



ELECTRIC DRIVES
FOR EVERY DEMAND

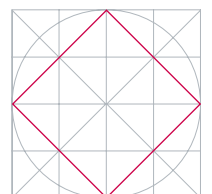


Explosion-protected motors

Type of protection: Increased safety “e”
for converter-fed operation

VEM  CHEM
ex motors

www.vem-group.com





Explosion-protected motors

Type of protection: Increased safety “e” for converter-fed operation

Drives for the chemical and power generation industries

Safe drives despite explosion hazards

Situations in which explosive gas or vapour/air mixtures can be formed, or where combustible dusts can arise, call for special electric drives. VEM is able to supply drives to suit your particular needs, because

- › highly qualified specialists are at hand to advise our customers
- › VEM has many decades of experience in the manufacturing of high-quality explosion-protected drives
- › production in our factories is governed by a quality management system certified by IBExU Institut für Sicherheitstechnik GmbH
- › machines are available for use in hazardous areas in zones 1 and 2, equipment group II, categories 2G and 3G (Gb, Gc)
- › VEM drives of this type are already operating reliably with renowned European and global chemical and power enterprises.

Quality tested and certified

The motors of the VEM type series K1.R are tested and certified by Physikalisch-Technische Bundesanstalt Braunschweig (Notified Body No. 0102) and comply with the European directive 94/9/EC – ATEX 95. The test certificates are recognised by all member states of the European Union, and are similarly accepted by those CENELEC members which do not belong to the EU. The new method developed by PTB Braunschweig for the certification of explosion-protected motors with protection type “e” (increased safety) permits use of these motors on a frequency converter, without requiring a permanent coupling between motor and converter as in the past. It is merely necessary for the frequency converters to meet the demands specified in the EC Type Examination Certificate.

Series	K1.R
Size	112 to 355
Efficiency class	without
Type of protection	IP 55, IP 55, IP 56, IP 65 nach IEC/EN 60034-5
Type of construction	IM B3, IM B35, IM B5, IM B14, IM B34 and derived types of construction acc. to IEC/EN 60034-7
Type of cooling	IC 411 acc. to IEC/EN 60034-6 (IC 416 Available upon request)



Explosion-protected motors with protection type “e” (increased safety) for converter-fed operation are used above all in the chemical industry.

When installing motors of construction types with a vertical shaft, precautions must be taken to prevent foreign objects falling into the ventilation inlets (protective cover).

Explosion-protected design in accordance with equipment group II, category 2, to

EN 60079-0 General Requirements

EN 60079-7 Increased safety “e”

Temperature classes T1 and T2, T3

Ambient temperatures -40 °C to +40 °C

The output assignments are increased compared to DIN 42673, sheet 2, and correspond approximately to the assignments for type of protection “d” (flameproof enclosure).

Overview of approvals

Series and shaft heights	EC Type Examination Certificate
K1.R 112	PTB08ATEX3026X
K1.R 132	PTB08ATEX3001X
K1.R 160	PTB07ATEX3142X
K1.R 180	PTB07ATEX3143X
K1.R 200	PTB08ATEX3027X
K1.R 225	PTB08ATEX3028X
K1.R 250	PTB08ATEX3029X
K1.R 280	PTB08ATEX3030X
K1.R 315	PTB08ATEX3031X
K1.R 355	PTB08ATEX3032X

Example of identification mark:
Ex e IIC T3 Gb

Please refer to our catalogues for technical details. The catalogues are available in printed or in digital version on DVD. They are also available in the internet.



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For detailed information
please visit our website.