SM-40-C Mobile Container

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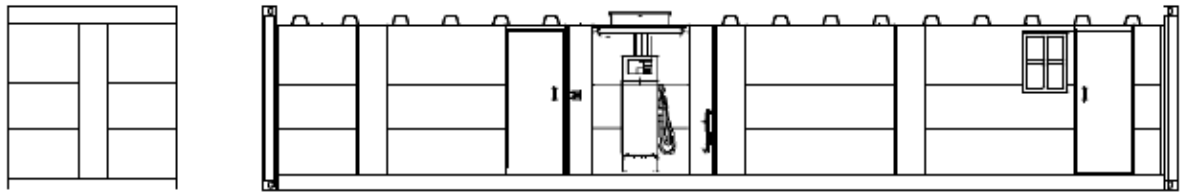
Important Note

Introduction

SAVEL Tank Container

This guide will explain all details of Mobile Container series fuel pumps.
The SAVEL is a containerised storage tank in accordance with ISO-standard. You can optionally use our standard type-series as complete gas station for motor vehicles, trucks, diesel locomotives or for yachts and boats. The SAVEL can be upgraded to airport gas station for helicopters and small aircrafts without any difficulty. An integrated self power supply (optional) makes the SAVEL an autarkic supply unit for civil and military purposes. In addition to our standard models, we also deliver customised products with pumps, filters and metering equipment integrated into niches of tanks according to your specifications. By welding additional partitions in the tank, it is possible to construct highly complex system modules, for example for the chemical industry.

Type of Container

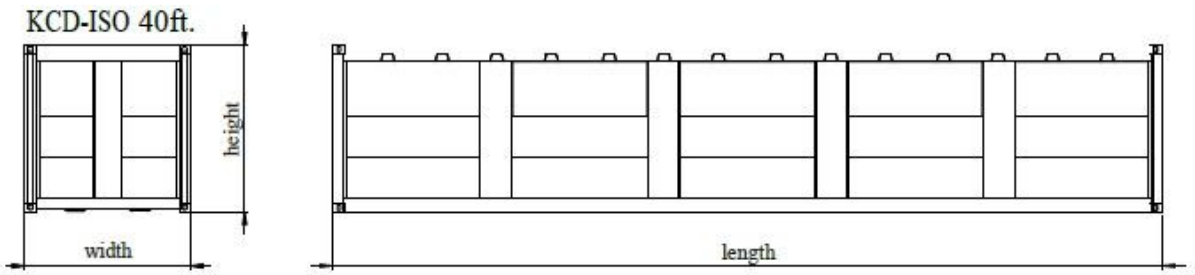


Gas-Station Container with Office

- Savel Tank Containers are robust, highly safe contai- ner systems with many international approvals. They can be quickly assembled and used in all fields of professional fuel supply.
- application areas: distribution of mineral oil, military, mining area, aid organisation, logistics and freight forwarding.
- media: diesel, gasoline, kerosene, biodiesel, bioethanol, vegetable oil
- volumes: 20.000 litre = 20' ISO-Container
40.000 litre = 40' ISO-Container
- dispensing units:
delivery rate 45-120 litre/min – uncalibratable (for own needs) or calibratable versions (for reseller). Counting de- vice with litre and price or fully electronic accounting.
- additional equipment: sunblind, office for staff, own power set

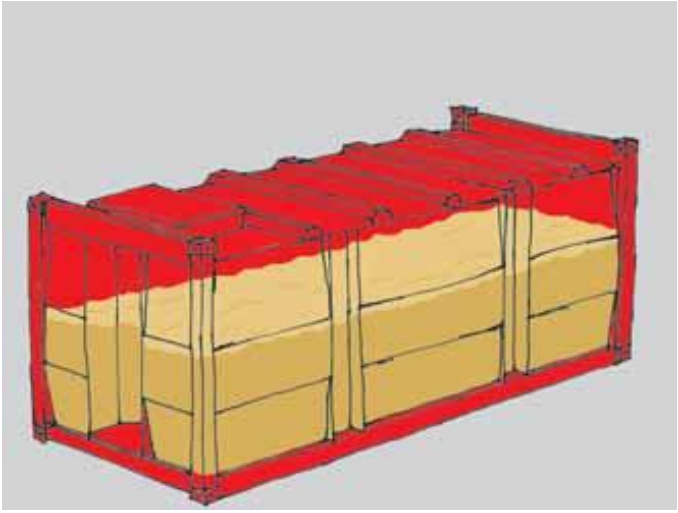
Container Dimensions

type of tank	volume	length	width	height
No. of item	liter	mm	mm	mm
KCD-ISO 40ft.	50.000	12.192	2.438	2.438



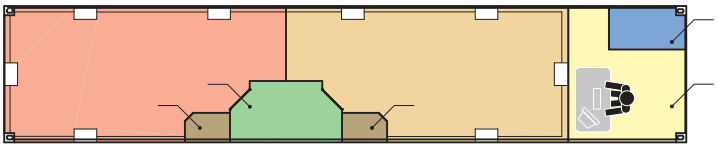
General Construction-Supervision Approval (DIBt):
- as storage tank for waters-endangering, inflammable liquids - Z-38.12-23
- as storage tank for liquids which are not hazardous to waters - Z-38.11-143

SAVEL - Building Concept
Best Space-Capacity-Ratio Due To Cubic Building Form



SAVEL gas-station containers are volume-optimised, highly safe, and double wall systems. The container itself is the cubic tank, in which equipment-niches for gas pump, Gen-Set, filter systems and electronic control can be integrated.
A robust, functional and highly modern system-building-block is herefrom formed.

Shematic Representation of Space Division



SAVEL 40ft. gas station container, double wall, with integrated office room and Gen-Set room
volume: double-chamber tank, 18.000 litre each chamber

ZN – niche for dispensing unit
BN – filling niche
AN – Gen-Set room
OR – office room
chamber for gasoline
chamber for diesel

standard equipment:

- load-carrying construction based on stable frame structure with ISO-corners (8x stackable when empty)
- robust, cubic, double wall body of steel, material: S 235 JRG 2
- ladder
- Tank roof is self-supporting single wall construction, which includes:
  - lightning rod
  - a hatch compartment on the tank roof, installed with:
  - a sealing hood with a gas pressure spring, a handle strip and a padlock
  - a man hole DN 500
  - access interfaces (bush 2“)
  - vent connections DN 50, a vent hood 2“
  - a mechanical level indicator (fuel dip stick)
- filling niche in the long side
  length 800mm, depth 500mm height 2.000 mm
  - transfer pump 600 litre/min
  - filling pipe with pipework
  - lockable door, light with switch
- function niche, long side, dispensing unit niche
  width 2.000 mm, depth: 1.000 mm, height: 2.000 mm

- leak warning device, static, type Kür 5
- module of pipeline to gas pump
- gas pump for diesel/gasoline, calibratable
  one dispensing point for each medium, delivery rate approx. 80 litre/min
  - light with switch
- emergency stop switch
  - fire distinguisher
- equipment in office room
  - air conditioner
  - current distribution board
  - lockable door and widow
  - light with switch
- equipment in Gen-Set room
  - diesel Gen-Set, approx. 5kw
  - external set of air conditioner
  - lockable door, light with switch

corrosion protection:

- inside: rough, oiled
- outside: 2-K coating

options:

- coating in all RAL colours
- material stainless steel
- sunblind
- tank heating/ heater coils
- heat insulation
- equipment for easily inflammable media

SAVEL 40ft. Gas-station container

View:dispensing niche with gas pump for diesel; filing niche for transfer pump; office with power set and air conditioner

SAVEL 40ft. Gas-station container

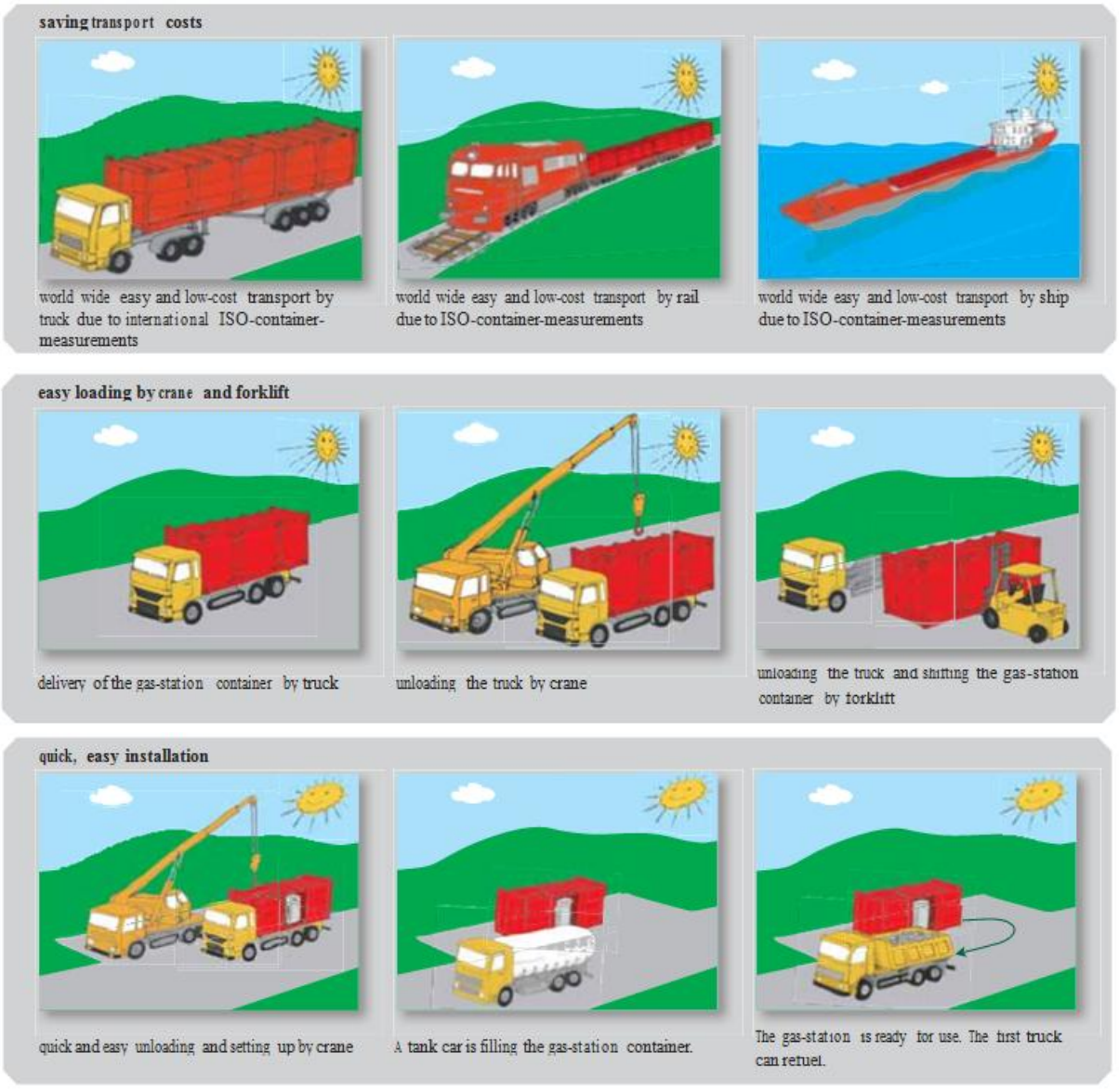
View:dispensing niche with gas pump

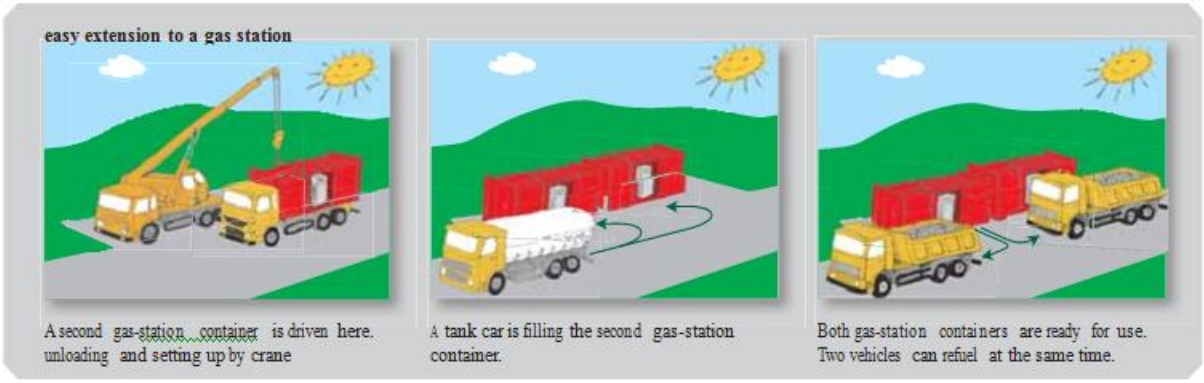
SAVEL 40ft. Gas-station container
View:standart equipment for diesel and benzine, transfer pump for self-filling

SAVEL 40ft. Gas-station container
View:office-/machine cabin (lockable) with current distribution board and integrated air conditioner

SAVEL 40ft. Gas-station container
View:office section, sunblind on the container to protecting from solar irradiation

Storage Tank Container in Use





1. Savel Fuel Pumps

1.1 General Features

3 Series fuel pumps is designed, for the fuel stations and vehicles to filling fuel types of 4.5 l / min to 45 l / min for different flow rates.

1.2 Technical Features

1.2.1 Data Processing Unit

The computing unit (Sav5CPU) which is developed by Savel, controls with two different electronic cards on both sides of the fuel pump. Processing Unit's general features, are summarized, as follows.

- Compatibility with the CANBUS Technology
- 2 noozles working at the same time
- Programmable feature on the cards
- RS485 or Current-loop Communication option
- • 10-digits for electronic total
- Menu system can be used in 7 different languages (Tur, En, Fr, Ru, Geo, Ar, Az)
- Auto Electronic Calibration (in grams)
- Compability with all the cash register
- Compability with Savel multimedia module
- Operating 170-240 VAC voltage ranges without error
- 1-wire and 2-wire special communication system
- Card design according to the EMC tests
- Automatic error detection and display error codes

1.2.2 Display

3 x 6 digit 1 "(25.4 mm) heighted LCDs are used. Liquid crystal displays work with a printed card which is connected to them. The general features of the display unit, are as follows.

- Separate screens for price, liter and amount
- 1 "digit height
- 6 x 6 x 6 digit display
- Compatible with existing pumps
- Backlit

- Card design suitable for EMC tests

1.2.3 Keyboard

Easy adjustment with 2x16 display and 4x4 keypad. Entering unit prices, seeing all the totals, monitoring the last sales and briefly You could do all other menu transactions from here.

1.2.4 Motor

380 V / 50 Hz three-phase (single-phase 220 V optional), 0.75 kW 1400 rpm, flame proof (explosion proof) electric motor with high reliability.

1.2.5 Pump Unit

This is a centrifugal unit with pallet system which is rotary typed, V-Belt driven, with integrated air separator and has a positive displacement, It has a by-pass safety valve and is a suction line filter typed. It has 50-90 l / min flow capacity.

1.2.6 Meter

All fuel pumps capable of being calibrated, positive displacement piston-type, four-piston, up to a value of ± 0.25% are equipped with adjustable meters.

1.2.7 Selenoid Valve

Electronic fuel pumps have 24 V DC, dual-level (stage) nad Ex-proof Solenoid valves are used, for the realization of the pre-setting function.

1.2.8 Fuel Nozzle and Hose

According to the flow rate of ¾ "or an 1" automatic trigger device with aluminum bodied fuel Nozzles are used. The hose is determined according to the flow rate of ¾ "or 1" respectively. 360 º swivel Nozzles behind the fuel used in the joints and breakway are standard accessories.

1.2.9 Totalizer

Our fuel pump has 12-digit and 7 digit electronic and electromechanical totalizer.

1.2.10 General

According to customers' requests our fuel pumps are produced in the suction and pressure types.

Outer panels are galvanized with corrosion-resistant steel and painted with electrostatic powder paint.

1.3. General Safety Information

To apply the following written rules in your gas station will make you and business more secure.

- You have to be taken appropriate security precautions in acoording to National and international standards.
- Just give allowance for the intervention of Equipments to only authorized technical service personnels.
- Hang the following warning signs as to where you may see.
    1. Do not smoke!
    2. Stop the engine during the filling!
    3. Turn off mobile phones during the filling!
    4. Hang the Nozzle its place after the filling!

1.4. Installation

Be carefull about the fuel pumps and equipment to be provided substantiality and completed. Please contact your service provider, in the case any technical deficiency or distortion.

1.4.1 Mechanical Installation

The pumps' installation places should be determined in accordance by the Savel technical service teams' recommendations..

1.4.2 Electrical Installation

The pump's connection to the electricity network, must be be performed by an authorized person. Computing unit of the pump should be fed with a regulator or uninterruptible power supply (UPS).

1.5. Security measures should be taken

It should be noted the high risk fuel transport. Everything in this guide was written to protect you and your assets' safety. To strictly fulfill them will give you a smooth working environment.

1. Do not smoke and do not let smoke at environment of the gas station pumps and tanks.
2. Turn off the electrical connector from the emergency stop button or the control panel, in case of any leakage.
3. Fire extinguishers need to be immediately ready for use at a location near here.
4. Only authorized personnel to allow the response to problems with electricity.
5. The technical interventions for the pumps has to be made the Savel technical service provider. Otherwise it will not take any responsibility.
6. Hang the following warning signs as to where you can see easily.

    - Do not Smoke!
    - Stop the engine during the filling!
    - Turn off mobile phones during the filling!
    - Hang the Nozzle its place after the filling!

7. In case of fire;

    - Position your station to the emergency stop situation.
    - Leave the danger zone
    - call the fire department and report the situation
    - Follow instructions; Fire and emergency

1.6. First Run

1.6.1 Control

if all electrical and mechanical connections are made correctly or not, to make sure that the necessary checks had been made with your hands and eyes.

1.6.2 Special conditions

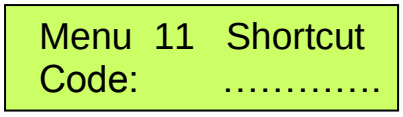
The moving parts of pumps should be checked against snow and ice.

1.6.3 Record

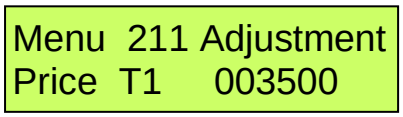
Please note for electronic and mechanical total before the first use, after you run your pump.

1.6.4 Program (Price adjustment)

Press the ENTER key two times to gain access, via the keypad. The following menu screen will be reached.



Code 211 for the first Nozzle, code 212 for the second Nozzle, code 213 for the third Nozzle, code 214 for the fourth Nozzle and code 215 for the fifth Nozzle shortcuts are used. For price changes, enter one of these shortcuts, press ENTER to see what the current price is, then by pressing again the ENTER key and write Password1 and record some new value, confirm with the ENTER key and exit.



1.7. Important Notices

Dear customer, technical interventions, needs to be done by Savel technical service which are specially trained in this area . In addition, the technical interventions that may arise as a result of any inconvenience would be entirely your responsibility.

1.8. Usage

Fuel filling instructions are as follows.

1.8.1 Manual Filling

1. Remove the Nozzle.
2. The unit price of the removed Nozzle's product, will be shown in the bottom line the screen.
3. Put the nozzle to your vehicle's fuel tank's entry.
4. Pull the trigger of the nozzle.

- Current flow could be edited through the trigger. Trigger could be fixed 1, 2, 3 positions.
- Fuel nozzle has a full auto trigger and it will cut itself when the storage is full.

5. Put back nozzle its place in the pump, when the filling is finished.
6. The amount of fuel received, the basic price and the price which is need to be paid, will continue to be shown on the screen.
7. For the prevent deformation of the hose, need to be placed back and not to been on the ways of vehicles.

1.8.2 Pre-adjusted amount filling

1. Remove the nozzle.
2. The unit price of the product of the removed nozzle, will be shown at the bottom line of the display.
3. Enter the amount you want to fill with the keyboard and press the Enter key.
4. Put the nozzle to your vehicle's fuel tank's entry.
5. Pull the trigger of the nozzle.
    - Current flow could be edited through the trigger. Trigger could be fixed 1, 2, 3 positions.
    - Fuel nozzle has a full auto trigger and it will cut itself when the storage is full.
6. Put back nozzle its place in the pump, when the filling is finished.
7. The amount of fuel received, the basic price and the price which is need to be paid, will continue to be shown on the screen.
8. For the prevent deformation of the hose, need to be placed back and not to been on the ways of vehicles.

1.8.3 Pre-adjusted liter filling

1. While the nozzle is turned off, press the "0" button.
2. This will provide to adjust if the filling program will be money or liter.
3. Select the filling program and enter the amount you want with the 0-9 keys.
4. Put the nozzle to your vehicle's fuel tank's entry.
5. Pull the trigger of the nozzle.
    - Current flow could be edited through the trigger. Trigger could be fixed 1, 2, 3 positions.
    - Fuel nozzle has a full auto trigger and it will cut itself when the storage is full.
6. Put back nozzle its place in the pump, when the filling is finished.
7. The amount of fuel received, the basic price and the price which is need to be paid, will continue to be shown on the screen.
8. For the prevent deformation of the hose, need to be placed back and not to been on the ways of vehicles.

1.9. Protective Treatments

Operator's maintenance and cleaning work to be done is as follows. All other works and interventions to be performed by qualified service personnel only Savel.

1.9.1 Daily operation of the pump

- Nozzle open the locks of the funnel of the nozzle (if exists)
- Open the Control and energy supply for the motor
- Check if the nozzle been put in their place or not.

1.9.2 To disable the pump

- Disconnect the pump from the power supply control panel.
- Lock the funnels of the nozzle.

1.9.3 Exterior cleaning of the pump

To prevent static electricity the exterior of the pump should be cleaned with a damp cloth.

1.9.4 Replacement of the filters

Fuel filters should be replaced from the first run two weeks later, or at the latest annually. But if the flows are declining due to pollution, may be necessary to change them earlier. During this process gloves should be worn, to prevent the fuel's contact with skin.. To change the filter;

1. Remove the fuel pump circuit (turn off the power supply)
2. Turn on with the key, the cover of the front of the hydraulic housing.
3. For Fuel to flow back set the filter cover slightly and then remove it (at the high-efficiency pumps remove the filter cover and air the valve)
4. Remove the filter
5. Insert the new filter
6. Close the fitler cover
7. Turn on the Centrifuge or submersible pump and check the fuel flow.

1.9.5 Changing lights

The lamps are in the pump's screen enclosure and outside the danger zone, but still the measures should be taken by the changing. The measures are as follow;

1. Disconnect the power supply
2. Open the display panel
3. Replace the lamp with new one
4. Close the display panel
5. Turn on the power supply

1.9.6 Fuel leakage control

All the hydraulic pump through the fuel elements and connections should be checked carefully, should be remedied immediately in case of any leakage, the pump should not be used if necessary.

1.9.7 Control of the fuel hose

The availability hose damage, fracture points, or bubble formation, should be checked regularly. Damaged fuel hoses should be replaced. In the event of spills or leaks on the pump, it should not be used.

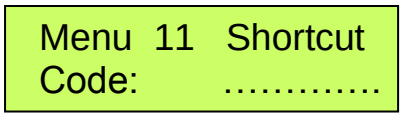
1.10. User Menu

1.10.1 Passwords

Password1: 1000
Password 2: 2000 < Reseller password >
Password 3: 3000 <Service password>
Special code: xxxxxxxx

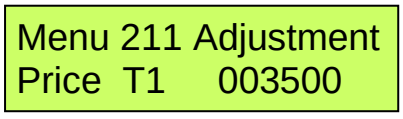
1.10.2 Shortcut Menu Access

Press the ENTER key two times to gain access, via the keypad. The following menu screen will be reached.



1.10.3 Price Adjustment

Code 211 for the first Nozzle, code 212 for the second Nozzle, code 213 for the third Nozzle, code 214 for the fourth Nozzle and code 215 for the fifth Nozzle shortcuts are used. (Hereinafter simply be called a shortcut 211-5) For price changes, enter one of these shortcuts, press ENTER to see what the current price is, then by pressing again the ENTER key and write Password1 and record some new value, confirm with the ENTER key and exit.



1.10.4 Total Vision

Call the shortcut menu. Write one of the 511-5 shortcuts and press the ENTER key, to see the total liters of nozzles. It can be seen the money totals by the same way with the 521-5 shortcuts.

Menu 511 Total B LT T1 0000002356	Menu 523 Total B PR T3 0000235670

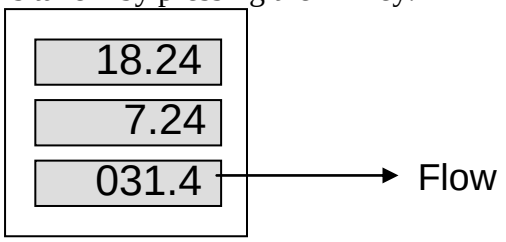
1.10.5 Seeing the last sales

Each nozzle's 8 sales are backwards. In total, the sales can be seen 40 of them backwards. Call the shortcut menu. To see the first last sale, write one of the 611-5 shortcuts and then press ENTER. F1 (+) and F2 (-) keys could be used to monitor all of the other sales.

Menu 6111 Total B Sls T1-1 00013.56	Menü 6124 Total B Sls T2-4 00017.11

1.10.6 Seeing the flow

The flow is monitored by pressing the P1 key while during the sales. Normal display position is taken by pressing the P2 key.



1.10.7 Money Programmed Sales

While the nozzles turned off could be done by entering the desired values from the keypad.

1.10.8 Liter Programmed Sales

Liter Programmed Sales could be done, by pressing the "0" key and writing the desired values, while the nozzles turned off.

1.10.9 Emergency Stop

It is used in very urgent cases. When you faced with problems breaking nozzles, hose etc. while giving fuel, press the "CLR" button on the keyboard and stop the pump.

1.10.10 Display Usage

All the menu operations can also be seen on the big screen at the same time.

1.10.11 Menu Codes

We have a few menu described in detail above. All the same logic with the following codes can be reached to the desired menus and done everything.

Enter the Price:	211-5 < Password 1 is used>
Set Relay Model:	221-5
Standby pulse rate:	231-5
Standby working pulse rate:	241-5
Liter sensitivity:	251-5
Price sensitivity:	261-5
Amount sensitivity:	271-5
Pulser direction selection:	281-5
Electronic calibration:	311-5
Pulser calibration:	321-5
----------Mekanik total var mı:	331-5
Liter preset values:	341-5

Price preset values: 351-5
Pass from slow valve to rapid valve: 361-5
Pass from rapid valve to slow valve: 371-5
the numbers of the hidden pulses: 381-5

Make ATC active/passive : 41 < It has to be written 2000 to the record section>
Determine butane/propane ratios: 42
Time setting: 43
Date setting: 44

Seeing liter total: 511-5
Seeing price total: 521-5
Seeing shift liter total: 531-5
Seeing price liter total: 541-5
Erase shift totals: 55 < Password 1 is used, It has to be written 100 to the record section >

Seeing the last sales: 6111-51 < can be seen the other sales by the arrow keys >
Seeing the last unit price: 6211-51 < can be seen the other sales by the arrow keys >
Seeing last errors : 6211-51 < can be seen the other sales by the arrow keys >

Determine the type of pump: 71
Set the operating mode: 72 <automation- manual-multimedia>
Determine the Address: 73
Determine the Protocol: 74
Determne unit of measurement: 75
Determine the language of Pump: 76
Determine the display model: 77
Set baud: 78

Change Password 1: 81
Change Password 2: 82
Change Password 3: 83

Automatic calibration: 9710
Return to factory settings: 9720 < it could not been deleted, if the record value is 100, if it is 200 even the totals can be deleted >
Reset per liter of total: 9730 < Record values should be 100 >
Reset per price of total: 9740 < Record values should be 100 >
Reset last sales: 9750 < Record values should be 100 >
Bring to cash register mode: 9760 <Password 2 is used, record values should be 100 >

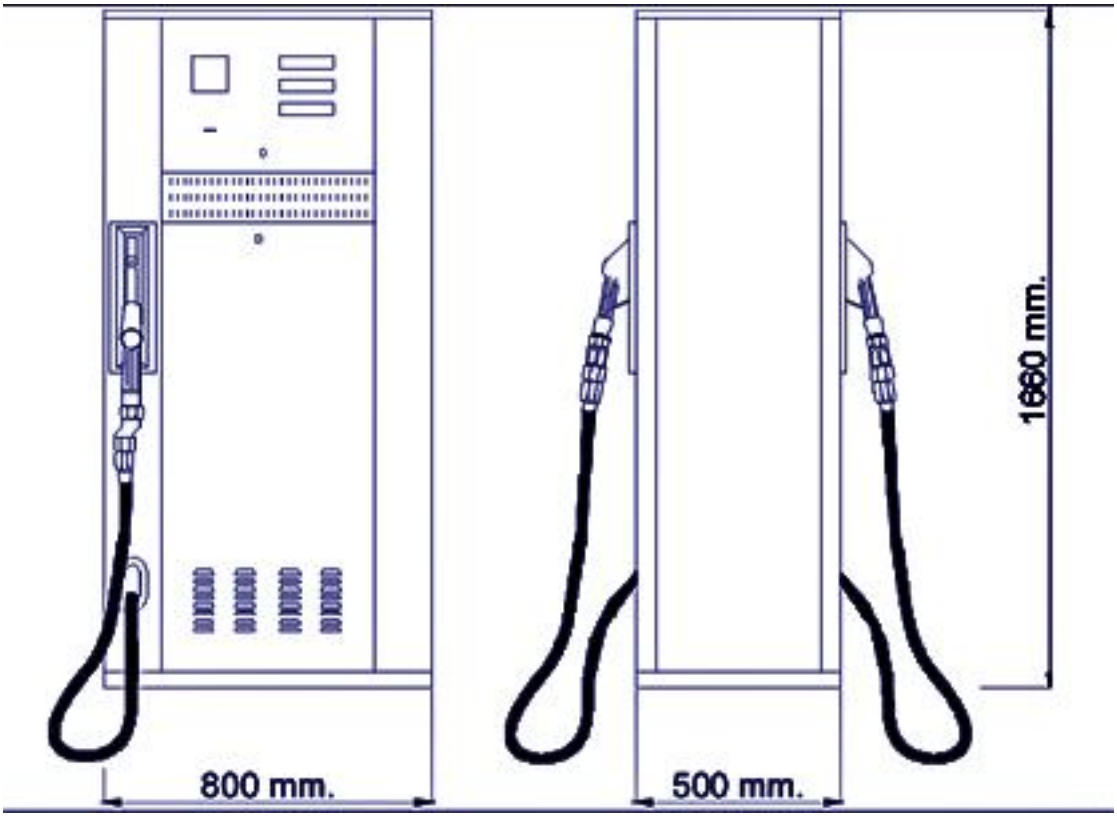
1.11. Error Codes

E 50 : Power cut on sales
E 51 : Power cut
E 52 : Missing or defective mechanical total
E 53 : Missing or defective Pulser
E 54 : No automation connection
E 55 : The waiting time-out with total
E 56 : The waiting time-out without total

E 57 : Pulser free movement during working
E 58 : Not entered the unit price
E 59 : Pulser free movement
E 60 : Nozzle remained open
E 61 : Short-circuit on mechanical total
E 62 : Short-circuit on Selonoid valve
E 63 : Pulser channel failure
E 64 : Preset value is exceeded
E 65 : CPU reset
E 66 : E2 is defective or missing
E 67 : Timer is defective or missing
E 68 : Emergency stop
E 69 : Pump was stopped by automation
E 70 : pre-set sales over, time-out or no total
E 71 : pre-set sales over, time-out or yes total
E 72 : pre-set sales over, Pulser free movement
E 73 : Full
E 74 : ATC sensor failure
E 75 : Calibration error
E 76 : Pulse calibration error
E 77 : Voltage Problem

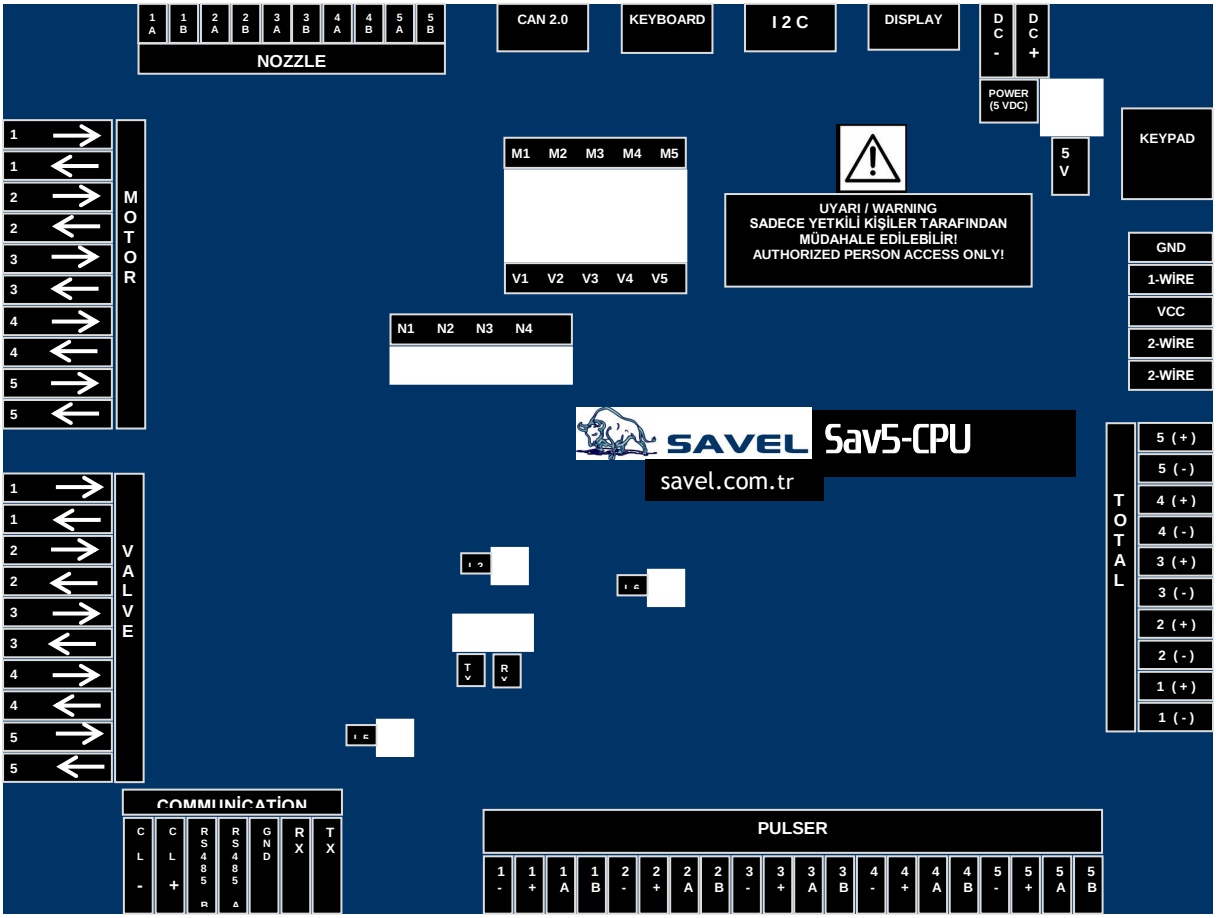
1.12. Technical Drawings

1 Series



1.13. Central processor unit (CPU) connections

SAV5-CPU



2. Generator System

Rated frequency(Hz)	50 60
Rated voltage(V)	400/230 400/230
Rated current(A)	6.7 7.5
Rated output power(kW)	5.0 5.2
Rated rotation speed(rpm)	3000 3600
DC output	No
Power factor(cos)	0.8(Appliced to KVA)
Phase number	Three phase
Noise level[dB(A)@7m]	74~77
Overall dimension(L*W*H)[mm(in)]	720x492x650(28.35x19.37x25.59)
Dry weight[kg(ibs.)]	100(220)
Structure type	Open-frame type
Coupling mode	Transmission shaft rigid couping
Engine model	KM186FAE
Engine type	Single cylinder, 4-stroke, air-cooled, direct injection, diesel engine
Displacement[ml(cu.in)]	418(25.51)
Compression ratio	19:1
Rated power[kW(Hp)/rpm]	5.9(8.02)/3000,6.5(8.84)/3600
Starting system	12V electric starter
Rotation direction(View from flywheel)	Clockwise
Fuel	0# (summer),-10# (winter) light diesel oil

3. Transfer Set

3.1. PPP Rotary Vane Pumps

PPP series fuel pumps are pumps with positive displacement and self priming with pallet. They are used safely for transfer of low viscosity fluids having explosion risk. Maximum pressure of rotary vane pumps are **8 bars.** 80 meters pump head could be obtained when coupled with proper motor power. Pump housing has been designed with internal by-pass. Maintenance is easy.

> Application Areas

They are used in all areas where fuel transfer is made such as ex-proof systems, fuel tank trucks and marine tankers, fuel stations, liquid fuel filling facilities.

> Fluids

Gasoline, diesel oil, solvents, LPG, kerosene, alcohols, low viscosity minerals and hydraulic oils.

> **Technical Specifications**

Ürün Kodu *Product Code*	Açıklaması *Description*	Ölçü *Dimention*	Debi *Flow Rate*		Basınç *Pressure*		Motor *Engine*					Ağırlık *Weight*	Paket Ölçü *Package Dimention*	By-Pass
		İnç *Inch*	Lt/dk *Lpm*	Gal/dk *Gpm*	Bar	Psi	Voltaj *Voltage*	Frekans Hz *Frequency*	Hız dev/dak *Rpm*	Hp	kW	Kg	Cm	
PPP 212	Paletli Pompa *Rotary (Sliding) Vane Pump*	2 1/2"	750	198	8	116	380	50	800	7,5	5,5	44	34x42x32	Standart *Standard*
PPP 300	Paletli Pompa *Rotary (Sliding) Vane Pump*	3"	1250	330	8	116	380	50	800	10	7,5	63	40x56x46	Standart *Standard*
PPP 212MS	Paletli Pompa (Mekanik Salmastralı) *Rotary (Sliding) Vane Pump (Mechanical Seal)*	2 1/2"	750	198	8	116	380	50	800	7,5	5,5	50	34x42x32	Standart *Standard*
PPP 300MS	Paletli Pompa (Mekanik Salmastralı) *Rotary (Sliding) Vane Pump (Mechanical Seal)*	3"	1250	330	8	116	380	50	800	10	7,5	68	40x56x46	Standart *Standard*

3.2. Three-phase induction motor - Squirrel cage rotor

Explosion Proof Motors (Exd / Exde) - Standard Efficiency - IE1

Product line : Explosion Proof Motors (Exd / Exde) - Standard Efficiency - IE1

Frame	: 112M
Output	: 4 kW
Frequency	: 50 Hz
Poles	: 4Full
load speed	: 1420
Slip	: 5.33 %
Voltage	: 380/660 V
Rated current	: 8.41/4.84 A
Locked rotor current	: 58.0/33.4 A
Locked rotor current (Il/In)	: 6.9
No-load current	: 3.60/2.07 A
Full load torque	: 26.9 Nm
Locked rotor torque	: 230 %
Breakdown torque	: 260 %
Design	: N
Insulation class	: FTemper
ature rise	: 80 K
Locked rotor time	: 10 s (hot)

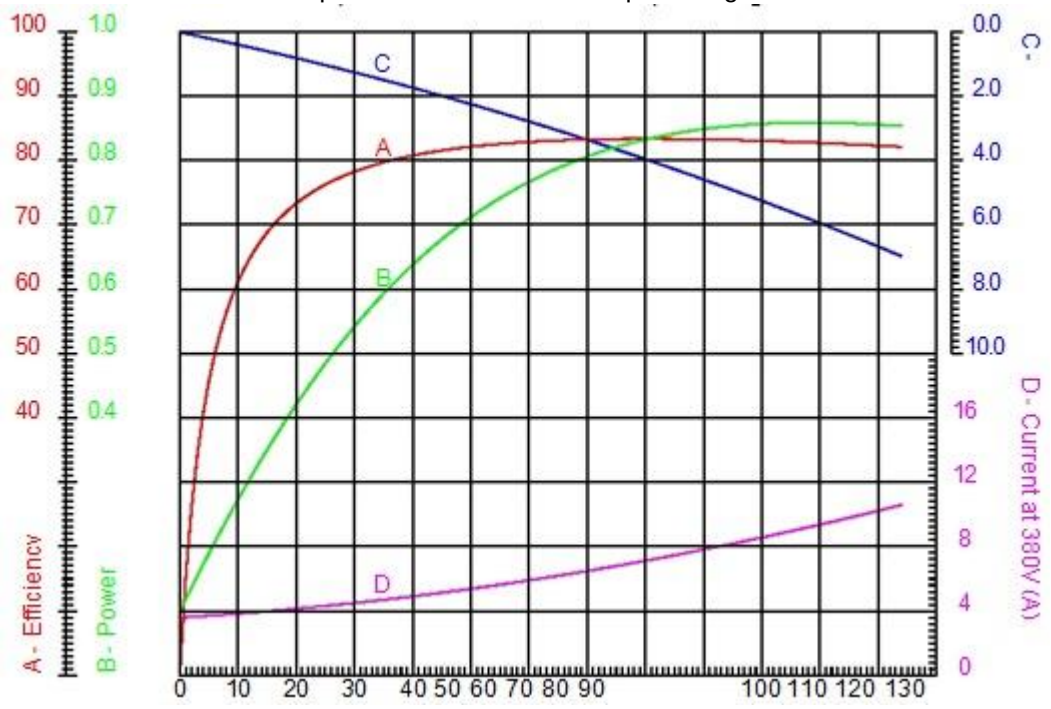
Service factor	: 1.00
Duty cycle	: S1
Ambient temperature	: -20°C - +40°C
Altitude	: 1000 Degree of
Protection	: IP55 Approximate
weight	: 62 kg
Moment of inertia	: 0.01607 kgm²
Noise level	: 56 dB(A)

	D.E.	N.D.E.	Load	Power factor	Efficiency(%)
Bearings	6307 ZZ	6206 ZZ	100%	0.86	83.1
Regreasing interval	---	---	75%	0.81	83.0
Grease amount	---	---	50%	0.72	82.5

Efficiencies according to the indirect method of IEC 60034-2-1:2007 with stray load losses determined from measurement.

PERFORMANCE CURVES RELATED TO RATED OUTPUT

Three-phase induction motor - Squirrel cage rotor

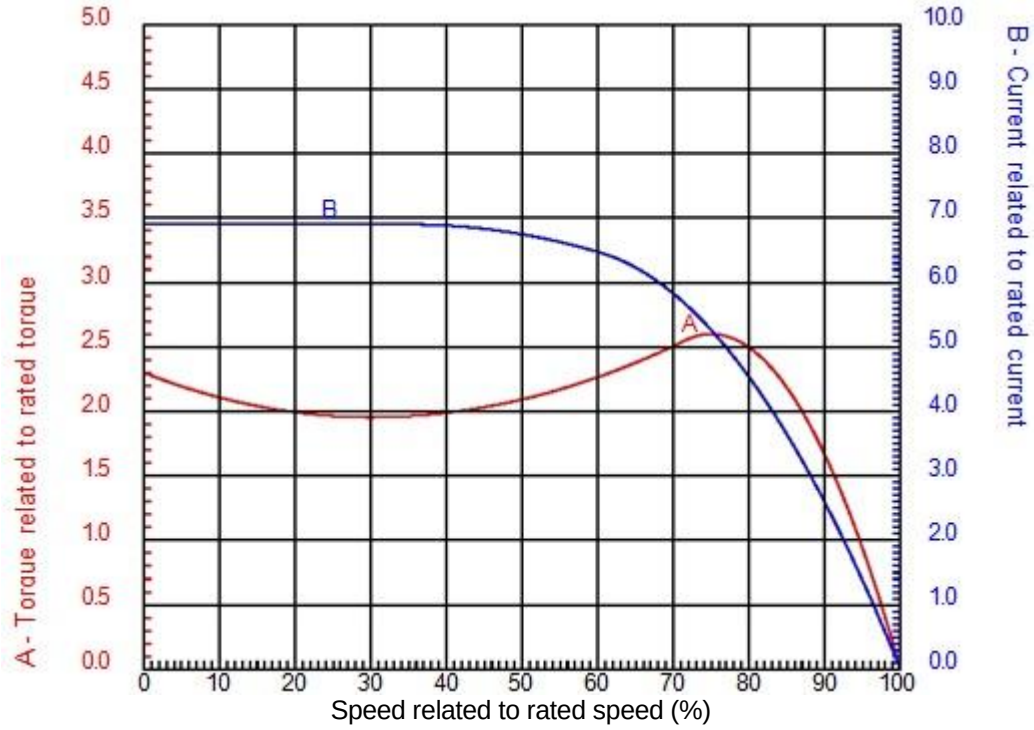


Product line	: Explosion Proof Motors (Exd / Exde) - Standard Efficiency - IE1

Frame	: 112M	Locked rotor current (Il/In)	: 6.9
Output	: 4 kW	Duty cycle	: S1
Frequency	: 50 Hz	Service factor	: 1.00
Full load speed	: 1420	Design	: N
Voltage	: 380/660 V	Locked rotor torque	: 230 %
Rated current	: 8.41/4.84 A	Breakdown torque	: 260 %
Insulation class	: F		

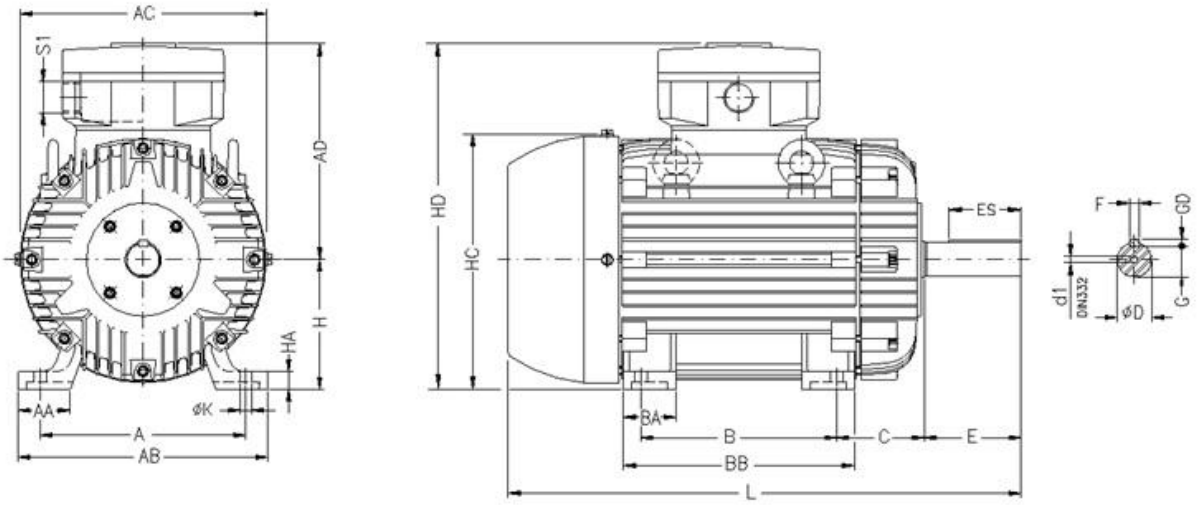
CHARACTERISTIC CURVES RELATED TO SPEED

Three-phase induction motor - Squirrel cage rotor



Product line : Explosion Proof Motors (Exd / Exde) - Standard Efficiency - IE1

Frame	: 112M	Locked rotor current (Il/In)	: 6.9
Output	: 4 kW	Duty cycle	: S1
Frequency	: 50 Hz	Service factor	: 1.00
Full load speed	: 1420	Design	: N
Voltage	: 380/660 V	Locked rotor torque	: 230 %
Rated current	: 8.41/4.84 A	Breakdown torque	: 260 %
Insulation class	: F		



Explosion Proof Motors (Exd / Exde) - Standard Efficiency - IE1
Three-phase induction motor 05-NOV-2012
Frame 112M - IP55

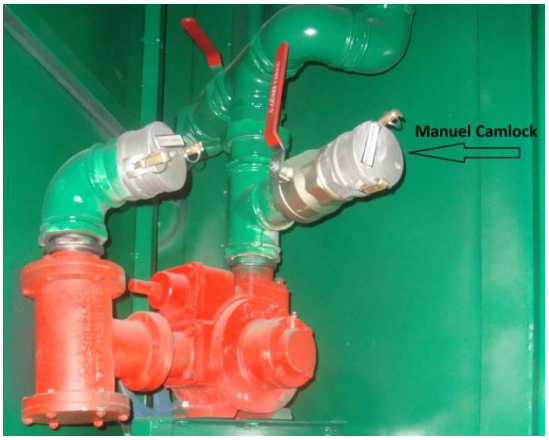
A 190	AA 48	AB 220	AC 223	AD 243
B 140	BA 50	BB 183	C 70	CA 128
D 28j6	E 60	ES 45	F 8	G 24
GD 7	DA 24j6	EA 50	TS 36	FA 8
GB 20	GF 7	H 112	HA 17	HC 237
HD 355	K 12	L 394	LC 448	S1 M32X1,5
d1 DM10	d2 DM8			

A. **FILLING WITH TRANSFER PUMP**

1- All the filling valves must be closed.
2- Connect the hose of tank truck to the entrance of transfer pump.
3- Open the filling valve which of tank to be filled.
4- Switch on the transfer pump from the transfer unit's panel.
5- Follow the filling on the tank level gauge from the operator room.
6- Tank filling must stop until 90%.

7- Firstly, switch off the transfer pump's electricity and then all the filling valves must be closed after the tank filling.
8- Remove the tank truck's hose and then put the counter camlock's cover.

B. **MANUEL FIILING**



1- Connect the tank truck's hose to manuel filling valve.
2- Open the filling valve which of tank to be filled.
3- Open the manuel filling valve.
4- Start the filling.
5- Follow the filling on the tank level gauge from the operator room.
6- Tank filling must stop until 90%.
7- All the filling valves must be closed.
8- Remove the tank truck's hose and then put the manuel camlock's cover.

Note: must be sure that the filling valves closed before and afterwards filling.

4. Electronical Instruments

4.1. Main Electronical Boards

1. First phase
2. Second phase
3. Third phase
4. "The Emergency Stop" is for cut off the electricity. Press the button in case of danger.
5. If the benzine tank overfill than 90%, the red lamp will be light.
6. If the benzine tank lower than 20%, the red lamp will be light.
5. If the benzine overfill than 90% in the tank, the red lamp will be light.
6. If the benzine lower than 20% in the tank, the red lamp will be light.
7. If the diesel overfill than 90% in the tank, the red lamp will be light.
8. If the diesel lower than 20% in the tank, the red lamp will be light.
9. The contactor switch is for turn on/off the office lamp.
10. The contactor switch is for turn on/off the lamp in the dispenser niche.
11. The contactor switch is for turn on/off the lamp in the generator and A/C niche.
12. If want to use electricity grid, turn the contactor switch to "1". If you want to use gen-set, turn the contactor switch to "2".
13. Can connect to UPS (optional)
14. Can be follow the fuel levels on display.

L1 - L2 - L3 (Electric Grid Entrance)			**Electric Grid Notr**			Grounding	**Generator Entrance**			Grounding	**Transfer Pump Exit**			Grounding	**Pompa Motor Çıkışı**		
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**

Dispenser Mainboard Exit		**UPS Electric Grid Entrance-FAZ**	**UPS Electric GridEntrance-Nötr**	**Grounding**	**UPS Return**		**Grounding**	**Port Exit**	**Office Lamp**	**Dispenser Lamp**	**Generator Lamp**	**Notr Exit**				**Grounding**
Phase (UPS)	**Notr (UPS)**				**PHASE**	**NOTR**										
20	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**

4.2. Transfer Pump's Electronical Board

1. First phase
2. Second phase
3.Third phase
4. The light is for transfer set. If the light turn on, it means the transfer set is working.
5.Contactor switch for start the transfer set.

ENTER					EXIT			
L1	L2	L3	Notr	Grounding	L1	L2	L3	Grounding

4.3. Alarm Systems

It has a wide range of useage offered and price advantage. With its stainless steel float and body. It is ideal for open top or low pressure tank applications. It has cable output and can be easily attached to metal or plastic tanks.

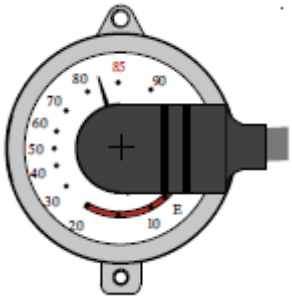
Parameters	Properties
Material	AISI 304, AISI 316(Op.)
Temperature (max.)	M10 Thread
Output	with cable
Quantity of Contact	1 x NO or NC
Contact Capacity	140 VAC / 150 VDC 1 A Dry Contact

(Op.) = Optional

4.4. Level Indicator

			rs485		Sens		RELAY 1			RELAY 2			220 AC	
12V	5V	GND	B	A	S1	S2	A1	B1	C1	A2	B2	C2	N	L

4.5. Hall Effect Twinsite Sensor



General Instructions
a) Work principle
The Hall Effect Transmitter are based on the transformation of magnetic field from the specific
pointer to an electrical signal proportional with the volume (in %) of the liquid inside the tank, available for different dial sizes (Junior, Senior, R3D, Senior 4", Magnetel 4" or 8".
The transmitters work as Voltage divider (Vout = %Vin).
b) Certification
These sensors are compatible for use in Hazardous Area if they are powered by an intrinsically
safe voltage supply with the values : Ui = 14VDC, Ii = 200mA.
On the other hand Li and Ci are the inductance and the capacitance of the sensor.
Inductance and capacitance of the wiring had to be added.
They are identified by means of a sticker which recall the certification data.
Except other mentions, the power supply voltage is 5VDC +/- 1V with a nominal current of 5mA under 5VDC..

General Description
The Hall Effect Twinsite transmitter is a magnetically-driven, Hall Effect, voltage output sender with potted wires and cable. Senders are utilized where direct reading plus an electrical signal to a remote level indication are required. Hall Effect is a solid state technology with no contacts. It counts on the fact that a magnet bends the path of electrons moving through a semiconductor. This bending is detected and converted into ratiometric voltage output. Many existing domestic storage tanksa re equippd with weak drive mahnets suited for low friction direct-indicating dial assemblies. As the Hall Effect Twinsite is a contactless sensor it can be utilized for a retrofit on these vessels to provide an electrical output which can be used for remote indication of tank levels. The Hall Effect Twinsite provide the easiest to read local indication by using a dial face divided into percentage units. The case, in UV stabilized material, is hermetically sealed by ultrasonic welding and the electrical connections are sealed with epoxy chambers.

General Specifications
Accuracy: +/- 4% for all types
Hysteresys: less than 1% typical
Repetability:+/- 2%
Resolution: Infinite
Operating Temperature: -40 ºC to 80 ºC
Operating Voltage range: 5VDC±0.5
With an accuracy decrease of 1 to 2%, power range can be extended at 3.5 to 6VDC
Consumption: typical 5 milliamps under 5VDC

Output Voltage: Ratiometric 8-90% of input voltage @8-90% volume Ratiometric means that the output signal voltage is propotional with the input voltage (Vin) and liqiud volume in the tank. Under 5VDC, “Empty” is 0.4V (or 8% of input voltage) 90% is 4.5V (or 90% of input voltage)
Output Current: Max 1mA

WARNING!
If this equipment is used in a flammable area, it has to be powered by an intrinsically safe power supply.