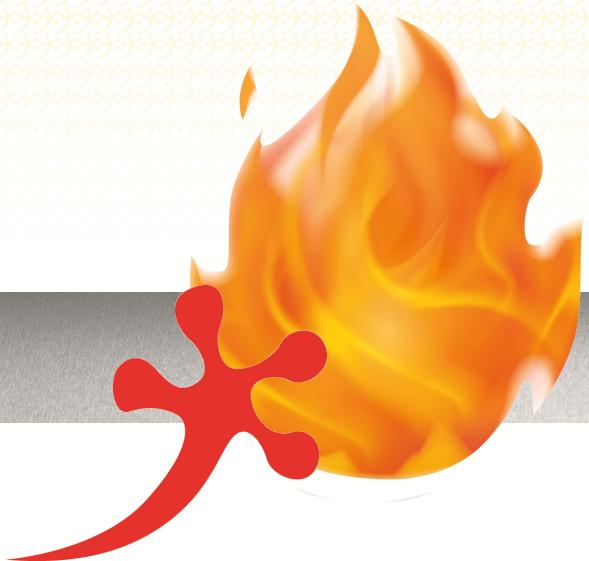




Fire-fighting



PALLEON Range

USER MANUAL

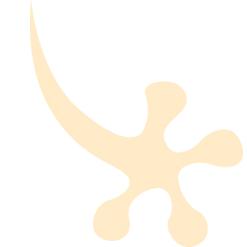
PALLEON MOBILE





History of modifications

Date	Version	Modification	Nº pages modified
19/10/16	1	Creation	



Summary

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Description of the system	4
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General presentation

- Palleon is a single-point pressurized injection device compliant with the requirements of EN 16327.
- Palleon can be used with soft water or seawater.
- Palleon is designed to be installed on fire trucks used under normal operating conditions (outdoors, tunnel, etc.). Explosive atmospheres must be avoided.
- Palleon operates within a temperature range of - 15°C and + 60°C with a humidity level between 30 and 90%.
- CTD recommends the use of gloves compliant with DIN EN 659 when using a Palleon device.



Description of the system

Palleon Mobile is in version : Low pressure (15 bar maxi).

The output of the system Palleon is 30 l/min.

This model comply with EN 16327 classification.

> Operating ranges: See operating curves in page 6.

PERFORMANCES





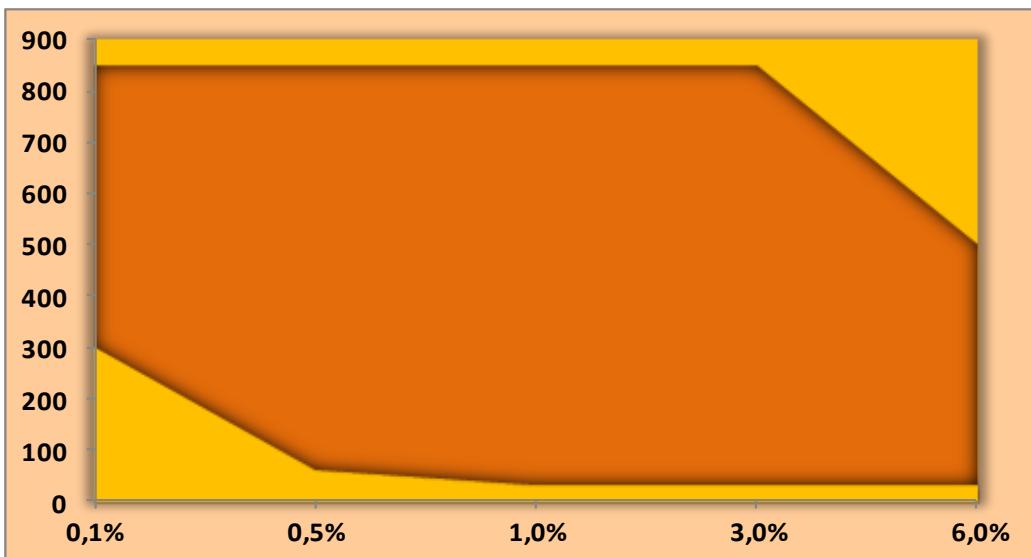
Performances

Palleon Mobile

PALLEON MOBILE - DZA 30 / 0,5 - 6

Flowmeter DN40

CONCENTRATION		0.1 %	0.5 %	1 %	3 %	6 %
FLOW	MINIMUM	300	60	30	30	30
	MAXIMUM	850	850	850	850	500



Standard	EN 16327
Supply voltage	24 Vdc
Maximum power consumption	60 A
Maximum injection pressure	15 bar
Electric motor power	1 Kw
Maximum output of the foam pump	30 L/mn
Dimensions of the motor pump unit	600 mm (L) x 400 mm (l) x 320 mm (H)
Total weight	41 Kg
Compatible foam concentrate	Class B (according to DIN EN 2 => See compatible foam concentrate table page 7 to 10)



List of compatible foam concentrates

EMULSEUR / CLASS B	
Fabricant / Manufacturer	Nom du produit / Name of the product
3M	FC203
3M	FC203A
3M	FC3017
3M	FC600
3M	FC602
3M	AR-AFFF FC-600 3/6
3M	AR-AFFF FC-602 3/6
3M	AR-AFFF FC-603EF3/3
3FFF	AFFF - Freesolv 1
3FFF	AFFF - Freesolv 3
3FFF	AFFF - Freesolv 6
3FFF	AFFF - Fluoex 1
3FFF	AFFF - Fluoex 3
3FFF	AFFF - Fluoex 6
3FFF	AFFF - Chemex 1
3FFF	AFFF - Chemex 3
3FFF	AFFF - Chemex 6
3FFF	ARF-Freedol (Fluoro-Free used at 3 or 6%)
3FFF	ARF - Filmex 1.3
3FFF	ARF - Filmex 3.3
3FFF	ARF - Filmex 3.6
3FFF	ARF - Polarex 3
3FFF	ARF - Polarex 6
3FFF	PF - PRO397
3FFF	PF - PRO694
3FFF	PF - FP397
3FFF	PF - FP694
3FFF	PF - Proseal 3
3FFF	PF - Proseal 6
3FFF	PF - Protol 9
ANSUL	3x3 Low Viscosity ARC
ANSUL	T'storm ATC AR-AFFF 1% or 3%
AUXQUIMIA	CAFILM
AUXQUIMIA	AQUAFILM
AUXQUIMIA	POLYFOAM
AUXQUIMIA	AQUAFILM-ARN
AUXQUIMIA	FLUOPOL
AUXQUIMIA	MULTIEXPANSION
BIO-EX	BIOFILM 3
BIO-EX	BIOFILM 3S
BIO-EX	BIOFILM 6
BIO-EX	BIOFILM 6S
BIO-EX	FILMOPOLE 3
BIO-EX	FILMOPOLE 6
BIO-EX	HYDROFILM 3
BIO-EX	HYDROFILM 6
BIO-EX	POLYFILM 9
BIO-EX	BIO HYDROPOLE 3

BIO-EX	BIO HYDROPOL 6
BIO-EX	ECOPOL
CHEMGUARD	AR 3%-6% Part # CAR36P
CHEMGUARD	AR-AFFF, 3%x3%, Part # C333
CHEMGUARD	Ultraguard 1%-3% Part # C133
CHEMGUARD	3%-6% AR-AFFF Product # C361
CHEMGUARD	3%-6% AR-AFFF Product # C363
Dr STHAMER	STHAMEX AFFF F15
Dr STHAMER	STHAMEX AFFF
Dr STHAMER	MOUSSOL APS F15 AFFF AR
Dr STHAMER	FOAMOUSSE FFFF
Dr STHAMER	FOAMOUSSE FP
EAU & FEU	A3 SP
EAU & FEU	KE FILM 3
EAU & FEU	PETROFILM
EAU & FEU	PETROFILM 3
EAU & FEU	POLYFLUIDOL
EAU & FEU	POLYPETROFILM
EAU & FEU	POLYPETROFILM 3/3
EAU & FEU	POLYPETROFILM 6-6
EAU & FEU	SFPM 3/3
EAU & FEU	SFPM 6/6
EAU & FEU	TRIDOL S3
EAU & FEU	TRIDOL S6
EAU & FEU	PETROFILM 3XT
EAU & FEU	PETROFILM 6XT
EAU & FEU	FLUOROPOLYDOL
EAU & FEU	FP 570
EAU & FEU	FP 70
EAU & FEU	EXPANDOL
EAU & FEU	SFPM 3/3
EAU & FEU	SFPM 6/6
EUROFEU	EURAL A 4P SP
Kidde Fire Fighting/ National Foam	Universal Gold 3% AR-AFFF
Kidde Fire Fighting/ National Foam	Universal Gold 1% - 3% AR-AFFF
Kidde Fire Fighting/ National Foam	1% Aero-Water
PROFOAM	PROFILM AR 3.3
PROFOAM	PROFLEX AR 3.3
PROFOAM	PROFLEX AR 3/6
PROFOAM	PROFILM AR 6.6
PROFOAM	PROFILM 3
PROFOAM	PROFILM 6
PROFOAM	PROFILM AR 3.3
PROFOAM	PROFLEX 3
PROFOAM	PROFLEX 6
PROFOAM	PROFLON FP
SOLBERG	ARCTIC 201 AF
SOLBERG	ARCTIC 203 A
SOLBERG	ARTIC 203
SOLBERG	ARTIC 206 AF

SOLBERG	ARTIC 602
SOLBERG	ARTIC 603 EF
SOLBERG	ARCTIC 603 F
SOLBERG	EXPIROL 3/6
Tyco - Sabo Foam	HYDRAL 3
Tyco - Sabo Foam	HYDRAL 6
Tyco - Sabo Foam	HYDREX
Tyco - Sabo Foam	HYDREX 3
Tyco - Sabo Foam	HYDREX AR
Tyco - Sabo Foam	TOWALEX AFFF 3
Tyco - Sabo Foam	TOWALEX ARC 3/3
Tyco - Sabo Foam	NEOMERPIN
Tyco - Sabo Foam	APIROL FX 3
Tyco - Sabo Foam	APIROL FX 6
Tyco - Sabo Foam	UNIVEX
Tyco - Sabo Foam	PLUREX NK
Tyco - Sabo Foam	HYDRAL AR
Tyco - Sabo Foam	UNIVEX
UNISER	CENTRIFOAM 903
UNISER	FILMFOAM 1013
UNISER	UNISERAL A 102 A 4P
UNISER	UNISERAL A 104 AR
UNISER	UNISERAL A106-A4P
UNISER	UNISERAL AF 12 S-6
UNISER	UNISERAL AF20A4P3/6
UNISER	UNISEROL PFP 3/6
UNISER	UNISEROL PFP 6/6
UNISER	UNISERAL AF 20
US FOAM	1-3% Alcohol Resistant AFFF (P/N USAR13)
US FOAM	3-6% Alcohol Resistant AFFF (P/N USFCAR36)
VS FOCUM	BoldFoam 05
VS FOCUM	BoldFoam B1
VS FOCUM	BoldFoam B3F
VS FOCUM	BoldFoam B3
VS FOCUM	BoldFoam BF601
VS FOCUM	BoldFoam B6-E
VS FOCUM	BoldFoam 6000
VS FOCUM	BoldFoam 611
VS FOCUM	BoldFoam B13
VS FOCUM	BoldFoam BF-130
VS FOCUM	BoldFoam 613
VS FOCUM	BoldFoam B33
VS FOCUM	BoldFoam BF-330
VS FOCUM	BoldFoam B36
VS FOCUM	BoldFoam BF-360
VS FOCUM	BoldFoam B66
VS FOCUM	BoldFoam R3
VS FOCUM	BoldFoam R6
VS FOCUM	BoldFoam APC

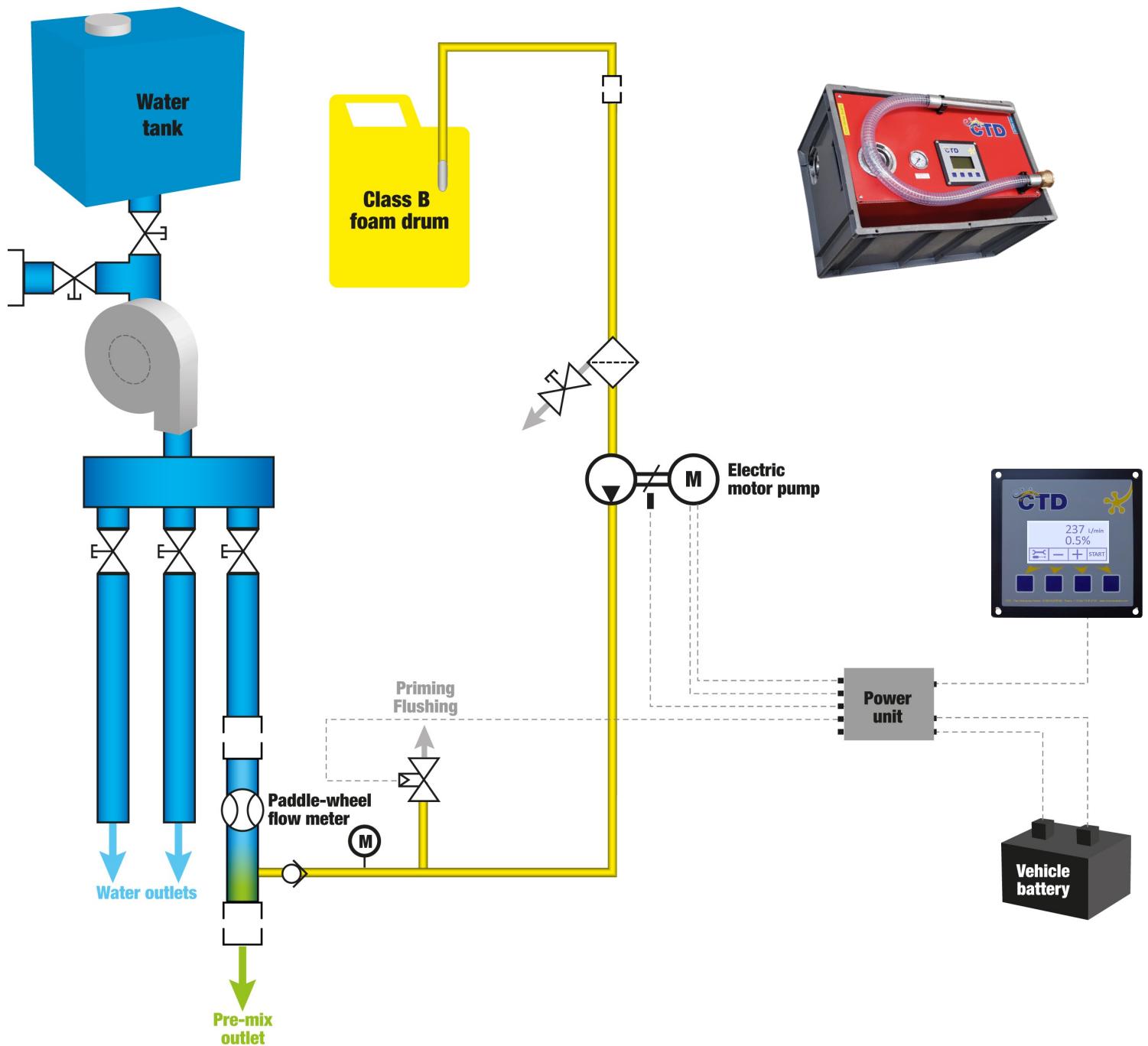
HYDRAULIC

DRAWING





Hydraulic drawing Palleon Mobile

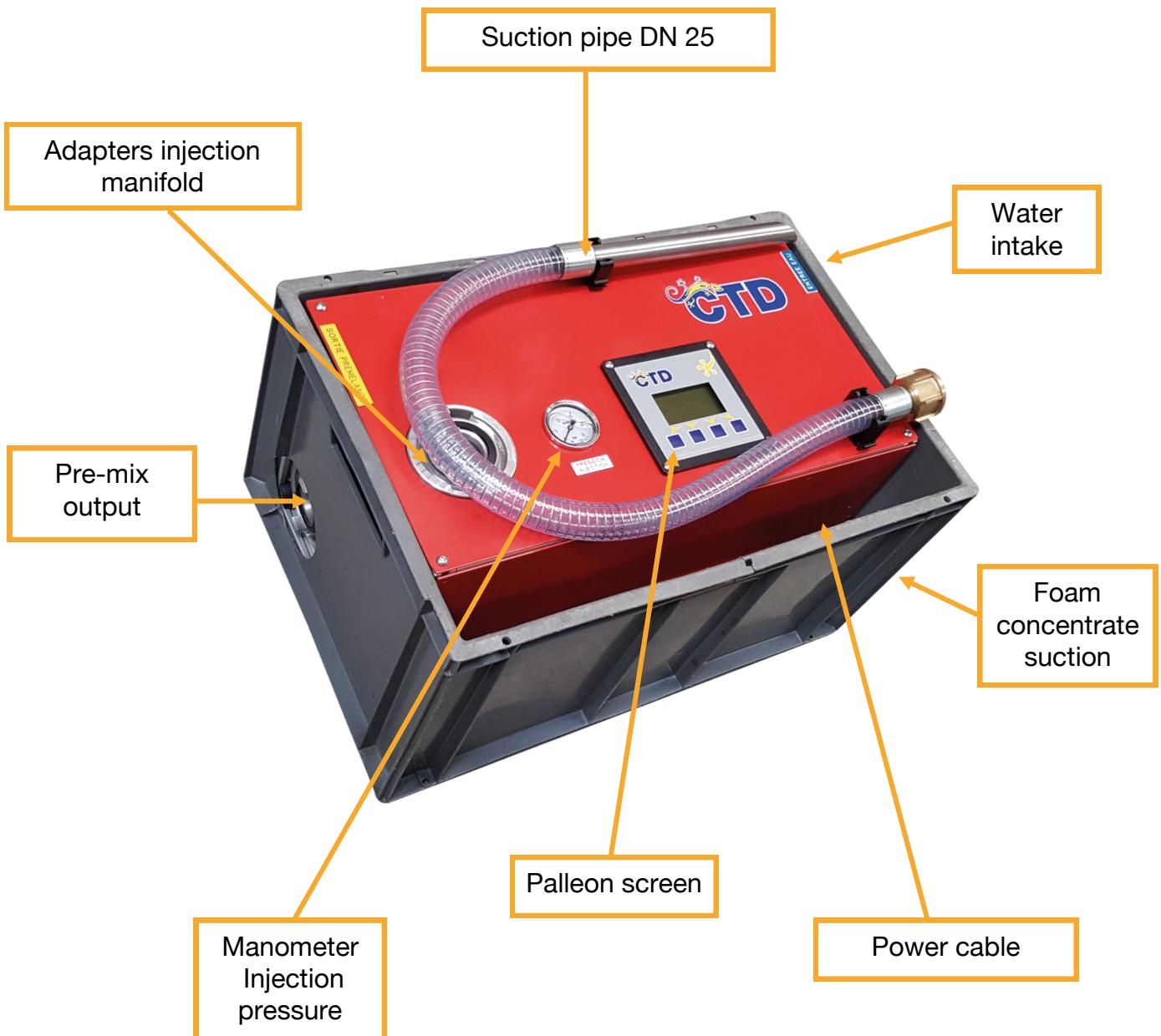


PRESENTATION OF THE PALLEON MOBILE





Presentation

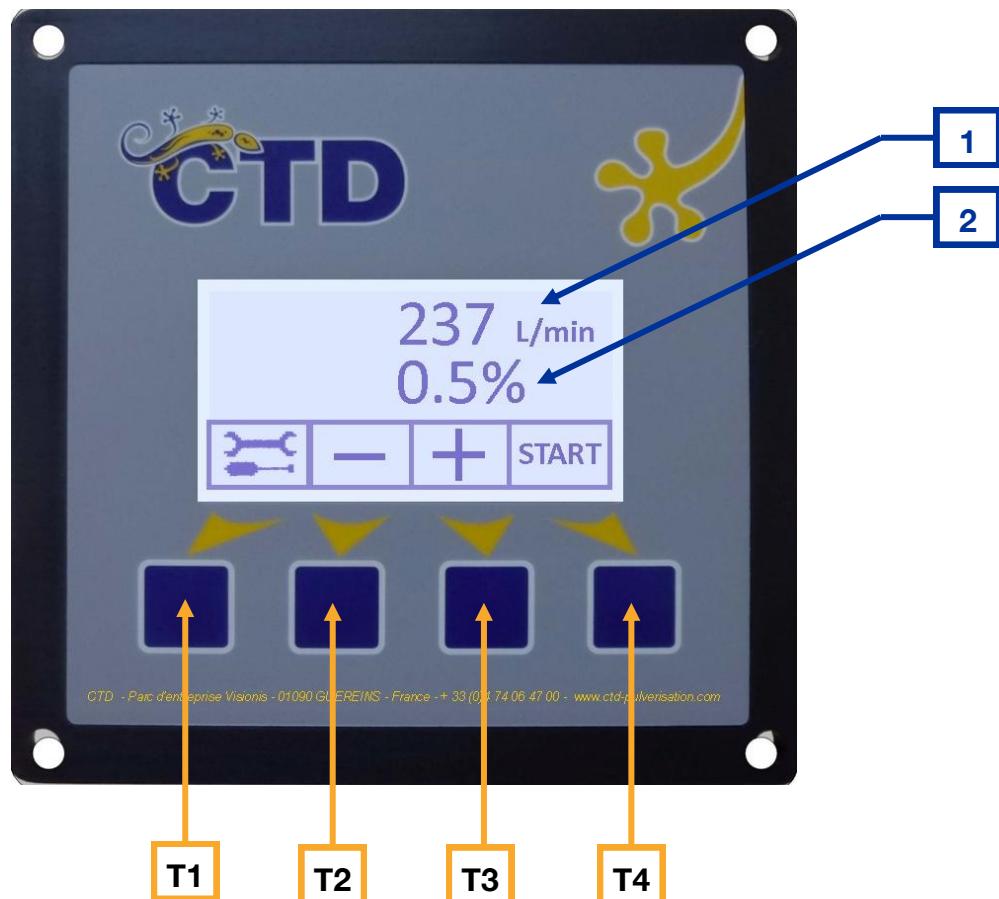


PRESENTATION OF PALLEON SCREEN





Intervention screen



STARTING AND USING BUTTON

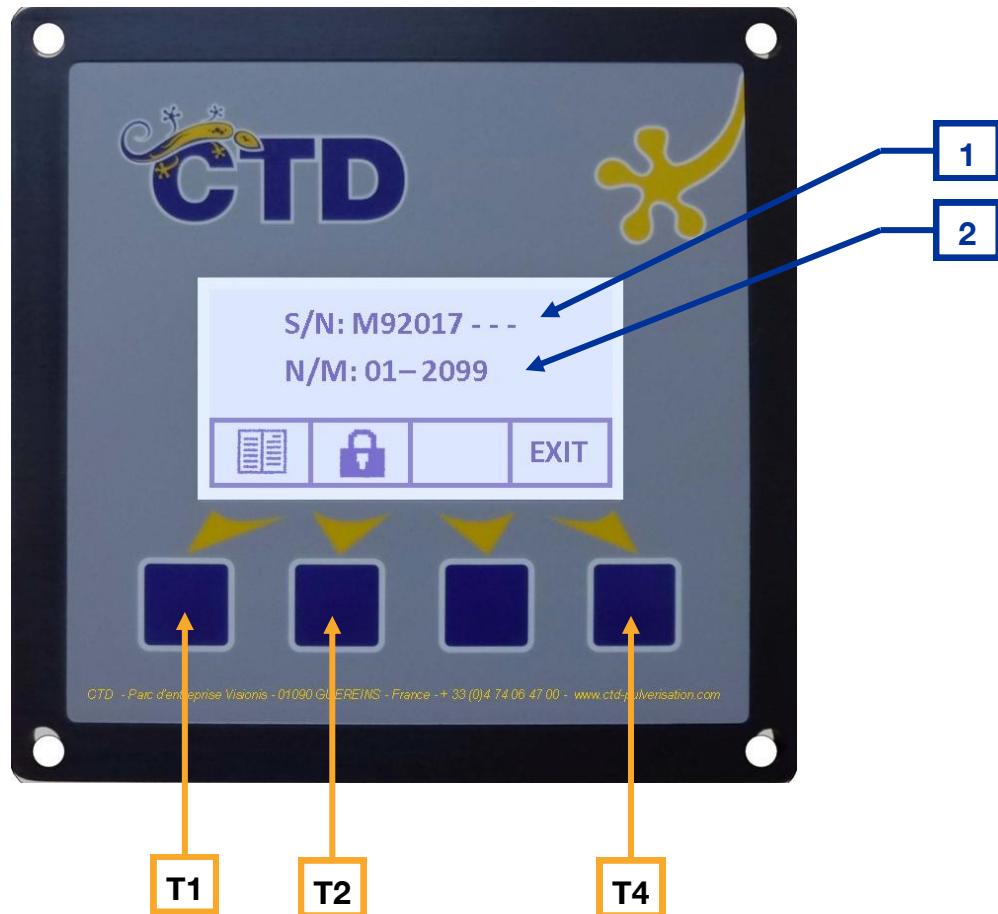
- T1** Button of access to the maintenance screen and priming in intervention.
- T2** Button for reducing the concentration percentage (mini 0.1%)
- T3** Button for increasing the concentration percentage (maxi 1%)
- T4** Button for start and stop the intervention

INFORMATION DISPLAY ON THE SCREEN

- 1** Real time water flow
- 2** Concentration in %



Maintenance screen



STARTING AND USING BUTTON

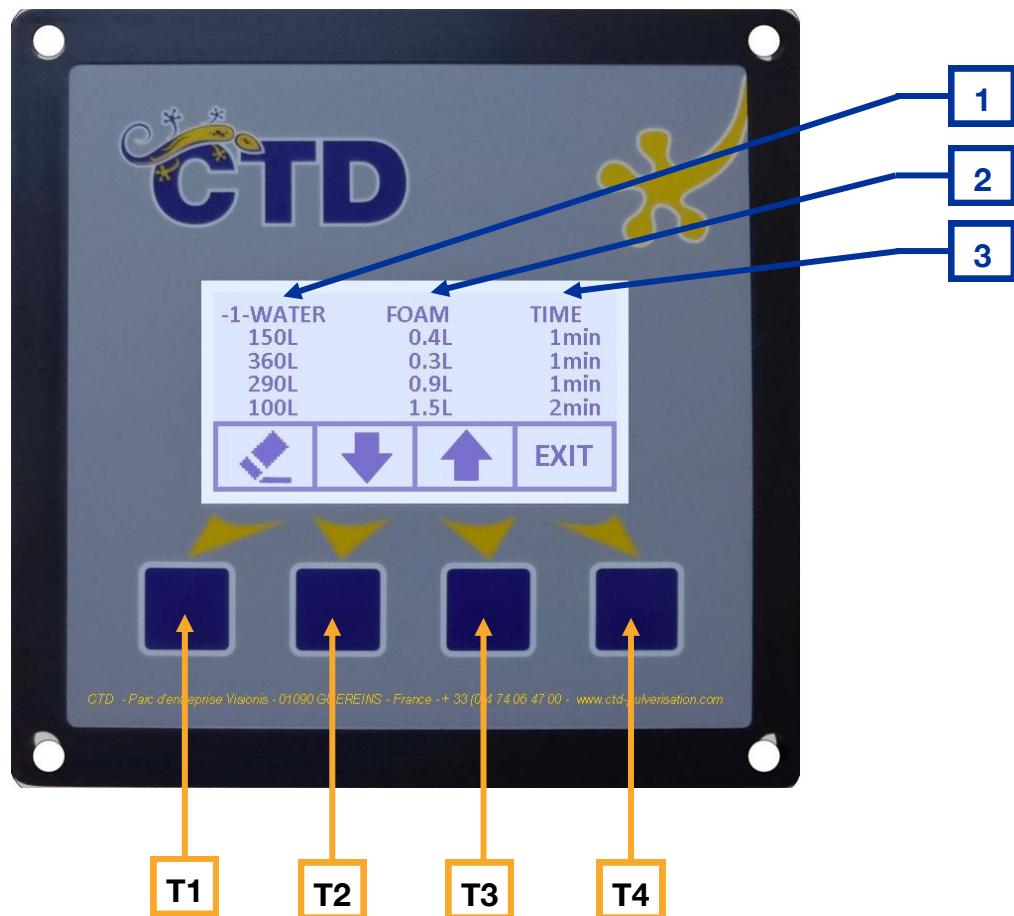
- T1** Button for accessing to the DAILY REPORTS
- T2** Button for accessing to the SECURE MENU
- T4** Button EXIT, return to the home screen

INFORMATION DISPLAY ON THE SCREEN

- 1** Serial number of the PALLEON
- 2** Date of the next maintenance



Daily report screen



STARTING AND USING BUTTON

- T1** Button « GUM » to clear the daily reports
- T2** Button « NEXT PAGE »
- T3** Button « PREVIOUS PAGE »
- T4** Button EXIT, return to the home screen

INFORMATION DISPLAY ON THE SCREEN

- 1** Quantity of water used
- 2** Quantity of product used
- 3** Interventions duration

INTERVENTION



PROCEDURE



Intervention procedure



1 - Connect a water hose to the inlet of the Palléon Mobile

2 - Connect one or more hose to the premix outlet

3 - Connect a suction pipe to the foam concentrate intake

4 - Connect the Palléon Mobile with the power cable on the 24 Vdc truck

- PALLEON powers on after switch on the battery switch.

The screen displays the current water flow and the last concentration used.

- Select the concentration wanted by pressing the « + » and « - » buttons. (Possible change during the intervention)



- Press « START »

- Dosing begins automatically when the water flow rate is higher than 50 l/mn.

PALLEON keep the concentration depending the water flow without any action from the users.

- **Check the injection pressure** (Manometer of the injector), which must be greater than the discharge pressure of the water pump.

- If the injection pressure is lower than the water pressure, press and hold down the « PRIMING » button until the liquid escapes from the prime tube.

Release the button to stop priming and check again the injection pressure.



- At the end of the intervention press the button

When using foam concentrate it is necessary flushing the circuit.





Intervention procedure



Flushing the PALLEON

- Plunge the suction pipe in a canister of water.
- Press the button « **TOOL** »



- Press the button « **FLUSHING** »



- Start the flushing by pressing the button
« **START** »



When clear water flows out the priming outlet, stop flushing
by pressing the button



- Come back to the intervention screen by pressing 2 times
the key



Specific effects during the intervention

EFFECTS	CAUSES
<ul style="list-style-type: none">The water flow rate value is blinking => Insufficient output	If the flow rate is lower than the measuring threshold, The system does not dispense the liquid and this makes the value blink.



SOLUTIONS
<ul style="list-style-type: none">Increase the nozzle output <p>The system starts dispensing again when the flow rate becomes higher than the measuring threshold.</p>

EFFECTS	CAUSES
<ul style="list-style-type: none">The water flow rate value is blinking => Excessive output	If the flow rate is higher than the maximum measuring performance, the system measures out the liquid at its maximum value. The value flashes to alert the user.



SOLUTIONS
<ul style="list-style-type: none">Reduce the nozzle output or the concentration <p>=> The system starts dispensing correctly again when the flow rate falls below the maximum measuring value.</p>

MAINTENANCE

PROCEDURE



Maintenance to be accomplished

MAINTENANCE TO BE MADE EVERY 6 MONTHS :

- Control the level of oil inside the piston pump (Type 5W40)

MAINTENANCE TO BE MADE EVERY 2 YEARS :

CTD OFFERS MAINTENANCE CONTRACTS

- Clean out the pump: 0.5 liter of oil is necessary
 - Control valves and joints of the pump
 - Control the brush of the electrical motor
 - Control hydraulic and electrical circuits
 - Clean the water flowmeter with ultrasounds
 - Calibrate the water flowmeter with a calibrate flowmeter

NOTES :



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