European standard EN 1004

MARCHETTI

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100% MADE IN ITALY

MOBILE ACCESS TOWER

SMART TOWER

Instructions for use
and maintenance

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

DOC. CUSTOMER ASSISTANCE
N. 136 REV. 0 DEL 23/04/2018

Code 11211

Instructions Manual EN 1298 – IM – it x en

Mobile access towers must only be used for finishing, maintenance and similar works. This instructions manual contains important instructions on use, maintenance and safety of the mobile access tower; the operator must be completely aware of them before use. Strictly complying with this manual means working in compliance with the provisions of the current standard on health and safety in the workplace Leg. Decree. 09.04.2008 no. 81.

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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. REFERENCE STANDARDS

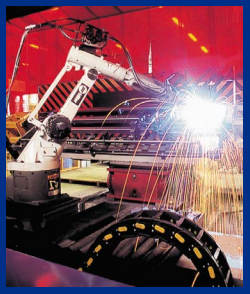
- Leg. Decree 09.04.2008 no. 81 (O.G. no. 101 dated 30.04.08) "Consolidating act on health and safety in the workplace".
- EN 1004 (July 2005) "Mobile access and working towers) composed of prefabricated elements. Materials, dimensions, design loads, safety and performance requirements";
- EN 1298 (February 1996) "Mobile access towers. Regulations and guidelines for preparation of an instructions manual";
- Leg. Decree 06.09.2005 no. 206 (O.G. no. 235 on 08.10.05 – Ordinary Supplement no. 162) "Consumers' Code".

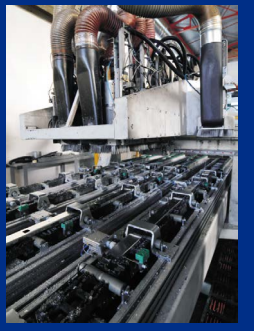
2. DESIGNATION, CLASS, CAPACITY

SMART TOWER mobile access tower EN 1004 – 3 – 5 / 5 XXCD
manufactured in compliance with Leg. Decree 81/08 and Technical Standard EN 1004;
Class of loads distributed uniformly equal to "3" (2.0 KN/m2);

- Maximum height permitted of the work platform equal to 5,50 metres both outside and inside buildings. Inside is intended as without wind.
- The overall load permitted for each tower is therefore 200 kg.
- The maximum number of surfaces loaded at the same time is 2.
- The sum of the loads relating to each surface must not exceed the overall value of the load permitted for the scaffolding.

3. DECLARATION OF CONFORMITY





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DECLARATION OF CONFORMITY

MARCHETTI s.r.l.

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

DECLARES

- that the mobile tower SMART TOWER was manufactured in compliance with Leg. Decree 09.04.2008 no. 81 and in particular the Technical Standard EN 1004 (July 2005)
- that it is manufactured in compliance with the prototype which has surpassed rigidity testing, pursuant to Appendix "A" of the Technical Standard EN 1004 (2005) and that it was subject, with a positive outcome, with the ASSESSMENT as outlined in point 13 of the Technical Standard EN 1004 (2005) at the:

  UNIVERSITY OF PERUGIA Certificate no. Marc 141

- the identification marking is outlined on all specimens of the products and on the Instructions Manual drafted according to specifications in Technical Specification EN1298 (point 9 of the Technical Standard EN 1004).

100% GUARANTEED SATISFACTION

MARCHETTI s.r.l.

4. GENERAL INFORMATION

4.1 Access to work platform

Access to the work platform can only take place inside the tower using one of the following methods:

- vertical rung ladder, composed of beams on the side frames of the structure
- inclined rung ladder, internal
- inclined step ladder, internal.

4.2 Maximum heights of the configuration EN 1004

The maximum height of the work platform without using the stabiliser braces is 1.90 metres (maximum tower height 3,25 metres).

The maximum height of the work platform using the stabiliser braces is 5,50 metres both inside and outside buildings.

The minimum open height between the work platform is 1.90 metres.

The maximum vertical distance between the work platform is 4.20 metres.

The maximum vertical distance between the floor and the first level is 4.60 metres.

5. IDENTIFICATION

EN 1004 - Class "3" (2.00 KN/m^2)

Overall permitted load 200 kg

Maximum number of surfaces loaded simultaneously

Table of elements composing the configurations A1 - A2 - A3 - A4

	Code	Component Elements	Weight	CONFIGURATIONS			
			Kg	A1	A2	A3	A4
	21386	Smart più	28,00				
1	33815	Foldable base	17,00	1	1	1	1
2	21936	Horizontal brace	4,50	0	1	1	1
3	33831	Work platform	10,5	0	0	0	0
	21387	Tower	9,00				
4	33835	Frame	4,50	0	2	4	6
5	21936	Horizontal brace	4,00	0	2	4	4
	21388	Work platform with toeboards	17,5				
6	33831	Work platform	10,5	1	1	1	2
7	11182	Long toeboards -166	3,00	2	2	2	4
8	11051	Short toeboards-75	0,50	2	2	2	4
	20998	Stabilizers kit	16,00				
9	20807	Stabilizers	4,00	0	4	4	4

To create configurations with final tower H=0.85 m (A2T-A3T-A4T)

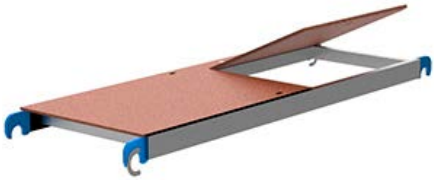
simply add the following elements

	Code	Component Elements	Weight	CONFIGURATIONS		
			Kg	A2T	A3T	A4T
	21393	Terminal tower	3,00	1	1	1
10		Final frame	1,50	2	2	2
11		Horizontal brace	4,00	2	2	2

"SMART TOWER" TOWER DESIGN

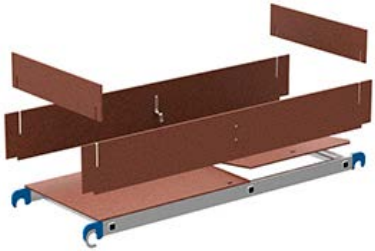
21393 FINAL TOWER

21936 HORIZONTAL BRACE



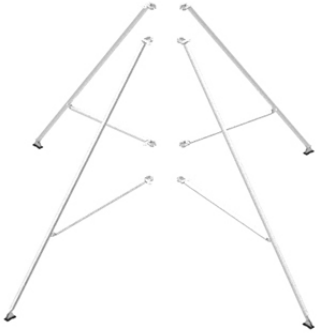
33831 WORK PLATFORM

21387 TOWER



21388 WORK PLATFORM WITH TOEBOARDS

33815 FOLDABLE BASE



20998 STABILIZERS

CONFIGURATIONS EN 1004

Smart Più
H Tower = 1,75 m
H Work = 1,00 m

A1
H Tower = 1,75 m
H Work = 1,00 m

A2
H Tower = 3,25 m
H Work = 1,90 m

A2T
H Tower = 3,66 m
H Work = 2,50 m

A3
H Tower = 4,75 m
H Work = 3,40 m

A3T
H Tower = 5,16 m
H Work = 4,00 m

A4
H Tower= 6,25 m
H Work = 4,90 m

A4T
H Tower = 6,66 m
H Work = 5,50 m

6. ASSEMBLY AND DISMANTLING

6.1 General information

a) For assembly and dismantling of the mobile access towers, at least 2 people are necessary and it is indispensable they are familiar with the assembly and use instructions;

b) Based on the height which must be reached, choose to set up one of the configurations outlined on page 9. The list, the weight and quantity of the elements necessary for assembly are outlined on page 7.

c) No damaged components must be used;

d) Only original parts must be used as indicated by the manufacturer.

6.2 Preliminary tests

a) The surfaces on which the tower is assembled and subsequently moved (if necessary) must be capable of supporting the weight, it must be perfectly level and guarantee distribution of the load, perhaps using planks or other equivalent devices;

b) Absence must be ensured of obstacles;

c) The assembly operations can only start in the absence of wind;

d) All the elements must be checked, accessory tools and safety equipment to assemble the tower are available on site;

e) The verticality of the mobile towers must be checked with the level supplied.

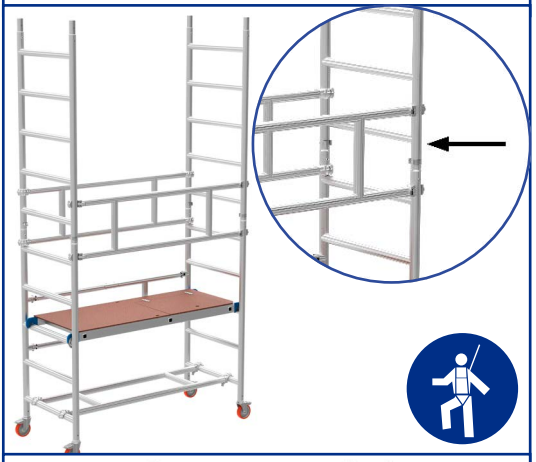
6.3 Assembly instructions

Having conducted the checks on par. 6.2, proceed to assemble the base section:

A) Open completely the foldable base.

B) Place the work platform at the desired height.

C) Insert one of the connecting brace, by joining the first rung of the two base bearing frames.



D) Place the two bearing frames, taking care to insert the spring pins and verify the correct hooking.

E) Hook the two connecting brace at the union between the frames.

F) Place the work platform at the desired height. N.B If the tower must be erected to a work platform height above m 2,00, one of the workers authorised to assemble the tower, must put on a safety belt and climb onto the work platform from the inside of the tower through the trapdoor.

G) Position the two frames of the guardrail, placing with the lower brace above the second beam from the work platform (approximately m 1,00) and fix the locking hooks to the vertical upright of the bearing frames.

H) Position the 2 long toeboards parallel to the work platform. Make sure plate hooks on the ends of the toeboards face inwards; now fit the 2 short toeboards into the respective housings found in the long boards.

I) If the SMART TOWER must be erected to a work platform height above m 1,99, the 4 stabilizers must be fitted.

L) Position the stabilizers with an angle of about 120° in relation to the tower's longer side. Make sure the stabilizer adhere well to the ground. Repeat the same sequence of operation for the other three stabilizers.

M) Once the tower has been assembled, fit the work platforms, toeboards and lateral protections at the desired heights. During assembly, to raise the components fot the upper section, it's advisable to use ropes or cables rated for the application, taking care never to pass up more than one component at a time. If access to the work platform is to be gained by inclined rung or step ladders, these must be attached with the two hooks at the top end to the cross piece on which the work platform.

6.4 Dismantling instructions

Dismantling of the towers must take place by executing the necessary operations in the inverse order to those for assembly; the elements composing the towers must be lowered from above using ropes or other suitable devices, avoiding sudden impact with the ground.

7. STABILITY

a) The mobile access towers must be assembled and used only in the absence of wind;
b) The stabiliser braces must always be applied, based on the configuration and the height to reach, as indicated;
c) The maximum applicable horizontal load, for example by effect of the work in progress on an adjacent structure, is 25 kg, intended as the total of the loads applied by various operators on the scaffolding;
d) Mobile access towers left unsupervised due to temporary suspension of works or due to the presence of wind, must be firmly fastened to a fixed, stable structure;
e) No additional structures must be added at the top of the tower and no screens of any nature, such as timber frames, coverings or otherwise, should be mounted.

8. USE

8.1 Preliminary controls

a) Check the mobile access tower was assembled in a vertical position, regularly and completely following the supplier's instructions to guarantee state of the the art implementation;
b) Check no environmental changes can influence safe use of the access tower (frost, rain, wind, ...).

8.2 Use

a) It is not permitted to increase the height of the scaffolding using ladders, crates or other devices;
b) It is compulsory to access the working surface from inside the tower, according to one of the three possibilities planned.
c) Where possible, the mobile access towers used outside buildings must be fastened securely to the building or another structure;
d) It is forbidden to approach electrical lines under than 5.00 metres;
e) Lifting the tools and materials up to the working surfaces must be carried out inside the tower, from level to level, through a trapdoor, using adequately sized ropes with manual traction. When this is not possible, lifting can be carried out outside the tower, always using adequately sized manual traction ropes, for loads not over 50 Kg and lifted in a vertical direction parallel to the tower and at a distance from it to remain inside the area used by the stabiliser braces.
f) It is not permitted to rest and use lifting devices;
g) It is forbidden to jump on the scaffolding;
h) It is not permitted to implement tower connections between an access tower and a building;
i) access towers are not designed to be lifted and suspended (e.g. using a building site crane).

8.3 Movement procedure

a) The mobile access towers can only be moved manually, on compact, smooth surfaces free of obstacles, perfectly level and in the absence of wind;

b) Before moving, lift the adjustable feet off the ground, if present, and the stabiliser brackets by a quantity not over 20 mm and release the brake on the wheels;

c) During movement, normal walking speed must not be surpassed;

d) During movement on the tower, no materials or people should be on it;

e) After movement, insert the brakes on the 4 wheels, level the tower again and move the stabiliser braces downwards to guarantee perfect adhesion with the ground.

9. CHECKS, CARE AND MAINTENANCE

a) Eliminate, after a certain number of uses at the operator's discretion, encrustation caused by mortar, cement, paint, etc., possibly on the various parts;
b) Keep the tightening and adjustment screws well lubricated, if present;
c) Before each assembly, check the perfect status of the components, replacing worn or damaged parts with others of the same type and strictly original, according to the manufacturer's instructions;
d) In movement, transport and storage, take care not to subject any of the parts composing the loaded towers which can generate permanent deformations, therefore avoid untidy stacks and stacks of materials with differing characteristics.
e) Every six months, completely service the equipment; the results of such servicing should be recorded in the specific table (Check list)

Legislative Decree
09.04.2008 no. 81

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MOBILE ACCESS TOWER

SMART TOWER

Instructions for use
and maintenance

This Instruction Manual must be consulted in conjunction with the EN 1298-IM-it x en Instruction Manual for the same scaffolding, used according to the Technical Standard EN 1004, which forms an integral and substantial part of it

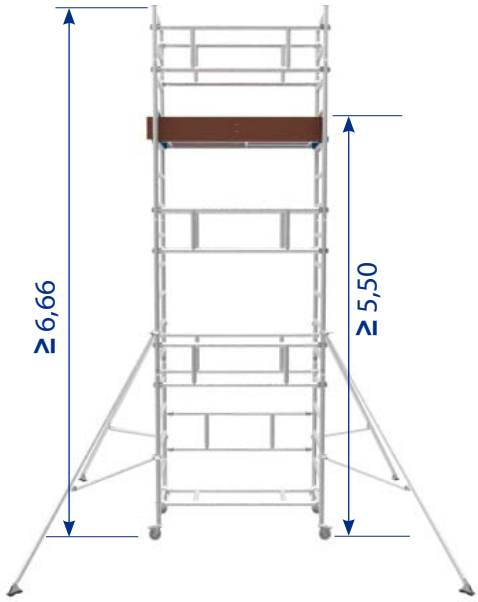
The mobile access tower must only be used for work of finishing, maintenance or similar. This Instruction Manual contains important information regarding the use, maintenance and safety of mobile access towers; the operator must have complete knowledge thereof before use. Strictly complying with this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

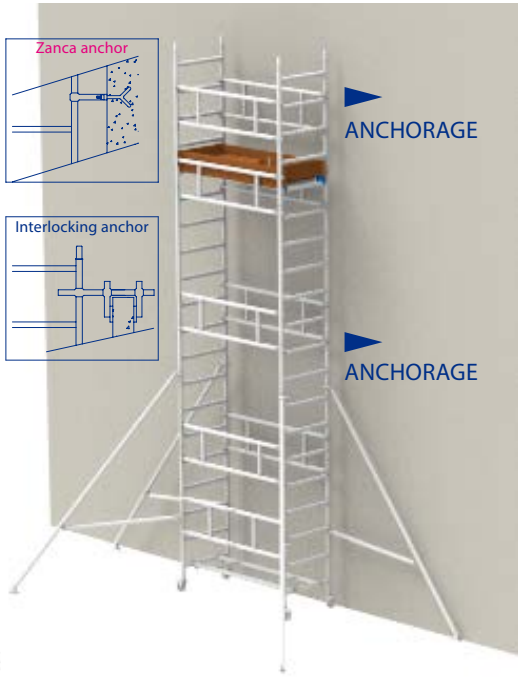
10.GENERAL INFORMATION

10.1 Configurations table according to Leg. Decree 81/08

H. max Tower	H. max work platform	Foldable base	Tower 1,50	Final Tower	No min work platform	No Braces H< 7m	Base Section	Wall anchorage
9,66 m	8,40 m	n°1	n° 5	n° 1	n° 1	n° 1	Standard	Every 2 towers

All towers comply with Leg. Decree 81/08, but not with EN 1004, they must be fastened to a fixed and stable structure every 2 towers. We can also have a single working surface assembled, naturally complete with toeboards and handrails. All towers comply with Leg. Decree 81/08, but not with EN 1004, they must have the base wheels braked during use and positioned on an already perfectly level floor and have stabiliser feet, when present, removed to the maximum compatible amount with the surrounding measurements, a specific automatic device will prevent unintentional removal, placed vertically touching the floor.
The same type stabiliser braces should be considered elements composing the base section, indispensable for access towers assembled at heights over 7 metres, they must always be present on towers both during use and movement and must be placed vertically at 10 mm off the ground.





10.2 Access to work platform

It is compulsory to access the work platform inside the tower, the beams on the side support frames composing the access ladder. People responsible for using the mobile access tower must use a fall-proof device connected to the safety harness that limits free falling to no more than 0.70 metres. This device must slide along a rope anchored on top of the last beam of the last side support frame and under the wheel support block of the base section. The fall-proof device, the safety harness and the holding rope must be certified.

10.3 Information completion

For further information, precisely:
capacities / number of surfaces simultaneously loaded / identification of parts / assembly and dismantling / stability / use / control / care and maintenance, the specifications in the Instructions Manual EN 1298 IM-itxen attached.

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)

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