

# FORWARD REPAIR SYSTEM NATO

A large military repair vehicle, the Forward Repair System NATO (FRSN), is shown in a field. The vehicle has a large crane mounted on its rear, which is lifting a component from a tank. Several soldiers in camouflage uniforms are working on the tank. The background shows a line of trees under a cloudy sky. The text "FORWARD REPAIR SYSTEM NATO" is overlaid in white capital letters.

FRSN.DK



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# CONCEPT OF OPERATION

The Forward Repair System NATO (FRSN) is a deployable workshop and versatile multitool that enables military mechanics to solve almost anything, anywhere and in any conditions.

The FRSN is built on a reinforced NATO STANAG flatrack and with the on-board crane, powerful generator, air compressor, welder, cutting and full range of diagnostic and hand tools, the FRSN crew

will be equipped to support a wide spectrum of operations. From installation of weapons and sensitive equipment in base locations to urgent field repairs of damaged vehicles to get them back into battle quickly.

The FRSN is transported and carried by a tactical truck and can be operational on the ground within 5 minutes of arrival.





CRANE

7 ton  
360 degrees  
5 m height  
4 m reach

GENERATOR

70 kVA  
230/400V  
50 Hz  
Multi-fuel

COMPRESSOR

10 bar  
900 l/min  
100 liter  
20 m hose

WELDER

MIG  
MAG  
TIG  
IH

SAFETY

First aid kit  
Fire extinguisher  
Eye washer  
Emergency shower

TOOLS

Manual  
Electrical  
Pneumatic  
Diagnostic

FOOTPRINT

Approx. 12.000 kg  
ISO 1CC 20ft DIMS  
Max. 63A (Grid)  
Max. 85A (Generator)

STANDARDS

CE  
CSC  
AECTP  
STANAG





# SYSTEM OVERVIEW

**Shelter Assembly:** The FRSN shelter assembly is a cube-shaped enclosure approximately 2200x2200x2300mm square with a reinforced ceiling. The doors on each side of the shelter hinge out to provide additional covered area. The shelter assembly houses and stores the majority of the FRSN tool load. Equipment is stowed and secured in cabinets and customized drawers. A detachable PVC fabric screen can snap around the open shelter to provide additional protection during inclement weather. Lashing points on flooring for securing an EPAL-pallet with spare parts and equipment.

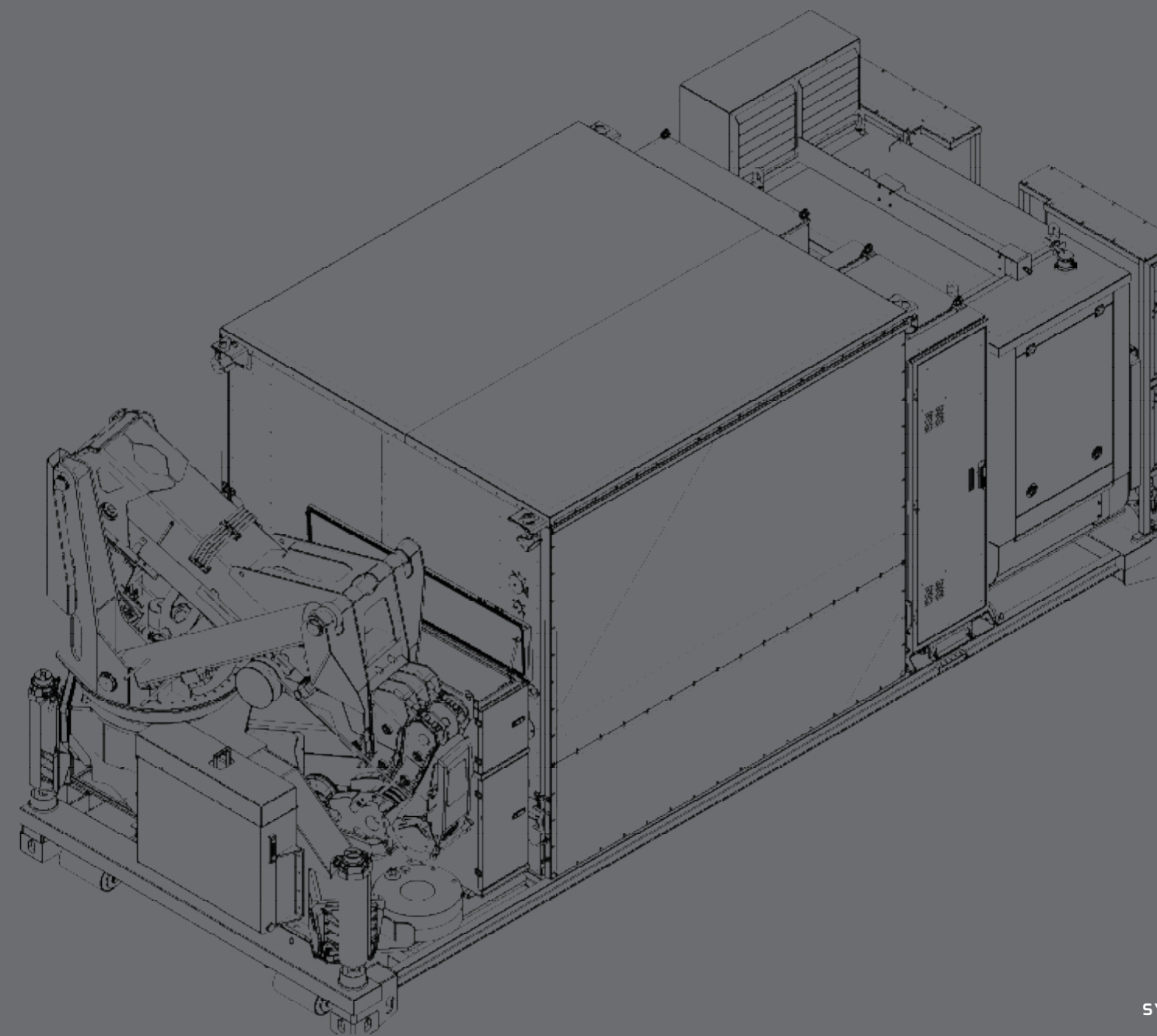
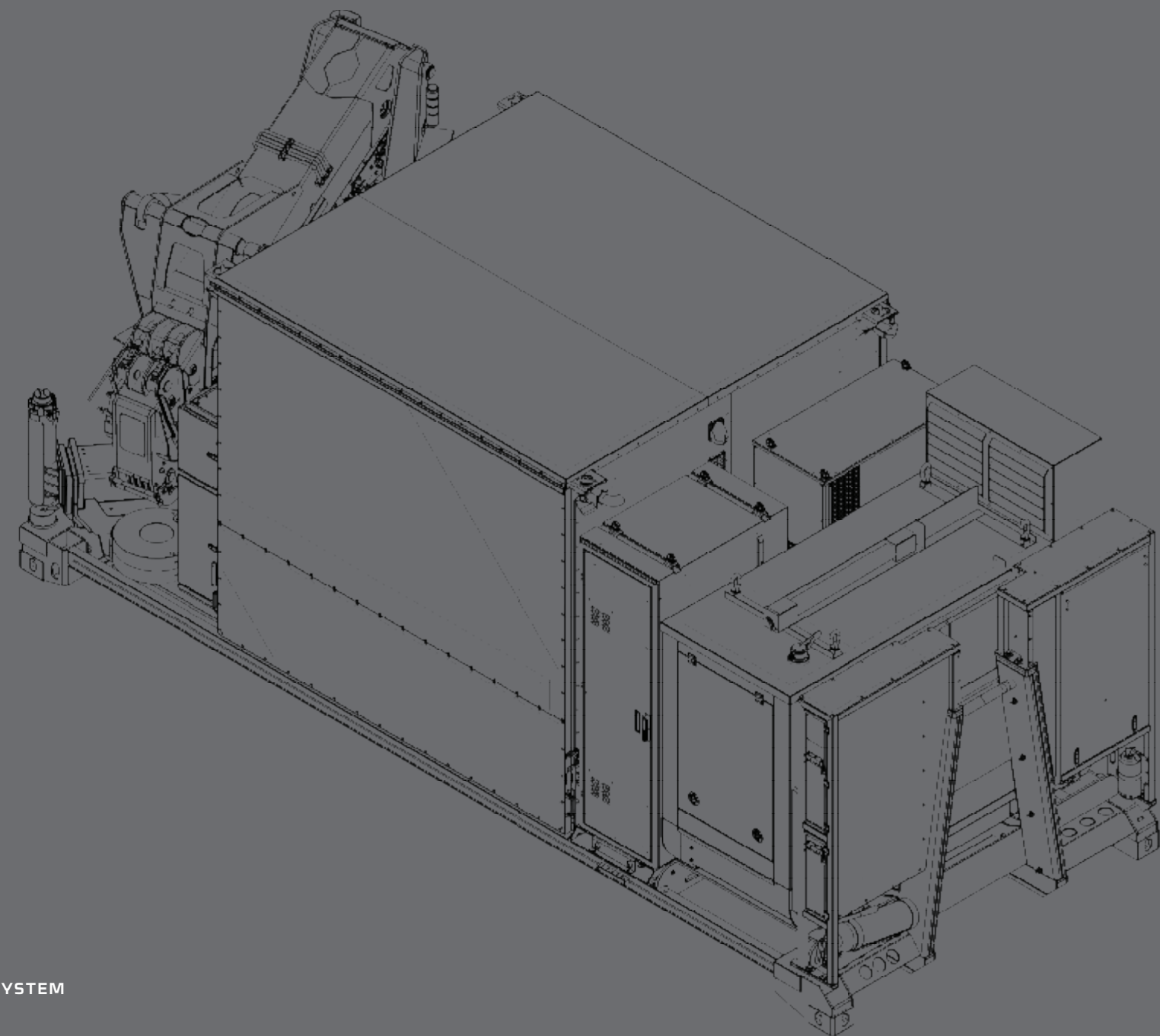
**Crane:** The FRSN crane can move and replace major components from tracked and wheeled vehicles, including the 6.800 kg heavy power pack from the Leopard 2 main battle tank. The crane can lift

and maneuver up to 7.000 kg in a 4m radius and 5m height from the rear. Stabilizing hydraulic legs are deployed for full stabilization and 360° operations. The crane is controlled on the main panel or via a remote control.

**Generator:** The FRSN is powered by a 70 kVA diesel generator. The generator is capable of simultaneously providing electrical power for all subsystems, including lighting, induction heater and power take-off for the crane. The FRSN can also be connected to an external power source like a transporting vehicle or power grid. The generator can be modified to accommodate specific user requirements e.g. 110V/60 Hz. The generator has a 120 liter tank capacity and runs on multifuel (F54, F34/JP8 and F35/A1).







# SYSTEM OVERVIEW

**Air Compressor:** The FRSN includes an electrical compressor capable of providing 900 liters per minute and 10 bars with 100-liter storage vessel. The air compressor supplies air for on-board pneumatic tools, inflation of tires and compressed air cleaning via the internal distribution line.

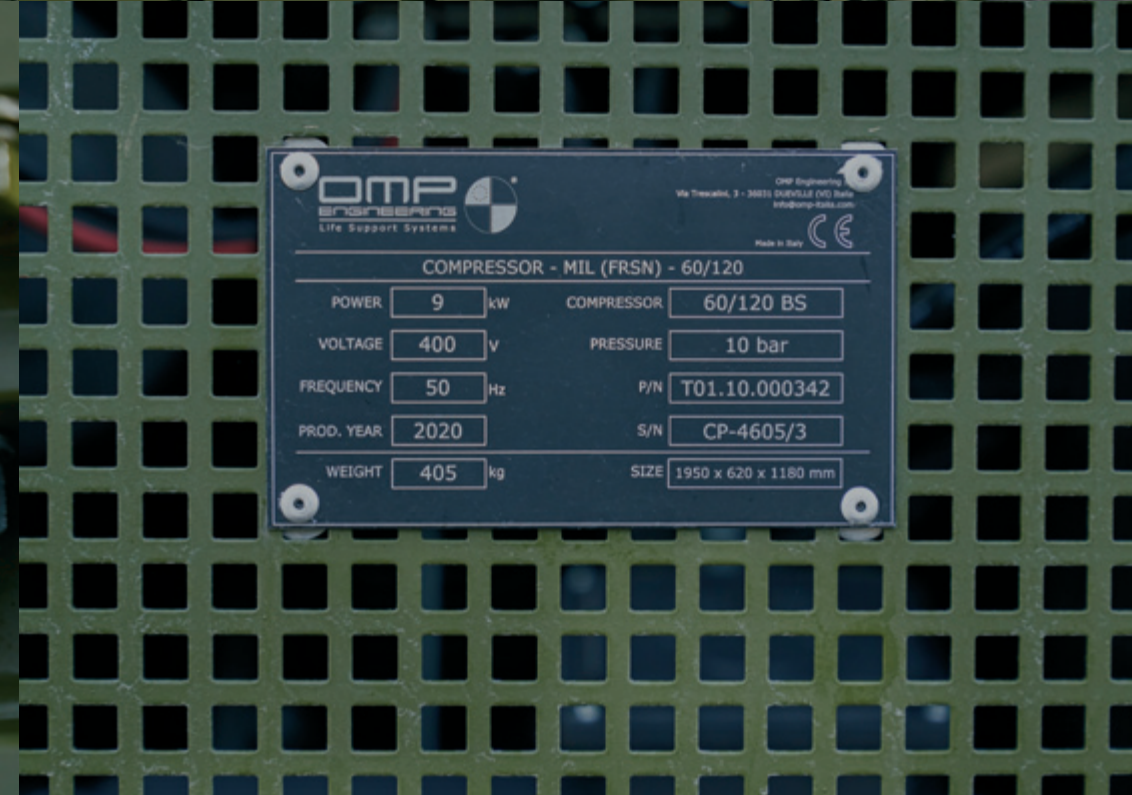
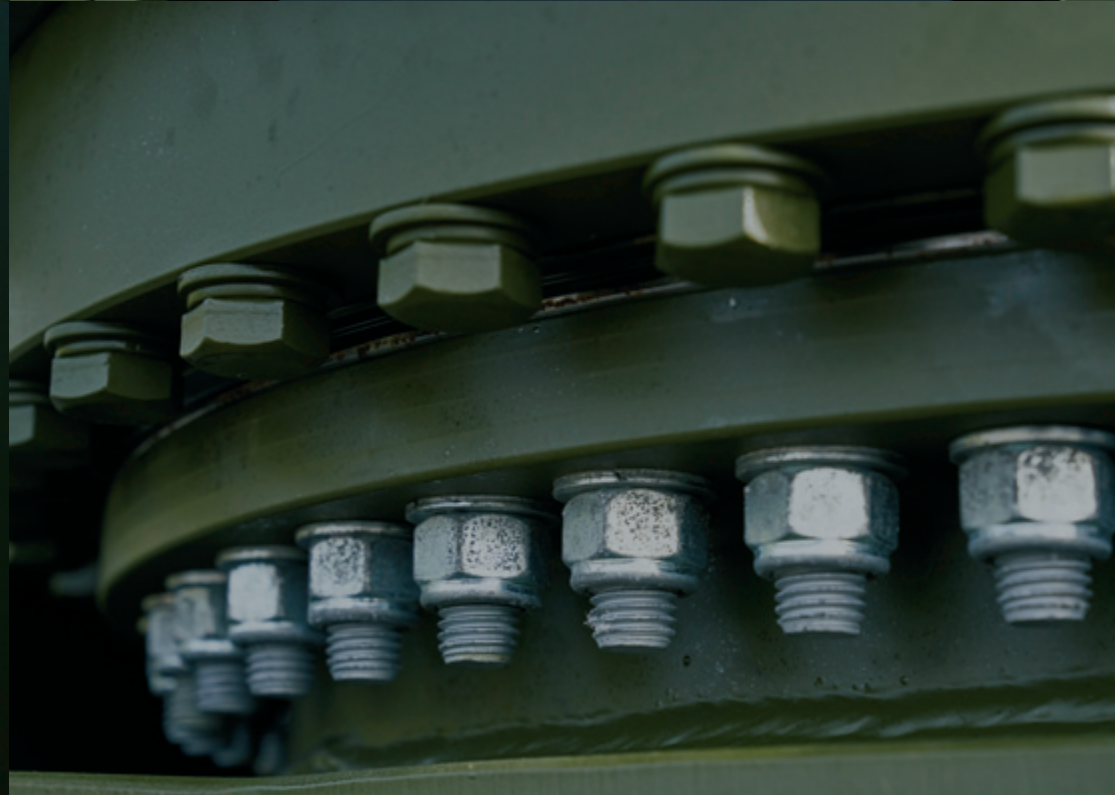
**Welding Cabinet:** The FRSN has a dedicated welding cabinet that can stores multiple hose reels and four pressurized vessels for different gasses and current capabilities includes shielded metal arc,

metal inert gas, induction heater and exothermic cutting/brazing.

**Tool Load:** The FRSN contains multiple storage cabinets for tools and lashing points for securing of heavy spare parts and cargo. Foam organizers allow for visual inventory of tools and equipment. Shelter interior and tool load is modular for ease of customization to accommodate desired operational profile and vehicle setup.















## TOOLS

A key component of the FRSN is the workshop tool load. This can be supplied as a custom made toolkit or directly by the end user as GFE.



## DOCUMENTATION

The FRSN is delivered with a comprehensive documentation package for operation, maintenance and certification of the entire system.



## SPARE PARTS

The delivery of the FRSN includes spare parts and consumables catalogues for various maintenance programs. Parts are shipped worldwide.



## TRAINING

The FRSN user training consists of an extensive operator and maintenance course, usually completed in 5 days by our experienced instructors and engineers.



## MAINTENANCE

The periodic and preventive maintenance of the FRSN is scheduled to ensure operational readiness and can be provided as a service to our clients.



## CUSTOMIZATION

The existing design of the FRSN can be customized to fulfill specific user requirements and operational profiles, e.g. generator power output, workshop interior.





# DANISH ARMY FRSN M/18

The FRSN M/18 is delivered to the Danish Army via a multi-year framework agreement, including all training, documentation and support services. Glaucus ApS is manufacturer and system supplier of the FRSN.

# OUR PURPOSE IS TO SUPPORT YOUR MISSION

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