

Supercant system

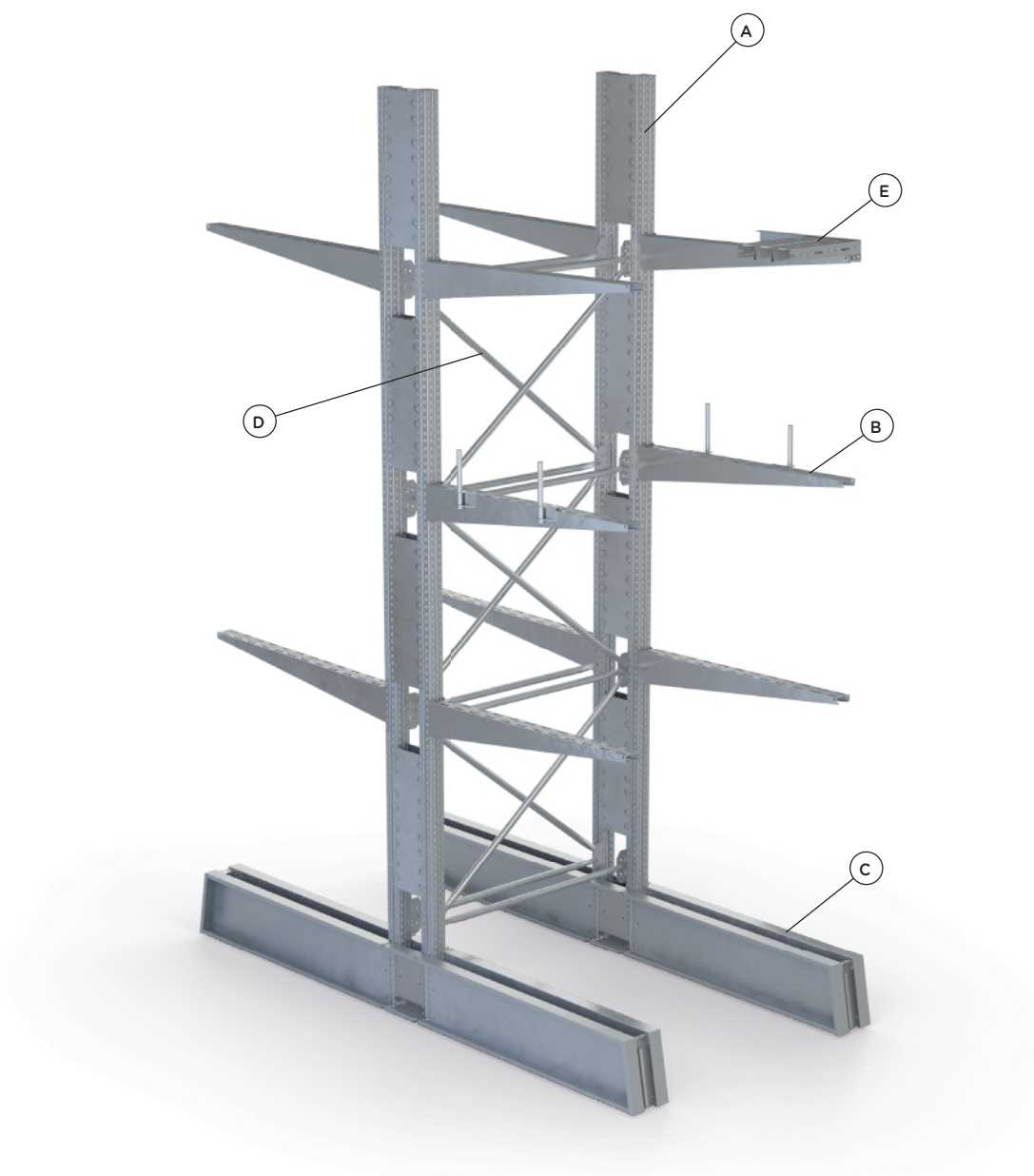
Supercant system allows the assembly of single and double side rows, with column heights up to 4094mm and arm lengths from 400mm and 1200mm.

Supercant system, based on Super 4-5-6 series, is modular by nature, and is well suited to the realization of versatile geometries and structural schemes (height and width of the columns, longitudinal bracing geometry, portal frames in transverse direction, etc.);

Supercant system components

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Tab. 1



Supercant columns

Supercant columns, in both Super6 and reinforced Super6 variants, are supplied preassembled in the various heights listed in Tab. 2.

The assembled column is made up of a pair of uprights united by H=190mm connection plates and completed by vertical bracing connection plates.

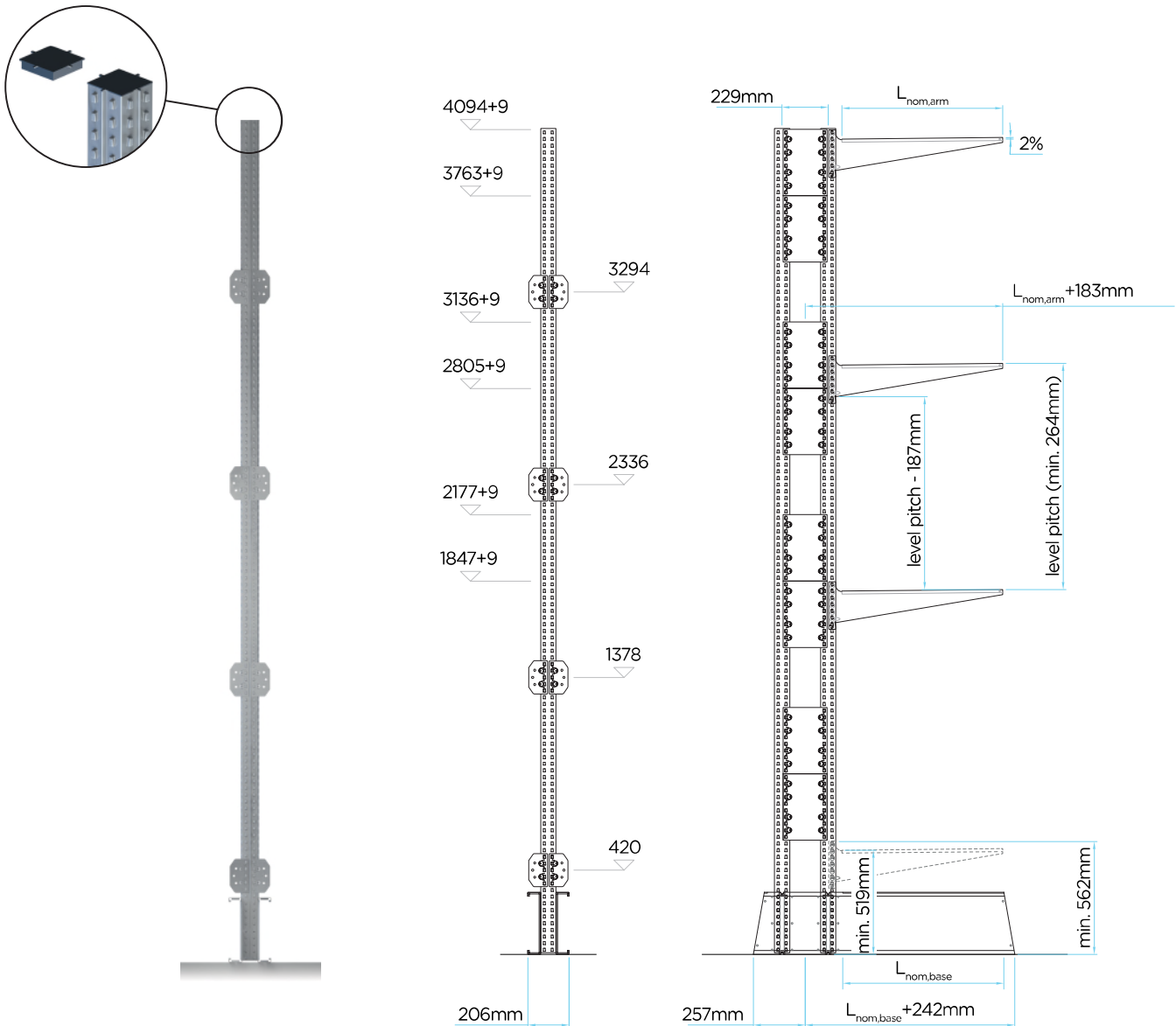
The main dimensions of the system - column heights, position of bracing connection plates, transverse dimensions - are described in the diagram below.

Uprights are capped with plastic top cap cod. 08021.98.

Supercant column order codes

Column height [mm]	Super6 column	Super6R column
1847	09610.95	09610/R.95
2177	09611.95	09611/R.95
2805	09612.95	09612/R.95
3136	09613.95	09613/R.95
3763	09614.95	09614/R.95
4094	09615.95	09615/R.95

Tab. 2



Supercant arms

Supercant arms are available in standard and reinforced versions, with nominal lengths ranging in increments of 100mm from 400mm to 1200mm. One arm is made up of the assembly of a left and right side, bolted together at their extremities with a M6x16 CHS bolt with M6 nyloc nut. Both half arms must be secured to the column by hammering the locking flange in order to prevent accidental dislodgement. The arm can be completed with an optional metallic cap, which can be installed if arms are not equipped with continuous shelves.

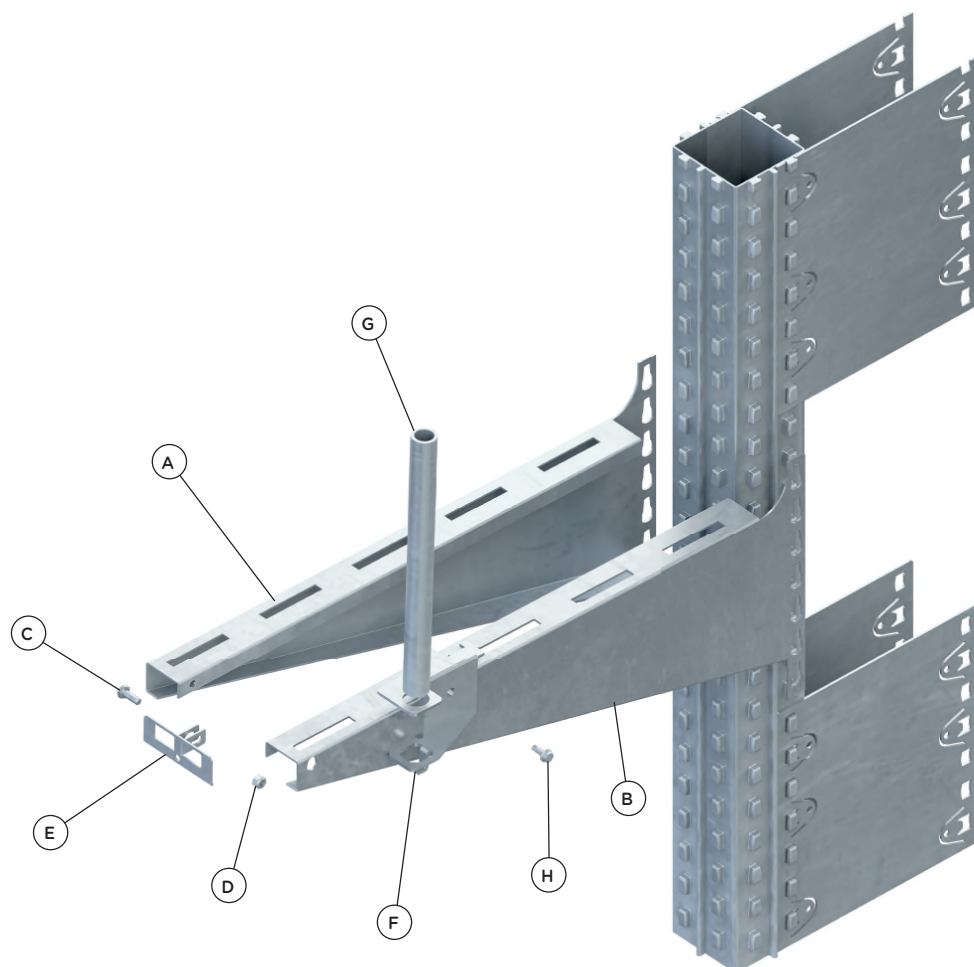
The end stop bracket for Supercant arms equipped with H=250mm tube can be installed in the dedicated slots on the upper wing of the arm to form an end stop suited for tubular stored goods.

Once installed in the slot, the bracket can be secured to the arm with a self tapping screw.

Supercant arms - codes and lengths

Pos.	Code	Description	L. ord. [mm]
A	09620.95	Supercant arm normal left	L _{nom}
B	09621.95	Supercant arm normal right	
A	09623.95	Supercant arm reinforced left	
B	09624.95	Supercant arm reinforced right	
C	00035.20	M6x16 CHS bolt UNI 5931 ZP	-
D	00029.20	M6 nyloc nut DIN 982 ZP	-
E	09638.95	Top cap for Supercant arm	-
F	09644.95	Endstop bracket for Supercant arms	-
G	09646.95	Endstop rod for Supercant arm	-
H	00058.20	5,5x19 HEX self tapping screw UNI 8117 ZP	-

Tab. 3



Supercant bases

Supercant bases are supplied in single side version with nominal depths ranging from 400mm to 1500mm and in double side version with nominal depths ranging from 400mm+400mm to 1200mm+1200mm.

A complete base is assembled from two C-shaped profiles connected at both extremities by end plates which increase the resistance to small impacts.

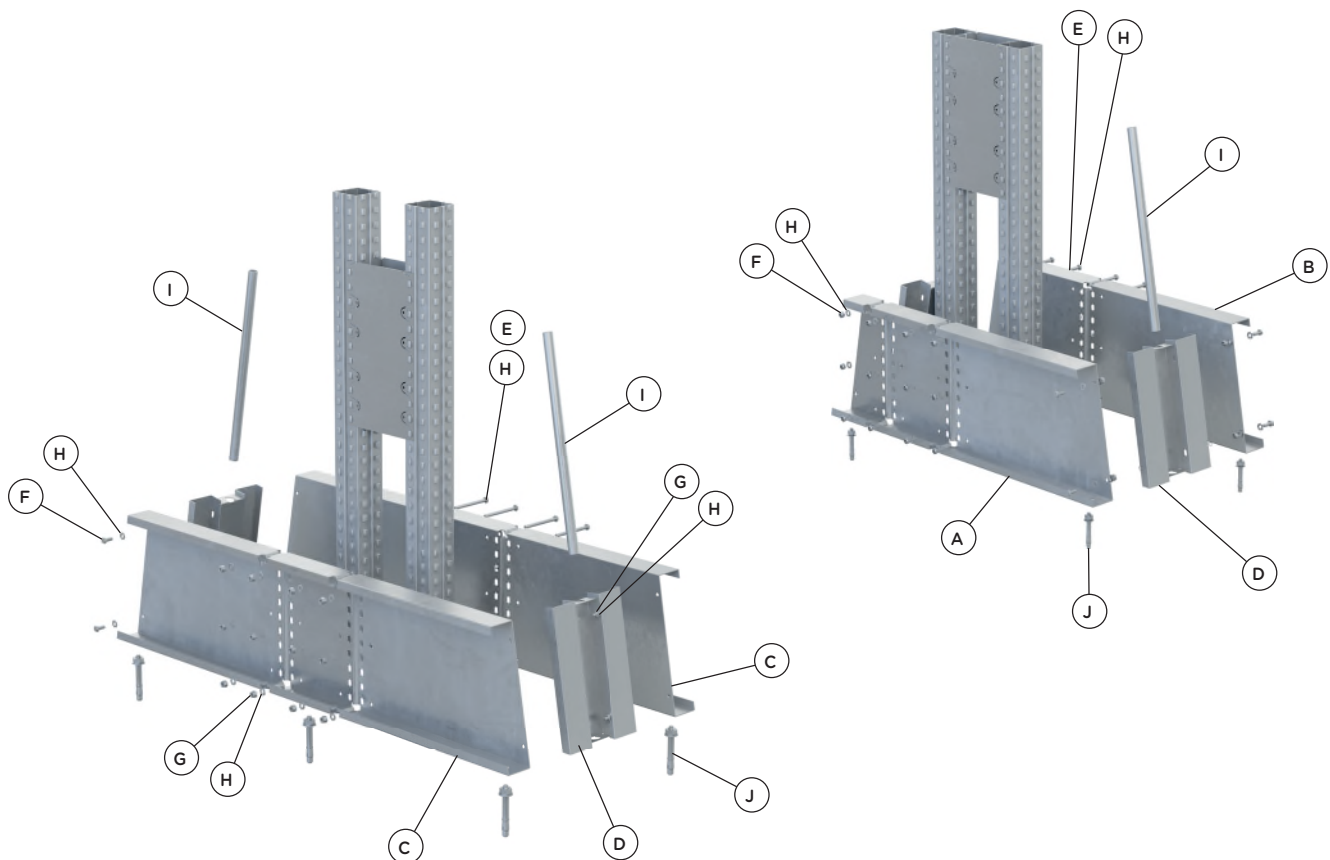
The order length of a base shall be at least equal to the longest arm connected to the corresponding column. The end plates shall be always installed on both ends of the base profiles. The end plates can host an endstop tube suited for tubular stored goods.

Every single side base must be fixed to the floor slab using 4 anchor bolts, while every double side base must be fixed to the floor slab using 6 anchor bolts.

Supercant bases - codes and lengths

Pos.	Code	Description	Q.ty SS	Q.ty DS	L. ord. [mm]
A	09601.95	Single side base Supercant left	1	-	L _{nom}
B	09602.95	Single side base Supercant right	1	-	
C	09603.95	Double side Supercant base 1/2	-	2	2 x L _{nom}
D	09604.95	Supercant base end plate	2	2	-
E	00010.20	M8x100 HEX bolt DIN 931 8.8 ZP	12	12	-
F	00004.20	M8x20 HEX bolt UNI 5739 8.8 ZP	8	8	-
G	00022.20	M8 nylon nut DIN 982 ZP	20	20	-
H	00030.20	M8 washer UNI 6592 ZP	40	40	-
I	09647.95	Endstop rod for Supercant base	1	2	-
J	00041.20	M10 expansion anchor bolt	4	6	-

Tab. 4



Longitudinal bracing

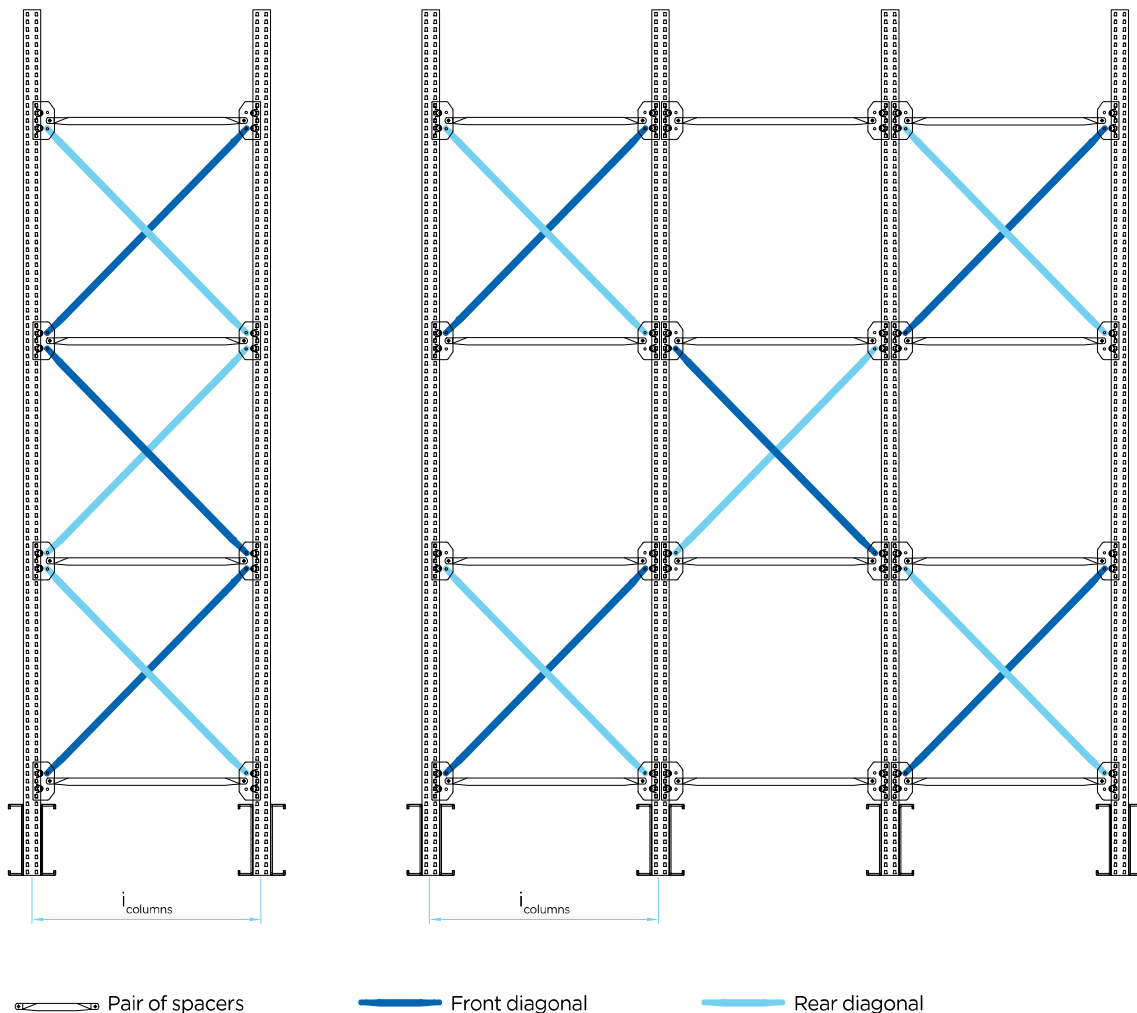
The longitudinal bracing system is created by connecting tubular profiles to the vertical bracing connection plates of the columns.

The bracing system of single bay rows is composed by one to three continuous braces, depending on the column height.

The bracing system of multiple bay rows follows a checked pattern.

The bracing elements lengths depend on the centre distance between adjacent columns. Supercant bracing ranges between 500mm and 2000mm column centre distances.

Tubular profiles with diameter $\varnothing 32\text{mm}$ can be used for column centre distances up to 1500mm; for centre distances up to 2000mm, $\varnothing 40\text{mm}$ diameter profiles are mandatory.



Longitudinal bracing - codes and lengths

Pos.	Code	Description	Order length [mm]
A	09635.95	Ø 32 spacer - Supercant cross bracing	$L_{spacer} = i_{column} - 124$
	09645.95	Ø 40 spacer - Supercant cross bracing	
B	09635.95	Ø 32 diagonal - Supercant cross bracing	$L_{diag} = \sqrt{(L_{spacer} - 11)^2 + 887^2} + 31$
	09645.95	Ø 40 diagonal - Supercant cross bracing	
C	00004.20	M8x20 HEX bolt UNI 5739 8.8 ZP	
D	00022.20	M8 nyloc nut DIN 982 ZP	

Note: each profile requires two bolted assemblies (bolt+nut)

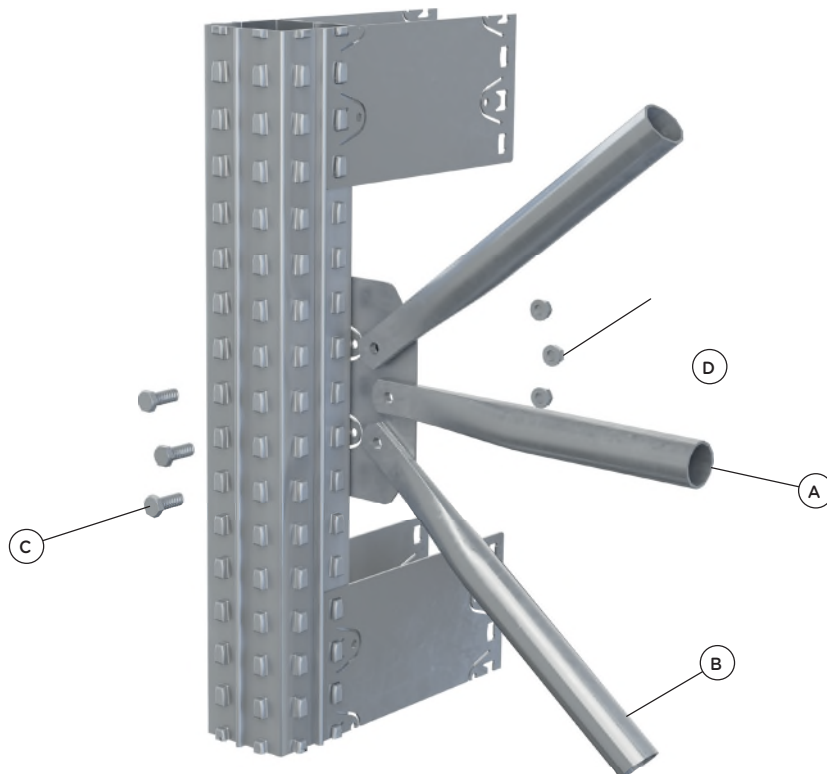
Tab. 5

Bracing elements count

Column height [mm]	Number of spacers	Single bay	Number of diagonals Even bays	Odd bays (>2)
1847	$4 \times n_{bays}$	2	$1 \times n_{bays}$	$1 \times n_{bays} + 1$
2177	$4 \times n_{bays}$	2	$1 \times n_{bays}$	$1 \times n_{bays} + 1$
2805	$6 \times n_{bays}$	4	$2 \times n_{bays}$	$2 \times n_{bays}$
3136	$6 \times n_{bays}$	4	$2 \times n_{bays}$	$2 \times n_{bays}$
3763	$8 \times n_{bays}$	6	$3 \times n_{bays}$	$3 \times n_{bays} + 1$
4094	$8 \times n_{bays}$	6	$3 \times n_{bays}$	$3 \times n_{bays} + 1$

Note: number of bolt assemblies (bolt+nuts) = number of profiles x 2

Tab. 6



Continuous shelves

Continuous shelves can be realized using H29 or H58 steel planks running over the arms. Please refer to "Pallet racking accessories technical manual", code MT07, for order procedures and codes and for load bearing capacity tables.

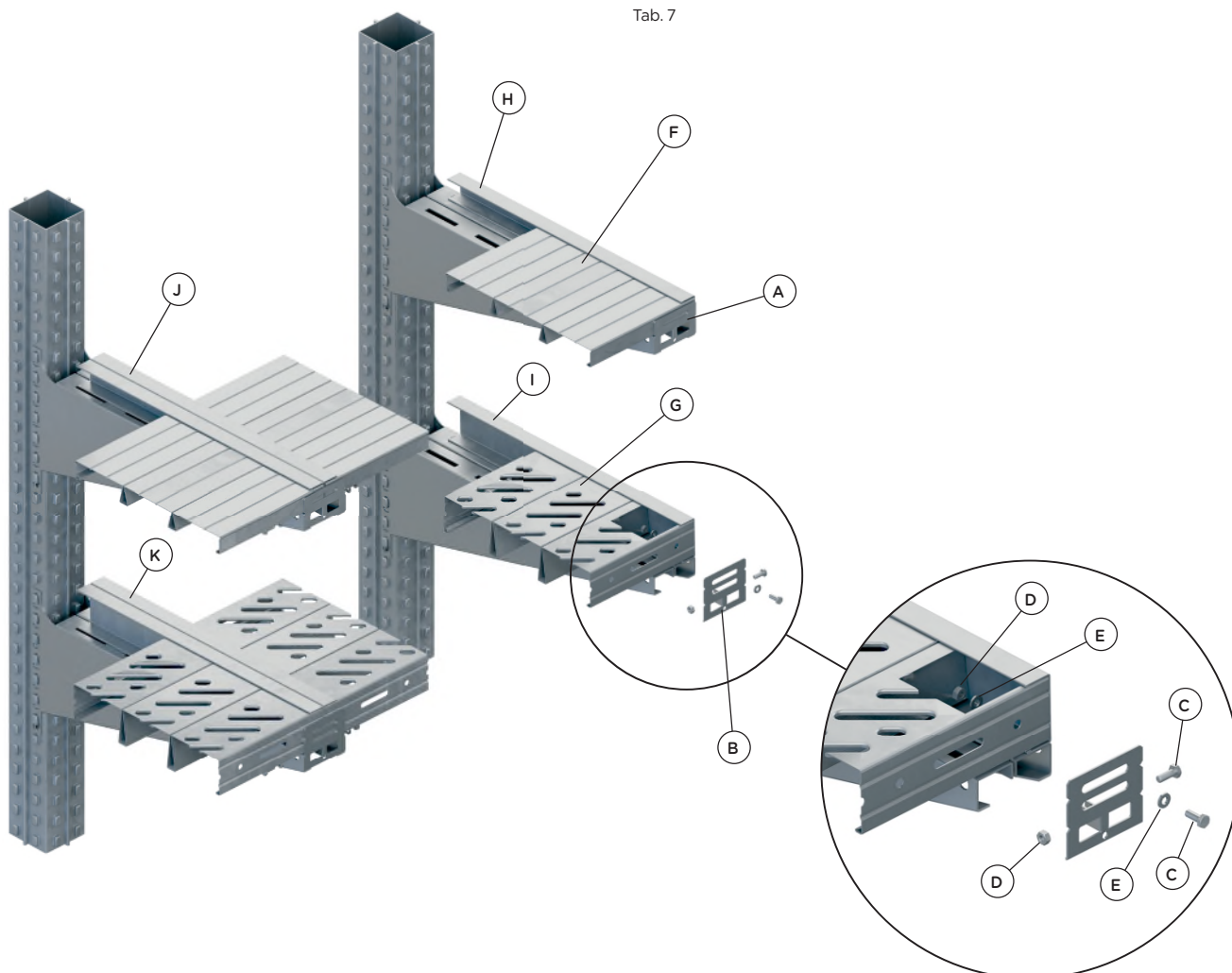
Steel planks are connected to the arms using the appropriate end stop fixing brackets. The brackets are connected to the tip of the arm in the place of the standard end cap, using the bolt already connecting the two half arms (page 12).

The external steel plank is connected to the bracket with a M6x20 hex bolt with nylon nut and washers.

Codes - continuous shelves

Pos.	Code	Description
A	09636.95	End stop for H29 steel planks
B	09637.95	End stop for H58 steel planks
C	00005.20	M6x20 CHS bolt UNI 5739 8.8 ZP
D	00029.20	M6 nyloc nut DIN 982 ZP
E	00005865.20	M6 washer UNI 6592 ZP
F	Ref. MT07	H29 steel plank
G	Ref. MT07	H58 steel plank
H	69801.95	"U" channel profile for H29 steel planks L=4000
I	69807.95	"U" channel profile for H58 steel planks L=4000
J	69804.95	"H" channel profile for H29 steel planks L=4000
K	69810.95	"H" channel profile for H58 steel planks L=4000

Tab. 7



Admissible loads

The load bearing capacity of a Supercant configuration depends on the arms length, on the number of loading levels and on the column and arm types.

Two load bearing capacity tables are available:

- Table A (cyan): load bearing capacity satisfying UNI 11598 / FEM 10.2.09 deformation limits;
- Table B (blue): load bearing capacity satisfying extended deformation limits, which can be adopted only in case the stability of stored goods and the operational methods are not affected by the deformation of the structure.

In both cases the load bearing capacity satisfies the safety levels mandated by UNI 11598 and FEM 10.2.09 (ref. paragraph Safety standards and design assumptions”).

Cantilever rackings are usually adopted to store long unit loads spanning several bays.

The required load bearing capacity per arm in a cantilever configuration depends on both the unit load flexibility and the distribution in plan of the supporting arms.

Refer to the informative Annex D of FEM 10.2.09 to correctly evaluate the required load bearing capacity.

TABLE A - Admissible load [daN] per Supercant arm - UNI 11598 - FEM 10.2.09 deformation limits

Arm length		400		500		600		700		800		900		1000		1100		1200	
N° of levels	Column	TS6		TS6R		TS6		TS6R		TS6		TS6R		TS6		TS6R		TS6	
	Arm	TS6	TS6R	TS6	TS6R	TS6	TS6R	TS6	TS6R	TS6	TS6R	TS6	TS6R	TS6	TS6R	TS6	TS6R	TS6	TS6R
1	Normal	660		540		455		390		340		300		265		240		220	
	Reinf.	825		685		580		500		435		385		345		310		285	
2	Normal	660		540		455		390		340		300		265		240		220	
	Reinf.	825		685		580		500		435		385		345		310		285	
3	Normal	605	660	535	540	455		390		340		300		265		240		220	
	Reinf.					475	580	430	500	390	435	360	385	335	345	310		285	
4	Normal	465	575	410	505	365	450	330	390	300	340	275	300	255	265	240		220	
	Reinf.																		
5	Normal	380	470	335	410	300	365	270	330	245	300	225	275	210	255	195	240	180	220
	Reinf.																		
6	Normal	320	395	280	345	250	310	225	280	205	255	190	235	175	215	165	200	150	185
	Reinf.																		
7	Normal	275	340	245	300	215	265	195	240	180	220	165	200	150	185	140	170	130	160
	Reinf.																		
8	Normal	245	300	215	260	190	235	170	210	155	190	145	175	135	165	125	150	115	140
	Reinf.																		

This table applies to TS6 column heights up to 4094mm; TS6R columns with height higher than 4094mm and up to 5000mm can be adopted with a load bearing capacity reduced by 15%.

TABLE B - Admissible load [daN] per Supercant arm - extended deformation limits

Arm length		400		500		600		700		800		900		1000		1100		1200	
N° of levels	Column	TS6	TS6R	TS6	TS6R	TS6	TS6R	TS6	TS6R	TS6	TS6R	TS6	TS6R	TS6	TS6R	TS6	TS6R	TS6	TS6R
	Arm																		
1	Norm.	1000		955		815		700		615		545		485		445		405	
	Reinf.			1000		985		855		750		665		600		545		495	
2	Norm.	1000		955		815		700		615		545		485		445		405	
	Reinf.			995	1000	890	985	805	855	730	750	665		600		545		495	
3	Norm.	790	1000	695	955	620	815	560	700	510	615	470	545	435	485	405	445	375	405
	Reinf.																		
4	Norm.	605	1000	535	910	475	810	430	700	390	615	360	545	335	485	310	445	290	405
	Reinf.																		
5	Norm.	495	845	435	740	385	660	350	600	320	545	295	500	270	465	250	430	235	400
	Reinf.																		
6	Norm.	415	710	365	625	325	555	295	505	270	460	245	420	230	390	210	360	200	340
	Reinf.																		
7	Norm.	360	615	315	540	280	480	255	435	230	395	215	365	195	335	185	310	170	290
	Reinf.																		
8	Norm.	315	540	280	475	250	425	225	380	205	345	185	320	175	295	160	275	150	255
	Reinf.																		

This table applies to column height up to 4094mm.