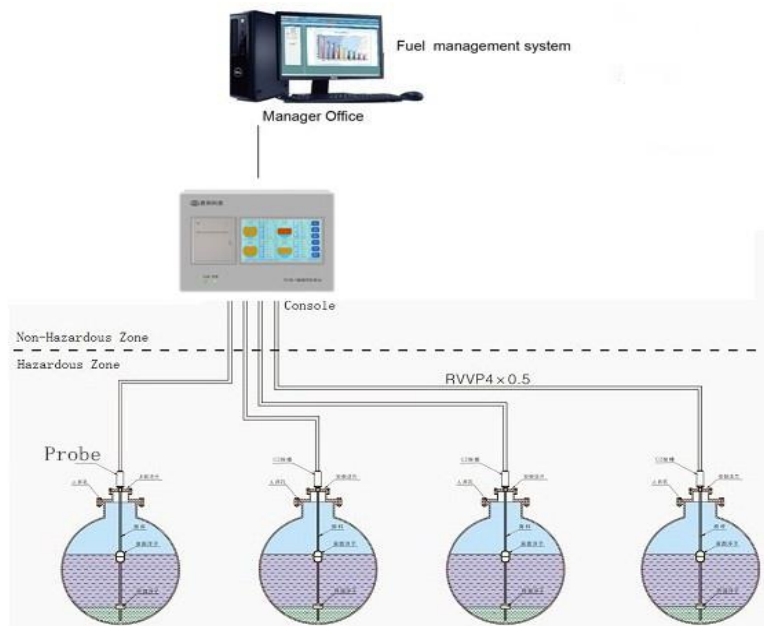


Automatic Tank Gauging System

Automatic Tank Gauge (ATG) system consists of Magnetostrictive Probe and Smart Console, it is an electronic device, whose basic function is to monitor the fuel level in the tank. It can also tell the operator what is going on inside the tank. In other words, it gives us very important information like fuel level, volume and temperature, water level and volume, high and low fuel level warnings etc. There are different plans to satisfy different customers according to their effective demands.



Solution:

1. SP300 Probe + TCM-1 Control Console
2. SP300 Probe + TCM-1 Control Console+Internet Remote Query(APP/WEB)
3. SP300 Probe + TCM-1 Control Console + Central Control System(other brands)
4. SP300 Probe (Modbus protocol)+ Other brands Controller

Magnetostrictive Probe

- The probe consist of:

Fully enclosed magnetostrictive probe.

Electronic Pod using for data measuring and transforming.

Floater made according to the product.



- Features:

Accuracy: level accuracy is $\pm 0.3\text{mm}$

Stability: strong anti-jamming ability

Efficiency: less than 1 second to test one tank.

- Probe Performance

Item	SP300
Purpose	To measure product level, water level and temperature
Titles of medium	Gasoline, diesel, kerosene, ethanol , water etc.
State of medium	Liquid
Others	
Pressure range	-0.02Mpa~0.6Mpa
Certificate	CE
Temperature	-40°C ~ 70°C

Product Level Accuracy	±0.3mm
Water Level Accuracy	±0.3mm
Temperature Accuracy	±0.2°C
Height Resolution	0.023mm
Repeatability	±0.1mm
Temperature Effect	Error<0.2mm
Vibration Effect	Error<0.5mm
Lowest Product Inactive Zone	2.5" floater-180mm
Lowest Water Inactive Zone	2.5" floater-25mm
Measured Variable	Product level, interface level and temperature of 5 sensors and average temperature
Measure Range	600~4000mm
Method of Communication	RS-485
Probe Material	1Cr18Ni9Ti
Power Supply	+24 ~ 26VDC
Protection Class of Probe Canister	IP67
Max Communication Distance	1200m

Touch Control Console (TCM-1)



- It can monitor up to 1-10 tanks and monitor the delivery conditions, it also enjoys a static leak test function.
- It can display product level, water level, temperature, volume, ullage.
- It can display dynamically the change of product level and water level with graphics in proportion, it features a 7 inch colored touch-screen console panel, and each interface displays 4 graphics.
- It features an audible and visual alarm function with front panel.
- It comes with two RS-232 serial interface communication ports to connect with different brand Center Console.
- It enjoys a record function, all information are stored in memory for future queries
- There is an embedded printer in it to print inventory reports, delivery reports, leak reports and shift reports.
- It can calculate volume of product by multipoint, which can fully ensure the accuracy of volume of the product.
- After connected with Center Console though internet, it can provide information in long-distance for manager to arrange the inventory.
- It can monitor the oil pump according to the product level, which can avoid the product

spilled and pumpdown..

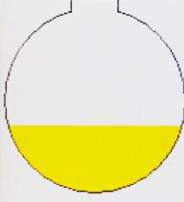
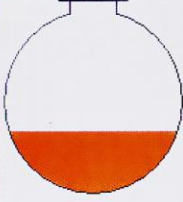
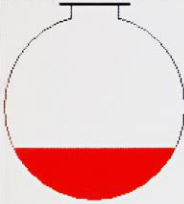
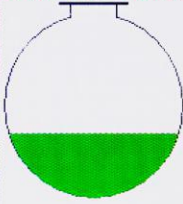
- It can connect with flow-meter to display delivery information constantly.

TCM-1 Touch Control Console	
Power Supply Voltage	AC120~265V 50HZ/60HZ
Environmental Temperature	-20°C~60°C
Environmental Humidity	20%~85%
Display Screen	7 inch real colorful touch screen
Processor / Memory	High-speed embedded / ---
Printer (Optional)	Embedded minitype printer
Safety Barrier	Power safety barrier, communication safety barrier
Size	310x220x80 (mm)
Functions	
Display	English, Graph, Colored
System Language	English
Monitoring Capability	10 tanks
Relay	With 2 relays
Method of Communication	RS-485
Tank Inventory Report	Users can inquire and print inventory information at any moment.
User-defined product type supported	Available
Auto Delivery	Auto delivery monitoring, and reports are generated after

	delivery. Users can inquire and print reports.
Manual delivery	Click the "start delivery", it will create delivery report
Product Mass Calculation	---
Print Function	User can print all kinds of reports
Network Function	Inquiring data in long-distance through internet.
Outside Ringer	Avoiding the product spilled.
System Update	It's convenient to update the software and hardware.
Control the Oil Pump	Avoiding the product spilled and pumpdown
Setup/Inquiry Parameter	Users can setup and inquiry the parameter about the tank, hardware, product type, alarm, date, tank volume table
Automatic Gauge	Display product level, water level, temperature, volume, ullage
Volume Table Edit	Data input via touch screen, enjoy the import and export function.
Volume Table Calibration	Use the method of Guihe Volume Table Calibration to calibrate it.
Static Leak Detection Function	During the idle time of the gas station, user can do the leak detection for the thank.(Detection rate :0.38 L/H)
Dynamic Leak Detection Function	---
Alarm	Audible and visual alarm and inquiry function
Shift Exchange	Shift exchange function and create the report.
Interface	With RS-232 serial interface communication ports

Console Function Show

Main interface

<p>1/H.72-F01P On-line: ●</p>  <p>H(oil): 376.9 mm V(oil): 23744.7 Lit H(water): 0 mm V(water): 0.0 Lit T(oil): 27.4 °C V(Air): 39255 Lit</p>	<p>2/H.72-F01S On-line: ●</p>  <p>H(oil): 349.6 mm V(oil): 22024.8 Lit H(water): 0 mm V(water): 0.0 Lit T(oil): 28.2 °C V(Air): 40975 Lit</p>	<p>Set Up</p> <p>Check</p> <p>Senior</p>
<p>3/H.72-F02P On-line: ●</p>  <p>H(oil): 299.1 mm V(oil): 16330.9 Lit H(water): 0 mm V(water): 0.0 Lit T(oil): 27.5 °C V(Air): 38269 Lit</p>	<p>4/H.72-F02S On-line: ●</p>  <p>H(oil): 362.6 mm V(oil): 19798.0 Lit H(water): 0 mm V(water): 0.0 Lit T(oil): 28.4 °C V(Air): 34802 Lit</p>	<p>Print</p> <p>Shfit</p> <p>Page</p>
<p>Automatic tank gauge system 2017-09-14 14:35:35</p>		

Tank parameter setup

← BACK
Set No.(01) Tank
NEXT →

Media type H.72-F01P

Media color

Probe address 0

Tank diameter 1000 mm ϕ

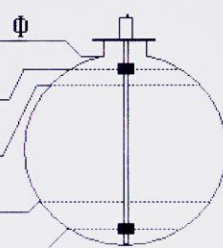
Height alarm 900 mm

Height alert 800 mm

Low alarm 200 mm

Water alarm 200 mm

Associated valve 1



7 stu	8 vwX	9 yz
4 jkl	5 mno	6 pqr
1 abc	2 def	3 ghi
0	.	-/+
Esc	123 ABC	Enter
ON/OFF	<input checked="" type="checkbox"/>	Self check

Tank

Time

Tank.C

Probe

Adjust

Home

2017-09-14 14:36:48

Check shift/ unloading/ leakage/ alarm records

← Last month

(09) Shift records

→ Next month

Shift

To shift :				Date and time:			
NO.	Height mm	Volume L	OIL TEMP °C	NO.	Height mm	Volume L	OIL TEMP °C

Shift
 Unload
 Leakage
 Alarm
 Tank.C
 Home

2017-09-14
14:39:23

← Last month

(09) Unloading record

→ Next month

Shift

Date	Time	NO.	Start		End		Unload
			Height	Volume	Height	Volume	

Shift
 Unload
 Leakage
 Alarm
 Tank.C
 Home

2017-09-14
14:39:46

Last month

(09) Leakage records

 Next month

NO.	Start Time		End Time		Leakage rate
	Height	Volume	Height	Volume	

2017-09-14 14:40:05

Last month

Check (09) Alarm record

 Next month

Date	Time	NO.	Height Alarm	Height early Alarm	Low Alarm	Water Alarm	Oilcan Leakage	Tubing Leakage	Wells Leakage	Tanker chassis Leakage

2017-09-14 14:40:23

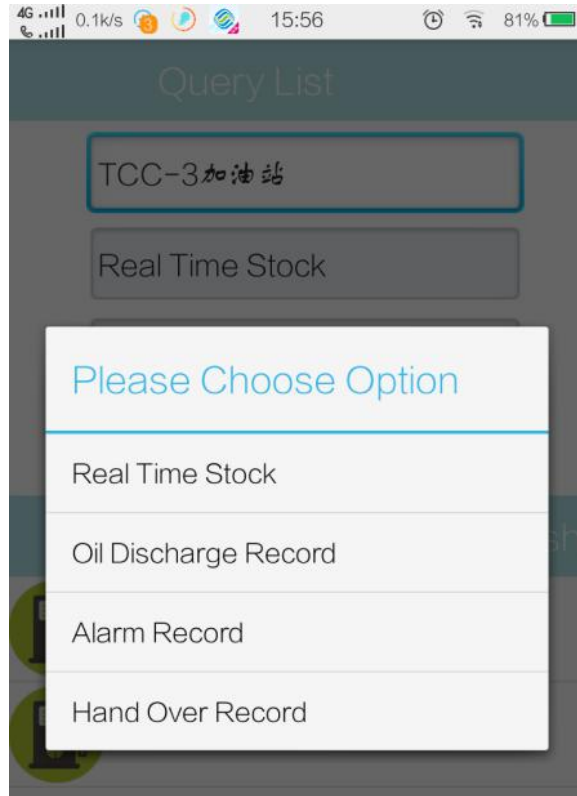
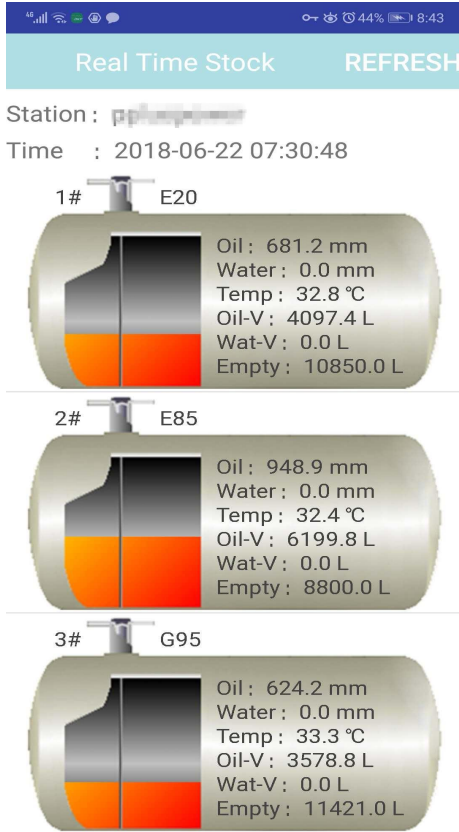
Print reports



Internet Function

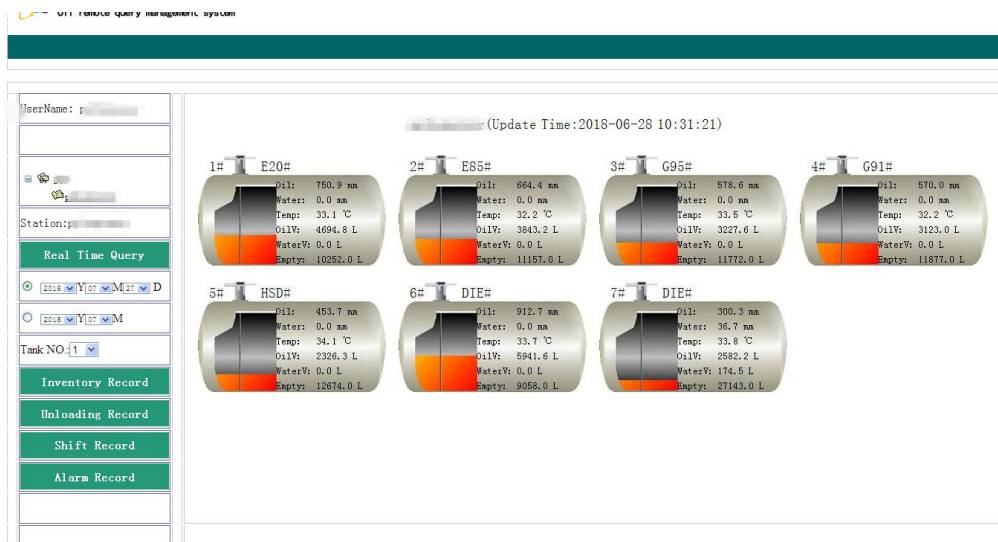
1. APP check for Android phone.

Users can check petrol station tank gauge information on Mobile phone .



2. Web check.

Users can logon our remote inquiry website, enter their petrol station name and password to check their petrol station tank gauge information.



Preparation Before Installation

The following preparation should be done before the liquid level meter installation.

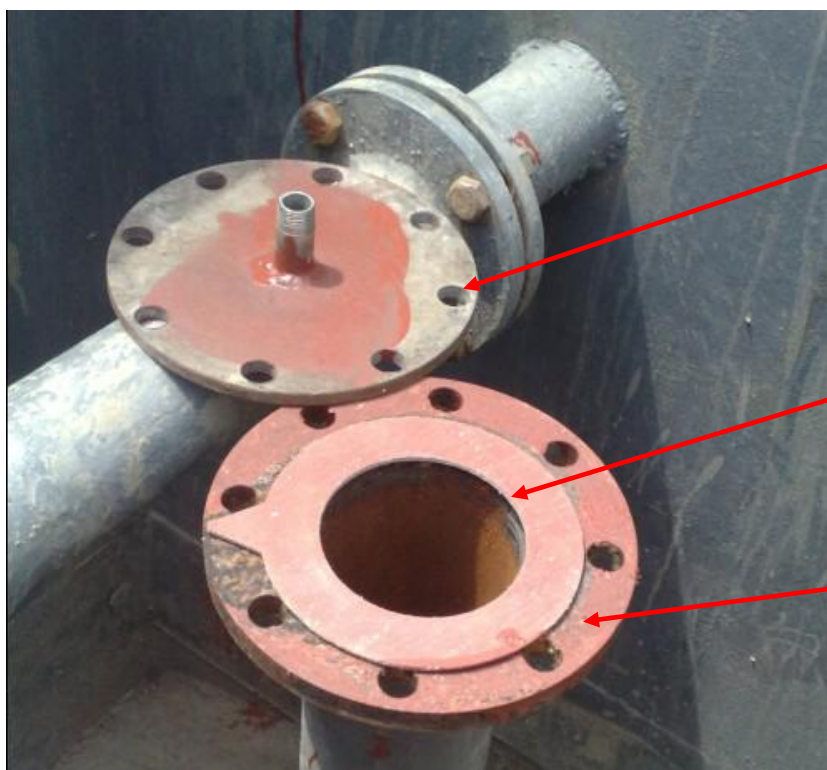
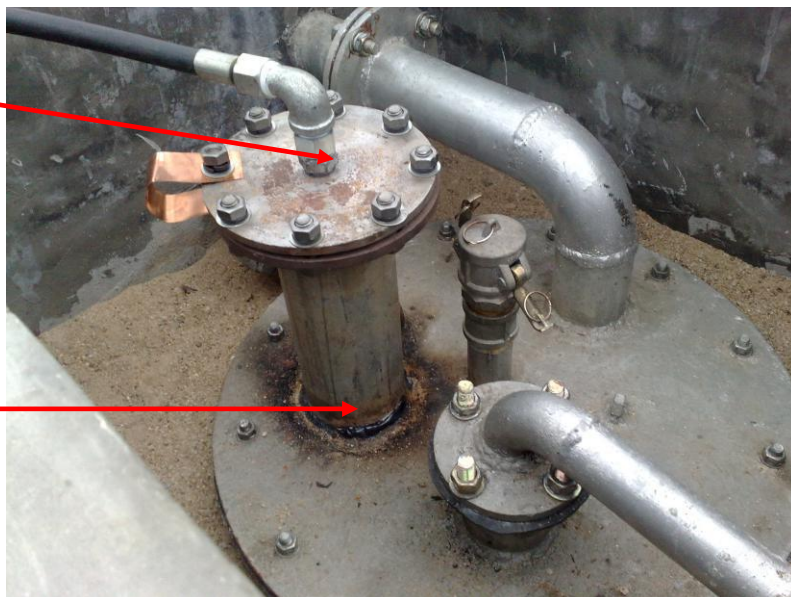
1. Vertical-pipe
2. Blind plate
3. Wiring RVVP-4*0.75 shielded cable from tank farm to control room, galvanized pipe on the outside of the shielded cable. The cable from tank farm to control room can not have a connector.
4. The part of the galvanized pipe exposed from the wall of manhole length about 100mm, its outer thread (G3/4) length of 25mm, using for connection with explosion-proof box.



After Level gauge installation

Make a hole on the center of the blind plate, welding vertical-pipe which inner diameter is 20mm, length of 50mm, galvanized pipe threaded at one end.

Vertical-pipe use for level meter installation, length of 400mm, inner diameter is 100mm.



The diameter of the screw hole on the blind plate should be consistent with the hole on the top flange of the vertical-pipe.

Asbestos pad

Top flange of vertical-pipe.

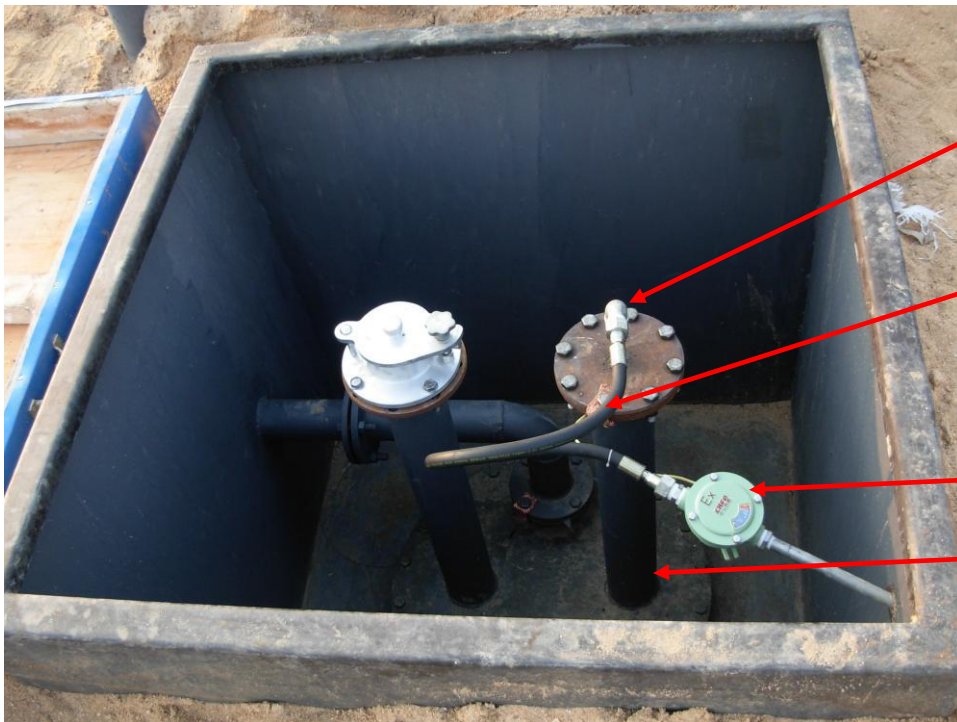


Galvanized pipe
on the outside of
the shield cable

Blind plat

Vertical-pipe

Manhole



Reducing elbow

Hose

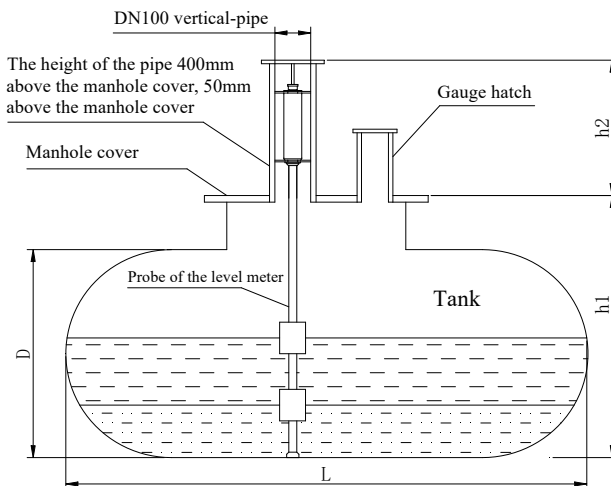
Box

Vertical-pipe

Measuring mothed before order

1. h_1 : it's the height from the top surface of the manhole cover to the bottom of the tank
2. h_2 : it's the height of vertical-pipe from the top surface of the vertical-pipe flange to the top surface of the manhole cove. Here is the size of vertical-pipe we recommended: 400mm above the manhole cover, 50mm under the cover.
3. D (diameter of the tank): it's the valid max inside diameter of the tank.
4. L (length of the tank): it's the valid max inside length of the tank.

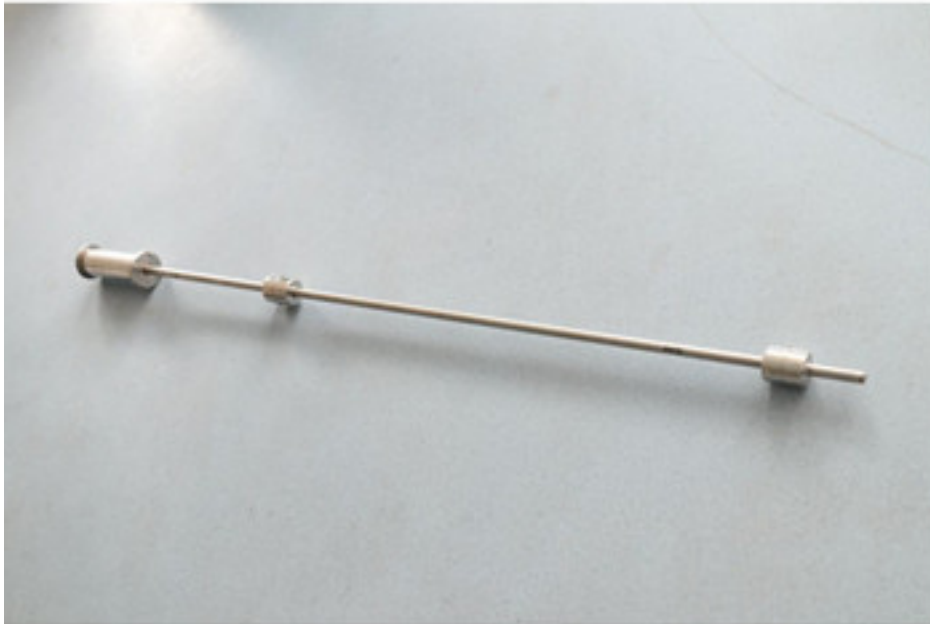
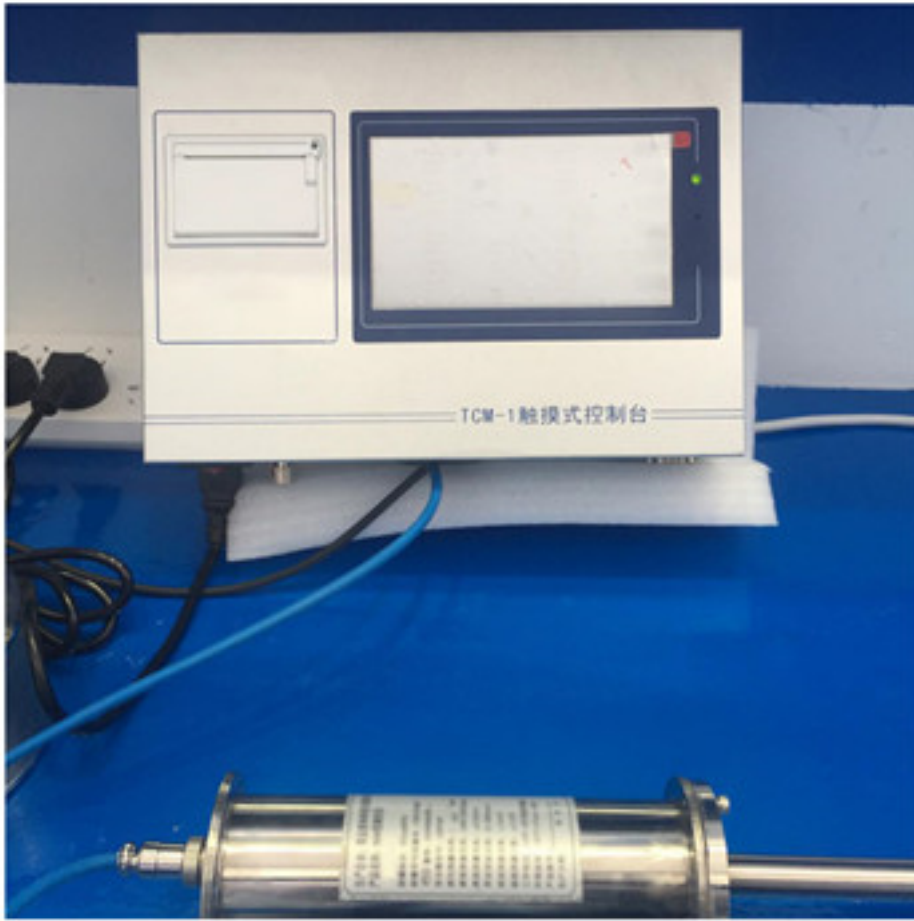
Notes: If install the probe from the gauge hatch, you need to add a vertical-pipe at the top of the gauge hatch, and it's total height of the vertical-pipe and the gauge hatch is more than 400mm.



Tank No.	h_1 (mm)	h_2 (mm)	D (mm)	L (mm)	Fuel	Inside Diameter of
1# Tank						
2# Tank						
User Name :		Linkman:		Tel:	Fax:	Email:

Please fill in a form and sent to us before order.

Products Pictures



Package Show

