Raised floor Installation Guide

1. TECHNICAL CONDITIONS ON SITE FOR A CORRECT INSTALLATION

For a correct installation of raised floor, it's necessary to take the following precautions:

1. **The rooms, where the raised floor should be installed, must be dry, water tight and equipped with doors and windows.**
2. The temperature must be between 10° and 35°C, and the relative humidity between 40% and 70%. The rooms must be completely dry without condensation's signs.
3. The presence of tubes for the passage of fluids, capable of changing the climatic conditions of the rooms, must be well isolated and we recommend to provide the correct ventilation to guarantee the normal conditions.
4. The building works and the plasters must be finished since 60 days.
5. The concrete slab must be dry, clean and good leveled.
6. If the concrete slab has been treated with an anti-dust coating, we suggest to verify the compatibility with adhesives to fix the raised floor pedestals on ground.
7. The rooms must be empty, clean and without any other installers.
8. The systems distribution must respect the raised floor lay-out and must consider the volume of its components.
9. The final floor level must be clearly showed along the perimeter.
10. The installation should normally begin when the systems are placed and the internal finishing are concluded, with exception of the wall units to be positioned on the raised floor.
11. It's forbidden to walk on the floor during its installation, with exception for the installer. In case of adhesive application, it's necessary to wait 48 hours for the drying.
12. The construction site entry has to be Free of any possible obstruction and must offer a passage near to the interested rooms to guarantee a fast and easy discharge of the material through the help of a fork truck.
13. The raised floor must be tested once the installation has been concluded, before any other intervention.

A) RAISED FLOOR'S CARE

The raised floor is composed by removable elements, the panels are the main ones and its stability has to be safeguarded following some maintenance rules:

1. To move considerable loads, it's necessary to use a fork truck laying on the floor some large and rigid planks to distribute the weight on the floor. The mechanical resistance of the floor is described on its technical sheet.
2. To remove the panels, it's expedient to avoid the creation of Islands or long channels, removing the minimal quantity of panels necessary to achieve the floor cavity.
3. Pay attention to not damage and to not move the pvc gaskets positioned on pedestals and stringers.
4. The removal of the panels has to be done with its specific cup lifter.

5. Pay particular attention during the removal of panels connected to accessories like air grills, electrical cables etc.
6. In case of removal of cut panels, be careful to put them in the same previous position.

Once the conditions above described are confirmed, the installation can be done.

THE INSTALLATION OF A RAISED FLOOR: FROM THE PROJECT, TO THE INSTALLATION OF THE FINISHED FLOOR

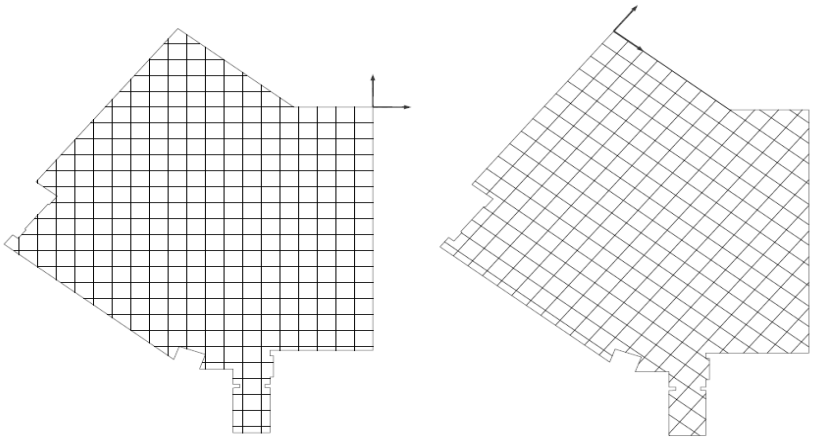
1 – Preliminary operations

The first step to install a raised floor, is to fix some benchmarks. Normally there is a floor plan where the architect drew the floor lay-out.

Starting from the proposed lay-out we can define:

- The geometric configuration of the raised floor
- the quantity and the type of material necessary to do the installation

2 floor lay-out proposals



2 – Preliminary inspection of the construction site

It must be organized some days before the installation

The inspection of the construction site permits to verify:

- The dimension of the room and the level of the thresholds
- The level (the final floor height of the floor) must be marked

In case we have not a working drawing, it's essential to do a metric survey directly on construction site.

To conclude the inspection it must be defined:

- The diagonal lines of the room
- The position of the doors and any other opening at ground level.
- The position and the presence of the systems
- The possible height difference within the rooms where to install the floor. It could be necessary the installation of ramps or steps.
- The presence of pillar
- recess
- the height of the thresholds or the final floor height decided. This level is called "0".

With "0" we mean the final height that the raised floor must reach.

It's necessary to pay particular attention to the levels of the room.
Cause of the roughness of the concrete slab it could be possible to

find height differences, for this reason we suggest to check the final floor height in many positions in the room. We remember that the pedestals can have a height regulation of about 25 mm.

To verify the levels, we suggest to pay particolar attention to:

- external and internal Thresholds
- perimetral walls, the possible presence of concrete curbs
- the center of the room where it's easy to find dips or bumps
- the presence of bulky systems palced on the floor

3 – Check the presence of suitable loading and unloading systems

Generally the means of transport are not equipped with uploading systems and for this reason it's very important to make sure of the presence on site of tools like fork truck, fork lift, crane to permit the movements of the goods on site.

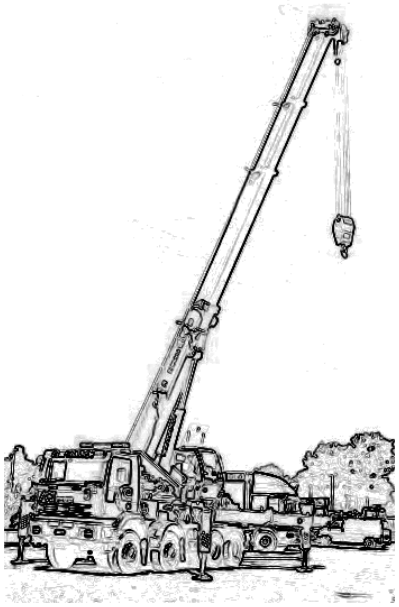
Fundamental it's to verify that the elevators in the rooms could support the weight and the dimension of the goods to move them on the floors.

In case of crane usage, the windows and the doors must have the suitable dimensions (considering the lifting belts) to permit the passage of the pallets.

If it would be necessary to stock temporarily the goods on terraces, it needs to verify the loading capacity of the concrete slab.

In any case it's a good rule to not concentrate the weigth in a particular spot but to position them along the perimeter in order to exploit the bearing wall.

In case of waterproof terraces treated with bitumen, it's necessary to provide the lay of large planks for the passage of the fork lift.



4 – Access on construction site:

Be sure of suitable access on construction site.

The means of transport must have the necessary space to enter on construction site and to park in a safe way to permit the unloading operations.

5 – Rooms conditions:

- **The rooms where to install the raised floor must be closed to protect the floor from atmospheric agents.**
- **Electricity and illumination must be started**
- **The rooms must be clean and clear**
- **When the floor will be used for air conditioning distribution,**

it's necessary to vacuum the concrete slab and to treat it with an anti-dust coating

6 – Lay-out

The lay-out is extremely useful when done before the systems laying, in order to not take up the place reserved for the pedestals of the raised floor. Normally the lay-out is signed on the concrete slab with step 60 cm basing on the architect drawings.

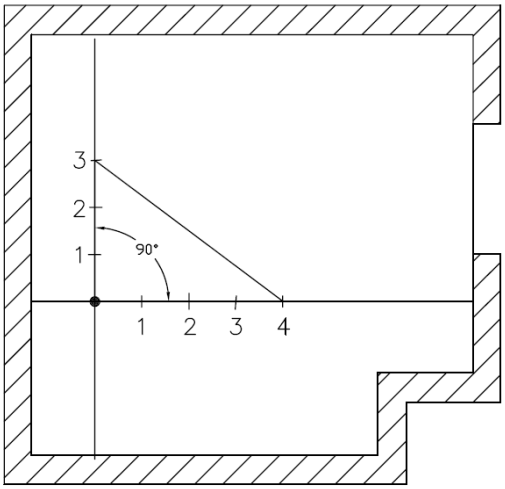
Lay-out example

First procedure

Defined a spot to start, generally on the longer wall, trace the ortogonal axis.

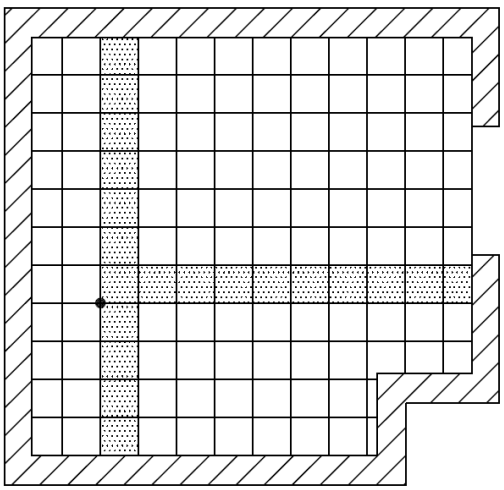
To verify its precision we can apply Pythagorean Theorem: *In any right-angled triangle the area of the square whose side is the hypotenuse is equal to the sum of the areas of the squares whose sides are the two legs*.

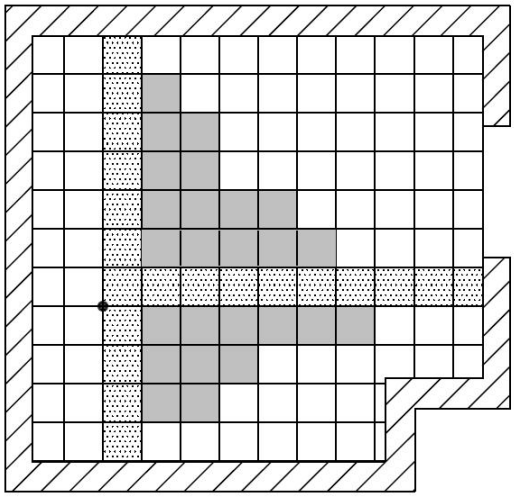
The spot "0" show the starting point to install the raised floor where to trace a 90° crossing line following the floor direction, like as a cartesian plan, we count 4 m on x-axis and 3 m on y-axis and we mark this position. To be sure of the perfect ortogonality of the axis, the distance between these two points must be 5 m.



We can proceed installing the substructure and then the panels.

We can suggest to start from the first internal line, along the the orthogonal axis.





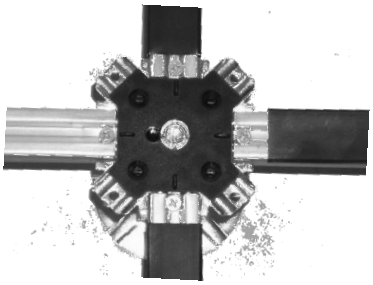
1. RAISED FLOOR INSTALLATION - SUBSTRUCTURE WITH STRINGERS

It will result easier to begin from the most perpendicular walls of the room fixing well the reference strings making sure of its perpendicularity following the previous method described.

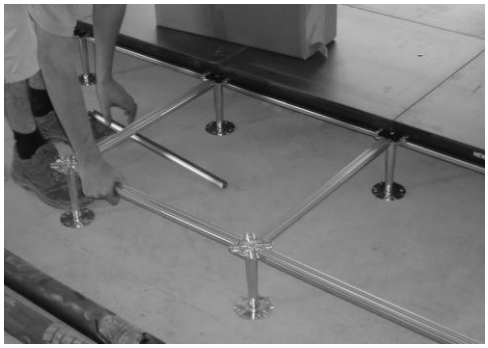
A. Assembly the pedestals (base + head + gasket) following the lay-out of the floor aligning them with the right angles.

B. Starting from the strings intersection, proceed with the assembly of the entire substructure module, pedestals + stringers to cover an area of 100 sqm (area that could change depending on the installer's experience).

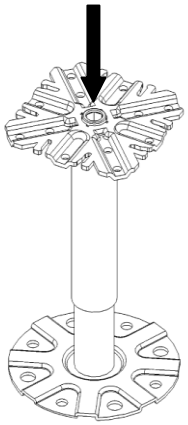
C. Fix the screws of the stringers.

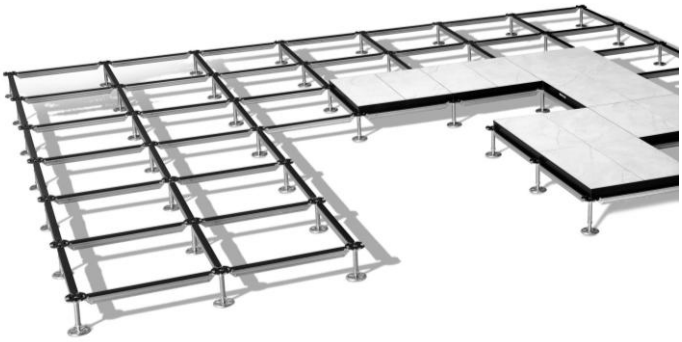

D. With the help of a tape measure, align the substructure following the lay-out of the floor marked from the reference strings.

E. Regulate the pedestal's height throught the regulation nut ensuring that it get stuck in the tube. Be sure of the perfect position of the head gasket and check the vertical position of the pedestal. Verify the correct height of the pedestals using a board and a level to center the bubble. When possible it's better to use a laser-level.

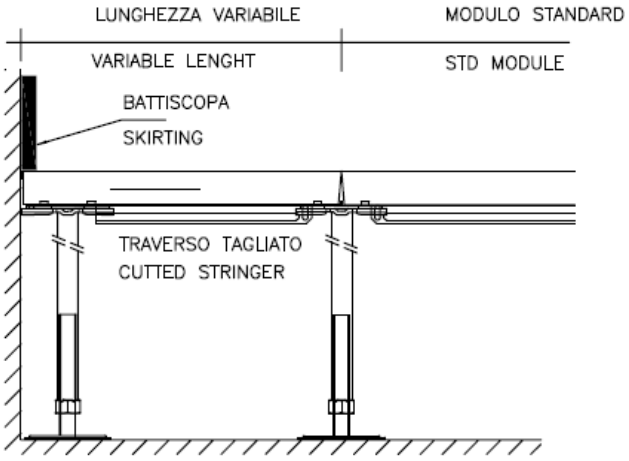



F. Conclude the gaskets installation.



G. Continue the installation of the panels with the help of the parallel reference strings taking care of the Top finish of the panels.

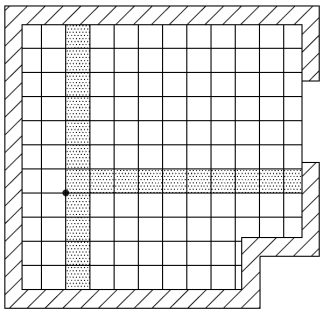
H. Conclude the work with the installation of the perimetral panels, previously custom-cut. In case of presence of small pieces of panels we suggest to put some stringers along the perimeter.
Remember to cut the separators of the gaskets positioned along the perimeter to guarantee the correct laying of the custom-cut panels.



2. RAISED FLOOR INSTALLATION – STRINGERLESS SUBSTRUCTURE

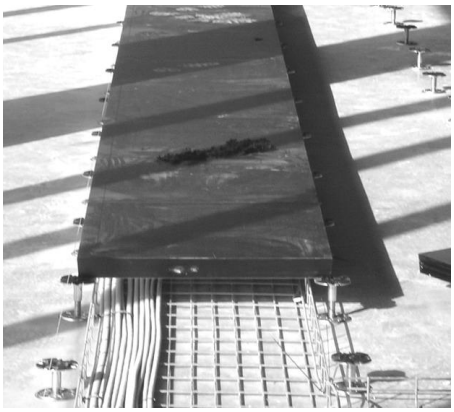
The use of a stringerless substructure need a good leveled concrete slab without any dip. Better is the surface of the slab, Better will be the final result, guarantee a stable raised floor and a faster installation. In some cases, it could be necessary to pour a new concrete slab layer to level the surface.

A. Start from the most perpendicular walls of the room fixing well the reference strings making sure of its perpendicularity following the previous method described.



B. Assembly the pedestal (base + head + gasket).

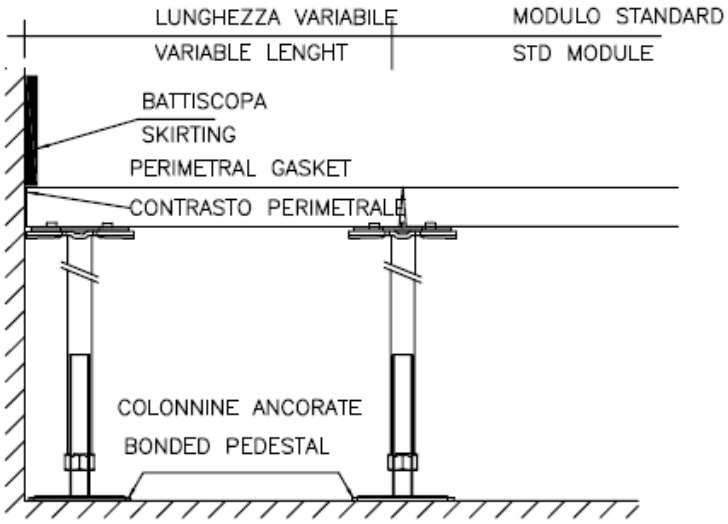
C. Start the installation laying the first panel on the 4 positioned pedestals, put it perfectly aligned to the perpendicular reference strings. Be sure that the strings are well stretched.



D. Proceed positioning the parallel lines with pedestals and panels. Before to position them definitely, remember to glue the bases on ground. Be sure that the panel's corner correspond with the separator of the pedestals.

E. Proceed laying the panels helping with the line marked by the parallel reference strings aligning them with the panels already installed. To increase the stability of the floor, apply some adhesive on the regulation nut of the pedestal.

F. Conclude the work with the installation of the perimetral panels, previously custom-cut and positioning them on the pedestalees glued on the ground. Cut the separators of the gaskets to lay correctly the panels along the perimeter.



NB: Don't walk along the perimeter if the glue is drying.

FREE FLOOR INSTALLATION GUIDE (CERAMIC DRY LOOSE-LAY FLOOR)

Freefloor is the ideal solution to cover the existing raised floor or panels without top covering. This item could be also applied on a traditional old floor preserved in good conditions and well leveled.

Free floor, dry loose-lay ceramic system to **install / replace / renew** the top finish of a floor.
Free floor, the revolution to:

1. Cover the raised floor without top finish
2. Renew the old one

It permits the dry loose-lay installation of ceramic tiles with different finish and in different dimensions.

It doesn't need adhesive or construction works.

The system is composed by removable ceramic panels installed without adhesive. The panels are beveled and edge trimmed (EN 12825 dimensional class 1) for a perfect intercambiality and junction.
Incomparable level of finish.

IMPORTANT: to obtain a perfect result installing Freefloor on an existing floor, it must be perfectly leveled

Necessary tools for the installation:

- Double cup lifter
- For the perimetral cut, an angular grinding machine with diamond tools or a simply cutter for tiles.
- if necessary a Inox Steel End-profile for ceramic

Picture 1 – Be sure that the room is empty and clean

Picture 1

Picture 2 – Define the starting point and lay the first line of panels

Picture 2

Picture 3 – Conclude the installtion cutting the panels in size along the perimeter

Picture 3

Picture 4 – Complete installation in short time

Picture 4