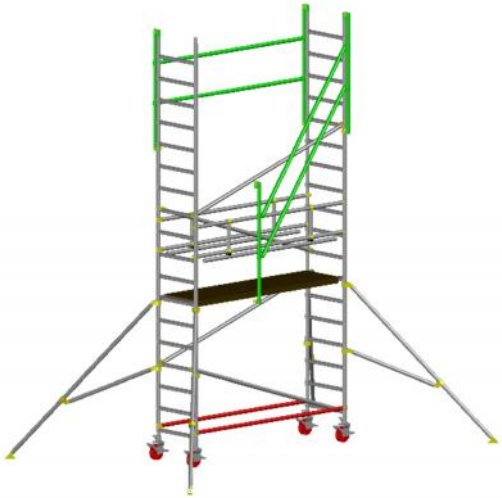
INSTRUCTION MANUAL
MOBILE TOWERS

ASSEMBLY GUIDE WITH ASSEMBLY GUARDRAIL BRACING FRAME



INDEX

1. INTRODUCTION

This manual provides the information and instructions necessary for an adequate knowledge and correct assembly of the Access Towers and Mobile Towers manufactured by ALUFASE.[1]

The ALUFASE models of Access Towers and Mobile Towers for which this instruction manual is developed are:

- Model 300, both in Single Width (0.74 m) and Double Width (1.35 m).

- Model 400, both in Single Width (0.74 m) and Double Width (1.35 m).

For both 300 and 400 models, several types of platform length are available: 1,12, 1.91, 2.50 and 3.05 meters.

The main difference between the model 300 and 400 is the vertical distance between the steps (rungs) integrated in the frames, which in the case of model 300 is 276 mm and in the case of 413 mm, which directly influences the type of access to be used (see point 3 scaffolding components).

This manual should only be used as a guide for the assembly of access towers and standard Mobile Towers indicated above, for other configurations (towers without wheels, cantilevers, walkways between towers, towers of several modules with common frame, etc.), please, contact the manufacturer.

The scaffolding has been certified, in accordance with the requirements of UNE EN 1004-1:2021 standard, by the company Bureau Veritas, with certificate number Nº CER-28/X52/1/12791504/1001-02

---

[1].- This manual is in accordance with UNE EN 1004-2:2022 standard that establishes the rules and guidelines for the preparation of an instruction manual

According to UNE EN 1004-1:2021 standard, the following general attentions must be considered:

A) THIS INSTRUCTION MANUAL MUST BE AVAILABLE AT THE PLACE OF USE OF THE MOBILE AND WORKING TOWER.

B) THIS MOBILE ACCESS AND WORKING TOWER SHOULD ONLY BE USED IN ACCORDANCE WITH THIS INSTRUCTION MANUAL, WITHOUT ANY MODIFICATION.

C) MOBILE ACCESS AND WORK TOWERS SHOULD ONLY BE USED IN ACCORDANCE WITH NATIONAL / LOCAL REGULATIONS.

D) TRAINING COURSES FOR USERS CANNOT REPLACE INSTRUCTION MANUALS, BUT ONLY COMPLEMENT THEM.

E) ONLY ORIGINAL ALUFASE COMPONENTS SPECIFIED IN THIS MANUAL SHOULD BE USED.

F) DAMAGED OR DEFECTIVE COMPONENTS CAN'T BE USED.

G) MOBILE ACCESS AND WORKINGTOWERS DESIGNED IN ACCORDANCE WITH UNE-EN 1004-1 STANDARD ARE NOT ANCHOR POINTS FOR PERSONAL PROTECTIVE EQUIPMENT AGAINST FALLS FROM HEIGHT.

H) WORK IS ONLY PERMITTED ON A PLATFORM PROVIDED WITH FULL SIDE PROTECTION INCLUDING GUARDRAILINGS AND TOEBOARDS.

2. GENERALINFORMATION

This is the general starting information regarding ALUFASE mobile towers, based on the tower models described in this manual:

:

Model 300 EN1004-3-8/8-XXCD-H2 (Single Width; 0.74 cm))
Model 300 EN1004-3-8/12-AXCD-H1/H2 (Double Width; 1.35 cm)

Model 400 EN1004-3-8/8-XXCD-H2 (Single Width; 0.74 cm)
Model 400 EN1004-3-8/12-AXCD-H2 (Double Width; 1.35 cm)

Donde:

- EN 1004; refers to the standard UNE EN 1004-1:2021 "Mobile access and work towers built with prefabricated elements
- 3; refers to the load class according to UNE EN 1004-1:2021.
- 8/8 and 8/12 refers to the maximum heights allowed for Single Width and Double Width
- XXCD refers to the means of access available to the tower system or model.
- H1 and H2, refers to the free height class.

These points are described below in accordance with UNE EN 1004-1:2021

2.1. LOAD CLASS

The load classes defined in UNE EN 1004-1:2021 are:

LOAD CLASS	UNIFORMELLY DISTRIBUTED LOAD q kN/m^2
2	1,50
3	2,00

The load class of the mobile towers indicated is class 3 (200 kg/m2).

The maximum loads to be taken into account are the following:

	Load (kg)
MAXIMUM LOAD PER TOWER	720
MAXIMUM LOAD PER LEVEL	360 / 4 people
MAXIMUM LOAD PER PLATFORM	250 / 3 people

It shall be used the most restrictive load limit, including the working goods.

According to the UNE EN 1004-1:2021 standard, THERE CAN ONLY BE ONLY ONE LEVEL OF WORK AT A TIME in the same mobile tower.

2.2. MAXIMUM HEIGHT

The maximum heights according to UNE EN 1004-1:2021 are, taking as maximum height the last platform height:

Type of Width Interior (without wind) Exterior

WIDTH	INDOOR (no wind)	OUTDOOR
SINGLE WIDTH (SW)	8	8
DOUBLE WIDTH (DW)	12	8

The possible effect of the wind in interiors of open constructions on the sides or "chimney effect" must be considered.

Stabilizers must be assembled on towers with a platform height from 2.2 meters for single width and 3.5 meters for double width. The distance between supports of the stabilizers on the smaller side of the base of the tower must be at least 1/3 of the height of the tower, taking as height the last platform height.

Pay special attention when choosing the height of the appropriate work platform with respect to the work to be developed. In case of doubt, please contact Alufase.

2.3. ACCESS CLASSES

Access to the different levels of the Mobile Access and Working Towers will always be made through the interior of the tower. The access classes for each model of mobile tower described are according to UNE EN 1004-1:2021 as:

MODEL 300

Model 300 EN1004-3-8/8-XXCD-H2 (Single Width; 0.74 cm)

- Access type C: by inclined scale, using a ladder.
- Access type D: by vertical scale, using the steps of the frame.

Model 300 EN1004-3-8/12-AXCD-H1/H2 (Double Width; 1.35 cm)

- Access type A: by stairs, using a 50º inclined stairway.
- Access type C: by inclined scale, using a ladder.
- Access type D: by vertical scale, using the rungs of the frames.

MODEL 400

Model 400 EN1004-3-8/8-XXCD-H2 (Single Width; 0.74 cm)

- Access type C: by inclined scale, using a ladder.
- Access type D: by vertical scale, using a vertical ladder included on the frame with steps at 300 mm distance (or less)

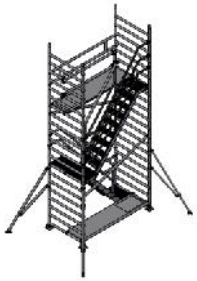
Model 400 EN1004-3-8/12-AXCD-H1/H2 (Double Width; 1.35 cm)

- Access type A: by stairs, using a 50º inclined stairway.
- Access type C: by inclined scale, using a ladder.
- Access type D: by vertical scale, using a vertical ladder included on the frame with steps at 300 mm distance (or less)

Model 300:

AS access type C

AS access type D



AD access type A

AD access type C

AD access type D

Model 400:

AS access type C

AS access type D

AD access type A

AD access type C

AD access type D

2.4. FREE HEIGHT CLASSES

The classes of free height between platforms of each model would be according to UNE EN 1004-1:2021 are:

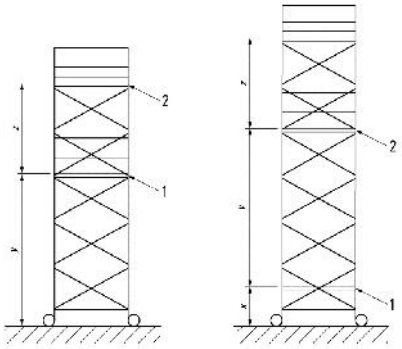
Model	Free height class	Mínimum free height (m)
300 SW	H2	1,85
300 DW	H1/H2*	1,85
400	H2	1,90

* In the case of DW, height type will depend on the assembly.

- H1, for assemblies with 2 platforms in intermediate levels.

- H2, for assemblies with 1 platform in intermediate levels.

The maximum distances allowed in the distribution of platforms in the tower according to UNE EN 1004-1:2021 is as follows:



x ≤ 0,6 m
y ≤ 3,40 m
z ≤ 2,25 m
1 First platform
2 Second platform

2.5. MAXIMUM WIND LOAD

Mobile Access and Working Towers must be dismantled or anchored in case wind rises above the dynamic pressure equivalent to 0.1 kN / m^2, so:

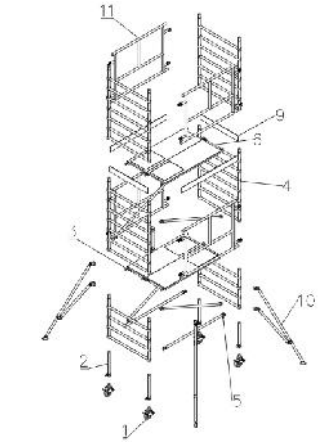
Maximum permissible wind speed for dismantling or anchoring the tower: 45.5 km/h (12.7 m/s)

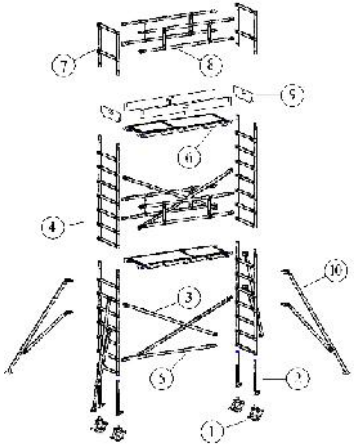
If the wind gets this speed during use or it is foreseen that while the tower remains assembled this wind speed can be reached, the tower must be dismantled or anchored.

It's NOT allowed to work on the mobile tower with a wind speed higher than indicated.[2]

[2] Apart from the horizontal force caused by the wind, maximum horizontal service force must be considered 0.3 kN (30kg).

3. COMPONENTS





MODEL 300: PARTS AND WEIGHTS					
1	CASTORS	Ø125	Ø150	Ø200	
		2.2 kg	2.7 kg	4.3 kg	
2	ADJUSTABLE LEGS	40 cm	60 cm	80 cm	
		1.1 kg	2.1 kg	2.9 kg	
3	DIAGONAL BRACES	1.12 m	1.91 m	2.50 m	3.05 m
		1.4 kg	1.8 kg	2.3 kg	2.7 kg
4	FRAMES	AS 1m	AS 2m	AD 1m	AD 2m
		5.2 kg	8.9 kg	7 kg	15 kg
5	HORIZONTAL BRACES	1.12 m	1.91 m	2.50 m	3.05 m
		1.2 kg	1.7 kg	2.2 kg	2.6 kg
6	PLATFORMS	1.12 m	1.91 m	2.50 m	3.05 m
		8.3 kg	13.3 kg	17.5 kg	20.8 kg
7	GUARDRAIL FRAMES	SW	DW		
		3 kg	3.8 kg		
8	GUARDRAIL B. FRAME	1.12 m	1.91 m	2.50 m	3.05 m
		4 kg	4.8 kg	5.6 kg	6.4 kg
9	TOEBOARD	1.12 m	1.91 m	2.50 m	3.05 m
		1.3 kg	2.2 kg	3.1 kg	3.9 kg
9	TOEBOARD	SW	DW		
		3 kg	3.8 kg		
10	STABILIZERS	TELESCOPIC		REINFORCED	
		5.2 kg		6.8 kg	
11	STRUCTURAL G.B. FRAME	1.12 m	1.91 m	2.50 m	3.05 m
		5.7 kg	6.8 kg	7.9 kg	9.1 kg
12	ASSEMBLY G.B. FRAME	1.12 m	1.91 m	2.50 m	3.05 m
		3.9 kg	4.8 kg	5.6 kg	6.4 kg
MODEL 400: PARTS AND WEIGHTS					
1	CASTORS	Ø125	Ø150	Ø200	

		2.2 kg	2.7 kg	4.3 kg	
2	ADJUSTABLE LEGS	40 cm	60 cm	80 cm	
		1.1 kg	2.1 kg	2.9 kg	
3	DIAGONAL BRACES	1.12 m	1.91 m	2.50 m	3.05 m
		1.4 kg	1.8 kg	2.3 kg	2.7 kg
4	FRAMES	SW 1m	SW 2m	DW 1m	DW 2m
		4.0 kg	7.4 kg	5.9 kg	9.3 kg
		SW 1m W/L	SW 2m W/L	DW 1m W/L	DW 2m W/L
		6.2 kg	9.6 kg	8.1 kg	11.5 kg
5	HORIZONTAL BRACES	1.12 m	1.91 m	2.50 m	3.05 m
		1.2 kg	1.7 kg	2.2 kg	2.6 kg
6	PLATFORMS	1.12 m	1.91 m	2.50 m	3.05 m
		8.3 kg	13.3 kg	17.5 kg	20.8 kg
7	GUARDRAIL FRAMES	SW	DW		
		2.9 kg	3.7 kg		
8	GUARDRAIL B. FRAME	1.12 m	1.91 m	2.50 m	3.05 m
		4.8 kg	5.1 kg	5.9 kg	6.6 kg
9	TOEBOARD	1.12 m	1.91 m	2.50 m	3.05 m
		1.3 kg	2.2 kg	3.1 kg	3.9 kg
9	TOEBOARD	SW	DW		
		3 kg	3.8 kg		
10	STABILIZERS	TELESCOPIC		REINFORCED	
		5.2 kg		6.8 kg	
11	STRUCTURAL G. B. FRAME	1.12 m	1.91 m	2.50 m	3.05 m
		5.7 kg	6.8 kg	7.9 kg	9.1 kg
12	ASSEMBLY G.B. FRAME	1.12 m	1.91 m	2.50 m	3.05 m
		3.9 kg	4.8 kg	5.6 kg	6.4 kg

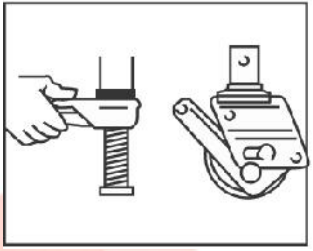
3.1. CASTORS

Alufase has three different wheel diameters that will be chosen depending on the height and use of the tower: Ø125 mm, Ø150 mm, Ø200mm.

All wheels have brakes that must always be activated before the using of the tower. They must be inserted in the legs so that they cannot detach by itself.

3.2. ADJUSTABLE LEGS

Legs must be placed between the wheels and the frames of the tower, must be used for leveling. Legs have a threaded spindle and a tightening leglock (clamp) for height regulation. To do this, leg lock latch must be tightened and slid along the spindle. Spin the leglock for accurate leveling.



Legs can only be used for leveling, not for increasing tower height. Press the spindle and slide it along the thread, rotate the clamp without pressing the spindle for more accurate adjustment

3.3. FRAMES

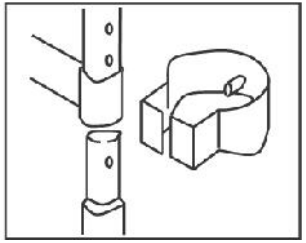
Alufase has several frames parts to achieve the desired heights of the tower, they can be identified by the number of rungs:

MODEL 300		MODELO 400	
7 rungs	1.93 m	5 rungs	2.07 m
4 rungs	1.10 m	4 rungs	1.66 m
		3 rungs	1.24 m

A Guardrail Frame at the top of the tower can be installed depending of the setting

Additionally, Alufase has frames of different of 1, 2, 3, 5 and 6 steps for the 300 model and 1 and 2 steps for the 400 model number of rungs, which can be used to reach more accurate heights.

Frames are joined together by spigots placed at the top end of each side. This union is blocked by a Clip that has a pin that is introduced through the matching holes that have the spigots and the frames.



To disassemble the joint between frames, just stretch the Clip outwards, without removing it completely, and place it in an upper hole provided for that purpose.

If it is necessary to move the tower by crane without dismantling, fixing Clips are available with a longer pin that completely crosses the tube and the spigot. In any case, Alufase should always be consulted before attempting to move the tower by crane.

3.4. BRACES

Alufase has three types of braces: horizontal, horizontal with clamps and diagonal.

Braces hooks are self-locking. To anchor them just press lightly on the corresponding tube. For safety all components must be installed with the triggers of the hooks out of the scaffolding. To release it you have to pull the latch with your thumb. Make sure the latches perfectly grab the tube on which they are assembled.

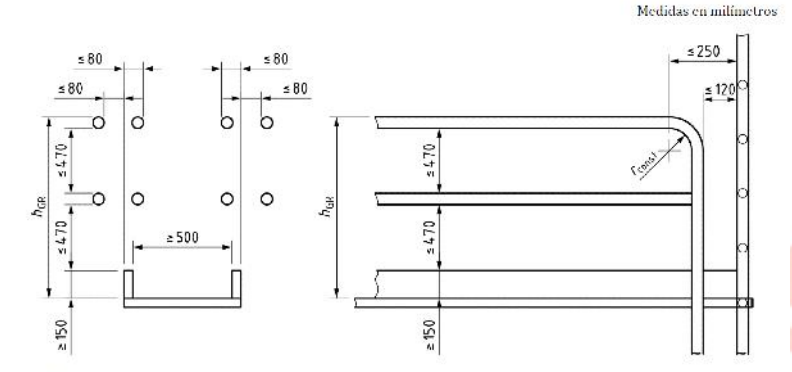
HORIZONTAL: They are used as a structural part at the base of the tower. They have the same length as the platform and differ from the diagonals because they are shorter, because of the color and the identification sticker. They can also be used as guardrail, where necessary, as a complement and / or replacement of the guardrail bracing frames.

DIAGONALS: They are used as a structural element and are aluminum color. They have a sticker for identification. They differ from the horizontal ones because they are longer, because of the color and the identification sticker.

HORIZONTAL WITH COUPLERS: They can be used as side protection, mainly in the case of double-width towers, whose assembly is carried out only with a platform at intermediate levels of access. The protection must be placed on the rungs. The coupler fixes the brace and prevents the bar from sliding over the rung.

3.5. GUARDRAILS

Guardrail protection consists of upper railing, intermediate railing and toeboard, and must comply with the provisions of the UNE EN 1004-1:2021 standard, with a minimum height of the main (upper) railing of at least 950 mm (h_{gr}).



Leyenda

h_{GR} Distancia entre la superficie superior de la plataforma y la superficie superior de la barandilla principal

r_{const} Radio de curvatura de la protección lateral constituida por un marco (véase 7.4.3)

Guardrails should be placed at all levels, both in the intermediate and at working level. It is mandatory to place toeboards at working level.[3]

[3] National regulations on working at height must be considered when assessing the placement of lateral protection for mobile access towers less than 2 m high working platform

Alufase has several types of railing, which are arranged to protect users or assemblers during the assembly and use of the mobile towers.

GUARDRAIL FRAMES

The railing frames are one-piece elements, with four hooks, which once placed comply with the measures indicated in the standard. The frames for model 300 and 400 are slightly different.

STRUCTURAL GUARDRAIL BRACING FRAME

Structural framework used in the safe assembly system. It is mounted from the lower level to work protected once the platform is placed.

ASSEMBLY GUARDRAIL BRACING FRAME

Provisional guardrail frame for safe assembling. It is installed from the lower level to work protected once the platform is placed. It can be substituted by a standard guardrail bracing frame.

GUARDRAIL FRAME

Depending on the assembly system used, guardrail frames can be used to be placed on the frames at the last working platform

BRACES

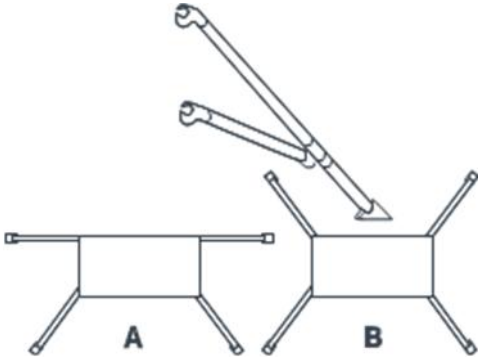
Depending on the assembly system used, horizontal or horizontal with couplers can be used to be placed on the frames at the last working platform

3.6. STABILIZERS

Stabilizers must be assembled on towers higher than 2.2 meters for single width or 3.5 meters for double width. The distance between stabilizer legs at the smaller side of the base must be at least 1/3 of the height of the tower, considering last platform height as the tower height.

They can be telescopic or reinforced. In the area of contact with the ground they have a rotating plate to allow contact on irregular surfaces. Union couplers are provided with ring nuts to make manual tightening easier. Make sure the top coupler stays immediately below the knot on the side and tightens enough to stay fixed. Make sure the rubber sole is in firm contact with the ground. Generally, the stabilizers must be assembled as shown in Figure B. If the tower is supported on a resistant wall, they can be placed as indicated in figure A as long as the wall is resistant and it has a height of at least 2/3 of the height of the tower.

When moving the tower, check for obstacles and do not lift the stabilizers more than 25mm from the ground (to avoid possible overturn). Once the tower is placed in its final position, check again its leveling, stabilizers assembly of and wheel braking.

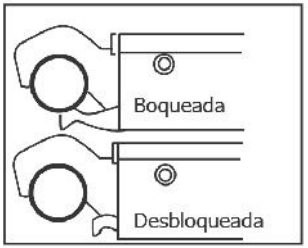


3.7. PLATFORMS

They are installed on each level of assembly and at a maximum height of 2.25 m between platforms, so access trapdoors of the platforms must be counterbalanced in height. In any case, the trapdoors must remain always closed, except during access.

Local regulations must also be taken into consideration for maximum height between platforms

The platforms have two hooks (opposite) with locking pin that prevents the platform from being accidentally lifted due to the effect of the wind or other reasons. Once the platforms are placed, these pins must always be activated.



3.8. COMPONENTS FOR EACH TYPE OF TOWER

ASSEMBLY WITH ASSEMBLY BRACING FRAME

SINGLE WIDTH:

ASSEMBLY OPTION: ASSEMBLY GUARDRAIL BRACING FRAME							
S.W. TOWER (EN 1004-3-8/8-XXCD-H2)	2m	3m	4m	5m	6m	7m	8m
TOTAL HEIGHT (METERS)	3,5	4,6	5,4	6,5	7,4	8,5	9,3
WORKING PLATFORM HEIGHT (METERS)	2	3,1	3,9	5,0	5,9	7,0	7,8
WORKING HEIGHT (METERS)	4	5,1	5,9	7,0	7,9	9,0	9,8
DESCRIPTION	QTY	QTY	QTY	QTY	QTY	QTY	QTY
Castors Ø150	4	-	-	-	-	-	-
Castors Ø200	-	4	4	4	4	4	4
Legs 40 cm	4	4	4	4	4	4	4
Horizontal braces	2	2	2	2	2	2	2
Diagonal braces	2	3	4	5	6	7	8
Frames 1 m	-	-	2	-	2	-	2
Frames 2 m	2	2	4	6	6	8	8
Platforms	1	2	2	3	3	4	4
Guardrail frame	2	-	-	-	-	-	-
Long toeboard	2	2	2	2	2	2	2
Short toeboard	2	2	2	2	2	2	2
Telescopic stabilizers	-	4	4	4	4	-	-
Reinforced stabilizers	-	-	-	-	-	4	4
Guardrail bracing frame	2	2	4	4	6	6	8
Structural guardrail bracing frame	-	-	-	-	-	-	-
Assembly guardrail bracing frame	2	2	2	2	2	2	2
TOTAL PIECES	25	29	36	38	43	45	50
TOTAL WEIGHT KG (1,91/2,50/3,05)	80/89/97	134/147/159	156/171/186	183/204/221	210/231/251	238/267/289	264/293/319
OUTDOOR USE	YES	YES	YES	YES	YES	YES	YES
INDOOR USE (NO WIND)	YES	YES	YES	YES	YES	YES	YES

DOUBLE WIDTH

ASSEMBLY OPTION: ASSEMBLY GUARDRAIL BRACING FRAME											
D.W. TOWER (EN 1004-3-8/12-XXCD-H1/H2)*	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m
TOTAL HEIGHT (METERS)	3,5	4,6	5,4	6,5	7,4	8,5	9,3	10,4	11,2	12,3	13,2
WORKING PLATFORM HEIGHT (METERS)	2	3,1	3,9	5,0	5,9	7,0	7,8	8,9	9,7	10,8	11,7
WORKING HEIGHT (METERS)	4	5,1	5,9	7,0	7,9	9,0	9,8	10,9	11,7	12,8	13,7
DESCRIPTION	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY
Castors Ø150	4	-	-	-	-	-	-	-	-	-	-
Castors Ø200	-	4	4	4	4	4	4	4	4	4	4
Legs 40 cm	4	4	4	4	4	4	4	4	4	4	4
Horizontal braces	2	2	2	2	2	2	2	2	2	2	2
Diagonal braces	4	6	8	10	12	14	16	18	20	22	24
Frames 1 m	-	-	2	-	2	-	2	-	2	-	2
Frames 2 m	2	4	4	6	6	8	8	10	10	12	12
Platforms	2	3	4	5	6	7	8	9	10	11	12
Guardrail frame	2	-	-	-	-	-	-	-	-	-	-
Long toeboard	2	2	2	2	2	2	2	2	2	2	2
Short toeboard	2	2	2	2	2	2	2	2	2	2	2
Telescopic stabilizers	-	-	4	4	4	-	-	-	-	-	-
Reinforced stabilizers	-	-	-	-	-	4	4	4	4	4	4
Guardrail bracing frame	2	2	4	4	6	6	8	8	10	10	12
Structural guardrail bracing frame	-	-	-	-	-	-	-	-	-	-	-
Assembly guardrail bracing frame	2	2	2	2	2	2	2	2	2	2	2
TOTAL PIECES	28	31	42	45	52	55	62	65	72	75	82
TOTAL WEIGHT KG (1,91/2,50/3,05)	105/119/132	143/162/179	204/230/253	236/281/308	281/318/351	313/356/394	358/407/451	384/439/486	429/490/543	455/522/579	501/571/636
OUTDOOR USE	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO
INDOOR USE (NO WIND)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

*H1 for model 300, H2 for model 400

4. ASSEMBLY AND DISMANTLING PROCEDURE OF MOBILE ACCESS AND WORK TOWERS

4.1. BEFORE ASSEMBLING THE TOWER

The following guidelines should be followed before mounting the tower:

- Assembly staff: mobile tower assembly personnel must be qualified for this activity (RD 2177/2004), as well as comply with established safety standards and procedures. Assembly training courses cannot replace instruction manuals, they only complement them. From 2 m onwards, at least 2 operators will be required for assembly. The assembly staff must be provided with the appropriate equipment and PPE for assembly.[4]
- Ground conditions: a review of the area where the tower is going to be mounted must be made.
  The tower will not be supported on elements such as logs, sewers, etc., if their resistance is not guaranteed. Obstacles that hinder assembly, possible displacement and work must be eliminated.
  Moving towers should not be assembled on slopes that make it difficult to control when the brakes are released from the tower.
  During the assembly, the area will be marked, so that no person outside the assembly is in the radius of influence of the tower.
  If the tower is not available for use, it must be marked with "Out of Service" sign placed.
- Weather conditions: work can only be carried out if weather conditions and lighting levels do not endanger the safety and health of workers. The maximum wind speed for the use of the tower is 45.5 km/h (12.7 m/s). Above this value, the tower must be dismantled or secured.
- Material: it must be checked that all the material is suitable for use. Defective or damaged components should be substituted.
- Electrical risk: special caution should be taken in the case of proximity of power lines, to avoid direct and indirect electrical contacts. The applicable current regulations, RD 614/2001 on the protection of workers against electrical risk, must be taken into account.

[4] The Alufase mobile towers are designed to be assembled without anti-fall personal protective equipment, in accordance with UNE EN 1004-1:2021. See assembly procedure.

4.2. ASSEMBLY OF THE TOWER. ASSEMBLY GUARDRAIL BRACING FRAME OPTION

The different possible types of assembly are described below:

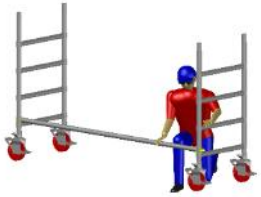
- ASSEMBLY WITH ASSEMBLY GUARDRAIL BRACING FRAME (300/400 system).

  - Single Width Towers even height.
  - Single Width Towers odd height.
  - Towers of Width Double even height.
  - Towers of Width Double odd height.

EVEN HEIGHT TOWERS ASSEMBLY

SINGLE WIDTH (SW)	EVEN TOWERS - DESCRIPTION	DOUBLE WIDTH (DW)
1	Separate the material by type, horizontal bars, forward bars, side bars, railings, etc., and check that you have all the material for mounting the tower. One meter frame (4 steps) will be used at the beginning of the tower. (One meter frame model 400 has 3 steps.)	
2 	Insert the wheel into the adjustable legs. Once this is done, insert the legs into the sides of the frames (inside the vertical tube). To level the towers, the leg lock must be rotated around the threaded leg until an adequate leveling is achieved (check with bubble level). NOTE: During the assembly and use of the tower the wheels will always remain braked. The first step should be at most 400 mm from the ground, 600 mm if it is a platform.	
3 	Place the horizontal bars (2), inserting the end hook into the vertical tube, at the bottom of the vertical tube. The other end of the horizontals must be supported on the ground, allowing the frame to be stand up. 2 horizontals should be placed in SW or DW. As a general rule, hooks are always placed from the inside out of the scaffolding, being mandatory in the case of guardrail.	

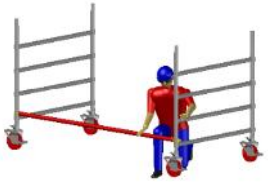
4



Place the other frame facing and insert the hook of the free end of the horizontal bar at the same height, usually at the base

SW: Assemble a diagonal brace, hooking the hooks between the first and fourth step and level the base.

DW: Assemble two diagonal braces, hooking the hooks between the first and fourth steps, one on each side of the sides and in reverse and level the base.



5

In Model 400 they will be placed from the first to the third step.
Note: the horizontal next to the diagonal will be placed, as an exception, from the outside to the inside of the scaffolding.

6

Place the next two frames, installing them through the spigots of the lower frames.
Be sure to place the fixing clips correctly, so that the two frames get jointed.

7

AS: Place the next diagonal, zigzag, from the fourth step to the seventh, on the opposite side of the previous diagonal.

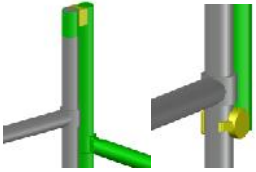
AD: Place the following diagonals, zigzag, from the fourth step to the seventh, on the opposite side of the previous diagonal.

In the Model 400 it will be placed from the third to the fifth step.

Place the assembly guardrail bracing frame that will serve as a temporary railing on the next level.

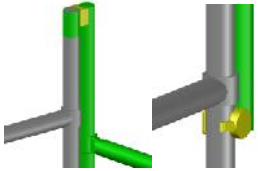
For doing this you need to insert the tube at the end of one of the vertical supports into a spigot. Then insert the hook of the bottom in the vertical of the side, until you make sure that the safety trigger blocks the joint. The hook should be just below one of the joining pieces to prevent the assembly guardrail bracing frame from being lifted and out of the top spigot.

8

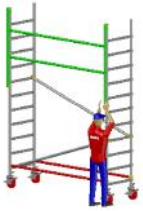


The other part of the end, as the horizontal bars are articulated, will be supported on the ground or hanging, depending on the width of the tower.

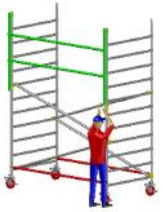
NOTE: take care that the tube is properly tucked into the spigot and the hook well placed in the vertical with the trigger locked.



9



Place in the same way the other vertical on the frame in front, leaving the guardrail installed.
And proceed in the same way with the other assembly guardrail bracing frame of the same level.



10

SW: Place the platform on the seventh step, always leaving 4 steps above the platform.
In the Model 400 there will be 3 steps.

AD: Place 2 platforms on the seventh step, always leaving 4 steps above the platform.
In the Model 400 there will be 3 steps.

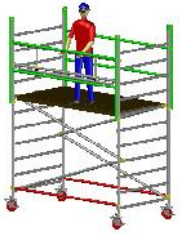
Be sure to place the safety latches (2) placed on opposite hooks in the locking position.

11

Climb by the frame as a vertical staircase, always by inside the scaffolding. To do this, you must open the trapdoor of the hatch using the lock that is at the bottom of the hatch. Once on the platform be sure to close the hatch.
For Model 400 scaffolding, before climbing, you must place the ladder to be able to climb, since the distance between steps is greater than that allowed by the regulations.

12

Place the final guardrail frames before removing the assembly guardrail bracing frame.



13

Remove one end of the mounting railings and leave them hanging from the other end. For this you will need to unlock the triggers of the vertical bars.
Place the frame on the spigots that have been left free when removing the assembly guardrail bracing frame. Be sure to place the clips in position.

14

Remove the assembly guardrail bracing frames from the opposite side, put them on the frame you just placed and leave them hanging.

15

Put the frame in front. Be sure to place the clips in position.

Place the assembly guardrail bracing frames in their correct position.

AS: Then place the diagonals of this level (2) continuing with the zigzag of the lower level. To do this, place the first brace from the first step on the platform to the fourth step on the platform on the opposite side, and the other diagonal from the fourth to the seventh.

16

AD: Then place the diagonals of this level (4) continuing with the zigzag of the lower level. To do this, place the first brace from the first step on the platform to the fourth step on the platform on the opposite side, and the other diagonal from the fourth to the seventh.

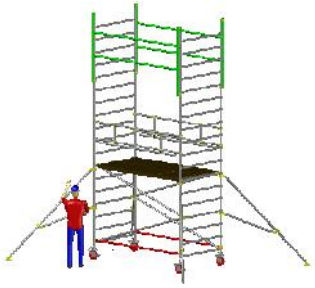
In the Model 400 it would be from the first step on the platform to the third step on the platform of the opposite side, and the other diagonal from the third to the fifth.

17

Assemble the stabilizers (4). These must be placed in each corner of the tower, in the vertical tubes of the frames (where the legs are installed). Use stabilizer couplers to grab the base frames
The top coupler must be placed under a knot.
Check that the rubber bases of the stabilizers are in firm contact with the ground. Assemble the stabilizers as described in the stabilizers section 3.8. (Page 18).

Note: in SW stabilizers must be placed for towers from 2.2 to 8 meters.

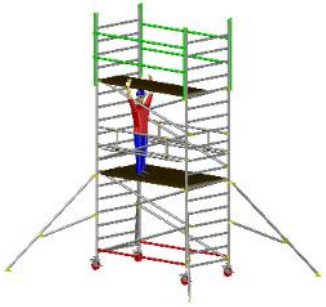
Note: in DW stabilizers must be placed for towers from 3.5 to 12 meters.



18

Place the platforms in the same way as in step 10. Trapdoors must be placed against those of the previous level, so there are no two trapdoors in a row in the same vertical.
To climb to the platform, proceed as in step 11.

To erect more levels repeat steps from 13 to 18.



19

Once at the last level, or any working level, you must assemble the toeboard. Longer toeboards are assembled by introducing the steel tube they have in the middle, in the existing holes on both sides of the platform, then the small toeboard must be placed fitting the grooves they have in the grooves of longer ones.
On the last level there are two options of guardrails, either leave the assembly guardrail bracing frames or remove them and place the standard guardrail frames.
Note: according to EN 1004-1:2021 you can only have one working level in the tower.

NOTA: In the case of towers of 2 meters there is the option of starting with 2 meters frames: place the horizontals and diagonals in an analogous way to what is explained. Subsequently place guardrail frames on the 2 meters frames and use the assembly guardrail bracing frames with a special coupling for the railings[5]. Then the platform and toeboards must be placed, being able to leave the assembly guardrail bracing frame or exchange it for standard bracing frames.

ODD HEIGHT TOWER ASSEMBLY

SINGLE WIDTH (SW)

1

2

ODD TOWERS - DESCRIPTION

Separate the material by type, horizontal bars, forward bars, side bars, railings, etc., and check that you have all the material for mounting the tower.

In odd towers a 2 meters frame (7 steps) will be used at the beginning of the assembly.

400 model two meters frame has 5 rungs.

Insert the wheel into the adjustable legs. Once this is done, insert the legs into the sides of the frames (inside the vertical tube).

To level the towers, the leg lock must be rotated around the threaded leg until an adequate leveling is achieved (check with bubble level).

NOTE: During the assembly and use of the tower the wheels will always remain braked. The first step should be at most 400 mm from the ground, 600 mm if it is a platform.

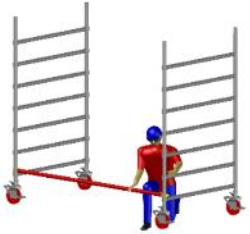
DOUBLE WIDTH (DW)

3

Place the horizontal bars (2), inserting the end hook into the vertical tube, at the bottom of the vertical tube. The other end of the horizontals must be supported on the ground, allowing the frame to be stand up.
2 horizontals should be placed in SW or DW.
As a general rule, hooks are always placed from the inside out of the scaffolding, being mandatory in the case of guardrail.

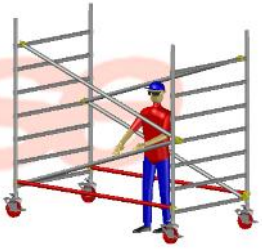
4

Place the other frame facing and insert the hook of the free end of the horizontal bar at the same height, usually at the base.



5

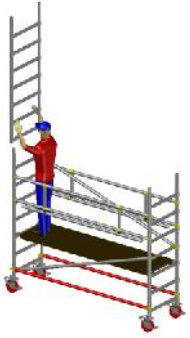
SW: Assemble 2 zigzag diagonals, placing the hooks between the first and fourth rungs and the fourth and seventh on the opposite frame, then level the base.
AD: Assemble 4 zigzag diagonals, placing its hooks between the first and fourth rungs and the fourth and seventh, counterbalancing from one part of the scaffold to the other, then level the base.
In the Model 400 diagonals will be placed from the first to the third step and from the third to the fifth.
Note: the horizontal next to the diagonal can be placed, as an exception, from the outside to the inside of the scaffolding.



6

AS: Place a platform on the third step of the frames and the guardrail bracing frames.
AD: Place a platform on the third step and another platform on the fourth step of the frames (just to have room enough to place diagonals and platform), install the guardrail bracing frames. Work is only permitted at the lowest platform.
Important: These platforms are placed for assembling, platforms and guardrail frames can be disassembled later and used for higher levels.
Confirm this point with local regulations.

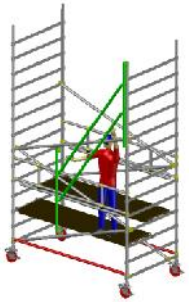
7

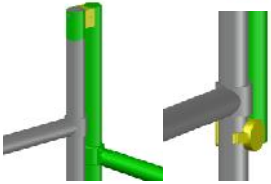


Place the next two frames, connecting them through the spigots of the lower sides.
Be sure to place the fixing clips correctly, so the frames get firmly connected.

8

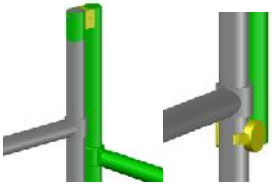
Install assembly guardrail bracing frames which will be temporary guardrail for the next level.
For doing this you need to insert the tube at the end of one of the vertical supports into a spigot. Then insert the hook of the bottom in the vertical of the side, until you make sure that the safety trigger blocks the joint. The hook should be just below one of the joining pieces to prevent the assembly guardrail bracing frame from being lifted and out of the top spigot.



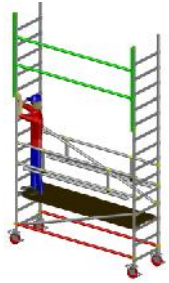


The other part of the end, as the horizontal bars are articulated, will be supported on the ground or hanging, depending on the width of the tower.

NOTE: take care that the tube is properly tucked into the spigot and the hook well placed in the vertical with the trigger locked.



9



Place the other vertical post in the same way in its frame, then the guardrail will be installed.

Repeat this process with the other assembly guardrail bracing frame at the same level.

10

Place the platform on the seventh rungs from the previous platform, always leaving 4 rungs above the platform. In Model 400 there will be 3 rungs.
Be sure to place the safety latches (2) placed on opposite hooks in the locking position.
Once the upper platform is placed, the platform and guardrail can be removed from the assembling level.

11

Assemble the stabilizers (4) before climbing the platform. These must be placed in each corner of the tower, in the vertical tubes of the frames (those where the legs are installed). Use the stabilizer coupler to grab them.
The upper coupler should be placed under the hook of the assembly guardrail bracing frame, leaving a little place to help to remove it later.
Check that the rubber plates of the stabilizers are in firm contact with the ground. Assemble the stabilizers as described in the stabilizers section 3.6 (Page 18).

Note: in SW stabilizers must be placed for towers from 2.2 to 8 meters.

Note: in DW stabilizers must be placed for towers from 3.5 to 12 meters.

12

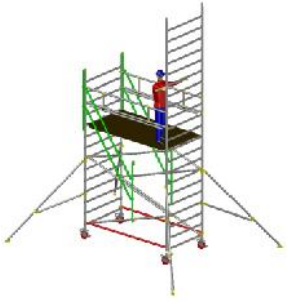
Climb by the frame as a vertical staircase, always by inside the scaffolding. To do this, you must open the trapdoor of the hatch using the lock that is at the bottom of the hatch.
Once on the platform be sure to close the hatch.
For Model 400 scaffolding, before climbing, you must place the ladder to be able to climb, since the distance between steps is greater than that allowed by the regulations.

13

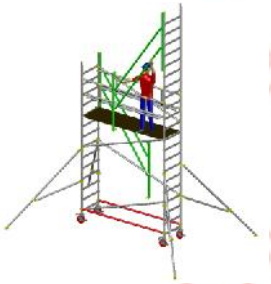
Place the final guardrail bracing frames frames before removing the assembly guardrail.

14

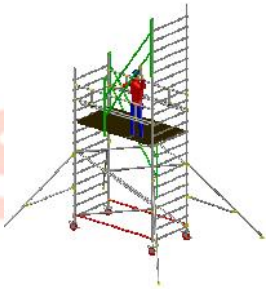
Remove one end of the assembly guardrail bracing frames and leave it hanging from the other end. For doing this you will need to unlock the triggers of the vertical braces.
Place the frame on the spigots that have been left free when removing the assembly guardrail. Be sure to place the clips in locking position.



15

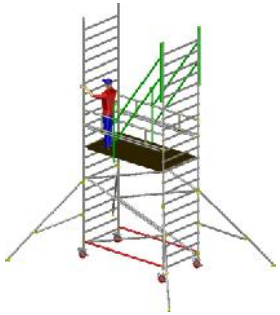


Remove the assembly guardrail bracing frames from the opposite frame, put them on the frame you just placed and leave them.



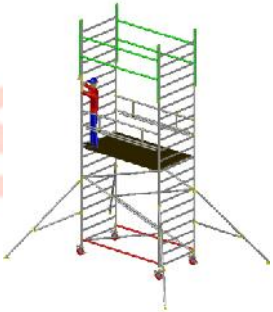
16

Put the front frame. Be sure to place the clips in locking position.



17

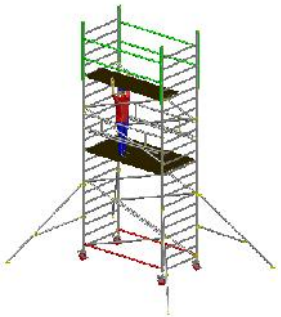
Place the assembly guardrail bracing frames in their correct position.
Then place the diagonals of this level (2) continuing with the zigzag of the lower level. To do this, place the first brace from the first step on the platform to the fourth step on the platform on the opposite side, and the other diagonal from the fourth to the seventh.
In the Model 400 it would be from the first step from the platform to the third step from the platform of the opposite side frame. The other diagonal must be installed from the third to the fifth rung.



18

Place the platform in the same way as described in 10. Trapdoors must be placed against those of the previous level, so there will be no two trapdoors in a row in the same vertical.
To climb to the platform, proceed as described in step 12.

To erect more levels, assemble as indicated from 14 to 18.



19

Once at the last level, or any working level, you must assemble the toeboard. Longer toeboards are assembled by introducing the steel tube they have in the middle, in the existing holes on both sides of the platform, then the small toeboard must be placed fitting the grooves they have in the grooves of longer ones.
On the last level there are two options of guardrails, either leave the assembly guardrail bracing frames or remove them and place the standard guardrail frames.
Note: according to EN 1004-1:2021 you can only have one working level in the tower.

OTHER ASPECTS TO CONSIDER DURING ASSEMBLY

20. As a general rule, the towers shall be mounted 30 cm from the wall on which work is to be carried out (if applicable).
21. The components shall be lifted by rope using a secure knot. Lift the elements always on the footprint of the tower, including stabilizers. It is forbidden for all personnel to remain under the lifting and lowering area of loads. Do not place pulleys or lift heavy materials on the outside of the tower.
22. Elements which may be damaged during assembly or which are detected to have a fault shall be dismantled immediately and repaired or replaced. A module or level will never be left without all required diagonals, if several braces have to be changed or replaced it will be done one by one.
23. If the scaffolding is not ready to be used, a tower sign must be marked “out of use”.
24. If you need to adjust the height of the tower to some intermediate distance between rungs, remember that the legs only are designed to level the scaffolding. Alufase has frames of 1, 2, 3 steps for the 300 system and 1 and 2 steps for the 400 system. In case of doubt contact with Alufase. It is totally forbidden to gain height by placing stairs, stools or similar on the platforms

25. After the assembly or modification of the tower, the following information must be indicated on a label clearly visible from the ground: name and contact details of the responsible person, whether or not the tower is ready for use, load class and maximum evenly distributed load, whether the tower is intended only for indoor use and date of assembly or modification.

4.3. DURING THE USE OF THE TOWER

1. Check that the brakes are completely blocked (check that the brake pedal is completely lowered) before using the tower.
2. Checked that the tower is correctly mounted and leveled (maximum allowed inclination is less than 1%); See the list of check points that is attached at the end of this guide.
3. Do not support stairs or other objects on the rolling tower.
4. Be careful with the horizontal forces that can be made on the tower, mainly work with motorized tools. The maximum horizontal forces on the tower should be 30 kg.
5. Do not stand on diagonal or horizontal braces. Do not jump on the platforms and work only inside of the tower.
6. Always go up/down the inside of the tower using the rungs of the sides (model 300) or the additional stairs or scales assembled (model 300 and 400), passing through the trapdoor. Remember trapdoors must always remain closed.
7. No other contiguous area can be accessed from the mobile tower platforms, no matter how close it is. If necessary, contact Alufase for possible access solutions.
8. Towers compliant UNE EN 1004-1:2021 are not designed to be used as edge protection systems.
9. Never remove the side guards (guardrails). Never remove toeboards on the working platform.
10. Do not coat the scaffolding with tarpaulins, meshes, nets or any other similar device. If necessary, contact Alufase.
11. Do not accumulate tools, materials or debris on platforms.
12. Never exceed the maximum loads indicated in this manual.
13. Anchor the tower to some fixed point when it will not be in use for a while.
14. Note that dilute hydrochloric acid, potash and other similar substances are corrosive to aluminum. Do not expose aluminum to these substances.

4.4. TOWER MOVEMENT

1. Before moving the tower check that there are no obstacles in the route, nor cables that can generate direct and indirect contacts.
2. The tower may not be moved if the wind limits indicated for its use are exceeded.
3. Check that all wheels are completely unlocked before moving the tower. To do this, the brake levers must be fully raised.
4. DO NOT move the tower with people, objects or tools on the platforms.
5. If the tower has stabilizers, when moving, lift them as little as possible from the ground and move them by keeping them in position (see point 3.6 of the manual). If you cannot move the tower because the stabilizers, the tower must be dismantled up to 2m in Single Width or 3 meters in Double Width, then, remove the stabilizers and move the tower. When the tower is in its new position, reassemble it.
6. In the new location proceed with the same previous checks before performing the work (firm ground, leveling, wind, etc.). See point 4.1.
7. The tower can only be moved by human force, pushing evenly from the base, on firm ground, leveled (maximum 2% slope) and without obstacles. During the displacement do not exceed the speed of a person walking at a normal pace.
8. As a general rule, towers are not designed to be hung or suspended. If necessary, request further information from Alufase.

4.5. DISASSEMBLY

1. Disassembly will be carried out in reverse to the assembly, firstly placing the assembly guardrail bracing frames on the last level.
2. Guardrail cannot be disassembled without having the assembly guardrail bracing frames installed properly.
3. You may not stay at any time on a platform without the railings.
4. All elements are designed to be able to be assembled/disassembled from the lower level protected by guardrail.

5.- INSPECTION, CARE AND MAINTENANCE

All scaffolding parts should be inspected regularly for possible damage. Check castors, brakes, threaded spindles of the legs, leveling calipers, frames, frame spigots, clips, joints of the tubes, braces, hooks, stabilizers, platforms, wood decking, pins and hatch locking...

Keep all scaffolding components clean, especially the spigots and openings where the frames meet. If necessary, lubricate with oil. As a rule, they should be stored upright to prevent them from being damaged. Keep platforms and pins clean, as well as the locking hooks of horizontal, diagonal and guardrail braces. Add grease, if necessary. The threads of the adjustable legs must be cleaned and lubricated slightly to maintain their correct operation. Remove dirt from the adjustable legs with a brush. If necessary, grease the wheel brakes with oil.

Los componentes dañados o rotos deberán ser reparados o sustituidos.

MATERIAL INSPECTION PROCEDURE

ALUFASE recommends inspecting all scaffolding components periodically and always:

(a) before each use;

(b) when the components are returned after use or rental;

c) after any circumstance that may have affected the safe use of the scaffolding (accident, adverse weather conditions, prolonged disuse over time...),

The inspection must be carried out by competent personnel who have the necessary protective equipment and who have been trained to do so.

MATERIAL DEFECTS DESCRIPTION

a) Cut: Incision in the material of the component resulting from the accidental or deliberate action of the user,

b) Crack: Fracture in the material of the component resulting from excess load, accidental damage, improper storage, prolonged use... Check especially wooden boards of the platforms.

c) Deformation: Defect in some parts of the scaffolding that can affect the structural strength of the scaffold or the correct assembly with other parts ... It may be due to overloading, accidental damage, prolonged use, use of sharp or hard tools that hit the material,

d) Holes: Punctures of any dimension, partially or totally through the thickness of the material, as a result of accidental or deliberate damage made by the user,

e) Contamination: Dirt on the scaffolding parts. It's not acceptable when the contaminant endangers the user, creates a chemical or biological risk or has a detrimental effect on the part. Some examples of this are: oil (risk of slipping, danger in material handling, dermatological risk ...), gypsum (creates a slippery surface and cancels the non-slip component of the platforms), dilute hydrochloric acid, potash and other similar substances are corrosive to aluminum and can reduce the strength of the equipment,

f) Broken surface: Platform wooden board and toeboard: risk of tripping or cutting by chips to the scaffolding users. It can be due to use in extreme conditions, overloads, improper storage, accidental damage. The hooks and triggers of the braces and guardrail, if broken, they can cause accidents since the collective protection would not be properly installed providing a sense of security that does not correspond to reality.

g) Excessive corrosion: Evidence of red rust or stains on screws, bolts, pins, etc., as well as white powder on aluminum components denote the defect of the parts that must be replaced.

PLATFORMS

- Platform wooden deck must be complete (uninterrupted surface), free of cracks, cuts, perforations or chips. The surface should be clean enough for the platform to be non-slip and prevent unwanted slips.

- Check that aluminum profiles don't have structural damages, shocks, cuts, holes...

- Check for damages, excessive wear or corrosion on the trapdoors and the opening device of the hatches. Check its correct operation when opening and closing the trapdoor (put the platform horizontally, open the trapdoor completely and close it again. Clean the dirt that can be accumulated on the locking and on the hinges).

- Check that all rivets and bolts do not present damage or excessive corrosion.

- Each platform has four support hooks. Check that the hooks are not damaged or have any play. Check that inside the hook is clean. Check the fixing nuts and screws of the hooks to the platform profile (corrosion-free and properly tightened). Place the platform on one side and check that the hooks are attached correctly.

- In at least two hooks, the platform has a wind locking device whose function is to fix the platform to the tube. Check that they are in perfect condition, free of dirt and fulfills its function, testing it on a tube (remove the locking device to check its correct operation and attach on the tube).

- Each platform must be marked with a safety sticker/label indicating the maximum load. Verify that it remains readable.

FRAMES AND GUARDRAIL FRAMES

- Check that all tubes are free of damage, cuts, holes, deformations, cracks, dust or impregnations. Remember that model 300 frames can be used as a vertical scale (to avoid slips, the tube is ribbed and must be free plaster, dust or any other material).
- Check that all "T" joints have no gaps or cracks
- Check that the spigots screws are properly tightened, without play and free of rust. Check correct fixation of the spigot to the tube.
- Check the existence of the two metallic fixing clips on each side. Verify their correct insertion in the holes (without slack and dirt that prevents their correct coupling) check the clips are free of damage and corrosion (check that they are not deformed).
- Check the existence and legibility of the identification sticker fixed to the vertical of the frame.
- Check guardrail frames; there must be two tabs at the top vertical tubes, they are necessary to prevent slippage of the guardrail bracing frames. Verify its correct operation by attaching a guardrail bracing frames and pressing it down.
- Check the collars at the guardrail frames, they must be fixed without play nor deformation. n the railing sides check the existence of the lower bush without damage, clearance or deformations.

BARRAS Y MARCOS DE BARANDILLA

- Bars and its hooks (placed at the ends of each bar), must be free of damage, cracks, deformations, dirt ... Check the correct condition of the triggers without cracking or deformations.

- Check the good condition of the trigger spring. To do this, insert the hooks on the frame and check their correct operation. Apply force to try to detach the bar and check its safe coupling (it cannot detach without intention).

LEGS AND CASTORS

- legs must be in good condition, without deformations, dents, corrosion, dirt…

- The threaded tube of the leg must be CLEAN (without plaster, cement, dirt ...), NOT BEATEN, so that the clamp can slide and blocked correctly.

- Check that the inside of the leg is not damaged, or deformed, to allow the wheel to enter correctly. Check it by inserting a castor into the leg.

- Check that the clamping ball is located on the outer top of the tube and the wheel, in good condition. Verify that it works properly: Leg fastens to the tube and castor fastens to the leg. Insert the leg on one side to check that it does not detach unintentionally. Insert the wheel into the leg to check that it does not detach involuntarily.

- Check that the adjustment leg lock rotates correctly around the entire threaded part of the leg (without significant clearances). Check that clamp teeth fit correctly to the thread of the leg (without gaps). Press the leg lock hardly, to check that it remains attached to the leg when load is applied.

- Check the condition of the spring of the leg lock. To do this, check that it works correctly by pressing and releasing the clamp. The leg lock should not show deformations, breaks, or cracks.

- Check that the castor is not damaged, nor the rubber surface damaged. Check that it is free of dirt, shaft must turn easily when unlocked. Verify that the wheel rotates correctly when the brake lever is released.

- Check the good condition of the castor brakes. Operate the brake lever and check that the wheel does not rotate.

- Check that the upper stub of the castor is in good condition and has no slack or deformations.

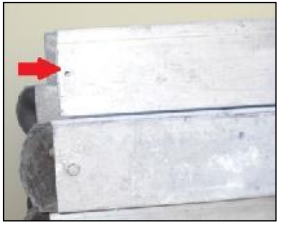
TOEBOARD

- Check the wood is in good condition, without chips or breakage.

- Check the good condition of the pins of insertion in the platform, they must have all the rivets that fix them to the wood. Check that the interlocking grooves at the ends of the toeboards are free of dirt and in good condition.

LADDERS AND STAIRS

- Check that the ladder and the steps are not damaged or bent or cracked. Check that the surface is not covered with plaster, cement or any other material that can cause slips when using the steps.



- Check the correct condition of the hooks (no damages, no dirt on the inside, no slack.

- Check that the rotation of the joining arm of the ladders with brace occurs is in correct condition. Check the hook in these arms.

- Check the existence of the rubber shoes of the inclined ladder.

COUPLERS AND STABILIZERS

- The tubes of the stabilizers must be free of damage, cuts, cracks, dirt...
- Check that the telescopic tube of telescopic stabilizers slides correctly and its holes are not damaged, deformed or covered by dirt. Insert the fixing clip into these holes and check their correct placement (protruding from the back of the tube)
- Check that the rubber shoe at the lower end is fixed to the tube and without significant wear.

- Check the good condition of the couplers: they should not present dirt, corrosion, bumps on the butterfly nut and thread. The thread cannot be deformed, damaged so that the tightening of the tube is correct. Turn the butterfly nut over the thread and check its correct operation.
- Check the existence of legible stickers relating to the instructions for use of the stabilizers.

5. REGULATIONS AND LEGISLATION

EN 1004-1:2021 Mobile access and working towers made of prefabricated elements - Part 1: Materials, dimensions, design loads, safety and performance requirements.

UNE EN 1004-2:2022 Mobile access and working towers made of prefabricated elements - Part 2: Rules and guidelines for the preparation of an instruction manual.

R.D. 2177/2004 (Spain), of 12 November, amending R.D. 1215/1997 of 18 July establishing the minimum safety and health requirements for the use by workers of work equipment, in terms of temporary work at height

NTP 695 (Spain), Mobile work towers: Construction standards.

NTP 696 (Spain), Mobile work towers: Assembly and use.

THIS MANUAL HAS BEEN DEVELOPED FOLLOWING EUROPEAN STANDARD EN 1004-1&2. ANYWAY, SOME COUNTRIES HAVE SPECIFIC LEGISLATION; CONSULT WITH LOCAL AUTHORITIES ON THE EXISTENCE OF NATIONAL REGULATIONS THAT MAY BE MORE RESTRICTIVE

ANNEX 1. CHECKLIST

SCAFFOLDING INSPECTION				WORK	
Tower features:		Date:		Next Revision:	
ITEMS TO BE CHECKED	Safe condition	Unsafe condition	N/A	Observations	Suitable to use
General stability					
Leveled tower/ Locked castors					
Right Access to different levels System 400 – ladders or frame ladders.					
Diagonals at all levels according to their configuration					
Horizontal braces at the base					
Guardrails (Guardrail bracing frames, structural guardrail bracing frame, etc.), according to system. Hooks out.					
Complete platform at working level.					
Platform windlocks in locking position					
Full toeboard at working level.					
Trapdoors closed.					
Frame clips correctly installed					
Right tightening of couplers.					
Marked area. Risk of falling objects.					
Power cables nearby.					
Anchoring to vertical walls. Only in case of wind fort owes out of use.					
Comments:				Name and signature of the inspector	

DELIVERY NOTE. CUSTOMER'S COPY.

COMPANY

WORK

I.D.

INFORMATION RECEIVED BY: (Name and surname)

NOTES

To fulfill with Chapter IV (Obligations of manufacturers, importers and suppliers) of Art. 41 of Spanish Law 31/1995, prevention of risks in the workplace, which states: "Manufacturers, importers and suppliers must provide employers, and they collect from them, the necessary information for the use and handling of machinery, equipment, products, raw materials and work tools are produced without risk to the safety and health of workers, as well as for employers to comply with their obligations to inform workers".

ALUFASE delivers this manual for the assembly and use of scaffolding, rolling towers models 300 and 400, which indicates the specifications, components, procedures and safety standards to be considered in the assembly, use and disassembly of scaffolding. Likewise, the scaffolding contractor is responsible for ensuring that the information contained in this Manual must be known by the workers who will use the scaffolding and the person who will supervise their work.

All persons who assemble, dismantle, use and supervise the scaffolding must have enough and adequate training

DATE

SIGNATURE

DELIVERY NOTE. MANUFACTURER'S COPY.

COMPANY

WORK

I.D.

INFORMATION RECEIVED BY: (Name and surname)

NOTES

To fulfill with Chapter IV (Obligations of manufacturers, importers and suppliers) of Art. 41 of Spanish Law 31/1995, prevention of risks in the workplace, which states: "Manufacturers, importers and suppliers must provide employers, and they collect from them, the necessary information for the use and handling of machinery, equipment, products, raw materials and work tools are produced without risk to the safety and health of workers, as well as for employers to comply with their obligations to inform workers".

ALUFASE delivers this manual for the assembly and use of scaffolding, rolling towers models 300 and 400, which indicates the specifications, components, procedures and safety standards to be considered in the assembly, use and disassembly of scaffolding. Likewise, the scaffolding contractor is responsible for ensuring that the information contained in this Manual must be known by the workers who will use the scaffolding and the person who will supervise their work.

All persons who assemble, dismantle, use and supervise the scaffolding must have enough and adequate training

DATE

SIGNATURE