

Condensing boiler technology

Product Catalogue 2021-03

ebmpapst

the engineer's choice





EC radial blowers for condensing boiler technology

ebmpapst

the engineer's choice



	Page		Page	
Information	4	About ebm-papst	4	
		GreenIntelligence	5	
		Gas condensing technology	6	
		Laboratory equipment	10	
		EC radial blowers	12	
		Systems for condensing boiler technology	14	
		Our system solutions	16	
EC radial blowers	18	Air performance and recommended operating range	18	
		High-efficiency venturi	20	
		RadiMix VG 71	22	
		RadiMix VG 100	24	
		RadiMix VG 108	26	
		NRG 118	28	
		RG 148	30	
		NRG 137	32	
		RG 175	34	
		G1G 170	36	
		G3G 200	38	
		G3G 250	40	
		VG 250	42	
		VG 315	44	
		VG 450	46	
		48	Connectors	48
			Electrical interfaces	50
Gas valves for pneumatic and electronic gas-air control systems	54	G15/G20 E01	56	
		G20 D01	58	
		G15/G20 F01	60	
		G32 F01	62	
		G40 F01	64	
Boiler control units	66	Residential range – BCU 100	67	
		Commercial range – BCU 900	68	
Agents Worldwide	70			

Information

EC radial blowers

Gas valves

Boiler control units

Agents

About ebm-papst.

As the leading supplier of ventilation and drive technology, ebm-papst is a highly respected engineering partner in many industries. With over 20,000 different products, we provide the right solution for just about any challenge. As the logical next stage in the development of our high-efficiency GreenTech EC technology, we believe that sustainably oriented industrial digitization offers the greatest future prospects for our customers. With GreenIntelligence, ebm-papst already offers intelligently interconnected complete solutions that are unrivaled worldwide and save energy costs and emissions.

ebmpapst

the engineer's choice

Six reasons that make us the ideal partner:

Our systems expertise.

You want the best solution for every project. The entire ventilation system must thus be considered as a whole. And that's what we do – with motor technology that sets standards, sophisticated electronics and aerodynamic designs – all from a single source and perfectly matched.

Our spirit of invention.

We are also always able to develop customized solutions for you with our versatile team of over 600 engineers and technicians.

Our lead in technology.

We are not only pioneers and trailblazers in the development of highly efficient EC technology, we also recognized the opportunities of digitization at an early stage. Therefore, we can offer solutions today that combine the highest energy efficiency with the advantages of IoT and digital networking.

Closeness to our customers.

ebm-papst has 29 production locations worldwide (including facilities in Germany, China and the USA), together with 48 sales offices, each of which has a dense network of sales representatives. You will always have a local contact, someone who speaks your language and knows your market.

Our standard of quality.

Our quality management is uncompromising, at every step in every process. This is underscored by our certification according to international standards including DIN EN ISO 9001, TS declaration of conformity and DIN EN ISO 14001.

Our sustainable approach.

Assuming responsibility for the environment, for our employees and for society is an integral part of our corporate philosophy. We develop products with an eye to maximum environmental compatibility, in particular resource-preserving production methods. We promote environmental awareness among our young staff and are actively involved in sports, culture and education. That's what makes us a leading company – and an ideal partner for you.

GreenIntelligence. *Making Engineers Happy.*



Why do our customers look so happy? Because when it comes to digitalization and sustainability, we provide them with a clear competitive edge with GreenIntelligence. The intelligent control and networking of fans and drives makes applications more powerful and efficient. Together with a long product life and highly efficient EC technology, we achieve lasting reductions in energy costs and emissions.

When it comes to **heating technology**, innovative, reliable, and energy-efficient products are needed. GreenIntelligence delivers solutions with smart networking capabilities that can be used to schedule service assignments as required and reduce variance. Furthermore, we are already preparing our gas/air composite systems for gas condensing boilers for climate-neutral use with hydrogen.

With our **comprehensive range of services**, we accompany you and your projects through every step in the process, from your application's planning to its deployment. Make use of our experts' product expertise to offer your customers new and advanced features. Or use our digital tools for optimal product selection. That will make your processes more efficient and get your products to market faster.

Now you know why ebm-papst makes engineers happy.



André opts for ready-to-install system solutions when it comes to condensing technology, which saves him a lot of adjustment effort.



Gas condensing technology

That's ebm-papst



Since creating the world's first gas blower for condensing technology, we have been the market leader for efficient components and complete, perfectly matched systems. We develop blowers, venturis, valves and burner controls together with our customers and supply everything as a full package. Enjoy the benefits of our well-established and constantly updated technology combined with unique system expertise.

More than just combustion

Modern gas condensing units are known for their productivity and efficient energy utilization. They have to be supplied with exactly the right amount of gas and air in an ideal ratio for every operating status and under all ambient conditions. Only then is hygienic and efficient combustion guaranteed. Compact dimensions keep the installation space to a minimum and at the same time provide better accessibility.

ebm-papst offers the world's most extensive product range for condensing technology. From just a few kilowatts for use in private households to several megawatts for supplying entire residential areas: We will always find the right solution. Our portfolio contains efficient EC radial blowers, gas valves and perfectly matched system solutions for every application.

Advantages at a glance

- System and development expertise from the market leader
- Unrivalled power and modulation spectrum
- Well-established technology guarantees a long service life
- High power density thanks to compact design
- Outstanding efficiency levels
- Extremely smooth operation with a low noise level
- Pre-matched components for easy adaptation to the respective application
- Future-proof thanks to BUS connection option

Ideally suited *for all applications*

Residential technology 150 kW

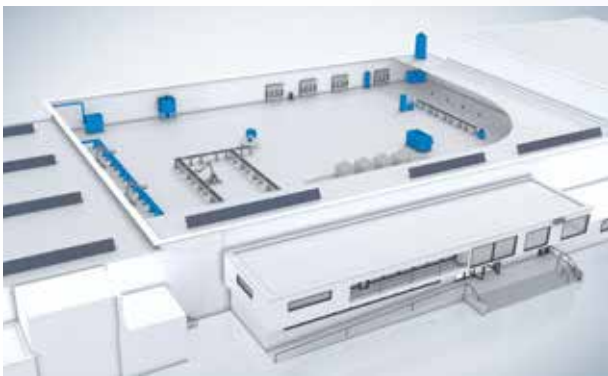


- + Gas condensing heating systems for private households
- + Use as heating unit only, as combi-boiler or in conjunction with regenerative energies

2kw

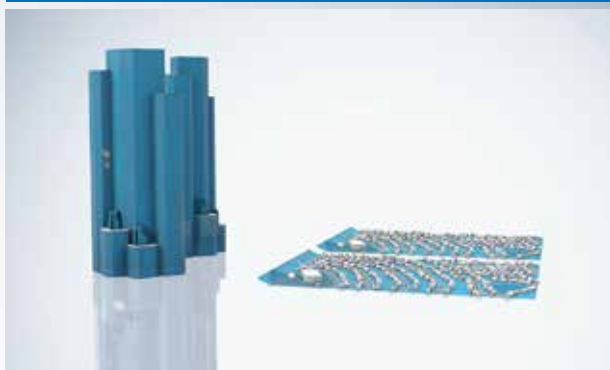


Commercial technology



- + Gas condensing heating systems for applications ranging from small trade businesses to heating installations in large industrial plants
- + From single boiler to cascade system installations

Apartment blocks / residential areas



- + The first condensing blower for heat output up to 4 MW rounds off our extensive product portfolio
- + For decentralized heating solutions keeping construction work and heat loss from long pipes to a minimum compared to large Combined Heat and Power stations



4MW

Laboratory equipment

As market and technology leaders, we are constantly endeavoring to improve our performance and provide our customers with the best possible complete solution. Our engineers and technicians assist our customers with the development of their application right from the start to help advance the process of improvement. Before series launch we conduct extensive tests to ensure compliance with legal requirements and customer specifications. We have a wide range of measuring equipment at our disposal for this purpose.

For example our checks include examining design influences such as modifications to the gas-air mixing device, the backflow flaps or the venturi. All these factors can affect the efficiency, noise level and functionality of a condensing heating system. We take measurements on combustion control systems directly in the heating unit to ensure ideal matching of the individual components and motor performances. This is accompanied by flow simulation with direct incorporation of the results obtained.



+ Gas laboratory:

- Highly advanced measuring equipment with all the standard test and limit gases used in Europe, America and Asia
- Exhaust gas measurements (CO_2 , CO, air ratio), measurements with variable aerodynamic parameters (venturi pressure, mass flow, exhaust gas back pressure) to increase and optimize the modulation range
- Measurement of thermal and electrical performance data
- Simulation of wind and turbulence in the exhaust gas area, e. g. for electronic gas-air composite systems
- Communication with all standard bus systems, e. g. CANbus, LINbus, Modbus, ebus, OpenTherm

+ Climate chambers:

- Environmental simulation and service life tests with more than 30 climatic, cold and warm chambers
- Simulation of temperature range from 70°C to 300°C possible

+ Air performance test stands:

Checking of the operating characteristics of blowers and systems with recording of the air performance curves

+ Endurance test rooms:

About 150 different endurance tests with over 700 specimens in progress

+ Sound measurement laboratory:

Precise sound power and gas measurement technology with incorporation of real conditions

+ Vibration test:

For simulation of transportation and operation with different vibration profiles



+ EMC measurement room:

Emission and immission measurements

+ Approvals:

AGA, CCC, CSA, DVGW, EAC, KIWA, TÜV, UL, VDE

+ Standards and Directives:

- Low-Voltage Directive
- Machinery Directive
- Gas Appliance Regulation
- EMC Directive

+ Additional equipment:

- 3D microscope
- 3D plotter

+ Gas valve test stands:

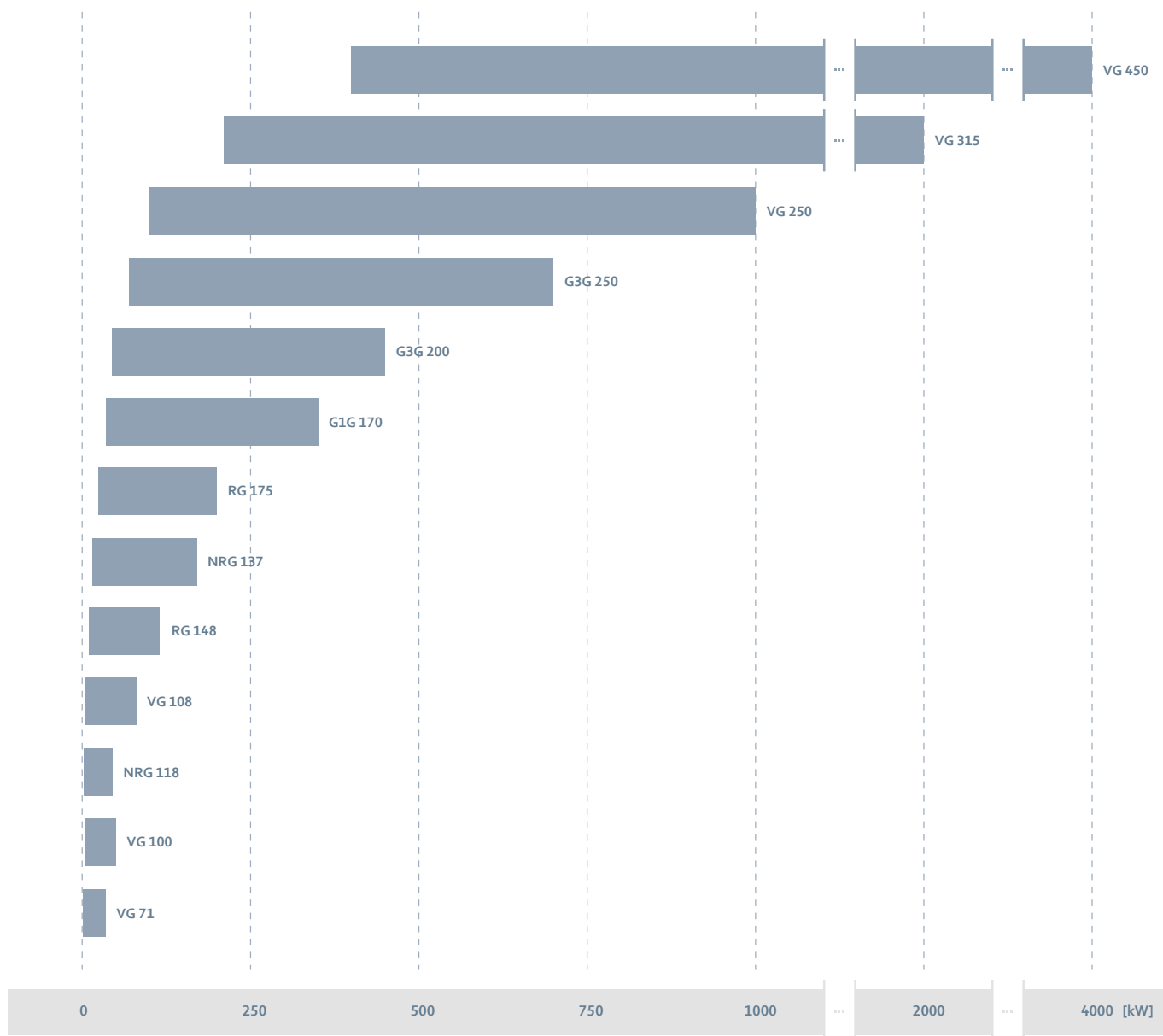
For gas valves with pneumatic and electronic modulation

EC radial blowers

Modern gas-fired modulated condensing units have to be supplied with the optimum volume and mixture of air and fuel in all operating modes and ambient conditions. They require adjustable blowers with steep pressure/air flow characteristic curves and high maximum pressures. ebm-papst played a significant role in developing EC blowers for this purpose and now offers the widest range of

solutions for this application area. The technical data in this catalogue relate to intended use in gas condensing boilers with interior installation. The special features of these blowers also make them suitable for many other applications upon consultation. Examples include gas-powered cooking appliances for the food service industry or gas-powered deep fryers for commercial use.

Heat load in kW



Heat output range depending on type of gas concerned and system conditions.

+ Commutation electronics:

- Integrated into the blower unit and perfectly harmonized with the motor
- Integrated blockage switch-off and overheating protection as per EN 60335
- Various standard interfaces available for the respective burner control
- Optimized in accordance with EMC emissions and pollution

+ Speed controls:

- Adjustment required in individual cases
- Controlled via PWM signal
- 0–10 V input optional
- Bus communication optional

+ Bearings:

- Maintenance-free ball bearings covered on both sides for long service life and smooth operation
- Use of lubricants suited for the particular application

+ Mounting positions:

- With horizontal shaft or vertical shaft with motor positioned at top
- For vibration-cushioned motor installation, the motor's weight is additionally supported by a flexible element.



+ Drive:

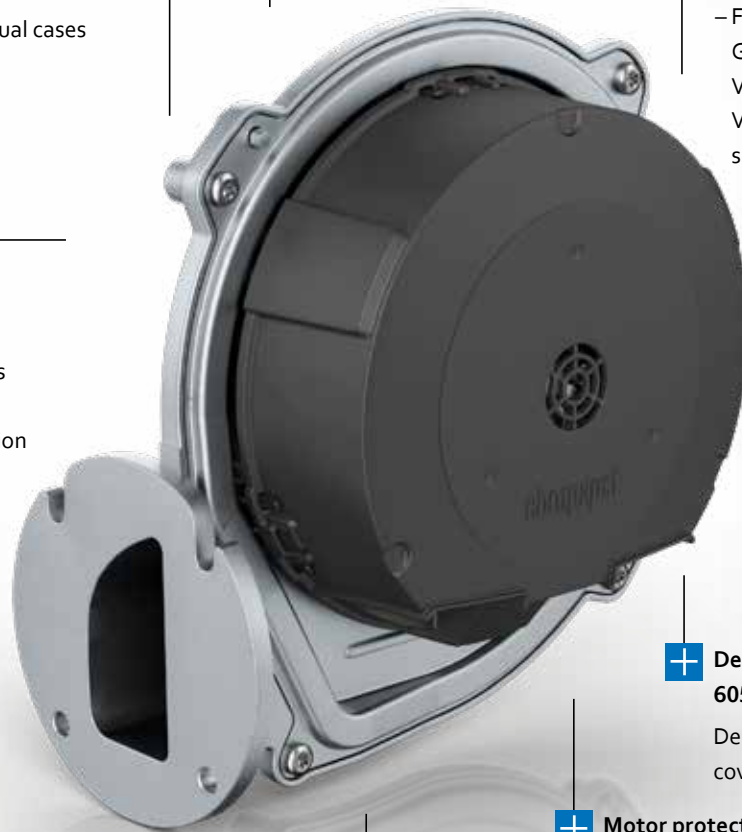
- Brushless DC (EC) motors with integrated electronics
- Vibration-free mounting to minimize structure-borne sound
- Adjustment of motor power on an individual basis

+ Housing:

- Made of die-cast aluminum
- (respectively cast aluminum/sheet steel)
- Required density thanks to special seal for housing halves and drive shaft conduit
- Outlet flange adjustable to many designs

+ Impellers:

- For type VG 71, 100 and 108, NRG and RG blowers of pentane-resistant plastic: dynamically fine balanced
- For the G1G 170, G3G 200, G3G 250, VG 250, VG 315 and VG 450 models made of sheet aluminum



+ Protection class:

Protection class I

+ Degree of protection DIN EN 60529:2014:

Degree of protection IP00, with cover hood, as a built-in component

+ Motor protection cap:

The adjustable rotation of the motor protection cap enables easy accessibility to the plugs and protection against dripping water in the application.

+ Speed output:

- With Hall IC signal output; in case of motors for line voltage operation, speed signal output is galvanically isolated

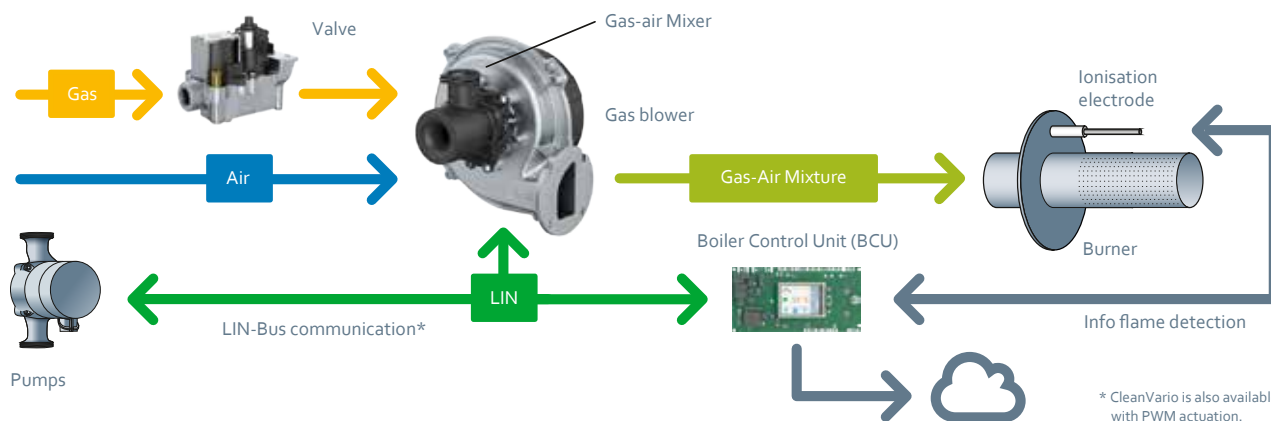
Systems for condensing boiler technology

An optimum gas-air mixing ratio is crucial to the energy yield realized during combustion. The mixing ratio needs to be exactly adjusted to the heating value of the gases being used (e.g. natural gas, LPG or biogas). An additional challenge is the flexibility of heat output. The greater the modulation range of a heating system, the better its heating output can be adjusted to actual needs. The limits of the

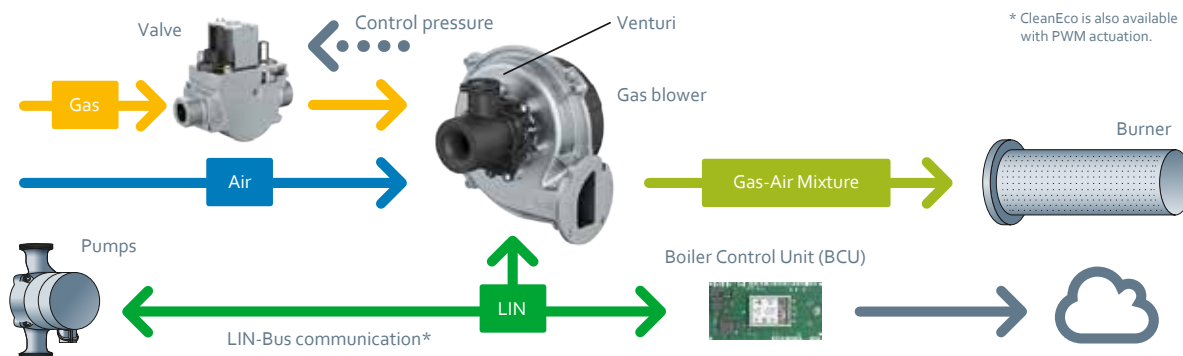
modulation level are determined among others by the minimum and maximum output of the premixing blower. This means its components need to be perfectly matched. That's why we offer complete heating systems including gas blowers, venturis, gas valves and boiler control units from a single source.

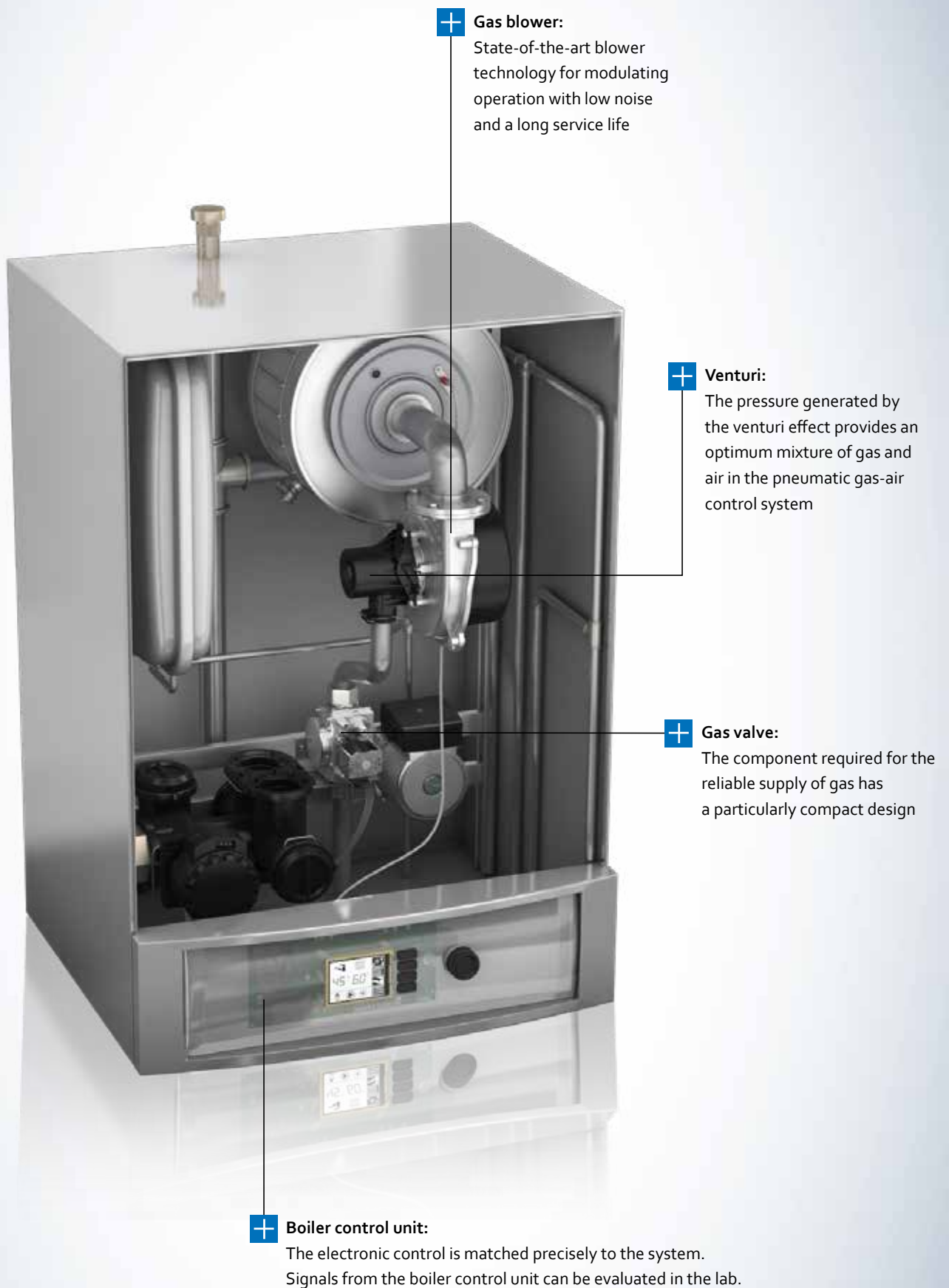
Ideally suited for use in electronic or pneumatic gas-air control systems

CleanVario – electronic gas-air control system



CleanEco – pneumatic gas-air control system





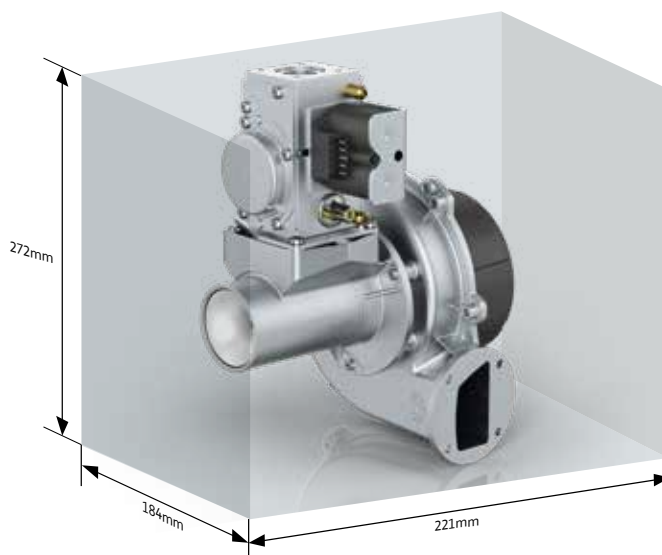
Our system solutions at a glance

All heating technology components must be perfectly harmonized in order to achieve optimum performance and efficiency. This is why we offer complete heating systems, including gas blower, venturi, gas valve and boiler control unit from a single source.

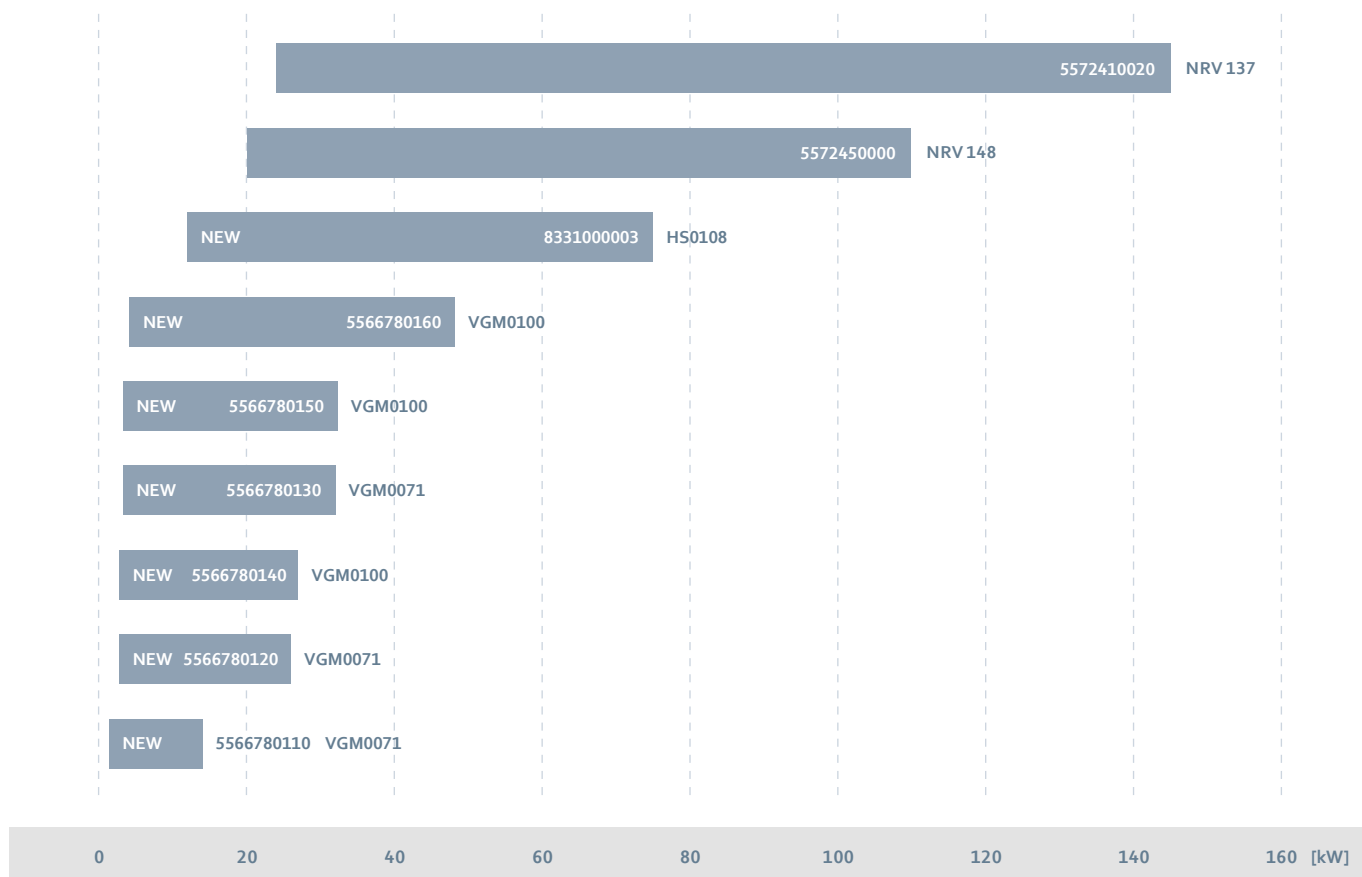
A key benefit of our combustion control systems is their optimal mixing ratio with simultaneously high modulation ranges. To achieve this high level of efficiency, we provide different venturis i.e. high-efficiency venturi or multiventuri, depending on the heat output range.

Our venturi solutions provide you with a wide variety of motor performances and options for assigning our systems to your devices. This gives you the benefit of flexible integration into compact spaces.

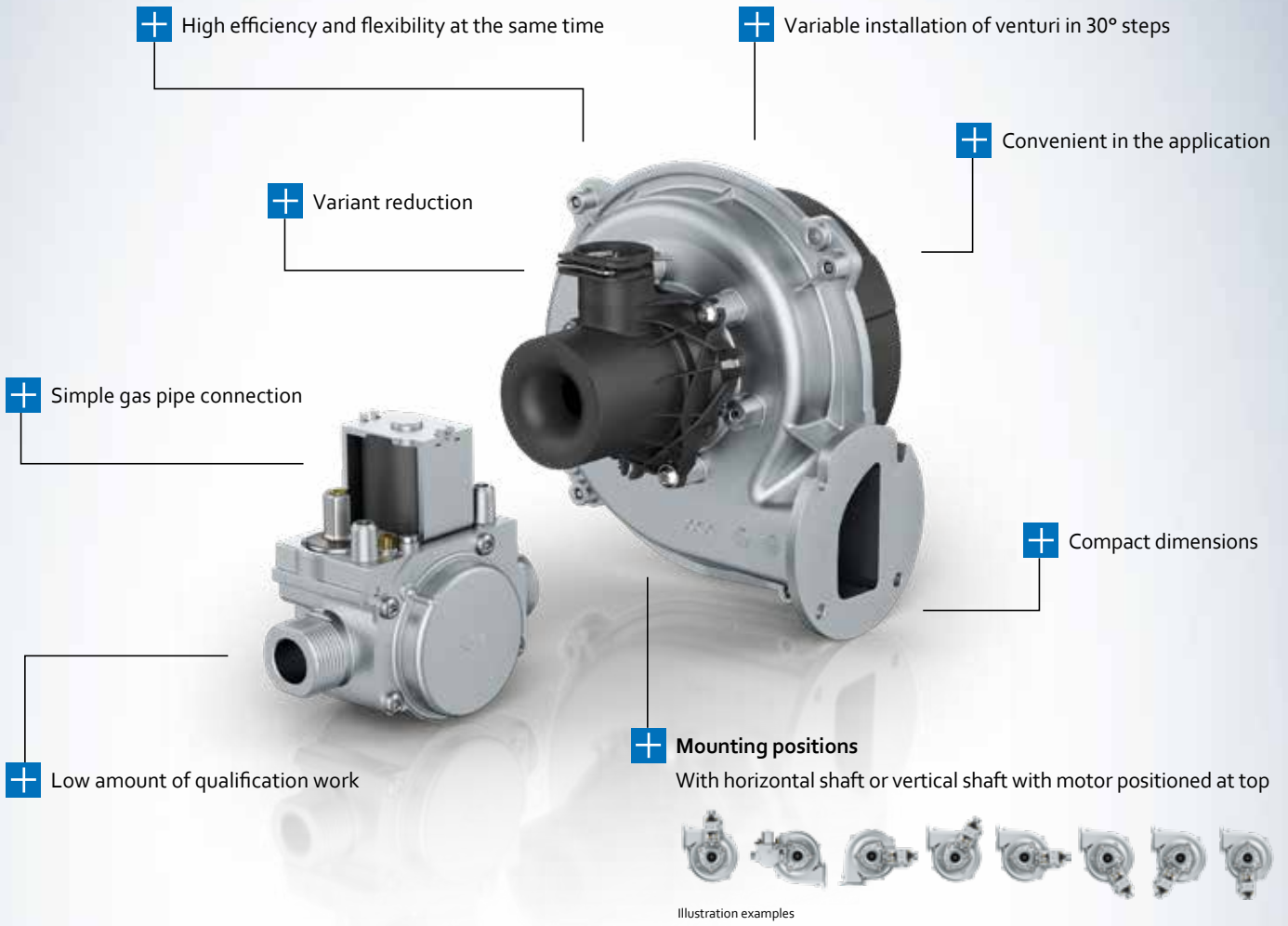
We supply our systems as completely tested, harmonized units with optimized interfaces to minimize your effort.



Heat load in kW



Heat output range depending on type of gas concerned and system conditions. Additional system solutions on request (see page 17).



System solutions

Heat output range [kW]	System solution	Gas blower	Venturi	Gas valve	Boiler control unit	Part number
1.4 – 14	VGM0071	RadiMix VG 71	High-efficiency venturi	E01	CleanEco	5566780110
3 – 23	NRV 118	NRG 118	Multiventuri	E01	CleanEco	5573432010
2.8 – 26	VGM0071	RadiMix VG 71	High-efficiency venturi	E01	CleanEco	5566780120
2.8 – 27	VGM0100	RadiMix VG 100	High-efficiency venturi	E01	CleanEco	5566780140
5 – 28	NRV 118	NRG 118	Multiventuri	E01	CleanEco	5573432020
3.3 – 32	VGM0071	RadiMix VG 71	High-efficiency venturi	E01	CleanEco	5566780130
3.3 – 32	VGM0100	RadiMix VG 100	High-efficiency venturi	E01	CleanEco	5566780150
7 – 42	NRV 118	NRG 118	Multiventuri	E01	CleanEco	5573432030
4.2 – 48	VGM0100	RadiMix VG 100	High-efficiency venturi	E01	CleanEco	5566780160
12 – 75	HS0108	RadiMix VG 108	Multiventuri	D01	CleanEco	8331000003
20 – 110	NRV 148	RG 148	Multiventuri	D01	CleanEco	5572450000
24 – 145	NRV 137	NRG 137	Multiventuri	D01	CleanEco	5572410020

Air performance, recommended operating range & heating power modulation

EC radial blower

Air performance curve:

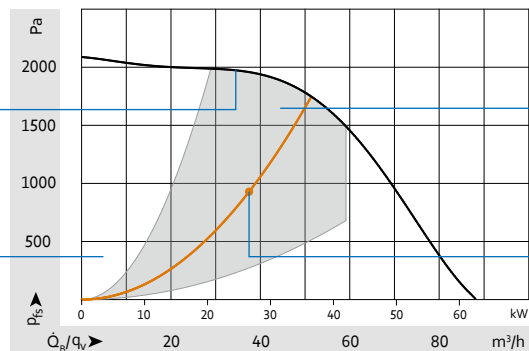
Air performance curves are determined in accordance with DIN ISO 5801, installation type A or C, on a chamber testing platform with outlet side connection.

They indicate the pressure increase p_{fs} as a function of the air flow q_v and apply to an air density of $\rho = 1.14 \text{ kg/m}^3 \pm 3.5\%$.

Recommended operating range:

Our gas blowers are developed for operation in the recommended operating range, which is highlighted in gray in the characteristic curve below.

In this range, you will benefit from the blower's maximum overall efficiency and optimized acoustics. The service life is tested in this range. The recommended operating range makes it easier to select the right blower for your application.



Outside the highlighted range in gray, the electronics, motor and parts of the blower that carry air only convert a reduced portion of the electrical input power into usable air performance. The motor and electronics have been optimally designed to comply with strict energy guidelines (ErP2015). Therefore, it is important to operate the blower in the recommended operating range in order to achieve maximum efficiency and minimal noise emissions.

Definitions:

q_v : Air flow rate [m^3/h]

\dot{Q}_B : Heat output in [kW]

P_w : Electrical power consumption in [W]

p_{fs} : Pressure increase in [Pa]

The operating point of the blower moves along the system characteristic curve at a variable speed. The mostly quadratic characteristic curve arises from the pressure loss in the system (venturi mixer, intake and exhaust pipe, heat exchanger, burner) at a given air flow rate.

Efficiency and losses of the blower:

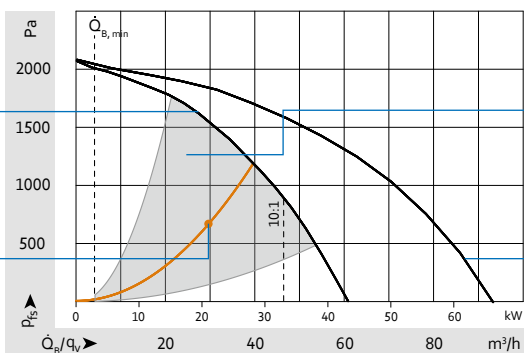
System characteristic curve:

System solution (blower & venturi)



Air performance curve: (of the system, consisting of venturi and blower)

The air performance curve indicates the pressure increase p_{fs} of the system (venturi and blower). It is measured in accordance to DIN ISO 5801, installation category A. It indicates the pressure increase p_{fs} as a function of the air flow q_v and applies to an air density of $\rho = 1.14 \text{ kg/m}^3 \pm 3.5\%$.



Recommended operating range: (of the system, consisting of venturi and blower)

Our systems, which consists of the high-efficiency venturi and a blower, are optimized to perform in a certain operating range. In this range (highlighted in grey), you will benefit from the system's maximum overall efficiency and a wide modulation range, depending on your additional application pressure losses (intake, burner, heat exchanger, exhaust-pipe).



Operating curve of the application: (\dot{Q}_{min} and modulation)

The operating point of the system (venturi-mixer and blower) moves along the, typically quadratic, system characteristic's curve. Assuming a known gas type e.g. G20, the minimum heat load $\dot{Q}_{B,min}$ for a system is only determined by the venturi-mixer nozzle diameter. Given a minimum venturi pressure of 40Pa for a typical mechanical-pneumatic gas valve, $\dot{Q}_{B,min}$ is stated on page 21.

The maximum heat load is a function of the blower's maximum aerodynamic power and the remaining pressure losses in the application. In this example the remaining system pressure losses are 955Pa at 33kW heat load. Our gas blowers and venturi assembly options offer a high modulation range of the heat load with high efficiency.



Air performance curve: (blower)

The air performance curve of the blower indicates a higher p_{fs} as the pressure losses in the venturi show a nearly quadratic behavior with volume flow q_v . The blower itself is still working in an optimal manner when the venturi is installed and the system is operated as recommended.

High-efficiency venturi

Gas-air mixing device



Heat output range¹

- Up to 53kW

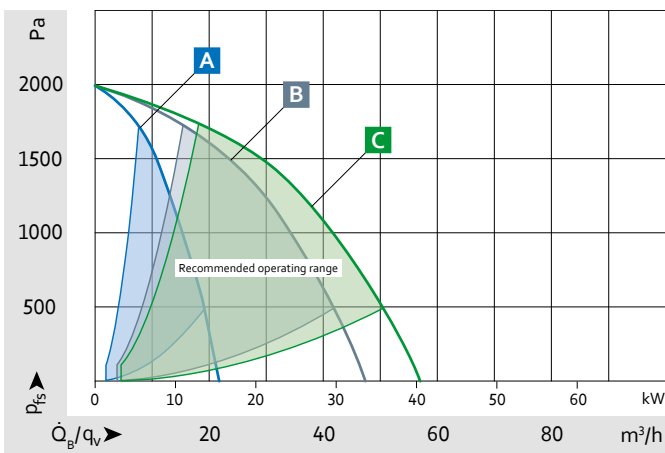
Material/surface

- Plastic

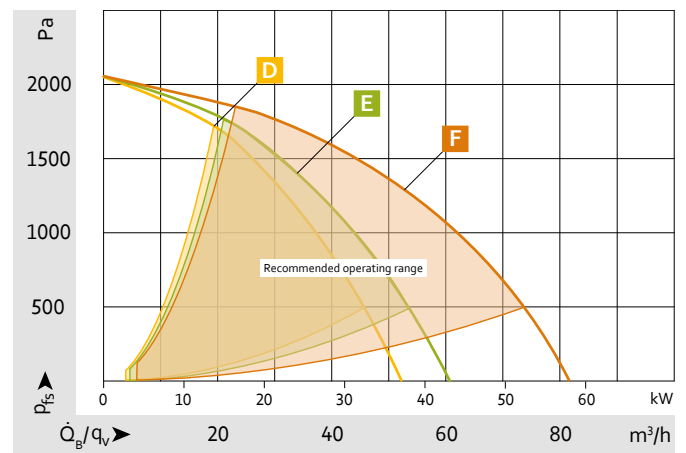
Mechanical data

- Material approval: UL and VDE
- Can be combined with RadiMix VG 71 and RadiMix VG 100
- Depending on the tuning and application pressure losses, modulations up to 1:10 are possible

on page 21	Possible mounting positions
from page 18	Air performance and recommended operating ranges
from page 48	Mains connector X, interface connector W
from page 50	Electrical interfaces
More at	www.ebmpapst.com



RadiMix VG 71 with high-efficiency venturi



RadiMix VG 100 with high-efficiency venturi

Measuring requirements

Air performance measured in accordance with ISO 5801, installation category A.
The specifications only apply under the specified measurement conditions
($\rho=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.
Heat output \dot{Q}_s for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

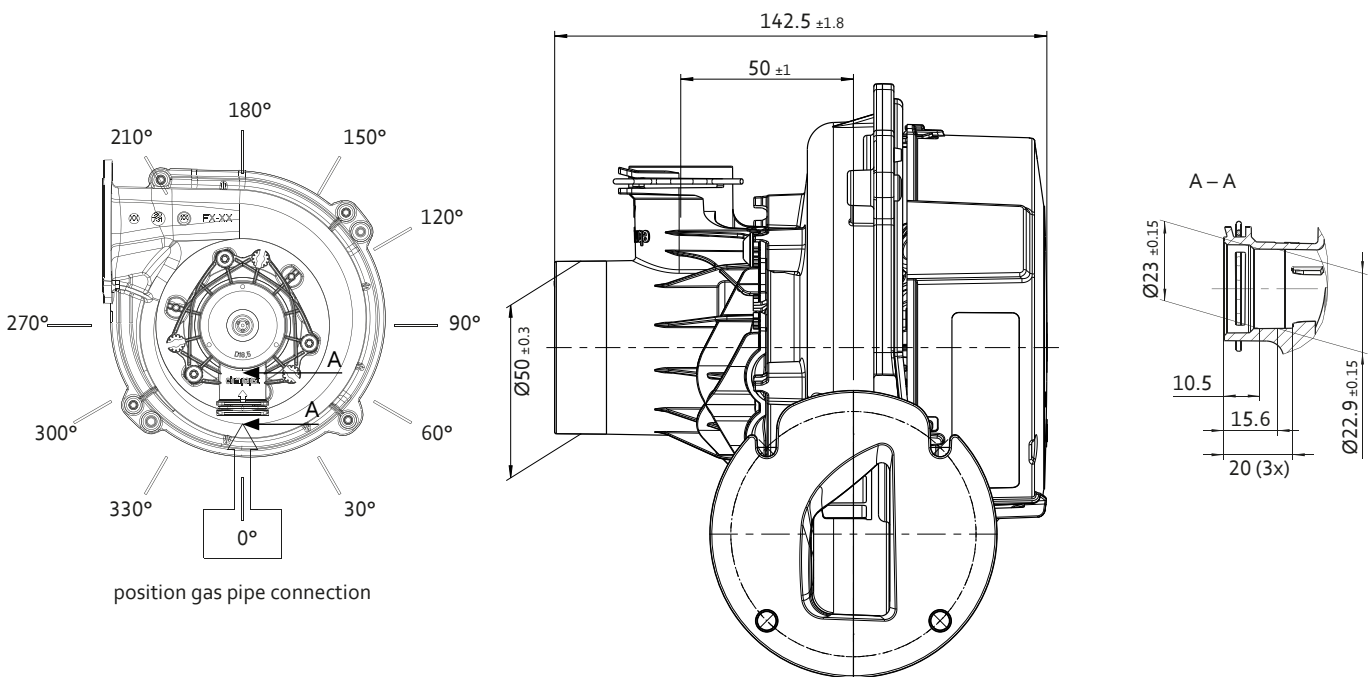
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Venturi nozzle diameter	Minimum heat load $\dot{Q}_{B,min}$	Heat load at x Pa application pressure loss	Pressure loss application	Weight
			mm	kW	kW	Pa	kg
Nominal voltage 220/240VAC, 50/60Hz							
<i>RadiMix VG 71 with high-efficiency venturi</i>							
A	VGM0071MSGBS	5566780110	10	1.4	14	500	1.0
B	VGM0071MSGBS	5566780120	14	2.8	28	750	1.0
C	VGM0071MSGBS	5566780130	15.5	3.3	33	825	1.0
<i>RadiMix VG 100 with high-efficiency venturi</i>							
D	VGM0100MSGBS	5566780140	14	2.8	28	945	1.0
E	VGM0100MSGBS	5566780150	15.5	3.3	33	955	1.0
F	VGM0100MSGBS	5566780160	18.5	4.2	42	1170	1.0

Subject to change. Type specifications as system solution consisting of fan and mounted venturi with gas pipe connection position 0°. Other versions on request. Only available in combination with an ebm-papst gas valve. Heat output range depending on type of gas concerned and system conditions.

F Technical drawing

Dimensions in mm



EC radial blower

RadiMix VG 71



Heat output range¹

- Up to 41kW

Material/surface

- Housing: Die-cast aluminum/sheet steel
- Impeller: Plastic
- Motor protection cap: Plastic

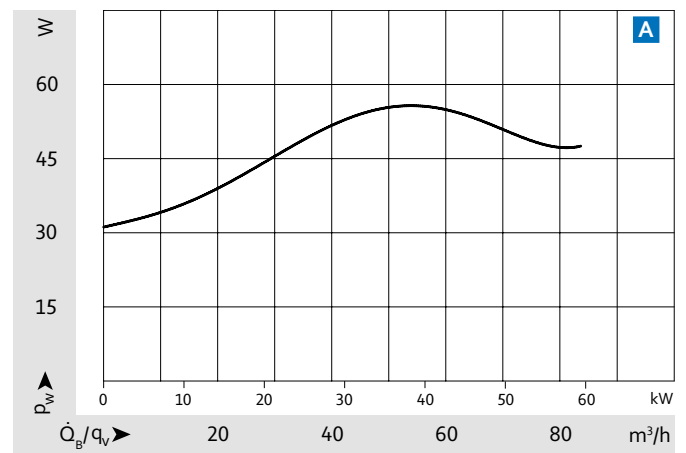
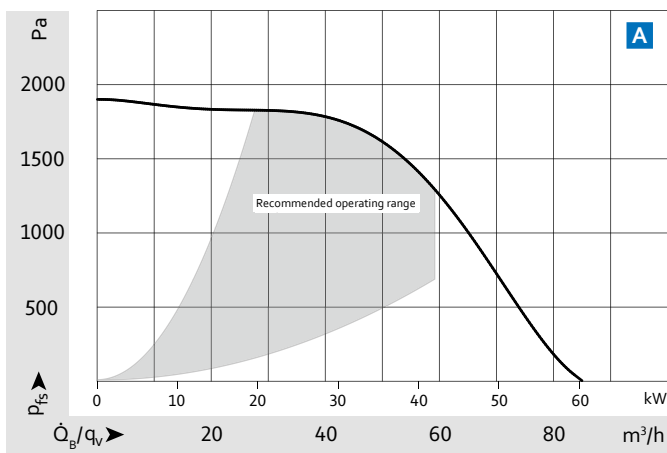
Mechanical data

- Degree of protection: IP00, with cover hood, as a built-in component
- Installation position: With horizontal shaft or for vertical shaft with motor position above
- Bearing: Ball bearings
- High-efficiency venturi available on request

Electrical data

- Designed for protection class I

on page 17	Possible mounting positions and system solutions
from page 18	Air performance and recommended operating ranges
from page 48	Mains connector X, interface connector W
from page 50	Electrical interfaces
More at	www.ebmpapst.com



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.
The specifications only apply under the specified measurement conditions
($\rho=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.
Heat output \dot{Q}_s for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

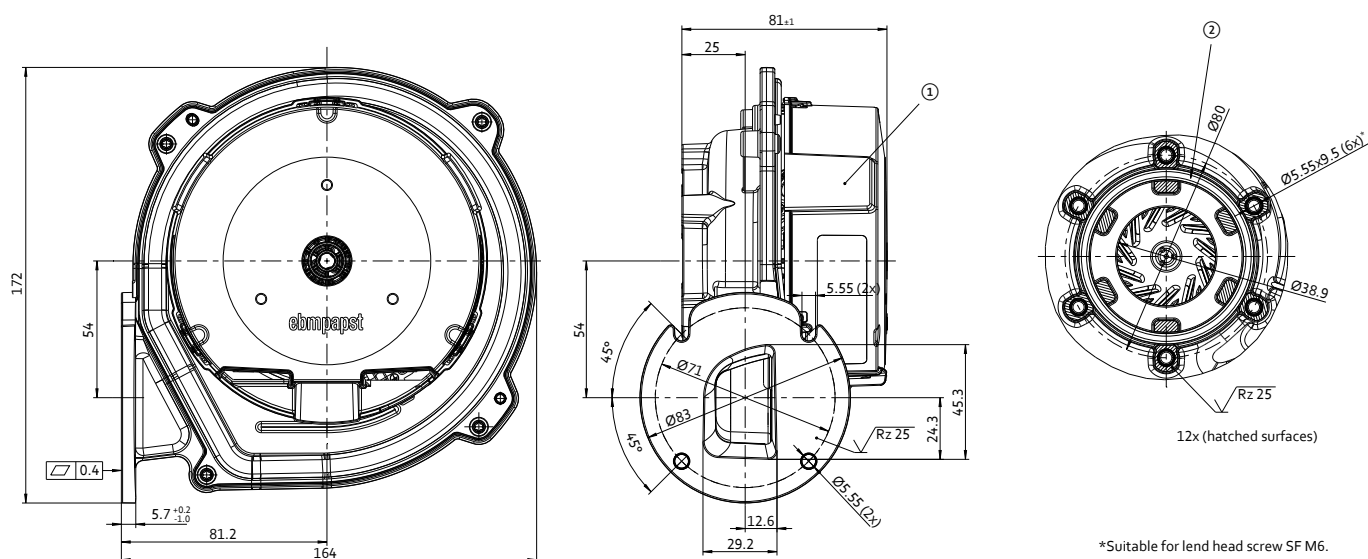
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P_{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 220/240VAC, 50/60Hz							
A	VGR0071MSGBS	8331000001	14000	65	0 up to 60	-15 up to 60	0.9

Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request.

A Technical drawing

Dimensions in mm



- ① no handling on the motor cap permitted
- ② groove suitable for round sealing ring 63x3

EC radial blower

RadiMix VG 100



Heat output range¹

- Up to 57kW

Material/surface

- Housing: Die-cast aluminum/sheet steel
- Impeller: Plastic
- Motor protection cap: Plastic

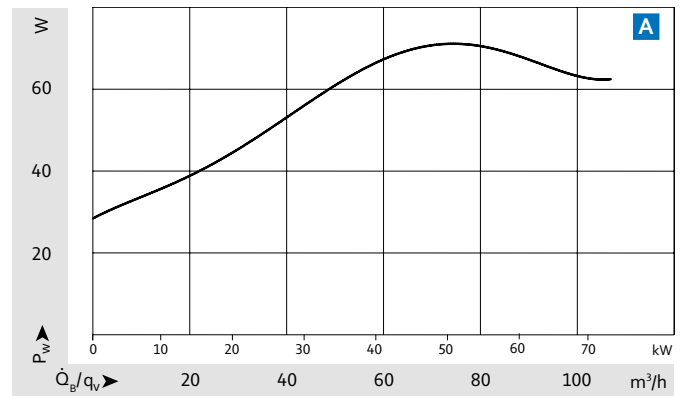
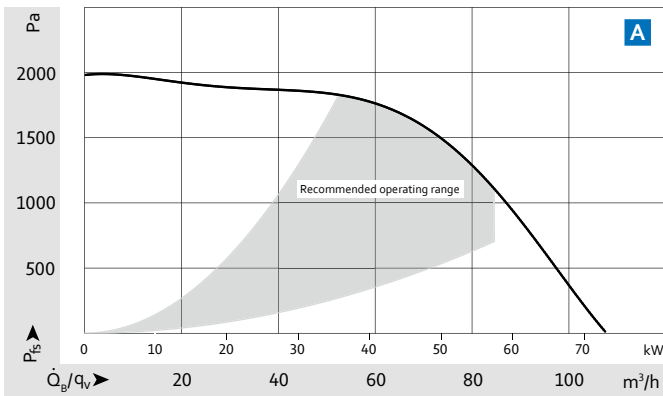
Mechanical data

- Degree of protection: IP00, with cover hood, as a built-in component
- Installation position: With horizontal shaft or for vertical shaft with motor position above
- Bearing: Ball bearings
- High-efficiency venturi available on request

Electrical data

- Designed for protection class I

on page 17	Possible mounting positions and system solutions
from page 18	Air performance and recommended operating ranges
from page 48	Mains connector X, interface connector W
from page 50	Electrical interfaces
More at	www.ebmpapst.com



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.

The specifications only apply under the specified measurement conditions ($\rho=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.

Heat output \dot{Q}_g for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

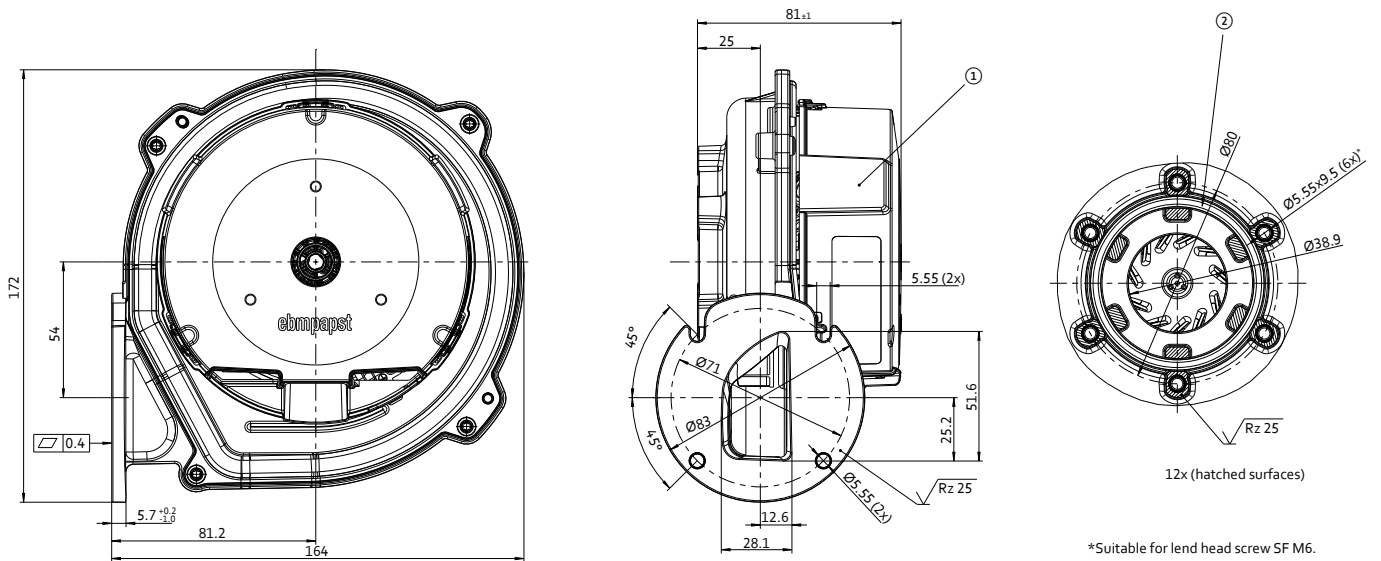
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P_{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 220/240VAC, 50/60Hz							
A	VGR0100MSGBS	8331000002	10000	90	0 up to 60	-15 up to 60	0.9

Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request.

A Technical drawing

Dimensions in mm



- ① no handling on the motor cap permitted
- ② groove suitable for round sealing ring 63x3

EC radial blower

RadiMix VG 108



Heat output range¹

- Up to 93kW

Material/surface

- Housing: Die-cast aluminum/sheet steel
- Impeller: Plastic
- Motor protection cap: Plastic

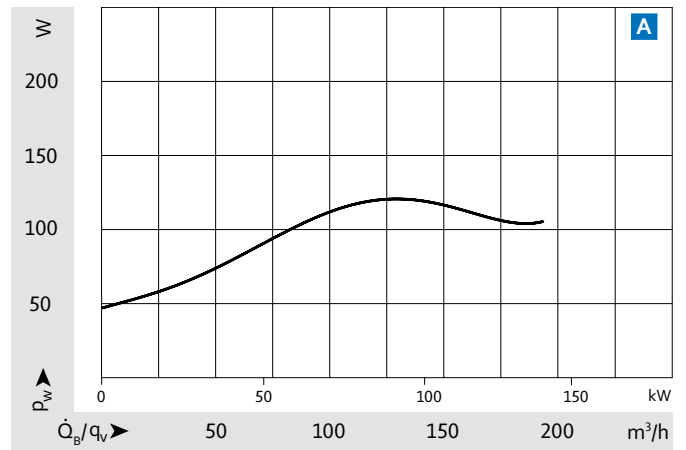
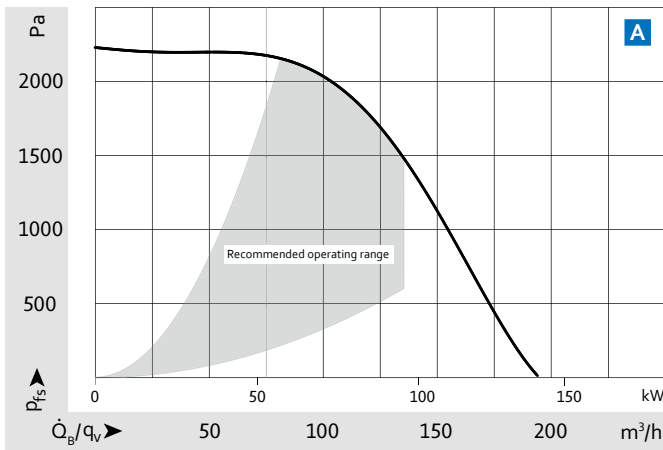
Mechanical data

- Degree of protection: IP00, with cover hood, as a built-in component
- Installation position: With horizontal shaft or for vertical shaft with motor position above
- Bearing: Ball bearings
- High-efficiency venturi available on request

Electrical data

- Designed for protection class I

on page 17	Possible mounting positions and system solutions
from page 18	Air performance and recommended operating ranges
from page 48	Mains connector X, interface connector W
from page 50	Electrical interfaces
More at	www.ebmpapst.com



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.
The specifications only apply under the specified measurement conditions
($\rho=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.
Heat output \dot{Q}_s for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

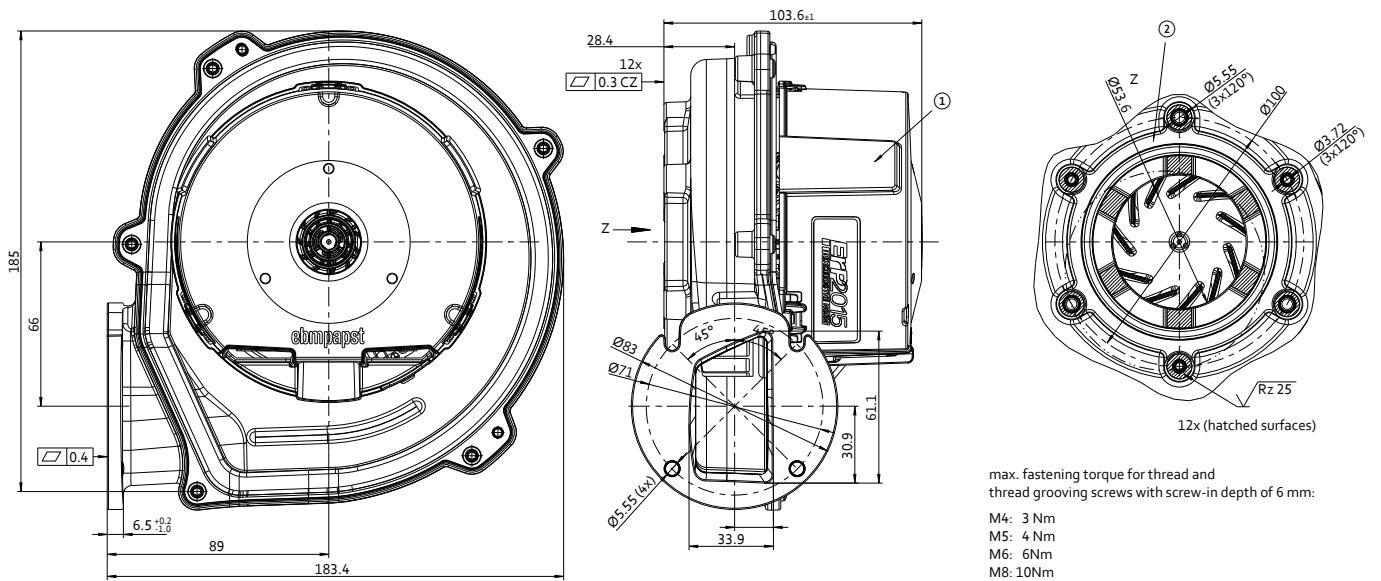
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P_{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 220/240VAC, 50/60Hz							
A	VGR0108MSGDS	5566780260	10000	135	0 up to 60	-15 up to 60	1.2

Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request.

A Technical drawing

Dimensions in mm



- ① no handling on the motor cap permitted
- ② groove suitable for round sealing ring 70x3

EC radial blower

NRG 118



Heat output range¹

- Up to 42kW

Material/surface

- Housing: Aluminum
- Impeller: Plastic
- Motor protection cap: Plastic

Mechanical data

- Degree of protection: IP00, with cover hood, as a built-in component
- Installation position: With horizontal shaft or for vertical shaft with motor position above
- Bearing: Ball bearings
- Multi-venturi available

Electrical data

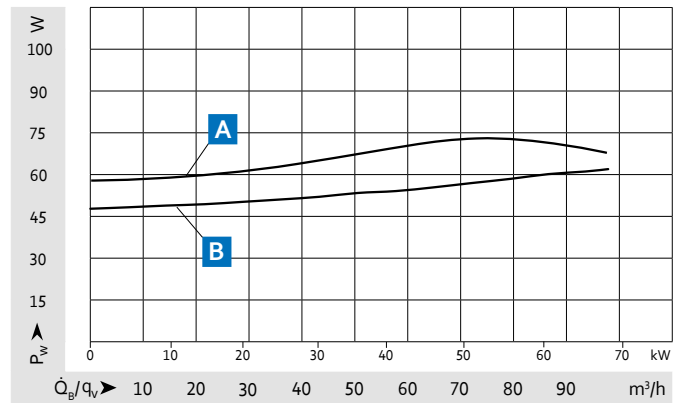
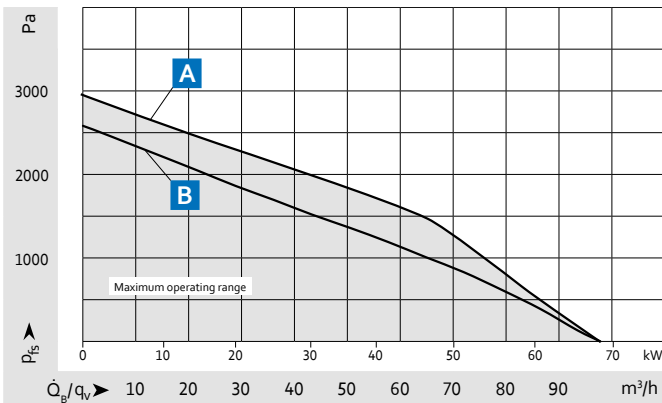
- Designed for protection class I

on page 17 Possible mounting positions and system solutions

from page 48 Mains connector X, interface connector W

from page 50 Electrical interfaces

More at www.ebmpapst.com



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.

The specifications only apply under the specified measurement conditions ($p=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.

Heat output \dot{Q}_g for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

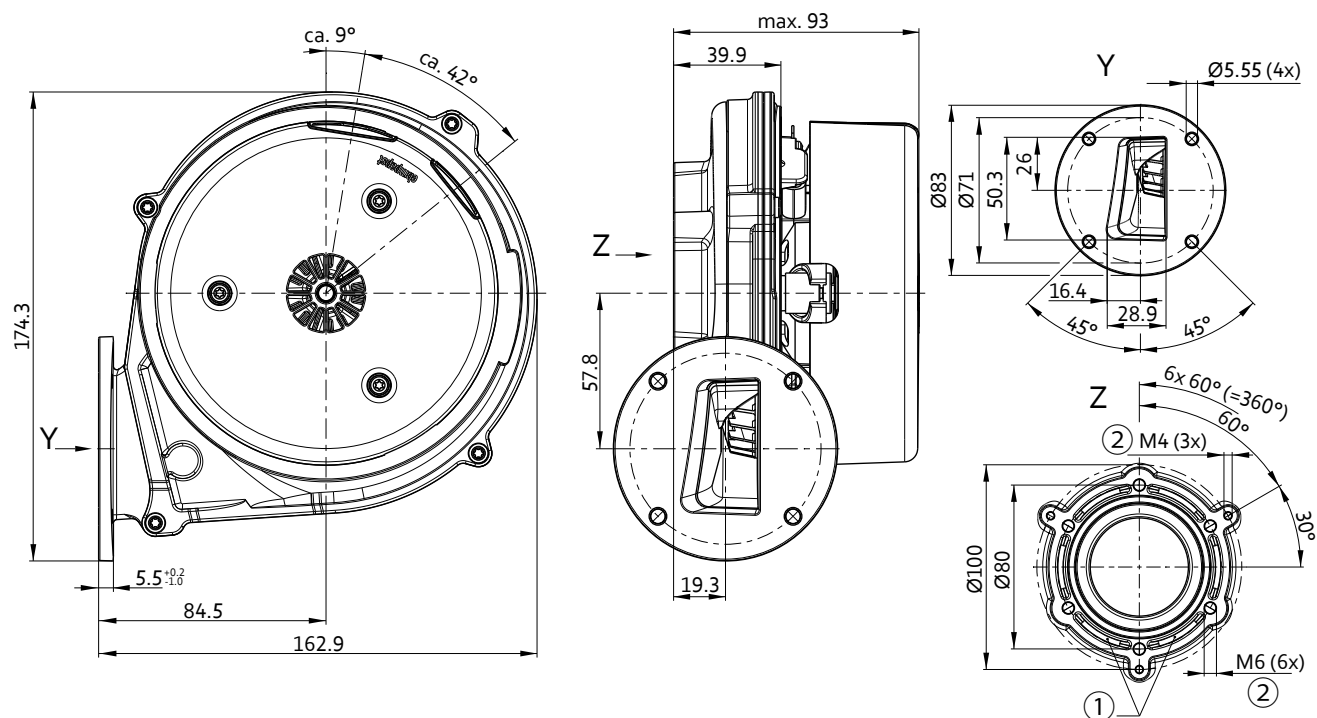
approx. data, heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P_{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 230VAC, 50Hz							
A	VGR0118NSHCS	5566731160	10000	70	0 up to 60	-15 up to 60	1.0
Nominal voltage 115VAC, 60Hz							
B	VGR0118NSHCS	5566730030	10000	61	0 up to 60	-15 up to 60	1.0

Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request. Available with the option of a more powerful motor.

A Technical drawing

Dimensions in mm



- ① Groove suitable for round sealing ring 63 x 3
- ② 6.5 deep

EC radial blower

RG 148



Heat output range¹

- Up to 110kW

Material/surface

- Housing: Aluminum
- Impeller: Plastic
- Motor protection cap: Plastic

Mechanical data

- Degree of protection: IP00, with cover hood, as a built-in component
- Installation position: With horizontal shaft or for vertical shaft with motor position above
- Bearing: Ball bearings
- Multi-venturi available

Electrical data

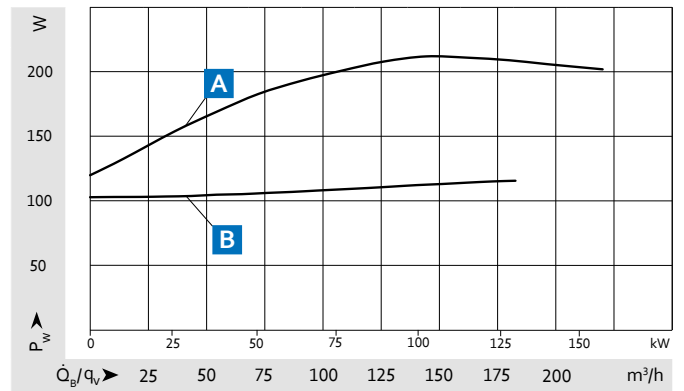
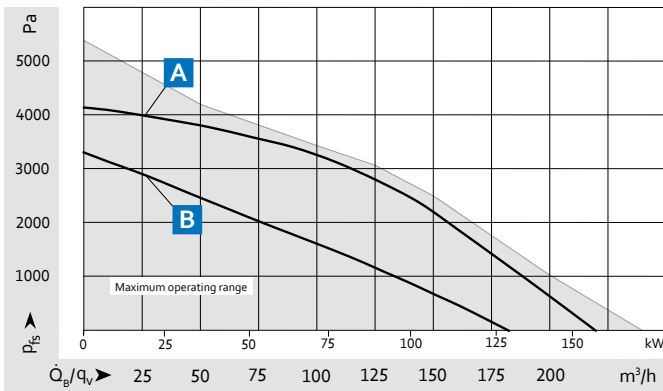
- Designed for protection class I

on page 17 Possible mounting positions and system solutions

from page 48 Mains connector X, interface connector W

from page 50 Electrical interfaces

More at www.ebmpapst.com



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.

The specifications only apply under the specified measurement conditions ($p=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.

Heat output \dot{Q}_g for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

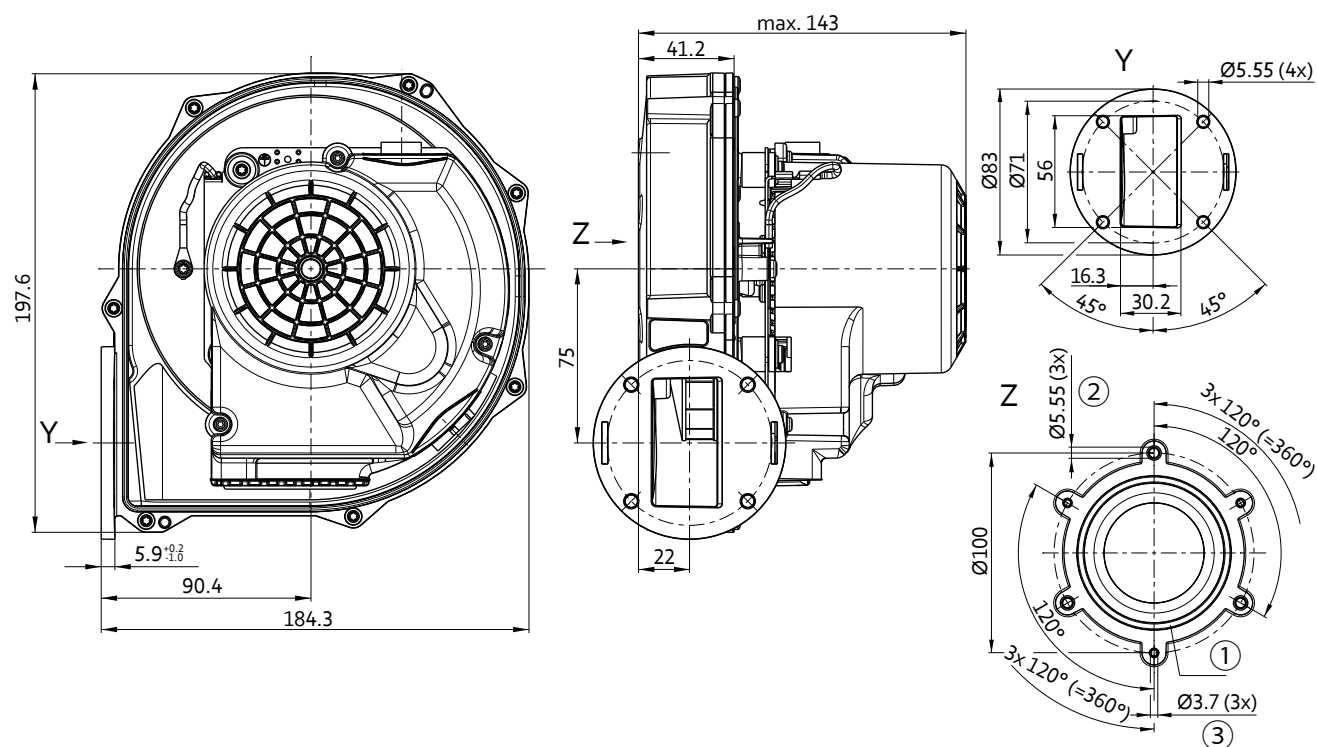
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P _{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 230VAC, 50/60Hz							
A	VGR0148XSHGS	5566725230	9000	200	0 up to 60	-15 up to 60	2.1
Nominal voltage 120VAC, 60Hz							
B	VGR0148XSHGS	on request	8200	130	0 up to 60	-15 up to 60	2.0

Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request. Available with the option of a more powerful motor.

A Technical drawing

Dimensions in mm



- ① Groove suitable for round sealing ring 70 x 3
- ② 10.5 deep
- ③ 9.5 deep

EC radial blower

NRG 137



Heat output range¹

- Up to 150kW

Material/surface

- Housing: Aluminum
- Impeller: Plastic
- Motor protection cap: Plastic

Mechanical data

- Degree of protection: IP00, with cover hood, as a built-in component
- Installation position: With horizontal shaft or for vertical shaft with motor position above
- Bearing: Ball bearings
- Multi-venturi available

Electrical data

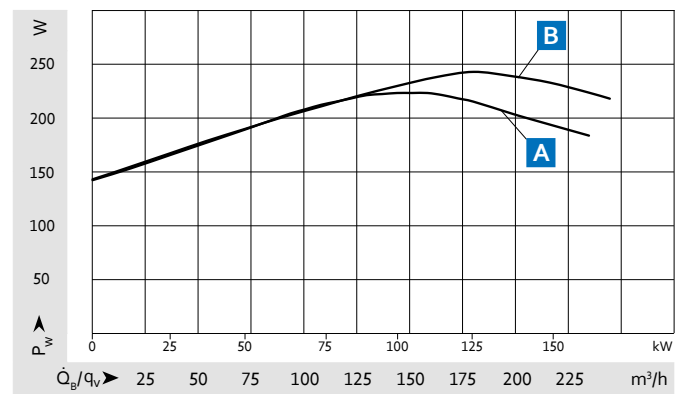
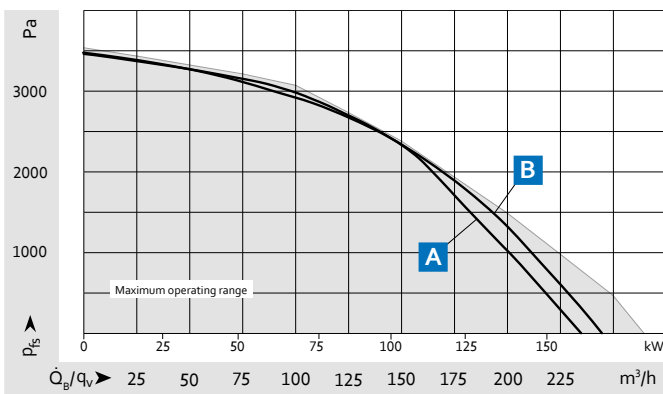
- Designed for protection class I

on page 17 Possible mounting positions and system solutions

from page 48 Mains connector X, interface connector W

from page 50 Electrical interfaces

More at www.ebmpapst.com



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.

The specifications only apply under the specified measurement conditions ($\rho=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.

Heat output \dot{Q}_g for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

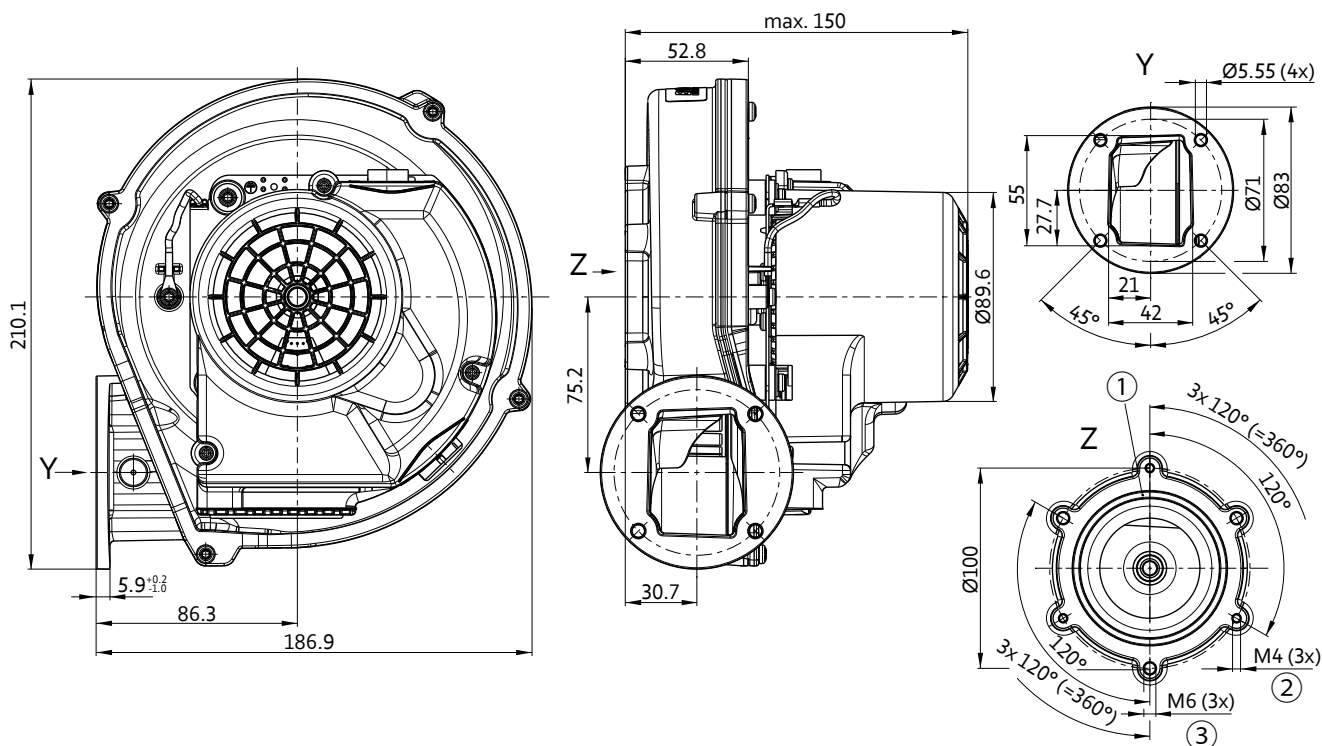
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P_{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 230VAC, 50/60Hz							
A	VGR0137NSHGS	5566733110	8500	220	0 up to 60	-15 up to 60	1.9
Nominal voltage 120VAC, 60Hz							
B	VGR0137NSHGS	5566733040	8500	250	0 up to 60	-15 up to 60	2.4

Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request. Available with the option of a more powerful motor.

A Technical drawing

Dimensions in mm



- ① Groove suitable for round sealing ring 70 x 3
- ② 6.5 deep
- ③ 7.5 deep

EC radial blower

RG 175



Heat output range¹

- Up to 200kW

Material/surface

- Housing: Aluminum
- Impeller: Plastic
- Motor protection cap: Plastic

Mechanical data

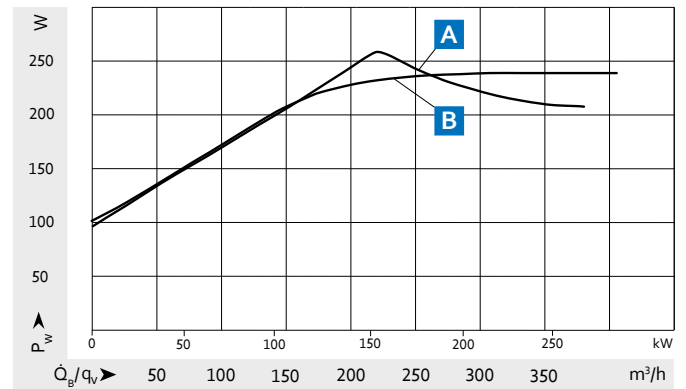
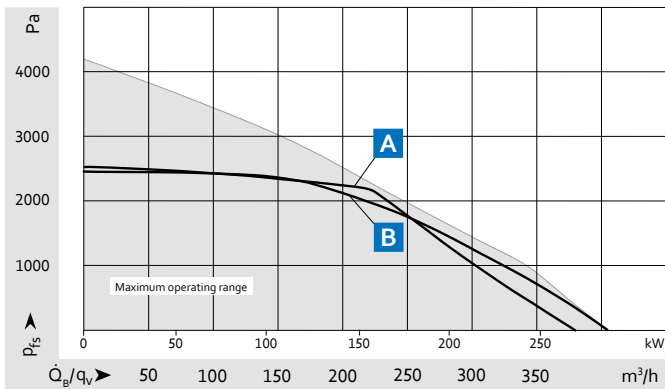
- Degree of protection: IP00, with cover hood, as a built-in component
- Installation position: With horizontal shaft or for vertical shaft with motor position above
- Bearing: Ball bearings

Electrical data

- Designed for protection class I

on page 17	Possible mounting positions
from page 48	Mains connector X, interface connector W
from page 50	Electrical interfaces
More at	www.ebmpapst.com

EC radial blowers



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.

The specifications only apply under the specified measurement conditions ($\rho=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.

Heat output \dot{Q}_g for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

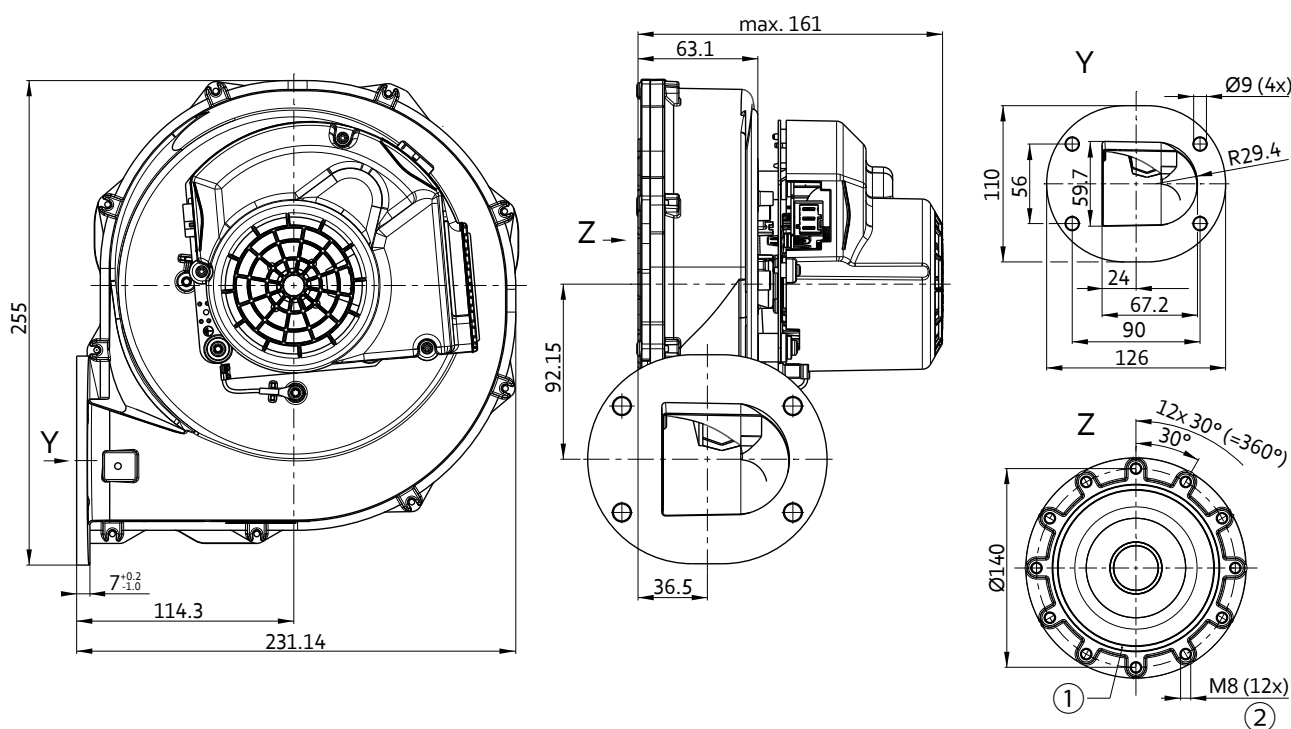
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P_{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 230VAC, 50/60Hz							
A	VGR0175XSHGS	5566714090	6250	270	0 up to 60	-15 up to 60	2.9
Nominal voltage 120VAC, 60Hz							
B	VGR0175XSHGS	5566714002	6250	240	0 up to 60	-15 up to 60	2.8

Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request. Available with the option of a more powerful motor.

A Technical drawing

Dimensions in mm



- ① Groove suitable for round sealing ring 110 x 3.4
- ② 8.5 deep

EC radial blower

G1G 170



Heat output range¹

- Up to 300kW

Material/surface

- Housing: Aluminum
- Impeller: Sheet aluminum
- Motor protection cap: Plastic

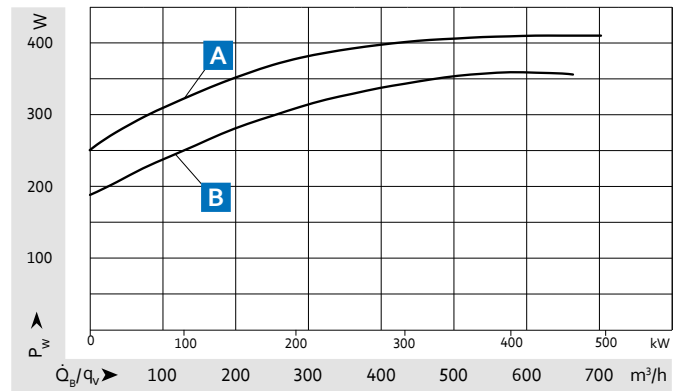
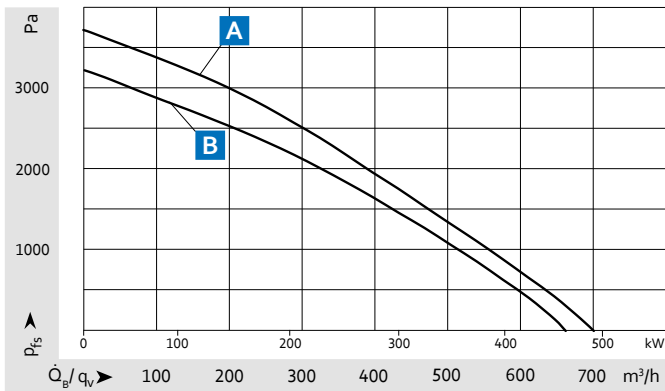
Mechanical data

- Degree of protection: IP20 with cover hood
- Installation position: With horizontal shaft or for vertical shaft with motor position above
- Bearing: Ball bearings

Electrical data

- Designed for protection class I

on page 17	Possible mounting positions
from page 48	Mains connector X, interface connector W
from page 50	Electrical interfaces
More at	www.ebmpapst.com



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.

The specifications only apply under the specified measurement conditions ($\rho=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.

Heat output \dot{Q}_g for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

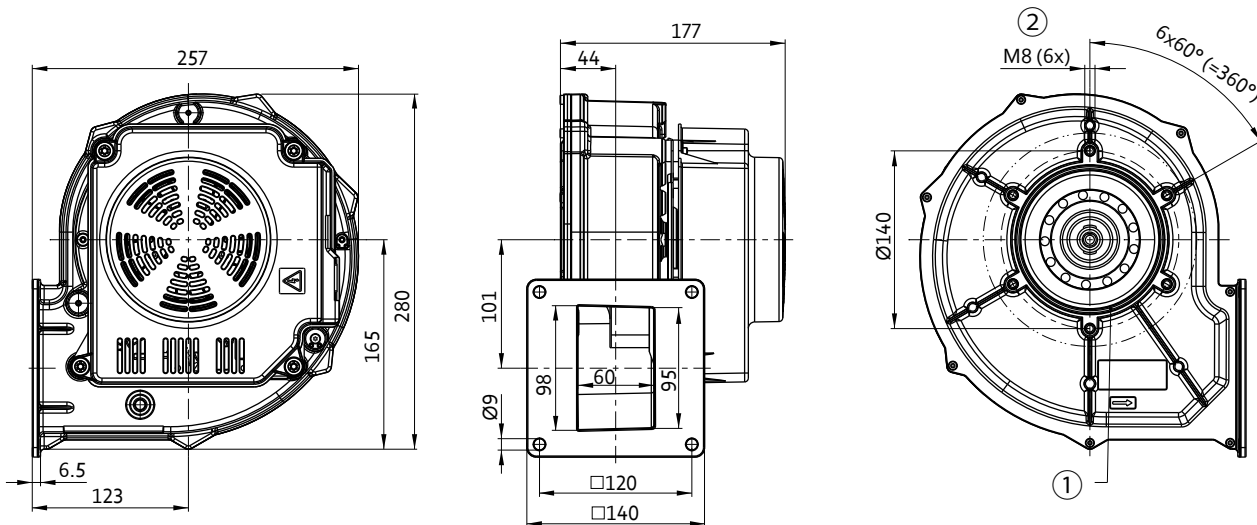
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P _{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 1~230VAC, 50/60Hz							
A	VGR0170XSPGS	5560001182	7200	420	0 up to 55	-15 up to 55	5.0
Nominal voltage 1~115VAC, 50/60Hz							
B	VGR0170XSPGS	5560001011	7200	360	0 up to 55	-15 up to 55	5.0

Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request.

A Technical drawing

Dimensions in mm



- ① Groove suitable for round sealing ring 110 x 3.2
- ② 9.5 deep

EC radial blower

G3G 200



Heat output range¹

- Up to 500kW

Material/surface

- Housing: Aluminum
- Impeller: Sheet aluminum
- Motor protection cap: Plastic

Mechanical data

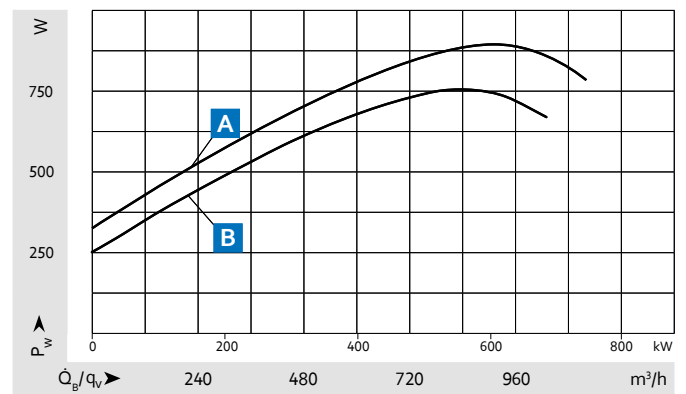
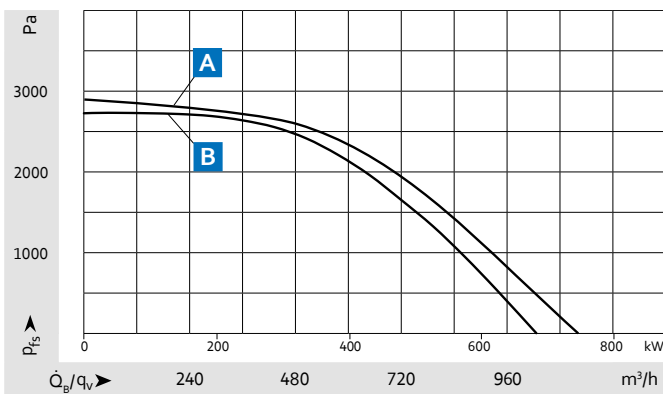
- Degree of protection: IP20 with cover hood
- Installation position: With horizontal shaft or for vertical shaft with motor position above
- Bearing: Ball bearings

Electrical data

- Designed for protection class I

on page 17	Possible mounting positions
from page 48	Mains connector X, interface connector W
from page 50	Electrical interfaces
More at	www.ebmpapst.com

EC radial blowers



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.

The specifications only apply under the specified measurement conditions ($\rho=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.

Heat output \dot{Q}_g for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

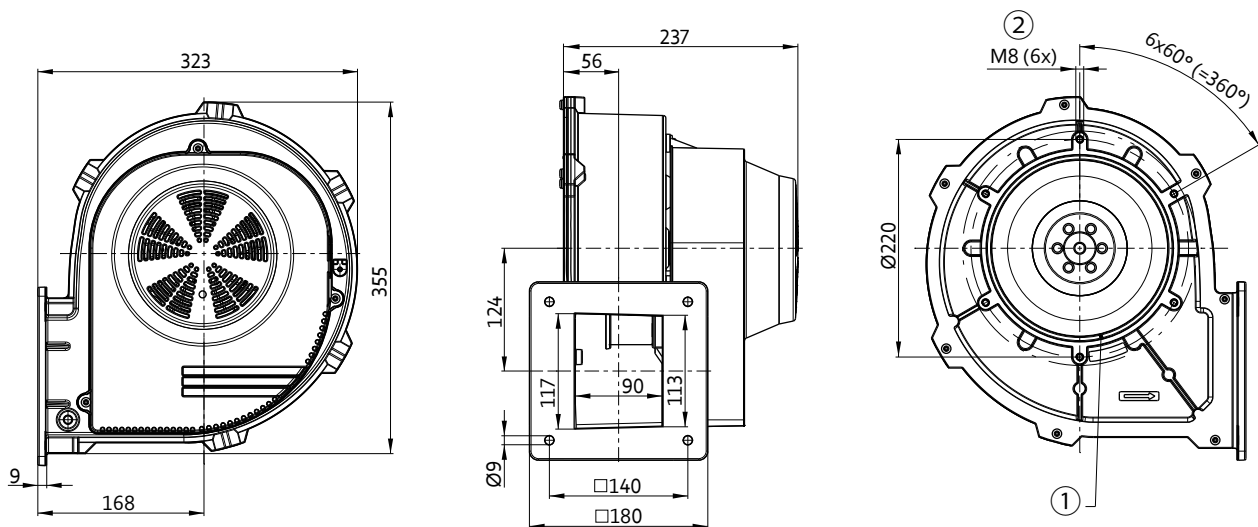
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P _{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 1~230VAC, 50/60Hz							
A	VGR0200XSPKS	5560003030	6100	890	0 up to 50	-15 up to 50	10
Nominal voltage 1~115VAC, 50/60Hz							
B	VGR0200XSPKS	5560003051	5700	800	0 up to 60	-15 up to 60	10

Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request.

A Technical drawing

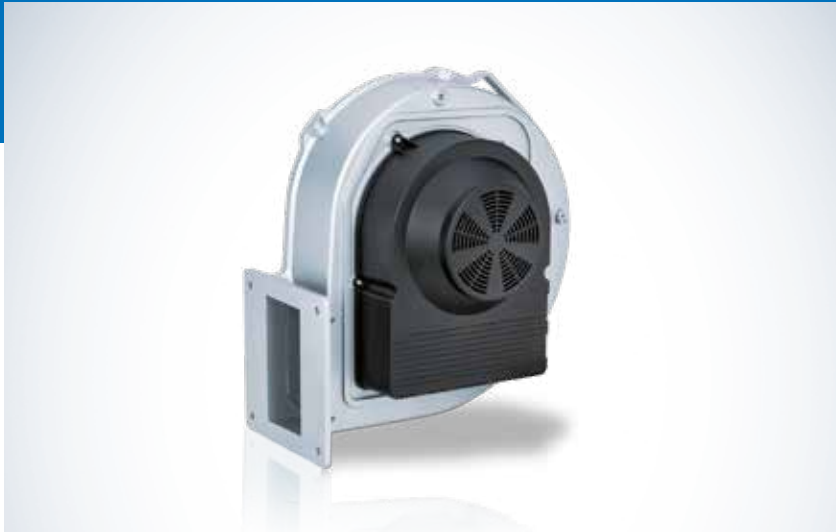
Dimensions in mm



- ① Groove suitable for round sealing ring 180 x 3.5
- ② 12 deep

EC radial blower

G3G 250



Heat output range¹

- Up to 800kW

Material/surface

- Housing: Aluminum
- Impeller: Metal
- Motor protection cap: Plastic

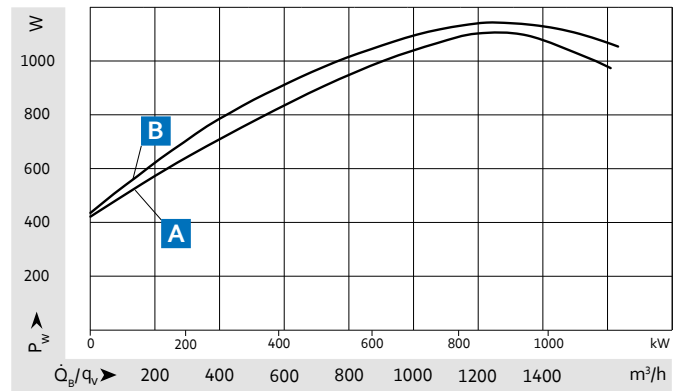
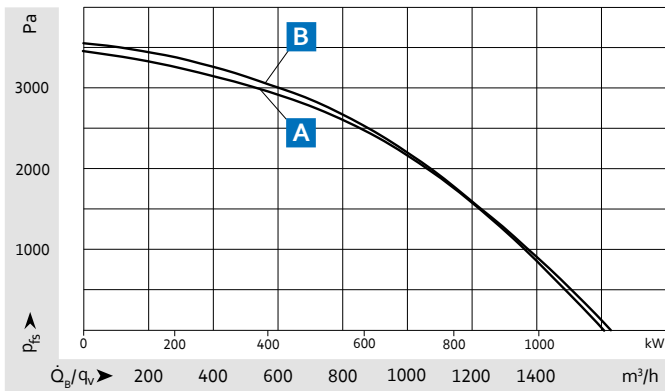
Mechanical data

- Degree of protection: IP20 with cover hood
- Installation position: With horizontal shaft or for vertical shaft with motor position above
- Bearing: Ball bearings

Electrical data

- Designed for protection class I

on page 17	Possible mounting positions
from page 48	Mains connector X, interface connector W
from page 50	Electrical interfaces
More at	www.ebmpapst.com



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.

The specifications only apply under the specified measurement conditions ($p=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.

Heat output \dot{Q}_g for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

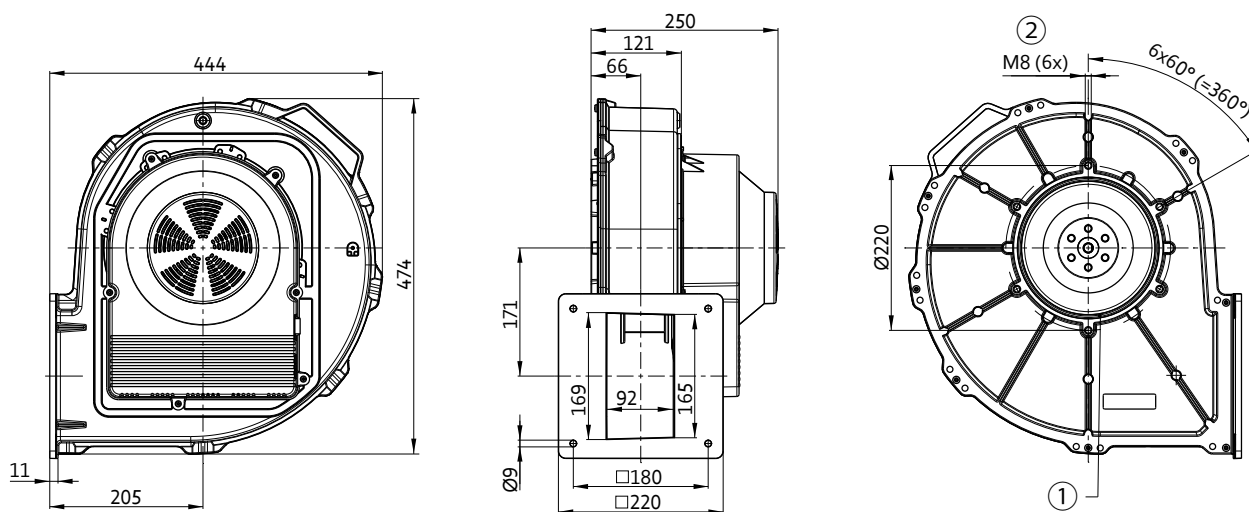
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P _{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 1~230VAC, 50/60Hz							
A	VGR0250XSPKS	5560005021	5200	1150	0 up to 60	-15 up to 60	13
Nominal voltage 1~115VAC, 50/60Hz							
B	VGR0250XSPKS	5560005051	5200	1200	0 up to 60	-15 up to 60	13

Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request.

A Technical drawing

Dimensions in mm



- ① Groove suitable for round sealing ring 180 x 3.5
- ② 12 deep

EC radial blower

VG 250



Heat output range¹

- Up to 1100kW

Material/surface

- Housing: Aluminum
- Impeller: Sheet aluminum
- Motor housing: Metal

Mechanical data

- Degree of protection: IP20 with cover hood
- Installation position: With horizontal shaft or for vertical shaft with motor position above
- Bearing: Ball bearings

Electrical data

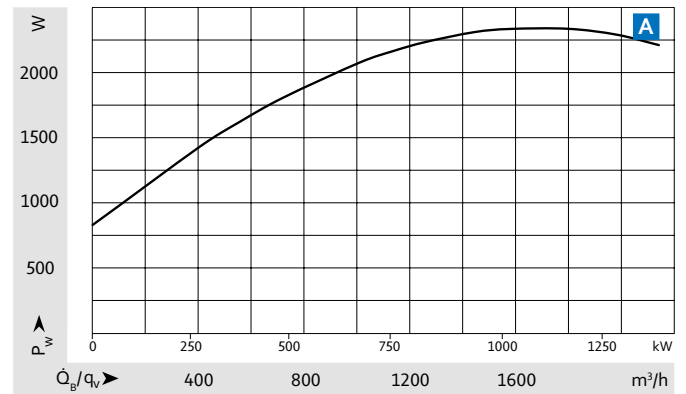
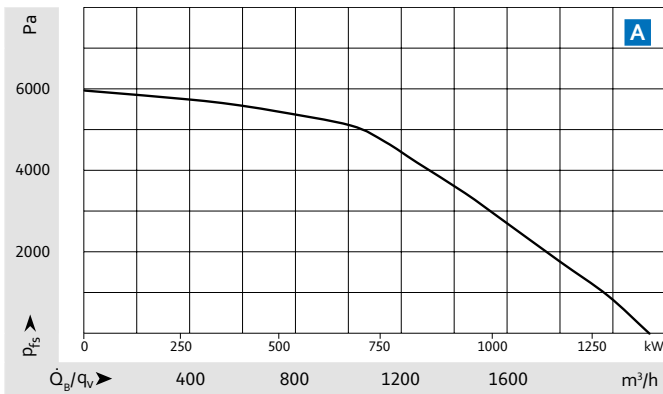
- Designed for protection class I

on page 17 Possible mounting positions

from page 48 Mains connector X, interface connector W

from page 50 Electrical interfaces

More at www.ebmpapst.com



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.

The specifications only apply under the specified measurement conditions ($\rho=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.

Heat output \dot{Q}_g for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

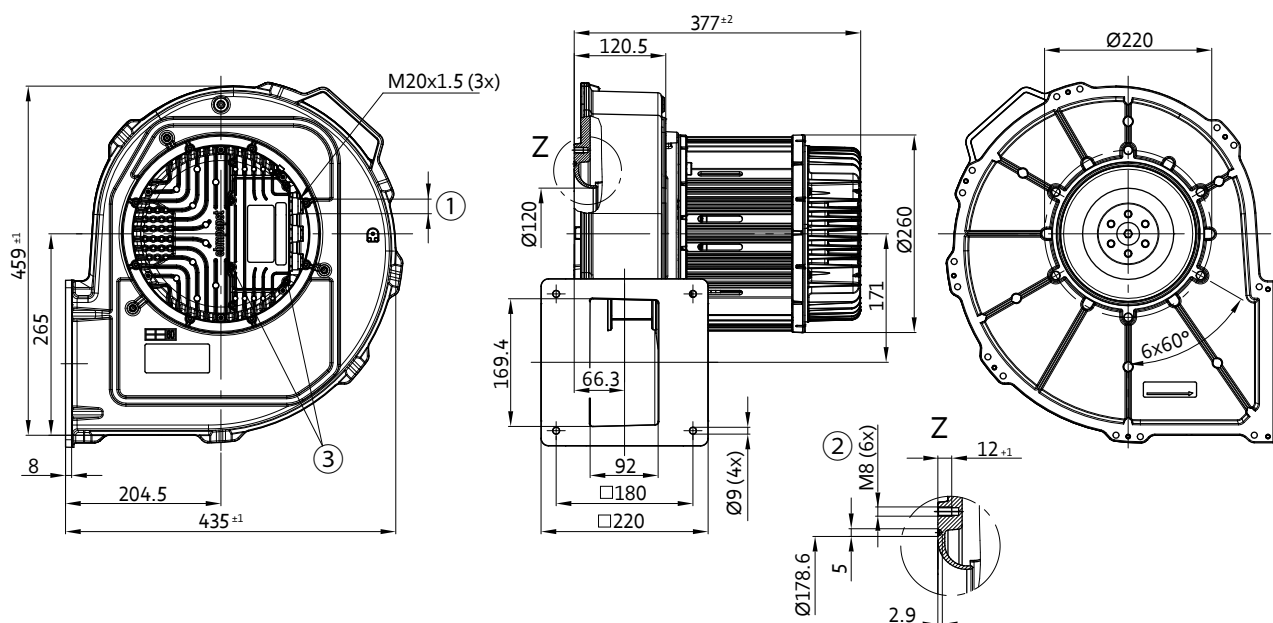
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P_{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 3-380 – 480VAC, 50/60Hz							
A	VGR0250XTRHS	5560006010	6400	2500	0 up to 50	-15 up to 50	24

Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request.

A Technical drawing

Dimensions in mm



- ① Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ② Clearance for screw 10-12 mm, tightening torque 20 ± 3 Nm
- ③ Tightening torque 3.5 ± 0.5 Nm

EC radial blower

VG 315



Heat output range¹

- Up to 2000kW

Material/surface

- Housing: Aluminum
- Impeller: Sheet aluminum
- Motor protection cap: Plastic

Mechanical data

- Degree of protection: IP20 with cover hood
- Installation position: Any
- Bearing: Ball bearings

Electrical data

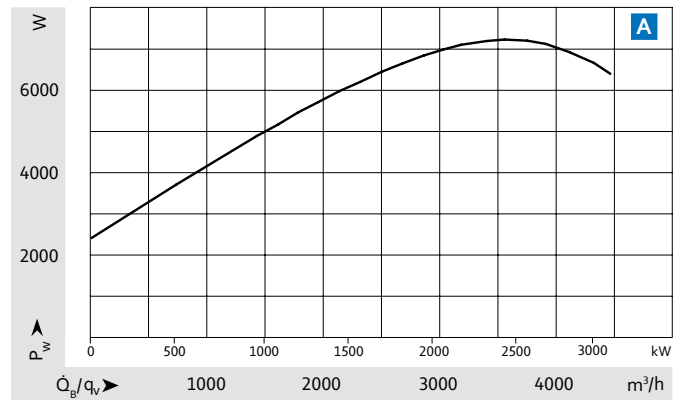
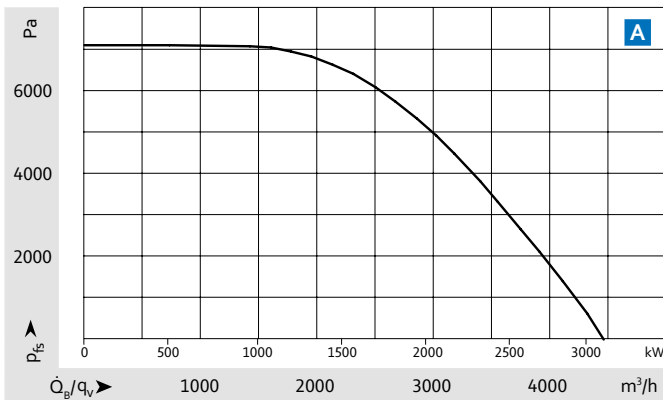
- Designed for protection class I

on page 17 Possible mounting positions

from page 48 Mains connector X, interface connector W

from page 50 Electrical interfaces

More at www.ebmpapst.com



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.

The specifications only apply under the specified measurement conditions ($\rho=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.

Heat output \dot{Q}_g for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

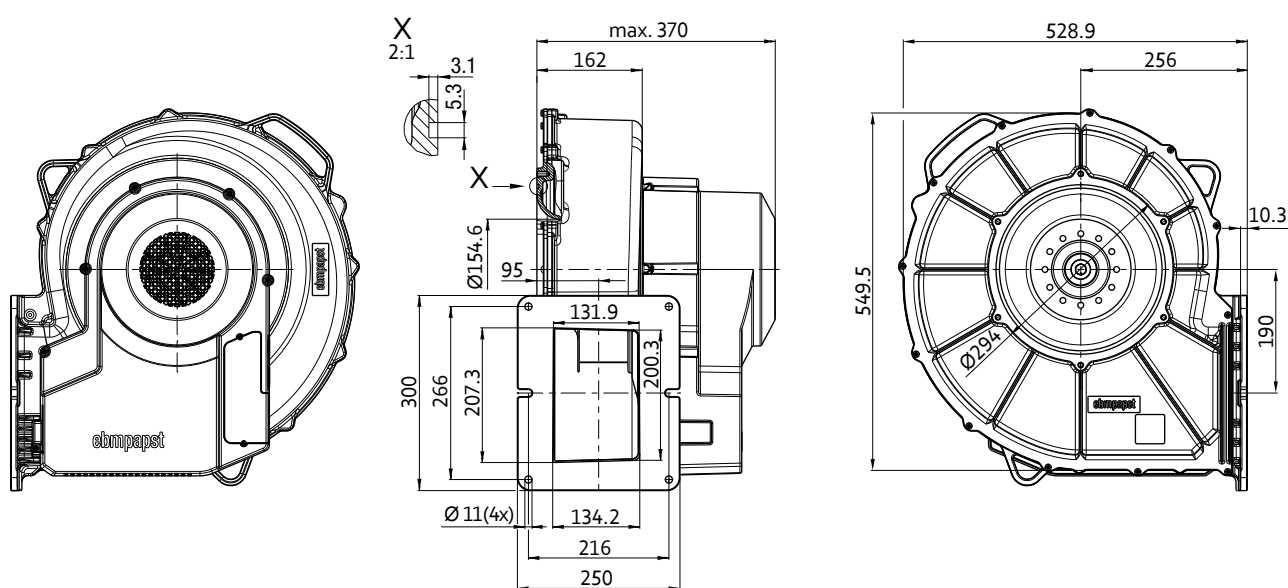
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P _{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 3-380 – 480VAC, 50/60Hz							
A	VGR0315XTTLS	5560007000*	6000	8000	0 up to 60	-15 up to 60	36
Nominal voltage 3-200 – 240VAC, 50/60Hz							
	VGR0315XTTLS	5560007030	6000	8000	0 up to 50	-15 up to 60	36

Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request. * Also available with 0 – 10V interface.

A Technical drawing

Dimensions in mm



EC radial blower

VG 450



Heat output range¹

- Up to 4000kW

Material/surface

- Housing: Cast aluminum
- Impeller: Sheet aluminum
- Motor casing: Die-cast aluminum
- Electronics box: Die-cast aluminum

Mechanical data

- Protection class electronics: IP54
- Protection class motor: IP20
- Installation position: Any
- Bearing: Ball bearings

Electrical data

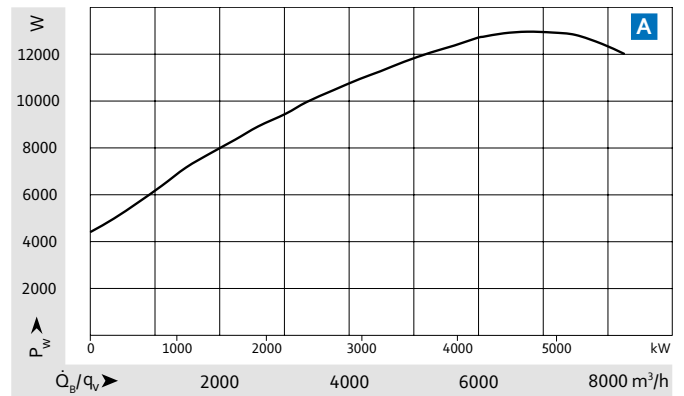
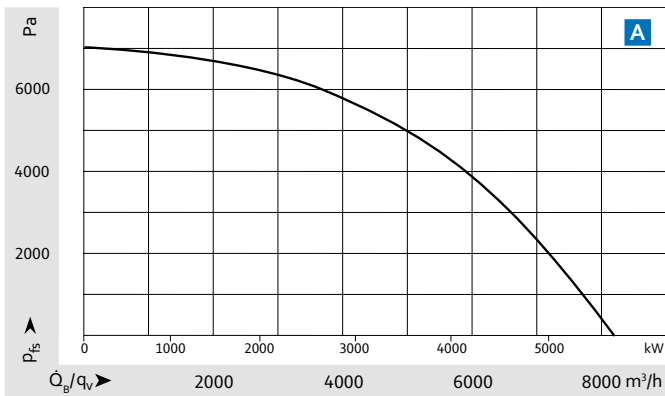
- Designed for protection class I

on page 17 Possible mounting positions

from page 48 Mains connector X, interface connector W

from page 50 Electrical interfaces

More at www.ebmpapst.com



Measuring requirements

Air performance measured in accordance with ISO 5801, installation category C.

The specifications only apply under the specified measurement conditions ($\rho=1.14 \text{ kg/m}^3 \pm 3.5\%$) and may change due to the installation conditions.

Heat output \dot{Q}_g for gas type G20 with air-fuel ratio $\lambda=1.3$.

¹ Heat output range

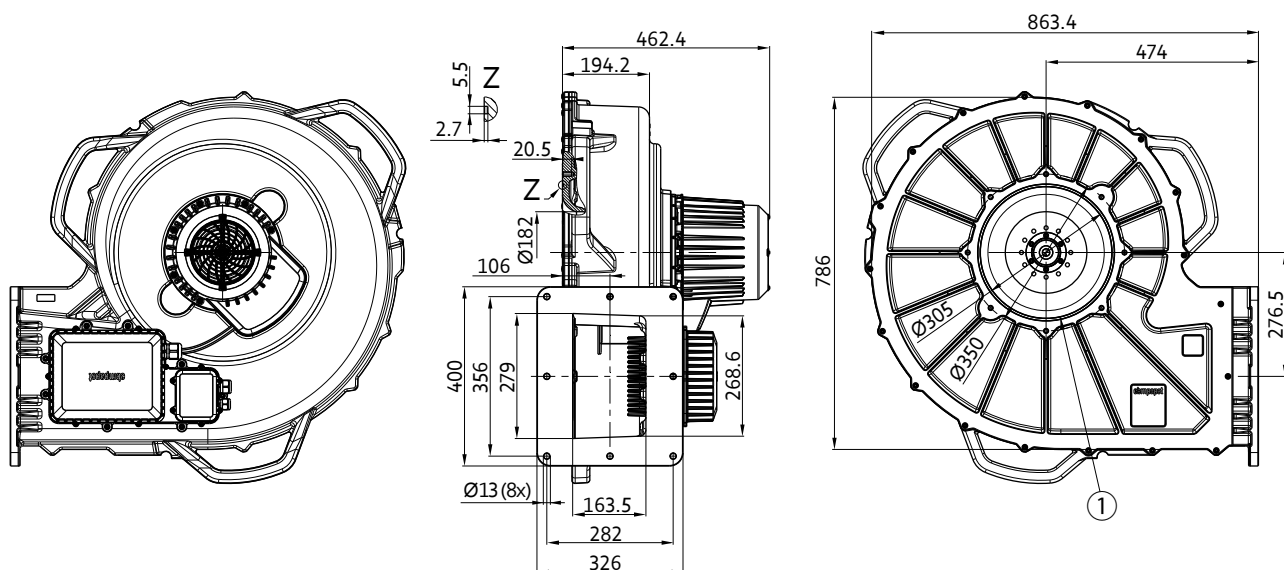
approx. data; heat output depends on gas type and the system conditions.

Curve	Type	Part number	Max. speed n	Max. input power P _{ed}	Perm. motor ambient temperature range	Perm. conveying medium temperature range	Weight
			rpm	W	°C	°C	kg
Nominal voltage 3-380-480VAC, 50/60Hz							
A	VGR0450XTTPS	5560008010	4250	14000	0 up to 40 ¹⁾	-15 up to 50	85

¹⁾ Short-term 60°C.
Subject to change. Temperature specifications dependent on time/temperature profile. Extended temperature range on request.

A Technical drawing

Dimensions in mm



① Seal groove

Connectors

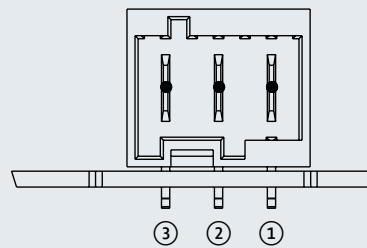
Connector	VG 71	VG 100	VG 108	NRG 118	RG 148	NRG 137	RG 175	G1G 170	G3G 200	G3G 250	VG 250	VG 315	VG 450
1 Mains connector X	x	x	x	x	x	x	x						
2 Mains connector X				x	x	x	x	x	x	x	see operating instructions	see operating instructions	see operating instructions
3 Interface connector W	x	x	x										
4 Interface connector W				x	x	x	x	x					
5 Interface connector W									x	x			
6 Interface connector W													
Interface 04600451...	03	03	03	04	04	04	04	38	39	39	64	61	63

Connectors refer to 230 V versions. Other plug and interface versions on request.

1 Mains connector X

3-pin pin-connector with coding type 0A according to RAST 5 in 90° angled / horizontal design with locking feature on top or down for locking device suitable for mating connector according to RAST 5 with coding type 0A as e. g. CoHaMoYY-A5002-H03-K01 or Lumberg 3623 03 K01

Part number for mating connector:
2431045025



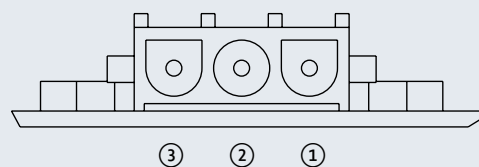
- ③ Power supply AC
- ② Protective earth
- ① Power supply AC

2 Mains connector X

3-pin pin-connector according RAST 6.35 in 90° angled / horizontal design suitable for mating connector according to RAST 6.35 e. g. Tyco Universal MATE-N-LOK

Order number: 1586847-1 and 3 x socket 926882-1

Part number for mating connector:
Connector shell 2430945012; Crimp socket 2430745002/3



- ③ Protective earth
- ② Power supply AC
- ① Power supply AC

3 Interface connector W

4-pin pin-connector according RAST 4.2
in 90° angled / horizontal design
suitable for mating connector
e. g. Stocko STO-FIT, CoHaMo

Order number Stocko:

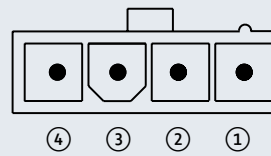
EH 705-004-004-960 and 3 x socket RBB 8230.120

Order number CoHaMo:

YY-5700-H04AS-GT and 3x socket YY-5700-TTAMA

Part number for mating connector:

Plug shell 2431045201; Crimp socket 2430045116



- ④ PWM Input
- ③ Power supply - (GND)
- ② Hall Sensor OUT
- ① NC

4 Interface connector W

5-pin pin-connector according RAST 4.2
in 90° angled / horizontal design
suitable for mating connector
e. g. Stocko STO-FIT, CoHaMo

Order number Stocko:

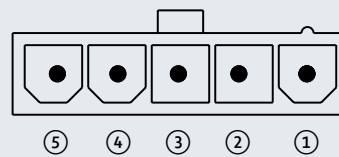
EH 705-005-004-960 and 5x socket RBB 8230.120

Order number CoHaMo:

YY-5700-H05AS-GT and 5x socket YY-5700-TTAMA

Part number for mating connector:

Connector shell 2431045200; Crimp socket 2430045116



- ⑤ Power supply - (GND)
- ④ PWM Input
- ③ NC
- ② Hall Sensor OUT
- ① Power supply +

5 Interface connector W

5-pin pin-connector according RAST 4.2
in 90° angled / horizontal design
suitable for mating connector
e. g. Stocko STO-FIT, CoHaMo

Order number Stocko:

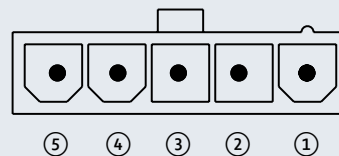
EH 705-005-004-960 and 5x socket RBB 8230.120

Order number CoHaMo:

YY-5700-H05AS-GT and 5x socket YY-5700-TTAMA

Part number for mating connector:

Connector shell 2431045200; Crimp socket 2430045116



- ⑤ Power supply - (GND)
- ④ PWM Input
- ③ Input 0-10V DC Control
- ② Hall Sensor OUT
- ① Power supply +

6 Interface connector W

5-pin pin-connector according RAST 4.2
in 90° angled / horizontal design
suitable for mating connector
e. g. Stocko STO-FIT, CoHaMo

Order number Stocko:

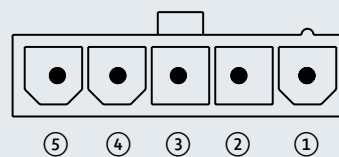
EH 705-005-004-960 and 5x socket RBB 8230.120

Order number CoHaMo:

Y-5700-H05AS-GT and 5x socket YY-5700-TTAMA

Part number for mating connector:

Connector shell 2431045200; Crimp socket 2430045116

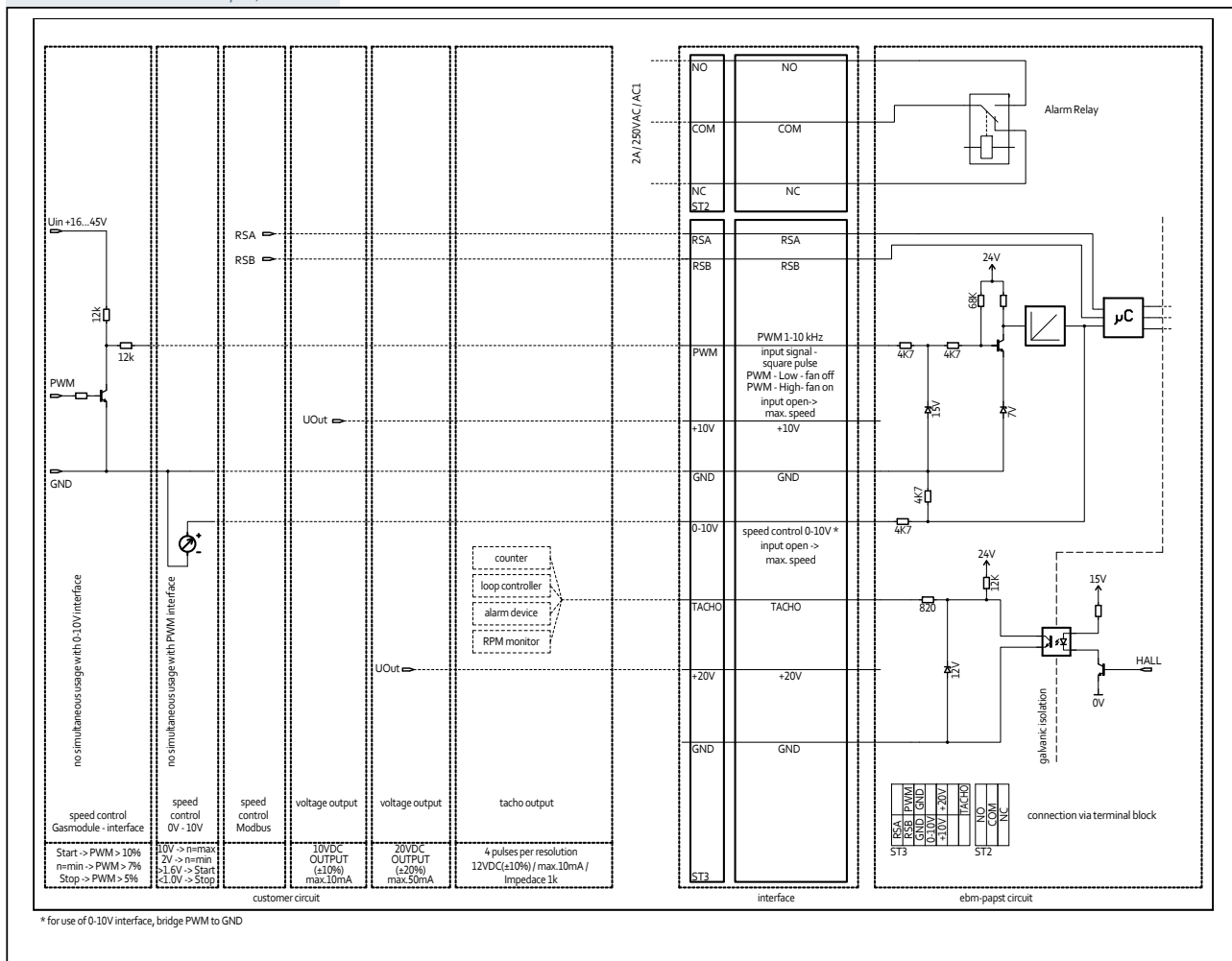


- ⑤ Power supply - (GND)
- ④ PWM Input
- ③ Input 0-10V DC Control
- ② Hall Sensor OUT
- ① Voltage Output

Electrical interfaces

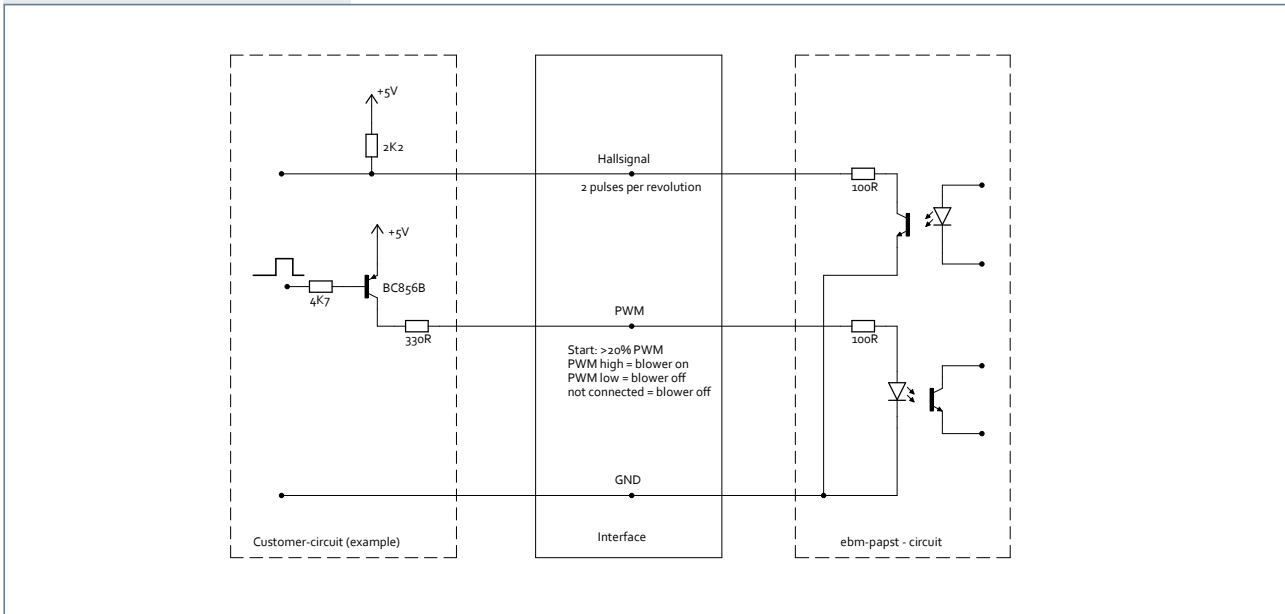
	VG 71	VG 100	VG 108	NRG 118	RG 148	NRG 137	RG 175	G1G 170	G3G 200	G3G 250	VG 250	VG 315	VG 450
Interface 04600451...	03	03	03	04	04	04	04	38	39	39	64	61	63

Interface 64 3-380-480VAC, 50/60Hz

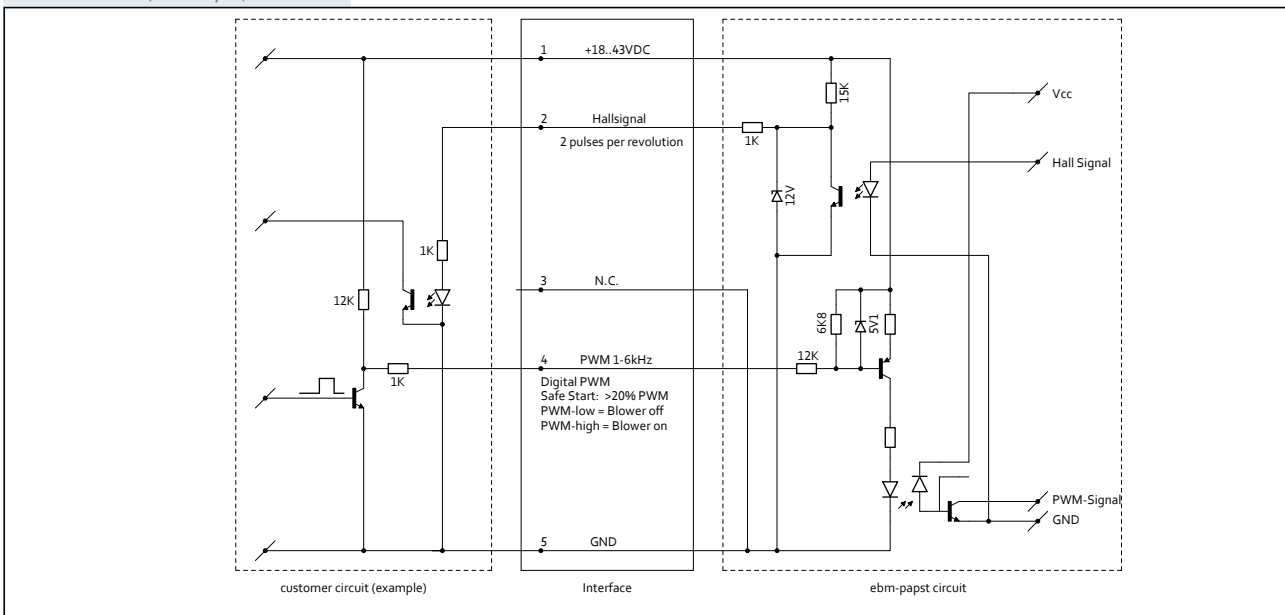


Further types available on request.

Interface 03 120/230VAC, 50/60Hz



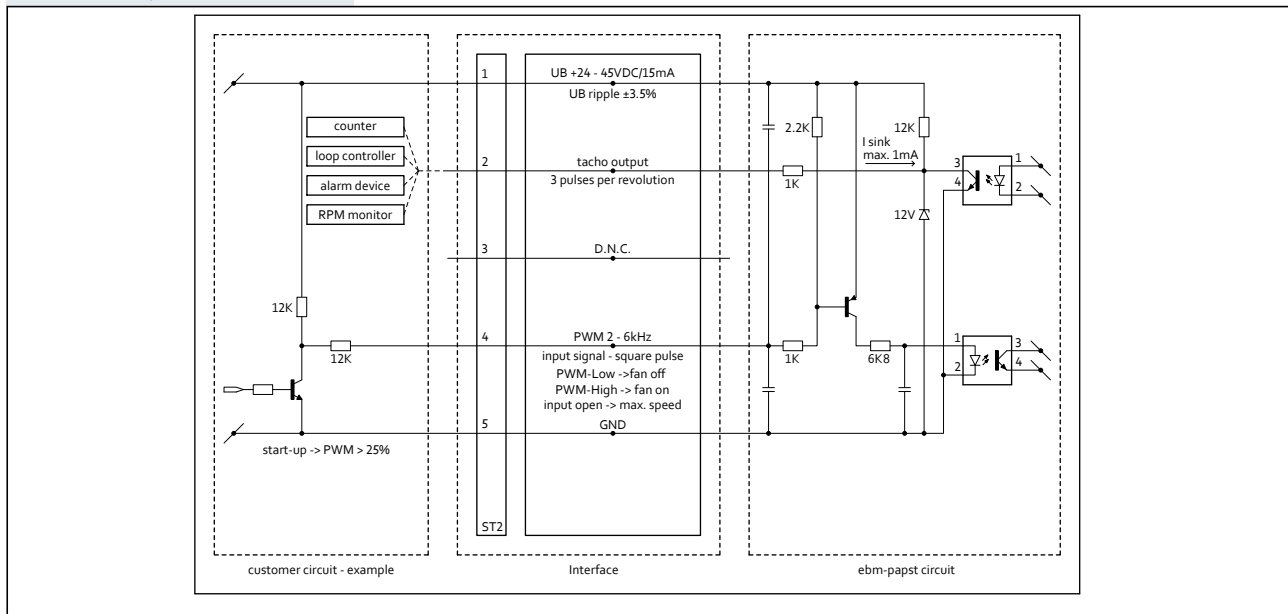
Interface 04 120/230VAC, 50/60Hz



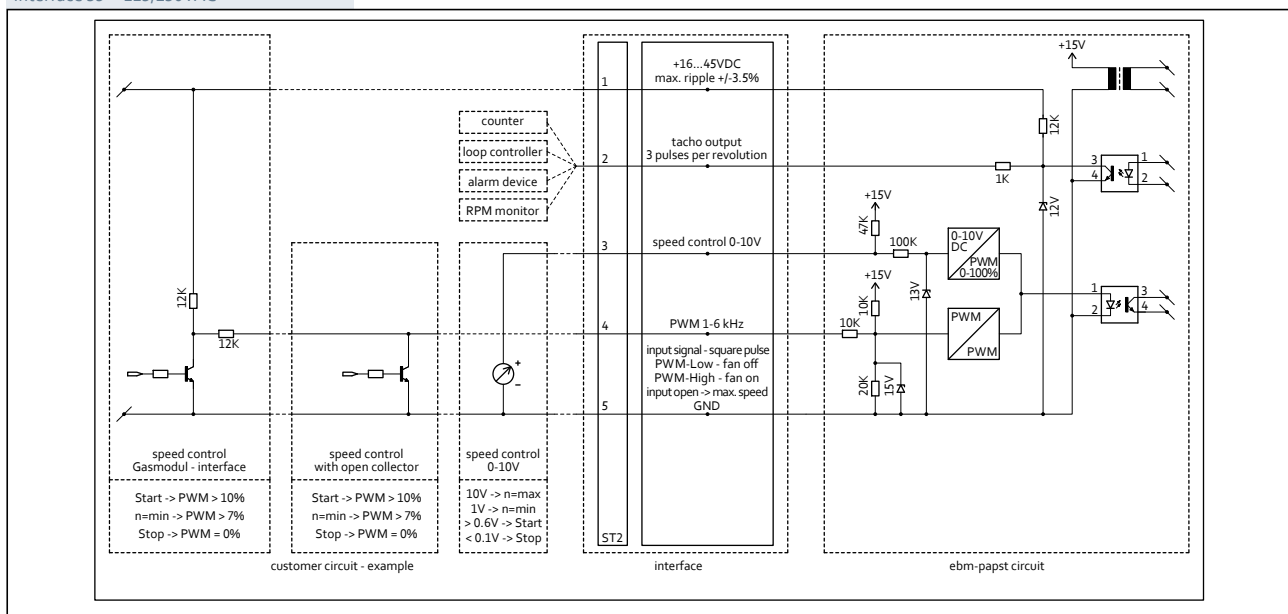
Further types available on request.

Electrical interfaces

Interface 38 115/230VAC

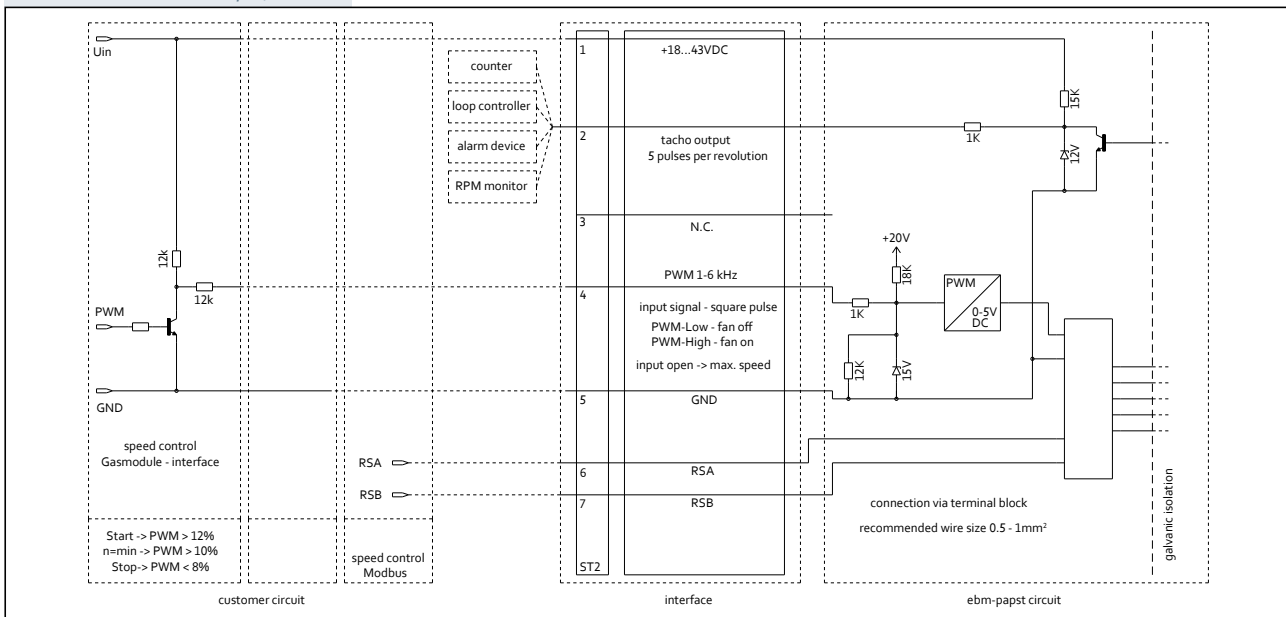


Interface 39 115/230VAC

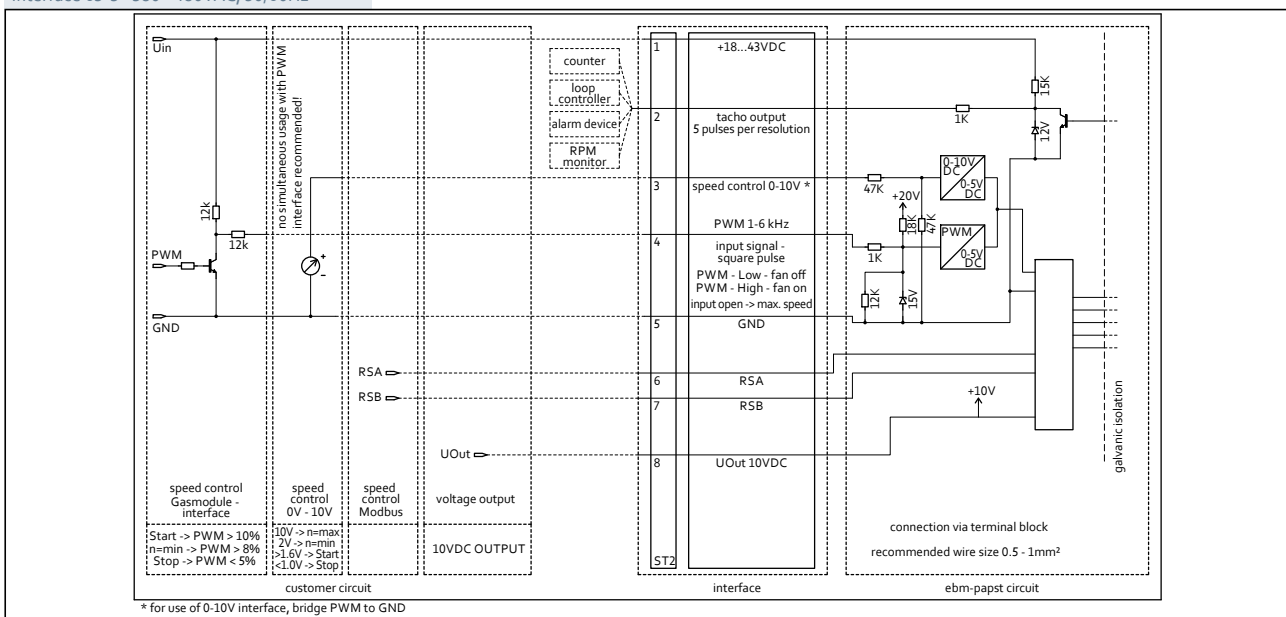


Further types available on request.

Interface 61 3- 380-480VAC, 50/60Hz



Interface 63 3- 380-480VAC, 50/60Hz



Further types available on request.

Gas valves

Pneumatic and electronic gas-air control system

Our gas valves are mainly used in condensing unit applications for domestic heating technology in the low-to-medium output range. They ensure precise gas-air ratio adjustment.

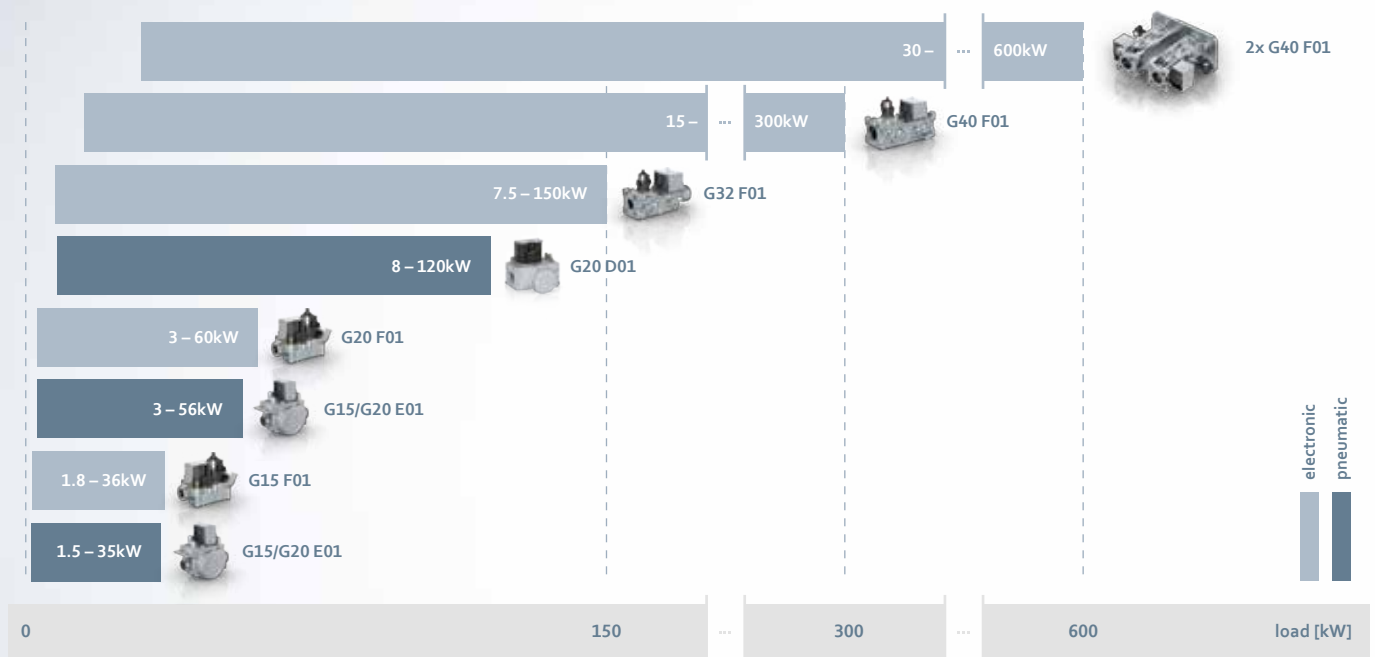
The G20 D01 and G15/G20 E01 gas valves are suitable for condensing units with pneumatic gas-air control systems.

Regardless of the suction pressure generated by the premix blower, these gas valves always keep the offset pressure at zero and compensate for pressure fluctuations in the supply network as well.

The offset (zero point shift) can be configured at the servo controller. At the same time, the desired gas quantity is adjusted using an integrated flow control element. Depending on the design, reference pressure can be connected to the servo controller if required.

The G15/G20 F01, G32 F01 and G40 F01 gas valves are suitable for condensing units with electronic gas-air control systems. Regardless of gas quality and any pressure fluctuations in the supply network, these gas valves regulate the constant gas-air ratio without relying on mechanical gas valve settings.

Gas valves



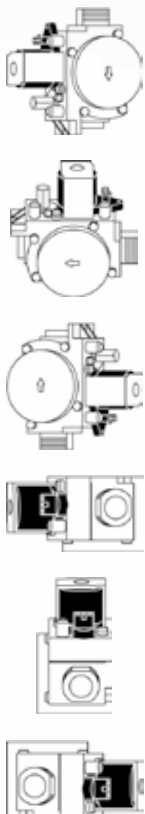
Additional notes

- Work on the gas valve is to be performed by authorised specialists only.
- Please ensure observation of the corresponding installation instructions.
- Corresponding documents with safety instructions are available upon request or on the Internet.



+ Mounting position

Solenoid at any position between vertical & horizontal – but not upside down



+ Type examination certificate for North America (USA and Canada): Master Contract No. 172723

Applicable standards
ANSI Z21.78 · CSA 6.20-2010
(Reaffirmed 2014):
Combination Gas Controls for gas appliances

Approvals exist for the chief gas consuming countries.

+ Type examination certificate Product ID number: CE0085CM0036

Applicable directives and standards:
EU/2016/426 Gas Appliances Regulation

- EN 126:2012 06: Multifunctional controls for gas burning appliances
- EN 13611:2016: Safety and control devices for gas burners and gas burning appliances – General requirements
- EN 161:2013: Automatic shut-off valves for gas burners and gas appliances
- EN 88-1:2016: Pressure regulators and associated safety devices for gas appliances – Part 1: Pressure regulators for inlet pressures up to and including 50kPa



Gas valves pneumatic gas-air control system

G15/G20 E01



Material/surface

- Housing: Aluminum

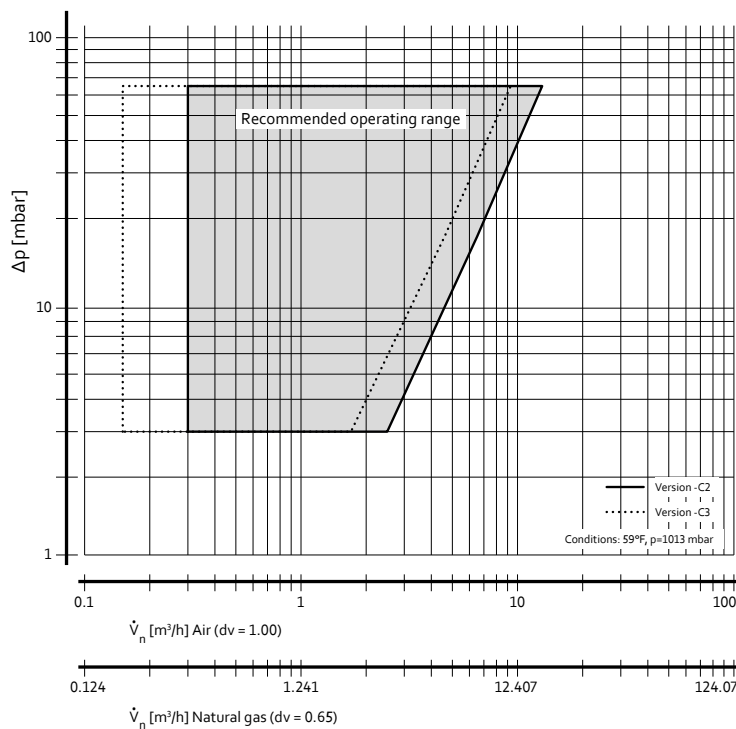
Mechanical data

- Degree of protection: IP40 in combination with a suitable plug
- Permitted gas families: II + III (in accordance with EN 437)
- Maximum inlet pressure: 65mbar (CE), 0.5psi (CSA)
- Permitted ambient temperature: -15°C to 70°C; extended temperature range on request, dependent on time/temperature profile
- Permitted storage temperature: -25°C to 70°C
- Offset correction: +/- 20Pa
- Input (gas connection): External thread G3/4 or G1/2 (EN ISO 228) or 4 x M4-mounting holes (optional)
- Output: ebm-papst proprietary quick release
- Safety valve: Coaxial design: Valve class B/C as per EN 161

More at

www.ebmpapst.com

Capacity curve – GXXE01-BCXCS-CX



Electrical data

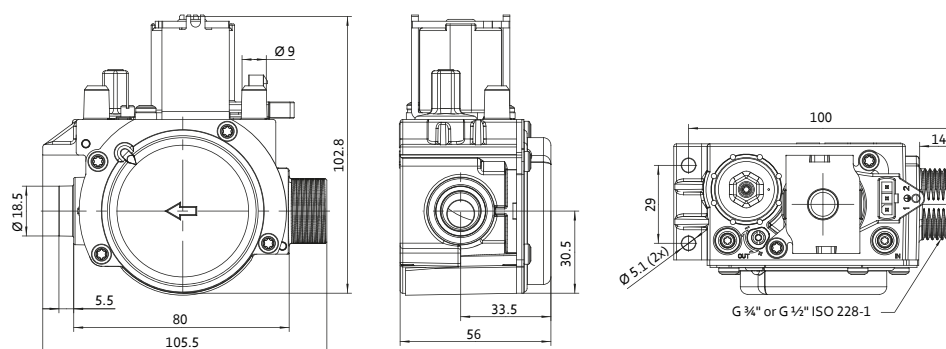
- Designed for protection class I
- Electrical connection: Connector shell with 4.20mm grid

Type	Rated voltage	Max. input power	Nominal diameter	Maximum inlet pressure	Flow rate (at $\Delta p = 5\text{mbar}$)	Automatic shutoff valves (EN 161)	Minimum signal pressure	Opening and closing time	Weight
	V	VA		mbar	m ³ /h		Pa	s	kg
Nominal data									
GXXE01-BCXCS-CX	230RAC	9.8	DN15/20	65	3.4	Class B/C	-40	< 1	0.57
	120RAC	9.8	DN15/20	65	3.4	Class B/C	-40	< 1	0.57
	24RAC	9.8	DN15/20	65	3.4	Class B/C	-40	< 1	0.57
	24DC	9.8	DN15/20	65	3.4	Class B/C	-40	< 1	0.57
	22DC	11.9	DN15/20	65	3.4	Class B/C	-40	< 1	0.57

Subject to change.

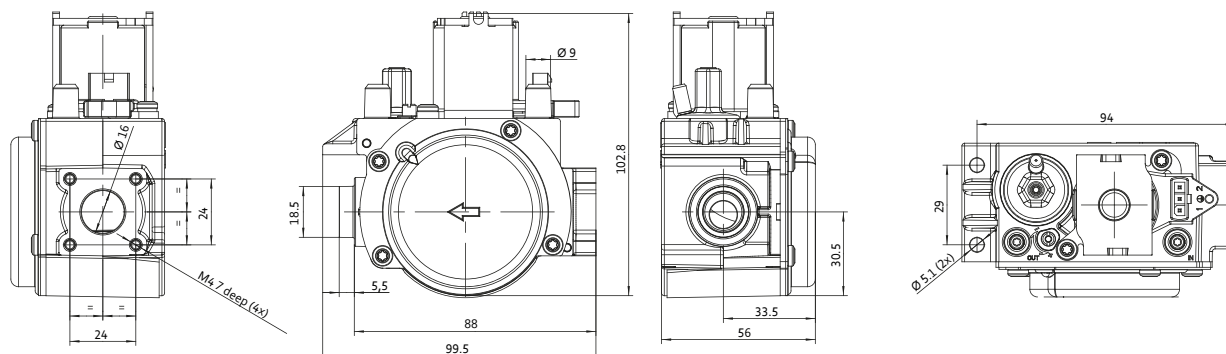
Version with G 3/4 connection (optionally also G 1/2)

Dimensions in mm



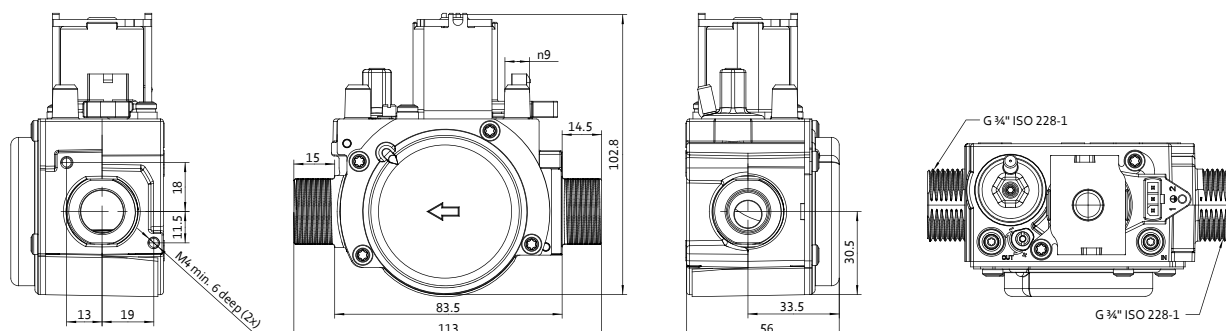
Version with 4 x M4 connection (suitable for NPT 1/2 flange)

Dimensions in mm



Version with 2 x G 3/4 connection

Dimensions in mm



Gas valves pneumatic gas-air control system

G20 D01



Material/surface

- Housing: Aluminum

Mechanical data

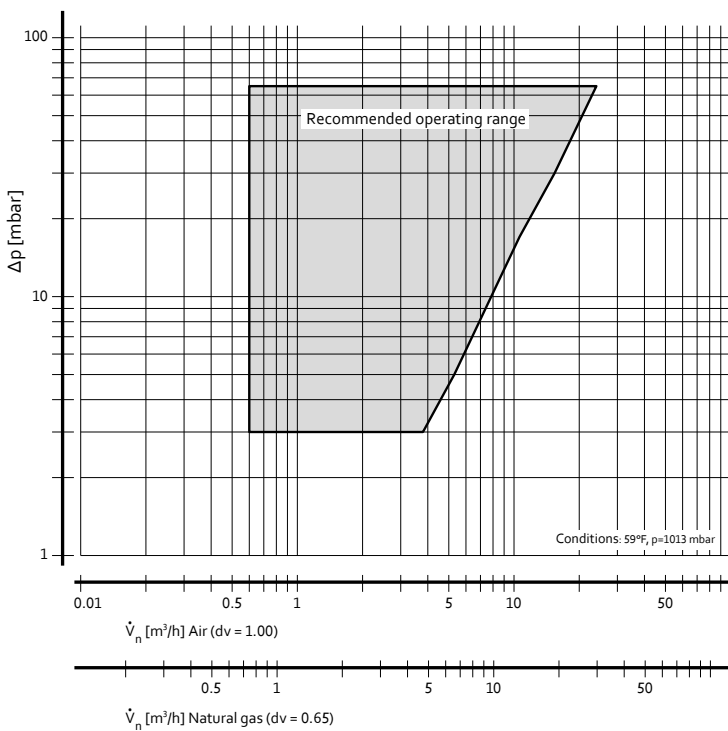
- Degree of protection: IP40 in combination with a suitable plug
- Permitted gas families: II + III (in accordance with EN 437)
- Maximum inlet pressure: 65mbar (CE), 0.5psi (CSA)
- Permitted ambient temperature: -15°C to 60°C; extended temperature range on request, dependent on time/temperature profile
- Permitted storage temperature: -25°C to 70°C
- Offset correction: +/- 20Pa
- Input (gas connection): 4 x M5-mounting holes (hole spacing 36mm)
- Output: 4 x M5-mounting holes (hole spacing 36mm)
- Safety valve: Valve class B/B as per EN 161

Electrical data

- Designed for protection class I
- Electrical connection: Connector shell with 5.08mm grid

More at www.ebmpapst.com

Capacity curve – G20D01-BBXCS-CX

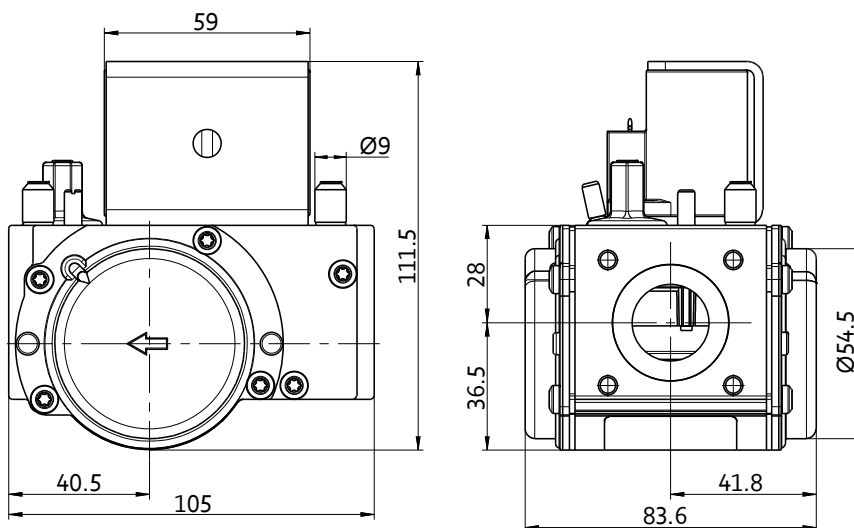


Type	Rated voltage	Max. input power	Nominal diameter	Maximum inlet pressure	Flow rate (at $\Delta p = 5\text{mbar}$)	Automatic shutoff valves (EN 161)	Minimum signal pressure	Opening and closing time	Weight
	V	VA		mbar	m ³ /h		Pa	s	kg
Nominal data									
G20D01-BBXCS-CX	230RAC	2 x 12.5	DN20	65	5.3	Class B/B	-40	< 1	1.3
	120RAC	2 x 12.5	DN20	65	5.3	Class B/B	-40	< 1	1.3
	24RAC	2 x 12.5	DN20	65	5.3	Class B/B	-40	< 1	1.3
	24DC	2 x 12.5	DN20	65	5.3	Class B/B	-40	< 1	1.3

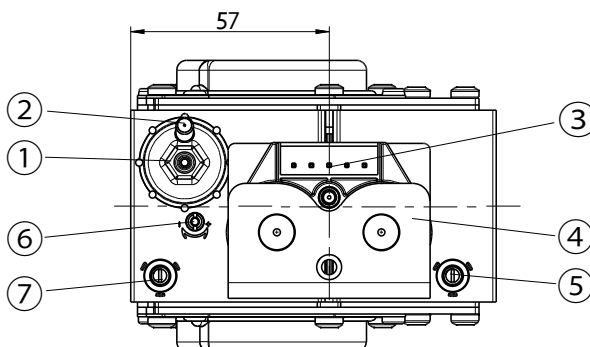
Subject to change.

Technical drawing

Dimensions in mm



- ① Pressure regulator offset adjustment
- ② Servo regulator
- ③ Electrical connection
- ④ Solenoid coil
- ⑤ Pressure test nipple P₁
- ⑥ Main flow throttle
- ⑦ Pressure test nipple P₂



Gas valves electronic gas-air control system

G15/G20 F01



Material/surface

- Housing: Aluminum

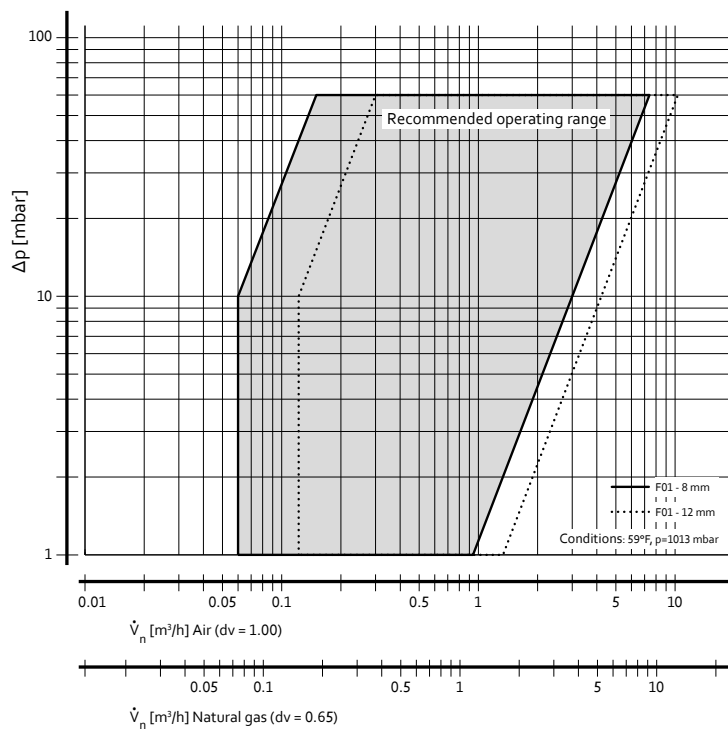
Mechanical data

- Degree of protection: IP40 in combination with a suitable connector
- Permitted gas families: II + III (in accordance with EN 437)
- Maximum inlet pressure: 60mbar (CE), 0.5psi (CSA)
- Permitted ambient temperature: -15°C to 70°C; extended temperature range on request, dependent on time/temperature profile
- Permitted storage temperature: -25°C to 70°C
- Input (gas connection): External thread G 1/2" (DN 15) or G 3/4" (DN 20) (EN ISO 228)
- Output: ebm-papst proprietary quick release
- Safety valves: Coaxial design: Valve class B/C as per EN 161

More at

www.ebmpapst.com

Capacity curve – GXXF01-BCXCS-CX



Electrical data

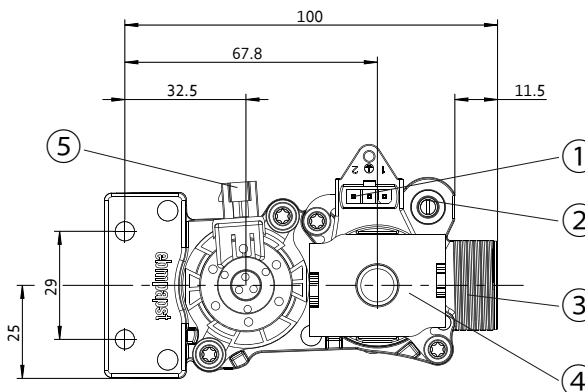
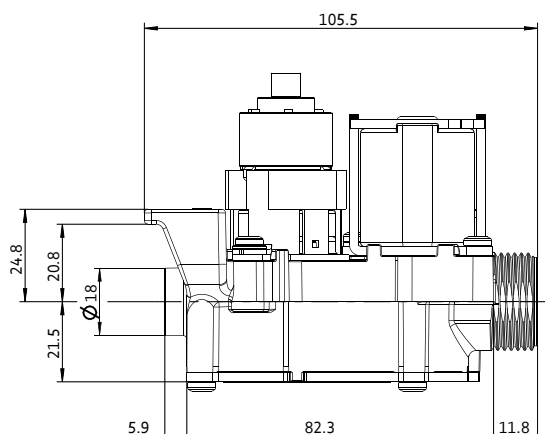
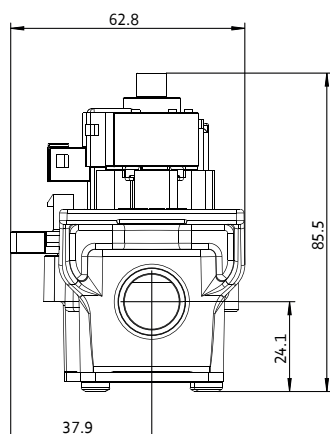
- Designed for protection class I
- Electrical connection: Connector shell with 4.20mm grid

Type	Rated voltage V	Max. input power VA	Nominal diameter DN15/20	Maximum inlet pressure mbar	Flow rate (at $\Delta p = 5\text{mbar}$) Stepper motor module with nominal diameter 8mm m ³ /h	Flow rate (at $\Delta p = 5\text{mbar}$) Stepper motor module with nominal diameter 12mm m ³ /h	Automatic shutoff valves (EN 161)	Opening and closing time s	Weight kg
Nominal data									
GXXF01-BCXCS-CX	230RAC	9.8	DN15/20	60	2.1	2.9	Class B/C	< 1	0.47
	120RAC	9.8	DN15/20	60	2.1	2.9	Class B/C	< 1	0.47
	24RAC	9.8	DN15/20	60	2.1	2.9	Class B/C	< 1	0.47
	24DC	9.8	DN15/20	60	2.1	2.9	Class B/C	< 1	0.47
	22DC	11.9	DN15/20	60	2.1	2.9	Class B/C	< 1	0.47

Subject to change.

Technical drawing

Dimensions in mm



- ① Electrical connection safety valve
- ② Pressure test nipple
- ③ G 3/4" or G1/2" ISO 228-1
- ④ Solenoid coil
- ⑤ Electrical connection stepper motor

Gas valves electronic gas-air control system

G32 F01



More at

www.ebmpapst.com

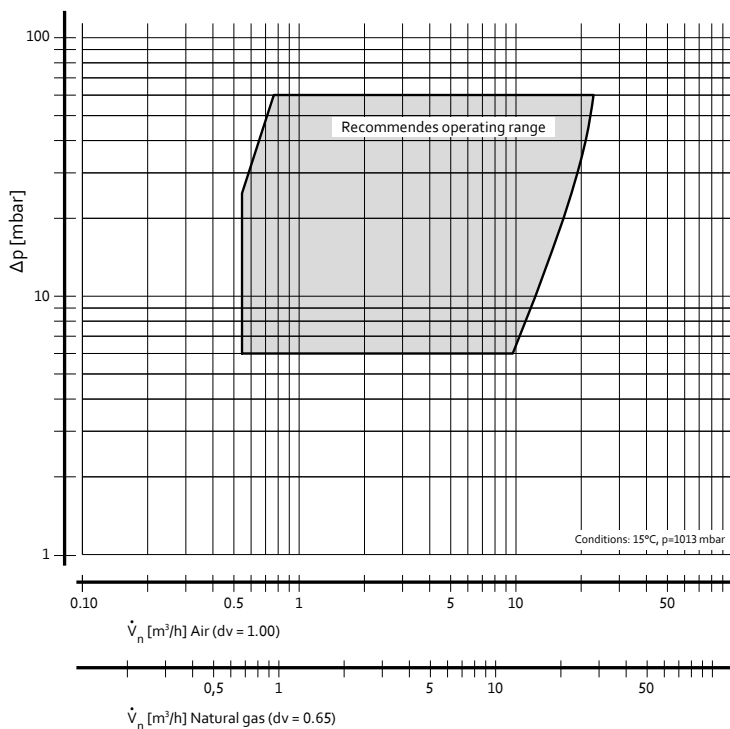
Material/surface

- Housing: Aluminum

Mechanical data

- Degree of protection: IP40 in combination with a suitable connector
- Permitted gas families: I + II + III (in accordance with EN 437)
- Maximum inlet pressure: 60mbar (CE), 0.5psi (CSA)
- Permitted ambient temperature: -15°C to 60°C; extended temperature range on request, dependent on time/temperature profile
- Permitted storage temperature: -25°C to 70°C
- Input (gas connection): external thread G 1 1/4 (EN ISO 228)
- Output: Flange connection 4 x mounting holes for self-tapping screw (nominal diameter 5mm); hole spacing □52.33mm
- Safety valves: Coaxial design: Valve class B/C in accordance with EN 161
- Interface to mechanical pressure monitor port: Inlet pressure; central chamber pressure
- Pressure test nipple: Inlet and outlet pressure

Capacity curve – G32F01-CBXCS-CX



Electrical data

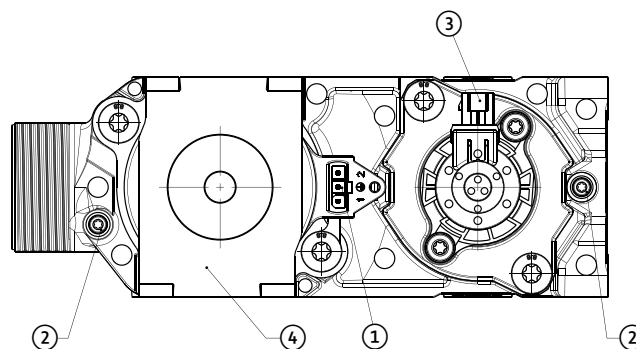
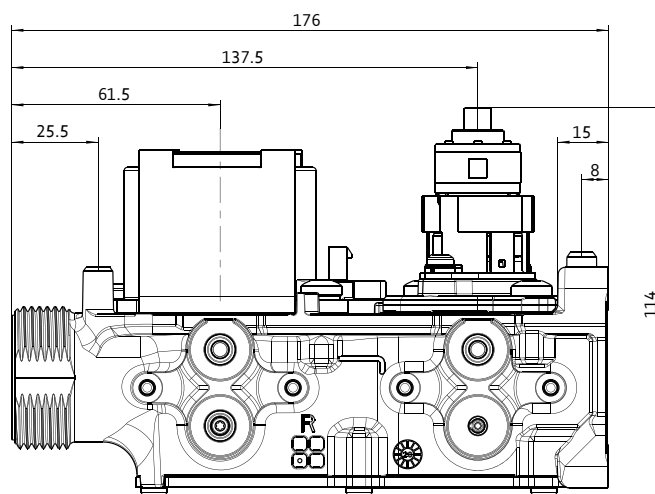
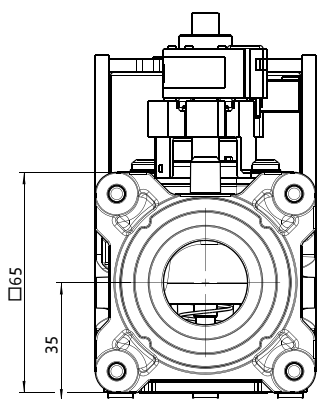
- Designed for protection class I
- Electrical connection: Safety module: suitable for connector housing with pitch 4.20mm (e.g., Stocko STO-FIT System, EH 705-103; Würth series WR-MPC4, item no. 649 003 013 322)
- Stepper motor module: Connector housing Stocko-Grid MH790-06-001

Type	Rated voltage V	Max. input power VA	Nominal diameter	Maximum inlet pressure mbar	Flow rate (at $\Delta p = 5\text{mbar}$) m ³ /h	Automatic shutoff valves (EN 161) Class C/B	Opening and closing time s	Weight kg
Nominal data								
G32F01-CBXCS-CX	230RAC	17	DN32	60	9.3	Class C/B	< 1	1.55
	120RAC	17	DN32	60	9.3	Class C/B	< 1	1.55
	24DC	17	DN32	60	9.3	Class C/B	< 1	1.55

Subject to change.

Technical drawing

Dimensions in mm



- ① Electrical connection safety valve
- ② Pressure test nipple
- ③ Electrical connection control valve
- ④ Solenoid coil

Gas valves electronic gas-air control system

G40 F01



Material/surface

- Housing: Aluminum

Mechanical data

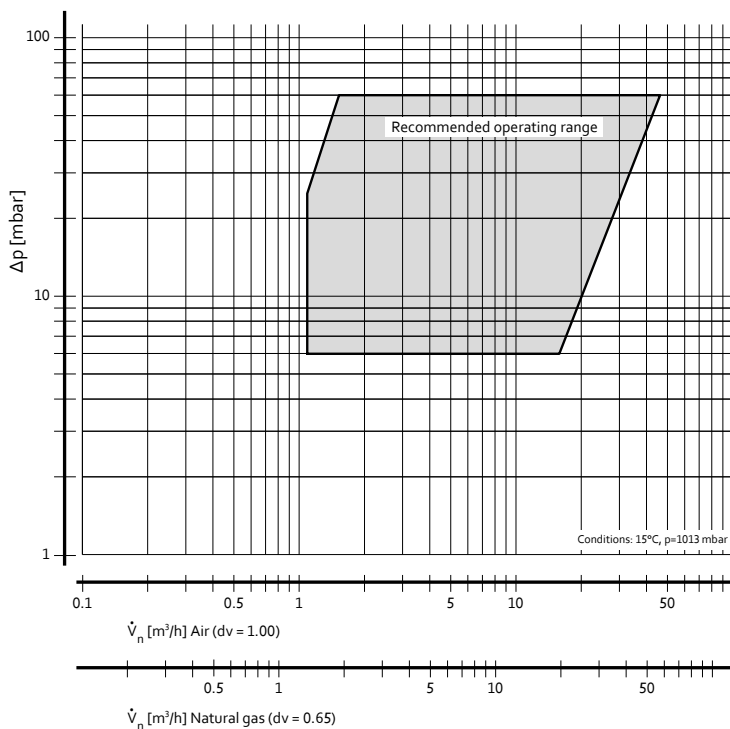
- Degree of protection: IP40 in combination with a suitable connector
- Permitted gas families: I + II + III (in accordance with EN 437)
- Maximum inlet pressure: 60mbar (CE), 0.5psi (CSA)
- Permitted ambient temperature: -15°C to 60°C; extended temperature range on request, dependent on time/temperature profile
- Permitted storage temperature: -25°C to 70°C
- Input (gas connection): Flange connection 4 x mounting holes for self-tapping screw (nominal diameter 6mm); hole spacing $\square 52.33\text{mm}$; bolt circle diameter 74mm; Input flange G 1 1/2" optional
- Output: Flange connection 4 x mounting holes for self-tapping screw (nominal diameter 6mm); hole spacing $\square 52.33\text{mm}$; bolt circle diameter 74mm
- Safety valve: Coaxial design: External thread B/B as per EN 161
- Interface to mechanical pressure monitor port: Inlet pressure; central chamber pressure for VPS (optional)
- Pressure test nipple: Inlet and outlet pressure

Electrical data

- Designed for protection class I
- Electrical connection: Suitable for connector housing with pitch 4.20mm (e.g., Stocko STO-FIT System, EH 705-103; Würth WR-MPC4 series, item no. 649 003 013 322)
- Stepper motor module: Connector housing Stocko-Grid MH790-06-001

More at www.ebmpapst.com

Capacity curve – G40F01-BBXCS-CX

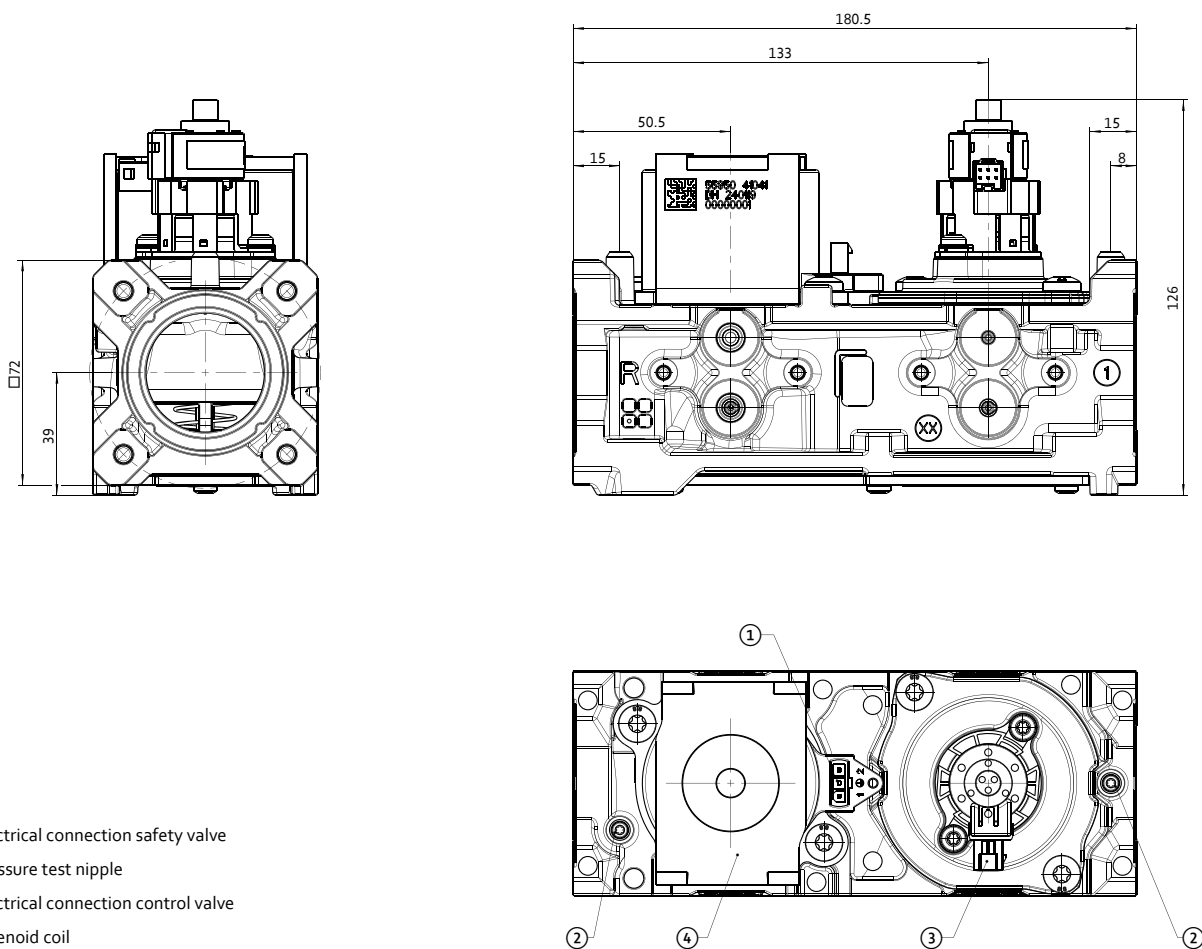


Type	Rated voltage	Max. input power	Nominal diameter	Maximum inlet pressure	Flow rate (at $\Delta p = 5\text{mbar}$)	Automatic shutoff valves (EN 161)	Opening and closing time	Weight
	V	VA		mbar	m ³ /h		s	kg
Nominal data								
G40F01-BBXCS-CX	230RAC	21.5	DN40	60	14	Class B/B	< 1	1.97
	120RAC	22	DN40	60	14	Class B/B	< 1	1.97
	24DC	22	DN40	60	14	Class B/B	< 1	1.97

Subject to change.

Technical drawing

Dimensions in mm



Gas valves

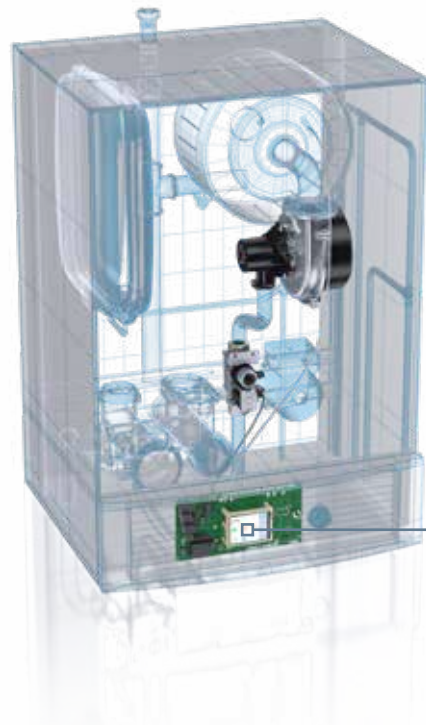
Boiler Control Units

Intelligent and customizable

We supply the right electronics for controlling ignition, performance regulation and monitoring the function of the condensing boiler as well as user interfaces needed for conveniently controlling central heating and hot water. Our product range, consisting of tried-and-tested hardware and software, enables reliable operating performance and short development cycles. The versatile software architecture allows easy interface integration. In addition, as with our blowers, we value having the lowest possible energy consumption.

The BCU 100 boiler controls are specially designed for use in wall-hang boiler: compact design and high integration of all electrotechnical functions of a modern wall-mounted condensing boiler.

The BCU 900 boiler controls are used in particular for commercial building technology: high functional scope with flexible setting options for the configuration of many heating systems.



Compact construction

- + Comprehensive electronic functions of a gas-condensing boiler
- + Solid-state design for high reliability, long service life and low space requirement
- + Integrated user interface
- + Space-saving and robust electrical connection with plated contacts

Optimally networked



- + Standard interfaces for room devices
- + RS 485 interface for user-defined control elements e.g. building management systems
- + Prepared for Plug-in modules to realize various communication options
- + Predictive maintenance via advance warning messages
- + Remote access for improved diagnostics



Boiler Control Units – Residential technology

BCU 100



Technical Data

- Wide range power supply 170–264VAC with voltage supervision
- PWM or LIN interface for blower and pump control
- Diverter valve stepper motor interface 24VDC
- DHW turbine 5VDC with supply
- Water pressure switch 5VDC
- Control of pneumatic or electronic gas valve 24VDC
- Ext. spark generator 230VAC
- Flow, return, flue, DHW and outside temperature sensor inputs
- Analog ionization input, all nets, reversed polarity

Mechanical data

- Rast-2.5 and rast-2.5-power direct connection
- PCB dimensions (LxWxH): 200x100x26mm

Benefits of the Boiler Control Unit

- ✓ Pneumatic (CleanEco) or electronic (CleanVario) gas-air ratio control
- ✓ Starts and monitors the boiler
- ✓ Fan control
- ✓ Boiler temperature control and safety temperature limiter
- ✓ Domestic hot water and central heating control
- ✓ Integrated flexible user interface and various display technologies available for standard and customer-specific designs
- ✓ Combines tried and tested hardware and software modules from a comprehensive modular system
- ✓ Flexible production of variants thanks to different electronic component configurations
- ✓ Variant management due to a comprehensive selection of parameter banks
- ✓ One product platform for various methods of gas-air ratio controls

Boiler Control Units – Commercial technology

BCU 900

+ Application

- For commercial applications above 50kW (up to 2MW boilers)
- Integrated cascade control
- Flexibility to configure many systems: preset appliance types
- Configurable inputs and outputs
- Integrated low water cutoff
- Many modes for CH and DHW



+ User Interfaces

- Touchscreen: communication with boiler control via Modbus
- Ethernet connection to web server via web module
- Graphical LCD interface for boiler status, operation and configuration
- Password-protected user levels
- Includes diagnostics software and a smart app for remote control

Boiler Control Units – Commercial technology Packages



Description

- Stand-alone and sequenced devices
- Flexible setup and easy configuration
- Multiple heat demand options (on/off, OpenTherm, 0–10V)
- Internal/external spark igniter or hot-surface igniter
- Primary safeguard functions
- Extra safety- and smart control functions

Cascade operation

Touch screen

User interface

AL-BUS

Modbus

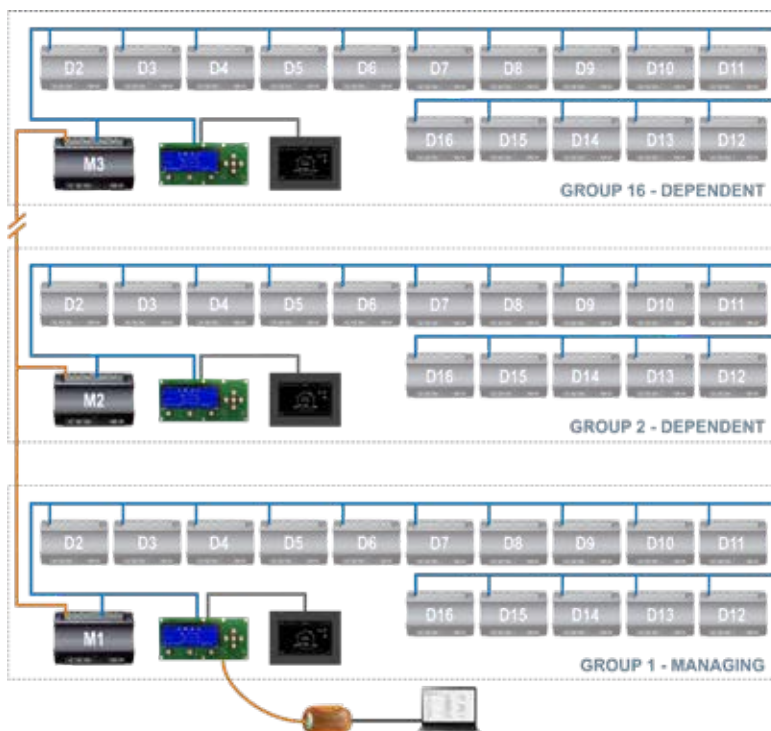
Ethernet

Diagnostics software

Smart app

Packages									
Commercial Plus	16 boilers x 16 modules	✓	900PB Display + 900TS Touchscreen	✓	✓	✓	✓	✓	✓
Commercial	max. 16 boilers	–	900PB Display	✓	✓	optional	✓	✓	✓
Residential Plus	settings only	–	900LB Display	✓	–	–	✓	✓	✓

Commercial Plus with integrated cascade control: Up to 16 boilers x 16 modules (1 managing group and 15 dependent groups) can be connected (max. 256 boilers).



Managing group 1: M1, D2, D3, ...
 Dependent group 2: M2, D2, D3, ...



900PB Display (Cover assembly)




900TS Touchscreen





900LB Display

Boiler control units


ebm-papst in Germany


 **Berlin**
Dipl.-Ing. (TH) Jens Duchow
Händelstraße 7
16341 Panketal
GERMANY
Phone +49 30 944149-62
Fax +49 30 944149-63
Jens.Duchow@de.ebmpapst.com


 **Bielefeld**
Dipl.-Ing. (FH) Wolf-Jürgen Weber
Niehausweg 13
33739 Bielefeld
GERMANY
Phone +49 5206 91732-31
Fax +49 5206 91732-35
Wolf-Juergen.Weber@de.ebmpapst.com


 **Dortmund**
Dipl.-Ing. (FH) Hans-Joachim Pundt
Auf den Steinern 3
59519 Möhnesee-Völlinghausen
GERMANY
Phone +49 2925 800-407
Fax +49 2925 800-408
Hans-Joachim.Pundt@de.ebmpapst.com


 **Frankfurt**
Dipl.-Ing. Christian Kleffmann
Dr.-Hermann-Krause-Straße 23
63452 Hanau
GERMANY
Phone +49 6181 1898-12
Fax +49 6181 1898-13
Christian.Kleffmann@de.ebmpapst.com

 **Halle**
Dipl.-Ing. (TU) Michael Hanning
Lercheneck 4
06198 Salzdahl / OT Lieskau
GERMANY
Phone +49 345 55124-56
Fax +49 345 55124-57
Michael.Hanning@de.ebmpapst.com


 **Hamburg**
Ingenieurbüro Breuell GmbH
Ing. Dirk Kahl
Elektroingenieur
Oststraße 96
22844 Norderstedt
GERMANY
Phone +49 40 538092-19
Fax +49 40 538092-84
Kahl@breuell-hilgenfeldt.de


 **Heilbronn / Heidelberg**
Wolfgang Richter
Büttelsbergweg 18
97980 Bad Mergentheim-Rengershausen
GERMANY
Phone +49 7937 32200-33
Fax +49 7938 81-110
Wolfgang.Richter@de.ebmpapst.com

 **Kassel**
Dipl.-Ing. (FH) Ralph Brück
Hoherainstraße 3 b
35075 Gladenbach
GERMANY
Phone +49 6462 4071-10
Fax +49 6462 4071-11
Ralph.Brueck@de.ebmpapst.com


 **Koblenz**
Winfried Schaefer
Hinter der Kirch 10
56767 Uersfeld
GERMANY
Phone +49 2657 16-96
Fax +49 2657 16-76
Winfried.Schaefer@de.ebmpapst.com

 **Munich**
Dipl.-Wirt.-Ing. (FH) Jens Peter
Landsbergerstraße 14
86932 Pürgen
GERMANY
Phone +49 7971 91909-49
Fax +49 8196 99877-55
Jens.Peter@de.ebmpapst.com

 **Nuremberg**
Dipl.-Wirt.-Ing. (FH) Axel Resch
Dr.-August-Koch-Str. 1
91639 Wolframs-Eschenbach
GERMANY
Phone +49 9875 9783-170
Fax +49 9875 9783-171
Axel.Resch@de.ebmpapst.com


 **Offenburg**
Dipl.-Ing. (FH) Ralf Braun
Hubeneck 21
77704 Oberkirch
GERMANY
Phone +49 7802 9822-52
Fax +49 7802 9822-53
Ralf.Braun@de.ebmpapst.com

 **Stuttgart**
Dipl.-Ing. (FH) Rudi Weinmann
Hindenburgstraße 100/1
73207 Plochingen
GERMANY
Phone +49 7153 9289-80
Fax +49 7153 9289-81
Rudi.Weinmann@de.ebmpapst.com

 **Ulm**
M.Sc. Reinhard Sommerreißer
Einsteinstraße 7a
86674 Baar / Schwaben
GERMANY
Phone +49 8276 5899-775
Fax +49 7938 81-110
Reinhard.Sommerreisser@de.ebmpapst.com

Distributors

 **Frankfurt**
R.E.D. Handelsgesellschaft mbH
Gutenbergstraße 3
63110 Rodgau - Jügesheim
GERMANY
Phone +49 6106 841-0
Fax +49 6106 841-111
info@red-elektromechnik.de
www.red-elektromechnik.de

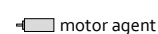
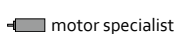
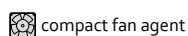
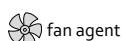
 **Hamburg**
Breuell + Hilgenfeldt GmbH
Oststraße 96
22844 Norderstedt
GERMANY
Phone +49 40 538092-20
Fax +49 40 538092-84
info@breuell-hilgenfeldt.de

 **Munich**
A. Schweiger GmbH
Ohmstraße 1
82054 Sauerlach
GERMANY
Phone +49 8104 897-0
Fax +49 8104 897-90
info@schweiger-gmbh.de
www.schweiger-gmbh.com

● **Express Service-Center** (1 to 5 pieces)

 **North**
Breuell + Hilgenfeldt GmbH
Oststraße 96
22844 Norderstedt
GERMANY
Phone +49 40 538092-20
Fax +49 40 538092-84
info@breuell-hilgenfeldt.de


 **South**
HDS Ventilatoren Vertriebs GmbH
Glaswiesenstraße 1
74677 Dörzbach
GERMANY
Phone +49 7937 80355-20
Fax +49 7937 80355-25
info@hds-gmbh.net
www.hds-gmbh.net



ebm-papst in Europe


Europe

 **Austria**
ebm-papst Motoren & Ventilatoren GmbH
Straubingstraße 17
4030 Linz
AUSTRIA
Phone +43 732 321150-0
Fax +43 732 321150-20
info@at.ebmpapst.com
www.ebmpapst.at

 **Belarus**
ebm-papst Bel AgmbH
4th Montazhnikov side street
House 6, Office 332
BY-220019 Minsk
BELARUS
Phone +375 17 2015216
Fax +375 17 2015216
info@by.ebmpapst.com
www.ebmpapst.by

 **Belgium**
ebm-papst Benelux B.V.
Sales office Belgium-Luxemburg
Romeinsestraat 6/0101
Research Park Haasrode
3001 Heverlee-Leuven
BELGIUM
Phone +32 16 396-200
Fax +32 16 396-220
info@be.ebmpapst.com
www.ebmpapst.be

 **Bulgaria**
ebm-papst Romania S.R.L.
Str. Tarnavei No. 20
500327 Brasov
ROMANIA
Phone +40 268 331859
Fax +40 268 312805
dudasludovic@xnet.ro

 **Croatia**
ebm-papst Industries Kft.
Ezred u. 2.
1044 Budapest
HUNGARY
Phone +36 1 8722-190
Fax +36 1 8722-194
office@hu.ebmpapst.com

 **Cyprus**
Helcoma
E. Rota and Co. OE
Davaki 65
17672 Kallithea-Attiki
GREECE
Phone +30 210 9513-705
Fax +30 210 9513-490
contact@helcoma.gr
www.helcoma.gr

 **Czech Republic / Slovakia**
ebm-papst CZ s.r.o.
Kaštanová 34a
620 00 Brno
CZECH REPUBLIC
Phone +420 544 502-411
Fax +420 547 232-622
info@ebmpapst.cz
www.ebmpapst.cz


 **Denmark**
ebm-papst Denmark ApS
Vallensbækvej 21
2605 Brøndby
DENMARK
Phone +45 43 631111
Fax +45 43 630505
mail@dk.ebmpapst.com
www.ebmpapst.dk

 **Estonia**
ebm-papst Oy, Eesti Filiaal
Kesk tee 21
Aaviku küla, Jüri Tehnпарк
75301 Rae Vald, Harjumaa
ESTONIA
Phone +372 65569-78
www.ebmpapst.ee

 **Finland**
ebm-papst Oy
Puistotie 1
02760 Espoo
FINLAND
Phone +358 9 887022-0
Fax +358 9 887022-13
mailbox@ebmpapst.fi
www.ebmpapst.fi

 **France**
ebm-papst sarl
Parc d'Activités Nord
1 rue Mohler – BP 62
67212 Obernai Cedex
FRANCE
Phone +33 3 88 66 88 03
info@ebmpapst.fr
www.ebmpapst.fr

 **Greece**
HELCOMA
HELLAS IKE
65, Davaki street
17672 Kallithea-Attiki
GREECE
Phone +30 210 9513-705
Fax +30 210 9513-490
contact@helcoma.gr
www.helcoma.gr

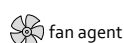
 **Hungary**
ebm-papst Industries Kft.
Ezred u. 2.
1044 Budapest
HUNGARY
Phone +36 1 8722-190
Fax +36 1 8722-194
office@hu.ebmpapst.com

 **Iceland**
RJ Engineers
Stangarhyl 1a
110 Reykjavik
ICELAND
Phone +354 567 8030
Fax +354 567 8015
rj@rj.is
www.rj.is

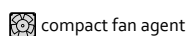
 **Ireland**
ebm-papst UK Ltd.
Chelmsford Business Park
Chelmsford Essex CM2 5EZ
UNITED KINGDOM
Phone +44 1245 468555
Fax +44 1245 466336
sales@uk.ebmpapst.com
www.ebmpapst.co.uk

 **AuBren Limited**
Portlaoise Business & Technology Park
Mountrath Road
Portlaoise, Co. Laois
IRELAND
Phone +353 57 8664343
Fax +353 57 8664346
sales@ie.aubren.com
www.aubren.com

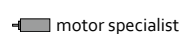
 **Italy**
ebm-papst Srl
Via Cornaggia 108
22076 Mozzate (Co)
ITALY
Phone +39 0331 836201
Fax +39 0331 821510
info@it.ebmpapst.com
www.ebmpapst.it



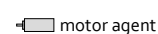
fan agent



compact fan agent




motor specialist



motor agent

ebm-papst in Europe

 **Macedonia**
 ebm-papst Industries Kft.
 Ezred u. 2.
 1044 Budapest
 HUNGARY
 Phone +36 1 8722-190
 Fax +36 1 8722-194
 office@hu.ebmpapst.com

 **Netherlands**
 ebm-papst Benelux B.V.
 Polbeemd 7 - 5741 TP Beek en Donk
 P.O. Box 140 - 5740 AC Beek en Donk
 NETHERLANDS
 Phone +31 492 502-900
 Fax +31 492 502-950
 verkoop@nl.ebmpapst.com
 www.ebmpapst.nl


ebm-papst Heating Systems B.V.
 Van Veldekecade 360
 5216 KT 's-Hertogenbosch
 NETHERLANDS
 Phone +31 73 648 89 00
 Fax +31 73 648 89 11
 info@ebmpapst-hs.nl
 www.ebmpapst-hs.nl


 **Norway**
 ebm-papst AS
 P.B. 173 Holmlia
 1203 Oslo
 NORWAY
 Phone +47 22 763340
 Fax +47 22 619173
 mailbox@ebmpapst.no
 www.ebmpapst.no


 **Poland**
 ebm-papst Polska Sp. z o.o.
 ul. Annopol 4A
 03236 Warszawa
 POLAND
 Phone +48 22 6757819
 Fax +48 22 6769587
 office@ebmpapst.pl
 www.ebmpapst.pl


 **Portugal**
 ebm-papst (Portugal), Lda.
 Centro Empresarial de Alverca
 Rua de Adarse, Vale D'Ervas
 Corpo D / Fracção 3
 2615-178 Alverca do Ribatejo
 PORTUGAL
 Phone +351 218 394 880
 Fax +351 218 394 759
 info@pt.ebmpapst.com
 www.ebmpapst.pt

 **Romania**
 ebm-papst Romania S.R.L.
 Str. Tarnavei Nr. 20
 500327 Brasov
 ROMANIA
 Phone +40 268 331859
 Fax +40 268 312805
 dudasludovic@xnet.ro

 **Russia**
 ebm-papst Rus GmbH
 Olimpiyskiy prospect 29A, office 418
 141006 Mytistschi, Oblast Moskau
 RUSSIA
 Phone +7 495 9807524
 Fax +7 495 5140924
 info@ebmpapst.ru
 www.ebmpapst.ru

 **ebm-papst Ural GmbH**
 Posadsckaja-Strasse, 23(E), 3
 620102 Ekaterinburg
 RUSSIA
 Phone +7 343 2338000
 Fax +7 343 2337788
 Konstantin.Molokov@ru.ebmpapst.com
 www.ebmpapst.ru

 **Serbia & Montenegro**
 ebm-papst Industries Kft.
 Ezred u. 2.
 1044 Budapest
 HUNGARY
 Phone +36 1 8722-190
 Fax +36 1 8722-194
 office@hu.ebmpapst.com

 **Spain**
 ebm-papst Ibérica S.L.
 Avda. del Sistema Solar, 29
 28830 San Fernando de Henares (Madrid)
 SPAIN
 Phone +34 91 6780894
 Fax +34 91 6781530
 ventas@ebmpapst.es
 www.ebmpapst.es

 **Sweden**
 ebm-papst AB
 Äggelundavägen 2
 17562 Järfälla
 SWEDEN
 Phone +46 10 4544400
 Fax +46 8 362306
 info@ebmpapst.se
 www.ebmpapst.se

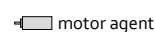
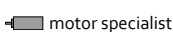
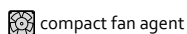
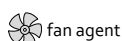
 **Switzerland**
 ebm-papst AG
 Rütisbergstrasse 1
 8156 Oberhasli
 SWITZERLAND
 Phone +41 44 73220-70
 Fax +41 44 73220-77
 verkauf@ebmpapst.ch
 www.ebmpapst.ch

 **Turkey**
 Akantel Elektronik San. Tic. LTD. Sti.
 Atatürk Organize Sanayi
 Bölgesi 10007 SK. No.:6
 35620 Cigli-Izmir
 TURKEY
 Phone +90 232 3282090
 Fax +90 232 3280270
 akantel@akantel.com.tr
 www.ebmpapst.com.tr

 **Ukraine**
 ebm-papst Ukraine LLC
 Lepse Boulevard, 4, Building 21
 03067 Kiev
 UKRAINE
 Phone +38 044 2063091
 Fax +38 044 2063091
 mail@ebmpapst.ua
 www.ebmpapst.ua

 **United Kingdom**
 ebm-papst UK Ltd.
 Chelmsford Business Park
 Chelmsford Essex CM2 5EZ
 UNITED KINGDOM
 Phone +44 1245 468555
 Fax +44 1245 466336
 sales@uk.ebmpapst.com
 www.ebmpapst.co.uk

 **ebm-papst Automotive & Drives (UK) Ltd.**
 The Smithy
 Fidlers Lane
 East Ilsley, Berkshire RG20 7LG
 UNITED KINGDOM
 Phone +44 1635 2811-11
 Fax +44 1635 2811-61
 A&Dsales@uk.ebmpapst.com
 www.ebmpapst-ad.com



ebm-papst in America & Africa

America



Argentina

ebm-papst Argentina S.A.
Parque Industrial Canning Etapa II - Nave
61A, Perito Moreno 845, Canning (1804),
Buenos Aires
ARGENTINA
Phone +54 11 46576135
Fax +54 11 46572092
ventas@ar.ebmpapst.com
www.ebmpapst.com.ar



Brazil

ebm-papst Motores Ventiladores Ltda.
Av. José Giorgi, 301 Galpões B6+B7
Condominio Logical Center
06707-100 Cotia - São Paulo
BRAZIL
Phone +55 11 4613-8700
Fax +55 11 4777-1456
vendas@br.ebmpapst.com
www.ebmpapst.com.br



Canada

ebm-papst Canada Inc.
419 King Street West, Suite 603A
Oshawa, ON, L1J2K5
CANADA
Phone +1 905 420-3533
Fax +1 905 420-3772
sales@ca.ebmpapst.com
www.ebmpapst.ca



Mexico

ebm Industrial S. de R.L. de C.V.
Paseo de Tamarindos 400-A-5to Piso
Col. Bosques de las Lomas
Mexico 05120, D.F.
MEXICO
Phone +52 55 3300-5144
Fax +52 55 3300-5243
sales@mx.ebmpapst.com
www.ebmpapst.com.mx

USA



ebm-papst Inc.
P.O. Box 4009
100 Hyde Road
Farmington, CT 06034
UNITED STATES
Phone +1 860 674-1515
Fax +1 860 674-8536
sales@us.ebmpapst.com
www.ebmpapst.us



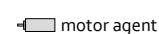
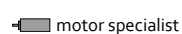
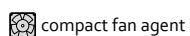
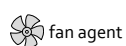
ebm-papst Inc.
Automotive & Drives Business Unit
3200 Greenfield Road, Suite 130
Dearborn, MI 48120
UNITED STATES
Phone +1 313 406-8080
Fax +1 313 406-8081
automotive@us.ebmpapst.com
www.ebmpapst-automotive.us

Africa



South Africa

ebm-papst South Africa (Pty) Ltd.
P.O. Box 3124
1119 Yacht Avenue
2040 Honeydew
SOUTH AFRICA
Phone +27 11 794-3434
Fax +27 11 794-5020
info@za.ebmpapst.com
www.ebmpapst.co.za



ebm-papst in Asien

Asia

 **China**
ebm-papst Ventilator (Shanghai) Co., Ltd.
 WaiGaoQiao Free Trade Zone
No. 418, Huajing Road
No. 2001, Yang Gao (N) Road
200131 Shanghai
P.R. of CHINA
Phone +86 21 5046-0183
Fax +86 21 5046-1119
sales@cn.ebmpapst.com
www.ebmpapst.com.cn

 **Hong Kong**
ebm-papst Hong Kong Ltd.
 Room 17E, MG Tower
133 Hoi Bun Road, Kwun Tong
Hong Kong
P.R. of CHINA
Phone +852 2145-8678
Fax +852 2145-7678
info@hk.ebmpapst.com

 **India**
ebm-papst India Pvt. Ltd.
 26/3, G.N.T. Road, Erukkencherry
Chennai-600118
INDIA
Phone +91 44 25372556
Fax +91 44 25371149
sales@in.ebmpapst.com
www.ebmpapst.in

 **Indonesia**
ebm-papst
 Representative Office Indonesia
German Centre, 4th Floor, Suite 4470
Jl. Kapt. Subijono Dj. Bumi Serpong Damai
Tangerang 15321
INDONESIA
Phone +62 21 5376250-52
Fax +62 21 5388305
sales@id.ebmpapst.com


 **Israel**
Polak Bros. Import Agencies Ltd.
 9 Hamefalsim Street
Kiryat Arie, Petach-Tikva 49514
ISRAEL
Phone +972 3 9100300
Fax +972 3 5796679
polak@polak.co.il
www.polak.co.il

 **Japan**
ebm-papst Japan K.K.
 Attend on Tower 13F
Shinyokohama 2-8-12, Kohoku-ku
222-0033 Yokohama-City, Kanagawa
JAPAN
Phone +81 45 47057-51
Fax +81 45 47057-52
info@jp.ebmpapst.com
www.ebmpapst.jp

 **Korea**
ebm-papst Korea Co. Ltd.
 A-13F, Doosan The Land Tower
152, Magokseo-ro
Gangseo-gu
Seoul 07788
KOREA
Phone +82 2 366213-24
Fax +82 2 366213-26
info@kr.ebmpapst.com
www.ebmpapst.co.kr

 **Malaysia**
ebm-papst Malaysia
 Representative Office
No. 16-1, Jalan Putra Mahkota 7/5A
Putra Heights
47650 Subang Jaya
Selangor Darul Ehsan
MALAYSIA
Phone +60 3 5192-7688
Fax +60 3 5614-3078
sales@my.ebmpapst.com

 **Philippines**
ebm-papst SEA Pte. Ltd.
 Representative Office (Philippines)
Coherco Financial Tower
Trade Street Corner Investment Drive
Unit 1101 Madrigal Business Park
1799 Ayala Alabang / Muntinlupa City
Telefon: +63 02 8042747
Fax: +63 02 8042757
sales@ph.ebmpapst.com

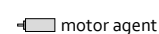
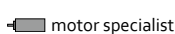
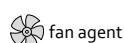
 **Singapore**
ebm-papst SEA Pte. Ltd.
 10 Changi South Street 2
#01-01/02
Singapore 486596
SINGAPORE
Phone +65 65513789
Fax +65 68428439
sales@sg.ebmpapst.com

 **Taiwan**
ETEKO Engineering & Trading Corp.
 10F-I, No. 92, Teh-Wei Str.
Tsow-Inn District, Kaohsiung
TAIWAN
Phone +886 7 557-4268
Fax +886 7 557-2788
eteco@ms22.hinet.net
www.ebmpapst.com.tw

 **Thailand**
ebm-papst Thailand Co., Ltd.
 99/9 Moo 2, Central Chaengwattana Tower
8th Floor, Room 801-802
Chaengwattana Road Bangtarad, Pakkret
11120 Nonthaburi
THAILAND
Phone +66 2 8353785-7
Fax +66 2 8353788
salesdept@th.ebmpapst.com

 **United Arab Emirates**
ebm-papst Middle East FZE
 PO Box 17755
Jebel Ali Free Zone / FZS1 / AP05
Dubai
UNITED ARAB EMIRATES
Phone +971 4 88608-26
Fax +971 4 88608-27
info@ae.ebmpapst.com
www.ebmpapst.ae

 **Vietnam**
ebm-papst SEA Pte. Ltd.
 Representative Office Vietnam
Floor M, Phuong Long Building,
506 Nguyen Dinh Chieu Street,
Ward 4, District 3,
Ho Chi Minh City
VIETNAM
Phone +84 28 3929 0699
Fax +84 28 3929 0669
sales@vn.ebmpapst.com

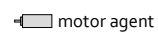
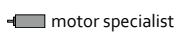
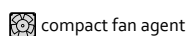
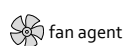
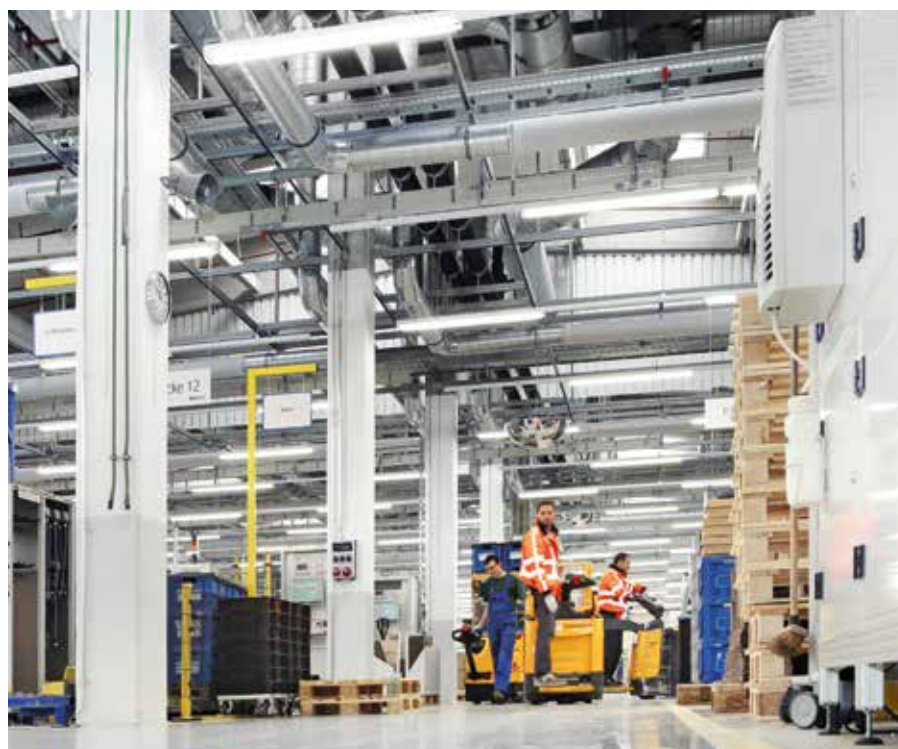


ebm-papst in Ozeanien

Oceania

 **Australia**
ebm-papst A&NZ Pty Ltd.
10 Oxford Road
Laverton North, Victoria, 3026
AUSTRALIA
Phone +61 3 9360-6400
Fax +61 3 9360-6464
sales@ebmpapst.com.au
www.ebmpapst.com.au

 **New Zealand**
ebm-papst A&NZ Pty Ltd.
61 Hugo Johnston Drive, Unit H
Penrose 1061, Auckland
NEW ZEALAND
PO Box 112278,
Penrose 1642, Auckland
Phone +64 9 525-0245
Fax +64 9 525-0246
sales@ebmpapst.com.au
www.ebmpapst.com.au



ebmpapst

the engineer's choice

ebm-papst
Landshut GmbH

Hofmark-Aich-Straße 25
84030 Landshut
Germany
Phone +49 871 707-0
Fax +49 871 707-465
info3@de.ebmpapst.com