

MVB-E/MVB-E-FLC



The MVB-E and MVB-E-FLC flanged vibrator series have been designed for use in industrial processes with screens and sieves in environments with a potentially explosive atmosphere, caused by gas and dusts, in compliance with ATEX Directive (94/9/EC).

These vibrators can be supplied in B, C, D versions (see page 70) according to the eccentric weights supplied with the vibrator and to be mounted by the user.

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 the following features:

Technical features

Power supply

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

Polarity

4 poles.

Conformity with European Directives

Low Voltage 2006/95/EC, ATEX 94/9/EC.

Reference Regulations

IEC/EN 60079-0, IEC/EN 60079-7, IEC/EN 60079-31, EN 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

1500 Kgf. (14.7 KN), adjustable with variation of the eccentric weights.

Mechanical protection

IP 66 according to IEC 529, EN 60529.

Protection against mechanical impacts

IK 08 according to IEC 68, EN 50102.

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 max. ambient temperature +55°C.

Vibrator thermal protection

On demand with PTC rated thermistor heat detectors 130°C (DIN 44081-44082). Also on request thermistors with different temperatures and anti-condensation heaters.

Fixing of the vibrator

In all positions and therefore without restriction.

Lubrication

All vibrators are lubricated in the factory and do not require further lubrication if used in normal operating conditions ("FOR LIFE" lubrication). In heavy duty operating conditions periodical re-lubrication may be applied.

Terminal box

Large fixed electrical connections. Special shaped terminals allow to fix the power supply cable, protecting it from loosening.

Electric motor

Three-phase asynchronous type. Insulated windings using "drop by drop" trickle system with class H resin. The rotor is die cast aluminium.

Casing

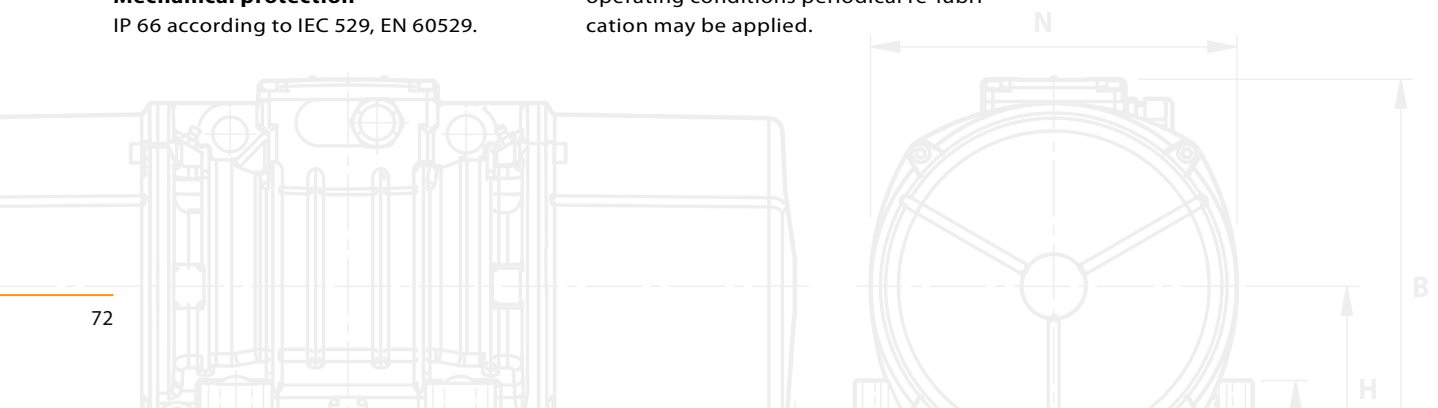
In spheroidal cast iron to have high strength and optimal elasticity. An external earthing screw is located on the casing as prescribed by Regulation IEC/EN 60079-0.

Bearing flange

Constructed in spheroidal cast iron. The geometry of the flange transmits the load to the casing uniformly.

Bearings

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



Category: II 2 GD

Level of protection:

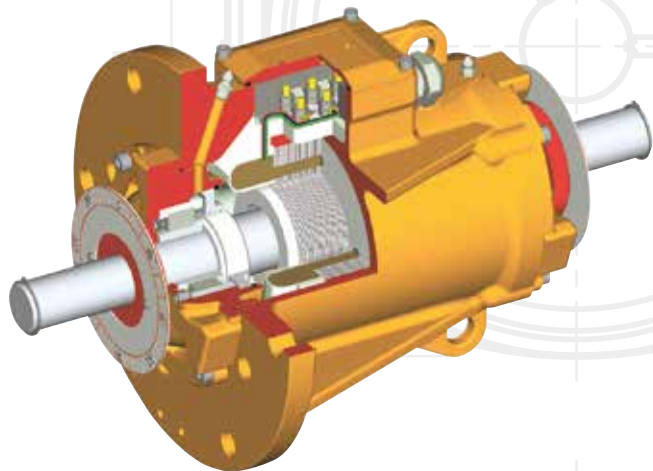
Ex e IIC T3/T4 Gb, Ex tb IIIC T150°C Db

Temperature class:

Gas: T3 (200°C) or T4 (135°C) Dusts: 150°C

EC certificate: LCIE 06 ATEX 6092 X

Zones of use: 1, 2, 21, 22



Motor shaft

In treated steel alloy (Isothermic hardening) resistant to stress.

Eccentric weights

The weights are not provided in the delivery and must be ordered separately (ask Italtibras sales office). Lamellar for clamped centric weigh have an ample possibility of adjustment: the particular adjustment system adopted allows to obtain phase shift from 0 to 180° of the group of upper weights with respect to the group of lower weights and to have ample adjustment of the centrifugal force within the same group of weights.

Weight covers

Not envisioned in the MVB-E and MVB-E-FLC series.

Painting

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

Stainless steel protection

On request, corrosion high grade protection (stainless steel AISI 316L micro suspensions in a polyurethanic paint) is available.

Certifications



II 2 GD - Class Ex e IIC T3/T4 Gb, Ex tb IIIC T150°C Db. IEC/EN 60079-0, IEC/EN 60079-7, IEC/EN 60079-31 Certificate n° LCIE 06 ATEX 6092 X



Comply with the applicable European Union directives: ATEX (94/9/EC), Low Voltage (2006/95/EC)



GGTN Permit and Gost-R certificate: Ex e II T3/T4 - DIP A21 IP66 standards GOST R 51330.0-99, GOST R 51330.8-99, GOST R IEC 61241-1-1-99.



KOSHA Korea Certificate n° 11-AV4 BO-0346/7/8/9/50/51 Ex e II T3/T4 - Ex td A21 IP66



Certificate of Conformity n° IECEx LCI 10.0003X following standards IEC 61241-0, IEC 61241-1, IEC 60079-0, IEC 60079-7



MVB-E/MVB-E-FLC



MVB-E 4 poles - 1500/1800 rpm

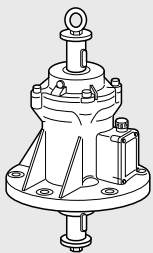
Description			Mechanical specifications					Electrical specifications							
Code	Type	SIZE	Centrifugal force				Weight kg	Temp. class (G)	Temp. class (D)	Max input power W		Power rating W		Max. current A	
			50 Hz	60 Hz	50 Hz	60 Hz				50 Hz	60 Hz	50 Hz	60 Hz	400 V 50 Hz	460 V 60 Hz
three- phase 6E1226	MVB 1510/15-E	50	1500	1500	14.7	14.7	41.5	T3	150°C	1100	1150	730	800	1.90	1.82
			630	700	480	530		1.33		1.27					

MVB-E-FLC 4 poles - 1500/1800 rpm

Description			Mechanical specifications					Electrical specifications							
Code	Type	SIZE	Centrifugal force				Weight kg	Temp. class (G)	Temp. class (D)	Max input power W		Power rating W		Max. current A	
			50 Hz	60 Hz	50 Hz	60 Hz				50 Hz	60 Hz	50 Hz	60 Hz	400 V 50 Hz	460 V 60 Hz
three- phase 6E1225	MVB 1510/15-E-FLC	50	1500	1500	14.7	14.7	54.5	T3	150°C	1100	1150	730	800	1.90	1.82
			630	700	480	530		1.33		1.27					

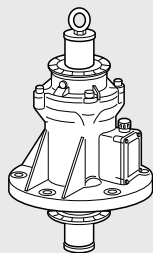
Versions

Version A



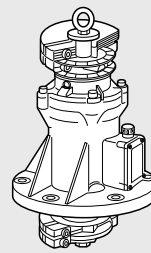
Basic model.

Version B



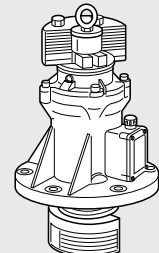
Basic model
with angle disc.

Version C



Basic model with angle disc
and weights type C (clamped).

Version D



Basic model with angle disc
and weights type D (lamellar).

Fig. I

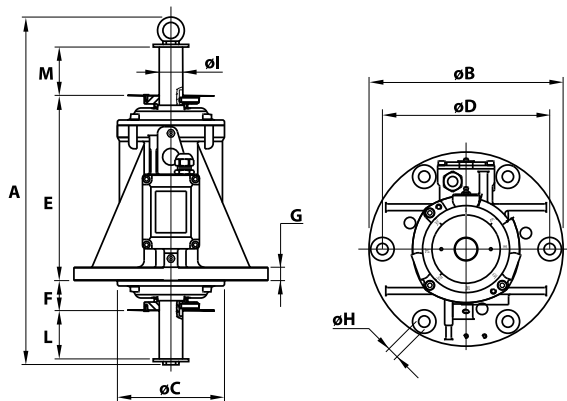
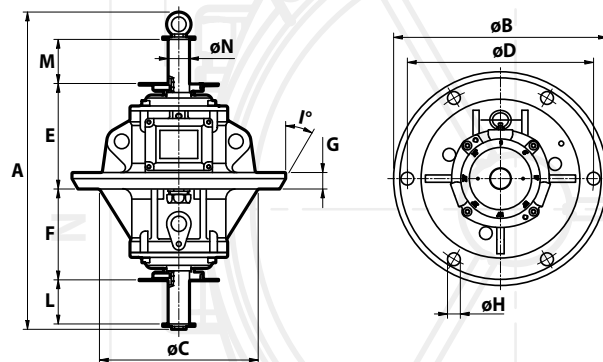


Fig. L



Dimensional specifications (mm)

t_E (s)	I_A/I_N	Type	Fig.	A	øB	øC	øD	Holes		E	F	G	øI	L	M	Cable entry thread
								øH	N°							
9 5.5	4.95 7.00	MVB 1510/15-E	I	476	290	171	250	17	6	278	46	20	35	71	71	M25x1,5

Dimensional specifications (mm)

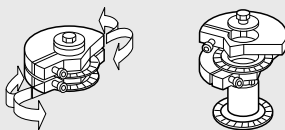
t_E (s)	I_A/I_N	Type	Fig.	A	øB	øC	øD	Holes		E	F	G	øI	L	M	øN	Cable entry thread
								øH	N°								
9 5.5	4.95 7.00	MVB 1510/15-E-FLC	L	476	350	260	305	21	6	174	150	27	30	71	71	35	M25x1,5

t_E (s) = set time t_E from IEC/EN 60079-7. I_A/I_N = ratio between start-up current and maximum current.

Each C type weight group (in twos) is adjustable by phase shifting one in respect to the other. Each D type weight group (lamellars) is adjustable by removing one or more lamellar elements.

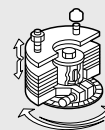
Weight adjustment: the weights at the two ends of the shaft can be staggered as required, with reference to the graduated discs on the shaft itself.

Type "C"



Infinitely adjustable centrifugal force

Type "D"



Centrifugal force adjustable from max. to min. by removing the lamellar weights.