CAEM ShelvingEngineering

What No One Tells You About Planograms

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1. About the author

I am Andy Magrini and I have worked for more than twenty years in the retail shelving industry. During my career I have built entire factories deploying multi-million-pound investments in manufacturing and automations and engaged with clients from California to Australia, from Mexico to Siberia, from Saudi Arabia to China.

I believe in the motto 'if you never failed, you never tried hard enough', and I, like many others had to make the most of my errors, interpreting them as a costly training!

Over the years I have been lucky enough to have received a lot of business training, some more technical, some more 'management oriented'.

As the MD of CAEM UK, I remain involved with every strategic decision within the CAEM Group as well as one of the owners.

2. Why 'What No One Tells You About Planograms'?

During my career I have travelled around the world meeting retailers in many countries. These were catering for numerous different demographics and cultures but there was one common factor: the need to make the most of the shop's retail space, the capex investments and operating costs.

When visiting stores it was evident that the density of merchandising differed extensively between retailers, but they all agreed that a shelving system that would improve the display of products by increasing the facing density would always be welcome.

Writing this whitepaper is my attempt to help retailers understand the interrelation between facings, planograms and their selection of a shelving system.

3. What are Planograms?

Planograms, also known as **plano-grams**, **plan-o-grams**, **schematics** and **POGs**, are a visual representations of a store's products on display.

They are a tool for visual merchandising. According to the Oxford English Dictionary, a planogram *"is a diagram or model that indicates the placement of retail products on shelves in order to maximise sales."*[1] The effectiveness of the planogram can be measured by the sales volume generated from the specific area it pertains to.

Overview

Planograms are predominantly used in retail businesses. A planogram defines the location and quantity of products to be placed on display. The rules and theories for creating planograms are set under the terms of merchandising. For example, given limited shelf space a vendor may prefer to provide a wide assortment of products, or may limit the assortment but increase the facings of each product to avoid stock-outs.

Manufacturers often send planograms to stores ahead of new product shipments. This is useful when a vendor wants retail displays in multiple store locations to have the same look and feel. Often a consumer goods manufacturer releases a planogram with each new product to show how the product fits with, and relates to existing products.

Fast-moving consumer goods (FMCG) organisations and supermarkets mostly use text and box-based planograms to optimise shelf space, inventory turns and profit margins. Apparel brands and retailers are more focused on presentation and use pictorial planograms that illustrate the look and brand identity for each product.

Placement methods

- Visual

Visual product placement is supported by different theories including; horizontal, vertical, and block placement. Horizontal product placement increases the concentration of a certain article.

Research studies suggest that a product's relation to customer eye levels directly correlates to its sales. This depends on the customer's distance from the unit.

Vertical product placement puts products on more than one shelf level to achieve 15 centimetres (5.9 in) – 30 centimetres (12 in) of placement space. Similar products are placed in blocks.

A planogram can be compared to a book. A store is the book and its individual modules represent the pages. The customer gradually "reads" these modules and automatically proceeds from the left to the right, from the top to the bottom as if he/she read a book. This principle is followed by the majority of rules for good displays. The rules say that goods should be arranged on a shelf from the least to the most expensive. Goods may also be arranged in the reverse order, depending on the kind of goods that the dealer wishes to promote.

- Commercial

Commercial placement is determined by both market share placement and margin placement. Market share research companies like ACNielsen collect sales data for various products and calculate market share of products in various market segments.

- Margin Placement

Margin placement is determined by the profit margin of a specific item. Higher margin places a product closer to the front of the store, where it is most likely to attract attention.

Objectives of Planograms

- To communicate how to set out the merchandise.
- To ensure sufficient inventory levels on the shelf or display.
- To use space effectively (e.g. floor, page, and screen).
- To facilitate communication of retailer's brand identity.
- To assist in the process of mapping a store.

The Origins of Planograms

The planogram concept originated with K-Mart. Planograms are created with the help of planogramming software by a Planogram Specialist, Space Planning Specialist or Space Planning Manager.

The retail industry utilises software to ensure proper stocking. Retailers turn to planogram software to reflect each store's customer profile and localised demand, while maintaining centralised control and supply chain efficiency.

For example, some software packages focus upon fast-moving consumer goods and hard goods sectors. These have enhancements to transfer parts of shelving elements to single store measurements, which, according to the producers, should increase efficiency.

Planograms libraries facilitate a multi-site retailer achieving the same 'best facing merchandising' across all stores.

Hence a library is crucial.

Retailers automate the creation of store-specific planograms through use of corporate-level business rules and constraints describing best practices. Such planogramming solutions allow these companies to respond with location and language-specific messaging, pricing, and product placement based on business rules, location, campaign and fixture attributes.

Recent advances in store virtualisation and collaboration allow manufacturers, retailers and category management experts from across the globe to work in the same virtual store in real time.

4. Automated or Manual

Planograms exist in every shop; the difference is they can be formalised or not. A small independent store may have found its own way of stacking products on shelves, knowing what the proportion should be by knowing their daily clients (and probably knowing them by name!).

A more organised retailer will probably have a 'library' of planograms that explains for each category and product, at which height the shelves should be located.

Due to the extremely fast dynamics in the retail sector, new products are added to the lines every quarter and probably the manufacturer' packaging also developed. Therefore, some retailers would adopt specific software to manage the planograms library and issue updated versions in an efficient way, both in its design and deployment across stores.

5. Planograms and Shelving Systems

Retail shelving systems are no longer just 'a device to stack up products' (with focus on just the weight bearing capacity), like they were until the early 80's. Today, gondola shelving is one of the 'means of sales' for a retailer: the more facing merchandising they offer, the more flexible they are, the better.

Products for sale come in different sizes, even within the same category. It often happens that a shelf has one portion of it optimised, but with the next product being less tall, quite a large area of the facing gets wasted.

So, Concept 1.

To optimise merchandising, the shelving running pitch size should not be excessive.

It is a difficult balance between procurement and category & sales managers: procurement likes a gondola shelving pitch of 125cm so it becomes cheaper over the long run, however common sense explains that using a running pitch of 100cm with plenty of 65cm units delivers flexibility and a much improved facing for merchandise.

Concept 2.

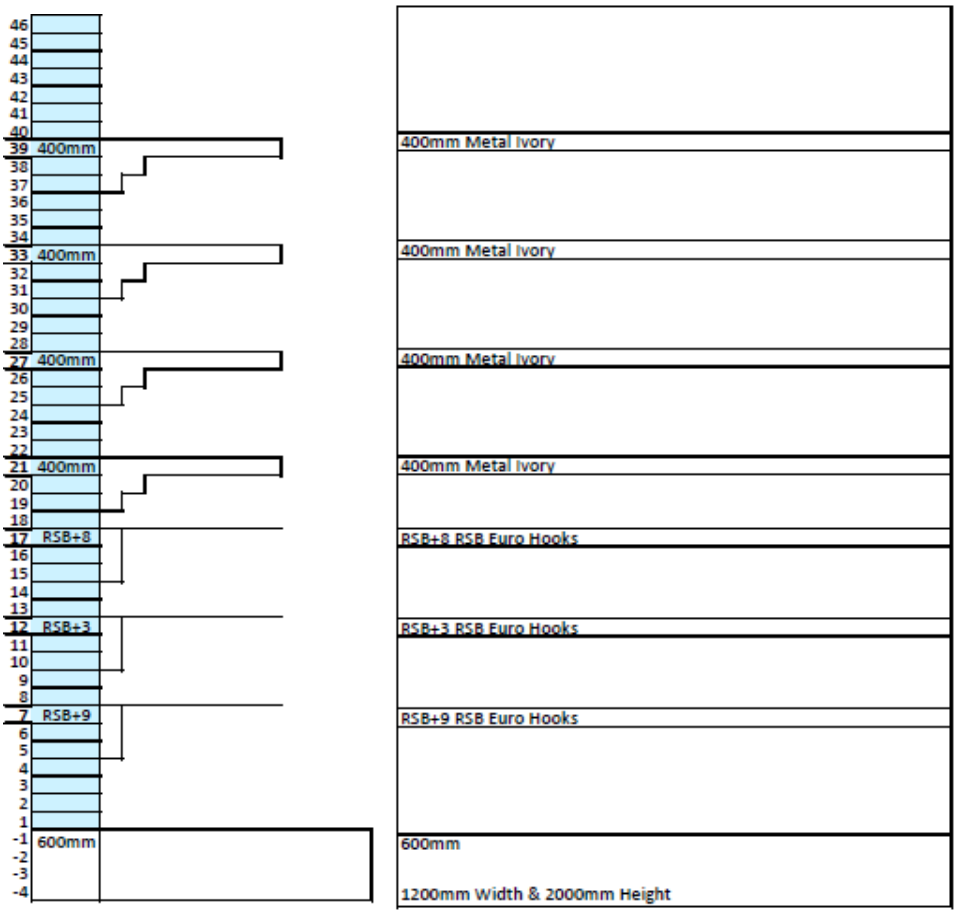
The smaller the width of shelving the less facing will be wasted.

Gondola shelving uses a rear column, referred to as the upright, to hold the shelves. Typically, uprights have holes punched at a regular intervals.

Planograms count these holes from the base shelf and upwards to indicate at what height a shelf should be positioned.

The following is an example, produced by a retailer's central office, of how one of hundreds of planograms may look.

The Base is 600mm deep, the profile includes three rear support bars and three 400mm shelves. The number on the left of the column indicates 'how many holes' in the upright, so it is easy for the shop attendant to place the bars and shelves correctly.



There are many different shelving systems out there: the main and most stringent identification factor in a shelving system is 'the upright pitch': how 'frequent' the holes are in the uprights. The pitch is the pace of the holes (from the bottom of a hole to the bottom of the hole above, typically in millimetres).

This influences immensely how 'precisely' a shelf can be positioned next to the product below.

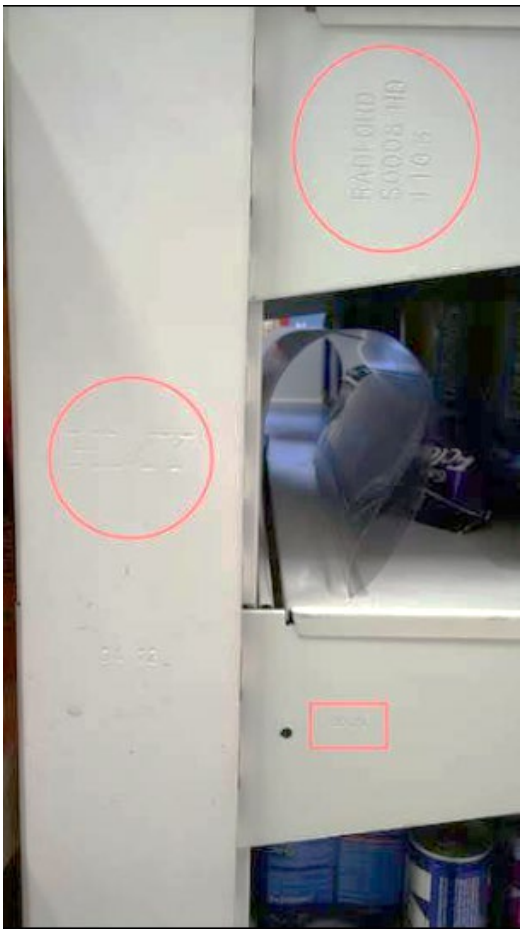
Concept 3.

The smaller the pitch
the less facing merchandising will be wasted.

6. Planograms in 50mm Compatible Shelving

In northern Europe, and specifically in the UK, 50mm shelving systems are very popular, to the point that retailers often mix and match components from different manufacturers.

Quite a few retailers committed to this 50mm shelving many years ago and now run an estate of shops using it.



Having a system already in place should not stop the search for improvements in facing merchandising: shelving & planograms are the interaction between the business and its clients, hence a relentless research for display improvements should be engaged.

Concept 4.

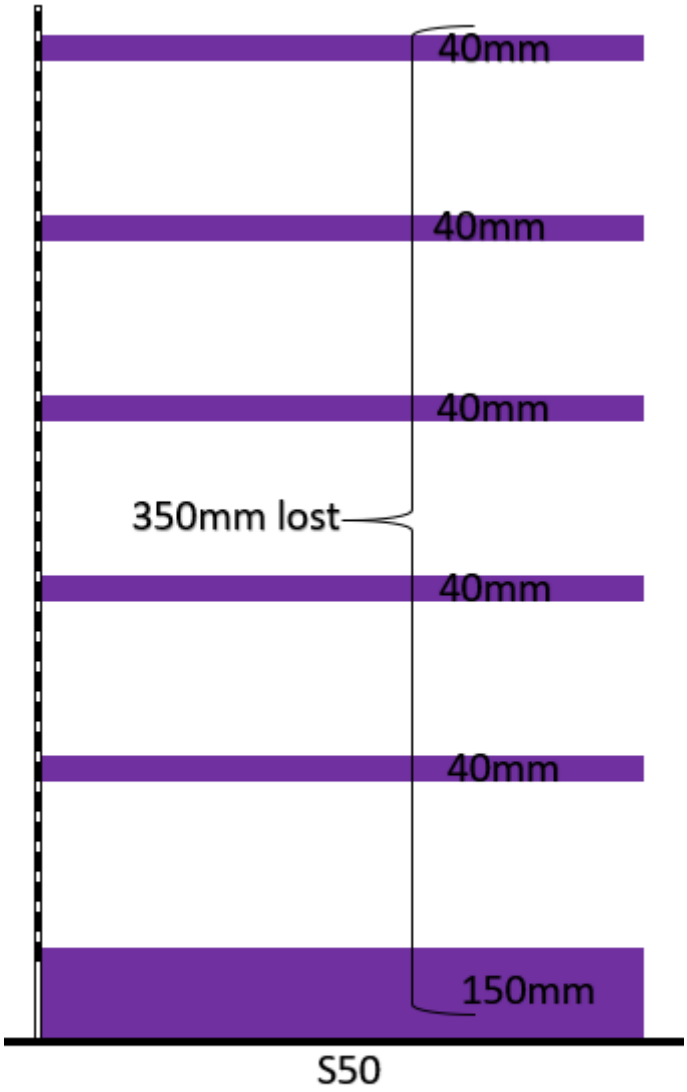
A retailer operating stores with 50mm pitch shelving can benefit immensely from shifting to a 25mm pitch shelving system.

New planograms will deliver immense value.

Older planograms will still work in both 50mm and 25mm shops.

50mm compatible shelving:

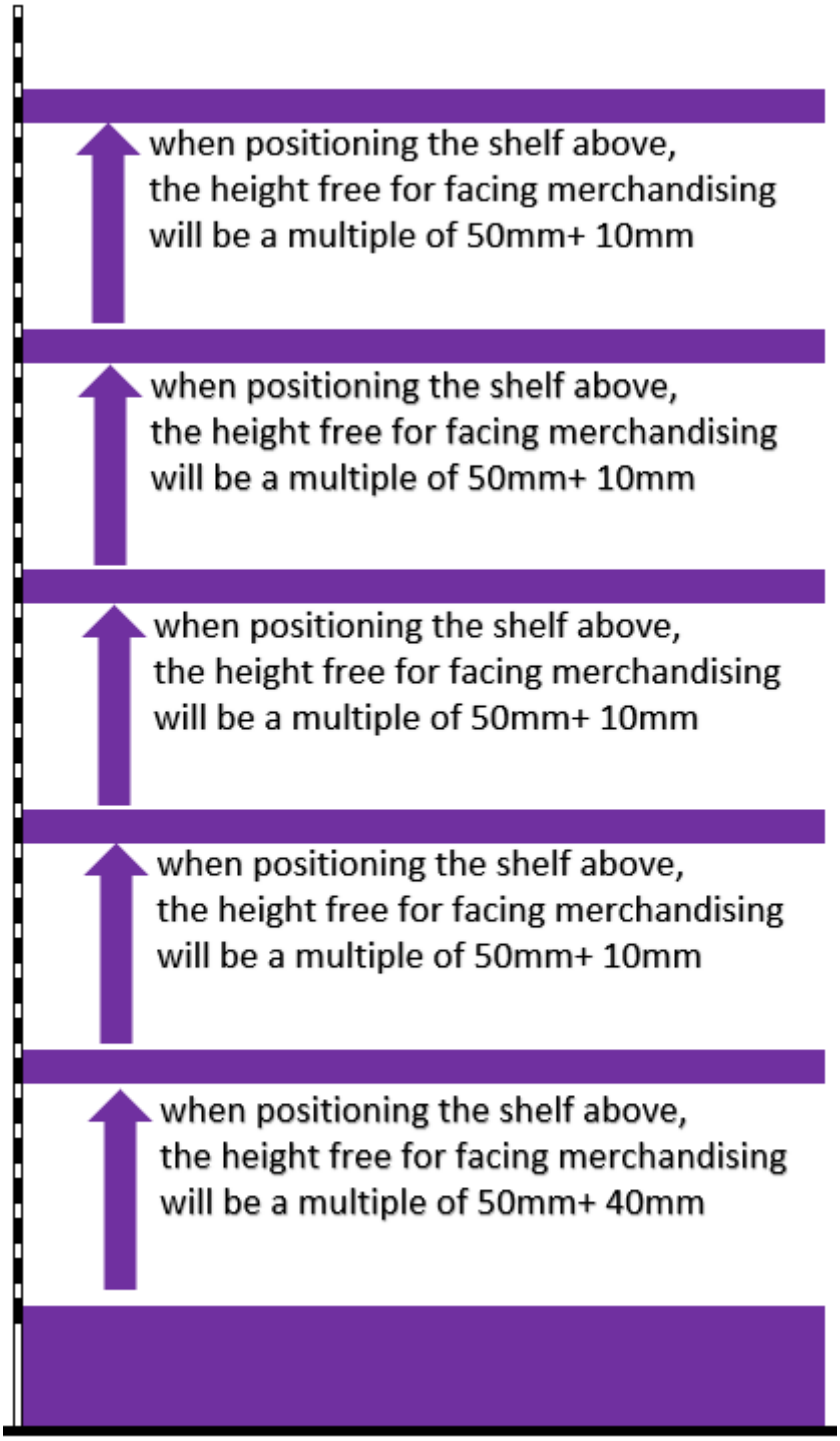
- Has 50mm upright pitch.
- Has 150mm high base.
- Has 40mm fixed height shelf due to shelf edge and ticket strip.



1800mm pickable height
-350mm used
=1450mm for merchandising

In the 50mm shelving system the height available for facings are:

- On suspended shelves, a multiple of 50mm + 10mm.
- On the base shelf, a multiple of 50mm + 40mm.

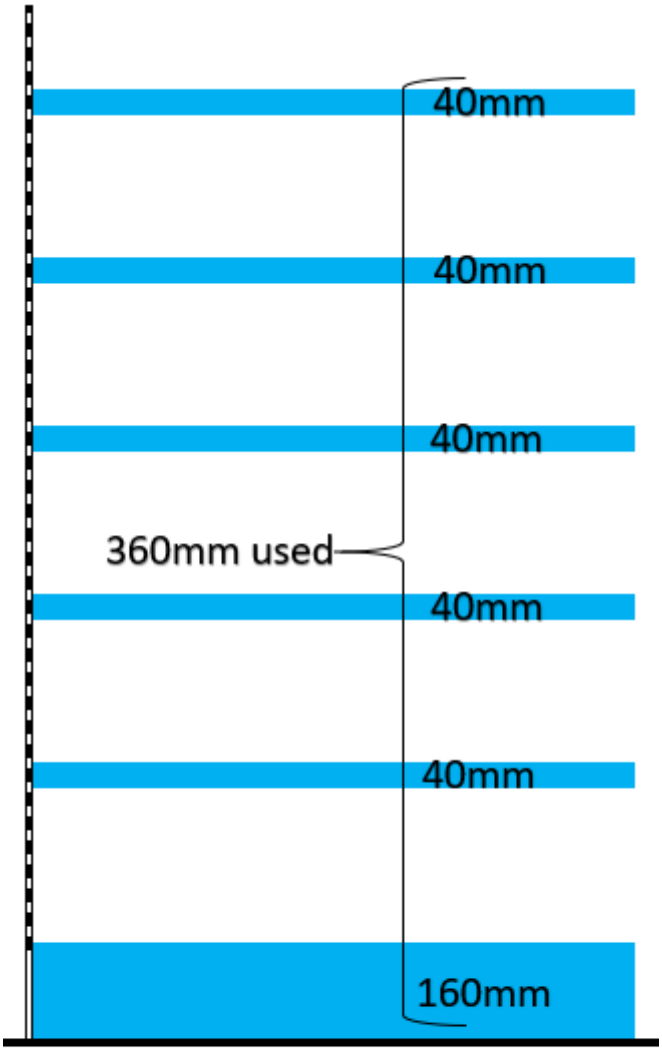


S50

7. Planograms in CAEM TN9

TN9 shelving:

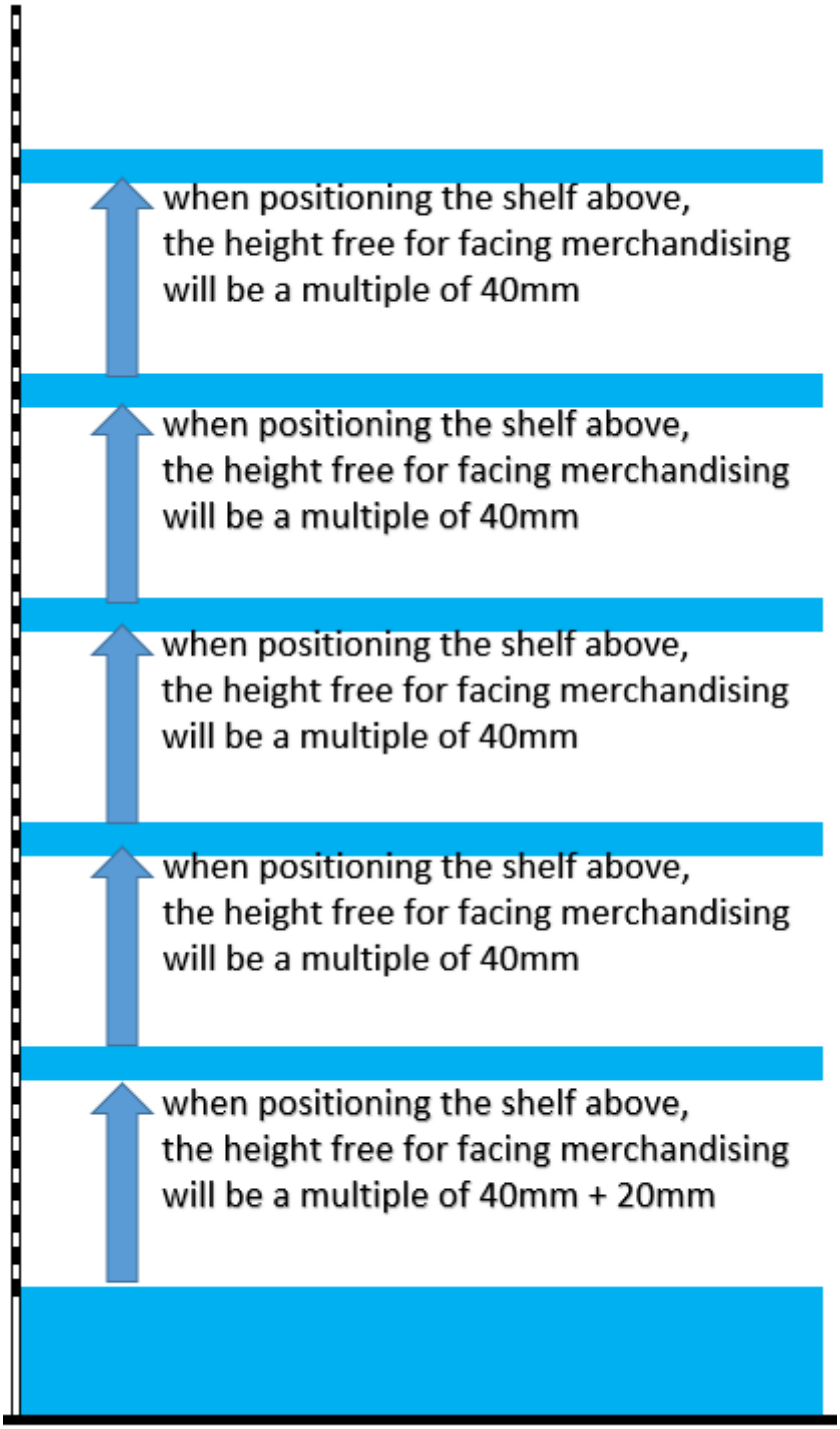
- Has 40mm upright pitch.
- Has 160mm high base.
- Has 40mm fixed height shelf due to shelf edge and ticket strip.



1800mm pickable height
-360mm used
=1440mm for merchandising

In the TN9 shelving system the height available for facings are

- On suspended shelves, a multiple of 40mm.
- On the base shelf, a multiple of 40mm + 20mm.

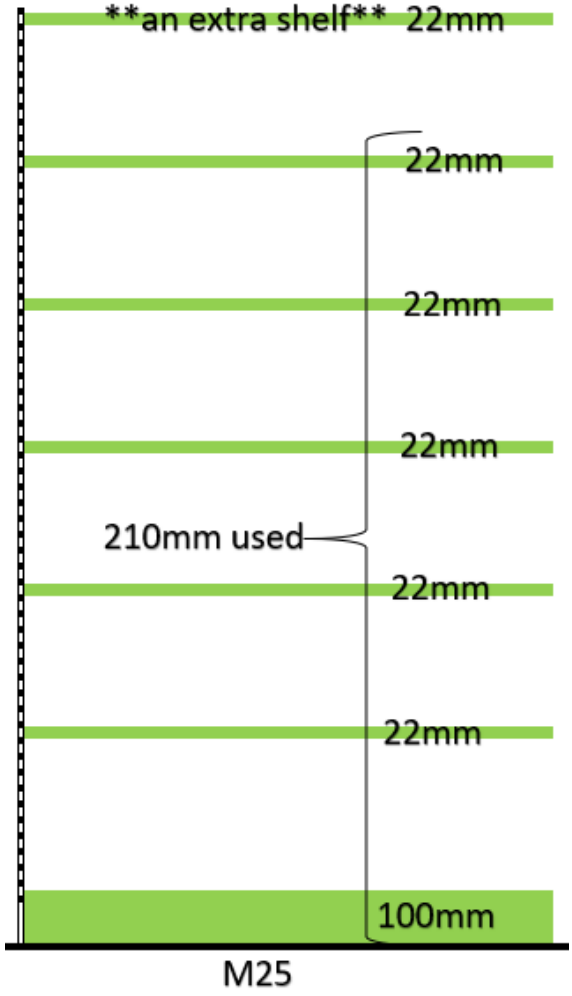


TN9

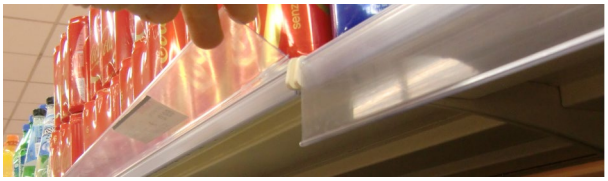
8. M25, the Best Friend of Planograms – More Space

M25 shelving:

- Has 25mm upright pitch.
- Has a 100mm high base.
- Has 22mm shelf erosion thanks to the ticket strip being hinged.

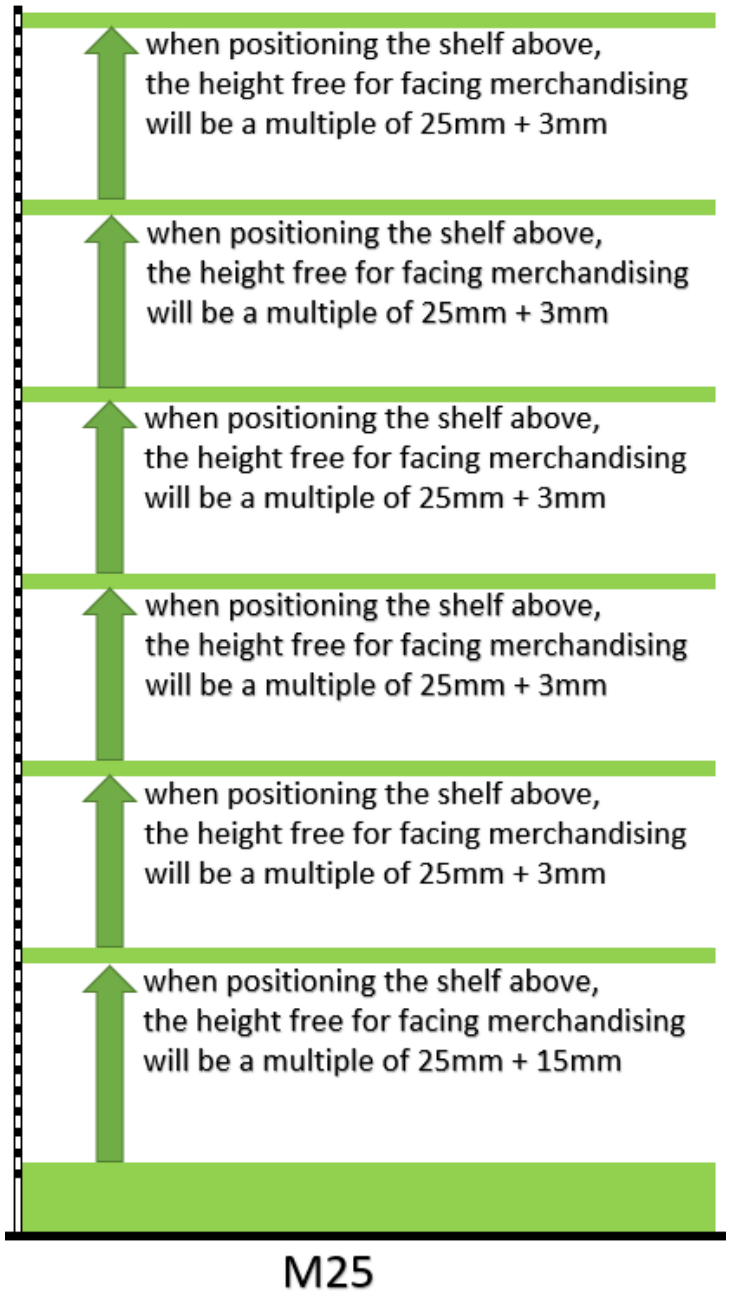


The hinging M25's epos allows products to be placed just below the shelf. When products are pulled out the strip will lift out of the way.



In the M25 shelving system the height available for facings are:

- On suspended shelves, a multiple of 25mm + 3mm.
- On the base shelf, a multiple of 25mm + 15mm.

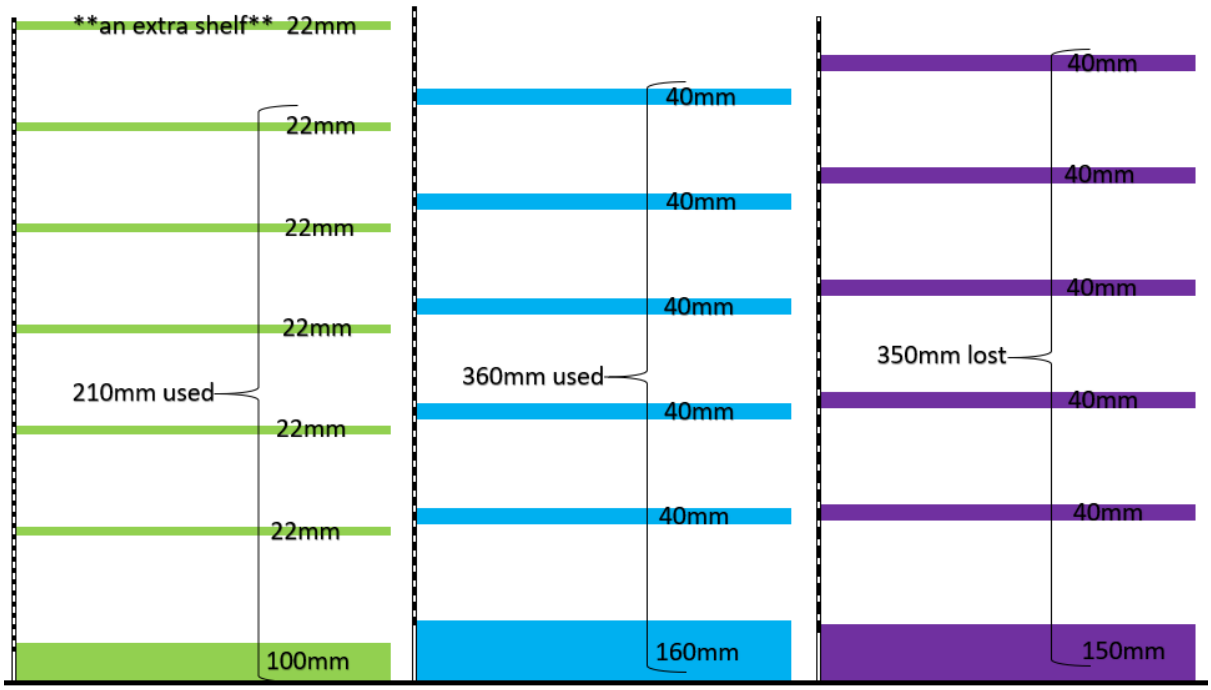


M25

9. M25, the Best Friend of Planograms – Optimised for Products

Shelving systems may all look the same, but they are not. The technical aspects will vary and more importantly so will their capacity to sell product.

Below is a quick comparison view of the three shelving systems. Consider how much facing they waste .



1800mm pickable height
-210mm used
=1590mm for merchandising

1800mm pickable height
-360mm used
=1440mm for merchandising

1800mm pickable height
-350mm used
=1450mm for merchandising

10% more than TN9
10% more than S50

It is obvious that thanks to its low base and the hinging epos, M25 delivers a much bigger facing for planogram design, hence for higher retail sales.

TN9 and S50 needed to go 'the next notch up' when positioning shelves, making it impossible to fit the extra shelf that the top below the 180cm accessible height from the floor.

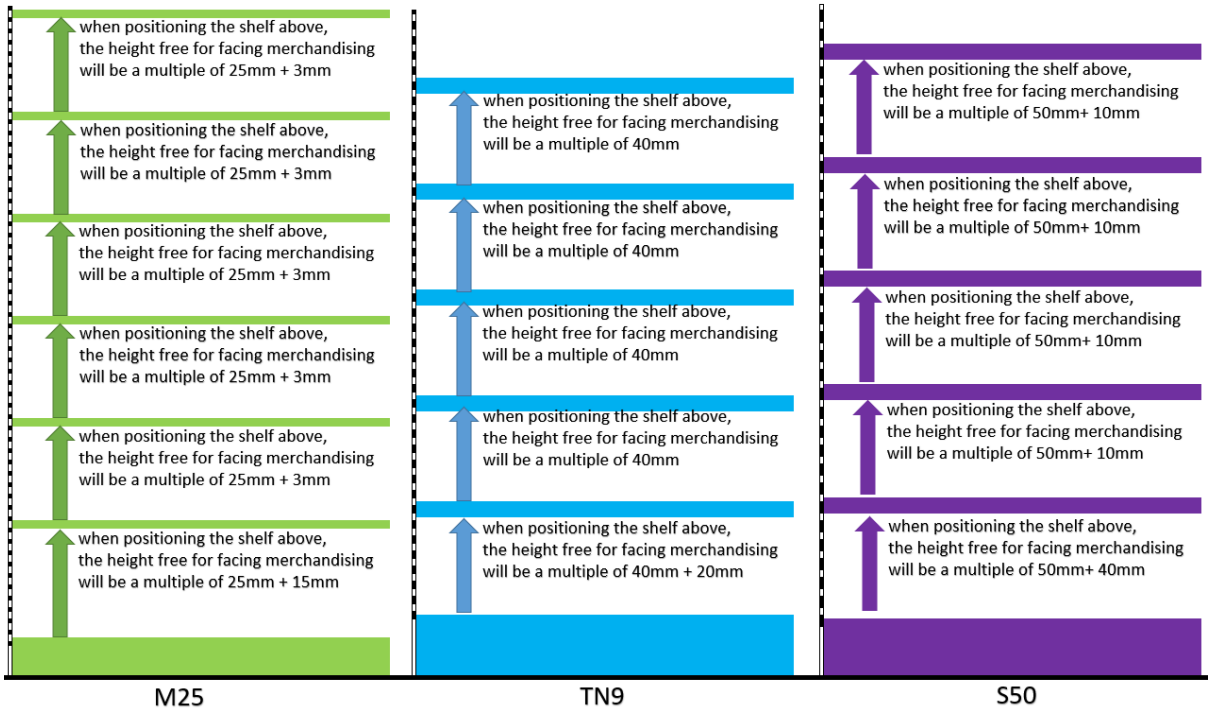
Retailers adopting M25 are claiming to be able to put "AN EXTRA SHELF ACROSS THE STORE".

10. Shelving Specifications for Planogrammers

A shelving manufacturer should specify exactly the free space available for facing merchandising: this is the performance of shelving!

Merchandisers and planogram designers should receive the sales performance of their shelving from the provider of shelving.

The comparison summary across the three shelving systems below, which includes the details of facing available to merchandisers, makes it obvious how M25 can accommodate an extra shelf.



M25 has more.

Thanks to the smaller upright pitch, it is more likely for shelves to be positioned closer to the product merchandised below.

The following chart shows how many millimetres of facing would be wasted in each shelving system depending on the height of products.

A waste equal to or bigger than 30mm is coloured red:

	M25	TN9	S50
How many times 30mm or more were wasted?	0	5 11%	15 34%

Product Height	mm of facing wasted	mm of facing wasted	mm of facing wasted
430 mm	23	10	30
425 mm	3	15	35
420 mm	8	20	40
415 mm	13	25	45
410 mm	18	30	0
405 mm	23	35	5
400 mm	3	0	10
395 mm	8	5	15
390 mm	13	10	20
385 mm	18	15	25
380 mm	23	20	30
375 mm	3	25	35
370 mm	8	30	40
365 mm	13	35	45
360 mm	18	0	0
355 mm	23	5	5
350 mm	3	10	10
345 mm	8	15	15
340 mm	13	20	20
335 mm	18	25	25
330 mm	23	30	30
325 mm	3	35	35
320 mm	8	0	40
315 mm	13	5	45
310 mm	18	10	0
305 mm	23	15	5
300 mm	3	20	10
295 mm	8	25	15
290 mm	13	30	20
285 mm	18	35	25
280 mm	23	0	30
275 mm	3	5	35
270 mm	8	10	40
265 mm	13	15	45
260 mm	18	20	0
255 mm	23	25	5
250 mm	3	30	10
245 mm	8	35	15
240 mm	13	0	20
235 mm	18	5	25
230 mm	23	10	30
225 mm	3	15	35
220 mm	8	20	40
215 mm	13	25	45

11. In practice

Shelving is used to merchandise products and ultimately obtain sales. The packaging dimensions of these products on sale vary massively. However, some shelving system will statistically offer an improved facing merchandising.

The height available for products on the base shelves often follows a different formula than those in the upper shelves.

Some shelving systems, like M25, combine a number of features to deliver more sales:

- A lower base shelf height.
- A thinner upper shelves geometry
- A hinged epos, to make the most of the height.

M25 also offers a Central Back Panel as standard, delivering more storage capacity and reduce costs of re-stocking.

The following example utilises some consumer products often found in shops; they are intentionally mixed from different categories to prove that they extra efficiency is achieved regardless of the stores' section.

With high performance gondola shelving like M25 you can obtain an extra shelf across the store. This results in more merchandising and higher sales.

Extra Shelf

7 levels

= + 17%

6 levels

M25

S50

Base Shelf; Shelf 1

M25

S50

Shelf 1; Shelf 2

M25

S50

Shelf 2; Shelf 3

M25

S50

Shelf 4; Shelf 5

BONUS: Shelf 6!

Extra Shelf

M25

S50

The combination of the 25mm pitch on the upright offering a more refined shelf height adjustment and the hinging epos, allowed products to be efficiently merchandised.

M25

M25

In S50 the same product would not fit in the same settings as M25.

S50

S50

In S50, raising the shelf 'a one hole up' in the upright was necessary. Because of its design, the shelf above went a whole 50mm above!

And this resulted in wasting valuable millimetres of facing.

S50

12. So... What Has No One Told You?

Facings are the mean by which retailers obtain sales in their brick and mortar operations. Planograms are the best practice aspect of how to display products on sale.

Shelving inherits the procurement approach of being pushed into 'a commodity', with an aim to standardise across them to reduce purchase price. This is allowing retailers to miss-out on the main reasons why shelving is bought: to sell.

Most common shelving systems might not be the best at the selling job; they might just be there because 'we did it before', which is certainly not the approach to improve a business.

Using a 50mm compatible shelving might mean you are wasting one third of your facing across all of your stores.

Implementing a transformation into a 25mm shelving an issuing new planograms opens up immense improvements in facing management.

Older planograms would of course remain valid for existing 50mm shelving stores and would work anyway in the newer 25mm shelving shops. Nothing would go wasted.

The capex of shelving is miniscule in comparison to the sales job we ask it to do over the 7 or more years of its lifespan.

Shelving should be sourced from companies with a reputation to guarantee a long lifespan, suitable weight loading and quality. But sales performance considerations should come first.