



## FIBREGLASS HANDRAIL SYSTEMS



EPP industrial fibreglass handrails are commercial railing systems for stair rails, platform/walkway handrails and guardrails. The EPP systems are fabricated from pultruded fiberglass components and moulded thermoplastic connectors. The railing systems are particularly well-suited to corrosive environments like those found in industrial, chemical and wastewater treatment plants as well as commercial structures with urban and salt air corrosion.

The EPP fibreglass handrail systems are:

- Corrosion resistant
- Structurally strong
- Low in thermal conductivity
- Impact resistant
- Low electrical conductivity
- Lightweight
- Easy to field fabricate

The EPP handrail systems are the result of more than 10 years of experience in the manufacture, design and fabrication of fibreglass handrail systems. The systems offer the following advantages:

- **Ease of Assembly** — The systems are produced in lightweight standard sections that include both post and rail. Systems can be prefabricated in large sections and shipped to the site or they can also be fabricated and installed on site with simple tools.
- **Internal Connection System** — All connections fit flush, resulting in a pleasing, streamlined appearance. The internal connections allow the construction of continuous handrail systems around circular tanks without special fittings.
- **Safety Features** — The systems come in “**yellow colour**”, feature low electrical conductivity for worker safety and exhibit high strength. Systems meet the **OSHA** standards and also comply with the **BIS** and other relevant **International Standards**.
- **Low Maintenance** — Corrosion resistant fibreglass with moulded-in color will outlast aluminum or steel systems with virtually no maintenance.

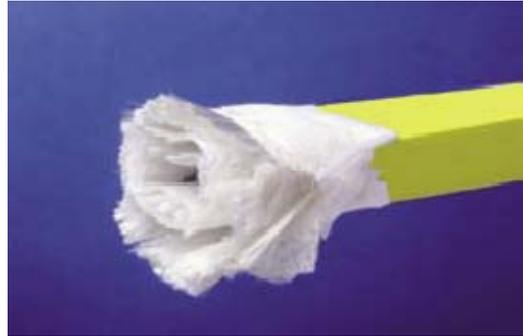
- **Cost Effective** — Fibreglass components and easy-to-assemble design provide savings on labour and maintenance, resulting in long-term savings and elimination of the cost and inconvenience of “downtime for repairs” in plant operations.

## Materials of Construction

The EPP handrail system is an engineered composite consisting of:

- Continuous glass fibers
- Two continuous strand glass mats
- A synthetic surfacing veil
- Fire-retardant polyester resin

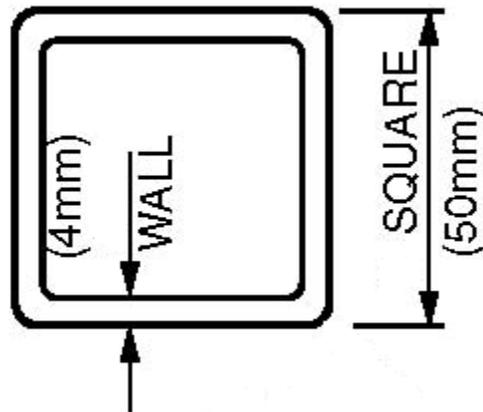
This unique combination provides the ultimate in strength, stiffness and long-term corrosion and UV protection.



## Handrail Systems

There are two types of FRP handrail systems.

- **Square Post or Rail Section Properties**



The square fiberglass handrail system meets **OSHA** strength requirements with a 2:1 safety factor with **1830 mm maximum** post spacing. Square handrails have no visible **aluminium** rivets or metal parts, are internally bonded with **Nylon 6** connectors, and a UV inhibitor for additional resistance to ultraviolet degradation and corrosion. Square handrail systems are the most commonly used: they are the most economical industrial handrail, useful for high traffic areas, and easily fabricated in the field.

## Square Handrail Components



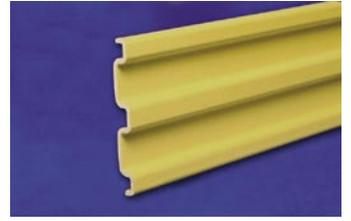
Post or Rail



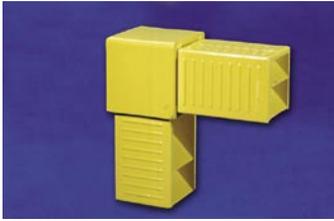
Square Plug



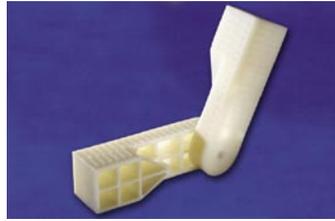
Split Tube Connector



Kick plate



90° Corner



Adjustable Corner Assembly

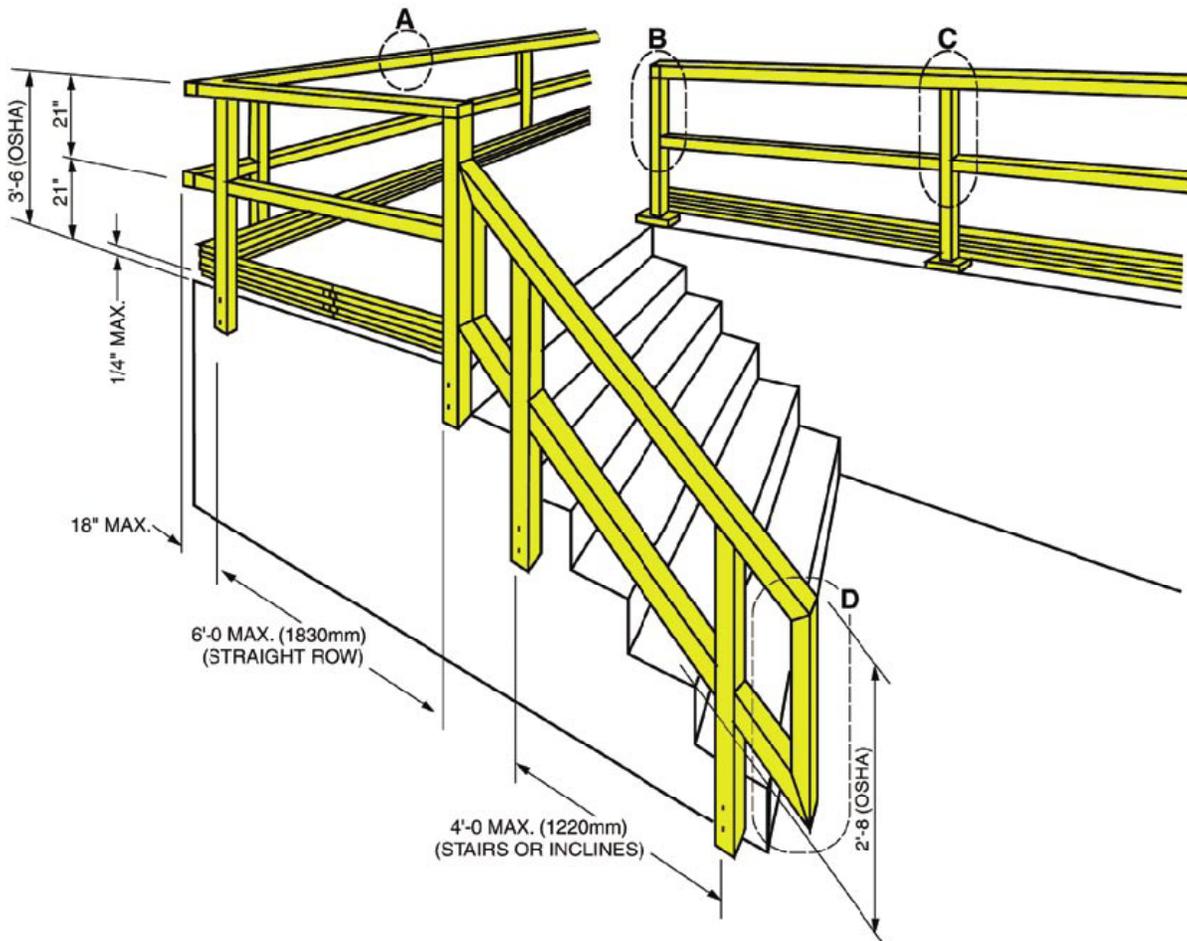


Post Base  
(Mounted To Post)

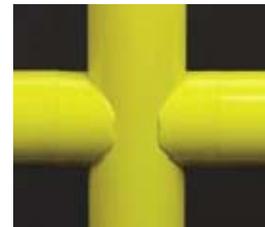
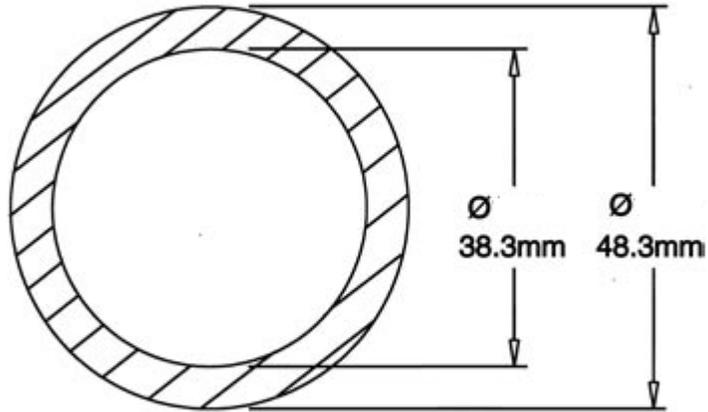


End Cap  
Note: For Capping  
Tubes(Special Construction)

## Typical Square Handrail Construction



- **Round Post or Rail Section Properties**



The EPP round handrail system is a round fibreglass system that is ideal for any high traffic area where handrail is needed. The round rails are easy to grip, pleasing to the eye and to the touch with 90° moulded corners which eliminate sharp edges. The handrail system meets **OSHA** strength requirements with a 2:1 factor of safety with a **1524 mm** maximum post spacing.

Internally bonded **Nylon 6** connectors result in no visible **aluminium** rivets or metal parts. Rail and posts are 48.3 mm O.D. x 38.3 mm I.D. This is the same outside dimension as typical metal rails for ease of adapting to common metal brackets. Kick plates are available upon request.

The EPP round handrail system is pultruded using either a vinyl ester or a polyester resin system. The handrail system includes a UV inhibitor for additional resistance to ultraviolet degradation and corrosion.

## Round Handrail Components



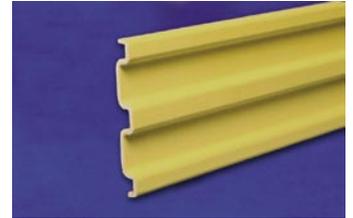
Intermediate Connector



Round Plug



Split Tube Connector



Kick plate



90° Corner



Adjustable Corner Assembly

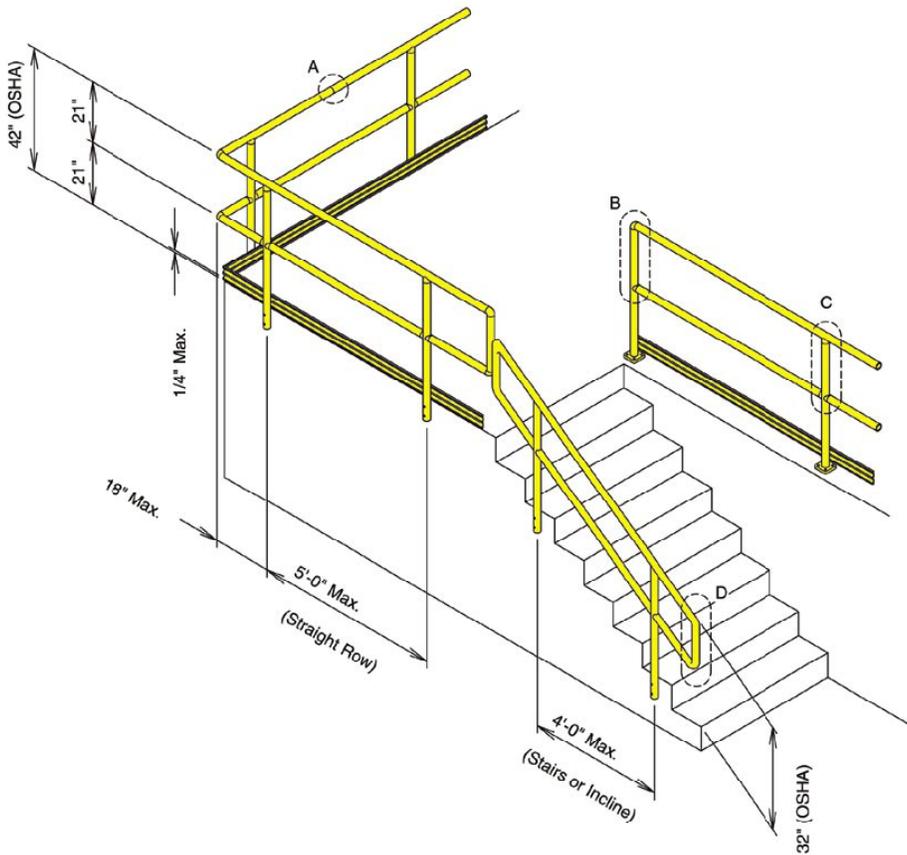


Post Base  
(Mounted To Post)



End Cap  
Note: For Capping  
Tubes(Special Construction)

## Typical Round Handrail Construction



## Typical Handrail Assembly



The pop rivets are of **aluminium** and the connectors are all **Nylon 6**. Kick plate is an optional accessory.