

# AXIAL FAN MODEL AFM

**DLK**<sup>®</sup>  
VENTILATOREN

**FAN  
TECHNOLOGY**  
OF COMPLETE INDUSTRY

Product Brochure

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# AFM Series

## Introduction

DLK Asia has developed an agile and engineered product line to tackle ventilation at volumes large, small, dusty, roofed, and more. This is accomplished with our AFM, AFM-F, AFM-B, AFM-R models, letting the AFM series meet your every purpose.

With this product lineup we can effectively provide extraction with ranges 360m<sup>3</sup>/hr - 216,000m<sup>3</sup>/hr, with static pressure rated for 1000 Pa.

## Features

- Versatile Application
- Quality Construction
- Modularized Components
- GRN/ALU Blade Material
- Anti-static GRN
- Specialized Three-phase Motor
- Third Party Certificate on BS 7346, part 2: BS 1990 for Smoke Spill Application

# AFM's Technologies

## Impeller

Our AFM line offer impeller blades constructed in either material: Glass Reinforced Nylon (GRN) and Aluminium (AL).

## Glass Reinforced Nylon

Glass Reinforced Nylon 66 impellers boast greater strength, higher operating temperatures (-40°C to 150°C), and are able to operate at faster speeds (RPM).

## Aluminium

Aluminium LM6 impellers offer the best solution for fume, and emergency smoke extraction (up to 400°C) in operating temperatures (-40°C to 200°C). Continuous operation is rated for -40°C to 200°C. Note, the maximum tip speed is 100m/sec.

## Balancing

AFM fans and axial-impellers are balanced as per ISO Standard No. 1940 with a balancing grade of G2.5 and a Displacement Amplitude of 2.5mm/s

## Casing Surface Finishing

AFM axial fan tube casing's surface use a paint – RAL 7030 via a powder coating method, with a coating thickness of 60µm. Thanks to this method we are able to produce AFM fans with tube casings which appear with a “wrinkled” texture, providing increased protection against chemical and environmental wear.

Long case axial casings are rolled from 2.0mm to 5.0mm mild steel, a standard double-flanged L bracket mounting is provided, with a foot mounted support as an option. Tube casing comes with a standard view port and an access door can be requested as a further option.

## Electric Motor

Our AFM model uses a standard three phase motor (TEFC), foot mounted insulation is in accordance with IEC standard EN 60034, Enclosure IP55, with insulation Class “F”.

## Reversed Airflow

Our AFM series achieves a reversed air flow direction by reversing the direction of rotation, the impact on performance in this mode is as follows:

Volume Reduction: -40%

Pressure Reduction: -50%

Power Reduction: -35%

## Improved Reversible Airflow

For improved performance with reversed airflow: every other blade ought to be set in the opposite direction of flow, the new impact on performance in this mode is as follows:

Volume Reduction: -20%

Pressure Reduction: -35%

Power Reduction: -30%

## Contra-Rotating

A multi-stage axial fans with contra-rotating impellers are further options. A two stage contra-rotating assembly develops approximately 2.5 times the pressure developed by a single stage fan and increases the overall sound level by 8-10 dB.

To select a contra-rotating axial, divide the static pressure by 2.5 and select as though it was a single stage unit. The kW figure is for one stage only and should multiply 2 to the system.

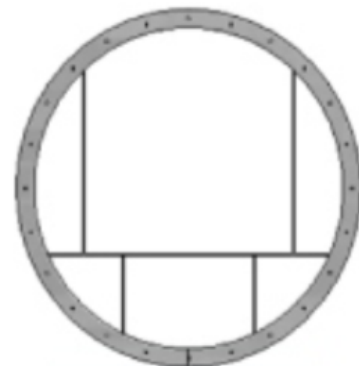
## Casing Dimensions



0315-0560

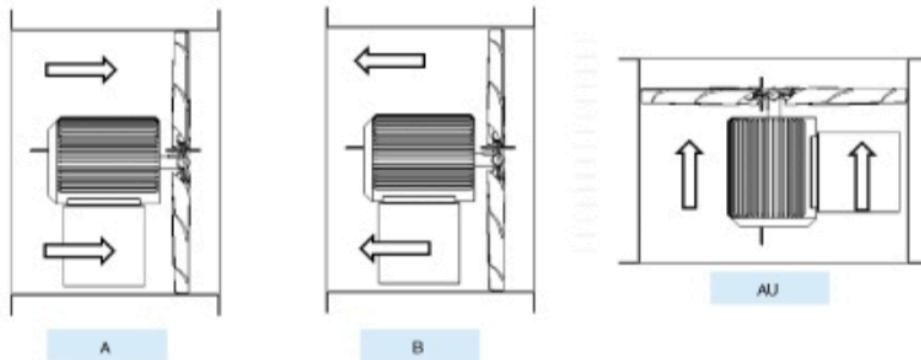


0630-1600(≤FS200)



1120-1600(≤FS200)

## Standard Arrangement



A = From motor to impeller

B = From impeller to motor

AU = From the motor to the impeller, up position

## Air Performance

Our AFM series air performance ratings are derived from performance tests made with installation type “D” with a ducted inlet and outlet. These tests were carried out in accordance with DIN EN ISO 5801 and DIN 24166 with accuracy class 2. Ratings refer to standard air density.

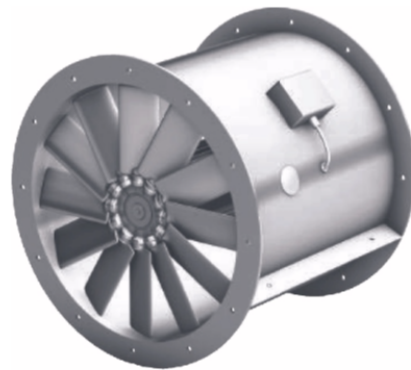
## Fan Balancing

Our Fan Balancing quality assurance is performed under DIN EN ISO 21940-11 grade G2.5

# AFM SERIES

## Uses

Our eponymous AFM series is the perfect solution when moving large volumes of stagnant air is your problem. Designed for use in general ventilation as well as large volume drying processes.



AFM CAD DESIGN

## Build

The build includes a heavy-gauge steel casing structure and a powder coated bake enamel finishing with the the option of galvanized steel.

Our high-efficiency impeller is made of adjustable pitch aerofoil blade: available in ALU or GRN type. Further options include foot mounting & hot-dipped galvanized casing.

## Operating Temperature

The operating temperatures differs depending on your choice of GRN and ALU impeller types:

GRN: -40°C to 150°C

ALU: -40°C to 200°C

## Motor

Three-phase motor which is "Totally Enclosed Fan Cooled" (TEFC), horizontal foot mounted Squirrel Cage Induction Motor, featuring a class F insulation.

Voltage supply of 400V/50Hz or 440V/60Hz.

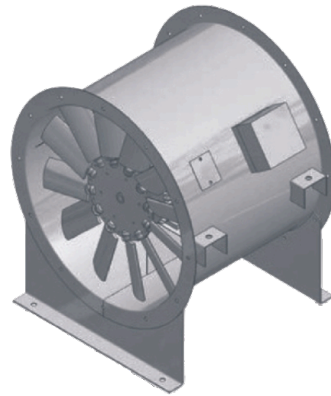
All motors comply with standard IEC 60034 and BS 4999.



# AFM-F SERIES

## Uses

Our model-F incorporates the best of our model-F in general ventilation but specializes for medium pressure and heavier particulates. Perfect for cases such as smoke extraction and removal of heavy particulates



AFM-F CAD DESIGN

## Build

The build includes a heavy-gauge steel casing structure and a powder coated bake enamel finishing with the the option of galvanized steel.

Our high-efficiency impeller is made of adjustable pitch aerofoil blade: available in ALU or GRN type. Further options include foot mounting & hot-dipped galvanized casing.

## Operating Temperature

Operating temperature differs between GRN and ALU imepeller types:

GRN: -40°C to 150°C

ALU: -40°C to 200°C

## Motor

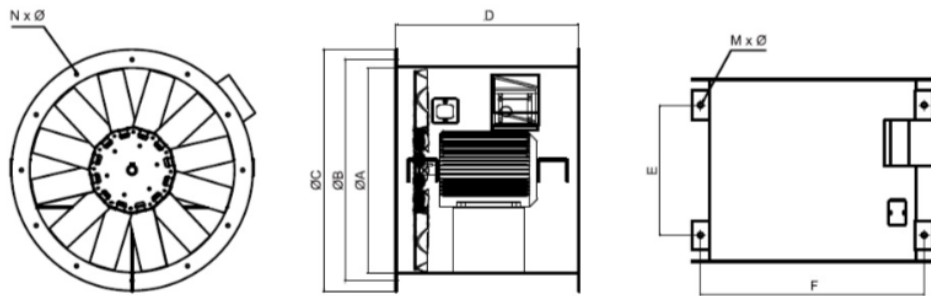
Three-phase motor which is “Totally Enclosed Air Over” (TEAO), with a horizontal foot mounted Squirrel Cage Induction Motor, featuring a class H insulation.

Voltage supply of 400V/50Hz or 440V/60Hz.

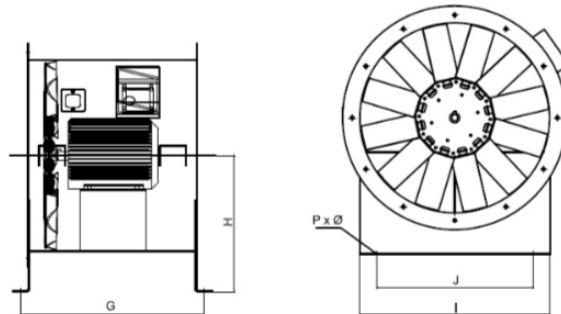
All motors compy with standard IEC 60034 and BS 4999.

# AFM,AFM-F Specification

## Hanger



## Mounting Feet (Optional)

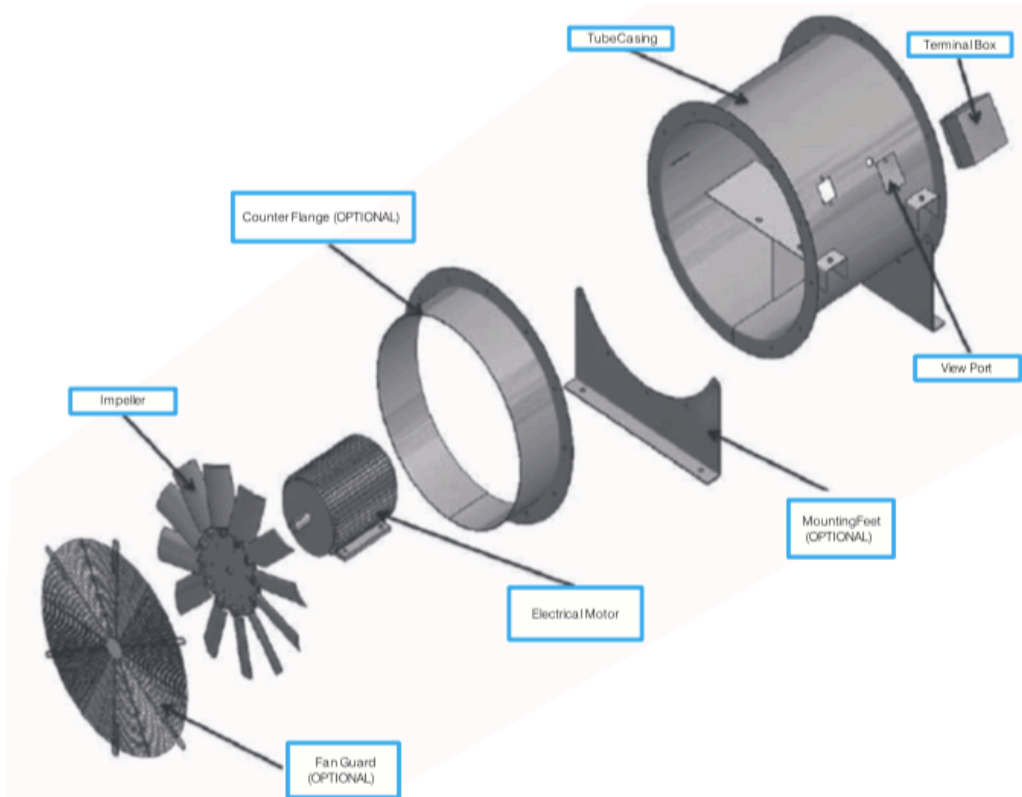


## Dimensions Reference

MODEL	ØA	ØB (PCD)	ØC	D	N x Ø	E	F	M x Ø	G	H	I	J	P x Ø	Size
315	315	355	395	355	8 X 10	211	365	4 X 16	395	277.5	265	315	2 x 10	90
400	400	440	480	355	12 X 10	211	450	4 X 16	395	320	350	400	2 x 10	90
400	400	440	480	435	12 X 10	291	450	4 X 16	475	320	350	400	2 x 10	112
500	500	540	580	500	12 X 10	356	550	4 X 16	538	370	450	500	2 x 14	132
560	560	605	660	500	12 X 10	356	611	4 X 16	538	402.5	480	560	2 x 14	132
630	630	675	730	500	12 X 10	326	691	4 X 20	538	437.5	530	630	2 x 14	112
630	630	675	730	700	12 X 10	526	691	4 X 20	738	437.5	530	630	2 x 14	160
710	710	755	810	500	18 X 12	324	774	4 X 20	536	477.5	610	710	2 x 16	112
710	710	755	810	710	18 X 12	534	774	4 X 20	746	477.5	610	710	2 x 16	160
800	800	845	900	560	18 X 12	384	864	4 X 20	596	522.5	700	800	2 x 16	132
800	800	845	900	760	18 X 12	584	864	4 X 20	796	522.5	700	800	2 x 16	180
900	900	945	1000	630	18 X 12	454	964	4 X 20	666	592.5	800	900	2 x 16	132
900	900	945	1000	820	18 X 12	644	964	4 X 20	856	592.5	800	900	2 x 16	200
1000	1000	1045	1100	630	24 X 12	454	1065	4 X 20	666	672.5	900	1000	2 x 16	160
1000	1000	1045	1100	800	24 X 12	624	1065	4 X 20	836	672.5	900	1000	2 x 16	200
1120	1120	1185	1250	900	24 X 12	724	1185	4 X 20	936	742.5	1020	1120	2 x 16	225
1120	1120	1185	1250	1150	24 X 12	974	1185	4 X 20	1186	742.5	1020	1120	2 x 16	280
1250	1250	1315	1380	1000	24 X 12	794	1324	4 X 25	1084	807.5	1050	1250	3 x 20	250
1250	1250	1315	1380	1150	24 X 12	944	1324	4 X 25	1234	807.5	1050	1250	3 x 20	280
1400	1400	1465	1530	1120	32 X 14	912	1476	4 X 25	1202	882.5	1200	1400	3 x 20	280
1600	1600	1663	1730	1250	32 X 14	1042	1676	4 X 25	1332	981.5	1400	1600	3 x 20	315

# AFM,AFM-F Expanded View

## Arrangement, Part List, and Specification



	Part Description	Specification
1	Tube Casing	Painted (RAL 7015) Finishing, Hot Dipped, Stainless Steel
2	Terminal Box	PVC, Cast Iron, etc
3	Viewport Cover	Depends on casing material
4	Mounting Feet (Optional)	Depends on casing material
5	Counter Fledge (Optional)	Depends on casing material
6	Electric Motor	Specification based on order
7	Impeller	ALU, GRN
8	Fan Guard	Painted or Hot Dipped

# AFM-B SERIES

## Uses

Our Model-B is highly designed for use in hot, corrosive, and especially high-dust environments. Perfect for use in kitchen fume extraction, workshop environments, and other high-dust environments.



AFM-B CAD DESIGN

## Build

The build includes a heavy-gauge steel casing structure and a powder coated bake enamel finishing with the the option of galvanized steel.

Our high-efficiency impeller is made of adjustable pitch aerofoil blade: available in ALU or GRN type. Further options include foot mounting & hot-dipped galvanized casing.

## Operating Temperature

Operating temperature differs between GRN and ALU imepeller types:

GRN: -40°C to 150°C

ALU: -40°C to 200°C

## Motor

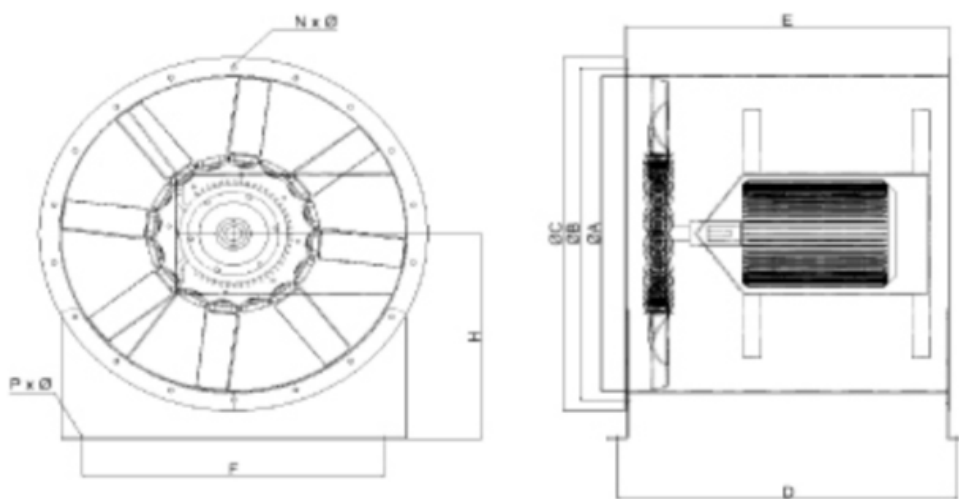
Three-phase motor which is “Totally Enclosed Fan Cooled” (TEFC), with a horizontal foot mounted Squirrel Cage Induction Motor, featuring a class H insulation.

Voltage supply of 400V/50Hz or 440V/60Hz.

All motors compy with standard IEC 60034 and BS 4999.

# AFM-B Specification

## General Dimensions

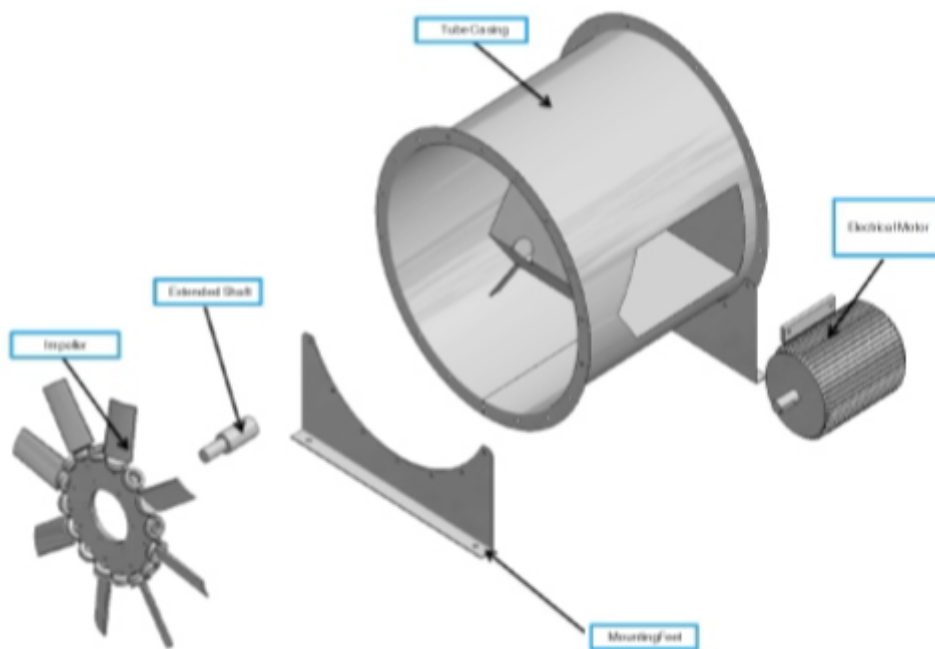


## Dimensions Reference

ADB GENERAL DIMENSIONS										
MODEL	ØA	ØB (PCD)	ØC	D	E	F	H	N x Ø	P x Ø	Mtr F.Size
400	400	440	480	500	460	395	320	12 X 10	2 x 10	D90S
450	450	490	530	500	460	440	345	12 X 10	2 x 10	D90L
500	500	540	580	688	650	538	370	12 X 10	2 x 14	D90L
560	560	605	660	688	650	538	402.5	12 X 10	2 x 14	D112M
630	630	675	730	688	650	538	437.5	12 X 10	2 x 14	D112M
710	710	755	810	736	700	536	477.5	18 X 12	2 x 16	D1120
800	800	845	900	786	750	596	522.5	18 X 12	2 x 16	D132M
900	900	945	1000	966	950	666	592.5	18 X 12	2 x 16	D160M
1000	1000	1045	1100	966	950	666	672.5	24 X 12	2 x 16	D160M
1120	1120	1185	1250	1136	1100	936	742.5	24 X 12	2 x 16	D225M
1250	1250	1315	1380	1184	1100	1084	807.5	24 X 12	3 x 20	D250M

# AFM-B Expanded View

## Arrangement, Part List, and Specification



	Part Description	Specification
1	Tube Casing	Hot Dipped, with an optional powder coating
2	Electric Motor	Customer Specification on request
3	Mounting Feet (Optional)	Hot Dipped
4	Extended Shaft	Steel C45
5	Impeller	ALU, GRN

# AFM-R SERIES

## Uses

Our model-R uses the technologies from our model-T in order to produce roof extraction for large volume ventilation. The model-R still holds the best

## Build

The build is a heavy-gauge mild-steel casing structure and a powder coated bake enamel finishing with the the option of galvanized steel.

The sleek design includes a slanted-cylinder structure with stacked sheet covers to protect against outdoor conditions.

Our high-efficiency impeller is made of adjustable pitch aerofoil blade: available in ALU or GRN type. Further options include foot mounting & hot-dipped galvanized casing.

## Operating Temperature

Operating temperature differs depending on your choice of GRN and ALU impeller types:

GRN: -40°C to 150°C

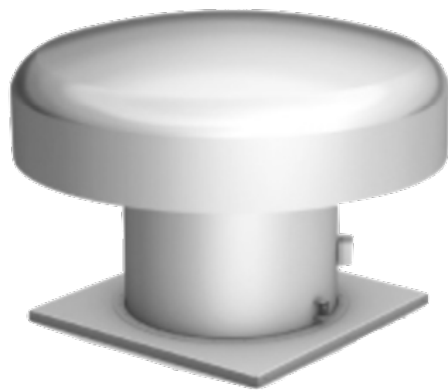
ALU: -40°C to 200°C

## Motor

Three-phase motor which is "Totally Enclosed Fan Cooled" (TEFC), horizontal foot mounted Squirrel Cage Induction Motor, featuring a class F insulation.

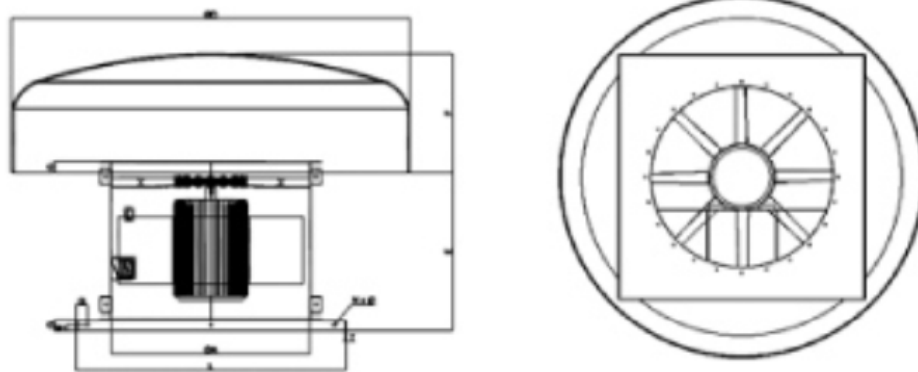
Voltage supply of 400V/50Hz or 440V/60Hz.

All motors comply with standard IEC 60034 and BS 4999.



AFM-R CAD DESIGN

# AFM-R Specification



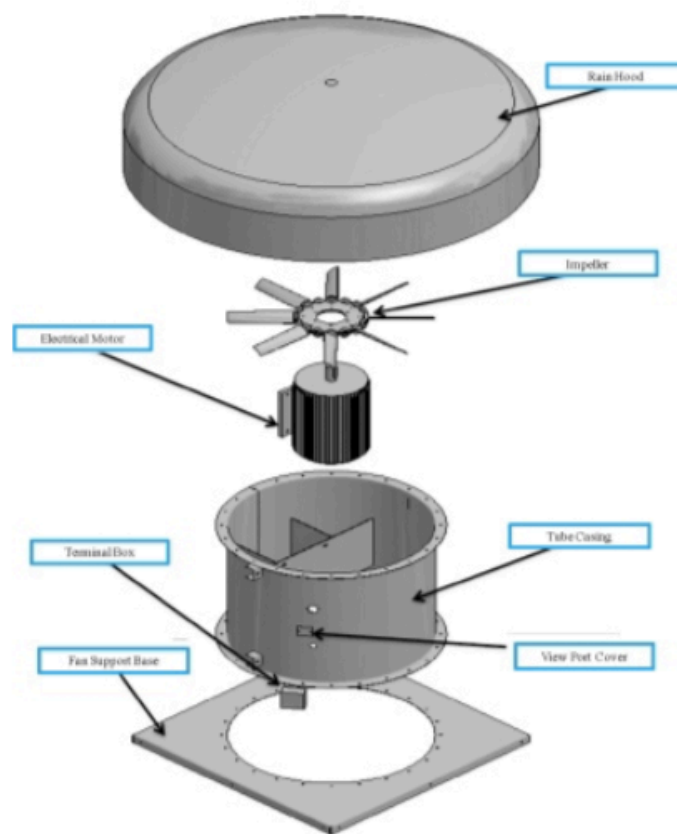
## DIMENSIONS REFERENCE

ARD GENERAL DIMENSIONS									
MODEL	ØA	D	E	F	G	L	T	N x Ø	Mtr F.Size
400	400	850	355	280	40	600	2.5	12 X 10	90
400	400	850	435	280	40	600	2.5	12 X 10	112
450	450	850	400	280	40	660	3	12 X 10	100
450	450	850	475	280	40	660	3	12 X 10	112
500	500	850	500	280	40	730	3	12 X 10	132
560	560	1250	500	400	50	810	3	12 X 10	132
630	630	1250	500	400	50	895	3	12 X 10	112
630	630	1250	700	400	50	895	3	12 X 10	160
710	710	1250	500	400	50	990	4	12 X 12	112
710	710	1250	710	400	50	990	4	12 X 12	160
800	800	1500	560	450	63	1100	4	12 X 12	132
800	800	1500	760	450	63	1100	4	12 X 12	180
900	900	1500	630	450	63	1235	4	12 X 12	132
900	900	1500	820	450	63	1235	4	12 X 12	200
1000	1000	1500	630	450	63	1375	4	12 X 12	160
1000	1000	1500	800	450	63	1375	4	12 X 12	200
1120	1120	2250	900	700	63	1520	4	12 X 12	225
1120	1120	2250	1150	700	63	1520	4	12 X 12	280
1250	1250	2250	1000	700	63	1650	4	12 X 12	250
1250	1250	2250	1150	700	63	1650	4	12 X 12	280



# AFM-R Expanded View

## Arrangement, Part List, and Specification

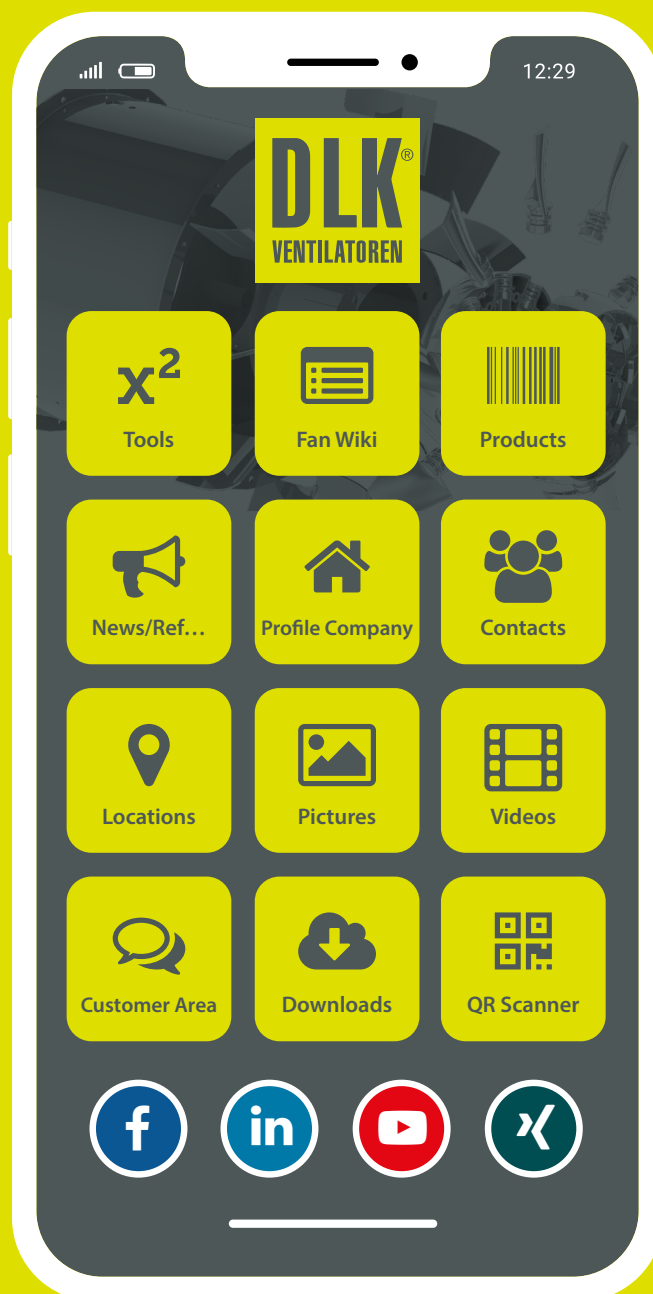


	Part Description	Specification
1	Tube Casing	Painted (RAL 7015) Finishing, Hot Dipped, Stainless Steel
2	Terminal Box	PVC, Cast Iron, etc
3	Viewport Cover	Depends on casing material
4	Rain Hood	Fiber Glass
5	Electric Motor	Specification based on order
6	Impeller	ALU, GRN
7	Fan Support Base	Depends on casing material
8		



# GET THE WORLD OF FANS ON YOUR SMARTPHONE

With this app, DLK Ventilatoren GmbH aims to provide our customers, prospective buyers, consultants and other technically interested persons a tool which offers quick help on construction sites and/or during meetings with regard to industrial fans and their design. Moreover, the application forms an interesting information and communication platform for all users in the world of industrial fans.



# DLK<sup>®</sup>

VENTILATOREN



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