



شركة حديث
التقنية العليا
HITECH
STEEL INDUSTRIES

MODULAR SAFETY RAILING KIT SYSTEM

- 1 Tool-Free Modular Assembly
- 2 High Strength & Compliance Design
- 3 Hot-Dip Galvanized Steel Construction
- 4 Flexible & Expandable System



OVERVIEW:

This modular safety railing kit system is a pre-engineered, field-assembled guardrail solution for industrial, commercial, and rooftop applications in the Kingdom of Saudi Arabia. The system comprises interlocking straight, corner, and extension kits that combine without welding, bending, or threading to deliver a compliant, high-visibility barrier. Components are supplied in galvanized / mild steel and are field-configurable to suit virtually any standard railing layout. The system meets Saudi Building Code (SBC) and SASO guardrail requirements and is suitable for HCIS- and Saudi Aramco-governed facilities. All dimensions are stated in SI (metric) units with imperial equivalents in brackets.



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MODULAR SAFETY RAILING KIT SYSTEM

APPLICABLE STANDARDS & CERTIFICATIONS

Primary- Kingdom of Saudi Arabia

Authority / Type	Standard / Reference
SBC (Saudi Building Code)	SBC 201 / SBC 301 – guardrail height, geometry, and live-load requirements
SASO	Applicable SASO guardrail and hot-dip galvanizing conformity requirements
HCIS	High Commission for Industrial Security – perimeter / fall-protection guidance for secured facilities
Saudi Aramco	Suitable for SAES / Aramco Engineering Standards installations (project-verified)
Occupational Safety	Saudi labour / OSH guarding requirements for elevated working surfaces

Reference – International

Authority / Type	Standard / Reference
ASTM	A53 / A123 – steel tube and hot-dip galvanized coating reference
BS	BS 6180 – satisfies 0.36 kN/m distributed load requirement
OSHA (US)	29 CFR 1910.23 – independently tested (reference benchmark)
IBC / ANSI (US)	Meets or exceeds guardrail geometry and loading (reference benchmark)
Testing / Certification	Independently tested; production-monitored

Compliance Note – HCIS / Saudi Aramco: Galvanized finish and bolt / chemical-anchor fixing suit oil, gas, and petrochemical facilities under HCIS security and Saudi Aramco engineering governance. Anchorage, coating system, and corrosion category to be confirmed against the applicable SAES and project specification.

Compliance Note – SBC Building / Commercial: For commercial, mezzanine, and rooftop applications the 1,067 mm rail height and mid-rail geometry satisfy SBC 201/301 guardrail provisions. Final loading and anchorage to be verified by the project engineer of record.

Note: The system exceeds (not merely meets) typical code minimums for guardrail height and applied load.

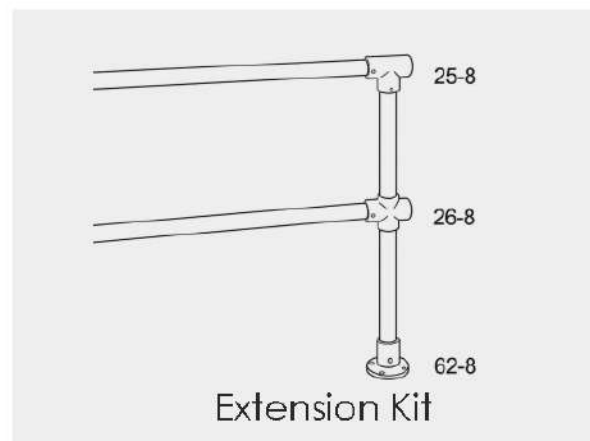
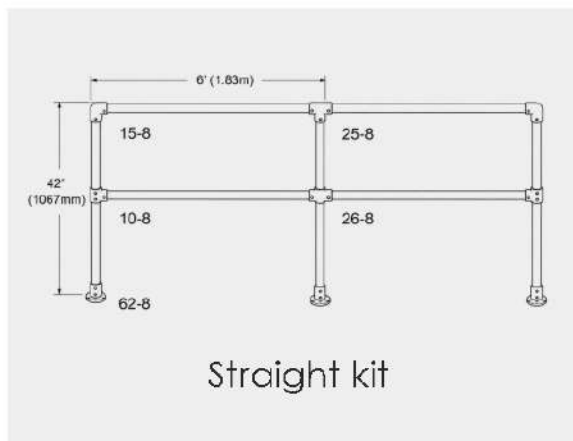
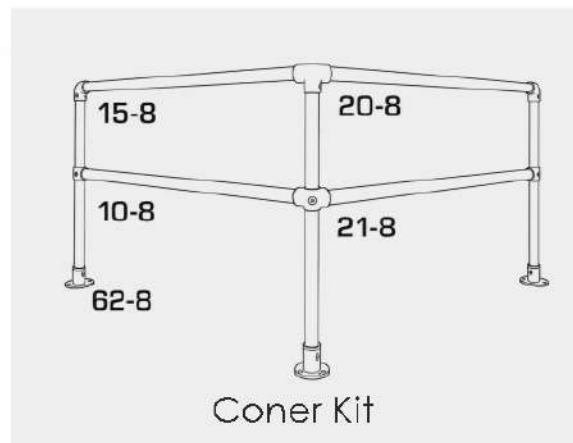


MODULAR SAFETY RAILING KIT SYSTEM

KIT CONFIGURATIONS

Kit Type	Model	Coverage	Uprights	Rails (69" ea.)	Bases
Straight Kit	SS	2 × 6 ft = 12 ft (3.66 m)	3 (2 end + 1 inter.)	4	3 × Type 62-8
Corner Kit	SC	2 × 6 ft = 12 ft corner	3 (2 end + 1 corner)	4	3 × Type 62-8
6 ft Extension	SE	1 × 6 ft (1.83 m)	1 intermediate	2	1 × Type 62-8

Kits may be combined: straight and corner kits can be extended indefinitely using 6 ft extension kits. Rails may be field-cut where shorter sections are required.





MODULAR SAFETY RAILING KIT SYSTEM



TECHNICAL SPECIFICATIONS

A. Structural & Dimensional Data

Rail height (top of top rail)	1,067 mm (42 in) above finished floor / working level
Top rail	Required – 1,067 mm (42 in) above floor
Mid rail	Required – positioned midway between top rail and floor / toeboard
Section length (per kit)	1.83 m (6 ft) per section; 3.66 m (12 ft) per straight / corner kit
Upright cut length	1,010 mm (39-3/4 in) – pre-cut, supplied ready for insertion
Rail tube length	1,753 mm (69 in) – supplied per kit; field-cutttable
Pipe outside diameter (OD)	42 mm (NPS 1½ / Schedule 40 equivalent – per system standard)
Base fitting	Type 62-8 flange base – bolt-fixed or chemical anchor
Set screw torque	39.3 N·m (29 ft·lbf) – applied with standard hex (Allen) key

B. Unit Weights

Kit	Material	Weight (kg)	Weight (lb)
Straight Kit	Galvanized / Mild Steel	43.5	96
Corner Kit	Galvanized / Mild Steel	43.5	96
Extension Kit	Galvanized / Mild Steel	19.5	43



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MATERIALS & SURFACE FINISH

Pipe / tube	Hot-dip galvanized mild steel tube, OD 42 mm
Fittings	Malleable iron, hot-dip galvanized – slip-on / clamp type
Exterior coating	Safety Yellow powder coat applied over galvanization; enhances corrosion resistance and visibility
Grub / set screws	Stainless steel with corrosion-resistant coating
Screw recess protection	Recess-coated to prevent seizing
Toeboard hardware	Stainless steel (where toe board option is specified)
Indoor / outdoor suitability	Suitable for both indoor and outdoor environments

COMPONENT FITTINGS SCHEDULE

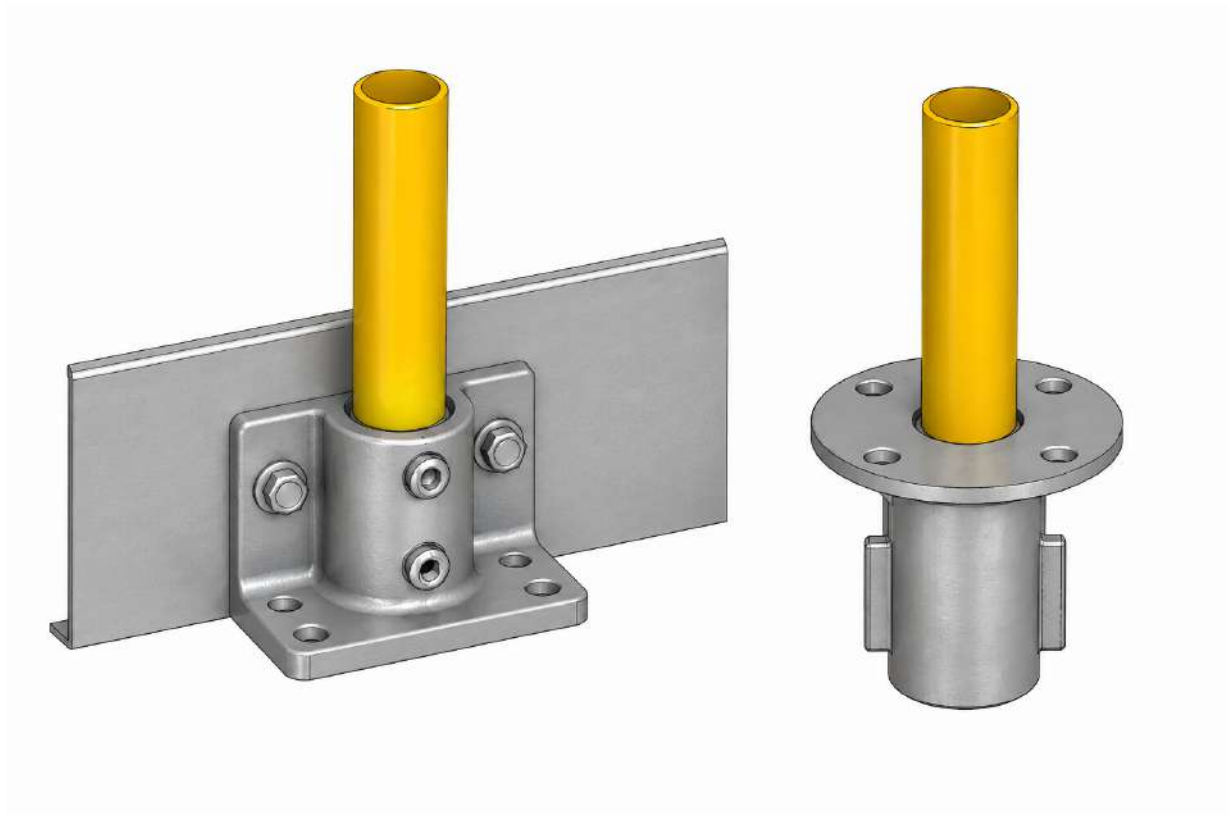
Fitting Type	Location / Function	Kit(s) Used In
Type 10-8	Single-socket end fitting – top rail termination at end upright	Straight, Corner
Type 15-8	Single-socket tee fitting – mid rail connection at end upright	Straight, Corner
Type 20-8	Corner single-socket – top rail at corner upright	Corner
Type 21-8	Corner single-socket – mid rail at corner upright	Corner
Type 25-8	Through-socket tee – top rail at intermediate upright	Straight, Extension
Type 26-8	Through-socket tee – mid rail at intermediate upright	Straight, Extension
Type 62-8	Flat-plate flange base – upright anchor to floor structure	All kits
Type 66	Ground socket (optional) – removable upright for concrete slab	All kits (optional)
Type 69	Toe board fitting (optional) – kick-plate / toe board compliance	All kits (optional)



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ANCHORAGE & BASE OPTIONS

Standard base	Type 62-8 flat-plate flange; secured with bolts or chemical anchors (not supplied) into concrete, steel deck, or structural substrate
Removable base	Type 66 ground socket with set-screw locking; plug supplied to close socket when post is removed. Suitable for concrete slabs where temporary or seasonal removal is required
Anchoring hardware	Bolts and chemical anchors to be selected by the project engineer in accordance with substrate type, loading, and local structural requirements
Toe board (optional)	Type 69 fitting with stainless steel hardware; satisfies applicable toe board / kick-plate requirements for elevated platforms. No drilling or welding required





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ACCESSORIES & SYSTEM OPTIONS

Toe board	Type 69 – stainless steel hardware; toe board / kick-plate compliant; no drilling or welding
Ground socket	Type 66 – removable post solution for concrete; includes cap plug
Extension capability	6 ft extension kits chain indefinitely off straight or corner base kits
Ramp / step kits	Variable-angle adjustment available for stair and ramp configurations
Cutting	Rails are field-cuttable where spans shorter than 69 in (1,753 mm) are required
Tool required	Standard hex (Allen) key only – no welding, threading, or bending required on site

APPLICATION SUITABILITY

Indoor	Yes – warehouses, manufacturing floors, mezzanines, plant rooms
Outdoor	Yes – rooftops, loading docks, elevated walkways, tank farms
Environments	General industrial; high-temperature and coastal / humid Gulf conditions; moderate chemical exposure (galvanized / powder-coat finish)
Industries	Oil, gas & petrochemical, manufacturing, utilities, data centres, healthcare, transportation, warehousing
Substrate compatibility	Concrete slab (bolt, chemical anchor, or ground socket); structural steel deck (bolt-fix)
Reconfigurability	Sections can be added, repositioned, or removed on site without specialist tools



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STRUCTURAL LOADING DATA

Top rail – applied point load	Withstand ≥ 890 N (200 lbf) applied in any outward or downward direction at any point
Mid rail – applied point load	Withstand ≥ 667 N (150 lbf) applied in any outward or downward direction
Distributed load – BS 6180	0.36 kN/m (satisfied per testing)
SBC reference	Geometry and loading meet SBC 201/301 guardrail provisions
Connection torque	39.3 N·m (29 ft·lbf) per fitting set screw – do not exceed
Load test status	Independently tested and certified; production monitoring in place
Design basis	System exceeds code minimums; project engineer to verify anchorage capacity independently