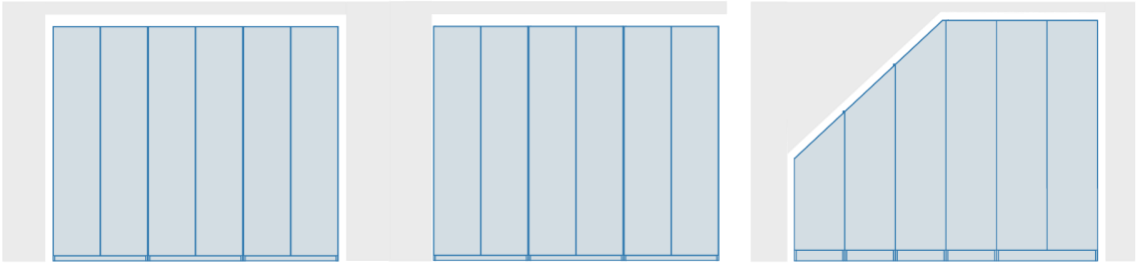
We can manufacture your cabinetry to sub-millimetre precision but to deal with building tolerances generally you should supply measurements that are under size to ensure the cabinetry will fit.

Measurement guidelines for three spaces will be examined:

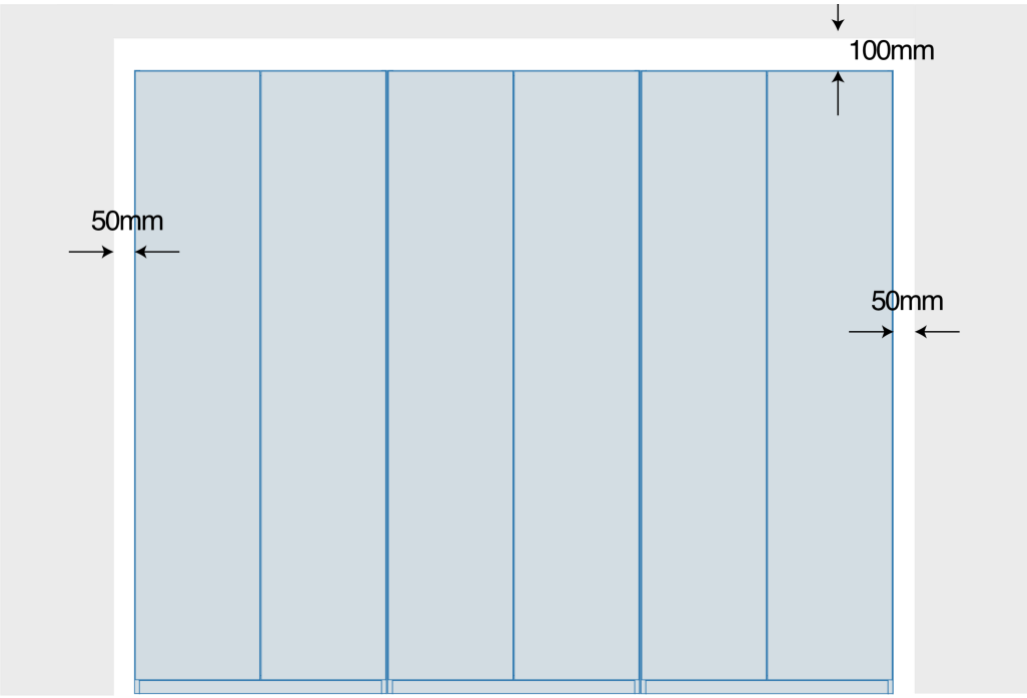
- Between two walls e.g. alcove
- Against a wall with free space at the other end
- Angled e.g. under a sloping ceiling



The measurements of the space we refer to as the ‘tight sizes’. The cabinetry sizes (the measurements we make the cabinets to) are the tight sizes after the under sizing is applied.

Space between two walls

For a run of cabinets between two walls, typically the under sizing should be 50mm left and right of the run and 100mm at the top for a floor to ceiling cabinet.



Example

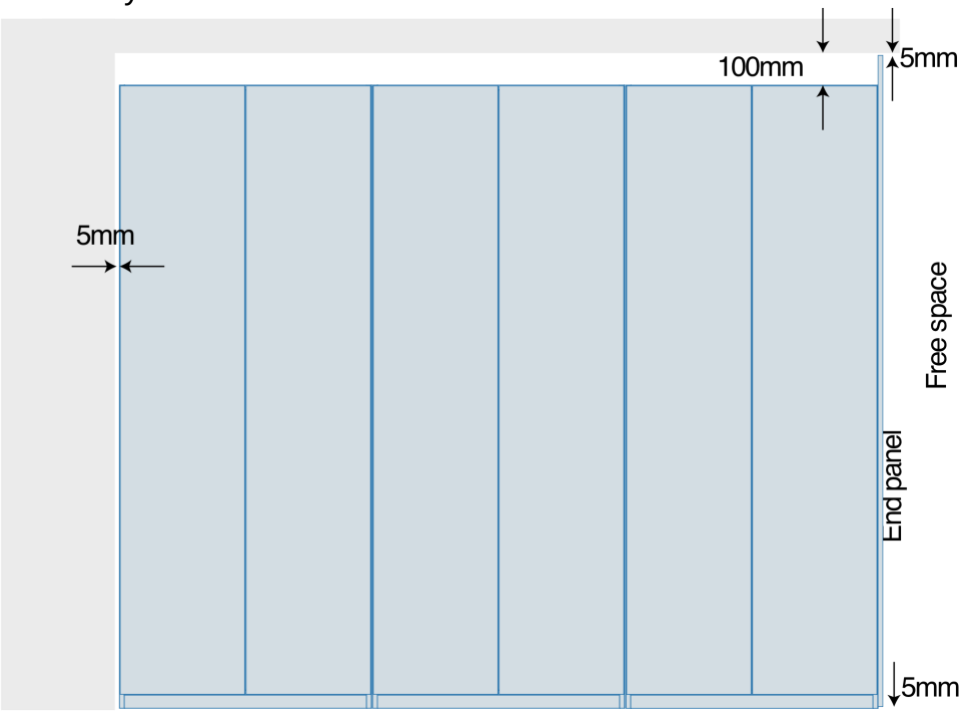
Measured space is 2400mm high, 3000mm wide.
After margins are factored in the available space will be:

2400 - 100	= 2300mm high
3000 – 2 × 50	= 2900mm wide

This space can be filled by three two door cabinets 2300mm high by 2900 ÷ 3 = 966mm wide. Each door will be around 966 ÷ 2 = 483mm wide.

Space against one wall

The width sizing in this case is less critical as any oversizing can be taken at the free end. Nonetheless at the wall end factor in a gap of at least 5mm. If all works out well at the wall/cabinet interface point then a bead of Decorator's Caulk will finish the interface neatly.



If the end side of the cabinet run will be in view you may want to add an End Panel. This panel can be oversized to cover any gap at the rear where the cabinets meet the back wall and can extend all the way up to the ceiling.
The End Panel can be trimmed to get an exact fit or - easier - allow a gap of 5mm at the top and bottom of the panel with the aim of sealing this gap with sealant or Decorator's Caulk.

Example

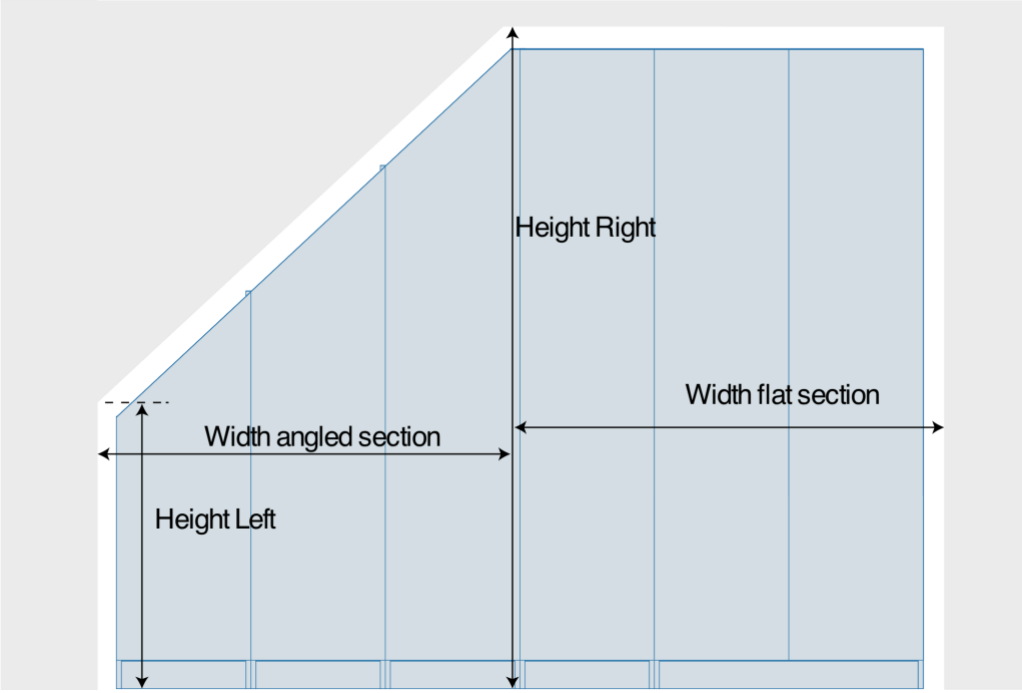
Measured space is 2400mm high, 3000mm wide.
After margins and End Panel are factored in the available space will be:

2400 - 100	= 2300mm high
3000 – 5 - 18	= 2977mm wide

This space can be filled by three two door cabinets 2300mm high by 2900 ÷ 3 = 992mm wide. Each door will be around 992 ÷ 2 = 496mm wide.

MEASURING A SPACE FOR ANGLED CABINETRY

We can calculate the angles for you from a few simple measurements. The diagram below shows the measurements needed.



When calculating the angles use the tight sizes. Then when designing the cabinets apply under-sizing but crucially use the same angle throughout.

Usually angled cabinets have one door hinged on the long side only (a door hinged on the short side would hit the ceiling when opening – the notable exception is an under-stairs installation where the doors open into free space).

In the progression of heights of an angled cabinet run, adjacent cabinets share a height measurement e.g. in the case of the diagram above the height left of the second angled cabinet is the same as the height right of the first angled cabinet.

Example

Measured space is 2400mm high, 3000mm wide.
Height Left = 1000mm
Width angled section = 1500mm
Undersizing left and right = 50mm
Undersizing top = 100mm
The unit width of each cabinet will be (3000 – 50 × 2) ÷ 6 = 483mm.
The angled cabinets are single units and the right most cabinet is a double at 966mm width.
Angled cabinet heights are calculated by our design tools and in this case the leftmost cabinet after under-sizing has dimensions:
Height left = 978.3mm, Height right = 1429.4mm, Cabinet angle = -43 degrees
The dimensions of the adjacent cabinet are:
Height left = 1429.4mm, Height right = 1880.5mm, Cabinet angle = -43 degrees
The othe cabinets continue the height progression until levelling out at 2300mm

Maximum cabinet height

We recommend a total height measurement of 100mm less than the tight height. As well as coping with an uneven ceiling this space allows for the cabinets to be rotated up into position. Usually it is easiest to assemble cabinets lying down then when the structure is fastened together the cabinet is rotated to vertical.
Phythagoras' Theorem tells us the space needed is:

$$rotated\ height = \sqrt{height^2 + depth^2}$$

Example: For a cabinet 2300mm high and 550mm deep the height space needed to rotate the cabinet into position is 2365mm.

Cabinet depth

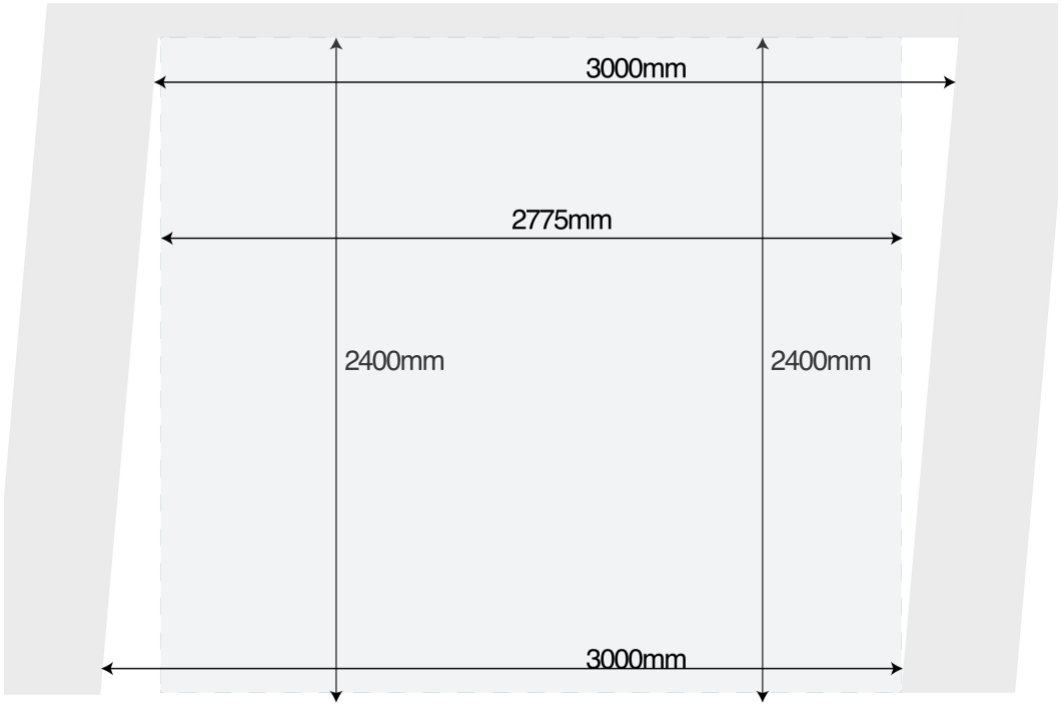
Typically a cabinet that will contain a hanging rail should be around 550mm deep. Absolute minimum is around 450mm but then you should expect that the door/back panel may come into contact with a coat hanger hanging from the rail.
With our cabinet designs the back panel is inset into the cabinet depth. Therefore for a cabinet 550mm deep, once the thickness of the back panel is factored in the usable depth is 550-18 = 532mm.

ACCURATE MEASUREMENTS AND THE NEED NOT TO RELY ON THEM

It can be very hard to take measurements to millimetre accuracy. One example is when the space to fill appears rectangular, straight and true but actually has the form of a rhombus.

The apparent space when measured is 2400mm high by 3000mm wide. However the slanting of the space means that the largest rectangular structure that would fit within is 2400mm high by 2775mm wide (this is an extreme example for illustration purposes!)

Cabinet maker's cover themselves against this type of situation by measuring the diagonals to check they are equal. Easier to do is to measure how much each wall is out of plumb and factor that into your under-sizing.



SCRIBE PIECES

We can supply scribe pieces to cover the gaps introduced by under-sizing. For example if you undersize by 50mm we can supply a scribe piece 70mm wide which you then trim to get the perfect interface between cabinet and wall.

DIVIDING UP THE SPACE

One you have decided the overall measurements you are working to, then you can consider the sizes of each cabinet in your design.

Dividing horizontally

In the examples above we have divided the horizontal space equally. Generally for hinged doors you want the space divided into multiples of between 400mm and 700mm. The 400mm suggestion is a minimum elective usable width for a hinged cabinet and 700mm is a suggested upper limit when maximum recommended door widths are considered.
Sliding doors have higher upper limits of around 1000mm width per door.

Dividing vertically

A typical UK floor to ceiling measurement is 2400mm and the suggested usable height is 2300mm. If you have a 50mm high plinth this makes each door around 2250mm in height.
One school of thought on utilising space is to put a drawer or two at the bottom of a cabinet, the rationale being that the bottom of a wardrobe attracts lost items whereas converting it to a drawer greatly increases usability.
Similarly the top of a wardrobe around the 1900mm upwards region is difficult to access so this is a good candidate for adding a small door of around 400mm height or a pull down wardrobe rail.

BUILDING TOLERANCES

There is a magnitude of difference between acceptable tolerances for building work as compared to cabinetry. Basically building work involves aiming for plumb and true but the final result is driven on looking right particularly when new work meets old.

What follows is a list of reasons for why a wall/ceiling/floor may not be plumb and true. All points are arguable but the underlying message is all building structures - even newly built - will have a tolerance.

- Bulges and hollows in hand finished plaster (+/-5mm)
- Different plaster thicknesses between top and bottom of a wall (+/-25mm)
- As above but due to underlying modifications to the wall over a period of time (+/-30mm)
- Building movement (+/-30mm)
- In a stud wall the plasterboard follows bends in the timber used for studs (+/-10mm)
- Different amounts of adhesive used behind plasterboard for ‘dot and dab’ drylined walls (+/-10mm)
- Suspended floors sag the further you get from the walls (-25mm)
- Plasterboard ceilings sag between joists (-25mm)

FINAL WORD ON THESE 'RULES'

We've stated these rules, now feel free to break them.
Following our guidelines helps to ensure that the installation goes smoothly.
However sometimes customers have particular design objectives. For example they want to use the absolute maximum room height available and are happy that this will involve building the cabinets in the vertical. Or the width of scribe pieces is reduced to the bare minimum (20mm). The aim of this guide is to ensure you do this from a position of knowledge.
Of course we have seen instances where purposely or not a cabinet has ended up too big for a space. With bespoke cabinetry there is always some kind of solution even if it is not apparent initially! However the solution can be very time consuming.