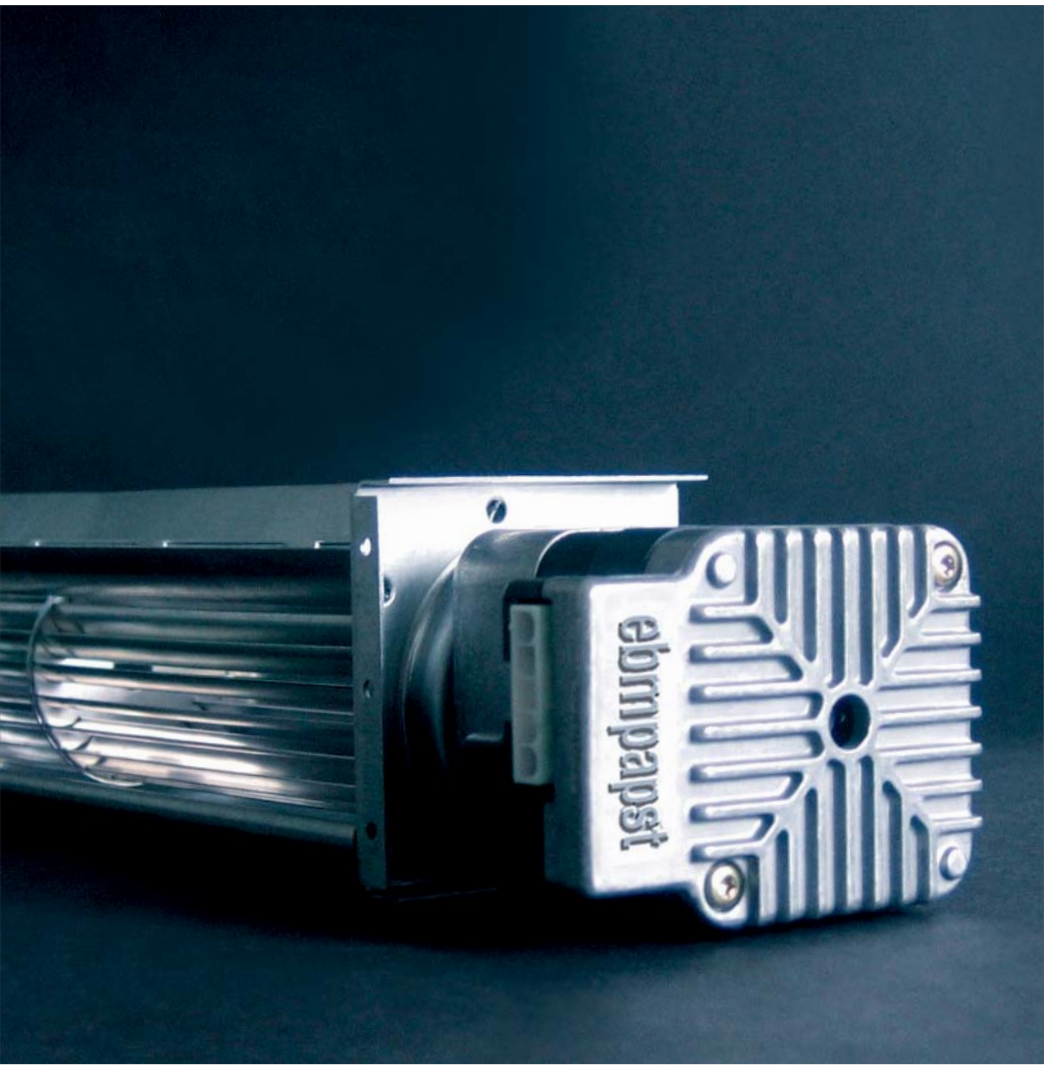
Tangential blowers with EC motors



Performance and intelligence that pay off

ebmpapst

A plus in output, efficiency and more...

Reliable, durable and extremely quiet – the outstanding features of tangential blowers from ebm-papst. For decades, they have been tried and tested in a wide variety of applications that require the specific characteristics of a flat fan design. Depending on the application, tangential blowers with EC motors have become increasingly popular, for example when modulation capacity and safety extra-low voltage are required. EC tangential blowers feature many other beneficial properties that make equally high-performance and energy-efficient end products a reality. Frequently, this provides critical competitive advantages.

ebm-papst tangential blowers:
one principle, virtually limitless applications

The tangential flow principle is suitable for an extremely wide variety of applications that require an air supply over a wide surface. The very flat design of our products, and the resulting ease of integration, even into tight installation situations, is a result of the mostly small ratio of the shaft diameter to the shaft length. The large intake and discharge cross-section allows a high air flow at low flow rates. ebm-papst tangential blowers also feature a long thrust range and very low noise levels.

ebm-papst EC technology:
A plus in output, efficiency and more ...

Moving air intelligently, minimizing energy consumption, maximizing output: you can do all of this and more with EC technology from ebm-papst. Our tangential blowers with EC motors save money and natural resources thanks to their high efficiency, continuously variable controllability over analog or digital inputs, long, maintenance-free service life and robustness. In addition, they are extremely quiet in operation. Furthermore, EC technology enables cost-effective integration of both simple and complex controls. Also, unlike AC products, the safety extra-low voltage (12 and 24 V) allows simpler electrical fuse protection.

When you decide to incorporate the benefits of EC technology into your application, you also take advantage of the edge in experience and development provided by the world market leader in fan and drive engineering. With our skills and knowledge, we can provide not only standardized solutions, but also customer and application-specific solutions for complex designs, customized installation situations or specific requirements for controllability. As your engineering partner, we provide in addition to EC technology, ideas and commitment that contribute to the success of your products.

Small size, big effect: the QG 030 series of

- Tangential blowers with electronically commutated direct current motors
- Fully integrated electronics; with electronic reverse polarity, blocking and overload protection with PTC resistor; many are impedance-protected
- Shaft diameter of 30 mm
- Motor with ball bearing system, blower impeller bracket with sliding bearings
- Impeller and ducted housing made of aluminum, housing side parts made of plastic
- Clockwise direction of rotation looking at rotor, air outlet from housing window
- Electrical connection to 2 single wires, wire ends bared and tin-plated

QG 030

QL 4

QLK 45

Nominal data		Curve	Nominal voltage	Air flow	Max. pressure increase	Input capacity	Speed	Weight	Shaft length
Motor on right*	**Motor on left**		VDC	m^3/h	Pa	W	min^{-1}	kg	mm
QG 030-148/12		**A** ①	12	75		6,2		0,23	148
QG 030-198/12		**A** ②	12	100		8,0		0,29	198
QG 030-303/12		**A** ③	12	140		8,7		0,38	303
QG 030-353/12		**A** ④	12	155		9,6		0,41	353
QG 030-148/14		**A** ①	24	75		6,2		0,23	148
QG 030-198/14		**A** ②	24	100		8,0		0,29	198
QG 030-303/14		**A** ③	24	140		8,7		0,38	303
QG 030-353/14		**A** ④	24	155		9,6		0,41	353
QL 4/1000-2212	QL 4/0010-2212	**B** ①	24	35	10	5	2250	0,55	100
QL 4/1500-2212	QL 4/0015-2212	**B** ②	24	60	12	5	2150	0,6	150
QL 4/2000-2212	QL 4/0020-2212	**B** ③	24	75	12	6	2000	0,65	200
QL 4/2500-2212	QL 4/0025-2212	**B** ④	24	110	15	7	2250	0,7	250
QL 4/3000-2212	QL 4/0030-2212	**B** ⑤	24	130	15	7	2200	0,75	300
QLK 45/1200-2212	QLK 45/0012-2212	**C** ①	24	80	50	7	2250	0,65	120
QLK 45/1800-2212	QLK 45/0018-2212	**C** ②	24	110	55	8	2050	0,7	180
QLK 45/2400-2212	QLK 45/0024-2212	**C** ③	24	160	60	10	2050	0,75	240
QLK 45/3000-2212	QLK 45/0030-2212	**C** ④	24	190	60	11	1900	0,8	300
QLZ 06/1200-2212	QLZ 06/0012-2212	**D** ①	24	120	75	10	2100	0,7	120
QLZ 06/1800-2212	QLZ 06/0018-2212	**D** ②	24	180	80	15	2050	0,75	180
QLZ 06/2400-2212	QLZ 06/0024-2212	**D** ③	24	220	80	17	1800	0,8	240
QLN 65/1200-2212	QLN 65/0012-2212	**E** ①	24	160	110	14	2200	0,75	120
QLN 65/1800-2212	QLN 65/0018-2212	**E** ②	24	210	85	16	1850	0,8	180

*) Corresponds to dimensioned drawing; technical data apply to operation with unimpeded airflow at rated voltage; subject to modifications

QL 4, QLK 45, QLZ 06, QLN 65 series

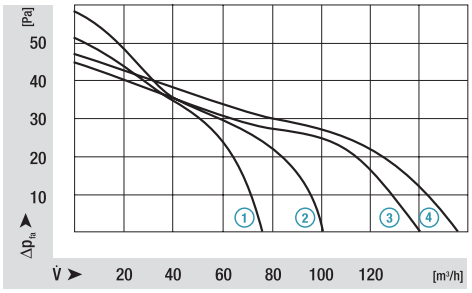
- Tangential blowers with electronically commutated direct current motors
- Fully integrated electronics
- Variety of shaft diameters: 40 mm, 45 mm, 60 mm to 65 mm
- Vertical or horizontal installation orientation with motor on bottom
- System of protection IP20, insulation class F
- Permitted ambient temperature 0–60 °C

QLZ 06

QLN 65

Curves

A



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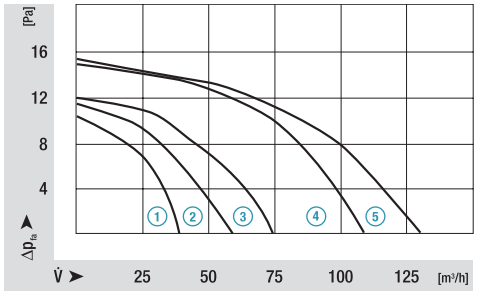

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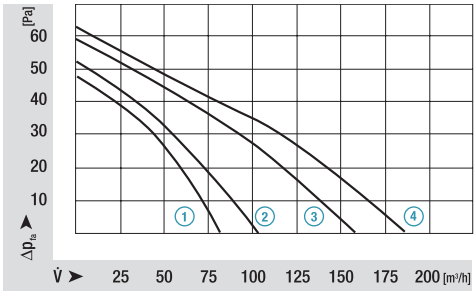

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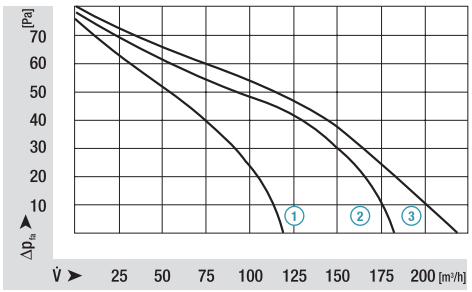
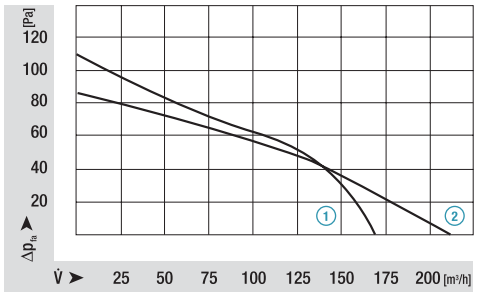
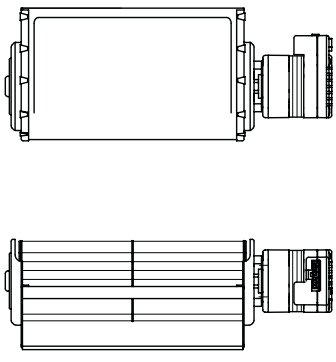
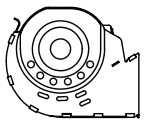


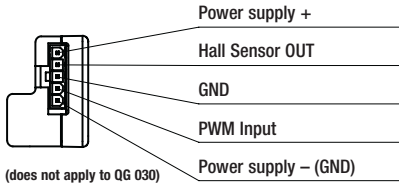
E

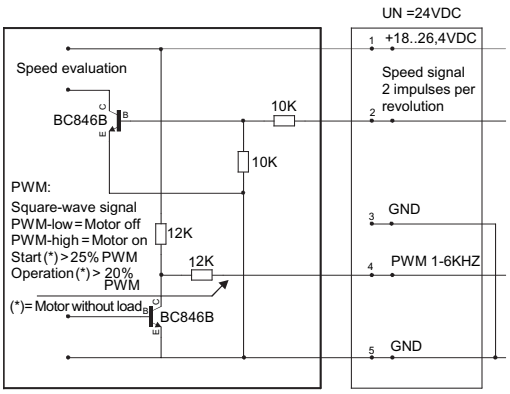


Design and connections









Example of customer-side connections

Interface

EC technology: a winner for every industry!

Whether for fireplaces or other heating applications, climate control systems, freezers, bus heating systems or advanced electronics cooling: all these applications share the need for ventilation with a low overall height and high air flow at low flow rates. Tangential blowers from ebm-papst are the ideal solution, particularly when driven by EC motors. With all of these advantages, ebm-papst EC technology is a winner for every industry: in output, energy efficiency and an exceptionally long service life.

Heating engineering	– Fireplaces – Underfloor convection heating
HVAC technology	– Ceiling-mounted units – Humidifiers
Refrigeration technology	– Beverage coolers – Freezers
Automotive	– Bus heaters – Forklift battery cooling – Mobile home ventilation
Telecommunications	– Electronics cooling
Medical technology	– Diagnostic equipment – X-ray equipment – Incubators
Optics/office technology	– Lamp cooling – Copiers – Printing machinery/electronics cooling
Food service	– Coffee machines for cafeterias and canteen kitchens

Advantages of EC technology over AC technology

- **Significantly higher efficiency**
- **Substantial energy savings**
- **Simple, electrical fuse protection with safety extra-low voltage, 12 and 24 V DC**
- **Long, maintenance-free service life**
- **Outstanding controllability: can be modulated using analog signal (0–10 V) or PWM (pulse width modulation signal)**
- **Easily interchangeable thanks to standardized connections**

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Subject to technical modifications.

ebm-papst EC tangential blowers for your application: the right decision for top-of-the-line quality and performance that pay off. Let your personal contact know what your needs and specific tasks are. He or she is always there for you, gladly providing advice and dedicated support for your individual project. Would you like more information about our products and services? Just request our current product catalogs and brochures. One quick call is all it takes.

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