

NOISE AND VIBRATION CONTROL

CDM-ISO-MONT

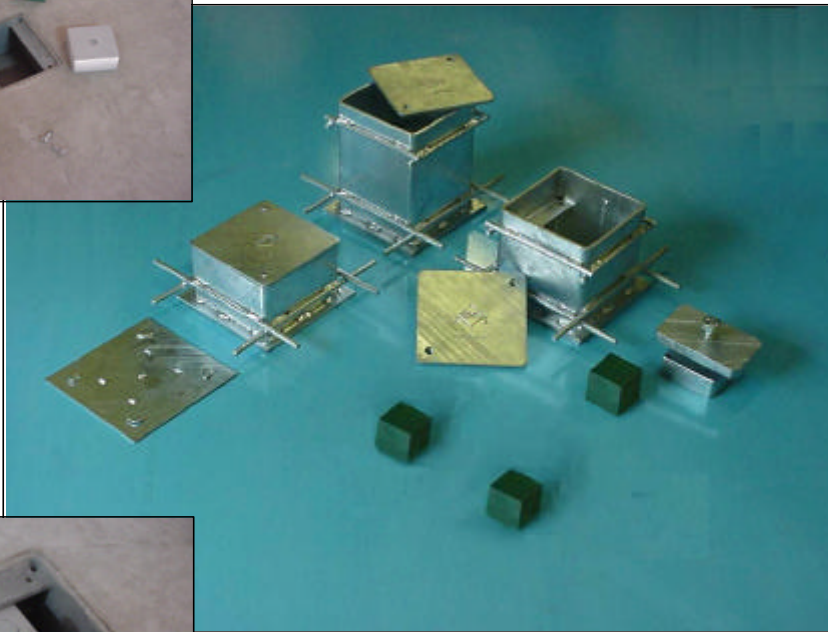


YOUR PARTNER IN SILENCE

JACK-UP FLOATING FLOOR SYSTEM WITH REPLACEABLE BEARINGS

$$f_{res} = 6 - 8 \text{ Hz}$$

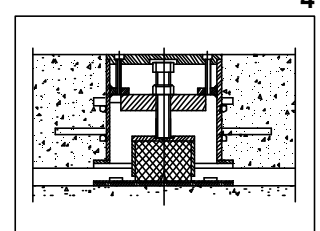
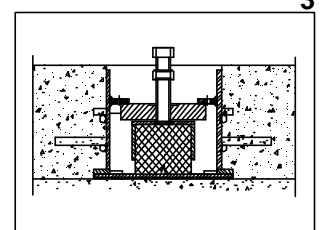
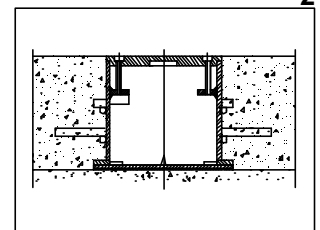
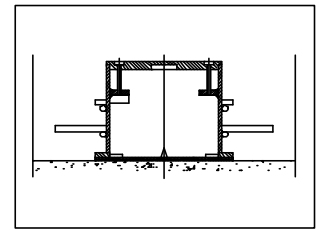
Product components



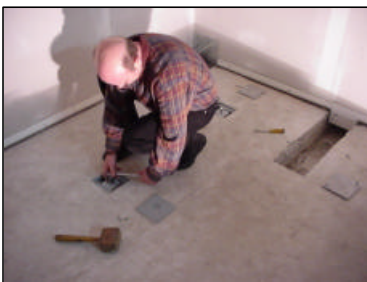
CDM-ISO-MONT jack-up system

- full replaceability of the bearings
- f_{res} 6-8 Hz independent of air gap
- guaranteed isolation
- for concrete slabs of 100 – 150 – 200 mm
- for acoustic loads up to 30 kN
- reduced air gap 10 – 40 mm
- air gap absorption possible

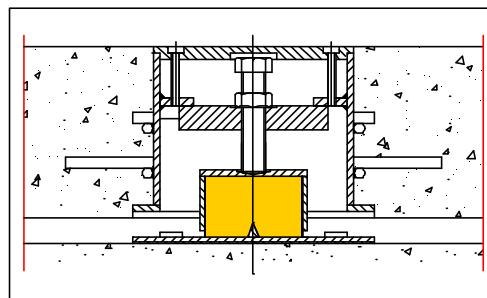
Installation



1. Installation of the boxes
2. Pouring of the concrete
3. Inserting the bearings
4. Lifting the floor slab and closing the boxes

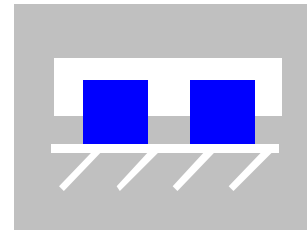


Lifting of the floor



Conceptual section

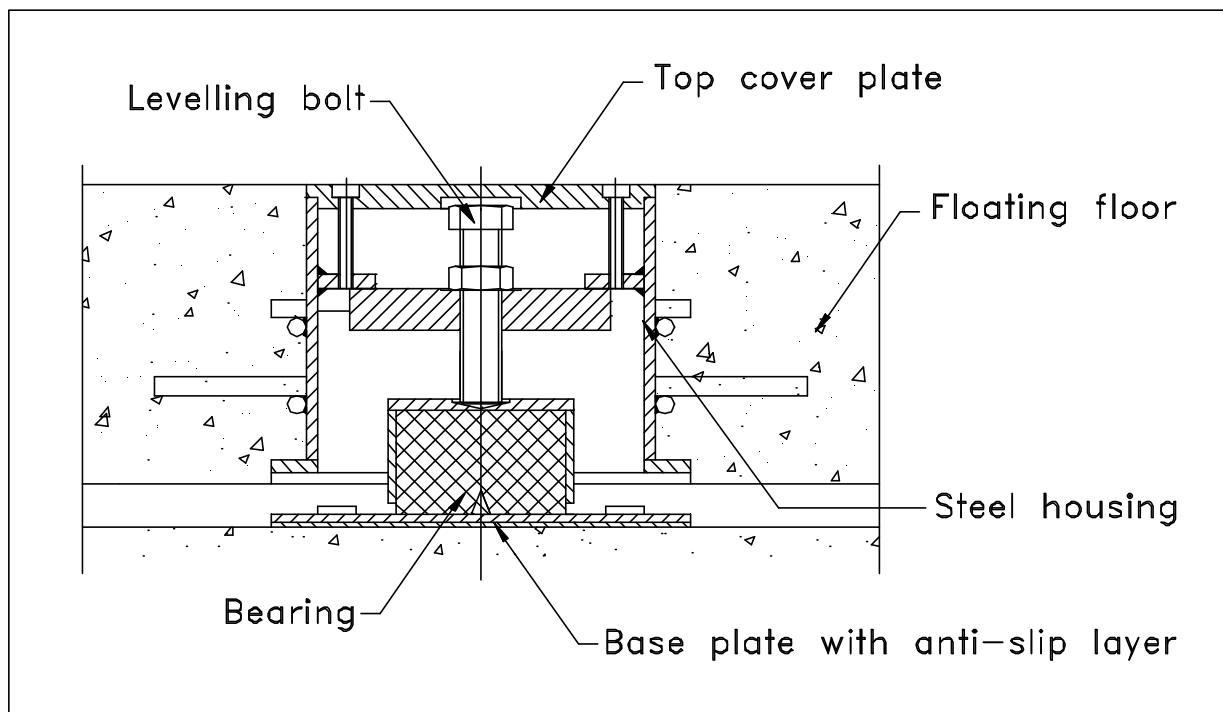
2.1.2 CDM-ISO-MONT



CDM-ISO-MONT

1. APPLICATIONS

The **CDM-ISO-MONT** system is a jack-up floating floor system on elastomer bearings with high performances on the isolation level of airborne and structure-borne sound transmission. The system is ideal for use in areas subjected to vibrations such as shopping malls, machine rooms, bowling halls etc... It is also very useful in cases where a floating floor is required but limited height space is available for the floating floor.



2. CDM PRODUCTS AND SYSTEMS

The **CDM-ISO-MONT** system consists of a steel housing that is placed in the reinforcement grid. Once the concrete is poured and dried, resilient bearings (made of CDM-HR material) are placed in the boxes and the floating floor is lifted, compressing the bearings. Because the bearings are integrated in the floating floor, the system allows for smaller air gaps than with formwork panels, thus saving important built-up height. If necessary, the bearings are easily accessible and can be replaced afterwards.

Which **CDM-ISO-MONT** type to choose, depends on the thickness of the floating floor and on the loads to be taken up by the bearings as can be derived from the table below: More details can be found on the product sheet.



ISO-MONT type	Height [mm]	Bearing material	Bearing dimensions [mm]	Work load [kN]	Maximum load [kN]
100/12	100	CDM-82	70*70*55	6	12
150/12	150	CDM-82	70*70*55	6	12
200/12	200	CDM-82	70*70*55	6	12
100/20	100	CDM-82	70*110*55	10	20
150/20	150	CDM-82	70*110*55	10	20
200/20	200	CDM-82	70*110*55	10	20
100/30	100	CDM-83	70*70*55	15	30
150/30	150	CDM-83	70*70*55	15	30
200/30	200	CDM-83	70*70*55	15	30
100/7.5	100	CDM-82 + spring	70*70*55	5	7.5
150/7.5	150	CDM-82 + spring	70*70*55	5	7.5
200/7.5	200	CDM-82 + spring	70*70*55	5	7.5

The latter three types are of the **CDM-ISO-MONT-LF** type and contain a spring inside the bearing. In this way, a lower resonance frequency of 4-5 Hz is obtained than with the other types containing an elastomer bearing (resonance frequency 6-8 Hz).

3. PERFORMANCES

Under load conditions, the bearings have a resonance frequency of 6-8 Hz, which ensures the efficient decoupling of the floating floor. The air gap can be chosen anywhere between 10 and 40 mm, values lower than with conventional floating floors.

Because the floor is lifted after installation, bridging between base floor and floating floor becomes impossible and maximum isolation is guaranteed.

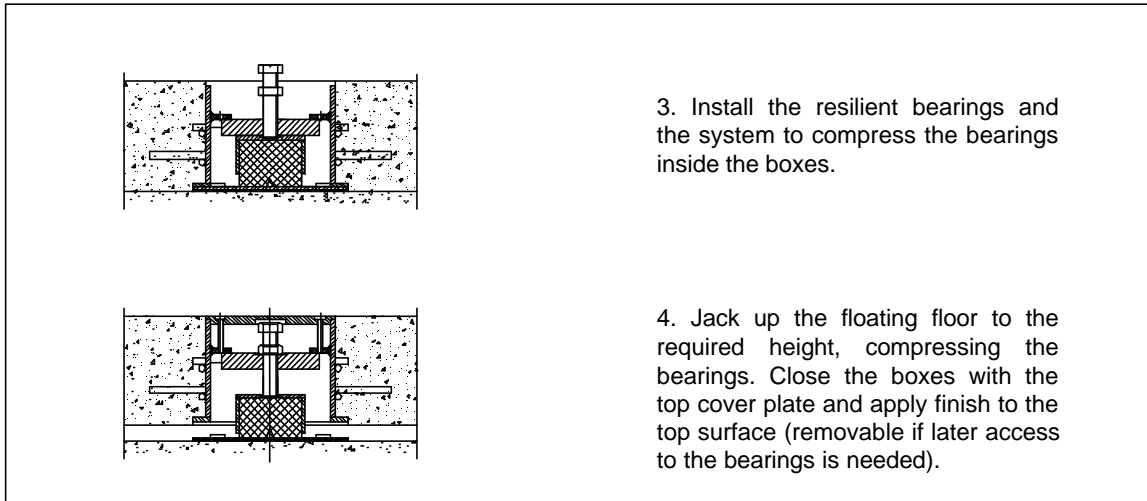
4. INSTALLATION

Mounting principles without air gap absorption:

1. Mark the position of the isolators on the floor according to the installation plan. Install the lateral isolation. Cover the structure with an impermeable PE sheet. Position the boxes and the reinforcement grid.

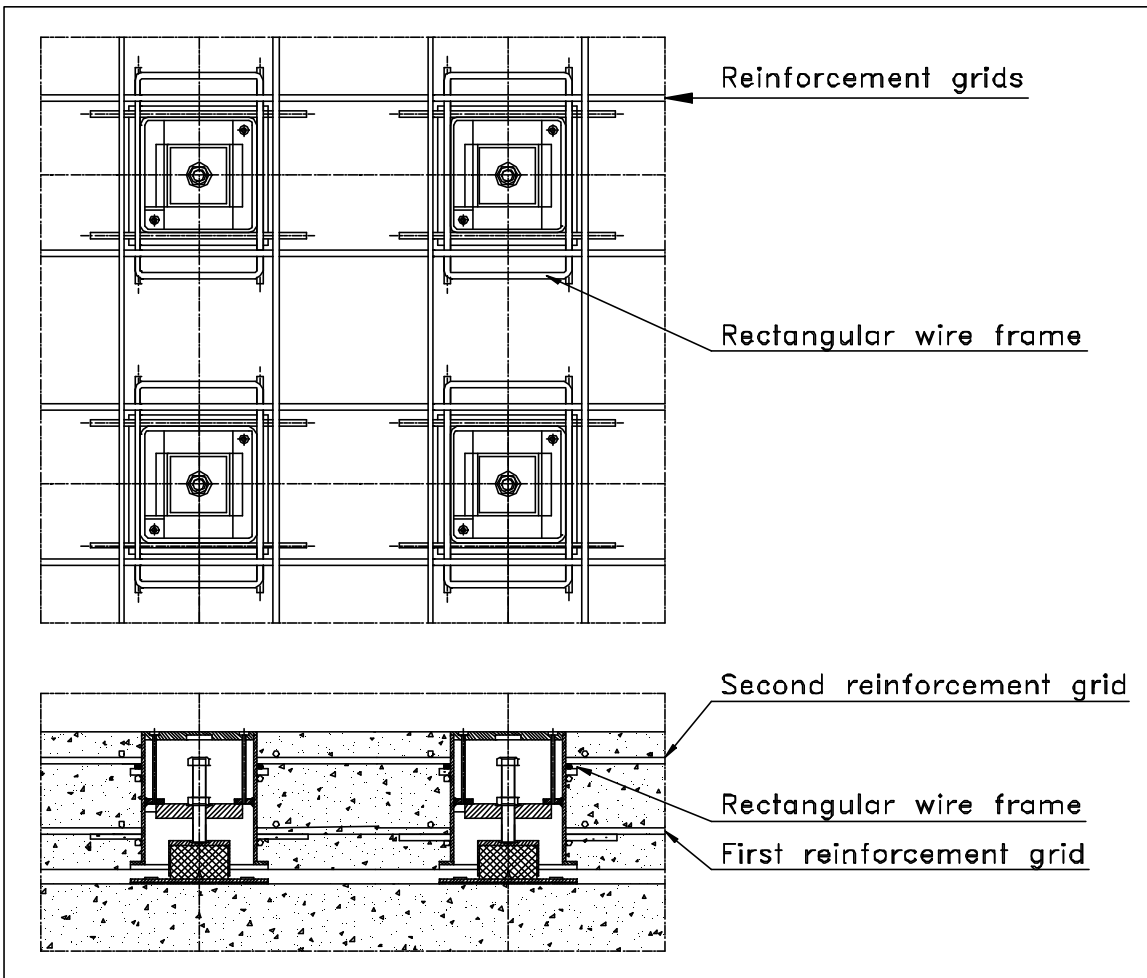
2. Pour the concrete and let cure.





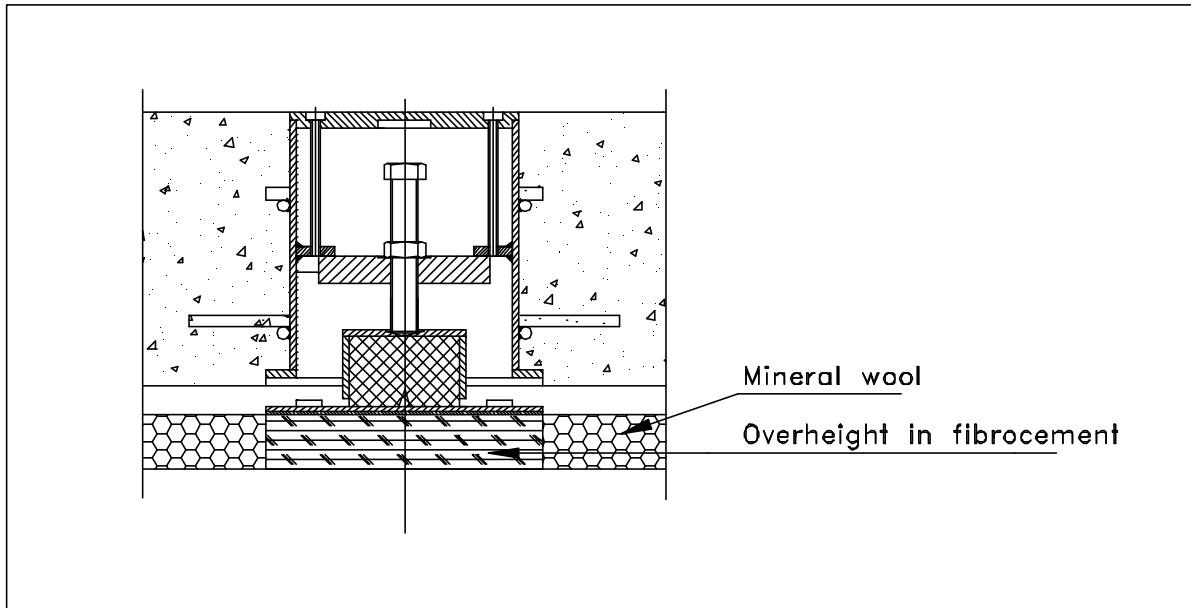
Some recommendations:

- As the dimensions of the steel housing are 150*150 mm, a reinforcement grid with minimum dimensions of 200*200*8*8 mm is required. For floors of 150 or 200 mm thickness, a second similar reinforcement grid must be used. To this aim, the outside of the steel housing is provided with a support set. A rectangular wire frame with dimensions 150*250*8 mm should be slipped over the box on the support set in order to take up the second reinforcing of 200*200*8*8 mm.

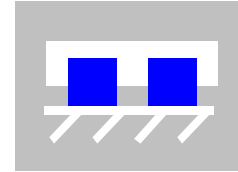


- The lateral isolation consists of mineral wool of 25 mm thickness and a density of about 90 kg/m^3 . Watertight lateral joints can be installed once the floating floor is dry.
- The supporting surface, onto which the boxes are to be installed, needs to be horizontal and clean: a tolerance of 1/1000 is acceptable (e.g. 2 mm on 2 m linear).
- No maintenance required after installation. The bearings can be replaced easily after installation if necessary.

In order to obtain a larger air gap, the boxes can be placed on overheight blocks (e.g. 36 mm fibroceMENT). To do this, the overheight blocks are positioned on the floor and a layer of 20 mm high-density ($>90 \text{ kg/m}^3$) mineral wool is placed between the blocks. Everything is then covered with a PE film. Further installation is as described above. A concept drawing is given below

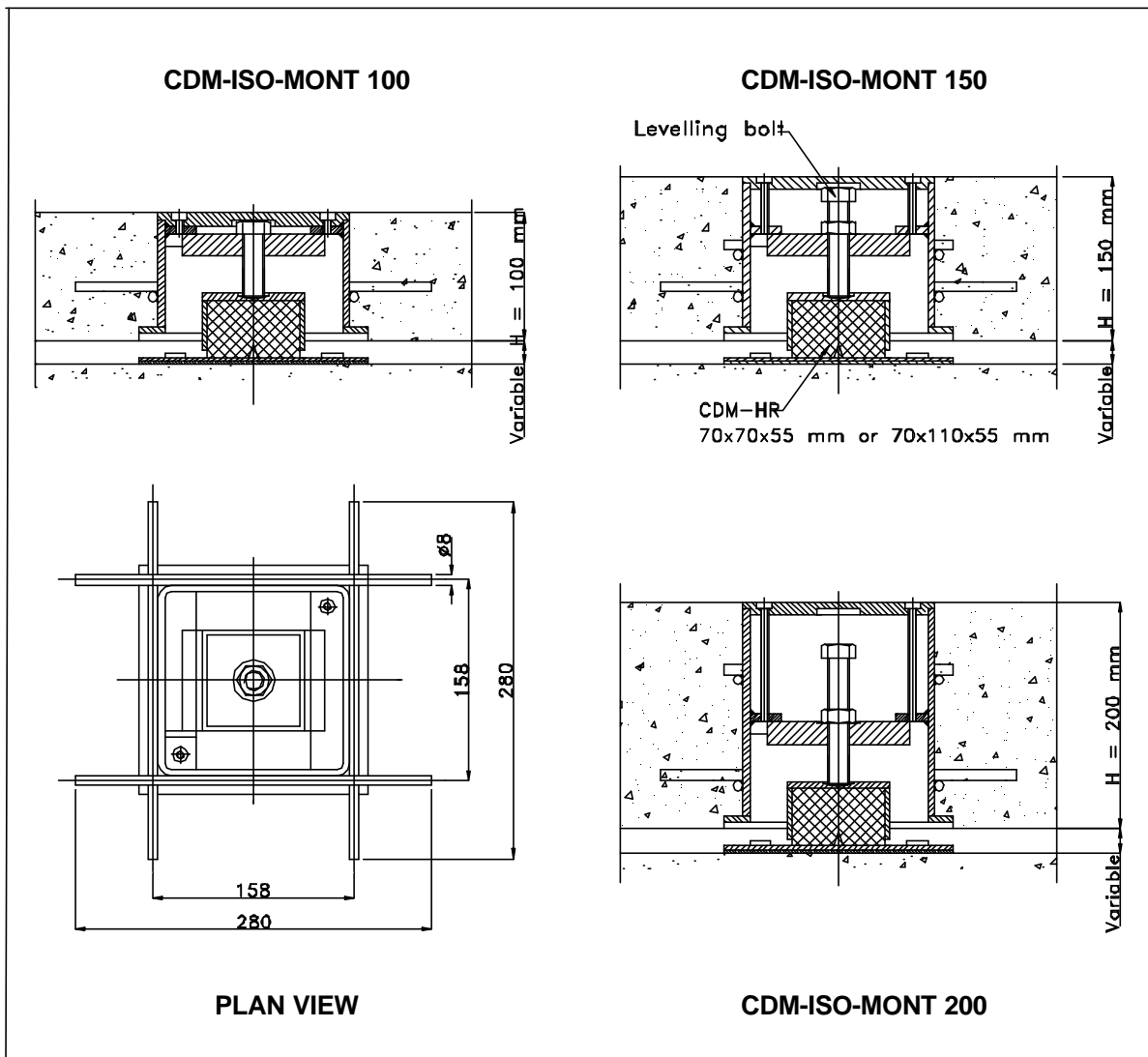


CDM-ISO-MONT



CDM-ISO-MONT

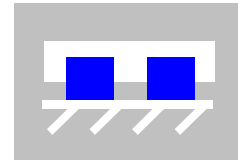
Type	Height [mm]	Bearing type and dimension [mm]	Properties	
100/12	100	CDM-82 (70*70*55)	Popt = 6 kN	Pmax = 12 kN
150/12	150		fres = 7 Hz	fres = 6 Hz
200/12	200		deflection = 7 mm	deflection = 13 mm
100/20	100	CDM-82 (70*110*55)	Popt = 10 kN	Pmax = 20 kN
150/20	150		fres = 7 Hz	fres = 6 Hz
200/20	200		deflection = 7 mm	deflection = 13 mm
100/30	100	CDM-83 (70*70*55)	Popt = 15 kN	Pmax = 30 kN
150/30	150		fres = 9 Hz	fres = 9 Hz
200/30	200		deflection = 11 mm	deflection = 16 mm



CDM-ISO-MONT 6 - 8 Hz

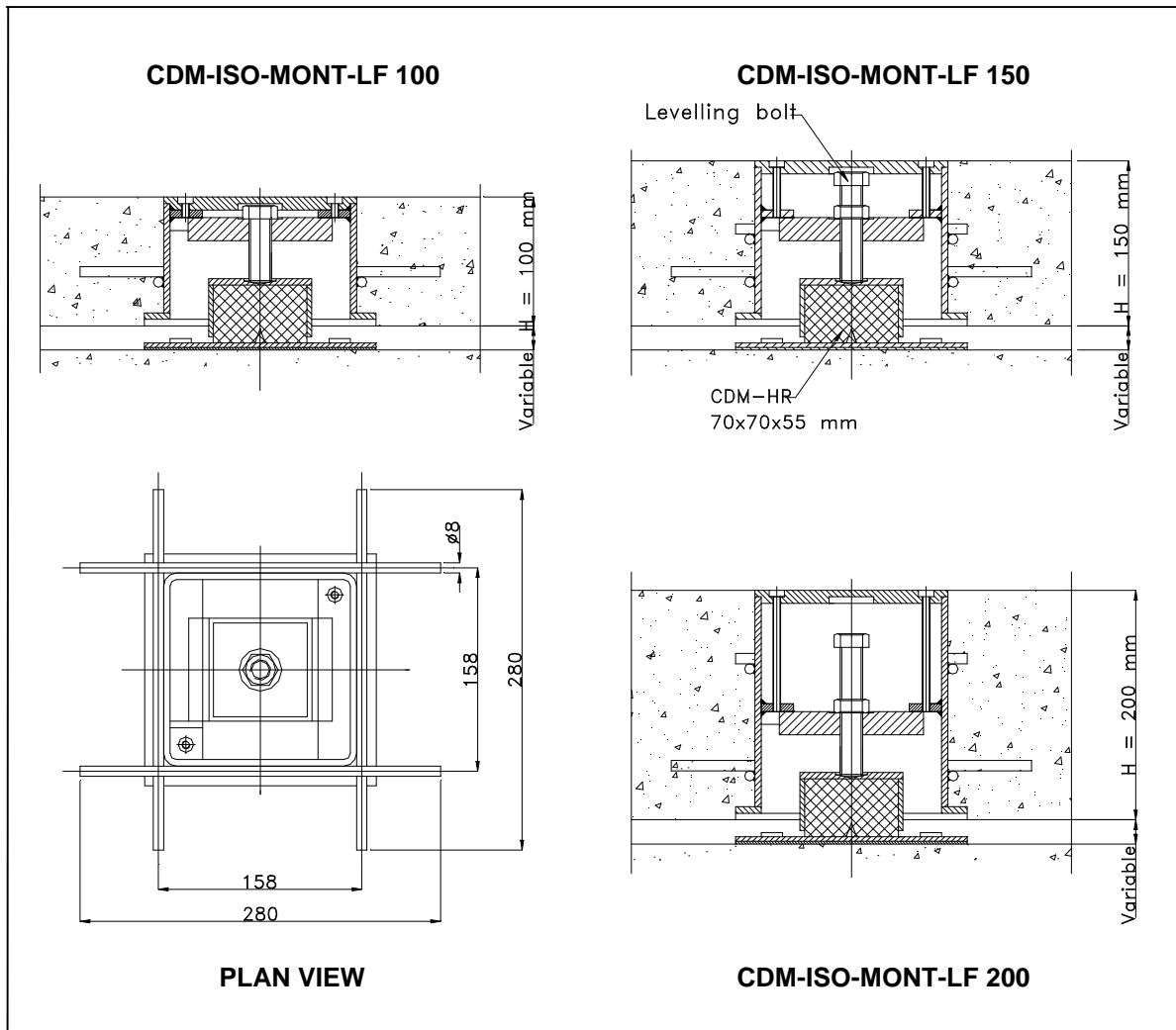


CDM-ISO-MONT-LF



CDM-ISO-MONT-LF

Type	Height [mm]	Bearing type and dimension [mm]	Properties	
LF-100/10	100	CDM-82 (70*70*55) + spring element	Popt = 5 kN	Pmax = 10 kN
LF-150/10	150		fres = 5 Hz	fres = 4 Hz
LF-200/10	200		deflection = 10 mm	deflection = 15 mm
LF-100/16	100	CDM-82 (110*70*55) + spring element	Popt = 8 kN	Pmax = 16 kN
LF-150/16	150		fres = 6 Hz	fres = 5 Hz
LF-200/16	200		deflection = 10 mm	deflection = 15 mm



CDM-ISO-MONT-LF 4 - 5 HZ

