European norm
UNI EN 1004

MOBILE ACCESS TOWERS

FUTURO 120x220
FUTURO 120x180
FUTURO 75X220
FUTURO 75x180
ULYSSE 75X180

GB instructions for use and maintenance

MARCHETTI®

CERTIFICATED UNI EN ISO 9001

NOTE:

- read and understand this manual in its entirety
- follow the instructions as indicated carefully.
- before each installation verify the integrity of each individual component.

Don't use damaged or not intact components

Instruction manual EN 1298 IM it x en

Mobile access towers must be used only for finishing, maintenance or similar work. This manual contains essential information regarding the use, maintenance and safety of Mobile Access Towers; operators must have a complete knowledge of the information contained herein before using. Scrupulous observance of this Manual ensures that operations are carried out in accordance with health and safety regulations **D.Lgs.09.04.2008 n°81**

INDEX

ENGLISH

1.REGUALATION REFERENCES

- Leg. Dcr. 09.04.2008 n° 81 (G.U. n° 101 dated 30.04.08) “Testo unico sulla salute e sicurezza sul lavoro”.
- UNI EN 1004 (July 2005) “ Mobile access and working towers (on wheels) made of prefabricated elements. Materials, dimensions, design loads, safety and performance”- EN 1298 (February 1996) “Mobile access and working towers. Rules and guidelines for the preparation of an instruction manual”;
- Leg. Dcr. 06.09.2005 n° 206 (G.U. n° 235 del 08.10.05 Suppl. Ordinario n° 162) “Codice del Consumo”.

2.THE “FUTURO ” RANGE

2.1 DESIGNATION

Futuro 120x220 working tower EN 1004 2 8/12 - XXCD

Futuro 120x180 working tower EN 1004 3 8/12 - XXCD

Futuro 75x220 working tower EN 1004 3 8/8,8 - XXCD

Futuro 75x180 working tower EN 1004 3 8/8,8 - XXCD

- The four mobile access towers are manufactured in compliance with Leg. Dcr. 81/08 and in particular with UNI EN 1004 Technical Standards;
- The Futuro 120x220 model is rated Class “2”, uniformly distributed loads (1,5 KN/m2), while the others are Class “3” uniformly distributed loads (2,0 KN/m2),
- They all have a maximum allowed height for working platforms of 8 meters outside buildings, while inside buildings the Futuro 120 have a maximum allowed height of 12 meters and the Futuro 75 of 8.80 meters.

MARCHETTI s.r.l. ladders and mobile access towers, located in Città della Pieve (Pg), st. Piemonte, 22:

DECLARES

► that the mobile access towers known as:

- **Futuro 120x220**
- **Futuro 120x180**
- **Futuro 75x220**
- **Futuro 75x180**

Are manufactured in compliance with the Leg. Decr. 09.04.2008 n° 81 specifications and in particular with the UNI EN 1004 (July 2005) Technical Standards

► that they are built in conformity with their respective prototypes, which passed the load and rigidity tests as described in appendix "A" of the UNI EN 1004 (2005) Technical Standards and that they have been subjected to ASSESSMENT, as pursuant to point 13 of UNI EN 1004 (2005) Technical Standards, with positive outcome, conducted at:

UNIVERSITY OF PERUGIA
Department of Industrial Engineering

Futuro 120x220 Certif.n° **Marc 95** del 30.09.2008
Futuro 120x180 Certif.n° **Marc 97** del 30.09.2008
Futuro 75x220 Certif.n° **Marc 99** del 30.09.2008
Futuro 75x180 Certif.n° **Marc 100** del 30.09.2008

•That all models are provided with an identification tag and an Instruction Manual written as prescribed by the EN1298 Technical Standards (point 9 of UNI EN 1004 Technical Standards)..

MARCHETTI
R. Marchetti

2.3 GENERAL INFORMATION

2.3.1 ACCESS TO THE WORK PLATFORMS

The work platforms may be accessed only from inside the tower, using one of the following systems :
-vertical rung ladder, formed by the structure's side frames
-inclined rung ladder, internal
-inclined step ladder, internal

2.3.2 CLASS, CAPACITY

The “Futuro 120x220” mobile towers are classified (in conformity with UNI EN 1004) as Class 2, that is, with a platform capacity of 1,5 KN/m2.
The “Futuro 120x180” - “Futuro 75x220” -“Futuro 75x180” towers are classified (in conformity with UNI EN 1004) as Class 3, that is, with a platform capacity of 2,0 KN/m2.
The total load allowed for each tower is thus

▫ Futuro 120 x 220	Kg 322	▫ Futuro 120 x 180	Kg 347
▫ Futuro 75 x 220	Kg 253	▫ Futuro 75 x 180	Kg 204

The maximum number of platforms which can be loaded simultaneously are:

▫ Futuro 120 x 220	n° 3	▫ Futuro 120 x 180	n° 3
▫ Futuro 75 x 220	n° 2	▫ Futuro 75 x 180	n° 2

The sum of loads relative to each platform must not exceed the total load allowance of the tower.

2.3.3 MAXIMUN HEIGHTS IN THE VARIOUS CONFIGURATIONS (pag.9-13)

The maximum height of the work platform, for all four models, without the use of stabilizers is 2.8m. (maximum height of the tower: 3,56m).
The maximum work platform height, for all four towers fitted with stabilizers, is 8m. for outdoor use, whereas for indoor use the Futuro 120 is 12m. and the Futuro 75 is 8.80m..
There are two types of stabilizers: Normal-35 and Super-35. The Super-35 must be mounted on all 4 models when the working platform is at a height in excess of 6m. and the tower is completely exposed to winds (e.g. in the middle of a square, in proximity of a structure, like a light post, which does not provide a shield from the wind, etc..).
The Normal stabilizers must always be mounted when working inside a building, whereas for outdoor use they can be mounted only for working platforms under a maximum height of 6m (maximum height under 7) if the tower is completely exposed to winds and in all configurations of all the range, of whatever height, if these are mounted against a wall (e.g. the façade of a building) which can act as a wind barrier. In the latter case, the stabilizers on the side of the wall must face the external part of the tower, parallel to the wall.The minimum clearance height between work platforms is 1,90m. The maximum vertical distance between work platforms is 4,20 m. The maximum vertical distance between the ground and the first level is 4,60 m.

2.4.1 "FUTURO 120x220" MOBILE ACCESS TOWER CHARACTERISTICS

UNI EN 1004 - Class "3" (2.0 KN/mq)
Maximum Load Kg 501
Maximum number of simultaneously loaded platforms: 3

Table of components for the various configurations

	Code	Components	Weight Kg	CONFIGURATION (pag. 10) A1	A2	A3	A4	A5	A6	B6	B7	B8
	20239	**Extractable base**										
1	20258	Wheel block for Extractable base with level-120	12,50	1	1	1	1	1	1	1	1	1
2	20312	Wheel block for Extractable base without level-120	12,50	1	1	1	1	1	1	1	1	1
3	20314	Connecting brace with level -220	8,00	1	1	1	1	1	1	1	1	1
4	20280	Connecting brace without level -220	8,00	1	1	1	1	1	1	1	1	1
6	20318	Extractable, adjustable foot	3,50	4	4	4	4	4	4	4	4	4
5	30523	M14x50 Screw with grip	0,14	4	4	4	4	4	4	4	4	4
	20236	**Tower**										
7	20252	Bearing frame-120	9,50	2	4	6	8	10	12	12	14	16
8	20254	Connecting brace -220	4,00	2	4	6	8	10	12	12	14	16
9	20256	Diagonal bracing rod -220	2,40	2	4	6	8	10	12	12	14	16
	20244	**Work platform**										
10	20416	Platform w/trapdoor -220	15,00	1	1	1	2	2	2	3	3	3
11		Long toe-board -220	2,50	2	2	2	4	4	4	6	6	6
12	20418	Long toe-board -220	10,00	1	1	1	2	2	2	3	3	3
13		Short toe-board -120	1,50	2	2	2	4	4	4	6	6	6
	20247	**Complete guardrails**										
14	20309	Short railing-120	5,00	2	2	2	4	4	4	6	6	6
15	20311	Long railing-220	5,00	2	2	2	4	4	4	6	6	6
	20753	**Stabilizer brackets**										
16	20765	Stabilizer bracket-35	9,80	0	0	4	4	4	4	4	4	4
17	31383	Coupling-35 round tube	1,00	0	0	8	8	8	8	8	8	8

In alternative to the Extractable Base, the Special Base can be mounted simply by replacing the wheel blocks for the Extractable Base (Code 20258 e Code 20312) with the following:

	Code	Components	Weight Kg	CONFIGURATION (pag. 10) A1	A2	A3	A4	A5	A6	B6	B7	B8
	20618	**Special Base**										
18	20620	Wheel block for Special Base with level -120	26,00	1	1	1	1	1	1	1	1	1
19	20621	Wheel block for Special Base without level - 120	26,00	1	1	1	1	1	1	1	1	1
20	31007	Blocking band	0,35	4	4	4	4	4	4	4	4	4
21	30522	M12x80 screw with grip	0,13	4	4	4	4	4	4	4	4	4

2.4.2 "FUTURO 120x180" MOBILE ACCESS TOWER

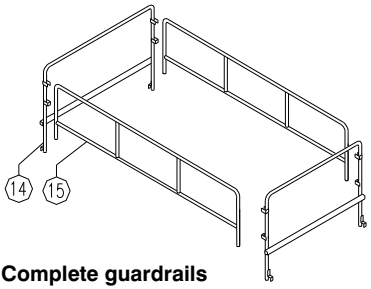
UNI EN 1004 - Class "3" (2,00 KN/mq)
Maximum load Kg 347
Maximum number of simultaneously loaded platforms: 3

Table of components for the various configurations:

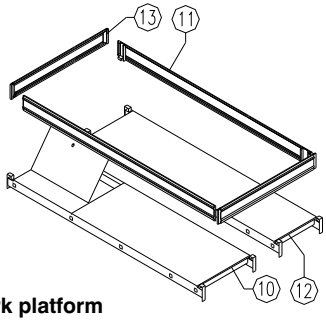
	Code	Components	Weight Kg	CONFIGURATION (pag. 10)								
				A1	A2	A3	A4	A5	A6	B6	B7	B8
	20238	**Extractable base**										
1	20258	Wheel block for Extractable base with level-120	12,50	1	1	1	1	1	1	1	1	1
2	20312	Wheel block for Extractable base without level-120	12,50	1	1	1	1	1	1	1	1	1
3	20315	Connecting brace with level -180	7,00	1	1	1	1	1	1	1	1	1
4	20281	Connecting brace without level -180	7,00	1	1	1	1	1	1	1	1	1
6	20318	Extractable, adjustable foot	3,50	4	4	4	4	4	4	4	4	4
5	30523	M14x50 screw with grip	0,14	4	4	4	4	4	4	4	4	4
	20237	**Tower**										
7	20252	Bearing frame -120	9,50	2	4	6	8	10	12	12	14	16
8	20253	Connecting brace -180	3,50	2	4	6	8	10	12	12	14	16
9	20255	Diagonal bracing rod -180	2,20	2	4	6	8	10	12	12	14	16
	20245	**Work platform**										
10	20415	Platform w/trapdoor -180	12,00	1	1	1	2	2	2	3	3	3
11		Platform w/trapdoor -180	2,00	2	2	2	4	4	4	6	6	6
12	20417	Platform w/out trapdoor-180	8,00	1	1	1	2	2	2	3	3	3
13		Short toe-board-120	1,50	2	2	2	4	4	4	6	6	6
	20246	**Complete guardrails**										
14	20309	Short railing-120	5,00	2	2	2	4	4	4	6	6	6
15	20310	Long railing-180	4,20	2	2	2	4	4	4	6	6	6
	20753	**Stabilizer brackets**										
16	20765	Stabilizer bracket-35	9,80	0	0	4	4	4	4	4	4	4
17	31383	Coupling-35 for round tube	1,00	0	0	8	8	8	8	8	8	8

In alternative to the Extractable Base, the Special Base can be mounted simply by replacing the wheel blocks for the Extractable Base (Code 20258 e Code 20312) with the following

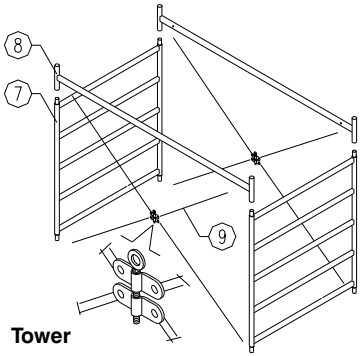
	Code	Components	Weight Kg	CONFIGURATION (pag. 10)								
				A1	A2	A3	A4	A5	A6	B6	B7	B8
	20354	**Special Base**										
18	20352	Wheel block for Special Base with level -120	26,00	1	1	1	1	1	1	1	1	1
19	20351	Wheel block for Special Base without level -120	26,00	1	1	1	1	1	1	1	1	1
20	31007	Blocking band	0,35	4	4	4	4	4	4	4	4	4
21	30522	M12x80 screw with grip	0,13	4	4	4	4	4	4	4	4	4



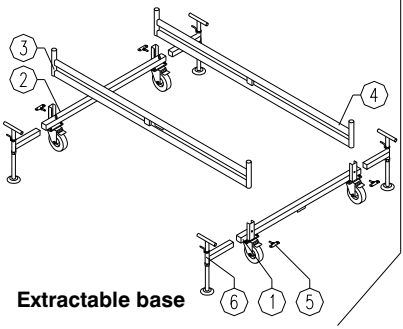
Complete guardrails



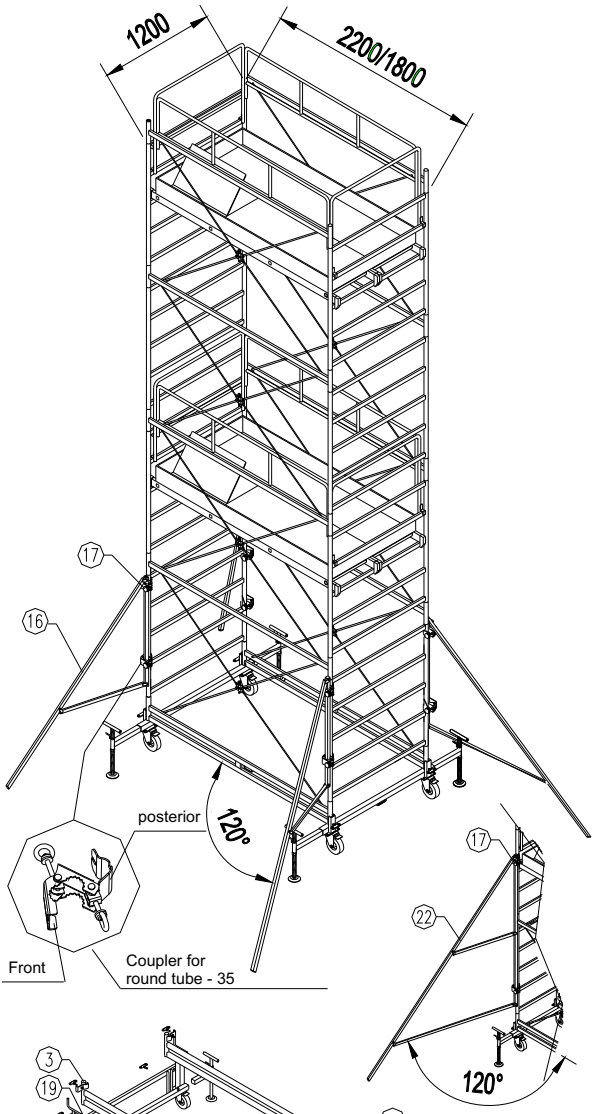
Work platform

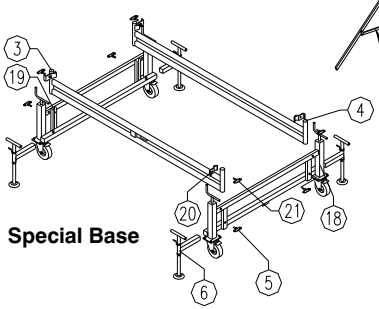


Tower



Extractable base



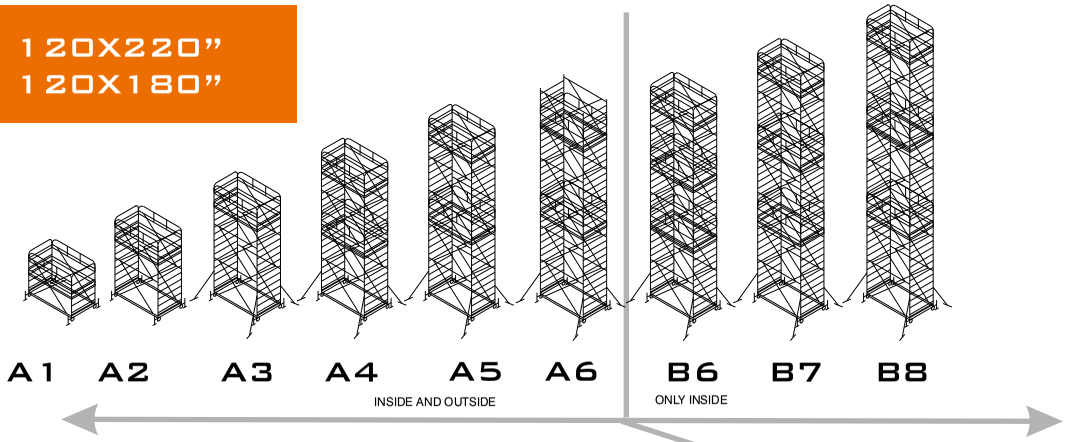


Special Base

ENGLISH

2.4.3 "FUTURO 120 TOWER" - UNI EN 1004 CONFIGURATIONS

"FUTURO 120X220"
"FUTURO 120X180"



CONFIGURATIONS		A1	A2	A3	A4	A5	A6	B6	B7	B8
H max	m	2,06	3,56	5,06	6,56	8,06	9,56	9,56	11,06	12,56
H max working platform	m	1,30	2,80	4,30	5,80	7,30	7,90	8,80	10,30	11,80
Towers (H=1,50 m)	n°	1	2	3	4	5	6	6	7	8
Working platform with guardrail	n°	1	1	1	2	2	2	3	3	3
Stabilizer-35	n°	0	0	4	4	4	4	4	4	4
Base section	n°	1	1	1	1	1	1	1	1	1

2.4.4 "FUTURO 75x220" MOBILE ACCESS TOWER CHARACTERISTICS

UNI EN 1004 - Class "3" (2,00 KN/mq)
Maximum load Kg 253
Maximum number of simultaneously loaded platforms: 2

Table of components for the various configurations

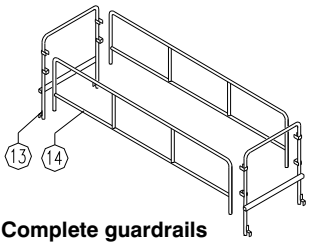
	Code	Components	Weight Kg	CONFIGURATIONS (pag14) A1	A2	A3	A4	A5	A6	B6
	20240	**Extractable base**								
1	20257	Wheel block for Extractable base with level-75	10,00	1	1	1	1	1	1	1
2	20313	Wheel block for Extractable base without level-75	10,00	1	1	1	1	1	1	1
3	20314	Connecting brace with level -220	8,00	1	1	1	1	1	1	1
4	20280	Connecting brace without level -220	8,00	1	1	1	1	1	1	1
6	20318	Extractable adjustable foot	3,50	4	4	4	4	4	4	4
5	30523	M14x50 screw with grip	0,14	4	4	4	4	4	4	4
	20235	**Tower**								
7	20251	Bearing frame -75	7,50	2	4	6	8	10	12	12
8	20254	Connecting brace -220	4,00	2	4	6	8	10	12	12
9	20256	Diagonal bracing rod -220	2,40	2	4	6	8	10	12	12
	20243	**Work platform**								
10	20416	Platform w/trapdoor -220	15,00	1	1	1	2	2	2	3
11		Long toe-board-220	2,50	2	2	2	4	4	4	6
12	20304	Short toe-board-75	1,30	2	2	2	4	4	4	6
	20248	**Complete guardrails**								
13	20308	Short railing-75	4,00	2	2	2	4	4	4	6
14	20311	Long railing-220	5,00	2	2	2	4	4	4	6
	20753	**Stabilizer brackets**								
15	20765	Stabilizer bracket-35	9,80	0	0	4	4	4	4	4
16	31383	Coupling-35 for round tube	1,00	0	0	8	8	8	8	8

2.4.5 "FUTURO 75X180" MOBILE ACCESS TOWER - CHARACTERISTICS

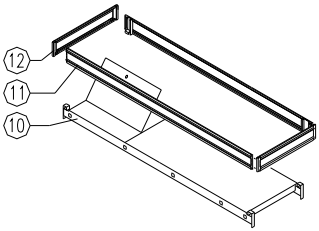
UNI EN 1004 - Class "3" (2,00 KN/mq)
Maximum load Kg 204
Maximum number of simultaneously loaded platforms: 2

Table of components for the various configurations

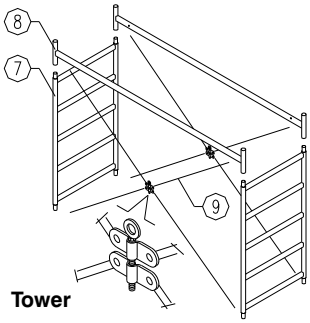
	Code	Components	Weight Kg	CONFIGURATIONS (pag14) A1	A2	A3	A4	A5	A6	B6
	20241	**Extractable base**								
1	20257	Wheel block for Extractable base with level -75	10,00	1	1	1	1	1	1	1
2	20313	Wheel block for Extractable base w/out level	10,00	1	1	1	1	1	1	1
3	20315	Connecting brace with level -180	7,00	1	1	1	1	1	1	1
4	20281	Connecting brace w/out level -180	7,00	1	1	1	1	1	1	1
6	20318	Extractable adjustable foot	3,50	4	4	4	4	4	4	4
5	30523	M14x50 screw with grip	0,14	4	4	4	4	4	4	4
	20234	**Tower**								
7	20251	Bearing frame -75	7,50	2	4	6	8	10	12	12
8	20253	Connecting brace -180	3,50	2	4	6	8	10	12	12
9	20255	Diagonal bracing rod -180	2,20	2	4	6	8	10	12	12
	20242	**Work platform**								
10	20415	Platform w/trapdoor -180	12,00	1	1	1	2	2	2	3
11		Long toe-board-180	2,00	2	2	2	4	4	4	6
12	20699	Short toe-board-75	1,30	2	2	2	4	4	4	6
	20249	**Complete guardrails**								
13	20308	Short railing-75	4,00	2	2	2	4	4	4	6
14	20310	Long railing-180	4,20	2	2	2	4	4	4	6
	20753	**Stabilizer brackets**								
15	20765	Stabilizer bracket-35	9,80	0	0	4	4	4	4	4
16	31383	Coupling-35 for round tube	1,00	0	0	8	8	8	8	8



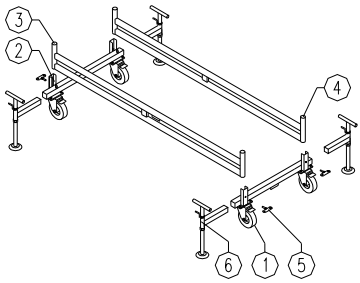
Complete guardrails



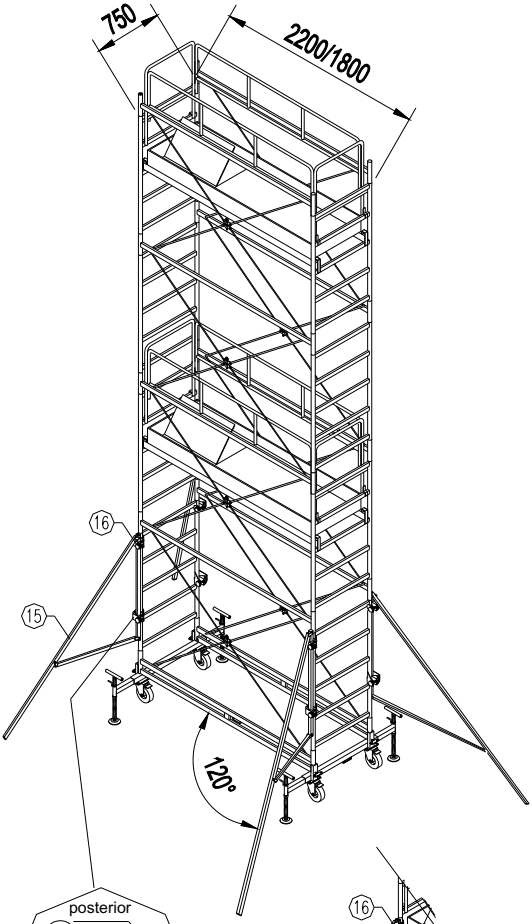
Work platform

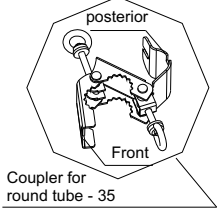


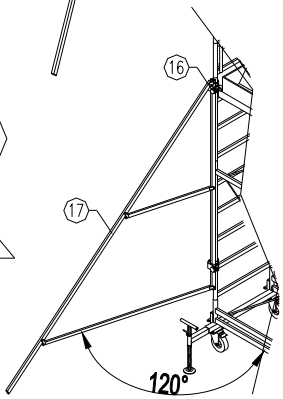
Tower



Extractable base

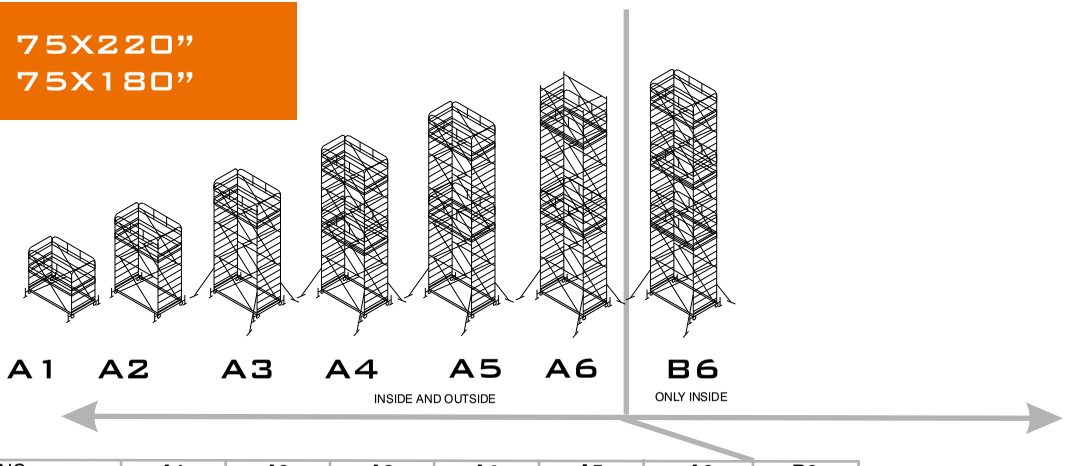






2.4.6 "FUTURO 75 TOWER" - UNI EN 1004 CONFIGURATIONS

"FUTURO 75X220"
"FUTURO 75X180"



CONFIGURATIONS		A1	A2	A3	A4	A5	A6	B6
H max	m	2,06	3,56	5,06	6,56	8,06	9,56	9,56
H max working platform	m	1,30	2,80	4,30	5,80	7,30	7,90	8,80
Towers (H=1,50 m)	n°	1	2	3	4	5	6	6
Working platform with guardrail	n°	1	1	1	2	2	2	3
Stabilizer-35	n°	0	0	4	4	4	4	4
Base section	n°	1	1	1	1	1	1	1

2.4.7 Base section (pages. 9,13)

The “Extractable” base section, made with E260 steel tubes, consists of 2 wheel blocks of which one with bubble level to check the horizontal levelling, 2 connecting braces of which one with bubble level, 4 extractable, adjustable feet and 4 M 14x50 screws with grip. The 4 wheels, on turning plate, have a diameter of 200mm and are all provided with breaks.

The “Futuro 120x220” and “Futuro 120x180” towers are provided also with another base known as the “Special” base which, as well as having the same characteristics of the Extractable base, has wheels which are vertically adjustable by means of a special crank. This base, as well as having different wheel blocks with respect to the “Extractable” base ones, is also provided with blocking bands for the base braces and 4 M12x80 screws with grip

2.4.8 Tower (pages. 9,13)

The tower, made of E260 steel tubes is a modular construction. Each module, 1,50m in height, consists of 2 lateral bearing frames, 2 connecting braces and 2 diagonal bracing rods equipped with turnbuckle. The lateral frames consist of 2 stanchions and 5 300mm wheelbase crossbars and are each suited to sustain the work platform and act as a rung ladder for access to the work platform itself. The crossbars are supplied with anti-slip surface

2.4.9 Work platform (pages. 9,13)

Each work platform consists of 1 or 2 bearing frames made of aluminium tubes fitted with anti-slip, multi-layer wood panels, one of which is fitted with a trapdoor to provide access to the platform. All perimeters are fitted with toe-boards, 150 mm in height, made from profiled, galvanized steel sheets, which inserted between the platform and the first cross bar of the bearing frame, firmly secure the platform to the tower, preventing any unintentional removal.

Lateral protection is ensured by 2 pairs of E260 steel tube frames, which guarantee protection on both top and intermediate positions. These are coupled to the structure so as to avoid accidental detachment .

2.4.10 STABILIZER BRACKETS AND COUPLINGS (pages.9,13)

Stabilizer brackets come in two types: Normal and Super (page 9,13). Each Normal bracket consists of 3 E260 zinc-coated, 35x35 square section, steel tubes. The three tubes are hinged at the extremities so as to obtain the two bracket positions: closed and open. In the closed position, the three elements are aligned side by side with the blocking pawl in the lowest hole of the longest tube in order to reduce encumbrance during transport. In order to open the stabilizer bracket it is sufficient to remove the blocking pawl, fold the two shorter tubes so as to form a triangle and insert the pawl in the central hole of the longest tube.
The Super stabilizer brackets have an extra square 35x35 steel tube, with respect to the Normal ones, which acts as a section break and are longer, but they work like the others. Both types of brackets, to be used as indicated in point 2.3.3, are fitted to the 4 stanchions of the tower in order to increase the actual base dimensions and must be fitted when the height of the work platform exceeds a height of 2.80m.

Each coupling consists of a central element fitted with two lateral hinged elements which bind the tower's stanchion and the stabilizer bracket respectively to then be closed and fastened on the central element by means of screws and eyebolt nuts.
The rear clamp which is placed on the stanchion has a semi-circle shape to best fit the stanchion itself and has two symmetric slots which must be placed in correspondence with the weld point of the rung to the stanchion, just above or just below, depending on the specific needs. These slots prevent the coupling from rotating with respect to the stanchion.
The coupling's central element and the front clamp are serrated in order to accommodate the stabilizer which, since it has a square cross-section, can be positioned at various angles with regard to the tower thus preventing any stabilizer-coupling rotation.

3.“ULYSSE” MOBILE ACCESS TOWER

3.1 DESIGNATION

Ulysse access tower EN 1004 3 7,5 / 7,5 XXCD

-The tower is manufactures in conformity with Leg. Decr. 81/08 and in particular with UNI EN 1004 Technical Standards;
-It is rated Class “3” for uniformly distributed loads (2,0 KN/m^2);
-The maximum height of the working platform is 7,50 for both indoor and outdoor use..

MARCHETTI s.r.l. ladders and mobile access towers, located in Città della Pieve (Pg), st. Piemonte, 22:

DECLARES

► that the mobile access tower known as:

- **Ulysse**

is manufactured in compliance with the Leg. Decr.. 09.04.2008 n° 81 standard and in particular with the UNI EN 1004 (July 2005) Technical Standards

►that the same is built in conformity to their respective prototypes, which passed the load and rigidity tests as described in appendix “A” of the UNI EN 1004 (2005) Technical Standards and that they have been subjected to the ASSESSMENT, as pursuant to point 13 of UNI EN 1004 (2005) Technical Standard, with positive outcome, conducted at

UNIVERSITY OF PERUGIA
Department of Industrial Engineering

CERTIFICATE N° MARC 101 DEL 30.09.2008

that all models are provided with an identification tag and an Instruction Manual written as prescribed by EN1298 Technical Standards (point 9 of UNI EN 1004 Technical Standards).

MARCHETTI s.r.l.
R. Marchetti

3.3 GENERAL INFORMATION

3.3.1 Accessing the work platform

The work platforms may be accessed only from inside the tower, using one of the following systems :
-vertical rung ladder, formed by the structure's side frames
-inclined rung ladder, internal
-inclined step ladder, internal.

3.3.2 Class, Capacity

Il ponte denominato “Ulysse” è classificato (in accordo con UNI EN 1004) in classe 3, ovvero portata del piano pari a 2,0 KN/m²
Il carico complessivo consentito per ogni torre risulta pertanto di kg. 204.
Il numero massimo di piani caricati contemporaneamente è di n° 2.
La somma dei carichi relativi ad ogni piano non deve superare il valore del carico complessivo consentito per il ponteggio.

3.3.3 maximun heights in the various configurations (pag.21)

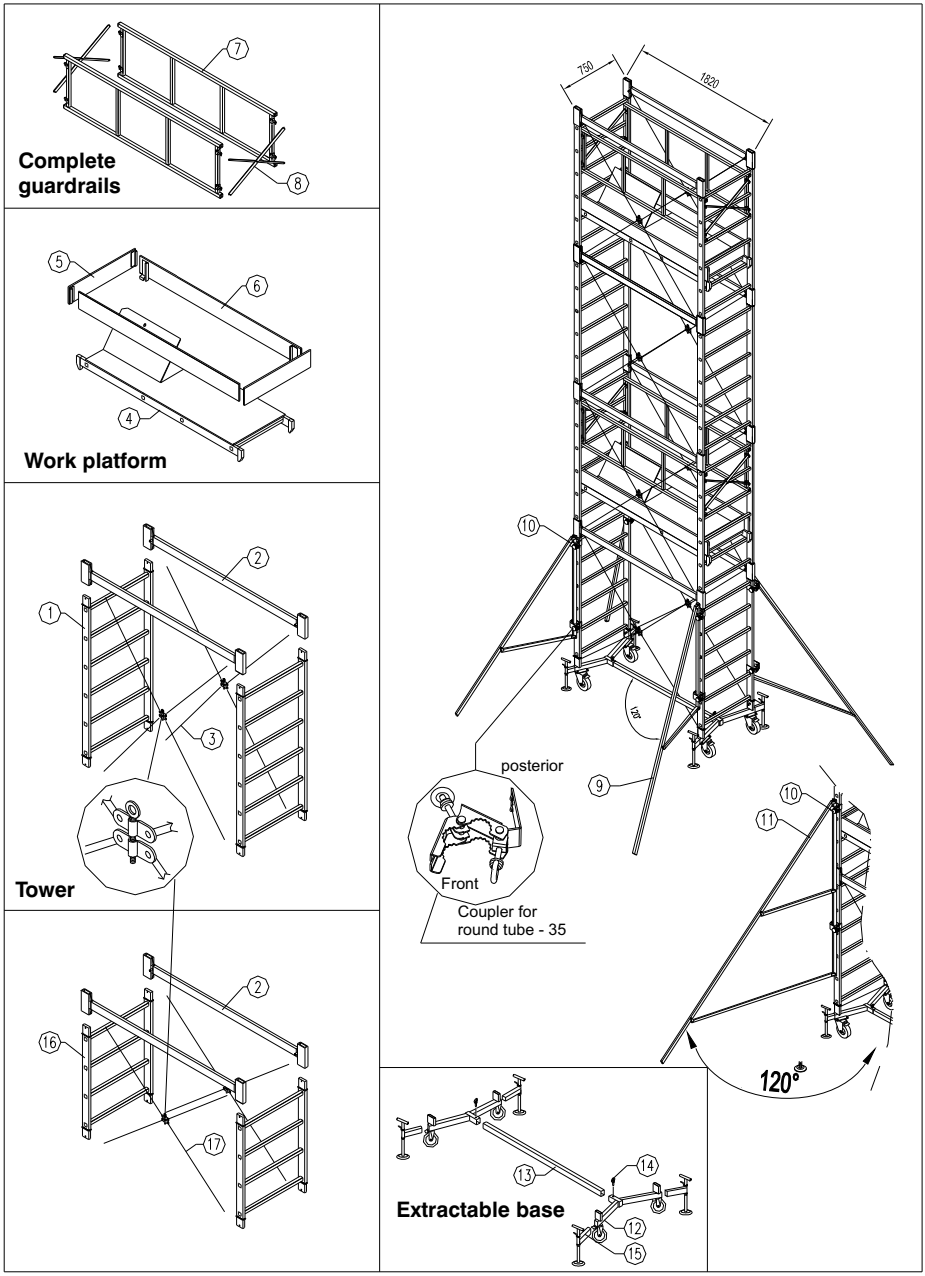
The maximum height of the work platform without the ise of stabilizer brackets is 2.00m (maximum height of the tower:3.20).
There are two types of stabilizers: Normal and Super (page 20). When used indoors, always fit the Normal stabilizers and the maximum height of the platforms must not exceed 7.5m. When working outdoors, always use the Super stabilizers on towers which have a work platform at a height in excess of 2.5m and are exposed to windy conditions (e.g. in the middle of a square, in proximity of a structure, like a light post, which does not provide a shield from the wind, etc..).**in this case where there is a complete exposure to wind, the maximum height of the work plan must not exceed 6m (maximum height of tower: 7.30).** The Normal stabilizers, when used outdoors, can be fitted at work platform heights equal to or under 2.5m, whatever the exposure to winds may be and in all configurations, independently from the height, if the tower is mounted on the side of a building (e.g. against a facade) which creates a wind barrier. In this case, the stabilizers on the side of the building must be turned towards the outside of the tower in parallel with the wall.
The minimum clearance height between work platforms is 1,90m. The maximum vertical distance between work platforms is 4,20m. The maximum vertical distance between the ground and the first level is 4,60m.

3.4.1 "ULYSSE" MOBILE ACCESS TOWER CHARACTERISTICS

UNI EN 1004 - Class "3" (2,00 KN/mq)
Maximum load Kg 204
Maximum number of simultaneously loaded platforms: 2

Table of components for the various configurations

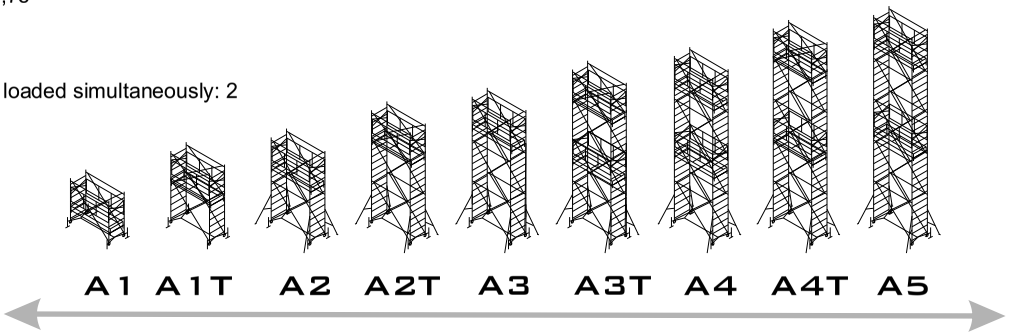
	Code	Components	Weight Kg	CONFIGURATIONS (pag. 21)								
				A1	A1T	A2	A2T	A3	A3T	A4	A4T	A5
	20495	**Extractable base**										
12	20503	Wheel block unit	11,50	2	2	2	2	2	2	2	2	2
13	20502	Connecting brace	3,50	1	1	1	1	1	1	1	1	1
14	30522	M12x80 screw with grip	0,14	2	2	2	2	2	2	2	2	2
15	20318	Adjustable, extractable foot	3,50	4	4	4	4	4	4	4	4	4
	20494	**Tower**										
1	20499	Bearing frame	4,90	2	2	4	4	6	6	8	8	10
2	20500	Connecting brace	2,90	2	2	4	4	6	6	8	8	10
3	20501	Diagonal bracing rod	2,20	2	2	4	4	6	6	8	8	10
	20496	**Work platform**										
4		Platform with trapdoor-180	12,00	1	1	1	1	1	1	2	2	2
5		Short toe.board-75	1,30	2	2	2	2	2	2	4	4	4
6		Long toe-board-180	2,00	2	2	2	2	2	2	4	4	4
	20787	**Complete guardrails**										
7	20504	Ulysse- long guardrail	2,50	2	2	2	2	2	2	4	4	4
8	32481	Ulysse - short guardrail	1,10	2	2	2	2	2	2	4	4	4
	20770	**Normal stabilizers (See point 3.3.3)**										
9	20765	Stabilizer bracket -35 Normal	9,80	0	0	4	4	4	4	4	4	4
10	31377	Stabilizer bracket coupling	1,00	0	0	8	8	8	8	8	8	8
	20773	**Super stabilizers - (See point 3.3.3)**										
11	20774	Stabilizer racket -35 Super	11,50	0	0	0	4	4	4	4	4	4
10	31377	Stabilizer bracket coupling	1,00	0	0	0	8	8	8	8	8	8
	20778	**TORRE terminale**										
16	20729	Terminal bearing frame	3,60	0	2	0	2	0	2	0	2	0
17	20730	Terminal brace	1,80	0	2	0	2	0	2	0	2	0
2	20500	Connecting brace	2,90	0	2	0	2	0	2	0	2	0


Complete guardrails
7
8
5
6
4
Work platform
2
1
3
Tower
2
16
17
750
1820
10
9
posterior
Front
Coupler for round tube - 35
10
11
120°
13
14
12
15
Extractable base

3.4.2 Ulysse tower - UNI EN 1004 configurations

"ULYSSE 75X180"

Characteristics:
- tower dimensions m 1,80 x 0,75
- H max work platform
- tower m 1,68
- total load permitted kg 204
- n. Max work platform can be loaded simultaneously: 2



CONFIGURATIONS		A1	A1T	A2	A2T	A3	A3T	A4	A4T	A5
H max	m	2,05	3,15	3,70	4,85	5,40	6,50	7,10	8,20	8,80
H max working platform	m	0,80	1,90	2,45	3,60	4,15	5,25	5,80	6,95	7,50
Towers (H=1,68 m)	n°	1	1	2	2	3	3	4	4	5
Towers (H=1,12 m)	n°	0	1	0	1	0	1	0	1	0
Working platform with guardrail	n°	1	1	1	1	1	1	2	2	2
Stabilizer-35	n°	0	0	0	4	4	4	4	4	4
Base section	n°	1	1	1	1	1	1	1	1	1

(The sum of loads relative to each platform must not exceed the total load allowance)

3.4.3 Base section (pag. 20)

Extractable base - The base section known as "Extractable base", made with E260 steel tubes, consists of 2 wheel blocks, 1 connecting brace, 4 extractable, adjustable feet and 2 M 14x50 screws with grip. The 4 wheels, on turning plate, have a diameter of 150mm and are all provided with breaks.

3.4.4 TOWER (pag. 20)

The tower is a modular construction. Each module, 1,68m in height, consists of 2 lateral bearing frames made of aluminium tubes with plastic wrists and a steel core for coupling, 2 connecting braces with plastic wrists and a steel core and 2 diagonal bracing rods equipped with turnbuckle. The lateral frames consist of 2 stanchions and 6 280mm wheelbase crossbars and are each suited to sustain the work platform and act as a rung ladder for access to the work platform itself. The crossbars are supplied with anti-slip surface. There is also a terminal module of 1.12 in height.

3.4.5 WORKING PLATFORM (pag. 20)

Each work platform consists of a bearing frame made of aluminium tubes fitted with anti-slip, multi-layer wood panels, with trapdoor to provide access to the platform. All perimeters are fitted with toe-boards, 150 mm in height, which inserted between the platform and the first cross bar of the bearing frame, firmly secure the platform to the tower, preventing any unintentional removal.
Lateral protection is ensured by 2 steel tube frames and two steel diagonal bracing rods which guarantee protection on both top and intermediate positions. These are coupled to the crossbars so as to avoid accidental detachment.

3.4.6 Stabilizer brackets and couplings (pagg.20)

Stabilizer brackets come in two types: Normal and Super (page 12). Each Normal bracket consists of 3 E260 zinc-coated, 35x35 square section, steel tubes. The three tubes are hinged at the extremities so as to obtain the two bracket positions: closed and open. In the closed position, the three elements are aligned side by side with the blocking pawl in the lowest hole of the longest tube in order to reduce encumbrance during transport. In order to open the stabilizer bracket it is sufficient to remove the blocking pawl, fold the two shorter tubes so as to form a triangle and insert the pawl in the central hole of the longest tube.
The Super stabilizer brackets have an extra square 35x35 steel tube, with respect to the Normal ones, which acts as a section break and are longer, but they work like the others. Both types of brackets, to be used as indicated in point 3.3.3, are fitted to the 4 stanchions of the tower in order to increase the actual base dimensions and must be fitted when the height of the work platform exceeds a height of 2m.
Each coupling consists of a central element fitted with two lateral hinged elements which bind the tower's stanchion and the stabilizer bracket respectively to then be closed and fastened on the central element by means of screws and eyebolt nuts. The coupling's central element and the front clamp are serrated in order to accommodate the stabilizer which, since it has a square cross-section, can be positioned at various angles with regard to the tower thus preventing any stabilizer-coupling rotation.

4. ASSEMBLY AND DISMANTLING

4.1 General Information

a) the assembly and dismantling of the mobile access towers requires at least two people who must be familiar with the instructions both for the assembly and for use of the tower;
b) the required working height will determine the configuration to use as described on page 10 for “Futuro 120” towers, on page 14 for “Futuro 75” towers, on page 21 for the “Ulysse” tower. The list, weight and quantity of the components needed to assemble the towers can be found on pages 7 and 8 for the “Futuro 120”, on pages 11 and 12 for the “Futuro 75”, and on page 19 for the ”Ulysse” tower;
c) damaged components must not be used;
d) only original components should be used as indicated by the manufacturer.

4.2 SAFETY PLATFORM (Leg. Decr. 09.04.2008 n° 81 Sect.. IV - art. 128)

The Safety Platform (a platform made like the normal work platform) is compulsory for maintenance and repair work exceeding 5 days and must always be used for construction work. The safety platform must be positioned under the work platform at a distance not exceeding 2,50m.

4.3 PRELIMINARY CHECKS

a) The surface on which the tower is to be assembled and moved (if necessary) must be suited to support the weight load, it must be perfectly level and able to guarantee weight distribution, using wooden planks or their equivalent when necessary;
b) ensure that the ground is free from obstacles of any nature;
c) assembly may only be undertaken in the absence of wind;
D) ensure that all components, accessories and safety equipment for the assembly of the tower are readily available and close at hand;
e) the verticality of mobile access towers must be verified with a spirit level or pendulum;

4.4 ASSEMBLY INSTRUCTIONS

4.4.1 "FUTURO" AND "ULYSSE" ON EXTRACTABLE BASE

After all requirements under section 4.3 have been met, proceed with the assembly of the base section:

a) join the 2 wheel blocks to the 1-2 connecting braces using 2-4 of the provided screws with grip;
b) before completely fastening the screws mount the first 2 lateral frames;
c) fasten the screws and fit the breaks on each of the 4 wheels and horizontally extract the adjustable feet as far as is compatible with the surrounding space, a special, automatic device will prevent unintentional release; subsequently fasten the extraction block screw;
d) level the base section using the adjusting screws on the feet and lifting all the wheels at least 20mm from the ground, when levelling is obtained, fasten the provided locknuts;
e) continue the assembly operations by joining the 2 connecting braces to the upper part of the stanchions of the lateral frames;
f) add the diagonal bracing rods by hooking the extremities to the pins on the connecting braces, position the turnbuckles without fastening completely;

g) position the planking elements in correspondence with the fourth rung from the bottom of the first two lateral frames;
h) first position the 2 long toe-boards in parallel to the work platform, making sure to keep the metal hooks on the ends turned inwards, then the 2 short toe-boards placing these in the respective lodgings on the long toe-boards;
i) at this stage one of the two assemblers must wear a safety belt and climb onto the work platform from inside the tower, using the trapdoor;
j) having securely anchored the safety belt to one of the two fitted connecting braces, the next two lateral frames can be installed and the turnbuckles fastened without using any kind of utensil. The tower can thus continue to be assembled repeating the same sequence of operations;
k) if the mobile tower needs to have a work platform placed at a height greater than 2.8m with regard to the “Futuro” or 2m for the “Ulysse” it is necessary at this point to mount 4 stabilizer brackets;
l) take the couplings for the stabilizer brackets from the bag provided with the tower components. Open the rear band of the first coupling by loosening its eyebolt nut, position the coupling on the stanchion of the tower (in correspondence with the welding point of the rung in the Futuro range) at the appropriate height for lodging the upper vertical part of the bracket. Repeat the operation with a second coupling on the same stanchion distancing it appropriately from the first so it can lodge the bracket. Open the rear bands of the two couplings by loosening the corresponding eyebolt nuts. Position the bracket between the two couplings at an angle of approx. 120° with regard to the longer side of the tower, compatibly with the surrounding space. Close the two rear bands of the couplings on the bracket, making sure the latter adheres properly to the round and fasten the corresponding eyebolt nuts. Repeat the operation in the same sequence for the other three stanchions of the tower.
m) as the tower assembly progresses, special care must be taken in the placement of floor panels in order to ensure maximum safety and freedom of movement to the person working at heights. The person should have easy and secure access to safety belt anchorage;
n) once the tower has been assembled, fit the work platforms, toe boards and lateral protections at the required heights following instructions in section 2.3.3 or 3.3.3;
O) the lateral safety railings, with regard to the “Futuro” range, must be assembled by positioning first the 2 narrower frames on the crossbars of the lateral frames, on the inner part of the tower,

keeping the upper part at about 1m from the platform, then position the 2 long frames in the respective lodgings made on the first two.
With regard to the “Ulysse” (point 3.4.5), the lateral protection consisting of 2 aluminium tubes and 2 X shaped diagonal bracing rods in inc coated teel, must be assembled by positioning first the 2 larger frames in parallel with the longer sides of the tower, resting the crossbars of the bearing frames so that the upper tube is 1m from the round, and subsequently opening the two X shaped bracing rods and positioning them so that the holes on the extremities correspond to the tongued pawls on the frames, the two bracing rods must be fitted on the external part of the tower.

p) during assembly, it is advisable to use ropes of suitable dimensions for lifting components to higher levels of the tower, never lifting more than one item at the time;
q) if the work platforms are accessed by means of inclined rung or step ladders, these must be anchored to the cross bars with the two hooks they are provided with, and placed in proximity of the trapdoor.

4.5 DISMANTLING INSTRUCTIONS

a) in order to dismantle the towers, follow the required assembly instructions in reverse order;
b) to lower mobile access tower components to the ground use suitable ropes or other suitable means, making sure at all times, that abrupt impact with the ground is avoided

5.STABILITY’

a) Erect and use mobile access towers only in absence of wind;
b) stabilizer brackets must be positioned according to the configuration and height requirements as indicated in section 4.4.1.k, 2.3.3 (Futuro towers) and 3.3.3 (Ulysse towers);
c) the maximum horizontal load capacity (e.g. applied by reason of work in progress on an adjacent structure) is 25 Kg, intended as the sum of the loads applied by the various people working on the tower;
d) towers left unattended due to temporary interruption of work or due to windy conditions, must be securely anchored to a stable structure;
e) no additional structures should be added to the tower summit and no shields/covers such tarpaulins, matting or other shielding of whatsoever nature should be fitted.

6.USE

6.1 PRELIMINARY CHECKS

a) Check that the mobile access tower has been erected in a perfectly vertical position, referring scrupulously to the instructions supplied by the manufacturers in order to guarantee a “state of the art” execution;
b) Check that there are no adverse weather conditions which may hinder the safe use of the mobile access tower (ice, rain, wind…)

6.2 USE

a) Do not increase the height of mobile access towers by using ladders, crates or any other devices;
b) work platforms must always be accessed from the interior of the tower by adopting one of the three options described as follows:
   • vertical rung ladder; the lateral bearing frames may be used for this purpose as they are fitted with non-slip rungs and spaced according to the required standards ;
   • inclined rung ladder;
   • inclined step ladder
c) all scaffolding in the tower, which should be positioned according to the instructions in section 2.3.3 and 3.3.3, even if used only for access and not for working, must be provided with lateral protection railings and toe-boards;
d) wherever possible, mobile access towers used externally, must be securely anchored to the building itself or other available structures ;
e) tools and other material must be raised to work platforms from within the tower itself, from one platform to the next, through the trapdoors, using manual traction with the use of appropriate ropes. If this is not possible, materials may be lifted from the outside of the tower, using manual traction and suitable ropes but not loads exceeding 50 Kg in weight which must be lifted vertically and in parallel to the tower, ensuring the load remains within the boundaries of the stabilizing brackets;
f) positioning, instalment or use of lifting devices is not allowed;
g) it is forbidden to jump on the platforms;
h) bridging connections between the mobile access tower and any building is not allowed;
i) mobile access towers are not designed to be lifted or suspended off the ground (e.g. by means of a crane).

6.3 Moving the Tower

A) mobile access towers must only be moved manually, on compact, perfectly level, smooth surfaces that are free from obstacles and in absence of windy conditions;

b) prior to moving the tower, reduce the tower's height to a maximum of 7m, lift the stabilizer brackets by no more than 20mm and disengage the brakes;
c) while moving the tower, speed should not exceed a normal walking pace;
d) personnel and/or materials must not be on the tower while it is being moved;
e) a distance of 5,00m from any power lines must be observed;
f) once in position, engage the brakes on all 4 wheels, level the tower as described in section 4.4.1 d) and reposition the stabilizer brackets to the ground ensuring they adhere perfectly.

7. INSPECTION, CARE AND MAINTENANCE

a) After a certain period of use, at the users discretion, remove encrustations of cement, mortar, paint or any other dirt present on the various components ;
b) always keep clamping, adjusting screws, pins and couplings well greased;
c) before each assembly, check that all components are in perfect condition, replacing any damaged or worn part, with the original manufacturer's spare parts;
d) while moving, transporting or storing the mobile access tower, care must be taken not to place any of the components to loads or stress which could cause permanent deformation of the structures, avoid careless stacking or stacking with materials of a different nature.

MOBILE ACCESS TOWERS

FUTURO 120x220
FUTURO 120x180
FUTURO 75X220
FUTURO 75x180
ULYSSE 75X180

ENGLISH

D.lgs. 09.04.2008 n° 81

MARCHETTI®

(This instruction manual must be consulted together with the EN 1298 IM it x en manuals regarding the same towers, used according to UNI EN 1004 Technical Standards which constitute integral and substantial part of the same)
Mobile access towers must be used only for finishing, maintenance or similar work. This manual contains essential information regarding the use, maintenance and safety of Mobile Access Towers; operators must have a complete knowledge of the information contained herein before using. Scrupulous observance of this Manual ensures that operations are carried out in accordance with health and safety regulations D.Lgs.09.04.2008 n°81

CERTIFICATED UNI EN ISO 9001

1.REGULATION REFERENCES

► Leg. Decr. 09.04.2008 n° 81 (G.U. n° 101 dated 30.04.08) “Testo unico sulla salute e sicurezza sul lavoro”.
► EN 1298 (february 1996) “Mobile access towers. Rules and guidelines for the preparation of an instruction manual”;
► D.Lgs. 06.09.2005 n° 206 (G.U. n° 235 dated 08.10.05 Suppl. Ordinario n° 162) “Codice del Consumo”.

2. DECLARATION OF CONFORMITY

MARCHETTI s.r.l. ladders and mobile access towers, located in Città della Pieve (Pg), st. Piemonte, 22:

DECLARES

► that the mobile access towers known as:

- **Futuro 120x220**
- **Futuro 120x180**
- **Futuro 75x220**
- **Futuro 75x180**
- **Ulysse 75x180**

are manufactured in compliance with the **D.Lgs. 09.04.2008 n° 81** standards

► that all models are provided with an identification tag and Instruction Manual

MARCHETTI s.r.l.
R. Marchetti

3.1 DIFFERENCES BETWEEN D.LGS. 09.04.2008 N° 81 AND UNI EN 1004

The “Futuro” range of access towers and the “Ulysse” are built in conformity with both Leg. Decr. 81/08 and UNI EN 1004 Technical Standards specifications, the difference lies in their methods of employment:
- According to use specified by UNI EN 1004 (refer to the attached handbook) the two “Futuro 120” tower systems can operate with a maximum work platform height of 7.9 outdoors and 11.8 indoors, the two “Futuro 75” tower systems can operate with a maximum work platform height of 7.9m outdoors and 8.8 indoors, and the “Ulysse” tower can operate with a maximum work platform height of 7.5m both indoors and outdoors. The towers must be erected in strict accordance with one of the standard configurations illustrated in the handbook. The use of stabilizer brackets is required for work platform heights in excess of those indicated in the manual. Anchorage to a fixed, stable structure is recommended (but not compulsory)

- For use in compliance with Leg. Decr. 09.04.2008 n° 81 see the following table of configurations:

TABELLA DELLE CONFIGURAZIONI SECONDO D.LGS. 81/08

Tower Leg. Decr. 81/08	Max Tower height m	Max work platform height m	Tower n.	Min. n. work platforms	N. stabilizers H>7 m	Base section	Wall anchorage
Futuro 120x220	17,00	16,30	11	1	n° 4	Extract. Special	every 2 elements
Futuro 120x180	14,00	13,30	9	1	n° 4	Extract. Special	every 2 elements
Futuro 75x220	12,50	11,80	8	1	n° 4	Extract.	every 2 elements
Futuro 75x180	12,50	11,80	8	1	n° 4	Extract.	every 2 elements
Ulysse 75x180	10,50	9,20	6	1	n° 4	Extract.	every 2 elements

All mobile towers conforming with Leg. Decr. 81/08, but not UNI EN 1004 standards, must be anchored to a fixed, stable structure every two levels. They may have just one working platform fitted, complete with toeboards and guardrails. As provided for by Leg. Decr. 81/08 (pag.32) standards, the guardrails may be made of connecting braces. If connecting braces are used as guardrails, care must be taken to ensure that the work platform is positioned in such manner as to have the connecting brackets at a height of at least 1m from the floor level and that another bracing element is placed in an intermediate position between the upper guardrail and the toe-board. Naturally, the work platform can be assembled also in such position that the crossbar acts as upper guardrail and the connecting brace of the tower acts as intermediate railing, but always in respect of the above mentioned reciprocal distances. Towers in conformity with UNI EN 1004, must have wheels with breaks engaged when working and they must be placed on a perfectly level ground, the stabilizer feet, must be extended to maximum length compatibly with the surrounding space, a special automatic device prevents unintentional disengagement. Stabilizer brackets are to be considered components of the base section and are essential elements for a mobile access tower higher than 7m. They must be present on such these towers both during use and during moving. They must be placed vertically at approximately 10m from the ground.

3.2 Access to the work platform

It is compulsory to access the work platform from inside the tower, the cross bars of the lateral load-bearing frames form the access ladder. Workers assigned to the tower are required to use a fall proof system attached to a safety belt which limits an eventual fall to 0,7m. This safety device must run along a rope/cable anchored above the highest cross bar of the highest lateral load-bearing frame and anchored below to the last cross beam of the base frame.

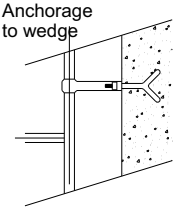
For access to work platforms by means of inclined ladders, refer to the attached EN 1298 IM-itxen handbook.

4. Additional information

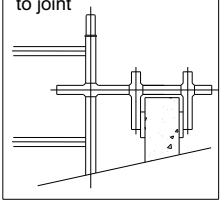
With regard to additional information, and particularly on:
capacities / number of platforms allowed / safety platform/ wind tolerance/ component identification / assembly and dismantling / stability / use / inspection / care and maintenance, the instructions in the EN 1298 IM-itxen handbook apply, together with the limitations described in sections 3.1 3.2 and 4

Anti-falling device

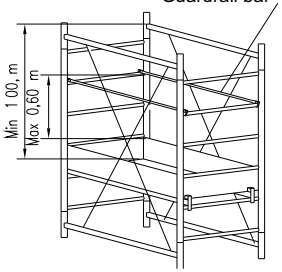
Anchorage to wedge

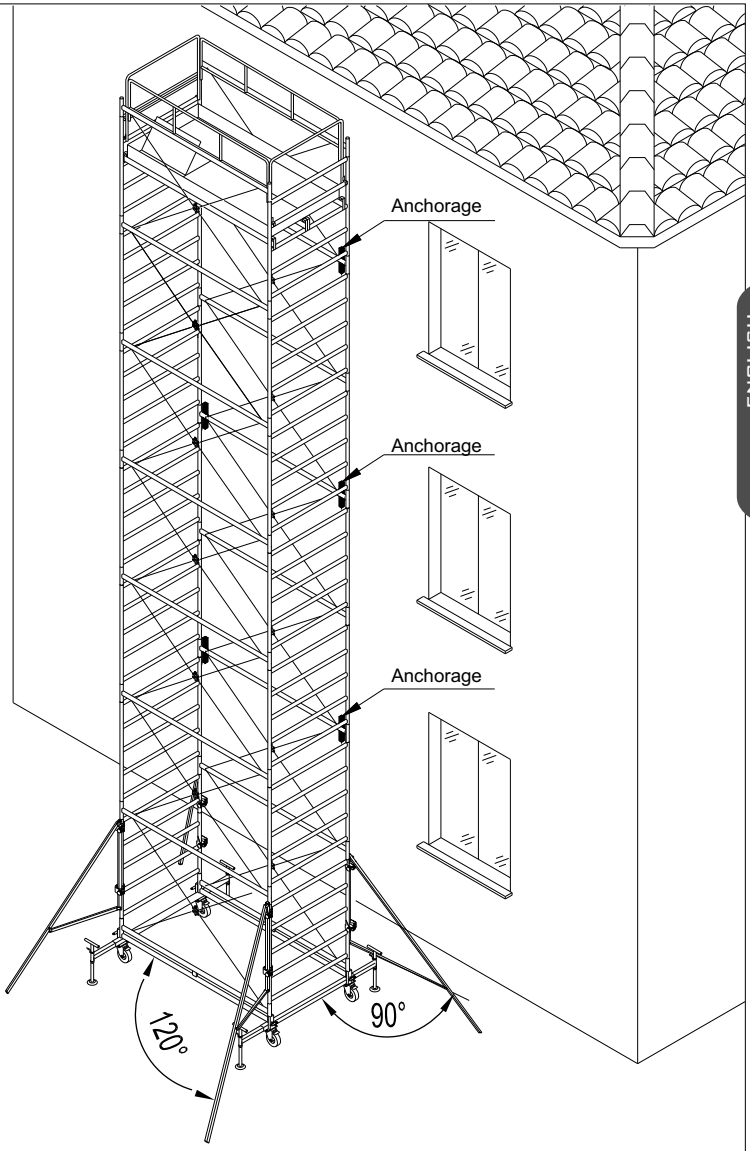


Anchorage to joint



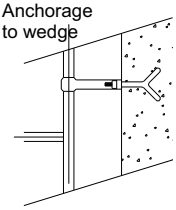
Guardrail bar



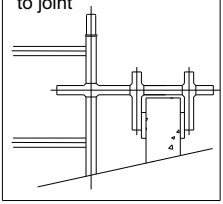


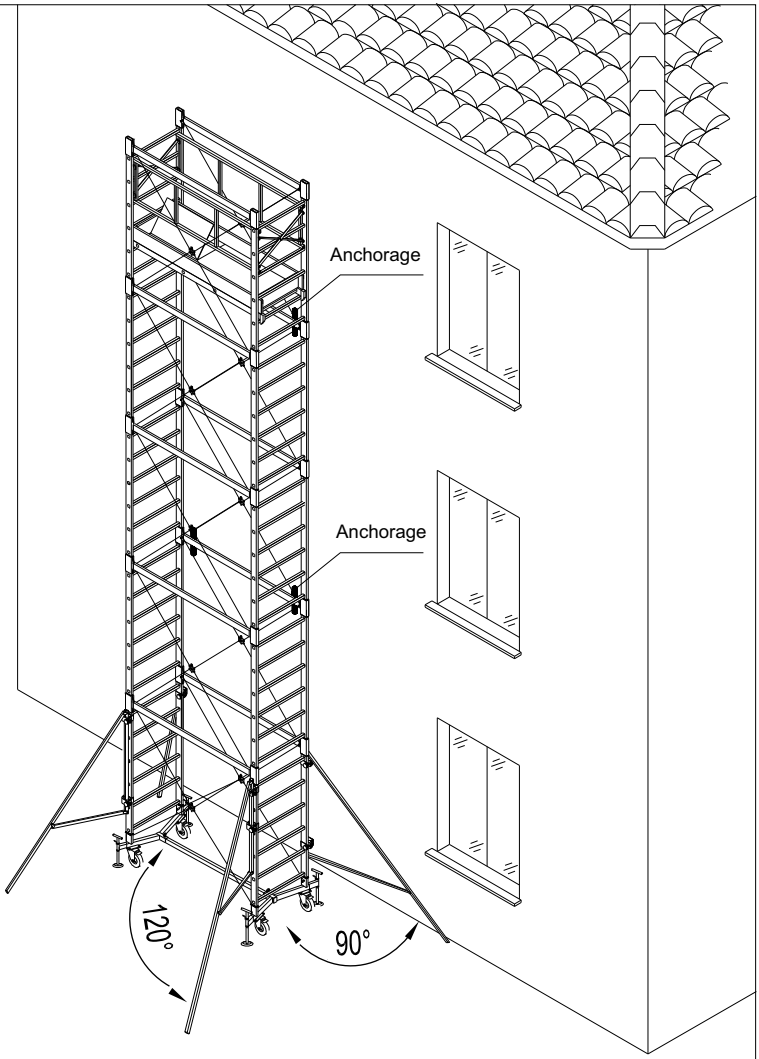
Anti-falling device

Anchorage to wedge



Anchorage to joint





REVIEWS

Mobile access tower model ……..

Review of .....……

- ☐ Check number of components
- ☐ Cleaning components
- ☐ Integrity of components
- ☐ No oxidized zones
- ☐ Integrity of welds
- ☐ Lubrication of screws
- ☐ Lubrication of plugs and sockets
- ☐ Efficiency of wheels and braking devices
- ☐ Integrity of work platforms
- ☐ Integrity of parapets
- ☐ Integrity of toe boards
- ☐ Integrity instruction hand book
- ☐ Integrity stickers with identification markings

Anomalies .....……..

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Elements discarded to be replaced …….

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Remarks .....……..

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Safety Officer
(Name in full)

Safety Officer
(Signature)

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