LEOTECH

DUST SUPPRESSION EXPERTS

User's Manual

English

MOTOFOG® D - B - E

030712

Index

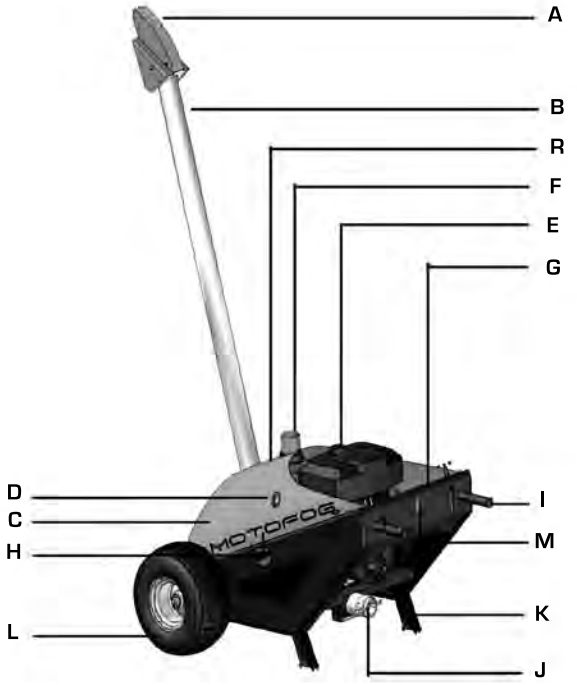
Release Manual: 030712

Introduction

MOTOFOG ® was conceived to solve the problem of abatingfumes and settling particulate matter caused by mining activities, demolition works and movement of loose materials.
MOTOFOG ® is capable of settling 90% of suspended dust.
The machine generates a powerful jet of atomized air and water, which produces a cloud of non-toxic fog capable of quickly settling suspended particles.

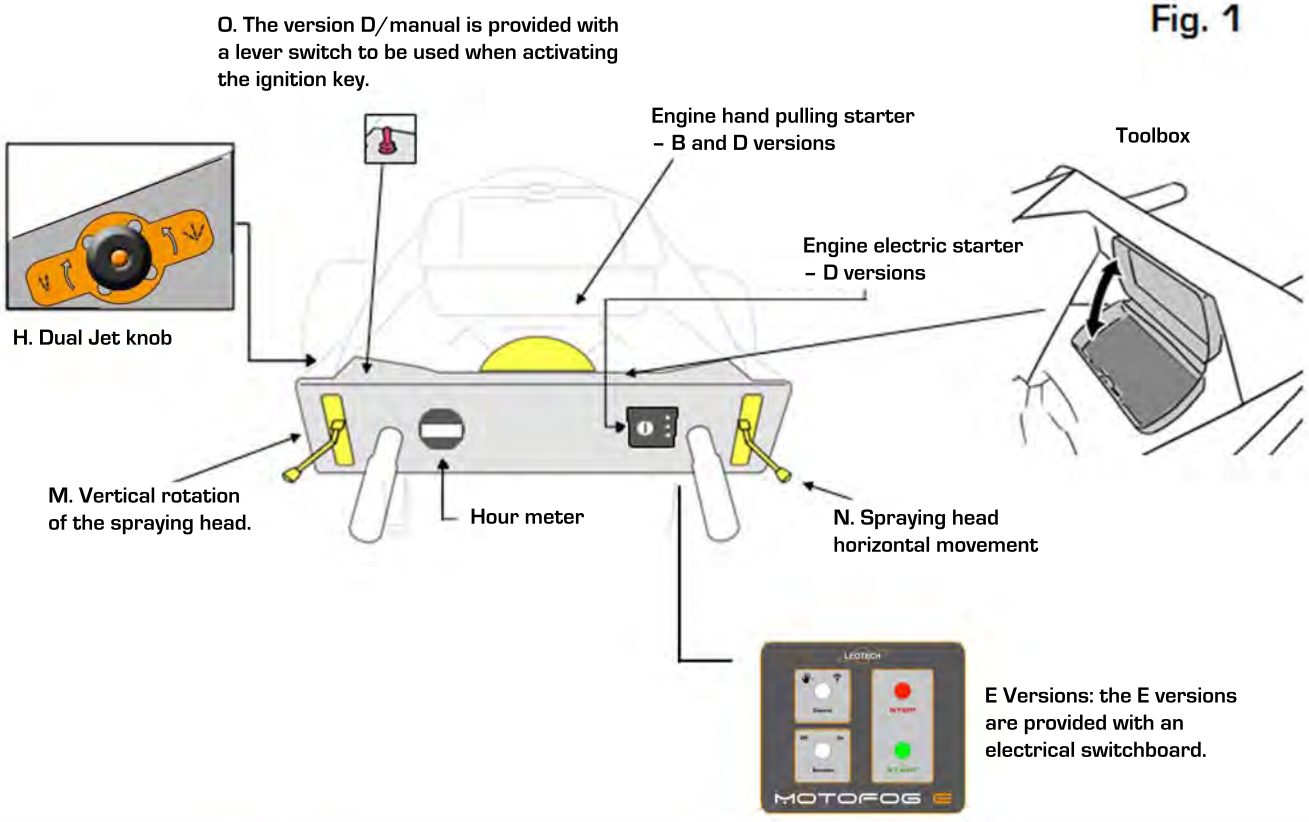
Parts description

A. Head with dual jet technology
B. Pole
C. Engine carter
D. Exhaust pipe (D - B)
E. Engine / fuel tank (D - B).
F. Signalling light
G. Control panel
H. Dual Jet knob
I. Handling grips
J. Water filter – water pipe fitting
K. Fixed feet
L. Wheels
M. Toolbox
R. Barycentric lifting point.



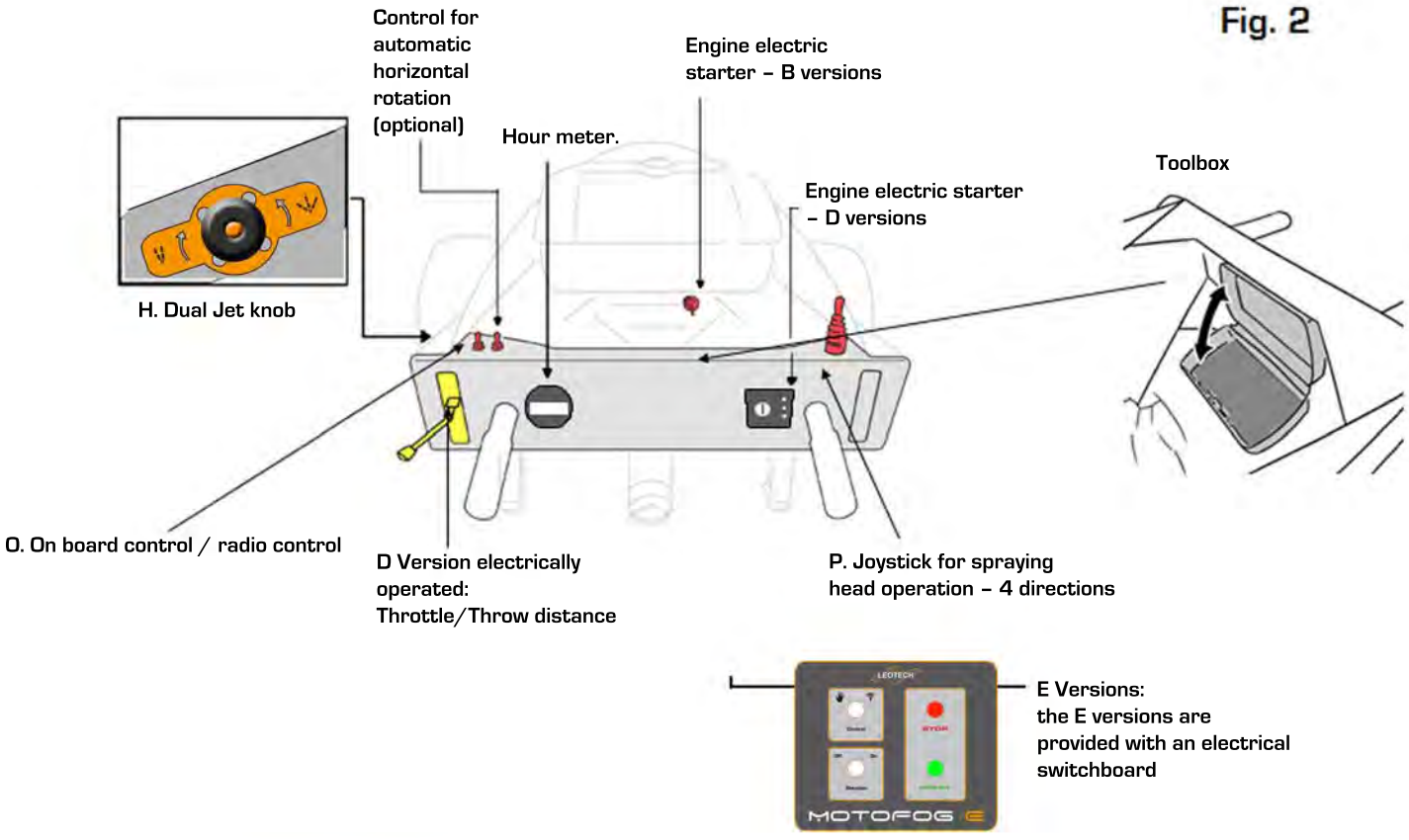
Control panel – MANUAL Versions

Fig. 1



Control panel – ELECTRICALLY OPERATED Versions

Fig. 2



E Versions:
the E versions are provided with an electrical switchboard

Warranty Conditions

> *See **General warranty conditions** enclosed.*
*See also **www.leotech.it***

Cautions

MOTOFOG ® is designed with the best technologies and in compliance with established safety regulations; however the machine may cause a danger if not handled properly.
In order to guarantee safety, strictly observe the manufacturer's instructions when using, maintaining, or handling the machine. If a third party causes any damages to the machine, the manufacturer will not assume any responsibility.
In case of evident malfunctions, please immediately switch off the engine and call LEOTECH Customer Service.
Any alteration not directly allowed from the manufacturer will automatically exclude the supplier from any responsibility.

Before using this machine, please consult the chapter "Use and manintenance" in the User's Manual.

For all maintenance work or new settings turn the machine off.

Only authorised employees are allowed to make changes or repairs to electric or mechanical devices and settings. It is illegal to permanently remove protective devices.

Before performing any maintenance or repair work, remove every energy source according to ANSI standards.

Cautions

Warning of hot surfaces!

Warning of flammable substance!

Warning of toxic engine exhaust!

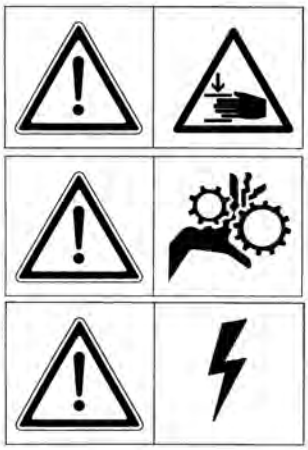
Warning noise!

Warning remote operation!

IMPORTANT!

In case of low temperatures read the user manual

Cautions



Warning mind your hands!

Danger of injury. When MOTOFOG® is in operation, keep away from any kind of mechanical moving part and never remove protective devices.

Caution! High voltage components (E Versions).

Wear eye protection

Wear ear protection

Do not direct the water jet towards people, animals or electric equipment.

Technical Specifications

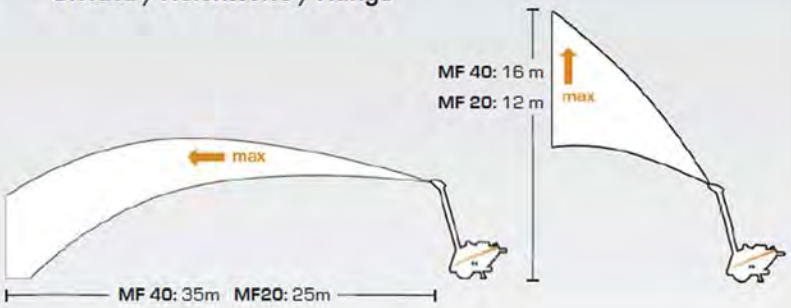
D: Diesel - B: Petrol - E: Electric

		MF20D	MF40D	MF20B	MF40B	MF20E	MF40E
Potenza motore/Motorleistung/Engine Power	CV/kW	7.5/5,5	10/7,3	9/6,6	13/9,5	5,5/4	8,2/6
Gittata fino a/Reichweite bis zu/Range till	m	25	35	25	35	25	35
Angolo brandeggio/Schwenkwinkel /Slewing Corner	°	90	90	90	90	90	90
Angolo alzo / Hebewinkel / Vertical Angle	°	-8/+38	-8/+38	-8/+38	-8/+38	-8/+38	-8/+38
Numero ugelli/Anzahl Düsen/Nozzles Number		2	2	2	2	2	2
Pressione acqua/Wasserdruck/Water pressure	bar	25-80	25-80	25-80	25-80	25-80	25-80
Qualità acqua/Wasserqualität/Water Quality		dolce non aggressiva/weiches, nicht aggressives Wasser/sweet non aggressive water					
Consumo acqua/Wasserverbrauch/Water Consumption	l/1' max	20	40	20	40	20	40
Autonomia /Autonomie / Uptim	h	≈6	≈6	≈6	≈6	-	-
Peso / Gewicht / Weight (Manual)	Kg	187(185)	207(205)	155(140)	180(165)	166(162)	176(172)
Motore / Motor /Motor		Diesel	Diesel	Benzina / Benzin / Petrol		400 V 50 Hz 3+T	

Technical Specifications

Dimensioni / Abmessungen / Dimensions

Gittata /Reichweite /Range



Use of MOTOFOG

For best results use MOTOFOG® according to the use and maintenance manual statements, and perform regular maintenance.
The maintenance of the machine must only be made by authorized and qualified technicians.

Safety instructions

Turn the engine off before operating on every mechanical component. The exhaust gas contain carbon monoxide: don't start the engine into indoor areas.

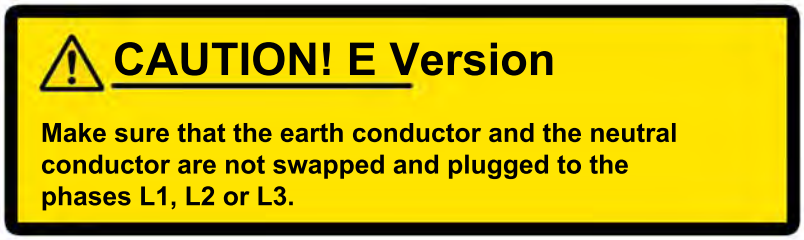
Vers.D

Before starting the machine

- Verify the absence of any foreign object into the machine.
- Verify the engine oil level .
  Using the engine with insufficient oil can seriusly damage it.
- Verify the fuel level.

During the refuel pay attention to the following precautions:

- Refuel with the engine switched off.
- Refuel outdoor or in airy rooms
- Don't smoke and don't use free flames during the refuelling.
- Don't fill the fuel tank until the rim: may cause fuel leaks during the usage.
- Clean any fuel leaks.
- Check if the filler cap is closed after the refuel.



BEFORE STARTING MOTOFOG

MF20D
MF40D
MF20B
MF40B
MF20E
MF40E

Set the type of water supply.

MOTOFOG can be supplied with water from:
- waterworks
- fire fighting pipelines
- hydrants
- tanks

It is very important to have a minimum flow rate for the water supply (MF20: 20 l/min – MF40: 40 l/min – MF60: 60 l/min) to allow the correct operation of MOTOFOG.

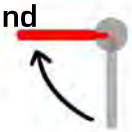
!! VERY IMPORTANT – Dimensioning the inlet water pipe to the MOTOFOG: !!

It is very important to choose the right diameter for the pipe that brings water to the MOTOFOG according to its length.
The pipes must have an minimum operating pressure of 10 bar.

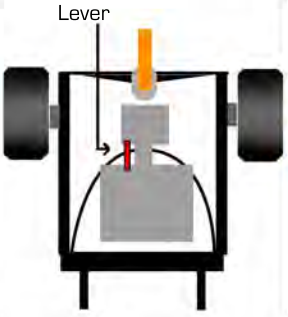
- Pipe length < 10 m Minimum pipe diameter: Ø 1”
- 10m < Pipe length < 20 m Minimum pipe diameter: Ø 1”1/2
- Pipe length > 20 m Minimum pipe diameter: Ø 2”

According to the type of water supply, MOTOFOG has to be set in a proper way:

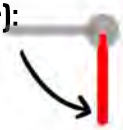
Water from waterworks or pipelines with suitable flow rate and enough pressure (2÷3 bar)



Close the by-pass valve placed next to the electrovalve by setting the lever in TRANSVERSAL POSITION. This the default configuration.



Water from tanks or pipelines with low pressure (< 2÷3 bar):



Open the by-pass valve placed next to the electrovalve by setting the lever in LONGITUDINAL POSITION. This configuration allows to use the MOTOFOG with low pressure conditions at the inlet.

N.B. When using water from a tank, this has to be placed at same level of the MOTOFOG, better above, to ensure a minimum pressure head.

MOTOFOG D Starting procedure MF20D MF40D

a) Ensure that the machine is steadily placed on a solid surface.

b) Ensure that filter cartridge is placed and locked.

c) Ensure that the fuel tank is full.

!! The Dual Jet knob H must be set to “wide jet” or “narrow jet”: DO NOT SET IT TO INTERMEDIATE POSITIONS !!

d) Connect the water pipe with the proper plug on the bottom, and secure it with the two levers of the quick lock (CAM-LOCK 1” 1/2).

e) **IMPORTANT!! Water supply the machine. MAX INLET PRESSURE: 8 bar**

MANUALLY OPERATED VERSIONS

F. > Insert the ignition key into the engine panel.

G. > Activate the lever switch to temporarily exclude the pressure switch (see O. fig. pag.3 – Control panel Manual version) while turning the ignition key clockwise by two steps, to turn the engine on. Keep the throttle lever in the lower position (idle speed).

N.B. On the D versions, at the first step of the key, the second and the third indicator light on the motor panel (from above) have to light up: battery and oil pressure. At the second step of the key, when the engine turns on, they have to switch off, while the first one lights up. In any other case please refer to engine user’s manual enclosed.

H. > Eventually increase the rotation speed of the engine, by acting on the throttle lever placed on the left side of the control panel.

ELECTRICALLY OPERATED VERSIONS

F. > Insert the ignition key into the engine panel and turn it clockwise by one step; to start the engine do another step clockwise within 5 seconds (Fig.2). If you wait more than 5 seconds, repeat the F. procedure from the beginning. Keep the throttle lever in the lower position (idle speed).

N.B. On the D versions, at the first step of the key, the second and the third indicator light on the motor panel (from above) have to light up: battery and oil pressure. At the second step of the key, when the engine turns on, they have to switch off, while the first one lights up. In any other case please refer to engine user’s manual enclosed.

G. > Eventually increase the rotation speed of the engine, by acting on the throttle lever placed on the left side of the control panel.

MOTOFOG B Starting procedure

MF20B
MF40/60B

a) Ensure that the machine is steadily placed on a solid surface.

b) Ensure that filter cartridge is placed and locked.

c) Ensure that the fuel tank is full.(MF B: unleaded petrol/gasoline)

!! The Dual Jet knob H must be set to “wide jet” or “narrow jet”: DO NOT SET IT TO INTERMEDIATE POSITIONS !!

d) Connect the water pipe with the proper plug on the bottom, and secure it with the two levers of the quick lock (CAM-LOCK 1” 1/2).

e) **IMPORTANT!! Water supply the machine. MAX INLET PRESSURE: 8 bar**

F) Open the fuel tap (placed on the rear right side of the engine).
G) Pull the choke lever (placed in the rear left side of the engine).

MANUALLY OPERATED VERSIONS

H. > Insert the ignition key into the engine panel and turn it clockwise by one step; Activate the lever switch to temporarily exclude the pressure switch (see O. fig. pag.3 – Control panel Manual version) while starting the engine using the hand pulling starter. Keep the throttle lever in the lower position (idle speed).
I. > Eventually increase the rotation speed of the engine, by acting on the throttle lever placed on the left side of the control panel.

ELECTRICALLY OPERATED VERSION

H. > Insert the ignition key into the engine panel and turn it clockwise by one step; to start the engine do another step clockwise within 5 seconds (Fig.2). If you wait more than 5 seconds, repeat the F. procedure from the beginning. Keep the throttle lever in the lower position (idle speed).
I > Eventually increase the rotation speed of the engine, by acting on the throttle lever placed on the left side of the control panel.
L > The unit is operative.

MOTOFOG E Starting procedure

MF20E
MF40E

A) Ensure that the machine is steadily placed on a solid surface.

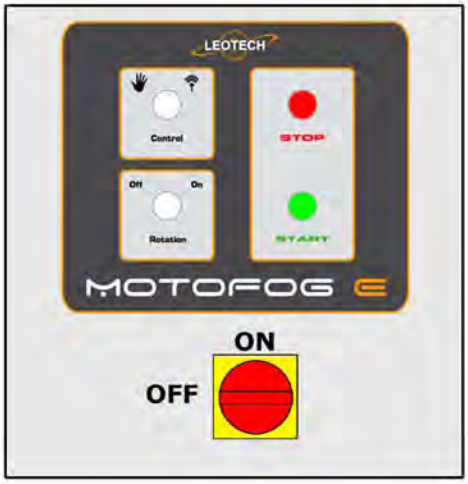
B) Ensure that filter cartridge is placed and locked.

C) Plug the unit to a power supply with the cable provided (socket 16 A – 5 poles – 400 VAC)

!! The Dual Jet knob H must be set to “wide jet” or “narrow jet”: DO NOT SET IT TO INTERMEDIATE POSITIONS !!

D)Connect the water pipe with the proper plug on the bottom, and secure it with the two levers of the quick lock (CAM-LOCK 1” 1/2).

E) IMPORTANT!! Water supply the machine. MAX INLET PRESSURE: 8 bar
The water have to come out of the nozzles



F) Turn the main switch on the switchboard to ON position.

G) Press the START button

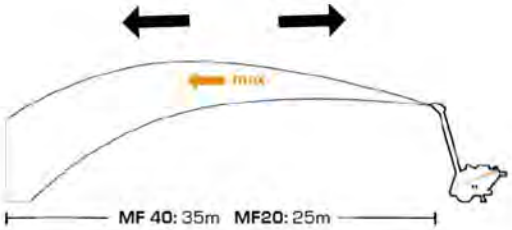
H) The unit is operative.

IF THE WATER FLOW RATE OR THE WATER PRESSURE ARE NOT ADEQUATE, MOTOFOG WILL SWITCH OFF. TO RE-ACTIVATE IT PRESS THE STOP BUTTON AND THEN THE START BUTTON AGAIN.

Setting the operative range:

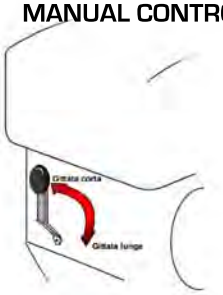
Only for D and B versions

With MOTOFOG® it is possible to modify the operating range while the machine is working: (not available for the E version)



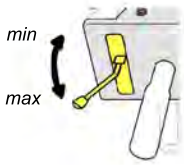
D

MANUAL CONTROLS



- for a longer throw distance pull the lever upwards.
- for a shorter throw distance push the lever downwards.

AUTOMATIC CONTROLS

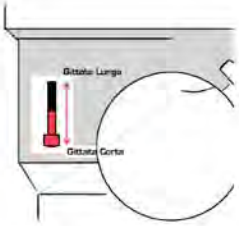


- *Increase the operating range by gently pulling up the lever.*

- *Decrease the operating range by gently pushing down the lever.*

B

MANUAL AND AUTOMATIC CONTROLS



- for a longer throw distance pull the lever upwards.
- for a shorter throw distance push the lever downwards.

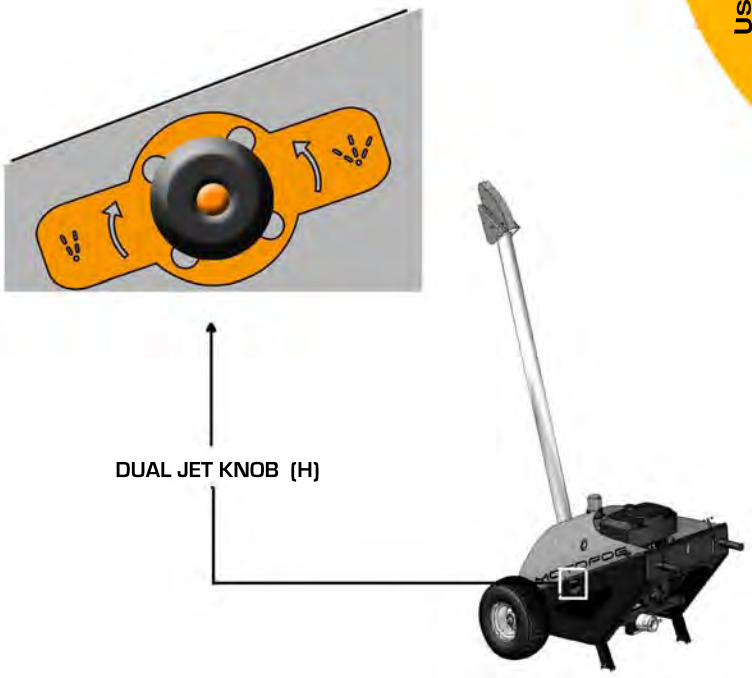
Setting the jet width.

Dual Jet

Using the H knob on the left side of MOTOFOG® (See the picture into the Parts description section) it is possible to set the width of the water jet: a wider jet means a shorter range.

- For a wide jet turn the knob counterclockwise.

- For a narrow water jet turn the knob clockwise.



Spraying head movements

Dual Jet **D B E**

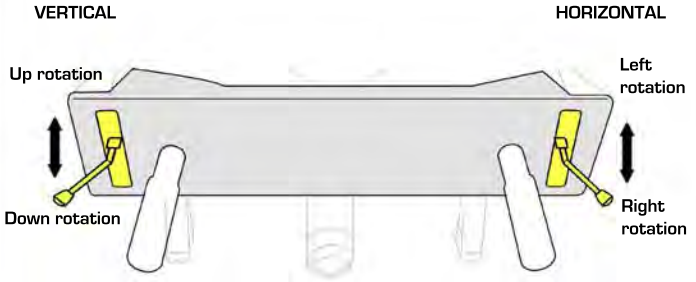
The head of MOTOFOG® can rotate vertically and horizontally to reach optimally the working area.

Rotation angles

Vertical angle: -8°, +38°
Horizontal angle: 90°

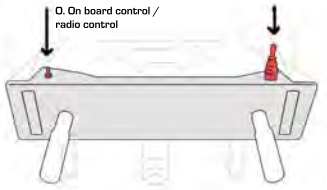
Motion controls of the spraying head
MANUALLY OPERATED VERSIONS

Through the dedicated levers placed on the rear control panel with mechanical operation.

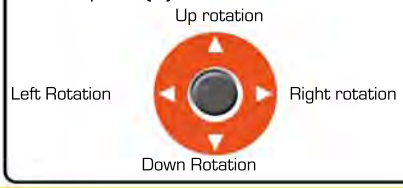


Motion controls of the spraying head
ELECTRICALLY OPERATED VERSIONS

Set the lever switch (Q – LOC/REM) to LOC – E version from the switchboard.



When the on board control is set, the movements of the spraying head can be operated with the joystick placed on the right upper side of the control panel (P).



RADIO CONTROL WITH START & STOP
Go to page 21 A

Radio control

(only Radio versions / electrically operated versions)

D
B
E

When the radio control is set (Q), it is possible to remotely operate the unit with a radio control within a maximum range of 150 m. This option activates the flashing signalling light onboard.

1.

1. Set the lever switch to activate the remote radio control.

On the switchboard of the E version:

2. Use of the radio control

- Press the ON button for 4 seconds
- Press again the ON button for 4 seconds until the led starts flashing (MOTOFOG has to be already ON)

- Press the 1,2,3,4 buttons to move the spraying head:
  1: Left
  2: Right
  3: Up
  4: Down
  5: Version D and B: in case of emergency press the E button (5) to immediately stop the engine.
  Version E: turns the pump ON and OFF and consequently the water jet.
  6: Automatic horizontal rotation of the spraying head (optional: see dedicated section)

(D and B Version): To switch off the radio control press the OFF button.
(E Version): in case of emergency press the E button to immediately stop the electric engine.

D - B Version

E Version

The radio control switches off automatically when the signal from the unit is lost (unit switched off or operation mode switched from radio control to onboard control).

Remote control specifications

Dimensions: 116 x 60 x 26 mm.

Weight: 100g.

Working temperature: -20/+55 °C

Working radius: 150m

Working frequency ISM band:

868,0125 – 869,9875 Mhz

Battery lasting (at 20°C): 50h
The remote controller is supplied with a battery charger.

Automatic horizontal rotation of the spraying head

(Optional)

MOTOFOG can be provided on request with a control to activate the automatic horizontal rotation of the head. This additional control can be activated both onboard and via radio control. It allows an automatic horizontal rotation of the head with an angle of 90° (45° left + 45° right).

Procedure to activate the automatic rotation on the D and B versions:

Local

to activate this control onboard set to ON the lever switch placed on the upper left part of the unit.

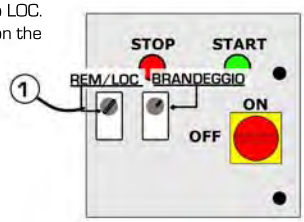
Radio C.

to remotely activate this function, set to "remote" the lever switch for the "local/remote" selection (1). Turn the radio control ON (see procedure on the previous page) and press the button (6) to activate the automatic rotation. To switch the automatic rotation off press again the button (6).

Procedure to activate the automatic rotation on the E versions:

Local

Switch on the MOTOFOG according to the procedure.
Be sure that the key switch REM/LOC (1) on the electric switchboard is set to LOC.
- It is now possible to activate the automatic horizontal rotation by switching on the ROTATION selector (see fig. to the side).
- To stop the automatic rotation, switch off the ROTATION selector



Radio C.

Set the key selector REM/LOC on the switchboard to REM. It is now possible to activate the automatic rotation with the provided radio control.
- Switch the radio control on (see procedure on the previous page)
- By pressing the button (6) – Rotation, the head will start swivelling. By pressing again the same button the rotation will stop.

D - B Version

E Version

Radio Control with START & STOP Versions 20D and 40D

(Only D versions with radio control/electrically operated)

When the radio control is set (Q), it is possible to remotely operate the unit with a radio control within a maximum range of 150 m. This option activates the flashing signalling light onboard. The START & STOP option allows to remotely start and stop the unit.

1. Using the START & STOP

Turn the ignition key on the motor panel clockwise by one step

2.

-Set the lever switch to activate the radio control

3. Start

I - - Press the I button – RADIO ON for 8 seconds until the green led on the radio control starts flashing.

II - Press the II button: MOTOFOG starts delivering low pressure water through the nozzle. If the water doesn't come out, the flow rate is not adequate and the unit cannot be started.

III - Press the III button to start the DIESEL engine: MOTOFOG is now operative.

4. Use

- Press the 1,2,3,4 buttons to move the spraying head:
  1: Left
  2: Right
  3: Up
  4: Down
  6: Automatic horizontal rotation

5. Stop

I - Press the I button – STOP: MOTOFOG stops immediately as well as the water jet while the radio control switches off.

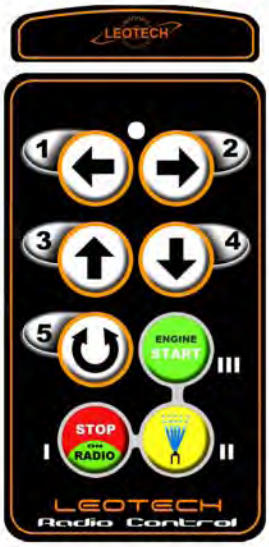
New Start & Stop

For a new start repeat the steps from n.3.

I

II

III > I stop



The engine rotation speed and the consequently the throw distance can be adjusted with the throttle lever on the left side of the control panel. MOTOFOG can start in every position of the throttle lever. It is suggested to warm the engine for some minutes at idle speed.

STOPPING MOTOFOG

MOTOFOG can be stopped as described below, according the particular version:

Stopping the D version of MOTOFOG

Local

> To stop the MOTOFOG D under normal conditions or in case of emergency, stop the engine by turning counterclockwise the ignition key on the motor panel.

Radio C.

> The radio controlled version can be stopped by pressing the E button (5) on the radio control. START & STOP VERSIONS EXCLUDED.
If the MOTOFOG has been stopped by pressing the E button on the radio control, to activate it again turn the ignition key on (Starting procedure).
START & STOP VERSIONS SEE THE NEXT PAGE.

Stopping the B version of MOTOFOG

Local

> To stop the MOTOFOG B under normal conditions or in case of emergency, stop the engine by turning counter clockwise the ignition key on the motor.

Radio C.

> The radio controlled version can be stopped by pressing the E button (5) on the radio control. If the MOTOFOG has been stopped by pressing the E button on the radio control, to activate it again turn the ignition key on (Starting procedure).

MOTOFOG® stops as well as the delivery of nebulized water from the head.
If the use of MOTOFOG is no longer required, shut off the main water supply and remove the feeding hose.

Stopping the E version of MOTOFOG

Local

> To stop the MOTOFOG E under normal conditions or in case of emergency, press the Stop button on the switchboard.

Radio C.

> The radio controlled version can be stopped by pressing the E button on the radio control. If the E button has been pressed to stop the MOTOFOG, it can be activated by pressing again the PUMP button.

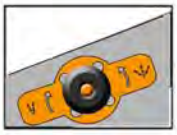
START & STOP IS A STANDARD EQUIPMENT.

Drain the water of Motofog

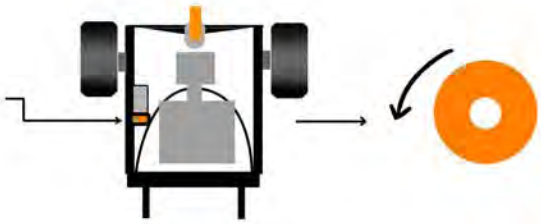
After every usage of MOTOFOG is a good practice to drain the water that remain into the pump and pipes.
This practice is important when the temperature can be under 0 °C and the water freezes.

Motofog has to be off and without water supply.

Move the H knob (Dual Jet) in the halfway position (see the picture), on this way the head sends the water to both the nozzles.



Turn clockwise the orange knob. It is placed into the machine, near the gauge, exactly next to the outside H knob.
cedure.



Turn the key in the panel until the first click . The water will be ejected from the drain valve. Wait until all the water is came out from the valve. After turn counterclockwise the key and close the orange knob (turn counterclockwise).

A further caution in case of low temperature: once unplugged the water pipe, tilt motofog with the back lower than the front, on this way the water come out from the filter.

in case of temperature below 0°C) >> IMPORTANT: SEE PAGE 27

Maintenance

Maintenance must be executed with the machine switched off and with all current connections disabled.
Follow all safety precautions!

VERY IMPORTANT !! This manual describes the use and maintenance of the MOTOFOG; for the maintenance of the engine and of the pump, please refer to the use and maintenance manuals provided by their manufacturers and herein enclosed, complying in particular with the scheduled maintenance. LEOTECH is not liable for improper use of these components and not compliant with what stated in their manuals.

Regular maintenance

8 - 15 Hours

- Every 8-15 hours of operation or every day before starting.

>> Filter
Check and clean the filter before operating.
Check list:
1. Remove the gasket inside the filter.
2. Remove the filter cartridge and remove the dirt with compressed air until the filter is clean.
3. Reinsert the clean cartridge and check the gasket.
4. Reinsert the gasket and make sure there are no water leaks.

>> TYRE PRESSURE CHECK
- The tyre pressure has to be of 1,5 bar.

>> WATER PRESSURE CHECK ON THE PRESSURE GAUGE (with the unit running)
At every starting check the water pressure on the pressure gauge: if it is too high (> 75÷80 bar) be sure that the nozzles are not clogged (exceptional case: can usually occur with hard water see nozzle maintenance procedure); if the pressure is too low (< 70 bar) be sure that the filter cartridge is not clogged.

B and D versions: In case of services with hot engine don't touch the exhaust pipe, it could be hot (burn danger)

Maintenance

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Regular maintenance

100 Hours

- Every 100 hours of normal operation, that is without events that can compromise the normal operation of MOTOFOG (heavy conditions, accidents during demolitions activities etc...), otherwise check the following components more frequently.

>> CHECK THE FASTENING BOLTS OF THE ENGINE.

>> CHECK ALL THE FASTENING BOLTS.

>> GENERAL INSPECTION ON THE MAIN COMPONENTS TO VERIFY THAT THERE AREN'T ANOMALIES OR WATER LEAKAGES.

>> REPAIR ANY POSSIBLE DAMAGE TO THE PAINT OF THE METAL FRAME.
When working while the engine is still hot, be careful to not touch the muffler that can be overheated (D and B versions – BURN HAZARD).

A scheduled maintenance will increase the life of the unit and will preserve its reliability

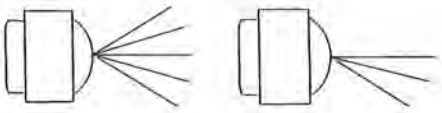
Maintenance

VERY IMPORTANT !! This manual describes the use and maintenance of the MOTOFOG; for the maintenance of the engine and of the pump, please refer to the use and maintenance manuals provided by their manufacturers and herein enclosed, complying in particular with the scheduled maintenance. LEOTECH is not liable for improper use of these components and not compliant with what stated in their manuals.

Nozzles

if needed

Regularly check the nozzles. Dirty water could obstruct the nozzles.



right wrong

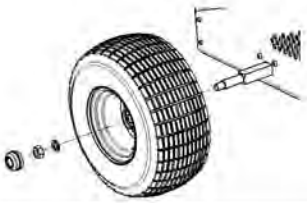
Check list:

1. Remove the nozzles using a 16 mm wrench.
2. Remove obstructions using compressed air or other tools.
3. Reassemble the nozzle. Do not over tighten as this will damage the rubber O-ring.

TYRES MAINTENANCE

if needed

If a tyre has been damaged or there is the need to remove it, just remove the hubcup with a screwdriver an then, using a socket wrench (30 mm) unscrew the nut and the split washer.
Tyres pressure: MAX: 1,5 bar



Maintenance

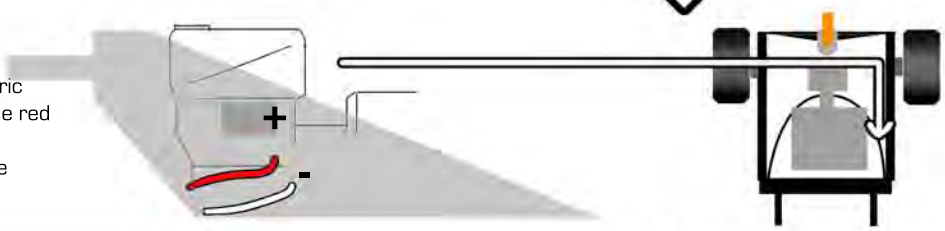
VERY IMPORTANT !! This manual describes the use and maintenance of the MOTOFOG; for the maintenance of the engine and of the pump, please refer to the use and maintenance manuals provided by their manufacturers and herein enclosed, complying in particular with the scheduled maintenance. LEOTECH is not liable for improper use of these components and not compliant with what stated in their manuals.

RECHARGING THE BATTERY

if needed

In case of battery discharge, simply recharge it with a common battery charger without removing it from MOTOFOG:

>On the right side of the engine, next to the electric starter motor, connect the positive terminal to the red cable (grey sometimes).
>Connect the negative terminal to the white cable (ca. 10 cm below the red one).



SCHEDULED MAINTENANCE AND SPECIAL MAINTENANCE

LEOTECH

LEOTECH

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LEOTECH Sales & Service:

Use of Motofog ®at low temperatures – Winter season

This document refers to the required operations at the end of every working session with MOTOFOG ®.

D - B Version

During the Autumn-Winter season use arctic diesel fuel to avoid the problems arising from the excessive viscosity at low temperatures.

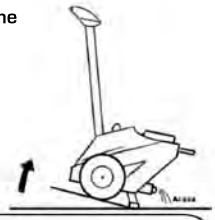
Once the unit has been switched off:

1. Remove the water hose from the inlet filter.
2. Open the bypass valve (move the lever next to the pump body to its vertical position).
3. Completely open the drain valve (lever, or orange knob in the latest versions, placed on the inner left side of the unit).
4. Rotate the nozzle selection knob (placed on the outer left side of the unit) to an intermediate position so that both of the nozzles are open.
5. Turn the motor starting key ahead by one step, wait at least 10 seconds and go on to the second step making the starter motor run for some seconds, until the residual water inside the pump is completely pushed off.
6. Tilt the unit as shown in the figure below, to drain the residual water inside the filter.

E Version

Once the unit has been switched off:

1. Remove the water hose from the inlet filter.
2. Open the bypass valve (move the lever next to the pump body to its vertical position).
3. Completely open the drain valve (lever, or orange knob in the latest versions, placed on the inner left side of the unit).
4. Rotate the nozzle selection knob (placed on the outer left side of the unit) to an intermediate position so that both of the nozzles are open.
5. Start the Motofog E and its pump for a few seconds so that the residual water inside can be ejected.
6. Tilt the unit as shown in the figure below, to drain the esidual water inside the filter.



Once these operations have been carried out, place the MOTOFOG ® indoors and sheltered from cold and humidity.

Storage – before a long time of inactivity

Before a long time of inactivity, it is suggested to:

- unplug the battery
- empty the fuel tank and the fuel pipes leaving the engine on.

Troubleshooting

Problem	Possible cause	Solution
D, B and E versions. MOTOFOG starts and then stops.	The Dual Jet knob is set to an intermediate position. Low inlet water pressure. Low inlet water flow rate. Cartridge of the filter clogged. Lack of fuel (D and B versions). Wrong voltage of the socket (E version).	- increase the engine speed. - set the Dual Jet knob either on "wide jet" or "narrow jet". - Open the by-pass valve placed next to the electrovalve (lever in longitudinal position). - Increase the water flow rate at the inlet of the MOTOFOG, using a pipe with a greater diameter. - if the water flows from a tank, try to place the MOTOFOG below the water tank ad much as possible. - remove the filter cartridge and clean it > page 23 - refill the fuel tank - check the electric power supply: 400 Vac – 50 Hz – 3+E
MOTOFOG has an un steady water jet and hardly reaches the optimal water pressure (70 bar). - The spraying head movements are not smooth or are difficult.	Low inlet water pressure. Low inlet water flow rate. Cartridge of the filter clogged. [with a low pressure output the spraying head cannot reach the upper limit of the vertical rotation].	- Increase the water flow rate at the inlet of the MOTOFOG, using a pipe with a greater diameter. - if the water flows from a tank, try to place the MOTOFOG below the water tank ad much as possible. - remove the filter cartridge and clean it > page 23
MOTOFOG doesn't start.	The second step of the ignition key was made too slowly. Battery discharged Engine speed not adequate (only B and D versions). The Dual Jet knob is set to an intermediate position. Low inlet water pressure. Low inlet water flow rate. MOTOTFOG is too sloping	- make the second step of the ignition key within 5 seconds from the first one (see starting procedures). - Recharge the battery (see dedicated section). - Increase the engine speed. - set the Dual Jet knob either on "wide jet" or "narrow jet". - Open the by-pass valve placed next to the electrovalve (lever in longitudinal position). - Increase the water flow rate at the inlet of the MOTOFOG, using a pipe with a greater diameter. - if the water flows from a tank, try to place the MOTOFOG below the water tank ad much as possible. - Place the MOTOFOG on a horizontal ground > page 23

Troubleshooting

Problem	Possible cause	Solution
The movements of the spraying head, made with the joystick, do not work.	The unit ha the ignition key set to off position. The lever switch REM/LOC is set to REM. Discharged battery.	- turn the ignition key to start MOTOFOG - Set the lever switch to LOC - Recharge the battery. See the dedicated section.
The radio control doesn't work.	The radio control has not been correctly switched on The lever switch REM/LOC is set to LOC. Radio control battery discharged. MOTOFOG battery discharged.	- Switch the radio control on following the correct procedure by pressing the ON button for 4 seconds and then again for other 4 seconds. - Recharge the radio control battery with the provided recharger. - Recharge the battery, see dedicated section.
- MOTOFOG B version doesn't start with the hand pulling starter.	Ingnition key set to OFF. Fuel tap closed. Low fuel. Dirty or worn spark plug.	Set the ignition key to ON. Open the fuel tap. Refill the fuel tank Check the spark plug or replace it.
The operative water pressure on the pressure gauge is too high (> 75÷80 bar).	Clogged nozzles.	Clean the nozzles (see maintenance procedures).
MOTOFOG stops after 5 seconds from the starting although the water flow rate is adequate.	>> Inlet water flow rate still inadequate. Pressure switch dirty or clogged. Pressure switch damaged. Pressure switch clogged.	w rate. - Remove the pressure switch mounted on the Dual Jet valve assembly placed on the left inside the MOTOFOG. Keep the copper gasket and possibly replace it. Unscrew the small slotted head screw and remove the dirt from the central hole. Reassemble the pressure switch. Blow inside the slotted head screw if the hole is clogged.

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Certifications CE

CEE CONFORMITY DECLARATION

THE COMPANY :

LEOTECH S.r.l.
Loc. Lausen 13/A - 38050 Canal San Bovo (TN) - Italy

It declares that the product: **MOTOFOG**

Production year: _____

Serie n. _____

It is in conformity with :

The essential safety requirements and health protections according to the regulation 2006/42/CE.

Canal San Bovo _____

Corona Italo *Technical Director*

_____

Assistance & Maintenance

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News & Events

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Maintenance paper

Date of intervention	Description	Modified parts/ Replaced parts	Stamp and signture

LEOTECH S.r.l.

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LEOTECH did everything to provide the most correct information with this manual.
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With reservation to make changes.

LEOTECH s.r.l. - GENERAL WARRANTY CONDITIONS

Leotech s.r.l. guarantees its products in case they are proven to be defective concerning the materials or the manufacturing, exclusively under the following conditions:

1. The present Warranty is exclusively limited to the products manufactured and supplied by Leotech s.r.l.
2. The Warranty provides the repair or the new supply, at the incontestable discretion of Leotech s.r.l., of the components proven to be defective since the origin.
3. The Warranty covers only the costs for repair or new supply of the defective components, included the transport costs. The cost of labour to disassemble or replace the defective components, the travel costs for the Leotech technicians and all the additional costs to restore the operative functionality of the machine or the system are excluded.
4. The damaged parts replaced under Warranty conditions become property of Leotech s.r.l. which has the right to have them shipped back at its own expense.
5. The components manufactured by third parties installed by Leotech s.r.l. on its products (pumps, electric motors, combustion engines, motorized valves, compressors etc.) are covered by the warranties of their own manufacturers according to the instructions and conditions stated by the specific documentation. This components are not covered in any case by the present Warranty.
6. The Warranty period starts from the day of delivery of the Goods ExWorks Leotech s.r.l. (EXW - Incoterms 2010) and lasts 12 (twelve) months, unless otherwise agreed.
7. Interventions on components or sub-systems damaged or not working properly as a consequence of one or more of the following causes are excluded from this Warranty:

    a) Tampering or interventions not expressly authorized by Leotech s.r.l.
    b) Maintenance or repair interventions with the use of materials not complying with the specifications and with the quality of the originals supplied by Leotech s.r.l., or made by people unskilled and not approved by Leotech s.r.l.
    c) Improper use of the products supplied by Leotech s.r.l. and not complying with what expressly stated in the Use and Maintenance manuals supplied by Leotech s.r.l. with its machines or systems.
    d) Improper use of third parties components (pumps, electric motors, combustion engines, motorized valves, compressors), not complying with what expressly stated in their own Use and Maintenance manuals.
    e) Behaviours of the Customer that infringe the information and the operative instructions eventually given to the operators during the usage training sessions of machines or systems.
    f) Force majeure circumstances which cannot be reasonably predictable or avoidable, such as natural disasters, military actions, emergency situation, export or import embargoes.
    g) Clear negligence and carelessness such as lack of regular maintenance, lack of worn parts replacement, lack of cleaning, bumps and drops as a consequence of moving or storage under improper environmental conditions.

h) Defects of the electric, hydraulic or pneumatic plants supplying the machines or the systems which are not under Leotech s.r.l. responsibility.

i) Lightning.

It is also excluded any liability of Leotech s.r.l. for damages to properties or personal injuries consequent, directly or indirectly, upon one ore more of the above mentioned conditions.

8. All the components or sub-systems normally subject to wear under common operative conditions are excluded from this Warranty, such as:

- Nozzles.
- Filter cartridges.
- Gaskets or seals of any kind.
- Lubricants.
- Hoses.
- Light bulbs.
- Tyres etc.

9. One or more interventions made under Warranty do not modify its expiration date.

10. Not abiding the agreed payment terms, may constitute a reason for the suspension or the decay of the Warranty conditions.