

## GRP Guardrail Stanchions and Systems

Owing to many years of experience in producing composite materials, Von Roll has developed a GRP (glass-reinforced plastic) guardrail stanchion system that provides a cost-effective alternative to conventional metal-based systems.

Von Roll manufactures lightweight stanchions from their Delglas® composite laminates that offer a lighter-weight, virtually maintenance-free corrosion-resistant alternative to metal-based stanchions.

### Products

The Delglas® guardrail stanchion system comprises:

- » **Type A** (fixed) stanchion c/w deck fitting and stainless steel (s/s) fasteners
- » **Type B** (hinged Inboard) stanchion c/w deck fitting, s/s drop nose pin and s/s fasteners
- » **Type D** (hinged outboard) stanchion c/w deck fitting, s/s drop nose pin and s/s fasteners
- » **Type E** (fixed, side-mounted) c/w deck fitting and s/s fasteners
- » **RAS** stanchion, c/w s/s bayonet deck fitting to allow easy removal for a clear deck where **Replenishment At Sea** operation is necessary

In addition to the stanchions, the complete guardrail system includes storm rail, s/s lug bolts and steel lashing wire for drop nose pins, with M30 lock nut and s/s locking tab washer.

### Features

- » Withstand all weather conditions, humidity, cold, elevated temperatures
- » Very strong, durable, proven design and construction
- » Corrosion-resistant; all used metal parts are treated s/s
- » The deck fitting can be modified to fit different types of deck pads
- » Full NATO codification; designed and tested in accordance with Def Stan 02-162
- » Shock-tested and certified to BR8470 Grade D

### Benefits

- » The entire system is lighter than a steel or aluminium equivalent
- » Virtually maintenance-free, thus reducing the cost of maintenance
- » Easy to install; reduces time for installation with minimum welding required
- » Reduced radar signature compared with aluminium or steel
- » Will not interfere with radar or other electronic weapon systems
- » Can be installed either with GRP guardrail or with Parafil wire rope to further reduce weight



# Von Roll References



Von Roll has equipped different ship types for various naval and commercial vessels. Typical examples of the types and classes of ships:

- » **Training Establishments** (shore-based), UK Ministry of Defence
  - STB Ajax
  - HMS Raleigh
- » **Type 23 Frigates**, Duke Class, UK Royal Navy/BAE Systems/Babcock Intl
  - HMS Lancaster
  - HMS Argyll
- » **Offshore Patrol Vessels**, Royal Brunei Navy, Nakhoda Ragam Class
  - Nakhoda Ragam
  - Bendahara Sakam
  - Jerambak
- » **LPH Class**, Helicopter Assault Ship, UK Royal Navy/BAE Systems
  - HMS Ocean
- » **LPD Class**, Landing Platform Dock, UK Royal Navy/BAE Systems
  - HMS Albion
  - HMS Bulwark
- » **LCU Class**, Landing Craft Utility, 10 vessels, BAE Systems
- » **Aircraft Carrier**, Invincible Class, DML/Babcock Intl.
  - HMS Ark Royal
  - HMS Invincible
  - HMS Illustrious
- » **Indonesian Navy Corvettes: 6 ships**, Damen Schelde Naval Shipbuilding, The Netherlands
- » **Trinidad and Tobago Naval Force**, Corvettes, BAE System
- » **Oman Naval Force**, Corvettes, BAE Systems
- » **Project Baynunah**, United Arab Emirates Navy, CMN Cherbourg/ADSL Abu Dhabi
- » **FREMM Project**, French Navy and Royal Moroccan Navy, DCNS Brest and Lorient, France