CUSTOM HINGES

ENDLESS POSSIBILITES

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08 8243 2277

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ABOUT CUSTOM HINGES

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CUSTOM INDUSTRIAL HINGES

At Custom Hinges, our manufacturer has over 20 years experience and proud to product makers including defense and building industry. Our hinges and other access hardware solutions offer unmatched quality and longevity, and we can work with our customers to provide custom hardware manufacturing to suit any application. High-quality, durable hinges are vital for tolerances and functionality, and we provides a variety of industrial hinges to suit any need.

The function of a door or lid relies on its hinges: without high-quality hinges, any door or lid will eventually become useless. We manufacture our hinges to an exacting standard of quality, and if you're looking for specific requirements to fit the unique needs of your product, we also offer product development, design engineering, prototyping, 3D printing, off-tool samples, supply chain and cost management, and manufacturing. Our patented engineers will work with you to understand the exact needs of the project and delivery requirements, then design a custom-made hinge using the optimum material, hinge design, and finish to provide ideal performance and longevity from the prototype to the finished product.

At Custom Hinges, we are committed to quality, service, value, and innovation, and we proudly offer high-value products at competitive prices. Contact us today to learn more about our industrial hinges or to start discussing your custom hinge manufacturing needs. We look forward to hearing from you.

THE TYPES OF INDUSTRIES WE ARE SUPPLYING

1. Meter Box Manufacturers
2. Metal Fabricators
3. Door Manufacturers
4. Sheet metal Fabricators
5. Stainless Steel Fabricators
6. Truck Trailer Manufacturers
7. Camper trailer Manufacturers
8. Road Sign Manufacturers
9. Truck Trailer Signs
10. General Hardware
11. Horse Float Manufacturers
12. Trailer Manufacturers
13. Some Outdoor Furniture Stores
14. Locker Manufacturers
15. Bus Companies
16. Defense Contract Companies
17. Engineering Shops

PRODUCT OVERVIEW

08 8243 2277 tim@customhinges.com.au

CONTINUOUS HINGES

LIFT-OFF HINGES

BUTT HINGES

MARINE HINGES

MISCELLANEOUS HINGES

ENCLOSURE HINGES

PINS HINGES

SPRING HINGES

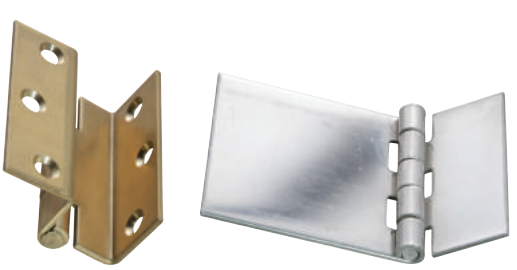
STOP HINGES

STRAP HINGES

T-HINGES

WELD-ON HINGES

DOUBLE KNUCKLE HINGES



ODD LEAF HINGES

FLIP SIGN HINGES

EXCERPTS FROM A GUIDE FOR SELECTING CONTINUOUS HINGES

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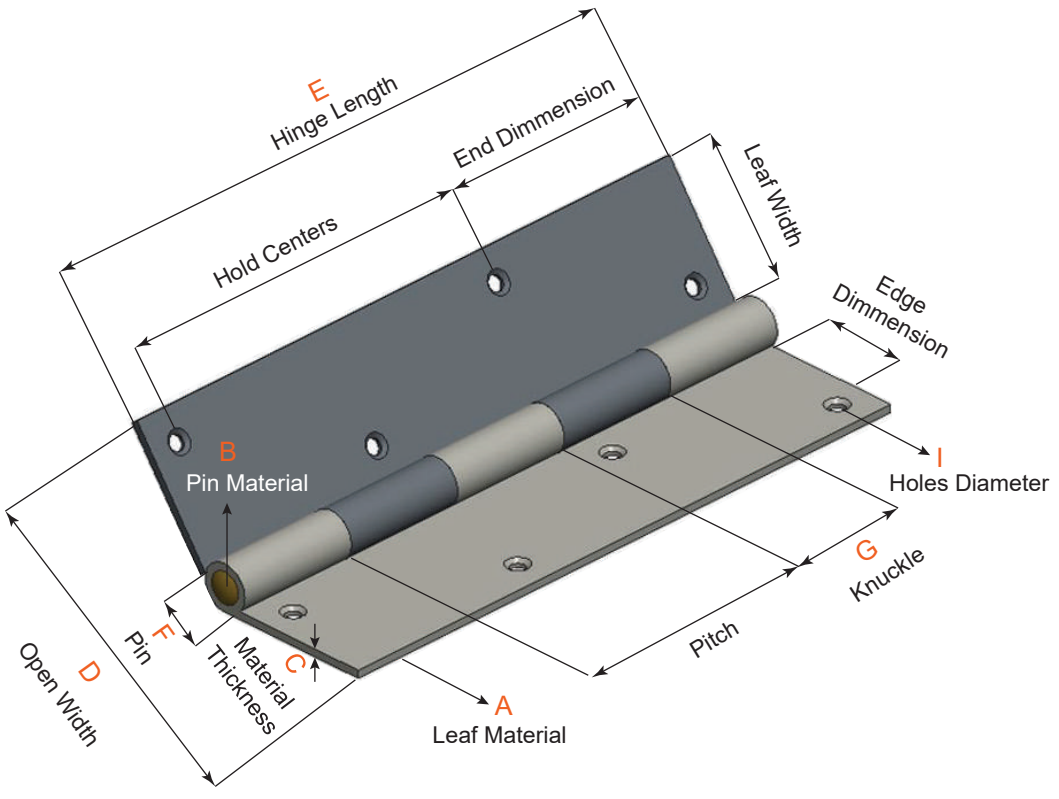
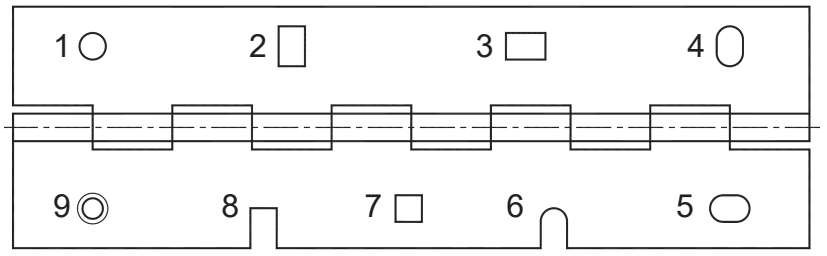


A LEAF MATERIAL	B PIN MATERIAL	SPECIAL SERVICES	ITEM	MATERIAL C MATERIAL THICKNESS	MATERIAL D OPEN WIDTH	MATERIAL E HINGE LENGTH	PIN & KNUCKLE F PIN DIAMETER	PIN & KNUCKLE G KNUCKLE LENGTH
1. Mild Steel 2. Stainless Steel 304 2B Finish, BA Finish 316 Grade 3. Galvabond 4. Zincannealed 5. Aluminium Mill Grade 6. Brass (1800 only) 7. Copper	1. Mild Steel 2. Stainless Steel 304/316 Grade 3. Galvabond	1. Designing, Manufacturing and Cropping to Special Required Lengths 2. Oddleg Hinges and Special Open Widths 3. Punching of holes and slots 4. Bending 5. Notching 6. Swaging 7. Countersinking	1	0.9	25 - 160	50 - 2400	3.18	16.67
			2	1.2	25 - 160	50 - 2400	3.18	16.67
			3	1.5	38 - 450	75 - 3000	4.76 or 5.0	25
			4	2	40 - 450	75 - 3000	4.76 or 5.0	25
			5	3	60 - 148	150 - 2400	6.35	50
			6	4	60 - 178	150 - 2400	10	50

K



HOLES I HOLDS DIAMETER	HOLES K TYPES
Any Sizes	1. Round 2. Rectangular (Vertical) 3. Rentangular (Horizontal) 4. Obround (Vertical) 5. Obround (Horizontal) 6. Notch (Radius End) 7. Square 8. Notch (Square End) 9. Countersunk

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GENERAL

The criteria in this guide is based upon yield load and not upon ultimate load (failure). The ratio of ultimate load to yield load is at least 1.5 for all hinges and is a natural safety factor. Impact or shock loads are not included.

Additional safety factors should be considered based on the material requirement. Generally harder materials, or metals, result in stronger hinges.

STRENGTH FACTORS

Hinges are strongest in horizontal stress when the forces are applied perpendicular to the hinge pin.

Hinges are weakest in vertical stress when the forces are applied parallel to the pin.

In horizontal load, the strength per unit of length is constant. The longer the hinge, the stronger it will be.

In vertical load, strength increases with the square of the length.

As the hinge leaf thickness increases, hinge strength increases.

As the diameter of the hinge pin is reduced, hinge strength increases provided the pin diameter is not reduced below twice the thickness of the leaf.

Under vertical stress, shorter hinge knuckles provide greater strength.

RECOMMENDED SELECTION CRITERIA

When applicable, use a hinge thickness approximately the same as the material to which the hinge is to be attached.

Select hinges with the smallest possible knuckle length and having at least 10 knuckles.

Choose a hinge having the smallest pin diameter (see 3.5) available for the hinge thickness selected.

Apply a hinge with the knuckles always out if the hinge is to be used under horizontal stress only.

Lubricating hinges weakens them by a factor of about 25%. Allow a safety factor of 25% if hinges are to be lubricated. Using this application, the strength will not vary with the angle of opening.

CONTINUOUS HINGE TERMINOLOGY

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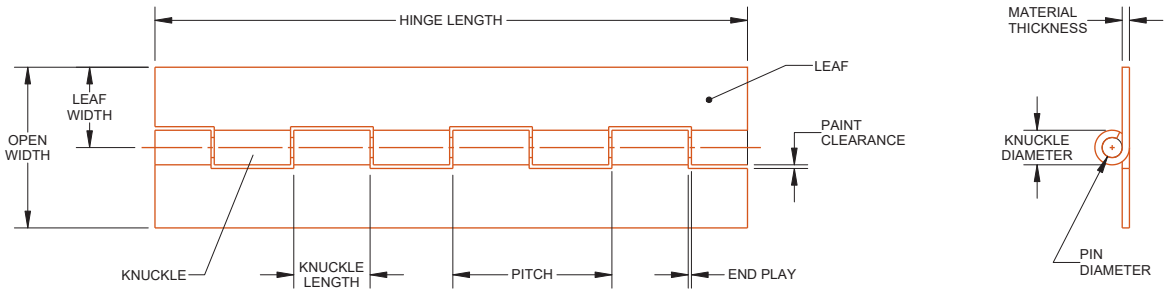
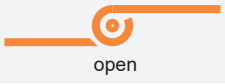
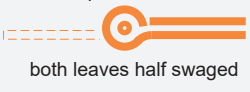
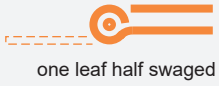
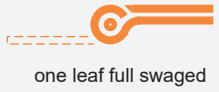
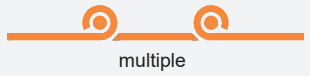
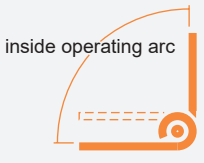
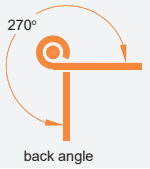


Material Thickness	The thickness of the hinge leaf.
Leaf	The portion of a hinge extending laterally from the knuckle and which usually revolves around a pin.
Open Width	The overall dimension of the leaves measured perpendicular to, or across, the pin.
Knuckle	The hollow circular part at the joint of a hinge through which a pin is passed. The knuckle is often called a loop, joint, node or curl.
Knuckle Diameter	The outside diameter of the knuckle.
Pitch	The dimension from a point on the knuckle to the same point on an adjacent knuckle on the same leaf.
Paint Clearance	The minimum dimension between the outer face of the knuckle and the opposing edge of the cutout over the hinge's entire range of pivotal movement.
End Play	The amount of axial movement between the leaves.
Plain or Standard Assembly	This is a surface-type hinge. The leaves lie at in the same plane when in the open position. Unless otherwise indicated, this type of hinge will be furnished. 
Reverse Assembly	Neither leaf swaged. Opposing leaves extend laterally from opposite sides of pin. Leaves will not close to parallel position. 
Swaging	The forming of one or both leaves toward or beyond the center of the pin. Swaging slightly increases leaf width. 
Both Leaves Half-Swaged	Both leaves are swaged approximately one-half the pin diameter with a minimum clearance between leaves when parallel. 

One Leaf Half-Swaged	One leaf swaged one-half the pin diameter. 
One Leaf Full-Swaged	One leaf swaged equal to the pin diameter. Both leaves parallel when in a closed position. 
Reversed Swaged	One leaf swaged to simulate reversed assembly. Leaves will not close to a parallel position. 
Offset	Forming one or both leaves away from the center of the pin. Offsetting slightly decreases leaf width. 
Multiple	This hinge has two pins or more for special applications. 
Stop Hinge	A hinge manufactured to limit the travel of the leaves to a specifed angle.
Inside Stop Hinge	Leaves will open from a closed position, leaves parallel to each other, to a stop angle as specifed. 
Outside Stop Hinge	Leaves move from an open or flat position and stop at a specifed angle. 
Back Angle	Usual maximum arc of 270° which varies from series to series and can be changed for custom applications.  back angle

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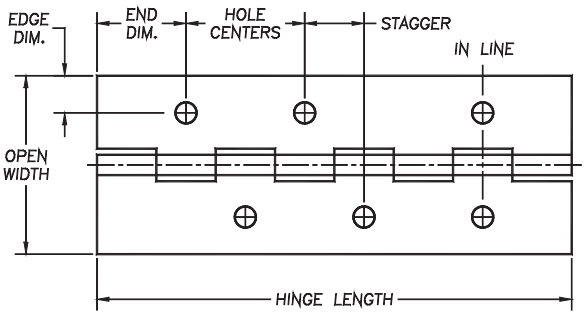
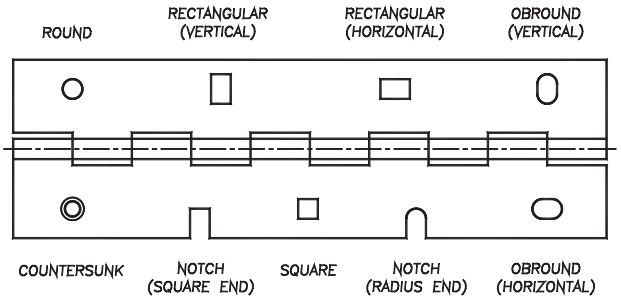




Hole Locations
A sketch or sample showing their locations is usually required for quoting. Please submit your drawing or print.

Holes

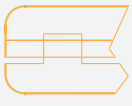
Many designs for perforating are available. When ordering or requesting a quotation, include: hinge dimension, hole diameter and type, hole centers, edge dimensions. Ask about any standard hole patterns. Above are several common perforating designs.

Notched Leaves

Some of the more commonly used designs are:


corners notched

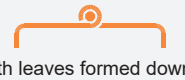

angled corners

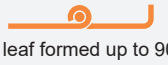

radius corners


complete corners notched

Formed Leaves

Formed hinge leaves can be supplied in a variety of configurations (including those illustrated here). Dimensions should be taken from the pin center line and inside of forms. Unless otherwise indicated, the inside radius of the form is the same as the material thickness.

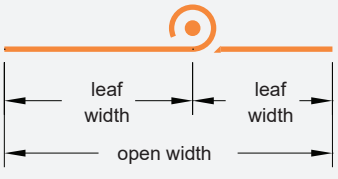

both leaves formed down 90°


one leaf formed up to 90°


both leaves formed up 90°

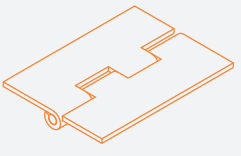
Unequal Leaves

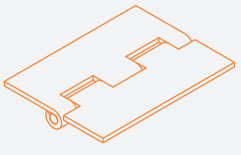
Unequal leaves are available on all hinges. Widths are measured from the pin center line to the leaf's outer edge. For the most economic method, unequal open width should be a product of a standard hinge width; however, unequal leaves with nonstandard widths are also available.



Length

Continuous hinges can be cut to exact length as required. Hinges should, however, be designed to a length that is a multiple of the knuckle length to eliminate partial knuckles. If a partial knuckle cannot be avoided, please keep the following points in mind: (1) partial knuckle lengths should be the same as, or larger than, the knuckle diameter; (2) when partial knuckles are required on both ends, they should be on the same leaf; (3) please be advised that continuous hinges with partial end knuckles on one leaf may not rotate as freely as full end knuckles.


full-end knuckle

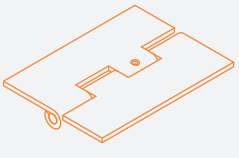

partial-end knuckle

Pin Retention

All standard continuous hinges are stocked with loose pins and flush cut ends, with the exception of steel, aluminum, and stainless steel hinges with quarter inch knuckles which will be staked to retain the pins.

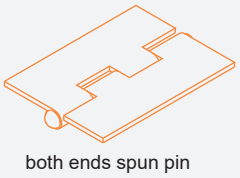
Staked Pin

Upsetting the knuckle(s) of one leaf secures the pin and prevents axial movement of the pin in the knuckle. Staking is usually located on the bottom of the knuckle in a uniform, consistent pattern.


staked pin

Spun Pin Both Ends

One or both ends of the pin are cold formed to a diameter greater than the inside diameter of the knuckle. This prevents axial movement. Pins spun at both ends are most commonly specified for tamper proof application.


both ends spun pin