

# Process for Drilling Structural Rivets

## Planning

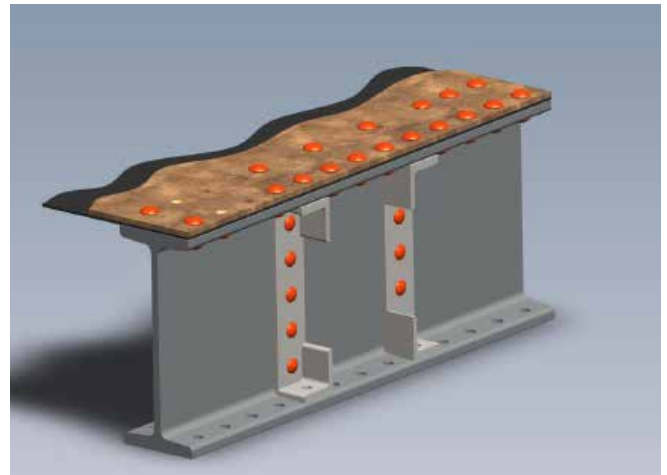
- Decide whether to remove the head of the rivet using a Rivet Buster or through Core Drilling with TCT HoleCutter or Magnetic Drill.
- It is possible to core drill entirely through the rivet head, which will take longer but avoid the use of Rivet Busting Tools

### Items Used

101030- Series VersaDrive 2" TCT HoleCutters

### Optional Items:

101035- Series VersaDrive 4" TCT HoleCutters  
Aerosol Lubricant / Biodegradable Cutting Fluid or Paste, as preferred



## STEP 1 - Pilot Drill Rivet Head

- Whether the head has already been removed from the rivet with a rivet buster or is still intact, it is recommended to remove the pilot drill bit completely from the HoleCutter to drill the locating hole.
- This avoids the risk of accidental contact/clash of the Holecutter Tips with the surface of the steel or rivet, when the Pilot Bit 'breaks through', which can result in damage.

### Items Used

101030P-0001 - 1/4" Pilot Drill Bit

### Optional Items:

209016-0040 - 1/4" High Speed TurboTip Drill Bit



## STEP 2 - Drill Through Rivet Head

- Once the pilot hole has been drilled to the full depth, reinsert the pilot bit into the HoleCutter, fastening with the set screw and carefully begin cutting into the rivet using gentle feed pressure.
- Once the cut is established, feed pressure can be increased until the cut is through the head of the rivet and into the body.

### Items Used

101030- Series VersaDrive 2" TCT HoleCutters

### Optional Items:

101035- Series VersaDrive 4" TCT HoleCutters  
Aerosol Lubricant / Biodegradable Cutting Fluid or Paste, as preferred



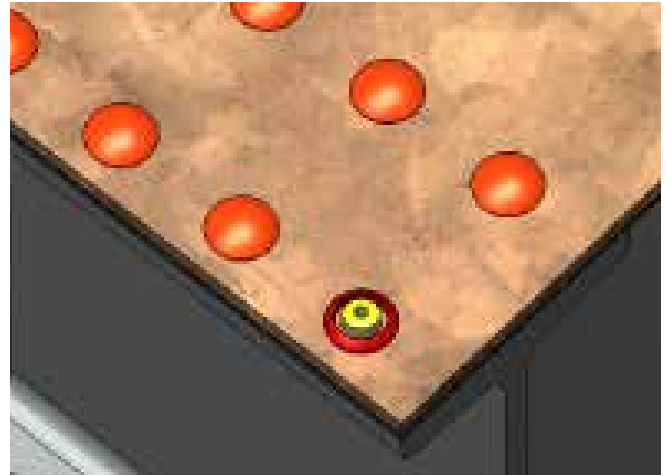
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## STEP 3 - Remove Rivet Head

- How Rivet head should appear after it has been fully pilot drilled and then core drilled through
- At this stage a cold chisel/hammer can be used to break the head of the rivet loose so the next stage of drilling can continue. This will enable better swarf clearance and inspection as the cut progresses.

### Optional Items

Hammer & Cold Chisel / Punch



## STEP 4 - Appearance of Rivet After Head Removed

- Appearance of Rivet after head has been removed. Core drilling body of the rivet can continue at this stage.



## STEP 5 - Continue Drilling Through Rivet Body

- Continue drilling through the body of the rivet to about 80% depth or until the rivet is felt to move.

### Items Used

101030- Series VersaDrive 2" TCT HoleCutters

### Optional Items:

101035- Series VersaDrive 4" TCT HoleCutters  
Aerosol Lubricant / Biodegradable Cutting Fluid or Paste, as preferred



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## STEP 6 - Punch Out Rivet Body

- At this stage it should be possible to punch the rivet free with a hammer. If it does not come free relatively easily, continue drilling as deep as is required.

### Optional Items

Hammer & Cold Chisel / Punch



## STEP 7 - Ream Hole To Diameter Required

- If any debris remains in the hole, left by rust or corrosion or a larger hole is required for a larger fastener the hole may size need to be reamed to increase the diameter or improve the surface finish.
- A VersaDrive Reamer can be used with an Impact wrench can be used to finish the hole cutting process.

### Items Used

501050- Heavy Duty VersaDrive MAX Impact reamers  
1111140- Impact Wrench Adapters - 1/2 or 3/4" square drive

### Optional Items

501030- VersaDrive Impact reamers



## STEP 8 - Insert Fastener

- Completed operation.

Fastener style may vary.



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## Alternative Rivet Drilling Method

- The contractor can choose to use a Magnetic Drill and Carbide Tipped Annular Cutter to complete the whole operation, however depending on position of the rivets and the circumstances of the project, this may not be possible in all situations.
- A hybrid combination of Magnetic Drilling and Core Drilling with hand held drills / VersaDrive Holecutters is often found to be the most practical / fastest solution for contractors.
- These tools can be used alongside of or as a complete replacement to Rivet Busters depending on the preference of the contractor and project constraints.

### Items Used

**CarbideMax TCT Annular Cutters**  
**HMT VersaDrive V35 or V60T Magnet Drill**



## Alternative Reaming Method

- If preferred a Magnetic Drill can be used with VersaDrive reamers to Ream the hole to diameter.
- Depending on the thickness of the steel and the preference of the contractor, either VersaDrive MAX heavy duty or standard VersaDrive Reamers can be used.
- HMT VersaDrive Reamers can be used in Hand Held Drills, Magnetic Based Drills or Impact wrenches.

### Items Used

**850060-P- VersaDrive V60T Magnet Drill**  
**501030- VersaDrive Taper Bridge Reamer**

### Optional Items

**Cutting Fluid/Lubricant**



## If Removing Rivet Heads with a Rivet Buster

- If using a Pneumatic Rivet Buster, a flat/chisel point should be placed against the rivet head, and the repeated blows will detach the head from the rivet.
- Consideration should be given to operator HAVS exposure & other hazards associated with rivet busting such as manual handling, air hose precautions & guarding against flying/dropped rivet heads.
- Alternatively, it is possible to core drill entirely through the rivet head, which will take longer but avoid the use of Rivet Busting Tools.

### Items Used

**Pneumatic Rivet Buster**

