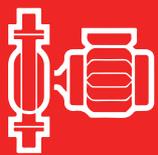


CUBE OPERATIONS MANUAL



01 Summary:

Cube - series fuel dispenser , using the optimal CPU processing technology ,high precision oval gear flow meter and a large LCD screen display, with favored features of accurate measurement, feature-rich, high reliability, easy use, simple maintenance and so on. If the power fails, important data such as related transaction records and information can be effectively retained; providing three refueling method such as fixed quantity, fixed amount, non-quantitative.

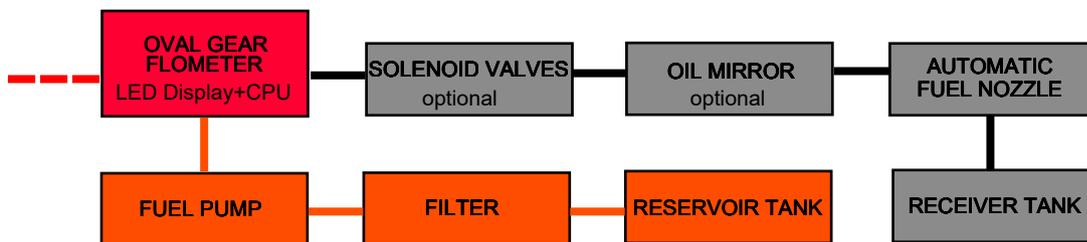
02 Technical specification:

Flow rate:20-60L/MIN	Voltage :AC220V±15% 50HZ
Accuracy :±0.5%	AC110V±15% 60HZ
Noise:80dB(A)	DC12V/24V
Accout range:0-9999999999.99	
Price Range:0.01-99.99	
Environmental adaptability:temperature -20℃~+60℃	
Relative humidity:45%~75%	
Atmospheric pressure:86-106Kpa	

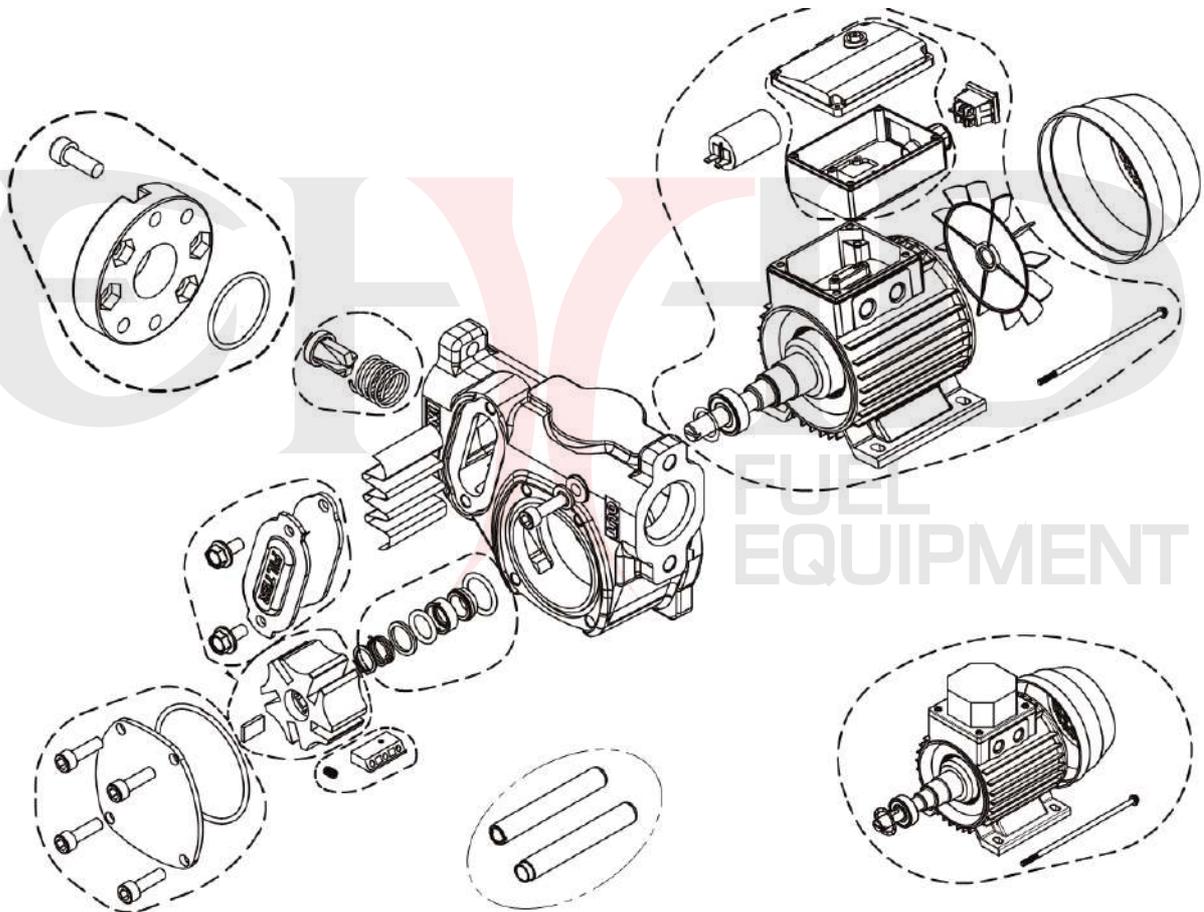
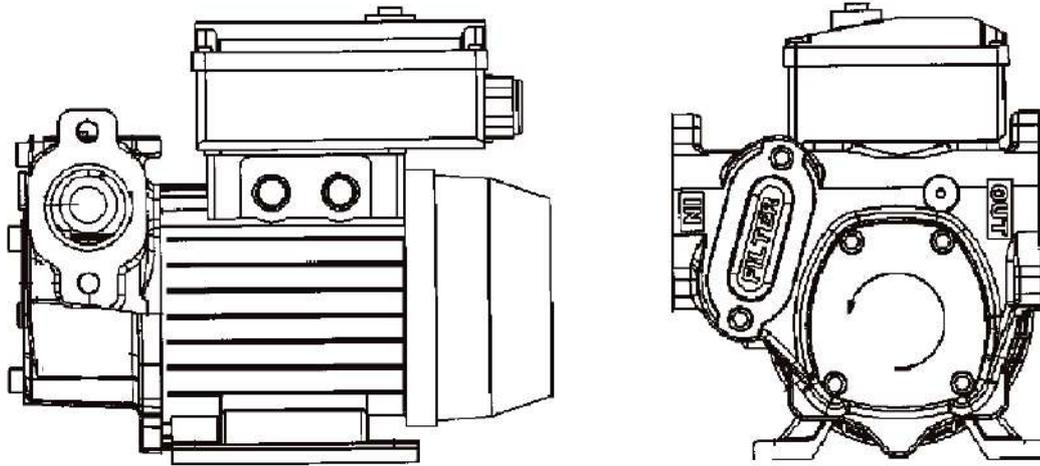
03 Fuel Dispenser Structure:

Cube series fuel dispenser including AC / DC vane pumps, filters, flow meters, explosion-proof solenoid valves, relays, CPU circuit board, oil hose, corrugated pipe , LCD display, connectors, auto shut-off oil gun and control parts.

04 Operation Principle



Open the oil nozzle---motor driven pump operating, the fuel through the filter and the debris of the fuel were filtered, and then fuel through the flow meter, solenoid valve, and finally through the nozzle to the tanker. When fuel flows through the meter, the sensor drive pulse signal, CPU pick up the signal then counts and displays, to ensure accurate measurement.



PUMP MACHINE DESCRIPTION

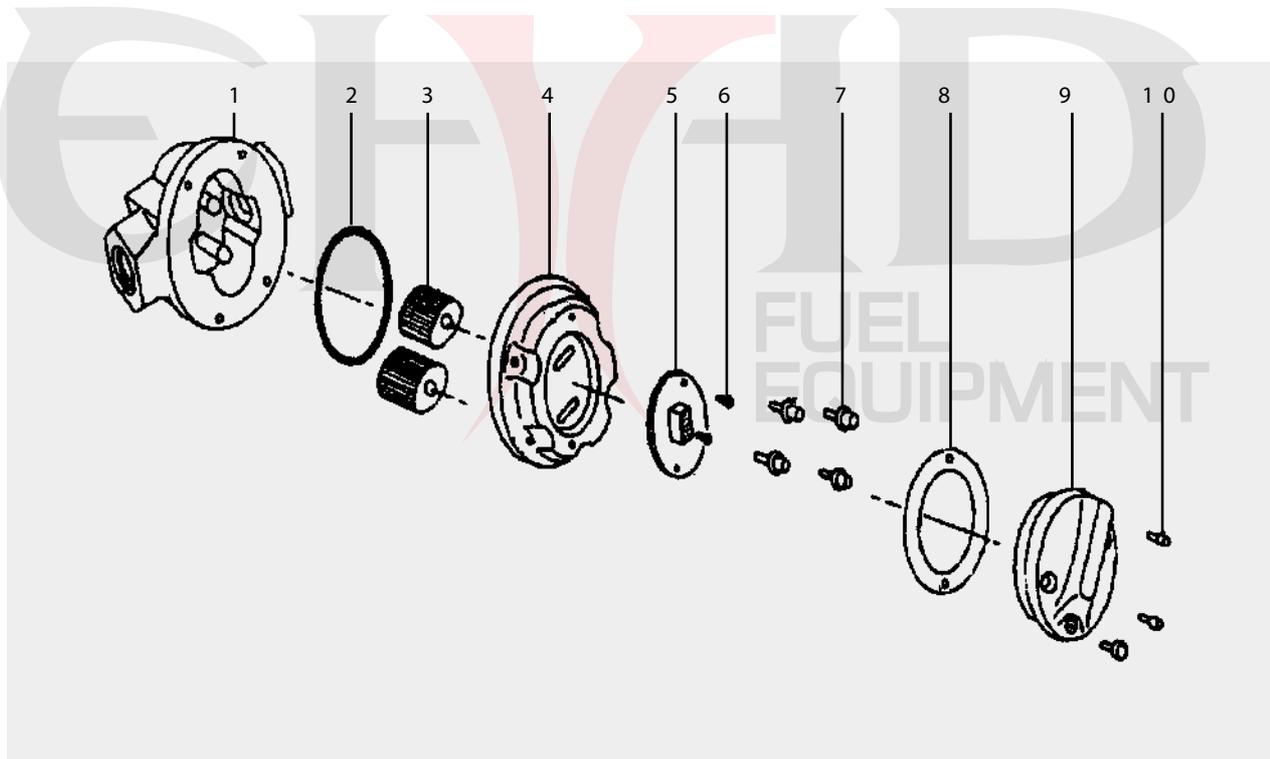
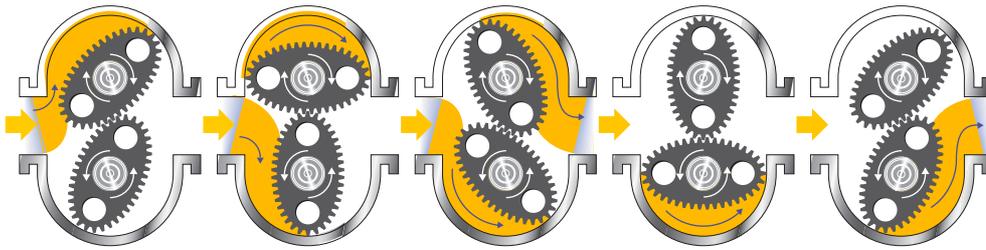
It's a self-priming, volumetric, rotating vane pump, equipped with by-pass valve. Motor is a Single-phase or three-phase, 2 or 4 pole, asynchronous induction motor, enclosed type (IP44) with self-ventilated, directly flanged on pump.

Also you can choose the DC pump, The DC pump is also the self priming diesel fuel transfer pump---only suitable with diesel or biodiesel, kerosene, the flowrate can be 35-70L/min, 1 inch BSP/NPT inlet & outlet ports, available with horizontal or vertical ports, direct drive vane pumping unit with bypass valve, On/Off switch and carry handle, with hose barb inlet/outlet ports and strainer.

Shown as the AC pump, for more information about the DC 12/24V pump please contact us

06 MAIN PARTS OF METER

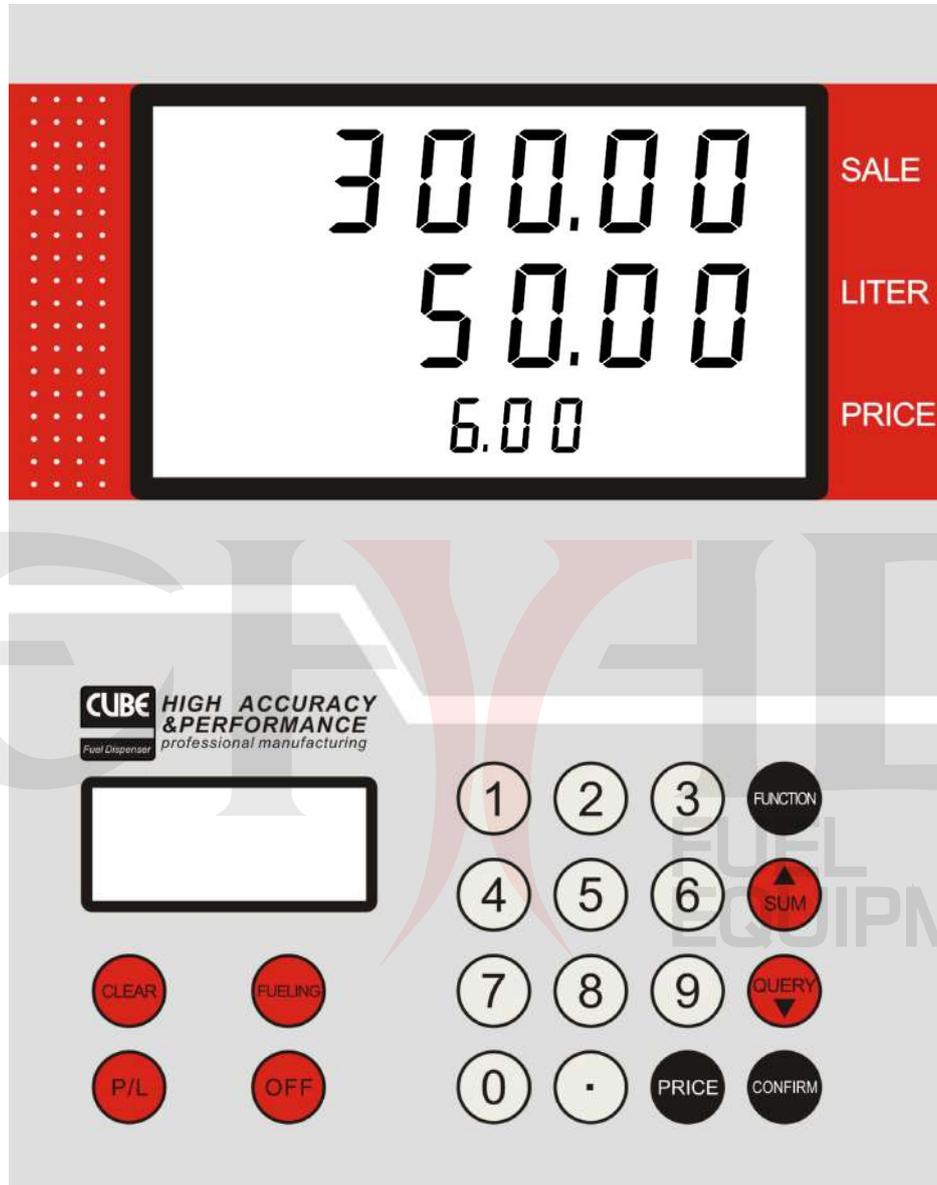
When fluid passes through the meter, the rotors turn, as shown above. The magnets which are located in the rotors will pass across the pulser circuit board which is containing either reed switches or hall effect sensors. A signal is then sent by the Pulse Circuit Board (PCB) to the relevant LC display or receiving instrument.



- 1 Meter Body 1" (Aluminium)
- 2 "O" Ring
- 3 Rotors Stainless Steel or PP
- 4 Meter Cap (Aluminium)
- 5 PCB (1 Reed Switch & 1 Hall Effect Sensor)
- 6 PCB Board Screws
- 7 Meter Cap Screws (Standard)
- 8 Pulser Cap Gasket
- 9 Pulser Cap (Aluminium) 20mm Conduit
- Thread 10 Pulser Cap Screw (Stainless Steel)

07 MAIN PARTS OF CONTROL BOARD

YM-FCL5122 tanker Operating Instructions Version: V0.1 Make: 2015-09-17 One: System Appearance



II: Functional Overview

YM-FCL5122 tanker control board using high-performance CPU, modular design, its main feature is fully functional, simple, clear interface, easy operation. Main functions and features are as follows:

1. LCD displays show the amount and volume.

2. LCD screen display power to maintain and keep longer than five minutes.
3. The pulse weight can be calibrated at any time depending on the base table to enhance the measurement accuracy.
4. Refueling according to user needs and quantitative quotas.
5. The current amount of fuel, total amount of fuel, the amount of power to maintain the unit price, the current amount of fuel and the accumulated amount of fuel can be manually cleared.

Two: the basic functions and operating instructions

1. Open the tanker power, the buzzer sounds loudly, tanker into standby mode, the LCD display fuel data before the last power-down.

LCD board		KEY board
350.00	SALE	P-----
5 0.00	LITER	
6.00	PRICE	

Three: refueling operation

1. When the keyboard is displayed any refueling [P----] or [L----], press the [Reset] key to clear the last refueling data. Press [Start] button, the pump then begin to work, put the gun refueling, press [Stop] key, the pump stops working, refueling finished, displays the current actual amount of fuel and the amount.
2. Fixed refueling Press [P / L] key until the keyboard and display [P----], enter the amount you want to refueling, assuming that the input \$350 , the keyboard is displayed as [P 350], if you enter the amount of the error, press [P / L] key, the keyboard and display [P - - -], re-enter the amount. Press [Cleared] key, the current amount and the oil is cleared, press [Start] button, the pump begin to work, put the gun refueling. When reaching the set amount, the oil pump stops working, refueling end, the keyboard display reverts to [P - - -], waiting for the next refueling quotas or arbitrary refueling.

3. Quantitative refueling Press [P / L] key until the keypad displays [L - - - -] fuel, enter the desired refueling, assuming that the input 25L, a keyboard is displayed as [L 25], if you enter the wrong fuel, Press [P / L] key, keyboard and display [L----], re-enter the oil. Press [Cleared]

key, the current amount and the oil is cleared, press [Start] button, the pump begin to work, put the gun refueling. When the oil reaches the set, the pump stops working, come the end, the keyboard display reverts to [L----], a quantitative wait for the next refueling refueling or arbitrary.

4. Secondary quotas or quantitative refueling during refueling, if the amount of fuel does not meet the needs of users, or you can enter new amounts of oil again for the second refueling. But the value entered must be greater than the current display value, otherwise it is impossible to achieve operation. When refueling fixed to \$138.80 , refueling gun jump the gun, as shown below:

LCD board	KEY board
138.80	SALE
23.13	LITER
6.00	PRICE
	P-----

In this case the user wants added to \$140 , according to the [P / L] key until the keyboard and display [P----], enter the amount of fuel you want, then press the [Start] key, re-fueling, when refueling when the amount reaches the \$140 , the pump stops working, come over. Keyboard display reverts to [P----], waiting for the next quota refueling.

Secondary and secondary quantitative quotas refuel refueling similar secondary quantitative refueling, press [P / L] key until the keypad displays [L----], enter the desired amount of oil fuel.

5. Clear

In stop mode, press [cleared] key, the current amount and the amount of oil to be cleared.

Notes: In the press [Start] before key, as needed to determine whether the need to press the [Reset] button to clear the current amount and the amount of fuel.

6. Rounding function

At any time during refueling refueling mode, as shown below, to \$138.80 refueling or 23.13 liters, refueling gun jump the gun.

LCD board	KEY board
138.80 SALE	P-----
23.13 LITER	
6.00 PRICE	

Press [rounding / *] key once, the keyboard appears as [P 139], according to one dollar for the unit rounding. Press [rounding / *] key twice, the keyboard is displayed as [P 140], press \$5 units of rounding. Press [rounding / *] key three times, the keypad is displayed as [L 24], press 1 liters rounding. Press [Rounding / *] key four times, the keyboard is displayed as [L 25], press 5 liters rounding. Press [rounded / *] key will turn these functions cycle. Reopen oil gun After setting refueling, when the fuel to the set value, the pump stops working.

Note: rounding press 1L, 5L, \$1, \$5 display P as a unit, a keyboard board, is the amount rounding. Keyboard panel display L, as oil rounding.

If (amount / oil) rounding value greater than rounding range, automatic switching any refueling mode without rounding.

Rounding function is valid only in any mode during refueling.

7. Automatic shut pump refueling process, if not detected flow rate, the pump is automatically shut after 20S. Automatic shut pump, press [Start], pumps start working, continue to the last state to refuel.

Four: query operation

1. Query total cumulative flow and totalized flow classes

In standby mode, press the [cumulative] button once, and fuel amount display area classes cumulative flow value, unit price display area [R_tol], press [cumulative] key twice, and the amount of fuel display shows the total accumulated flow value, unit price display area [tol]. Press [Enter] / [Stop] to return to standby mode.

The total cumulative flow / class Accumulated flow display range:

- 1) less than 9999.99, the amount of area is not displayed, fuel oil area displays the corresponding value
- 2) is greater than 9999.99, for example: 129997.98L, the amount of display area 12, the oil area displays 9997.98
- 3) greater than 9,999,999,999.99, automatically cleared

2. Query history refueling amount / oil recorded in the standby mode, press the [complex was] key, the unit price display shows the history of the number (1-100), you can query the history of 100 groups refueling. Amount and Fuel display area corresponding to the

number of historical values. Press [complex was] key, history record number plus one. Press [cumulative] key, history number minus one. Price display area [--1], the amount corresponding to the display area and the amount of oil on the display once the record value, unit price display area [-52], the amount and value of oil display record 52nd corresponding area is displayed, press [OK] / [Stop] to return to standby.

Five: setting operation

1. Price setting standby mode, the unit price the highest level press [Unit] key, priced LCD display flashes, enter single value you want to set, press the [ENTER] key to end the unit price is set, then the unit price of LCD displays Price changed value set.

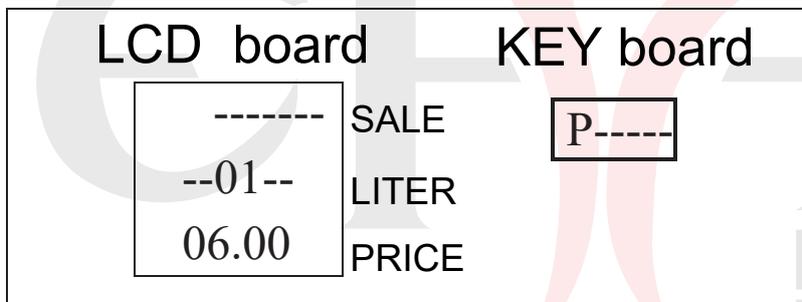
In the setting process, press the [cumulative] button, the flashing digit forward displacement. Press [complex was] key, blinking digit backward shift.

Price setting range: 0.01 to 99.99.

Note: Price set another entry method, in the standby mode, press [function] key, the middle two horizontal oil LCD flashes, press the number

[1] key, press the [ENTER] key to enter the unit price, the operation above.

When the display interface unit price is set as follows:

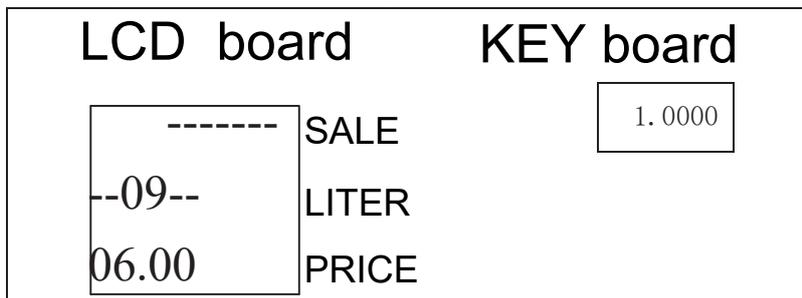


2. Error coefficient setting

2.1 In standby mode, press [function] key, the amount of LCD display [----], fuel LCD display [----], the middle two horizontal flashing. Press the number

[9] key, then press the [ENTER] key to enter the error coefficient setting mode, the display changes to the following states.

The highest bit keyboard display flashes.



2.2 Enter a new error coefficients, press [ENTER] key to save and exit coefficient, press [stop] key to restore the previous settings coefficient and exit.

2.3 error coefficient Setting range: 0.1000-9.9999

2.4 error coefficient setting Description

Error coefficient for correcting LCD display value of oil provided with the error value between the actual amount of oil.

[Error coefficient] = [actual oil provide value] / [LCD displays the value of oil]

[Error coefficient newly set] = [old error factor] X [error coefficient]

Before the error coefficient setting, please write down the [old error factor], [old error coefficient] refers to the error coefficient values into the error coefficient is set, the keyboard LCD display. Eg. [old errorfactor] 1.0000

[LCD displays the value of oil] is: 105 l

[Actual oil provide value] as follows: 100 liters

Then [error coefficient] = 100/105 ≈ 0.9524

[New set of error coefficients] = [old error factor] X [error factor] = 1.0000 X 0.9524 = 0.9524

3. The system version number View

In standby mode, press [function] key, the amount of LCD display [- - - - -], fuel LCD display [- - - - -], the middle two horizontal flashing. Press the number [2] button, then press the [ENTER] key to enter the system version number to view the status.

Display changes to the following states:

Display panel display panel display keyboard

- 0.10

] -----

--02--

06.00

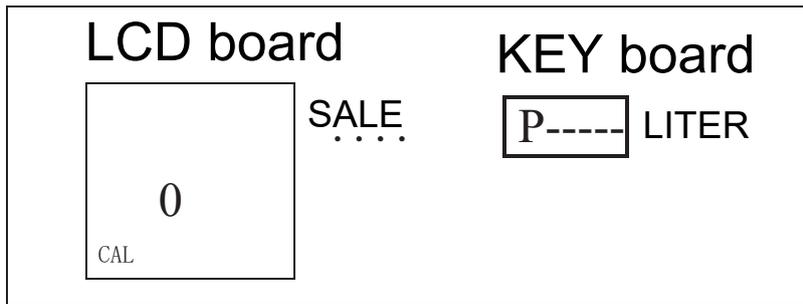
Enter key to exit the system version number to view the status. Amount liter Price

[confirm] to exit.

LCD board	KEY board
-----	SALE
--02--	LITER
06.00	PRICE
	-- 0.10

4. Pulse equivalent calibration

In standby mode, press [function] key, the amount of LCD display [----], fuel LCD display [- - - - -], the middle two horizontal flashing. Press the number [3] button, then press the [ENTER] key to enter the pulse equivalent calibration state, the display changes to the following condition.



4.1 Fuel LCD display pulse number, when there is a pulse comes begin recording total number of pulses.

4.2 Pulse equivalent calibration Prerequisites: Fixed 50L liquid flows.

4.3 Pulse equivalent calibration process Press digit [2] key to cancel the calibration. Pulse equivalent calibration process Press digit [1] key to confirm the calibration.

4.4 If the calibration is successful, the amount of LCD display [End], release the figure [1] to return to standby mode, a new calibration pulse equivalent effect immediately. .

4.5 If the calibration failure, the amount of LCD display [Err], release the figure [1] key, the number of pulses is cleared, you can re-calibration.

Note: If the pulse is less than 300 or more than 50,000, the calibration failure, need re-calibration. After the calibration is successful, reset the error coefficient: 1.0000.

5. Ban cumulative total cumulative flow of oil is cleared and classes total flow state inquiry, hold down the [cumulative] key, then press the [Reset] button, the unit price display area

[R_tol], fuel display shows [- - - -], prompted for a password, enter each one corresponding to the display position becomes 8, four-digit PIN is entered, if the password is correct fuel display area [CLEAR], Press the [ENTER] key, Ban accumulated oil is cleared and return to the original state, press the [Stop] key, Ban accumulated oil is not cleared and return to the initial state. If the password is wrong fuel display area

[Err], about one second after oil was

Zone display shows [----], suggesting that the new password. Press [Stop] to exit ban cumulative oil cleared and return to the initial state.

6. The total cumulative oil cleared

In standby mode, press [function] key, the amount of LCD display [----], fuel LCD display [----], the middle two horizontal flashing. Press the number [4] key, then press the [ENTER] key to enter the total cumulative oil cleared, methods of operation and class Accumulated oil is cleared in the same state.

7. The local address is set

In standby mode, press [function] key, the amount of LCD display [- - - - -], fuel LCD display [- - - - -], the middle two horizontal flashing. Press the number [5] button, then press the [ENTER] key to enter the unit address setting mode, the display changes to the following condition.