The Basics of Metal Roofing

Rooftop Quality Assurance

8 IIBEC Continuing Educational Hours
8 AIA Learning Units and HSW Credit

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Metal Roofing
“a general term that covers both low slope and steep slope type installations”
Low Slope Metal Roofs

- 1/12 to 3/12 – typically installed with a “secondary” membrane layer under the metal roofing.
- Seams are tightly formed
- Fasteners are hidden – “Concealed Fasteners”
- Joints are typically lapped – some installations allow “pressure bar” installation.

Check with Manufacturer regarding slope limitations – ties into warranty!
Low Slope Metal Roofs
Steep Slope Metal Roofs

• 3/12 and Up – typically installed with a “secondary” membrane layer under the metal roofing.
• Seams are usually lapped or “snapped”
• Exposed fasteners
• Joints are typically lapped
Steep Slope Metal Roofs
Seam Types

Snap Fit Seams
Roll Form Seams

Seam measurements

Putting the panels together

#1 square seam closed

#2 double locked standing seam

Roll formed standing seam panels
End Lap Seams

• Determined by the manufacturer
• Shingled
• Typically with sealant
• Remember - “the lower the pitch the longer the lap”
Side Lap Seams

Sealing Side Seams

Crest fixing for roof or walls

Valley fixing for walls only

Butyl tape

Don’t fix here because underlapped sheet would leak.
Metal Roof Profiles

PANEL PROFILES

Craftsman™ Series
L-12 (with Beads)
316 and 15-5 PH Stainless
316L
SB-12
LB-12
HB-12
10.5" x 2.5"

Artisan® Series
L-12 (with Beads)
316 and 15-5 PH Stainless
316L

QwikLok™
2½
12"

Traditional® Series

5-12C

SH-12
1½ only

ShadowRib™

B-12C
3½
1½

Trapezoidal Leg
Vertical Leg

Ultra-Dek™

LokSeam®

Double-Lok®

BattenLok®

Punch-Through System
13" and 16" Shak estile

Field Seamed System
12" Shak estile

Field Seamed System
12" Shak estile

Field Seamed System
12" Shak estile

Curved BattenLok®

Architectural Wall Panels

FW 120-1 (with Bead)

ILM-240-3 (with Beads)

ILM-283-2 (with Beads)

FlexLoc®

10½
6½ and 7½ also available

Classic® Series

10½
6½ also available

NuWall™

12"
Metal Shingles
Flat Copper Roofs
Seam Types

- Single Hem
- Double Hem
- Single Flange
- Lap Seam
- Outside Lap Seam
- Plain Lap Seam
- Double Flange
- Single Flange
- Double Seam
- Groove Seam
- Standing Seam
- Wired Edge
Metal Roof Assemblies

- Assembly Type - Insulated or Non-Insulated
- Vented or Non-vented?
- Gauge?
- High Temperature Underlayment or Not?
- Internal Gutters or External?
- Snow Guards?
- UL 580 Class 90 Compliant?
Gauge & Material

• Typical – 22 & 24 gauge
• 26 gauge (more for farm and storage buildings)
• Thicker gauges are available from some manufacturers (check to verify)
• Finishes:
  Galvalume (55% Alum + 45% zinc),
  Zincalume (55% Alum + 43.5% Zinc + 1.6% Silicon),
  PVDF (Kynar or Hylar 500 finish)
• Base Materials
  steel, stainless steel, aluminum, copper
Underlayment
Snow Guards

Clip Type
www.snowguards.biz

Bar Type
www.alpinesnowguards.com
Questions and Discussion