



Waterpark FRP Application & RFQ Guide

Platforms, wet walkways, stair treads and structural interfaces in chlorinated and continuously wet environments

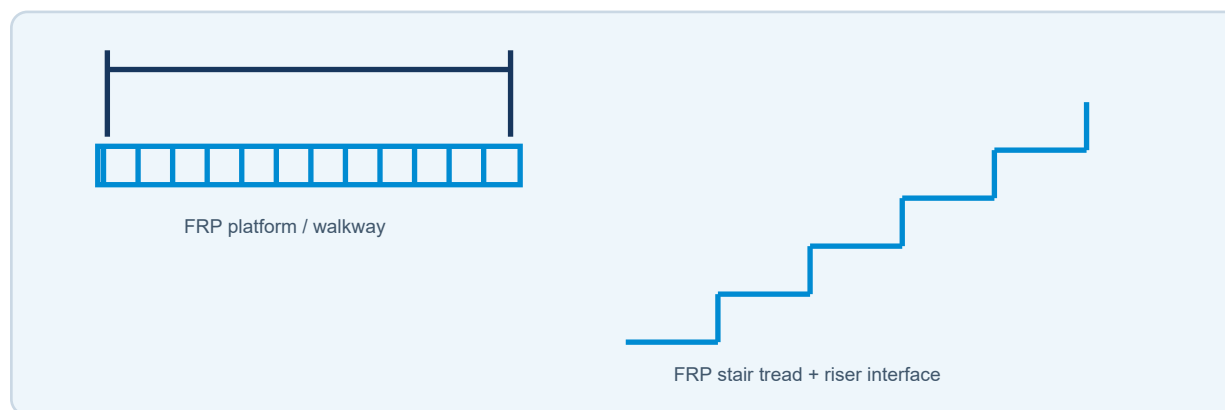
Document	Value
Document code	QY-FRP-WP-01
Revision / date	Rev. 1.0 / 24 Jul 2026
Intended use	Application engineering and RFQ definition; not a project case study
Status	Controlled customer reference; project data remains subject to approved submittals

Evidence boundary. The illustrations are application concepts, not evidence of a completed QY installation. Chemical, slip, structural and fire performance require project-matched product data and evidence.

Use rule: Never release a quotation, fabrication drawing, installation instruction or compliance statement from this guide without a project-specific technical review.

Engineering clarity • RFQ completeness • traceable evidence

1. Application concept



Why the environment is demanding

- Continuous wetting, chlorinated water, cleaners, UV and warm humid air can act together.
- Bare feet and mixed footwear increase the importance of drainage, openings and surface selection.
- Stair nosings, cut edges, fasteners and support interfaces are common detail-sensitive locations.
- Maintenance access and safe removal/replacement should be designed from the start

Use the separate QY chemical service worksheet for the exact water treatment and cleaning exposure.

Typical FRP elements

Element	RFQ focus
Platform / walkway grating	Process, thickness, mesh/profile, span, load, deflection, surface and openings
Stair tread	Width, depth, span, nosing, riser interface, surface and fastening
Riser / kick plate	Height, thickness, support, edges and color contrast
Structural profile	Shape, laminate, span, connection, fire and environment
Handrail interface	Post connection, local reinforcement, waterproofing and code



2. Selection and evidence matrix

Decision	Project input	Evidence needed
Resin / laminate	Water chemistry, concentration, temperature, cleaners, UV and exposure mode	Exact resin supplier data and/or representative test
Structural	Clear span, concentrated/uniform loads, support width, deflection and impact	Exact QY model load table or sealed/project calculation
Slip / barefoot	Operating state, contaminants, cleaning and footwear/barefoot protocol	Agreed test method and exact surface result
Openings / accessibility	Jurisdiction, route type and drainage needs	Opening geometry and code review
Fire / smoke	Occupancy and authority requirements	Exact product report from accepted laboratory
Fasteners	Material, wet chemistry, crevice exposure and maintenance	Material certificate and approved detail

Do not transfer a test result between different resin systems, surface treatments, thicknesses or manufacturing processes unless the report scope explicitly permits it.



3. Detail checklist

Platform and walkway

- Define support direction, clear span and minimum bearing.
- Control cutouts with edge clearance, trimming/banding and local support.
- Avoid ponding; coordinate slope and drainage without reducing required bearing.
- State allowable panel movement, joint gap and removable-panel sequence.

Stairs

- Coordinate tread depth, nosing, riser opening, uniformity and code.
- Provide support at both ends and intermediate support where the selected model requires it.
- Define surface/nosing contrast and replacement method.
- Keep fasteners accessible and compatible with the wet chemical environment.

Inspection and maintenance

Check	Action trigger
Surface wear / contamination	Clean with compatible method; reassess slip condition
Cracks / exposed fibers / delamination	Isolate and obtain technical disposition
Loose clips / fasteners	Correct cause and replace with approved hardware
Support corrosion / movement	Inspect underlying structure and bearing
Chemical process change	Repeat compatibility review



4. Waterpark FRP RFQ worksheet

Field	Project entry
Application / location	
Molded / pultruded / open	
Panel or tread size	
Clear span / support width	
Uniform / concentrated load	
Deflection limit	
Water chemistry / concentration	
Normal / peak temperature	
Cleaning chemicals / frequency	
Surface / slip requirement	
Fire / smoke / accessibility	
Color / UV / appearance	
Fasteners / support material	
Required evidence	

Send the completed worksheet, plan/elevation and load cases to sales@qymetaltech.com.