

DRIVE-IN PALLET RACKING

ASSEMBLY MANUAL



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1. ASSEMBLY

The assembly process will be made by qualified personnel and with the adequate means so as to end the installation within the specified time and with the tolerances required.

There are different phases:

2. PRELIMINAR STAGE

Personnel in charge of the assembly should check the reception of the goods, the control of the packages (number, conditions, etc.). This is shown in the corresponding delivery note.

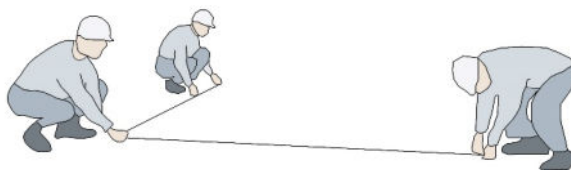
The contents of the received packages should be checked before starting to assemble, in order to avoid delays. In case something is wrong, it might be indicated immediately so as to give a rapid solution.

While the installation is being done, and pending on the location characteristics, all materials need to be identified, ordered and placed in an area secure and damage-free.

If any difficulty comes out while installing some element, this should not be forced. In fact, this/these element/s should be checked in case dimensions or type of the material are not the correct ones.

3. BASIC ASSEMBLY PROCESS

- 1- First of all, it's important to measure and clean the area where this Drive-in pallet racking will be installed. It's compulsory to check floor's flatness.



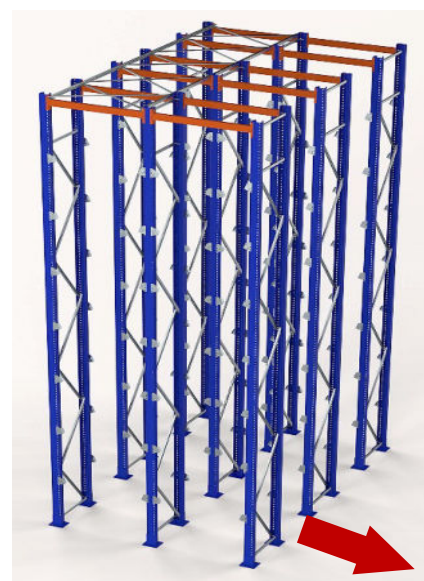
- 2- Elevation of the first frame and tie beams and raising of the second frame. The frames will be raised with the brackets already placed at the correct level.



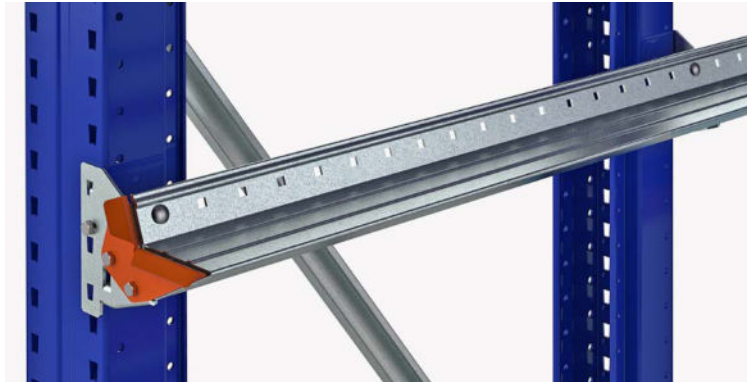
- 3- The first lane is completed once all the frames, tie beams, bracings, etc are placed. After that, the lane must be aligned, plumbed and levelled. Then, they must be anchored to the floor. This first lane will be used as a pattern for the following ones.



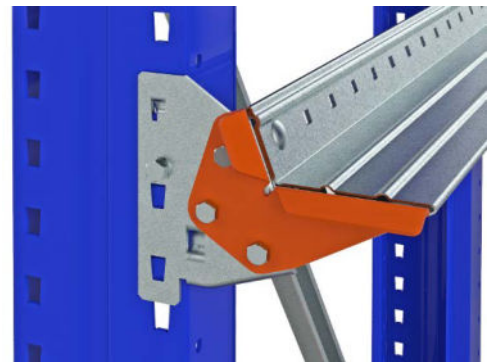
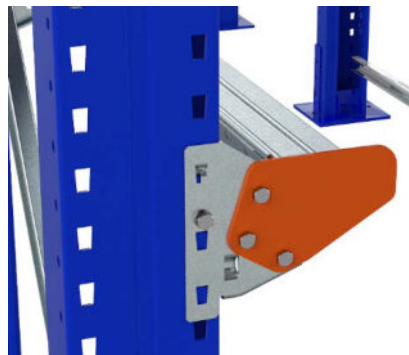
- 4- Hereafter, the additional lanes must be added to the first one, which all together will form a block. Then all the lanes are aligned, plumbed, levelled and anchored.



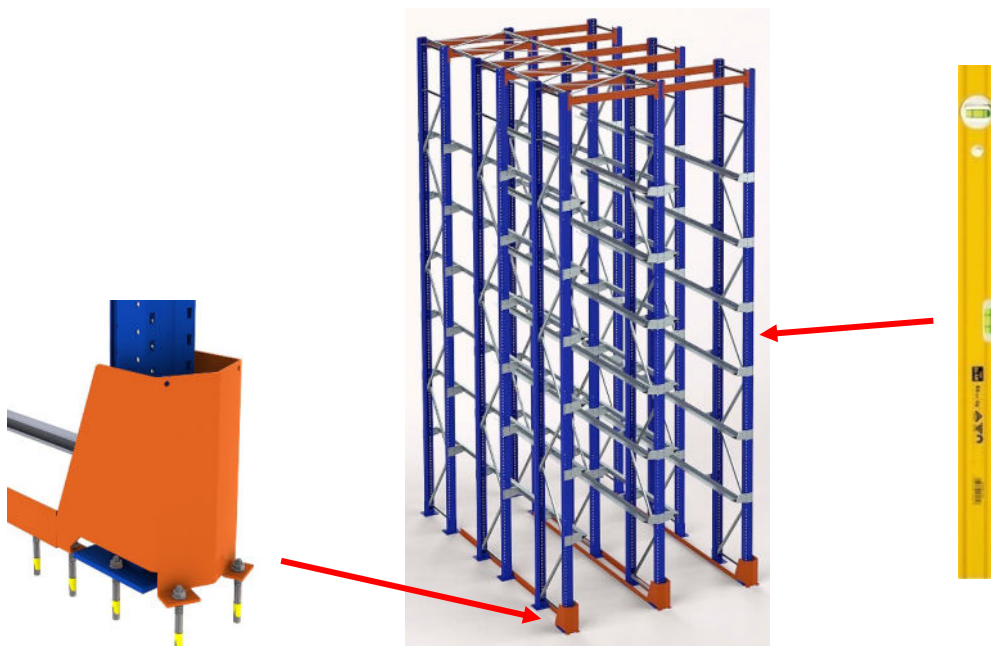
5- Place pallet rail.



6- Placement of accessories (back stops, protectors, pallet entry guards, etc).



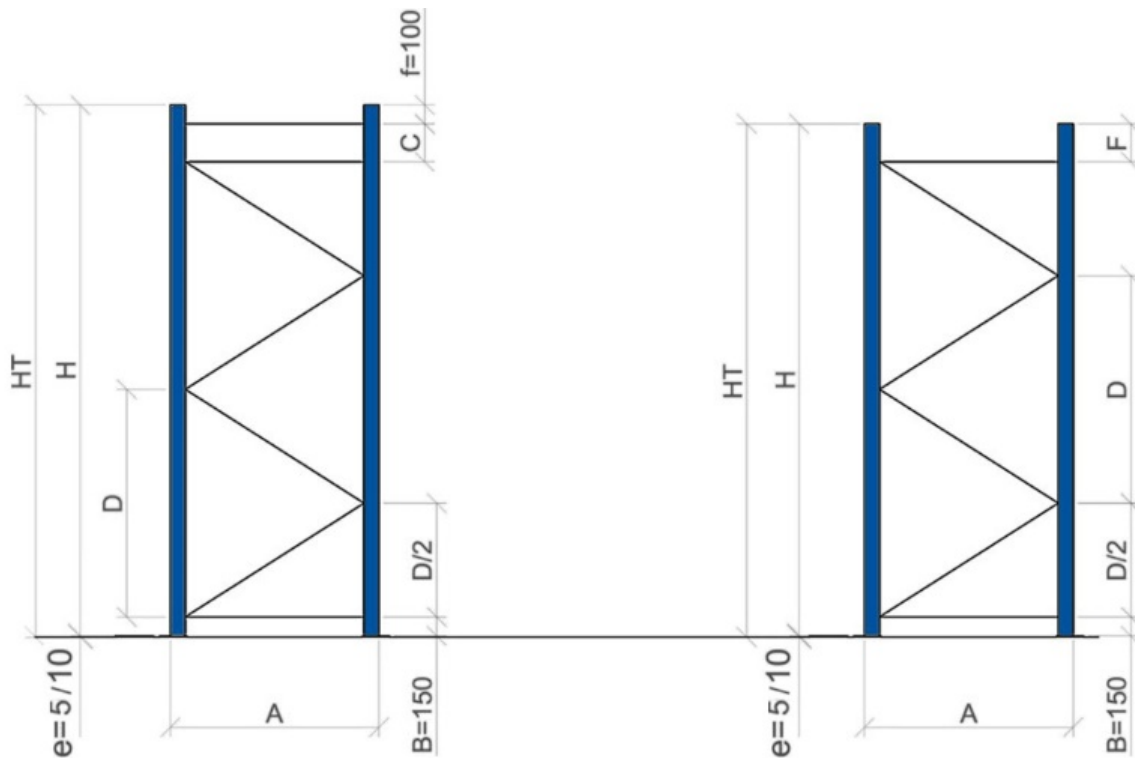
7- The last stage is to check the anchor bolts, the levelling, and the vertical position of the frames.



4. FRAME CONFIGURATION AND COMPONENTS

Depending on the type of upright, there are 2 possible configurations: 1) for uprights 76, 100, 115mm wide; 2) for uprights 135, 160mm wide.

Different possible configurations for uprights **76, 100 and 115mm** wide.



FRAME TYPE	ER76M, ER76A, ER100A, ER100B, ER115B, ER115C
e – Foot plate thickness in mm.	5 - 10
G – Height of the 1st horizontal bracing in mm.	150
D – Maximum distance between diagonal bracings in mm.	2000
C – Minimum/maximum distance between top horizontal bracings in mm	200 / 950
F – Minimum/maximum free upright on top in mm	100 / 250

The upright height is taken without considering the footplate thickness, it must be multiple of 50mm. and it is manufactured, as a standard, in stretches of 250mm.

For frame configurations different from the standard range, please contact the Esnova Technical Department.

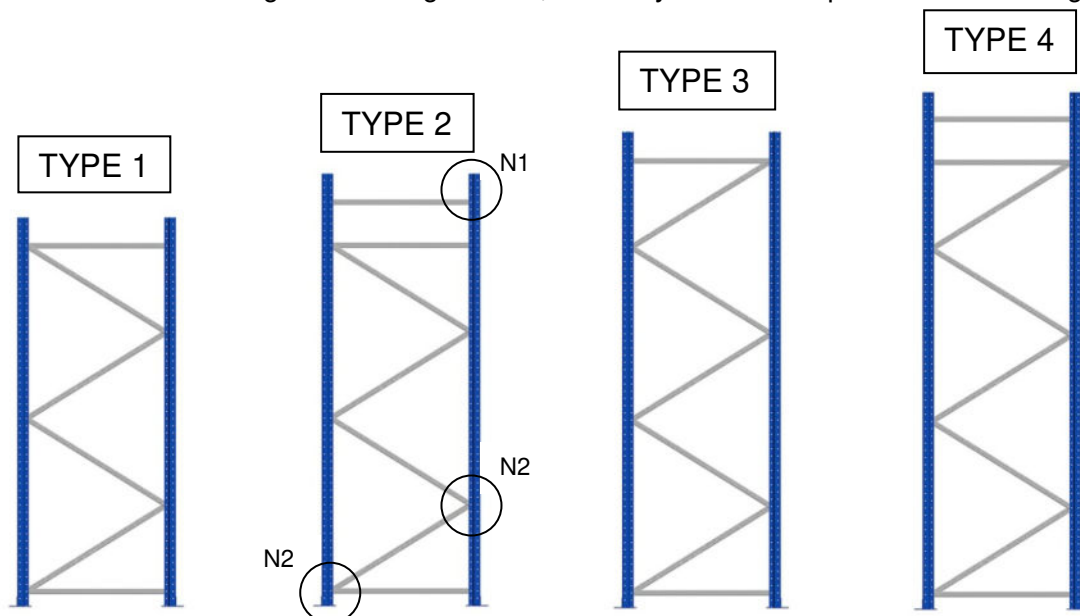
All different standard frames could have the four configurations below, and they are repeated depending on their height.

TYPE 1 – The number of diagonal bracings is even.

TYPE 2 – The number of diagonal bracings is even, and they have two top horizontal bracings.

TYPE 3 – The number of diagonal bracings is odd.

TYPE 4 – The number of diagonal bracings is odd, and they have two top horizontal bracings.



FRAME COMPONENTS							
DENOMINATION				TYPE			
				1	2	3	4
UPRIGHT ER [] / H				2	2	2	2
FOOT PLATES DV AND PLK				2	2	2	2
FOOT PLATE FIXING SET	DV	76M, 76A	FIXING SET CT AW 895 / 845	6 / 2	6 / 2	6 / 2	6 / 2
		100A, 100B	FIXING SET CT AC 820	16	16	16	16
		115B, 115C					
	PLK	76M, 76A	FIXING SET CT CB 1030	2	2	2	2
		100A, 100B					
		115B, 115C					
DIAGONAL BRACINGS CZ [36, 42, 50] / D8,5 / 24 / L				$\frac{[(H - 150)/0.5D]}{= \textit{Whole number}}$			
HORIZONTAL BRACINGS CZ [36, 42, 50] / D8,5 / 24 / L				2	3	2	3
NODES 1 N1	76M, 76A		FIXING SET CT AE 845	2	4	2	4
	100A, 100B		FIXING SET CT AE 870				
	115B, 115C		FIXING SET CT AE 885				
NODES 2 N2	76M, 76A		FIXING SET CT AA845	Nº OF DIAGONAL BRACINGS + 1			
	100A, 100B		FIXING SET CT AA870				
	115B, 115C		FIXING SET CT AA885				

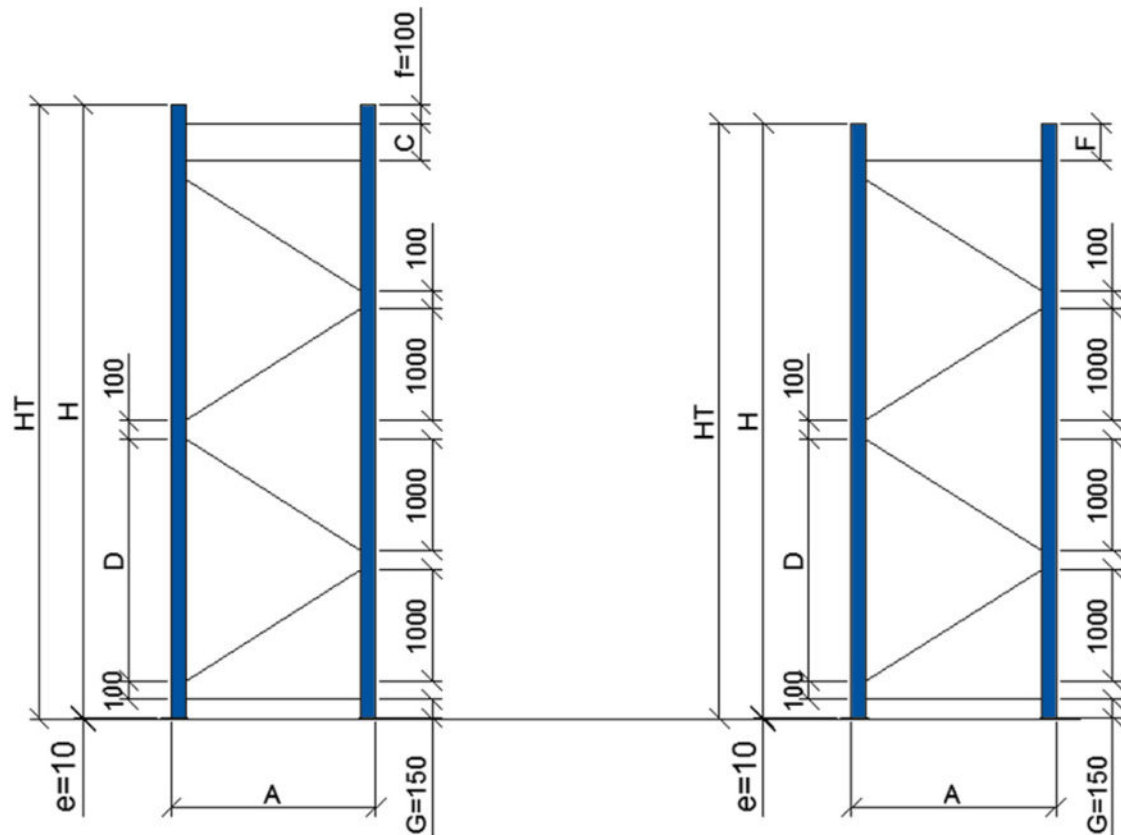
In the event of frame configurations different from the standard range, please contact Esnova Technical Department

FRAME COMPONENTS LIST:

MAX. DISTANCE BETWEEN DIAGONAL BRACINGS **D=2000** (Frames ER76M, ER76A, ER100A, ER100B, ER115B, ER115C).

Frame Height (H)	TYPE				Nº (N)	Nº (N3)	N1	N2	C	F
	1	2	3	4	Diagonal bracings	Horizontal bracings	Nodes 1	Nodes 2	mm	mm
3500				•	3	3	4	4	250	100
3750				•	3	3	4	4	500	100
4000				•	3	3	4	4	750	100
4250	•				4	2	2	5	0	100
4500		•			4	3	4	5	250	100
4750		•			4	3	4	5	500	100
5000		•			4	3	4	5	750	100
5250			•		5	2	2	6	0	100
5500				•	5	3	4	6	250	100
5750				•	5	3	4	6	500	100
6000				•	5	3	4	6	750	100
6250	•				6	2	2	7	0	100
6500		•			6	3	4	7	250	100
6750		•			6	3	4	7	500	100
7000		•			6	3	4	7	750	100
7250			•		7	2	2	8	0	100
7500				•	7	3	4	8	250	100
7750				•	7	3	4	8	500	100
8000				•	7	3	4	8	750	100
8250	•				8	2	2	9	0	100
8500		•			8	3	4	9	250	100
8750		•			8	3	4	9	500	100
9000		•			8	3	4	9	750	100
9250			•		9	2	2	10	0	100
9500				•	9	3	4	10	250	100
9750				•	9	3	4	10	500	100
10000				•	9	3	4	10	750	100
10250	•				10	2	2	11	0	100
10500		•			10	3	4	11	250	100
10750		•			10	3	4	11	500	100
11000		•			10	3	4	11	750	100
11250			•		11	2	2	12	0	100
11500				•	11	3	4	12	250	100
11750				•	11	3	4	12	500	100
12000				•	11	3	4	12	750	100
12250	•				12	2	2	13	0	100
12500		•			12	3	4	13	250	100
12750		•			12	3	4	13	500	100
13000		•			12	3	4	13	750	100

Different possible configurations for uprights **135** and **160mm** wide.



FRAME TYPE	ER135A, ER135B, ER160A
e – Foot plate thickness in mm.	10
G – Height of the 1st horizontal bracing in mm.	150
D – Maximum distance between diagonal bracings in mm.	2100
C – Minimum/maximum distance between top horizontal bracings in mm	200 / 1050
F – Minimum/maximum free upright on top in mm	100 / 250

The upright height is taken without considering the footplate thickness, it must be multiple of 50mm. and it is manufactured, as a standard, in stretches of 250mm.

For frame configurations different from the standard range, please contact the Esnova Technical Department.

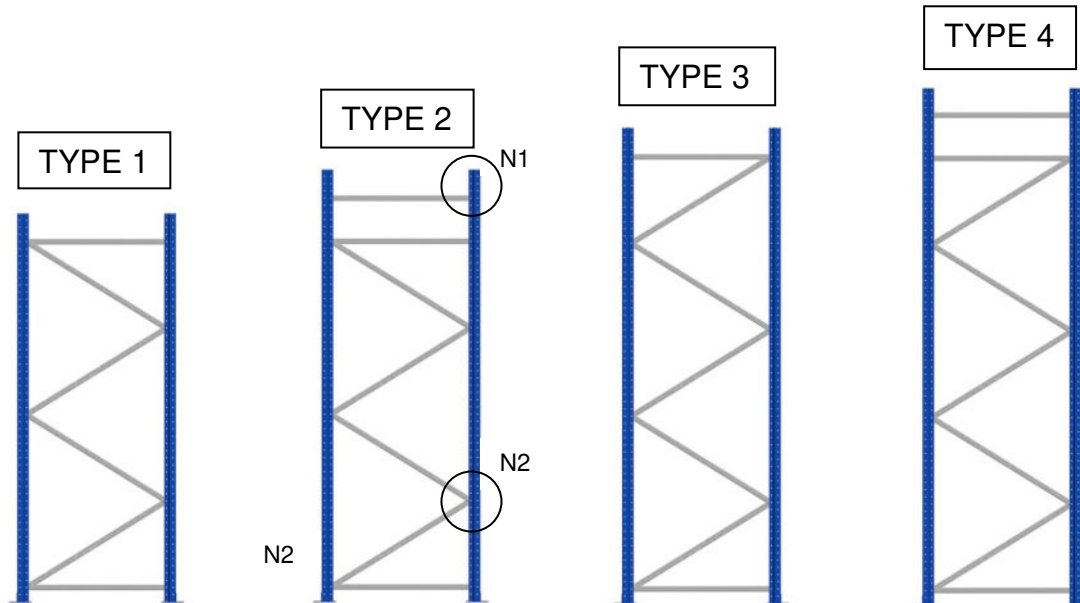
All different standard frames could have the four configurations below, and they are repeated depending on their height.

TYPE 1 – The number of diagonal bracings is even.

TYPE 2 – The number of diagonal bracings is even, and they have two top horizontal bracings.

TYPE 3 – The number of diagonal bracings is odd.

TYPE 4 – The number of diagonal bracings is odd, and they have two top horizontal bracings.



FRAME COMPONENTS							
DENOMINATION				TYPE			
				1	2	3	4
UPRIGHT ER [] / H				2	2	2	2
FOOT PLATE DV				2	2	2	2
FOOT PLATE FIXING SET	DV	135A, 135B	FIXING SET CT AC 820	16	16	16	16
		160A					
DIAGONAL BRACINGS CZ [42] / D8,5 / 24 / L				$Whole\ number\ [(H - 150) / 0.5D] * 2$			
HORIZONTAL BRACINGS CZ [42] / D8,5 / 24 / L				4	6	4	6

Upright frames 135 and 160mm wide must require double diagonal and horizontal bracings and that's why the quantities are doubled:



FRAME COMPONENTS LIST:

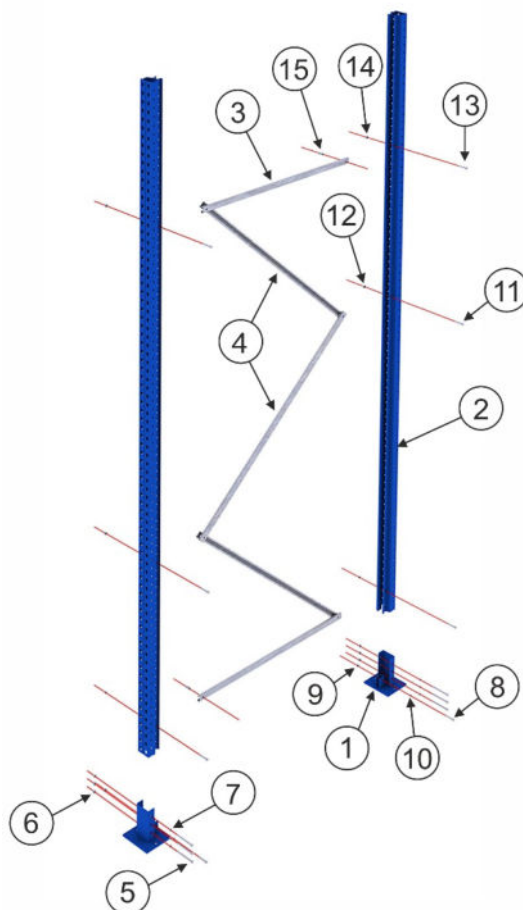
MAXIMUM DISTANCE BETWEEN DIAGONAL BRACINGS **D=2100** (Frames ER135A, 135B, 160A).

Frame Height (H)	TYPE				Nº (N)	Nº (N3)	C	F
	1	2	3	4	Diagonal Bracings	Horizontal Bracings	mm	mm
3500		•			4	6	950	100
3750			•		6	4	0	200
4000				•	6	6	350	100
4250				•	6	6	600	100
4500				•	6	6	850	100
4750	•				8	4	0	100
5000		•			8	6	250	100
5250		•			8	6	500	100
5500		•			8	6	750	100
5750		•			8	6	1000	100
6000			•		10	4	0	250
6250				•	10	6	400	100
6500				•	10	6	650	100
6750				•	10	6	900	100
7000	•				12	4	0	150
7250		•			12	6	300	100
7500		•			12	6	550	100
7750		•			12	6	800	100
8000		•			12	6	1050	100
8250				•	14	6	200	100
8500				•	14	6	450	100
8750				•	14	6	700	100
9000				•	14	6	950	100
9250	•				16	4	0	200
9500		•			16	6	350	100
9750		•			16	6	600	100
10000		•			16	6	850	100
10250			•		18	4	0	100
10500				•	18	6	250	100
10750				•	18	6	500	100
11000				•	18	6	750	100
11250				•	18	6	1000	100
11500	•				20	4	0	250
11750		•			20	6	400	100
12000		•			20	6	650	100
12250		•			20	6	900	100
12500			•		22	4	0	150
12750				•	22	6	300	100
13000				•	22	6	550	100

5. FRAME ASSEMBLY

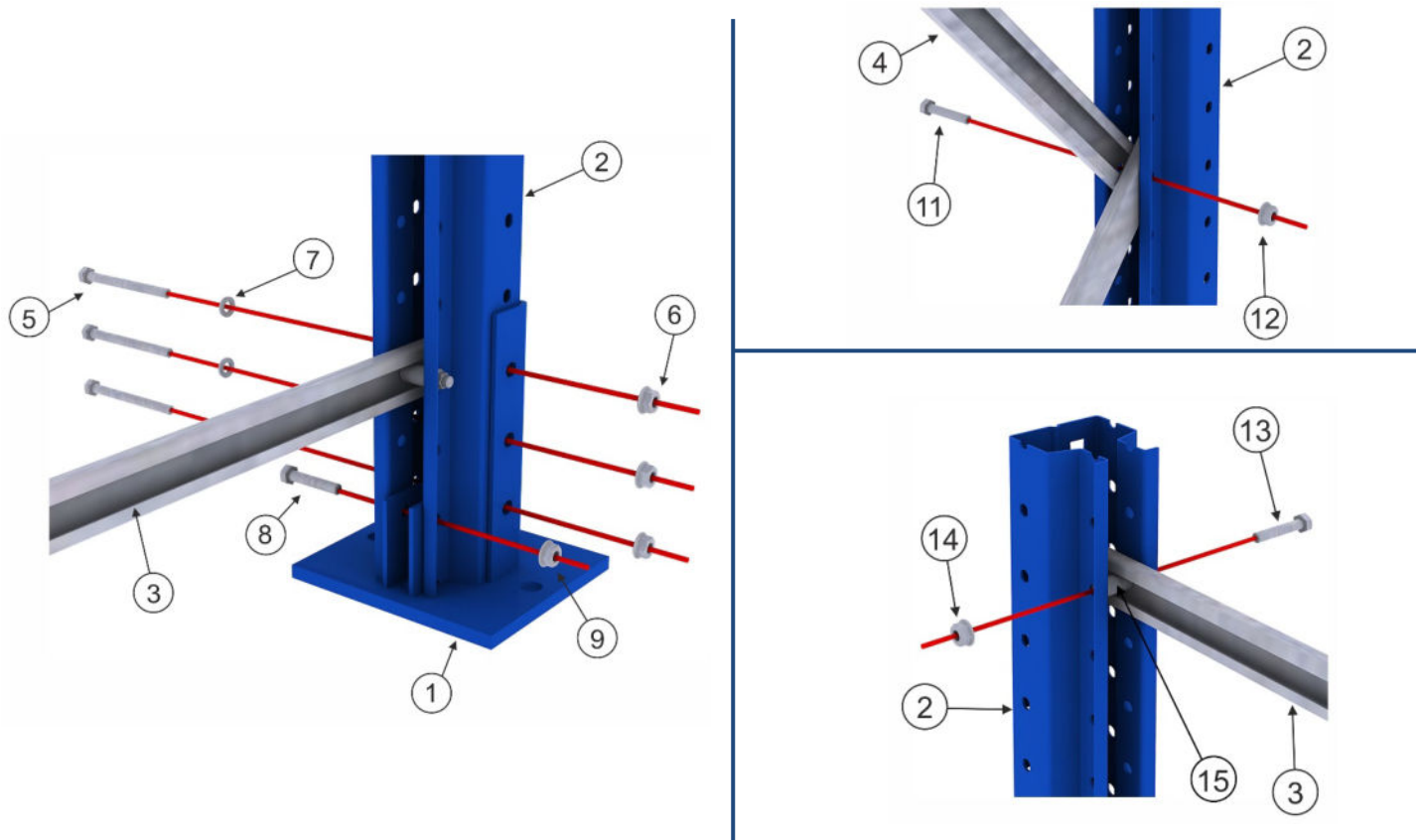
5.1. Frame ER76M15 / ER76M18 / ER76M23

Frame ER76A15 / ER76A18 / ER76A20 / ER76A23 / ER76A25



POSITION	DENOMINATION	DRAWING	OBSERVATIONS
1	FOOT PLATE DV76 [M or A] – FOOT PLATE PLK5	PL-007551 / PL-011005	FOOT PLATE
2	UPRIGHT ER76M or ER76A	PL-006094 / 000094	UPRIGHT
3	PROFILE CZ36/D8.5	PL-000095	HORIZONTAL BRACING
4	PROFILE CZ36/D8.5	PL-000095	DIAGONAL BRACING
5	BOLT DIN 931-8,8 M8x95/Z	E.C.	FIXING SET CT AW 895
6	NUT DIN 6923-8 M8/Z	E.C.	
7	WASHER DIN 125-8 M8/Z	E.C.	
8	BOLT DIN 931-8,8 M8x45/Z	E.C.	FIXING SET CT AW 845
9	NUT DIN 6923-8 M8/Z	E.C.	
10	WASHER DIN 125-8 M8/Z	E.C.	
11	BOLT DIN 931-8,8 M8x45/Z	E.C.	FIXING SET CT AA 845
12	NUT DIN 6923-8M8/Z	E.C.	
13	BOLT DIN 931-8,8 M8x45/Z	E.C.	FIXING SET CT AE 845
14	NUT DIN 6923-8M8/Z	E.C.	
15	SEPARATING TUBE TS/13/25/Z	E.C.	

ER76 FRAME ASSEMBLY DETAILS:

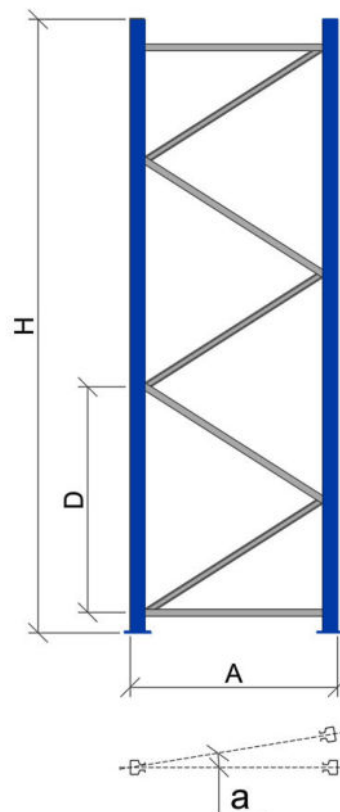


ASSEMBLY SEQUENCE:

- A. Position the frame uprights horizontally (on trestles).
- B. Fix the first and last horizontal with a bolt and place the frame. Do not put the nut yet. Start with the diagonals at one end and pre-assemble with the accessories and screws. At the end, tighten all screws to their tightening torque.
- C. Check the mounted material and position the frame vertically.

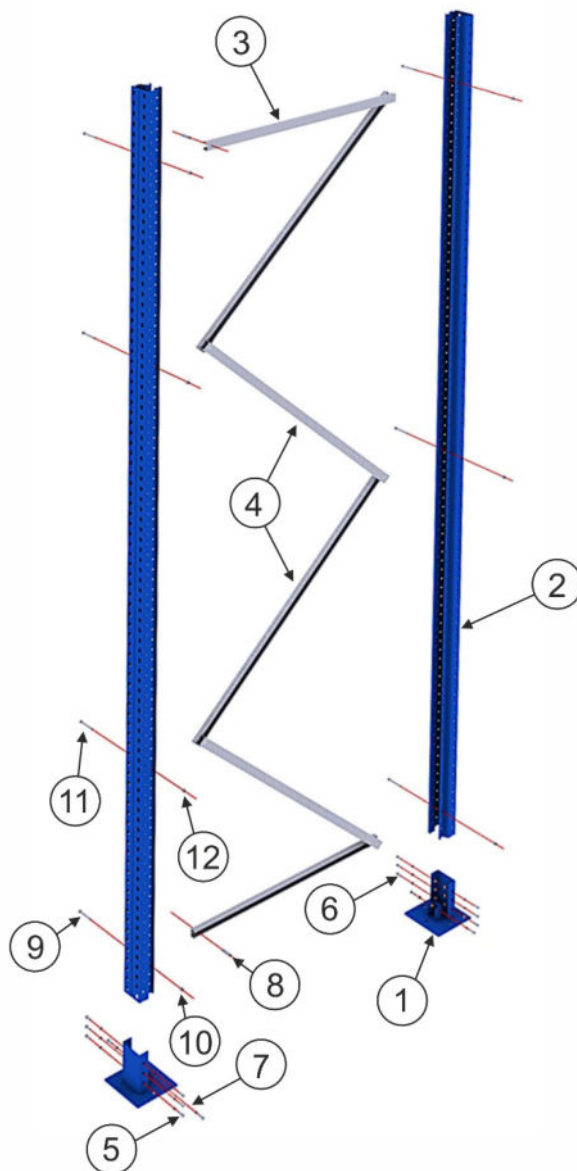
VERIFICATION:

- Frame width (A)
- Height (H)
- Distance between nodes (D)
- Frame deviation angle (α)



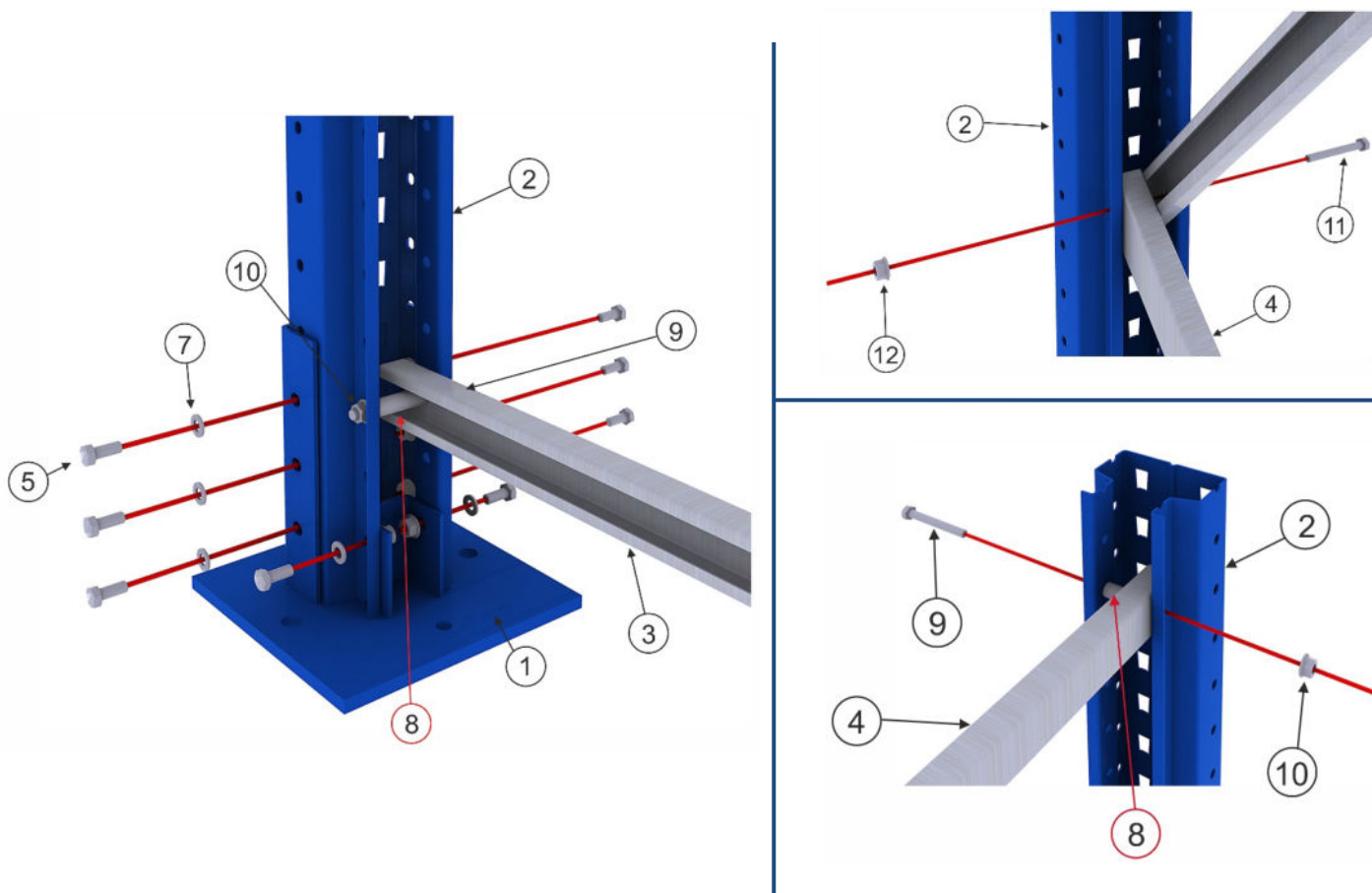
Tightening torque of the bolts (1,5 kg/m)

5.2. Frame ER100A18 / ER100A20 / ER100A23 / ER100A25 Frame ER100B18 / ER100B20 / ER100B23 / ER100B25 / ER100B30



POSITION	DENOMINATION	DRAWING	REMARKS
1	FOOT PLATE DV100 [A or B] – FOOT PLATE PLK5	PL-007995 / PL-011005	FOOT PLATE
2	UPRIGHT ER100A / 100B	PL-000096 / PL-000097	UPRIGHT
3	PROFILE CZ42/D8.5	PL-000100	HORIZONTAL BRACING
4	PROFILE CZ42/D8.5	PL-000100	DIAGONAL BRACING
5	BOLT DIN 933-8.8 M8x20/Z	E.C.	FIXING SET CT AC 820
6	NUT DIN 6923-8 M8/Z	E.C.	
7	WASHER DIN 125 M8/Z	E.C.	
8	SEPARATING TUBE TS/13/48/Z	E.C.	
9	BOLT DIN 931-8,8 M8x70/Z	E.C.	FIXING SET CT AE 870
10	NUT DIN 6923-8M8/Z	E.C.	
11	BOLT DIN 931-8,8 M8x70/Z	E.C.	FIXING SET CT AA 870
12	NUT DIN 6923-8M8/Z	E.C.	

ER100 FRAME ASSEMBLY DETAIL:



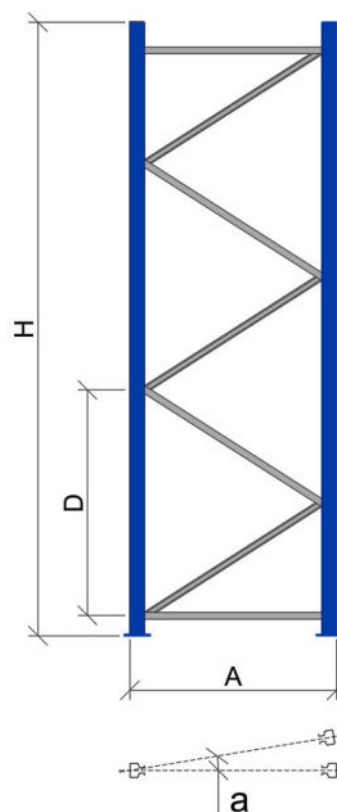
ASSEMBLY SEQUENCE:

- Position the frame uprights horizontally (on trestles).
- Fix the first and last horizontal with a bolt and place the frame. Do not put the nut yet. Start with the diagonals at one end and pre-assemble with the accessories and screws. At the end, tighten all screws to their tightening torque.
- Check the mounted material and position the frame vertically.

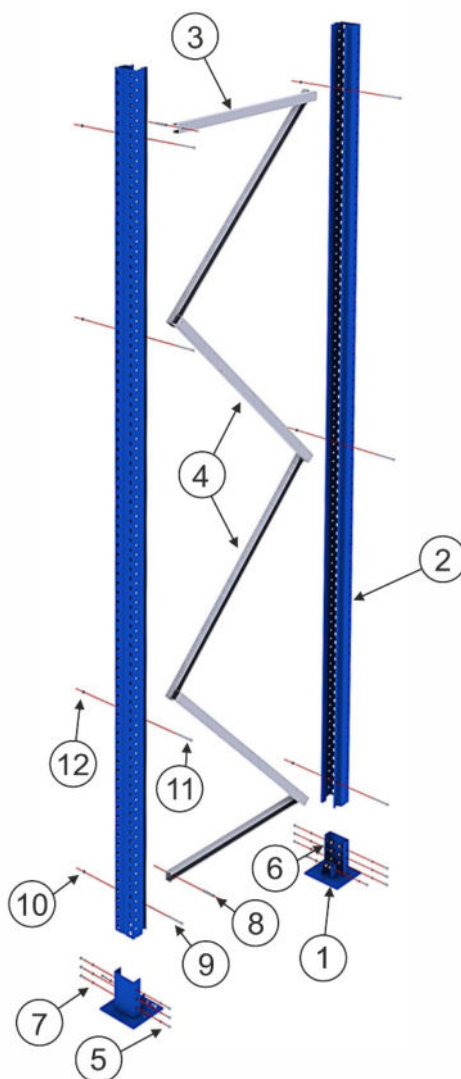
VERIFICATION:

- Frame width (A)
- Height (H)
- Distance between nodes (D)
- Frame deviation angle (a)

Tightening torque of the bolts (1,5 kg/m)

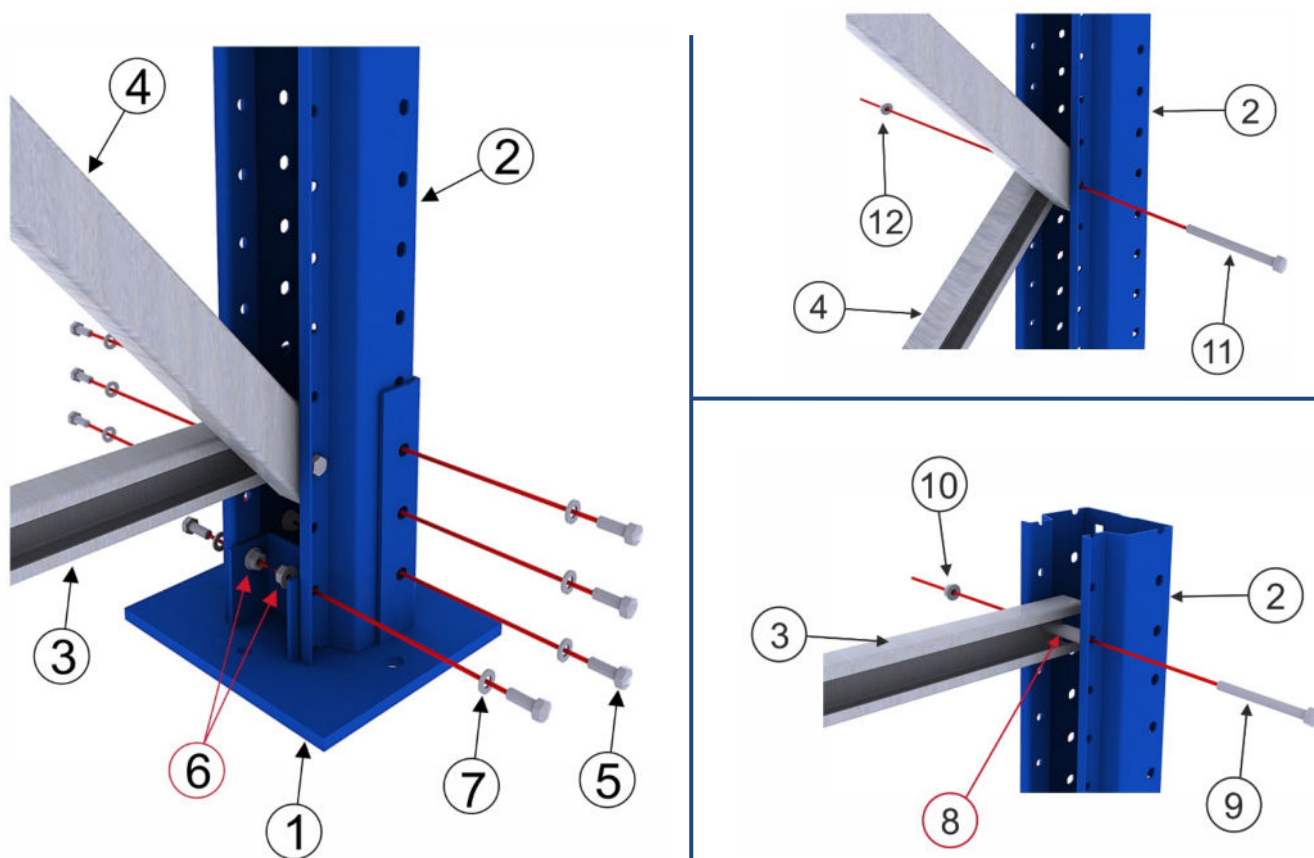


5.3. Frame ER115B18 / ER115B20 / ER115B23 / ER115B25 / ER115B30 Frame ER115C20 / ER115C25 / ER115C30 / ER115C35



POSITION	DENOMINATION	DRAWING	REMARKS
1	FOOT PLATE DV115[B or C] – FOOT PLATE PLK5	PL-007995 / PL-011005	FOOT PLATE
2	UPRIGHT ER115B / 115C	PL-001009 / PL-001010	UPRIGHT
3	PROFILE CZ50/D8.5	PL-000148	HORIZONTAL BRACING
4	PROFILE CZ50/D8.5	PL-000148	DIAGONAL BRACING
5	BOLT DIN 933-8.8 M8x20/Z	E.C.	FIXING SET CT AC 820
6	NUT DIN 6923-8 M8/Z	E.C.	
7	WASHER DIN 125 M8/Z	E.C.	
8	SEPARATING TUBE TS/13/63/Z	E.C.	
9	BOLT DIN 931-8.8 M8x70/Z	E.C.	FIXING SET CT AE 885
10	NUT DIN 6923-8 M8/Z	E.C.	
11	BOLT DIN 931-8.8 M8x70/Z	E.C.	FIXING SET CT AA 885
12	NUT DIN 6923-8M8/Z	E.C.	

ER115 FRAME ASSEMBLY DETAIL:

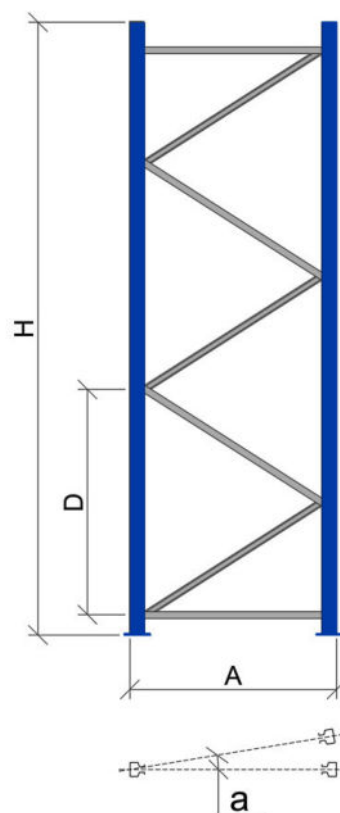


ASSEMBLY SEQUENCE:

- Position the frame uprights horizontally (on trestles).
- Fix the first and last horizontal with a bolt and place the frame. Do not put the nut yet. Start with the diagonals at one end and pre-assemble with the accessories and screws. At the end, tighten all screws to their tightening torque.
- Check the mounted material and position the frame vertically.

VERIFICATION:

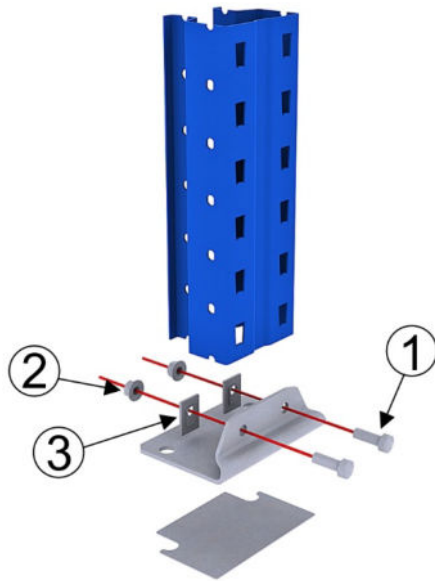
- Frame width (A)
- Height (H)
- Distance between nodes (D)
- Frame deviation angle (a)



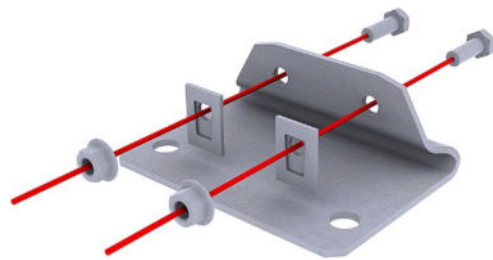
Tightening torque of the bolts (1,5 kg/m)

FRAMES WITH PLK BASE OPTION.

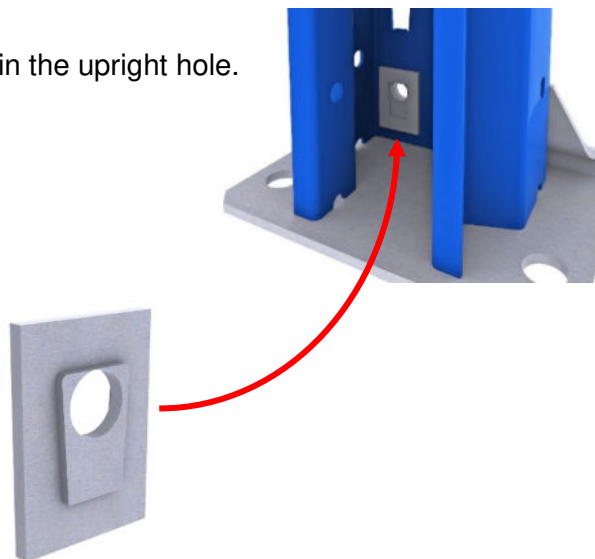
It's very important to assemble this type of base before putting the bracing.



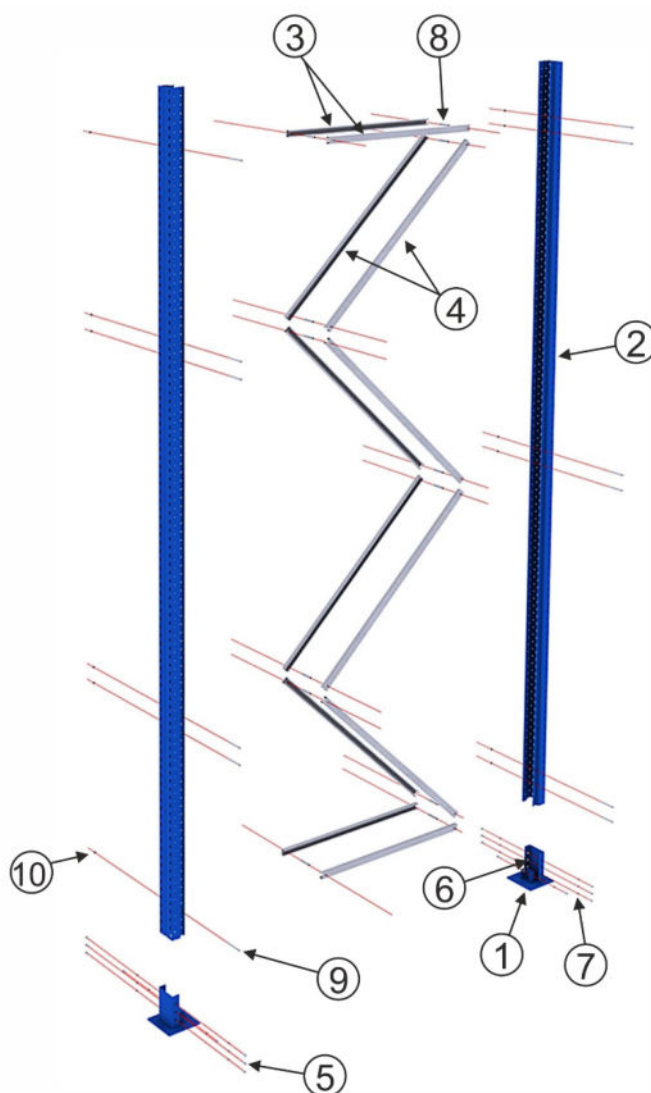
		FIXING SET CT CB 1030 PART NUMBER - 13010228
1	1	BOLT DIN 933 – 8.8 M10x30 / Z
2	1	NUT DIN 6923 – 8 M10 / Z
3	1	WASHER PLK



PLK washer must be perfectly embedded in the upright hole.

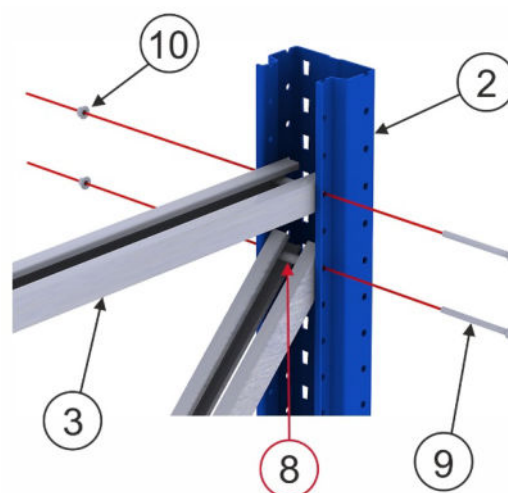
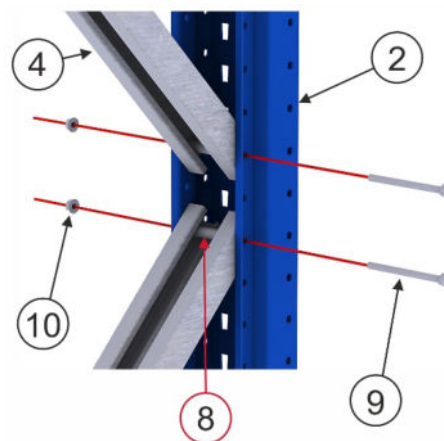
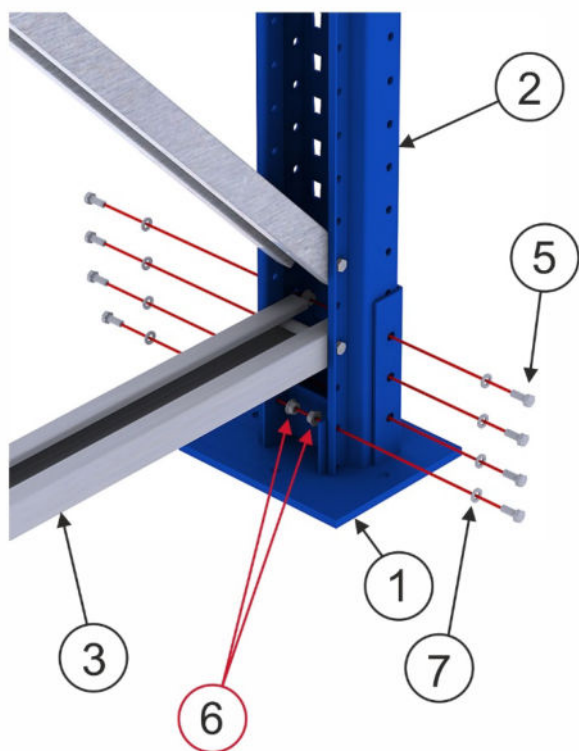


5.4. Frame ER135A20 / ER135A25 / ER135A30 / ER135A35 Frame ER135B20 / ER135B25 / ER135B30 / ER135B35



POSITION	DENOMINATION	DRAWING	REMARKS
1	FOOT PLATE DV/135 [A or B]	PL-007995	FOOT PLATE
2	UPRIGHT ER135A / 135B	PL-006894 / PL-008471	UPRIGHT
3	PROFILE CZ42/D8.5	PL-000100	HORIZONTAL BRACING
4	PROFILE CZ42/D8.5	PL-000100	DIAGONAL BRACING
5	BOLT IN 933-8.8 M8x20/Z	E.C.	FIXING SET CT AC 820
6	NUT DIN 6923-8 M8/Z	E.C.	
7	WASHER DIN 125 M8/Z	E.C.	
8	SEPARATING TUBE TS/13/82/Z	E.C.	FIXING SET CT AE 8105
9	BOLT DIN 931-8.8 M8x105/Z	E.C.	
10	NUT DIN 6923-8 M8/Z	E.C.	

ER135 FRAME ASSEMBLY DETAIL:

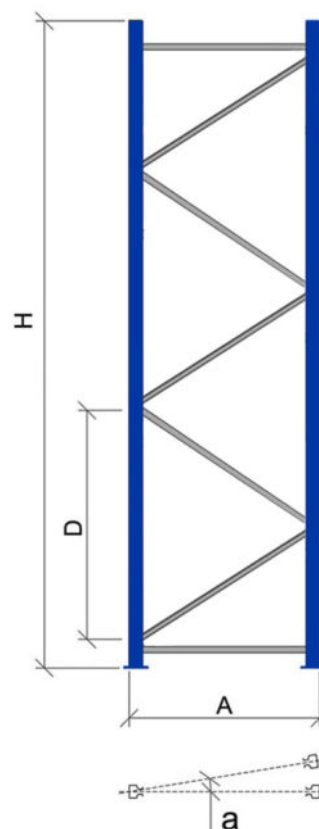


ASSEMBLY SEQUENCE:

- Position the frame uprights horizontally (on trestles).
- Fix the first and last horizontal with a bolt and place the frame. Do not put the nut yet. Start with the diagonals at one end and pre-assemble with the accessories and screws. At the end, tighten all screws to their tightening torque.
- Check the mounted material and position the frame vertically.

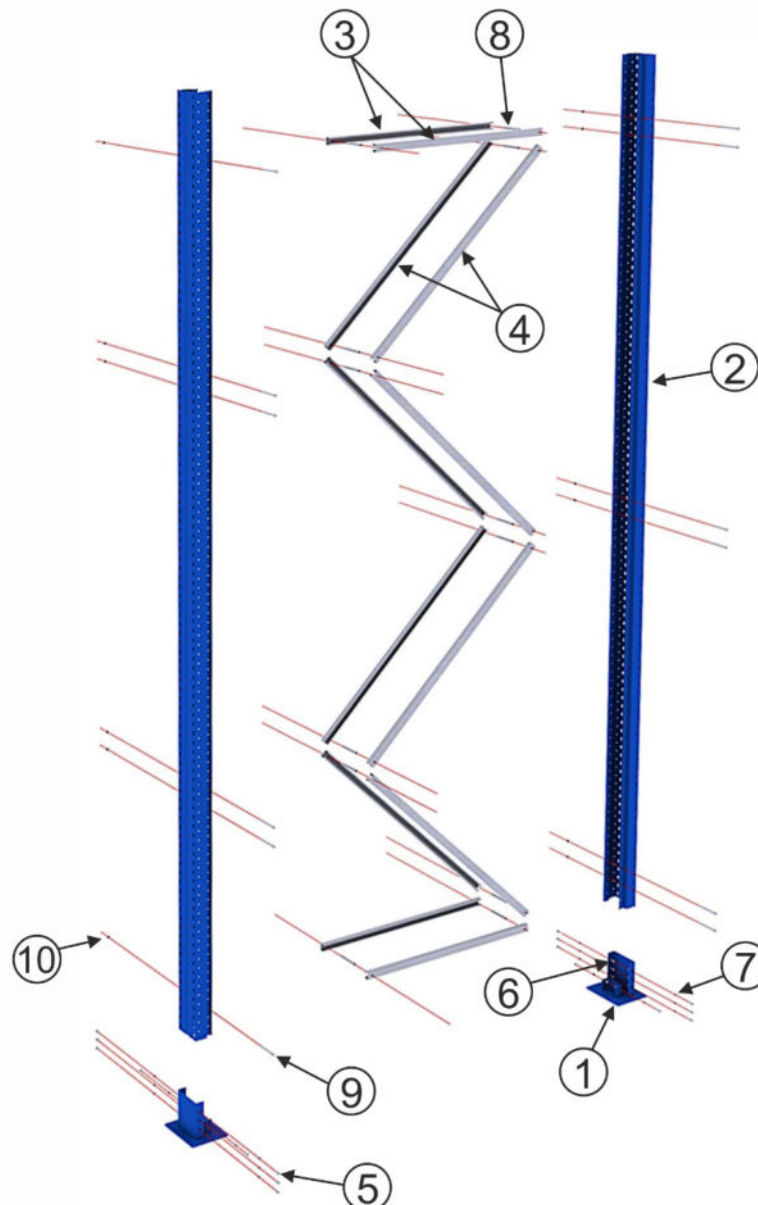
VERIFICATION:

- Frame width (A)
- Height (H)
- Distance between nodes (D)
- Frame deviation angle (α)



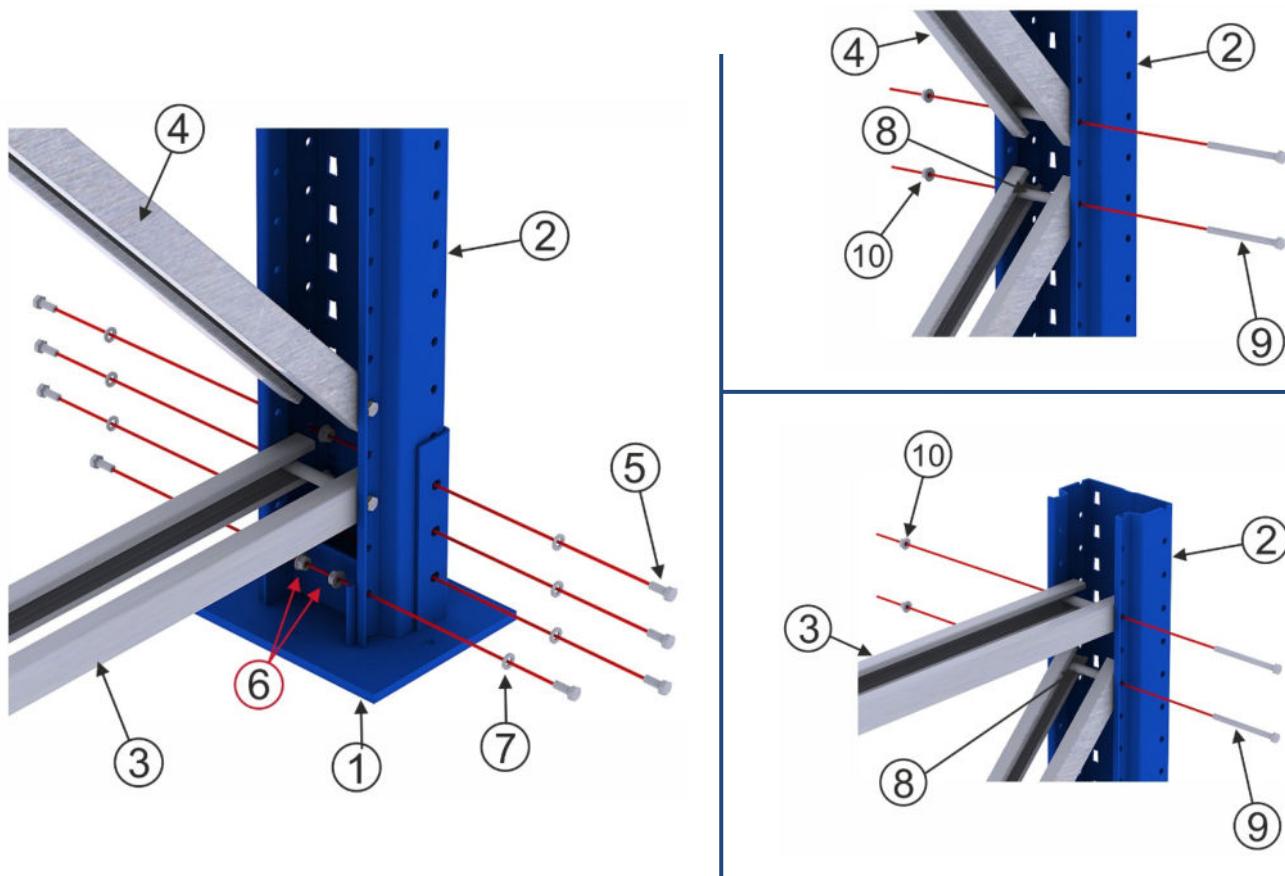
Tightening torque of the bolts (1,5 kg/m)

5.5. Frame ER160A20 / ER160A25 / ER160A30 / ER160A35



MARK	DENOMINATION	DRAWING	OBSERVATIONS
1	FOOT PLATE DV/160 A	PL-007995	FOOT PLATE
2	UPRIGHT ER160A	PL-006935	UPRIGHT
3	PROFILE CZ42/D8.5	PL-000100	HORIZONTAL BRACING
4	PROFILE CZ42/D8.5	PL-000100	DIAGONAL BRACING
5	BOLT DIN 933-8.8 M8x20/Z	E.C.	FIXING SET CT AC 820
6	NUT DIN 6923-8 M8/Z	E.C.	
7	WASHER DIN 125 M8/Z	E.C.	
8	SEPARATING TUBE TS/13/107/Z	E.C.	FIXING SET CT AE 8130
9	BOLT DIN 931-8.8 M8x130/Z	E.C.	
10	NUT DIN 6923-8 M8/Z	E.C.	

ER160 FRAME ASSEMBLY DETAIL:



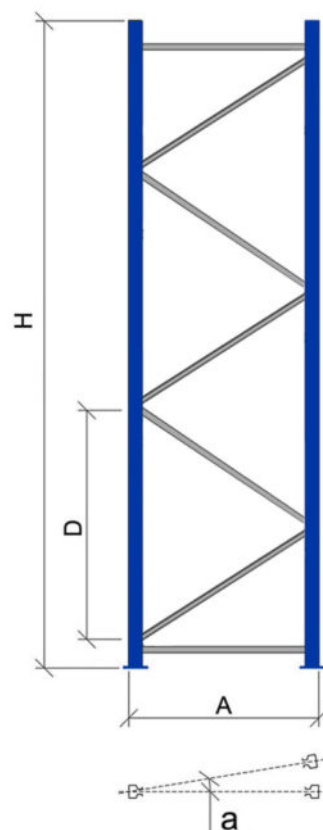
A. ASSEMBLY SEQUENCE:

- Position the frame uprights horizontally (on trestles).
- Fix the first and last horizontal with a bolt and place the frame. Do not put the nut yet. Start with the diagonals at one end and pre-assemble with the accessories and screws. At the end, tighten all screws to their tightening torque.
- Check the mounted material and position the frame vertically.

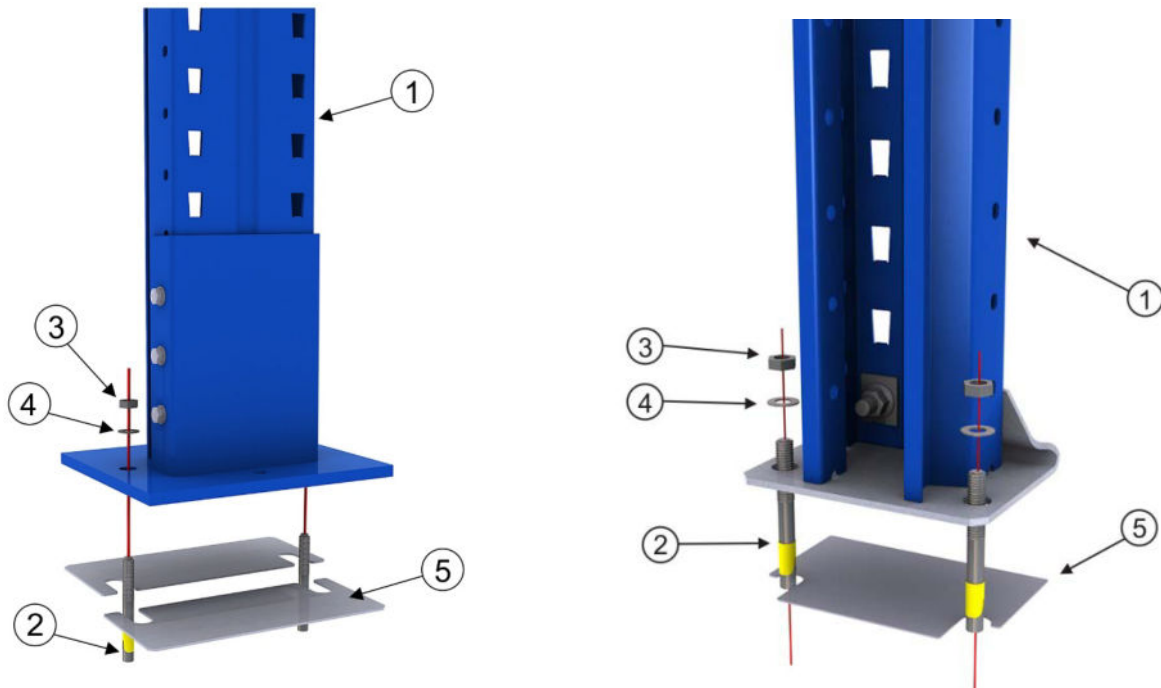
VERIFICATION:

- Frame width (A)
- Height (H)
- Distance between nodes (D)
- Frame deviation angle (a)

Tightening torque of the bolts (1,5 kg/m



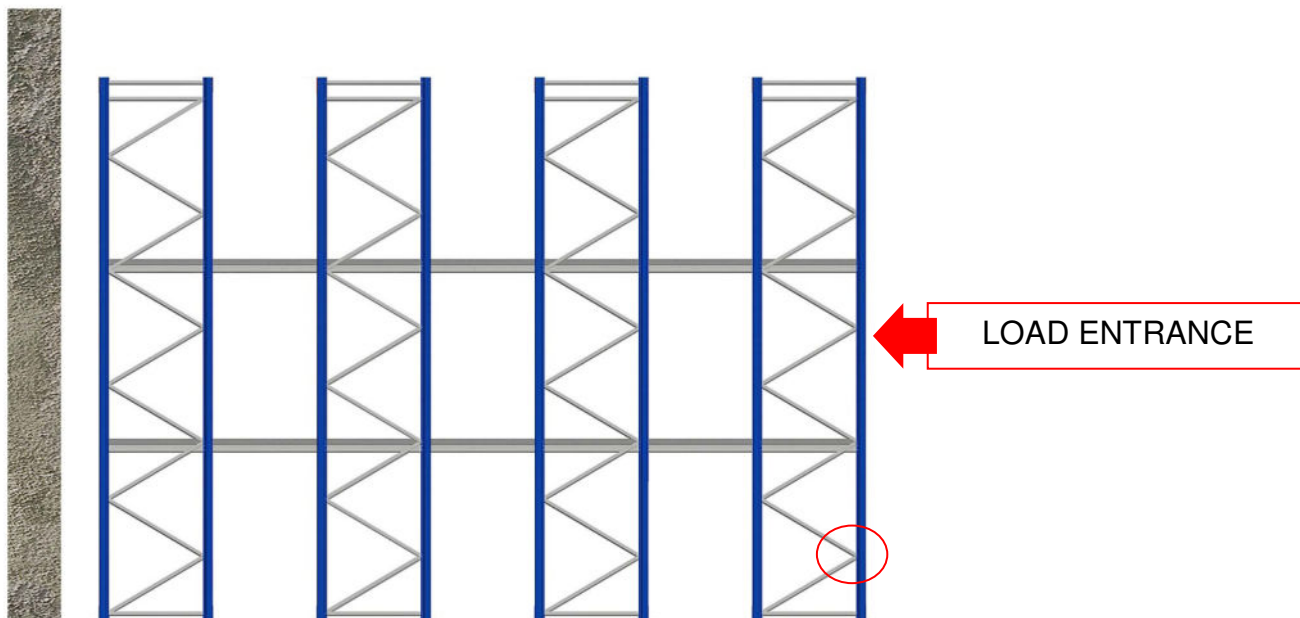
5.6. HOW TO FIX SHIM PLATES AND ANCHORS.



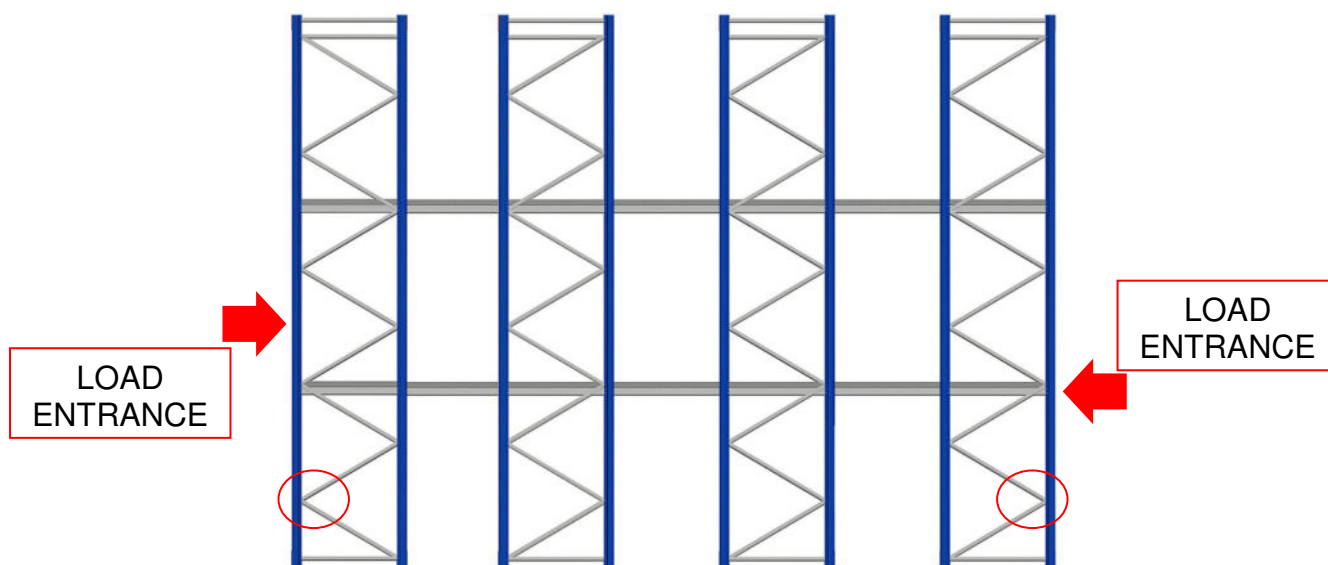
POSITION	DENOMINATION
1	UPRIGHT
2	ANCHOR BOLT
3	NUT
4	WASHER
5	SHIM PLATE PN DV

5.7. FRAMES ORIENTATION.

The orientation of the frames is understood as the position of the bracing with respect to the access lanes



In single Drive-in pallet racking installations, the first diagonal bracing node needs to be pointing at the aisle. For the rest of the frames, the configuration should be the same as the initial frame.

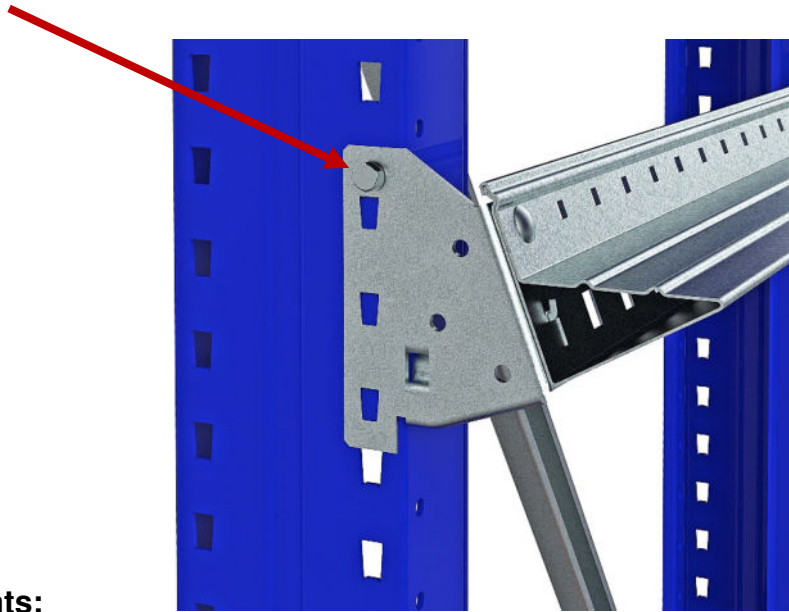


In double Drive-in installations, the position of the first diagonal node needs to be pointing at the aisles, in both entrances. As far as the orientation of the rest of the frames is concerned, we recommend having the same orientation as one of the both load entrances.

6. BRACKET

The single brackets ES [I or D]/1350 must be fixed to the uprights:

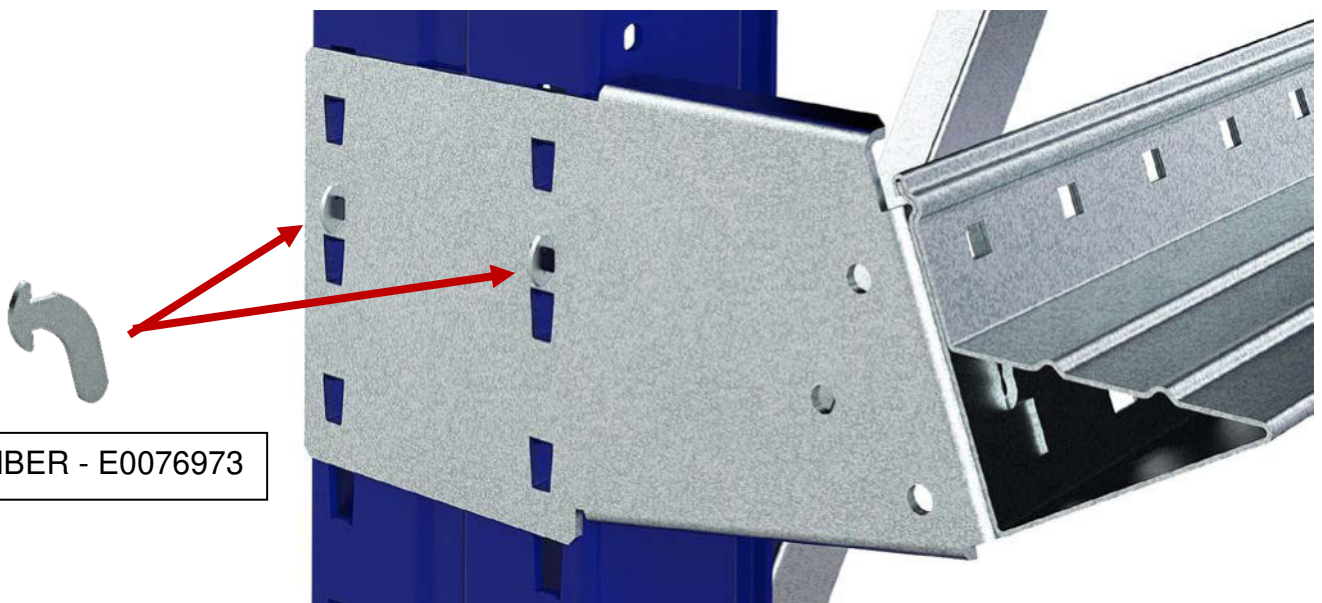
FIXING SET CT AC 825 – Part number 13010006



Components:

MARK	DENOMINATION	PART NUMBER
1	Bolt DIN 933 – 8.8 M8x25/Z	10010069
2	Nut DIN 6923–8 M8/Z	10020019
3	Washer DIN 125 M8/Z	10030025

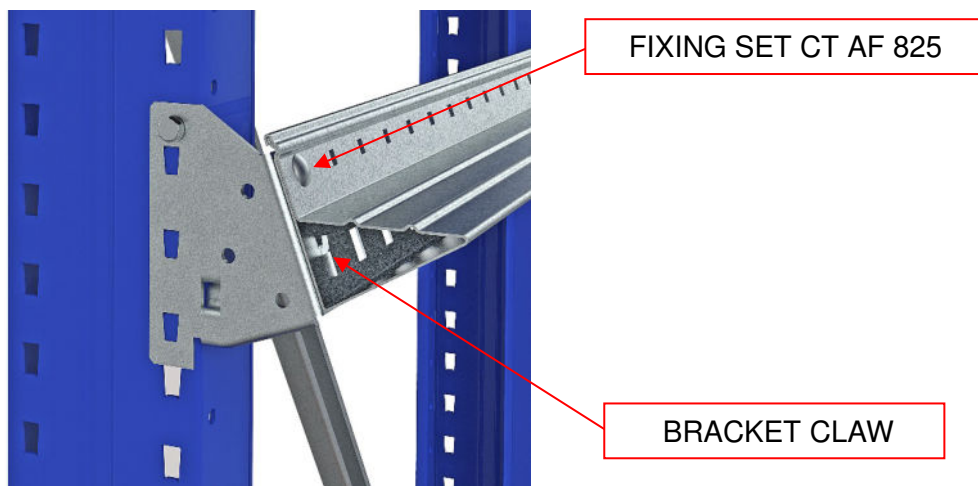
The double brackets will be fixed with 2 CSD safety clips per bracket.:



PART NUMBER - E0076973

7. PALLET RAIL

The bracket has a claw that serves as a guide and support for the Pallet Rail. In order to complete its fixation, we use the following set of union:

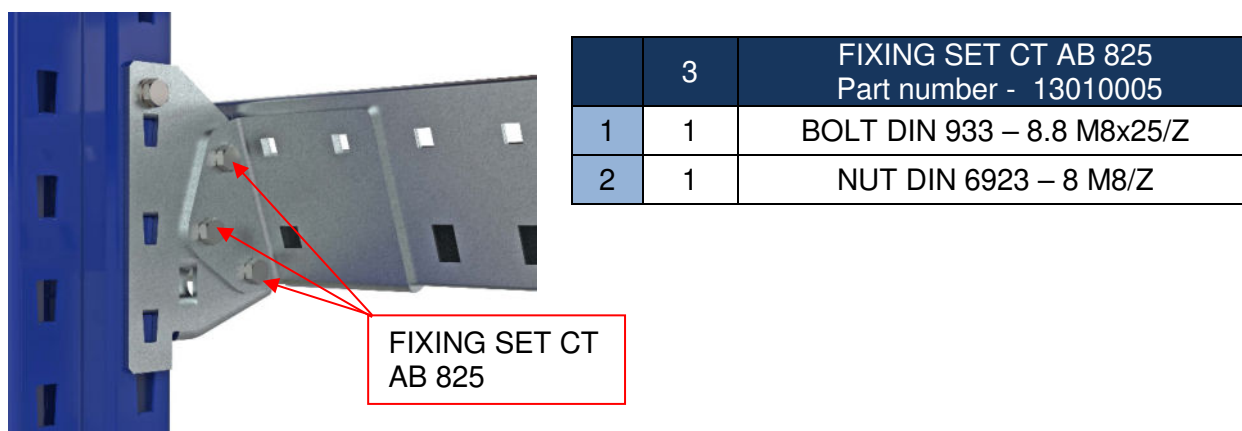


Mark	Nº Pieces	DENOMINATION		PART NUMBER
1	1	BOLT DIN 603 – 8.8 M8x25 / Z	FIXING SET CT AF 825	13010234
2	1	NUT DIN 6923 – 8 M8 / Z		

2 FIXING SETS CT AF 825 per double bracket and 1 FIXING SET CT AF 825 per single bracket, no matter if it is in one or in several stretches.

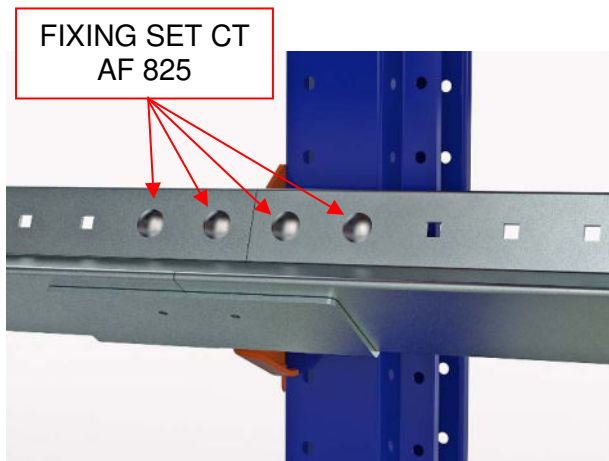
7.1. LANE UNION ASSEMBLY.

Firstly, the pallet rail splice must be fixed to the bracket:



	3	FIXING SET CT AB 825 Part number - 13010005
1	1	BOLT DIN 933 – 8.8 M8x25/Z
2	1	NUT DIN 6923 – 8 M8/Z

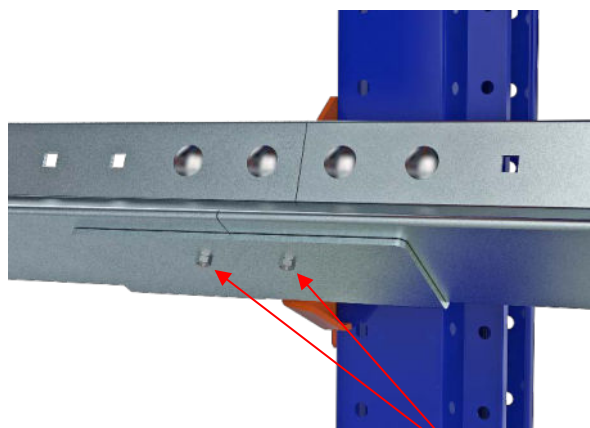
Then, the pallet rail must be fixed to the pallet rail splice:



	3	FIXING SET CT AF 825 Part number - 13010234
1	1	BOLT DIN 603 – 8.8 M8x25/Z
2	1	NUT DIN 6923 – 8 M8/Z

The fourth bolt of the image is the standard one between pallet rail and bracket, so three fixing sets for the splice.

Finally, two self-drilling screws must be used to get the pallet rail fixed.

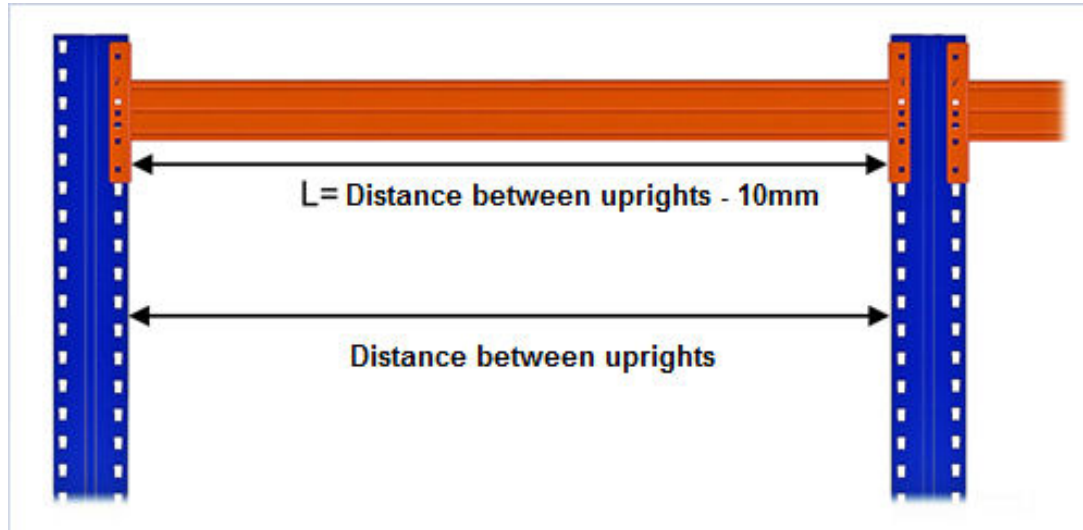


2	SELF-DRILLING SCREW DIN 7504-K M4,8x19/Z Part number - 10010427
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SELF-DRILLING SCREW M4,8

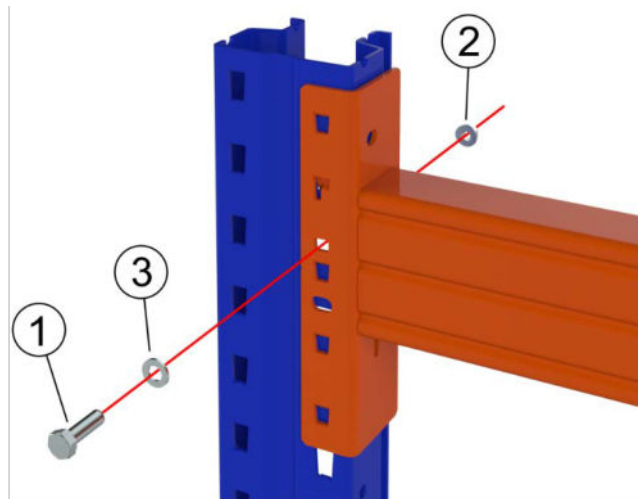
8. TIE BEAMS

Horizontal structural component which does not support unit loads and is generally part of the plan bracing system. They are placed in all lanes, at the very top of the frames.



HOW TO FIX IT:

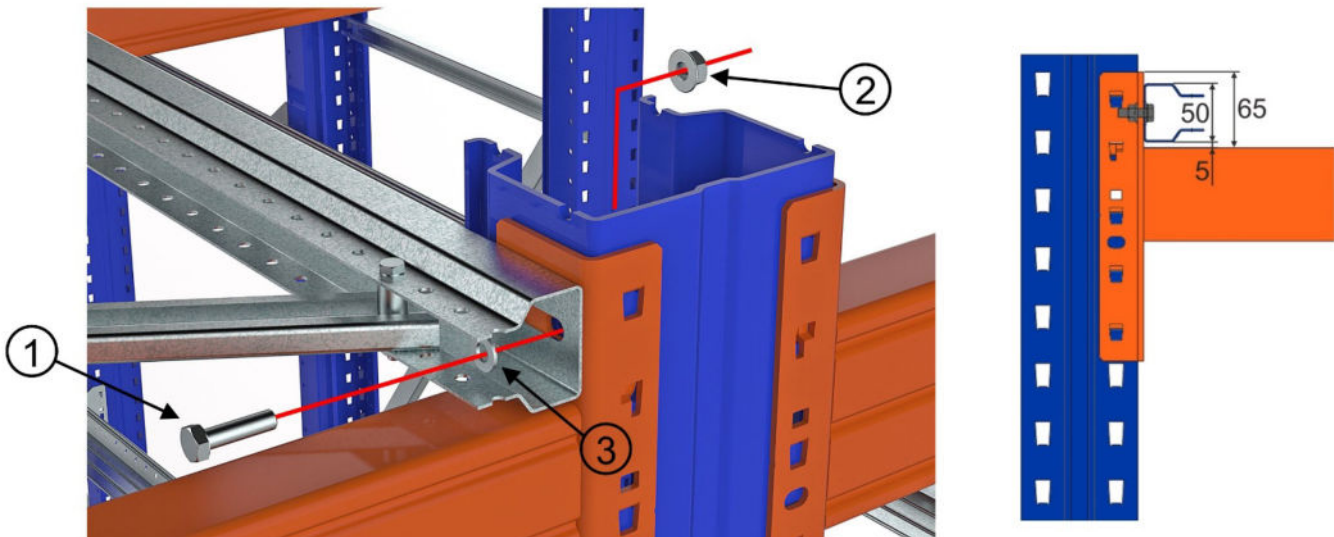
Each tie beam is fixed with 2 FIXING SETS CT AC 825.



Mark	Nº Pieces	Denomination
1	2	Bolt DIN 933 – 8.8 M8 x 25 / Z
2	2	Nut DIN 6923 – 8 M8 / Z
3	2	Washer DIN 125 M8 / Z

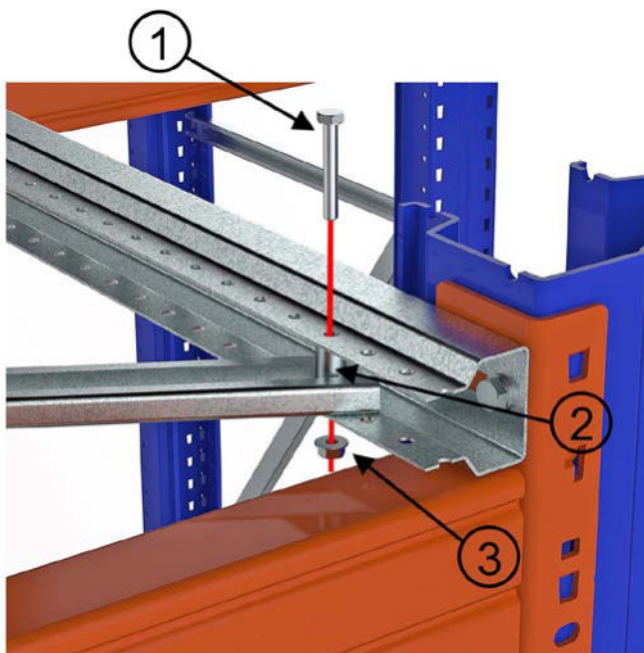
9. TOP PLAN BRACING

The "ES Bracing Profile" is bolted to the all tie beam connectors and uprights throughout the lane.



	1	FIXING SET CT AC 830 PART NUMBER - 13010171
1	1	BOLT DIN 933-8.8 M8x30/Z
2	1	NUT DIN 6923-8 M8/Z
3	1	WASHER DIN 125-8 M8

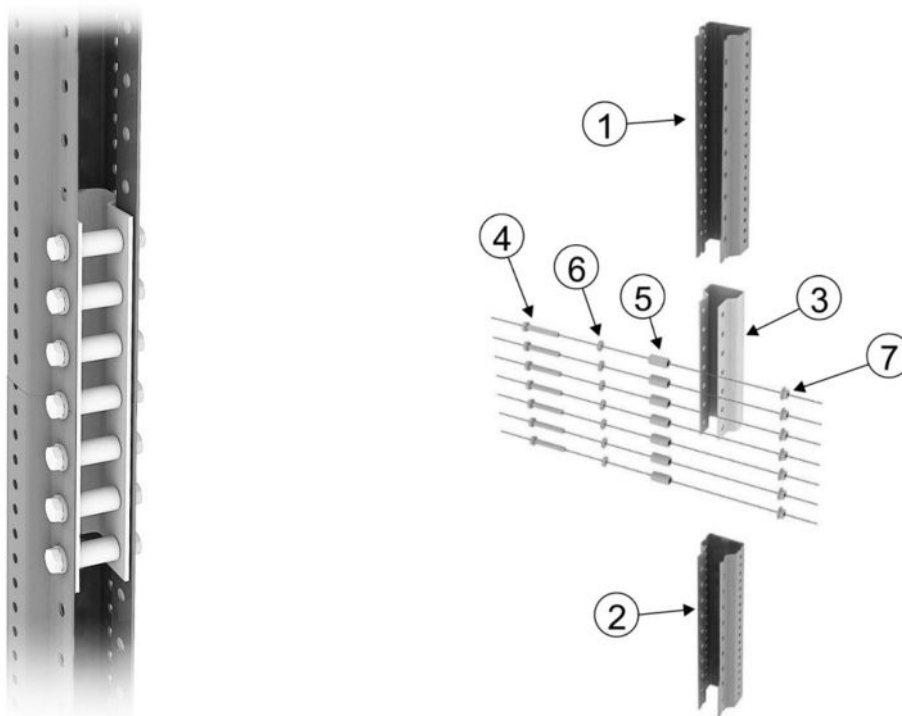
The CZ36/D6,5/18 profiles which form the crossed bracing are fixed with the following bolts:



	1	FIXING SET CT AE 640 PART NUMBER - 13010054
1	1	BOLT DIN 931 - 8.8 M6x40 / Z
2	1	SEPARATING TUBE 10/8x26 / Z
3	1	NUT DIN 6923 - 8 M6 / Z

If the length of the "ES Bracing Profile" exceeds 12 metres, it is compulsory to use an upright splice kit:

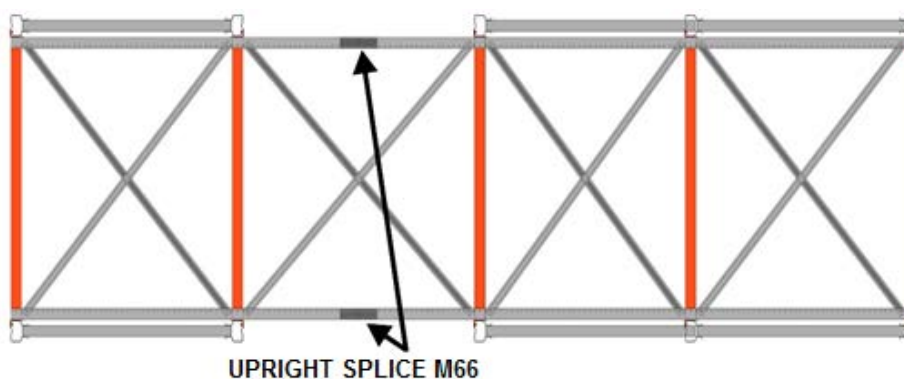
One upright splice kit per ES Bracing Profile is required, two for each braced lane:



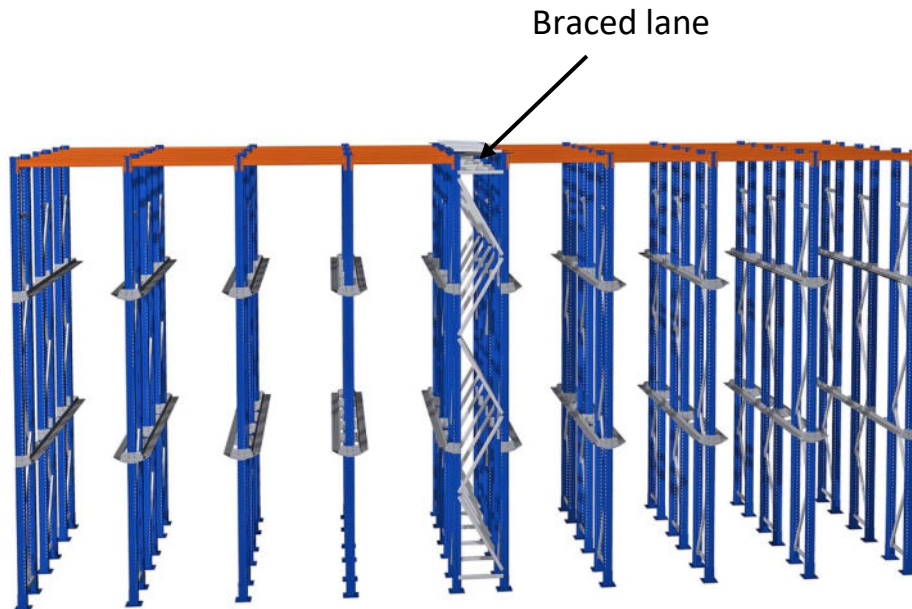
Inner part of the upright.

MARK	Nº Pieces	DENOMINATION
1	-	Upright M66
2	-	Upright M66
3	1	Upright Splice M66
4	7	Bolt DIN 931-8.8 M6x40/Z
5	7	Separating tube 10/8x22
6	7	Washer DIN 125 M6/Z
7	7	Nut DIN 6923 M6/Z

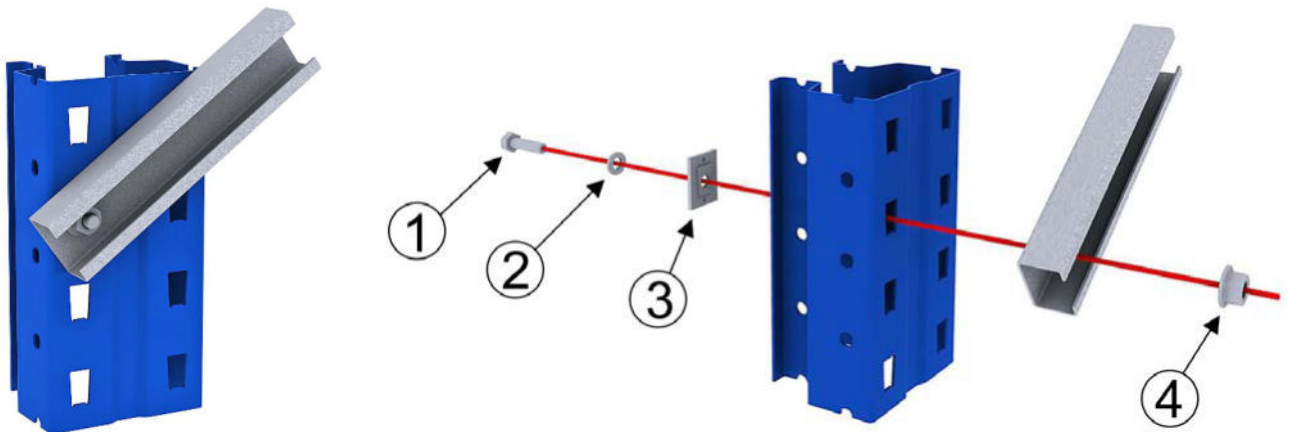
The splice in each braced lane will be made in the middle of a frame or a span:



10. BRACED LANE



10.1. BRACING DV CZ42 ASSEMBLY.

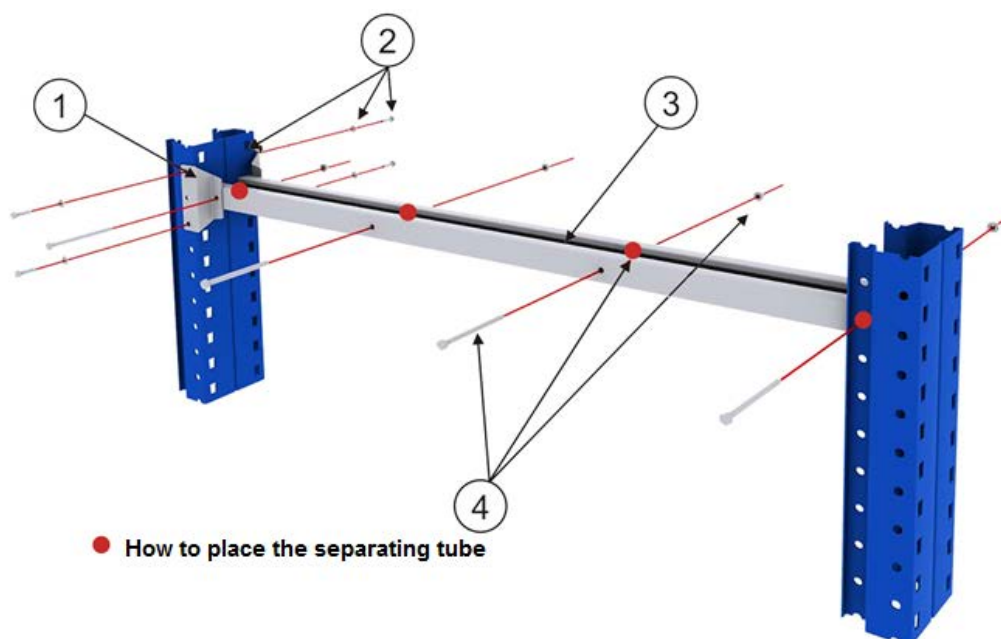


2 FIXING SETS CT BV 830 per bracing.

MARK	Nº pieces	FIXING SET CT BV 830
1	1	BOLT DIN 933-8.8 M8x30/Z
2	1	WASHER DIN 125 M8/Z
3	1	WASHER ERZ/D8,5
4	1	NUT DIN 6923-8 M8/Z

11. FRAME-UPRIGHT SPACER

11.1. FRAME-UPRIGHT SPACER.



MARK	DENOMINATION	QUANTITY	COMPONENTS	PART NUMBER
1	FRAME-UPRIGHT SPACER	2		E0038181
2	Front 76 FIXING SET CT AW 895	2	Bolt DIN 931 – 8.8 M8x95 / Z Nut DIN 6923 – 8 M8 / Z Washer DIN 125 M8 / Z	13010180
	Front 100, 115, 135 and 160 FIXING SET CT AC 825	4	Bolt DIN 933 – 8.8 M8x25 / Z Nut DIN 6923 – 8 M8 / Z Washer DIN 125 M8 / Z	13010006
3	PROFILE CZ [TYPE] / D8,5 / 18	2		-
4	FIXING SET CT A-[TYPE]	if $LN \leq 600 = 2$	Bolt DIN 931 – 8.8 M8x [Type] / Z	-
		if $600 \leq LN \leq 1100 = 3$	Nut DIN 6923 – 8 M8 / Z	
		if $1100 \leq LN \leq 1600 = 4$	Separating tube TS / 13 / - / Z	

UPRIGHT TYPE	FIXING SETS
ER 76M	FIXING SET CT AA 845
ER 76A	
ER 100A	FIXING SET CT AA 870
ER 100B	
ER 115B	FIXING SET CT AA 885
ER 115C	
ER 135A	FIXING SET CT AE 8105
ER 135B	
ER 160A	FIXING SET CT AE 8130

12. ACCESSORIES

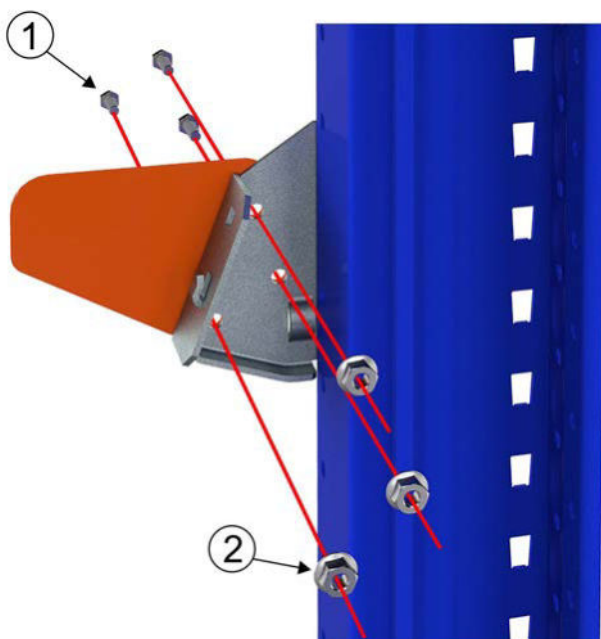
12.1. UPRIGHT PROTECTOR ASSEMBLY.

TYPE	FIXING
76M	3 – FIXING SET CT AW 895
76A	
100A	6 – FIXING SET CT BZ 825
100B	
115B	6 – FIXING SET CT BZ 1025
115C	
135A	6 – FIXING SET CT BZ 1025
135B	
160A	6 – FIXING SET CT BZ 1025



12.2. LOAD LEVEL SAFETY BACK STOP ASSEMBLY.

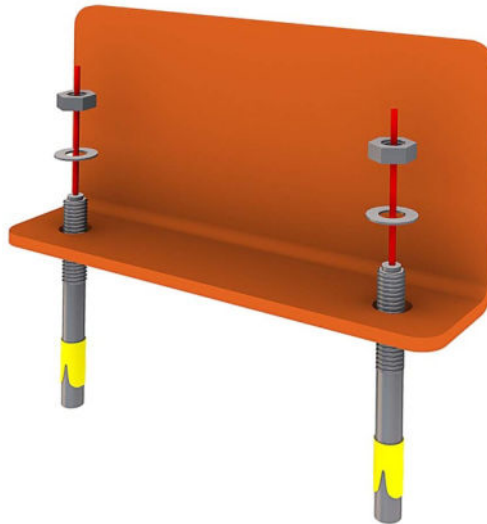
They are fixed with 3 FIXING SETS CT AB 825 per back stop.



	3	FIXING SET CT AB 825 PART NUMBER - 13010005
1	1	BOLTS DIN 933–8.8 M8x25/Z
2	1	NUT DIN 6923–8 M8/Z

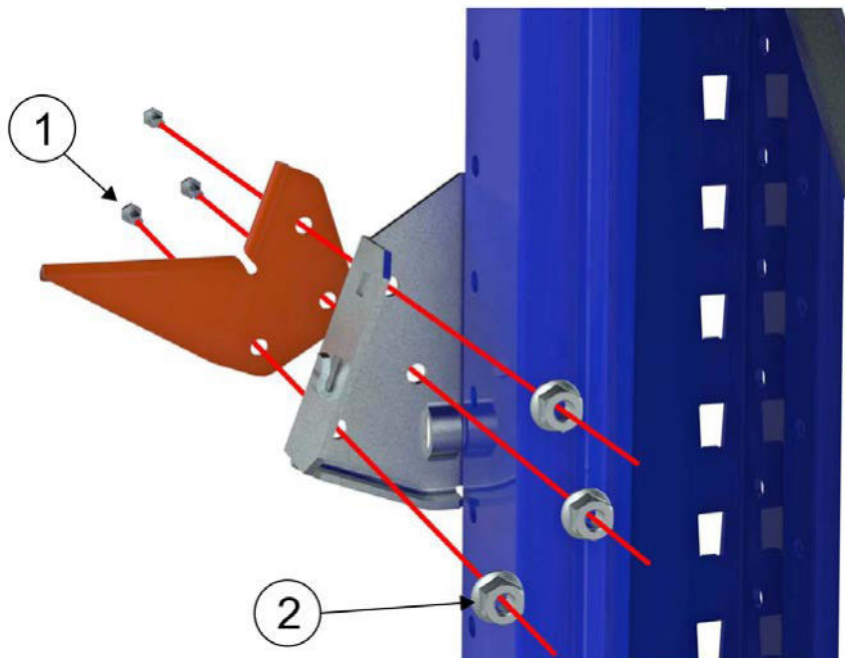
12.3. GROUND LEVEL SAFETY BACK STOP ASSEMBLY.

It is fixed with 2 anchor bolts M12.



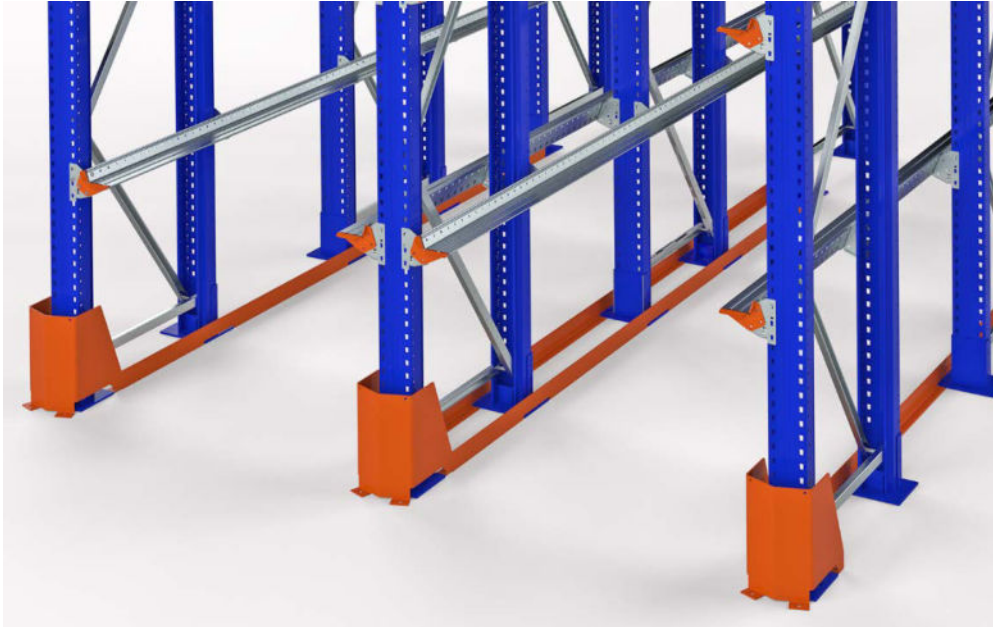
12.4. PALLET ENTRY GUARD ASSEMBLY.

It is fixed at the front of the entry bracket with 3 FIXING SET CT AB 825.

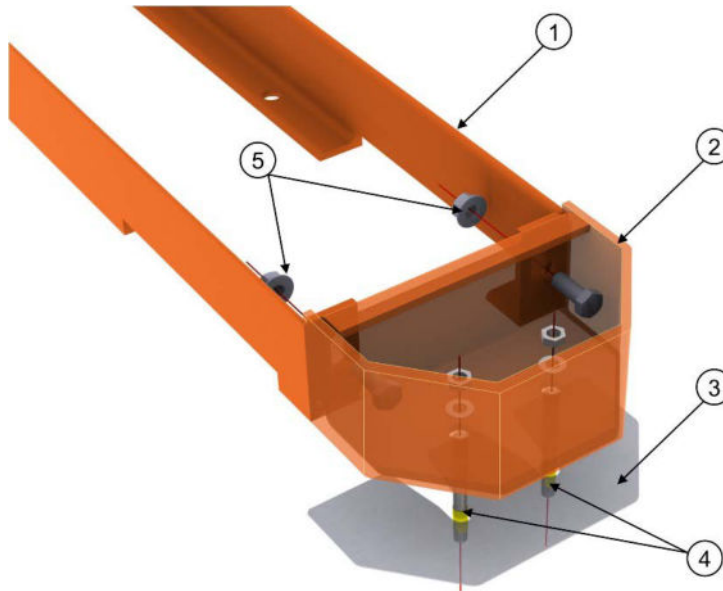


	3	FIXING SET CT AB 825 PART NUMBER - 13010005
1	1	BOLT DIN 933-8.8 M8x25/Z
2	1	NUT DIN 6923-8 M8/Z

13. FORKLIFT TRUCK GUIDE RAIL

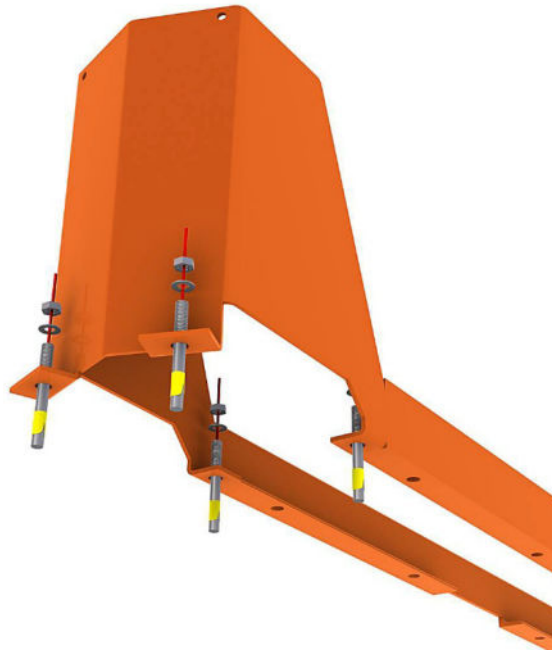


13.1. FORKLIFT TRUCK GUIDE RAIL HEAD ASSEMBLY.



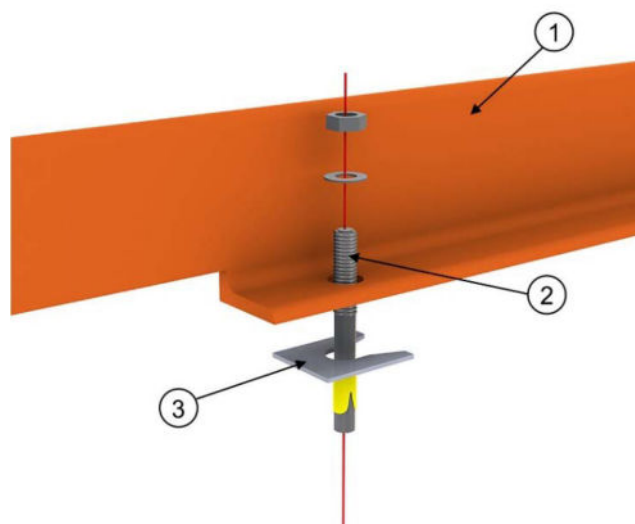
MARK	DENOMINATION	PART NUMBER
1	FORKLIFT TRUCK GUDE RAIL	-
2	FORKLIFT TRUCK GUDE RAIL HEAD	-
3	FORKLIFT TRUCK GUDE RAIL HEAD SHIM PLATE DV	
4	ANCHOR BOLT M12	10080027
5	FIXING SET CT AC 1230	13010008

13.2. HOW TO FIX FORKLIFT TRUCK GUIDE RAIL WITH PROTECTOR PPN-DV.



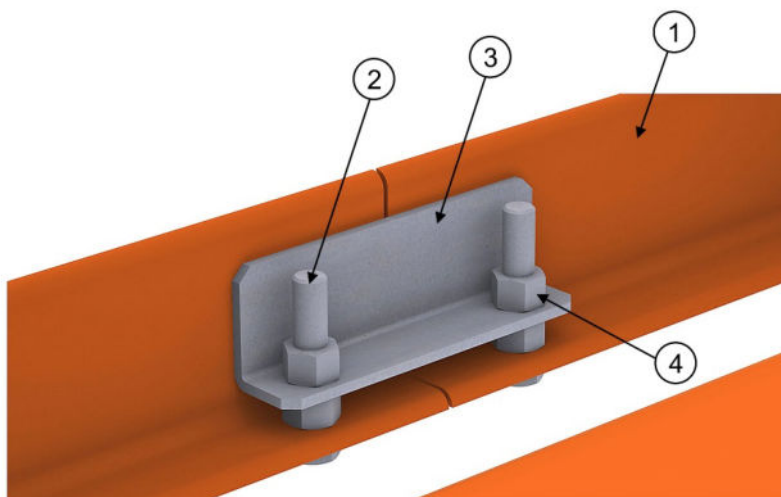
They are fixed to the floor with 4 anchors bolts M12.

13.3. HOW TO FIX FORKLIFT TRUCK GUIDE RAIL TO THE FLOOR.



MARK	DENOMINATION	PART NUMBER
1	FORKLIFT TRUCK GUIDE RAIL	-
3	ANCHOR BOLT M12	10080027
4	GUIDE RAIL SHIM PLATE LPN	E0017963 / E0017964

13.4. FORKLIFT TRUCK GUIDE RAIL SPLICE.



MARK	DENOMINACIÓN	PART NUMBER
1	FORKLIFT TRUCK GUDE RAIL	-
2	ANCHOR BOLT M12	10080027
3	FORKLIFT TRUCK GUDE RAIL SPLICE	E0049719
4	NUT DIN 6923 M12	10020022