European standard EN 1004

MARCHETTI

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100% MADE IN ITALY

MOBILE ACCESS TOWER

Instructions for use and maintenance

- Alutower 140x240
- Alutower 140x180
- Alutower 87x240
- Alutower 87x180

The products identified in this handbook have been manufactured by MARCHETTI s.r.l. With QUALITY SYSTEM MANAGEMENT, certified by Tuv Italia, in accordance with ISO 9001

Instruction Manual EN 1298 – IM – it x en

The mobile access tower must only be used for work of finishing, maintenance or similar. This Instruction Manual contains important information regarding the use, maintenance and safety of mobile access towers; the operator must have complete knowledge thereof before use. Strictly complying with this manual means operating in accordance with the provisions of existing legislation on health and safety at work Legislative Decree 09.04.2008 no. 81.

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DOC. ASSISTENZA CLIENTE
N. 57 REV. 6 DEL 28/05/2018
Code 10867

ATTENTION:

- Read and understand this manual in its entirety.
- Follow the instructions as indicated.
- Before any installation, verify the integrity of each individual component.

Do not use damaged or not whole components

The mobile access tower on wheels is made according to the standards.

Any changes made by others invalidate the manifacturer's responsibility.

TABLE OF CONTENTS

1. REGULATORY REFERENCES

- Legislative Decree 09.04.2008 no. 81 (O.J. no. 101 dated 30.04.08) "Consolidated Act on Occupational Health and Safety".
- EN 1004 (July 2005) "mobile access and towers (mobile access towers) made from pre-fabricated elements. Materials, sizes, design loads, safety and performance requirements";
- EN 1298 (February 1996) "mobile towers. Rules and guidelines for preparation of an instruction manual";
- Legislative Decree 06.09.2005 no. 206 (O.J.. no. 235 dated 08.10.05 - Ordinary Supplement no. 162) "Consumer Code".

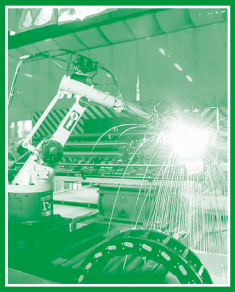
2. "ALUTOWER" series

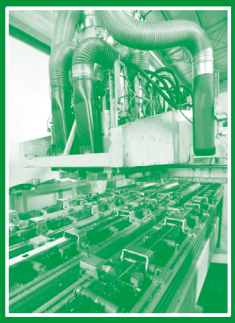
2.1 DESIGNATION

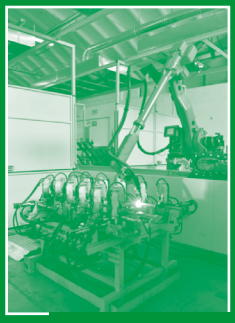
Alutower 140x240	tower EN 1004 – 3 – 8/11.60 - ABCD
Alutower 140x180	tower EN 1004 – 3 – 8/11.60 - XXCD
Alutower 87x240	tower EN 1004 – 3 – 7.10/11.60 - XXCD
Alutower 87x180	tower EN 1004 – 3 – 7.10/11.60 – XXCD

- The mobile access towers were built in compliance with Legislative Decree no. 81/08 and in particular with Technical Standard EN 1004;
- All have the Class of evenly distributed loads equal to "3" (2.0 KN/m 2);
- The maximum permitted height of the work platform varies for the different models according to the indications specified in the designation, between 7.10 m and 8.0 m externally while internally for all the models it is equal to 11.60 m. By internally it is meant in the absence of wind.

2.2 DECLARATION OF CONFORMITY







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DECLARATION OF CONFORMITY

MARCHETTI s.r.l.

with headquarter in Città della Pieve (Pg), Via Piemonte, 22:

DECLARES

that the mobile access towers named:

Alutower 140x240 – Alutower 140x180

Alutower 87x240 – Alutower 87x180

were manufactured in accordance with Legislative Decree no. 09.04.2008 no. 81 and in particular with Technical Standard EN 1004 (July 2005)

- They were built in accordance with the respective prototypes having passed the rigidity test, referred to in appendix "A" of Technical Standard EN 1004 (2005) and having been subjected with positive outcome to the EVALUATION, as addressed in section 13 of Technical Standard EN 1004 (2005) at:

UNIVERSITY OF PERUGIA

Alutower 140x240	Certificate n° Marc 102
Alutower 140x180	Certificate n° Marc 103
Alutower 87x240	Certificate n° Marc 104
Alutower 87x180	Certificate n° Marc 105

- that on all the models produced the identification mark is reported and an instruction manual is prepared according to the prescriptions of the Technical Standard EN1298 (section 9 of Technical Standard EN 1004).

GUARANTEE 100% SATISFACTION
MARCHETTI s.r.l.

2.3 GENERAL INFORMATION

2.3.1 Access to the work platforms

For the versions "Alutower 140x180 – 87x240 and 87x180, access to the work platforms can only be performed from the inside of the tower using one of the following methods:

- access type C: Inclined ladder;
- access type D: Upright ladder, consisting of crosspieces of the side frames of the structure;

For the version "Alutower 140x240 access to the work platforms can only take place from the inside of the tower using one of the following methods:

- access type A: Ramp ladder;
- access type B: Step ladder;
- access type C: Inclined ladder;
- access type D: Upright ladder, consisting of crosspieces of the side frames of the structure.

The instructions for use of accesses A and B are provided in the relevant manual.

2.3.2 Class, capacity

The tower called "Alutower" are classified (in accordance with EN 1004) in class 3, that is with capacity of the floor equal to 2.0 KN/m 2 .

The total load permitted for each tower is therefore:

- Alutower 140x240 Kg 501 - Alutower 140x180 Kg 367
- Alutower 87x240 Kg 273 - Alutower 87x180 Kg 200

The maximum number of floors loaded at the same time is:

- Alutower 140x240 no. 3 - Alutower 140x180 no. 3
- Alutower 87x240 no. 3 - Alutower 87x180 no. 3

The sum of the loads related to each floor must not exceed the value of the overall load permitted for each tower.

2.3.3 Maximum heights in the various configurations

The maximum height of the work platform, without the use of the stabilizers, is for all four models 1.70 m (tower maximum height 2.90 m).

The maximum height of the work platform, with the use of the stabilizers, is for all four Alutower-Evo models 11.60 m inside buildings, while on the outside of buildings it is 8.00 m

The minimum free height between the work platforms is 1.90 m . The maximum vertical distance between the work platforms is 4.20 m. The maximum vertical distance between the ground and the first floor is 4.60 m.

2.4 IDENTIFICATION

2.4.1 Specifications mobile access tower "Alutower 140x240"

EN 1004 - Class "3" (2.0 KN/m2)

Overall load permitted 501 Kg - Maximum number of floors loaded at the same time 3

Table of the elements comprising the various configurations

	Code	Component Elements	Weight Kg	CONFIGURATIONS (pag. 9)						
				A1	A2	A3	A4	A5	B6	B7
	20927	Tower								
1	20883	Frame-140	8,50	0	2	4	6	8	10	12
2	20801	Horizontal brace-240	2,50	0	2	4	6	8	10	12
3	20802	Diagonal brace -240	2,80	0	2	4	6	8	10	12
	20810	Work platforms								
6	20808	Floor with trapdoor-240	15,00	1	1	1	2	2	3	3
8	11122	Long toe board-240	5,50	2	2	2	4	4	6	6
7	20809	Work platform without trapdoor-240	13,5	1	1	1	2	2	3	3
9	33644	Short toe board-140	2,60	2	2	2	4	4	6	6
		Complete guardrail								
10	20803	Guardrail 240	5,00	0	2	2	4	4	6	6
	20851	Stabilizers								
5	20807	Stabilizer	9,80	0	4	4	4	4	4	4
	20926	Tower base								
1	21012	Frame-140	8,50	2	2	2	2	2	2	2
2	20801	Horizontal brace-240	2,50	4	4	4	4	4	4	4
3	20802	Diagonal brace -240	2,80	2	2	2	2	2	2	2
4	20824	Wheel D200 self-leveling with brake	6,20	4	4	4	4	4	4	4

In order to produce the configurations with end tower H=0.80 m (A1T-A2T-A3T - A4T-B5T-B6T) simply add the following component element:

	Code	Component Elements	Weight Kg	CONFIGURATIONS (pag. 13)					
				A1T	A2T	A3T	A4T	B5T	B6T
	20928	Final tower							
11	20884	Final frame-140	3,90	2	2	2	2	2	2
10	20803	Guardrail	5,00	2	2	2	2	2	

2.4.2 Specifications mobile access tower "Alutower 140x180"

EN 1004 - Class "3" (2.00 KN/m2)

Overall load permitted 367 Kg

Maximum number of floors loaded at the same time 3

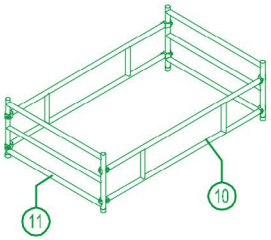
Table of the elements comprising the various configurations

	Code	Component Elements	Weight	CONFIGURATIONS (pag. 9)						
			Kg	A1	A2	A3	A4	A5	B6	B7
	20930	Tower								
1	20883	Frame-140	8,50	0	2	4	6	8	10	12
2	20805	Horizontal brace-180	2,00	0	2	4	6	8	10	12
3	20806	Diagonal brace -180	2,20	0	2	4	6	8	10	12
	20812	Work platform								
6	20814	Work platform with trapdoor-180	12,00	1	1	1	2	2	3	3
8	32542	Long toe board-180	4,20	2	2	2	4	4	6	6
7	20815	Work platform without trapdoor-180	10,5	1	1	1	2	2	3	3
9	33644	Short toe board-140	2,63	2	2	2	4	4	6	6
		Complete guardrail								
10	20804	Guardrail180	4,50	0	2	2	4	4	6	6
	20851	Stabilizers								
5	20807	Stabilizer	9,80	0	4	4	4	4	4	4
	20929	Base section								
1	21012	Frame-140	8,50	2	2	2	2	2	2	2
2	20805	Horizontal brace-180	2,00	4	4	4	4	4	4	4
3	20806	Diagonal brace -180	2,20	2	2	2	2	2	2	2
4	20824	Wheel D200 self-leveling with brake	6,20	4	4	4	4	4	4	4

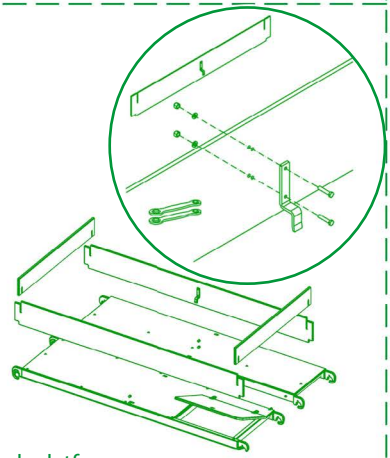
In order to produce the configurations with end tower H=0.80 m (A1T-A2T-A3T - A4T-B5T-B6T) simply add the following component element:

	Code	Component Elements	Weight	CONFIGURATIONS (pag. 13)					
			Kg	A1T	A2T	A3T	A4T	B5T	B6T
	20931	Tower							
11	20884	Final frame-140	3,90	2	2	2	2	2	2
10	20804	Guardrail	4,50	2	2	2	2	2	2

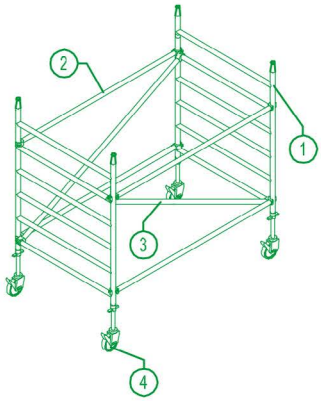
Design - Alutower 140



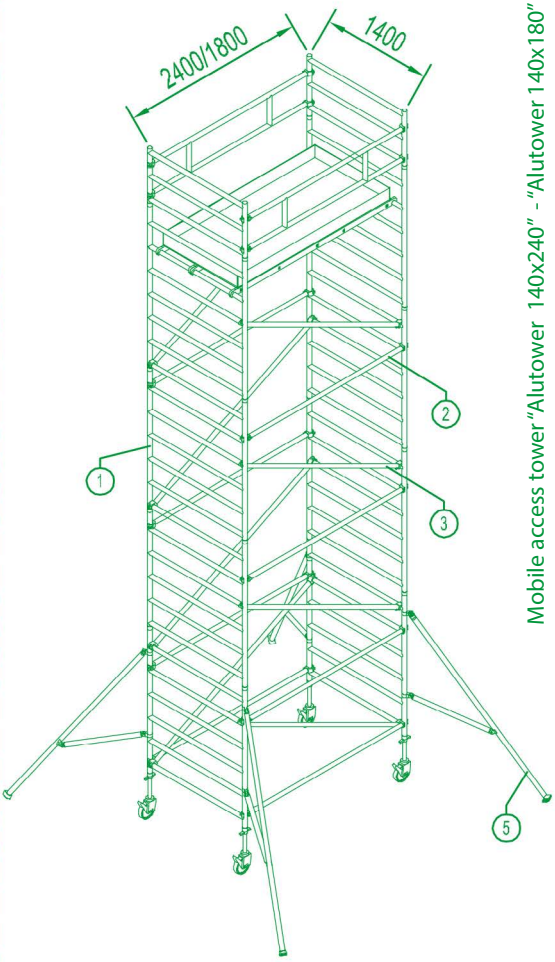
Terminal tower



Work platform



Base section

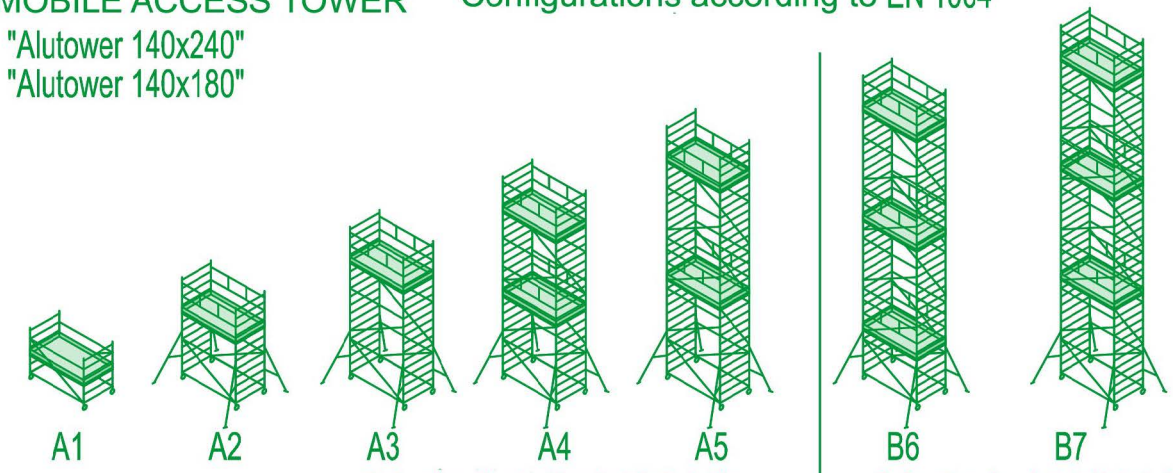


Mobile access tower "Alutower 140x240" - "Alutower 140x180"

MOBILE ACCESS TOWER

"Alutower 140x240"
"Alutower 140x180"

Configurations according to EN 1004



WITHOUT FINAL TOWER H=0,80 m

CONFIGURATIONS		A1	A2	A3	A4	A5	B6	B7
Code								
H max. scaffolding	m	2,20	4,00	5,80	7,60	9,40	11,20	13,00
H max work platform	m	1,10	2,60	4,40	6,20	8,00	9,80	11,60
Towers (H=1,80 m)	n°	0	1	2	3	4	5	6
Complete guardrails	n°	1	1	1	2	2	3	3
Stabilizers	n°	0	4	4	4	4	4	4
Base section	n°	1	1	1	1	1	1	1

WITH FINAL TOWER H=0,80 m

		Configurations allowed inside and outside the building				Configurations allowed only inside the building	
		A1T	A2T	A3T	A4T	B5T	B6T
Code							
H max scaffolding	m	2,90	4,70	6,50	8,30	10,10	11,90
H max work platform	m	1,70	3,50	5,30	7,10	8,90	10,70
Towers (H=1,80 m)	n°	0	1	2	3	4	5
Towers (H=0,80 m)	n°	1	1	1	1	1	1
Work platform with guardrail	n°	1	1	2	2	3	3
Stabilizers	n°	4	4	4	4	4	4
Base section	n°	1	1	1	1	1	1

2.4.4 Specifications mobile access tower "Alutower 140x240" with RA type access - Alternating continuos ramp stairs

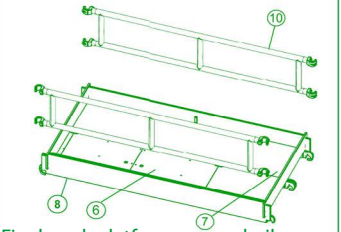
EN 1004 - Class "3" (2,0 KN/mq)

Overall load permitted Kg 501

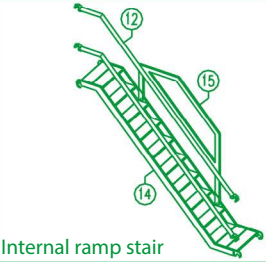
Table of the elements comprising the various configurations:

	Cod.	Component elements	Weight	CONFIGURATIONS (pag. 13)					
			Kg	RA2	RA3	RA4	RA5	RA6	RA7
	20927	Tower							
1	20883	Frame-140	8,50	0	2	4	6	8	10
2	20801	Horizontal brace-240	2,50	0	2	4	6	8	10
3	20802	Diagonal brace -240	2,80	0	2	4	6	8	10
	21007	Tower RA-RI							
1	20883	Frame-140	8,50	2	2	2	2	2	2
3	20802	Diagonal brace -240	2,80	1	1	1	1	1	1
	21009	Double trapdoor work platform							
6	20960	Double trapdoor platform-240	15,00	1	1	1	1	1	1
8	11120	Long toe board-240	5,50	2	2	2	2	2	2
7	20809	Platform without trapdoor -240	13,50	1	1	1	1	1	1
9	33644	Short toe board-140	2,60	2	2	2	2	2	2
	20849	Complete guardrail							
10	20803	Guardrail 240	5,00	2	2	2	2	2	2
	20951	Internal ramp stairs							
14	32876	Ramp stair	16,00	1	2	3	4	5	6
12	32864	Diagonal	2,80	2	4	6	8	10	12
	20851	Stabilizers							
5	20807	Stabilizer - 35	9,80	4	4	4	4	4	4
	20926	Tower base							
16	21012	Base section -14	8,50	2	2	2	2	2	2
2	20801	Horizontal brace - 240	2,50	4	4	4	4	4	4
3	20802	Diagonal brace - 240	2,80	2	2	2	2	2	2
4	20824	Wheel P60 D.200 C/B SRC	6,20	4	4	4	4	4	4
15	20952	Handrail	2,80	0	2	3	4	5	6

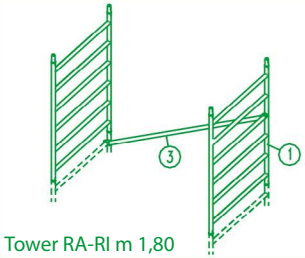
Alutower 140x240 - Alternating continuos ramp stairs type RA



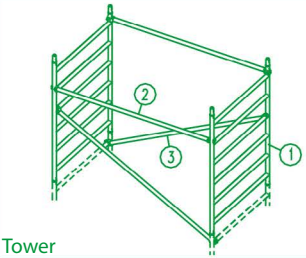
Final work platform + guardrail



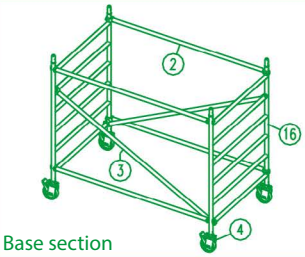
Internal ramp stair



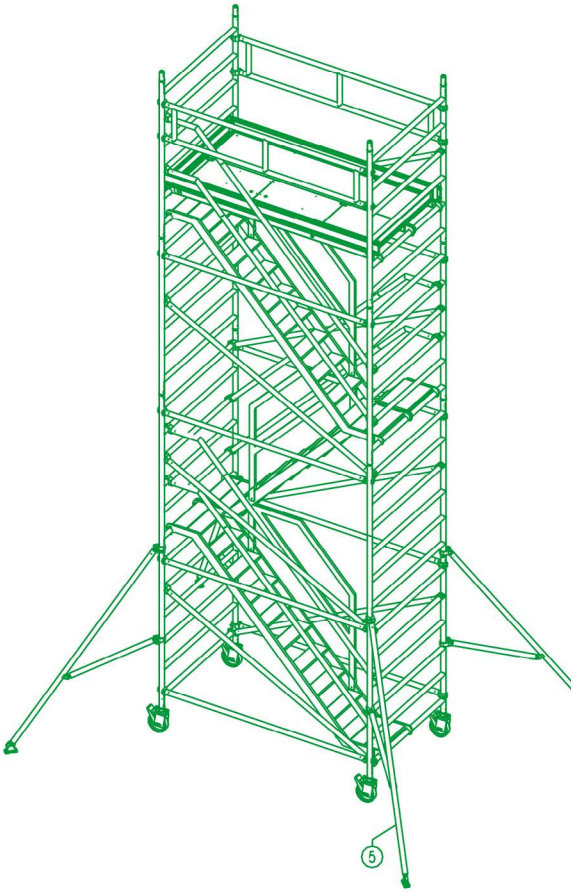
Tower RA-RI m 1,80



Tower



Base section



Mobile access tower "Alutower 140x240" with RA type access-Alternating continuos ramp stairs

2.4.5 Configurations according to EN 1004 - Alutower 140x240
Alternating continuos ramp stairs type RA

CONFIGURATIONS		RA2	RA3	RA4	RA5	RA6	RA7
H max. scaffolding	m	4,00	5,80	7,60	9,40	11,20	13,00
H max work platform	m	2,60	4,40	6,20	8,00	9,80	11,60
Towers (H=1,80 m)	n°	0	1	2	3	4	5
Tower RA - RI	n°	1	1	1	1	1	1
Internal ramp stair	n°	1	2	3	4	5	6
Handrail	n°	0	2	3	4	5	6
Double trapdoor work platform	n°	1	1	1	1	1	1
Complete guardrail	n°	1	1	1	1	1	1
Stabilizers	n°	4	4	4	4	4	4
Base section	n°	1	1	1	1	1	1

•Configurations RA6 RA7 must be anchored to the wall every two tower.

2.4.6 Specifications mobile access tower "Alutower 140x240" with RI type access - Alternating ramp stairs and intermediate platforms

EN 1004 - Class "3" (2,00 KN/mq)

Overall load permitted Kg 501

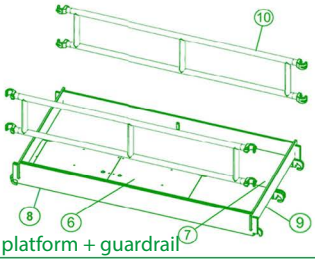
Table of the elements comprising the various configurations:

	Cod.	Component elements	Weight	CONFIGURATIONS (pag. 9)				
			Kg	RI2	RI3	RI4	RI5	RI6
	21008	Tower RI						
1	20883	Frame-140	8,50	0	2	4	6	10
2	20801	Horizontal brace-240	2,50	0	1	2	3	5
3	20802	Diagonal brace-240	2,80	0	2	4	6	10
	21007	Tower RA - RI						
1	20883	Frame-140	8,50	2	2	2	2	2
3	20802	Diagonal brace -240	2,80	1	1	1	1	1
	21009	Double trapdoor work platform						2
6	20960	Double trapdoor platform - 240	15,00	1	1	1	1	1
8	20960	Long toe board - 240	5,50	2	2	2	2	2
7	20809	Platform without trapdoor - 240	13,50	1	1	1	1	1
9	33644	Short toe board -140	2,60	2	2	2	2	2
	21010	Intermediate work platform						4
7		Platform without trapdoor - 240	13,50	0	1	2	3	4
8	11120	Long toe board - 240	5,50	0	2	4	6	8
13	11127	Short toe board - 51	1,30	0	2	4	6	8
	20849	Complete guardrail						2
10	20803	Guardrail 240	5,00	2	1	2	3	6
	20951	Internal ramp stairs						
14	32876	Ramp stair	16,00	1	2	3	4	5
12	32864	Diagonal	2,80	2	4	6	8	10
	20851	Stabilizers						
5	20807	Stabilizer - 35	9,80	4	4	4	4	4
	20926	Tower base						
16	21012	Frame -140	8,50	2	2	2	2	2
2	20801	Horizontal brace-240	2,50	4	4	4	4	4
3	20802	Diagonal brace-240	2,80	2	2	2	2	2
4	20824	Wheel P60 D.200 C/B SRC	6,20	4	4	4	4	4

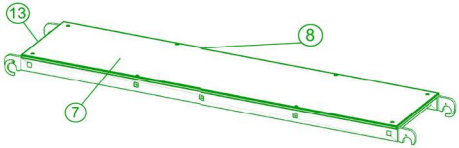
To realize the configurations RI3-RI4-RI5 it is necessary to add the following component element:

	Cod.	Component elements	Weight	CONFIGURATIONS (pag. 9)				
			Kg	RI2	RI3	RI4	RI5	RI6
	20928	Final tower						
11	20884	Frame-140	3,90	0	2	2	2	0
10	20803	Guardrail - 240	5,00	0	2	2	2	0

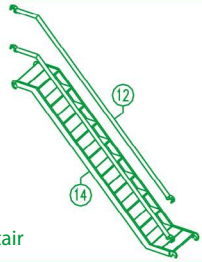
Alutower 140x240 - Alternating ramp stairs and intermediate platforms RI



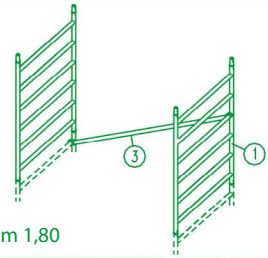
Final work platform + guardrail



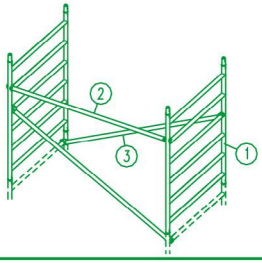
Intermediate work platform



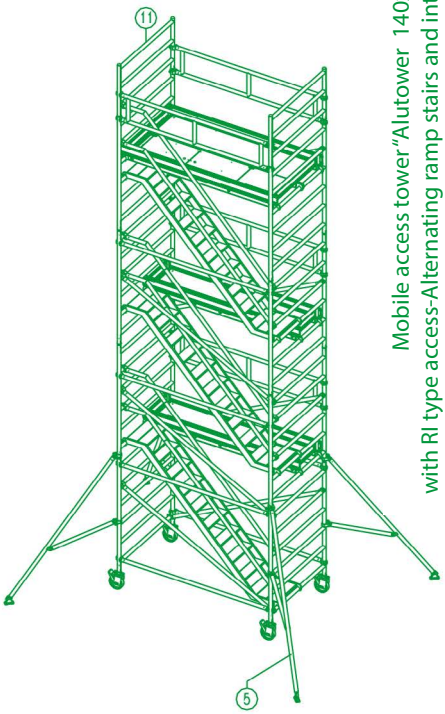
Internal ramp stair



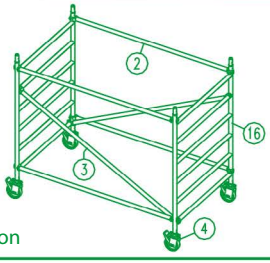
Tower RA-RI m 1,80



Tower



Mobile access tower "Alutower 140x240" | with RI type access-Alternating ramp stairs and intermediate platforms



Base section

2.4.7 Configurations according to EN 1004 - Alutower 140x240 with RI type access - Alternating ramp stairs and intermediate platforms

CONFIGURATIONS		RI2	RI3	RI4	RI5	RI6
H max. scaffolding	m	4,00	6,50	8,30	10,00	13,00
H max work platform	m	2,60	4,70	6,80	8,90	11,00
Tower RI (H=1,80 m)	n°	0	1	2	3	5
Tower RA - RI	n°	1	1	1	1	1
Internal ramp stair	n°	1	2	3	4	5
Double trapdoor work platform with guardrail	n°	1	1	1	1	1
Intermediate work platform	n°	0	1	2	3	4
Single Guardrail	n°	2	3	4	5	6
Stabilizers	n°	4	4	4	4	4
Tower base	n°	1	1	1	1	1
Terminal tower m 0,80	n°	0	1	1	1	0

•Configurations RI5 RI6 must be anchored to the wall every two tower.

2.4.8 Specifications mobile access tower "Alutower 87x240"

EN 1004 - Class "3" (2.00 KN/m2)

Overall load permitted 273 Kg

Maximum number of floors loaded at the same time 3

Table of the elements comprising the various configurations

	Code	Component Elements	Weight	CONFIGURATIONS (pag. 9)						
			Kg	A1	A2	A3	A4	A5	B6	B7
	20933	Tower								
1	20885	Frame-87	6,50	0	2	4	6	8	10	12
2	20801	Horizontal brace-240	2,50	0	2	4	6	8	10	12
3	20802	Diagonal brace 240	2,80	0	2	4	6	8	10	12
	20811	Work platforms								
6	32548	Work platform with trapdoor-240	15,00	1	1	1	2	2	3	3
7	11120	Long toe board-240	5,50	2	2	2	4	4	6	6
8	11122	Short toe board	1,65	2	2	2	4	4	6	6
	20849	Complete guardrail								
9	20803	Guardrail 240	5,00	0	2	2	4	4	6	6
	20851	Stabilizers								
5	20807	Stabilizer	9,80	0	4	4	4	4	4	4
	20932	Tower base								
1	21013	Frame-87	6,50	2	2	2	2	2	2	2
2	20801	Horizontal brace-240	2,50	4	4	4	4	4	4	4
3	20802	Diagonal brace 240	2,80	2	2	2	2	2	2	2
4	20824	Wheel D200 self-leveling with brake	6,20	4	4	4	4	4	4	4

In order to produce the configurations with end tower H=0.80 m (A1T-A2T-A3T - A4T-B5T-B6T) simply add the following component element:

	Code	Component Elements	Weight	CONFIGURATIONS (pag. 13)					
			Kg	A1T	A2T	A3T	A4T	B5T	B6T
	20934	Final tower							
10	20886	Frame-87	2,50	2	2	2	2	2	2
9	20803	Guardrail - 240	5,00	2	2	2	2	2	2

2.4.9 Specifications mobile access tower "Alutower 87x180"

EN 1004 - Class "3" (2.00 KN/m2)

Overall load permitted 200 Kg

Maximum number of floors loaded at the same time 3

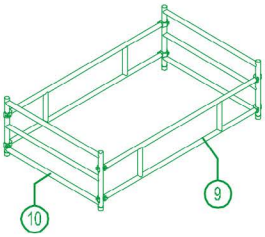
Table of the elements comprising the various configurations

	Code	Component Elements	Weight	CONFIGURATIONS (pag. 9)						
			Kg	A1	A2	A3	A4	A5	B6	B7
	20936	Tower								
1	20885	Frame-87	6,50	0	2	4	6	8	10	12
2	20805	Horizontal brace-180	2,00	0	2	4	6	8	10	12
3	20806	Diagonal brace -180	2,20	0	2	4	6	8	10	12
	20813	Work platforms								
6	20814	Work platform with trapdoor-180	12,00	1	1	1	2	2	3	3
7	32542	Long toe board-180	4,20	2	2	2	4	4	6	6
8	11122	Short toe board	1,65	2	2	2	4	4	6	6
	20850	Complete guardrail								
9	20804	Guardrail 180	4,50	0	2	2	4	4	6	6
	20851	Stabilizers								
5	20807	Stabilizer	9,80	0	4	4	4	4	4	4
	20935	Base tower								
1	21013	Frame-87	6,50	2	2	2	2	2	2	2
2	20805	Horizontal brace-180	2,00	4	4	4	4	4	4	4
3	20806	Diagonal brace -180	2,20	2	2	2	2	2	2	2
4	20824	Wheel D200 self-leveling with brake	6,20	4	4	4	4	4	4	4

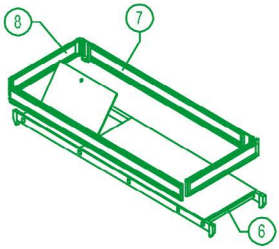
In order to produce the configurations with end tower H=0.80 m (A1T-A2T-A3T - A4T-B5T-B6T) simply add the following component element:

	Code	Component Elements	Weight	CONFIGURATIONS (pag. 13)					
			Kg	A1T	A2T	A3T	A4T	B5T	B6T
	20937	Final tower							
10	20886	Frame-87	2,50	2	2	2	2	2	2
9	20804	Guardrail - 180	4,50	2	2	2	2	2	2

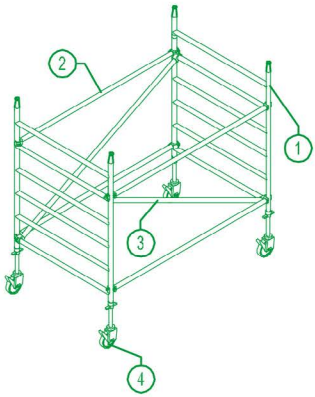
DESIGN "Alutower 87"



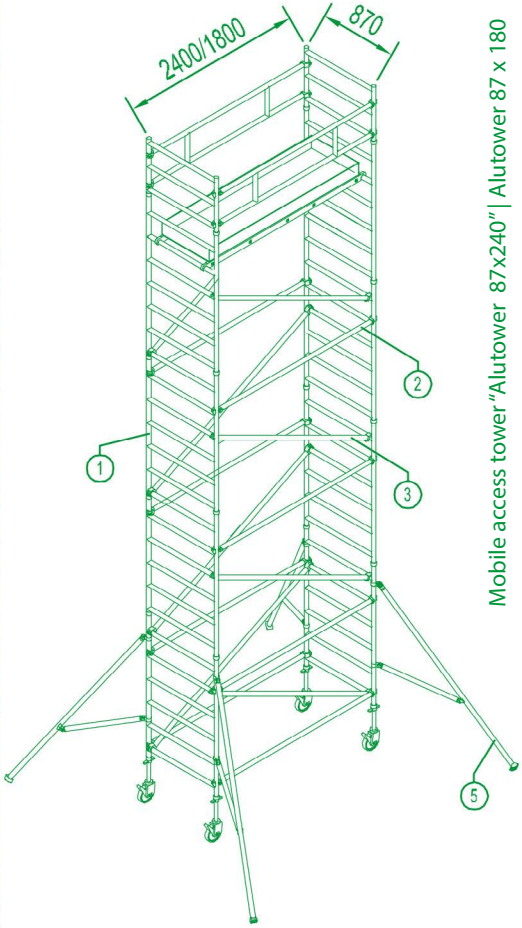
Terminal tower



Work platform



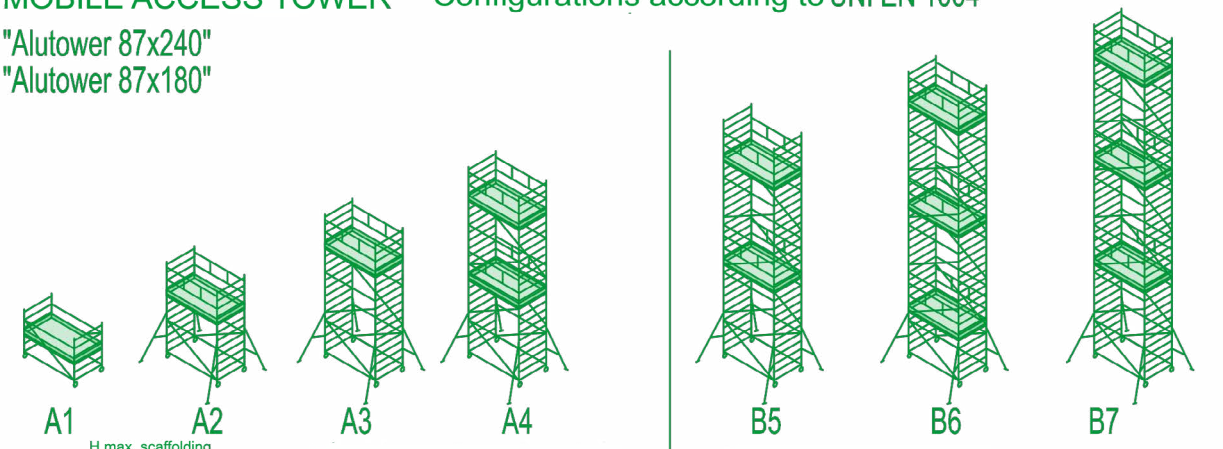
Tower base



Mobile access tower "Alutower 87x240" | Alutower 87 x 180

MOBILE ACCESS TOWER Configurations according to UNI EN 1004

"Alutower 87x240"
"Alutower 87x180"



WITHOUT FINAL TOWER H=0,80 m

CONFIGURATIONS	A1	A2	A3	A4	B5	B6	B7
Code							
H max. scaffolding m	2,20	4,00	5,80	7,60	9,40	11,20	13,00
H max work platform m	1,10	2,60	4,40	6,20	8,00	9,80	11,60
Towers (H=1,80 m) n°	0	1	2	3	4	5	6
Work platform with guardrail n°	1	1	1	2	2	3	3
Stabilizers n°	0	4	4	4	4	4	4
Tower base n°	1	1	1	1	1	1	1

WITH FINAL TOWER H=0,80 m — Configurations allowed inside and outside the building — Configurations allowed only inside the building

CONFIGURATIONS	A1T	A2T	A3T	A4T	B5T	B6T
Code						
H max. scaffolding m	2,90	4,70	6,50	8,30	10,10	11,90
H max work platform m	1,70	3,50	5,30	7,10	8,90	10,70
Towers (H=1,80 m) n°	1	2	3	4	5	6
Towers (H=0,80 m) n°	1	1	1	1	1	1
Work platform with guardrail n°	1	1	2	2	3	3
Stabilizers n°	4	4	4	4	4	4
Tower base n°	1	1	1	1	1	1

2.4.11 Base section

The base section consists of no. 2 frames, no. 4 horizontal braces and no. 2 bracing diagonals. The no. 4 wheels have a diameter equal to 200 mm, are pivotal and fitted with a hinge that places the centre of the wheel in axis with the upright of the tower at the time of engagement of the brake. This means that it can only be released with an intentional action.

2.4.12 Tower

The tower, in aluminium tubes, is modular. Each module, of height equal to 1.80 m, consists of no. 2 side bearing side frames, no. 2 horizontal braces and no. 2 bracing diagonals. The side frames consist of no. 2 uprights and no. 6 cross-members with a distance of 300 mm from each other and each designed to support the work platform as well as having the function of vertical ladder for access to that floor. The crosspieces have a non-slip surface.
The couplings between the various components of the tower are secured by snap locking hooks at the ends of the horizontal braces and of the bracing diagonals, constituting a mechanical lock, and can only be removed with a voluntary action.

2.4.13 Work platform

Every work platform consists of no. 1 or 2 aluminium tube frames with overlaid panels coated in non-slip phenolic resin, one of which forms an access trapdoor. On all sides there are toe boards with useful height equal to 150 mm that, suitably inserted between the floor and the first rung of the bearing side frame, ensure locking to the tower, preventing any type of unintended removal.
The side protection consists of no. 2 aluminium tube frames that guarantee both the upper and the intermediate protection. They are connected to the frames in order to prevent accidental removal.

2.4.14 Stabilizers

The stabilizers consist of 2 aluminium tubes of d. 50 mm, hinged in such a way as to allow the two positions of bracket closed and bracket open. In the closed position the two elements are arranged side by side and aligned in such a way as to reduce bulk during transportation. To switch to open bracket simply loosen the eye bolt to widen the short element joint.
The stabilizers, to be used as indicated in section 2.3.3, are fixed to the no. 4 uprights of the tower to increase the actual sizes of the base and must be mounted when the height of the working floor exceeds 1.70 m. The joints guarantee adjustment to ensure contact with the ground, have adequate strength and are such that the reaction loads are transferred to the tower without slippage or rotation.

3. ASSEMBLY AND DISMANTLING

3.1 General information

a) For assembly and dismantling of the bridges on mobile access towers at least no. 2 persons are required and they must be familiar with the installation and use instructions;
b) According to the height that must be reached, select installation of one of the configurations shown on p. 10 for the "Alutower 140" towers and on p. 20 for the "Alutower 87" towers. The list, the weight and the quantities of the elements necessary for assembly are listed on pages 7, 8, 11, 14 for the "Alutower 140" towers and on pages 17 and 18 for the "Alutower 87" towers.
c) damaged components must not be used;
d) only original components must be used as indicated by the manufacturer.

3.2 Sub-tower

It is present only in the Italian decree D.Lgs. 81/08

3.3 Preliminary checks

a) The surface on which the tower is mounted and then moved (if necessary) must be able to bear the full weight, must be perfectly levelled and be able to ensure load distribution, perhaps making use of planks or other equivalent means;
b) the absence of any kind of obstacle must be ensured;
c) the assembly operations can only start in the absence of wind;
d) it must be checked that all the elements, accessory tools and safety equipment for mounting of the tower scaffolding are available on site;
e) The verticality of the mobile towers must be checked with a spirit level or pendulum.
f) carefully check the condition of the welds and pipes, replacing any damaged elements with others that are intact and original.

3.4 Instructions for assembly of the tower

Carry out the checks referred to in section 3.3 then assemble the base section:

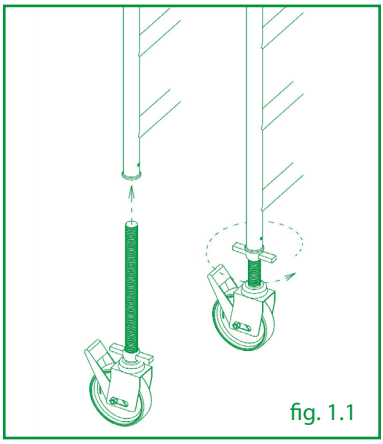


fig. 1.1

Insert the no. 4 wheels in the vertical uprights of the frames;

level the no. 2 frames of the base by acting on the adjusting screw of the wheel;

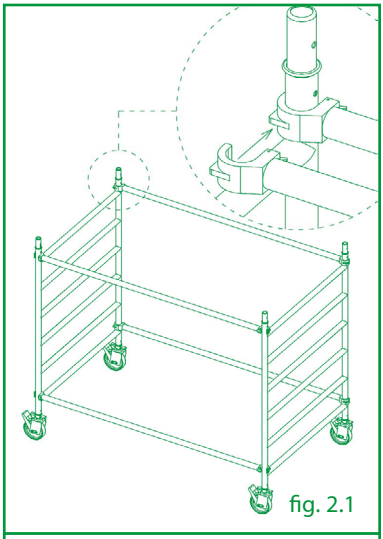


fig. 2.1

Attach no. 2 horizontal braces on the same upright of one of the two frames, respectively above the first and the last rung turning the open part of the hook towards the outside of the tower; align the other frame and connect them together. Repeat the operation from the opposite side;

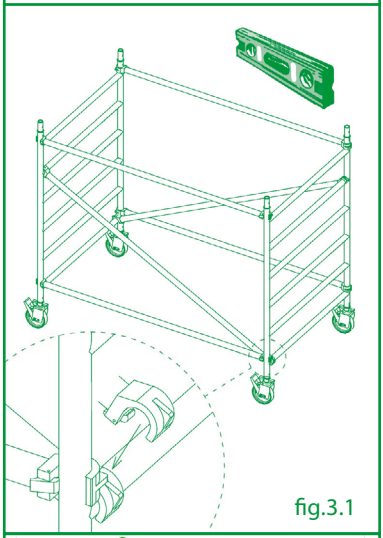


fig.3.1

Attach the no. 2 bracing diagonals to complete the base upright; the lower end of the diagonals must be placed on the first rung of the base frames with the hook facing downwards; place the diagonals in a position opposite to one another;

Level the base upright by acting on the adjusting screw of the wheels; after levelling tighten the relevant screws of the regulator and insert the brakes;

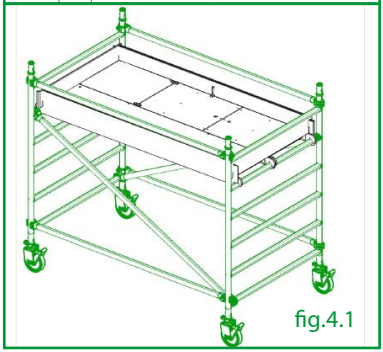


fig.4.1

Place the flat elements of the work platform on the fifth rung from the bottom of the first two side frames;

First position the no. 2 long toe boards parallel to the walkable floor, then the no. 2 short toe boards, inserting them in the respective slots in the long boards;

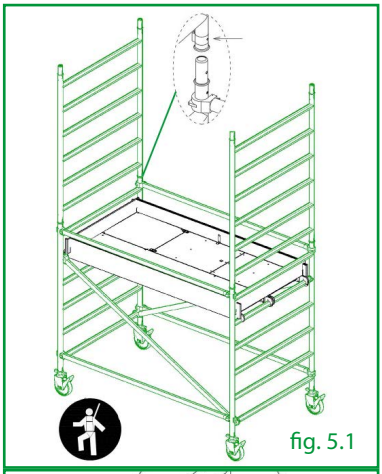


fig. 5.1

At this point at least one of the operators assigned to installation must wear the safety belt and climb onto the work platform from the inside of the tower through the relevant trapdoor;

After securing the rope end of the safety belt to a stable point, place the additional no. 2 side frames in continuation of the lower ones, taking care to insert the spring pins in the slots made on the sleeves and check their tightness;

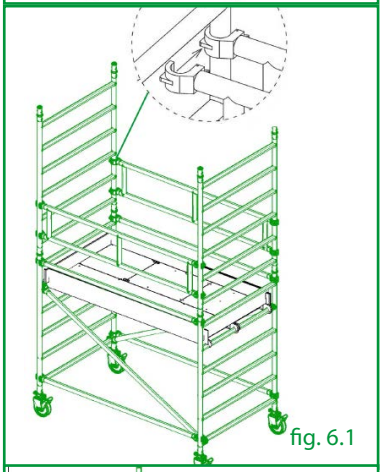


fig. 6.1

Position the no. 2 guardrail frames, positioning them with the lower element above the second rung from the work platform, fixing the locking hooks of the ends to the vertical upright of the frames, turning the open part of the hook towards the outside of the tower;

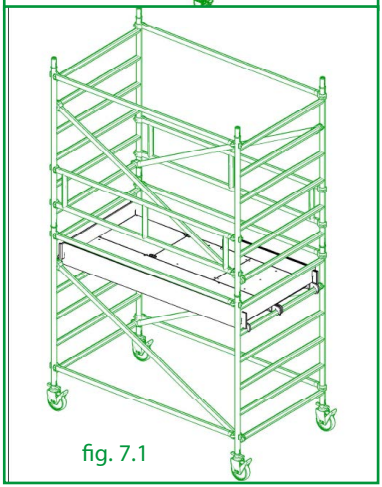


fig. 7.1

Position the no. 2 bracing diagonals, one per part, with the lower part attached to the last rung of the base side frame, as close as possible to the upright of the frame;

Place no. 2 elements below the last rung of the frames mounted as per section i), again turning the open part of the hook towards the outside of the tower.

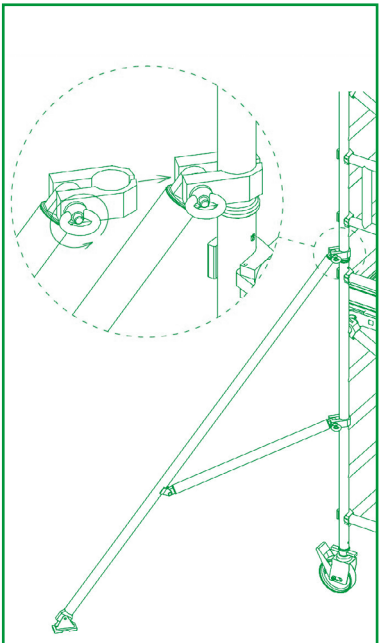


fig. 8.1

If the mobile access tower under construction needs the work platform placed at a height greater than 1.70 m it is necessary at this point to fit the no. 4 stabilizers;

Place the stabilizers in the open position as indicated in 2.4.8, position the bracket with an inclination of approx. 120° with respect to the long side of the tower, compatibly with the surrounding space, attach the two joints on the vertical upright of the frame, making sure that it adheres well to the ground and tighten the corresponding nuts-eyebolts. Repeat the operations with the same sequence for the other three uprights of the tower;

Having positioned the stabilizers, the operator will be able to continue the operations of assembly of the tower by following the same operations procedure;

As the tower assembly operations proceed, be careful to place the work platforming in such a position as to guarantee the operator present at height agile and safe movements;

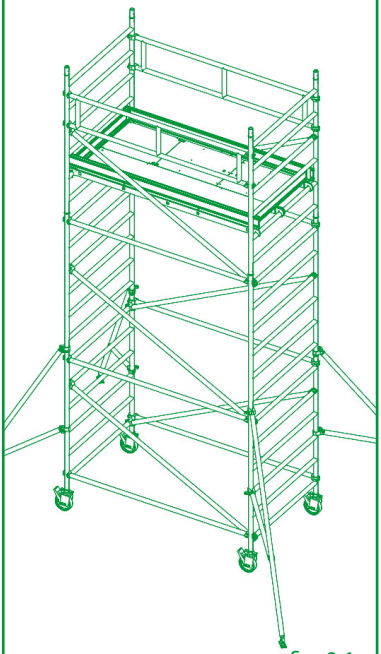


fig. 9.1

Having completed assembly of the tower the work platforms must be positioned according to the indications in section 2.3.3, at the desired heights, inclusive of toe boards plus the side guards;

During assembly, for lifting of the components of the upper sections, it is appropriate to make use of cables of adequate dimensions, taking care never to raise more than one component at a time;

Where access to the work platforms must take place via inclined ladders or step ladders, the latter, being equipped with no. 2 hooks at the upper end, must be secured to the rung on which the work platform rests, close to the access trapdoor.

3.5 Instructions for assembly of the continuous alternate ramp ladder

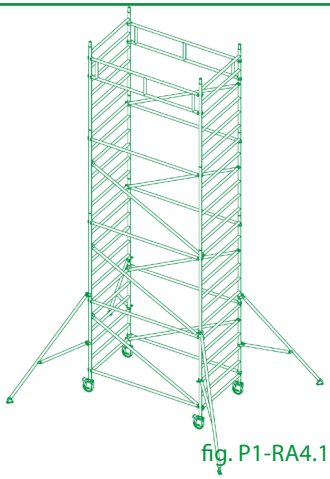


fig. P1-RA4.1

After establishing the configuration to be set up, assemble the tower following the indications referred to in section 3.4;

Standing on the top work platform necessary to assemble the tower, that always falls on the penultimate rung of the side frame, apply no. 2 guardrail frames, one per side, with the lower rung above the 4th rung of the last frame;

Remove all the floors and relative railings present on the tower used for mounting of the same, carrying out the necessary operations in the reverse order of those indicated in section 3.4 for assembly;

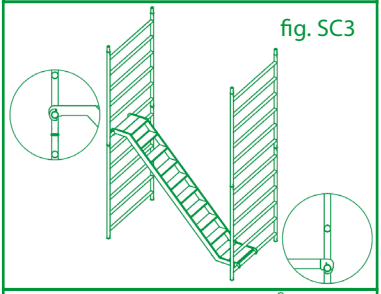


fig. SC3

Take a ladder ramp without handrail from the inside of the tower and place it in an approximate vertical position supporting the upper hooks on the first rung of the second side frame from the ground. Ensure the position is correct so that the last ramp is aligned with the double trapdoor of the end work platform; place the lower hooks on the first rung of the first lateral frame from the ground, ensuring that the anti-lift devices are in the correct position;

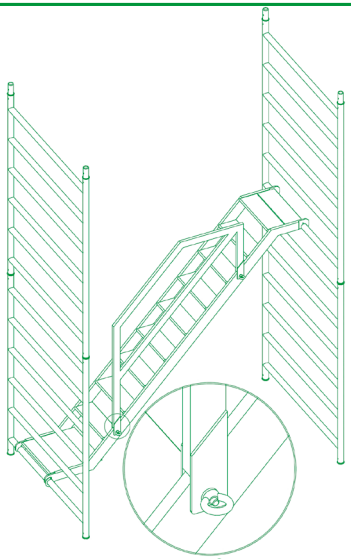


fig. P3-RA4.1

Install the inner railing, placing it in such a way that the holes on its uprights line up with those made on the stringer of the ladder and attach with the no. 2 screws fitted with nuts and eyebolts;

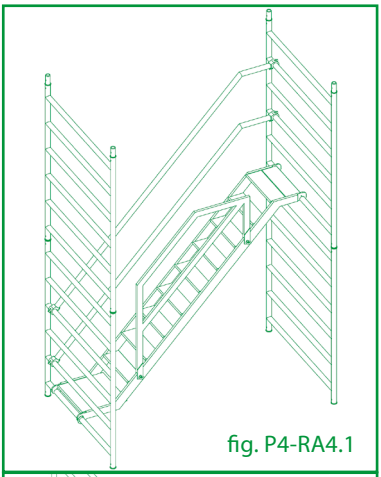


fig. P4-RA4.1

Install the no. 2 rods that constitute the outer railing, anchoring them to the tower, in a position that is approximately parallel to the ladder, with the lower ends respectively on the 1st and 3rd rung from the lower landing of the ladder and the upper ends respectively on the 2nd and 4th rung from the upper landing of the ladder;

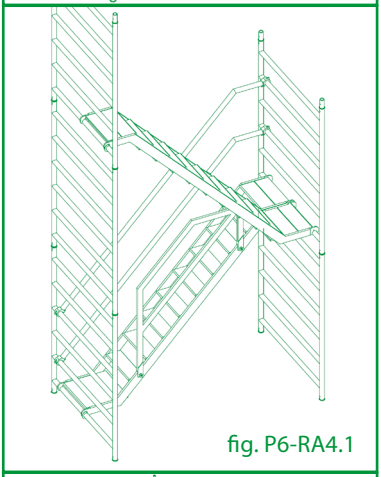


fig. P6-RA4.1

Take a second ladder ramp without handrail, from the inside of the tower, standing on the first landing of the already assembled ramp and place it in an approximate vertical position supporting the upper hooks on the first rung of the third side frame from the ground. Grasp the rail from the bottom and, climbing on the previously assembled ladder, rotate it until its lower hooks are on the first rung of the second side frame from the ground so that the upper landing of the first ramp and the lower landing of the second ramp are adjacent on the same floor;

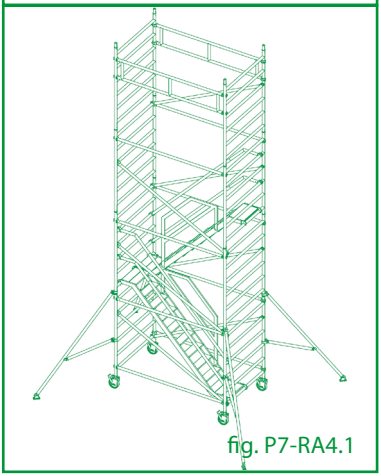


fig. P7-RA4.1

Standing not higher than the fourth step of the first ramp, install the inner guardrail of the second ramp, placing it in such a way that the holes on its uprights correspond with those made on the stringer of the ladder and attach with the no. 2 screws fitted with nuts and eyebolts;

Repeat the operations until complete assembly of the inner ladder.

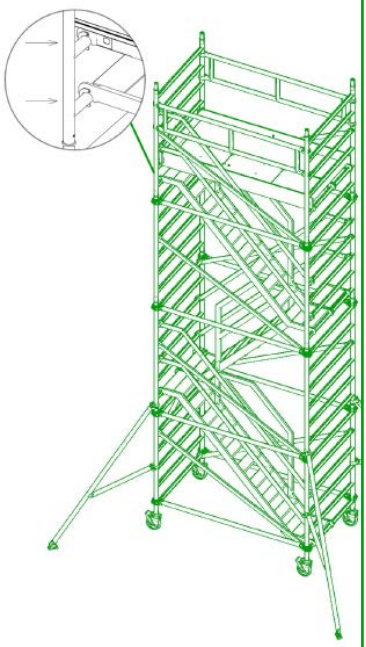


fig. P8-RA4.1

Position the final work platform on the 1st rung starting from the upper landing of the last ladder, in such a way that the double trapdoor is located close to the ascent of the latter.

3.6 Instructions for mounting of the ramp ladder interrupted by work platform

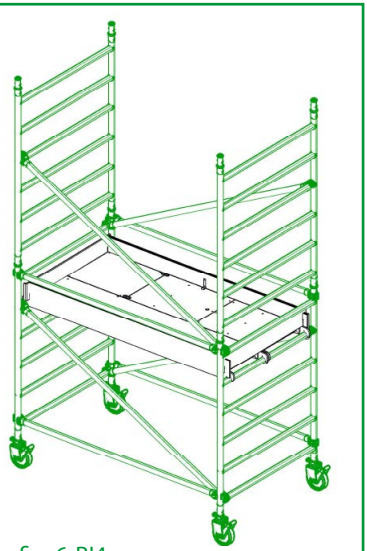


fig. 6-RI4

After establishing the configuration to be set up, fit the base module of the tower by following the instructions in section 3.4;

Standing on the previously installed work platform, position the no. 2 bracing diagonals, one per side, with the lower part attached to the last rung of the base side frame;

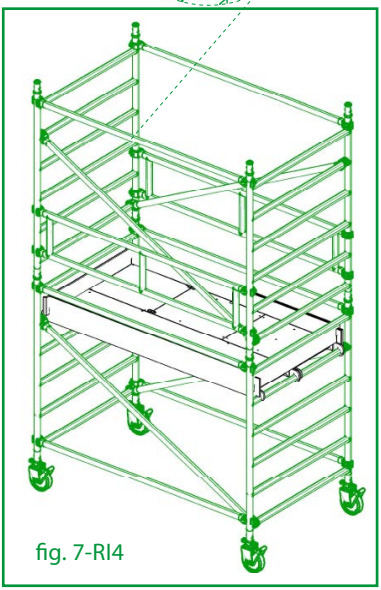


fig. 7-RI4

Place no. 1 guardrail frame, positioning it with the lower element above the third rung of the second side frame, in the position opposite to the landing of the inner ladder; place the horizontal brace from the opposite side on the uprights of the frames above the fifth crosspiece;

Descend to the ground, dismantle the work platform;

Take a ladder ramp without handrail from the inside of the tower and place it in an approximate vertical position supporting the upper hooks on the first rung of the second side frame from the ground. Ensure the position is correct so that the last ramp is aligned with the double trapdoor of the end work platform; place the lower hooks on the first rung of the first lateral frame from the ground, ensuring that the anti-lift devices are in the correct position;

Assemble the stabilizers by opening them as shown in fig. 8.1, position the bracket with an inclination of approx. 120° with respect to the long side of the tower, compatible with the surrounding sizes, fix the two joints on the vertical upright of the frame, making sure it adheres well to the ground and tighten the corresponding nuts-eyebolts. Repeat the operations with the same sequence for the other three tower uprights;

Install the no. 2 rods that constitute the outer railing, in a position that is approximately parallel to the ladder, with the lower ends respectively on the 1st and 3rd rung from the lower landing of the ladder and the upper ends respectively on the 2nd and 4th rung from the upper landing of the ladder;

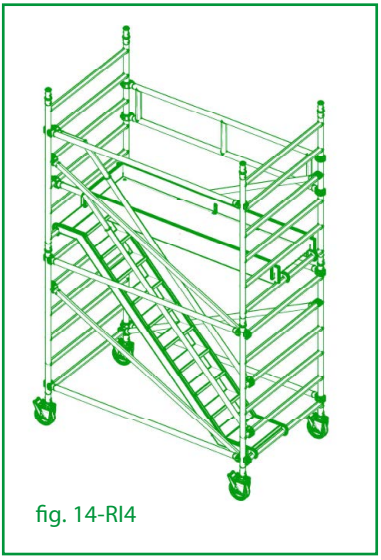


fig. 14-RI4

Place a semi-floor without trapdoor on the 2nd of the 2nd side frame, complete with the toe boards, first positioning the no. 2 long toe boards parallel to the walkable floor, taking care to keep the stamped sheet metal hooks located at their ends facing the inside, then the no. 2 short toe boards, inserting them in the respective slots in the long boards;

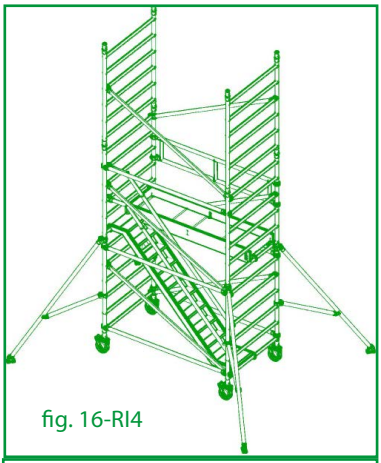


fig. 16-RI4

Climb onto the semi-floor, position an additional no.2 side frames in continuation of the lower ones and no.2 bracing diagonals from the last rung of the 2nd side frame;

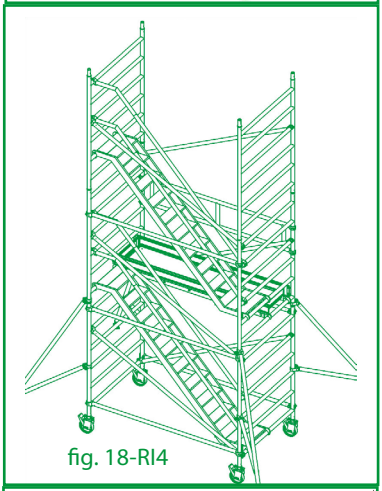


fig. 18-RI4

Take a 2nd ladder ramp and no.2 handrails, place them from the inside of the tower according to the diagram;

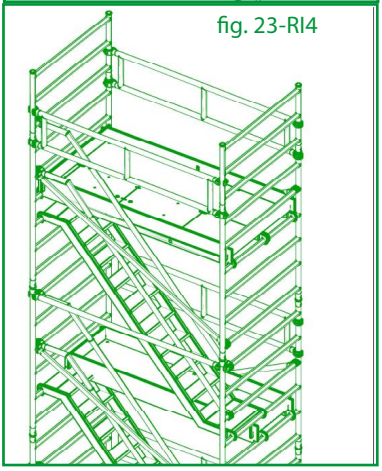


fig. 23-RI4

Continue mounting according to this sequence, always ensuring placing first the railings or horizontal braces in positions that provide a safe lateral protection to the floors which are mounted from time to time so that they always have a higher protection at a minimum distance of 0.95 m from the walkable floor and other intermediate floors such as to reduce the gap between them to a maximum of 460 mm;

Having reached the top end, after correctly positioning the last two railings, according to the instructions in the previous section k), lay, on the rung immediately above the one on which the last ladder ramp sits, a semi-floor with double trapdoor, then mount the toe board.

3.7 Dismantling towers

a) Dismantling of the towers must be performed by carrying out the necessary operations in reverse order to those carried out for assembly;

b) The constituent elements of the towers must be lowered from above via cables or by other suitable means in any case avoiding abrupt impact with the ground.

4. STABILITY

a) The mobile access towers must only be mounted and used in the absence of wind;

b) The stabilising brackets must be mounted, depending on the configuration and the height to be reached.

c) The maximum horizontal load applicable, for example according to the work being carried out on an adjacent structure, is 25 kg, which is the sum of the loads applied by the various operators on the scaffold;

d) Mobile towers left unattended for reasons of temporary suspension of work or due to the presence of wind must be firmly anchored to a stable fixed structure;

e) No additional superstructures should be added to the top of the tower and no shields of any kind, such as timber-frame, tarpaulins, or any other should be mounted.

5. USE

5.1 Preliminary checks

a) Verify that the mobile access tower has been mounted vertically, following compliantly and completely the manufacturer's instructions to ensure professional execution;

b) Make sure that no environmental modification can affect the safety of use of the mobile tower (frost, rain, wind, etc.).

5.2 Use

a) It is not permitted to increase the height of scaffolds using ladders, crates or other devices;

b) it is mandatory to access the work platform from within the tower, according to one of the envisaged possibilities:

- Vertical ladder, in this case the bearing side frames act as a ladder, having crosspieces with a non-slip surface and placed at a distance such as to fall within the regulatory steps
- Inclined ladder
- Inclined step ladder
- ramp ladder and step ladder for the Alutower 140x240 model, when present;

c) All the work platforms on the tower, positioned according to the instructions given in section 2.3.3, even if used as transit and non-work platforms, must be fitted with side protections and toe boards;

d) Where possible, mobile access towers used on the outside of buildings must be securely attached to the building or to another structure;

e) The lifting of tools and materials to the work platforms must be carried out from the inside of the tower, from floor to floor, through the access trapdoors, using cables of appropriate manual traction dimensions. When this is not possible, lifting can be carried out from the outside of the tower, always using cables with appropriate manual traction dimensions, for loads not exceeding 50 Kg and raised in a direction that is vertical and parallel to the tower and at a distance away from it that remains within the area occupied by the stabilising brackets;

f) it is not permitted to support and use lifting devices;

g) it is forbidden to jump on the work platforms;

h) Tower connections between an access tower and a building are not permitted;

i) Mobile towers are not designed to be lifted and suspended (e.g. via a site crane).

6. PROCEDURES FOR MOVEMENT

a) Mobile access towers can only be moved manually, on compact, smooth surfaces, without obstacles, that are perfectly level and in the absence of wind;

b) Before moving, reduce the total height of the tower to a maximum of 7.00 m, raise the stabilizers from the ground to a height not exceeding 20 mm and release the wheel brake;

c) The normal travel speed must not be exceeded during the movement;

d) No materials or persons are permitted on the tower during movement;

e) It is forbidden to approach power lines at a distance of less than 5.00 m;

f) After movement, apply the brakes on the 4 wheels, and level the tower again. Move the stabilizers down to ensure perfect adhesion to the ground.

7. VERIFICATION, CARE AND MAINTENANCE

a) Before assembly remove any deposits of mortar, cement, paint, etc. possibly present on the various components;

b) Always keep lubricated the clamping and adjusting screws present and the pins and sleeves of the various fittings;

c) Check the perfect condition of the components before each assembly, with particular attention to welds and tubes; replace those that are deteriorated or damaged with others of the same type, absolutely original, as indicated by the manufacturer;

d) In handling, transportation and storage, be careful not to subject any of the elements constituting the tower to loads that could generate permanent deformations, thus avoiding disordered stacking and stacking together of materials of a different nature;

e) Every six months carry out complete servicing of the equipment; the service, the results of which should be recorded in the appropriate table on p. 38 of this Manual, must include the following steps:

- Numerical verification of components;
- Cleaning of all components, with removal of any deposits present;

- Thorough inspection of the conservation status of all components in order to be able to assess the suitability for use both from a functional and a resistance point of view, with particular attention to the presence of oxidised zones;
- Careful checking of the welds, discarding the elements in which cracks or causes of breakages are noted that could compromise the integrity of the element itself;
- Lubrication of the clamping and adjustment screws present and of the pins and sleeves of the various fittings;
- Checking of the efficiency of the base wheels and of the respective braking systems;
- Checking of the integrity of the work platforms, railings and toe boards;
- Checking of the state of conservation of the Instruction Manual;
- Checking of the integrity of stickers with markings.

INSTRUCTIONS FOR USE AND MAINTENANCE

MOBILE ACCESS TOWER

Legislative Decree 09.04.2008 no. 81

MARCHETTI

www.marchetti.eu

100% MADE IN ITALY

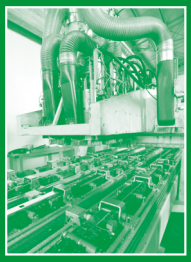
- Alutower 140x240
- Alutower 140x180
- Alutower 87x240
- Alutower 87x180

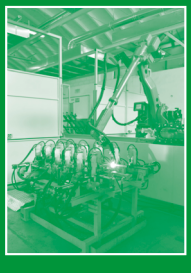
New design

This Instruction Manual must be consulted in conjunction with the EN 1298-IM-itxen Instruction Manual for the same scaffolding, used according to the Technical Standard EN 1004, which forms an integral and substantial part of it.
The mobile access tower must only be used for work of finishing, maintenance or similar. This Instruction Manual contains important information regarding the use, maintenance and safety of mobile access towers; the operator must have complete knowledge thereof before use. Strictly complying with this manual means operating in accordance with the provisions of existing legislation on health and safety at work Legislative Decree 09.04.2008 no. 81.

1. REGULATORY REFERENCES

- Legislative Decree 09.04.2008 no. 81 (O.J. no. 101 dated 30.04.08) "Consolidated Act on Occupational Health and Safety".
- EN 1298 (February 1996) "mobile towers. Rules and guidelines for preparation of an instruction manual";
- Legislative Decree 06.09.2005 no. 206 (O.J.. no. 235 dated 08.10.05 - Ordinary Supplement no. 162) "Consumer Code".





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100% MADE IN ITALY

DECLARATION OF CONFORMITY

MARCHETTI s.r.l.

with headquarter in Città della Pieve (Pg), Via Piemonte, 22:

DECLARES

That the mobile access towers named:

Alutower 140x240 – Alutower 140x180

Alutower 87x240 – Alutower 87x180

were manufactured in accordance with Legislative Decree no. 09.04.2008 no. 81

- That on all the models produced is reported the identification marking, accompanied by an Instruction Manual.

GUARANTEE 100% SATISFACTION

MARCHETTI s.r.l.
R.Marchetti

3. GENERAL INFORMATION

3.1 Differences between Legislative Decree 09.04.2008 no. 81 and EN 1004

The "Alutower" series mobile access towers were constructed in compliance both with Legislative Decree 81/08 and with the Technical Standard EN 1004; the differences are in the possibilities of use:

- In the case of use according to EN 1004 (see the attached Instruction Manual) in the no. 2 towers of the "Alutower 140" series there can be a maximum working height of 8.00 m on the outside of buildings and 11.60 m inside buildings, while in the no. 2 towers of the "Alutower 87" series there can be a maximum working height equal to 7.10 outside buildings and 11.60 m inside buildings. All of them must be mounted strictly respecting one of the standard configurations specified in the Instruction Manual. It is mandatory to use the stabilizers for work height heights above those indicated in the Manual. It is recommended (not mandatory) to anchor to a stable fixed structure.

- For use according to Legislative Decree 09.04.2008 no. 81 see the following configuration Table:

Configuration Table according to Legislative Decree 81/08

Scaffolding Legislative Decree 81/08	H max tower m	H max floor m	Upright N	N. Min. floors	N. brackets H>7 m	Anch. to wall
Alutower 140x240	17,30	16,10	9	1	4	every 2 uprights
Alutower 140x180	15,50	14,30	7	1	4	every 2 uprights
Alutower 87x240	13,70	12,50	6	1	4	every 2 uprights
Alutower 87x180	13,00	11,60	5	1	4	every 2 uprights

All towers comply with Legislative Decree 81/08, but not with EN 1004. They must be anchored to a stable fixed structure every no. 2 uprights. They can also have a single work platform mounted, of course complete with toe boards and railings. For the purposes of Legislative Decree 81/08 the railings may also consist of the horizontal brace. If horizontal braces are used as a railing, care must be taken to mount the work platforms in such positions as to have the tower horizontal braces at a minimum vertical distance of 1.00 meters from the walkable floor and to place another element at an intermediate position between the upper element and the toe board. The stabilising brackets must be considered component elements of the base section, indispensable for access towers mounted at heights greater than 7.00. They must always be present on such towers both during use and during movement and must be placed vertically at approx. 10 mm from the ground.

3.2 Access to work platforms

It is compulsory to access the work platforms from the inside of the tower. The crosspieces of the bearing side frames constitute the access ladder. Persons using the mobile access tower must make use of a fall-arrest device connected to a safety belt that limits free fall to no more than 0.70 m. That device must slide along a rope fastened at the top to the last rung of the last bearing side frame and below the first rung of the base frame. The fall-arrest device, safely belt and retention cable must be of the approved type.

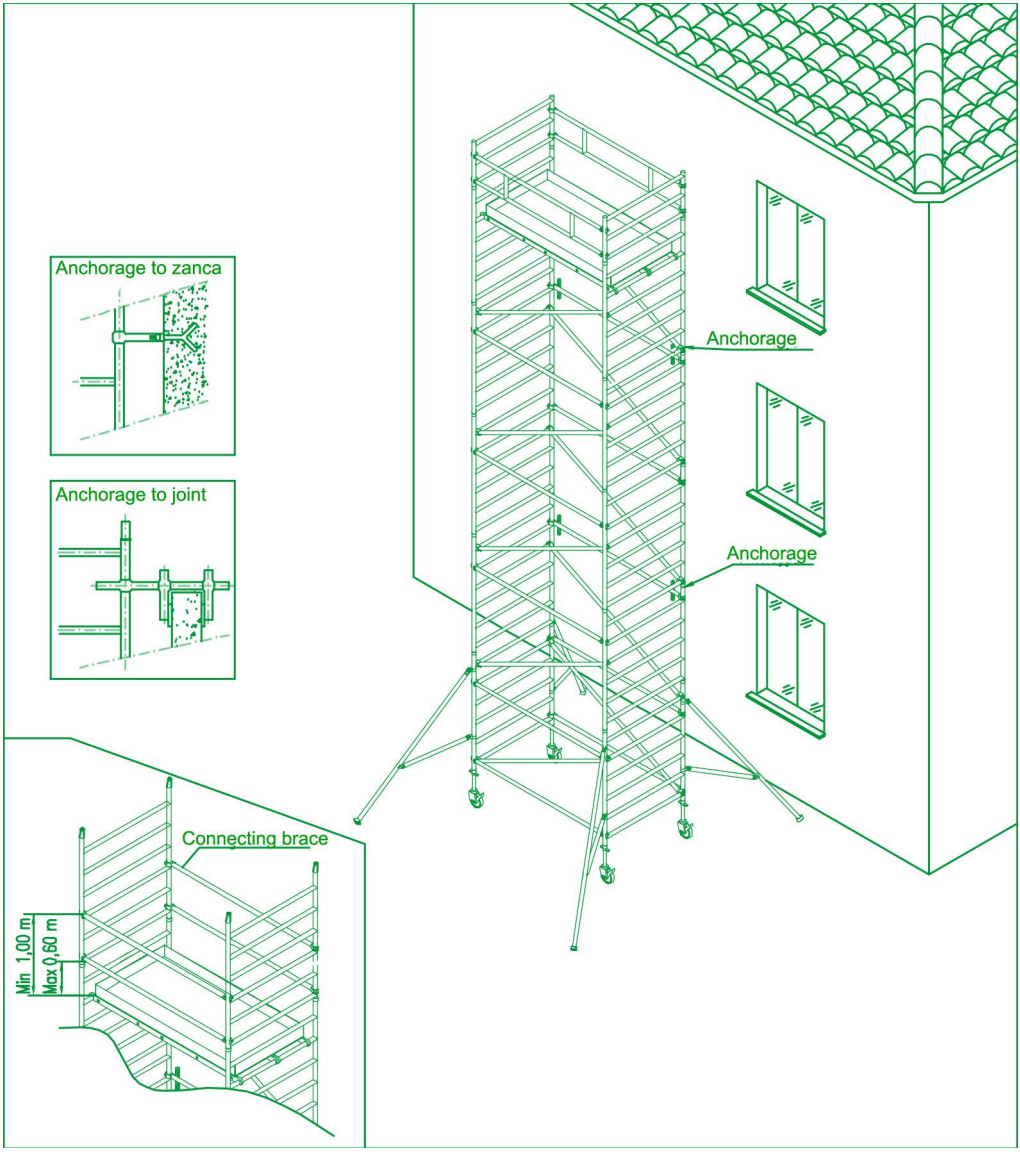
For access to floors via inclined ladders, the description in the annexed EN 1298 IM-itxen Instruction Manual is valid.

4. Completing information

For further information and more precisely:

capacities / number of floors simultaneously loaded / sub-tower / wind limitations / component identification / assembly and dismantling / stability / use / verification / care and maintenance, the description in the annexed EN 1298 IM-itxen Instruction Manual is valid with the various limitations described in the preceding points 3.1 - 3.2 and 4.

Design of "Alutower" towers with anchors



CHECK LIST

Mobile access tower Mod.

Service of

A) Verify that the mobile tower is vertical or requires repositioning

B) Verify that the structural assembly is always correct and complete

C) Verify that no environmental changes affect the safe use of the mobile tower

- ☐ Numerical verification of components
- ☐ Cleaning of components
- ☐ Integrity of components
- ☐ Absence of oxidised areas
- ☐ Integrity of welding
- ☐ Lubrication of tightening screws
- ☐ Lubrication of pins and sleeves
- ☐ Efficiency of wheels and braking devices
- ☐ Integrity of work platforms
- ☐ Integrity of railings
- ☐ Integrity of toe boards
- ☐ Integrity of Instruction Manual
- ☐ Integrity of stickers with identification markings

Faults detected

Discarded elements to be replaced

Health and Safety Manager
(Signature)

CHECK LIST

Mobile access tower Mod.

Service of

A) Verify that the mobile tower is vertical or requires repositioning

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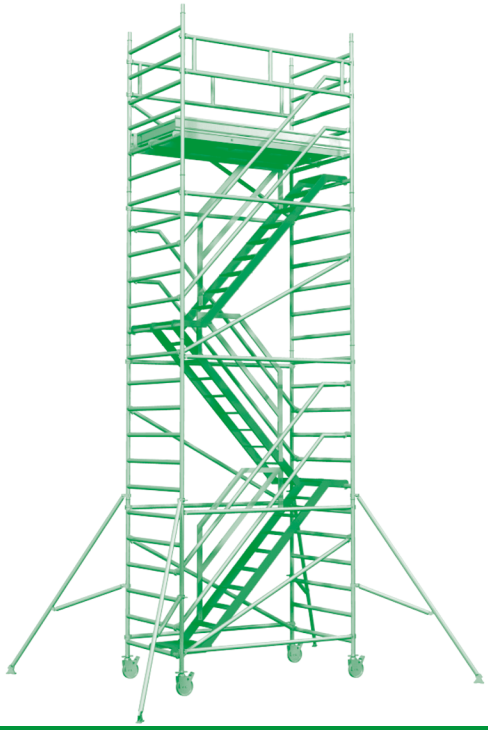

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