

IMPACT WRENCH



IMPORTANT:

Read and understand this instruction manual thoroughly before using the product.

INSTRUCTION MANUAL

MAXIMUM

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NOTE: If any parts are missing or damaged, or if you have any questions, please call our toll-free helpline at 1-800-689-9928



SAVE THESE INSTRUCTIONS

 This manual contains important safety and operating instructions. Read all instructions and follow them with use of this product. **TECHNICAL SPECIFICATIONS**



TECHNICAL SPECIFICATIONS

No-load Speed	2100 RPM
Impacts per minute	2700 BPM
Maximum fastening torque	350 ft-lb
Rated voltage	120 V~, 60 Hz
Rated power input	8A
Capacity (Standard bolt)	M12-M20 1/2-3/4" (12.7-19.1 mm) 1/2-5/8" (12.7-15.9 mm)
Capacity (High-tensile bolt)	M12-M16 (1/2"-5/8") (12.7 mm-15.9 mm)
Socket Size	1/2" (12.7 mm)
Weight	7 lbs 6 oz (3.3 kg)

RULES FOR SAFE OPERATION

KNOW YOUR TOOL

To operate this tool, carefully read this Instruction Manual and all labels affixed to the impact wrench. Keep this Manual available for future reference.

IMPORTANT

This tool should only be serviced by a qualified service technician. For more information, call the toll free helpline, at 1-800-689-9928.

READ ALL INSTRUCTIONS CAREFULLY

SAVE THESE INSTRUCTIONS

GENERAL POWER TOOL SAFETY WARNINGS



WARNING!

Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

WORK AREA SAFETY

- Keep the work area clean and well lit. Cluttered or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence
 of flammable liquids, gases or dust. Power tools create sparks, which may
 ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions
 can cause you to lose control.

ELECTRICAL SAFETY

- Power tool plugs must match the outlet. Never modify the plug in any way. Do
 not use any adapter plugs with earthed (grounded) power tools. Unmodified
 plugs and matching outlets will reduce the risk of electric shock.
- Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep the cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.

AFETY GUIDELINES

- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a ground-fault circuit interrupter (GFCI) protected supply. Use of a GFCI reduces the risk of electric shock.

PERSONAL SAFETY

- Stay alert, watch what you are doing and use common sense when operating
 a power tool. Do not use the tool while tired or under the influence of drugs,
 alcohol, or medication. A moment of inattention while operating power tools
 may result in serious personal injury.
- Use personal protective equipment. Always wear eye protection. Protective
 equipment such as dust mask, non-skid safety shoes, hard hat, or hearing
 protection, used for appropriate conditions, will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the off-position before
 connecting to power source and/or battery pack, picking up or carrying the
 tool. Carrying power tools with your finger on the switch or energising power
 tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on. A
 wrench or a key left attached to a rotating part of the power tool may result in
 personal injury.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure that these are connected and properly used. Use of these devices can reduce dust-related hazards.

POWER TOOL USE AND CARE

- Do not force the power tool. Use the correct power tool for your application.
 The correct power tool will do the job better and more safely at the rate for which it was designed.
- Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.

- Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.
 Power tools are dangerous in the hands of untrained users.
- Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- Use the power tool, accessories, tool bits, etc. in accordance with these
 instructions, taking into account the working conditions and the work to be
 performed. Use of the power tool for operations different from those intended
 could result in a hazardous situation.

SERVICE

 Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

SAFETY GUIDELINES FOR IMPACT WRENCH

- Hold the tool by insulated gripping surfaces when performing an operation
 where the cutting tool may contact hidden wiring or its own cord. A cutting
 accessory contacting a "live" wire may make exposed metal parts of the power
 tool "live" and could give the operator an electric shock.
- Check the socket carefully for wear, cracks or damage before installation.
- Hold the tool firmly with both hands.
- Always be sure you have a firm footing. Be sure no one is below you when using the tool in high locations.
- Check the torque with a torque wrench. The proper fastening torque may differ depending on the type or size of the bolt.

ADDITIONAL SAFETY INSTRUCTIONS FOR OPERATION

- Know your power tool. Read the Instruction Manual carefully. Learn the
 applications and the specific potential hazards related to this tool. Following
 this rule will reduce the risk of electric shock, fire or serious injury.
- Protect your hearing. Wear appropriate personal hearing protection during use.
 Under some conditions, noise from this product may contribute to hearing loss.
- All visitors and bystanders must wear the same safety equipment as the operator.
- Inspect the tool cords periodically, and if damaged, have them repaired by a
 qualified service technician. Be aware of the cord location.

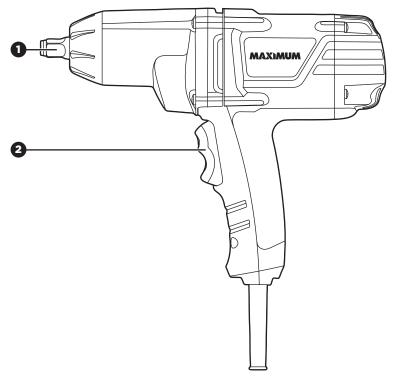
KEY PARTS DIAGRAM

- Save these instructions. Refer to them frequently, and use them to instruct others who may use this tool. If someone borrows this tool, make sure they have these instructions also.
- The label on your tool may include the following symbols. The symbols and their definitions are as follows:

v	Volts
A	Amperes
Hz	Hertz
w	Watts
min	Minutes
\sim	Alternating current
	Direct current
n _o	No-load speed
<u> </u>	Class II Construction
/min	Revolutions or reciprocation per minute
≟	Grounding terminal
BPM	Beats per minute
&	WARNING - To reduce the risk of injury, user must read instruction manual.

PACKAGE CONTENTS

Impact Wrench and Instruction Manual



NO.	PART
1	Anvil

NO.	PART
2	Forward/reverse switch



WARNING!

- Remove the impact wrench from the package and examine it carefully. Do not discard the carton or any packaging material until all parts have been examined.
- If any part of the impact wrench is missing or damaged, do not plug the tool in or use it until the part has been repaired or replaced.
 Failure to heed this warning could result in serious injury.

IMPORTANT INFORMATION

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Before attempting to use this impact wrench, become familiar with all of its operating features and safety requirements. For optimum performance and safety, read the following operating instructions carefully before using the impact wrench.

ASSEMBLY INSTRUCTIONS

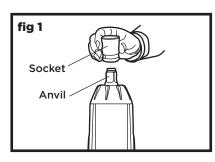
SELECTING THE CORRECT SOCKET (AVAILABLE SEPARATELY)

Always use the correct size socket for bolts and nuts. An incorrect socket will result in inaccurate and inconsistent fastening torque and/or damage to the bolt or nut.

INSTALLING AND REMOVING THE SOCKET (fig 1)

To install the socket, push it onto the anvil of the tool until it locks into place.

To remove the socket, simply pull it off.



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WARNING!

 Do not allow familiarity with the impact wrench to cause a lack of alertness. A fraction of a second of carelessness is enough to cause severe injury.



CAUTION!

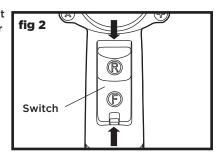
• Always verify that the tool is switched off and unplugged before installing any accessories on the tool.

OPERATING INSTRUCTIONS

OPERATING INSTRUCTIONS

TURNING ON AND TURNING OFF (fig 2)

- Connect the power cord of your impact wrench to a standard household power outlet.
- Press the part of the switch marked F to run the tool in the forward direction (clockwise rotation).
- Press the part of the switch marked R to reverse the motor direction (counter-clockwise rotation).
- 4. Release the switch to stop the tool.



INSTALLING FASTENERS

To fasten:

- Start threading the fastener by hand onto or into its threaded counterpart (e.g. nut onto bolt, or bolt into nut or threaded hole).
- 2. With the proper impact socket securely mounted to the wrench, slide the impact socket onto the nut or bolt head.
- 3. Place the direction-of-rotation selector in the FORWARD position, firmly hold the tool and depress the switch. The impact socket will turn the fastener and impacting will begin once the fastener encounters resistance.

To loosen:

- With the proper impact socket securely mounted to the wrench, slide the impact socket onto the bolt head.
- 2. Place the direction- of-rotation selector in the REVERSE position, firmly hold the tool and depress the switch. The tool will start to impact immediately.
- 3. Once the fastener has "broken loose," it will start to unthread. Be careful that you do not allow a fastener to spin freely once it is no longer engaged with its threaded counterpart, as it may be thrown out of the socket.



CAUTION!

 Do not allow familiarity with your impact wrench to make you careless. Remember that a careless fraction of a second is sufficient to cause severe injury.



CAUTION!

 Always verify that the tool is switched off and unplugged before installing any accessories on the tool.

MAINTENANCE

IMPACTING TIPS

The proper fastening torque may differ depending on the type or size of the bolt, the material of the workpiece to be fastened, etc.

Hold the tool firmly, and place the socket over the bolt or nut. Turn the tool on, and fasten the bolt or nut to the proper torque.

Practice with various fasteners, noting the length of time required to reach the desired torque. Check the tightness with a hand torque wrench. If the fasteners are too tight, reduce the impacting time. If they are not tight enough, increase the impacting time. The torque that is required to loosen a fastener averages 75% to 80% of the tightening torque, depending on the condition of the contacting surfaces. However, if rust or corrosion causes seizing, more torque may be required.

After fastening, always check the torque with a torque wrench. The fastening torque is affected by a wide variety of factors, including the following:

- 1. Voltage
 - A voltage reduction will cause a reduction in the fastening torque.
- 2. Socket
 - Failure to use the correct size socket will cause a reduction in the fastening torque.
 - A worn socket (wear on the hex end or square end) will cause a reduction in the fastening torque.
- 3. Bolt
 - Although the torque coefficient and the class of bolt may be the same, the proper fastening torque will differ according to the diameter of the bolt.
 - Although the diameters of bolts are the same, the proper fastening torque will differ according to the torque coefficient, the class of bolt and the bolt length.
- 4. The use of a universal joint or an extension bar (both available separately) will reduce the fastening force of the impact wrench somewhat. Compensate by fastening for a longer period of time.
- 5. The manner of holding the tool or the material to be fastened will affect the torque.

NOTE:

- Hold the tool straight along the axis of the bolt or nut.
- Excessive fastening torque may damage the bolt/nut or socket. Before starting your job, always perform a test operation to determine the proper fastening time for your bolt or nut.

MAINTENANCE

BEFORE EACH USE:

- Inspect the impact wrench, the switch, and the cord for damage.
- Check for damaged, missing, or worn parts.
- Check for loose screws, misalignment or binding of moving parts, or any other condition that may affect the operation.
- If abnormal vibration or noise occurs, turn the impact wrench off immediately, and have the problem corrected before further use.
- Using compressed air may be the most effective cleaning method. Always wear safety goggles when cleaning tools using compressed air.



WARNING!

- To ensure safety and reliability, all repairs should be performed by a qualified service technician.
- When servicing, use only identical replacement parts. The use of any other parts may create a hazard or cause damage to the product.
- Unplug the impact wrench from the power source before cleaning or performing any maintenance.
- Do not allow brake fluids, gasoline, petroleum-based products, penetrating oil, etc. to come into contact with plastic parts.
 These substances contain chemicals that can damage, weaken, or destroy plastic.

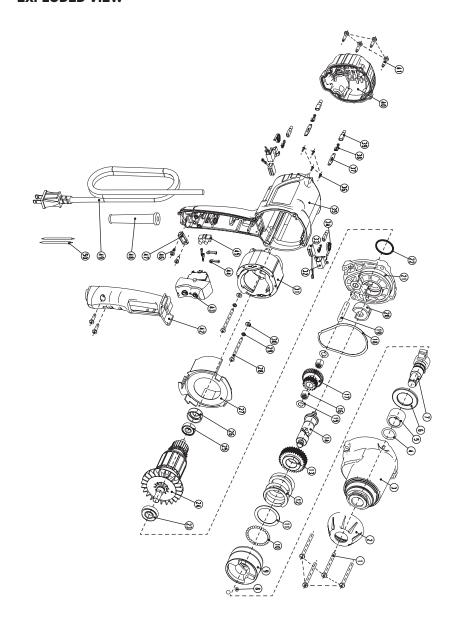
PART LIST

TROUBLESHOOTING

Problem	Cause of the Problem	Suggested Corrective Action
The impact wrench does not work	The impact wrench is not plugged into a power source	Plug the wrench into an appropriate power source
Socket cannot be installed	Improper socket selection	Use a suitable socket
The motor is overheating	Cooling vents may be obstructed by dust or other obstacles	Clean and clear vents. Do not cover with hand during operation

If the problem remains unsolved after performing the checks described above, call the toll-free helpline, at 1-800-689-9928.

EXPLODED VIEW



lo.	Part No.	Description
	5610100000	Tapping Screw
2	3125144000	Cover
	3421042000	Front Gear Housing
4	5690208000	O-Ring
5	3551518000	Bushing
6	5650351000	Washer
7	2822873000	Spindle
8	5700217000	Steel Ball
9	3551371000	Impact Block
10	5700045000	Steel Ball
11	5650312000	Washer
12	3660413000	Spring
13	3551440000	Gear
14	3551372000	Spindle
15	5650187000	Washer
i	5700028000	Needle Bearing
17	3551470000	Gear
18	3704670000	Gasket
19	5670258000	Pin
20	5700211000	Oil Impregnated Bearing
21	3421041000	Rear Gear Housing
22	5690213000	Rubber Ring
23	5700014000	Ball Bearing
24	2750905000	Rotor
25	5700008000	Ball Bearing

If the problem remains unsolved after performing the checks described above, call the toll-free helpline, at 1-800-689-9928.

5-YEAR LIMITED WARRANTY

This Mastercraft Maximum product is guaranteed against defects in workmanship and materials for a period of 5 years from the date of original retail purchase, with the exception of the following components:



- a) Component A: Batteries, chargers and carrying case, which are guaranteed against defects in workmanship and materials for a period of 2 years from the date of original retail purchase:
- b) Component B: Accessories, which are guaranteed against defects in workmanship and materials for a period of 1 year from the date of original retail purchase.

Subject to the conditions and limitations described below, this product, if returned to us with proof of purchase within the stated warranty period, and if covered under this warranty, will be repaired or replaced (with the same model or one of equal value or specification), at our option. We will bear the cost of any repair or replacement and any labour costs relating thereto.

This warranty is subject to the following conditions and limitations:

- a) A bill of sale verifying the purchase and purchase date must be provided;
- b) This warranty will not apply to any product or part thereof that is worn or broken, or that has become inoperative due to abuse, misuse, accidental damage, neglect or lack of proper installation, operation or maintenance (as outlined in the applicable owner's manual or operating instructions), or that is being used for industrial, professional, commercial or rental purposes;
- c) This warranty will not apply to normal wear and tear or to expendable parts or accessories that may be supplied with the product and that are expected to become inoperative or unusable after a reasonable period of use;
- d) This warranty will not apply to routine maintenance and consumable items, including but not limited to fuel, lubricants, vacuum bags, blades, belts, sandpaper, bits, fluids, tune-ups or adjustments;
- e) This warranty will not apply where damage is caused by repairs made or attempted by others (i.e.: persons not authorized by the manufacturer);
- f) This warranty will not apply to any product that was sold to the original purchaser as a reconditioned or refurbished product (unless otherwise specified in writing);
- g) This warranty will not apply to any product or part thereof if any part from another manufacturer is installed therein or if any repairs or alterations have been made or attempted by unauthorized persons;
- h) This warranty will not apply to normal deterioration of the exterior finish, including but not limited to scratches, dents, paint chips, or to any corrosion or discolouring by heat, abrasive and chemical cleaners; and

 This warranty will not apply to component parts sold by and identified as the product of another company, which shall be covered under the product manufacturer's warranty, if any.

Additional Limitations

This warranty applies only to the original purchaser, and may not be transferred. Neither the retailer nor the manufacturer shall be liable for any other expense, loss or damage, including but not limited to any indirect, incidental, consequential or exemplary damages arising in connection with the sale, use or inability to use this product.

Notice to Consumer

This warranty gives you specific legal rights, and you may have other rights, which may vary from province to province. The provisions contained in this warranty are not intended to limit, modify, take away from, disclaim or exclude any statutory warranties set forth in any applicable provincial or federal legislation.

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