



# PORTAL METAL INDUSTRIES

## GENERAL CATALOGUE



- Specialists in all types of fully compliant safety systems,
- Decking, and support structures
- Quality design and products, to international clients globally
- Providing Turnkey Safety solutions to the world
- Bespoke metal work for Industrial and Infrastructure projects



Management  
System  
ISO 9001:2015



www.tuv.com  
ID 9105077115



From the outset we work closely with our clients. Our highly experienced designers (using the latest Computer Aided Design) can give instant advice in the knowledge that the latest, local British, European and USA Standards are being implemented.

Our Aim is to achieve the most cost effective, fully compliant solution for permanent access and safety requirements. Portal Metal Industries engineers, will visit the site of a proposed project, fully survey and subsequently submit proposals for customers approval.

PAGE



# CONTENTS

Introduction_____	04
Services & Certifications_____	05
Industrial Aluminium Decking_____	06
Industrial Aluminium Sealed Odour Control Decking_____	10
Industrial Aluminium Access/Hatch Cover_____	14
Industrial GMS Decking_____	18
Industrial Aluminium Handrail_____	20
Industrial GMS Handrail_____	24
Industrial Aluminium & GMS Ladder_____	26
Staircases, Structural Steel & Stainless Steel Works_____	30





# INTRODUCTION

Portal Metal Industries Group is a UAE and Qatar registered Company with strong links, to other reputable International Companies who have been operating successfully in the Middle East region since 2004.

With a proven track record, state of the art facility, unrivalled quality products and local Partners, Portal Qatar is well equipped, to take on major turnkey projects both locally and further afield.

We strongly believe in continued product development and offer our clients, cost effective products, solutions and expertise, without compromise, to our global customers.



We specialize in manufacturing and supplying Industrial Handrails, Gratings, Deckings, Ladders, Staircases, safety components and support systems.

Primarily, Aluminium (Marine Grade 6082 T6) Stainless Steel Grade 316 (A4) and Galvanised Mild Steel materials are incorporated within our range of products.

Over the past few years, we have provided many engineered safety solutions to many Reservoirs, Sewage Treatment Plants, Pump stations, Petrochemical and Desalination Plants around the world.

Portal operates to ISO 9001, BSI Standards and incorporates TUV certified Industrial products and components, which comply fully with the Technical Norms of UAE, Bahrain, Qatar, Kuwait and Sultanate of Oman Governments as well as European and USA regulations.



## SERVICES

- Manufactures Industrial deckings, handrails, ladders, platforms, staircases & other structural elements.
- Design & Engineering as per client requirement.
- Preparation of detailed Bills of Quantity for all projects.
- Provision of all Structural Design Calculations as required.
- On site assistance as per client requirements.
- Preparation of detailed shop drawing.
- Preparation of erection drawing.
- Delivery of finished products to any part of the globe in accordance with Project milestones through our professional shipping agents.



## CERTIFICATIONS





# PRDODUCTS

## Industrial Aluminium Decking

Industrial Aluminium Decking is available in two different types, Solid & Open Mesh. Both Solid & Open Mesh Deckings are designed and manufactured to withstand a UDL of up to 7.5Kn/Sq.m.

The material used for the manufacture of the deckings is Aluminium Alloy 6082 T6 which has high tensile and excellent corrosion resistance properties.

Where the trench structure shape varies abruptly, or a presence of any protruding pipework or instrumentation access holes through the Decking may occur, the Decking can be specially cut as per the exact shape and size.

The material has good machinability & weldability properties. Openings required on the deckings will be banded or welded with stiffeners of the same material



to provide additional strength.

Maximum weight of a single panel should not exceed 40 Kgs for the ease of installation. T-Key slots are also provided on the Decking for the ease of removal in case of any maintenance required.

The top surface of the decking is fully serrated providing better foot grip for operatives.

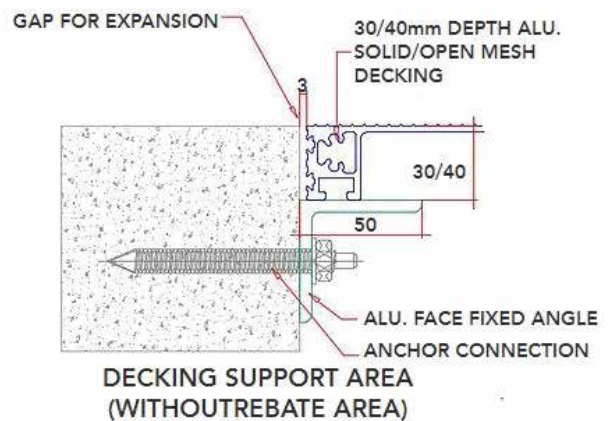
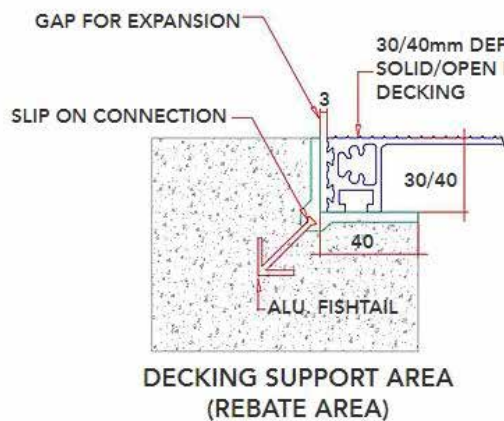
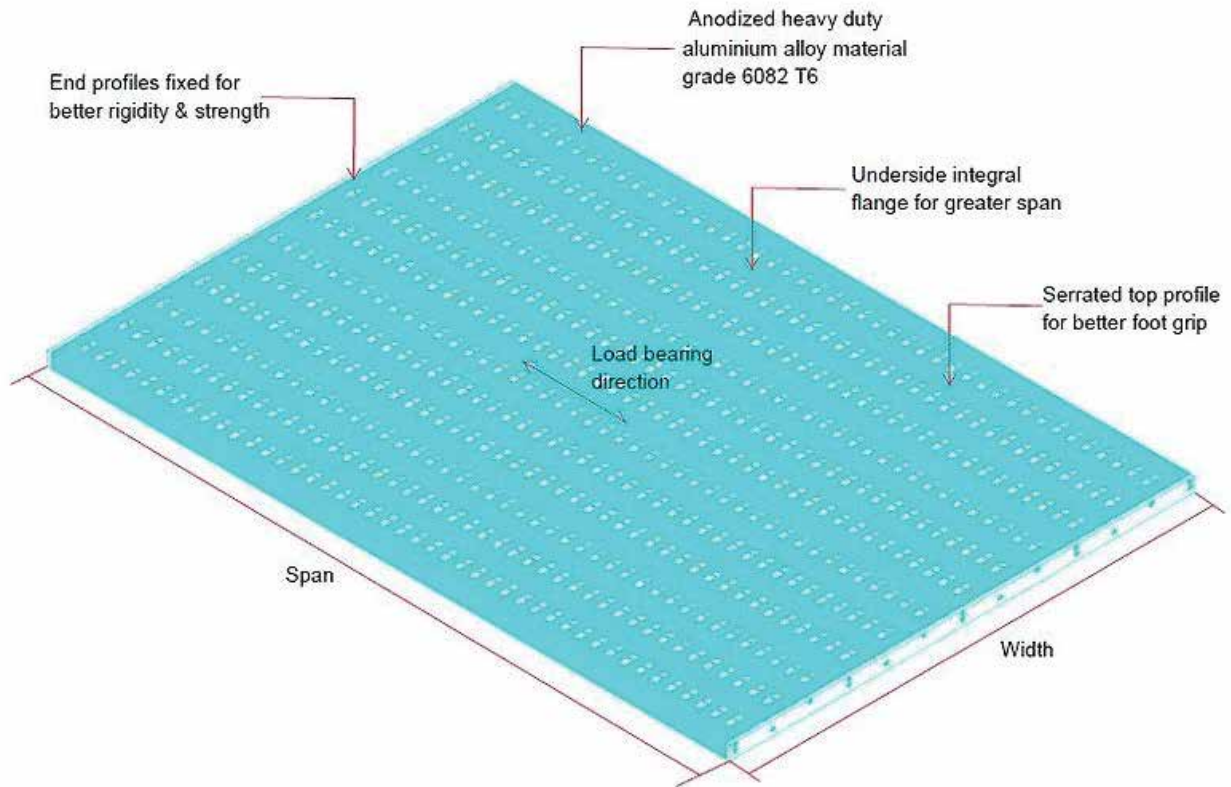
All Aluminium Deckings are supplied in an Anodized AA20-AA25 finish, which prevents the risk of corrosion due to highly corrosive gases (H<sub>2</sub>S) and moisture.

Anodising preserves the original surface texture and guarantees product durability for many years.

Decking is available in both 30mm & 40mm Depth profiles.

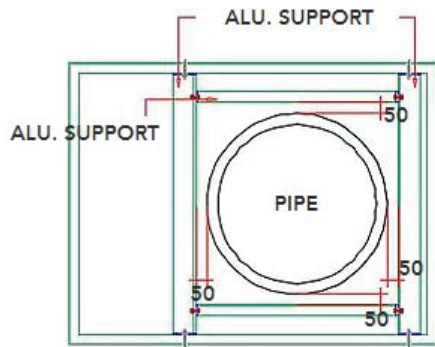


# TECHNICAL SPECIFICATION

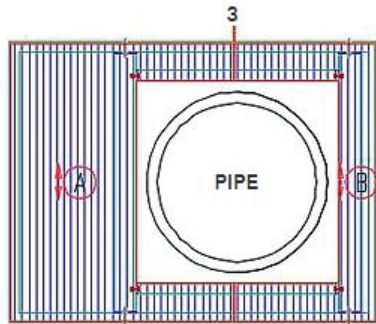




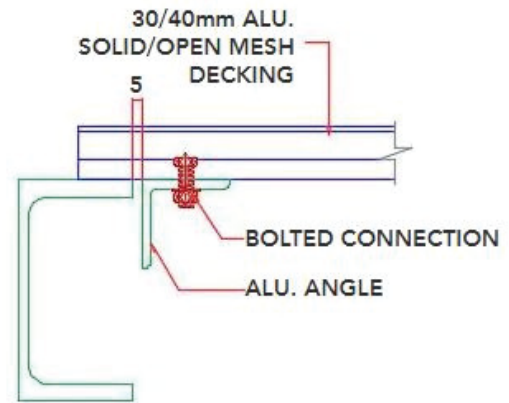
# TECHNICAL SPECIFICATION



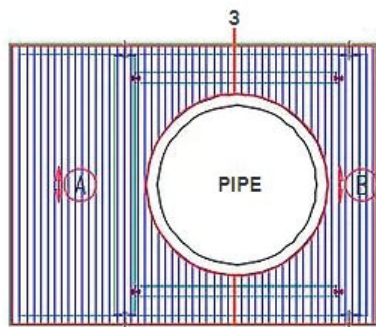
ADDITIONAL DECKING SUPPORT IN PIPE/EQUIPMENT PROTRUDING AREA



DECKING ARRANGEMENT(OPTION-1)  
STRAIGHT CUT



STOPPER ANGLE  
(FOR RESTRICTING THE MOVEMENT OF DECKING)



DECKING ARRANGEMENT(OPTION-2)  
RADIUS CUT





## INDUSTRIAL ALUMINIUM DECKING





## INDUSTRIAL ALUMINIUM SEALED ODOUR CONTROL DECKING

Industrial Aluminium Solid Odour Control Decking(OCD) is an excellent choice for areas which has dangerously high levels of H<sub>2</sub>S and other highly corrosive effluents. OCD is designed and manufactured to withstand a UDL of up to 7.5Kn/Sq.m.

The material used for the manufacture of the deckings are Aluminium Alloy 6082 T6 which has high tensile and excellent corrosion resistance properties.

The deckings are equipped with pre-installed side profiles which accommodate a special 5mm thick EPDM Foam Rubber Strip around the perimeter of the decking which provides a total seal and excellent odour/water control capability.

An Aluminium flatbar is also provided & fixed on to the underside of Decking between two panels to sandwich the EPDM Rubber Strip on areas where there are no supports in order to provide maximum performance of the odour control system.

Where the trench structure shape varies abruptly, or a presence of any protruding pipework or instrumentation access holes through the Decking may occur, the Decking can be specially cut as per the exact shape and size.



The material has good machinability & weldability properties. Openings required on the deckings will be banded or welded with stiffeners of the same material to provide additional strength.

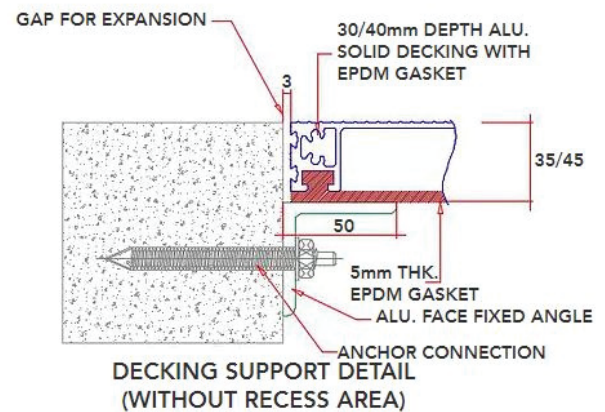
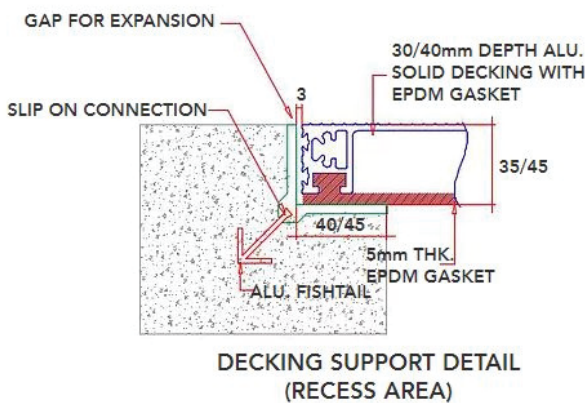
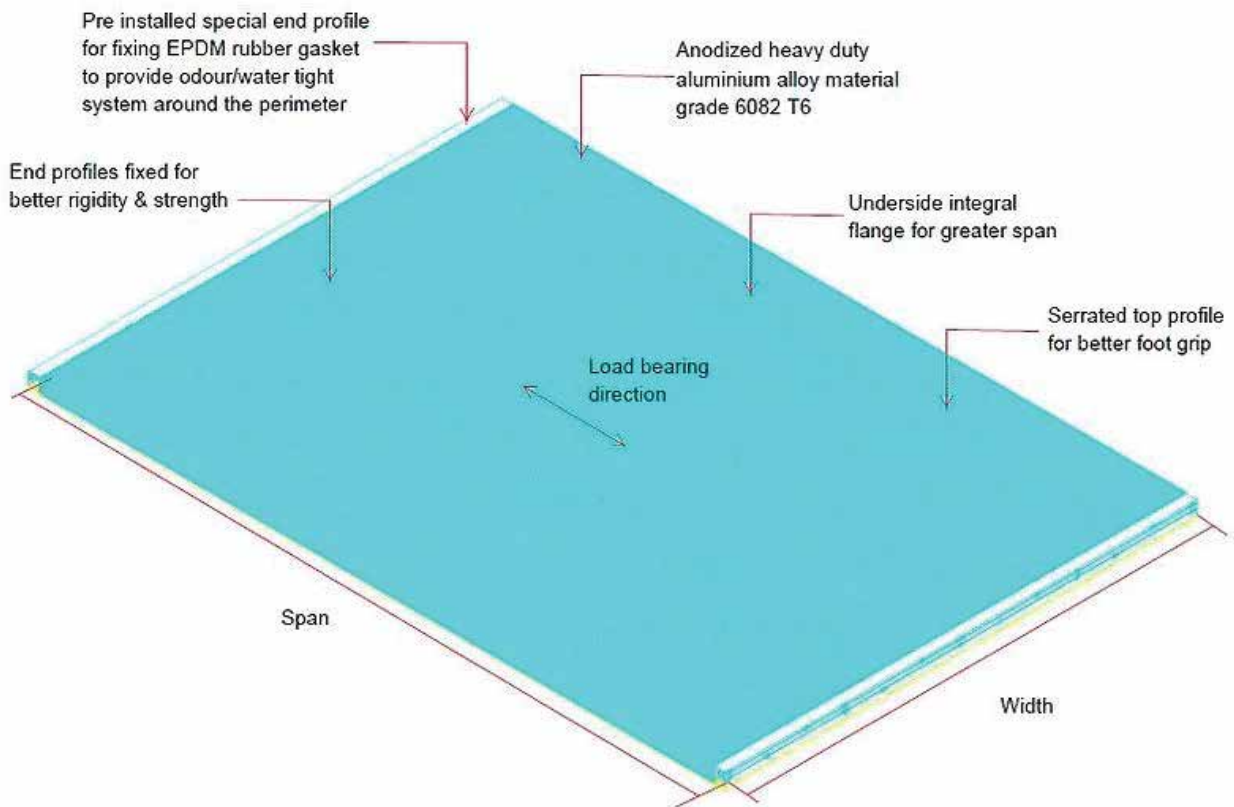
The clearance gap between any protrusions and the Decking can be sealed by using a 5mm thick EPDM Rubber Sheet (cut to size on site), and fixed to the decking using an aluminium gasket frame.

Maximum weight of a single panel should not exceed 40 Kgs for the ease of installation. T-Key slots are also provided on the Decking for the ease of removal in case of any maintenance required. The top surface of the decking is fully serrated providing better foot grip for operatives.

All Aluminium Deckings are supplied in an Anodized AA20-AA25 finish, which prevents the risk of corrosion due to highly corrosive gases (H<sub>2</sub>S) and moisture. Anodising preserves the original surface texture and guarantees product durability for many years. Decking is available in both 30mm & 40mm Depth profiles.

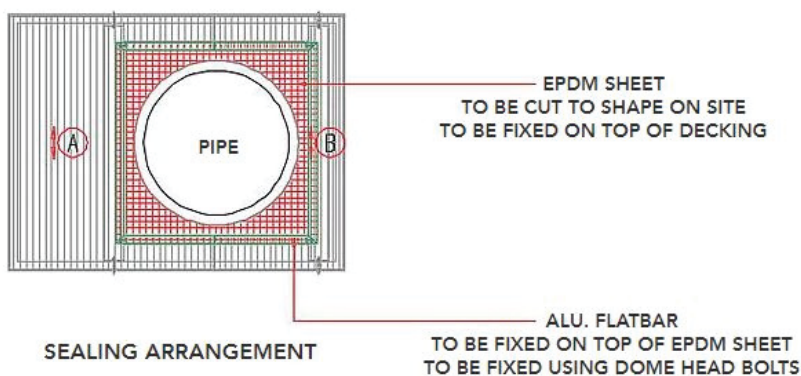
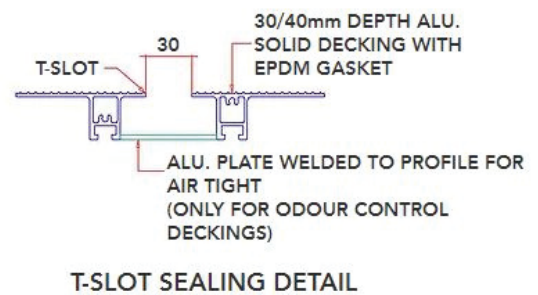
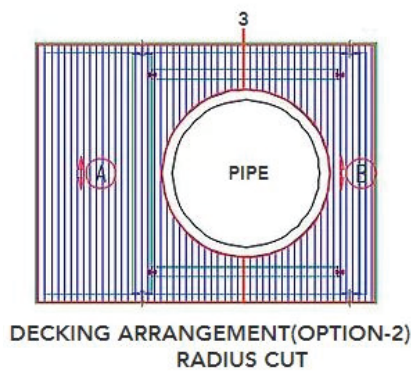
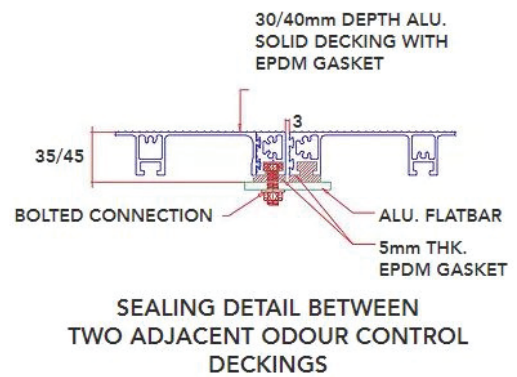
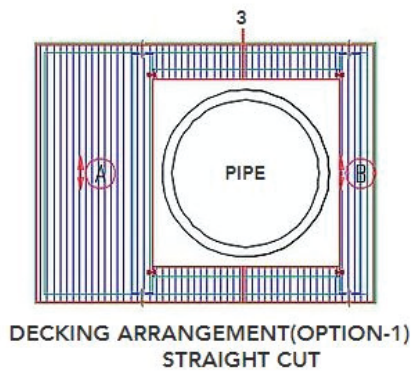
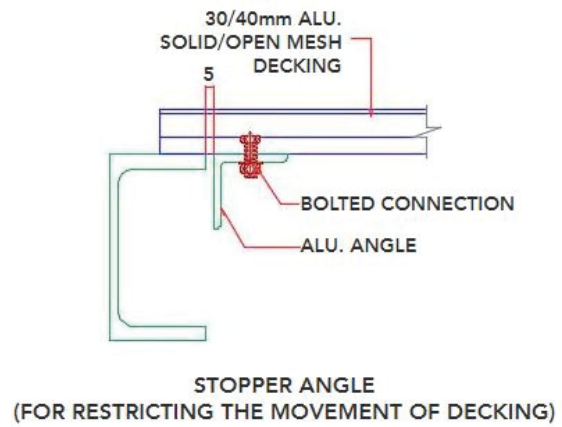
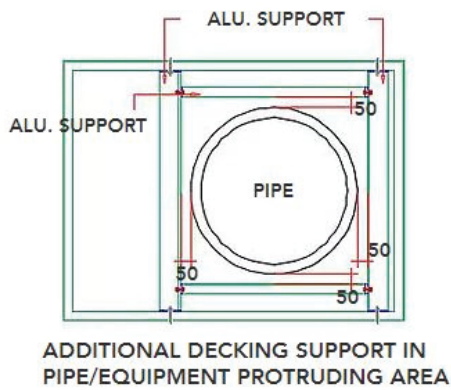


# TECHNICAL SPECIFICATION





# TECHNICAL SPECIFICATION





## INDUSTRIAL ALUMINIUM SEALED ODOUR CONTROL DECKING





## INDUSTRIAL ALUMINIUM ACCESS/HATCH COVER

Industrial Aluminium Access/Hatch Cover is extensively used in areas which require regular and restricted access.

These hatches are designed to suit manholes of various sizes and come with pre installed handles, locks and SS (Grade 316) hinges.

Normally a simple pin strut is provided to prevent the hatch from closing whilst unattended however, SS 316 Pneumatic Struts can be installed if required.

The material used for the manufacture of the deckings is Aluminium Alloy 6082 T6 which has high tensile strength and excellent corrosion resistance properties.



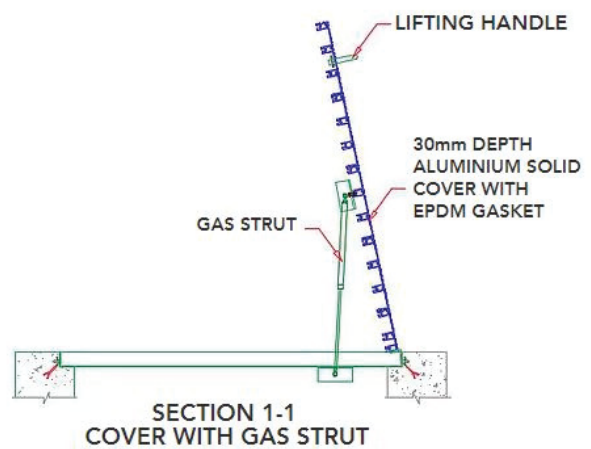
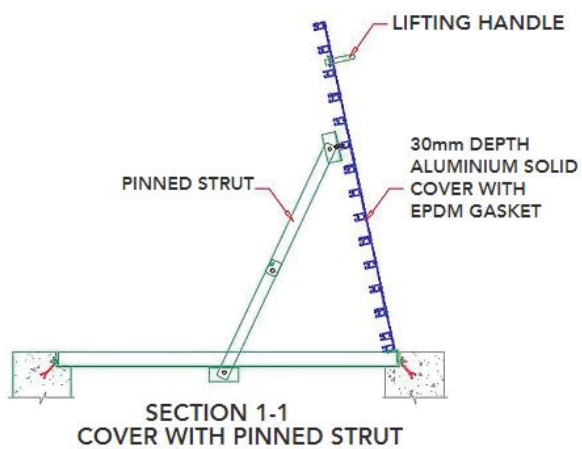
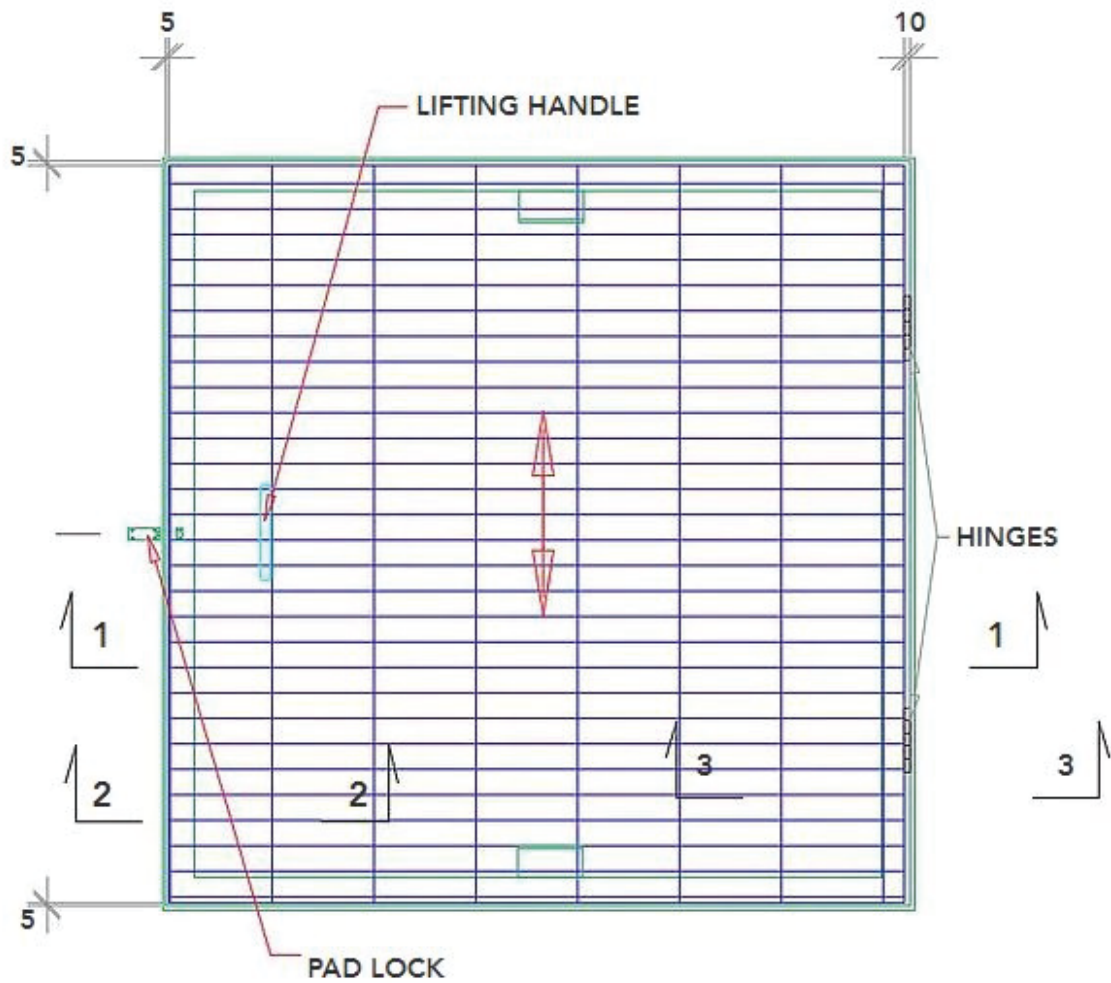
The top surface of the decking is fully serrated providing better foot grip for operatives. The Aluminium Access Hatches are supplied in an Anodized AA20-AA25 finish which prevents the risk of corrosion due to highly corrosive gases (H<sub>2</sub>S) and moisture.

Anodising preserves the original surface texture and guarantees product durability for many years.



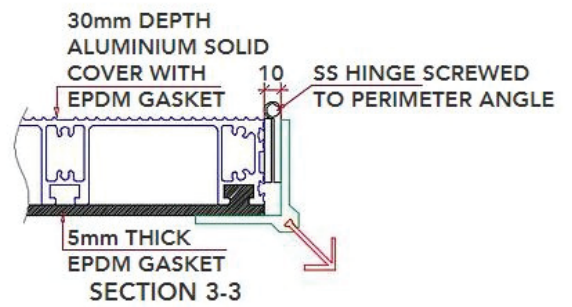
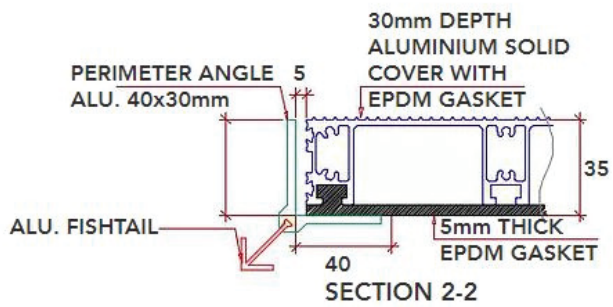


# TECHNICAL SPECIFICATION





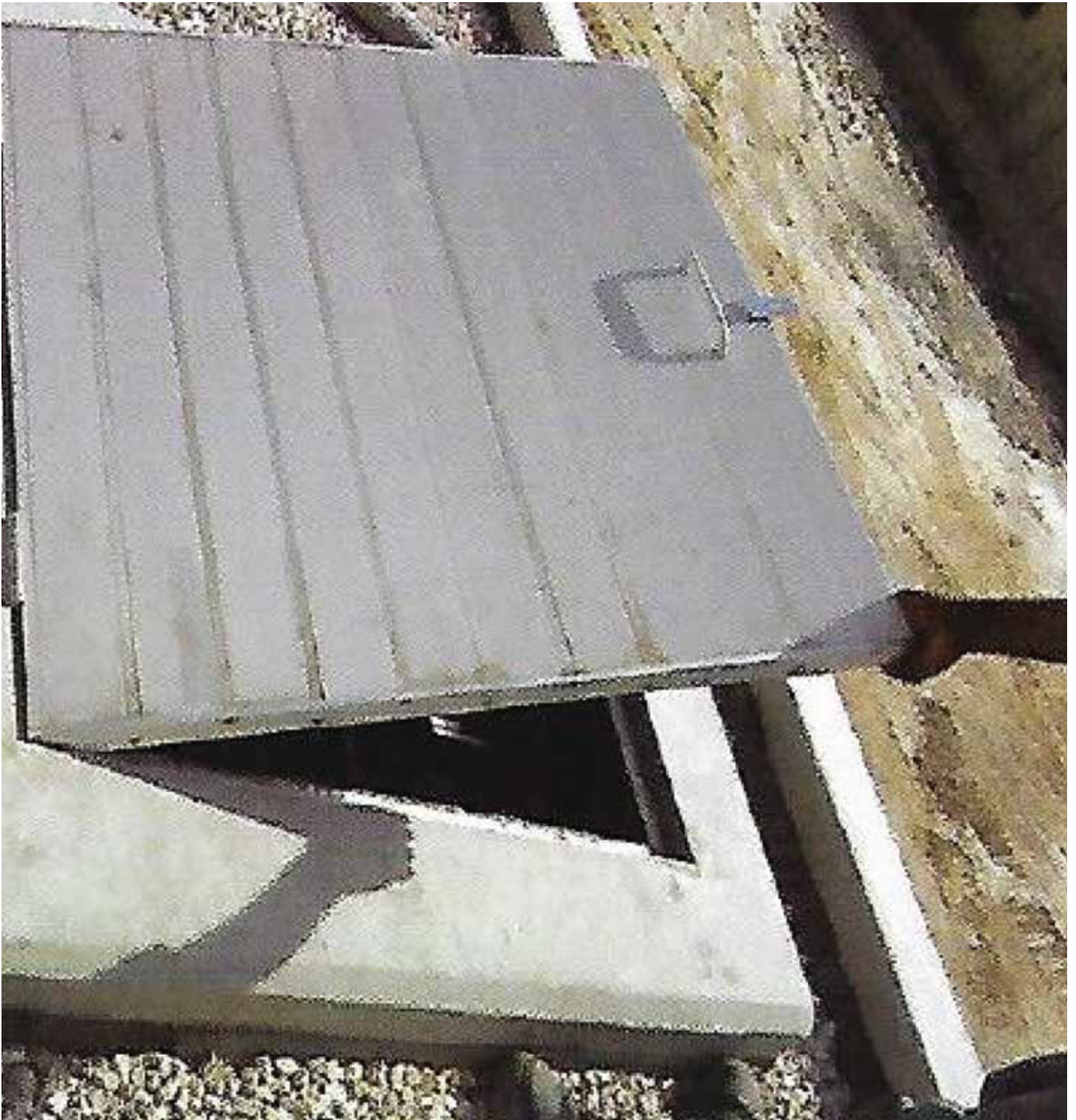
# TECHNICAL SPECIFICATION







## INDUSTRIAL ALUMINIUM ACCESS/HATCH COVER





## INDUSTRIAL GMS DECKING

Industrial GMS Decking is designed and manufactured where specified. Capable of a much heavier load capacity than aluminium or where there is a requirement for high-density traffic.

The standard decking consists of load-bearing bars @ 30mm centers & cross bars @ 100mm centers and the material used is Steel grade S275 JR, Steel grade S355 JR is also available.

Comprising of a series of parallel flat load bearing bars stood on end equispaced, with either indented round or square twisted bars, which are resistance welded into the top surface of the load bearing bars, primarily to keep them upright.

In the event there is a requirement for openings within the decking areas, or there is a presence of any



protrusion through the decking, the Decking can be specially cut as per the exact shape and size.

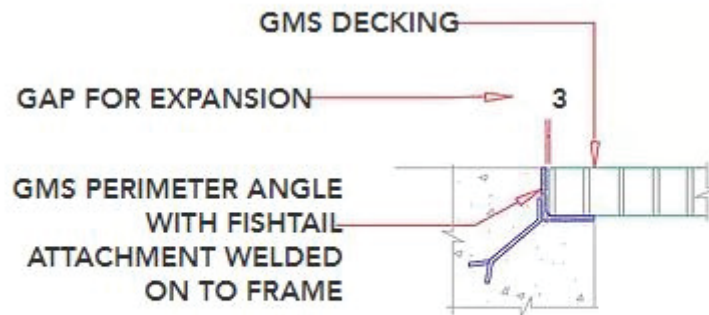
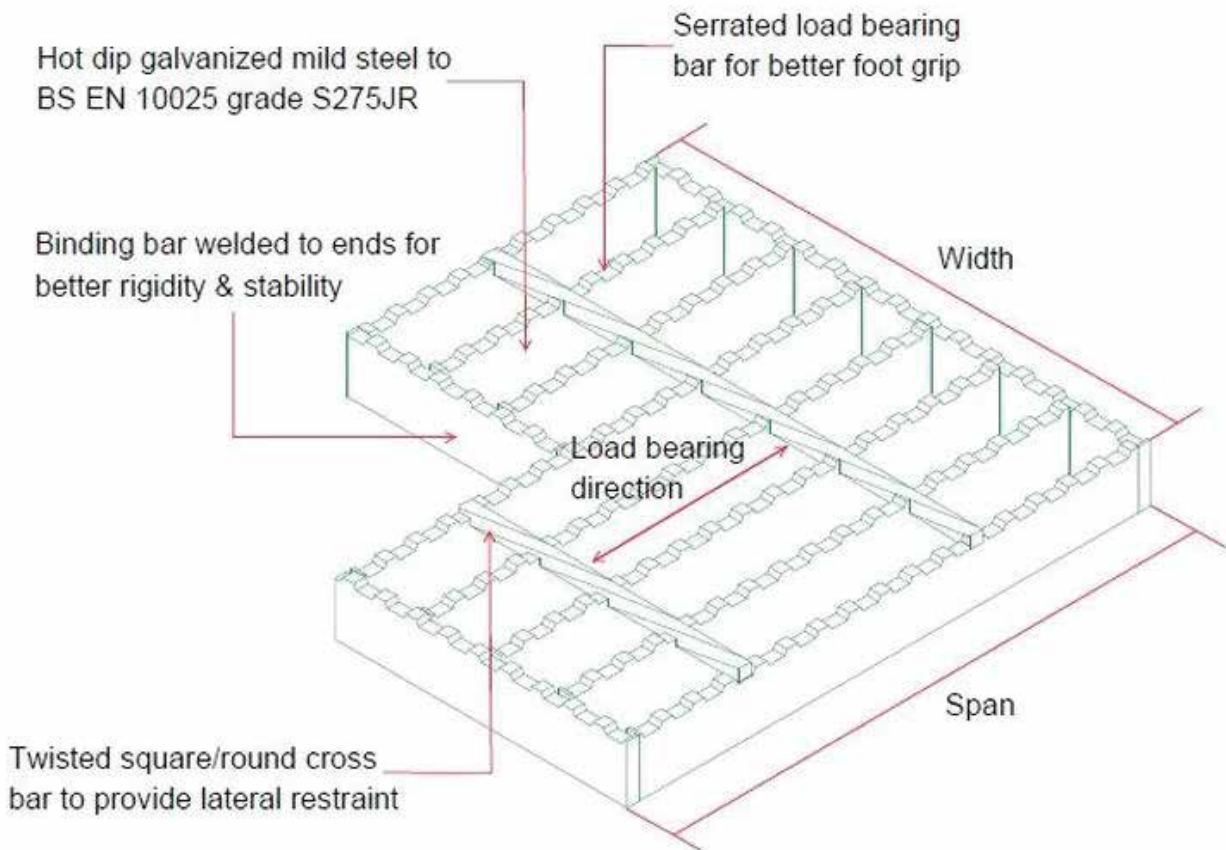
Openings required on the deckings will be banded or welded with stiffeners of the same material to provide additional strength.

Maximum weight of a single panel does not exceed 40 Kgs for the ease of installation.

The Deckings are available in Galvanized finish.



# TECHNICAL SPECIFICATION



DECKING SUPPORT DETAIL



## INDUSTRIAL ALUMINIUM HANDRAIL

Industrial Aluminium Handrail is 1100mm High with an intermediate horizontal rail 550mm above the walking surface. The system uses 6082-T6 Aluminium Tube and TUV approved Slip-On fittings.

The main advantage of this system is there is, no requirement of any welding, drilling or bolting. All slip-on components are high-grade aluminium (A356-T6) and Anodised AA20-AA25 Finish.

All slip-on components bear a specific model number for easy identification & installation at site. Aluminium tubing shall be of high-grade 6082-T6 marine grade aluminium, Anodised AA20 – AA25 Finish. Tube size 48.5mm O/D x 3.25mm thick (min) for Top and Mid Rails.

Uprights of 48.5mm O/D x 4.00mm or 48.5mm O/D x 7.80mm wall thickness respectively. A hexagonal key is



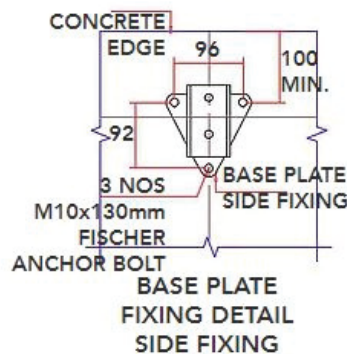
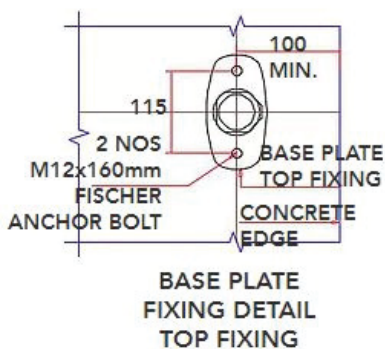
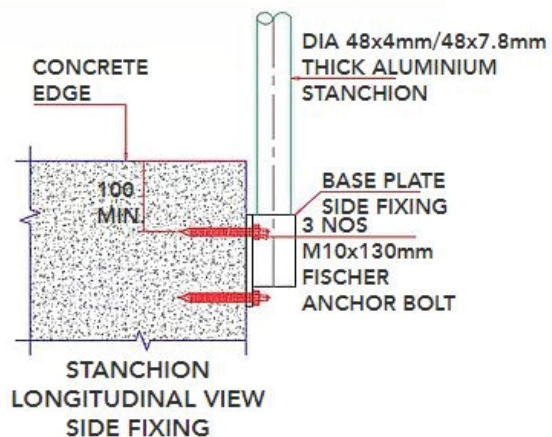
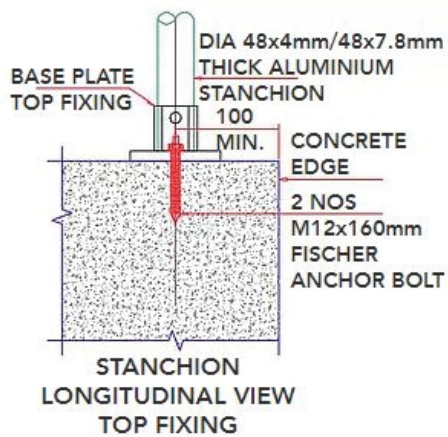
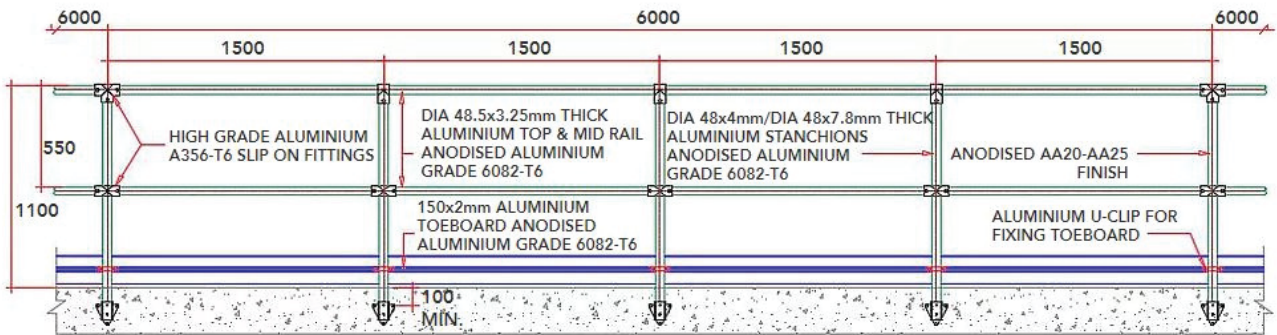
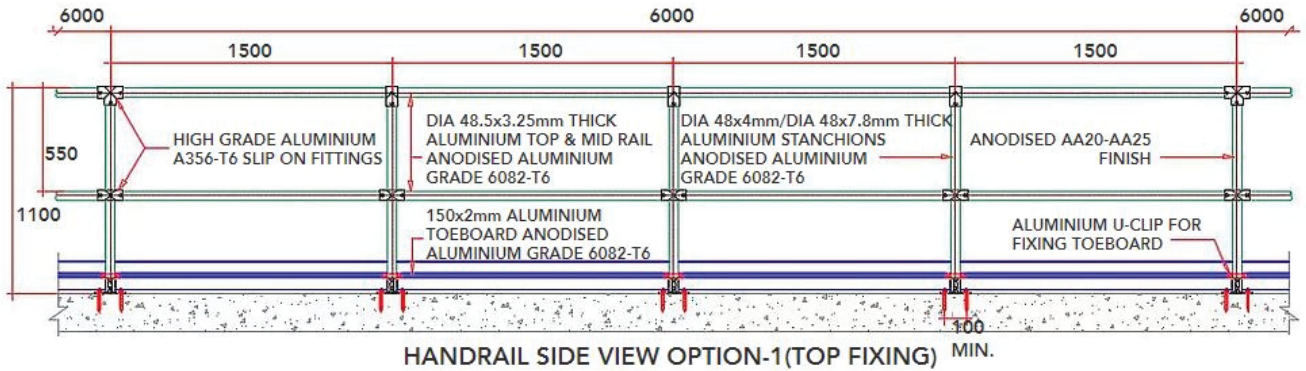
used to tighten the set screw of the slip-on components on to the tubing.

The system is designed as to support an axial load of 770kg per set screw, with the set screw tightened to a torque of 39Nm rating and have a safety factor of 2:1. Toeboards are 150mm high extruded profile and extruded from 6082-T6 and anodised AA20 – AA25 Finish.

The specific extrusion profile of the board will help limit warping in excessive heat. The toeboards are fixed directly to an upright post, by using a “U” clamp around the upright fitted and bolted to a slot on the rear face of the toeboard.

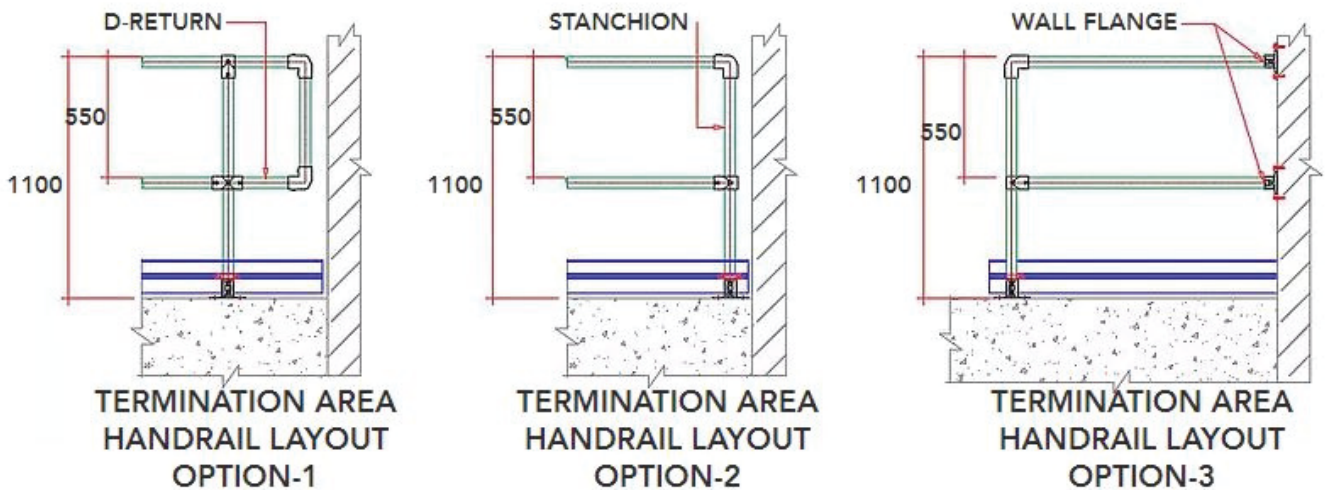
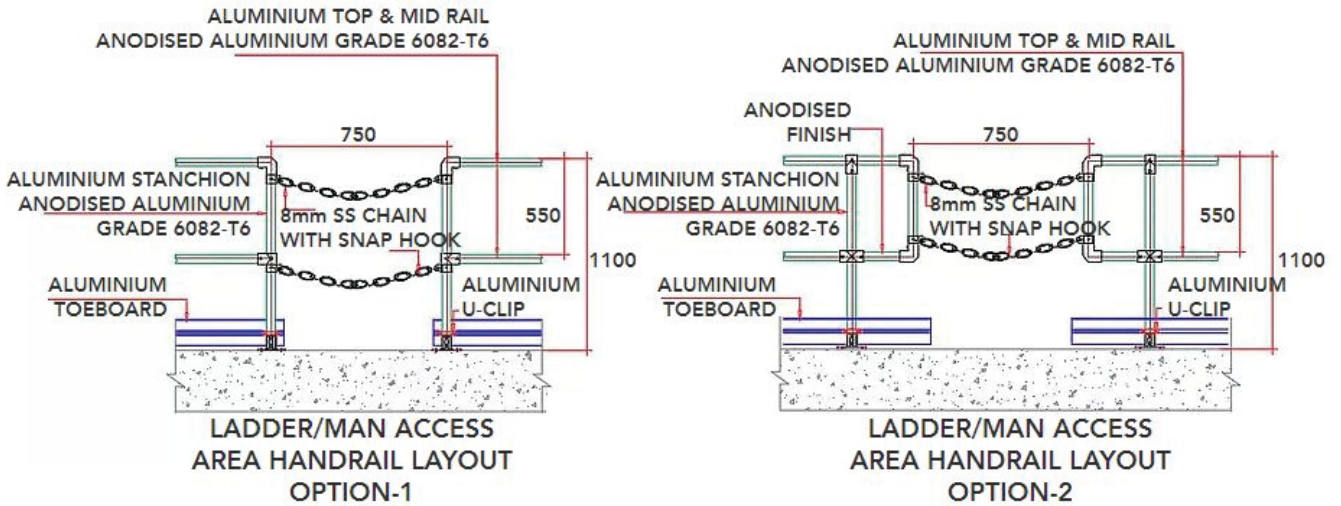


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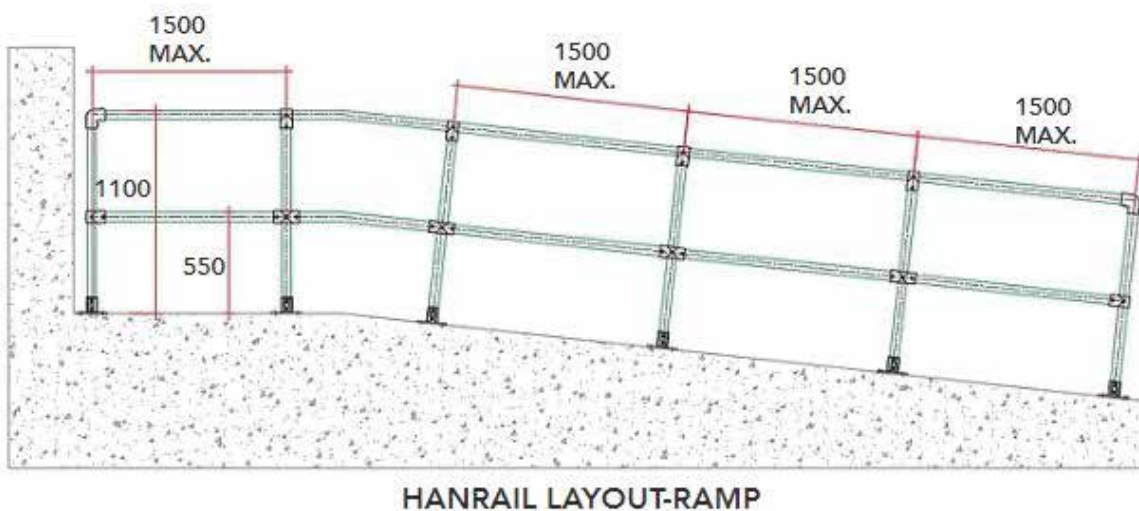
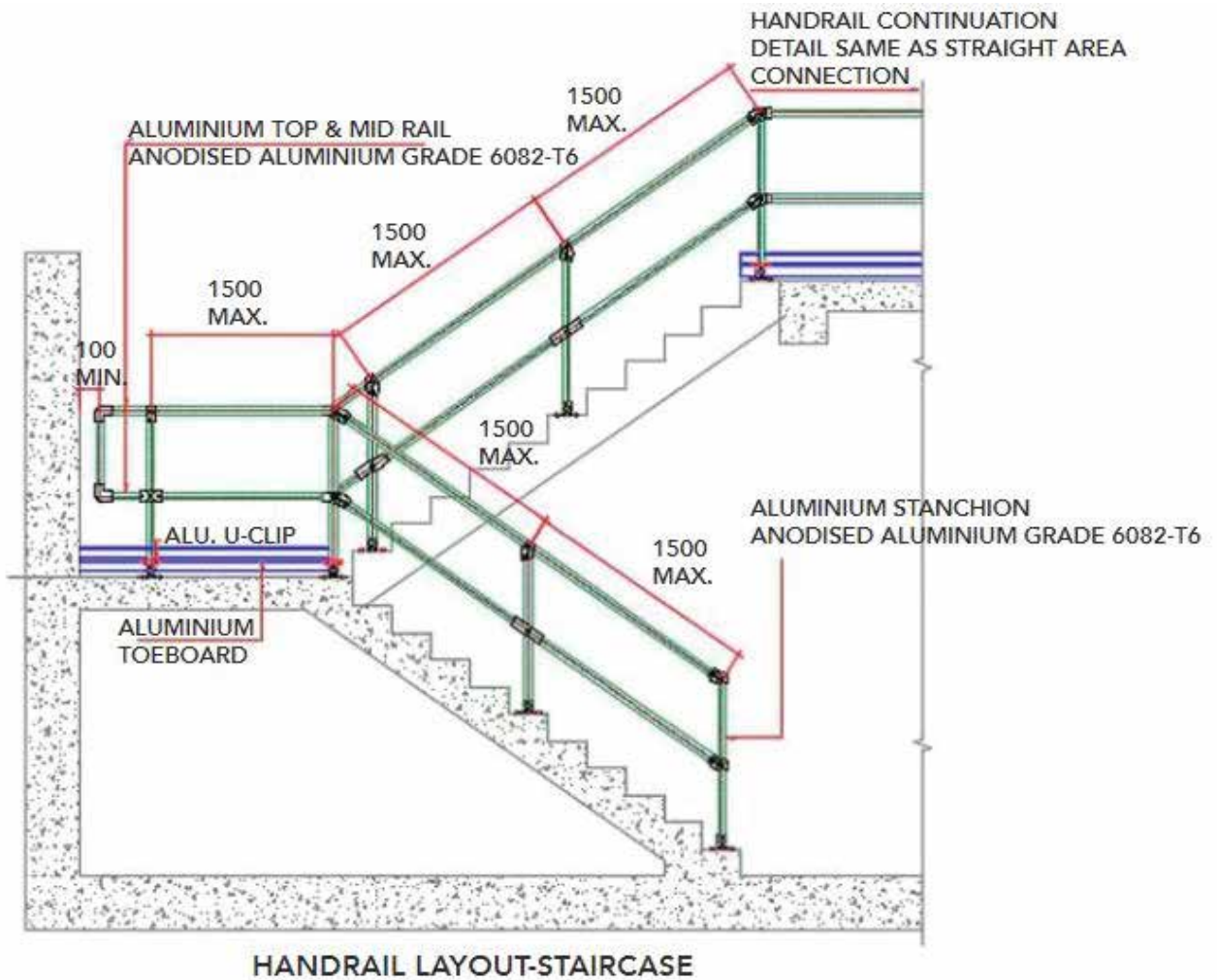


# TECHNICAL SPECIFICATION





# TECHNICAL SPECIFICATION





## INDUSTRIAL GMS HANDRAIL

Industrial GMS Handrail is 1100mm High with an intermediate horizontal rail 550mm above the walking surface.

Industrial GMS Handrail is designed, using Steel ERW Tube and Slip-On components. The main advantage of this system is there is, no requirement of any welding, drilling or bolting.

All slip-on components are Iron castings, to BS EN 1562 and BS EN 1563 and are hot dip galvanized finish. All slip-on components bear a specific model number for easy identification & installation at site.

The slip-on fittings have been rigorously Tested and Approved by TUV.

The tube size is 48.3mm O/D with wall thickness of 3.8mm min to 5.0mm max. (Top, Mid Rails & Stanchions) A hexagonal key is used to tighten the set screw of the slip-on components on to the tubing.

The system is designed as to support an axial load of 770kg per set screw, with the set screw tightened to a torque of 39Nm rating and have a safety factor of 2:1.



The toeboards are of 150mm high extruded profile and will be of high-grade 6082-T6 and anodised AA20- AA25 Finish.

The specific extrusion profile of the board will help limit warping in excessive heat.

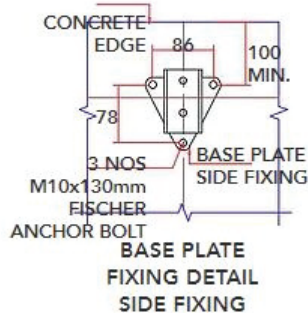
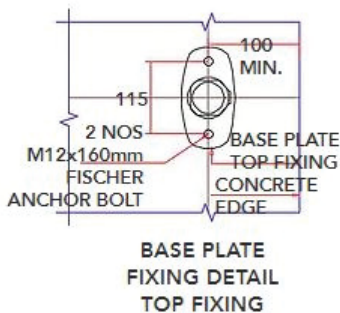
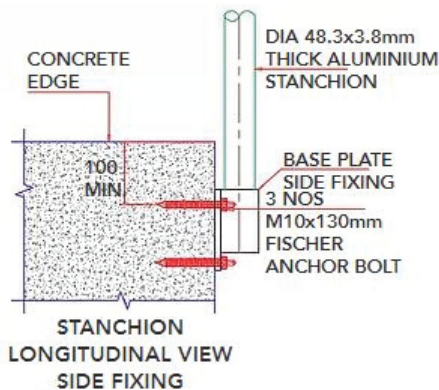
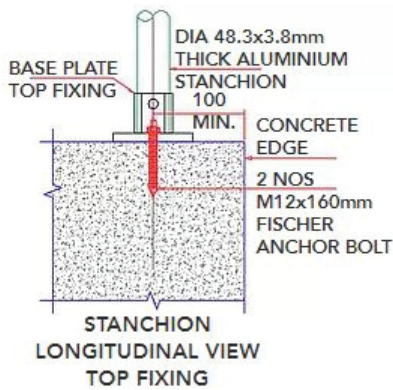
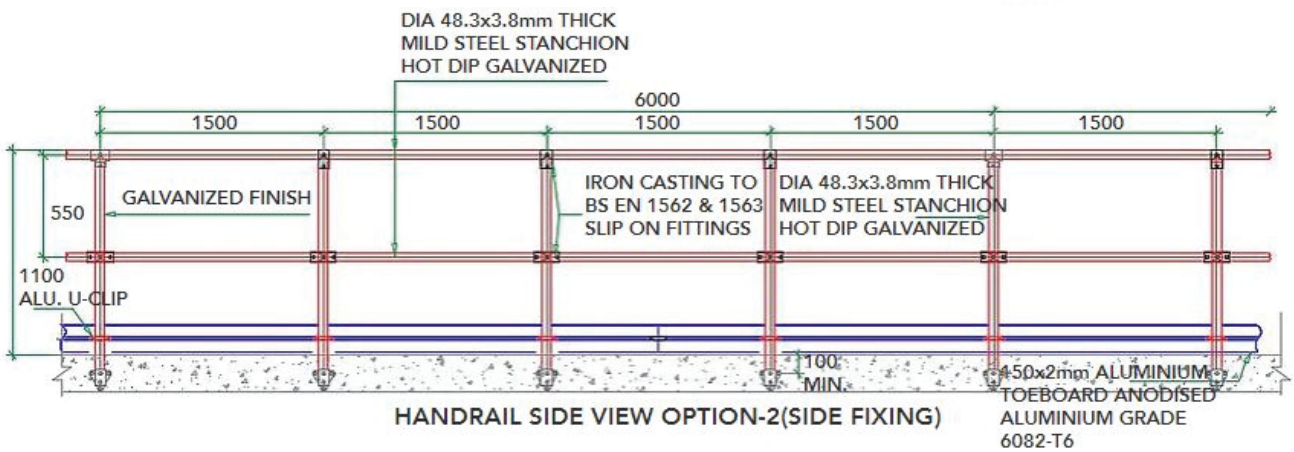
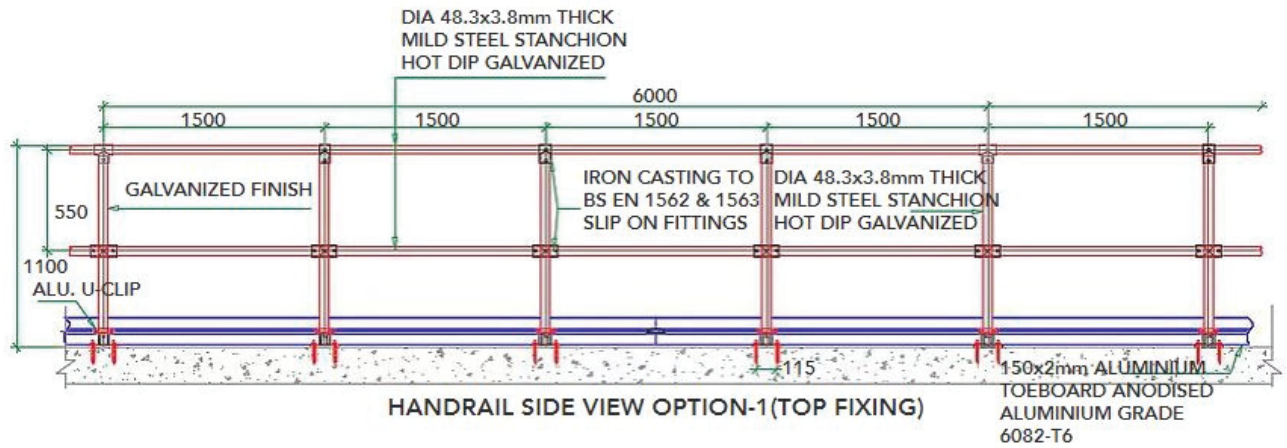
The toeboard can be fixed directly to an upright post, by using a “U” clamp around the upright fitted and bolted to a slot on the rear face of the toeboard.

The toe board has a maximum ground clearance of 10mm, to ensure that any potential water and dust does not build up.





# TECHNICAL SPECIFICATION





## INDUSTRIAL ALUMINIUM LADDER & GMS LADDER

Industrial Aluminium ladders are constructed from solid aluminium extrusions or GMS Flat Bar stringer, minimum 65x13mm profile, spaced minimum 380mm apart and fitted with minimum 25mm diameter solid serrated rungs at 250mm – 300mm pitch.

Portal Cat Ladders, are fabricated from either Aluminium alloy grade 6082-T6 or Galvanized mild steel flat bar profiles.

The Stringers will be pre drilled to receive rungs, which are passed through the holes, welded into position from the outside of the stringers and ground flush, prior to anodising or galvanising. Aluminium Rungs are of serrated solid section to ensure optimum hand and footholds, with the GMS round bar rungs left plain smooth finish. Stringers continue over the top for easy walk-through access.

Ladder fixing brackets will be provided at centres not greater than 1.8m. The centre line of the Rungs and Ladder Stringers are a minimum 200mm from adjacent walls, to ensure adequate foot room.

Connections to concrete or masonry walls will be secured by fixing



accurately positioned Stainless Steel Resin Anchor Bolts - Grade 316 (A4).

Ladders longer than 3m in height, will be fitted with a safety cage starting at a maximum height of 2.5m. Grab Rails (if required) shall be provided to all ladders, to allow easy access/egress.

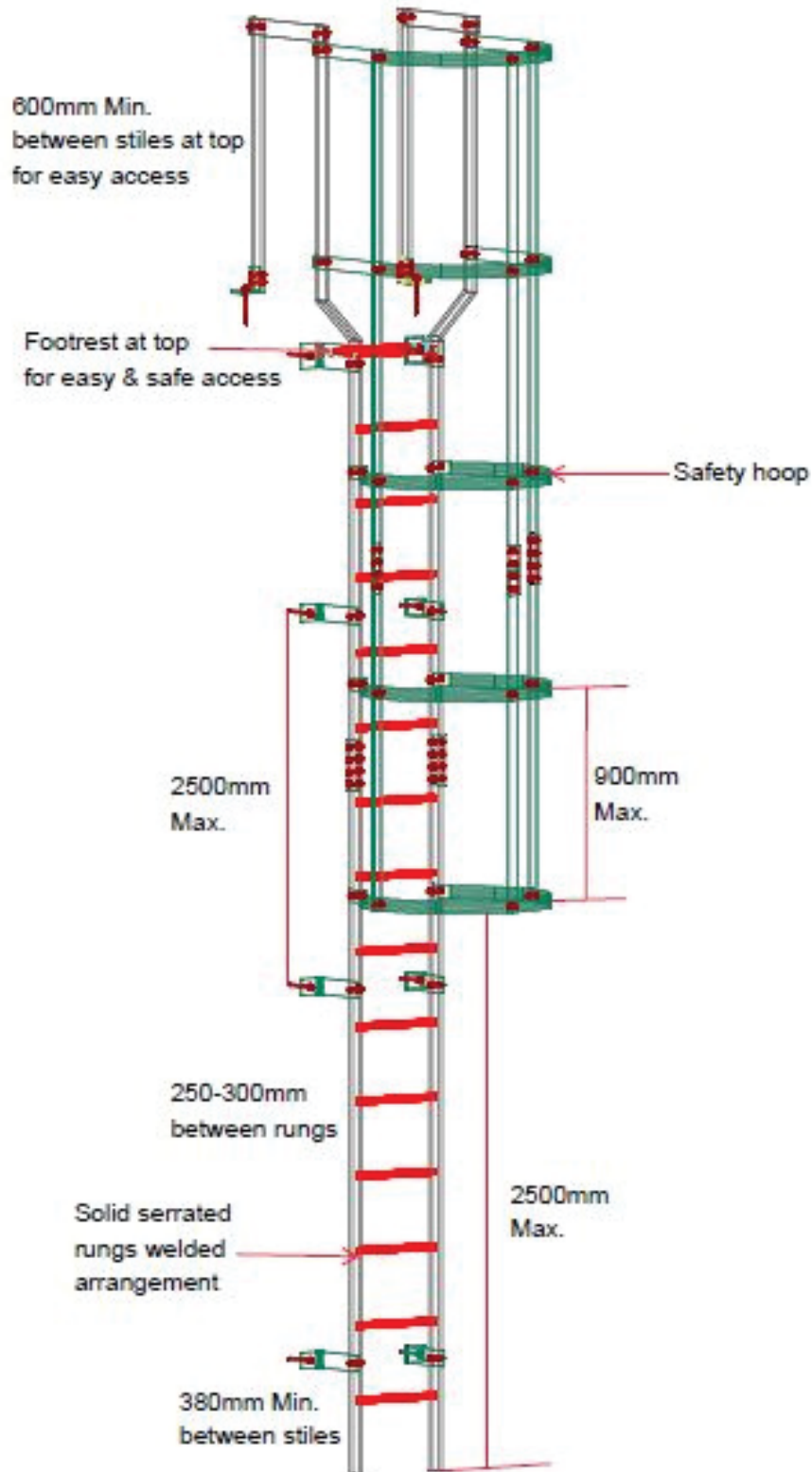
Access ladders that terminate below floor level, (where applicable), shall be fitted with retractable handholds as per client requirement, especially in manhole type applications, where Grab Rails cannot be provided. Safety cages will be constructed from minimum 50x8mm flat hoops with a diameter of 750mm, complete with 3 or 5 vertical straps.

Safety Cage Hoops will be provided at centres not greater than 900mm and will be of bolted construction. All fixing bolts will be Stainless Steel Grade 316 (A4).

Finishes for Cat Ladders are: Hot Dip Galvanized for Carbon Steel ladders and Anodised AA20 - AA25 for Aluminium Ladders.

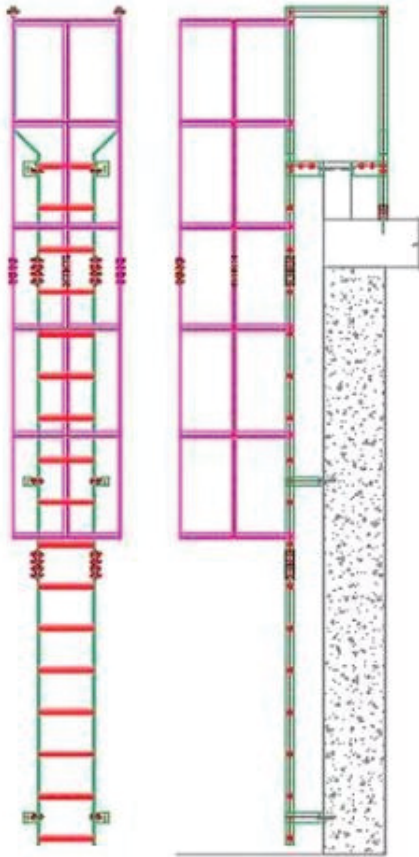


# TECHNICAL SPECIFICATION

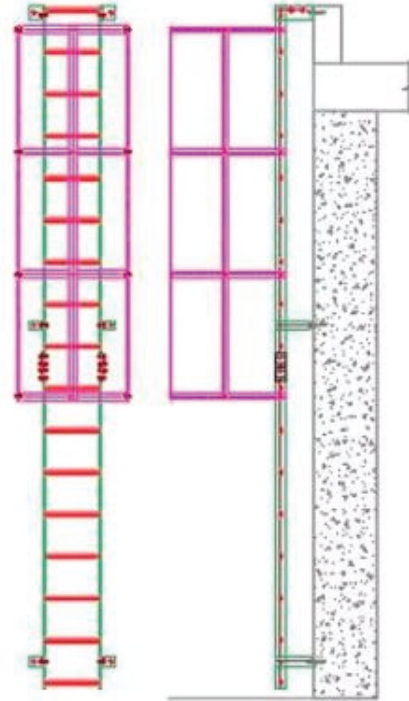




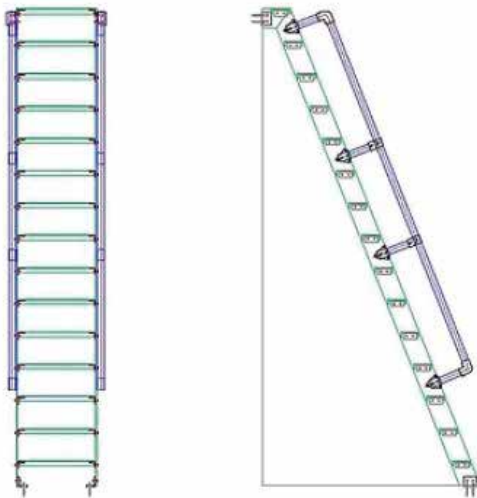
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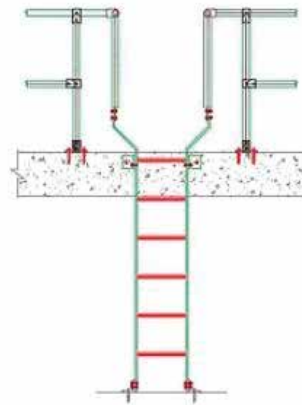
LADDER WITH STRINGERS  
EXTENDED, OPENED OUT &  
RETURNED



LADDER WITH STRINGERS  
TERMINATING BELOW TOP  
LEVEL



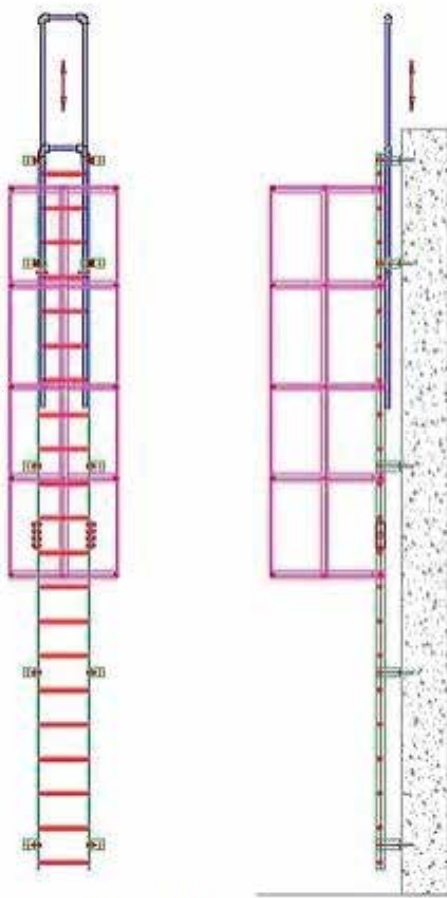
SHIP LADDER



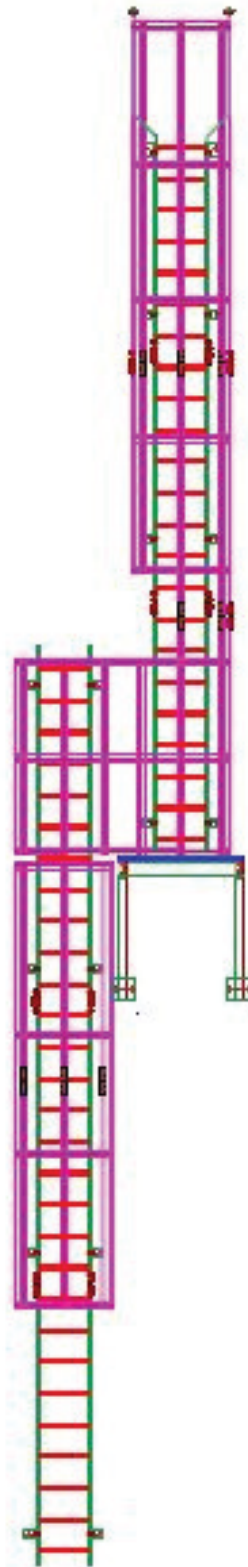
LADDER WITH STRINGERS  
EXTENDED & OPENED OUT  
AS HANDRAILS



# TECHNICAL SPECIFICATION



LADDER WITH RETRACTABLE HANDHOLDS



LADDER WITH INTERMEDIATE REST PLATFORM



## STAIRCASES, STRUCTURAL STEEL & STAINLESS STEEL WORKS

All Staircases are manufactured from either Aluminium Extrusions or Galvanized Mild Steel profiles, in full compliance with the specific requirements of the Project and client.

Utilising the latest FEA software and CAD software programmes, Member Sizing and Design for the staircases are performed in-house to all relevant international norms.

Treads and Stringer designs are optimized, to serve both aesthetic and structural functions.

Aluminium/GMS Handrails are side fixed to the stairs to provide suitable fall protection. Specific fittings are used to match the handrails to the slope of the staircase.



All structural Steel and Stainless works for Substructures, Supports and Platforms are carried out by Portal, which incorporates years of engineering and manufacturing expertise.

Engineering Professionals, Qualified Technicians, Skilled Workforce and State of the Art equipment contribute to providing high quality manufacturing and engineering solutions with respect to steel structures.



## STAIRCASES, STRUCTURAL STEEL & STAINLESS STEEL WORKS





## ALUMINIUM HANDRAIL



## LADDER



## LADDER WITH INTERMEDIATE ACCESS PLATFORM











Portal Metal Industries employs fully trained, certified teams of fitters, with an excellent safety record to liaise with site management, to achieve a safe and effective construction. Our training procedures are ongoing and are regularly reviewed to ensure safe and efficient installations of our equipment. All of our clients can expect Portal Metal Industries to fully conform to any specific site requirements, whatever they are.



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