



The CDX explosion proof vibrators have been designed for use in industrial processes with a potentially explosive atmosphere.

The enclosure of the CDX vibrators is characterised by increased thickness and joints to prevent the transmission of an internal explosion to the surrounding area.

The CDX series is characterised and enhanced by many different certifications, depending on the vibrator model, as shown in these pages.

Technical features

Power supply

Three-phase voltage from 24V to 690V (limit at 600V for UL and CSA certifications), 50Hz or 60Hz, or single-phase 100-130V 60Hz and 200-240V 50Hz; suitable for use with a PWM inverter from 20Hz to the base frequency with constant torque load profile.

Polarity

2, 4, 6 and 8 poles.

Conformity with Standards and Regulations

ATEX Directive 2014/34/UE;
EN/IEC 60079-0, EN/IEC 60079-1,
EN/IEC 60079-31, UL 674-886, CSA C22.2.
See also tables.

Controls

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

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

Range extended to 22400 kgf. (220 kN), with centrifugal force adjustable from 0 to 100%.

Mechanical protection

IP66 according to IEC/EN 60529.

Protection against mechanical impacts

IK 08 according to IEC/EN 62262.

Insulation class

Class F (155°C).

Tropicalization

Standard on all vibrators, with vacuum encapsulation up to size 35, with "drop by drop" trickle system for larger sizes.

Ambient temperature

From -20°C to +40°C. See also approval table for other ambient temperatures.

Vibrator thermal protection

With thermal protector at 130°C for the entire CDX range, or on request with PTC thermistors rated heat detectors 130°C.

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. The terminal cover, with increased thickness, is constructed to contain internal explosions. Special shaped terminals allow to fix the power supply cable, protecting it from loosening.

Electric motor

Three-phase and single-phase asynchronous type. Insulated windings using vacuum encapsulating up to size 35; using the "drop by drop" trickle system with Class H resin for the larger sizes. The rotor is die cast aluminium.

Casing

In high-tensile aluminium alloy up to size 30, in spheroidal cast iron for larger sizes.

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 Italtibras, suitable to support both high radial and axial loads.

Motor shaft

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

Eccentric weights

Allow adjustment of the centrifugal force. This adjustment is realized by a graduated scale, which expresses the centrifugal force as a percentage of the maximum centrifugal force.

A patented system, called ARS, prevents adjustment errors.



The CDX-G series, obtained by the CDX frame sizes 35 to 80 series, is specifically designed for use in industrial processes in a potentially explosive gas atmosphere, among other applications they are commonly used on oil and gas drilling rigs. The CDX-G series has weight covers and terminal box covers with special protection coatings; weight covers can be supplied in stainless steel upon request.

Approvals	series CDX	series CDX-G
	Class I, Groups CD. Class II, Groups EFG. Temp. Class T4 (135°C) (Amb. Temp. -20°C÷+40°C)	Class I, Groups CD. Temp. Class T2C (230°C) (Amb. Temp. -20°C÷+60°C)
	ATEX II2G Ex d IIB 120°C Gb II 2D Ex tb IIIC T120°C Db (Amb. Temp. -20°C÷+40°C)	ATEX II2G Ex d IIB 160°C Gb (Amb. Temp. -20°C÷+60°C)
	Ex d IIB 120°C Gb Ex tb IIIC T120°C Db (Amb. Temp. -20°C÷+40°C)	Ex d IIB 160°C Gb (Amb. Temp. -20°C÷+60°C)
Notes	Version with Amb. Temp. -20°C to +60°C and other temperature classes is available.	Version with cULus temperature class T3C (160°C) with thermal protection is available.

Weight covers

In aluminium alloy.
Special coatings provided on CDX-G types.
On request available also in stainless steel for CDX-G types.

Painting

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

Other features

The CDX series is supplied without cable gland and with NPT threaded conduit opening.

Other mounting bolt patterns are available. For further details please contact sales offices at Italtibras.

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

Certifications



Compliance with the applicable European Union directives.



Certificate: E129825
Class I, Groups CD
Class II, Groups EFG
Temp. Class T4 (135°C)
UL Standard N°674-886, CSA C22.2



Certificate: DEMKO 07 ATEX 0612032X
II2D Ex tb IIIC T120°C Db
II2G Ex d IIB 120°C Gb
ATEX Directive 2014/34/UE
EN 60079-0, EN 60079-1, EN 60079-31



Certificate: IECEx UL 09.0034X
Ex tb IIIC T120°C Db
Ex d IIB 120°C Gb
IEC 60079-0, IEC 60079-1, IEC 60079-31



Certificate: LR 100948
Class I, Groups CD
Class II, Groups EFG
Temp. Class T4 (135°C)
CSA Standard C22.2, UL N°674-886



Certification for Eurasian Customs Union
N° TC RU C-IT.ГБ08.B.02190



KOSHA Korea
Certificati n° 11-AV4BO-0353/4/5/6/7/8/60
Ex d IIB 120°C
Ex td A21 IP66 T120°C