

ALEXFORM

ALEXANDRIA STEEL FORMING COMPANY

www.alexform.com



ALEX FORM
Solar Structure
Solutions

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ALEXFORM SOLAR

ABOUT ALEXFORM

AlexForm origins date back to 1959, and since then the Company has consistently grown its business, and today AlexForm is leading the cold-formed steel sections industry and insulated panels in Egypt, and among the top players in the region, it remained at the top by finding new and exciting ways to reach out consumers, maintaining excellent relationship with clients as well as developing and improving the quality and business. AlexForm has a number of sister companies that all together provide a complete integrated steel structural solutions, starting from manufacturing to fabrication and installations.

AlexForm is a global manufacturer of cold steel section profiles, insulated sandwich panels and solar mounting solutions, pioneering in steel fabrication industry for more than 60 years.

Through the years, AlexForm remained focused on empowering our R&D team along with our technical office to work on innovating and providing new technologies that contribute in building green society.

AlexForm has early realized the exponential growth and demands of renewable energy and decided to expand its products ranges and integrate

solar energy structural solutions as part of its business and production policy considering the top quality procedures, international and industry standards. To achieve this goal, Alex Form has equipped its production lines with the top quality machinery and state-of-the-art equipment.

AlexForm has a large number of skilled and highly qualified and experienced managers, engineers, technicians & workers, who are the real asset of our company and play a large role in developing the business and success set-up.

AlexForm constantly provides training to the staff and ensures that the most modern manufacturing techniques are persistently applied.

AlexForm full-fledged sales and marketing team comprises high caliber professional engineers & sales representatives. Empowered by its strong supply chain network, AlexForm provides high quality (supreme - prime) material to satisfy customers' requirements.





Alex Group History SINCE 1959



1959



1990



1993



1997



2015



2020



Kholafaa Khalil Abdel Naim Steel Trading

60 years ago, Alex Family was brought to life by Mr. Khalil Abdel Naeem. It started by focusing on one end goal, to be the leading steel traders covering the Egyptian market and fulfilling all its needs.



AlexSteel Factory

The first step towards comprehension was to create a general steel fabrication center. As a start, AlexSteel was created to manufacture steel built up sections.



AlexProfile Factory

Further expansions were made to cover more of the steel components needed to provide a complete solution for a steel structural building. AlexProfile line worked on providing all forms of corrugated and wave single steel sheets, used as wall and roof cladding.



AlexForm Factory

With the rise of pre-engineered buildings culture, AlexForm worked on providing all types of Cold-formed steel sections, as well as cold formed Steel Deck.



AlexPanel Factory

The new AlexPanel factory presented the first insulated sandwich panel onto the African and Middle-Eastern market. With diversity of steel specifications and insulating core thicknesses, we were able to provide a product covering a wide range of applications.



AlexSolar

With further technology addition to our line, our R&D along with the technical team succeeded in designing our own lightweight steel sections suitable for solar mounting systems. With specifications such as Zinc-Magnesium galvanization, AlexSolar provide a guaranteed and durable solution customized considering the surrounding rough environmental attacks.



SOLAR Mounting Structure

In view of the great and rapid developments in our time in the field of energy, especially renewable energy and its great impact on the environment, Alex Form can provide the best engineering solutions for the solar mounting structures in different types (roof mounting, ground mounting, Car Shed and steel parts of the tracker) assisted by its large and varied availability of raw materials throughout the year in its warehouse, and it can also provide special raw materials on demand.

Also, Alex Form is investing directly and permanently to obtain the most stiffened and strong profiles to resist the loads exposed to it in order to provide the weight of the structure with the same stability and efficiency required, which makes the structure more economical.



Solar Mounting Structure Types:
In AlexForm, you are unrestrained with typical patterned structures as we are working as a tailor made for each project and client requirements.



Solar Ground Mounting Structures

In ground mounting structures we can provide the 2 types of post fixations (ramming type and on concrete base).



Single Post Mounting Structure



Dual Post Mounting Structure



AlexForm understands the market dynamics and the needs for continuous innovative designs of cold formed steel sections that enhances the performance and reduce the weight of the solar mounting steel structures. AlexForm has uniquely designed sections that helped many companies enhancing their design and system performance especially solar tracker systems designers. These nonconventional sections have been used in many projects and are now proven in use. This has certainly led to a better system performance with significant lower weight of the entire structure, and accordingly contributes in offering more economic and competitive solutions



CAR SHED



Single Car Shed



Double Car Shed



Car Shed - Tubes

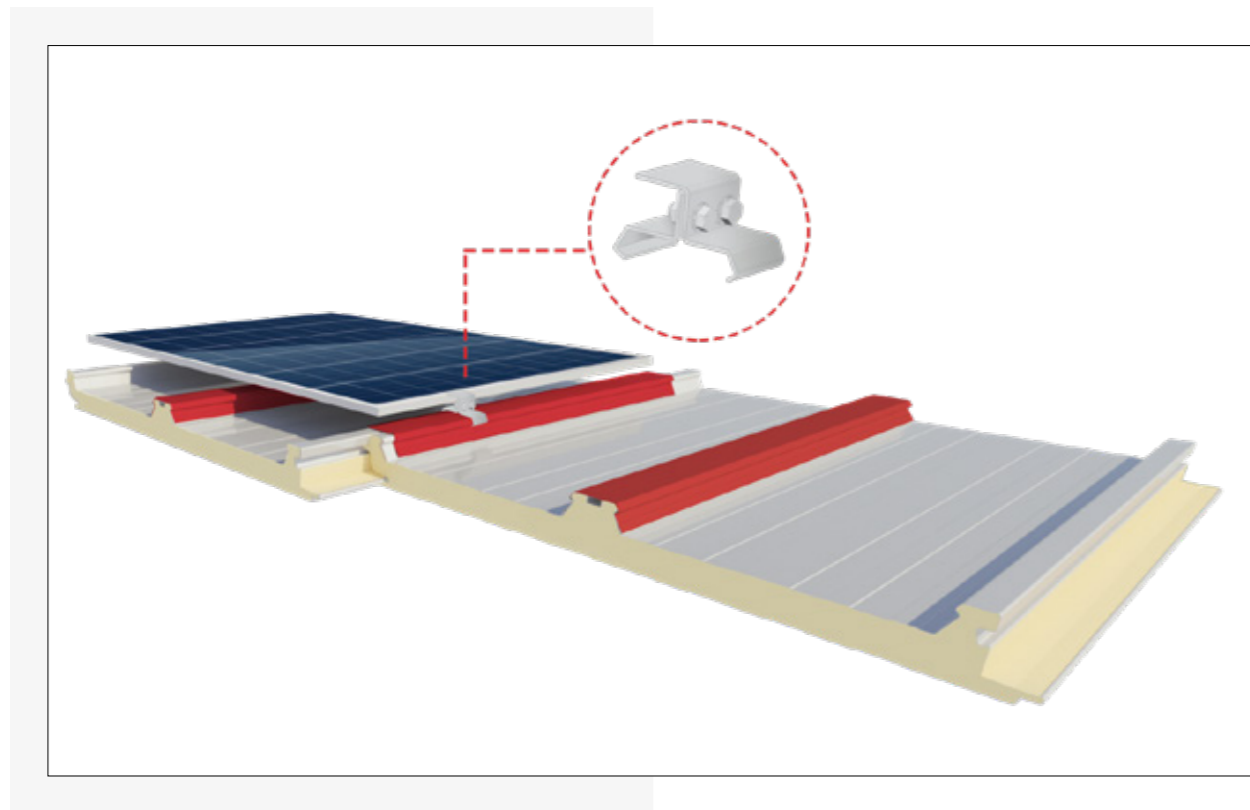


Car Shed - Cold Formed Profiles

Product Name	Car Shed Tubes	Car Shed Cold Formed Profiles
Less weight per meter square		✓
Less weight per watt		✓
More waste in materials	✓	
Materials Availability	✓	✓
Easy for installation		✓
Faster in installation		✓
Flexibility to be customized		✓



SECRET FIX ROOF CLAMPING

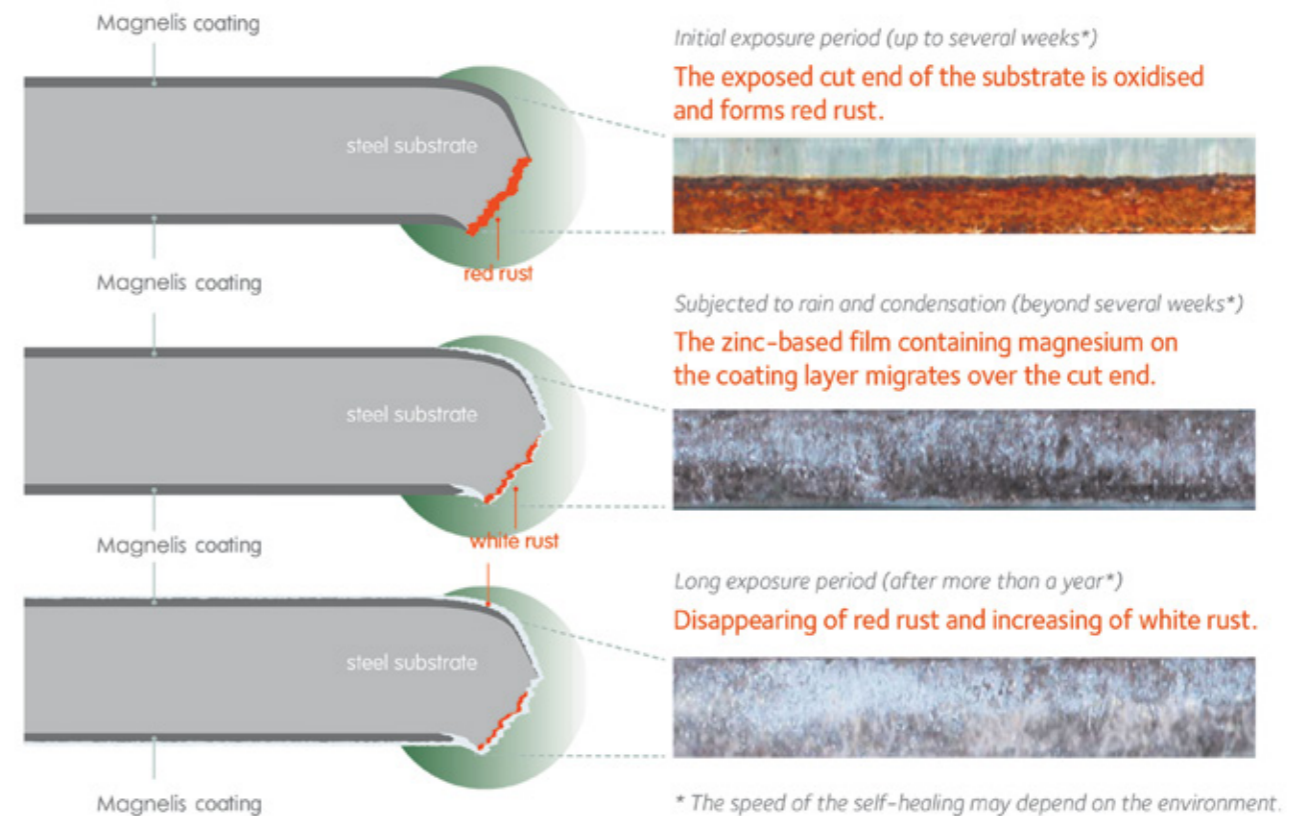


AlexForm can provide the new innovative solution combining its products, the new secret fix roof profile for sandwich panel and roof solar mounting, which help the industrial buildings to find the best roofing system thanks to its type of fixation with hidden screws to ensure a long life time and resist against the environmental circumstances.

Edge protection with self-healing effect:

When exposed to the environment, Magnelis® forms a very dense zinc-based protective film, unlike galvanised where the film is very porous.

This unique dense film is also formed on edges, welds, perforations and scratches. In case some red rust was present on these uncoated zones, the red rust will be gradually covered by the Magnelis® film. It is almost impossible for the environment to penetrate this film. The result is that Magnelis® provides perfect protection of the whole structure, even on the uncoated edges, scratches and perforations.



Technical specifications:

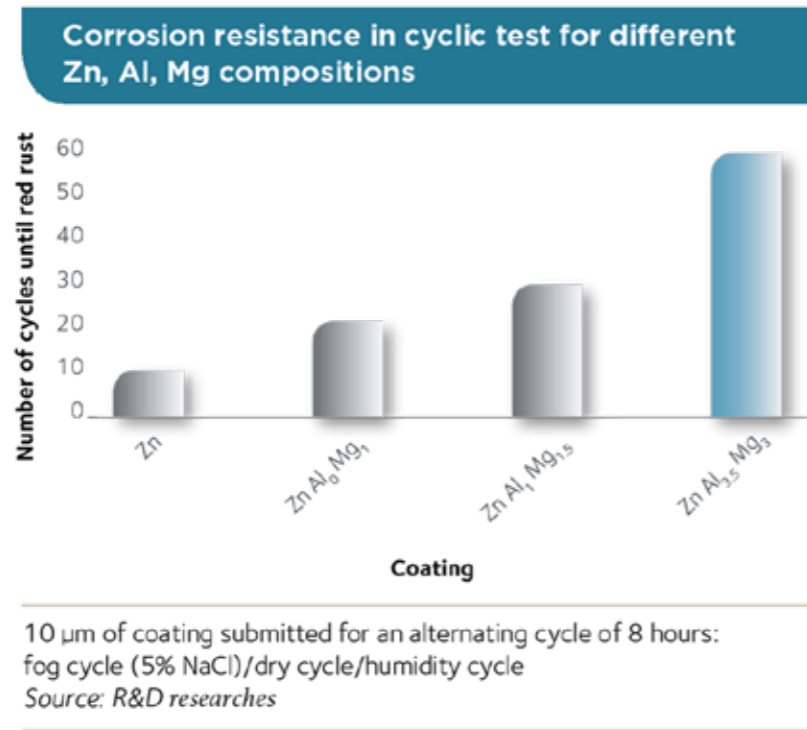
Coating Designation		ZM70	ZM90	ZM120	ZM175	ZM200	ZM250	ZM310	ZM430
Coating Mass (total both sides)	g/m ²	70	90	120	175	200	250	310	430
	oz/ft ²	0.23	0.30	0.40	0.60	0.65	0.80	1.00	1.40
Coating Thickness	(µm/per side)	5	7	10	14	16	20	25	35

Aspect	MA and MB aspect
Surface Treatment	C (E-Passivation® CrVI-free), O (oiled)
Thickness	0.45 to 6.00 mm (0.018 to 0.236 inches)
Width	Up to 1680 mm (66 inches)

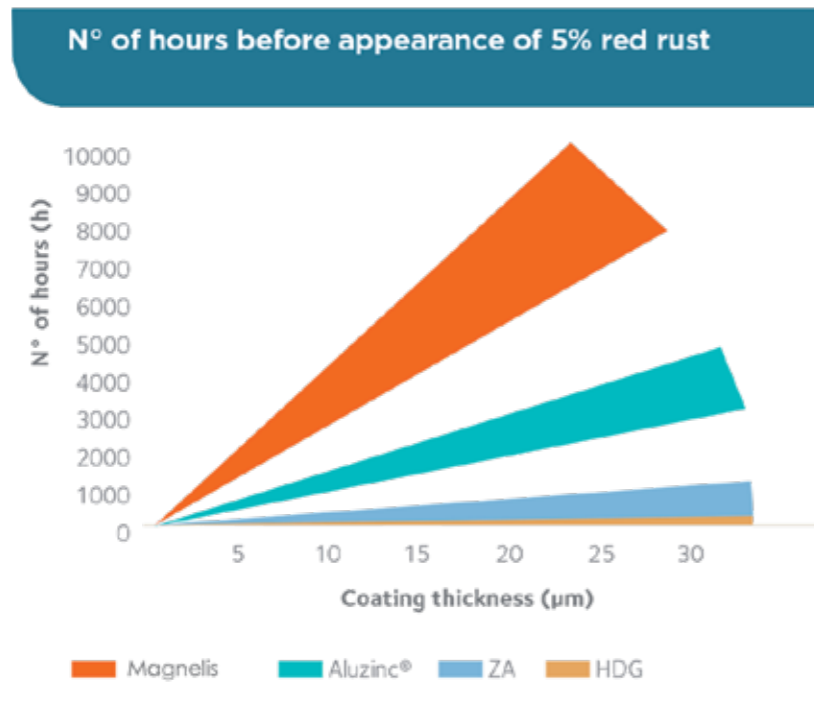
Steel grades

HX260 LAD to HX460 LAD + ZM
H240 + ZM

The following figure shows the high performance of zinc coated material against salt spray in comparison to other coated materials



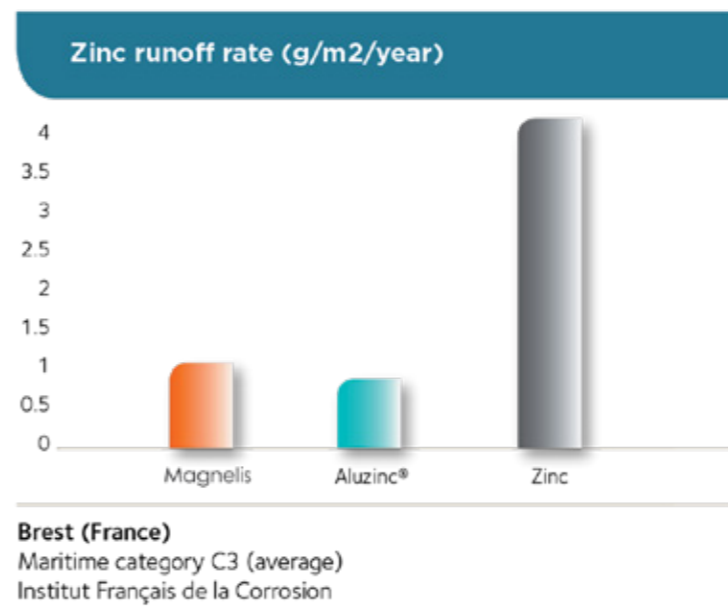
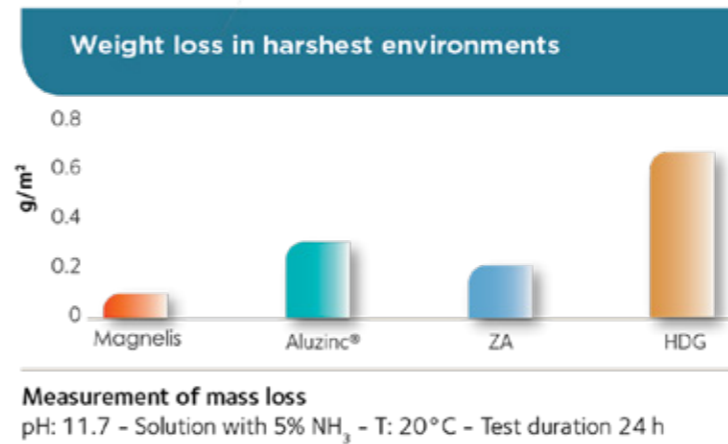
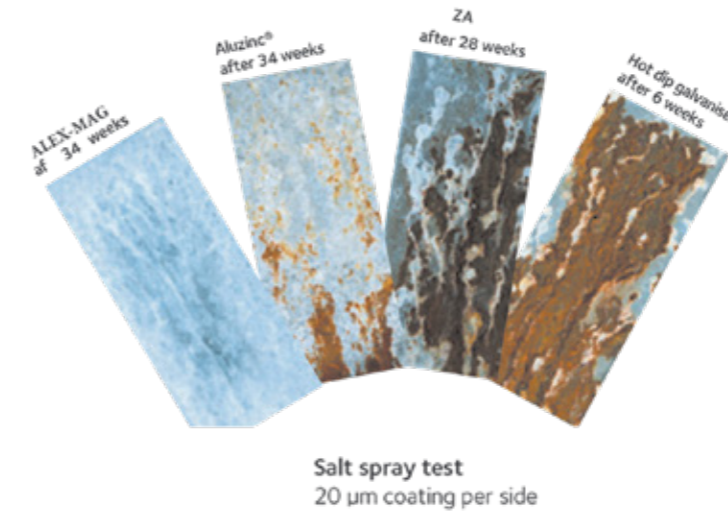
The following shape show the behavior of zinc coating against salt spray test, where it show better performance for Zm coating against other types of coating:



Corrosion resistance by salt spray test (average) :
Magnelis: > 200 h/µm - Aluzinc®: ±100 h/µm - ZA: ± 25 h/µm
Hot dip galvanised (HDG): ± 8-10 h/µm

In highly alkaline environments (pH between 10 and 13), Magnelis® demonstrates superior corrosion resistance compared to other metallic coatings.

Due to its chemical composition, the product has better quality characteristics in terms of barrier protection against corrosion in an ammonia environment.



Environmentally responsible:

The application of Magnelis ensures the preservation of natural resources since it uses less zinc than pure zinc coatings. Moreover, like Aluzinc®, Magnelis® reduces considerably the zinc runoff* in soils.

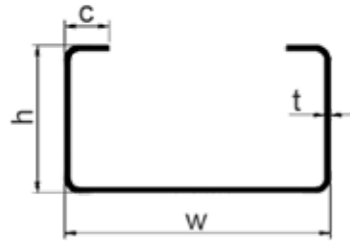
*Runoff rate: the rate of dissolution of a material from its surface into the external environment (in g/m²/year).

In our case: the quantity of zinc washed from the surface by falling rain water.



ALEX SOLAR PROFILES

■ C - Channel Profile (AS-CC):

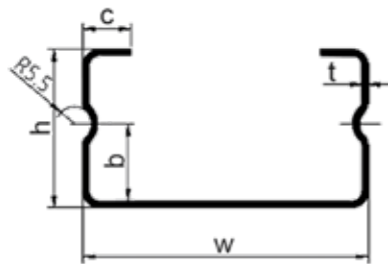


w		h		c		t	
From	To	From	To	From	To	From	To
90	140	36	50	17	20	1.20	2.00
140	200	50	80	20	20	1.50	2.50
200	300	50	80	20	25	2.00	3.50

Dim in mm.

Material: Galvanized/Black iron

■ C - Channel Profile with notch on leg (AS-CNF):

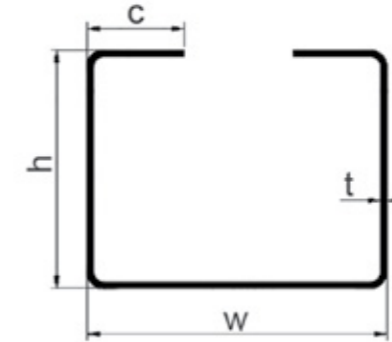


w		h		c		t		b
From	To	From	To	From	To	From	To	
90	140	36	50	17	20	1.20	2.00	20:40
140	200	50	80	20	20	2.00	2.50	
200	300	50	80	20	25	2.00	3.50	

Dim in mm.

Material: Galvanized/Black iron

- C channel profile (High thickness wide leg profile) AF-CC-WL :



h	36	40	50	60	70	80	90	100	110	120	130	135
w												
520	•	•										
500	•	•	•									
480	•	•	•	•								
460	•	•	•	•	•							
440	•	•	•	•	•	•						
420	•	•	•	•	•	•	•					
400	•	•	•	•	•	•	•	•				
380	•	•	•	•	•	•	•	•	•			
360	•	•	•	•	•	•	•	•	•	•		
340	•	•	•	•	•	•	•	•	•	•	•	
320	•	•	•	•	•	•	•	•	•	•	•	•
300	•	•	•	•	•	•	•	•	•	•	•	•
380	•	•	•	•	•	•	•	•	•	•	•	•
360	•	•	•	•	•	•	•	•	•	•	•	•
240	•	•	•	•	•	•	•	•	•	•	•	•
220	•	•	•	•	•	•	•	•	•	•	•	•
200	•	•	•	•	•	•	•	•	•	•	•	•
180	•	•	•	•	•	•	•	•	•	•	•	•
160	•	•	•	•	•	•	•	•	•	•	•	•
140	•	•	•	•	•	•	•	•	•	•	•	•
125	•	•	•	•	•	•	•	•	•	•	•	•

h	36	40	50	60	70	80	90	100	110	120	130	135
C	10	11	20	25	25	25	28	31	34	37	42	42

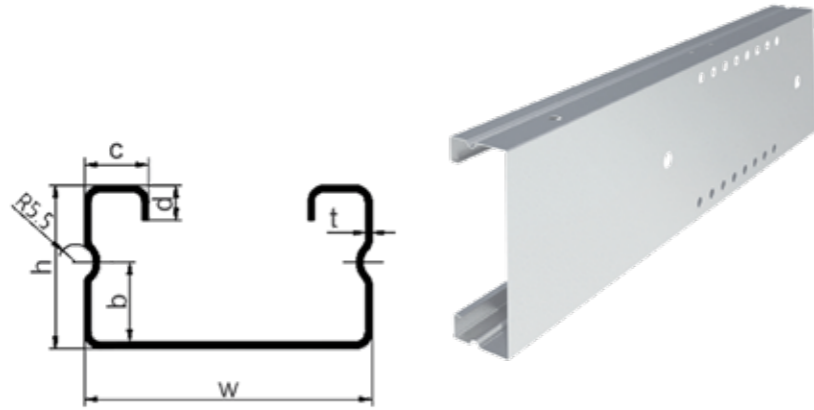
Dim in mm.

Material: Galvanized/Black iron

According to EN 10162.

Steel Grade S250, S350 and S420.

■ **C - Channel plus profile with notch on leg (AS-CC-NF+):**

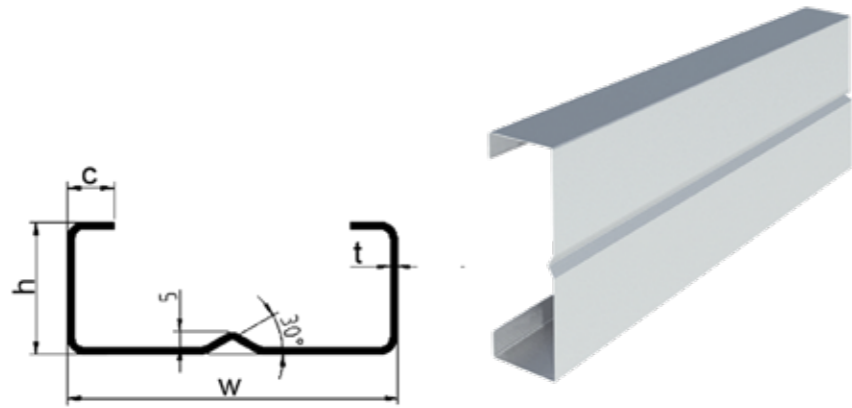


w		h		c	d	t		b
From	To	From	To			From	To	
140	200	50	80	25	10	1.20	2.50	25:40
200	300	50	80	25	10	2.00	3.50	

Dim in mm.

Material: Galvanized/Black iron

■ **C - Channel Profile with notch on web (AS-CC-NW):**

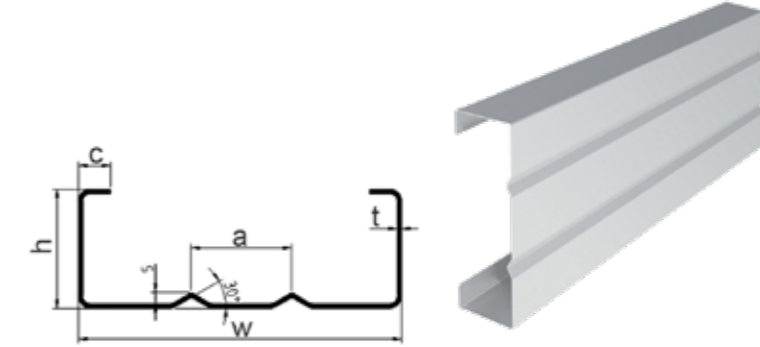


w		h		c		t	
From	To	From	To	From	To	From	To
100	140	36	50	17	20	1.20	2.00
140	300	50	80	20	20	2.00	2.50

Dim in mm.

Material: Galvanized/Black iron

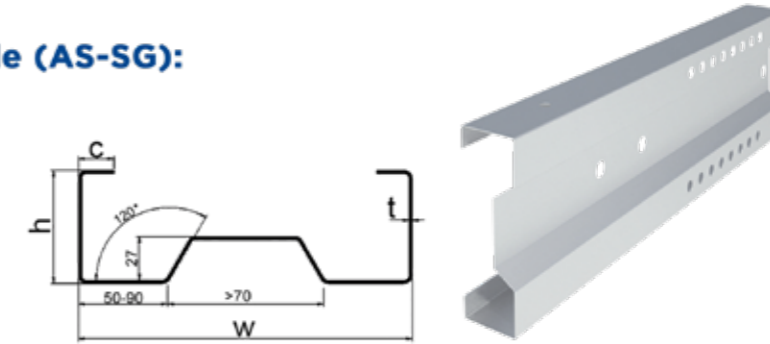
■ **C - Channel Profile with 2 notches on web (AS-CC-DNW):**



w		h		c		t		a
From	To	From	To	From	To	From	To	
200	300	50	80	20	25	2.00	3.50	80:180

Dim in mm. Material: Galvanized/Black iron

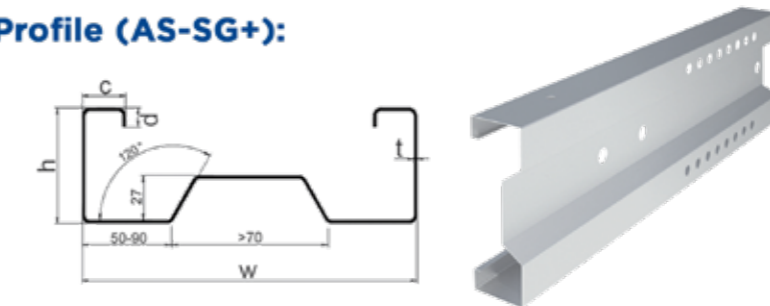
■ **Sigma Profile (AS-SG):**



w		h		c		t	
From	To	From	To	From	To	From	To
170	250	50	80	22	22	1.50	3.50

Dim in mm. Material: Galvanized/Black iron

■ **Sigma plus Profile (AS-SG+):**



w		h		c	d	t	
From	To	From	To			From	To
170	250	50	80	25	10	1.50	3.50

Dim in mm. Material: Galvanized/Black iron

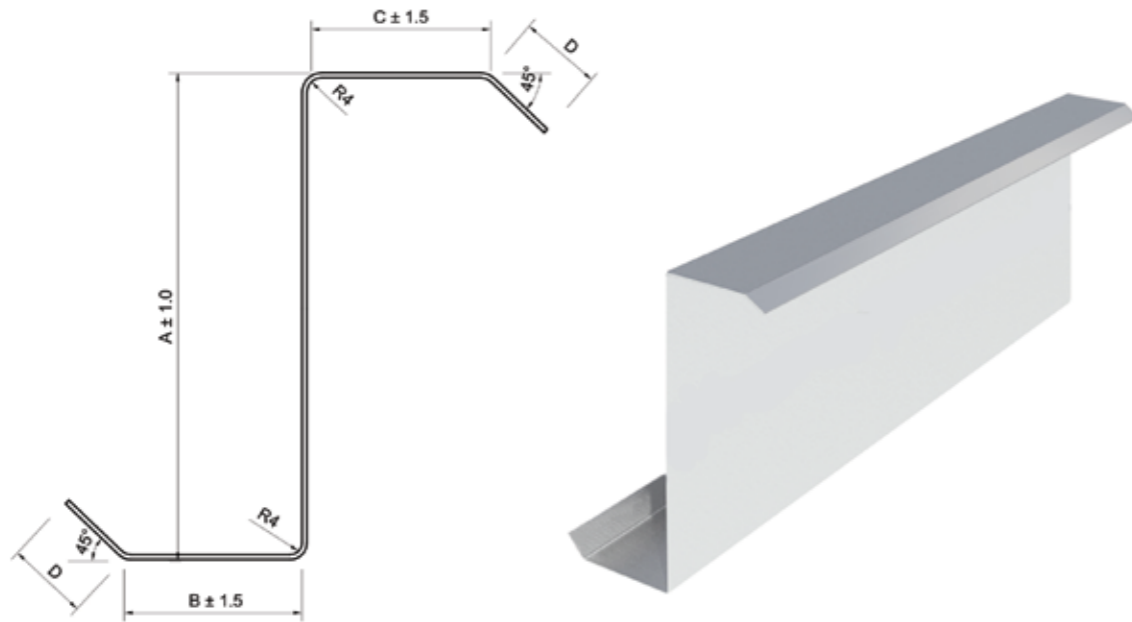
Technical data sheet

Cold Formed Profile

ZEE section purlins

(AF-Z)

ZEE section purlins are accurately roll formed from high strength steel to provide an efficient, light weight and economical roofing and cladding support system for structural steel buildings. The thickness and height of the purlin selected depend on span length and loads.



Nominal Size	Dim. "A"	Dim. "B"	Dim. "C"	Dim. "D"	MATERIAL THICKNESS									
					1.50	1.70	1.90	2.00	2.25	2.65	3.00	3.35	3.75	4.00
305 * 90	305	90	90	25						•	•	•	•	•
250 * 90	250	90	90	25						•	•	•	•	•
200 * 60	200	60	60	25						•	•	•	•	•
100 * 60	100	60	60	25					•	•	•	•	•	•
100 * 50	100	50	50	19					•	•	•	•	•	•
90 * 50	90	50	50	19		•	•	•	•	•	•	•	•	•

Material: Galvanized/Black iron

Steel Grade S250, S350 and S420.

Twist tolerance to be defined as follows:

Zee purlins with web width (Dim. "A") of 100 mm or less cannot be expected to be without twist.

All Zee's with leg lengths (Dim.'s "B" & "C") of 54 mm or more cannot have lip lengths (Dim. "D") greater than 28 mm.

All Zee's with leg lengths less than 54 mm cannot have lip lengths greater than 19 mm.



REFERENCE LIST IN THE SOLAR SECTOR



AlexForm Clients:



20+ COUNTRIES

WORLDWIDE FOOTPRINT

AlexForm Footprint:

- Algeria
- Angola
- Benin
- Burundi
- Cyprus
- England
- Ethiopia
- France
- Ghana
- Greece
- India
- Iraq
- Jamaica
- Jordan
- Kenya
- Libya
- Morocco
- Nigeria
- Qatar
- Rwanda
- Saudi Arabia
- Spain
- Sudan
- Syria
- Tanzania
- USA
- Yemen
- Zambia



CERTIFICATES

CERTIFICATE
EUROCERT certifies that the company
ALEXANDRIA STEEL FORMING
(ALEXFORM / ALEXANEL).
K21 Merghen, Alex - Cairo Desert Road, ALEXANDRIA, EGYPT

Certificate No. 2016GDS
Date of initial issue 25/04/2016
Transfer Date 16/04/2021
The Certificate is valid until 25/04/2022

implements Quality Management System according to the Standard:
EN ISO 9001:2015
for the following field of application:
STEEL COLD FORMING SERVICE, MANUFACTURING AND SANDWICH PANEL PRODUCTION.

Signature
GEORGI N. SIRONIOS
Director of Development

Lack of fulfillment of the conditions set out in the contract No. 2016GDS makes this Certificate invalid. Please check the validity of the Certificate from our website using the password below: 2YR0P5E. The validity of this Certificate is subject to annual surveillance.

CERTIFICATE
EUROCERT certifies that the company
ALEXANDRIA STEEL FORMING
(ALEXFORM / ALEXANEL).
K21 Merghen, Alex - Cairo Desert Road, ALEXANDRIA, EGYPT

Certificate No. 218EGES
Date of initial issue 25/04/2016
Transfer Date 16/04/2021
The Certificate is valid until 25/04/2022

implements Environmental Management System according to the Standard:
EN ISO 14001:2015
for the following field of application:
STEEL COLD FORMING SERVICE, MANUFACTURING AND SANDWICH PANEL PRODUCTION.

Signature
GEORGI N. SIRONIOS
Director of Development

Lack of fulfillment of the conditions set out in the contract No. 218EGES makes this Certificate invalid. Please check the validity of the Certificate from our website using the password below: 2eR0P5E. The validity of this Certificate is subject to annual surveillance.

CERTIFICATE
EUROCERT certifies that the company
ALEXANDRIA STEEL FORMING
(ALEXFORM / ALEXANEL).
K21 Merghen, Alex - Cairo Desert Road, ALEXANDRIA, EGYPT

Certificate No. 218EGOH
Date of initial issue 04/04/2016
Transfer Date 16/04/2021
The Certificate is valid until 30/04/2022

implements Occupational Health and Safety Management System according to the Standard:
ISO 45001:2018
for the following field of application:
STEEL COLD FORMING SERVICE, MANUFACTURING AND SANDWICH PANEL PRODUCTION.

Signature
GEORGI N. SIRONIOS
Director of Development

Lack of fulfillment of the conditions set out in the contract No. 218EGOH makes this Certificate invalid. Please check the validity of the Certificate from our website using the password below: 2ZV3JPL. The validity of this Certificate is subject to annual surveillance.

SGS ITALIA S.p.A.
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Industria & Environment
Via Caldera, 21
20153 Milano
Tel. (02) 7393.1 Fax: (02) 7012067
Affiliazione code 095103

Id.: CER CPR Structural Steel and Aluminum Components
Rev. 1
Page 1 of 1
File nr.: 21.20237

Certificate of Conformity of the Factory Production Control
1381-CPR-729 Venice, 16 November 2021

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (The Construction Product Regulation or CPR), this certificate applies to the construction product
Structural Steel and Aluminum Components

Produced by
Manufacturer: **Alexandria Steel Forming "Alex - Form"**
Address: **21K Merghem Cairo - Alexandria Desert Road Egypt.**

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performances described in Annex ZA of the standards

EN 1090-1:2009+A1:2011 Execution of Structural Steel and Aluminum Components
Execution class up to EXC2
Methods of Declaration: 1 - 3a

Are applied according to System 2+ and that
The Factory Production Control fulfills all the prescribed requirements.
This certificate has been issued on **16 November 2021** and will remain valid as long as the harmonized standard remains valid or the manufacturing conditions in the plant or the factory production control itself are not modified significantly.

This certificate is a translation of the original certificate nr. 1381-CPR-729 in Italian language and must not be used for any legal interpretation.

Date of last issue: **16 Nov. 2021**

The Authorized Representative
p.p. Roberto Giorgi
Roberto Giorgi

The Technical Director
Flaviano Prospero-Flaviani
Flaviano Prospero-Flaviani

Member of SGS (Société Générale de Surveillance) Group
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