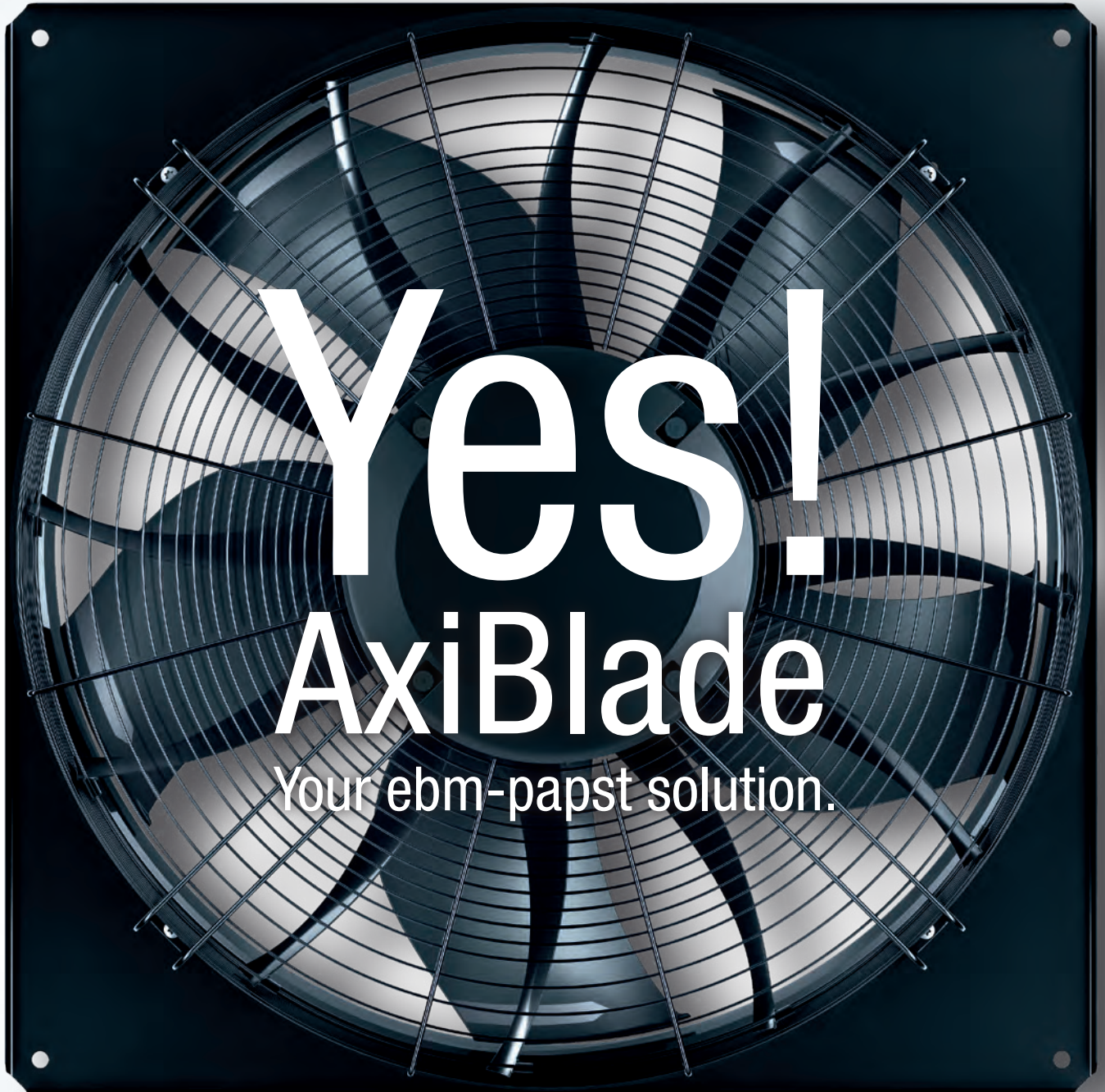


One system for all applications?



**Yes!**  
**AxiBlade**

Your ebm-papst solution.

**ebmpapst**

The engineer's choice

# Your ebm-papst solution: AxiBlade.

Air conditioning and refrigeration systems can have very different requirements. You want to offer a customized solution in all cases, so the heart of the system – the fan – must also be customized.

With the new AxiBlade, ebm-papst has developed a system that perfectly satisfies this need. By optimizing all the efficiency-relevant components and enabling maximum configuration flexibility, highly efficient fans become “Your ebm-papst solution.”

The new AxiBlade has many different and improved features while maintaining the same footprint. They are exactly the same as the industry standard, so the end device requires only minimal design changes. Only the height has been modified.

The AxiBlade is very low. This is not the most important factor for installation, but is also a major advantage for transport and ultimately saves costs.

## Increased refrigerating performance

- Significant increase in airflow to the high-performance heat exchanger
- Enables heat exchanger downsizing

## Lower sound emission

- Optimized aerodynamics
- Noise reduction up to 8 dB(A)

## Low installation height

- Decisive for efficient transport and loading

AR

# Have we really considered everything?

## Yes!

- Each fan component optimizes the overall system in a way that targets the specific requirements
- The best values with respect to noise level and overall efficiency

## Improved performance.

All components have been optimized for maximum system performance. The results are a static efficiency of up to 54 % and up to 8 dB(A) less sound emission with respect to the HyBlade® series.

## Maximum flexibility.

For all applications, the modular system of the AxiBlade series provides the ideal efficiency or noise level for meeting your requirements.

## Very simple.

We achieve this performance improvement with the same footprint. This means you will not have to implement any design-related conversion measures on your application. The new AxiBlade series is an exact replacement.

## Improved power

- New standards of power density for your application
- Significantly higher power per square meter of installation area

## Rugged design

- Top protection against splash water (to IP 55)
- Durable, corrosion-resistant components for the highest standards

## Same installation area

- Exterior dimensions identical to industry standard
- Simple to install with few screws

## Bring the AxiBlade to life – with augmented reality.

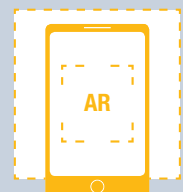
### 1. Install the app

Go to your app store and install the free ebm-papst augmented reality app: AxiBlade.



### 2. Scan the images

Point the camera to the images identified with this icon and you're ready.



# Do we deliver the best for every operating point?

## Yes!

- From application-specific adjustments
- With solutions engineered down to the last detail
- In a broad performance spectrum

In order to satisfy the requirements of heat exchangers with different designs even better, we have analyzed the applications for the fans used in the market in detail.

Our solution is a modular concept that provides maximum flexibility so that fans can be operated as close to the ideal state as possible in typical operating ranges. Here are some examples:

## Operating range 1.

Your requirements: Low to medium back pressure  
(up to approx. 200 Pa/0.80 in wg)

Our solution: AxiBlade

The details: Complete fan system comprising motor, impeller, guard grill and fan housing.

## Operating range 2.

Your requirements: High back pressure (up to approx. 290 Pa/1.16 in wg)

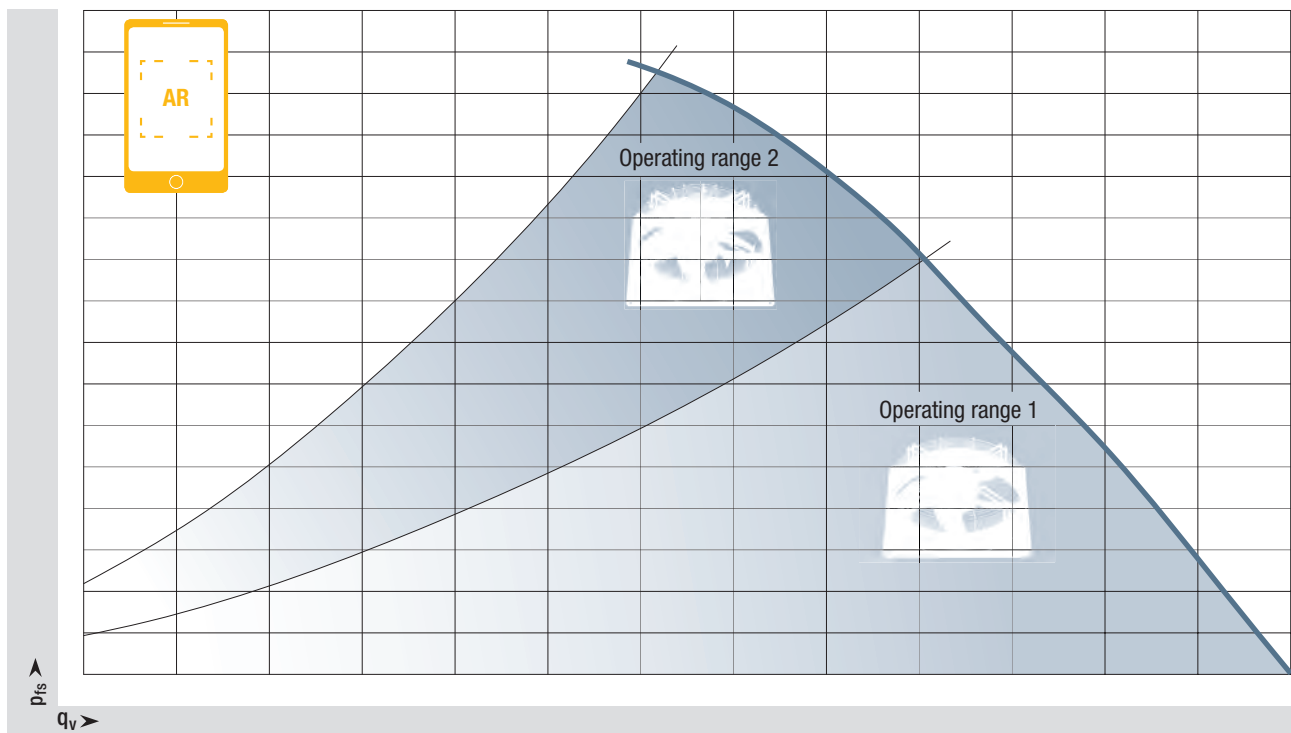
Our solution: AxiBlade

The details: The guide vanes minimize the exhaust turbulence, the dynamic losses thus also contribute to the energy balance.

## Noise.

If noise level is your major concern, we can reduce the sound pressure by up to **8 dB(A)**.

## Air performance

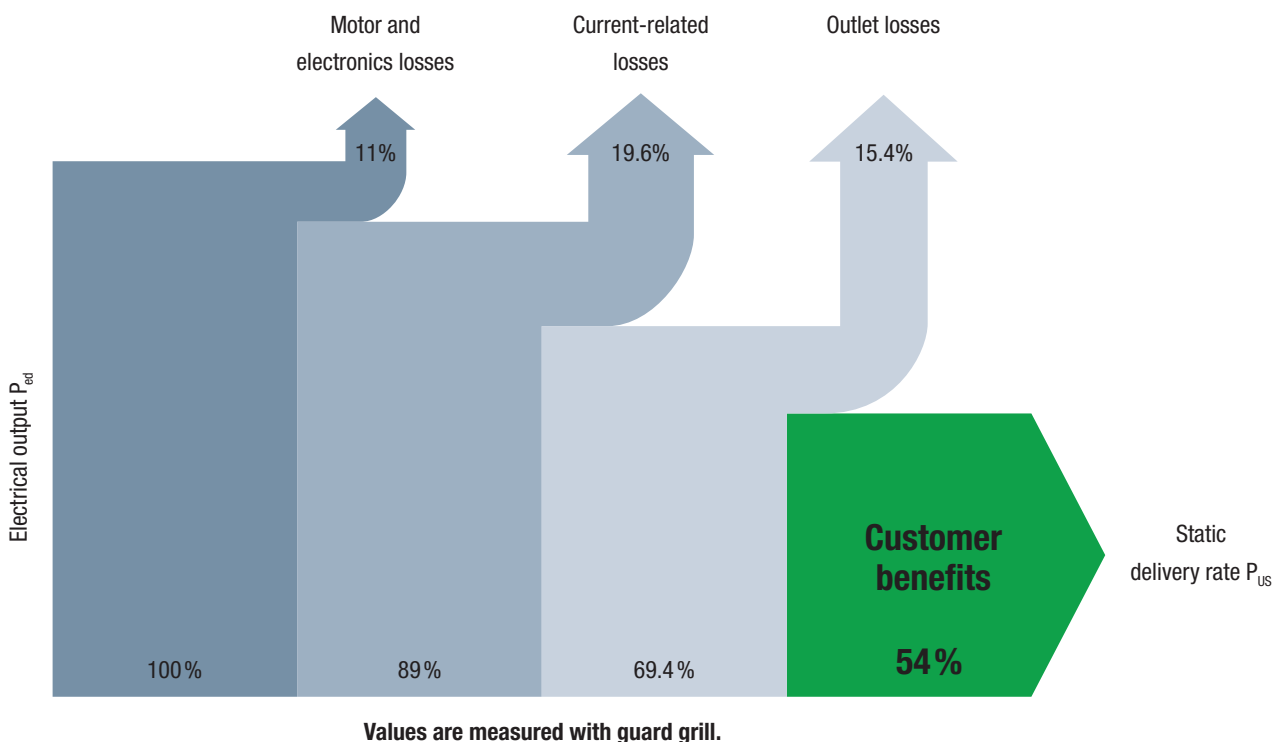


AxiBlade operating points for typical applications. The dark areas represent high back pressures up to 290 Pa, where the system with guide vanes can make the most of its strengths. The light areas represent low to medium back pressures (up to approx. 200 Pa).

# Does AxiBlade tap all of its optimization potential?

## Yes!

For the new AxiBlade, the overall system consisting of an impeller, motor, housing and control electronics is taken into consideration. After all, turning the “familiar setscrews” is the only way to fully tap the potential of a fan. As the figure shows, today aerodynamics is practically the only area in which decisive improvements can be achieved. In the process, the exact installation situation and the application-specific operating points must be considered so the fans work with the best positive efficiency when they are in operation.



### Modular design – the right solution for every pressure range.

With fans, different back pressures have to be taken into consideration depending on the application and installation conditions. There is no fan that will work with the same efficiency or noise level under all conditions; the search for an all-purpose unit will be futile. However, with their modular design, the AxiBlade axial fans are very flexible in this regard. Components can be combined depending on the pressure ranges required and the fans can be produced accordingly. For example, optimized Plug & Play system solutions are available for the conditions expected for an application.

### Each detail counts.

The complete modular system consists of a fan housing with an aerodynamically optimized geometry and guide vanes. The pressure-raising effect of the diffuser minimizes the outlet losses. In addition, there are impellers with a profiled blade geometry and winglets that are harmonized with the respectively installed motor. This, too, increases efficiency and reduces noise. Users can have GreenTech EC motors with integrated control electronics or conventional AC motors installed as drives. And the guard grills, which are matched to the various combinations, are also aerodynamically optimized. Not only do they protect against accidental contact, but they also contribute to the high overall efficiency of the axial fans. In this fashion, the new axial fans can be optimally configured for a given application.



One benefit after the other.



#### FlowGrid

- + **Reduced noise range**
  - Low noise level
  - Significantly reduced tonal noise
- + **Remaining efficiency**
  - Unchanged air performance
  - Low power consumption remains constant
- + **Effective environmental protection**
  - Noise reduction as an essential component of environmentally friendly operation
- + **Robust version**
  - Made of durable composite material



#### Fan housing

- + **Optimized aerodynamics**
  - Optimized inlet ring for maximum efficiency and quiet operation
- + **Simple installation**
  - Identical exterior dimensions based on the industry standard
  - Easily installed with only a few screws
- + **Robust design**
  - Resistant, corrosion resistant, sendzimir galvanized and coated sheet steel for the highest standards



#### Impeller

- + **High efficiency**
  - Profiled blade geometry and winglets for maximum efficiency
- + **Quiet operation**
  - Aerodynamically optimized form for noise reduction
- + **Innovative materials**
  - Impeller made of durable composite material
  - UV and corrosion resistant



#### GreenTech EC motor

- + **Top energy efficiency**
  - High efficiency
  - High power density
  - Optimized thermal management for minimum self-heating
- + **Long service life**
  - Very long service life through no-maintenance ball bearing, brushless commutation and minimum self-heating
- + **Extremely durable**
  - Top spray water protection thanks to protection class IP 55
- + **Safe operation**
  - Insulated bearing system to prevent bearing currents
- + **Unrivaled compactness**
  - An axial fan unit: External running motor is integrated directly into the impeller





### Electronics

- + Precision control**
  - Infinitely variable speed control by 0–10 V DC/PWM control signal or MODBUS-RTU
  - Remote maintenance and monitoring via MODBUS-RTU interface
- + Universal applicability**
  - Suitable for use with 50- and 60-Hz grids
  - Worldwide voltage ranges and grid forms
- + Safe operation**
  - Safety provided by integrated locked rotor and thermal overload protection
  - Status LED
- + Simple commissioning**
  - Simple hook-up via terminal box
  - Plug & Play: no adjustment effort required
  - RFID for wireless parameterization
- + Maximum flexibility**
  - Programmable interface



### Guide vanes

- + Maximum efficiency**
  - Integrated guide system minimizes aerodynamic turbulence for maximum efficiency and minimum noise
- + Aerodynamically perfected**
  - Optimized internal diffuser in combination with guide vanes reduces turbulence and increases air performance

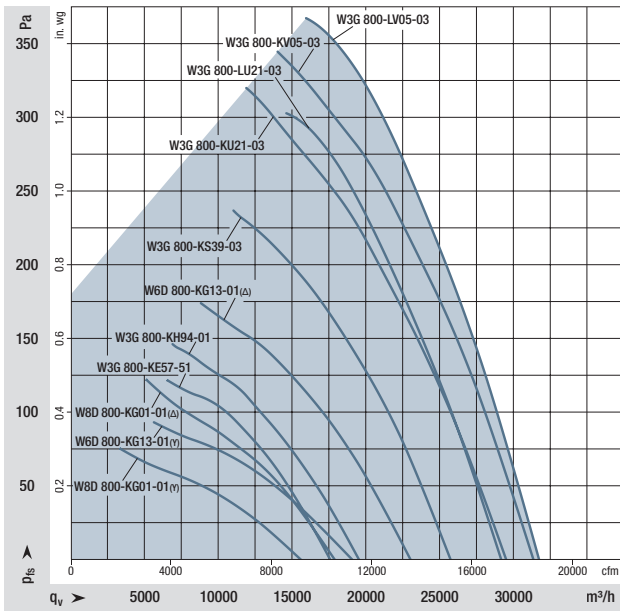


### Guard grill

- + Safe operation**
  - Motor cover as protection against splash water
  - Contact protection according to standard DIN EN ISO 13857
- + Rugged design**
  - Double-coated metal ring guard
- + Aerodynamically optimized**
  - Innovative design minimizes pressure loss

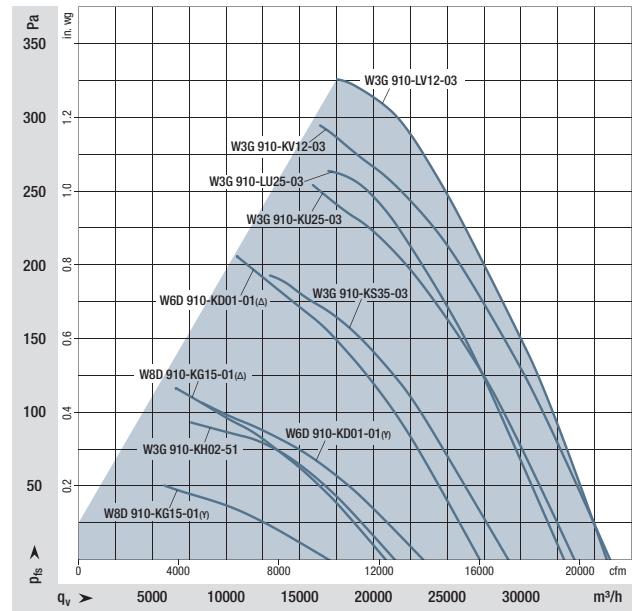


# Top values for every operating point.



Size 800 (AC/EC)

Values are measured with guard grill.



Size 910 (AC/EC)

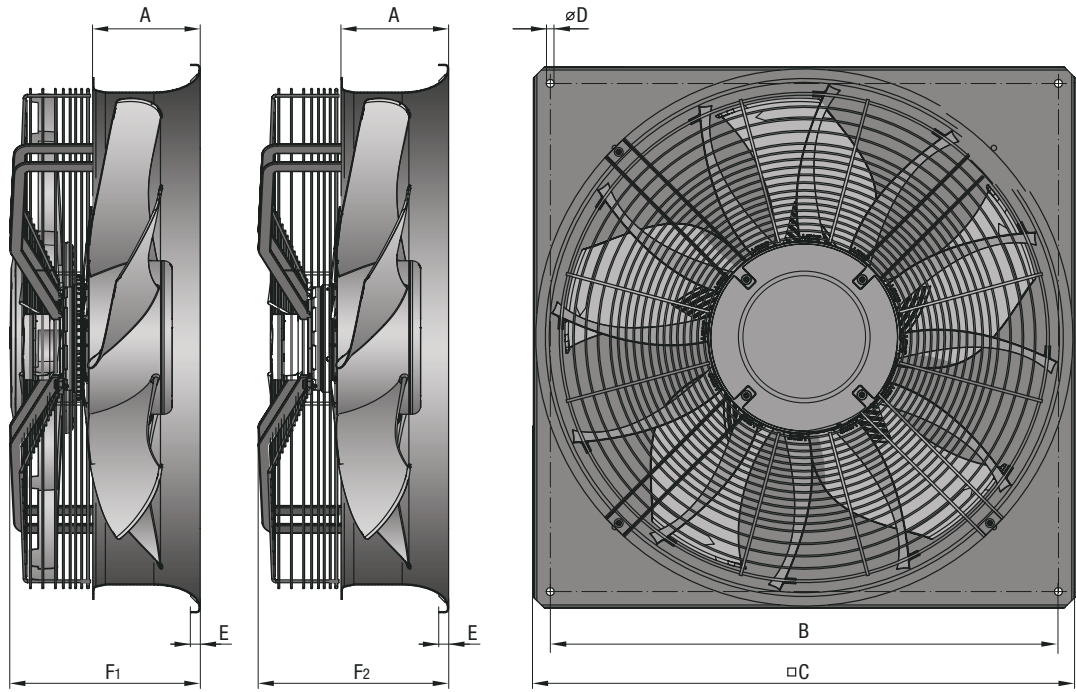
Nominal data			Nominal voltage	Frequency	Speed	Max. input power <sup>(1)</sup>	Max. input current <sup>(1)</sup>	Perm. ambient temperature	Weight	
Size	Article number	Motor	VAC	Hz	rpm	W	A	°C	kg	
800	EC	W3G 800-KE57-51	3~ 380-480	50/60	720	660	1.0	-25...+60	32	
		W3G 800-KH94-01	3~ 380-480	50/60	780	860	1.4	-25...+60	34	
		W3G 800-KS39-03	3~ 380-480	50/60	960	2,000	3.1	-25...+60	43	
		W3G 800-KU21-03	3~ 380-480	50/60	1,100	2,900	4.5	-25...+60	48	
		W3G 800-LU21-03	3~ 380-480	50/60	1,100	2,560	4.0	-25...+60	52	
		W3G 800-LV05-03	3~ 380-480	50/60	1,200	3,300	5.0	-25...+60	58	
		W3G 800-KV05-03	3~ 380-480	50/60	1,150	3,400	5.2	-25...+60	53	
	AC	W6D 800-KG13-01	AC	3~ 400	50	870/650	1,430/840	2.8 Δ/1.6 Y	-25...+60	44
W8D 800-KG01-01		AC	3~ 400	50	680/540	730/460	5.5 Δ/1.7 Y	-25...+60	44	
910	EC	W3G 910-KH02-51	3~ 380-480	50/60	610	640	1.0	-25...+60	43	
		W3G 910-KS35-03	3~ 380-480	50/60	850	1,770	2.8	-25...+60	47	
		W3G 910-KU25-03	3~ 380-480	50/60	980	2,470	3.9	-25...+60	52	
		W3G 910-LU25-03	3~ 380-480	50/60	980	2,370	3.8	-25...+60	58	
		W3G 910-LV12-03	3~ 380-480	50/60	1,070	3,080	4.7	-25...+60	63	
		W3G 910-KV12-03	3~ 380-480	50/60	1,050	3,200	4.9	-25...+60	59	
		AC	W6D 910-KD01-01	AC	3~ 400	50	870/640	1,920/1,170	3.8 Δ/2.2 Y	-25...+60
	W8D 910-KG15-01		AC	3~ 400	50	630/430	900/480	2.1 Δ/1.0 Y	-25...+60	43

Subject to change. Y: AC motor star circuit diagram; Δ: AC motor delta circuit diagram  
 (1) Nominal data at operating point with maximum load and 400 VAC

Variants with conduit connection on request.  
 Data is subject to change without notice at ebm-papst discretion.



The new standard.



### Dimensions

Size	Article number	Motor	A	B	C	D	E	F1	F2	
800	EC	W3G 800-KE57-51	EC	190	910	970	∅ 14.5 (4x)	17	–	338
		W3G 800-KH94-01	EC	190	910	970	∅ 14.5 (4x)	17	–	338
		W3G 800-KS39-03	EC	190	910	970	∅ 14.5 (4x)	17	–	334
		W3G 800-KU21-03	EC	190	910	970	∅ 14.5 (4x)	17	–	334
		W3G 800-LU21-03	EC	190	910	970	∅ 14.5 (4x)	17	350	–
		W3G 800-LV05-03	EC	190	910	970	∅ 14.5 (4x)	17	350	–
		W3G 800-KV05-03	EC	190	910	970	∅ 14,5 (4x)	17	–	334
	AC	W6D 800-KG13-01	AC	190	910	970	∅ 14.5 (4x)	17	–	336
W8D 800-KG01-01		AC	190	910	970	∅ 14.5 (4x)	17	–	336	
910	EC	W3G 910-KH02-51	EC	205	1,010	1,070	∅ 14.5 (4x)	20	–	334
		W3G 910-KS35-03	EC	205	1,010	1,070	∅ 14.5 (4x)	20	–	338
		W3G 910-KU25-03	EC	205	1,010	1,070	∅ 14.5 (4x)	20	–	338
		W3G 910-LU25-03	EC	205	1,010	1,070	∅ 14.5 (4x)	20	352	–
		W3G 910-LV12-03	EC	205	1,010	1,070	∅ 14.5 (4x)	20	352	–
		W3G 910-KV12-03	EC	205	1,010	1,070	∅ 14,5 (4x)	20	–	338
		AC	W6D 910-KD01-01	AC	205	1,010	1,070	∅ 14.5 (4x)	20	–
	W8D 910-KG15-01		AC	205	1,010	1,070	∅ 14.5 (4x)	20	–	343

All specifications in mm.  
Data sheets available on request.  
Data is subject to change without notice at ebm-papst discretion.

# ebm-papst FanScout: click your way to the optimum AxiBlade.

Our axial fans can be configured individually for each application, and it is important to correctly consider all the relevant aspects when selecting your axial fan. When making your selection, you can rely on our experts' many years of experience – and on our professional fan selection software as well.

The ebm-papst FanScout has proven itself with its combination of user friendliness and real-world measured values. Not only is the performance of the individual fan components measured but also that of the fan as a complete system. The program allows you to quickly select the best fan for your application, to describe and modify the operating behavior and to document the technical specifications. During this process, factors such as air performance, operating time and installation space can be taken into account. TÜV SÜD has tested the difference between the actual measurements and the data calculated using the software and assigned the accuracy of the calculation to the highest class.

## Exact presentation of the life cycle costs:

The costs of everything from operation, procurement and installation to service can be calculated over a time period that can be individually defined. Practical: The software can be integrated into your device's configuration program very easily, via DLL interface.

## The best part:

ebm-papst will pre-select the products that are suitable for you. This saves you the trouble of searching through the broad product portfolio and helps you configure your application in advance.

## ebm-papst FanScout is available to our customers only.

Please contact your personal ebm-papst representative.



## About ebm-papst.

*As a leader in technologies for ventilation and drive engineering, ebm-papst is in demand as an engineering partner in many sectors. With over 15,000 different products, we provide the right solution for just about any challenge. Our fans and drives are reliable, quiet and energy-efficient.*



### **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 pioneers and leaders in the development of high-efficiency EC technology. Already today almost our entire product range is also available with GreenTech EC technology. The list of benefits is long: higher efficiency, low maintenance, longer service life, sound reduction, intelligent control characteristics and incomparable energy efficiency.

#### **Proximity to our customers.**

ebm-papst has 25 production locations worldwide (including facilities in Germany, China and the USA), together with 49 sales offices, each of which has a dense network of sales representatives and distributors. 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, ISO/TS 16949-2 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 sporting, cultural activities and education. That's what makes us a leading company – and an ideal partner for you.

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