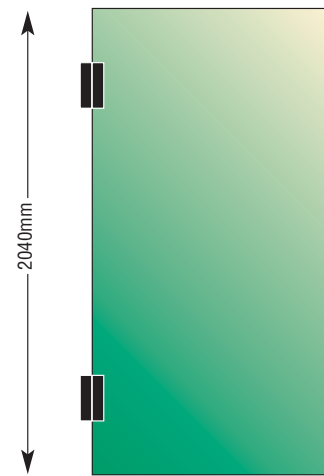
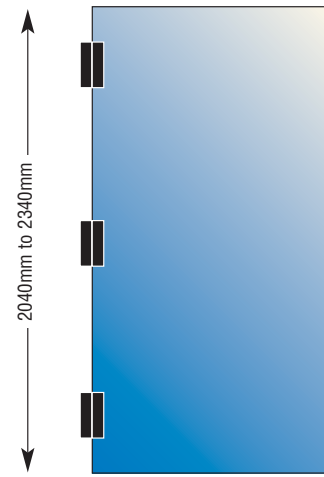


Builders Hinges General Guide

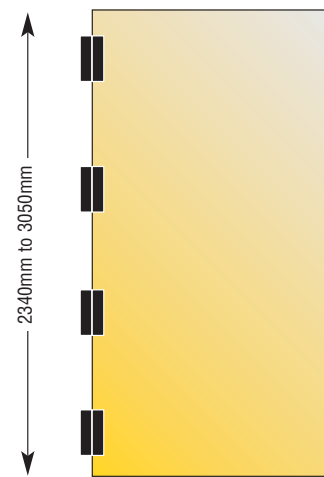
How many hinges to fit a door



Use two hinges for average doors up to 2040 mm in height.



For doors over 2040 mm in height and under 2340 mm high use three hinges.



Doors over 2340 mm high and under 3050 mm high require four hinges.

Doors with closers are subjected to greater forces and stress than standard free hung and free swinging doors. Loading on the top hinge is much higher than normal. It is recommended that a minimum of three hinges be used. The extra hinge will assist in taking the extra load caused by the closer.



Builders Hinges General Guide

Choosing the right hinge length

Hinges are described by their length. A 70 mm hinge is 70 mm long. The length of the hinge you choose for fixing a door is determined by the width, thickness and height of the door. The table below shows the most suitable steel hinge lengths for various door sizes:

Thickness of Door	Width of door	Length of Butt hinge	Length of Non mortice hinge
19 to 28 mm cabinet doors	to 620 mm	70 mm	75 mm
22 to 28 mm screen doors	to 920 mm	70 mm	75 mm
28 to 35 mm	to 820 mm	85 mm	90 mm
28 to 38 mm	to 940 mm	100 mm	100 mm
40 to 50 mm	to 920 mm	100 mm	100 mm

Metric and Imperial sizes

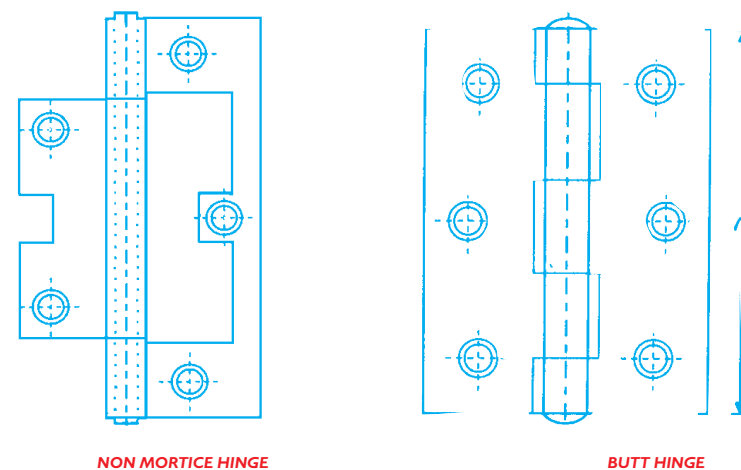
Steel and stainless steel butt hinges are true "metric" sizes. This includes 35., 50, 70, 85 and 100 mm sizes. Brass butt hinges are imported and made to imperial measurements although when their size is quoted nominal metric measurements are quoted. Non Mortice hinges although Australian made are also made to imperial sizes. A comparison of the metric versus imperial measurements for non mortice hinges is shown below:

True size in inches	Nominal size in metric	True metric measurement
2"	50 mm	50.8 mm
2 1/2"	65 mm	63.5 mm
3"	75 mm	76.2 mm
3 1/2"	90 mm	88.9 mm
4"	100 mm	101.6 mm

Choosing - Butt hinges or Non Mortice hinges

Non mortice hinges have a clear advantage in that they are easy to fit and save time. Time is saved in that there is no need to rebate the wood in order to fit the hinge. This time saving is attractive to tradesmen while the ease of fitting appeals to the DIY market. The smaller 50 and 65 mm non mortice hinges are more often used for cabinet work.

Butt hinges offer conventional appearance. These are the most common hinge type used for door fixing. Because they are rebated into the wood butt hinges can offer additional strength and resist stress caused by door closers. Butt hinges are also available in broad butt pattern which offer wide throw features and are much stronger than standard narrow pattern hinges. Butt hinges are available in brass and stainless steel which is a consideration in areas where salt water or exposure to corrosion is a factor.



Builders Hinges Features and Benefits

Fixed versus loose pin hinges

Most hinges used for structural doorways are loose pin hinges. This means that the pin can be removed for ease of fitting or later maintenance of the door.

Sizes of loose pin hinges for this purpose are:

- Steel Butt hinges - 70, 85 and 100 mm
- Non Mortice hinges - 75, 90 and 100 mm.

Loose pin hinges should never be used on exterior or security doors which open out. When these circumstances arise fixed pin hinges are recommended. Smaller fixed pin hinges are ideal for cabinet making uses. Sizes are:

- Steel butt hinges: 35 and 50 mm
- Brass Butt hinge: 25, 38 and 50 mm
- Non mortice hinges: 50 and 65 mm

Non Mortice hinges - flat & centred profile

Non mortice hinges in sizes 50 through 100 mm are available as a standard flat profile pattern. A centred pattern is generally more popular for 75 through to 100 mm sizes. The choice of centred rather than flat profile is dependant on the individual preference of the user.

Diagrams of both patterns are shown below:

Centred Profile Non Mortice Hinge



Flat Profile Non Mortice Hinge



Choosing - Steel, Stainless or Brass hinges

Steel hinges are economical, reliable and can be plated to provide finishes which appeal to the home owner. Standard finishes include:

- **Bright steel** - the hinge is supplied with a light oil coating which provides temporary protection. These are best coated with paint when installed.
- **Brass plated** - an electronic brass coating is applied to the steel. This gives an attractive finish but offers little protection against corrosion.
- **Florentine Bronze** - a darker powder coated finish but once again offering little protection against corrosion.
- **Zinc plating** - a coating of zinc is applied to the steel giving some protection against corrosion.

Standard steel butt and non mortice hinges work well in most conditions across Australia however in coastal areas or where exposure to salt water or continued moist conditions other materials are recommended.

Stainless steel is steel with anti-corrosive additives. The prime additive is chrome which does not rust. However stainless steel will stain though it is not readily stained.

It is the anti corrosion features which make it attractive to use in areas where moisture or corrosion is a problem. Stainless steel used in Zenith hinges is 3042B non rust stainless steel.

Brass hinges also offer anti rust features and again they will tarnish over a period of time.

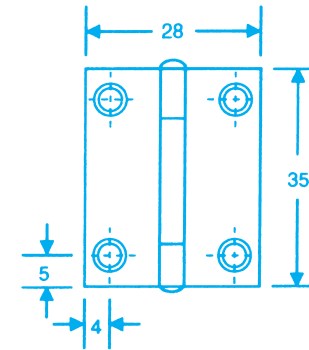
Australian made steel used in all butt and non mortice hinges.

Chemical composition	Guaranteed minimum %
Carbon (C)	0.15
Phosphorus (P)	0.04
Manganese (Mn)	0.60
Sulphur	0.04

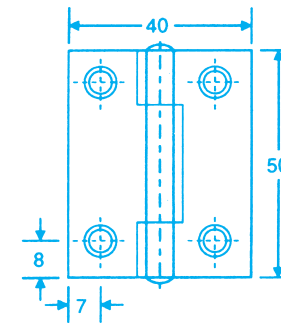
Choosing the right fixing screws

Due to the wide variety of final applications for each hinge fixing screws are not supplied with Zenith hinges. However we are able to provide a full range of bulk and prepacked screws, including special hinge screws. (Minimum standard fixing screw data is included for all products on the product data sheets.)

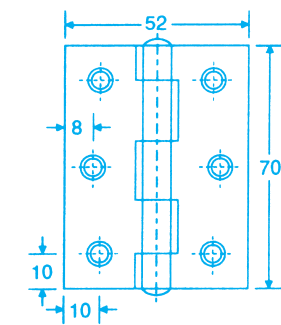
Butt Hinges - Metric, Steel, Fixed Pin



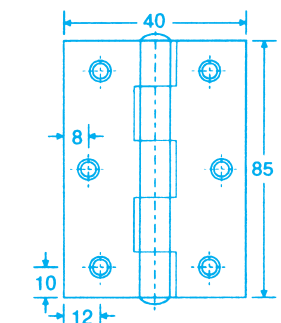
Size	35mm
Pin type	Fixed
Screw Hole Size	4 gauge x 16mm
Pack	20



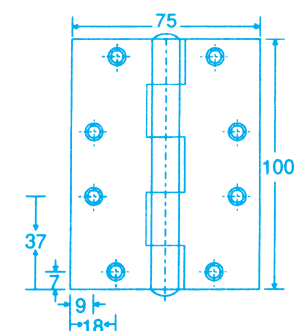
Size	50mm
Pin type	Fixed
Screw Hole Size	4 gauge x 20mm
Pack	20



Size	70mm
Pin type	Loose / Fixed
Screw Hole Size	6 gauge x 20mm
Pack	20

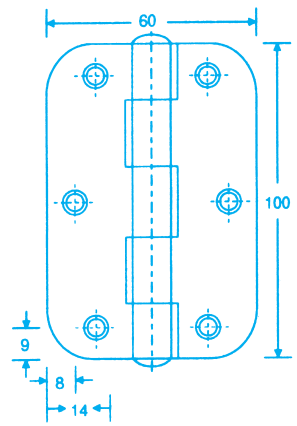


Size	85mm
Pin type	Loose / Fixed
Screw Hole Size	8 gauge x 25mm
Pack	20

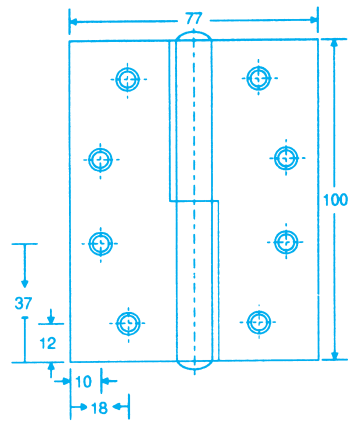


Size	100mm
Pin type	Loose / Fixed
Screw Hole Size	8 gauge x 25mm
Pack	20

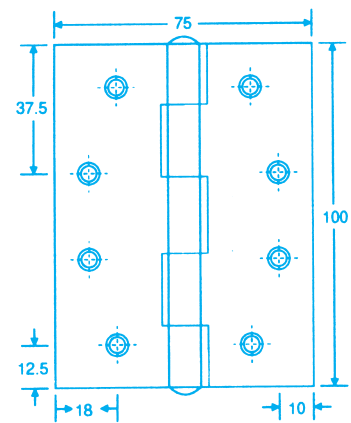
Broad & Radius Butt, Lift off Hinges



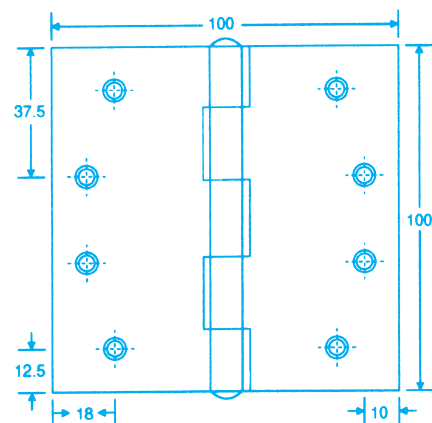
Size	90mm
Pin type	Loose
Screw Hole Size	8 gauge x 20mm
Pack	50



Size	100mm
Pin type	Loose
Screw Hole Size	8 gauge x 25mm
Pack	20

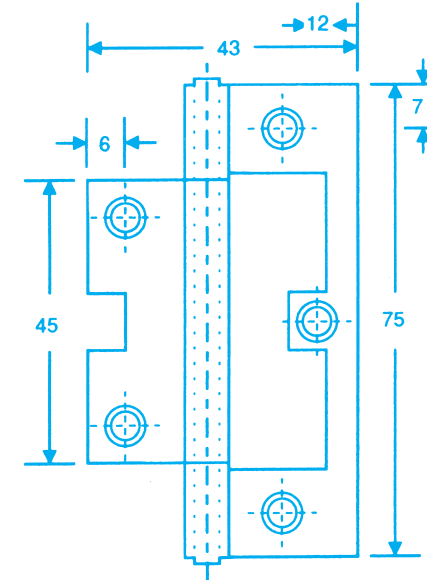


Size	100mm x 75mm
Pin type	Loose / Fixed
Screw Hole Size	9 gauge x 25mm
Pack	20

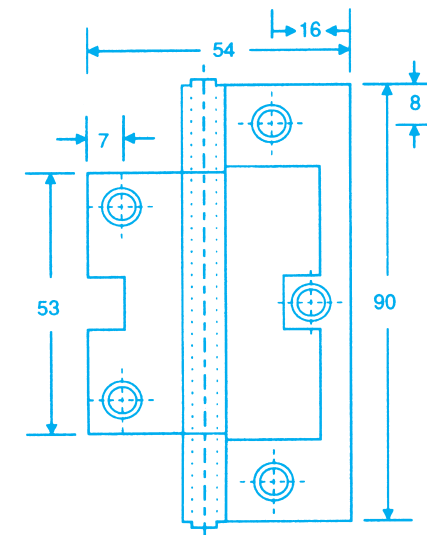


Size	100mm x 100mm
Pin type	Loose / Fixed
Screw Hole Size	10 gauge x 25mm
Pack	20

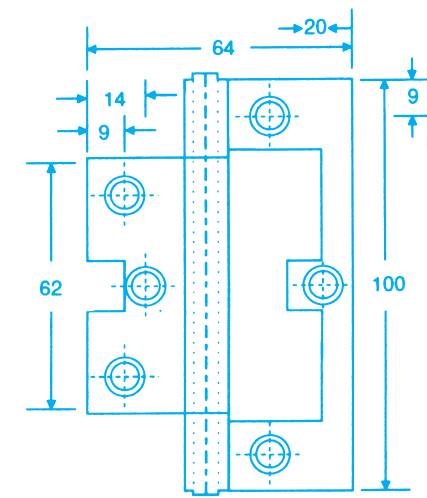
Non Mortice Hinges - Flat Profile



Size	75mm
Pin type	Loose
Screw Hole Size	4 gauge x 20mm
Profile	Flat / Centred
Pack	20

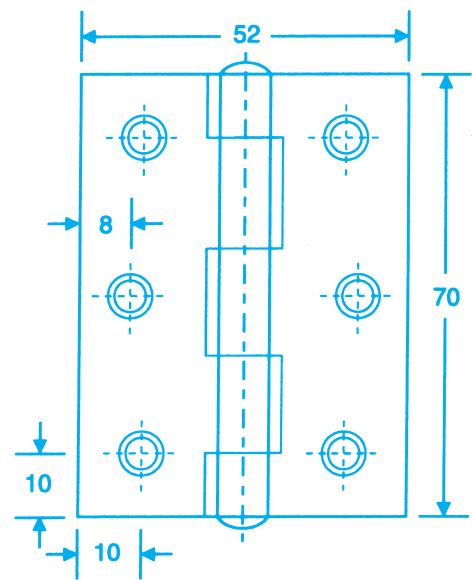


Size	90mm
Pin type	Fixed / Loose
Screw Hole Size	8 gauge x 25mm
Profile	Flat / Centred
Pack	20

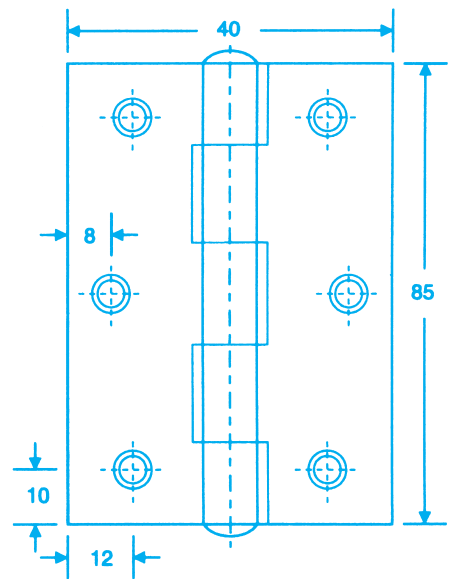


Size	100mm
Pin type	Fixed / Loose
Screw Hole Size	8 gauge x 25mm
Profile	Flat / Centred
Pack	20

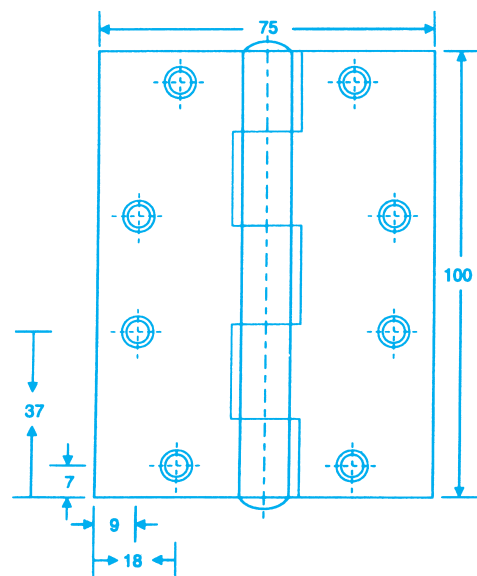
Butt Hinges - Metric, Steel, Loose Pin



Size	70mm
Pin type	Loose
Screw Hole Size	6 gauge x 20mm
Pack	20



Size	85mm
Pin type	Loose
Screw Hole Size	8 gauge x 20mm
Pack	20



Size	100mm
Pin type	Loose
Screw Hole Size	8 gauge x 25mm
Pack	20