

# RAPTOR

OVERHEAD RAIL SYSTEM

**SAYFA**  
PROTECT

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SAYFA.COM.AU

## OVERHEAD FALL ARREST SYSTEM FOR MULTIPLE USERS

▲ MUST BE READ AND UNDERSTOOD PRIOR TO USE

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# SYSTEM OPERATION MANUAL



# RAPTOR® OVERHEAD RAIL

Sayfa Group leads the industry in the design, installation and management of access, fall protection and ground safety systems.

The In-Action model demonstrates access, fall and ground protection requirements for a commercial building design.

Sayfa Group recommendations fulfill current workplace requirements for the safety of building maintenance subcontractors, employees and the general public.

#	DESCRIPTION	
1	3 SIXTY	Fall arrest anchors
2	TRAVEL 8	Roof or wall mount static lines
3	SENTRY	Roof mount guardrails
4	ON-TRAK	Roof walkways (yellow or grey)
5	PROTEX	Skylight protectors
6	RAPTOR	Overhead fall arrest rails

#	DESCRIPTION	
7	KATT	Modular fixed ladders
8	VISTA	Modular fold down ladders
9	ALTO	Step ladders & step bridges
10	ALTO	Stairs & platforms
11	MODDEX	Handrails & balustrades
12	SKYDORE	Roof access hatches

For more information, please contact Sayfa Group directly.



IT'S THE SAYFA WAY

# MINIMAL DEFLECTION OF RAIL LIMITS THE FALL DISTANCE & REDUCES INJURY TO OPERATOR

## FEATURES & BENEFITS

### RAIL SECTION

Spanning up to 6000mm using long span attachment



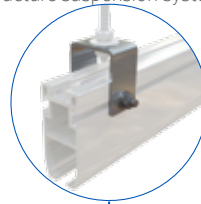
### T-NUT MOUNT

Connects fixing brackets to rail system



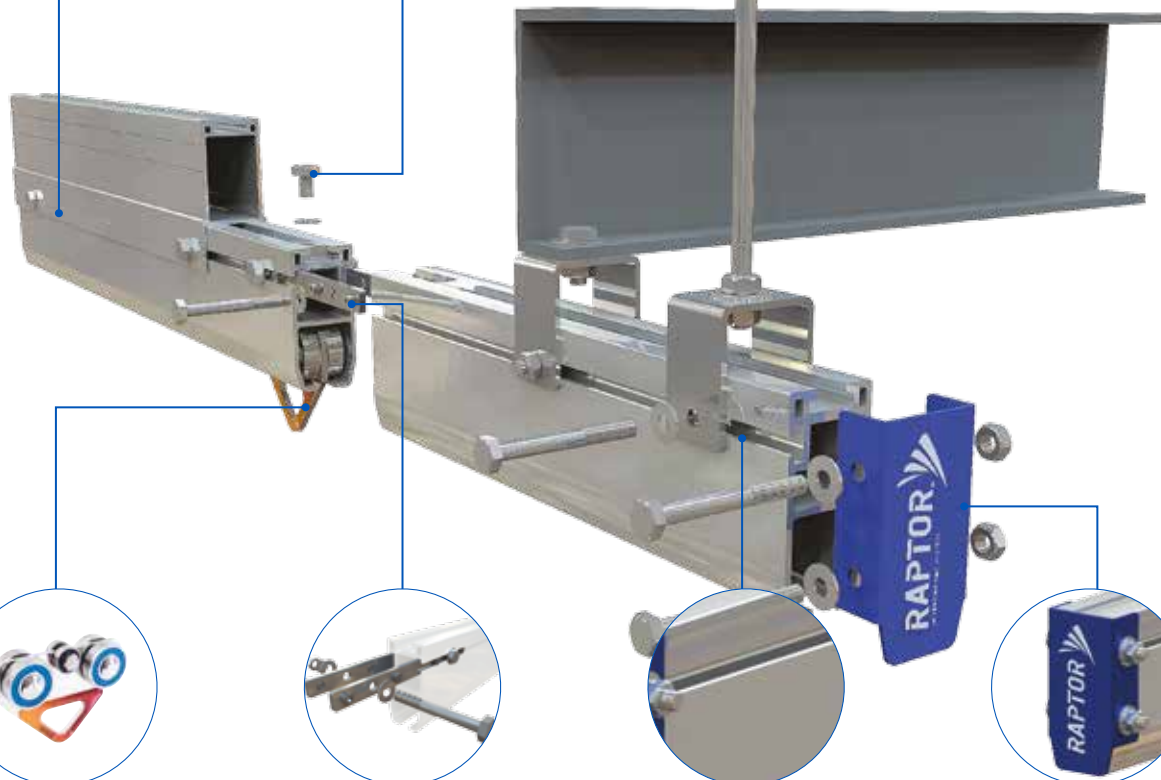
### SUSPENSION BRACKET

Provides connection of rail to support structure suspension system



### RETRACTABLE LANYARD

Allows free movement of operator whilst ensuring lanyard remains tensioned



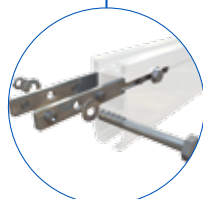
### SEALED BEARING TROLLEY

Provides connection point for retractable lanyard



### RAIL SPLICE JOINER KIT

Used to join multiple rail sections together



### MOUNTING SLOT

Provides adjustable positioning of mounting brackets



### END STOP

Provides the trolley termination point



UNIQUE  
PRODUCT FEATURE

## FALL ARREST TROLLEY

### FOR EFFORTLESS MOBILITY

The robust sealed bearing trolley ensures effortless operator mobility when used as a rope access or fall arrest system. Lateral stabilising bearings allow the trolley to function normally when angled or side loading is required providing unlimited flexibility for positioning the rail to best suit the application and safety of the operator.

PATENTS AND DESIGN REGISTRATIONS APPLY



# OPERATION

## MUST BE READ PRIOR TO USE

1. Prior to use, ensure all operating procedures have been read and understood.
2. This fall arrest system is only to be used by competent persons who have experience and training in the safe use of the system and associated equipment.
3. Ensure all workplace OH&S requirements are identified and understood. A risk assessment with a safe work method procedure must be completed and approved by management prior to work commencing.
4. This system requires periodic inspection and maintenance by a qualified height safety inspector. The system **MUST NOT** be used if the service date is overdue.
5. A rescue plan must be devised and be ready to be implemented prior to usage of a fall arrest system.
6. Authorisation to enter any risk area must be obtained from the work place manager prior to accessing.
7. Only approved full body harness, gear and equipment with energy absorber certified to Australian Standard AS/NZS 1891, to be used with this system.
8. Visually inspect the system for damage prior to use. System must not be used if there is any deterioration or deformation of any components or structure to which the system is attached.
9. If the safety system is damaged or has arrested a fall, discontinue use until it has been fully inspected and recertified by a competent height safety equipment inspector.
10. Ensure all fixings, fittings and components are securely attached. Any tightening, adjustment or replacement of components must be carried out by a competent height safety inspector.
11. Persons must not be allowed to work alone in fall arrest situations in case emergency rescue assistance or first aid is required.
12. All applicable Australian Standards, OHS Acts & Regulations, and Codes of Practice & Guidelines must be read and obeyed when using this safety system.
13. This user manual does not in any way, replace the need for completion of a recognised height safety training course by a Registered Training Organisation (RTO).

**⚠ Failure to follow all warnings, usage and maintenance instructions may result in serious injury or death.**



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# LIMITATIONS

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## MUST BE READ PRIOR TO USE

1. Only to be used by competent persons with proof of training by a Registered Training Organisation (RTO) in the use of height safety and fall protection systems.
2. Harness gear is susceptible to deterioration when exposed to chemicals or hazardous environments and must be approved by the manufacturer for use in these applications.
3. The Raptor rail system is suitable for up to 2 person use per 3 metre span.
4. The Raptor trolley is for single person use only. Multiple trolleys are required for additional users.
5. Operators of this system must be connected via a retractable lanyard which will limit any fall to less than 600mm.
6. Using a retractable lanyard, the system must be set up so that the user will not be offset by more than 30 degrees as per AS/NZS 1891.4:2009.  
**⚠ Excessive offset beyond 30 degrees may cause the retractable lanyard to malfunction or cause severe pendulum resulting in injury or death.**
7. When the Raptor Rail is set up to be used as a fall arrest system, the retractable lanyard needs to be positioned at least 600mm above the operator's head to ensure correct fall arrest action of the system.
8. Do not tamper with system components.
9. This system is not to be used for tethering or lifting machinery or equipment.
10. The safety system must be recertified by a competent height safety inspector as recommended:
  - Non corrosive/mild environment - 12 monthly
  - Corrosive/harsh environment - 6 monthly (more frequent inspection may be required).

**⚠ Sayfa recommends that persons using fall arrest systems do not work alone in case of an emergency and help is required. Should any part of the system/equipment have been subjected to abnormal loading, use must be discontinued until replaced/recertified by a competent height safety inspector.**



# SAFE USE PROCEDURE

## STEP 1

Ensure a full body harness, with rear dorsal attachment ring, is used and once fitted that straps are properly adjusted, to ensure firm but comfortable fit.

⚠ **Harness Gear must be certified to Australian Standards AS/NZS 1891.1**

⚠ **Ensure system (harness and rail) serviceability dates are current.**



## STEP 2

Should the fall arrest device (retractable lanyard) be out of reach, use a Raptor reach pole with hook one end to retrieve the snap hook until within reach.



## STEP 3

Attach the lanyard snap hook to the rear dorsal attachment ring of the harness.



## STEP 4

Prior to moving into the fall zone check that the Raptor trolley runs freely in the rail section.



# SAFE USE PROCEDURE

## STEP 5

Prior to moving into the fall zone check that the locking mechanism in the retractable lanyard is operational by giving the cable a sudden tug, the cable should lock in position until load is removed. Do this three times.



## STEP 6

Prior to moving into the fall zone check the webbing/steel rope on the fall arrest device for any damage. Pull the webbing out to its full length. There should be no tears, cuts, abrasions, or any damage to the webbing/wire rope.

**⚠ Any damage to the system must be reported to the workplace manager and removed or tagged out of service until recertified by a competent height safety inspector.**



## STEP 7

Ensure all attachment hardware is correctly and securely attached, prior to moving into a 'Fall Zone' .



## STEP 8

**⚠ Excessive offset beyond 30 degrees may cause the retractable lanyard to malfunction or cause severe pendulum resulting in injury or death.**



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# CONFIGURATIONS

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OH1 RAPTOR RAIL, PURLIN MOUNT - INLINE



OH2 RAPTOR RAIL, PURLIN MOUNT - ACROSS



OH3 RAPTOR RAIL, FLUSH MOUNT



OH4 RAPTOR RAIL, SIDE MOUNT





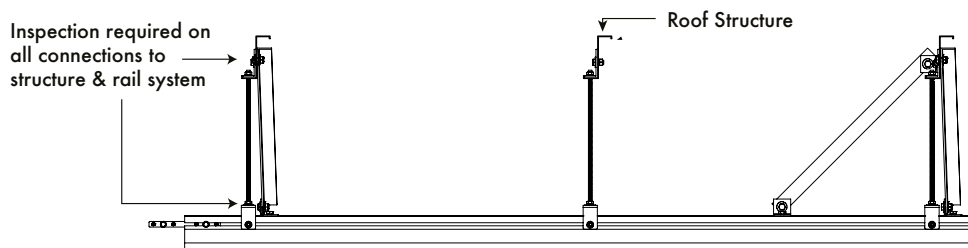
# MAINTENANCE

1. This system needs to be checked and recertified by a competent height safety inspector every 12 months for non corrosive environments or 6 monthly for corrosive or harsh environments. (To be determined by specialist depending on severity of surrounding conditions.)
2. Never clean using acids or other chemicals that could damage the system components.
3. The identification label must be completed confirming certification, maintenance and recertification of the system.
4. Harness gear and equipment must be maintained and stored in a dry, protected area, away from acids and ultra violet rays which cause material fibres to break down and reduce their safety and life expectancy.
5. Any deterioration or damage to the system or equipment must be reported to the person in control of the workplace.
6. Maintenance inspections must be clearly documented. Any non-conformance must be clearly identified and tagged 'Do Not Use' until corrective action by a competent person has been completed.

The Raptor Rail System may be configured in 2 different ways:-

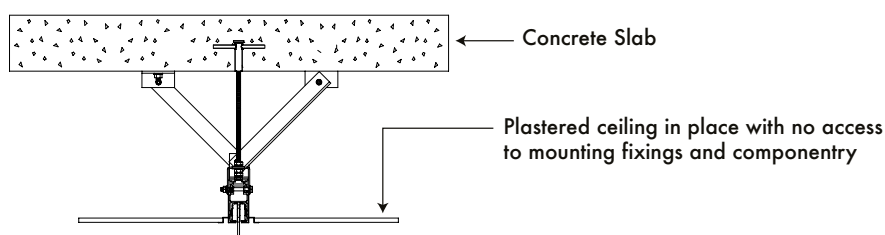
## 1. ACCESSABLE STRUCTURE AND RAPTOR ATTACHMENT HARDWARE FOR VISUAL ASSESSMENT

In this application, all the components and fixings must be checked according to the procedure as set out on the page 7. The structure must be capable of the required loads and be certified by an engineer unless it is clear to a competent person that the structure is suitably adequate.



## 2. NO ACCESS TO STRUCTURE AND RAPTOR ATTACHMENT HARDWARE FOR VISUAL ASSESSMENT

(Sayfa always recommends that ceiling hatches are installed for inspection purposes, where possible)



In this application the only way to check the system in accordance with Australian Standards is via a load test. The load test will involve loading the rail by applying a 750kN load onto the trolley, ideally directly under the rail support structure. The rail/trolley can be loaded using a block and tackle system or can be loaded using weights. The load must be held for a minimum of 3 minutes with no failure or evidence of support structure movement of the system.

Frequency of the load testing is dependent on the environment in which the system is installed and should be determined by a competent person.

Recommended minimum testing

- Non corrosive / mild environment - 3 years
- Corrosive / harsh environment - 12 monthly

**⚠ Recertification should be based on structural engineer report confirming project installation compliance and suitability.**

# MAINTENANCE




The checklist below outlines key checking criteria required to ensure the safe use of this system. Any item of concern not shown on the checklist must be noted on the maintenance report and brought to the attention of the workplace manager.

Items ticked PASS- **YES** means they conform with the required checking criteria and are suitable for normal use until the next recertification date. System data plates must be updated showing current check date and next check date.

Item ticked PASS - **NO** means they do not conform to the required checking criteria. These items must be clearly tagged 'Do Not Use' and the required corrective actions put in place. The maintenance report must clearly document all non-conforming criteria.

**⚠ This system must be maintained by a competent height safety inspector trained in the safe use and maintenance of this system.**


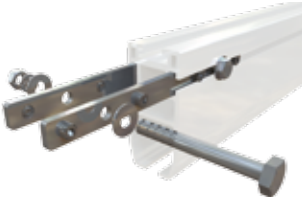



## SYSTEM MAINTENANCE CHECKLIST

COMPONENT	INSPECTION CRITERIA	PASS Y / N	CORRECTIVE ACTION	COMPLETION DATE
TROLLEY CODE: OH260/261 	Check all bearing axles and middle bearing bolts are secure			
	There must be no deformation in the connection plate			
	Make sure bearings do not show signs of wear			
	Trolley must run freely in the track <b>⚠ Raptor trolley is designed with a 'fail safe' axle arrangement. Should the trolley not run freely and possibly 'jam' inside the rail it is likely that the bearing axle is working loose.</b>			
END STOP CODE: OH265 	Check all bolts/nuts are secure (18Nm)			
	Ensure there is no sign of damage to the end stop			
SUSPENSION COMPONENTS 	Check all bolts/nuts are secure (18Nm) <b>⚠ Friction fit anchors into concrete will need to be load tested to 750kN. Load to be applied for 2 minutes with no sign of movement or failure.</b>			
	Check for any signs of structure break down or damage <b>⚠ Should the system attachment structure not be accessible, a load test will be required to check correct performance. (See page 9 for structure checking and testing.)</b>			

**⚠ A record of system maintenance recertification and necessary repairs must be kept by the workplace manager**

# MAINTENANCE

## SYSTEM MAINTENANCE CHECKLIST

COMPONENT	INSPECTION CRITERIA	PASS Y / N	CORRECTIVE ACTION	COMPLETION DATE
U-BRACKET CODE: OH260.10/20 	Check all bolts/nuts are secure (18Nm)			
	Check for any signs of deformation in the U-bracket			
SPLICE JOIN CODE: OH262 	Check all bolts/nuts/ grub screws are secure (18Nm)			
	Check for any signs of deformation in the splice join			
	Max permissible gap between rail joins - 4mm			
T-NUT CODE: OH264 	Check all bolts/ T-Nuts are secure (18Nm for M10 bolts 25Nm for M12)			
RAIL CODE: OH250 	Check bearing travel flanges on the rail are not bent/ damaged and free from grime			
	Max opening between travel flanges - 19mm			
	Check for signs of excessive load or damage to the rail			
FALL ARREST BLOCK CODE: OH026 	<ul style="list-style-type: none"> <li>Retract complete lanyard, check for any cuts or abrasions or signs of damage.</li> <li>Check lanyard snap hook functions correctly and gates move freely.</li> <li>Check lanyard karabiner attachment to the Raptor rail trolley for any signs of damage or malfunction.</li> <li>Check current date does not exceed due service date.</li> </ul>			

# TECHNICAL

## FALL CLEARANCE

There must be sufficient clearance below the user to arrest a fall before the user strikes the ground or another lower level hazard. The clearance required is dependent on the following factors:

- Elevation of anchorage
- Anchorage deflection
- Lanyard length
- Lanyard elongation on deceleration pull out (personal energy absorber)
- Operator height
- Fall distance residual clearance

See AS/NZS 1891.4:2009 Section 7 for a detailed explanation.

## SYSTEM REQUIREMENTS

The worker must wear a full body harness when connected to any fall arrest system including a personal energy absorber compliant with AS/NZS 1891.2:2001 and AS/NZS 1891.4:2009 limiting the force on the anchor and operator to a maximum of 6kN.

Harness connectors must support at least 15kN. Non-compatible connectors may unintentionally disengage (roll-out). Karabiners supplied with proprietary systems must not be removed or substituted with any other component.

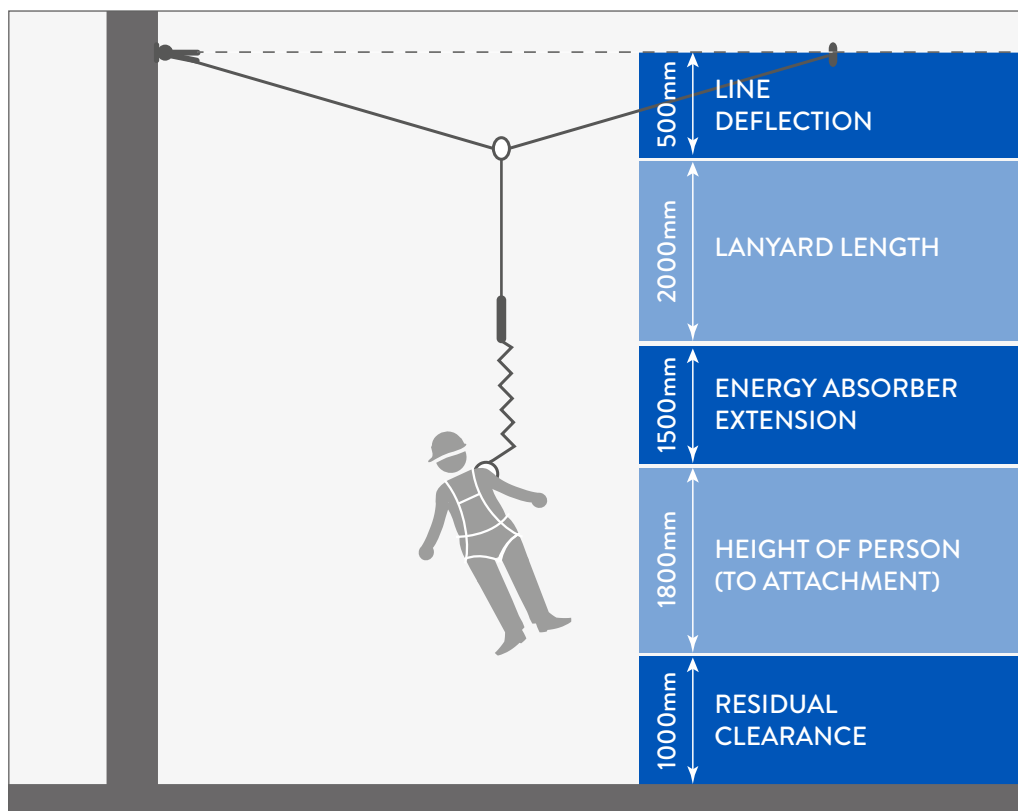
## INSPECTION AND MAINTENANCE

Inspection and recertification of fall arrest systems and equipment is required at least every 12 months by competent person in accordance with manufacturer's specifications and requirements of Australian Standard AS/NZS1891.4:2009 Section (9).

## IMPORTANT NOTE

Failure to supply and/or install Sayfa proprietary products in accordance with above standards and codes, specifications and instructions voids complete system certification and/or warranty.

## FALL DISTANCE CALCULATOR (To be used as a guide only)





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# WARRANTY

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## WARRANTY PERIOD ON THIS SYSTEM - 10 YEARS FROM DATE OF PURCHASE

Should you have a warranty claim as a result of a defect the following procedure must be followed:

Identify the following information:

- The product/system name and code number.
- The date of purchase/installation.
- Installation company details.
- The installation identification number.
- The name of the company using this system.
- A description of the defect/warranty claim.
- The periodic system maintenance report.

Forward the above information to [sales@sayfa.com.au](mailto:sales@sayfa.com.au) or contact technical helpline, 1300 301 755.

NEVER HAS SAFETY  
IN THE WORKPLACE  
HAD A HIGHER PRIORITY

## TERMS & CONDITIONS

- All warranty claims must be made in writing within 14 days of the appearance of the defect.
- Incorrect installation or work done by a non accredited Sayfa system installer will void all warranty rights.
- Systems that have been installed using non proprietary equipment will void all warranties.
- System roof/cladding penetration seals are not covered in this warranty.
- Systems/components that have not been maintained in accordance with manufacturer's/legislative requirements will void warranty.
- Systems used by incompetent persons or use with non compatible accessories ie. harness gear, lanyards, travellers, fall arrestors etc. will void warranty.
- Systems/components used for purposes other than their intended use will void warranty.
- General wear and tear is expected and will depend on the frequency of use and is not covered by warranty.

## DISCLAIMER

All product specifications and technical descriptions, recommendations and other information provided, are given as general guidance and advice, and are to be read in conjunction with Sayfa Group installation instructions and any other data available and applicable to each particular standard product or system. Use of such data is however the user's sole responsibility, taking into account the intended application and actual conditions existing on the particular worksite. Consequent selection of the right product for any particular use, remains the user's ultimate responsibility. Sayfa Group is therefore not obligated or liable for any direct or indirect, incidental or consequential damages, losses or expenses in connection with, or by reason of the suitability and use of or otherwise, any product or system for any purpose. Implied warranties of merchantability or fitness for any particular purpose, are specifically excluded.

All Sayfa Group products must be installed and used by competent personnel trained in the selection, safe use and maintenance of fall arrest systems and equipment by a registered training organisation (RTO). Installation not in accordance with Sayfa Group requirements or the use of non Sayfa Group components will void all certification and warranties.

Suitability of support structure and design layout of system is the responsibility of the installer and should be verified by a competent person trained by a Registered Training Organisation (RTO) in the selection, safe use and maintenance of fall arrest systems and equipment or approved by a structural engineer to ensure conformance.

Sayfa Group maintains a policy of continuous improvement and development, and therefore reserves the right to modify, amend or otherwise alter product and system designs and specifications, models and part numbers, colours and pricing etc without prior notice. Errors and omissions are excepted, and Sayfa Group accepts no liability for incorrect information, errors or omissions.

# TECHNICAL SPECIFICATION

## SYSTEM CODE

**RAPTOR OVERHEAD RAIL SYSTEM  
OH 250**

## TECHNICAL DATA

### MATERIALS

- Rail – profiled hi-tensile aluminum
- Trolley – stainless steel including 6 sealed bearings
- Mounting Brackets – profiled stainless steel and/or aluminium
- Mounting Fixings – M12 stainless steel fixings

### FIXINGS (into support structure)

- Steel fixing – M12 bolt or threaded stud
  - Concrete fixing – M12 mechanical concrete anchor
- Note: May vary depending on application

### WEIGHT

- 4.5kg / per linear metre of rail section

### WORKING LOAD LIMIT

- Single person use – 180kg per trolley (user/equipment)
- Maximum horizontal pitch for safe use – 3°
- Support structure integrity, suitability and fixing method to be assessed and determined by a competent person prior to installation

### RAPTOR RAIL SPAN TABLE (FOR FALL ARREST USE)

RAPTOR RAIL ONLY			RAPTOR RAIL WITH LONGSPAN SUPPORT		
No of Users Per Span	Max Span Length	Support Structure Design Load	No of Users Per Span	Max Span Length	Support Structure Design Load
1	4000mm	15kN	1	6000mm	15kN
2	3200mm	21kN	2	5500mm	21kN
3	2500mm	27kN	3	4800mm	27kN
4	2000mm	33kN	4	4200mm	33kN

## COMPLIANCE

Raptor Overhead Rail is designed to comply with Australian Standards AS/NZS1891.2:2001, AS/NZS1891.4:2009 and relevant statutory OHS Codes of Practice/Guidelines. (Refer instruction manual.)

## TESTING

Testing and performance based on requirements of Australian Standard

- AS/NZS1891.2:2001 and AS/NZS1891.1:2009

## PRODUCT WARRANTY

10 years from date of purchase subject to correct installation, use and maintenance in accordance with manufacturer's specifications and recommendations. (Refer instruction manual.)

## INSPECTION AND MAINTENANCE

Inspection and certification every 12 months by a height safety equipment inspector in accordance with manufacturer's specifications and requirements of Australian Standard AS/NZS181.1:2009 (Refer instruction manual.)

## IMPORTANT NOTE

Failure to supply and/or install proprietary product in accordance with above standards and codes, specifications and instructions voids complete system certification and/or warranty.





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## THE SAYFA GROUP

### WE SAVE LIVES!

This is our Mission, and it drives our Vision to BRING EVERY WORKER HOME SAFELY.

Sayfa Group leads the industry in the design, installation and management of access, fall protection and ground safety systems. As an Australian owned company, we engineer and rigorously test our proprietary systems to exceed national and international standards. Simple installation and easy to use systems are our key drivers for ensuring maximum effectiveness, improved safety and compliance with Occupational Health and Safety standards in the workplace.

### OUR VALUES

We are governed by the following principles in everything we do:

- A – Accountability / Totally responsible and answerable for our actions.
- L – Loyalty / Steadfast and dependable based on our values in our dealings with one another.
- I – Integrity / Honest and sincere, we do what we say, on time every time.
- V – Value Driven / Increase what's of value in view of a win win plan for all.
- E – Enthusiastic / Motivated and inspired to continuously perform better.

### COMMITMENT

We are passionate about our work with every product a testament to our commitment of world class safety, quality and performance. Our obligation is to live up to our own high standards as well as those of our customers and stakeholders ensuring total peace of mind.



PRODUCT IS OWNED BY THE SAYFA GROUP.  
THE SAYFA GROUP CONSISTS OF:

