



TRI TOOL INC.

TRI TOOL INTERNATIONAL INC.

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TRI TOOL INC.
TECHNICAL SPECIFICATION
MODEL 202TS™ TUBE SHEET CUTTER
SEPTEMBER, 1999

MODEL 202TS™ TUBE SHEET CUTTER

The Model 202TS™ TUBE SHEET CUTTER is an ID mount machine tool for facing and chamfering the ends of tubing and tube sheet bores in preparation for welding and finish squaring.

The Model 202TS™ System comes complete with:

- A. Model 202TS™ Subassy
- B. Head Kit, 2" Dia.
- C. Air Motor Assy.
- D. Mandrel Assy.
- E. Jaw Block Sets
- F. Wrench Kit
- G. Carrying Case
- H. Operator's Manual

Design and Operation Features:

1. The lathe accepts it's own torque through the mandrel.
2. The expanding mandrel provides fast, accurate self-centering and alignment.
3. All wrenches needed for operation are provided with the system..
4. The lathe [at less then 17 lbs. (7.7 Kg)] is lightweight and is easily handled by one operator.
5. Pneumatic Clamping System.
6. Mandrel shaft seal to keep coolants out of the gears.
7. Heat treated mandrel mounting blocks for maximum life and secure mounting.
8. Stops, adjustable, to set mounting and / or cut depth.
9. Hoist ring for attachment to an overhead balancer.

Specifications:

1. Reference Envelope Drawing No.77-1528.
2. Pipe Cutting Capacities:
 - a. Basic Tube Size:
A maximum OD of 2.00" (50.8mm) and a minimum ID of .77" (19.6mm) may be faced with the Model 202TS.
 - b. Wall Thickness Capacity:
Wall thickness of all standard tube sizes [.187" (4.8mm) maximum] in the range listed. Contact Tri Tool for heavier wall procedures.
 - c. Counterboring Operations:
The tool will chamfer tubing with an ID range of 1.00" (25.4mm) to 2.00" (50.8mm) with the standard mandrel or 0.77" (19.6mm) to 2.00" (50.8mm) with the optional small mandrel.
 - d. Optional Small Mandrel:
Mounting range of .50" (12.7mm) ID to .78" (19.8mm) ID.
3. Material Cutting Capabilities:
 - a. Mild steels, chrome steels (Rc 35 max), stainless steel, copper-nickel alloys and aluminum without limitations except size and wall thickness as specified in paragraph #2.
 - b. Inconel and some other high temperature alloys may require special procedures as a function of wall thickness and type of end preparation. Contact Tri Tool's Engineering Department for details.
4. Clearance and Dimensions:

a. Rotating Head Dia.	2.00" (50.8mm)
b. Length over motor:	11.20" (284.5mm)
c. Length (of machine)	16.53" (419.9mm)
d. Available feed travel:	.56" (14.2mm)
e. Weight	16.50 lbs. (7.5Kg)
5. Drive System:

a. Final Drive:	Gear Driven
b. Pneumatic Motor:	
Free speed	400 rpm
Max. H.P. speed	200 rpm

6. Power Supply:
 - a. Pneumatic motor requires 30 cfm (14 L/s) air supply at 90 psi (621 kPa) for maximum horsepower delivery.

Note: Air Supply must have a filter/regulator/lubricator (FRL) system to protect the warranty on the air motor.
7. Cutting Head Speeds:

a. Maximum cutting head speed:	275 rpm
b. Cutting head speed @ maximum H.P.	138 rpm
c. Functional speed range:	35-200 rpm
d. RPM at 300 surface inches per minute:	
2.00" (50.8mm)	48 rpm
.50" (12.7mm)	191 rpm
8. Speed Control:
 - a. On/off safety lever valve and trigger air flow control valve.
9. Mounting:
 - a. Pneumatically actuated draw rod expands mandrel ramp blocks.
10. Feed:
 - a. Manual: a lever arm actuated feed mounted at rear of the 202TS provides .560" (14.2mm) of travel.

Spare parts and standard tool bits are available from stock.

Engineering design services for custom tool bits and special function modifications are available from the factory.

All Tri Tool and allied equipment products are subject to design improvements and specification changes at any time with no obligation to units already sold.

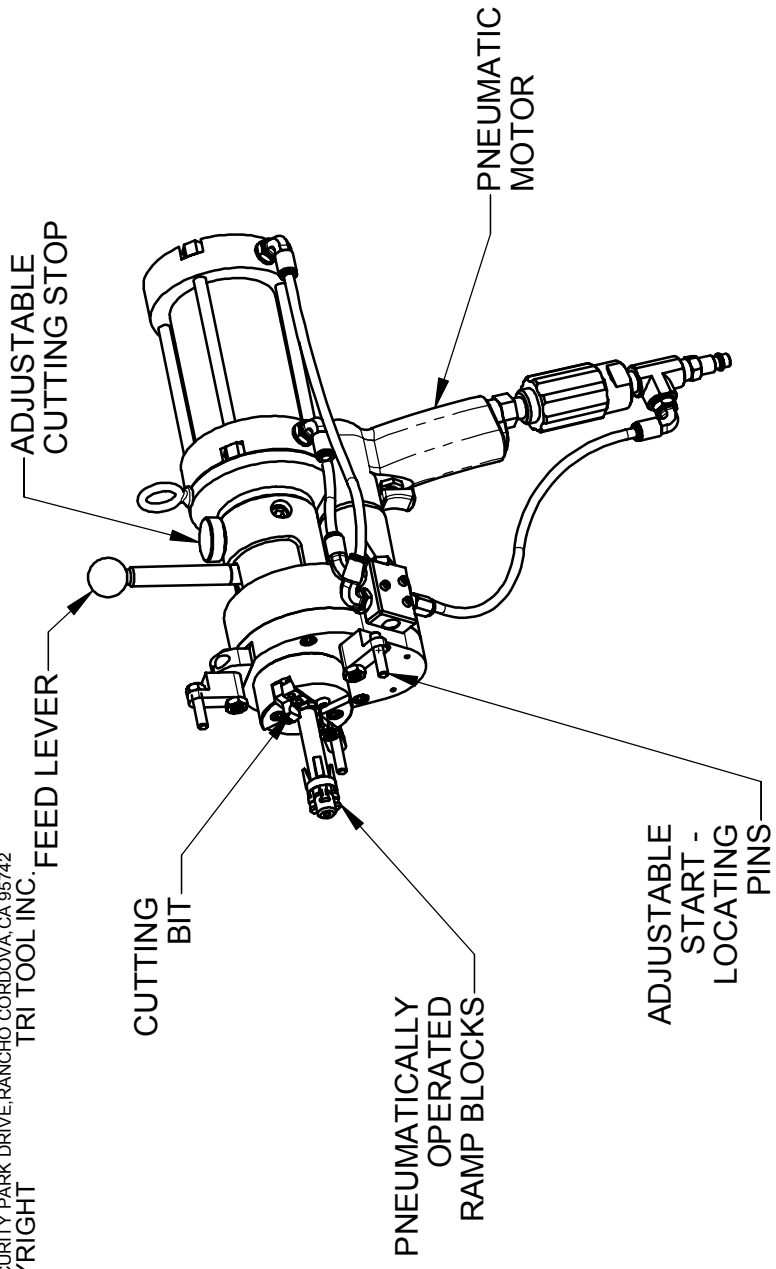
Warranty (limited), parts and/or equipment are warranted against defects in material and workmanship for a period of one year from the date of purchase. Full details supplied on request and/or with tools.

Filter, regulator, lubricator are required to protect warranty on air powered tools.

REVISIONS		
REV.	DESCRIPTION	DATE

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DWG NO.	77-1528
SHT	1
REV.	

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCES ARE: DECIMALS FRACTIONS ANGLES .XX ± .03 ± 1/16 ± 0° 30' XXX ± .010 MACHINED SURFACES 125 ✓ † TO BE CONCENTRIC WITHIN .010 TIR FLATNESS TO WITHIN .010 TIR BREAK ALL SHARP EDGES .005-.015 FILLET RADIUS TO BE .030 MAX CSINK THD HOLES TO MAJ DIA X 82°-90°	202TS	CONTRACT NO.	ER-8137	APPROVALS	DATE	REV.
	NEXT ASSY	USED ON				
MATERIAL				C. VANDER POL	8-13-99	77-1528
FINISH				CHECKED		A
DO NOT SCALE DRAWING						SCALE
						1 / 4
						MODEL: 77-1528.SLDPRT
						SHEET 1 OF 2

TRI TOOL INC
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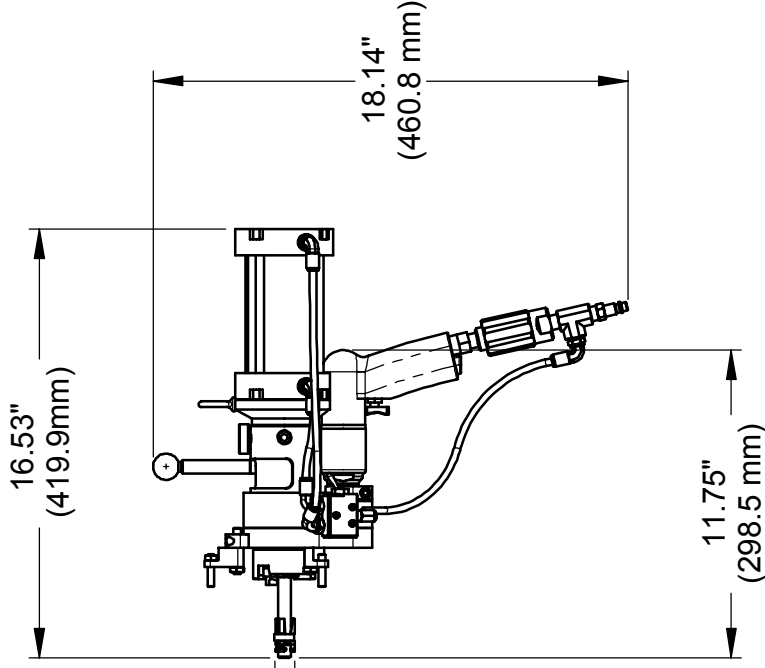
202TS TUBE SHEET CUTTER

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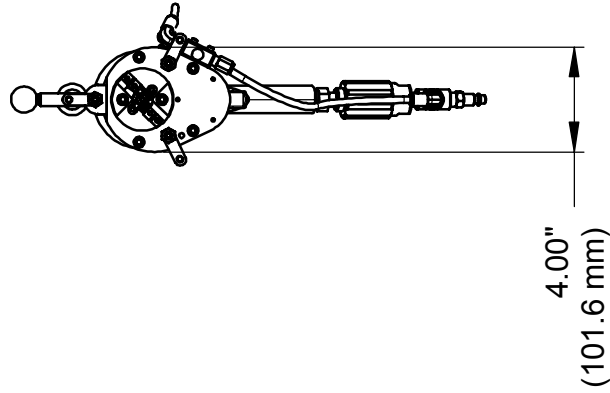
REVISIONS

REV.	DESCRIPTION	DATE	APPROVED

DWG NO. 77-1528
 SHT 2
 REV.



.77" Min
 (19.6 mm)



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<p>NEXT ASSY</p>	<p>MATERIAL</p>	<p>APPROVALS DRAWN C. VANDER POL CHECKED</p>	<p>DATE 8-13-99</p>	<p>202TS TUBE SHEET CUTTER</p>
<p>FINISH</p>	<p>DO NOT SCALE DRAWING</p>	<p>ISSUED</p>	<p>SCALE 1 / 6</p>	<p>SIZE A</p>
<p>REV.</p>	<p>DATE</p>	<p>DWG. NO. 77-1528</p>	<p>MODEL: 77-1528.SLDPRT</p>	<p>REV. SHEET 2 OF 2</p>

