



Dust-explosion protected motors

Type of protection Protection by enclosure “tb” for use in Zone 21
Efficiency classes IE1, IE2 and IE3

VEM  CHEM
ex motors

SENSE EXPERIENCE
EXPERIENCE VISION





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Drives for the chemical industry, agriculture, wood processing and power generation industries

Safety for every eventuality

Situations in which explosive gas or vapour/air mixtures can be formed, or where combustible dusts can arise, call for special electric drives. The decisions as to which outdoor or indoor areas are to be considered potentially hazardous in the sense of ATEX 137 or other relevant directives and regulations must be left exclusively to the operator or to the responsible authorities. Whichever decision is made, VEM is able to supply a suitable drive, because

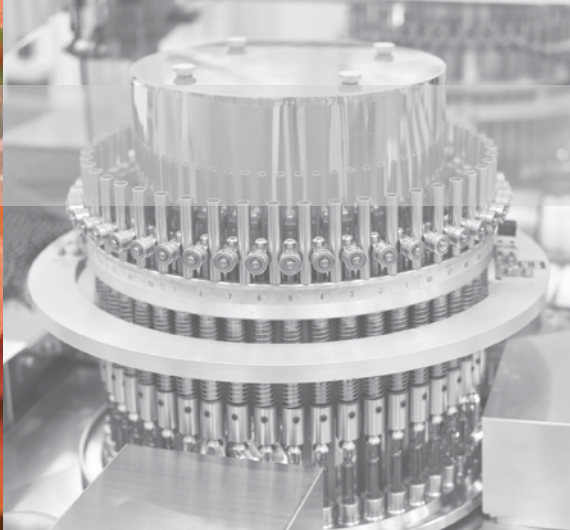
- › highly qualified specialists are at hand to advise our customers
- › VEM has many decades of experience in high-quality drives with dust-explosion protection
- › production in our factories is governed by a quality management system certified by IBExU Freiberg
- › VEM drives of this type are already operating reliably in explosive-dust atmospheres at renowned European and global enterprises.

Quality tested and certified

The motors of the VEM type series are tested and certified by DEKRA EXAM GmbH (*Notified Body* no. 0158) and IBExU Institut für Sicherheitstechnik GmbH Freiberg (*Notified Body* no. 0637) and comply with the directive 94/9/EC – ATEX 95.

The test certificates are recognised by all member states of the European Union, and are additionally accepted by those CENELEC members which do not belong to the EU.

In the case of special versions influencing explosion protection (pole-changing motors, other frequencies, outputs or coolant temperatures, converter operation, etc.), supplementary or renewed approval is required.



Explosion-protected motors with protection rating "tb" (enclosure protection) for use in Zone 21 are required not only in the chemical and power generation industries, but also in agriculture and wood processing.



Type	KPR/KPER/IE1-KPR/IE1-KPER/IE2-KPR/IE2-KPER K2.Q/IE1-K2.Q/K1.R/IE1-K1.R/IE2-W.1R/IE3-W41R
Size	56 to 355
Power range	0.06 – 450 kW
Efficiency class	IE1, IE2 and IE3 acc. to IEC 60034-30 in the power range 0.75...375 kW, 2-, 4- und 6-pole
Type of protection	IP 65 acc. to EN 60034-5
Type of construction	IM B3, IM B35, IM B5 and derived types of construction acc. to EN 60034-7 When installing motors in types of construction with vertical shaft it must be prevented that foreign objects can fall in the air inlets (protective cover). Mounting dimensions and performances acc. to EN 50347
Explosion-protected design complying with equipment group II, category 2	EN 60079-0, General requirements EN 60079-31 Protection by enclosure "t"
Ambient temperatures	-40 °C up to +40 °C (+55 °C), for shaft size 56 up to 132T: -20 °C up to +40 °C (+55 °C)
Type of cooling	IC 411 acc. to EN 60034-6
Max. surface temperature	125 °C, other surface temperatures on request

For the design of the motors the following EC type examination certificates are available:

Design series and sizes	EC type examination certificate
KPER 56 bis 132T	DTM00ATEXE012X
(IE1-)K2.Q 112 – 315	IBExU02ATEX1019
(IE1-)K1.R 112 – 355	IBExU09ATEX1065
(IE2-)W.1R 112 – 355	IBExU04ATEX1118
(IE3-)W.1R 112 – 355	IBExU04ATEX1118

Example of identification mark:
Ex tb IIIC T125 °C Db

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





For detailed information
please visit our website.

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