

**CONTAINERIZED SOLUTIONS  
FOR GROUND FUEL HANDLING**

The various CSDS and MSA versions are minutely designed and manufactured in our offices – workshop using high quality components from reputable suppliers. Although we have preferred suppliers, the customer may opt for its favorite make for fuel dispenser, metering and gauging systems.

The storage tanks are constructed in accordance with recognized International Standards. The container is manufactured by specialized companies based on AMA design and certified by a Third Party Organization.

The unit assembly, piping, wiring and testing take place in our workshop in Casale sul Sile under the direct control of AMA quality department in order to guarantee the highest quality standards.



## CSDS 20' MILITARY

The 20' CSDS Military version is a system based on the CSDS commercial version but using a 20'x8'x8' container and special components designed to meet the heavy duty cycles and harsh environment in the field. Each component, from the carbon steel alloy to the refuelling hose quality, are specifically designed to withstand extreme temperatures (-32°C + 50°C). Pumps, motors and meters construction is optimized in order to reduce the maintenance interventions. The unit permits the transfer of diesel and kerosene in bulk at 240 l/min and the refuelling of light and heavy vehicles at 50 and 130 l/min respectively. All operations are controlled by a SCADA system that can be interlinked with the Operation Centre.



## CSSDS 40'

When the storage requirement exceeds the capacity of the standard horizontal cylindrical reservoir, AMA can offer rectangular section storage tanks, which optimize the storage volume inside the ISO container. In this configuration, the stored fuel volume is increased up to approx. 60'000 l. All the other systems features apply to CSSDS.



## MSA 30 – 3P

This unit is specifically designed and constructed in collaboration with a major African oil company for the momentary replacement of a retail station under refurbishment.

The system is fully fitted with “state of the art” components, which provide the same reliability and accuracy of a conventional service station. Based on the same concept of MSA 30- 1P, the MSA 3P version can handle three different types of fuel (unleaded gasoline, premium gasoline and diesel).



## CSTS 20'

When the requirement is to transfer fuel in bulk rather than refuelling vehicles, AMA offers a containerized unit equipped with pump set, bulk meter, appropriate piping and valves integrated in a skid mounted module which fits at the container front section. The storage tank capacity determines the container size (20', 40', 40' HC) ranging from 8'000 l up to 32'000 l. The electrical system including the control panel can be supplied in Exd version to suit low flash point fuels and/or hot weather conditions.

Among AMA Spa's various containerized solutions, the CSDS and MSA systems are two of the most successful products.

The general concept is to deliver, deploy and put into service a complete system that permits to store and dispense fuel in a short time frame. While the construction technology is well defined and proven, the system general arrangement can vary according to the customer's requirements. Tank compartments, type of fuels, dispenser position, electronic fuel level monitoring system, fuel management system, power supply source are some of the various options that can be integrated in the units.

The containerized system offers the advantage to be handled and transported as a conventional box container, which reduces the freight cost. Moreover, once at destination, it can be installed and put into service with a minimum ground preparation and a very limited start up time. The CSDS and MSA are designed to allow total closure of each door/porthole, offering full weather protection and preventing unauthorised access.



## CSDS 20'

The **20' CSDS** module is a containerized system based on a 20'x8'x8'6" ISO container consisting of a single compartment 10'000 l storage tank, 400 l/min unloading pump suitable to discharge fuel from a road tanker plus a heavy duty fuel dispenser for vehicle refuelling at 40÷80 l/min. The typical configuration includes a 10 kVA diesel gen set located in a separate compartment at the container rear, where the main control panel is also fitted.

In case the power supply is provided from the local network and the gen set removed, the tank storage capacity can be increased up to 15'000 litres.



## CSDS 40'

The **40' CSDS** variant offers the same characteristics as the 20' CSDS with the advantage of a larger storage capacity (up to 30'000 l but depending on the chosen configuration). In case of multiple products, the tank is divided in compartments and additional unloading pumps and dispenser lines are added to suit the various fuels. A spring rewind hose reel can be provided to extend the delivery hose length up to 20 m.



## MSA 1P

The **MSA 30- 1P** is a semi-permanent diesel vehicles filling station based on a 40' ISO container with integrated 30'000 l double wall storage tank, 800 l/min unloading pump, double nozzle dispenser (standard plus high flow rate) and generating power set. The system has a dedicated office compartment with an integrated fuel management system to monitor tank fuel level and fuel transactions.

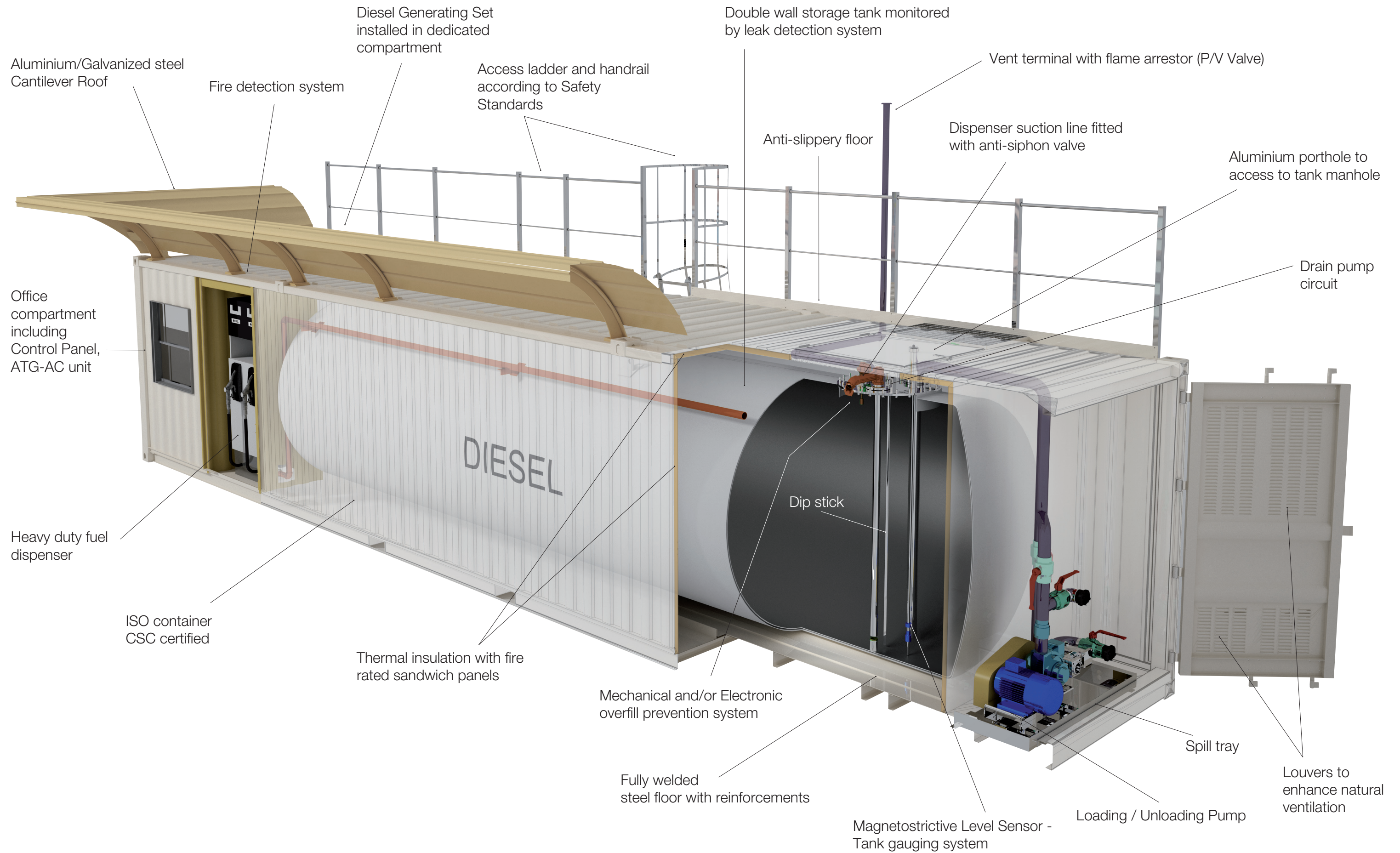
Dozens of units are in service in various European Eastern Countries as refuelling points for private vehicle fleet refuelling.



## CDS 20' MILITARY

The **20' CDS Military** system is a variant of the CSDS Military without storage reservoir. The four fuelling nozzles deliver diesel fuel at 80 and 200 l/min at 15 m distance. The pump set (two units) includes a filter water separator and a dedicated piping system suitable to transfer fuel in bulk to/from road tanker into external storage facilities and/or recirculate the fuel through the fws. The extra space available in the pumping room is dedicated to shelving and lubricants storage.









Maputo - Mozambique



Dorolt - Romania



Aweil - South Sudan



Zam zam - Darfur



Taranto - Italy

