



a different brand.



PORTUGAL

INDUSTRIE

Zona Industrial do Rossio
Av. da Industria 3730-600
Vale de Cambra Portugal

tel.: +351 256 420 890
fax: +351 256 422 774
e-mail: info@catari.pt

DELEGATION NORTH

Zona Industrial da Farrapa
Chave 4540-267
Arouca Portugal

tel.: +351 256 400 110
tlm: +351 911 099 000
fax: +351 256 485 197
e-mail: portugal@catari.pt

DELEGATION TO SOUTH

Pq. Empresarial do Barreiro
Rua 23, nº2 Apartado 5057
2831-904 Barreiro Portugal

tel.: +351 21 192 12 01
tlm: +351 91 019 09 11
fax: +351 21 192 12 00
e-mail: portugal@catari.pt
site: www.catari.pt

BRAZIL

Estrada Municipal, 300
Rodovia Fernão Dias Km33
CEP12940-000-Atibaia
São Paulo-Brasil

tel.: 0055 (11) 4416-1933
e-mail: comercial@catari.com.br
site: www.catari.com.br

ANGOLA

Travessa N'Gola M bandi, s/n
Bairro da Madeira
Município da Maianga
Luanda Angola

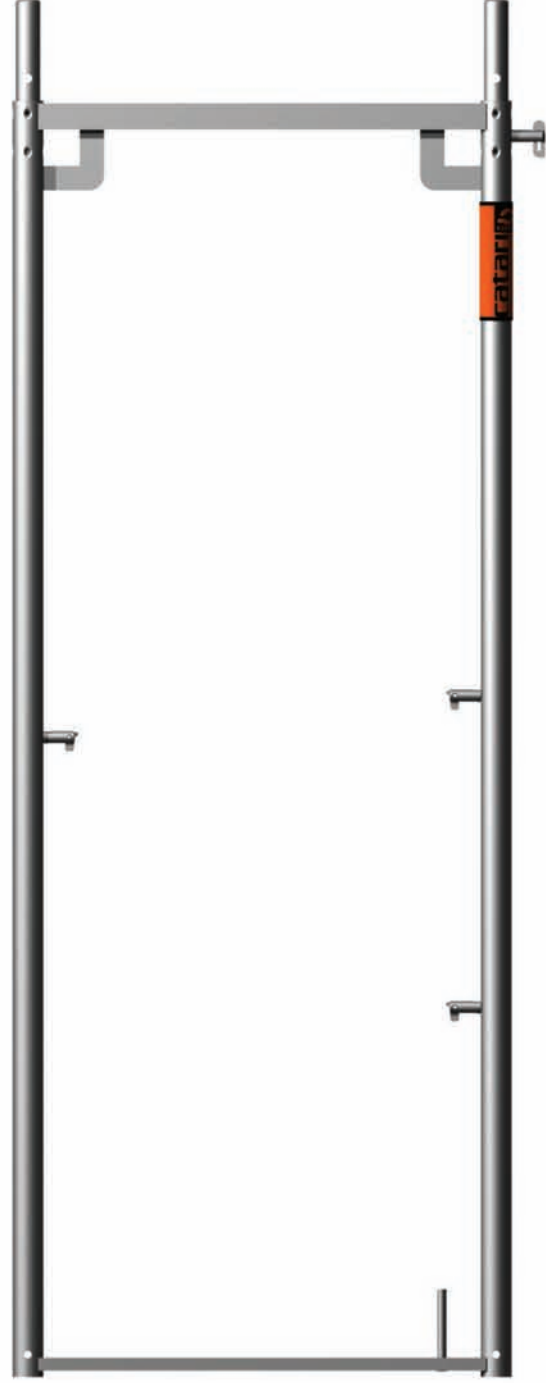
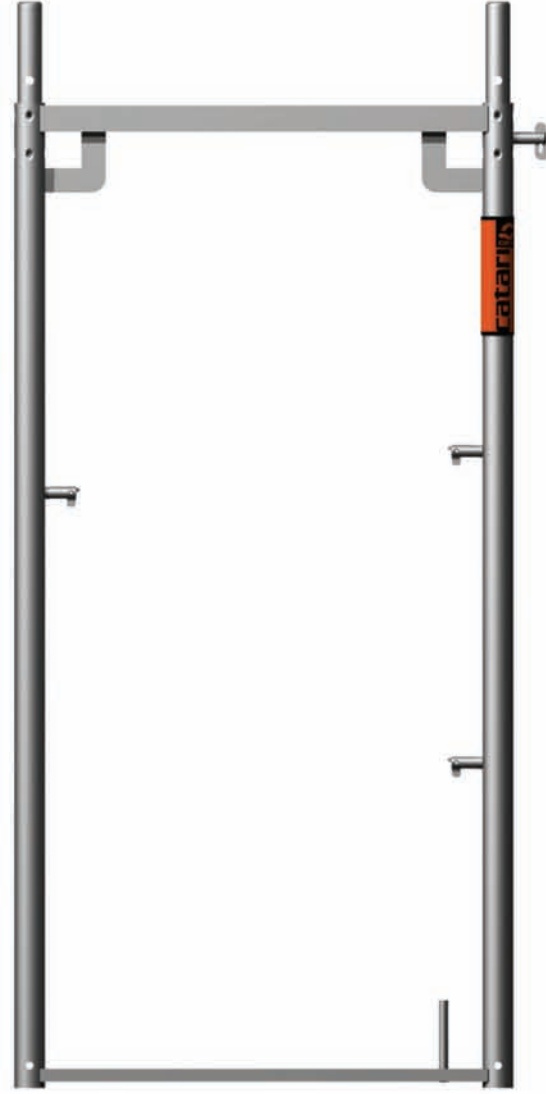
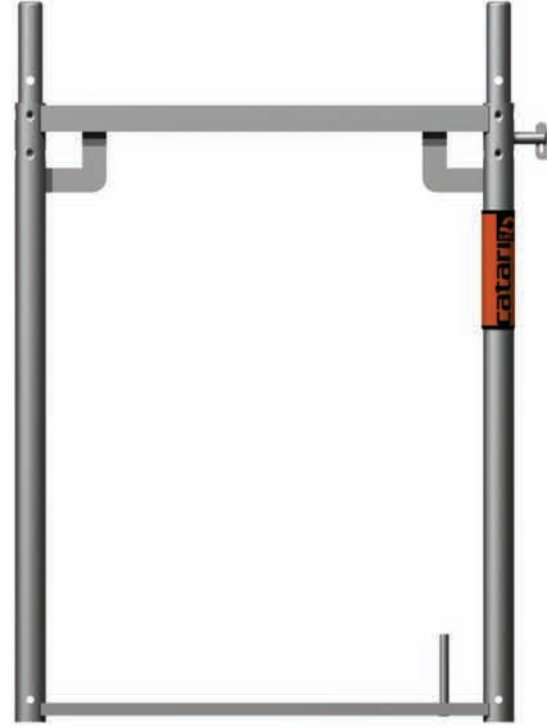
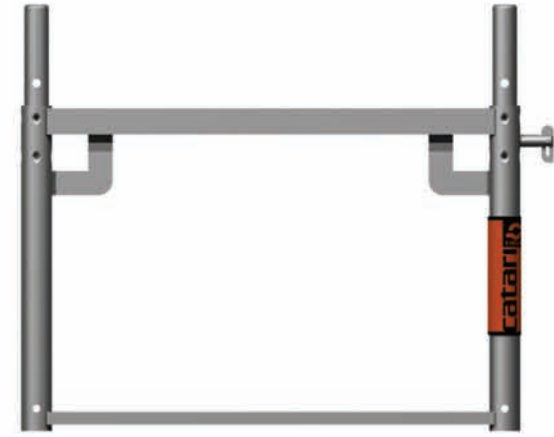
tel.: +244 222 680 050
fax: +244 222 680 051
e-mail: angola@catari.pt
site: www.catari.pt

CHILE

Avenida Alemania 355, 2º piso
Los Angeles - VIII
Región Bio-Bio, Chile

tel.: 056-043-521557
056-043-521558
e-mail: info@catari-chile.cl
site: www.catari-chile.cl

SCAFFOLDING
FA[®]-48



GENERAL FEATURES

FAÇADE MAINTENANCE SPECIAL PROJECTS

FA-48® Façade Scaffolding was designed thinking about daily basis situations workers face on Construction & Building Industry. Having in mind essential concepts like Safety, Flexibility and Reliability, Catari developed an Outstanding equipment, gathering multiple combinations and unmatched quality, giving accurate answers to most demanding professionals' needs..

SAFETY

FA-48® fully complies EEC 76-502-90 Norm and the Harmonization Document HD1000. Manufactured with first quality materials and with a wide range of accessories, assuring needed reliability, FA-48® system is a light weight solution due to its short in number basic elements needs.

FLEXIBILITY

FA-48® System is adaptable to all kinds of usage, answering, effectively, to most specific needs while working on a Façade.

VERSATILITY

FA-48® allows working on the most complex in geometry configuration Façades, with all security. This is why so many professionals consider this solution as "indispensable" on rehabilitation jobs, for buildings and structures maintenance, for covering applications and civil construction in general

MULTIPLE SOLUTIONS

While developing FA-48® many considerations were taken into account, especially those in on-the-job environment. Accessories like ledgers, consoles, supporting transoms, external staircases, etc., allows a confident and safe approach to high level of difficulty mounting projects.

QUALITY

All metallic FA-48® elements are made of hot-dip galvanized steel, which gives a high corrosion resistance, increasing significantly its lifetime. European Norm 12810-1 was approved by The European Committee for Standardization (CEN) on September the 3rd of 2003. This document replaced 1998's HD1000, which regulates generic and performance requisites for structural conception and assessing of prefabricated façade's scaffolding systems. That Norm demands that all equipments complies all expressed requisites, guaranteeing workers a high security level, stability loading capability, easy assembly and reliability.



SYSTEM COMPATIBLE WITH THE
MULTIDIRECTIONAL SCAFFOLDING
"UNIVERSAL SYSTEM".

”

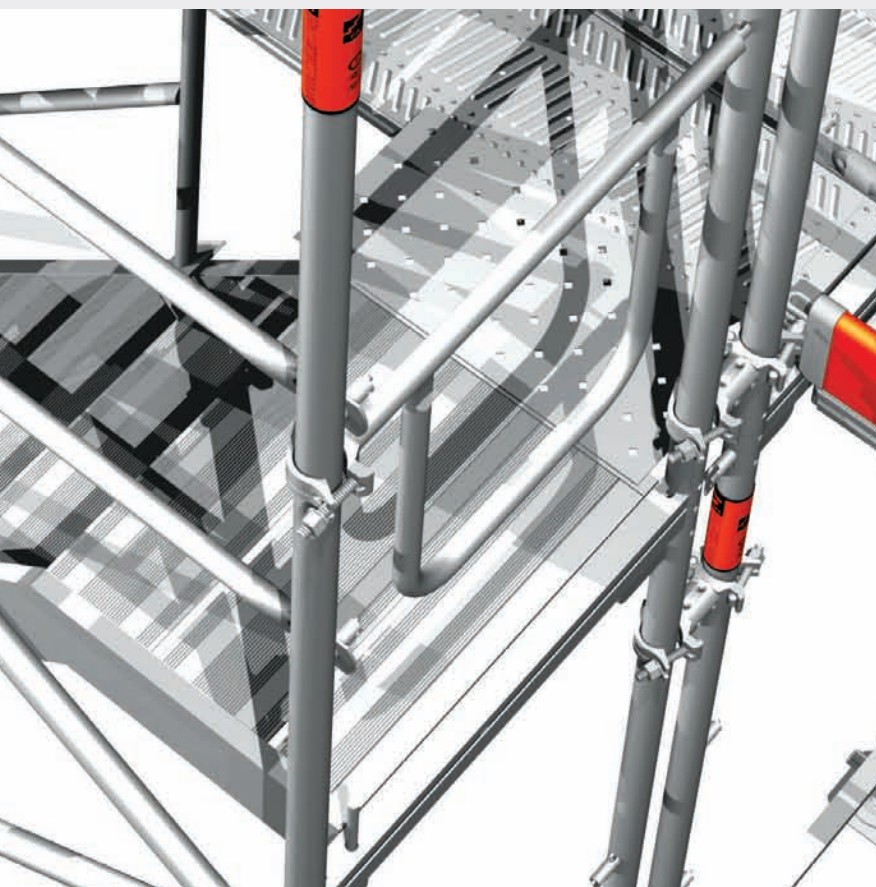
ACCESS TO WORKING LEVELS

EXTERNAL
STAIRCASE

Assembling an external Access Block to different working levels, allows one to carry equipments and walk free, fast and safely up and down the working area.
Depending on the job, particularly on equipments to be carry up and down, one can choose between: internal accessing stairs (trap platforms with integrated hatch), or external accessing stairs

SAFE CONNECTION
BETWEEN
WORKING LEVELS

Catari developed, under its concept and model of Safety, an accessory which allows leveling the staircase level and working areas' platforms.



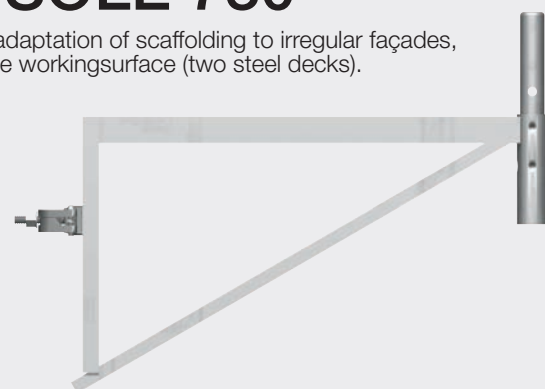
THE FA-48 IS A
HIGH LEVEL EQUIPMENT.
TESTS PROVE IT.

”

GENERAL FEATURES

FAÇADE CONTOUR CONSOLE 730

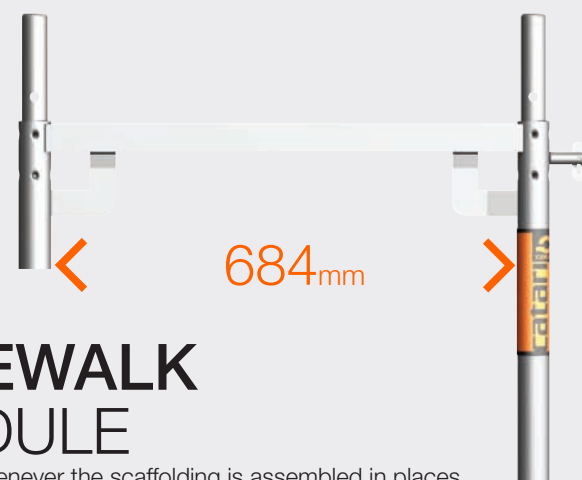
Enables the adaptation of scaffolding to irregular façades, expanding the working surface (two steel decks).



SCAFFOLDING FRAME

500_1000_1500_2000

The shape of the profile frame has an important influence on stability, weight and maintenance. FA-48 system has a high stable performance with minimum weight.



SIDEWALK MODULE

It is used whenever the scaffolding is assembled in places where it is necessary to limit pedestrian passages, for example, in pedestrian sidewalks.



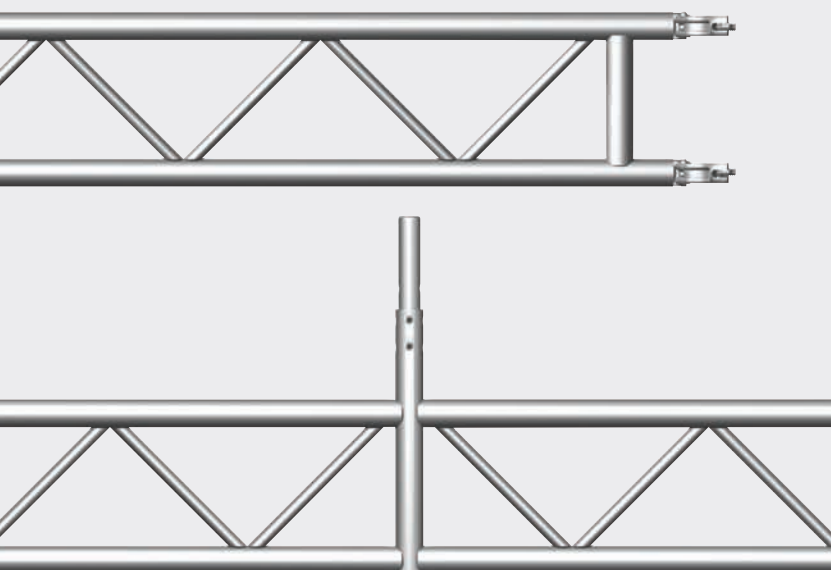
TECHNICAL FEATURES

TECNHICAL FEATURES SUSPENDED SCAFFOLDING

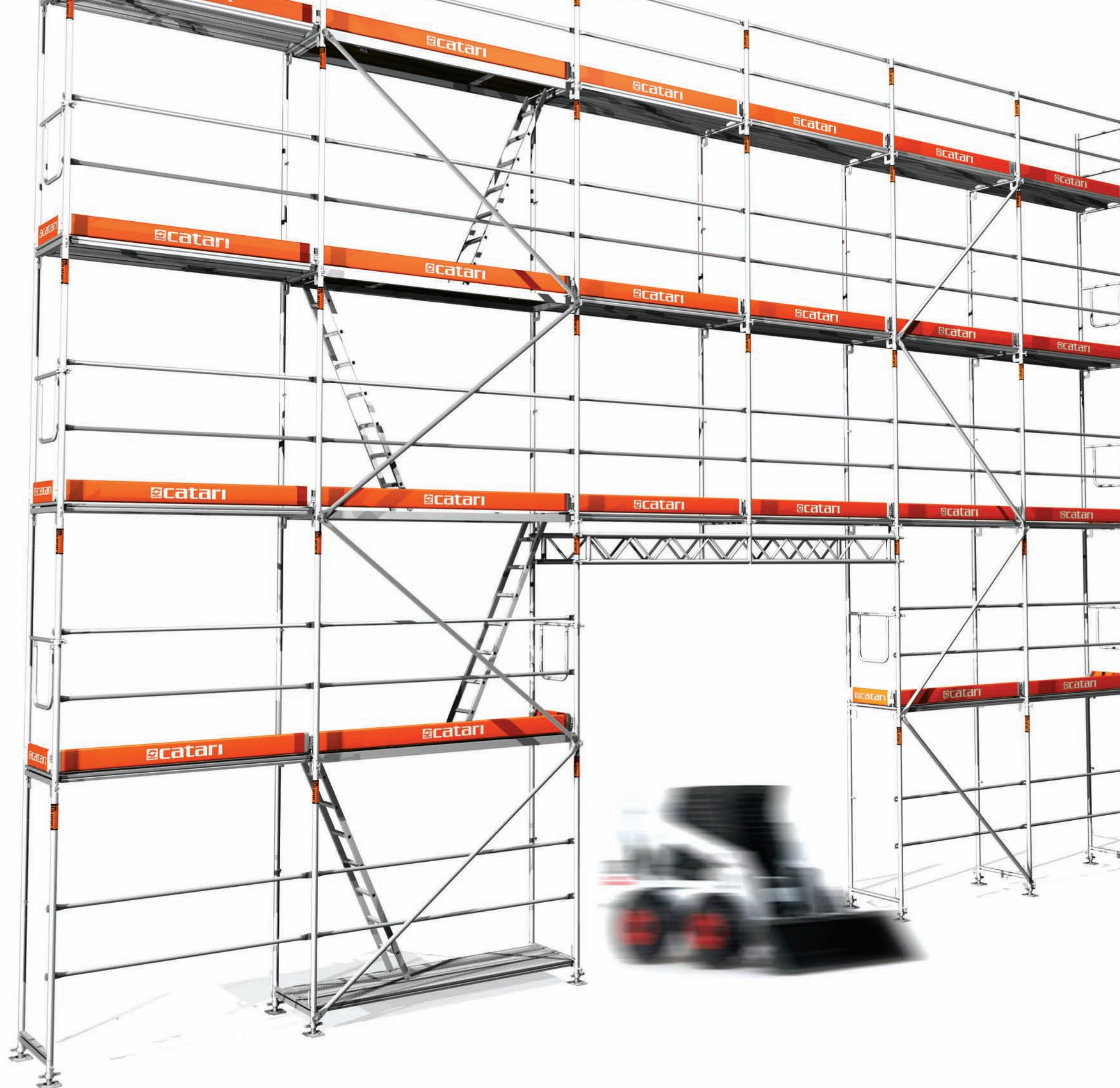
Among a wide set of FA-48 Scaffolding Accessories on Catari's portfolio, there are some related with "Suspended Scaffolding".

The huge difficulty one might find on solving obstacles, both on working façade and base floor, becomes easy to solve through the usage of bracket and parallel transoms. Bracket Transom allows to "bridge" space gaps up to 6.14m long. This is possible thanks to the couplers welded on both sides of the transom, connecting scaffolding frames/structures widely separated.

For space gaps over 6.14m, one can use Paralel Transoms, connecting them to the scaffolding structures through couplers.



"Simple solutions, which do not affect the regular scaffolding usage, allows the **creation of solid and stable structures to overcome existing gaps and obstacles.**"



PLATFORM

SCAFFOLDING CLASSES

Based on the harmonization document **EN12810**, depending on the load calculation of platforms, scaffoldings can be classified into the following **6 classes**.



45°90°

SPECIAL PLATFORMS

CONNECTING PLATFORMS

Corners in all kinds of scaffolding is a serious technical problem. In order to increase the quality and safety of the FA-48 scaffolding,

Catari developed a new connecting platform with varying angles between 15° and 45°, adjusting itself to the system.



a) TABLE OF CATARI'S PLATFORMS LOADS FA.PL

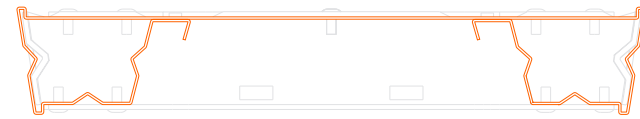
dimensions (mm)	net weight (Kg)	distributed load (kN/m ²)
2070x320	11.30	6.00
2570x320	13.80	6.00
3070x320	16.20	3.00

b) TABLE OF CATARI'S PLATFORMS LOADS FA.PL.320

dimensions (mm)	net weight (Kg)	distributed load (kN/m ²)
2070x320	11.50	6.00
2570x320	15.10	3.00
3070x320	22.10	2.00



cross section of the platform a



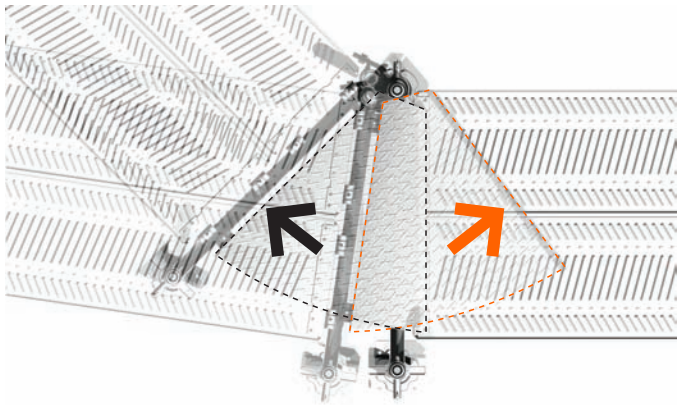
cross section of the platform b

loads definition
01_ uniformly distributed load
02_ concentrated load

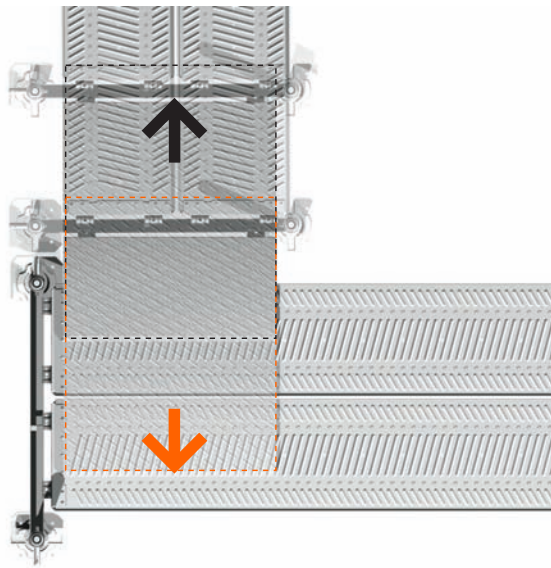


c) TABLE CALCULATION LOADS OF PLATFORMS

class	uniformly distributed load (kN/m ²)	concentrated load on a surface of 500x500mm (kN)	concentrated load on a surface of 200x200mm (kN)
01	0.75	1.50	1.00
02	1.50	1.50	1.00
03	2.00	1.50	1.00
04	3.00	3.00	1.00
05	4.50	3.00	1.00
06	6.00	3.00	1.00



Within the same principle of scaffolding system improvement, the resolution of square corners with this new platform, simplifies the assembly process and required security standards at work.



SAFETY FEATURES

DIAGONALS STABILITY

Scaffolding safety reveals itself through the level of achieved stability, not only verifying EN12810 while manufacturing, but also on a correct mounting procedure, maximizing scaffolding performance and guarantees. This way, one must address in advance diagonals and anchorage importance, regarding safety observation.

Diagonals have three main functions:

Stability - once they support part of structure's efforts (tensions and weight);

Strengthening - once they give steadiness to the structure even when there are strong winds;

Geometry - keeping scaffolding's structure geometry, avoiding its deformation.

Together with Diagonals, working platforms have important role on horizontal stability.

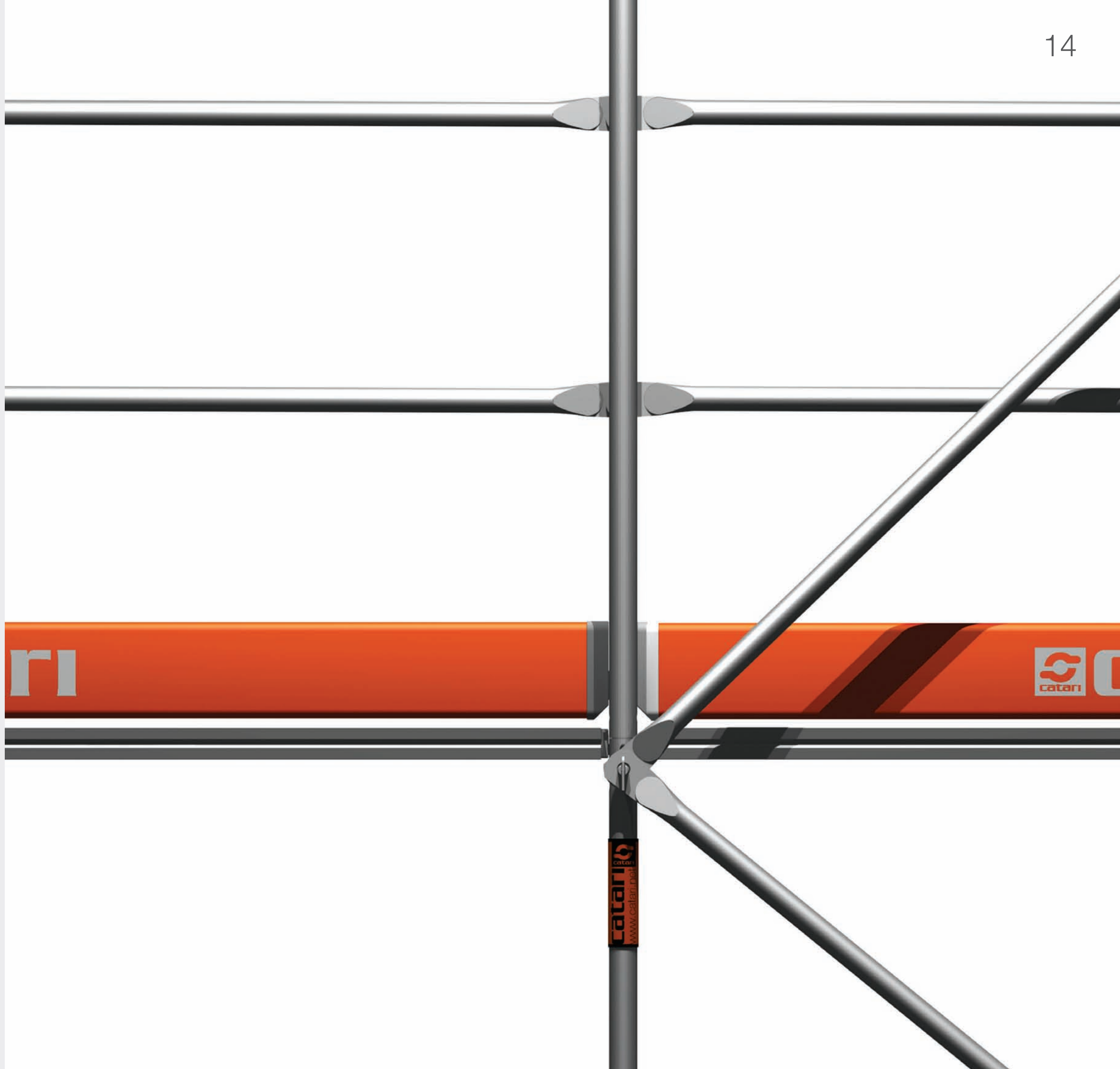
On the vertical plan, scaffolding steadiness is achieved by diagonals and transoms (or guard rails) working together. Diagonals must be used each 3 scaffolding "steps" or modules (one module is composed by two columns of frames with platforms connecting them...)

ANCHORAGE ANCHOR CLAMP

Anchorage is a connecting point of scaffolding to the façade. It's function is to guarantee scaffolding immobilization, on situations of strong wind or any other efforts caused by any other situation. In general, anchorage holds up efforts (loads) parallel and orthogonal to façade's surface.

Every anchorage point must be checked, especially in terms of solidity.

General rule is that one point of anchorage must be placed for each 24m² of "uncovered" scaffolding and for each 12m² when the scaffolding is covered.



DIRECTIONS FOR USE AND SAFETY



The security of each worker is an essential value and we consider indispensable the accomplishment of the security, Hygiene and Health in work Plan. Therefore, this should be considered at work as a group task and not as set of imposed administrative procedures. The scaffolding construction in a safe way implies the responsibility of all the intervenient parts in its conception and construction process. It is essential to guarantee its security as well as users or others who may be affected by its actions. Scaffoldings without security are an important cause for accidents. The risks are bigger for those who don't know or don't prevent them. Avoid accidents.

Take special care when you begin the scaffolding assembly:

- 1) Confirm if the scaffolding is adequate concerning height, the number of people that are going to use it, the job that has to be done and the protections required by law;
- 2) Check ground's solidity; check and use resistant bases to support the loads transmitted by the plumb line. Even if ground is solid you should be aware that rain may reduce considerably its resistance capacity. Therefore, it is essential to distribute the loads transmitted by the plumb lines by elements of higher sections and strength, interpolated between the bases and the ground in order to reduce the tensions invested;
- 3) Observe the manual of assembly instructions and, if it is the case, follow the imposed dispositions by the given project;

- 4) Use the security individual protection equipments;
- 5) Assure the adequate anchorage using the prescribed moorings; these should be done in stable and resistant zones such as those of concrete. You shouldn't do anchorage in points which don't guarantee the necessary resistant capacity. Don't forget that to determine the number of anchorages you should know if the scaffolding will be lined with protection net; anchorages should be reinforced due to the accidental action of the wind. If necessary you should consult a specialized technician to do the necessary calculations.
- 6) Don't allow intervals superior to 20cm between the wall and the scaffolding ground and establish interior guard rails when the span is superior.
- 7) Establish appropriate accessibilities between the different levels in the scaffoldings.

RULES AND PROCEEDURES

PROCEEDURES OF ASSEMBLY



Placing Leveling Jacks

Placement of Leveling Jacks must be done according terrain features. One can set innumerous heights combinations thanks to the threaded set on the Level Jacks; Fit in Initiation Brackets on Leveling Jacks, following placement of first level of steel decks.



Placing higher levels Scaffolding Frames

Varying according to project's geometry and needed steel decks' lengths (0.73m, 1.07m, 1.57m, 2.07m, 2.57m, 3.07m);

Ledgers

Place ledgers (ledgers and top ledgers) to "close" scaffolding structure.



Placing Steel Decks

Fit in steel decks on the initiation brackets' rail;

Fitting Scaffolding Frames

Fit in scaffolding frames on leveling jacks.



Toe Boards

Fit in toe boards from scaffolding second level;

Anchorage

Place anchorage elements, perpendicularly to steel decks, taking into account aside (on this page) considerations.



Placing Diagonals

Place a diagonal fitting it, upper level, on the scaffolding frame's pin and, lower level, on the initiation bracket's pin, granting system's vertical stability and steadiness.

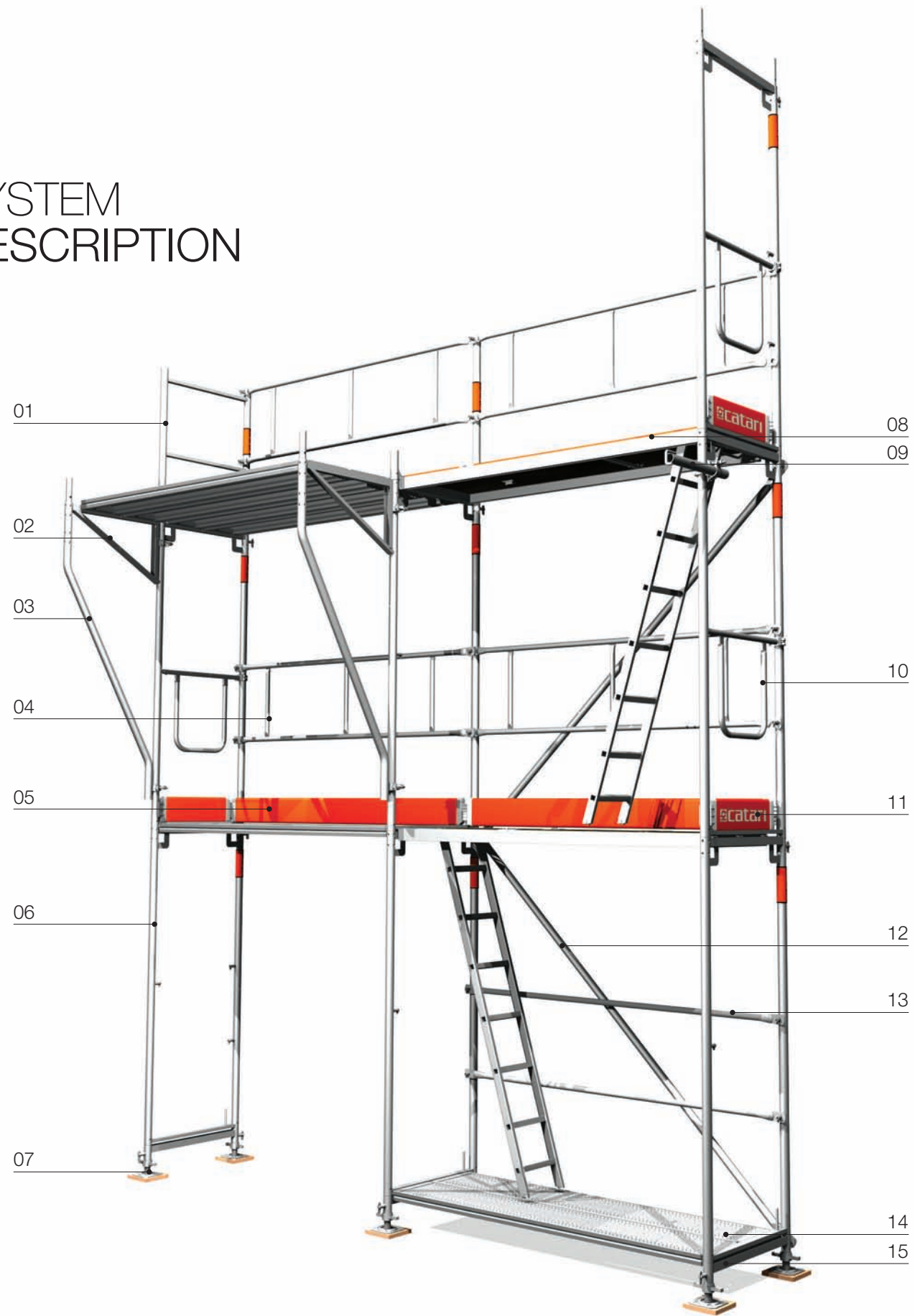
Transom or Double Guard Rail

This step sets beginning of safety elements. One can choose between two transoms or one double guard rail. These elements have double function of keeping worker's (while erecting and working) safety and stability and steadiness for the scaffolding structure itself.

Placing Access Trap Platform

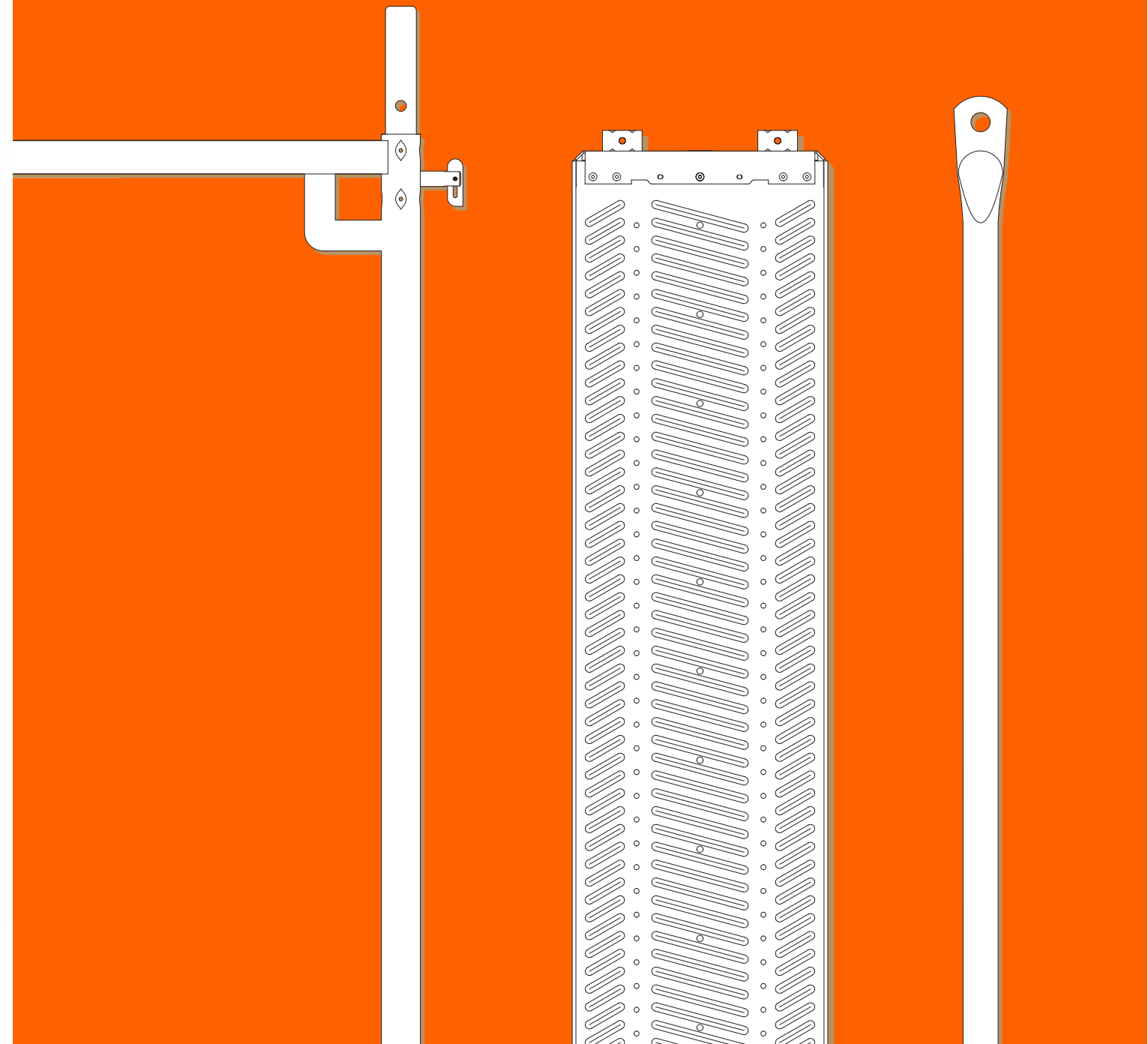
For a higher safety level, access trap platform's ladder should be parallel with the diagonal;

SYSTEM DESCRIPTION



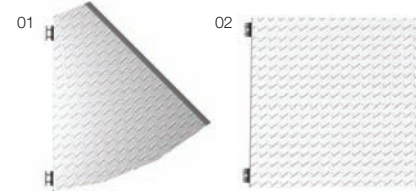
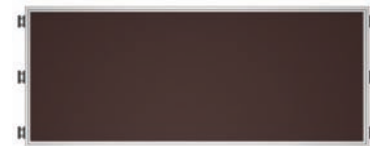
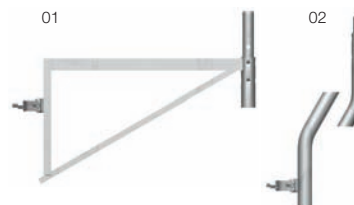
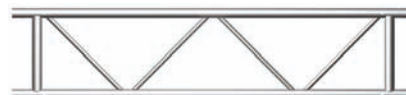
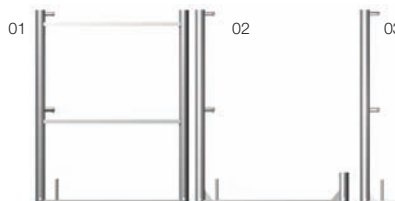
- | | |
|---------------------------|-------------------------|
| 01 top ledger | 08 access trap platform |
| 02 console | 09 anchor clamp |
| 03 console's bracket tube | 10 top guard rail |
| 04 double guard rail | 11 top toe board |
| 05 front toe board | 12 diagonal |
| 06 frame | 13 transom |
| 07 leveling jack | 14 steel deck |
| | 15 initiation bracket |

COMPONENTS AND ACCESSORIES





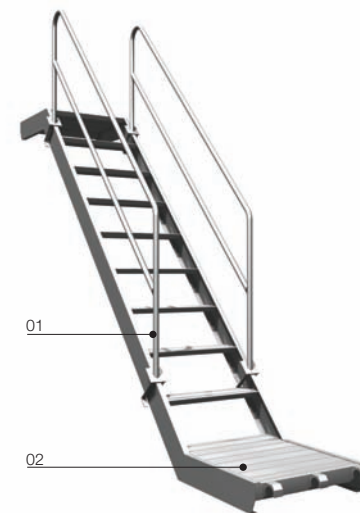
levelling jack			initiation bracket			scaffolding frame			sidewalk frame			transom			double guard rail			top guard rail		
code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)
(01)FA.BI.700.500	H 0.35	2.20	FA.SI.730	L 0.73	3.10	FA.MD.730.500	H 0.50	8.10	FA.MP.1500	H 2.20	37.10	FA.TR.730	L 0.73	1.00	FA.GC.2070	L 2.07	7.70	FA.GT.730	L 0.73	2.70
(02)AA.BN.500	H 0.50	3.00				FA.MD.730.1000	H 1.00	11.50				FA.TR.1070	L 1.07	1.50	FA.GC.2570	L 2.57	9.60			
(02)AA.BN.700	H 0.70	3.60				FA.MD.730.1500	H 1.50	14.70				FA.TR.1570	L 1.57	2.20	FA.GC.3070	L 3.07	10.70			
						FA.MD.730.2000	H 2.00	18.10				FA.TR.2070	L 2.07	3.40						
												FA.TR.2570	L 2.57	4.30						
												FA.TR.3070	L 3.07	5.10						

[illegible]

top toe board			front toe board (wood)			PVC front toe board			top ledger			paralel transom			bracket transom			console/console's bracket tube		
code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)
(01)FA.RT.730	L 0.73	1.70	FA.RF.1070	C 1.07	2.70	FA.RFP.1070	L 1.07	1.10	(01)FA.PT.730	L 0.73	10.40	AA.VP.2000	C 2.00	19.70	FA.VS.4140	C 4.14	44.00	(01)FA.CL.320	L 0.32	2.90
(02)FA.RTP.730	L 0.73	0.70	FA.RF.1570	C 1.57	4.00	FA.RFP.1570	L 1.57	1.50	(02)FA.PP.730.1000	H 1.00 x L 0.73	5.30	AA.VP.3000	C 3.00	29.80	FA.VS.5140	C 5.14	53.20	(01)FA.CL.730	L 0.73	5.50
			FA.RF.2070	C 2.07	4.80	FA.RFP.2070	L 2.07	3.10	(02)FA.PP.730.2000	H 2.00 x L 0.73	9.50	AA.VP.4000	C 4.00	42.70	FA.VS.6140	C 6.14	62.20	(02)AA.TC	L 2.00	6.90
			FA.RF.2570	C 2.57	5.70	FA.RFP.2570	L 2.57	3.80	(03)FA.PS	H 1.00	4.00	AA.VP.5000	C 5.00	49.20						
			FA.RF.3070	C 3.07	8.00	FA.RFP.3070	L 3.07	5.00				AA.VP.6000	C 6.00	61.40						



accessories										staircase		
code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	code	dimensions (m)	weight (kg)	
(01)AA.OL.120	L 0.12	0.16	(06)AA.AR		0.80	(12)AA.EE		1.30	(16)AA.GA.250	L 0.73	1.00	
(01)AA.OL.190	L 0.19	0.18	(07)AA.OG.48		1.40	(13)FA.FS.320	C 0.32		(16)AA.GA.500	L 0.50	1.90	
(02)AA.BC.80	L 0.08	0.01	(08)AA.OT.48		1.20	(13)FA.FS.730	C 0.73		(16)AA.GA.1000	L 1.00	3.20	
(03)AA.PF		3.50	(09)AA.AD.48		1.50	(14)AA.CA.7300	L 0.73	3.20	(16)AA.GA.1500	L 1.50	4.80	
(04)AA.PS		0.13	(10)AA.AE		0.90	(15)AA.R.N.132/NS			(16)AA.GA.2000	L 2.00	7.00	
(05)AA.AF		0.65	(11)AA.AP			(15)AA.R.N.132/NST						





MADE IN U.E.

