



TECHNICAL DATA & SPECIFICATION GUIDE

GRATING · ACCESS · SAFETY SYSTEMS

Selection logic, dimensional ranges, installation control and RFQ data.

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01 · HOW TO USE THIS GUIDE

Four decisions define the correct system

Start with duty and environment, then lock geometry, product family and documentation.

01

DUTY

People, equipment, point loads and wheel traffic

02

ENVIRONMENT

Corrosion, chemicals, fire, slip and electrical exposure

03

GEOMETRY

Clear span, bearing direction, openings and interfaces

04

EVIDENCE

Calculations, drawings, certificates and inspection records

ORDER OF PRECEDENCE

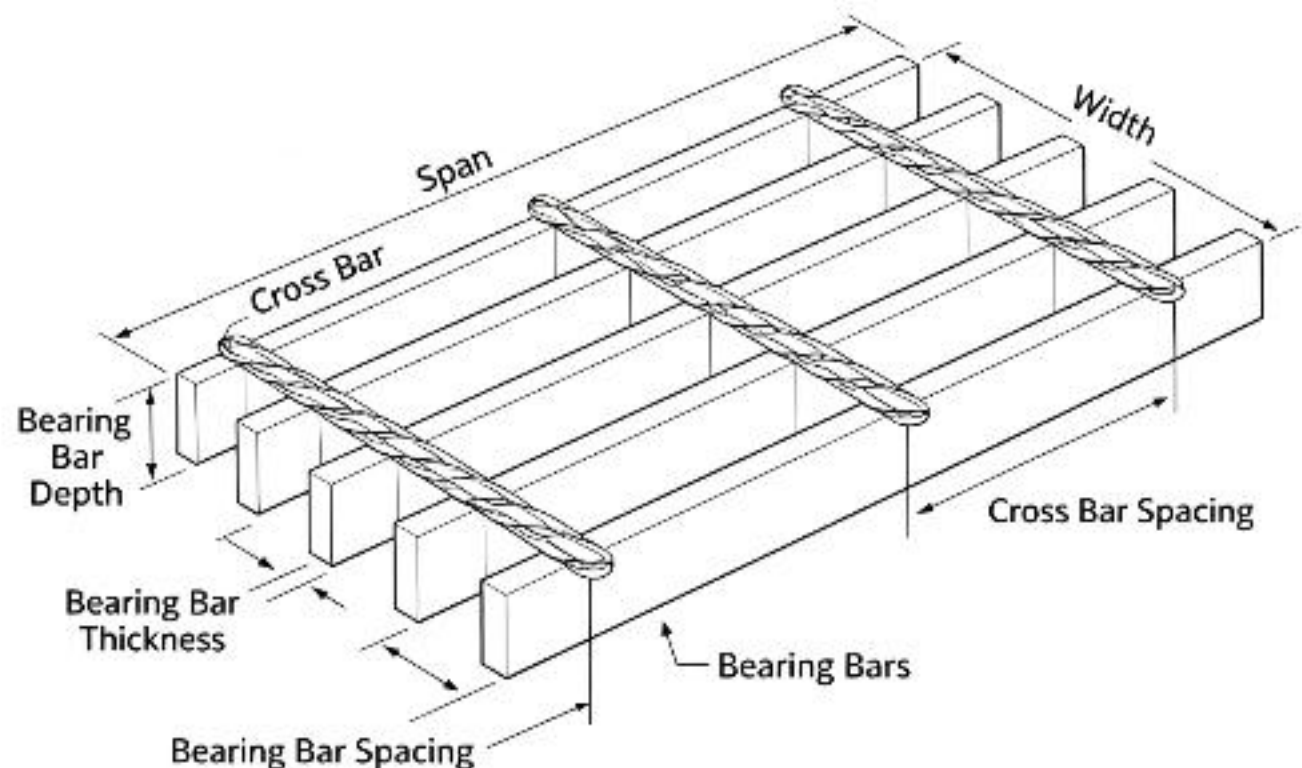
Project specification → approved drawings → WIBERG quotation/data sheet → this guide.

WIBERG

02 · PRODUCT DESIGNATION

One code should describe the product

A complete code prevents wrong material, pitch, surface and bearing direction.



CODE BLOCK	EXAMPLE	MEANING
Family	WBG	Welded bar grating
Material	CS	Carbon steel
Bearing bar	305	30 mm deep × 5 mm thick
Pitch	30/100	30 mm / 100 mm
Surface	S	Serrated (P = plain)
Finish	HDG	Hot-dip galvanized

CODE EXAMPLE WBG-CS-305-30/100-S-HDG

03 · DIMENSIONAL RANGE

Steel grating starts with bearing-bar geometry

Typical planning series; project loads and approved drawings govern final selection.

TYPICAL CODE	BEARING BAR	PITCH B/C	SURFACE	SERVICE CLASS
WBG-CS-253-30/100	25×3 mm	30 / 100 mm	P / S	Light / short span
WBG-CS-303-30/100	30×3 mm	30 / 100 mm	P / S	General walkway
WBG-CS-305-30/100	30×5 mm	30 / 100 mm	P / S	Industrial platform
WBG-CS-405-30/100	40×5 mm	30 / 100 mm	P / S	Longer span / duty
WBG-CS-505-30/100	50×5 mm	30 / 100 mm	P / S	Heavy-duty input



- Forge-welded for industrial floors
- Press-locked for clean appearance
- Serrated for wet or oily access
- Close mesh for reduced opening

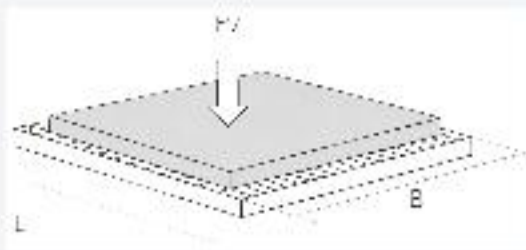
04 · LOAD INPUTS

Thickness alone is not a selection method

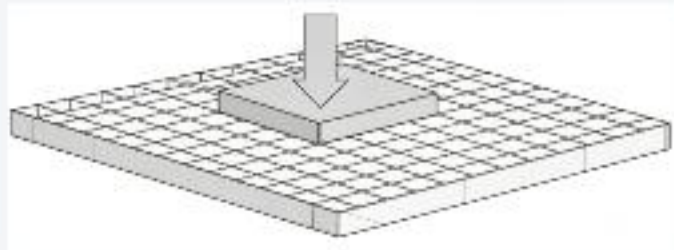
Capacity and deflection must be checked for the exact span, direction and load case.

LOAD INPUTS THAT CONTROL SELECTION

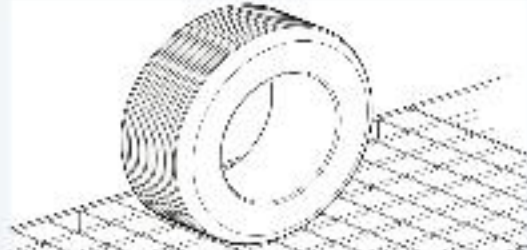
UNIFORM LOAD



CONCENTRATED LOAD



WHEEL LOAD



INPUT	REQUIRED PROJECT DATA
Geometry	Clear span · support width · bearing direction
Uniform load	Service and factored area load
Point load	Magnitude · contact area · position
Wheel load	Axle load · wheel split · footprint · impact
Limit state	Strength basis · deflection criterion
Environment	Temperature · corrosion · fire · slip

Always state clear span, bearing-bar direction, load combination, deflection limit and support condition.

DO NOT SUBSTITUTE

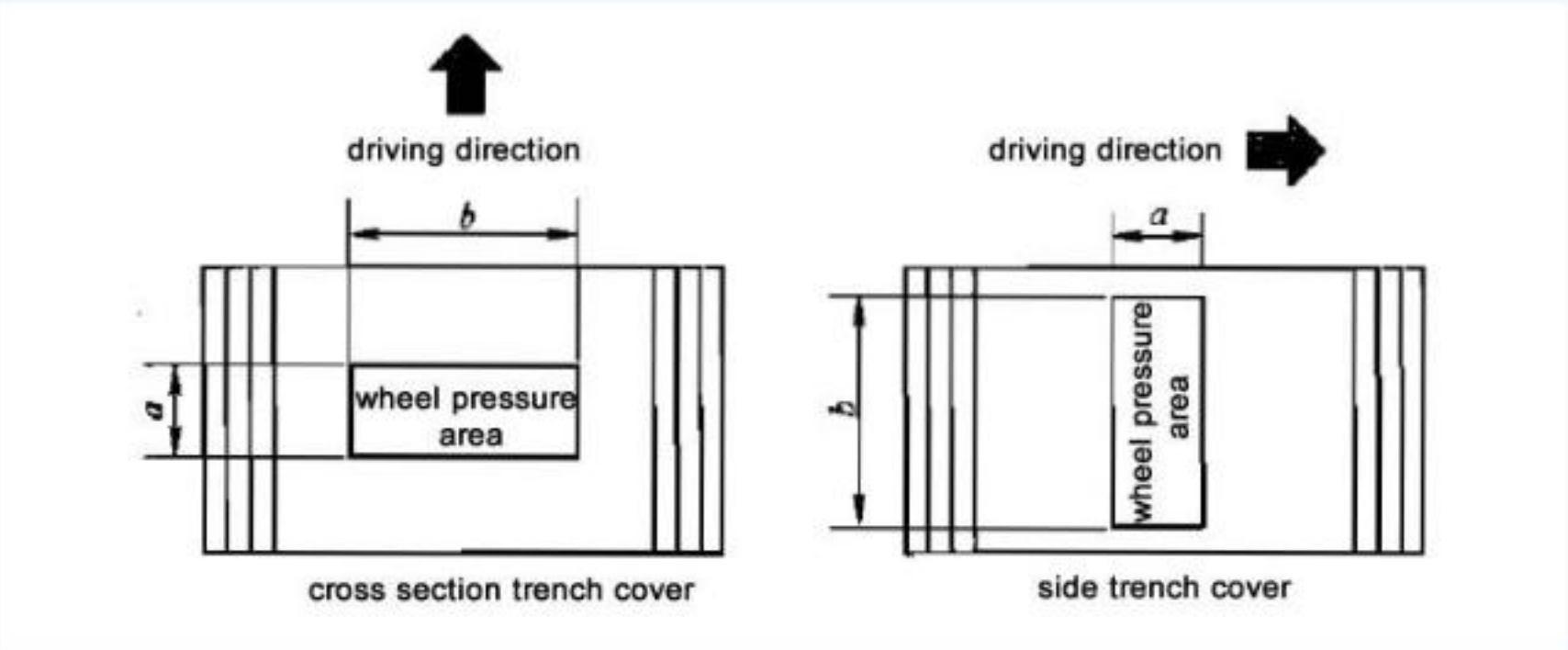
A different pitch, thickness, alloy, resin or support direction requires a new verification.

05 · WHEEL TRAFFIC

Vehicle duty begins with axle and wheel data

A reliable system coordinates panel, frame, support seat and restraint.

TRENCH COVER - COORDINATED EDGE, SEAT & RESTRAINT



RFQ FIELD	DESIGN EFFECT
Vehicle / equipment	Establishes governing mass
Wheel arrangement	Number of bars engaged
Tyre / contact	Local stress and impact
Movement	Turning, braking and edge crossing
Traffic frequency	Fatigue and wear requirement
Opening / span	Panel and frame selection

HOLD POINT

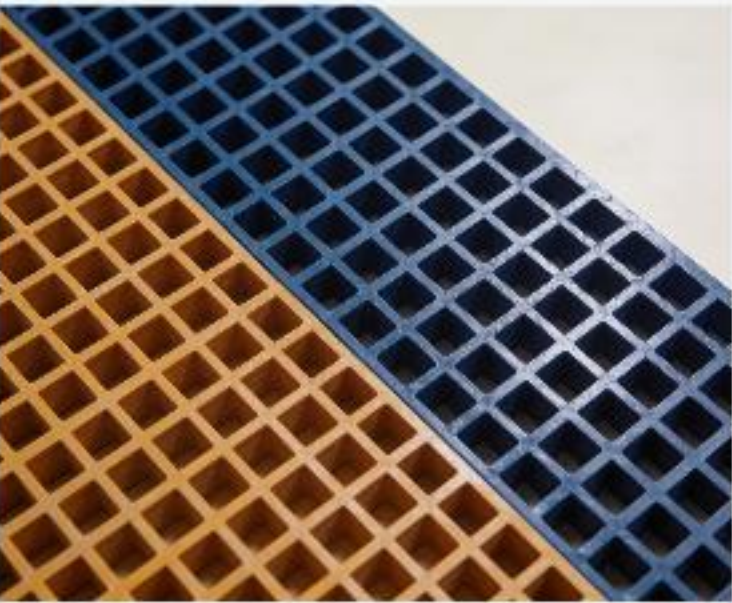
No vehicle-duty recommendation is released from vehicle mass alone.

06 · PROCESS SELECTION

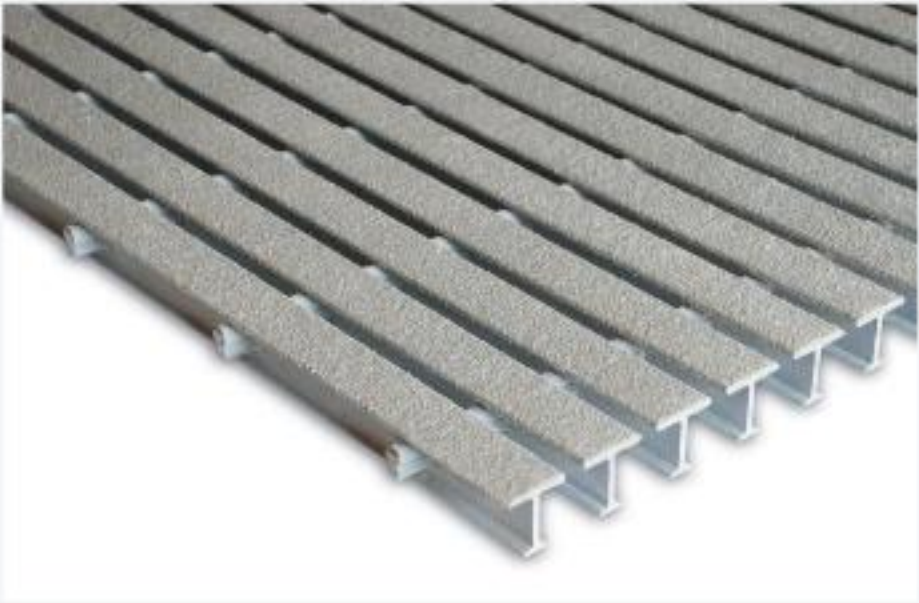
Choose molded or pultruded before choosing depth

The two constructions may look similar but carry load differently.

MOLDED FRP



PULTRUDED FRP



SELECTION FACTOR	MOLDED	PULTRUDED
Load path	Bidirectional sharing	Principal bearing-bar direction
Span efficiency	Short-to-medium	Medium-to-long
Cut-outs	Efficient for irregular cuts	Maintain profile integrity
Typical use	Chemical floors and trenches	Walkways and engineered duty
Optimization	Standard panel nesting	Length follows bearing bars

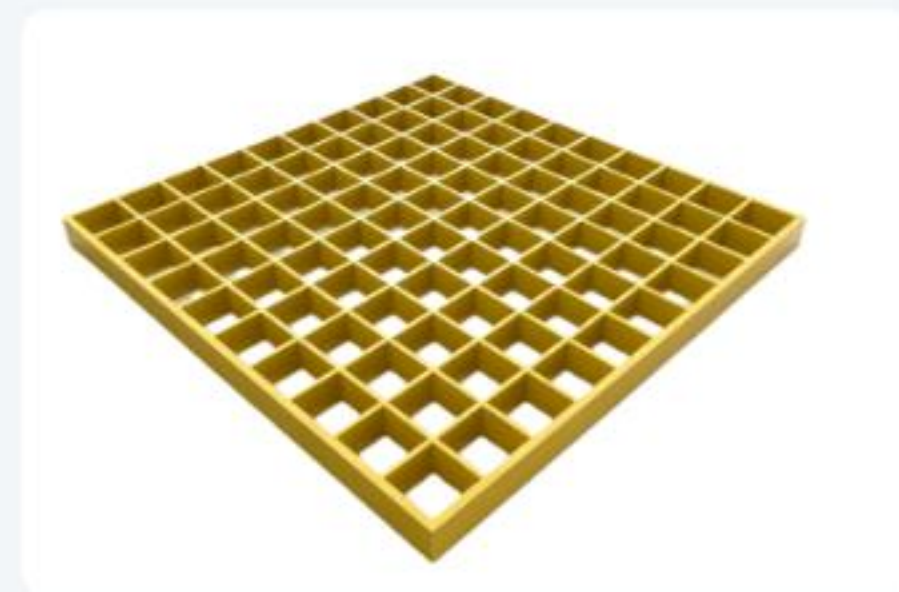
FRP DESIGN NOTE Final span must match the exact profile, resin, temperature and load duration.

07 · MOLDED FRP RANGE

Mesh, depth and open area define the panel family

Nominal planning sizes; exact resin, surface, colour and stock status are quoted.

DEPTH	MESH	OPEN AREA	APPROX. MASS
25.4 mm	50.8×50.8	72%	11.8 kg/m ²
25.4 mm	38.1×38.1	70%	12.7 kg/m ²
25.4 mm	25.4×101.6	69%	13.7 kg/m ²
38.1 mm	38.1×38.1	70%	18.6 kg/m ²
38.1 mm	19.05 mini mesh	44%	22.0 kg/m ²
50.8 mm	50.8×50.8	72%	19.5 kg/m ²



- Integral one-piece grid
- Efficient field cut-outs
- Short-to-medium spans
- Surface: concave or grit top

WIBERG

08 • PULTRUDED FRP RANGE

I-bar spacing trades open area against section density

Bearing-bar height and direction control the span.

SERIES	OPEN AREA	O.C. SPACING	MAX SPAN @38	MASS @38
I-2000	20%	19.1 mm	1708 mm	26.9 kg/m ²
I-3000	30%	21.6 mm	1652 mm	23.9 kg/m ²
I-4000	40%	25.4 mm	1587 mm	21.5 kg/m ²
I-5000	50%	30.5 mm	1516 mm	17.6 kg/m ²
I-6000	60%	38.1 mm	1431 mm	14.7 kg/m ²
I-7000	70%	50.8 mm	1332 mm	11.2 kg/m ²



- Mark bearing direction
- Support bars at both ends
- Use profile-matched clips
- Seal cut ends where specified

09 • RESIN AND SURFACE

The operating environment decides the FRP system

Chemical charts are screening tools; mixture, concentration and temperature still require confirmation.

RESIN FAMILY	RELATIVE RANGE	TYPICAL SERVICE
Orthophthalic / GP	Basic	Dry, low-corrosion service
Isophthalic polyester	Good general industrial	Water, wastewater, mild splash
Vinyl ester	Highest common chemical range	Acids, alkalis, chlorides
Phenolic / low-smoke	Project-specific	Fire/smoke-sensitive areas

SURFACE	SELECTION NOTE
Meniscus / concave	General wet service
Grit top	Anti-slip aggregate
Covered / solid top	Check drainage and local loading
Mini mesh	Reduced opening
Conductive / antistatic	Test evidence required

EVIDENCE RULE

Performance descriptions do not replace product-specific certificates to the specified test method.

10 · STAIR TREAD ASSEMBLIES

Specify the tread as a coordinated assembly

Grating, nosing, end plates, holes and finish must match the stair drawing.



PARAMETER	TYPICAL RANGE / OPTION
Construction	Welded, press-locked, steel or FRP
Bearing bar	25×3 to 40×5 mm common steel range
Tread depth	240–330 mm typical
Tread length	600–1200 mm typical
Nosing	Checker plate, serrated, abrasive or FRP grit
End plates	Welded or bolted to approved detail
Finish	HDG, stainless steel or FRP system

TREAD CODE

WST-CS-305-30/100-S-280×900-CP-HDG

12 · PLATFORMS AND WALKWAYS

Treat access components as one interface-controlled system

Grating, supports, handrails, stairs, gates and fixings must resolve together.



- 01 Duty — users, equipment, rescue and maintenance
- 02 Geometry — route width, levels, headroom and openings
- 03 Actions — live, point, wheel, wind and operational loads
- 04 Materials — corrosion, chemicals, fire, electrical and slip
- 05 Interfaces — anchors, toe plates, gates and removable panels
- 06 Verification — calculations, drawings and inspection records

DRAWING SET

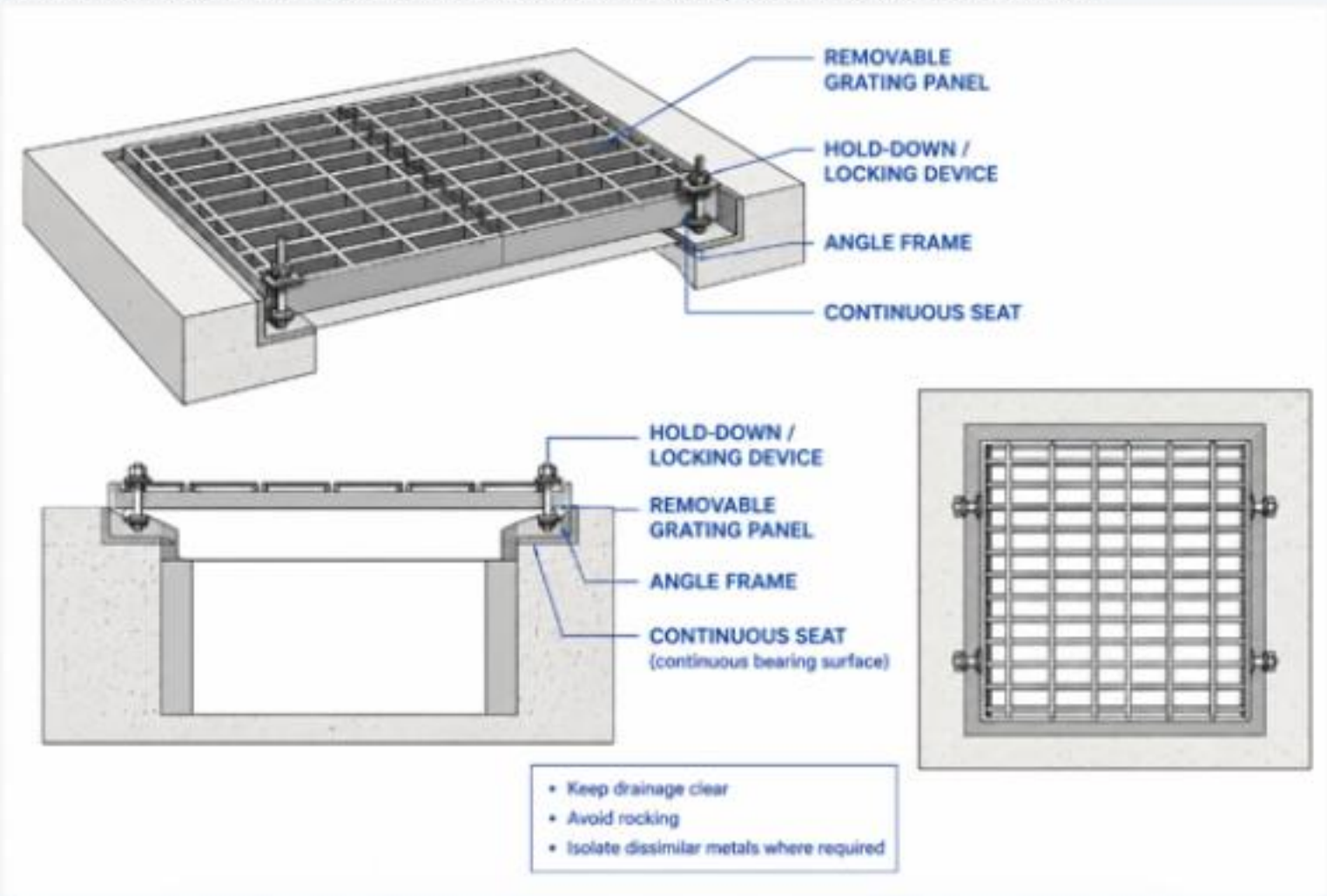
General arrangement · grating layout · access details · connections

11 · TRENCH COVERS

Panel, frame and restraint must be designed together

Seat width, edge protection and locking detail govern reliability.

TRENCH COVER - COORDINATED EDGE, SEAT & RESTRAINT



COVER FAMILY	WHEN TO USE	KEY INPUT
Open steel grating	Drainage and ventilation	Span, slip, debris
Heavy-duty steel	Forklift or vehicle crossing	Wheel-load schedule
Solid / checker plate	Debris or surface continuity	Plate and drainage
FRP	Corrosion / non-metallic	Resin, load, fire
Hinged / lockable	Controlled access	Hinge, lock and stay

INSTALLATION HOLD POINT

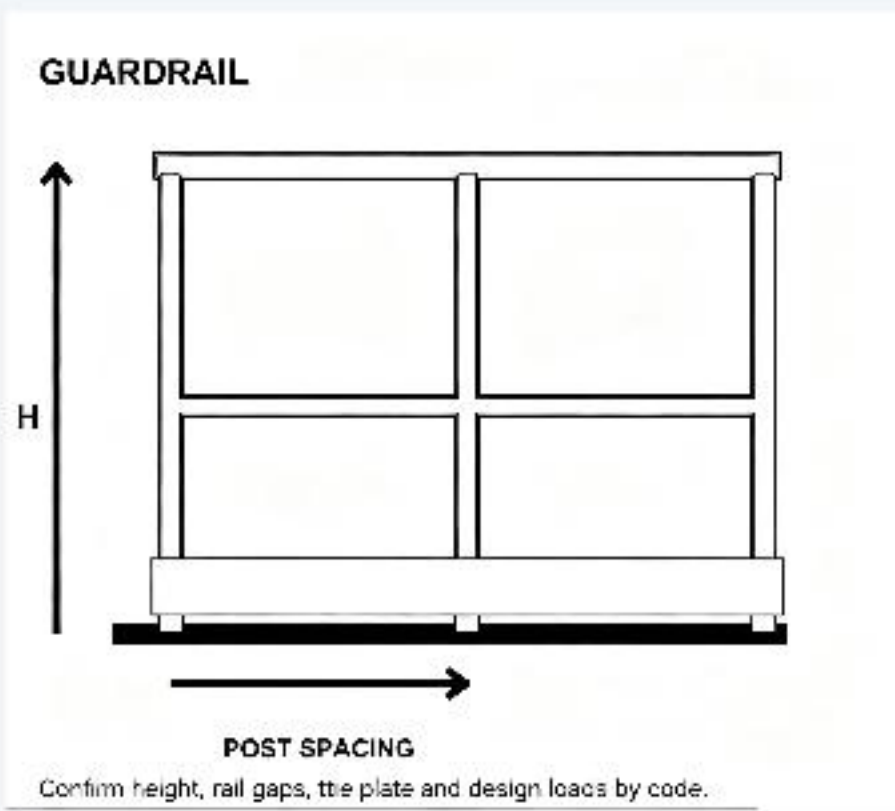
Verify frame level, clearances, drainage path and continuous support before fabrication.

13 · GUARDRAILS AND LADDERS

Safety geometry is controlled by the governing project standard

Typical ranges support quotation; the applicable code and design loads control final geometry.

TYPICAL ACCESS GEOMETRY - PROJECT STANDARD CONTROLS



PARAMETER	TYPICAL RANGE	PROJECT CHECK
Guardrail height	1050–1100+ mm	Applicable code
Post spacing	Up to 1500 mm preliminary	Top-rail load
Toe plate	100×4 mm typical	Risk assessment
Ladder clear width	400–600 mm	User equipment
Rung pitch	250–300 mm	Transitions
Cage / hoop	Approx. 700–800 mm	Required or permitted

SAFETY NOTE

A cage is a physical enclosure; it is not automatically a complete fall-arrest solution.

15 · FINISH, INSPECTION AND EVIDENCE

Good technical documentation states what will be measured

Finish claims and standards must connect to records supplied with the order.

SYSTEM	TYPICAL OPTION	CONTROL
Carbon steel	Mill / primer / HDG / duplex	Coating standard
Stainless steel	304 / 316L	Grade and contamination control
Aluminium	Project-specific alloy	Load table and galvanic isolation
FRP	Resin, colour, UV, grit, fire	Batch certificate and test evidence

STAGE	CHECK	TYPICAL RECORD
Material	Grade, size, heat/batch	MTC / CoC / resin batch
Fabrication	Dimensions, welds, cut-outs	Inspection report
Finish	Preparation, coverage, repair	Coating report
Fit-up	Marks, direction, gaps, clips	Installation checklist
Packing	Bundle marks, protection, count	Packing list / photos

COATING NOTE

Required coating mass or thickness depends on the invoked standard, steel thickness and environment.

14 • FIXING SELECTION

Match the fixing to both grating profile and support

Clip type, material, length and access method must be shown in the quotation or drawing.

FIXING	FUNCTION	USE WITH
Saddle / top clip	Hold panel to steel support	Steel grating
Butterfly / M clip	Top hold-down through mesh	Molded FRP
J / G clip	Edge or support hold-down	Molded FRP
C clip	Join unsupported adjacent edges	Molded FRP
FC / profile clip	Hold pultruded bearing bars	I-bar / T-bar FRP
Anchor block	Blind-side support connection	Steel / FRP by detail



- Inspect supports and panel marks
- Place bearing bars in span direction
- Fit matched clips and approved spacing

INSTALLER HOLD POINT Do not open panels to traffic until support, fastening, gaps and edge protection are inspected.

16 • TECHNICAL ENQUIRY

Complete inputs produce faster, more accurate quotations

Attach the latest drawings and identify the governing revision.

RFQ FIELD	PROJECT ENTRY	RFQ FIELD	PROJECT ENTRY
Product / code / qty		Dimensions / clear span	
Uniform / point / wheel loads		Material / resin / finish	
Slip / fire / chemical		Frames / fixings / gates	
Standards / certificates		Delivery / packing / Incoterm	

SHORT-FORM SPECIFICATION

Provide WIBERG grating and access-system components in the approved material, geometry, surface and finish. Submit product data, verification, layout drawings, fixing details and ordered certificates. Do not substitute pitch, profile, material, resin, finish or support direction without written approval.

WIBERG



PROJECT SUPPORT

Technical questions, drawings and RFQ packages

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SCAN FOR RFQ