



User & Installation Guide

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User Guide

40. – 47.

Caem contact details

48.

The following guide can be used in helping meet CDM regulations.

- C**onstruction How a product is made.
- D**esign To conform to certain standards, be safe/methods of fixings or securing etc.
- M**anagement Ensuring that products are used correctly.

When an enquiry is made into our system the most important consideration before specifying any component sizes etc. is what the end user's needs and requirements actually are. This is what determines which components should and should not be used.

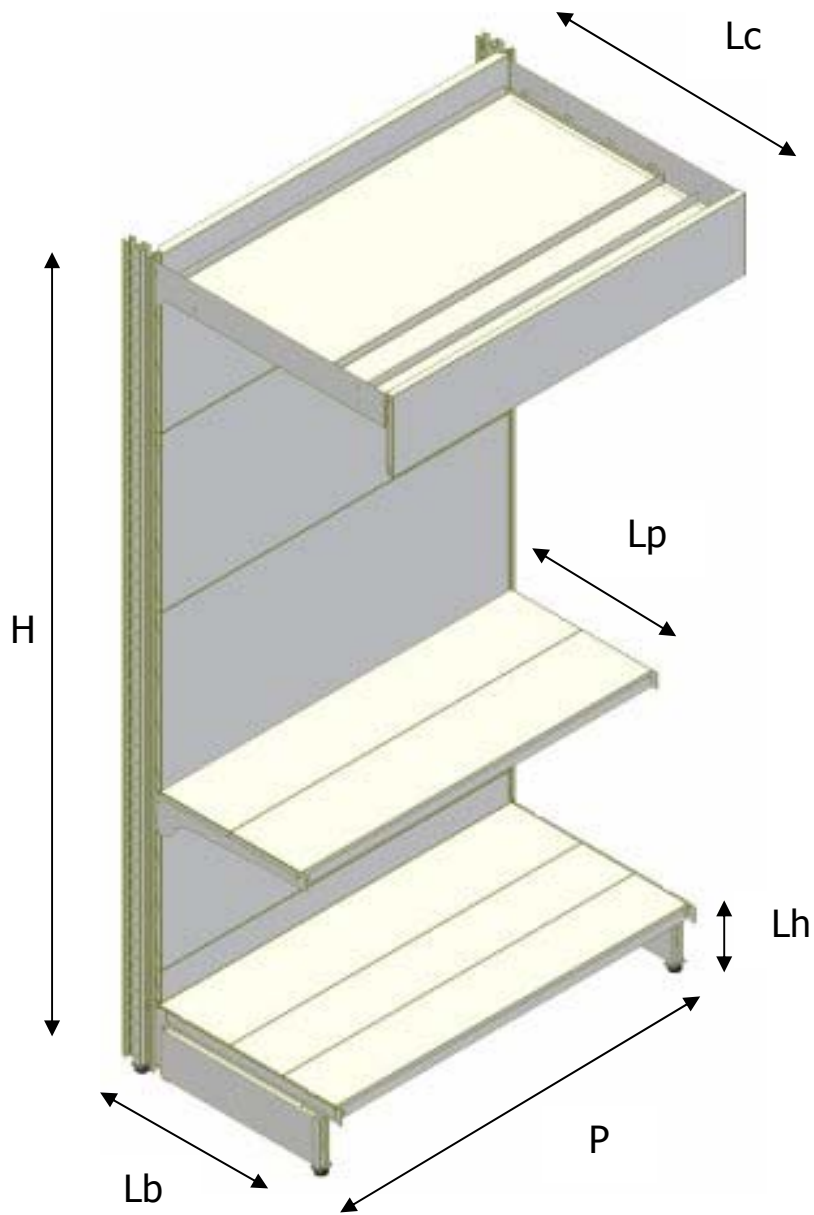
It is your responsibility to ensure the appropriate components are used.

Please do not hesitate to contact us for help and advice.

The products supplied by Caem must be assembled and used as outlined in the following guide.

Caem will not accept any responsibility for the actual installation or the end use of the product.

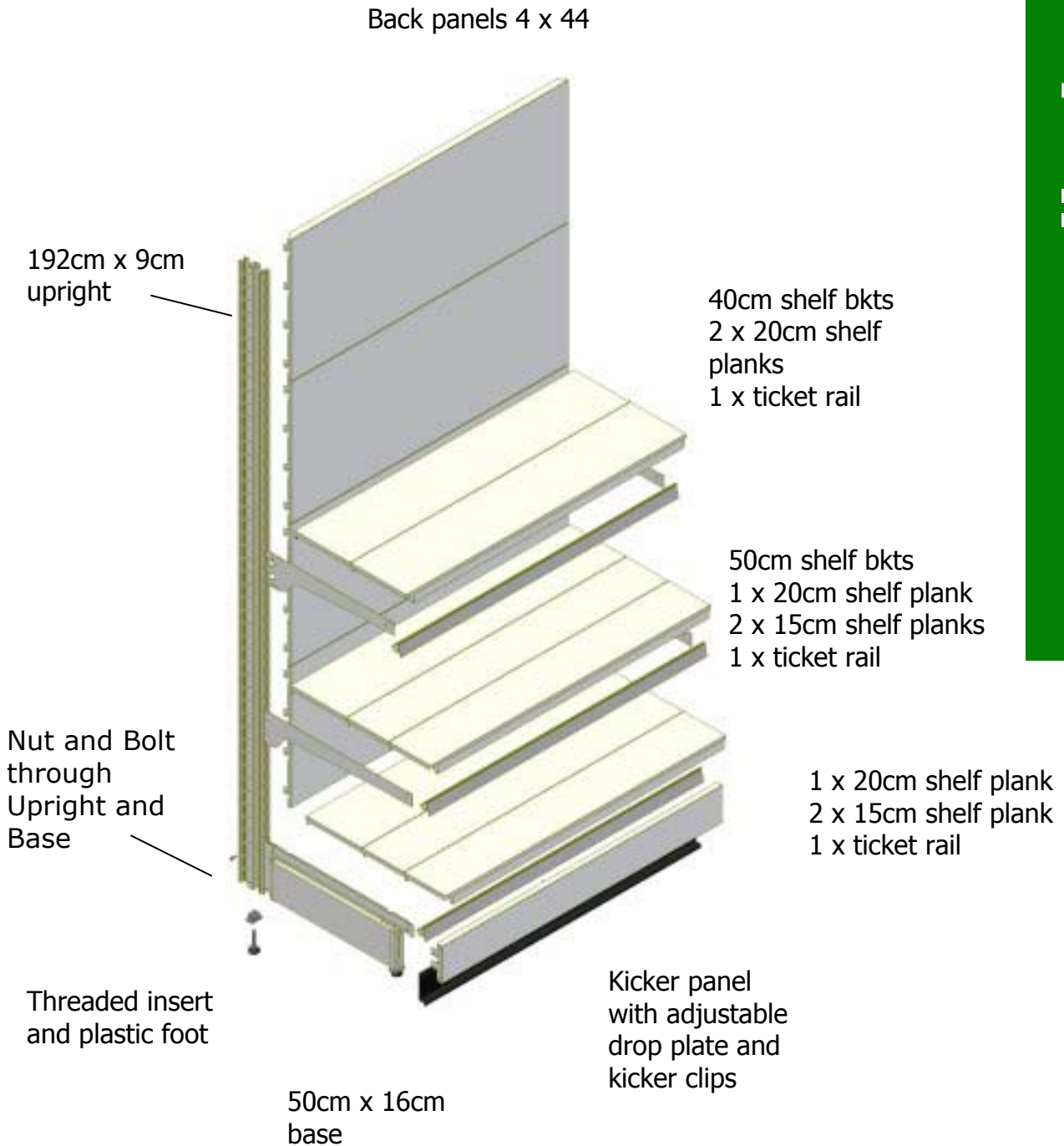
Component Sizes



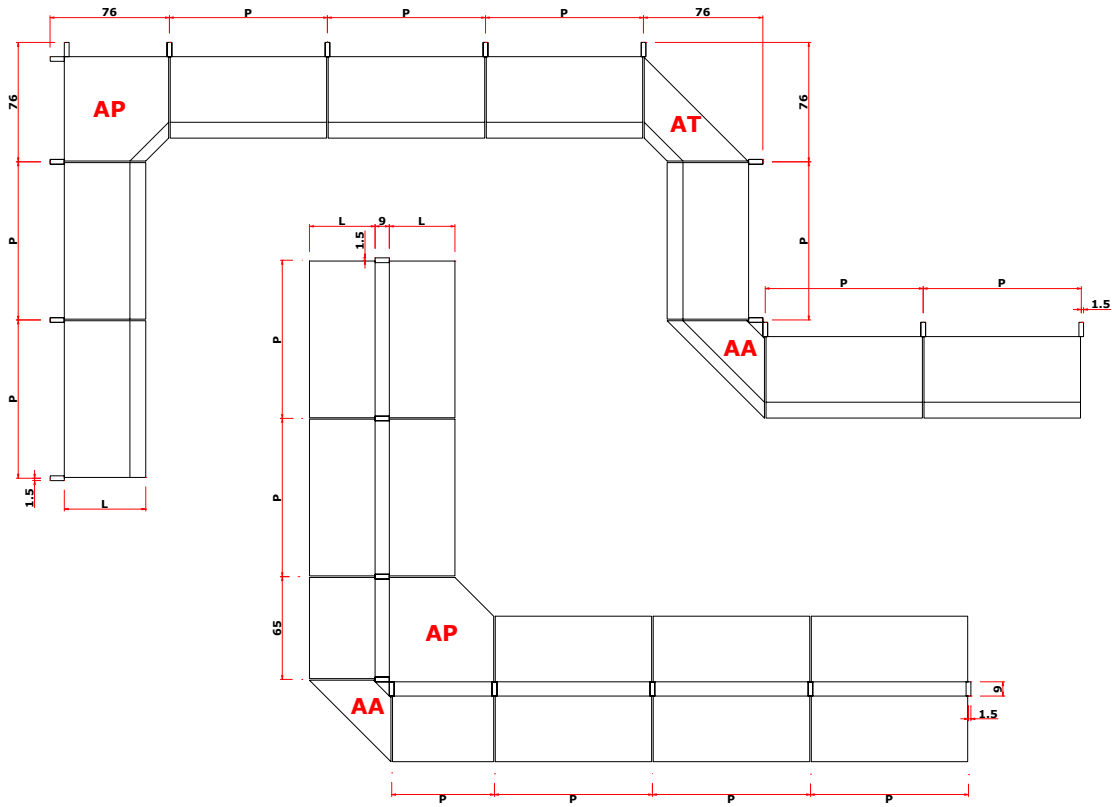
H = Upright Size	88, 112, 136, 148, 156, 180, 200, 224, 244, 268, 288, (cm)
Lh = Base Size	16, 24 (cm)
Lb = Base Size	20, 30, 40, 50, 60, 70, 80 (cm)
Lp = Bracket Size	15, 20, 30, 35, 40, 50, 60 (cm)
Lc = Canopy Size	65 (cm)
P = Bay Size	45, 65, 100, 120, (cm) AP, AT, AA

Exploded Drawing of a Standard Bay

1. Installation Guide



Floor Plan



1. Installation Guide

P= Bay Size	45, 65, 100, 120, (cm) AP, AT, AA
L = Base Size	20, 30, 40, 50, 60, 70, 80 (cm)

Run Lengths

Caem's 45cm bay helps create the most modular shopfitting system



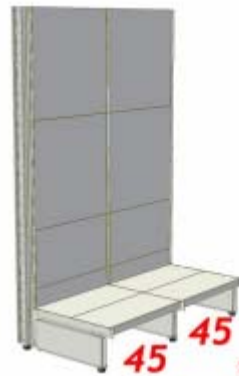
45

=45cm



65

=65cm



45

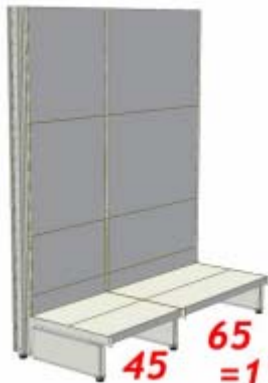
45

=90cm



100

=100cm



45

65

=110cm



120

=120cm



65

65

=130cm

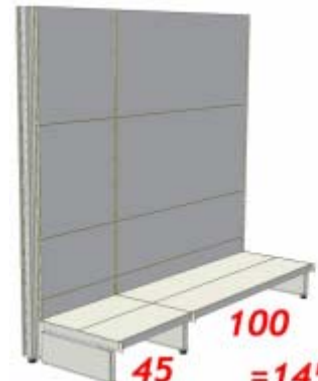


45

45

45

=135cm

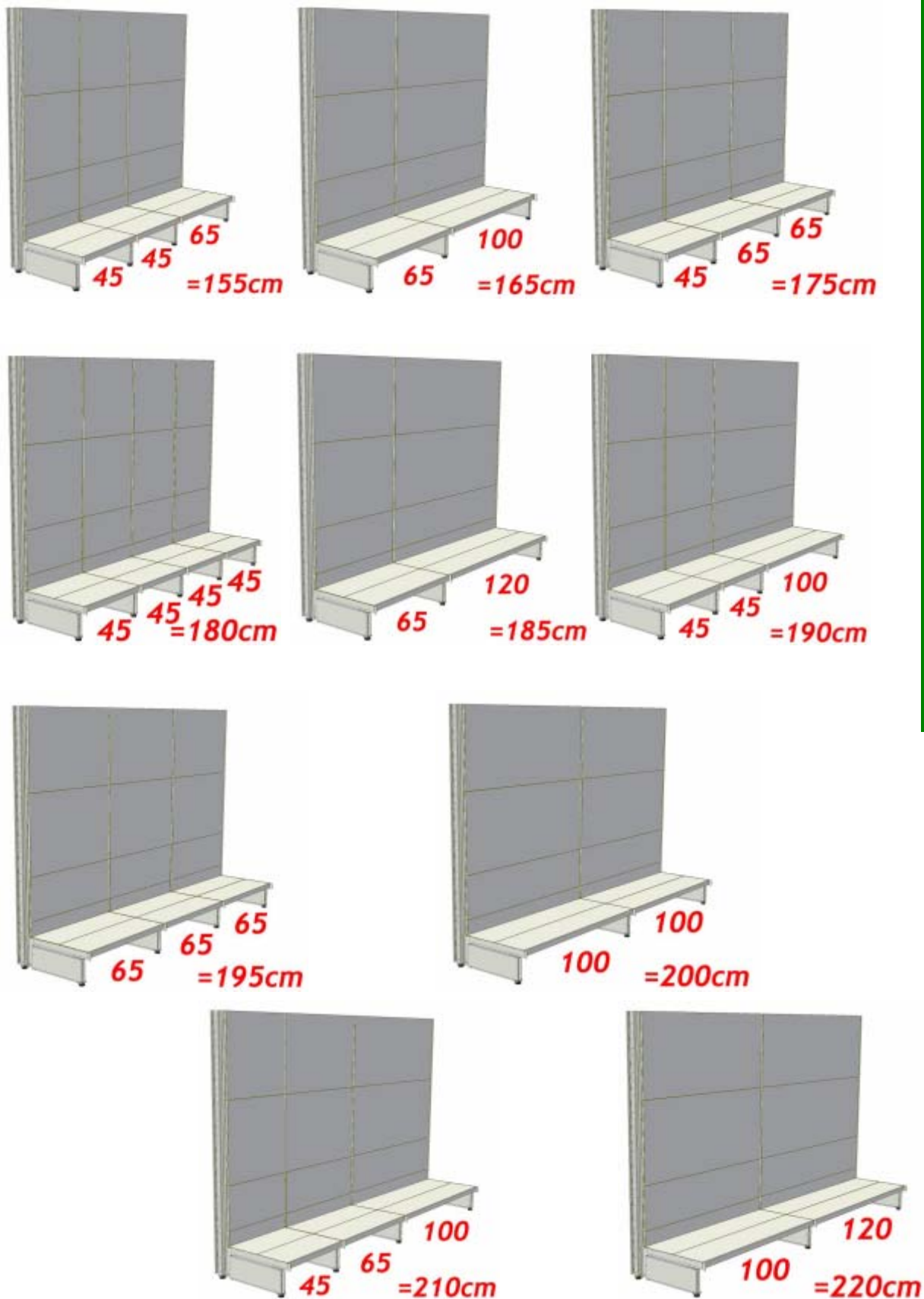


45

100

=145cm

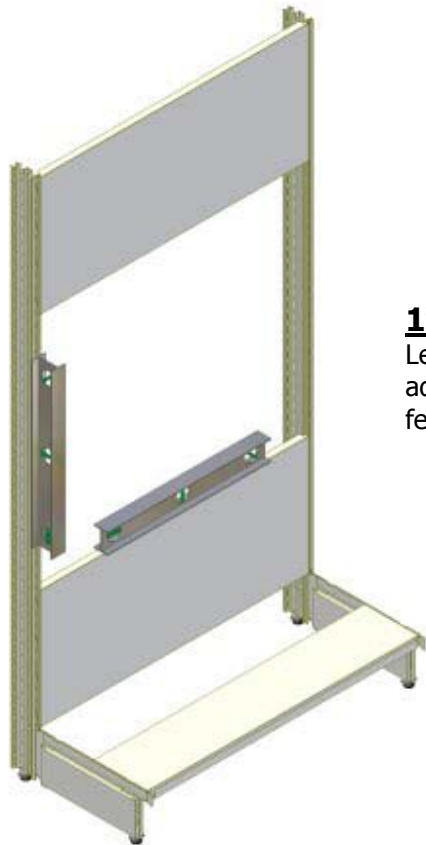
Run Lengths



The above chart indicates the run lengths which are available using Caem. Any run length over 220cm can be accommodated to the nearest 5cm using multiples of the above. Together with the use of three types of corner unit (AA/AP/AT), this makes Caem the most modular system available.

NB. Add 1.5cm for each end upright.

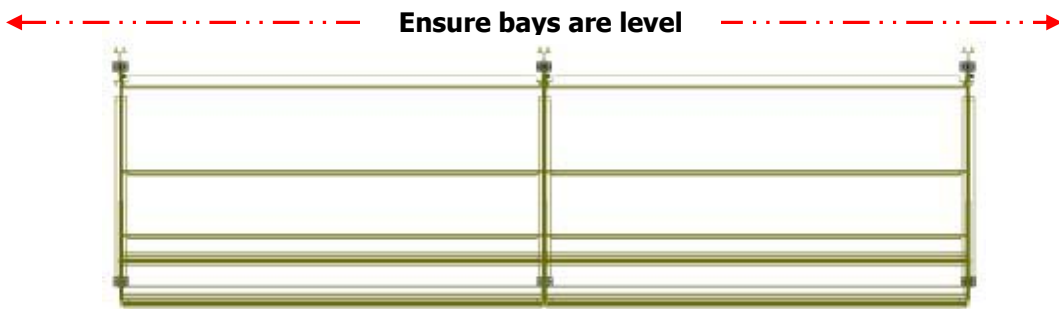
Wall Fixing and Levelling



1st
Level side to side by adjusting the rear plastic feet (in Upright)

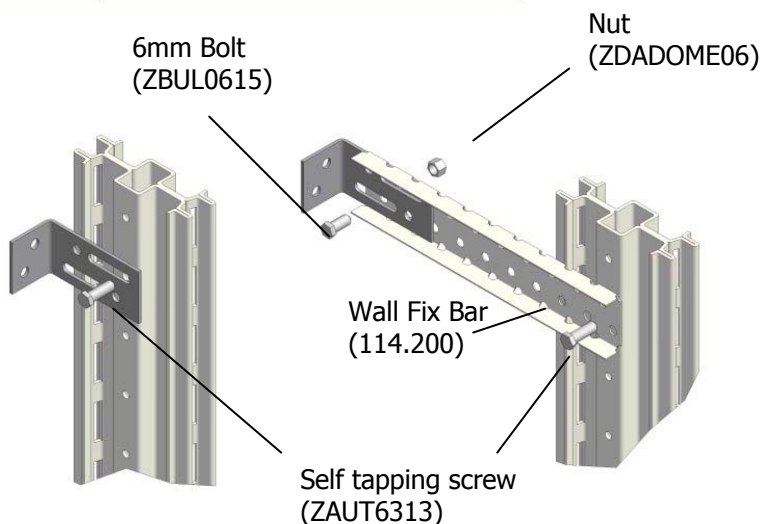
2nd
Level using the front feet (in base) to ensure that the bay is vertical.

3rd
Level bay to bay using a 'builders string line' or similar method to ensure straight alignment with each other.



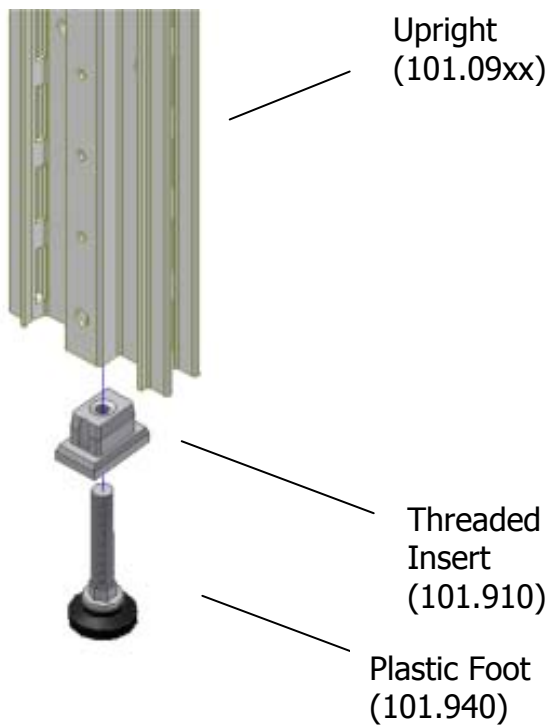
Wall Fixing

All uprights 200cm and over must be ALWAYS wall fixed. This is essential if the quoted Safe Weight Loadings are to be relied upon.

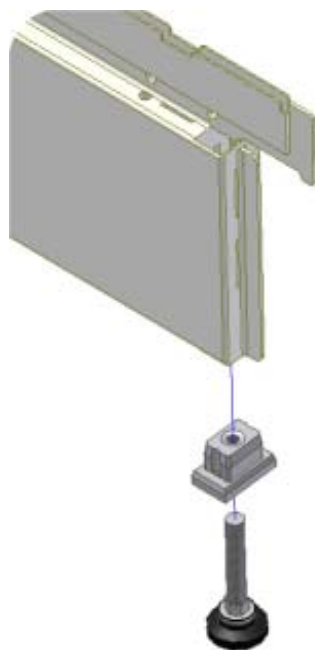
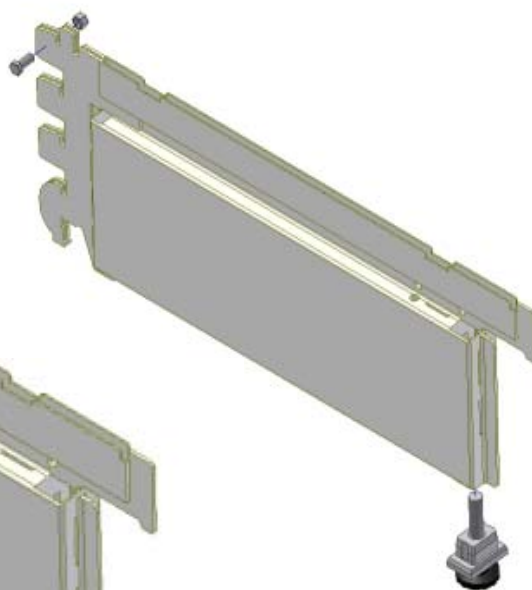
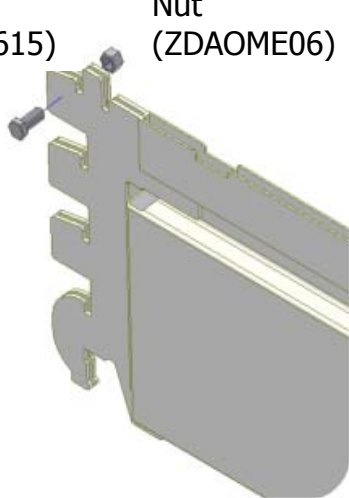


Complete Base and Upright

1. Installation Guide

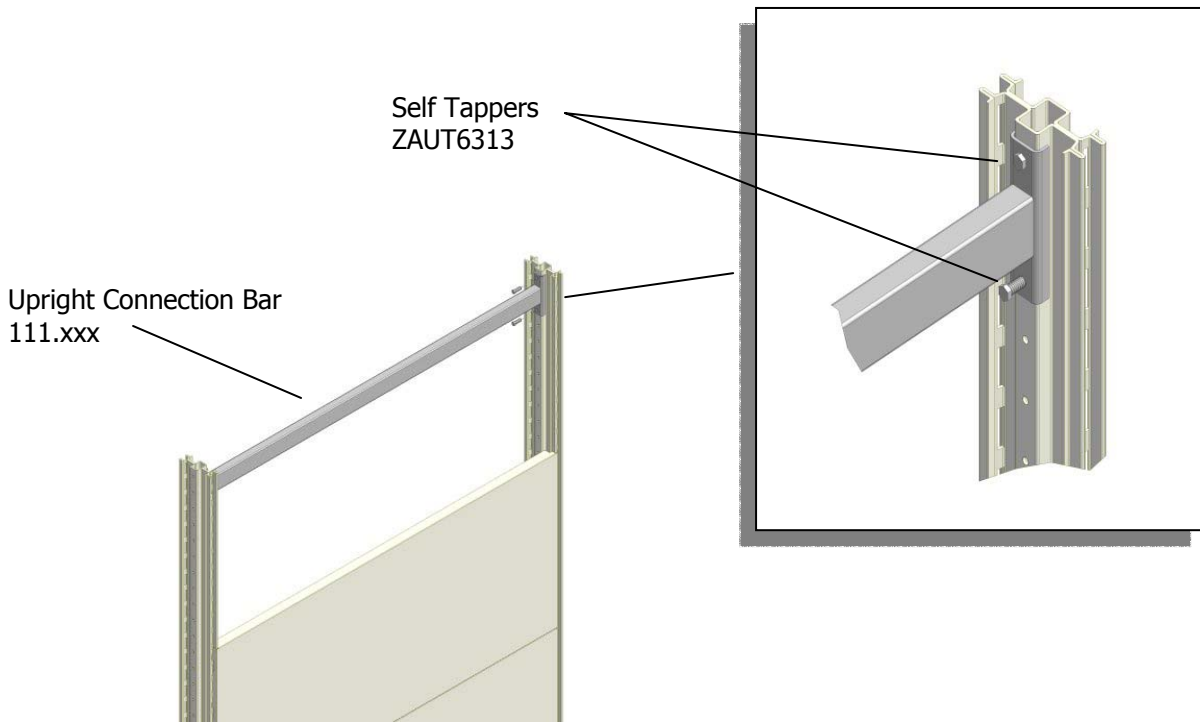


Bolt (ZBUL0615) Nut (ZDAOME06)

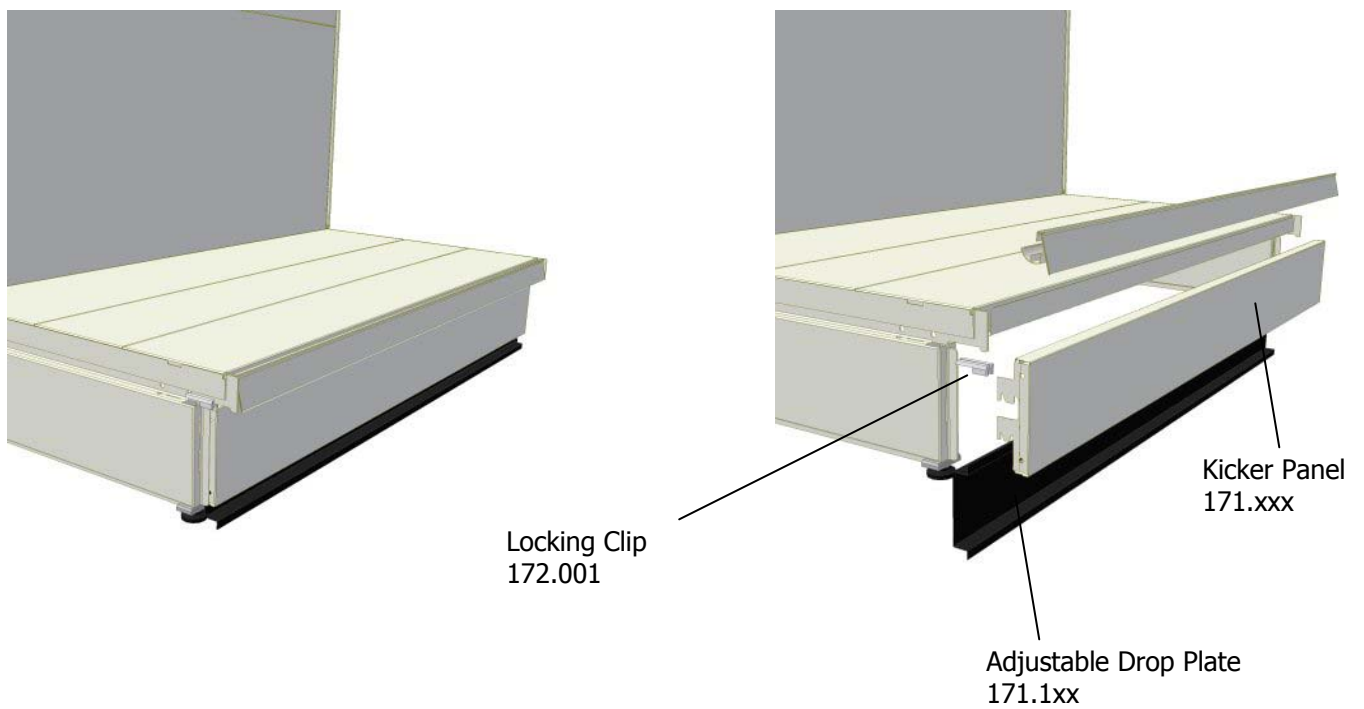


Threaded Insert (101.910)
Plastic Foot (101.940)

Upright Connection Bar

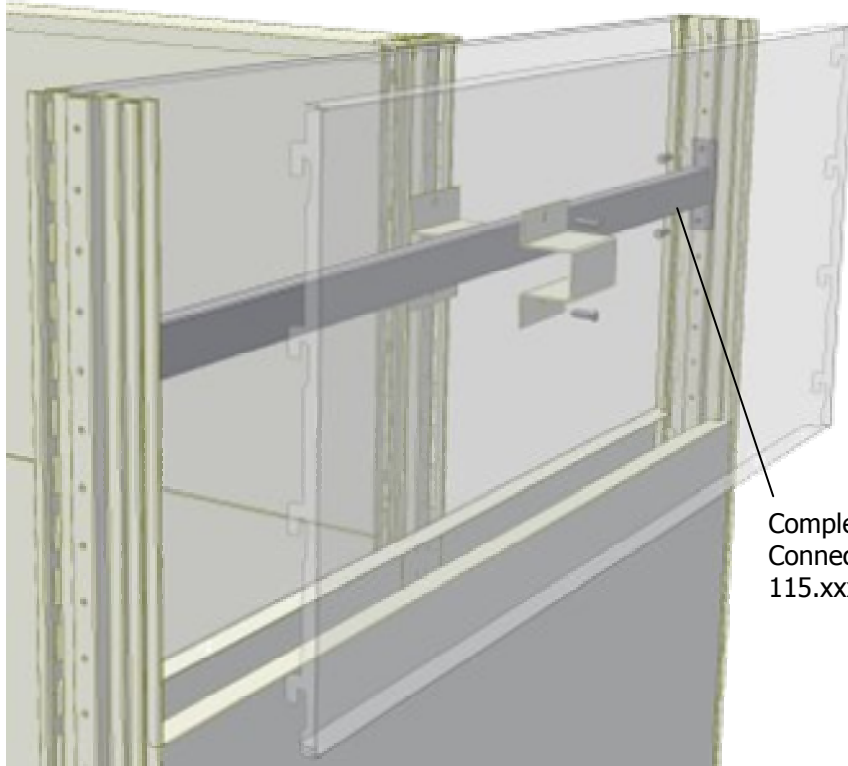


Complete Kicker Assembly

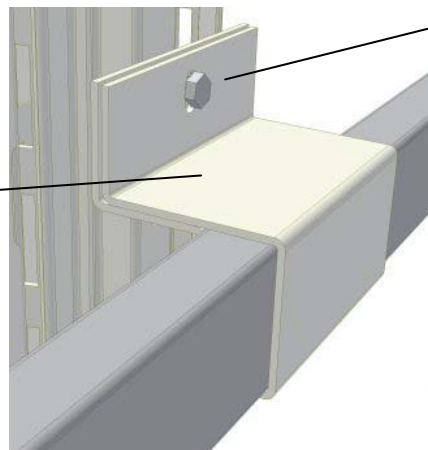


Gondola End Brackets

1. Installation Guide



Complete Upright
Connection Bar
115.xxx



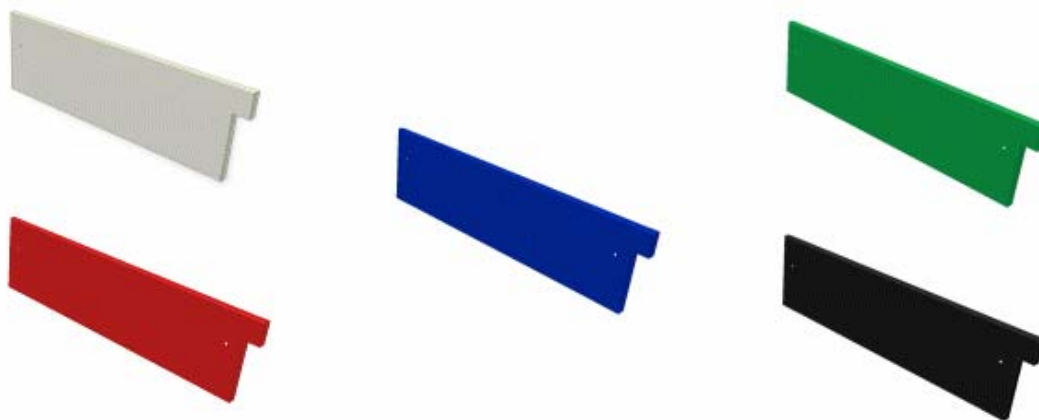
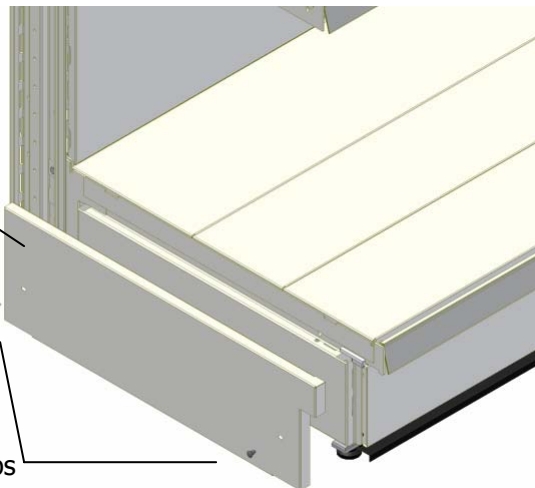
Self Tappers
ZAUT.6313

Gondola End
Brackets
466.002

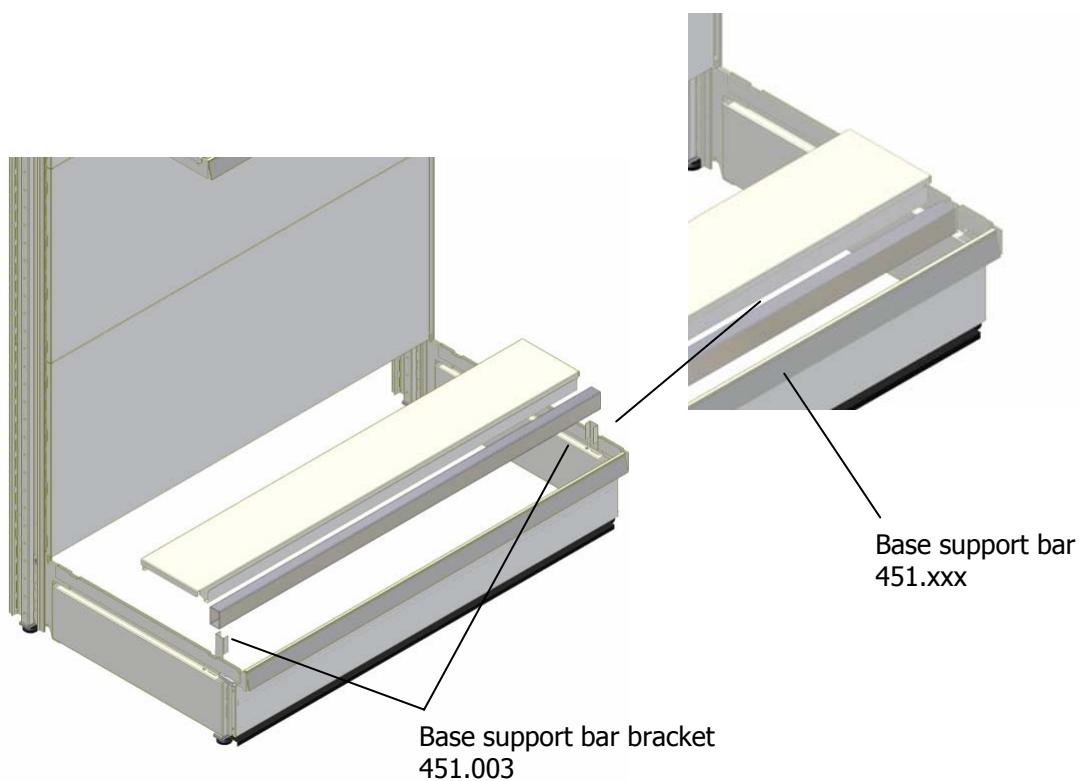
Base Cover

Base Cover (left & right hand)
C109.16xxL_RALxxxx
(for 16 high base)
C109.24xxL_RALxxxx
(for 24 high base)

Push-In Plastic Clips
ZCLIPS05



Base Support Bar



Upright And Gondola Top Covers, Caps

1. Installation Guide



112.09xx

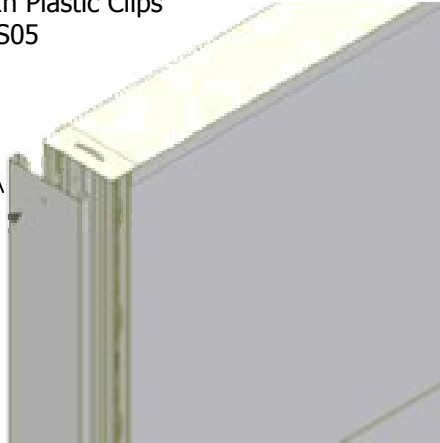


112.09xxR



112.09xxE

Push-In Plastic Clips
ZCLIPS05



Complete Upright Side
Cover (with clips)



112.09xxB



112.09xxN

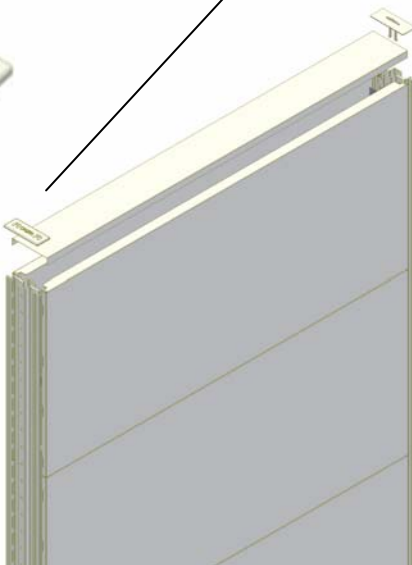
Upright Top Cover
Use either 113.009
or
C113.010.RALxxxx



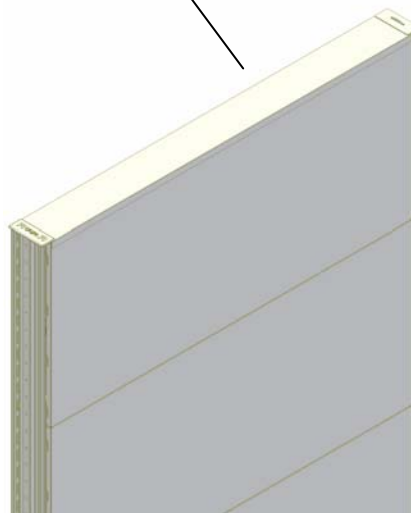
113.009



113.009N



Gondola Top Cover
113.xxx



C113.010 RALIVORY



C113.010 RAL3000



C113.010 RAL9005



C113.010 RAL6029



C113.010 RAL9003



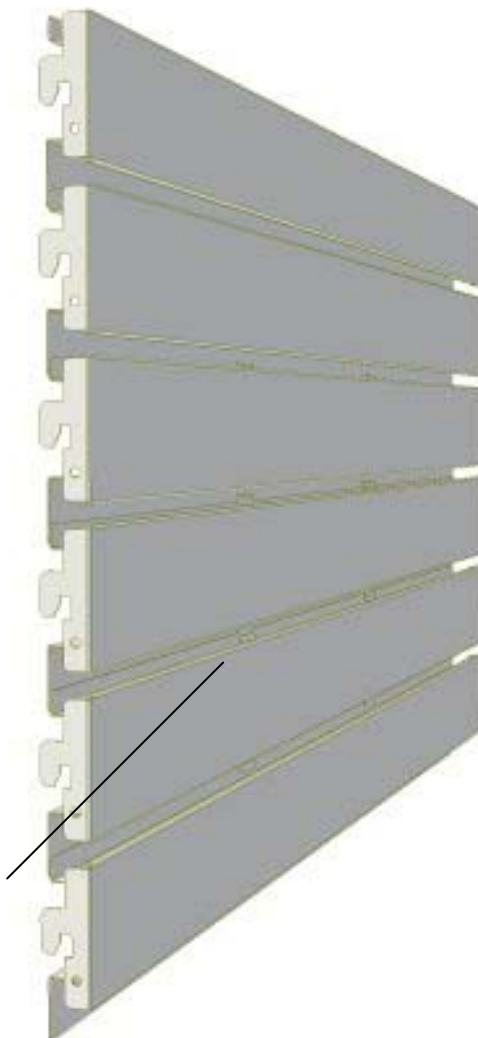
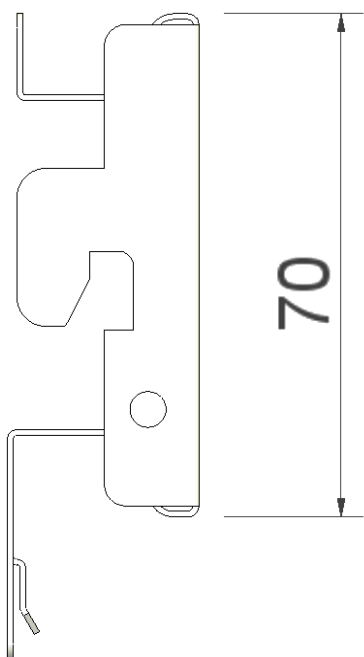
C113.010 RAL5005



C113.010 BBSILVER

Slat Panel

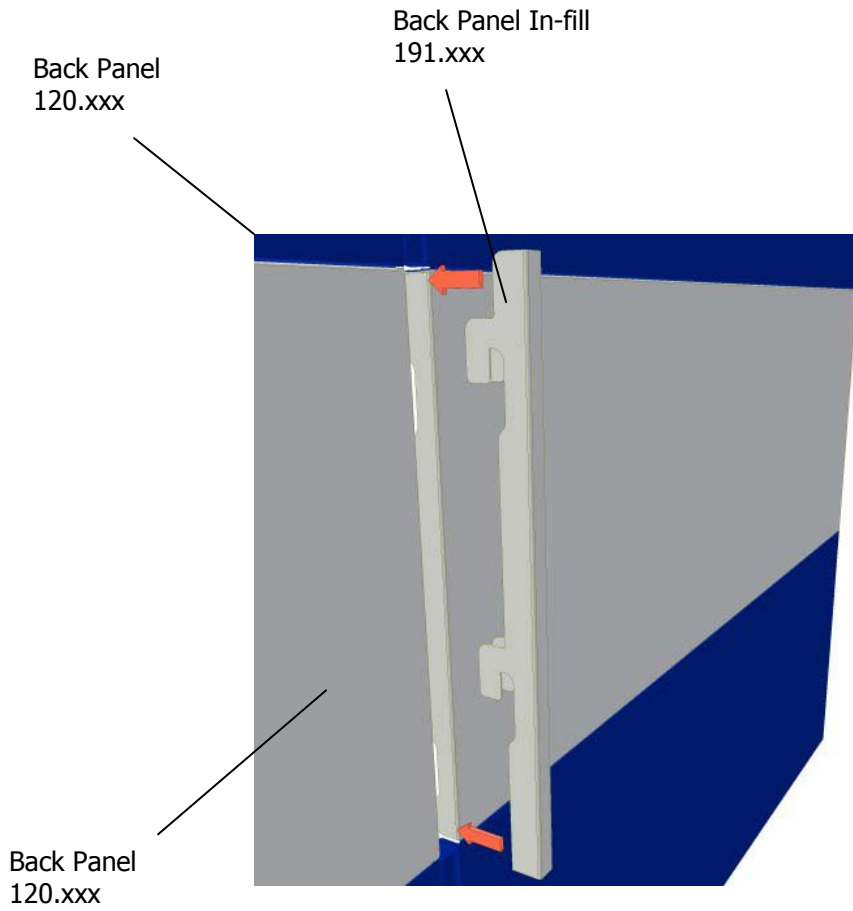
Slat Panel
121.xxx



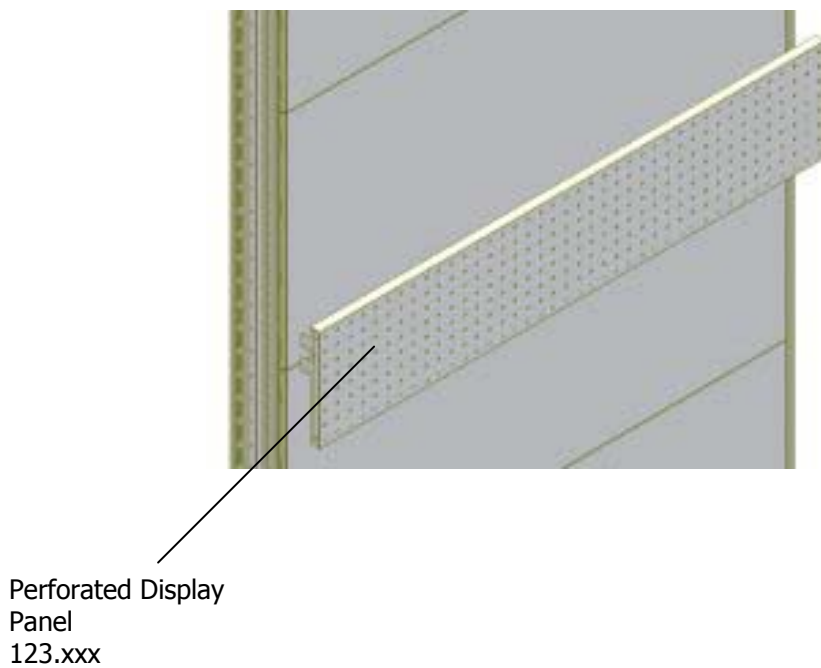
Slat Panels Lock Into Each Other At 80mm Pitch And Can Be Fitted With Standard Back Panels

1. Installation Guide

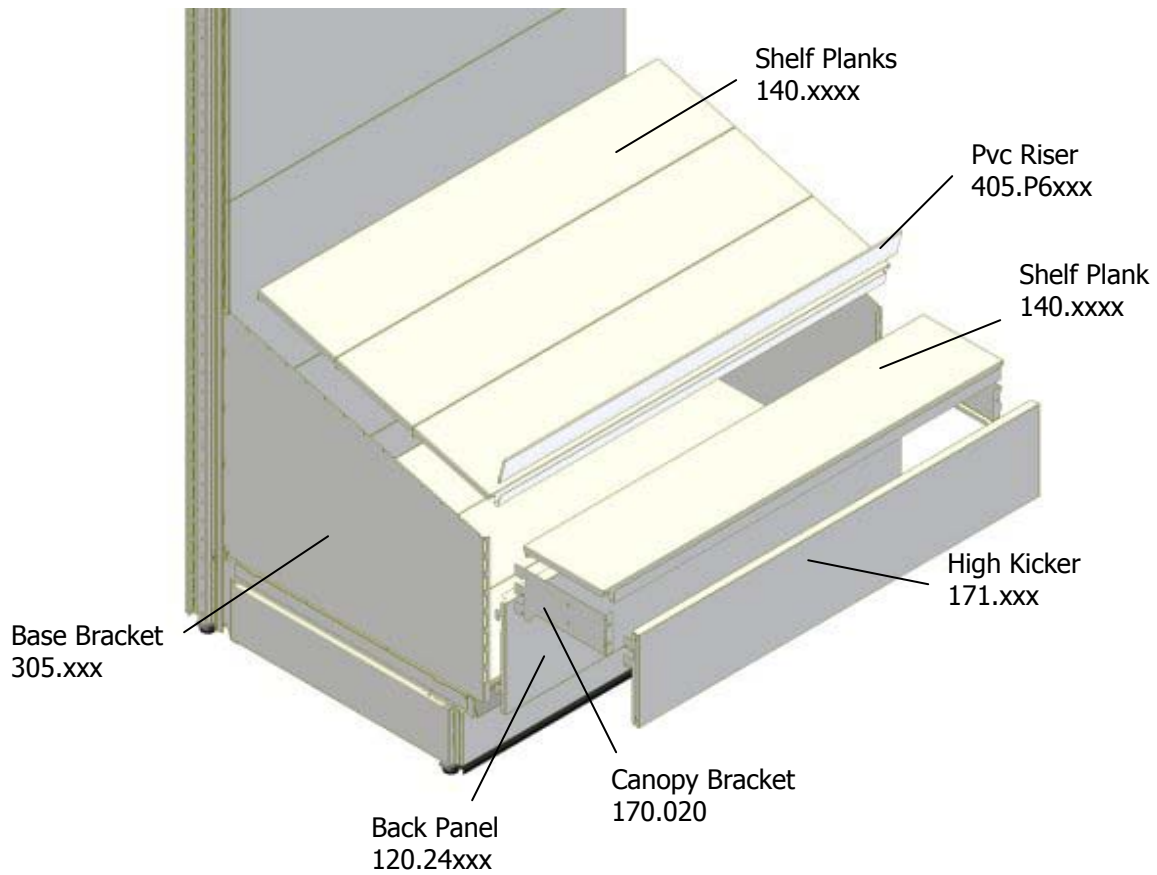
Back Panel In-fill



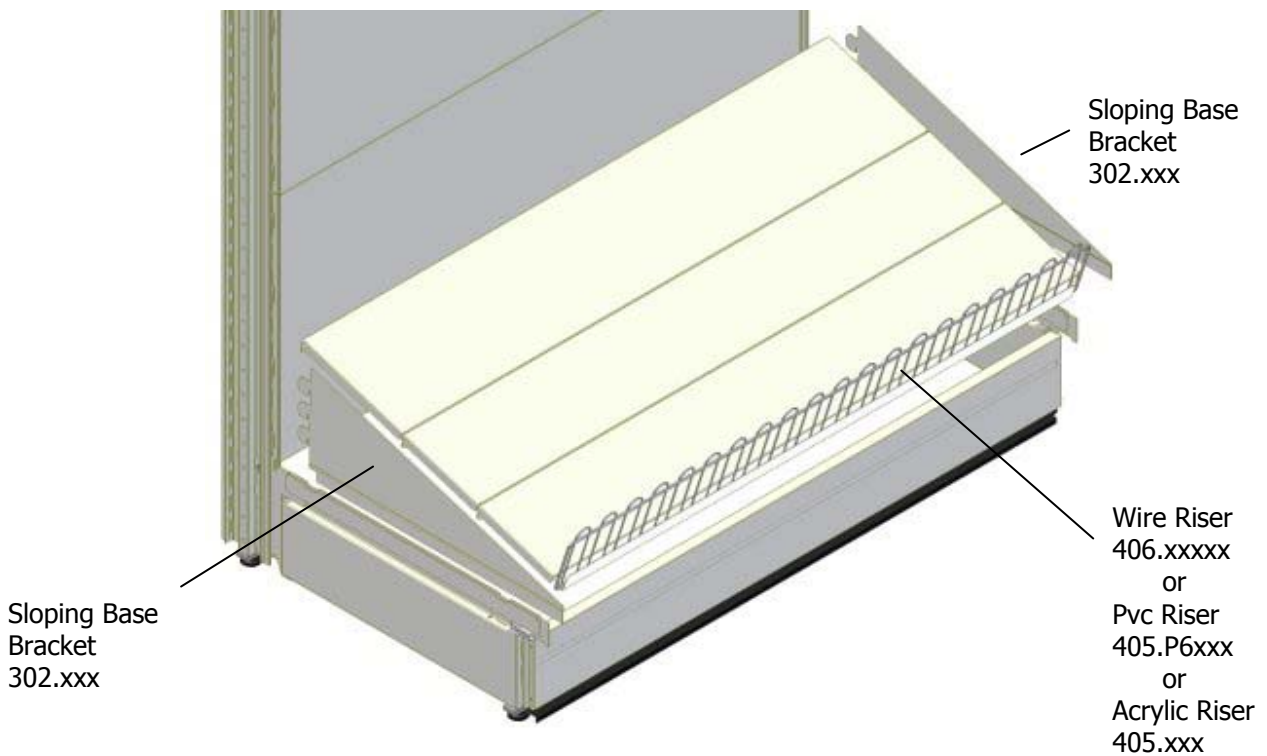
Perforated Display Panel



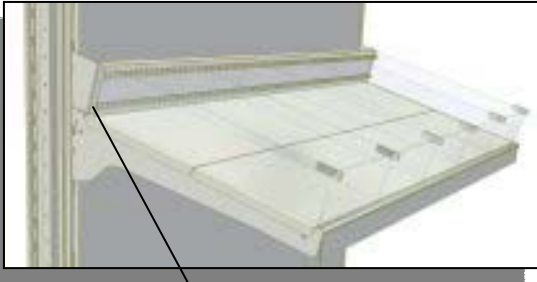
Fruit & Veg. Brackets



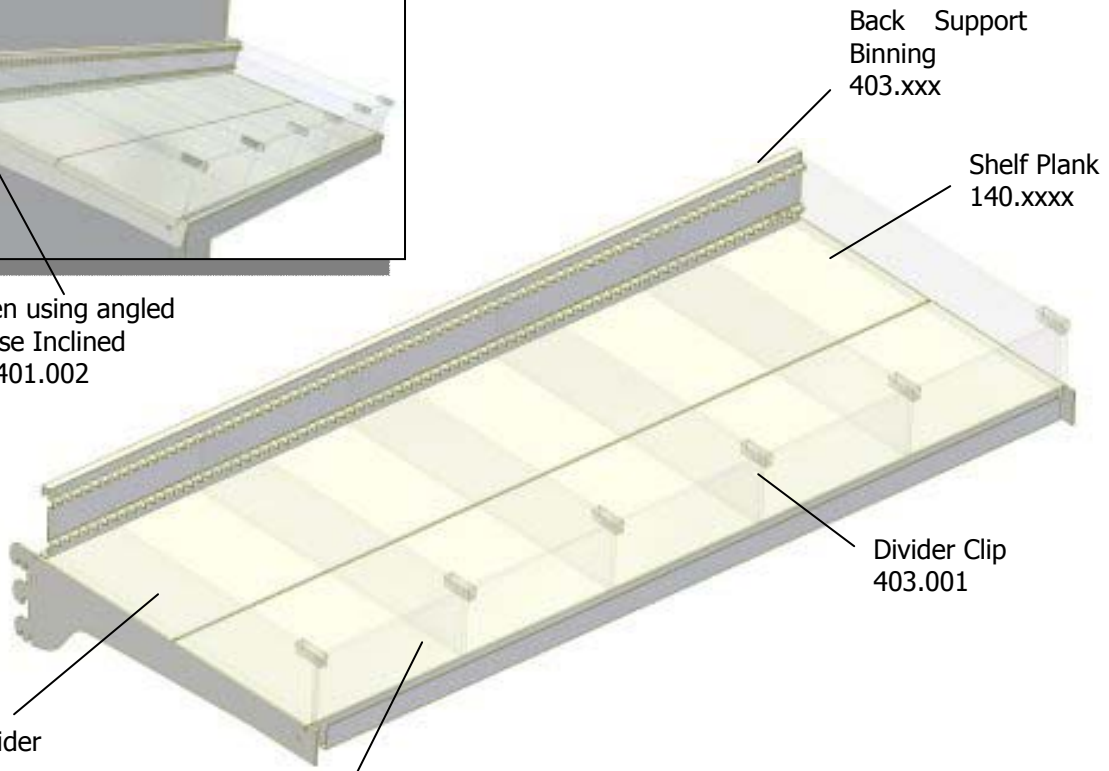
Sloping Base Bracket



Shelf Binning



Note-when using angled shelves use Inclined Bracket 401.002



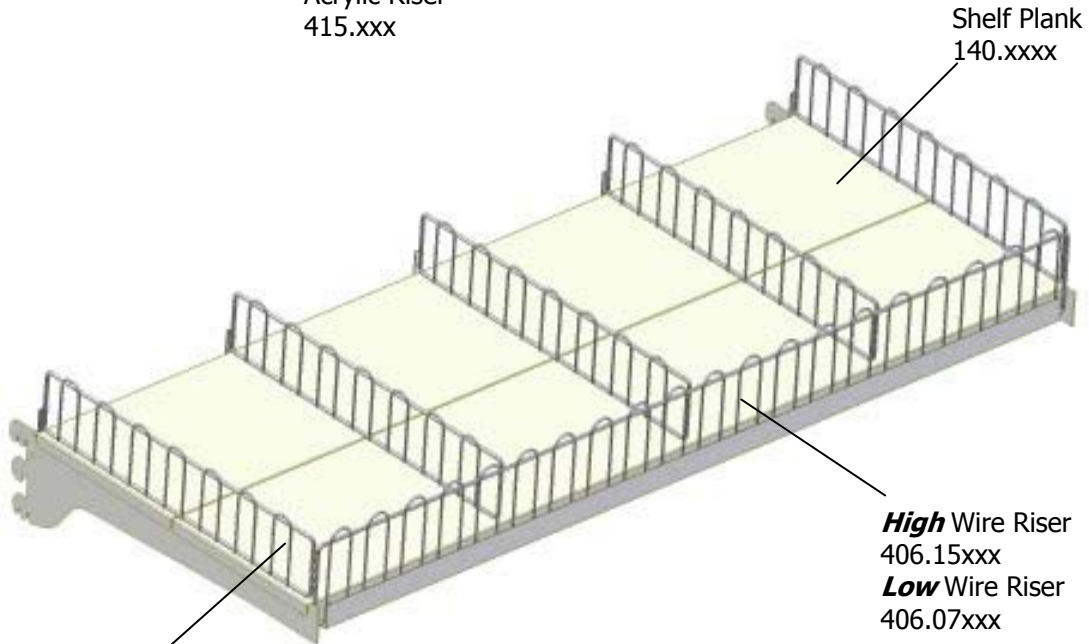
Back Support Binning 403.xxx

Shelf Plank 140.xxxx

Divider Clip 403.001

Glass Divider 410.xxx
or
Acrylic Divider 413.xxx

Glass Riser 405.xxx
or
Acrylic Riser 415.xxx

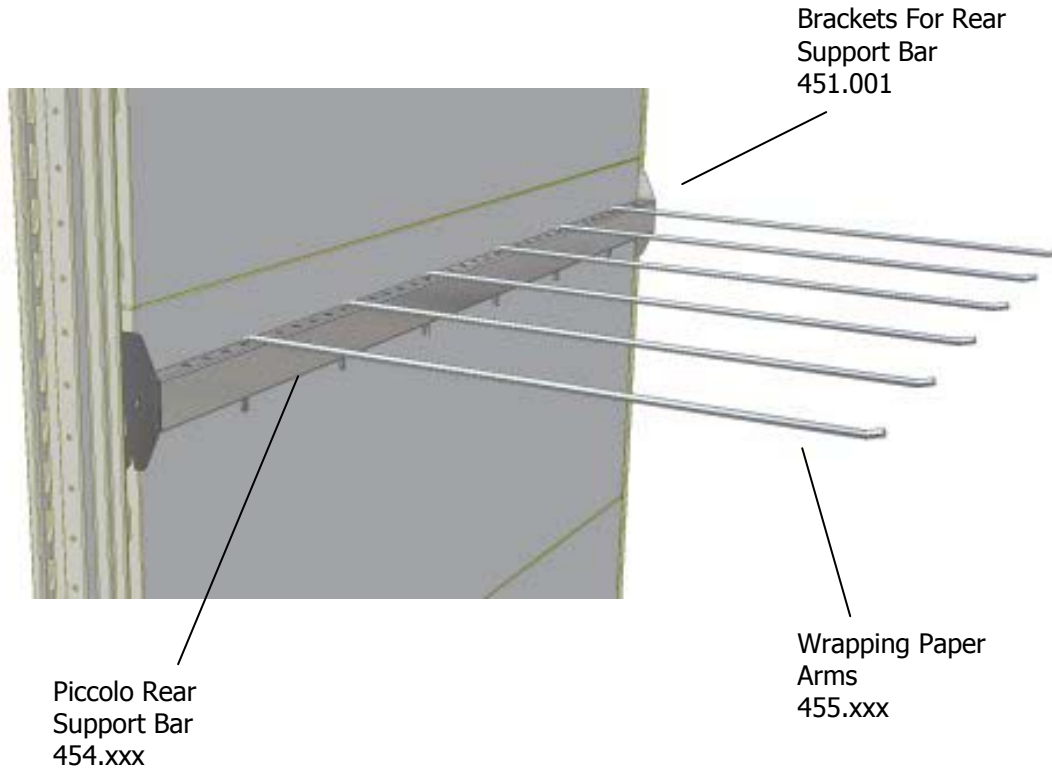


Shelf Plank 140.xxxx

High Wire Riser 406.15xxx
Low Wire Riser 406.07xxx

High Wire Divider 412.xx15
Low Wire Divider 412.xx07

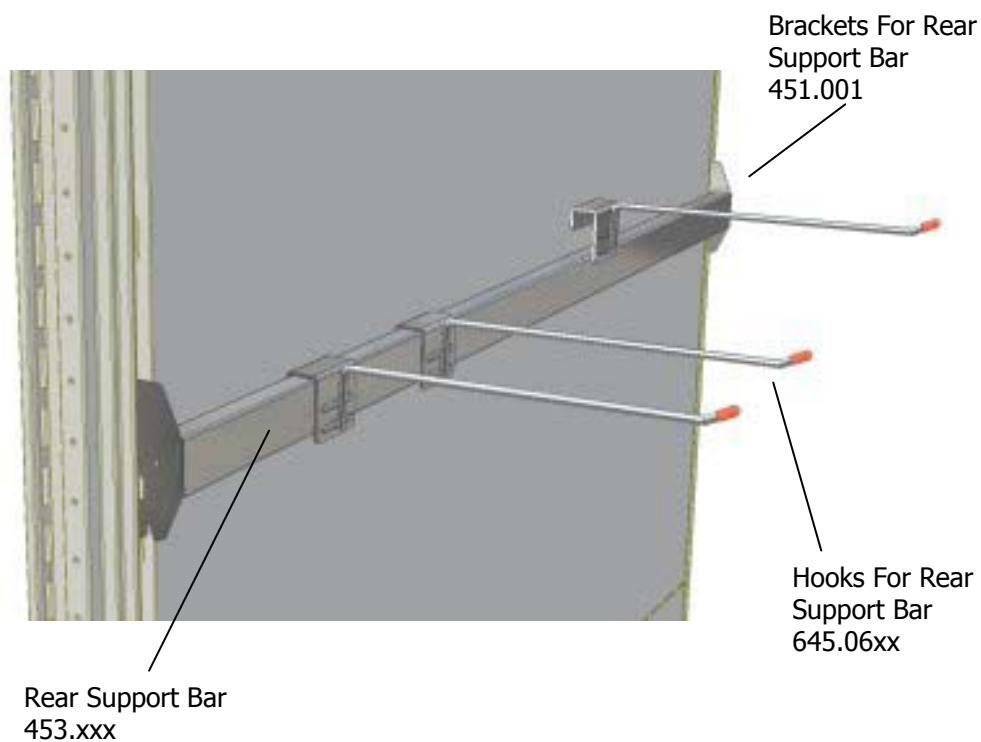
Piccolo Bar & Wrapping Arms



Maximum number of wrapping paper arms per piccolo bar

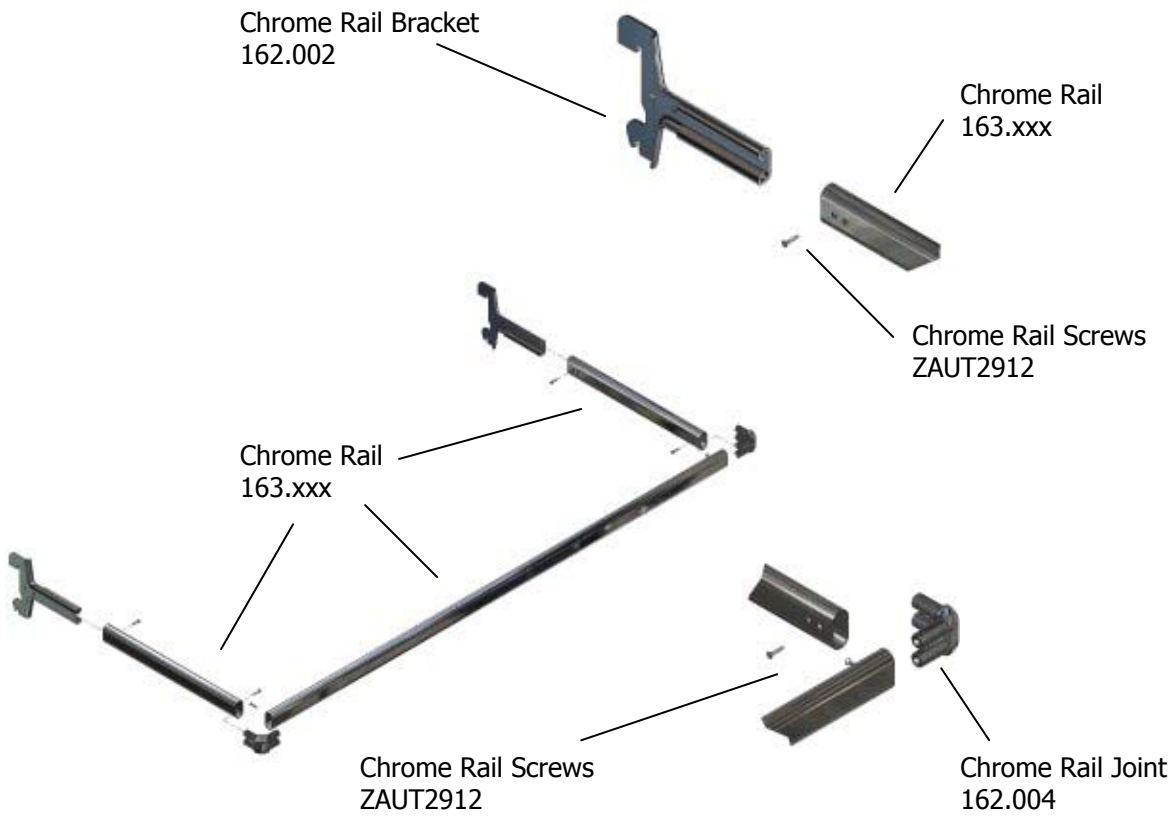
45 = 14
65 = 22
100 = 36
120 = 44

Rear Support Bar



Complete Chrome Rail

1. Installation Guide

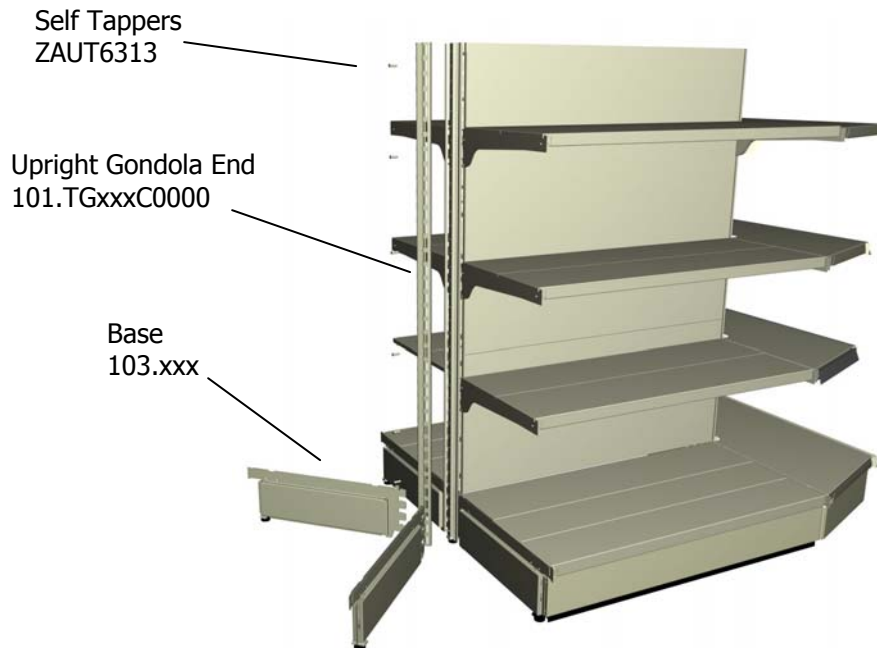


Complete Chrome Rail c/w Glass Shelf

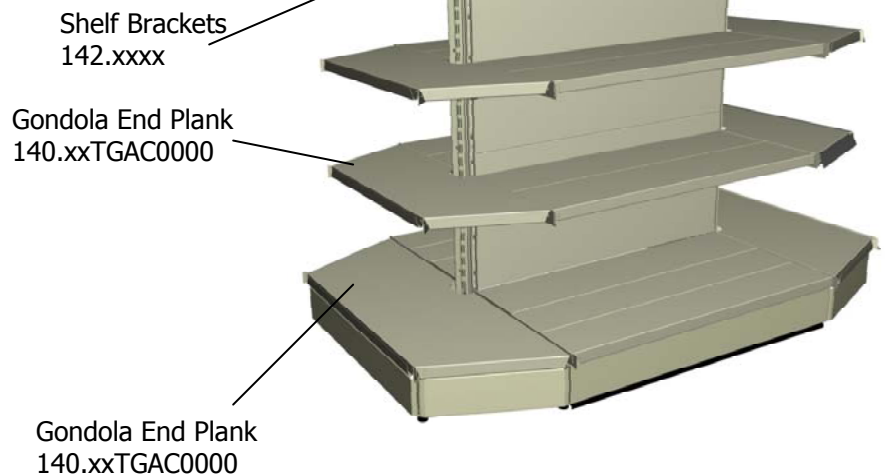


Wrap-Around Shelves

1. Installation Guide

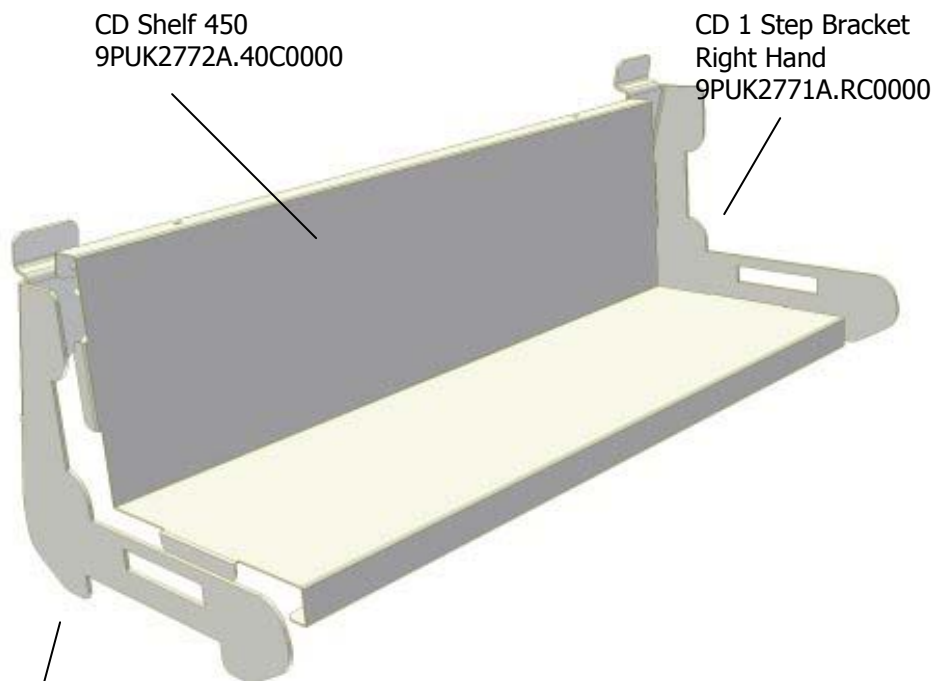


Complete Kicker Panel
171.TGxxxxC0000



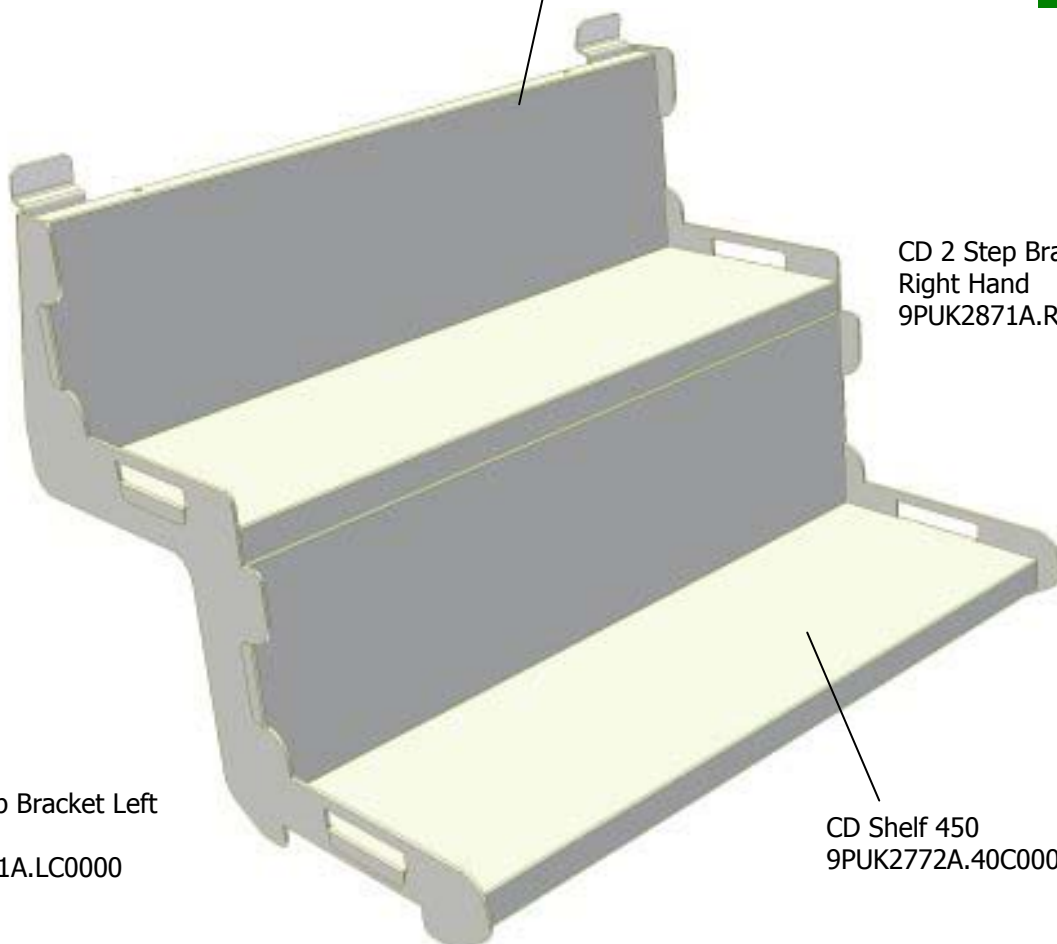
Multi-media Shelves

1. Installation Guide



CD 1 Step Bracket Left
Hand
9PUK2771A.LC0000

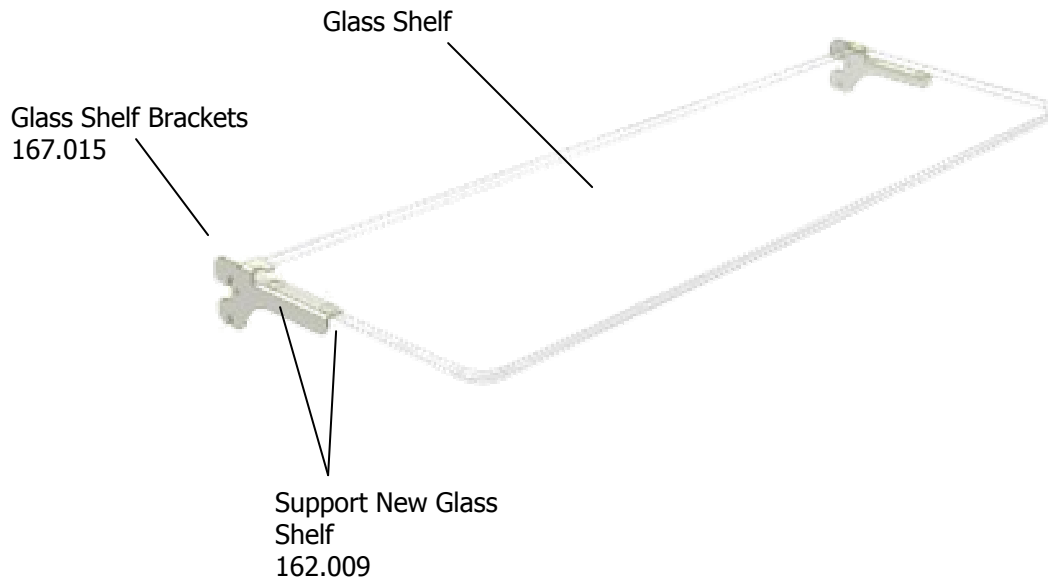
CD Shelf 450
9PUK2772A.40C0000



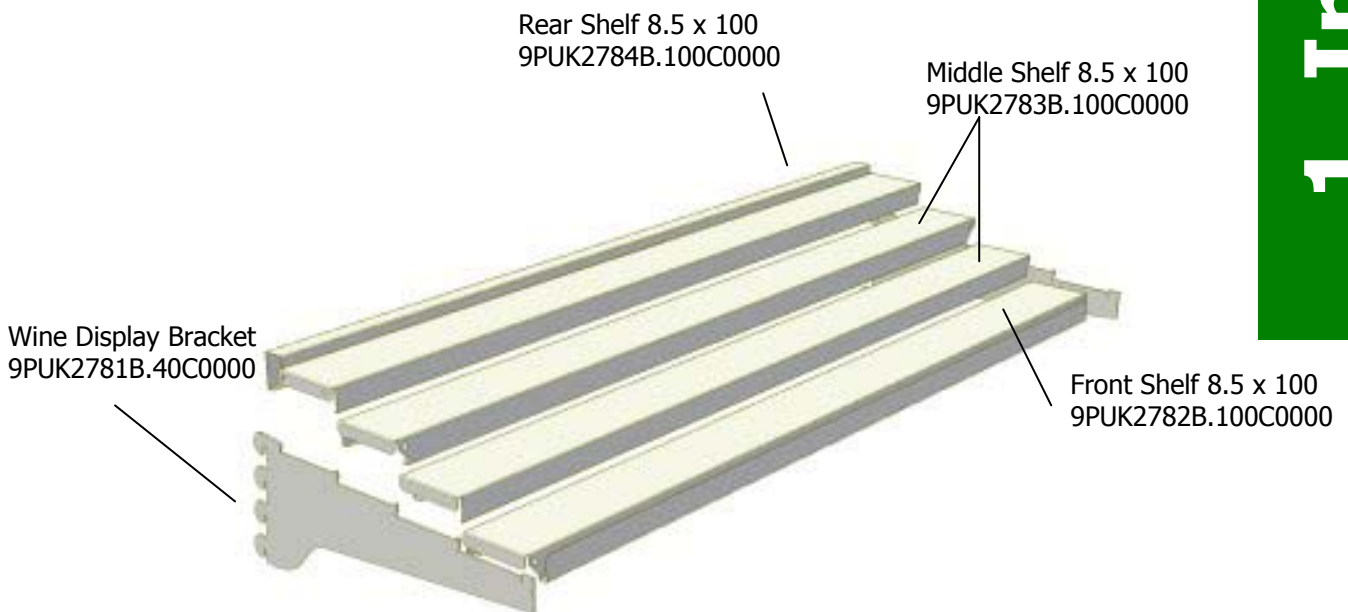
CD 2 Step Bracket Left
Hand
9PUK2871A.LC0000

CD Shelf 450
9PUK2772A.40C0000

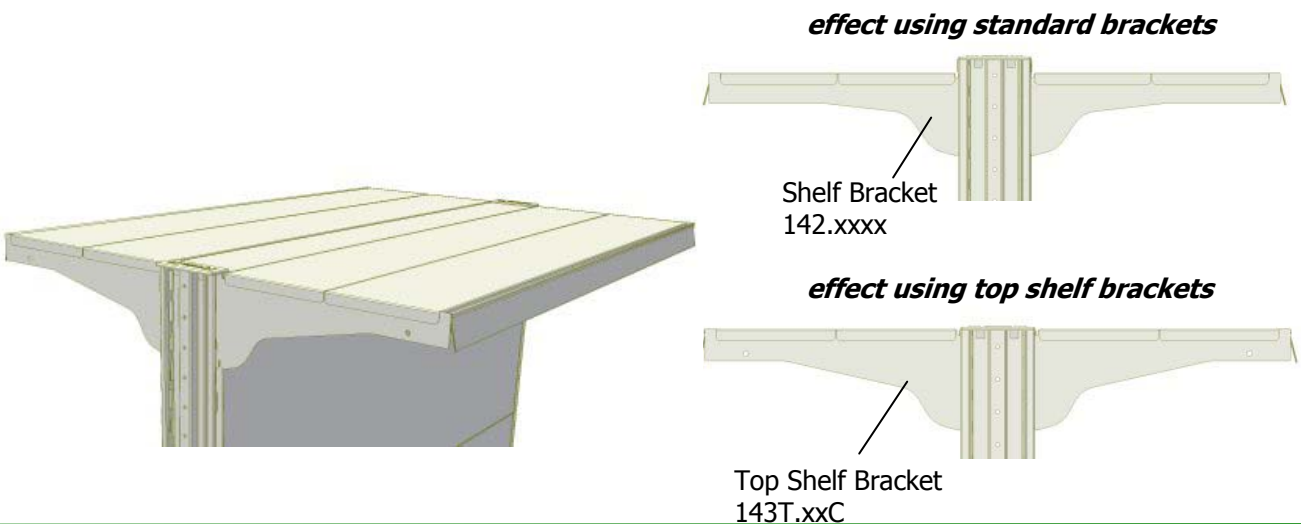
Glass Shelf



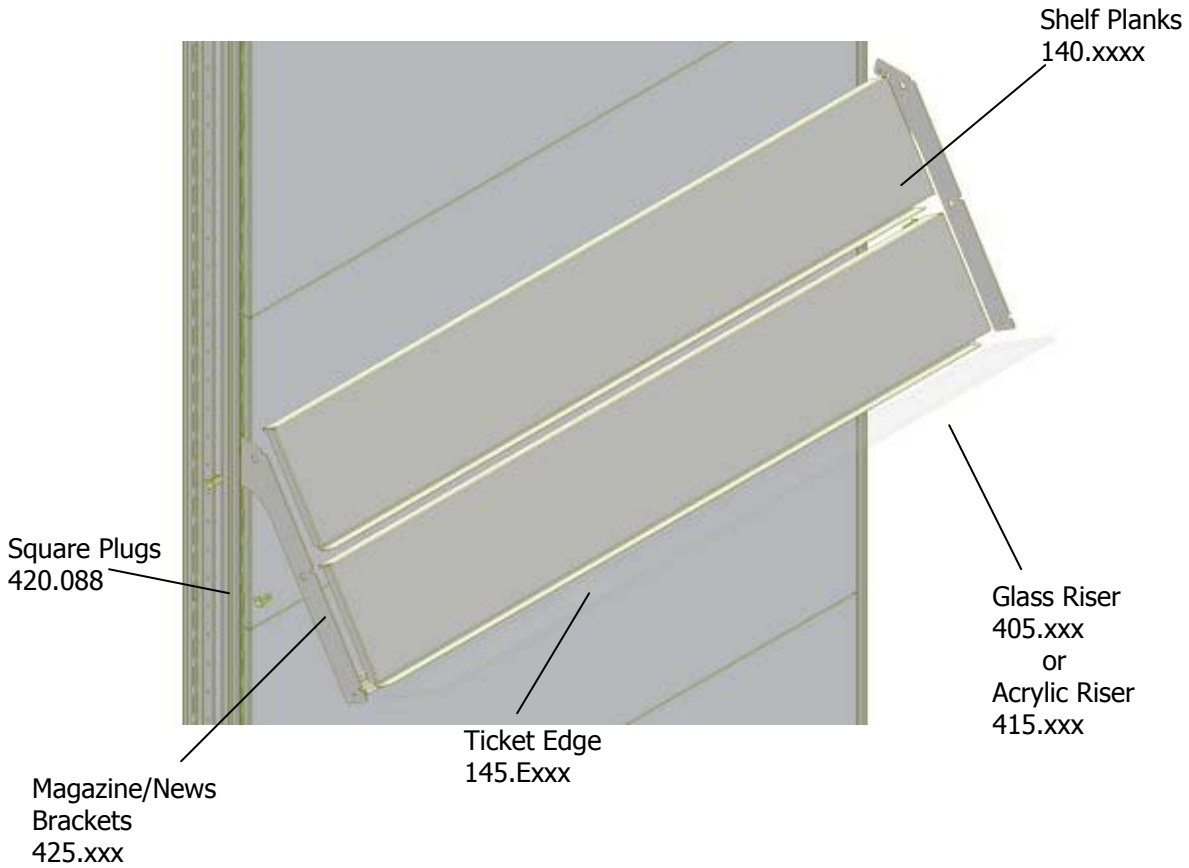
Wine Display Shelf



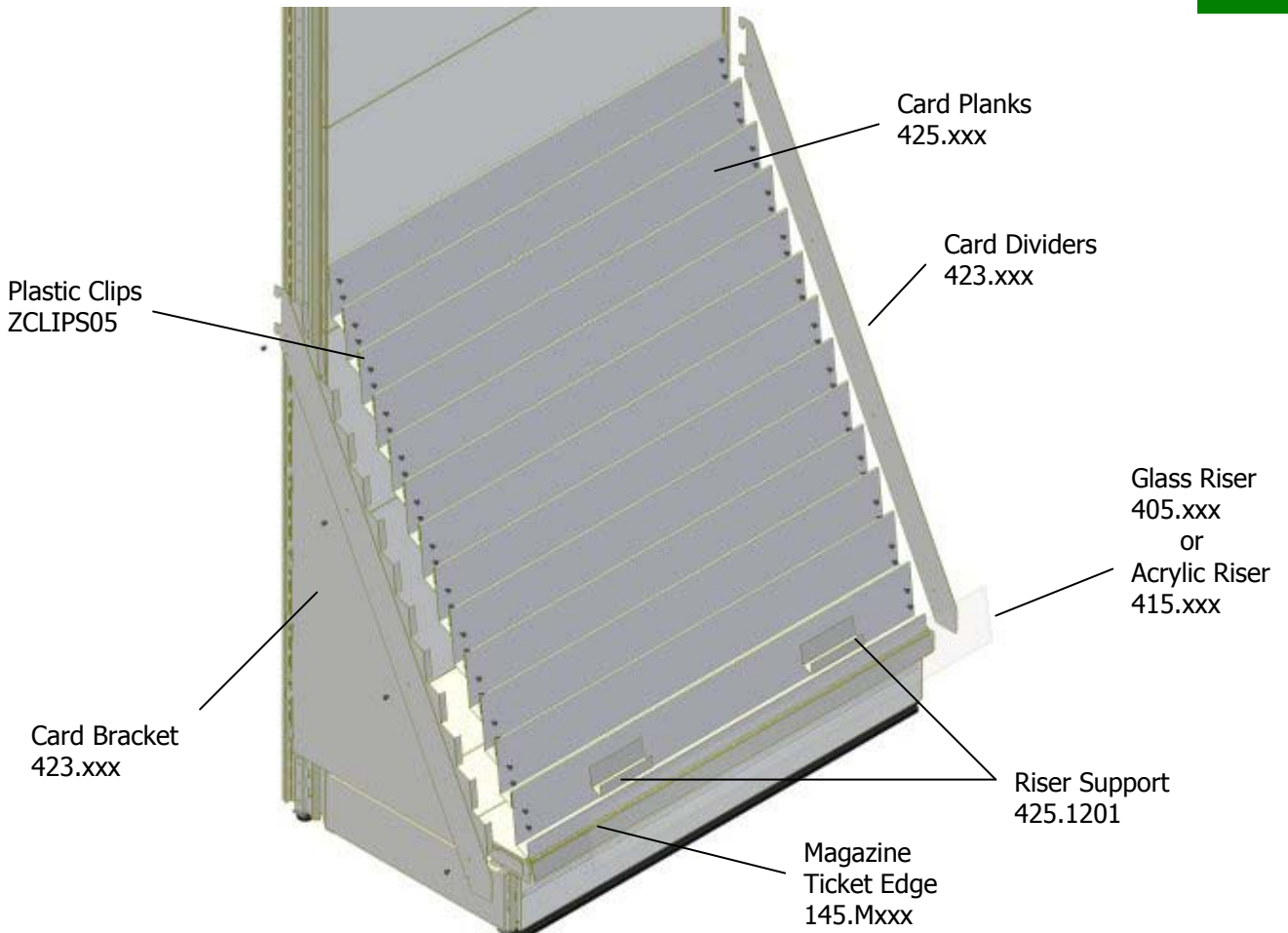
Top Shelf Bracket



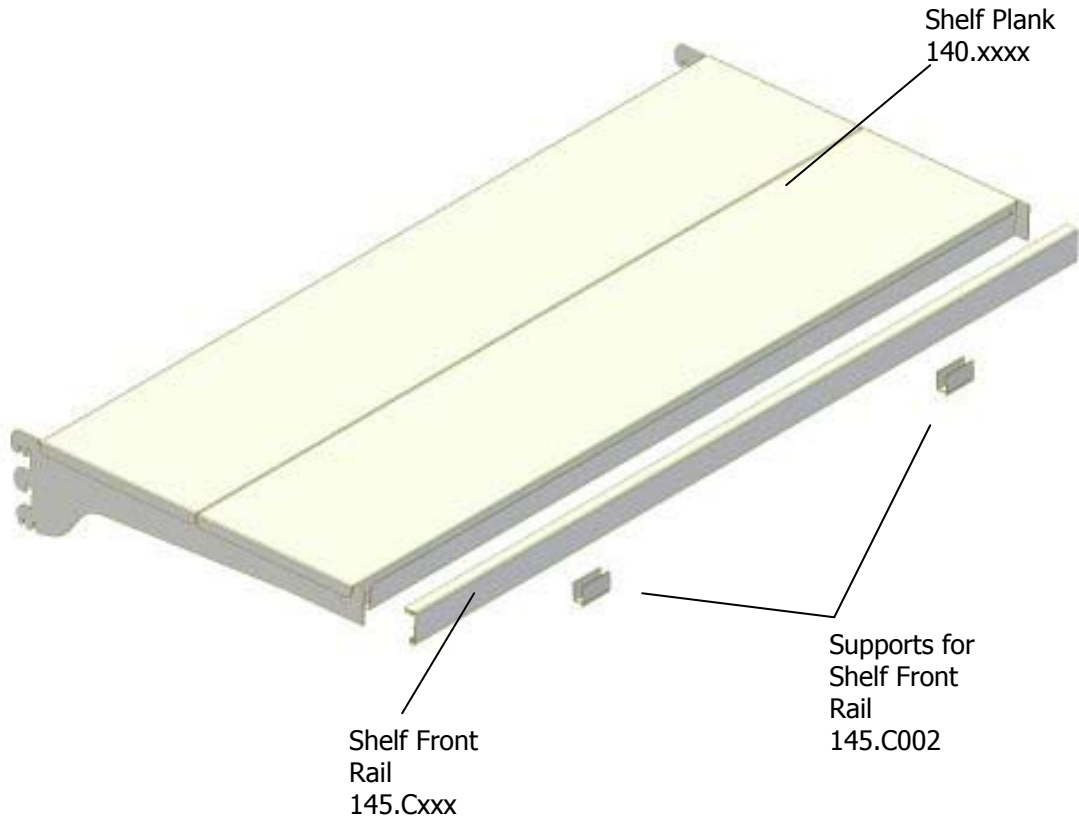
Magazine/ News Display



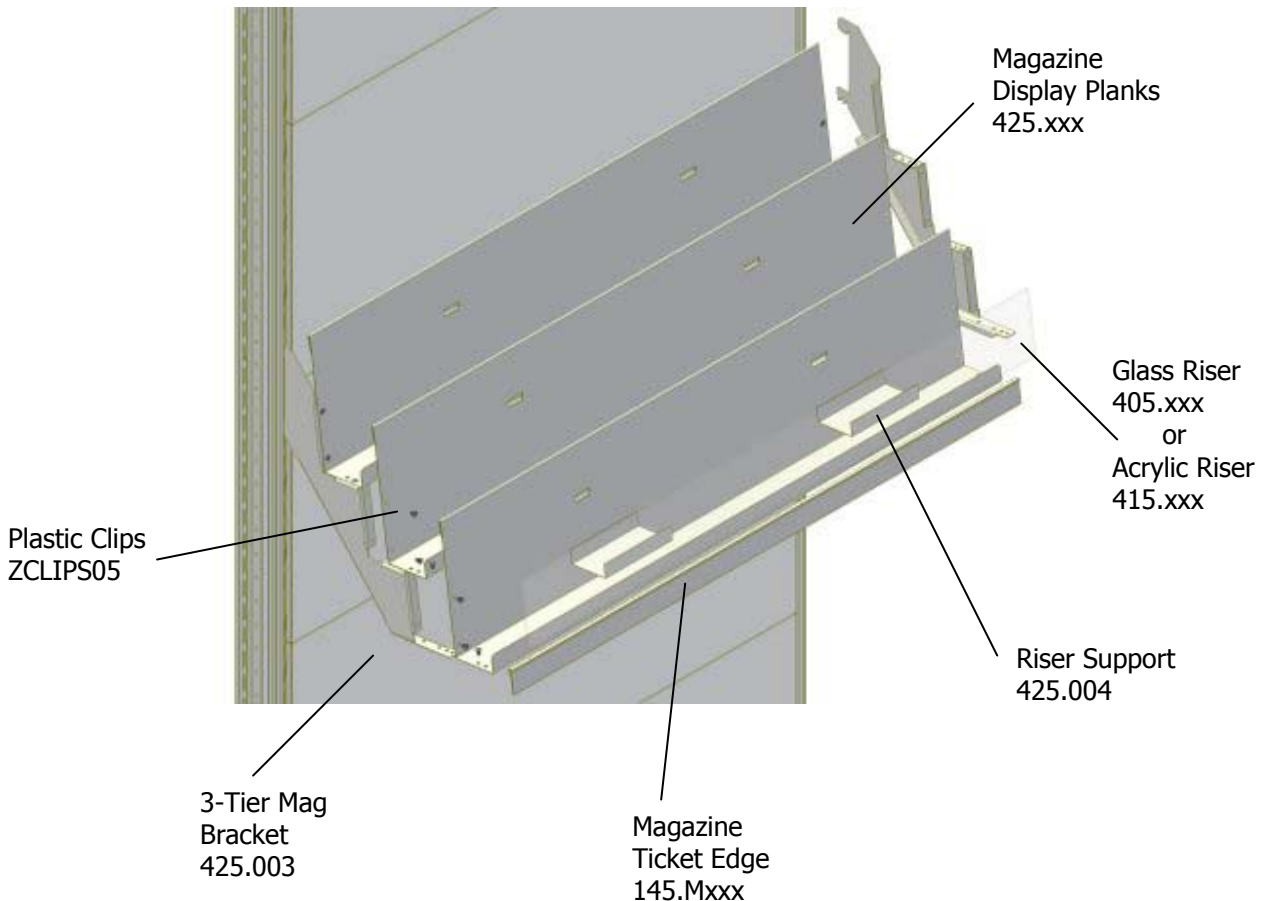
Tiered Card Display



Shelf Front Rail

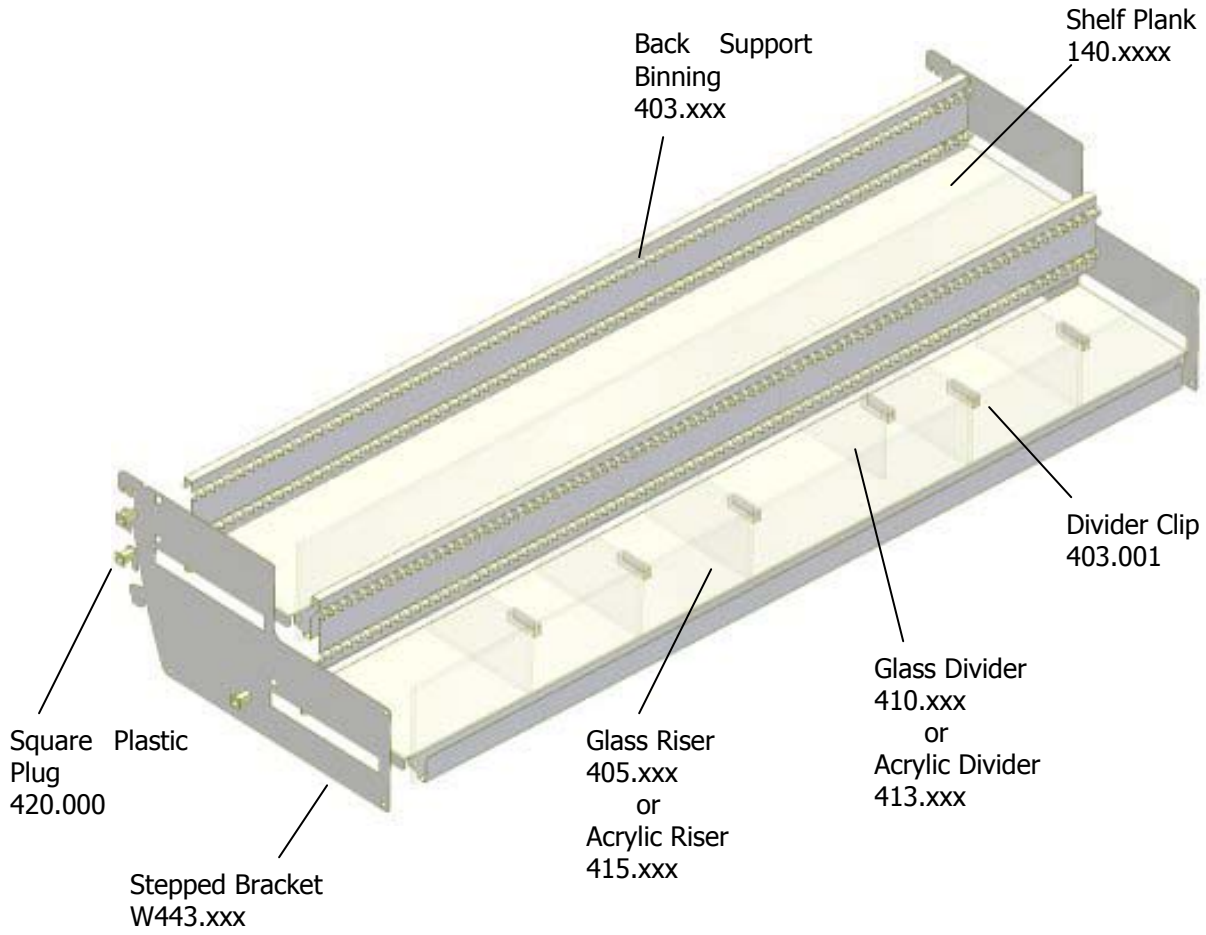


Tiered Magazine Display

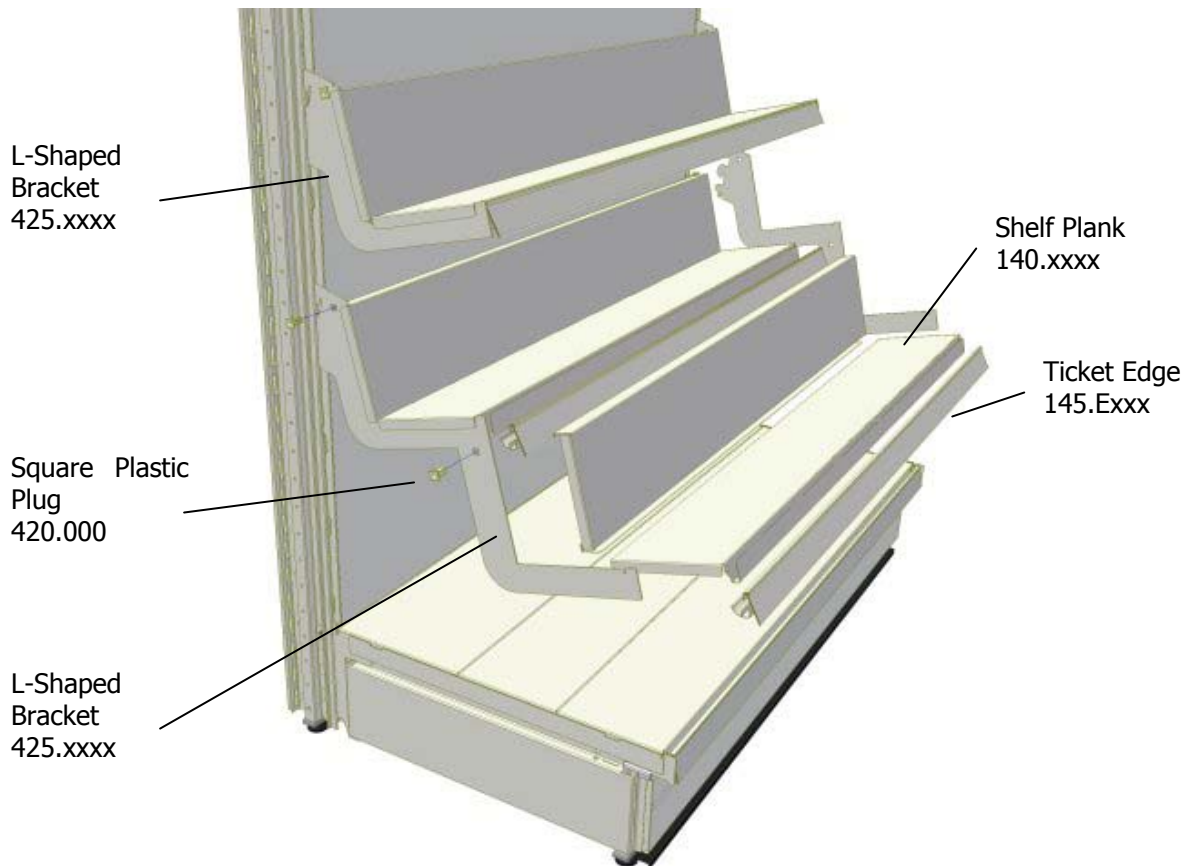


Stepped Shelf c/w Binning

1. Installation Guide



L-Shaped Brackets



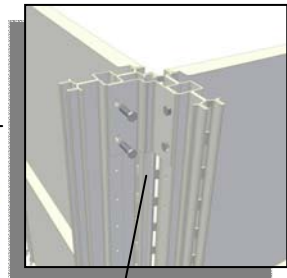
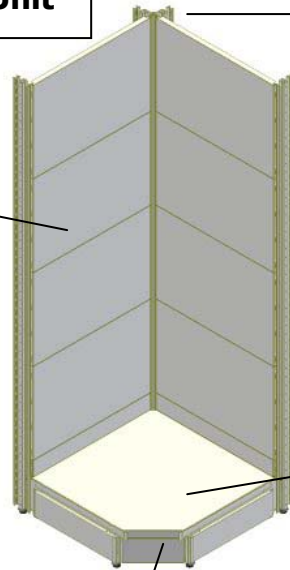
Corner Units

View from rear

AP Corner Unit



Back Panels
120.xx06

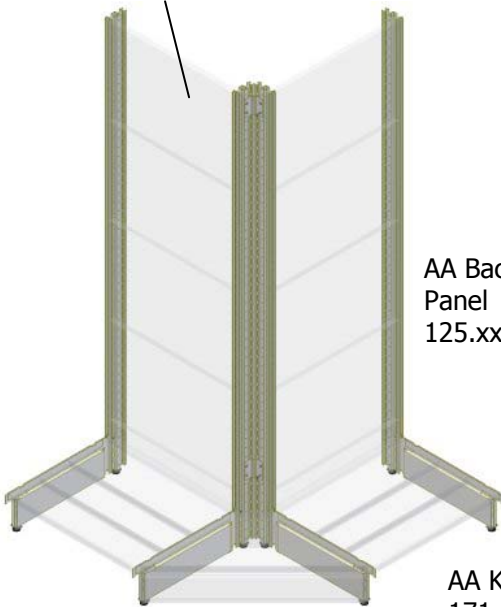


Corner Upright
Supports
114.099
Self Tappers
ZAUT6313

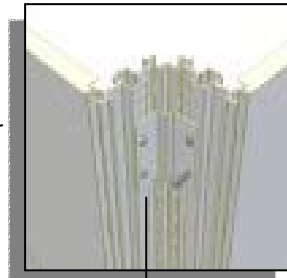
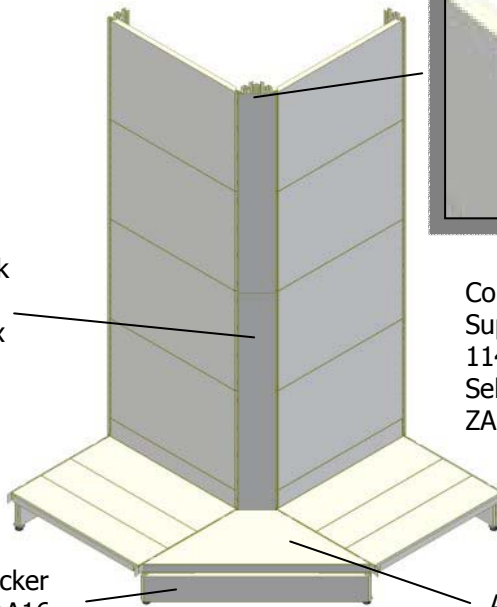
AP Shelf Planks
140.APxx
important
fit brackets to AP
shelves
Base- W55.01
Shelves- W55.02

AA Corner Unit

Back panels
120.xxx



AA Back
Panel
125.xxx



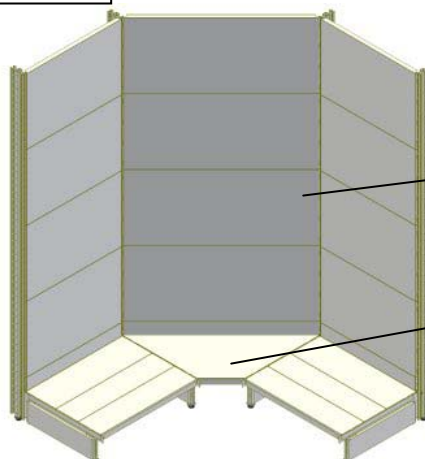
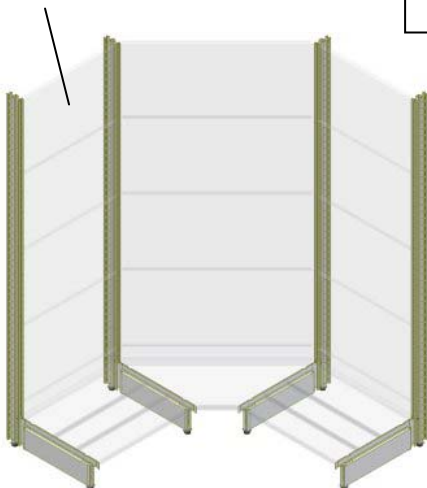
Corner Upright
Supports
114.099
Self Tappers
ZAUT6313

AA Kicker
171.AA16xx

AA Shelf
Plank
140.AAxx

Back panels
120.xxx

AT Corner Unit



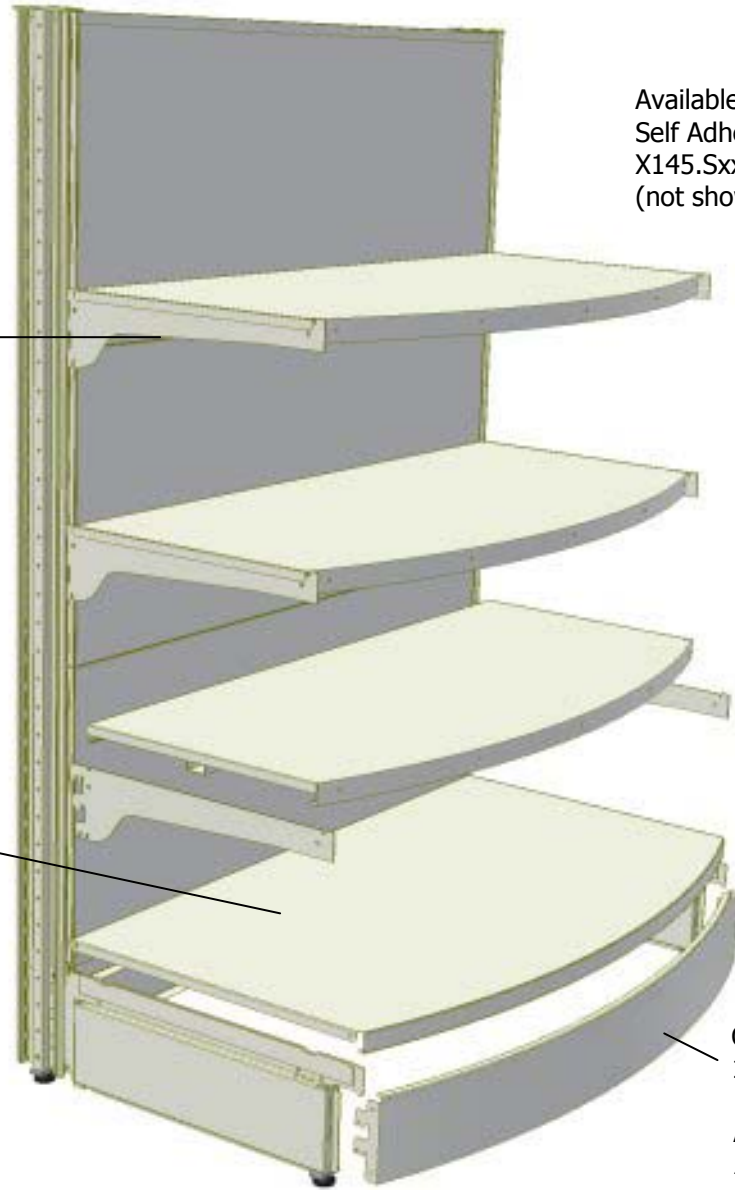
AT Back
Panels
120.xxT

AT Shelf
Plank
140.ATxx

1. Installation Guide

Curved Shelves And Kickers

1. Installation Guide



Available to order-
Self Adhesive Epos
X145.Sxxxx
(not shown)

Std. Shelf Bracket
142.xxxx

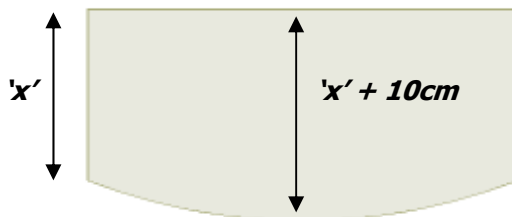
Curved Shelves
141.RxxxxxCxxxx

*Example:-
141.R40100C0000
(40 x 100 curved shelf
in Ivory to fit 40 shelf
bracket)*

Curved Kicker
171H.C0xxxxxCxxxx

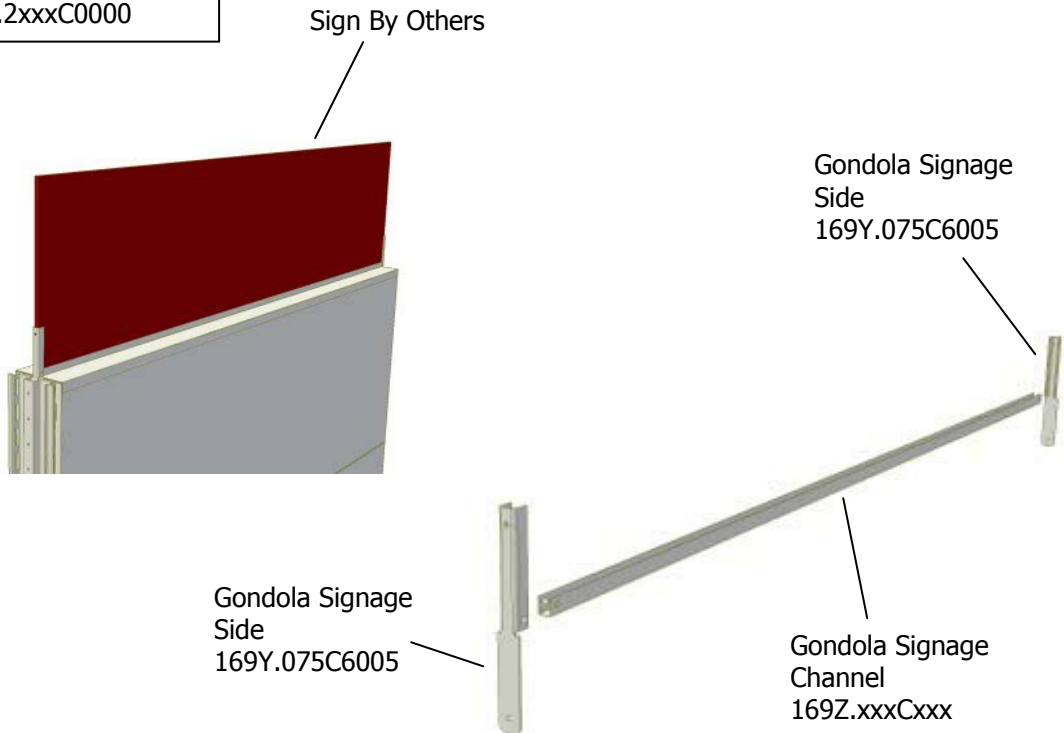
*Example:-
171H.C016100C0000
(Low Curved Kicker x
100 in Ivory)*

Shelf Depth Details



Gondola Signage

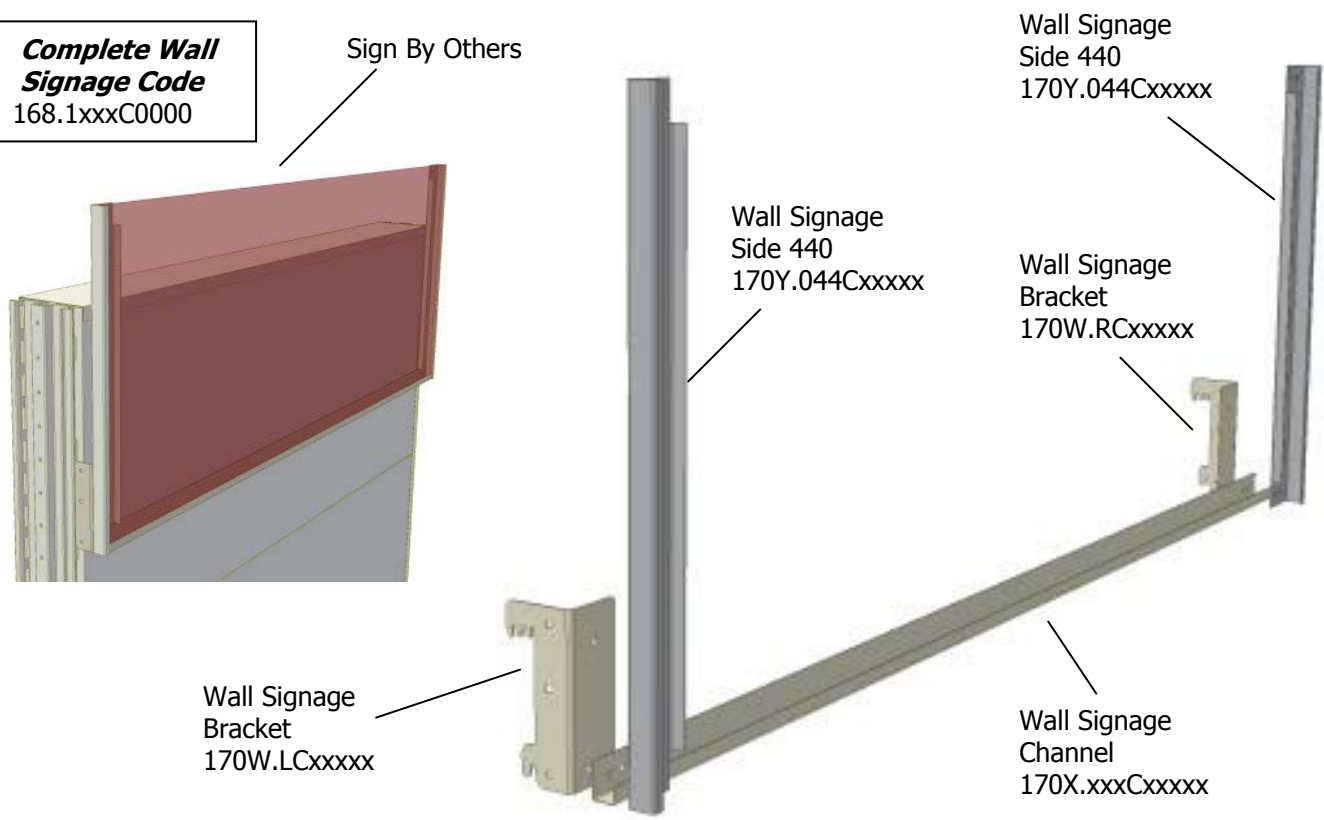
Complete Gondola Signage Code
168.2xxxC0000



1. Installation Guide

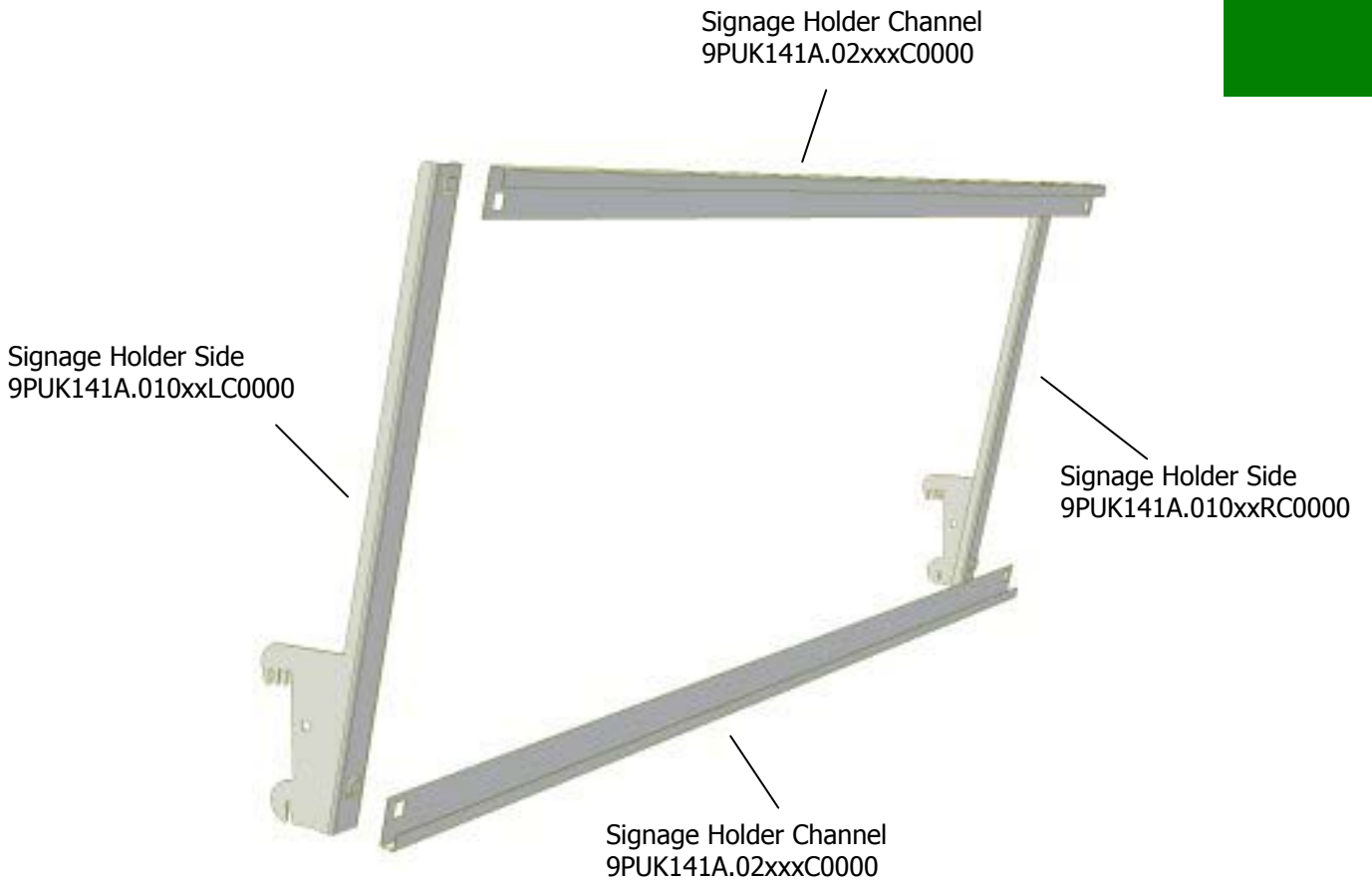
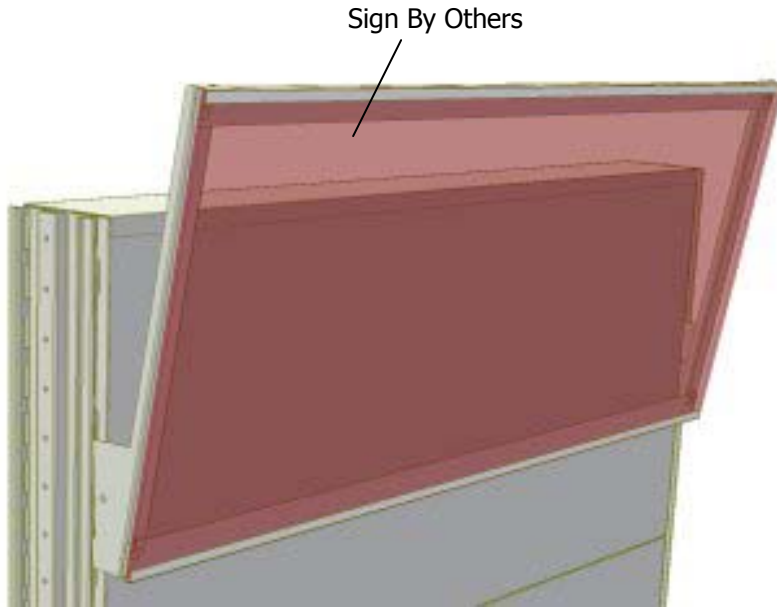
Wall Signage

Complete Wall Signage Code
168.1xxxC0000

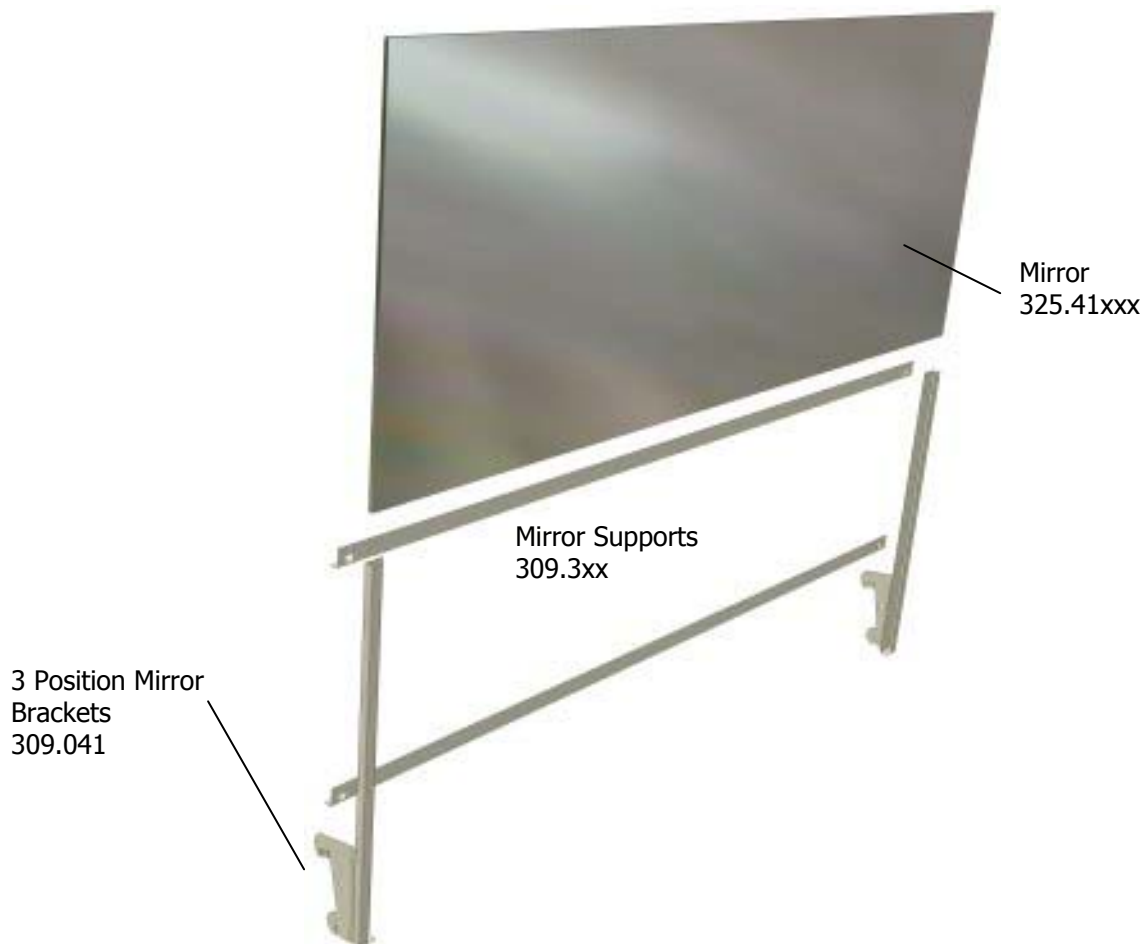


Wall/Gondola Signage

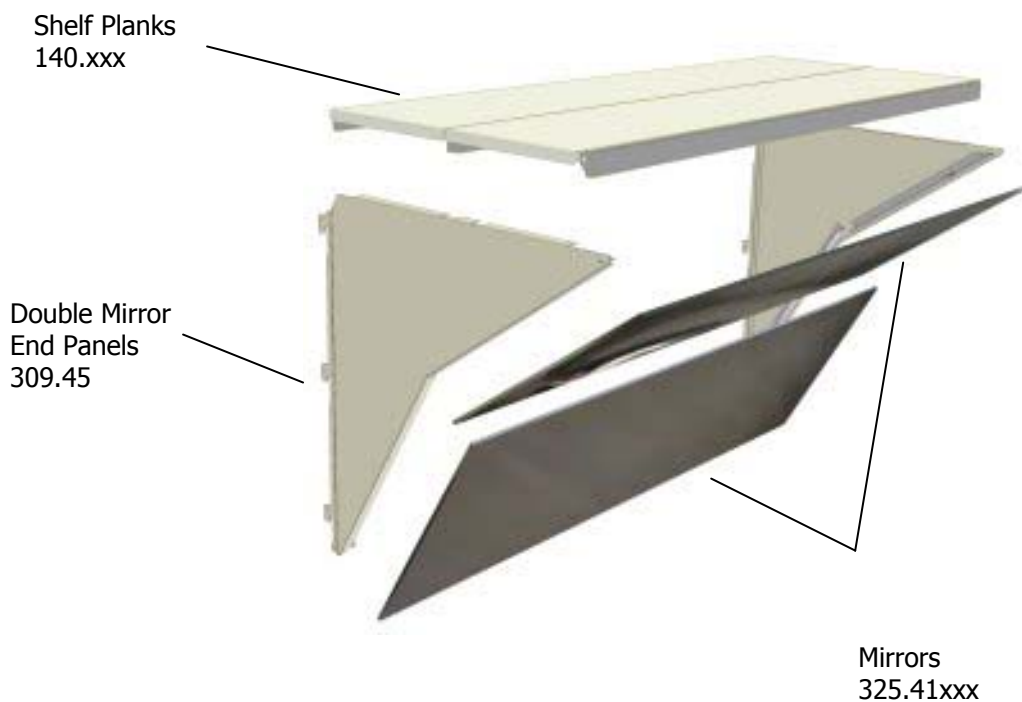
1. Installation Guide



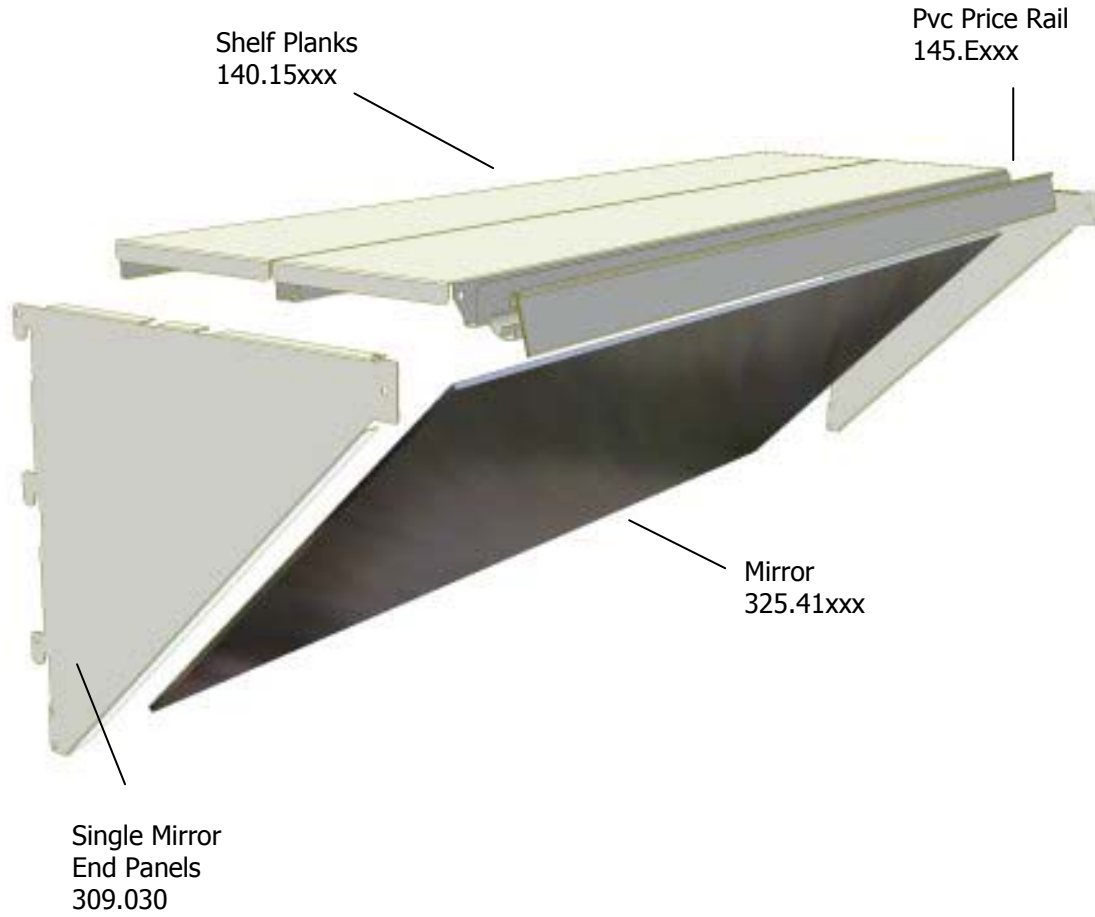
Double Mirror Display



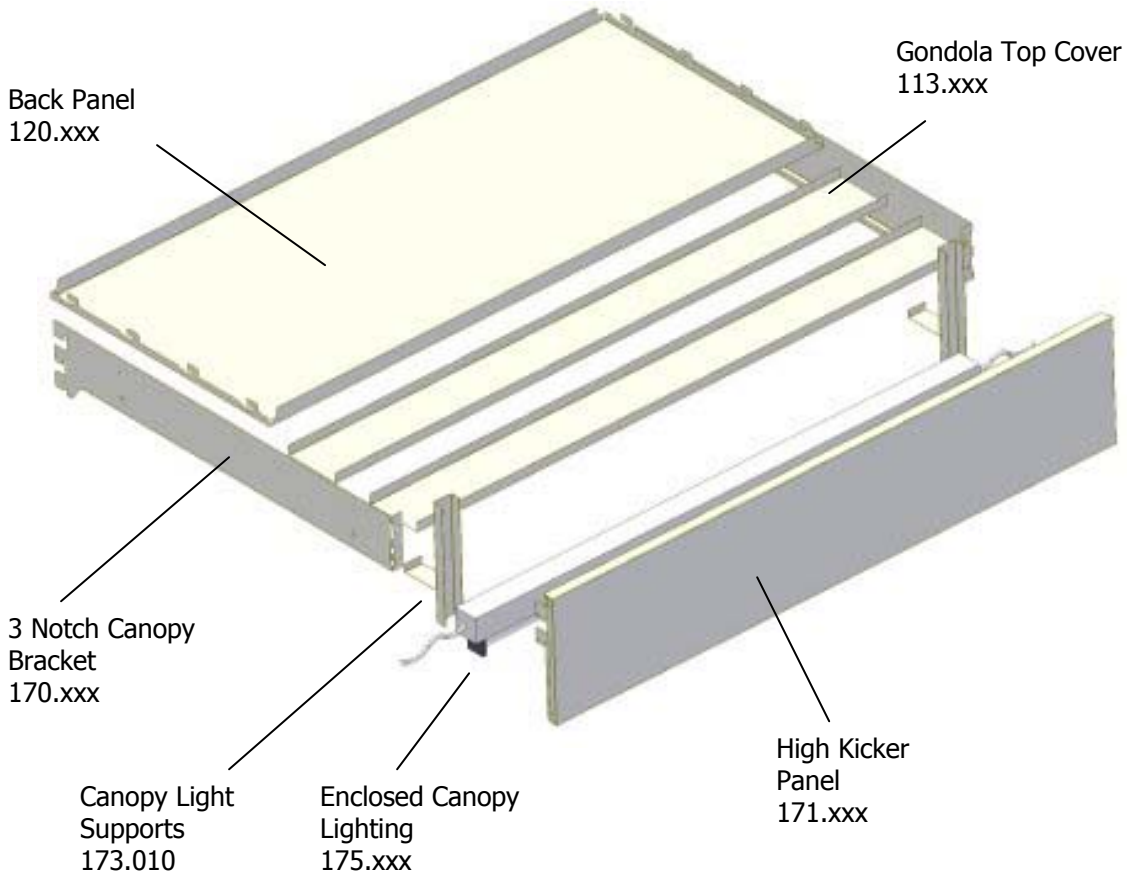
3 Position Mirror Display



Single Mirror End Panels

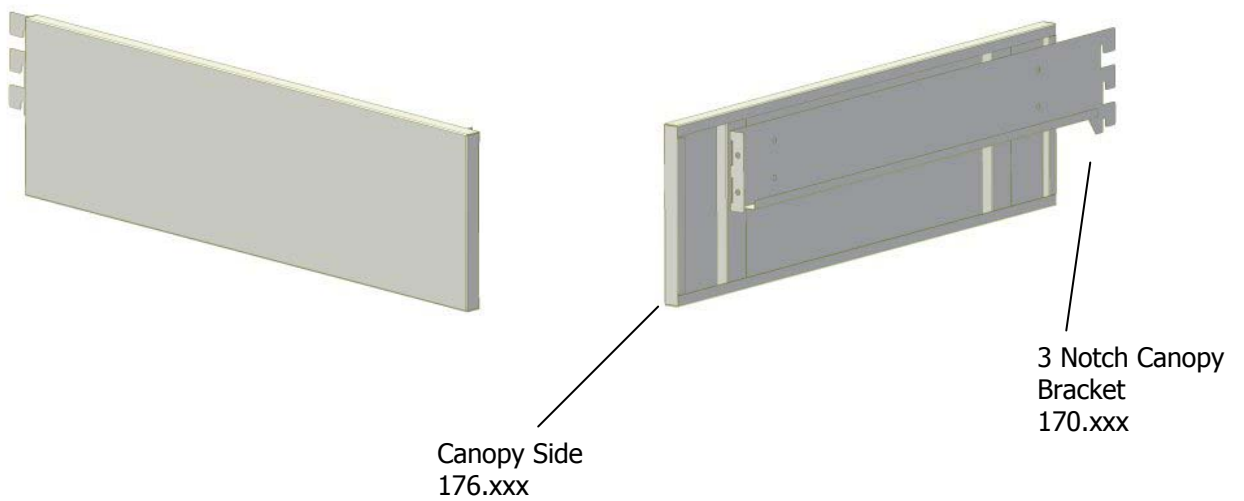


Complete Canopies



1. Installation Guide

Canopy Side Covers

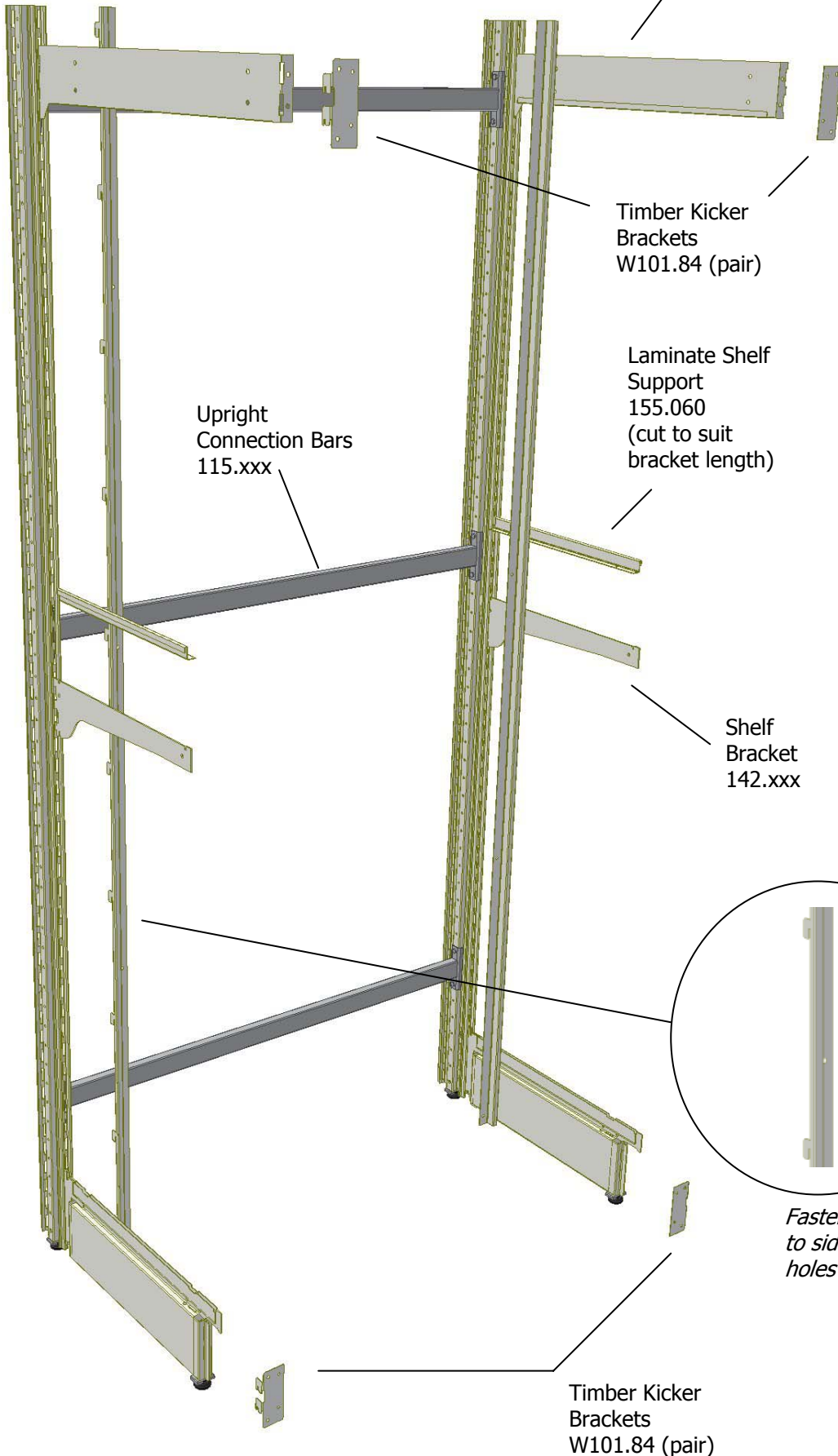


Timber Accessories

1. Installation Guide

Side Fixings For Timber Back Panels
131S.20244C0000

Canopy Brackets
170.xxx (pairs)



Timber Kicker Brackets
W101.84 (pair)

Laminate Shelf Support
155.060
(cut to suit bracket length)

Upright Connection Bars
115.xxx

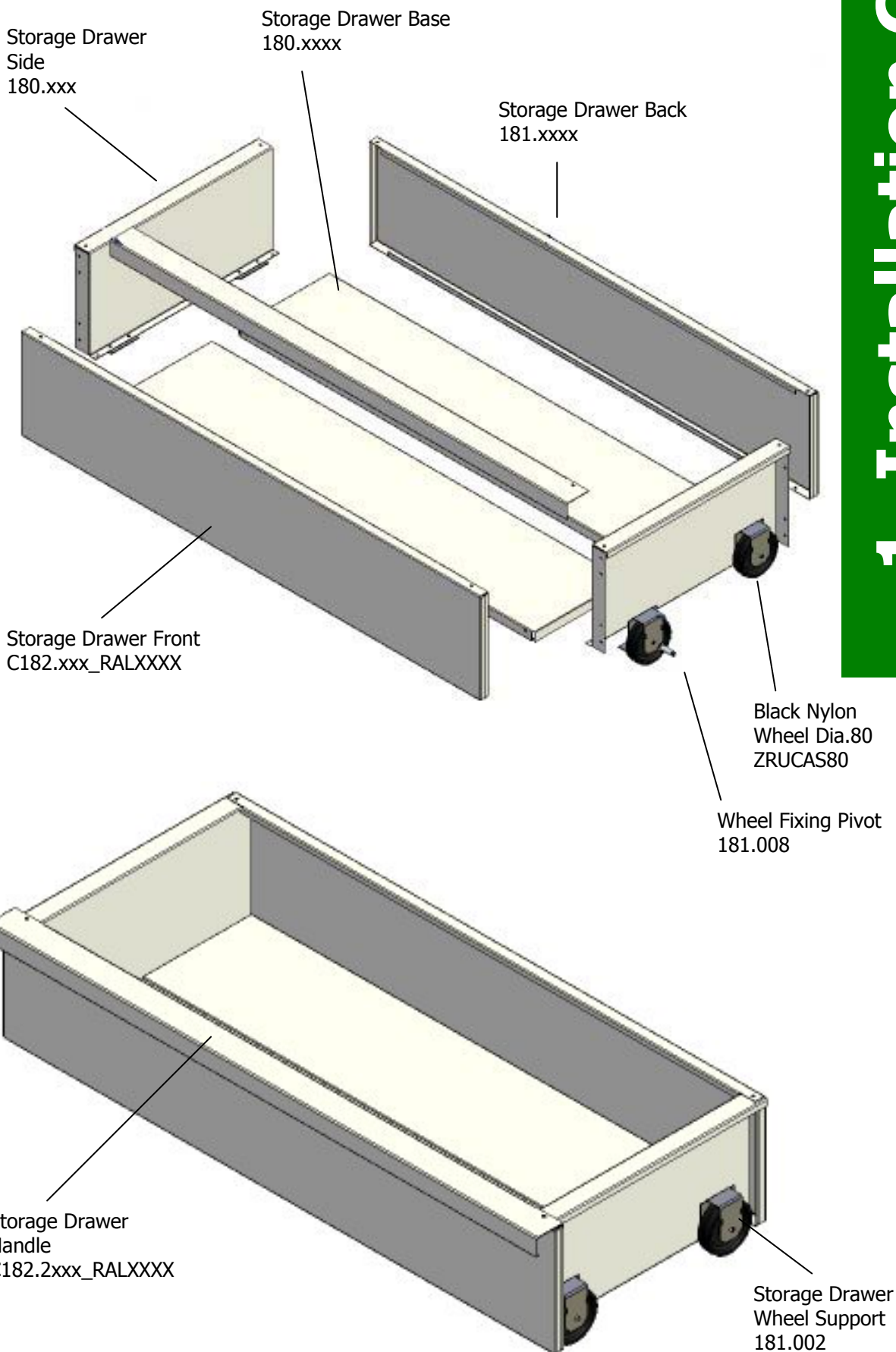
Shelf Bracket
142.xxx

Fasten timber panels to side fixing, using holes as shown

Timber Kicker Brackets
W101.84 (pair)

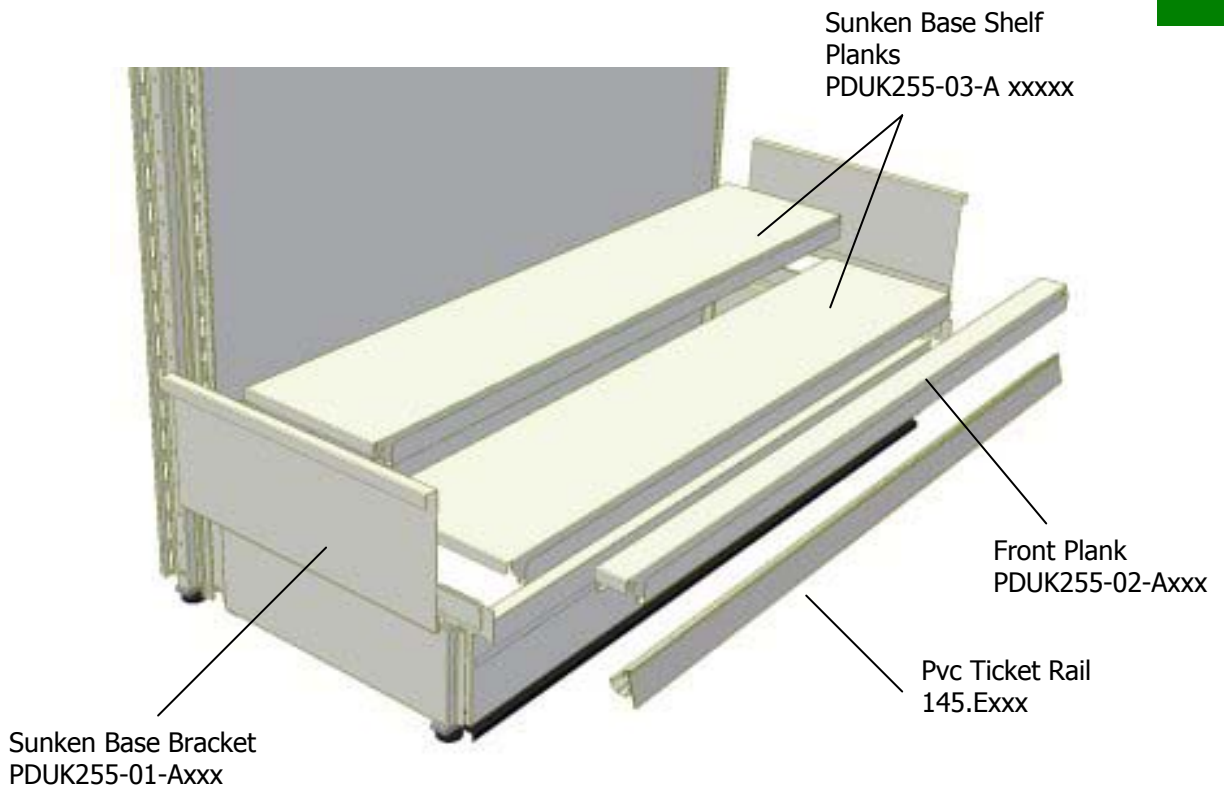
Storage Drawer

1. Installation Guide



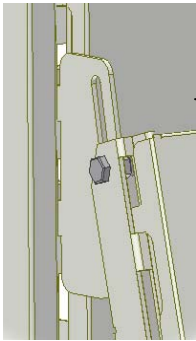
Sunken Base

1. Installation Guide

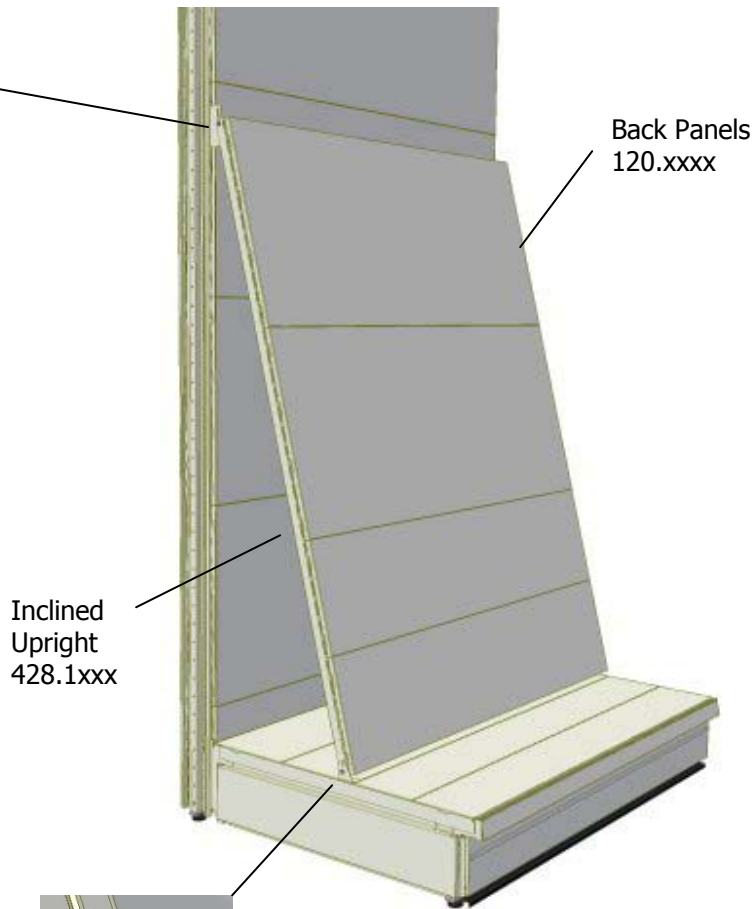


Inclined Upright

1. Installation Guide

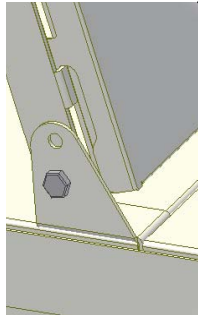


Inclined Upright
Bracket
428.1001

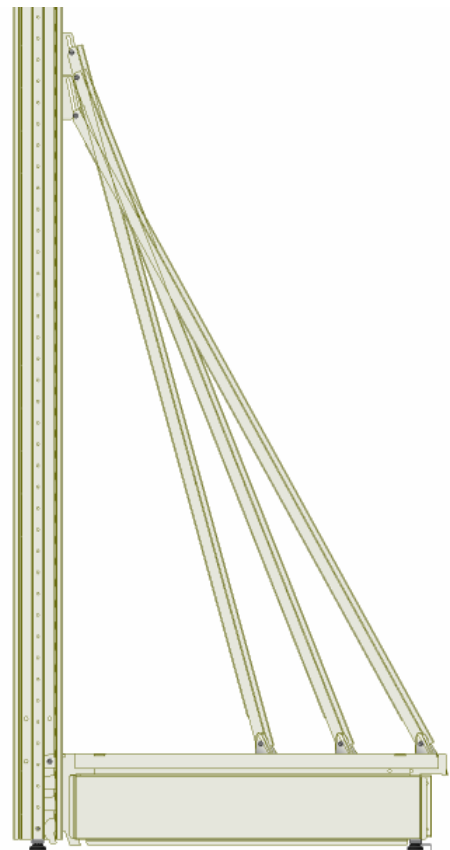


Inclined
Upright
428.1xxx

Back Panels
120.xxxx

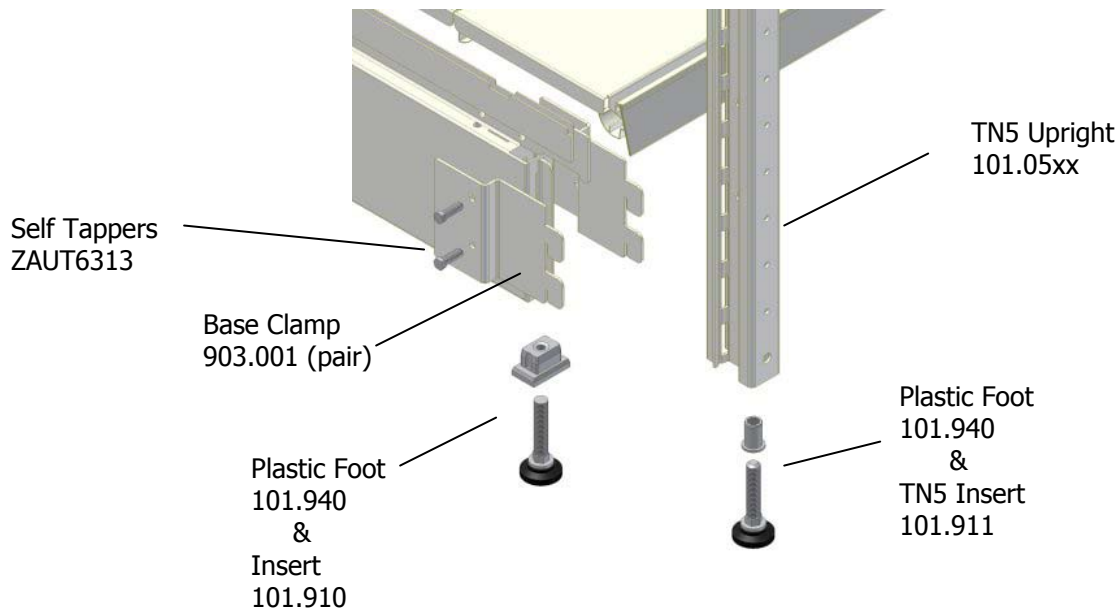
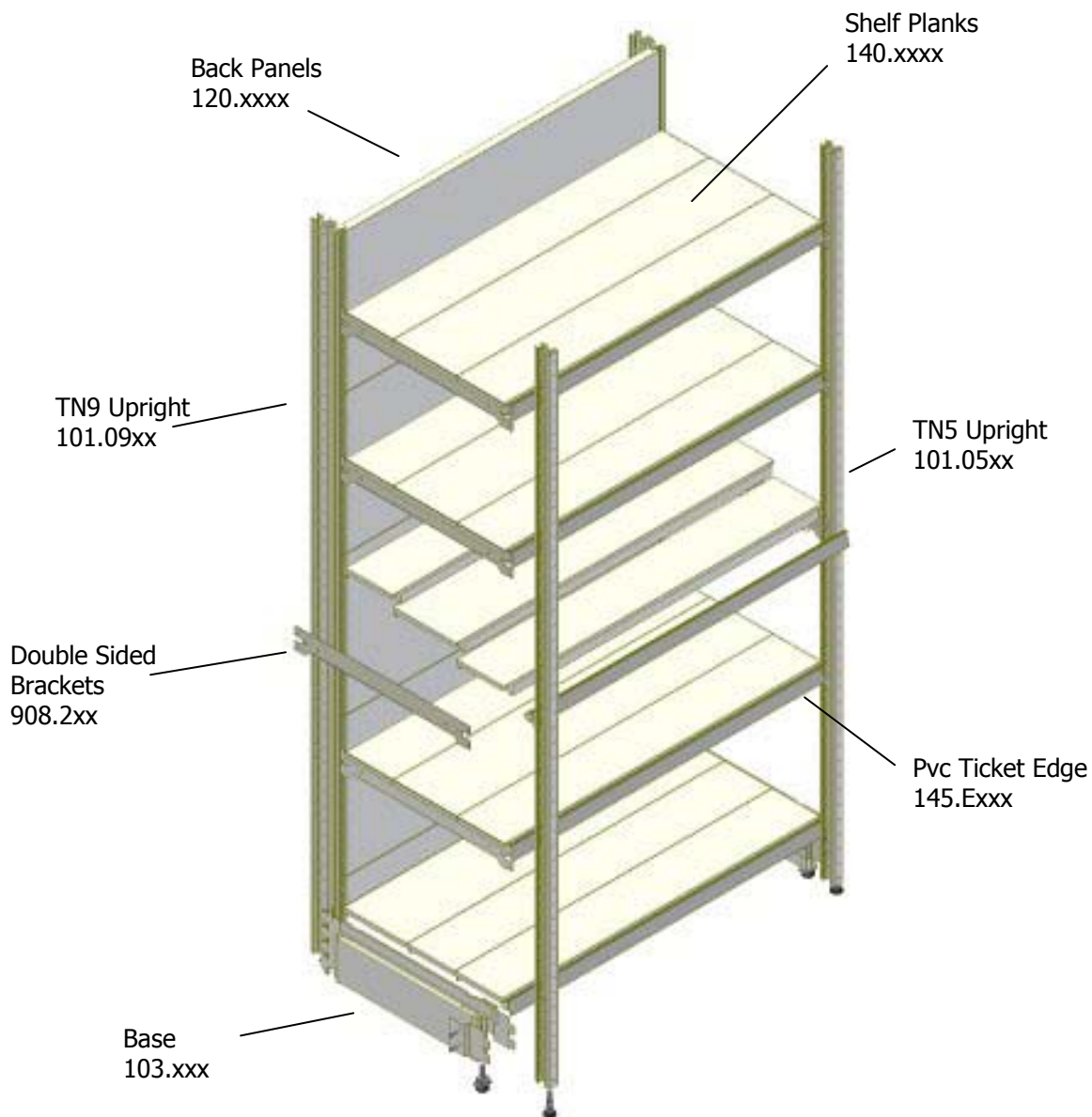


Inclined Upright
Support
428.1002 (pair)



4 Post System

1. Installation Guide

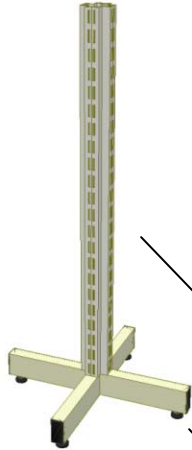


Totem Assembly Guide

1. Installation Guide

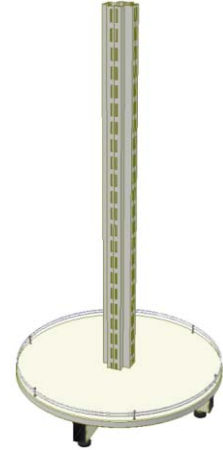
1)-Screw-in adjustable feet into the bottom of the base and knock-in, to the ends, plastic end caps. **Important**-adjust feet to make base level.

2)-Fit the upright to the base and secure with self-tapping screws



Totem Upright
PDUK244.xxx

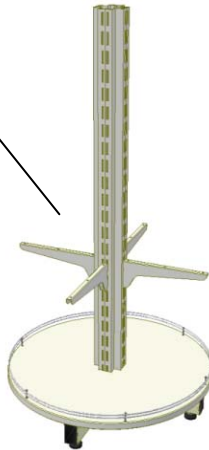
Totem Base 30 X 30
PDU244.3030



Plastic End Caps
XFF.CAP

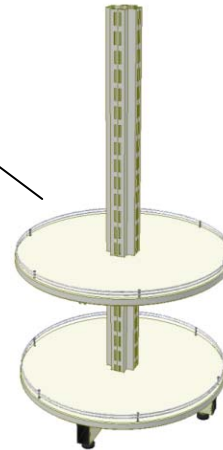
4)-Fit 4 x 200mm brackets, at required height, to the upright

200 Brackets
PDUK244.020



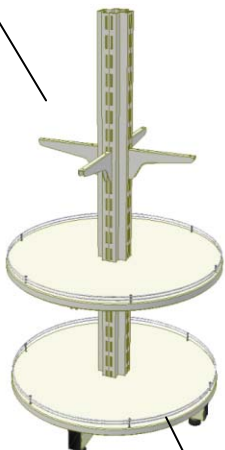
5)-Slide over the top of the upright, the 2nd. round (635mm) shelf, onto the brackets

Steel Shelves
PDUK244.365



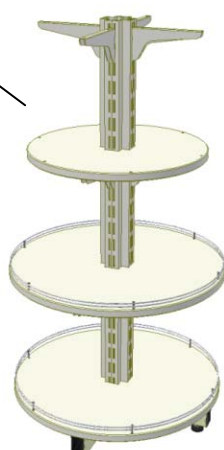
6)-Fit 4 x 150mm brackets, at required height, to the upright

150 Brackets
PDUK244.015



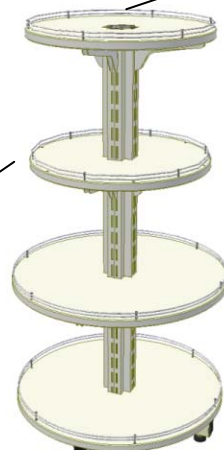
Steel Shelves
PDUK244.550

7)-Slide over the top of the upright, the 1st. round (550mm) shelf, onto the brackets and then fit the 150mm brackets in the top notches



8)-Slide over the top of the upright, the 2nd. round (550mm) shelf, onto the brackets and fit the upright top cover

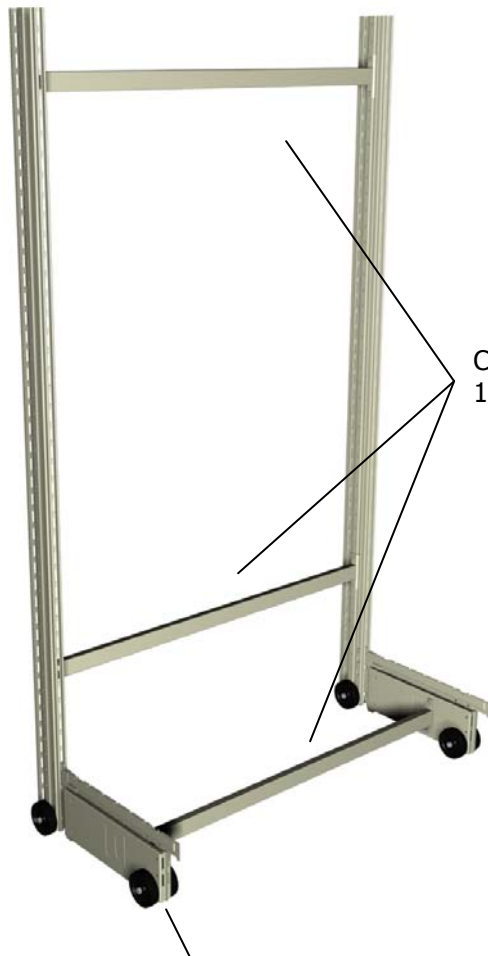
PDUK244.CAP



550 Wire Riser
X406.550

635 Wire Riser
X406.635

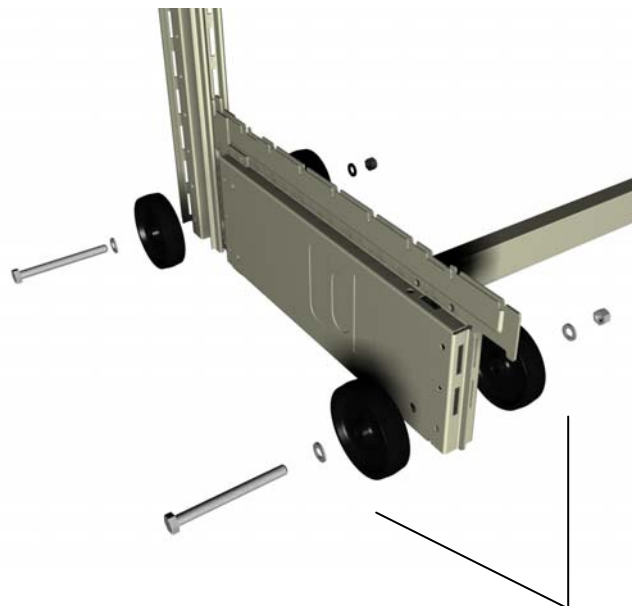
Mobile Units



Connection bars
115.xxx

Double Wheel
118.050

Important-
To make the unit as rigid
and stable as possible it is
recommended that upright
connection bars are fitted
and high base are used.
Please contact Caem for
any units over 1360mm
high



Double Wheel Bolt Set
118.280

1. FOOD SAFE MATERIALS

The product has non-toxic surface coatings which have been certified non-toxic by the coating manufacturers.

The product has been tested for resistance to mould growth where in a 3 month test under ideal conditions for fungal growth the coatings resisted 13 different strains of mould including cheese mould and pink stain mould at a temperature of 23 °C

Food Safe Material contains less than one part per million vinyl chloride monomer so that it can conform with requirements in HM Government Statutory Instrument No 1523, 1987, *The Materials and Articles in contact with Food Regulations*.

Food Safe Material is chemically inert and is safe for continuous contact with unpacked foodstuff. It is also recommended for shelving in cold stores.

In the context of the Building Regulations, Food Safe Material has a 'Class O' rating which is based upon low indices of performance, 1 below 12 and 1 below 6, in BS 476: Part 6 (fire propagation) combined with 'Class 1' rating in BS 476: Part 7 (surface spread of flame).

2. STAIN RESISTANCE

The products of combustion in the exhaust fumes of internal combustion engines or in the fumes of gas-fired space heaters (eg propane variety) may stain Foodsafe. Fork-lift truck engines or petrol driven electrical generators, often used during installations, can generate these fumes. This staining can occur even when the coating is protected by a strippable film. Although Foodsafe coatings are formulated to resist this staining, a builder or erector must take precautions to prevent such staining.

3. CLEANING FOODSAFE

Water may be heated to 60°C. A solution of fresh water and Tepol or non-aggressive detergent may be used to remove heavy deposits, followed by a fresh water rinse. The maximum water temperature for pressure hose cleaning is 70°C with a maximum pressure of 1000 pounds per square inch. Stubborn oil or grease stains can usually be removed with white spirit on a soft cloth followed immediately by a fresh water rinse. Solvents, cleaners containing abrasives, and cleaners in strong concentrations should not be used. Over-cleaning or scrubbing can do more harm than good. Steam cleaning can cause problems if the coating overheats. The surface temperature of the panel should not exceed 60°C.

Typical properties of Food Safe

Scratch resistance.	2800g – 3000g
Impact resistance, ECCA T5	15 J
Minimum bend diameter (T - Substrate thickness), ECCA T7, BS3900/E1	0-1 T
Taber Abrasion resistance [<i>Note 1</i>] ASTM D4060-95	12-15 mg
Nominal organic coating thickness (micrometers), ECCA T1,	130
Cheese mould resistance.	Pass
Pink stain mould resistance,	Pass
VCM level SI 1523	5%
Specular gloss (60°), ECCA T2	Class 1
Surface spread of flame, BS 476: Part 7	Class O
Fire resistance, Building Regulations.	500h (EN10142) 200h (EN10130)
Salt spray ECCA T8, ASTM B117 - 73	1000h (EN10142) 500h (EN10130)
Humidity ASTM 02247-94	
Minimum temperature for forming	20°C

Notes:

1. Wear index at 1000 cycles.

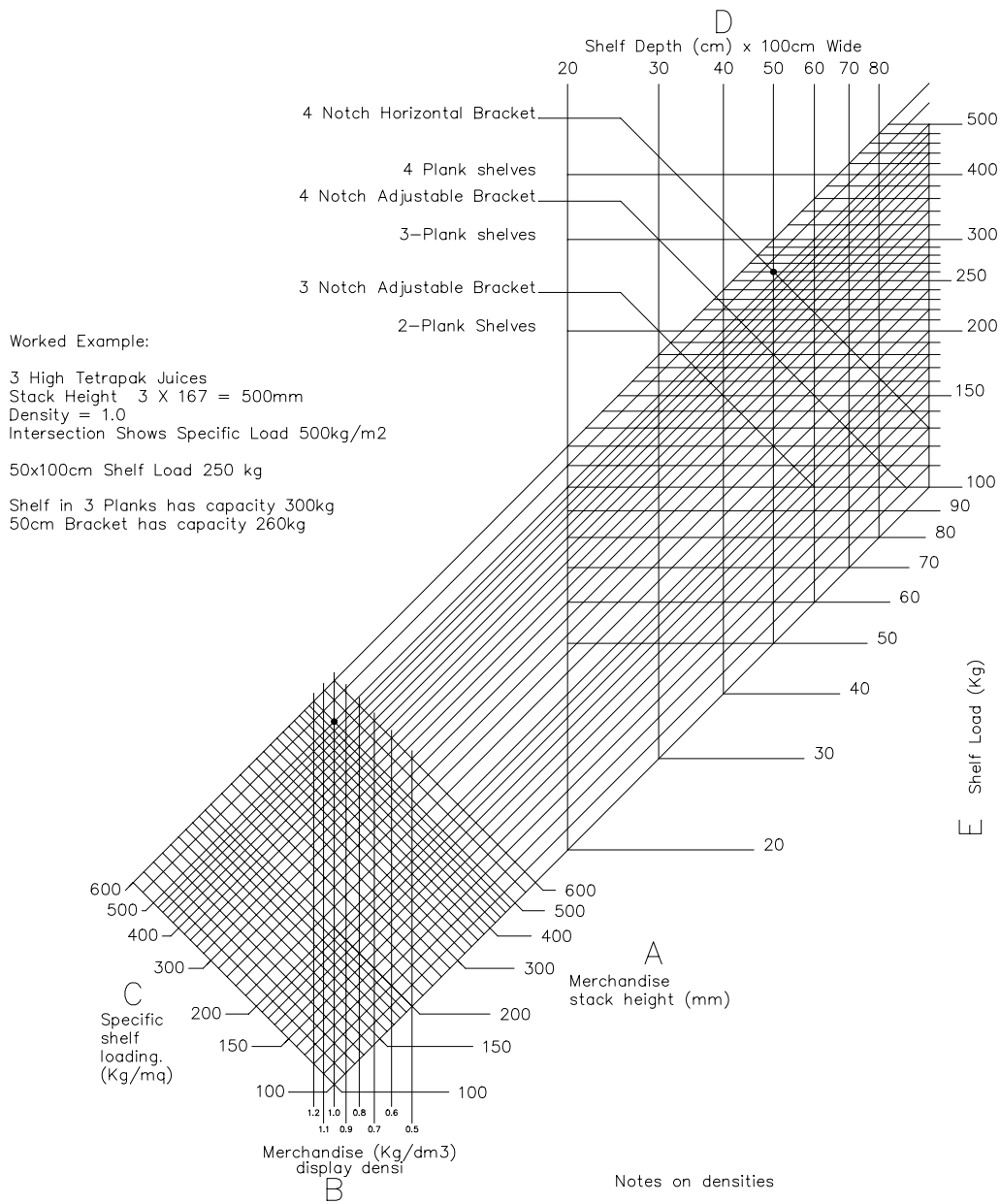
All figures in the table above are typical properties and do not constitute a specification.

Weight Loadings

N.B To calculate:

65cm figures $\frac{100}{65} \times$ shelf load

120cm figures $\frac{100}{120} \times$ shelf load



Worked Example:

3 High Tetrapak Juices
 Stack Height 3 X 167 = 500mm
 Density = 1.0
 Intersection Shows Specific Load 500kg/m²

50x100cm Shelf Load 250 kg

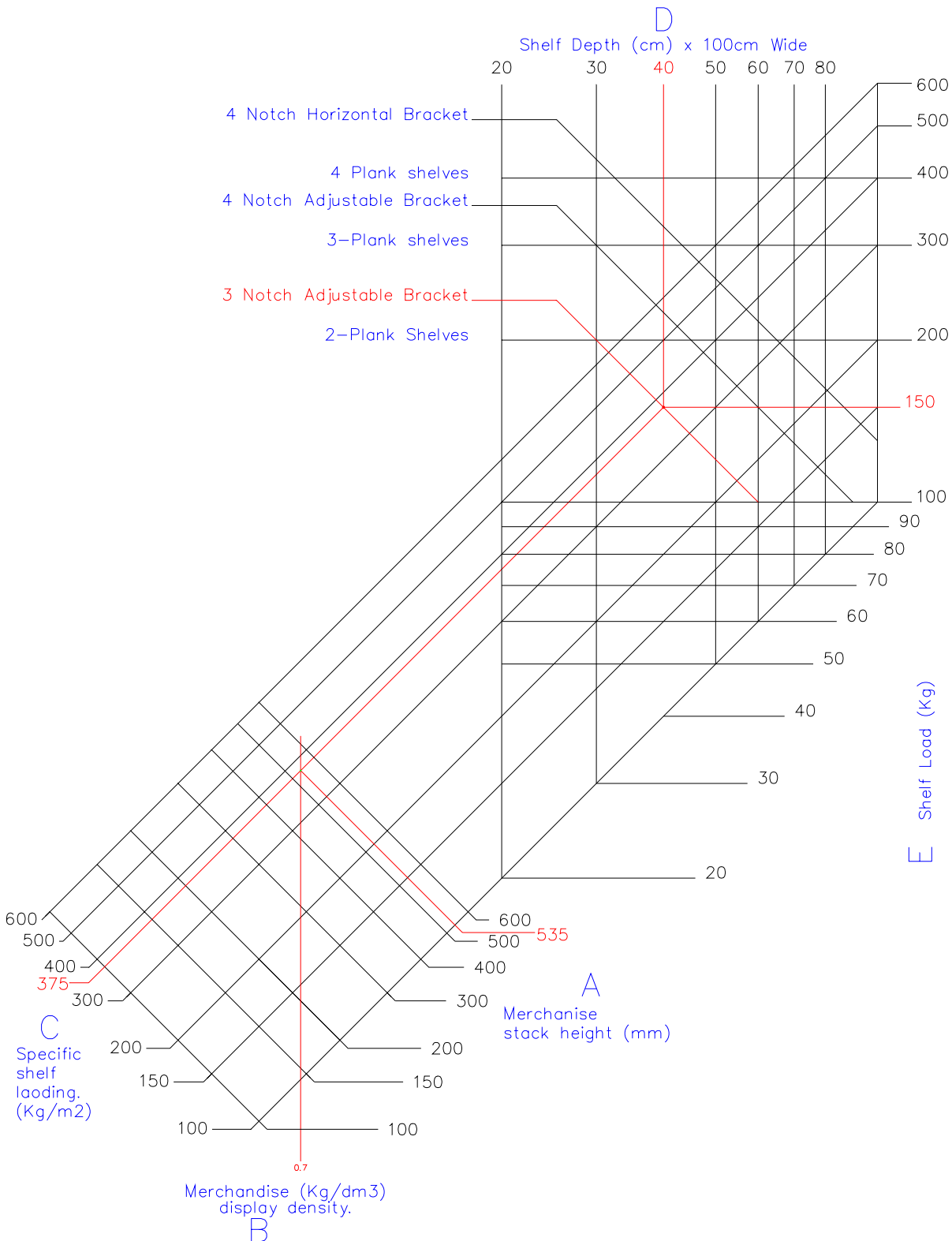
Shelf in 3 Planks has capacity 300kg
 50cm Bracket has capacity 260kg

Notes on densities

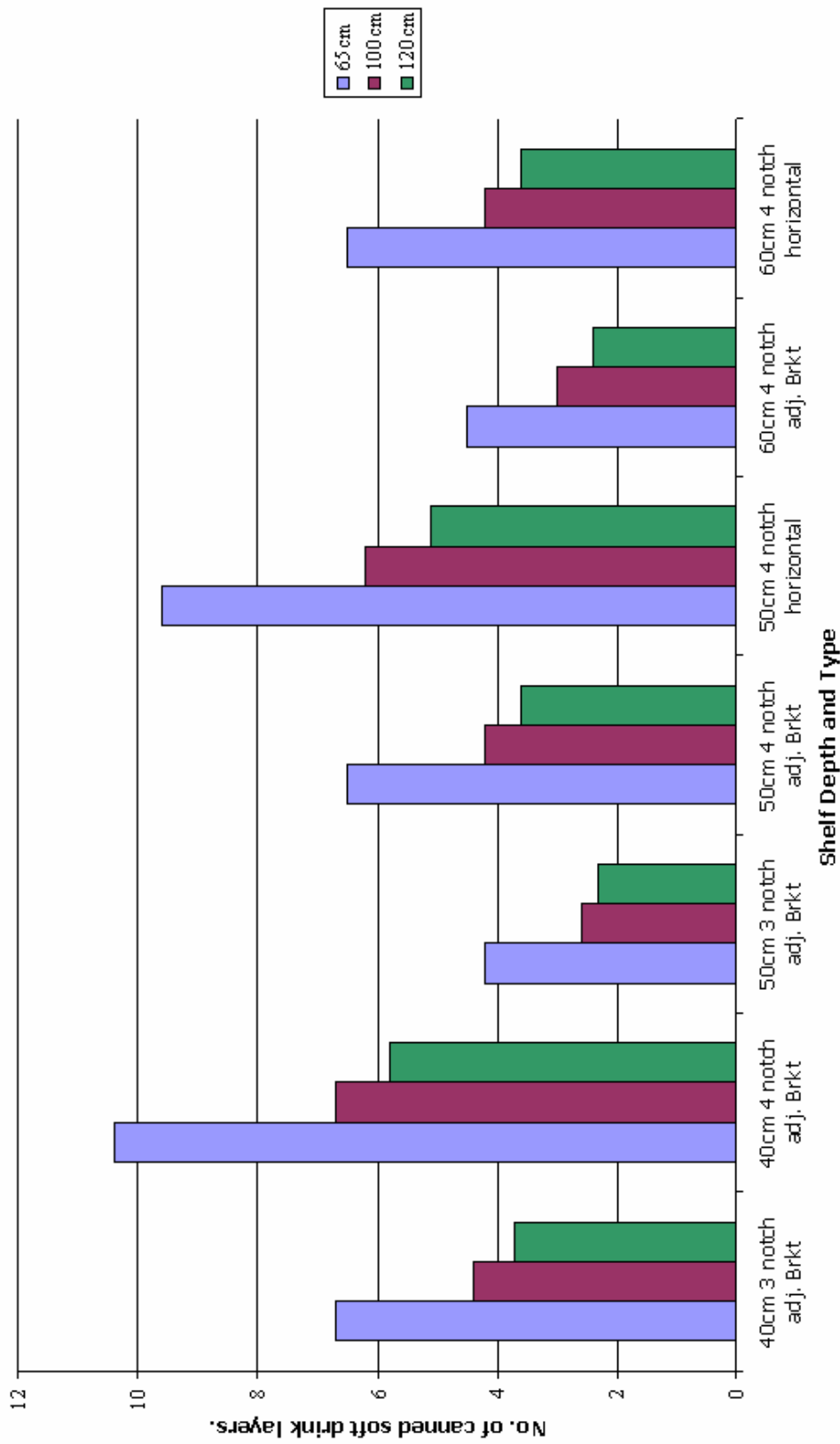
- Plastic Bottled Carbonates = .52 kg/dm³
- Canned Coke = 0,70 kg/dm³
- Glass Bottled Cordials = 0,78 kg/dm³
- Bagged Flour = 0,91 kg/dm³
- Bagged Sugar = 1,0 kg/dm³
- Tetrapacks = 1,0 - 1,05 kg/dm³
- Tetrapack Concentrated Washing Liquids = 1,2 kg/dm³

$$Y = ((\text{Log} X) / \text{Log} 2) * 100$$

Weight Loadings chart for Caem Modular Shopfitting System



A Bar Chart showing the impact of different bay sizes on weight capacities / stack heights.



Examples Of Typical Stack Heights

SHELF SIZE	Capacity KG	SHELF LOAD KG/M ²	STACK HEIGHTS (mm)		
			Bagged Sugar	Canned Soft Drinks	Canned Petfood
40 X 100cm 3 notch adjustable brackets	150	375	375 (2.5 layers)	535 (4.4 layers)	500 (4.6 layers)
50 x 100cm 3 notch adjustable brackets	120	240	240 (1.6 layers)	340 (2.8 layers)	320 (2.9 layers)
50 x 100cm 4 notch adjustable brackets	180	360	360 (2.4 layers)	520 (4.3 layers)	480 (4.4 layers)
50 x 100cm 4 notch horizontal brackets	260	520	520 (3.4 layers)	750 (6.2 layers)	700 (6.4 layers)
60 x 100cm 4 notch adjustable brackets	150	250	250 (1.6 layers)	360 (3 layers)	330 (3 layers)
60 x 100cm 4 notch horizontal brackets	216	360	360 (2.4 layers)	520 (4.3 layers)	480 (4.4 layers)

There are two important factors to take into consideration when arriving at specific weight loadings required when using the Caem Modular Shopfitting System.

1) Type of Brackets used

2) Bay Width

PLEASE NOTE :

All weight capacities quoted assume a safety margin of 2:1 or higher, but stated weights should not be exceeded for safety reasons.

Table of weight ratings for the Caem Modular Shopfitting System

Notes:

1. All quoted ratings are for loads evenly distributed on shelves.
2. Wall units can take higher loads if they are fastened back.
3. Heavy loads should be put lower down and lighter loads higher up.
4. Double-sided gondolas may have quoted loads on one or both sides.
5. Base shelf loads listed are additional to upper shelf bay loads.
6. If loads are likely to be in excess of quoted loads, please ask if there are higher rated components available.
7. All weights are given in kg and specific loadings in kg/m²

Table 1. Highest recommended individual shelf working loads:
Bay width 100cm:

Bracket type: *	Shelf size (cm): No of planks (No.)					
	20 (1)	30 (2)	40 (2)	50 (3)	60 (3)	60 (4)
	<i>(specific shelf loading - kg/m²)</i>					
Adjustable	100 500	200 666	200 500	180 360	150 250	150 250
Horizontal	100 500	200 666	200 500	250 500	200 333	200 333
High base	100 500	200 666	200 500	300 600	300 500	400 666
Low base	100 500	200 666	200 500	300 600	300 500	400 666

* Note: bracket deflection may be up to 0.5° at the highest load.

Table 2. Highest recommended Gondola and Wall unit weight loadings:
The figures below are totals for all upper shelves in a bay excluding the base shelf.
See notes 2,4 & 5 above.

Base leg size (cm):	40	50	60	60
Average depth of upper shelves:	30	40	50	60
Load per shelving bay (9cm post):	420	420	340	280
Load per shelving bay (12cm post):	680	680	590	500

System Deflection. Loading to obtain acceptable deflection:

To avoid deflection, which can be ugly or lead to swaying, loads should be distributed as advised in note 3 above.

In any shelving bay the expression $\Sigma (W_n \times H_n \times D_n)$, calculated for each upper shelf and totalled, should not exceed the figure below:

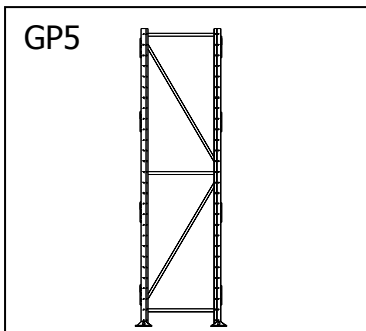
Where W_n = weight kg; H_n = shelf height cm; D_n = shelf depth cm.

Deflection Criterion for the 9cm post: $\Sigma (W_n \cdot H_n \cdot D_n) \leq 1,800,000$.

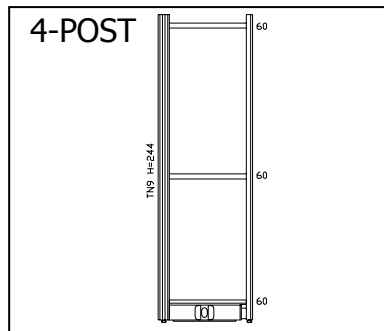
for the 12cm post: $\Sigma (W_n \cdot H_n \cdot D_n) \leq 3,600,000$.

Heavy Duty Shopfitting System

The following examples show independently tested weight capacities for the GP5, 4-Post, TN12 and TN9 Systems. All loadings are based on evenly spread merchandising.



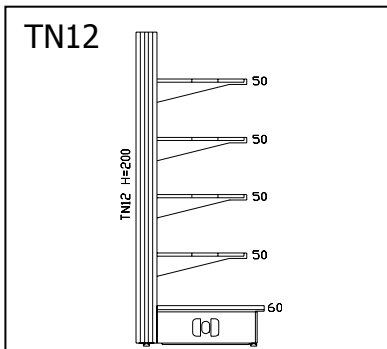
GP5



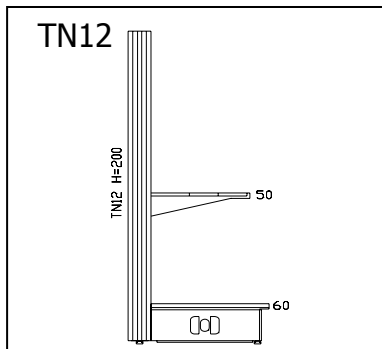
4-POST

Beam (pair) 1m
=1200kg
Beam (pair) 1.2m
=1050kg

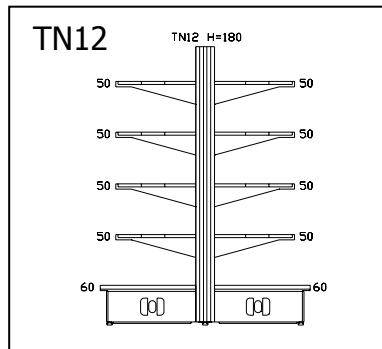
Upper Shelves = 400kg
Base = 400kg



TN12



TN12

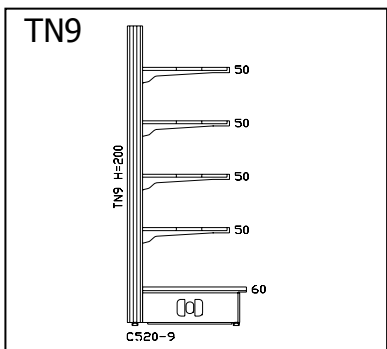


TN12

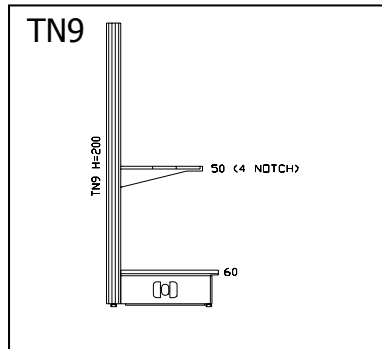
Upper Shelves =230 kg
Base = 400 kg

Upper Shelves =260kg
Base = 400 kg

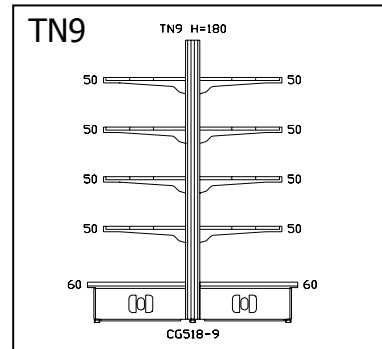
Upper Shelves =230 kg
Base = 400 kg



TN9



TN9



TN9

Upper Shelves =120kg
Base = 400 kg

Upper Shelves =260 kg
Base = 400 kg

Upper Shelves =120 kg
Base = 400 kg

If 3-plank base shelves are used, ratings must be reduced to 300kg

Contact details

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Fax. 01223 305879
Email johnellis@shopequip.co.uk
Website www.shopequip.co.uk*