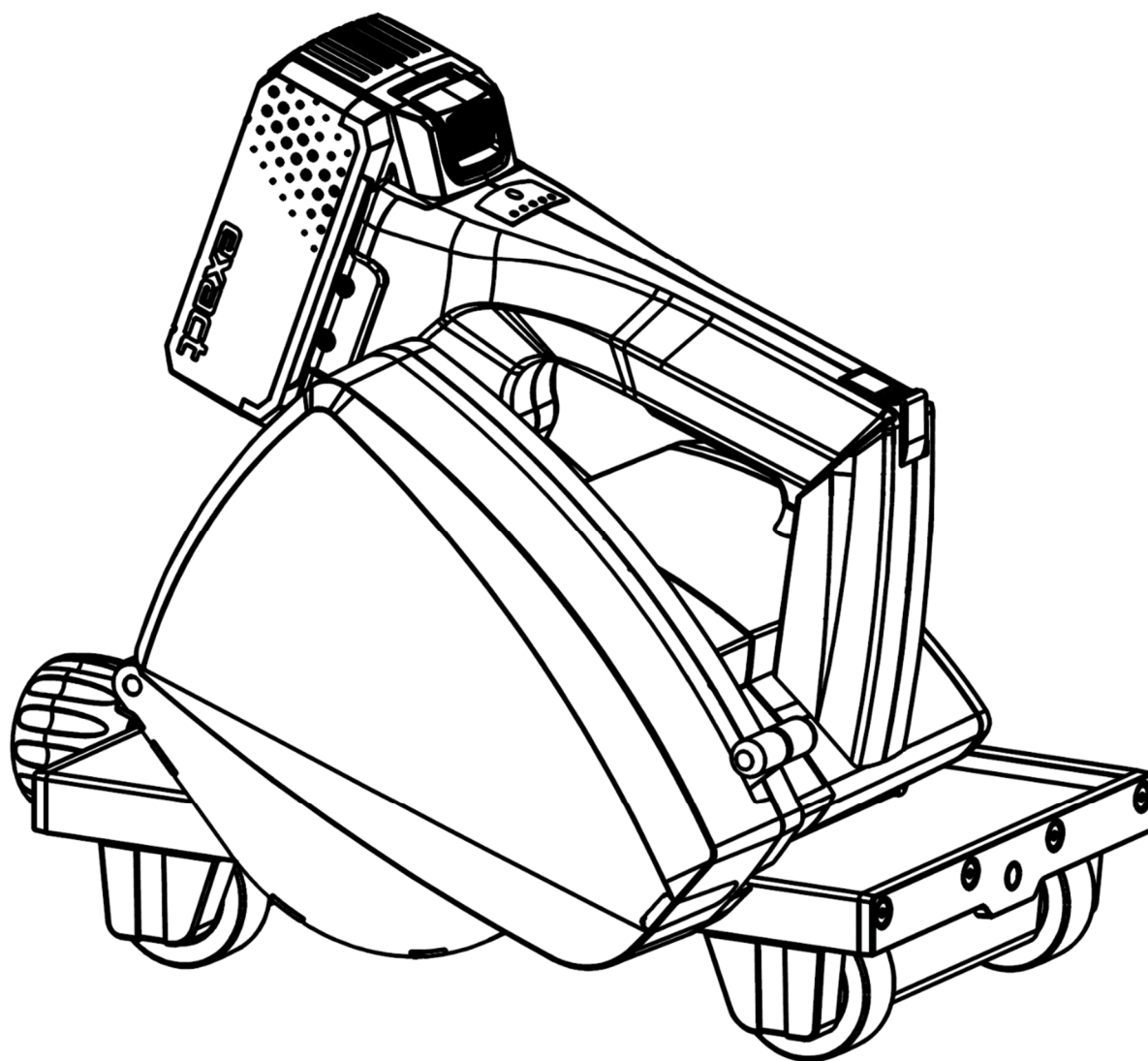


PipeCut P400 Battery

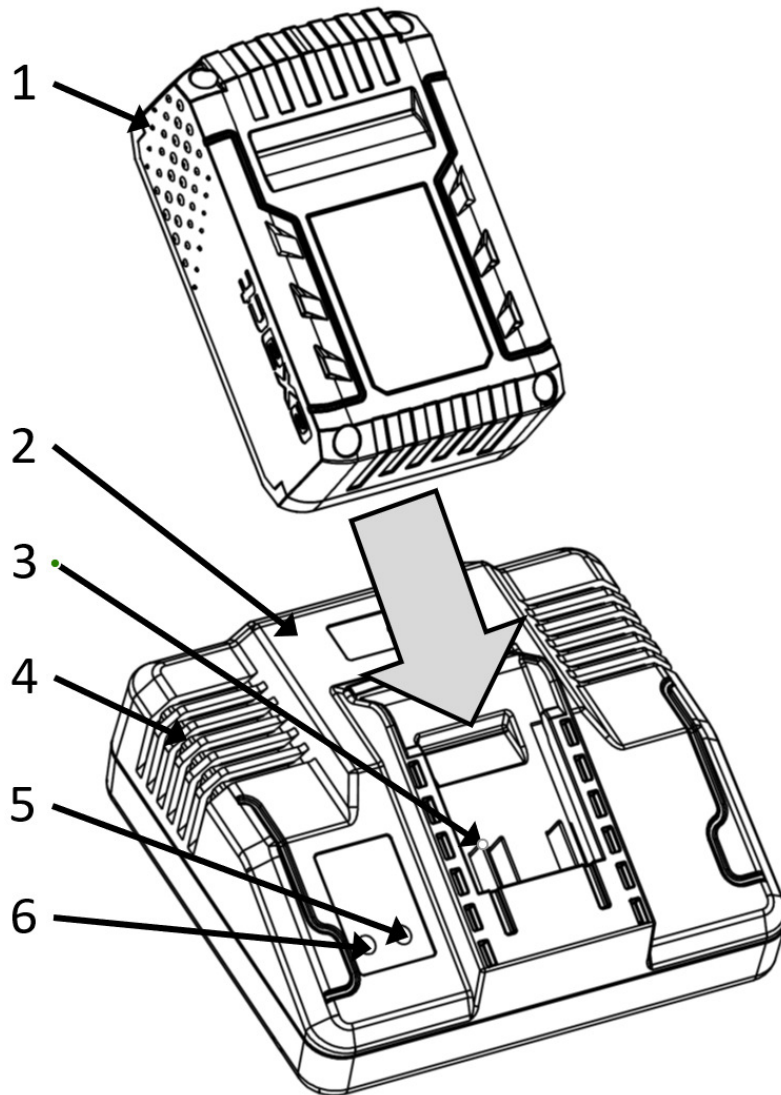


These are the original instructions.

All instructions are available on web-site: exacttools.com/manuals

exact Patents: US 7,257,895, JP 4010941, EP 1301311, FI 108927, KR 10-0634113

Figure A1 Battery charger features



- 1. Exact Battery pack
- 2. Exact Battery Charger
- 3. Battery pack connectors

- 4. Air cooling vents
- 5. Red LED indicator
- 6. Green LED indicator

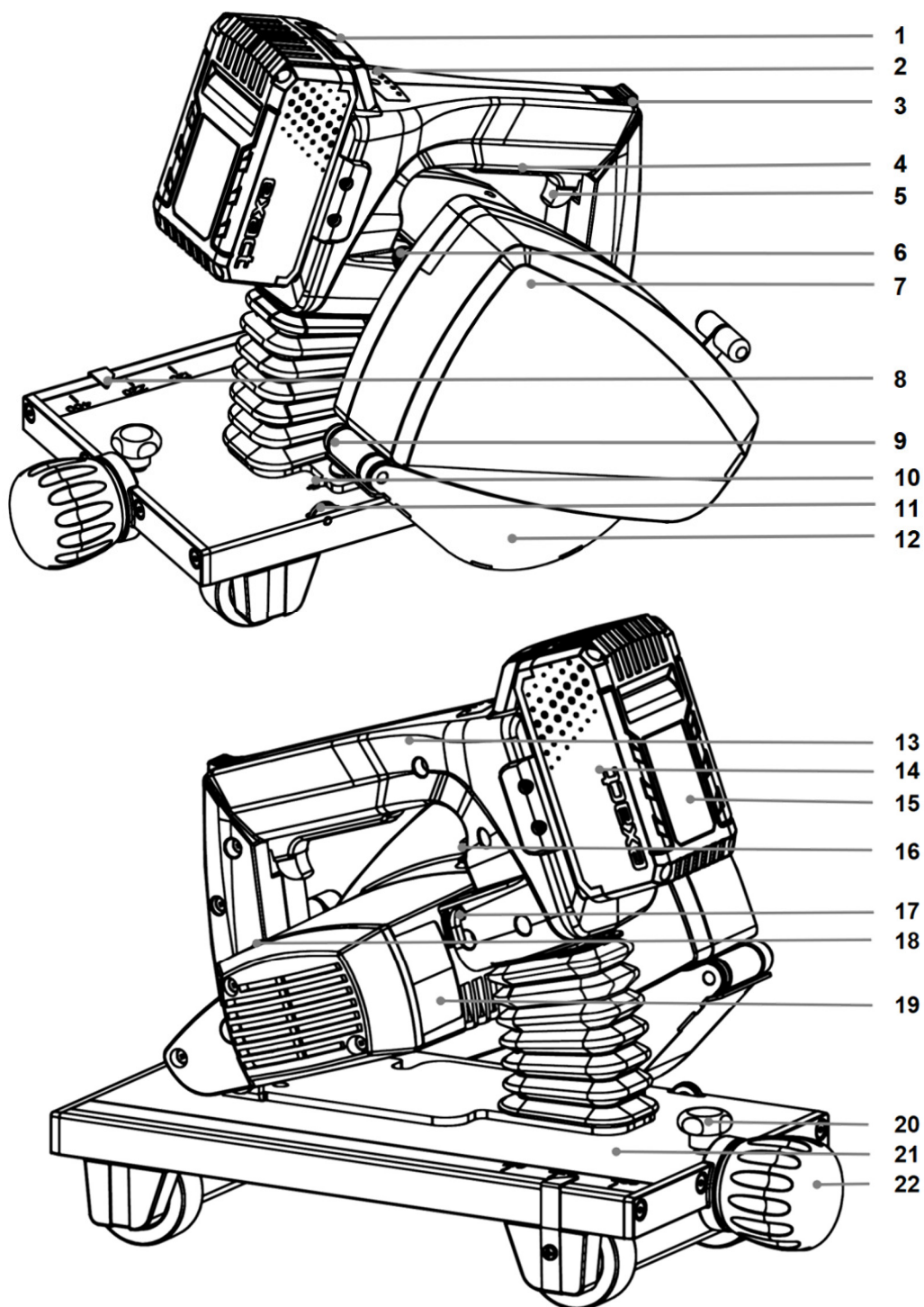


Figure A2. Pipecut features

- | | |
|-----------------------------------|---------------------------------------|
| 1. Battery release button | 12. Moving blade-guard |
| 2. Battery indicator | 13. Operating handle / Motor unit |
| 3. Unlock button | 14. Battery pack |
| 4. Power switch | 15. Battery pack rating plate |
| 5. Power-switch locking lever | 16. Spindle-lock button |
| 6. Blade-guard screw | 17. Hex key for blade |
| 7. Blade-guard cover | 18. Heat indicator light |
| 8. Steering unit indicator | 19. Rating plate |
| 9. Setting points | 20. Steering unit adjustment lock nut |
| 10. Steering adjustment indicator | 21. Steering unit |
| 11. Steering adjustment screw | 22. Steering unit adjustment knob |

Contents

- 5 Technical data
- 6 Package contents

Safety

- 7 Safety instructions
- 9 Intended use and product features

Battery Charger

- 10 Charger information
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- 13 Charger maintenance, environment and guarantee

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- 14 Before operating the tool
- 14 Precise setting of the cutting point
- 14 Setting the pipe on supports
- 15 Attaching the pipe saw to the pipe
- 15 Piercing the pipe wall
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- 16 Heat indicator and feeding speed
- 16 Straightness of cut and adjusting wheel
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- 19 **Environment /Disposal**
- 19 **Guarantee/Guarantee conditions**
- 19 **Tips for users**

exact
Pipe Cutting System

Declaration of Conformity **CE**

We declare under our sole responsibility that the products described under "Technical Data" are in conformity with the following standards or standardization documents: EN/IEC62841-1, EN62841- 2-5, EN55014-1, EN 55014-2, EN61000-3-2, EN61000-3-3 according to the provisions of the directives 2004/108/EC, 2006/42/EC.

For more information, please contact Exact Tools at the following address. The technical file is available at the address underneath.

The person authorized to compile the technical file:

Marko Törrönen, R&D Manager (marko.torronen@exacttools.com)

Helsinki, 10.03.2022



Seppo Makkonen, Chairman of the Board

Exact Tools Oy
Särkiniementie 5 B 64
FI-00210 Helsinki FINLAND

Blade information for Exact PipeCut P400 Battery

There are two types of blades for Exact PipeCut P400 Battery pipe saw:

- 1) TCT P150 blade is designed for cutting plastic pipes with P400 pipe saw. TCT blades can be resharpened few times.
- 2) Cut Bevel blade is designed to cut and bevel plastic pipes in one process. The beveling tips can be turned around for to get new sharp cutting edge.

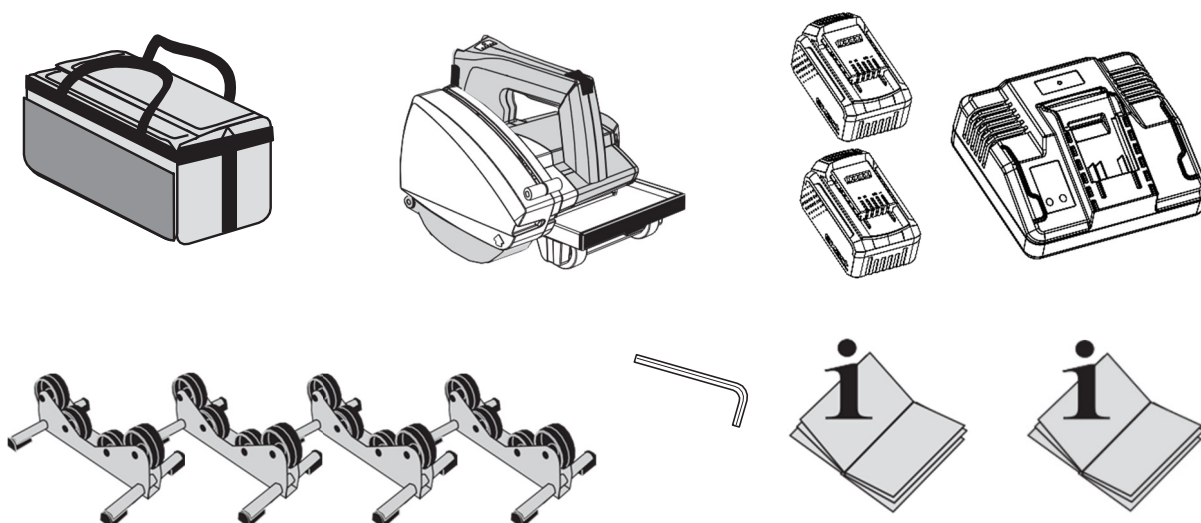
Technical data Pipecut P400 Battery

Voltage	18 V DC
Power	730 W
No-Load speed	3450 r/min
Intermittent operation	1,5 min ON / 8,5 min OFF (S3 15%)
Blade diameter	140 - 150mm (5.5" – 5.9")
Mounting bore	62 mm (2.44")
Weight	6,2 / 7,0 kg (14/15 lbs)
Range of use Ø	50 mm - 400 mm (3,9"- 15.7")
Max. pipe wall plastics	20 mm (0.78") cut, 18 mm (0.7") Cut+Bevel
Vibration a_h	$<2,5 \text{ m/s}^2$
LpA (sound pressure)	86 dB(A)
KpA (sound pressure uncertainty)	3 dB(A)
LWA (acoustic power)	97dB(A)
KWA (acoustic power uncertainty)	3 dB(A)

Exact PipeCut P400 Battery, Package contents:


Please check the package contains the following items:


- Shoulder bag
- Exact PipeCut P400 Battery pipe saw with Cut+Bevel blade installed
- Cutting supports, 4pcs
- Exact Battery Charger
- 2 x Exact 18V Batteries, Exact BAT18V50
- TCT P150 blade separately in the bag
- Hex socket key 5 mm fitted to the machine
- Operating instructions and manual for the charger





Definitions: Safety instructions

The definitions below describe the level of severity for each signal word. Please read the manual and pay attention to these symbols

 **DANGER:** Indicates an imminently hazardous situation which, if not avoided, will result in serious injury or in extreme cases a fatality


 **WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in serious injury or in extreme cases a fatality

 **CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

 **NOTICE:** Indicates a practice not related to personal injury which, if not avoided, may result in property damage.

 **Denotes risk of electric shock.**

Symbols found on the machine.

 **Use ear protection.**

 **Use gloves.**

 **Read instructions before use.**



Saw blade: Saw blade behind this cover, do not insert fingers or other body parts inside this cover.

Operating, safety and service instructions

Read these operating, safety and service instructions carefully before operating the pipe saw.

Store these instructions in a place where all pipe saw operators have access. In addition to these instructions official work, health and safety rules must be followed. Exact PipeCut is for professional use only.

Please notice the article number on the type plate of your machine. The trade names of the individual machines may vary.

Noise/vibration Information

The vibration emission level given in this information sheet has been measured in accordance with a standardized test given in EN62481-2-5:2014

Use ear protection!


Vibration level values

(sum of vectors of three directions) are defined in accordance with standard EN62841-2-5:2014:

Vibration rate $a_h = < 2,5 \text{ m/s}^2$,

Uncertainty $K = 1,5 \text{ m/s}^2$.

The vibration emission level given in this information sheet has been measured in accordance with a standardized test given in EN62841-2-5:2014 and may be used to compare one tool with another. It may be used for a preliminary assessment of exposure.


 **WARNING:** The declared vibration emission level represents the level during main applications of the tool.

However, if the tool is used for different applications, with different accessories or poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working period.

An estimation of the level of exposure to vibration should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period.

Identify additional safety measures to protect the operator from the effects of vibration such as: maintain the tool and the accessories, keep the hands warm, organize work patterns.

General power tool safety warnings

 **WARNING:** Read all safety warnings, 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

- 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.

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 residual current device (RCD) protected supply.** Use of an RCD 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 jewelry. Keep your hair and clothing away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
- g) **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.

- 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 Battery tool use and care

- a) **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.
- b) **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
- c) **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.

d) **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.

e) **Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion, or risk of injury.

f) **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.


g) **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.

6 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.

b) **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers.

Cutting procedures

a)  **DANGER: Keep hands away from cutting area and the blade. Keep your second hand on auxiliary handle, or motor housing.** If both hands are holding the saw, they cannot be cut by the blade.

b) **Do not reach underneath the workpiece.** The guard cannot protect you from the blade below the workpiece.

c) **Adjust the cutting depth to the thickness of the workpiece.** Less than a full tooth of the blade teeth should be visible below the workpiece.

d) **Never hold the workpiece in your hands or across your leg while cutting. Secure the workpiece to a stable platform.** It is important to support the work properly to minimize body exposure, blade binding, or loss of control.

e) **Hold the 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 also make exposed metal parts of the power tool "live" and could give the operator an electric shock.

f) **When ripping, always use a rip fence or straight edge guide.** This improves the accuracy of cut and reduces the chance of blade binding.

g) **Always use blades with correct size and shape (diamond versus round) of arbour holes.**

Blades that do not match the mounting hardware of the saw will run off-centre, causing loss of control.

h) **Never use damaged or incorrect blade washers or bolt.** The blade washers and bolt were specially designed for your saw, for optimum performance and safety of operation.

Further safety instructions

Kickback causes and related warnings

– kickback is a sudden reaction to a pinched, jammed or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator;

– when the blade is pinched or jammed tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator;

– if the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator.

Kickback is the result of saw misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

a) **Maintain a firm grip with both hands on the saw and position your arms to resist kickback forces. Position your body to either side of the blade, but not in line with the blade.** Kickback could cause the saw to jump backwards, but kickback forces can be controlled by the operator, if proper precautions are taken.

b) **When blade is binding, or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or kickback may occur.** Investigate and take corrective actions to eliminate the cause of blade binding.

c) **When restarting a saw in the workpiece, centre the saw blade in the kerf so that the saw teeth are not engaged into the material.** If a saw blade binds, it may walk up or kickback from the workpiece as the saw is restarted.

d) **Support large panels to minimize the risk of blade pinching and kickback.** Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.

e) **Do not use dull or damaged blades.** Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.

f) **Blade depth and bevel adjusting locking levers must be tight and secure before making the cut.** If blade adjustment shifts while cutting, it may cause binding and kickback.

g) **Use extra caution when sawing into existing walls or other blind areas.** The protruding blade may cut objects that can cause kickback.

Guard function

a) **Check the guard for proper closing before each use. Do not operate the saw if the guard does not move freely and enclose the blade instantly. Never clamp or tie the guard so that the blade is exposed.** If the saw is accidentally dropped, the guard may be bent. Check to make sure it moves freely and does not touch the blade or any other part, in all angles and depths of cut.

b) **Check the operation of the guard spring. If the guard and the spring are not operating properly, they must be serviced before use.** The guard may operate sluggishly due to damaged parts, gummy deposits, or a build-up of debris.

c) **Assure that the base plate of the saw will not shift while performing a "plunge cut".** Blade shifting sideways will cause binding and likely kick back.

d) **Always observe that the guard is covering the blade before placing the saw down on bench or floor.** An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after the switch is released.

Use only blades within the diameter range stated in technical data.

Do not use any abrasive wheels.

Do not use any blade with lower speed marking than no-load speed marked on the power tool.

Wear a dust mask.

Use pipe holders to support the pipe being cut

Intended Use

PipeCut P400 Battery: The Exact Pipe Cut P400 Battery is intended for professional use at any kind of construction sites.

The Exact PipeCut P400 Battery is designed to be used only for plastic pipes with dimensions 50 mm (2") - 400 mm (16").

The maximum wall thickness that the Exact Pipe Cut P400 Battery can cut through is 25 mm (1"). With the Cut Bevel blade, the maximum wall thickness is 22 mm (0,9").

With the Exact PipeCut P 400 Battery you can cut pipes made from the different plastic materials, such as PP, PE, PVC, etc.

PipeCut P400 Battery pipe saw is intended for short, intermittent use. The machine may be loaded for 1,5 minutes during a 10-minute period (S3 15 %).

PipeCut P400 Battery pipe saw is not intended for use in industrial serial production.

When using PipeCut P400 Battery, remember that it is not as powerful as the corded PipeCut P400 model. Don't expect the same performance as with the AC model.

When you use the saw, the following factors shall be considered:

- Support the pipes to be cut properly so that the blade is not clamped between the ends of the pipes.
- Support the pipe to cut securely. Pipe supports are more reliable for holding the pipe than bare hands.
- Make sure that the pipe to be cut is empty. Take care that no-one will put anything inside the pipe during the operation.
- Make sure that the diameter and thickness of the blade is suitable for the saw and that the blade is suitable for rotational speed selected
- Do not use damaged or faulty blades or blade flanges. Blade flanges and nuts are custom made for this tool to ensure optimum operating performance and safety.
- Never use axial friction force to stop the blade, let it stop freely.
- Check the parts of the blade protection, never operate the tool if blade covers are not in place.
- Never apply excessive force when using the pipecut.
- Never use the pipecut to lift the pipe when fixed on the pipe.
- Avoid excessive load on the electric motor.
- Always wear a dust mask if cutting materials that produce dust, for example cast iron with Diamond blade.
- Always follow safety and operation manual and applicable regulations.

The pipe saw must never be used in the following cases:

- There is water or another liquid, explosive gases, or poisonous chemicals inside the pipe to be cut.
- The power switch is faulty.
- The blade is bent.
- The blade is dull or in poor condition.
- The plastic components are cracked or have parts missing.
- The gripper unit is not properly tightened around the pipe or if it is warped.
- The blade guard cover or moving blade guard has been damaged or removed from the machine.
- The locking mechanisms do not work properly (UNLOCK - SWITCH).
- The pipe saw has become wet.

Operating, safety, and servicing instructions



WARNING:

DO NOT attempt to operate the tool until you have read and understood all instructions and safety rules contained in this manual. Failure to comply may result in accidents involving fire, electric shock, or serious personal injury. Save this owner's manual for future reference and review it frequently for safe operation.

Technical data

Model	DC1804
Voltage input (AC)	100 - 240 V / 50-60 Hz
Voltage output (DC)	18 V
Current	4,0 A
Power	95 W
Protection class	□ / II

Description of the symbols:

V = Volts

A = Amperes

Hz = Herz



= Read operators manual before use

T3.15A250V



= Use only designated fuse as a replacement

~ = AC = Alternating Current

⋮ = DC = Direct Current

□ = Class II Construction



= Indoor use only

Guidelines for using extension cords:



WARNING! If you are using an extension cord outdoors, be sure it is acceptable for outdoor use.

Be sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.

Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

Battery Care



WARNING! When batteries are not in tool or charger, keep them away from metal objects.

For example, to protect terminals from shorting

DO NOT place batteries in a tool box or pocket with nails, screws, keys, etc. Fire or injury may result.

DO NOT PUT BATTERIES INTO FIRE OR EXPOSE TO HIGH HEAT. They may explode.

Battery Disposal



WARNING! Do not attempt to disassemble the battery or remove any component projecting from the battery terminals.

Fire or injury may result. Prior to disposal, protect exposed terminals with heavy insulating tape to prevent shorting.



NOTE: Before disposing of damaged, check with your state Environmental Protection Agency to find out about special restrictions on the disposal of tool or return them to a certified service center for recycling.

General safety rules



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 safety instructions



NOTE: This instruction manual contains important safety and operation procedures for the designated battery packs and charger. Before using the battery packs and charger, read this manual, the matching tool's instruction manual, and all labels on the battery packs, charger and tool.

- 1. To reduce the risk of injury, charge the designated battery packs only in the designated chargers.** Other types of chargers may cause personal injury or damage. Do not wire a battery pack to a power supply plug or car cigarette lighter. Battery packs will be permanently disabled or damaged.
- 2. Use the designated battery packs only on the designated tools.** Use with other tools may result in risk of fire, electric shock or personal injury.
- 3. Avoid dangerous environments.** Do not charge battery pack in rain, snow, damp or wet locations. Do not use battery pack or charger in the presence of explosive atmospheres (gaseous fumes, dust or flammable materials) because sparks may be generated when inserting or removing battery pack, possibly causing fire.
- 4. Charge in a well ventilated area.** Do not block charger vents. Keep them clear to allow proper ventilation. Do not allow smoking or open flames near a charging battery pack. Vented gases may explode.
- 5. Maintain charger cord.** When unplugging charger, pull plug rather than cord to reduce the risk of damage to the electrical plug and cord. Never carry charger by its cord. Keep cord from heat, oil and sharp edges. Make sure cord will not be stepped on, tripped over or subjected to damage or stress. Do not use charger with damaged cord replaced immediately with identical replacement parts.
- 6. Do not use an extension cord unless it is absolutely necessary.** Using the wrong, damaged or improperly wired extension cord could result in the risk of fire and electrical shock. If an extension cord must be used, plug the charger into a properly wired 16 gauge or larger extension cord with pins that are the same number, size and shapes as the pins on the charger. Make sure that the extension cord is in good electrical condition.
- 7. Charger is rated for 100-240 volt AC only.** Charger must be plugged into an appropriate receptacle.
- 8. Use only recommended attachments.** Use of an attachment not recommended or sold by the battery charger or battery pack manufacturer may result in a risk of fire, electric shock or personal injury.
- 9. Unplug charger when not in use.** Remove battery packs from unplugged chargers.
- 10. To reduce the risk of electric shock,** always unplug charger before cleaning or maintenance. Use a Ground Fault Circuit Interrupter (GFCI) to reduce shock hazards.
- 11. Do not burn or incinerate battery packs.** Battery packs may explode, causing personal injury or damage. Toxic fumes and materials are created when battery packs are burned.
- 12. Do not crush, drop, or damage battery packs.** Do not use a battery pack or charger that has received a sharp blow, been dropped, run over, or damaged in any way.
- 13. Do not disassemble.** Incorrect reassembly may result in the risk of electric shock, fire or exposure to battery chemicals. If it is damaged, take it to an authorized service center.
- 14. Battery chemicals cause serious burns.** Never allow contact with skin, eyes, or mouth. If a damaged battery pack leaks battery chemicals, use rubber or neoprene gloves to dispose of it. If skin is exposed to battery fluids, wash with soap and water and rinse with vinegar. If eyes are exposed to battery chemicals, immediately flush with water for 20 minutes and seek medical attention. Remove and dispose of contaminated clothing.
- 15. Do not short circuit.** Battery packs will short circuit if a metal object make a connection between the positive and negative contacts on the battery pack. Do not place a battery pack near anything that may cause a short circuit, such as coins, keys or nails in your pocket. A short-circuited battery pack may cause fire and personal injury.
- 16. Store your battery pack and charger in a cool, dry place.** Do not store battery pack where temperatures may exceed 105°F (40.5°C) such as in direct sunlight, a vehicle or metal building during the summer. Charger will charge the battery when the battery's internal temperature is between 32°F (0°C) and 113°F (45°C). When the battery temperature is outside that range, charging will not occur.
- 17.** This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- 18.** Children should be supervised to ensure that they do not play with the appliance.
- 19.** If the supply cord is damaged, it must be replaced by the manufacturer or it's service agent or similar qualified person in order to avoid a hazard.

Exact Li-ion 18V Battery Charger DC1804

Operating instructions Charging Battery Pack

1. Make sure power circuit voltage is the same as that shown on the charger specification plate. Connect charger to power source. Red light (2) should light up. This indicates the charger is ready to begin charging.
2. Position a battery pack (6) on charger (3); align rails on battery compartment (5). Slide battery forward onto charger until it stops. Charge only Exact BAT18Vxx series batteries.
3. And the red light (2) will go out and green light (1) begins to blink continuously, indicating that the battery pack is receiving a “Fast Charge”.
4. After approximately 60 minutes the battery pack is fully charged. The green light will become steady.
5. Disconnect the battery pack and the charger in turn (unless you would like to charge another battery pack, or to leave the battery pack on Trickle-Charge mode until you are ready to use it.)



NOTE: The steady green light indicates that the battery pack is fully charged or in slow charging mode to maintain battery pack charge level.



NOTE: Depending on room temperature, line voltage, and existing charge level, initial battery charging may take longer than 60 minutes.



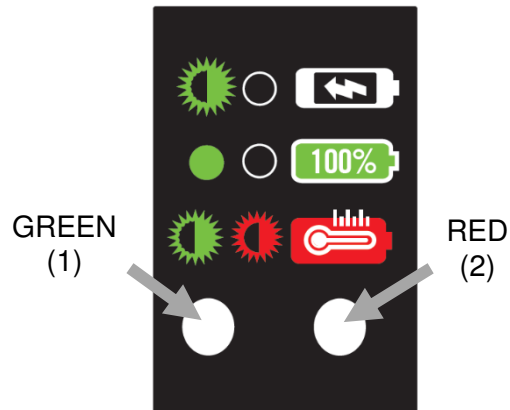
NOTE: After normal use, the battery pack will require 60 minutes of charging before it will be fully charged.

A completely discharged battery will require more than 60 minutes in order to be fully charged.



NOTE: Disconnect charger from power source when not in use.

Charger LED light indicator



	GREEN	RED	SITUATION
1.	No Light	Steady Light	Standing by (when no battery pack is inserted)
2.	Blinking Light	No Light	Charging
3.	Steady Light	No Light	Charging is complete = Charged = Ready
4.	Blinking Light	Blinking Light	Battery pack is too hot or too cold (charging will begin automatically when battery reaches correct charging temperature)
5.	No Light	Blinking Light	Damaged or faulty battery pack

Important Charging Notes

1. Longest life and best performance can be obtained if the battery pack is charged when the surrounding air temperature is between 65°F (18°C) and 75°F (24°C). DO NOT charge battery pack in an air temperature below 40°F (4.5°C), or above 105°F (40.5°C). This is important and will prevent serious damage to battery pack.
2. The charger was designed to fast charge battery pack between 32°F (0°C) and 113°F (45°C). If the battery pack just inserted is too cold or too hot, the charger will not charge it and only the green LED indicator and the red LED indicator will blink alternatively and continuously. After the battery pack

temperature fit standard temperature range, the fast charging procedure will be started automatically.

3. If battery pack is not charged properly (the red LED indicator will blink):
 - a. Check battery pack terminals for dirt. Clean with cotton swab and alcohol if necessary.
 - b. If battery pack is not still charged properly, take or send charger (and battery pack) to the closest Authorized Service Center.
4. Under certain conditions, with the charger plugged into the power source, the exposed charging contacts inside the charger can be shorted by foreign material. Foreign materials of a

conductive nature such as, but not limited to, steel wool, aluminum foil, or any buildup of metallic particles should be kept away from charger cavities. Always unplug the charger from the power source when there is no battery pack in the battery compartment. Unplug charger before attempting to clean.

5. Do not freeze or immerse charger in water or any other liquid



WARNING!! Don't allow any liquid to get inside charger. Electric shock may result. To facilitate the cooling of the battery pack after use, avoid placing the charger in a warm environment such as in a metal shed, or an uninsulated trailer.



CAUTION: Never attempt to open the charger for any reason. If the plastic housing of the charger breaks or cracks, return to the closest Authorized Service Center.



NOTE: This product is not user serviceable. There are no user serviceable parts inside the charger.

Servicing at the closest Authorized Service Center is required to avoid damage to static sensitive internal components.

READ ALL OF THE INSTRUCTIONS IN THE BATTERY CHARGER SECTION OF THIS MANUAL BEFORE ATTEMPT TO CHARGE THE BATTERY PACK FOR YOUR TOOL.

Always use correct battery pack (pack supplied with tool or replacement pack exactly like it.) Never install any other battery pack. It will ruin your tool and may create a hazardous condition.

Important Battery Pack Notes

1. Battery pack can remain in the charger without damaging the battery or the charger. The battery will remain fully charged in the charger.
2. If you remove the battery pack from the battery compartment before the battery is fully charged, it will not cause any damage to the battery.
3. If several charging operations are performed consecutively, the charger can become warm. It is normal and does not indicate any technical defect.



CAUTION: DO NOT USE THE BATTERY PACK if it is damaged and liquid is leaked from the battery pack cells. If

this leakage gets on your skin, please wash affected part immediately and observe any skin reaction. If necessary, please seek medical attention.



NOTE: If you do not use the machine for a long time, the battery has to be anyway charged at least every 5 months.



NOTE: When using a generator for loading the batteries it has to be true sine wave style inverter generator with minimum power of 2000W / 2.5 kVA.

Maintenance

Cleaning Instructions



WARNING!! Disconnect charger from DC outlet before cleaning. Dirt and grease may be removed from the exterior of the charger by using a cloth or a soft non-metallic brush. Do not use water or any cleaning solutions.

NOTE: To ensure product SAFETY and RELIABILITY, repairs, maintenance and adjustments should be performed by a qualified technician, who always using identical replacement parts.

Environment



Separate collection. This product must not be disposed of with normal household waste. When your Exact charger is worn out, do not dispose of it with normal household waste. This product must be recycled separately. Separate recycling of used products and packaging facilitate recycling and recovery of materials. Reusing of recycled materials helps prevent pollution of environment. According to local regulations it is possible to deliver household appliances to municipal rubbish depositories or to the dealer when buying a new product.

Guarantee

If the Exact charger becomes unusable due to material or manufacturing faults within 6 months of the date of purchase, we will replace the damaged parts with new ones or supply an entirely new or factory- reconditioned charger to replace the damaged one.

The guarantee is only valid if:

The guarantee card or a dated purchase receipt is returned to the manufacturer or retailer.

The product has not been misused.

No attempt has been made by non-approved persons to repair the charger.

The product has been used in accordance with these operating, safety, and servicing instructions.

Due to continuous product development, the information in this instruction book may change. We do not give separate notification of changes.

Exact PipeCut P400 Battery

Operating instructions

Before operating the tool

- Ensure that the motor unit is in the upright position. The yellow mark of the UNLOCK button is visible.
- Check that the blade is correctly fitted, in good condition and suitable for the material to be cut.
- Ensure the pipe saw guide wheels rotate.
- Ensure the guide wheels rotate.
- Check the operation of the lower blade guard.
- Ensure the pipe is empty.

Mounting the battery



NOTE: Use only Exact BAT18Vxx series batteries.

Put a fully loaded battery to the battery rails of the saw. Push it to the end so that it is properly connected. Check that the battery is correctly in its place by pushing the battery indicators button (**Fig A/2**). If the battery is correctly mounted and fully charged all the led lights should light up. If the battery has been used the number of led lights indicates the charging level of the battery. To take the battery off from the saw, push the battery release buttons (**Fig A/3**) simultaneously on both sides of the battery and pull the battery along the rails off from the saw.

Setting the supports for the pipe to be cut.

Always use Exact pipe supports when sawing. The supports maximize safety and optimize the cutting result. The cutting should always be done on a flat surface. Place the pipe on the sawing support so that the cutting point is between the wheel pairs.

Place the single supports underneath both ends of the pipe. Make sure that all the wheels are in contact with the pipe. If necessary, wedge the holders with a piece of wood. (**Fig. B**) Shorter sections (under 25cm/10") can be cut with two supports placed so that the cutting point is outside the supports. (**Fig. C**) By sawing in the correct order you prevent the saw blade from jamming in the pipe in the final stage of the cutting process.

Fig B

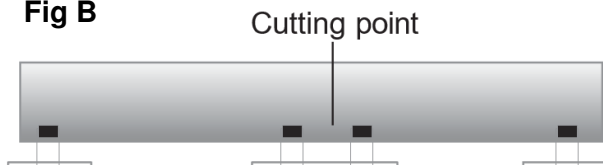


Fig C



Setting and marking the cutting point

Use a marker to mark the cutting point. There are two setting points on the moving blade-guard of the saw. One is for the blade that only cuts the pipe off (**Fig. D/1**) while the other is for the blade that cuts and provides a bevel on the end of the pipe. (**Fig. D/2**)

To start sawing

Open the safety screw (**Fig. E1**) and adjust the wheel pairs in the Exact P400 Battery steering device according to the diameter of the pipe by rotating the adjustment knob on the back of the Exact P400 Battery (**Fig. E2**). The scale on the saw is approximate. User can fine tune the length of the bevel with the adjustment knob. Please notice that the smaller the diameter of the pipe the more sensitive the adjustment of the depth of the bevel will be.

Fig D

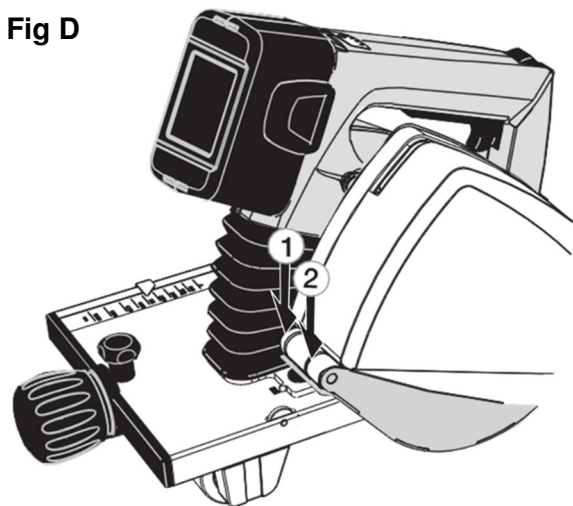
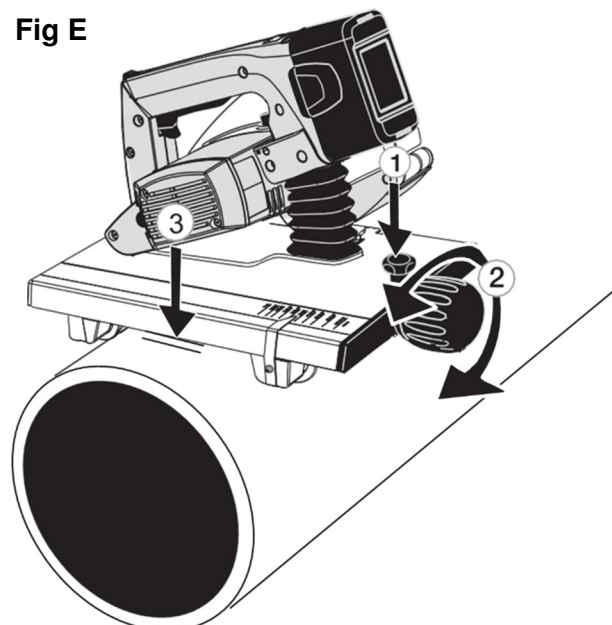


Fig E



It is most important that the base of the steering device does not touch the pipe but rather that the wheel pairs support the saw (**Fig. E3**). Finally lock the adjustment with the safety screw (**Fig. E1**) so that the adjustments do not alter during the sawing.

Pull the lever on the moving bladeguard towards you. (**Fig. F and A/5**) Place the Exact P400 Battery horizontally on top of the pipe so that a suitable setting mark for the blade that is in the machine is positioned at the cutting point (**Fig F**). Hold the pipe in place and ensure that the Exact P400 Battery moves freely in the direction the pipe is fed. The Exact P400 Battery is now ready for use.

Piercing the pipe wall

Strive to keep the P400 Battery in a horizontal position on top of the pipe during the entire sawing process. Take a firm hold of the operating handle with your right hand, start the motor by releasing the locking lever on the power switch (**Fig. G/1**) and push the power switch all the way down (**Fig. G/2**). Before starting to saw wait until the blade reaches full speed. Pierce the pipe wall by pressing the operating handle down slowly until the blade has cut through the pipe wall (at this stage the pipe must not rotate) and the motor unit has locked into sawing position. When the UNLOCK button is locked, i.e. the yellow mark disappears (**Fig. H**), the Exact P400 Battery is locked and you can safely start sawing around the pipe. When using a Cut Bevel blade piercing must be performed especially calmly.

Sawing around the pipe

Start sawing by rotating the pipe with your left hand towards yourself (**Fig. I**) and keep the Exact P400 Battery stable and in a horizontal position in relation to the pipe (**Fig. J**). Continue sawing by rotating the pipe calmly and at the most even speed possible towards yourself until the pipe is cut off.

If you use a CutBevel blade continue sawing approximately 5 cm after the pipe has been cut off. This will ensure an even bevel around the entire pipe. If you bevel an additional round you will get even better result.

The saw can also be steered manually if the blade does not coincide with the initial cut. When you see the starting point of the cut, turn the saw at a gentle angle towards the initial cut until the pipe is cut off (**Fig. L**)

Fig F

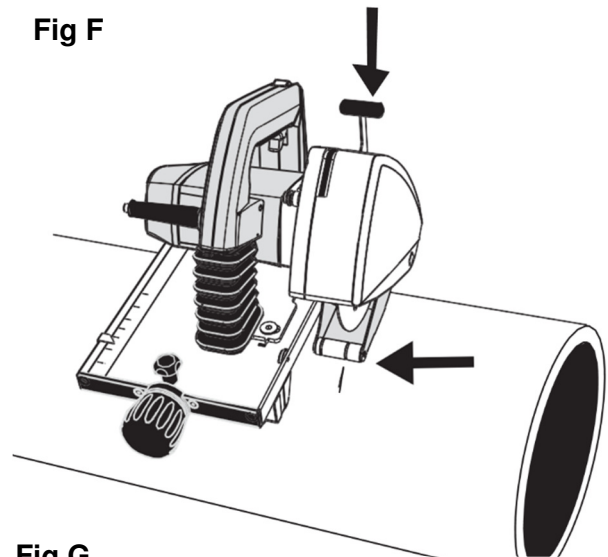


Fig G

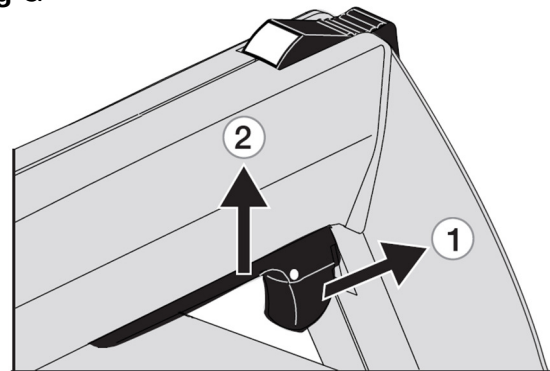


Fig H

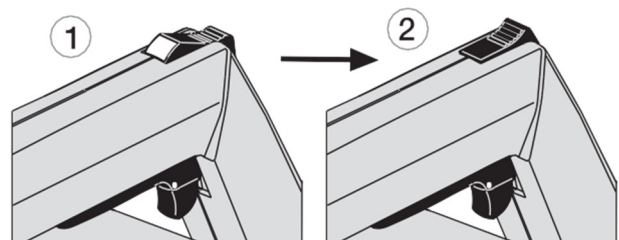
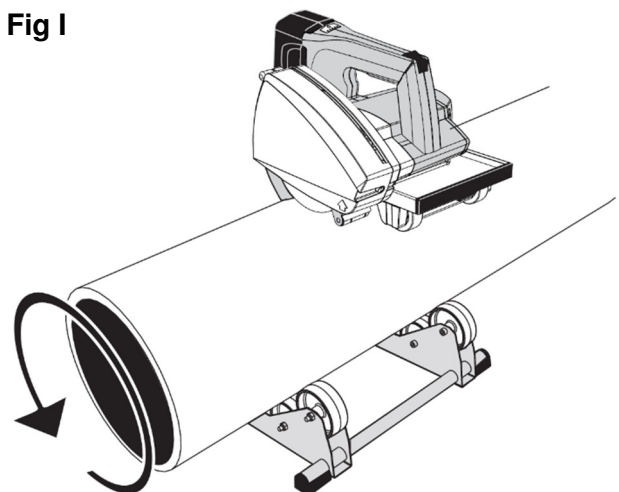


Fig I



When the pipe is cut off, push the UNLOCK button forward until the yellow mark is visible and the locking is released (**Fig L**). Now raise the motor unit to starting position. Release the power switch. After the saw is lifted away from the pipe ensure that the moving blade guard has turned into safety position (**Fig. M**).

Select the feeding speed as per the material and the thickness of the wall. Too high speed can damage the blade, overload the Exact P400 and give a poor sawing result. Especially when using the Cut Bevel blade, the feed rate should be fairly slow to ensure good quality bevel finish.

The Exact P400 Battery can also be used for making only a bevel to the end of plastic pipe. First position the saw on top of the pipe so that the cutting blade of the Cut Bevel blade is at the end of the pipe. (**Fig. N**) Now you can work the pipe as previously described.

Should there be problems during piercing or sawing, abnormal sounds or vibrations due to which you have to interrupt sawing before the pipe is cut through, release the blade by pushing the UNLOCK button forward until the UNLOCK button is released and lift the motor unit up. Once the problem is cleared, start sawing again.

Never start the motor when the motor unit is locked in sawing position, or the teeth of the blade are in contact with the sawn pipe.

Always clean the steering device and the guide wheels after use. This will ensure that plastic chips caught in the wheels do not skew the unit and cause a lopsided cut.

Heat indicator light and feeding speed

The saw is equipped with a heat protection. The heat raises in the motor when using the saw. It raises faster when the blade is dull, when the feeding speed is fast, or the pipe dimensions are big. When the temperature has raised over certain limit the heat indicator light (**Fig A/18**) starts to blink. You should stop sawing immediately and wait until the temperature of the motor cools down and blinking of heat indicator light does not occur anymore. If you keep on sawing the heat indicator starts to light up constantly and the heat protection cuts power automatically.

The indicator light in question turns on for a moment every time the motor is started. This is normal and does not require any actions.

In case of overheat: Release the power switch (**Fig L/3**). Push the UNLOCK button forward until the yellow mark is visible and the locking is released (**Fig L/1**). Now raise the motor unit to the starting position (**Fig L/2**).

Fig J

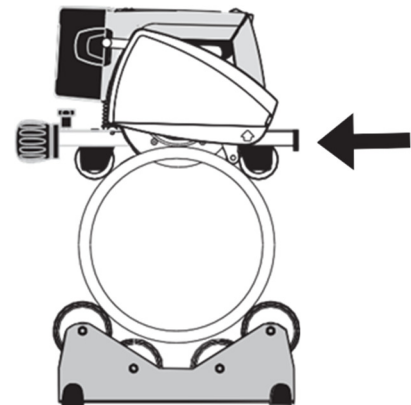


Fig K

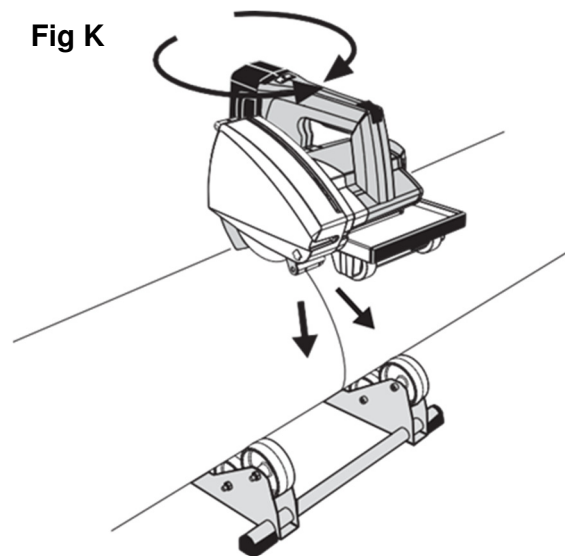


Fig L

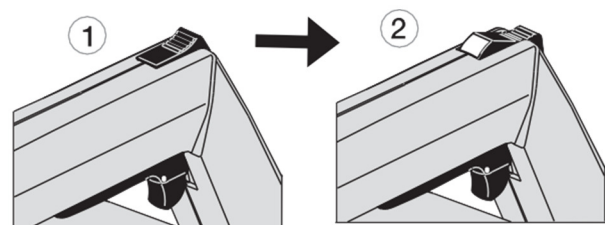
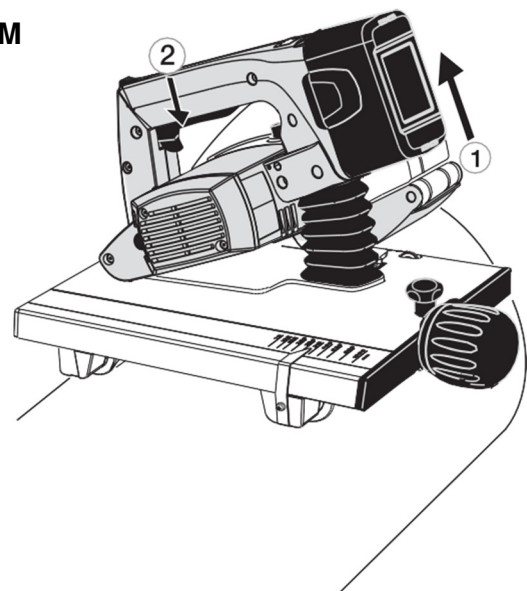


Fig M



Straightness of the cut and the adjustment

The cut is affected by many factors, e.g. the size of the pipe, the material, the wall thickness, the quality of the pipe's surface, the roundness, blade condition, feed rate, the operator's experience. The cutting result may vary and a gap may result on the cutting surface either to the right or left i.e. the difference between the start and end point of the cut (**Fig. O**).

There is a feature in the steering device of the Exact P400 Battery (**Fig. A/11**) which, if needed, can improve the sawing result and facilitate to reach the placement of the initial cut.

Loosen the locking screw (**Fig.P/1**) with the M5 allen key on the handle of the Exact P400 Battery. There is an adjustment wheel on the right-hand side of the steering device (**Fig. P/2**). Turn the wheel with your finger either clockwise or anti clockwise. The direction depends on the direction of the misalignment. This adjustment turns the entire motor unit in relation to the steering unit. There is also an arrow and a dial on the steering unit. (**Fig. P/2**) These will help to gauge the extent of the adjustment. Adjust the motor unit to the desired direction to correct the sawing error. The extent of the adjustment depends on the extent of the error, pipe diameter as well as the strength and material of the pipe wall. Tighten the locking screw (**Fig. P/1**) after the adjustment.

Installing and changing the saw blade



WARNING: To reduce the risk of injury, turn unit off and disconnect it from power source before installing and removing accessories, before adjusting or when making repairs. An accidental start-up can cause injury. Remove the battery from the saw. Check that the motor unit is locked in the upper position.

Remove the blade guard cover (**Fig. Q/1**) by opening the screw (**Fig. Q/2**). Press the spindle-lock button (**Fig. A/12**) and simultaneously rotate the blade by hand until the spindle-lock button drops a further distance of about 4 mm. Now the rotation of the blade is prevented. Use the blade key to open the blade attachment bolt (**Fig. Q/3**), the washer (**Fig.Q/4**), the blade flange (**Fig. Q/5**), and the blade (**Fig. Q/6**).

Before installing a new blade, check that both blade flange discs are clean. Place a new or sharpened blade on the lower blade flange (**Fig. Q/7**), so that the rotation direction arrows on the blade are facing in the same direction as the rotation direction markings on the inside of the blade case. Ensure that the new blade goes right to the bottom in the lower blade flange. Put the blade flange, the washer, and the securing bolt back in place. Press the spindle lock button and tighten the blade securing bolt. Put the blade guard cover back in place and tighten the screw.

Fig N

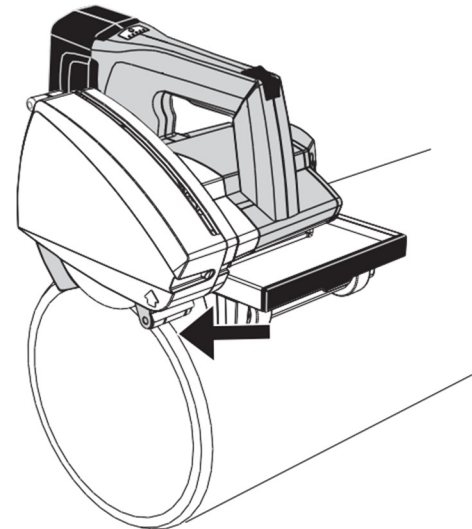


Fig O

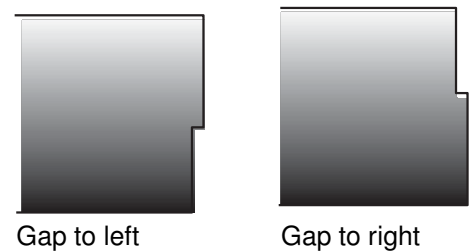


Fig P

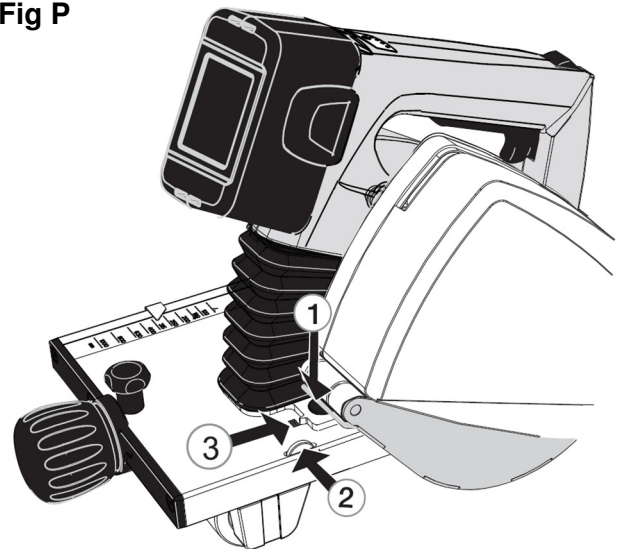
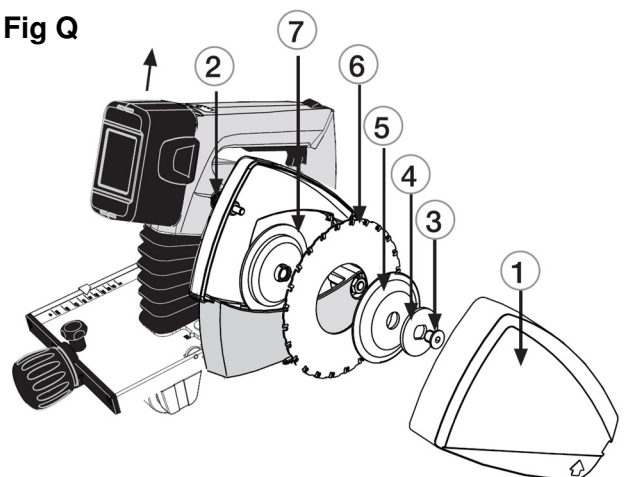


Fig Q



Maintenance and servicing instructions



WARNING: To reduce the risk of injury, turn unit off and disconnect it from power source before installing and removing accessories, before adjusting or when making repairs. An accidental start-up can cause injury.



WARNING: To reduce the risk of injury, DO NOT TIE, TAPE, OR OTHERWISE LOCK THE ON/OFF SWITCH ON while "running in". HOLD BY HAND ONLY.

Cleaning



WARNING: Periodically blowing dust and chips out of the motor housing using clean, dry compressed air is a suggested maintenance procedure. To reduce the risk of serious personal injury, ALWAYS wear safety glasses while using compressed air.



WARNING: When cleaning, use only mild soap and a damp cloth on plastic parts. Many household cleaners contain chemicals which could seriously damage plastic. Also, do not use gasoline, turpentine, lacquer or paint thinner, dry cleaning fluids or similar products which may seriously damage plastic parts. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.

Gripper unit

Clean the gripper unit regularly with compressed air. Lubricate the gripper's wheel axles (**Fig. P/1**) and its joints (**Fig. P/2**). Also clean and lubricate the gripper's trapezoidal screw (**Fig. P/3**) and the two worm screws on it (**Fig. P/4**).

Blade guard



When you have sawn plastic pipes and then intend to start sawing metal pipes always clean the inside of the blade guards. Hot particles derived from sawing metal will burn plastic particles, which may release toxic smoke. Make it a rule to clean the blade guard regularly and pay special attention to keep the moving blade guard movement from becoming hampered. Lubricate the axis of the moving blade guard regularly.

Motor

Keep the motors cooling vents clean.

Power cable



WARNING: Check the condition of the power cable of the battery charger regularly. A faulty power cable should always be replaced at an approved service agency. Correct use and regular servicing and cleaning will ensure the continued operation of the pipe saw.

Accessories



WARNING: Since accessories, other than those offered by Exact Tools, have not been tested with this product, use of such accessories with this tool could be hazardous. To reduce the risk of injury, only Exact Tools, recommended accessories should be used with this product.

Recommended accessories for use with your tool are available at extra cost from your local dealer or authorized service center. If you need assistance in locating any accessory, please visit our website www.exacttools.com.

Blades



WARNING: VISUALLY EXAMINE CARBIDE BLADES BEFORE USE. REPLACE IF DAMAGED



WARNING: To minimize the risk of eye injury, always wear ANSI Z87.1 approved eye protection. Carbide is a hard but brittle material. Foreign objects in the work piece such as wire or nails can cause tips to crack or break. Only operate saw when proper saw blade guard is in place. Mount blade securely in proper rotation before using, and always use a clean, sharp blade.

A dull blade will cause inefficient cutting, overload on the saw motor.

Change blades when it is no longer easy to push the saw through the cut, when the motor is straining, or when excessive heat is built up in the blade. It is a good practice to keep extra blades on hand so that sharp blades are available for immediate use. Dull blades can be sharpened in most areas; see SAWS-SHARPENING in the yellow pages.

Your PipeCut pipe saw is designed for use with 5,5" – 5,9" (140 - 150 mm) diameter blades that have a 2.44" (62 mm) diameter bore. Blades must be rated for 4200 RPM operation (or higher). DO NOT use any abrasive wheels.

See blade selection on page 5

Repairs

To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustments should be performed by a authorized service center or other qualified service personnel. Always use identical replacement parts.

Environment



Separate collection. This product must not be disposed of with normal household waste. When your Exact PipeCut - machine is worn out, do not dispose of it with normal household waste.

This product must be recycled separately. Separate recycling of used products and packaging facilitate recycling and recovery of materials. Reusing of recycled materials helps prevent pollution of environment. According to local regulations it is possible to deliver household appliances to municipal rubbish depositories or to the dealer when buying a new product.

Guarantee

Warranty terms valid from 01.01.2018

If the Exact PipeCut Saw becomes unusable due to material or manufacturing defects within the Warranty Term at our discretion we will repair the Exact PipeCut Saw or supply an entirely new or factory reconditioned Exact PipeCut Saw at no charge.

The Exact Tools Warranty Term is for 12 months from date of purchase.

The Warranty is only valid if:

- 1.) Copy of a dated purchase receipt is returned to the Authorized Warranty Repair Center or has been uploaded to our website at the time of warranty registration.
- 2.) The Exact PipeCut Saw has not been misused.
- 3.) No attempt has been made by non-approved persons to repair the saw.
- 4.) The Exact PipeCut Saw has been used in accordance with the operating, safety, and servicing instructions provide in the manual.
- 5.) The Exact PipeCut Saw has been delivered to an Authorized Warranty Repair Center within the term of the warranty.

Note: The Exact PipeCut Saw is to be shipped to the Authorized Warranty Repair Center freight prepaid. If the Exact PipeCut Saw is repaired under Warranty the return shipment will be made freight prepaid. If the Exact PipeCut Saw is not repaired under Warranty the return shipment will be made freight collect.

The following items or services are excluded from Warranty claims:

- Saw Blades
- Overload Protection Fuse
- Carbon Brushes
- Gripping Unit Wheels
- Blade Flange
- Attachment Flange
- Pulling Flange Washer
- Normal Wear and Tear
- Errors Due to Misuse or Accident
- Water, Fire and Physical Damage
- Battery charger and batteries
- Adjustment of Adjustment Wheel

Tips for using Exact PipeCut saws

Diamond blade should only be used for cutting cast iron pipe. It is not recommended to cut cast iron with TCT or Cermet blades.

Clean the inside of the blade guards after cutting plastic pipe.

Smaller pipe is easily cut by rotating the pipe by hand either on a table or on the floor. Please note: rotate pipe towards you when rotating by hand and be careful not to rotate too fast.

Check the condition of the blade regularly.

The cutting procedure is divided into two stages; first saw through the pipe wall, then complete the cut by sawing around it.

Do not overload the saw by cutting continuously. The saw will be overheated and the metal parts can become burning hot. This will also damage the motor and the blade. The rule is 2.5 minutes in use and 7.5 minutes rest.

Keep the feeding speed constant. This will extend the lifetime of the blade. For example cutting time for a steel pipe diameter of 6" (170mm), and a wall thickness of 1/5" (5mm), is 15-20 seconds, and for a cast-iron pipe diameter of 4" (110mm), with a wall thickness of 1/6" (4mm) is 20 to 25 seconds.

Always keep the motor unit in the upright position. The yellow mark of the unlock button is then visible. Never place the Pipe Cut Saw on the pipe in the locked / cutting position.

Factors that affect the lifetime of the saw blade:

- material of the pipe
- correct blade type for material being cut
- wall thickness of the pipe
- feeding speed
- smoothness of the pipe
- user's general skills
- cleanness of the pipe
- rust on the pipe
- welded seam in the pipe
- blade speed

Factors that affect the straightness of the cut:

- condition of the saw blade
- wall thickness of the pipe
- feeding speed
- smoothness of the feed
- user's general skills
- cleanness of the pipe
- roundness of the pipe
- gripper unit too loose or too tight
- blade assembled too tight

Due to continuous product development, the information in this instruction book may change. We do not give separate notification of changes.

exact

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