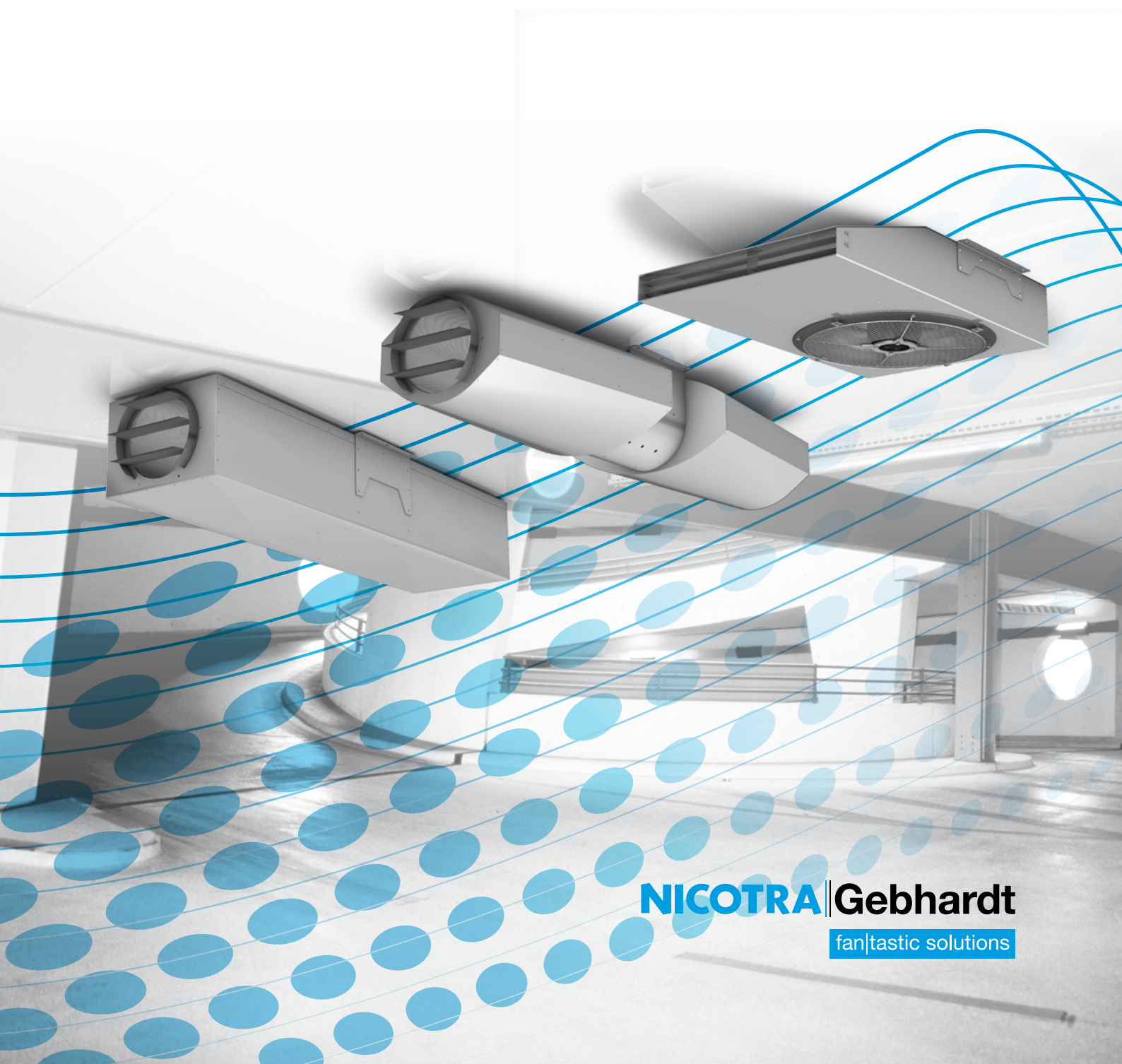


Fan solutions for underground and car parks



The system. The safety. The service.

The Jetfan – more safety for underground car parks and passages

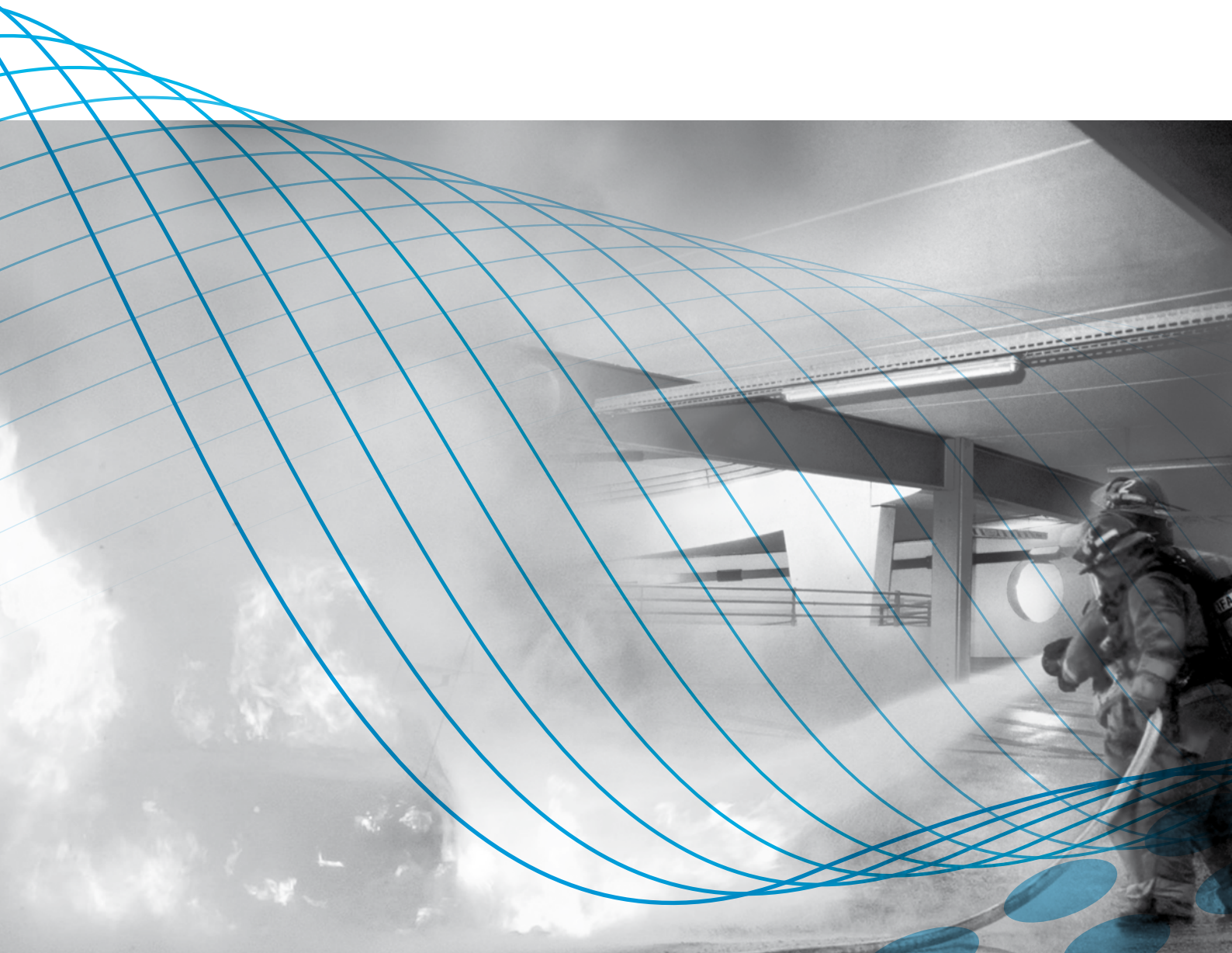
The architects of today are designing buildings on a larger scale than ever before. Giant buildings are being erected, often with labyrinthine underground car parks and passages.

The result: people often can't find their way back to ground level in a fire. Those trapped are placed in serious danger. It is therefore crucial that effective smoke extraction systems are installed in underground public spaces. The new Jetfan concept from Nicotra Gebhardt is pioneering a new generation of smoke extraction solutions to meet this need.

Ductless ventilation and safe smoke extraction – the Jetfan provides both

Jetfan serves to provide both normal ventilation and smoke extraction in equal measure.

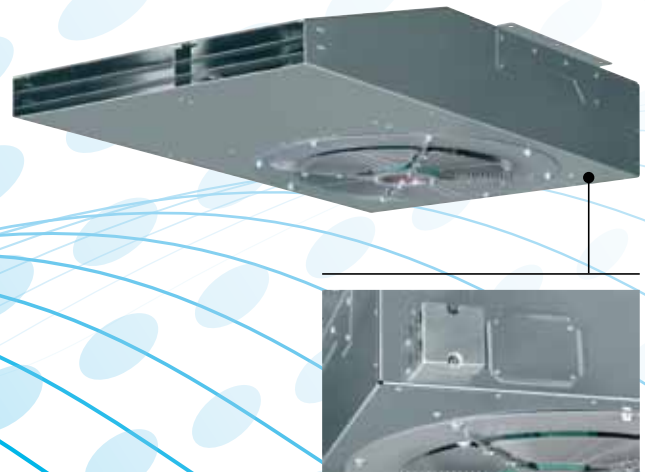
In doing so, it has a twofold function: it improves the air quality during normal operation and guarantees a higher level of safety in a fire. And all this at a fraction of the price of conventional systems.

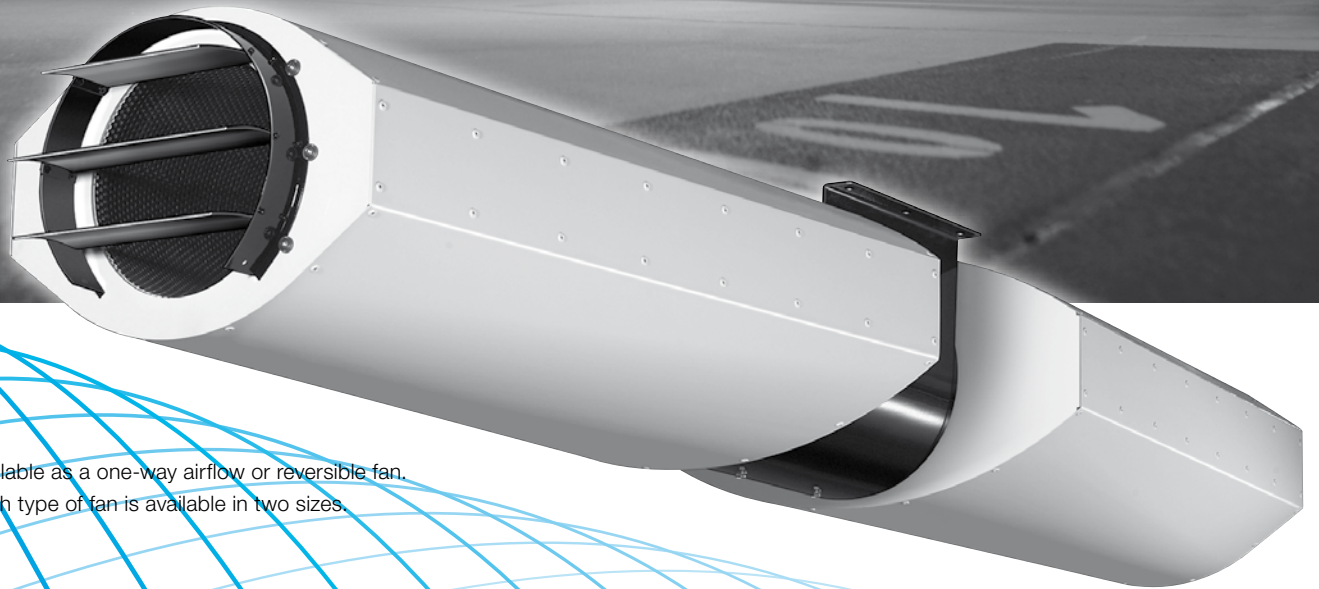


Cost, safety, design – the benefits of Jetfan

Jetfan has many advantages over classic duct systems:

- ▶ The Jetfan can partially ventilate or extract smoke
- ▶ The dynamic airflow means that all layers of air throughout the entire car park are intermingled; the concentration of toxic substances is much lower than in the case of conventional units with ventilation ducts.
- ▶ The flexible positioning of Jetfans means that “dead spots” (where there is no airflow) are prevented.
- ▶ Jetfans are flexible and can be adapted to suit changes in the use of space.
- ▶ Expensive large-scale ducts are not required. Such ducts are not effective if air inlet and outlet ducts are more than a certain distance apart.
- ▶ The car park becomes lighter and more pleasing for clients, as no bulky ventilation ducts impinge upon the environment. This means an enormous saving of space, along with increased efficiency in comparison with conventional systems.
- ▶ Air outlet fans operate at significantly lower thrust levels, as no duct network is required (energy saving).
- ▶ Air inlet fans are not required at all if free slipstreaming is in place.





available as a one-way airflow or reversible fan.
Each type of fan is available in two sizes.

The principle behind Jetfan air extraction systems: construction and positioning

As with tunnel ventilation, Jetfans are mounted on the ceiling and achieve their effect by means of the thrust (impulse) of the air outflow. A high induction of the surrounding air is produced here, and after a short time the volume of air in the entire space begins to circulate. This effect results in the transferred volume of air being several times greater than the actual flow volume of the fan. This central airflow is then drawn into the low-pressure area of the centrally aligned outlet air channel. The advantage: duct systems are not required.

Both the alignment of fans and the positioning and dimensions of the slipstream air vents are of decisive importance for the effectiveness of such a system. The formation of a continuous airflow in the direction of the outlet air channel is significant here.

**Technology and material:
Jetfan AGM 01/11, RGM 91/96
and Jetfan premium
AGM 02/12, AGM 06/16**



available as a one-way airflow or reversible fan.
Each type of fan is available in two sizes.

Jetfan is available in the form of a reasonably priced standard version and an elaborately designed premium version.

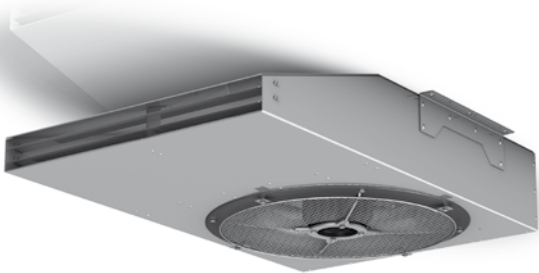
All three of these models are available in two versions, which are in turn available in two sizes. The casing for all of these products is made of galvanised sheet steel and features noise suppressors integrated on both sides.

The axial fan built into the AGM 01 transports the air by exerting pressure from the motor as standard. The AGM 11, on the other hand, is designed for reversible operation. It can exert both pressure, via the motor, and suction on the flow medium. The radial fan built into the RGM transports the air from an vertical inlet to horizontal discharge.

The impeller wheel of the AGM is made of pressure die-cast aluminium, the centrifugal impeller of the RGM is made of sheet steel, welded and coated. They are balanced according to DIN ISO 1940. The impellers adopted “flying” on the shaft of the drive motor located within the flow of air.

The thermally resistant connecting cable is protected against mechanical damage.

A temperature-resistant, metal connection box is located on the side of the casing. An air-conveyance unit made of sheet steel slats is mounted on the pressure side (AGM 01/02, RGM) or on the pressure and suction side (AGM 11). This serves to draw the airflow in the direction required. On the suction side of the AGM 01/02 and RGM there is protective grating made of steel.



Jetfan RGM:
with vertical discharge.
A reason for he is suitable for narrow installation dimensions.

Jetfan AGM 01/11, premium AGM 02/12 and RGM 91 have been tested according to EN 12101-3 at 300 °C – 120 min in a testing laboratory at TUM (Munich Technical University) and exceed the legally required standards.

Jetfan premium AGM 06/16 and RGM 96 is suited for the ventilation of dangerous CO-gases up to +40 °C.



Ventilation – the Jetfan air outlet system

In normal day-to-day operation, the Jetfans are controlled by the CO system – in accordance with the concentration threshold setting. In this way, carbon monoxide-contaminated air is extracted from the car park. This takes place with either just a few Jetfans operating at a low speed, or with all system components operating at a higher output level, depending on the concentration in the air.

Smoke extraction – the Jetfan smoke extraction system

In the event of smoke needing to be extracted, the Jetfans are immediately activated at maximum speed by smoke detectors, regardless of the CO system setting, in order to extract smoke from the area of the fire. The central ventilation shafts are switched to full power at the same time.

A significant advantage of the Jetfan smoke extraction system lies in the fact that smoke can be partially extracted from the immediate area of the fire. In other words, the Jetfans can be used to control smoke levels as well. This avoids the costly process of dividing a car park up into separate sections to reduce the spread of fire.

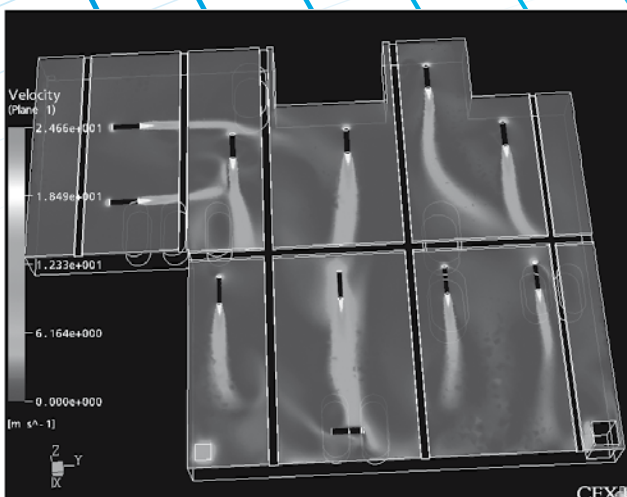
Our service: smoke flow simulation for perfect planning

We will assist you in the detailed planning and dimensioning of car park ventilation equipment, by means of a smoke flow simulation using computational fluid dynamics (CFD).

With the help of CFD, the ideal smoke extraction and ventilation system – including the number and positioning of Jetfans required – can be determined for each construction project, based on the legal requirements (GarVO).

We recommend the use of an airflow-simulation for large garages with difficult geometries.

It offers maximum planning security and is an invaluable tool for assessing the entire system.





In short: more safety, less costs

The largest financial benefit of Jetfans lies in the savings made in investment costs. Depending on the results of the smoke flow simulation, experience shows that lower investment costs are involved in installing the respective number of Jetfans, compared with the complete installation of a duct system with a central air outlet unit.

No penetration of the ceiling is required for the installation of Jetfans either, meaning that the structural concept of the underground car park is simplified significantly as well, therefore contributing further to the reduction of investment costs. Jetfans can also be expected to generate very low operating costs on the whole because partial ventilation is also possible.

And in addition to all of this: Jetfan systems offer maximum safety in a fire and meet all statutory requirements.

Your contact at Nicotra Gebhardt will be happy to provide you with further information. Alternatively, you can contact us by telephone on +49(0)7942101-0.

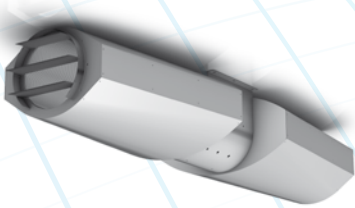
Cleaner air for underground car parks:

Interested in rock-bottom prices?

What should the perfect smoke extraction system for underground car parks offer? This was the question on our minds when we came up with our new pulse fan system. The result is the Jetfan, a solution which boasts impressive technology, functionality and a striking design.

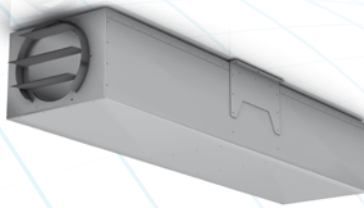
With the Jetfan, you save on investments across the board. Thanks to the pulse fan system, there is no need to invest in expensive, large-scale duct systems and high-maintenance smoke extraction flaps. The bigger the garage or ventilation system, the more money you save with the jet system. What's more, you will benefit from our computer-aided smoke flow simulation during the planning stage. Discover low, low prices for underground car park smoke extraction: with the Jetfan.

Jetfan AGM premium



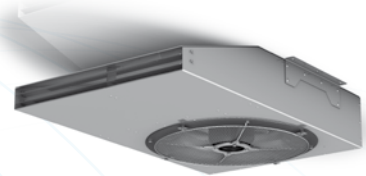
Pulse fan systems
with thrust up to 52 N
300 °C – 120 min.
No. 0036 CPD RG01 09

Jetfan AGM



Pulse fan systems
with thrust up to 52 N
300 °C – 120 min.
No. 0036 CPD RG01 09

Jetfan RGM



Pulse centrifugal fan systems
with thrust up to 75 N
300 °C – 120 min.
No. 0036 CPD RG01 11



The ultimate system for ultimate safety

The Jetfan is the ideal solution for heightened safety in underground car parks and underpasses.

Choose the ultimate system for safer and more aesthetic underground constructions.

- ▶ All models have CE certification.
- ▶ The Jetfan can be used for partial smoke extraction or ventilation.
- ▶ The flexible positioning of the Jetfan makes sure there are no areas where air does not circulate.
- ▶ The Jetfan makes expensive, large-scale duct systems unnecessary.
- ▶ Fresh air fans can become superfluous if there is a free flow of new air.
- ▶ The flexible fans can be adapted to cater for a change in the use of space.
- ▶ The Jetfan is available as an affordable standard version or as the Jetfan premium with a high-end design.
- ▶ Then Jetfan is available in two sizes and as a reversible fan.
- ▶ Pole-changing motors offer greater ventilation flexibility.
- ▶ Non-corrosive materials guarantee a long life.
- ▶ Integrated silencers for quieter permanent ventilation (approved for up to +40 °C)
- ▶ **Nicotra Gebhardt** offers the complete system solution:
 - Jetfan for smoke extraction up to +300 °C for 120 min.
 - Jetfan for ventilation of CO-gases up to +40 °C
 - axial or radial shaft fans and roof fans
 - switchgear cabinets with or without CO warning systems or SPS control
 - complete system sensors
 - right the way through to commissioning and official approval



AGM 01-/11-0315, 300 °C – 120 min.

Technical Data												
	Thrust	Discharge speed	Poles	Voltage/Connection	Frequency	Speed	Nominal power	Nominal current	Starting/Full load current	Motor size	Sound pressure level L_{pA} at 1 m distance	Weight
⑤	N	m/s		V (3~)	Hz	1/min	kW	A			dB ⑩	kg
AGM 01-						not reversible						
0315-2D-10	30	21	2	230/400 Δ/Y	50	2830	0.75	3.70/2.10	5.6	80	64	92
0315-FD-11	30/7.5	21/10	2/4	400 YY/Y	50	2820/1385	0.95/0.25	2.35/0.63	4.2/3.8	80	64/46	92
AGM 11-						reversed operation - data indicating flow direction over motor						
0315-2D-10	18	16	2	230/400 Δ/Y	50	2830	0.75	3.70/2.10	5.6	80	62	93
0315-FD-11	18/4.5	16/ 8	2/4	400 YY/Y	50	2820/1385	0.95/0.25	2.35/0.63	4.2/3.8	80	62/46	93

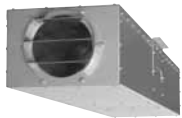
Accessories (on request)

- Smoke detecting switch unit
- Optical smoke detector with mounting base
- Manual switch
- CO-measuring unit

Accessories / Index

- ⑤ Connection diagrams see www.nicotra-gebhardt.com
- ⑩ Sound pressure measurement measured at the centre line below the fan

Dimensions in mm, Subject to change.



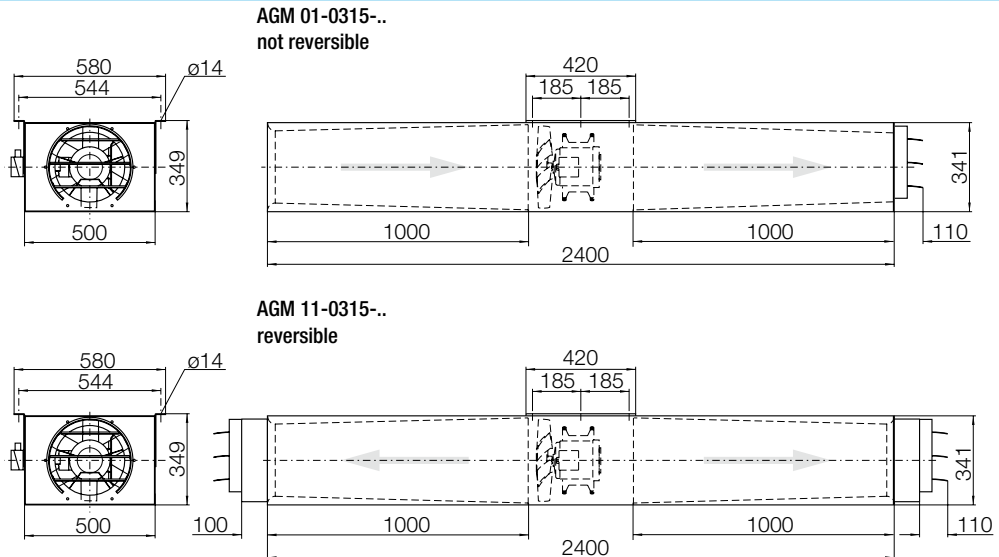
Fan and accessories tested to EN 12101-3

Certificate of EC conformity: 0036 CPD RG01 09

Impulse smoke extraction fan

AGM 01
Air flow in direction of motor (pressure) - not reversible

AGM 11
Air flow in direction of motor (pressure/suction) - reversible



AGM 01-/11-0400, 300 °C – 120 min.

Technical Data

	Thrust	Discharge speed	Poles	Voltage/Connection	Frequency	Speed	Nominal power	Nominal current	Starting/Full load current	Motor size	Sound pressure level L_{pA} at 1 m distance	Weight
⑤	N	m/s		V (3~)	Hz	1/min	kW	A			dB ⑩	kg
AGM 01-			not reversible									
0400-2D-11	52	21	2	230/400 Δ/Y	50	2845	1.10	4.70/2.70	6.1	80	65	114
0400-FD-11	52/13	21/10	2/4	400 YY/Y	50	2820/1385	0.95/0.25	2.35/0.63	4.2/3.8	80	65/48	114
AGM 11-			reversed operation - data indicating flow direction over motor									
0400-2D-11	45	20	2	230/400 Δ/Y	50	2845	1.10	4.70/2.70	6.1	80	68	115
0400-FD-11	45/11	20/10	2/4	400 YY/Y	50	2820/1385	0.95/0.25	2.35/0.63	4.2/3.8	80	68/51	115

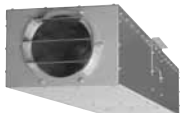
Accessories (on request)

- Smoke detecting switch unit
- Optical smoke detector with mounting base
- Manual switch
- CO-measuring unit

Accessories / Index

- ⑤ Connection diagrams see www.nicotra-gebhardt.com
- ⑩ Sound pressure measurement measured at the centre line below the fan

Dimensions in mm, Subject to change.



Fan and accessories tested to EN 12101-3

Certificate of EC conformity: 0036 CPD RG01 09

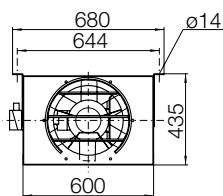
Impulse smoke extraction fan

AGM 01

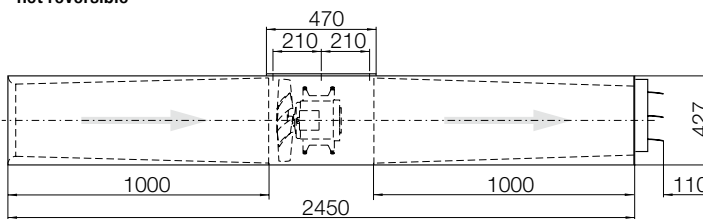
Air flow in direction of motor (pressure) - not reversible

AGM 11

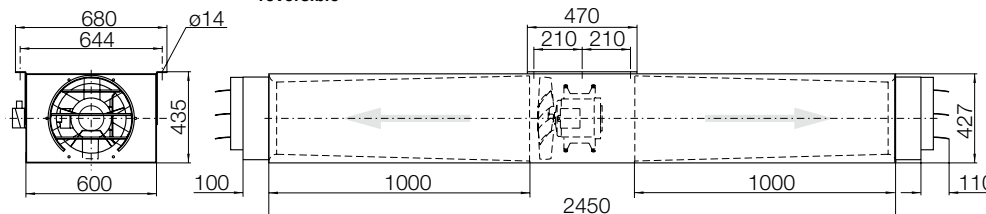
Air flow in direction of motor (pressure/suction) - reversible



AGM 01-0400-.. not reversible



AGM 11-0400-.. reversible



AGM 02-/12-0315, 300 °C – 120 min.

Technical Data												
	Thrust	Discharge speed	Poles	Voltage/Connection	Frequency	Speed	Nominal power	Nominal current	Starting/Full load current	Motor size	Sound pressure level L_{pA} at 1 m distance	Weight
⑤	N	m/s		V (3~)	Hz	1/min	kW	A			dB ⑩	kg
AGM 02-						not reversible						
0315-2D-10	30	21	2	230/400 Δ/Y	50	2830	0.75	3.70/2.10	5.6	80	64	92
0315-FD-11	30/7.5	21/10	2/4	400 YY/Y	50	2820/1385	0.95/0.25	2.35/0.63	4.2/3.8	80	64/46	92
AGM 12-						reversed operation - data indicating flow direction over motor						
0315-2D-10	18	16	2	230/400 Δ/Y	50	2830	0.75	3.70/2.10	5.6	80	62	93
0315-FD-11	18/4.5	16/ 8	2/4	400 YY/Y	50	2820/1385	0.95/0.25	2.35/0.63	4.2/3.8	80	62/46	93

Accessories (on request)

- Smoke detecting switch unit
- Optical smoke detector with mounting base
- Manual switch
- CO-measuring unit

Accessories / Index

- ⑤ Connection diagrams see www.nicotra-gebhardt.com
- ⑩ Sound pressure measurement measured at the centre line below the fan

Dimensions in mm, Subject to change.



Fan and accessories tested to EN 12101-3

Certificate of EC conformity: 0036 CPD RG01 10

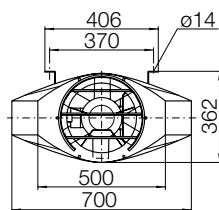
Impulse smoke extraction fan premium

AGM 02

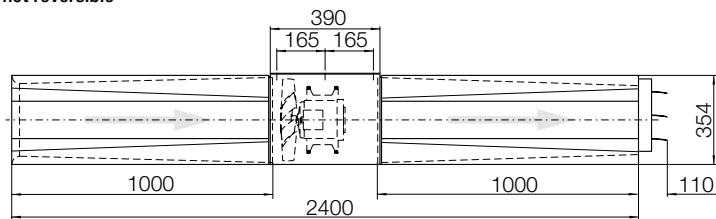
Air flow in direction of motor (pressure) - not reversible

AGM 12

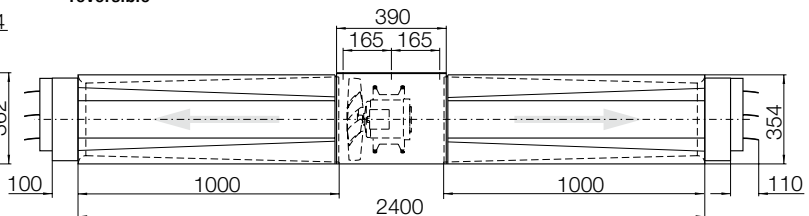
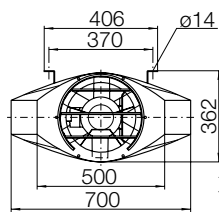
Air flow in direction of motor (pressure/suction) - reversible



AGM 02-0315-..
not reversible



AGM 12-0315-..
reversible



AGM 02-/12-0400, 300 °C – 120 min.

Technical Data												
	Thrust	Discharge speed	Poles	Voltage/Connection	Frequency	Speed	Nominal power	Nominal current	Starting/Full load current	Motor size	Sound pressure level L_{pA} at 1 m distance	Weight
⑤	N	m/s		V (3~)	Hz	1/min	kW	A			dB ⑩	kg
AGM 02-						not reversible						
0400-2D-11	52	21	2	230/400 Δ/Y	50	2845	1.10	4.70/2.70	6.1	80	65	114
0400-FD-11	52/13	21/10	2/4	400 YY/Y	50	2820/1385	0.95/0.25	2.35/0.63	4.2/3.8	80	65/48	114
AGM 12-						reversed operation - data indicating flow direction over motor						
0400-2D-11	45	20	2	230/400 Δ/Y	50	2845	1.10	4.70/2.70	6.1	80	68	115
0400-FD-11	45/11	20/10	2/4	400 YY/Y	50	2820/1385	0.95/0.25	2.35/0.63	4.2/3.8	80	68/51	115

Accessories (on request)

- Smoke detecting switch unit
- Optical smoke detector with mounting base
- Manual switch
- CO-measuring unit

Accessories / Index

- ⑤ Connection diagrams see www.nicotra-gebhardt.com
- ⑩ Sound pressure measurement measured at the centre line below the fan

Dimensions in mm, Subject to change.



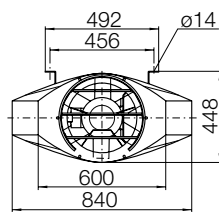
Fan and accessories tested to EN 12101-3

Certificate of EC conformity: 0036 CPD RG01 10

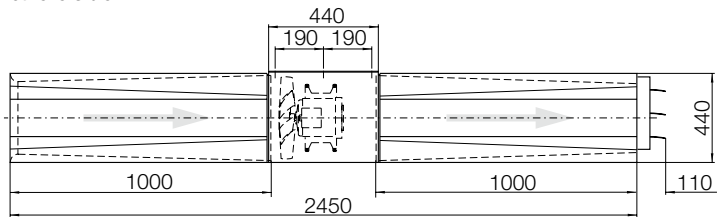
Impulse smoke extraction fan premium

AGM 02
Air flow in direction of motor (pressure) - not reversible

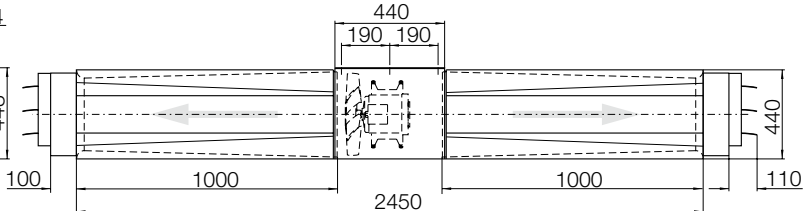
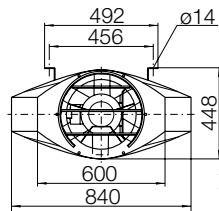
AGM 12
Air flow in direction of motor (pressure/suction) - reversible



AGM 02-0400-..
not reversible



AGM 12-0400-..
reversible



RGM 91-0600, 300 °C – 120 min.

Technical Data											
	Thrust	Discharge speed	Poles	Voltage/Connection	Frequency	Speed	Nominal power	Nominal current	Starting/Full load current	Motor size	appr. weight
⑤	N	m/s		V (3~)	Hz	1/min	kW	A			kg
RGM 91-0600, 300 °C – 120 min.											
0600-4D-15	50	25.0	4	230/400 Δ/Y	50	1435	1.5	5.80/3.30	5.8	90 L	130
0600-ID-15	50/23	25.0/17.0	4/6	400 YY/Y	50	1425/955	1.5/0.55	3.60/1.80	7.4/3.9	90 L	130
0600-GD-15	50/13	25.0/13.0	4/8	400 YY/Y	50	1420/720	1.3/0.22	3.00/1.15	5.4/3.4	90 L	130

Attention! In the case of fire fans with 2-speed motors must only be operated at high speed.

Accessories (on request)

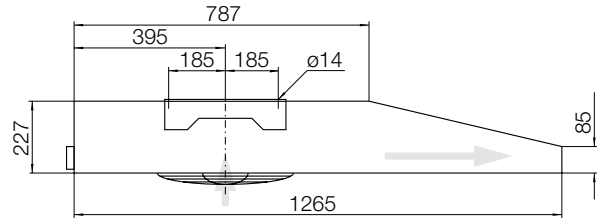
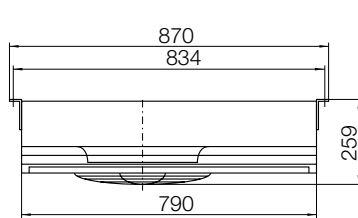
- Smoke detecting switch unit
- Optical smoke detector with mounting base
- Manual switch
- CO-measuring unit

Accessories / Index

⑤ Connection diagrams for fan and isolator to be found online at www.nicotra-gebhardt.com

Dimensions in mm, Subject to change.

RGM 91-0600, 300 °C – 120 min.



Sounds

The sound pressure level was measured in a distance of 1 m in two positions. The average values are shown in the table.

Fan type	Poles	L _{pA, 1m} dB	L _{pfc, 1m at f_c}								Hz
			63	125	250	500	1000	2000	4000	8000	
RGM 91-0600-..	4	77	64	79	75	75	71	69	66	60	dB
	6	66	66	70	65	64	61	57	54	48	dB
	8	59	68	62	58	57	54	49	46	39	dB

RGM 91-0610, 300 °C – 120 min.

Technical Data

	Thrust	Discharge speed	Poles	Voltage/Connection	Frequency	Speed	Nominal power	Nominal current	Starting/Full load current	Motor size	appr. weight
⑤	N	m/s		V (3~)	Hz	1/min	kW	A			kg
RGM 91-0610, 300 °C – 120 min.											
0610-4D-16	75	23.5	4	230/400 Δ/Y	50	1435	2.2	8.60/5.00	6.4	100 L	180
0610-ID-16	75/34	23.5/16.0	4/6	400 YY/Y	50	1425/955	2.2/0.75	5.00/2.60	7.1/4.0	100 L	180
0610-GD-16	75/19	23.5/12.0	4/8	400 YY/Y	50	1430/715	2.2/0.37	5.10/1.60	6.3/3.8	100 L	180

Attention! In the case of fire fans with 2-speed motors must only be operated at high speed.

Accessories (on request)

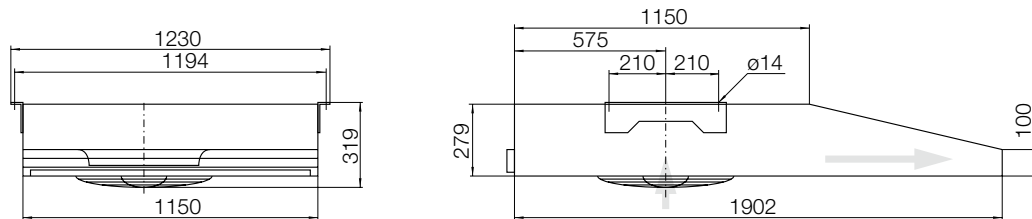
- Smoke detecting switch unit
- Optical smoke detector with mounting base
- Manual switch
- CO-measuring unit

Accessories / Index

⑤ Connection diagrams for fan and isolator to be found online at www.nicotra-gebhardt.com

Dimensions in mm, Subject to change.

RGM 91-0610, 300 °C – 120 min.



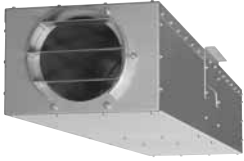
Sounds

The sound pressure level was measured in a distance of 1 m in two positions. The average values are shown in the table.

Fan type	Poles	L _{pA, 1m} dB	L _{pfc, 1m at f_c}								Hz
			63	125	250	500	1000	2000	4000	8000	
RGM 91-0610-..	4	83	74	87	81	80	77	75	68	63	dB
	6	71	72	79	71	68	66	62	55	50	dB
	8	63	74	68	61	61	58	52	45	40	dB

AGM 01-0315/-0400, 300 °C – 120 min.

Specification



Fan and accessories tested to EN 12101-3

Certificate of EC conformity: 0036 CPD RG01 09

General technical approval; Approval number: Z-78.11-153

Smoke extract jetfan AGM 01

Suitable for smoke extraction in the case of fire **up to 300 °C – 120 min.**

tested to DIN EN 12101-3 and CE certified.

Certificate of EC conformity: 0036 CPD RG01 09

DIBt approval number: Z-78.11-153

Suitable as fan for continuous standard ventilation up to 40 °C.

Certified for horizontal installation inside of a room where fire may occur.

Conveying direction blowing over motor (pressure).

Casing made of galvanised sheet steel and equipped with silencer at both ends.

Integrated air flow straightener for achieving a turbulence free air stream.

Adjustable guide vanes made of galvanised steel sheet at discharge, intake guard at suction side.

Axial fan impeller with aerofoil blades made of corrosion resistant cast aluminium, balanced to DIN ISO 1940 Class G 6,3.

Certified motor for smoke gases, protection IP 55, ISO H, maximum operation allowed to ISO F.

Protected, heat resistant electrical feed cable,

leading to metal connection box fixed on fan casing,

Tappings provided for high temperature resistance.

Options (at choice)

single speed (3-)

two speed (3-)

speed controlled by inverter during standard ventilation operation (max. working frequency admitted 50 Hz)

Fan type	AGM 01-	
Thrust	F =	N
Discharge velocity	v =	m/s
Reference density	ρ_1 =	kg/m ³
max. smoke extract temp.	t/T =	°C/min
max. ventilation temperature	t =	°C
Rated speed	N =	1/min
Nominal power	P _N =	kW
Nominal current	I _N =	A
Voltage/Frequency	U/f =	V/Hz
A-Sound pressure level	L _{pA} =	dB
Dimensions (L×W×H)	=	mm
Weight	m =	kg

Special fittings (at extra cost)

Special paint on request

Simulation on request

Accessories (on request)

Switch and control cabinet – with or w/o CO-warning system including all necessary equipment (CO-sensors, signal horn, blinking lamp, warning panels, etc.)

Optical smoke detector

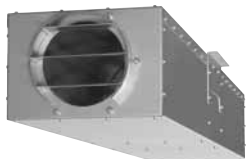
Manual trigger switch

Description see accessories

Connection diagrams see www.nicotra-gebhardt.com

AGM 11-0315/-0400, 300 °C – 120 min.

Specification



Fan and accessories tested to EN 12101-3

Certificate of EC conformity: 0036 CPD RG01 09

General technical approval; Approval number: Z-78.11-153

Smoke extract jetfan AGM 11

Suitable for smoke extraction in the case of fire

up to 300 °C – 120 min.

tested to DIN EN 12101-3 and CE certified.

Certificate of EC conformity: 0036 CPD RG01 09

DIBt approval number: Z-78.11-153

Suitable as fan for continuous standard ventilation up to 40 °C.

Certified for horizontal installation inside of a room where fire may occur.

Reversible - Conveying direction blowing over motor or inverse (pressure or suction)

Casing made of galvanised sheet steel and equipped with silencer at both ends.

Two integrated air flow straighteners for achieving a turbulence free air stream. Adjustable guide vanes made of galvanised steel sheet at discharge and intake.

Axial fan impeller with aerofoil blades made of corrosion resistant cast aluminium, balanced to DIN ISO 1940 Class G 6,3.

Certified motor for smoke gases, protection IP 55, ISO H, maximum operation allowed to ISO F.

Protected, heat resistant electrical feed cable,

leading to metal connection box fixed on fan casing,

Tappings provided for high temperature resistance.

Options (at choice)

- single speed (3~)
- two speed (3~)
- speed controlled by inverter during standard ventilation operation (max. working frequency admitted 50 Hz)

Fan type	AGM 11-	
Thrust	F =	N
Discharge velocity	v =	m/s
Reference density	ρ_1 =	kg/m ³
max. smoke extract temp.	t/T =	°C/min
max. ventilation temperature	t =	°C
Rated speed	N =	1/min
Nominal power	P _N =	kW
Nominal current	I _N =	A
Voltage/Frequency	U/f =	V/Hz
A-Sound pressure level	L _{pA} =	dB
Dimensions (L×W×H)	=	mm
Weight	m =	kg

Special fittings (at extra cost)

Special paint on request

Simulation on request

Accessories (on request)

Switch and control cabinet – with or w/o CO-warning system including all necessary equipment (CO-sensors, signal horn, blinking lamp, warning panels, etc.)

Optical smoke detector

Manual trigger switch

Description see accessories

Connection diagrams see www.nicotra-gebhardt.com

AGM 02-0315/-0400, 300 °C – 120 min.

Specification



Fan and accessories tested to EN 12101-3

Certificate of EC conformity: 0036 CPD RG01 10

General technical approval; Approval number: Z-78.11-153

Smoke extract jetfan premium AGM 02

Suitable for smoke extraction in the case of fire

up to 300 °C – 120 min.

tested to DIN EN 12101-3 and CE certified.

Certificate of EC conformity: 0036 CPD RG01 10

DIBt approval number: Z-78.11-153

Suitable as fan for continuous standard ventilation up to 40 °C.

Certified for horizontal installation inside of a room where fire may occur.

Conveying direction blowing over motor (pressure)

Stylish, elliptical design and equipped with silencer made of galvanised sheet steel at both ends. Centre part with fixing brackets coated black.

Integrated air flow straightener for achieving a turbulence free air stream.

Adjustable guide vanes made of galvanised steel sheet at discharge, intake guard at suction side.

Axial fan impeller with aerofoil blades made of corrosion resistant cast aluminium, balanced to DIN ISO 1940 Class G 6.3.

Certified motor for smoke gases, protection IP 55, ISO H, maximum operation allowed to ISO F.

Protected, heat resistant electrical feed cable,

leading to metal connection box fixed on fan casing,

Tappings provided for high temperature resistance.

Options (at choice)

- single speed (3~)
- two speed (3~)
- speed controlled by inverter during standard ventilation operation (max. working frequency admitted 50 Hz)

Fan type	premium AGM 02-		
Thrust	F =	.....	N
Discharge velocity	v =	.....	m/s
Reference density	ρ_1 =	.....	kg/m ³
max. smoke extract temp.	t/T =	.....	°C/min
max. ventilation temperature	t =	.....	°C
Rated speed	N =	.....	1/min
Nominal power	P _N =	.....	kW
Nominal current	I _N =	.....	A
Voltage/Frequency	U/f =	.....	V/Hz
A-Sound pressure level	L _{pA} =	.....	dB
Dimensions (L×W×H)	=	.....	mm
Weight	m =	.....	kg

Special fittings (at extra cost)

Special paint on request

Simulation on request

Accessories (on request)

Switch and control cabinet – with or w/o CO-warning system including all necessary equipment (CO-sensors, signal horn, blinking lamp, warning panels, etc.)

Optical smoke detector

Manual trigger switch

Description see accessories

Connection diagrams see www.nicotra-gebhardt.com

AGM 12-0315/-0400, 300 °C – 120 min.

Specification



Fan and accessories tested to EN 12101-3

Certificate of EC conformity: 0036 CPD RG01 10

General technical approval; Approval number: Z-78.11-153

Smoke extract jetfan premium AGM 12

Suitable for smoke extraction in the case of fire up to 300 °C – 120 min,

tested to DIN EN 12101-3 and CE certified.

Certificate of EC conformity: 0036 CPD RG01 10

DIBt approval number: Z-78.11-153

Suitable as fan for continuous standard ventilation up to 40 °C.

Certified for horizontal installation inside of a room where fire may occur.

Reversible - Conveying direction blowing over motor or inverse (pressure or suction)

Stylish, elliptical design and equipped with silencer made of galvanised sheet steel at both ends. Centre part with fixing brackets coated black.

Two integrated air flow straighteners for achieving a turbulence free air stream.

Adjustable guide vanes made of galvanised steel sheet at discharge and intake.

Axial fan impeller with aerofoil blades made of corrosion resistant cast aluminium, balanced to DIN ISO 1940 Class G 6,3.

Certified motor for smoke gases, protection IP 55, ISO H, maximum operation allowed to ISO F.

Protected, heat resistant electrical feed cable, leading to metal connection box fixed on fan casing, Tappings provided for high temperature resistance.

Options (at choice)

- single speed (3~)
- two speed (3~)
- speed controlled by inverter during standard ventilation operation (max. working frequency admitted 50 Hz)

Fan type	premium AGM 12-		
Thrust	F =	.....	N
Discharge velocity	v =	.....	m/s
Reference density	ρ_1 =	.....	kg/m ³
max. smoke extract temp.	t/T =	.....	°C/min
max. ventilation temperature	t =	.....	°C
Rated speed	N =	.....	1/min
Nominal power	P _N =	.....	kW
Nominal current	I _N =	.....	A
Voltage/Frequency	U/f =	.....	V/Hz
A-Sound pressure level	L _{pA} =	.....	dB
Dimensions (L×W×H)	=	.....	mm
Weight	m =	.....	kg

Special fittings (at extra cost)

- Special paint on request
- Simulation on request

Accessories (on request)

Switch and control cabinet – with or w/o CO-warning system including all necessary equipment (CO-sensors, signal horn, blinking lamp, warning panels, etc.)

- Optical smoke detector
- Manual trigger switch

Description see accessories

Connection diagrams see www.nicotra-gebhardt.com

RGM 91-0600/-0610, 300 °C – 120 min.

Specification



Fan and accessories tested to EN 12101-3

Certificate of EC conformity: 0036 CPD RG01 11

General technical approval; Approval number: Z-78.11-163

Smoke extract jetfan RGM 91

Suitable for smoke extraction in the case of fire

up to 300 °C – 120 min.

tested to DIN EN 12101-3 and CE certified.

Certificate of EC conformity: 0036 CPD RG01 11

DIBt approval number: Z-78.11-163

Suitable as fan for continuous standard ventilation up to 40 °C.

Certified for horizontal installation inside of a room where fire may occur.

Especially slim casing construction made of galvanised sheet steel, equipped with mounting bracket at both ends.

Protection guard at inlet side and integrated guide vanes made of galvanised steel sheet at discharge.

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

Certified motor for smoke gases, protection IP 55, ISO H, maximum operation allowed to ISO F. Protected heat resistant electrical feed cable, leading to metal connection box fixed on fan casing, Tappings provided for high temperature resistance.

Options (at choice)

single speed (3-)

two speed (3-)

(High speed for smoke extraction, low speed for continuous standard ventilation)

Fan type	RGM 91-	
Thrust	F =	N
Discharge velocity	v =	m/s
Reference density	ρ_1 =	kg/m ³
max. smoke extract temp.	t/T =	°C/min
max. ventilation temperature	t =	°C
Rated speed	N =	1/min
Nominal power	P _N =	kW
Nominal current	I _N =	A
Voltage/Frequency	U/f =	V/Hz
A-Sound pressure level	L _{pA} =	dB
Dimensions (L×W×H)	=	mm
Weight	m =	kg

Special fittings (at extra cost)

Special paint on request

Simulation on request

Accessories (on request)

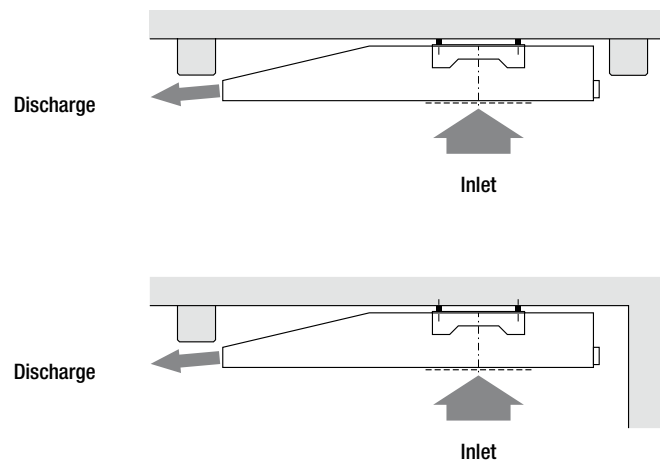
Switch and control cabinet – with or w/o CO-warning system including all necessary equipment (CO-sensors, signal horn, blinking lamp, warning panels, etc.)

Optical smoke detector

Manual trigger switch

Description see accessories

Connection diagrams see www.nicotra-gebhardt.com

RGM 91-0600/-0610, 300 °C – 120 min.**Samples**

CO Gas warning system

Enabling to switch an alarm on in the case of harmful carbon monoxide concentration in car parks

Tested and certified by TÜV acc. to VDI-Regulation 2053, latest issue (Certificate 09-92-0121)

The system and its function

The CO warning system is made of 2 functional groups:

- central warning unit
- bus capable CO measuring unit (max. 48 off)

The measuring units are fed with 24 V from the central unit. Their continuous measuring of the CO content supplies via bus lead to the central unit. There the signal is processed in order to get:

- Average half hour concentration value
- measured concentration against a CO concentration limit -> alarm

In the standard mode the alarm is set on only if the average half hour concentration value at one measuring point is higher than the fixed limit value.

1. Central unit

flush-mounted into switchboard consisting of:

Control module, processor controlled digital display for:

- Number of measuring point (control section)
- Actual CO concentration
- Unit parameters

LED display for:

- Alarm for every alarm group
- Excess of setting limits
- operation failures (buffered)
- Alarm group of the measuring point
- Operational data

Technical data

- Measuring area: 0...300 ppm CO
- Number of measuring points from 1...48
- 4 adjustable alarm thresholds

Works-Settings

- | | |
|-------------------|--|
| 1. Alarm: 40 ppm | } half hour average, freely programmable |
| 2. Alarm: 60 ppm | |
| 3. Alarm: 100 ppm | |
| 4. Alarm: 250 ppm | maximum value |

Number of alarm groups:

as a standard feature up to 4, more with optionally module.

Manual and automatic alarm confirmation (after 2 minutes).

Manual activation of system functions and threshold values for testing the fans and alarms without test gas.

RS232-connection for documentation of alarm-, status-, and measured data.

Switching contacts:

Per every alarm threshold and group 2 switching contacts, potential free.

- Switching rating of the relay contacts 2000 VA/8 A/250 V
- Voltage: 230 V* 10 %, 50 Hz





2. CO measuring unit

Inside wall fitted casing made of plastic

- Protection class IP 42
 - Cable entry from above
 - Dimensions: 94×130×57 mm (W×H×D)
- Connection to central unit by 4-wire signal cable
- Cable type to be used: IY (ST)Y.
 - Supply: 24 V (from central unit)
 - Signal via RS 484 bus

4. Echem-Sensor CO 300 ppm

Electro chemical measuring CO

5. NOX sensor

freely programmable

6. Central emergency power supply USV 2000

for uninterrupted power supply of the central unit and the warning panel in the case of power supply failure according to the national prescriptions. Wall casing with key lock.

- Period of power supply: 1 hour
- Power: 230 V/50 Hz, 1000 VA
- Dimensions app. 600×400×210 mm (W×H×D)
- Weight: ca. 50 kg
- Protection class: IP 54

7. Warning panel

Yellow body with aluminium frame, pictogram panel, execution acc. to car park regulations.

- Dimensions: 642×203×22 mm (W×H×D)
- Supply: 24 VDC

(Alternative for item 5. and 7.)

8. Warning panel

Yellow body with black writing - 3 lines, blinking light in the case of alarm. Power supply failure compensation for 1 hour by NiCd-Batteries, loading automatically acc. to VDI 2053.

- Dimensions: 642×203×22 mm (W×H×D)
- Supply: 230 V/50 Hz, 60 VA

9. Flash light WBL

Optical warning signal for inside or outside installation. Thermo plastic/Aluminium casing with yellow spherical cap.

- Protection class: IP 54
- Flashing sequence: 60/min
- Flash energy: 5 Joule
- Dimensions: 235×54×66 mm
- Supply: 230 V/50 Hz

10. Signal panel for flash light

- Dimensions: ca. 250×100 mm
- Black letters on white panel and red border

11. Signal horn

into connection box warning panel integrated

- Sound level: ca. 85 dB (A)/300 mm
- Dimensions: 75×75×37 mm
- Supply: 24 VDC

12. Connecting cables

to connect the measuring unit, 4×2×0.8 mm² supply and wiring either on existing cable ways or with copper tubes with distance holder clips.

13. Supply and Control line

for connection of the warning panels with integrated uninterrupted power supply NYM-J 5×1.5 mm² supply and wiring either on existing cable ways or with copper tubes.

14. Supply and Control line

NYM-J 3×1.5 mm² for connection of the warning panels without integrated uninterrupted power supply or other means.

15. Traffic light

2 lights signal red/green: 200 mm incl. two sets of fixing material.

16. Signal panel

for installation in the office of the manager equipped with 3 signal lamps.

- Dimensions: 200×100×80 mm

17. Commissioning of the gas warning and control central unit

including the demonstration of alarm- and switching functions by using test gases. Instruction of the personnel, support of the expert for certification.

AGM 06-0315/-0400, 40 °C – CO

AGM 16-0315/-0400, 40 °C – CO

Technical Data

	Thrust	Discharge speed	Poles	Voltage/Connection	Frequency	Speed	Nominal power	Nominal current	Starting/Full load current	Motor size	Sound pressure level L_{pA} at 1 m distance	Weight
⑤	N	m/s		V (3~)	Hz	1/min	kW	A			dB ⑩	kg
AGM 06- not reversible												
0315-2W-10⑪30	21		2	230/400 Δ/Y	50	2805	0.75	2.89/1.67		80	64	92
0315-FD-11	30/7.5	21/10	2/4	400 YY/Y	50	2780/1385	0.95/0.25	2.40/0.61	4.2/3.8	80	64/46	92
0400-2W-11⑪52	21		2	230/400 Δ/Y	50	2830	1.10	4.16/2.40		80	65	114
0400-FD-11	52/13	21/10	2/4	400 YY/Y	50	2780/1385	0.95/0.25	2.40/0.61	4.2/3.8	80	65/48	114
⑤	N	m/s		V (3~)	Hz	1/min	kW	A			dB ⑩	kg
AGM 16- reversed operation - data indicating flow direction over motor												
0315-2W-10⑪18	16		2	230/400 Δ/Y	50	2805	0.75	2.89/1.67		80	62	93
0315-FD-11	18/4.5	16/8	2/4	400 YY/Y	50	2780/1385	0.95/0.25	2.40/0.61	4.2/3.8	80	62/46	93
0400-2W-11⑪45	20		2	230/400 Δ/Y	50	2830	1.10	4.16/2.40		80	68	115
0400-FD-11	45/11	20/10	2/4	400 YY/Y	50	2780/1385	0.95/0.25	2.40/0.61	4.2/3.8	80	68/51	115

Accessories (on request)

- CO measuring unit

Accessories / Index

⑤ Connection diagrams see www.nicotra-gebhardt.com

⑩ Sound pressure measurement measured at the centre line below the fan

⑪ Motor according to efficiency class IE2.

Dimensions in mm, Subject to change.



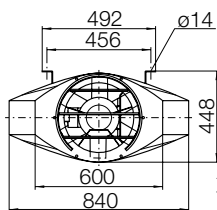
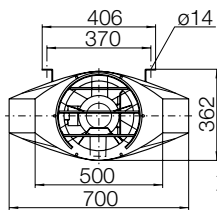
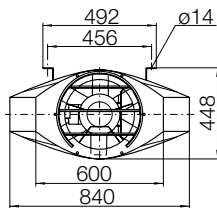
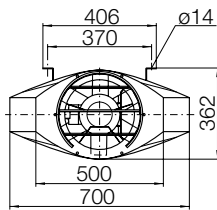
Impulse Jetfan premium

AGM 06

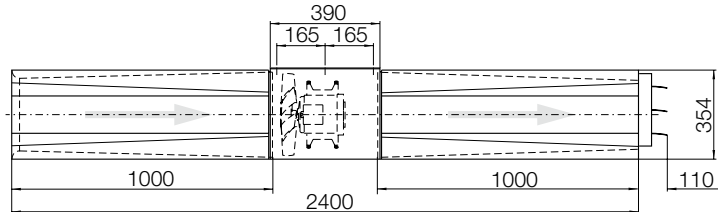
Air flow in direction of motor (pressure) - not reversible

AGM 16

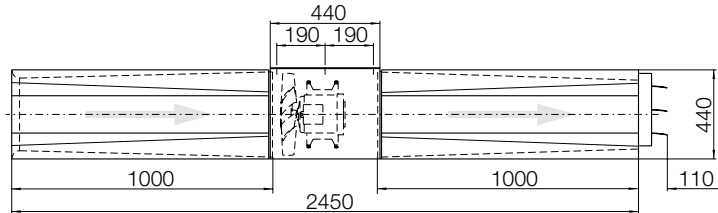
Air flow in direction of motor (pressure/suction) - reversible



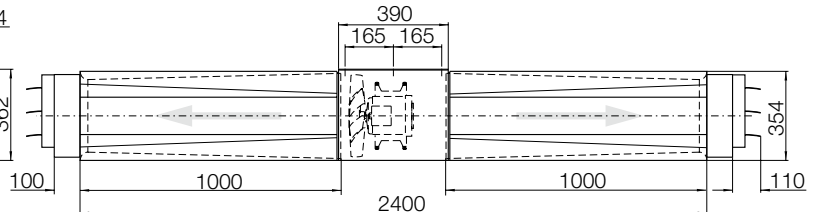
AGM 06-0315-.. not reversible



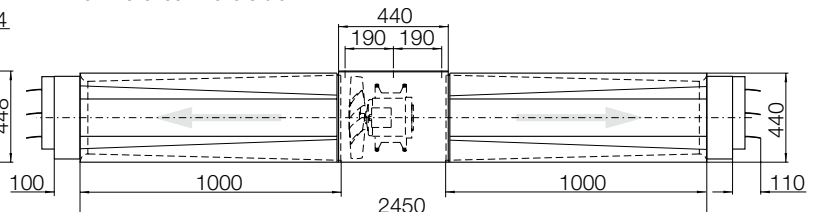
AGM 06-0400-.. not reversible



AGM 16-0315-.. reversible



AGM 16-0400-.. reversible



RGM 96-0600/-0610, 40 °C – CO

Technical Data											
	Thrust	Discharge speed	Poles	Voltage/Connection	Fre-quency	Speed	Nominal power	Nominal current	Starting/Full load current	Motor size	appr. Weight
⑤	N	m/s		V (3~)	Hz	1/min	kW	A			kg
RGM 96-0600, 40 °C – CO											
0600-4W-15 ⑪	50	25.0	4	230/400 Δ/Y	50	1445	1.5	5.57/3.20	5.5	90 L	130
0600-ID-15	50/23	25.0/17.0	4/6	400 YY/Y	50	1425/940	1.5/0.55	3.60/2.20	6.1/3.3	90 L	130
0600-GD-15	50/13	25.0/13.0	4/8	400 YY/Y	50	1459/732	1.5/0.25	4.20/1.60	5.5/3.1	90 L	130
⑤	N	m/s		V (3~)	Hz	1/min	kW	A			kg
RGM 96-0610, 40 °C – CO											
0610-4W-16 ⑪	75	23.5	4	230/400 Δ/Y	50	1440	2.2	7.65/4.40	6.3	100 L	180
0610-ID-16	75/34	23.5/16.0	4/6	400 YY/Y	50	1400/940	2.2/0.75	4.80/2.30	6.8/4.2	100 L	180
0610-GD-16	75/19	23.5/12.0	4/8	400 YY/Y	50	1446/726	2.2/0.37	5.50/2.00	5.2/3.2	100 L	180

Accessories (on request)

- CO measuring unit

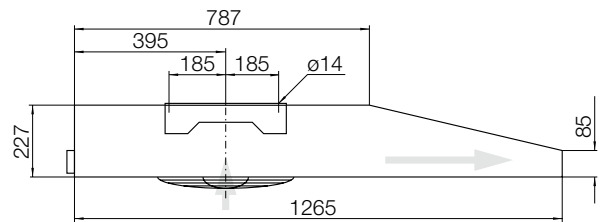
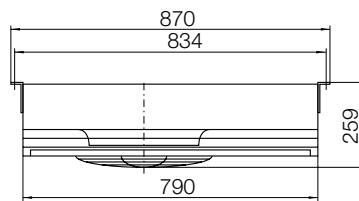
Accessories / Index

⑤ Connection diagrams for fan and isolator see www.nicotra-gebhardt.com

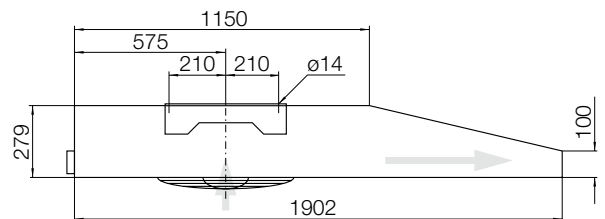
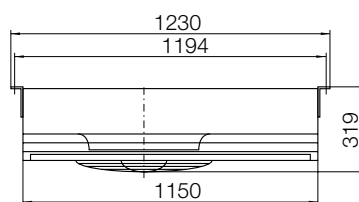
⑪ Motor according to efficiency class IE2.

Dimensions in mm, Subject to change.

RGM 96-0600, 40 °C – CO



RGM 96-0610, 40 °C – CO



Sounds

The sound pressure level was measured in a distance of 1 m in two positions. The average values are shown in the table.

Fan type	Poles	L _{pA, 1m} dB	L _{pfc, 1m at f_c}								Hz
			63	125	250	500	1000	2000	4000	8000	
RGM 91-0600-..	4	77	64	79	75	75	71	69	66	60	dB
	6	66	66	70	65	64	61	57	54	48	dB
	8	59	68	62	58	57	54	49	46	39	dB
RGM 91-0610-..	4	83	74	87	81	80	77	75	68	63	dB
	6	71	72	79	71	68	66	62	55	50	dB
	8	63	74	68	61	61	58	52	45	40	dB

AGM 06-0315/-0400, 40 °C – CO

AGM 16-0315/-0400, 40 °C – CO

Specification



Jetfan premium AGM 06/16 for ventilation of CO-gases

Suitable for continuous standard ventilation up to 40 °C.

Certified for horizontal installation.

Conveying direction blowing over motor (pressure)

Stylish, elliptical design and equipped with silencer made of galvanised sheet steel at both ends. Centre part with fixing brackets coated black.

Integrated air flow straightener for achieving a turbulence free air stream.

Adjustable guide vanes made of galvanised steel sheet at discharge, intake guard at suction side.

Axial fan impeller with aerofoil blades made of corrosion resistant cast aluminium, balanced to DIN ISO 1940 Class G 6.3.

Electrical feed cable leading to connection box fixed on fan casing.

Options (at choice)

- single speed (3~)
- two speed (3~)
- speed controlled by external frequency inverter
(max. working frequency admitted 50 Hz)

Fan type	AGM 06-/16-		
Thrust	F =	.....	N
Discharge velocity	v =	.....	m/s
Reference density	$\rho_1 =$	.....	kg/m ³
max. ventilation temperature	t =	.....	°C
Rated speed	N =	.....	1/min
Nominal power	P _N =	.....	kW
Nominal current	I _N =	.....	A
Voltage/Frequency	U/f =	.....	V/Hz
A-Sound pressure level	L _{pA} =	.....	dB
Dimensions (L×W×H)	=	.....	mm
Weight	m =	.....	kg

Special fittings (at extra cost)

Special paint on request

Simulation on request

Accessories (on request)

Switch and control cabinet – with CO-warning system including all necessary equipment (CO-sensors, signal horn, blinking lamp, warning panels, etc.)

Description see accessories

Connection diagrams see www.nicotra-gebhardt.com

RGM 96-0600, 40 °C – CO

RGM 96-0610, 40 °C – CO

Specification



Jetfan RGM 96

for ventilation of CO-gases

Suitable for continuous standard ventilation up to 40 °C.

Certified for horizontal installation.

Especially slim casing construction made of galvanised sheet steel, equipped with mounting bracket at both ends.

Protection guard at inlet side and integrated guide vanes made of galvanised steel sheet at discharge.

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

Electrical feed cable leading to connection box fixed on fan casing.

Options (at choice)

- single speed (3~)
- two speed (3~)
- speed controlled by external frequency inverter (max. working frequency admitted 50 Hz)

Fan type premium RGM 96-

Thrust	F =	.....	N
Discharge velocity	v =	.....	m/s
Reference density	ρ_1 =	.....	kg/m ³
max. ventilation temperature	t =	.....	°C
Rated speed	N =	.....	1/min
Nominal power	P_N =	.....	kW
Nominal current	I_N =	.....	A
Voltage/Frequency	U/f =	.....	V/Hz
A-Sound pressure level	L_{PA} =	.....	dB
Dimensions (L×W×H)	=	.....	mm
Weight	m =	.....	kg

Special fittings (at extra cost)

Special paint on request

Simulation on request

Accessories (on request)

Switch and control cabinet – with CO-warning system including all necessary equipment (CO-sensors, signal horn, blinking lamp, warning panels, etc.)

Description see accessories

Connection diagrams see www.nicotra-gebhardt.com

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