

VB-E



The double-conical flange VB-E vibrators have been designed for use in industrial processes where explosive gas and dust particles are present, in compliance with ATEX Directive (2014/34/UE) and in compliance with IECEx Scheme.

They are supplied without eccentric weights, which must be realised and mounted by the manufacturer of the vibrating machine. In particular, these vibrators can be used in areas 1 and 2 (gas) and in areas 21 and 22 (dusts) according to the layout and following features:

Technical features

Power supply

Three-phase voltage from 220V to 690V, 50Hz or 60Hz; variable frequency (in presence of PTC thermistor) from 20Hz to the base frequency with constant torque load profile type PWM.

Polarity

4 poles.

Conformity with Standards and Regulations

ATEX Directive 2014/34/UE;
EN/IEC 60079-0, EN/IEC 60079-7,
EN/IEC 60079-31, EN/IEC 60034-1.

Controls

The components that affect protection are 100% accurately controlled and recorded.

Functioning

Continual service (S1) at maximum declared centrifugal force and electric power.

Centrifugal force

Range extended up to 5000 kgf (49 kN), eccentric weights not included.

Mechanical protection

IP 66 according to IEC/EN 60529.

Protection against mechanical impacts

IK 08 according to IEC/EN 62262.

Insulation class

Class F (155°C).

Tropicalization

Standard with "drop by drop" trickle system.

Ambient temperature

From -20°C to +40°C, on request it is possible to have vibrators for maximum ambient temperatures of +55°C.

Vibrator thermal protection

Standard PTC rated thermistor heat detectors 130°C for VB 15/5000E-LM, on request for smaller sizes.

Also on request thermistors with different temperatures, bimetallic thermal protections and anti-condensation heaters.

Fixing of the vibrator

Typical vertical assembly with double tapered flange.

Lubrication

All vibrators are lubricated in the factory and do not require further lubrication at start-up.

Terminal box

The size guarantees passage of tools used for fixing the vibrator to the vibrating machine. The electrical connection must be carried out using the relative connectors inserted inside the connection box.

Electric motor

Three-phase asynchronous type. Designed for maximum starting torques and torque curves specific to requirements of vibrating machines. Insulated windings using "drop by drop" system with class H resin. The rotor is die cast aluminium.

4 poles - 1.500/1.800 rpm

Three-phase

Description			Mechanical Specifications							Electrical Specifications									
Code	Type	Poles	rpm		Centrifugal force				Weight	Temp. class (G)	Temp. class (D)	Max input power		Power rating		Max. current		tE (s)	Ia/In
			50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	kg			W	W	400V 50Hz	460V 60Hz				
6E1223	VB 15/2510-D-E	4	1500	1800	2500	2500	24,5	24,5	68,0	T3	150°C	1700	1800	1390	1480	2,85	2,80	7	6,70
										T4		1220	1350	1030	1100	2,38	2,30	6	7,76
6E1378	VB 15/5000E-LM	4	1500	1800	5000	5000	49,0	49,0	101	T3	135°C	3200	3500	2560	2800	5,70	5,45	6	7,00

Certifications

Category: II 2D & II 2G

Level of protection:

Ex tb IIIC T...°C Db

Ex e IIC T3/T4 Gb

Temperature class:

si veda tabella

Zones of use:

1, 2, 21, 22



Compliance with the applicable European Union directives.



II2G II2D (2014/34/UE)
Ex e IIC T3/T4 Gb
Ex tb IIIC T...°C Db
EN 60079-0
EN 60079-7
EN 60079-31



Ex e IIC T3/T4 Gb
Ex tb IIIC T...°C Db
IEC 60079-0
IEC 60079-7
IEC 60079-31



Certification for Eurasian Customs Union
N° TC RU C-IT.Г508.B.02190



KOSHA Korea
Certificate n° 11-AVG BO-0346/7/8/9/50/51
Ex e IIT3/T4
Ex td A21 IP66

Casing

In spheroidal cast iron to have high strength and optimal elasticity.

Bearing flange

The two flanges, made in spheroidal cast iron, are characterized by external tapered diameter for fixing in the vibrating machine.

Bearings

Custom made with particular geometry, especially designed for Italvibras, suitable to support both high radial and axial loads.

Motor shaft

In treated steel alloy (Isothermic hardening) resistant to stress. On request both shaft ends may be modified to be adapted to the user weights.

Eccentric weights

Not envisioned, to be made and mounted by the user.

Weight covers

Not envisioned.

Painting

Electrostatic surface treatment based on polymerised epoxy polyester powder in oven at 200°C. Tested in salt spray for 500 hours.

For further details please contact sales offices at Italvibras.

The technical data and models listed in this catalogue are not binding. Italvibras reserves the right to modify them without prior notice.

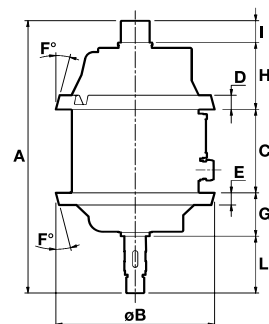


Fig. H

DIMENSIONAL SPECIFICATIONS (mm)

Type	Fig.	A	ØB	C	D	E	F°	G	H	I	L	Cable entry thread
VB 15/2510-D-E	H	517,5	281	158,5	27	23	14	82,5	127	41,5	108	M32x1,5
VB 15/5000E-LM	H	555	342	208	48	48	25	110	119	48	70	M25x1,5

tE (s) = set time tE from IEC/EN 60079-7. Ia/I_n = ratio between start-up current and maximum current.

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