accesus

SCAFFOLD PENDANT: BRAKOO COUNTERWEIGHT DAVIT

ORIGINAL INSTRUCTION MANUAL

This manual must always be available to the user.
Request more copies if you need them.

Índice:

¡DANGER!	
Risk of injury from falling objects, failure, misapplication and/or misuse.	Read the entire instruction manual thoroughly before installation and commissioning of the machine. The instructions and procedures described in this instruction manual must be followed to ensure safe use of the equipment.

1. Information about the manual:

Date of edition:	**Manufacturer**
9ª Edition: 04/2019	**ACCESUS plataformas suspendidas, S.L.** c/ Energia 54 08940 Cornellá de Llobregat (Barcelona) SPAIN Telf.: (+34) 93 475 17 73 www.accesus.es accesus@accesus.es
Industrial property rights: All rights reserved on the ownership of this instruction manual.	

2. Symbols used in this manual:

¡DANGER!	
Type and source of danger	Result: e.g. death or serious injury.
	-Measures to be taken to eliminate the danger

¡IMPORTANT!	
Type and source of danger	Result: e.g. damage to equipment or the environment.
	-Measures to be taken to eliminate any possibility of accident

NOTE
This symbol does not identify with any safety instruction, it gives information to improve compression.

3. General

This instruction manual is intended for operators of the equipment described. This instruction manual must be accessible to the operator at all times. Request more copies if needed.

ACCESUS suspended platforms, S.L. reserves the right to modify the product described in this instruction manual as part of its policy of continuous improvement.

Customers may obtain documentation on other ACCESUS products by requesting the documentation from ACCESUS through the means described in section 1 of this instruction manual. Please visit our website www.accesus.es.

3.1. Glossary and abbreviations used in this manual

C.M.U.	Maximum working load
Electrician	An electrician is a professional who possesses sufficient knowledge or has obtained the necessary qualification through training to know the risks and avoid the danger of working in an electrical environment.
Professional	Operator who handles the equipment
PST	Temporary Suspended Platform

IMPORTANT:

If you have to entrust the equipment described in this manual to sub-contracted personnel or similar, check and apply your obligations under the applicable national regulations on safety at work, particularly with regard to checks and tests before putting it into service.

OCCUPATIONAL RISK PREVENTION PLAN:

According to Article 7 of RD 1627/97, each contractor must draw up an occupational health and safety plan in which the provisions contained in the study or basic survey are analysed, studied, developed and supplemented, depending on their own system for carrying out the work. See points 1 and 2 of the aforementioned RD.

4. Description of the equipment

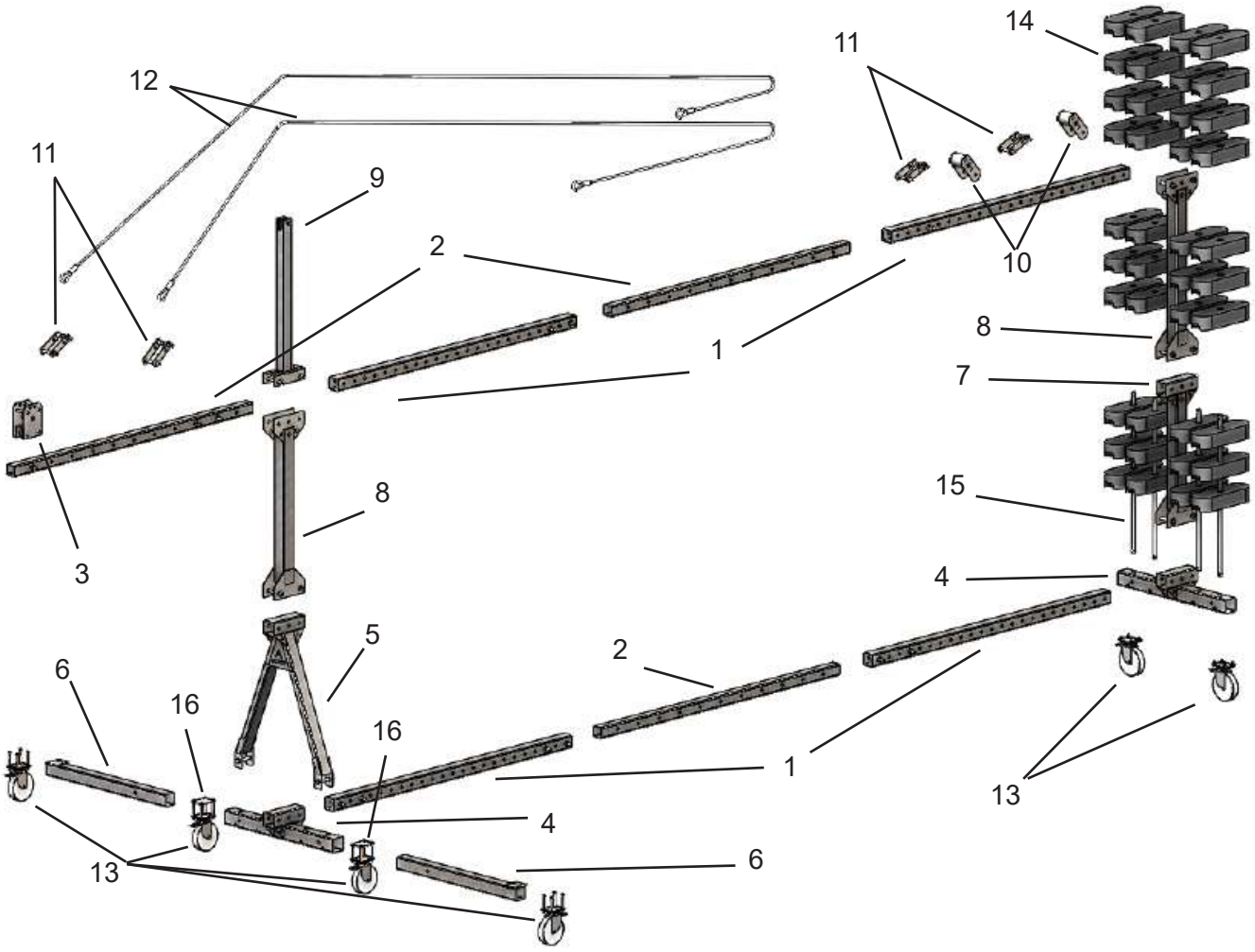
4.1. Application area

BRAKOO counterweight davits are designed to support and maintain in position suspended scaffolding equipped with hoists with a maximum capacity of use of up to 1000kg. The jibs are installed on flat terraces.

The following equipment is excluded from this manual:

-Temporary suspended platforms equipped with appliances with a maximum working capacity exceeding 1000 kg.

4.2. Main components



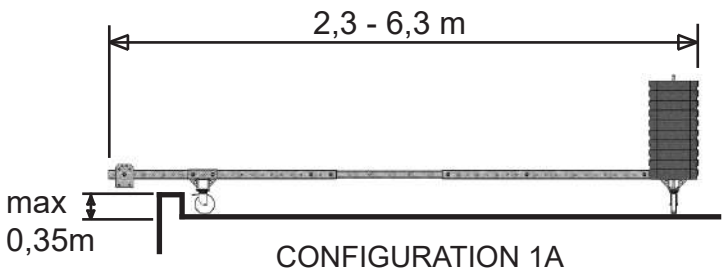
The components of the davit are as follows:

1-Outside telescopic tube.
2-Interior telescopic tube.
3-Cable support head.
4-Base
5-Front legs
6-Forward base extension
7-Shortened
8-Lengthening
9-Cable extension - Mast
10-Cable deflection plate
11-Cable attachment plate
12-Sling with tensioner
13-Wheels
14-Counterweight Accesus 25kg
15-Bar clamping counterweights + pin
16-Wheel Anchorage Plate

4.3. Configurations

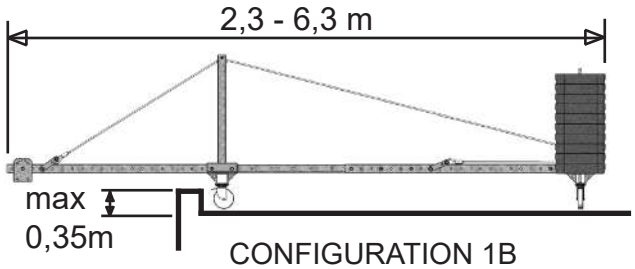
The BRAKOO davit is composed of elements that allow the following configurations.

CONFIGURATION 1A		
Own weight		100 kg (counterbl)
Height under beam		350 mm
Max. Overhang	C.M.U. 300kg	1 m
	C.M.U. 400kg	0,8 m
	C.M.U. 500kg	0,8 m
	C.M.U. 600kg	0,6 m
	C.M.U. 800kg	0,3 m
	C.M.U. 1000kg	-



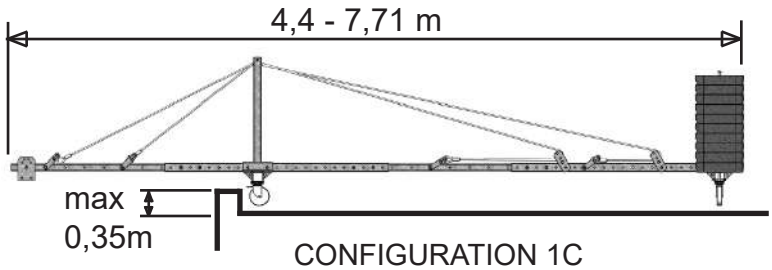
CONFIGURATION 1A
(without bracing)

CONFIGURATION 1B		
Own weight		125 kg (counterbl)
Height under beam		350 mm
Max. Overhang	C.M.U. 300kg	2 m
	C.M.U. 400kg	2 m
	C.M.U. 500kg	2 m
	C.M.U. 600kg	1,8 m
	C.M.U. 800kg	1,2 m
	C.M.U. 1000kg	0,6 m



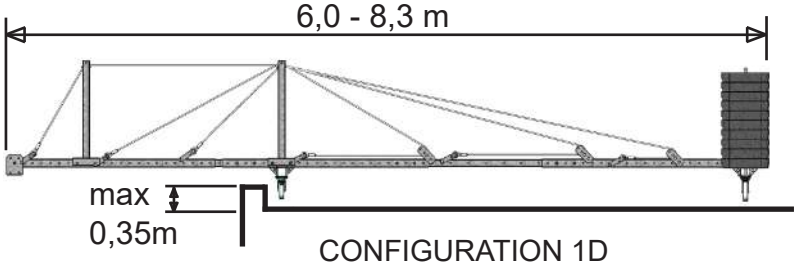
CONFIGURATION 1B
(with single-braced)

CONFIGURATION 1C		
Own weight		160 kg (counterbl)
Height under beam		350 mm
Max. Overhang	C.M.U. 300kg	2,5 m
	C.M.U. 400kg	2,5 m
	C.M.U. 500kg	2,5 m
	C.M.U. 600kg	2,2 m
	C.M.U. 800kg	1,6 m
	C.M.U. 1000kg	1,2 m



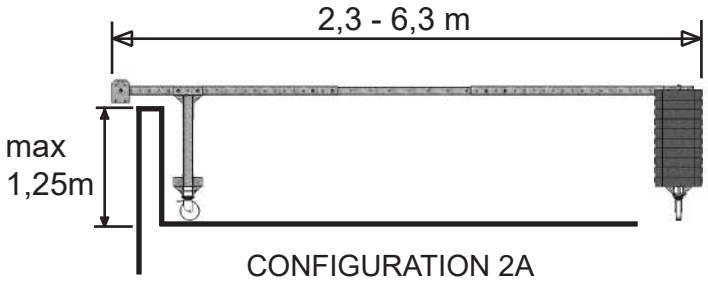
CONFIGURATION 1C
(with double-barred)

CONFIGURATION 1D		
Own weight		200 kg (counterbl)
Height under beam		350 mm
Max. Overhang	C.M.U. 300kg	3,0 m
	C.M.U. 400kg	3,0 m
	C.M.U. 500kg	3,0 m
	C.M.U. 600kg	-
	C.M.U. 800kg	-
	C.M.U. 1000kg	-



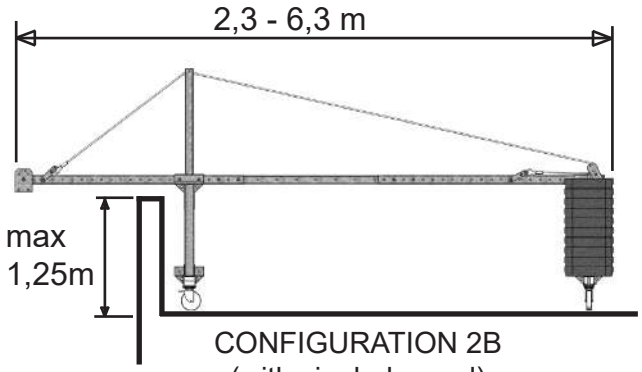
CONFIGURATION 1D
(with triple-barred)

CONFIGURATION 2A		
Own weight		140 kg (counterbl)
Height under beam		1250 mm
Max. Overhang	C.M.U. 300kg	1 m
	C.M.U. 400kg	0,8 m
	C.M.U. 500kg	0,8 m
	C.M.U. 600kg	0,6 m
	C.M.U. 800kg	0,3 m
	C.M.U. 1000kg	-



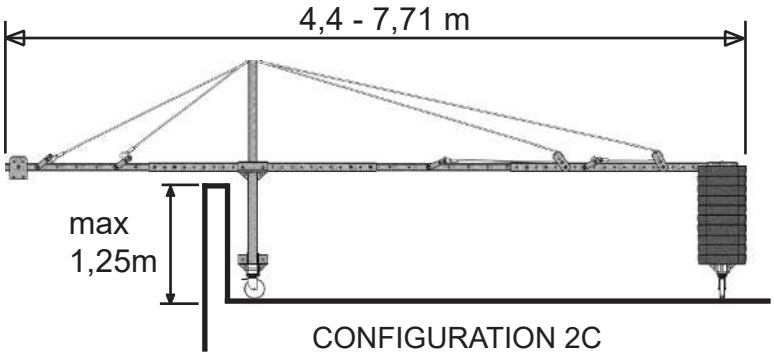
CONFIGURATION 2A
(without bracing)

CONFIGURATION 2B		
Own weight		160 kg (counterbl)
Height under beam		1250 mm
Max. Overhang	C.M.U. 300kg	2 m
	C.M.U. 400kg	2 m
	C.M.U. 500kg	2 m
	C.M.U. 600kg	1,8 m
	C.M.U. 800kg	1,2 m
	C.M.U. 1000kg	0,6 m



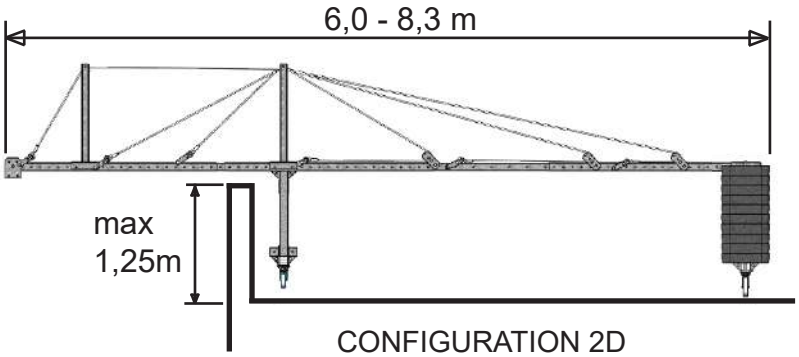
CONFIGURATION 2B
(with single-braced)

CONFIGURATION 2C		
Own weight		195 kg (counterbl)
Height under beam		1250 mm
Max. Overhang	C.M.U. 300kg	2,5 m
	C.M.U. 400kg	2,5 m
	C.M.U. 500kg	2,5 m
	C.M.U. 600kg	2,2 m
	C.M.U. 800kg	1,6 m
	C.M.U. 1000kg	1,2 m



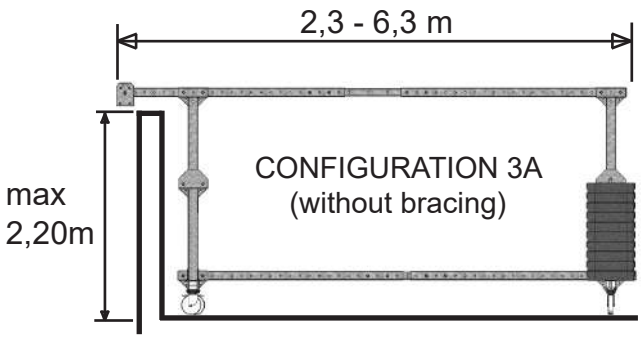
CONFIGURATION 2C
(with double-barred)

CONFIGURATION 2D		
Own weight		235 kg (counterbl)
Height under beam		1250 mm
Max. Overhang	C.M.U. 300kg	3,0 m
	C.M.U. 400kg	3,0 m
	C.M.U. 500kg	3,0 m
	C.M.U. 600kg	-
	C.M.U. 800kg	-
	C.M.U. 1000kg	-

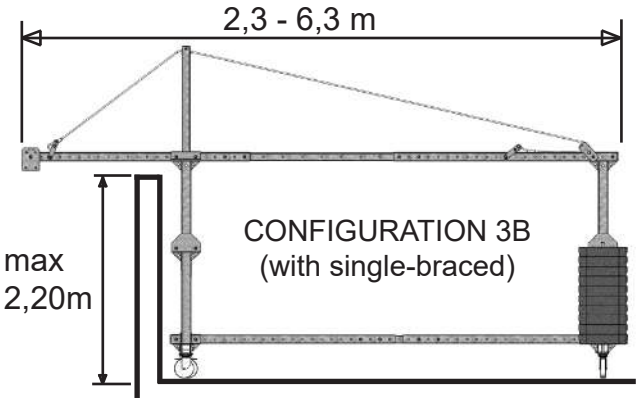


CONFIGURATION 2D
(with triple-barred)

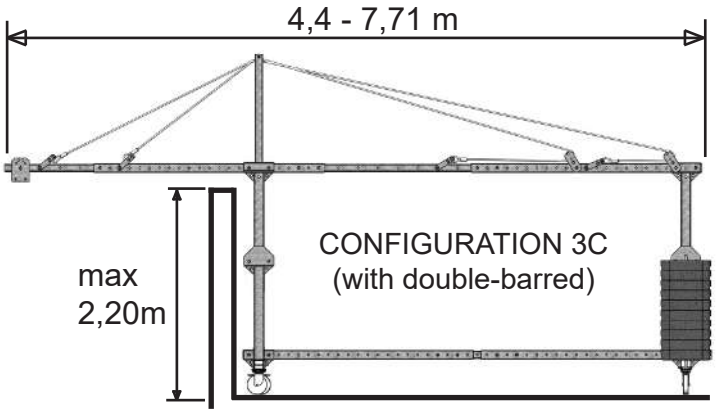
CONFIGURATION 3A		
Own weight		250 kg (counterbl)
Height under beam		2200 mm
Max. Overhang	C.M.U. 300kg	1 m
	C.M.U. 400kg	0,8 m
	C.M.U. 500kg	0,8 m
	C.M.U. 600kg	0,6 m
	C.M.U. 800kg	0,3 m
	C.M.U. 1000kg	-



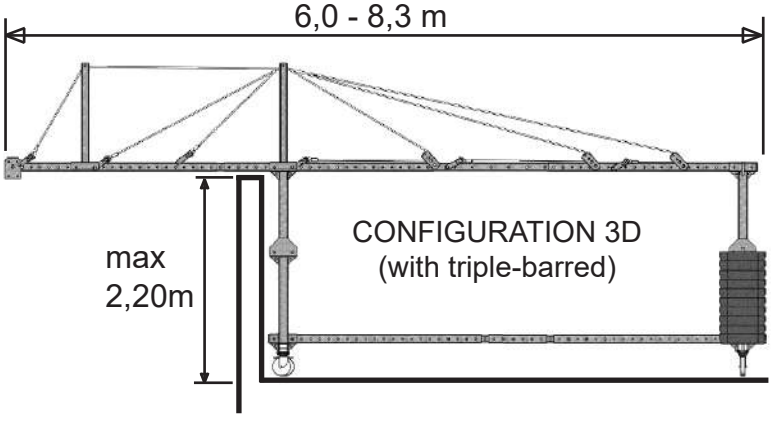
CONFIGURATION 3B		
Own weight		275 kg (counterbl)
Height under beam		2200 mm
Max. Overhang	C.M.U. 300kg	2 m
	C.M.U. 400kg	2 m
	C.M.U. 500kg	2 m
	C.M.U. 600kg	1,8 m
	C.M.U. 800kg	1,2 m
	C.M.U. 1000kg	-



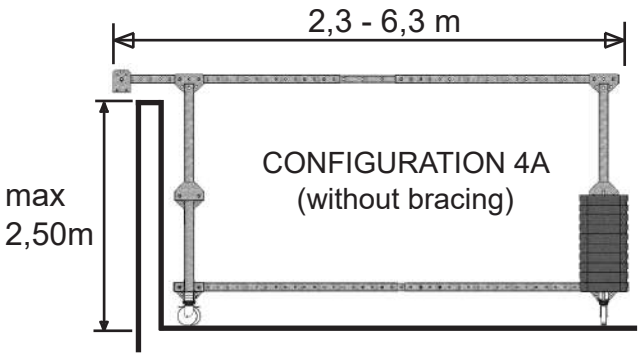
CONFIGURATION 3C		
Own weight		310 kg (counterbl)
Height under beam		2200 mm
Max. Overhang	C.M.U. 300kg	2,5 m
	C.M.U. 400kg	2,5 m
	C.M.U. 500kg	2,5 m
	C.M.U. 600kg	2,2 m
	C.M.U. 800kg	1,6 m
	C.M.U. 1000kg	-



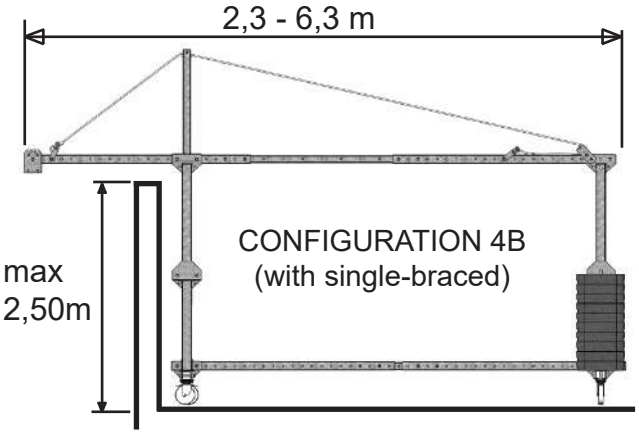
CONFIGURATION 3D		
Own weight		350 kg (counterbl)
Height under beam		2200 mm
Max. Overhang	C.M.U. 300kg	3,0 m
	C.M.U. 400kg	3,0 m
	C.M.U. 500kg	3,0 m
	C.M.U. 600kg	-
	C.M.U. 800kg	-
	C.M.U. 1000kg	-



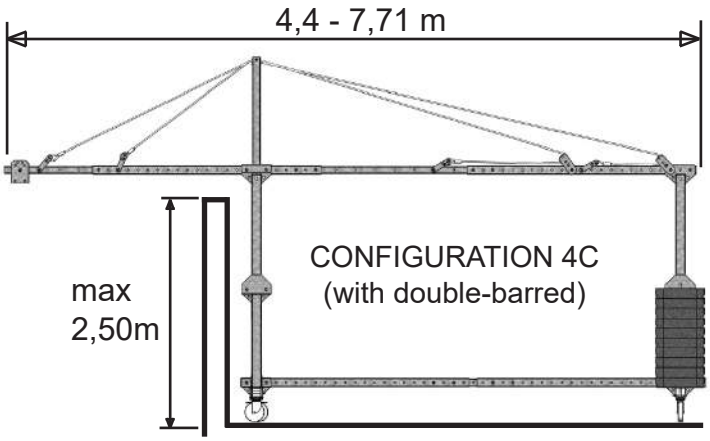
CONFIGURATION 4A		
Own weight		255 kg (counterbl)
Height under beam		2500 mm
Max. Overhang	C.M.U. 300kg	1 m
	C.M.U. 400kg	0,8 m
	C.M.U. 500kg	0,8 m
	C.M.U. 600kg	0,6 m
	C.M.U. 800kg	0,3 m
	C.M.U. 1000kg	-



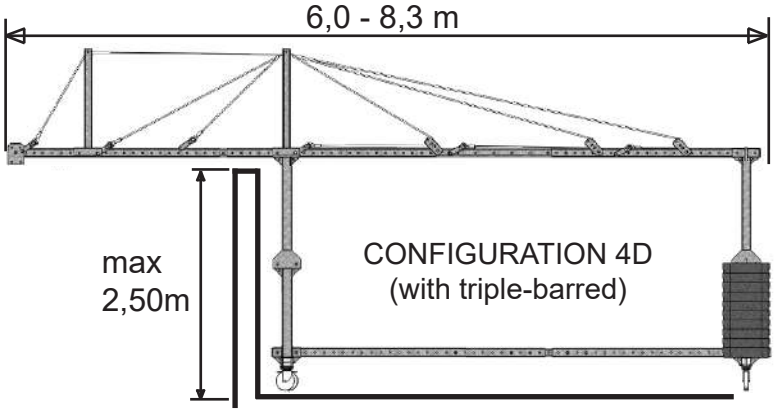
CONFIGURATION 4B		
Own weight		280 kg (counterbl)
Height under beam		2500 mm
Max. Overhang	C.M.U. 300kg	2 m
	C.M.U. 400kg	2 m
	C.M.U. 500kg	2 m
	C.M.U. 600kg	1,8 m
	C.M.U. 800kg	1,2 m
	C.M.U. 1000kg	-



CONFIGURATION 4C		
Own weight		315 kg (counterbl)
Height under beam		2500 mm
Max. Overhang	C.M.U. 300kg	2,5 m
	C.M.U. 400kg	2,5 m
	C.M.U. 500kg	2,5 m
	C.M.U. 600kg	2,2 m
	C.M.U. 800kg	1,6 m
	C.M.U. 1000kg	-



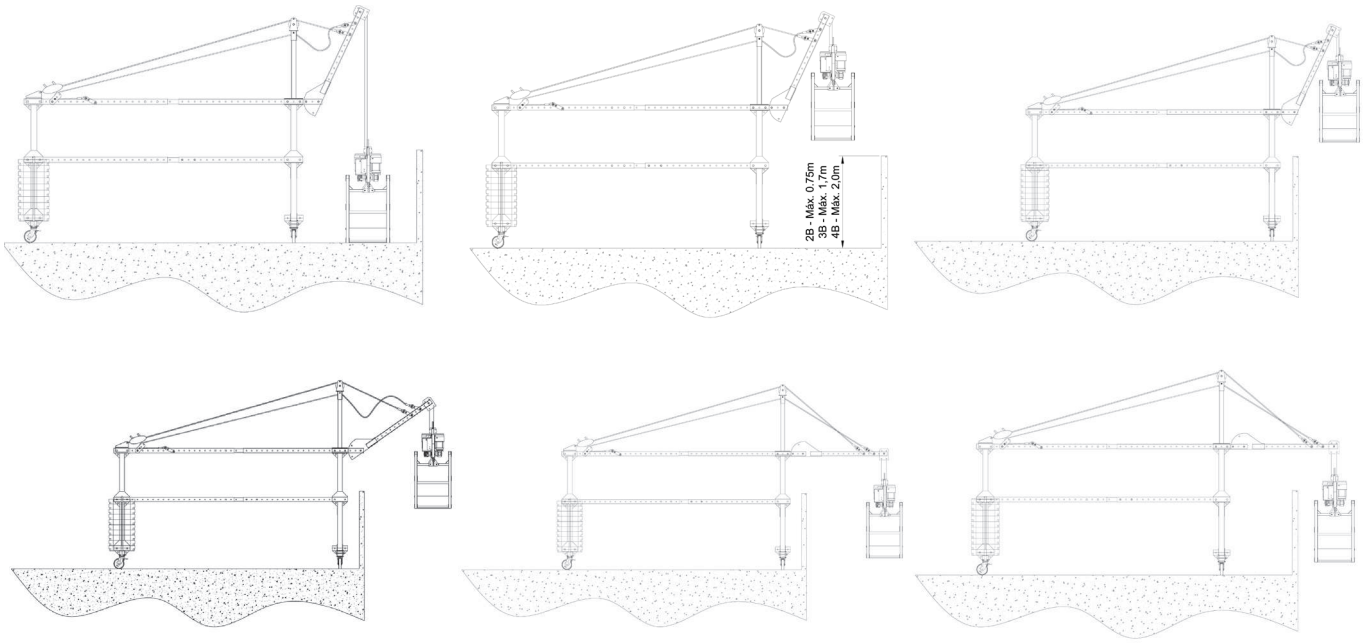
CONFIGURATION 4D		
Own weight		355 kg (counterbl)
Height under beam		2500 mm
Max. Overhang	C.M.U. 300kg	3,0 m
	C.M.U. 400kg	3,0 m
	C.M.U. 500kg	3,0 m
	C.M.U. 600kg	-
	C.M.U. 800kg	-
	C.M.U. 1000kg	-



4.3.1. Swing arm configuration

The components and controls with the swing arm configuration are intended to facilitate the installation of a platform suspended from the upper terrace.

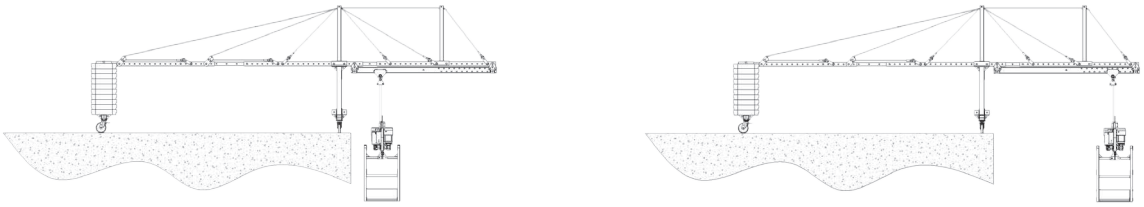
All the information about this configuration is given in ANNEX I to this instruction manual (MI200033 APPENDIX I).



4.3.2. Beam track configuration

The components and manoeuvres with the beam track configuration are designed to facilitate the installation, access and movement of a platform suspended from an upper terrace.

All the information about this configuration is in ANNEX II to this instruction manual (MI200033 ANNEX II).



4.4. Tips for commissioning

¡IMPORTANT!	
Risk of injury from falling objects, falling to different levels and/or breakage.	Risk of death due to falling objects, falling to different levels and/or breakage.
	-Before assembling the davits, ensure that the support surfaces have sufficient capacity to withstand the stresses due to the suspended loads. If necessary, consult the site manager about the permissible loads. The transmitted loads are those described in section 4.5 of this User's Manual

-Regulate the distance between the davits according to the distance between the cables of the suspended platform.

-Regularly check the condition of all davit components. Check the condition of all davit components regularly, especially the condition of the cable tensioning system. Use only original ACCESUS spare parts.

-It is always preferable to reduce the rear load by lengthening the beam as much as possible and reducing flight to a minimum.

-Check that the deck is capable of supporting the loads and stresses caused. The loads transmitted are those described in section 4.5 of this manual.
If necessary, check the permissible loads with the project manager.

-The terrace cladding must always be protected with boards, wood or metal profiles.

-The counterweight must be made with ACCESUS counterweights. To know the value of the counterweighting, observe the label located on the front element or in section 4.5 of this manual.

-The scaffolding must only be hooked up when the davit has been completely installed and correctly counterbalanced.

-It is essential to test the installation in accordance with current regulations after assembly and before use.

-Before use, check that the brakes on each wheel are locked and that the cable is tightened.

-Use only original ACCESUS spare parts.

4.5. Efforts due to suspended loads

-The loads transmitted by the davit depend on:

a) The range.
b) Distance between the front and rear supports.
c) Maximum capacity of the lift.

-Maximum load capacity (CMU or WLL) is 1000kg.

-The stability coefficient is 3.

-The following tables describe the loads transmitted by the davit. The loads described are the total and increased loads.

-2Ra and 2Rb are the reactions in the front and rear support. To obtain the reaction at each wheel it is directly Ra or Rb. The results are in kg.

A qualified person must carry out the check calculation or load test and take responsibility for ensuring that the support surface has sufficient capacity to withstand the stresses due to the suspended loads.

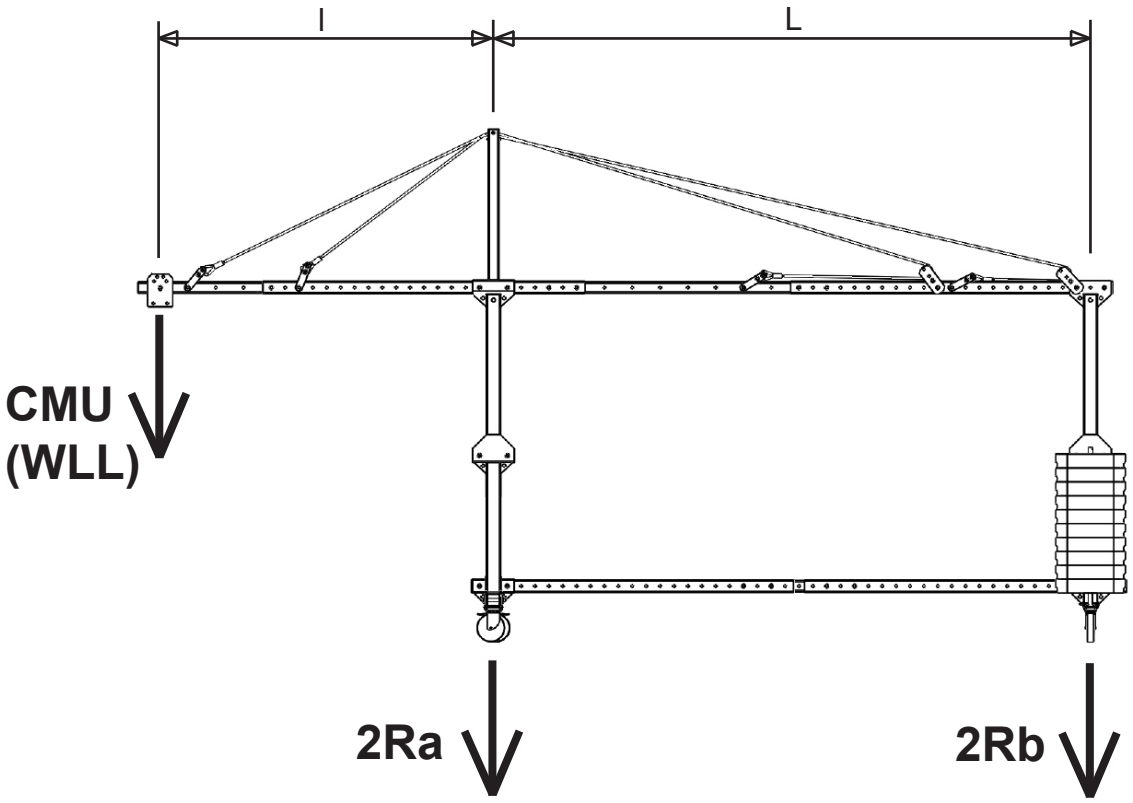
If the desired configuration does not appear in the tables, use the following formulas to perform the calculation of counterweights.

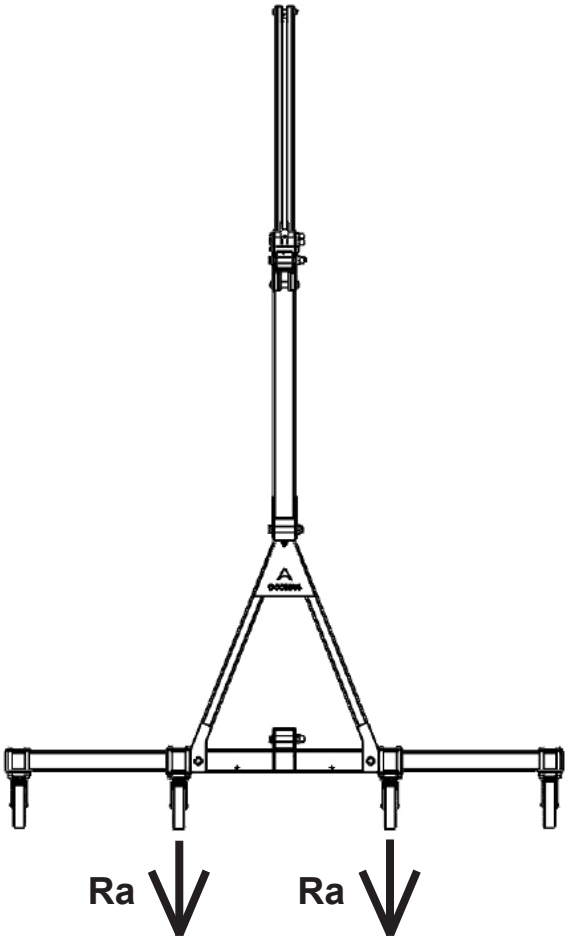
Formulas:

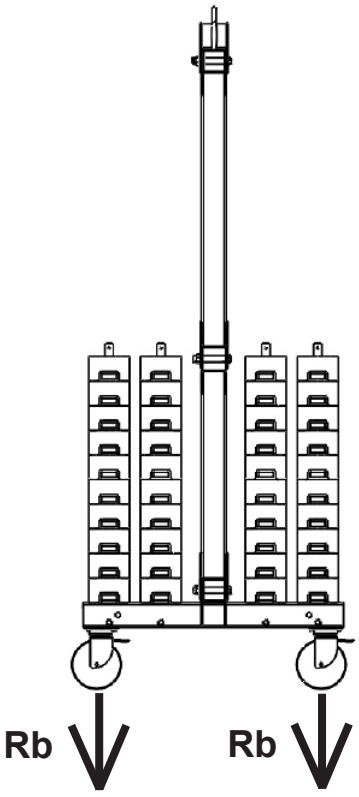
2Ra = (CMU x (L + l)) / L) x 3

2Rb = (CMU x l / L) x 3

Nº counterweights = 2Rb / 25


l
L
CMU
(WLL)
2Ra
2Rb


Ra
Ra


Rb
Rb

CARGA MÁXIMA DE UTILIZACIÓN POR ELEVADOR, CMU = 300 KG

Vuelo l (m)		Distáncia entre apoyos L (m)																			Ra máx. rueda(kg)	Rb máx. rueda (kg)
		1,4	1,6	1,8	2	2,2	2,4	2,6	2,8	3	3,2	3,4	3,6	3,8	4	4,2	4,4	4,6	4,8	5	5,2	
SIN arriostramiento	0,3	8	7	6	6	5	5	5	4	4	4	4	3	3	3	3	3	3	3	3	3	630	180
	0,4	11	9	8	8	7	6	6	6	5	5	5	4	4	4	4	4	4	3	3	3	660	210
	0,6	16	14	12	11	10	9	9	8	8	7	7	6	6	6	6	5	5	5	5	5	730	280
	0,8	21	18	16	15	14	12	12	11	10	9	9	8	8	8	7	7	7	6	6		790	340
	1	26	23	20	18	17	15	14	13	12	12	11	10	10	9	9	9	8	8			860	410
CON arriostramiento **simple**	1,2	31	27	24	22	20	18	17	16	15	14	13	12	12	11	11	10	10				920	470
	1,4	36	32	28	26	23	21	20	18	17	16	15	14	14	13	12	12					980	530
	1,6		36	32	29	27	24	23	21	20	18	17	16	16	15	14						980	600
	1,8			36	33	30	27	25	24	22	21	20	18	18	17							980	660
	2			40	36	33	30	28	26	24	23	22	20	19								1030	730
CON arriostramiento **doble**	2,2				40	36	33	31	29	27	25	24	22	21	20	19	18	18	17			1030	790
	2,4					40	36	34	31	29	27	26	24	23	22	21	20	19	18			1020	860
	2,5						38	35	33	30	29	27	25	24	23	22	21	20	19			1000	890
CON arriostramiento **triple**	2,7							38	35	33	31	29	27	26	25	24	23	22	21	20		1000	950
	3								39	36	34	32	30	29	27	26	25	24	23	22		1020	1050

Número de contrapesos **por pescante**

CARGA MÁXIMA DE UTILIZACIÓN POR ELEVADOR, CMU = 400 KG

Vuelo l (m)		Distáncia entre apoyos L (m)																			Ra máx. rueda(kg)	Rb máx. rueda (kg)
		1,4	1,6	1,8	2	2,2	2,4	2,6	2,8	3	3,2	3,4	3,6	3,8	4	4,2	4,4	4,6	4,8	5	5,2	
SIN arriostramiento	0,3	11	9	8	8	7	6	6	6	5	5	5	4	4	4	4	4	4	3	3	3	810	210
	0,4	14	12	11	10	9	8	8	7	7	6	6	6	6	5	5	5	5	4	4	4	860	260
	0,6	21	18	16	15	14	12	12	11	10	9	9	8	8	8	7	7	7	6	6	6	940	340
	0,8	28	24	22	20	18	16	15	14	13	12	12	11	11	10	10	9	9	8	8		1030	430
CON arriostramiento **simple**	1	35	30	27	24	22	20	19	18	16	15	15	14	13	12	12	11	11	10			1110	510
	1,2		36	32	29	27	24	23	21	20	18	17	16	16	15	14	14	13				1130	530
	1,4			38	34	31	28	26	24	23	21	20	19	18	17	16	16					1150	550
	1,6				39	35	32	30	28	26	24	23	22	21	20	19						1160	560
	1,8					40	36	34	31	29	27	26	24	23	22							1170	570
	2						40	37	35	32	30	29	27	26								1180	580
CON arriostramiento **doble**	2,2								38	36	33	32	30	28	27	26	24	23	22			1160	560
	2,4									39	36	34	32	31	29	28	27	26	24			1160	560
	2,5									40	38	36	34	32	30	29	28	27	25			1180	580
CON arriostramiento **triple**	2,7											39	36	35	33	31	30	29	27	26		1160	560
	3												40	38	36	35	33	32	30	29		1180	580

Número de contrapesos **por pescante**

CARGA MÁXIMA DE UTILIZACIÓN POR ELEVADOR, CMU = 500 KG

Vuelo l (m)		Distáncia entre apoyos L (m)																			Ra máx. rueda(kg)	Rb máx. rueda (kg)
		1,4	1,6	1,8	2	2,2	2,4	2,6	2,8	3	3,2	3,4	3,6	3,8	4	4,2	4,4	4,6	4,8	5	5,2	
SIN arriostramiento	0,3	13	12	10	9	9	8	7	7	6	6	6	5	5	5	5	5	4	4	4	4	990	240
	0,4	18	15	14	12	11	10	10	9	8	8	8	7	7	6	6	6	6	5	5	5	1050	300
	0,6	26	23	20	18	17	15	14	13	12	12	11	10	10	9	9	9	8	8	8	7	1160	410
	0,8	35	30	27	24	22	20	19	18	16	15	15	14	13	12	12	11	11	10	10		1260	510
CON arriostramiento **simple**	1		38	34	30	28	25	24	22	20	19	18	17	16	15	15	14	14	13			1300	550
	1,2			40	36	33	30	28	26	24	23	22	20	19	18	18	17	16				1330	580
	1,4					39	35	33	30	28	27	25	24	23	21	20	20					1310	560
	1,6						40	37	35	32	30	29	27	26	24	23						1330	580
	1,8								39	36	34	32	30	29	27							1320	570
	2									40	38	36	34	32								1330	580
CON arriostramiento **doble**	2,2											39	37	35	33	32	30	29	28			1320	570
	2,4												40	38	36	35	33	32	30			1330	580
	2,5													40	38	36	35	33	32			1330	580
CON arriostramiento **triple**	2,7															39	37	36	34	33		1320	570
	3																	40	38	36		1320	570

Número de contrapesos **por pescante**

CARGA MÁXIMA DE UTILIZACIÓN POR ELEVADOR, CMU = 600 KG

Vuelo l (m)		Distáncia entre apoyos L (m)																			Ra máx. rueda(kg)	Rb máx. rueda (kg)
		1,4	1,6	1,8	2	2,2	2,4	2,6	2,8	3	3,2	3,4	3,6	3,8	4	4,2	4,4	4,6	4,8	5	5,2	
SIN arriostramiento	0,3	16	14	12	11	10	9	9	8	8	7	7	6	6	6	6	5	5	5	5	5	1180	280
	0,4	21	18	16	15	14	12	12	11	10	9	9	8	8	8	7	7	7	6	6	6	1240	340
	0,6	31	27	24	22	20	18	17	16	15	14	13	12	12	11	11	10	10	9	9	9	1370	470
CON arriostramiento **simple**	0,8		36	32	29	27	24	23	21	20	18	17	16	16	15	14	14	13	12	12		1430	530
	1			40	36	33	30	28	26	24	23	22	20	19	18	18	17	16	15			1480	580
	1,2					40	36	34	31	29	27	26	24	23	22	21	20	19				1470	570
	1,4							39	36	34	32	30	28	27	26	24	23					1470	570
	1,6									39	36	34	32	31	29	28						1460	560
	1,8											39	36	35	33							1460	560
CON arriostramiento **doble**	2												40	38	36	35	33	32	30			1480	580
	2,2														40	38	36	35	33			1480	580
Número de contrapesos **por pescante**																							

Table not valid for configurations 1D, 2D, 3D y 4D

CARGA MÁXIMA DE UTILIZACIÓN POR ELEVADOR, CMU = 800 KG

Vuelo l (m)		Distáncia entre apoyos L (m)																			Ra máx. rueda(kg)	Rb máx. rueda (kg)
		1,4	1,6	1,8	2	2,2	2,4	2,6	2,8	3	3,2	3,4	3,6	3,8	4	4,2	4,4	4,6	4,8	5	5,2	
SIN arriostramiento	0,3	21	18	16	15	14	12	12	11	10	9	9	8	8	8	7	7	7	6	6	6	1540	340
CON arriostramiento **simple**	0,4	28	24	22	20	18	16	15	14	13	12	12	11	11	10	10	9	9	8	8	8	1630	430
	0,6		36	32	29	27	24	23	21	20	18	17	16	16	15	14	14	13	12	12	12	1730	530
	0,8				39	35	32	30	28	26	24	23	22	21	20	19	18	17	16	16		1760	560
	1						40	37	35	32	30	29	27	26	24	23	22	21	20			1780	580
	1,2									39	36	34	32	31	29	28	27	26				1760	560
CON arriostramiento **doble**	1,4											40	38	36	34	32	31	30	28			1780	580
	1,6														39	37	35	34	32			1760	560
Número de contrapesos **por pescante**																							

Table not valid for configurations 1D, 2D, 3D y 4D

CARGA MÁXIMA DE UTILIZACIÓN POR ELEVADOR, CMU = 1000 KG

Vuelo l (m)		Distáncia entre apoyos L (m)																			Ra máx. rueda(kg)	Rb máx. rueda (kg)
		1,4	1,6	1,8	2	2,2	2,4	2,6	2,8	3	3,2	3,4	3,6	3,8	4	4,2	4,4	4,6	4,8	5	5,2	
CON arriostramiento **simple**	0,3	26	23	20	18	17	15	14	13	12	12	11	10	10	9	9	9	8	8	8	7	1910	410
	0,4	35	30	27	24	22	20	19	18	16	15	15	14	13	12	12	11	11	10	10	10	2010	510
	0,6			40	36	33	30	28	26	24	23	22	20	19	18	18	17	16	15	15	14	2080	580
CON arriostramiento **doble**	0,8						40	37	35	32	30	29	27	26	24	23	22	21	20			2080	580
	1									40	38	36	34	32	30	29	28	27	25			2080	580
	1,2												40	38	36	35	33	32	30			2080	580
Número de contrapesos **por pescante**																							

Table not valid for configurations 1D, 2D, 3A, 3B, 3C, 3D, 4A, 4B, 4C y 4D

5.Assembly of the davits

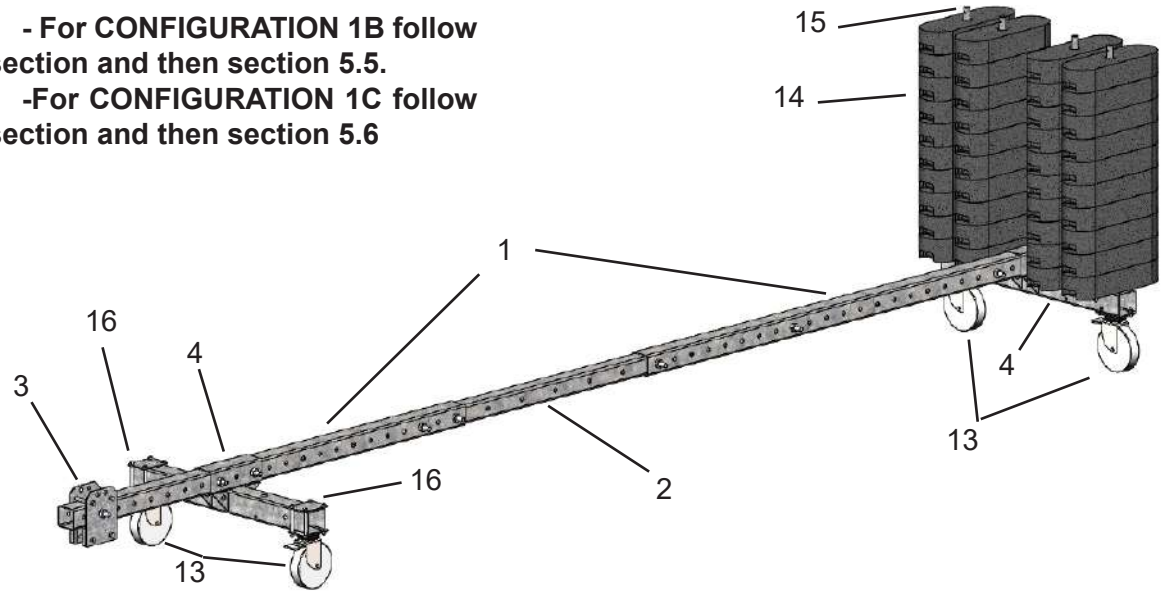
¡DANGER!

Risk of injury from falling objects, falling to different levels and/or breakage.	Risk of death due to falling objects, falling to different levels and/or breakage.
	-Before assembling the davits, ensure that the davit support points have sufficient capacity to withstand the forces due to the suspended loads. -During the assembly and installation of the davits, it is compulsory for the operators to be equipped with all the PPE and a harness that is anchored to a sufficiently resistant anchorage point. -Only when the two suspension beams are completely assembled is it possible to suspend the platform. Conversely, removal of the counterweights will only be undertaken after the platform has been unhooked.

For the references and weights of each part see table section 8.

5.1. CONFIGURATION 1A

- For CONFIGURATION 1B follow this section and then section 5.5.
-For CONFIGURATION 1C follow this section and then section 5.6



Two operators are required to install the davits.

The components of CONFIGURATION 1 of the davit are as follows:

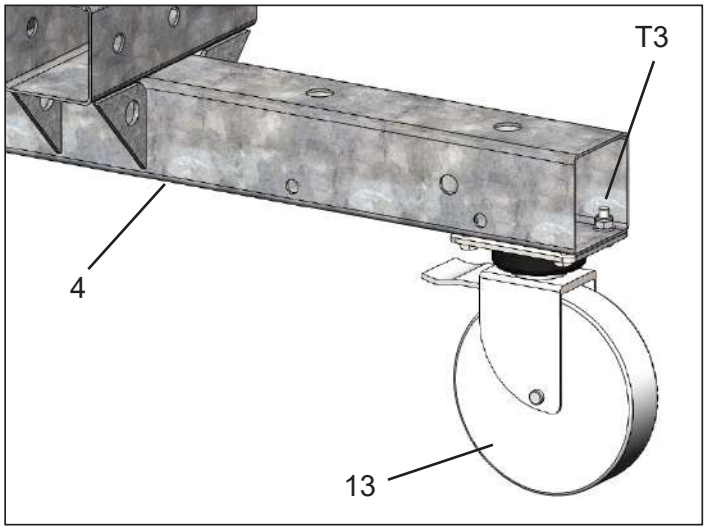
1-Outside telescopic tube. (2 pcs.)
2-Interior telescopic tube. (1 unit)
3-Cable support head. (1 pc.)
4-Base (2 pcs.)
13-Wheels (4 pcs.)
14-Countereso Accesus 25kg
15-Counterweight support bar + pin (4 pcs.)
16-Wheel anchorage plate (2 pcs.)

List of required materials:
Fixed and ratchet wrenches for M10, M12 and M18 hexagonal screw, 2 persons.

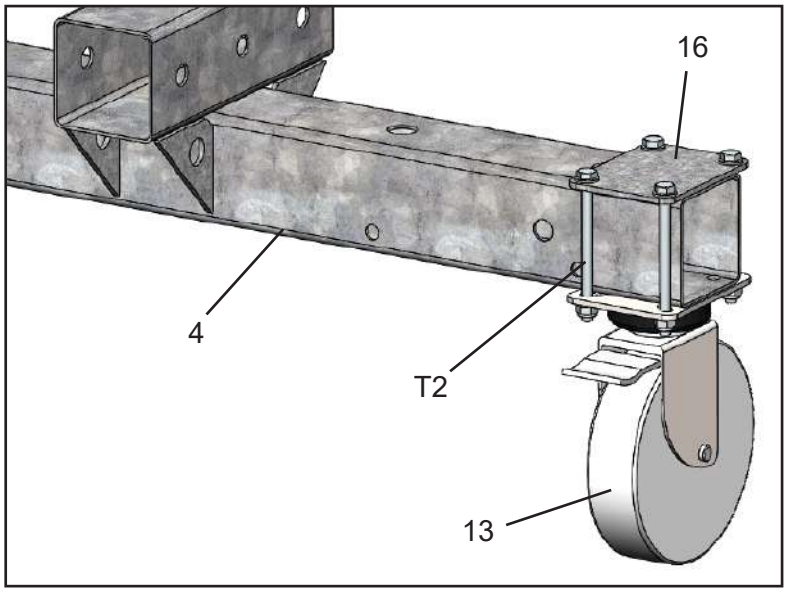
Screws and tightening torque (this list is referred to in the assembly description)

	DESCRIPTION	TIGHTENING TORQUE	UDS.
T1	Screw DIN931 M12x130 8.8 + Nut DIN934	62 Nm	4
T2	Screw DIN931 M10x130 8.8 + Nut DIN985 + 2 Washers DIN125	36 Nm	8
T3	Screw DIN933 M10x30 8.8 + Nut DIN985 + 2 Washers DIN125	36 Nm	8
T4	Screw DIN931 M18x140 8.8 + Nut DIN934	220 Nm	9

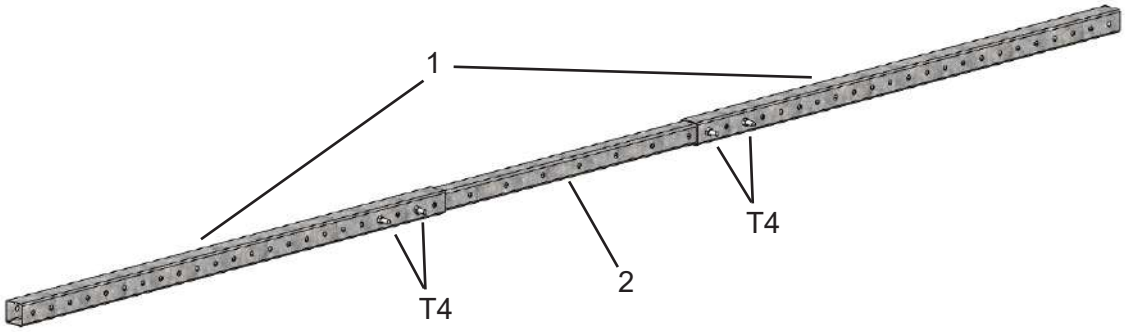
1- Fix the wheels (item 13) to the rear base (item 4), using 4 T3 screws each.



2-Fix the wheels (item 13) to the front base (item 4), using 4 T2 screws each and the wheel anchor plate (item 16).

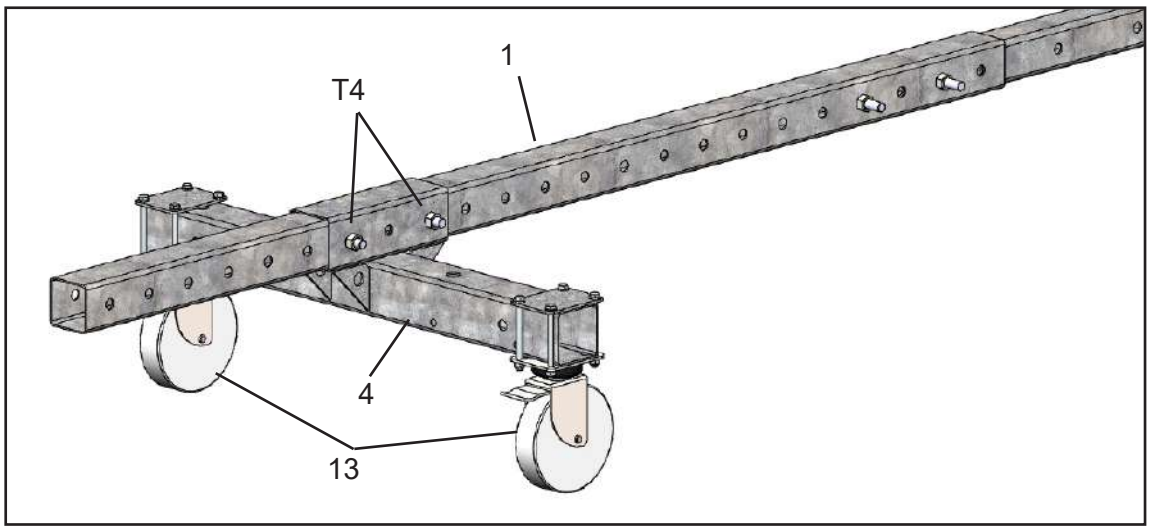


3-Assemble the outer telescopic tube (Pos.1), the inner telescopic tube (Pos.2) and another outer telescopic tube (Pos.1) with 2 + 2 T4 screws.

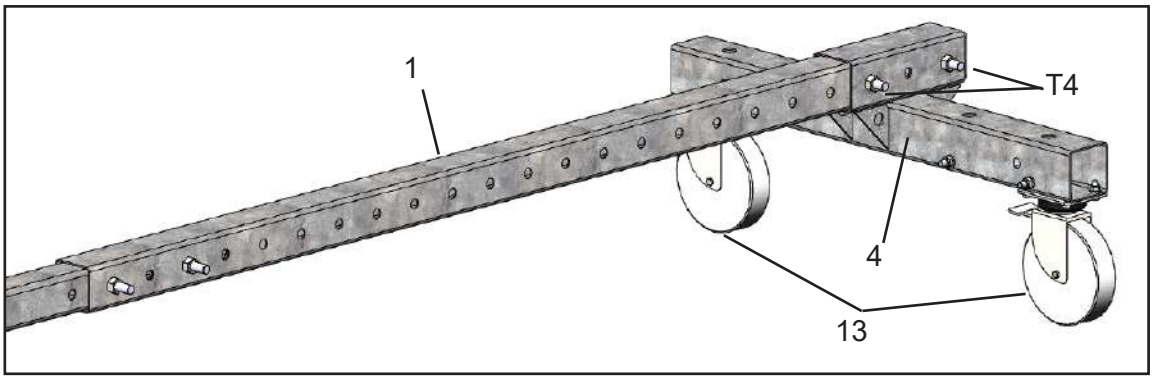


4-Determine the Overhang and backward movement using the load tables in section 4.5 of this manual. It is advisable to lengthen the beam as much as possible so as to reduce the number of counterweights required.

5-Mount the front base (Pos.4) on the front outer telescopic tube (Pos.1) with 2 screws T4.

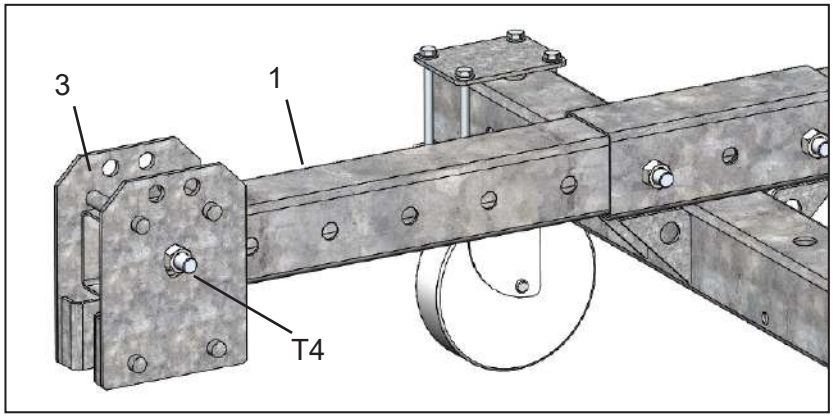


6-Assemble the rear base (Pos.4) with the rear external telescopic tube (Pos.1) by means of 2 screws T4.



7-Lock the wheel brakes (Item 13) on both bases (Item 4). Place wood, planks or metal profiles on the front and rear wheels (Item 13) to protect the roof covering, to distribute the loads and to facilitate the movement.

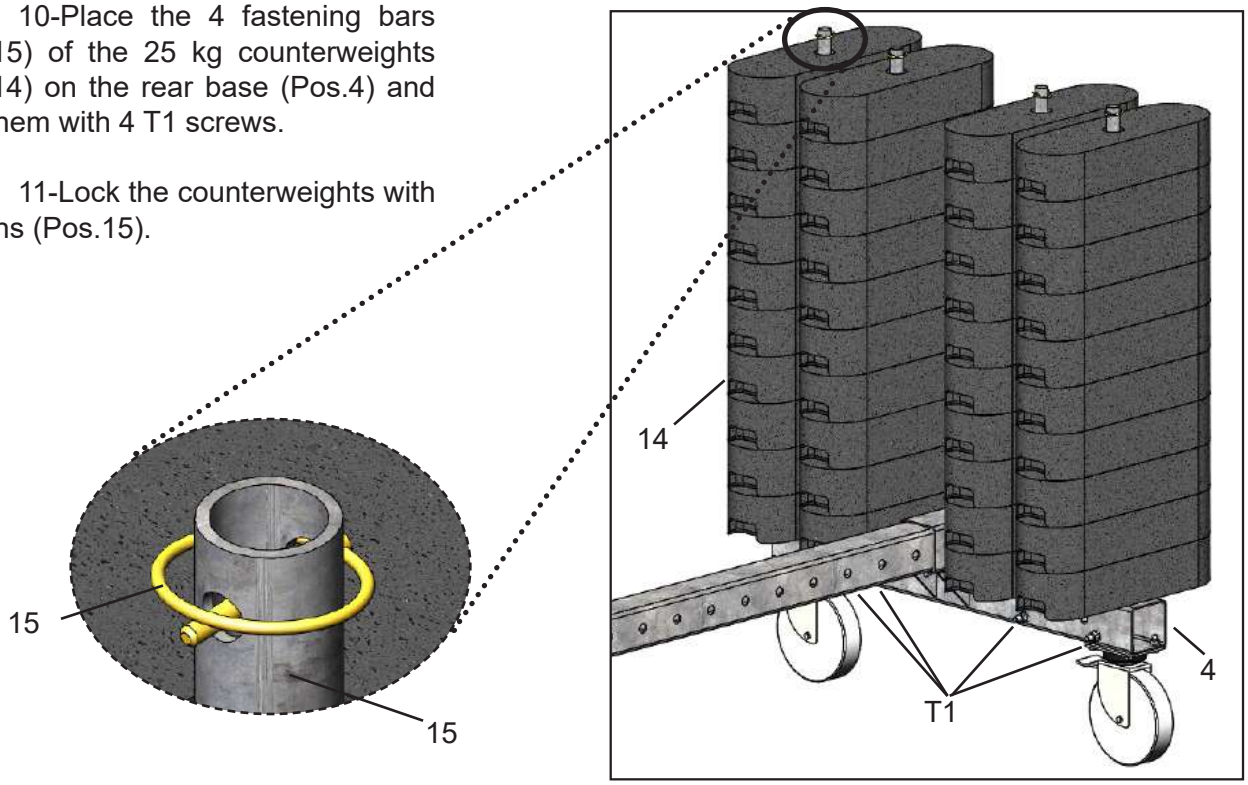
8-Place the cable support head (Pos.3) on the front external telescopic tube (Pos.1) by means of 1 screw T4.



9-Place the 25 kg Accesus counterweights (Pos.14) on the rear base (Pos.4). Remember that the maximum number of counterweights is 40 in the rear base. To define the number of counterweights see section 4.5.

10-Place the 4 fastening bars (Pos.15) of the 25 kg counterweights (Pos.14) on the rear base (Pos.4) and hold them with 4 T1 screws.

11-Lock the counterweights with the pins (Pos.15).

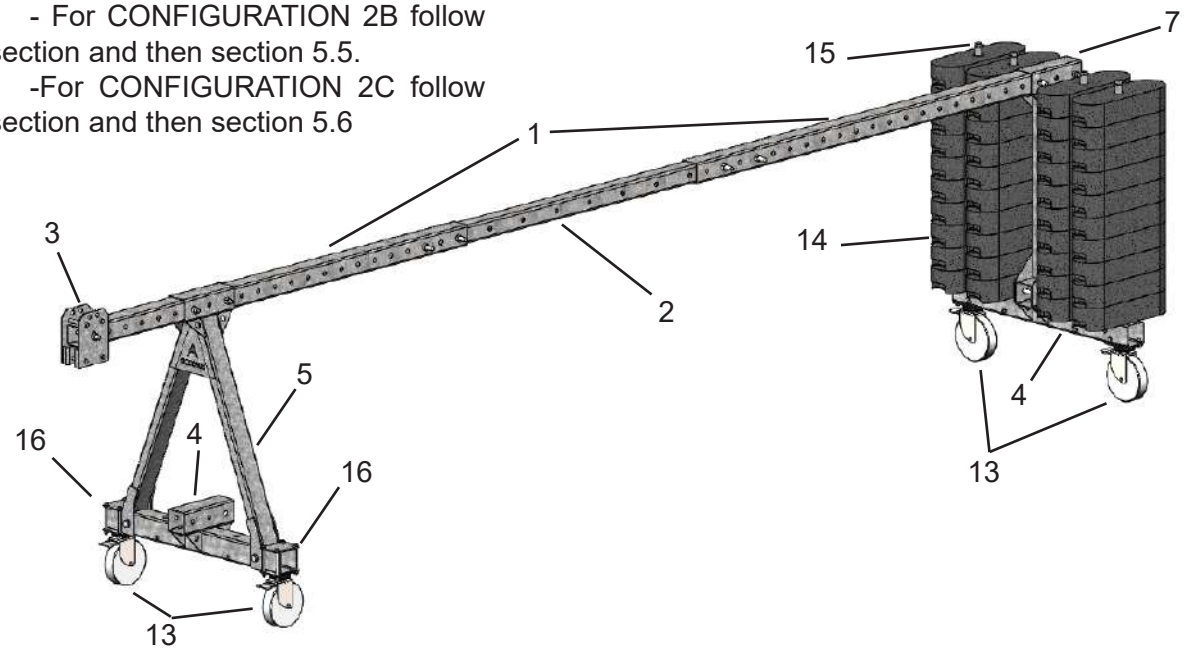


ATTENTION: Only when the two suspension beams are fully assembled can the platform be suspended
Conversely, the removal of the counterweights will only be undertaken after the platform has been unhooked.

5.2. CONFIGURATION 2A

- For CONFIGURATION 2B follow this section and then section 5.5.

-For CONFIGURATION 2C follow this section and then section 5.6



Two operators are required to install the davits.

The components of CONFIGURATION 2 of the davit are as follows:

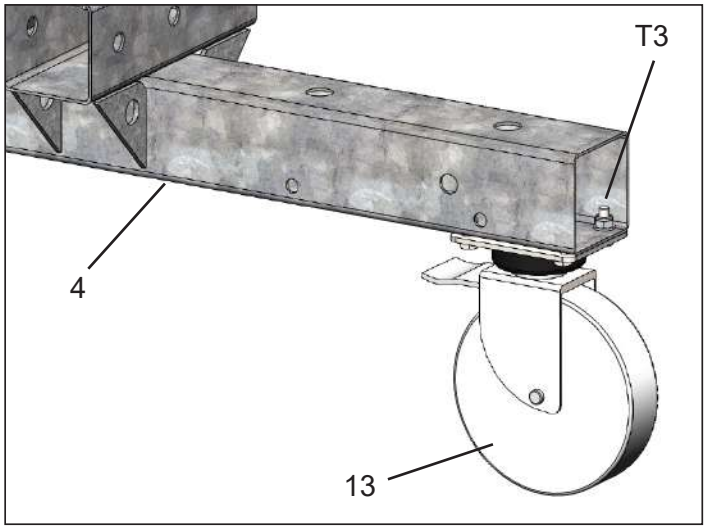
1-Outside telescopic tube. (2 units)
2-Interior telescopic tube. (1 unit)
3-Cable support head. (1 unit)
4-Base (2 units)
5-Front legs (1 unit)
7-Short enhancement (1 unit)
13-Wheels (4 units)
14-Counterweight
15-Counterweight clamping bar + pin (4 units)
16-Wheel anchor plate (2 units)

List of required materials:
Fixed and ratchet wrenches for M10, M12 and M18 hexagonal screw, 2 persons.

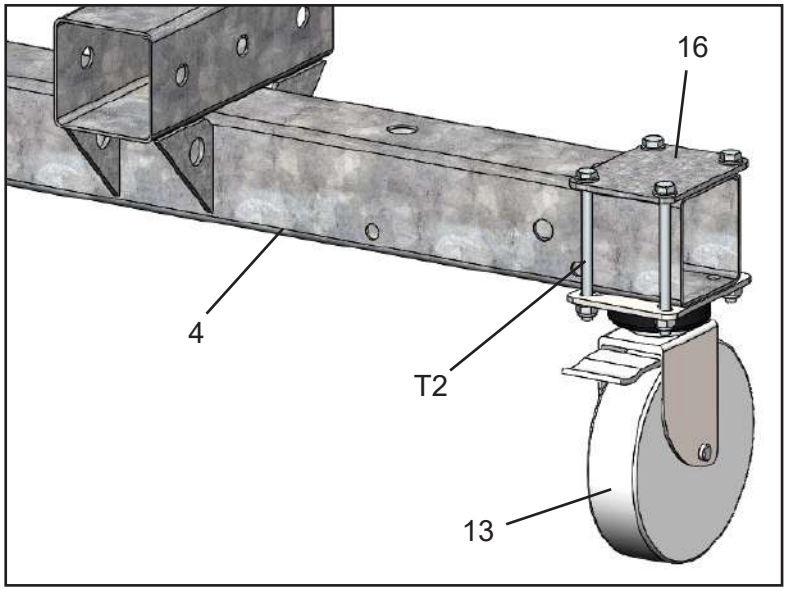
Screws and tightening torque (this list is referred to in the assembly description).

	DESCRIPTION	TORQUE	UDS.
T1	Screw DIN931 M12x130 8.8 + Nut DIN934	62 Nm	4
T2	Screw DIN931 M10x130 8.8 + Nut DIN985 + 2 Washers DIN125	36 Nm	8
T3	Screw DIN933 M10x30 8.8 + Nut DIN985 + 2 Washers DIN125	36 Nm	8
T4	Screw DIN931 M18x140 8.8 + Nut DIN934	220 Nm	11
T5	Screw DIN931 M18x140 8.8 + Nut DIN985	220 Nm	2

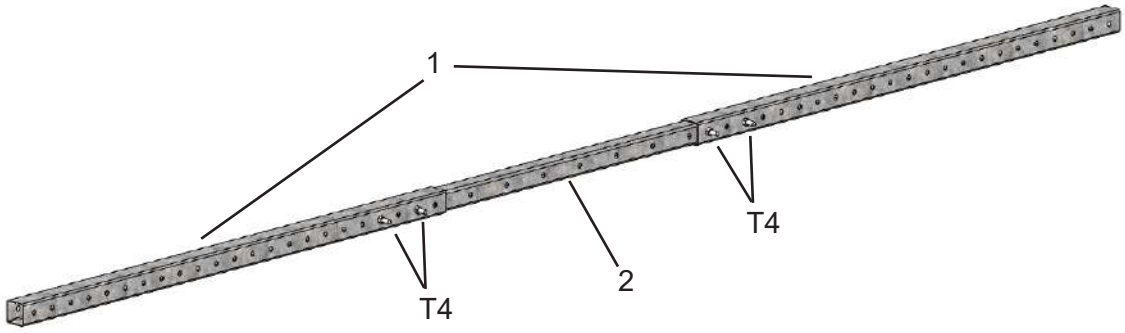
1- Fix the wheels (item 13) to the rear base (item 4) with 4 T3 screws each.



2-Attach the wheels (item 13) to the front base (item 4), using 4 T2 screws each and the wheel anchor plate (item 16).

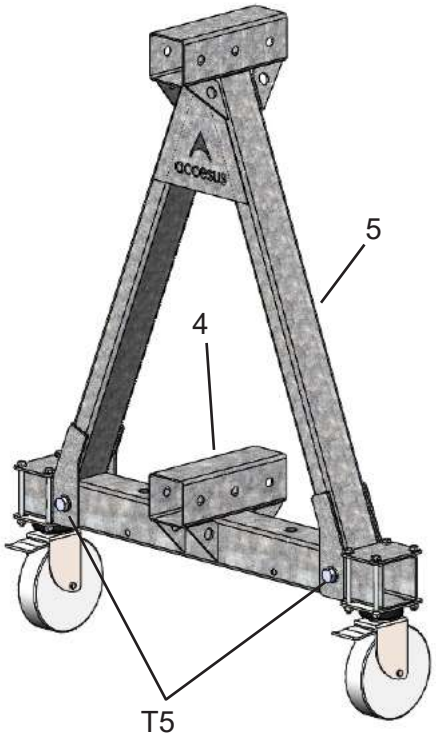


3-Assemble the outer telescopic tube (Pos. 1), the inner telescopic tube (Pos. 2) and another outer telescopic tube (Pos. 1) with 2 + 2 T4 screws.

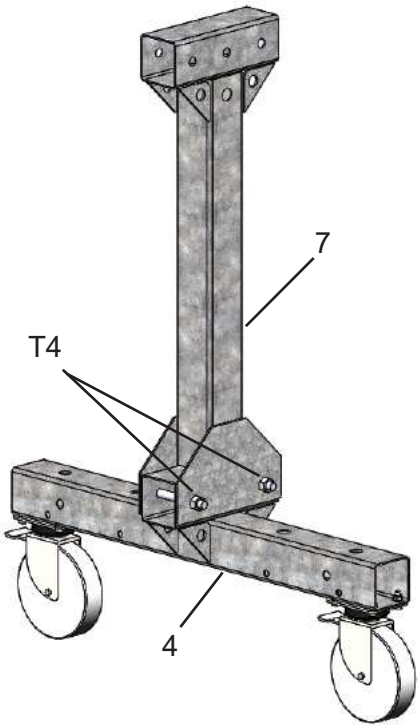


4-Determine the Overhang and backward movement using the load tables in section 4.5 of this manual. It is advisable to lengthen the beam as much as possible so that the number of counterweights required is reduced.

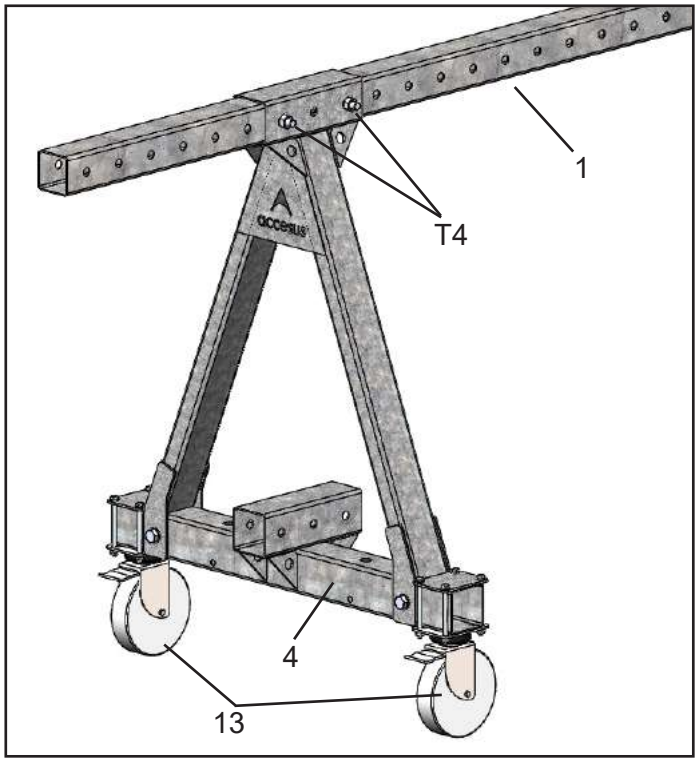
5-Mount the front legs (Pos. 5) on the front base (Pos. 4) with 2 T5 screws.



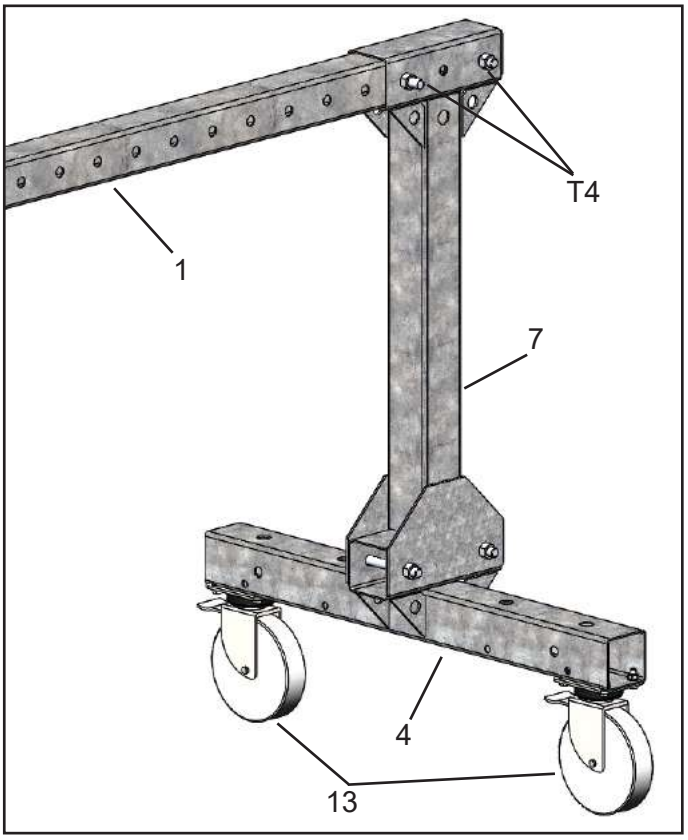
6- Mount the short extension (item 7) on the rear base (item 4) with two T4 screws.



7- Mount the front legs (Pos.5) on the front outer telescopic tube (Pos.1) with 2 screws T4.

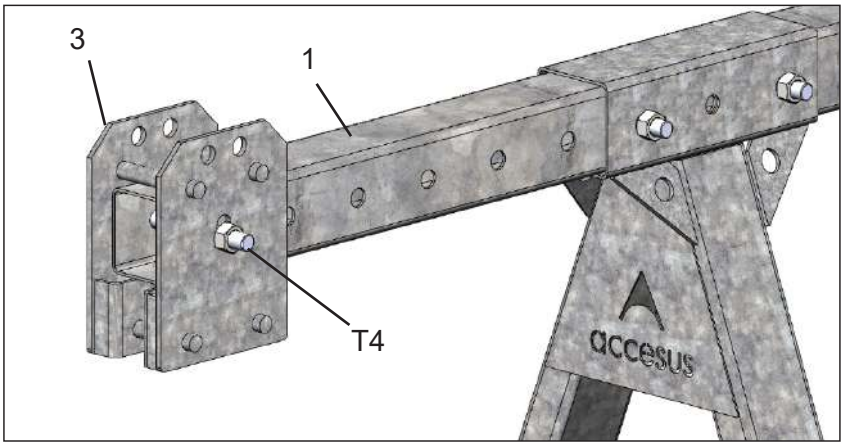


8-Assemble the short extension (Pos. 7) with the rear external telescopic tube (Pos. 1) by means of 2 T4 screws.



9-Lock the wheel brakes (Item 13) on both bases (Item 4). Place wood, planks or metal profiles on the front and rear wheels (Item 13) to protect the roof covering, to distribute the loads and to facilitate the movement.

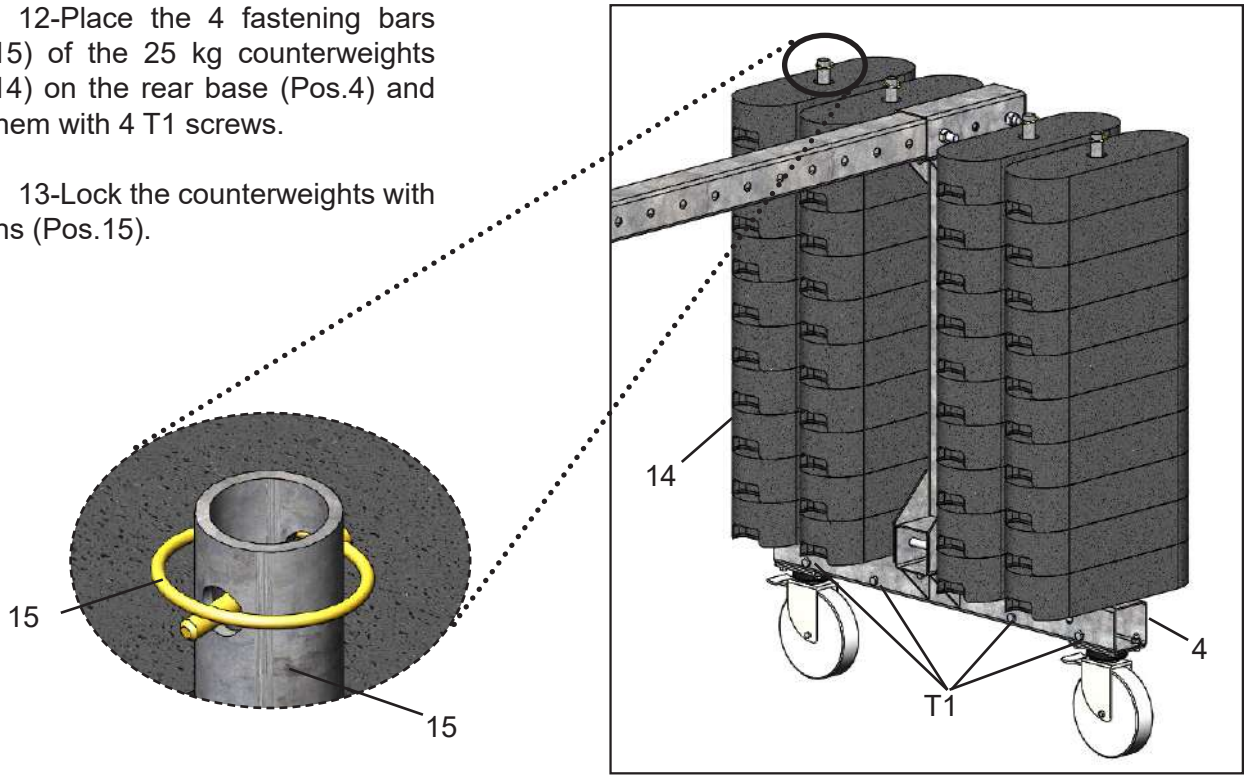
10-Place the cable support head (Pos.3) on the front external telescopic tube (Pos.1) by means of 1 screw T4.



11-Place the 25 kg Accesus counterweights (Pos.14) on the rear base (Pos.4). Remember that the maximum number of counterweights is 40 in the rear base. To define the number of counterweights see section 4.5.

12-Place the 4 fastening bars (Pos.15) of the 25 kg counterweights (Pos.14) on the rear base (Pos.4) and hold them with 4 T1 screws.

13-Lock the counterweights with the pins (Pos.15).

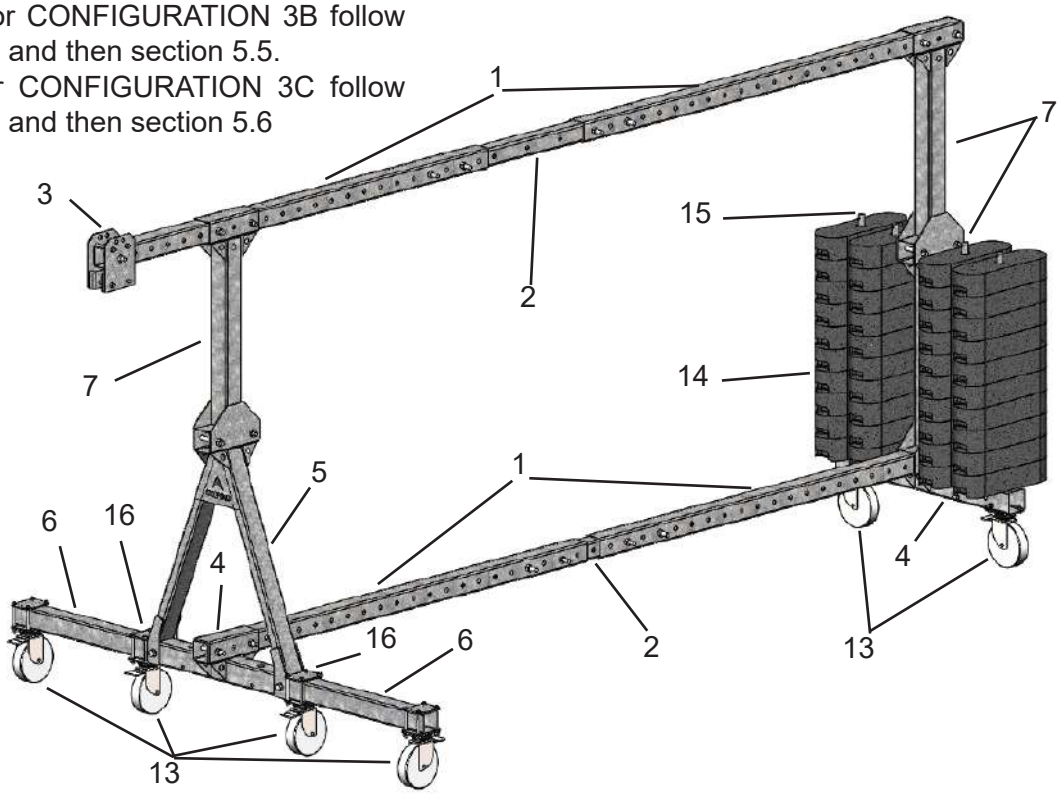


ATTENTION: Only when the two suspension beams are fully assembled can the platform be suspended
Conversely, the counterweights will only be removed after the platform has been unhooked.

5.3. CONFIGURATION 3A

- For CONFIGURATION 3B follow this section and then section 5.5.

-For CONFIGURATION 3C follow this section and then section 5.6



Two operators are required to install the davits.

The components of CONFIGURATION 3 of the davit are as follows:

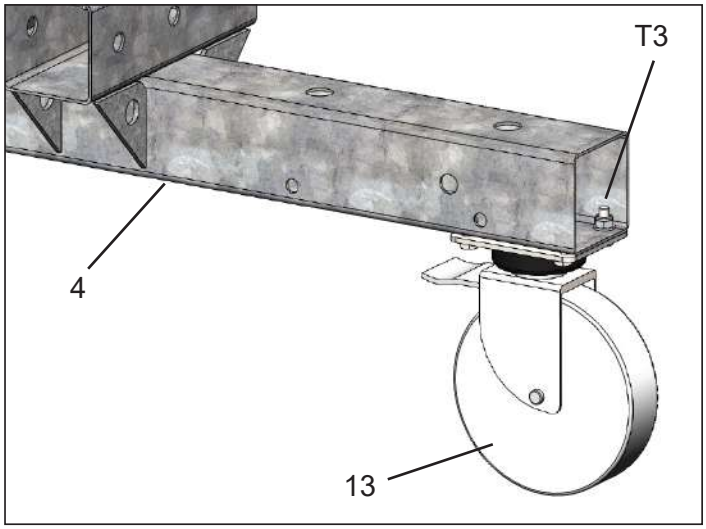
1-Outside telescopic tube. (4 units)
2-Interior telescopic tube. (2 unit)
3-Cable support head. (1 unit)
4-Base (2 units)
5-Front legs (1 unit)
6-Forward base extension (2 units)
7-Short enhancement (3 unit)
13-Wheels (6 units)
14-Counterweight
15-Counterweight clamping bar + pin (4 units)
16-Wheel anchor plate (2 units)

List of required materials:
Fixed and ratchet wrenches for M10, M12 and M18 hexagonal screw, 2 persons.

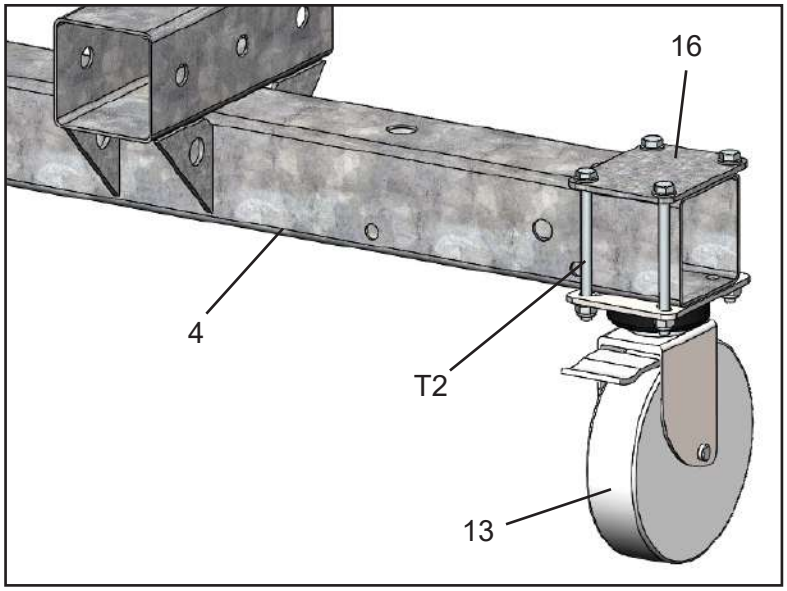
Screws and tightening torque (this list is referred to in the assembly description).

	DESCRIPTION	TORQUE	UDS.
T1	Screw DIN931 M12x130 8.8 + Nut DIN934	62 Nm	4
T2	Screw DIN931 M10x130 8.8 + Nut DIN985 + 2 Washers DIN125	36 Nm	16
T3	Screw DIN933 M10x30 8.8 + Nut DIN985 + 2 Washers DIN125	36 Nm	8
T4	Screw DIN931 M18x140 8.8 + Nut DIN934	220 Nm	21
T5	Screw DIN931 M18x140 8.8 + Nut DIN985	220 Nm	2

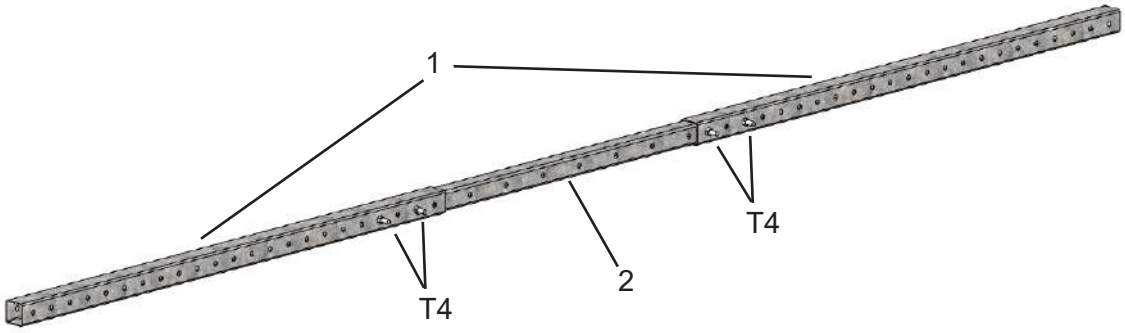
1- Fix the wheels (item 13) to the rear base (item 4), using 4 T3 screws each.



2-Fix the wheels (item 13) to the front base (item 4), using 4 T2 screws each and the wheel anchor plate (item 16).

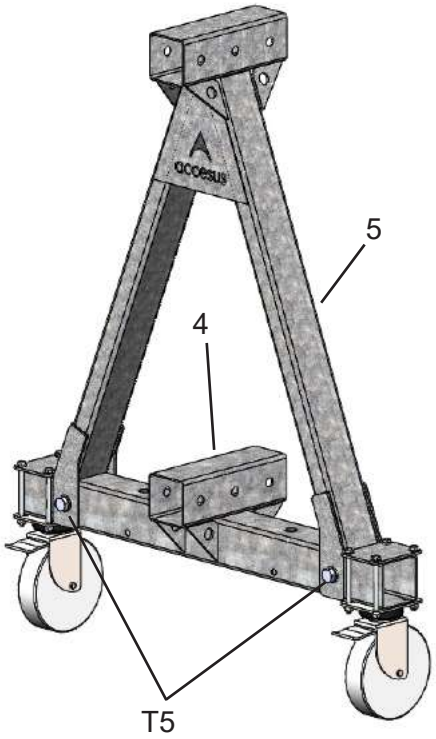


3-Assemble the outer telescopic tube (Pos. 1), the inner telescopic tube (Pos. 2) and another outer telescopic tube (Pos. 1) with 2 + 2 T4 screws. Perform this operation for two assemblies.

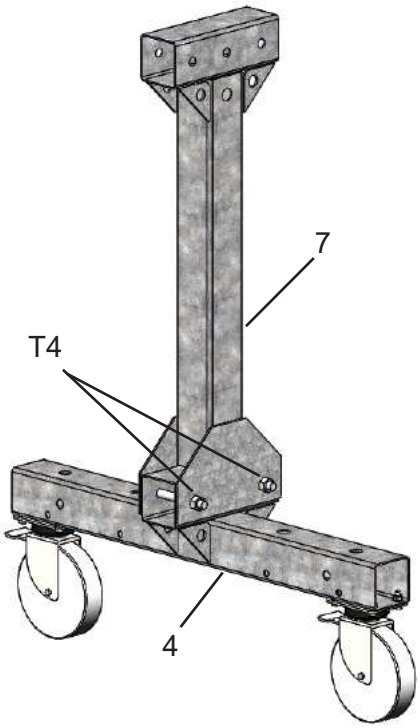


4-Determine the Overhang and backward movement using the load tables in section 4.5 of this manual. It is advisable to lengthen the beam as much as possible so as to reduce the number of counterweights required.

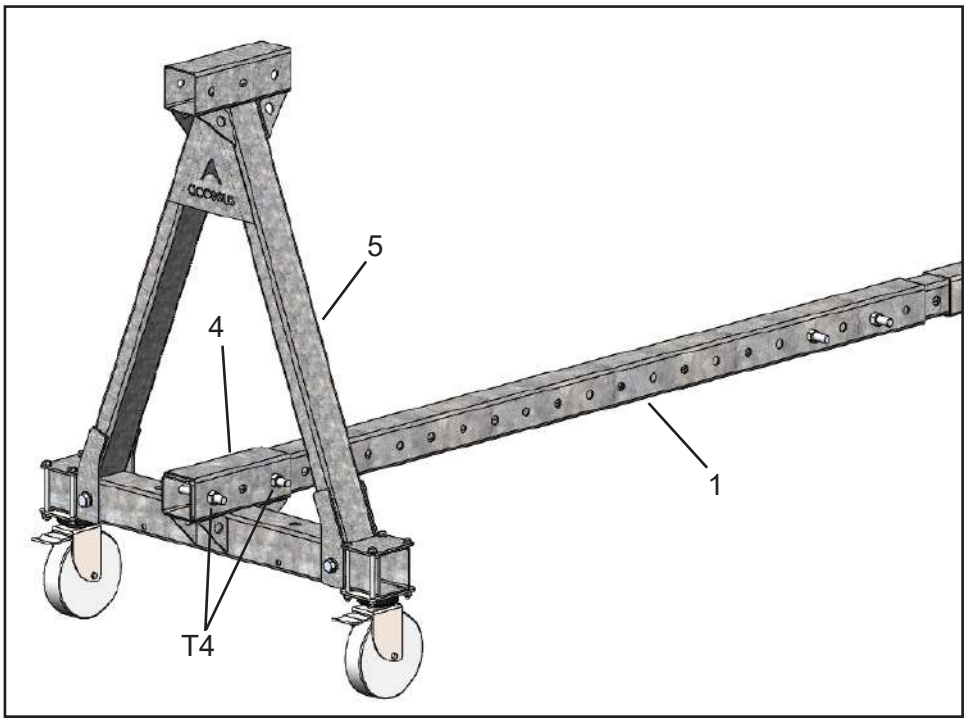
5-Mount the front legs (Pos. 5) on the front base (Pos. 4) with 2 T5 screws.



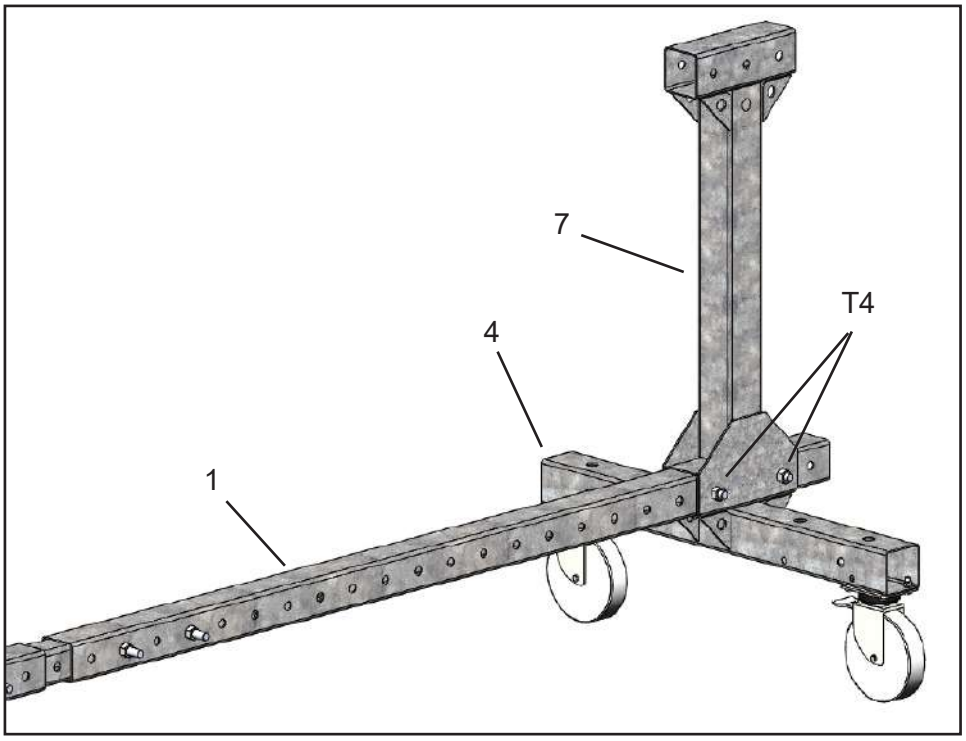
6- Mount the short extension (item 7) on the rear base (item 4) with two T4 screws.



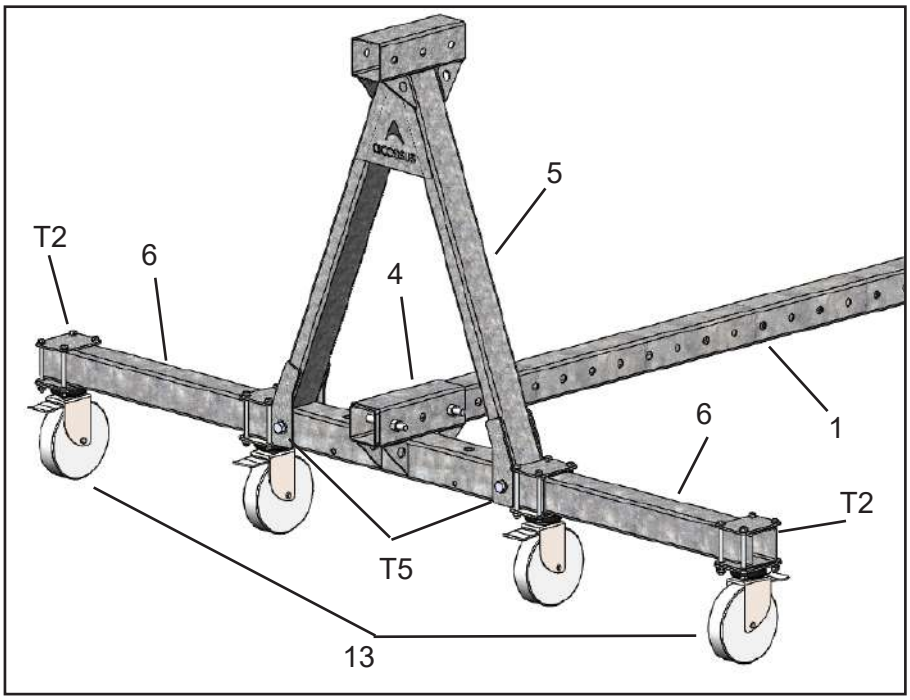
7- Mount the front legs (Pos.5) on the front outer telescopic tube (Pos.1) of one of the assemblies with 2 screws T4.



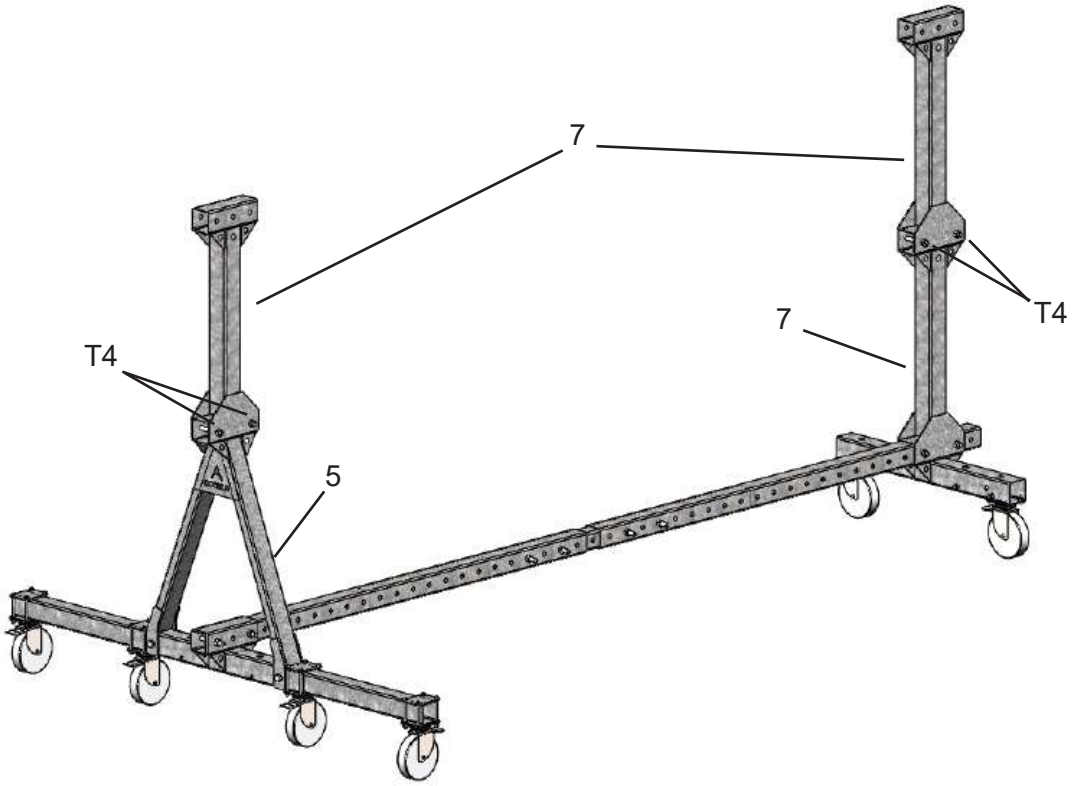
8-Assemble the short extension (Pos. 7) with the rear external telescopic tube (Pos. 1) of the same assembly by means of 2 T4 screws.



9-Mount the 2 front base extensions (Pos. 6) on the front base (Pos. 4) with the same 2 T5 screws used before. In this step also mount one wheel (pos. 13) on each extension by means of 4 screws T2 each.



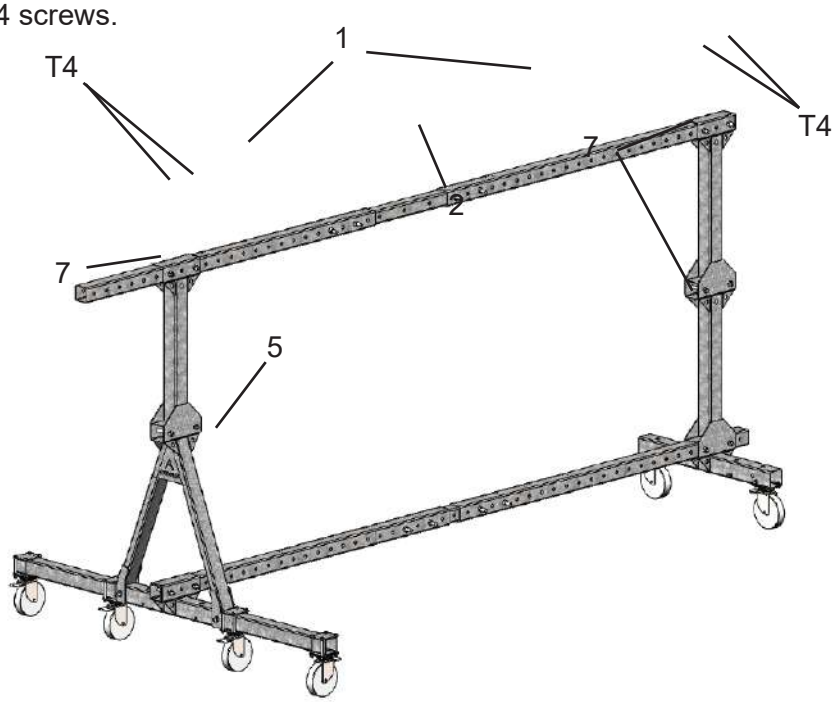
10-Mount the 2 short extensions (Pos. 7), one on the front legs (Pos. 5) and one on the short extension (Pos. 7) already mounted, by means of 2 screws T4 each.



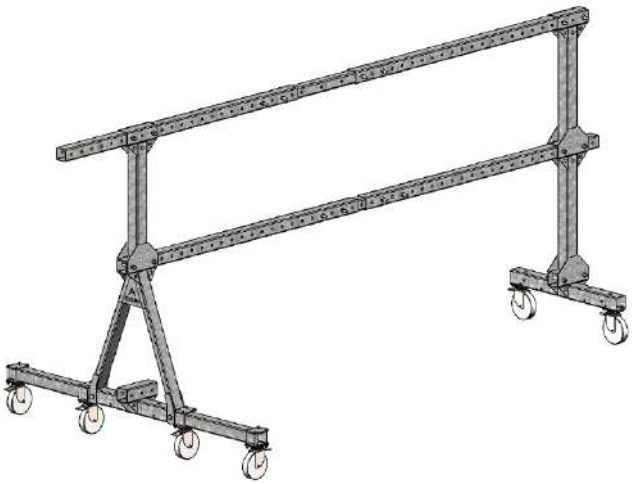
¡DANGER!

Risk of injury from falling objects, falling to different levels and/or breakage.	Risk of death from falling objects, falling to different levels and/or breakage
	-Help yourself with a ladder or other means to perform the following steps -Risk of falling

11-Mount the pre-assembled telescopic tube assembly (Pos. 1 and 2) on top of the short extensions (Pos. 7) with 4 T4 screws.

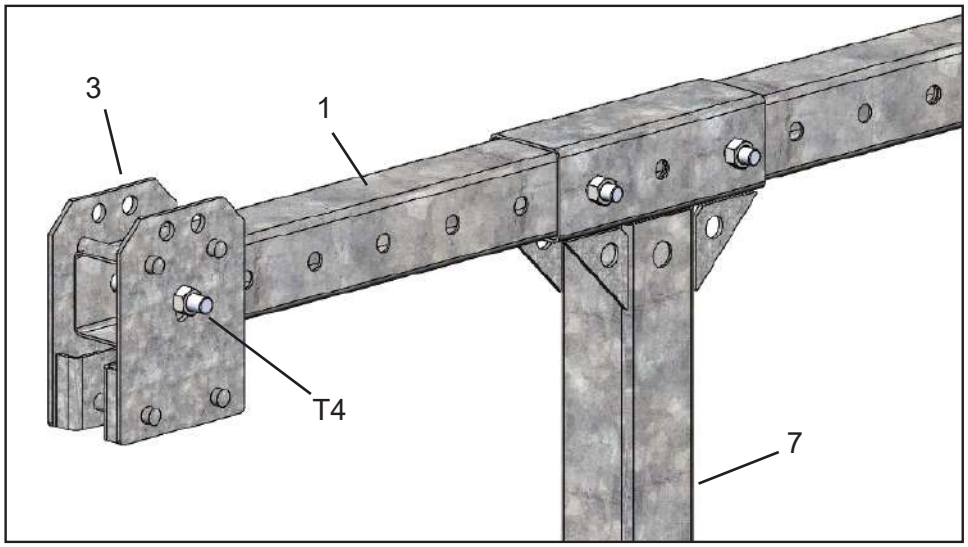


11b-The lower telescopic tube assembly can be optionally mounted at half height, as shown in the figure below. Both mountings are correct.



12-Lock the wheel brakes (item 13) on both bases (item 4). Place wood, boards or metal profiles on the front and rear wheels (item 13) to protect the roof covering, to distribute the loads and to facilitate the movement.

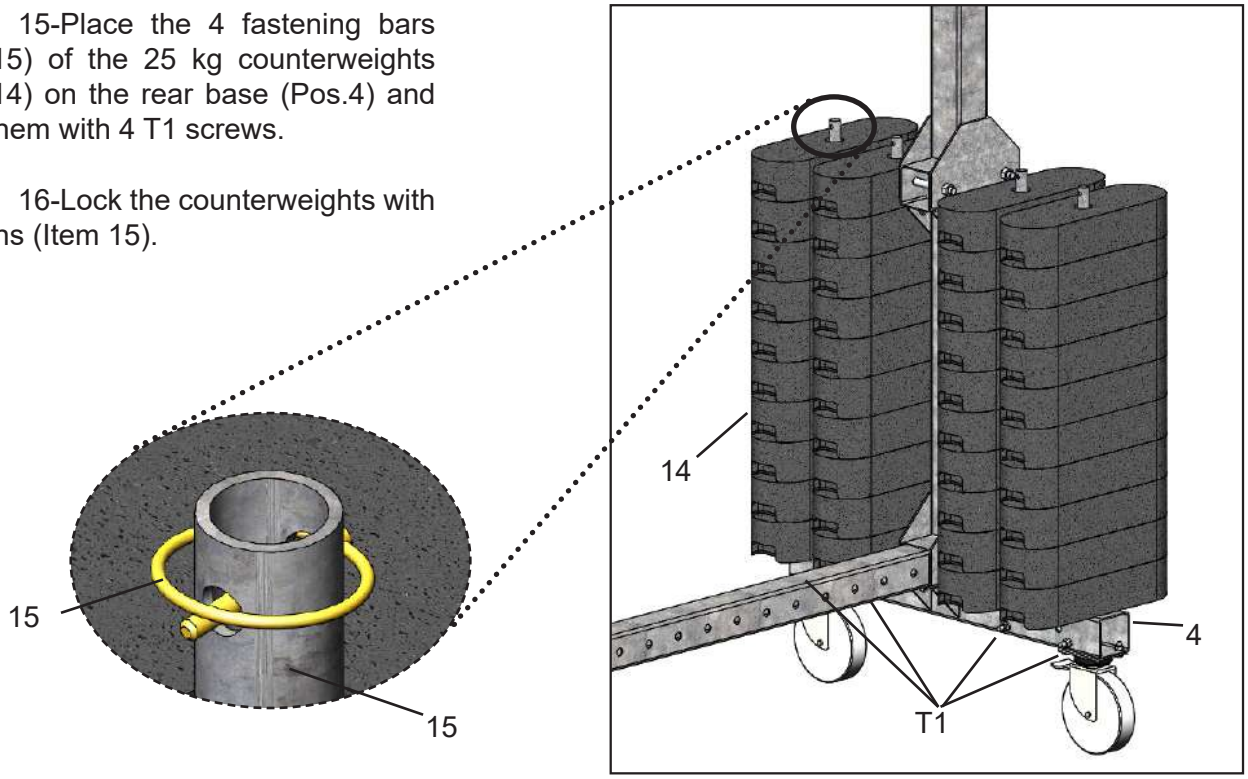
13-Place the cable support head (Pos.3) on the front external telescopic tube (Pos.1) by means of 1 screw T4.



14-Place the 25 kg Accesus counterweights (Pos.14) on the rear base (Pos.4). Remember that the maximum number of counterweights is 40 in the rear base. To define the number of counterweights see section 4.5.

15-Place the 4 fastening bars (Pos.15) of the 25 kg counterweights (Pos.14) on the rear base (Pos.4) and hold them with 4 T1 screws.

16-Lock the counterweights with the pins (Item 15).

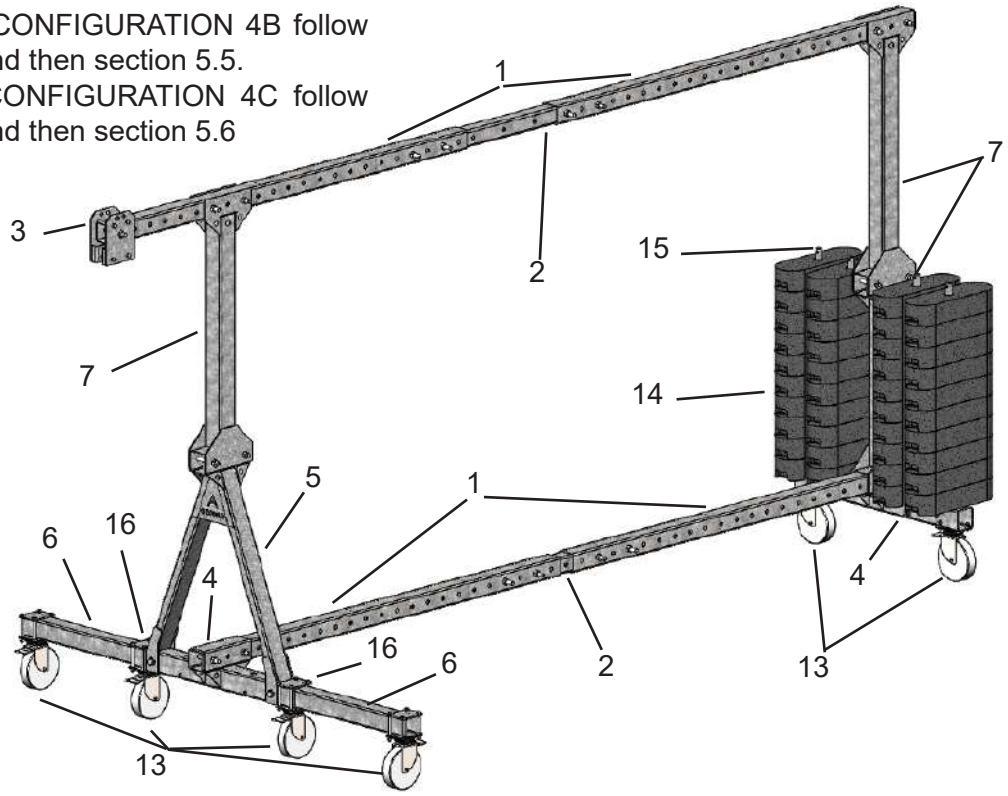


ATTENTION: Only when the two suspension beams are fully assembled can the platform be suspended
Conversely, the removal of the counterweights will only be undertaken after the platform has been unhooked.

5.4. CONFIGURATION 4A

- For CONFIGURATION 4B follow this section and then section 5.5.

-For CONFIGURATION 4C follow this section and then section 5.6



Two operators are required to install the davits.

The components of CONFIGURATION 4 of the davit are as follows:

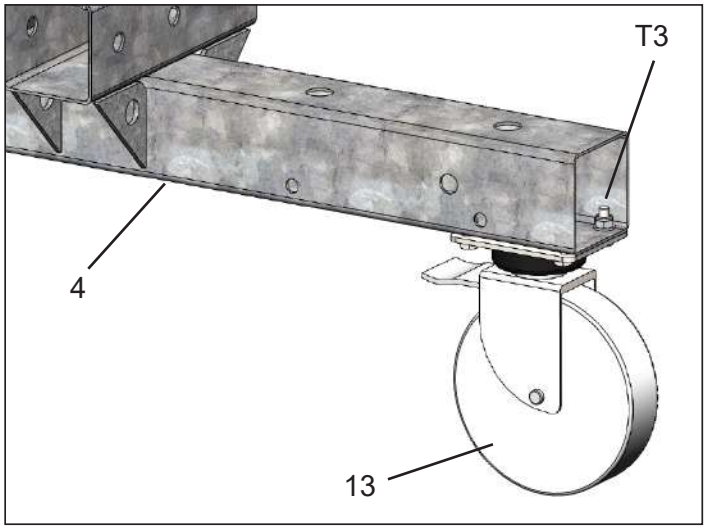
1-Outside telescopic tube. (4 units)
2-Interior telescopic tube. (2 unit)
3-Cable support head. (1 unit)
4-Base (2 units)
5-Front legs (1 unit)
6-Forward base extension (2 units)
7-Short enhancement (1 unit)
8-Long enhancement (2 units)
13-Wheels (6 units)
14-Counterweight
15-Counterweight clamping bar + pin (4 units)
16-Wheel anchor plate (2 units)

List of required materials:
Fixed and ratchet wrenches for M10, M12 and M18 hexagonal screw, 2 persons.

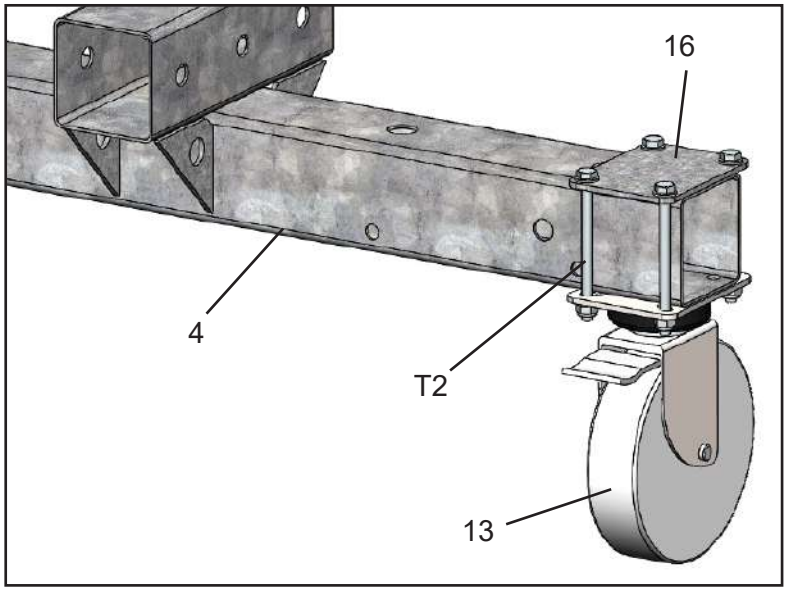
Screws and tightening torque (this list is referred to in the assembly description).

	DESCRIPTION	TORQUE	UDS.
T1	Screw DIN931 M12x130 8.8 + Nut DIN934 62 Nm 4	62 Nm	4
T2	Screw DIN931 M10x130 8.8 + Nut DIN985 + 2 Washers DIN125 36 Nm 16	36 Nm	16
T3	Screw DIN933 M10x30 8.8 + Nut DIN985 + 2 Washers DIN125 36 Nm 8	36 Nm	8
T4	Screw DIN931 M18x140 8.8 + Nut DIN934 220 Nm 21	220 Nm	21
T5	Screw DIN931 M18x140 8.8 + Nut DIN985 220 Nm 2	220 Nm	2

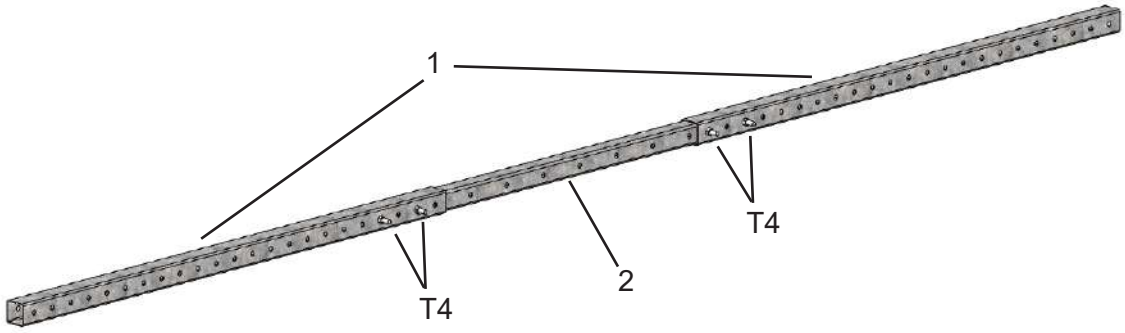
1- Fix the wheels (item 13) to the rear base (item 4) with 4 T3 screws each.



2-Fix the wheels (item 13) to the front base (item 4), using 4 T2 screws each and the wheel anchor plate (item 16).

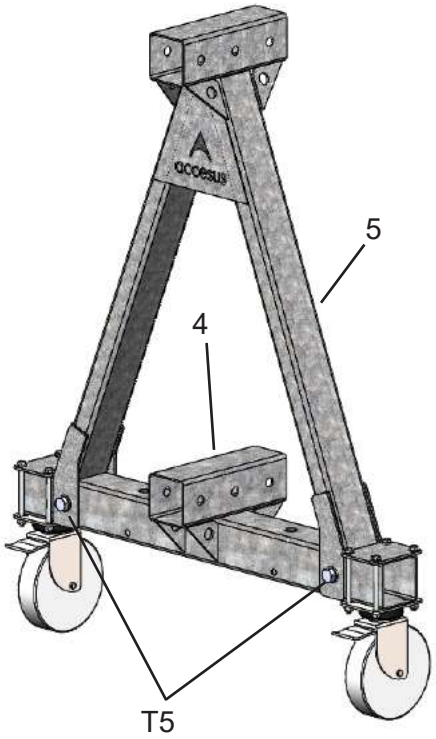


3-Assemble the outer telescopic tube (Pos. 1), the inner telescopic tube (Pos. 2) and another outer telescopic tube (Pos. 1) with 2 + 2 T4 screws. Perform this operation for two assemblies.

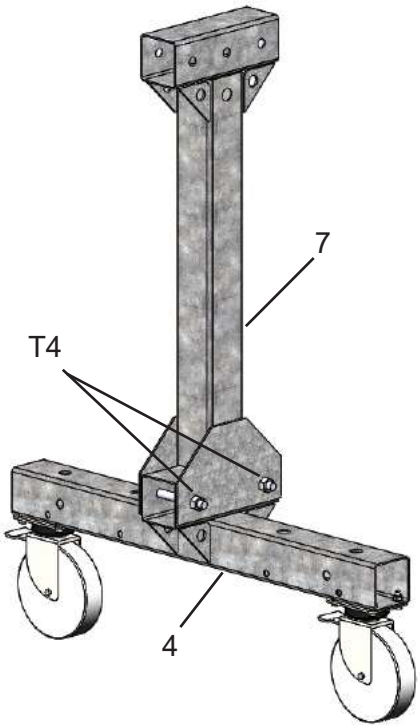


4-Determine the overhang and backward movement using the load tables in section 4.5 of this manual. It is advisable to lengthen the beam as much as possible so as to reduce the number of counterweights required.

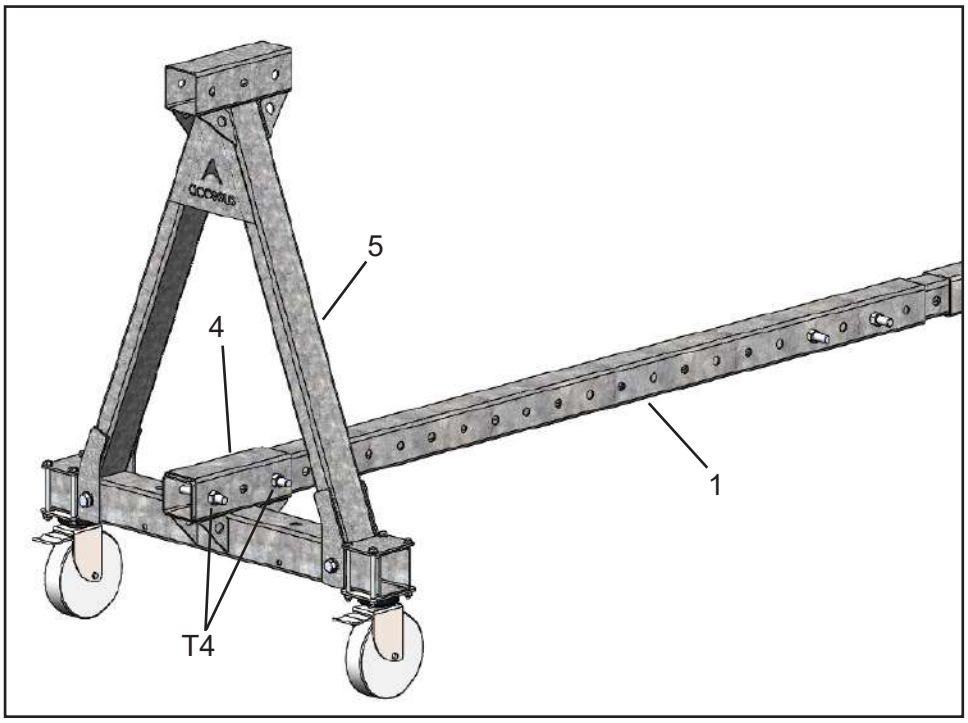
5-Mount the front legs (Pos. 5) on the front base (Pos. 4) with 2 T5 screws.



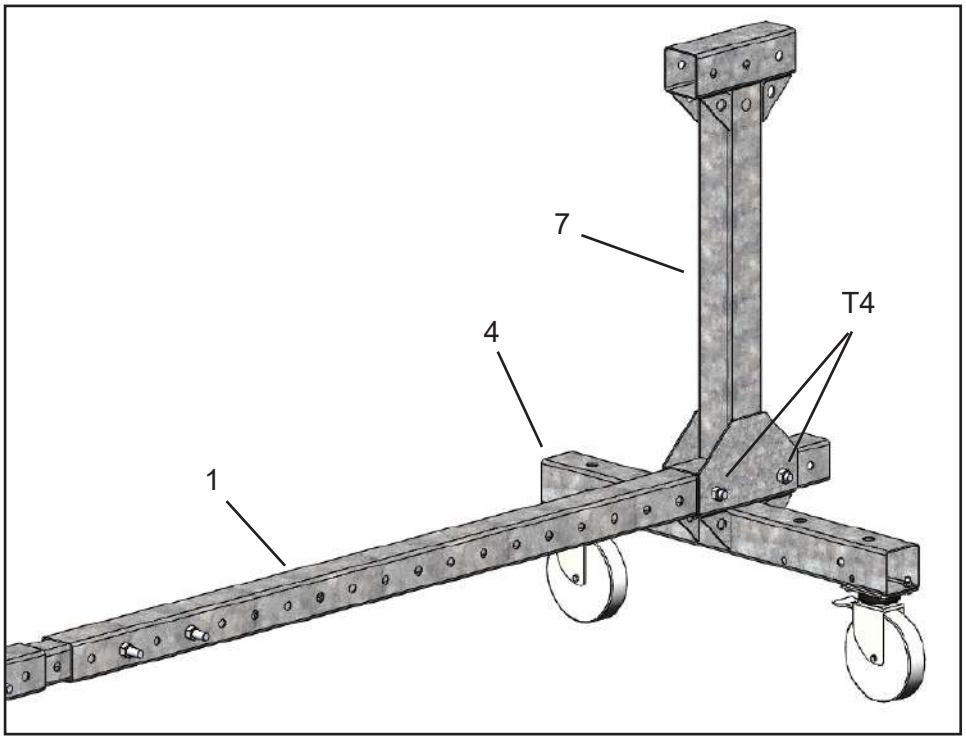
6-Mount the short extension (item 7) on the rear base (item 4) with 2 T4 screws.



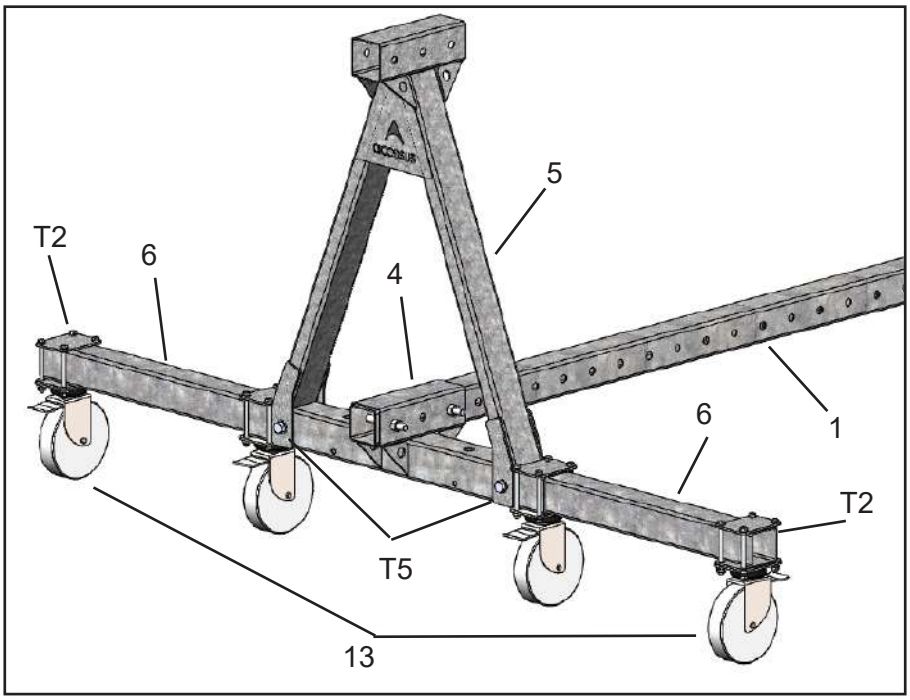
7-Mount the front legs (Pos.5) on the front outer telescopic tube (Pos.1) of one of the assemblies using 2 T4 screws.



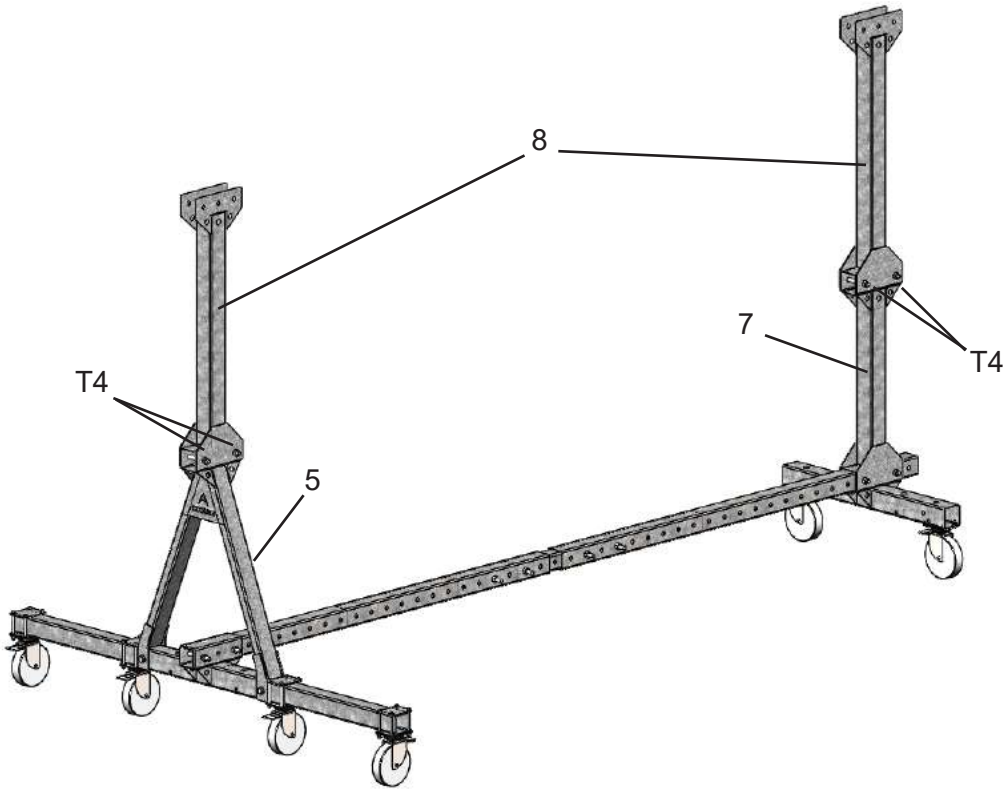
8-Assemble the short extension (Pos. 7) with the rear outer telescopic tube (Pos. 1) of the same assembly using 2 T4 screws.



9-Mount the 2 front base extensions (Pos. 6) on the front base (Pos. 4) with the same 2 T5 screws used before. In this step also mount one wheel (pos. 13) on each extension by means of 4 screws T2 each.



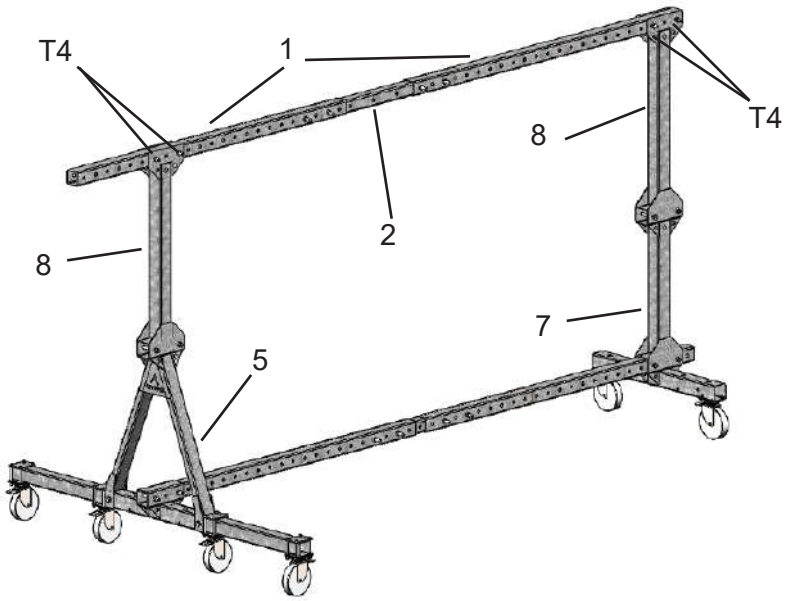
10-Mount the 2 short extensions (Pos. 8), one on the front legs (Pos. 5) and one on the short extension (Pos. 7) already mounted, by means of 2 screws T4 each.



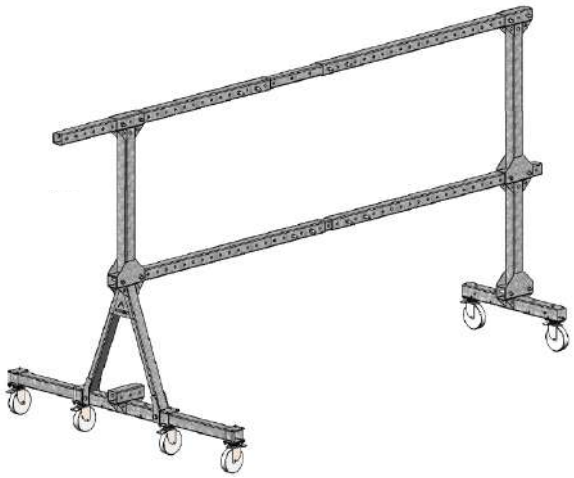
¡DANGER!

Risk of injury from falling objects, falling to different levels and/or breakage.	Risk of death from falling objects, falling to different levels and/or breakage
	-Help yourself with a ladder or other means to perform the following steps. Risk of falling

11-Mount the pre-assembled telescopic tube assembly (Pos. 1 and 2) on top of the long extensions (Pos. 8) with 4 T4 screws.

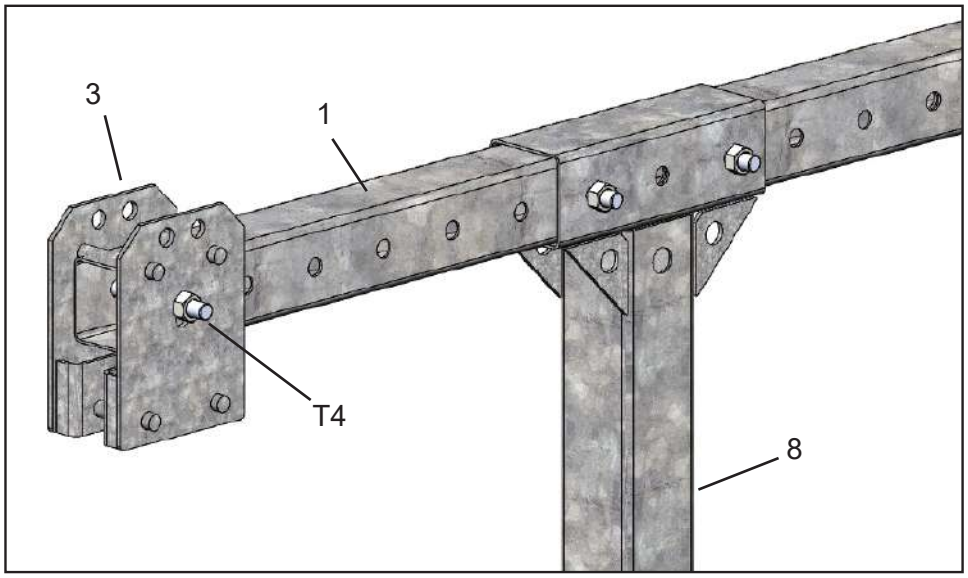


11b-The lower telescopic tube assembly can be optionally mounted at ground level, as shown in the figure below. Both mountings are correct.



12-Lock the wheel brakes (item 13) on both bases (item 4). Place wood, boards or metal profiles on the front and rear wheels (item 13) to protect the roof covering, to distribute the loads and to facilitate the movement.

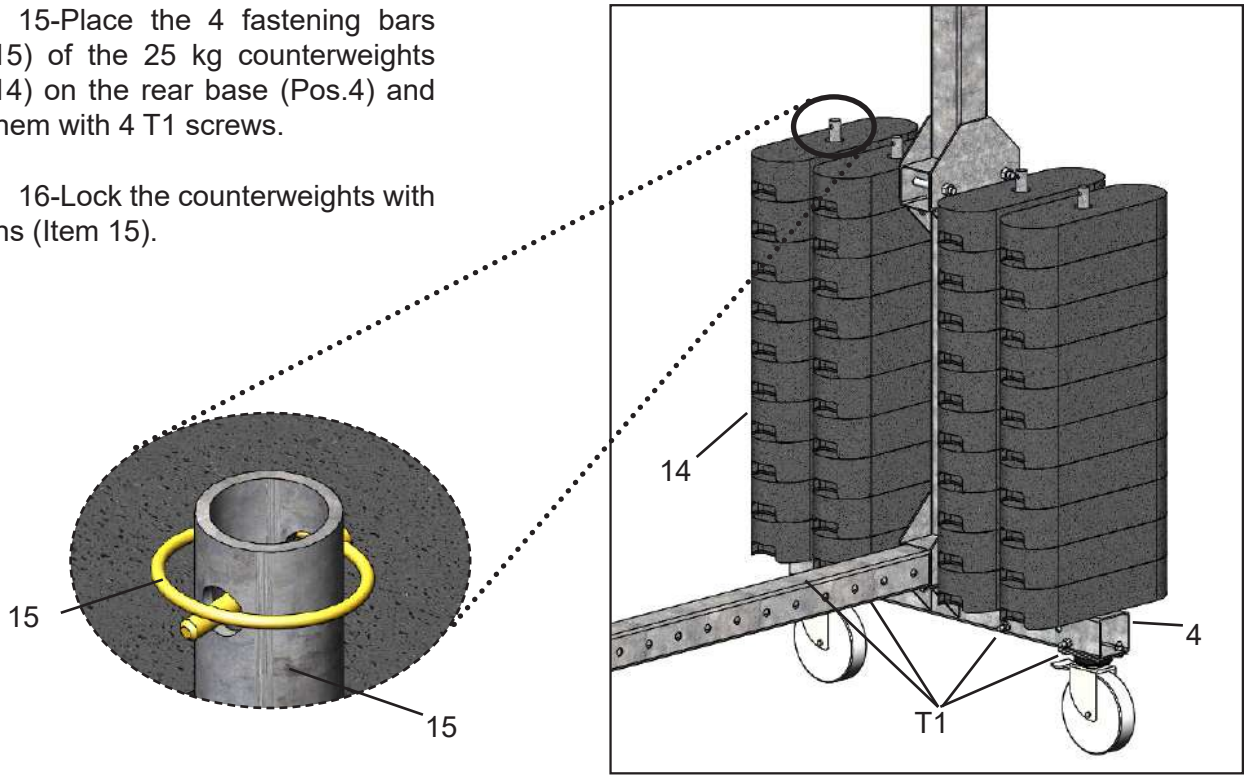
13-Place the cable support head (Pos.3) on the front outer telescopic tube (Pos.1) using 1 screw T4.



14-Place the 25 kg Accesus counterweights (Pos.14) on the rear base (Pos.4). Remember that the maximum number of counterweights is 40 at the rear base. To define the number of counterweights see section 4.5.

15-Place the 4 fastening bars (Pos.15) of the 25 kg counterweights (Pos.14) on the rear base (Pos.4) and hold them with 4 T1 screws.

16-Lock the counterweights with the pins (Item 15).

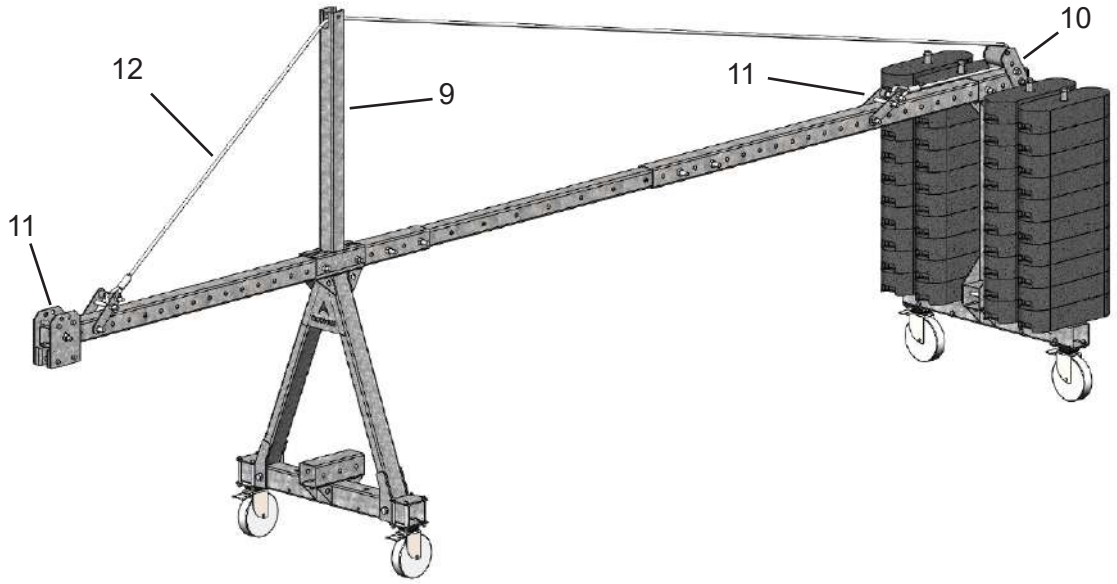


5.5. Overhang kit assembly B, configurations B

To increase the flight in any of the configurations it will be necessary to mount the appropriate flight kit according to the flight you want to achieve. Below is a description of how to mount the Flight Kit B.

KIT OVERHANG B, SIMPLE BRACING	
Motor	Max. Overhang
C.M.U. 300kg	2 m
C.M.U. 400kg	2 m
C.M.U. 500kg	2 m
C.M.U. 600kg	1,8 m
C.M.U. 800kg	1,2 m
* C.M.U. 1000kg	0,6 m

** Overhang kit assembly B not valid for 3B and 4B configurations with CMU 1000 kg hoist*



Two operators are required to install the davits.

The components of the Flight B kit are:

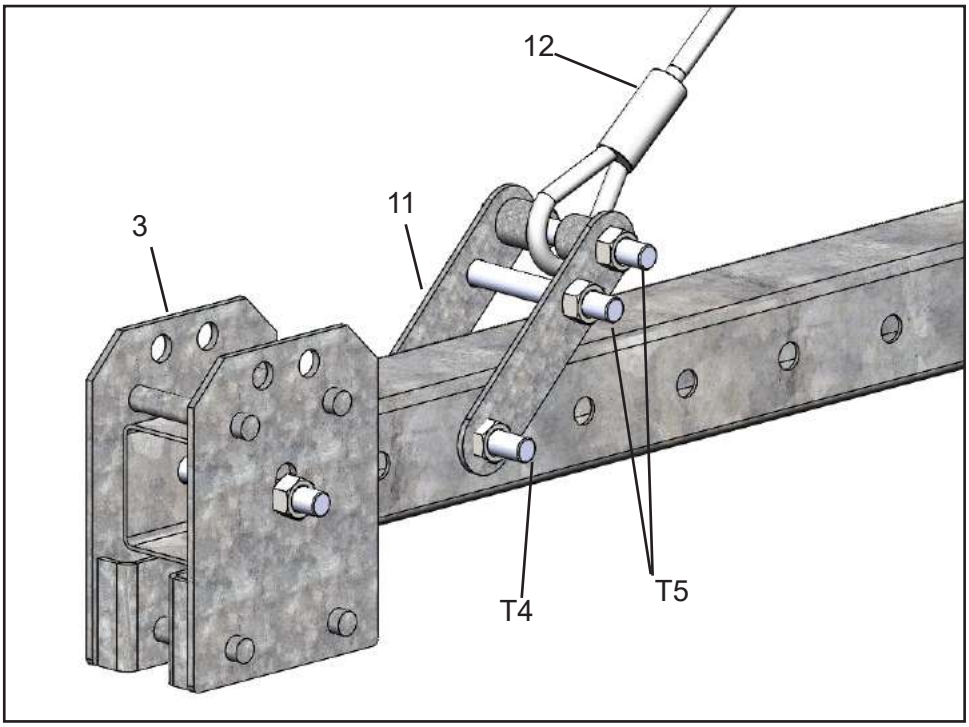
9-Cable-pole (1 pc.)
10-Cable deflection plate (1 pc.)
11-Cable hitch plate (2 pcs.)
12- Sling with turnbuckle (1 pc.)

List of required materials:
Fixed and ratchet wrenches for M12 and M18 hexagonal screw, 2 persons.

Screws and tightening torque (this list is referred to in the assembly description).

	DESCRIPTION	TORQUE	UDS.
T4	Screw DIN931 M18x140 8.8 + Nut DIN934	220 Nm	3
T5	Screw DIN931 M18x140 8.8 + Nut DIN985	220 Nm	6
T6	Screw DIN931 M12x100 8.8 + Nut DIN934	62 Nm	1

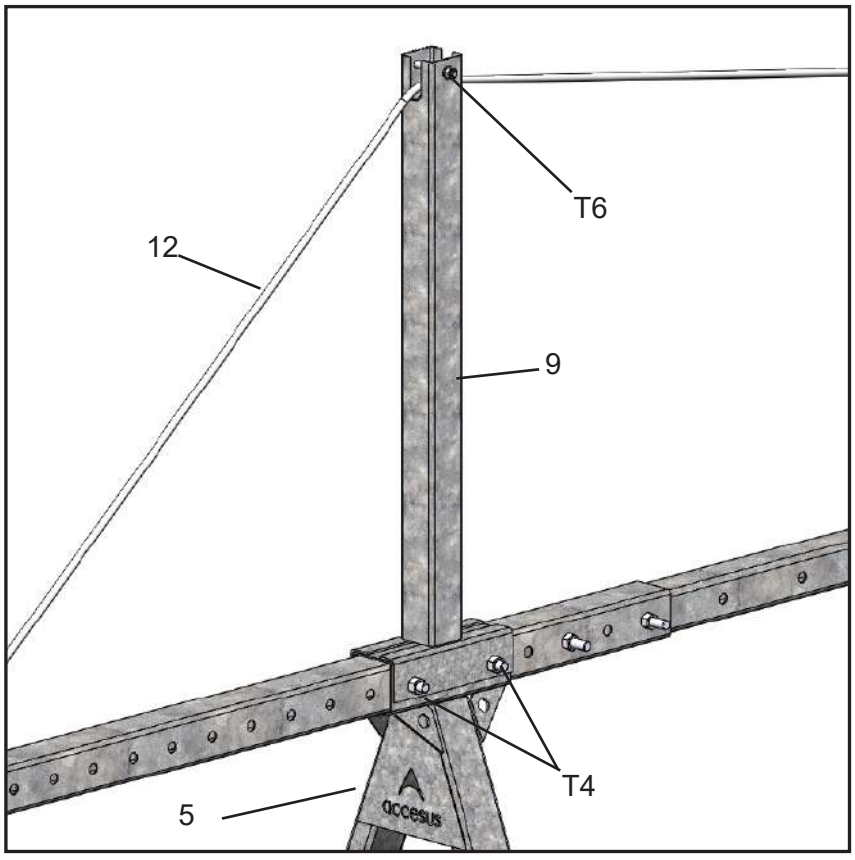
1-Place the cable clamping plate (item 11) (2 screws T5 and 1 T4) and fix the cable clamp. The plate must be anchored in the most forward position possible, the one closest to the cable support head (Pos. 3).



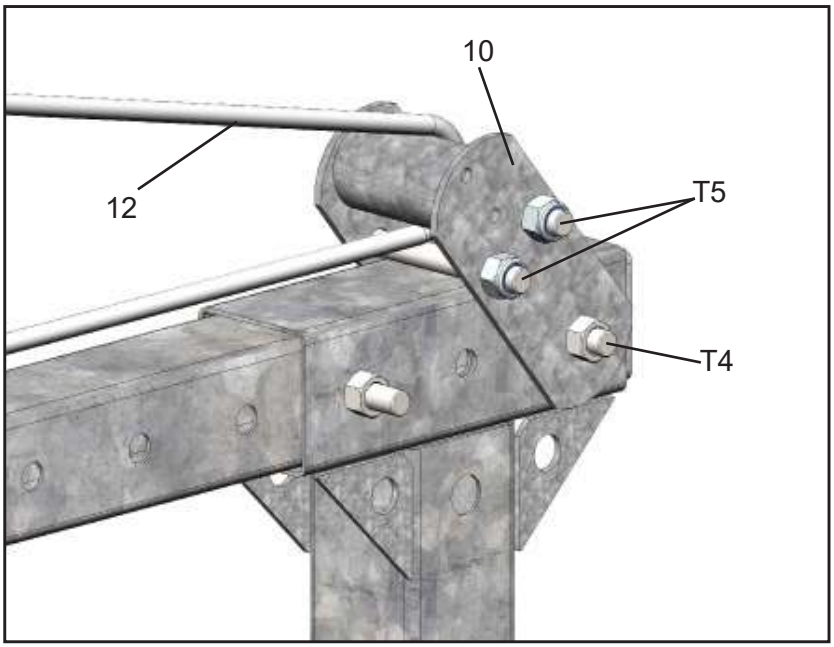
2-Place the cable extension (Pos. 9) with 2 T4 screws on top of the front base.

These screws are the same ones that join the telescopic tube assembly (Pos. 1 and 2) previously assembled with the corresponding front base (Pos. 4, 5, 7, or 8 according to the CONFIGURATION).

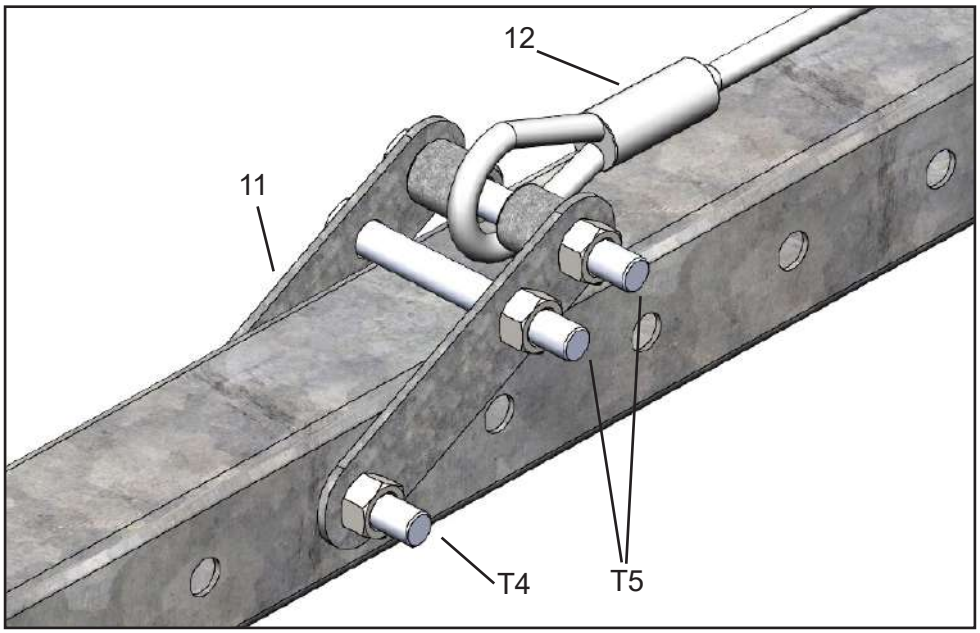
The cable is held at the top of the mast by a groove and is locked with a T6 screw.



3-Attach the cable deflection plate (item 10) (1 T4 and 2 T5 screws) and pass the cable clamp (item 12). The plate must be anchored in the rearmost possible position.



4-Attach the clamping plate (item 11) of the cable (2 screws T5 and 1 T4) and fix the other end of the clamping cable (end with the tensioner with flashlight).



5-Tighten the cable.

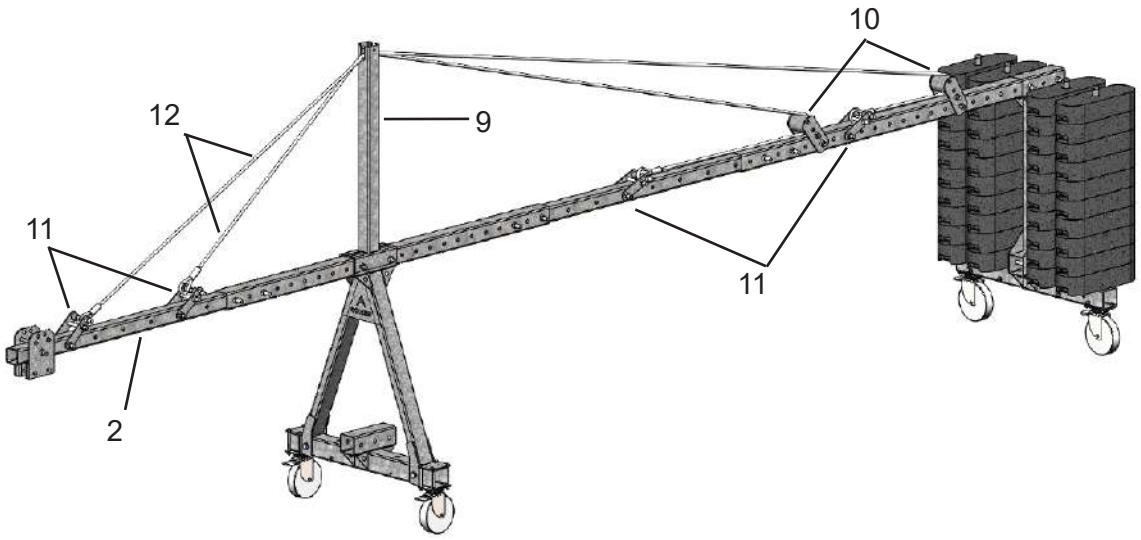
The davit will be assembled at ground level, and once assembled it will be placed in its position and fixed by braking the front and rear wheels.

5.6. Overhang kit assembly C, configurations C

To increase the flight in any of the configurations it will be necessary to mount the appropriate flight kit according to the flight you want to achieve. Below is a description of how to assemble the C-flight kit.

KIT OVERHANG C, DOUBLE BRACING	
Motor	Max. Overhang
C.M.U. 300kg	2,5 m
C.M.U. 400kg	2,5 m
C.M.U. 500kg	2,5 m
C.M.U. 600kg	1,6 m
C.M.U. 800kg	1,6 m
* C.M.U. 1000kg	1,2 m

** Overhang kit assembly C not valid for 3C and 4C configurations with CMU 1000 kg hoist*



Two operators are required to install the davits.

The components of the overhang C kit are:

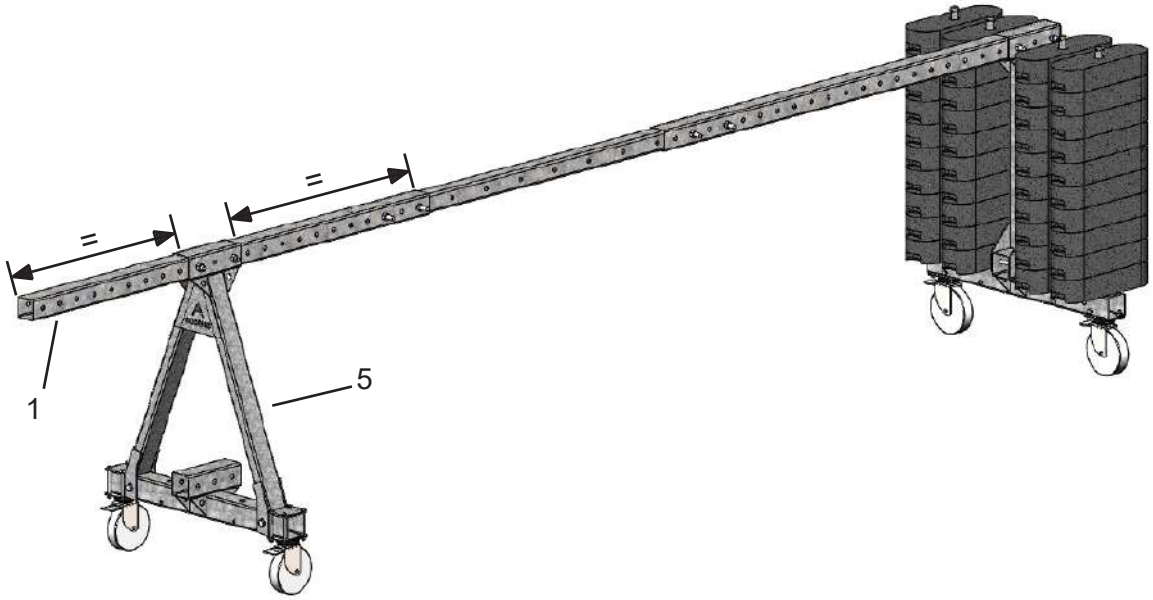
1-Outside telescopic tube. (1 pc.)
2-Interior telescopic tube. (1 unit)
9-Cable extension - Mast (2 pcs.)
10-Cable deflection plate (3 pcs.)
11-Cable hooking plate (6 pcs.)
12-Sling with turnbuckle (3 pcs.)

List of required materials:
Fixed and ratchet wrenches for M12 and M18 hexagonal screw, 2 persons.

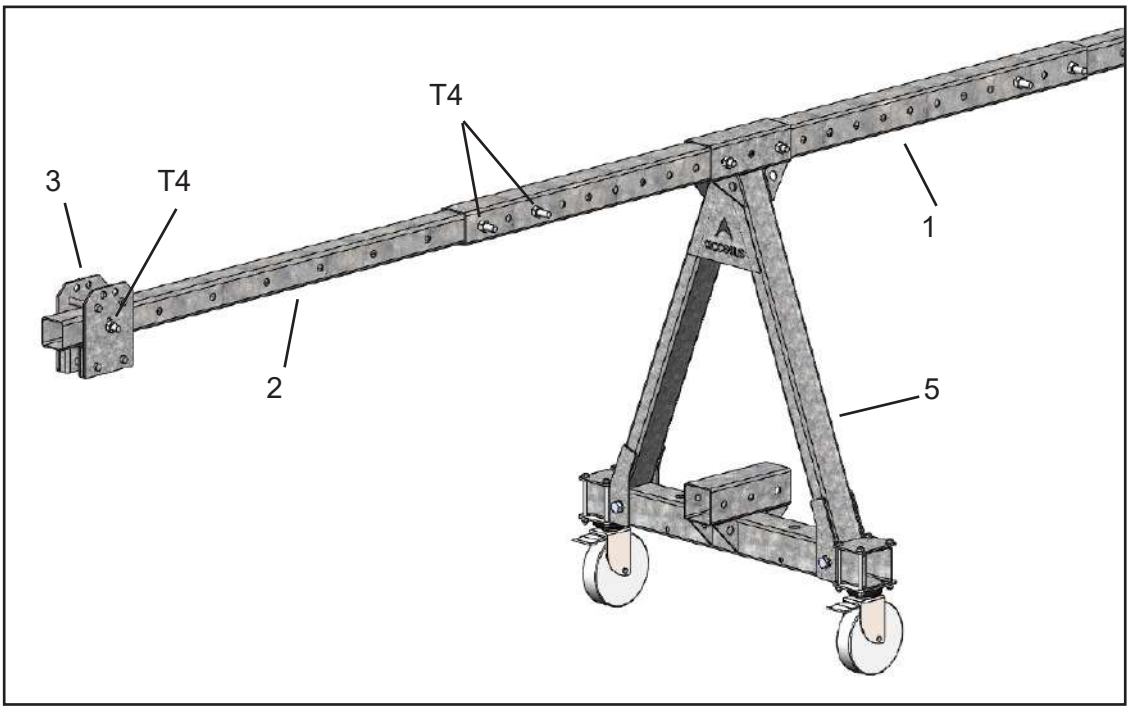
Screws and tightening torque (this list is referred to in the assembly description).

	DESCRIPTION	TORQUE	UDS.
T4	Screw DIN931 M18x140 8.8 + Nut DIN934	220 Nm	8
T5	Screw DIN931 M18x140 8.8 + Nut DIN985	220 Nm	12
T6	Screw DIN931 M12x100 8.8 + Nut DIN934	62 Nm	1

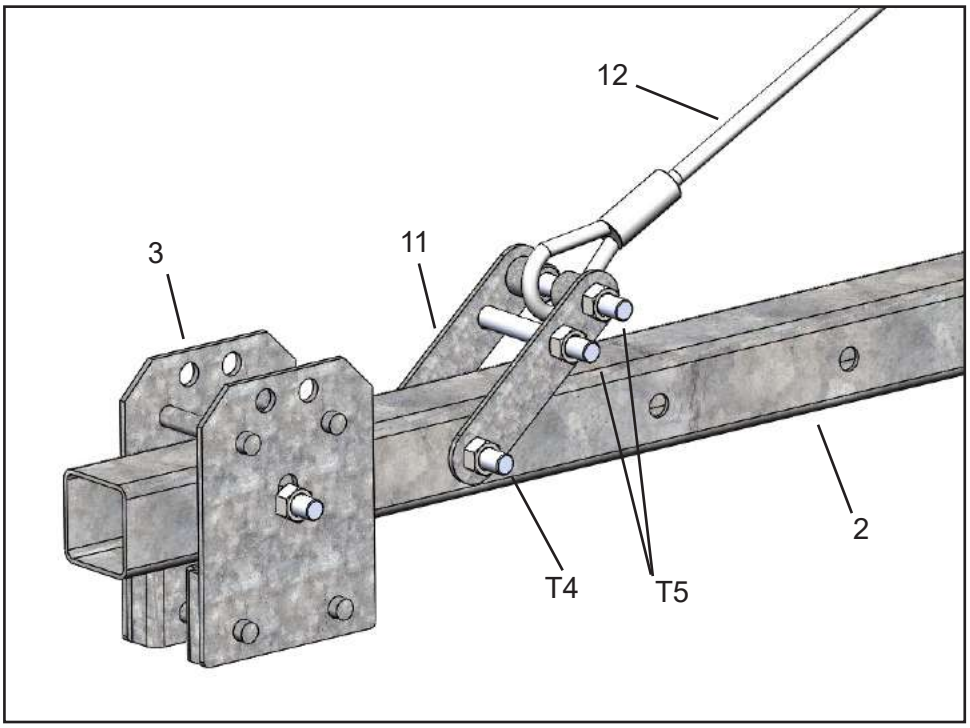
1-Before starting to install the C overhang kit, remove the cable support head (Pos. 3) and centre the front outer telescopic tube (Pos. 1) in relation to the corresponding front base (Pos. 4, 5, 7, or 8 depending on the configuration).



2-Install the front inner telescopic tube (Pos. 2) according to the required flight by means of 2 T4 screws. At the end of this, mount the cable support head (Pos. 3) with 1 T4 screw.



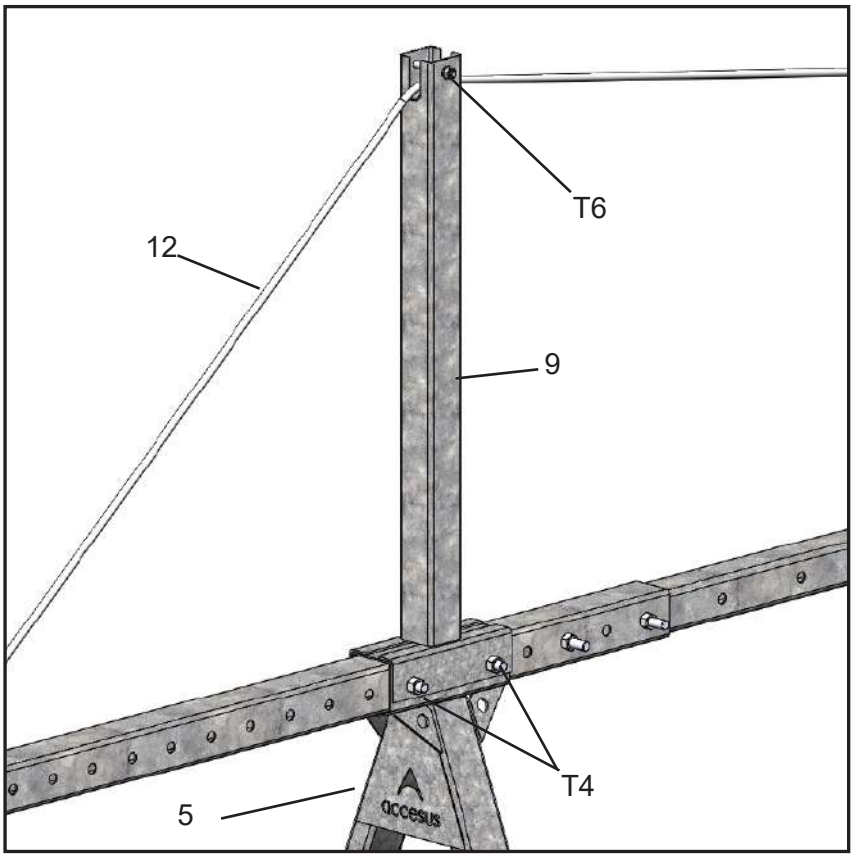
3-Attach the cable clamping plate (item 11) (2 screws T5 and 1 T4) and fix the cable clamp. The plate must be anchored in the most forward position possible, the one closest to the cable support head (item 3).



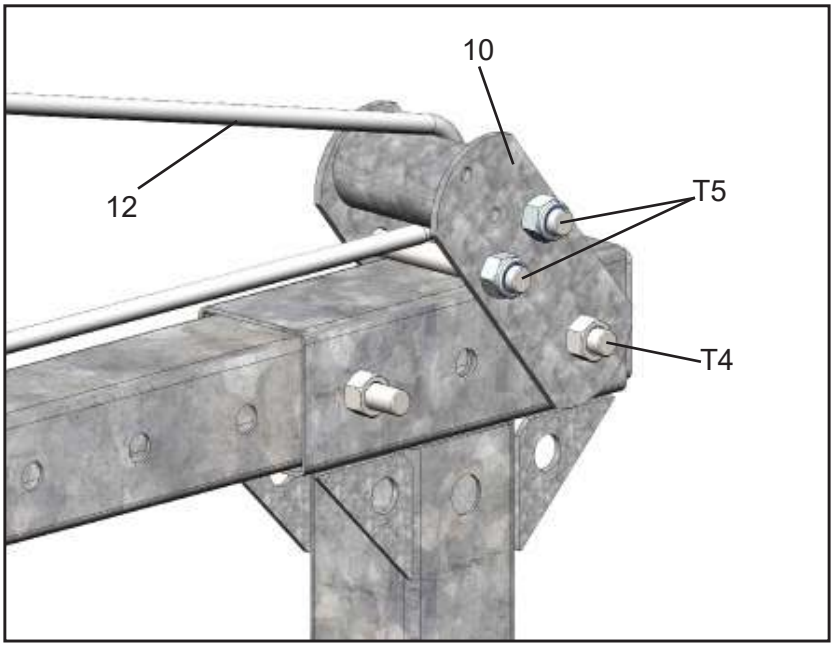
4-Place the cable extension (item 9) with 2 T4 screws on top of the front base.

These screws are the same ones that join the telescopic tube assembly (Pos. 1 and 2) previously assembled with the corresponding front base (Pos. 4, 5, 7, or 8 according to the configuration)

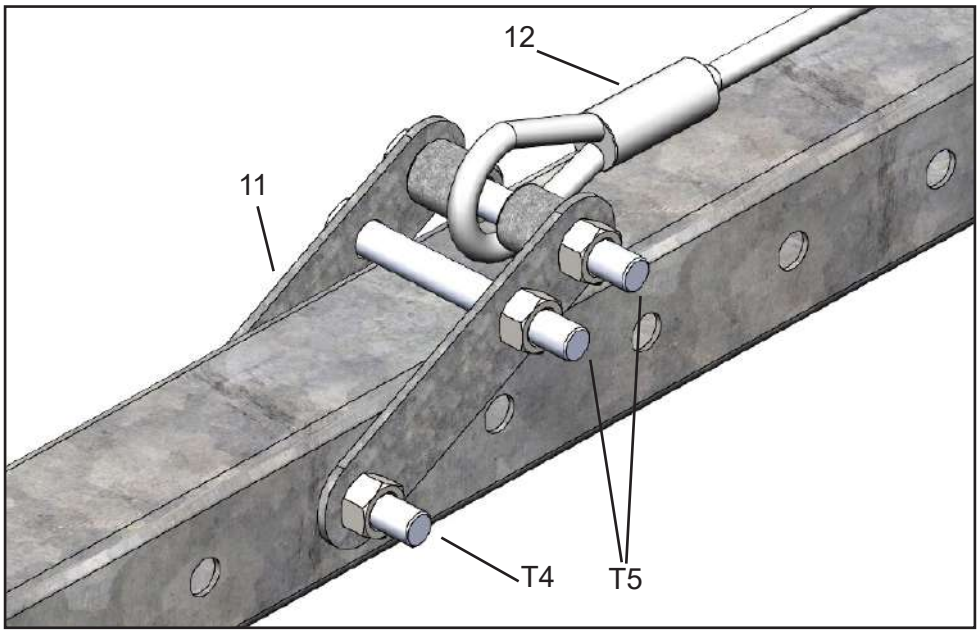
The cable is held at the top of the mast by a groove and is locked with a T6 screw.



5-Place the first deflection plate (Pos. 10) of the cable (1 screws T4 and 2 T5) and pass the fixing cable (Pos 12). The sheet must be anchored in the most backward position possible.

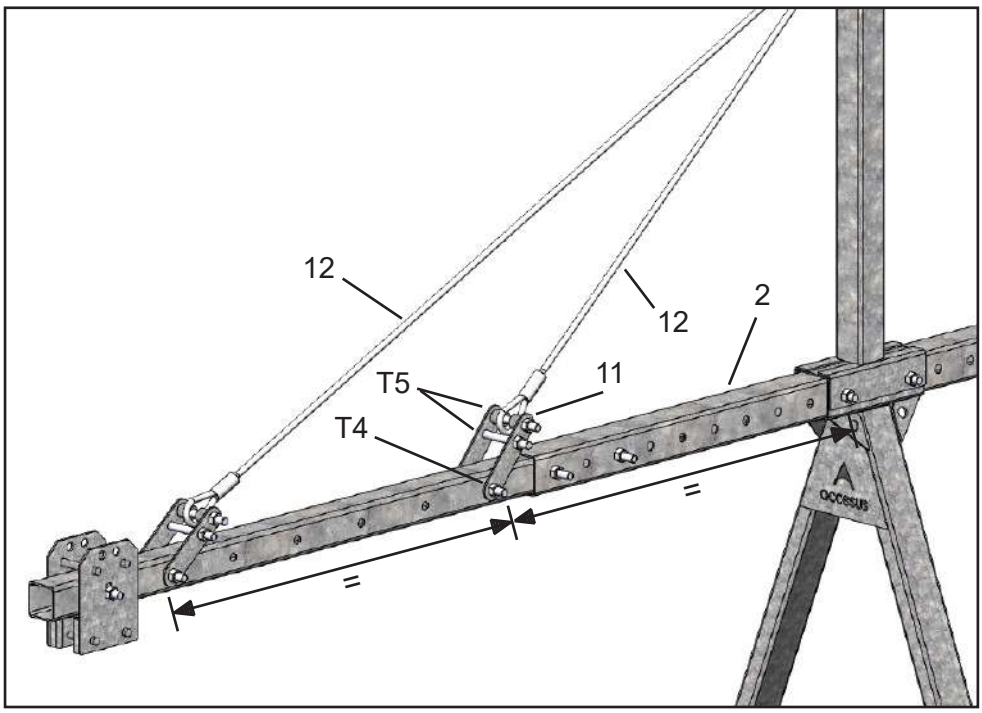


6-Place the hook plate (Pos. 11) of the cable (2 screws T5 and 1 T4) and fix the other end of the clamping cable (end with the tensioner with flashlight).

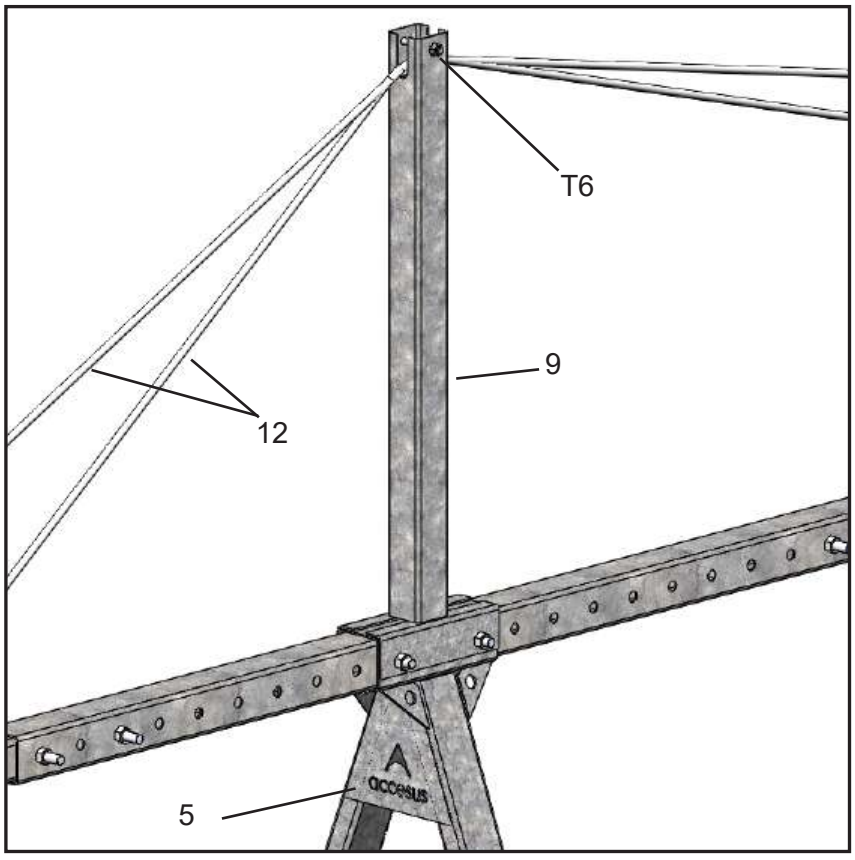


Once the first cable is installed we proceed to the installation of the second.

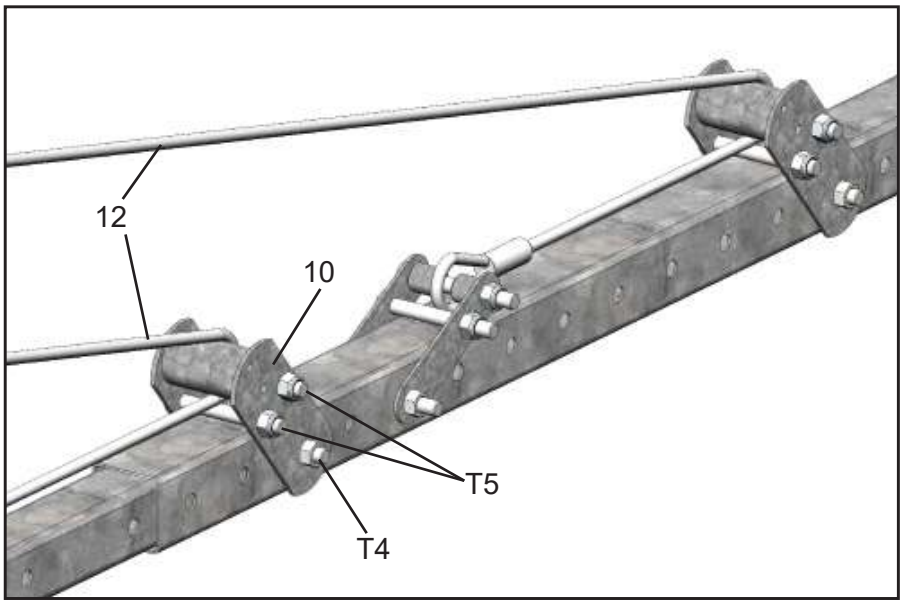
7-Fit the hook plate (Pos. 11) of the cable (2 screws T5 and 1 T4) and fix the second cable for fastening. The plate must be anchored in the position as centered as possible with respect to the other hook plate (Pos. 11) and the cable extension (Pos. 9).



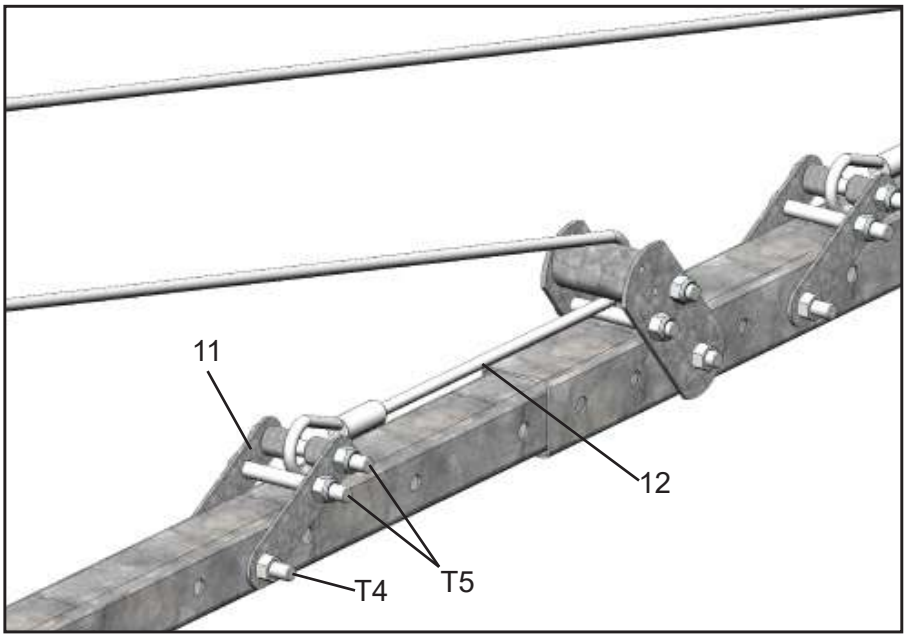
8-The second tether cable is held at the top of the mast by a groove and locked with a T6 screw (in exactly the same way as the first cable).



9-Place the second deflection plate (Pos. 10) of the cable (1 screws T4 and 2 T5) and pass the second clamping cable (Pos 12). The sheet must be anchored in the most backward position possible.



10-Attach the clamping plate (item 11) of the cable (2 screws T5 and 1 T4) and fix the other end of the clamping cable (end with the turnbuckle with flashlight) to the second cable.



11-Tighten the two wires.

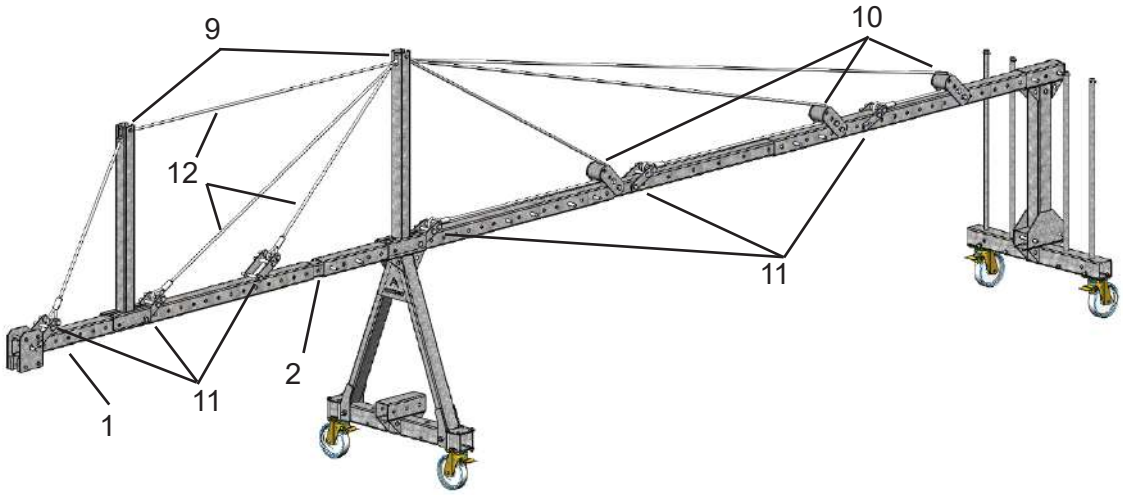
The davit will be assembled at ground level, and once assembled it will be placed in its position and fixed by braking the front and rear wheels.

5.7. Overhang kit assembly D, configurations D

To increase the flight in any of the configurations it will be necessary to mount the appropriate flight kit according to the flight you want to achieve. Below is a description of how to mount theoverhang kit D.

KIT OVERHANG C, TRIPLE BRACING	
Motor	Max. Overhang
C.M.U. 300kg	3,0 m
C.M.U. 400kg	3,0 m
C.M.U. 500kg	3,0 m
* C.M.U. 600kg	-
* C.M.U. 800kg	-
* C.M.U. 1000kg	-

**Overhang D kit assembly not valid for 1D, 2D, 3D and 4D configurations with CMU 600, 800 and 1000 kg lift*



Two operators are required to install the davits.

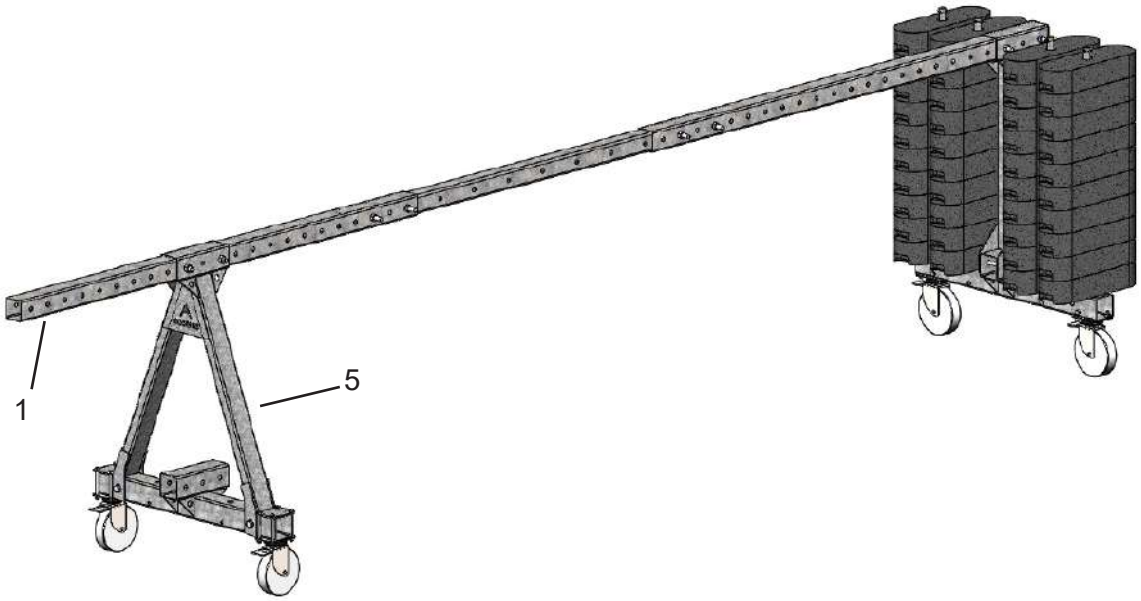
The components of the overhang D kit are:

1-Outside telescopic tube. (1 pc.)
2-Interior telescopic tube. (1 unit)
9-Cable extension - Mast (2 pcs.)
10-Cable deflection plate (3 pcs.)
11-Cable hooking plate (6 pcs.)
12-Sling with turnbuckle (3 pcs.)
List of required materials:
Fixed and ratchet wrenches for M12 and M18 hexagonal screw, 2 persons.

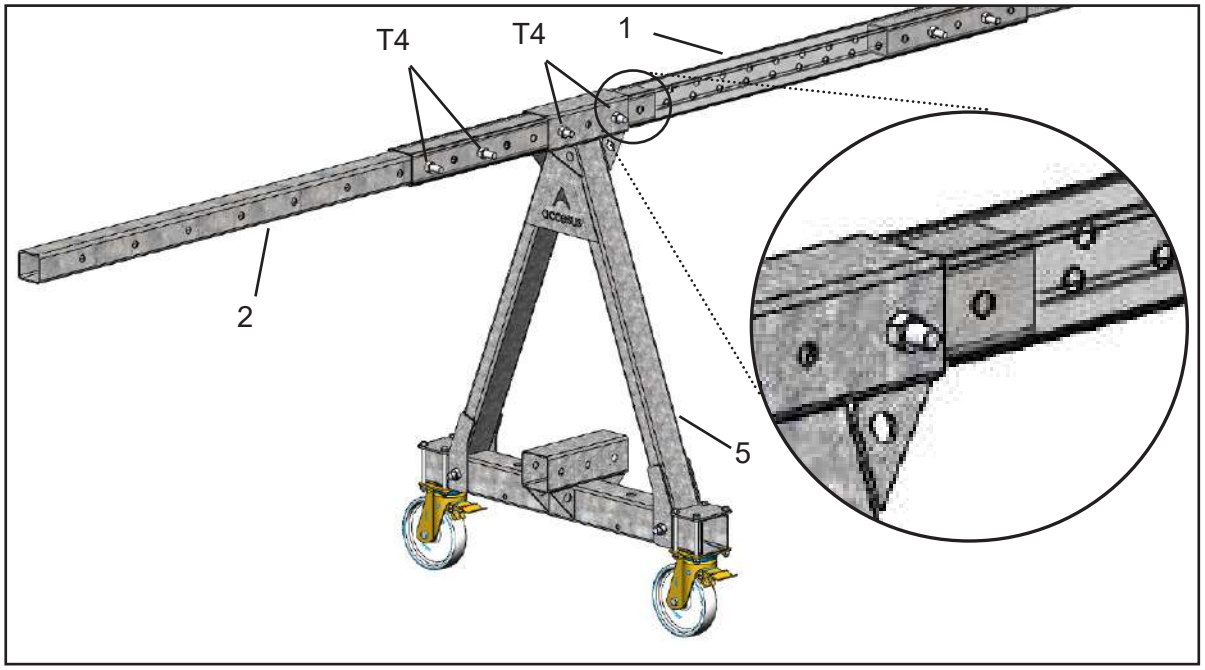
Screws and tightening torque (this list is referred to in the assembly description).

	DESCRIPCIÓN	TORQUE	UDS.
T4	Screw DIN931 M18x140 8.8 + Nut DIN934	220 Nm	15
T5	Screw DIN931 M18x140 8.8 + Nut DIN985	220 Nm	18
T6	Screw DIN931 M12x100 8.8 + Nut DIN934	62 Nm	2

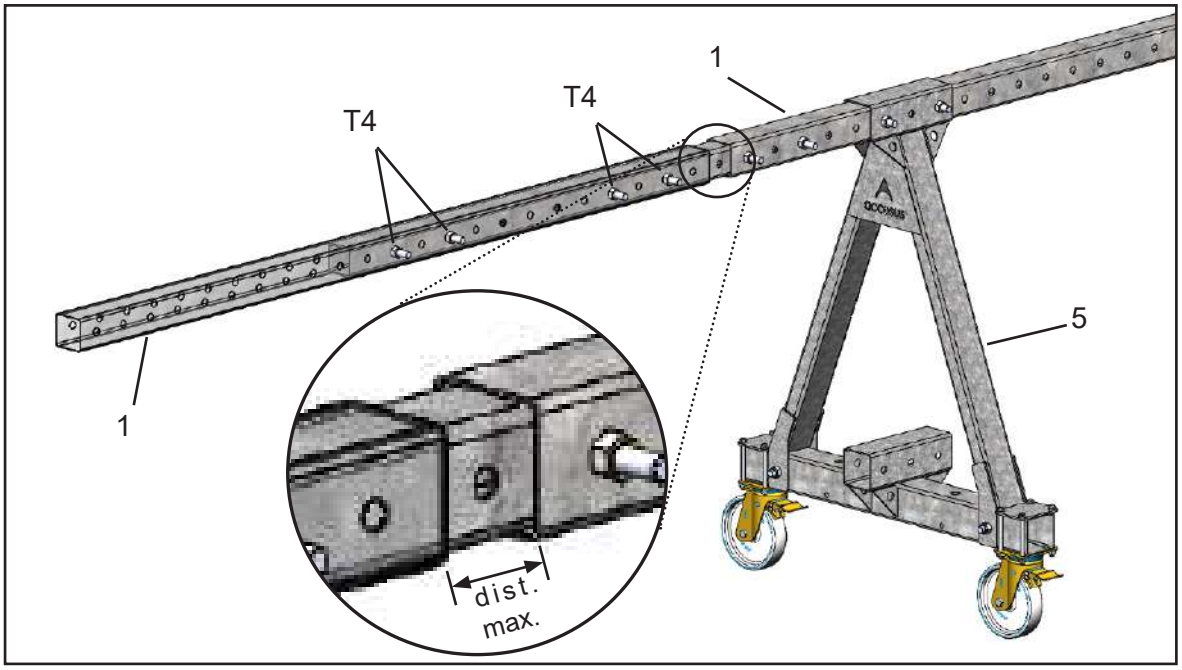
1-Before starting to install the flight kit D, is to remove the cable support head (Pos. 3) and adjust the front outer telescopic tube (Pos. 1) with respect to the corresponding front base (Pos. 4, 5, 7, or 8 depending on the configuration), and the other tubes to achieve the required distance between supports before continuing.



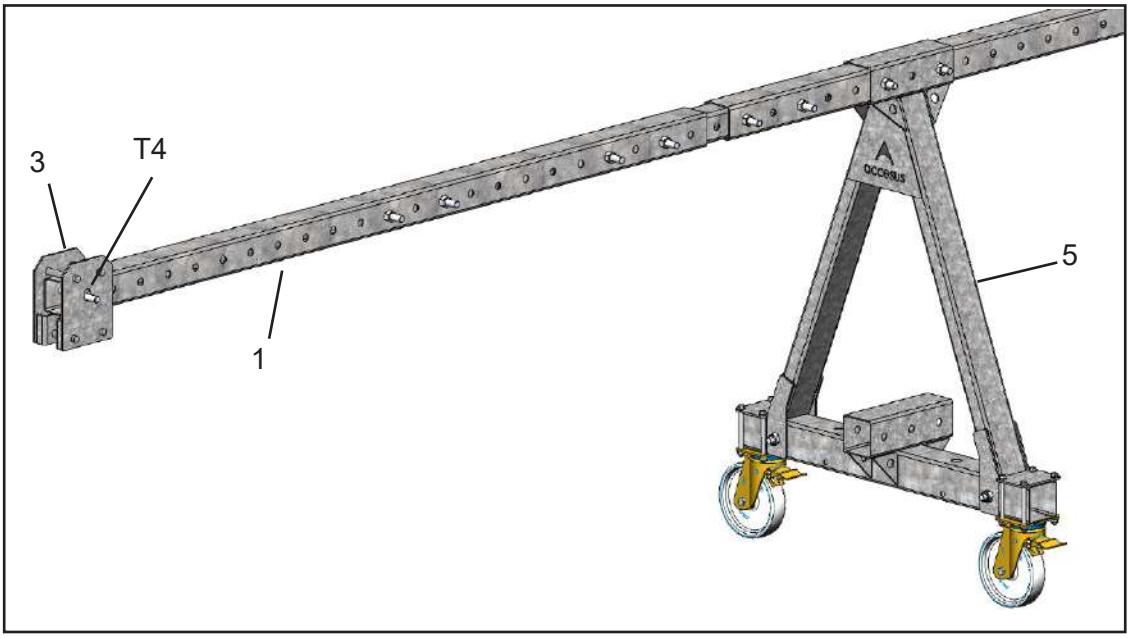
2-Install the front inner telescopic tube (item 2) with 2 T4 screws. The innermost end of the tube must also be fixed (depending on the flight required, taking into account that there is a missing tube to be installed) with the 2 T4 screws that already hold the front base (Pos. 4, 5, 7, or 8 depending on the configuration).



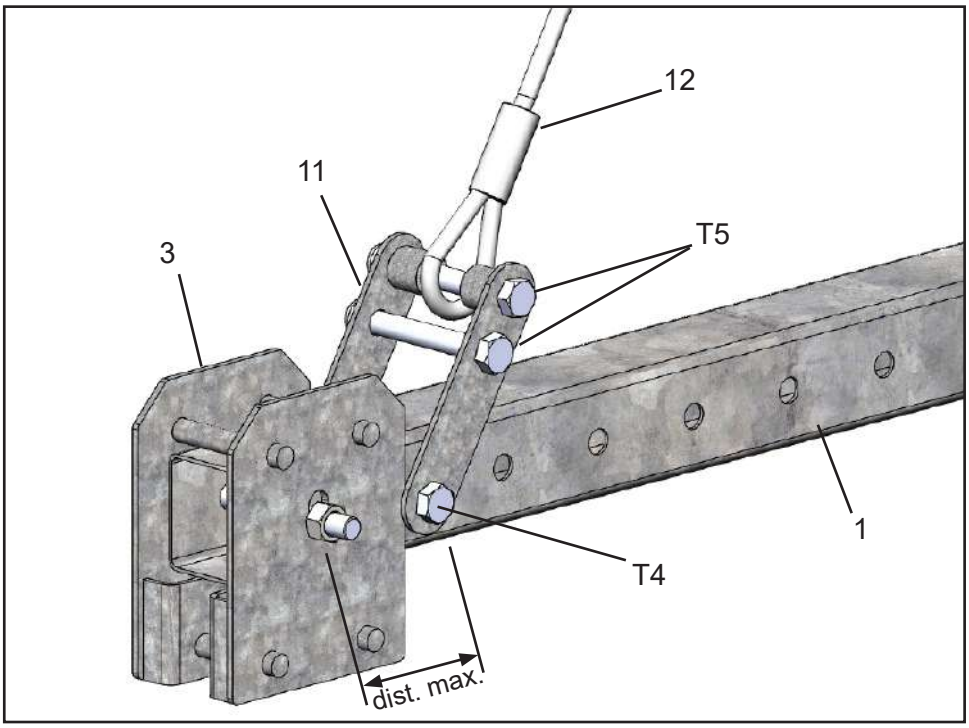
3-Install the front outer telescopic tube (Pos. 1) using 4 T4 screws so that it is as close as possible to the other front outer telescopic tube (Pos. 1)



4-On the tip of the newly assembled front outer telescopic tube (Pos. 1), mount the cable support head (Pos. 3) by means of 1 screw T4.



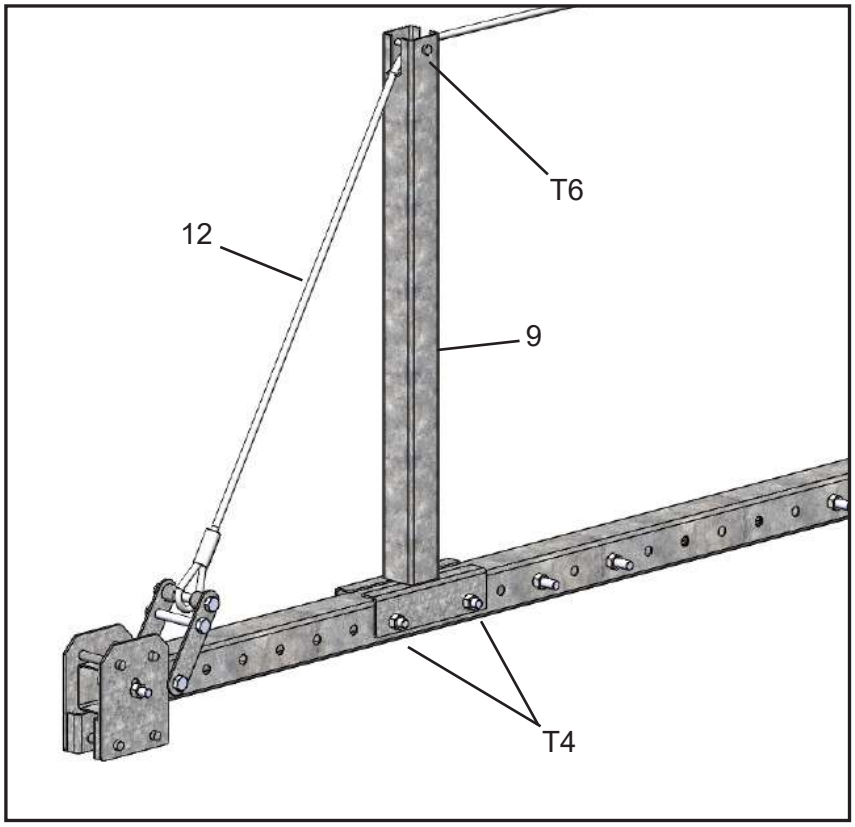
5-Attach the cable clamping plate (item 11) (2 screws T5 and 1 T4) and fix the cable clamp. The plate must be anchored in the most forward position possible, the one closest to the cable support head (item 3).



6-Place the cable extension (Pos. 9) using 2 T4 screws on top of the front tube.

The position of the enhancement is approximate. It will be defined when all the other components have been fully assembled. See next step.

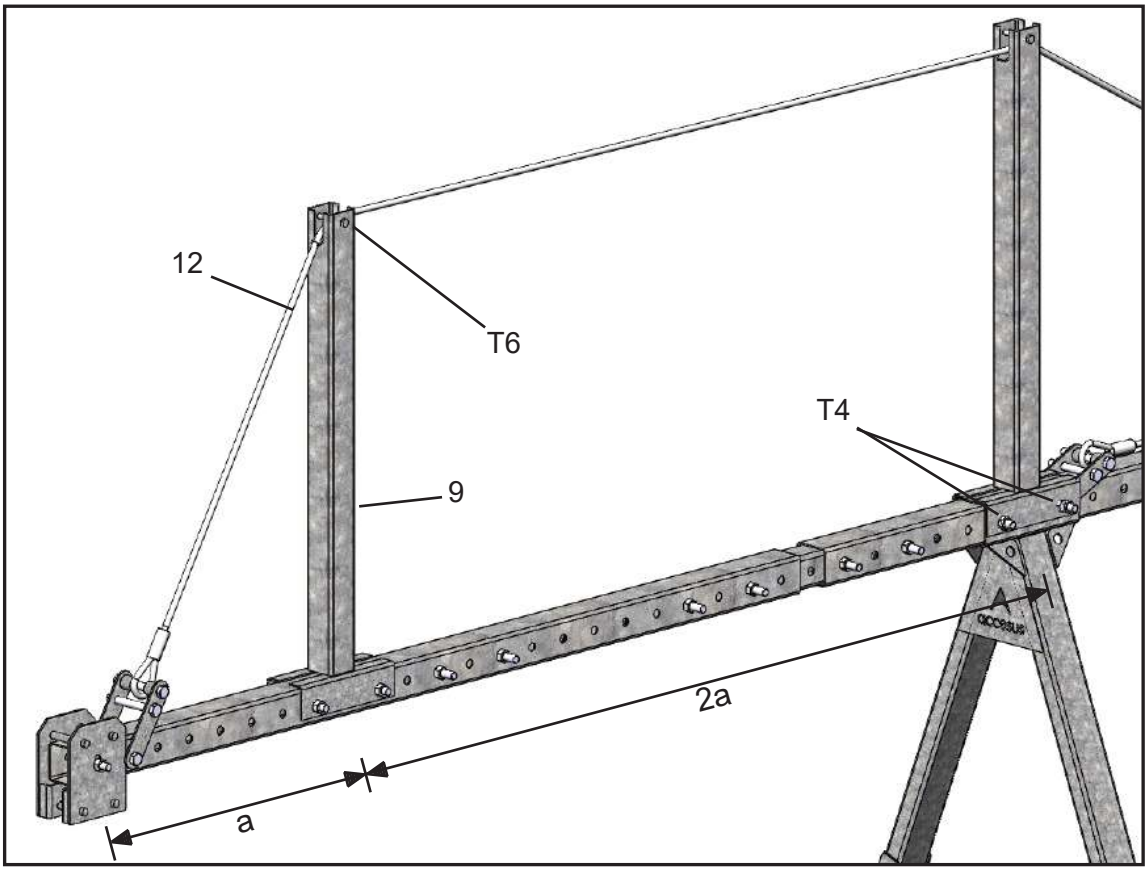
The attachment cable is held at the top of the mast by a groove and locked with a T6 screw.



7-Place the cable extension (item 9) with 2 screws T4 on top of the front tube.

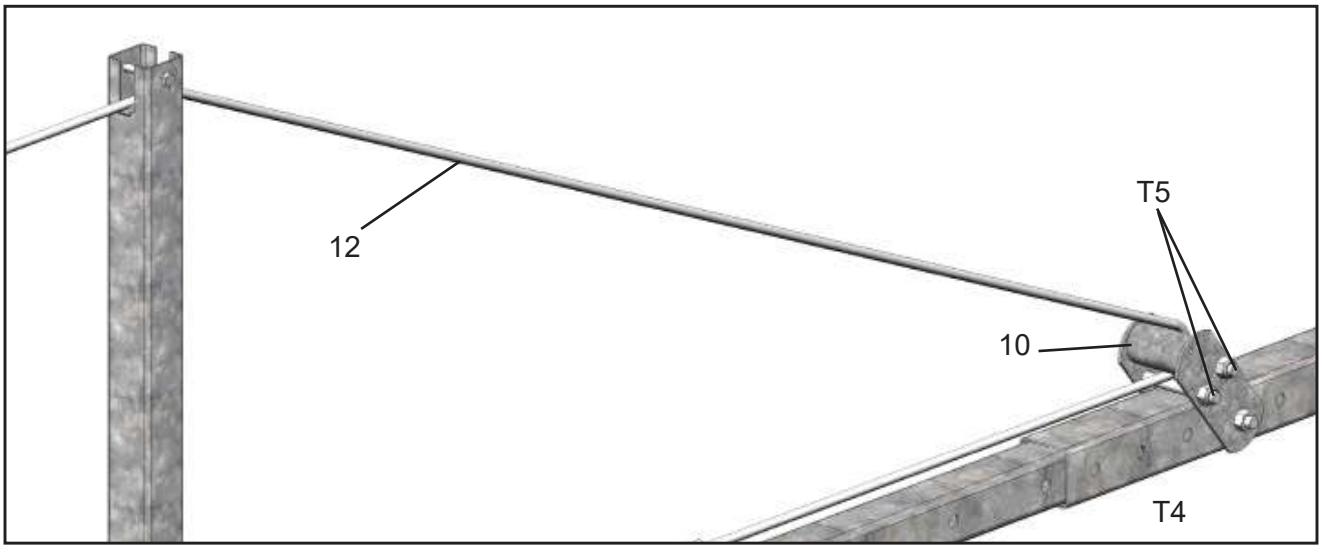
These screws are the same ones that join the telescopic tube assembly (Pos. 1 and 2) previously assembled with the corresponding front base (Pos. 4, 5, 7, or 8 depending on the configuration).

The cable is held at the top of the mast by a groove and is locked with a T6 screw.

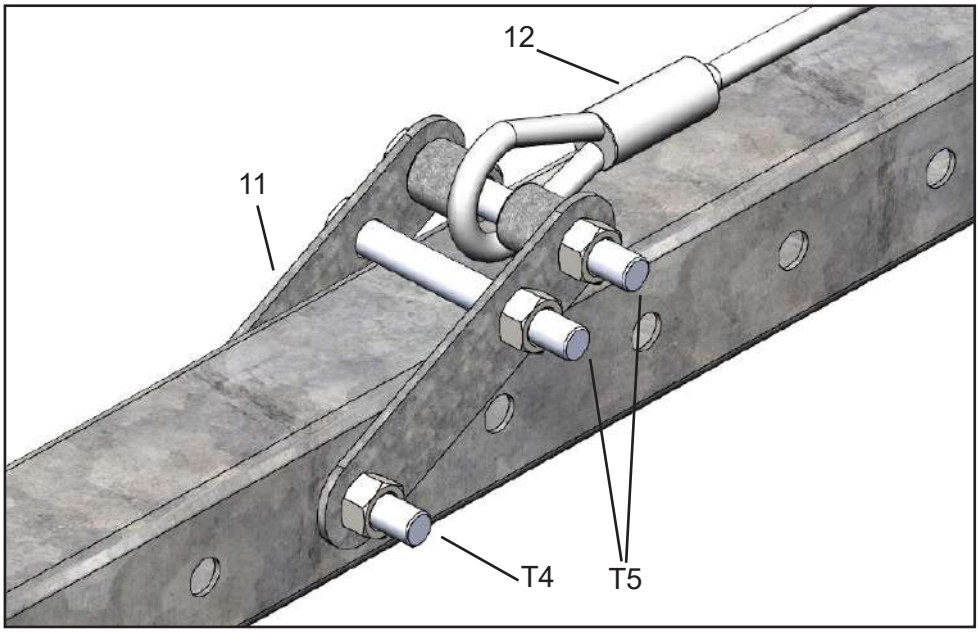


There are 2 ways of anchoring the wire rope to the back of the davit. Follow step 8.1 (and 8.1.1) or 8.2 as appropriate.

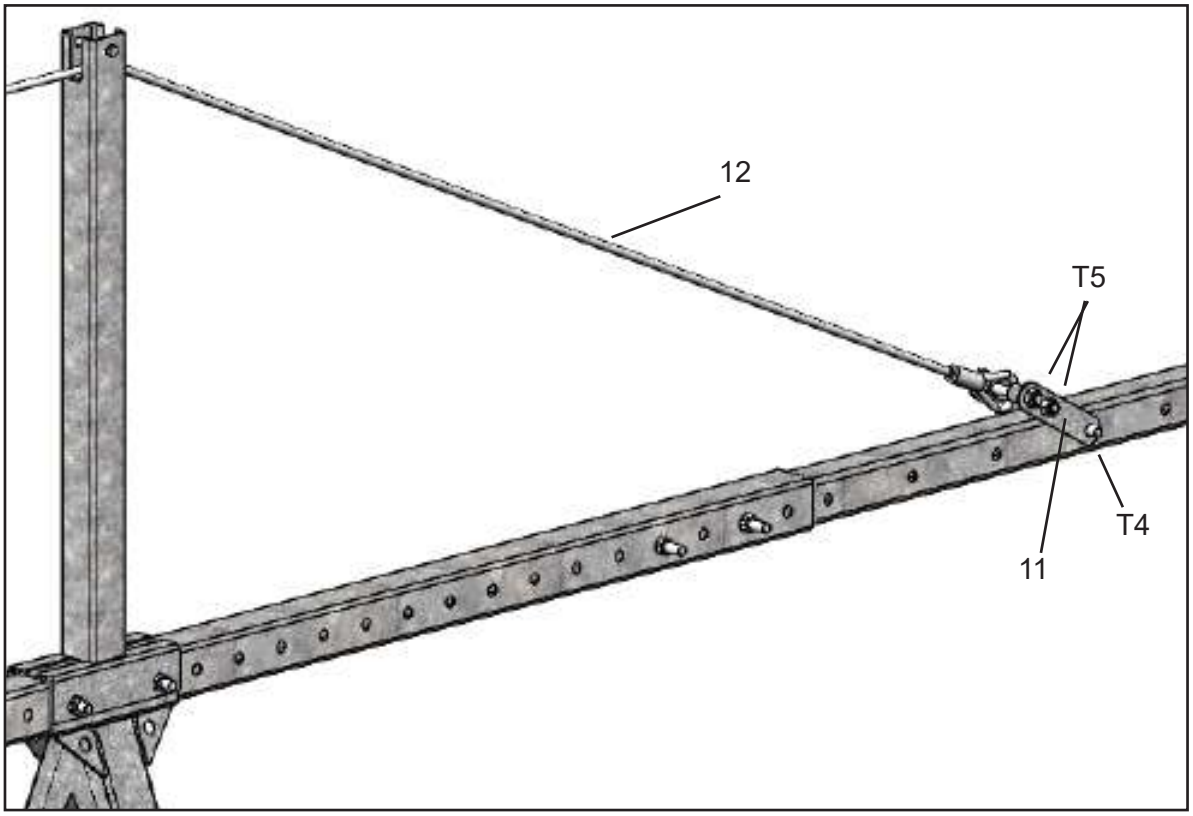
8.1-Place the first cable deflection plate (Item 10) on the cable (1 T4 and 2 T5 screws) and pass the cable clamp (Item 12). The plate must be anchored in the furthest back position possible.



8.1.1-If we have followed step 8.1, we still need to place the cable clamping plate (item 11) (2 screws T5 and 1 T4) and fix the other end of the cable clamp (end with the turnbuckle with flashlight).

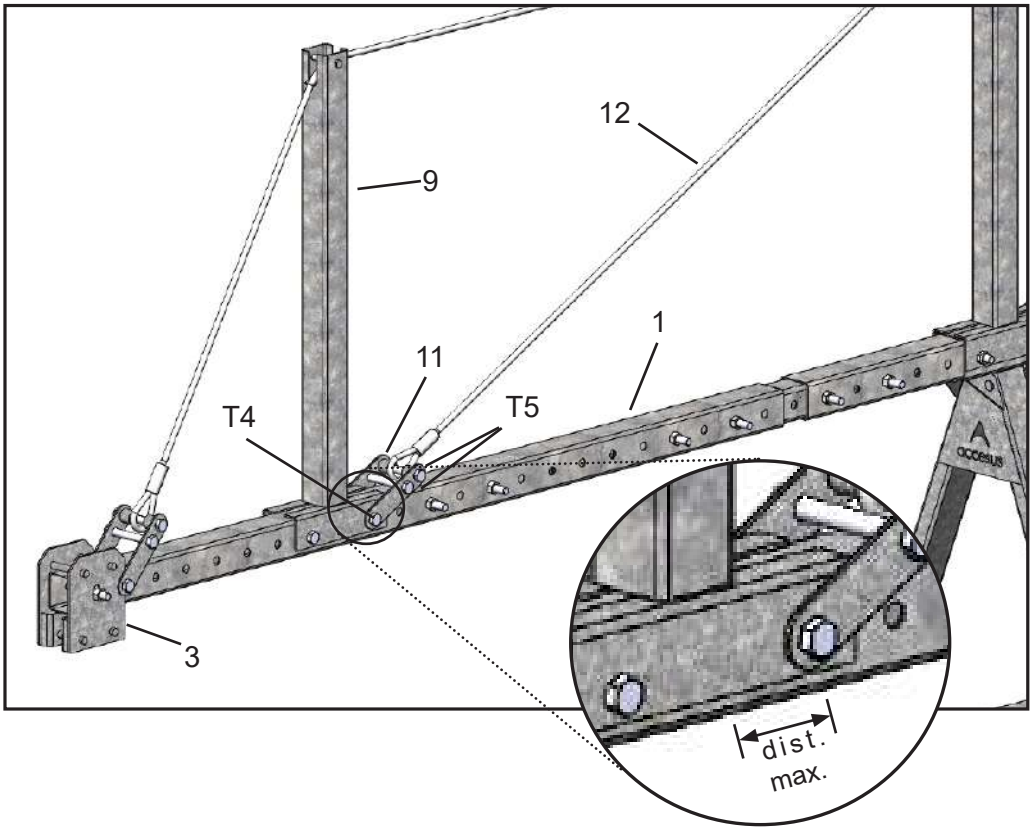


8.2-Instead of using the deflection plate (item 10), another way is to anchor the cable coupling plate (item 11) directly to the pipe (1 T4 and 2 T5 screws) without deflecting the cable. The plate must be anchored in the rearmost position possible.

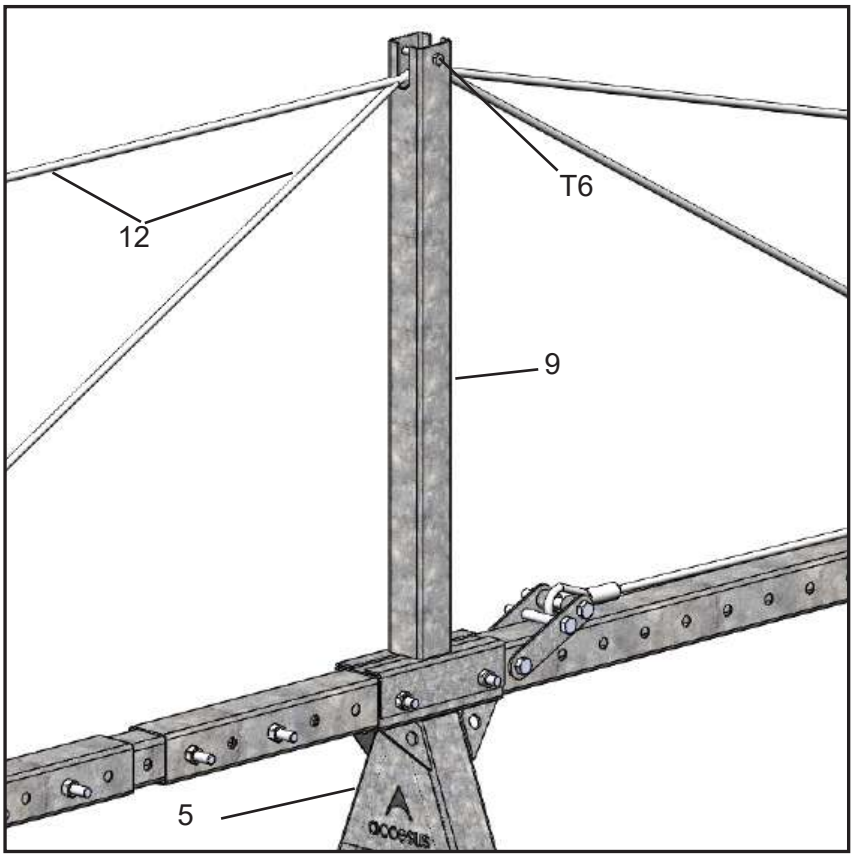


Once the first cable is installed, we proceed to the installation of the second one.

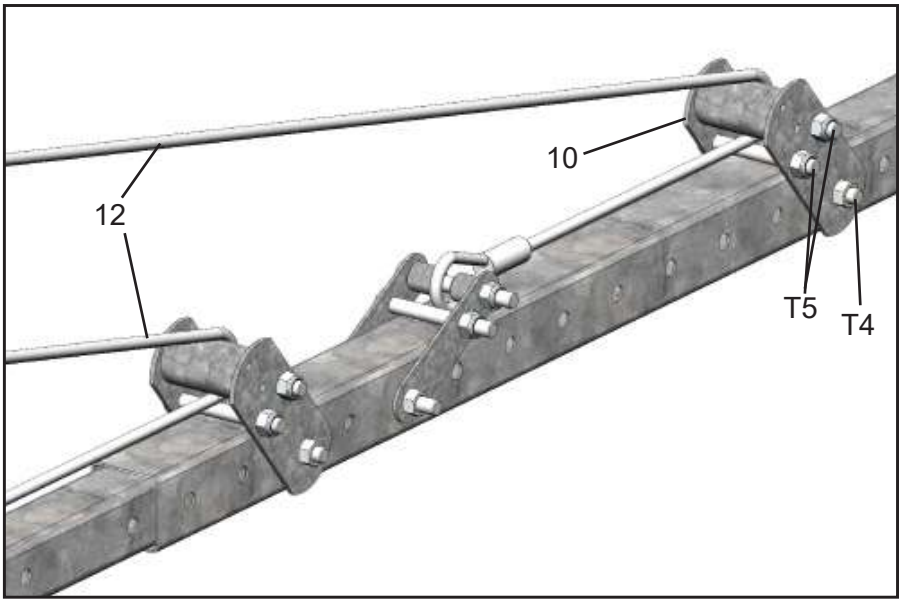
9-Attach the cable clamping plate (item 11) (2 screws T5 and 1 T4) and fix the second cable clamp. The plate must be anchored in the base of the cable extension (item 9) closest to the cable support head (item 3).



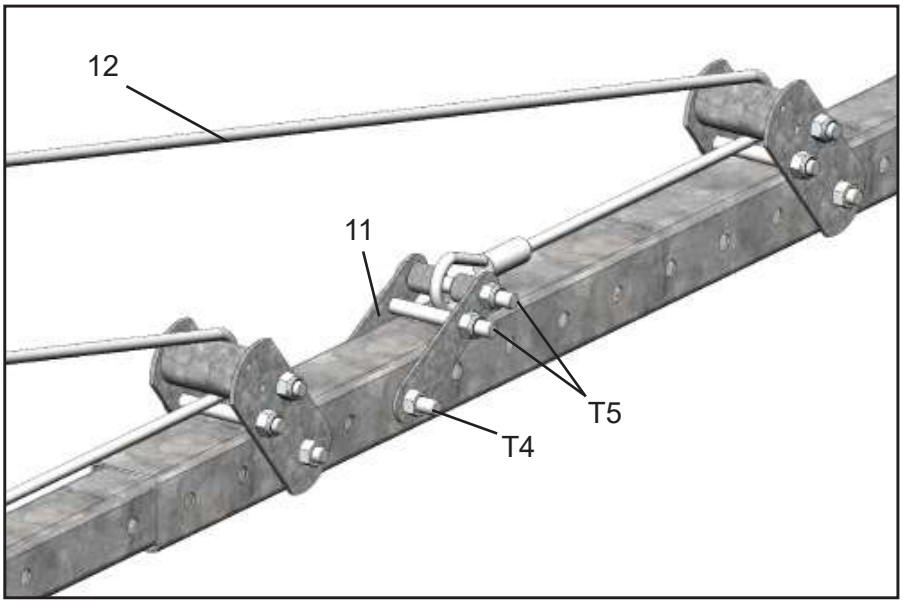
10-The second clamping cable is passed over the top of the cable extension (Pos.9) previously mounted on the corresponding front base (Pos. 4, 5, 7, or 8 depending on the configuration). The cable is held in place by a groove and locked with a T6 screw (exactly the same as the first cable).



11-Attach the second cable deflector plate (item 10) (1 T4 and 2 T5 screws) and pass the second cable clamp (item 12). The plate must be anchored in the rearmost possible position.

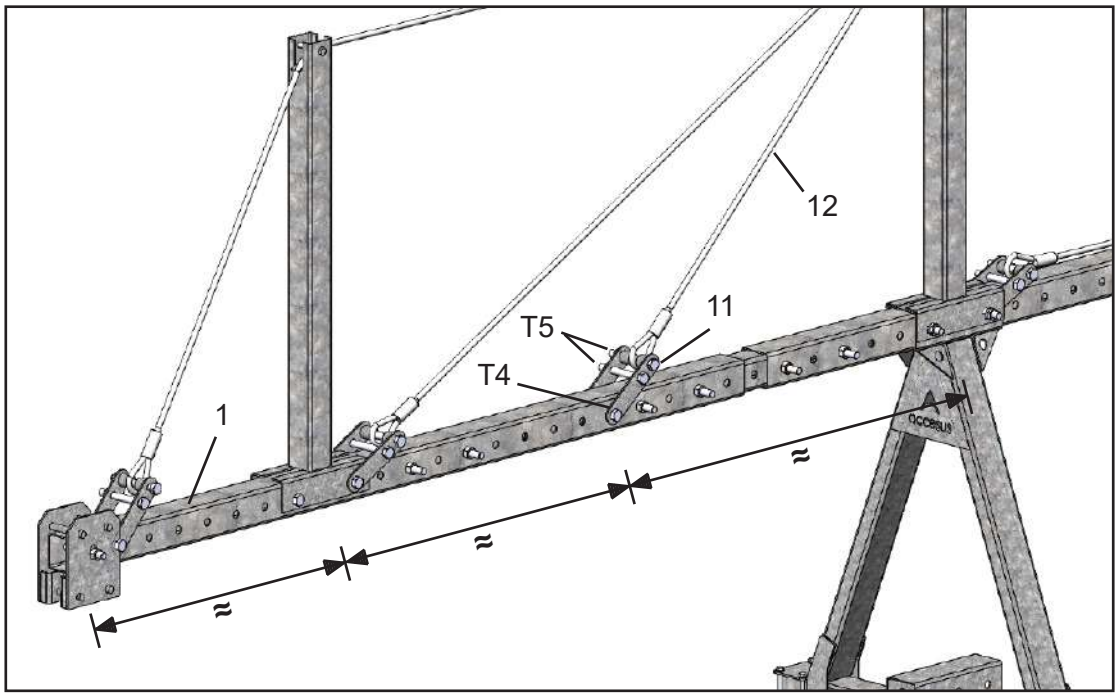


12-Attach the clamping plate (item 11) of the cable (2 screws T5 and 1 T4) and fix the other end of the clamping cable (end with the turnbuckle with flashlight) to the second cable.

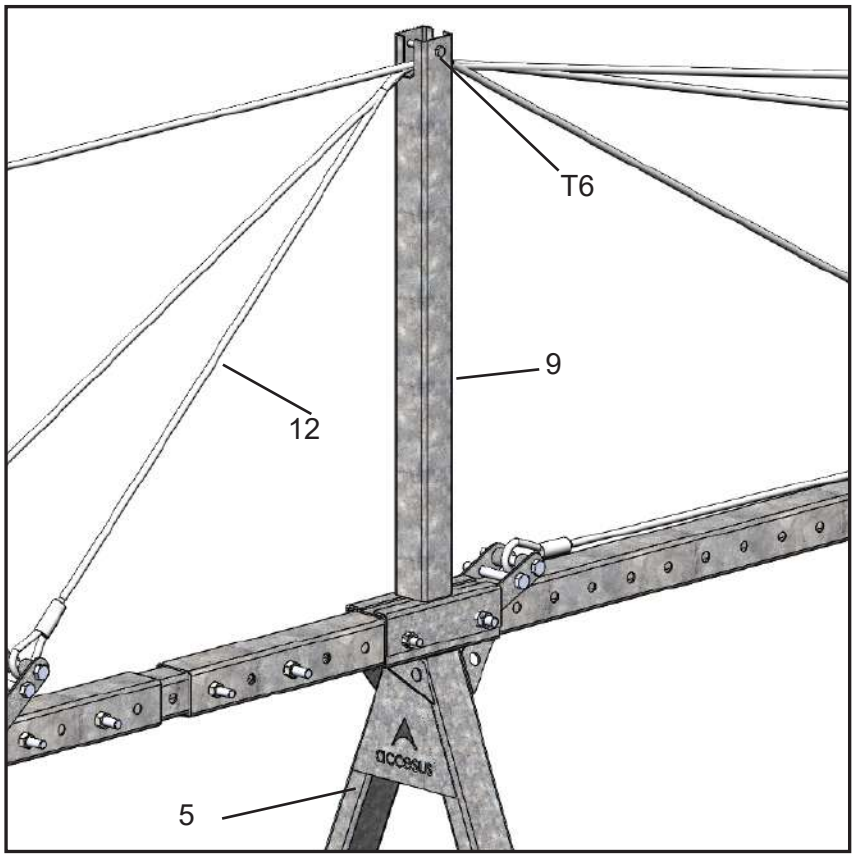


The way of anchoring the cable to the pipe explained in steps 11 and 12 can be substituted according to step 8.2, in exactly the same way as explained in the first cable.

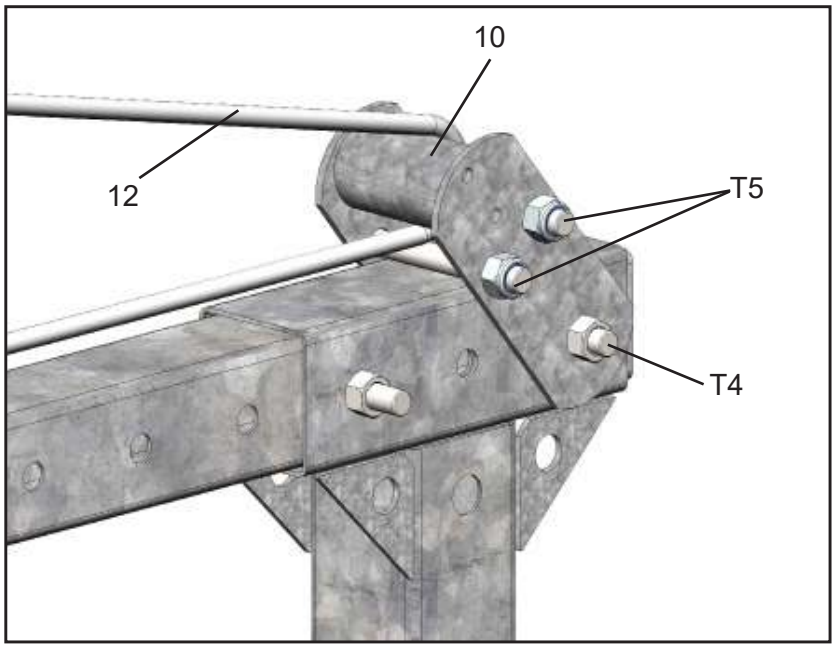
13-Attach the cable clamping plate (item 11) (2 screws T5 and 1 T4) and fix the third cable clamp. The plate must be anchored in the tube (item 1) so that the distances shown in the picture are approximately respected.



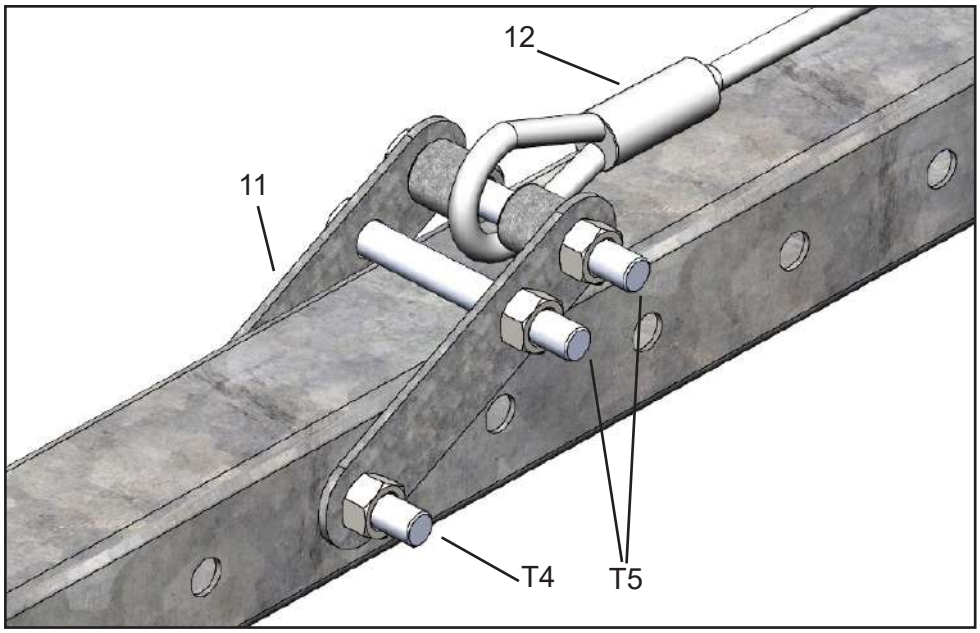
14-The third clamping cable is passed over the top of the cable extension (Pos.9) previously mounted on the corresponding front base (Pos. 4, 5, 7, or 8 depending on the configuration). The cable is held in place by a groove and locked with a T6 screw (exactly the same as the first and second cable).



15-Attach the third cable deflector plate (item 10) (1 T4 and 2 T5 screws) and pass the third cable clamp (item 12). The plate must be anchored in the rearmost possible position.



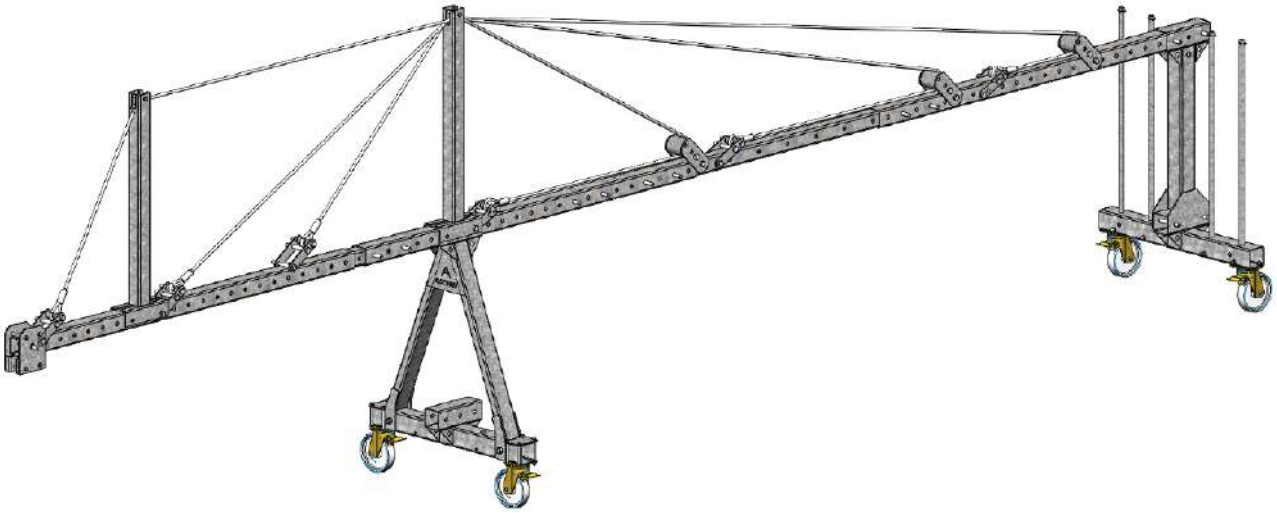
16-Attach the clamping plate (item 11) of the cable (2 screws T5 and 1 T4) and fix the other end of the clamping cable (end with the tensioner with flashlight) to the third cable.



The way of anchoring the cable to the pipe explained in steps 15 and 16 can be substituted according to step 8.2, in exactly the same way as explained in the first cable.

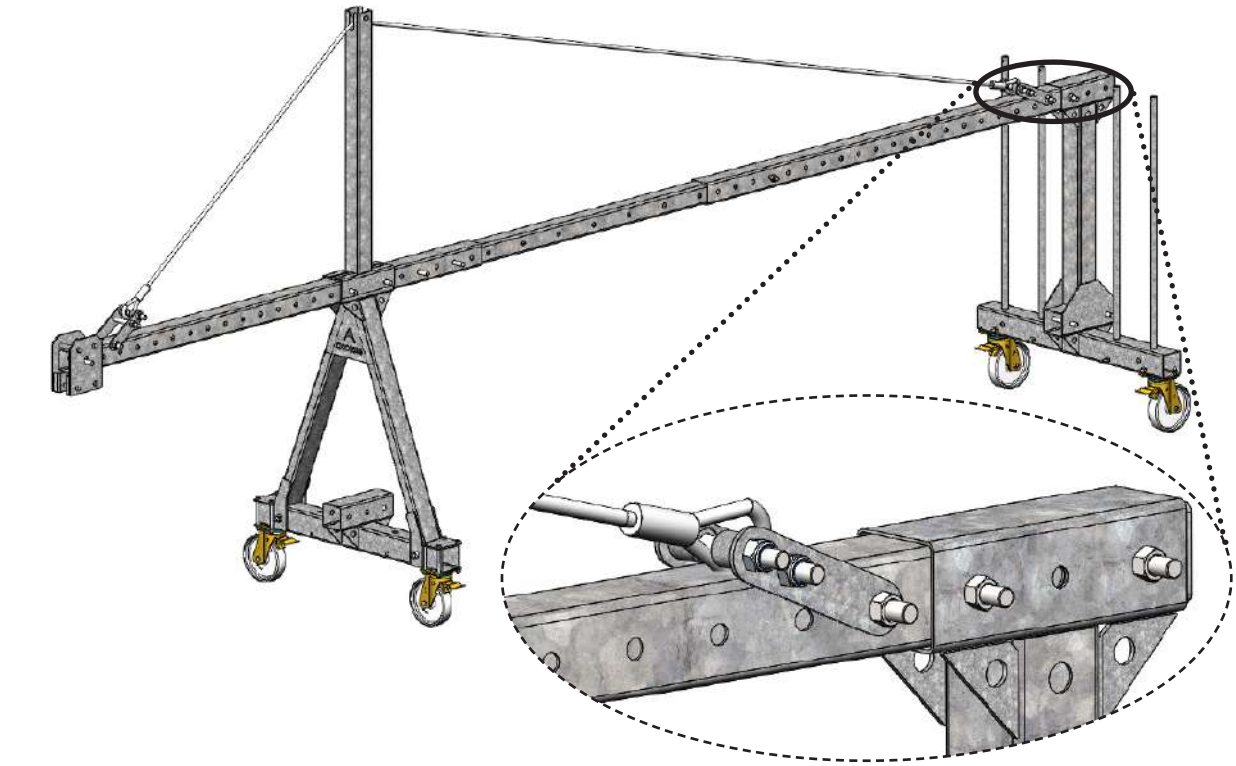
17-Tighten both cables.

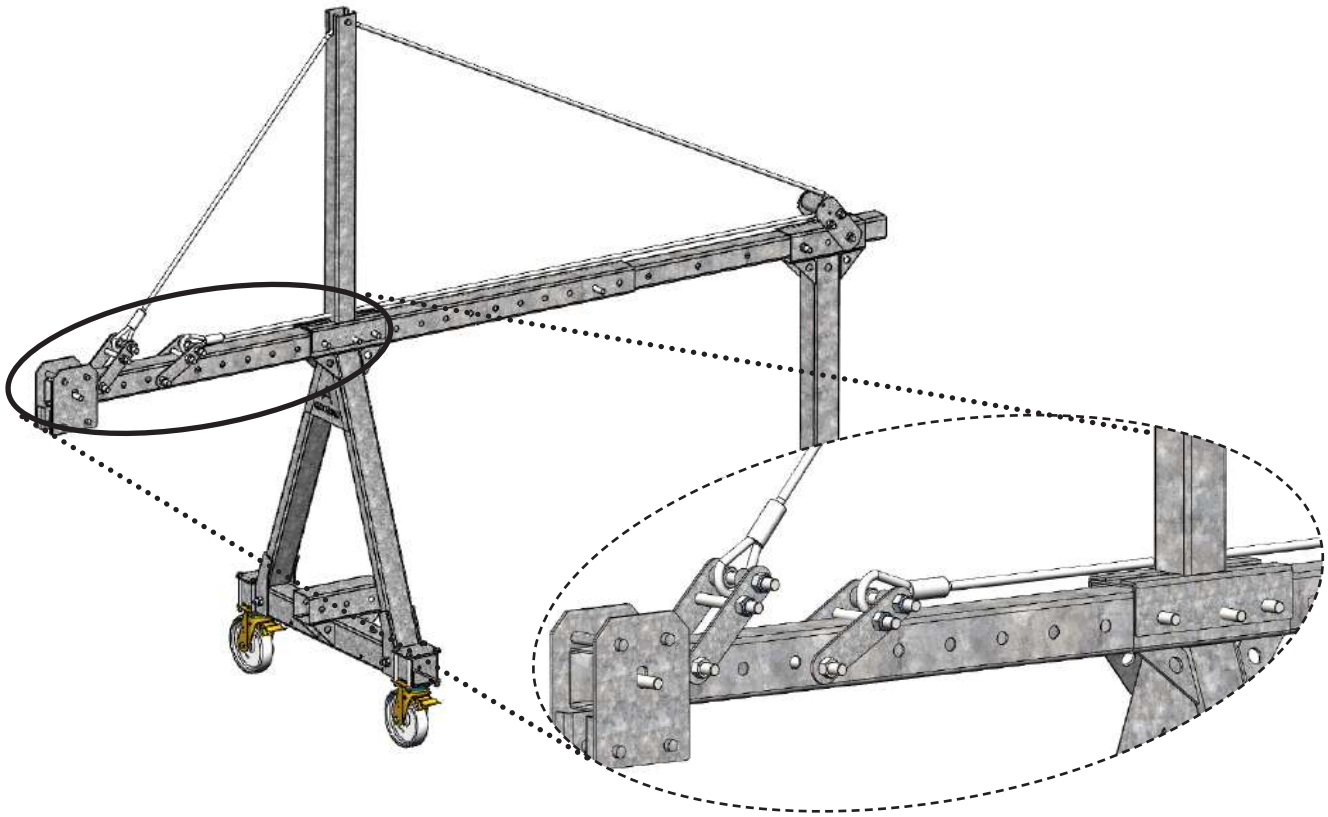
The davit will be assembled at ground level, and once assembled it will be placed in its position and fixed by braking the front and rear wheels. The davit with the flying kit up to 3m is now complete

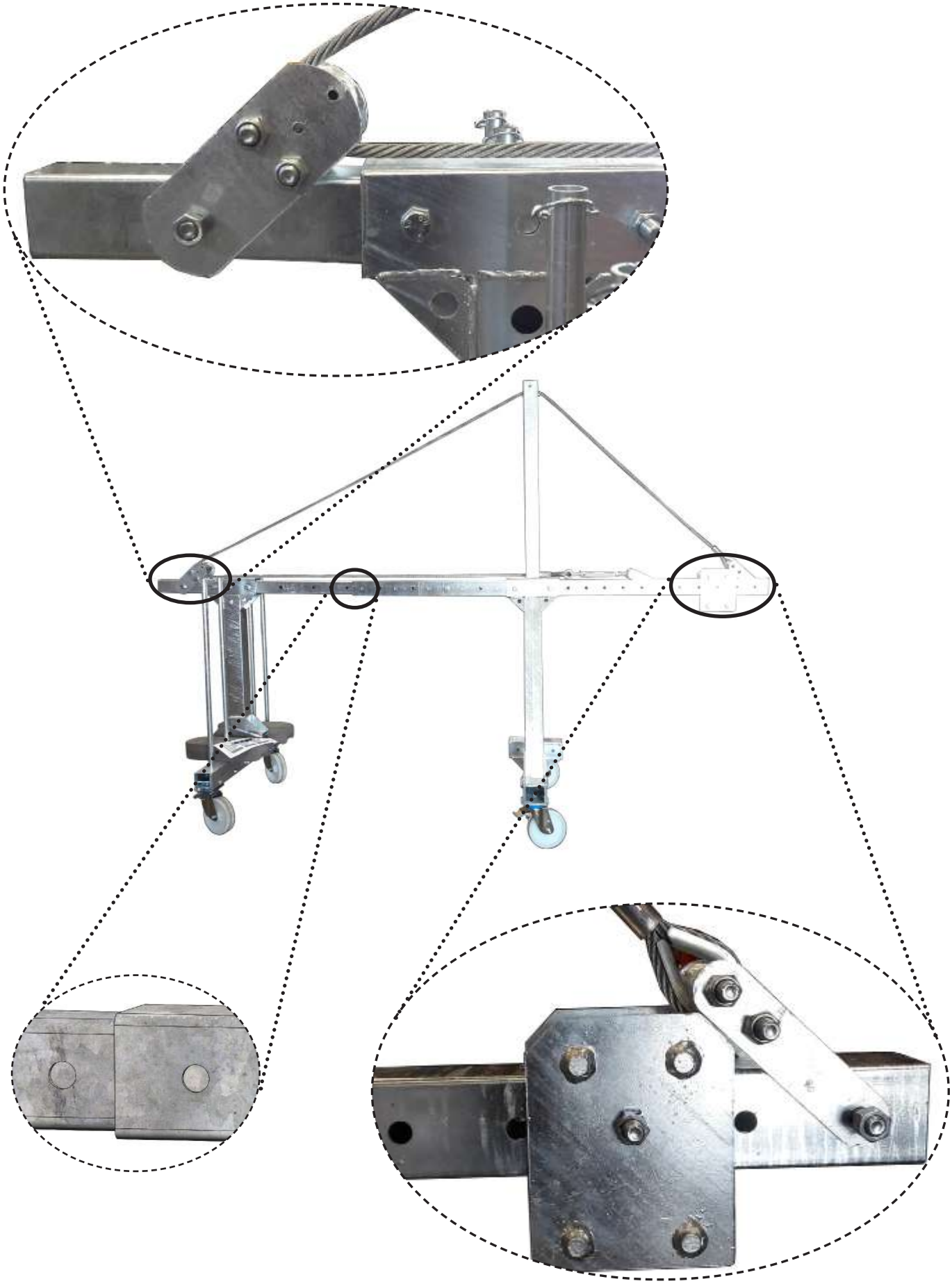


5.8. Examples of assemblies with extreme lengths

Some of the configurations with very long, or very short, flights or distances between supports are shown below as examples:







6. Mounting the cables

¡DANGER!

Damage due to cable handling. Risk of injury from falling objects, falling to different levels and/or breakage.	Danger of cuts and scratches Risk of death from falling objects, falling to different levels and/or breaking.
	-Before assembling the cables, make sure that the suspension or davit structure has sufficient capacity to withstand the stresses due to suspended loads, described in section 4.5 of this manual. -Use suitable PPE's: harness, protective gloves, safety boots, protective helmet, etc. -Only the cables specified by the manufacturer should be used. -Make sure that the diameter of the cable corresponds to that indicated on the plate of the lifting device and the fall arrest device, that the length of the cable is sufficient for the height of the work to be carried out and that the tip is correct. -Avoid the formation of loops when handling cables. -Place the lead platform under the suspensions.

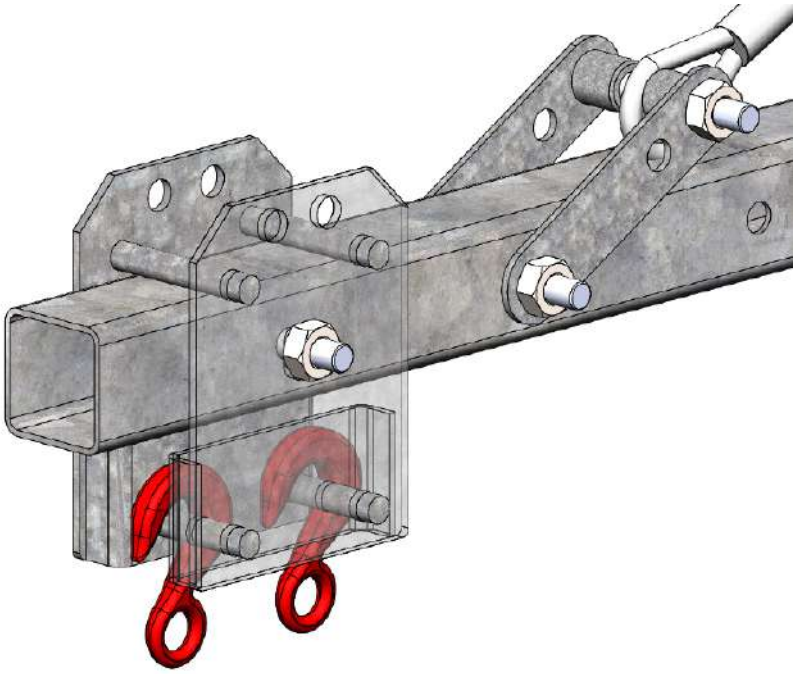
Two operators are required to install the cables: one on the platform and the second at suspension level. The latter must be equipped with a harness that is anchored to a sufficiently strong anchorage point.

1-Unspool the lifting and safety ropes from the ground by lifting them with a rope, **do not drop them to unwind.**

2-**Adjust the distance between the davits** so that it is equal to the distance between the platform lifts.

3-Hook the ropes to the davit rings separately for the lifting and safety rope, see next page. Make sure that the hook lock is fully closed.

It is mandatory to use these two independent anchorage points.



7. Displacement of davits

Two operators are required to move the davits. When working at davit level, they must be equipped with a harness that is anchored to a sufficiently strong anchorage point.

1-Place the platform about 30 cm above the ground.

2-Remove the counterweights of the safety cables.

3. Leave the safety wires sufficiently loose.

4-Support the platform on the ground and leave the working cables loose. **Never remove or loosen the tension cable from the davit.**

5- Move the davits to the new position (release the wheel brakes of the davit and lock them again once the davits have been placed in their new location).

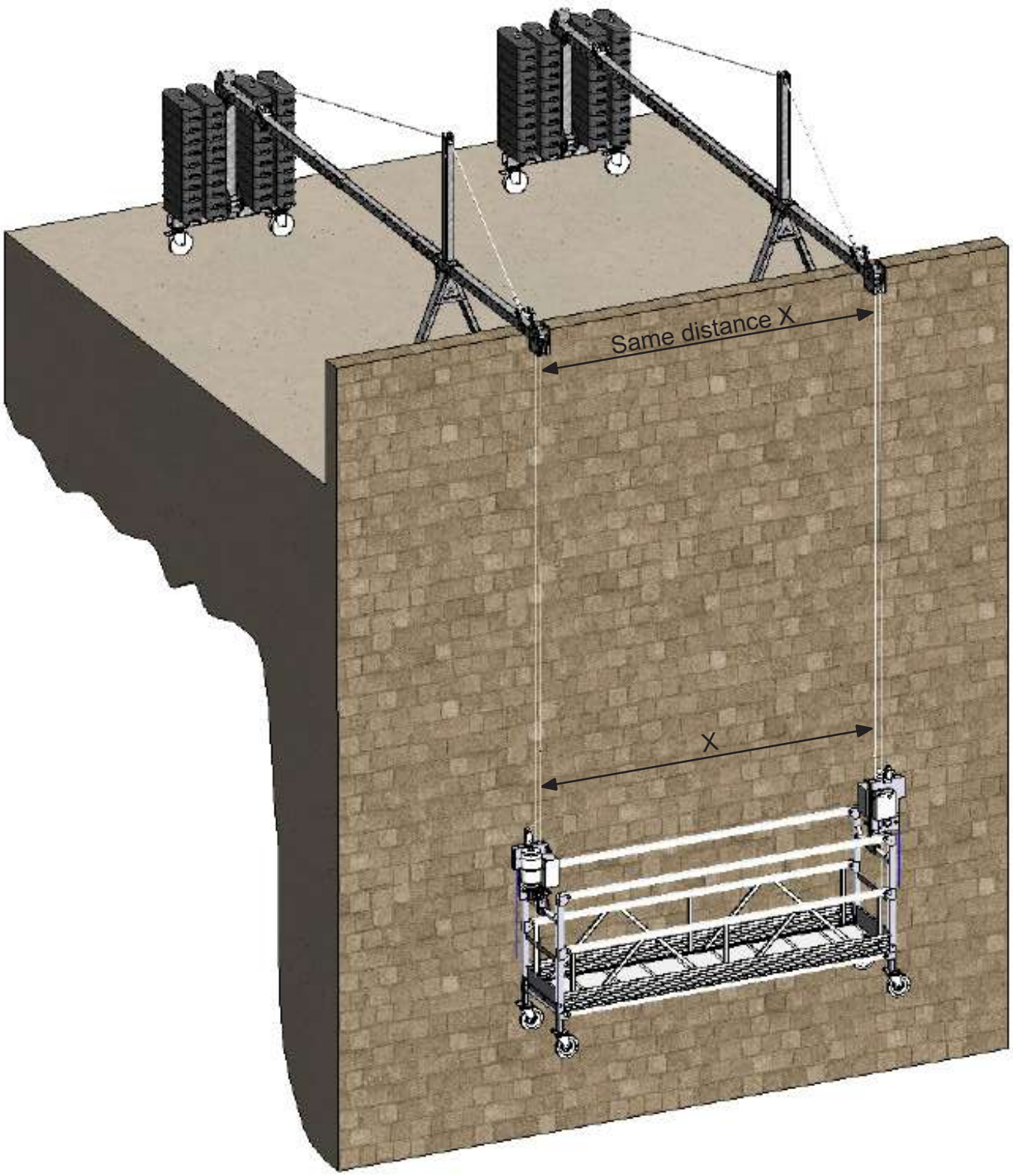
6-Lift the platform until it is in the vertical of the suspensions.

7-Avoid placing the platform by means of the lifts; it could produce a dangerous swing or the deterioration of the material.

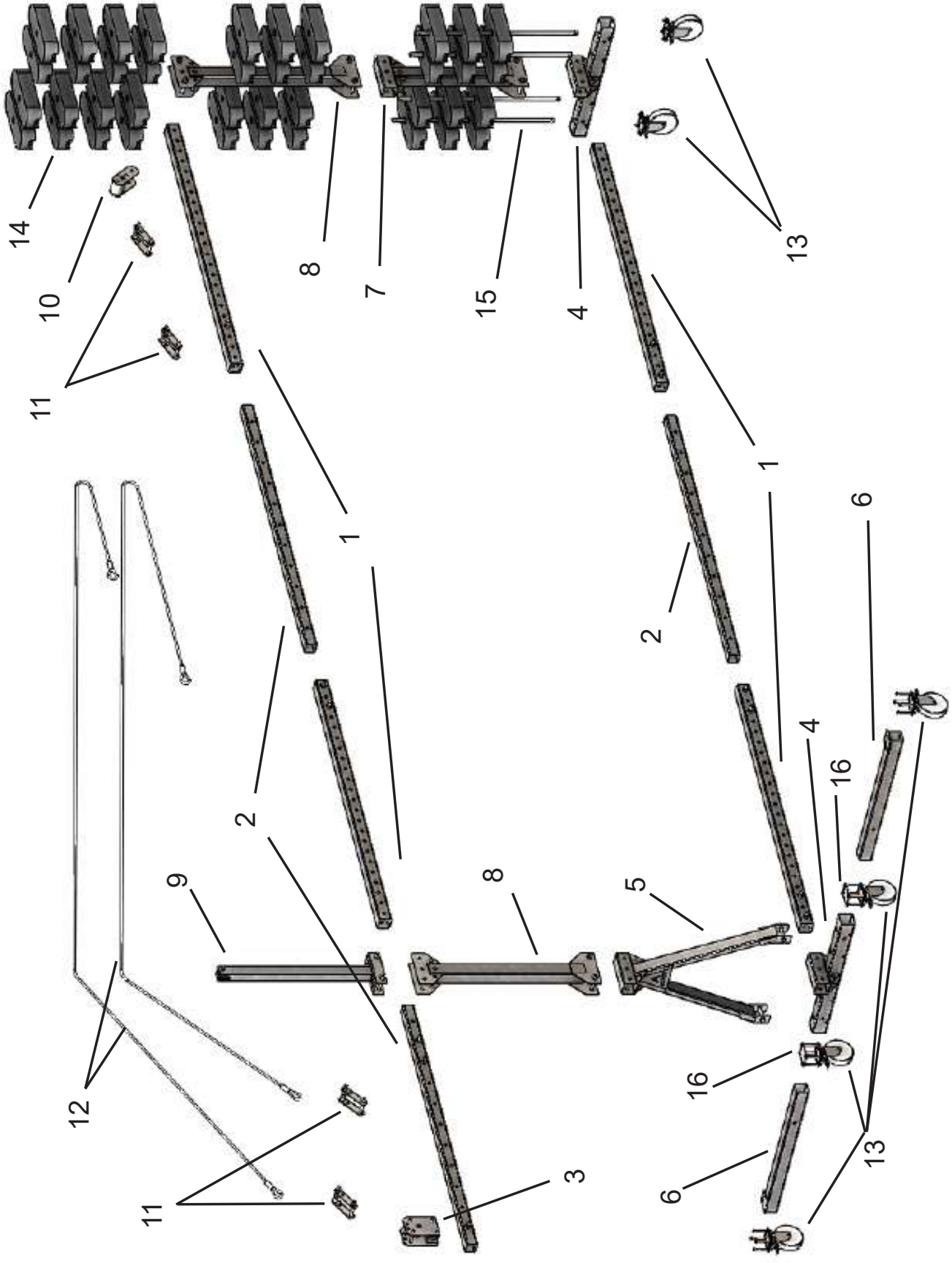
8-Tension the suspension wires by pressing the UP button.

9-Lift the platform about 30 cm.

10-Tension the safety wires by hand and attach the counterweights to each safety wire. Carefully roll up the unused length of wire.


Same distance X
X

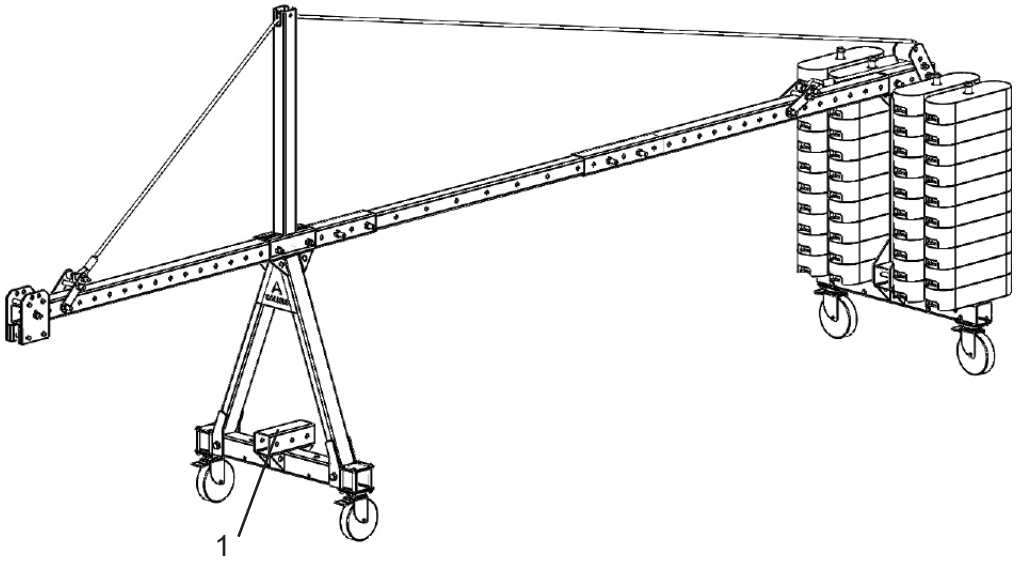
8. Components



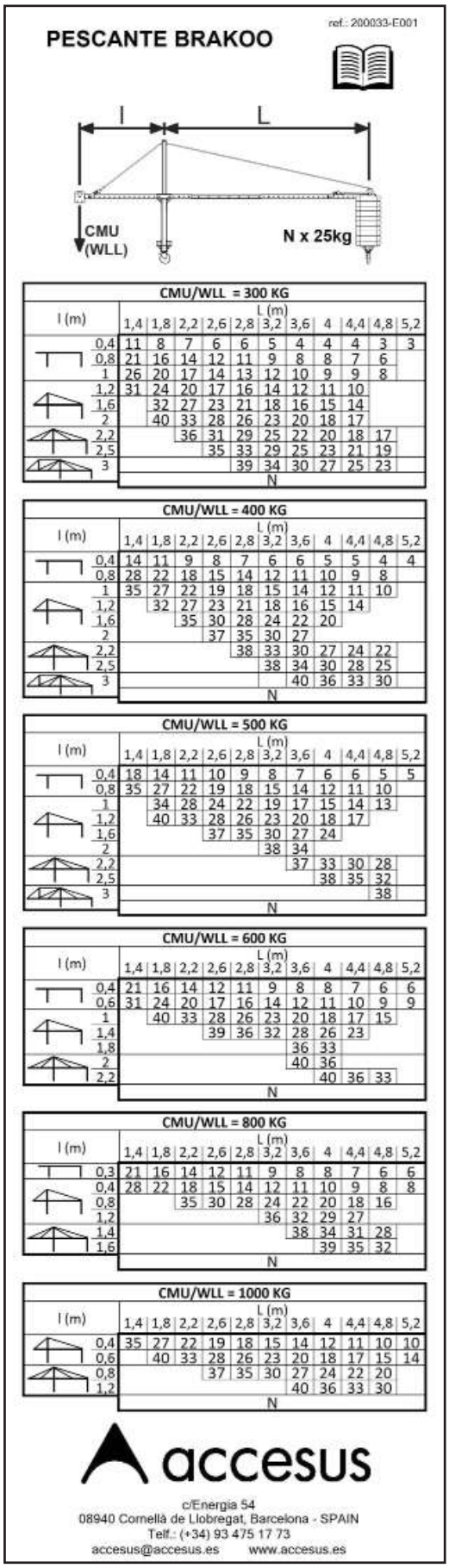
Pos.	Reference	Description	Quantity per configuration															Weight (kg)
			1A	1B	1C	1D	2A	2B	2C	2D	3A	3B	3C	3D	4A	4B	4C	4D	
1	200033-001	Telescopic outer tube	2	2	2	3	2	2	2	3	4	4	4	5	4	4	4	5	18
2	200033-002	Telescopic inner tube	1	1	2	2	1	1	2	2	2	2	3	3	2	2	3	3	21
3	200033-800	Cable support bracket	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6
4	200033-300	Base	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	13
5	200033-100	Front legs	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	20
6	200033-335	Front base extension	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	11
7	200033-200	Short enhancement		0	0	0	1	1	1	1	3	3	3	3	1	1	1	1	15
8	200033-400	Long highlight		0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	17
9	200033-500	Cable Enhancement - Mast	0	1	1	2	0	1	1	2	0	1	1	2	0	1	1	2	10
10	200033-600	Cable deflection plate	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	2,5
11	200033-710	Cable Hitch Plate	0	4	8	12	0	4	8	12	0	4	8	12	0	4	8	12	1
12	200033-003	Sling with tensioner	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	7
13	-	Wheels	4	4	4	4	4	4	4	4	6	6	6	6	6	6	6	6	3,5
14	020001-000	Countereso	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
15	200033-302	Counterweight bar + pin	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2
16	200033-322	Wheel Anchorage Plate	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0,5
T1	DIN931 M12x130 8.8 + Nut DIN934		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	-
T2	DIN931 M10x130 8.8 + Nut. DIN985 + 2 Ar. DIN125		8	8	8	8	8	8	8	8	16	16	16	16	16	16	16	16	-
T3	DIN933 M10x30 8.8 + Nut. DIN985 + 2 Ar. DIN125		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	-
T4	DIN931 M18x140 8.8 + Nut DIN934		9	12	17	24	11	14	19	26	21	24	29	36	21	24	29	36	-
T5	DIN931 M18x140 8.8 + Nut DIN985		0	6	12	18	2	8	14	20	2	8	14	20	2	8	14	20	-
T6	DIN931 M12x100 8.8 + Nut DIN934		0	1	1	2	0	1	1	2	0	1	1	2	0	1	1	2	-

9. Labels and plates

Check that the labels are in place.



Identification label (1)



PESCANTE BRAKOO

ref.: 200033-E001

CMU/WLL = 300 KG

l (m) \ L (m)	1,4	1,8	2,2	2,6	2,8	3,2	3,6	4	4,4	4,8	5,2
0,4	11	8	7	6	6	5	4	4	4	3	3
0,8	21	16	14	12	11	9	8	8	7	6	
1	26	20	17	14	13	12	10	9	9	8	
1,2	31	24	20	17	16	14	12	11	10		
1,6		32	27	23	21	18	16	15	14		
2		40	33	28	26	23	20	18	17		
2,2			36	31	29	25	22	20	18	17	
2,5				35	33	29	25	23	21	19	
3					39	34	30	27	25	23	

N

CMU/WLL = 400 KG

l (m) \ L (m)	1,4	1,8	2,2	2,6	2,8	3,2	3,6	4	4,4	4,8	5,2
0,4	14	11	9	8	7	6	6	5	5	4	4
0,8	28	22	18	15	14	12	11	10	9	8	
1	35	27	22	19	18	15	14	12	11	10	
1,2		32	27	23	21	18	16	15	14		
1,6			35	30	28	24	22	20			
2				37	35	30	27				
2,2					38	33	30	27	24	22	
2,5						38	34	30	28	25	
3							40	36	33	30	

N

CMU/WLL = 500 KG

l (m) \ L (m)	1,4	1,8	2,2	2,6	2,8	3,2	3,6	4	4,4	4,8	5,2
0,4	18	14	11	10	9	8	7	6	6	5	5
0,8	35	27	22	19	18	15	14	12	11	10	
1		34	28	24	22	19	17	15	14	13	
1,2		40	33	28	26	23	20	18	17		
1,6				37	35	30	27	24			
2						38	34				
2,2							37	33	30	28	
2,5								38	35	32	
3										38	

N

CMU/WLL = 600 KG

l (m) \ L (m)	1,4	1,8	2,2	2,6	2,8	3,2	3,6	4	4,4	4,8	5,2
0,4	21	16	14	12	11	9	8	8	7	6	6
0,6	31	24	20	17	16	14	12	11	10	9	9
1		40	33	28	26	23	20	18	17	15	
1,4				39	36	32	28	26	23		
1,8							36	33			
2							40	36			
2,2								40	36	33	

N

CMU/WLL = 800 KG

l (m) \ L (m)	1,4	1,8	2,2	2,6	2,8	3,2	3,6	4	4,4	4,8	5,2
0,3	21	16	14	12	11	9	8	8	7	6	6
0,4	28	22	18	15	14	12	11	10	9	8	8
0,8			35	30	28	24	22	20	18	16	
1,2						36	32	29	27		
1,4							38	34	31	28	
1,6								39	35	32	

N

CMU/WLL = 1000 KG

l (m) \ L (m)	1,4	1,8	2,2	2,6	2,8	3,2	3,6	4	4,4	4,8	5,2
0,4	35	27	22	19	18	15	14	12	11	10	10
0,6		40	33	28	26	23	20	18	17	15	14
0,8				37	35	30	27	24	22	20	
1,2							40	36	33	30	

N

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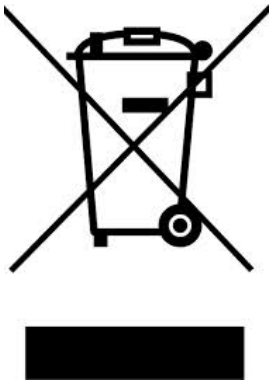
10. Disposal and environmental protection

Reusable materials have been used to manufacture the device. The device must be disposed of in accordance with the regulations for scrapping. This must be carried out correctly in accordance with the Waste Directive 75/442/EEC, which applies in the European Union.

In accordance with Directive 2002/96/EC, the manufacturer is obliged to take back and manage specific pneumatic and electronic components. The components in question are identified on the type plate with the following symbol:



11. Maintenance

¡DANGER!

Risk of injury and death from falling objects, falling to different levels, breakage and/or electrical contact.	Risk of death due to falling objects, falling to different levels and/ or breakage.
	-Stop work immediately. -Determine the cause and remedy the fault. -Use only ACCESUS original parts, otherwise the manufacturer cannot guarantee the safety of the equipment.

The equipment covered by this instruction manual must be serviced annually by the ACCESUS maintenance department or an ACCESUS authorized repairer.

Periodic maintenance of the BRAKOO davit consists of:

A-Cleaning of surfaces, removal of material residues such as paint, mortar, etc.

B-Revision of the state of the screws: rust, deformation, cracks, fissures, breaks. If any of these defects are observed, the bolts should be replaced. Caution! Check that the quality of the screws is adequate, the nuts must be safety nuts. See section 8 of this manual.

C-Revision of the state of the structural components: oxidation, deformation, cracks, fissures, breaks. If any of these defects are observed, the affected component must be replaced by another original ACCESUS component.

D-Revision of the state of the cables and tensioners: oxidation, deformations, cracks, fissures, breaks. If any of these defects are observed, the affected component must be replaced by another original ACCESUS component.

Only the cables recommended and supplied by ACCESUS guarantee the safe operation of the elevators.

12. Record

Indicate the serial number of the machine and all its components.

Machine or component	Serial number / year of manufacture
BRAKOO counterweight davit	
Commissioning date	

Date	Maintenance according to section 11.	Estado del pescante OK	Estado del pescante NO OK	Identification and signature of the person in charge

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