

Starplast

Mod. LUM 06 - Rev. 01 del 21.05.2021



MAINTENANCE AND USE MANUAL

STARTANK

Read carefully this use and maintenance manual before starting installation, use, maintenance or any repair of the system.

Thanks for choosing the Starplast product.

For any technical-commercial information, you can contact our office, which will be at your complete disposal for:

consultancy, installation, start-up, system management and indications relating to the Starplast Point closest to you.

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DESCRIPTION, FUNCTION AND PERMITTED USE

This STARTANK transfer system has been designed for the accumulation, transport and related transfer of Diesel fuel for vehicles or mechanical devices in general (see paragraph on prohibited use).

The flow rate of about 40 liters / min is given by a self-priming volumetric vane type pump, operated by an IP 55 low voltage electric motor working at 12V DC. It has an internal By-Pass valve which keeps the system pressure below 1.3 bar (18 psi). The engine has an intermittent duty cycle of about 40 minutes. The transfer pump is already prepared with special supply cables equipped with pliers for connection to DC accumulators. The storage tank is equipped with a level indicator on sight and on the delivery of the transfer pump a digital liter-counter with LCD display is installed.



PRECAUTIONS OF USE AND FORBIDDEN USE

Improper use of this product can cause serious harm to people and even death!

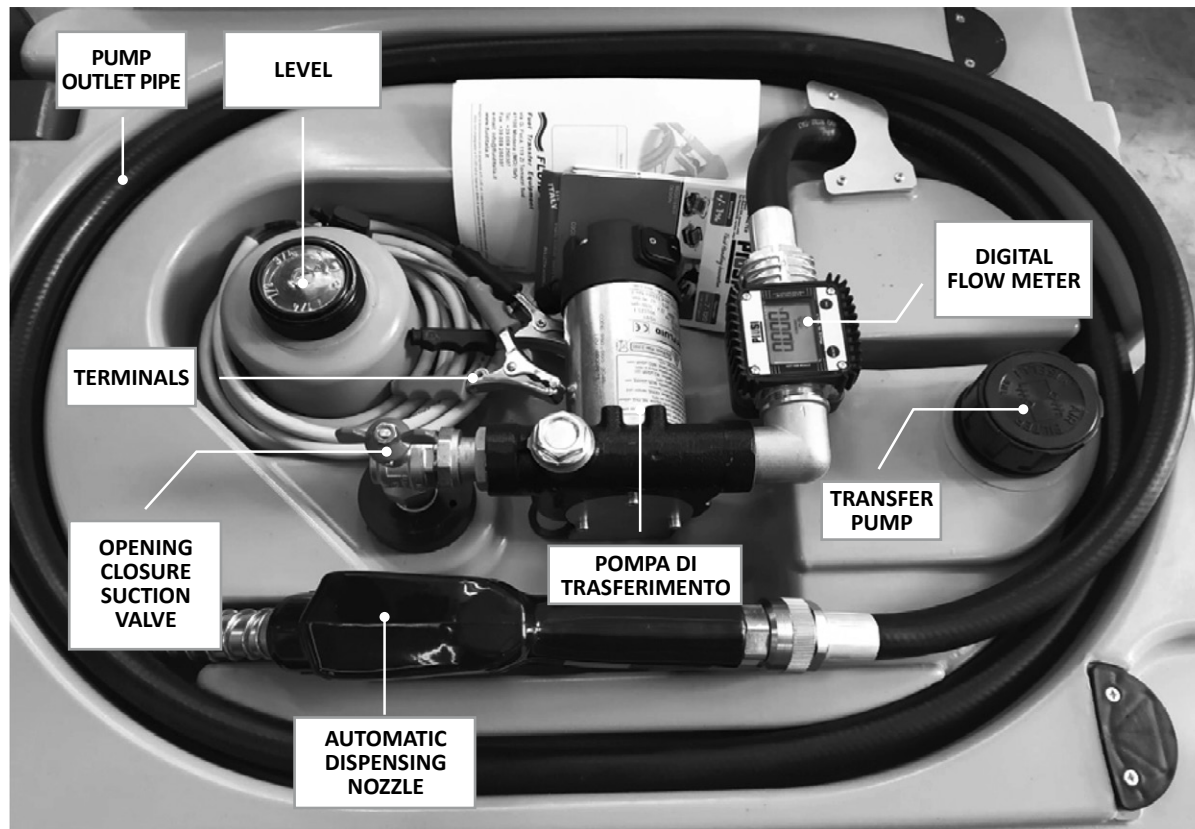
- Forbidden to use with petrol, alcohol or other liquids with a flash point below 40 ° C (104 ° F)
- Forbidden to use in dangerous places
- Forbidden to use with fluids having a viscosity higher than diesel
- Forbidden to use to transfer fluids in an aircraft
- Forbidden to use for fluids for human consumption or fluids containing water
- Forbidden to use in a continuous work cycle

GENERAL TECHNICAL DATA

GENERAL CHARACTERISTICS	STARTANK 230	STARTANK 440
Capacity (liters)	230	440
Dimensions b x h x d (mm)	800 x 600 x 700	1200 x 700 x 800
Material	Polyethylene	Polyethylene
Empty weight (kg)	26	46
Empty weight with pump set (kg)	35	55
Lid with key locks	Si	Si
Pump set power supply	12 V CC	12 V CC

ADR EXEMPTION TANK N ° 1.1.3.1.C

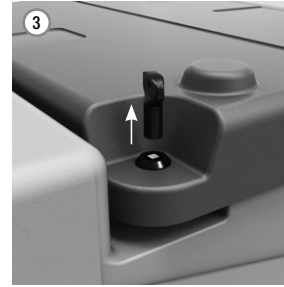
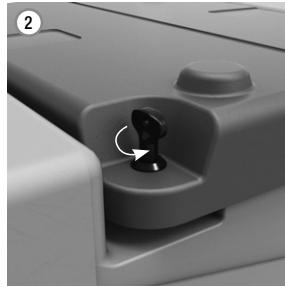
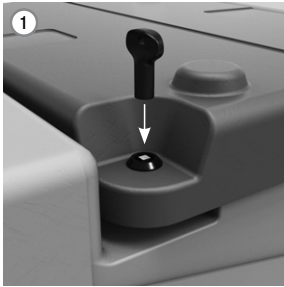
TRANSFER GROUP COMPONENTS



PRELIMINARY OPERATIONS AND USE

Before doing any type of operation, read carefully the following instructions.

- a)** Using the supplied key, open the lid and make sure the tank has not been damaged during transport.
(See figures 1-4)



- b)** Place the tank on a safe surface, in a ventilated place, making sure it is tightly fastened during transport.



ATTENTION once filled with diesel, during transport, the containment tank could move involuntarily due to the lapping force!

- Unscrew the refill cap and fill the tank with diesel fuel, checking in advance that the pump is disconnected.
For this operation wear suitable PPE such as suitable gloves and goggles.
- Once the tank is filled, close the refill cap.
- If included, calibrate the digital flow meter (see specific paragraph).

ELECTRICAL INSTALLATION DC

1. Connect the power cable clamps to a suitable battery capable of delivering the required voltage and current (see technical data at the end of this manual):
 - The RED clamp is connected to the positive (+) terminal of the battery;
 - The BLACK clamp is connected to the negative (-) terminal of the battery;
 2. If the power cord is not long enough, have it replaced by a licensed electrician.
IN ORDER TO AVOID SPARKS WHICH COULD CAUSE A FIRE, DO NOT MAKE BRACKETS TO LENGTHEN THE POWER CORD.
 3. Before using the system, clean any dirt that may have accumulated in the gun and hoses.
 4. Insert the gun into the inlet of the tank to be filled.
 5. Connect the electric cable to the power supply as previously explained in the ELECTRICAL INSTALLATION paragraph, verifying that the pump switch is in the OFF position
 6. Open the valve located at the inlet of the pump.
 7. Start the engine.
 8. Reset the flow meter if necessary
 9. Operate the gun lever to dispense liquid
 10. When the desired liquid level has been dispensed or the automatic gun has triggered, release the lever
-

11. Switch off the pump immediately
12. Reposition the gun in its housing, and rewind the power cable
13. Close the inlet valve and close the lid
14. The impeller and vanes may wear out and will need to be replaced if the pump performance decreases
15. During an extended period of non-use of the tank, empty the system and store it in a dry and clean place.

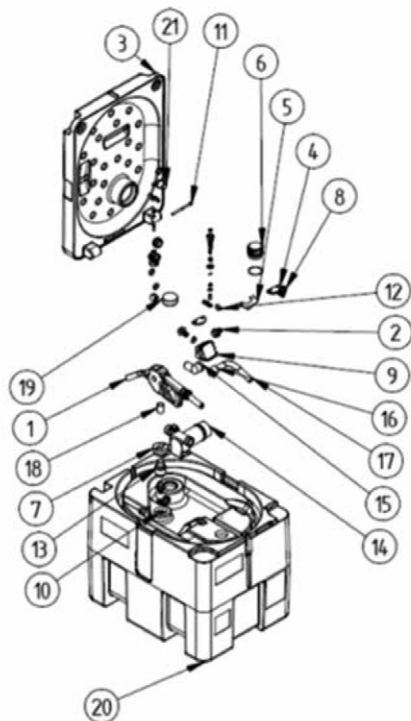
AVOID TO RUN THE PUMP DRY FOR MORE THAN THREE MINUTES

GENERAL ORDINARY MAINTENANCE OPERATIONS

Before carrying out any type of maintenance, release the pressure from the system by opening the gun, empty the hose and disconnect the power cable clamps.

- Inspect and clean the filter and pipe inlet fittings on a monthly basis.
- Clean the metal part of the pliers with a wire brush in order to maintain a good electrical connection with the battery.
- Check all pipes at least annually and replace them in case of breakage or wear.

SPARE PARTS FOR THE COMPLETE STARTANK SYSTEM



POSITION	DESCIPTION	QTY
1	pistol	1
2	1p x 20 hose connector	3
3	tank cover	1
4	insert	2
5	tube locking bracket	1
6	pressurized vent with filter	1
7	attack 2 "	1
8	manhole cover B-LOCK	2
9	digital liter counter	1
10	suction wire tube	1
11	screw M8x120	2
12	metal clamp	3
13	check valve F-M PN 25 1 "	1
14	diesel pump_00	1
15	curve M-F 90 °_1 "	1
16	sleeve F-F 1 "	1
17	gun hose I 4.9 mt	1
18	brass barrel M-M 1 "	1
19	level indicator	1
20	startank 230 Lt	1
21	ball valve	1

TRANSFER PUMP

SAFETY INFORMATION

The safety symbols listed below are used in this manual. Follow the instructions below to avoid possible accidents



DANGER

Indicates a dangerous condition which, if not avoided, can cause serious injury or even death



ATTENTION

Indicates a potentially hazardous condition which, if not avoided, can result in serious injury or even death.

For those who use the electric pump:

- Know and follow the local guidelines relating to the installation and use of electrical devices to be used for the transfer of fuel.
- Know and follow the safety precautions necessary for handling diesel and other petroleum derivatives.
- Make sure that the personnel who use the device have the necessary training in use and maintenance of the electric pump.



DANGER

This device is designed for the transfer of diesel. DO NOT USE with Petrol and Fluids with a flash point lower than 55 ° C, as any sparks could cause fires and / or fatal explosions.

The electric pump is NOT suitable for transferring food substances.

This appliance is NOT of the explosion proof type, do not use in the presence of flammable vapors.

To operate in safe conditions, it is necessary that all the devices of the transfer system are earthed, that is, a metal-to-metal connection must be made between the components, including the reservoir, pump, delivery tube, gun and tank to be refilled.



ATTENTION

This manual is an integral part of the appliance.

Before use, to make the most of the device and achieve the best results in terms of duration and operation, read carefully the instructions contained in this manual and then keep it in a safe place.

Never leave the device unattended during operation; when not in use, store the device in a suitable place, out of the reach of children.

Before carrying out any work on the device, disconnect it from the power supply.

Do not pull the cable to disconnect the terminals, but always act on the latter, never grab the terminals with wet hands.

Never tamper with the device in any way.

Observe the general rules of law for safety and accident prevention.

Always use the device correctly: inappropriate use can make it dangerous for things and / or people and / or animals.

During the transfer operations, take all the necessary precautions to avoid accidental spillage of diesel fuel; use suitable clothing to protect yourself from any unexpected splashes / spills.

Before each use, check that the appliance is perfectly efficient and functioning: in case of problems, do not use the appliance and remove the cause and, if necessary, contact the service center.

Never direct the jet of the decanted product towards people, animals or things other than those in which the product itself is to be transferred.

DECLARATION OF CONFORMITY OF TRANSFER PUMP

The undersigned, legal representative of the company:

FLUID s.r.l. - via G. Fucà, 119 - 41100 Modena - ITALY

declares that the manufacture of the devices

is in accordance with the directives:

compliant with the following European standards

(and their subsequent variants):

compliant with the following Italian standards:

FL 40 - FLC 40 - FLK 40

98/37 CEE - 73/23 CEE - 89/336 CEE

EN 292/1 - EN 6100-6-1 - EN 60335-1

EN 292/2 - EN 6100-6-3

EN 294 - EN 60204-1

DPR 547/55

Modena, lì 15/09/2007

The legal representative

Giovanni Bedoni

TECHNICAL DATA

Volumetric rotary vane electric pump, self-priming, with by-pass valve integrated in the pump body, driven by a low voltage current electric motor continuous, with IP55 protection degree.

The electric pump is designed for intermittent operation of 40 minutes.

FL 40: electric pump with power supply cables and fixing support.

FLC 40: FL 40 electric pump with switch, cable with fuse and terminals for direct connection to the battery.

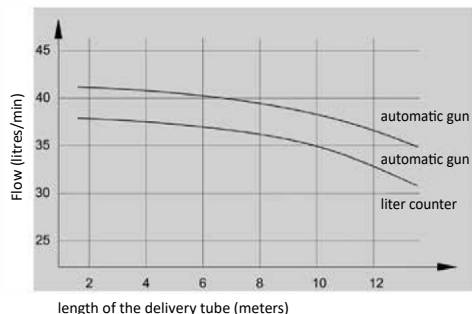
FLK 40: kit including the FLC 40 electric pump, 1" suction tube, antistatic delivery tube 3/4" and delivery gun with swivel connection.

TYPE	VOLTAGE V (+/- 5%)	MAX POWER W	NOMINAL CURRENT A	MAX CURRENT A (BY-PASS)	FUSE	CONNEC- TIONS	WEIGHT
FL 40-12	12	264	18	22	-	1"	3,6
FL 40-24	24	312	10	13	-	1"	3,6
FLC 40-12	12	234	18	22	•	1"	4,1
FLC 40-24	24	312	10	13	•	1"	4,1
FLK 40-12	12	264	19	22	•	1"	8,8
FLK 40-24	24	312	11	13	•	1"	8,8

NOISE EMISSION

Under normal working conditions, the sound pressure level, measured at a distance of 1 meter from the device, is less than 70dB.

DIESEL FLOW RATE



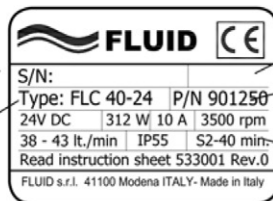
To get the maximum range from the appliance it is recommended to:

- Reduce the length of the intake ducts to a minimum delivery;
- Avoid, if possible, the presence of elbows and throttling along the line;
- Use pipes with a diameter greater than or equal to 3/4 ";
- Regularly clean the appliance filter;
- Use power extensions only if necessary and of an adequate section (sect. minimum 2x4 mmq).

Product identification

Serial number

Product description



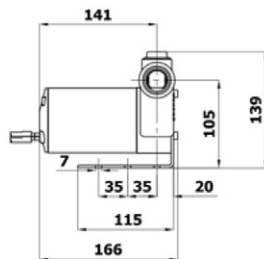
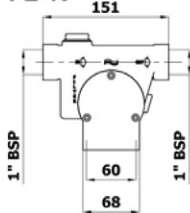
Production date

Product code

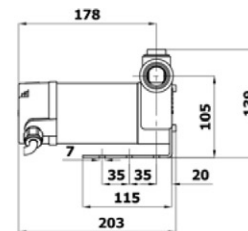
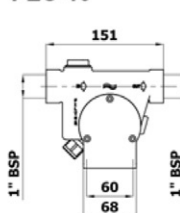
Technical data

Dimensions

FLC 40



FLC 40



INSTALLATION

DANGER

If the application requires the pouring of petrol, petroleum, or other easily flammable liquids, which require the use of explosion-proof devices, **DO NOT INSTALL THE ELECTRIC PUMP.**

Preliminary operations:

- check that the device has not been damaged during transport and that the electrical parts are perfectly intact; for damage and / or lack of parts, contact the supplier immediately;
- remove the protective lids on the suction and outlet ports;
- fix the device using the slots on the support for fastening.

ELECTRICAL CONNECTION

ATTENTION

The electrical connection must always and in any case be made in compliance with the local regulations in force and is the responsibility of who installs it to verify that this happens.

Check that the voltage of the power source corresponds to what is stated on the Technical Data plate of the appliance; failure to comply with the correct power supply voltage can cause damage to the electric pump; then check that the fuse on the power supply cable is efficient.

ATTENTION

Protect the power cord from oil, excessive heat and sharp edges; periodically check the cable and check that it is not damaged: in case of damage (crushing, cuts, peeling) immediately replace the cable with an identical one. Avoid that the device, the cable and the connectors or pliers come into contact with water and / or environments with high humidity rate. If an extension is used, use a cable with a section of at least 2x4 mmq x 5 meters in length and unwind the cable completely during use. Always connect all metal parts to earth.

FL 40-12 / 24: connect the connector (faston 6.3x0.8- female) of the brown cable to the positive pole (+) and the connector of the black cable to the negative pole (-).

FLC 40-2 / 24: Connect the red clamp.

HYDRAULIC CONNECTION

Check that the pump outlets and the suction and delivery pipes are clean, undamaged, free from encrustations and / or debris and that there are no bottlenecks. Any debris could affect the correct operation of the pump, requiring premature cleaning of the filter. The threaded connections must be of the 1" BSP type (do not use the conical threaded connections), the hydraulic connections must be hermetic, in order to avoid air and / or diesel leaks and to allow the electric pump to function properly. In general, for both the suction and delivery pipes (if they are not supplied), reduce to minimum length and use pipes suitable for diesel, antistatic, with a diameter equal to or greater than $\frac{3}{4}$ " and working pressure equal to or higher than 10 bar, moreover the suction pipe must be suitable for working in depression. When connecting, observe the correct flow of diesel fuel as indicated by the arrow on the pump body.

ATTENTION

The use of unsuitable pipes can cause harm to people and pollution, due to possible leaks of diesel fuel.

ATTENTION

The pump outlet pipes and accessories (guns, liter counters, etc.) must be earthed to discharge electrostatic currents. It is the responsibility of the installer to adopt suitable materials for the connection pipes.

USE

To start pouring, press the switch and, if present, pull the gun lever.

At the end of the delivery, turn off the device and disconnect the power supply.

DANGER

In order to prevent accidents, observe the necessary precautions during the transfer operations. Do not use the electric pump in presence of possible ignition elements such as lit cigarettes, endothermic engines turned on, heating systems turned on, etc.

ATTENTION

When using the electric pump, observe the necessary precautions to prevent electric shocks. Use the electric pump in environments with temperatures between -15 ° C and + 40 ° C, with humidity below 90%.

ATTENTION

Avoid prolonged skin contact with diesel fuel. Protect yourself from accidental spills and / or splashes of diesel by always wearing suitable individual protective equipment complying with the standards, such as goggles, gloves and boots; immediately replace wet clothing diesel fuel by washing the affected area of the body with soap and water.

This electric pump has been designed for the transfer of diesel oil with a flash point equal to or greater than 55 ° C.

DO NOT USE the electric pump for other types of fluids. The use of the electric pump with other types of fluids can damage the electric pump itself and entails the forfeiture of the warranty. The electric pump is not suitable for food uses.

DRY RUNNING

ATTENTION

DO NOT let the electric pump run dry. Running dry, even for a few minutes, damages the electric pump.

BY-PASS OPERATION

The electric pump is equipped with a by-pass valve which intervenes as soon as the supply is suspended and the engine is running. To prolong the duration of the electric pump it is recommended to minimize the by-pass operating time.

ATTENTION

A by-pass operation of more than 3 minutes causes abnormal heating of the diesel contained in the electric pump, with consequent fire / explosion risks.

MAINTENANCE

ATTENTION

Danger of electric shock: take the necessary precautions!

Always disconnect the device from the mains before carrying out any maintenance operations. Before reconnecting the device to the mains, make sure that all parts have been correctly reassembled.

The careful design and care in the construction of the device reduce maintenance operations to a minimum; it is recommended to follow the following indications:

ON A DAILY BASIS:

keep the pump clean externally to identify any leaks, check the tightness of the connections and, if it is necessary to tighten and / or eliminate leaks immediately;

Check the condition of the power supply cable: cuts, peeling or other damage require the replacement of the cable with one identical to the original, this operation must be performed by specialized personnel, in compliance with local regulations in force.

Check the condition of the suction and pump outlet pipes: cracks, cuts, swelling or other damage require the replacement of the tube with one equal to the original.

WEEKLY OR EVERY 5 HOURS OF OPERATION:

check and / or clean the filter integrated in the pump body: a clogged filter reduces the pump flow rate and compromises its duration; to remove the filter unscrew the cap (2, page 7) and extract it from its seat, clean it with a jet of air, put it back in its seat and screw the cap back on.

Every 2 years it is recommended to replace the pump outlet pipe.

TRANSPORT

urn off, disconnect the electrical, hydraulic and empty the electric pump. Pack the pump and make sure that during the transport it does not suffer shocks.

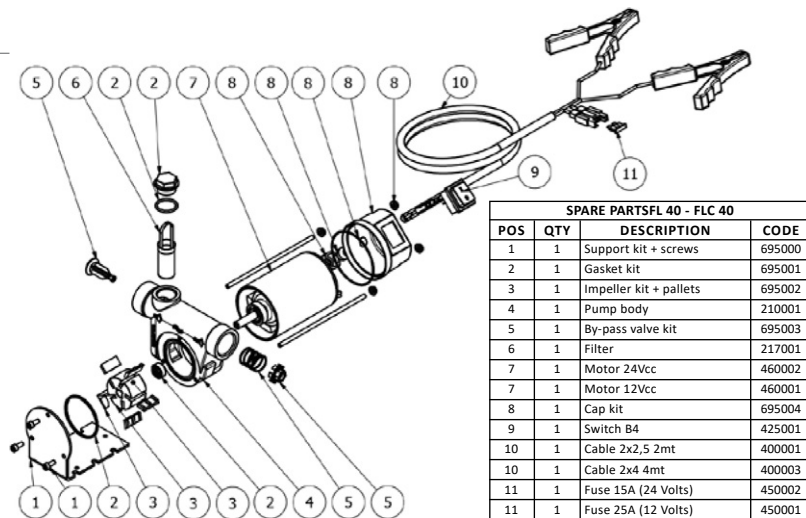
WASTE DISPOSAL

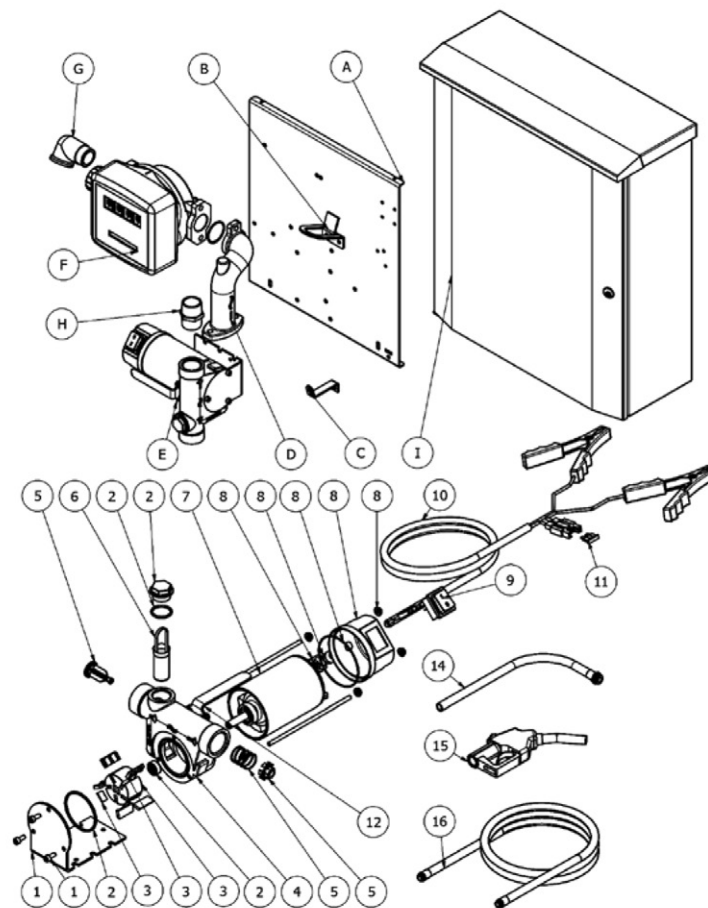
Do not disperse polluted material in the environment. Refer to local regulations for proper disposal.

DRAWBACKS AND SOLUTIONS

DRAWBACK	CAUSE	SOLUTION
The electropump does not work	Lack of voltage	Check the supply voltage. Check that the cable (and extension cables) is connected and that the fuse is intact.
The electropump has low flow and/ or it runs slowly	Voltage lower than the prescribed value	Correct the tension. If you are using extension cables, check that they have a section of at least 2x4mmq.
The electropump works but there is no flow	Low tank level Clean clogged ducts and / or dirty filter Air leaks	Fill the tank. Remove blockages and / or clean the filter. Check the joints and pipes

SPARE PARTS





	P/N	Descrizione	Description	€
A	200014	Pannello	Panel	30,00
B	200011	Fondina	Nozzle seat	7,30
C	200012	Supp. pistola	Nozzle holder	5,50
D	695036	Kit manicotto+oring	Conjunction+oring kit	21,00
E	-----	Elettropompa FLC 40	FLC 40 pump	-----
F	320701S	Contaltri	Meter	110,50
G	320101	Gomito 1" M/F	Elbow 1" M/F	8,25
H	320201	Nipplo 1"	Nipple 1"	5,00
I	608001	Armadio verniciato	Painted steel box	250,00
1	695000	Kit supporto+viti	Bracket+screws kit	6,00
2	695001	Kit guarnizioni	Gaskets kit	5,00
3	695002	Kit girante+palette	Rotor+vanes kit	9,80
3A	695002	Kit palette	Vanes kit	5,00
4	210001	Corpo pompa 40lt.	Pump body 40lt	47,00
5	695003	Kit by-pass 40lt.	40lt by-pass kit	5,00

	P/N	Descrizione	Description	€
6	217001	Filtro inox	Inox strainer	5,00
7	460001	Motore 12 Vcc	12 Vcc motor	52,00
7	460002	Motore 24 Vcc	24 Vcc motor	52,00
7a	470001	Kit spazzole	Carbon brushes kit	14,50
8	695004	Kit calotta interr.	Switch cover kit	6,50
9	425001	Interruttore B4	Switch B4	5,00
10	400001	Cavo 2x2,5mmq 2mt	2x2,5mmq 2mt cord	15,00
10	400002	Cavo 2x4mmq 4mt	2x4mmq 4mt cord	26,50
11	450001	Fusibile 25A (12V)	Fuse 25A (12V)	2,50
11	450002	Fusibile 15A (24V)	Fuse 15A (24V)	2,50
12	695012	Kit manico+viti	Handle + screws kit	5,00
14	990201	Tubo aspirazione 2mt	Suction hose 2mt	39,88
15	320601	Pistola autom. 60lt	Autom. nozzle 60lt	45,00
15	321601	Pistola alu man. 80lt	Manual nozzle 80lt	19,00
16	990104	Tubo 3/4" 4mt racc.1"	Delivery hose 1"-4mt	22,10

DIGITAL LITER COUNTER

CONFORMITY DECLARATION

The undersigned: PIUSI S.p.A - Via Pacinotti 16/A z.i.Rangavino, 46029 Suzzara (MN) - ITALY

DECLARES

under its own responsibility, that the equipment described below:

Description: Liter counter

Model: K24

Serial number: refer to the Lot Number shown on the CE plate affixed to the product

Year of construction: refer to the year of production shown on the CE plate affixed to the product.

complies with the legislative provisions transposing the directives:

- Electromagnetic Compatibility Directive 2014/30 / EU

The documentation is available to the competent authority upon a reasoned request from Piusi S.p.A. or by requesting it at the address e-mail: doc_tec@piusi.com.

The person authorized to compile the technical file and to draw up the declaration is Otto Varini as legal representative.

Suzzara, 20/04/2016

Legal Representative

Otto Varini

GENERAL WARNINGS

Important warnings

To safeguard the safety of operators, to avoid possible damage and before performing any operation, it is essential to have read the entire instruction manual.

Symbology used in this manual

The following symbols will be used throughout the manual to highlight indications and particularly important warnings:



ATTENTION

This symbol indicates accident prevention regulations for operators and / or any exposed persons.



CAREFUL

This symbol indicates that there is a possibility of causing damage to the equipment and / or their components.



NOTES

This symbol indicates useful information.

CONSERVATION OF THE MANUAL

This manual must be complete and legible in its entirety, by the end user and the technicians specialists authorized for installation and maintenance, who must be able to consult it anytime.

SAFETY INSTRUCTIONS

SAFETY INSTRUCTIONS

ATTENTION

Electricity net-
verifications
before installation



By all means, avoid the contact between the electrical supply and the liquid to be pumped.

***Control interventions
maintenance***

Before any inspection or maintenance, disconnect the POWER

***For security purposes,
respect
notices and
warnings below
specified before
starting
the liter counter***

When using flammable liquids, observe the precautions against fire or hazards explosion

In case of transfer of dangerous liquids, always follow the safety precautions of the manufacturer of the liquid

Always dispose of solvents used for cleaning safely, according to the manufacturer's instructions of the solvent

During the removal of the liter counter, liquid may leak. Follow the safety precautions of the liquid manufacturer for cleaning up small spills

Do not blow compressed air through the liter counter

Prevent liquids from drying out inside the liter counter

Use the equipment only in well ventilated areas.

FIRE AND EXPLOSIONS

Where flammable liquids are present in the area of work, such as gasoline and washer fluids, it is necessary to be aware of the fact that flammable vapors can ignite or explode. To prevent fires and explosions:



Eliminate all sources of fire such as cigarettes and portable lamps

Keep the work area free from impurities, and from spilled rags and containers of solvent and petrol or open.

Do not plug or unplug power cords or turn lights on or off when flammable vapors are present

Ground all equipment in the work area

Stop the operations immediately in case of static discharge or if you feel a shock

Do not use the equipment until the problem has been identified and corrected

Keep a working fire extinguisher in the work area

IMPROPER USE OF THE EQUIPMENT

Improper use can cause death or serious injury



Do not operate the unit when fatigued or under the influence of drugs or alcohol

Do not leave the work area while the equipment is under tension or pressure

Turn off all equipment when not in use.

Do not alter or modify the equipment.

Alterations or modifications to the equipment can render void approvals and cause safety hazards

Route pipes and cables away from traffic, sharp edges, moving parts, and hot surfaces

Do not twist or excessively bend the hoses or use hoses to pull the equipment

Keep children and animals away from the work area

Comply with all safety regulations in force

Danger of liquids or toxic fumes



Read the safety data sheet to know the specific risks of the liquids used

Store hazardous liquids in approved containers, and dispose of in accordance with guidelines applicable

Prolonged contact with the treated product can cause skin irritation: always wear protective gloves during dispensing

FIRST AID RULES

NOTE

For specific information, refer to the product safety data sheets

NOT SMOKING

During the dispensing operation, do not smoke and do not use open flames

ATTENTION

When measuring flammable liquids, take fire prevention precautions and explosions

When using hazardous liquids, follow the safety and prevention notes on the safety data sheet of the treated liquid

Do not immerse the meter

GENERAL SAFETY RULES

Characteristics essential of the equipment of protection

Wear protective equipment that is:
Suitable for the operations to be carried out;
Resistant to cleaning products.

Devices of individual protection to wear

During the handling and installation phases, wear the following individual protection devices:



safety shoes;



clothing that is close to the body;



protective gloves;



safety glasses;

Protection devices



instructions manual

WARNING



In the event of transfer of hazardous liquids, always follow the Liquid manufacturer's Safety Precautions. Wear protective clothing, such as goggles, gloves, and a mask as prescribed.

When using flammable liquids, observe the precautions against fire or hazards explosion. Do not measure liquids in the presence of ignition sources, including running or hot engines, lit cigarettes, or electric or gas heaters.

GETTING TO KNOW K24

PREMISE

Digital electronic liter-counter equipped with a turbine measuring system, designed for precision measurement of low viscosity fluids. K24 is a bi-directional meter with LCD display and buttons calibration with aluminum body (conductive) and designed for high flow rates (120 l / min - 32 GPM). K24 is available in 2 variants:

- 1 METER - with LCD display and calibration buttons**
- 2 PULSER - single-channel impulse, connectable with a Meter.**

COMPATIBLE LIQUIDS

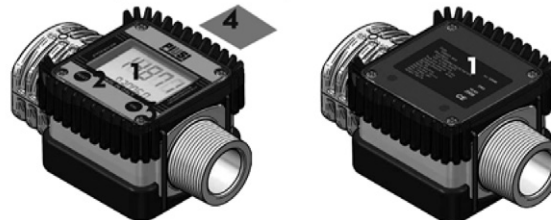
Turbine measurement system

The turbine is positioned inside a hole that crosses the body of the K24 and equipped with an inlet and M-F threaded outlet. The liquids compatible with K24 ARE low viscosity and precisely the following:
DIESEL

ATTENTION

NEVER USE WITH LIQUIDS DIFFERENT FROM THOSE INDICATED.

<i>Main components K24 METER</i>		<i>Main components K24 Pulser</i>
1. Display LCD	3. Button CAL	1. Technical data plate
2. Button RESET	4. Technical data plate	



ATTENTION



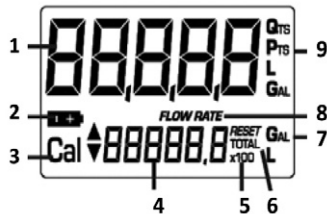
LIMITATIONS ON THE USE OF THE PLANT IT IS FORBIDDEN:

1. To use the equipment in a construction configuration different from the one indicated by the manufacturer.
2. To use the equipment with fixed guards tampered with or removed.
3. To integrate other systems and / or equipment not considered by the manufacturer in the executive project.
4. Connect the equipment to energy sources other than those provided by the manufacturer
5. To use commercial devices for a purpose other than those intended by the manufacturer.
6. Do not use in the presence of lightning

LCD DISPLAY (METER ONLY)

PREMISE

The “LCD” of the liter-counter is equipped with two numerical registers and various indications that are displayed to the user only if the function of the moment requires it



1 . Partial register (5 digits of shifting point from 0.1 to 99999), indicating the volume delivered since the last time the reset button was pushed.

2 . Partial register (5 digits of shifting point from 0.1 to 99999), indicating the volume delivered since the last time the reset button was pushed.

3. Indication of mode calibration.

4 . Totals register (6 digits of shifting point from 0.1 to 999999), which can indicate two types of total: 4.1. Grand total not resettable (total). 4.2. Total resettable (total reset).

5. Indication of the multiplication factor of totals (x10 / x100) reset button.

6. Indication of the type of total, (total / reset total).

7. Indication of the unit for measuring the totals: l = liters gal = gallons.

8. Indication of the unit of measure of the partial: qts = quarters; pts = pints; l = liters; gal = gallons.

9. Mode indication “Flow Rate”

DISPLAY ORIENTATION (METER VERSION ONLY)

Premise

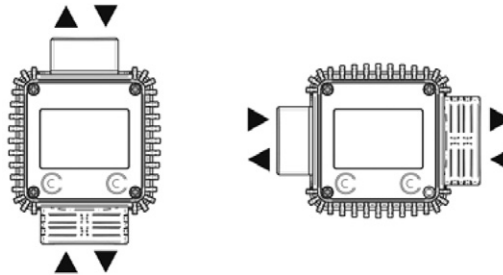
The square shape of the K24 body allows the card to be rotated in its housing thus ensuring great versatility of orientation.

This allows easy reading of the display in all positions. The housing of the card is closed by a plastic cover with sealing guaranteed by the rubber protection which is also a gasket. The whole thing can be easily removed by unscrewing the 4 screws that secure the cover and board (1).

ATTENTION



When fixing the K24 board, it is important to make sure that the battery contact cable is not positioned above the circular housing of the ampoule.



USER BUTTONS - LEGEND

Premise

K24 is equipped with two buttons (RESET and CAL) which perform, individually, two main functions and, in combination, other secondary functions.

**MAIN
FEATURES**

- For the RESET key, the resetting of the partial register and that of the resettable total (reset total)
- For the CAL key, it is the entry into the instrument calibration mode

**SECONDARY
FUNCTIONS**

Used in combination, the two keys allow you to enter configuration mode (configuration mode), useful for changes to the unit of measurement and the calibration factor.

LEGEND

CALIBRATING MEANS OPERATING ACTIONS ON THE METER KEYS. BELOW IS THE LEGEND RELATED TO THE SYMBOLS USED TO DESCRIBE THE ACTIONS TO BE PERFORMED

LIGHT
PUSH
OF THE
KEY CAL



PROLONGED
PUSH
OF THE
KEY CAL



LIGHT
PUSH
OF THE
KEY RESET



PROLONGED
PUSH
OF THE
KEY RESET



METHOD OF USE

**METHOD
OF USE**

The user can choose between two different modes of use: The liter-counter is equipped with a non-volatile memory that allows to keep the archived data of the transfers made even in the event of a complete absence of power for long periods.

1 - Normal Mode

mode with display of the partial and total quantities dispensed

2 - Flow rate Mode

mode with visualization of the instantaneous flow rate, as well as of the partial quantity dispensed

DAILY USE

Premise

The only daily operations that are performed are the resetting of the registers of the partial and / or total that can be reset. Occasionally it may be necessary to configure or calibrate the liter counter. In this regard, refer to the specific chapters.

The two typical displays of normal operation are shown below. In a screen the partial register and the resettable total register (reset total) are shown. In the other, the partial and the general total are shown. Switching between viewing the resettable total and of the general total is automatic and is linked to phases and timings set in the factory and not editable.



NOTE



The digits available for the totals are 6 plus two x 10 / x100 icons increment is as follows: 0.0 -> 99999.9 -> 999999 -> 100000 X 10 -> 999999 x 10 -> 100000 x 100 -> 999999 x 100

DISPENSING IN NORMAL MODE

Premise

Normal mode is the standard dispensing. While counting, the “partial dispensed” and the “resettable total” (reset total) are displayed simultaneously.

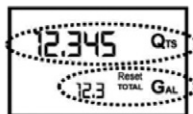


Accidentally pushing the buttons during the dispensing has no effect.

STAND BY

A few seconds after the end of the dispensing, on the lower register, the display changes from “total resettable” to the “general total”: the reset message above the total message disappears, and the value of “resettable total”, is replaced by the “general total”.

This situation is called rest (or STAND-BY) and remains stable until the user perform other operations.



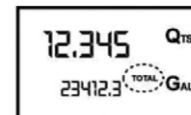
RESETTING THE PARTIAL

The Partial Register can be reset by pressing the RESET key when the liter-counter is in Stand-by, that is when the display shows the word “TOTAL”

After pressing the RESET key, during the reset phase, the display shows first all the lit digits in succession, then all the off digits

At the end of the process, a screen is first shown that presents the Partial Reset and the Reset Total

and, after a few moments, the Reset Total is replaced by the NON Total resettable (Total)



TOTAL RESET

The reset operation of the Reset Total can only be carried out after a reset of the register of the Partial. In fact, the Reset Total can be reset by pushing the RESET key for a long time while the display shows RESET TOTAL as in the following screen:

Schematically, the steps to follow are:

1. *Wait until the display is in the normal stand-by screen (with only Total displayed)*

2. *Briefly push the RESET button*
3. *The liter-counter begins its phases of partial reset*
4. *While the Reset Total screen is displayed push the Reset button again for at least 1 second*
5. *The shows again all segments of the display, followed by the phase with all segments off to turn, then, to the screen where the clear Reset Total is displayed*



DISPENSING WITH INSTANT FLOW RATE MODE DISPLAY (FLOW RATE MODE)

It is possible to dispense by simultaneously viewing:

1. *the dispensed partial*
2. *the Flow Rate in [Partial Unit / minute]
as shown in the screen ON THE SIDE*



Procedure to enter this mode:

1. *wait for the Meter to be in Stand-By, i.e. until it only displays the Total*
2. *briefly push the CAL key*
3. *Start dispensing*

The instantaneous flow rate is updated every 0.7 seconds. Therefore at lower flow rates you will be able to have a relatively unstable display. The higher the flow rate, the greater the stability of the read value.

NOTE



The flow rate is measured with reference to the unit of measurement of the Partial. For this reason, if the unit of measurement of the Partial and of the Total were different, as in the example below, it is necessary remember that the indicated flow rate is relative to the unit of measurement of the partial. In the example shown, the flow rate is expressed in Qts / min.



The word "Gal" which remains next to the flow rate refers to the register of the Totals (Resettable or NOT Resettable) that are again displayed when exiting the range reading mode.

To return to the "Normal" mode, push the button CAL again. Accidentally pushing of one of the two RESET or CAL keys during the count has no effect.

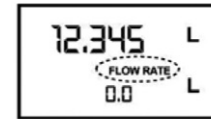
NOTE



Even if they are not displayed in this mode, both the total resettable (Reset Total) and the General Total (Total) increase. It is possible to check their value after the end of the supply, returning to the "Normal" mode, by briefly pressing the CAL key.

RESETTING THE PARTIAL (FLOW RATE)

To reset the Partial Register it is necessary to terminate the dispensing, wait for the Meter to indicate a Flow Rate of 0.0 as indicated in the picture and then briefly push the RESET key.



CALIBRATION

When operating close to the extreme conditions of use or range, (close to the minimum or maximum values of the allowed range), it may be advisable to carry out a calibration in the field, carried out in the real conditions in which K24 has to work.

DEFINITIONS

CALIBRATION FACTOR OR "K FACTOR"

Multiplication factor that the system applies to the electrical impulses received, to transform them into units of measured fluid.

FACTORY K FACTOR

Factory default calibration factor. It is equal to 1,000.
 This calibration factor ensures maximum accuracy under the following conditions of use
DIESEL fluid
Temperature: 20 °C
Flow rate: 50 liters / min (13 GPM)

Even after any changes by the user, through a simple procedure, it is possible restore the factory calibration factor.

USER K FACTOR:

User-customized calibration factor, or modified by a calibration.

CALIBRATION MODE

Why calibrating?

1. To view the currently used calibration factor
2. To return to the factory k factor after a previous calibration with user k factor
3. To Change the calibration factor through one of the two procedures indicated above

Premise

It is possible to carry out a quick and precise electronic calibration by changing the k factor. There are 2 calibration methods:

1. Calibration in the field, performed through a dispensing
2. Direct calibration, performed through a direct modification of the k factor

In calibration mode, the partial dispensed and cumulative indications on the display take on different meanings depending on the step of the calibration procedure. During calibration, the liter counter cannot make normal dispensing. In calibration mode the totals are not incremented.

NOTE



The K24 is equipped with a non-volatile memory. This keeps calibration and dispensing data in memory even after battery replacement or long periods of non-use.

CURRENT "K FACTOR" DISPLAY AND RESET OF THE "FACTORY K FACTOR"

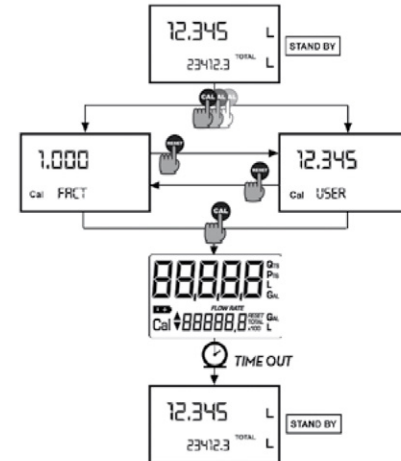


By pushing and holding the CAL key while the liter-counter is in standby, the screen showing the calibration factor currently used is displayed. If you are using it with the "factory k factor", with the word "fact". The screen represented in the diagram will be shown.

Instead, if a "user k factor" has been set, the calibration factor set by the user will be displayed (in our example 0.998). The word "user" shows that you are using the calibration factor set by the user.



The diagram ON THE SIDE shows the logic behind the passage from screen to screen. In this condition, the reset button allows to switch from the user factor to the factory. To confirm the choice of the calibration factor, push cal briefly while the "user" or the "fact" is displayed. After the restart cycle the liter counter will use the calibration factor that has just confirmed.



NOTE

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

FIELD CALIBRATION

Premise

This procedure involves dispensing the fluid into a real-world operating conditions graduated sample container (flow rate, viscosity, etc.) to which maximum precision is required.

NOTE

To obtain a correct calibration of the k24 it is essential to:

- 1. Completely eliminate the air from the system before carrying out the calibration***
- 2. Use a precise sample container with a capacity of no less than 5 liters, equipped with an accurate graduated indication***
- 3. Carry out the calibration delivery at a constant flow rate equal to that of normal use, up to the filling of the container***
- 4. Do not reduce the flow rate to reach the graduated area of the container in the final dispensing phase (the correct technique in the final stages of filling the sample container consists in carrying out short top-ups within the flow rate of normal use)***
- 5. At the end of the dispensing wait a few minutes to make sure that any air bubbles are removed from the sample container; read the true value only at the end of this phase, during which a lowering of the level in the container might happen***
- 6. If necessary, carefully follow the procedure below***

PROCEDURE TO PERFORM FIELD CALIBRATION

ACTION		DISPLAY
1	NOTHING stand by	
2	 LONG PRESS ON THE CAL BUTTON enters the calibration mode, shows the indication of “CAL” and displays the calibration factor in place of the cumulative total. “FACT” and “USER” indicate which of the two factors is currently in use.	
3	 LONG PRESS ON THE RESET BUTTON shows the indication of “CAL” and the subtotal to zero. Meter is ready to perform field calibration.	
4	DELIVERY IN THE SAMPLE VESSEL Without pressing any BUTTON, start the delivery in the sample vessel. Delivery can be interrupted and resumed as you want. Continue dispensing until fluid level in the sample vessel reach the graduated zone. It is not necessary reach a set amount.	 Indicated value Real value

5



SHORT PRESS ON RESET BUTTON

K24 is informed that the calibration delivery is finished. Make sure the supply is properly finished before this action. To calibrate, the value indicated by the partial totalizer (example 9,800) must be forced to the actual value marked by the graduated sample vessel. An arrow appears at the bottom left of the display (pointing upwards or downwards), showing the direction (in increase or decrease) of the value variation of the USER K FACTOR, when actions 6 or 7 are performed.



6



SHORT PRESS ON RESET BUTTON

Change the direction of the arrow. This action can be repeated as necessary.



7



SHORT/LONG PRESS ON CAL BUTTON

The indicated value changes in the direction defined by the arrow - one unit for each SHORT PRESS of the CAL button - continuously if the CAL key is kept pressed. (for the first 5 units with slow performance, then with a fast progress). If you exceed the desired value, repeat actions from point (6).



8



LONG PRESS ON RESET BUTTON

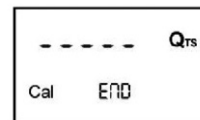
Meter is so informed that the procedure calibration is over. Before making this operation, be careful that the value INDICATED, is equal to the REAL value.






Indicated
value



Real
value



ACTION		DISPLAY
<p>8</p> 	<p>K24 calculates the new USER K FACTOR. This calculation may require a few seconds, because of the correction that must be performed. During this phase, the arrow disappears but the CAL indication remains.</p> <p>WARNING: If this operation is made after action (5), without changing the indicated value, USER K FACTOR would results the same as FACTORY K FACTOR, so it is ignored.</p>	
<p>9</p>	<p>NO ACTION</p> <p>At th end of the calculation the new USER K FACTOR is shown for a few seconds after which the restart cycle is repeated to finally reach the standby condition.</p> <p>ATTENTION: Starting from this moment, the one indicated will become the calibration factor used by the litre-counter and will remain so even after any replacement of the batteries.</p>	
<p>10</p>	<p>NO ACTION</p> <p>Meter memorises the new work calibration factor and it is ready for the delivery, using USER K FACTOR just calculated.</p>	

DIRECT MODIFICATION

If the normal use of K24 shows an average percentage error, this can be corrected by applying to the calibration factor currently in use, a correction of same percentage. In this case the percentage correction of the USER K FACTOR, must be calculated by the operator as follows:

NEW CALIBRATION FACTOR = OLD CALIBRATION FACTOR * (100 - E% / 100)






EXAMPLE:









Percentage of error found: E%-0.9%

CURRENT caibration factor: 1000

New USER K FACTOR: $1000 * [(100 - (-0,9)) / 100] = 1000 * [(100 + 0,9) / 100] = 1009$

If the litre counter indicates less than the actual output (negative error) the new calibration factor shall be greater than old as shown by the example. Vice versa if the litre counter indicates more than the real value paid (positive error).

ACTION		DISPLAY
1	<p>NO ACTION Meter in normal mode, not in counting.</p>	
2	 <p>LONG PRESS ON CAL BUTTON Meter enter calibration mode, and the calibration factor is shown in use, instead of partial one. Writings “Fact” or “USER” indicate which of the two factors (work or factory) is currently in use.</p>	
3	 <p>LONG PRESS ON RESET BUTTON Meter shows “CAL” indication and the partial total at zero. Meter is ready to perform field calibration via dispensing.</p>	

ACTION		DISPLAY
<p>4</p> 	<p>LONG PRESS ON RESET BUTTON Switch to direct modification of calibration factor: "Direct" writing is shown and calibration factor Currently in Use. At the bottom left of the display an arrow is shown (pointing upwards or downwards) that defines the direction (increase or decrease) of the variation of the shown value when following actions 5 or 6 are performed.</p>	
<p>5</p> 	<p>SHORT/LONG PRESS ON CAL BUTTON The direction of the arrow changes. The action can be repeated to alternate arrow's direction.</p>	
<p>6</p> 	<p>SHORT/LONG PRESS ON CAL BUTTON The indicated value changes in the direction defined by the arrow - a unit for every SHORT PRESS on the CAL button - continuously if the CAL button is kept pressed. The increase's rate increases if the button is kept pressed. If you exceed the wanted value, repeat the actions from point (5).</p>	
<p>7</p> 	<p>LONG PRESS ON RESET BUTTON Meter is informed that the calibration procedure has ended. Before making this operation, pay attention that the indicated value is the one that you want.</p>	

8

NO ACTION

At the end of the calculation the new USER K FACTOR is shown for a few second, then the restart cycle is repeated to finally reach the stand-by condition.



WARNING: From this moment, the indicated one will become the calibration factor used by Meter and will remain that even after a possible battery substitution.

9

NO ACTION

Meter memorises the new work calibration factor and it is ready for dispensing, using the newly calculated USER K FACTOR.



LITER COUNTER CONFIGURATION

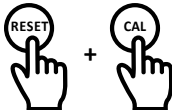
Some models are provided with a menù, with which the user can select the main unit of measurements, quarts (qts), pints (pts), litres (lit), gallons (gal).

The combination between units of measurements of artial register and the totals one is predefined according to the following table:

N° COMBINATION	UNITS OF MEASUREMENTS OF PARTIAL REGISTER	UNITS OF MEASUREMENTS OF TOTALS REGISTER
1	Litri (Lit)	Litri (Lit)
2	Galloni (Gal)	Galloni (Gal)
3	Quarti (Qts)	Galloni (Gal)
4	Pinte (Pts)	Galloni (Gal)

TO CHOOSE BETWEEN ONE OF THE 4 PROPOSED COMBINATIONS:

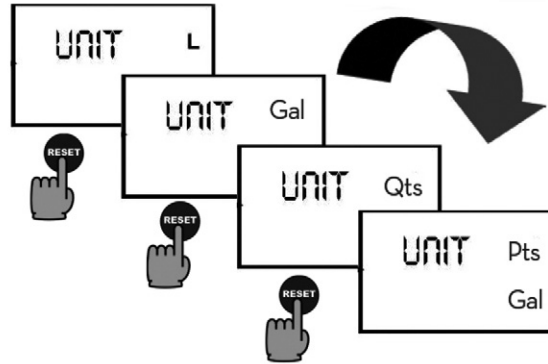
1 Wait for the Liter counter to be on stand-by phase

2  Press simultaneously CAL and RESET buttons and keep pressing them until writing “unit” and the unit of measurements set in that moment (in this example litres/litres) appear

3



Press reset button to choose the wanted combination of units of measurements, between the illustrated ones below



4



Memorise the new combination by long pressing the CAL button
K24 will pass to the start-up cycle, and will be ready to dispense in the set units

NOTE



Resettable Total and Total registers will be automatically converted in the new unit of measurement. Modifications of Unit of Measurement DOES NOT make doing a new calibration necessary.

MAINTENANCE

Batteries substitutio

Use 2 alkaline batteries size AAA 1,5 volt

WARNING





It is good practice to install K24 in a convenient position to allow battery replacement without having to disassemble it from the plant.

BATTERIES

Check batteries and terminals at least once a year to guarantee a correct functioning. It is strongly recommended to clean terminals once a year.

LITER COUNTER IS PROVIDED WITH TWO LOW BATTERY ALARM LEVELS

- 

When the battery charge drops below first level, on the LCD a fixed battery symbol. In this condition K24 continues to work properly, but the fixed icon warns the user that it is RECOMMENDED substituting the batteries.
 - 

If K24 is still being used without substituting the batteries, the second battery alarm level that inhibits the functioning is reached. In this condition the battery icon becomes flashing and remains the only one shown on the LCD.
-

TO REMOVE THE BATTERY:

WARNING



During liter counter removal, leakage of liquid may occur. Follow the liquid manufacturer's safety precautions for cleaning small spills.

NOTE

- 1. Make sure that all the liquid has come out of the liter counter. This could include the discharge from the flexible pipe, liter counter, dispensing nozzle or pipe.*

STAND BY

2. *Wear protective clothing as requested, loosen the two ends of the lutre counter. The use of torque wrenches should be reserved exclusively to plane metal surfaces of the litre counter.*
3. *If the litre counter isn't immediatley reinstalled, close the end of the tube or piping to prevent leakings.*

To substitute the batteries, with reference to exploded drwaing positions, proceed as follows

1. *Press reset button to update all totals*
2. *Unscrew the 4 fixing screws of the bottom cover*
3. *Remove the spent batteries and release the connector.*
4. *Put the new batteries in the position of the previous ones (be sure to insert the battery into the correct position)*
5. *Close the lid by repositioning the rubber protection as a gasket*
6. *K24 will turn on automatically and the normal use can restart*

METER will display the same RESETTABLE TOTAL, the same TOTAL and the same PARTIAL indicated before replacing the batteries. After battery replacement, no re-calibration of the liter counter is required

NOTE

For no reason blow compressed air through the liter counter. It could damage the rotor.

CLEANING OF THE TURBINE

Remove any residue, using liquid or with the aid of mechanical action. If this cleaning can't succeed in restoring a fluid rotation of the turbine, its substitution will be necessary.

WARNING

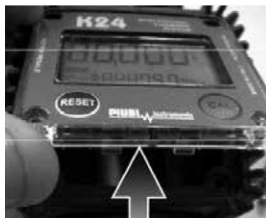
Do not use compressed air on the turbine to avoid damage due t excessive rotation.

Do not throw dead batteries in the enviroment.

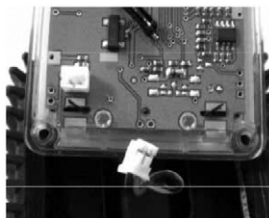
STORAGE

Follow liquid manufacturer's instructions for the disposal of contaminant solvents for cleaning.

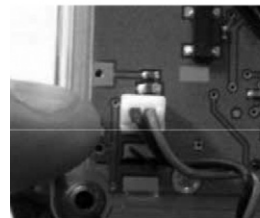
CARD REPLACEMENT



1 - Carefully unscrew the front panel from the body of the litre counter.



2 - Disconnect the power cable from the board, then remove it.



3 - Substitute the card, paying attention that the power cable is correctly connected to the new card.



4 - Reposition new card and front panel on the counter, paying particular attention to properly accommodate the cable.

MALFUNCTION

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
LCD: absent indications	Bad contact of the batteries	Control battery's contacts
Insufficient measurement accuracy	Wrong K FACTOR	Referring to paragraph H, check the K FACTOR
	The liter counter works under the minimum acceptable rate	Increase the rate, until reaching cceptable rates field
Reduced or no flow rate	Blocked TURBINE	Clean the TURBINE

Insufficient measurement accuracy	Wrong installation of the meter after cleaning	Repeat reassemble procedure
	Possible problems of the electronic card	Contact Your reseller
K24 doesn't turn on	Dead battery or installed in the wrong position	Verify the battery charge and/or check its position

DEMOLITION AND DISPOSAL

Premise

In case of system's demolitio, its parts must be entrusted to companies specialised in disposal and recycle of industrial waste and, in particular:

Disposal of the packaging

The packaging is composed of biodegradable cardboard that can be delivered to companies for the normal reuse of cellulose

Disposal of mechanical parts

Metallic parts, both painted and stainless steel ones, are normally recoverable by specialised companies in the metals' scrapping

Disposal of electric and electrical components

They must be disposed of by companies specialised in disposal of electronical components, in accordance with Directive 2012/19/EU (see directive text below).

Information relating to the enviroment for customers resident in the European Union



The European Directive 2012/19/EU requires that equipment marked with this symbol on the product and/or packaging is not disposed of together with unsorted municipal waste. The symbol indicates that this product should not be disposed of together with normal household waste. It is the owner's responsibility to dispose of both these products and other electrical and electronic equipment through specific collection facilities designated by the government or local public authorities.

The disposal of Waste Electronic and Electrical Equipment (WEEE) as household waste is strictly prohibited. This type of waste must be disposed of separately.

Any hazardous substances present in electrical and electronic equipment and/or incorrect use of such equipment may have serious consequences for the environment and human health.

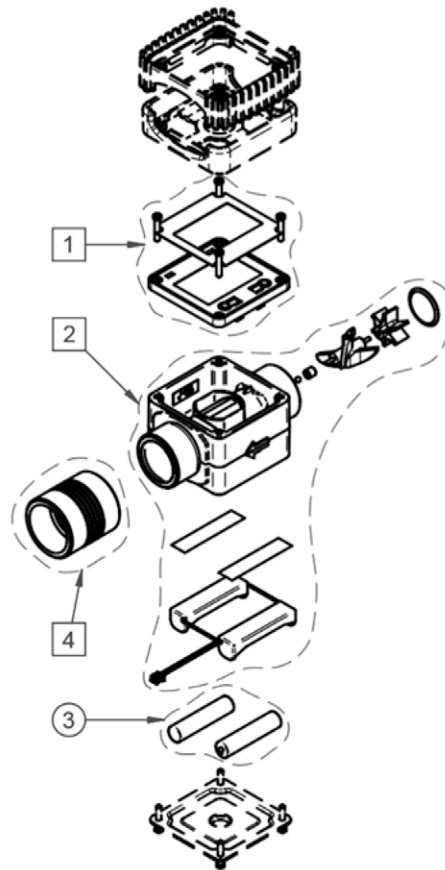
In the event of improper disposal of such waste, the penalties provided for by current legislation may be applied

***Disposal of
additional parts***

Additional parts constituting the product, like pipes, rubber gaskets, plastic parts and wiring, are to be entrusted to companies specialised in industrial waste disposal.

TECHNICAL DATA

MEASUREMENT SYSTEM	TURBINE
Resolution	0.010 litres/impulse
Rate (Field)	7 ÷ 120 (litres/minute)
Operating pressure (Max)	20 (Bar)
Burst pressure (Min)	100 (Bar)
Storage temperature (Field)	-20 ÷ + 70 (°C)
Storage humidity (Max)	95 (% RU)
Operating temperature	-10 ÷ + 50 (°C)
Load loss	0.30 Bar a 100 litres/minute
Admitted viscosity (Field)	2 ÷ 5.35 cSt
Precision (between 10 and 90 l/min)	+/- 1 (%) of the indicated value after calibration
Repeatability (Tipic)	+/- 0,3 (%)
Display (meter)	Liquid crystal LCD Equipped with: - 5-digit partial - resettable total to 6 digit more x10 / x100 - non-resettable total to 6 digit more x10 / x100
Power supply	alkaline batteries size AAA 1,5 volt
Battery life	24 months
Wegh	0.4 Kg (batteries included)
Impermeability grade	P65
Ampoule (Pulser)	Max current: 100 mA
Max Voltage	28V
MaxLoad	3V



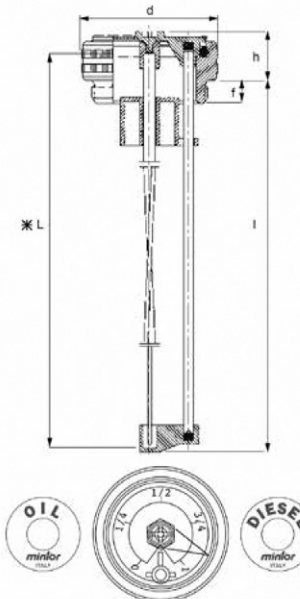
SPARE PARTS LIST CODE F00408100 - K24-A M/F 1 BSP

POS	CODE	DESCRIPTION	Q.TY	UNIT PRICE	DIVISA	DRAWING
0001	R17964000	LT CARD + COVER + PLATE K24 ALLUM	1	118,80	EUR	
0002	R19402000	BODY K24 ALLUM BSP + TURBINE PVDF	1	80,60	EUR	
0003	R10234000	KIT NR.2 ALKALINE BATTERY 1.5 V AAA	1	5,00	EUR	

VISIBLE LEVEL INDICATOR WITH FLOAT

Composed of an aluminium alloy male cap complete with visual dial of polyamide. Equipped with float, allows a precise and constant indication of the level of the liquid contained in the tank. Suitably designed for application on agricultural machinery, road construction, earthmoving and hydraulic power plants.

Supplied complete with O-ring. Operating temperature 80, max C. On request with vent hole or in different colors. Avoid contact with alcohol, solvents, trieline, and glycol.



Patented model

CODE	COD. OIL	COD. DIESEL	GAS	L*	d	h	f	l
TC/ZLG1G	1LGTM304	1LGTM300	2"	200	70	25	12	192
TC/ZLG2G	1LGTM305	1LGTM301	2"	300	70	25	12	292
TC/ZLG3G	1LGTM306	1LGTM302	2"	350	70	25	12	342
TC/ZLG4G	1LGTM307	1LGTM303	2"	400	70	25	12	392

CODE	COD. OIL	COD. DIESEL	METER	L*	d	h	f	l
TC/ZLG1M	1LGTM404	1LGTM400	60 x 2	200	70	25	12	192
TC/ZLG2M	1LGTM405	1LGTM401	60 x 2	300	70	25	12	292
TC/ZLG3M	1LGTM406	1LGTM402	60 x 2	350	70	25	12	342
TC/ZLG4M	1LGTM407	1LGTM403	60 x 2	400	70	25	12	392

* variable measure on customer request (max 90 mm, minimum measure 180 mm)

STARTANK CONFORMITY DECLARATION

STARPLAST SRL - via dell'Artigianato 43 - 61028 Mercatale di Sassocorvaro Auditore (PU) Italia

DECLARES

that STARTANK system is designed according to the regulations of reference in total exemption according to 1.1.3.1C ADR.

The container and its lid are made of polyethylene suitable for the containment of diesel oil by rotational molding in monolithic version without welding and constant thickness of the walls that guarantees the integrity and the perfect hydraulic seal.

The signatory to this document is:

Sig. Grandicelli Stefano

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61028 Mercatale di Sassocorvaro e Auditore (PU) - Italy

tel. +39 0722 725108 - fax +39 0722 7725165,

who has full legal authority to represent the company in the
Community context



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Starplast srl

