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Formdrill Thermal Drilling System

Eliminates the use of welded nuts, bosses or threaded inserts

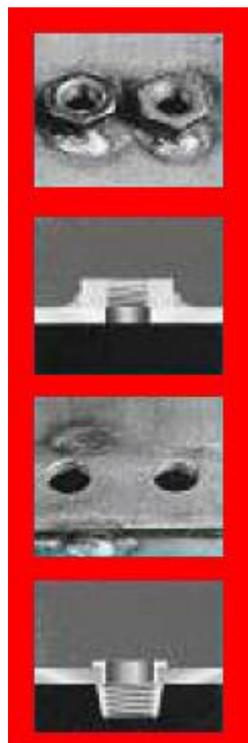
Thermal drilling is a process that uses friction to produce bushings in metal tubing and flat stock. The friction is generated from the combined rotational and downward forces using a special Thermal Drilling tool, Formdrill. The friction heats up the metal and softens it, allowing the tool to create a bushing from the displaced material.

This bushing is roughly 2 to 3 times the original metal thickness in length. These bushings are ideal for threaded applications, as the number and strength of threads is significantly increased. It is a cost-savings alternative to welded nuts, bosses or threaded inserts.

The bushing can also be used as a through hole for welded, soldered or brazed connections or for a load-bearing surface.

The Thermal Drilling system can be used in most ferrous and non-ferrous metals including mild steel, stainless steel, copper, aluminum, brass and bronze, with material thickness up to 1/2". Standard drills are available in any size up to 1" diameter. No special equipment is required, a standard drill press, milling machine or CNC systems are suitable.

Why should I use the Thermal Drilling System?

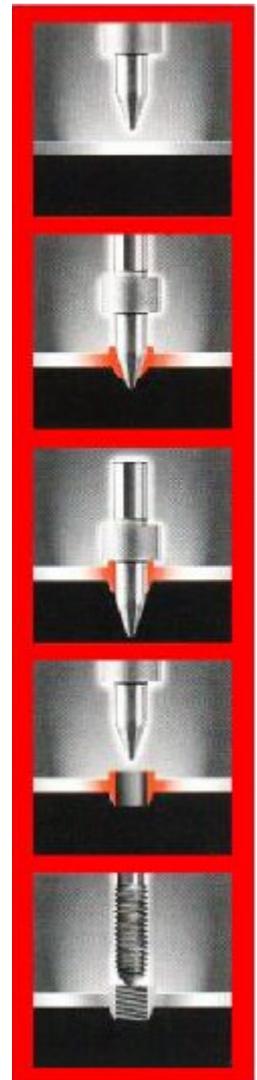


Weld nuts, inserts, nipples and weld bosses require special and costly machines and techniques to install. There is a potential for misalignment during installation, corrosion between dissimilar materials, fastener breaking loose or slipping after installation, weld slag in the threads & warping of the material. Scrap is produced and the actual fastener needs to be purchased.

With the Thermal Drilling system, no special and costly machinery is required. A standard drill press, milling machine or CNC system will do fine.

Because the process is chip less, no scrap is produced. The completed drilled and tapped bushing is an integral part of your work piece --- nothing is added and nothing is removed.

You will get stronger joints and reduce your labor and material costs!





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Thermal Drilling requires the following tools and accessories:

1. A **Formdrill**, or Thermal Drilling Tool specified by diameter and style.
SHORT styles are for thinner wall thickness, while LONG styles are for thicker materials and for straight through holes. Use the SHORT/FLAT or LONG/FLAT style to remove the upper portion of the bushing for a flush finish.

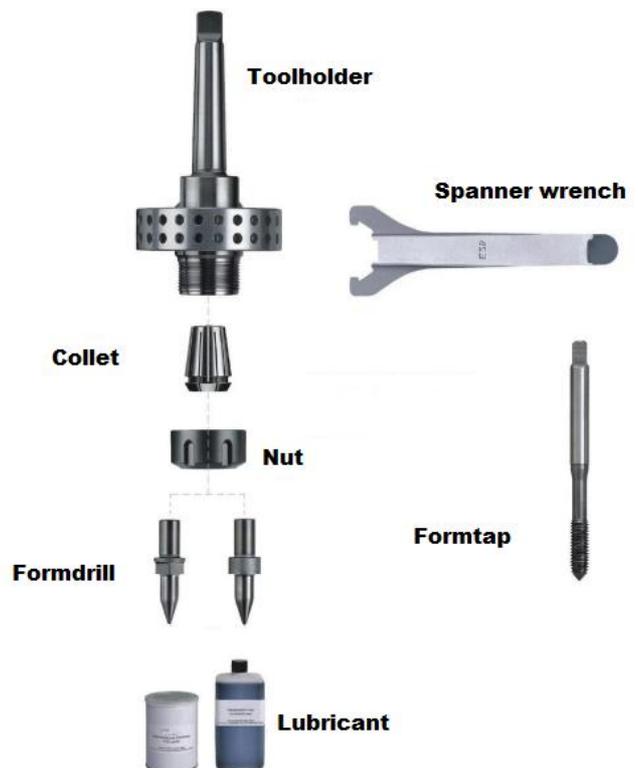
SHORT	LONG	SHORT/FLAT	LONG/FLAT
			

2. A special **Toolholder** and **Collet** is available in a #2 Morse Taper shank for sizes up to 9/16 or a #3 Morse Taper shank for sizes 3/8 and larger. A 20mm straight shank is also available for both sizes. The Toolholders have a special heat sink attached for dissipating excess heat generated by repetitive drilling. This is very important to prolong the life of the tool and protecting your drilling equipment.

3. **Thermal Drilling Compound**. Is a specially formulated lubricant designed to prolong tool life by reducing material build up on the tool. For steel and stainless steel, lubricants are available in both paste and liquid form. A special lubrication system is available for use in CNC machines. Paste lubricants are also available for copper and aluminum.

4. **Formtap**. Is a roll forming style tap used to maximize thread engagement and pull-out strength.

5. **Formtap lubricant**. Maximizes tool life while maintaining high quality threads.



Contact information:

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