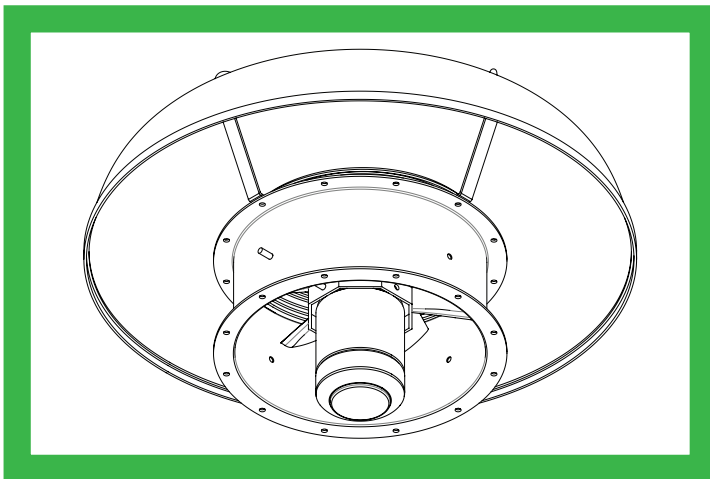


Axial Flow Roof Fans

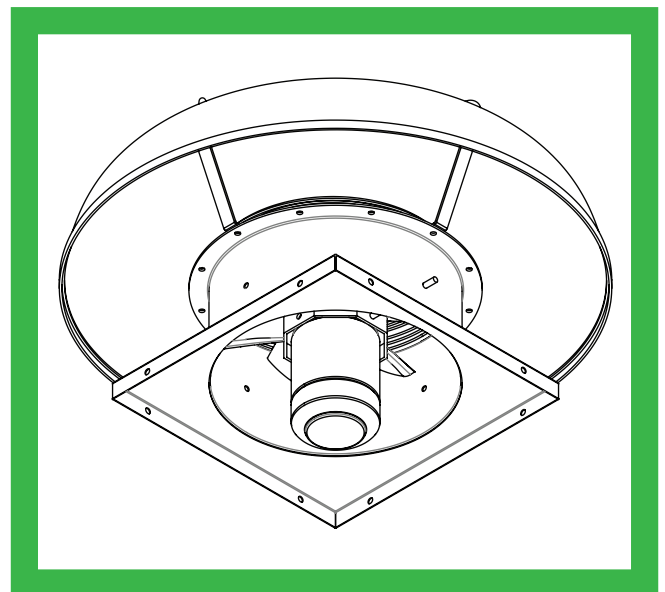
Suitable for smoke spill
Application 400°C / 2h



RF-AXV Series

Axial Dachventilatoren

auch geeignet für
Entrauchung 400°C / 2h



RFB-AXV Series

DA05.5

Axial Flow Roof Fans



Technical description

Description

Size Ranges (315~1000mm diameters)

Axial roof fans are manufactured with size ranges from 315mm to 1000mm diameters. Diameter above 1000mm can also be supplied upon request.

Performance

The performances are ranged from 1000 to 150000 CMH on air volume at a static pressure up to 1500. Performances are established in accordance to AMCA 210 / ISO 5801, inlet chamber and installation type C.

Roof Cap and Horizontal Square Base

The light weight standard roof cap are moulded in fire resistant glass fibre reinforced polyester resin or with spinned aluminium, which give maximum strength, anti-corrosion and ensures long life in all weather conditions. All metal parts are painted or galvanised.

For application, as option, the square base can be manufactured of galvanised steel sheet, aluminium or stainless steel to suit special requirement.

Suitable for smoke spill Application 400°C / 2h

Smoke Spill Roof Fan

Cylindrical roof cap and square base can be mounted on Wolter RF-AXV-HT axial fan series suitable for 400°C/2hours application. Upon requested, other application such as flameproof, multi-speeds, extra enclosure and over-heat protection can be supplied.

Impellers

The fan blades are aerodynamically profile guarantee highest efficiency and low noise. The standard blades come with durable flame retardant plastic are designed to give maximum performance combine with durability and trouble free operation. The impeller manufactured with high efficiency blade profile and adjustable pitch angle. Cast aluminium alloy blade can be supplied upon requested.

Wire Guard

Standard galvanised wire bird guards at the outlet are available for all models. Finger proof wire guard and wire guard at the inlet are available on requested.

Air Shutter

Air shutter can be supplied upon request for exhaust application to prevent back draught or heat loss from within the building when the fan is not running. Shutters are not recommended for low flow units. Motorise and automatic shutter can be supplied upon request.

Curb mounting units

The base is designed to fix on to a prepared curb on a flat roof. Base curb are available on requested.

Electric Induction Motor

Standard electric motor with wiring terminal box of ball bearing type. 50 or 60 Hz, 220 and 380 volts. Single or three phases supply. Isolator switch can also be supplied upon request.

Tropicalisation

Motor winding are coated with resin varnishes, which make the motor suitable for tropical atmospheres. Additional treatment can be carried out where motors are required to operate in severe tropical environments.

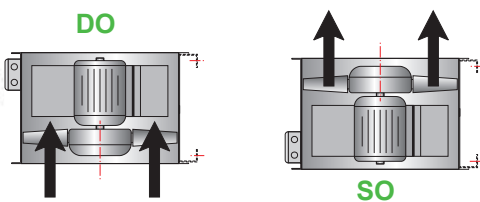
Axial Flow Roof Fans



Technical description

Forms of running

Axial roof fans are available for two forms of running. Standard form of running is "D0".



Ancillaries

Wolter offers a wide range of ancillaries, e.g.:

- Impeller or motor side guard
- Bell mouth inlet
- Anti-vibration mounts
- Silencers with or without pod
- Anti-spark-track for flame proof

Roof Unit Selection and Application

Quantity of fresh air required

The supply of fresh air to a room or building should remove airborne contamination and maintain an acceptable air temperature. The required flow rate should depend on the amount and type of contamination present in the air and on the thermal loads.

In addition, experiments have shown that odours are less easily dispersed in small airspace, so that room size is also important. These three factors will determine the fresh air requirements allow about 9.5 l/s of fresh air per person, increasing to 23.5 l/s per person where heavy smoking is likely. When dealing with heat load use the normal approximate formula:

$$\text{Volume} = Q / (K (T_i - T_o))$$

The air flow should be increased if excessive contamination is present such as steam in a kitchen, chemical fumes in a factory, etc., although it is always advisable to use hoods fixed above the relevant equipment and extract the fumes using a fan connected to the hood by ducting. When designing a hood extract system allow a face velocity of between 0.25 - 0.75 m/sec at the hood (depending on the amount of air disturbance in the room).

Grease filter should be used on kitchen extract system to avoid the fire risk associated with grease collecting in the ducting.

In cases where heat loads or the number of occupants are unknown it is often acceptable to estimate the air flow rates from data such as that shown in **Table 1** which lists average figures for various applications.

The number of fans to use for a given airflow will depend on the permissible noise levels and on flow distribution requirements.

Duplication the fan is often necessary to safeguard against possible failure. Intake grilles should be carefully positioned to provide even flow distribution and should be large enough to avoid excessive pressure losses.

Intake velocities should be about 5 m/s for industrial applications reducing to about 1m/s for critical draught free areas. Filters and heater batteries can also be incorporated in input grilles.

By suitably controlling fan speeds either manually or automatically, the airflow rates can be adjusted to suit varying conditions.

Axial Flow Roof Fans



Technical description

In some cases, reversal of fans can provide alternative airflow arrangements. When using extract fans for agricultural purposes, specialist literature should always be consulted due to the large number of factors to take into consideration. Table 2 is intended as a rough guides only.

Table 1, Airflow rate for various applications

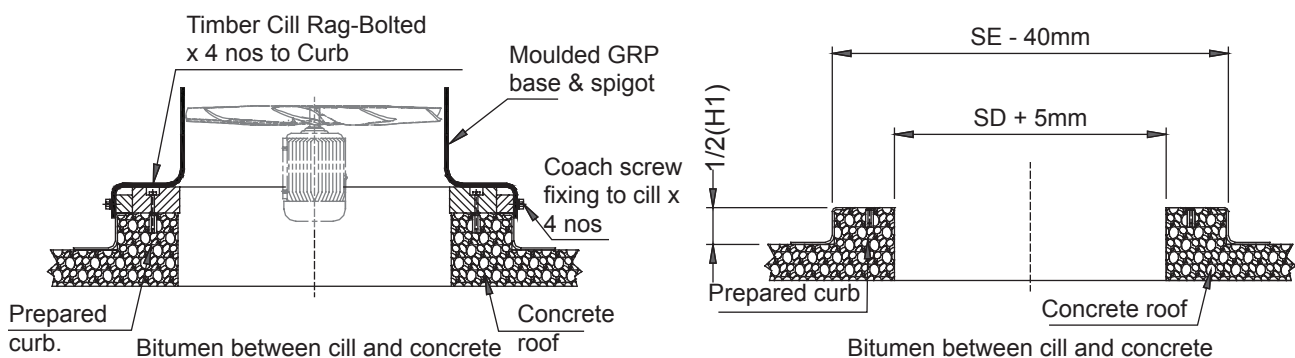
Application	Air change per hour
Classrooms, Offices and Hospital Wards	3 to 6
Dance Halls, workshops, Garages & Restaurants.	6 to 10
Theatres, Cinemas, Toilets & Domestic kitchens.	10 to 15
Commercial Kitchens, Bakeries & Boiler Houses	15 to 25
Heat treatment shops and paint shops	25 to 50

If necessary, double the above figures where smoking is excessive. Flameproof fans are normally required for garages and paint shops. Where heavy inflammable vapours are present (e.g. petrol), an additional low-level extract fan is necessary.

Table 2, Maximum figures - Summer Temperate Zone

Zone	Cfm/pound Live weight	Litres/sec per kg Live weight
Adult Cattle Young Calf	0.20 to 0.40	0.21 to 0.42
Sow & Litter Fattening Pig	0.25 to 0.50	0.26 to 0.52
Broiler Chickens	0.75 to 1.25	0.78 to 1.30
Laying Poultry	1.50 to 2.50	1.66 to 2.60

Roof and cowl opening

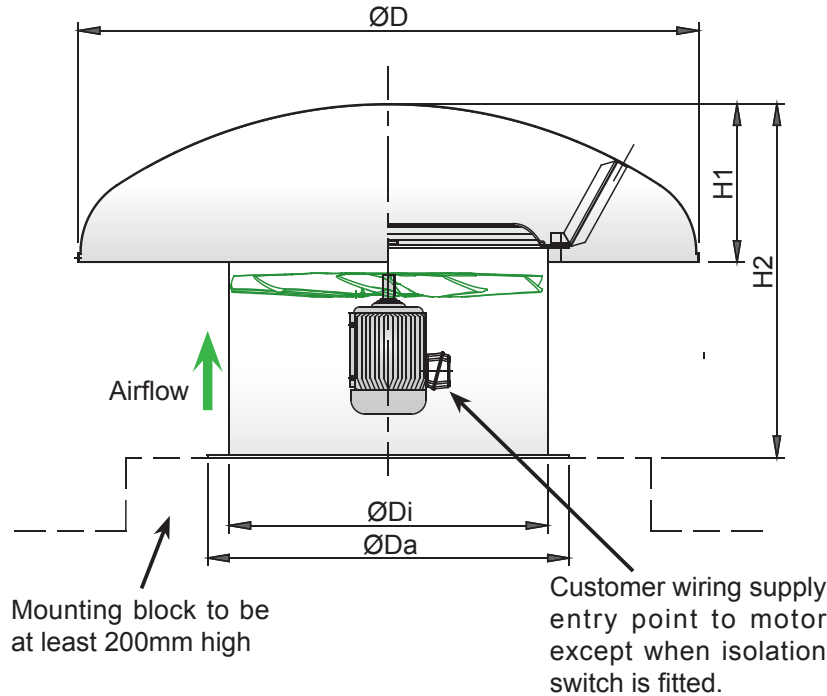


Axial Flow Roof Fans

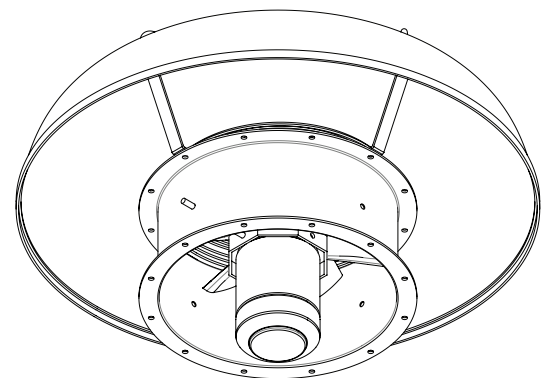


DIMENSIONS

Down Discharge with RF-AXV Axial Flow Fan



AXIAL ROOF FANS
- RF-AXV Series



Model	Di [mm]	Da [mm]	D [mm]	H1 [mm]	H2 [mm]
-					
RF-AXV 315	320	388	900	206	540
RF-AXV 355	359	428	900	206	540
RF-AXV 400	401	472	900	206	586
RF-AXV 450	450	522	900	206	586
RF-AXV 500	504	574	1130	258	633
RF-AXV 560	565	654	1130	258	633
RF-AXV 630	634	724	1270	290	658
RF-AXV 710	711	802	1270	290	658
RF-AXV 800	797	889	1550	405	760
RF-AXV 900	894	988	1550	405	890
RF-AXV 1000	1003	1095	1550	405	890
RF-AXV 1120	1125	1231	1850	480	1054
RF-AXV 1250	1250	1370	1850	480	1054
RF-AXV 1400	1405	1510	1850	480	1424
RF-AXV 1600	1605	1710	2250	584	1504
RF-AXV 1800	1805	2010	2250	584	1504

NB: We reserve the right to alter measurements without notice in case of technical improvements.

Guangdong Wolter Chemco Ventilation Ltd.

Jigongkeng Administrative Zone, Futian, Boluo, Huizhou, Guangdong, P.R.China

Dongguan Wolter Chemco Ventilation Ltd.

No.69 Miaobianwang Road, Shipai, Dongguan, Guangdong, P.R.China

Tel. (+86)769 8655 7298, Fax (+86)769 8655 7278

www.wolter.com.hk, info@wolter.com.hk

DA05.5, V2022/July

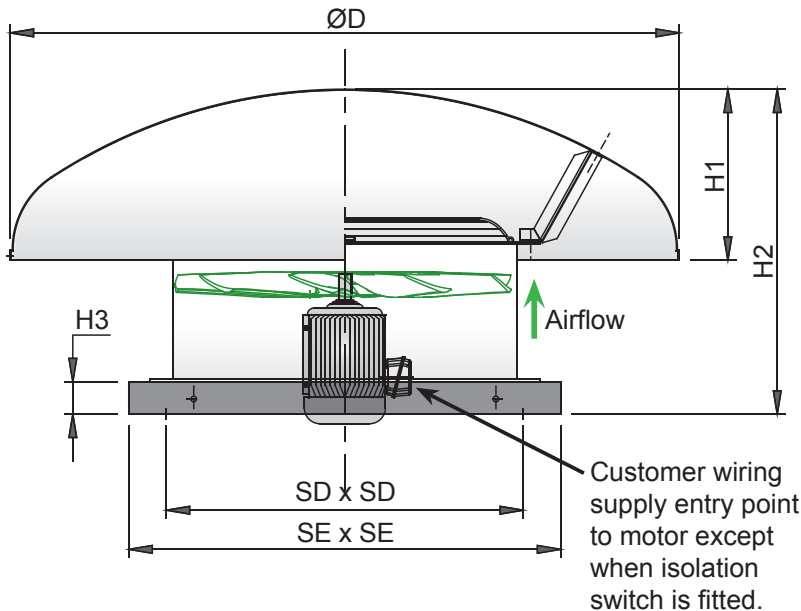


Axial Flow Roof Fans

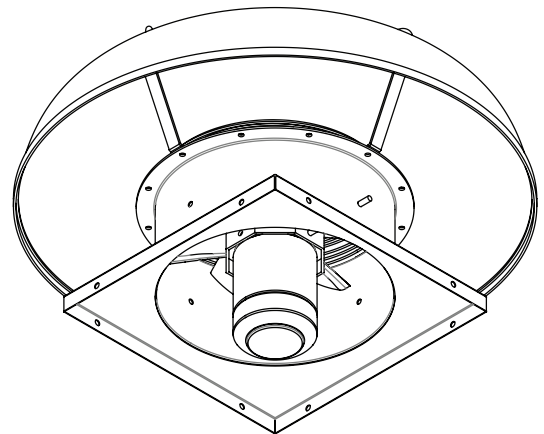


DIMENSIONS

Down Discharge with RFB-AXV Axial Flow Fan with base curb



AXIAL CURB ROOF FANS - RFB-AXV Series



Model	Di [mm]	Da [mm]	D [mm]	H1 [mm]	H2 [mm]	H3 [mm]	SD x SD [mm]	SE x SE [mm]
RFB-AXV 315	320	388	900	206	410	60	340	550
RFB-AXV 355	359	428	900	206	415	60	379	589
RFB-AXV 400	401	472	900	206	421	60	421	631
RFB-AXV 450	450	522	900	206	421	60	470	680
RFB-AXV 500	504	574	1130	258	458	60	524	744
RFB-AXV 560	565	654	1130	258	518	75	585	805
RFB-AXV 630	634	724	1270	290	553	75	664	874
RFB-AXV 710	711	802	1270	290	633	75	741	951
RFB-AXV 800	797	889	1550	405	735	75	837	1047
RFB-AXV 900	894	988	1550	405	735	75	934	1144
RFB-AXV 1000	1003	1095	1550	405	775	75	1043	1253
RFB-AXV 1120	1125	1231	1850	480	849	75	1165	1375
RFB-AXV 1250	1250	1370	1850	480	849	75	1290	1500
RFB-AXV 1400	1405	1510	1850	480	849	75	1455	1665
RFB-AXV 1600	1605	1710	2250	584	929	75	1655	1865
RFB-AXV 1800	1805	2010	2250	584	929	75	1855	2085

NB: We reserve the right to alter measurements without notice in case of technical improvements.

Guangdong Wolter Chemco Ventilation Ltd.

Jigongkeng Administrative Zone, Futian, Boluo, Huizhou, Guangdong, P.R.China

Dongguan Wolter Chemco Ventilation Ltd.

No.69 Miaobianwang Road, Shipai, Dongguan, Guangdong, P.R.China

Tel. (+86)769 8655 7298, Fax (+86)769 8655 7278

www.wolter.com.hk, info@wolter.com.hk

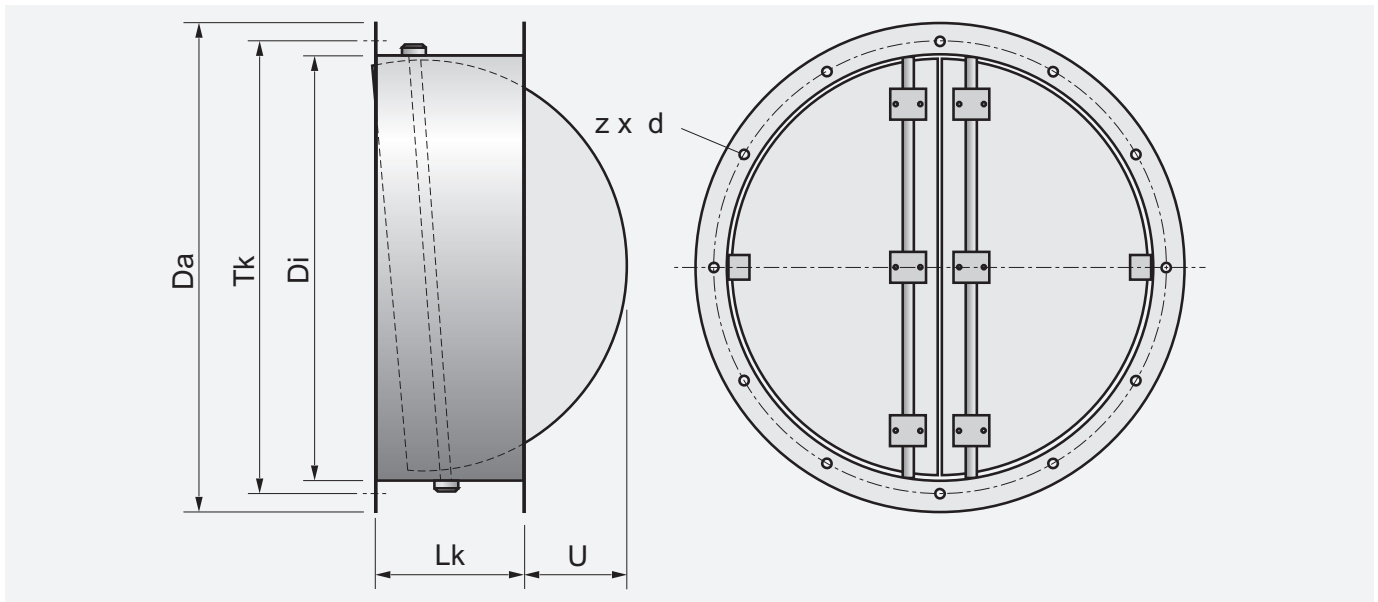
Axial Flow Roof Fans



DIMENSIONS

AXIAL FLOW ROOF FANS - Air Shutter

LRK - Air Shutter



Model size	Da [mm]	Di [mm]	Tk [mm]	z x d [mm]	Lk [mm]	U [mm]
315	388	320	366	8 x 12	250	-
355	438	359	405	8 x 12	250	-
400	484	401	448	12 x 12	250	-
450	534	450	497	12 x 12	250	15
500	584	504	551	12 x 12	250	45
560	664	565	629	16 x 14	250	80
630	734	634	698	16 x 14	250	120
710	814	711	775	16 x 14	350	60
800	904	797	861	12* x 14	350	110
900	1004	894	958	12* x 14	350	170
1000	1105	1003	1067	12* x 14	350	225
1120	1245	1125	1200	16* x 18	350	255
1250	1370	1250	1337	16* x 18	400	375
1400	1525	1405	1475	16* x 18	400	450
1600	1725	1605	1675	20* x 18	400	550

Guangdong Wolter Chemco Ventilation Ltd.

Jigongkeng Administrative Zone, Futian, Boluo, Huizhou, Guangdong, P.R.China

Dongguan Wolter Chemco Ventilation Ltd.

No.69 Miaobianwang Road, Shipai, Dongguan, Guangdong, P.R.China

Tel. (+86)769 8655 7298, Fax (+86)769 8655 7278

www.wolter.com.hk, info@wolter.com.hk

DA05.5, V2022/July

