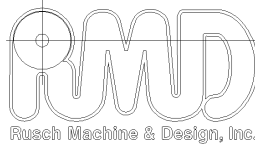


Model #TN250

Operating Manual





Trick-Tools.com

80 Truman Road

Pella, IA 50219

Phone:1-877-VAN-SANT

E-mail: sales@trick-tools.com



1) IMPORTANT INFORMATION AND CONTACTS

INTRODUCTION

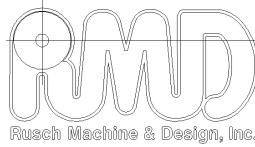
Model #TN250
45 lbs/ 21kg

- i) You have made a practical choice in purchasing an RMD, INC. Model #TN250 Tube Notcher. It has been carefully built of high quality materials and designed to give many years of efficient service. The simplicity of design and minimum effort required to operate the machine contributes towards meeting schedules and producing greater profits.
- ii) The Model # TN250 Tube Notcher is built of solid steel ensuring maximum rigidity. Grade 8 bolts used throughout, provides very high rigidity and stability.
- iii) In the next chapter of this manual, you'll find safety-related descriptions for attention. Which contain the essential information to the operators while operating, and maintaining. Failure to follow these instructions may result in great damage to the machine or injury to the operator.

2) SAFETY PRECAUTIONS

a) Safety Guide

- i) Read this manual before operating the machine.
- ii) Keep this manual handy for answers to any questions you may have. Store it near the machine to be usable in the future.



- iii) Workers shall not depend on only the safety equipment. They shall familiarize and understand the machine before operating and maintaining the machine.

b) Safety Precautions

- i) Before being engaged in operating this machine, please read and understand the entire instruction manual, and follow all the warning signs labeled on the machine. Do not disfigure or remove.
- ii) During operation, please do not expose any of your body parts near to the moving parts of the machine.
- iii) Never touch workpiece, tooling or spindle unless completely stopped.
- iv) Before using the machine, make sure that all workpiece and tooling are properly installed to avoid accidents.
- v) Operators should wear safety glasses, and remove rings, watches, jewelry and loose fitting clothing for their own protection while operating the machine.
- vi) There must be no obstacles to obstruct the operator while in the working area
- vii) Please do not put any tools or measuring devices on the moving parts of the machine.

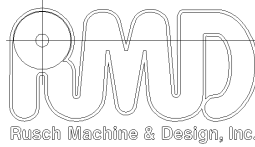
3) UNPACKING

- i) After receiving machine, visually inspect for damage. Any damage should be reported immediately to RMD Inc.

4) INSTALLING

- i) Install the handwheel onto the hub with the supplied 5/16-18 socket head screws.





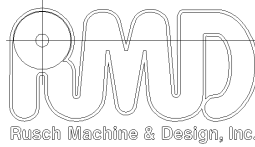
- ii) Attach the pivot block and indicator assembly onto the vise assembly using the ½-13 bolts and the retaining plate supplied.



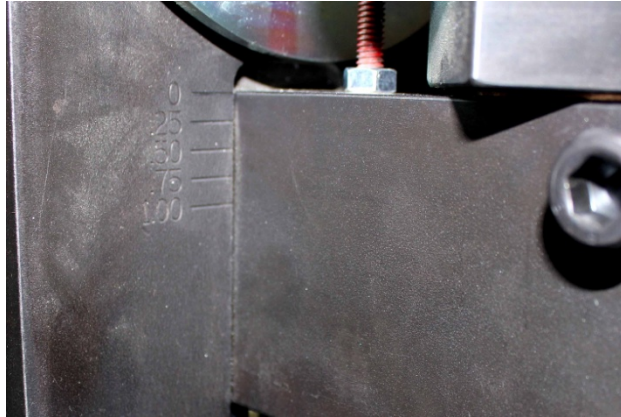
- iii) The pivot block will fit into the machined recess in the vise assembly plate.
- iv) The retaining plate will go on the opposite side of the vise assembly and is there to act as a support washer not to damage the vise plate from frequent tightening

5) OPERATING

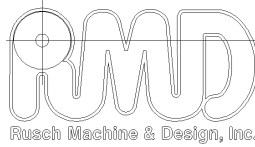
- i) Operating your TN-250 is very easy, but certain steps need to be followed.
- ii) After your notcher is assembled, it needs to be clamped into a vise or bolted to the side of a workbench. The main vise plate has a machined step that is designed to make insertion into vise jaws very easy.
- iii) Choose a hole saw that matches your materials outside diameter and screw it onto the threaded stud on the end of the main shaft arbor



- iv) If you will be notching on center, check the height scale on the left side of the notcher and make sure the pivot clamp block is in the zero position. If an offset notch is required, loosen the two hex screws using a 3/8 hex key wrench and adjust it to the desired offset.



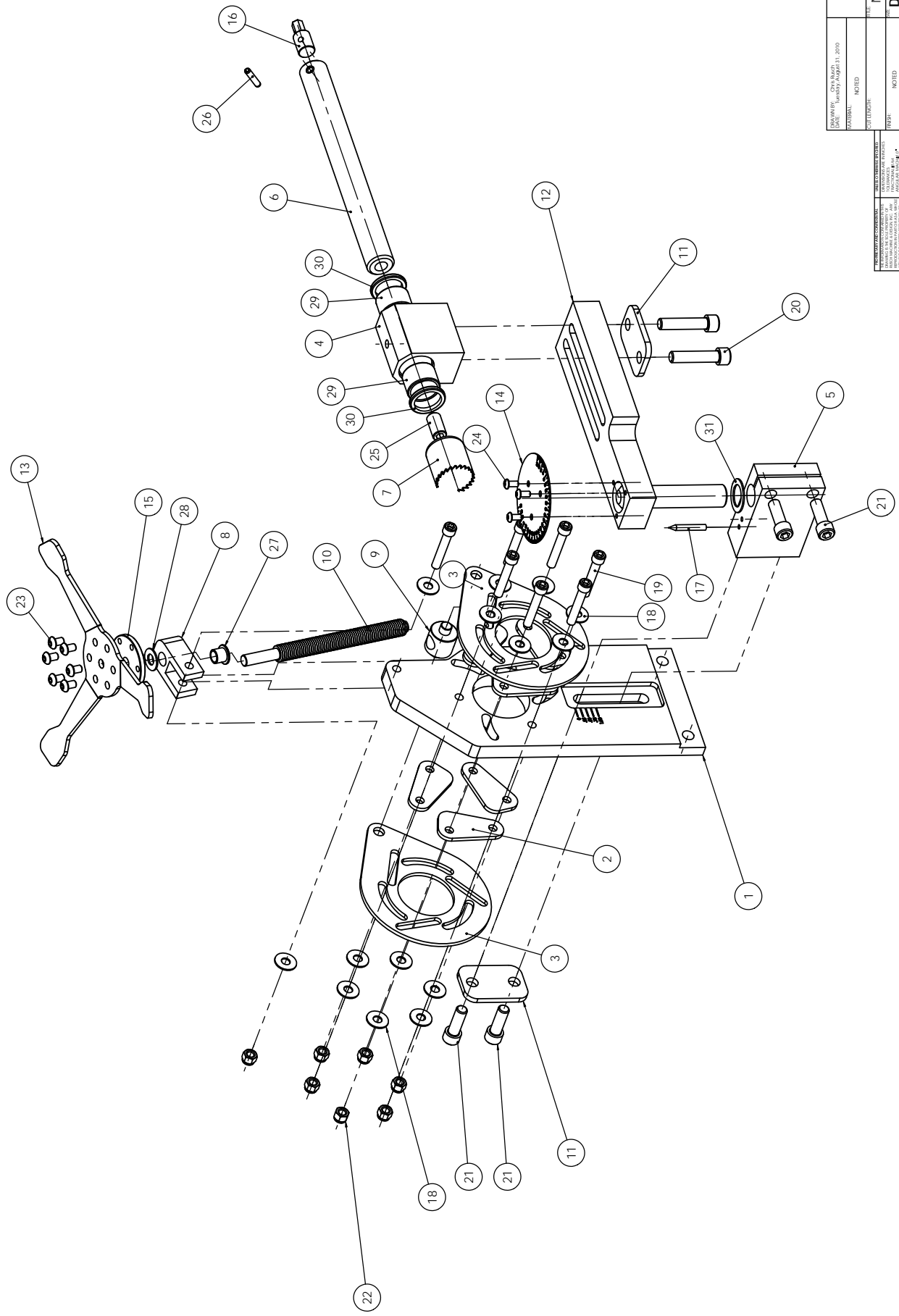
- v) Open your vise assembly using the 3 legged handwheel and insert the desired tubing that needs to be notched. The amount of tubing protruding past the vise will be determined by the angle of notch, and the hole saw should be slid forward to set that distance.
- vi) Tighten the material, being careful not to over tighten and crush your tube, as the vise has supreme holding power.
- vii) If an angle notch is required, loosen the two hex bolts on the side of the clamp block with a 3/8" hex key. Position the pivot arm to the desired angle. And re-tighten. Angles up to 45 degrees work best using the center slot in the pivot arm, the second slot is used for extreme angles and for notching on curved tubes as it aides in offsetting further.
- viii) When the desired angle is set, the aluminum bearing block should be slid as far forward as possible to the notch, this will make the cutting as rigid as possible. Be sure to tighten the two hex bolts beneath the aluminum block using a 3/8" hex key.
- ix) A 1/2" drive electric drill will need to be chucked onto the hexed arbor, and tighten securely.
- x) The notching operation is pretty self explanatory, let the hole saw do the work, and don't push too hard. Keep the speed around 250 rpm, that seems to give the hole saws the best life. In some instances, the hole saw will bottom out requiring the slug to be cut out with a zip wheel to continue the notch, this is normal with this type of machine. Sometimes the pivot arm can be swung back 180 degrees to finish a notch, but again probably only up to 45 degrees will this method work.



- xi) Angle notches over 45 degrees should be sawed to the angle first to remove the majority of the material.
- xii) Following these simple steps will give you years of trouble free service from your TN-250 notcher.

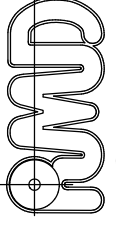
6) MAINTAINANCE

- i) Check for any loose or worn parts; contact your dealer for replacement parts.
- ii) Fluid level in aluminum housing should be checked periodically, add 80w gear oil if fluid levels are low. When completely empty, the aluminum block will hold 1 oz of oil.
- iii) Replacement seals/bearings/threaded hole saw studs and drive hexes are all available to keep your machine running for years.

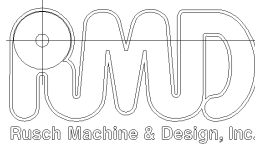


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NOTED	NOTED	NOTED	NOTED
RUSCH MACHINE & DESIGN, INC.		RUSCH MACHINE & DESIGN, INC.	
TITLE: MAIN EXPLODED VIEW		TITLE: MAIN EXPLODED VIEW	
SCALE: 1:1		SCALE: 1:1	
SHEET 1 OF 2		SHEET 1 OF 2	

ITEM NO.	PART NUMBER	DESCRIPTION	EXPLODED VIEW 1/QTY.
1	TN200-6A016	MAIN FRAME	1
2	TN200-6A010	GRIPPER	6
3	TN200-6A009	ACTUATOR PLATE	2
4	TN200-6A013	BRG BLOCK	1
5	TN200-6A011	PIVOT CLAMP BLOCK	1
6	TN200-7A001	SAW ARBOR	1
7	1-75 HOLE SAW		1
8	TN200-6A015	ROCKER BLOCK	1
9	TN200-7A007	TRUNION	1
10	TN200-7A006	WISE SCREW	1
11	TN200-6A014	BOLT CAP	2
12	TN200-5A001	PIVOT ARM ASSY	1
13	M300-6A066	HAND WHEEL	1
14	TN200-6A017	DEGREE DISC	1
15	TN200-7A008	WHEEL HUB	1
16	TN200-7A010	DRIVE STUD	1
17	TN200-7A011		1
18	FW 0.375		14
19	HX-SHCS 0.375-16x2.25x1.25-C		7
20	HX-SHCS 0.5-13x2.25x1.5-C		2
21	HX-SHCS 0.5-13x1.5x1.5-C		4
22	HNUT 0.3750-16-D-C		7
23	SBHCSCREW 0.3125-18x0.5-HX-C		6
24	SBHCSCREW 0.25-20x0.5-HX-C		3
25	SSCUPSKT 0.625-18x1.25-HX-C		1
26	SPS 0.25x1.25		1
27	PP-0196		1
28	PP-0055		1
29	1.25 NEEDLE BEARING	NEEDLE BEARING	2
30	1.25 GREASE SEAL	NEEDLE BEARING	2
31	PP-0935	1.0 ID X 1.5 OD X .0625 THK	1

DRAWN BY: DATE: Tuesday, August 31, 2010			RUSCH MACHINE & DESIGN, INC.
	TITLE:		
MATERIAL:		SIZE MAIN EXPLODED VIEW DWG. NO. [REV]	
CUT LENGTH:		SCALE: 1:8	WEIGHT:
FINISH:		SHEET 2 OF 2	

PROPRIETARY AND CONFIDENTIAL	UNLESS OTHERWISE SPECIFIED:
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF RUSCH MACHINE & DESIGN, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF RUSCH MACHINE & DESIGN, INC. IS PROHIBITED.	DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/64$ ANGULAR: MACH $\pm 1.0^\circ$ TWO PLACE DECIMAL $\pm .010$ THREE PLACE DECIMAL $\pm .005$



10)WARRANTY

Coverage

Rusch Machine & Design, Inc. warrants to the original purchaser for use that the products sold by RMD, Inc. will be free from defects in workmanship and material for a period of one year from the date of purchase provided such goods are installed, operated, maintained and used in accordance with RMD, Inc.'s written instructions.

Exclusions from warranty

Ordinary wear and tear, and damage from abuse, neglect or alterations are not covered by this warranty. **THIS WARRANTY IS NULL AND VOID IF INSTRUCTIONS AND OPERATING PROCEDURES ARE NOT FOLLOWED.**

Hole saws are not covered.

Machine maintenance, adjustments, setups or downtime costs are excluded from warranty.

Rusch Machine & Design, Inc. will in no event be liable for incidental or consequential damages.

Conditions

All warranty work must be approved by RMD, Inc.

All defective items must be returned to RMD, Inc. for inspection.

Customer pays freight, travel and all other associated costs other than parts and labor

Replacement labor not included. Customer pays freight costs.

Any questions pertaining to this limited warranty should be addressed to:

Rusch Machine & Design, Inc.
P.O. Box 375
Two Rivers, WI 54241