护栏与围栏系统 · Guarding & Fencing Systems

FRP Guarding and Fencing Systems — Installation Data Sheet

NANTONG ZEALL (ZeAllgrate) · founded 2004 · plant 20,000+ m² · 200+ staff · exported to 40+ countries · indicative figures for preliminary design; confirm against project calculation before ordering.

1. System overview

FRP pultruded guardrail and fencing systems are used on walkways, platforms, stair openings and perimeter edges where corrosion, non-conductivity or low weight matters. Standard components: top rail, mid rail, kick plate (toe board), posts, base plate and stainless / FRP clamp connectors. Heights and loads below are indicative of the catalogue range; project-specific rail loads are quoted to the local code (e.g. OSHA 1910.28, EN ISO 14122-3, GB 4053.3).

2. Standard post spacing and rail height

Application	Top rail height	Post spacing	Mid rail	Kick plate
General platform / walkway	1100 mm	1500 mm max	Required	100 mm
Stair side guard	900-1000 mm on slope	1200 mm max	Required	100 mm
Perimeter / roof edge	1100 mm	1500 mm max	Required	150 mm
Low-level barrier (visual)	600-800 mm	2000 mm max	Optional	Optional

3. Indicating lateral load on top rail

Rail load (horizontal, point)	Loading point	Deflection limit	Note
0.5 kN	Mid-span	L/120	General industrial guard
0.75 kN	Mid-span	L/120	Heavier duty / public area
1.0 kN	Mid-span	L/120	Stair opening / high risk

4. Standard sections used

Member	Standard section	Material	Surface
Post	Ø48 mm tube or 50x50 mm square tube	Isophthalic / vinyl ester	Smooth or gritted
Top / mid rail	50x25 mm or 60x30 mm rectangular tube	Isophthalic / vinyl ester	Smooth
Kick plate	100x6 mm flat bar or 100x10 mm plate	Polyester, smooth	Smooth
Base plate	150x150x10 mm FRP plate with 4 holes	Polyester, smooth	Smooth
Connector	Stainless steel A2-70 or FRP clamp	A2-70 / SMC	—

Note: post centres above are catalogue recommendations; the final spacing must be checked against the nominated rail load and section depth on a per-project basis.

Appendix A — Multilingual glossary (EN / DE / ES / FR)

English	Deutsch (DE)	Español (ES)	Français (FR)
FRP / GRP grating	GFP-Gitterrost / GFK-Gitterrost	Rejilla PRFV	Caillebotis PRV
Fibreglass / fiberglass	Glasfaser / GFK	Fibra de vidrio	Fibre de verre
Moulded grating	Pressguss-Gitterrost	Rejilla moldeada	Caillebotis moulé
Pultruded grating	Pultrusions-Gitterrost	Rejilla pultruida	Caillebotis pultrudé
Resin	Harz	Resina	Résine
Isophthalic polyester	Isophthalsäure-Polyester	Poliéster isoftálico	Polyester isophtalique
Vinyl ester	Vinylester-Harz	Resina viniléster	Résine vinylester
Barcol hardness	Barcol-Härte	Dureza Barcol	Dureté Barcol
Load / deflection	Last / Durchbiegung	Carga / flecha	Charge / flèche
Span	Stützweite	Luz	Portée
Clip / fastener	Klammer / Befestiger	Abrazadera / fijación	Agrafe / fixation
Kick plate / toe board	Riffelblech / Fußleiste	Zócalo	Plinthe
Handrail / guardrail	Handlauf / Schutzgeländer	Pasamanos / barandilla	Garde-corps / main courante

DE = GFK (glasfaserverstärkter Kunststoff) · ES = PRFV (plástico reforzado con fibra de vidrio) · FR = PRV (plastique renforcé de fibres de verre).

Appendix B — How to order

Step	What to send us	What we return
1. Brief	Application, medium, temperature, span, load	Recommended build-up and resin
2. Drawing	Plan view, support layout, cut-outs	Cutting list and panel count
3. Confirm	Resin grade, colour, surface (smooth / concave / grit)	Pi with price and lead time
4. Production	Deposit received	Production, QA, packing
5. Shipment	Balance or LC	FOB Shanghai / CFR / CIF per agreed term

Commercial term	Value
Minimum order (MOQ)	10 m²
Standard lead time	12-36 working days (stock to production)
Exceptional lead time	Oversize, custom colour, new die, special resin — confirmed separately
Standard panel	1220 x 3660 mm; cut-to-size on diamond saw
Density	1.5-2.0 g/cm³ depending on resin and glass content
Barcol hardness	>= 40 on a sound panel
Quality system	GB/T19001-2000 idt ISO9001:2000 · reg. 01708Q11888R0S
Product test report	ASTM F3059 report 211122012SHF-001 (grating only)
Contact	sales@gratingfrp.com · www.gratingfrp.com · Nantong, China

We do not issue SGS load reports, ABS product design assessments, or named-customer case references without a written release. Any figure in this sheet is indicative for preliminary design and must be confirmed by a stamped project calculation before ordering.

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