

BENCHMARKTM MC

1/2" DRIVE IMPACT WRENCH



5 year limited warranty on tool



Intertek
3042597
JD2173U

**READ ALL INSTRUCTIONS BEFORE FIRST USE.
KEEP THIS MANUAL FOR FUTURE REFERENCE.
KEEP AWAY FROM CHILDREN.**



**WEAR CSA APPROVED
EYE PROTECTION**



**WEAR EAR
PROTECTION**



**WEAR A
FACE MASK**

PRODUCT SPECIFICATIONS

1/2" HEAVY DUTY IMPACT WRENCH

Motor	8.5 Amp, 120V~, 60Hz
Drive	1/2" Square
Rocker Switch	Single hand forward/reverse
Variable Speed	2600 RPM
Impact Speed	2700 IPM
Torque	480 Ft. Lbs.
Tool Weight	8.3lbs. (3.75kg)

NEED ASSISTANCE?

Call us on our toll-free customer support line:
1-866-349-8665 (Monday through Friday 9am – 5pm Eastern Standard Time)

- Technical questions
- Replacement parts
- Parts missing from package

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GENERAL POWER TOOL SAFETY WARNINGS

⚠️ WARNING: Read all safety warnings, instructions, illustrations, and specifications provided with this power tool. Failure to follow all instructions listed below 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.

1) WORK AREA SAFETY

- a) Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- b) 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.
- c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

2) ELECTRICAL SAFETY

- a) 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 risk of electric shock.
- b) 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.
- c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- d) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- e) 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.
- f) 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.

3) PERSONAL SAFETY

- a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
- b) 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.

- c) 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 energizing power tools that have the switch on invites accidents.
- d) 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.
- e) Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- f) 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.
- g) If devices are provided for dust extraction and collection, ensure these are connected and properly used. Use of dust collection facilities can reduce dust-related hazards.
- h) Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.

4) POWER TOOL USE AND CARE

- a) Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- b) 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.
- c) Disconnect the plug from the power source and/or remove the battery pack, if detachable, 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.
- d) 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.
- e) Maintain power tools and accessories. 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.
- f) Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) Use the power tool, accessories, and 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.
- h) Keep handles and grasping surfaces dry, clean, and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

5) SERVICE

- a) 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.

**SPECIFIC SAFETY WARNINGS
FOR IMPACT WRENCHES**

1. Hold power tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
2. Wear ear protection with impact drivers. Exposure to noise can cause hearing loss.
3. Use clamps or another practical way to secure and support the work piece to a stable platform. Holding the work by hand or against your body leaves it unstable and may lead to loss of control.
4. When not in use, place tool on its side on a stable surface where it will not cause a tripping or falling hazard. Some tools with large battery packs will stand upright but may be easily knocked over.
5. Keep your hair, clothing, and gloves away from air vents. Air vents often cover moving parts in which these items can be caught.
6. Hold tool firmly with two hands. Loss of control can cause personal injury.
7. Wear safety goggles or other eye protection. Hammering and drilling operations cause chips to fly. Flying particles can cause permanent eye damage.
8. Bits, sockets and tools get hot during operation. Wear gloves when touching them.
9. Do not operate this tool for long periods of time. Vibration caused by tool action may be harmful to your hands and arms. Use gloves to provide extra cushion and limit exposure by taking frequent rest periods.
10. Wear appropriate personal hearing protection during use. Under some conditions and duration of use, noise from this product may contribute to hearing loss.

ADDITIONAL SAFETY INFORMATION

⚠️ WARNING: ALWAYS use safety glasses. Everyday eyeglasses are NOT safety glasses. Also use face or dust mask if cutting operation is dusty. ALWAYS WEAR CERTIFIED SAFETY EQUIPMENT:

- ANSI Z87.1 eye protection (CAN/CSA Z94.3),
- ANSI S12.6 (S3.19) hearing protection,
- NIOSH/OSHA/MSHA respiratory protection.

⚠️ WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water. Allowing dust to get into your mouth, eyes, or lay on the skin may promote absorption of harmful chemicals.

⚠️ WARNING: Use of this tool can generate and/or disperse dust, which may cause serious and permanent respiratory or other injury. Always use NIOSH/OSHA approved respiratory protection appropriate for the dust exposure. Direct particles away from face and body.

⚠️ WARNING: Always wear proper personal hearing protection that conforms to ANSI S12.6 (S3.19) during use. Under some conditions and duration of use, noise from this product may contribute to hearing loss.

⚠️ CAUTION: When not in use, place tool on its side on a stable surface where it will not cause a tripping or falling hazard. Some tools will stand upright but may be easily knocked over.

Air vents often cover moving parts and should be avoided. Loose clothes, jewellery or long hair can be caught in moving parts.

An extension cord must have adequate wire size (AWG or American Wire Gauge) for safety. The smaller the gauge number of the wire, the greater the capacity of the cable, that is, 16 gauge has more capacity than 18 gauge. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. When using more than one extension to make up the total length, be sure each individual extension contains at least the minimum wire size. The following table shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The lower the gauge number, the heavier the cord.










EXTENSION CORD GUIDELINES

MINIMUM GAUGE FOR CORD SETS					
Volts		Total Length of Cord in Feet (meters)			
120V		25 (7.6)	50 (15.2)	100 (30.5)	150 (45.7)
240V		50 (15.2)	100 (30.5)	200 (61.0)	300 (91.4)
AMPERE RATING		AMERICAN WIRE GAUGE			
MORE THAN	NOT MORE THAN				
0	6	18	16	16	14
6	10	18	16	14	12
10	12	16	16	14	12
12	16	14	12	Not Recommended	

SYMBOLS

The label on your tool may include the following symbols.

The symbols and their definitions are as follows:

V	Volts	or AC/DC	Alternating or Direct Current
Hz	Hertz		Class II Construction (Double Insulated)
min	Minutes	n ₀	No Load Speed
= or DC	Direct Current	n	Rated Speed
	Class I Construction (Grounded)		Earthing Terminal
.../min	Per Minute		Safety Alert Symbol
BPM	Beats Per Minute		Visible Radiation
IPM	Impacts Per Minute		Wear Respiratory Protection
RMP	Revolutions Per Minute		Wear Eye Protection
sfpm	Surface Feet Per Minute		Wear Hearing Protection
SPM	Strokes Per Minute		Read All Documentation
A	Amperes		
W	Watts		
~ or AC	Alternating Current		



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This symbol designates that this tool is listed with U.S. requirements by ETL Testing Laboratories, Inc.

Conforms to UL62841-1, UL62841-2-2.

Certified to CSA C22.2#62841-1, CSA C22.2#62841-2-2.

KNOW YOUR 1/2" IMPACT WRENCH

1/2" Hog Ring Anvil

Air ducts

Motor cover

Forward/Reverse Rocker

Handle

Heavy Duty
Blow Mold Case



ASSEMBLY AND ADJUSTMENTS

REMOVE ACCESSORY

To remove an accessory, grasp the accessory and firmly pull it out of the 1/2" hog ring anvil.

OPERATION

⚠️ WARNING: To reduce the risk of serious personal injury, turn unit off and disconnect it from power source before making any adjustments or removing/ installing attachments or accessories. An accidental start-up can cause injury.

⚠️ WARNING: Shock hazard. Under no circumstances should this product be used near water.

⚠️ WARNING: Risk of lacerations or burns. Do not touch work piece or accessory immediately after operating the tool. They can become very hot. Handle carefully. Always allow accessories and work piece to cool before handling.

PROPER HAND POSITION

⚠️ WARNING: To reduce the risk of serious personal injury, ALWAYS use proper hand position as shown.

⚠️ WARNING: To reduce the risk of serious personal injury, ALWAYS hold securely in anticipation of a sudden reaction.



FIG.2

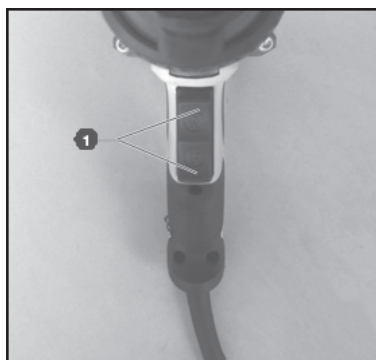


FIG.3

Proper hand position requires one hand on the handle. (Fig. 2)

ON/OFF SWITCH

1. Press the bottom part of the forward/reverse switch marked "F" to run the tool in a forward (right-hand thread) direction. (FIG.3)
2. Press the top of the forward/reverse switch marked "R" to reverse the motor direction. (FIG.3)

COMPONENTS

MOTOR

Be sure your power supply matches with the nameplate marking. Voltage decrease of more than 10% will cause loss of power and overheating. These tools are factory tested; if this tool does not operate, check power supply.

Refer to page 9 of this manual for a complete list of components.

INTENDED USE

DO NOT use under wet conditions or in presence of flammable liquids or gases. DO NOT let children come into contact with the tool. Supervision is required when inexperienced operators use this tool.

ASSEMBLY AND ADJUSTMENTS

⚠️ WARNING: To reduce the risk of serious personal injury, turn unit off and disconnect it from power source before making any adjustments or removing/ installing attachments or accessories. An accidental start-up can cause injury.

⚠️ WARNING: Shock hazard. Under no circumstances should this product be used near water.

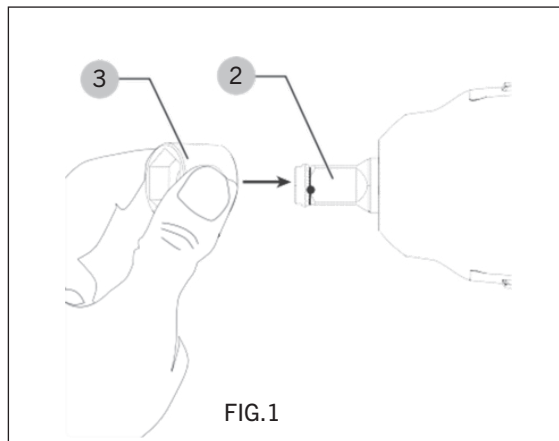
⚠️ WARNING: Risk of lacerations or burns. Do not touch work piece or accessory immediately after operating the tool. They can become very hot. Handle carefully. Always allow accessories and work piece to cool before handling.

INSTALL & REMOVING THE SOCKETS

⚠️ CAUTION:

Use only impact sockets. Non-impact sockets may break and cause a hazardous condition. Inspect socket prior to use to ensure that it contains no cracks.

To install an accessory, firmly push accessory onto the 1/2" hog ring anvil (2). The hog ring (3) compresses to allow the accessory to slide on. After the accessory is installed, the hog ring applies pressure to help provide accessory retention. (FIG.1)



FASTENING

⚠️ WARNING: Ensure fastener and/or system will withstand the level of torque generated by the tool. Excessive torque may cause breakage and possible personal injury.

1. Place the accessory on the fastener head. Keep the tool pointed straight at the fastener.
2. Press forward/reverse switch to start operation. Always check torque with a torque wrench, as the fastening torque is affected by many factors including the following:

Voltage: Low voltage, due to generator or long extension cord, will reduce fastening torque.

Accessory size: Failure to use the correct accessory size will cause a reduction in fastening torque.

Bolt Size: Larger bolt diameters generally require higher fastening torque. Fastening torque will also vary according to length, grade, and torque coefficient.

Bolt: Ensure that all threads are free of rust and other debris to allow proper fastening torque.

Material: The type of material and surface finish of the material will affect fastening torque.

Fastening Time: Longer fastening time results in increased fastening torque. Using a longer fastening time than recommended could cause the fasteners to be overstressed, stripped or damaged.

CAPACITY

Your 1/2" (12.7 mm) impact wrench uses sockets with 1/2" (12.7 mm) square drive ends.

CLEANING

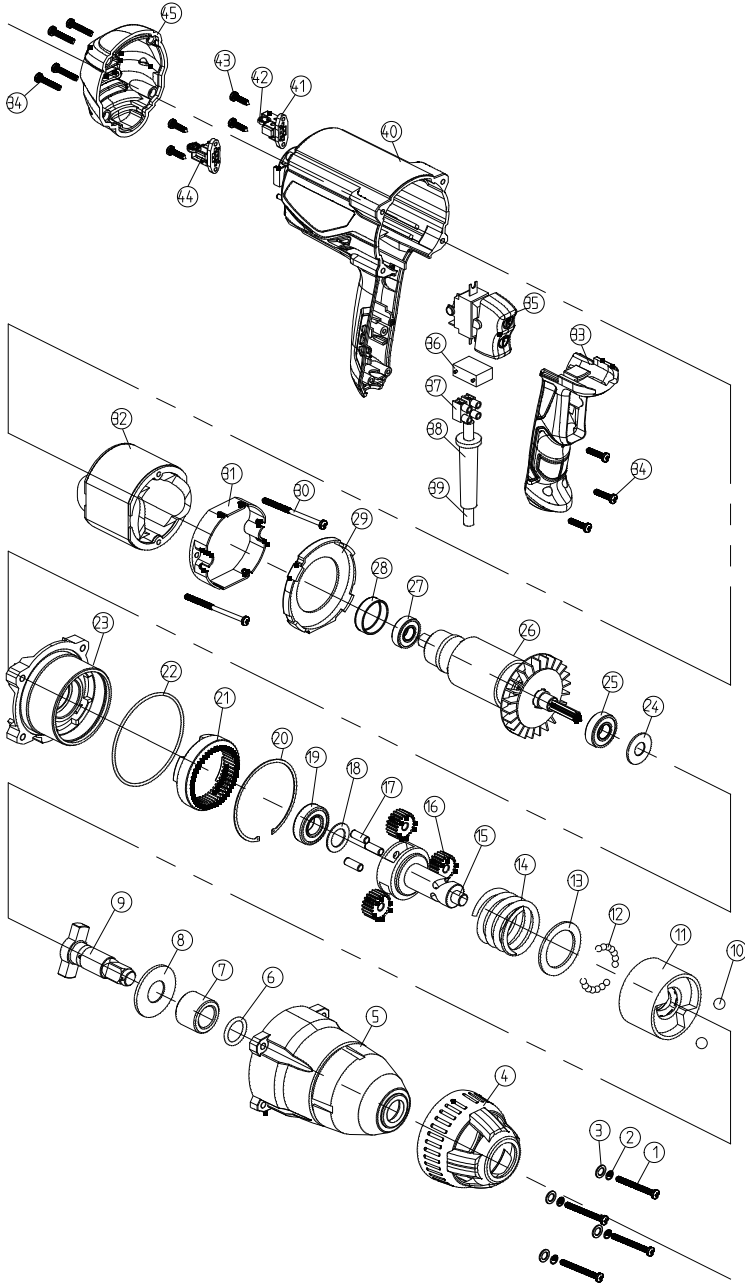
⚠️ WARNING: Blow dirt and dust out of all air vents with clean, dry air at least once a week. To minimize the risk of eye injury, always wear ANSI Z87.1 approved eye protection when performing this.

⚠️ WARNING: Never use solvents or other harsh chemicals for cleaning the non-metallic parts of the tool. These chemicals may weaken the plastic materials used in these parts. Use a cloth dampened only with water and mild soap. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.

REPAIRS

⚠️ WARNING: To assure product SAFETY and RELIABILITY, repairs, maintenance, and adjustment (including brush inspection and replacement, when applicable) should be performed by a BENCHMARK factory service center or a BENCHMARK authorized service center. Always use identical replacement parts.

EXPLODED VIEW



PARTS LIST

⚠ WARNING: When servicing, use only original equipment replacement parts. The use of any other parts may create a safety hazard or cause damage to the 1/2" impact wrench.

Any attempt to repair or replace electrical parts on this impact wrench may create a safety hazard unless repairs are performed by a qualified technician.

For more information, call the Toll-free Helpline at 1-866-349-8665, Monday – Friday from 9am to 5pm Eastern Standard Time.

Always order by key number.

Key #	Part #	Part Name	Quantity
1	4030090005	ST4.9X50	4
2	4040030003	5MM SPRING WASHER	4
3	4040010011	5MM WASHER	4
4	3140100013	RUBBER SLEEVE	1
5	2020050079	ALUMINUM SHELL	1
6	3140020017	O TYPE SEALING RING	1
7	2010080084	SHAFT COAT	1
8	2030020034	WASHER 1	1
9	2040040131	OUTER SHAFT (FI MACHINING)	1
10	4080080002	BALL Φ 6.35mm	2
11	2040200014	IMPACT BLOCK (FI MACHINING)	1
12	4080060001	BALL Φ 5MM	24
13	2030020351	WASHER 2	1
14	2050060240	TORQUE SPRING	1
15	2040040113	PINNER SHAFT	1
16	2010010132	PLANETARY	3
17	4110010011	PIN	3
18	2030020229	WASHER 3	1
19	4010010084	BEARING 6002 2RS	1
20	4100010015	CIRCLIP	1
21	2010090082	INNER GEAR RING	1
22	3140020132	OIL SEAL RING	1
23	2020020050	GEAR BOX	1
24	3190010023	WOOL FELT SEAL RING	1
25	4010010055	BEARING 6001 2RS	1
26	1010180014	ROTATOR	1
27	4010010048	BEARING 608 RS	1
28	3140040014	BEARING COVER	1

PARTS LIST (CONT.)

Key #	Part #	Part Name	Quantity
28	3140040014	BEARING COVER	1
29	3150050094	WIND SHIELD	1
30	4030010126	ST3.9X65	2
31	3150160214	SETTING RING FOR STATOR	1
32	1020180013	STATOR	1
33	3120070132	HANDLE	1
34	4030010106	ST3.9X19	7
35	1062020067	SWITCH	1
36	1210020024	0.1UF CAPACITANCE	1
37	1250010002	TERMINAL	1
38	3140010067	CABLE SHEATH	1
39	1190220026	GS STANDARD CABLE	1
40	3011180006	ENCLOSURE	1
41	1230030032	CARBON BRUSH HOLDER ASSEMBLY	2
42	2050020027	SPIRAL SPRING	2
43	4030010023	ST2.9X8	4
44	1230010149	CARBON BRUSH	2
45	3160010072	CASE COVER	1

WARRANTY

BENCHMARK 1/2" HEAVY DUTY IMPACT WRENCH WARRANTY

If this Benchmark tool fails due to a defect in material or workmanship within five years from the date of purchase, return it to any Home Hardware store with the original bill of sale for exchange. This warranty does not include expendable parts including but not limited to blades, brushes, belts, light bulbs.

This warranty covers defects in material or workmanship only. It does not cover normal wear and tear, failure due to abuse/misuse, or defects caused by careless or accidental mishandling. If this Benchmark product is used for commercial or rental purposes, this warranty does not apply.

**SAVE YOUR RECEIPTS
THIS WARRANTY IS VOID WITHOUT THEM**

1/2" DRIVE IMPACT WRENCH



5 year limited warranty on tool

BENCHMARK™

BENCHMARK TOOLS CANADA

ST. JACOBS, ONTARIO N0B 2N0

© 01 / 2021 Home Hardware Stores Limited

CUSTOMER SERVICE/TECH SUPPORT

1-866-349-8665

1248-000

Made in China



* This Benchmark™ product carries a five (5) year LIMITED warranty against defects in workmanship and materials. See Owner's Manual for full details.



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