



NEW

VORTICE.COM



E-ATEX

Range of explosion proof plate mounted axial fans compliant with ATEX Directive N° 2014/34/EU.





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 LIMITED**, the UK subsidiary of VORTICE S.p.A., established in 1977 and based in Burton on Trent.

[2] **VORTICE INDUSTRIAL**, born from the acquisition in 2010 of Loran srl, based in Isola della Scala (VR). 2024 become Vortice's BUSINESS UNIT INDUSTRIAL.

[3] **VORTICE VENTILATION SYSTEM**, a company inaugurated in 2013 with headquarters in Changzhou, China.

[4] **VORTICE LATAM S.A.**, based in Alajuela in Costa Rica, established in 2012.

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

E-ATEX RANGE

Range of explosion proof plate mounted axial fans compliant with ATEX Directive



DUST



GAS

Directives and standards relevant to ATEX certification and CE Marking

Directive 2014/34/EU (ATEX)

- EN 14986:2017: Design of fans working in potentially explosive atmospheres.
- EN IEC 60079-0:2018: Explosive atmospheres. Part 0: Equipment - General requirements.
- EN ISO 80079-36:2016: Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic method and requirements.
- EN 60079-1:2014 (Motors): Explosive atmospheres Part 1: Equipment protection by flameproof enclosures "d".
- EN 60079-7:2015 (Motors): Explosive atmospheres Part 7: Equipment protection by increased safety "e".
- EN 60079-31:2014 (Motors): Explosive atmospheres Part 31: Equipment dust ignition protection by enclosure "t".

Directive 2006/42/EC (MCD)

- EN 60204-1:2018: Safety of machinery - Electrical equipment of machines Part 1: General requirements
- EN ISO 12100:2010: Safety of machinery - General principles for design - Risk assessment and risk reduction.
- EN ISO 12499:2008: Industrial fans - Mechanical safety of fans - Guarding.

- EN ISO 13857:2019: Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs.
- CEI EN 60529:1997: Degrees of protection provided by enclosures (IP Code).

Directive 2014/30/EU (EMC)

- EN IEC 55014-1:2021: Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus. Part 1: Emission.
- EN IEC 55014-2:2021: Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus. Part 2: Immunity: Product family standard.
- EN IEC 61000-3-2:2019: Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase).
- EN 61000-3-3:2013: Electromagnetic compatibility (EMC) Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection.

Directive 2009/125/EC (Ecodesign) (Motors)

Regulation 2019/1781/EU (Motors)

Ecodesign requirements for electric motors and variable speed drives.

Directive 2012/19/EU (WEEE)

Directive 2011/65/EU (RoHS)

E-ATEX

Axial plate-mounted fans for installation in potentially explosive areas

E-ATEX RANGE



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Industrial axial fans suitable for use in environments characterized by potentially explosive atmospheres due to the presence of gas or dust included in Group II (according to ATEX classification).

ATEX Classification "II 2G Ex h IIB T3 Gb"

Area of use in presence of potentially explosive gas (industrial warehouses, chemical and pharmaceutical industries, electric battery charging areas)

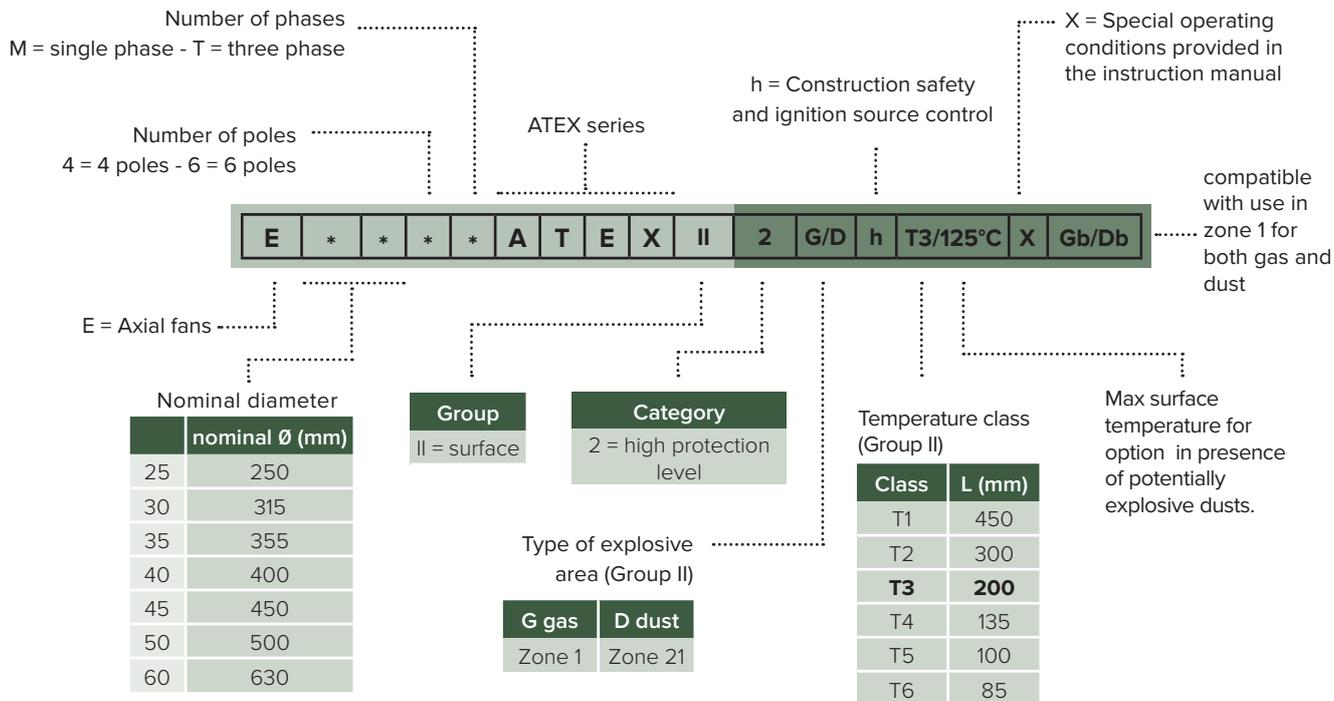
ATEX Classification "II 2D Ex h IIIC T125°C Db"

Area of use in presence of potentially explosive dusts (flour production plants, textile industries, aluminum processing plants)

EXAMPLE OF E-ATEX RANGE LABELLING

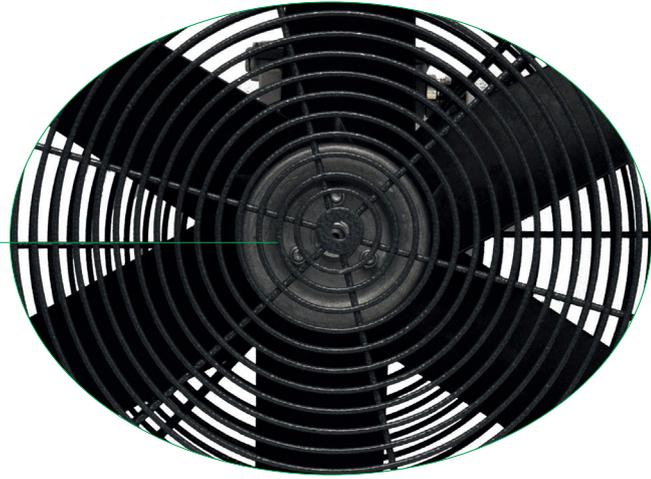
Range composition

Code	Product name
40320	E 254 M ATEX II 2G/D h T3/125°C X Gb/Db
40321	E 304 M ATEX II 2G/D h T3/125°C X Gb/Db
40322	E 354 M ATEX II 2G/D h T3/125°C X Gb/Db
40323	E 404 M ATEX II 2G/D h T3/125°C X Gb/Db
40324	E 454 M ATEX II 2G/D h T3/125°C X Gb/Db
40325	E 254 T ATEX II 2G/D h T3/125°C X Gb/Db
40326	E 304 T ATEX II 2G/D h T3/125°C X Gb/Db
40327	E 354 T ATEX II 2G/D h T3/125°C X Gb/Db
40328	E 404 T ATEX II 2G/D h T3/125°C X Gb/Db
40329	E 454 T ATEX II 2G/D h T3/125°C X Gb/Db
40330	E 504 T ATEX II 2G/D h T3/125°C X Gb/Db
40333	E 506 T ATEX II 2G/D h T3/125°C X Gb/Db
40331	E 604 T ATEX II 2G/D h T3/125°C X Gb/Db
40332	E 606 T ATEX II 2G/D h T3/125°C X Gb/Db

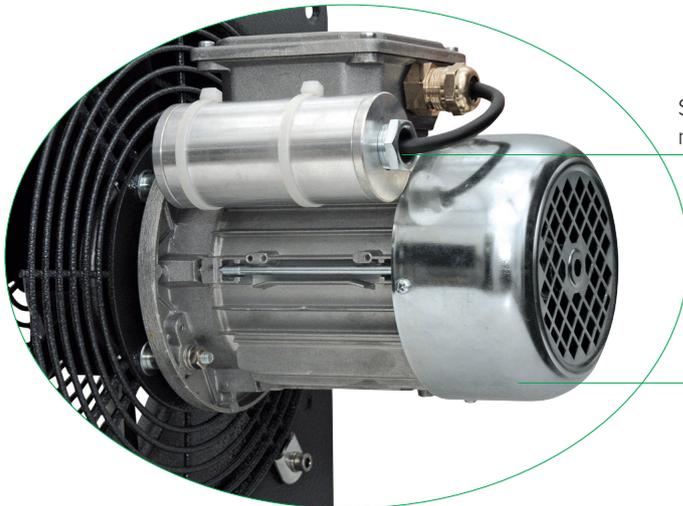


TECHNICAL CHARACTERISTICS

Aluminium made hubs



Starting capacitor of single-phase motors housed in a metal enclosure.



Stamped steel motor cover.

- **14 models.**
- Frames with grilles made of stamped steel, pickled and phosphated, with epoxy base coat; grey textured finish obtained by coating polyurethane powder paint strengthened by oven baking.
- **1 speed**, single (**M**) or three (**T**) phase AC motors, UNEL MEC standard B3/B5, fully compliant with ECODESIGN regulation EU 2019/1781. Shafts mounted on double shielded ball bearings. Manufacturing and materials fully suitable for use in potentially explosive atmospheres. Motors are without thermal protection. Thermal protectors (GV2-ME Range) are available as optional. Motor Protection: IP65.
- Motor Class: F
- Range of operating temperatures: -20°C/+40°C.
- Impeller with aluminium hubs and blades made of antistatic PA resin filled with glass fibers.
- Aluminium made motor cooling fan.
- Stamped steel motor cover.
- Metal cable glands for electrical connection.
- IMQ-certified for use in areas at risk of explosion due to presence of gas and dust, according to ATEX Directive.

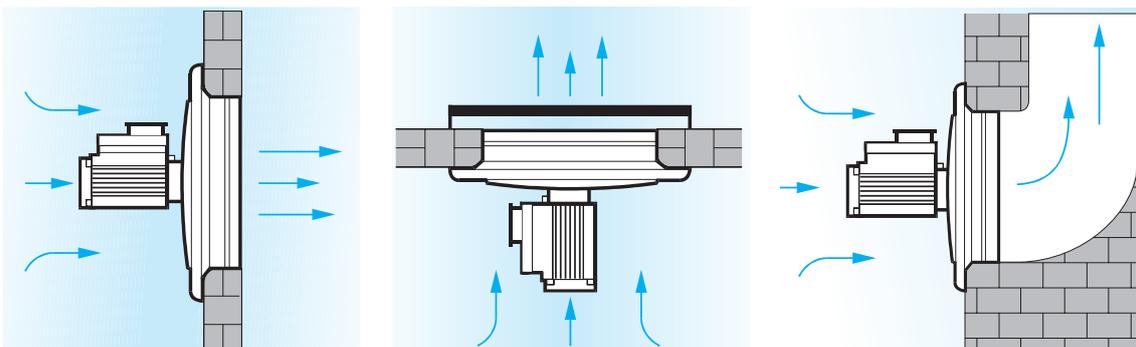
Technical data

PRODUCTS	CODE	Ø nom.	Supply V~50 Hz	Max power absorption (W)	Max rated current (A)	Num. of poles	RPM	Max Airflow		Max Pressure		Sound Pressure* Lp dB(A) 3m	kg
								m³/h	l/s	mmH₂O	Pa		
SINGLE PHASE													
E 254 M ATEX	40320	250	230	133	0,88	4	1400	1145	318	12,8	126	49,9	8
E 304 M ATEX	40321	315	230	162	0,90	4	1400	1700	472,2	17,2	169	52,8	8,8
E 354 M ATEX	40322	355	230	208	1,05	4	1400	2600	722,2	18,5	181	58	9,5
E 404 M ATEX	40323	400	230	274	1,20	4	1400	3610	1002	20,9	205	59,5	11,5
E 454 M ATEX	40324	450	230	315	1,47	4	1400	4690	1302	20,1	197	66,8	14
TRHEE PHASE													
E 254 T ATEX	40325	250	400	101	0,48	4	1400	1175	326,4	13,3	130	48,2	7
E 304 T ATEX	40326	315	400	140	0,49	4	1400	1811	503	17,3	170	51,3	8
E 354 T ATEX	40327	355	400	194	0,52	4	1400	2548	707,8	18,8	184	56,4	8,8
E 404 T ATEX	40328	400	400	257	0,58	4	1400	3460	961	18,6	182	56,8	10,5
E 454 T ATEX	40329	450	400	303	0,62	4	1400	4430	1230	17,7	174	60,7	13,6
E 504 T ATEX	40330	500	400	282	0,59	4	1400	5100	1416	19,1	187	66,1	13,8
E 506 T ATEX	40333	630	400	160	0,54	6	1000	3580	994	9,6	94	55,7	14,5
E 604 T ATEX	40331	500	400	352	0,67	4	1400	6550	1819	18,4	180	67	18
E 606 T ATEX	40332	630	400	185	0,55	6	1000	5100	1417	11,5	113	51,3	19,5

* Calculated in free- field, emispheric distribution.

Applications

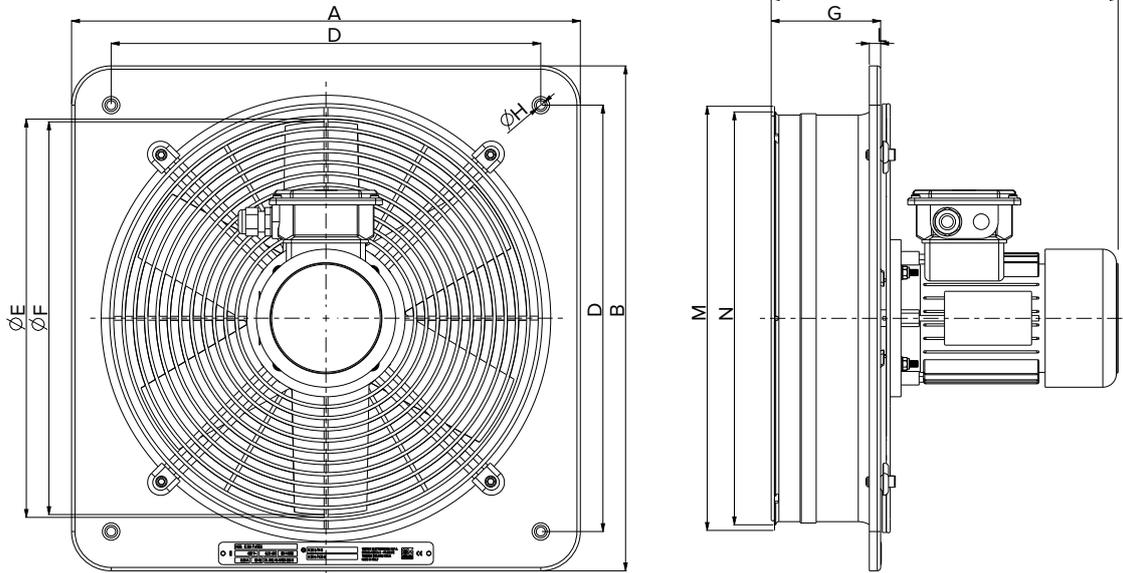
These appliances are designed for wall or ceiling installation, or can even be ducted. The classification and identification of these environments must be carried out by the relevant authorities..



E-ATEX

Axial plate-mounted fans for installation in potentially explosive areas

Dimensions



Dimensions (mm)

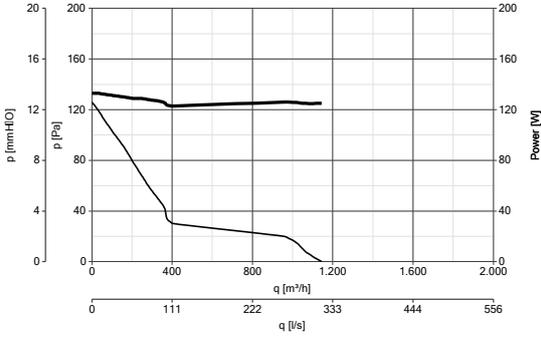
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MODEL	CODE	A	B	C	D	ØE	ØF	G	ØH	L	M	N
SINGLE PHASE												
E 254 M ATEX II 2G/D h T3/125°C X Gb/Db	40320	320	320	305	280	256	250	95	8	10	274	264
E 304 M ATEX II 2G/D h T3/125°C X Gb/Db	40321	380	380	307	330	308	300	97	8	10	325	316
E 354 M ATEX II 2G/D h T3/125°C X Gb/Db	40322	450	450	307	380	360	350	97	8	10	378	368
E 404 M ATEX II 2G/D h T3/125°C X Gb/Db	40323	510	510	327	430	410	400	117	12	15	428	418
E 454 M ATEX II 2G/D h T3/125°C X Gb/Db	40324	630	630	325	530	460	448	112	12	15	478	468
TRHEE PHASE												
E 254 T ATEX II 2G/D h T3/125°C X Gb/Db	40325	320	320	305	280	256	250	95	8	10	274	264
E 304 T ATEX II 2G/D h T3/125°C X Gb/Db	40326	380	380	307	330	308	300	97	8	10	325	316
E 354 T ATEX II 2G/D h T3/125°C X Gb/Db	40327	450	450	307	380	360	350	97	8	10	378	368
E 404 T ATEX II 2G/D h T3/125°C X Gb/Db	40328	510	510	327	430	410	400	117	12	15	428	418
E 454 T ATEX II 2G/D h T3/125°C X Gb/Db	40329	630	630	325	530	460	448	112	12	15	478	468
E 504 T ATEX II 2G/D h T3/125°C X Gb/Db	40330	630	630	325	530	510	498	112	12	15	528	518
E 506 T ATEX II 2G/D h T3/125°C X Gb/Db	40333	630	630	361	530	510	498	112	12	15	528	518
E 604 T ATEX II 2G/D h T3/125°C X Gb/Db	40331	760	760	340	630	610	598	127	12	15	628	618
E 606 T ATEX II 2G/D h T3/125°C X Gb/Db	40332	760	760	361	630	610	598	127	12	15	628	618

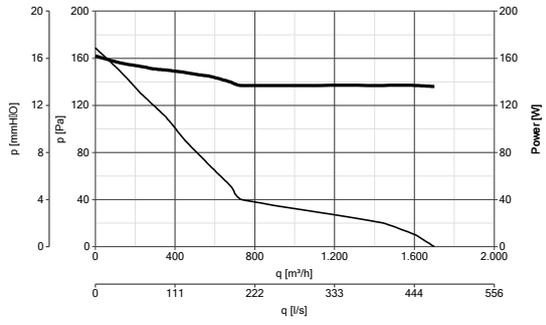


Performances and consumptions

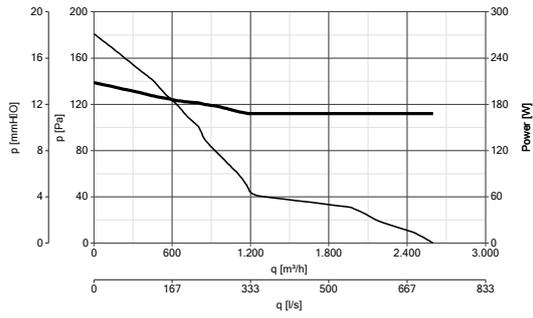
E 254 M ATEX II 2G/D h T3/125°C X Gb/Db
code 40320



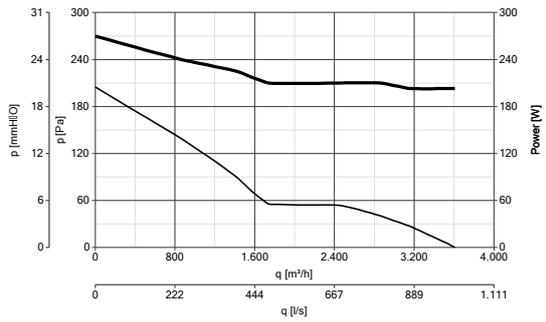
E 304 M ATEX II 2G/D h T3/125°C X Gb/Db
code 40321



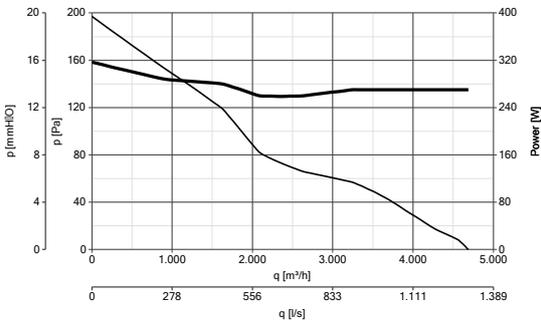
E 354 M ATEX II 2G/D h T3/125°C X Gb/Db
code 40322



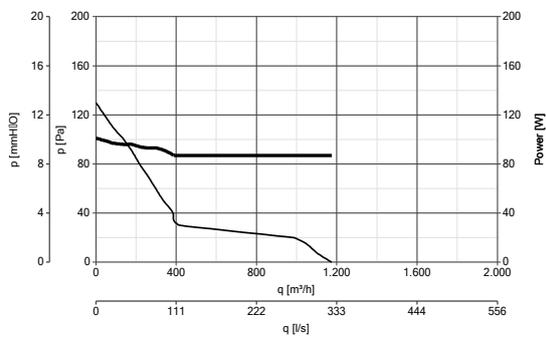
E 404 M ATEX II 2G/D h T3/125°C X Gb/Db
code 40323



E 454 M ATEX II 2G/D h T3/125°C X Gb/Db
code 40324



E 254 T ATEX II 2G/D h T3/125°C X Gb/Db
code 40325

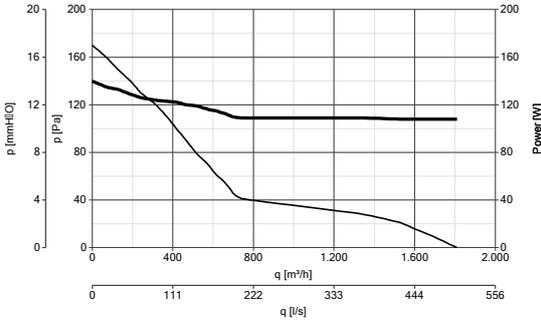


— Power consumption
— Performance

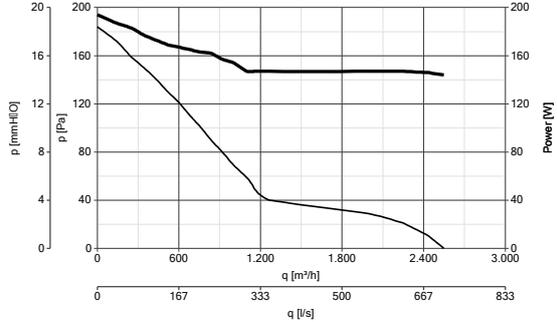


Performances and consumptions

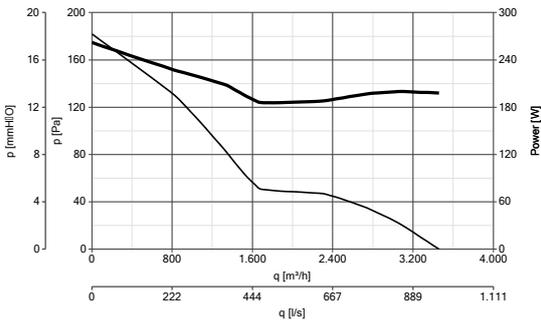
**E 304 T ATEX II 2G/D h T3/125°C X Gb/Db
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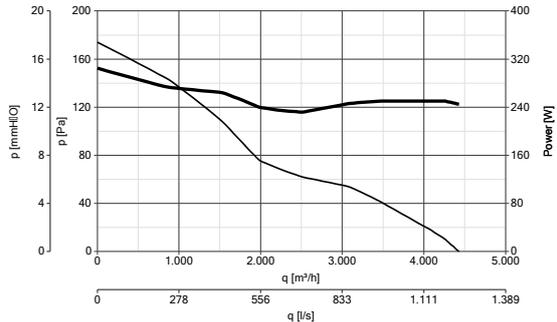
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code 40327**



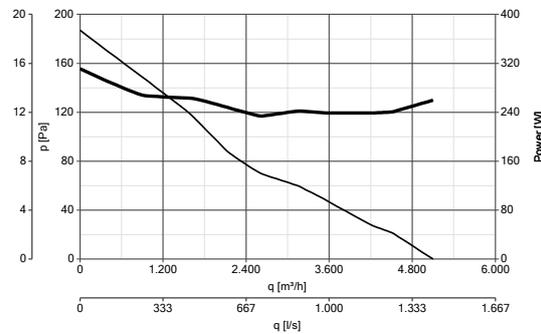
**E 404 T ATEX II 2G/D h T3/125°C X Gb/Db
code 40328**



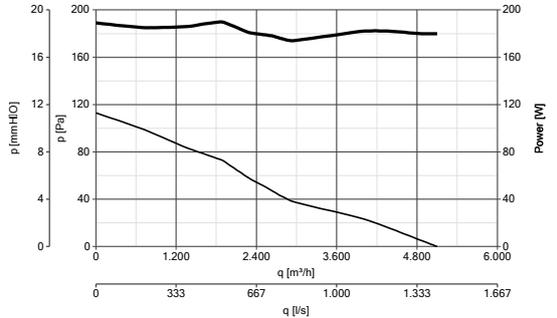
**E 454 T ATEX II 2G/D h T3/125°C X Gb/Db
code 40329**



**E 504 T ATEX II 2G/D h T3/125°C X Gb/Db
code 40330**



**E 506 T ATEX II 2G/D h T3/125°C X Gb/Db
code 40331**



— Power consumption
- - - Performance

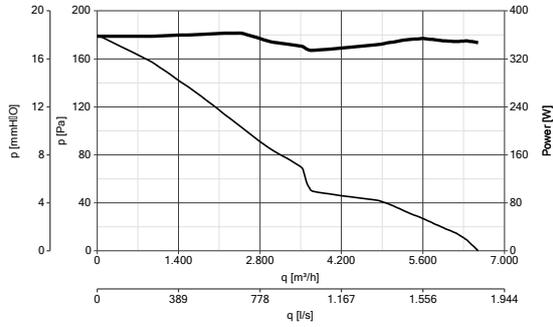


E-ATEX

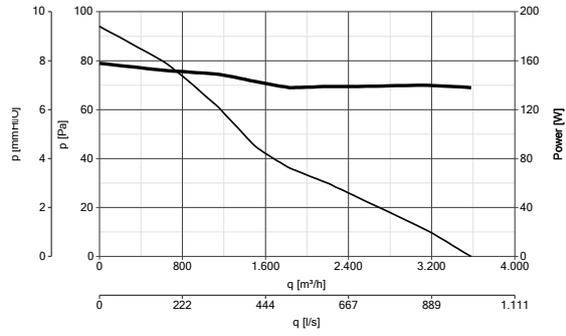
Axial plate-mounted fans for installation in potentially explosive areas

Performances and consumptions

E 604 T ATEX II 2G/D h T3/125°C X Gb/Db
code 40332



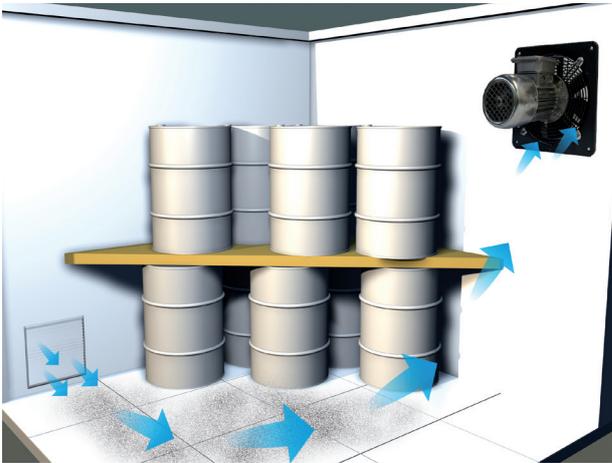
E 606 T ATEX II 2G/D h T3/125°C X Gb/Db
code 40333



— Power consumption
- - - Performance

Examples of ventilation

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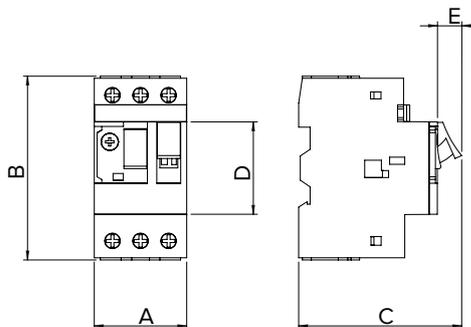
Motor protection decives



GV2-ME

Thermal-Magnetic motor circuit breaker for ATEX industrial fan.

MODEL	CODE	A	B	C	D	E
GV2-ME04	21113	44,5	89	78	45	11
GV2-ME05	21114	44,5	89	78	45	11
GV2-ME06	21115	44,5	89	78	45	11



Dimensions (mm)

PRODUCTS	CODE	GV2-ME04 code 21113	GV2-ME05 code 21114	GV2-ME06 code 21115
E 254 M ATEX II 2G/D h T3/125°C X Gb/Db	40320		•	
E 304 M ATEX II 2G/D h T3/125°C X Gb/Db	40321		•	
E 354 M ATEX II 2G/D h T3/125°C X Gb/Db	40322		•	
E 404 M ATEX II 2G/D h T3/125°C X Gb/Db	40323			•
E 454 M ATEX II 2G/D h T3/125°C X Gb/Db	40324			•
E 254 T ATEX II 2G/D h T3/125°C X Gb/Db	40325	•		
E 304 T ATEX II 2G/D h T3/125°C X Gb/Db	40326	•		
E 354 T ATEX II 2G/D h T3/125°C X Gb/Db	40327	•		
E 404 T ATEX II 2G/D h T3/125°C X Gb/Db	40328	•		
E 454 T ATEX II 2G/D h T3/125°C X Gb/Db	40329		•	
E 504 T ATEX II 2G/D h T3/125°C X Gb/Db	40330			•
E 506 T ATEX II 2G/D h T3/125°C X Gb/Db	40333	•		
E 604 T ATEX II 2G/D h T3/125°C X Gb/Db	40331	•		
E 606 T ATEX II 2G/D h T3/125°C X Gb/Db	40332		•	



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