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DSES

WIRELESS

HARD WIRED

Explanatory booklet

DSES OPTION: ADDITIONAL ELECTRONIC SAFETY SYSTEM

DSES is a cut-prevention system invented and patented by INFACO. It can only be used only with the ELECTROCOUP F3010 (hard wired) and F3015 (hard wired & wireless) electronic shears.

THERE ARE 2 DSES SYSTEMS:

- **Hard wired DSES**

On the F3015, it is composed of an INFACO conductive safety glove connected to a specific DSES spiral cable.

- **Wireless DSES**

Only available on the ELECTROCOUP F3015 shears, it is composed of a conductive trigger that makes the connection between the user's body and the shears' electronic system (patented system).

What they have in common is that they instantly trigger the re-opening of the shear blade whenever the cutting head comes into contact with the hand: accidents are therefore prevented!

COMPARISON OF THE "HARD WIRED DSES" AND "WIRELESS DSES"

	HARD WIRED DSES	WIRELESS DSES *F3015 only*
PROS	✓ No unexpected triggering caused by damp wood. ✓ No unexpected triggering when cutting close to the ground. ✓ No unexpected triggering by contact with trellis wires.	✓ Can be used without gloves. Direct contact with the skin (patented conductive trigger). ✓ No connection cable. ✓ Less risk of cutting trellis wires.
CONS	✗ An INFACO conductive glove must be worn regardless of the weather or the work being done. ✗ A cable must always be connected to the operator's glove. ✗ The system will trigger unexpectedly if the hand not holding the pruning shears touches trellis wires at the same time as the pruning shears' cutting head.	✗ Unexpected triggering on damp wood, when cutting close to the ground in wet weather. ✗ Unexpected triggering if the cutting head comes into contact with the metal trellis wire, supports or stakes. ✗ Requires INFACO conductive glove(s) to be worn if hands require protection hands from cold, damp or dirt.

WIRELESS DSES:

This version operates by measuring the intrinsic electric conductivity of the supports to be trimmed, as well as their ground occupation. The shear continuously analyses conductivity. Therefore, when the conductive trigger is pressed, the system analyses the signal it receives and controls the instant re-opening of the blade or not.

To do this, the Wireless DSES shear must be used with bare hands and/or with INFACO conductive gloves.

INFACO conductive gloves are not required for the system to operate but are strongly recommended to prevent unexpected safety triggering on certain types of wood (damp, green or sap-filled). **Wearing gloves therefore increases safety and reduces the risk of unexpected triggering.**

To tell the difference between wood and the user's hands, the INFACO Wireless DSES requires calibration every time the device is powered up. This calibration is used to check that the system properly detects the user's body (bare-handed or hand wearing an INFACO conductive glove) and to memorise an initial reference threshold.

The system therefore differentiates between the user's hand, which has a high conductivity value, and a piece of wood (non conductive) which has a low conductivity value.

If the device detects a value greater than or equal to the threshold initially saved during calibration, it will order the blade to re-open. Otherwise, for a value lower than the threshold, the device orders the blade to close. This is how the system tells the difference between the user's hand and the wood to be cut.

However, when using the device on wet, green or sap-filled wood, the conductivity of that type of support may come close to the value of a signal from a bare hand. Therefore, unexpected safety openings may occur on that type of wood (in which case it is impossible to cut the wood). To reduce (and/or prevent) this type of phenomenon, INFACO conductive gloves must be worn to amplify the signal from the user.

Wearing INFACO conductive gloves during the calibration phase makes it possible to increase the initial reference threshold, thereby reducing the occurrence of unexpected safety triggering (see support conductivity graph on pages 6 & 7).

Important: For user safety, it is prohibited to change how the device is held during use without first re-initialising the system by re-calibration. If users wish to remove their conductive glove during use, it is compulsory to restart the device and re-calibrate it.

Reminder: For the Wireless DSES system to operate, it is essential that the finger used to press the trigger be bare or fitted with an INFACO conductive glove (ref. GWDSESD / ref. GWDSESG or ref 355G29 / ref: 355G29G).
Every time the device is started, it is also essential to visually check the INFACO conductive glove condition. The glove should be washed if dirty or replaced if worn/damaged.
NB: INFACO conductive gloves must be washed at least once per week (hand-washed in cold, clean water without detergent). Detergents may alter the conductivity of the conductive fabric.

DSES & DSES WIRELESS Glove
Free hand
Ref. Right & Left
355G29 - 355G29G

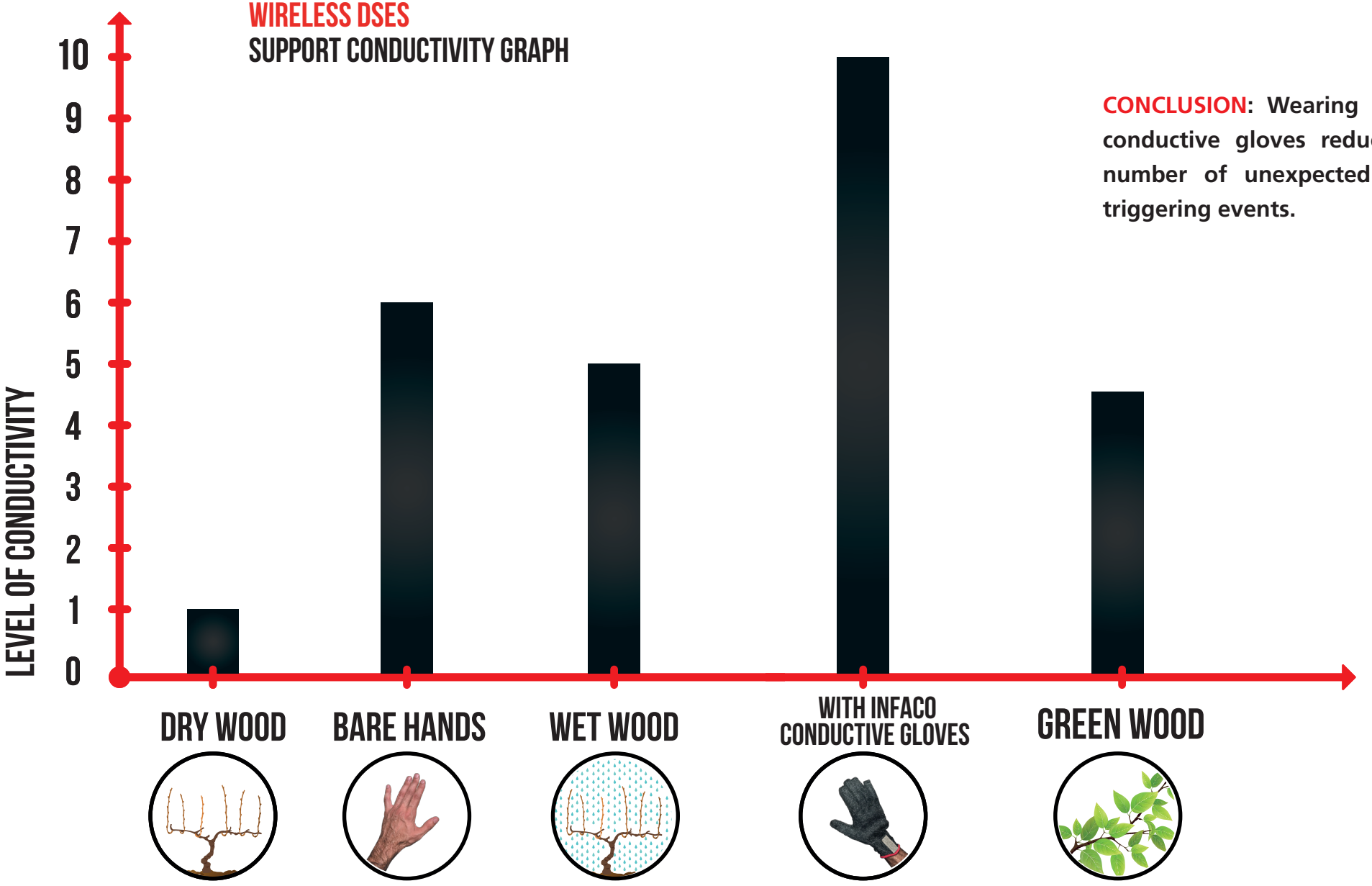
DSES WIRELESS Glove
pruning hand
Ref. Right & Left
GWDSESD - GWDSESG

Important: Calibration is also used to test the level of wear on the conductive gloves. During this operation, if the shear LED turns red, the glove is out of order and must be replaced.

Alternative: Unexpected safety triggering on wet, green or sap-filled wood can be avoided by using an insulated finger (non-conductive) to press the device trigger. For this purpose, the use of the red glove (GWDSESD) is ideal. Only the index finger has a conductive PATCH, so the middle finger can be used to work around unexpected triggering. **Caution: in that specific case, the Wireless DSES system is no longer active and the user is not protected.** The same applies when using the thumb to press the trigger.

For any further questions, please contact your approved INFACO dealer.

WIRELESS DSES
SUPPORT CONDUCTIVITY GRAPH



CONCLUSION: Wearing INFACO conductive gloves reduces the number of unexpected safety triggering events.

TIP

TO PREVENT INCONVENIENT TRIGGERING.

Change fingers to avoid **conductivity** and **unexpected triggering.**

Conductive finger

Non **conductive** fingers
(Thumb, middle finger, ring finger, little finger).

!!!!! CAUTION !!!!!
in this specific case the DSES WIRELESS safety system is no longer active.

PERFORMANCE INDEX

VERY IMPORTANT

INFACO GLOVES MUST BE IN DIRECT CONTACT WITH THE SKIN:
WEARING CUFFS INSIDE THE GLOVES IS **STRICTLY PROHIBITED.**

IT IS **PROHIBITED** TO USE OTHER TYPES OF GLOVES OR UNDER-GLOVES THAN **INFACO** CONDUCTIVE GLOVES.

WIRELESS DSES

VERY IMPORTANT

For better
Wireless DSES system operation, it is essential to wear
the INFACO conductive glove.

**If the conductive glove is too worn or damaged,
it must be replaced.**

It is our duty to remind you of the instructions for use.
On each start-up:
- visually inspect the condition of your glove
- check that the DSES wireless system is in working order (see manual)
**HAND-WASH THE GLOVE AT LEAST ONCE EVERY WEEK
IN COLD, CLEAN WATER WITHOUT DETERGENT.**

Users must be aware that the DSES system supplements all mandatory and usual safety rules but does not replace them under any circumstances.

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HARD WIRED DSES

VERY IMPORTANT

To operate the
DSES system, it is essential to wear
the INFACO conductive glove.

**If the conductive glove is too worn or damaged,
it must be replaced.**

It is our duty to remind you of the instructions for use.
On each start-up:
- visually inspect the condition of your glove
- check that the DSES system is in working order (see manual)
**HAND-WASH THE GLOVE AT LEAST ONCE EVERY WEEK
IN COLD, CLEAN WATER WITHOUT DETERGENT.**

Users must be aware that the DSES system supplements all mandatory and usual safety rules but does not replace them under any circumstances.

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WIRELESS DSES

HARD WIRED DSES