

# GBX-A – Smart Automation for Marine Gearboxes

More Operational Efficiency and Safety for Your Vessels

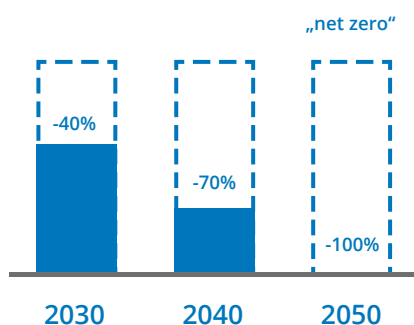




# REINTJES – Automation for a Smooth Ship Operation



IMO GHG intensity targets or ambitions compared to the base year 2008



## Automation in the Maritime Industry – Better Efficiency, Reliability and Sustainability.

In the maritime industry, efficiency, reliability, and environmental sustainability have become critical priorities. With tightening regulations, rising cost pressures, and the need to reduce the ecological footprint, ship automation has emerged as a key success factor. Modern gearbox automation solutions not only ensure precise and efficient control but also improve onboard operations, reduce wear, and enhance safety.



# Unlock the Automation Potential with REINTJES

## GBX-A – Compact, Light and Efficient Gearbox Automation for all Vessel Types

The GBX-A series from REINTJES is an automation solution specifically designed for all types of vessels. It stands out for its compact design and high level of efficiency. With the integration of REINTJES automation systems, the operation of the gearbox and the clutch engagement is simplified, service life is extended, and fuel consumption is reduced.

## GBX-A – Your Benefits Along with the Well-Known REINTJES Quality at a Glance

- As a **shipyard**, you experience a faster cable installation and connectivity, faster gearbox commissioning, less weight and a reduced space envelope.
- As a **ship designer**, you gain from an easier integration with other ship systems through standardised interfaces and a flexible customisation to individual customer requirements.
- If you **operate vessels** with GBX-A, you benefit from reduced operation costs, smoother clutch engagement and less noise, a higher gearbox availability and additional safety features.

For more detailed and specific information for your projects please contact your REINTJES sales partner.

## GBX-A – One Automation Solution for all REINTJES Gearboxes

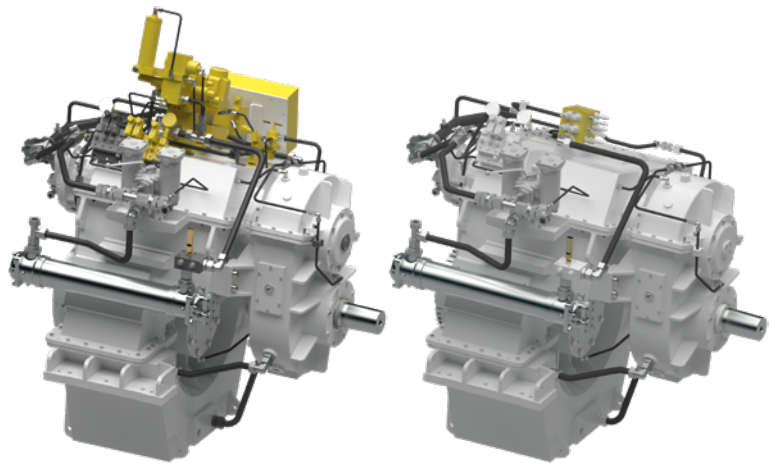
### GBX-A Main Operation Modes and Functions are:

- Ahead
- Astern
- Trolling
- Shaft brake
- PTO / PTI
- Second gear

Gearbox status and operational data can be shown on an optional touchscreen display.

With GBX-A, the REINTJES gearbox integrates seamlessly with the vessel control system, using electronically controlled automation to build pressure efficiently and optimise clutch performance. This ensures smooth, low-noise clutch engagement, reducing strain on the drivetrain. Additionally, the GBX-A maintains consistent engagement, unaffected by oil temperature variations.

*Exemplified comparison of a REINTJES WGF 863  
- weight saving approx 80 kg*



*With a conventional  
hydraulic system*

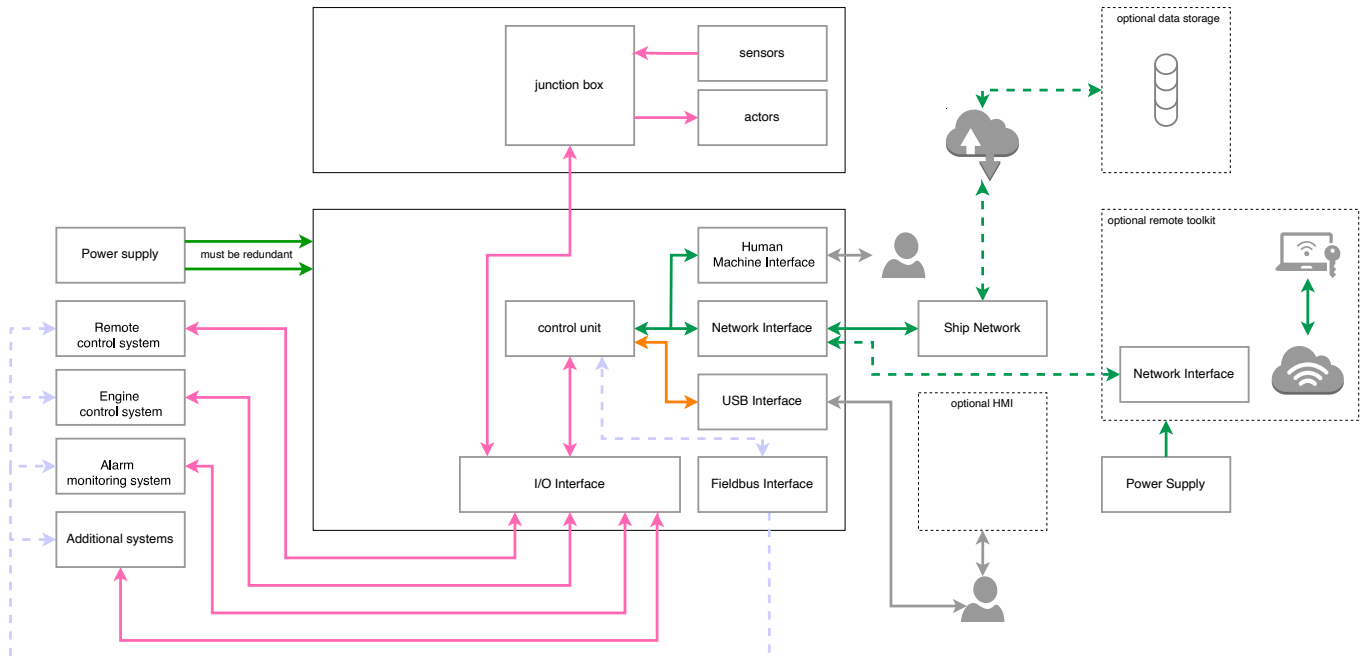
*With an electronic  
REINTJES GBX-A*

# GBX-A – Features and Connectivity

The GBX-A system features a dedicated control cabinet with an optional touchscreen for real-time gearbox monitoring. With a PLC-controlled setup, it manages gearbox clutches and PTI/PTO auxiliary drives precisely and allows up to three customisable pressure curves for smooth operation. During critical manoeuvres, such as crash stops, this ensures optimal performance, reduces wear and ensures a safe, controlled handling.

## GBX-A – Less Components, More Features for an Excellent Operation Experience – Future-Proof

- Three adjustable pressure curves per clutch
- Programmable to individual operation profiles
- Data and event logging
- Remote gearbox diagnostics (option)
- Integrated gearbox alarm monitoring
- Integrated trolling function (option)
- BUS communication to higher-level systems
- PLC-controlled proportional valves, sensors and actuators integrated
- Touchscreen for setup, service and real-time status (option)
- Maritime 4.0 IoT-interface, encrypted gearbox remote access via VPN (option)
- 100 % retrofittable



## GBX-A – Fluently Speaking with any Propulsion Management System PMS

A broad range of fieldbus protocols ensures an easy integration of GBX-A into the ship control system and facilitates performant data exchange and user-friendly data visualisations:

- Modbus TCP (standard)
- OPC UA (fully encrypted)
- Ethercat
- CAN / CAN open (J1939 / NMEA 2000)

# GBX-A – Peace of Mind and Other Benefits

- **More Space, Less Weight:**

The GBX-A reduces the overall height and weight of the gearbox compared to conventional systems. This enables better space utilisation and a more flexible ship design, especially on ships with very limited space.

- **More Sustainable, Reduced Fuel Consumption:**

With optimised clutch control and efficient pressure management, operators can achieve fuel savings with GBX-A, lowering operating costs and reducing emissions.

- **Climate Proof:**

The GBX-A systems are designed to perform reliably, regardless of oil temperature fluctuations. This ensures consistent operation and system resilience even in extreme climates.

- **Easier Gearbox Commissioning:**

The compact design and modular structure of the GBX-A make installation and parameter setting easier and faster. Commissioning times can be significantly reduced compared to a conventional system.

- **Retrofit Existing Plants:**

GBX-A benefits can also be secured for the already running ships since the solution is fully retrofittable and can be tailored to nearly all existing REINTJES gearbox installations.

- **Peace Of Mind:**

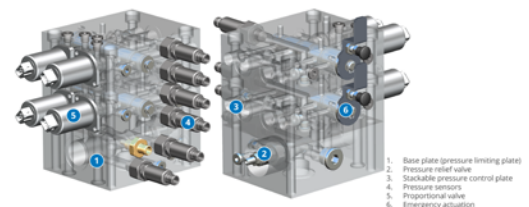
GBX-A comes in a proven and well-known REINTJES quality for unbeaten operational safety. Our experts achieved a perfect integration of automation as well as other system components and delivered a reliable product.



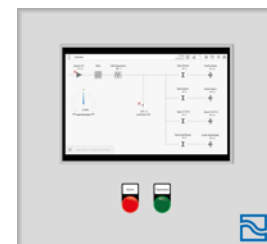
*Conventional automation system*



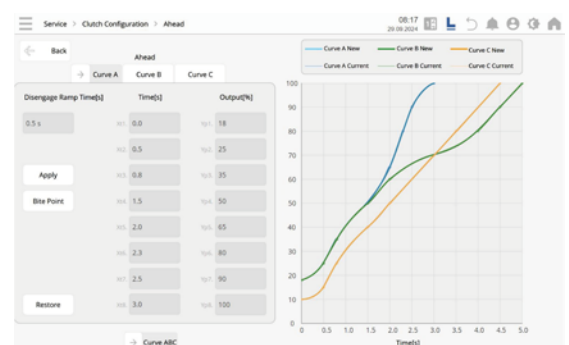
*GBX-A installation*



*GBX-A hydraulic block insights*



*User-friendly GBX-A touchscreen (option)*



*GBX-A pressure curve parametering*

# GBX-A – Customer Success Stories



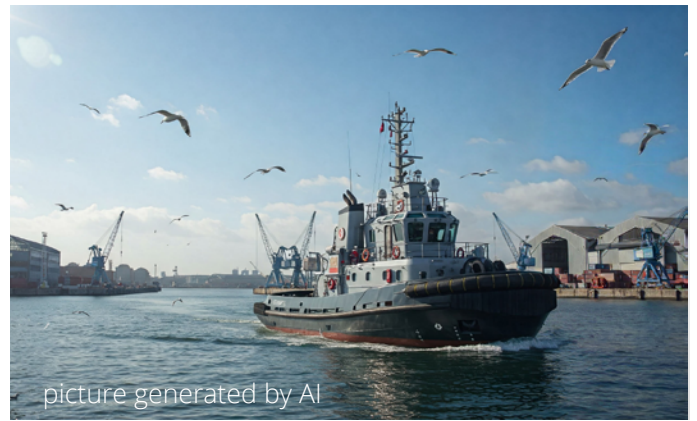
- **Gearbox Type:** WGF 863 | 1x
- **Vessel Type:** Fishing Vessel
- **Engine Manufacturer:** MITSUBISHI
- **Drive Power:** 749 kW
- **Classification society:** Bureau Veritas
- **Highlights:** Trolling, Shaft brake; in operation for > 12000 hrs



- **Gearbox Type:** WVS 430 | 15x
- **Vessel Type :** Crew Boat
- **Engine Manufacturer:** BAUDOUIN
- **Drive Power:** 1104 kW
- **Classification society:** Bureau Veritas



- **Gearbox Type:** WWSA 1542 | 16x
- **Vessel Type:** Ferry
- **Engine Manufacturer:** MTU-Rolls Royce
- **Drive Power:** 2x 2560 kW
- **Classification society:** Registro Italiano Navale
- **Highlights:** MTU hybrid propulsion system containing shaft brake and PTI / PTO



- **Gearbox Type:** WF 350 | 8x
- **Vessel Type:** Tugboat
- **Engine Manufacturer:** VOLVO
- **Drive Power:** 386 kW
- **Classification society:** Bureau Veritas
- **Highlights:** Trolling



# GBX-A – Technical Data and Specifications

## Cabinet:

- Standard colour: RAL 7035
- Dimensions: 600 mm x 600 mm x 210 mm
- Protection: IP66
- Weight: approx 35 kg

## Power Supply:

- Rated voltage: 2 x 24 V (18 V-32 V) DC
- Rated current: 2 x 10 A (Fused 10A char. C)
- Rated power: 240 W

## Environment:

- Operating ambient temperature: 0 - 45 °C
- Operating ambient humidity: up to 100 %

## Connectivity / Field Protocols:

- Modbus TCP (standard)
- OPC UA (fully encrypted)
- Ethercat
- CAN / CAN open (J1939 / NMEA 200)

GBX-A hardware and software comply with:

- IACS  
(International Association of Classification Societies).

GBX-A is adjustable to different class requirements:

- DNV
- LR
- ABS
- BV

Other classes on request.

## REINTJES Principle

REINTJES is committed to quality, innovation and sustainability with all its products and services – ever has been. Offering robust and easy to integrate products with modular and customisable options, enabling designers, shipbuilders and operators to select the components best suited for their specific needs is a REINTJES core philosophy. This applies to gearbox automation solutions as well. If you would like to find out more about what we and our products can benefit you, please contact us directly.

Scan here to see our  
worldwide locations



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Dimensions and dry weights are approximate and may vary with housing or by input and ratio. Specifications are subject to change without notice. Please contact your REINTJES distributor for current information and binding data.

REINTJES GmbH  
Eugen-Reintjes-Straße 7  
31785 Hameln  
Germany

E-Mail: [info@reintjes-gears.de](mailto:info@reintjes-gears.de)  
Phone: +49 5151 1040

[www.reintjes-gears.com](http://www.reintjes-gears.com)

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