

# FUMIRA



Certified Company  
No. 16 00 A 17012



Certified Company  
Cert No. 03 13 A 17006

# Introduction of FUMIRA

Presented by Ferry Boen

29th Sept 2021





# ARGO MANUNGGAL GROUP

## LAND

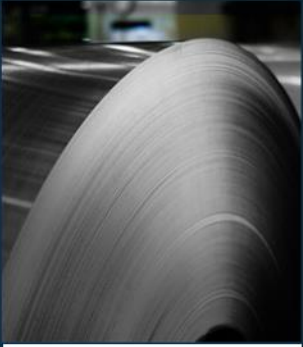
## LIFESTYLE

## INDUSTRIAL

## AGRICULTURE

## RESOURCES

## LOGISTICS



 **BeFa**  
INDUSTRIAL ESTATE
  **AVIARNA**  
INDUSTRIAL ESTATE

 **Alam Sutera**  
RESIDENTIAL & LIFESTYLE COMMUNITY

 **GWK**  
CULTURAL PARK  
Alam Sutera

 **2100**  
INDUSTRIAL TOWN

 **DAMASTA**

 **SUVARNA SUTERA**  
RESIDENTIAL & BUSINESS COMMUNITY

 **ARGO**  
WORKWEAR
  **EDITION**

 **BUSHIDO**
 **i.sha**

 **Run thing**
 **neusa**

 **an.line**
 **Miyoshi Josei**

 **MIYOSHI**  
ESTABLISHED 1988

 **CS**  
cakra steel


 **FUMIRA**

 **Phalon**®

 **CITRAFEED**

 **PETERHAKAN AYAM MANGGIS INDONESIA**

 **Fresh Pro**

 **resources**  
by Argo Manunggal Group

 **WAREHOUSING**  
Logistics by AMG

 **CONTRACT**  
Logistics by AMG

 **DISTRIBUTIONS**  
Logistics by AMG

 **VAS**  
Logistics by AMG

 **E-COMMERCE ENABLER**  
Logistics by AMG



# TODAY FIGURES

**4** companies  
Listed

More than **20,000** employees

Dedication to the  
Country

**70+** years

B2B and B2C

**+1200**

industrial  
customers

**ARGO MANUNGGAL**  
GROUP

One of the **LEADER**  
**industrial groups** in  
Indonesia

More than **8000** of project  
are made in industrial market

### More than 50 Years Experience

First factory was established in 1970

### One of the Biggest Galvanized Steel Manufacturer in Indonesia

2 factories in Semarang and Cibitung

### Modern Technology

Using Japan Technology since its establishment, Fumira become a pioneer in the galvanizing line and adopt modern technology in corrugated metal roof industry



#### Semarang factory

Established in 1970

4

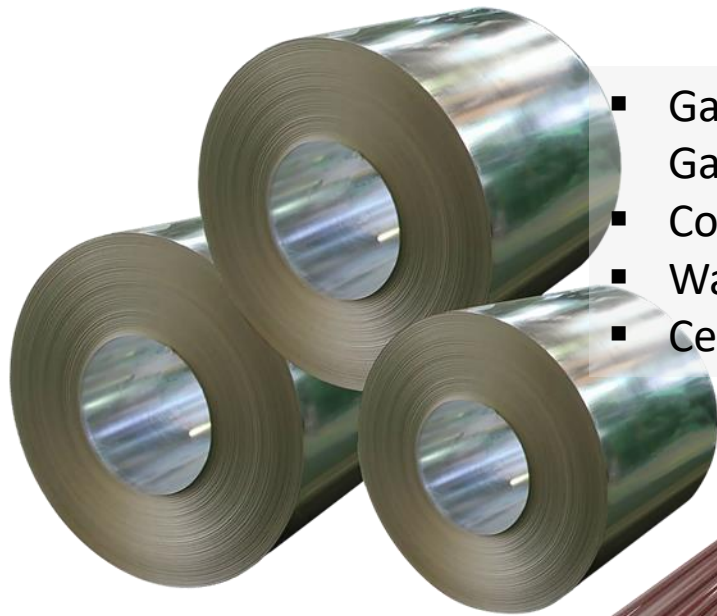


#### Cibitung factory

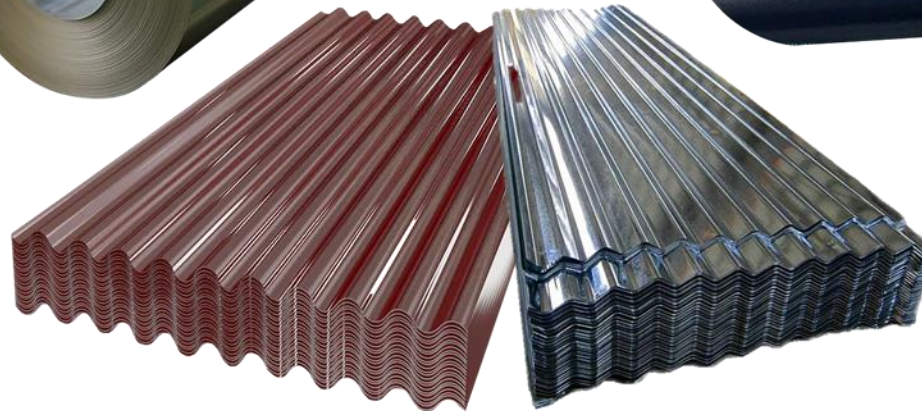
Established in 1997

- FU : Fuji Steel ( Nippon Steel Corp, Jepang )
- MI : Mitsui & Co. Ltd, ( Jepang )
- RA : Ragam Logam ( Argo Manunggal Grup )

## WHAT WE DO



- Galvanized Steel & Prepainted Galvanized Steel in Coil & Sheet
- Corrugated Metal Roof Solution
- Wall / Cladding Solution
- Ceiling Solution



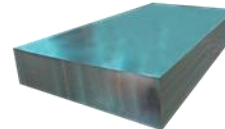
**Floor Deck**



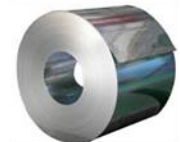
**Various Metal Roof**



**Galvanized Sheet**



**Galvanized Coil**



## PRODUCT APPLICATIONS

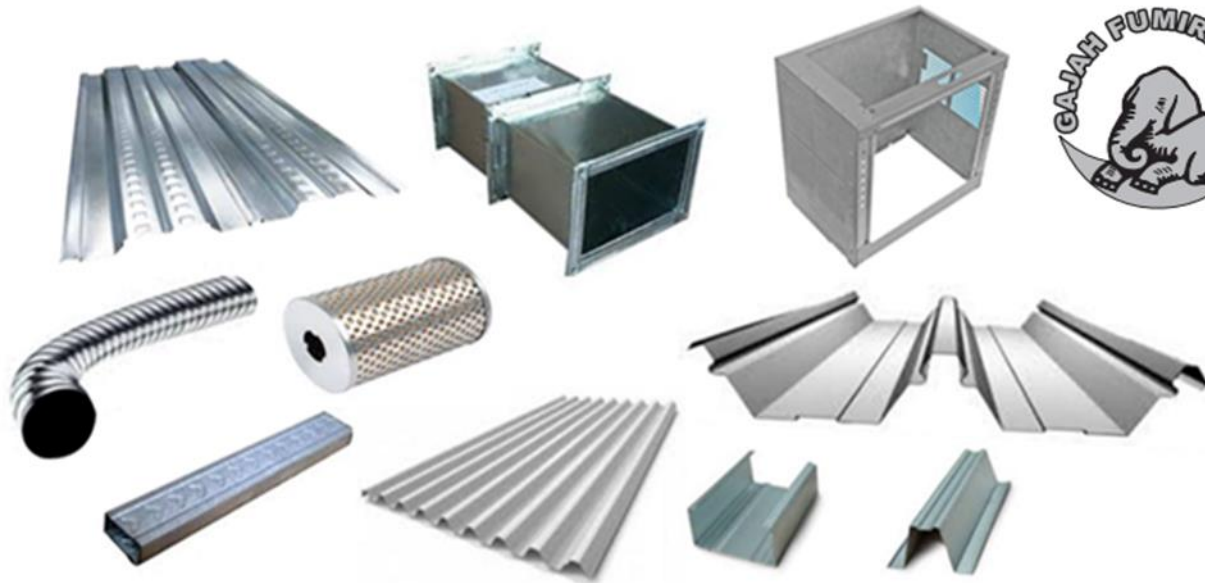


07 - 2053 - 2006  
LSPr-004-IDN

NRP 201-002-090549



**PT. FUMIRA**  
B.j.L.S - D - 020 - L  
0.20mmx914mmx 1829mm  
Z12



07 - 2053 - 2006  
LSPr-004-IDN

NRP 201-002-090554



**PT. FUMIRA**  
B.j.L.S - D - 020 - K  
0.20mmx914mmx 1829mm  
Z12

### Construction

- Roofing
- Cladding
- Ceiling
- Light steel
- Deck
- Ducting
- Fence

### Electrical

- Cable Tray
- Cable Armour
- Panel

### Home Appliance

- Fan
- AC
- Refrigerator
- Washing machine

### Automotive

- Automobile Heat Shield
- Bus Bodies
- Air & Oil Filters
- Pickup box

### Office Application

- Filling Cabinets
- Locker
- Partition

### Others

- Billboard
- Container
- Packaging
- Spiral Duct
- Showcase

## INNOVATING SINCE 1970

Fumira has succeeded in developing color coated galvanized steel sheet in Fumira's original design of Color Coating Line in 1979. Based on the experience in operating color line, Fumira installed a modern Continuous Color Line in 2014 to increase the production capacity as well as to expand product types and quality.



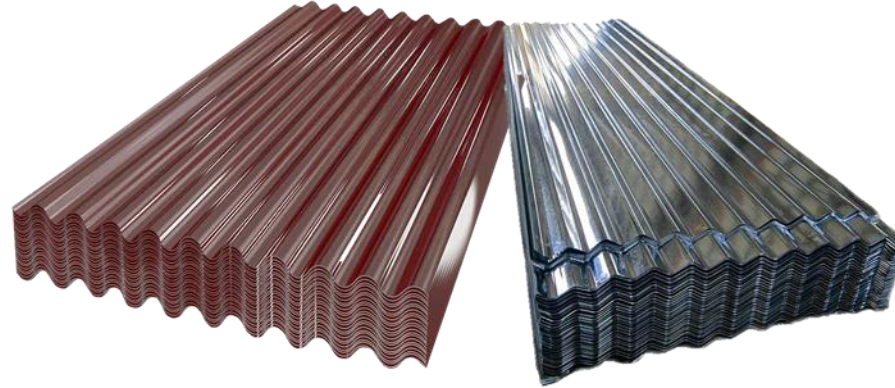
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No. 16 00 A 17012



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Cert No. 03 13 A 17006



## OUR BRANDS IN RETAIL MARKET



**MORE THAN 30 MILLION SHEET / > 50 MILLION SQUARE METERS  
PER YEAR ROOFING IN INDONESIA.**

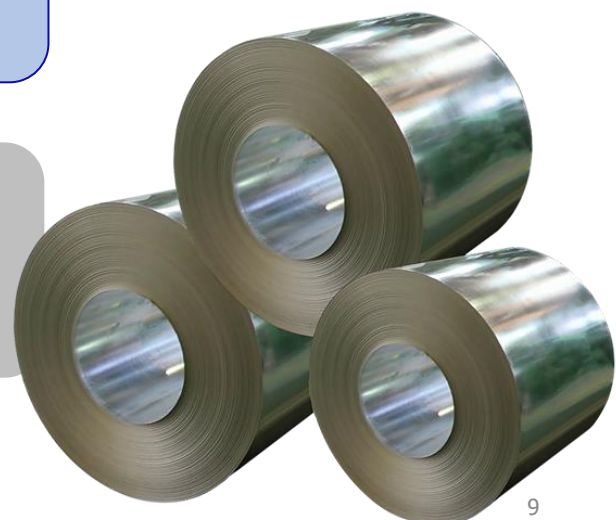
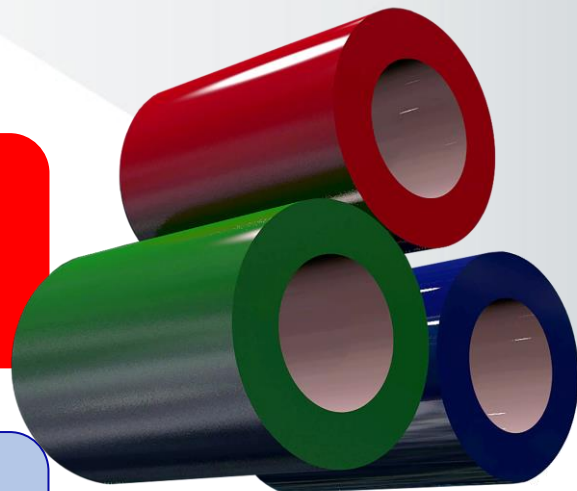


**BRANDS**

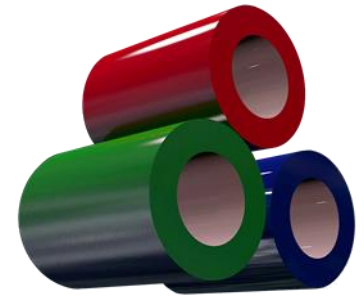
**COLORCOAT®**

**COLORFRESH®**

**FUMIRAGRIP®**



## FUMIRA COLOR



### The Advantages of Fumira Color

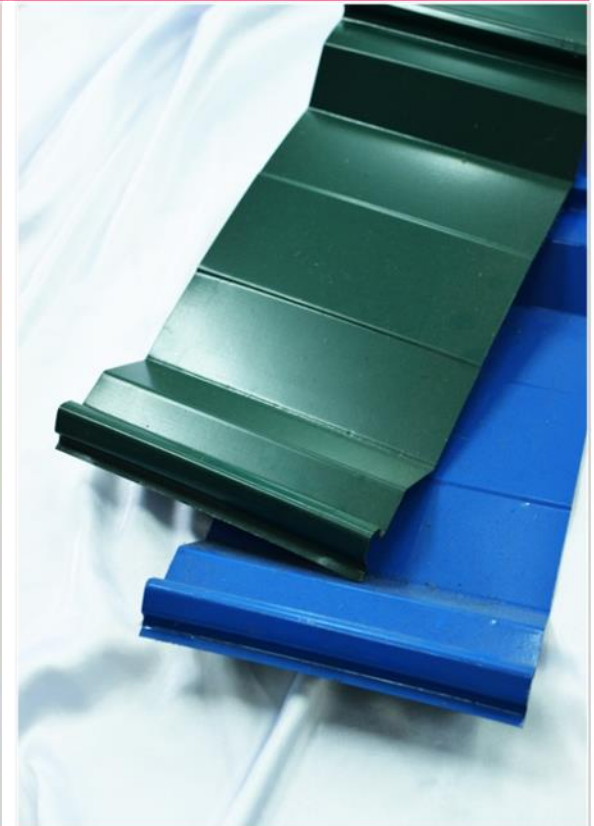
DOUBLE PROTECTIONS! ( Corrosion & Holes/Porous Resistance)



Various Color Choices



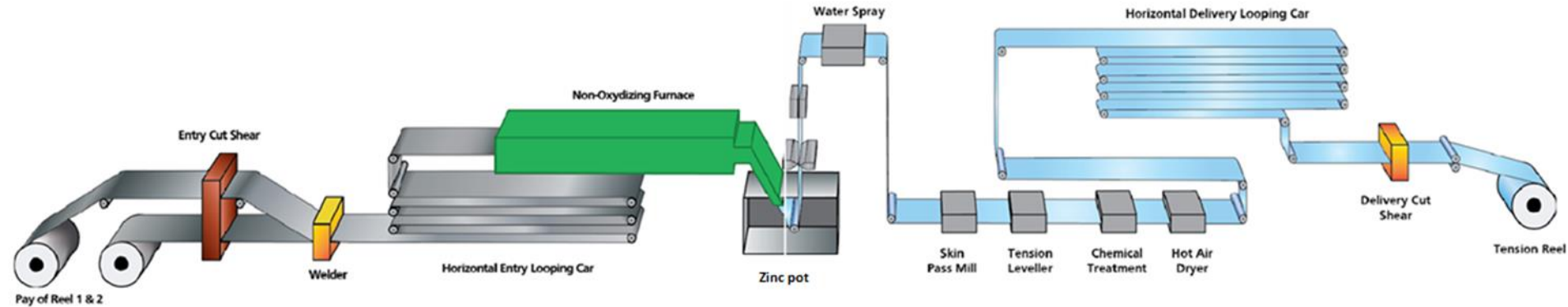
Double Protection



Economical

## COATING LINE PRODUCTION PROCESS

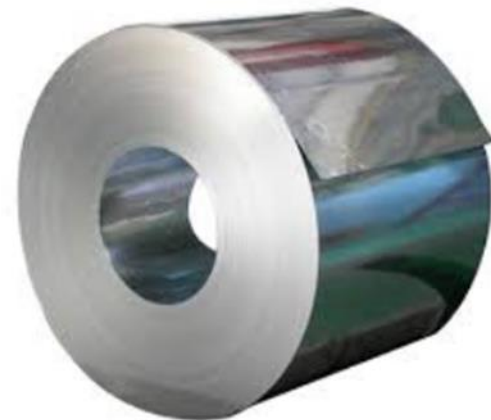
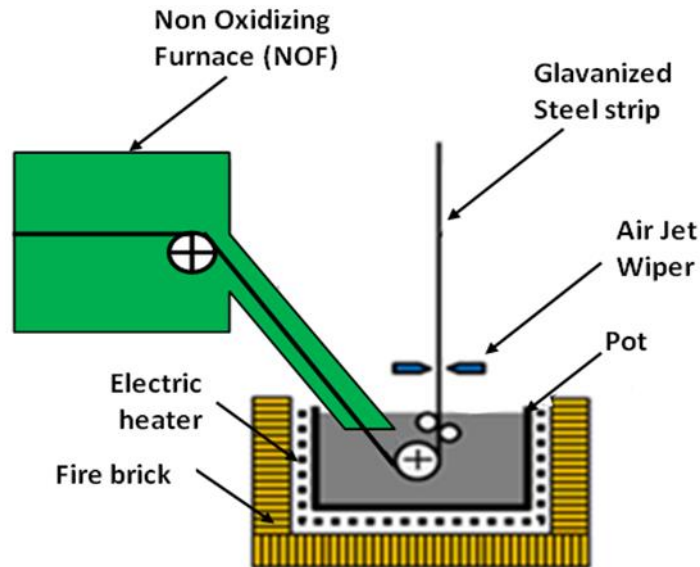
### Continuous Galvanising Line NOF System



Continuous Galvanizing Line (CGL) with Non-Oxidation Furnace (NOF) system, technology from Nippon Steel Corp., Japan, produces products with the best zinc coating quality of lockforming quality.

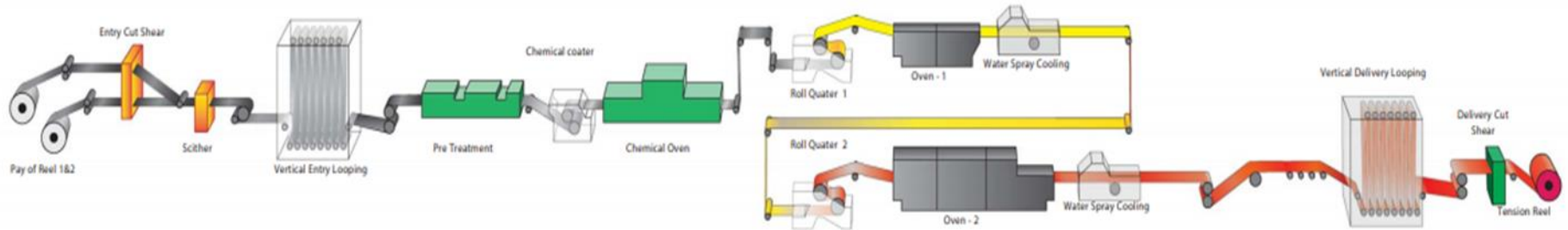
### NOF system Zinc coating

In Non-Oxidizing Furnace (NOF) technology, the raw material is passed through a set of closed and air-free or non-oxidizing furnaces so that the steel surface is free of oxide coating when it enters the zinc liquid.

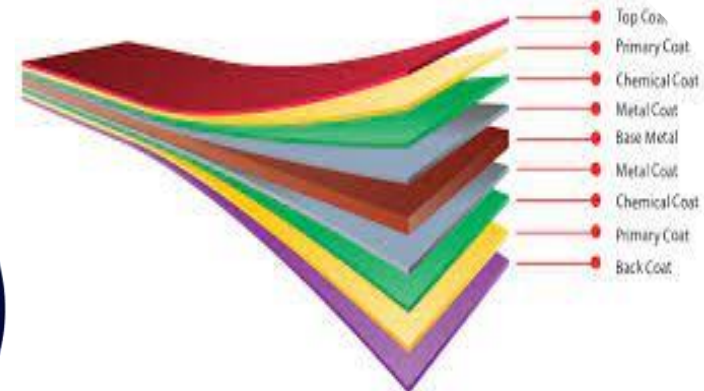
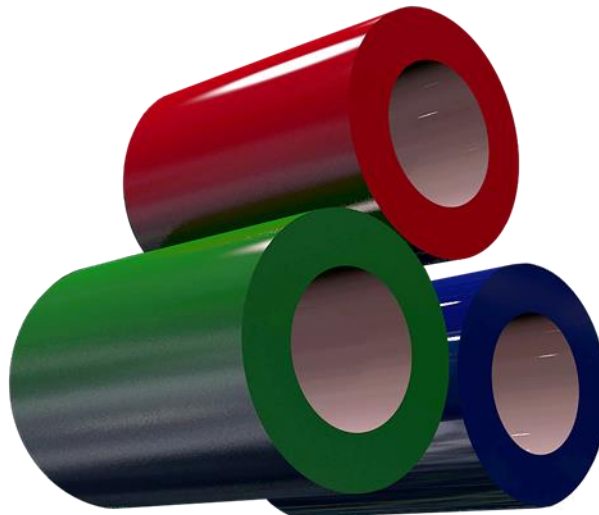


## PREPAINTING LINE PRODUCTION PROCESS

### Continuous Color Line



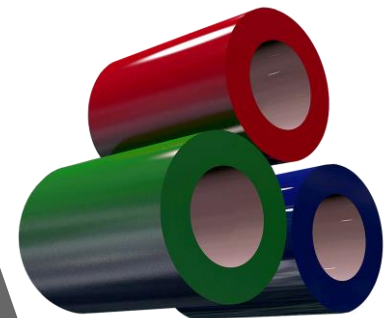
Continuous Color Line (CCL) with reverse coating technology from Chugai Ro, Japan, gives a uniform and smooth paint coat.

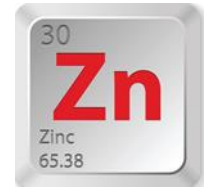


# WHY SHOULD CHOOSE FUMIRA?

- ✓ Proven experience more than 50 Years.
- ✓ Integrated production line.
- ✓ Trusted in International large projects.
- ✓ Galvanized Iron is the strongest corrosion protection for steel base metal.
- ✓ Various type of roofing profile and application.
- ✓ Ductile coated steel for lock joint forming, bend OT
- ✓ Various durable color for esthetic and double protection.
- ✓ Corrosion and color warranty until 15 years.

# FUMIRA





## WHAT IS GALVANIZED ?

### Zinc at a Glance

- Zinc occurs naturally in the earth, air and foods you eat
- Zinc was used by the Greeks and romans in 20 BC.
- Zinc was being refined from 1100 to 1500 in Asia.
- Zinc was first recognized as an element in 1776 in India.
- 1836 galvanizing, anti-corrosion, introduced in France
- Zinc is 100% recyclable.



### History of Hot Dip Galvanizing



Record of zinc usage in construction began, which could be considered the origination of galvanizing.

### What is Galvanized Steel

Galvanized steel is a type of steel that has been galvanized by the application of a zinc coating throughout its body so that it can be protected from corrosion or rusting

# FUMIRA ADVANTAGES OF GALVANIZED IRON FUMIRA

## HOW ZINC PROTECT THE BASE METAL ?

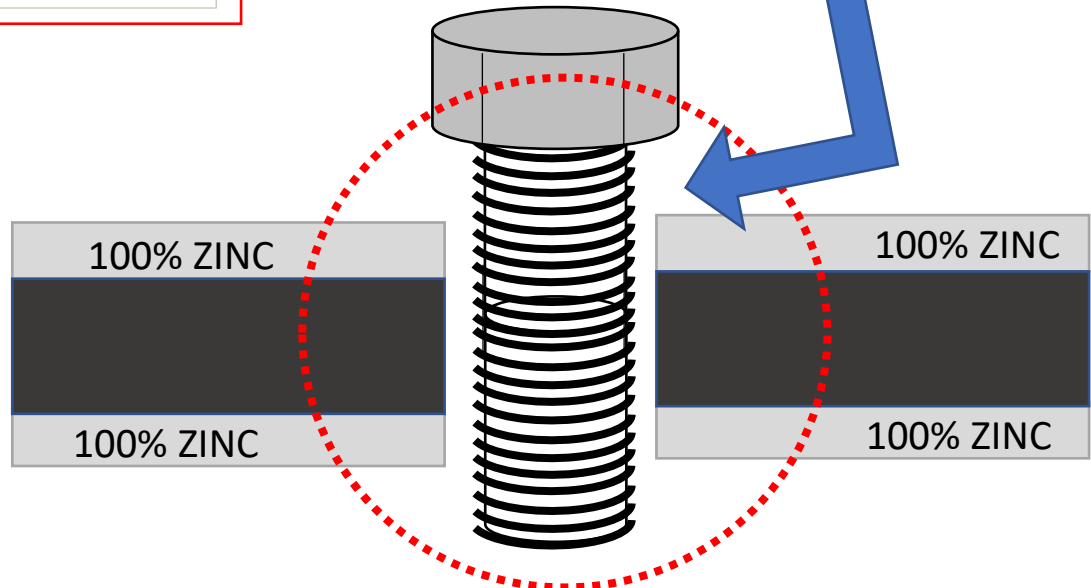
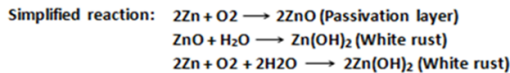
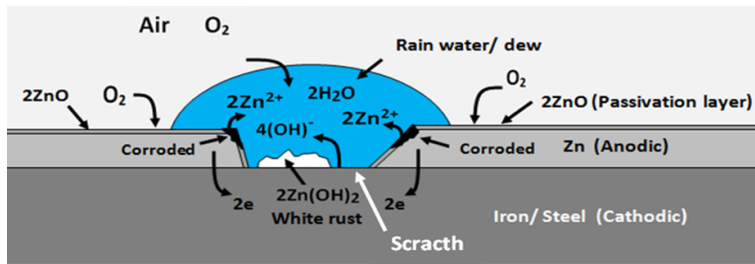
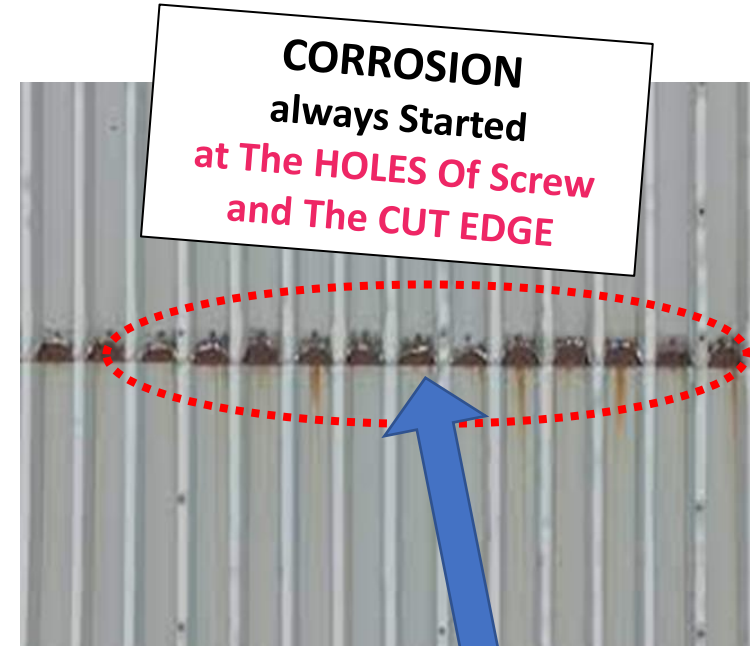
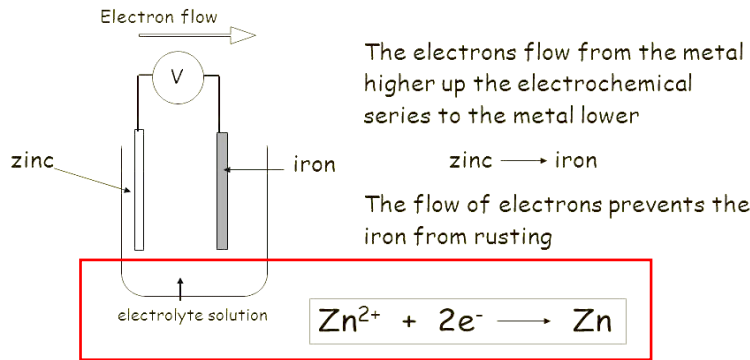
Electronegative,  
more easy to be oxidized

Anodic	Magnesium
	Aluminum
	Zinc
	Iron (Steel)
	Lead
	Tin
	Nickel
	Brass
	Bronzes
	Copper
	Stainless Steel
	Silver
	Gold
Platinum	
Cathodic	

Electropositive,  
less easy to be oxidized

### Sacrificial Protection

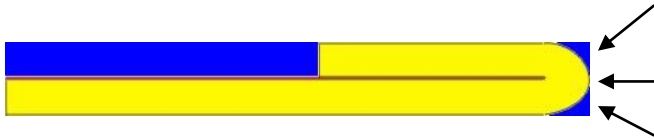
What happens when you connect a more reactive metal to a less reactive metal in a simple cell?



## ADVANTAGES OF GALVANIZED IRON FUMIRA

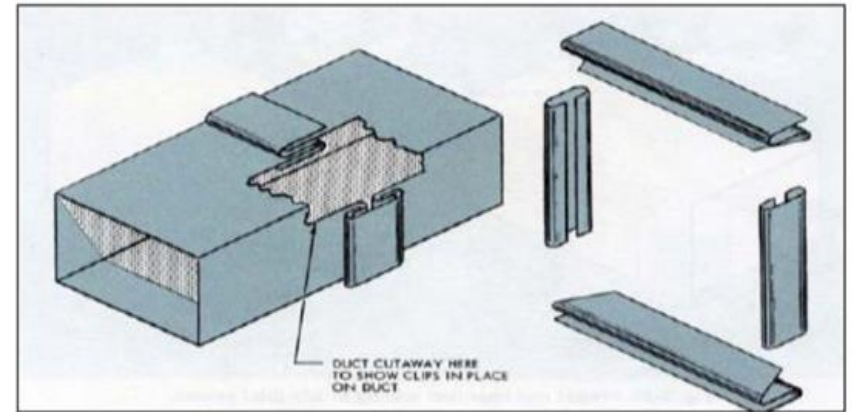
### Best Lock Forming Quality

Bending Quality 0 ( Zero ) T.



Excellent Ductile and flexibility of Zinc

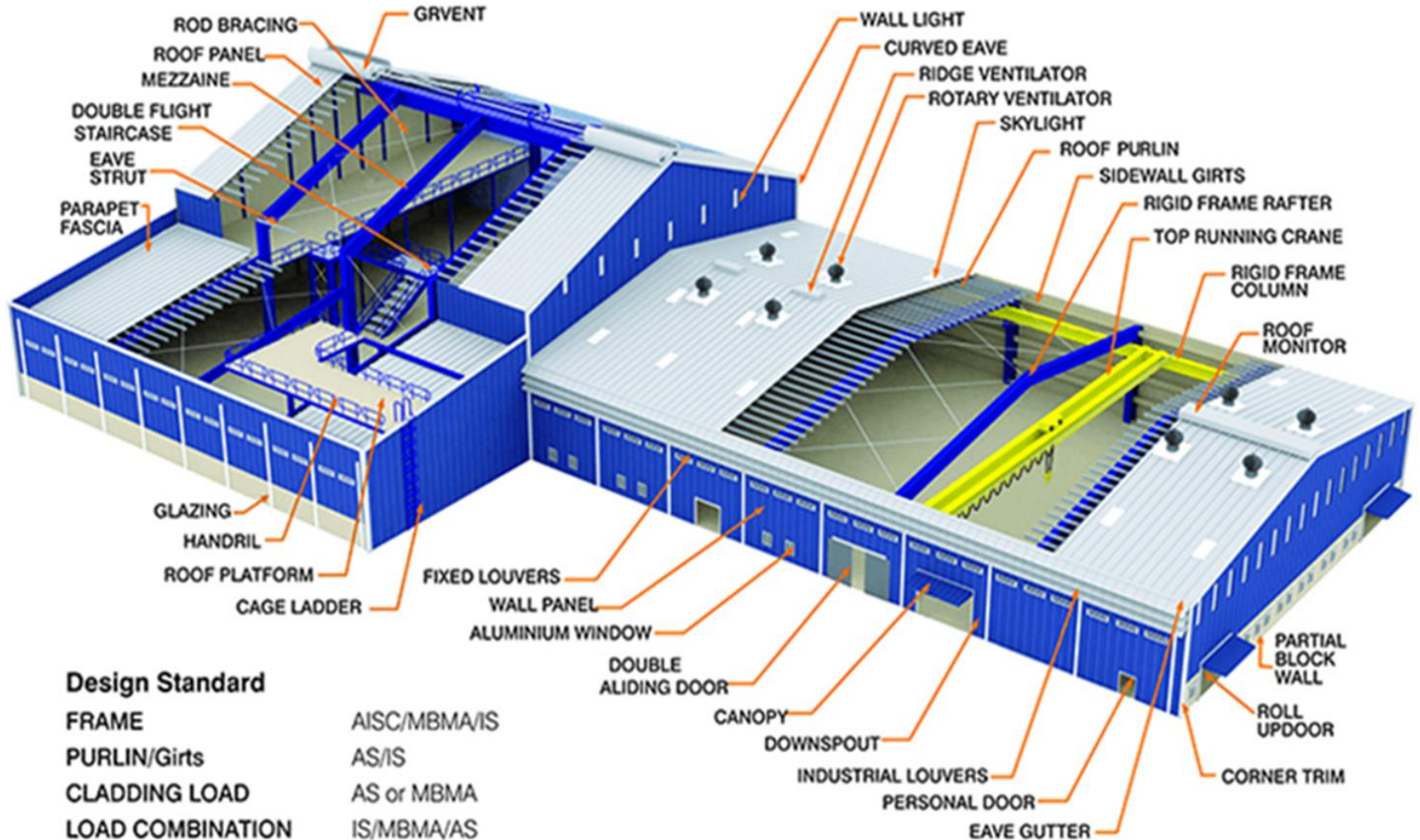
Bending Quality 1 ( One ) T.



Able to accept bending with 0 T quality, without cracking or peeling.



## FUMIRA SOLUTION FOR APPLICATION



# FUMIRA/ ADVANTAGES OF GALVANIZED IRON FUMIRA

## VARIOUS TYPE OF ROOFING CHOICES

### FUMIRASPAN

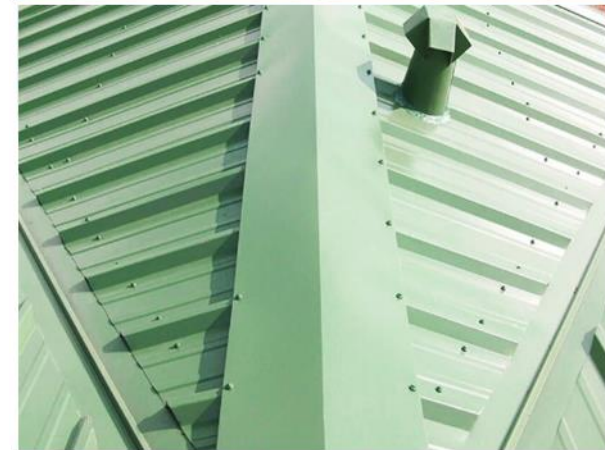
FUMIRASPAN is a roof profile series of the Fumira roof which is a combination of trapezoidal waves with varied of shape to provide a function of strength and decorative of form without leaving its economic value.

### PRODUCT CLASSIFICATION

- Wide Span Roof
- Middle Wide Span Roof
- Standard Roof, Wall and Cladding / Fascia

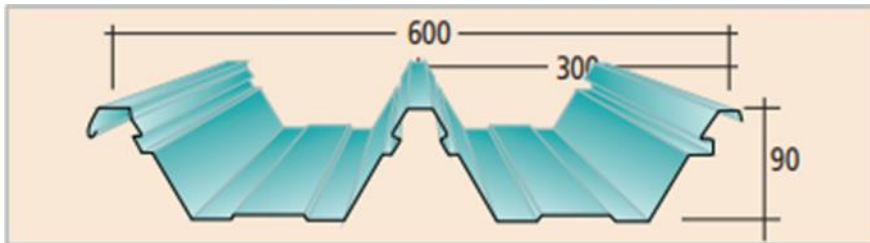
### FUMIRASPAN ADVANTAGES

- Economical width.
- Trapezoidal wave profile with adequate ribs enforcement.
- Wave profile combination that provides decorative value.
- Easy and cheap in installation by using screw without special tight frames.
- Metal-coated steel material that can be customized color coating

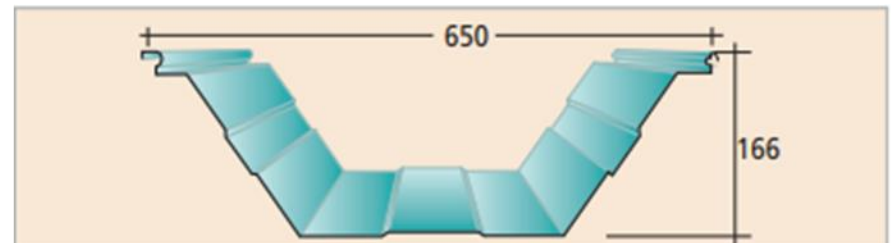


## WIDE SPAN ROOF

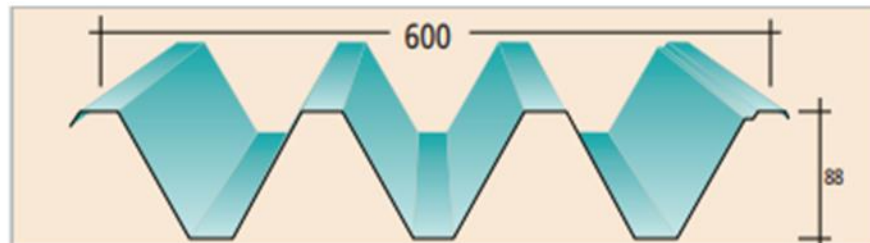
➤ Suitable for Factory / Warehouse / Project



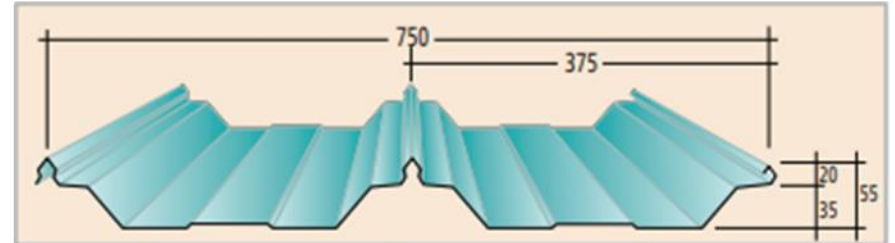
<b>BL 600</b>	<b>Thickness:</b> 45-80 Bj.L.S	<b>Minimum Length:</b> 1,5 m	<b>Maximum Length:</b> 12 m
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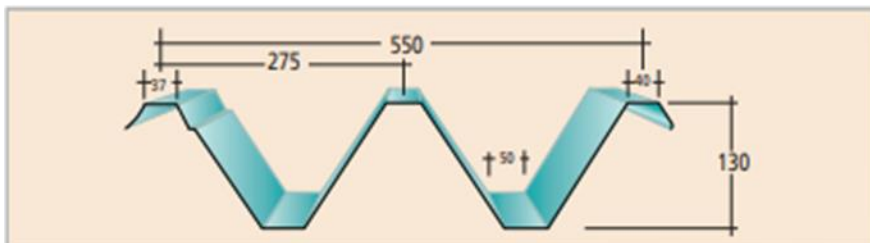
<b>SF 650</b>	<b>Thickness:</b> 45-100 Bj.L.S	<b>Minimum Length:</b> 1,5 m	<b>Maximum Length:</b> 12 m
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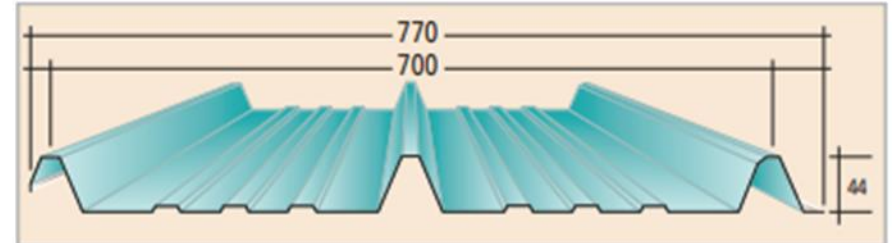
<b>I 600</b>	<b>Thickness:</b> 45-80 Bj.L.S	<b>Minimum Length:</b> 1,5 m	<b>Maximum Length:</b> 12 m
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<b>SF 750</b>	<b>Thickness:</b> 40-60 Bj.L.S	<b>Minimum Length:</b> 1,5 m	<b>Maximum Length:</b> 12 m
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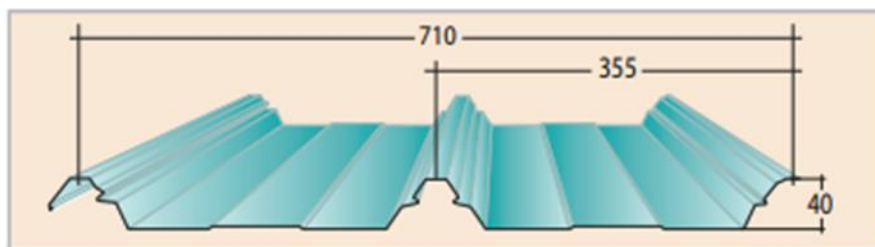
<b>GP 550</b>	<b>Thickness:</b> 45-80 Bj.L.S	<b>Minimum Length:</b> 1,5 m	<b>Maximum Length:</b> 12 m
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<b>L 700</b>	<b>Thickness:</b> 30-80 Bj.L.S	<b>Minimum Length:</b> 0,65 m	<b>Maximum Length:</b> 12 m
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## MIDDLE SPAN ROOF

➤ Suitable for Factory / Warehouse / Project / Residential

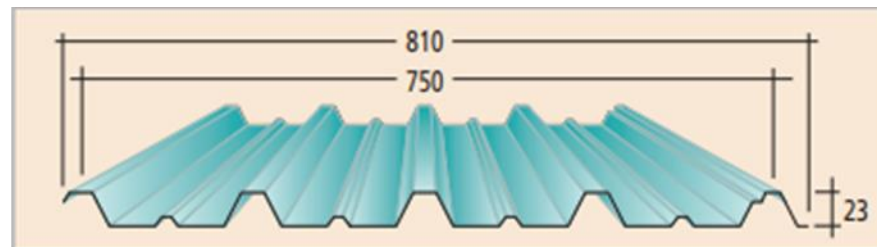


**BL 710**

**Thickness:**  
30-60 Bj.L.S

**Minimum Length:**  
0,65 m

**Maximum Length:**  
12 m

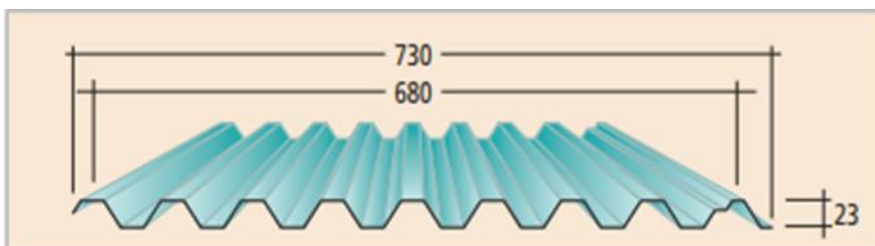


**GG 750**

**Thickness:**  
30-40 Bj.L.S

**Minimum Length:**  
0,65 m

**Maximum Length:**  
12 m

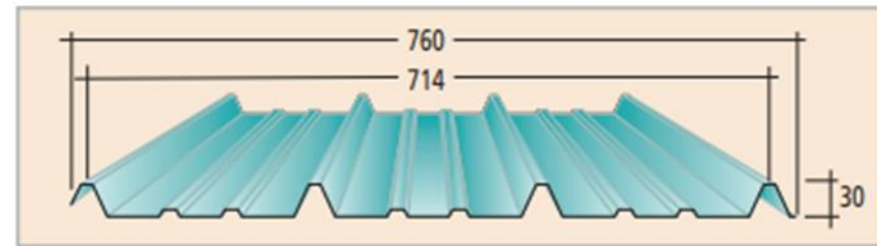


**G 680**

**Thickness:**  
30-80 Bj.L.S

**Minimum Length:**  
0,65 m

**Maximum Length:**  
12 m



**F 714**

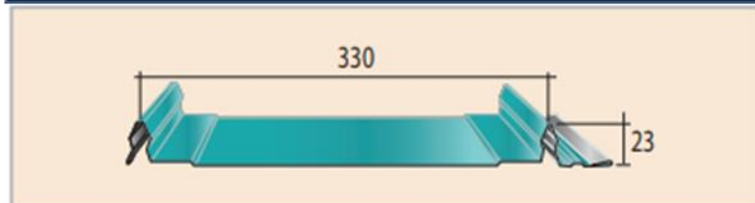
**Thickness:**  
30-60 Bj.L.S

**Minimum Length:**  
1 m

**Maximum Length:**  
12 m

## STANDARD ROOF, WALLING, CLADDING / FASCIA

### HIDDEN SCREW

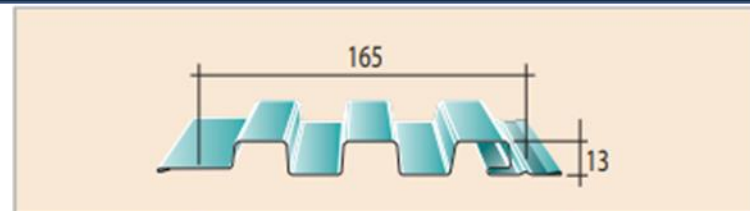


**Click-33**

**Thickness:**  
35-50 Bj.L.S

**Minimum Length:**  
1,50 m

**Maximum Length:**  
Upon Request



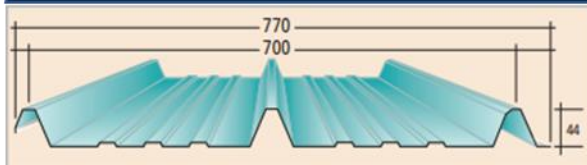
**K 165**

**Thickness:**  
35-50 Bj.L.S

**Minimum Length:**  
1,30 m

**Maximum Length:**  
Upon Request

### WITH SCREW

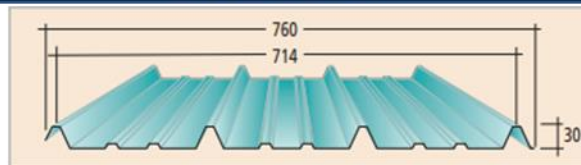


**L 700**

**Thickness:**  
30-80 Bj.L.S

**Minimum Length:**  
0,65 m

**Maximum Length:**  
12 m

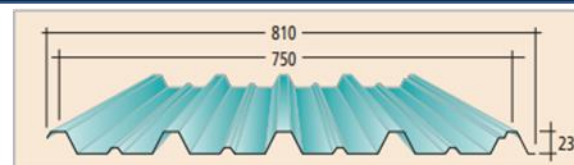


**F 714**

**Thickness:**  
30-60 Bj.L.S

**Minimum Length:**  
1 m

**Maximum Length:**  
12 m

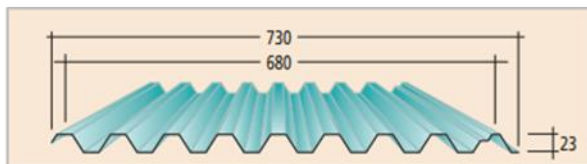


**GG 750**

**Thickness:**  
30-40 Bj.L.S

**Minimum Length:**  
0,65 m

**Maximum Length:**  
12 m

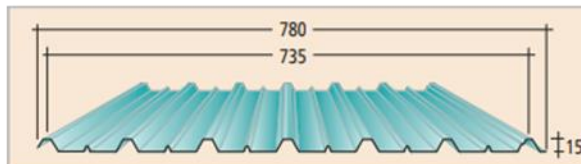


**G 680**

**Thickness:**  
30-80 Bj.L.S

**Minimum Length:**  
0,65 m

**Maximum Length:**  
12 m

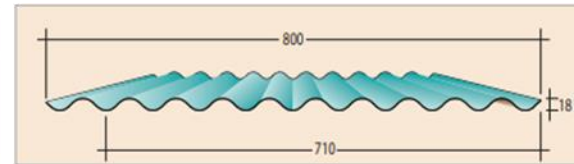


**A 735**

**Thickness:**  
20-50 Bj.L.S

**Minimum Length:**  
0,65 m

**Maximum Length:**  
12 m

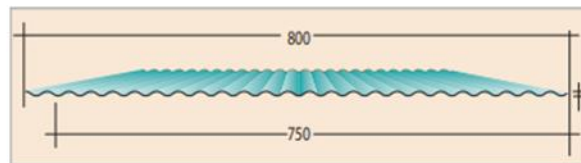


**C 710**

**Thickness:**  
20-80 Bj.L.S

**Minimum Length:**  
0,50 m

**Maximum Length:**  
3,65 m



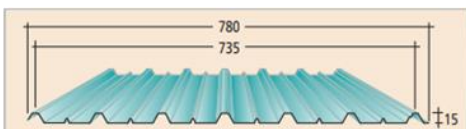
**D 750**

**Thickness:**  
20-30 Bj.L.S

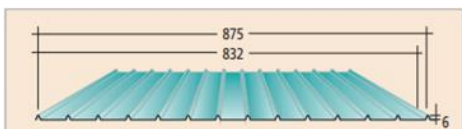
**Minimum Length:**  
1,50 m

**Maximum Length:**  
3,65 m

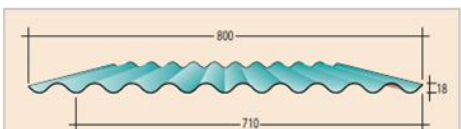
## BOLT SYSTEM



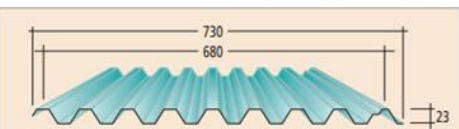
**A 735** Thickness: 20-50 Bj L.S Minimum Length: 0,65 m Maximum Length: 12 m



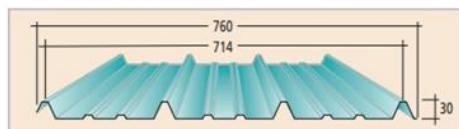
**B 832** Thickness: 20-40 Bj L.S Minimum Length: 0,75 m Maximum Length: 12 m



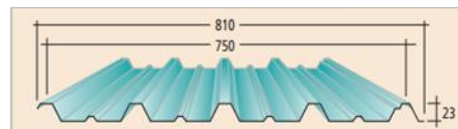
**C 710** Thickness: 20-80 Bj L.S Minimum Length: 0,50 m Maximum Length: 3,65 m



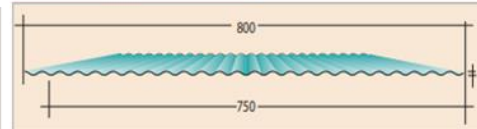
**G 680** Thickness: 30-80 Bj L.S Minimum Length: 0,65 m Maximum Length: 12 m



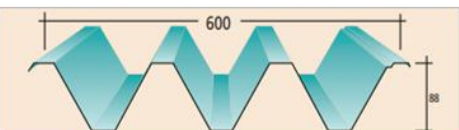
**F 714** Thickness: 30-60 Bj L.S Minimum Length: 1 m Maximum Length: 12 m



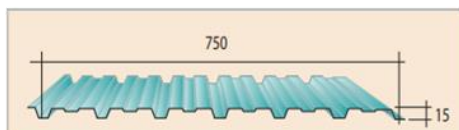
**GG 750** Thickness: 30-40 Bj L.S Minimum Length: 0,65 m Maximum Length: 12 m



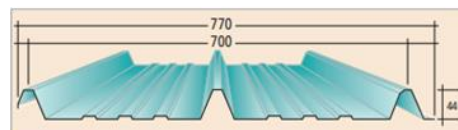
**D 750** Thickness: 20-30 Bj L.S Minimum Length: 1,50 m Maximum Length: 3,65 m



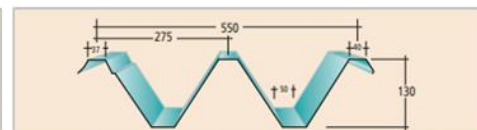
**I 600** Thickness: 45-80 Bj L.S Minimum Length: 1,5 m Maximum Length: 12 m



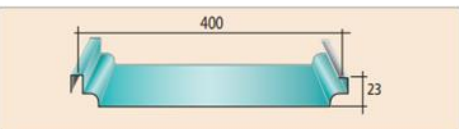
**M 750** Thickness: 35-50 Bj L.S Minimum Length: 1,50 m Maximum Length: Upon Request



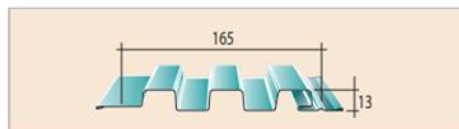
**L 700** Thickness: 30-80 Bj L.S Minimum Length: 0,65 m Maximum Length: 12 m



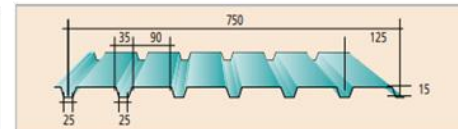
**GP 550** Thickness: 45-80 Bj L.S Minimum Length: 1,5 m Maximum Length: 12 m



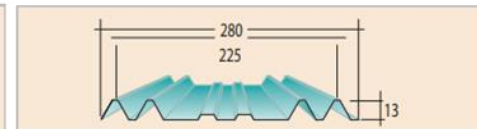
**SF 400** Thickness: 35 - 50 Bj L.S Minimum Length: 1,00 m Maximum Length: 12 m



**K 165** Thickness: 35-50 Bj L.S Minimum Length: 1,30 m Maximum Length: Upon Request



**N 750** Thickness: 35-50 Bj L.S Minimum Length: 1,50 m Maximum Length: Upon Request



**H 225** Thickness: 20-40 Bj L.S Minimum Length: 0,65 m Maximum Length: 5 m

## ROOF FASTENING SYSTEM

HOOK BOLTS



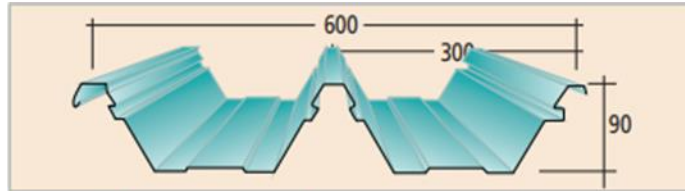
SELF DRILLING SCREWS



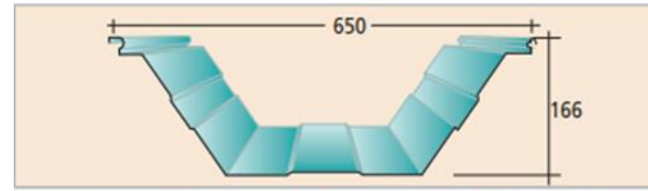
NAILS



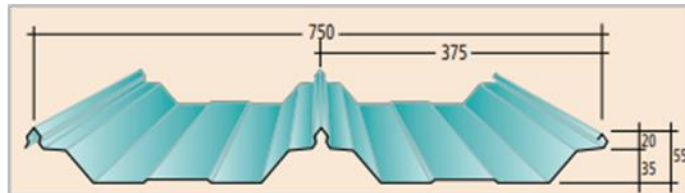
## BOLTLESS SYSTEM



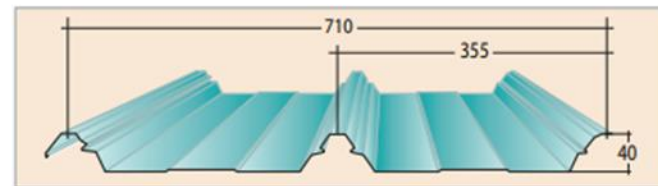
**BL 600**    Thickness: 45-80 Bj.L.S    Minimum Length: 1,5 m    Maximum Length: 12 m



**SF 650**    Thickness: 45-100 Bj.L.S    Minimum Length: 1,5 m    Maximum Length: 12 m



**SF 750**    Thickness: 40-60 Bj.L.S    Minimum Length: 1,5 m    Maximum Length: 12 m



**BL 710**    Thickness: 30-60 Bj.L.S    Minimum Length: 0,65 m    Maximum Length: 12 m

## ROOF FASTENING SYSTEM

### HOOK TIGHTENING SYSTEM

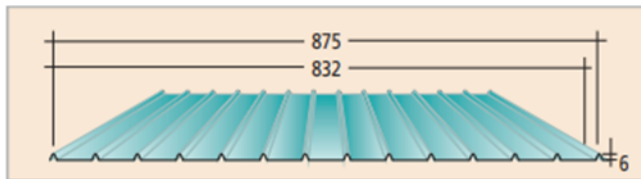
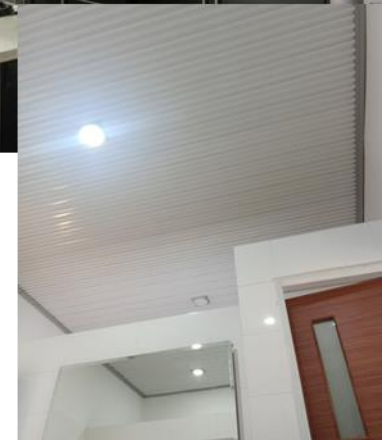


### CLIP SYSTEM

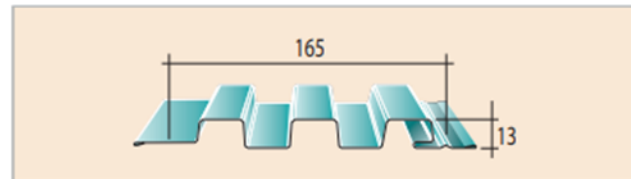


## CEILING

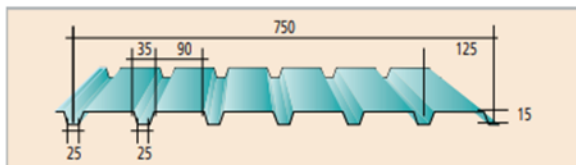
- ❑ A great fit for an industrial style, minimalist, yet perfectly with a modern aesthetic design, rustic look, traditional decor, and others as well.
- ❑ Giving creativity, Durability, Cost Effective, Easy installation and Low Maintenance
- ❑ Can be installed in your bathroom, kitchen, bedroom, or any area of the house you wish



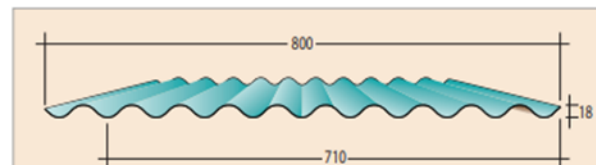
<b>B 832</b>	<b>Thickness:</b> 20-40 Bj L.S	<b>Minimum Length:</b> 0,75 m	<b>Maximum Length:</b> 12 m
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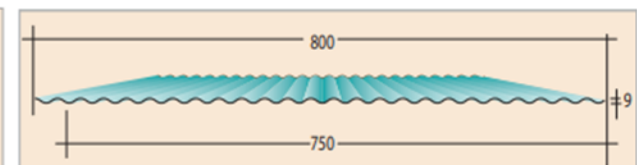
<b>K 165</b>	<b>Thickness:</b> 35-50 Bj L.S	<b>Minimum Length:</b> 1,30 m	<b>Maximum Length:</b> Upon Request
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<b>N 750</b>	<b>Thickness:</b> 35-50 Bj L.S	<b>Minimum Length:</b> 1,50 m	<b>Maximum Length:</b> Upon Request
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<b>C 710</b>	<b>Thickness:</b> 20-80 Bj L.S	<b>Minimum Length:</b> 0,50 m	<b>Maximum Length:</b> 3,65 m
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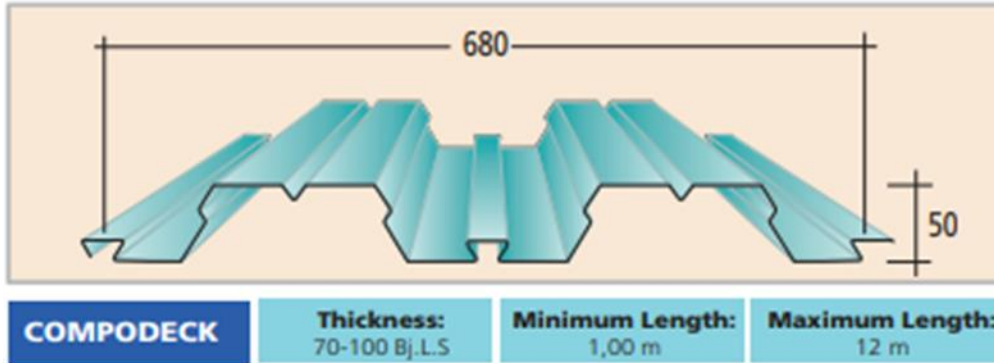
<b>D 750</b>	<b>Thickness:</b> 20-30 Bj L.S	<b>Minimum Length:</b> 1,50 m	<b>Maximum Length:</b> 3,65 m
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## FLOOR DECK

### COMPODECK

Compodec has a unique tyros wave profile that similar to bird tail shape that will press concrete when it is loaded and gives high shear resistance. Colordeck is color coated Compodeck of its bottom side to give decorative as well as protective function.



Installation:



**FUMIRA**

**INDUSTRIAL**

Daiwa Manunggal Logistik Property



**FUMIRA**

**INDUSTRIAL**



UMETOKU Phase-2



**FUMIRA**

**INDUSTRIAL**

PT. INABATA



**FUMIRA**

**INDUSTRIAL**

KIIC WAREHOUSE



**FUMIRA**

**INDUSTRIAL**



Cold Storage, Muara Baru



**FUMIRA**

**COMMERCIAL**

CLICK 33 - SUMARECON BEKASI



**FUMIRA**

**OFFICE**



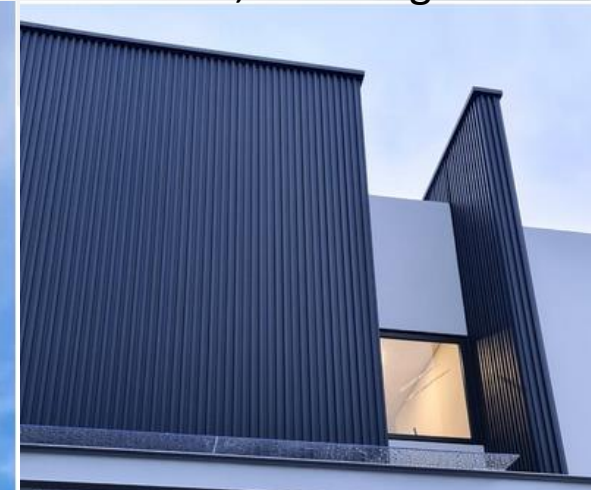
Squadron Angkatan Udara  
Halim Perdana Kusumah



**FUMIRA**

**RESIDENTIAL**

House, Bandung



# ROOF – CLICK-33

Click-33 is a minimalist roof type made by Fumira that has a low wave profile for long to medium spans connection by hidden screw installation using a click system.

## ADVANTAGES

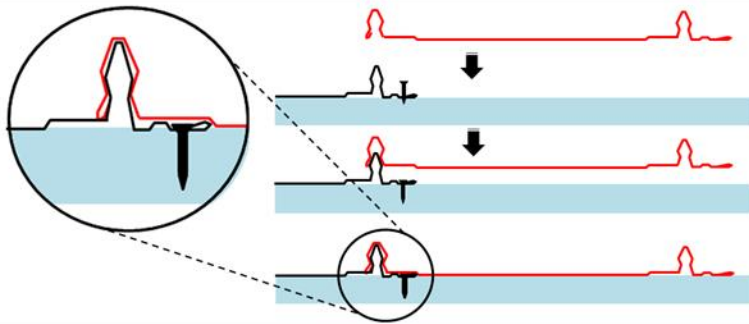
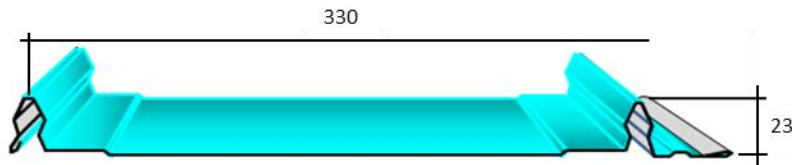
- ✓ Minimalist design
- ✓ Clean looks and neat due to hidden screw
- ✓ Narrow width that easy to be handled
- ✓ Hole free with click system mount
- ✓ Easy Hidden Screw to minimize leaks to building
- ✓ Rainfall capacity up to 100 mm/hour.
- ✓ Fast and easy installation system
- ✓ Can be disassembled without damaging the roofing material.
- ✓ Can be used as side wall or roof
- ✓ Has 5 ribs profile variation and curved shape in diameter of 4.5 minimum
- ✓ Economical low wave profile



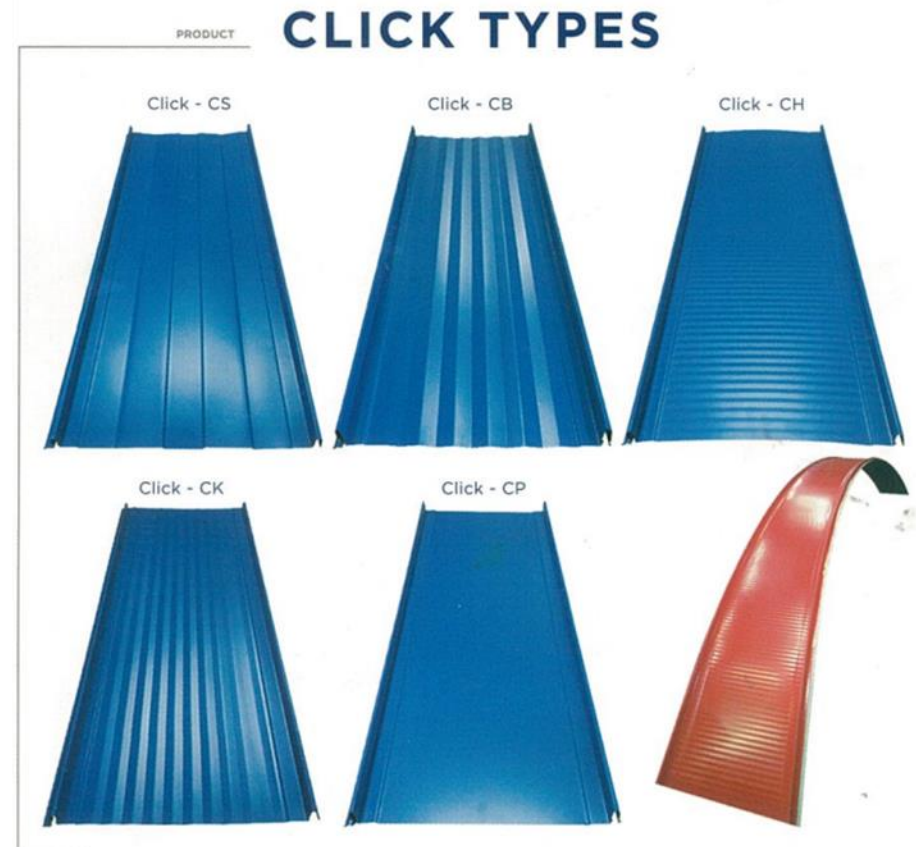
# ROOF – CLICK-33

Manufactured using a good quality material combined with the most advanced technology with a NOF (Non Oxidizing Furnace) system to produce a high quality products that meet SNI standard. Not easy to change color due to oxidation and Has the best advantage of Fumira's Lockforming quality up to 0 (Zero) with a guarantee can be bent without a break

## Profile:



## Installation:



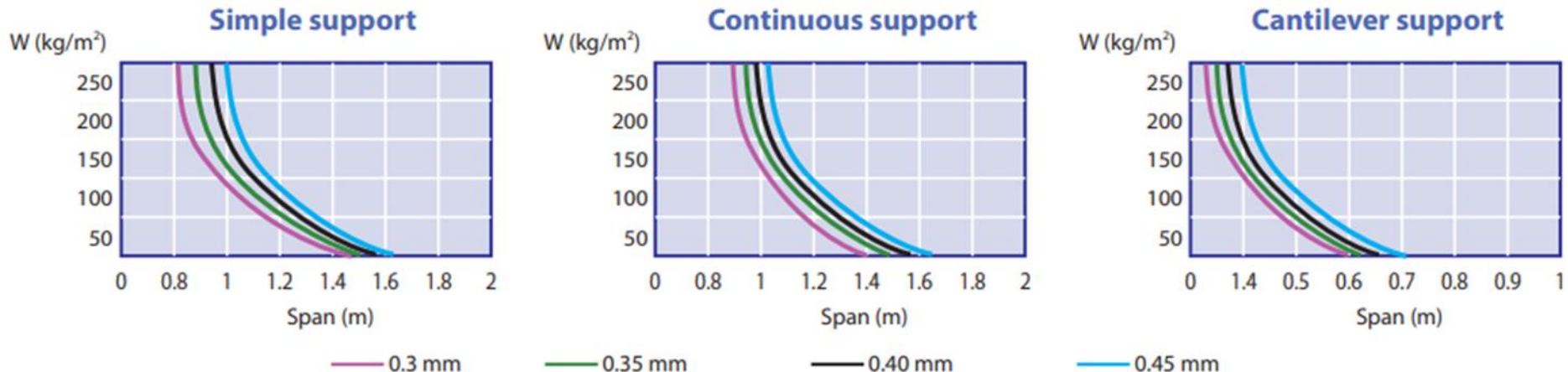
# ROOF – CLICK-33

## SECTIONAL PROPERTIES

Thickness		Unit weight		Momen of Inersia
SNI Symbol BjLS	Total Coating (mm)	Kg/m	Kg/m <sup>2</sup>	1 x (cm <sup>4</sup> /m)
33	0.35	2.35	3.81	1.86
35	0.40	3.71	3.81	2.13
40	0.45	3.09	4.35	2.40
45	0.50	3.45	4.56	3.19

The narrow shape of the peaks of the cross-sectional geometry of Click-33 prole provides moments of inertia that produce sufficient rigidity so that the continuous line up support distance can be up to 1 m while still having the ability to withstand the weight of worker on the roof

## Load capacity graph on Various support types of Click-33



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Architect: Tan Tik Lam Architect



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Architect: Tan Tik Lam Architect



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House, Sukabumi







# RESIDENTIAL

House, Pondok Gede



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Dago Village - Bandung



# FUMIRA PUBLIC BUILDING

Masjid Universitas Gunadarma - Depok





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House - Kelapa Gading



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House, Jl. Pahlawan, Bandung

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House, Bumi Serpong Damai

Photograph: Sandi Baratama & Niko Adiatma

Source: Archdaily



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House, Bekasi Barat

Photograph: Sandi Baratama & Niko Adiatma

Source: Archdaily



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House Sawangan



**FUMIRA**

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House, Kemang

