

USER MANUAL

MU 7033 EN O FLEXICOMPT AUTONOME+



O	2024/07/04	Corrections following software update 449 V2.0.8 (removal of wifi)	ITB	EB
N	21/04/2021	Monitoring of battery charge and discharge cycles. Menu Supervisor>Date time. Monitoring of the pulses number on the two counting channels. Update of drawings	DSM	DRA
M	2020/05/18	How to improve battery life, Add menus Supervisor>Date format and Supervisor>Maintenance>Reboot, Functional changes and improvements	DSM	SH
L	2020/01/27	UNI-2 [PJV158]	DSM	SH
A	2010/04/29	Creation	DSM	XS
Issue	Date	Nature of modifications	Written by	Approved by

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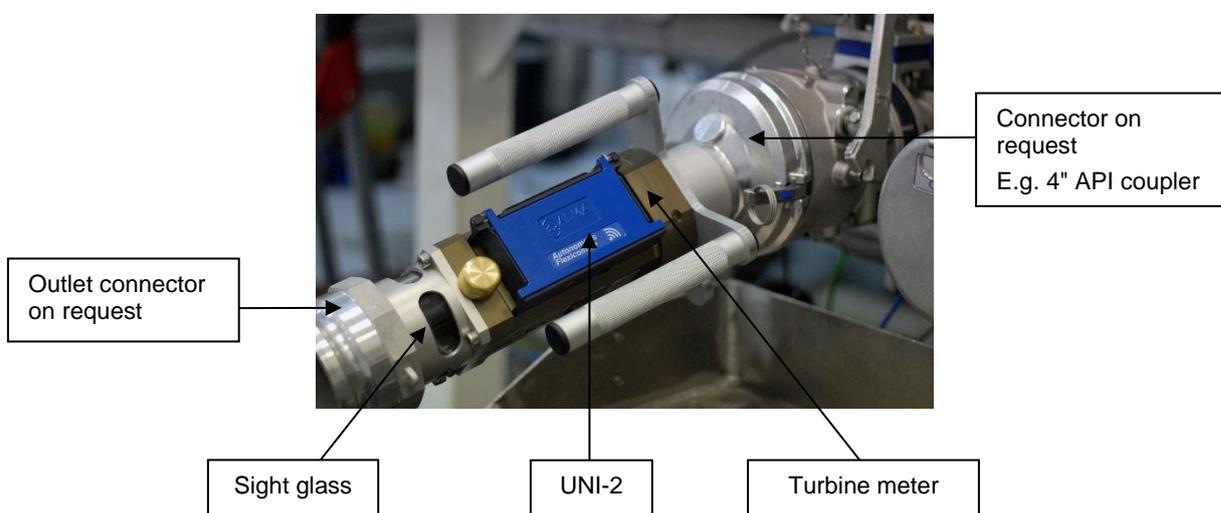
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1 GENERAL PRESENTATION AND DESCRIPTION

The FLEXICOMPT AUTONOME+ is a measuring system intended to the gravity measurement of products other than water on various installations. Depending on the model, it may be used for measurement of AdBlue.

The FLEXICOMPT AUTONOME+ includes:

- ⇒ An UNI-2 intrinsic security indicator-calculator device fastened to the hydraulic sleeve
- ⇒ An hydraulic sleeve which includes the elements that follow:
 - An ALMA ADRIANE turbine meter DN80-80
 - A sight glass, downstream of the turbine meter
 - A vacuum breaker valve
- ⇒ An appropriate outlet connector: a 4" coupler to connect onto the API adapter, a DN80 quick coupling to connect the unloading hose or any other connector (CAMLOCK, TODO, aviation...)
- ⇒ An appropriate unloading connector: a quick coupling to connect the unloading hose or any other connector (CAMLOCK, TODO, aviation...).



Directly coupled to the unloading valve, the FLEXICOMPT AUTONOME+ can:

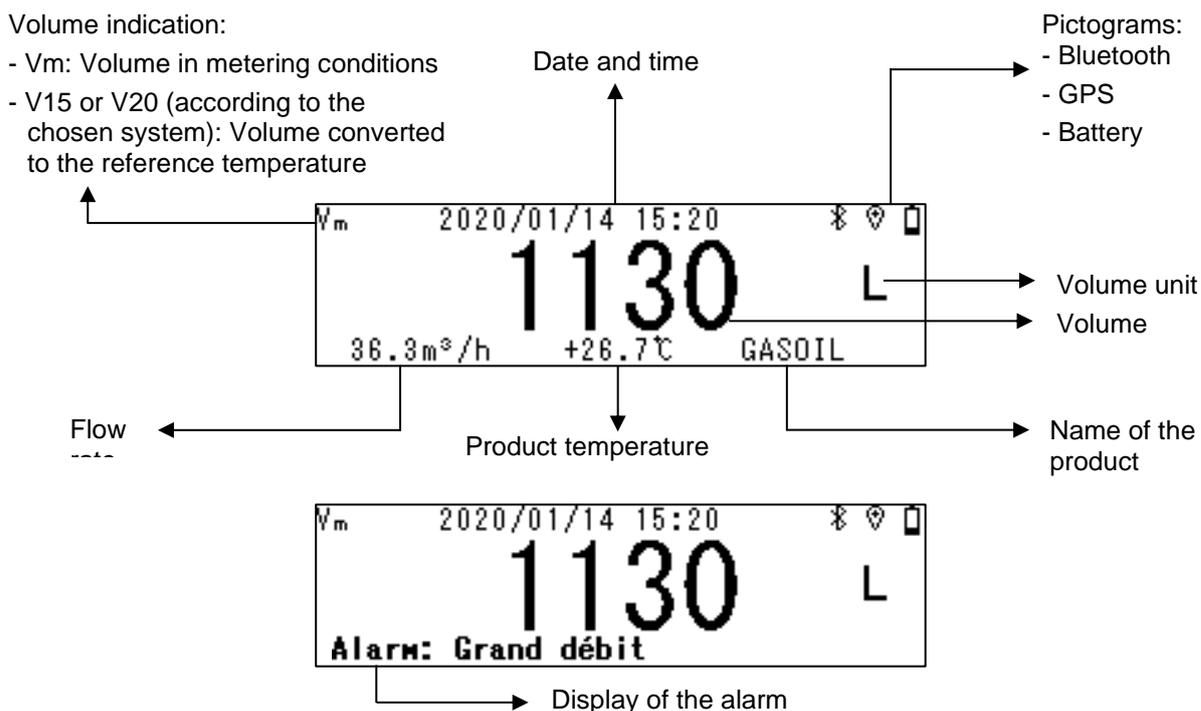
- ⇒ Measure products when they are delivered to the station
- ⇒ Monitor the reception of products (lorry/wagon)
- ⇒ Split compartments
- ⇒ Measure product returns
- ⇒ Issue tank charts
- ⇒ Manage faults
- ⇒ Communicate with a PC/tablet/portable device thanks to the wireless connection.

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The optional functions are available:

- ⇒ The FLEXICOMPT AUTONOME+ can manage the product temperature. In that case, it shows volume in metering conditions or volume converted to the reference temperature;
- ⇒ It can be associated to a CTD+. This option is used to transfer measurements results to the CTD+ thanks to an infrared communication between the FLEXICOMPT AUTONOME+ and the CTD+. The data can be downloaded to a computer with a USB cable or to the printer kit. The metrological parameters file and the configuration file of the FLEXICOMPT AUTONOME+ can be uploaded separately in order to make an easier monitoring of the instrument (periodic inspection, identification and diagnosis). **CAUTION the CTD+ is not an ATEX device.**

The FLEXICOMPT AUTONOME+ has one display:



Meaning of the pictograms displayed in the upper right of the screen:

Bluetooth			GPS			Battery		
OFF	ON	Connected	OFF	ON without position	ON position OK	Charge battery	Charging	Battery is full charged

NOTE : To save battery power, if the Bluetooth connection is not established within two minutes, it is deactivated.

The backlight can automatically switch off or dim when a module is switched on.

The FLEXICOMPT AUTONOME+ has five keys:

		Lights the display during 4 seconds
	MODIF	<u>Normal mode:</u> back to previous menu <u>Metrological mode:</u> increment the flashing figure when imputing a value or return to previous menu
	SELECT	<u>Normal mode, metering off:</u> select the menu <u>Normal mode, metering on:</u> display the values (immediate flow, temperature) <u>Metrological mode:</u> select the figure to be modified or select the menu
	VALID	<u>Normal mode:</u> validate the selected menu or value <u>Metrological mode:</u> validate the displayed value or the selected menu <u>In case of default:</u> acknowledge the default
	RESET	The key is active when the UNI-2 is autonomous. Reset the volume to zero and record the data of the last measurement Reset the display when entering data

2 CONNECTED FEATURES AND SUPPLY OF THE FLEXICOMPT AUTONOME+

	FLEXICOMPT AUTONOME+			
	Charging	Between 100% and 40%	Between 40% and 10%	Less than 10%
Metering	On *	On	On	Off
Rétro éclairage**	On	On	On	Off
Bluetooth	On	On	On	Off
GPS	Off	On	On	Off



* Charge batteries outside potentially explosive area

** More connectivity activated at the same time, the luminous power of the backlight can be reduced to save battery power

NOTE 1 : Depending on the ambient temperature, some connectivity functions may not be activated. The optimum temperature range is +15°C to +50°C.

NOTE 2 : The more connectivity is activated simultaneously, the more the display will be disrupted.

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2.1 Connected functions

The wireless connection enables the FLEXICOMPT AUTONOME+ to communicate with a PC/tablet/portable device

The connected functions of the FLEXICOMPT AUTONOME+ are:

- Incoming data flow processing
- Recovery of parameters
- Recovery of maintenance information
- Geo-tracking of each measurement, the instantaneous position of the FLEXICOMPT AUTONOME+
- Recovery of the clock

Communication modules are listed below:

- Bluetooth Low Energy 4.1

Allows measurement data and FLEXICOMPT AUTONOME+ parameters to be externalised for use by the Customer. The customer uses a proximity interface which may be a tool provided by the customer or a tool provided by ALMA (e.g. the Android and IOS ALMA INSIDE application). These functionalities are exclusive.

- GPS. It is used to locate measurements and synchronize the clock again.



The GPS module does not work when the induction charger is charging the meter. GPS deactivates when charger is in place

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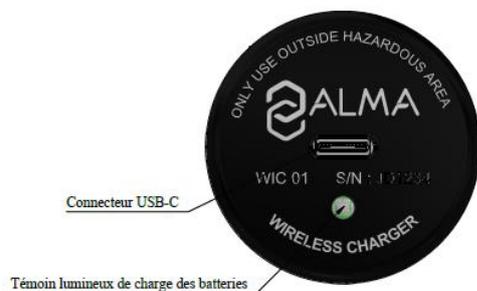
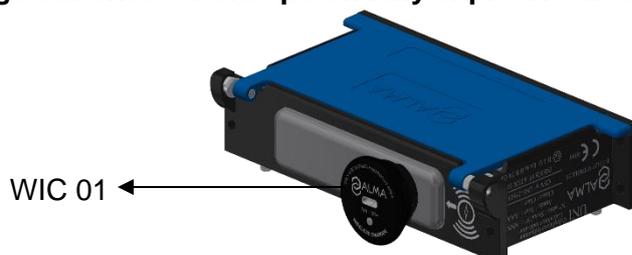
2.2 Power supply

The FLEXICOMPT AUTONOME+ is powered by two rechargeable batteries. These internal batteries have a five years lifetime. The FLEXICOMPT AUTONOME+ operates with or without its charging module. It has at least one week battery life.

To charge the battery, use only the USB cable and the charging module WIC 01, supplied with the equipment.



Charge batteries outside potentially explosive area



Etat du témoin lumineux	Etat de charge de la batterie
Flashing green	In charge
Permanent orange	On hold
Permanent red	Presence of a fault

If the meter is switched off because the batteries have been discharged, it may take up to 5 minutes to start up after the charger has been connected.

When it starts up, the message "**Please charge battery**" is displayed. "**Wait for full charge**" is displayed until the meter is fully charged.

If the meter was switched off before charging, the time required for a full charge is 6 to 7 hours.



As long as the charger is plugged in, the "Alarm: Date time" alarm may remain displayed even if you acknowledge it..

If, after a full charge, the date and time are not displayed on the screen and the "Alarm: Date Time" alarm persists, go to the CONNECTIVITY Menu and activate GPS to start synchronisation.

To save battery life:

- Bluetooth connectivity is activated manually in the Interfaces menu in USER mode.
- The communication modules go into standby automatically after a period of inactivity.
- GPS is automatically activated only during measurements

If the date and time are lost, the GPS can be manually activated to resynchronise the clock. This operation takes one minute and should be carried out outdoors in an unobstructed area.

3 CONFIGURATION, SETTINGS AND CALIBRATION

3.1 Configure the FLEXICOMPT AUTONOME+

You must configure the FLEXICOMPT AUTONOME+ during commissioning and sometimes during metrological controls. Break the seals protecting the opening of the case, remove the four screws and press the micro BP Metro. See below.

Then you enter the METROLOGICAL mode. Details are available in the section CONFIGURE THE FLEXICOMPT AUTONOME+: METROLOGICAL MODE.

NOTE: Only approved persons are permitted to remove the seal.



3.2 Set the FLEXICOMPT AUTONOME+

You must set the FLEXICOMPT AUTONOME+ before use. Then choose:

- Menu User>Connect to enable the possible external connections (Bluetooth, GPS)
- Menu User>Interfaces to set the active connections (CTD+, Bluetooth)

3.3 Calibrate the FLEXICOMPT AUTONOME+

To calibrate the FLEXICOMPT AUTONOME+, choose the menu User>Supervisor>Calibration. To modify the coefficient, remove the seal to switch in METROLOGICAL mode.

NOTE: Only approved persons are permitted to remove the seal.

4 OPERATING RECOMMENDATIONS

- ⇒ The operating temperature of the UNI-2 is between -20°C and +50°C.
- ⇒ When it is not used, closing the UNI-2 cover is recommended.
- ⇒ The front face glass must be regularly cleaned for easy readability and better communication with the data transfer key CTD+.



- ⇒ **Charge batteries outside potentially explosive area**
- ⇒ **Replace batteries outside potentially explosive area**
- ⇒ **Use the CTD+ outside potentially explosive area**

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4.1 Mobile installation

The vacuum between the connecting device and stripping valve on the FLEXICOMPT AUTONOME+ device must be rigid with a 15 degree angle, an 80mm minimum diameter and a length of less than 80mm.



NOTE: The FLEXICOMPT AUTONOME+ AdBlue® must be rinsed with water after use to clean it and to ensure it works properly. This prevents crystals from forming.

5 IGNITION AND OPERATION

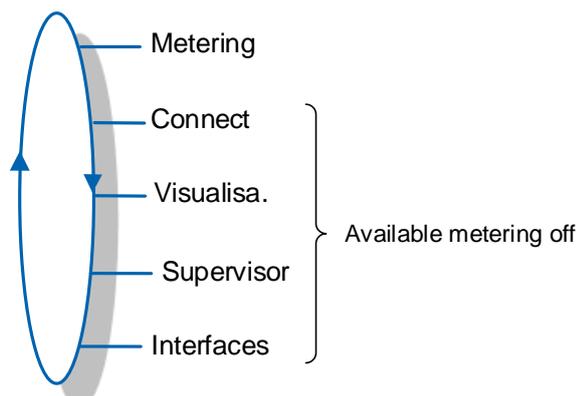
The FLEXICOMPT AUTONOME+ measuring system operates with an empty hose. The operator connects it to the API adaptor and then connects the hose to the FLEXICOMPT AUTONOME+ outlet.

The operating procedure is as follows:

- ⇒ Reset the volume on the UNI-2. The operator opens the tank valve. The metering starts as soon as the UNI-2 records impulses coming from the turbine (dès la rotation de l'hélice à l'intérieur de la turbine). The metered volume is continually displayed on the UNI-2.
- ⇒ For partial emptying:
The operator stops metering by closing the tank valve. The metering stops when the UNI-2 notes that both gas detectors are wet and flow rate is to zero.
- ⇒ For complete emptying:
The operating procedure is identical to the partial emptying procedure but there is no voluntary action on the tank valve.

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6 USE THE FLEXICOMPT AUTONOME+: USER MODE

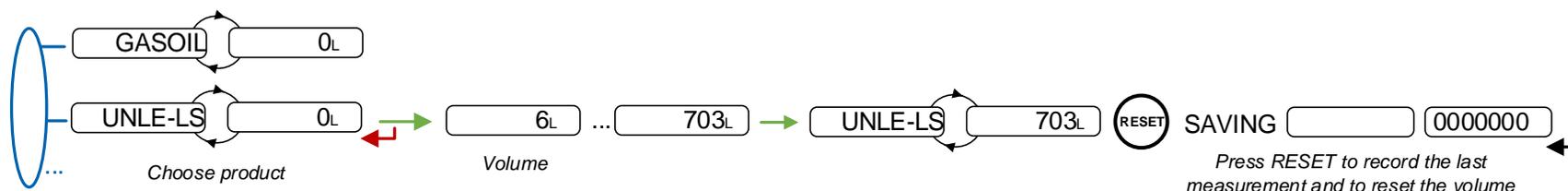


The FLEXICOMPT AUTONOME+ is on metering between the first command level after initialization or resetting the current volume to zero, and resetting the current volume to zero.

The displayed volume depends on the configuration set in METROLOGICAL mode. A pictogram at the upper left of the screen, indicates V_m for volume at temperature, or $V_{15}/V_{20}/V_b$ for a volume converted to the reference temperature.

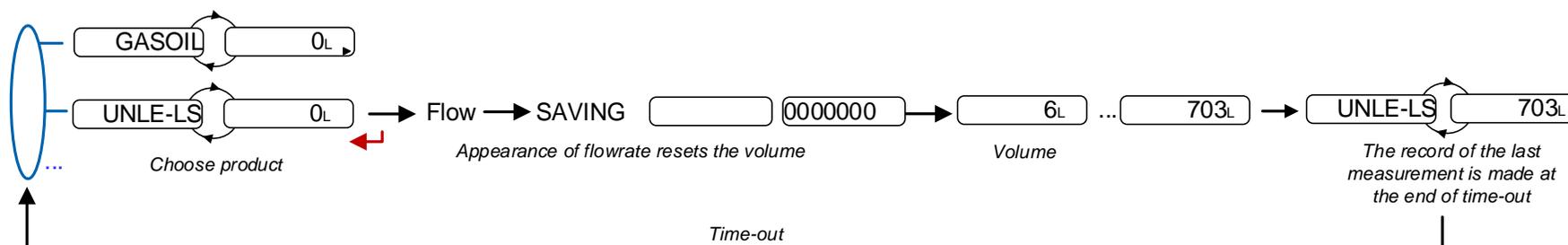
6.1 Menu Metering

The manual recording sequence starts at the end of measurement by pressing RESET. The last measurement data is then recorded and the volume is reset.



For the automatic recording sequence, the time-out is set in METROLOGICAL mode (menu Ens. Mesurage / Enreg. Auto => vous pouvez sélectionner une durée en seconde).

At the beginning of measurement, appearance of flowrate resets the volume. The last measurement data is automatically recorded at the end of measurement, at zero flow and when the time-out is up.



6.1.1 Data recording and volume reset

Data recording and volume reset depend on the configuration of the FLEXICOMPT AUTONOME+:

- Manual recording sequence: volume reset and recording of the last measurement data are triggered by pressing RESET at zero flow conditions
- Automatic recording sequence: the appearance of flowrate resets the volume to zero. The last measurement data are recorded when the time-out is up.

6.1.2 Transfer measurement results and parameters

6.1.2.1 Transfer with the INSIDE app

The INSIDE app is used to transfer measurement results and parameters via Bluetooth.

NOTE: For more information, read the user guide GU 7094.

6.1.2.2 Transfer with CTD+



As the CTD+ is not ATEX, this operation must be done outside potentially explosive area.

When flow rate is zero, you can transfer to the key the parameters and the measurement results of the N last days. Set N in the menu User>Interfaces>CTD+

See the user guide GU 7110

The file can be downloaded to a PC at '.csv' format.

NOTE : It is advised to use the Windows XP version



Do not plug the USB cable during data transfer.

NOTE: If the CTD+ key is blocked, refer to FM 8022

6.1.3 Printing

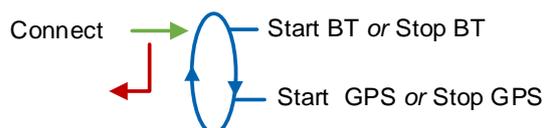
6.1.3.1 Printing with the INSIDE app

Use the INSIDE app to print the delivery ticket. This feature is used to print delivery ticket as a PDF file. See the user guide GU 7094.

6.1.3.2 Printing with the CTD+ and the mobile printer kit

Use the CTD+ and the non ATEX mobile printer kit to print the delivery ticket. See the user manual MU 7087.

6.2 Menu Connect

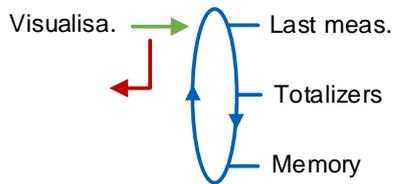


Start BT: Start or stop Bluetooth connection. The Bluetooth switches automatically to stand-by mode after two minutes of inactivity when connection is off and after ten minutes of inactivity when connection is on

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Start GPS: This menu is used to switch on the GPS manually to synchronize the clock again. This operation lasts one minute and must be done outdoors. Stop GPS at the end of synchronization.

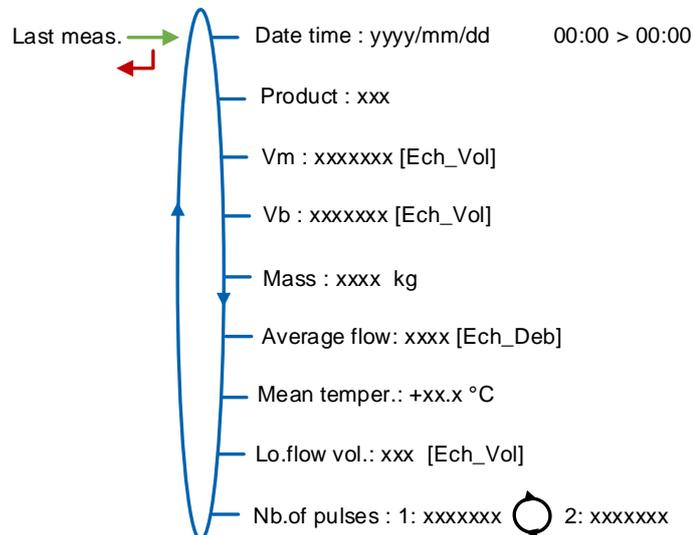
6.3 Menu Visualisa.



If the values are preceded by this display '-----'; it means they are no longer guaranteed.

6.3.1 Sub-menu Last Meas.

This menu displays the information of the last measurement. Information displayed depend on the configuration of the FLEXICOMPT AUTONOME+.



Date time: Date and time when measurement started and ended

Product: Product

Vm: Volume in metering conditions

Vb: Volume converted to the reference temperature

Mass: Mass

Average flow: Average flow of the measurement

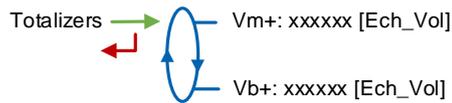
Mean temper: Mean temperature of the measurement

Lo.flow vol: Volume measured under minimal flow rate during measurement

Nb.of pulses: Number of pulses by liter of the measuring device (way 1 alternating with way 2)

6.3.2 Sous-menu Totalizers

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Vm+: Totalizer of volume in metering conditions

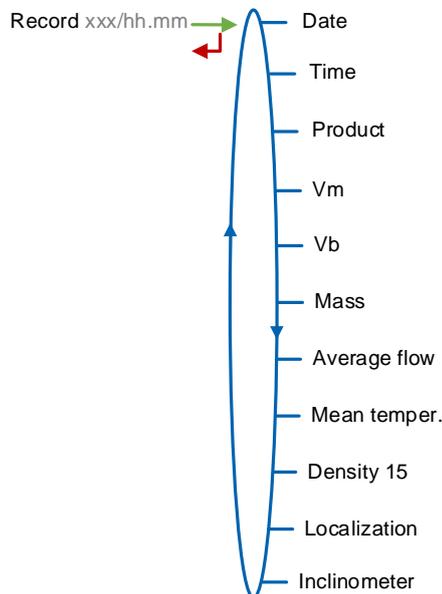
Vb+: Totalizer of volume converted to base conditions if the temperature option is activated

6.3.3 Sub-menu Memory

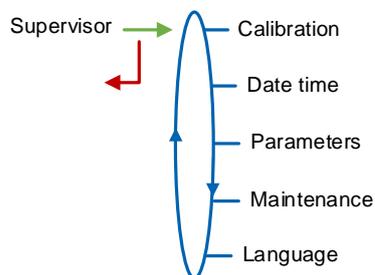
Enter or validate the date and the measurement number to access the relevant data.



Available information depend on the configuration of the FLEXICOMPT AUTONOME+. Temperature, converted volume, and mass are displayed if the temperature option is activated. The measured volume of gas VG is displayed for information only. It has no metrological value.



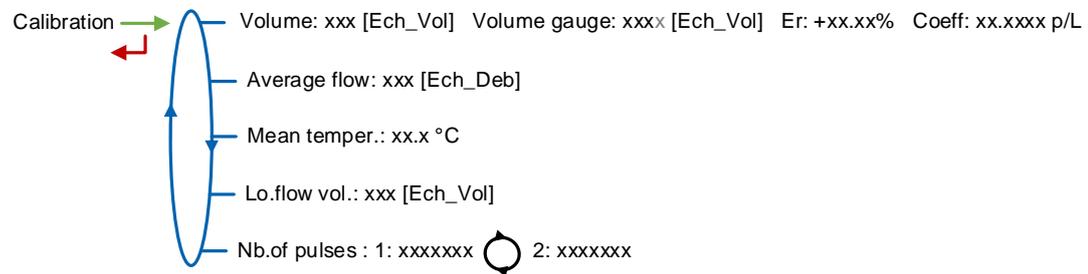
6.4 Menu Supervisor



6.4.1 Sub-menu Calibration

Measure the accuracy of the FLEXICOMPT AUTONOME+ during the calibration with a gauge. It is available after a measurement. Data of the last measurement are available.

NOTE: Only approved persons are permitted to remove the seal.



Volume: Display the volume; **Gauge volume:** Enter the volume read on the calibration mean; **Er:** Display the error in %; **Coeff:** Coefficient to be set only by an authorized person in METROLOGICAL mode, if required

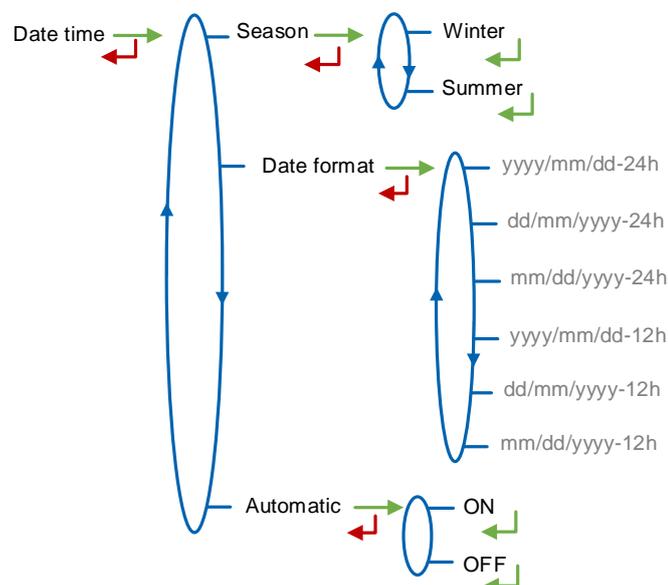
Average flow: Average flow of the measurement

Mean temper: Mean temperature of the measurement

Lo.flow vol: Volume measured under minimal flow rate during measurement

Nb.of pulses: Number of pulses by liter of the measuring device (way 1 alternating with way 2)

6.4.2 Sub-menu Date time



Season: This menu is used to change from summer to winter time (and back again).

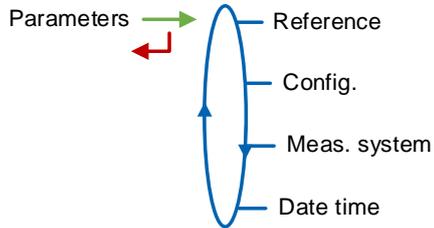
Date format: This menu is used to choose the date format

Automatic:

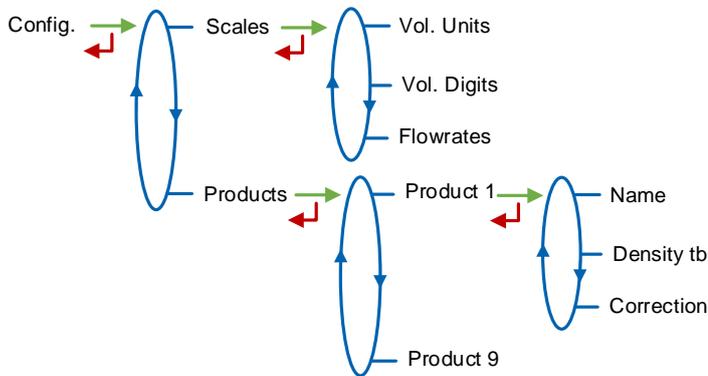
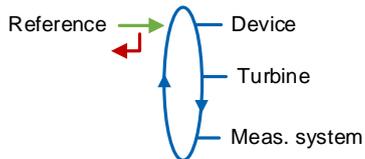
- **ON:** Timing recovery with the GPS
- **OFF:** Date and time are set manually

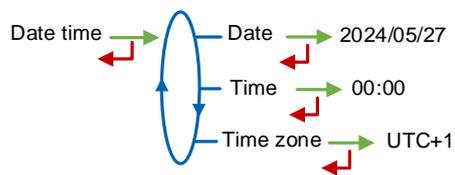
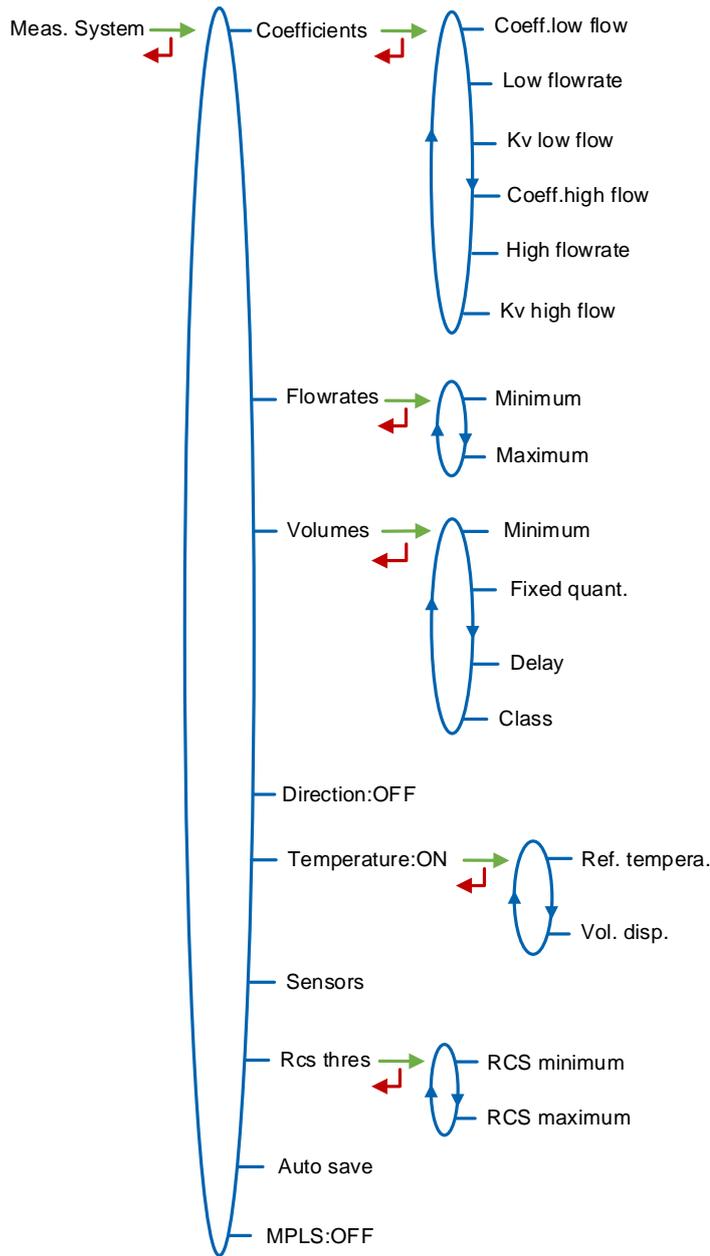
6.4.3 Sub-menu Parameters

This menu is used to display the parameters set in METROLOGICAL mode. The values depend on the configuration. The values depend on the configuration.

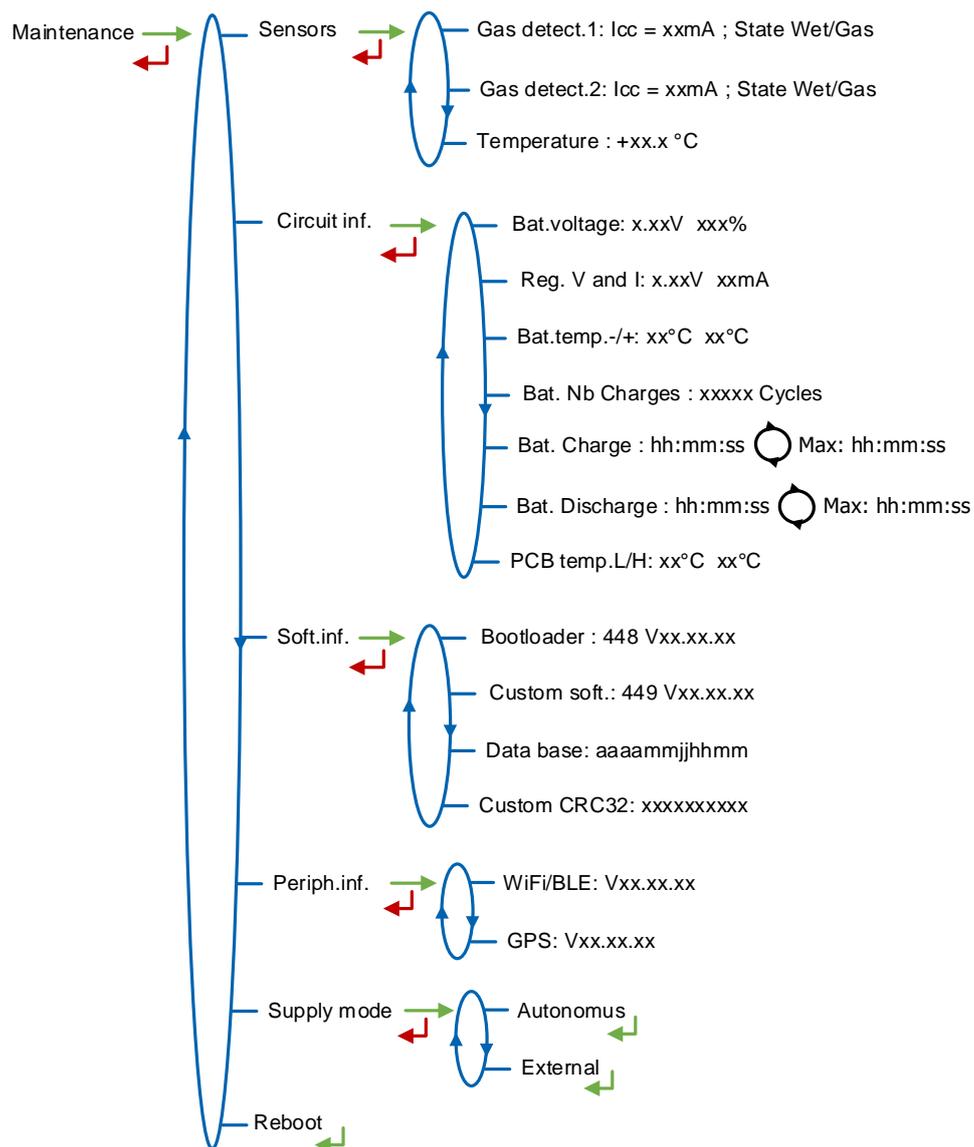


e.g.:





6.4.4 Sub-menu Maintenance



Sensors:

- **Gas detect. 1:** Current and status (wet or dry) of the gas detector 1
- **Gas detect. 2:** Current and status (wet or dry) of the gas detector 2
- **Temperature:** Product temperature

Circuit Inf.:

- **Bat.voltage :** Batteries voltage and remaining charge (from 0% to 100%)
- **Reg. V and I:** Internal supply voltage and current of the UNI-2 circuit
- **Bat. temp.-/+:** Minimum and maximum values of the batteries temperature
- **Bat. Nb Charges:** Number of charge cycles with the WIC 01
- **Bat. Charge:** Alternating display of the current and maximum charging time among all charging cycles with the WIC 01
- **Bat. Discharge:** Alternating display of the current and maximum discharging time among all discharging cycles with the WIC 01

- **PCB temp.L/H:** Minimum and maximum values of printed circuit operating temperatures in °C

Soft.inf.: Information about the software, the database and the app

Periph.inf.: Information about peripherals (Bluetooth and GPS)

Supply mode:

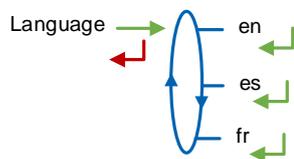


- **Autonomus:** VALID THIS CHOICE
- **External:** Do not valid

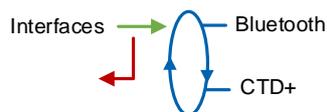
Reboot: When blocked, the UNI-2 reboots. Metrological and supervisor parameters are saved as well as the measurements recording

6.4.5 Sub-menu Language

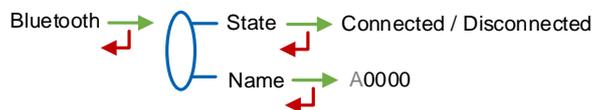
Select the display language. This menu is available if a translation catalogue is uploaded in the UNI-2.



6.5 Menu Interfaces



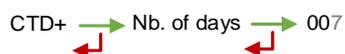
6.5.1 Sub-menu Bluetooth



State: Status of the Bluetooth connection

Name: Assign a Bluetooth device name to UNI-2 (alphanumeric value such as the serial number for example)

6.5.2 Sub-menu CTD+



Nb. of days: Set the number of days N for the transfer of the measurement results on the CTD+. If N=007, the measurement results of the last 7 days will be transferred

6.6 List of alarms

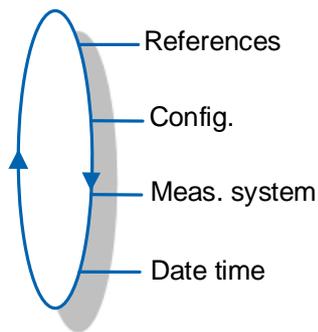
Should a fault occur, the FLEXICOMPT AUTONOME+ displays Alarm: name of the default at the bottom of the screen. The volume remains visible. The operator acknowledges the fault by pressing VALID (even when pouring). Apart from battery related faults, persistent

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faults cannot be acknowledged. Once the fault is acknowledged, the selected value is displayed alternately with "-----" to indicate that the measured values are no longer guaranteed.

		DISPLAY	MEANING	ACTION
USER	COMMON	Overflow	Volume greater than 4 194 304 liters	Reset the device
		Low flowrate	Flow rate less than the setting minimal flow rate	Do a check of the hydraulic configuration and the flowing
		No flowrate	No flowrate	Do a check of the hydraulic configuration and the flowing
		Sensor 1	High gas detector fault (GDh)	Use the maintenance menu to do a check of the detector status
		Sensor 2	Low gas detector fault (GDI)	Use the maintenance menu to do a check of the detector status
		Failure	Problem with the transfer of the files to the CTD+	See GU 7110
		Bat too low	Battery is not charged enough to light the display or to start Bluetooth or GPS	Outside potentially explosive area: Charge the battery (min 50%)
		Init Bluetooth	Bluetooth module initialization problem	Restart the UNI-2 via the menu Supervisor>Maintenance>Reboot
		Init GPS	GPS module initialization problem	Restart the UNI-2 via the menu Supervisor>Maintenance>Reboot
REPARATOR	COMMON	Flowrates	Flow setting fault	Do a check of the parameters
		Frequency	Frequency fault	Do a check of the parameters
		Coefficients	Difference two coefficients is greater than 0.5%	Do a check of the coefficients setup
		Metering	Problem of metering with the meter	Do a check of the parameters
		High flowrate	Flowrate greater than the setting maximum flowrate	Do a check of the parameters
		Low flow high	Flow greater than 20m ³ /h while GDh dry	Do a check of the parameters
		Date time	Loss of date and time	Set date and time in metrological mode or use the menu Connect>Start GPS to switch on the GPS. This operation must be done outdoors. It lasts one minute to synchronize the clock
		Gas	GDh is wet but GDI is dry	Do a check of the hydraulic configuration / detector status
		Dry metering	When using a pump. The volume of gas is greater than the minimum measured quantity	Stop metering
		Coil	Loss of pulse transmitter signal	Do a check of the connection with the pulse transmitter
		Temperature	Faulty temperature measure. Temperature less than -20°C or greater than 50°C	Do a check of the temperature sensor (measure and calibration)
		Display	LCD display fault	If steady alarm, substitution of the UNI-2
		Watchdog	Fault with card	If steady alarm, substitution of the UNI-2
		Program	Error on the checksum of the metrological data	If steady alarm, substitution of the UNI-2
		RAM	Saved memory fault	If steady alarm, substitution of the UNI-2
		Memory	Bad writing into the memory	If steady alarm, substitution of the UNI-2
		Metrological	Loss of configuration	If steady alarm, substitution of the UNI-2
		Low Battery	The battery is no more charging	Substitution of the battery
		Totaliser	Totalizer fault	If steady alarm, substitution of the UNI-2
		Memory default	Problem with the measurement integrity: loss of backup data concerning the last measurement	If steady alarm, substitution of the UNI-2
Micro SD card	Problem with the micro SD card	Make sure the micro SD card is in. Try another one if necessary		

7 CONFIGURE THE FLEXICOMPT AUTONOME+: METROLOGICAL MODE



Setup should be done under cover, metering off, with dry gas detectors.

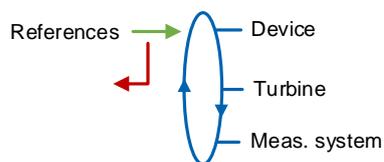
NOTE: Only approved persons are permitted to change parameters

The configuration parameters can only be modified by pressing the micro BP Metro on the electronic board.

Exit the METROLOGICAL mode by pressing the micro BP Metro. The UNI-2 resets.

The option to display the volume (volume in metering conditions or volume converted to base conditions) is made in menu Meas. System>Temperature>Vol. disp. when the temperature is activated.

7.1 Menu References

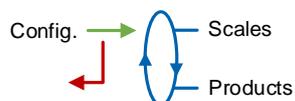


Device: Set the serial number of the UNI-2

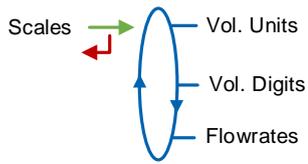
Turbine: Set the serial number of the turbine meter

Meas. system: Set the serial number of the FLEXICOMPT AUTONOME+

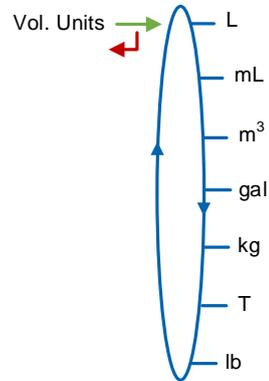
7.2 Menu Config.



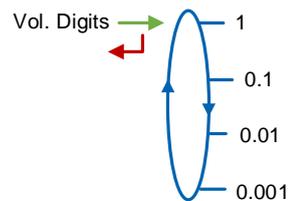
7.2.1 Sub-menu Scales



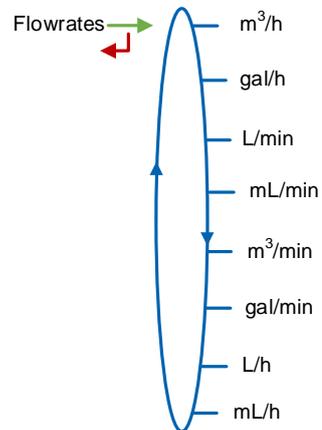
Vol. Units: Select the unit of the volume.



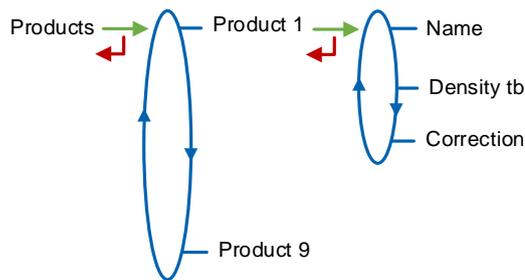
Vol. Digits: Select the accuracy of the volume.



Flowrates: Select the unit and the accuracy of the flowrate.



7.2.2 Sub-menu Products



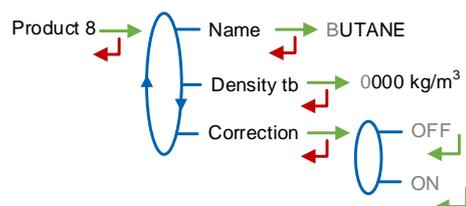
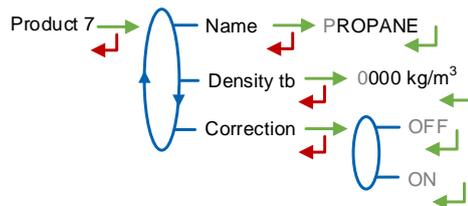
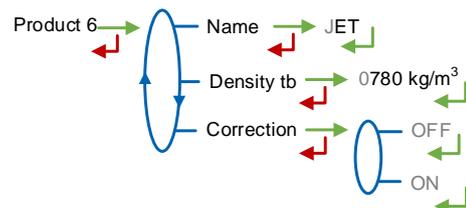
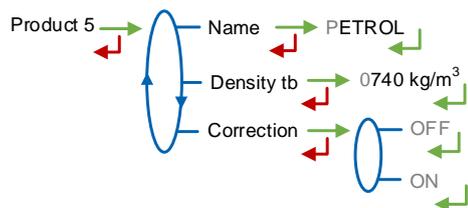
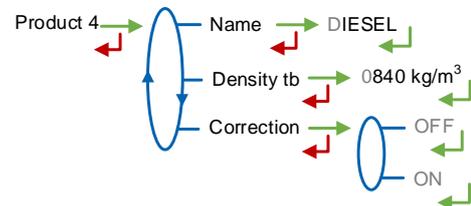
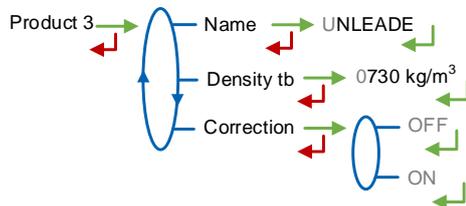
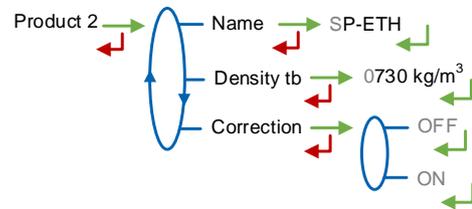
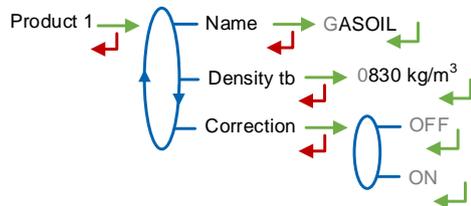
You can configure 9 different products.

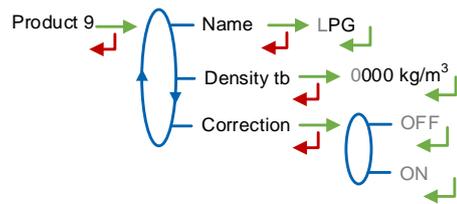
Name: Enter the product name (max 8 alphanumeric characters)

Density tb: Enter the density in kg/m³ in base conditions (min: 550 max: 1100). Set 0000 to remove the product from the list displayed in USER mode

Correction: Select if the correction is on or off for the product. If Density tb ≤ 750 → Correction = ON. Otherwise → Correction = OFF

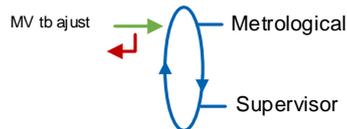
The UNI-2 is configured as follows:





7.2.3 Sub-menu MV tb ajust.

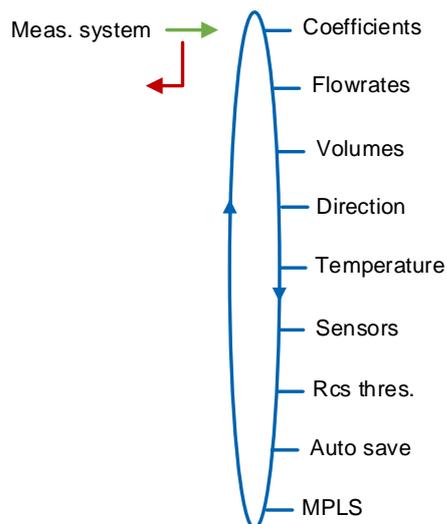
This menu is used to enable or disable density adjustment in USER mode.



Metrological: The density is set in METROLOGICAL mode and cannot be modified by the user

Supervisor: The density can be adjusted by the user within $\pm 5\%$ at the menu Supervisor>Config.>Products> Product N>Density tb.

7.3 Menu Meas. System



7.3.1 Sub-menu Coefficients

Coeff.low flow: Coefficient for low flow (pulses/liter)

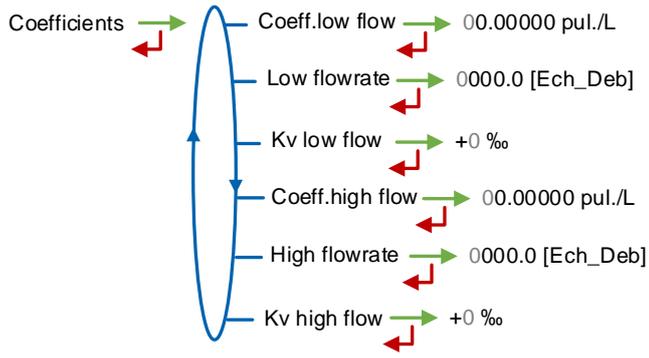
Low flowrate: Flowrate corresponding to Coeff.low flow. Unit depends on the configuration (Config.>Scales>Flowrates)

Kv low flow: Correction coefficient (%) at low flowrate for low viscosity products

Coeff.high flow: Coefficient for high flow (pulses/liter)

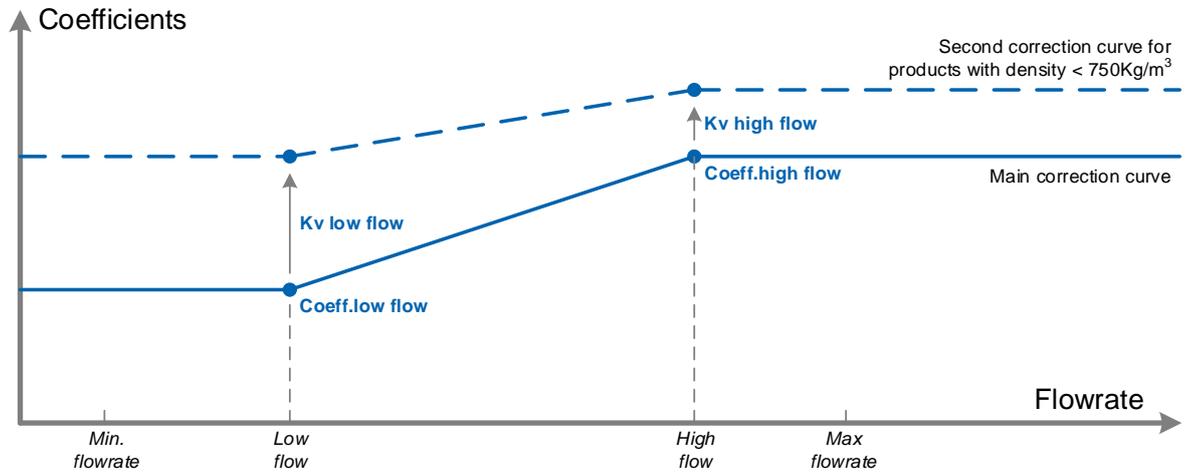
High flowrate: Flowrate corresponding to Coeff.high flow. Unit depends on the configuration (Config.>Scales>Flowrates)

Kv high flow: Correction coefficient (%) at high flowrate for low viscosity products



When parameters **Low flowrate** and **High flowrate** are set to zero, parameters **Coeff.high flow** and **Kv high flow** are not applied.

Adjustment of coefficients for several flowrates:



Coefficients applied in accordance with flowrate and product density

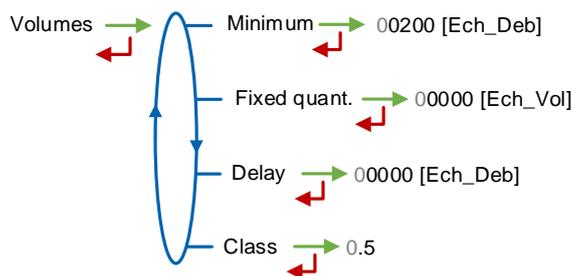
7.3.2 Sub-menu Flowrates



Minimum: Minimum flowrate of the FLEXICOMPT AUTONOME+. Unit depends on the configuration (Config.>Scales>Flowrates)

Maximum: Maximum flowrate of the FLEXICOMPT AUTONOME+. Unit depends on the configuration (Config.>Scales>Flowrates)

7.3.3 Sub-menu Volumes



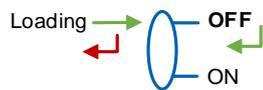
Minimum: Minimum measured quantity to guaranty the measurement. Unit depends on the choice made for the scale interval

Fixed quant.: End of counting fixed volume of the FLEXICOMPT AUTONOME+. Unit depends on the choice made for the scale interval. Not applicable without gas detectors

Delay: Delay for the additional volume (upper gas detector dry). Unit depends on the choice made for the scale interval. Not applicable without gas detectors

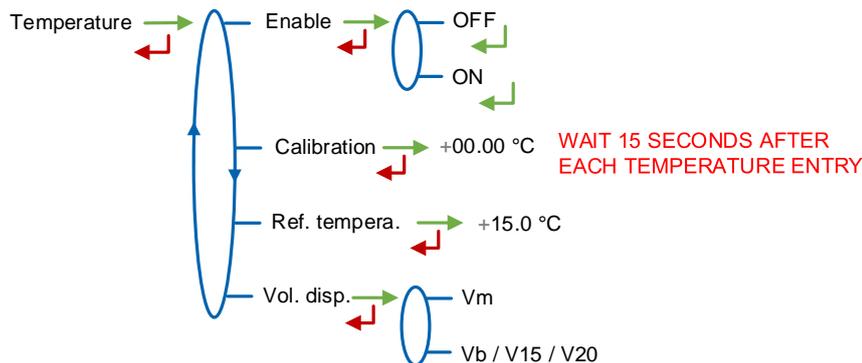
Class: Accuracy class of the FLEXICOMPT AUTONOME+: 0.5

7.3.4 Sub-menu Loading



7.3.5 Sub-menu Temperature

This menu is an option. It is used to calibrate the temperature into the FLEXICOMPT AUTONOME+. See maintenance sheet FM 8513



Enable: Enable or disable the product temperature control

Calibration: The temperature calibration can be done either on two measuring points or on a single measuring point.

- Calibration on two temperature measuring points:
The measure must be done outside the range -20 to +50°C.
First point at $t < -20^{\circ}\text{C}$, second point at $t > +50^{\circ}\text{C}$.
- Calibration on a single temperature measuring point:
The measure must be done in the range -20 to +50°C.

Ref. tempera: Reference temperature ($^{\circ}\text{C}$)

Vol. disp.: Choose the volume displayed in USER mode:

- **Vm:** Volume in metering conditions
- **Vb:** Volume converted to the reference temperature

7.3.6 Sub-menu Sensors



ON: Before validation, make sure both gas sensors are dry and well-connected to the FLEXICOMPT AUTONOME+.

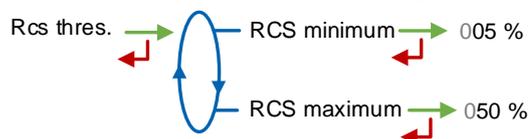
To calibrate GAS detectors following a maintenance operation, for example:

- Select Detectors: **NO**
- Confirm with the green **VALID** button
- Select **Detector: YES**
- Confirm with the green **VALID** button.

NOTE: This operation must be carried out with both detectors dry.

7.3.7 Sub-menu Rcs thres.

Detection thresholds of metering inputs at zero flow and at maximal flow.



7.3.8 Sub-menu Auto Save

Set the time required at the end of measurement before automatic recording of the measurement data (in seconds).



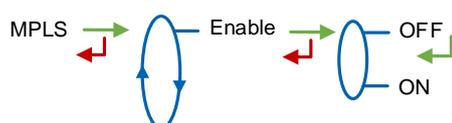
- Auto Save=0: Data recording is manual, it is done by pressing RESET. It causes the volume reset.
- Auto Save>1: Data recording is automatic, it is done when the time-out is up. The RESET key is disabled. The volumes counted during the time-out are added at recording of the measurement data.

For example, the parameter can have the value that follows:

Auto Save=060. Automatic recording with time-out 60 seconds

7.3.9 Sub-menu MPLS

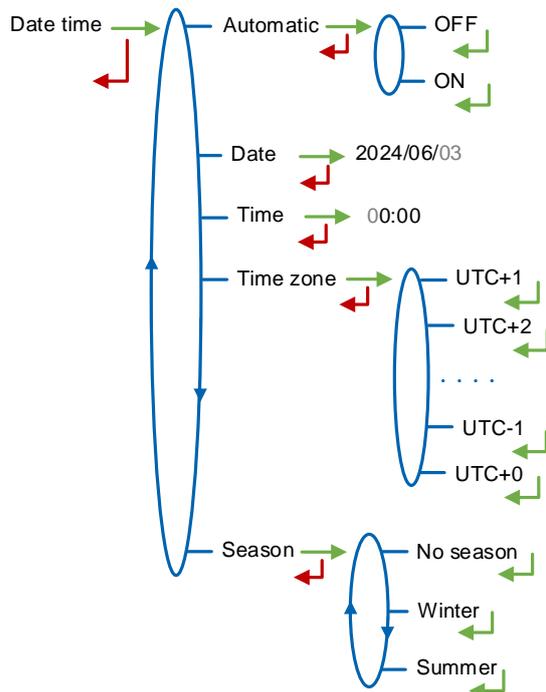
Do not enable this feature.



Enable: Choose OFF

7.4 Menu Date time

This menu is used to define date and time according to the destination country.



Automatic:

- **OFF:** Date and time are set manually
- **ON:** Timing recovery with the GPS

Date: Set the date yyyy/mm/dd. You can change the date format in USER mode with the menu Supervisor>Date time>Date format

Time: Set the time hour:minutes (hh:mm)

Time zone: Set the jet lag related to the time zone. E.g.: validate UTC+1 for the Brussels, Copenhagen, Madrid, Paris time zone

Season:

- **OFF:** No time change when the season changed
- **Winter:** Winter-time (at commissioning)
- **Summer:** Summer-time (at commissioning)

Time change is done in USER mode with the menu Supervisor>Date time>Season.

RELATED DOCUMENTS

GU 7033	Operating guide: Flexicompt autonome+
GU 7110	Operating guide: Transfer parameters and measurement results of the UNI/UNI-2 to a computer
GU 7094	Operating guide: INSIDE App
MU 7087	User manual: Non ATEX mobile printer kit
MV 5011	Verification Manual Flexicompt autonome+
FM 8014	Maintenance sheet: Replacement of the battery on the CTD+
FM 8512	Maintenance sheet: Adjustment of an ALMA measuring system equipped with a UNI-2
FM 8513	Maintenance sheet: Adjustment of temperature in the UNI-2