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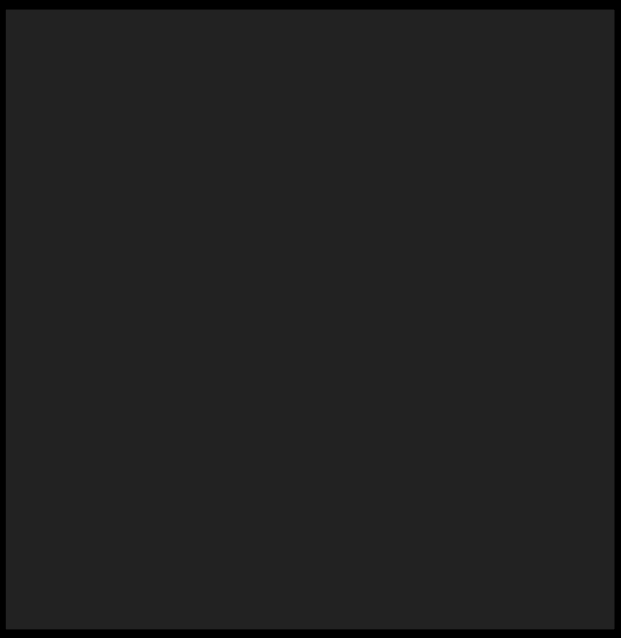
PAVIMENTI SOPRAELEVATI



STORAGE AND INSTALLATION

Storage And Installation.

Storage

1. The rooms where Raised Floors will be stored and/or installed, must be dry, waterproof with effective weather seals at windows and doors.

2. The temperature level of the rooms must be between 5° and 35°C (40°-95°F) and the humidity rate between 40% and 75% (not necessary for Monointec).

3. In case storage by the job site is not possible directly in the rooms where the Raised Floors are to be installed, it is recommended to store them in the nearest rooms offering temperature and humidity conditions as specified above.

Advice on Installation

1. The Raised Floors must be installed in dry rooms with a temperature rate between 5° and 35° C (40°-95°C) and a humidity rate between 40% and 75% (not necessary for Monointec).

2. If the plan requires the placement of water pipes or heating ducts beneath the floors, it is necessary to insulate them well enough to prevent significant, localized temperature differentials and to provide ventilation of the under-floor spaces to maintain the recommended conditions.

3. The walls should be finished at least 60 days before and their decoratings and paintings at least 30 days before.

4. The rooms must be provided with properly sealing doors and windows.

5. The slab must be dry, smooth and clean. If the slab is not entirely smooth, the installation must be preceeded by an inspection in order to check its practicability.

6. In case an antidust sealing product is required on the slab, it must be compatible with the glue used, if needed, for the pedestals.

7. For proper installation, the room must be clean and empty of objects whicht might interfere with the work. Likewise, the presence of other workers not associated with the raised floor installation should be avoided.

8. Placement of plugs, pipes and ducting systems must be planned carefully to accoomodate the regular spacing of pedestals and stringers.

9. Finished floor height must be clearly indicated in every room where Raised Floors are supposed to be installed.

10. Normally, the installation of Raised Floors is made when all systems and indoor finishs are fully completed: an exception is the installation of cladding and mobile walls , which are to be installed on the Raised Floors. If this is not possible, a work schedule must be planned to avoid conflicts with others trades.

11. No one but the installation workers should walk on the Raised Floor during the installation.In order to allow full curing of the glue used for the pedestals, foot traffic should be avoided for 48 hours after the installation is completed.

12. The access to the job site where Raised Floors are being installed, must be kept free from obstacles, so that the unloading of the material can be easily done through the access areas by means of pallet trolleys or other transport devices.

13. The access to the rooms and to the lifts (elevators) must also be kept free from obstacles, in order to allow the use of forklifts.

14. The rooms where Raised Floors are supposed to be installed, must be provided with clear pathways for pallet trolleys or other wheeled devices.

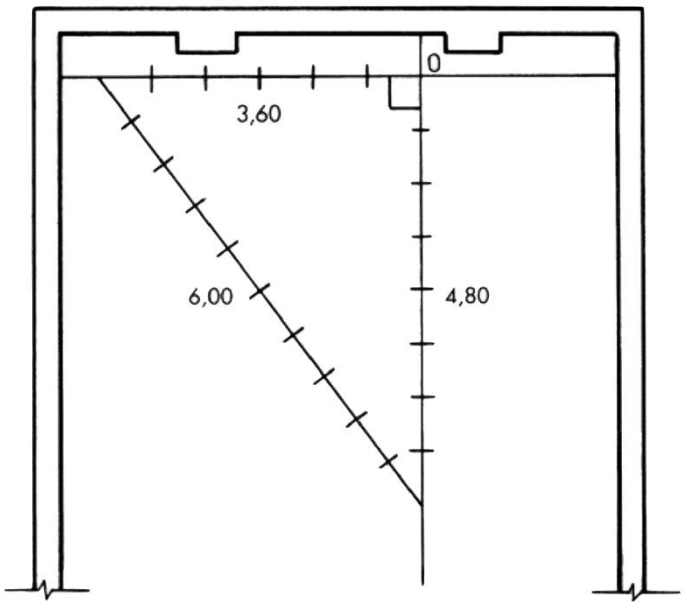
15. The characteristics and the proper usage schedules of the lifting devices for the shifting of the Raised Floor panels must be clearly defined in the contract.

16. The Raised Floor System must be tested and released to the customer as soon as the installation in each room is finished and before the application of protective coverings or mobile walls and before the room is made available to other workers.

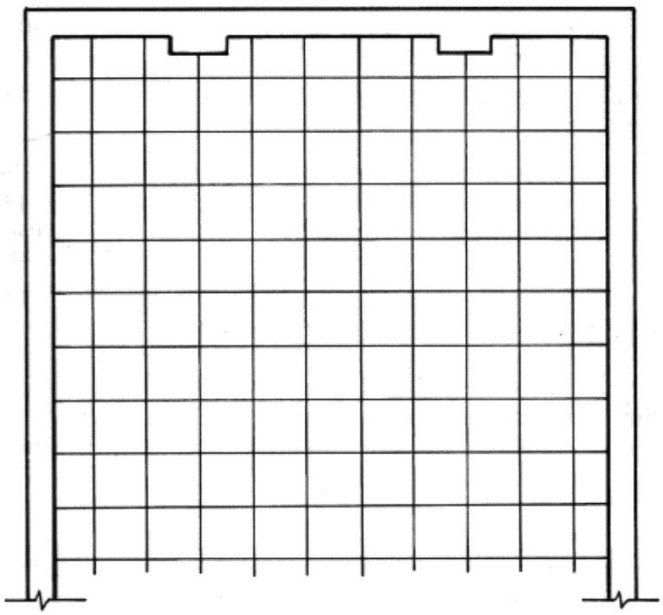
Installation

Once preparations have been made as outlined in the previous section, it is possible to begin laying out the structure of the panels. Before taking any action, it is strictly necessary to check the difference in level of the slab, since the standard pedestals have an average height adjustment range of 30 mm, but often slabs present greater differences in level.
Moreover, after the cleaning up of the dust from the slab, it is recommended to use an antidust treatment product such as a poliurethe or epoxy paint. This treatment is indispensable if the space between the slab and the panels is used as air-conditioning channel (plenum).

1. The first step in laying out the job, is the tracing of two perpendicular axes inside the room, using a non-stretch measuring tape (check the perpendicularity of the two axes by the Pyithagorean theorem: the sum of the squares of two sides of a right-angle triangle is equal to the square of the hypothenuse. See Fig.1:

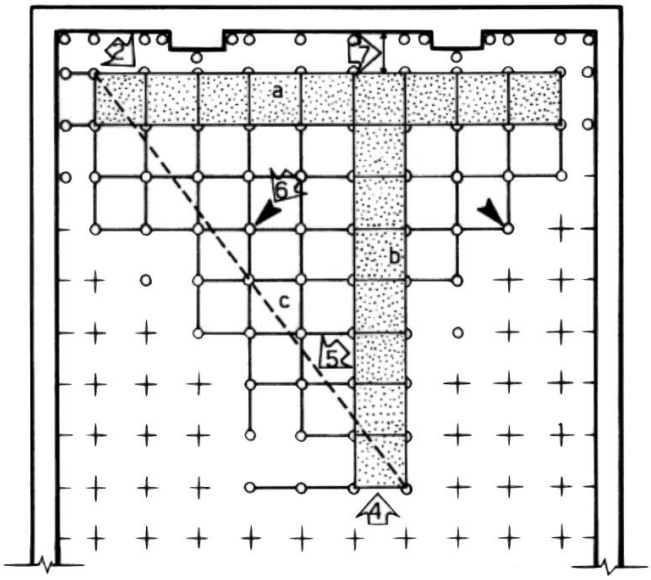


2. After that, the pedestals are to be placed according to the modular nest 600x600 mm, starting from point 0 (Fig. 1). If, by following this module, two cuts of different sizes are obtained at the wall (perimetral cuts) - i.e. 50 cm and 20 cm - , it is recommended to avoid having excessively small panel cut pieces at the sides of the room . Fig. 2:



3. Once finished with the laying of the structure (pedestals and stringers, if required), the pedestals are best adjusted by using a laser-selflevelling device (an optical transit is a suitable alternative).

4. Then, the first panels can be laid, as to form a T-shape starting from the first internal line on the two perpendicular axes, fig. 3:



5. After that, the squareness of the layout must be checked (fig. 3):
cathetus A = ml 3,60 cathetus B = ml 4,80 hypothenuse = ml 6,00.

6. Then the laying of the panels can go on progressively in the two directions opposite to the T-shape (fig. 3).

7. The last panels to be laid form the perimeter, after being cut to size. If stringers are not required, the pedestals are to be fixed to the slab by gluing. In this case pedestals and panels are laid at the same time, adjusted and levelled one at a time. At the end, before being able to walk on this Raised Floor , one must wait 48 hours to allow the glue which fixes the pedestals, to fully cure. Finally, it is recommended to protect the top finish with cardboard or polyethylene sheets until the furnishing and set-up of the room is finished.

Installation Timing

There are various factors which affect the time needed to install a Raised Floor: sizes, shapes and the accessibility of the rooms, the type of panel, top finish and structure chosen. Generally speaking, two workers can install a minimum 30 sqm per day in small rooms, up to 90 sqm per day in case of medium-large rooms, depending on the factors mentioned above as well as the degree of difficulty encountered in cutting and laying the perimeter panels.

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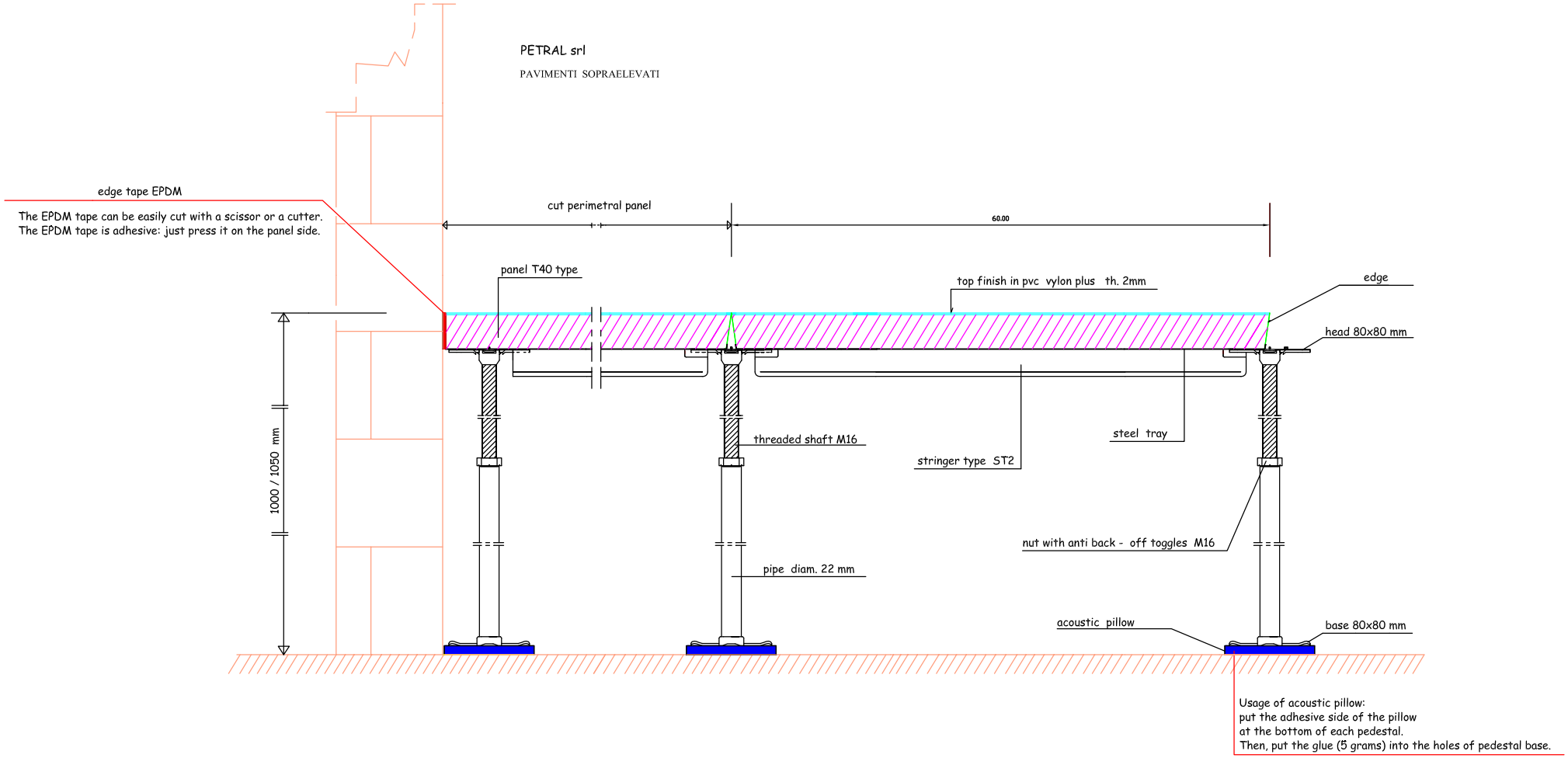
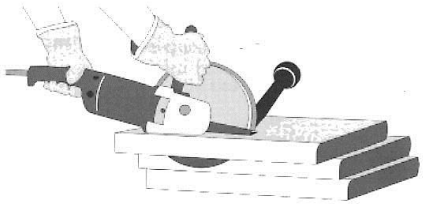


Installation Equipments

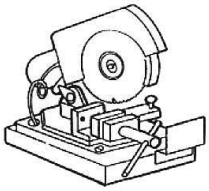
We are showing thereby some of the most common equipments used for the installation of raised floors:

- steel meter tape
- tracing rope
- equalizer
- laser
- spirit level
- electrical screwer

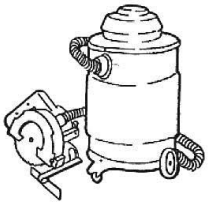
- saw with Diamond or Widia Disk



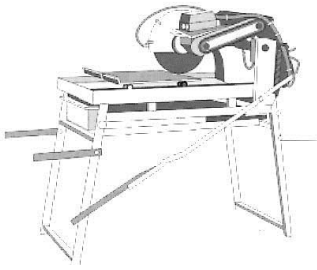
- shear



- saw with aspirator



- water or dry saw “klipper”



Panels lifters:

- single-handle in PVC

- single-handle in aluminium

- double-handle in aluminium

- carpet panel lifter