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 terminal box to facilitate electrical connection.
Special shaped terminals allow for the power supply cable to be secured, whilst 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 where explosive gas and dust particles are present, 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

CE
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

IECEx
Ex e IIC T3/T4 Gb
Ex tb IIIC T150°C Db
EN 60079-0
EN 60079-7
EN 60079-31

EAC
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									
				Centrifugal force kg		Centrifugal force kN		Weight kg			Max input power W		Power rating W		Max. current A			
Code	Type	SIZE	Available versions	50Hz	60Hz	50Hz	60Hz		Temp. class (G)	Temp. class (D)	50Hz	60Hz	50Hz	60Hz	400V 50Hz	460V 60Hz	tE (s)	Ia/In
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

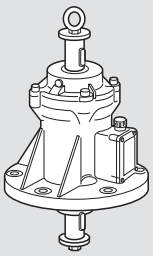
MVB-E-FLC 4 poles - 1.500/1.800 rpm

DESCRIPTION				MECHANICAL SPECIFICATIONS					ELECTRICAL SPECIFICATIONS									
				Centrifugal force kg		Centrifugal force kN		Weight kg			Max input power W		Power rating W		Max. current A			
Code	Type	SIZE	Available versions	50Hz	60Hz	50Hz	60Hz		Temp. class (G)	Temp. class (D)	50Hz	60Hz	50Hz	60Hz	400V 50Hz	460V 60Hz	tE (s)	Ia/In
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 obtained in the casing, there are no eyebolts on the shaft.

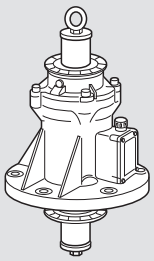
Versions

Version A



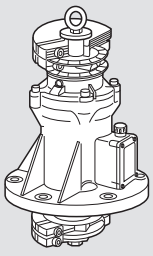
Basic model.

Version B



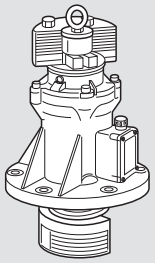
Basic model with angle disc.

Version C

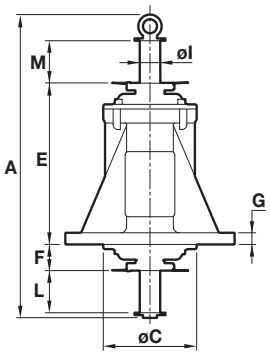


Basic model with angle disc and weights type C (clamped).

Version D



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



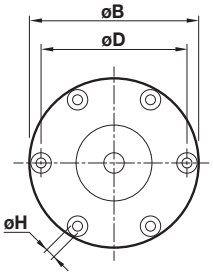
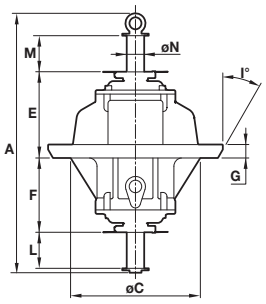


Fig. I



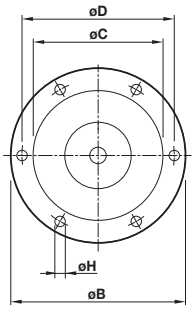


Fig. L

DIMENSIONAL SPECIFICATIONS (mm)

Holes

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

DIMENSIONAL SPECIFICATIONS (mm)

Holes

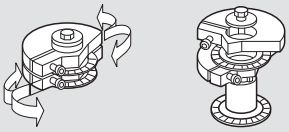
Type	Fig.	A	ØB	ØC	ØD	ØH	N°	E	F	G	I°	L	M	ØN	Pressacavo
MVB 1510/15-E-FLC*	**L**	476	350	260	**305**	**21**	**6**	174	150	27	30	71	71	35	M25x1,5

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.

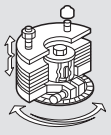
Weight adjustment: the weights at the two ends of the shaft can be staggered as required, with reference to the graduated discs on the shaft itself.

Type “C”



Infinitely adjustable centrifugal force

Type “D”



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