Methods for pit

FF2017

Methods for pit - drawings

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INTRODUCTION

Hereinafter there is an explanation of the various methods for pit proposed by Armo. The methods foreseen cover, for the most, the inquiries incoming from all over the Europe and can be easily "adapted" in case of various constructive situations. For further details, you can refer to the detailed booklets, where you will also find the technical drawings regarding the building works required for the various dock levellers dimensions.

Method 8 – self-standing model
These levellers are installed once the industrial ground is finished. This is the most used system. The particular structure, laterally integrated to the leveller, permits to fix the three angle bars, which are cast into the concrete before delivering the leveller. Since no under side support is required, it is possible to realize a room under the leveller for the tail lift of the truck (when necessary). This is the most widespread fixing method through Europe, because of the advantages which gives to the building companies, the installers and the final users,

Method 5 (Universal) – self-supporting model
These levellers are installed before preparing the industrial ground. The Universal method has cramp-iron and plated-perimetric protections having height 210 mm minimum. The perimeter is closed thanks to "L" profiles, which avoid problems due to concrete casting into the pit. Pits are prepared first by making a pre-cast concrete at the height of -100 mm from the finished ground. Levellers are then positioned, levelled and then you can finish the industrial ground.

Method 4 (Box) – no self-supporting method
The Box version is the best solution when the customer does not require to prepare a pit. The leveller is supplied in a monoblock structure with preassembled quarterdeck, tried in our warehouse before shipment and ready for final checks. Thanks to its strong sheeted walls, there is no risk of deformation of the frame during the casting phases. Levellers can be protected from concrete splashes by cardboards positioned on the upper frame and lip (options by request).

Method SF (pit mounted) – no self-supporting method
This method is usually employed when we have to change old levellers, in order to fit within the existing pit. The leveller lays at the bottom of the pit, which requires smooth and well-squared walls.

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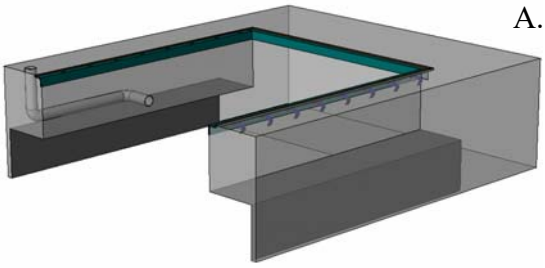
METHOD 8 – self-supporting model

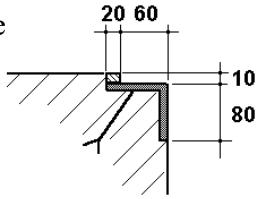
Freight for pit frame are repaid by the advantages of installing the dock leveller when the industrial ground is finished. These **ADVANTAGES** are resumed hereinafter:

1. Installation without possibility of any mistake. The dock leveller is directly unloaded into the pit, levelled of few millimetres and welded to the border of the pit.
2. Walls can have a coarse finishing.
3. Clean job. No concrete casting is needed then; the dock levellers are not spattered and, specifically, the hinges do not need any final cleaning to remove possible concrete excesses.
4. Cheap and continuous assembling. It is possible to install, at the same time, dock levellers, sectional doors and dock shelters, by improving transport cost, assignments and assembling time.
5. Delayed payments. The delivery can be made after the floor has been finished; so, when works are considerably in progress.
6. Easy replacement. If, for any reason, it is necessary to replace the dock leveller, by this method, you can proceed without breaking the ground.
7. There are three possibilities, from which you can choose for realizing a pit: closed, open or with the room for the truck tailboard.

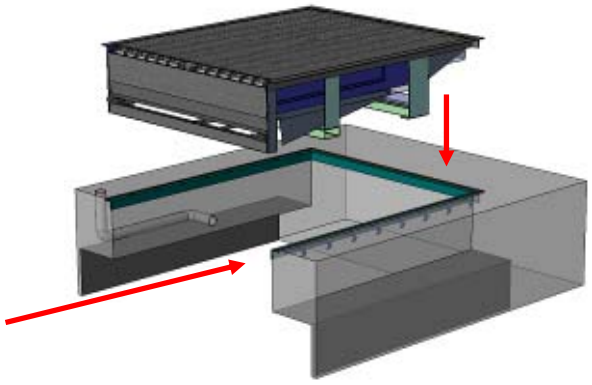
INSTALLATION SEQUENCE



A. Put the suitable frame and finish the building works (drawing to the side).

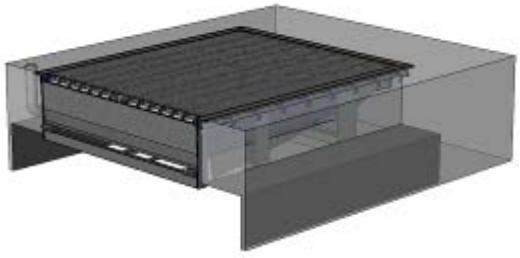


B. Dock levellers are realized with a self-supporting monoblock structure and are equipped by 4 hooks for being moved properly.



C. Before placing the dock leveller into the pit, take care to introduce the electric cable into its suitable housing.

D. To level and weld the dock leveller at the border of the industrial ground on the 3 fixed sides. Retouch, if necessary, near the welding. The installation is successfully completed.



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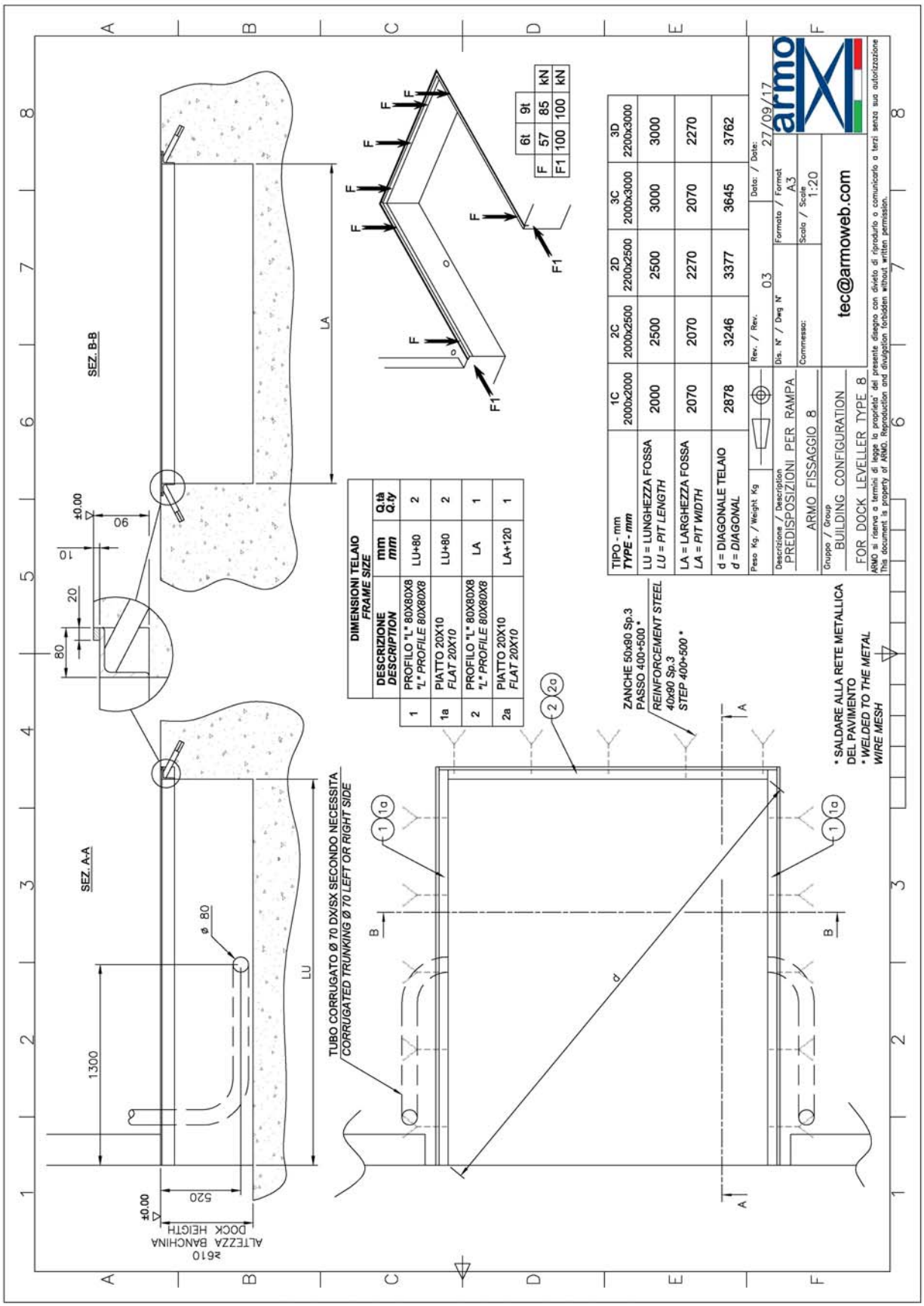
Method 8 arrangements
Without truck tail lift



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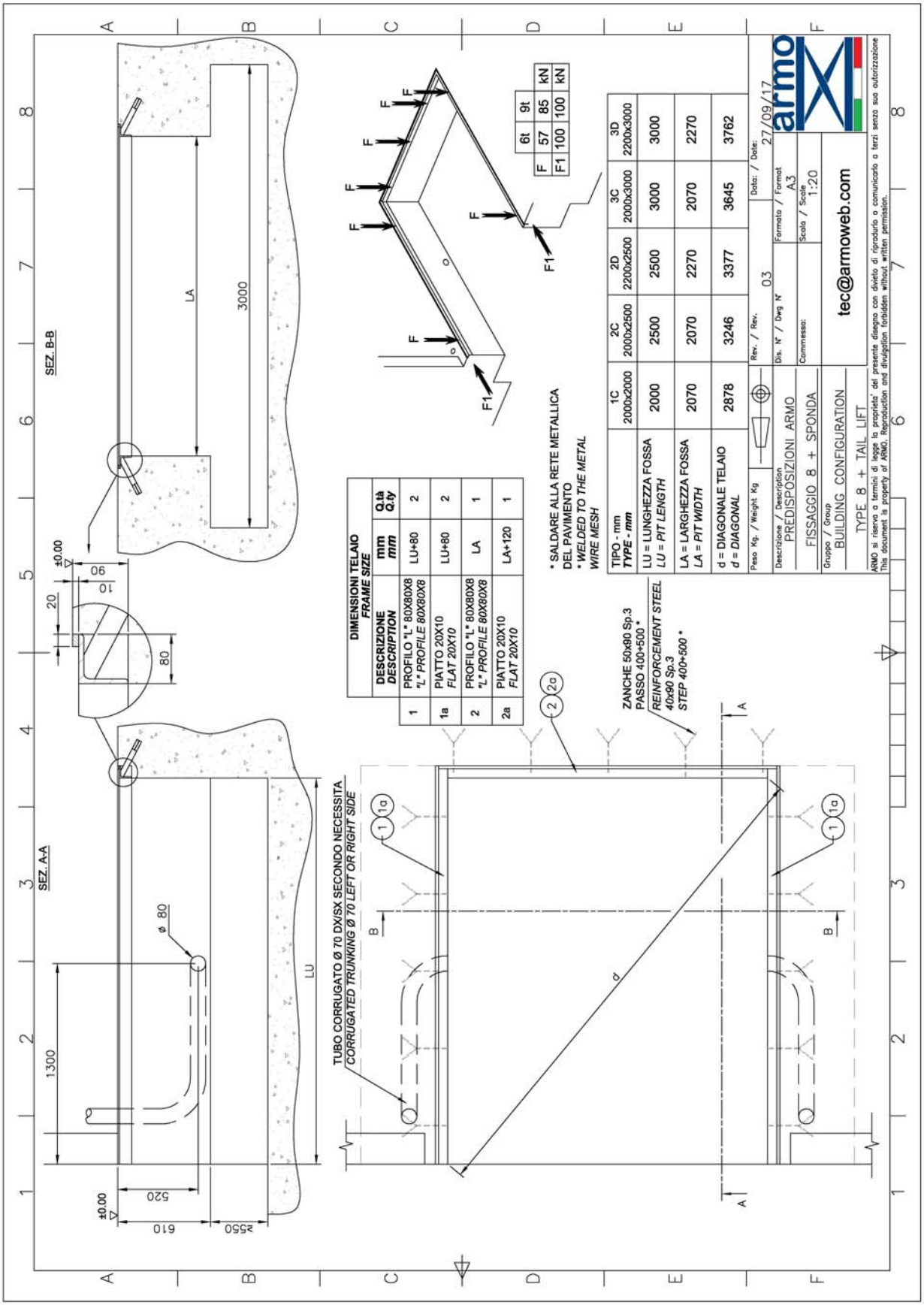
Method 8 arrangements
With truck tail lift



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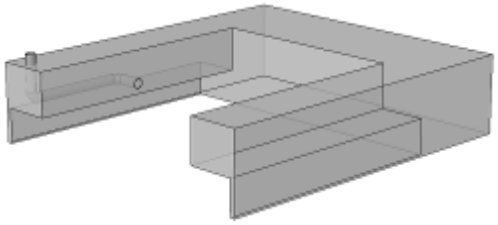
METHOD 5 – Universal

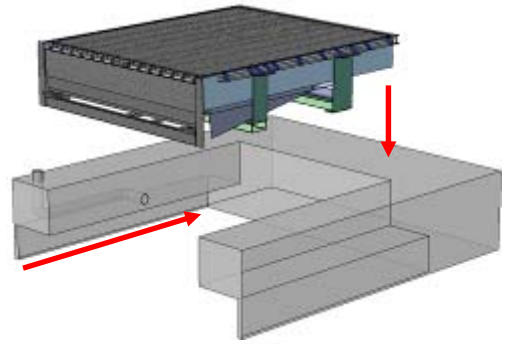
The **ADVANTAGES** of the "Universal" method are:

1. Iron rods are not needed anymore for fixing along the pit border; neither are pit edges with angles, nor particular structures (quarterdeck) for the pit. Thus, there are no freight to forward.
2. During the installation, any welding is no longer necessary.
3. The walls and the pit bottom can have a course finishing.
4. The work is perfectly finished; dock leveller and industrial ground make an only frame, without discontinuity.
5. Thanks to specific L-shaped profiles, the concrete does not overflow into the pit during the industrial floor casting.
6. Dock levellers can be protected by possible concrete squirts with cartoons placed on the upper frame and on the lip (optional by request)
7. The Universal profile allows employing this method with different measurements of pre-casting.
8. There are three ways to make a pit: closed, open or with the space for trucks tailboard

INSTALLATION SEQUENCE

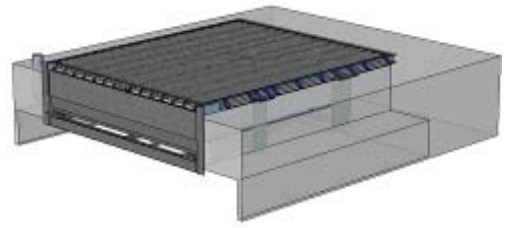


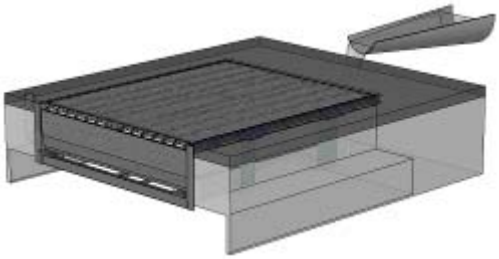
A. Make first e pre-casting of concrete. The iron rod are no more needed.



B. Dock levellers are realized with a self-supporting monoblock structure and are equipped by 4 hooks for being moved properly.

C. Before placing the dock leveller, introduce the electric cable in the cable-passing pipe.





D. To level the dock leveller at the border of the industrial ground. Proceed with the final casting of the ground. The installation is successfully completed.

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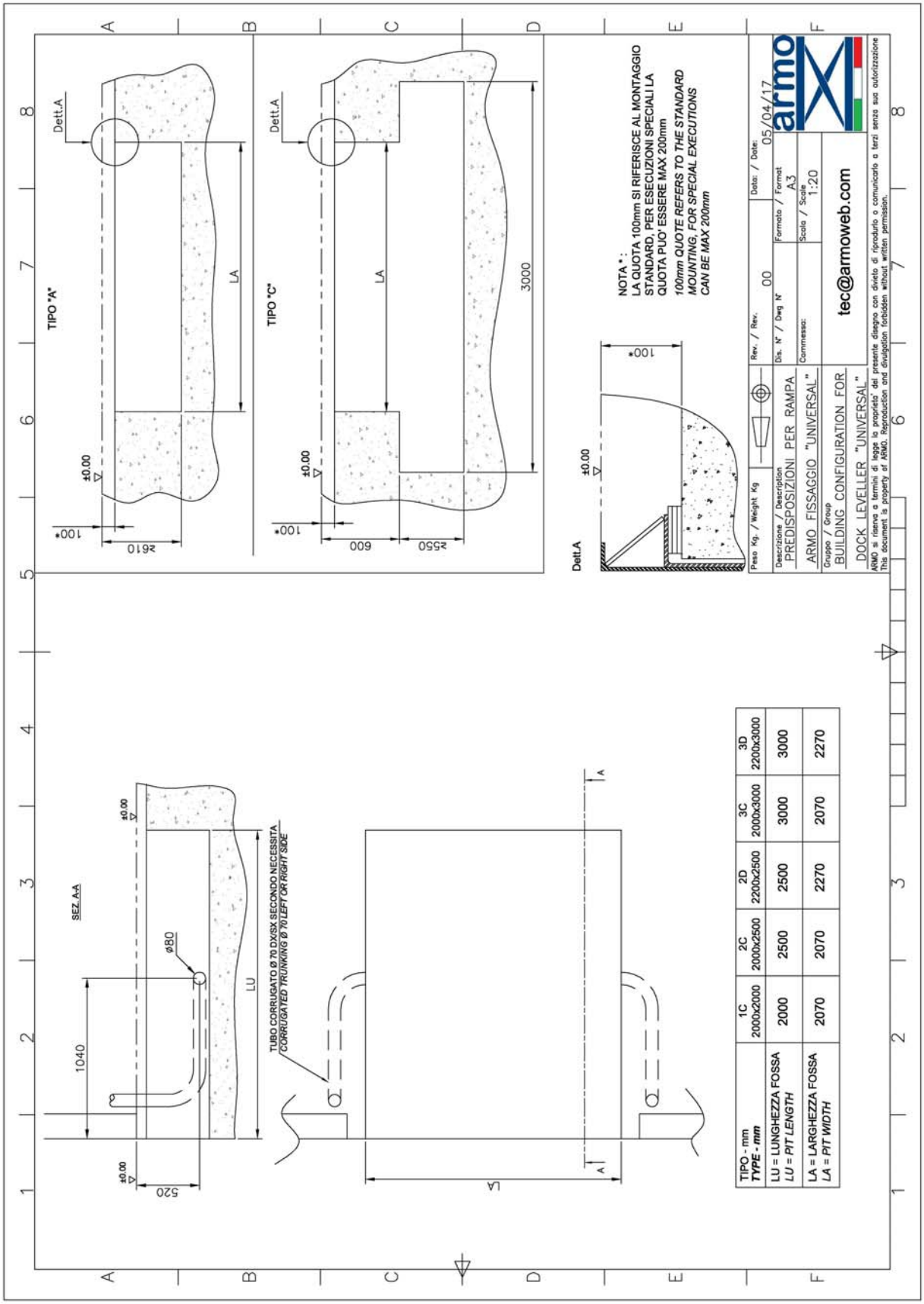
Method 5 arrangements
"Universal"



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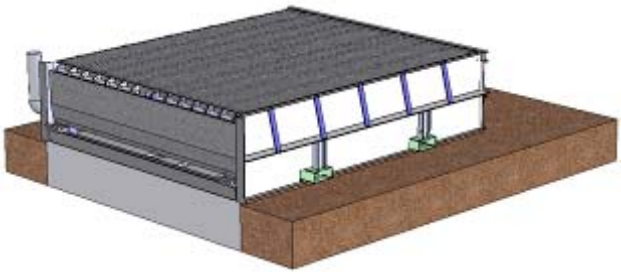
METHOD 4 – BOX

Freight for this system are totally repaid by the **ADVANTAGES** obtained and that can be resumed as follow:

1. It is not required to prepare the pit; nor is needed its shuttering.
2. The leveller is a mono-block structure, already assembled, tried, ready for the final checks.
3. Thanks to the strong sheeted-walls, there is any deformation of the frame during the different phases of the concrete casting.
4. The dock levellers can be protected by possible concrete squirts with cartoons, which are placed on the frame and lip (optional by request).

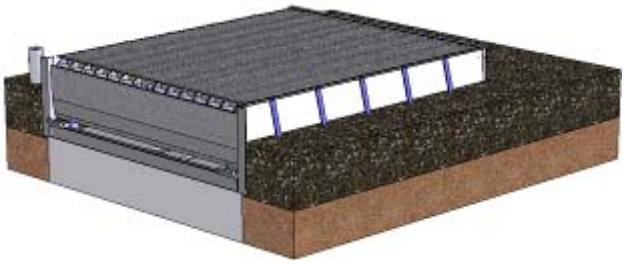
INSTALLATION SEQUENCE

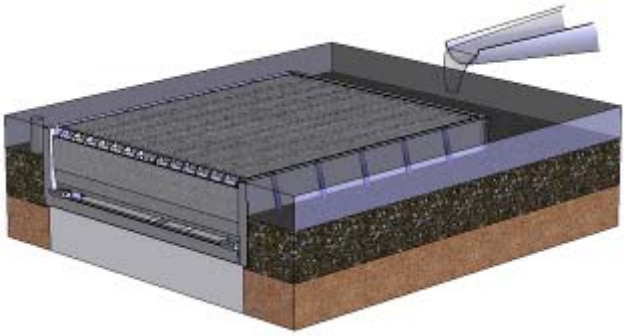
A. Level at ~-600 mm from the finished floor quota. To obtain a support base for the dock leveller at quota -610 mm according to the future dock height by metallic plates, concrete or other.



B. Put and level the dock leveller according to the future dock height measure. Weld or bolt the dock leveller at the concrete surface.

C. Before proceeding, make the electric wire passing through the suitable cable run. Fill the pit with earth and/or concrete or gravel casting.





D. Final concrete casting of the industrial ground. The dock leveller will constitute an only surface with the floor.

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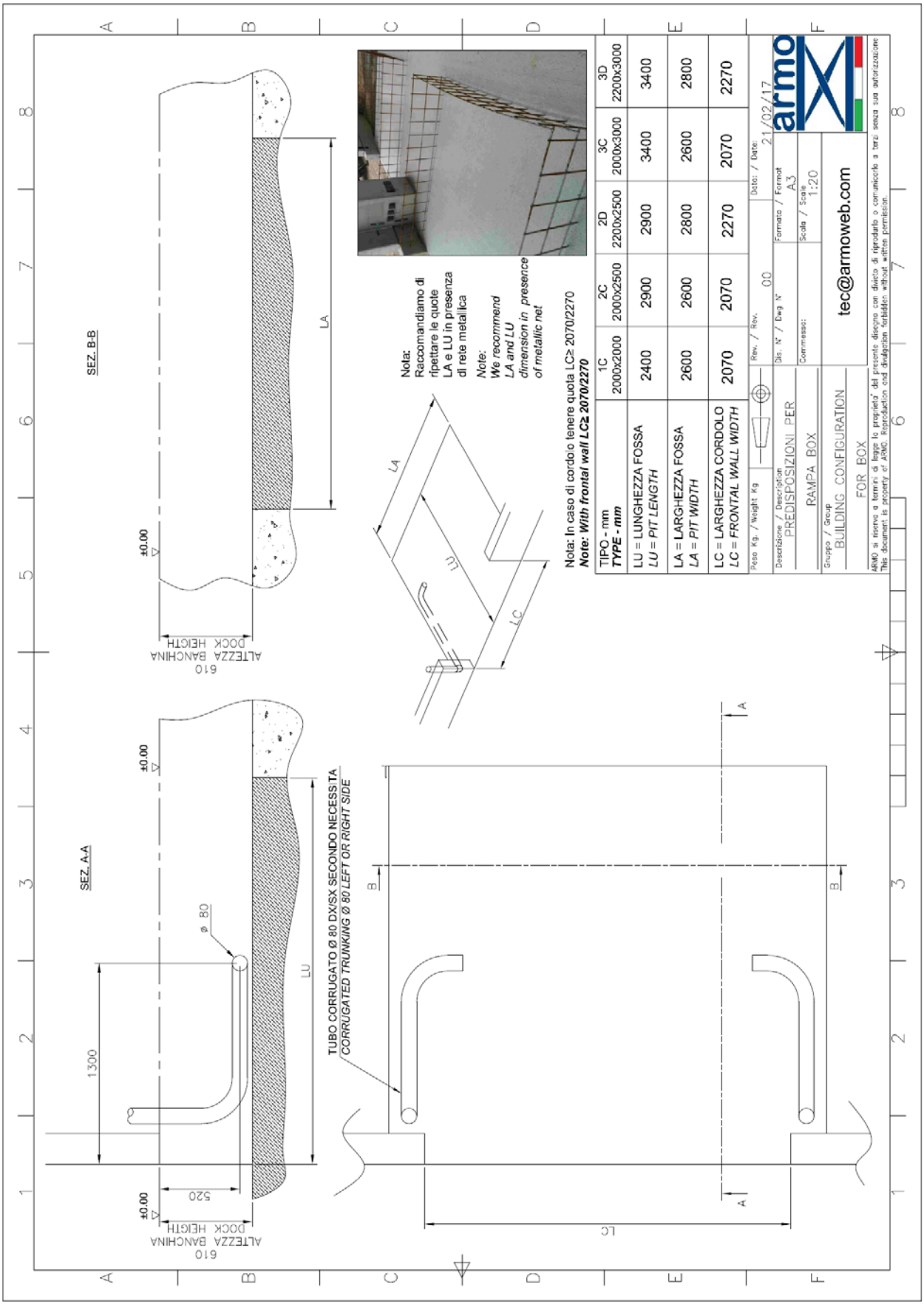
Method 4 arrangements
“BOX”



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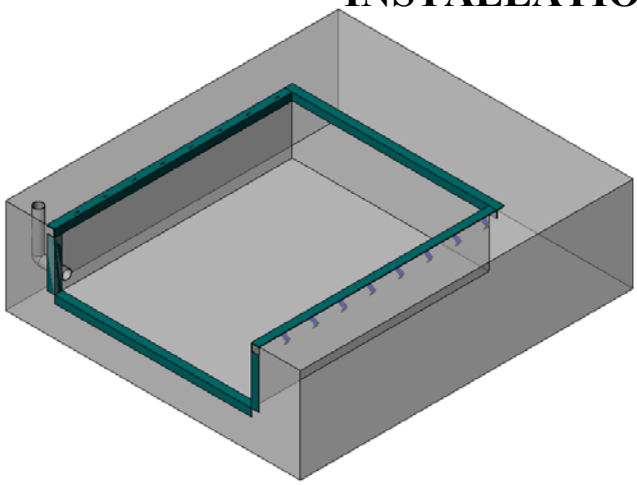
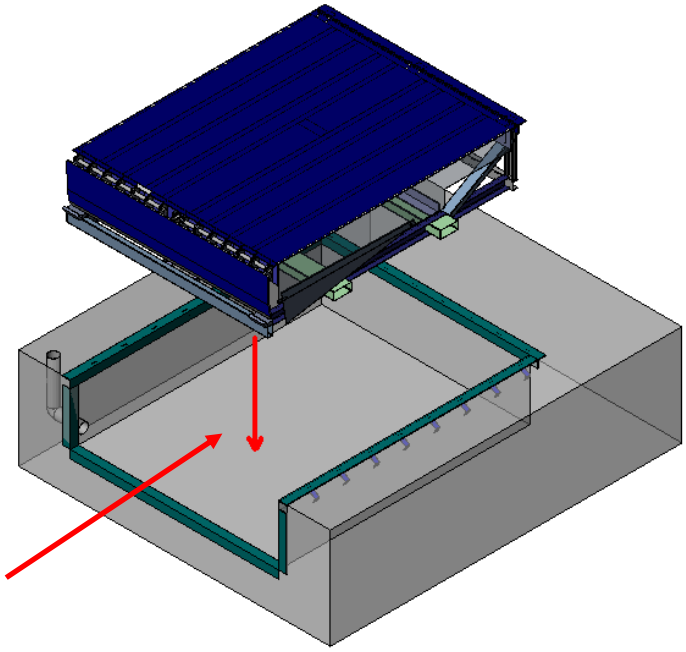
METHOD SF – pit mounted

Method SF (pit mounted) – no self-supporting method
This method is usually employed when we have to change old levellers, in order to fit within existing pit. The leveller is realized with special dimensions (length, width, closed height), when required.

INSTALLATION SEQUENCE

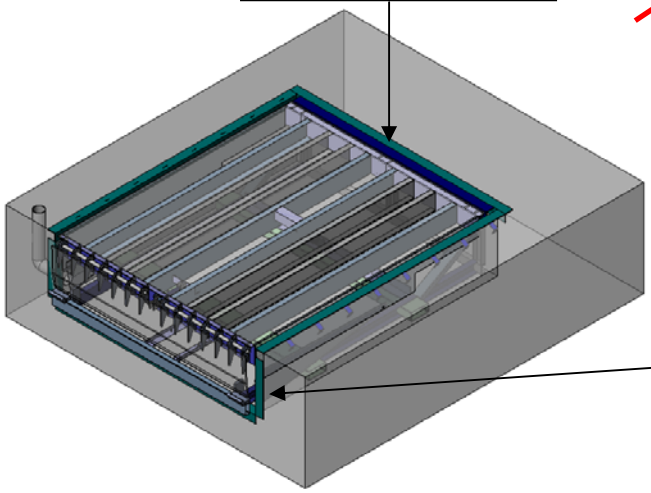


A. You realize the pit, which has to be perfectly squared, smooth and well-refined bottom. Along the border you have to put an "edge guard" angle.



B. The leveller is lowered and levelled into the pit. In that way it fills the hole completely. You then weld it at the angle on the rear in order to avoid the sliding.

Welding between the leveller rear and the pit edge



Welding on the frontal edge

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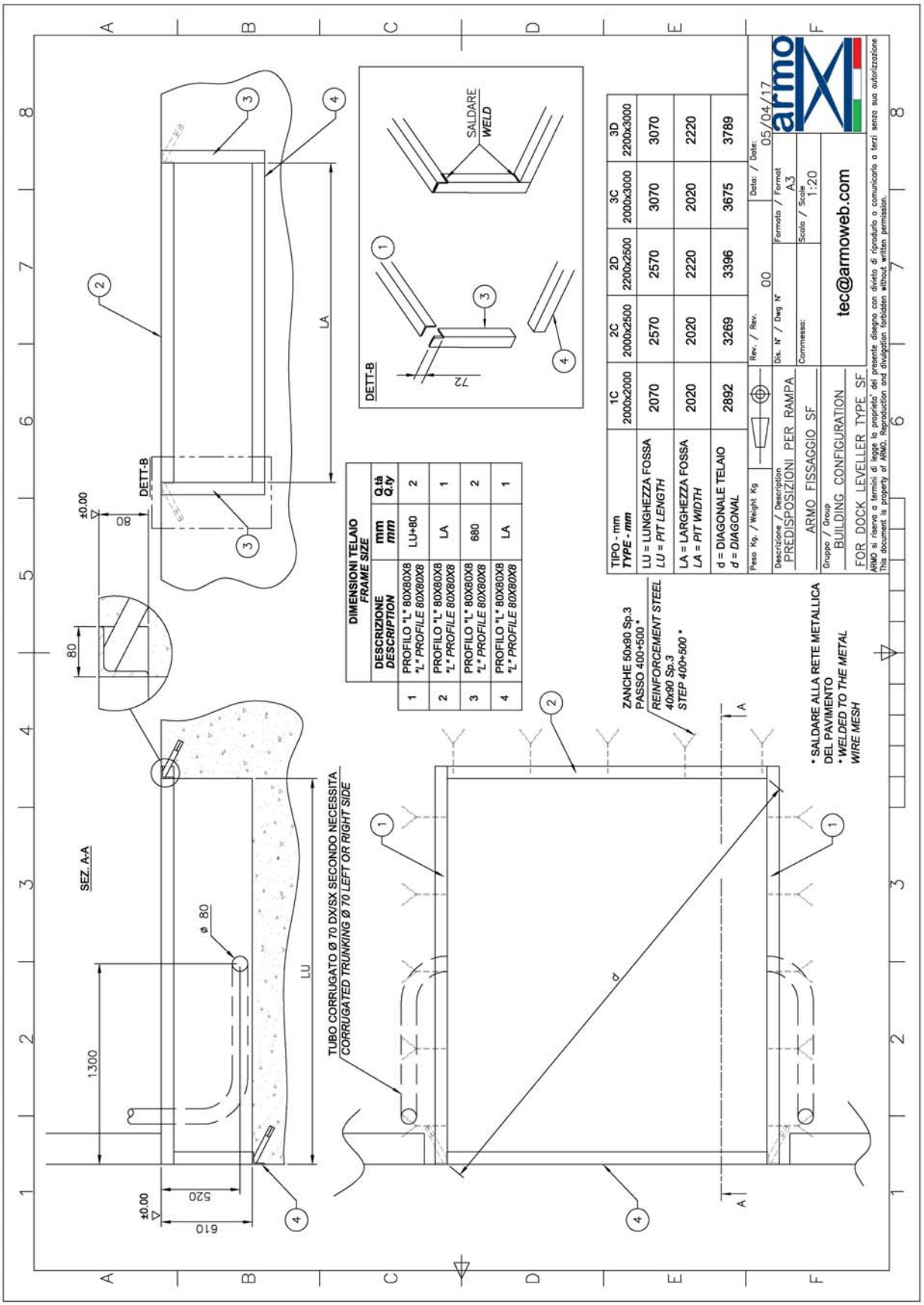
Method SF arrangements
“Pit mounted” or “Letter box”



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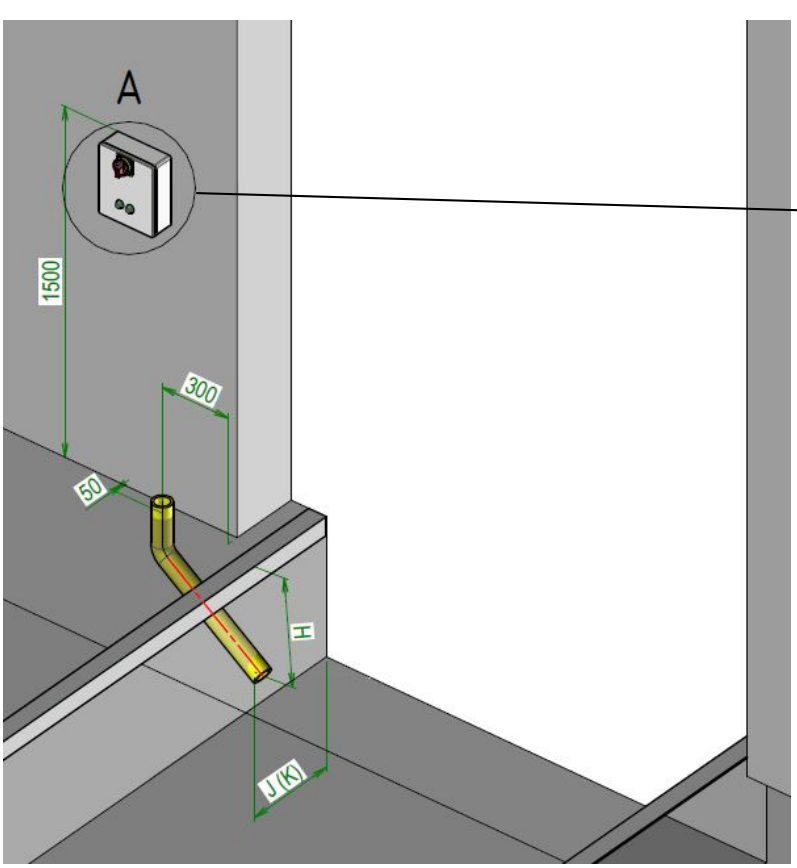
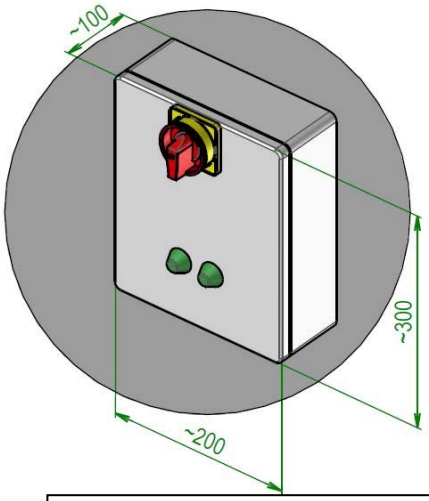
ELECTRIC BOX





ELECTRIC BOX

Should not be possible to place the hole for the cable passage at the point suggested in the drawing, it is possible to use alternative measures, depending by the dock leveller model and its dimensions. Consult the following chart:

ROTATING LIP DOCK LEVELLERS				
	L=2000	**L=2500**	**L=3000**	**L=3400**
J	400	620	800	1000
K	620	850	1050	N/D
H	520	520	520	520

TELESCOPIC LIP DOCK LEVELLERS				
	L=2000	**L=2500**	**L=3000**	**L=3400**
J	800	800	800	800
H	520	520	520	520

“L” is the length of the dock leveller. The optional measures for the rotating dock levellers, are the “J” & “H”, expressed in mm.

Should there be some problems to keep quota “J”, you can refer to measure “K”.

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