



**VORTICE**

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RESIDENTIAL VENTILATION 

## VORT QUADRO EVO RANGE

**NEW**



# VORT QUADRO EVO RANGE

Residential centrifugal extractor fans

Suitable for wall/ceiling mounting or recessed installation; performance and fire resistance according to DIN 18017-3 standard. Ultra low noise levels perfectly compatible with night operation. High degree of protection (IP45), allowing safe installation in Zone 1 of bathrooms. Modular design: basic units can be combined to match a wide range of installation needs. High aerodynamic efficiency, granting full compliance with Erp Reg. n° 1253/2014, 2<sup>nd</sup> Tier.

Advanced electronic controls  
to satisfy a wide range of needs





Excellent sealing of backdraught shutter (TÜV Certified),  
to prevent the risk of bad smells and cold air diffusion  
when the product is switched off.





# VORT QUADRO EVO RANGE

Residential centrifugal extractor fans

## PRODUCT SPECIFICATION

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- AC motor, shaft on ball bearings, granting continuous operation at least than 40.000 hours at max rated temperature.
- Forward curved centrifugal impeller, PBT made, granting high rigidity, dimensional stability and great resistance to aggressive chemical agents. Its high efficiency, resulting from accurate aerodynamics studies, grant high pressure levels at nominal airflows.
- Scroll, comprehending the electronic cardboard housing, made of self-extinguishing (V0) ABS.
- Aesthetic front panel, made of self-extinguishing (V0) ABS; perimeter extraction two A hinges allow a wide rotation angle for easy filter maintenance.
- Motor housing and filter frame made of ABS plastic.
- G2 filter, with clogged filter alarm, according to Erp. Reg. N° 1253/2014/Eu , 2<sup>nd</sup> Tier.



## PRODUCT SPECIFICATION

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### CASINGS

- 10 alternative casings, different for installation and fire protection.
- Integrated spigot (nominal diameters 80 mm) and a backdraught shutter.
- Frame to prevent entry of dirt and plaster at installation supplied with the product.

Fireproof K90 casing



Recessed casing



External casing



# VORT QUADRO EVO RANGE

Residential centrifugal extractor fans

## RANGE

Modular concept allows to freely complete ventilation units and casing to match different needs. Vort Quadro Evo Range consists of 23 ventilation units, different for performances and features, and 10 casing, suitable for wall ceiling and flush mounting. Alternative levels of fire protection available.



**VENTILATION UNITS:**

23 models different for electronic Suite (5) and level of performance (5)

+



**CASINGS EXTERNAL/RECESSED MOUNTINGS:**

10 casings, different for installation and fire protection grade

## VENTILATION UNITS

Consisting of motorfan, scroll, filter, filter frame, electronics and front panel.

### BASIC VERSION

- On/off switching through a dedicated remote switch or light switch off.
- Different (60 m<sup>3</sup>/h or 100 m<sup>3</sup>/h) levels of max performance.
- Multi-Speed versions available; desired speed selectable through a remote switch. Possibility to operate 24/7 the unit of minimum speed (Continuous Ventilation), boosting it to maximum speed through remote switch.



CODE	MODELS	DESCRIPTION
11521	QE 60 LL	1 speed air volume 60 m <sup>3</sup> /h
11523	QE 60/35 LL	2 speeds air volumes 60/35 m <sup>3</sup> /h
11522	QE 100 LL	1 speed air volume 100 m <sup>3</sup> /h
11524	QE 100/60 LL	2 speeds air volumes 100/60 m <sup>3</sup> /h
11525	QE 100/60/35 LL	3 speeds air volumes 100/60/35 m <sup>3</sup> /h

## VENTILATION UNITS

### TIMER VERSION (T)

Same as Basic Versions, but with a Timer for delayed switch on/off. Switch or delay can be set at installation between 0-45".

Switch off delay between 0-20'.



CODE	MODELS	DESCRIPTION
11526	QE 60 LL T	1 speed air volume 60 m <sup>3</sup> /h and timer
11528	QE 60/35 LL T	2 speeds air volumes 60/35 m <sup>3</sup> /h and timer
11527	QE 100 LL T	1 speed air volumes 100 m <sup>3</sup> /h and timer
11531	QE 100/60 LL T	2 speeds air volumes 100/60 m <sup>3</sup> /h and timer

### TIMER PRO VERSION (TP)

Same as Timer Version, but:

- Switch-on delay can be set at installation 0, 45", 90" or 120", switch-off delay at 6', 10', 15' or 21'.
- In multiple speed models, it is possible at installation (Comfort Mode) to set their start at max speed when the light is switched-on, their switch at max speed when the light is switched-off and finally their stop after 6', 10', 15' or 21'.
- To ensure a proper ventilation of the room, even for extended inactivity periods, is possible to set (Holiday Mode), every 8, 12 or 24 hours, a periodic operation cycle (duration settable to 6', 10', 15' or 21 minutes).



CODE	MODELS	DESCRIPTION
11532	QE 60 LL TP	1 speed with air volume 60 m <sup>3</sup> /h and timer pro
11534	QE 60/35 LL TP	2 speeds air volumes 60/35 m <sup>3</sup> /h and timer pro
11533	QE 100 LL TP	1 speed air volume 100 m <sup>3</sup> /h and timer pro
11535	QE 100/60 LL TP	2 speeds air volumes 100/60 m <sup>3</sup> /h and timer pro
11536	QE 100/60/35 LL TP	3 speeds air volumes 100/60/35 m <sup>3</sup> /h and timer pro

### TIMER + PIR SENSOR (T PIR)

- The fan immediately starts when the PIR ( Passive Infra Red) detects occupants; after the room has been left, the product stops to run with a delay between 0 and 20".
- In case of multiple speed models it possible to set, at installation, the continuous operation at minimum speed (Continuous Ventilation), automatically boosting the fan to higher speed through the PIR sensor.



CODE	MODELS	DESCRIPTION
11544	QE 60 LL T PIR	1 speed air volume 60 m <sup>3</sup> /h timer and PIR sensor
11546	QE 60/35 LL T PIR	2 speeds air volumes 60/35 m <sup>3</sup> /h timer and PIR sensor
11545	QE 100 LL T PIR	1 speed air volume 100 m <sup>3</sup> /h timer and PIR sensor
11547	QE 100/60 LL T PIR	2 speeds air volumes 100/60 m <sup>3</sup> /h timer and PIR sensor



# VORT QUADRO EVO RANGE

Residential centrifugal extractor fans

## VENTILATION UNITS

### TIMER EVO + HCS SENSOR (TP HCS)

- Timer EVO mode: the on/off switching realized through the light switch; the on-board electronics allows to set at installation, the start/stop delay when the product is switched on/off (delays can be set at 0, 45", 90" or 120" and at 6', 10', 15' or 21').
- HCS mode: the on/off switching is realized according to ambient relative humidity (RH) detected by the HCS sensor (Humidity Control System) integrated in the on-board electronics. The system operates with three different modes, to ensure the best environmental conditions:
  - The product starts to run when RH the pre-set according to exceeds a threshold, adjustable at installation at 60%, 70%, 80%, 90% (70% is the factory setting). The fan stops when the RH falls 15% below the pre-set value or after two hours of continuous running.
  - The product automatically starts as a result of a sudden RH increase (> 20% in 10 minutes), and immediately stops air when the RH falls 15% below the pre-set limit or after two hours of continuous running.
  - The fan is controlled through a remote switch, independently from the RH detected (E.g. to avoid its switch-on when the outdoor humidity is too high).



CODE	MODELS	DESCRIPTION
11537	QE 60 LL TP HCS	1 speed air volume 60 m <sup>3</sup> /h timer pro and humidity sensor
11541	QE 60/35 LL TP HCS	2 speeds air volumes 60/35 m <sup>3</sup> /h timer pro and humidity sensor
11538	QE 100 LL TP HCS	1 speed air volume 100 m <sup>3</sup> /h timer pro and humidity sensor.
11542	QE 100/60 LL TP HCS	2 speeds air volumes 100/60 m <sup>3</sup> /h timer plus and humidity sensor
11543	QE 100/60/35 LL TP HCS	3 speeds with air volume 100/60/35 m <sup>3</sup> /h timer plus and humidity sensor



Forward curved centrifugal impeller, PBT made, granting high rigidity, dimensional stability and great resistance to aggressive chemical agents. Its high efficiency, resulting from accurate aerodynamics studies, assures high pressure levels in a wide range of airflows.





## CASINGS

Casings integrate a nominal 80 mm diameter spigot and a backdraught shutter. Casings are also provided with a frame to prevent entry of dirt and plaster.

### BASIC FOR INSTALLATION ON WALLS AND CEILINGS



CODE	MODEL	DESCRIPTION
11561	QE - B M	Basic encasement for surface (wall/ceiling) installation, made of ABS plastic. Spigot made of ABS plastic, integrating the backdraught shutter compliant with DIN 18017-3, as certified by TUV German Institute.

### BASIC FOR INSTALLATION ON WALLS AND CEILINGS WITH FIREPROOF (CLASS K90), BACKDRAUGHT SHUTTER



CODE	MODEL	DESCRIPTION
11563	QE - B M VK90	Basic encasement for surface (wall/ceiling) installation, made of ABS plastic. Stainless steel spigot, integrating the K90 fireproof valve, TUM certified according to DIN 18017-3. Backdraught shutter compliant with DIN 18017-3, as certified by TUV German Institute.

### BASIC FOR RECESSED INSTALLATION



CODE	MODEL	DESCRIPTION
11560	QE - B I	Basic encasement for recessed installation, made of ABS plastic. Spigot made of ABS plastic, integrating the backdraught shutter compliant with DIN 18017-3, as certified by TUV German Institute. Square frame to prevent entry of dirt and plaster. Port to connect a spigot (QE-AD cod. 21118, available as accessory) to extract air from a second room. Possibility of drywall installation.

### BASIC FOR RECESSED INSTALLATION WITH FIREPROOF CLASS K 90, BACKDRAUGHT SHUTTER



CODE	MODEL	DESCRIPTION
11562	QE - B I VK90	Basic encasement for recessed installation, made of ABS plastic. Stainless steel spigot, integrating the K90 fireproof valve, TUM certified according to DIN 18017-3. Backdraught shutter compliant with DIN 18017-3, as certified by TUV German Institute. Square frame to prevent entry of dirt and plaster. Port to connect a spigot (QE-AD cod. 21118, available as accessory) to extract air from a second room. Possibility of drywall installation.



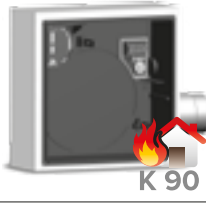





# VORT QUADRO EVO RANGE

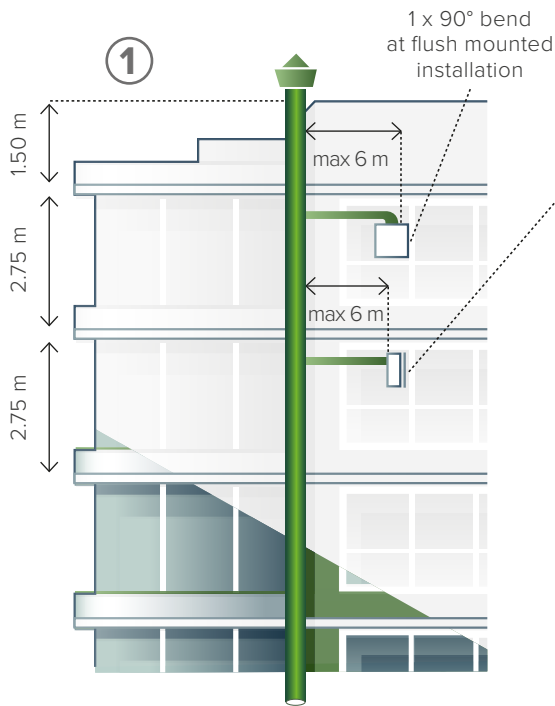
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## RECESSED MOUNTINGS

### RECESSED INSTALLATION FIREPROOF ENCASEMENT K 90, WITH FIREPROOF CLASS K 90 BACKDRAUGHT SHUTTER

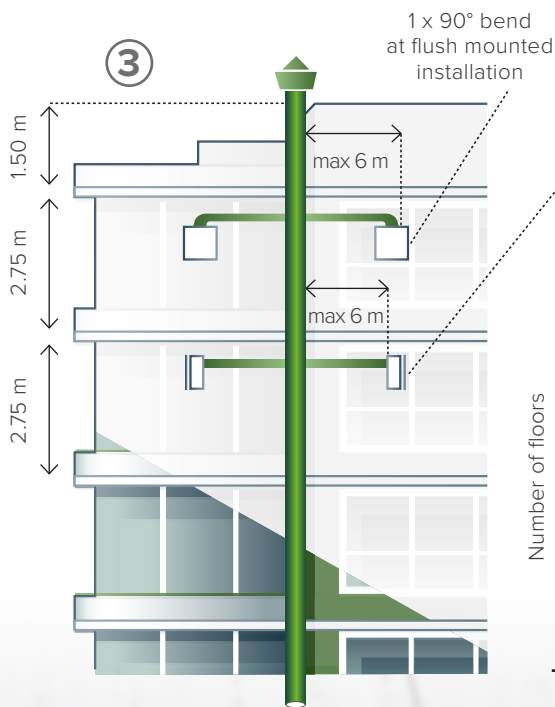
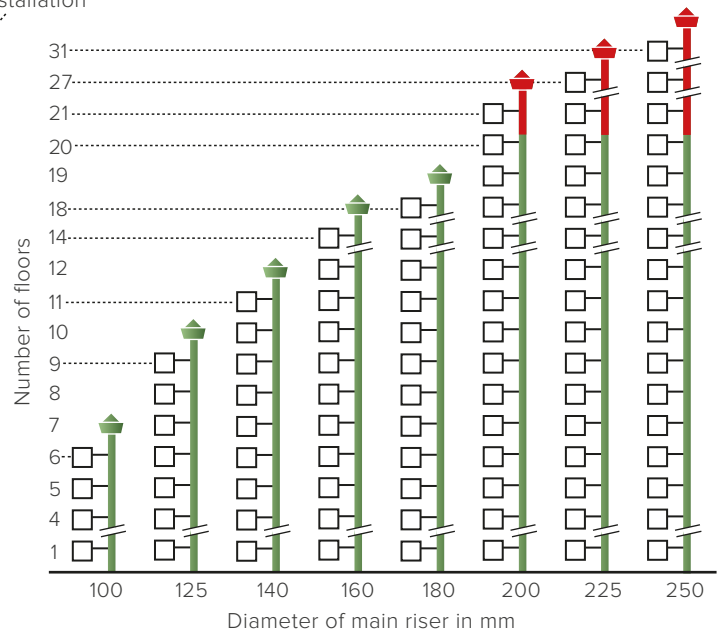
	CODE	MODELS	DESCRIPTION
 K 90	11564	QE - B I K90 R	Fireproof K90 casing for recessed installation and rear discharge. Stainless steel spigot, integrating the K90 fireproof valve, TUM certified according to DIN 18017-3. Backdraught shutter compliant with DIN 18017-3, as certified by TUV German Institute Spigot nominal diameter: 80 mm. Square frame to prevent entry of dirt and plaster.
 K 90	11565	QE - B I K90 S	Fireproof K90 casing for recessed installation and side discharge. Stainless steel spigot, integrating the K90 fireproof valve, TUM certified according to DIN 18017-3. Backdraught shutter compliant with DIN 18017-3, as certified by TUV German Institute Spigot nominal diameter: 80 mm. Square frame to prevent entry of dirt and plaster.
 K 90	11566	QE - B I K90 R 2R	Fireproof K90 casing for recessed installation and rear discharge. Stainless steel spigot, integrating the K90 fireproof valve, TUM certified according to DIN 18017-3. Backdraught shutter compliant with DIN 18017-3, as certified by TUV German Institute Spigot nominal diameter: 80 mm. Square frame to prevent entry of dirt and plaster. Stainless steel spigot, on the right side, able to extract air from a second room.
 K 90	11567	QE - B I K90 R 2L	Fireproof K90 casing for recessed installation and rear discharge. Stainless steel spigot, integrating the K90 fireproof valve, TUM certified according to DIN 18017-3. Backdraught shutter compliant with DIN 18017-3, as certified by TUV German Institute Spigot nominal diameter: 80 mm. Square frame to prevent entry of dirt and plaster. Stainless steel spigot, on the left side, able to extract air from a second room.
 K 90	11568	QE - B I K90 S 2R	Fireproof K90 casing for recessed installation and side discharge. Stainless steel spigot, integrating the K90 fireproof valve, TUM certified according to DIN 18017-3. Backdraught shutter compliant with DIN 18017-3, as certified by TUV German Institute Spigot nominal diameter: 80 mm. Square frame to prevent entry of dirt and plaster. Stainless steel spigot, on the right side, able to extract air from a second room.
 K 90	11569	QE - B I K90 S 2L	Fireproof K90 casing for recessed installation and side discharge. Stainless steel spigot, integrating the K90 fireproof valve, TUM certified according to DIN 18017-3. Backdraught shutter compliant with DIN 18017-3, as certified by TUV German Institute. Spigot nominal diameter: 80 mm. Square frame to prevent entry of dirt and plaster. Stainless steel spigot, on the left side, able to extract air from a second room.

60 m<sup>3</sup>/h BATHROOM OR TOILETS



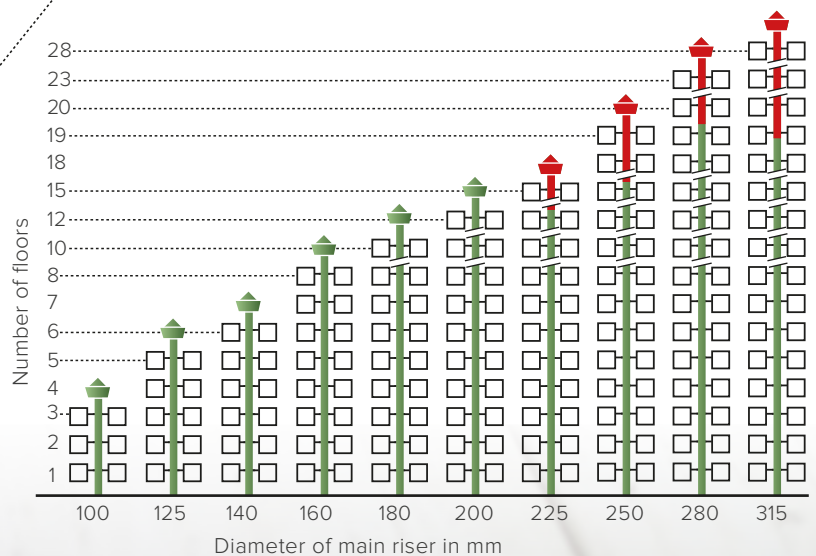
INSTALLATION OF 1 UNIT PER FLOOR

With 60 m<sup>3</sup>/h designed air flow volume and operation of all units at the same time.



INSTALLATION OF 2 UNITS PER FLOOR

With 60 m<sup>3</sup>/h designed air flow volume and operation of all units at the same time.



Reference room height 2.75 m; straight ducting without bends; ducting length max. 1.5 m from last unit to air extract above the roof max pressure loss between ventilated room and exhaust opening 60 Pa. The required main riser diameter can be read from above diagram. Data valid for operated at nominal air flow volumes of 60 or 100 m<sup>3</sup>/h per unit and all units operated at the same time. Copies of approvals are available on request.

⚠ These number of floors are outside of comfort range, therefore non recommendable.

**Example 1**  
Type of room: bathroom/toilet  
V = 60 m<sup>3</sup>/h

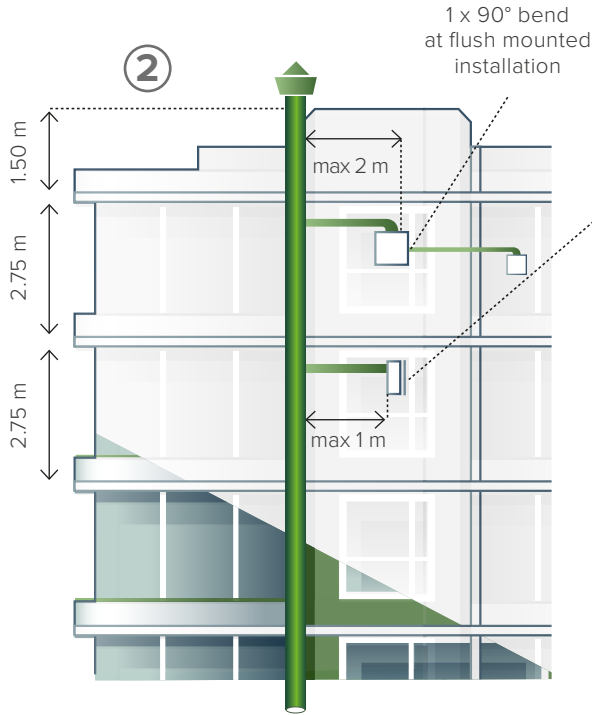
Units per floor: 1  
Floor levels: 9  
Main riser diameter: 125 mm



# VORT QUADRO EVO RANGE

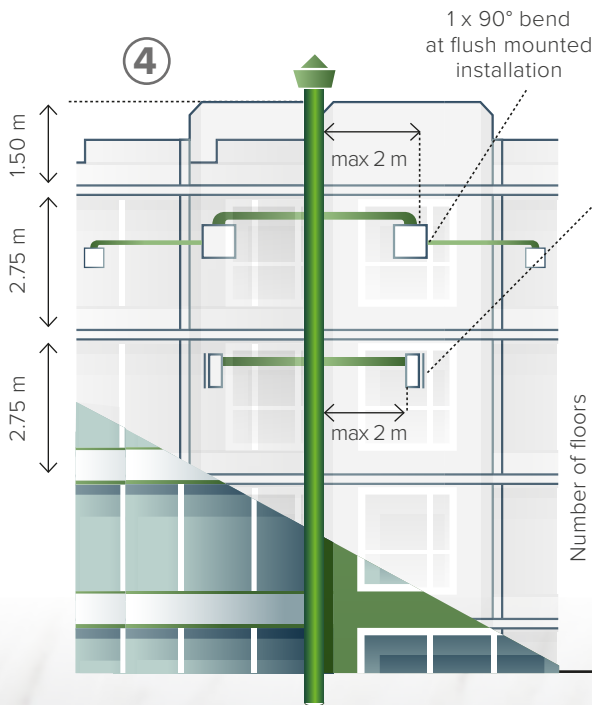
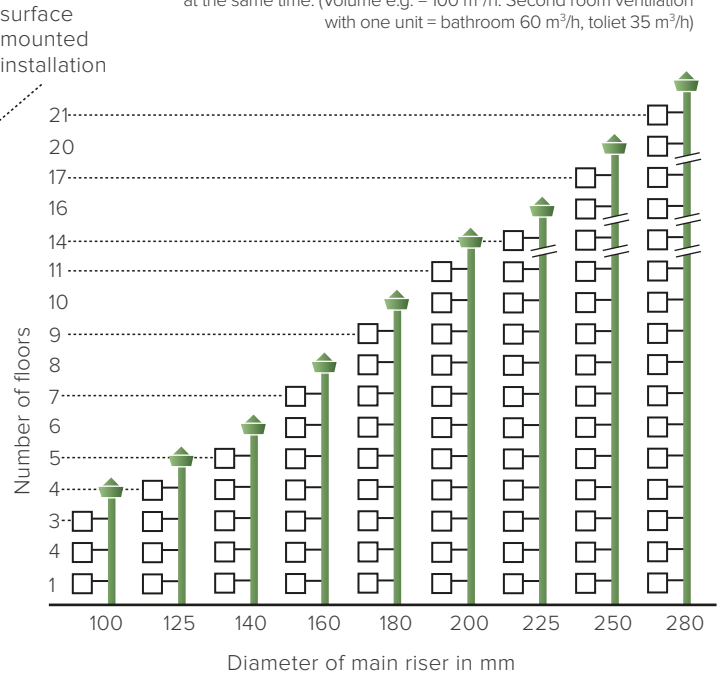
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## 100 m<sup>3</sup>/h ONE AND TWO ROOM VENTILATION



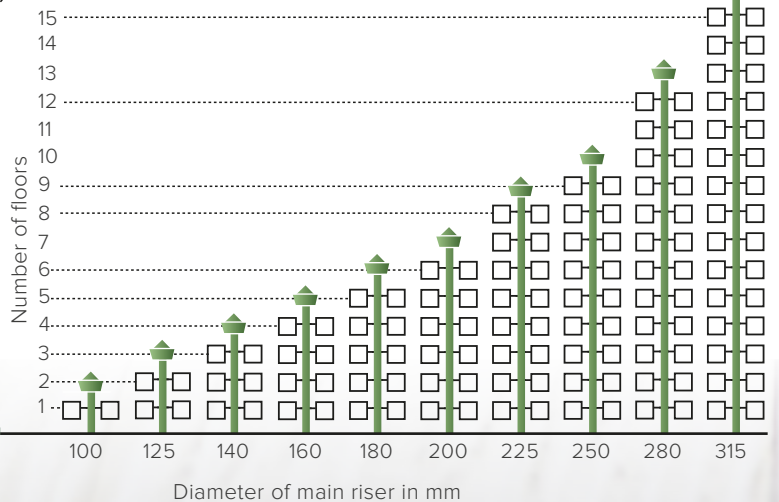
### INSTALLATION OF 1 UNIT PER FLOOR

With 100 m<sup>3</sup>/h designed air flow volume and operation of all units at the same time. (Volume e.g. = 100 m<sup>3</sup>/h. Second room ventilation with one unit = bathroom 60 m<sup>3</sup>/h, toilet 35 m<sup>3</sup>/h)



### INSTALLATION OF 2 UNITS PER FLOOR

With 100 m<sup>3</sup>/h designed air flow volume and operation of all units at the same time. (Volume e.g. = 100 m<sup>3</sup>/h. Second room ventilation with one unit = bathroom 60 m<sup>3</sup>/h, toilet 35 m<sup>3</sup>/h)



**Example 2**  
Type of room: bathroom + toilet (2 rooms) or kitchen  
V = 100 m<sup>3</sup>/h (bathroom 60 m<sup>3</sup>/h and toilet 35 m<sup>3</sup>/h)

Units per floor: 2  
Floor levels: 6  
Main riser diameter: 180 mm

**TECHNICAL DATA**

Referred to Max, Mid, Min speed when available

CODE	MODELS	V ~ 50 Hz	W	A	MAX AIRFLOW		MAX PRESSURE		MAX °C
					m³/h	l/s	mmH <sub>2</sub> O	Pa	
11521	QE 60 LL								
11526	QE 60 LL T								
11532	QE 60 LL TP	220 - 240	16	0.14	60	16,7	35	343	50
11537	QE 60 LL TP HCS								
11544	QE 60 LL T PIR								
11523	QE 60/35 LL								
11528	QE 60/35 LL T								
11534	QE 60/35 LL TP	220 - 240	16 9	0.14 0.11	60 35	16,7 9,7	35 10	343 98	50
11541	QE 60/35 LL TP HCS								
11546	QE 60/35 LL T PIR								
11522	QE 100 LL								
11527	QE 100 LL T								
11533	QE 100 LL TP	220 - 240	26	0.17	100	27,8	36	353	50
11538	QE 100 LL TP HCS								
11545	QE 100 LL T PIR								
11524	QE 100/60 LL								
11531	QE 100/60 LL T								
11535	QE 100/60 LL TP	220-240	26 16	0.17 0.14	100 60	27,8 16,7	36 35	353 343	50
11542	QE 100/60 LL TP HCS								
11547	QE 100/60 LL T PIR								
11525	QE 100/60/35 LL								
11536	QE 100/60/35 LL TP	220 - 240	26 16 9	0.17 0.14 0.11	100 60 35	27,8 16,7 9,7	36 35 10	353 343 98	50
11543	QE 100/60/35 LL TP HCS								

**SOUND LEVELS**

SOUND POWER L <sub>wA</sub>								
Airflow m³/h	WALL MOUNTING			35	Airflow m³/h	RECESSED MOUNTING		
	100	60	35			100	60	35
dB(A)	50.5	43.7	33.7		dB(A)	50.2	42	32.7

SOUND PRESSURE* L <sub>p 1,5 m</sub>								
Airflow m³/h	WALL MOUNTING			35	Airflow m³/h	RECESSED MOUNTING		
	100	60	35			100	60	35
dB(A)	39.0	32.2	22.2		dB(A)	38.7	30.5	21.2

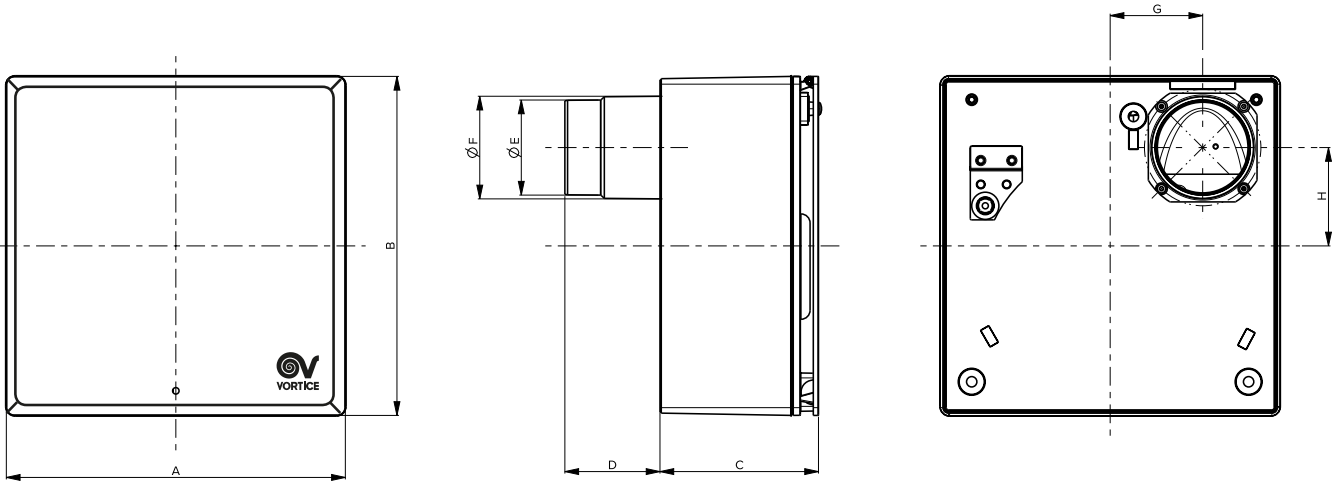
\*Sound pressure calculated in free-field conditions, 1,5 m distance, emispheric distribution.



# VORT QUADRO EVO RANGE

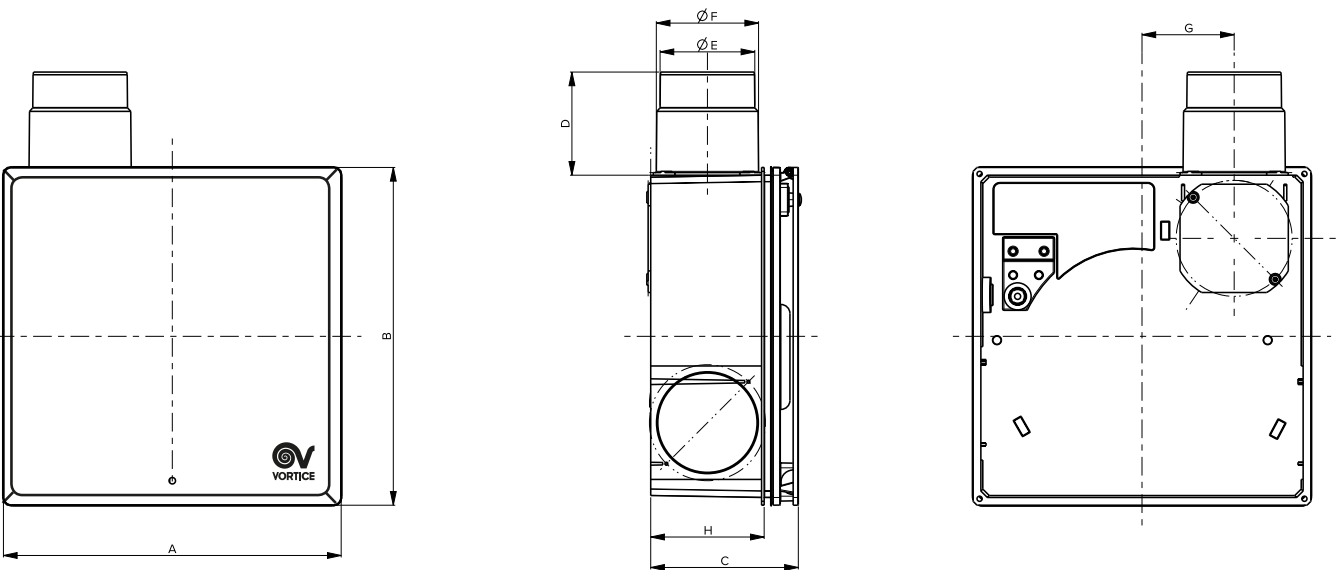
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## DIMENSIONS



MODELS	A	B	C	D	Ø E	Ø F	G	H
Surface mounted version	262	262	123,5	81	73	79	71,5	76

Dimensions (mm)

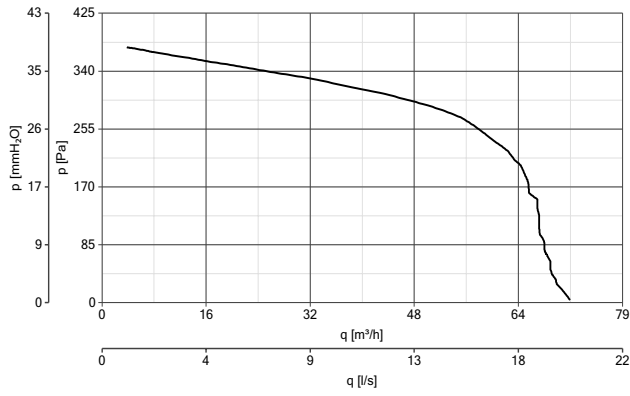


MODELS	A	B	C	D	Ø E	Ø F	G	H
Recessed version	262	262	115,5	80	73	79	71,5	90

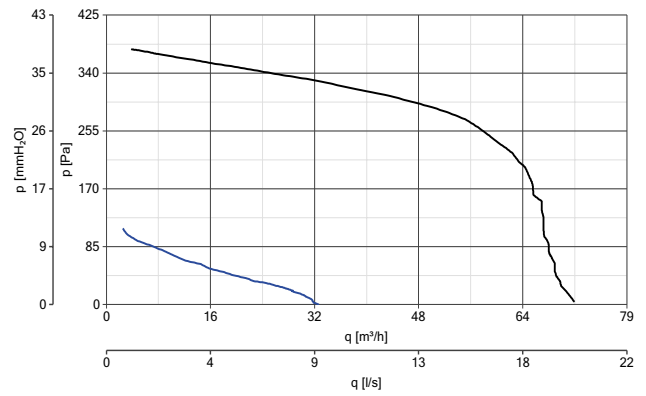
Dimensions (mm)

PERFORMANCE CURVES

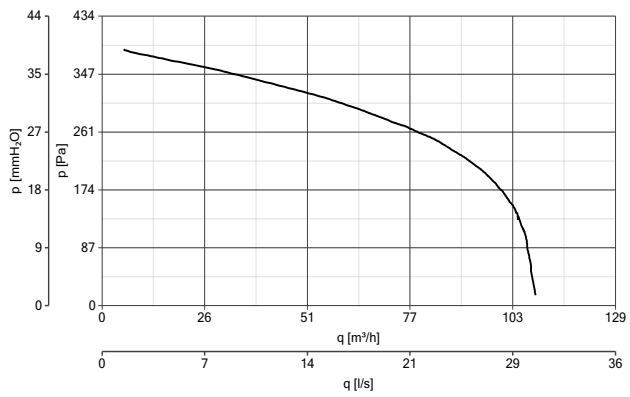
QE 60



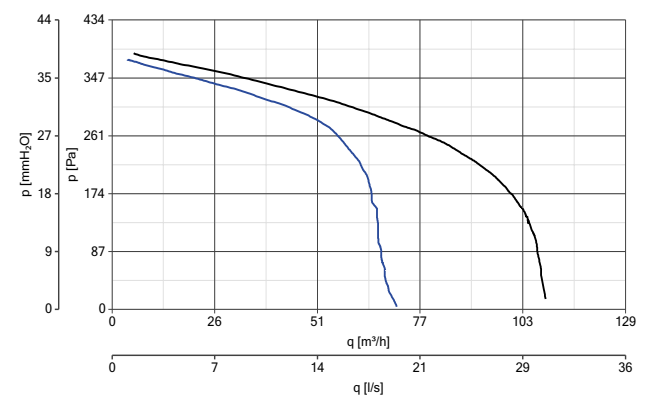
QE 60/35



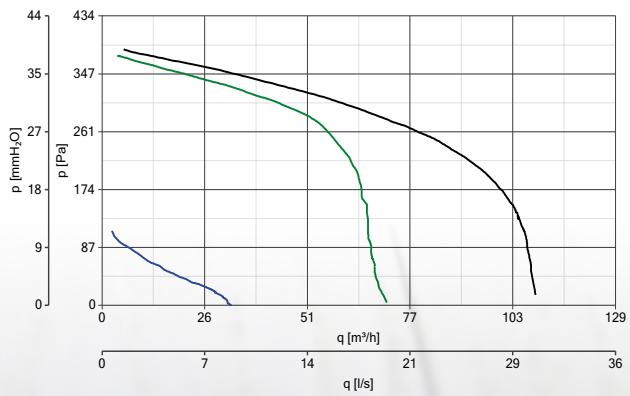
QE 100



QE 100/60



QE 100/60/35















— MAX speed  
— MID speed  
— MIN speed



# VORT QUADRO EVO RANGE





Residential centrifugal extractor fans

## ACCESSORIES

	<u>CODE</u>	<u>NAME</u>	<u>DESCRIPTION</u>
	24127	QE - MH	Mounting holder for flush mounting in plasterboard systems
	24128	QE - TEK	Toilet extraction kit for WC
	24094	QE - UMB	Universal bracket for flush mounting in duct systems and false ceilings also for fireproof K90 casings
	24129	QE - SRK	Second room kit (including second room spigot)
	24183	QE - FBA	Plasterboard adapter
	21118	QE - AD	Second room spigot
	24229	QE - CFR	Plasterboard cover
	21101	QE - SPF	Spacer frame
	21119	SAWG	White door grille
	21120	SABG	Brown door grille
	91018	EAA30 BL	Automatic acoustic air inlet 30 m <sup>3</sup> /h
	91035	EAA45 BL	Automatic acoustic air inlet 45 m <sup>3</sup> /h



## ACCESSORIES

	CODE	NAME	DESCRIPTION
	21121	AVR 100	Fire damper, diameter 100 mm
	21122	AVR 125	Fire damper, diameter 125 mm
	21123	AVR 140	Fire damper, diameter 140 mm
	21124	AVR 160	Fire damper, diameter 160 mm
	21125	AVR 180	Fire damper, diameter 180 mm
	21126	AVR 200	Fire damper, diameter 200 mm
	21127	MDV 100	Manual air supply valve for 100 mm duct
	21128	ADV 100	Automatic air supply valve for 100 mm duct
	21129	MSDV 100	Manual air supply valve for 100 mm duct, with sound insulation
	21130	ASDV 100	Automatic air supply valve for 100 mm duct, with sound insulation
	21132	3SS - D	2 - 3 speeds switch for flush mounted installation, in a DIN Standard box
	21133	2SS - I	2 speeds switch for flush mounted installation, in a UNI 503 Standard box
	21134	3SS - I	3 speeds switch for flush mounted installation, in a UNI 503 Standard box



# VORT QUADRO EVO RANGE

Residential centrifugal extractor fans

## APPLICATIONS



Example: Recessed Casings mounting cod. 11560 with Timer (T) motor fan cod. 11526;



Example: Recessed Casings mounting cod. 11560 with Timer Evo + HCS sensor (TP HCS) motor fan cod. 11543;

## APPLICATIONS



Example: Recessed installation fireproof encasement K90, with fireproof class K90 backdraught shutter cod. 11566 with Timer EVO (TP) motor fan cod. 11533;



Example: External Casings mounting cod. 11561 with basic motor fan cod. 11521;

Cod. 5.170.084.452

04/17

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