

DOOR HINGES



**COMMERCIAL
HARDWARE**

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Hinges

A BRIEF GUIDE TO HINGES

STANDARD DOORS

- Is it a fire, smoke or emergency escape door?
- The size and weight of the door?
- Is it an internal or external door; is it near the coast or in a swimming pool?
- Is it to be used in an office environment with minimal use or for higher volume traffic such as a hospital, school or shopping centre?
- Is there any other door hardware to be fitted that may affect performance (ie door closer, door stops).

FORCES OPERATING ON A DOOR

There are two main forces that the hinge has to cope with. The vertical load; and, as hinged doors are side-hung, the horizontal or lateral load.

The **vertical load** is a direct result of the gross door weight.

The **horizontal load** is created by:

- The door weight
- The door height to width ratio
- Where the hinges are positioned.

The wider the door is in relation to its height, the greater the side load that the hinges and their fixings have to support.

ADJUSTED DOOR WEIGHT

Hinge specification is also determined by the adjusted door weight. We recommend wherever possible to refer to the actual weight supplied by the door manufacturer.

Adjusted door weight calculation table			
Actual Door Weight	Doors of excess width, please refer to Side Loading Calculation table		= Adjusted Door Weight
	Door Closer	+20%	
	Door Closer (Backcheck)	+75%	
	Extra Heavy Use Light Use	+10% -10%	

Fig.1

STANDARD DOORS

The standard positioning when fitting three hinges to a door. This gives the most effective load bearing capability.

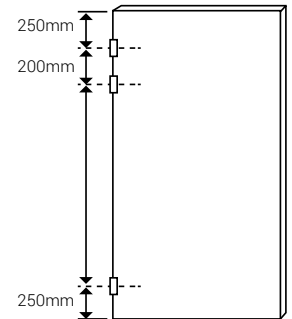


Fig.2

LIGHTWEIGHT DOORS

Three hinges may be fitted as shown. On doors subject to warping (such as glazed doors), fit a third hinge at the centre of the door.

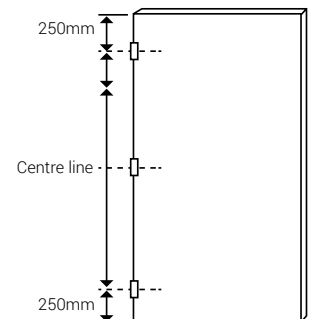


Fig.3

HEAVY DOORS

When load bearing is the prime consideration, fit four hinges as shown.

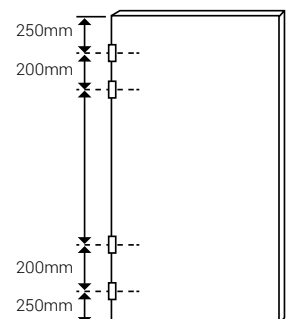
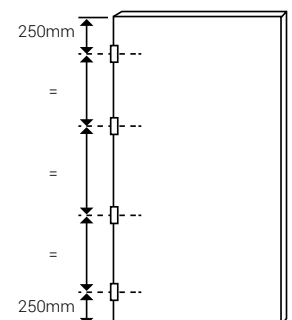


Fig.4

TALL DOORS (OVER 2100MM)

On all door or those which are particularly subject to warping (such as glazed doors) fit four hinges equally spaced, as shown.



Hinges

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Ball Bearing Hinge

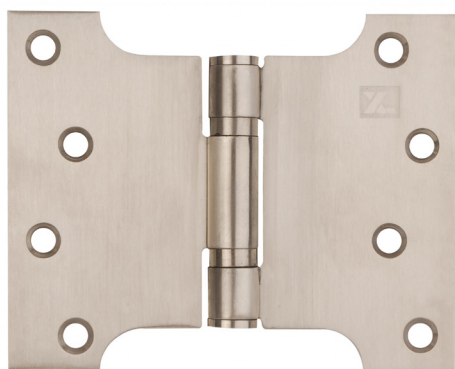
Features:

- BS EN 1935 : 2002 Grade 13
- 76 x 50 x 2mm
- 102 x 76 x 3mm
- Radius & Squared Profiles
- Complete with fixings

Finishes:



SSS, PB, PSS, PCB



Parliament Hinge

Features:

- Available in various sizes
- Complete with fixings

Finishes:



SSS, PB, PC

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Finishes:



SSS, PB, PSS

Lift-Off Hinge

Features:

- BS EN 1935 : 2002 Grade 11
- 102 x 76 x 3mm
- Stainless steel
- Lift-off hinge
- Left & Right Handed available
- Radius Profile
- Complete with fixings



Finishes:



SSS, PB

Rising Butt Hinge

Features:

- 76 x 50 x 2mm
- 102 x 76 x 2.5mm
- Left & Right Handed available
- Complete with fixings

Square Pivot Hinge



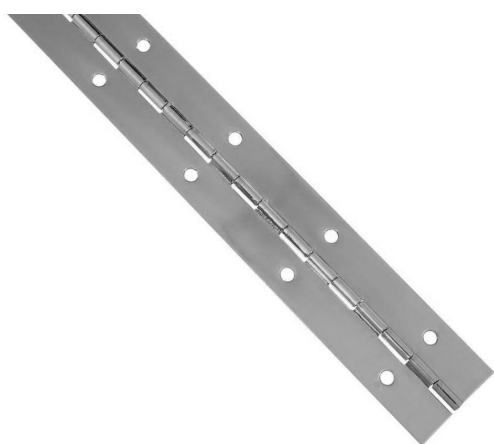
Features:

- Grade 304 Stainless steel
- Designed to allow the door to open outwards in the case of an emergency
- Use with Pivot Emergency Release
- Maximum door weight 80kg

Finishes:



SSS



Piano Hinge

Features:

- Complete with fixings
- Available in various sizes

Finishes:

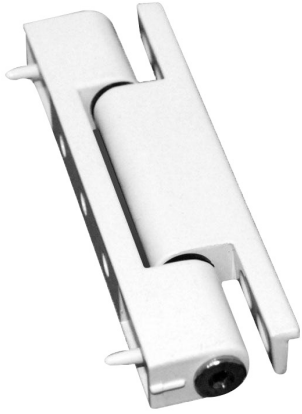


SSS, PB, PSS

Hinges

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UPVC Butt Hinge



Finishes:



WHT, BR, BLK

Features:

- Available in flat and angled formats
- Up to 1.5mm of adjustment to cater for all weather-seal types
- 115mm Hinge
- Removable pin for ease of assembly with security grub screw

Mini 3D Hinge



Finishes:



WHT, BR, BLK, PC, G

Features:

- 3 way adjustment combining product excellence with ease of fabrication
- Simple allen key adjustment enables door movement to be compensated