



شركة حديد
التقنية العليا
HITECH
STEEL INDUSTRIES

ROOF HATCH

- 1 OSHA-compliant fall protection
- 2 Durable duplex finish for harsh environments
- 3 Multiple model configurations
- 4 Robust modular steel construction



OVERVIEW:

The Roof Hatch Railing System by Hitech Steel Industries provides OSHA- compliant fall protection around roof hatch openings. Constructed from Schedule steel pipe (42 mm OD) with Kee Klamp Fittings, the system protects the open hatchway and provides a secure grab device for safe egress and ingress. Meets OSHA Standards 1910.23 and 1910.27.



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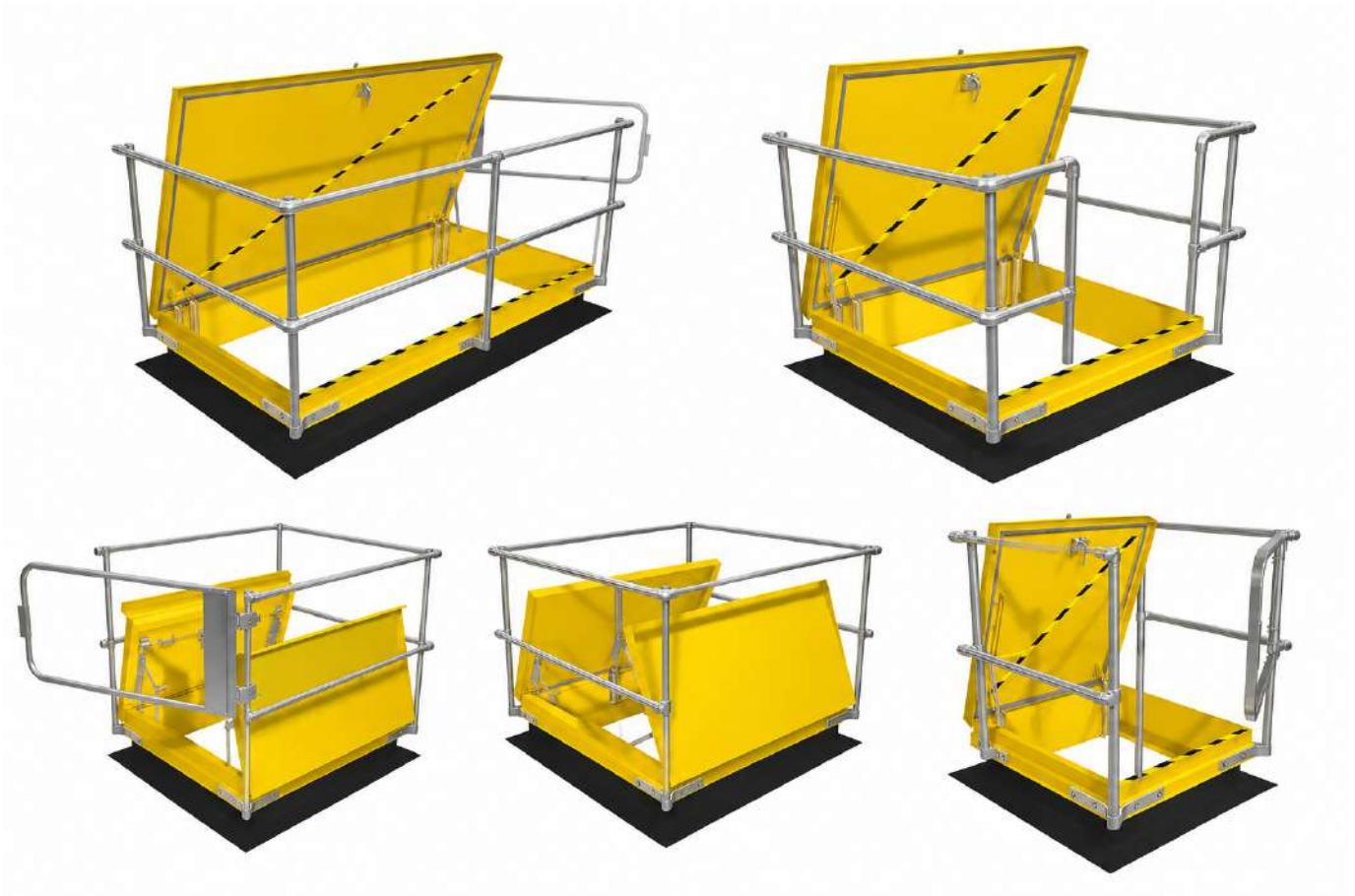




ROOF HATCH

MODEL SELECTION GUIDE

Model Code	System Type	Hatch Size / Condition	Leaf Type
RHSR-SS	Standard System	2'6" × 3' (762 × 914 mm) — ladder on 2'6" side, opposite hinge	Single
RHSR-FB	Forward Barrier (Left or Right exit)	Up to 4' × 6' (1219 × 1829 mm); also for exit close to roof edge / obstruction	Single
RHSR-FB	Forward Barrier — Large Hatch	Larger than 4' × 6' with ladder / stairway at hatch end	Single
RHSR-O	Offset Handles	Any size where ladder is opposite hinge and hatch dimension on mounting side >30" (762 mm)	Single
RHSR-DL	Double Leaf	Any size	Double



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PIPE & POST SPECIFICATIONS

Component	Qty	Length (imperial)	Length (metric)	OD
Corner Post	2-4 (model-dependent)	42 $\frac{3}{4}$ "	1086 mm	42 mm
Side Post	1 (RHSR-SS / FB-3054)	40"	1019 mm	42 mm
Top & Mid Rail	2-6 (model-dependent)	36" or 66"	914 / 1676 mm	42 mm
Offset Handle Stub	4 (RHSR-O only)	12"	305 mm	42 mm
Offset Handle	2 (RHSR-O only)	30"	762 mm	42 mm

All pipe is Schedule-40 Mild Steel, 42 mm OD. Posts and rails are field-cut to length as required.



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MATERIAL SPECIFICATION & FINISH

Component	Material	Grade / Standard (KSA)	Wall Thickness	OD
Structural Pipe (Posts & Rails)	Mild Steel (MS)	SASO / ASTM A53 Gr. B SABIC MS equivalent	Sch-40 (3.56 mm nominal)	42 mm
Kee Klamp® Fittings	Malleable Cast Iron	ASTM A197 ISO 1562	—	Suits 42 mm OD pipe
Mounting Brackets (161-7 / 162-7)	Mild Steel (MS)	SASO / ASTM A36	Min. 5 mm plate	—
Fasteners (Bolts / Nuts / Washers)	Medium Carbon Steel	ASTM A307 Gr. B ISO 4016	3/8" (9.5 mm) dia.	—
Safety Chain	Mild Steel	BS 4942 / ASTM A413	3/16" (4.76 mm) link	—

Finish Type	Applied To	Process / Standard	Min. Coating Thickness	Purpose
Hot-Dip Galvanising	All MS pipe, brackets & fasteners	SASO 11 / BS EN ISO 1461 (KSA mandatory for outdoor structural steel)	85 µm average (70 µm min. any point)	Primary corrosion protection — suits KSA coastal & desert environments
Polyester Powder Coating	All galvanised components (applied over galvanising — duplex system)	SASO / BS EN 13438 Cure temp: 180–200 °C	60–80 µm DFT	UV resistance, colour uniformity & additional barrier protection
Colour — Standard	Full system	RAL 1023 (Traffic Yellow) — safety visibility	—	Complies with KSA / OSHA high-visibility requirements for fall-protection equipment
Colour — Optional	Full system	RAL 9005 (Jet Black) or custom RAL on request	—	Architectural / project-specific requirements

Duplex finish system (galvanise + powder coat) provides a service life exceeding 25 years in KSA coastal and high-humidity environments per ISO 12944-5 corrosivity category C3–C4. All surface preparation to Sa 2½ per ISO 8501-1 prior to galvanising.



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MODEL COMPONENT SUMMARY

Model	Kee Klamp® Fittings	Pipe Pieces	Bolts (3/8")	Hardware Sets
RHSR-FB 3054	1× 10-7 1× 15-7 2× 45-7 5× 77-7 2× 121-7 2× 178-7 3× 161-7 1× 162-7	1× 40" 3× 42¾" 2× 36" 2× 66"	14× 3/8"×2½" 14× 3/8"×1¼"	14× Nut / Fender W / SAE W / Lock W
RHSR-FB 4854	4× 45-7 8× 77-7 2× 121-7 2× 178-7 4× 161-7	4× 42¾" 4× 66"	16× 3/8"×2½" 16× 3/8"×1¼"	16× Nut / Fender W / SAE W / Lock W
RHSR-FB 4896	2× 26-7 4× 45-7 9× 77-7 2× 121-7 2× 178-7 4× 161-7 1× 162-7	5× 42¾" (posts) 6× 66" (rails)	18× 3/8"×2½" 18× 3/8"×1¼"	18× Nut / Fender W / SAE W / Lock W
RHSR-O 3636	4× 10-7 4× 15-7 4× 45-7 6× 77-7 2× 178-7 2× 161-7 2× 162-7 4× 121-7	2× 42¾" 2× 40" 4× 36" 2× 30" handles 4× 12" stubs	12× 3/8"×2½" 12× 3/8"×1¼"	12× Nut / Fender W / SAE W / Lock W
RHSR-O 4848	2× 10-7 2× 15-7 4× 45-7 10× 77-7 4× 121-7 2× 178-7 4× 161-7	4× 12" stubs 2× 30" rails 4× 42¾" 4× 66"	16× 3/8"×2½" 16× 3/8"×1¼"	16× Nut / Fender W / SAE W / Lock W

INSTALLATION TORQUE & FASTENER REQUIREMENTS

Item	Specification / Value	Notes
Kee Klamp® Set Screw Torque	29 ft-lbf (39 N·m)	5/16" hex key; tighten all fittings
Mounting Bolt Torque (Final)	30 ft-lbf (41 N·m)	Torque wrench required after snug-tightening
Mounting Bolts — Curb	3/8" × 2½" (with fender & SAE flat washer + lock washer)	Run bolt from inside roof curb outward
Mounting Bolts — Counter Flash	3/8" × 1¼"	Preferred; does NOT void hatch manufacturer warranty
Chain Hang Height	≥ 42" (1067 mm) from roof surface	Chain should be reasonably taut; trim excess
Top Rail Height	≥ 42" (1067 mm) above roof surface	OSHA 1910.23 / 1910.27 requirement
Mid Rail Position	Midway between top rail & top of hatch curb	Level during installation
Roof Curb Packing	Min. ¾" (19 mm) plywood or equiv.	Required for non-insulated curbs before mounting



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TOOLS REQUIRED

Tool	RailingReady® Hatch	Non-RailingReady® Hatch
Wrenches (×2) to tighten nuts	✓	✓
Torque wrench	✓	✓
Level	✓	✓
Hacksaw / reciprocating saw	✓	✓
5/16" Hex key (set screws)	✓	✓
Exterior caulk & gun (roof-approved)	✓	✓
Bolt cutter (excess chain)	✓	✓
Marking device	—	✓
Drill + 3/8" drill bit	—	✓
Eye protection	—	✓
File / grinder (deburr bolt ends)	—	✓

COMPLIANCE & CERTIFICATIONS

Standard / Requirement	Detail
OSHA 1910.23	Ladders — protects open hatchway
OSHA 1910.27	Scaffolds / elevated surfaces — substantial grab device for egress/ingress
Installer Certification	Roof-curb mounting must be supervised/performed by a certified installer. Contact Hi Tech Steel Industries for certification and training details.
Counter-Flashing Mounting	Preferred method; no certification required; no warranty voided