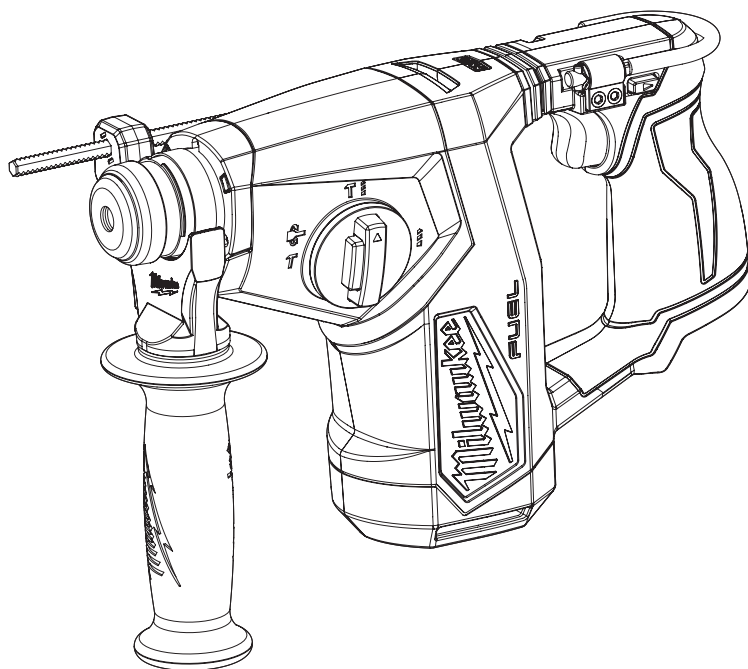




OPERATOR'S MANUAL



Cat. No.

M12 FHAC16



M12 FUEL™ 16MM SDS PLUS ROTARY HAMMER



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 ROTARY HAMMERS

Safety instructions for all operations

- Wear ear protectors. Exposure to noise can cause hearing loss.
- Use auxiliary handle(s), if supplied with the tool. Loss of control can cause personal injury.
- Brace the tool properly before use. This tool produces a high output torque and without properly bracing the tool during operation, loss of control may occur resulting in personal injury.
- Hold the power tool by insulated gripping surfaces, when performing an operation where the accessory or fasteners may contact hidden wiring. Cutting or fasteners accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

Safety instructions when using long drill bits with rotary hammers:

- Always start drilling at low speed and with the bit tip in contact with the workpiece. At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.
- Apply pressure only in direct line with the bit and do not apply excessive pressure. Bits can bend, causing breakage or loss of control, resulting in personal injury.
- Always brace or hold securely.
- Keep hands away from all cutting edges and moving parts.
- Cut embedded rebar only if this operation does not affect the integrity of the building. If in doubt, consult a structural engineer. Tool

operator fully responsible for adverse structural effects.

⚠WARNING To reduce the risk of injury, when working in dusty situations, wear appropriate respiratory protection or use a suitable dust extraction solution.

- 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.

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE USE

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.

SPECIFICATIONS

Cat. No.	M12 FHAC16
Volts.....	12 V DC
Battery Type.....	M12™
Charger Type.....	M12™
No-Load RPM.....	0-1,200
BPM.....	0-4,400
Type.....	SDS Plus
Capacities	
Drill Only	
Steel.....	10 mm (3/8")
Wood.....	13 mm (1/2")
Rotary Hammer (Concrete)	
Carbide Tipped Percussion Bit.....	16 mm (5/8")
Recommended Ambient	
Operating Temperature.....	-17°C to 51°C

SYMBOLLOGY



Volts



Direct Current

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

BPM

Blows per Minute (BPM)



Anti-vibration System



Read operator's manual.



Wear eye and ear protections and dust mask.

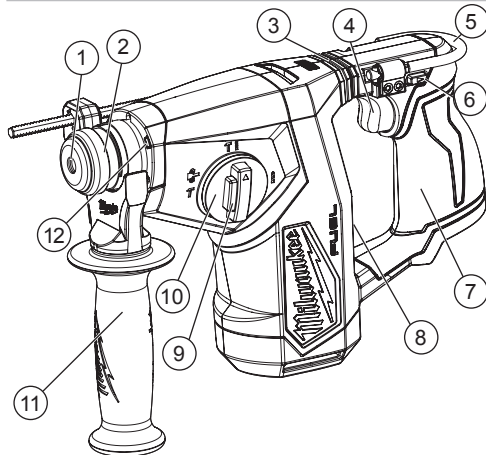


Regulatory Compliance Mark (RCM). This product meets applicable regulatory requirements.



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.

FUNCTIONAL DESCRIPTION



- | | |
|--------------------------|-----------------------|
| 1. SDS Plus bit holder | 7. Handle |
| 2. Bit release collar | 8. Fuel gauge |
| 3. Anti-vibration system | 9. Mode select button |
| 4. Trigger | 10. Mode select knob |
| 5. Hook | 11. Side handle |
| 6. Control switch | 12. LED |

ASSEMBLY

WARNING 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

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

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

To remove the battery, push in the release buttons and pull the battery pack away from the tool.

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

Adjusting the Side Handle Position

- WARNING** Remove battery to avoid starting the tool.
- Loosen the side handle by unscrewing the side handle grip until the side handle rotates freely.
- Rotate the side handle to the desired position.
- Tighten the side handle grip securely.

Installing/Removing Accessories

NOTE: Only use accessories with SDS or SDS Plus shanks.

When selecting an accessory, use the right type for the job.

For best performance, always use sharp bits.

NOTICE Be sure that the shank of the bit is clean. Dirt particles may cause the bit to line up improperly. Do not use bits larger than the maximum recommended capacity of the drill because gear damage or motor overloading may result. For best performance, be sure that the bit is properly sharpened and the shank is lightly greased before use.

- WARNING** Remove battery to avoid starting the tool.
- Insert the accessory into the SDS plus bit holder of the tool.
- Rotate accessory slowly until it aligns with the locking mechanism.
- Push accessory into tool until it locks.
- Check that the accessory is locked properly; it should be possible to pull the accessory back and forth slightly (about 6 mm).
- To remove accessories, remove battery, pull bit release collar toward the rear of tool and remove accessory.

WARNING Accessories may be HOT immediately after use. Do not touch the accessory with bare hands; it could burn skin.

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 injury, keep hands away from the bit and all moving parts. Always use personal protective equipment. Always wear eye protection marked to comply with AS/NZS 1337.1.

When working in dusty situations, wear appropriate respiratory protection or use a suitable dust extraction solution.

Always use a side handle when using this tool. Always brace or hold securely.

Cut embedded rebar only if doing so does not affect the integrity of the building. If in doubt, consult a structural engineer. The tool operator is fully responsible for adverse structural effects.

Fuel Gauge

To determine the amount of charge left in the battery, turn the tool on. The fuel gauge will light up for 2-3 seconds. When less than 10% of charge is left, 1 light on the fuel gauge will flash 4 times.

To signal the end of charge, 1 light on the fuel gauge will flash 8 times and the tool will not run. Charge the battery pack.

If the battery becomes too hot, the fuel gauge lights will flash and the tool will not run. Allow the battery to cool down.

Selecting Mode

To select the mode, depress the mode select button then turn the mode select knob until it clicks. Select drilling only, rotary hammer, hammering only, or chisel adjustment. Always allow the motor to come to a complete stop before changing the mode selection to avoid damage to the tool.

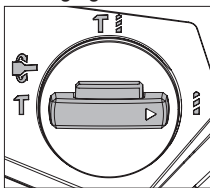
1. **Drilling only:** turn the mode select knob to the twist drill symbol .

2. **Rotary Hammer:** turn the mode select knob to the hammer and twist drill symbol .

To engage the hammering mechanism, maintain pressure on the bit. When pressure on the bit is released, the hammering action will stop.

3. **Hammering only:** turn the mode select knob to the hammer symbol . Use this setting for chiseling. For use with "hammering-only" accessories.

4. **Chisel adjustment:** turn the mode select knob to the free rotation symbol . Rotate the accessory to the desired angle. Then, follow step 3.



Using the Control Switch

The control switch may be set to three positions: forward, reverse and lock. Due to a lockout mechanism, the control switch can only be adjusted when the ON/OFF trigger switch is not pressed. Always allow the motor to come to a complete stop before using the control switch to avoid damage to the tool.

For **forward** (clockwise) rotation, push in the control switch  from the right side of the tool. **Check the direction of rotation before use.**

For **reverse** (anticlockwise) rotation, push in the control switch  from the left side of the tool. **Check direction of rotation before use.**

To **lock** the trigger, push the control switch to the centre position. The trigger will not work while the control switch is in the centre locked position. Always lock the trigger or remove the battery pack before performing maintenance, changing accessories, storing the tool and any time the tool is not in use.

Starting, Stopping and Controlling Speed

For operation when using the dust extractor, refer to your dust extractor manual.

1. To **start** the tool, grasp the handle(s) firmly and pull the trigger.

NOTE: A LED is turned on when the trigger is pulled and will go off shortly after the trigger is released.

2. To **vary** the speed, increase or decrease the pressure on the trigger. The further the trigger is pulled, the greater the speed.

3. To **stop** the tool, release the trigger. Ensure the tool has come to a complete stop before laying the tool down.

Operating

1. Position the tool, grasp the handle firmly and pull the trigger.

2. Always hold the tool securely to maintain control.

3. This tool has been designed to achieve top performance with only moderate pressure. Let the tool do the work.

NOTE: Applying greater pressure does not increase the tool's effectiveness (see "Operator Force").

4. If the speed begins to drop off when drilling large or deep holes, pull the bit partially out of the hole while the tool is running to help clear dust. Do not use water to settle the dust since it will clog the bit flutes and tend to make the bit bind in the hole.

5. If the bit should bind, a built-in, non-adjustable slip clutch prevents the bit from turning. If this occurs, stop the tool, free the bit and begin again.

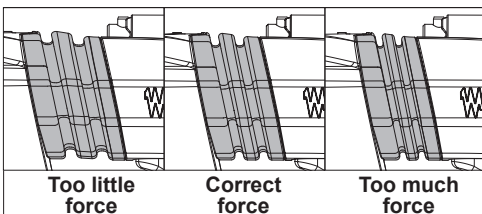
NOTE: Applying greater pressure does not increase the tool's effectiveness. If the applied working pressure is too high, the shock absorber will be pushed together making the vibrations to the handle noticeably stronger.

Operator Force

The Anti-Vibration System provides the operator with comfort without sacrificing power or performance.

Ideal operator force compresses the bellows slightly and allows the tool to work aggressively while the handle remains steady.

Excessive force compresses the bellows significantly and reduces vibration dampening. Users will be able to feel the difference and should adjust the force to the handle accordingly.



APPLICATIONS

WARNING To reduce the risk of electric shock, check work area for hidden pipes and wires before drilling.

Cut embedded rebar only if doing so does not affect the integrity of the building. If in doubt, consult a structural engineer. Tool operator fully responsible for adverse structural effects.

Selecting Bits

When selecting a bit, use the right type for your job. For best performance, always use sharp bits.

Drilling

1. Before drilling, be sure the workpiece is clamped securely. Use backing material to prevent damage to the workpiece during breakthrough.
2. When starting a hole, place the drill bit on the work surface and apply firm pressure. Begin drilling at a slow speed, gradually increasing the speed as you drill.
3. Always apply pressure in line with the bit. Use enough pressure to keep the drill biting, but do not push hard enough to stall the motor.
4. Reduce pressure and ease the bit through the last part of the hole. While the tool is still running, pull the bit out of the hole to prevent jamming.

Drilling in Wood, Composition Materials and Plastic

When drilling in wood, composition materials and plastic, start the drill slowly, gradually increasing speed. When drilling into wood, use wood augers or twist drill bits. Always use sharp bits. When using twist drill bits, pull the bit out of the hole frequently to clear chips from the bit flutes. To reduce the chance of splintering, back work with a piece of scrap wood. Use low speeds for plastics with a low melting point.

Chiseling and Chipping

MILWAUKEE® Rotary Hammers may be used for chipping and chiseling.

When chiseling, hold the tool at an angle to the workpiece. Work from a corner or close to the edge of the workpiece, breaking off one small area at a time rather than attempting too large an area.

A variety of accessories are available.

	Bushing Tools Used to surface concrete.
	Mortar Cutting Chisels (Seam Tools) For removing old mortar for tuck pointing or caulking.
	Bull Points For demolition work and starting holes in concrete slabs.
	Flat Chisels For edging, chipping or channeling.
	Scaling Chisels For removing weld spatter or scale and cutting straight lines.
	Slotting Chisel For slotting and cutting between drilled holes in concrete and masonry.

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 repairs.

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.

WARNING To reduce the risk of personal injury and damage, never immerse the tool, battery pack or charger in liquid or allow a liquid to flow inside them.

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.

Repairs

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

ACCESSORIES

WARNING Use only recommended accessories. Others may be hazardous.

For a complete listing of accessories, go online to milwaukeekeetool.com.au / milwaukeekeetool.co.nz or contact an authorised 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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