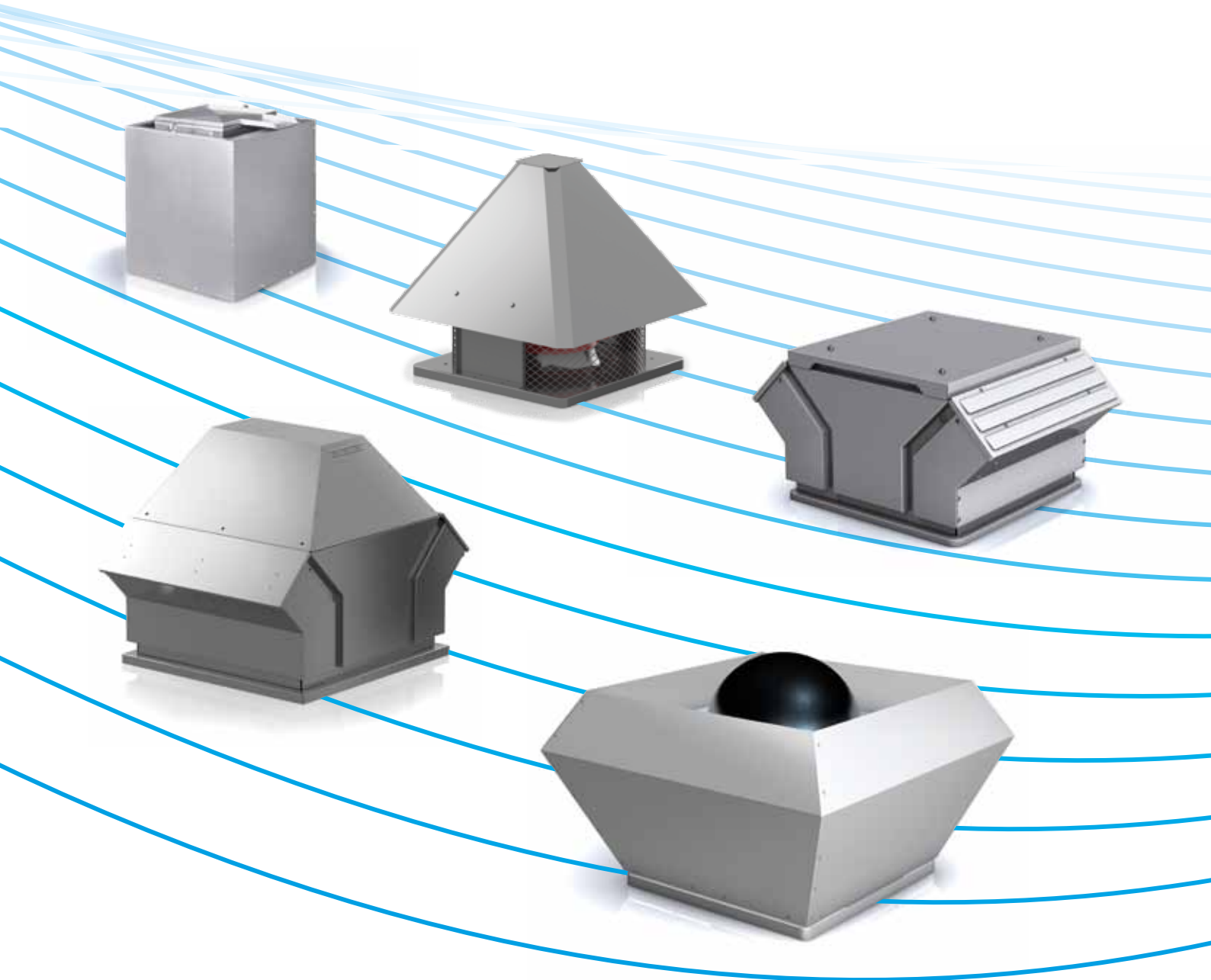


# Roof Fans

## Ventilation Systems BelAir



**RVM** – the efficient allrounder

**RGH** – the favourably priced power package

**RDME** – the new classic

**RDA** – the tried and tested classic

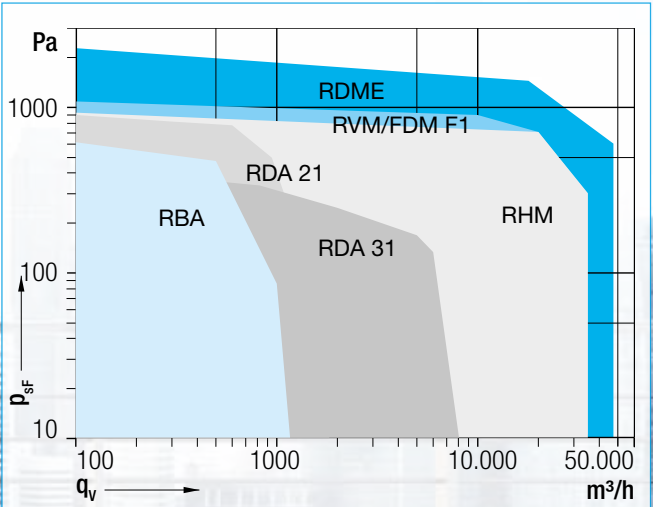
**FDM** – the quiet specialist

**RBA** – the tangibly invisible presence



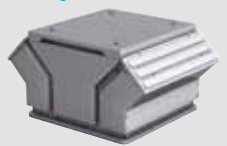



**NICOTRA** || **Gebhardt**

fan|tastic solutions

# The roof extract fans – an overview



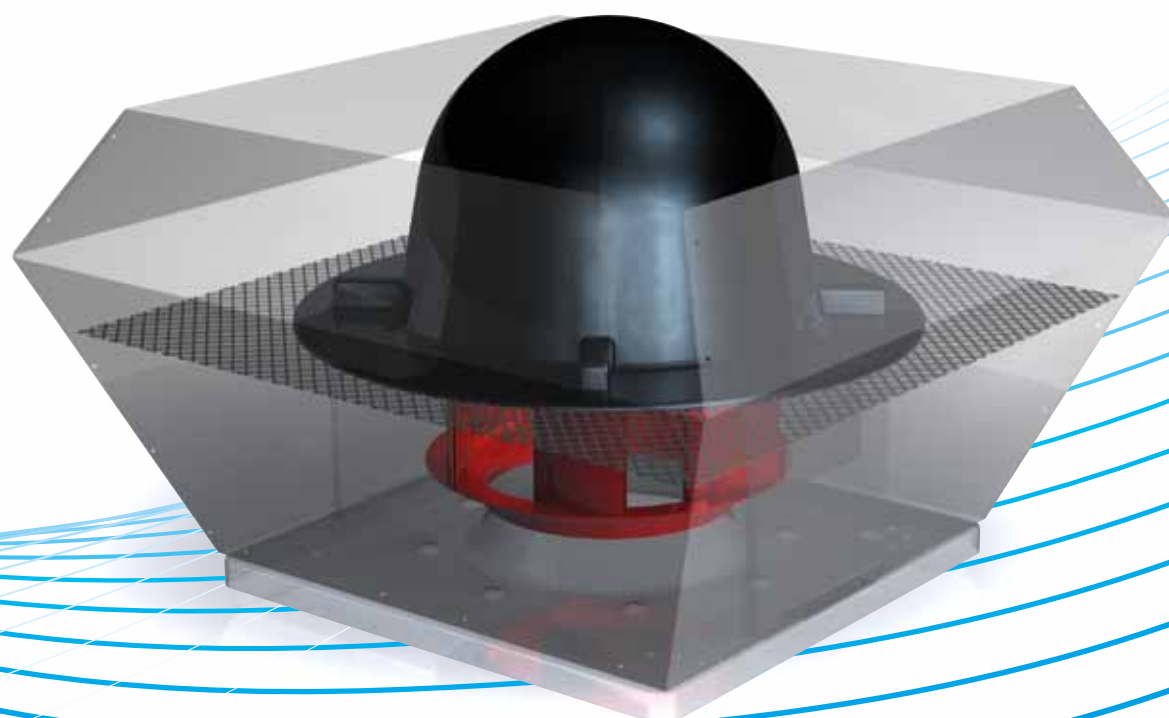
The advantages lie in the concept: the ErP Directive (Energy-related Products) requires ever higher performance at lower energy consumption. Whilst the majority of the industry here is just looking to more cost-efficient motors, we at Nicotra Gebhardt are looking at the whole picture. The impeller and housing design are specifically included in our concept in all our models. In the development, we now rely almost entirely on asynchronous internal rotor motors that are available worldwide. And for good reason: fans with internal rotor motors are systemically superior to systems with external rotor motors. Systems that use external rotor motors have the disadvantage of the air flow of being cut off by the motor in the impeller. In addition, IE2 and IE3 standard motors exceed the traditional voltage controllable external rotor motors in terms of efficiency. The same applies to even higher motor efficiencies. Even an impeller driven by a PM internal rotor motor exceeds the energy efficiency of systems with EC external rotor motors. A further advantage: external frequency converters do not require a special filter for driving the roof fans. And even if a service is required, motors and frequency converters can be easily replaced in a few, simple steps.

			Flow rate				Conveying medium			Design			Speed control			Material		
			1.200 m³/h	6.500 m³/h	33.000 m³/h	47.000 m³/h	40 °C	60 °C	120 °C	Discharge	Integrated silencer	EX-ATEX	Brushless-DC-Drive	Integrated FU	External FU	Aluminium	Galvanised steel	Painted
RVM <small>EVO</small>		<b>NEW</b> <b>Der efficient allrounder</b> <ul style="list-style-type: none"><li>Centrifugal roof fan</li><li>low noise level</li><li>vertical discharge</li></ul>	<ul style="list-style-type: none"><li>with IE2/IE3 standard motor</li><li>Frequency inverter operation</li></ul>				•	•	•	▲					•		•	optional
RHM		<b>NEW</b> <b>The favourably priced power package</b> <ul style="list-style-type: none"><li>Centrifugal roof extract fan</li><li>vertical discharge</li></ul>	<ul style="list-style-type: none"><li>with IE2/IE3-standard motor</li><li>Frequency inverter operation</li></ul>				•	•	•	◀▶					•		•	optional
RDA <small>GENDOVENT®</small>		<b>The tried and tested classic</b> <ul style="list-style-type: none"><li>Centrifugal roof extract fan</li><li>vertical discharge (RDA 21 - horizontal)</li><li>integrated back draught dampers (RDA 31/32)</li><li>with silencer lining (RDA 32)</li><li>Terminal cowl</li></ul>	<ul style="list-style-type: none"><li>with external rotor motor EC</li><li>BelAir <a href="#">timer</a> / BelAir <a href="#">pressure</a></li></ul>				•	•	•	▲	RDA-/32		•			•		optional
RDME <small>GENDOVENT®</small>		<b>NEW</b> <b>The new classic</b> <ul style="list-style-type: none"><li>Centrifugal roof extract fan</li><li>vertical discharge</li><li>integrated back draught dampers</li><li>with silence lining (RDME 32)</li></ul>	<ul style="list-style-type: none"><li>IE2/3/4/PM standard motor placed out of airstream</li><li>Frequency inverter operation</li><li>Integrated frequency inverter</li><li>BelAir <a href="#">pressure</a></li></ul>				•	•	•	▲	RDME-/32	• Baureihe RDM 31/32	•	•	•	•	•	optional
FDM <small>EVO</small>		<b>NEW</b> <b>The quiet specialist</b> <ul style="list-style-type: none"><li>Centrifugal roof extract fan</li><li>vertical discharge</li><li>low noise execution</li></ul>	<ul style="list-style-type: none"><li>with IE2 standard motor</li><li>Frequency inverter operation</li></ul>				•	•	•	▲	•				•		•	optional
RBA		<b>The tangible invisible presence</b> <ul style="list-style-type: none"><li>Centrifugal ventilation fanbox</li><li>vertical discharge</li></ul>	<ul style="list-style-type: none"><li>with external rotor motor EC</li><li>integrated technology</li><li>with integrated pressure regulation</li></ul>				•	•	•	▶▶			•				•	



# RVM<sup>EVO</sup> **NEW**

## The efficient allrounder



### The RVM appeals: economical and quiet like no other

The heart of the new RVM<sup>EVO</sup> is the newly developed impeller-motor unit in combination with a housing geometry optimised for this purpose. The impeller with its geometry, selected to achieve high efficiency, consists of six hollow blades. This special form and the slanting blade leading-edge ensure that the air flows better around the blade. Pressure losses are reduced significantly. Furthermore, the self-designed housing of the RVM<sup>EVO</sup>, which blows vertically upwards, ensures ideal flow conditions within the device.

**The economic one:** the RVM really comes into its own and shines when the costs of operation, assembly and maintenance are important. It can later be seen that the ventilator which is the very best at using energy is also the best investment:

- The unique motor-impeller-housing unit of the EVO series is harmonised in every detail and ensures the highest possible efficiency. This reduces decisive costs, also those over and above incurred during the period it is operating.
- Despite its simply excellent efficiency the RVM<sup>EVO</sup> has the same basic measurements and operating data as those of earlier models in the Nicotra Gebhardt roof extract units programme. They can therefore be easily and quickly integrated into existing assembly equipment which saves time and money.

**The quiet one:** one welcome side effect of the new EVO and housing technology is reduction of the sound level generated – without additional sound insulation.

#### *The innovative high performance impeller:*

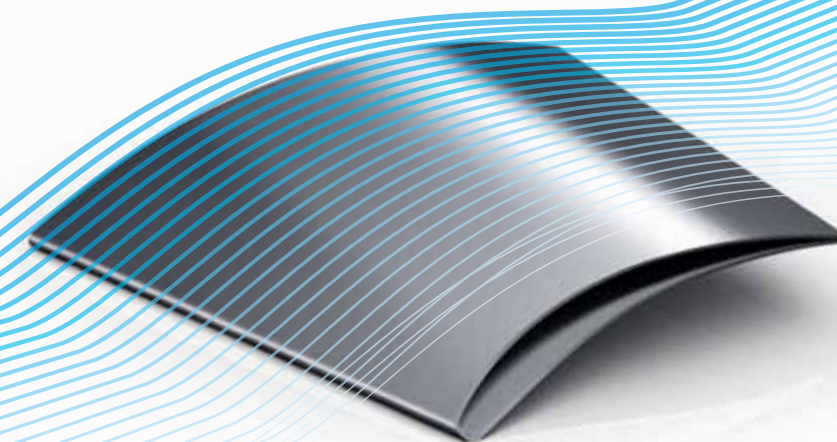
*The efficiency achieved by the RVM with the adapted design of the new EVO impeller is unbeatable. The special form of the hub already improves air flow significantly. All dimensions are perfectly matched to each other. The improved air flow in combination with the hollow blades not only promotes efficiency but also reduces the sound level significantly.*

### Ready for the next generation

With the new RVMEVO product range, we have created the basis for effectively using high motor efficiencies over the housing dimensions. The RVMEVO meets the highest standard of the future levels in the ErP Directive already today. Each individual part of the fan contributes to the successful overall concept:

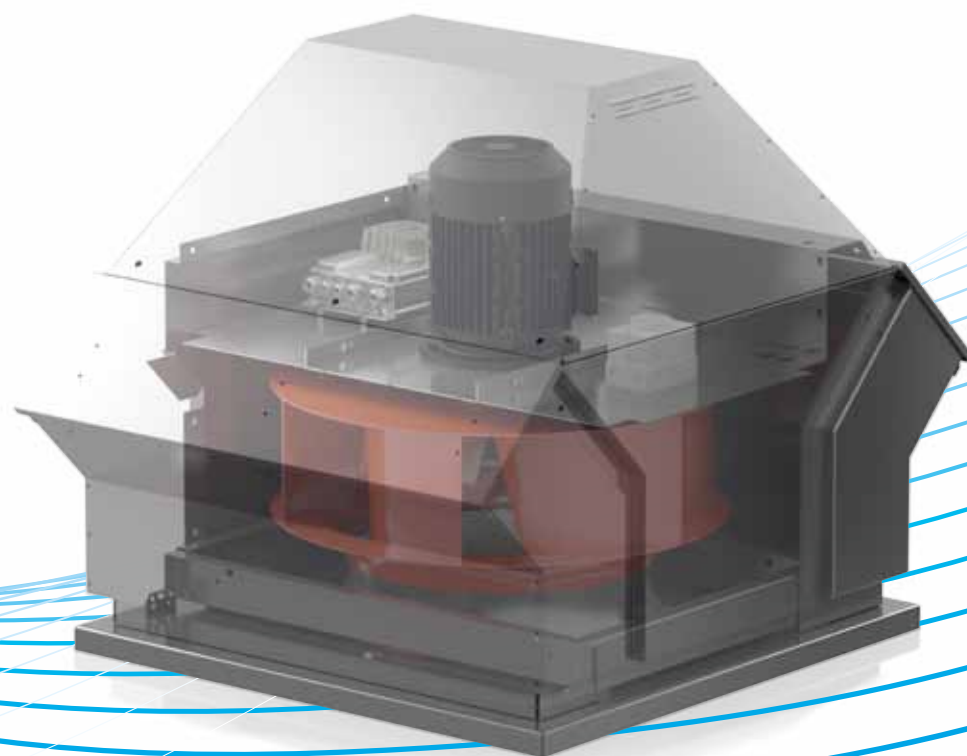
- Asynchronous three-phase current motors according to the High Efficiency classification IE2/IE3 merge with the impeller and housing to produce an efficient unit
- Individual impeller configuration for volume flows of up to 34,000 m<sup>3</sup>/h
- Simple base mounting based on compatibility with standard measurements
- Exact controlling at the operating point by means of frequency converter operation
- Simple and secure handling
- vertical blowing out direction avoids dirt accumulating on the roof

The solutions can be easily configured with our electronic proselecta selection program.



*The perfect profile for the highest levels of efficiency: the hearts of the EVO series are the six blades with a rounded slanting leading-edge and a newly designed hollow profile. They ensure optimal flow characteristics in the impeller and are the basis of the extraordinarily high efficiency achieved.*

## The famous classic



## The extraordinary is a standard with us

The research and development department at **Nicotra Gebhardt** is known for their sophisticated ideas. A good example is the **genovent®**, which is full of extraordinary solutions – without asking for extra cost:

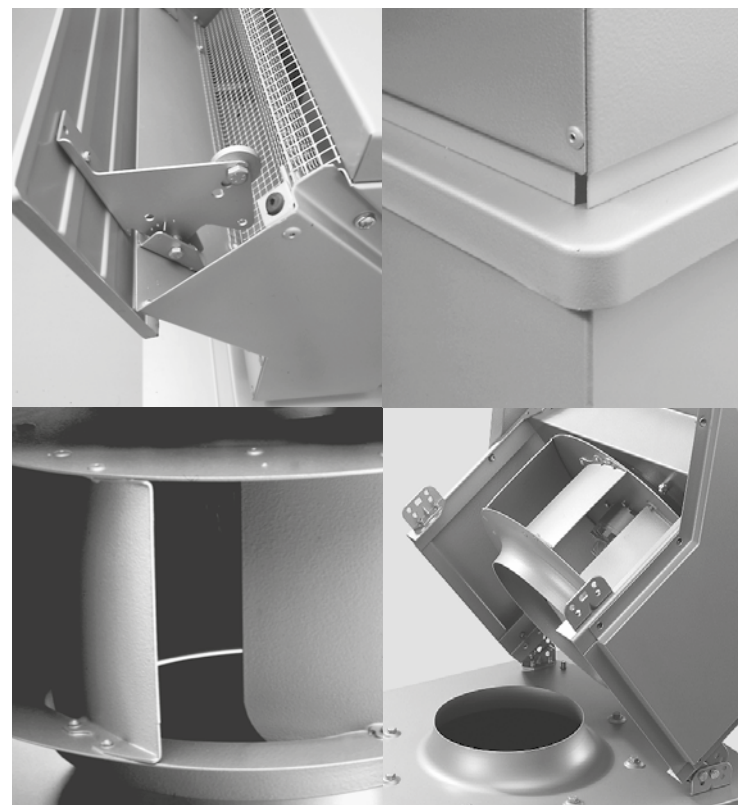
- The **genovent®** can be fitted as **easy as plug & play** – even when exchanging an existing unit.
- The intelligent design of the **genovent®** makes it possible to open the fan in a most simple and cost saving manner: unscrew and ready!
- The back draught dampers protect the fan from intruding snow or rain, and prevents unnecessary heat losses of the duct system. This is built in, no extra backdraught damper need be provided.
- A considerable throw of the vertically discharging **genovent®** is preventing the roof from dirt deposits and air flow short circuits.
- Flexible and exact modification to the required operating point lowers energy consumption. For the highest efficiency requirements, a PM motor in accordance with IE 4 is also available in the RDME. In addition, variants with an integrated frequency converter are configurable.
- **A flexible and precise targeting** of the required duty point reduces energy consumption. As an option we offer energy efficient solutions through through additional or integrated frequency inverters or even through energy saving brushless DC motors.
- Thanks to the structural separation of the motor from the exhaust air, variants with up to 120 degrees media temperature are available for special requirements, such as transporting exhaust air from kitchens.
- **genovent®** roof fans are also available in ATEX execution acc. to category 3G.

## The genovent in every respect is a premium product

In wins acceptance as a result of its expressive design, its corrosion-resistant aluminium housing and the multiplicity of technical refinements it embodies. Even more astounding is the price of this high performance extract unit. Quality does not have to be expensive: **Save money on your first acquisition, operation, assembly and maintenance** through:

- an extremely high quality basic version without low surcharge heat loss
- long periods of maintenance-free operation
- low heat losses
- simply assembly which does not require special tools
- simple swivelling out of the housing

**Ventilation provides a better living environment:** The ventilation system BelAir allows us to supply architects, planers or building owners with a suitable ventilation solution. A wide range of systems on offer with which many domiciles have already been equipped create a basis for making a very secure decision. RDA genovent® – also with integral pressure regulation or a time switch module for use according to DIN 18017-3 and DIN 1946-6 – more information can be found under BelAir on page 11 of this brochure and through use of the selection programme proSelecta at [www.nicotra-gebhardt.com](http://www.nicotra-gebhardt.com).



**RDM 31/32**  
Line **RDM**  
with IEC standard motor up to IE4  
flow rate up to 47,000 m³/h

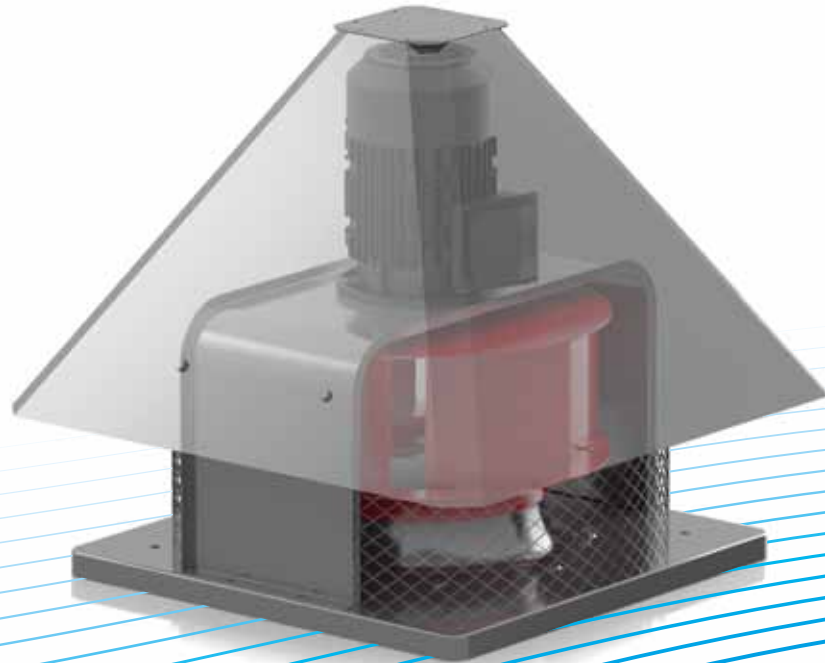


**RDA 31**  
Line **RDA**  
with external rotor motor  
(Brushless DC technology)  
flow rate up to 8,000 m³/h



## RGA **NEW**

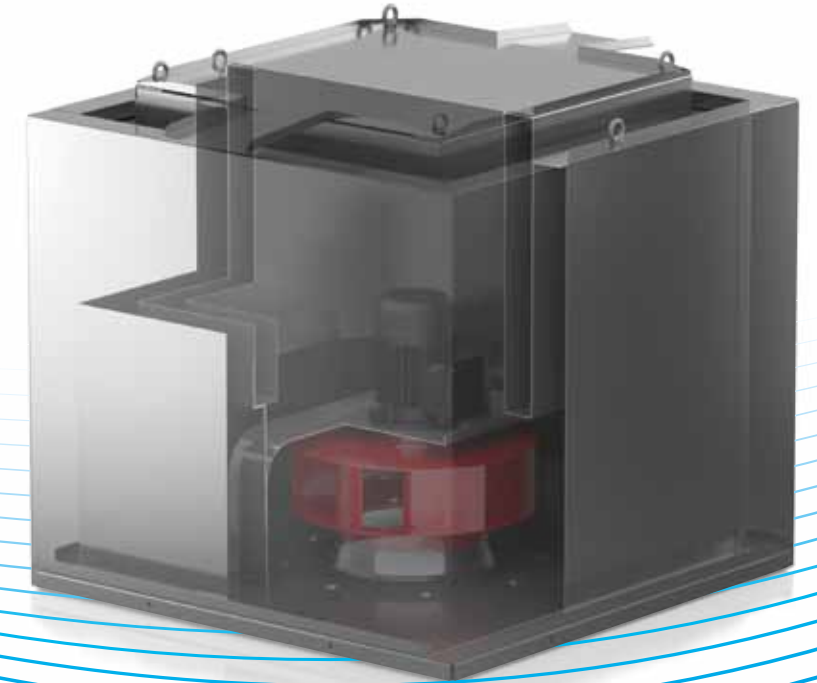
The favourably priced power package



**RHM**  
Line **RHM**  
with IEC 2 standard motor  
Flow rate up to 33,000 m³/h

## FDM **NEW**

The quiet specialist

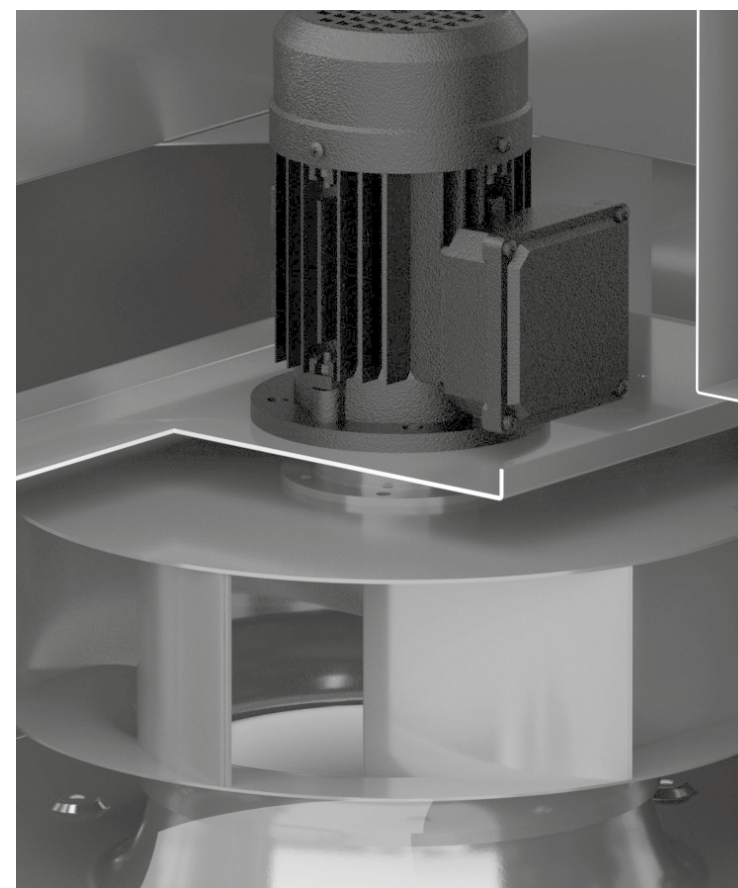


**FDA**  
Line **FDM F1**  
with IEC 2/3 standard motor  
Flow rate up to 33,000 m³/h

### Power under the hood for less money

Planners often tender for roof fans with a horizontal blow-out direction due to structural conditions. The new RHM is the price-effective alternative precisely for this application. The convenient construction makes it particularly maintenance friendly. All you need is to remove the cover and guard and replace the motor. When looking for high quality in this price segment, you will not find it. The RGA is offering, below its stylish cowl of modern plastics, many extra technical features:

- A wide programme of IE2/IE3 standard motors.
- Easy handling with external frequency converter.
- Anti vibration mounts will guarantee extra low vibration level.
- The high performance impeller with backward curved blades enables particular smooth running.
- All sub-assemblies are designed to be extremely efficient.
- A full range of accessories completes the offer.



### Many reasons for choosing the silent unit

There are cases where a fan has to be silent first. It is for cases like this that the **FDM F1** has been designed. A casing equipped with highly efficient lining reduces the discharge sound level. The cubic design of the steel casing in addition integrates the unit into any roof surrounding. Using an intelligent concept for the FDM F1 a high level of expectations concerning performance, quality, design and noise comfort is met.

- cubic design with integrated silencer made of galvanised steel sheet.
- the high performance backward curved impeller assures a smooth operation at high efficiency level.
- a wide programme of IE2/IE3 standard motors.
- simple installation and inspection.
- full range of accessories

# RBA

## The tangibly invisible presence



**RBA**  
Line **RBA**  
with external rotor motor  
und integrierter Druckregelung  
Flow rate up to 1.200 m³/h

## The fresh air powerplant under the roof

Not every exhaust fan must be placed on the roof! The RBA made by **Nicotra Gebhardt** offers a perfect ventilation solution where simple exhaust systems have to be realised without roof fan. The exhaust box, easy to install, with integrated centrifugal fan can be fitted directly inline with the air duct. It is available in two model sizes and conveys substantial volumes of air. Therefore the RBAs are the perfect addition to a system for simple ventilation systems, if:

- special building regulations forbid use of a roof extract unit, for example in historical old towns.
- aesthetic requirements of architects exclude use of a roof extract unit.
- the slope of the roof is too steep.
- inspection work on the roof would not be possible or would be simply too complicated.

You cannot see it, you can hardly hear it, but you can feel it: the RBA provides fresh air to every place you want. Four reasons for selecting a **Nicotra Gebhardt** RBA:

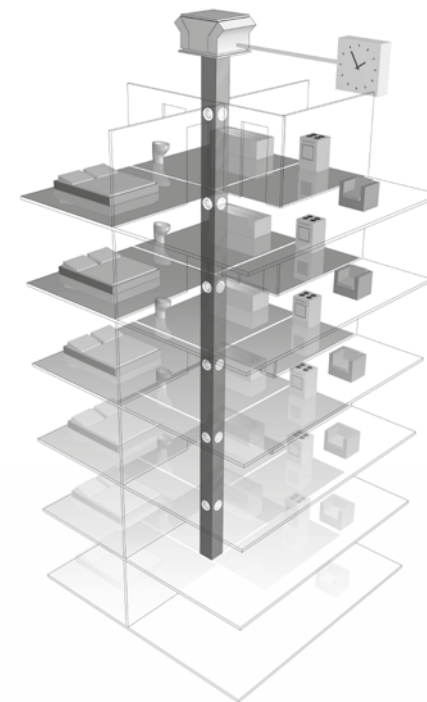
- a high performance RBA with integrated fan of the Nicotra Gebhardt range RDA.
- a casing of frameless sandwich panels made of galvanised sheet steel and filled with mineral fibre.
- 100% speed control of motor and fan
- a full range of accessories including mating flanges, weather protection hood, and condense water drain.

**Easy to install, easy to maintain:** The installation of the RBA is easy: By connecting a duct at intake and discharge the RBA is connected instantly in a Plug&Play manner. And service is made as easy as that: At both sides you take off the side panels by opening quick locks and you close the unit by replacing them and by closing the locks with one movement in a time of seconds. .



# BELAIR<sup>TIMER</sup> / BELAIR<sup>PRESSURE</sup>

## The total solution for RDA



### BelAir timer – A time-controlled ventilation system

**BelAir timer** is a ventilation system built according to DIN 18017 Part 3 Section 2.2.1; a central ventilation system with overall flow volumes which can only be altered together.

#### **timer means:**

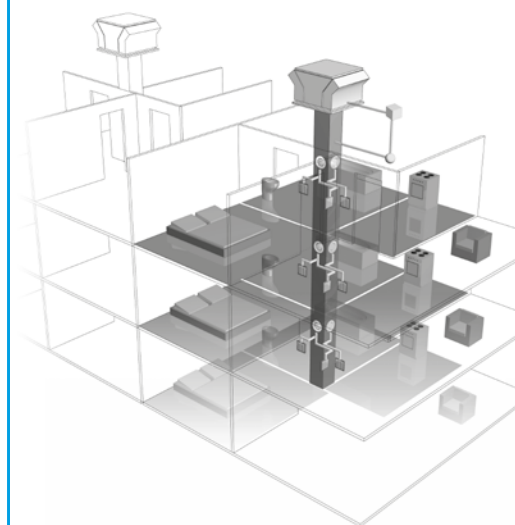
Rooms which are damp are ventilated at regular fixed intervals over the central ventilation duct.

#### **An example application:**

All baths and toilets in an hotel can be ventilated regularly using this economical system.

#### **Components:**

Roof extract unit, ventilator accessories, switch cabinet with timer, valves (manually adjustable ZXH).



### BelAir pressure – A pressure-controlled ventilation system

**BelAir pressure** is a ventilation system built according to DIN 18017 Part 3 Section 2.2.2; a central ventilation system with overall flow volumes which can only be altered for each apartment

#### **pressure means:**

The exhaust air valves in the damp rooms are controlled by the light switch, over a moisture temperature sensor or over a fixed interval interval switching system. A change in pressure occurs in the central ventilation shaft just as soon as any further valve is opened, which is registered by a sensor. This increases the output of the roof extract unit until the previous pressure level has been restored.

#### **An example application:**

A tried and tested system regulates ventilation in a multi-storey terraced house according to requirements.

#### **Components:**

Roof extract unit, ventilator accessories, pressure regulation (integrated), differential pressure sensor, valves with a 230 V drive (ZXS 24/31), switch control, moisture sensor, motion sensor, grease filter.

# PROSELECTA

## Come easily and quickly to the point

proselecta is a technical selection programme for configuration of "your" individually designed ventilator. You have the option to select all ventilator types and the associated options.

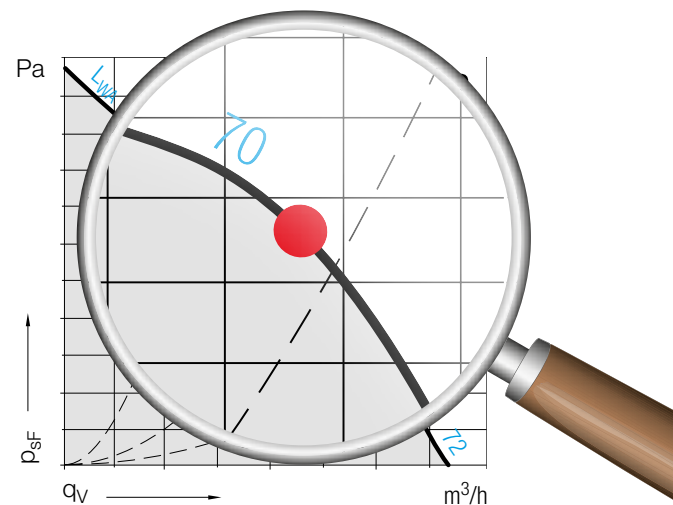
The result: proselecta delivers all technical data to your ventilator, including noise data, dimension drawings and accessories. As a registered user you also have access to the purchase prices. It is also possible to call up dimensioned drawings in a dxf format which can be adopted into your CAD system after the download.

To always ensure that you are on the safe side, and as a further plus point, proselecta only offers you technically realisable and permissible versions and variants for configuration.

You can register yourself as a user in proselecta and thereby have the opportunity to achieve accelerated processing:

- ▶ Full configuration of your ventilator with suitable system accessories and the belt drive layout
- ▶ Storage of your ventilator configuration on our server.
- ▶ The option to modify the stored configuration, also over the telephone, in a conversation with your advisor at Nicotra Gebhardt.

proselecta on: [www.nicotra-gebhardt.com](http://www.nicotra-gebhardt.com)



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