

**HORSE DENTAL  
EQUIPMENT**

## Evolution motor with WATERCOOLING

### OPERATING INSTRUCTIONS

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You have purchased quality professional equipment from HDE and we thank you for your trust.  
Please read these operating instructions carefully, in order to optimize the use and longevity of your equipment.



## SET DESCRIPTION

Evolution motor



Control box



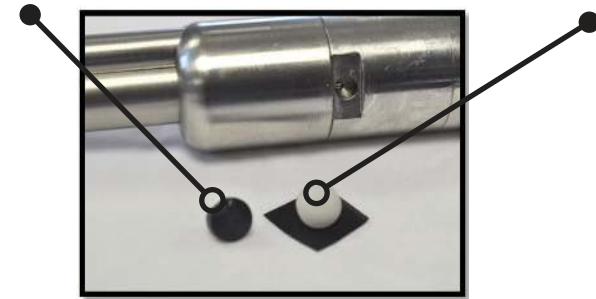
Lithium Ion battery



## CLEAN OR CHANGE THE WATERCOOLING NOZZLE

Black nozzle: Flexxidisc

White nozzle: Polyfloat



Please check whether the nozzle is clogged by using the small drill supplied with your burr.



If water is still not running, use a small flat screwdriver (2.0x0.4 AN 2x75 FACOM) to lift and remove the defective nozzle and replace the defective nozzle by a new one.



Make sure to direct the nozzle's opening towards the burr.



We recommend to use only distilled water with your Watercooling system.

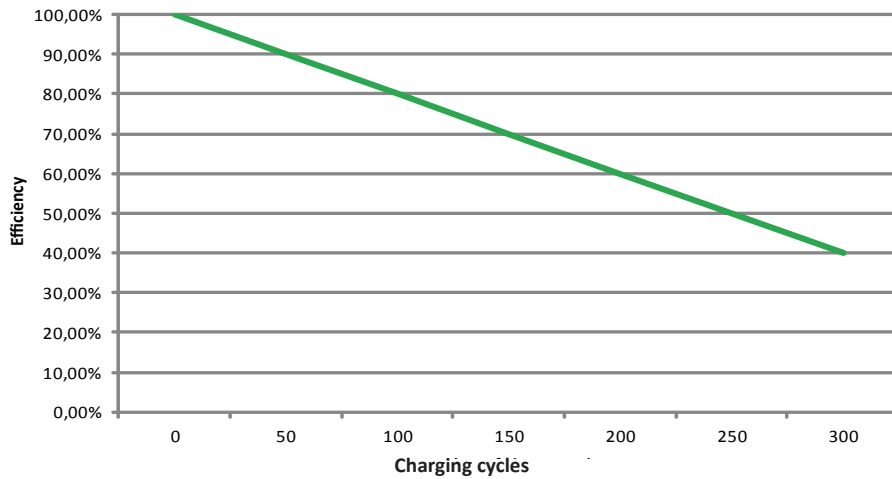
# LITHIUM ION BATTERY

## RECOMMENDATIONS

- Only use the HDE Lithium Ion battery with the HDE Evolution
- Do not charge the battery more than 12 hours in a row
- Partial discharge is fine so you don't have to wait until your battery is empty to recharge it
- Charge and store the battery in a dry environment at room temperature (18/20°C)

## BATTERY LIFECYCLE

### Lifecycle



Based on 10 horses per charging cycle when the battery is new (working at 15°C)

**RECYCLING:** do not dispose of the battery in regular waste container recycle it.

# SET DESCRIPTION

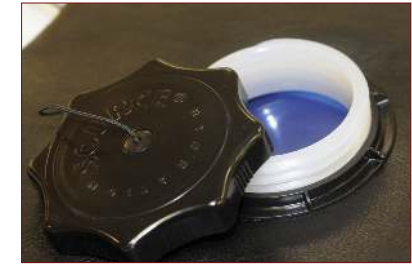
Watercooling drive shaft



Watercooling diamond burr  
(Flexxidisc or Polyfloat)



WATER POUCH (1.25 liter)



- 2 electric connectors
- Battery or transformer to control box
  - Control box to engine



**ONLY DISTILLED WATER**

## SET DESCRIPTION

### Control box



Protective cover

On/off switch button

Watercooling on/off switch button

Lower speed

Higher speed

6 speeds

### On/off switch:

If the blue light flashes slowly (1 time /second) : normal functioning

If it flashes faster (4 times /second) : bad functioning (wrong connection)

### WARNING:

Please note that the control box without the protective cover is not waterproof. Therefore, make sure you always use the control box with its protective cover.



Battery or transformer connection



Engine connection

Watercooling connection

## LITHIUM ION BATTERY

### Charging the battery

Connect the green connector + wire of the control box to the green connector of the battery.

**WARNING:** always position the white mark on the wire connector straight opposite to the white mark on the battery.

Do not turn the connector, just pull slowly to unplug it.



+ 3 different charging levels:

**RED:** Low level of your battery

**ORANGE:** Intermediate level

**GREEN:** Full charge



Car charger



Battery charger

## CLEANING RECOMMENDATIONS

### WATER POUCH

- 1 - After every working session, clean the water system with clean water :  
To do this, turn your head down to let the water circulate properly
- 2 - Clean the engine with a damp sponge
- 3 - Dry thoroughly with a clean, soft cloth
- 4 - Unclip the hydraulic connections

### DIAMOND BURRS

- 1 - Start the engine with the handpiece attached
- 2 - Run it at high speed with the head pointing down to remove any water
- 3 - Clean the diamond burr by running it over the HDE stainless steel brush
- 4 - Continue until the remains of dentine have completely disappeared
- 5 - Thoroughly dry the body and the head with a clean, soft cloth
- 6 - Store the burr in its dedicated place within your clean, dry case

The burr is resistant to water projection, don't fully immerse in water  
Always use clean water without corrosive, nor abrasive products  
Only use the HDE stainless steel brush.

### FLEXIBLE

- 1 - Clean the outside sheath with a damp sponge
- 2 - Dry thoroughly with a clean, soft cloth
- 3 - When finished working, detach the drive shaft from the engine and the handpiece
- 4 - Store the drive shaft in your clean, dry case

Ensure not to bend the drive shaft in an excessive radius

### MOTOR

- 1 - Turn off the engine before cleaning
- 2 - Clean the motor with a damp sponge
- 3 - Thoroughly dry the engine with a clean, soft cloth
- 4 - Store the engine in your clean, dry case.

### CASE

- 1 - Clean the case with a damp sponge
  - 2 - Thoroughly dry the case with a clean, soft cloth
  - 3 - Store in a clean and well ventilated place
- Make sure the case is opened from time to time, to ensure your equipment is well ventilated  
Make sure each aspect of your equipment is always clean & dry before storage  
HDE recommends at least 1 annual overhaul of your equipment in an approved technical center\*

## USE

### Setting up the Watercooling

Fill the water pouch with distilled water and close the cap tightly.

The water pouch contains 1.25 Liter

Connect the drive shaft to the engine and the diamond-coated Watercooling burr to the drive shaft.

Check that the transmission screw of the drive shaft is secure in the engine motor connector slot.



Make sure the battery is fully charged before connecting the electrical hydraulic connectors.



Switch on the engine by pressing the black button on the control box.

Press the blue button on the control box to activate and deactivate the Watercooling.

To stop the spray, you can either press the blue button again or press the on/off switch.

## USE

### Changing the burr

- 1 - Stop the engine
- 2 - Disconnect the hydraulic connection at the handle of the burr by pulling on the knurled ring. Then disconnect the burr from the drive shaft and change the burr.



To use the «TWIST» function, hold the burr by the rubber handle and pull on the head while turning to one of the four desired positions.



### Water is not flowing

- Step 1** - Check the hydraulic and electric connections
- Step 2** - Make sure the pouch is full of water
- Step 3** - Place the diamond coated burr head down and turn on your engine
- Step 4** - Unclip the hydraulic connection near the burr

If water is not flowing correctly from the hose, the problem is coming from the burr

- Step 5** - Clip the hydraulic connection back to the burr

### Water is not flowing from the nozzle

- Step 6** - Make sure the nozzle is not blocked  
Clean the nozzle with a soft brush or change the nozzle\*

If the problem persists, contact our technical center



\*The nozzle is a wearing part you may change it yourself (COR\_B107IR (flexxidisc) or COR\_B115IR (polyfloat))

## WHEN FINISHED

- 1- Fill the water pouch with distilled water and close the cap
- 2- Turn the engine back on with the watercooling as to rinse the entire water system
- 3- Clean the nozzle with a soft brush
- 4- Stop the engine by pressing the black button on the control box
- 5- Unclip the hydraulic connections
- 6- Disconnect the burr from the drive shaft and the drive shaft from the engine. Then store the equipment away in the provided spaces in the case only after following our maintenance instructions (described on the following page)

## USER PRECAUTIONS

- Make sure to use the supplied storage case for the transport of the HDE Evolution unit to avoid any shocks
- Do not leave the engine & battery near flammable materials
- Do not attempt any electrical repairs
- Do not attempt any «home-made» repairs
- Do not let the water pump run while empty

For any problem, contact your local technical center