

SOSS concealed hinges

The SOSS principle: smooth, streamlined, strong, secure and stable.

The appeal of SOSS concealed hinges is not limited to their unobtrusive looks. Once installed, they're so firmly anchored in the door jamb and frame that locating screws are relieved of much of the strain of supporting the door.

The extensive range of SOSS hinges caters for almost every eventuality, from light duty applications such as cupboards to heavy-duty use for weighty conventional timber and cumbersome metal doors.

The SOSS Type 218F hinge, is suitable for inclusion within a 1/2 hour fire doorset and the all stainless steel 218 SS has passed a one hour fire test.

Materials

SOSS hinges are manufactured to standard finishes:

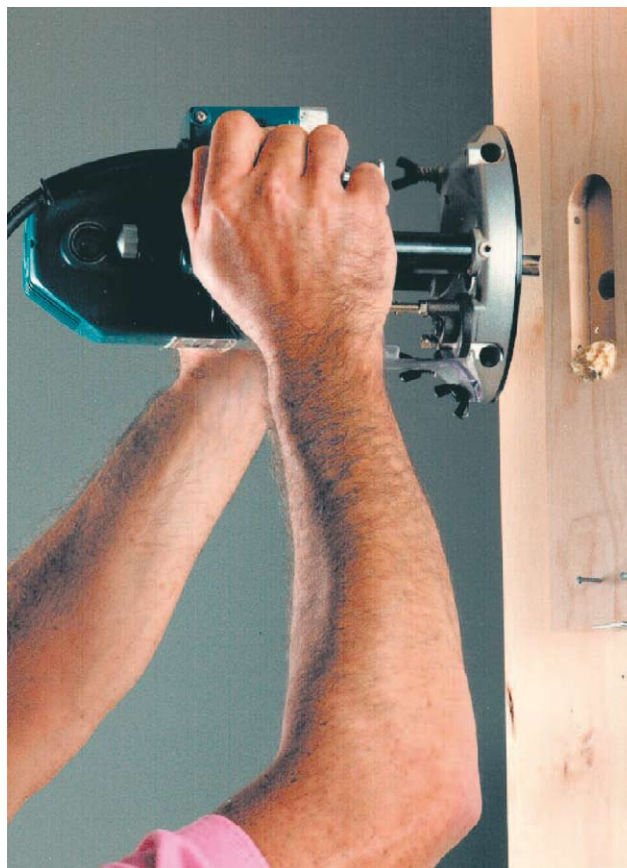
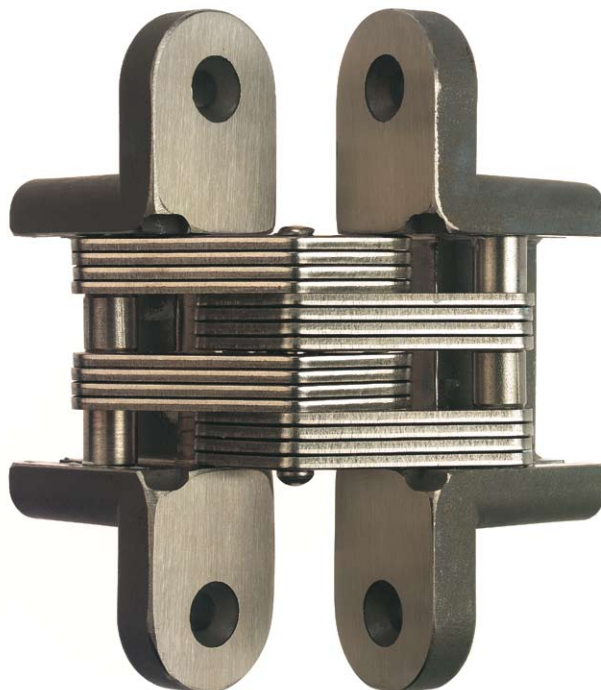
Brass, Nickel (bright or satin) Zinc, Zinc passivate & Black passivate. Pins, rollers and links can all be custom-made in stainless steel if their application and exposure warrants it. Moreover, hinges can also be supplied to order in a variety of other finishes. If you don't see the finish you want then please ask.

SOSS hinges are manufactured in 12 different sizes. Those suitable where traditional doors are specified are Types 212, 216, 218 and 220. Of these, Type 218F (the fire-rated model) is the most commonly used and the one utilised in combination with a spring-loaded closer.

Door closers

Standard spring-loaded closers provide a totally concealed method of automatically shutting a door. By concealing the mechanism within the door, unsightly overhead ironmongery can be eliminated. Furthermore, SOSS closers reduce or eliminate slamming.

The closer hinge is designed to operate only in conjunction with the Type 218 hinge. Suitable for fitting to doors of up to ~~50kg~~ 50kg in weight, the closer is necessarily manufactured in brass or nickel only and can be 1/2 hour fire-rated if required.

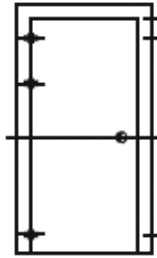


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SOSS Hinges & accurate fitting

Fitting your SOSS hinges with a template will ensure that a perfectly routed shape is easily achieved. The aluminium routing jig is designed to act as an almost universal base-plate into which precision templates for most SOSS hinges can be slotted and changed as required saving fitting time while allowing an accurate, professional installation. Alternatively, separate dedicated templates are available.

The spacing of hinges is critical to the correct functioning of the door (see diagram). As with traditional hinges, fitting a doorstop too close to the hinge face can cause excessive leverage and damage may result.



Selecting the appropriate hinge

The number of SOSS hinges required for a door are simply calculated from the tables (right).

Given the weight, width and thickness of a door, the tables combine to identify the number of hinges required. When used in conjunction with a spring-loaded door closer (Type 218 hinge only), the number of hinges required is reduced by one, replaced with the closer hinge.

Step-by-step guide to calculating how many hinges you need:

- Determine the width, thickness and weight of the door.
- Starting with the door width on the left hand side of Table 1, draw a line through the appropriate weight on the right hand side.
- Continue the line up towards Table 2.
- Where the diagonal intersects with Table 2, draw a horizontal line across to the shaded columns, which indicates the door thickness.
- The number of hinges (either 2, 3 or 4) is shown in the shaded areas and, at the foot of the column, the relevant hinge type. At the top is shown the minimum door thickness for each hinge size. Thicker doors are not a problem, the hinge is positioned relative to the door face.



Table 1

Door Width mm	Door Weight kg
100	225
200	180
300	135
500	90
700	70
900	45
1250	35
1750	25
	15
	10
	7
	5

Table 2

	Minimum Door Thickness (mm)			
	28	35	41	48
4 x hinges			4x	
3 x hinges			3x	
2 x hinges			2x	
	212	216	218	220

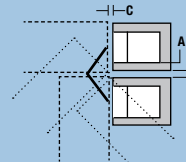
In this example, a 760mm wide door which weighs 90kg and has a thickness of 41mm would require 4 x Type 218 hinges.

4 x hinges
3 x hinges
2 x hinges

SPECIFICATIONS	MEDIUM DUTY		HEAVY DUTY	
HINGE NOS.	212	216	218	220
	mm	mm	mm	mm
LENGTH	95.3	117.5	117.5	140
WIDTH	19	25.4	28.6	35
DEPTH OF PLATE	9.5	12	10.3	11.9
MINIMUM THICKNESS OF WOOD/METAL SECTION	28	35	41.3	47.5
DEPTH OF MORTISE	27	36.5	40.5	49.2
CLEARANCE WHEN OPEN	13.5	18.3	22.2	27
SIZE OF WOOD SCREWS	4.5 x 30mm	No.6 x 40mm	4.5 x 40mm	5.5 x 50mm

PATHS & CLEARANCES OF DOORS

The diagram on the right shows the typical path of SOSS hinged door. The table shows the door clearance when fully opened for each SOSS hinge.



HINGE No.	A mm	B mm	C mm
212	4.8	4.0	1.2
216	6.4	5.5	1.6
218	6.4	9.5	1.6
220	9.5	8.0	1.6

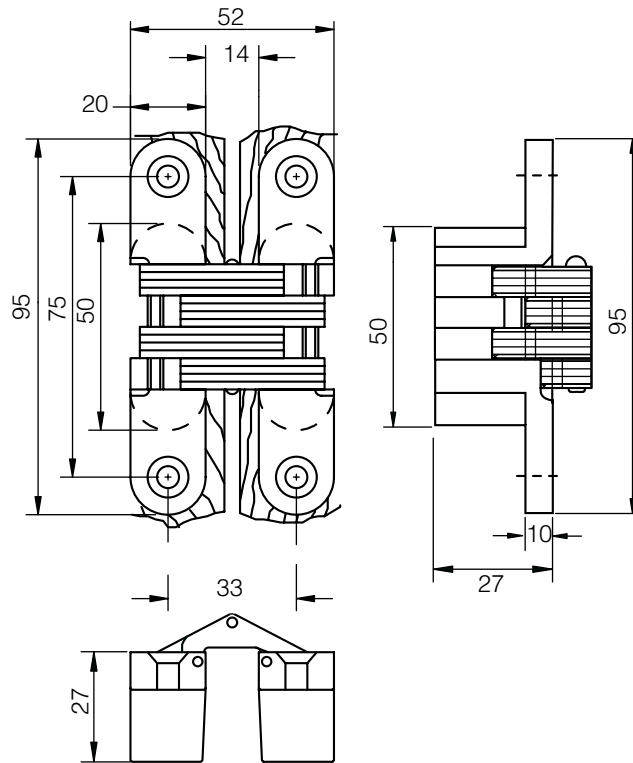
Please note: Hinge may be offset in mounting but dimension A must not be exceeded.

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- 212-STD-BP Standard – Brass Plated
- 212-STD-NP Standard – Nickel Plated

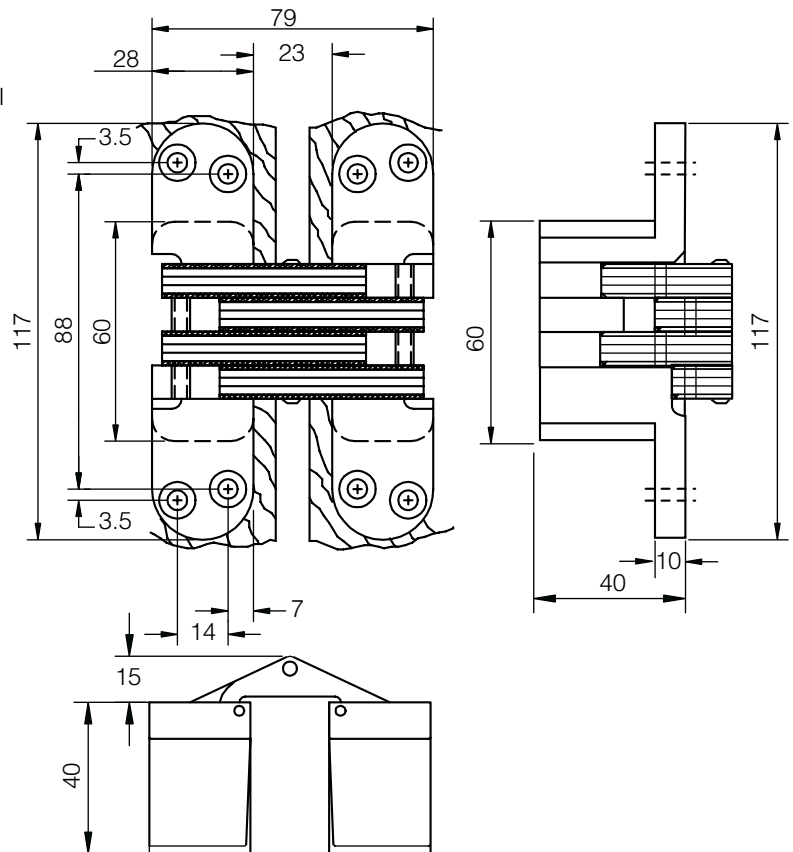
- 216-STD-BP Standard – Brass Plated
- 216-STD-NP Standard – Nickel Plated



- 218-FIRE-BP 30 Minute Fire Rated – Brass Plated
- 218-FIRE-NP 30 Minute Fire Rated – Nickel Plated
- 218-FIRE-SS 60 Minute Fire Rated – Stainless Steel

218-SSL-NP Stainless Steel Link and Pins
Standard Body – Nickel Plated

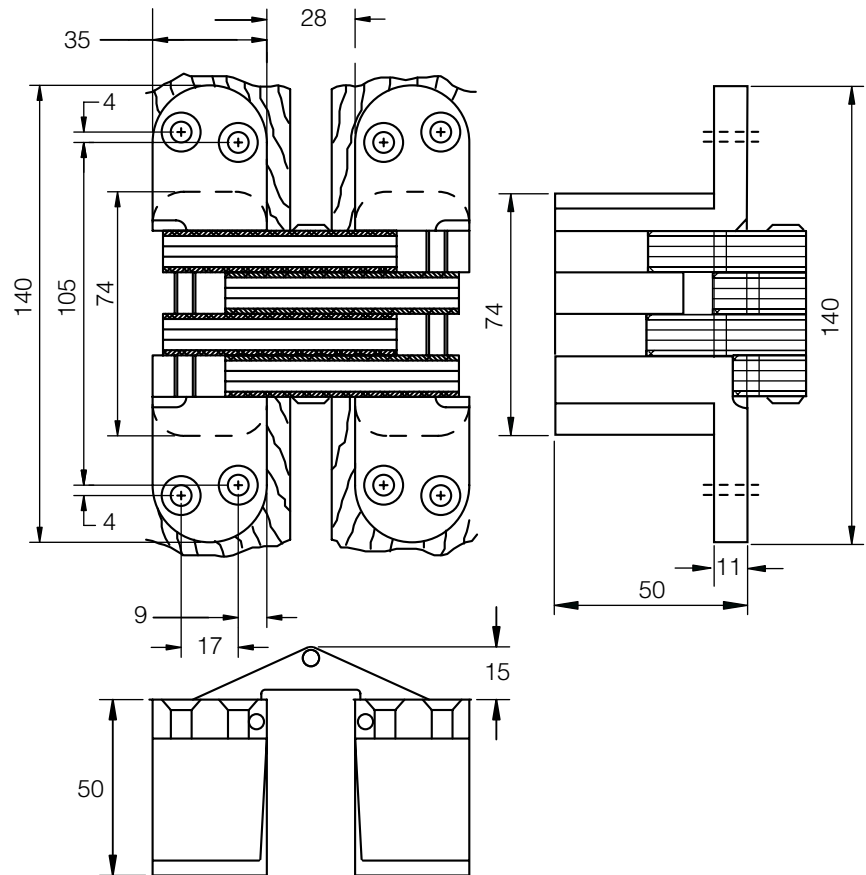
- 218-STD-BP Standard – Brass Plated
- 218-STD-NP Standard – Nickel Plated



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220-STD-BP Standard – Brass Plated
220-STD-NP Standard – Nickel Plated



218-CLOSER-BP Integral Closer NON Fire Rated – Brass Plated
218-CLOSER-NP Integral Closer NON Fire Rated – Nickel Plated
218-FCLOSER-BP Integral Closer 30 Minute Fire Rated – Brass Plated
218-FCLOSER-NP Integral Closer 30 Minute Fire Rated – Nickel Plated

Routing Jigs and Templates for Hire/Purchase

JIG-TEMPLATE Aluminium Routing Jig
212-TEMPLATE 212 Hinge Template
216-TEMPLATE 216 Hinge Template
218-TEMPLATE 218 Hinge Template
220-TEMPLATE 220 Hinge Template

To hire: the purchase price less 15% will be credited on return of jigs and templates in good condition