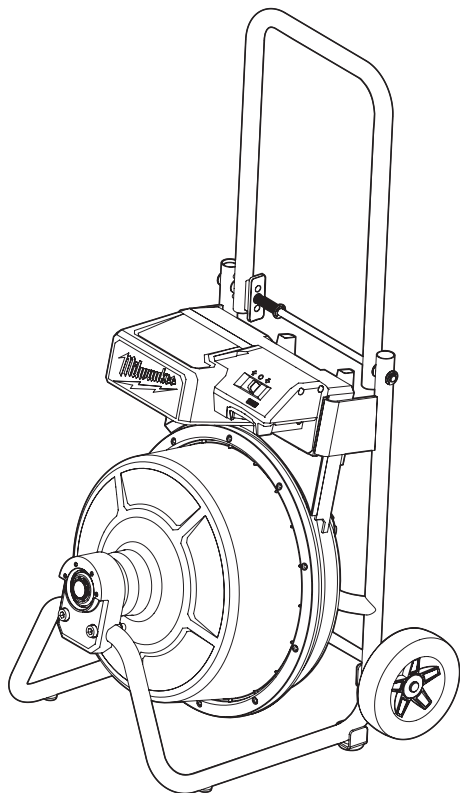




OPERATOR'S MANUAL



Cat. No.
M18 BCDM

M18™ BRUSHLESS COMPACT DRUM MACHINE 3/8" (9.5 MM)

WARNING

 To reduce the risk of injury, user must read and understand operator's manual.

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.

WORK AREA SAFETY

- **Keep 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 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 cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- **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 residual current device (RCD) protected supply.** Use of a RCD 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 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.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as a 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 and clothing 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 these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
- **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.

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 safer 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 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.
 - **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 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.
 - **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 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.
 - **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.
- ### BATTERY TOOL USE AND CARE
- **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
 - **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
 - **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.

- **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.
- **Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
- **Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 130°C (265°F) may cause explosion.
- **Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

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.
- **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorised service providers.

SPECIFIC SAFETY RULES FOR SEWER MACHINES

- **Only grasp the rotating cable with gloves recommended by the manufacturer.** Latex or loose fitting gloves or rags can become wrapped around the cable and may result in serious personal injury.
- **Do not allow the cutter to stop turning while the cable is turning.** This can overstress the cable and may cause twisting, kinking or breaking of the cable and may result in serious personal injury.
- **One person must control both the cable and the switch.** If the cutter stops rotating, the operator must be able to turn the tool off to prevent the cable from twisting, kinking and breaking.
- **Use latex or rubber gloves inside the gloves recommended by the manufacturer.** Use goggles, face shields, protective clothing, and respirator when chemicals, bacteria or other toxic or infectious substances are suspected to be in a drain line. Drains may contain chemicals, bacteria and other substances that may cause burns, be toxic or infectious or may result in other serious personal injury.
- **Practice good hygiene. Do not eat or smoke while handling or operating the tool. After handling or operating drain cleaning equipment, use hot, soapy water to wash hands and other body parts exposed to drain contents.** This will help reduce the risk of health hazards due to exposure to toxic or infectious material.
- **Only use the drain cleaner for the recommended drain sizes.** Using the wrong size drain cleaner can lead to twisting, kinking or breaking of the cable and may result in personal injury.
- **Inspect cable for wear and damage before use.** Replace a worn or damaged cable before using the drain cleaner.
- **Do not twist, kink or over bend cables.** Breaking of the cable may result in serious personal injury.
- **Inspect the drain to be cleaned before use.** If possible, determine the access point(s) to the drain, the size(s) and length(s) of the drain, distance to

mainlines, the nature of the blockage, presence of drain cleaning chemicals or other chemicals, etc. If chemicals are present in the drain, it is important to understand the specific safety measures required to work around those chemicals. Contact the chemical manufacturer for required information.

- **If needed, place protective covers in the work area.** The drain cleaning process can be messy.
- **Make sure cable is fully retracted inside of the drain cleaner.** This will prevent whipping at start up.
- **Place the drain cleaner at a distance no greater than 60 cm from drain opening.** If the drain cleaner cannot be placed within 60 cm from the drain opening, the drain opening will need to be extended using a similar size pipe and fittings.
- **Do not operate the drain cleaner in reverse rotation except as described in this manual.** Running the tool in reverse for extended periods can cause damage to the cable and accessories.
- **Always wear outer gloves recommended by the manufacturer to avoid entanglement.**
- **Always clear the area of obstructions before transporting.**
- **Do not use cart to transport other loads or add additional product.** For use with recommended cable size/lengths only.
- **Ensure drum is secure and front drum mount is tightly fastened.** Moving parts can cause injury.
- **Disassembly of the internal drum when a cable is installed will cause the cable to unwind quickly and could whip around uncontrollably, which may result in injury.** Remove cable before disassembling drum.
- **Always secure the tool and any accessories when operating on uneven or raised surfaces.**
- **Always use common sense and be cautious when using tools.** It is not possible to anticipate every situation that could result in a dangerous outcome. Do not use this tool if you do not understand these operating instructions or you feel the work is beyond your capability; contact MILWAUKEE® Tool or a trained professional for additional information or training.
- **Maintain labels and nameplates. These carry important information.** If unreadable or missing, contact a MILWAUKEE® service facility for a replacement.

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

- lead from lead-based paint
 - 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.

ADDITIONAL BATTERY SAFETY RULES

⚠WARNING To reduce the risk of fire, personal injury, and product damage due to a short circuit, never immerse your tool, battery pack or charger in fluid or allow a fluid to flow inside them. Corrosive or conductive fluids, such as seawater, certain industrial chemicals, and bleach or bleach-containing products, etc., can cause a short circuit.

⚠WARNING Do not charge non-rechargeable batteries.

SYMBOLOLOGY



Volts



Direct Current

n_0 XXXX min⁻¹ No Load Revolutions per Minute (RPM)



Read operator's manual.



Always wear outer gloves over latex/rubber gloves.



Always wear appropriate eye, hearing and respiratory protection.



Forward/OFF/Reverse drum control



Do not allow battery to contact corrosive or conductive fluid



Regulatory Compliance Mark (RCM). This product meets applicable regulatory requirements.

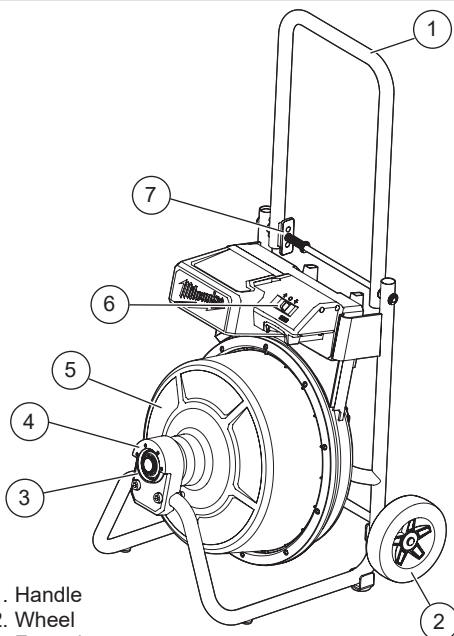


Do not dispose of electric tools together with household waste material. Electric tools and electronic equipment that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

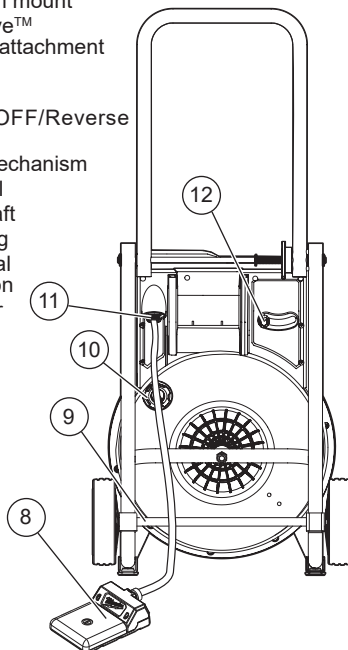
SPECIFICATIONS

Cat. No.	M18 BCDM
Volts.....	18V DC
No Load RPM.....	300
Battery Type.....	M18™
Charger Type.....	M18™
Cable Range.....	9.5 mm (3/8") - 12.7 mm (1/2")
Weight (without cable).....	16.6 kg
Recommended Ambient Operating Temperature.....	-18°C - 51°C

FUNCTIONAL DESCRIPTION



1. Handle
2. Wheel
3. Front drum mount
4. Cable Drive™ assembly attachment holes
5. Drum
6. Forward/OFF/Reverse switch
7. Folding mechanism
8. Foot pedal
9. Wheel shaft
10. Drum plug
11. Foot pedal connection
12. Tensioner



ASSEMBLY

AWARNING Recharge only with the charger specified for the battery. For specific charging instructions, read the operator's manual supplied with your charger and battery.

Inserting/Removing the Battery

AWARNING Always remove the battery pack any time the tool is not in use.

To **insert** the battery, slide the pack into the body of the machine. Make sure it latches securely into place.

To **remove** the battery, push the battery latch to the side and squeeze the battery latch lever. Pull the battery pack away from the machine.

NOTICE To prevent damage to the cable and attachments, only use in recommended pipe size.

Remove the anchor cable packaging stop from the front drum mount before use.

Selecting the Proper Cable

Cat. No.	Description	Pipe Diameter
48532776	9.5 mm x 22.9 m Cable for M18™ Small Drum Machine (3/8" x 75')	38 mm - 76 mm (1-1/2" - 3")
48532777	9.5 mm x 30 m Cable for M18 Small Drum Machine (3/8" x 100')	38 mm - 76 mm (1-1/2" - 3")
48532778	12.7 mm x 22.9 m Cable for M18 Small Drum Machine (1/2" x 75')	76 mm - 102 mm (3" - 4")

Cable Installation

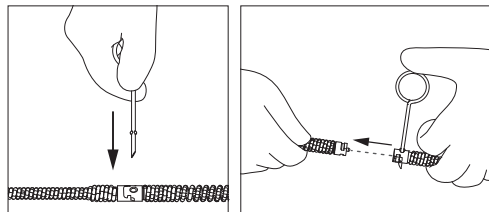
AWARNING To reduce the risk of injury, always wear proper eye protection marked to comply with AS/NZS 1337.1.

Always wear outer gloves over latex/rubber gloves to avoid entanglement. Cable tip may be sharp. Never feed more than 30 m (100') of cable into the machine to avoid overloading.

Remove the cable for cleaning after each use. Different size and types of cables are available for different applications. The instructions below detail how to remove/install the cable manually.

To manually remove the cable:

1. Move the Forward/OFF/Reverse switch to OFF **O** and remove the battery pack. Pull the cable out through the nose of the drum until the anchor cable shows.
2. Remove the cable from the anchor cable by inserting the pin key into the coupling hole and sliding the cable away.



3. To clean or maintain cable, follow the cleaning instructions under "Maintenance".

To manually install the cable:

1. Move the Forward/OFF/Reverse switch to OFF **O**. Ensure the cable feed is disengaged by pressing down on the cable feed quick release button.
2. Attach the cable to the anchor cable by snapping the attachment coupler into the cable coupler.
3. Move the Forward/OFF/Reverse switch to Forward **↓**.
4. Use the foot pedal to start the drum.
5. Manually feed the cable into the drum.

AWARNING Always wear outer gloves over latex/rubber gloves to avoid entanglement.

Cable Attachment Installation

To install the attachment:

Snap the attachment coupler into the cable coupler. Test the cable before inserting into the drain to make sure the attachment does not fall off during use.

To remove the attachment:

Insert the pin key into the coupling hole and slide attachment off of cable.

Attaching Cable Drive Assembly

Cable Drive™ Assembly for M18™ Drum Machine Sold separately. Refer to manual or **MILWAUKEE®** Tool website for the Cable Drive™ Assembly instructions.

Wheel Installation

1. Install wheel shaft through frame eyelet holes.
2. Attach wheels with recess facing out to wheel shaft.
3. Attach e-clip to the shaft groove using pliers to clamp e-clip into place.

Using the Handle

Make sure the handle is locked in the upright position before transporting.

1. Pull back on the folding mechanism with one hand while lifting the handle with the other hand.
2. Continue to lift handle to the upright position until the folding mechanism clicks into place.
3. Reverse the process when storing the handle of the tool.

Transportation

Ensure handle is in the locked position before transporting.

Do not use cart to transport other loads or add additional product. For use with recommended cable size/lengths only.

Always turn OFF or remove battery from the machine before transporting.

Ensure the foot pedal cord is properly wrapped and the pedal is stored before transporting.

Always clear the area of obstructions before transporting.

To roll cart from place to place, grasp the transport handle and tilt the machine back onto the tires. Push, don't pull, the machine.

Drain Cleaning Setup

1. Place the sewer drum machine no further than 60 cm (2') from the drain.

AWARNING Greater distance can cause twisting, kinking, breaking or whipping of the cable.

2. Remove the foot pedal from storage and unwrap the cord and place to the side, ensuring the cord will not tangle with the cable.

OPERATION

⚠WARNING Always remove battery pack before changing or removing accessories.

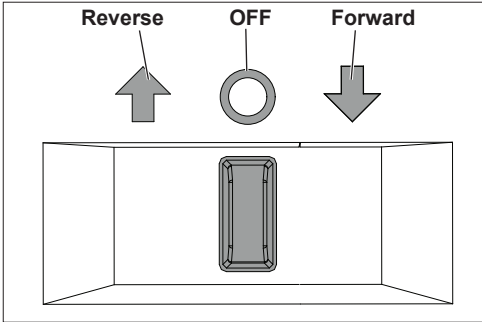
Only use accessories specifically recommended for this tool. Others may be hazardous.

To reduce the risk of short circuit, when setting tool or battery down, do not allow battery to contact corrosive or conductive fluid.

To reduce the risk of injury, always wear proper eye protection marked to comply with AS/NZS 1337.1.

Always wear outer gloves over latex/rubber gloves to avoid entanglement.

Using Forward/OFF/Reverse Switch



1. For **forward** (anticlockwise) rotation, turn the forward/off/reverse switch to the arrow pointing towards the nose of the drum ↓. Check the direction of rotation before use.
2. For **reverse** (clockwise) rotation, turn the forward/ off/reverse switch to the arrow pointing away from the nose of the drum ↑. Check the direction of rotation before use.
3. To **lock** the switch, turn the forward/off/reverse switch to the centre position O. The foot pedal will not work while the forward/off/reverse switch is in the centre locked position. Always lock the switch or remove the battery pack before performing maintenance, changing accessories, storing the tool and any time the tool is not in use.

Starting and Stopping Speed

1. To **start** the tool, push the forward/off/reverse switch to either direction and step or kneel on the foot pedal.
2. To **stop** the tool, release pressure on the pedal.

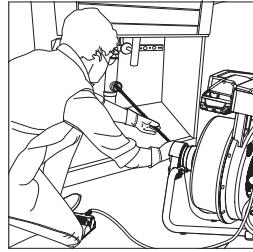
Inserting Cable Into Drain

1. Transport and set the tool up according to the instructions under "Transportation and Drain Cleaning Set Up".
2. Grasp the cable close to the tool and feed at least 60 cm (2') into the drain.

⚠WARNING Always wear outer gloves over latex/rubber gloves to avoid entanglement.

3. Turn the forward/off/reverse switch to the forward position ↓ and engage the foot pedal to begin rotating the cable.

4. Continue feeding cable into the drain until the obstruction is reached.



5. When the clog is reached, move the cable in a back and forth motion until the obstruction is cleared. If the tool binds, release pressure from the foot pedal immediately. Repeat until the drain is clear.

To Unbind Cable

1. Turn the forward/off/reverse switch to the reverse position ↑ and engage the foot pedal to begin rotating the cable.
2. Withdraw the tool a few inches while in reverse to free the cable.
3. Stop the tool.
4. After the tool has come to a complete stop, switch back to the forward position.

⚠NOTICE Running the tool in reverse for extended periods can cause damage to the cable and accessories.

Removing Cable From Drain

1. Turn the forward/off/reverse switch to the forward position ↓ and engage the foot pedal.
2. Pull the cable away from the drain.
3. Wipe down the exposed cable as it returns to the drum.
4. Repeat steps 2 - 4 until the cable is free from the drain.
5. Before storing the tool, wash the cable and drum (see "Cleaning Cables and Drums" in Maintenance).

MAINTENANCE

⚠WARNING To reduce the risk of injury, always unplug the charger and remove the battery pack from the charger or tool before performing any maintenance. Never disassemble the tool, battery pack or charger. Contact a **MILWAUKEE®** service facility for ALL repairs.

Maintaining Tool

Keep your tool, battery pack and charger in good repair by adopting a regular maintenance program. Inspect your tool for issues such as undue noise, misalignment or binding of moving parts, breakage of parts, or any other condition that may affect the tool operation. Return the tool, battery pack, and charger to a **MILWAUKEE®** service facility for repair. After six months to one year, depending on use, return the tool, battery pack and charger to a **MILWAUKEE®** service facility for inspection. If the tool does not start or operate at full power with a fully charged battery pack, clean the contacts on the battery pack. If the tool still does not work properly, return the tool, charger and battery pack, to a **MILWAUKEE®** service facility for repairs.

Cleaning

Clean dust and debris from vents. Keep handles clean, dry and free of oil or grease. Use only mild soap and a damp cloth to clean, since certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include petrol, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia and household detergents containing ammonia. Never use flammable or combustible solvents around tools.

Cleaning Cables and Drums

The cable and drum should be thoroughly flushed with water after every use to prevent damaging effects of sediment and drain cleaning compounds. Remove the drum plug and flush the drum with clean water. Reinstall the drum plug after cleaning the drum.

⚠WARNING Always wear outer gloves over latex/rubber gloves to avoid entanglement.

After washing, dry the cable and drum completely. Then, wipe cable with an oiled rag before returning it to the drum according to the instructions in "Cable Installation".

Bound or Knotted Cable

If the cable cannot be pulled from the nose of the machine, it may be bound or knotted in the drum. To correct this, the drum may need to be disassembled.

⚠WARNING **Disassembly of the internal drum when a cable is installed will cause the cable to unwind quickly and could whip around uncontrollably, which may result in injury.** Disassembly should only be performed by properly trained personnel. Contact **MILWAUKEE®** for assistance.

Replacing the Anchor Cable

Due to the precise torque fastener requirements, **MILWAUKEE®** recommends contacting a **MILWAUKEE®** service facility for anchor cable replacement.

Cleaning the Battery and Battery Bay

Keep battery connections and surfaces between the machine and battery free of debris and materials. Failure to keep surfaces clean may result in misalignment and/or damage to the battery connection.

Repairs

For repairs, return the tool, battery pack and charger to the nearest service centre.

ACCESSORIES

⚠WARNING **Use only recommended accessories. Others may be hazardous.**

For a complete listing of accessories, go online to milwaukeeetool.com.au / milwaukeeetool.co.nz or contact a distributor.

WARRANTY - AUSTRALIA and NEW ZEALAND

Please refer to Australian and New Zealand warranty supplied with tool. This warranty applies only to product sold by authorised dealers in Australia and New Zealand.

SERVICE - AUSTRALIA and NEW ZEALAND

MILWAUKEE® prides itself in producing a premium quality product that is Nothing But Heavy Duty™. Your satisfaction with our products is very important to us! If you encounter any problems with the operation of this tool, please contact your authorised **MILWAUKEE®** dealer.

For a list of **MILWAUKEE®** dealers, guarantee or service agents please contact **MILWAUKEE®** Customer Service or visit our website.

(Australia Toll Free Telephone Number 1300 645 928)

(New Zealand Toll Free Telephone Number 0800 645 928)

or visit milwaukeeetool.com.au/milwaukeeetool.co.nz.

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