

## Installing A Through Bolt In An Umbrella

Please use this guide to successfully drill through an umbrella pole for a through bolt. You will need a drill, a sharp 5/16" bit, some cutting oil, and some tape. Please read to the end before starting as improper drilling can compromise the strength of the umbrella pole. This set of directions assumes that **whatever your umbrella is going into is already predrilled for a through bolt**.



Measure the width of **whatever your through bolt is going through**. **You will take this measurement and divide it in half**. This is the measurement you will mark on your 5/16" drill bit. In this example, our through bolt is going through a 4" pipe, so we will mark our drill bit at 2". Your through bolt may go through something larger or smaller.



Using tape, mark your drill bit so that it is marked at half the width of what you are drilling through. At this point ensure that your umbrella is positioned correctly and use the tightening bolt to lock the umbrella in position. If you don't have a tightening bolt, use shims to wedge the umbrella pole in place and keep it from spinning.



Start on center of the hole in your base or table coupler and do your best to keep the drill level and square.



Drill until the tape reaches the outside of your base or table coupler. If you are drilling through the stainless pole of the umbrella, use cutting fluid to keep your bit from overheating and dulling quickly.



Go to the other side of the base or coupler and begin drilling on center.



When you meet the other hole halfway, continue until your drill bit pops out the other side. Continue to drill out the hole until the drill bit slides in and out smoothly.



Insert your through bolt.



Secure through bolt with a lock.



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