

CENTRAL MACHINERY®

Accessories

REVERSIBLE TAPPING ATTACHMENT

Model 46343

ASSEMBLY AND OPERATING INSTRUCTIONS



3491 Mission Oaks Blvd., Camarillo, CA 93011

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For technical questions and replacement parts, please call 1-800-444-3353

Specifications

Shank Type	Tapered (MT 2)
Jaw Type	3-Jaw, Spring Loaded
Construction	1050 High Carbon Steel
Hardness	46-56 HRC
Overall Length	10-3/8"
Side Handle Length	9-3/8"
Reversing	Auto-Reversing
Concentricity	+ / - 0.001
Head Diameter	3.250"
Hex Wrench	6MM
Oil Recommended	HP Millcot 52

Note: Accessories include a guide handle, a Tapping Adjustment handle, and a 4MM hex wrench.

Save This Manual






You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this product!

1. **Avoid working alone.** If an accident happens, an assistant can bring help.
2. **Avoid electrical shock.** Use extreme caution when clamping around uninsulated conductors or bus bars. Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and cabinet enclosures when testing voltages.
3. **Keep work area clean.** Cluttered areas invite injuries.
4. **Observe work area conditions.** Don't expose to rain. Keep work area well lighted.
5. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
6. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.

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7. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically nonconductive clothes and nonskid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
 8. **Use eye and ear protection.** Always wear ANSI approved impact safety goggles.
 9. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across electrical cables or frames.
 10. **Maintain tools with care.** Inspect tool periodically and, if damaged, have it repaired by an authorized technician.
 11. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
 12. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
 13. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician.
 14. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
 15. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
 16. **Maintenance.** For your safety, maintenance should be performed regularly by a qualified technician.

Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Unpacking

When unpacking, check to make sure the parts listed on page 7 are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual.

Operation

Note: This tool is most suited for semi-automatic tapping. High Speed Steel (HSS) taps recommended.

Refer to the Assembly Drawing on page 8.

1. Insert the **Taper Shank (#1)** firmly and securely into your drill press or mill/drill machine chuck following the instructions provided in the instruction manual of the drill press or mill/drill machine being used.
2. To keep the lower casing of the Tapping Attachment stationary throughout tapping, insert the Tapping Adjustment handle into the **Guide Bushing (#14)**. Hand turn the Tapping Attachment until the Tapping Adjustment handle rests firmly against the drill column or another suitable fixed object.
3. You must adjust the drill spindle in order to tap blind holes at a specific depth.
4. When you raise the drill spindle, the Tapping Attachment will automatically reverse at twice the tapping speed.
5. You must adjust the **Clutch Part (#10)** dependent upon the size of tap being used. Loosen the **Cup Nut Screw (#2A)** and the **Cup Nut (#2)** to decrease the spring pressure on the **Clutch Part (#10)**. To increase the spring pressure on the **Clutch Part (#10)** tighten the **Cup Nut Screw (#2A)** and the **Cup Nut (#2)**.

Note: To set the Tapping Attachment to the desired position for a particular sized tap, use the numbers etched into the **Cup Nut (#2)**. The numbers only relate to the pressure set on the **Clutch Part (#10)** and do not take into account the type of threads, condition of tap, material being tapped, and other factors.

Note: Before tapping, thoroughly lubricate the Tapping Attachment with a high quality tool oil. Insert the oil into the top of the Tapping Attachment, in the oil hole (see Assembly Drawing, page 8).

6. The tapping attachment is ready for use.

Recommended Tapping Speeds for Different Materials

NOTE: The speeds shown in the chart below are approximate and intended as a general guide only. The most effective speeds can best be determined by actual testing a particular tap, material, drill used, and tapping fluid.

THREAD INCHES	1/16	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1	1, 1/4
METRIC	1.7	4	6	8	10	12	16	20	25	30
STEEL	750	525	450	375	300	225	200	175	150	95
CAST IRON	950	870	750	625	525	450	360	245	200	145
BRASS	1150	1000	900	750	650	540	450	320	250	180

Recommended tap and drill hole sizes chart, on next page.

Maintenance

1. Wipe all dirt, debris, and oil off of Tapping Attachment after each use.
2. If any part of the attachment becomes loose or cracks, take it to an authorized service technician.

Recommended Tap And Drill Hole Sizes:

DRILL/TAP CHART

DRILL THIS SIZE HOLE		TO TAP FOR THIS SIZE BOLT OR SCREW	DRILL THIS SIZE HOLE		TO TAP FOR THIS SIZE BOLT OR SCREW	DRILL THIS SIZE HOLE		TO TAP FOR THIS SIZE BOLT OR SCREW
DECIMAL INCHES	DRILL SIZE		DECIMAL INCHES	DRILL SIZE		DECIMAL INCHES	DRILL SIZE	
.0459"	3/64"	0-80 NF	.1380	No. 29	8-32 NC	.2401	6.1mm	7mm-1.00mm
.0595	No. 53	1-84 NC	.1380	No. 29	8-36 NF	.2570	Ljr. F	5/16-19 NC
.0595	No. 53	1-72 NF	.1405	No. 28	8-40 NS	.2715	6.9mm	8mm-1.25mm
.0700	No. 50	2-56 NC	.1470	No. 26	3/16-24 NS	.2720	Ljr. I	5/16-24 NF
.0700	No. 50	2-64 NF	.1495	No. 25	10-24 NC	.2795	7.1mm	8mm-1.00mm
.0768	No. 47	3-48 NC	.1570	No. 22	3/16-32 NS	.2812	9/32"	5/16-32 NEF
.0920	No. 45	3-56 NF	.1590	No. 21	10-32 NF	.3110	7.9mm	9mm-1.25mm
.0880	No. 44	4-36 NS	.1653	4.2mm	5mm-0.80mm	.3125	5/16"	3/8-16 NC
.0890	No. 43	4-40 NC	.1693	4.3mm	5mm-0.80mm	.3189	8.1mm	9mm-1.00mm
.0935	No. 42	4-48 NF	.1770	No. 16	12-24 NC	.3286	8.3mm	9mm-0.75mm
.0984	2.5mm	3mm-0.50mm	.1820	No. 14	12-26 NF	.3320	Ljr. Q	3/8-24 NF
.1016	No. 38	1/8-40 NS	.1850	No. 13	12-32 NEF	.3425	8.7mm	10mm-1.50mm
.1016	No. 38	5-40 NC	.1935	No. 10	14-20 NS	.3503	8.9mm	10mm-1.25mm
.1040	No. 37	5-44 NF	.2010"	No. 7	1/4-20 NC	.3583	9.1mm	10mm-1.00mm
.1065	No. 36	6-32 NC	.2010	No. 7	14-24 NS	.3680	Ljr. U	7/16-14 NC
.1110	No. 34	6-36 NS	.2047	5.2mm	8mm-1.00mm	.3818	9.7mm	11mm-1.50mm
.1130	No. 33	6-40 NF	.2090	No. 4	1/4-24 NS	.3906	25/64"	7/16-20 NF
.1200	No. 31	6-48 NS	.2130	No. 3	1/4-28 NF	.4133	10.5mm	12mm-1.75mm
.1338	3.4mm	4mm-0.70mm	.2188	7/32"	1/4-32 NEF	.4212	10.7mm	12mm-1.50mm
.1338	3.4mm	4mm-0.75mm	.2280	No. 1	1/4-48 NS	.4219	27/64"	1/2-13 NC

DRILL THIS SIZE HOLE		TO TAP FOR THIS SIZE BOLT OR SCREW	TAP-DRILL SIZES FOR PIPE TAPS		
DECIMAL INCHES	DRILL SIZE		DRILL THIS SIZE HOLE		TO TAP FOR THIS SIZE BOLT OR SCREW
			DECIMAL INCHES	DRILL SIZE	
.4291	10.9mm	*12mm-1.25mm	.8125	13/16"	7/8-14 NF
.4531	29/64"	1/2-20 NF	.8228	20.9mm	22mm-1.50mm
.4531	29/64"	1/2-24 NS	.8281	53/64"	*7/8-18 NS
.4803	12.2mm	14mm-2.00mm	.8425	21.4mm	24mm-3.00mm
.4844	31/64"	9/16-12 NC	.8750	7/8"	1-8 NC
.4999	12.7mm	14mm-1.50mm	.8779	22.3mm	24mm-2.00mm
.5039"	12.8mm	*14mm-1.25mm	.9219	59/64"	1-12 NF
.5156	33/64"	9/16-18 NF	.9375	15/16"	1-14 NS
.5312	17/32"	5/8-11 NC	.3390	Ljr. R	1/8-27 NPT
.5590	14.2mm	16mm-2.00mm	.4375	7/16"	1/4-18 NPT
.5781	37/64"	5/8-18 NF	.5781	37/64"	3/8-18 NPT
.5787	14.7mm	16mm-1.50mm	.7031	45/64"	1/2-14 NPT
.5938	19/32"	11/16-11 NS	.9219	59/64"	3/4-14 NPT
.6220	15.8mm	18mm-2.50mm	1.1562	1-5/32"	1-11 - 1/2 NPT
.6250	5/8"	11/16-16 NS	1.5000	1-1/2"	1-1/4 - 11-1/2NPT
.6562	21/32"	3/4-10 NC	1.7344	1-47/64"	1-1/2 - 11-1/2NPT
.6614	16.6mm	*18mm-1.50mm	2.2188	2-7/32"	2 - 11-1/2 NPT
.6875	11/16"	3/4-18 NF			
.7008	17.8mm	20mm-2.50mm			
.7656	49/64"	7/8-9 NC			

* SPARK PLUG TAP

Parts List

Part No.	Description
1	Taper Shank
2	Cup Nut
2A	Cup Nut Screw
3	Cam
4	Cam Pin
5	Spring Washer
6	Cup Spring
7	Body
8	Gear Wheel
9	Wheel Pin
10	Clutch Part
11	Clutch Pin
12	Clutch Screw
13	Guide Nut
14	Guide Bushing
15	Bolt Bearing
16	Small Pinion
17	Large Pinion
18	Square Key
19	Spindle
19A	Dowel Pin
20	Square left / right Nut
21	Jaws
22	Jaws Spring
23	Chuck Nut
23A	Lock Ring

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

Assembly Drawing

