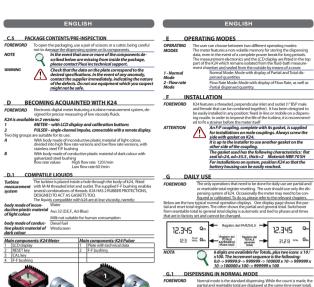




2 - weight of the contents

3 - description of the product



| | | 1 1 1 1 1 | | | | | | |
|----|--|--|--|--|--|--|--|--|
| Ma | in components: K24 Pulser [Plate with technical data | 12.3 | Proof Ga. Registro del TOTALE STERRABLE SERSITA DEL GAL SERSIT | | | | | |
| 2 | F-F bushing | NOTA | 6 digits are available for Totals, plus two icons x 10/ x 100. The increment sequence is the following: | | | | | |
| | The same of the sa | 0.0 > 99999 > 999999 > 100000 x 10 - > 959999 x 10 > 100000 x 100 - > 999999 x 100 G.1 DISPENSING IN NORMAL MODE | | | | | | |
| | | FOREWORD | Normal mode is the standard dispensing. While the count is made, the partial and <u>resettable total are displayed at the same time (reset total)</u> Should one of the keys be accidentally pressed during dispensing, this will have no effect. | | | | | |
| | | WARNING | | | | | | |
| | | STAND BY | A few seconds after dispensing has ended, on the lower register, the display switches from resettable total to general total: the word reset above the word total disappears, and the reset total is replaced by the general total. | | | | | |
| | | | This situation is called standby and remains stable until the user | | | | | |

operates the k24 again

12.345 G

C23 ™ G.,

12.345

88888

Cal\$88888888

0.000 0...

23412.3 "** Gw

0.000 Q₁₀

23412.3 TOOL GA

23412.3 Food Gw.

0.000

12.345

0.000

0.000

(0.0

12.5

(234)2.3 **** \$

2345.61 G

23412.3 CM GA

12.345 Qn

and, after a few moments, the reset total is replaced by the non resettableTotal.

G.1.2 RESETTING THE RESET TOTAL

Schematically, the steps to be taken are:

The reset total resetting operation can only be performed after resetting the partial register. The reset total can in fact be reset by pressing the reset key at length while the display screen shows reset total as on the following display page:

Wait for the display to show normal standby display page (with total only displayed)
Press the reset key quickly
These the reset key quickly
The meter starts to reset the partial
While the display page showing the reset total is displaye
Press the reset key again for at least 1 second

The display screen again shows all the segments of th display followed by all the switched-off segments and finally shows the display page where the reset Reset Total is shown.

It is possible to dispense fluids, displaying at the same

| FO. | | | s two numerical registers and various er only when the applicable function | |
|-----|---|--|---|--|
| 1 | Partial register (5 figures with moving comma FROM 0.1 to 99999) indicating the volume dispensed since the reset button was last pressed | | Indication of type of total, (TOTAL / Reset TOTAL); | |
| 2 | Indication of battery charge | | Indication of unit of measurement of Totals: L=Litres Gal=Gallons | |
| 3 | Indication of calibration mode | | Indication of Flow Rate mode | |
| 4 | Totals register (6 figures with moving comma FROM 0.1 to 999999), that can indicate two types of Total: 4.1. General Total that cannot be reset (TOTAL) 4.2. Resettable total (Reset TOTAL) | | 9 Indication of unit of measurement of Partial: Qts=Quarts Pts=Pints L=Litres Gal=Gallons | |
| 5 | Indication of total multiplication factor (x10 / x100) | | | |

| | (23 mm Gw.) | G ₂ | | | | |
|---|--|----------------|--|--|--|--|
| unit of measurement of | _G.1.1 PARTIAL RESET (NORMAL MODE) | | | | | |
| Flow Rate mode | The partial register can be reset by pressing the reset key when the meter is in standby, meaning when the display screen | | | | | |
| unit of measurement of Quarts Pts=Pints res Gal=Gallons | shows the word "TOTAL". | | | | | |
| | After pressing the reset key, during reset, the disple first of all shows all the lit-up digits and then all the are not lit up. | | | | | |
| | At the end of the process, a display page is first of a | ll shown | | | | |
| , | with the reset partial and the reset total | | | | | |
| | | | | | | |

D.3 DISPLAY POSITIONING (METER VERSION ONLY) The square shape of the k24 body allows the card to be notated in its housing, thus ensuring great versatility in positioning. This allows easy display readings in any position. The card housing is closed by a plastic cover seeled through a rubber protection acting as a gasket as well. This can be easily removed unscrewing the

2 Cal \$88888888

D2 USERS BUTTONS

The METER features two buttons (RESET and CAL) which individually perform two main functions and, together, other secondar functions.

- for the RESET key, resetting the partial register and Reset Total
- for the CAL key, entering instrument calibration mode MAIN FUNCTIONS PERFORMED Used together, the two keys permit entering configuration FUNCTIONS

BELOW IS THE LEGEND OF THE SYMBOLS USED TO DESCRIB

the Flow Rate in [Partial Unit / minute] as shown on the following display page: roscowing display page:
Procedure for entering this mode:
1 wait for the Remote Display to go to Standby, meaning
the display screen shows Total only
2 quickly press the CAL key.
3 Start dispensing

The flow rate is updated every 0.7 seconds. Consequently, the display could be relatively unstable at lower flow rates. The higher the flow rate, the more stable the displayed where

C.2 DISPENSING WITH FLOW RATE MODE DISPLAY

ENGLISH The flow rate is measured with reference to the unit of measurement of the Partial. For this reason, in case of the unit of measurement of the Partial and Total being different, as in the example shown below, it should be remembered that the indicated flow rate relates to the unit of measurement of the partial. In the example shown, the flow rate is expressed in Qts/min. 12.345 (25 GA which are again displayed when exiting from the flow mater radion mode.

mail* radio reading mode.

mail* radio reading mode.

for the two keys RESET or a fly pressed during the count, this will have no effect.

Even though in this mode they are not displayed, both the Reset Total and the General Total Total Total norcess. Their value can be checked after dispensing has terminated, returning to "Thorda" mode, by quickly pressing OLI.

G.2.1 PARTIAL RESET (FLOW RATE MODE) To reset the Partial Register, finish dispensing and wait for the Remote Display to show a Flow Rate of 0.0 as indicated in the illustration. 12.345 L D.D L

H CALIBRATION
When operating dose to extreme use or flow rate conditions (close to minimum maximum acceptable values), an on-the-spot calibration may be required to suit the real conditions in which the K24 is required to operate.

H1 DEFINITIONS CALIBRATION Multiplication factor applied by the system to the electrical pulses FACTOR OR received, to transform these into measured fluid units. FACTOR OR "K FACTOR" FACTORY K FACTOR Factory-set default factor. It is equal to 1,000. This calibration factor ensures utmost precision in the following operating conditions: ensures utmost precision in the following operating conditions:
Fluid Temperature: 20°C
Flow rate: 10-30 ltr/min
Even after any changes have been made by the user, the factory k actor can be restored by means of a simple procedure.

customized calibration factor, meaning modified by calibration. USER K FACTOR: Custon

H2 CALIBRATION MODE Why calibrate? 1 Display the currently used calibration factor:
Return to factory calibration (Factory K Factor) after a previous calibration by the user

Change the calibration factor using one of the two previously indicated procedures

cedures are available for changing the Calibration Factor: In-Field Calibration, performed by means of a <u>dispensing</u> operation

Direct Calibration, performed by directly changing the Direct Calibration, performed by directly unbinging uncalibration factor
 calibration mode, the partial and total dispensed quantities indicated on the display screen take on different manings according to the delabstation procedure places, in calibration mode, the KVA cannot be used for normal dispensing operations.

de, the K24 cannot be used for normal dispensing operations.

Add, the totals are no increased

The K24 features a non-volatile memory that keeps
the data concerning callibration and total dispensed
quantity stored for an indefinite time, even in the
case of a long power break; after changing the batteries; calibration need not be repeated.

Cal FRCT

Example: Error percentage found: E%-0.9% CURRENT calibration factor: 1.000

ACTION

-

T_F

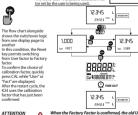
H.2.1 DISPLAY OF CURRENT CALIBRATION FACTOR AND RESTORING FACTORY FACTOR 1.000

DRESTORING FACTORY FACTOR. By pressing the CAI. key white the appli-ance is in Standby, the display page ap-pears showing the current calibration fac-tor used. If no calibration has ever been performed, or the factory setting has been restored after previous calibrations, the following display page will appear: the following display page will appear: shows that the factory calibration factor is being used.

ATTENTION

been made by the user, the display page will appear showing the currently used calibration factor (in our example 0,998). The word "user" indicates a calibration fac tor set by the user is being

0.998 Cal USER





H.2.2 IN FIELD CALIBRATION FOREWORD

This procedure calls for the fluid to be dispensed into a graduated sample container in real operating conditions (flow rate, For correct K24 calibration, it is most important to:

For correct Rescum.

When the Factory Factor is confirmed, the old User factor is deleted

**Apacity of not less than 5

from the memory
2 use a precise Sample Container with a capacity of not less than 5
litres, featuring an accurate graduated indicator.
3 ensure calibration dispensing is done at a constant flow rate equivalent to that of normal use, until the container is full;

ient to that or normal use, until the container is full; 4 Not reduce the flow rate to reach the graduated area of the con-tainer during the final dispensing stage (the correct method during the final stages of sample container filling consists in making short top-ups at normal operation flow rate);

5 after dispensing, wait a few minutes to make sure any air bubbles are eliminated from the sample container; only read the Real value at the end of this stage, during which the level in the container cou

6 Carefully follow the procedure indicated below.

ENGLISH H.2.2.1 IN-FIELD CALIBRATION PROCEDURE ACTION DISPLAY 12.345 1945 1974 1,000 0.000 al FIELD 9,800 La . Call FIELD

| | 9.800 L on 1000 L Indicated value Real value | | | | | |
|--------------------------------------|--|------------------------|--|--|--|--|
| . | SHORT RESET key keying The Meter is informed that the calibration disperating operation is friended, operation in friended, operation in friended, the companion of the companion of the companion of the this operation. On calibratine the Meter, the value indicated by the partial localizer lessample 98000 must be forced to the resultable marked on the graduated sample container. In the bottom left part of the displays a move appears is purposed and documented, that shows the direction invalues or obscurated commands, that shows the direction invalues or obscurated or 2 are performed. | 9.800 L cal # FIELD | ATTENTION | | | |
| . | The arrow changes direction. The operation can be repeated to alternate the direction of the arrow. | 9.800 L cal▼ FIELD | _ | | | |
| | SHORT/LONG CAL key keying The Indicated value changes in the direction indicated by the arrow arrow can be compared to the continuation of the con | 9.860 L cal * FIELD | L MAINTEN BATTERY REPLACEMENT WARNING | | | |
| | LONG MSET They having The Metter is informed that the calibration procedure is finished. Before section that the calibration procedure is finished. Before section from this consistent make sum the NRICATED relates to the same set life field, under the section of the section of the NRICATED relates to the NRICATED relate | L cal END | K24 features two low-batt 1 2.345 | | | |
| | NO OPERATION At the end of the calculation, the new USER K FACTOR is shown for a lew seconds, after which the restart cycle is repeated to finally achieve standby condition. MMPORTART: Form now on, the indicated factor will become the calibration factor used by the Meter and will continue to remain such even force to better chance. | 7,015 L on 810 | reference to the a exploded diagram positions, proceed as follows | | | |
|) | NO OPERATION The Meter stores the new work calibration factor and is ready to begin dispensing, using the USER K FACTOR that has just been calculated. | 0.000 L | 6 The K24 will display the s cated before the batterie After changing the batter | | | |
| .2.3 DIRECT MODIFICATION OF K FACTOR | | | | | | |

H.2.3 DIRECT MODIFICATION OF K FACTOR

LONG CAL KEY KEYING

ONG DESET KEY KEYING

ONG RESET KEY KEYING

HORTA ONG CAL VEY VEYING

ir normal weter operation snows a mean percentage error, this can be corrected by ap-plying to the currently used calibration factor a correction of the same percentage. In the case, the percentage correction of the USER KFACTOR must be calculated by the opera

New cal. Factor = Old Cal Factor * $\left(\frac{100 - E\%}{100}\right)$

ONG CAL KEY KEYING
Weter enters calibration mode, shows "CAL" and displays the
calibration factor being used instead of the partial. The words
Fact" and "User" indicate which of the two factors (factory or

e now go on to Direct change of the calibration factor: e word "Direct" appears together with the Currently Us illbration factor. In the bottom left part of the display, a

anne of the calibration factor:

i the calibration procedure is

ed.

e performing this operation, make sure the INDICATED.

NO OPERATION
At the end of the calculation, the new USER K FACTOR is shown a force of the calculation.

The Meter stores the new work calibration factor and is ready to begin dispensing, using the USERK FACTOR that has just been changed.

IMPORTANT: From now on, the indicated factor will b the calibration factor used by the Meter and will cont

remain such even after a battery change NO OPERATION

CURRENT calibration factor: 1.000
New USEN KRACTOR: 1.000*[1(100 - (-0.9))/1(00) = 1.000*[(100 + 0.9)/1(00) = 1.009
If the Meter indicates less than the real dispensed value (negative error) the new calibration factor must be higher than the old one as shown in the example. The opposite applies if the Meter shows more than the real dispensed value (positive error). 12,345 13456 ***

1,000

1000

al RELO

1.000

DIRECT

1000

1.003

1,003

Call ECO

0.000

12000 1094

Cast CIRECT

METER CONFIGURATION

MAINTENANCE

K24 shoura occurrent batteries to be retthe system.

Partial Register

To choose between the 4 available combinations:

Wait for the METRI to go to Standby.

Thus press the CA and RESSI lays together. Keep these pressed until the word UNIT appears on the creen together with the untof the measurement set at that time in the carright lense; (I has)

e a menu with which the user can select the main measurement unit, (Pts), Litres (Lit), Gallons (Gal); of the unit of measurement of the Partial register and that of the sd according to the following table:

Unit of Measurement Unit of Measurement

Every short press of the RESET key, the various combina-tions of the units of measurements are scrolled as shown

UNIT Qts

be stored, the METER will pass through the set will then be ready to dispense in the set units.

Use 2x1.5 V alkaline batteries size AAA

calibration is required after changing the

K24 should be installed in a position allowing the batteries to be replaced without removing it from

Press RESET to update all the totals

Loosen the 4 fixing screws of the lower cover

Remove the old batteries

Place the new batteries in the same position as the

ose the cover again, by positioning the rubber pro

tection as a gasket
K24 will switch on automatically and normal opera-

tion can be resumed

Reset Total, the same Total and the same Partial indi-

Only one operation is necessary to clean the k24. After removing k24 from the plant where it was built in, any residual elements can be removed by washing or mechanically-handling. If this operation does not restore a smo

The interpretation of the training of the turbine, it will have to be replaced.

Do not discard the old batteries in the environment.

Refer to local disposal regulations.

Do not use compressed air onto the turbine in order to avoid its damage because of an exces-

Carefully remove the screws from the corners of the front panel, and then carefully lift the front cover up away from the main body of the meter.

sive rotation

were changed.
es, the meter does not need calibrating again.

UNIT Pts

Carefully remove the screws from the corners of the front panel, and then carefully lift the front cover up away from the main body of the meter.

Then the new panel is fitted make sure the power

The meter does not count, but the flow

rate is correct

Contact your dealer

MALFUNCTIONS Remedial Action ng K FACTOR check the K FACTOR een achieved iced or zero flow

gears after cleaning

ASCORP **K24 ELECTRONIC TURBINE METER - PULSER**



MANUALE D'USO. MANUTENZIONE E COLIRBOZIONE

USE, MAINTENANCE AND CALIBRATION MANUAL

M0171CITEN 00

and disposal of industrial waste and, in particular: The packaging consists of biodegradable cardboan

N DISPOSAL

delivered to companies for normal recycling of cellulose.

Metal parts, whether paint-finished or in stainless steel can be

eatures two low-battery alarm levels:

When the battery charge falls below the first level on the LCD,
the fixed battery symbol appears. In this condition, K24 continues to operate correctly, but the fixed lotter on warns the user
that it is ADVISABLE to change the batteries.

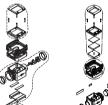
If K24 operation continues without changing the batteries, the second battery alarm level will be reached which will prevent operation. In this condition the battery ison starts to flash and is the only one to remain visible on the LCD.

Metal Parts Da-posed of John Components of John Co

authorities.

Other components, such as pipes, rubber gaskets, plastic parts and wires, must be disposed of by companies specialising in the disposal of industrial waste. EXPLODED VIEWS AND OVERALL DIMENSIONS

/VISTE ESPLOSE ED INGOMBRI





75 1" G 1" NPT

1" G 1" NPT

- 54 -METER











73.5

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