



**SAFETY INSTRUCTIONS AND
INSTRUCTION MANUAL**

ITALIANO

ENGLISH

**Li-Ion BATTERY IMPACT WRENCH
1/2" SQUARE DRIVE
18V – 5.0 Ah**

Rev.0 12.2018

FG 166/LT



CE

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FG 166/LT – IMPACT BATTERY WRENCH

1. IMPORTANT WARNINGS



Before to use the tool, please read carefully the instruction contained in this manual.

Improper or unsafe use of this tool can result in death or serious bodily injury.

This manual of instructions constitutes an integral part of product and it has to be edited by the end user for every possible future consultation. It contains important informations about the safety use of the product.



Use destination.

This tool and its accessories, must only be used for the purpose for which they have been conceived. A different use from that one suitable could cause damages to people, animals or things and it's considered improper and unreasonable action. The producer can't be considered responsible for possible damages caused by improper, wrong and unreasonable uses, as, for example, the un-observance of the safety instruction, the use of no original accessories and operation not authorized on the product.



Always wear protective gloves when using the tool in accordance with current regulations.



Always wear hearing protection in accordance with current regulations.



Always wear safety glasses with side protection in accordance with current regulations.



Avoid prolonged use of the tool in order to limit prolonged exposure to the vibrations produced by it.

2. GENERAL WARNINGS

- This device is not a toy. Keep out of reach of children.
- The packing material (cardboard box, plastic sheets, etc.) must not be used by children for play.
- Prevent the device from getting wet. Rain, humidity and any type of liquid or condensate may contain minerals that can corrode the electronic circuits.
- Do not use the tool in a potentially explosive atmosphere, such as near flammable fuels, gases or dusts. Respect and comply with the limitations and provisions of the law.
- Do not throw into fire or expose to fire. Danger of explosion.
- Use the charger in enclosed areas and away from moisture.
- Fall events in particular conditions (such as falls on blades or sharp objects) can cause irreparable damage to the tool, cause malfunction or breakage and damage is not covered by warranty. In this case, in order to avoid any risk, do not use the tool and its accessories, but contact an authorized service center.
- Do not attempt to repair the tool or the accessories supplied. Contact an authorized service center only. Interventions by unqualified personnel are potentially dangerous and invalidate the warranty.
- Use only the accessories supplied with the tool. The use of non-original accessories will result in the loss of the warranty and could be a source of danger, with risk of fire, explosion, leakage of battery fluid or other hazards. For availability of approved accessories, contact your dealer.
- Avoid exposures to excessively high temperatures which can shorten the life of electronic circuits, damage batteries and deform or melt plastic parts.
- Avoid exposures to temperatures that are too low which can reduce battery life or make plastic components fragile.

- Avoid handling or disconnecting the device being charged or the battery charger by pulling on the cables.

3. SAFETY- GENERAL RULES FOR ALL BATTERY OPERATED TOOLS

When using the tool always follow the following safety instructions to reduce the risk of personal injury:

WORK AREA	<ul style="list-style-type: none"> ▪ 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 of fumes. ▪ Keep bystanders, children and visitors away while operating a power tool. Distractions can cause you to lose control.
ELECTRICAL SAFETY	<ul style="list-style-type: none"> ▪ A battery operated tool with integral batteries or a separate battery pack must be recharged only with the specified charger for the battery. A charger that may be suitable for one type of battery may create a risk of fire when used with another battery. ▪ Use battery operated tool only with specifically designed battery pack. Use of any other batteries may create a risk of fire.
PERSONAL SAFETY	<ul style="list-style-type: none"> ▪ 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. ▪ Avoid accidental starting. Be sure switch is off position before inserting battery. Carrying tools with your finger on the switch or inserting the battery pack into a tool with 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 enable 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. ▪ Use clamps or other practical way to secure and support the work piece 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 battery pack from tool or place the switch in the locked or off position before making any adjustments, changing accessories, or storing the tools. Such preventive safety measures reduce the risk of starting the tool accidentally.
TOOL USE AND CARE	<ul style="list-style-type: none"> ▪ Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users. ▪ 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 sparks, burns, or a fire. ▪ 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. ▪ Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools. ▪ 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	<ul style="list-style-type: none"> ▪ Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.

- **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 Instruction may create a risk of electric shock or injury.


4. SAFETY- GENERAL RULES FOR BATTERY CHARGER

Before using the charger, read all cautionary instructions and warnings on it, the battery and this manual.

Improper use of the battery and charger can cause serious injury. To avoid such injuries:

1. Never disassemble the battery.
2. Never throw the battery into fire, even if it is damaged or if it is completely worn. The battery can explode in the fire.
3. Never short-circuit the battery.
4. Never insert objects into the ventilation slots of the battery charger. There may be an electric shock or damage to the charger.
5. Keep the battery away from direct sunlight and use it only in well-ventilated areas with low humidity.
6. Never store the battery or charger in places where the temperature can reach or exceed 60 ° C (140 ° F).
7. Never use a charger other than the original one to charge
8. Never recharge outside.
9. Never recharge when the temperature is below 0 ° C (32 ° F) or above 45 ° C (113 ° F). The optimal temperature to charge the battery is 20 ~ 25 ° C (68 ~ 77 ° F).
10. Never connect two chargers together.
11. Always use the charger with a standard household electrical supply (230 volt). Using the charger with other voltages may overheat it or damage it.
12. Between charges, always wait at least 15 minutes to prevent the charger from overheating.
13. Disconnect the cable from the mains when not using the charger.

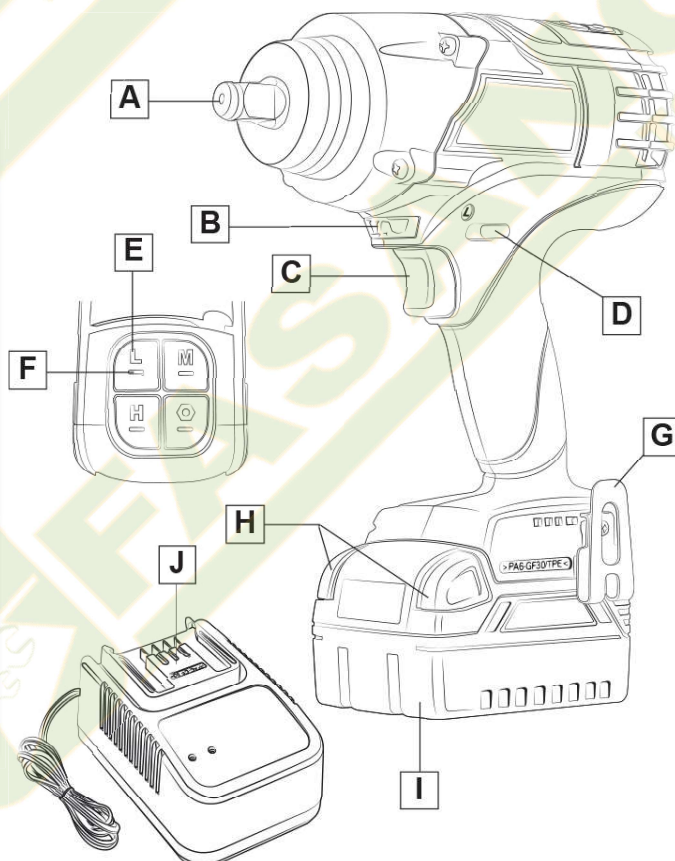
5. TECHNICAL FEATURES

IMPACT WRENCH:	
Model:	FG 166/LT
Type:	Li-Ion battery impact wrench
Weight (without battery):	2,32 kg
Square drive:	1/2"
Engine:	18V
Free speed:	Low Torque Mode "L": 0~900 rpm
	Medium Torque Mode "M": 0~1200 rpm
	High Torque Mode "H": 0~1900 rpm
	Automatic Mode  : 0~1200 rpm
Impacts per minute:	Low Torque Mode "L": 0~1200 ipm
	Medium Torque Mode "M": 0~1600 ipm
	High Torque Mode "H": 0~2400 ipm
Max. Torque:	650 Nm
Battery Charger:	
Model:	FG 166/CB
Input:	100V~240V, 50-60Hz, 80W
Charging Voltage:	20V
Charging Time (*):	≤110 minutes approximately (5.0Ah)
Battery Pack:	
Model:	FG 166/BA (5.0Ah)
Type:	Li-Ion

(*) The charging time may vary depending on the ambient temperature.

6. FUNCTIONAL DESCRIPTION

- A. 1/2" SQUARE DRIVE
- B. LED LIGHT
- C. TRIGGER
- D. FORWARD/REVERSE LEVEL
- E. 4 STAGE IMPACT POWER SELECTION AND BATTERY CAPACITY INDICATOR LIGHT
- F. 4 STAGE IMPACT POWER SELECTION BUTTON
- G. BELT HOOK
- H. BATTERY CLIP
- I. BATTERY PACK
- J. BATTERY CHARGER



7. INSTRUCTIONS FOR USE



ATTENTION

Before using the tool, make sure that you are familiar with all of its features and that you have the appropriate safety devices.

• How to install or remove the battery pack

To install or remove the battery pack, hold both the tool and the battery pack firmly so that they can not escape from the hands and fall, damaging the tool, the battery pack and risking injury.

Always switch off the tool when removing the battery pack.

To remove the battery pack from the tool, press the two buttons on the sides of the battery pack (item H) and carefully remove it.

To install the battery pack on the tool, align the groove on the battery pack with the grooves on the tool body and slide it carefully into place until a short click is heard. If you install the battery pack without warning, the battery pack may come loose from the tool and break and cause serious injury to the user.

NOTE: Never apply force when installing the battery pack on the tool. If the battery pack does not easily slip into its housing on the tool, it means that it has been installed incorrectly.

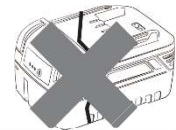


• How to recharge the battery pack

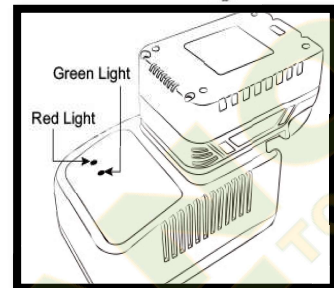


DANGER

NEVER install the battery pack on the charger if it is damaged or broken. Serious danger of electric shock.



1. The battery pack of this tool is supplied with little charge to prevent potential problems, therefore it is necessary to charge it before the first use.
2. Recharge this battery pack only with the supplied charger.
3. Connect the charger to a power outlet. Insert the battery pack on the charger by aligning its slots with those on the charger.



NOTE:

- Lithium batteries do not have the memory effect, so to prolong the life of the battery pack of this tool you must always recharge before storing it. This will reduce the effect of the self-discharge characteristic of this type of batteries. If the battery pack voltage is too low, it will automatically lock. As soon as the tool shows power loss, please stop and recharge the battery pack immediately. If the battery pack has not been used for more than 3 months, recharge the battery pack before using it
- If the screwdriver does not work, remove all debris and try again. If the problem persists, remove the battery immediately and contact your dealer.
- During the charging phase the battery pack becomes slightly warm. This is normal and does not indicate the presence of a problem.
- Do not place the charger in an environment that is neither too hot nor too cold. It works best at room temperature.
- As soon as the battery is fully charged, unplug the charger from the power outlet and remove the battery pack from the charger.

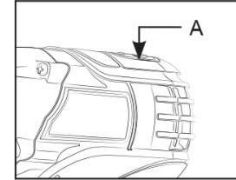
ATTENTION



If the indicators on the charger do not work in the charging phase, immediately remove the battery pack from the battery charger and take them to an authorized service center for inspection or replacement. Never install the battery pack on the damaged or non-functioning battery charger as this can damage the battery pack.

- Battery pack charge status indicator

This screwdriver has a battery pack charge status indicator on the top panel for easy viewing.



The remaining charge of the battery pack is shown in the form of a light signal from the three letters on the top panel when the start button is pressed. The letter that remains lit when the start button is released indicates the speed selected for the use of the tool and stays on for about 60 seconds.

If only one indicator lights up but in flashing mode or no indicator lights up, it means that the battery pack has run out of charge and therefore the screwdriver will not work. In this case, recharge the battery pack or replace the battery pack with a fully charged one.

If two or more lights do not light even if the battery is fully charged, then it means that the battery has finished its life cycle and must be replaced with a new one.

STATE OF THE CHARGE OF THE BATTERY PACK: LIGHT INDICATORS				
LIGHT	OFF	FLASHING		
Battery pack charge level \geq 60%	Battery pack charge level 30%~60%	Battery pack charge level \leq 30%	Battery pack charge level \leq 10% (NECESSARY RECHARGE)	MALFUNCTION

NOTE:

- The indicated battery pack charge may be lower than the real one when using the tool.
- The charge indicated by the light indicators may deviate slightly from the actual one depending on the conditions of use and the ambient temperature.

- LED indicators of the charger

BATTERY CHARGER IN STAND BY	RED LED light GREEN LED off			Stand by
DURING THE RECHARGE PROCESS	RED LED & GREEN LED light			In charge phase
	RED LED flashing GREEN LED off			Battery pack too cold or too hot
RECHARGE PROCESS TERMINATED	RED LED light GREEN LED flashing			Complete charge
MALFUNCTION OF THE BATTERY PACK	RED LED & GREEN LED flash alternately			Battery pack replacement required

NOTE:

after the first recharge, the battery pack does not reach the full state of charge. The full charge will only be reached after several charging cycles.

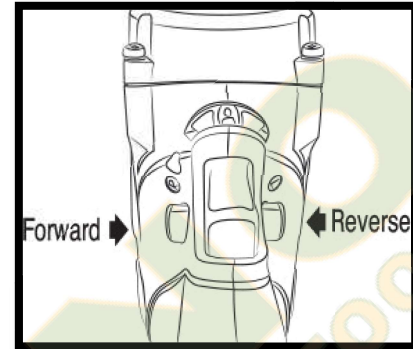
- **Button for inversion of the rotation direction of the tool**



ATTENTION

Always check the direction of rotation of the screwdriver before using it.

By means of the inversion button it is possible to determine the direction of rotation of the screwdriver's square drive (clockwise or counterclockwise)



To change the direction of rotation of the tool, press the button to the right or left. When the button is in position "F" the tool rotates clockwise (to screw). When the button is in the "R" position, the tool rotates counterclockwise (to unscrew). Before using the screwdriver, make sure that the inversion button is in the desired position.

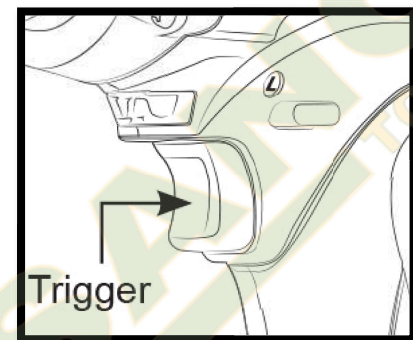


ATTENTION

Use the reverse button only after the tool stops completely. Changing the rotation direction of the tool while it is rotating can cause the tool to break. When the tool is not used, move the reverse button to the neutral position.

- **Trigger**

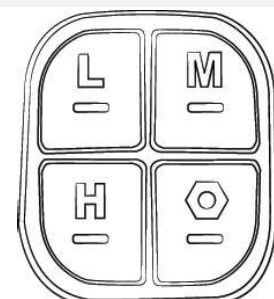
To start the tool, simply press the trigger. The speed of rotation of the tool increases with increasing pressure on the trigger. Release the trigger to stop the tool.




When the start button is released, the square drive will continue to rotate for a few seconds. The start button can be locked in the OFF position to reduce the possibility of accidental starts when the tool is not used. To lock it: position the rotation inversion button in the central position (neutral position).

- **How to select the working mode of the screwdriver**

The buttons for selecting the working mode of the tool allow to set the torque, the rotation speed (rpm) and the impact speed (ipm) according to the different applications. Be careful: the work mode selection buttons can not be used when the tool is operating.

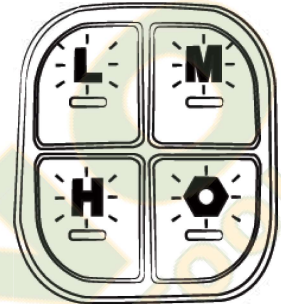


Before selecting the work mode using the buttons on the top panel of the tool, press the trigger to turn on the button panel.








For the clockwise rotation (to screw) you can select only the three modes L, M, H while for the counter-clockwise rotation (to unscrew) you can also select the fourth or the automatic mode indicated on the panel with the symbol . The tool will be ready to work as soon as the letter / symbol typed on the panel lights.

When using the tool, the lighting of the four symbols on the top panel indicates the charge status of the battery pack as indicated in the table in the paragraph "Battery pack charge status indicator" of this manual.

When the trigger is released, lighting of one of the four symbols indicates the work mode that has been selected (refer to the table below).



When the four symbols on the panel are flashing at the same time, the battery or the tool have a fault. Do not use the tool and contact your dealer.

WORKING MODE: LIGHT INDICATORS		
 LIGHT		 OFF
Work mode selected and indicated on the upper panel:	rpm/ ipm / Torque (Nm) (indicative values)	Description of the selected mode:
	0~1900 rpm 0~2400 ipm 650 Nm	"H" mode selected, or maximum torque mode
	0~1200 rpm 0~1600 ipm 400 Nm	"M" mode selected, or average torque mode
	0~900 rpm 0~1200 ipm 200 Nm	"L" mode selected, or low torque mode
	The number of impacts is established automatically by the PCB	Automatic mode selected  (selectable only for counterclockwise rotation to help unscrew the nuts in a safe manner, avoiding that these, during the unscrewing phase, can project into the air causing injury to the user and to those around him)

- LED light

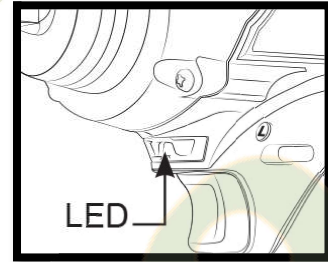


ATTENTION

Never point the LED light in your eyes. It could cause serious damage and pain in the eyes.

This screwdriver is equipped with an LED light placed in the front part so as to illuminate the work area during use.

The LED lights up after a slight pressure on the start button and switches off automatically after about 60 seconds from its release.



- Belt hook

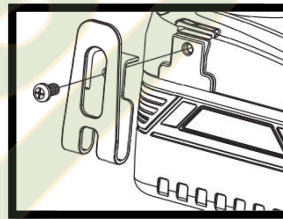
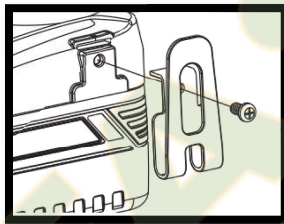


ATTENTION

Properly tighten the screw when installing the hook on the screwdriver. If the screw is not screwed properly, the tool can fall down during use, breaking and causing serious injury to the user.

This screwdriver is equipped with a hook to use to keep it hanging on the belt for short periods.

To install it: screw it with a screw into the special groove on the screwdriver. To remove it: simply unscrew the screw.



- Installation and removal of the socket wrench



ATTENTION

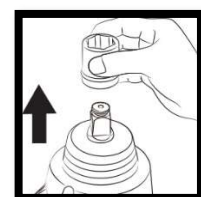
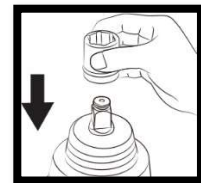
ALWAYS use only socket wrenches or accessories designed to be used with impact wrenches. NEVER use socket wrenches or accessories designed for manual use.

NOTE: always make sure the tool is switched off and without the battery pack before installing or removing the socket wrench or accessory.

Always use the socket wrench of the correct size for the nut / bolt to be screwed or unscrewed. The use of an unsuitable socket wrench may not allow screwing / unscrewing properly or may even cause the nut / bolt to break or become damaged.

To install the socket wrench, align it with the square drive and hook it appropriately onto the retaining ring on the square drive.

To remove it, remove it from the square drive of the tool.



8. CLEANING & MAINTENANCE



ATTENTION

Always make sure the screwdriver is switched off and without the battery pack before checking or servicing the tool. This prevents the accidental start of the tool which could cause serious injury to the user.

• Cleaning

Remove the battery pack from the tool.

1. Free the air intakes from any obstruction. Do not spray, wash or immerse the air inlets.
2. Clean the tool body and all plastic parts with a soft, dry cloth only. Never use solvents or aggressive detergents on plastic parts as they may cause damage and electric shock.

• Maintenance

Remove the battery pack from the tool.

1. Verify that there are no loose parts and / or damaged parts.
2. Store the tightened screwdriver (OFF position) in a dry place away from children.
3. Use only original spare parts or accessories recommended by the manufacturer.
4. Before and after each use check the integrity of the tool in all its parts.
5. Do not install the battery pack on the tool when storing it.

9. DISPOSAL INFORMATION



This equipment falls within the scope of the Directive 2011/65 /UE. The crossed-out bin symbol on the product and / or its packaging means that at the end of its life the product must be treated separately from household waste and must therefore be sent to the appropriate disposal and recycling centers. This operation is the responsibility of the user. The disposal of the product in the dedicated facilities helps to avoid possible negative effects on the environment and favors the recycling of the materials that compose it.

10. EU DECLARATION OF CONFORMITY

This product complies with the provisions of the following European Directives and related harmonized standards:

2006/42/EU
Machinery
Directive

2014/30/EU
EMC Directive

2014/35/EU
LVD Directive

2011/65/EU
RoHS Directive

EN 60745-1:2009+A11:2010
EN 60745-2-2:2010

EN 55014-1:2017
EN 55014-2:2015
EN 61000-3-2:2014
EN 61000-3-3:2013

EN 60335-1:2012+A11:2014
EN 60335-2-29:2004+A2:2010
EN 62233:2008

IEC 62321:2013

11. WARRANTY

This tool is guaranteed to be free from manufacturing defects and materials, for normal service use, for a period of one year from the date of purchase of the tool.

If during this period there are any defects attributable to the manufacturer on the tool, the company Fasangas S.r.l. will act, at its discretion, by repairing the tool or replacing with another of equal value and features at no cost to the purchaser.

The warranty does not cover consumables and / or components subject to particular wear such as batteries, fuses, etc. and faults caused by improper or incorrect use of the tool or in any case not in compliance with the instructions in this manual.

The warranty right lapses if the instrument has been tampered with by personnel not authorized by Fasangas S.r.l.

Products without warranty rights will be repaired at the customer's total expense.