

# FORWARD REPAIR SYSTEM NATO

FRSN.DK



GLAUCUS

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## CONCEPT OF OPERATION

The Forward Repair System NATO (FRSN) is a deployable repair 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  
Fire blanket  
Eye washer

## 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

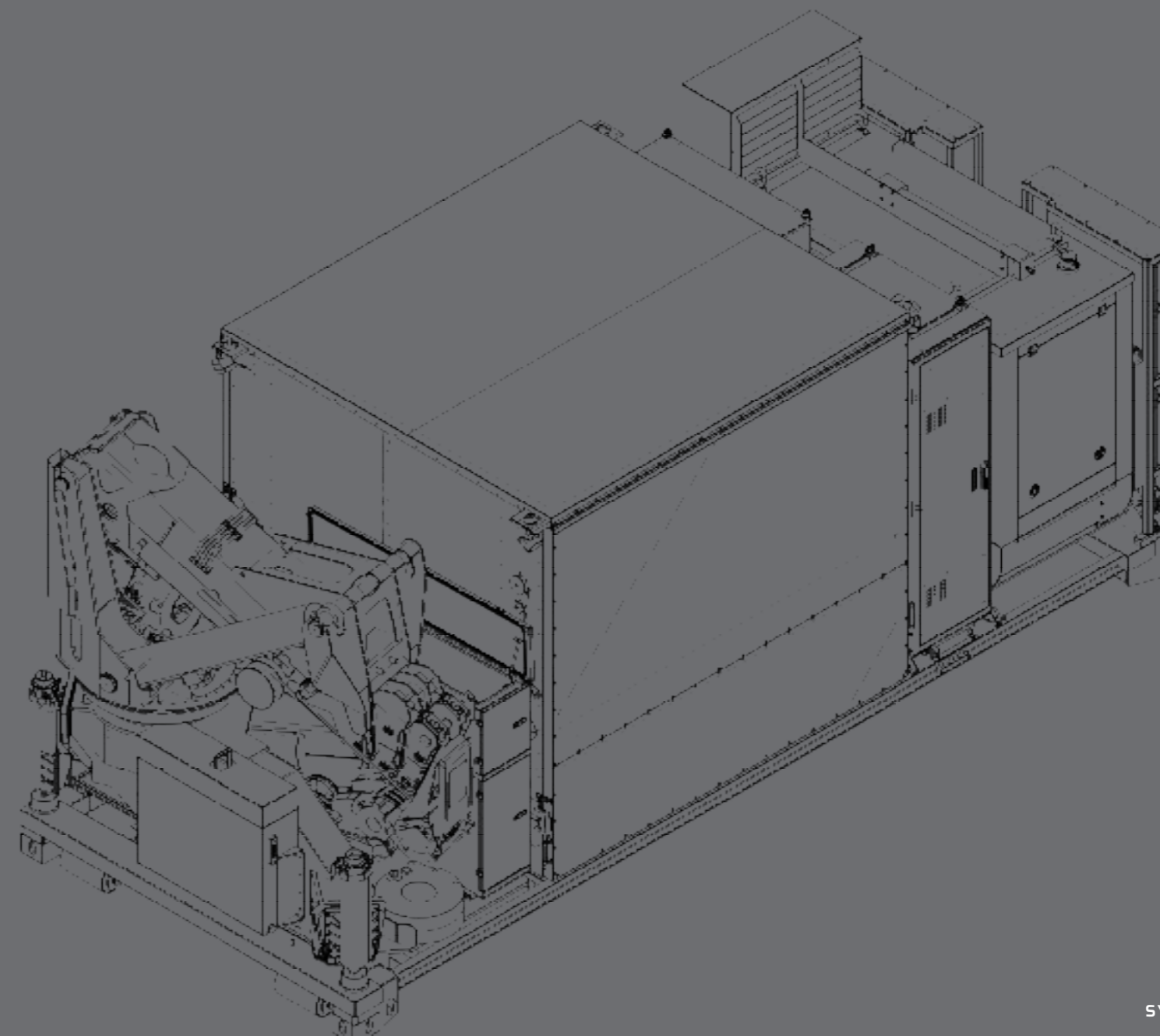
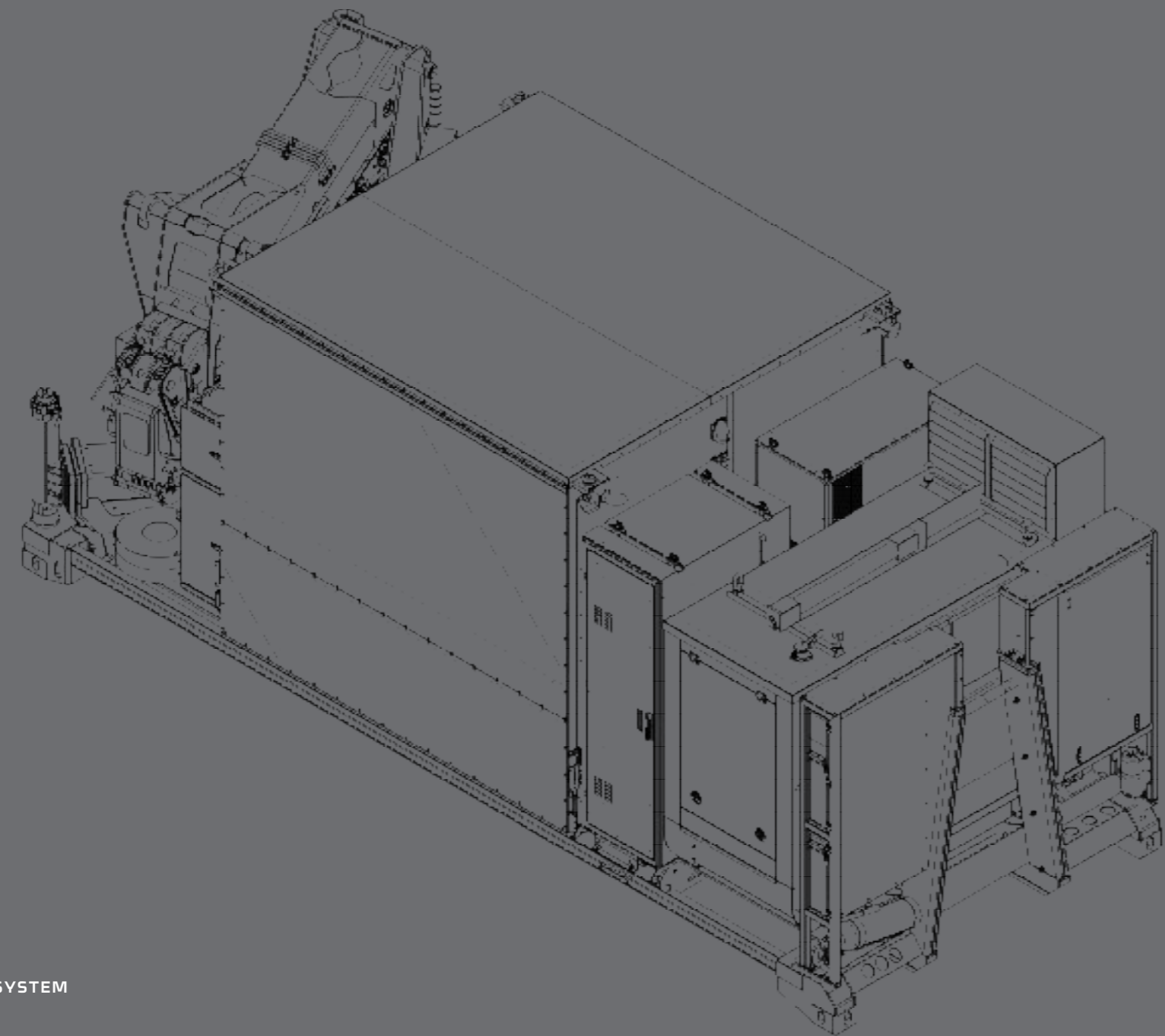
**Workshop Assembly:** The FRSN workshop assembly is a cube-shaped enclosure approximately 2200x2300x2500mm square with a reinforced ceiling. The doors on each side of the workshop hinge out to provide additional covered area. The workshop assembly houses and stores the majority of the FRSN tool load. 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 4 m radius and 5 m

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). The generator has two 32A power outlets to simultaneously power external systems.





# 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 store multiple hose reels and four pressurized vessels for different gasses and current capabilities includes oxyacetylene

torches, plasma cutter, water cooled TIG welder, MIG/MAG welder, induction heater, and welding table.

**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. Workshop interior and tool load is modular for ease of customization to accommodate desired operational profile and vehicle setup.









**WORKSHOP EQUIPMENT  
AND TOOL CABINETS**



**GFE TOOLS IN CUSTOM  
DESIGNED DRAWERS**

## TOOL KIT

A key component of the FRSN is the workshop tool kit. 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.

## ULCAS CAMOUFLAGE KIT

Multispectral ultra-light 10mx10m camouflage screen to conceal the FRSN from arial threats.

## 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, completed in 5 days by experienced instructors and engineers.

## UNIVERSAL LIFTING KIT

Adjustable lifting bar with chains to enable safe lifting of multiple different loads up to 7,000 kg.

## 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 configuration of the FRSN can be customized to fulfill specific user requirements based on pre-selectable options, e.g., power output, workshop interior, and accessories.

## EXTRA TOOL KITS

Various customized tool and consumable kits for mechanics, technicians, armourer, and specialist.



# 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.



# DANISH ARMY FRSN M/22

The new FRSN M/22 is ordered by the Danish Army for delivery of multiple units in 2023 and 2024.



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CLIENTS

NSN 3990-22-637-7209

# US ARMY FRSN M/22

The new FRSN M/22 is ordered by the United States Army for delivery of multiple units in 2023, 2024, and 2025.



NSN 3990-22-637-7209

CLIENTS

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# UK ARMY FRSN M/22

The FRSN M/22 is ordered by the UK Army for delivery of multiple units in 2024 and 2025.



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NSN 3990-22-637-7209

# NATO FRSN M/22

Glaucus ApS is awarded a long-term NSPA/NLSE outline agreement for delivery of several hundreds FRSN M/22 to multiple nations across the alliance.



NSN 3990-22-637-7209

CLIENTS P25

# OUR PURPOSE IS TO SUPPORT YOUR MISSION

## **Glaucus ApS**

Sankt Annae Plads 9  
DK-1250 Copenhagen K  
+45 20663660  
info@glaucus.dk

[www.glaucus.dk](http://www.glaucus.dk)  
[www.frsn.dk](http://www.frsn.dk)

VAT: DK35409432  
NCAGE: R7862

**Glaucus ApS**

Sankt Annae Plads 9  
DK-1250 Copenhagen K  
+45 20663660  
info@glaucus.dk

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