

# ■ MVB-E / MVB-E-FLC



## 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

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

### 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 max. ambient temperature +55°C.

### Vibrator thermal protection

On demand with PTC rated thermistor heat detectors 130°C. 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 at start-up.

### 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. 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

In spheroidal or grey cast iron. The geometry of the flange transmits the load to the casing uniformly.

### 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.

### Eccentric weights

The weights are not provided in the delivery and must be ordered separately (ask Italvibras 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.

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 (2014/34/UE) and with IECEx Scheme.

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:

**Tipo: MVB-E gr.50, MVB-E-FLC gr.50**

**Category:** II 2D & II 2G

**Level of protection:**

Ex tb IIIC T150°C Db

Ex e IIC T3/T4 Gb

**Temperature class:**

Gas: T3 (200°C o T4 (135°C)

Polveri: 150°C

**Zones of use:**

1, 2, 21, 22

#### 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.

**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.**

#### Certifications



Compliance with the applicable European Union directives.



II2G II2D (2014/34/UE)  
Ex e IIC T3/T4 Gb  
Ex tb IIIC T150°C Db  
EN 60079-0  
EN 60079-7  
EN 60079-31



Ex e IIC T3/T4 Gb  
Ex tb IIIC T150°C Db  
EN 60079-0  
EN 60079-7  
EN 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

# MVB-E / MVB-E-FLC



## MVB-E 4 poles - 1.500/1.800 rpm

### Three-phase

DESCRIPTION				MECHANICAL SPECIFICATIONS						ELECTRICAL SPECIFICATIONS								
Code	Type	SIZE	Esecuzioni disponibili	Centrifugal force				Weight kg	Temp. class (G)	Temp. class (D)	Max input power		Power rating		Max. current		tE (s)	Ia/In
				50Hz	60Hz	50Hz	60Hz				W	W	400V 50Hz	460V 60Hz				
6E1226	MVB 1510/15-E*	50	B, C, D	1500	1500	14,7	14,7	41,5	T3	150°C	1100	1150	730	800	1,90	1,82	9	4,95
									T4		630	700	480	530	1,33	1,27	5,5	7,00

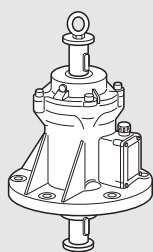
## MVB-E-FLC 4 poles - 1.500/1.800 rpm

DESCRIPTION				MECHANICAL SPECIFICATIONS						ELECTRICAL SPECIFICATIONS								
Code	Type	SIZE	Esecuzioni disponibili	Centrifugal force				Weight kg	Temp. class (G)	Temp. class (D)	Max input power		Power rating		Max. current		tE (s)	Ia/In
				kg	kN	kg	kg				W	W	A	A	A			
				50Hz	60Hz	50Hz	60Hz				50Hz	60Hz	50Hz	60Hz	400V 50Hz	460V 60Hz		
6E1225	MVB 1510/15-E-FLC*	50	B, C, D	1500	1500	14,7	14,7	41,5	T3	150°C	1100	1150	730	800	1,90	1,82	9	4,95
									T4		630	700	480	530	1,33	1,27	5,5	7,00

\* The lifting rings are made in the casing, there are no eyebolts on the shaft.

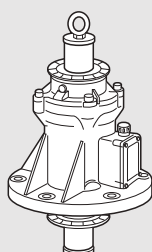
### Versions

Version A



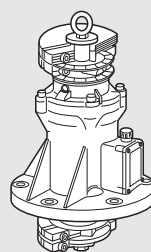
Basic model.

Version B



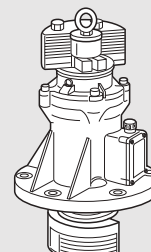
Basic model with angle disc.

Version C



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

Version D



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

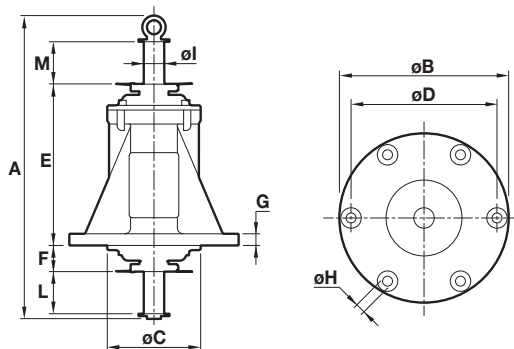


Fig. I

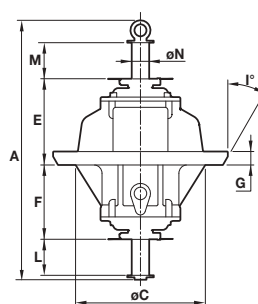


Fig. L

DIMENSIONAL SPECIFICATIONS (mm)

Holes

Type	Fig.	A	ØB	ØC	ØD	ØH	N°	E	F	G	I°	L	M	ØN	Pressacavo
<b>MVB 1510/15-E*</b>	I	476	290	171	250	17	6	278	46	20	35	71	71		M25x1,5

DIMENSIONAL SPECIFICATIONS (mm)

Holes

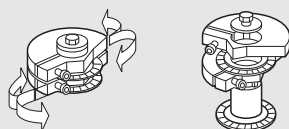
Type	Fig.	A	ØB	ØC	ØD	ØH	N°	E	F	G	I°	L	M	ØN	Pressacavo
<b>MVB 1510/15-E-FLC*</b>	L	476	350	260	305	21	6	174	150	27	30	71	71	35	M25x1,5

tE (s) = set time tE from IEC/EN 60079-7. Ia/In = 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.

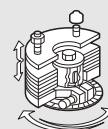
**Weight adjustment:** the weights at the two ends of the shaft can be staggered as required, with reference to the graduated discs on the shaft itself.

Type "C"



Infinitely adjustable centrifugal force

Type "D"



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