

Build Your Own Axle

Weld your own custom axle using Tie Down Engineering's axle tube and spindles



WARNING

Welding an axle requires that you have the proper equipment and have the skill to apply a proper weld. If you are not comfortable with your welding capabilities, have a qualified welder assemble you axle.



READ ALL INSTRUCTIONS BEFORE STARTING

Instructions

1. Determine the axle capacity required for your trailer. Trailer capacity is based on the lowest capacity of the trailer components. This includes but is not limited to: frame, axle, spindles, hubs, bearings, wheels, tires, springs and all hardware.

#124991

1.5" x 1.5" x 72" axle tube, up to 1,500 lb. capacity

Use with: #128006 - 4 Lug Hub & Spindle End Unit

#128007 - 5 Lug Hub & Spindle End Unit

#124993 - 1350 lb. Spindle with Flange
(2 per pack, for hubs with
1-1/16" inner & outer bearings
& 1.25" seals)

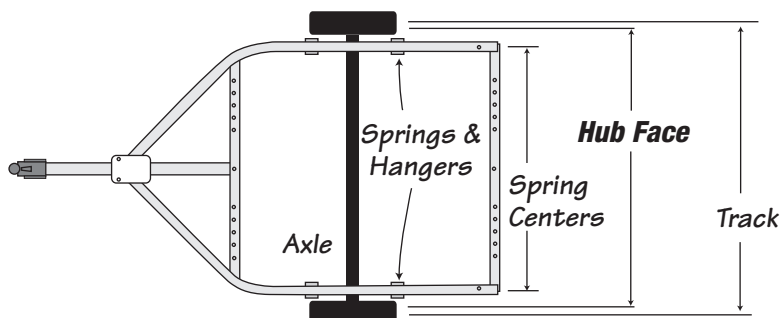
#124997

2" x 2" x 72" axle tube, up to 3,500 lb. capacity

Use with: #128008 - 5 Lug Hub & Spindle End Unit.

#124994 - 1750 lb. Spindle with
Brake Flange (2 per pack,
for hubs with 1-1/16" &
1-3/8" bearings & 1.72" seals)

2. Determine the **Hub Face** measurements required for your trailer.
 - a. If you are replacing an axle, measure the distance from the outside face of each hub.
 - b. If you are building a new trailer/axle, consider the space required for the wheel/tire combination to properly fit the trailer frame.



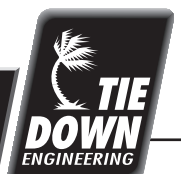
Hub Face: Distance between hub face to hub face

Track: Distance between center tire to center tire

Spring Center: Distance between the center of springs & hangers (if used)

Instruction Sheet #08109

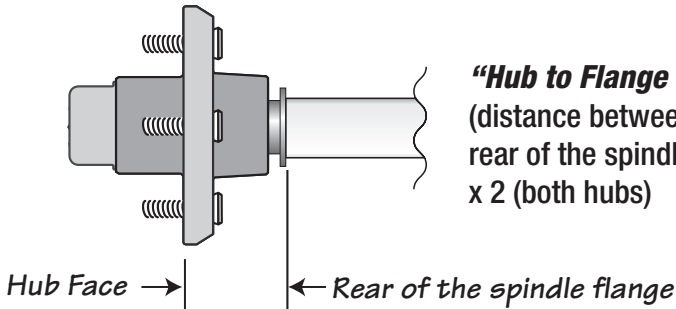
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013108, F996

3. Calculate your axle tube length:

$$\text{Tube Length} = \text{Hub Face} \text{ minus } \text{Hub to Flange Width}$$



When used with Tie Down Engineering's Spindles and Hubs listed on these pages the hub to flange width equals:

1.5" Tube: 5-7/8" (2-15/16" x 2) 2.0" Tube: 6-5/8" (3-5/16" x 2)

1.5" Tube Calculation

Hub Face Needed: _____
 Hub to Flange Width: - 5-7/8"
 Cut Tube to Length: _____

2" Tube Calculation

Hub Face Needed: _____
 Hub to Flange Width: - 6-5/8"
 Cut Tube to Length: _____

TIP:

Place spindle or end unit in one end of the axle tube. Place axle on trailer to get a visual of where to cut tube. Make sure the tube is close to your "math" calculations.

4. Cut tube to required length (measure twice, cut once!). Special care should be taken to make sure the cut is "Square" at 90 degrees. Remove any burrs inside and outside the tube.

5. Clamp tube to a secure welding table.

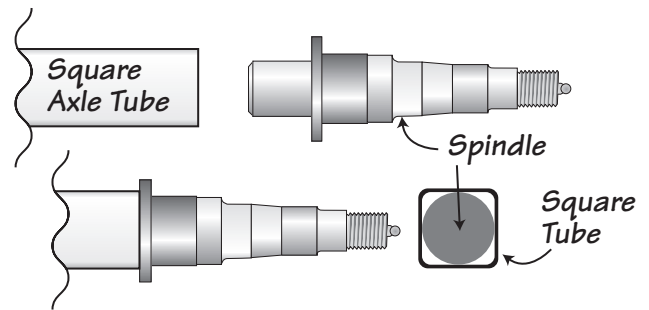
6. Insert round spindle or end unit (hub/spindle) into the square tube so that the brake flange or circular flange is flush against the end of the tube.

7. Support the spindle or end unit so that it does not move during the welding operation.

8. Weld a 1/4" fillet weld on all sides of the surface joint.

9. Allow to cool before using.

10. Determine spring center location. Drill 9/16" holes for the center spring bolt head to fit in. Use spring hanger kit to complete axle.



Mount spindle flush to the axle tube

