



VORT QBK POWER F400 RANGE



Dual-use fan boxes with belt and pulley transmission, designed to ensure a proper ventilation for professional and industrial kitchens





VORTICE S.p.A. is part of a multinational group, **VORTICE GROUP**, which operates through its own companies or local distributors in over 90 countries worldwide and has a rich product portfolio that guarantees air quality and climate comfort. The headquarters of VORTICE S.p.A are in Tribiano (Milan).



VORTICE GROUP also includes:

[1]
VORTICE UK Ltd., English branch of VORTICE S.p.A, established in 1977 and based in Burton upon Trent.

[2]
VORTICE INDUSTRIAL, since 2010, following the acquisition of Loran srl, based in Isola della Scala (VR).

[3]
VORTICE Ventilation System, a company inaugurated in 2013 with the headquarters in Changzhou, China.

[4]
VORTICE Latam, based in Alajuela in Costa Rica, since 2012.

[5]
CASALS VENTILACIÓN AIR INDUSTRIAL S.L., historic Spanish brand, based in Sant Joan de les Abadesses, Girona, acquired in 2019.



QBK POWER F400 RANGE

Dual-use fan boxes with belt and pulley transmission



Designed to ensure that professional and industrial kitchens can be ventilated properly, whilst also ensuring that heat and fumes can be quickly extracted in emergency conditions, in compliance with the requirements specified by EN 12101-3: 2015 standards. In relation to this standard, the fan boxes have been APPLUS certified.



Certification of conformity to EN 12101-3 standards issued by APPLUS

Certifications

The Industrial Range products comply with the following European directives and regulations:

Electromagnetic compatibility standards

- EN 55014-1; EN 55014-2; EN 61000-3-2; EN 61000-3-3

Standards associated with the Machinery Directive

- EN 60204-1; EN 12100; EN 12499; EN 13857

Certification of conformity with the standard (EN 12101-3)

Standards associated with measuring performance levels (ISO 5801)

Standards for extracting hot fumes (EN 12101-3)

Machinery Directive (2006/42/CE)

EMC Directive (2014/30/CE)

ErP Directive (2009/125/CE)

ErP Regulation no. 327/2011

CONSTRUCTION FEATURES

- Rectangular suction ducts and inlets, with integrated fittings for coupling to the pipeline.
- Internal nozzles for rotors coupling, to maximise operational levels of efficiency.
- 230/400V-50Hz power supply for motors of up to 4 kW; 400/690V-50Hz power supply for higher outputs.
- Belt and pulley transmission outside of the air flow, with integrated grids for protecting the belts.
- Belt bearings specifically designed for withstanding high temperatures.
- Maximum temperature of the treated fluid: 110 °C
- Custom versions, optimised for reaching specific working points, and characterised by various supply voltages or with vertical outlet muzzles, are available on request.

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01

Structure with panels

made from thermally galvanised steel and acoustically insulated.

02

Three-phase asynchronous motors

Single or dual speed in class H, with IP55 protection, 400 °C/2h certified.

03

Centrifugal rotors

with dual suction and forward-facing blades

04

Maximum temperature

for continuous operation: +60 °C.



Applus⁺

Certification of conformity to EN 12101-3 standards issued by APPLUS

APPLUS certification according to the EN 12101-3:2015 standard (hot smoke extraction) relating to the 400 °C/2 hour class appliances, with the motor outside of the danger zone.

Wide range (-15 °C/+60 °C) of temperature for continuous operation when deployed in ventilation mode.



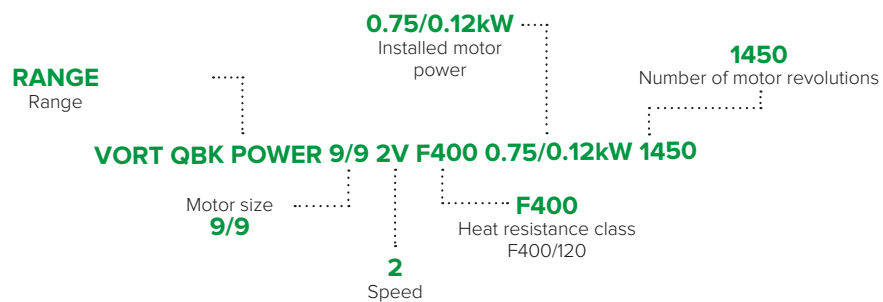
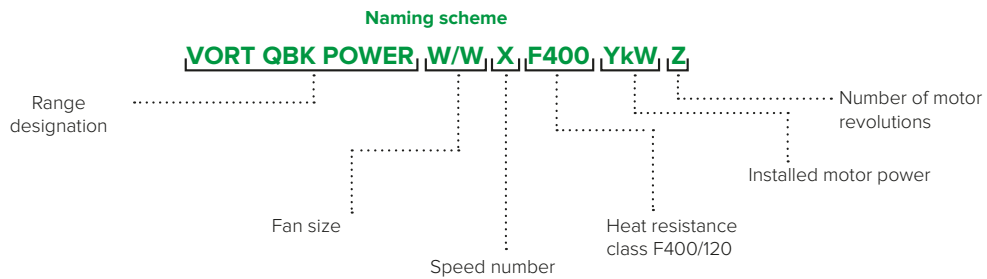
A sturdy construction, perfectly compatible with an installation inside commercial and industrial areas or outdoors, with special rain canopies available as an extra optional.

High (110 °C) maximum temperature for the treated fluid.

RANGE COMPOSITION

The VORT QBK POWER F400 range is available in five models of varying size: Each size is also available in a range of versions, which vary in terms of performance and motors, all of which are three-phase, with single or dual speed, so to cover a wide range of application requirements. The flexibility of the product is further enhanced by models available upon request, with versions including a vertical delivery port and non-standard supply voltages.

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Technical Data

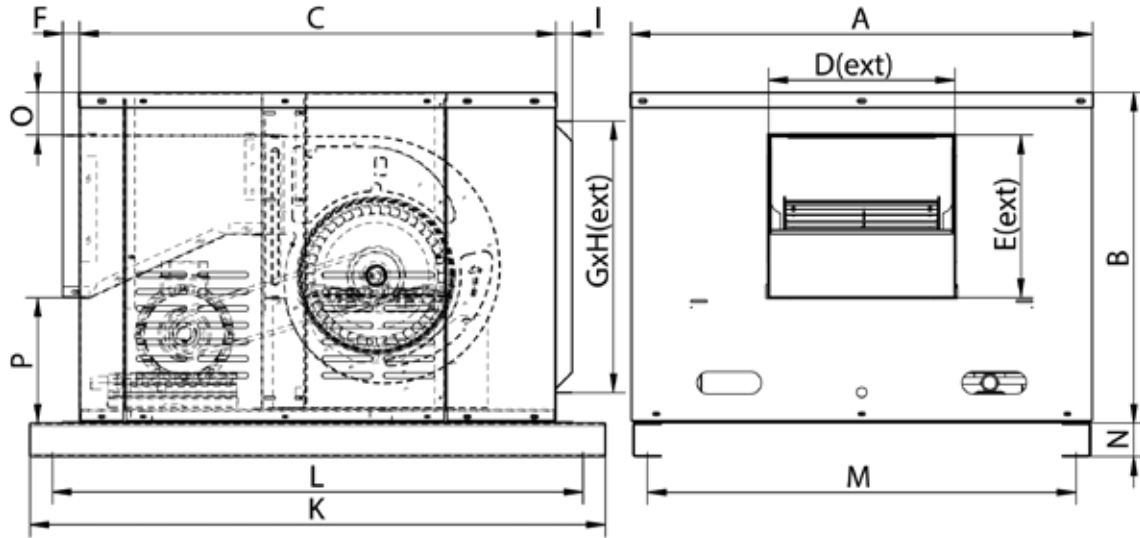
PRODUCT	Fan diameter mm	Flow rate (m ³ /h) min/max flow @ 0 BI	Static pressure range (Pa) min/max	Static pressure range (Pa) water inchs min/max	Speed (RPM) min/max	No. of poles min/max	Power range (kW) min/max	Total efficiency % min/max
VORT QBK POWER F400 9/9	9/9	4,000 5,220	183 520	46,482 132,080	950 1,600	4	0.37 1.1	50%
VORT QBK POWER F400 10/10	10/10	4,400 6,630	163 590	41,402 149,860	800 1,500	4	0.37 1.5	51%
VORT QBK POWER F400 12/12	12/12	5,500 10,050	104 590	26,416 149,860	550 1,300	4	0.37 2.2	55%
VORT QBK POWER F400 15/15	15/15	8,000 14,300	148 600	37,592 152,400	500 1,000	4	0.55 4.00	55%
VORT QBK POWER F400 18/18	18/18	12,500 21,170	174 700	44,196 177,800	490 900	4	1.1 5.5	60%

PRODUCT	Fan diameter mm	Flow rate (m ³ /h) min/max flow @ 0 BI	Static pressure range (Pa) min/max	Static pressure range (Pa) water inchs min/max	Speed (RPM) min/max	No. of poles min/max	Power range (kW) min/max	Total efficiency % min/max
VORT QBK POWER F400 9/9 2V	9/9	2,000 5,220	45 520	11,430 132,080	950 1,600	4/8	0.04 1.1	*
VORT QBK POWER F400 10/10 2 V	10/10	2,200 6,630	40 590	10,160 149,860	800 1,500	4/8	0.04 1.5	*
VORT QBK POWER F400 12/12 2V	12/12	2,750 10,050	26 590	6,604 149,860	550 1,300	4/8	0.04 2.2	*
VORT QBK POWER F400 15/15 2V	15/15	4,000 14,300	36 600	9,144 152,400	500 1,000	4/8	0.09 4	*
VORT QBK POWER F400 18/18 2V	18/18	6,250 21,170	43 700	10,922 177,800	460 900	4/8	0.18 5.5	*

* data not available

VORT QBK POWER F400
FAN BOXES WITH BELT AND PULLEY TRANSMISSION

Dimensions



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PRODUCT	A	B	C	D	E	F	G	H	I	K	L	M	N	O	P
VORT QBK POWER F400 9/9	780	562	792.5	304	262	30	680	456	29	970	890	721.5	60	80.5	219.3
VORT QBK POWER F400 10/10	825	592	852	333	291	30	725	486	29	1,029	949	766.5	60	76.5	224.3
VORT QBK POWER F400 12/12	951	678	970.5	400	345	30	851	573	29	1,147	1,067	891.5	60	72.5	260
VORT QBK POWER F400 15/15	1,100	802	1,103.5	483	404.5	30	1,009	702	29	1,280	1,200	1,041.5	60	102.8	295
VORT QBK POWER F400 18/18	1,270	922	1,279.5	561.5	479.5	30	1,178.6	822	29	1,456	1,376	1,211	60	92	350.5

Dimensions (mm)



Accessories

MODELS

DESCRIPTION

**SWT**

“Start-stop” safety switch, compliant with the requirements specified under IEC 60947-1 and IEC 60947-3 standards. Level of protection: IP65. Equipped with an auxiliary contact. Useful for cutting off the power supply before carrying out any maintenance work on the fan.

**SWT-F400**

Speed switches/selectors for disconnecting from the F400/120 certified fans network, in accordance with the UNI EN 12101-3 standard. Suitable for direct control of motors in AC 3 operation category.

**IREM INVERTER**

Frequency transformers designed for regulating the frequency speed. Ultra compact, with simplified operation and a wide range of functions. Panel with integrated display.

PID card. - Certifications: CE / UL / CSA / EN / GOST / CCC. Level of protection: IP20.

IREM INVERTER 230: input 230V I, output 230V III IRET INVERTER 400: Input 400V III, output 400V III

**EMC FTR**

EMC box type filters for IREM /IRET INVERTER frequency transformers, which are applied to the frequency transformer heat sink. They provide the level of protection required to ensure compliance with electromagnetic compatibility (EMC) regulations in relation to conducted network emissions.

Designed in accordance with the EN61800-3: 2004 standard, they are capable of:

- restricting high frequency noise levels.
- reducing any interference.
- protecting any sensitive equipment.
- eliminating any transformer cross-communication.

**QBK GGR**

Intensity damper made from galvanised sheet steel, to be applied to the delivery port.

**QBK FL-IN / QBK FL-OUT**

Panels with circular flanges, to be applied on the extraction/delivery port.

**QBK GP-IN / QBK GP-OUT**

Protection grids, to be applied on the extraction/delivery port.

**BK GP-IN / QBK GP-OUT**

Protection grids to be applied

INSTALLATION

The VORT QBK POWER F400 range fan boxes have been designed for installation inside ventilation ducts.



Professional
kitchens

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Industrial
kitchens



Professional kitchens



Industrial kitchens



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