

PRODUCTPRESENTATION
SAFE, MODULAR
FUEL STORAGE SYSTEM

<u>e</u>FStore

# Safe, Modular Fuel Storage System



### **Background**

During recent years, we have received consistent feedback that fuel theft has become a common issue. There has also been a greater awareness, specifically amongst municipalities, of the environmental issues directly related to spills from fueling facilities.

Many companies, including insurance companies, struggle with the increased costs related to fuel theft as well as environmental cleanup caused by fuel spills.

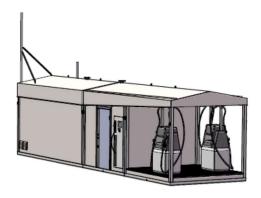
Another reason for the Modular Fuel Storage System was a market requirement for temporary and/or adaptable fuel storage solutions. Also, more products are being introduced to the market. (RME, HVO100)

Using the above "wish list", our R&D department came up with a completely built in solution where no connections are visible/accessible, and the equipment is completely covered by a protective shell.

The shell also provides containment, preventing spills from reaching the environment.

### Benefits with eFStore:

- Burglary resistant in accordance with SS EN 1143-1:2012
- Low operating cost
- Reduced insurance premium
- Reduced cost for new installation
- Quick turnaround for new or modification to storage unit
- Easy to increase or decrease storage capacity when necessary
- Dramatically reduce fuel theft
- Significant cost savings thanks to no environmental cleanup cost

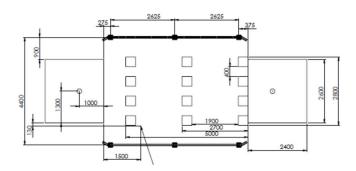


# **Flexibility**

Our modular system allows for a variety of storage tank sizes and products in conjunction with dispensing units, service areas and DEF storage tanks for example.

The main advantages are the flexibility to relocate complete storage units, increase or decrease the capacity, add other products, replace dispensing units, etc.

The Modular Storage System is manufactured at the factory and is "plug in" ready.



# **Safety and Security**

There is an obvious market demand for an easy to use, safe and secure fuel storage system to prevent thefts and vandalism.

Our Modular Storage System has burglary protection in accordance with SS EN 1143-1 (Value Storage).

This allows sufficient time for security/police to reach the site to prevent a crime.

#### Design

The roof is designed to be removed if major maintenance or replacement of the storage tank is necessary.

The roof is set up for custom installations such as sign with fuel price, spot lights, dedicated signs, marketing material etc.

Walls can be prepared for logotype or panels.

### **Storage Tank**

The storage tank is always divided in two equal parts of tank and can be obtained in a variety of sizes and configurations of up to 4 different products. (2 x SFS) Diesel, HVO100, RME or gas\*,  $(10 + 10m^3 \text{ up to } 25 + 25m^3)$  \*Class 1 requires separate HSE.

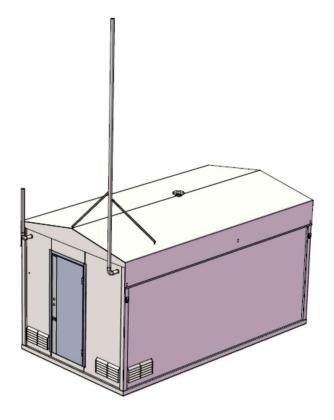
It is a rectangular K-Storage Tank which means internal anti-corrosion treatments which are subject to inspection every 12 years. Stainless steel tanks are optional. All storage tanks are provided with a Certificate from Inspecta.

The receivers for refilling the storage tank are located in a locked room at the rear of the container, as is the vapor recovery.

Storage tank includes:

- Manhole
- Inside ladder
- Refilling pipe
- Suction pipe
- Level measurement
- Overfilling prevention
- Solenoid valve
- Return pipe
- Vent pipe
- Vapor revovery (class 1)
- Pressure vacuum relief valve (class 1)
- Additional flame arrestor.

The storage tank is delivered fully fitted as a "plug and play" solution.



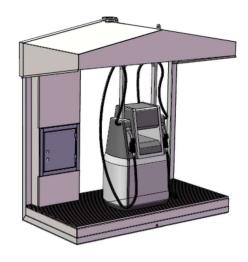
# Safe Fuel Storage - SFS

The container unit is designed for security as well as spill containment.

The equipment for refilling is located at the rear of the container, which is also the inspection area. We use suction pump to refill gas and other media use pump from the vehicle.

This area also provides additional storage space for things like cleaning equipment, safety clothes etc. This room is properly ventilated and lockable with a steel safety door.

The "plug and play" equipment is located at the front of the container for easy installation. The roof is securely fitted to prevent damage from rust and mold as well as theft and damage.

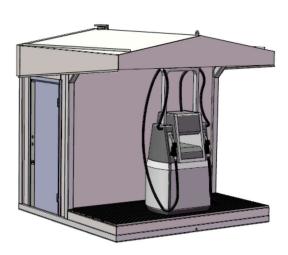


#### Refuel Unit - RU

The refueling unit with full dispensing equipment is designed to be easily connected to the container (SFS) or other units. Dimensions are  $1.4 \times 2.8 \text{ M}$ .

Below the dispensing equipment, there is a spill containment unit which is covered by a grid or checker plate.

An optional electrical cabinet is available.

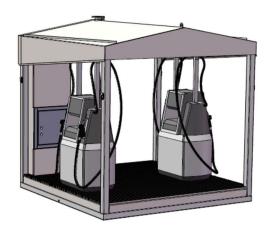


# Refuel/Service Unit - RSU

The combined refueling and service unit provides additional storage space and a safe location for the electrical cabinet. The service unit is outfitted with a burglary resistant steel door. Optionally, the service unit can be provided in a frost safe version. Dimensions are 2.8 x 2.8 M.

Below the dispensing equipment, there is a spill containment unit which is covered by a grid or checker plate.

Customers have the option to install the electrical cabinet inside or outside.

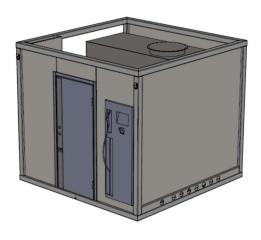


### Refuel Unit Double - RUD

The double refueling unit allows for two vehicles to refuel simultaneously with the dispensing units installed alongside the container. Alternatively adding other products like DEF (AdBlue) to be dispensed as well. Dimensions are 2.8 x 2.8 M.

Below the dispensing equipment, there is a spill containment unit which is covered by a grid.

An optional electrical cabinet is available.



### Service Unit - SU

The service unit provides additional storage space and can also be supplied in a frost safe version. For example to house a storage tank  $(4m^3)$  and dispensing equipment (Esense) for DEF (AdBlue) for instance. Dimensions are  $2.8 \times 2.8 \text{ M}$ .

An optional electrical cabinet is available.

Several service units can be installed if required.

#### **Security Solutions**

All options above may be combined with additional units. The sky is the limit. These units below are specifically designed where security, safety and fuel theft is of outmost concern and when the unit is placed in a remote location.

### Unit with Security Room - USR \*

The unit with the security room is designed to prevent theft and vandalism and is outfitted with burglary resistant steel door to access the pumps.

Narrow openings on the side of the Security Room allow the operator to make a payment and reach the nozzles.

Below the dispensing equipment, there is a spill containment unit which is covered by a grid. Dimensions are 2.8 x 2.8 M.

\*Not available for class 1 products

## Unit with Built in Pump - UBP \*

The unit with the security room is designed to prevent theft and vandalism and is outfitted with burglary resistant steel door to access the pumps.

Below the dispensing equipment there is a spill containment unit which is covered by a grid. Dimensions are 2.8 x 2.8 M.

This unit is specifically designed for smaller operations and requires individual keys to access the dispensing equipment.

\*Not available for class 1 products



### **General Conditions and Advantages:**

#### **Construction:**

The Container (SFS) is manufactured according to EN 1090-2 EXC 2, requirements as of July 1<sup>st</sup>, 2014. This EU directive applies to all steel structures throughout the European Union and Norway. (Also includes mobile container for wired connection).

This construction is approved for snow zone 5.

The Container is compliant with class C3 painting requirements. Can be supplied with class C5 painting as well. The surface is blasted according to SA 2.5 and painted with epoxy paint from Jotun. See BSK 07, attach 4.

The spill containment feature is manufactured according to Swedish Standard "Cisternanvisning VIII 1999".

The Storage tank is manufactured as a K-Storage Tank according to Cisternanvisning VIII with a subject to inspection every 12 years.

The inside bottom of the storage tank is rust proofed using Jotun ChemFlake. Rust proofing of the complete inside of the storage tank or using a stainless steel storage tank is optional.

The entire container is designed to have as few openings in the ceilings as possible to prevent leaks and rust build up. The container is based on the "House concept," which provides the best possible ventilation.

#### **Burglary Protection**

The SFS was successfully tested by SP, Sveriges Tekniska Forskningsinstitut (Technical Research Institute of Sweden), in accordance with EN 1143-1:2012. (Strongroom & safe.)

The SFS comes standard with a 4 mm outer steel cover. The rear entrance comes with a security door (EN 1627 RC4 classified), additional striker plate on the door, security locks for even better protection etc. The SFS can also be equipped with a burglary grid and/or alarm.

The outer hull of the SFS prevents theft by drilling a hole in the storage tank. Also, the pipes are concealed and protected. This also prevents an explosion caused by drilling a hole in the storage tank. The wiring is done through protective pipes.

The dispensing units are provided with their own safety measures, however, there is always the option of adding a Service Unit to contain this equipment as well.

Talk to your insurance company for better conditions!

#### Flexible Modular System

The major advantage of an above ground fuel station is the ability to quickly and economically install a new one, configure an existing one or relocate one, as minimal ground work is required.

The product is designed with a spill containment module to contain any spills related to fuel dispensing. This coupled with an oil separator provides full environmental compliance welcomed by any environmental agency.

VFZ style collision protection of the system is available as an option.

Lighting is EX classified and available in a variety of configurations to provide the best possible, safe lighting.

The unique design provides a minimal and flexible footprint which allows the SFS to be installed in locations which previously was not suitable for a fuel stations.

Some examples of the many different configurations can allow the following:

1 SFS = 2 products, 2 SFS + Service Unit = 4 products + DEF Choose between Gasoline, diesel, kerosene, RME, HVO100 (DEF)

### Example

1 SFS (2x10m<sup>3</sup>) with one Refueling Unit-RU. Mainly suitable for smaller operations with low turnover.

1 SFS (2x25m³) with one Service Unit-SU and one Refueling Unit Double-RUD. Suitable for busy locations with heavy duty and light duty vehicles. 2 SFS (4x25m³) with one or two Service Units-SU and one Refueling Unit Double-RUD. Suitable for busy locations with heavy duty and light duty vehicles. (Storage tanks can be modified to 1x50m³ + 2x25m³ for example).

Additional Refueling Units located away from the SFS are also an option to allow for more refueling spots. This is particularly favorable in a case where both vehicle refueling on shore and boat refueling off shore is necessary.

The flexibility to configure the refueling locations, number of refueling spots, products and capacity not only allows the customers to design the best solution for them based on their demands, rather than a one size fits all solution. It also helps to keep maintenance costs and reconfiguration costs down.

This also allows the manufacturer/re seller/ installer to better service their customers and respond quickly to a change in demand.

#### **Electrical installations**

All electrical installations are carried out according to Swedish standards, electrical installation carried out by qualified personnel.

### **Pipelines**

All pipes are fitted in accordance with applicable regulations, pressure testing done by certified company according to Swedish regulations.



#### On Site

We provide a drawing with a proposal for the best installation location, including concrete plates (preferably a concrete slab) and collision protection installations with the order of an SFS. Installation of roofing, Refueling Units and Service Units are done on site.

The SFS unit can be ordered fully installed which basically means, provided that the ground work is completed, the SFS unit can be up and running hours after delivery. Manual follows delivery.

Gasoline is a Class 1 media which comes with rigorous safety and labelling requirements.

A HS & E risk plan and classification requirements are provided with the SFS. We also provide assistance with completing a risk plan should it be required.

# **Standard equipment**

Pump

Payment terminal

Level measurement system

Security door (RC4) with striking plate and two security locks Assa 510+511. No locking system.

Prepared with electrical cabinet to plug in on site.

Prepared with security signs and fire-extinguisher.

Painted class 3.

Incoterms Ex Works.

Additional you can buy service agreement.



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