



## Technical features

### Functioning

VR rotational motion exciters have a spheroidal cast iron body, within which two bearings support a shaft with eccentric weights fitted at either end, generating the declared centrifugal force.

Static moment, thus centrifugal force, are adjustable by means of additional weight inserts in steel or lead.

Bearings are lubricated by oil bath, which must be inserted by the end user.

The typical application is with two VR exciters coupled together by means of a cardan shaft, with each VR fitted at either side of the machine.

They are available in executions 1U and 2U, with one joint and two joints respectively.

The rotation of the shaft of the exciter with two joints (2U) is obtained by means of an external drive, connecting to the shaft by means of a joint, generally a cardan (recommended).

The external drive can be an electric motor, or hydraulic or other, to be connected directly to the joint by means of belts and pulleys and can have variable speed in function of the exciter specifications.

### Conformity to Directives

In the application field of the Machinery Directive 2006/42/EC, the VR rotational motion exciters can be considered as "partly completed machinery".

### Static moment

The total static moment of a pair of VR exciters varies from 4294 to 73440 kgmm depending on the model.

For each single model the static moment can be set thanks to the additional steel or lead inserts.

### Centrifugal force

Up to 580 kN by pair of VR exciters.

### Ambient temperature

From -40°C to +70°C.

### Mounting position

VR exciters can be mounted with the shafts in horizontal position.

### Lubrication

Oil bath lubricated bearings. Each exciter is supplied without oil which has to be inserted by the end user following relevant instructions as per Manual.

### Driving system

The movement is transmitted by an external driving system coupled to the shaft of the 2U version VR by means of a joint, generally a Cardan (recommended).

The external driving system can be an electric motor, a hydraulic motor or other type of motor, directly coupled or by belts and pulleys.

### Casing

In spheroidal cast iron.

### Bearings

Spherical double crown roller bearings, high rated lifetime at maximum load.

### Motor shaft

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

### Eccentric weights

Steel or cast iron eccentric weights, additional steel or lead insert weights.

### Weight cover

The VR oscillators are equipped with one weight cover on the side which remain to the external to protect the rotating weight

### Painting

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

The VR series of rotational motion exciters are designed for use in pairs, on vibrating machines or medium and large sizes.

The technical choices made in the design have allowed an excellent containment of noise as well as a long service life.

Centrifugal force setting is simple through the choice of additional insert weights.

With the VR exciters it is possible to obtain a unidirectional vibration with high values of centrifugal force by fitting two pairs of VR oscillators in parallel on the vibrating machine.

#### **Other features**

The VR Italtibras exciters are supplied with:

- coupling flange according to DIN standards on the shaft
- additional weights, based on the requested weight setting
- oil level inspection hole, magnetic plugs and breathing plug with valve
- technical handbook for use and maintenance.

On request Italtibras can supply the complete driving system, including joints, shaft extension and electric motor.

**Different fixing distances can be available.**

**Contact Italtibras Sales Service.**

**Technical features and models mentioned in this catalogue are indicative and not binding. Italtibras reserves the right to modify them without any obligation.**