

Self driven  
Centrifugal Fan RDH

**NICOTRA** | **Gebhardt**  
fan|tastic solutions



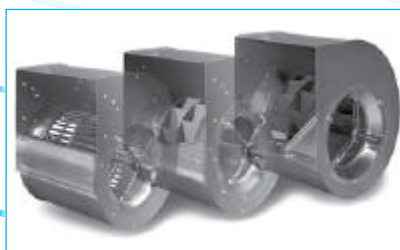
**Nicotra Gebhardt S.p.A.** (Italy) certifies that ADH-E fans of the E0, E2, E4, E6 and E7 versions, from sizes 0160 to 0560, RDH-E fans of the E0, E2, E4, E6 and E7 versions, from sizes 0180 to 0560, ADH and RDH fans of the L, R, K, K1 and K2 versions, from sizes 0630 to 1000, AT fans of the S, SC, C and TIC versions, from sizes 7/7 to 30/28, shown herein are licensed to bear the AMCA Seal.

**Nicotra Gebhardt GmbH** (Germany) certifies that RZR fans of the 11, 12, 15 versions, from sizes 0355 to 1000, shown herein are licensed to bear the AMCA Seal.

The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

Air performance with Installation Type “A” (“with free outlet”), and that of the twin fan versions G2L, G2R, G2K, G2K2, G2E0, G2E2, G2E4, G2E7, SC2, G2C and G2C-C2, and that of the triple fan versions G3C and G3C-C2 in any installation type is not AMCA licensed.

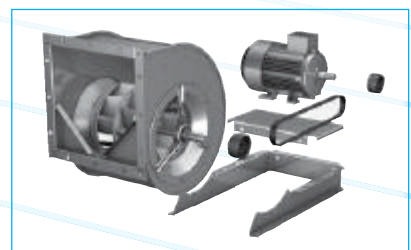
Nicotra Gebhardt stands for:



► Maximised flexibility and minimised design effort for customers, because all radial fan casings have identical dimensions – no matter what kind of impeller geometry



► Top product quality and shorter delivery times – thanks to state-of-the-art production technology



► Energy efficiency through comprehensive system know-how

# The Nicotra Gebhardt portfolio

## A strong provider for many optimal solutions

When it comes to radial fans, we are the first people you should talk to. From belt-driven radial fans to plugfans, it's all there in our product portfolio. We offer the largest, most comprehensive range of products in this area – and of course the matching services.

### ADH-E / ADH



double-inlet  
forward-curved  
impeller geometry

### AT



double-inlet  
inch diameters  
forward-curved impeller  
geometry

### RDH-E / RDH



double-inlet  
backward-curved  
impeller geometry

### RZR



double-inlet  
hollow aerofoil  
impeller geometry

## When everything fits

To us, perfection in our product portfolio means that all product series in the area of encased radial fans are attuned to one another and are 100% compatible in their dimensions.

How did we do it?

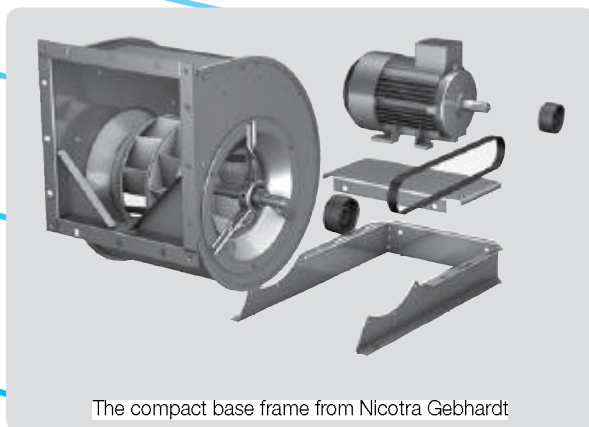
By using an identical design for the connection dimensions of every fan size in our newly developed series ADH-E and RDH-E and carefully coordinating our options and accessories.

In this way, we have standardised and harmonised our product portfolio in all relevant areas.

## Well designed, easy to install, economical

A system that saves space, time, and money – in an air handling unit or any other application: our compact base frame offers decisive advantages:

- ▶ The frame lengths have been optimised and adjusted for the casing position and motor installation height to achieve the smallest possible overall height and length
- ▶ Exact, optimised coordination of all components, all the way through to installation, adjustment and testing
- ▶ Suitable for all fans of the series ADH-E0, RDH-E0 and RZR-11 up to size 0500



The compact base frame from Nicotra Gebhardt

# proSELECTA II

proSELECTA II is a technical selection program that allows you to configure your own individually designed fan. It provides you with the opportunity to choose from the entire range of fan types and their associated options.



## Simple and reliable selection

The result from **proSELECTA II** is the provision of all the technical data for your fan, including sound level data, dimension specifications and accessories. Apart from that, as a registered user, your purchase prices are provided. Additionally fully dimensioned drawings in DXF format are available, which can be downloaded and transferred straight into your CAD system.

## So that you can be sure

Models and options that are technically not permissible, are automatically excluded in proSELECTA II. So there is no chance that you will configure a "wrong" device option.



## What else is important to you

During the fan selection process, you can choose any of the standardised ATEX options.

Free registration and many advantages

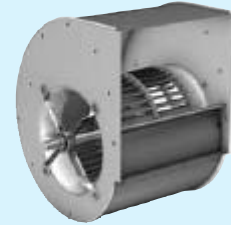
You can register as a proSELECTA II user with us, which enables us to offer you faster order processing. What this means for you is:

- ▶ The complete configuration of your fan with its associated system accessories and belt drive layout.
- ▶ The possibility to produce fans that operate via a frequency inverter.
- ▶ The option of saving your own fan configuration on our server.
- ▶ The opportunity to modify your saved configuration, even over the phone to your Nicotra Gebhardt representative.

### High performance centrifugal fan ADH

double inlet for belt drive  
impeller with forward curved blades of galvanised sheet steel

- ▶ Volume up to 300,000 m<sup>3</sup>/h
- ▶ Pressure up to 2,200 Pa

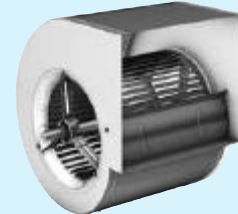


ADH

### High performance centrifugal fan AT

double inlet for belt drive  
impeller with forward curved blades of galvanised sheet steel

- ▶ Volume up to 65,000 m<sup>3</sup>/h
- ▶ Pressure up to 2,500 Pa

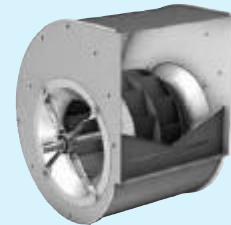


AT

### High performance centrifugal fan RDH

double inlet for belt drive  
centrifugal impeller with backward inclined blades

- ▶ Volume up to 290,000 m<sup>3</sup>/h
- ▶ Pressure up to 3,500 Pa

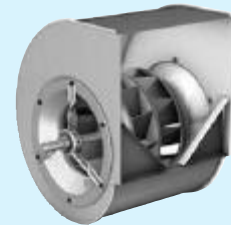


RDH

### High performance centrifugal fan RZR

double inlet for belt drive  
high performance impeller with backward curved hollow section true aerofoil blades

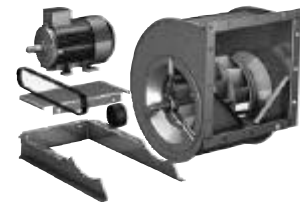
- ▶ Volume up to 300,000 m<sup>3</sup>/h
- ▶ Pressure up to 3,500 Pa



RZR

### Fittings / Accessories

- ▶ complete system accessories
- ▶ miscellaneous fittings



Accessories

### Description

- ▶ technical description
- ▶ operating limits



Description

# Working towards perfection



## The RDH E and RDH series

Like the ADH E range, with the serie RDH E we have taken the next logical step in further developing our successful RDH range of models.

The aim of our development work is to ensure that the dimensions of all casing for the RDH E and RDH range are compatible with the relevant sister models from the forward-curved series (ADH E and ADH). In future, we will also ensure compatibility with the hollow aerofoil impeller types from the RZR series.

As part of the development work being undertaken across all product ranges, the quality of the RDH E series has also been improved. For example, it now has standing seam casing which is manufactured during a fully automatic process, and the impeller shaft is galvanised.

### New choice of models

Whether you are looking for single or twin fans, the new RDH E series offers impressive further improvements in terms of functionality and potential uses, whatever the application.

### The ultimate in compatibility

The RDH E and RDH also entail minimised design effort for you, which means that:

- ▶ All accessories and equipment are carefully coordinated (and identical with the ADH E/ADH).
- ▶ The connection dimensions for RDH E (sizes 0180 to 0560) are identical with the corresponding models from the old range RDH and the ranges ADH/ADH E.
- ▶ The models for sizes RDH 0630 to 1000 remain unchanged.
- ▶ All RDH E models up to size 0500 are compatible with the new compact base frame – a unique feature which makes completing your system ultra simple and affordable!

### Top quality for performance and a long service life!

Alongside an intelligent construction, aspects such as the quality of materials and workmanship play a crucial role in ensuring a long life cycle. That's why – like the ADH E – we have made the casing of the new RDH E even sturdier by means of a standing seam construction. Apart from that, the tried and tested quality of our successful, long-standing RDH series remains the same. And that means robust impeller constructions, non-corrosive impeller shafts and quality bearings – for a long life with minimum noise.



# The product range at a glance

## The technical specifications of the RDH E and RDH series.

The standard series are designed for permanent ventilation at up to +80 °C resp. +100 °C. According to DIN 24166, the specifications conform to accuracy class 1 (for all sizes from 0355 to 1000) and accuracy class 2 (for all sizes from 0180 to 315).

### RDH E and RDH G2E series

- ▶ Sizes 0180 to 0560
- ▶ Scroll of galvanized sheet steel with standing seam and V-cut off
- ▶ Centrifugal impeller with 11 backward inclined blades made of sheet steel (0250-0560), welded and coated
- ▶ with galvanised shaft
- ▶ Volume up to 90.000 m<sup>3</sup>/h
- ▶ Pressure up to 3.500 Pa






### RDH and RDH G2-0630/-1000 series



- ▶ Sizes 0630 up to 1000
- ▶ Lap jointed scroll of galvanised sheet steel assembled by Pittsburgh lockforming, with V-cut off.
- ▶ High performance radial impeller with 11 backward inclined blades made of sheet steel, welded and painted, balanced acc. to ISO 1940.
- ▶ Volume up to 290.000 m<sup>3</sup>/h
- ▶ Pressure up to 3.500 Pa

## The RDH E and RDH range of models:

The right fan for every specification!

Depending on the fan size, the RDH E and RDH series have up to 5 mechanical versions of the single fan and up to 2 additional twin fan options. In this way, we ensure that we have the perfect model for all requirements and any application.

Version	Description	Figure
RDH E0	Lap jointed scroll without feet and discharge flange. Light duty bearing execution with pressed steel housing/strut assemblies.	
RDH E2 / RDH R	Lap jointed scroll with rectangular side frame, without discharge flange. Light duty bearing execution with pressed steel housing/strut assemblies.	
RDH E4 / RDH K	Lap jointed scroll with heavy duty reinforced side frames, without discharge flange. Medium duty bearing execution with cast iron pillow block, mounted on a robust pedestal.	
RDH E6 / RDH K1	Lap jointed scroll with heavy duty reinforced side frames, without discharge flange. Medium-heavy duty bearing execution with cast iron pillow block, mounted on a robust pedestal.	
RDH E7 / RDH K2	Lap jointed scroll with heavy duty reinforced side frames, without discharge flange. Heavy duty bearing execution with single-piece resp. split-type plummer block, mounted on a robust pedestal.	

Version	Description	Figure
RDH G2E4 / RDH G2K	The two single fans RDH E4 or RDH K are fitted together to a robust assembly by means of 3 angle bars. Both impellers are fitted on a common shaft supported by 3 bearings (sizes 0250/-0630) or the fans have separated shafts being connected by a elastic coupling (sizes 0710/-1000).	
RDH G2E7 / RDH G2K2	The two single fans RDH E7 or RDH K2 are fitted together to a robust assembly by means of 3 angle bars. Both impellers are fitted on a common shaft supported by 3 bearings (sizes 0250/-0630) or the fans have separated shafts being connected by a elastic coupling (sizes 0710/-1000).	

# RDH E\_-0180

Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

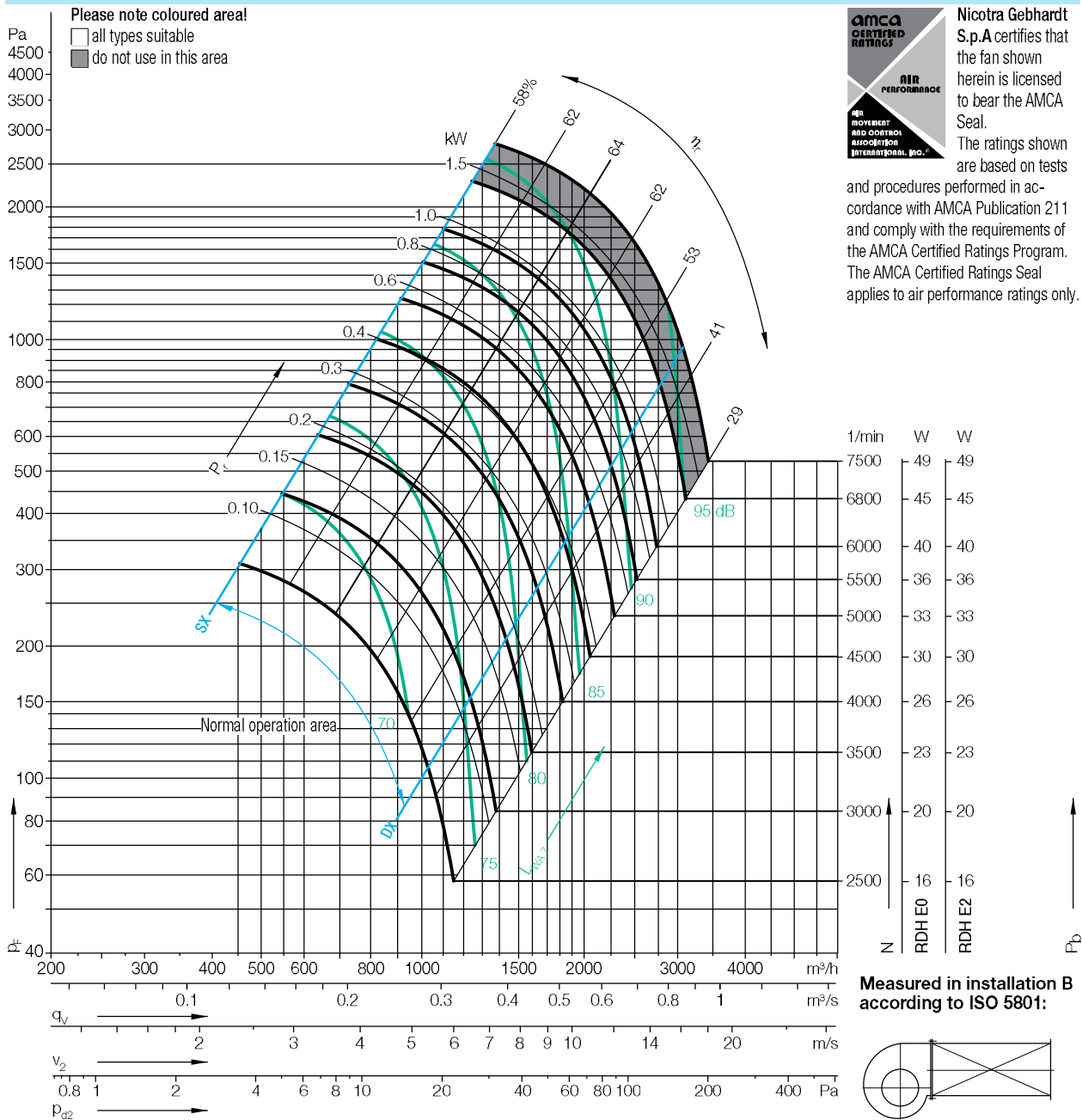
### Impeller Data

Impeller diameter	$D_f$	180 mm
Number of blades	$z$	8
Moment of Inertia	$J$	0,003 kgm <sup>2</sup>

### Impeller Data

Impeller weight	$m$	0,62 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		2

## Performance Curves



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**AIR PERFORMANCE**  
 AMCA CERTIFIED RATINGS ASSOCIATION INC. 2015

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Duty point	Speed 1/min	dB
SX	6000	4
SX	4500	3
SX	3000	2
$Q_{V,opt}$	6000	3
$Q_{V,opt}$	4500	2
$Q_{V,opt}$	3000	1
DX	6000	2
DX	4500	1
DX	3000	1

Relative sound power level for inlet side $L_{WrelI7}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
-14	-6	-2	-5	-5	-6	-11	-17	dB	
-9	-2	-3	-3	-5	-8	-12	-18	dB	
-3	0	-3	-3	-4	-9	-15	-21	dB	
-17	-8	-3	-5	-6	-5	-12	-17	dB	
-11	-4	-3	-4	-4	-8	-13	-18	dB	
-5	-0	-3	-4	-3	-10	-15	-22	dB	
-21	-11	-6	-4	-6	-5	-11	-16	dB	
-15	-7	-5	-4	-4	-8	-12	-17	dB	
-9	-4	-2	-4	-3	-9	-14	-21	dB	

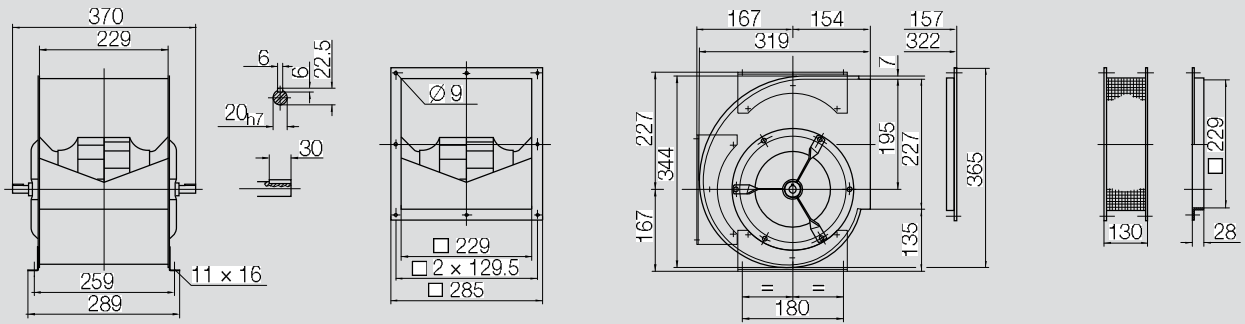
Relative sound power level for discharge side $L_{Wrel4}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
15	8	3	3	-5	-6	-10	-17	dB	
16	5	5	2	-6	-6	-12	-19	dB	
10	6	5	-3	-4	-8	-15	-22	dB	
8	6	5	1	-7	-6	-12	-21	dB	
10	6	5	0	-6	-7	-16	-22	dB	
8	7	3	-5	-4	-10	-19	-25	dB	
5	3	-2	1	-7	-6	-9	-19	dB	
7	1	0	-1	-6	-6	-12	-21	dB	
5	0	3	-5	-4	-7	-17	-26	dB	



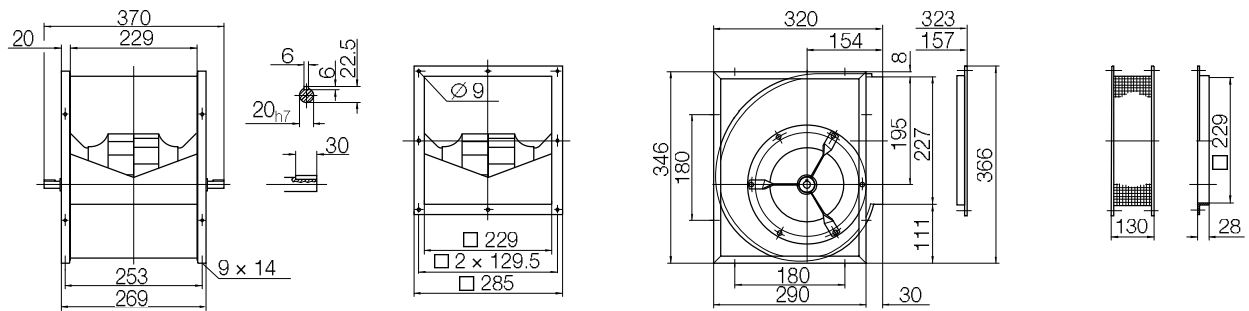
# RDH E\_-0180

Dimensions in mm, subject to change.

**RDH E0-0180** 5.3 kg



**RDH E2-0180** 7.1 kg



# RDH E\_-0200

Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

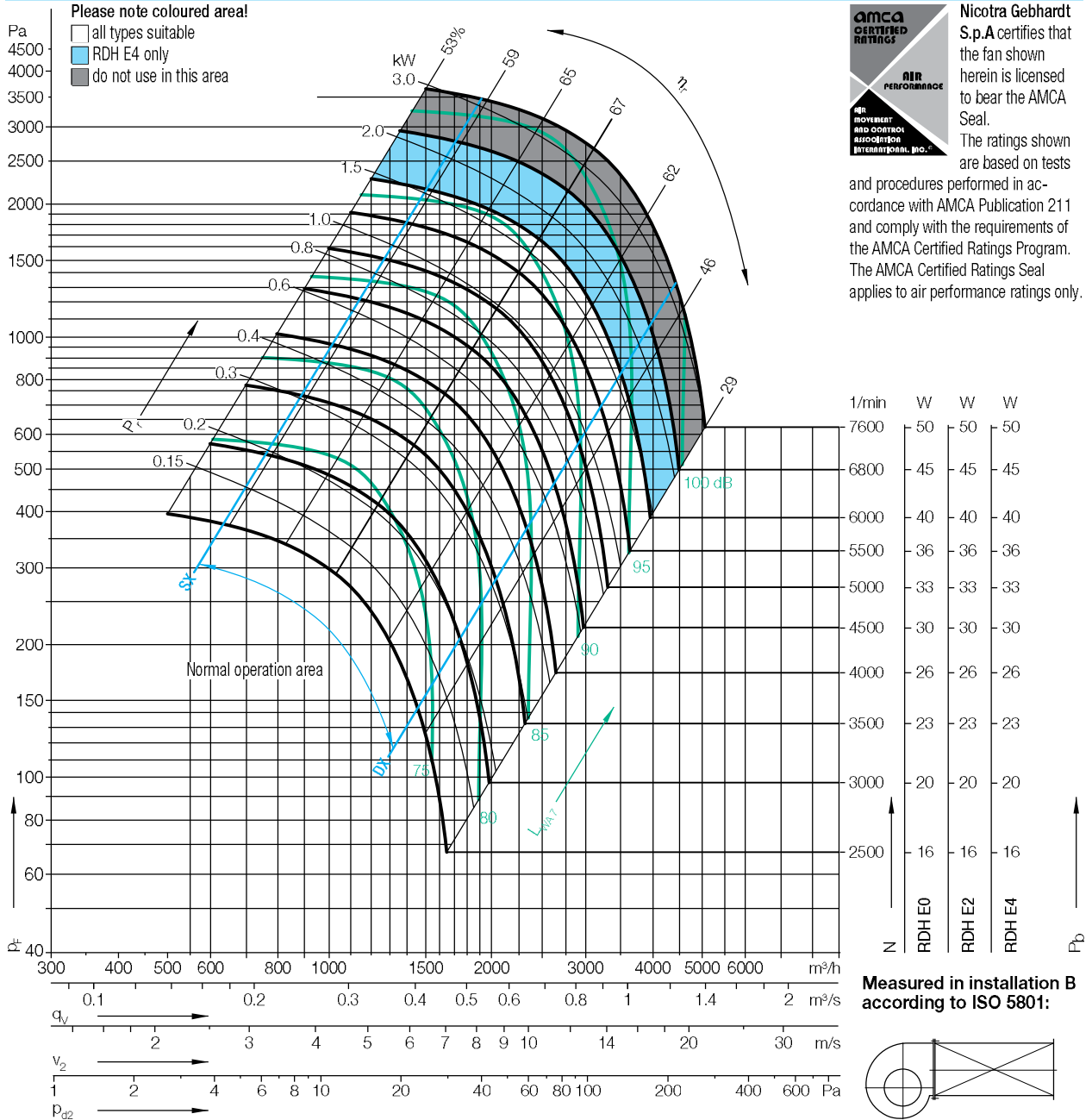
### Impeller Data

Impeller diameter	$D_f$	200 mm
Number of blades	$z$	8
Moment of Inertia	$J$	0,006 kgm <sup>2</sup>

### Impeller Data

Impeller weight	$m$	0,84 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		2

## Performance Curves



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Duty point	Speed 1/min	dB
SX	5500	5
SX	4500	4
SX	3000	3
$Q_{V,opt}$	5500	4
$Q_{V,opt}$	4500	3
$Q_{V,opt}$	3000	1
DX	5500	2
DX	4500	2
DX	3000	0

Relative sound power level for inlet side  $L_{WrelI7}$  at octave centre frequencies  $f_c$

	63	125	250	500	1000	2000	4000	8000	Hz
53%	-5	-5	-5	-3	-5	-8	-11	-17	dB
59	-5	-5	-5	-3	-5	-8	-11	-17	dB
65	-5	-5	-5	-3	-5	-8	-11	-17	dB
67	-4	-2	-1	-4	-6	-7	-9	-13	dB
62	-3	-1	-2	-3	-6	-9	-9	-14	dB
46	-0	1	-2	-4	-5	-8	-10	-18	dB
29	-7	-4	-3	-5	-6	-6	-10	-13	dB
95	-6	-3	-4	-4	-5	-8	-11	-11	dB
90	-3	-2	-4	-4	-4	-8	-12	-12	dB

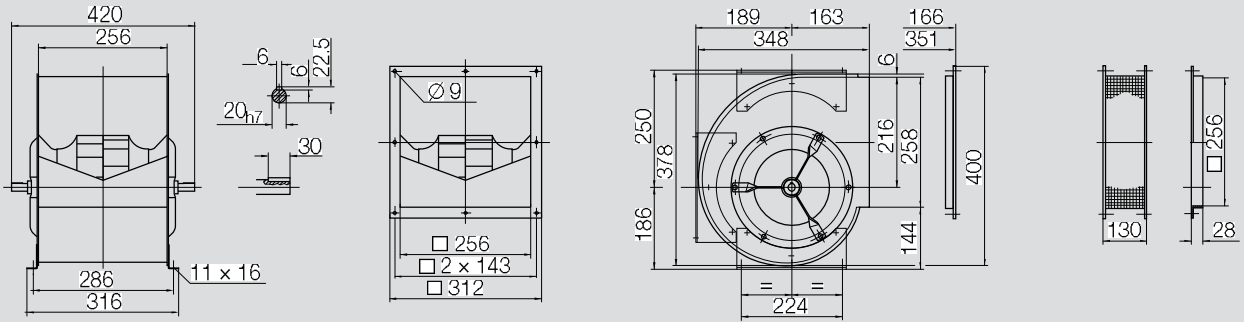
Relative sound power level for discharge side  $L_{Wrel4}$  at octave centre frequencies  $f_c$

	63	125	250	500	1000	2000	4000	8000	Hz
53%	25	10	5	4	-6	-7	-11	-17	dB
59	22	7	7	2	-7	-7	-12	-18	dB
65	14	7	7	-2	-5	-8	-14	-18	dB
67	19	11	7	1	-8	-7	-11	-17	dB
62	16	10	6	-1	-8	-8	-13	-18	dB
46	14	9	3	-5	-6	-9	-15	-21	dB
29	19	7	0	-1	-8	-5	-8	-17	dB
95	18	3	1	-1	-7	-6	-11	-16	dB
90	10	2	1	-6	-5	-6	-15	-17	dB

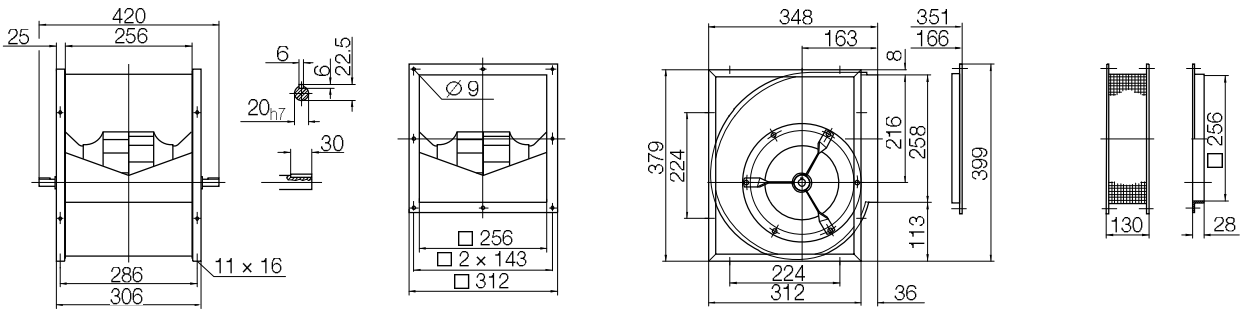
# RDH E\_-0200

Dimensions in mm, subject to change.

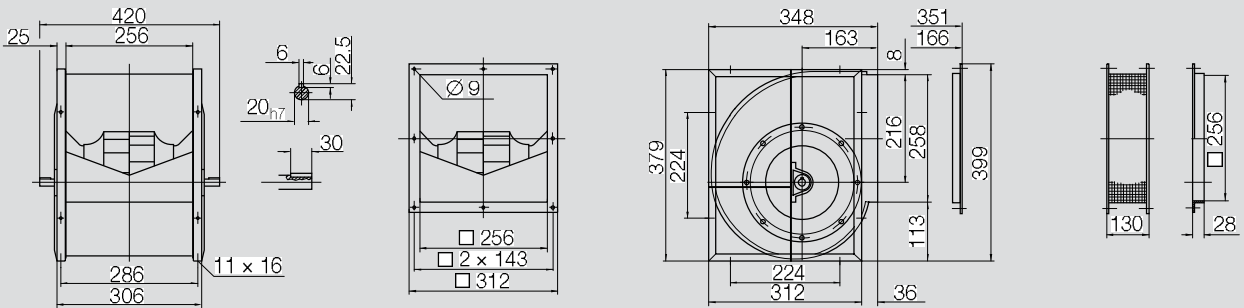
**RDH E0-0200** 6.6 kg



**RDH E2-0200** 8.5 kg



**RDH E4-0200** 11.8 kg



# RDH E\_-0225

Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

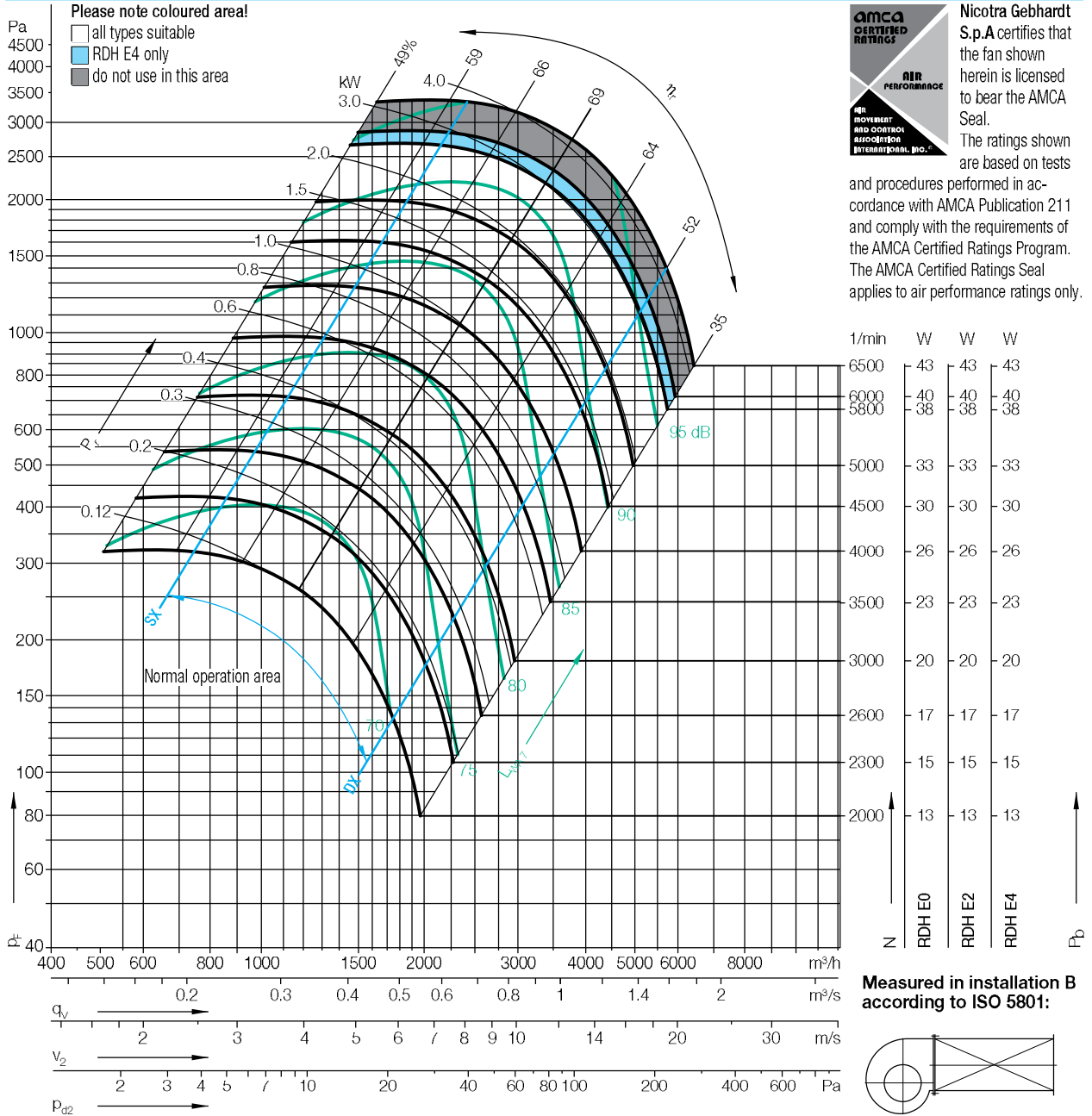
### Impeller Data

Impeller diameter	$D_f$	225 mm
Number of blades	$z$	8
Moment of Inertia	$J$	0,011 kgm <sup>2</sup>

### Impeller Data

Impeller weight	$m$	1,3 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		2

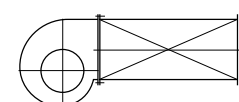
## Performance Curves



**AMCA CERTIFIED RATINGS**  
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1/min	W	W	W
6500	43	43	43
6000	40	40	40
5800	38	38	38
5000	33	33	33
4500	30	30	30
4000	26	26	26
3500	23	23	23
3000	20	20	20
2600	17	17	17
2300	15	15	15
2000	13	13	13



Duty point	Speed 1/min	dB
SX	5000	5
SX	3500	3
SX	2300	2
$q_{V,opt}$	5000	3
$q_{V,opt}$	3500	1
$q_{V,opt}$	2300	1
DX	5000	2
DX	3500	1
DX	2300	1

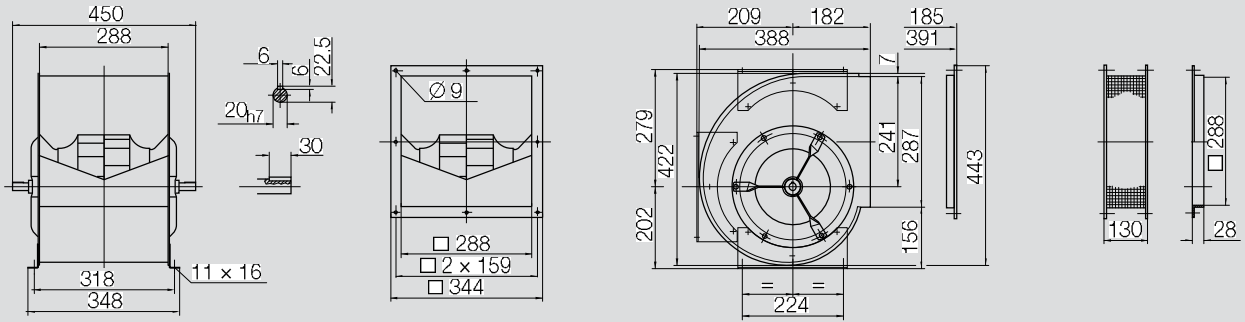
$\Delta L_{Wrel,d}(A)$									
Relative sound power level for inlet side $L_{Wrel,i}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
-6	-0	0	-2	-6	-8	-13	-17	dB	
-4	3	-1	-2	-5	-10	-13	-19	dB	
4	3	1	-3	-6	-10	-14	-20	dB	
-6	-1	-1	-2	-6	-7	-12	-16	dB	
-4	2	-3	-1	-5	-9	-13	-17	dB	
3	1	1	-3	-5	-9	-13	-20	dB	
-11	-4	-2	-4	-6	-6	-12	-16	dB	
-8	0	-4	-3	-4	-9	-13	-16	dB	
0	-1	-1	-3	-4	-10	-13	-18	dB	

Relative sound power level for discharge side $L_{Wrel,d}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
21	8	7	4	-7	-7	-13	-17	dB	
14	8	7	0	-6	-9	-14	-19	dB	
11	10	6	-4	-4	-10	-15	-21	dB	
16	11	6	1	-9	-7	-14	-21	dB	
12	10	3	-1	-7	-9	-18	-21	dB	
14	8	4	-6	-4	-12	-18	-22	dB	
14	6	2	0	-8	-5	-11	-20	dB	
10	5	1	-3	-6	-7	-15	-21	dB	
8	4	2	-5	-3	-10	-18	-21	dB	

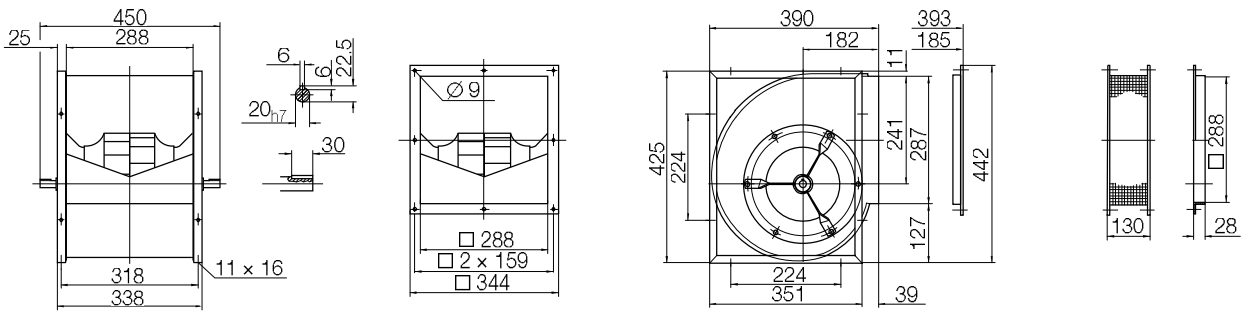
# RDH E\_-0225

Dimensions in mm, subject to change.

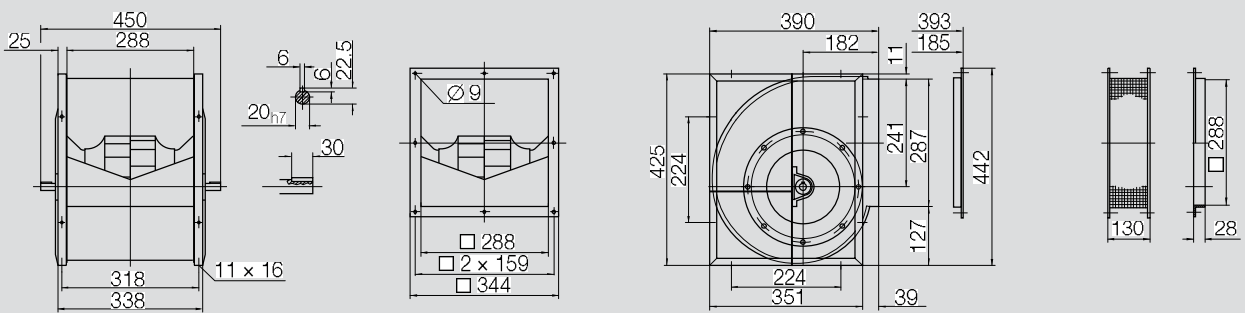
**RDH E0-0225** 7.8 kg



**RDH E2-0225** 9.9 kg



**RDH E4-0225** 13.6 kg



# RDH E\_-0250

Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

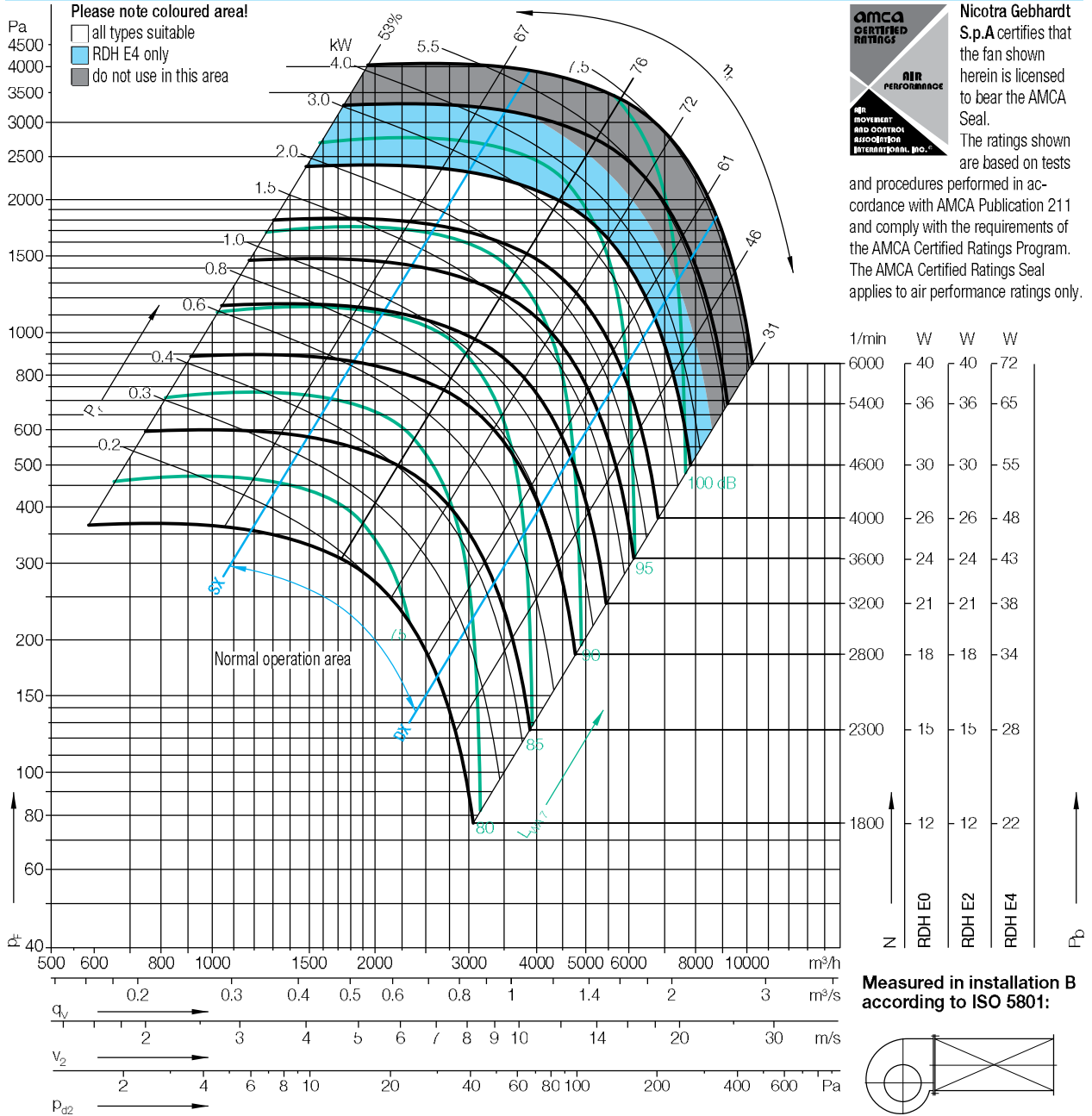
### Impeller Data

Impeller diameter	$D_f$	252 mm
Number of blades	$z$	11
Moment of Inertia	$J$	0,044 kgm <sup>2</sup>

### Impeller Data

Impeller weight	$m$	4,87 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		2

## Performance Curves



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1/min	W	W	W
6000	40	40	72
5400	36	36	65
4600	30	30	55
4000	26	26	48
3600	24	24	43
3200	21	21	38
2800	18	18	34
2300	15	15	28
1800	12	12	22

Duty point	Speed 1/min	$\Delta L_{Wrel4}(A)$ dB
SX	4600	3
SX	3200	3
SX	2300	2
$Q_{V,opt}$	4600	4
$Q_{V,opt}$	3200	4
$Q_{V,opt}$	2300	3
DX	4600	3
DX	3200	3
DX	2300	3

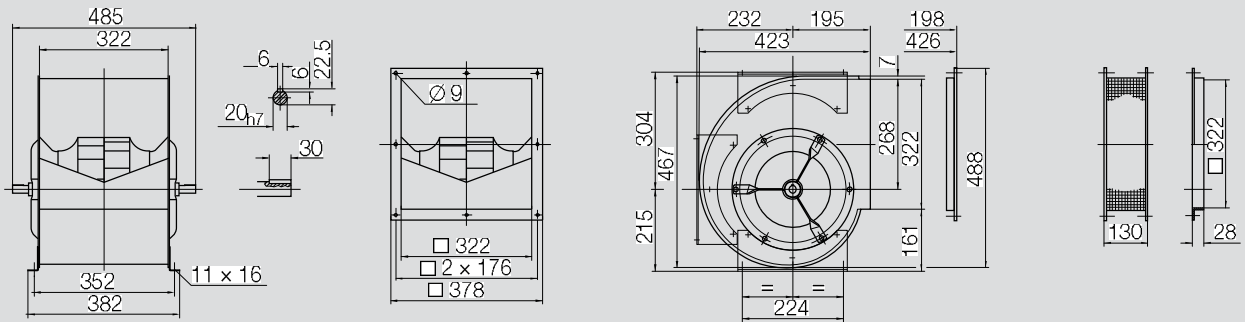
$\Delta L_{Wrel4}(A)$ Relative sound power level for inlet side $L_{Wrel4}$ at octave centre frequencies $f_c$								
63	125	250	500	1000	2000	4000	8000	Hz
-8	-7	-5	-4	-4	-9	-13	-18	dB
-7	-3	-4	0	-8	-9	-13	-19	dB
-4	-3	-3	-1	-6	-10	-15	-20	dB
-10	-10	-8	-8	-3	-7	-10	-17	dB
-9	-8	-7	-1	-7	-7	-12	-19	dB
-8	-6	-7	-1	-5	-8	-15	-21	dB
-10	-9	-9	-7	-5	-6	-9	-15	dB
-7	-8	-8	-3	-6	-6	-10	-19	dB
-7	-7	-8	-3	-4	-7	-13	-21	dB

Relative sound power level for discharge side $L_{Wrel4}$ at octave centre frequencies $f_c$								
63	125	250	500	1000	2000	4000	8000	Hz
6	7	3	-2	-4	-6	-8	-16	dB
9	7	3	0	-7	-4	-11	-18	dB
10	6	2	-1	-3	-5	-13	-19	dB
6	5	0	-5	-4	-3	-5	-15	dB
7	4	-1	-2	-5	-1	-9	-18	dB
6	2	-2	-2	-1	-3	-13	-20	dB
5	4	-2	-4	-4	-2	-4	-13	dB
7	3	-2	-2	-5	-1	-8	-16	dB
6	1	-2	-3	-1	-3	-11	-19	dB

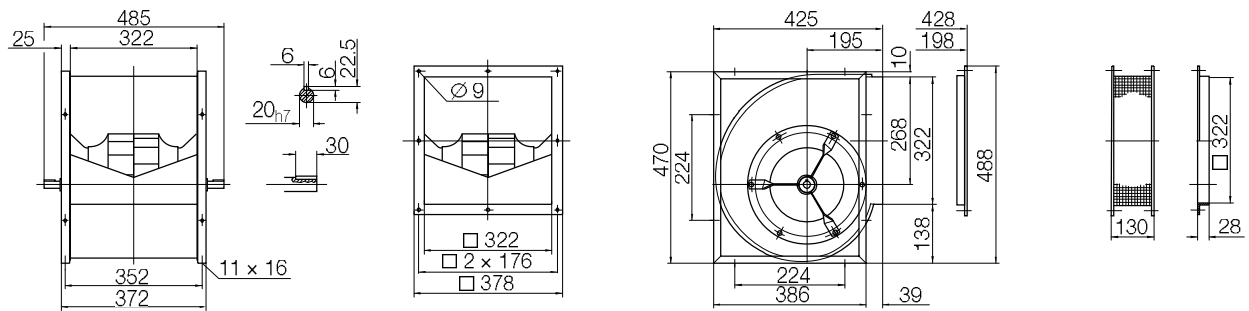
# RDH E\_-0250

Dimensions in mm, subject to change.

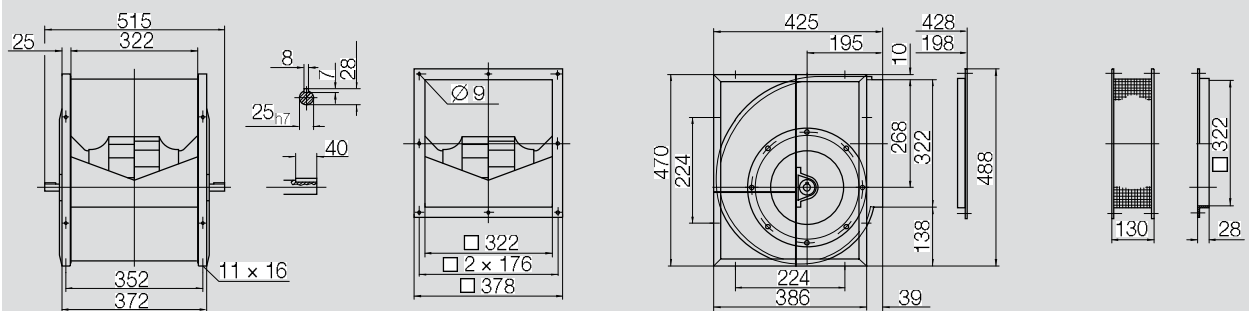
**RDH E0-0250** 13.3 kg



**RDH E2-0250** 15.7 kg



**RDH E4-0250** 21 kg



# RDH E\_-0280

Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

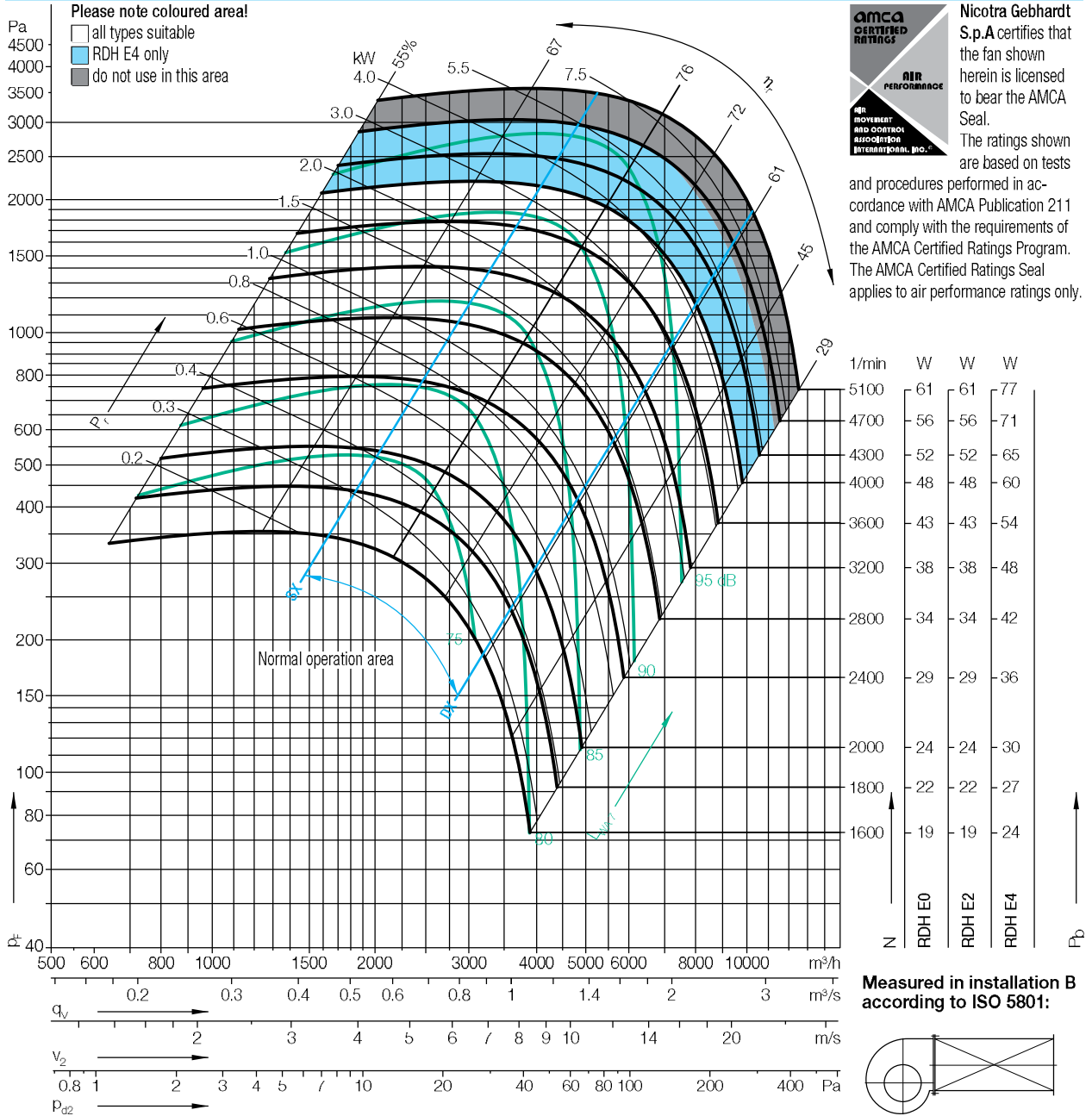
### Impeller Data

Impeller diameter	$D_f$	282 mm
Number of blades	$z$	11
Moment of Inertia	$J$	0,069 kgm <sup>2</sup>

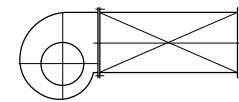
### Impeller Data

Impeller weight	$m$	5,89 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		2

## Performance Curves



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Duty point	Speed 1/min	dB
SX	4300	3
SX	2800	3
SX	1800	3
$Q_{V,opt}$	4300	4
$Q_{V,opt}$	2800	3
$Q_{V,opt}$	1800	4
DX	4300	3
DX	2800	4
DX	1800	4

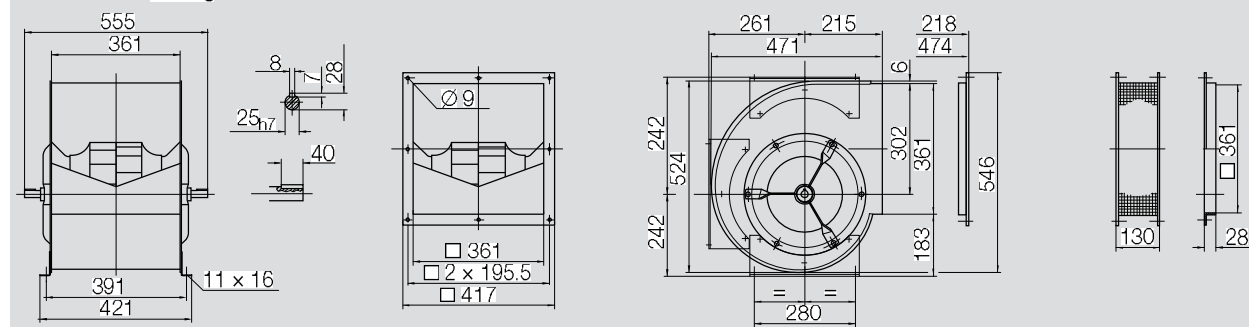
$\Delta L_{Wrel(A)}$									
Relative sound power level for inlet side $L_{WrelI}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
-8	-6	-5	-5	-4	-9	-12	-16	dB	
-7	-4	-4	-1	-8	-8	-13	-18	dB	
-1	-1	0	-4	-5	-8	-14	-19	dB	
-10	-9	-8	-8	-4	-7	-10	-15	dB	
-9	-7	-7	-1	-7	-6	-12	-18	dB	
-6	-5	-2	-5	-4	-7	-14	-20	dB	
-9	-9	-9	-8	-4	-6	-8	-14	dB	
-7	-8	-8	-3	-7	-5	-11	-18	dB	
-6	-6	-3	-5	-4	-6	-14	-22	dB	

Relative sound power level for discharge side $L_{WrelE}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
7	7	3	-3	-4	-4	-8	-15	dB	
10	6	2	-1	-5	-3	-11	-17	dB	
11	7	5	-3	0	-5	-13	-18	dB	
7	5	0	-6	-5	-2	-5	-14	dB	
7	3	-1	-3	-4	0	-10	-17	dB	
7	2	2	-4	1	-4	-13	-19	dB	
6	4	-1	-4	-3	-2	-4	-12	dB	
7	2	-2	-1	-4	0	-8	-16	dB	
7	2	3	-3	1	-3	-11	-19	dB	

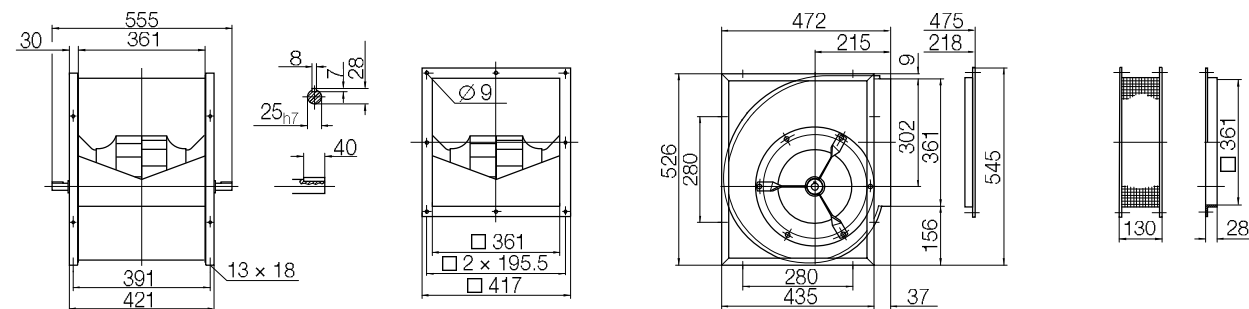


# RDH E\_-0280

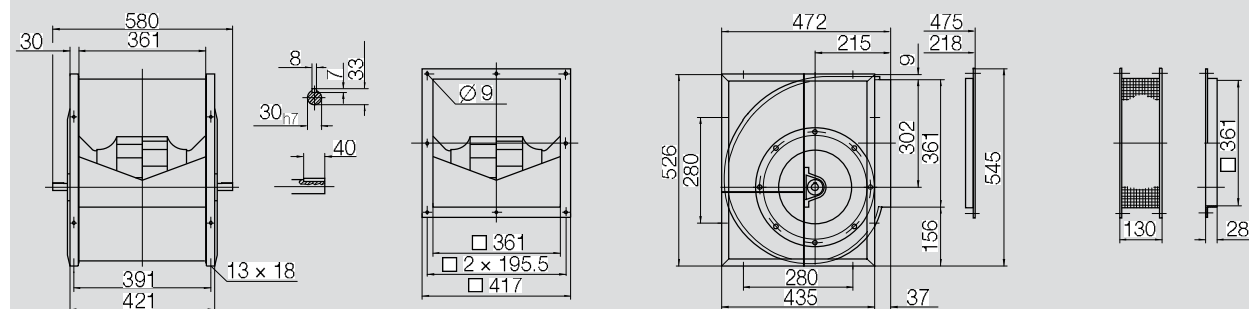
Dimensions in mm, subject to change.  
RDH E0-0280 17.8 kg



RDH E2-0280 21 kg



RDH E4-0280 28 kg



# RDH E\_-0315

Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

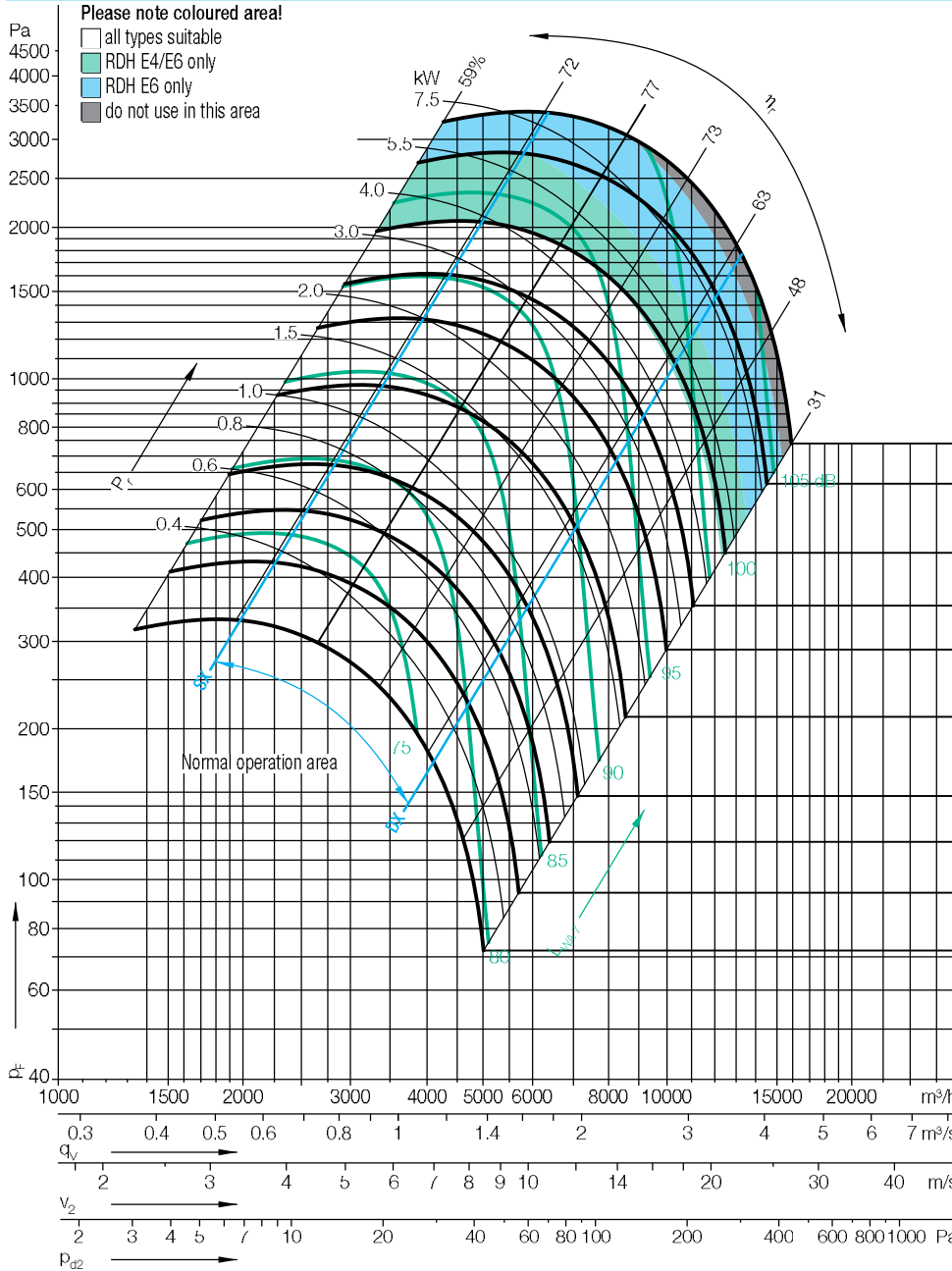
### Impeller Data

Impeller diameter	$D_f$	317 mm
Number of blades	$z$	11
Moment of Inertia	$J$	0,110 kgm <sup>2</sup>

### Impeller Data

Impeller weight	$m$	7,14 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		2

## Performance Curves

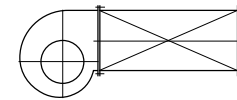


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1/min	W	W	W	W
4500	54	54	68	225
4100	49	49	62	205
3500	42	42	53	175
3100	37	37	47	155
2800	34	34	42	140
2400	29	29	36	120
2000	24	24	30	100
1800	22	22	27	90
1600	19	19	24	80
1400	17	17	21	70
Z	RDH E0	RDH E2	RDH E4	RDH E6
				$P_b$

Measured in installation B according to ISO 5801:



$\Delta L_{Wrel4}(A)$

Relative sound power level for inlet side  $L_{Wrel4}$  at octave centre frequencies  $f_c$

Duty point	Speed 1/min	dB
SX	4100	4
SX	2800	4
SX	1600	3
$Q_{V,opt}$	4100	4
$Q_{V,opt}$	2800	4
$Q_{V,opt}$	1600	4
DX	4100	3
DX	2800	3
DX	1600	3

	63	125	250	500	1000	2000	4000	8000	Hz
SX 4100	-7	-5	-4	-4	-3	-11	-15	-18	dB
SX 2800	-7	-4	-4	-0	-6	-12	-14	-18	dB
SX 1600	0	-1	2	-2	-8	-10	-14	-18	dB
$Q_{V,opt}$ 4100	-9	-9	-8	-6	-3	-11	-14	-18	dB
$Q_{V,opt}$ 2800	-9	-7	-7	-1	-8	-11	-13	-19	dB
$Q_{V,opt}$ 1600	-5	-5	0	-4	-7	-9	-14	-20	dB
DX 4100	-9	-9	-9	-7	-2	-10	-12	-16	dB
DX 2800	-7	-8	-8	0	-7	-10	-12	-19	dB
DX 1600	-6	-5	0	-3	-6	-8	-15	-22	dB

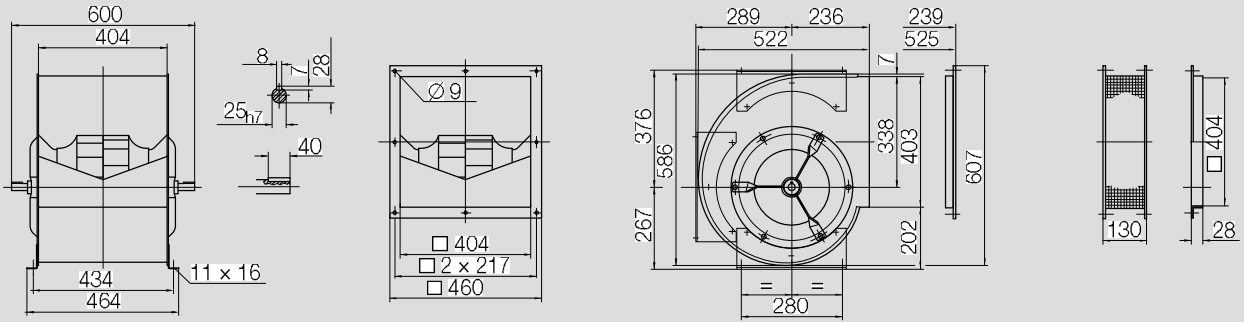
Relative sound power level for discharge side  $L_{Wrel4}$  at octave centre frequencies  $f_c$

	63	125	250	500	1000	2000	4000	8000	Hz
SX 4100	8	8	4	-1	-3	-6	-11	-17	dB
SX 2800	11	7	3	-1	-3	-7	-12	-17	dB
SX 1600	11	7	6	0	-2	-7	-13	-18	dB
$Q_{V,opt}$ 4100	7	5	0	-3	-3	-6	-10	-16	dB
$Q_{V,opt}$ 2800	7	3	-1	0	-4	-6	-11	-18	dB
$Q_{V,opt}$ 1600	7	2	4	-2	-1	-6	-13	-19	dB
DX 4100	6	4	-2	-3	-1	-5	-8	-14	dB
DX 2800	6	2	-2	1	-3	-5	-9	-17	dB
DX 1600	6	2	5	-1	-1	-5	-12	-20	dB

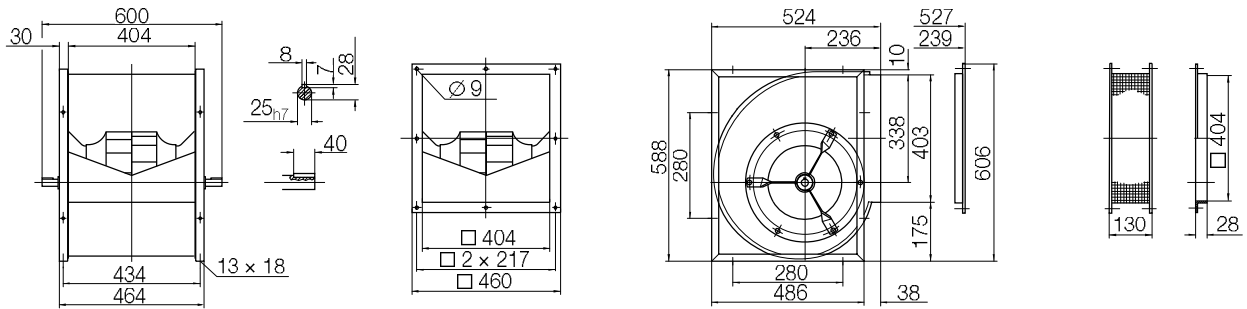
# RDH E\_-0315

Dimensions in mm, subject to change.

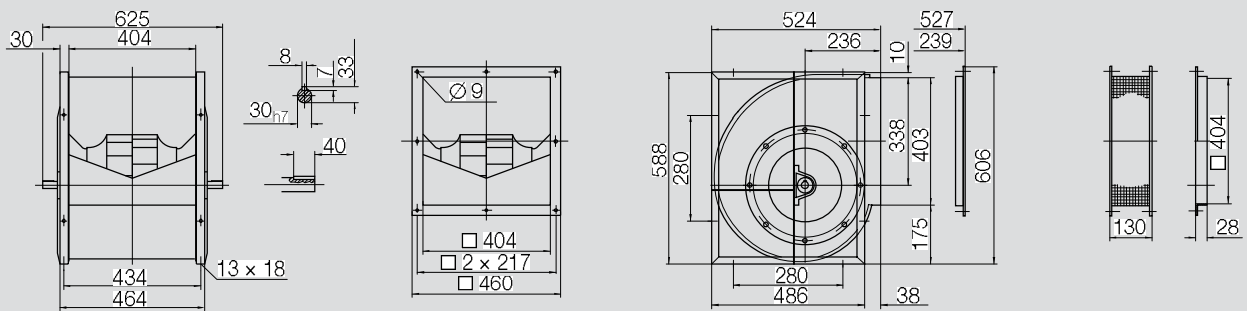
**RDH E0-0315** 21 kg



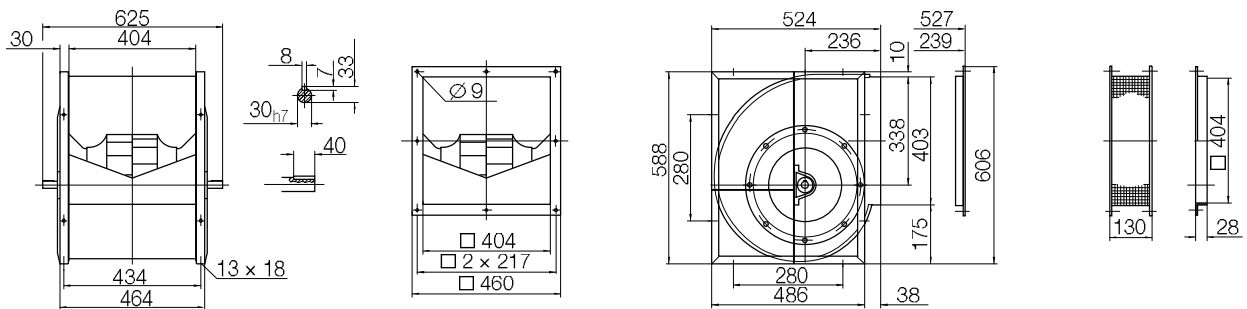
**RDH E2-0315** 25 kg



**RDH E4-0315** 32 kg



**RDH E6-0315** 34 kg



Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

**Technical Data**

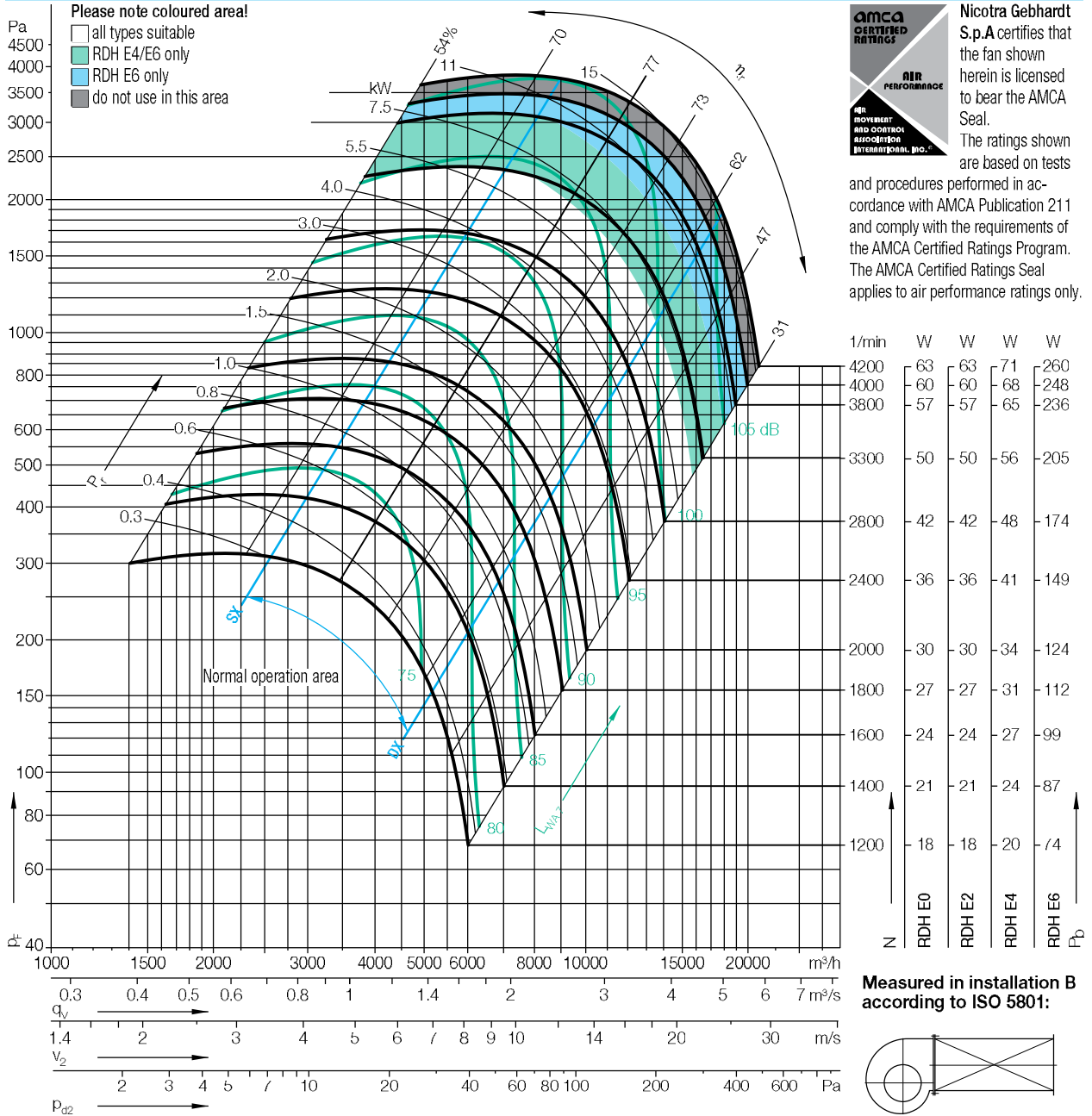
**Impeller Data**

Impeller diameter	$D_f$	357 mm
Number of blades	$z$	11
Moment of Inertia	$J$	0,200 kgm <sup>2</sup>

**Impeller Data**

Impeller weight	$m$	10,2 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		1

**Performance Curves**



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Duty point	Speed 1/min	$\Delta L_{Wrel4}(A)$ dB
SX	3800	5
SX	2400	4
SX	1400	4
$Q_{V,opt}$	3800	6
$Q_{V,opt}$	2400	4
$Q_{V,opt}$	1400	4
DX	3800	4
DX	2400	3
DX	1400	3

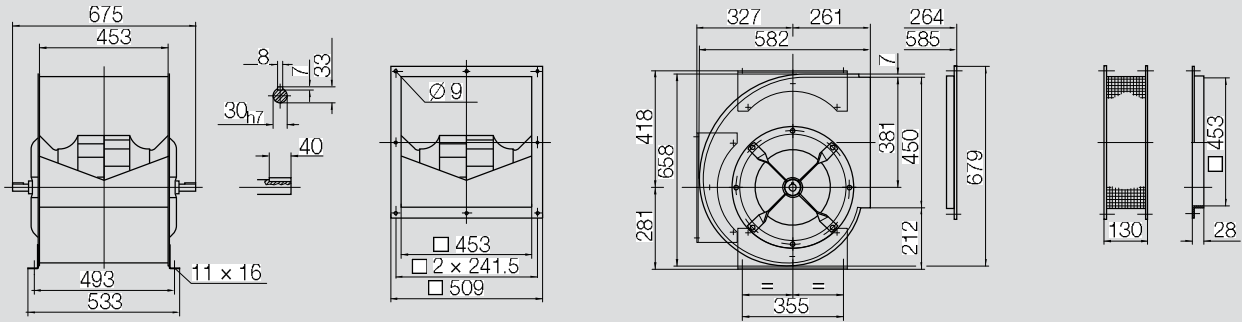
Relative sound power level for inlet side $L_{Wrel17}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
-7	-5	-4	-2	-6	-11	-14	-17		dB
-5	-3	-3	-1	-7	-12	-14	-18		dB
0	0	3	-3	-7	-9	-14	-18		dB
-9	-8	-7	-3	-5	-10	-12	-17		dB
-8	-7	-7	-1	-6	-11	-13	-18		dB
-4	-4	2	-3	-7	-9	-14	-19		dB
-8	-8	-8	-3	-5	-9	-11	-17		dB
-7	-8	-8	0	-6	-10	-13	-20		dB
-5	-5	2	-3	-6	-9	-16	-22		dB

Relative sound power level for discharge side $L_{Wrel4}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
11	9	5	1	-5	-6	-10	-16		dB
11	7	4	0	-3	-7	-12	-17		dB
11	7	7	0	-2	-7	-13	-18		dB
9	7	2	0	-4	-4	-9	-15		dB
7	3	-1	-1	-2	-6	-11	-17		dB
7	2	6	0	-1	-6	-13	-19		dB
7	4	-1	0	-3	-4	-8	-14		dB
6	1	-2	1	-2	-6	-10	-17		dB
5	2	7	0	-1	-6	-13	-20		dB

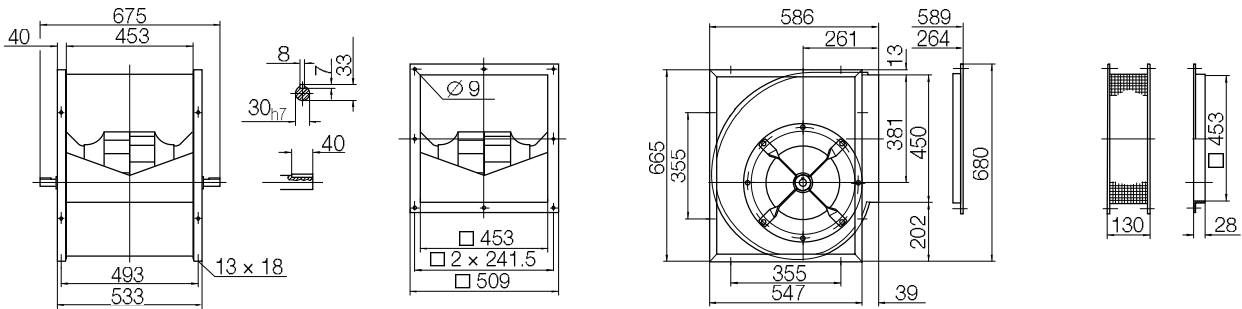
# RDH E\_-0355

Dimensions in mm, subject to change.

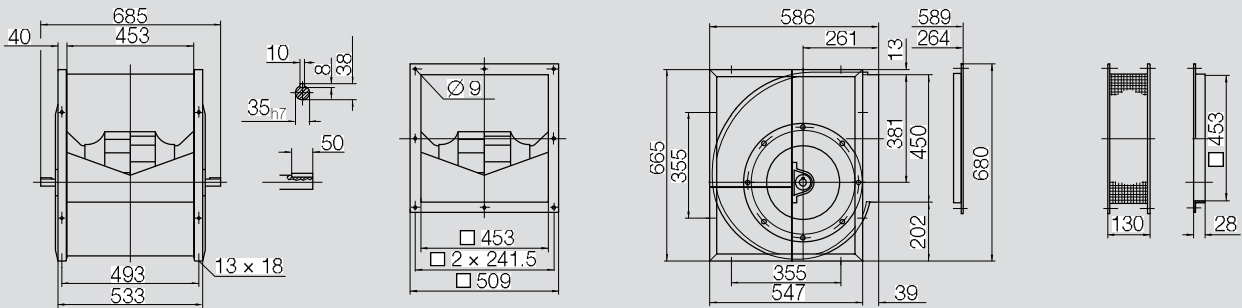
**RDH E0-0355** 29 kg



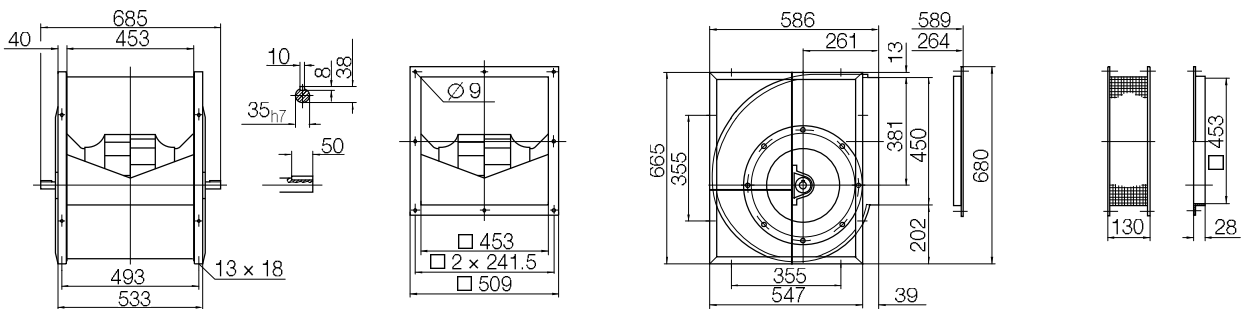
**RDH E2-0355** 34 kg



**RDH E4-0355** 46 kg



**RDH E6-0355** 47 kg



# RDH E\_-0400

Performance certified is for installation type B - free inlet, ducted outlet.

Power rating (kW) does not include transmission losses.

Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

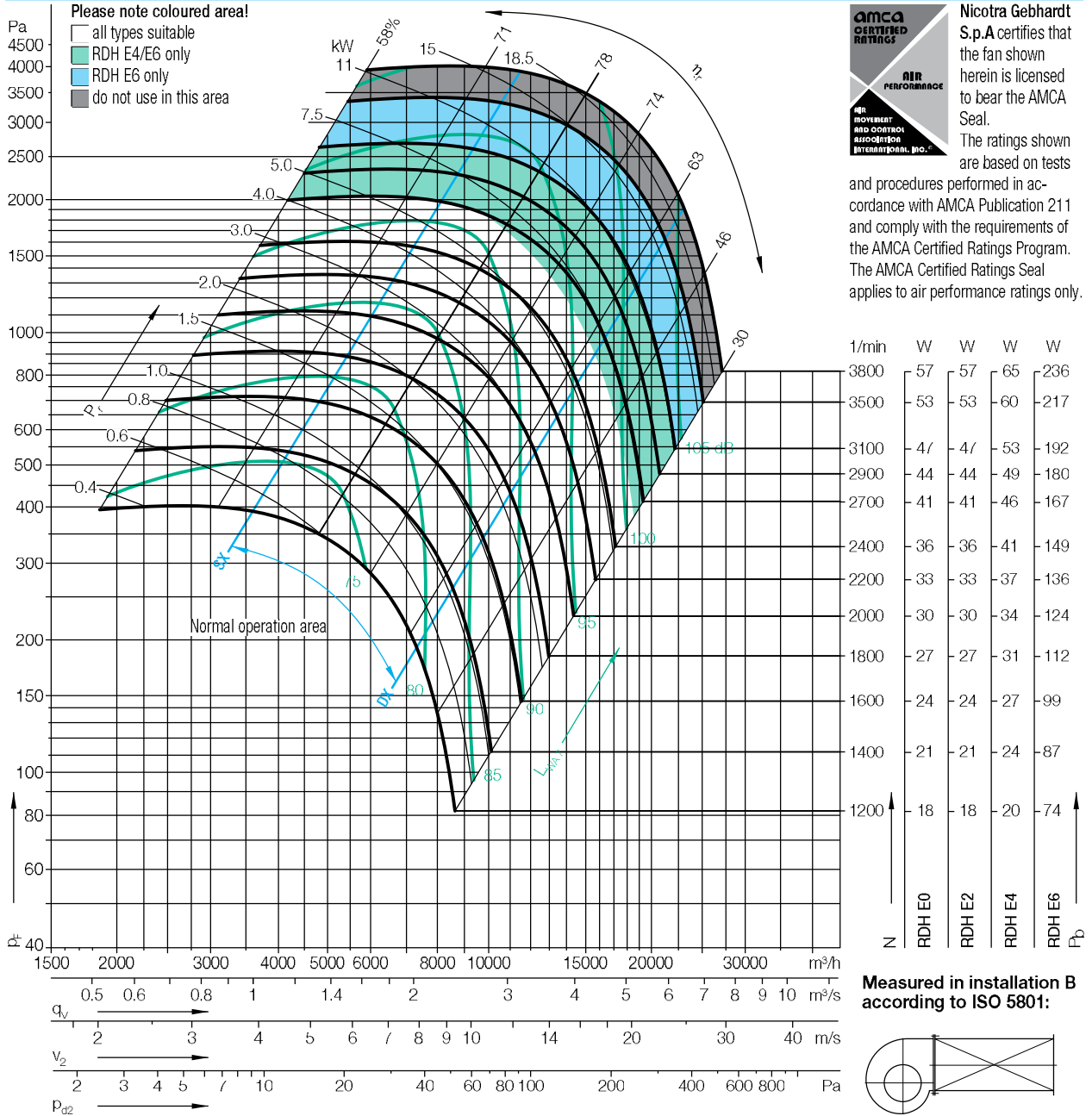
### Impeller Data

Impeller diameter	$D_f$	402 mm
Number of blades	$z$	11
Moment of Inertia	$J$	0,330 kgm <sup>2</sup>

### Impeller Data

Impeller weight	$m$	12,7 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		1

## Performance Curves

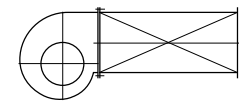


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1/min	W	W	W	W
3800	57	57	65	236
3500	53	53	60	217
3100	47	47	53	192
2900	44	44	49	180
2700	41	41	46	167
2400	36	36	41	149
2200	33	33	37	136
2000	30	30	34	124
1800	27	27	31	112
1600	24	24	27	99
1400	21	21	24	87
1200	18	18	20	74

Measured in installation B according to ISO 5801:



$\Delta L_{Wrel,d}(A)$

Relative sound power level for inlet side  $L_{Wrel,i}$  at octave centre frequencies  $f_c$

Relative sound power level for discharge side  $L_{Wrel,d}$  at octave centre frequencies  $f_c$

Duty point	Speed 1/min	dB
SX	3100	3
SX	2400	3
SX	1400	3
$Q_{V,opt}$	3100	3
$Q_{V,opt}$	2400	3
$Q_{V,opt}$	1400	3
DX	3100	2
DX	2400	3
DX	1400	3

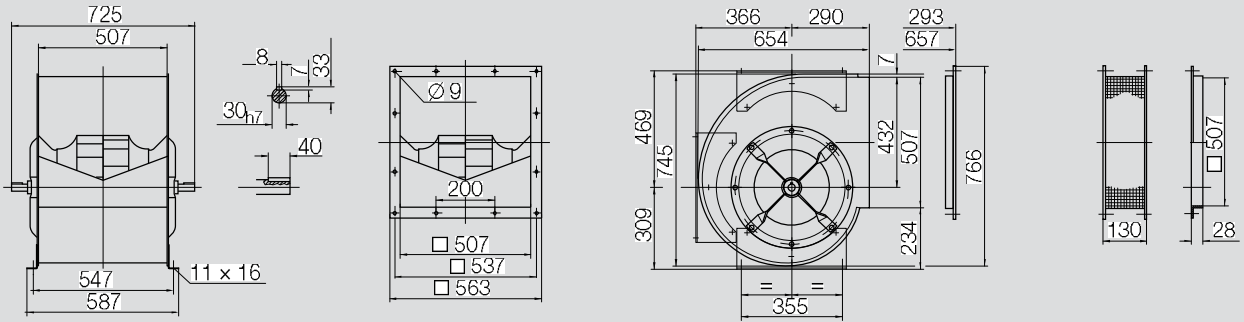
63	125	250	500	1000	2000	4000	8000	Hz
-7	-3	-4	-1	-6	-10	-11	-16	dB
-5	-3	-3	-1	-6	-8	-13	-17	dB
0	0	3	-3	-6	-9	-13	-17	dB
-9	-7	-7	-1	-6	-9	-10	-17	dB
-8	-7	-7	-1	-6	-8	-13	-18	dB
-4	-4	2	-4	-5	-8	-14	-18	dB
-7	-8	-8	-1	-7	-9	-10	-17	dB
-7	-8	-8	0	-7	-8	-12	-20	dB
-5	-5	2	-4	-5	-8	-15	-21	dB

63	125	250	500	1000	2000	4000	8000	Hz
10	7	3	-1	-4	-4	-8	-15	dB
10	6	2	-2	-2	-4	-11	-16	dB
10	6	6	0	-1	-7	-12	-16	dB
7	4	-1	0	-4	-3	-8	-15	dB
10	7	3	0	-2	-3	-11	-17	dB
6	2	6	-1	0	-6	-13	-18	dB
6	2	-2	0	-4	-4	-7	-15	dB
5	0	-3	0	-4	-3	-10	-17	dB
5	1	6	-1	-1	-5	-13	-19	dB

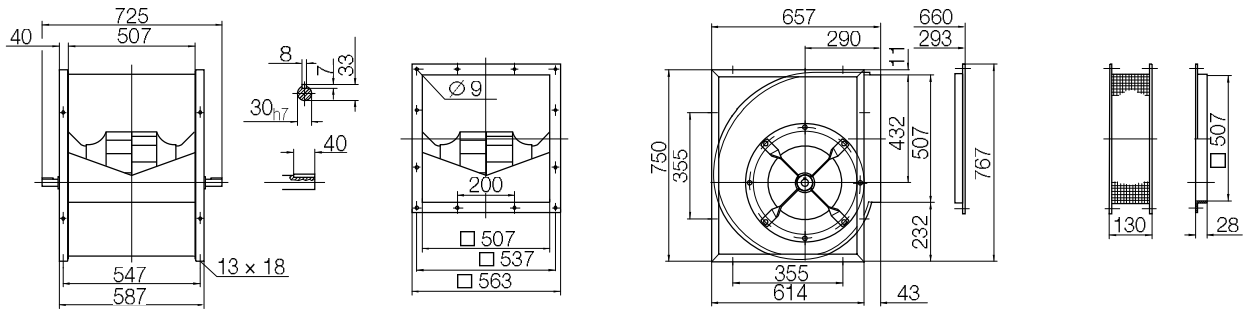
# RDH E\_-0400

Dimensions in mm, subject to change.

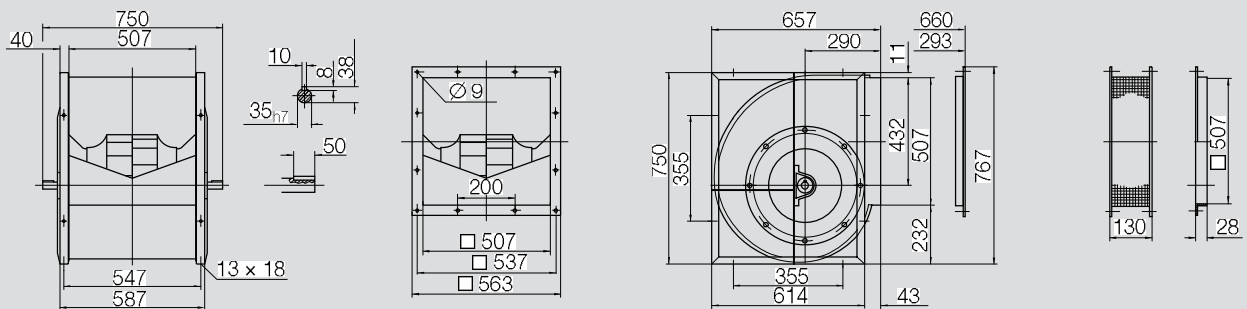
**RDH E0-0400** 36 kg



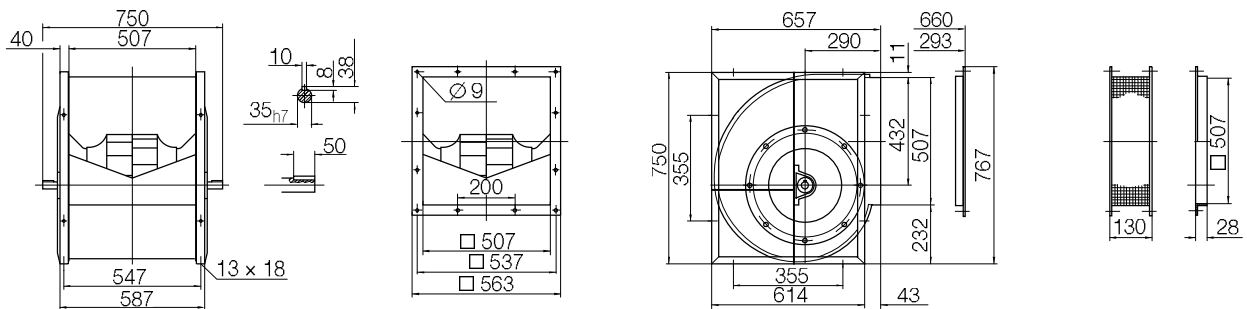
**RDH E2-0400** 42 kg



**RDH E4-0400** 57 kg



**RDH E6-0400** 58 kg



# RDH E\_-0450

Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

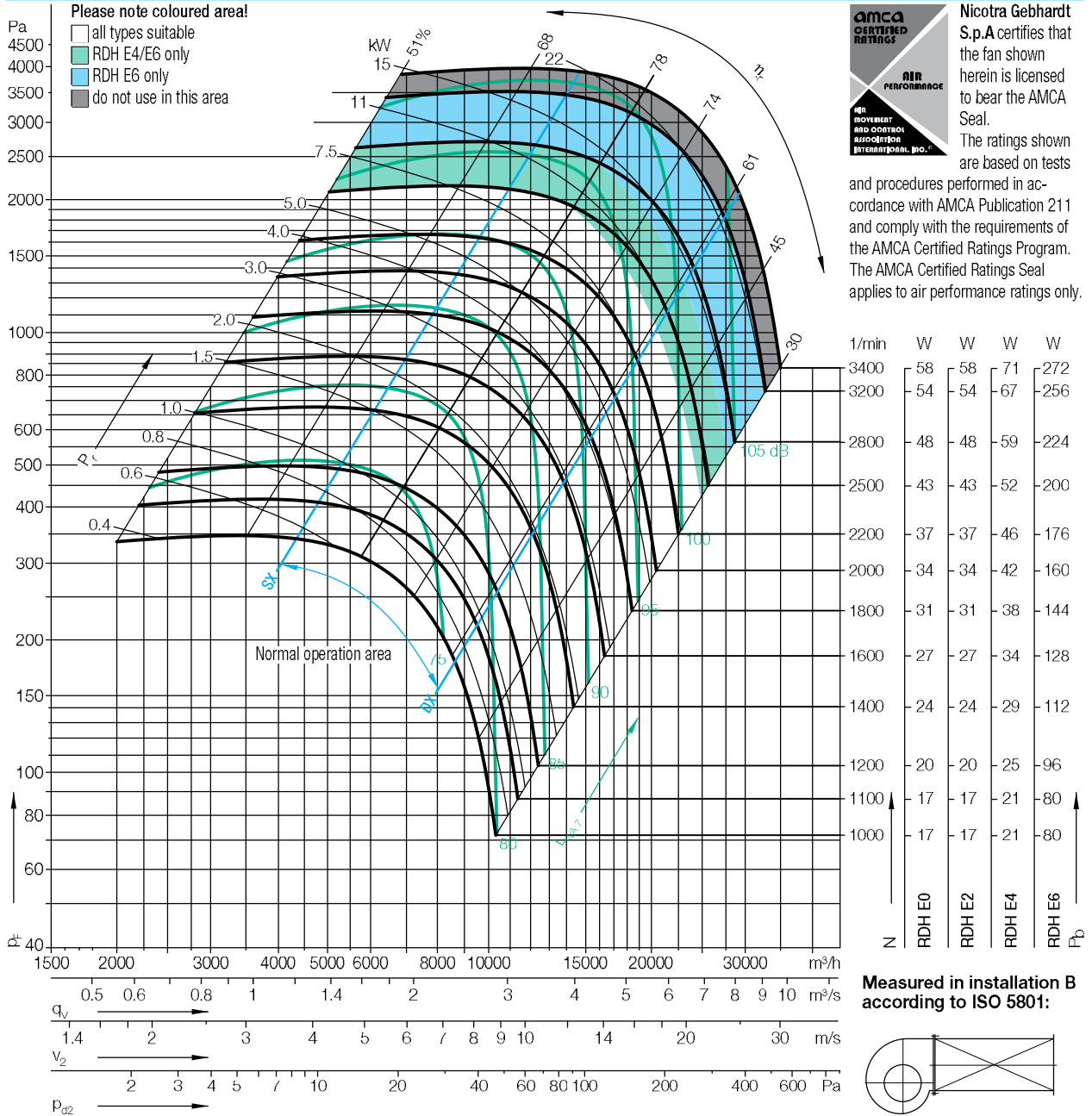
### Impeller Data

Impeller diameter	$D_f$	452 mm
Number of blades	$z$	11
Moment of Inertia	$J$	0,520 kgm <sup>2</sup>

### Impeller Data

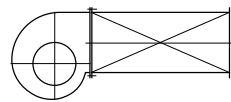
Impeller weight	$m$	17,6 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		1

## Performance Curves



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1/min	W	W	W	W
3400	58	58	71	272
3200	54	54	67	256
2800	48	48	59	224
2500	43	43	52	200
2200	37	37	46	176
2000	34	34	42	160
1800	31	31	38	144
1600	27	27	34	128
1400	24	24	29	112
1200	20	20	25	96
1100	17	17	21	80
1000	17	17	21	80



Duty point	Speed 1/min	dB
SX	2800	3
SX	2000	3
SX	1200	3
$Q_{V,opt}$	2800	3
$Q_{V,opt}$	2000	3
$Q_{V,opt}$	1200	3
DX	2800	3
DX	2000	3
DX	1200	3

$\Delta L_{Wrel4}(A)$									
Relative sound power level for inlet side $L_{Wrel4}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
-7	-4	-4	0	-7	-10	-13	-17	dB	
-3	-2	-1	-1	-6	-10	-13	-19	dB	
1	0	3	-3	-7	-10	-15	-20	dB	
-9	-7	-7	-1	-6	-9	-12	-17	dB	
-7	-5	-4	-1	-5	-9	-13	-19	dB	
-4	-4	3	-2	-6	-10	-15	-21	dB	
-7	-8	-8	0	-7	-9	-13	-19	dB	
-7	-6	-5	-1	-6	-9	-14	-21	dB	
-5	-5	3	-3	-6	-10	-17	-24	dB	

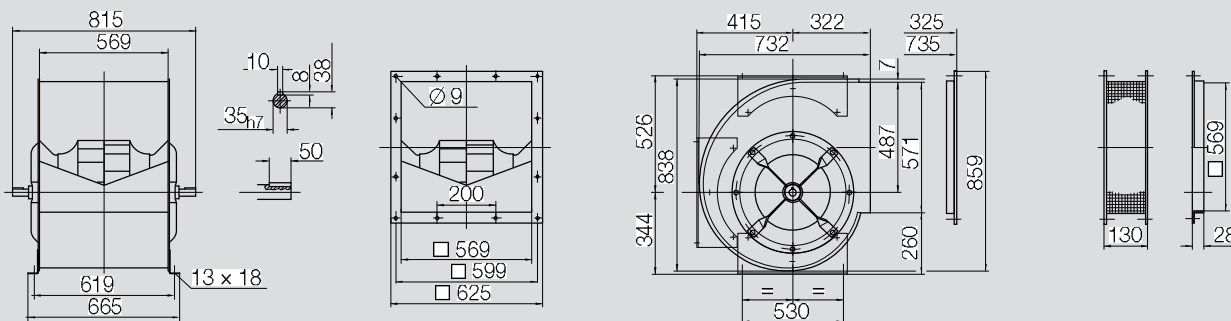
Relative sound power level for discharge side $L_{Wrel4}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
10	6	2	0	-4	-5	-11	-16	dB	
10	6	3	0	-2	-6	-12	-18	dB	
6	0	0	1	-2	-8	-14	-20	dB	
6	2	-2	-2	-3	-3	-10	-16	dB	
6	2	0	-2	0	-5	-12	-19	dB	
6	2	6	2	-1	-8	-15	-21	dB	
6	1	-3	1	-4	-4	-10	-17	dB	
6	0	0	0	-1	-5	-12	-19	dB	
4	1	6	1	-2	-8	-15	-22	dB	



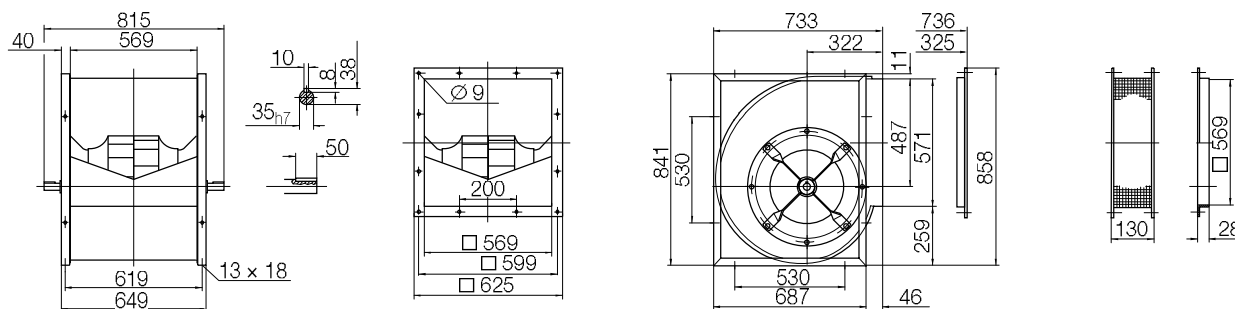
# RDH E\_-0450

Dimensions in mm, subject to change.

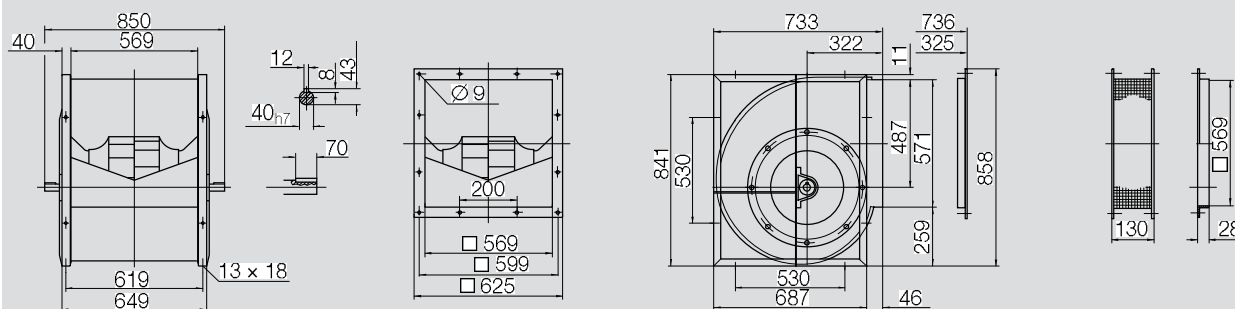
**RDH E0-0450** 50 kg



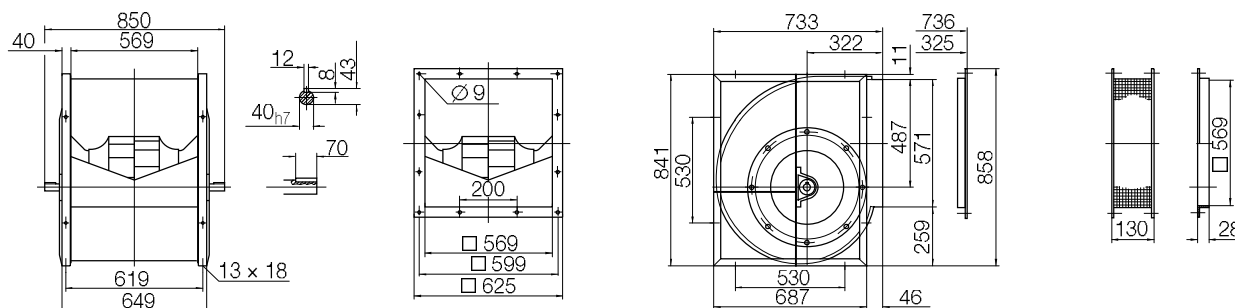
**RDH E2-0450** 57 kg



**RDH E4-0450** 73 kg



**RDH E6-0450** 75 kg



# RDH E\_-0500

Performance certified is for installation type B - free inlet, ducted outlet.

Power rating (kW) does not include transmission losses.

Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

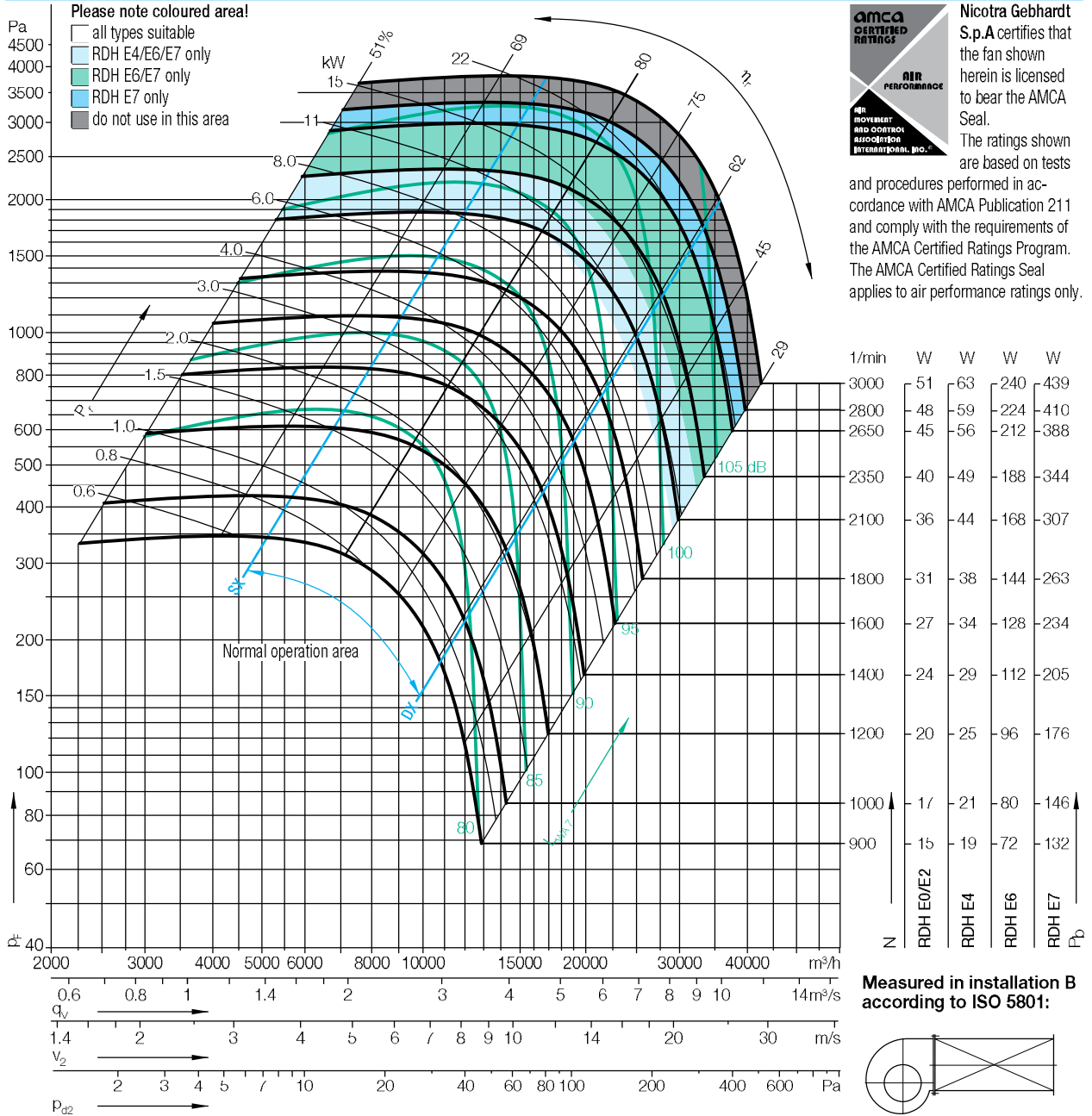
### Impeller Data

Impeller diameter	$D_f$	502 mm
Number of blades	$z$	11
Moment of Inertia	$J$	0,890 kgm <sup>2</sup>

### Impeller Data

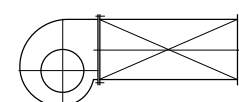
Impeller weight	$m$	23,5 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		1

## Performance Curves



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1/min	W	W	W	W
3000	51	63	240	439
2800	48	59	224	410
2650	45	56	212	388
2350	40	49	188	344
2100	36	44	168	307
1800	31	38	144	263
1600	27	34	128	234
1400	24	29	112	205
1200	20	25	96	176
1000	17	21	80	146
900	15	19	72	132

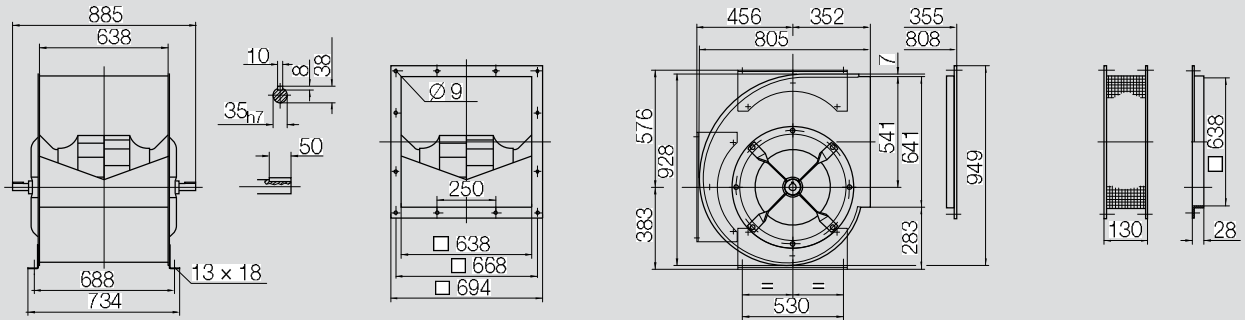


Duty point	Speed 1/min	dB	Relative sound power level for inlet side $L_{Wrel4}$ at octave centre frequencies $f_c$								Relative sound power level for discharge side $L_{Wrel4}$ at octave centre frequencies $f_c$									
			63	125	250	500	1000	2000	4000	8000	Hz	63	125	250	500	1000	2000	4000	8000	Hz
SX	2600	2	-6	-4	-4	1	-9	-13	-14	-18	dB	9	5	1	1	-6	-8	-13	-17	dB
SX	1800	3	-1	-1	0	-2	-9	-11	-15	-18	dB	10	6	4	0	-4	-8	-13	-18	dB
SX	1000	3	2	2	2	-5	-7	-11	-14	-18	dB	10	7	5	0	-3	-9	-13	-18	dB
$Q_{V,opt}$	2600	1	-9	-7	-8	1	-9	-12	-14	-19	dB	8	5	1	1	-5	-7	-12	-18	dB
$Q_{V,opt}$	1800	2	-6	-5	-2	-1	-8	-10	-15	-19	dB	10	6	4	0	-3	-7	-13	-18	dB
$Q_{V,opt}$	1000	3	-2	-1	2	-4	-7	-11	-15	-19	dB	5	3	5	1	-3	-9	-14	-19	dB
DX	2600	2	-8	-8	-8	1	-7	-11	-13	-19	dB	5	0	-3	1	-4	-6	-10	-16	dB
DX	1800	3	-6	-6	-3	-1	-7	-9	-14	-19	dB	6	1	2	0	-2	-6	-12	-17	dB
DX	1000	3	-3	-2	2	-3	-6	-10	-15	-21	dB	5	4	5	1	-3	-8	-13	-20	dB

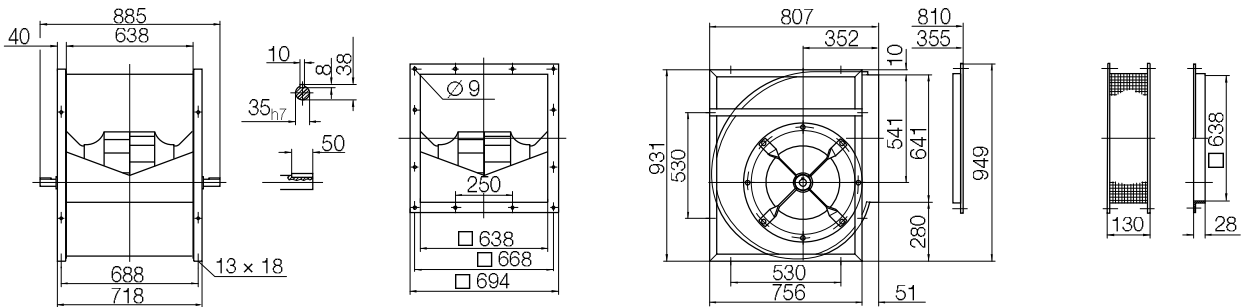
# RDH E\_-0500

Dimensions in mm, subject to change.

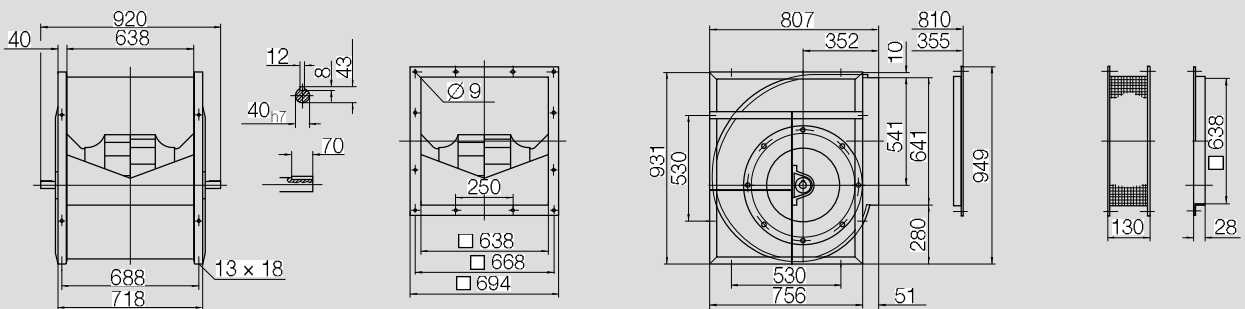
**RDH E0-0500** 62 kg



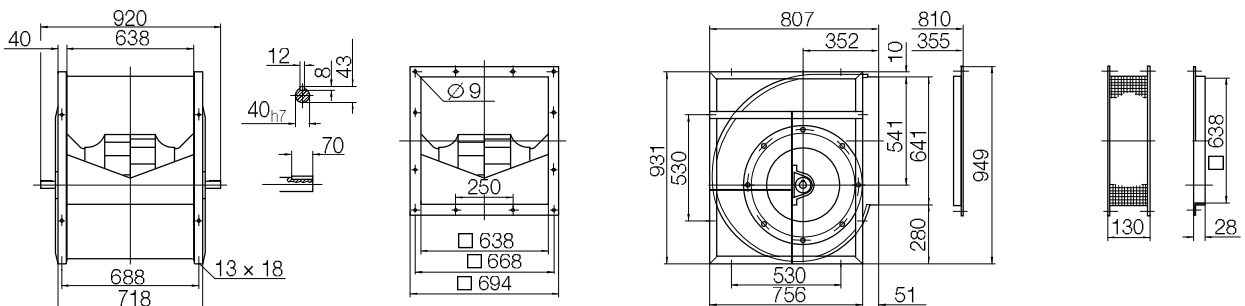
**RDH E2-0500** 70 kg



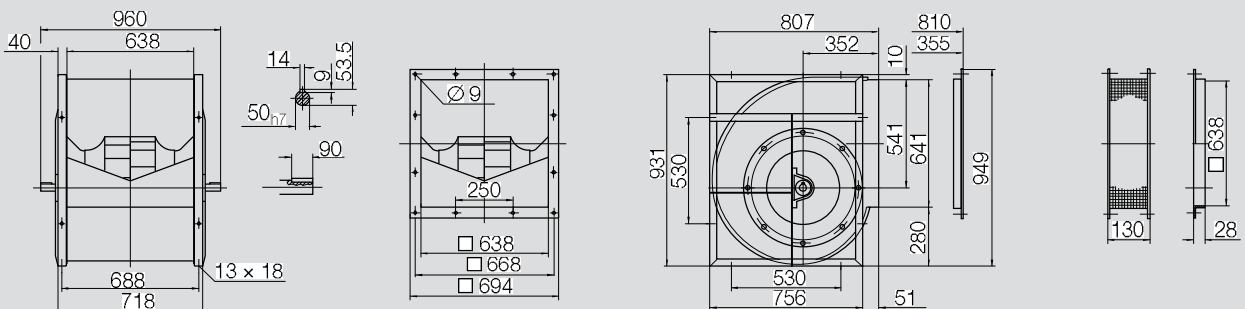
**RDH E4-0500** 90 kg



**RDH E6-0500** 92 kg



**RDH E7-0500** 110 kg



# RDH E\_-0560

Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

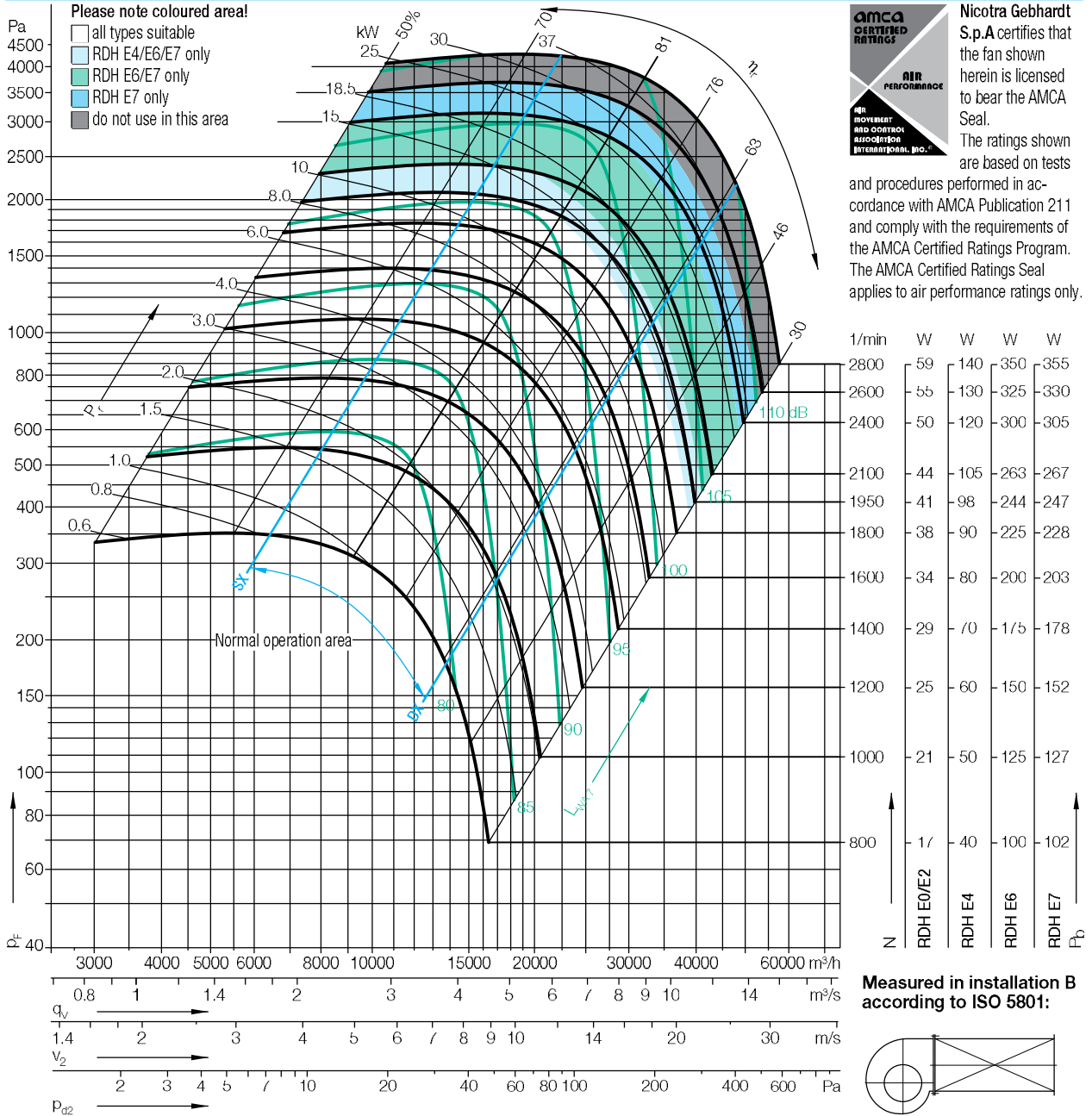
### Impeller Data

Impeller diameter	$D_f$	562 mm
Number of blades	$z$	11
Moment of Inertia	$J$	1,410 kgm <sup>2</sup>

### Impeller Data

Impeller weight	$m$	28,8 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		1

## Performance Curves



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Duty point	Speed 1/min	dB
SX	2400	3
SX	1800	3
SX	1000	3
$q_{v,opt}$	2400	3
$q_{v,opt}$	1800	3
$q_{v,opt}$	1000	3
DX	2400	2
DX	1800	3
DX	1000	3

Relative sound power level for inlet side  $L_{WrelI}$  at octave centre frequencies  $f_c$

$f_c$	63	125	250	500	1000	2000	4000	8000	Hz
SX 2400	-5	-3	-3	-1	-7	-12	-13	-15	dB
SX 1800	-1	-1	0	-1	-8	-10	-12	-16	dB
SX 1000	2	2	2	-4	-7	-9	-12	-18	dB
$q_{v,opt}$ 2400	-8	-7	-7	-1	-6	-11	-11	-14	dB
$q_{v,opt}$ 1800	-1	-1	0	-2	-7	-9	-11	-14	dB
$q_{v,opt}$ 1000	-2	-1	2	-4	-7	-8	-11	-17	dB
DX 2400	-7	-8	-8	1	-7	-11	-13	-16	dB
DX 1800	-6	-6	-3	-1	-7	-10	-13	-15	dB
DX 1000	-3	-2	2	-4	-7	-10	-12	-16	dB

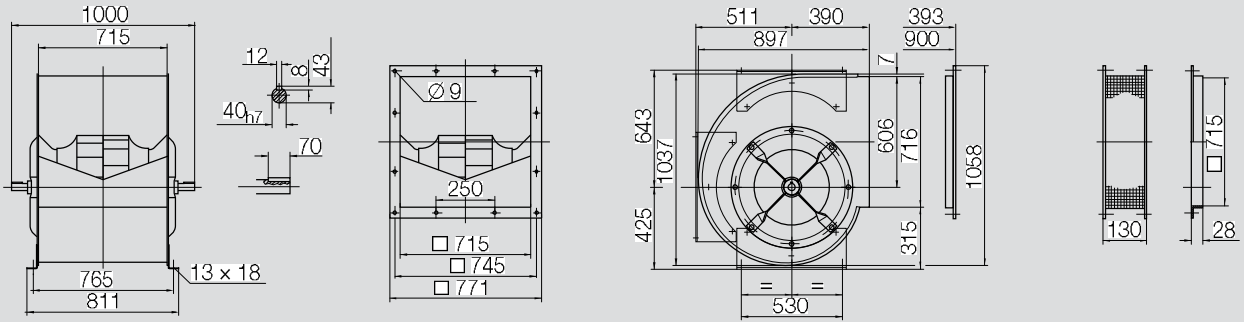
Relative sound power level for discharge side  $L_{WrelA}$  at octave centre frequencies  $f_c$

$f_c$	63	125	250	500	1000	2000	4000	8000	Hz
SX 2400	10	6	2	0	-3	-7	-11	-14	dB
SX 1800	6	1	-2	0	-3	-7	-11	-15	dB
SX 1000	10	7	5	0	-3	-7	-11	-19	dB
$q_{v,opt}$ 2400	6	2	-2	-2	-2	-6	-10	-13	dB
$q_{v,opt}$ 1800	6	2	2	-1	-2	-6	-10	-14	dB
$q_{v,opt}$ 1000	5	4	5	1	-2	-7	-10	-17	dB
DX 2400	5	0	-3	1	-3	-7	-11	-14	dB
DX 1800	6	1	2	1	-2	-7	-11	-13	dB
DX 1000	4	4	6	1	-3	-7	-10	-15	dB

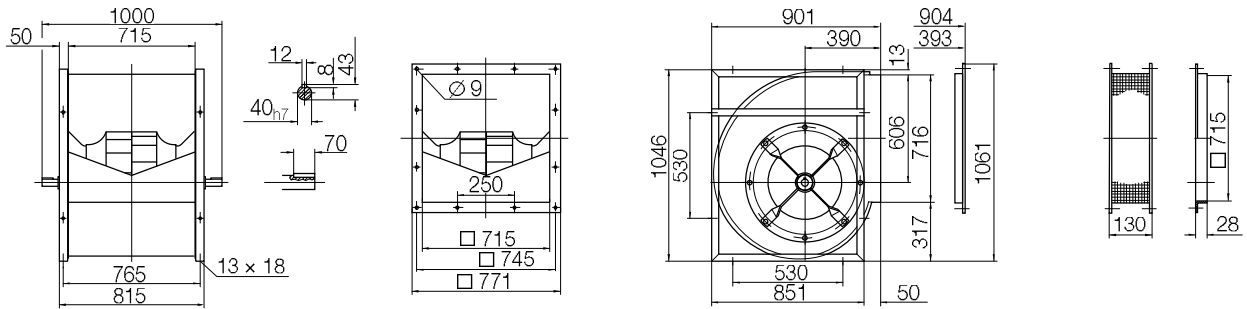
# RDH E\_-0560

Dimensions in mm, subject to change.

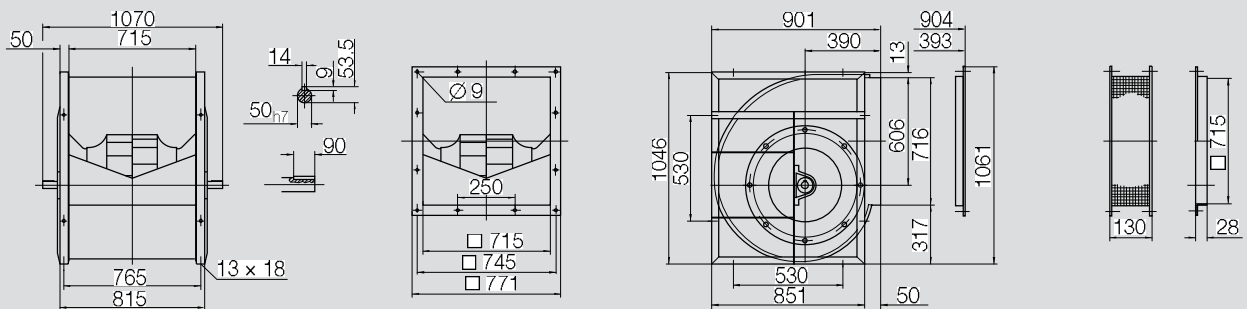
**RDH E0-0560** 79 kg



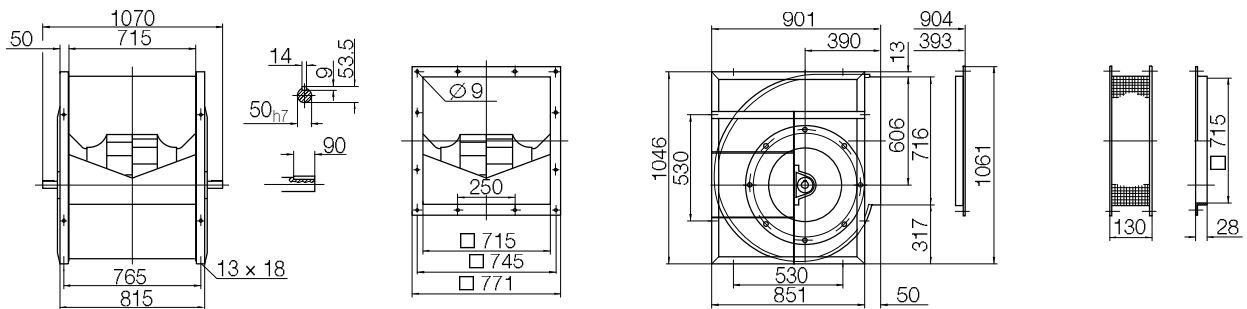
**RDH E2-0560** 92 kg



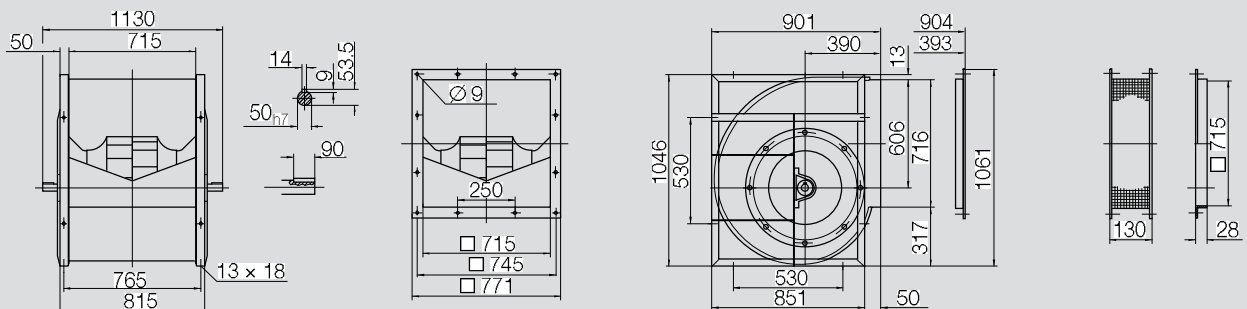
**RDH E4-0560** 141 kg



**RDH E6-0560** 148 kg



**RDH E7-0560** 153 kg



# RDH \_-0630

Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

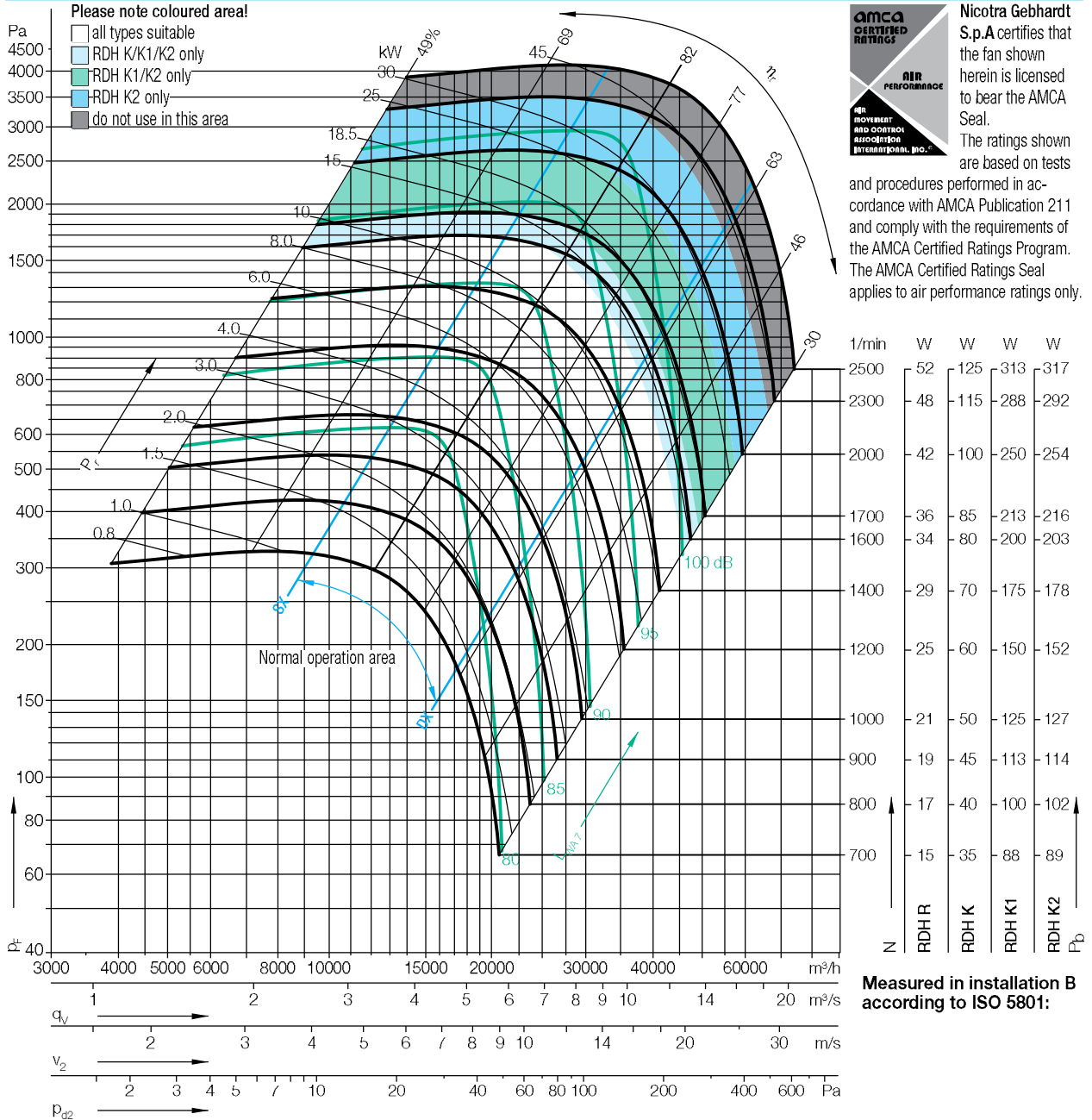
### Impeller Data

Impeller diameter	$D_f$	632 mm
Number of blades	$z$	11
Moment of Inertia	$J$	2,320 kgm <sup>2</sup>

### Impeller Data

Impeller weight	$m$	36,7 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		1

## Performance Curves



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1/min	W	W	W	W
2500	52	125	313	317
2300	48	115	288	292
2000	42	100	250	254
1700	36	85	213	216
1600	34	80	200	203
1400	29	70	175	178
1200	25	60	150	152
1000	21	50	125	127
900	19	45	113	114
800	17	40	100	102
700	15	35	88	89

Z RDH R RDH K RDH K1 RDH K2 P<sub>b</sub>

Duty point	Speed 1/min	dB
SX	2000	3
SX	1400	3
SX	800	3
$Q_{V,opt}$	2000	3
$Q_{V,opt}$	1400	3
$Q_{V,opt}$	800	3
DX	2000	3
DX	1400	3
DX	800	3

Relative sound power level for inlet side  $L_{Wrel4}$  at octave centre frequencies  $f_c$

	63	125	250	500	1000	2000	4000	8000	Hz
3	3	3	1	-1	-7	-12	-15	-18	dB
5	4	3	3	-1	-8	-12	-16	-18	dB
8	7	3	-4	-7	-12	-13	-21	-21	dB
0	-1	-2	-1	-6	-11	-14	-17	-17	dB
2	-2	3	-2	-7	-11	-15	-17	-17	dB
3	6	3	-3	-7	-11	-13	-20	-20	dB
-4	-4	-2	-1	-6	-11	-13	-19	-19	dB
-2	-3	2	-1	-7	-10	-16	-21	-21	dB
1	6	3	-3	-6	-11	-16	-21	-21	dB

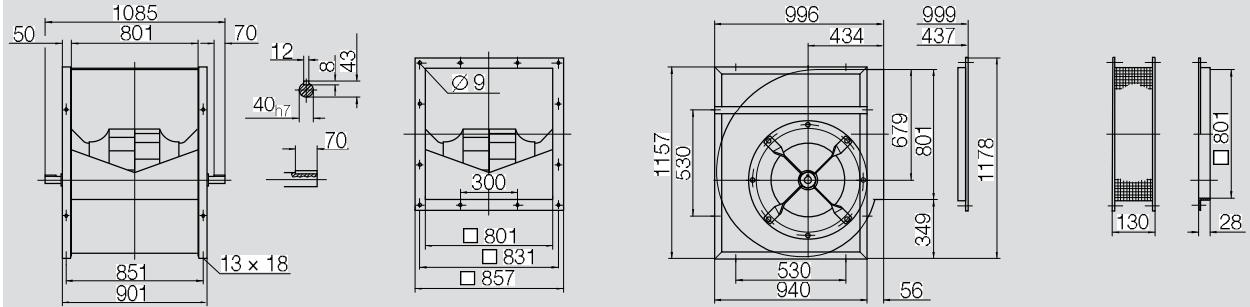
Relative sound power level for discharge side  $L_{Wrel4}$  at octave centre frequencies  $f_c$

	63	125	250	500	1000	2000	4000	8000	Hz
14	11	4	0	-2	-8	-14	-18	-18	dB
14	10	4	2	-3	-9	-15	-18	-18	dB
15	8	6	2	-4	-11	-13	-21	-21	dB
9	6	1	0	-1	-7	-13	-17	-17	dB
10	5	2	2	-1	-9	-14	-17	-17	dB
9	6	5	3	-4	-10	-12	-20	-20	dB
10	4	2	1	-1	-7	-11	-17	-17	dB
8	4	4	2	-2	-8	-13	-19	-19	dB
8	8	5	2	-3	-8	-14	-22	-22	dB

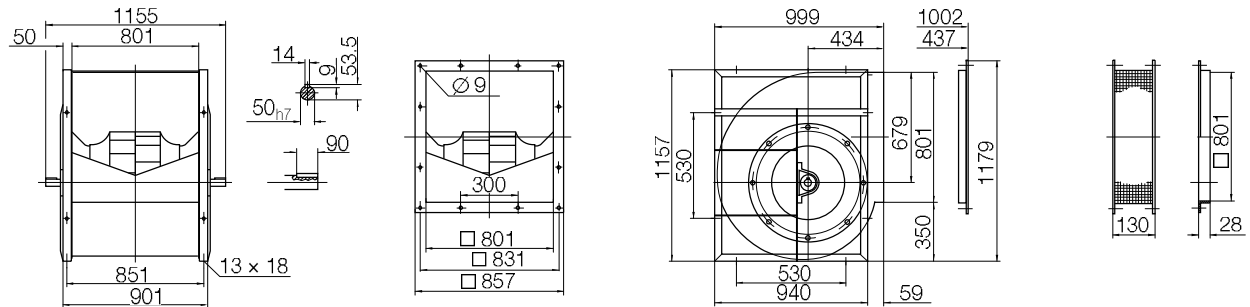
# RDH\_-0630

Dimensions in mm, subject to change.

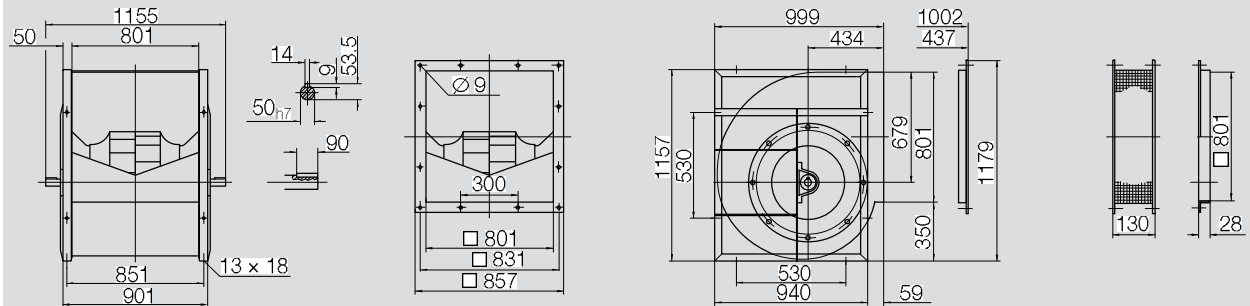
**RDH R-0630** 119 kg



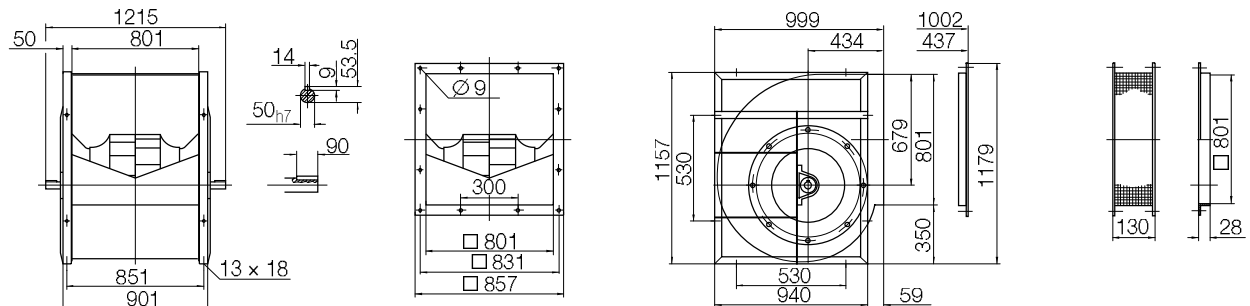
**RDH K-0630** 173 kg



**RDH K1-0630** 180 kg



**RDH K2-0630** 185 kg



# RDH \_-0710

Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

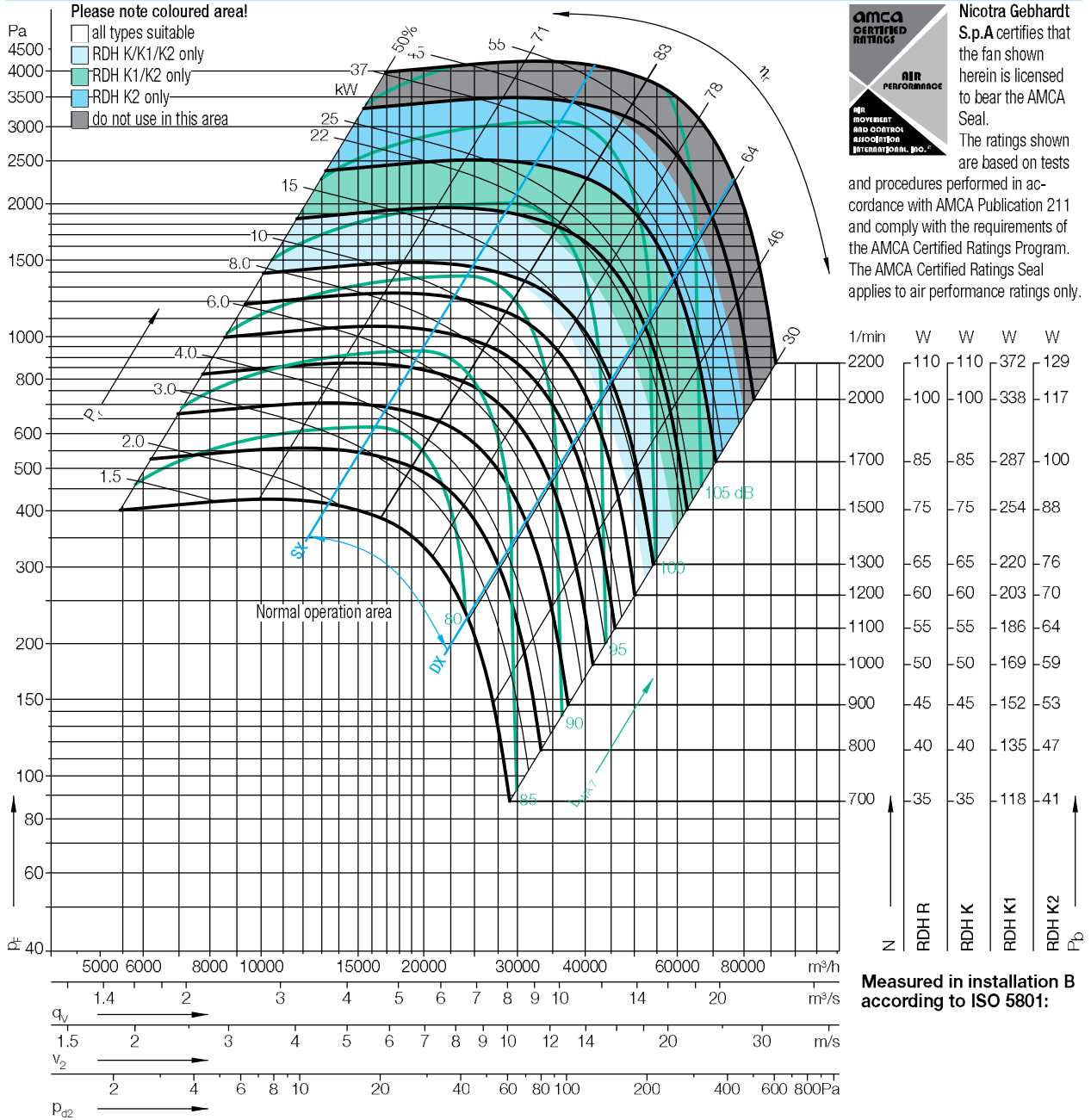
### Impeller Data

Impeller diameter	$D_f$	712	mm
Number of blades	$z$	11	
Moment of Inertia	$J$	4,940	kgm <sup>2</sup>

### Impeller Data

Impeller weight	$m$	60	kg
Density of media	$\rho_1$	1,2	kg/m <sup>3</sup>
Tolerance class (DIN 24166)		1	

## Performance Curves



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Duty point	Speed 1/min	dB
SX	2000	3
SX	1500	3
SX	800	3
$Q_{V,opt}$	2000	3
$Q_{V,opt}$	1500	3
$Q_{V,opt}$	800	3
DX	2000	3
DX	1500	3
DX	800	3

Relative sound power level for inlet side  $L_{WrelI7}$  at octave centre frequencies  $f_c$

	63	125	250	500	1000	2000	4000	8000	Hz
1	1	0	0	-8	-11	-14	-19	-19	dB
3	2	3	-2	-8	-10	-15	-19	-19	dB
6	7	3	-4	-6	-11	-15	-19	-19	dB
-1	-1	-1	-0	-7	-10	-14	-19	-19	dB
0	0	3	-3	-7	-9	-15	-19	-19	dB
4	7	2	-4	-6	-11	-15	-20	-20	dB
-1	-1	-1	0	-8	-10	-14	-21	-21	dB
1	0	4	-3	-8	-9	-16	-22	-22	dB
4	7	2	-4	-5	-12	-18	-23	-23	dB

Relative sound power level for discharge side  $L_{Wrel4}$  at octave centre frequencies  $f_c$

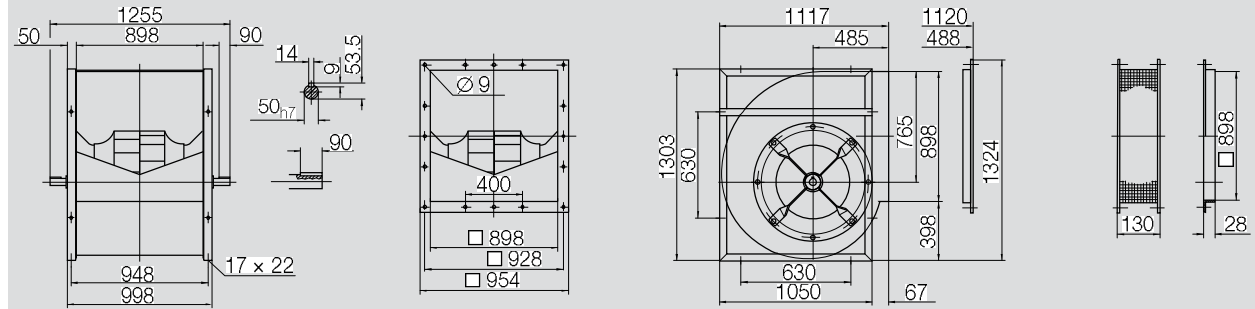
	63	125	250	500	1000	2000	4000	8000	Hz
11	8	3	1	-3	-7	-13	-19	-19	dB
11	8	4	1	-3	-7	-14	-19	-19	dB
12	8	5	1	-3	-10	-15	-19	-19	dB
7	6	2	0	-2	-6	-13	-18	-18	dB
8	6	3	0	-2	-7	-14	-19	-19	dB
10	7	4	2	-3	-10	-15	-20	-20	dB
12	7	3	1	-3	-6	-12	-19	-19	dB
11	7	6	0	-2	-7	-14	-21	-21	dB
11	9	4	2	-2	-10	-16	-23	-23	dB



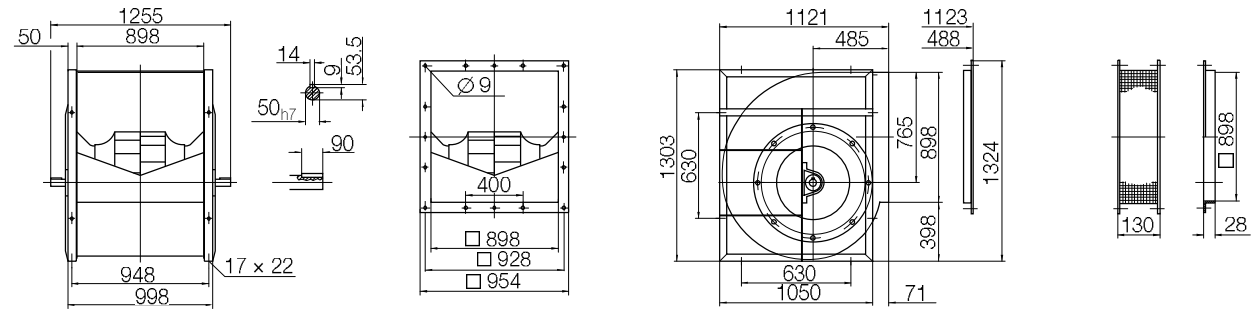
# RDH\_-0710

Dimensions in mm, subject to change.

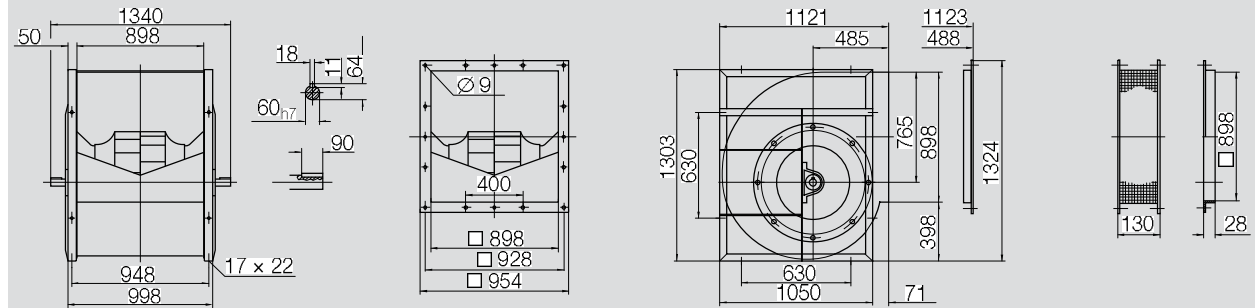
**RDH R-0710** 165 kg



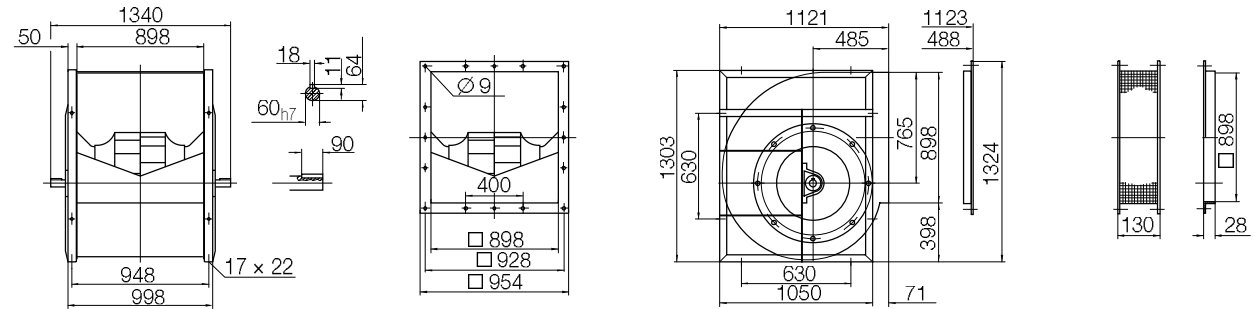
**RDH K-0710** 220 kg



**RDH K1-0710** 240 kg



**RDH K2-0710** 250 kg



Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

**Technical Data**

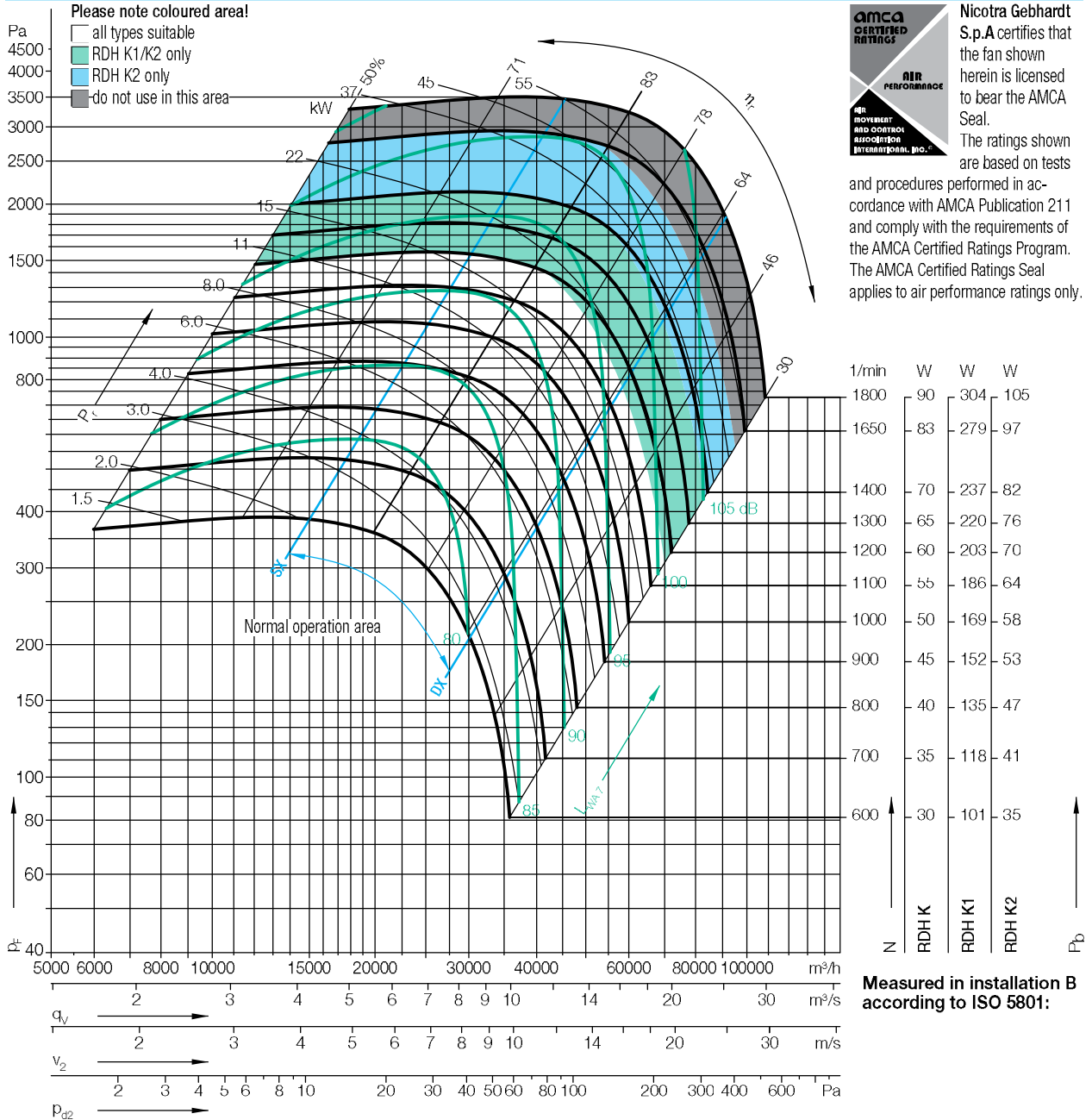
**Impeller Data**

Impeller diameter	$D_f$	802 mm
Number of blades	$z$	11
Moment of Inertia	$J$	8,250 kgm <sup>2</sup>

**Impeller Data**

Impeller weight	$m$	86 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		1

**Performance Curves**



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1/min	W	W	W
1800	90	304	105
1650	83	279	97
1400	70	237	82
1300	65	220	76
1200	60	203	70
1100	55	186	64
1000	50	169	58
900	45	152	53
800	40	135	47
700	35	118	41
600	30	101	35

**Measured in installation B according to ISO 5801:**

$\Delta L_{Wrel4}(A)$

Duty point	Speed 1/min	dB
SX	1400	3
SX	1100	3
SX	700	3
$Q_{V,opt}$	1400	3
$Q_{V,opt}$	1100	3
$Q_{V,opt}$	700	3
DX	1400	3
DX	1100	3
DX	700	3

Relative sound power level for inlet side  $L_{Wrel7}$  at octave centre frequencies  $f_c$

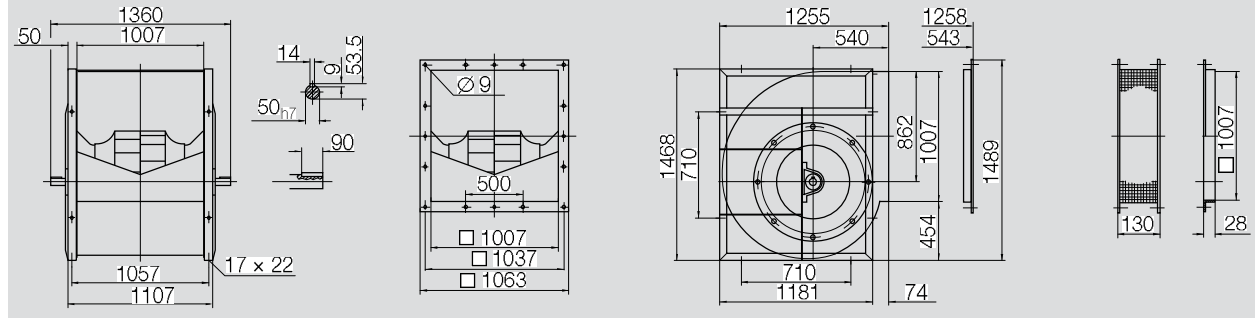
	63	125	250	500	1000	2000	4000	8000	Hz
	4	3	3	-2	-8	-10	-16	-19	dB
	5	3	4	-4	-8	-10	-16	-19	dB
	7	8	2	-4	-6	-12	-15	-20	dB
	0	0	4	-3	-7	-9	-15	-20	dB
	1	0	4	-3	-7	-10	-16	-20	dB
	4	8	1	-3	-6	-12	-16	-20	dB
	2	0	4	-3	-7	-9	-17	-23	dB
	2	0	5	-4	-7	-10	-18	-23	dB
	4	8	1	-3	-5	-12	-18	-23	dB

Relative sound power level for discharge side  $L_{Wrel4}$  at octave centre frequencies  $f_c$

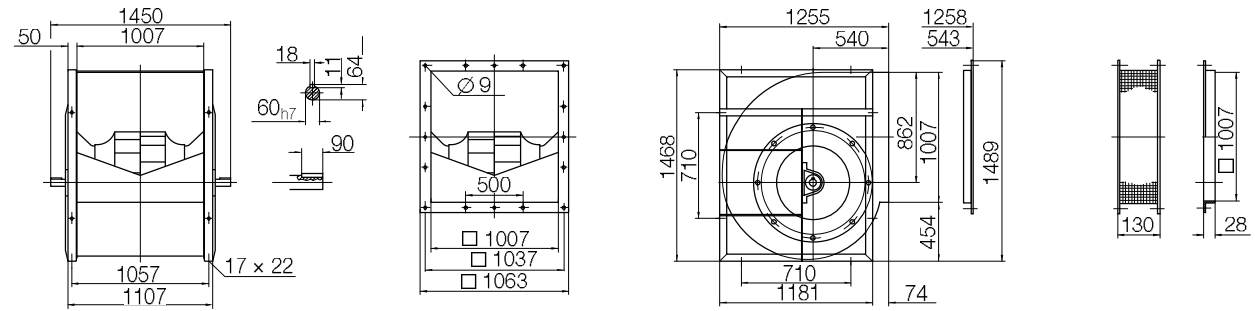
	63	125	250	500	1000	2000	4000	8000	Hz
	12	8	4	1	-3	-8	-15	-19	dB
	12	6	5	1	-3	-8	-15	-20	dB
	12	8	5	1	-3	-11	-15	-19	dB
	8	6	3	0	-2	-7	-14	-19	dB
	8	3	4	1	-2	-9	-15	-21	dB
	9	7	4	2	-3	-10	-15	-20	dB
	11	7	5	0	-2	-7	-14	-21	dB
	10	4	6	1	-3	-8	-16	-22	dB
	11	9	4	2	-3	-10	-17	-23	dB

# RDH\_-0800

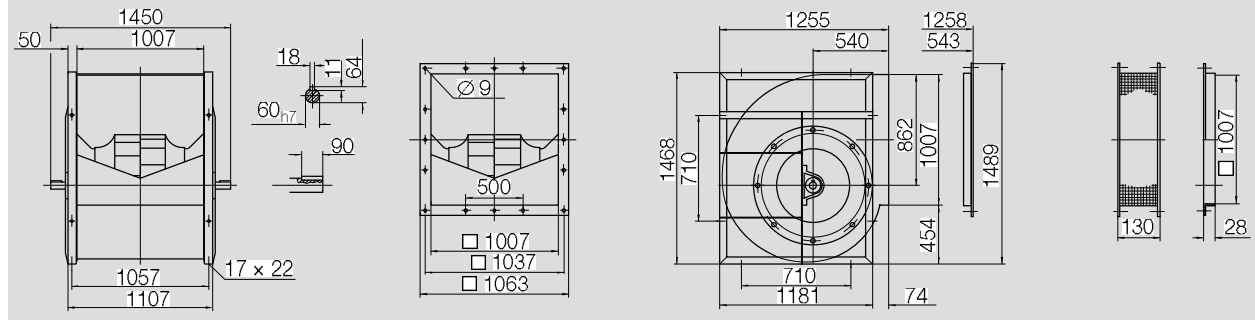
Dimensions in mm, subject to change.  
RDH K-0800 270 kg



RDH K1-0800 297 kg



RDH K2-0800 305 kg



# RDH \_-0900

Performance certified is for installation type B - free inlet, ducted outlet.  
 Power rating (kW) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).

## Technical Data

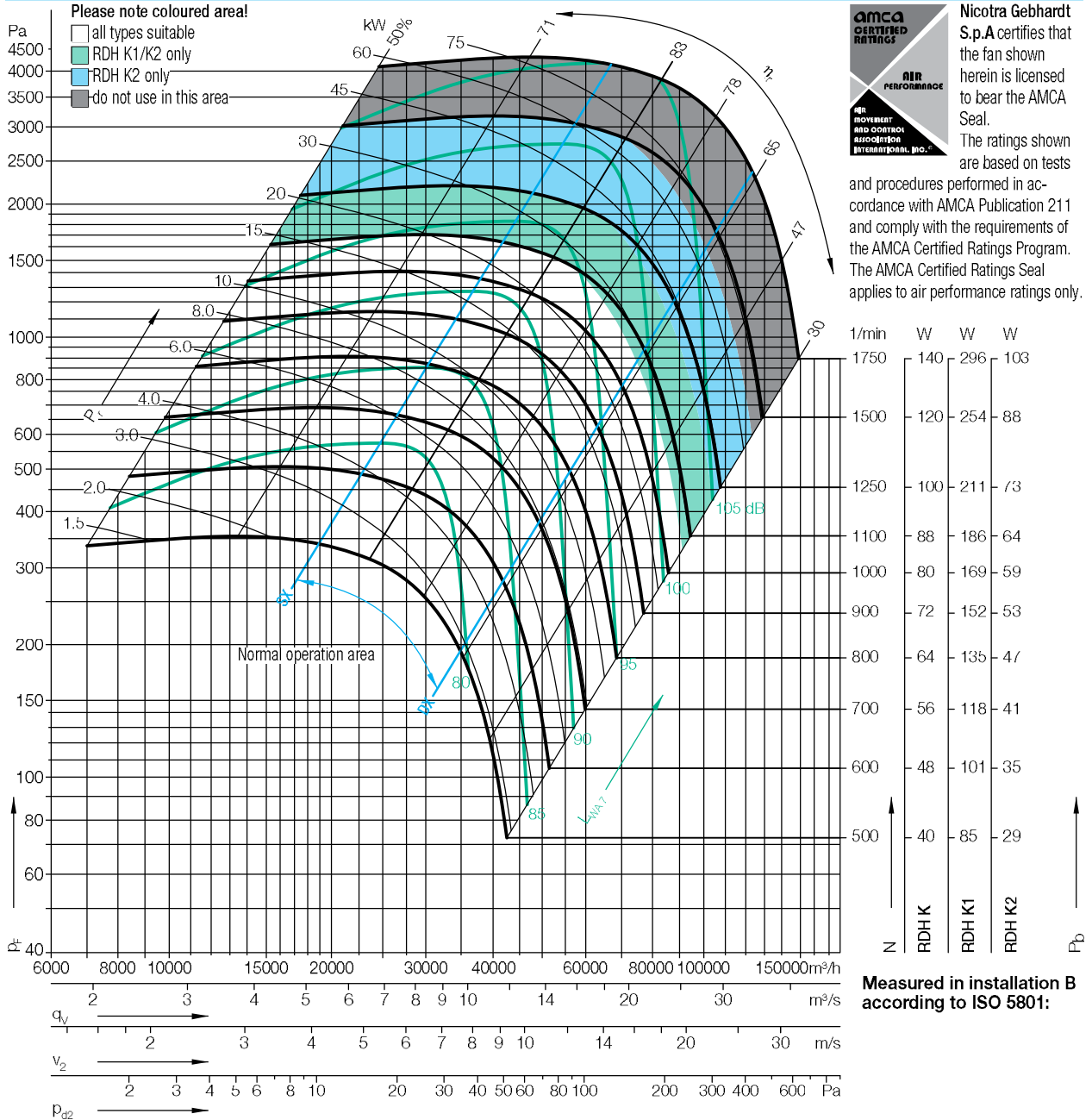
### Impeller Data

Impeller diameter	$D_f$	902 mm
Number of blades	$z$	11
Moment of Inertia	$J$	12,80 kgm <sup>2</sup>

### Impeller Data

Impeller weight	$m$	102 kg
Density of media	$\rho_1$	1,2 kg/m <sup>3</sup>
Tolerance class (DIN 24166)		1

## Performance Curves



**AMCA CERTIFIED RATINGS**  
**AIR PERFORMANCE**  
 Nicotra Gebhardt S.p.A certifies that the fan shown herein is licensed to bear the AMCA Seal.  
 The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.

1/min	W	W	W
1750	140	296	103
1500	120	254	88
1250	100	211	73
1100	88	186	64
1000	80	169	59
900	72	152	53
800	64	135	47
700	56	118	41
600	48	101	35
500	40	85	29

Duty point	Speed 1/min	dB
SX	1250	3
SX	1000	3
SX	600	3
$Q_{V,opt}$	1250	3
$Q_{V,opt}$	1000	3
$Q_{V,opt}$	600	3
DX	1250	3
DX	1000	3
DX	600	3

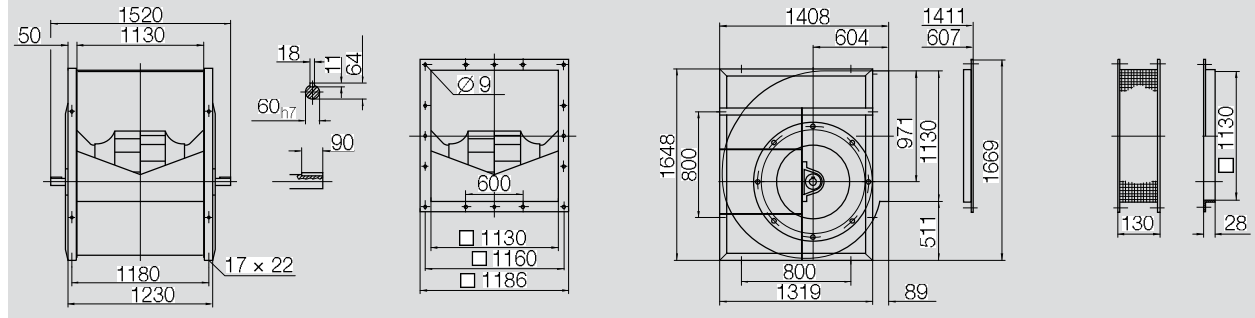
Relative sound power level for inlet side $L_{Wrel7}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
4	2	4	-3	-8	-10	-16	-19	dB	
5	4	4	-4	-7	-10	-16	-19	dB	
6	8	1	-4	-6	-12	-15	-20	dB	
1	-1	4	-3	-7	-10	-16	-20	dB	
3	3	4	-4	-6	-10	-15	-20	dB	
3	8	1	-3	-6	-12	-16	-21	dB	
1	-1	5	-4	-7	-10	-18	-24	dB	
3	3	4	-4	-6	-11	-18	-23	dB	
4	9	1	-3	-6	-14	-19	-24	dB	

Relative sound power level for discharge side $L_{Wrel4}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
11	7	4	1	-3	-8	-15	-19	dB	
12	7	5	1	-3	-9	-15	-19	dB	
10	9	5	1	-4	-11	-15	-20	dB	
8	4	4	1	-2	-8	-15	-20	dB	
9	5	4	2	-2	-9	-15	-20	dB	
8	8	5	2	-4	-11	-16	-21	dB	
10	5	6	0	-3	-7	-15	-22	dB	
10	7	5	1	-2	-8	-16	-22	dB	
9	10	5	2	-3	-11	-18	-24	dB	

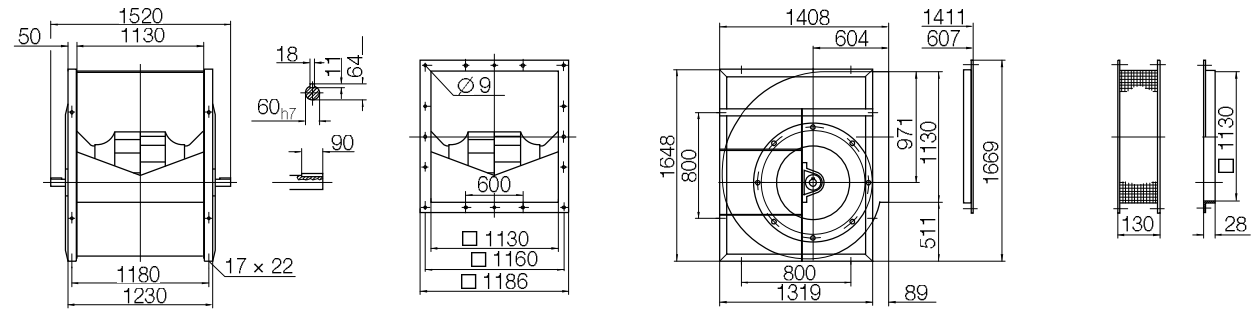
# RDH \_-0900

Dimensions in mm, subject to change.

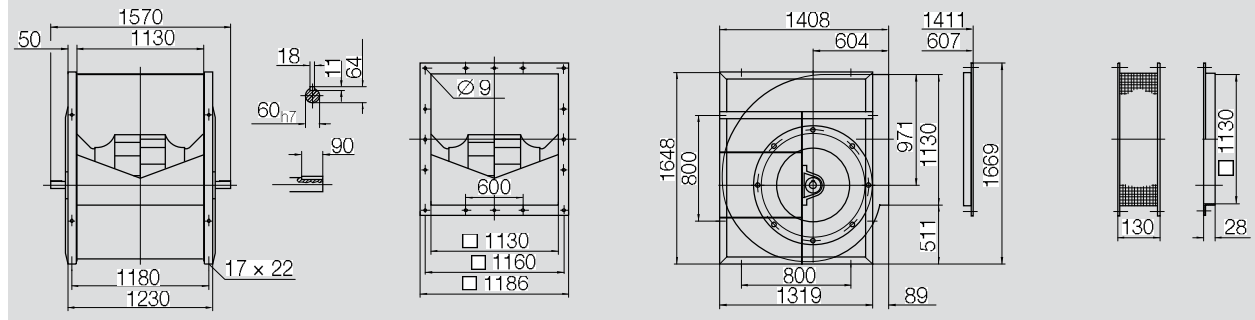
RDH K-0900 343 kg



RDH K1-0900 355 kg



RDH K2-0900 375 kg



Performance certified is for installation type B - free inlet, ducted outlet.  
Power rating (kW) does not include transmission losses.  
Performance ratings do not include the effects of appurtenances (accessories).

**Technical Data**

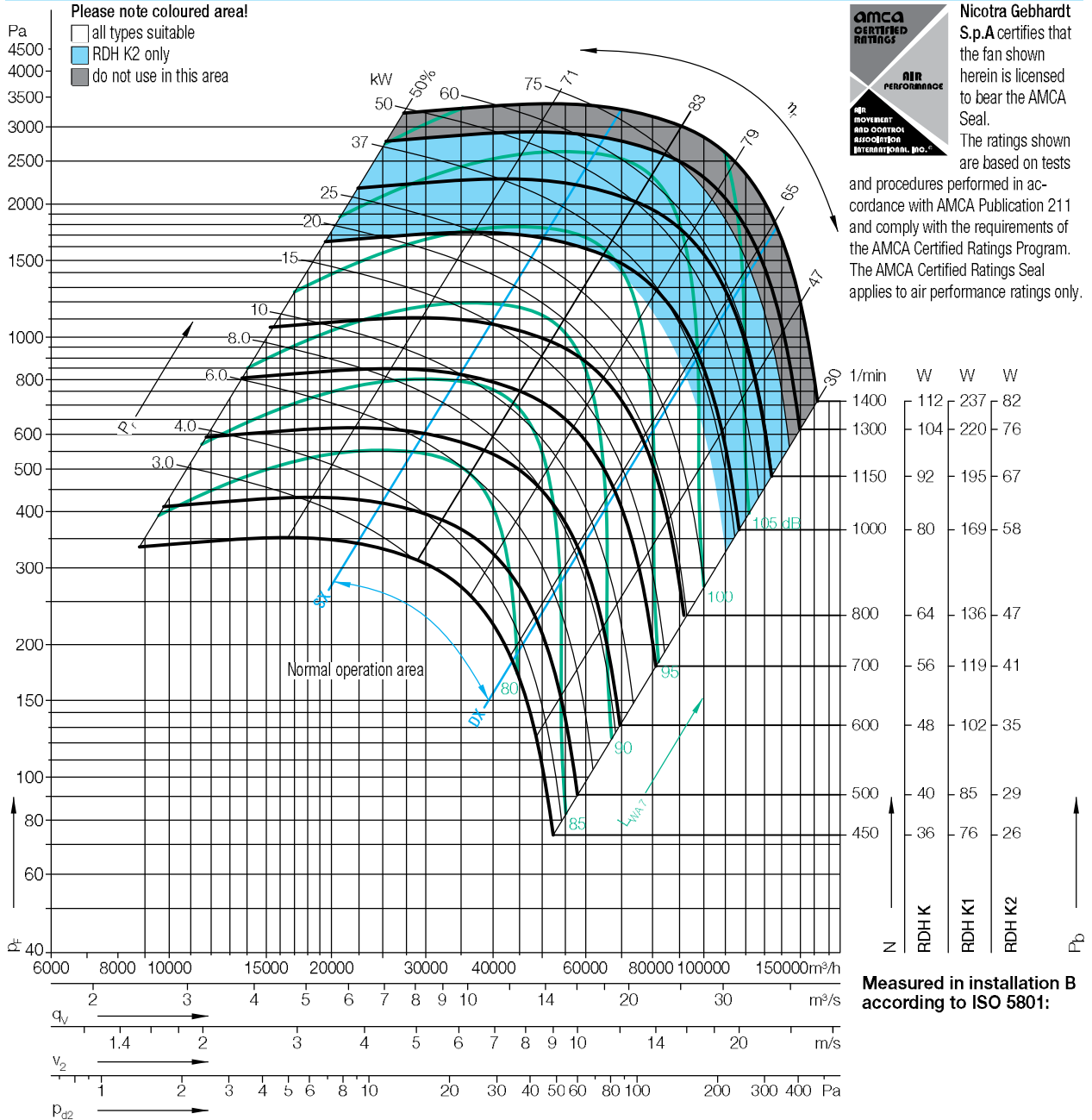
**Impeller Data**

Impeller diameter	$D_f$	1002	mm
Number of blades	$z$	11	
Moment of Inertia	$J$	24,80	kgm <sup>2</sup>

**Impeller Data**

Impeller weight	$m$	146	kg
Density of media	$\rho_1$	1,2	kg/m <sup>3</sup>
Tolerance class (DIN 24166)		1	

**Performance Curves**



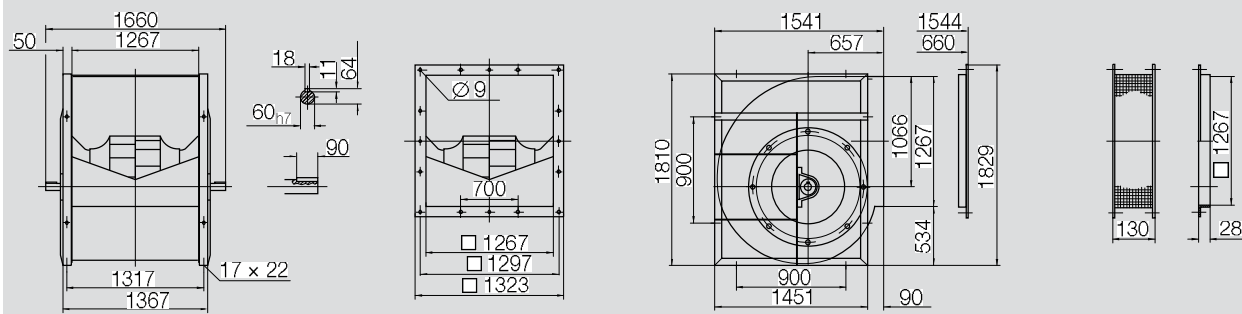
Duty point	Speed 1/min	dB
SX	1150	3
SX	800	3
SX	500	3
$Q_{V,opt}$	1150	3
$Q_{V,opt}$	800	3
$Q_{V,opt}$	500	3
DX	1150	3
DX	800	3
DX	500	3

Relative sound power level for inlet side $L_{WrelI7}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
4	2	4	-4	-8	-10	-16	-19	dB	
7	7	3	-4	-6	-11	-15	-19	dB	
8	8	0	-3	-6	-11	-15	-20	dB	
1	-1	4	-3	-7	-10	-16	-20	dB	
4	7	2	-4	-5	-11	-15	-20	dB	
7	7	0	-2	-6	-12	-16	-21	dB	
2	-1	5	-4	-7	-10	-18	-24	dB	
4	7	2	-4	-5	-12	-18	-23	dB	
7	8	1	-2	-6	-13	-19	-23	dB	

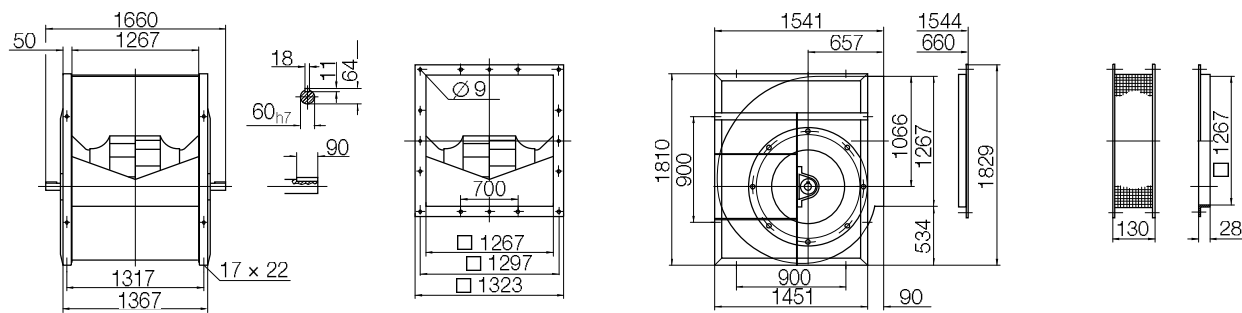
Relative sound power level for discharge side $L_{Wrel4}$ at octave centre frequencies $f_c$									
63	125	250	500	1000	2000	4000	8000	Hz	
12	6	5	1	-3	-8	-15	-20	dB	
12	8	5	1	-3	-10	-15	-19	dB	
11	9	5	1	-5	-11	-15	-20	dB	
8	3	4	1	-3	-8	-15	-21	dB	
10	7	4	2	-3	-10	-15	-20	dB	
9	8	6	2	-5	-11	-16	-22	dB	
10	4	6	0	-3	-8	-16	-22	dB	
11	9	4	1	-3	-10	-16	-23	dB	
11	9	5	2	-4	-11	-18	-24	dB	

# RDH \_-1000

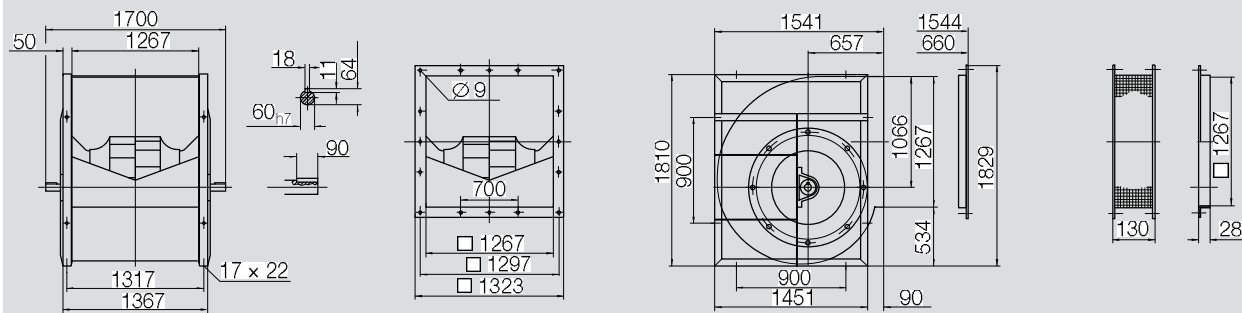
Dimensions in mm, subject to change.  
RDH K-1000 415 kg



RDH K1-1000 430 kg



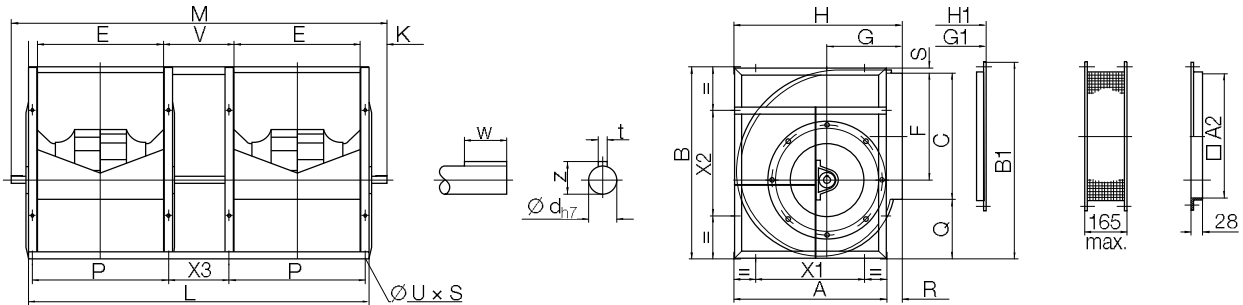
RDH K2-1000 450 kg



# RDH G2E4 / RDH G2K

Dimensions in mm, subject to change.

RDH G2E4-0250/-0560 / RDH G2K-0630/-1000

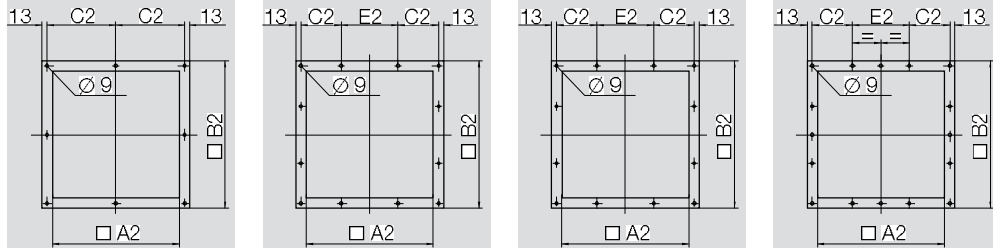


RDH G2E4-0250/-0355

RDH G2E4-0400/-0560

RDH G2K-0630

RDH G2K-0710/-1000



RDH G2E4-0250/-0560 / RDH G2K-0630/-1000

	A	B	C	E	F	G	H	L	M	P
0250	390	474	322	322	268	195	427	943	1085	352
0280	439	530	361	361	302	215	474	1062	1220	391
0315	490	592	403	404	338	236	526	1182	1340	434
0355	551	669	450	453	381	261	588	1341	1505	493
0400	618	754	507	507	432	290	659	1494	1660	547
0450	691	845	571	569	487	322	735	1668	1870	619
0500	760	935	641	638	541	352	809	1856	2060	688
0560	855	1050	716	715	606	390	903	2090	2330	765
0630	940	1157	801	801	679	434	1005	2332	2576	851
0710	1050	1303	898	898	765	485	1121	2606	2898	948
0800	1181	1468	1007	1007	862	540	1255	2914	3257	1057
0900	1319	1648	1130	1130	971	604	1408	3260	3550	1180
1000	1451	1810	1267	1267	1066	657	1541	3634	3927	1317

	Q	R	S	V	K	X1	X2	X3	t	w
0250	140	37	10	250	71	224	224	220	8	40
0280	158	35	9	280	79	280	280	250	8	40
0315	177	36	10	315	79	280	280	285	8	40
0355	204	37	13	355	82	355	355	315	10	50
0400	234	41	11	400	83	355	355	360	10	50
0450	261	44	11	450	101	530	530	400	12	70
0500	282	49	10	500	102	530	530	450	12	70
0560	319	48	13	560	120	530	530	510	14	90
0630	349	59	7	630	122	530	530	580	14	90
0710	398	71	7	710	146	630	630	660	18	91
0800	453	74	8	800	172	710	710	750	18	91
0900	510	89	8	900	145	800	800	850	18	91
1000	534	90	9	1000	147	900	900	950	18	91

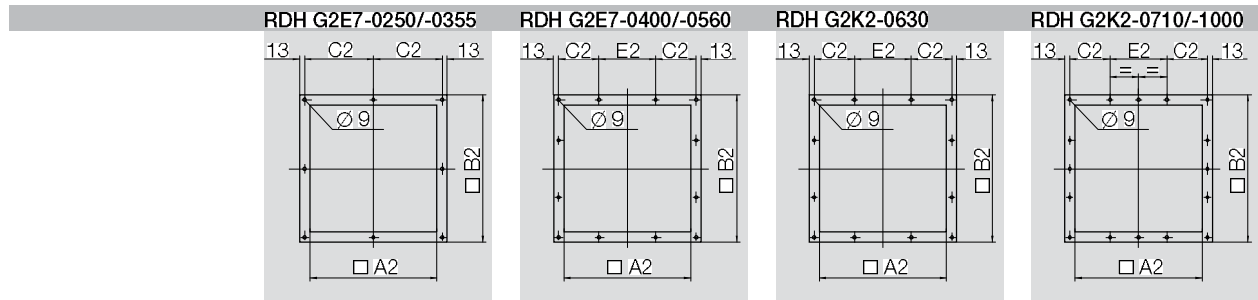
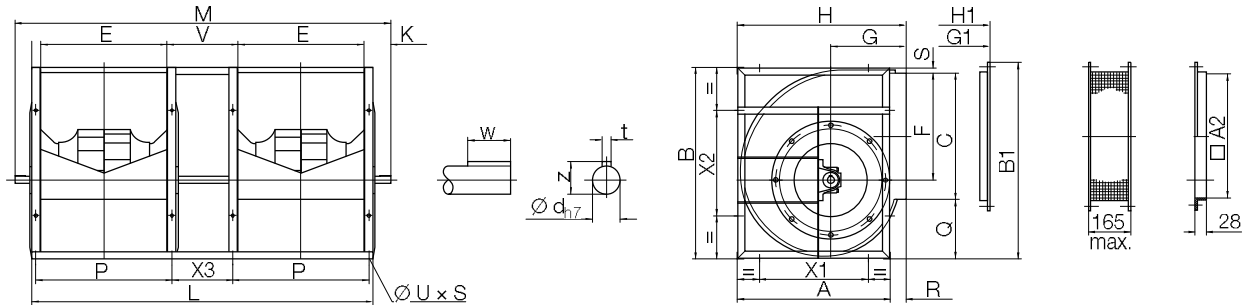
	z	$\varnothing d$	u x s	B1	H1	G1	A2	B2	C2	E2
0250	28	25h7	11 x 16	490	430	198	322	378	176.0	-
0280	33	30h7	13 x 18	547	477	218	361	417	195.5	-
0315	33	30h7	13 x 18	608	529	239	404	460	217.0	-
0355	38	35h7	13 x 18	682	591	264	453	509	241.5	-
0400	38	35h7	13 x 18	769	662	293	507	563	168.5	200
0450	43	40h7	13 x 18	860	738	325	569	625	199.5	200
0500	43	40h7	13 x 18	951	812	355	638	694	209.0	250
0560	53.5	50h7	13 x 18	1063	906	393	715	771	247.5	250
0630	53.5	50h7	13 x 18	1179	1008	437	801	857	265.5	300
0710	64	60h7	17 x 22	1391	1124	488	898	954	264.0	400
0800	64	60h7	17 x 22	1561	1258	543	1007	1063	268.5	500
0900	64	60h7	17 x 22	1748	1411	607	1130	1186	280.0	600
1000	64	60h7	17 x 22	1930	1544	660	1267	1323	298.5	700



# RDH G2E7 / RDH G2K2

Dimensions in mm, subject to change.

RDH G2E7-0250/-0560 / RDH G2K2-0630/-1000



RDH G2E7-0250/-0560 / RDH G2K2-0630/-1000

	A	B	C	E	F	G	H	L	M	P
0250	390	474	322	322	268	195	427	943	1085	352
0280	439	530	361	361	302	215	474	1062	1230	391
0315	490	592	403	404	338	236	526	1182	1400	434
0355	551	669	450	453	381	261	588	1341	1545	493
0400	618	754	507	507	432	290	659	1494	1800	547
0450	691	845	571	569	487	322	735	1668	1924	619
0500	760	935	641	638	541	352	809	1856	2146	688
0560	855	1050	716	715	606	390	903	2090	2380	765
0630	940	1157	801	801	679	434	1005	2332	2576	851
0710	1050	1303	898	898	765	485	1121	2606	2898	948
0800	1181	1468	1007	1007	862	540	1255	2914	3257	1057
0900	1319	1648	1130	1130	971	604	1408	3260	3550	1180
1000	1451	1810	1267	1267	1066	657	1541	3634	3927	1317

	Q	R	S	V	K	X1	X2	X3	t	w
0250	140	37	10	250	71	224	224	220	8	40
0280	158	35	9	280	84	280	280	250	10	50
0315	177	36	10	315	109	280	280	285	12	70
0355	204	37	13	355	102	355	355	315	12	70
0400	234	41	11	400	153	355	355	360	14	90
0450	261	44	11	450	128	530	530	400	14	90
0500	282	49	10	500	145	530	530	450	18	90
0560	319	48	13	560	145	530	530	510	18	90
0630	349	59	7	630	122	530	530	580	18	91
0710	398	71	7	710	146	630	630	660	18	91
0800	453	74	8	800	172	710	710	750	18	91
0900	510	89	8	900	145	800	800	850	18	91
1000	534	90	9	1000	147	900	900	950	18	91

	z	ød	u x s	B1	H1	G1	A2	B2	C2	E2
0250	33	30h7	11 x 16	490	430	198	322	378	176	-
0280	38	35h7	13 x 18	547	477	218	361	417	195.5	-
0315	43	40h7	13 x 18	608	529	239	404	460	217	-
0355	43	40h7	13 x 18	682	591	264	453	509	241.5	-
0400	53.5	50h7	13 x 18	769	662	293	507	563	168.5	200
0450	53.5	50h7	13 x 18	860	738	325	569	625	199.5	200
0500	64	60h7	13 x 18	951	812	355	638	694	209	250
0560	64	60h7	13 x 18	1063	906	393	715	771	247.5	250
0630	64	60h7	13 x 18	1179	1008	437	801	857	265.5	300
0710	64	60h7	17 x 22	1391	1124	488	898	954	264.0	400
0800	64	60h7	17 x 22	1561	1258	543	1007	1063	268.5	500
0900	64	60h7	17 x 22	1748	1411	607	1130	1186	280.0	600
1000	64	60h7	17 x 22	1930	1544	660	1267	1323	298.5	700

# RDH E0-0180/-0560

## Specifications



### High performance centrifugal fan RDH E0

Double inlet belt drive.  
 Lap jointed scroll of galvanised sheet steel assembled through a standing-seam.  
 Multi-position feet and discharge flange as an option.  
 Centrifugal impeller with 8 backward inclined blades made of fibreglass reinforced polyamide (sizes 0180/-0225) or with 11 backward inclined blades made of sheet steel, welded and coated, balanced in according to ISO 1940.  
 Throat plate inclined to blade trailing edge.  
 Noise tested, maintenance free, self aligning radial insert ball bearings, mounted in pressed steel housing/strut assemblies with rubber interliners.  
 Performance data in according to DIN 24166 tolerance class 2 (sizes 0180/-0315) tolerance class 1 (sizes 0355/-0560).

## Fan data

Fan type	.....	
Volume flow	$Q_V$ .....	m <sup>3</sup> /h
Total pressure increase	$p_F$ .....	Pa
Static pressure	$p_{sF}$ .....	Pa
Air density at fan inlet	$\rho_1$ .....	kg/m <sup>3</sup>
Air medium temperature	$t$ .....	°C
Shaft power	$P_a$ .....	kW
Efficiency	$(\eta_e)$ .....	
Speed	$N$ .....	1/min
Sound power level (A weighted)	$L_{WA}$ .....	dB
Weight	$m$ .....	kg

## Fittings / Accessories

- Multi-Position feet
- Discharge flange
- Discharge flex with flexible sleeve
- Inlet guard
- Discharge guard
- Shaft guard for free shaft end
- Matching flange
- Inspection door
- Drain plug R 1/8"
- Increase corrosion protection
- Volumeter
- Shaft made of stainless steel
- Nuts and bolts and fastening elements made of stainless steel
- Aluminium inlet cone
- Copper inlet cone

# RDH E2-0180/-0560 RDH R-0630/-0710

## Specifications



### High performance centrifugal fan RDH E2 / RDH R

Double inlet belt drive.

Lap jointed scroll of galvanised sheet steel assembled through a standing-seam (sizes 0160/-0560) or by Pittsburgh lockforming (sizes 0630/-0710), discharge flange as an option.

Rectangular side frame of galvanised steel.

Centrifugal impeller with 8 backward inclined blades made of fibreglass reinforced polyamide (sizes 0180/-0225) or with 11 backward inclined blades made of sheet steel, welded and coated, balanced in according to ISO 1940.

Throat plate inclined to blade trailing edge.

Noise tested, maintenance free, self aligning radial insert ball bearings, mounted in pressed steel housing/strut assemblies with rubber interliners.

Performance data in according to DIN 24166 tolerance class 2 (sizes 0180/-0315) or tolerance class 1 (sizes 0355/-0710).

## Fan data

Fan type	.....	
Volume flow	$q_V$ .....	m <sup>3</sup> /h
Total pressure increase	$p_F$ .....	Pa
Static pressure	$p_{sF}$ .....	Pa
Air density at fan inlet	$\rho_1$ .....	kg/m <sup>3</sup>
Air medium temperature	$t$ .....	°C
Shaft power	$P_a$ .....	kW
Efficiency	$(\eta_a)$ .....	
Speed	$N$ .....	1/min
Sound power level (A weighted)	$L_{WA}$ .....	dB
Weight	$m$ .....	kg

## Fittings / Accessories

- Multi-Position feet
- Discharge flange
- Discharge flex with flexible sleeve
- Inlet guard
- Discharge guard
- Shaft guard for free shaft end
- Matching flange
- Inspection door
- Drain plug R 1/8"
- Increase corrosion protection
- Volumeter
- Shaft made of stainless steel
- Nuts and bolts and fastening elements made of stainless steel
- Aluminium inlet cone
- Copper inlet cone, or equipped with a copper strip (from size 0630)

**RDH E4-0200/-0560**  
**RDH K-0630/-1000**

**RDH G2E4-0250/-0560**  
**RDH G2K-0630/-1000**

**Specifications**



**High performance centrifugal fan RDH E4 / RDH K**

Double inlet, belt drive.  
Lap jointed scroll of galvanised sheet steel assembled through a standing-seam (Sizes 0200/-0560) or by Pittsburgh lockforming (sizes 0630/-1000), discharge flange as an option.  
Welded heavy duty reinforced side frames, coated.  
Centrifugal impeller with 8 backward inclined blades made of fibreglass reinforced polyamide (sizes 0200/-0225) or with 11 backward inclined blades made of sheet steel, welded and coated (sizes 0250/-1000), balanced in according to ISO 1940.  
Throat plate inclined to blade trailing edge.  
Monobloc pedestal cast iron bearings with relubrication nipple, mounted on a robust pedestal, integrated, self aligning radial insert ball bearings fixed by eccentric clamp.  
Performance data in according to DIN 24166 tolerance class 2 (sizes 0200/-0315) or tolerance class 1 (sizes 0355/-1000).

**Twin fan arrangement**



**Twin fan arrangement**

**High performance centrifugal fan RDH G2E4/RDH G2K**

The two single fans RDH E4 or RDH K are fitted together to a robust assembly by means of 3 crossbars. Both impellers are fitted on a common shaft supported by 3 bearings (sizes 0250/-0630) or the fans have separated shafts being connected by a flexible coupling (sizes 0710/-1000).

**Fan data**

Fan type	.....	
Volume flow	$Q_V$ .....	$m^3/h$
Total pressure increase	$p_T$ .....	Pa
Static pressure	$p_{sF}$ .....	Pa
Air density at fan inlet	$\rho_1$ .....	$kg/m^3$
Air medium temperature	$t$ .....	$^{\circ}C$
Shaft power	$P_a$ .....	kW
Efficiency	$(\eta_e)$ .....	
Speed	$N$ .....	1/min
Sound power level (A weighted)	$L_{WA}$ .....	dB
Weight	$m$ .....	kg

**Fittings / Accessories**

- Discharge flange
- Discharge flex with flexible sleeve
- Inlet guard
- Discharge guard
- Shaft guard for free shaft end
- Matching flange
- Inspection door
- Drain plug R 1/8"
- Reinforcing side frame hot dip galvanised
- Increase corrosion protection
- Volumeter
- Shaft made of stainless steel
- Nuts and bolts and fastening elements made of stainless steel
- Aluminium inlet cone
- Copper inlet cone, or equipped with a copper strip (as from size 0630)

# RDH E6-0315/-0560 RDH K1-0630/-0900

## Specifications



### High performance centrifugal fan RDH E6 / RDH K1

Double inlet, belt drive.

Lap jointed scroll of galvanised sheet steel assembled through a standing-seam or by Pittsburgh lockforming (sizes 0630/-1000), discharge flange as an option.

Welded heavy duty reinforced side frames, coated.

Centrifugal impeller with 11 backward inclined blades made of sheet steel, welded and coated, balanced in according to ISO 1940.

Throat plate inclined to blade trailing edge.

Monobloc pedestal cast iron bearings with relubrication nipple, mounted on a robust pedestal, integrated, self aligning radial insert ball bearings fixed by conical sleeve.

Performance data in according to DIN 24166 tolerance class 2 (size 0315) or tolerance class 1 (sizes 0355/-1000).

## Fan data

Fan type	.....	
Volume flow	$q_V$ .....	m <sup>3</sup> /h
Total pressure increase	$p_F$ .....	Pa
Static pressure	$p_{sF}$ .....	Pa
Air density at fan inlet	$\rho_1$ .....	kg/m <sup>3</sup>
Air medium temperature	$t$ .....	°C
Shaft power	$P_a$ .....	kW
Efficiency	$(\eta_a)$ .....	
Speed	$N$ .....	1/min
Sound power level (A weighted)	$L_{WA}$ .....	dB
Weight	$m$ .....	kg

## Fittings / Accessories

- Discharge flange
- Discharge flex with flexible sleeve
- Inlet guard
- Discharge guard
- Shaft guard for free shaft end
- Matching flange
- Inspection door
- Drain plug R 1/8"
- Reinforcing side frame hot dip galvanised
- Increase corrosion protection
- Volumeter
- Shaft made of stainless steel
- Nuts and bolts and fastening elements made of stainless steel
- Aluminium inlet cone
- Copper inlet cone, or equipped with a copper strip (from size 0630)

# RDH E7-0500/-0560 RDH K2-0630/-1000

## Specifications



### High performance centrifugal fan RDH E7 / RDH K2

Double inlet belt drive.

Lap jointed scroll of galvanised sheet steel assembled through a standing-seam (Sizes 0500/-0560) or by Pittsburgh lockforming (sizes 0630/-1000), discharge flange as an option.

Welded heavy duty reinforced side frames, coated.

Centrifugal impeller with 11 backward inclined blades made of sheet steel, welded and coated, balanced in according to ISO 1940.

Throat plate inclined to blade trailing edge.

#### Size 0500

Monobloc pedestal cast iron bearings with relubrication nipple, mounted on a robust pedestal, integrated, self aligning radial insert ball bearings fixed by conical sleeve  
Sizes 0560 up to 0800

Split pedestal cast iron bearings with relubrication nipple, mounted on a robust pedestal, integrated self aligning double row bearings fixed by conical sleeve, lubricated with long life high performance grease.

#### Sizes 0900 and 1000

Single-piece pillar blocks with relubrication nipple, mounted on a robust pedestal, integrated double row, self aligning roller bearings fixed by conical sleeve, lubricated with long life high performance grease.

Performance data in according to DIN 24166 tolerance class 1.

## Fan data

Fan type	.....	
Volume flow	$Q_V$ .....	$m^3/h$
Total pressure increase	$p_T$ .....	Pa
Static pressure	$p_{sF}$ .....	Pa
Air density at fan inlet	$\rho_1$ .....	$kg/m^3$
Air medium temperature	$t$ .....	$^{\circ}C$
Shaft power	$P_a$ .....	kW
Efficiency	$(\eta_e)$ .....	
Speed	$N$ .....	1/min
Sound power level (A weighted)	$L_{WA}$ .....	dB
Weight	$m$ .....	kg

## Fittings / Accessories

- Discharge flange
- Discharge flex with flexible sleeve
- Inlet guard
- Discharge guard
- Shaft guard for free shaft end
- Matching flange
- Inspection door
- Drain plug R 1/8"
- Reinforcing side frame hot dip galvanised
- Increase corrosion protection
- Volumeter
- Threaded hole for measurement of shock impulse (sizes 0560 up to 1000)
- Shaft made of stainless steel
- Nuts and bolts and fastening elements made of stainless steel
- Aluminium inlet cone
- Copper inlet cone, or equipped with a copper strip (from size 0630)

# RDH G2E7-0250/-0560 RDH G2K2-0630/-1000

## Specifications



### Centrifugal twin fan RDH G2E7 / RDH G2K2

Double inlet belt drive.

Lap jointed scroll of galvanised sheet steel assembled through a standing-seam (sizes 0250/-0560) or by Pittsburgh lockforming (sizes 0630/-1000), fitted together to a robust assembly by means of 3 crossbars, discharge flange as an option.

Welded heavy duty reinforced side frames, coated.

Both impellers, with 11 backward inclined blades made of sheet steel, welded and coated, are fitted on a common shaft supported by 3 bearings (sizes 0250/-0630) or the fans have separated shafts being connected by an elastic coupling (sizes 0710/-1000), balanced in according to ISO 1940.

Throat plate inclined to blade trasling edge.

Sizes 0250 up to 0630

Single piece cast iron block housing with relubrication nipple, mounted on a robust pedestal, integrated, maintenance free, self aligning radial insert ball bearings fixed by eccentric clamp.

Sizes 0710 up to 1000

Split pedestal cast iron block housing with relubrication nipple, mounted on a robust pedestal,

outside bearings: integrated self aligning double row roller bearings, fixed by conical tightening sleeve, lubricated with long life high performance grease.

inside bearings: integrated single row ball bearings, fixed by eccentric clamp, lubricated with long life high performance grease.

Performance data in according to DIN 24166 tolerance class 2 (sizes 0250/-0315) or to tolerance class 1 (Sizes 0355/-1000).

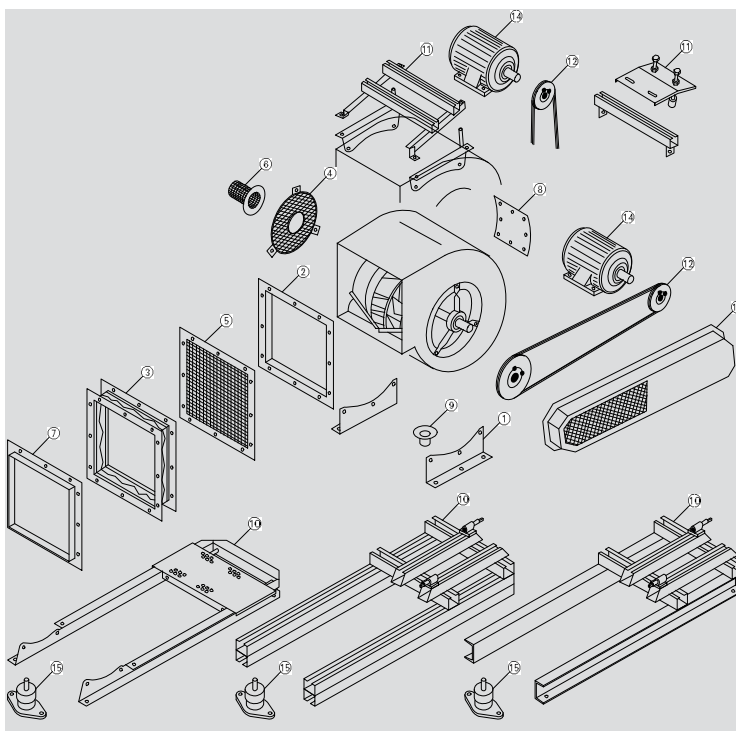
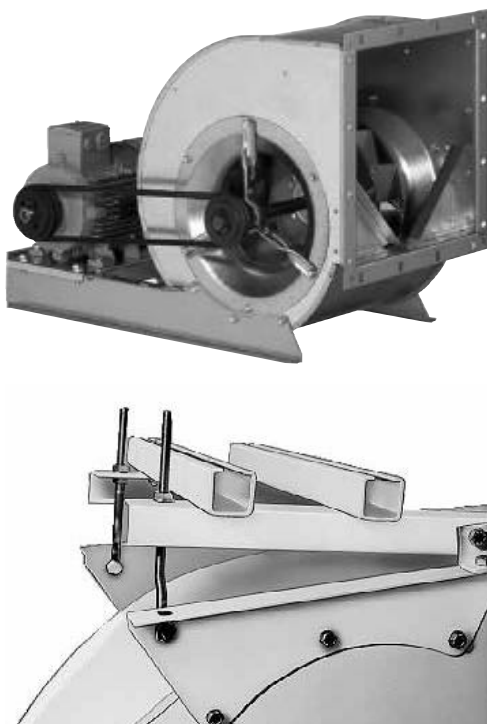
## Fan data

Fan type	.....	
Volume flow	$q_V$ .....	m <sup>3</sup> /h
Total pressure increase	$p_F$ .....	Pa
Static pressure	$p_{sF}$ .....	Pa
Air density at fan inlet	$\rho_1$ .....	kg/m <sup>3</sup>
Air medium temperature	$t$ .....	°C
Shaft power	$P_a$ .....	kW
Efficiency	$(\eta_a)$ .....	
Speed	$N$ .....	1/min
Sound power level (A weighted)	$L_{WA}$ .....	dB
Weight	$m$ .....	kg

## Fittings / Accessories

- Discharge flange
- Discharge flex with flexible sleeve
- Inlet guard
- Discharge guard
- Shaft guard for free shaft end
- Matching flange
- Inspection door
- Drain plug R 1/8"
- Reinforcing side frame hot dip galvanised
- Increase corrosion protection
- Volumeter
- Threaded hole for measurement of shock impulse (sizes 0560 up to 1000)
- Shaft made of stainless steel
- Nuts and bolts and fastening elements made of stainless steel
- Aluminium inlet cone
- Copper inlet cone, or equipped with a copper strip (from size 0630)

## Fittings / Accessories



- [1] Mounting feet
- [2] Discharge flange
- [3] Discharge flex
- [4] Inlet guard
- [5] Discharge guard
- [6] Shaft guard
- [7] Mounting flange
- [8] Inspection door
- [9] Drain plug
  - ▶ extended corrosion protection
  - ▶ ATEX-Execution (RZR)
  - ▶ Impellerblades continuously welded (RZR)
  - ▶ Casing continuously welden-inside (RZR)
  - ▶ Casing continuously welden- inside/outside (RZR)
  - ▶ Split casing (RZR 13/19)
  - ▶ Shaft from stainless steel
  - ▶ Nuts and bolts from stainless steel
  - ▶ Thread for impuls sensor fitting
  - ▶ Volumeter (RDH / RZR)
  - ▶ Copper inlet cone
  - ▶ Aluminium inlet cone (ADH / AT / RDH)
  - ▶ hot dip galvanised side frame (ADH / RDH)
  - ▶ relubricatable bearings (relubrication during operation, RZR)

### Fan set (ADH / AT / RDH on request)

- [10] Base frame
- [11] Pick-a-Back
- [12] Belt drive
- [13] Drive guard
  - ▶ Belt guard split horizontally
  - ▶ Access door on belt guard
  - ▶ Opening on belt guard for speed measuring device
- [14] Drive motor
- [15] Anti-vibration mounts



**Gebhardt fan systems – the "completely carefree" package for installation fans with belt drive**

Fan systems with components tailored for each other, precisely assembled and adjusted, individually tested, delivered quickly and on time, allow for problem-free processing and ensure long and reliable operation.

Size has its price so we build as small as possible






- ▶ Optimised base frame lengths, tailored to the casing position and motor size and small system construction heights save valuable space in the air conditioning unit
- ▶ Various casing and drive positions allow for individual adjustment to the most diverse applications
- ▶ Optimised flat belt drives allow for efficient operation with a high level of convenience

Where required, we deliver our fan systems with safety equipment complying with DIN EN ISO 13857 for safe operation!

**e.g. Belt guard**

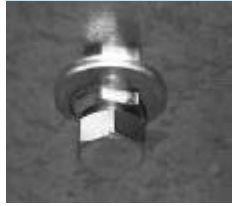
- ▶ also as segmented design
- ▶ also with inspection hole
- ▶ also with rotation speed measurement opening.

**Fan set diversity**

Version	Description	Figure
Pick-A-Back	for sizes 0200/-0355	
Pick-A-Back	for sizes 0400/-1000	
Compact base frame	Integrated compact base frame for sizes up to 0500.	
Base Frame, CC-profile	Base frames made from CC-profiles with length optimisation.	
Base Frame, U-profile	Heavy duty base frame made from U-profiles, welded and painted, from size 0800 upward.	

# Fittings / Accessories

## Drain Plug



If the fan is installed outside, or if conveying a medium containing humidity, condensation of water may accumulate inside the fan scroll.

For extraction of this water a condense water drain has to be installed at the lowest point of the scroll.

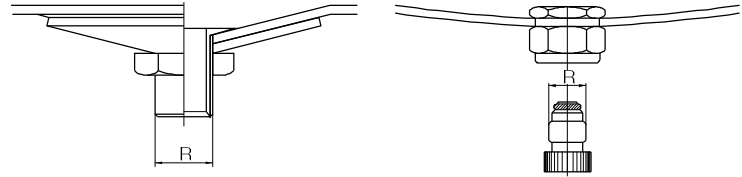
The drain will be provided with a thread for connecting it to a piping.

At order please indicate the required casing position.

Connecting thread / hole

- ▶ ADH / RDH = female thread R 1/8"
- ▶ AT = drain hole
- ▶ RZR 0200/-1000 = male thread R 1/2"
- ▶ RZR 1120/-1600 = male thread R 1"

## Dimensions



## Inspection Door



For the purposes of maintenance and cleaning there is an opening, which can be securely closed by means of an access door, in the fan casing.

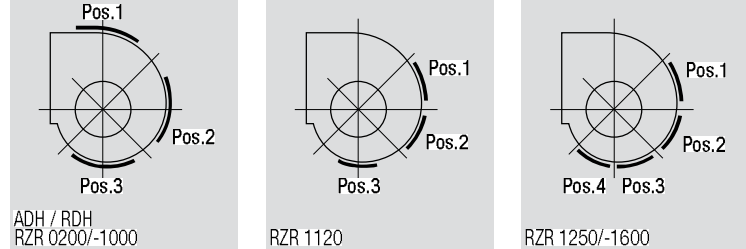
As it can only be opened with a tool, the access door complies with safety and accident prevention regulations. Additional securing with locking bars can be supplied on request.

The site and orientation of the inspection opening depends on the casing position.

The position should be specified when ordering according to the following diagram:

e.g. Access door, Pos. 2.

## Inspection Door Positions



Dimensions in mm, subject to change.

ADH ..-		RDH ..-		RZR ..-	
0160/-0180	100 x 230	0180	100 x 230	-	-
0200/-0280	240 x 240	0200/-0280	240 x 240	0200	160 x 160
0315/-0560	360 x 360	0315/-0560	360 x 360	0225/-0315	210 x 210
0630/-1000	500 x 500	0630/-1000	500 x 500	0355/-1000	310 x 310
-	500 x 500	1120/-1400	500 x 500	1120/-1600	500 x 500

# Fittings / Accessories

## Corrosion Protection Systems



Nicotra Gebhardt fans are treated with high quality corrosion protection as standard. Under extreme operating conditions, however, additional corrosion protection is advisable.

### ADH / AT / RDH

Extended corrosion protection for series ADH, AT and RDH only available on request.

### RZR

Depending on the use to which the fan is to be put and the degree of exposure to corrosion, we offer various anti-corrosion protection measures.

#### Corrosion protection - Class S40

Degreasing, ironphosphating

- ▶ **Powder coating** Layer thickness  $\geq 40 \mu\text{m}$ , Colour RAL 7039
- ▶ **Wet lacquering** Layer thickness  $\geq 40 \mu\text{m}$  (primer + lacquer finish), Colour RAL 7039

#### Corrosion protection - Class K90

Degreasing, ironphosphating

- ▶ **Powder coating** Layer thickness  $\geq 90 \mu\text{m}$ , Colour RAL 7039
- ▶ **Wet lacquering** Layer thickness  $\geq 90 \mu\text{m}$  (primer + lacquer finish), Colour RAL 7039

#### Corrosion protection - Class P100

Degreasing, ironphosphating

- ▶ **Thermoplastic powder coating** Layer thickness  $\geq 100 \mu\text{m}$ , Colour RAL 7001

## Continuously welded blades



Impeller blades can be continuously welded in order to increase the corrosion resistance when conveying a humid or slightly aggressive medium. The continuous welding has no influence on the material resistance or on the max. tip speed.

## Continuously welded scroll



The casing can be continuously welded in order to increase the corrosion resistance when conveying a humid or slightly aggressive medium. By continuous welding the casing is provided with additional impermeability.

- ▶ **GEH 01** - Casing inside continuously welded
- ▶ **GEH 02** - Casing inside and outside continuously welded

# Fittings / Accessories

## Split Casing

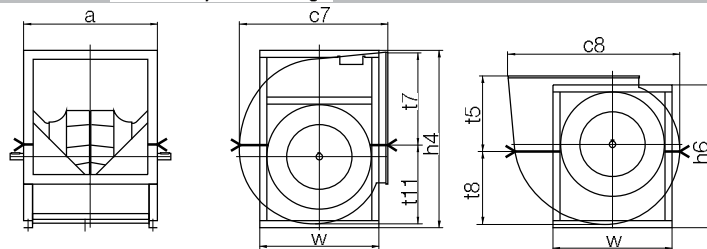


There may be a lot of reasons to choose a split casing, the advantages of split casings are:

- ▶ smaller openings for fan chambers
- ▶ easier refitting of fan
- ▶ easier transport to site
- ▶ easier access to impeller for cleaning and maintenance

The joint face on the casing position runs horizontally above or under the fan axis (see drawing). The reinforced side frames are not divisible. The fan is supplied fully assembled.

**Dimensions** in mm, subject to change.



RZR	RZR	a	c7	c8	h4	h6	t5	t7	t8	t11	w
13-	19- 0500	709	822	950	957	783	410	473	409	477	652
13-	19- 0560	785	914	1061	1083	884	458	531	456	530	743
13-	19- 0630	872	1021	1188	1204	984	511	594	510	594	820
13-	19- 0710	967	1143	1331	1350	1100	572	666	571	665	905
13-	19- 0800	1086	1280	1498	1520	1245	640	749	640	749	1035
13-	19- 0900	1219	1439	1686	1707	1386	719	843	720	843	1140
13-	19- 1000	1356	1568	1847	1869	1509	784	923	784	924	1230

## Stainless Steel Shaft



For applications where there is an increased risk of corrosion, an optional shaft made of stainless steel can be supplied.

- ▶ **ADH / AT / RDH**  
Stainless steel 1.4301 / AISI 304 / XCrNi18-10
- ▶ **RZR**  
Stainless steel 1.4305

## Stainless Steel Nuts and Bolts



For applications where there is an increased risk of corrosion, the connecting elements of the fan can be ordered made of stainless steel.

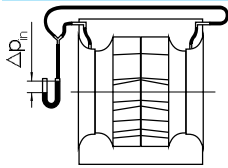
## Impuls Sensor Thread



A tapped hole M6 or M8 can be provided in the pedestal bearing cast housing for admission of sensors to measure the shock impulses. (The measuring connecting piece is not included in the scope of delivery).

# Fittings / Accessories

## Volumeter



$$q_v = K \times \sqrt{\frac{2}{\rho} \times \Delta p_{Dü}}$$



Measuring connector in inlet cone  
Hose pipe to connecting piece in the side wall  
Connecting piece (external diameter of 6mm) for the pressure measurement

With the flow measuring device it is possible to easily measure/monitor the flow rate after the fan is installed. A pressure tapping at a predetermined position on the inlet cone is provided whereby the differential pressure in relation to the static pressure is measured in front of the inlet cone in a static atmosphere.  
Permissible media temperature: +80 °C (RZR), +70 °C (RDH).

In order to calculate the flow rate, a calibrating factor "K" is required. This factor is determined by comparative measurement on a standard test rig.

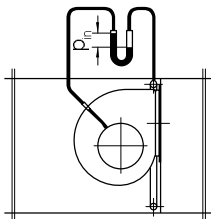
### Standard-calibration faktor K

Where fans are built into a plenum, the pressure difference between the static pressure in the inlet side plenum and the pressure on the inlet cone is to be measured. It must be ensured that the static pressure to be measured in front of the inlet cone is not tampered by dynamic pressure fractions.

It is often recommended to arrange a ring of points on the wall facing the outlet side as illustrated in the sketch.

When using the K-factors specified below, a minimum clearance of 0.5xD between the inlet cone of the fan and the side wall of the plenum must be maintained. Indentations that obstruct the flow to the cone can lead to faults when measuring the flow rate.

In the event that the differential pressure is fed via a pressure sensor, the signal can also be used for regulating purposes.



- ▶ volume flow  $q_v$  [m<sup>3</sup>/h]
- ▶ calibration factor K [m<sup>2</sup>s/h]
- ▶ density of media  $\rho$  [kg/m<sup>3</sup>]
- ▶ pressure difference at cone  $\Delta p_{Dü}$  [Pa]

### Calibration factors

Type	Standard calibration factor K m <sup>2</sup> s/h
IMV 13-0200	100
IMV 13-0225	115
IMV 13-0250	140
IMV 13-0280	165
IMV 13-0315	190
IMV 13-0355	235
IMV 13-0400	290
IMV 13-0450	360
IMV 13-0500	460
IMV 13-0560	560
IMV 13-0630	730
IMV 13-0710	960
IMV 13-0800	1180
IMV 13-0900	1450
IMV 13-1000	1850
IMV 13-1120	2400
IMV 13-1250	3000
IMV 13-1400	3800
IMV 13-1600	4700

## Inlet Cones



Inlet cone of copper or aluminium prevent the production of sparks during operation. These can be employed when spark protection is required, but ATEX is not mandatory.

## Hot Dip Galvanised Side Frame



### Fan Ranges ADH/RDH E4, E6, E7 or K, K1, K2

For applications where an increased corrosion protection is required the reinforcing side frames of the casing can be executed in hot dip galvanisation as an option.

# Fittings / Accessories

## Relubrications



ADH / AT / RDH



RZR

### Series RZR

The lubrication unit IWN allows the fan bearings to be greased even when in operation.

The lubrication tubes screwed into the bearing housing are lead out and fastened at the side wall of the fan.

If desired, the lubrication tubes can be lead to the drive side of the fan.

▶ IWN 01 - uses standard grease

▶ IWN 11 - uses moisture resistant grease

For more details see "Technical Description" - "Bearings"!

### Series ADH / RDH

The bearing housings of the fan ranges ADH / RDH E4, E6, E7 or K, K1, K2 and AR, TIC are equipped with directly fitted grease nipples.

## Mounting feet



Feet made from galvanized steel, either mounted or loose, enable the fan to be installed with a 0, 90 and 270 orientation.

## Protection guards



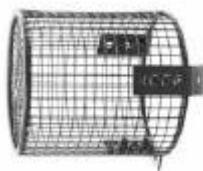
The fans are designed for installation in equipment and as standard are not equipped with protective guards.

**They should not be put into operation before all protective devices are fitted and connected!**

Protective measures must be carried out as set out in DIN EN ISO 12100 "Safety of machinery - Basic concepts, general principles for design".

If the application of the fan allows free access to the inlet and discharge apertures, safety devices must be put in place on the fan in accordance with DIN EN ISO 13857! Suitable safety guards are available as an optional extra.

## Shaft Guards



Contact guard for the free end of the shaft for double inlet centrifugal fans. Models in accordance with DIN EN ISO 13857, made of painted steel mesh.

## Flanges



Made from galvanized or painted steel, to connect ducts and system components to the fan outlet side.

## Flexible Connections



Connecting piece with elastic intermediate section for the vibration or impact-noise decoupled connection of the fan to the system or unit. Made out of two connecting flanges with elastic intermediate section.

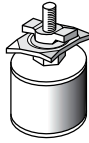
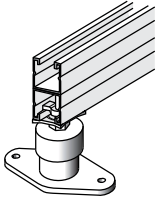
### Temperature range / Application

▶ Standard up to +80 °C

▶ ATEX max. +60 °C

# Fittings / Accessories

## Anti Vibration Mounts



Fastening for CC-profile



Fastening for U-profile

AV mounts are designed to prevent noise and vibrations being transmitted through the base of the fan.

AV mounts should be mounted beneath the fan base frame so the weight and spring deflections are evenly distributed. They should not be mounted symmetrically because a counter force is induced into the system by the pressure created by the working fan.

It is difficult for the manufacturer to establish the position of the AV mounts to suit all types of application.

Vibration and noise insulation can also be improved by ensuring that the fan is connected to its external environment by a flexible coupling.

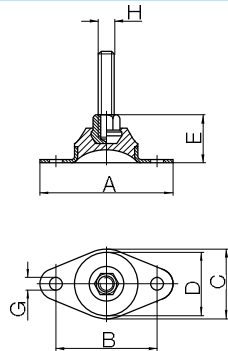
**Rubber pads** and **buffers** for both vibration and noise insulation at fan speeds above 1400 rpm or 850 rpm.

**Rubber buffers** for noise insulation only at fan speeds under 800 rpm or 1700 rpm.

**Spring diffusers** with noise insulation layer and height adjustment, for both vibration and noise insulation at fan speeds above 400 rpm.

**Available AV mounts for different fans, see proSELECTA II.**  
**The AVM-mounts are supplied with the suitable mounting material for the base frame.**

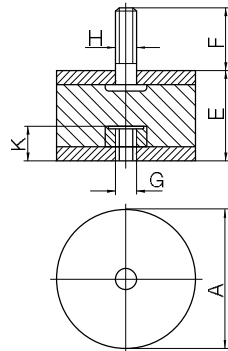
## Anti Vibration Rubber Pads



ZBD	ZBD	A	B	C	D	E	G	H
21-6035A*	21-6035C*	60	45	35	30	20	5	M6
21-6065A*	21-6065C*	60	45	35	30	20	6	M6
21-5935A*	21-5935C*	90	70	50	45	32	9	M10
21-5950A*	21-5950C*	90	70	50	45	32	9	M10

\* A = for U-profile, C = for CC-profile

## Anti Vibration Rubber Buffers

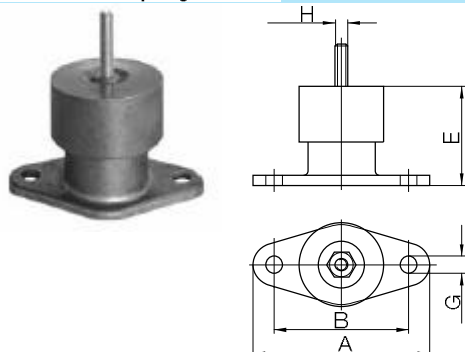


ZBD	ZBD	A	E	F	G	H	K
01-0405A*	01-0405C*	20	25	16	M 6	M 6	6.5
03-0503A*	03-0503C*	25	15	11	M 6	M 6	6.5
01-0504A*	01-0504C*	25	20	11	M 6	M 6	6.5
03-0806A*	03-0806C*	40	30	21	M 8	M 8	9.5
03-1007A	03-1007C*	50	34	26.5	M 10	M 10	10.5
03-1510A*	03-1510C*	75	50	39	M 12	M 12	12.5
02-2008A*	02-2008C*	100	40	44	M 16	M 16	16.5

\* A = for U-profile, C = for CC-profile

# Fittings / Accessories

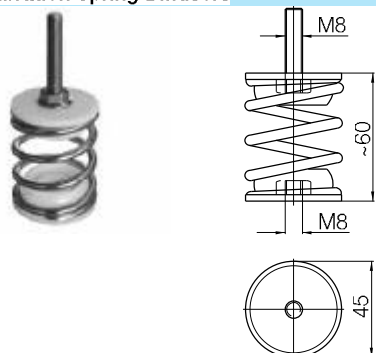
## Anti Vibration Spring Diffusers



ZBD	ZBD	A	B	C	D	~ E	~ F	G	H
60-0101A*	60-0101C*	130	100	70	72	70-50	35	13	M10
60-0103A*	60-0103C*	130	100	70	72	70-50	35	13	M10
60-0105A*	60-0105C*	130	100	70	72	70-50	35	13	M10
60-0108A*	60-0108C*	130	100	70	72	70-50	35	13	M10
60-0112A*	60-0112C*	150	120	82	92	90-75	35	13	M12
60-0120A*	60-0120C*	150	120	82	92	90-75	35	13	M12
60-0130A*	60-0130C*	150	120	82	92	90-75	35	13	M12
60-0150A*	60-0150C*	150	120	82	92	110-85	35	13	M12

\* A = for U-profile, C = for CC-profile

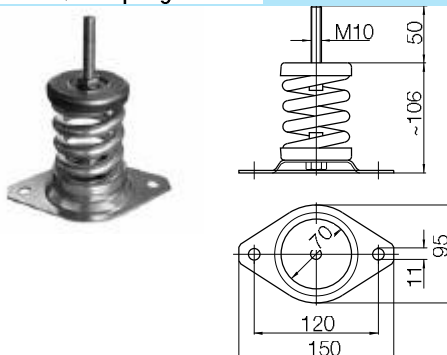
## Anti Vibration Spring Diffusers



ZBD	ZBD
SP-7701A*	SP-7701C*
SP-7702A*	SP-7702C*
SP-7703A*	SP-7703C*
SP-7704A*	SP-7704C*
SP-7705A*	SP-7705C*
SP-7706A*	SP-7706C*
SP-7707A*	SP-7707C*

\* A = for U-profile, C = for CC-profile

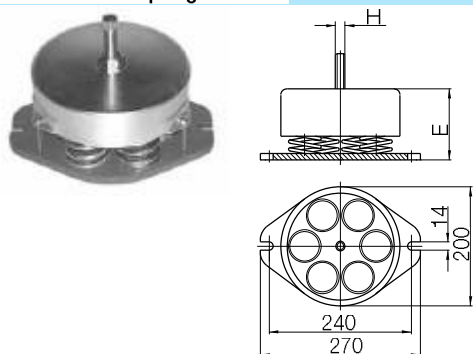
## Anti Vibration Spring Diffusers



ZBD	ZBD
SP-7501A*	SP-7501C*
SP-7502A*	SP-7502C*
SP-7503A*	SP-7503C*
SP-7504A*	SP-7504C*
SP-7505A*	SP-7505C*
SP-7506A*	SP-7506C*
SP-7507A*	SP-7507C*
SP-7508A*	SP-7508C*

\* A = for U-profile, C = for CC-profile

## Anti Vibration Spring Diffusers



ZBD	ZBD	E	H	kg
80-W603A*	80-W603C*	68-101	M 16	8.3
80-W605A*	80-W605C*	76-101	M 16	8.6
80-W608A*	80-W608C*	86-105	M 16	9.0
80-W612A*	80-W612C*	84-104	M 16	9.3
80-W616A*	80-W616C*	92-105	M 24	9.7

\* A = for U-profile, C = for CC-profile



# Fan Sets

## Base Frame with Belt Tensioning Device

G2Z-component size 0200/-0500 (only RZR 11/19)



This compact base frame with integrated motor tensioning slider provides optimum compactness and easiest handling.

- ▶ The base frame made of galvanized sheet steel is screwed directly onto the fan (without any casing feet) – the result being the low overall height of the system.
- ▶ The overall length depending on the casing position and size of the motor is a further factor influencing the optimum compactness.
- ▶ The integrated tensioning slider considerably simplifies re-adjustment of the belt drive during maintenance and service work.

## G1Z-component size 0400/-0710



The base frames up to motor size 180 are manufactured from galvanized CC-profiles. The anti-vibration mounts in the CC-profile provide infinitely variable adjustment. From motor size 200 the base frames are of U-profile, welded and painted. Fitted motor tensioning tracks that allow the motor to be shifted longitudinally, allow for the simple adjustment of the belt tension.

## G1Z-component size 0800/-1600



Base frame of stable U-profiles, welded and painted, with holes for attaching the anti-vibration mounts. Fitted motor tensioning tracks that allow the motor to be shifted longitudinally, allow for the simple adjustment of the belt tension.

### Equipment

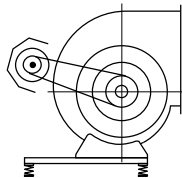
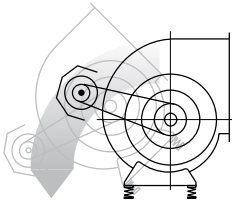
- ▶ FKS hot-dip galvanized for U-profile base frame

## Pick-A-Back



This allows the motor to be fixed directly onto the fan casing, where space around the fan is limited. One side of the pick-a-back is fixed to the casing so that it swivels, while the other is supported on a spindle. Thus the pick-a-back becomes adjustable to leave room for tensioning the drive belt. The various motor arrangements and casing positions are shown in the drawings.

The accompanying tables also show the maximum permissible motor sizes. When using a pick-a-back arrangement and fitting anti vibration mounts (AVM) an additional base frame for fitting the AVM may be required depending on the position of the centre of gravity of the whole fan set.



# Fan Sets

## Belt Drive Wedge Belts



High performance narrow V-belts in accordance with DIN 7753 are temperature stable up to +80 °C, resistant to mineral oils and electrostatically conductive. The belt pulleys are made of high quality cast iron and, depending on the peripheral velocity and number of grooves, are statically (G 16) or dynamically (G 6.3) balanced. They are fastened to the shaft of the motor or fan by means of a clamping bush.

## Flat Belts



The flat belt drives employed are made using the most modern technology and materials. They are the centrepiece of highly developed, powerful belt drives. This modern flat belt drive has distinct advantages over traditionally employed V-belt drives and exceeds it in efficiency, quiet running and economy.

### Overview of the advantages:

- ▶ higher efficiency
- ▶ longer service life
- ▶ quieter running
- ▶ easy to install
- ▶ low maintenance
- ▶ no wear on the belt - so it is possible to dispense with the 2nd filter stage in the air conditioning unit (in accordance with VDI 6022)

## Belt Guard



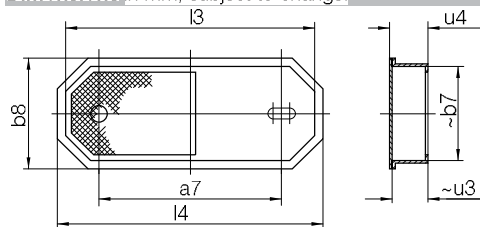
Totally enclosed belt guards are made from galvanised sheet steel in accordance with DIN EN ISO 13857.

The front section can be removed for maintenance. If there is no standard belt guard available for the selected belt drive (see table), a suitable belt guard will be made as a welded construction and then coated.

### Features

- ▶ belt guard split horizontally
- ▶ access door on belt guard
- ▶ opening on belt guard for speed measuring device

## Dimensions in mm, subject to change.



RBS	a7 <sub>max</sub>	DW <sub>max</sub>	b8	b7	s5	u4	u3	l4	l3
01-....-01	250	90	194	159	97	72	69	444	404
01-....-02	300	90	194	159	97	72	69	494	454
01-....-03	350	160	264	229	132	72	69	614	574
01-....-04	400	160	264	229	132	72	69	664	624
01-....-05	450	160	264	229	132	72	69	714	674
01-....-06	500	160	264	229	132	72	69	764	724
01-....-07	600	160	264	229	132	72	69	864	824
01-....-08	700	125	264	229	132	72	69	964	924
01-....-09	800	125	264	229	132	72	69	1064	1024
01-....-10	900	125	264	229	132	72	69	1164	1124
01-....-11	450	250	344	304	172	122	119	794	754
01-....-12	500	250	344	304	172	122	119	844	804
01-....-13	600	250	344	304	172	122	119	944	904
01-....-14	700	315	484	444	242	122	119	1184	1144
01-....-15	800	315	484	444	242	122	119	1284	1244
01-....-16	900	315	484	444	242	122	119	1384	1344
01-....-17	1000	315	484	444	242	122	119	1484	1444
01-....-18	1100	315	484	444	242	122	119	1584	1544
01-....-19	1200	315	484	444	242	122	119	1684	1644

... Placeholder for fan-size

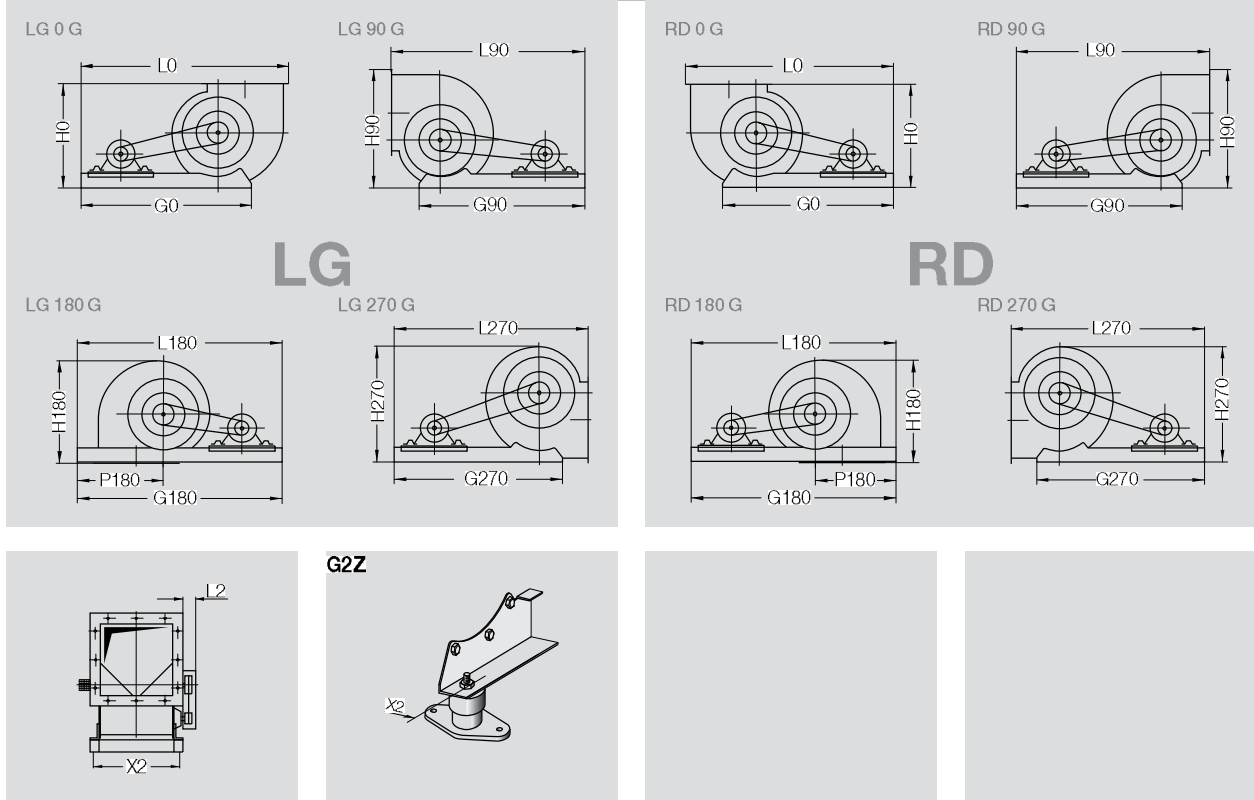
DW<sub>max</sub> Diameter of the biggest pulley

a7<sub>max</sub> Maximum axle centre distance

# RZR 11-0200/-0500

## Fan set arrangement with base frame

Dimensions in mm, subject to change.



RZR	RZR		②	②	②	②	H0	H90	H180	H270
			G0	G90	G180	G270				
11-	19-	0200	625	650	880	650	358	408	356	386
11-	19-	0225	680	710	925	710	404	467	401	431
11-	19-	0250	705	730	974	730	440	510	438	477
11-	19-	0280	725	755	1031	755	489	569	485	531
11-	19-	0315	750	785	1094	785	542	623	537	597
11-	19-	0355	845	885	1207	885	603	689	601	670
11-		0400	990	970	1350	970	671	773	667	749
11-		0450	1030	1010	1440	910	755	868	750	840
11-		0500	1070	1050	1530	1050	827	956	821	929

RZR	RZR		②	②	②	②	L2	P180	X2	Motor Base frame ~ kg max.
			L0	L90	L180	L270				
11-	19-	0200	745	740	880	740	100	396	286	132 6
11-	19-	0225	793	792	925	792	100	423	322	132 7
11-	19-	0250	843	829	974	829	100	450	356	132 7.5
11-	19-	0280	893	876	1031	876	100	482	395	132 8
11-	19-	0315	952	931	1094	931	100	520	438	132 9
11-	19-	0355	1087	1090	1207	1060	100	552	487	160 10
11-		0400	1219	1120	1350	1120	120	587	546	180 11
11-		0450	1315	1203	1440	1203	120	646	612	180 12
11-		0500	1400	1279	1530	1279	120	700	680	180 14

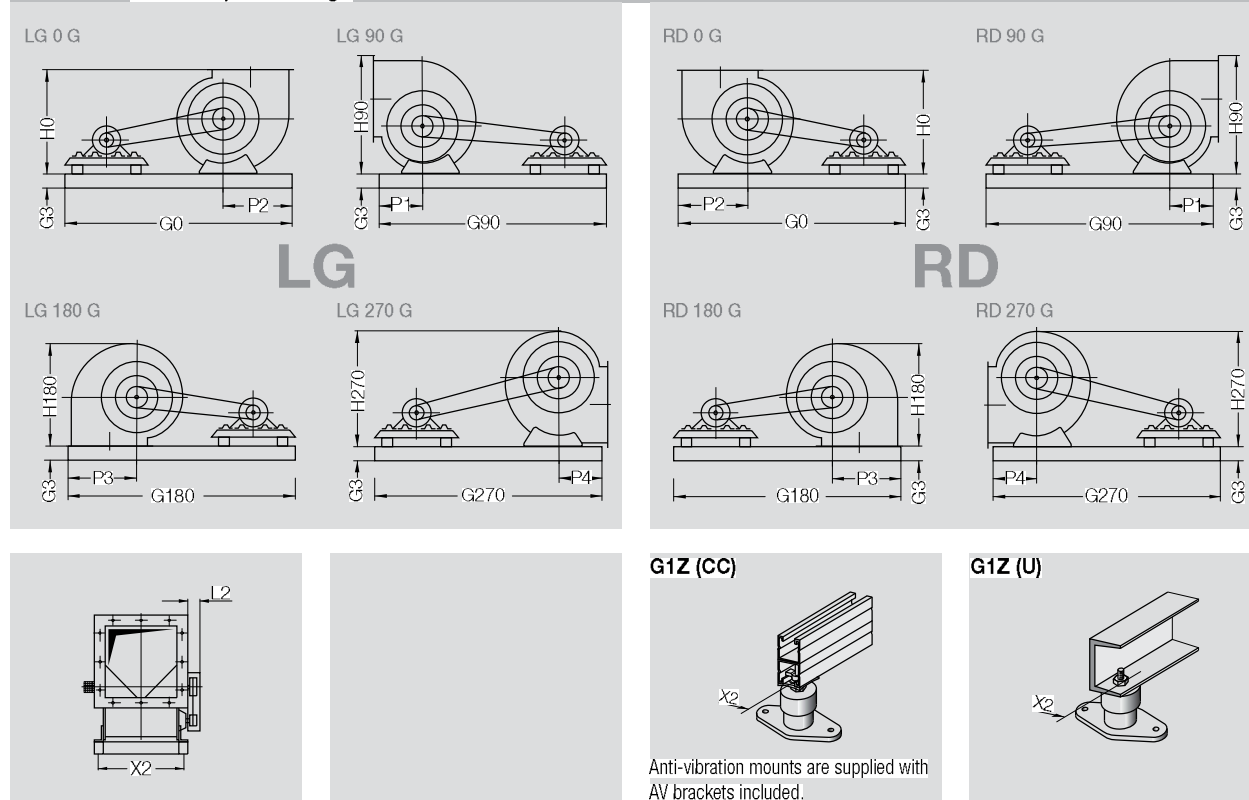
② The base frame length has been determined with the always largest admitted motor size. With smaller motors the frame length will be reduced.

For accurate dimensions use proSELECTA II or on request.

# RZR 11-0400/-0710

## Fan set arrangement with base frame

Dimensions in mm, subject to change.



Anti-vibration mounts are supplied with AV brackets included.

RZR		②	②	②	②	G3 for motor size					
		G0	G90	G180	G270	63-71	80-90	100-132	160-180	200-225	250-280
11-	0400	1240	1300	1650	1240	82-CC	82-CC	82-CC	82-CC	80-U ③	-
11-	0450	1300	1350	1740	1298	82-CC	82-CC	82-CC	82-CC	80-U ③	-
11-	0500	1434	1405	1772	1405	82-CC	82-CC	82-CC	82-CC	80-U ③	-
11-	0560	1558	1508	1908	1508	82-CC	82-CC	82-CC	82-CC	80-U ③	-
11-	0630	1600	1574	2006	1574	-	82-CC	82-CC	82-CC	80-U ③	-
11-	0710	1708	1680	2145	1680	-	82-CC	82-CC	82-CC	-	-
11-	0710-U	1700	1700	2115	1700	-	-	-	-	100-U	120-U ③

RZR		H0	H90	H180	H270	L2	P1	P2	P3	P4	X2	Motor Base frame ~ kg			
												max.	CC	80-U 100-U	
11-	0400	671	773	667	749	120	275	355	669	275	550	225	31	③	③
11-	0450	755	868	750	840	120	320	408	718	320	614	225	32	③	③
11-	0500	827	956	821	929	120	348	452	766	348	682	225	33	60	-
11-	0560	921	1071	914	1041	150	384	502	851	384	759	225	34	63	-
11-	0630	1028	1195	1021	1168	150	432	566	915	432	846	225	35	68	-
11-	0710	1152	1341	1143	1316	180	479	625	1014	479	943	180	37	-	-
11-	0710-U	1152	1341	1143	1316	180	-	-	-	-	943	250	-	94	145

② The base frame length has been determined with the always largest admitted motor size. With smaller motors the frame length will be reduced.

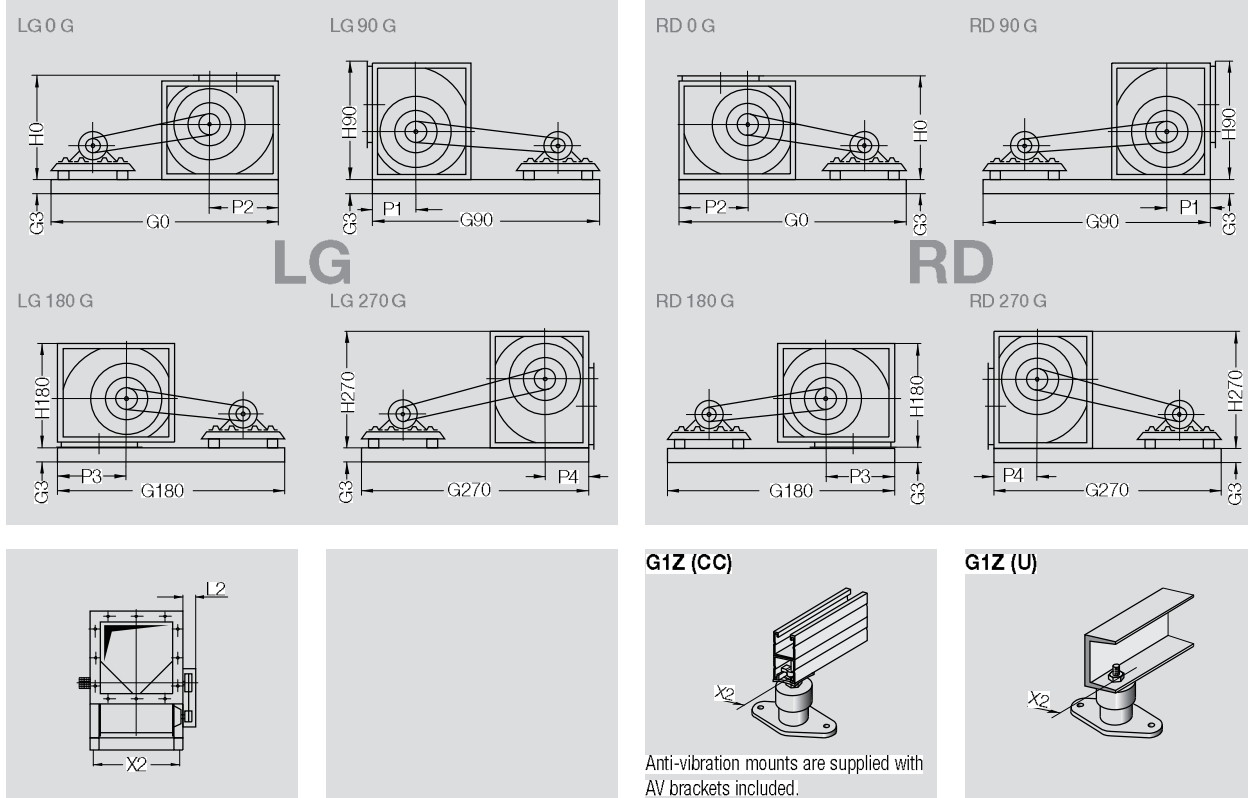
For accurate dimensions use proSELECTA II or on request.

③ Dimensions on request

# RZR 12-0200/-0710

## Fan set arrangement with base frame

Dimensions in mm, subject to change.



Anti-vibration mounts are supplied with AV brackets included.

RZR	②	②	②	②	G3 for motor size						
					G0	G90	G180	G270	63-71	80-90	100-132
12-0200	④	④	④	④	-	-	-	-	-	-	-
12-0225	④	④	④	④	-	-	-	-	-	-	-
12-0250	④	④	④	④	-	-	-	-	-	-	-
12-0280	④	④	④	④	-	-	-	-	-	-	-
12-0315	④	④	④	④	-	-	-	-	-	-	-
12-0355	④	④	④	④	-	-	-	-	-	-	-
12-0400	1430	1312	1655	1312	82-CC	82-CC	82-CC	82-CC	80-U ③	-	-
12-0450	1522	1388	1740	1388	82-CC	82-CC	82-CC	82-CC	80-U ③	-	-
12-0500	1610	1460	1830	1460	82-CC	82-CC	82-CC	82-CC	80-U ③	-	-
12-0560	1736	1561	1958	1561	82-CC	82-CC	82-CC	82-CC	80-U ③	-	-
12-0630	1865	1670	2078	1670	-	82-CC	82-CC	82-CC	80-U ③	-	-
12-0710	2008	1784	2235	1784	-	82-CC	82-CC	82-CC	-	-	-
12-0710-U	2035	1840	2235	1840	-	-	-	-	100-U	120-U ③	-

RZR	H0	H90	H180	H270	L2	X2	Motor Base frame ~ kg		
							max.	CC	80-U
12-0200	④	④	④	④	④	④	④	④	④
12-0225	④	④	④	④	④	④	④	④	④
12-0250	④	④	④	④	④	④	④	④	④
12-0280	④	④	④	④	④	④	④	④	④
12-0315	④	④	④	④	④	④	④	④	④
12-0355	④	④	④	④	④	④	④	④	④
12-0400	669	769	669	750	120	550	225	31	③ ③
12-0450	753	865	753	841	120	614	225	32	③ ③
12-0500	825	955	825	931	120	682	225	33	60 -
12-0560	920	1067	920	1046	150	759	225	34	63 -
12-0630	1027	1195	1027	1173	150	846	225	35	68 -
12-0710	1152	1341	1152	1324	180	943	180	37	- -
12-0710-U	1152	1341	1152	1324	180	-	250	-	94 155

② The base frame length has been determined with the always largest admitted motor size. With smaller motors the frame length will be reduced.  
For accurate dimensions use proSELECTA II or on request.

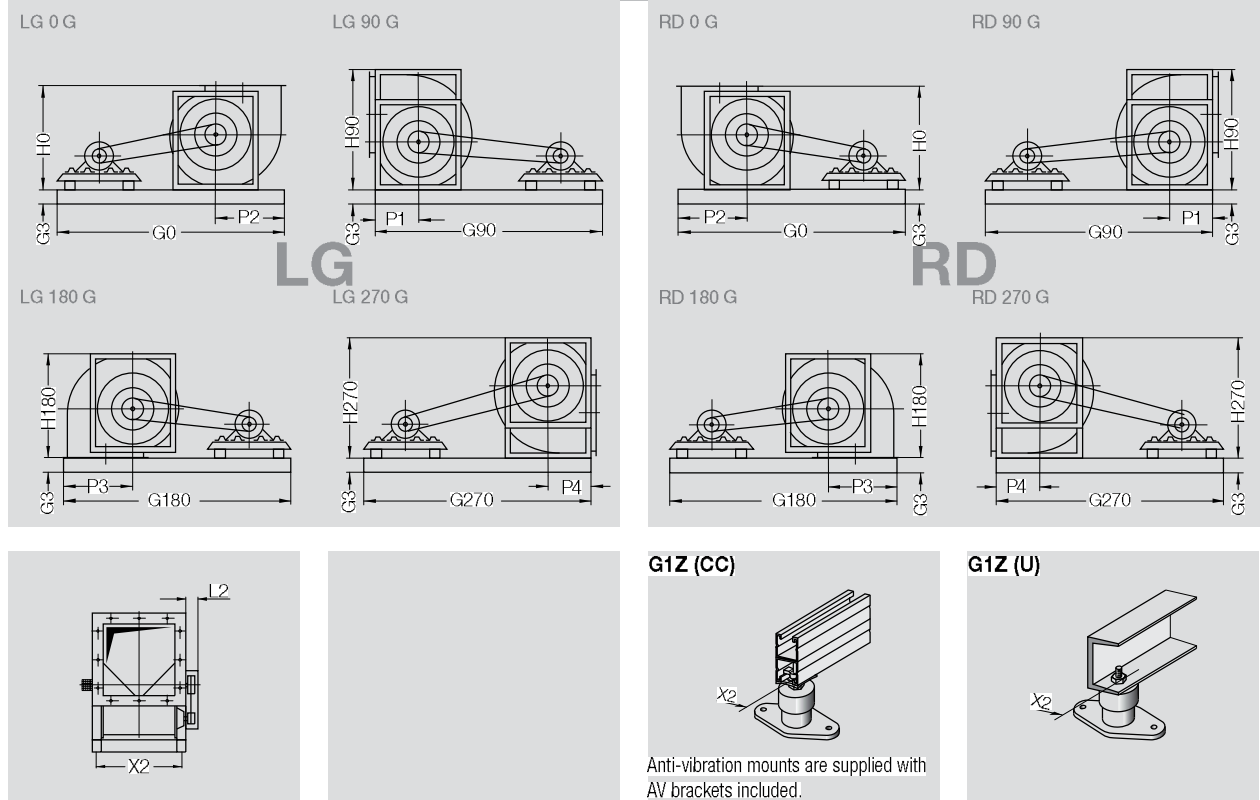
③ Dimensions on request  
④ The RZR 12-0200 to 0355 can only be supplied as standard basic models.

# RZR 13-0400/-1000

# RZR 18-0400/-1000

**Fan set arrangement with base frame**

Dimensions in mm, subject to change.



RZR	RZR		G0		G90		G180		G270		G3 for motor size					
			CC <sup>②</sup>	U	CC <sup>②</sup>	U	CC <sup>②</sup>	U	CC <sup>②</sup>	U	63-71	80-90	100-132	160-180	200-225	250-280
13-	18-	0400	1240	-	1300	-	1650	-	1240	-	82-CC	82-CC	82-CC	82-CC	80-U <sup>③</sup>	-
13-	18-	0450	1300	-	1350	-	1740	-	1298	-	82-CC	82-CC	82-CC	82-CC	80-U <sup>③</sup>	-
13-	18-	0500	1411	-	1411	-	1772	-	1411	-	82-CC	82-CC	82-CC	82-CC	80-U <sup>③</sup>	-
13-	18-	0560	1468	-	1468	-	1908	-	1468	-	82-CC	82-CC	82-CC	82-CC	80-U <sup>③</sup>	-
13-	18-	0630	1564	-	1564	-	2006	-	1564	-	82-CC	82-CC	82-CC	82-CC	80-U <sup>③</sup>	-
13-	18-	0710	1660	1700	1660	1700	2145	2115	1660	1700	82-CC	82-CC	82-CC	100-U	120-U <sup>③</sup>	
13-	18-	0800	-	2300	-	2300	-	2885	-	2300	80-U	80-U	80-U	100-U	120-U	
13-	18-	0900	-	2410	-	2410	-	3052	-	2410	80-U	80-U	80-U	100-U	120-U	
13-	18-	1000	-	2505	-	2505	-	3180	-	2505	80-U	80-U	80-U	100-U	120-U	

RZR	RZR		H0	H90	H180	H270	L2	P1	P2	P3	P4	X2	Motor Base frame ~ kg max.				
													CC	80-U	100-U	120-U	
13-	18-	0400	671	775	671	775	170	290	290	669	290	550	225	31	③	③	③
13-	18-	0450	755	868	755	868	170	316	316	718	316	614	225	32	③	③	③
13-	18-	0500	827	957	827	957	170	345	345	766	345	682	225	33	60	-	-
13-	18-	0560	921	1083	921	1083	210	382	382	851	382	759	225	34	63	-	-
13-	18-	0630	1028	1204	1028	1204	210	410	410	915	410	846	225	35	68	-	-
13-	18-	0710	1152	1350	1152	1350	240	464	464	1014	464	943	250	37	94	155	-
13-	18-	0800	1290	1520	1290	1520	250	518	518	1155	518	1048	250	-	67	98	155
13-	18-	0900	1448	1707	1448	1707	260	570	570	1276	570	1179	280	-	72	105	165
13-	18-	1000	1577	1869	1577	1869	260	620	620	1317	620	1316	280	-	77	111	165

② The base frame length has been determined with the always largest admitted motor size. With smaller motors the frame length will be reduced.  
For accurate dimensions use proSELECTA II or on request.

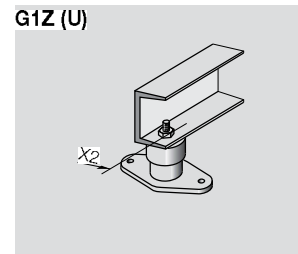
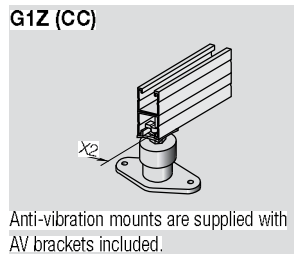
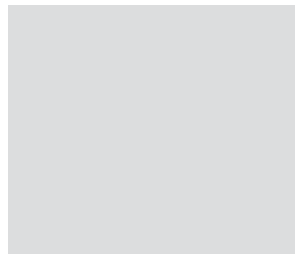
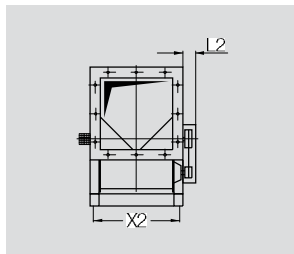
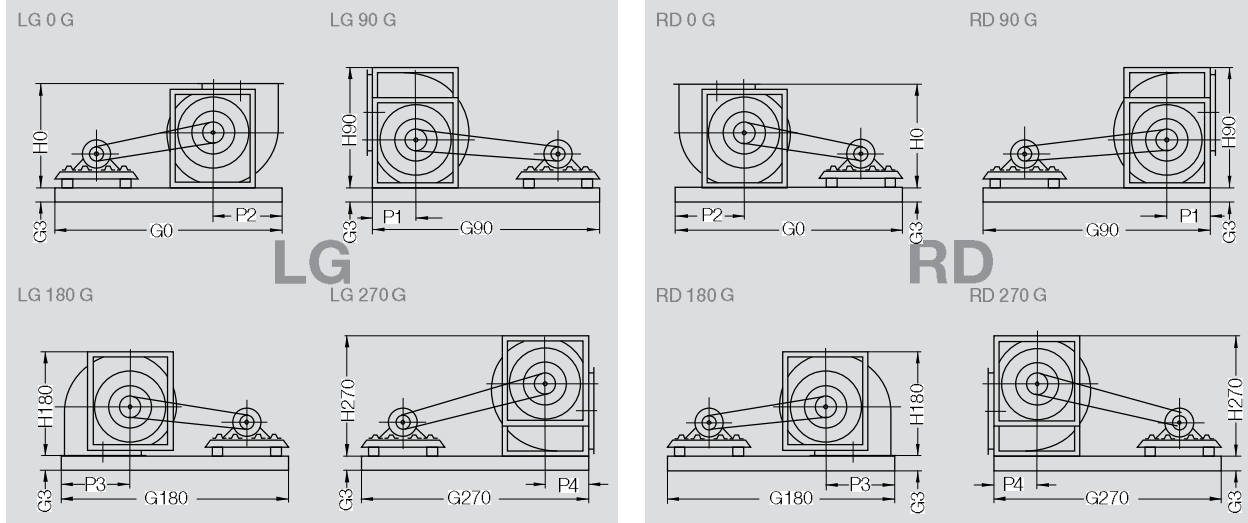
③ Dimensions on request

**RZR 11-0800/-1000**  
**RZR 15-0400/-1000**

**RZR 19-0400/-1000**

**Fan set arrangement with base frame**

Dimensions in mm, subject to change.



RZR	RZR	RZR	G0		G90		G180		G270		G3 for motor size					
			CC(2)	U	CC(2)	U	CC(2)	U	CC(2)	U	63-71	80-90	100-132	160-180	200-225	250-280
15-	19-	0400	1240	-	1300	-	1650	-	1240	-	82-CC	82-CC	82-CC	82-CC	80-U (3)	-
15-	19-	0450	1300	-	1350	-	1740	-	1298	-	82-CC	82-CC	82-CC	82-CC	80-U (3)	-
15-	19-	0500	1411	-	1411	-	1772	-	1411	-	82-CC	82-CC	82-CC	82-CC	80-U (3)	-
15-	19-	0560	1468	-	1468	-	1908	-	1468	-	82-CC	82-CC	82-CC	82-CC	80-U (3)	-
15-	19-	0630	1564	-	1564	-	2006	-	1564	-	82-CC	82-CC	82-CC	82-CC	80-U (3)	-
15-	19-	0710	1660	1700	1660	1700	2145	2115	1660	1700	82-CC	82-CC	82-CC	82-CC	100-U	120-U (3)
11-	15-	19-	0800	-	2300	-	2300	-	2885	-	80-U	80-U	80-U	100-U	100-U	120-U
11-	15-	19-	0900	-	2410	-	2410	-	3052	-	80-U	80-U	80-U	100-U	100-U	120-U
11-	15-	19-	1000	-	2505	-	2505	-	3180	-	80-U	80-U	80-U	100-U	100-U	120-U

RZR	RZR	RZR	H0	H90	H180	H270	L2	P1	P2	P3	P4	X2	Motor Base frame ~ kg					
													max.	CC	80-U	100-U	120-U	
15-	19-	0400	671	775	671	775	170	290	290	669	290	550	225	31	(3)	(3)	(3)	
15-	19-	0450	755	868	755	868	170	316	316	718	316	614	225	32	(3)	(3)	(3)	
15-	19-	0500	827	957	827	957	170	345	345	766	345	682	225	33	60	-	-	
15-	19-	0560	921	1083	921	1083	210	382	382	851	382	759	225	34	63	-	-	
15-	19-	0630	1028	1204	1028	1204	210	410	410	915	410	846	225	35	68	-	-	
15-	19-	0710	1152	1350	1152	1350	240	464	464	1014	464	943	250	37	94	155	-	
11-	15-	19-	0800	1290	1520	1290	1520	250	518	518	1155	518	1048	250	-	67	98	155
11-	15-	19-	0900	1444	1707	1444	1707	260	570	570	1276	570	1179	280	-	72	105	165
11-	15-	19-	1000	1573	1869	1573	1869	260	620	620	1317	620	1316	280	-	77	111	165

(2) The base frame length has been determined with the always largest admitted motor size. With smaller motors the frame length will be reduced.  
For accurate dimensions use proSELECTA II or on request.

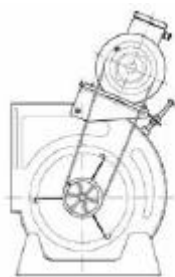
(3) Dimensions on request

# AT 7/7-18/18

## Fan set arrangement with Pick-A-Back



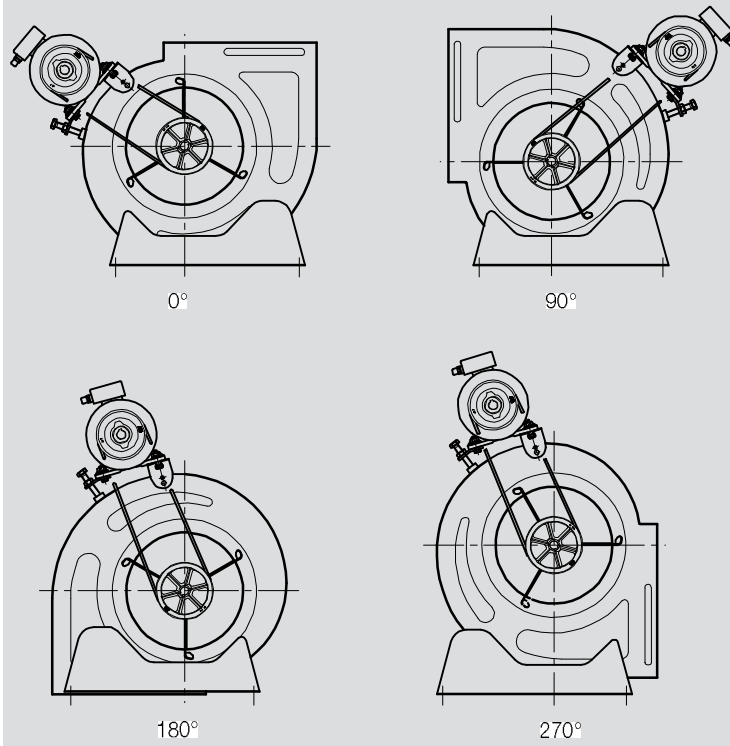
Version 1



Version 2

Using these specially designed motor brackets, the motor can be fixed, Pick-A-Back, directly on the scroll of the S-version fans.  
When the motor must be held on the fan side-frames, the customer will need providing an appropriate slide or bracket, to connect it to the fixing holes on the standard frames.

### Motor positions



### Permissible Motor Power

Size AT	Version 1		Version 2	
	Article-code	Max. permissible motor power kW	Article-code	Max. permissible motor power kW
7/7	687303	0.75	687940	—
9/7	687303	0.75	687940	1.1
9/9	687308	0.75	687941	1.1
10/8	687312	0.75	687942	1.5
10/10	687314	0.75	687943	1.5
12/9	687318	0.75	687944	2.2
12/12	687320	0.75	687945	2.2
15/11	687335	0.75	687546	3.0
15/15	687338	0.75	687947	3.0
18/13	687346	0.75	687948	3.0
18/18	687348	0.75	687949	3.0

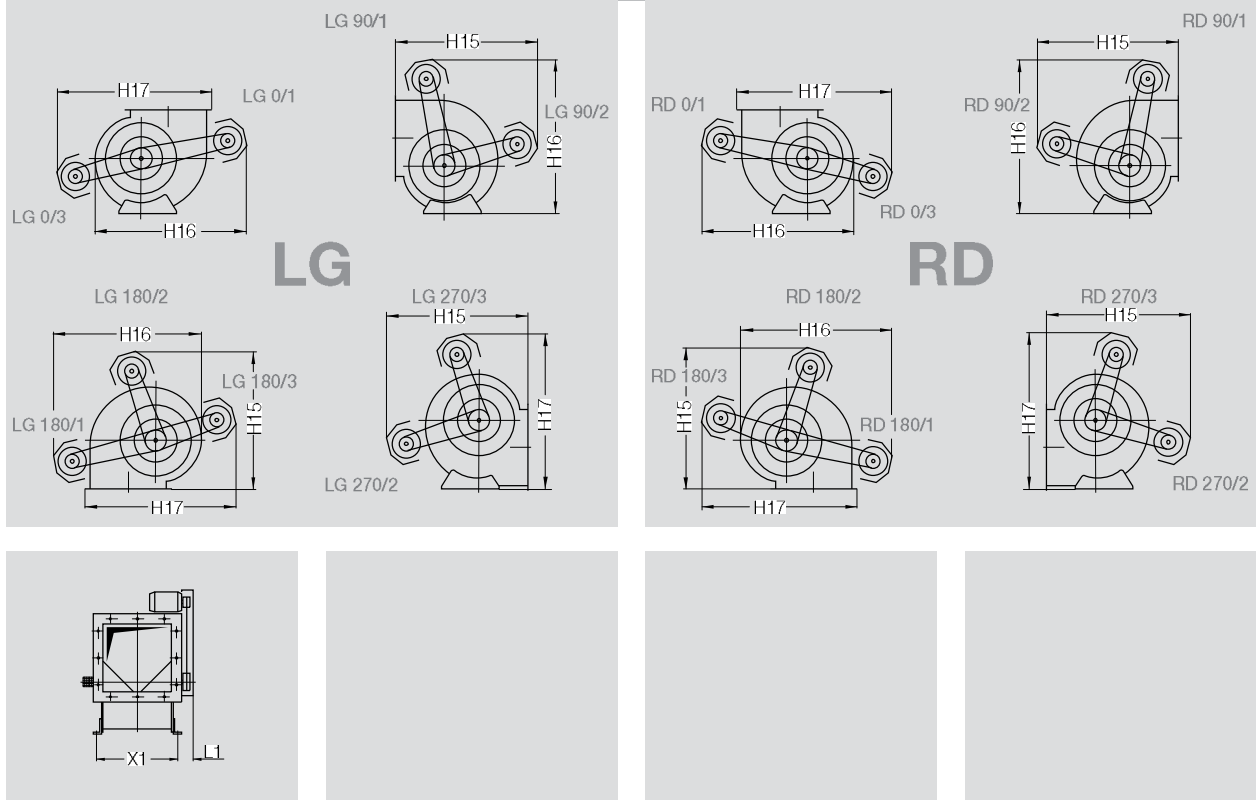


# RZR 11-0200/-0710

# RZR 19-0200/-0355

Fan set arrangement with Pick-A-Back

Dimensions in mm, subject to change.



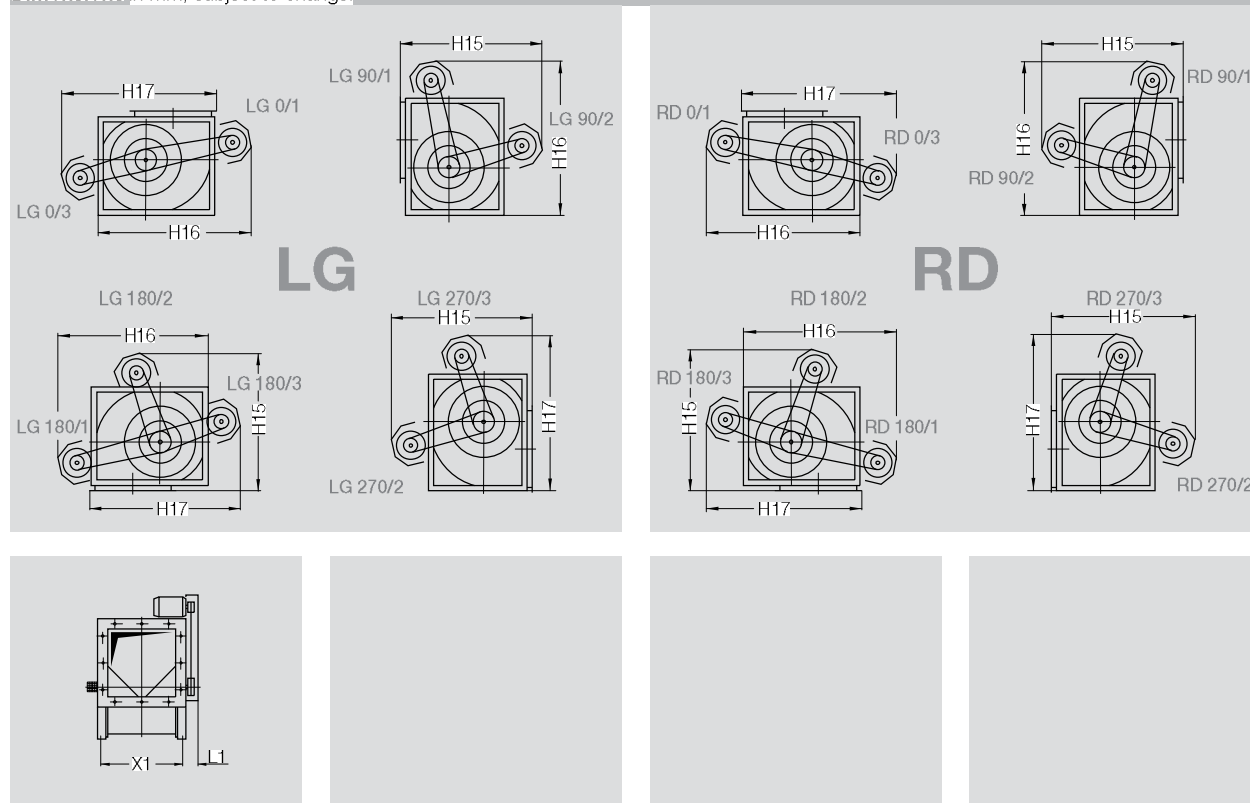
RZR	RZR	① ~ H15	① ~ H16	① ~ H17	L1	X1	Motor max.	Weight ~ kg
11-	19- 0200	650	720	680	100	286	90	1
11-	19- 0225	700	760	720	100	322	100	2
11-	19- 0250	750	850	810	100	356	100	2
11-	19- 0280	860	930	890	100	395	112	3
11-	19- 0315	880	970	960	100	438	112	3
11-	19- 0355	960	1080	1070	100	487	112	3
11-	0400	1280	1290	1280	120	546	132	8
11-	0450	1330	1430	1380	120	612	132	8
11-	0500	1360	1470	1560	120	680	132	8
11-	0560	1510	1630	1740	150	756	132	11
11-	0630	1660	1800	1820	150	843	160	12
11-	0710	1810	1960	2010	180	940	160	17

① This dimensions have been calculated with the largest appropriate applicable motor in mind.

# RZR 12-0200/-0710

## Fan set arrangement with Pick-A-Back

Dimensions in mm, subject to change.



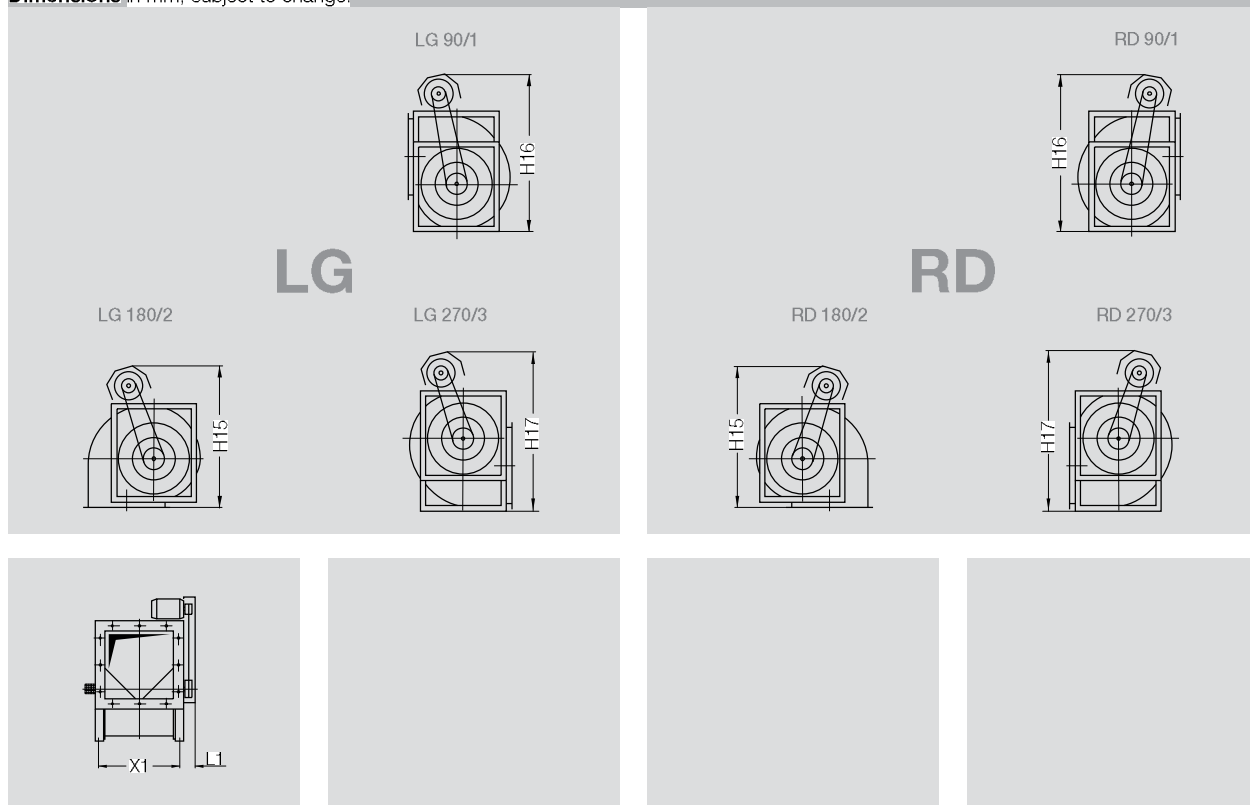
RZR	① ~ H15	① ~ H16	① ~ H17	~ L1	X1	Motor max.	Weight ~ kg
12- 0200	670	670	690	100	286	90	1
12- 0225	710	730	780	100	322	100	1
12- 0250	850	840	860	100	356	100	2
12- 0280	880	920	930	100	395	112	2
12- 0315	950	950	1030	100	438	112	3
12- 0355	1080	1090	1130	100	487	112	3
12- 0400	1190	1290	1280	120	546	132	7
12- 0450	1330	1430	1390	120	612	132	7
12- 0500	1360	1470	1560	120	680	132	8
12- 0560	1500	1620	1630	150	756	132	11
12- 0630	1650	1790	1810	150	843	160	12
12- 0710	1800	1950	2000	180	940	160	17

① This dimensions have been calculated with the largest appropriate applicable motor in mind.

# RZR 13-0400/-1000 RZR 18-0400/-1000

Fan set arrangement with Pick-A-Back

Dimensions in mm, subject to change.



RZR	RZR	① ~ H15	① ~ H16	① ~ H17	~ L1	X1	Motor max.	Weight ~ kg
13-	18- 0400	1280	1300	1300	170	548	132	10
13-	18- 0450	1320	1430	1380	170	612	132	11
13-	18- 0500	1350	1560	1550	170	683	132	12
13-	18- 0560	1530	1700	1730	210	759	160	15
13-	18- 0630	1640	1870	1820	210	845	160	16
13-	18- 0710	1800	1970	2010	240	942	160	23
13-	18- 0800	1970	2150	2150	250	1053	160	30
13-	18- 0900	2150	2400	2350	260	1179	160	33
13-	18- 1000	2230	2630	2550	260	1317	160	36

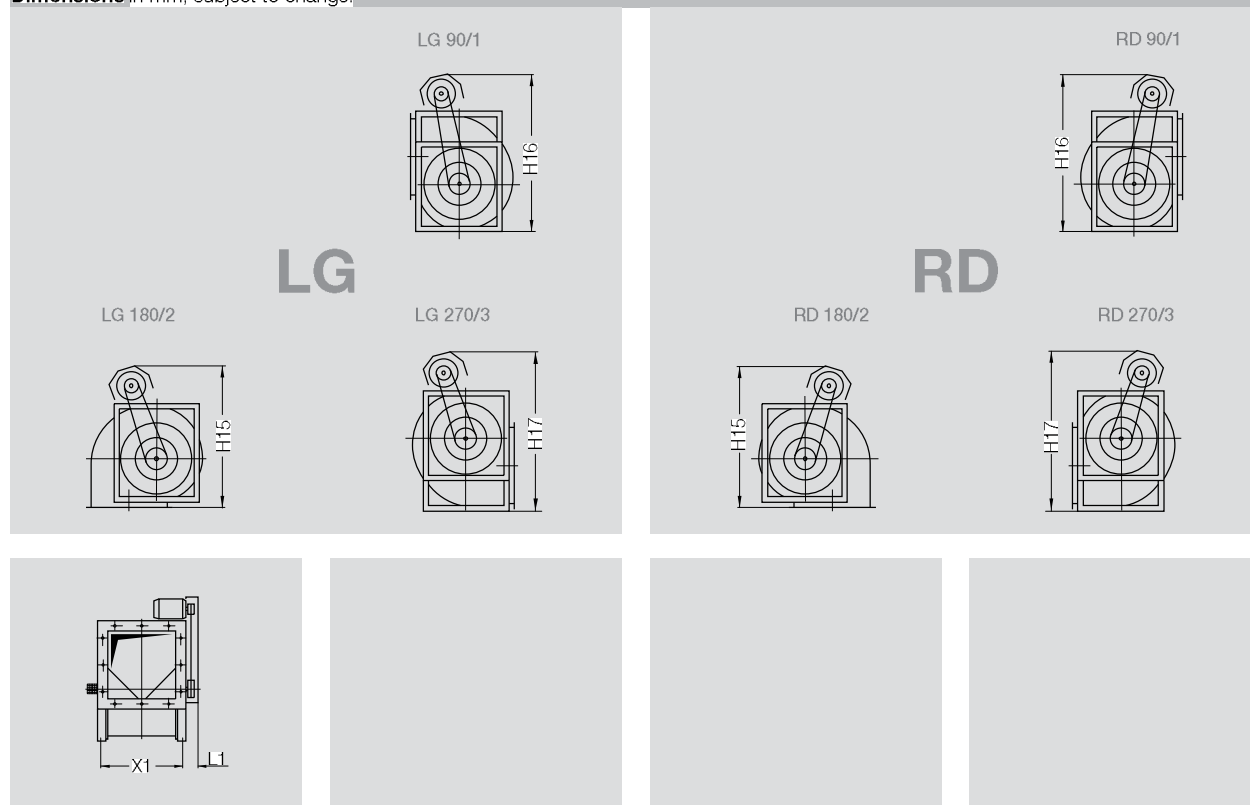
① This dimensions have been calculated with the largest appropriate applicable motor in mind.

**RZR 11-0800/-1000**  
**RZR 15-0400/-1000**

**RZR 19-0400/-1000**

Fan set arrangement with Pick-A-Back

Dimensions in mm, subject to change.



RZR	RZR	RZR	① ~ H15	① ~ H16	① ~ H17	~ L1	X1	Motor max.	Weight ~ kg
15-	19-	0400	1280	1300	1300	170	548	132	10
15-	19-	0450	1320	1430	1380	170	612	132	11
15-	19-	0500	1350	1560	1550	170	683	132	12
15-	19-	0560	1530	1700	1730	210	759	160	15
15-	19-	0630	1640	1870	1820	210	845	160	16
15-	19-	0710	1800	1970	2010	240	942	160	23
11-	15-	0800	1970	2150	2150	250	1053	160	30
11-	15-	0900	2150	2400	2350	260	1179	160	33
11-	15-	1000	2230	2630	2550	260	1317	160	36

① This dimensions have been calculated with the largest appropriate applicable motor in mind.

# Fan Sets

## Min. Pulley-Diameter, Bearings Life Expectency

As a principle, the fans are only equipped with noise tested precision bearings designed for a nominal bearing life time (L10h acc. to DIN ISO 281-1) of 40,000 operating hours.

In order to not exceed the admitted bearing loads there are minimum pulley diameters defined to be respected when sizing the belt drive.

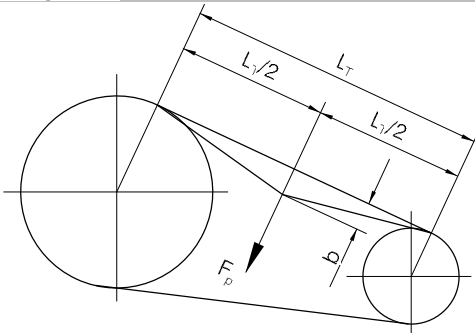
**The minimum pulley diameters indicated are to be applied for belt drives selected according to the state of the art and tensioned according to the prescriptions.**

**For flat belt drives the minimum pulley diameters are to be increased of 40 % to the indicated figure!**

A correct design of a belt drive may be achieved with our selection software where all relevant parameters will be kept automatically.

For correct design of a belt drive made by external means, dimensioning and the application of the tensioning forces have to be made in full respect of all specification data indicated.

## Wedge Belts



$L_T$  = Shaft Centres

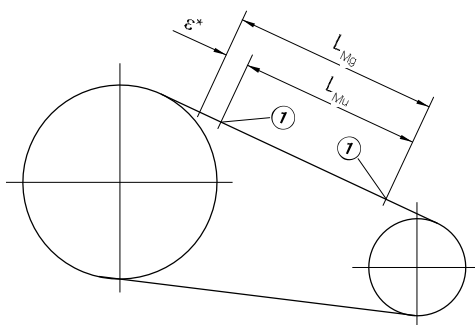
$b$  = Deflection of belt in mm under test force  $F_D$

$F_p$  = Test force N as prescribed by Nicotra Gebhardt-Document

### Belt Tensioning

The correct tension is achieved when the test force  $F_p$  results in a deflection of 16 mm / metre of span.

## Flat Belts



$L_{Mu}$  = Measuring Marks ① before Tensioning

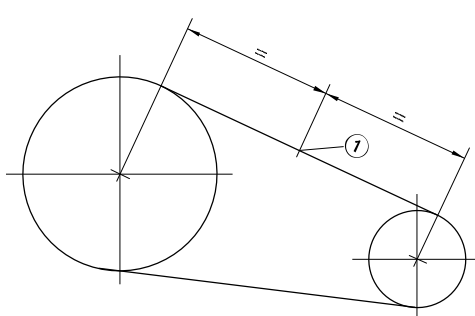
$L_{Mg}$  = Measuring Marks ① After Tensioning

$\epsilon^*$  = Stretching Values as specified by Nicotra Gebhardt-Document

### Belt Tensioning

The correct belt tension is achieved when the measuring marks  $L_{Mu}$  have increased by the stretching value  $\epsilon^*$ . This should be carried out in two stages to prevent over-stressing of the bearing.

## Wedge- and Flat Belts



A further simple method for setting or checking the correct belt tension is via the static frequency of the drive belt.

Here the flat or V-belt is set to oscillate freely through striking it whilst stationary.

These vibrations are measured using an electronic measuring unit (e.g. a belt tension gauge). The vibration frequency in Hz must then be set to the specified value (documentation / nameplate).

① = Measuring point

**Detailed instruction on tensioning are included within the operating and maintenance manuals.**

# Fan Sets

Min. recommended Pulley Diameter for ADH																
Fan size	Fan model	Nominal motor power in kW														
		2.2	3	4	5.5	7.5	11	15	18.5	22	30	37	45	55	75	
160	E0 / E2	63	71													
	G2E0 / E2	63	71													
180	E0 / E2	63	80													
	G2E0 / E2	63	80													
200	E0 / E2 / E4	71	95	125												
	G2E0 / E2	71	95	140												
225	E0 / E2 / E4	80	112	140												
	G2E0 / E2	80	100	160												
250	E0 / E2	80	112	150												
	E4		90	112	140	180										
	G2E0 / E2	80	100	132												
	G2E4		95	125	160	224										
	G2E7					100	118	160								
280	E0 / E2		100	140	180											
	E4			90	112	140	212									
	G2E0 / E2		112	140	180											
	G2E4			100	118	150	224									
	G2E7					112	112	140	180	224						
315	E0 / E2		100	125	180											
	E4			90	125	160	250									
	E6						160	224	250							
	G2E0 / E2		112	140	200											
	G2E4			112	140	180	250									
355	E0 / E2			100	132	180										
	E4				112	150	224	280								
	E6						125	180	224	236						
	G2E0 / E2		112	140	200											
	G2E4			112	140	150	224	280								
400	E0 / E2			100	132	180										
	E4				112	150	224	280								
	E6						140	180	212	250						
	G2E0 / E2		100	132	180											
	G2E4			100	132	140	200	280								
450	E0 / E2				112	132	212									
	E4					118	180	250								
	E6						180	212	250	315						
	G2E0 / E2			118	140	200										
	G2E4				112	160	224									
500	E0 / E2				112	132	200									
	E4					112	180	224								
	E6							150	190	224	315					
	E7								180	250	315					
	G2E0 / E2			118	140	200										
560	E0 / E2					132	180	224								
	E4						150	200	236							
	E6								160	190	250					
	E7									160	180	212	236			
	G2E2					132	180	212								
630	G2E4						132	180	224							
	G2E7							132	180	224						
	L / R					132	160	215								
	K						132	200	224							
	K1								160	180	200	224				
710	K2									160	190	212	236			
	G2K										180	200	224	280		
	G2K2											180	200	224	280	
	L / R					132	150	180	250							
	K						132	180	224	250						
800	K1									180	212	236				
	K2										180	200	224	250		
	G2K											180	200	224	280	
	G2K2												180	200	280	
	L / R									160	180	224	236	280		
900	K										180	212	236	280		
	K1											180	200	224	280	
	K2												180	200	280	
	G2K													180	200	
	G2K2														180	
1000	K										180	212	280			
	K2											180	200	224	280	
	G2K												180	200	280	
	G2K2													180	200	
	L / R														180	