

BOSCH

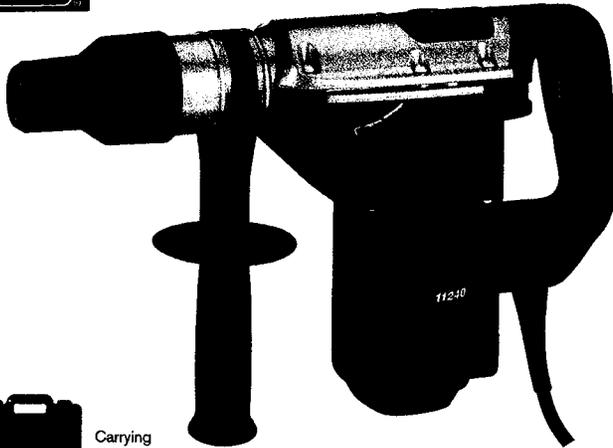
SDS-max® COMBINATION HAMMERS



11240

1-9/16" SDS-max® Combination Hammer

Replaces model 11227E



Carrying Case Included

Features

- SDS-max® bit system - tool-free bit changes with automatic bit locking, dust protection and maximum impact energy transfer rate
- "Combination" dual mode selector- 2 modes of operation, rotary hammer and hammer only mode
- Vario-Lock™ positioning - rotates and locks chisel into 12 different positions to optimize working angle.
- Innovative service modules - designed so a qualified service technician can quickly replace the brushes and cord
- 360° Auxiliary handle - provides a wide range of movement along with operator comfort
- Integral clutch - helps minimize torque reaction
- Grounded design, UL listed, complies to OSHA

Specifications

Rating	120V AC
Amperage	10
No Load RPM	400
Loaded BPM	3,000
Impact Energy (ft./lbs.)	
Rotary Hammer Mode	5.2
Hammer Only Mode	5.2
Maximum Capacities (in.)	
Concrete	1-9/16
Thru-Hole Bit	2-1/2
Core Bit	4
Optimal Concrete Capacity Range (in.)	1/2 - 1-3/8
Length (in.)	17.25
Weight (lbs.)	13.2

Standard Equipment

Auxiliary Handle	2 602 025 062
Carrying Case	3 605 438 536



11241EVS

1-9/16" SDS-max® Combination Hammer

Replaces model 11230EVS



Carrying Case Included

Features

- SDS-max® bit system - tool-free bit changes with automatic bit locking, dust protection and maximum impact energy transfer rate
- "Combination" dual mode selector- 2 modes of operation, rotary hammer and hammer only mode
- Auto-Max® dial - variable speed dial designed to automatically ensure the maximum speed and power every time the tool is plugged in
- Constant-Response™ Circuitry
 - Provides soft-start
 - Maintains constant speed under load
 - Provides overload protection
- Turbo™ Power - delivers 20% more power in hammer only mode
- Service Minder™ light - indicates when preventative maintenance is required
- Power light - ensures operator that power feed is live
- Vario-Lock™ positioning - rotates and locks chisel into 12 different positions to optimize working angle
- Innovative service modules - designed so a qualified service technician can quickly replace the brushes and cord
- Vibration dampening handle - reduces vibration up to 40%, providing uncompromising user comfort for extended periods of work
- Patented cord turret - provides added flexibility and reduces cord wear
- 360° Auxiliary handle - provides a wide range of movement along with operator comfort
- Integral clutch - helps minimize torque reaction
- Grounded design, UL listed, complies to OSHA

Specifications

Rating	120V AC
Amperage	11
Loaded RPM	170-340
Loaded BPM	1,700-3,300
Impact Energy (ft./lbs.)	
Rotary Hammer Mode	6.2
Chipping Mode	7.4 (Turbo)
Maximum Capacities (in.)	
Concrete	1-9/16
Thru-Hole Bit	2-1/2
Core Bit	4
Optimal Concrete Capacity Range (in.)	1/2 - 1-3/8
Length (in.)	17.25
Weight (lbs.)	14

Standard Equipment

Auxiliary Handle	2 602 025 062
Carrying Case	3 605 438 536

Large Rotary Hammers Redefined

Bosch would like to introduce the newest class of hammers we call "Combination" Hammers. With these new hammers, Bosch has bridged the gap between the drilling performance you would expect from a rotary hammer and the chipping performance you would expect from a light demolition hammer.



IMPORTANT:
Read Before Using

IMPORTANT :
Lire avant usage

IMPORTANTE:
Leer antes de usar

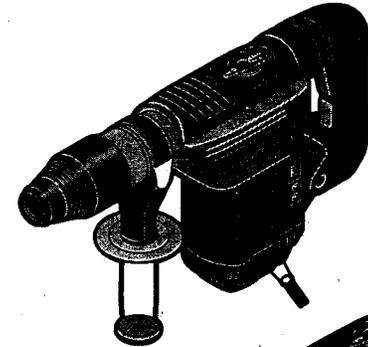


Operating/Safety Instructions

Consignes de fonctionnement/sécurité

**Instrucciones de funcionamiento
y seguridad**

ITEM # 11



11241EVS

11248EVS



BOSCH

10-29-03

S/N 385000880

**Consumer Information
Renseignement des consommateurs
Información para el consumidor**

Toll Free Number: 1-877-BOSCH99 (1-877-267-2499) <http://www.boschtools.com>
Appel gratuit : 1-877-BOSCH99 (1-877-267-2499) <http://www.boschtools.com>
Número de teléfono gratuito: 1-877-BOSCH99 (1-877-267-2499) <http://www.boschtools.com>

**For English
See page 2**

**Parlez-vous français?
Voir page 10**

**¿Habla español?
Ver página 18**

▲ WARNING

Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS**Work Area**

Keep your work area clean and well lit. Cluttered benches and 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 by-standers, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

Electrical Safety

Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adaptor plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user. Improper grounding can shock, burn or electrocute. Grounded tools are equipped with three conductor cord and three prong type plugs. Before plugging in the tool be certain the outlet voltage supplied is within the voltage marked on the nameplate. Do not use "AC only" rated tools with a DC power supply.

Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded. If operating the power tool in damp locations, it is unavoidable, a Ground Fault Circuit Interrupter must be used to supply the power to your tool. Electrician's rubber gloves and footwear will further enhance your personal safety.

Don't 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 to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.

When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W." These cords are rated for outdoor use and reduce the risk of electric shock. Refer to "Recommended sizes of Extension Cords" in the Accessory section of this manual.

Personal Safety

Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use 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.

Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Keep handles dry, clean and free from oil and grease.

Avoid accidental starting. Be sure switch is "OFF" before plugging in. Carrying tools with your finger on the switch or plugging in tools that have the switch "ON" invites accidents.

Remove adjusting keys or wrenches before turning the tool "ON". A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.

Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Tool Use and Care

Use clamps or other practical way to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.

Do not force tool. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed. Do not use tool if switch does not turn it "ON" or "OFF". Any tool that cannot be controlled with the switch is dangerous and must be repaired.

Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.

Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.

Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control. Any alteration or modification is a misuse and may result in a dangerous condition.

Check for misalignment or binding of moving parts, breakage of parts, and any

other condition that may affect the tools operation. If damaged, repair the tool serviced before using. Many accidents are caused by poorly maintained tools. Develop a periodic maintenance schedule for your tool.

Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool, may become hazardous when used on another tool.

Service

Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury. For example: internal wires may be misplaced or pinched, safety guard return springs may be improperly mounted.

When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury. Certain cleaning agents such as gasoline, carbon tetrachloride, ammonia, etc. may damage plastic parts.

Combination Hammer Safety Rules

Hold tools 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. Do not drill, fasten or break into existing walls or other blind areas where electrical wiring may exist. If this situation is unavoidable, disconnect all fuses or circuit breakers feeding this worksite.

Wear ear protectors when using the tool for extended periods. Prolonged exposure to high intensity noise can cause hearing loss.

Use a metal detector to determine if there are gas or water pipes hidden in the work area or call the local utility company for assistance before beginning the operation. Striking or cutting into a gas line will result in explosion. Water entering an electrical device may cause electrocution.

Always use the side handle for maximum control over torque reaction or kick-back. Never attempt to operate this tool with one hand. The slip clutch engages if you firmly control the tool during a torque reaction or kickback.

Always wear safety goggles or eye protection when using this tool. Use a dust mask or respirator for applications which generate dust. Safety goggles or eye protection will help deflect fragments of the material that may be thrown toward your face and eyes. Dust generated or gases released from the material you are cutting (i.e. asbestos insulated pipes, radon) may cause respiratory difficulties.

Use thick cushioned gloves and limit the exposure time by taking frequent rest periods. Vibration caused by hammer-drill action may be harmful to your hands and arms.

Position the cord clear of rotating bit. Do not wrap the cord around your arm or wrist. If cord becomes entangled with the spinning bit it could entrap you causing serious personal injury.

Position yourself to avoid being caught between the tool or side handle and walls or posts. Should the bit become bound or jammed in the work, the reaction torque of the tool could crush your hand or leg.

Do not strike the bit with a handheld hammer or sledge hammer when attempting to dislodge a bound or jammed bit. Fragments of metal from the bit could dislodge and strike you or bystanders.

Never place the tool down until the bit or accessory have come to a complete stop.

Do not use dull or damaged bits and accessories. Dull or damaged bits have a greater tendency to bind in the workpiece.

When removing the bit from the tool avoid contact with skin and use proper protective gloves when grasping the bit or accessory. Accessories may be hot after prolonged use.

Do not run the tool while carrying it at your side. The spinning drill bit may become entangled with clothing and injury may result.

When the power cord is unplugged from the mains outlet or when branch-circuit power is interrupted, the electronic controller will automatically reset the tool to maximum speed and impact force. Unexpected starting at maximum operating speed and impact force could startle the operator and lead to potential injury.

⚠ 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 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.

IMPORTANT: Some of the following symbols may be used on your tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

Symbol	Name	Designation/Explanation
V	Volts	Voltage (potential)
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
kg	Kilograms	Weight
min	Minutes	Time
s	Seconds	Time
∅	Diameter	Size of drill bits, grinding wheels, etc.
n ₀	No load speed	Rotational speed, at no load
.../min	Revolutions or reciprocation per minute	Revolutions, strokes, surface speed, orbits etc. per minute
0	Off position	Zero speed, zero torque...
1, 2, 3, ... I, II, III,	Selector settings	Speed, torque or position settings. Higher number means greater speed
	Infinitely variable selector with off	Speed is increasing from 0 setting
	Arrow	Action in the direction of arrow
	Alternating current	Type or a characteristic of current
	Direct current	Type or a characteristic of current
	Alternating or direct current	Type or a characteristic of current
	Class II construction	Designates Double Insulated Construction tools.
	Earthing terminal	Grounding terminal
	Warning symbol	Alerts user to warning messages
	Ni-Cad RBRC seal	Designates Ni-Cad battery recycling program



This symbol designates that this tool is listed by Underwriters Laboratories.



This symbol designates that this tool is listed to Canadian Standards by Underwriters Laboratories.



This symbol designates that this tool is listed by the Canadian Standards Association.



This symbol designates that this tool is listed by Underwriters Laboratories, and listed to Canadian Standards by Underwriters Laboratories.



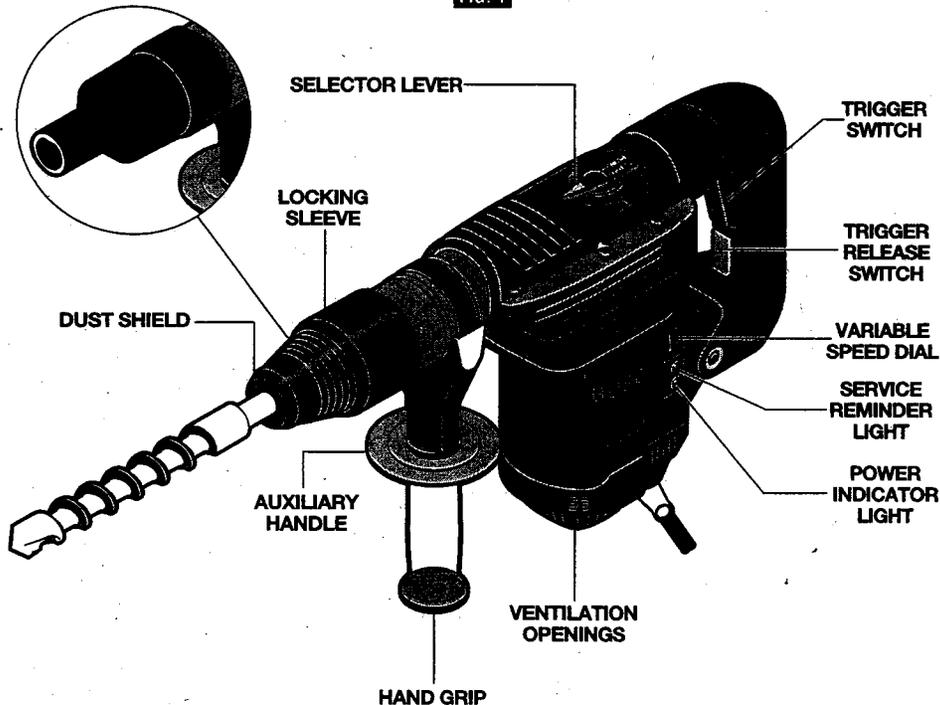
This symbol designates that this tool complies to NOM Mexican Standards.

⚠ WARNING Disconnect the plug from the power source before making any assembly, adjustments or changing accessories. Such preventive safety measures reduce the risk of starting the tool accidentally.

Combination Hammer

SPLINE TOOL HOLDER
(Model 11248 only)

FIG. 1



Model number	11241EVS	11248EVS
Shank style	SDS Max	Spline
Maximum Capacities:		
Carbide tipped bits	1 9/16"	1 9/16"
Thick wall core bits	4"	4"

NOTE: For tool specifications refer to the nameplate on your tool.

INSTALLING ACCESSORIES

Clean the insert shank end of the accessory to remove any debris, then lightly grease with a light oil or lubricant.

Insert accessory into the tool holder, while twisting and pushing inward until it locks automatically into place (Fig. 2).

(Model 11248 only)

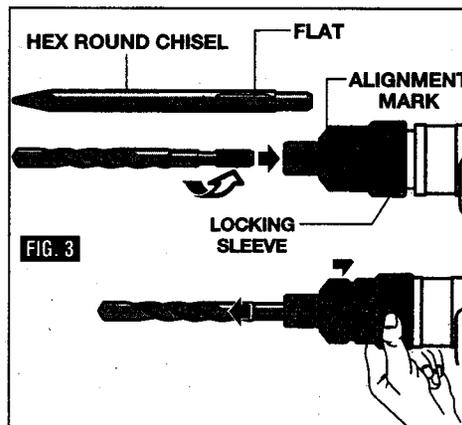
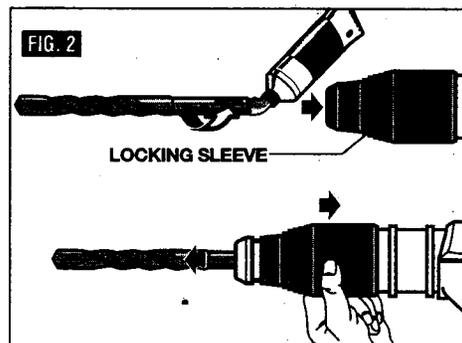
To install hex round chisels, align flat on chisel with alignment mark on tool holder, then push chisel into tool holder until it lock automatically into place. Pull outward on the accessory to be certain it is locked into the tool holder (Fig. 3).

REMOVING ACCESSORIES

⚠ WARNING Accessories may be hot after use. Avoid contact with skin and use proper protective gloves or cloth to remove.

To remove an accessory, pull and hold locking sleeve backward and pull bit forward. All accessories should be wiped clean after removing.

NOTE: The high efficiency available from the rotary hammers can only be obtained if sharp and undamaged accessories are used. The "cost" to maintain sharp and undamaged accessories is more than offset by the "time saved" in operating the tool with sharp accessories.



DUAL FUNCTION TRIGGER SWITCH

To turn the tool "ON" in the Drilling/Hammering mode, squeeze and hold the trigger switch. To turn the tool "OFF", release the trigger switch, which is spring loaded and will return to the "OFF" position automatically.

Your tool is also equipped with a "Lock-ON" feature when the selector dial is in the Hammering Only mode which allows continuous operation without holding the trigger.

TO LOCK TOOL "ON": turn the selector dial to the Hammering Only mode and squeeze the trigger switch until it locks.

TO TURN TOOL: "OFF" press the trigger release switch and the trigger will return to the "OFF" position automatically.

To increase switch life, do not turn switch on and off while tool is under load.

AUTO-MAX™

The patented Bosch Auto-Max system insures that each time your tool is plugged in and receiving power, it will operate at maximum speed and impact force.

⚠ WARNING When the power cord is unplugged from the mains outlet or when branch-circuit power is interrupted, the electronic controller will automatically reset the tool to maximum speed and impact force. Unexpected starting at maximum operating speed and impact force could startle the operator and lead to potential injury.

VARIABLE SPEED DIAL

Your tool is equipped with a variable speed dial. The speed and impact force can be adjusted by rotating the dial. Higher speeds and impact force work best for faster penetration when drilling or chiseling in hard

masonry material. Lower speeds work best to reduce break when bits exit material being drilled or chiseling material such as plaster or tile.

"TURBO" FEATURE

In the "Hammer Only" mode power is automatically increased 20% when the tool is turned on to provide maximum chiseling performance.

CONSTANT RESPONSE CIRCUITRY

The internal electronic feedback system provides a "soft start", which will reduce the stresses that occur from a high torque start. The system also helps to keep the pre-selected impact rate and rotating speed virtually constant between no-load and load conditions.

SELECTOR LEVER

The selector lever allows the tool to be set for various applications as listed in the following chart, (Fig. 4).

When using demolition or chipping bits such as bull points, chisels, spades, gouges, etc. the "Hammer Only" mode must be selected.

SELECTOR LEVER - "VARIO-LOCK"

The vario-lock can be set in any one of twelve positions (30° increments). Choose a position

which is best suited for your operation. The Vario-Lock position is intended for use with chipping bits such as bull points, spades, gouges, etc.

Turn the selector lever, to the "vario-lock" setting. Next, rotate the locking sleeve, along with the accessory, to the desired position. Then turn the selector lever to the "hammer only" setting and slightly turn the locking sleeve to have it automatically lock into a definite position.

SLIP CLUTCH

The tool has a internal pre-set slip clutch. The output spindle will stop rotating if the accessory binds and overloads the tool.

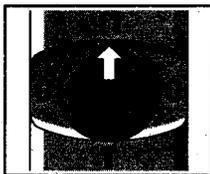
AUXILIARY HANDLE

The tool must be supported with the auxiliary handle, which can be swiveled 360°. To reposition and/or swivel the handle, loosen the hand grip, move the handle to the desired position along the barrel and securely retighten the hand grip.

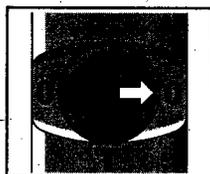
POWER INDICATOR LIGHT

When you plug your tool into the power source, the power indicator light will go "ON" indicating the tool is receiving power.

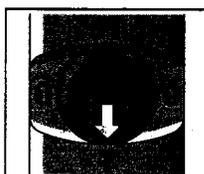
FIG. 4



Drilling/Hammering:
used for drilling with solid carbide bits and core bits



Vario-Lock:
allows chisel to be set in one of 12 positions (right or left "0" position)



Hammering Only:
used for chipping and demolition work

"TOOL TIPS"

For the best penetration rates in concrete, run the tool with a steady pressure, but do not use excessive force as this will decrease the efficiency of the tool.

All hammers require a short period of time to warm up. Depending on the room temperature, this time may vary from approximately 15 seconds (90°F) to 2 minutes (32°F). A new hammer requires a break-in period before full performance is

realized. This period may require up to 5 hours of operation.

A combination hammer is likely to be the most expensive portable tool at the construction job. The long wear and efficient operation of the BOSCH hammers will more than justify the cost for tools of this type. As earlier pointed out, sharp accessories as well as clean air vents are necessary for efficient operation. Establish and follow a set maintenance program.

Service

⚠ WARNING Preventive maintenance performed by unauthorized personnel may result in misplacing of internal wires and components which could cause serious hazard. We recommend that all tool service be performed by a Bosch Factory Service Center or Authorized Bosch Service Station.

SERVICE REMINDER LIGHT

When the service reminder light lights up or blinks, this will indicate that the cut-out carbon brushes will switch off the tool in approximately 8 hours. After that period, the light will go off and the tool will stop running. The tool must then be sent to a service center for service.

TOOL LUBRICATION

Your Bosch tool has been properly lubricated and is ready to use. It is recommended that tools with gears be regreased with a special gear lubricant at every brush change.

CARBON BRUSHES

The brushes and commutator in your tool have been engineered for many hours of dependable service. To maintain peak efficiency of the motor, we recommend every two to six months the brushes be examined. Only genuine Bosch replacement brushes specially designed for your tool should be used.

BEARINGS

After about 300-400 hours of operation, or at every second brush change, the bearings

should be replaced at Bosch Factory Service Center or Authorized Bosch Service Station. Bearings which become noisy (due to heavy load or very abrasive material cutting) should be replaced at once to avoid overheating or motor failure.

REPLACEMENT OF CORD AND CARBON BRUSHES

Your tool is designed to provide a qualified service technician optimal access to replace the carbon brushes and the cord. This provides the service technician the ability to replace these components without the need of disassembling the entire tool housing.

Cleaning

⚠ WARNING To avoid accidents always disconnect the tool from the power supply before cleaning or performing any maintenance. The tool may be cleaned most effectively with compressed dry air. Always wear safety goggles when cleaning tools with compressed air.

Ventilation openings and switch levers must be kept clean and free of foreign matter. Do not attempt to clean by inserting pointed objects through openings.

⚠ CAUTION Certain cleaning agents and solvents damage plastic parts. Some of these are: gasoline, carbon tetrachloride, chlorinated cleaning solvents, ammonia and household detergents that contain ammonia.

⚠ WARNING If an extension cord is necessary, a cord with adequate size conductors that is capable of carrying the current necessary for your tool must be used. This will prevent excessive voltage drop, loss of power or overheating. Grounded tools must use 3-wire extension cords that have 3-prong plugs and receptacles.

NOTE: The smaller the gauge number, the heavier the cord.

RECOMMENDED SIZES OF EXTENSION CORDS 120 VOLT ALTERNATING CURRENT TOOLS

Tool's Ampere Rating	Cord Size in A.W.G.				Wire Sizes in mm ²			
	Cord Length in Feet				Cord Length in Meters			
	25	50	100	150	15	30	60	120
3-6	18	16	16	14	.75	.75	1.5	2.5
6-8	18	16	14	12	.75	1.0	2.5	4.0
8-10	18	16	14	12	.75	1.0	2.5	4.0
10-12	16	16	14	12	1.0	2.5	4.0	—
12-16	14	12	—	—	—	—	—	—

Auxiliary Handle*
Carrying case*

(* = standard equipment)
(** = optional accessories)