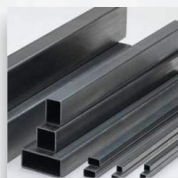


# PRODUCT GUIDE





**Proudly building  
millions of  
Rwandan Roofs  
for over 10 years**



- Proud member of Safal Group, the largest steel roofing company in Africa
- Integral part of Rwanda's heritage for over 10 years
- Leading producers of roofing sheets, accessories and structural steel products
- Introduced world class technologies in Rwanda:
  - ZINCAL (Alu-Zinc Coating)
  - Color Plus - Double coating color system
  - ULTRASPAN - Light guage steel truss systems
  - QUIKMOVER - Prefab solutions
  - Complete Roofing Solutions

A member of the





**Africa's largest metal roofing company**

**12 Countries, 36 Operations, 50 Years Experience**



Ethiopian Steel PLC



Alaf Ltd, Tanzania

Mabati Rolling Mills Ltd, Kenya



Gainvest SARL, Angola

Insteel Ltd, Kenya  
Safal Building Systems Ltd, Kenya



Safintra Zambia Ltd

Safintra Namibia Ltd



Steel Supplies (Malawi) Ltd

Uganda Baati Ltd



Safintra Mozambique LDA

Safintra Rwanda Ltd



Safintra South Africa (Pty) Ltd

Safintra Burundi Ltd



Safal Steel (Pty) Ltd, South Africa

[www.safalgroup.com](http://www.safalgroup.com)



### SAFINTRA RWANDA LIMITED

Safintra Rwanda Limited commenced operations in October 2008 and has established itself in short span of 5 years as a key player in Rwanda's industry attributed to its unrelenting pursuit of Quality, Customer Service and introduction of technically superior products. Safintra Rwanda Limited is part of SAFAL GROUP which is Africa's largest manufacturer of Aluminum-Zinc coated steel roofing sheets having 36 operations across 12 countries. SAFAL GROUP has been servicing the roofing requirements of Africa for 50 years.

Safintra Rwanda Limited (SRL) is the leader in roofing business with its well established brands like LIFESTYLE, ROMANTILE, VERSATILE, MAXCOVER, COVERMAX and DUMUZAS, covering the whole spectrum of consumer segments. SAFINTRA reaches its customers through a network of more than 100 distributors across Rwanda. All roofing products manufactured and distributed by SRL are Aluminum-Zinc coated steel as base material. Aluminum-Zinc (Aluminum – 55% & Zinc – 45%) coating provides superior corrosion resistance and is free from Lead compared to only Zinc coated products. All products manufactured by SRL have been certified by Rwanda Standards Bureau with "S" Mark certification.

Safintra Rwanda constantly strives to introduce technically superior products and customer centric services which are aimed at reducing the life-cycle cost, time and complexities for the highly demanding construction industry and provide a competitive edge to our immediate customer.

#### OUR MISSION

To be Africa's premier provider of metal roofing and allied building solutions

#### OUR VISION

To enhance value for all through innovation and best practices

#### OUR VALUES

SAFINTRA RWANDA will strive for highest standards of Ethics, Safety, Compliance & Quality and will be fair and caring towards Employees, Customers and Shareholders, Community, the Environment & all stakeholders.

# AWARDS & RECOGNITION

Over its 10 years of existence in Rwanda, Safintra Rwanda has won many awards and recognitions. We work hard to make a difference on the job, in our communities and in the entire Rwanda. We're truly honored when organizations recognize us for our innovation, business practices and social responsibility. This recognition generally reflects a good perspective of our employees, products and company as a whole by others in the respective communities. To mention but a few, Safintra Rwanda has scooped awards in the following categories;

- RRA Best tax Compliance as a large Taxpayer in 2011.
- RRA Appreciation of Invaluable Compliance as a Large and Exemplary Compliant Taxpayer in 2012.
- RDB Business Excellence Award 2013/2014
- RRA In Recognition of outstanding Tax Compliance as a Large Taxpayer in 2013
- Ministry of Trade, Industry and EAC Affairs Award in Recognition and Appreciation of Commitment to building the Industrial Sector and Contribution to the development of Rwanda.



A member of the

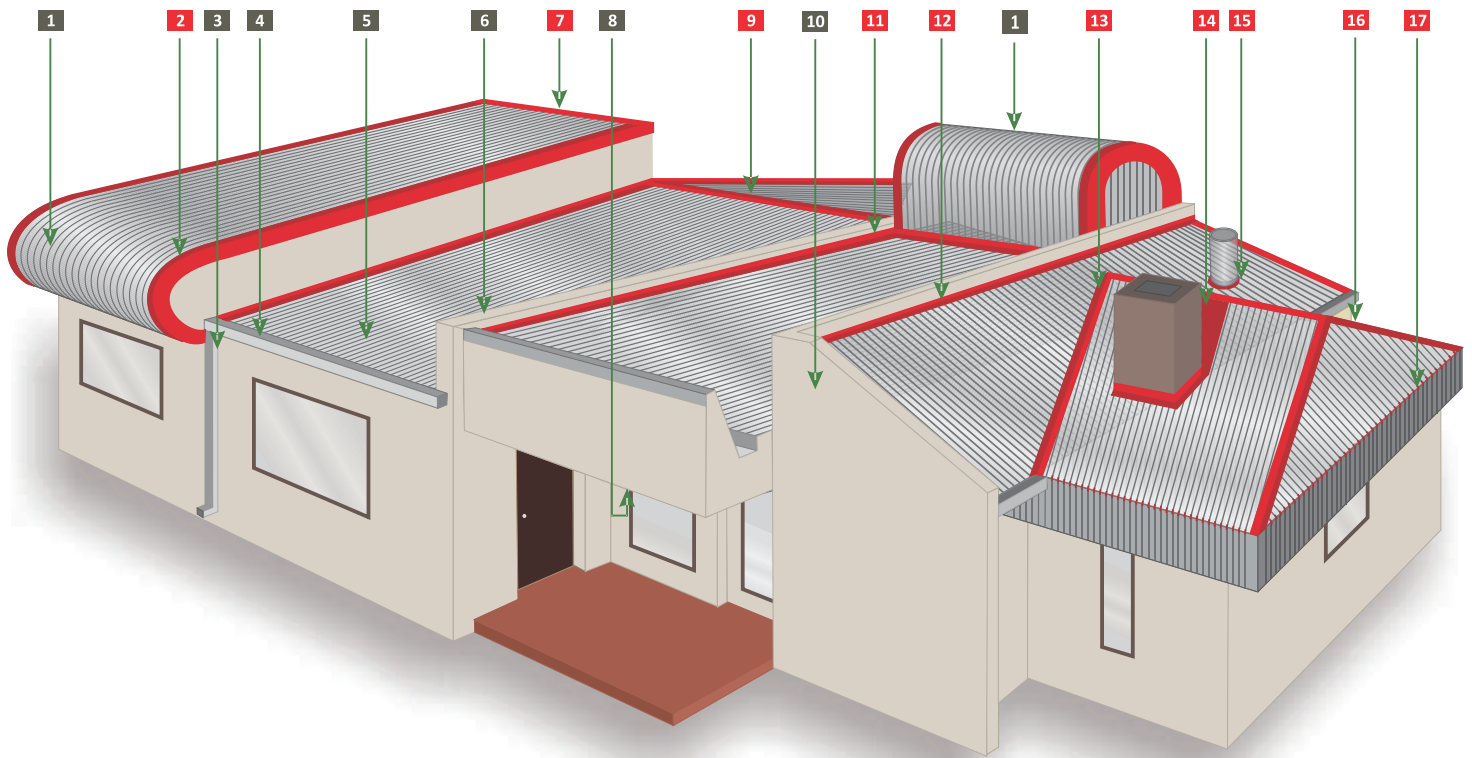


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# ROOFING TERMINOLOGY



**1 Curved/Cranked/Bullnosed Sheets**

A term used in building construction for rounded sheeting.

**2 Barge Flashing**

Weather proofing strip placed over corners where the roof meets the side of building. (Straight or curved to follow roofline)

**3 Down Pipe**

Vertical pipe for carrying rainwater from a rain gutter to ground level.

**4 Gutter**

The trough or duct under the eaves of a building for catching and redirecting rainwater.

**5 Eaves Level**

Lowest point of roof.

**6 Parapet Wall**

The portion of an exterior wall that continues above the line of the roof.

**7 Apex Flashing**

Angled strip placed over apex of roof.

**8 Soffit**

The material forming a ceiling from the exterior building wall to the outer edge of the roof, i.e., bridging the gap between a building's siding and the roofline, otherwise known as the eaves.

**9 Ridge Flashing**

Flashing used to cover the point on the roof where two sections of roofing meet, often the highest point of the roof, running horizontally.

**10 Gable**

The triangular portion of a wall between the edges of a sloping roof.

**11 Sidewall Flashing**

Used to waterproof the sheet which ends or runs alongside parapet or other walls.

**12 Headwall Flashing**

Used to waterproof the top end of a sheet where it butts with a parapet or headwall.

**13 Valley Flashing**

Used as a gully between two adjoining roof planes.

**14 Back Flashing**

Flat flashing extending from the penetration (chimney or ventilator) to ridge of roof.

**15 Cravat**

A collar fitted between the outer skin of a flue and the flashing.

**16 Hip Flashing**

Flashing used to cover the point on the roof where two sections of roofing meet, often the highest point of the roof, running horizontally.

**17 Rib Cap**

A small sheet-metal cap fitted to the rib of the sheet only.

# FLASHINGS

Flashings are made for particular applications and locations on the roof, with variations to suit the specific profile being used.

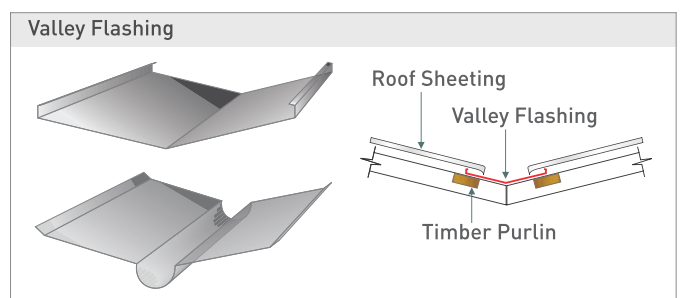
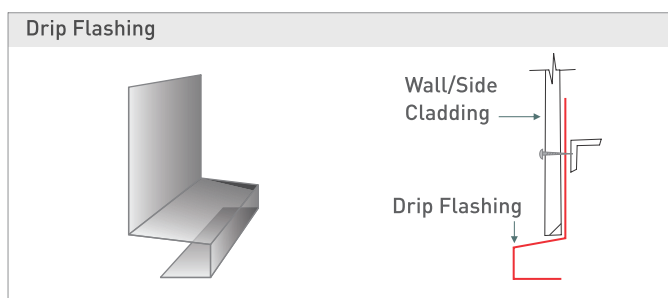
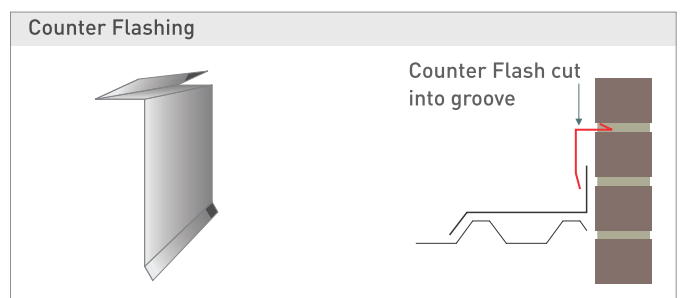
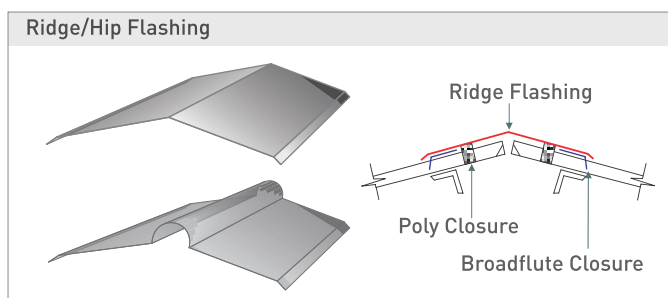
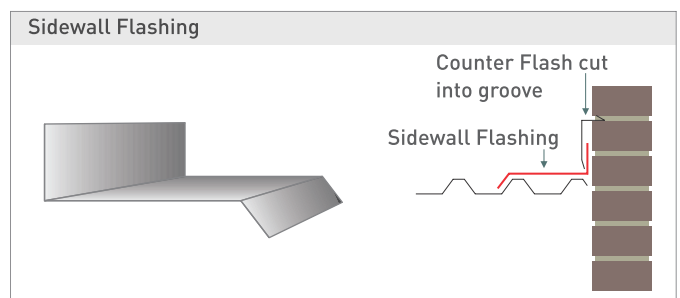
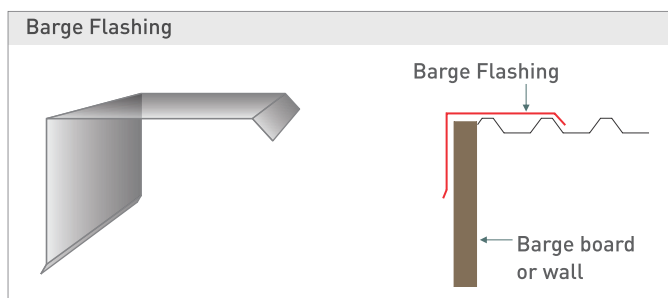
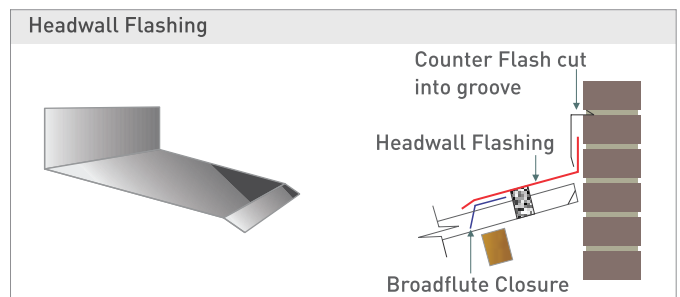
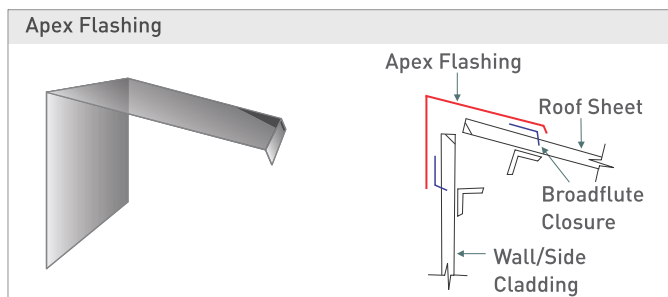
Industrial and commercial flashings tend to be functional more than aesthetic, and Safintra makes a range of standard flashings which are suitable for this purpose.

Residential flashings however, usually have an important aesthetic role which necessitates that they are designed for the structure in question.

Safintra is able to produce most custom designed flashings for residential and other applications- please ask office more information.

Flashings are usually made in the same material as the roof, for colour matching. Safintra flashings are offered in Aluminium-Zinc coated steel and Aluminium. All counter flashings should be sealed with silicone - not cement.

Please speak to our flashings departments for further guidance and technical assistance.





# COMPLETE ROOFING SOLUTION

ONE STOP SHOP for all your roofing requirements – Design, Fabrication & Installation with Warranty.



## Design

- ◆ Roof Layout & Designs.
- ◆ Designing trusses as per Engineering calculations for applied loads.
- ◆ Custom Software.



## Fabrication

- ◆ Complete Fabrication of Roof Trusses & Accessories.
- ◆ Usage of Standard Practices and Material.
- ◆ Quality Standards.



## Installation

- ◆ Installing with Expertise.
- ◆ Zero Defect Warranty.
- ◆ All Safety Standards are maintained.

Safintra Rwanda offers a full range of roofing services, from laying new roofs as well as maintenance and repairs of existing ones. We have wide experience in working with a range of roofing, structures, including:

- ◆ Industrial Shed – Prefab Structure.
- ◆ Zero Pitched Roofing & High Slope Roofs.
- ◆ Residential roofing.
- ◆ Curved Roofing.
- ◆ All Accessories fixing - Gutters, Fascias, Ridges, Flashings etc.
- ◆ Light Gauge Steel Trusses.
- ◆ Heavy & Medium Structures.

A member of the



# Premium Stone Coated Metal Roofing Tiles



## Why just build a roof when you can build a Lifestile?

Standards of Beauty have changed over time when it comes to houses and roofs. The new standard of beautiful homes is having a Lifestile roof on your house.

## Beauty that lasts a lifetime

Beauty is the quality of being pleasing to look at someone or something that gives great pleasure and this is the essence of our Brand - Lifestile. Lifestile exude timeless appeal with texture, style and longevity.



### ATTRACTIVE APPEARANCE

The Appearance of Lifestile roofing has a premium finish and design to satisfy the most discerning homeowner



### LIGHT WEIGHT

At just 2.8 kg/pc(5.96kg/sqm) Lifestile roofs are eight times lighter than clay or concrete tiles. this means less strain on the structure, easier and cheaper construction process



### WIND RESISTANCE

Despite being lightweight, Lifestile roofs are designed to withstand prolonged exposure to winds up to 233kph.



### FIRE RESISTANCE

All the materials that go into lifestile roofing are non-combustible ensuring protection from any airborne fires.

**Contact:**  
Plot 2156, Prime Economic Zone, Phase 1, Masaro, Gasabo District  
**Tel: +250 727 888070, +250 788 317072**  
**Email: sales.safintrarwanda@safalgroup.com**  
**Web: www.safintra-rwanda.com**



# COATING BRANDS





## Technical Specifications

Mabati Rolling Mills Limited ZINCAL® AZ100 and AZ150 (refer to product selection guide overleaf) Grade G550 or G330.

Standards	Grades
A792M/A924M	G550
EAS410:2008	G330

Mechanical Properties	Guaranteed Minimum	
	G550	G330
Yield strength, MPa	550	330
Tensile strength, MPa	570	400
Elongation on 50mm GL%	2	15

### Coating Weight\*

Coating Class	Minimum (g/m <sup>2</sup> )	AZ coating Thickness/microns
AZ100	85	23
AZ150	130	35

\*Triple spot testing

Reflective Index	
Total Solar Reflectance	50%

\*Please note this figure may vary depending on coating weight

### Dimensions

Base Metal Thickness (mm)	
Range	Tolerances
	Width ≤ 1200
0.3 – 0.4	±0.03
0.4 – 0.5	±0.04
0.5 – 0.6	±0.05
0.6 – 0.7	±0.06
0.7 – 0.8	±0.07
0.8 – 0.9	±0.08
0.9 – 1.0	±0.10
1.0 – 1.2	±0.12

\*Restricted thickness tolerance is subject to negotiation

### Coating Adhesion - 180° Bend Test

Coating Class	Guaranteed Minimum	
	G550	G330
AZ100	2t	1t
AZ150	2t	2t

\*Warranties available upon pre-application

Coil Width (mm)	
Range	Tolerance
762 - 1220	+5 / -0

### Supply Conditions

	Normal
Surface Condition	Spangled
Surface Treatment	Passivated with Thin Organic Coating (TOC)
Flatness	EAS 410:2008

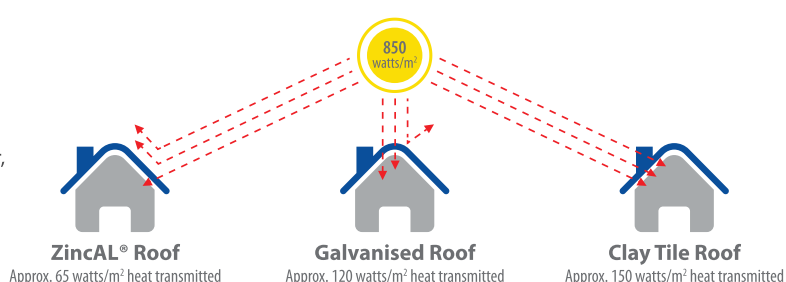
### Branding

All coils are branded to allow for full traceability. Example of product identification (underside of sheet):

MABATI ROLLING MILLS ZINCAL 925 X 0.5 TCT AZ100 45107-1-1-1

### Superior Thermal Performance

Less heat transmitted into building interior, giving cooler interiors in hot climates.





## Technical Specifications

Mabati Rolling Mills Limited COLORPLUS® AZ100 and AZ150 (refer to product selection guide overleaf) Grade, G550 or G330.

Standards	Grades
A792M/A924M	G550
EAS410:2008	G330

Mechanical Properties	Guaranteed Minimum	
	G550	G330
Yield strength, MPa	550	330
Tensile strength, MPa	570	400
Elongation on 50mm GL%	2	15

### Dimension

Base Metal Thickness (mm)	
Range	Tolerances
	Width ≤ 1220
≥0.3	±0.03
≥0.4	±0.04
≥0.5	±0.05
≥0.6	±0.03
≥0.7	±0.04
≥0.8	±0.04

\*Restricted thickness tolerance is subject to negotiation

### Branding

All coils are branded to allow for full traceability. Example of product identification (underside of sheet):

MABATI ROLLING MILLS RESINCOT COLORPLUS 925 X 0.5 TCT G550 AZ150 45107-1-1-1

### Colour Fading and Physical Parameters

Colour	Maximum Fading ΔE CIELab (Cleaned) ASTM 2244	Gloss % (Within 15 years)	Maximum Chalking (Tape off Test) ISO 4628-6	Physical Parameters (Within 15 years)
Light colours (L≥60)	≤4	>50	2 (10 years)	No Peel, Crack, Chip
Dark Colours (L<60)	≤7	>60	2 (10 years)	No Peel, Crack, Chip

\*Result may change depending on climate conditions

\*Warranties available upon pre-application

### Coating Weight\*

Coating Class	Minimum (g/m <sup>2</sup> )	AZ coating Thickness/microns
AZ100	85	23
AZ150	130	35

\*Triple spot testing

### Paint Line Tested Properties of Top Coat

Property	Measured by	Result
Hardness	Pencil	Min 2H
Adhesion	Reverse Impact	≥ 10 Joule
	T - Bend	Maximum 2 T
Specular Gloss	60° meter	40 ± 5 units

Coil width (mm)	
Range	Tolerance
925 -1220	+5 / -0

### Supply Conditions

Typical micron coverage (paint coating)	
AZ100 and AZ150	20 + 2µm top coat
	5 ± 1µm corrosion inhibitive primer
	8 ± 1µm backing coat - light grey

\*for applications in severe coastal conditions, we recommend  
COLORPLUS® Dura AZ200 (supplied ex Safal Steel)



## Colour Options

COLORPLUS® is a factory pre-painted product, with colour applied over a ZincAL substrate, offering all the advantages of ZincAL with the option of colour for added aesthetic appeal.

The ColorPlus paint system has been carefully selected to endure the harsh African climate, and resist dirt or contaminant retention, so that the surface stays clean and the colour is fresh looking for as long as possible.

COLORPLUS® is available in the following standard colours:



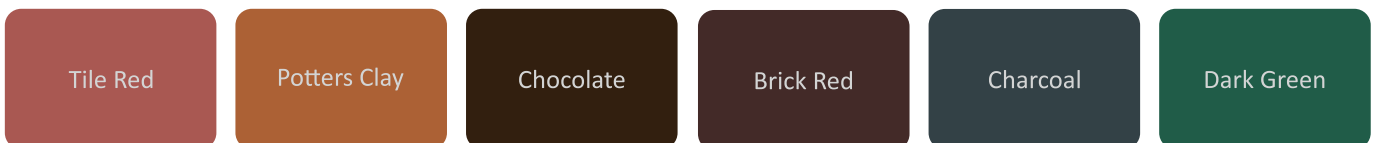
Non-standard colours are available at the discretion of the mill, with minimum order quantities and extended lead times.



## Colour Options

COLORPLUS TEXTURED® is a double-coat textured-finish paint system applied to a Zincal® substrate (Aluminium-Zinc coated sheet).

COLORPLUS TEXTURED® is available in the following standard colours:



Non-standard colours are available at the discretion of the mill, with minimum order quantities and extended lead times.



## Technical Specifications

Mabati Rolling Mills Limited, **OPTIMA PLUS® AZ100** (refer to product selection guide overleaf) Grade, **G550** or **G330**. **OPTIMA PLUS®** is fit-for-purpose colour coated steel for use in **benign** corrosive environments. **OPTIMA PLUS®** is warranted for up to 5 years if used in the correct environment.

Standards	Grades
EAS468:2008	G550
EAS468:2008	G330

Mechanical Properties	Guaranteed Minimum	
	G550	G330
Tensile strength, MPa	550	330
Yield strength, MPa	570	400
Elongation	2	15

Coil width (mm)	
Range	Tolerance
925 - 1220	+5 / -0

### Dimensions

Thickness range	Tolerance thickness	Width range (mm)	Width tolerance
0.25	± 0.025	925 - 1220	0, (+) 5
0.32	± 0.032	925 - 1220	0, (+) 5
0.4	± 0.040	925 - 1220	0, (+) 5
0.5	± 0.050	925 - 1220	0, (+) 5
0.6	± 0.060	925 - 1220	0, (+) 5

### Branding

All coils are branded to allow for full traceability. Example of product identification (underside of sheet):

MABATI ROLLING MILLS OPTIMA PLUS 925 X 0.4 TCT AZ100 45107-1-1-2

### Colour Fading and Physical Parameters

Colour	Maximum Fading $\Delta E$ CIELab (Cleaned) EAS46:2008	Gloss % (Within 5 years)	Maximum Chalking/ Tape off test ISO 4628-6 (Within 5 years)
Light colours (L > 60)	≤5	>60	4 (5 years)
Dark Colours (L < 60)	≤8	>70	4 (5 years)

\*Result may change depending on climate conditions

\*Warranties available upon pre-application

### Coating Weight\*

Coating Class	Minimum (g/m <sup>2</sup> )	AZ coating Thickness/microns
AZ100	85	23

\*Triple spot testing

### Paint Line Tested Properties of Material

Property	Measured by	Result
Hardness	Pencil	2H min
	Reverse Impact	500g
	T-bend	Max 2T
Adhesion	Flexibility	Max 6mm dia
Specular Gloss	60 degree	40 ± 5 units
Paint Film	Top Coat	12 ± 2 µm
	Backing Coat	7 ± 1 µm - light grey
Solvent Resistance	MEK	100 double rubs

## Atmospheric Exposure

To ensure we produce a product that not only satisfies quality standards but also performs under weathering conditions, we have commissioned the following test methods:

- **QUV/QUB testing**  
The polymer characteristics of the **OPTIMA PLUS<sup>®</sup>** material is exposed for predetermined time periods to UVA and UVB rays at fixed temperatures
- **Live Test Stations**  
Live test stations have now been installed at various locations for monitoring the visual performance of **OPTIMA PLUS<sup>®</sup>** under everyday weathering conditions

## Usage Guidelines

**OPTIMA PLUS<sup>®</sup>** is designed to offer premium service life in environments which are only benignly corrosive. This applies to most urban and rural areas of Africa, excluding zones within 5 kilometres of a coast or marine areas, or regions adjacent to high industrial pollution areas such as coal mines and smelters.

## Thermal Attributes

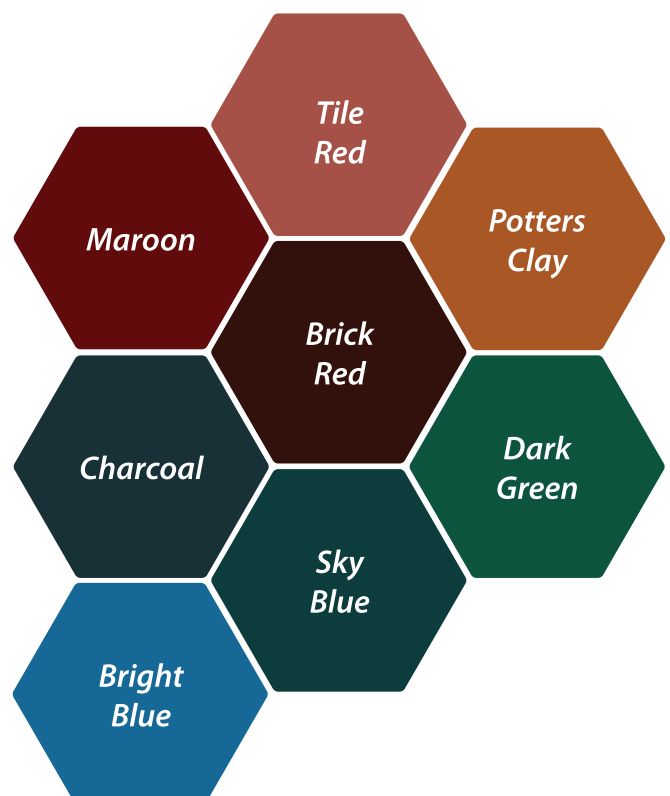
The thermal mass of **OPTIMA PLUS<sup>®</sup>** is significantly lower than traditional pre-painted galvanised and clay tile roofing due to the patented coating technology. This increases the reflection of the sun's rays creating a cooler building in summer and a warmer building in winter.

Adding colour not only offers aesthetic appeal, but also increases solar reflection.

## Colours

**OPTIMA PLUS<sup>®</sup>** is available in a variety of colours. Tests have proven that light colours offer a higher reflectance compared to darker colours and will therefore provide a cooler interior on hot days.

\*Colours reproduced here may not be completely accurate.





# PRODUCTS INDEX

## STONE COATED TILE



## TILE PROFILE ROOF SHEETING



## ROOF SHEET



## **DUMUZAS**

## CONCEALED FIXED SHEETS



## STRUCTURAL PRODUCTS



## FASTENERS



## PREFAB STRUCTURES

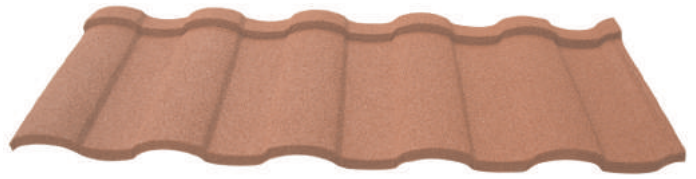
# QUIK MOVERS

# Lifestile® Roman

Lifestile Roman is a stone coated metal roofing tile. It combines the superior performance of steel roof with architectural detail of an old world Roman tile. Durable and lightweight, Roman tile requires little maintenance.

### Specifications

Tile Size : 1322mm x 425 mm  
 Width of Cover : 1253mm  
 Length of Cover : 370mm  
 Area Coverage of Tile : 0.47 SQM  
 Tiles / SQM : 2.1  
 Installed weight : 5.96 kg/sq. mtr  
 Base Material : Al-Zinc Coated Steel  
 Thickness : 0.40 mm



### COLORS AVAILABLE



# Lifestile® Supreme Plus

Lifestile Supreme Plus is a stone coated metal roofing tile. Lifestile Supreme Plus offers a unique elegance, longevity and versatility. It is an ideal alternative to traditional tile products. It is light strong, durable and beautiful.

### Specifications

Tile Size : 1340mm x 420 mm  
 Width of Cover : 1265mm  
 Length of Cover : 370mm  
 Area Coverage of Tile : 0.47 SQM  
 Tiles / SQM : 2.13  
 Installed weight : 5.96 kg/sq. mtr  
 Base Material : Al-Zinc Coated Steel  
 Thickness : 0.40 mm



### COLORS AVAILABLE

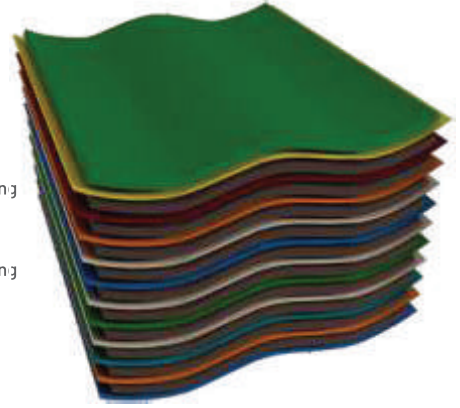


## COMPONENT DETAIL

### The Stone Coating Process Quality Promise

Safintra Rwanda Ltd uses only the latest and best in stone coating technology.

Lifestile Roofing System is composed of several layers of materials pressed into different profiles then sealed with our exclusive polymer coating. Ceramic-coated stone chips that resist fading and UV degradation. Lifestile roofing products are light-weight, yet extremely durable and trouble-free.



## QUALITY ASSURANCE

Lifestile Tiles are made to world class standard. We use the finest quality ceramic coated stone chips that resist fading and ultra violet penetration, sealed on to quality aluminium zinc-alloy coated steel. Our exclusive polymer coating completes a finish that will remain beautiful for generations.



#### ATTRACTIVE APPEARANCE

Appearance of Lifestile roofing has a premium finish and design to satisfy the most discerning homeowner.



#### LIGHT WEIGHT

At just 2.8kg/pc (5.98kg/sqm) Lifestile roofs are eight times lighter than clay or concrete tiles. This means less strain on the structure, easier and cheaper construction process.



#### WIND RESISTANCE

Despite being lightweight, Lifestile roofs are designed to withstand prolonged exposure to winds up to 233 kph.

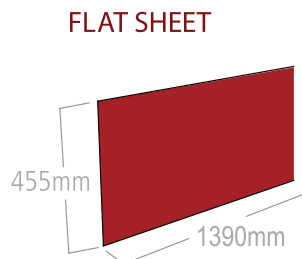
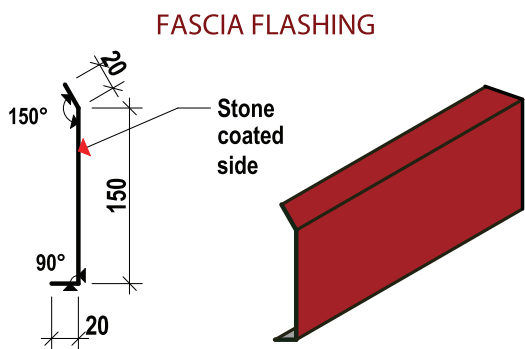
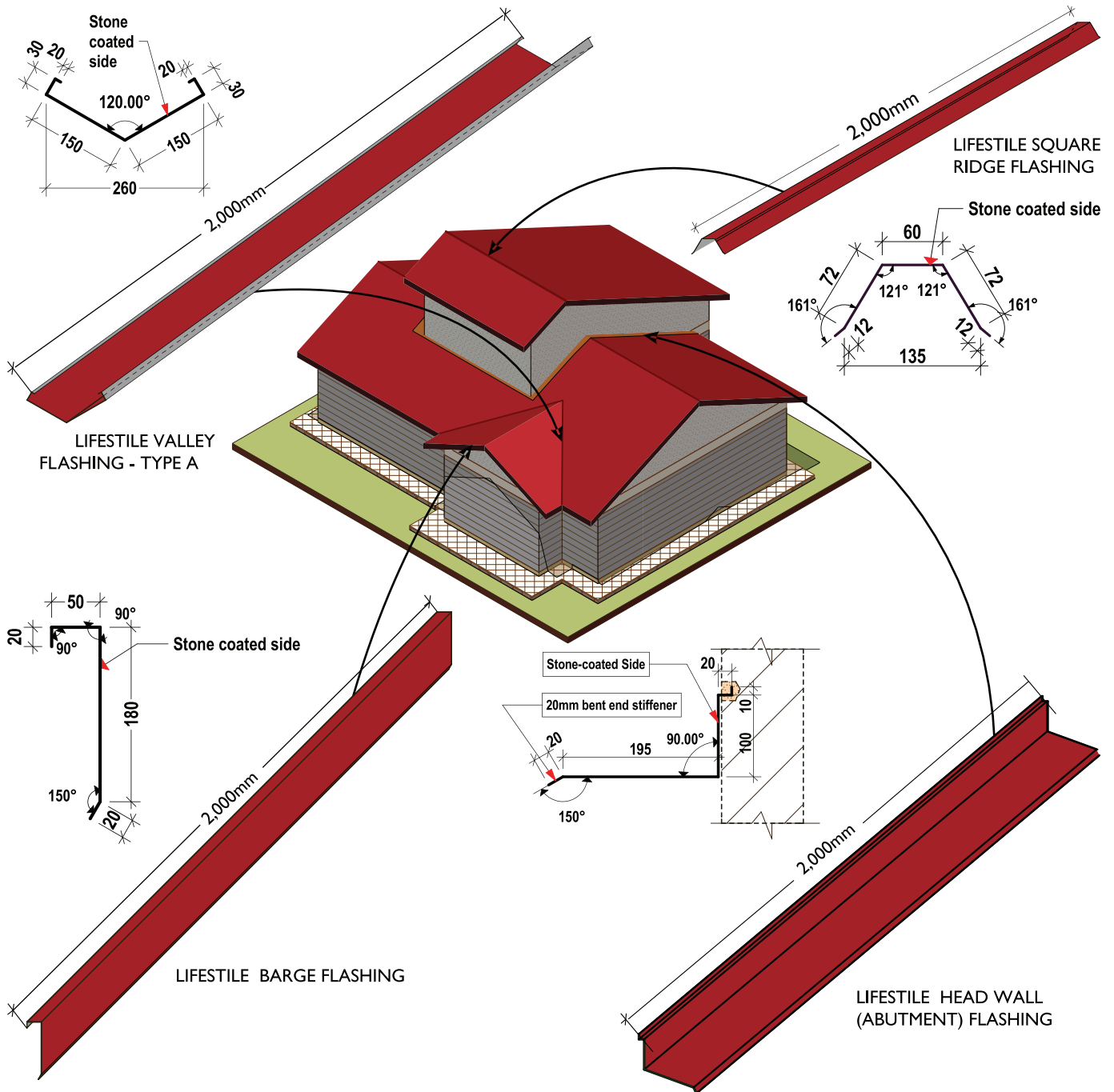


#### FIRE RESISTANCE

All the materials that go into Lifestile roofing are non-combustible, ensuring protection from any airborne fires.

#### Disclaimer:

- Care has been taken to ensure that the information provided is accurate. Safintra does not assume responsibility for inaccuracies or misinterpretations of this data.
- Safintra is continuously engaged in product development, please ensure that you have the most recent issue of information from Safintra.
- Photographs and illustrations are typical examples of roofing and cladding products and applications.





ROMANTILE is a new unique profile from Safintra Rwanda a premium range roofing Profile - it has elegant looks with graceful curves and strong layering after installation. ROMANTILE gives your house a distinctive look. It is now available in a variety of colors to suit your requirement.

Benefits	
RWF Cost Efficiency	Extra Wide
Kg Light Weight	Engineered Roofing
Long Lasting	Fashionable & Stylish
Secure	Speed of Installation & Minimised Wastage
Heritage	Fire Resistant
Repair Free	Performance

## Features

### Sheets

- Continuous length profile increases visual uniformity
- Reduced leakages
- Lightweight - safer to lift and install while enabling the supporting structure to be less bulky/costly
- No underlay's needed
- Rapid roof coverage
- Large panel size enables roofing to be completed faster
- Easy & Secure - roofing sheets are fixed to the roof structure
- World class patented coating technology
- Safintra Rwanda Mark of Quality - Each sheet is stamped with Safintra Rwanda Logo.

**Contact:**  
 Plot 2156, Prime Economic Zone, Phase 1, Masaro, Gasabo District  
 Tel: +250 727 888070, +250 788 317072  
 Email: sales.safintrarwanda@safalgroup.com  
 Web: www.safintra-rwanda.com



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## PRODUCT DESCRIPTION & FEATURES

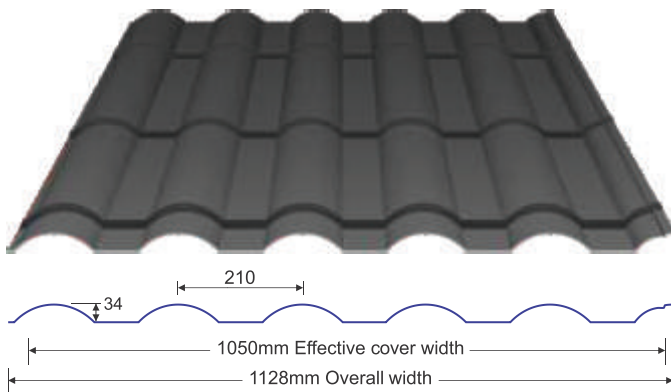
Romantile® is a premium steel tile roofing sheet that provides an aesthetically pleasing profile that is sophisticated & durable. Clean lines give it a very chic finish. Its Mediterranean heritage allows for a good fit in this tropical climate. For a statement of style choose Romantile.

## MATERIAL OPTIONS

Aluminium - Zinc	Gauge (mm)		
AZ150 Colour Coated Steel	0.32	0.40	0.50

Elegantile is rolled in soft material only - G275

Input Coil Width	1220mm
Profiled Sheet Width (Overall Width)	
Rib To Rib Width ie: Pitch	
Depth Of Each Tile (Step To Step)	300mm
Effective Cover Width	1050mm
Purlin Spacing (RECOMMENDED)	600mm



## ROOF PITCH

Romantile can be used on a roof pitched from as low as 10°.

## PURLIN SPACINGS

Battens / purlins should be spaced at 600mm on both ridge and eave (ie: at every tile step), and at maximum 600mm (ie: at every second tile step) on internal spans, although battens at every step will be stronger.

### Note:

During installation, clean the roof daily by removing all swarf, pop rivets and unused fasteners or any other debris.

### Disclaimer:

- Care has been taken to ensure that the information provided is accurate. Safintra does not assume responsibility for inaccuracies or misinterpretations of this data.
- Safintra is continuously engaged in product development, please ensure that you have the most recent issue of information from Safintra.
- Photographs and illustrations are typical examples of roofing and cladding products and applications.

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## PRODUCT DESCRIPTION & FEATURES

Versatile® is a premium steel tile roofing sheet with the look of a classic roof tile but with a much longer life span. Count on a Versatile Roof to provide unmatched beauty, durability and cost efficiency.

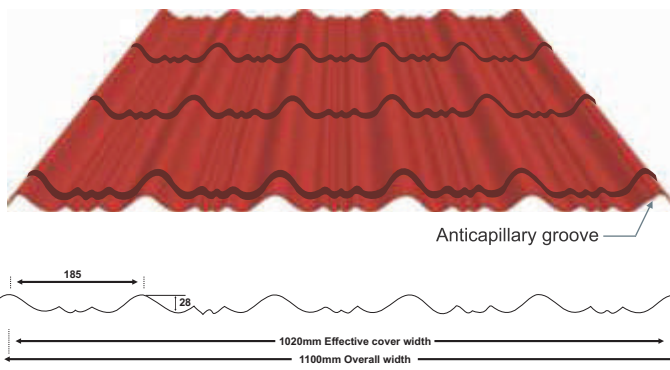
Renowned for beauty and durability, Versatile is the market leader in steel tile roofing sheets amongst homeowners countrywide

## MATERIAL OPTIONS

Aluminium - Zinc	Gauge (mm)		
AZ100 Colour Coated Steel	0.32	0.40	0.50

Versatile is rolled in soft material only - G275

Input Coil Width	1220mm
Profiled Sheet Width (Overall Width)	1100mm
Rib To Rib Width ie: Pitch	205mm
Depth Of Each Tile (Step To Step)	300mm
Effective Cover Width	1020mm
Purlin Spacing (RECOMMENDED)	600mm



Available in Normal and Textured Paint Finish.



## ROOF PITCH

Versatile can be used on a roof pitched from as low as 10°.

## PURLIN SPACINGS

Battens / purlins should be spaced at 300mm on both ridge and eave (ie: at every tile step), and at maximum 600mm (ie: at every second tile step) on internal spans, although battens at every step will be stronger.

### Note:

During installation, clean the roof daily by removing all swarf, pop rivets and unused fasteners or any other debris.

### Disclaimer:

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# TILE PROFILED SHEETS INSTALLATION, HANDLING & MAINTENANCE

## FEATURES

### Sheets:

- Continuous length profile increases visual uniformity and reduces chance of leakage.
- Engineered to prevent leakage by addition of a capillary break during roll forming.
- Lightweight — safer to lift and install while enabling the supporting structure to be less bulky / costly.
- A wide color range available in 7 standard colours & 5 textured colours.

### Installation:

- Large panel size enables roofing to be completed faster.
- Easy & secure — roofing sheets are fixed to the roof structure.
- No underlays needed to ensure weather-proofness, unlike traditional tiles.

### Quality:

- Safintra mark of quality — each sheet is inspected over 6 times before dispatch.  
Each sheet has marking - Safintra name, Grade of steel & specifications.

### Coating:

- World class patented coating technology for extended durability and lasting colour.



## ROLL TOP RIDGES

All tile profiled sheets are sold as a complete system, with their own distinctive roll top ridges which are designed to complement the profile. The roll top ridge is notched, to allow it to be bent into the tiles as a closure.

NOTE: The ridges have matching notches on either side.

During installation, ensure that the sheets are lined up to fit the notches on both sides of the roof. If laying sheets from left to right on the one face, the sheets on the opposite face should be laid starting from the same side.



## ON SITE CUTTING

For cutting thin metal on site, we recommend a circular saw with a metal cutting blade because it produces fewer damaging hot metal particles and leaves less resultant burr than a carborundum disc.

Cut materials over the ground and not over other materials.

Sweep all metallic swarf and other debris from roof areas and gutters at the end of each day and at the completion of the installation. Failure to do so can lead to surface staining when the metal particles rust.

## SEALED JOINTS

For sealed joints use screws or rivets and neutral-cure silicone sealant branded as suitable for use with Aluminium-Zinc coated steel.

## STORAGE AND HANDLING

Keep the product dry and clear of the ground. If stacked or bundled product becomes wet, separate and wipe with a clean cloth to dry thoroughly. Handle materials carefully to avoid damage, don't drag materials over rough surfaces or each other, don't drag tools over material, protect from swarf.

## MAINTENANCE

Optimum product life will be achieved if roofs are washed and maintained regularly.

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# TILE PROFILED SHEETS INSTALLATION, HANDLING & MAINTENANCE

## INSTALLING TILE PROFILED SHEETS

### ORDERING AND INSTALLING THE SHEETS

Tile profiled sheets are always laid into the prevailing weather – this should guide your installation process, which in turn affects the detail of your order.

**Recommended structure:** Custom designed light gauge steel structure or Minimum 50 x 50mm purlins (recommended) 100 x 50mm (trusses/rafters) for timber structures.

Wherever possible, it is recommended that one use single lengths to cover each run of roof from ridge/crest to eave (avoid end-lapping) for better aesthetics, economy and reduced chance of leakage.

**Maximum Purlin Spacing:** 600mm centres.

**Roofing Procedure:** Always overlap the left edge of the sheet over the right edge (looking from outside).

**Roof Pitch:** The tiles can be used on roof pitches from minimum 12.5°.

**Crest Fixing:** The sheets are pierce fixed to steel or timber supports. This means that fastener screws pass through the sheeting. To maximize water tightness, always place roof screws through the crest of the sheeting. Always drive the screws perpendicular to the sheeting and in the center of the crest. We recommend self drilling screws fixed through the crest of the profile ribs using an electric screw-gun (drill). Screws must be used in conjunction with appropriate EPDM washers.

Please call our technical department for assistance.

### SIDE LAPPING

A standard lap is 1 flute. It is generally considered good practice to use fasteners along side laps.

### FASTENERS

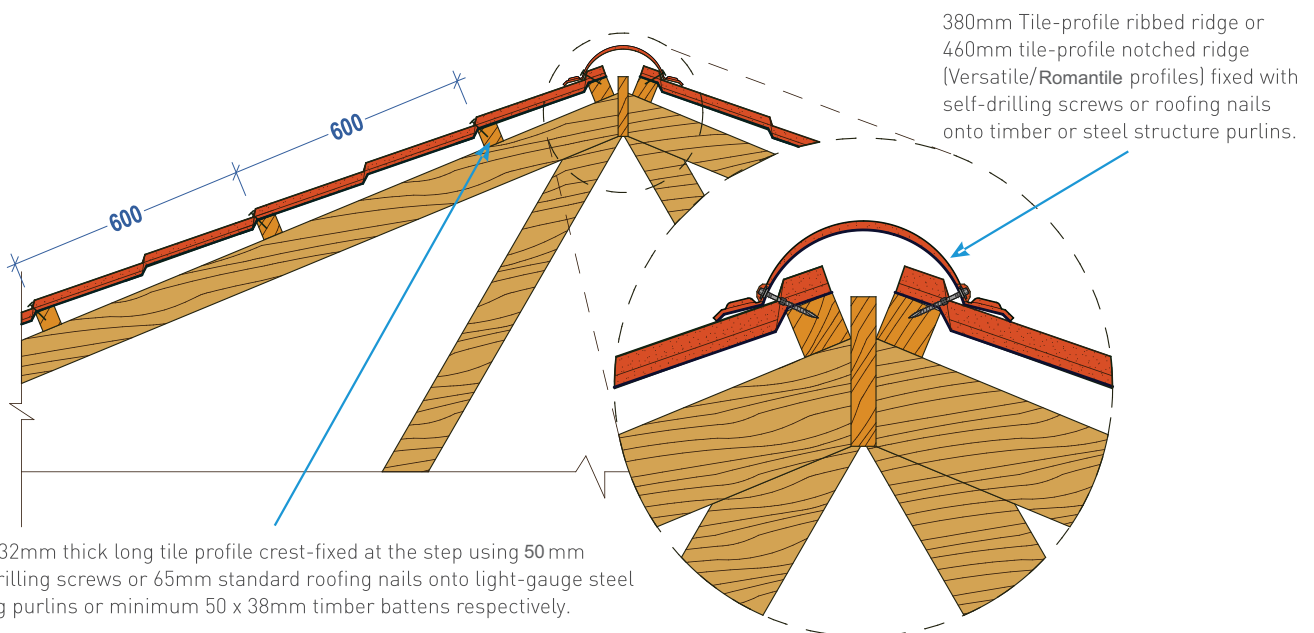
Safintra recommends only Fixtite or MRM approved class 3 fasteners for inland regions and class 4 fasteners in coastal regions, especially within 5 kilometres of coastline or similar condition.

Steel: Class 3 (or 4) #12 x 50 mm fastener.

Timber: Class 3 (or type 17) #12 x 70 mm fastener.

Side Lapping: Class 3 (or 4) #14 x 20mm fastener.

## TILE PROFILES TYPICAL RIDGE FIXING DETAIL



Min 0.32mm thick long tile profile crest-fixed at the step using 50 mm self-drilling screws or 65mm standard roofing nails onto light-gauge steel roofing purlins or minimum 50 x 38mm timber battens respectively.

### Max recommended purlin/ batten spacing:

0.32mm tile profiles - 600mm centres

≥0.40mm profiles - 900mm (600mm preferred)

### Disclaimer:

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## PRODUCT DESCRIPTION & FEATURES

Maxcover® offers consumers the benefit of a box profile with an effective cover width of 1020 mm, offering a more economical sheet for budget sensitive projects. Maxcover is ideal for domestic and light industrial or commercial applications.

## PURLIN SPACINGS

Purlin Spacings are dependant on both downward loading and negative suction loading caused by wind. Your engineer should be consulted to calculate your load (kN/m<sup>2</sup>) for your particular application.

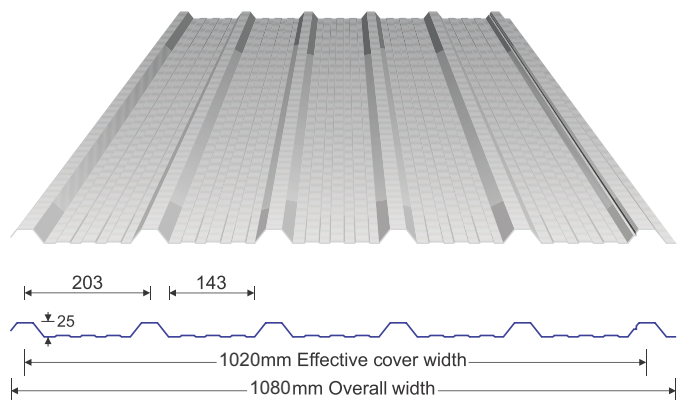


STEEL SHEETS SUPPORT SYSTEM			
TOTAL COATED THICKNESS (TCT) mm	MAXIMUM PURLIN SPACING IN METRES (m)		
	SIMPLY SUPPORTED (2 SUPPORTS)	CONTINUOUS SUPPORTS (3 SUPPORTS)	CONTINUOUS SUPPORTS (>3 SUPPORTS)
<b>ROOFS</b>			
0.32	0.6	0.8	0.9
0.40	0.8	1.0	1.1
0.50	0.9	1.1	1.2
0.60	1.0	1.3	1.4
<b>WALLS</b>			
0.32	0.8	1.1	1.2
0.40	1.0	1.3	1.4
0.50	1.2	1.5	1.6
0.60	1.3	1.6	1.8

RECOMMENDED END-LAPPING			
	SLOPE/PITCH	ENDLAP MIN. mm	ENDLAP MAX. mm
ROOFS	less than 15°	250	300
	Greater than 15°	200	250
WALLS		150	200

### Notes:

1. These spacings are indicated as a guide for information purposes only. The user should ensure to have a qualified professional work out the precise spacing specifications based on the design considerations unique to the project/site.
2. It is important to reduce the purlin spacings by 20% when spring curving a roof.



## COVERAGE CALCULATOR

To calculate the number of sheets (N) to cover a given area. Required, use the formula:  $N = W / 1020$  where; W is the linear width of the roof in metres and N is the number of sheets.

### Note:

During installation, clean the roof daily by removing all swarf, pop rivets and unused fasteners or any other debris.

## LENGTHS & ROOF PITCH

When using Maxcover sheeting the recommended minimum pitch for roof slopes in excess of 15m is 10° and for slopes less than 15m is 7,5°.

It can be ordered in Custom lengths, subject to transport limitations, up to 9m (min 0.4mm thickness. Lower thicknesses up to 6m max lengths.

## TOLERANCES

A length variation range of +/-5,0mm, and width tolerance of +/-3,0mm are permissible

## FASTENING

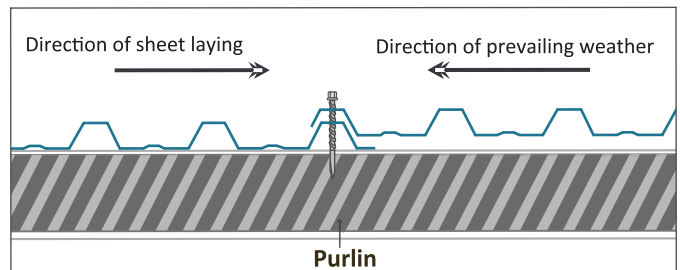
Maxcover is pierce-fixed to timber or steel supports. This means that fastener screws pass through the sheeting. You can place screws for Maxcover through the crests or in the valleys. To maximise water tightness, always place roof screws through the crest. For walling, you may use either crest or valley fixing. Always drive the screws perpendicular to the sheeting, and in the centre of the corrugation or rib. Don't place fasteners less than 25 mm from the ends of sheets.

The edge of Maxcover with the anti-capillary groove is always the under-lap. It is generally considered good practice to use fasteners along side-laps however, when cladding is supported as indicated in purling spacings, side-lap fasteners are not usually needed for strength.

End-laps are not usually necessary because Maxcover is available in long lengths. If you want endlaps, seek advice from your nearest **Safintra** office on the sequence of laying and the amount of overlap. When Maxcover is laid on slopes of 7.5 degrees or more, cut back the corner of the undersheet, at the downhill end of the sheet to block capillary action.

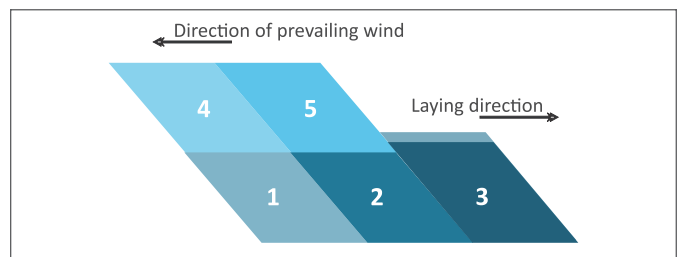
## INSTALLATION

The recommended roof fixing method for Maxcover profile is as shown in the figure below:



## FIXING PROCEDURE

Lay each run of sheets in turn from side to side before moving onto the next run as depicted below. Similar procedure for wall cladding too.



### Disclaimer:

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## PRODUCT DESCRIPTION & FEATURES

Covermax® is a box profile roofing sheet available in a variety of colours, suitable for domestic and light industrial or commercial application.

### Features and Benefits:

- Covermax is a trapezoidal profile with box crest and valleys suitable for roofing and wall cladding.
- It is especially targeted at domestic and light industrial/commercial applications where the goal is economy and aesthetics.
- Covermax has 4 troughs and 5 ribs. The valley (trough) is stiffened using two 25mm wide ribs.
- Covermax can be factory cranked into curves of minimum 400mm radius.

## PURLIN SPACINGS

Purlin Spacings are dependant on both downward loading and negative suction loading caused by wind. Your engineer should be consulted to calculate your load (kN/m<sup>2</sup>) for your particular application.

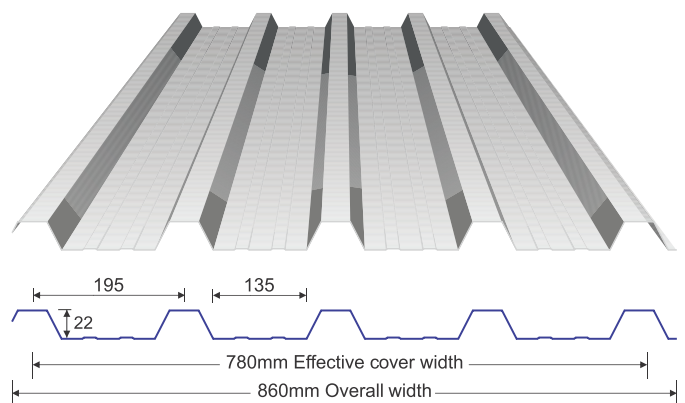


STEEL SHEETS SUPPORT SYSTEM			
TOTAL COATED THICKNESS (TCT) mm	MAXIMUM PURLIN SPACING IN METRES (m)		
	SIMPLY SUPPORTED (2 SUPPORTS)	CONTINUOUS SUPPORTS (3 SUPPORTS)	CONTINUOUS SUPPORTS (>3 SUPPORTS)
<b>ROOFS</b>			
0.25	0.5	0.6	0.7
0.32	0.6	0.8	0.9
0.40	0.8	1.0	1.1
0.50	0.9	1.1	1.2
0.60	1.0	1.3	1.4
<b>WALLS</b>			
0.25	0.7	0.8	0.9
0.32	0.8	1.1	1.2
0.40	1.0	1.3	1.4
0.50	1.2	1.5	1.6
0.60	1.3	1.6	1.8

RECOMMENDED END-LAPPING			
	SLOPE/PITCH	ENDLAP MIN. mm	ENDLAP MAX. mm
ROOFS	less than 15°	250	300
	Greater than 15°	200	250
WALLS		150	200

### Notes:

1. These spacings are indicated as a guide for information purposes only. The user should ensure to have a qualified professional work out the precise spacing specifications based on the design considerations unique to the project/site.
2. It is important to reduce the purlin spacings by 20% when spring curving a roof.



## COVERAGE CALCULATOR

To calculate the number of sheets (N) to cover a given area. Required, use the formula:  $N = W/0.780$  where; W is the linear width of the roof in metres and N is the number of sheets.

### Note:

During installation, clean the roof daily by removing all swarf, pop rivets and unused fasteners or any other debris.

## LENGTHS & ROOF PITCH

When using Covermax sheeting the recommended minimum pitch for roof slopes in excess of 15m is 10° and for slopes less than 15m is 7,5°. Covermax can be ordered in **custom** lengths, subject to transport limitations, up to 9m (min 0.4mm thickness. Lower thicknesses up to 6m max lengths.

## TOLERANCES

A length variation range of +/-5,0mm, and width tolerance of +/-3,0mm are permissible

## FASTENING

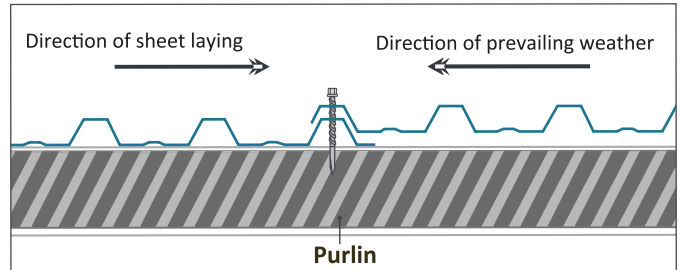
Covermax is pierce-fixed to timber or steel supports. This means that fastener screws pass through the sheeting. You can place screws for Covermax through the crests or in the valleys. To maximise water tightness, always place roof screws through the crest. For walling, you may use either crest or valley fixing. Always drive the screws perpendicular to the sheeting, and in the centre of the corrugation or rib. Don't place fasteners less than 25 mm from the ends of sheets.

The edge of Covermax with the anti-capillary groove is always the under-lap. It is generally considered good practice to use fasteners along side-laps however, when cladding is supported as indicated in purling spacings, side-lap fasteners are not usually needed for strength.

End-laps are not usually necessary because Covermax is available in long lengths. If you want endlaps, seek advice from **Safintra** office on the sequence of laying and the amount of overlap. When Covermax is laid on slopes of 7.5 degrees or more, cut back the corner of the undersheet, at the downhill end of the sheet to block capillary action.

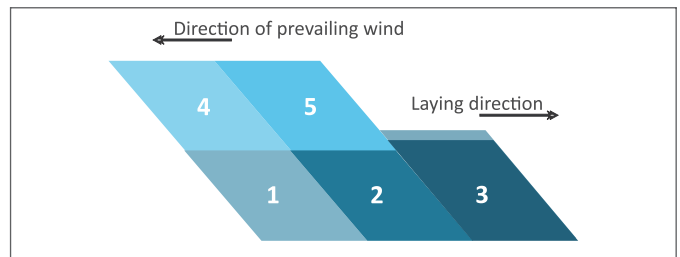
## INSTALLATION

The recommended roof fixing method for Covermax profile is as shown in the figure below:



## FIXING PROCEDURE

Lay each run of sheets in turn from side to side before moving onto the next run as depicted below. Similar procedure for wall cladding too.



### Disclaimer:

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## PRODUCT DESCRIPTION & FEATURES

Resincot® is a unique brand that offers an Aluminium- Zinc coated steel base which is pre-painted in controlled factory conditions. Resincot features over 7 different colours. The Aluminium-Zinc coated base offers an extremely long life.

## PURLIN SPACINGS

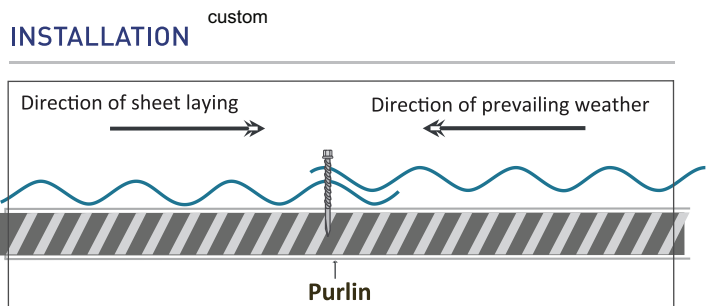
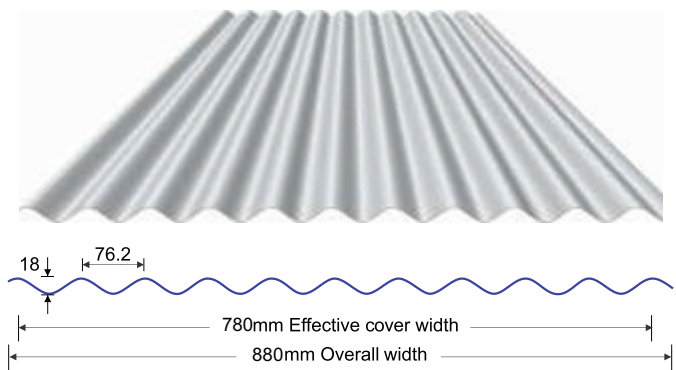
Purlin Spacings are dependant on both downward loading and negative suction loading caused by wind. Your engineer should be consulted to calculate your load (kN/m<sup>2</sup>) for your particular application.

STEEL SHEETS SUPPORT SYSTEM			
TOTAL COATED THICKNESS (TCT) mm	MAXIMUM PURLIN SPACING IN METRES (m)		
	SIMPLY SUPPORTED (2 SUPPORTS)	CONTINUOUS SUPPORTS (3 SUPPORTS)	CONTINUOUS SUPPORTS (>3 SUPPORTS)
<b>ROOFS</b>			
0.25	0.5	0.6	0.7
0.32	0.6	0.7	0.8
0.40	0.8	0.9	1.0
0.50	0.7	0.9	1.1
0.60	0.9	1.1	1.3
<b>WALLS</b>			
0.25	0.6	0.7	0.8
0.32	0.8	1.0	1.2
0.40	1.0	1.2	1.4
0.50	1.2	1.4	1.5
0.60	1.3	1.5	1.7

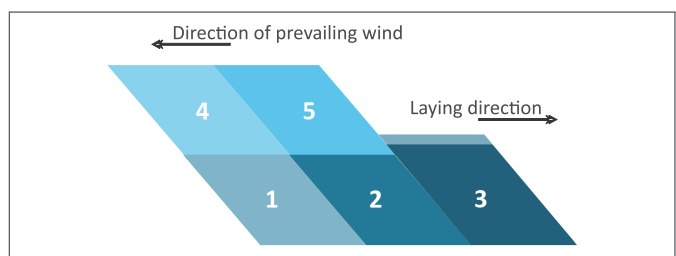
RECOMMENDED END-LAPPING			
	SLOPE/PITCH	ENDLAP MIN. mm	ENDLAP MAX. mm
ROOFS	less than 15°	250	300
	Greater than 15°	200	250
WALLS		150	200

### Notes:

1. These spacings are indicated as a guide for information purposes only. The user should ensure to have a qualified professional work out the precise spacing specifications based on the design considerations unique to the project/site.
2. It is important to reduce the purlin spacings by 20% when spring curving a roof.



Lay each run of sheets in turn from side to side before moving onto the next run as depicted below. Similar procedure for wall cladding too.



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# DUMUZAS

## PRODUCT DESCRIPTION & FEATURES

Dumuzas® is a revolutionary brand made from high tensile steel that has a protective coating of Aluminium-Zinc, resulting in a product with an extremely long life. Now with extra thin organic coating (TOC). The New Dumuzas has increased durability and a beautiful silver finish. It has a corrugated profile with 11 ribs and a pitch (distance between ribs) of 76.2mm. It is mainly used for roofing and walling in domestic applications.

It comes with matching accessories for a complete roofing solution.

## PURLIN SPACINGS

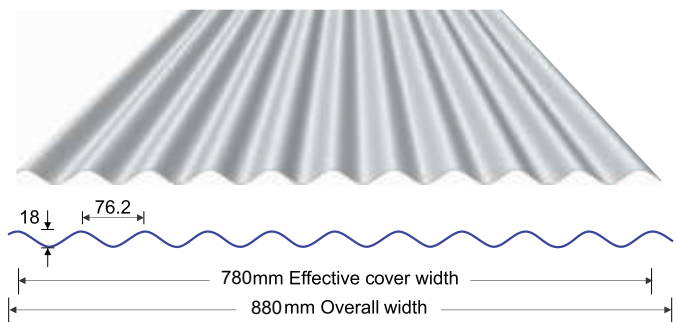
Purlin Spacings are dependant on both downward loading and negative suction loading caused by wind. Your engineer should be consulted to calculate your load (kN/m<sup>2</sup>) for your particular application.



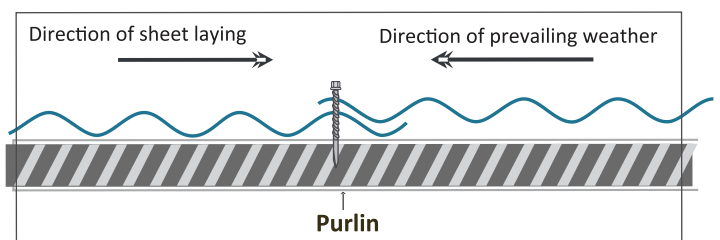
### Notes:

1. These spacings are indicated as a guide for information purposes only. The user should ensure to have a qualified professional work out the precise spacing specifications based on the design considerations unique to the project/site.
2. It is important to reduce the purlin spacings by 20% when spring curving a roof.

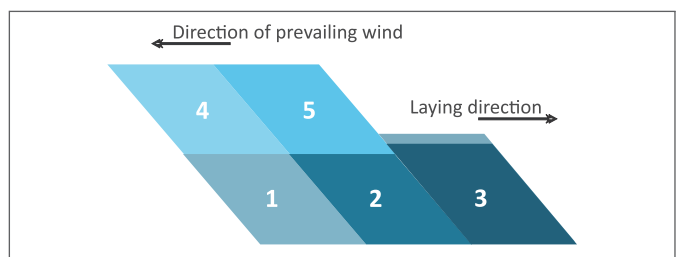
STEEL SHEETS SUPPORT SYSTEM			
TOTAL COATED THICKNESS (TCT) mm	MAXIMUM PURLIN SPACING IN METRES (m)		
	SIMPLY SUPPORTED (2 SUPPORTS)	CONTINUOUS SUPPORTS (3 SUPPORTS)	CONTINUOUS SUPPORTS (>3 SUPPORTS)
<b>ROOFS</b>			
0.20	0.4	0.5	0.6
0.25	0.5	0.6	0.7
0.32	0.6	0.7	0.8
0.40	0.8	0.9	1.0
0.50	0.7	0.9	1.1
0.60	0.9	1.1	1.3
<b>WALLS</b>			
0.20	0.5	0.6	0.7
0.25	0.6	0.7	0.8
0.32	0.8	1.0	1.2
0.40	1.0	1.2	1.4
0.50	1.2	1.4	1.5
0.60	1.3	1.5	1.7



## INSTALLATION



Lay each run of sheets in turn from side to side before moving onto the next run as depicted below. Similar procedure for wall cladding too.



RECOMMENDED END-LAPPING			
	SLOPE/PITCH	ENDLAP MIN. mm	ENDLAP MAX. mm
<b>ROOFS</b>	less than 15°	250	300
	Greater than 15°	200	250
<b>WALLS</b>		150	200

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# SAFLOK 700

## concealed fix roofing

### PRODUCT DESCRIPTION & FEATURES

Concealed-fix roofing, also referred to as secret fix, is designed for very low pitched roofs. Because clips under the sheet hold it down, the sheet is not punctured with fasteners, and remains completely watertight even at a very low slope. The securing clips are pre-fixed into the purlins and the sheet is mechanically snapped onto the clip.

A concealed fix sheet can also expand and contract over the clips as the temperature changes, this system is ideal for long spans on industrial, commercial and retail buildings.

The Saflok 700® concealed fix roofing system is an interlocking trapezoidal rib profile that can be rolled on site in lengths of up to

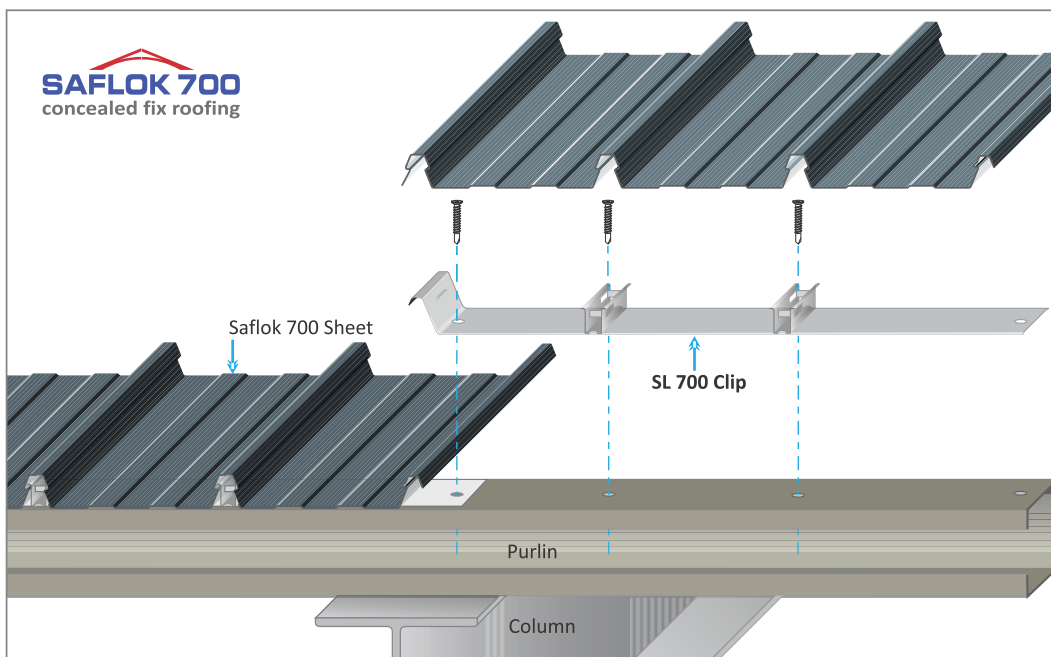
120 metres.

Saflok 700® may be rolled in Aluminium - Zinc coated steel, (bare or colour coated) or Aluminium (Mill Finish or G4 Colortech).

On high slope roofs, the aesthetics of Saflok may be affected by occasional oil canning in the pans. This becomes visually apparent on slopes greater than 5 degrees, as the roof material becomes increasingly visible. It does not affect the structural integrity of the sheet in any way, and Safintra will not entertain claims made for oil canning.

Saflok 700® can be curved or bullnosed to a minimum internal radius of 450mm - 500mm. Reverse cranking is not possible.

Further information available on request.

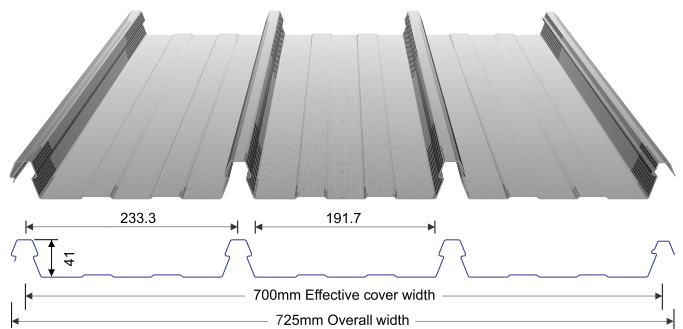


### SAFLOK 700 CLIP



The fully interlocking SAFLOK 700 clip incorporates two anchors to clasp the two inner ribs and a dual action component to positively hold down the male-female joint.

1. Stiffener ribs on 1mm baseplate add formidable strength, specifically over the goose-neck
2. The clip's male hooks allow for full width engagement on the profile's female goose-neck grooves
3. The clips have 4 fastening points along their length for stability, particularly over blanket insulation
4. The geometry of the anchor unit is engineer-designed for optimal performance under high wind load and foot traffic
5. The entire clip is manufactured from 1mm high-tensile GI or AZ coated steel for strength and compatibility with sheeting



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## SAMPLE SPECIFICATION

Safintra 0,50mm thick SAFLOK 700 Colorplus® AZ150 interlocking roof sheeting fixed to steel internal purlins at 2000mm, and ridge/eaves purlins at 1700mm centres using SAFLOK 700 clips which must be screw fixed to steel purlins with Fixtite® or Safintra approved wafer head self-tapping screws. The sheeting will be a double interlocking concealed fix SAFLOK 700 profile as manufactured by Safintra, roll formed in continuous lengths from certified G550 steel or aluminium 3004 H14. The profile shall be roll formed with 4 ribs and centres not exceeding 233mm and a cover width not exceeding 700mm. The male rib is to include spurs to ensure a double interlocking action with adjacent sheets. The minimum sheet depth will be 41mm. Two stiffening ribs are incorporated in each pan.

## PURLIN SPACINGS

GAUGE	0.4mm	0.5mm	0.6mm
MATERIAL	ALUMINIUM-ZINC	ALUMINIUM-ZINC	ALUMINIUM
ROOFS	mm	mm	mm
Single Span	1 400	1 700	1 400
End Span	1 600	1 900	1 500
Internal/Double Span	1 800	2 100	2 000
Cantilever (Unstiffened)	150	150	180
Cantilever (Stiffened)	350	300	380
SIDE CLADDING			
Single Span	2 100	2 300	1 600
End Span	2 400	2 600	2 200
Internal Span	2 600	2 700	2 400
Cantilever	300	400	300
Approximate Mass/m <sup>2</sup>	5.2kg	6.2kg	2.9kg

Saflok 700 clips are calculated at 330g per clip - require approximately 1.5 clips per m<sup>2</sup>.

Span tables are for SAFLOK 700 with light foot traffic only. Span tables are based on 1.5kN downward point load, and 1.6kPa upward pressure. The span tables are maximum recommended spans based on buildings up to 10m high for a basic design wind speed of 28m/s, Terrain Category C.

For further clarity on terrain categories, and wind speeds, please refer to the Safal Group Design and Installation Manual (specifically pages 5,6 and 10,11).

**Note:**

It is important to reduce purlin spacings by 20% when spring curving a roof.



## LENGTHS & ROOF PITCH

SAFLOK 700 can be ordered in any practical length as per customer requirements. On site rolling is recommended for lengths in excess of 13 metres. The minimum roof pitch when using SAFLOK 700 is 2° on steel and 3° on wood.

## DRAINAGE TABLE

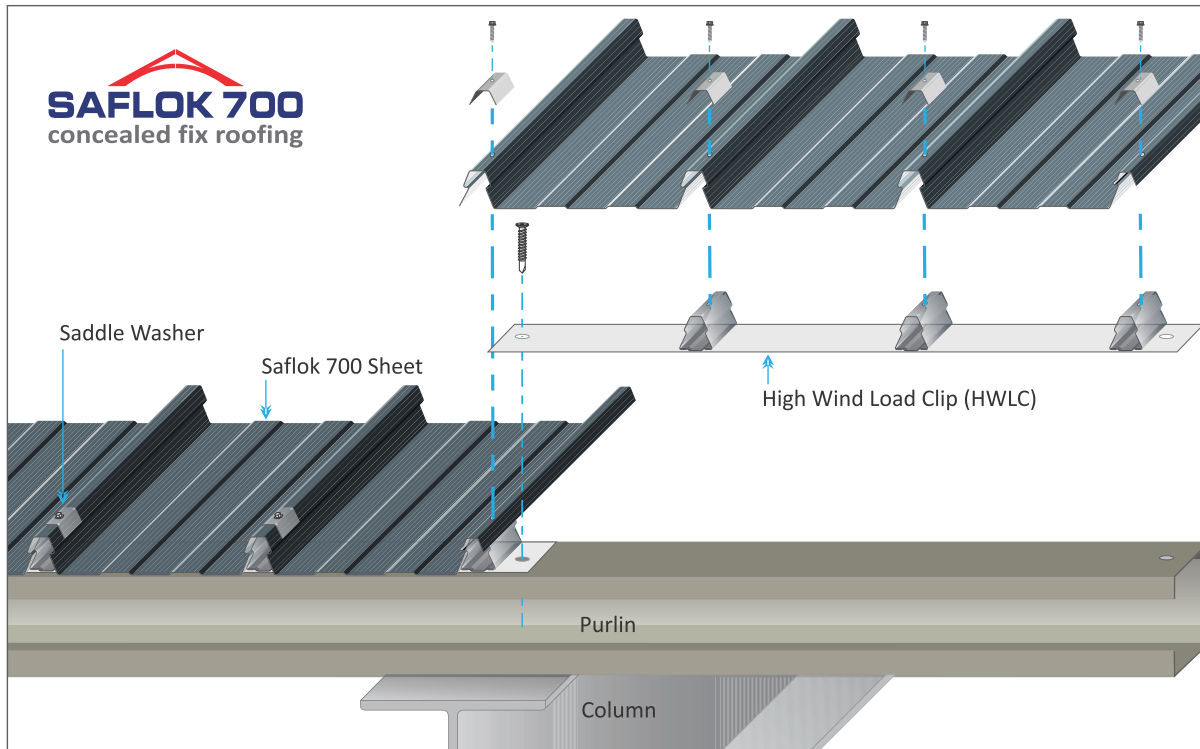
DRAINAGE TABLE	ROOF SLOPE				
RAINFALL INTENSITY MM/HOUR	2°	3°	5°	8°	10°
250	75	90			
300	65	75	95		
400	50	55	70	80	90
500	40	45	55	65	70

Maximum roof run for roof slopes and rainfall intensities shown.



### HIGH WIND LOAD INSTALLATION DETAILING (HIGH WIND ZONES AND COASTAL WIND BELTS)

The installation process for using the High Wind Load System (HWLS) is a pierced fix method. The High Wind Load System is recommended for terrain categories A & B, (For reference on terrain categories, please refer to the Safal Group Design & Installation Manual). Note that the HWLS is not a concealed fix system, and is therefore recommended only for the perimeter and/or overhang areas of the building. Buildings taller than 10m would also require special design attention and the use of the HWLS.



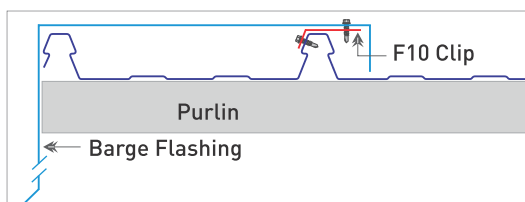
**Step 1.** Starting with the female rib first, align first sheet and hold down.

**Step 2.** Place saddle washers over the first 3 ribs above the purlins (starting from the female rib side). Align, and fasten the saddle washers through the rib using an appropriate Fixtite® or Safintra approved fastener.

**Step 3.** Position the next sheet, engaging the female rib firmly over the male rib of the previous sheet. Repeat step 2.

**Note:** The bonded washer can only be fixed from the top.

### F10 BRACKET FOR FLASHINGS



**Note:** this clip is positively fixed. Care should be taken when detailing industrial-length sheeting and flashing due to thermal expansion.

Safintra recommends the use of a Flashing Slider Clip for very long sheets. Please consult our Technical Department for assistance.

## SPECIALISED FIXING ACCESSORIES

### POLYSLIDER CLIP

For use with Saflok polycarbonate sheeting. Must be installed with saddle washer.

Polycarbonate sheets must be positively fixed - consult our technical department for advice.



### FASTENERS

Where insulation is to be installed, you may need to increase the length of the fasteners given below, depending on the density and thickness of the insulation. When the fastener is properly tightened:

- into metal: there should be at least three threads protruding past the purlin you are fixing to, but the shankguard must not reach that purlin.
- into timber: the fastener must penetrate the timber by the same amount that the recommended fastener would do if there were no insulation.

### CRANKING

SAFLOK 700 sheets may be cranked and bullnosed but not reverse bullnosed. Minimum radius is 450mm. On-site cranking is available on request.

### CURVING

Natural springing occurs at 36m radius in the convex and 60m radius in the concave. It is important to reduce purlin spacings by 20% when spring curving a roof.

## ROLLING STRAIGHT ONTO A ROOF

It is possible to rollform straight onto a roof using a scaffold ramp. The limitations are the building height and space needed to roll. A departure angle of 10° is the maximum allowed at any time. A greater angle would damage the sheet when leaving the mill and again when bending to settle onto the roof. The sheeting cannot be roll formed onto a building higher than 10m.

## SEALED JOINTS

For sealed joints use fasteners or rivets and neutral-cure silicone sealant branded as suitable for use with AZ steel.



#### Disclaimer:

- Care has been taken to ensure that the information provided is accurate. Safintra does not assume responsibility for inaccuracies or misinterpretations of this data.
- Safintra is continuously engaged in product development, please ensure that you have the most recent issue of information from Safintra.
- Photographs and illustrations are typical examples of roofing and cladding products and applications.

# NEWLOK

## standing seam roofing

### CONCEALED FIX ROOFING INTRODUCTION

Saflok and Newlok (unseamed) are both concealed fix or secret fix profiles as the anchoring system is not visible, which provides unrestrained thermal expansion or contraction.

The difference between concealed fix and standing seam (Newlok) is that the Newlok profile can be seamed either mechanically or by hand, giving it additional wind uplift strength.

Concealed fix roofing (also referred to as secret fix), is designed for very low pitched roofs. Because clips under the sheet hold it down, the sheet is not punctured with fasteners, and remains completely watertight even at a very low slope. The securing clips are fixed over the male rib of the previous sheet and fastened to the purlins, and the female rib of the next sheet is mechanically snapped over the clip.

As a concealed fix sheet can also expand and contract with the clips as the temperature changes, this system is ideal for long spans on industrial and commercial buildings.

### CLIPPING SYSTEM

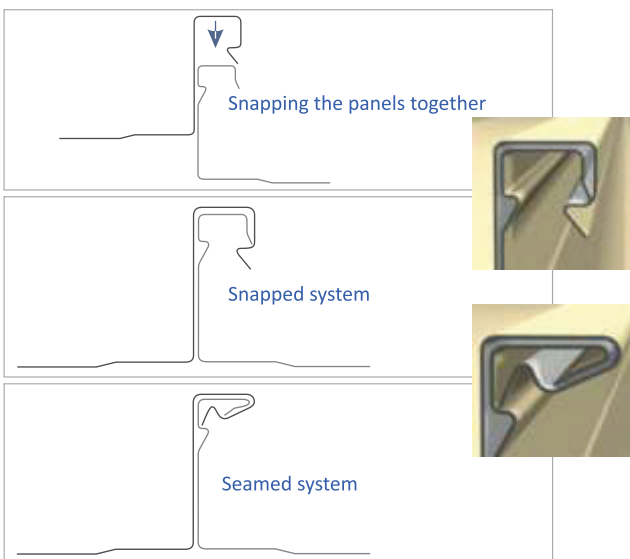
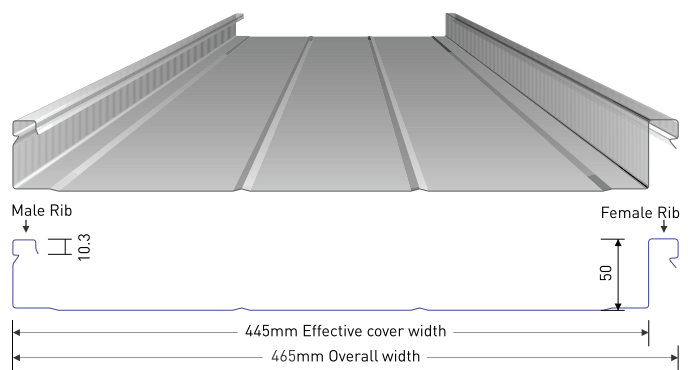
The NEWLOK clip incorporates a two-part component to positively hold down the male-female joint on every rib. It also incorporates a sliding halter to allow for thermal movement.

\*Seaming is recommended for Industrial and Commercial applications. For residential purposes, a snapped configuration is adequate due to reduced loadings.

### NEWLOK PRODUCT DESCRIPTION

NEWLOK is a concealed fix, standing seam sheet profile with an effective cover width of 445mm, and a height of 50.8mm. It is designed for use on low pitched roofs and can withstand high wind conditions and has commercial, industrial and residential applications.

NEWLOK'S unique interlocking clipping system incorporates a concealed clip to positively hold down the male-female joint at every rib. The profile is usually roll formed on mobile mills on the building site, in lengths of up to 120m. The two-part clip allows for natural thermal expansion and contraction of the sheet, and the 50mm rib height delivers optimal water shedding capabilities at slopes as low as 1.5 degrees.



### NEWLOK FEATURES AND BENEFITS

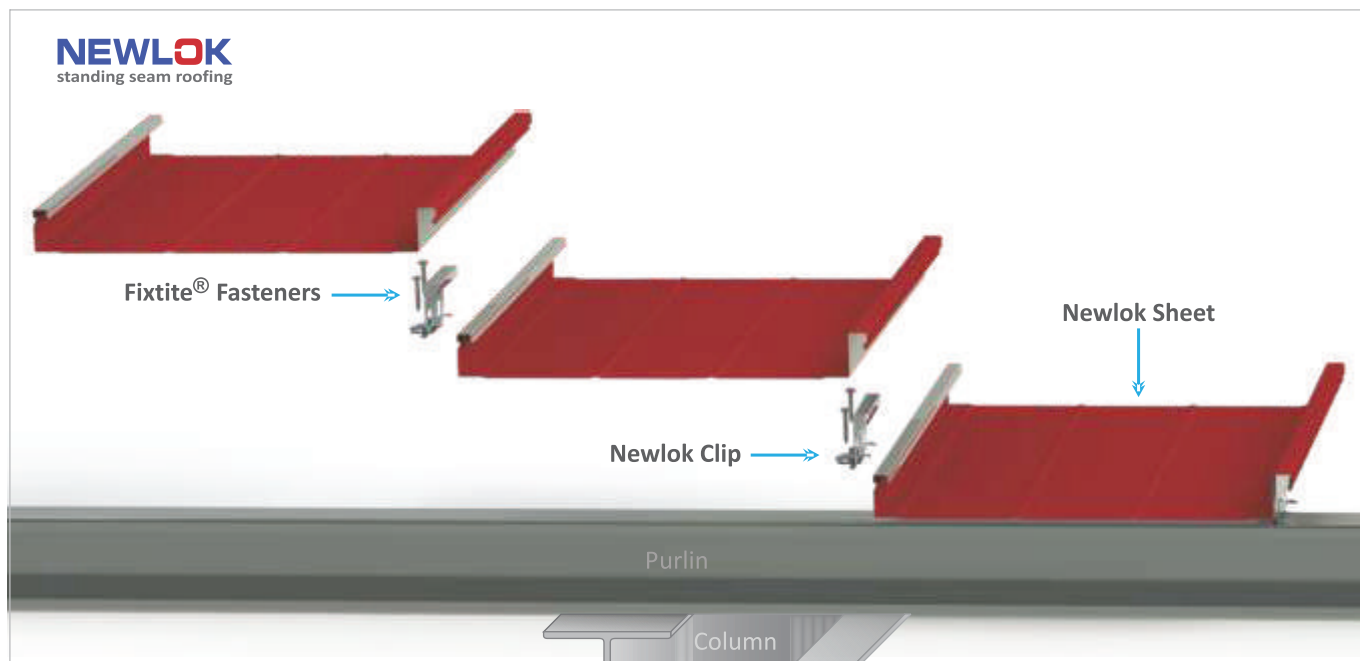
- Unique profile offers either a snap-together or a snap-and-seam interlocking mechanism for optimum wind stability
- Exceptional hold down strength, in excess of 3kPa hold down on negative wind uplift on the seamed profile
- Interlocking system allows natural thermal expansion and contraction, without unclipping between purlin supports
- Concealed fasteners provide increased security, as roof sheets cannot easily be removed from the outside

A member of the



# NEWLOK

standing seam roofing



## PURLIN SPACINGS

Purlin Spacing is dependant on both downward loading and negative suction loading caused by wind. Your engineer should be consulted to calculate your load (kN/m<sup>2</sup>) for your particular application.

Span tables are for NEWLOK with light foot traffic only. Span Tables are based on 1.5kN downward pressure, 1.6kPa upward pressure and 0.75kPa for the side cladding, inward or outward.

The span tables are for a maximum of recommended spans based on buildings up to 10m high in medium wind zone, Terrain Category B. (See Safal Group Design & Installation Manual)

### ROOFS:

C<sub>pi</sub>=+0.20, C<sub>pe</sub>=-0.90, K<sub>L</sub>=2.0 for single and end spans, K<sub>L</sub>=1.5 for internal Spans.

### WALLS:

C<sub>pi</sub>=-0.20, C<sub>pe</sub>=-0.65, K<sub>L</sub>=2.0 for single and end spans, K<sub>L</sub>=1.5 for internal Spans. These spacings may vary by serviceability and strength limit stated for particular projects.

	WIND LOADING		POINT LOAD		GAUGE		
	*ASTE 1592-01				0.5mm	0.55mm	0.8mm
MATERIAL	0.55mm Negative wind pressure (Unfactored)	0.55mm Negative wind pressure <sup>†</sup>	0.55mm Live point load (Unfactored)	0.55mm Live point load <sup>‡</sup>	ALUMINIUM-ZINC	ALUMINIUM-ZINC	ALUMINIUM
ROOFS	kPa	kPa		kN	mm	mm	mm
End Span	3.597	2.767		1.5	1 300	1 600	900
Internal/Double Span	3.284	2.526		1.5	1 500	1 800	1 400
Cantilever (Unstiffened)	-	-		-	150	150	100
Cantilever (Stiffened)	-	-		-	300	300	200
SIDE CLADDING							
Single Span	3.027	2.329		-	1 700	2 000	1 400
End Span	2.916	2.243		-	1 800	2 100	1 600
Internal Span	2.548	1.960		-	2 100	2 500	1 900
Cantilever	-	-		-	300	300	300
Approximate Mass/m <sup>2</sup>	-	-		-	5.4kg	6.2kg	2.9kg

NEWLOK clips are calculated at 110g per clip - require approximately 3 clips per m<sup>2</sup>.

<sup>†</sup>Factored ultimate loading (SANS 10237 - reduction factor of 1.3)

### Note:

It is important to reduce purlin spacings by 20% when spring curving a roof.

A member of the



## SAMPLE SPECIFICATION

NEWLOK, roll-formed in 0.50mm Colorplus® AZ150, and snap-locked or snap-locked and seamed roof sheeting, fixed to steel internal purlins at 1500mm, and steel ridge/eaves purlins at 1300mm centres using NEWLOK clips which must be screw fixed to purlins with Fixtite® or Safintra approved wafer head self-tapping screws, all in accordance with manufacturer's recommendations.

The roof sheeting shall be manufactured by Safintra, roll-formed in continuous lengths and cut to length from Aluminium-Zinc coated steel.

The profile shall be roll formed with 2 ribs of 50.8mm and a cover width of 445mm. Two stiffening ribs shall be incorporated in the pan.

## LENGTH

With the aid of a mobile rolling mill, custom lengths can be rolled on-site. To date the longest continuous sheets have been in the region of 130m long. Off-site rolled sheets are cut to transportable lengths (approximately 12m).



Mechanical Seamer



NEWLOK Mobile Mill



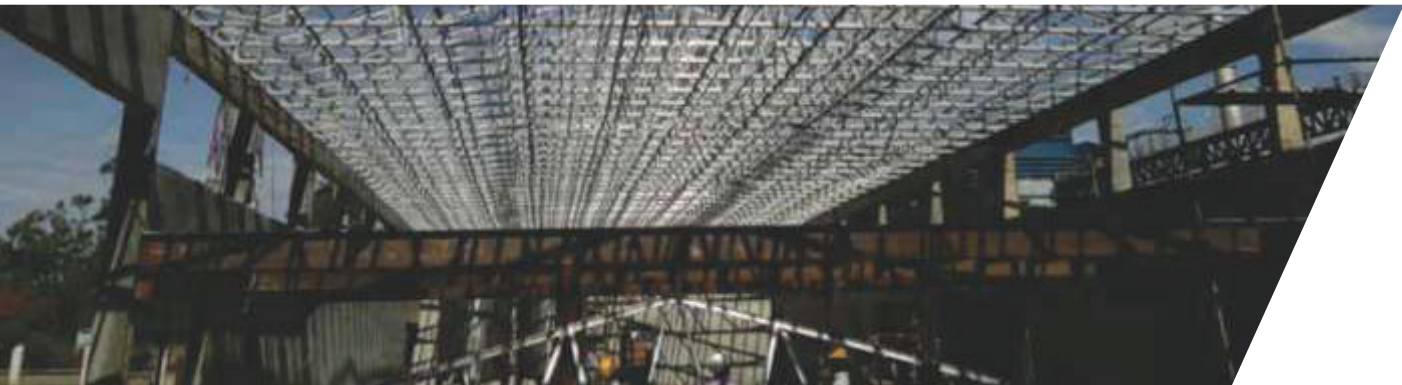
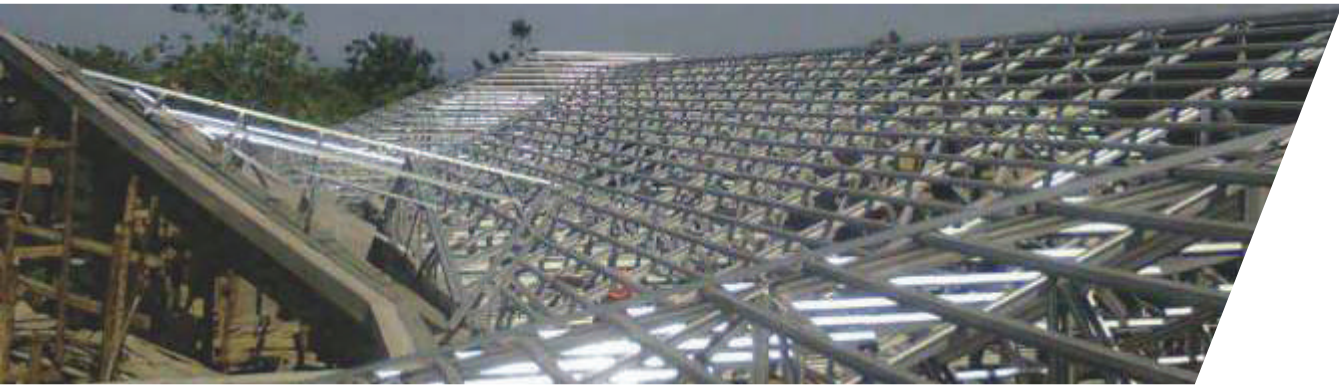
90° Hand Crimper

AVAILABLE TESTING	DESCRIPTION	RESULT
ASTM E-1592	1 Foot and 5 Foot Wind Test	The max. sustained test pressure was -3.735kPa for 1 foot & -12.942kPa for 5 foot.
ASTM E-1680	Air Leakage Test	Air Infiltration @ 7.665kPa has leakage of 2.631 x 10 <sup>-6</sup> m <sup>3</sup> /min per m <sup>2</sup> & 0.017m <sup>3</sup> /min per m. Air Infiltration @ 30.466kPa has leakage of 5.261 x 10 <sup>-6</sup> m <sup>3</sup> /min per m <sup>2</sup> & 0.026 x 10 <sup>-3</sup> m <sup>3</sup> /min per m.
ASTM E-1646	Water Penetration Test	Water penetration @ 30.466kPa has no water leakage.
FM 4471	Foot Traffic Test (Pending)	Results Pending.



LIGHT GAUGE STEEL TRUSS SYSTEM

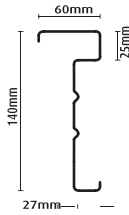
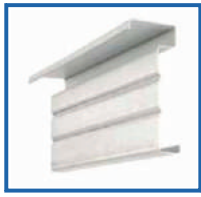
**OVER**  
**850,000 SQM**  
**INSTALLED**  
.....  
ACROSS EAST AFRICA



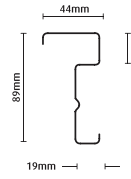
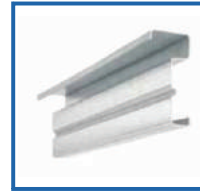
Ultra Span is sold under licence by:  
**Safal Building Systems Ltd.**, a group company of Safintra Rwanda Ltd.  
Creating the Advantage in Steel Roofing Solutions...

A member of the

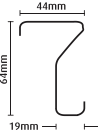
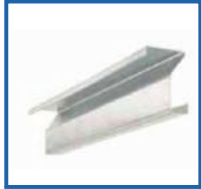




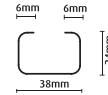
**CHORDS**  
USC140 x 1.0, 1.2 or 1.6 mm Steel  
(Suitable for large spans/girders)  
Weight Kg/m  
Approx: 2.07, 2.49 & 3.34 Kg/m respectively



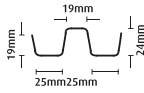
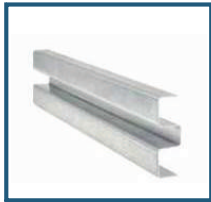
**CHORDS**  
USC89 x 1.0, 1.2 Steel  
89 mm in 1.0 mm or 1.2 mm Steel  
Weight Kg/m  
Approx: 1.42 & 1.69 Kg/m respectively



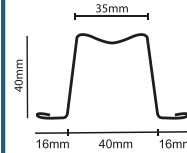
**CHORDS**  
USC64 x 0.8 or 1.0 mm Steel  
64 mm Chord in 0.8 mm or 1.0 mm Steel  
Weight Kg/m  
Approx: 0.91 & 1.13 Kg/m respectively



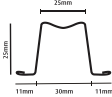
**WEBS**  
USW38 x 0.8 or 1.0mm Steel  
38 mm web in 0.8 mm or 1.0 mm Steel  
Weight Kg/m  
Approx: 0.56 & 0.70 Kg/m respectively



**WEBS**  
USW76 x 0.8 or 1.0 or 1.2 or 1.6 mm  
76 mm Web in 0.8 mm, 1.0 mm, 1.2 mm & 1.6 mm Steel  
Weight Kg/m  
Approx: 0.90, 1.12, 1.35 & 1.8 Kg/m respectively



**HAT CHANNEL**  
40 x 0.5 mm  
Weight Kg/m  
Approx: 0.6 Kg/m



**BATTEN**  
25 x 0.5 mm  
Weight Kg/m  
Approx: 0.42 Kg/m



**KING POST**



**APEX JOINT**

**BASIC TOOLS REQUIRED FOR FABRICATION.**







**TRUSS TO TRUSS CONNECTIONS**



**STEEL PURLIN/BATTEN**



**STEEL PURLINS ON TIMBER ROOF**



**CEILING BRANDING OPTIONS**



**STEEL PURLIN/BATTEN**



## TYPICAL FACT PROFILE

Optimum design has truss centres suitable for all kinds of roofing like clay tiles, steel tiles, thatched roof, steel profiled sheeting, asbestos sheeting etc



*Saves Cost*



*Saves Construction Time*



*Environmental Friendly*



*Recyclable*



*High Accuracy*

## Application

- Residential, Commercial & Industrial buildings
- Warehouses/Godowns
- Churches
- Schools
- Health Centres
- Affordable Houses
- Kiosks
- Sports facilities/Stadiums
- Petrol Stations
- Exhibition Centres
- Cargo handling & Storage Complexes
- Shopping Centres/Malls
- Temporary Site offices



**ULTRA-SPAN®**  
LIGHT GAUGE STEEL TRUSS SYSTEM

## ADVANTAGES

- Fire resistant
- Light weight
- High strength
- Minimal wastage
- Pre-engineered for accurate installation
- Form work not needed for erection
- Environment friendly/recyclable
- Fungus borer and termite resistant
- Lower builders risk and therefore insurance costs
- Reduces costs, improves handling and erection
- Shorter construction time than typical steel frames
- Can be supplied in kit form for remote projects
- Light gauge steel frames weigh approximately 25% less than timber
- Non-shrinking and non-creeping at ambient temperature
- Longer life due to pre-coating
- No anti corrosive painting required



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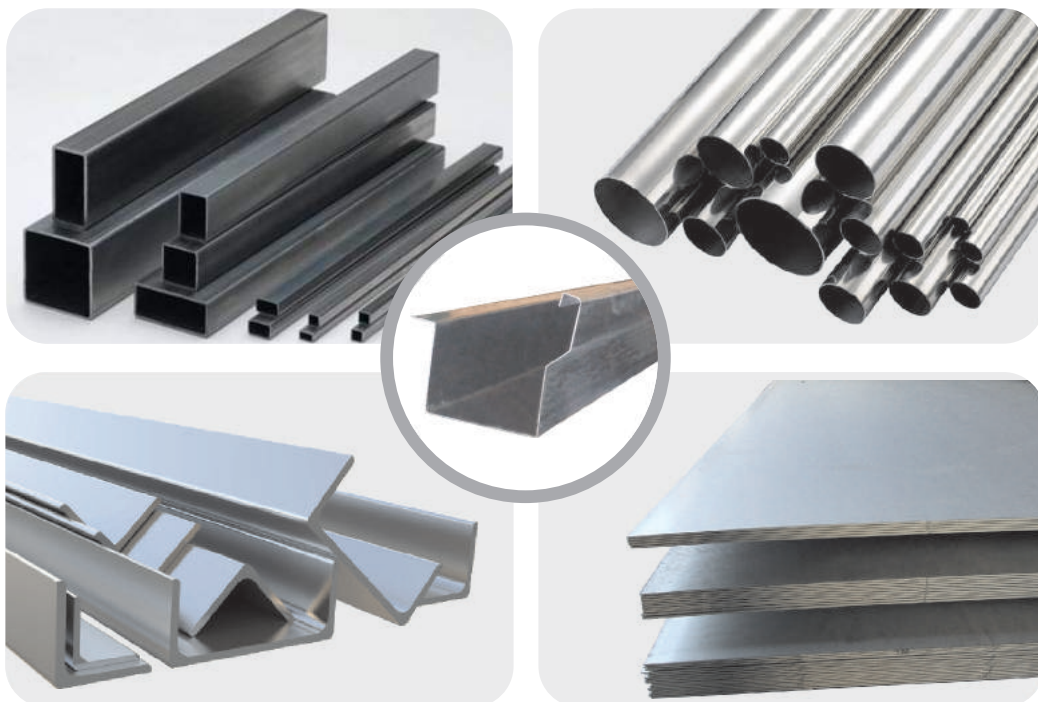


## Cold Formed Steel Sections

SIMBACHUMA cold-formed steel sections commonly known as Hollow Sections / Round Tubes confirm to Rwanda Standards Boards specifications. The Hollow Sections and Round Tubes are manufactured at our Group companies in Kenya and Tanzania. The sections are manufactured a tube mill using high frequency induction welding technology. The strip is seam welded while round in shape and then gradually brought to the desired section in the sizing mill. The weld seam is put to a great amount of cold working while being sized. Each section passes through multiple stages of Quality testing.

Areas of Application: Fabrication, Construction, Furniture etc.

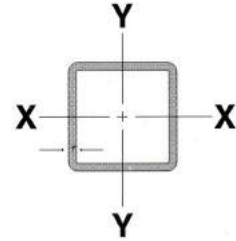
Length: Standard size - 6.0 Mtrs (Custom length can also be supplied for special orders).



# SIMBACHUMA<sup>TM</sup>

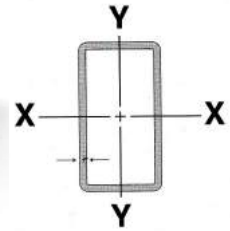
## PREMIUM STEEL PIPES & SECTIONS

### SQUARE HOLLOW SECTIONS



SIZE	THICK NE SS	WEIGHT	PIECE /M.T	SECT. AREA	MOMENT OF INERTIA		RADIU S OF GYRATION		SECTION MODULU S	
					ly(cm <sup>4</sup> )	ly(cm <sup>4</sup> )	ix(cm)	iy(cm)	zx(cm <sup>3</sup> )	zy(cm <sup>3</sup> )
mm	mm	kg/m		(cm <sup>2</sup> )						
12x12	1.0	0.37	450	0.44	0.08	0.08	0.45	0.45	0.12	0.12
	1.2	0.41	407	0.52	0.10	0.10	0.44	0.44	0.17	0.17
	1.5	0.49	340	0.63	0.11	0.11	0.43	0.43	0.18	0.18
16x16	1.0	0.46	362	0.60	0.22	0.22	0.61	0.61	0.27	0.27
	1.2	0.56	298	0.71	0.26	0.26	0.60	0.60	0.32	0.32
	1.5	0.68	245	0.87	0.30	0.30	0.59	0.59	0.38	0.38
20x20	1.0	0.61	273	0.76	0.46	0.46	0.78	0.78	0.46	0.46
	1.2	0.71	235	0.90	0.53	0.53	0.77	0.77	0.53	0.53
	1.5	0.87	192	1.11	0.64	0.64	0.76	0.76	0.64	0.64
	2.0	1.13	147	1.44	0.79	0.79	0.74	0.74	0.79	0.79
25x25	1.0	0.80	208	0.96	0.92	0.92	0.98	0.98	0.74	0.74
	1.2	0.90	185	1.14	1.08	1.08	0.97	0.97	0.86	0.86
	1.5	1.11	150	1.41	1.30	1.30	0.96	0.96	1.04	1.04
	2.0	1.44	116	1.84	1.63	1.63	0.94	0.94	1.30	1.30
	3.0	2.07	81	2.64	2.17	2.17	0.90	0.90	1.74	1.74
30x30	1.0	0.93	179	1.16	1.63	1.63	1.18	1.18	1.08	1.08
	1.2	1.08	154	1.38	1.91	1.91	1.17	1.17	1.27	1.27
	1.5	1.34	124	1.71	2.32	2.32	1.16	1.16	1.55	1.55
	2.0	1.75	95	2.24	2.94	2.94	1.14	1.14	1.96	1.96
	3.0	2.54	66	3.24	3.99	3.99	1.10	1.10	2.66	2.66
40x40	1.2	1.46	114	1.86	4.67	4.67	1.58	1.58	2.34	2.34
	1.5	1.81	92	2.31	5.71	5.71	1.57	1.57	2.86	2.86
	2.0	2.39	70	3.04	7.34	7.34	1.55	1.55	3.67	3.67
	3.0	3.48	48	4.44	10.20	10.20	1.51	1.51	5.10	5.10
50x50	1.5	2.28	73	2.91	11.42	11.42	1.98	1.98	4.57	4.57
	2.0	3.01	55	3.84	11.77	11.77	1.96	1.96	5.91	5.91
60x60	2.0	4.43	38	5.64	20.85	20.85	1.92	1.92	8.34	8.34
	3.0	5.37	31	6.84	37.14	37.14	2.33	2.33	12.38	12.38
	4.0	7.03	24	8.96	47.07	47.07	2.29	2.29	15.69	15.69
75x75	2.0	4.58	36	5.84	51.91	51.91	2.98	2.98	13.84	13.84
	3.0	6.78	25	8.64	74.78	74.78	2.94	2.94	19.94	19.94
	4.0	8.92	19	11.36	95.75	95.75	2.90	2.90	25.53	25.53
	6.0	13.00	13	16.56	132.40	132.40	2.83	2.83	35.31	35.31
100x100	2.0	6.15	27	7.84	125.54	125.54	4.00	4.00	25.11	25.11
	3.0	9.14	18	11.64	182.71	182.71	3.96	3.96	36.54	36.54
	4.0	12.18	14	15.36	236.43	236.43	3.92	3.92	47.27	47.27
	6.0	17.71	9	22.56	333.59	333.59	3.85	3.85	66.72	66.72
125x125	3.0	11.49	15	14.60	363.00	363.00	4.98	4.98	58.14	58.14
	4.0	15.20	11	19.36	473.00	473.00	4.94	4.94	75.67	75.67
	6.0	22.42	7	28.56	676.00	676.00	4.86	4.86	108.12	108.12
150x150	3.0	13.85	12	16.64	636.00	636.00	6.00	6.00	84.74	84.74
	4.0	18.34	9	23.36	831.00	831.00	5.96	5.96	110.74	110.74
	6.0	27.13	6	34.56	1196.00	1196.00	5.88	5.88	159.53	159.53
175x175	4.0	21.48	8	27.36	1334.00	1334.00	6.98	6.98	152.47	152.47
	6.0	31.84	5	40.56	1933.00	1933.00	6.90	6.90	220.93	220.93
200x200	4.0	24.62	7	31.36	2009.00	2009.00	8.00	8.00	200.87	200.87
	6.0	36.55	5	46.56	2923.35	2923.35	7.92	7.92	292.33	292.33

### RECTANGULAR HOLLOW SECTION



**RECTANGULAR HOLLOW SECTIONS**

SIZE mm	THICK NESS mm	WEIGHT kg/m	PIECE /M.T	SECT. AREA (cm <sup>2</sup> )	MOMENT OF INERTIA		RADIUS OF GYRATION		SECTION MODULUS	
					ly (cm <sup>4</sup> )	ly (cm <sup>4</sup> )	ix (cm)	iy (cm)	ZX (Cm <sup>3</sup> )	ZY (Cm <sup>3</sup> )
40x20	1.2	1.08	154	1.38	2.87	0.96	1.44	0.83	1.44	0.96
	1.5	1.40	119	1.71	3.49	1.15	1.43	0.83	1.75	1.15
	2.0	1.76	95	2.24	4.44	1.44	1.14	0.80	2.22	1.43
40x25	1.2	1.18	141	1.50	3.32	1.59	1.49	1.03	1.66	1.27
	1.5	1.46	114	1.86	4.04	1.73	1.47	1.01	2.02	1.54
	2.0	1.91	87	2.44	5.17	2.43	1.45	0.99	2.59	1.94
	3.0	2.78	60	3.54	7.11	3.26	1.42	0.96	3.59	2.61
50x25	1.2	1.37	122	1.74	4.73	1.93	1.81	1.05	2.29	1.54
	1.5	1.69	99	2.15	7.00	2.43	1.80	1.04	2.80	1.87
	2.0	2.23	75	2.84	9.00	2.96	1.78	1.02	3.60	2.37
	3.0	3.25	51	4.14	12.55	3.99	1.74	0.96	5.02	3.19
60x40	1.2	1.84	91	2.34	12.12	6.48	2.27	1.66	4.04	3.24
	1.5	2.28	73	2.90	14.89	7.93	2.26	1.65	4.96	3.96
	2.0	3.01	55	3.83	19.31	10.22	2.24	1.63	6.43	5.11
	3.0	4.43	38	5.64	27.38	14.31	2.21	1.59	9.12	7.10
75x50	2.0	3.73	45	4.84	38.50	20.50	2.82	2.06	10.20	8.21
	3.0	5.60	30	7.14	55.30	29.10	2.78	2.02	14.70	11.60
	4.0	7.34	23	9.36	70.50	36.70	2.74	1.98	18.80	14.70
100x50	3.0	6.78	25	8.64	112.00	37.40	3.60	2.08	22.40	14.90
	4.0	8.92	19	11.30	144.00	47.30	3.56	2.04	28.80	18.90
120x60	2.0	5.53	30	7.04	135.58	46.24	4.39	2.56	22.60	15.41
	3.0	8.20	20	10.44	197.31	66.41	4.35	2.52	32.88	22.14
	4.0	10.80	15	13.76	255.20	84.77	4.31	2.48	42.53	28.26
	6.0	15.83	11	20.16	360.12	116.47	4.23	2.40	60.02	38.82
125x75	2.0	6.15	27	7.84	172.53	78.56	4.69	3.17	27.60	20.95
	3.0	9.14	18	11.64	251.74	113.68	4.65	3.13	40.28	30.32
	4.0	12.06	14	15.36	326.47	146.21	4.61	3.09	52.24	38.99
	6.0	17.71	9	22.56	463.18	203.99	4.53	3.01	74.11	54.40
150x50	3.0	9.14	18	11.60	311.00	54.00	5.18	2.15	41.50	21.60
	4.0	12.06	14	15.30	404.00	68.50	5.14	2.11	53.80	27.40
	6.0	17.71	9	22.56	574.03	93.15	5.04	2.03	76.54	37.26
150x100	3.0	11.49	15	14.64	473.00	253.00	5.69	4.16	63.1	50.76
	4.0	15.20	11	19.36	617.00	329.00	5.65	4.12	82.3	5.79
	6.0	22.42	7	28.56	885.00	466.00	5.57	4.04	118.0	3.31
200x50	2.0	7.72	22	9.84	447.00	49.40	6.74	2.24	44.70	9.74
	3.0	11.49	15	14.64	656.00	70.60	6.69	2.20	65.62	28.25
	4.0	15.20	11	19.36	856.00	89.80	6.65	2.15	85.61	35.92
	6.0	22.42	7	28.56	1229.00	122.40	6.56	2.07	122.92	48.95
200x100	3.0	13.85	12	17.64	947.00	324.00	7.33	4.28	94.72	64.78
	4.0	18.34	9	23.36	1240.00	421.00	7.29	4.24	124.03	84.15
	6.0	27.13	6	34.56	1794.00	599.00	7.20	4.16	179.39	119.81

# ROUND HOLLOW SECTION



## ROUND HOLLOW SECTIONS

SIZE	THICK NESS	WEIGHT	PIECE /M.T	SECT. AREA	MOMENT OF INERTIA	RADIUS OF GYRATION	SECTION MODULUS
mm	mm	kg/m		(cm <sup>2</sup> )	I(cm <sup>4</sup> )	I (cm)	ZX (Cm <sup>3</sup> )
16	1.0	0.37	451	0.47	0.13	0.53	0.17
	1.2	0.44	379	0.56	0.15	0.52	0.19
	1.5	0.54	309	0.68	0.18	0.52	0.23
19	1.0	0.44	379	0.57	0.23	0.64	0.24
	1.2	0.53	315	0.67	0.27	0.63	0.28
	1.5	0.65	256	0.82	0.32	0.62	0.33
20	1.0	0.50	333	0.60	0.27	0.67	0.27
	1.2	0.59	283	0.71	0.31	0.67	0.31
	1.5	0.75	222	0.87	0.38	0.66	0.38
22	1.0	0.52	322	0.66	0.36	0.74	0.33
	1.2	0.62	269	0.78	0.43	0.74	0.39
	1.5	0.76	220	0.97	0.51	0.73	0.46
25	1.0	0.59	282	0.75	0.54	0.85	0.44
	1.2	0.70	237	0.90	0.64	0.84	0.51
	1.5	0.87	192	1.11	0.77	0.83	0.61
32	1.2	0.91	183	1.16	1.38	1.09	0.86
	1.5	1.13	148	1.44	1.68	1.08	1.05
33.5	1.2	0.96	174	1.22	1.59	1.14	0.95
	1.5	1.18	141	1.51	1.93	1.13	1.15
38	1.2	1.12	149	1.39	2.35	1.30	1.24
	1.5	1.38	121	1.72	2.87	1.29	1.51
42.25	1.2	1.21	137	1.55	3.26	1.45	1.54
	1.5	1.54	108	1.92	3.99	1.44	1.89
45	2	1.90	87	2.53	5.13	1.42	2.43
	1.2	1.30	129	1.65	3.96	1.55	1.76
	1.5	1.61	104	2.05	4.85	1.54	2.16
48.25	2	2.12	79	2.70	6.26	1.52	2.78
	1.2	1.39	120	1.77	4.91	1.66	2.04
	1.5	1.73	96	2.20	6.02	1.65	2.50
51	2	2.28	73	2.91	7.78	1.64	3.23
	1.5	1.87	89	2.33	7.15	1.75	2.80
60	2.0	2.42	69	3.08	9.25	1.73	3.63
	1.5	2.16	77	2.76	11.80	2.07	3.93
	2.0	2.86	58	3.64	15.34	2.05	5.11
	2.5	3.54	47	4.52	18.70	2.03	6.23
76	2.0	3.75	44	4.65	31.85	2.62	8.38
	2.5	4.53	37	5.77	39.02	2.60	10.27
89	2.0	4.29	39	5.47	51.74	3.08	11.63
	2.5	5.37	31	6.79	63.59	3.06	14.29

# BLACK STEEL PIPES



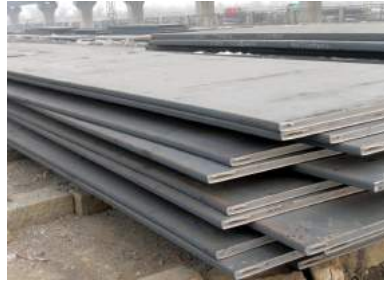
BLACK STEEL PIPES AS PER KS 06 - 259 AND BS 1387								
TYPE	NOMINAL BORE		WALL THICKNESS	AP- PROX	WEIGHT OF BLACK PIPE PLAIN END		WEIGHT OF BLACK PIPE	
CLASS	mm	in	mm	mm	kg/m	m/M.T	kg/m	m/M.T
LIGHT "A"	15	½	2.00	21.3	0.95	1053	0.96	1042
	20	¾	2.35	26.3	1.41	709	1.42	704
	25	1	2.65	33.7	2.01	498	2.03	493
	32	1¼	2.65	42.4	2.58	388	2.61	383
	40	1½	2.90	48.3	3.25	308	3.29	304
	50	2	2.90	60.3	4.11	243	4.18	239
	65	2½	3.25	76.2	5.80	172	5.92	169
	80	3	3.25	88.9	6.81	147	6.98	143
	100	4	3.65	114.3	9.89	101	10.20	98
MEDIUM "B"	15	½	2.65	21.3	1.22	820	1.23	813
	20	¾	2.65	26.9	1.58	633	1.59	629
	25	1	3.25	33.7	2.44	410	2.46	407
	32	1¼	3.25	42.4	3.14	318	3.17	315
	40	1½	3.25	48.3	3.61	277	3.65	274
	50	2	3.65	60.3	5.10	196	5.17	193
	65	2½	3.65	76.2	6.51	154	6.63	151
	80	3	4.05	88.9	8.47	118	8.64	116
	100	4	4.50	114.3	12.10	83	12.40	81
	125	5	4.85	139.7	16.20	62	16.70	60
	150	6	4.85	165.1	19.20	52	19.80	51
HEAVY "C"	15	½	3.25	21.3	1.45	690	1.46	685
	20	¾	3.25	26.9	1.90	526	1.91	524
	25	1	4.05	33.7	2.97	337	2.99	334
	32	1¼	4.05	42.4	3.84	260	3.87	258
	40	1½	4.05	48.3	4.43	226	4.47	224
	50	2	4.50	60.3	6.17	162	6.24	160
	65	2½	4.50	76.2	7.90	127	8.02	125
	80	3	4.85	88.9	10.10	99	10.30	97
	100	4	5.40	114.3	14.40	69	14.70	68
	125	5	5.40	139.7	17.80	56	18.30	55
	150	6	5.40	165.1	21.20	47	21.80	46

**200mm and 250 mm BLACK STEEL PIPES (Detailed specification on request)**

200	8	5.2	219.1	27.71	36	28.56	35
200	8	6	219.1	31.82	31	32.57	31
250	10	6	267	39.09	26	40.01	25

## MILD STEEL PLATE

The Plates are made from Hot Rolled coils (HRC) of highest quality that conform to International standards and quality parameters. Technical specifications for mild steel Plates are below:

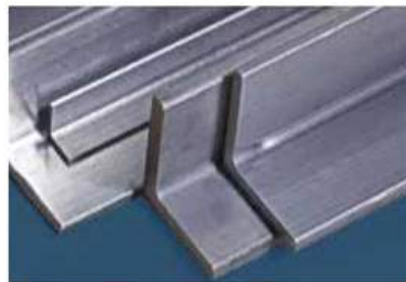


Size (Mtrs)	Width (mm)	Length (mm)	Thickness (mm)	Approx. Wt/Pc (Kg)
2X1	1000	2000	1.0	15.7
			1.2	18.8
			1.5	23.6
Size (Feet)	Width (mm)	Length (mm)	Thickness (mm)	Approx. Wt/Pc (Kg)
8 X 4	1220	2440	1.0	23.8
			1.2	28.6
			1.5	35.7
			2.0	45.5
			3.0	71.5
			4.0	91
			6.0	140
			8.0	187.2
			10.0	234
			12.0	294.7
			16.0	374.4
			20.0	468
25.0	585			
40.0	936			
50.0	1170			

## EQUAL ANGLES

EQUAL ANGLES are used in Furniture, Beds, Racks & Shelves, Doors etc.

Size (mm)	Weight per pos (Kg)
25X25X2.5	5.9
25X25X3.0	6.7
30x 30 x 2.5	6.5
30X30X3.0	7.8
40X40X3.0	11.0
40X40X5.0	18.9
50X50X3.0	13.5
50X50X4.0	18.5
50X50X5.0	22.5
75X75X6.0	41.5





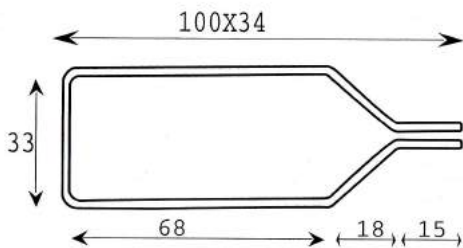
## REBARS

High Tensile Rebars are used in Reinforced concrete, Road construction etc.

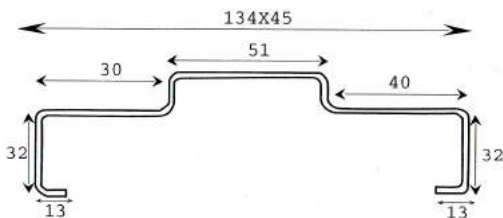
Size (Length: 12 Mtrs)	Weight per pcs (Kg)
8 mm	4.76
10 mm	7.41
12 mm	10.70
14 mm	14.49
16 mm	18.87
20 mm	29.41
25mm	45.45



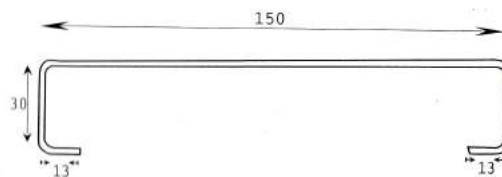
## OPEN PROFILES



Bottle Sections – 6 Mtrs



Door Frames – 6 Mtrs

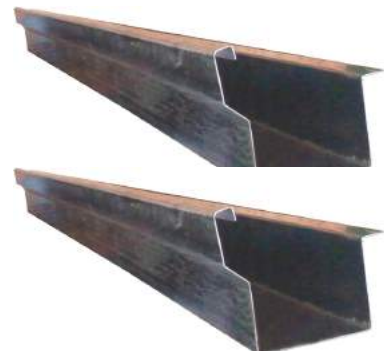


Fascia Board – 6 Mtrs

## METALLIC GUTTERS

### BENEFITS:

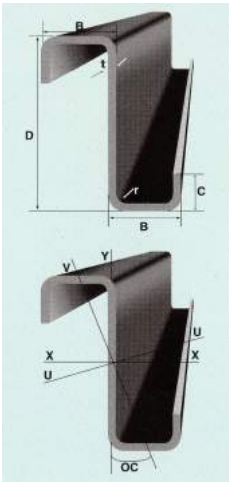
- Length as per your requirement.
- Accurate alignment.
- High Savings:
- Less welding joints.
- Savings on Labor.
- Less Electricity.
- No Wastage.



## Z PURLIN



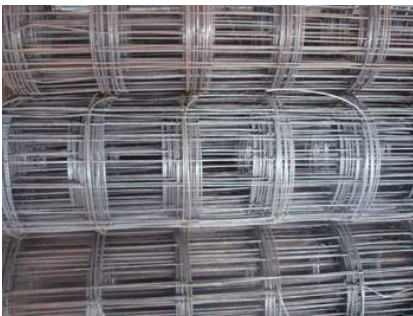
Z purlins are used as Purlins for commercial, Industrial and domestic structures. Thickness above 2.0mm is also available based on requirement.



### Z PURLIN

SIZE AxB	THICK NESS	WEIGHT	SECT. AREA	DIMENSIONS			MOMENT OF INERTIA		SECTION MODULUS		RADIUS OF GYRATION	
				A	B	C	I <sub>x</sub>	I <sub>y</sub>	Z <sub>x</sub>	Z <sub>y</sub>	i <sub>x</sub>	i <sub>y</sub>
mm	mm	kg/m		mm	mm	mm	cm <sup>4</sup>	ly (cm <sup>4</sup> )	ix (cm)	iy (cm)	ZX (cm <sup>2</sup> )	Zy (cm <sup>2</sup> )
100X50	2	3.64	4.63	101.6	50.8	22.2	70.18	33.87	13.81	6.8	3.83	2.7
115X50	2	3.85	4.9	114.6	50.8	22.2	98.24	33.87	17.19	6.8	4.47	2.62
130X50	2	4.05	5.16	127	50.8	22.2	125.99	33.87	19.84	6.8	4.94	2.56
140X50	2	4.24	5.4	139.7	50.8	22.2	157.8	33.87	22.6	6.8	5.4	2.5
150X50	2	4.44	5.66	152.4	50.8	22.2	194.14	33.87	25.47	6.8	5.85	2.44
175X50	2	5.18	6.6	177.8	63.5	22.2	331.7	63.13	37.31	10.1	6.97	3.04
175X50	2.5	6.4	8.23	177.8	63.5	22.2	389.51	67.91	43.81	10.91	6.9	2.88

## WELD MESH & BRC



Reinforcement steel wire fabrics are manufactured in conformity with International standards. The profiles are commonly known as BRC and WELD MESH.



## C Channels

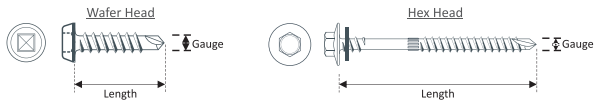
Size	Wt per Pcs (Kg)
Channel 100 x 50mm x 6m	56.16
Channel 127 x 64mm x 6m	89.4

## Heavy Structural I Beams

Size	Kg/Mtr
150 x 150mm x 12m	31.10
152 x 152mm x 12m	23.00
200 x 200mm x 12m	49.90
203 x 203mm x 12m	46.10
254 x 254mm x 12m	73.00
254 x 254mm x 12m	167.00
305 x 305mm x 12m	96.90
203 x 133mm x 12m	25.10
248 x 124mm x 12m	25.10
250 x 125mm x 12m	29.00
300 x 150mm x 12m	36.70
305 x 165mm x 12m	40.30
350 x 175mm x 12m	49.40

Other Sizes available on request.

ALL FIXTITE FASTENERS CARRY A MANUFACTURER'S WARRANTY AND COMPLY WITH SANS1273-2009 (AS3566.2-2002) STANDARDS  
 ALL SAFINTRA ROOF SYSTEMS WILL ONLY BE WARRANTED IF INSTALLED WITH SAFINTRA-APPROVED FASTENERS.

How to read our fastener sizes		
Gauge <b>12</b>	Threads Per Inch <b>14</b>	Length <b>75mm</b>
(Diameter of shank excluding thread) #8 - 4.2mm #10 - 4.8mm #12 - 5.5mm #14 - 6.3mm	Number of thread crests that can be counted along a lineal measurement of 1 inch. (TPI).	Overall length of shank including drill point, up to shank beneath head.
		

**NOTES:**

- All Safintra Fixtite Fasteners used for our pierced fix profiles are Class 4 only, as this will provide optimal service life with aluminium-zinc coated steel.
- Different lengths/types of fasteners are available on request, including stainless steel.
- For optimal performance, the service life warranty of fasteners must match the service life warranty of the sheeting.
- Only Class 3 and 4 fasteners are suitable for use with Aluminium-Zinc coated steel (unpainted or pre-painted).
- Class 4 fasteners must be used within 1km of coast, river and in all corrosive environments.
- Aluminium roof sheeting: use ONLY stainless steel fasteners.


## FIXTITE FASTENER APPLICATION GUIDE

### METAL APPLICATIONS

**#12 x 50mm Metalfix hex flange, Head Self**

**For trapezoidal onto metal  
Drill Screw, 3PT, Dual Thread, Guard**


**Class 4**



**#12 x 20mm Metalfix hex flange, Head Self**

**For side cladding onto metal (Ultraspan)  
Drilling Screw, 3PT**

**Class 3**

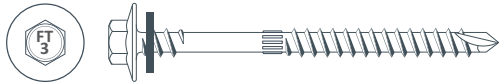


### TIMBER APPLICATIONS

**#12 x 70mm Timberfix hex flange, Head Type 17**

**For trapezoidal on timber,  
Screw, Dual, Thread, Guard**

**Class 3**



# QUIK MOVERS



## PREFAB MULTIPURPOSE AND MOBILE UNITS

QUICK MOVERS is a prefab multipurpose and mobile unit. Composed of steel frames and insulation sandwich panels with a roof of choice, can be used as Mobile Office (including meeting room), living house, commercial house, holiday house, clinics, public utility military buildings, large-scale exhibitions, events, sports, docks, industrial and civil buildings, etc. as the temporary units.

Benefits:

- \* Comes in Kit - Can be assembled and dismantled quickly.
- \* Zero Maintenance - Life span of more than 10 years.
- \* Provides comfortable stay.
- \* Lowest life cycle cost.
- \* Custom design as per customer requirement.



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# ADDITIONAL SERVICES

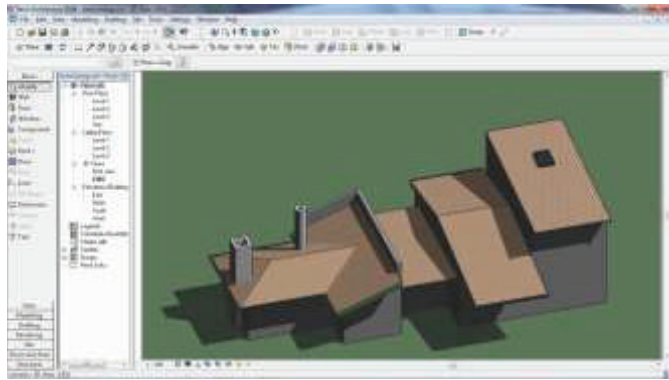
## ON SITE ROLLING

Safintra offers on-site rolling of Saflok 700 and Newlok.



## TECHNICAL SERVICES

A full technical advisory service is available on request.



### Disclaimer:

- Care has been taken to ensure that the information provided is accurate. Safintra does not assume responsibility for inaccuracies or misinterpretations of this data.
- Safintra is continuously engaged in product development, please ensure that you have the most recent issue of information from Safintra.
- Photographs and illustrations are typical examples of roofing and cladding products and applications.

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# BULLNOSING AND CRANKING

## CRANKING OF PROFILED SHEETING

Cranking of a profiled sheet incorporates lateral rib indentations pressed in at uniform distances which vary according to the radius requirements.

Cranked sheets can be supplied in standard radii as follows:

PROFILE	MINIMUM RADIUS (INSIDE CURVE)
MAXCOVER / COVERMAX	500mm

When ordering cranked sheets, details should be given using our standard information sheet - please contact our technical department at Safintra office.

## EXPANSION

It should be noted that Aluminium has an expansion co-efficient which is twice that of conventional steel substrates. If the sheet is to be bullnosed on one end, then expansion must be allowed for in the opposite direction.

**NB:** Profiles can be cranked to a minimum thickness of 0.4mm.



## STANDARD CRANK

Normally with the narrow flute uppermost and the bend away from the angular inclination.

## REVERSE CRANK

Normally with the narrow flute downward and the bend into the narrow flute. Applies to pierced fix profiles only.

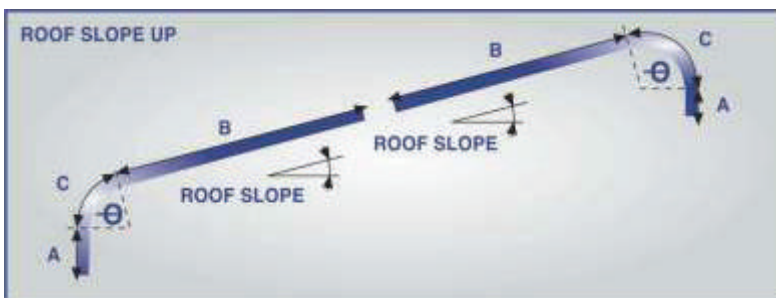
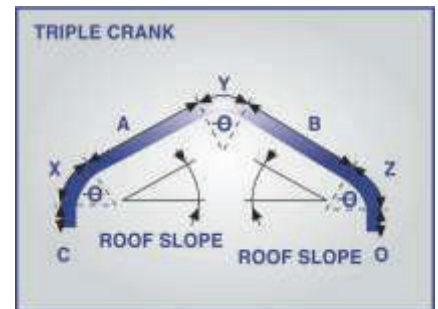
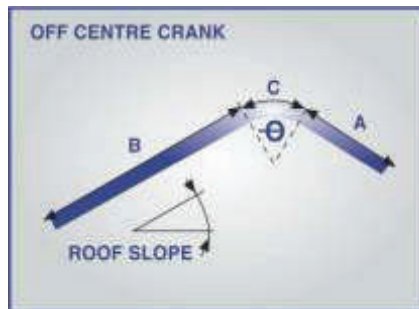
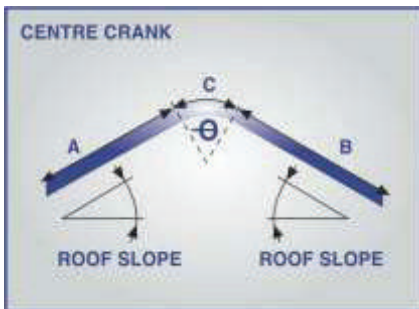
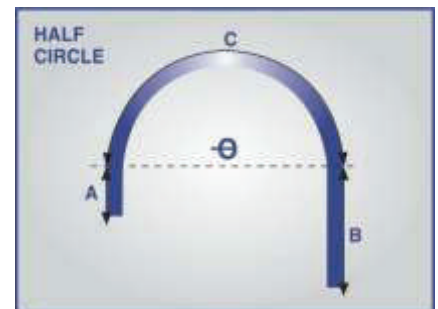
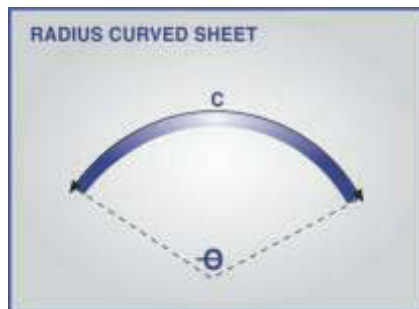
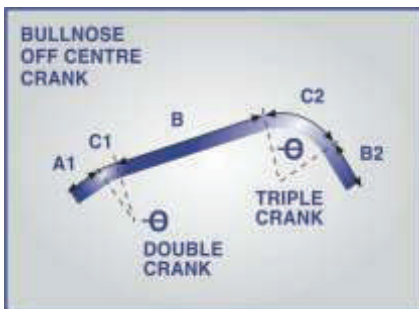
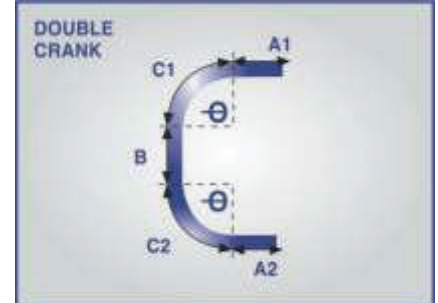
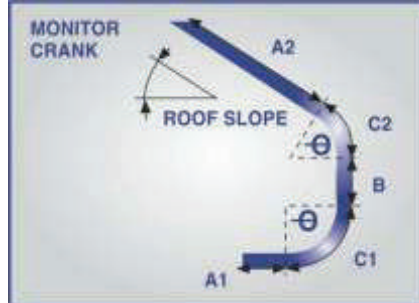
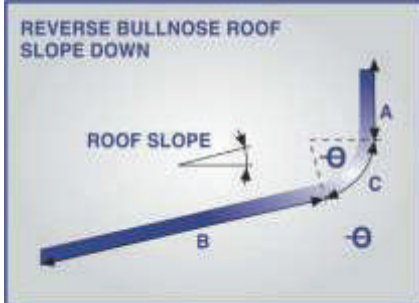


# BULLNOSING AND CRANKING


These drawings show the various types of bullnosing and cranking available on Safintra sheeting. Before production may commence, we will require a detailed drawing giving all the required data, and duly authorized by the customer.

**Note:**

During installation, clean the roof daily by removing all swarf, pop rivets and unused fasteners or any other debris.



**MINIMUM RADII FOR NATURALLY SPRUNG SHEETING**

	CONVEX 	CONCAVE 
MAXCOVER	28 meters	55 meters
COVERMAX	28 meters	55 meters

A member of the



# GENERAL NOTES

## TRANSPORTATION

Safintra profiles can be supplied in any length, limited only by handling and transport ordinance regulations. The normal length that can be transported by road is 12.0 metres depending on the vehicle length. Saflok 700 and Newlok is rolled on-site to any length required.

## STORAGE

### WET STORAGE STAIN

Steel sheets are normally treated with a special chromate solution, under strictly controlled conditions (i.e. the sheet is passivated) before leaving the Mill. Although this process ensures long and satisfactory protection to sheets, wet storage stain or white rust can still occur. One of the main conditions which may give rise to this problem is sheets being exposed to water while stacked, which restricts air circulation between sheets.

It is therefore important that sheets remain dry and that they do not come into contact with each other at any point if exposed to water. If sheets cannot be stored in a dry storage space, they should be stood on end and spaced out at the bottom.

A drop in temperature after a warm, humid day may also lead to condensation of moisture throughout the stack. And because sheets are often placed on the ground or very close to it, where the temperature is usually at its lowest during the night, the risk of condensation is increased.

The stain that is created does not compromise the integrity of the sheet, but does have a negative impact on the aesthetic value.



## TECHNICAL

### EDGE WAVE AND OIL CANNING

The amount of edge wave or oil canning is dependant upon the varying mechanical properties of the coil used. Stiffener ribs are incorporated into the troughs to minimise the effects of oil canning.

### SURFACE CONTAMINATION

Care should be taken to ensure that none of the debris arising from the fixing of a steel roof remains on the sheets after completion of work. If nails, swarf, etc. are allowed to remain on roof sheets, unsightly spots will soon appear. Initially these rust spots will merely be stains from rapidly rusting fine particles of steel, if allowed to develop further, a loss of zinc coating in the stained areas will appear. Nails, particles of steel, etc. will also stain and ultimately reduce the life expectancy of sheets. Sheets are often subject to wet cement splashes that create an area that is subject to alkali attack. Cement splashes should therefore be cleaned off immediately.

#### Note:

During installation, clean the roof daily by removing all swarf, pop rivets and unused fasteners or any other debris.

### WIND TERRAIN CATEGORIES

It is important to consult an engineer at design stage, to ensure the correct specification of purlin spacing and roof sheet gauge.

### CORROSION

The coast line of Africa is a particularly harsh environment which carries coastal chlorides. In urban areas, corrosion is accelerated by the presence of sulphur emissions from industry and traffic. The choice of the correct steel substrate is therefore important to avoid high replacement costs and losses in rentals, etc. Please request additional information from Safintra in this regard.









- ◆ Africa's largest manufacturer of steel roofing
- ◆ The continent's first producer of Aluminium-Zinc coated steel
- ◆ Over 3,200 people employed in 36 operations in 12 countries
- ◆ Africa's most tried and trusted roofing brands

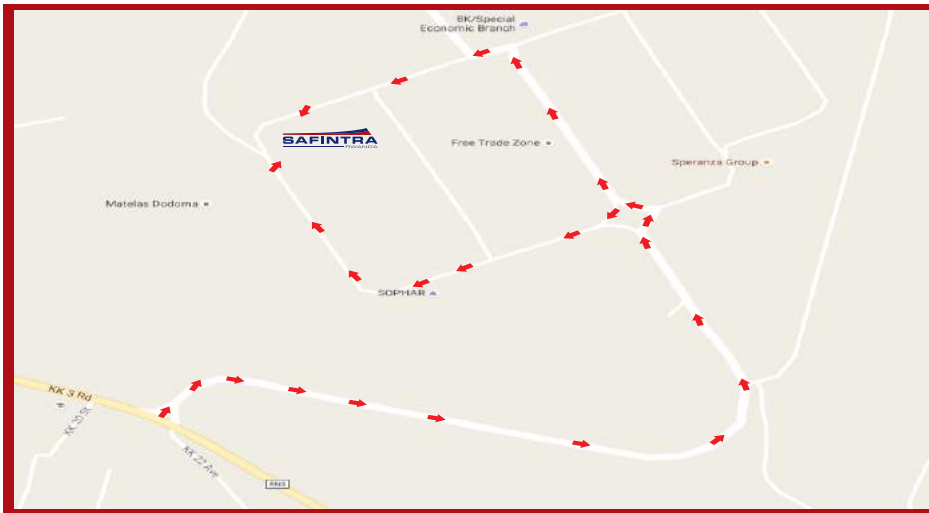
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**The SAFAL Group continually strives to  
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