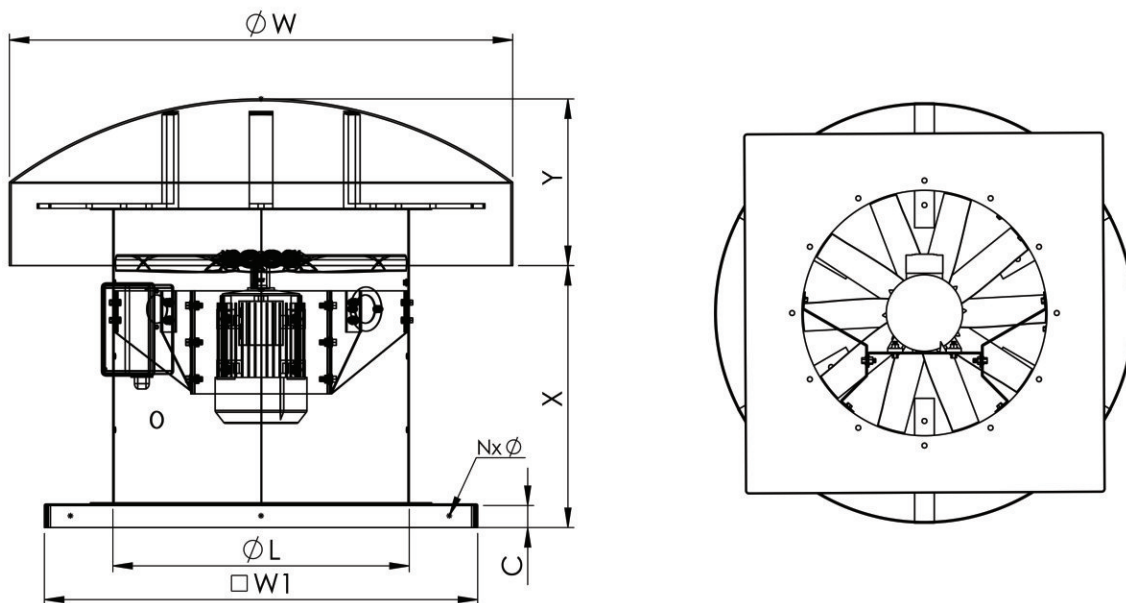
Motor are wired to an external terminal box with cable and through PVC or steel flexible conduit.

Please refer to page 18 Appendix for wire connection diagram.

### DIRECTION OF THE AIR

The standard air flow direction is from the motor to impeller (A).

**ADTA - RD General Dimension**



view : 3 holes on each side of fan support base

**ARD GENERAL DIMENSIONS**

MODEL	$\varnothing L$	$\varnothing W$	W1	X	Y	C	N x $\varnothing$
400	400	850	600	355	280	40	12 x10
500	500	850	730	500	280	40	12 x10
560	560	1250	810	500	400	50	12 x10
630	630	1250	895	500	400	50	12 x10
710	710	1250	990	500	400	50	12 x10
800	800	1500	1100	530	450	63	12 x10
900	900	1500	1235	630	450	63	12 x10
1000	1000	1500	1375	630	450	63	12 x10
1120	1120	2250	1520	900	700	63	12 x10
1250	1250	2250	1650	1000	700	63	12 x10

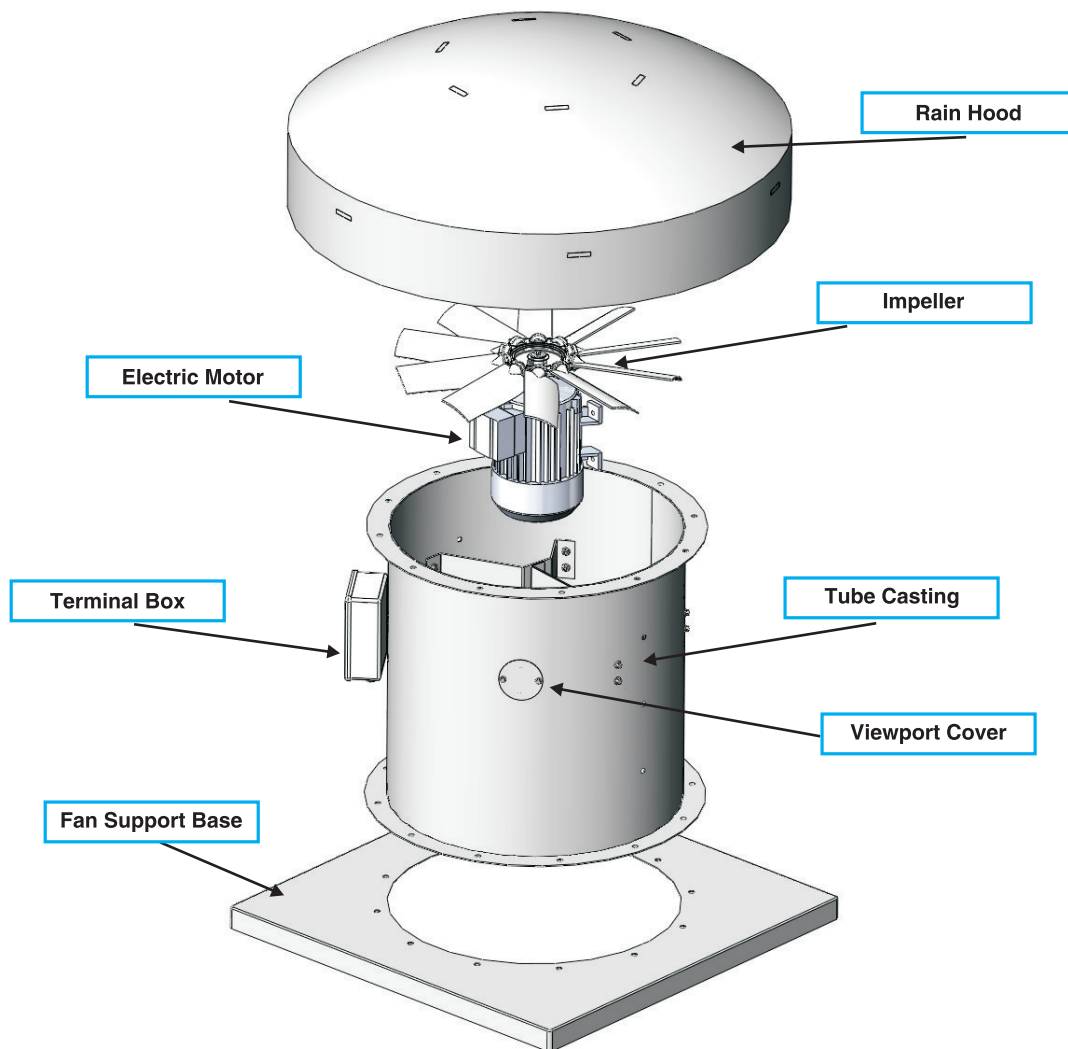
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Certified dimensions will be supplied on receipt of order

## ADTA - RD Exploded View

### Part List, Specification, Arrangement

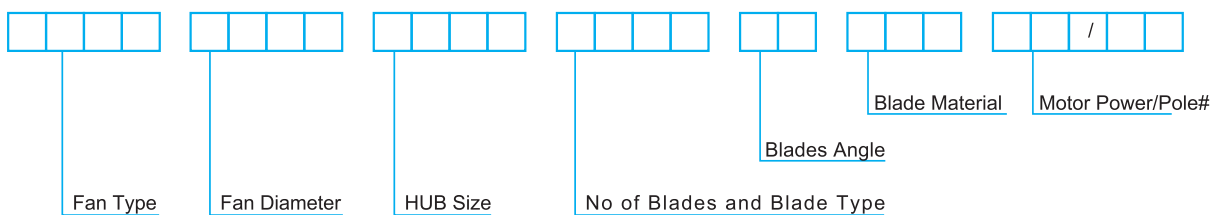
	Part Description	Specification
1	Rain Hood	Fiber Glass
2	Impeller	ALU, GRN, GRN-antistatic
3	Electric Motor	Specification as per requested
4	Tube Casting	Painted (RAL 7030)
5	Terminal Box	PVC, Cast Iron, Mild Steel, etc.
6	Viewport Cover	Depend on t/casting material
7	Fan Support Base	Depend on t/casting material



## Nomenclature

When ordering Nicotra Gebhardt Axial fans, please specify your requirements in the followings sequence to avoid confusion.

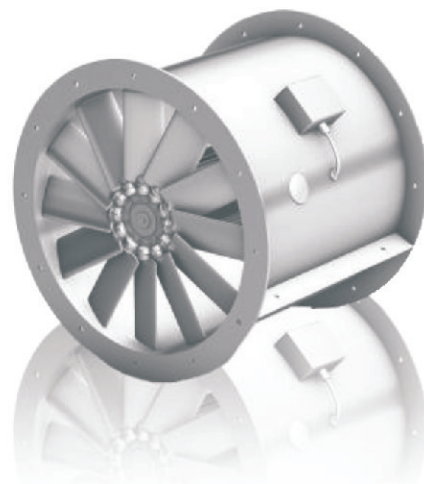
1. Fan Type and Performance Data
  - Fan Type: ADTA, ADTA-F
  - Capacity
  - Static Pressure
  
2. Electric Motor Details
  - Power, main supply, voltage, frequency, 50 Hz or 60 Hz type
  - Motor Speed, Polarity
  - Insulation (Class F, Class H, etc)
  
3. Impeller Material
  - Glass Reinforced Nylon, GRN
  - Aluminium, ALU
  - Anti Static GRN



### Description (Sample)

ADTA1000/400/08C/20.0/ALU-18.5/4P

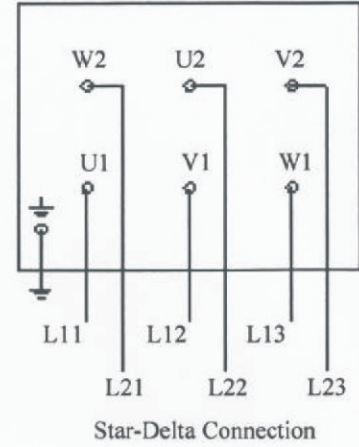
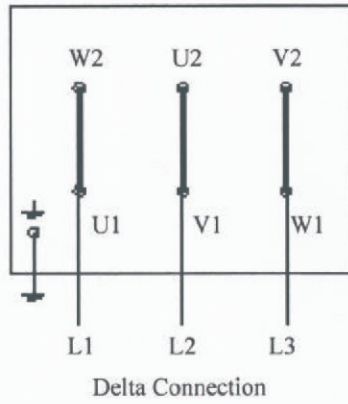
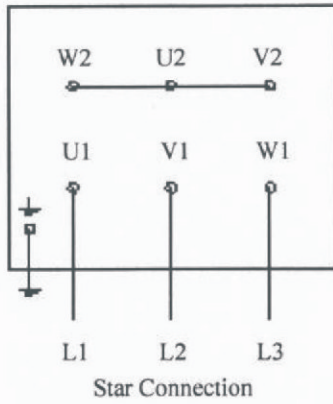
ADTA	Long Case Drive
1000	Fan Diameter = 1000mm
400T	Hub Size
8C	Blade type C, Qty = 8
20°	Blade Angle 20 Deg
ALU	ALU Material



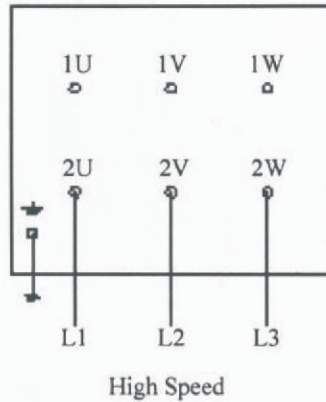
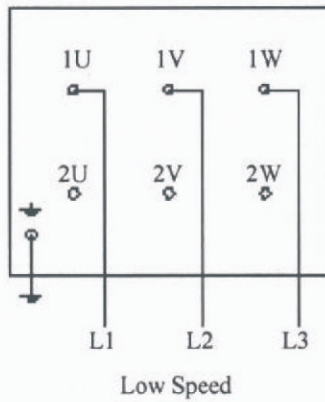


## Appendix

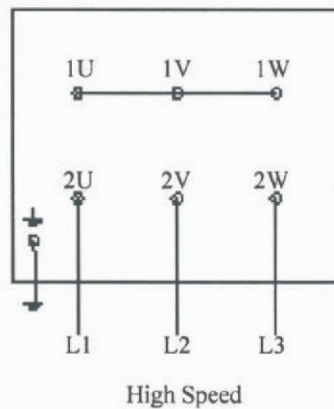
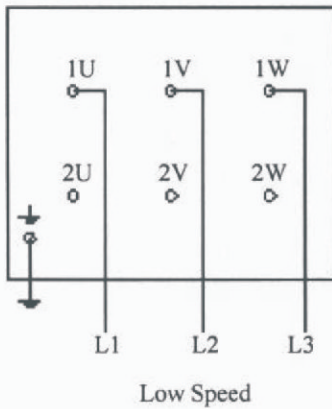
### Wiring Diagram For Various Application



#### Multi-speed motors in Dahlander Connection (tapped winding)



#### Multi-speed with 2 separate Windings











AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.

# NEWS RELEASE

Revised  
August 9, 2004

## NICOTRA INDIA PVT. LTD. JOINS AMCA INTERNATIONAL'S CERTIFIED RATINGS PROGRAM

The Air Movement and Control Association International, Inc. (AMCA International) announced Nicotra India Pvt. Ltd. Of Noida, India has three centrifugal fans licensed through AMCA International's Certified Ratings Program.

The following fans were licensed for air performance:  
Model ADH Forward Curved DWDI Centrifugal Fan  
Model AT Forward Curved DWDI Centrifugal Fan  
Model RDH Backward Inclined DWDI Centrifugal Fan

The newly licensed model appears in "Licensed Products" under Nicotra India Pvt. Ltd. on AMCA International's website ([www.amca.org](http://www.amca.org)).

Under AMCA International's Certified Ratings Program, products are tested for performance in accordance with an AMCA or other internationally recognized method of test standard. AMCA International also verifies that the manufacturer's catalogues, printed or electronic, are accurate. All products undergo periodic check tests to ensure that conformance is maintained.

\*\*\*

The Air Movement and Control Association International, Inc. is a not-for-profit international association of the world's manufacturers of related air system equipment — primarily, but not limited to fans, louvers, dampers, air curtains, airflow measurement stations, acoustic attenuators, and other air system components for the industrial, commercial, and residential markets.

The association's mission is to promote the health and growth of the industries covered by its scope and the members of the association consistent with the interests of the public. AMCA International, with origins dating back to 1917, has members in most industrialized countries throughout the world.

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ITALY



FRANCE



GERMANY



SPAIN



BELGIUM



UK



MALAYSIA



THAILAND



AUSTRALIA



CHINA



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