

The VB series is made up of vertical vibrators with double conical flange. These vibrators are typically used in circular screens and in medium-size and large sieves.

They are supplied without eccentric weights, which must be realised and mounted by the manufacturer of the vibrating machine.

The VB series complies with the most recent IEC and EN international standards for use in atmospheres with potentially explosive powders. In particular, the VB series can be used in areas 21 and 22.

Technical features

Power supply

Three-phase voltage from 220V to 690V, 50Hz or 60Hz; suitable for use with an inverter from 20Hz to the base frequency with constant torque load profile

Polarity

4 and 6 poles.

Conformity with Standards and Regulations

Low Voltage Directive 2006/95/EC; ATEX Directive 2014/34/UE; EN/IEC 60034-1, EN/IEC 60079-0, EN/IEC 60079-31, UL 1004-1, CSA C22.2 No.100, NEMA MG-1.

Functioning

Continual service (S1) at maximum declared centrifugal force and electric power. Intermittent services are also possible depending on the type of vibrator and the operating conditions. For detailed information, contact our technical assistance office.

Centrifugal force

Proportioned for a centrifugal force equal to 5000 Kgf. (49 KN), with eccentric weights not included, to be made by the user.

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), class H (180°C) on request.

Tropicalization

Standard on all vibrators with "drop by drop" trickle system.

Ambient temperature

From -20°C to +40°C. Versions for higher or lower temperatures are available on request.

Vibrator thermal protection

Standard PTC rated thermistor heat detectors 130°C for VB 15/5000-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. Special shaped terminals allow to fix the power supply cable, protecting it from loosening.

4 poles - 1.500/1.800 rpm Three-phase

DESCRIPTION					MECHANICAL SPECIFICATIONS						ELECTRICAL SPECIFICATIONS						
Code	Type	Poles	 II2D Temp. class	rpm		Centrifugal force				Weight kg	Max input power		Max current		Ia/In		
				50Hz	60Hz	50Hz	60Hz	50Hz	60Hz		50Hz	60Hz	W	W	A	A	50Hz
601650	VB 15/2200-D	4	-	-	1500	1800	2200	2200	21,6	21,6	66,0	1540	1900	2,60	3,00	3,84	4,00
601223	VB 15/2510-D	4	•	150°C	1500	1800	2500	2500	24,5	24,5	68,0	2016	2600	3,60	4,10	3,50	3,58
601651	VB 15/3000-D	4	-	-	1500	1800	3000	3000	29,5	29,5	78,0	2800	3000	5,90	6,00	6,78	7,00
601378	VB 15/5000-LM	4	-	135°C	1500	1800	5000	5000	49,0	49,0	101	3600	3400	6,00	5,00	7,02	8,00

6 poles - 1.000/1.200 rpm Three-phase

602171	VB 10/2510-D	6	•	150°C	-	1200	-	2500	-	24,5	68,0	-	2100	-	3,22	-	3,27
602056	VB 10/5500-D	6	-	-	-	1200	-	5500	-	54,0	110	-	4600	-	7,70	-	5,00

Certifications

Category: II 2 D

Level of protection:

Ex tD A21 T...°C IP66 (Ex tb IIIC T...°C Db)

Temperature class:

see tables

Zones of use:

21, 22



Compliance with the applicable European Union directives.



Ex tD A21 T...°C IP66 (Ex tb IIIC T...°C Db)
IEC 60079-0
IEC 60079-31



Standard CAN/CSA – C22.2, N°.100-95,
Certificate n° LR 100948
Class 4211 01 - Motors e generators
UL 1004-1 – Rotating Electrical Machines –
General Requirements



Version VB-C available on request
Class I Div.2, Groups ABCD
Standard CAN/CSA – C22.2



Certification for Eurasian Customs Union
N° TC N RU Д-IT.АЛ33.В.02527
N° TC RU C-IT.ГБ08.В.02190



KOSHA Korea
Certificate n° 11-AVG BO-0359
Ex td A21 IP66

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” trickle system with class H resin. The rotor is die cast aluminium.

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 Italtvibras, 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 Italtvibras.

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

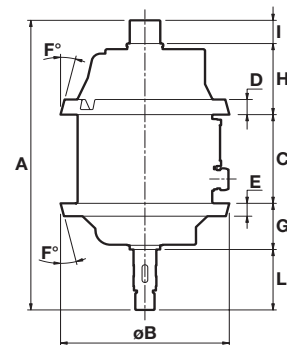


Fig. H

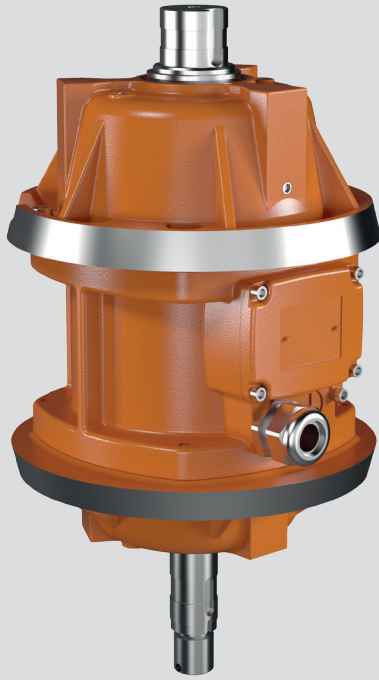
DIMENSIONAL SPECIFICATIONS (mm)

Type	Fig.	A	ØB	C	D	E	F°	G	H	I	L	Cable entry thread
VB 15/2200-D	H	517,5	281	158,5	27	23	14	82,5	127	41,5	108	M32x1,5
VB 15/2510-D	H	517,5	281	158,5	27	23	14	82,5	127	41,5	108	M32x1,5
VB 15/3000-D	H	523	282,5	152	25	25	14	113	129,5	38,0	90,5	M25x1,5
VB 15/5000-LM	H	555	342	208	48	48	25	110	119	48,0	70	M25x1,5

VB 10/2510-D	H	517,5	281	158,5	27	23	14	82,5	127	41,5	108	M32x1,5
VB 10/5500-D	H	607	282,5	216	25	25	14	119	143,5	38,0	90,5	M32x1,5

la/In = ratio between start-up current and maximum current.

VB-E



The double-conical flange VB-E vibrators have been designed for use in industrial processes in environments with a potentially explosive atmosphere, caused by gas and dusts, 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 5000kgf (49kN), 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 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 kg	Temp. class (G)	Temp. class (D)	Max input power W		Power rating W		Max. current A		tE (s)	Ia/In
			50Hz	60Hz	50Hz	60Hz	50Hz	60Hz				50Hz	60Hz	50Hz	60Hz	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
					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.ГБ08.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 Italtvibras, 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.

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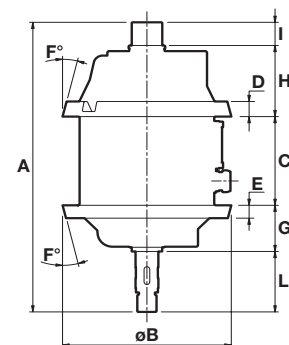


Fig. H

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/In = ratio between start-up current and maximum current.