



# MANUAL HOLE-MAKING MACHINES

by TECHNICAL INNOVATIONS

Whether you are drilling, skiving, or punching, these compact, economical and versatile hole-making systems are well-suited for a wide array of hole-making applications.

## Manual Hole Drilling Machine

These compact and economical yet extremely precise hole-drilling machines offer a wide range of fixturing, keyless Albrecht chuck, manual quill control and a hollow quill ejector-pin system for automatic plug clearing.

The manual hole-drilling machine can also be fitted with an optional skiving package, resulting in an extremely precise way to skive an oval chip from the side of a catheter. It's ideally suited for accessing specific lumens in multi-lumen catheters.



## Pneumatic Hole-Puncher LT

Providing safe and functioning solutions to hole-punching challenges, the Pneumatic Hole-Puncher LT is well-suited to a range of hole punching options. These machines accept standard or custom tool (?) for single and multi-lumen tubes. Punch travel distance is adjustable and the dual-hand activation feature enhances operator safety.



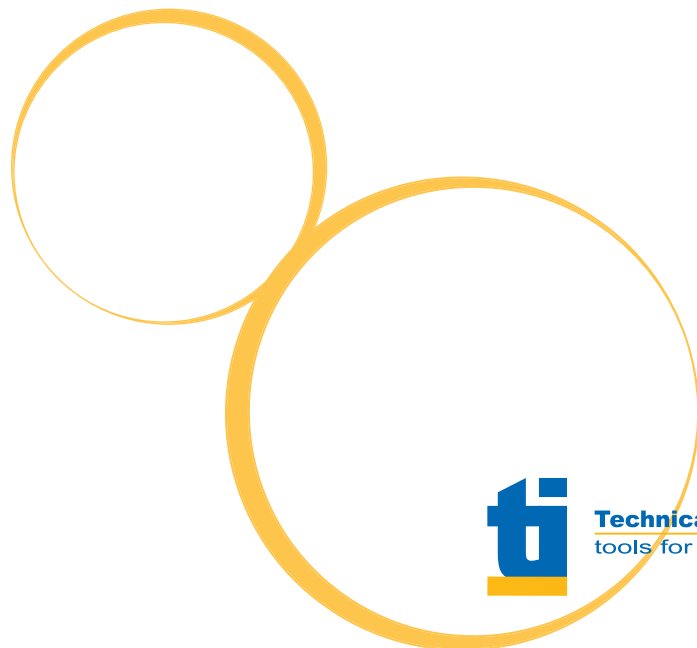
**Technical Innovations**  
tools for the hole world

For ordering information, please contact us at:  
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# Features and Accessories\*

<p align="center"><b>TI Pneumatic Hole Puncher LT</b></p>	<p align="center"><b>TI Manual Hole Drilling Machine</b></p>
<p align="center"><b>Features</b></p>	<p align="center"><b>Features</b></p>
<p>Simple, precise depth control</p>	<p>Quick change tooling base</p>
<p>Accepts punch shanks from 1/8" to 3/8"</p>	<p>RPM range from 200-20,000</p>
<p>Round and oval hole punching capability</p>	<p>Precision depth control with indicator read-out</p>
<p>Automatic plug ejection</p>	<p>Accepts drills up to 1/8" diameter shanks</p>
<p>Two-hand pneumatic activation</p>	<p align="center"><b>Accessories</b></p>
<p>Quick change tooling base</p>	<p>Custom quick-change catheter guides</p>
<p>Centering plate with shield</p>	<p>Skiving package (adjustable Y-axis and skiving stabilizer)</p>
<p>RAM speed control</p>	<p>Adjustable X-axis slide</p>
<p>Cleanroom compatible</p>	<p>Microscope with stand</p>
<p align="center"><b>Accessories</b></p>	<p>Metric readouts</p>
<p>Catheter guides for single-wall and through-punching applications</p>	<p>220 volt conversion</p>
<p>Adjustable X-axis slide, Y-axis slide and/or theta-axis table</p>	<p>Keyed lumen locating fixtures for multi-lumen tubing</p>
<p>Adjustable end stop</p>	
<p>Coordinated air wash cycle</p>	
<p>Foot pedal activation</p>	
<p>Digital readout for Y-axis slide</p>	
<p>Heavy duty punching head for thick-walled punching applications</p>	

\*Specifications subject to change without notification.



For a free demonstration just send us a sample of your tubing and your specifications. We will return your tubing, drilled to your specifications and include a review of our methodology and the tools we used. We will also recommend the best TI hole-making system to meet your requirements. **Free.**



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