

TRANSPORTABLE GAS STATIONS

MINI GAS STATION MICROSTA 12

Mini gas station “MICROSTA 12” is the only Ex certified product in Romania that fulfills all requirements of the norm concerning transportable gas stations NP 004/1/1999, approved by MLPAT with order 17/N/07.04.2000.

Fuel dispensing station “MICROSTA 12 ” is a fully functional containerized, transportable gas station.

RECOMENDED PURPOSES FOR MICROSTA 12

- in order to evaluate business potential of a new location envisaged to be used for a large capacity stationary gas station
- in areas with a reduced number of vehicles (less than 1000) and more than 20 km from large capacity stationary gas station.
- in case when the land plot is too small and does not provide enough space for a large capacity stationary gas station.
- in case of refurbishment of large capacity stationary gas station for periods that exceed 6 months.
- for temporary activities: site constructions, infrastructure, agriculture.
- for seasonal activities: mountains tourism, spa, countryside tourism.
- in case of vehicles fleet of companies.

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MINIMUM EFFORT FOR INSTALLATION AND RELOCATION OF MICROSTA 12

- Land required by the station is very small, about 10mx15m
- Minimum expenses for installation: concrete platform, access connection to power source (380V).
- No need for additional permits during transportation on public roads.
- Installation takes about 6-8 hours, dismantling and preparation for transport take about 4 hours.
- Maximum safety in operation due to the automatic fire detection, explosive environment detection and fire fighting system.
- Low installed power, 6,8kW
- Construction permit and operation certificate are facilitated by the existing certifications of the station, namely SCEEX, fire fighting and environment, conformity to NP 004/1/1999 MLPAT

HIGH ECONOMIC EFFICIENCY OF MICROSTA 12

- Becomes operational in a very short time, decreasing financial immobilization time
- At a very low sales volume(2000 l/day) the initial investment is recuperated in 5 years; for 3000 l in 2 ½ years, for 4000 l in less than 2 years.
- Station equipment enables accurate management of fuel inventory and sales
- It requires 1 person/shift
- Does not require qualified personnel, training being provided as part of the installation

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- Low energy consumption.
- Maintenance expenses are insignificant due to high reliability of the components
- Station shut downs are minimum due to quick servicing
- Life time of the gas station is minimum 10 ani

DESCRIPTION OF MICROSTA 12

“MICROSTA 12” includes all the equipment required for simultaneous storage and dispensing in maximum safety conditions of two types of fuel.

Total station capacity is 12 000 l of fuel, stored in a tank with two independent and sealed compartments. The tank is located in a specially designed insulated room.

Tank is equipped with fuel loading system (electropump-filter-hoses), vapour evacuation system, liquid level measurement in each compartment. Tank and pumps are installed in a leak retention tray due to environmental reasons. The air in the tank room is permanently ventilated and supervised by channel 1 of gas analyzer GMC7022E manufactured by Bieler+Lang Germany and by temperature sensor TM of the fire fighting system.

Fuel dispensing pump is two post type, model ZS-2402 manufactured by “SCHEIDT & BACHMANN” Germany with LCD display, frontal dispensers, approved by BRML RO 265/97. Dispensing pump is installed in a separate ventilated room, with secured door and is surveyed by channel 1 of gas analyzer GMC7022E .

Fuel dispensing area is protected by a tilting canopy on 3m length and an adjustable width up to 2m.

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Control system provides measuring, alarming, shut down in case of the appearance of potentially maximum fuel in the tank, pump shut down when reaching maximum allowable level(95%).

Operator control room enables supervision of the station by means of control panel TFAMC and also provides a comfortable environment due to interior endowments(aluminum carpentry, double glazed windows, shades, desk, chair, metallic closet).

Entrance area is protected against weather by means of 80 cm width canopy.

The station can be transported by any truck that can carry 20 ft containers, lifting device being included in the deliverables.

The station complies with the following european standards CEI-IEC 79-10/1995, CEI-IEC 79-14/1996, SR CEI 79-17/1996, CEI-IEC 79-19/1993, SR EN 50.014, SR EN 50.057, SR EN 50.05 and norm NP004/1/1999.

Design and technical documentation are approved by fire fighting department and environment department from Prahova district.

Transportable gas station "MICROSTA 12" is Ex certified by INSEMEX Petroșani with type certificate nr. SECEEx NMATEX 2000 .12008X.

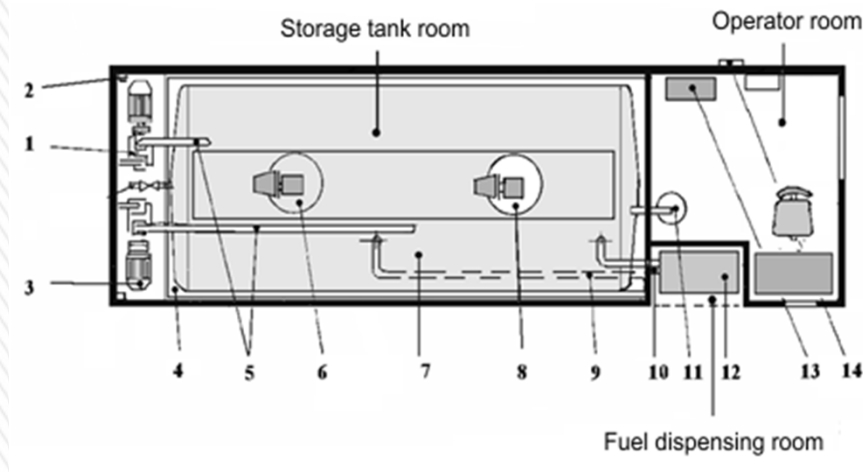
The station is delivered with installation agreement and calibration certificate.

Installation on location requires a minimum surface, the conditions that must be fulfilled as per NP 004/1/1999 are presented in the annex.

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MICROSTA 12 components

1. Gasoline unloading electric pump
2. Sensor Ch 1 for measurement vapour concentration in tank room
3. Diesel unloading electric pump
4. Fuel leak retention tray
5. Tank filling pipes
6. Equipment for measurement gasoline level
7. Fuel tank
8. Equipment for measurement diesel level
9. Gasoline pipe
10. Sensor Ch 2 for measurement vapour concentration in pump dispensing room
11. Automatic fire fighting system
12. Fuel dispensing pump
13. Control panel
14. 380V power connection box

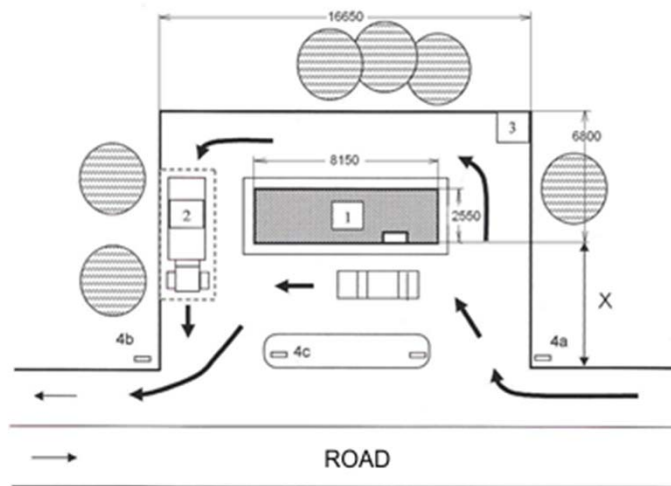


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MICROSTA 12 delivery set

1. Station itself as per dwg BM 3555.0A	1 pc
2. Glowing post consisting of 6 boxes and 2 flags	1 set
3. Tilting canopy and stationary canopy	1 set
4. Flag posts	2 pc
5. Office	1 pc
6. Chair	1 pc
7. PVC floor cover for office room	1 pc
8. Keys for door, control panel, power connection box	2 sets
9. Stickers for prices(optional)	2 sets
10. Grounding clipper for fuel tank car	1 pc
11. Metallic closet	1 pc
12.Special wrench for unloading pump	1 pc
13.Special wrench for connection to fuel tank car	1 pc
14.2" hoses with adapters for fuel tank	2 pc

MICROSTA MS 12 LOCATION LAY OUT



- 1 - gas station
- 2 - position of the fuel tank truck
- 3 - toilet for station personnel
- 4 - road signs
 - 4a - entrance
 - 4b - exit
 - 4c - access forbidden

MINI GAS STATION MICROSTA 24 A

MICROSTA 24 A DESCRIPTION

“MICROSTA 24 A” is a fully functional gas station built in transportable containers.

This station is designed for storage and dispensing three types of fuel and consists of two main modules, storage/dispensing module and shop module, along with fire fighting kit, canopy, flag posts, toilet.

“MICROSTA 24 A” includes all equipment required for storage and dispensing in safe conditions, simultaneously three types of fuel, but also it provides the space for an additional shopping area.

“M 24” is 10 m long and 2,4 m wide, with a total storage capacity of 24 000 l of fuel in three independent, sealed compartments. Fuel tank is installed in a specially designed, insulated room. Tank includes a fuel loading system (electric pumps-filter-hoses), vapour recovery system, in the fuel truck, fuel level measurement in each compartment. Tank and pumps are installed in fuel retention trays for environmental reasons. The air in tank room is naturally ventilated and permanently monitored by sensor Ch 1 from Bieler+Lang gas analyzer and temperature sensor TM from the automatic fire fighting system.

Dispensing pump is three post type M-6106 M manufactured by “SCHEIDT & BACHMANN” Germany with LCD display, 3 vapour recovery dispensers, approved by BRML RO 265/97. Dispensing pump is installed separately from the storage tank and the surrounding area is permanently monitored by the gas analyzer in order to detect and measure potentially explosive vapour concentration.

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Shopping module having 6m length and 2.4 m width is a metallic structure with polyurethane panel enclosure. The module is split into compartments providing space also for locker room, main control panel TFAMC. Carpentry is made of aluminum profiles and double glazed windows(app. 3,5 sqm). The entrance to fuel dispensing area and shopping module is protected by a 8.5 m long and 2,3 m wide canopy.

Control system provides measurement, alarming, emergency shut down in case of the appearance of potentially explosive atmosphere in tank room or fire, fuel level measurement with automatic shut down of the pump when reaching maximum allowable level in the tank(95%). Electric system complies with the requirements of Ex zones.

The station can be operated by 1 person/shift. Monitoring of the station is made by means of the main panel TFAMC located in the shopping module, office area.

MS 24 A requirements for installation on site

Station installation requires a minimum land surface, the requirements that must be satisfied as per norm NP 004/1/1999, are presented in annex.

Installation requires:

- concrete pads 10 x 2,45 m for the storage module, 6x2,45m for shopping module
- access roads for vehicles and fuel truck
- grounding and 380 V power connection for maximum installed power 10,8 kW(electric connection box BMDT 100A intris delivered with the station)

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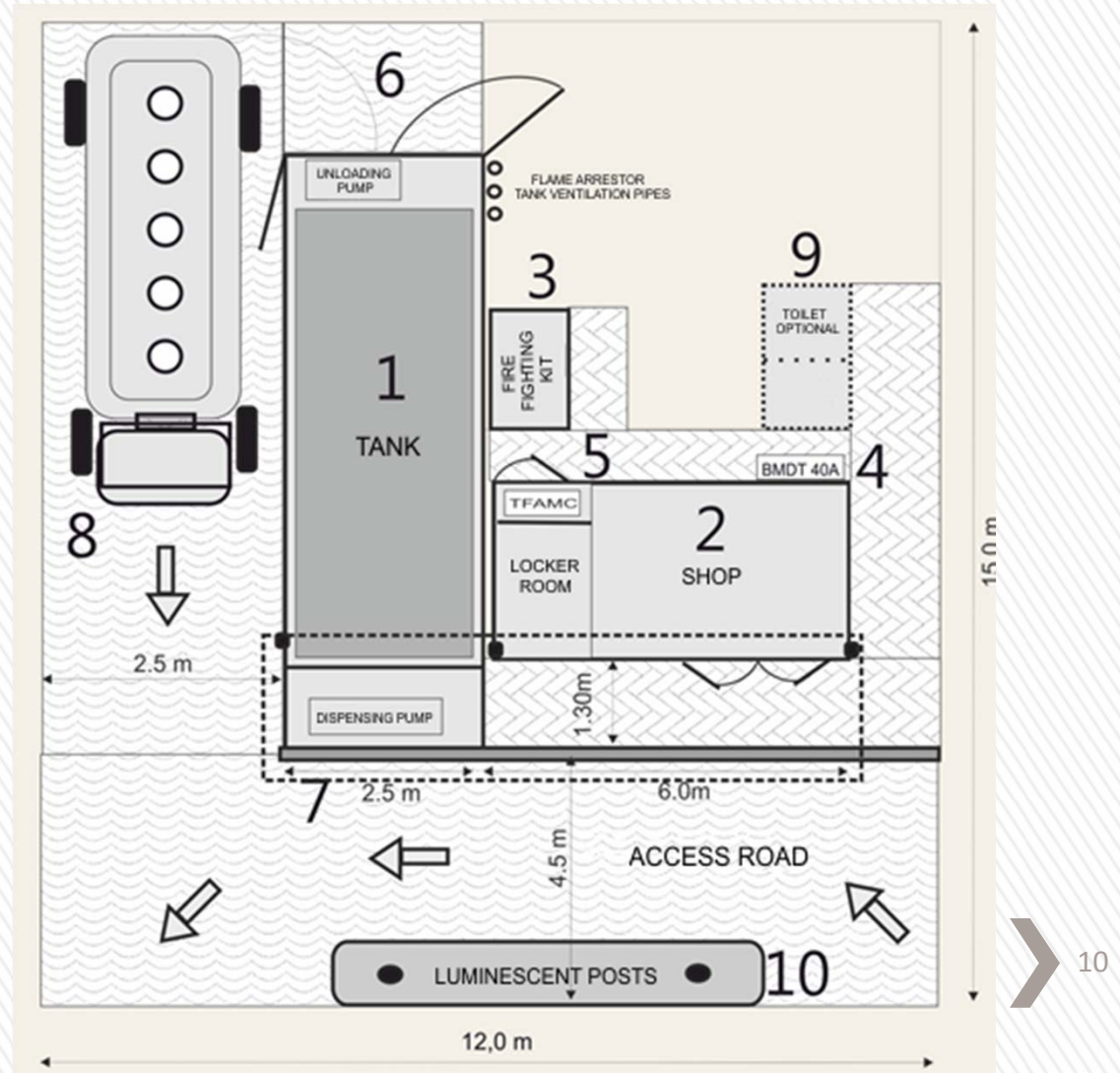
MS 24 delivery set	
1. Fuel storage and dispensing module MS 24	1 pc
2. Shopping module 2.4 x 6.0 m	1 pc
3. Luminescent box 8,5x0,5 m	1 pc
4. Canopy 2.2 x 8,5 m	1 pc
5. Light and flag posts	2 pcs
5. Luminescent price panel 1.5x0.9	1 pc
6. Fire fighting kit	1 pc
7. Main control board	1 pc
8. Electric connection box BMDT40A	1 pc
9. Grounding clipper and cable for fuel truck	1 pc
10. Metallic closet	1 pc
11. Special wrench for unloading pump	1 pc
12. Special wrench for connection to fuel tank truck	1 pc
13. 2" hoses with adapters for fuel tank	2 pcs
14. Shades for office window	4 pcs
15. Crane handling device	1 pc
16. Flame arrestor and tank ventilation pipes	3 pcs
17. Access ladder tank manhole	1 pc



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MS 24 A INSTALLATION LAY OUT

1. Fuel storage and dispensing module MS 24
2. Shopping module
3. Fire fighting kit
4. Electric connection box BMDT40A
5. Main control board
6. Unloading electric pump
7. Dispensing pump
8. Fuel truck
9. Toilet(optional)
10. Advertising posts



MICROSTA 24 A FUNCTIONS

- Storage three types of fuel in one tank 3x8000 litri
- Unloading from fuel truck and loading the tank, by means of three pumps:
 - Centrifuge pump AC 302, flow 250 litri / min
 - electric motor 100 ASA ExII Bt 4 2,2KW-380V/1500 rot/min
 - coarse filter with metallic mesh 150µm
 - fuel hose with copper insertion 2" x 4,0 m
 - quick connection couplings for fuel truck 3"
 - Fuel dispensing by means of Scheidt&Bachmann MZ 6106-M pump
 - flow min-max 2÷50 litri/min/post
 - reusable fine filter 40µm
 - SLIMLINE delivery hose 1" x 4,0 m
 - automatic fuel dispenser ZVA 1"
 - LCD display: unit price 4 digits
 - liters 6 digits
 - total lei 6 digits
 - total liters 12 digits
- Shopping module 15 sqm(6 x 2,5 m) with office area
- Fuel level measurement in each compartment:
 - a. Optical sight lines
 - accuracy 1,65÷10 litri/mm
 - range min/max 100÷1400 mm
 - b. Electronic level indicator
 - number of steps 15
 - accuracy liters/step 300÷400

MICROSTA 24 A FUNCTIONS

- Corrosion protection is provided:
 - two layers of primer for all components min 80 µm
 - inside protection of the tank with fuel resistant system min 60 µm
 - outside protection system for all components min 60 µm

- Controls:
 - all electric controls are made from main board
 - ball valves are actuated manually
- Fire fighting protection inside tank room:
 - a. Automatic fire detection and extinguishing system
 - temperature indicator with preset alarming level : 70 °C
 - visual and acoustic signals:
 - delay to general shut down 15 sec
 - Manual fire extinguisher 50 kg
 - b. Equipment for monitoring potentially explosive atmosphere
 - c. Insulation by means of polyurethane panel
 - d. Ex proof electric equipment

- Equipment for detection and alarming potentially explosive atmosphere
 - gas analyzer type Bieler+Lang tip GMC 7022E with sensors 822 Exmess
 - detected gas benzina-motorina
 - measurement range: 0-90% LIE
 - pre-alarming, signaling level 20% LIE
 - alarming and shut down level 50% LIE

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- **Automation:**

- compartment loading is limited by the level switch (95%) that leads to automatic shut down of the pump
Maximum level is displayed visually and acoustically.

- temperature in tank room is monitored by a temperature sensor set on 70 °C that leads to emergency alarming, opening the electric valve from powder and N₂ line, and triggers general shut down in 15 seconds.

- the air in tank room and dispenser room is monitored in order to detect, measure fuel vapours, start the alarms at the preset values and eventually shut down of the station.

- disconnect dispensing pumps during loading the tank

- Thermal stability of the station is ensured by means of insulation with 40mm thick polyurethane panels

- Water insulation is achieved by means of special sealing solutions and gaskets

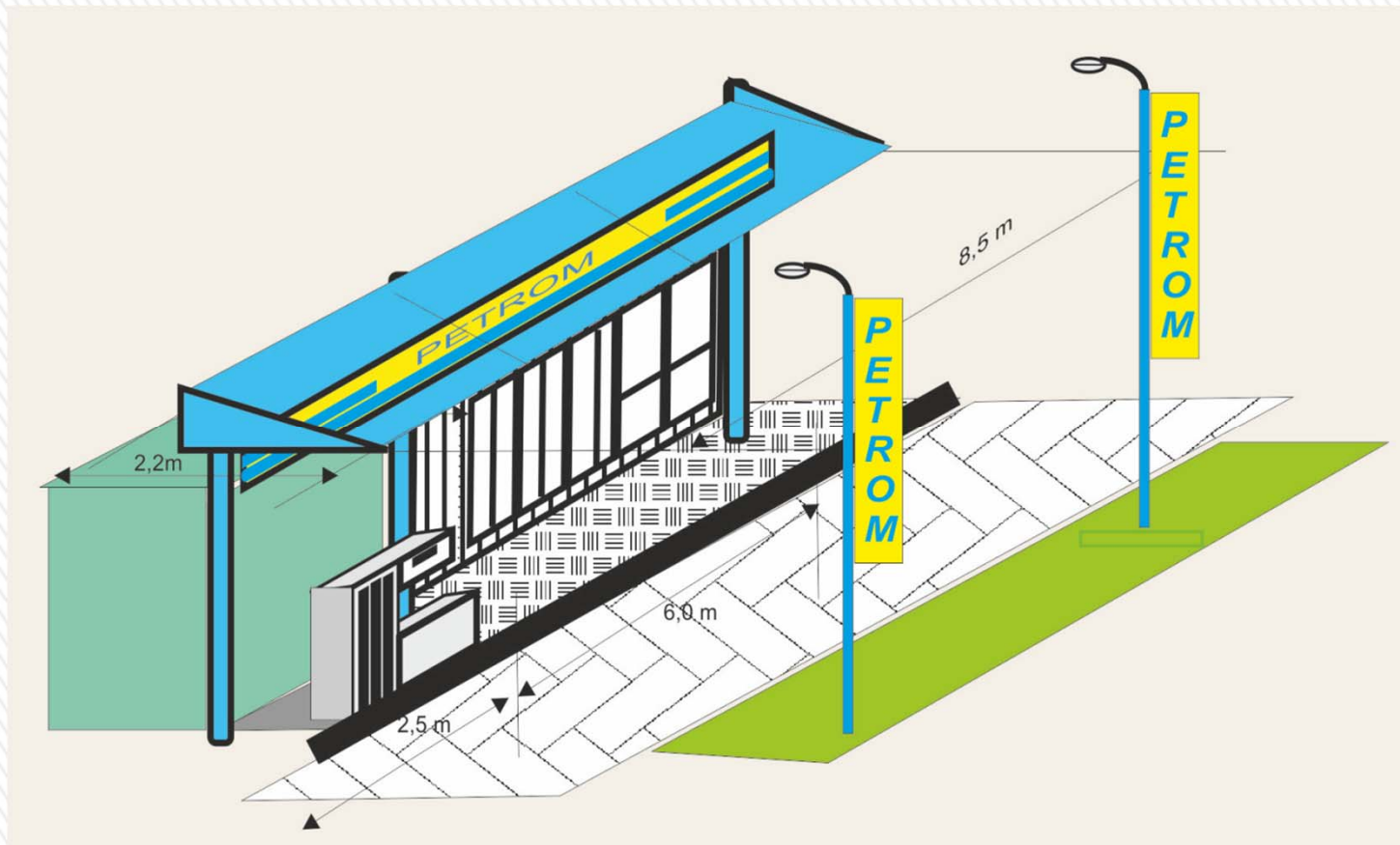
- Station handling can be made with 12 to crane only by using the lifting device DR, supplied with the product. Maximum weight supported by the device is 12 to.

- Station transport can be made by means of 40 ft container truck.

TRANSPORTABLE GAS STATIONS

• Dimensions

	MMS 24 module	Office module
- Length	10 000 mm	6 000 mm
- Width	2 350 mm	2 350 mm
- Height	2 565 mm	2 565 mm
- Weight	11 200 Kg	2 300 Kg



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Transportable module for storage and dispensing diesel fuel SM 14

This product is mostly dedicated for internal activities of companies that have a significant number of vehicles, in a safe and environmentally compliant manner. Module is built using steel profiles covered with polyurethane panels. Module is L x l x H de 6000 x 2300 x 2450 mm with a total weight of 4200 kg. Storage tank has 14 000 l capacity and is located inside a leak retention tray. Ventilation during tank filling is made by a 1" pipe, equipped with flame arrestor. Tank loading is made using a pumping system (pump, filter, 2" hose), at a 250 l/min flow, the operation being automatically stopped upon reaching maximum allowable level. Level measurement system is optical sight line, with an accuracy of minimum 6l/mm. Dispensing pump is ZS-2401 manufactured by "SCHEIDT & BACHMANN" Germany with a flow of 2÷50 l/min, LCD display, and a T20 calculator that enables fuel management. Control panel along with fire fighting kit are located separately at 4,5 m distance from the module. All electric equipment installed on the module are Ex proof. Module is powered 380 V and has an installed power of 2,8 kW. On the site the module must be grounded and protected against lightning. Module is protected towards outside with metallic lattice. Transportation can be made with a truck having 6 m long platform. Module installation requires a 3 m x 6 m platform with conditions to be fulfilled that are presented below.

"SM 14 " FUNCTIONS

- | | |
|---|--|
| <ul style="list-style-type: none"> • Fuel storage in a horizontal, cylindrical tank | 14 000 l |
| <ul style="list-style-type: none"> • Fuel loading by pumping system that includes: <ul style="list-style-type: none"> - centrifuge pump AC 302, flow - electric motor 100 ASA ExII Bt 4 - coarse filter with metallic mesh - fuel hose with copper insertion - quick connection couplings for fuel truck | 250 litri / min
2,2KW-380V/1500 rot/min
150µm
2" x 4,0 m
3" |
| <ul style="list-style-type: none"> • Fuel dispensing with equipment Scheidt&Bachmann 2401 Z <ul style="list-style-type: none"> - flow min-max - reusable fine filter - SLIMLINE dispensing hose - automatic fuel dispenser ZVA - LCD display: unit price
liters
total lei
total liters | 2÷50 litri/min/post
40µm
1" x 4,0 m
1"
4 cifre
6 cifre
6 cifre
12 cifre |
| <ul style="list-style-type: none"> • Level measurement by means of optical sight lines <ul style="list-style-type: none"> -accuracy -rangemin/max | 1,65÷10 litri/mm
100÷2000 mm |
| <ul style="list-style-type: none"> • Corrosion protection is provided: <ul style="list-style-type: none"> -two layers of primer on all components - inside protection of the tank with fuel resistant system - outside protection system for all components | min 80 µm
min 60 µm
min 60 µm |
| <ul style="list-style-type: none"> • Controls : <ul style="list-style-type: none"> -all controls are made from the main board located 4,5 m away from the module -ball valves are manually actuated | |

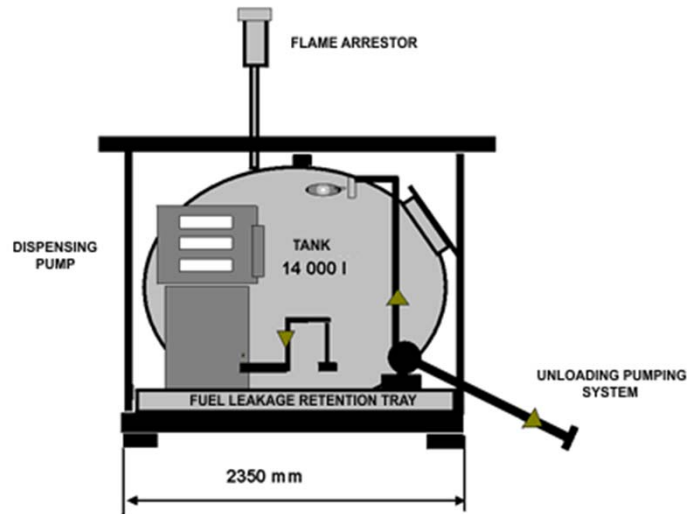
"SM 14 " FUNCTIONS

- **Fire fighting :**
 - a. Powder and N₂ extinguisher **50 kg**
 - b. Standard fire fighting kit
 - c. Roof insulation by polyurethane panel **g=40 mm**
 - d. Electric equipment Ex proof
- **Local lighting of dispensing area with Ex proof lamp** **2x36 W**
- **Automation:**
 - maximum fuel level(95%)
 - power shut down by emergency button N1 117 Ex
- **Module theft protection by means of metallic lattice and mechanical locks.**
- **Equipment handling can be made by a 7 to crane using the lugs located on the upper generatrix of the tank.**
- **Transportation can be made with a truck having 6 m long platform.**
- **Dimensions:**

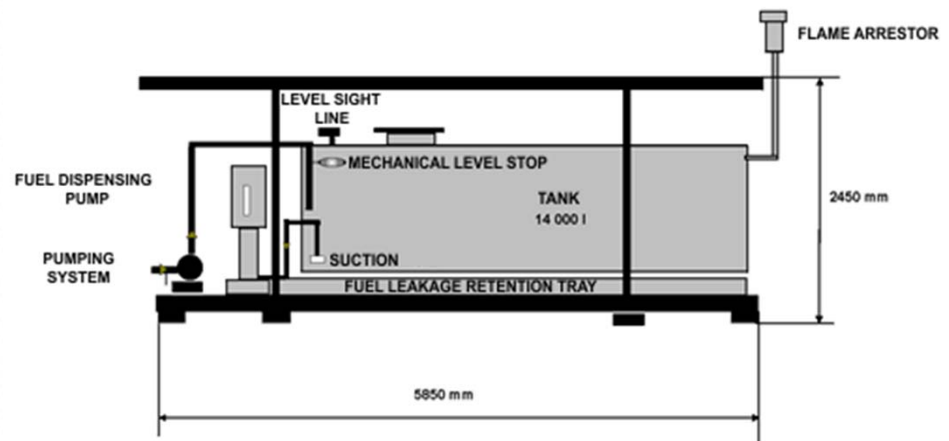
Length	5850 mm
Width	2350 mm
Height	2450 mm
Weight empty	4200 Kg

TRANSPORTABLE GAS STATIONS

SM 14 DIESEL STORAGE AND DISPENSING MODULE
FRONTAL VIEW



SM 14 DIESEL STORAGE AND DISPENSING MODULE
SIDE VIEW



REQUIREMENTS FOR INSTALLATION OF TRANSPORTABLE GAS STATIONS(NP 004/1/1999)

Installation of equipment is allowed only by means of urbanism certificate and construction permit. Stages of installations are:

- submitting documentation for urbanism certificate, as per HGR nr. 525/1996 și Legea nr. 10/1995;
- preparing all documents required by the urbanism certificate;
- submitting the documentation for construction permit;
- receiving the construction permit;
- installation design;
- installation works(concrete pads, access, power connection, grounding etc);
- reception of works as per HGR nr.273/1994 și HGR nr. 51/1996;
- receiving operation permit from authorities.

Gas stations are installed only outdoors, in areas easily accessible by public roads, at safe fire distances as per norms.

It is not allowed to install the station on top of electric lines, pipes, tunnel etc nor under bridges, crossings etc.

Gas stations are located at standard distances from the public roads, with the access only from the lane in the proximity of the stations, by means of right turning.

In order to enable proper traffic, standardized signs will be installed.

Minimum distances that must be ensured between the gas station and existing constructions, installations are presented below:

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CONDITII PRIVIND AMPLASAREA BENZINĂRIILOR TRANSPORTABILE(Extras din NP 004/1/1999)

No	Constructions, installations	Distance (m)
1	Constructions I-II grade fire resistance	15
2	Constructions III grade fire resistance	18
3	Constructions IV-V grade fire resistance	22.5
4	Tall and very tall buildings, or crowded buildings	30
5	Schools, kinder gardens, asylums, hospitals	35
6	International roads, highways	15
7	District roads	10
8	Streets within town limits	5
9	Rail roads	40
10	Rivers, sea, forests, lakes	50

Gas stations are installed at minimum 1,5 H from high voltage power lines(H=power line pillar height), not less than 20 m from medium voltage lines, not less than 10 m from low voltage power line.

In case a portable gas station is installed near an existing station, with stationary above ground tanks, the minimum distance should be 25 m.

Distances are measured horizontally from the outer limit of perimeter enclosures of the portable station to each existing object.

In cases that are technically justified there can be lower distances if additional measures are taken.

Other constructions related to the portable stations are designed, manufactured and installed as per the requirements of Norm NP 004.

It is not allowed to install the station on top of electric lines, pipes, tunnel, nor under bridges, crossings.