



METAL BUILDING SUPPLY, INC

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Order Contacts

Phone: 800-467-0626

Fax: 888-638-2580 sales@metalbuildingsupply.com

Email for inside sales team:

Stephanie Sawyer sas@metalbuildingsupply.com

Nate Obenshain nate@metalbuildingsupply.com

Jason Oaks Jason.oaks@metalbuildingsupply.com

Amber Tyrone amber.tyrone@metalbuildingsupply.com

Project Manager

Kristy Smith Kristy@metalbuildingsupply.com

Website: www.metalbuildingsupply.com

Order Cutoffs

-Mon 3:00 pm for Thur/Fri delivery*

-Wednesday 3:00 pm for Mon/Tue delivery*

*Orders with guttering or substantial custom trim may require longer lead times

*Order cutoffs will be affected by holidays

Shipping Charges

-Orders of \$150 or more do NOT have a freight charge

-Orders less than \$150 will have UP TO a \$40 freight charge

-Jobsite delivery charge is \$75(must have equipment onsite to unload)



Metal Building Supply
19601 N Mt. Olive Road * Gravette, Arkansas 72736
Telephone: 800-467-0626 * Credit Dept. Fax: 479-787-6168
Sales Dept. Fax: 888-638-2580

CREDIT APPLICATION AND AGREEMENT

Name/Company: _____ (hereafter, the "Applicant") Date: _____
 Address: _____ Billing Address: _____
 City: _____ State: _____ Zip: _____ Phone: _____ Fax: _____
 Email Address: _____ A/P Contact: _____
 Invoice/Statement Delivery Preference: Mail Email: _____ Fax: _____
 Order verification preference: Email: _____ Fax: _____ PO Required? Yes No
 Amount of Credit Requested: _____ Estimated Annual Metal Sales: _____
 Type of Business: Corporation Partnership Sole Proprietor LLC # of Years in Business: _____
 Company Officer/Owner: _____ SS#: _____
 Company Officer/Owner: _____ SS#: _____
 Have any of the Officers ever filed Bankruptcy? Yes No Any judgments filed or pending against applicant? Yes No
 Sales Tax Exempt: **YES** Certificate #: _____ **Please attach copy of Sales Tax Exempt Certificate**
NO Is business within city limits? Yes No County located in: _____
 Federal Tax #: _____ State Formed/Incorporated: _____

Bank: _____ Address: _____
 City: _____ State: _____ Zip: _____ Phone: _____
 Fax: _____ DDA Acct: _____ Loan #: _____ Contact: _____

TRADE REFERENCES:

Company	Address	Phone	Fax	Contact
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

The Applicant hereby authorizes Metal Building Supply, Inc. ("MBS") to investigate all references and customary credit information sources regarding the Applicant's credit and financial responsibility. The Applicant and MBS agree that the construction and interpretation of this Credit Application and Agreement ("Agreement"), as well as all disputes between MBS and the Applicant arising out of, or related to, this Agreement, shall be governed by the laws of the State of Arkansas, without resort to Arkansas's conflicts-of-laws rules/provisions. The Applicant and MBS agree that the Circuit Court of Benton County, Arkansas shall have personal jurisdiction over the Applicant and MBS for all disputes between the Applicant and MBS that arise out of, or relate to, this Agreement in any respect. The Applicant and MBS further agree that the Circuit Court of Benton County, Arkansas shall be the exclusive jurisdiction, venue, and forum for any and all disputes between the Applicant and MBS that arise out of, or relate to, this Agreement in any respect. **The Applicant and MBS agree that the Circuit Court of Benton County, Arkansas having exclusive jurisdiction and being the proper venue and forum is fair and reasonable and will in no way deprive either party of its day in court.** The Applicant and MBS agree that MBS's sale of goods to the Applicant constitutes a transaction that arises out of, and relates to, this Agreement. As such, any dispute related to the sale of goods by MBS to the Applicant arises out of, and relates to, this Agreement. **THE APPLICANT AND MBS HEREBY WAIVE ANY RIGHT TO A TRIAL BY JURY IN ANY CIVIL ACTION ARISING OUT OF, OR BASED UPON, THIS AGREEMENT.**

All term sale invoices are due thirty (30) days following the date of invoice. The Applicant agrees to pay MBS in accordance with the terms set forth in any and all invoices delivered/provided to the Applicant by MBS. If any invoice remains unpaid after 30 days of its due date, the Applicant agrees to pay a finance charge to MBS at the rate of one-percent (1%) per month. The Applicant will not be charged a finance charge on unpaid finance charges (in other words, simple interest, as opposed to

compound interest, will apply). The Applicant and MBS agree that MBS shall have the absolute right to refuse to extend credit to the Applicant at any time and for any reason. It is further agreed that this Agreement is entered into in the state of Arkansas.

Company/Applicant Name: _____

By: _____

Signature of Company Owner/Officer

Title

Date

PERSONAL GUARANTEE: For valuable consideration, the receipt of which is acknowledged, including, but not limited to, the extension of credit by Metal Building Supply, Inc. (hereafter, the "Obligee") to the Applicant, the undersigned (each, a "Guarantor"), jointly and severally, unconditionally and absolutely guarantees to Obligee, the full and prompt performance, including payment by the Applicant (hereafter, the "Obligor"), of all obligations which Obligor presently or hereafter may have to Obligee and payment when due of all sums presently or hereafter owing by Obligor to Obligee. In short, each Guarantor personally guarantees the payment of all sums owed by Obligor to Obligee, whether now existing or arising subsequent to the Guarantor(s)' execution of this document. Each Guarantor agrees to indemnify Obligee against any losses Obligee may sustain or incur as a result of any failure to perform by Obligor, including, but not limited to, reasonable attorneys' fees and costs and all costs or other expenses incurred in collection of any indebtedness of Obligor or in the enforcement of this Personal Guaranty. Notice of acceptance is waived. Any Guarantor has the right to revoke this Personal Guaranty by delivering a written notice of revocation to the Obligee by certified mail, return receipt requested, to the address set forth above. In the event that any Guarantor revokes this Personal Guarantee, such Guarantor shall continue to be personally liable to Obligee for all amounts owed to Obligee by Obligor at the time the written revocation notice becomes effective (whether such debts are due or not). Further, a written notice of revocation shall not apply to any debts associated with the sale of goods by Obligee to Obligor that takes place prior to the effective date of the written notice of revocation. In short, the revocation of this Personal Guarantee only relieves such Guarantor from liability with regard to debts arising after the effective date of the written notice of revocation. The revocation by one Guarantor shall have no impact or effect on the liability of any other Guarantor. A written notice of revocation shall become effective thirty-one (31) days after a representative of the Obligee signs for the certified mail containing the written notice of revocation. Each Guarantor acknowledges that he/she is receiving a benefit from any extension of credit by the Obligee to the Obligor.

Each Guarantor and the Obligee agree that the construction and interpretation of Personal Guarantee, as well as all disputes between the Obligee and any Guarantor arising out of, or related to, the Agreement and/or this Personal Guarantee, shall be governed by the laws of the State of Arkansas, without resort to Arkansas's conflicts-of-laws rules/provisions. Each Guarantor and the Obligee agree that the Circuit Court of Benton County, Arkansas shall have personal jurisdiction over each Guarantor and the Obligee for all disputes between any Guarantor and the Obligee that arise out of, or relate to, the Agreement and/or this Personal Guarantee in any respect. Each Guarantor and the Obligee further agree that the Circuit Court of Benton County, Arkansas shall be the exclusive jurisdiction, venue, and forum for any and all disputes between any Guarantor and the Obligee that arise out of, or relate to, the Agreement and/or this Personal Guarantee in any respect. **Each Guarantor and the Obligee agree that the Circuit Court of Benton County, Arkansas having exclusive jurisdiction and being the proper venue and forum is fair and reasonable and will in no way deprive either party of its day in court.** Each Guarantor and the Obligee agree that the Obligee's sale of goods to the Obligor constitutes a transaction that arises out of, and relates to, the Agreement and this Personal Guarantee. As such, any dispute between the Obligee and any Guarantor related to or arising from, in any respect, the sale of goods by the Obligee to the Obligor shall be governed by the provisions set forth in this paragraph. **EACH GUARANTOR AND THE OBLIGEE HEREBY WAIVE ANY RIGHT TO A TRIAL BY JURY IN ANY CIVIL ACTION ARISING OUT OF, OR BASED UPON, THIS AGREEMENT.**

GUARANTORS:

Print Name: _____ Signature: _____ Date: _____

Print Name: _____ Signature: _____ Date: _____

METAL BUILDING SUPPLY, INC.

By: _____

Position: _____

Date: _____



METAL BUILDING SUPPLY, INC

ATTN:

FROM:

P.O./ JOB

DATE:

NOTES:

DOOR HARDWARE

8' ROUND TRACK

10' ROUND TRACK

12' ROUND TRACK

COVER BRACKET

DOOR PULL

DOOR STOP

CAM LATCH

END CAP

TROLLEY

SPLICE COLLAR

PIPE FLASHING

1/4"-4" REGULAR

1/4"-4" HI TEMP

4"-7" REGULAR

4"-7" HI TEMP

7"-13" REGULAR

7"-13" HI TEMP

10"-18" REGULAR

RETRO FIT SMALL

RETRO FIT LARGE

WALK DOORS

3068 LD

3068 HD

4068 HD

3070 HD

WINDOWS

3X3 INSULATED

INSULATION

4X125 R FOIL SGL

4X125' R FOIL DBL

6X102' R FOIL SGL

6X102' R FOIL DBL

RIVETS

250 CT RIVETS

3" FIBERGLASS

6'x50'

6'x104'

PANEL				TRIM	QTY.	COLOR
29 GA. <input type="checkbox"/> 20 Year <input type="checkbox"/> 45 Year				10'3 RIDGE CAP		
<input type="checkbox"/> NU-AG <input type="checkbox"/> NU-MAG				12'3 RIDGE CAP		
26 GA 45 year only*				10'3 EXTRA WIDE RIDGE		
<input type="checkbox"/> NU-AG <input type="checkbox"/> NU-MAG <input type="checkbox"/> PBR				10'3 RAKE AND CORNER		
Textured Colors <input type="checkbox"/> 26 GA <input type="checkbox"/> 29 GA <input type="checkbox"/> NU-AG <input type="checkbox"/> NU-MAG <input type="checkbox"/> Burnished Slate <input type="checkbox"/> Green <input type="checkbox"/> Charcoal <input type="checkbox"/> 29GA. 2.5" CORRUGATED <input type="checkbox"/> 31 GA. 1.25" CORRUGATED 10 PIECE MIN. PER LENGTH*				12'3 RAKE AND CORNER		
				14'3 RAKE AND CORNER		
				16'3 RAKE AND CORNER		
				18'3 RAKE AND CORNER		
				20'3 RAKE AND CORNER		
				10'3 RESIDENTIAL RAKE		
				12'3 RESIDENTIAL RAKE		
				14'3 RESIDENTIAL RAKE		
				16'3 RESIDENTIAL RAKE		
				10'3 DENVER GABLE		
12'3 DENVER GABLE						
14'3 DENVER GABLE						
16'3 DENVER GABLE						
10'3 OVERHEAD DOOR						
12'3 OVERHEAD DOOR						
14'3 OVERHEAD DOOR						
16'3 OVERHEAD DOOR						
18'3 OVERHEAD DOOR						
20'3 OVERHEAD DOOR						
10'3 RAT GUARD						
10'3 RAT GUARD HEM						
12'3 RAT GUARD HEM						
14'3 RAT GUARD HEM						
16'3 RAT GUARD HEM						
10'3 FASCIA						
12'3 FASCIA						
10'3 ENDWALL						
SCREWS:				10'3 SIDEWALL		1/4"-4" REGULAR
	MTW	"		10'3 VALLEY		1/4"-4" HI TEMP
	MTW	"		12'3 VALLEY		4"-7" REGULAR
	MTW	"		10'3 DRIP CAP		4"-7" HI TEMP
	MTM	1.25"		10'3 DOUBLE ANGLE		7"-13" REGULAR
	MTM	7/8"		10'3 DOOR JAMB		7"-13" HI TEMP
	MTW	3/4"		10'3 EAVE TRIM		10"-18" REGULAR
CLOSURE AND SEALANT:				12'3 EAVE TRIM		RETRO FIT SMALL
	INNER LOW RIB			10'3 TRANSITION		RETRO FIT LARGE
	OUTER LOW RIB			10'3 INSIDE CORNER		WALK DOORS
	INNER HI-RIB			12'3 INSIDE CORNER		3068 LD
	OUTER HI-RIB			14'3 INSIDE CORNER		3068 HD
	VERSA VENT 1" X10'			16'3 INSIDE CORNER		4068 HD
	VERSA VENT 1.25"X10'			10'3 GAMBREL		3070 HD
	UNIV. POLY FOAM 25'			10'3 SINGLE ANGLE 1.5X1.5		WINDOWS
	EMSEALLO 1"X19.68'			10'3 SINGLE ANGLE 2X2		3X3 INSULATED
	EMSEALHI 1.5"x13.12'			10'3 SINGLE ANGLE 3X3		
	BUTYL TAPE 3/8"X45'			10'3 SINGLE ANGLE 1.5X3.5		INSULATION
	BUTYL TAPE 3/4"X45'			10'3 SINGLE ANGLE 1.5X5.5		4X125 R FOIL SGL
FLAT SHEETS				10'3 SINGLE ANGLE 1.5X7.5		4X125' R FOIL DBL
10'3 FLAT SHEET				10'3 J-TRIM		6X102' R FOIL SGL
12'3 FLAT SHEET				12'3 J-TRIM		6X102' R FOIL DBL
14'3 FLAT SHEET				10'3 SNOW GUARD		RIVETS
16'3 FLAT SHEET				10'3 NATIONAL SQ TRK COVER		250 CT RIVETS
18'3 FLAT SHEET				10'3 ROUND TRACK COVER		3" FIBERGLASS
20'3 FLAT SHEET				12'3 ROUND TRACK COVER		6'x50'
						6'x104'



METAL BUILDING SUPPLY, INC

BROCHURE & COLOR CHART

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Metal Building Supply, Inc.



Your Complete



Metal Building Partner



800-467-0626

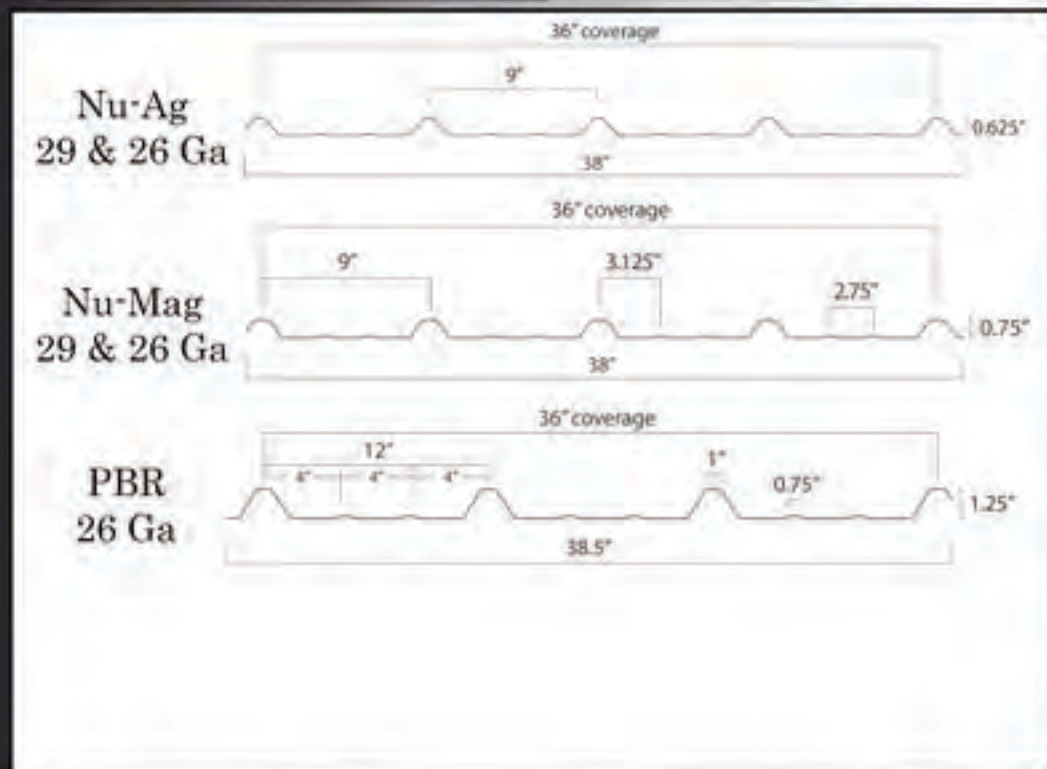
MBS is committed to producing the highest quality products to meet our customer's needs. Whether it be a custom building that we design, fabricate, and deliver or a simple job pack order, our skilled staff has the technology, and equipment to meet or exceed every project's requirements.



MBS has proudly been in business for over 40 years. We can handle every aspect of your metal building design, fabrication, and delivery. Our knowledge is available to you long after your delivery guarantee expires. We offer assembly and



Our ROLLFORMING department features state of the art computerized rollforming machines that our skilled technicians use to produce thousands of squares of cut to length steel panels in 4 different profiles. By manufacturing our own panels from high quality steel coils we are able to provide better service and offer lower prices.





Warranted for up to 45 years

panels

Over 26 years. We
 working in-house from
 knowledgeable staff is
 guaranteeing smooth
 and erection.

Tapered Beam and Hot Rolled I-beam Frames Available



all structural members cut to length including base and rake angle

easy bolt together assembly

MBS's RED IRON department custom fabricates our frames in-house using CNC plasma and sub-arc tables. By doing this in-house we are able to produce a high quality product at a reduced cost. These cost savings are ultimately passed on to you, our valued Customer.



length ASTM-A653 Grade 50

UL 90 wind uplift rated



or hadl



trim and panel colors match exactly

The TRIM department produces all of our trim profiles by using the latest rollforming and trim break technology. Whether it be standard trim or a custom profile, we at MBS will deliver a high quality product. In our ACCESSORY department we stock a variety of doors, windows, closures, fasteners and dozens of other items. Anything that you may need for your metal building project.

Standard Trim Profiles



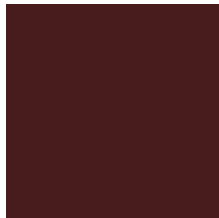
custom trim on request



Our Plant, Warehouse, and Offices in Gravette, AR



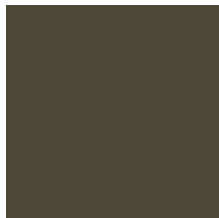
www.metalbuildingsupply.com



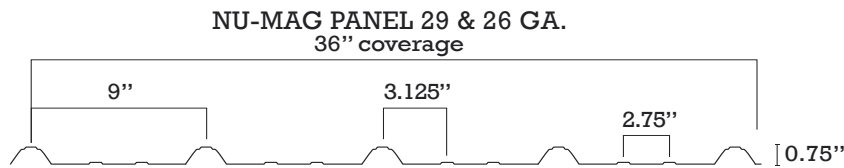
Burgundy



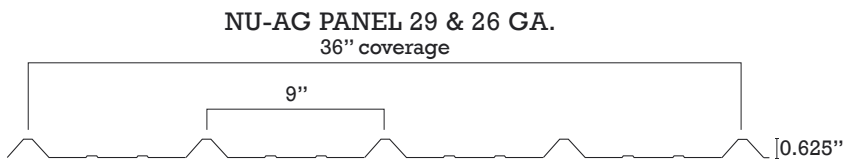
Gray



Burnished Slate



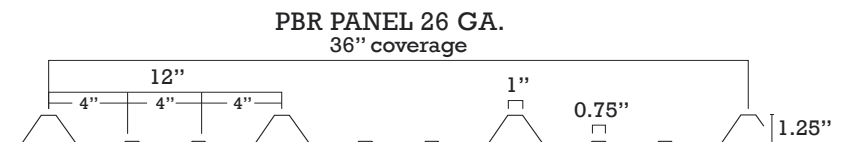
Green



Light Stone



Blue



Tan



Black

COLOR AVAILABILITY

29 GA. 45 YR. NU-MAG, NU-AG

BURGUNDY, BURNISHED SLATE, BLUE, BLACK, BRITE RED, REGAL BLUE, CHARCOAL, GRAY, GREEN, LIGHT STONE, TAN, RED, WHITE, BROWN, CLAY, IVORY and COPPER PENNY

26 GA. 45 YR. NU-MAG, NU-AG

WHITE, GREEN, GRAY, TAN, LIGHT STONE, RED, BURNISHED SLATE, CHARCOAL, BRITE RED, BURGUNDY, REGAL BLUE, BLUE, CLAY, BROWN, IVORY and COPPER PENNY

26 GA. 45 YR. PBR PANEL

RED, BURNISHED SLATE, CHARCOAL, GREEN, LIGHT STONE, TAN, WHITE, GRAY, BRITE RED, BLUE, CLAY, BROWN, BURGUNDY and COPPER PENNY



Brite Red



Ivory



Class 4 impact rating
Class A fire rating



Copper Penny



Red



Regal Blue



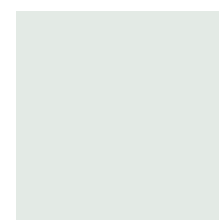
Charcoal



Clay



Brown



White

* Color samples shown are printer's close representations & are intended as a general guide for initial color selection only. Actual finish may vary slightly from the samples seen above.
CAUTION: Store metal out of the weather. Trapped moisture will cause sheets to spot rust. Failure to comply with these procedures will void your warranty.

+ indicates color available in 20 year warranty 29 gauge +++ does not meet energy star compliance

call for pricing - metallic finish is not represented; call for sample



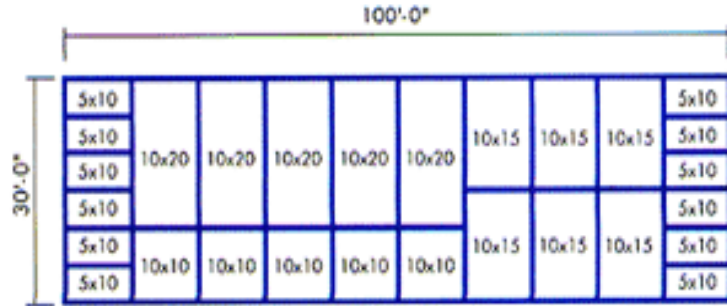
1-800-467-0626 or 479-787-6264

STEEL ROOFING and SIDING

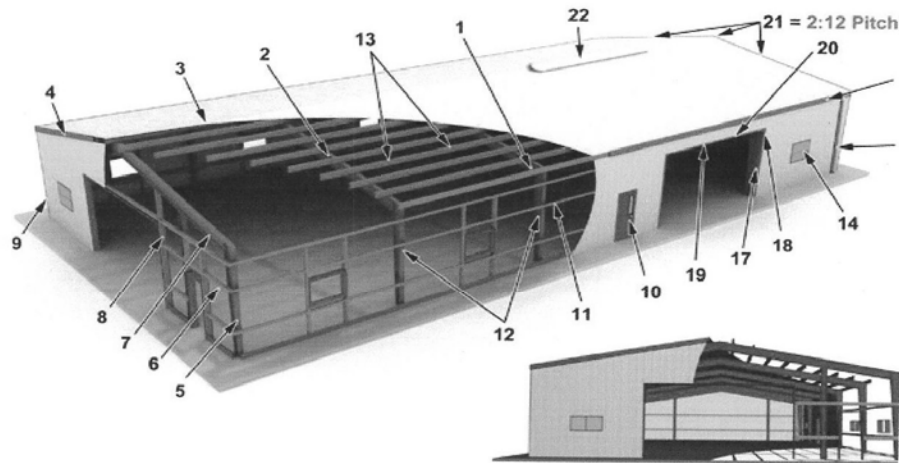
Ordering– Installation and
Self-Help Guide



MBS Self-Storage buildings offer a wide variety of layouts– Typically based on 5ft spacing. Common roof slopes 1:12 to 1/2:12 and eave heights of 8'6 or 9'6 . All roof and wall panels are made from strong 26ga sheeting either bare galvalume or painted sheeting with a 45 year warranty. Interior partition panels commonly use 29ga bare galvalume



Steel Building kits from Metal Building Supply offer many advantages you won't find in other buildings. All building components are pre-cut, pre-punched and ready to bolt together in the field w/ solid I-beam frames all engineered for your area. You will receive a comprehensive set of erection drawings showing all details. All buildings are made with the highest quality Materials, all painted sheeting carries a 45 year warranty.



- | | | | |
|------------------|--------------------|-------------------------|--------------------|
| 1. Eave Strut | 6. Endwall Girt | 12. Frame Column | 18. Jamb Trim |
| 2. Frame Rafter | 7. Endwall Rafter | 13. Purlins | 19. Framed Opening |
| 3. Ridge Cap | 8. Endwall Columns | 14. Window | 20. Door Head Trim |
| 4. Gable Trim | 9. Corner Trim | 15. Gutter or Eave Trim | 21. Roof Slope |
| 5. Corner Column | 10. Walk Door | 16. Downspout | 22. Ridge Vent |
| | 11. Sidewall Girt | 17. Framed Opening Jamb | |



Installation Instructions

Building Design and Construction

To ensure adequate performance and longevity, protect metal panels from potentially corrosive situations and materials. When treated lumber will be in direct contact with metal panels please note the following: Galvanized steel is compatible with the CCA (Chromated Copper Arsenate) pressure-treated lumber that is predominantly used today, but not with the older Penta treated lumber. Aluminum, however, must be separated from contact with all treated wood since the chemical preservatives are corrosive to aluminum. Likewise, dissimilar metals also require a protective barrier between them to prevent galvanic corrosion.

Plastic, builders' felt, bituminous paint, caulking, or gasket material may be used to separate panels from treated wood and dissimilar metals. When using aluminum panels in direct contact with steel use one of the above methods to separate the two metals.

Fertilizer, lime, acids, feeds, manure, soils, and many other substances also cause corrosion in metal panels. Contact between metal panels and any potentially corrosive materials should be prevented.

Porous insulation board may absorb and retain moisture, and requires a vapor barrier similar to that described above. This vapor barrier should be installed such that moisture is prevented from contacting both the insulation and the metal panel.

MBS supplied translucent panels are intended for siding applications only.

In all situations, foot traffic should be avoided on translucent panels. Translucent panels used in roofing applications will break down over a short period and stain metal panels below, eventually causing corrosion of the metal. If used on roofs, use butyl caulking to separate the fiberglass from the metal. The fiberglass panels should be sealed regularly, as recommended by the translucent panel manufacturer.

Purlins, Girts and Roof Deck

The material to which the metal panel is fastened should be properly spaced and sufficiently thick to provide a roof or wall system able to meet required design loads. Refer to the Wind Uplift chart on page 7. MBS recommends spacing the purlins a maximum of 24" on-center for roofing.

In re-roofing jobs where the condition of the old decking is in question, or where existing shingles will be left in place, new 2x4 purlins should be fastened through the decking and into the rafters. This will provide a solid framework for attaching the metal panels.

A 2" nominal lumber thickness provides the maximum pullout values for both screws and nails when the fasteners achieve a minimum of 1" penetration into the wood. (Note that 1" nominal lumber is only 3/4" thick and, therefore, results in lower pullout values. Pullout values may decrease slightly if the fasteners protrude completely through the purlins or girts. (refer to the load table below) Kiln-dried softwood is recommended for purlins, girts, or decking (pine, fir, hemlock, and spruce). Hardwoods are difficult to fasten into without splitting and contain acids that are corrosive to metal panels. Green (non-kiln-dried) lumber may warp, twist, and shrink as the wood seasons fully, causing waviness in the panels and loosening of the fasteners.

Roofing

Sidelaps should face away from wind driven rain. Therefore, begin installation by installing the first sheet square with the eave and gable at the downwind end of the roof, farthest away from the direction of prevailing winds.

In applications requiring a panel endlap, please refer to the details shown on this manual on page 6. For best results, lap panels as shown and install in the indicated sequence. **All endlaps require sealant.** When weather tightness is critical use sealant tape in all sidelaps.

To provide a drip edge, allow an overhang of 1" to 2" at the eave. If gutter is to be used allow 2 1/2" to 3" overhang. At the gable edge, use a gable or sidewall flashing. This will keep weather out, prevent lifting in high winds, and provide a neat, finished appearance. The trim and roofing sheet should be fastened every 6" to 10" inches along the gable edge.

Roof Pitch

The metal roofing panels shown in this manual require a minimum pitch of 2-1/2" per foot to ensure proper drainage. Refer to the Installation Guide for the suggested endlap and the suggested "horizontal projected roof lengths" that apply to the various panels. For wider buildings and lower roof pitches, contact your MBS dealer for other suitable MBS profiles.

Bending and Bowing

Steel roofing and siding sheets are rollformed from hardened, tempered metal for maximum strength. If a sheet must be bent, a gentle 90-degree bend is the maximum recommended. Metal should not be re-bent once it has been formed, nor should it be folded back on itself, since it is not designed to take a lockseam. When a metal roofing sheet must be installed on a curved roof, screws should be installed at every overlapping rib at the sheet ends to resist the natural tendency of the metal to spring back. Standard fastener spacing is permitted over the rest of the sheet.

Additional care and fasteners must be provided when securing the top and bottom purlins on a laminated rafter building to prevent the curved panels

from pulling the purlins loose from the rafters. Ring-shank pole barn nails, heavy wood screws, lag screws, or bolts are often used for attaching these purlins.

Siding

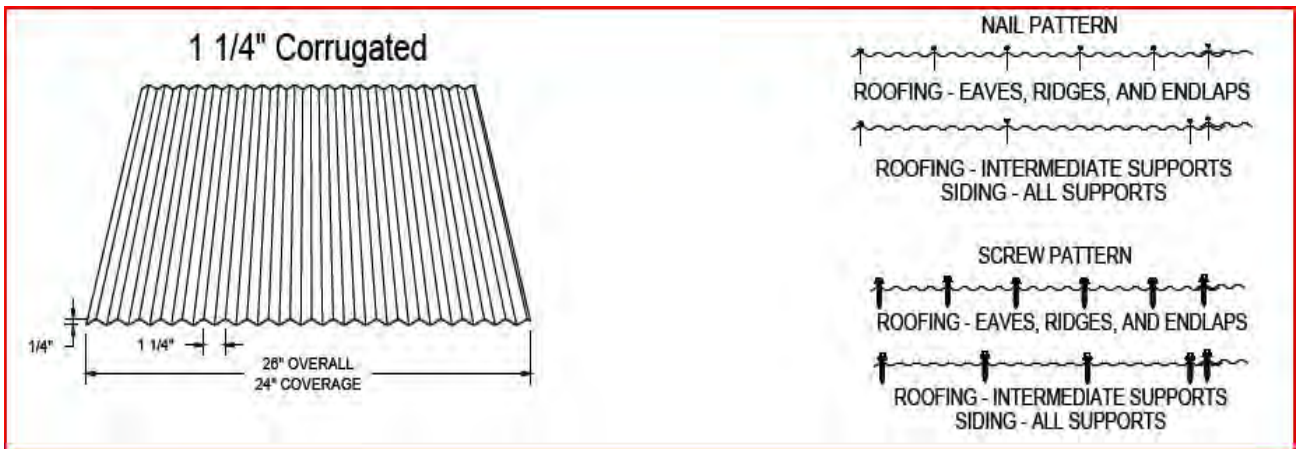
Siding should be installed using the standard fastening and overlap patterns to ensure optimum performance. For strong, neat corners use hemmed corner flashings. **Do not run siding sheets all the way to the ground.** Instead, provide a protective base of concrete, masonry, treated wood, or similar material 12" to 18" from ground level and end the siding sheets there.

If siding sheets are installed horizontally, use sealant tape or butyl caulking at the vertical laps to ensure weathertight joints. Install panels from the bottom up so that water is directed away from, and not into, the lap joints.

Fastening

MBS only supplies screws for fastening into dimension lumber, because screws offer better pullout values. Wood grip screws for use with steel panels are galvanized and then coated with an organic polymer for optimum corrosion resistance. See page 7 for proper torque on screws.

The correct way to fasten steel panels with nails is to drive the nail through the top of the rib so the washer is compressed securely against the metal. Nail placement must be in the ribs for roofing applications to minimize the potential for roof leaks. Over-driving the nail can split the washer and dimple the metal, causing leaks.



Wood screws with combination metal and neoprene washers should be installed in the flat area of the panel adjacent to the ribs, and tightened such that the washer is compressed as illustrated below. This will ensure a lasting, leak-proof seal. See page 5 & 6 for proper screw attachment.

A rule of thumb is to figure 75 screws per square of roof and wall panels. If stitch screws are desired figure 20-30 screws per square.

TOOLS RECOMMENDED:

Screw Gun-2000-2500rpm

1/4" hex magnetic socket and or 5/16" hex magnetic socket.

Tin Snips- For miscellaneous panel and flashing cutting.

Chalk Line- Used to assist in the alignment of panels and flashings.

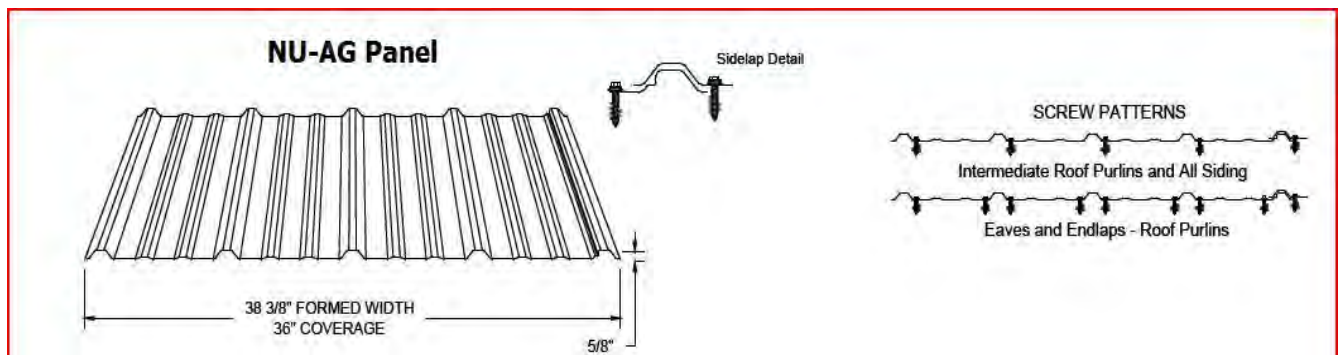
Caulking gun- Used for miscellaneous caulking and sealing to inhibit water infiltration.

Rivet Tool- May be used for miscellaneous trim fastening.

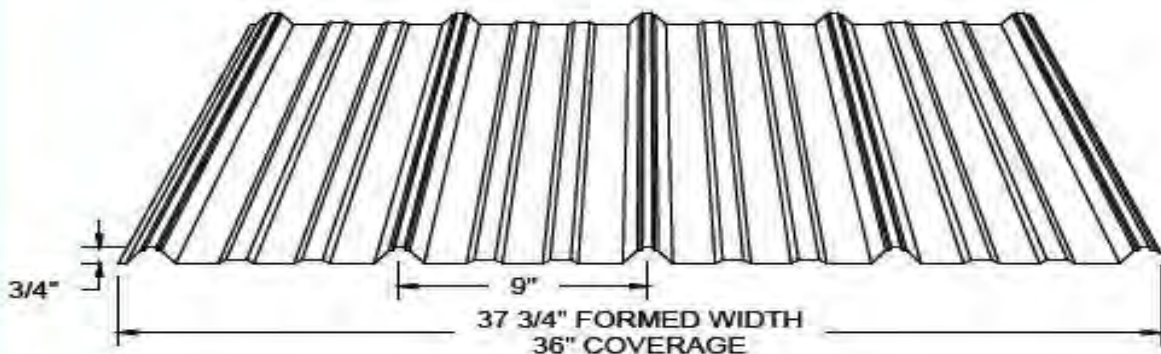
Electric Nibblers or Metal Shears- Used for general cutting of panels in hip, end wall, and valley areas. Some installers' prefer to use a circular saw with a metal cutting abrasive blade. Some drawbacks are:

1. Saw cut edges are jagged and tend to rust more quickly than sheared edges.
2. Saw cut edges produce hot metal filings that can embed in the paint and will cause rust specs to develop on the face of the panel.
3. Saw cut burns the paint and Galvalume at the cut edge which may cause rust to start at the edges. (nibblers and steel cutting blades have a tendency to leave hot metal particles that may burn into the surface of the paint- the same steel shavings may appear with the application of screws. CAUTION: You must wipe off the particles or rust will occur voiding all warranties)

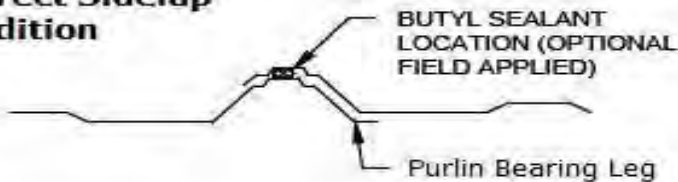
Electric drill- Used to drill holes as for pop rivets or applying screws to panels.



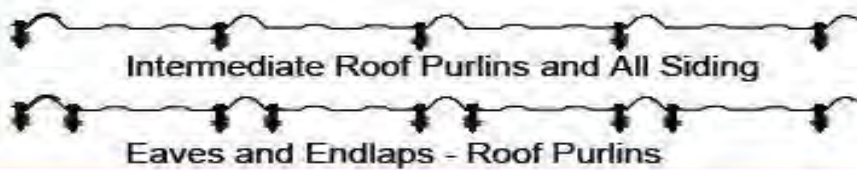
29ga NU-MAG Bare or Painted Galvalume

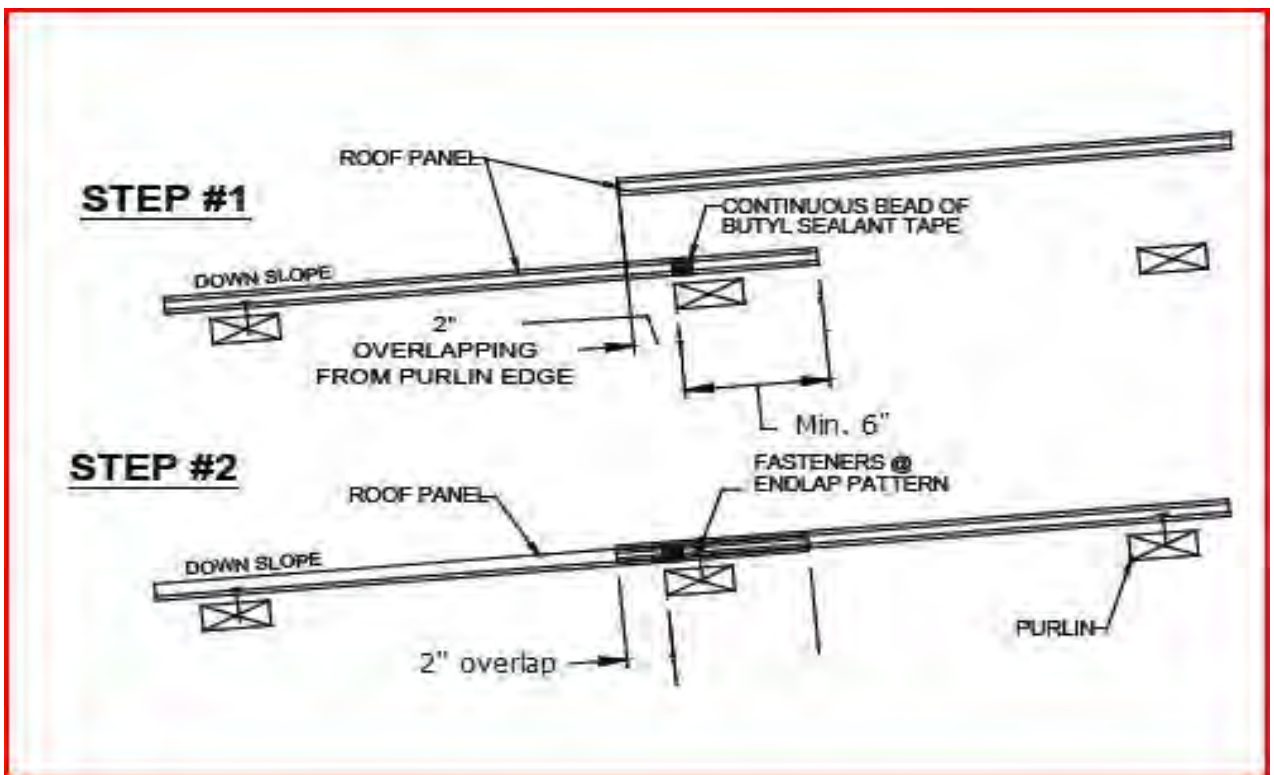
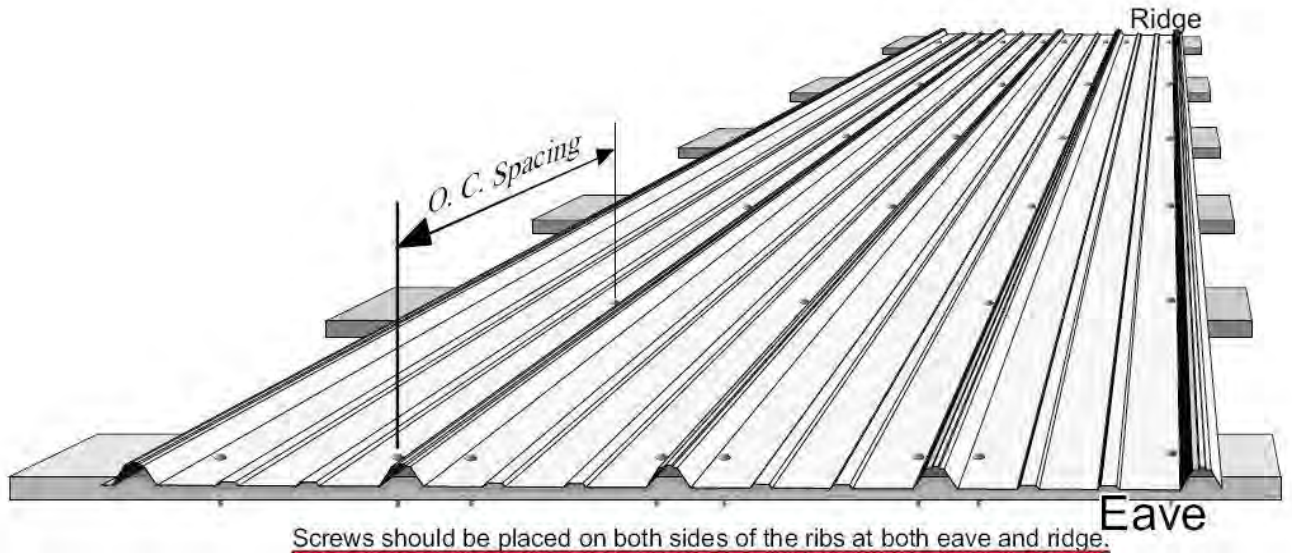


Correct Sidelap condition



SCREW PATTERNS





Lapping Requirements

Slope 3/12 or less- not recommended
 Greater than 3/12- endlap 6" minimum with sealant required
 Sidewall- 4" minimum, sealant not required.

Proper Installation of fasteners

Correctly Driven



Under-Driven



Over-Driven



ALLOWABLE WIND UPLIFT LOADS (PSF)

Substrate	Fastener	9"	12"	15"	18"	21"	24"
3/4" Plywood	#14 x 1" MP	261.1	195.0	156.5	130.5	111.5	97.5
5/8" Plywood	#14 x 1" MP	242.0	181.5	145.3	121.0	103.5	90.5
1/2" Plywood	#14 x 1" MP	165.0	123.5	99.0	82.5	70.5	61.75
7/16" OSB	#14 x 1" MP	99.5	74.5	59.7	49.75	42.5	37.0
19/32" OSB	#14 x 1" MP	122.0	91.5	73.0	61.0	52.0	45.75
23/32" OSB	#14 x 1" MP	181.5	136.0	109.0	90.75	77.75	68.0
Solid 2x SPF	#14 x 1" MP	313.8	235.3	188.3	156.9	134.5	117.6
Solid 1x Pine	#14 x 1" MP	313.8	235.3	188.3	156.9	134.5	117.6
Screws	per Sq.	190	150	120	100	90	80

Safety

Always work safely when installing metal products. Use extreme caution on the roof at all times, and wear gloves and safety glasses to avoid injury. Hearing protection should be used when power-cutting metal panels. Do not walk on panels until all the fasteners are installed. Metal panels are slippery when wet, dusty, frosty, or oily. Do not attempt to walk on a metal roof under these conditions. Wear soft soled shoes to improve traction and to minimize damage to the paint finish. Always be aware of your position on the roof relative to any roof openings, roof edges, co-workers, and penetrations. Installing metal panels on a windy day can be dangerous and should be avoided. Consult OSHA guidelines for more complete safety requirements

Delivery, Handling & Storage

Always inspect the shipment upon delivery. Check for damage and verify quantities against the shipping list. Note any damage or shortages at time of delivery.

Handle panel bundles and individual panels with care to avoid damage. Longer bundles may require more than one "pick-up" point properly spaced to prevent buckling or bending of panels.

Store panels in a dry, well ventilated area away from traffic. Elevate one end of the bundle so that moisture can run off if needed. Be sure that air will be able to circulate freely around the bundles to avoid moisture build-up. Never store materials in direct contact with the ground.

Wear clean, non-marking soft-soled shoes when walking on the panels to avoid shoe marks.

Building Maintenance

A metal roof should be inspected annually and cleaned as necessary to maintain its beauty and performance. Any debris or residue, including leaves, twigs, and dust should be cleaned off promptly to prevent moisture entrapment against the metal, which may lead to finish deterioration or premature corrosion.

Every metal panel manufacturer has maintenance guidelines for its products, despite whether or not those products have a warranty. In addition to basic maintenance instructions, there often are instructions for maintenance during the installation of panels and trim. For example, instructions advise keeping the panels clean of metal shavings and cuttings created when fasteners are drilled into the panel to the structure or from trim to panels. You may not see the fine metal shavings, but they are there. If not wiped off, rust from these particles may start to show in as little as 12 hours of exposure to moisture in the atmosphere.

FAILURE TO COMPLY WITH THESE INSTALLATION AND STORAGE PROCEDURES WILL RELIEVE THE MANUFACTURER OF ANY RESPONSIBILITY FOR ANY RESULTANT DAMAGE TO, OR DETERIORATION OF, THE PRODUCT AND VOIDS ALL WARRANTIES.

For further information on potential jobsite concerns, imperfections, and field questions- refer to: **Resolution Manual for Metal Building Construction – Jobsite Imperfections.** Published by U.S. Steel Corp. and your Metal Building Supply Representative.

Post Frame Estimating & Roof Types

Estimating Metal Roofing, Siding & Flashings

Panel lengths are to be determined by the truss top chord or actual field measurements. Remember to add for overhangs at the eaves; subtract for a gap at the ridge. Siding should be kept up away from the ground with a skirt board.

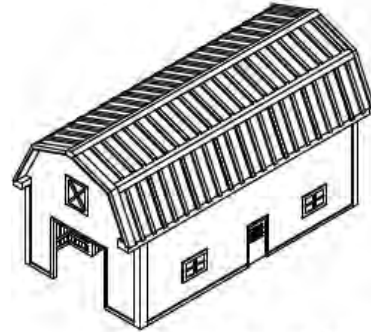
Number of Panels

The coverage of the panel being used will determine the number of panels at a length (i.e.: 3' coverage panel on a 30 ft. long building would require 10 panels on each side of the ridge or 20 panels at the particular length.)

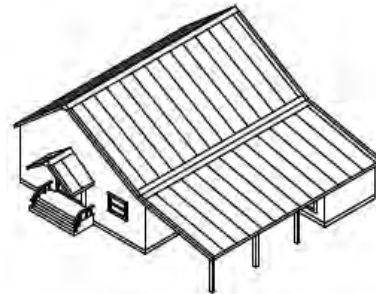
Horizontal Measurement to a Roof

Divide the building width in half, then multiply by the slope factor (i.e.: 40' wide building with 4/12 slope. 40 divided by 2 equals 20' times 1.054 equals 21'-1" in slope dimension.) Allow for 1/2" to 1" gap at peak and 1" to 2" eave overhang.

Roof Pitch	Slope Factor
3/12	1.031
4/12	1.054
5/12	1.083
6/12	1.120
8/12	1.202
10/12	1.302
12/12	1.414



Gambrel Roof



Transition Roof

Flashing Conditions

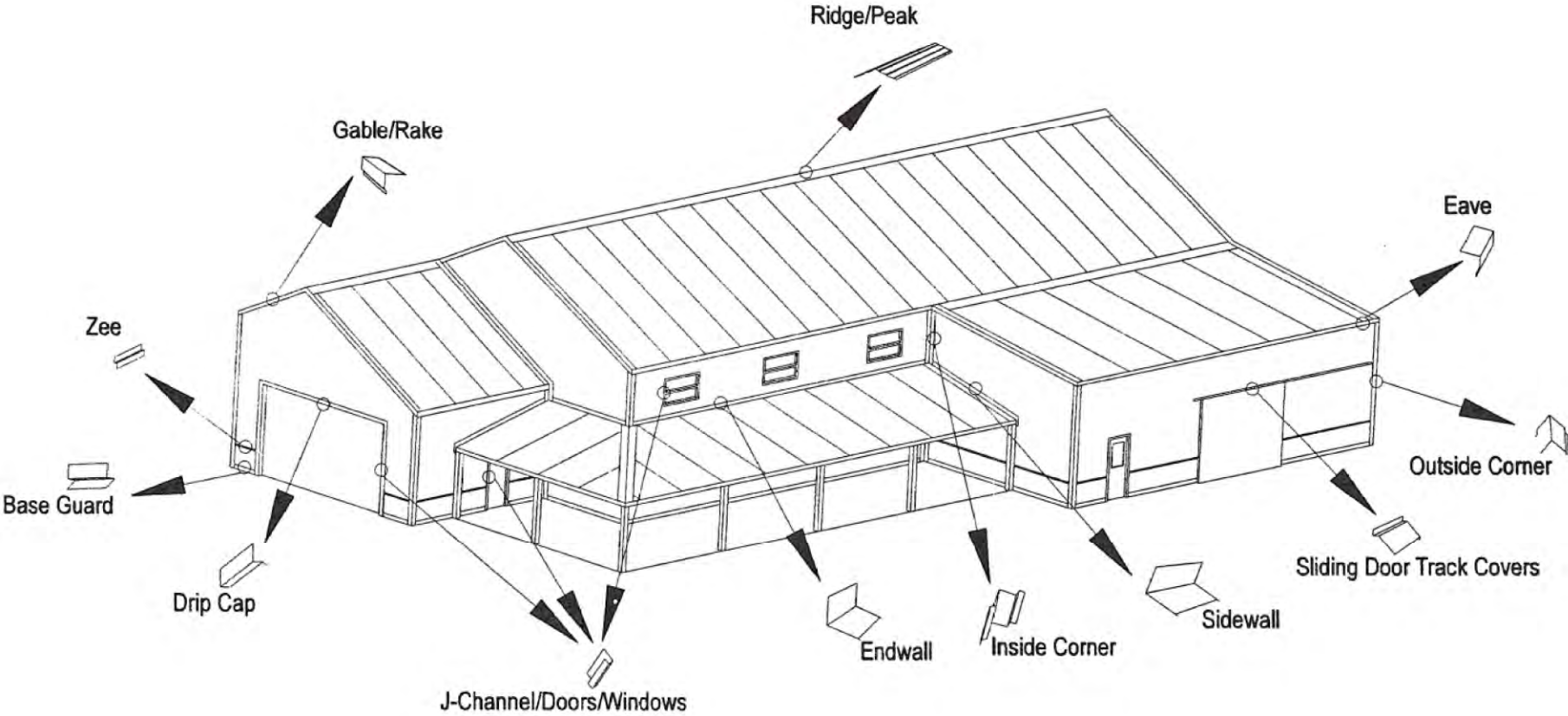
Roof - Eave, Ridge, Gable, Sidewall, Endwall, Valley, Hip, Transition, Gambrel, Soffits

Siding - Base Perimeter, Corners, Inside Corners, Man Doors, Windows, Sliding Doors, Overhead Doors



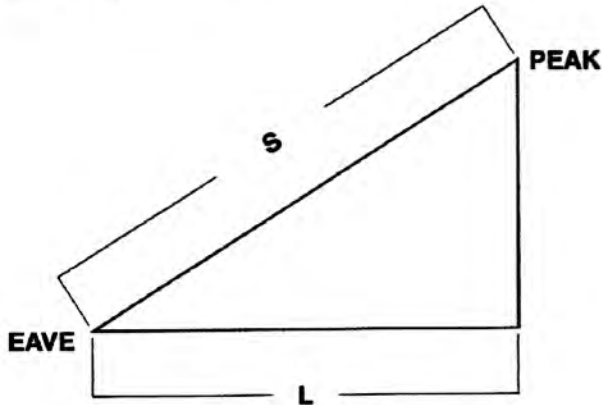
Hip Roof

Post Frame Building Details

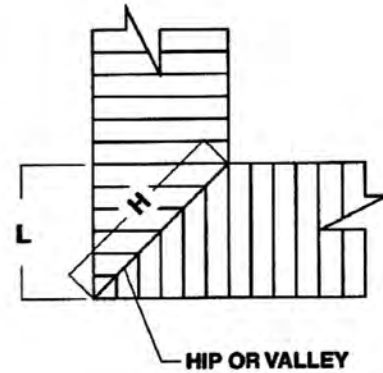


Slope Factor

This chart should be used when specifying and ordering panels and flashings. It will help you determine overall required length of material on sloped applications.

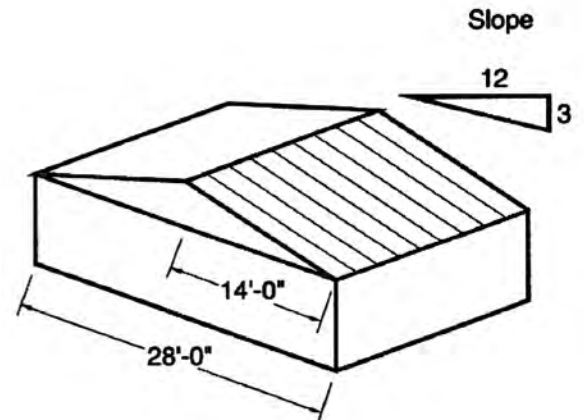
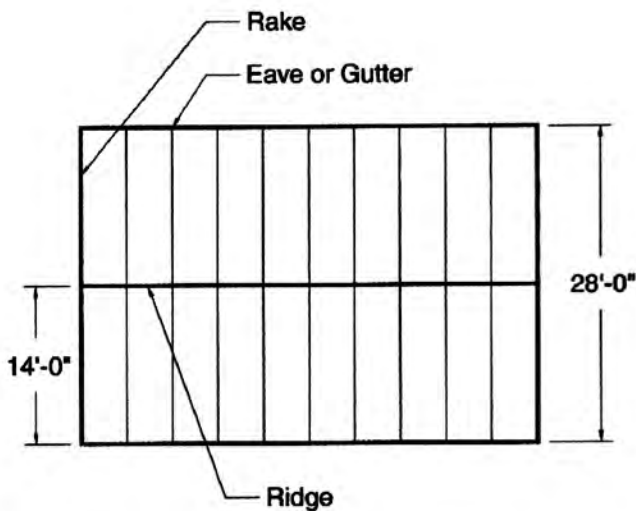


$$(L) \times (\text{SLOPE FACTOR}) = S$$



$$(L) \times (\text{HIP VALLEY MULTIPLIER}) = H$$

SLOPE	SLOPE FACTOR	HIP / VALLEY MULTIPLIER	SLOPE	SLOPE FACTOR	HIP / VALLEY MULTIPLIER
1:12	1.0035	1.4167	7:12	1.1577	1.5298
2:12	1.0138	1.4240	8:12	1.2019	1.5635
3:12	1.0308	1.4362	9:12	1.2500	1.6008
4:12	1.0541	1.4530	10:12	1.3017	1.6415
5:12	1.0833	1.4743	11:12	1.3566	1.6853
6:12	1.1180	1.5000	12:12	1.4142	1.7320



Your building is 28'-0" wide with a 3:12 pitch

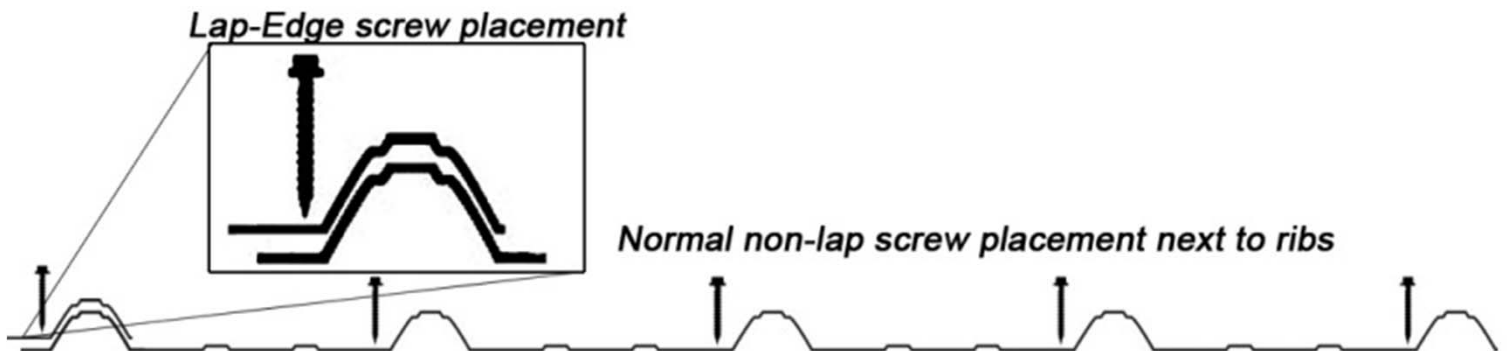
To determine the panel lengths for each side: $(L) \times (\text{SLOPE FACTOR}) = S$

$14'-0" \times 1.0308$ (from chart above for 3:12 slope) = 14.4312' OR 14'-5"



TO OUR VALUED CUSTOMERS

We are often asked about the proper placement of screws in the installation of our metal panels. In years past, corrugated panels were used in construction of barns and other buildings, and lead-head nails were the fasteners most commonly used. They were placed on the top of one of the corrugated ribs. The panels most commonly used **today require placement of fasteners in the flat part of the metal panel** (see illustration below). This adds considerable strength to the overall structure. **Please note in the illustration below that the screws need to be placed next to the lap rib, and then next to each of the other ribs across the panel.**





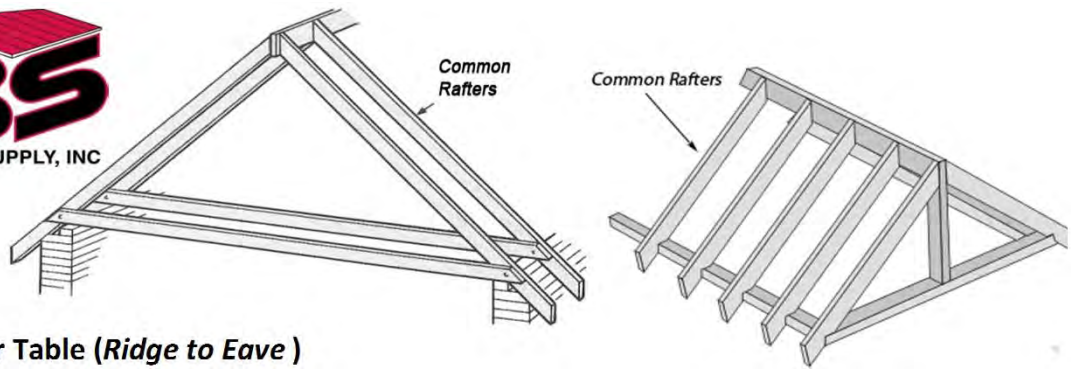
CONVERSION FACTORS FOR 3' COVERAGE PANELS

- SQUARE PRICE $\div 31.6$ = LINEAR FOOT PRICE (*NU-AG & NU-MAG*)
- TOTAL LINEAR FEET $\times 31.6$ = TOTAL SQUARE (*NU-AG & NU-MAG*)

- SQUARE PRICE $\div 31.17$ = LINEAR FOOT PRICE (*PBR*)
- TOTAL LINEAR FEET $\times 31.17$ = TOTAL SQUARE (*PBR*)

INCH CONVERSION FOR CALCULATORS		
1"	=	0.08
2"	=	0.17
3"	=	0.25
4"	=	0.33
5"	=	0.42
6"	=	0.5
7"	=	0.58
8"	=	0.67
9"	=	0.75
10"	=	0.83
11"	=	0.92

MEASUREMENT CONVERSION FOR CALCULATORS		
1/8"	=	0.125
1/4"	=	0.25
3/8"	=	0.375
1/2"	=	0.5
5/8"	=	0.625
3/4"	=	0.75
13/16"	=	0.813
7/8"	=	0.875



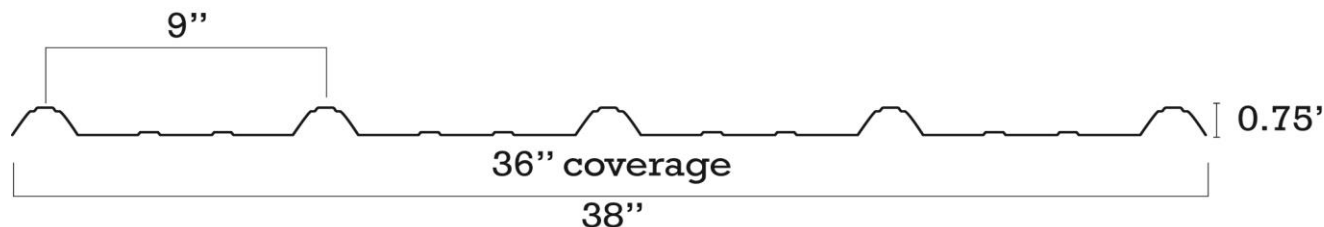
Common Rafter Table (Ridge to Eave)

Running Feet	1:12 Pitch	2:12 Pitch	3:12 Pitch	4:12 Pitch	5:12 Pitch	6:12 Pitch
1	1' 0"	1' 0 1/8"	1' 0 3/8"	1' 0 5/8"	1' 1"	1' 1 3/8"
2	2' 0 1/8"	2' 0 3/3"	2' 0 3/4"	2' 1 1/4"	2' 2"	2' 2 7/8"
3	3' 0 1/8"	3' 0 1/2"	3' 1 1/8"	3' 2"	3' 3"	3' 4 1/4"
4	4' 0 1/8"	4' 0 5/8"	4' 1 1/2"	4' 2 5/8"	4' 4"	4' 5 5/8"
5	5' 0 1/4"	5' 0 7/8"	5' 1 7/8"	5' 3 1/4"	5' 5"	5' 7 1/8"
6	6' 0 1/4"	6' 1"	6' 2 1/4"	6' 3 7/8"	6' 6"	6' 8 1/2"
7	7' 0 1/4"	7' 1 1/8"	7' 2 5/8"	7' 4 1/2"	7' 7"	7' 9 7/8"
8	8' 0 3/8"	8' 1 3/8"	8' 3"	8' 5 1/4"	8' 8"	8' 11 3/8"
9	9' 0 3/8"	9' 1 1/2"	9' 3 3/8"	9' 5 7/8"	9' 9"	10' 0 3/4"
10	10' 0 3/8"	10' 1 5/8"	10' 3 3/4"	10' 6 1/2"	10' 10"	11' 2 1/8"
11	11' 0 1/2"	11' 1 7/8"	11' 4 1/8"	11' 7 1/8"	11' 11"	12' 3 5/8"
12	12' 0 1/2"	12' 2"	12' 4 3/8"	12' 7 3/8"	13' 0"	13' 5"
13	13' 0 1/2"	13' 2 1/8"	13' 4 3/4"	13' 8 1/2"	14' 1"	14' 6 3/8"
14	14' 0 5/8"	14' 2 3/8"	14' 5 1/8"	14' 9 1/8"	15' 2"	15' 7 7/8"
15	15' 0 5/8"	15' 2 1/2"	15' 5 1/2"	15' 9 3/4"	16' 3"	16' 9 1/4"
16	16' 0 5/8"	16' 2 5/8"	16' 5 7/8"	16' 10 3/8"	17' 4"	17' 10 5/8"
17	17' 0 5/8"	17' 2 7/8"	17' 6 1/4"	17' 11"	18' 5"	19' 0 1/8"
18	18' 0 3/4"	18' 3"	18' 6 5/8"	18' 11 5/8"	19' 6"	20' 1 1/2"
19	19' 0 3/4"	19' 3 1/8"	19' 7"	20' 0 3/8"	20' 7"	21' 2 7/8"
20	20' 0 7/8"	20' 3 3/8"	20' 7 3/8"	21' 1"	21' 8"	22' 4 3/8"
21	21' 0 7/8"	21' 3 1/2"	21' 7 3/4"	22' 1 5/8"	22' 9"	23' 5 3/4"
22	22' 0 7/8"	22' 3 5/8"	22' 8 1/8"	23' 2 1/4"	23' 10"	24' 7 1/8"
23	23' 1"	23' 3 3/4"	23' 8 1/2"	24' 3"	24' 11"	25' 6 3/8"
24	24' 1"	24' 4"	24' 8 7/8"	25' 3 5/8"	26' 0"	26' 10"
25	25' 1"	25' 4 1/8"	25' 9 1/4"	26' 4 1/4"	27' 1"	27' 11 3/8"
26	26' 1 1/8"	26' 4 1/4"	26' 9 1/2"	27' 5"	28' 2"	29' 0 3/4"
27	27' 1 1/8"	27' 4 1/2"	27' 9 7/8"	28' 5"	29' 3"	30' 2 1/4"
28	28' 1 1/8"	28' 4 3/4"	28' 10 1/4"	29' 6 1/4"	30' 4"	31' 3 3/4"
29	29' 1 1/4"	29' 4 7/8"	29' 10 5/8"	30' 6 7/8"	31' 5"	32' 5 1/8"
30	30' 1 1/4"	30' 5"	30' 11"	31' 7 1/2"	32' 6"	33' 6 1/2"
31	31' 1 3/8"	31' 5 1/8"	31' 11 3/8"	32' 8 1/8"	33' 7"	34' 7 7/8"
32	32' 1 1/2"	32' 5 1/4"	32' 11 3/4"	33' 8 1/8"	34' 8"	35' 9 1/4"
33	33' 1 1/2"	33' 5 1/2"	34' 0 1/8"	34' 9 3/8"	35' 9"	36' 10 3/4"
34	34' 1 1/2"	34' 5 3/4"	35' 0 1/2"	35' 10"	36' 10"	38' 0 1/4"
35	35' 1 1/2"	35' 5 7/8"	36' 0 7/8"	36' 10 5/8"	37' 11"	39' 1 5/8"

*This table is intended as an approximate guide only; all figures should be verified for accuracy.

METAL BUILDING SUPPLY, INC.

NOMINAL DIMENSIONS - PANEL COVERAGE



FEATURES INCLUDE: 3/4" Rib Height - 36" Net Coverage

9" Rib Spacing With 5 Major & 8 Minor Separate Ribs For Rigidity & Load Carrying Capability

Rugged Baked-On Paint Finish - 17 Standard Prime Colors With Matching Custom Trim

Anti-Siphon Lap Design - High "Strength to Weight" Ratio on 29 Gauge Galvalume Prime Steel

ADD INCHES

	0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
1 ft	0.0317	0.0343	0.0369	0.0396	0.0422	0.0449	0.0475	0.0501	0.0528	0.0554	0.0581	0.0607
2 ft	0.0633	0.0660	0.0686	0.0712	0.0739	0.0765	0.0792	0.0818	0.0844	0.0871	0.0897	0.0924
3 ft	0.0950	0.0976	0.1003	0.1029	0.1056	0.1082	0.1108	0.1135	0.1161	0.1187	0.1214	0.1240
4 ft	0.1267	0.1293	0.1319	0.1346	0.1372	0.1399	0.1425	0.1451	0.1478	0.1504	0.1531	0.1557
5 ft	0.1583	0.1610	0.1636	0.1662	0.1689	0.1715	0.1742	0.1768	0.1794	0.1821	0.1847	0.1874
6 ft	0.1900	0.1926	0.1953	0.1979	0.2006	0.2032	0.2058	0.2085	0.2111	0.2137	0.2164	0.2190
7 ft	0.2217	0.2243	0.2269	0.2296	0.2322	0.2349	0.2375	0.2401	0.2428	0.2454	0.2481	0.2507
8 ft	0.2533	0.2560	0.2586	0.2612	0.2639	0.2665	0.2692	0.2718	0.2744	0.2771	0.2797	0.2824
9 ft	0.2850	0.2876	0.2903	0.2929	0.2956	0.2982	0.3008	0.3035	0.3061	0.3087	0.3114	0.3140
10 ft	0.3167	0.3193	0.3219	0.3246	0.3272	0.3299	0.3325	0.3351	0.3378	0.3404	0.3431	0.3457
11 ft	0.3483	0.3510	0.3536	0.3562	0.3589	0.3615	0.3642	0.3668	0.3694	0.3721	0.3747	0.3774
12 ft	0.3800	0.3826	0.3853	0.3879	0.3906	0.3932	0.3958	0.3985	0.4011	0.4037	0.4064	0.4090
13 ft	0.4117	0.4143	0.4169	0.4196	0.4222	0.4249	0.4275	0.4301	0.4328	0.4354	0.4381	0.4407
14 ft	0.4433	0.4460	0.4486	0.4512	0.4539	0.4565	0.4592	0.4618	0.4644	0.4671	0.4697	0.4724
15 ft	0.4750	0.4776	0.4803	0.4829	0.4856	0.4882	0.4908	0.4935	0.4961	0.4987	0.5014	0.5040
16 ft	0.5067	0.5093	0.5119	0.5146	0.5172	0.5199	0.5225	0.5251	0.5278	0.5304	0.5331	0.5357
17 ft	0.5383	0.5410	0.5436	0.5462	0.5489	0.5515	0.5542	0.5568	0.5594	0.5621	0.5647	0.5674
18 ft	0.5700	0.5726	0.5753	0.5779	0.5806	0.5832	0.5858	0.5885	0.5911	0.5937	0.5964	0.5990
19 ft	0.6017	0.6043	0.6069	0.6096	0.6122	0.6149	0.6175	0.6201	0.6228	0.6254	0.6281	0.6307
20 ft	0.6333	0.6360	0.6386	0.6412	0.6439	0.6465	0.6492	0.6518	0.6544	0.6571	0.6597	0.6624
21 ft	0.6650	0.6676	0.6703	0.6729	0.6756	0.6782	0.6808	0.6835	0.6861	0.6887	0.6914	0.6940
22 ft	0.6967	0.6993	0.7019	0.7046	0.7072	0.7099	0.7125	0.7151	0.7178	0.7204	0.7231	0.7257
23 ft	0.7283	0.7310	0.7336	0.7362	0.7389	0.7415	0.7442	0.7468	0.7494	0.7521	0.7547	0.7574
24 ft	0.7600	0.7626	0.7653	0.7679	0.7706	0.7732	0.7758	0.7785	0.7811	0.7837	0.7864	0.7890
25 ft	0.7917	0.7943	0.7969	0.7996	0.8022	0.8049	0.8075	0.8101	0.8128	0.8154	0.8181	0.8207
26 ft	0.8233	0.8260	0.8286	0.8312	0.8339	0.8365	0.8392	0.8418	0.8444	0.8471	0.8497	0.8524
27 ft	0.8550	0.8576	0.8603	0.8629	0.8656	0.8682	0.8708	0.8735	0.8761	0.8787	0.8814	0.8840
28 ft	0.8867	0.8893	0.8919	0.8946	0.8972	0.8999	0.9025	0.9051	0.9078	0.9104	0.9131	0.9157
29 ft	0.9183	0.9210	0.9236	0.9262	0.9289	0.9315	0.9342	0.9368	0.9394	0.9421	0.9447	0.9474
30 ft	0.9500	0.9526	0.9553	0.9579	0.9606	0.9632	0.9658	0.9685	0.9711	0.9737	0.9764	0.9790
31 ft	0.9817	0.9843	0.9869	0.9896	0.9922	0.9949	0.9975	1.0001	1.0028	1.0054	1.0081	1.0107
32 ft	1.0133	1.0160	1.0186	1.0212	1.0239	1.0265	1.0292	1.0318	1.0344	1.0371	1.0397	1.0424
33 ft	1.0450	1.0476	1.0503	1.0529	1.0556	1.0582	1.0608	1.0635	1.0661	1.0687	1.0714	1.0740
34 ft	1.0767	1.0793	1.0819	1.0846	1.0872	1.0899	1.0925	1.0951	1.0978	1.1004	1.1031	1.1057
35 ft	1.1083	1.1110	1.1136	1.1162	1.1189	1.1215	1.1242	1.1268	1.1294	1.1321	1.1347	1.1374
36 ft	1.1400	1.1426	1.1453	1.1479	1.1506	1.1532	1.1558	1.1585	1.1611	1.1637	1.1664	1.1690
37 ft	1.1717	1.1743	1.1769	1.1796	1.1822	1.1849	1.1875	1.1901	1.1928	1.1954	1.1981	1.2007
38 ft	1.2033	1.2060	1.2086	1.2112	1.2139	1.2165	1.2192	1.2218	1.2244	1.2271	1.2297	1.2324
39 ft	1.2350	1.2376	1.2403	1.2429	1.2456	1.2482	1.2508	1.2535	1.2561	1.2587	1.2614	1.2640
40 ft	1.2667	1.2693	1.2719	1.2746	1.2772	1.2799	1.2825	1.2851	1.2878	1.2904	1.2931	1.2957

This table is intended as an approximate guide only; all figures should be verified for accuracy.



METAL BUILDING SUPPLY, INC

WARRANTIES

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WARRANTIES AT A GLANCE

BARE GALVALUME HAS A 20 YEAR RUST WARRANTY

BARE GALVANIZED HAS NO WARRANTY

**29 & 26 GA. 45 YEAR IS WARRANTED AGAINST
FADING, CHAULKING, PEELING, CRACKING, CHIPING
AND FLAKING.**

**29 GA. 20 YEAR IS NOT WARRANTED AGAINST FADING
OR CHAULKING.**

METAL BUILDING SUPPLY, INC.

Prime Color Coat Limited Warranty

Prepainted Prime Grade Steel Sheets For Building Panels



Metal Building Supply, Inc. (MBS) warrants that for a period of **forty-five (45) years**, within the contiguous United States, normal outdoor atmospheric conditions (which term excludes aggressively corrosive atmospheres like those carrying contaminants such as chemical fumes or salt spray), will not cause the exterior color coat on our **NU-MAG 29 and NU-AG 29** prime panels sold to you (Buyer), by MBS (Seller), to;

(a) Peel, check, flake, chip or crack, (not to be construed to mean slight hairline crazing which may occur during forming or fabrication), for the warranty period on sidewalls and/or roof applications.

(b) 1. Not to chalk in excess of a numerical rating of eight(8) when measured in accordance with the standard procedures specified in ASTM D659-80; or

2. Not to fade or change in excess of seven(7)E units (NBS), calculated in accordance with ASTM D2244-85, paragraph 6.3. Color change shall be measured on an exposed painted surface that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed painted surface. It is understood that fading or color changes may not be uniform if the surfaces are not equally exposed to the sun and/or other elements.

This warranty is subject to the following conditions:

1. Roof panels are to be installed per accepted code and shall have a slope greater than 2/12 on which no standing or ponding water accumulates.
2. Buyer shall exercise due diligence in inspection of material as received from seller prior to installation and accept responsibility for incorrect or visually flawed material which has been cut, altered or installed. If material is not installed within 21 days of purchase it must be **stored out of the weather**. It should be stored inside and not under a tarp or plastic as this will trap moisture causing the sheets to spot rust, thus **voiding your warranty**.
3. Claims for all such defects shall be made within the warranty period and within thirty (30) days after any defects are discovered. Buyer will allow MBS a reasonable time period for material inspection and processing of Buyer's claim, especially when such claim will involve an absent supplier.
4. Amount of Liability: MBS's liability for breach of this warranty shall be limited to the repair or replacement of only those sheets or panels which fail to meet the above stated standards **exclusive of labor, incidental or consequential cost to the contractor or final consumer**. Consideration will be given as to **prorated** performance remaining under the original warranty for the sheet or panels meeting the claim criteria. Seller shall have the sole discretion to determine which of any methods will be used to fulfill it's obligation relevant to applicable law.

This warranty applies only to **NU-MAG 29 and NU-AG 29** prime grade painted panels erected in the contiguous United States limited to the aforementioned defects or failures and does not apply to failures or damage caused by natural disaster, falling objects, external forces, explosions, civil commotion, fire, riots, acts of war, radiation, caustic gases, chemicals or fumes, excessive atmospheric sodium, excessive sand or foreign substances in the air or atmosphere. Finished installation must provide for proper water shed/drainage regardless of selected roof or sidewall pitch and not allow for any ponding. This warranty applies only to prime painted panel surfaces and does not cover failures resulting from edge corrosion (usually caused by cut edge), or to failures of the metal substrate or conversion coating material or from metal cuttings or other foreign particles allowed to remain on panel surfaces causing oxidation or other contamination related discoloration. The buyer may have specific rights as provided by state covenant not covered herein which are the sole responsibility or the Buyer to enforce.

5. Duties of Buyer in Presenting Claims. As a condition precedent to sellers liability hereunder, buyer must present a copy of the invoice with his claim, such as to enable Seller to establish the order number, date of shipment and the date of installation for the claimed nonconforming sheet. These records must be duly authenticated, be made in the ordinary course of business and be contemporaneous with the events noted therein. Buyer shall also present such evidence that established any claimed nonconformance was due to a breach of the warranty stated herein.

6. Transfers, Representations and Assignments. This warranty is extended to Buyer as the original purchaser from Seller and is **nontransferable and nonassignable**. No right against Seller shall be created by any transfer or assignment. Buyer, or its agents or representatives, shall not claim, represent or imply nor permit its customers, distributors, distributors applicators or contractors to claim represent or imply that this warranty extends to or is available to parties other than buyer, and to the limit of its legal right to do so, buyer shall cause any party to cease and desist in any such misrepresentation. This condition shall constitute a material term of this warranty and its violation by Buyer shall excuse Seller from its obligations hereunder.

7. Termination. Seller reserves the right to terminate this warranty except with respect to orders which it has already accepted upon the giving of written notice thereof.

8. Waiver or Modification of Sellers Rights. No terms or conditions, other than those stated herein, and no agreement or understanding, oral or written, and no course of conduct or performance, in any way purporting to modify this warranty or to waive Sellers rights hereunder, shall be binding on Seller unless the same be clearly described in a writing that expressly refers to this warranty and expressly refers to having such effect on this warranty and is signed by the authorized representative of Seller. Moreover, additional liabilities of or limitations upon the rights & remedies of Seller contained in such documents as purchase orders or order acknowledgments which may subsequently be exchanged between parties shall have no force upon this warranty. All proposals, negotiations and representations, if any, made prior to or with reference hereto are merged herein.

METAL BUILDING SUPPLY INCORPORATED (MBS) MAKE NO WARRANTIES OR GUARANTIES, EITHER EXPRESSED OR IMPLIED BEYOND THE FACT HEREOF: INCLUDING, WITHOUT LIMITATION, WARRANTIES OF FITNESS AND MERCHANTABILITY AND SHALL HAVE NO OTHER LIABILITY WITH RESPECT HERETO.

By : _____
Metal Building Supply, Inc. Date

By : _____
Customer Date

METAL BUILDING SUPPLY, INC.

Prime Color Coat Limited Warranty

Prepainted Prime Grade Steel Sheets For Building Panels



Metal Building Supply, Inc. (MBS) warrants that for a period of **twenty (20)** years, within the contiguous United States, normal outdoor atmospheric conditions (which term excludes aggressively corrosive atmospheres like those carrying contaminants such as chemical fumes or salt spray), will not cause the exterior color coat on our **NU-MAG 29 and NU-AG 29** prime panels sold to you (Buyer), by MBS (Seller), to;

(a) Peel, check, flake, chip or crack, (not to be construed to mean slight hairline crazing which may occur during forming or fabrication), for the warranty period on sidewalls and/or roof applications.

(b) 1. This warranty does not include chalking or fading as all paints will fade and chalk when exposed to sunlight and inclement weather. The roof may need to be cleaned from time to time to remove chalk, dirt and grime. It is understood that fading or color changes may not be uniform if the surfaces are not equally exposed to the sun and/or other elements.

This warranty is subject to the following conditions:

1. Roof panels are to be installed per accepted code and shall have a slope greater than 2/12 on which no standing or ponding water accumulates.
2. Buyer shall exercise due diligence in inspection of material as received from seller prior to installation and accept responsibility for incorrect or visually flawed material which has been cut, altered or installed. If material is not installed within 21 days of purchase it must be **stored out of the weather**. It should be stored inside and not under a tarp or plastic as this will trap moisture causing the sheets to spot rust, thus **voiding your warranty**.
3. Claims for all such defects shall be made within the warranty period and within thirty (30) days after any defects are discovered. Buyer will allow MBS a reasonable time period for material inspection and processing of Buyer's claim, especially when such claim will involve an absent supplier.
4. Amount of Liability: MBS's liability for breach of this warranty shall be limited to the repair or replacement of only those sheets or panels which fail to meet the above stated standards **exclusive of labor, incidental or consequential cost to the contractor or final consumer**. Consideration will be given as to **prorated** performance remaining under the original warranty for the sheet or panels meeting the claim criteria. Seller shall have the sole discretion to determine which of any methods will be used to fulfill its obligation relevant to applicable law.

This warranty applies only to **NU-MAG 29 and NU-AG 29** prime grade painted panels erected in the contiguous United States limited to the aforementioned defects or failures and does not apply to failures or damage caused by natural disaster, falling objects, external forces, explosions, civil commotion, fire, riots, acts of war, radiation, caustic gases, chemicals or fumes, excessive atmospheric sodium, excessive sand or foreign substances in the air or atmosphere. Finished installation must provide for proper water shed/drainage regardless of selected roof or sidewall pitch and not allow for any ponding. This warranty applies only to prime painted panel surfaces and does not cover failures resulting from edge corrosion (usually caused by cut edge), or to failures of the metal substrate or conversion coating material or from metal cuttings or other foreign particles allowed to remain on panel surfaces causing oxidation or other contamination related discoloration. The buyer may have specific rights as provided by state covenant not covered herein which are the sole responsibility of the Buyer to enforce.

5. Duties of Buyer in Presenting Claims. As a condition precedent to seller's liability hereunder, buyer must present, with his claim, such records so as to enable Seller to establish the order number, date of shipment and the date of installation for the claimed nonconforming sheet. These records must be duly authenticated, be made in the ordinary course of business and be contemporaneous with the events noted therein. Buyer shall also present such evidence that established any claimed nonconformance was due to a breach of the warranty stated herein.

6. Transfers, Representations and Assignments. This warranty is extended to Buyer as the original purchaser from Seller and is **nontransferable** and **nonassignable**. No right against Seller shall be created by any transfer or assignment. Buyer, or its agents or representatives, shall not claim, represent or imply nor permit its customers, distributors, distributors applicators or contractors to claim represent or imply that this warranty extends to or is available to parties other than buyer, and to the limit of its legal right to do so, buyer shall cause any party to cease and desist in any such misrepresentation. This condition shall constitute a material term of this warranty and its violation by Buyer shall excuse Seller from its obligations hereunder.

7. Termination. Seller reserves the right to terminate this warranty except with respect to orders which it has already accepted upon the giving of written notice thereof.

8. Waiver or Modification of Sellers Rights. No terms or conditions, other than those stated herein, and no agreement or understanding, oral or written, and no course of conduct or performance, in any way purporting to modify this warranty or to waive Seller's rights hereunder, shall be binding on Seller unless the same be clearly described in a writing that expressly refers to this warranty and expressly refers to having such effect on this warranty and is signed by the authorized representative of Seller. Moreover, additional liabilities of or limitations upon the rights & remedies of Seller contained in such documents as purchase orders or order acknowledgments which may subsequently be exchanged between parties shall have no force upon this warranty. All proposals, negotiations and representations, if any, made prior to or with reference hereto are merged herein.

METAL BUILDING SUPPLY INCORPORATED (MBS) MAKE NO WARRANTIES OR GUARANTIES, EITHER EXPRESSED OR IMPLIED BEYOND THE FACT HEREOF: INCLUDING, WITHOUT LIMITATION, WARRANTIES OF FITNESS AND MERCHANTABILITY AND SHALL HAVE NO OTHER LIABILITY WITH RESPECT HERETO.

By : _____
Metal Building Supply, Inc. Date

By : _____
Customer Date

METAL BUILDING SUPPLY, INC.

Prime Color Coat Limited Warranty

Prepainted Prime Grade Steel Sheets For Building Panels



Metal Building Supply, Inc. (MBS) warrants that for a period of **forty-five (45) years**, within the contiguous United States, normal outdoor atmospheric conditions (which term excludes aggressively corrosive atmospheres like those carrying contaminants such as chemical fumes or salt spray), will not cause the exterior color coat on our **NU-MAG 26, NU-AG 26, PBR PANEL 26** prime panels sold to you (Buyer), by MBS (Seller), to:

(a) Peel, check, flake, chip or crack, (not to be construed to mean slight hairline crazing which may occur during forming or fabrication), for the warranty period on sidewalls and/or roof applications.

(b) 1. Not to chalk in excess of a numerical rating of eight(8) when measured in accordance with the standard procedures specified in ASTM D659-80; or

2. Not to fade or change in excess of seven(7)E units (NBS), calculated in accordance with ASTM D2244-85, paragraph 6.3. Color change shall be measured on an exposed painted surface that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed painted surface. It is understood that fading or color changes may not be uniform if the surfaces are not equally exposed to the sun and/or other elements.

This warranty is subject to the following conditions:

1. Roof panels are to be installed per accepted code and shall have a slope greater than 2/12 on which no standing or ponding water accumulates.

2. Buyer shall exercise due diligence in inspection of material as received from seller prior to installation and accept responsibility for incorrect or visually flawed material which has been cut, altered or installed. If material is not installed within 21 days of purchase it must be **stored out of the weather**. It should be stored inside and not under a tarp or plastic as this will trap moisture causing the sheets to spot rust, thus **voiding your warranty**.

3. Claims for all such defects shall be made within the warranty period and within thirty (30) days after any defects are discovered. Buyer will allow MBS a reasonable time period for material inspection and processing of Buyer's claim, especially when such claim will involve an absent supplier.

4. Amount of Liability: MBS's liability for breach of this warranty shall be limited to the repair or replacement of only those sheets or panels which fail to meet the above stated standards **exclusive of labor, incidental or consequential cost to the contractor or final consumer**. Consideration will be given as to **prorated** performance remaining under the original warranty for the sheet or panels meeting the claim criteria. Seller shall have the sole discretion to determine which of any methods will be used to fulfill its obligation relevant to applicable law.

This warranty applies only to **NU-MAG 26, NU-AG 26, PBR PANEL 26** prime grade painted panels erected in the contiguous United States limited to the aforementioned defects or failures and does not apply to failures or damage caused by natural disaster, falling objects, external forces, explosions, civil commotion, fire, riots, acts of war, radiation, caustic gases, chemicals or fumes, excessive atmospheric sodium, excessive sand or foreign substances in the air or atmosphere. Finished installation must provide for proper water shed/drainage regardless of selected roof or sidewall pitch and not allow for any ponding. This warranty applies only to prime painted panel surfaces and does not cover failures resulting from edge corrosion (usually caused by cut edge), or to failures of the metal substrate or conversion coating material or from metal cuttings or other foreign particles allowed to remain on panel surfaces causing oxidation or other contamination related discoloration. The buyer may have specific rights as provided by state covenant not covered herein which are the sole responsibility of the Buyer to enforce.

5. Duties of Buyer in Presenting Claims. As a condition precedent to seller's liability hereunder, buyer must present a copy of the invoice with his claim, such as to enable Seller to establish the order number, date of shipment and the date of installation for the claimed nonconforming sheet. These records must be duly authenticated, be made in the ordinary course of business and be contemporaneous with the events noted therein. Buyer shall also present such evidence that established any claimed nonconformance was due to a breach of the warranty stated herein.

6. Transfers, Representations and Assignments. This warranty is extended to Buyer as the original purchaser from Seller and is **nontransferable and nonassignable**. No right against Seller shall be created by any transfer or assignment. Buyer, or its agents or representatives, shall not claim, represent or imply nor permit its customers, distributors, distributors applicators or contractors to claim represent or imply that this warranty extends to or is available to parties other than buyer, and to the limit of its legal right to do so, buyer shall cause any party to cease and desist in any such misrepresentation. This condition shall constitute a material term of this warranty and its violation by Buyer shall excuse Seller from its obligations hereunder.

7. Termination. Seller reserves the right to terminate this warranty except with respect to orders which it has already accepted upon the giving of written notice thereof.

8. Waiver or Modification of Sellers Rights. No terms or conditions, other than those stated herein, and no agreement or understanding, oral or written, and no course of conduct or performance, in any way purporting to modify this warranty or to waive Seller's rights hereunder, shall be binding on Seller unless the same be clearly described in a writing that expressly refers to this warranty and expressly refers to having such effect on this warranty and is signed by the authorized representative of Seller. Moreover, additional liabilities of or limitations upon the rights & remedies of Seller contained in such documents as purchase orders or order acknowledgments which may subsequently be exchanged between parties shall have no force upon this warranty. All proposals, negotiations and representations, if any, made prior to or with reference hereto are merged herein.

METAL BUILDING SUPPLY INCORPORATED (MBS) MAKE NO WARRANTIES OR GUARANTIES, EITHER EXPRESSED OR IMPLIED BEYOND THE FACT HEREOF: INCLUDING, WITHOUT LIMITATION, WARRANTIES OF FITNESS AND MERCHANTABILITY AND SHALL HAVE NO OTHER LIABILITY WITH RESPECT HERETO.

By : _____
Metal Building Supply, Inc. Date

By : _____
Customer Date

20 – Year Galvalume Warranty

Metal Building Supply, Inc. guarantees that roofing and siding panels produced in either 26ga or 29ga and roll-formed into Nu-Mag, Nu-Ag or PBR-panel and made from hot dipped aluminum zinc alloy coated Galvalume sheet steel, if erected within the continental U.S. , will not rupture, fail structurally, or perforate within a period of 20 years and 6 months after shipment from our manufacturing plant.

This warranty does not apply to sheets exposed at any time to corrosive, aggressive, harmful, or abnormal weather or atmospheric conditions including but not limited to the following:

- a. Areas subject to salt water, marine atmosphere, or repeated salt spray
- b. Areas subject to fallout of, or exposure to chemicals, ash, fumes, dust-including cement dust, vapors, animal waste or similar items.
- c. Areas subject to water run-off from lead or copper flashings or piping or areas in metallic contact with lead or copper.
- d. Areas subject to foreign substances, such as sand, or dirt particles or other abrasive particles.
- e. Corrosive fumes or condensates that are generated or released inside the building.
- f. Circumstances where roof or sidewall pitch is improper causing water to pond or hold water.

This warranty **Does not Apply** in the event of:

- a. Bends less than 27 deg. For sheet thickness 0.0030 and thinner and less than 47 deg. For sheet thickness 0.031 and thicker.
- b. Slopes of roofing flatter than ¼:12
- c. Mechanical, chemical or other damage caused during shipment, storage, or forming, or during erection, including from falling objects, acts of God, explosion, acts of war, or other external forces.
- d. Forming, stretching or bending which creates excessive stresses.
- e. Improper fabrication, embossing, or cut edge exposure.
- f. Presence of damp insulation or other corrosive materials in contact with the panel.
- g. Deterioration of the panel caused by contact with green or wet lumber or wet storage stain caused by water damage.
- h. Deterioration caused directly or indirectly by panel contact with improper panel fasteners. The responsibility for the selection of the proper fasteners rests solely on the purchaser or building owner.

This warranty shall be subject to the stipulations, limitations, and conditions set forth:

- a. Metal Building Supply shall not in any event be liable for the cost of the labor by others on any nonconforming sheet or for any special, indirect consequential damages to anyone by reason of the fact that such panel shall have been nonconforming.
- b. Metal Building Supply liability for breach of this warranty shall be limited exclusively to the cost of either repairing nonconforming panels, or at Metal Building Supply's option, of furnishing Buyers location sufficient sheet replacement panels for the nonconforming sheets.
- c. Claims must be promptly reported in writing to Metal Building Supply and shall be given reasonable time to inspect possible nonconforming panels. Adequate identification of the material involved in the claim shall include: date of installation, Metal Building Supply invoice number, and date of shipment.

CUSTOMER NAME: _____

METAL BUILDING SUPPLY: _____

DATE: _____

DATE: _____



TGFU.R20512 Roofing Systems

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Roofing Systems

[See General Information for Roofing Systems](#)

METAL BUILDING SUPPLY INC

R20512

19601 N MOUNT OLIVE RD
GRAVETTE, AR 72736 USA

OTHER SYSTEMS

Class A

1. **Deck:** NC

Incline: Unlimited

Impact: 4

Insulation: — None required, however any UL Classified insulation may be used over open purlin spans. Any combination and any total thickness of insulation may be used.

Surfacing: — Metal roof panels mechanically attached to metal purlins.

Panels: — "NU-MAG".

Last Updated on 2008-05-29

[Questions?](#)

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An independent organization working for a safer world with integrity, precision and knowledge.





TGAM.R20512 Roof-covering Materials, Impact Resistance

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Roof-covering Materials, Impact Resistance

[See General Information for Roof-covering Materials, Impact Resistance](#)

METAL BUILDING SUPPLY INC

R20512

19601 N MOUNT OLIVE RD
GRAVETTE, AR 72736 USA

Class 4 formed steel panel, designated NU-MAG.

[Last Updated](#) on 2008-05-29

[Questions?](#)

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An independent organization working for a safer world with integrity, precision and knowledge.





Manufacturer's Certification

This is to certify that the metal roofing product purchased contains an Akzo Nobel TRINAR® Cool Chemistry™, CERAM-A-STAR® 950 Cool Chemistry™ or CERAM-A-STAR® 1050 Cool Chemistry™ coating that:

- a) Is appropriately pigmented and is specifically and primarily designed to reduce the heat gain of a dwelling unit when installed on the dwelling unit; and,
- b) Meets or exceeds Energy Star® program requirements for steep-slope roofs (as in effect at the time of installation),

in accordance with IRS Notice 2006-26. Furthermore, the roof coating is an “eligible building envelope component that qualifies for the credit allowed under § 25C”.

Declaration Statement:

Under penalties of perjury, I declare that I have examined this certification statement, and to the best of my knowledge and belief, the facts presented are true, correct and complete.

W. Scott Hanna, Business Manager Coil & Extrusion Coatings

Akzo Nobel Coatings, Inc.
1313 Windsor Ave.
Columbus, OH 43211

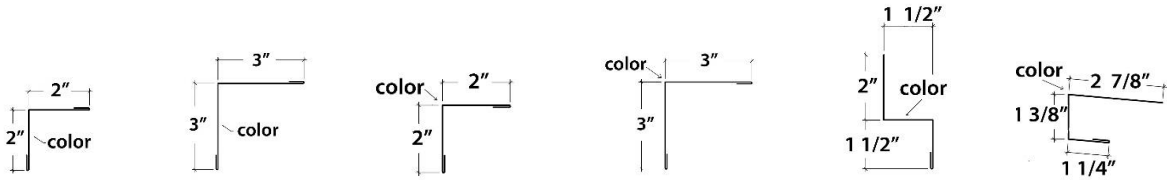


METAL BUILDING SUPPLY, INC

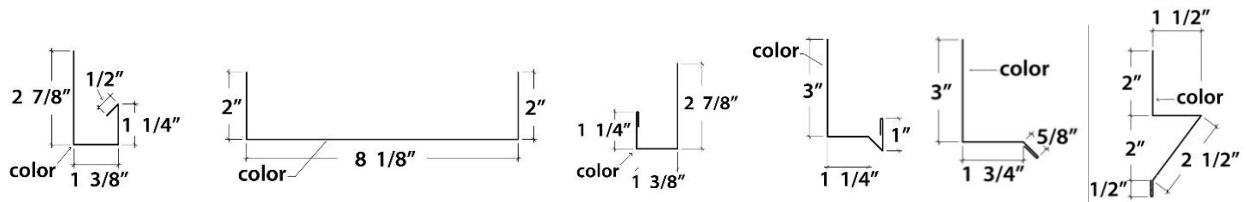
TRIM

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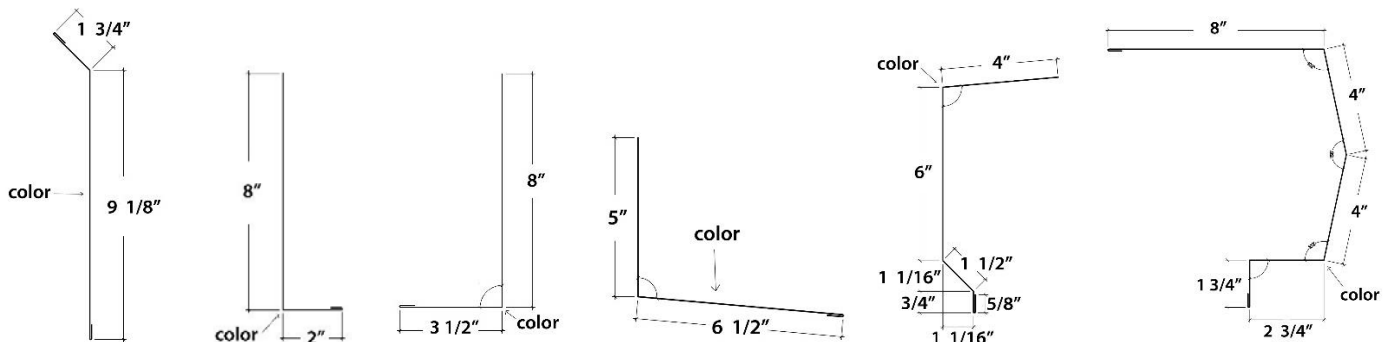
Trim Profiles – 26G Hi Rib



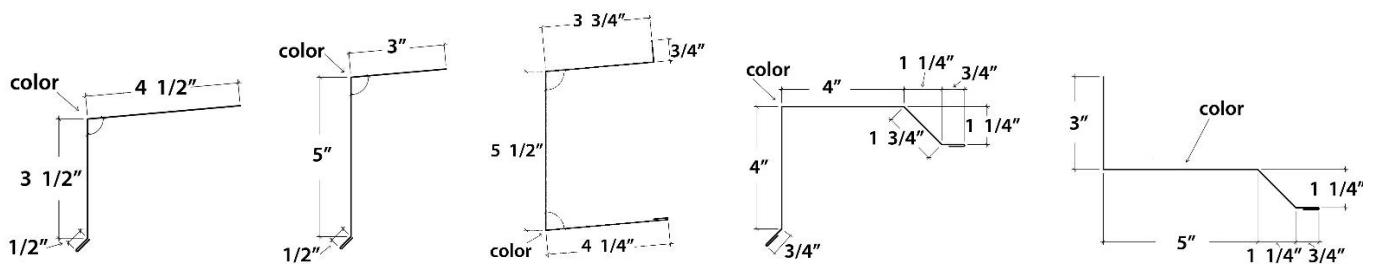
Inside Angle 2x2 Inside Angle 3x3 Outside Angle 2x2 Outside Angle 3x3 Double Angle Soffit Trim



Jamb Jamb Header Header Header w Drip Base w Drip Base Guard



Partition Trim Purlin Extension Bypass Extension Endwall Fascia High Side Eave



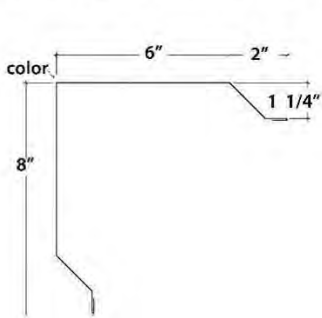
Simple Eave Large Eave Eave Extension Gable Side Wall Transition

<- Images are NOT Drawn to Scale ->

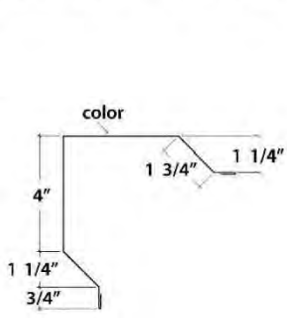
800-467-0626

metalbuildingsupply.com

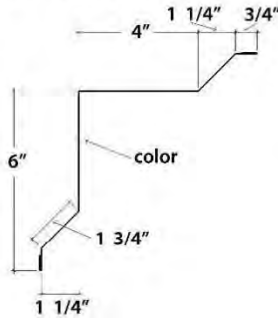
Trim Profiles – 26G Hi Rib (continued)



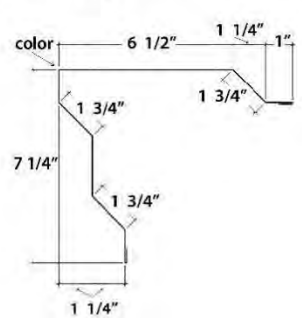
Outside Corner Rake



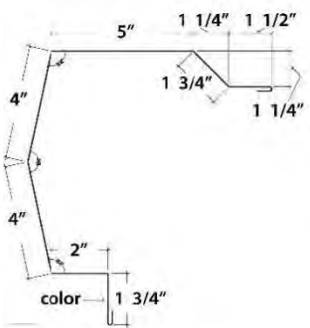
Small Outside Corner



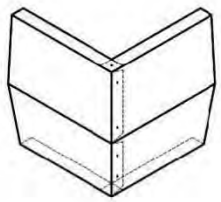
Inside Corner



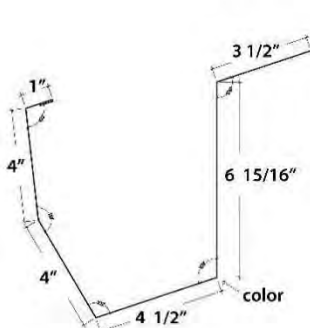
Shadow Rake



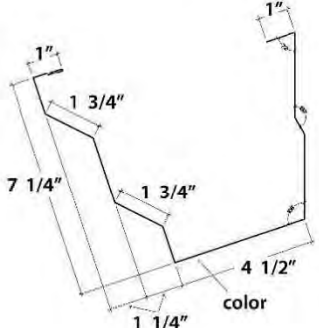
Sculptured Rake



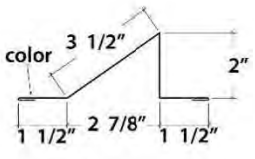
Sculptured Corner Rake



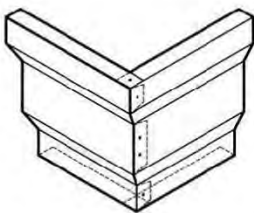
Pre-Hung Gutter



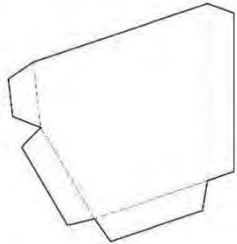
Shadow Gutter



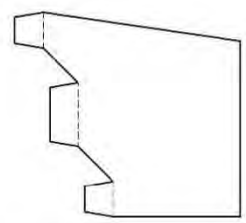
Snow Guard



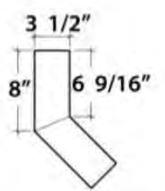
Shadow Corner Box



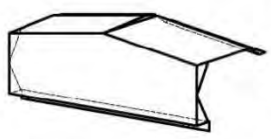
Gutter End Cap



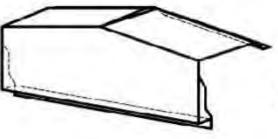
Shadow Gutter End Cap



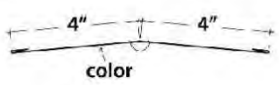
45 Elbow



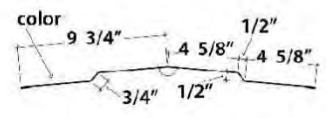
Sculptured Peak Box



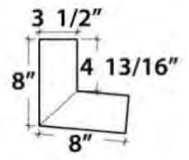
Shadow Peak Box



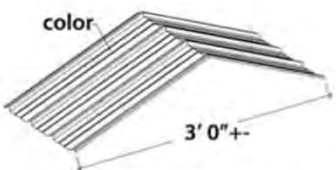
Canopy Soffit



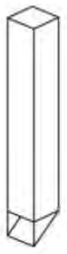
Ridge Cap



95 Elbow



Formed Ridge Cap

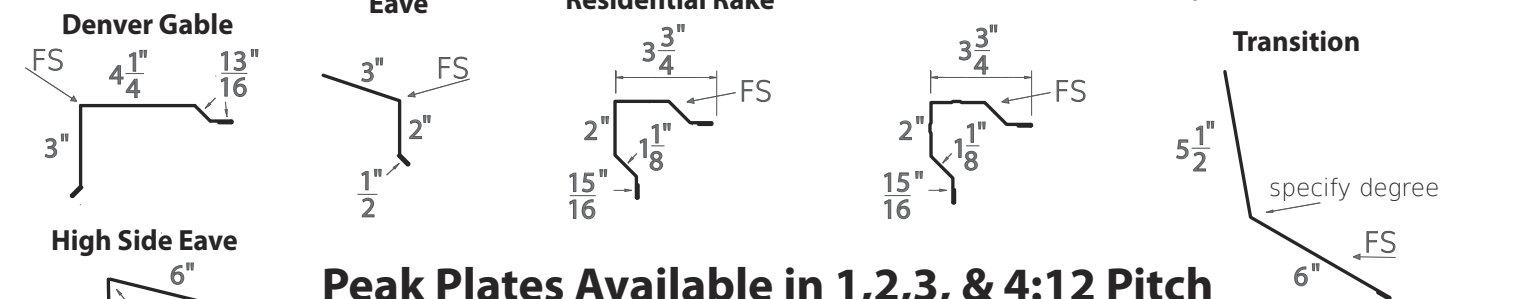
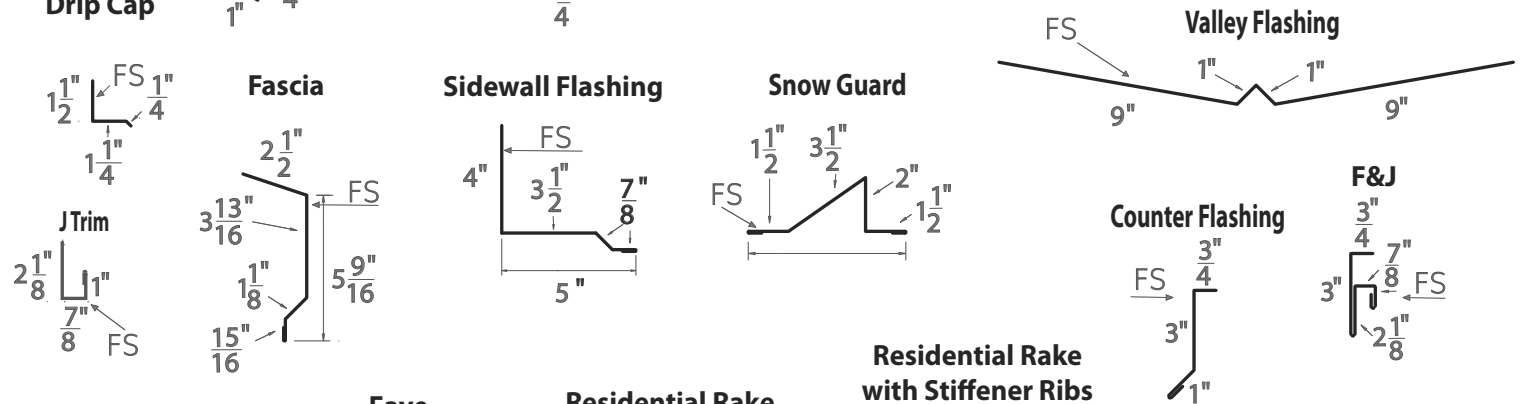
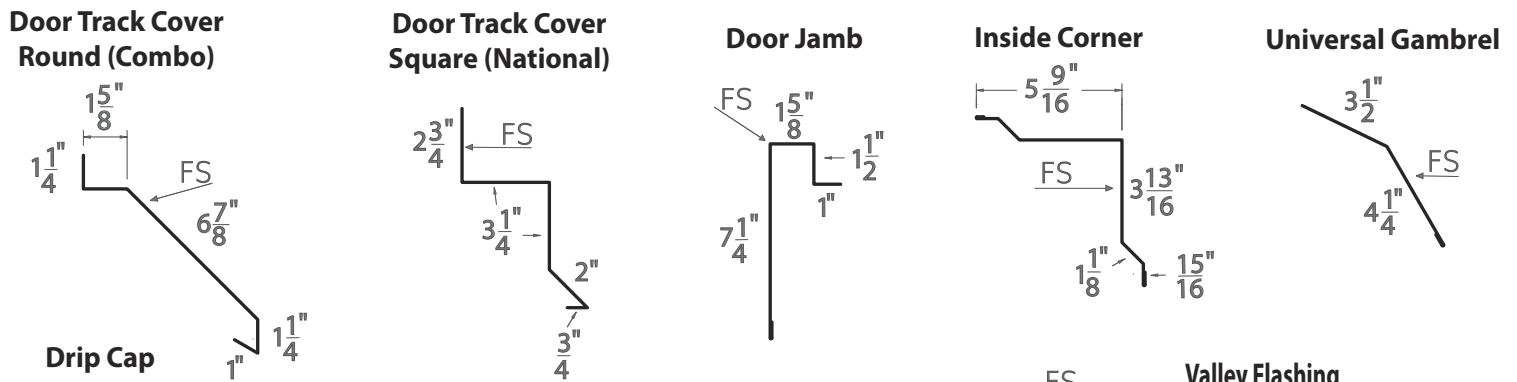
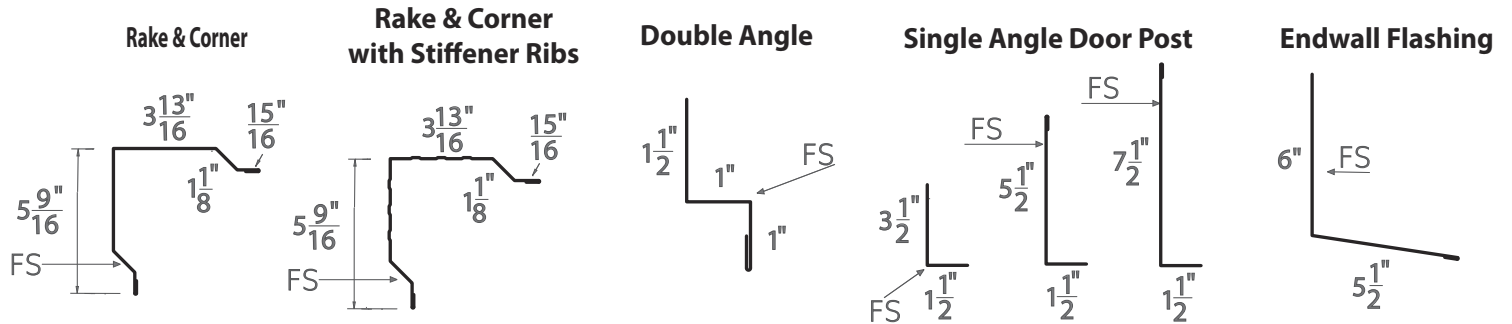
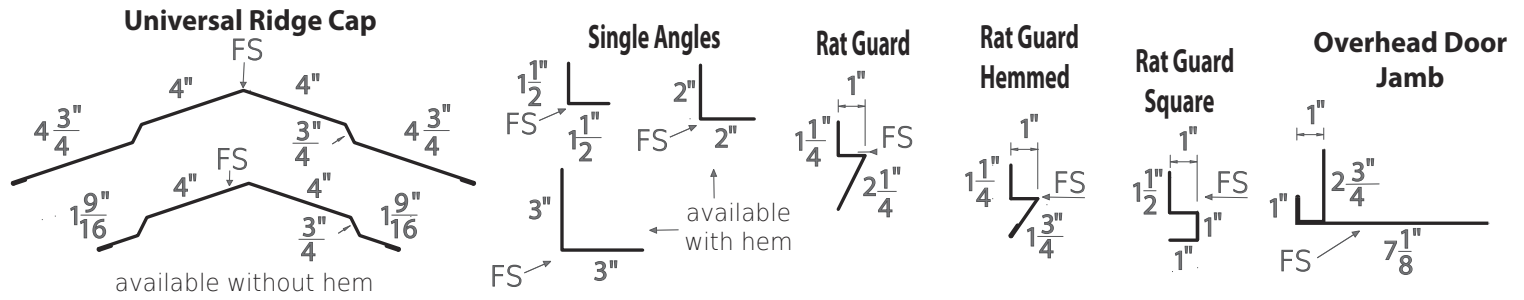


Down Spout



Custom Trim Available on Request

Trim Profiles - 29Ga. Nu-Mag/Nu-Ag



Peak Plates Available in 1,2,3, & 4:12 Pitch

Custom Trim Available Upon Request

*FS = finished side or painted side

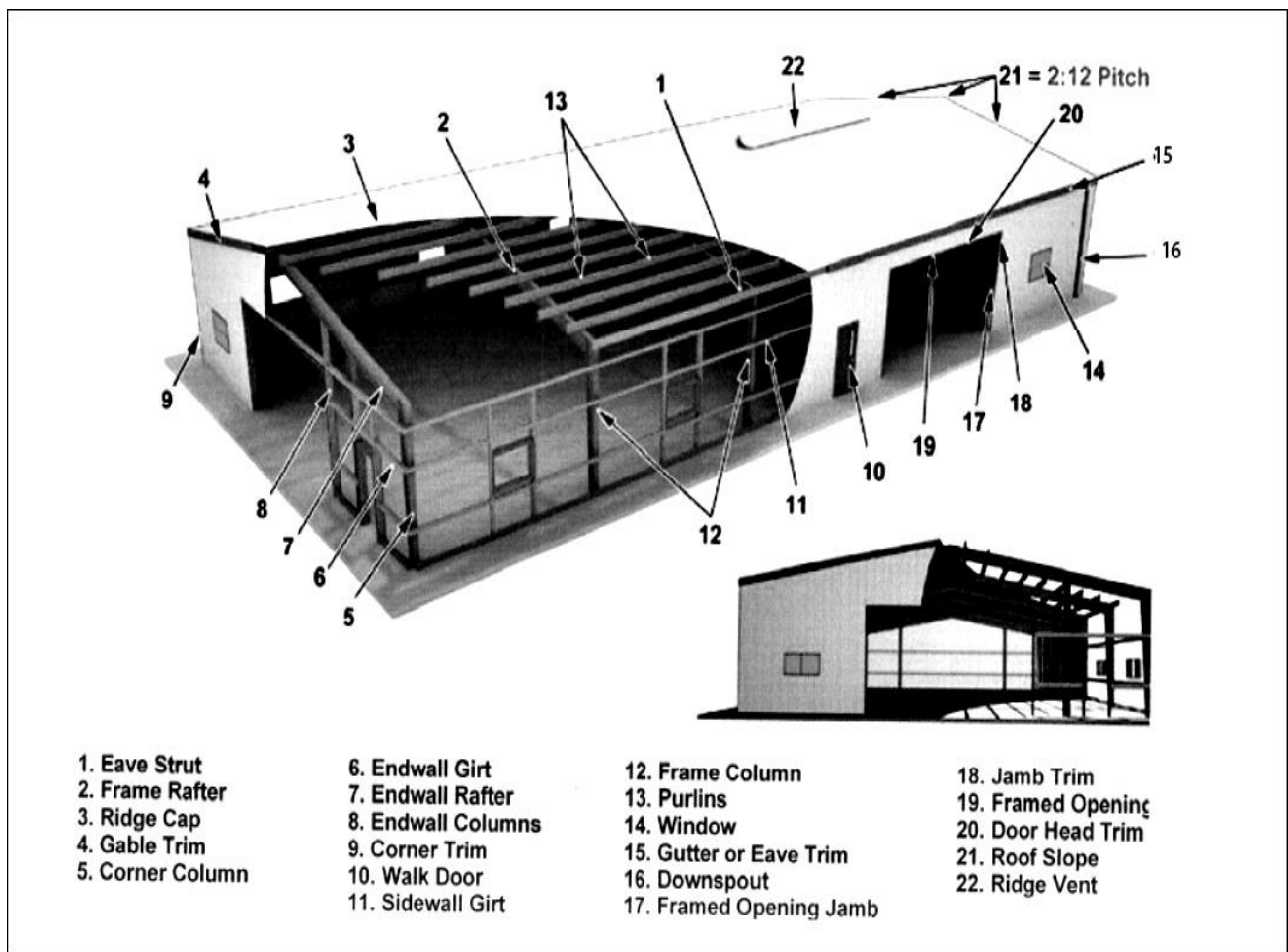
June 2018



METAL BUILDING SUPPLY, INC

METAL BUILDING TYPICAL TRIM DETAILS

26ga R/PBR Panel



Metal Building Supply, Inc.

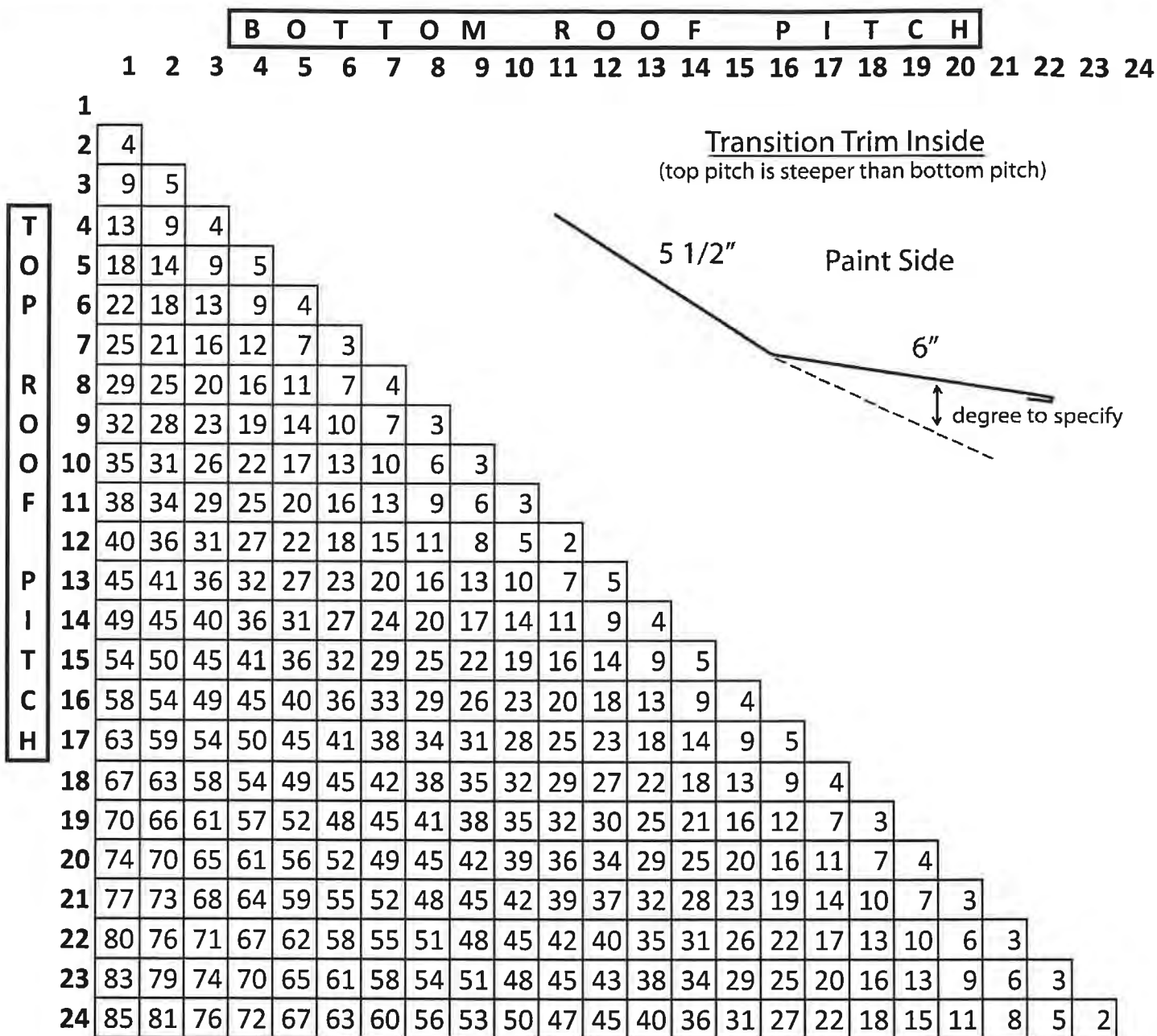
19601 N. Mount Olive Rd.

Gravette, AR 72736

800-467-0626 Fax: 888-638-2580

Actual Trim Break Bends						
		Ridge Cap		Eave		Hi Side Eave
1	:12	10		85		95
2	:12	18		81		99
3	:12	28		76		104
4	:12	36		72		108
5	:12	46		67		113
6	:12	54		63		117
7	:12	60		60		120
8	:12	68		56		124
9	:12	74		53		127
10	:12	80		50		130
11	:12	86		47		133
12	:12	90		45		135
13	:12	100		40		140
14	:12	108		36		144
15	:12	118		31		149
16	:12	126		27		153
17	:12	136		22		158
18	:12	144		18		162
19	:12	150		15		165
20	:12	158		11		169
21	:12	164		8		172
22	:12	170		5		175
23	:12	176		2		178
24	:12	180		0		180

Transition Trim Inside (top pitch is steeper than bottom pitch)



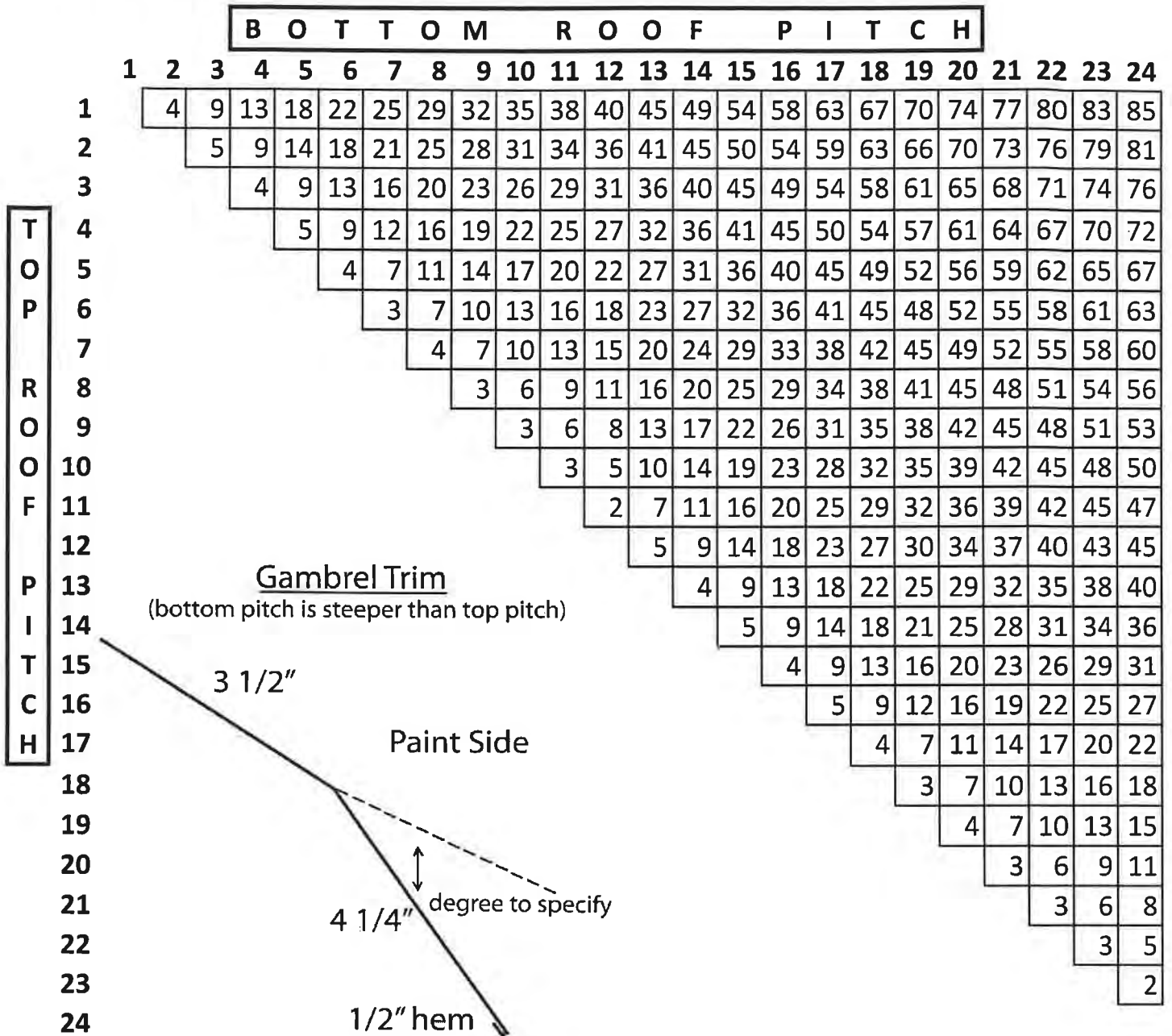
This is the typical configuration for Transition Trim

A customer wants transition trim going from a 4:12 to a 2:12 (inside transition trim – typical configuration) then your memo line under the memo for TTGN would be **9 DEG I/S TT**

OR

the memo for TTGN would be **4:12 to 2:12**

Gambrel Trim (bottom pitch is steeper than top pitch)



This is the typical configuration for Gambrel Trim

A customer wants a gambrel trim going from 4:12 to 12:12
(typical gambrel) then you memo line under the entry for GTGN would be

27 DEG GT

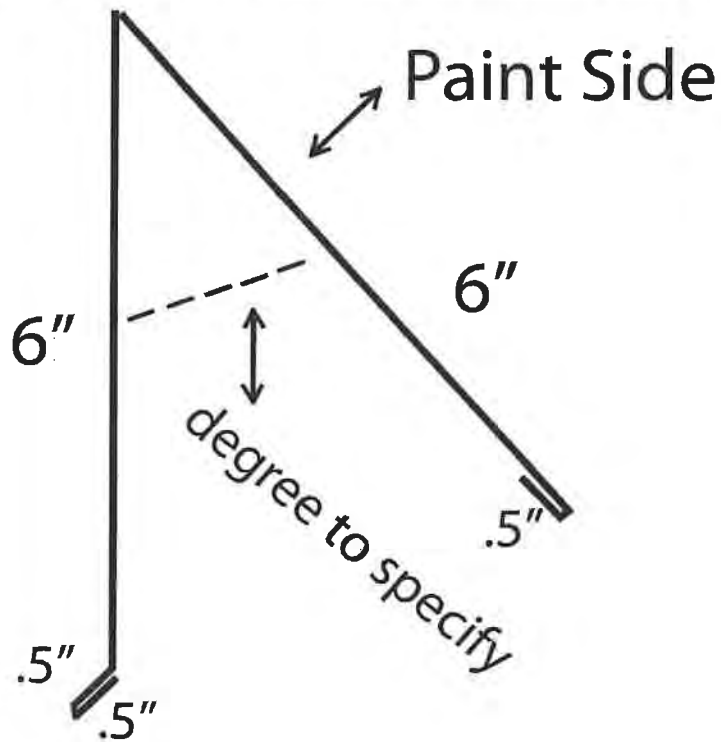
OR

4:12 to 12:12

High Side Peak Flashing

	1	5	85
R	2	9	81
O	3	14	76
O	4	18	72
F	5	23	67
	6	27	63
P	7	30	60
I	8	34	56
T	9	37	53
C	10	40	50
H	11	43	47
	12	45	45

High Side Peak Flashing



A customer wants high side peak trim on a 4:12
the memo for HSGN would be **72 DEG HS**

OR

the memo for TTGN would be **4:12**



Special Trim Diagram Sheet

Date: ___/___/___

Gauge: _____

Special Instructions: _____

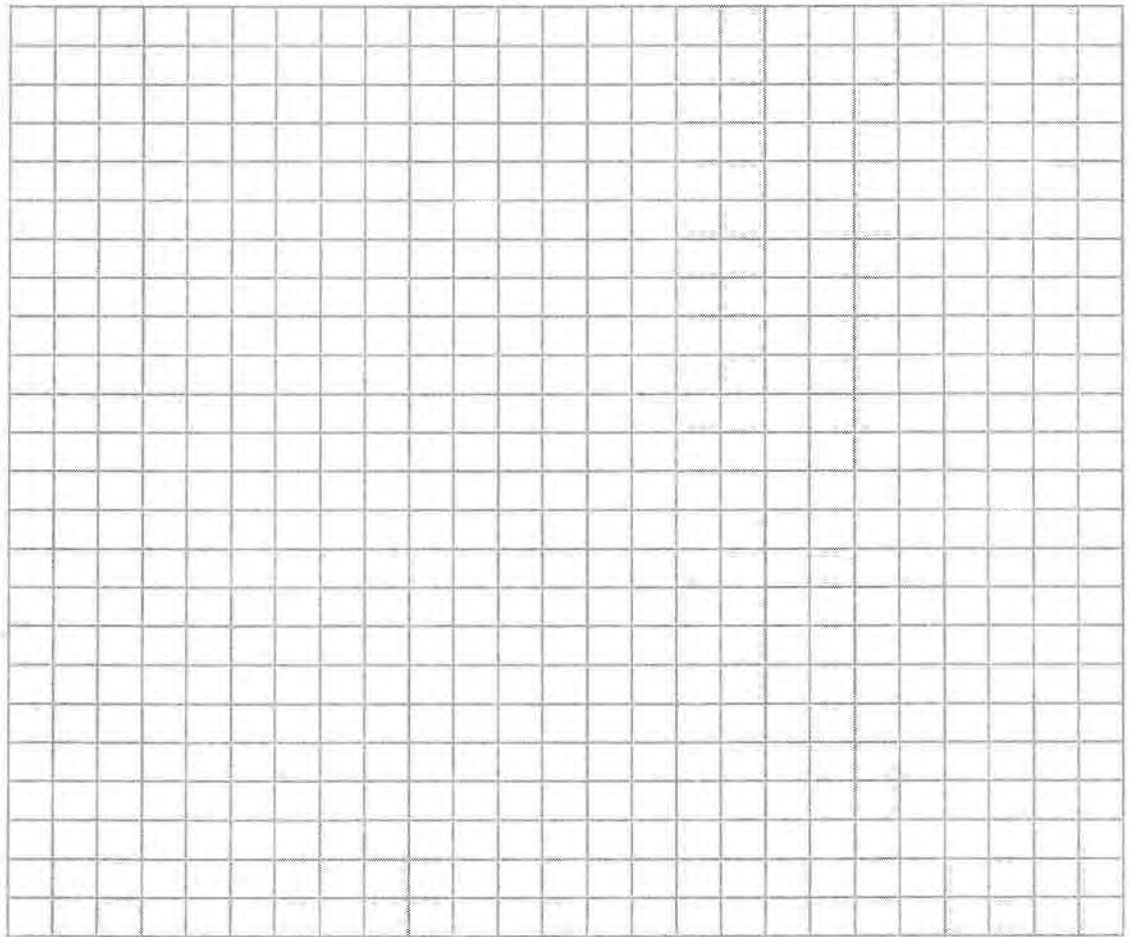
Color: _____

Slit Size: _____

Number of Hems: _____

Number of Bends: _____

(each hem is 2 bends and should be included in this total)



Is the paint on the correct side? _____

Are the degree of bends correct? _____

Are the bends the correct length? _____

Customer Signature: _____

Salesperson: _____



METAL BUILDING SUPPLY, INC

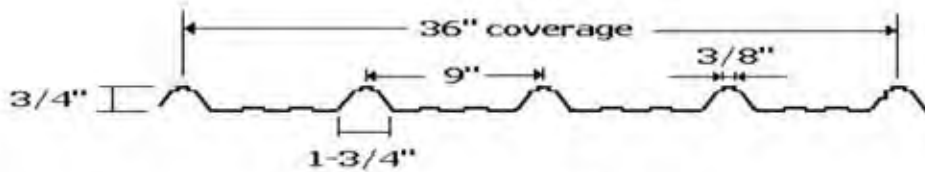
PANELS

[Back to TABLE OF CONTENTS](#)

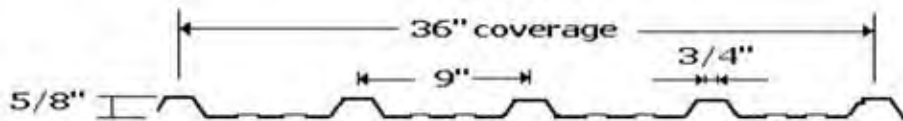
PANEL PROFILES



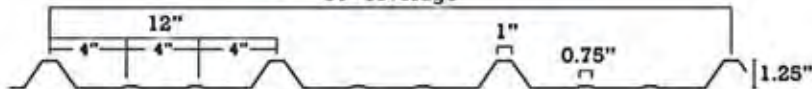
NU-MAG



NU-AG



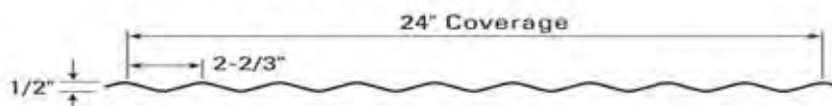
**PBR PANEL 26 GA.
36\" coverage**



1 1/4\" corrugated



2 1/2\" corrugated





METAL BUILDING SUPPLY, INC

ACCESSORIES

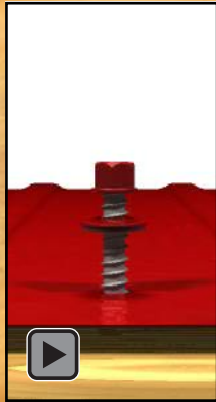
[Back to TABLE OF CONTENTS](#)

#10 WoodTite™

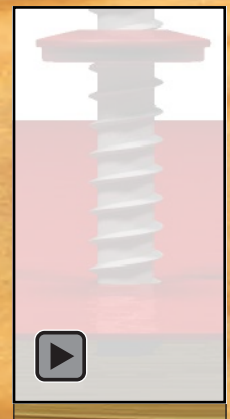
Nonconductive
washer



Type-17 Cutting
Point for Faster
Installation



Hybrid Serrated
Threads Reduce
Pigtails



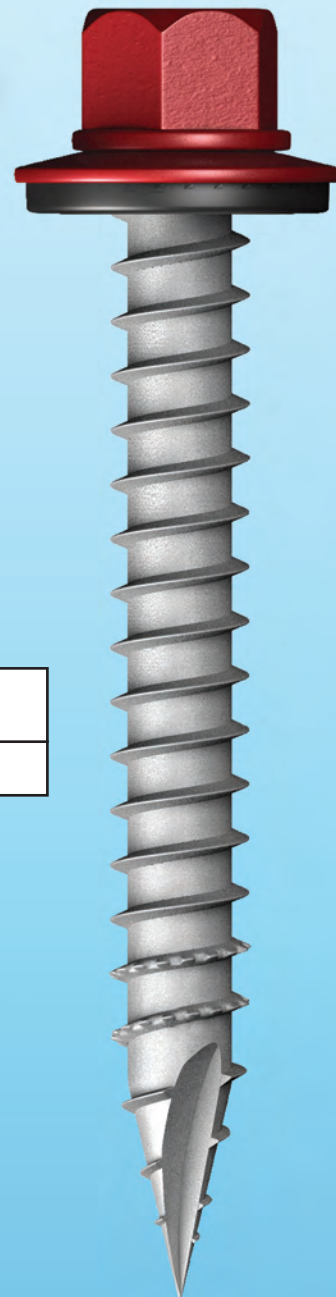
Self
Tapping
Type-17
Point

Innovative hybrid
threads cut through
hard woods and knots

ATLAS
Fasteners For Construction

#10 WoodTite™

Diameter: #10
Threads per In.: 14
Length: 1", 1½", 2", 2½", 3"
Point: Type-17
Material: Carbon Steel
Coating: Oxysel

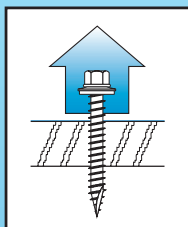


ENGINEERING TEST REPORT

For questions contact Technical Service: 1-800-321-6977

Fastener Diameter	Minimum Torsional	Minimum Tensile	Minimum Shear
#10	68 in. lbs.	2,100 lbs.	1,265 lbs.

PULL OUT VALUES



TEST MATERIAL	PENETRATION	RESULTS
S-P-F #2	1"	535 lbs.
S-P-F #2	1-1/2"	925 lbs.
5/8" OSB	Full	243 lbs.
5/8" CDX	Full	461 lbs.

Note: Pull-out values are a measurement of wood material strength. Actual field values may vary.

Recommended Screw Gun Speed: 2,500 rpm maximum.

CAUTION: Stripped threads may cause delayed failures resulting in costly leaks.

NO IMPACT OR HAMMER DRILLS TO BE USED FOR INSTALLATION.

DISCLAIMER: All test results and recommendations are based on laboratory tests. Specific job site conditions should be taken into consideration when specifying the proper fastener. Because applications may vary, we assume no liability for use of this information.

www.atlasfasteners.com


Fasteners For Construction

www.atlasfasteners.com

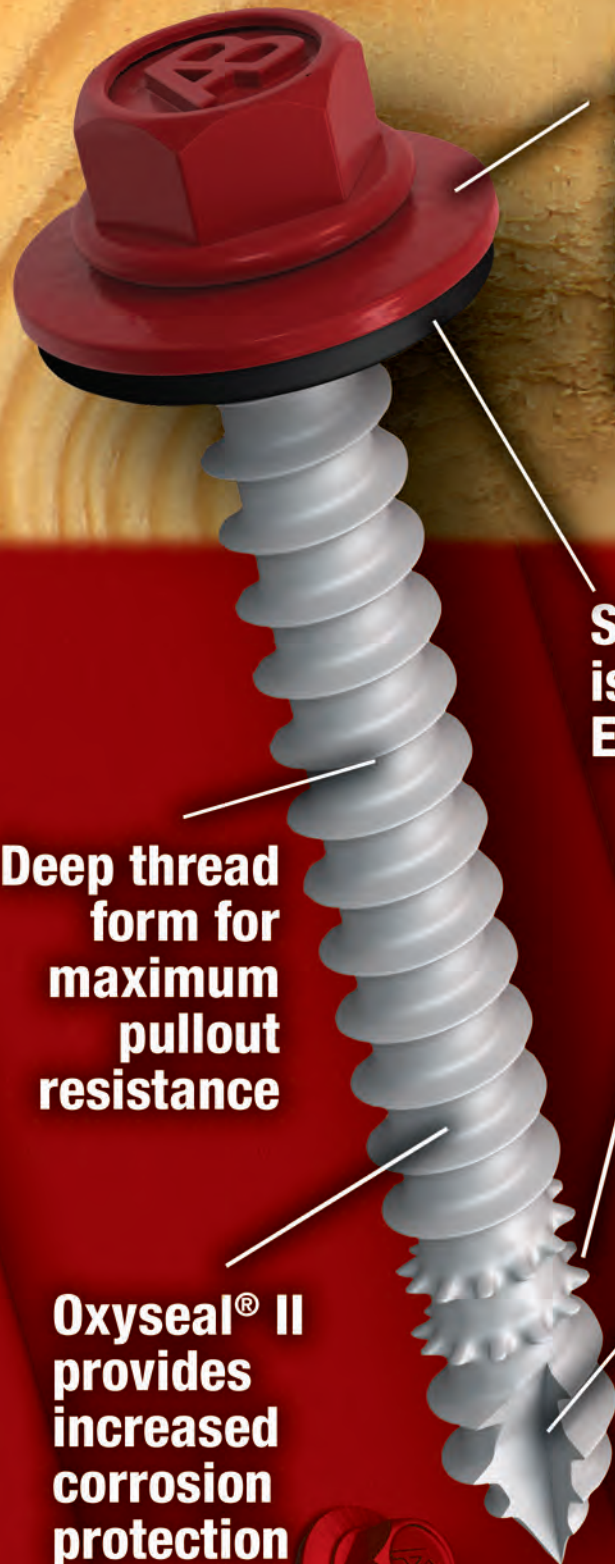
1628 Troy Road • Ashland, Ohio 44805
 Phone: 419-289-6171 • Fax: 419-289-2564

800-321-6977

SALES AND SERVICE CENTERS:

Ashland, OH	Flat Rock, NC	Houston, TX	Salem, OR
1-800-321-6977	1-800-364-0370	1-800-503-2105	1-800-547-8740

#14 WoodTite™



Head & Sealing washer can be painted with oven cured poly-urethane enamel

Sealing washer is non-conductive EPDM rubber

Deep thread form for maximum pullout resistance

Innovative hybrid threads cut through hard woods and knots

Oxyseal® II provides increased corrosion protection

Type-17 Point easily penetrates lapped high tension steel



ATLAS™
Fasteners For Construction

Pull-Out Test Results

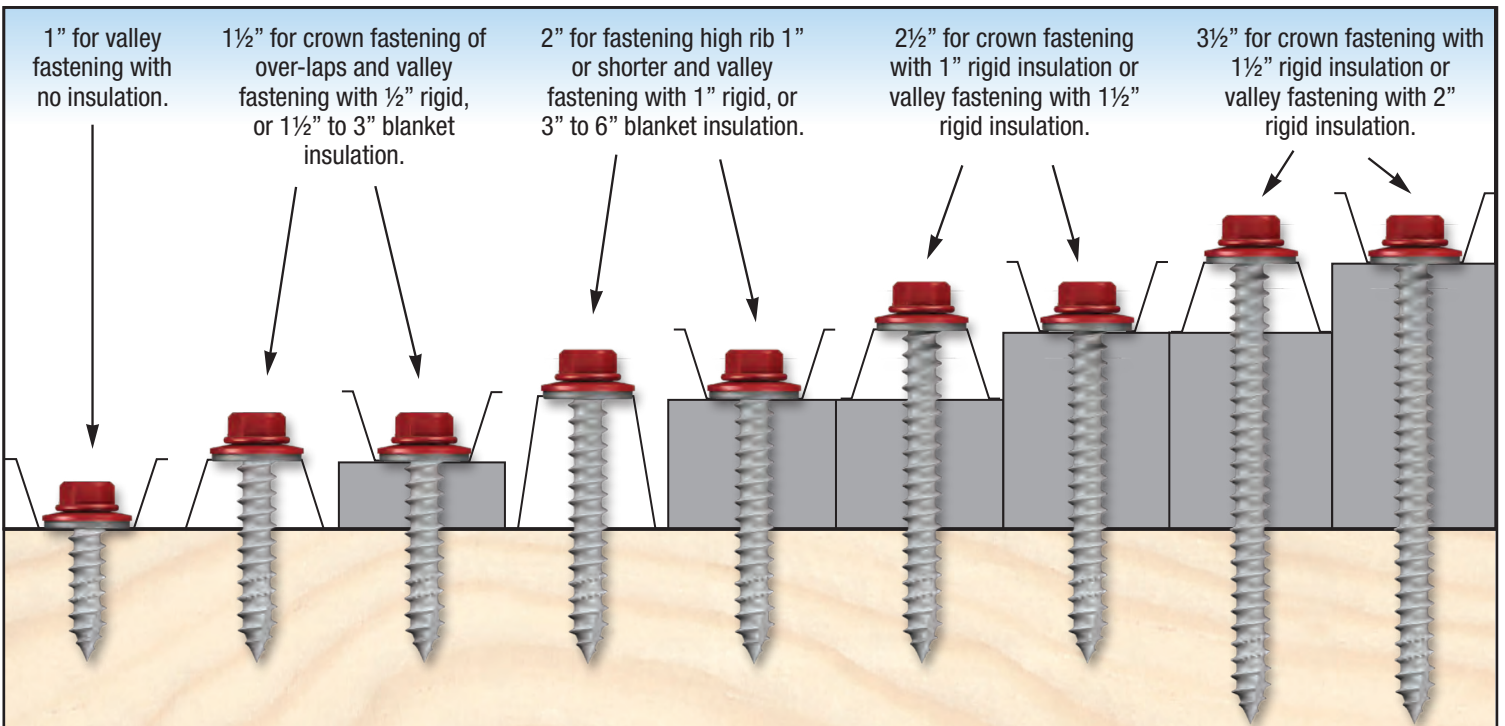
Screw Description	Test Material	Ultimate Pullout Lbs.
Woodtite #14-10 Mechanical Zinc Plating (.0003) Min. Sharp Point	SPF #2	1,080 (1½" Penetration)
	7/16" OSB	213
	5/8" OSB	301
	1/2" CDX	520
	5/8" CDX	430
	3/4" CDX	718



Fastener Strength Characteristics

(Min. Values)

Size	Steel	Tensile	Shear	Torsional
#14 - 10	C1022	3150 lbs.	2150 lbs.	125 Inch lbs.



www.atlasfasteners.com

1628 Troy Road • Ashland, Ohio 44805

Phone: 419-289-6171 • Fax: 419-289-2564

800-321-6977

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1-800-321-6977

Flat Rock, NC

1-800-364-0370

Houston, TX

1-800-503-2105

Salem, OR

1-800-547-8740

FLAT-TOP™

SELF-SEALING FASTENERS

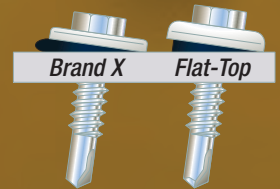
**CARBON
STEEL**

**Product superiority
in design, application
and installation**

For more information, contact
an authorized ATLAS distributor,
or call ATLAS Sales Support at
(800) 321-6846

- *ATLAS Flat-Top™ carbon steel with OxySeal® Long-Life Coating*

- *Special Undercut entraps EPDM sealing washer, even when driven at extreme angles*



- *One-Piece Design eliminates damage to painted washer surface and eliminates dissimilar metal washer materials*
- *Higher Hex provides positive socket engagement*

- *Flat-Top Design stabilizes socket during installation*

Build it better with

www.atlasfasteners.com

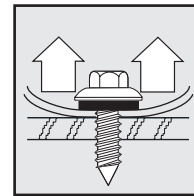
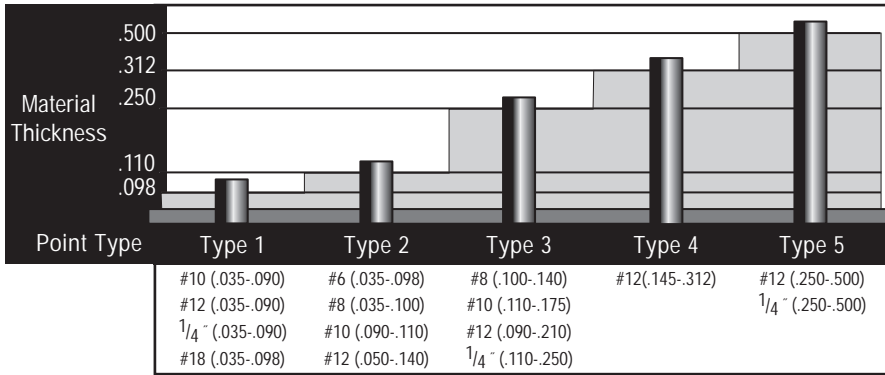
1628 Troy Road • Ashland, Ohio 44805

ATLAS

Fasteners For Construction

Self-Sealing Fasteners

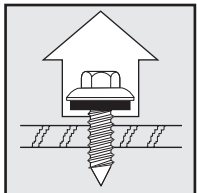
Drill Point Capabilities



Pull-Over Values (Lbs.)

for Flat-Top Self-Sealing Fasteners

Gauge			
Fastener Diameter	22 (.030)	24 (.023)	26 (.018)
12-14	1128	982	621
1/4-14	1298	1043	687



Pull-Out Values (Lbs.)

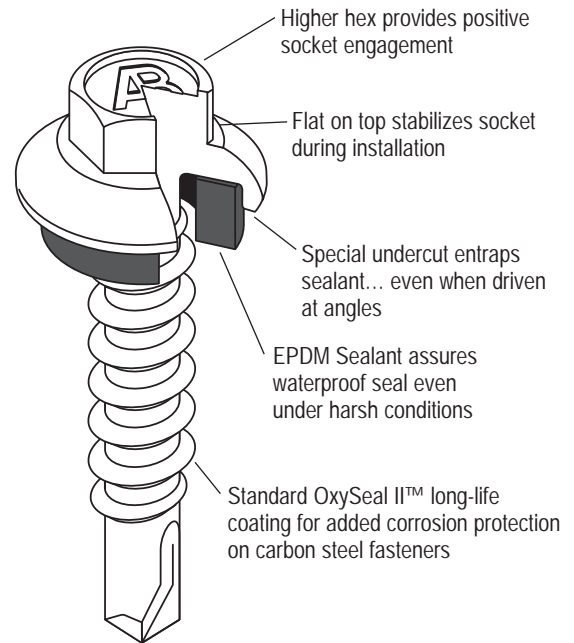
for Flat-Top Self-Sealing Fasteners

Gauge					
Size	Point	12	14	16	18
12-14	TCP3	1634	1066	760	554
1/4-14	TCP3	1861	1148	883	613

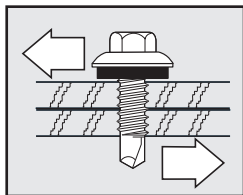
Decimal (inch) Equivalents of Thread Diameters

Thread Diameter	Decimal Equivalent	Gauge	Thickness (in.)
#6	.140	26	.018
#7	.150	24	.024
#8	.160	22	.030
#9	.180	20	.036
#10	.190	18	.048
#11	.200	16	.060
#12	.210	14	.075
#13	.230	12	.105
1/4"	.240	10	.134
#14	.250	8	.164
#17	.285	4	.224
#18	.304	1/4	.250
11/32"	.344		

Decimal (inch) Equivalents of Sheet Metal Gauges



Shear Values for Carbon Steel Drilling Fasteners



Gauge												
Size	Point	26-26	24-24	22-22	20-20	18-18	16-16	14-14	12-12	1/8-1/8	3/16-3/16	1/4-1/4
12-14	T/1	435	706	756	1021	1455	/	/	/	/	/	/
1/4-14	T/1	514	852	888	1247	1767	/	/	/	/	/	/
8-18	T/2	297	499	563	743	1063	1081	/	/	/	/	/
10-16	T/2	315	481	592	833	1209	1271	/	/	/	/	/
12-14	T/2	368	603	626	901	1373	1761	2141	/	/	/	/
8-18	T/3	/	/	/	733	1093	1213	1217	/	/	/	/
10-16	T/3	/	/	/	731	1269	1543	1555	/	/	/	/
10-24	T/3	/	/	/	754	1211	1557	1697	/	/	/	/
12-14	T/3	/	/	/	772	1361	1623	1973	1989	/	/	/
1/4-14	T/3	/	/	/	933	1445	2103	2587	2653	2823	/	/
12-24	T/4	/	/	/	/	/	/	/	2051	2703	/	/
12-24	T/5	/	/	/	/	/	/	/	/	2703	2723	2765

Strength Characteristics for Flat-Top Self-Sealing Fasteners

Fastener Size	Minimum Tensile (pounds)	Min. Fastener Torque Strength (inch-pounds)	Fastener Shear (pounds)
12-24	2,800	92	2,000
1/4-14	3,850	150	2,600



1628 Troy Road
Ashland, OH 44805
1-800-321-6846

All test results and recommendations are based on laboratory tests.

Specific job site conditions should be taken into consideration when specifying the proper fastener.

Because applications vary, we assume no liability for use of this information.

#10 WOOD ULTIMATE® / LONG LIFE FASTENERS

HEAD

- Lifetime Warranty: Zamak-5 Zinc Alloy cast head warranted against red rust for the life of the building
- Superior Cast Zinc Head Design vs. capped or press fitted preventing head failure during installation
- Redesigned head for maximum compatibility with magnetic nutsetter
- Superior socket fit for more control
- Head Style: 5/16" HWH
- Wet paint application for consistent socket fit and weathering performance

WASHER

- Dekfast® Multi-Seal™ Washer: Four sealing points to assure positive seal even when driven at extreme angles
- Protects and seals under the head, against the shank and against the roof sheet
- Ideal for 5V roof applications
- Engineered to distribute the load

THREAD

- High Major Threads with Low Minor Threads for enhanced pullout values
- Diameter: #10
- Threads per inch: 14
- Major Hi Diameter: .190"-.200"
- Major Low Diameter: .155"-.165"
- Minor Diameter: .128"-.133"
- Aster Threads - Innovative hybrid threads to cut through hard woods and knots

POINT

- Type-17 Point helps to penetrate metal more quickly while minimizing chips
- 26 Degree Sharp Point for quick piercing

FINISH

- Mechanical Zinc Plate

MATERIAL

- Carbon Steel



#10 WOOD ULTIMATE - 5/16" CAST ZINC LONG LIFE HEADS-WITH ASTER THREAD

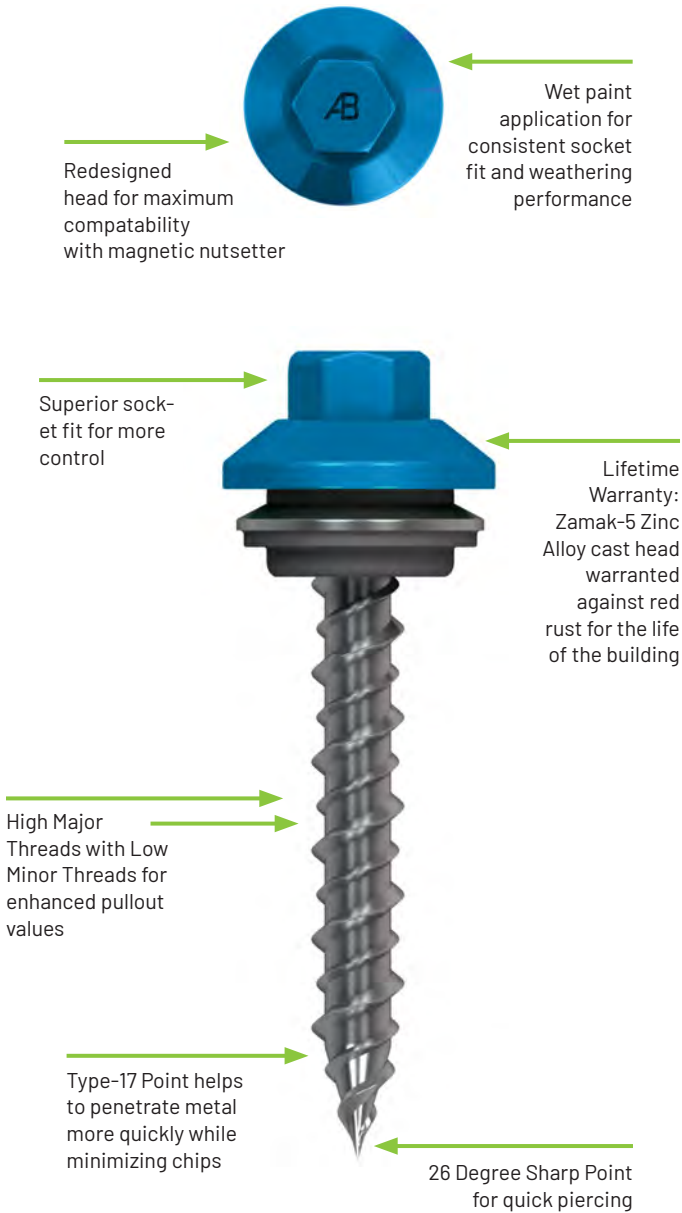
SIZE	ITEM#	# PER M	BOX QTY
10-14 x 1	65712ZBN99JR	16.6	2500
10-14 x 1-1/2	65713ZBN99JR	11.5	2000
10-14 x 2	65714ZBN99JR	14	1500
10-14 x 2-1/2	65715ZBN99JR	22.9	1000

ENGINEERING TEST REPORT

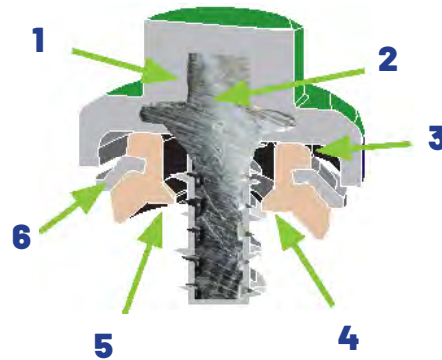
Minimum Tor-sional	Minimum Tensile	Minimum Shear	Pull Out In 2 X 4 Pine-1" Penetration	Back Out Re-sistance	Revolutions/In. Install Speed
68 in. lbs	1817 lbs.	1216 lbs.	796 lbs.	31 in. lbs.	7.0

All test results and recommendations are based on laboratory tests. Specific job site conditions should be taken into consideration when specifying the proper fastener. Actual field values may vary. Because applications may vary, we assume no liability for use of this information. Pull-out values are a measurement of wood material strength.

#10 WOOD ULTIMATE® / LONG LIFE FASTENERS



Ultimate® Head Design: **(1)** Zinc Casting on Head, **(2)** Completely Enveloping Steel Shank



Dekfast® Multi-Seal™ Washer: Four sealing points to assure positive seal even when driven at extreme angles. Protects and seals **(3)** Under the head, **(4)** Against the shank, **(5)** Against the roof sheet. **(6)** Engineered to distribute the load. Ideal for 5V roof applications

INSTALLATION INSTRUCTIONS:

- Recommended Driving Tools: 2,000 - 2,500 RPM electric screw gun with depth sensing nose piece to prevent overdriving and stripout
- Seating Torque: Setting required varies with substrate that metal panel is fastened to.

Low Pro **ULTIMATE**[®]

Low Profile Zinc Head Design

Cast Zinc Head

- (Not capped) prevents head failure during installation; provides excellent paint adhesion

Compatible with Magnet Nutsetter

- Superior socket fit
- More Control

Low Profile Design

- Fastener blends in with panel
- Less visible fastener lines

Lifetime Warranty

- Zinc die cast head warranted against Red Rust for the life of your building.

5/8" O.D. Design

- Meets Industry specifications & codes

Superiority in Product Design, Application, Installation and Innovation



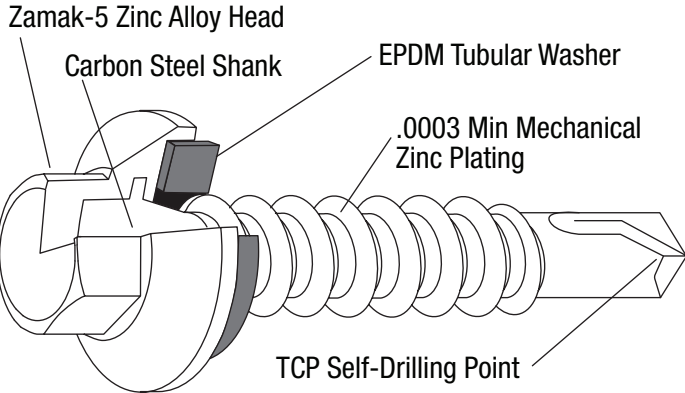
ATLAS[™]
Fasteners For Construction

All test results and recommendations are based on laboratory tests.

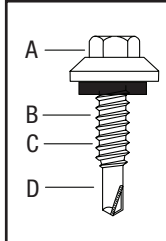
Specific job site conditions should be taken into consideration when specifying the proper fastener.

Because applications vary, we assume no liability for use of this information.

Note: Test results are average Ultimate failure values.



UltiMate 1/4" x 7/8"



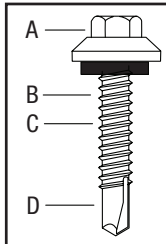
A - Head, Across Flats:	.312"
B - Major Diameter:	.240" - .246"
C - Minor Diameter:	.185" - .192"
Stress Area:	.02362 in ²
D - TCP1 Stitch/Lap Point	

Strength Characteristics

For Self-Drilling and Self-Tapping Fasteners

Fastener Size	Minimum Tensile (pounds)	Min. Fastener Torque Strength (inch-pounds)	Fastener Shear (pounds)
12-14	2800	92	2000
1/4"-14	3850	150	2600

UltiMate 1/4" - 14 x 1-1/4"



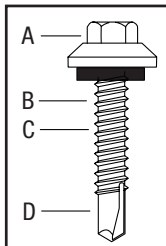
A - Head, Across Flats:	.312"
B - Major Diameter:	.240" - .246"
C - Minor Diameter:	.185" - .192"
Stress Area:	.02362 in ²
D - TCP3 Point	

Pull-Over Values (Lbs.)

For Ultimate Fasteners

Fastener Diameter	Gauge		
	22 (.0299)	24 (.0239)	26 (.0179)
1/4"-14 TCP3	1320	1061	683
#12-14 TCP3	1154	1016	687

UltiMate #12 - 14 x 1-1/4"



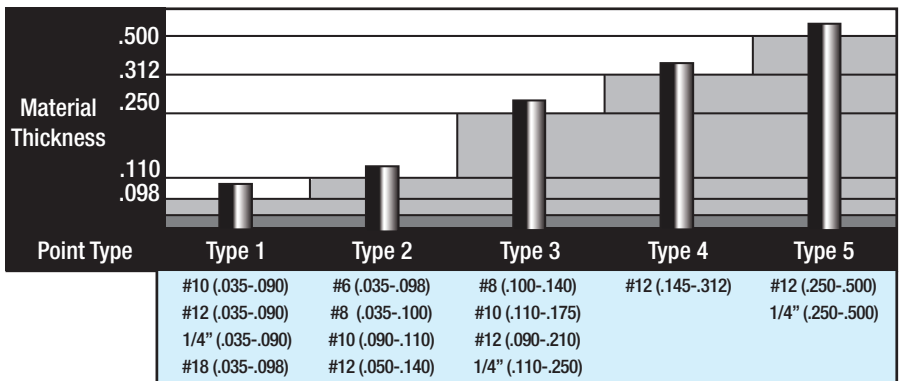
A - Head, Across Flats:	.312"
B - Major Diameter:	.209" - .215"
C - Minor Diameter:	.157" - .164"
Stress Area:	.01593 in ²
D - TCP3 Point	

Pull-Out Values (Lbs.)

For Carbon Steel Self-Drilling Fasteners

Steel Thickness	12-14	1/4"-14
	TCP3	TCP3
22	292	296
20	344	349
18	554	613
16	760	883
14	1066	1148
12	1634	1861
1/8"	2423	2409
3/16"	3001	4553

Drill Point Capabilities





- Great for exterior and interior sealing
- Permanently flexible
- Will not shrink or crack
- Waterproof
- Mold/mildew resistant
- Invisible to UV light
- Excellent adhesion to most building substrates
- Will not sag or slump
- Completely cured within 48 hours
- Tack-free in 10 minutes
- Excellent tooling properties
- No solvents or odor (50-state VOC compliant)
- Will not freeze

NOVA FLEX SILICONE

Metal Roof Sealant

NovaFlex Metal Roof Sealant is a non-corrosive, single-component, oxime-cured, silicone sealant and/or adhesive. This product is a general purpose compound that is used most frequently as a seam sealant or joint filler in metal roof systems.



NovaFlex Metal Roof Sealant is a single-component, high-solid, low-odor material. It cures to a medium modulus, flexible, and durable rubber-like solid. NovaFlex Metal Roof Sealant will develop primerless adhesion to most common construction substrates, and the neutral cure is compatible with most materials.

Recommended for Sealing: Metal siding/metal roofs, gutters, wood, steel, chimney flashing, snow guards, pipe boots, and downspouts/trim.

Adheres to:

- | | | |
|--------------------------|---------------|--------------------|
| • Lap Joints | • Metal Roof | • Stucco |
| • Pipe Boots | • PVC/PVDF | • Roof Flashing |
| • Trim | • Snow Guards | • Downspouts |
| • Copper (exposed areas) | • Single-Ply | • Roof Tile |
| • Metal Siding | • Gutters | • Termination Bars |
| | • Aluminum | |

Color Match

NovaFlex Metal Roof Sealant is color matched to over 70 industry standard colors for major siding, trim coil, window, and metal roof manufacturer colors

Visit novagard.com/novaflex/metal-roof-sealants/ for our metal roof manufacturer color cross reference tool.



Made in USA. Professional Grade.



TECHNICAL INFORMATION

Appearance: Colored paste

Application Temperature: -20°F to 160°F

Service Temperature: -40°F to 400°F

Adhesion: Excellent to most common building materials

Consistency: Non-sag

Bridging Ability: Excellent, bridges gaps to 3/8"

Gunning Ability: Easy to gun

Durability: +/- 35-50% depending on color/formulation

Flexibility: Very good

Water Resistance: Good, not to be submerged

Exterior Weathering: Excellent

Aging: Excellent

Not Recommended: For surfaces that are to be painted, for joints submerged under water

Freeze-Thaw Stable: Will not freeze

Odor: None

Skin Time:

40 minutes (40°F/40% relative humidity)

10 minutes (75°F/50% relative humidity)

5 minutes (95°F/95% relative humidity)

Cure Through Time:

5 days (40°F/60% relative humidity)

48 Hours (75°F/50% relative humidity)

Solids: 97%

NOVAGARD

Sealants | Foams | Coatings | Thermals

5109 Hamilton Avenue
Cleveland, OH 44114 USA
(216) 881-8111 | (800) 380-0138
(216) 881-6977 fax
novagard.com

ISO 9001:2015, IATF 16949:2016

Effective Date: November 2018

NOVAFLEX SILICONE

Metal Roof Sealant

Product Specifications

Physical Property	Test Method	Performance Range Type I - Class 35	Performance Range Type II - Class 50
Appearance		Colored Paste	Colored Paste
Viscosity	Brookfield #7 @ 10 rpm	3500-7000 poises	4500-8000 poises
Extrusion Rate	1/8" Orifice @ 50 psi	30 - 80 grams/minute	30 - 80 grams/minute
Skin Over Time	3/8" @ 50% RH & 77°F	5 - 10 minutes	5 - 10 minutes
Through Cure	3/8" @ 50% RH & 77°F	48 hours	48 hours

Typical Properties*

Physical Property	Test Method	Typical Value Type I - Class 35	Typical Value Type II - Class 50
Specific Gravity		1.00 - 1.05	1.15 - 1.25
Tensile Strength	ASTM D412	140 - 200 psi	170 - 220 psi
Elongation	ASTM D412	500 - 650%	800 - 1000%
Tear Resistance	ASTM D624	30 - 35 pli	30 - 35 pli
Shore Hardness	ASTM D2240	20 +/- 5	25 +/- 5
Service Temperature		-40°F to 400°F (-40°C to 205°C)	-40°F to 400°F (-40°C to 205°C)
Joint Sealant Designation	ASTM C920	Type S Grade NS Class 35 Use NT, M, G, A, O	Type S Grade NS Class 50 Use NT, M, G, A, O
Adhesion Glass Aluminum Vinyl	ASTM D903	12 - 15 pli 10 - 14 pli 12 - 15 pli	12 - 15 pli 10 - 14 pli 12 - 15 pli

*The values outlined reflect testing that was conducted under laboratory conditions, actual results may vary. The information provided in the above table is not intended for use in preparing specifications. Please consult manufacturer for additional information.

Packaging Information

NovaFlex Metal Roof Sealant is available in 10 ounce cartridges, 20 ounce sausage packs, 5 gallon pails, and 55 gallon drums.

Specifications

Meets or exceeds ASTM C-920, TT-S-001543A and TT-S-230C. AAMA 803.3 (I), 805.2 C, 808.3.

Disposal

Consult and obey all applicable local, state, and federal regulations. For additional information, consult product Safety Data Sheet.

Precautions

For additional information consult product Safety Data Sheet. Not recommended for surfaces that are to be painted. Not recommended for joints submerged under water.

Professional Grade

Made with pride in
Cleveland, Ohio



Touch Up Paint Pen

Scratches on Your Metal Roof? Not Anymore!

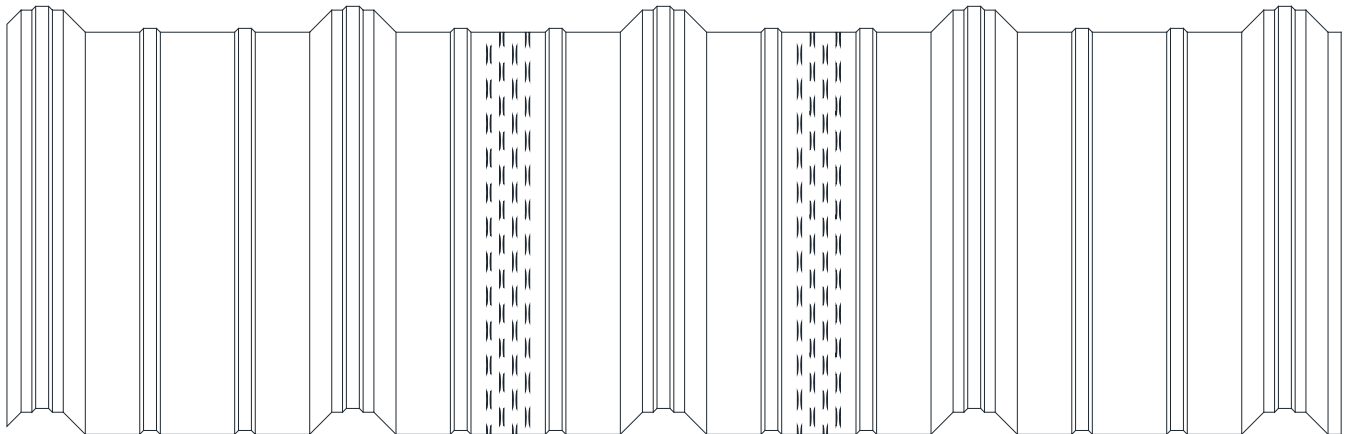
Use our paint pen for quick fixes to provide long lasting and reliable touch-up. Available in numerous color choices that match most metals and help cover up small scratches. Quick shipping allows speedy touch-up.

- 3 year shelf life
- 28 colors available
- Allows quick and easy touch-up





VENTED PANELS now available from MBS



Perfect for vented soffit

Available in Nu-Mag panel profile

Manufactured in-house: exact color match to our panels and trim

Perfect for Residential and Commercial use

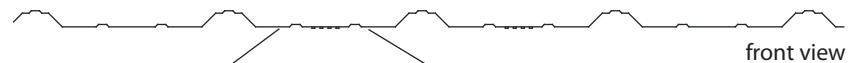
Available in 29G or 26G substrate

Available with ribs up or down

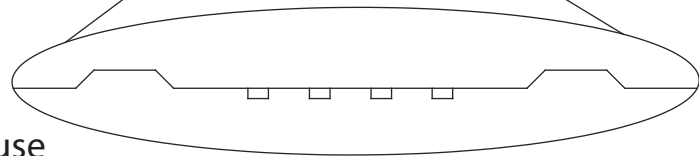
Custom cut to any length

Reduces attic heat

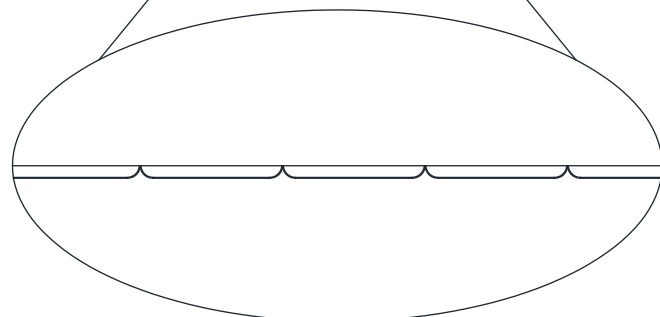
Reduces moisture buildup



front view



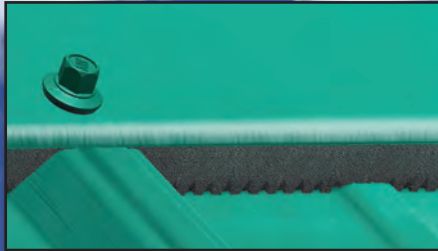
side view



(800) 467-0626

www.metalbuildingsupply.com

X10 **VERSAVENT**[®] **RIDGE VENT MATERIAL**



Contractor Approved!

- Easiest installation
- Lowest in-place cost

- Available sizes:
 - up to 1" rib height
 - 1-1/4" rib height
- Non-profile specific
- No roof measurements, chalk lines, sealants or clips required for installation

Contact your Metal Panel Manufacturer for product information.



Build it better with



X-10 VERSAVENT®

Applied to the Ridge Cap at the Jobsite



Ground Applied:

- One person installation.
- No fall protection required.
- X-10 VersaVent® will not blow away while installing on ridge cap.
- No jobsite waste.
- No additional roof measurements, chalk lines, sealants or clips required.



Product Advantages:

- Maximizes net-free area
- **Durable:** Tear and flame resistant
- Won't scratch roof panel
- Prevents insect, animal and snow infiltration
- Meets all building codes
- 99% recovery after compression

Engineering Test Reports

Provides Lowest In-Place Cost:

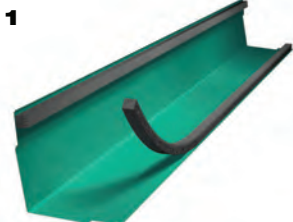
- Highly engineered design allows 2 sku's to conform to most roof panel profiles
- Application to ridge cap allows:
 - Easy, one-person installation
 - No fall protection required
 - Will not blow off while installing the ridge cap
- Boxes contain 10 each 10' sections, and product can be ordered per job, matching ridge cap length
- No roof measurements, caulking, sealants or clips required
- Clean, dust free installation
- One strip of continuous glue keeps material in place during installation
- Screws go through ridge cap and VersaVent®

Call Atlas for technical details on this revolutionary closure or for technical details on how to improve your building.

Vented Ridge Product Typical Properties

Property	Test Description	Results
Panel Fit		2 Sizes Fit Most Panels
Net Free Area	1" Nominal Thick	8.5 Sq.In. Per LF-Slope 17 Sq.In. Per LF-Ridge
Air Permeability	ASTM D737	760 Cu.Ft. per Min.
Heat Resistance	180° for 500 Hrs.	No Change
Humidity Resistance	ASTM D2247-97	No Change
Cold Crack	F87260 Sec. 4-C14	-55° C (-130° F)
Cold Resistance	10° for 500 Hrs.	No Change
Snow Infiltration	CRL 5704	0
Tear Strength	ASTM D3574	3.5 PPI
Tensile Strength	ASTM D3574	16 PSI - Elong. 175%
Compressive Strength	ASTM D3574	1.8 PSI@75%
Abrasion	ASTM D1175	No Damage
Water Immersion	500 Hrs.	No Change
QUW Weatherometer	ASTM G154	No Change
Attic Ventilation	UBC Code	Meets Code

Installation easy as 1, 2, 3!



1
On the ground, apply VersaVent® with adhesive strip to the underside of the ridge cap, 1/4 inch in from each edge. VersaVent® can be cut to length with utility knife or scissors.



2
With the VersaVent® held in place by the adhesive, apply the ridge cap per manufacturers instructions.



3
When installing be sure the Atlas Fasteners are positioned at the edge of the ridge cap so the fasteners pass through the VersaVent® material. When necessary cut the VersaVent® material back to over lap two pieces of ridge cap.



Fasteners For Construction
www.atlasfasteners.com

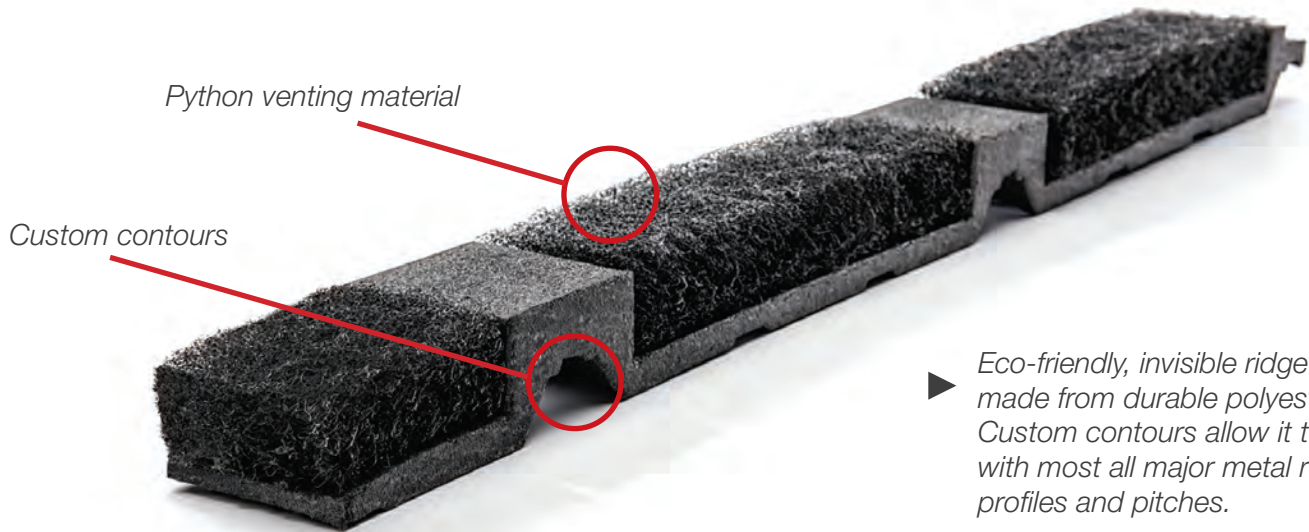
1628 Troy Road
Ashland, Ohio 44805
Phone: 419-289-6171
Fax: 419-289-2564

800-321-6977

SALES AND SERVICE CENTERS:
Ashland, OH: 1-800-321-6977
Flat Rock, NC: 1-800-364-0370
Houston, TX: 1-800-503-2105
Salem, OR: 1-800-547-8740

LP2

LOW PROFILE RIDGE VENT



▶ *Eco-friendly, invisible ridge vent made from durable polyester fiber. Custom contours allow it to fit with most all major metal roofing profiles and pitches.*

Marco's patented Weather-Tite™ LP2™ Ridge Vent is made from non-fabric-covered Python™ vent material. This durable, modified polyester is a non-woven, non-wicking, fiber-based matting. Its specially cut contours provide a custom, low-profile fit for any pitch and most major metal roof profiles.

LP2 provides a superior net-free ventilation area that helps keep out moisture, pests and dust. Plus, LP2 can be installed by just one

person in three easy steps. In fact, the screw bed and industrial strength peel-and-stick adhesive pre-applied to LP2 makes this one of the easiest installations imaginable.

Our unique LP2 system improves ventilation, eliminates condensation, and is easy to install...at a cost lower than traditional fans and louvers.

- Reduces utility costs
- One-person installation
- M63 Marco proprietary adhesive, superior hold
- Superior net-free ventilation reduces condensation
- 40-year limited warranty



- Lower, custom-fit profile
- Moisture and pest barrier
- Non-obtrusive appearance

➤ FLEX-O-VENT GOOD

Our original, most economical polyester-based ventilation product.

FLEXPRO BETTER

New! A profile-cut strip or roll designed to fit most roof panels.

LP2 RIDGE VENT BEST

➤

Premier custom-cut vent strip includes Python™ polyester vent material inserts for optimum fit and ventilation.

**The Marco
Weather-Tite™
System**

Closure

Ventilation

Fasteners

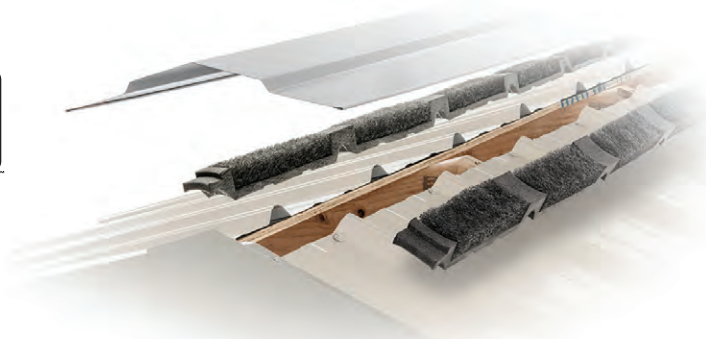
Flashing

Sealants

Underlayment

Accessories

- ▶ Value drives everything we do. That's why we developed the Marco Weather-Tite System— a comprehensive line of products that offers easy installation, remarkable building ventilation, lower utility costs, extreme durability, and outstanding warranties. Get more quality, more performance and more value ... from Marco.



Specs*

Overall

Net Free Area: Varies with profile based on 17 square inches per linear foot of ventilation material

Dimensions: Varies with profile

Air Permeability:
>760 cubic feet per minute

Cold Cracking: -25° F

Tear & Tensile Strength:
Machine 25 ppi / Counter 25 ppi

Compressive Strength: 1.8 psi at 75%

Rain: No leakage

Closure Material

**Nominal Density-Skin/Skin
(BS ISO 7214 1998):** 24 kg/m³

**Compression Stress-Strain
(BS ISO 7214 1998)**

10% compression: 34 kPa

25% compression: 53 kPa

40% compression: 85 kPa

50% compression: 118 kPa

**Shore Hardness 00 Scale, 10 mm Cell/
Cell Thickness (ISO 868 1985):** 50 00

**Thermal Conductivity — Mean Temp of
10° C (ISO 8302 1991):** 0.0392 W/m.K

**Flammability — Automotive
(FMVSS.302-Burn Rate):**

Pass 12 mm & thicker <100mm/min

**Flammability — Horizontal Burn Rate
(ISO 7214 1998):** 5 mm thick, 2.1 mm/
sec and 13 mm thick, 1.5 mm/sec

Python Material

Net Free Area: Varies with profile based on 17 square inches per linear foot of ventilation material

Dimensions: Varies with profile

Cold Cracking: -25° F

Compressive Strength: 1.8 psi at 75%

Rain: No leakage

Air Permeability: (ASTM D737)
760 cubic feet per minute

Tear & Tensile Strength: (Tear: ASTM
D1294-86, Tensile: ASTM D2261-83
Machine 25 ppi / Counter 25 ppi)

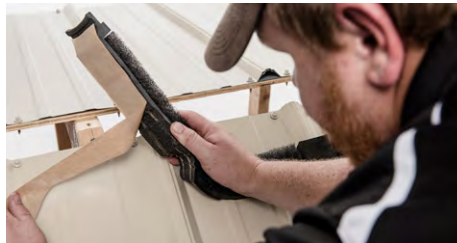
Self-Ignition Temperature:
(ASTM D1929) 963° F

Easy Install



Step 1:

Allow a 2" slot at the ridge of the metal roof for ventilation. Apply the LP2 Ridge Vent to metal roof by removing the backing paper.



Step 2:

Align LP2 1/2"-1" up-slope from the edge of the ridge cap. Place onto metal roof with adhesive side down. Be sure LP2 Ridge Vent is in place the first time, the adhesive makes it hard to move.



Step 3:

To attach consecutive LP2 Vents, butt fit pieces together, sealing with Marco's Weather-Tite Metal Roof Sealant. Place ridge cap over LP2. Secure with Marco QuickGrip/ QuickDrill fasteners through metal roof ridge locations, using screw bed locations to avoid penetrating the LP2 insert material.



Value through the Roof.

800.800.8590 / MarcoIndustries.com



Marco's Rapid Response™ delivers, faster and easier. Take advantage of free shipping with low minimum orders.

*Effective Net-Free Area determined by profile. Product tested in unassembled state. See full specs at www.marcoindustries.com.



Dektite Original

The original watertight flashing for metal roof penetrations



- Easy to Identify**
Dektite brand name engraved on product for traceability
- Unique Cone Design**
Provides 10mm (1/2") continuous contact with flashed pipe providing a watertight seal
- Clear Markings**
Makes for easier cutting to pipe size
- Proven design**
Associated with the roofing industry globally for over 40 years
- Size ranges - Numbers 0-9**
Available in Black and Grey EPDM, and red silicone
- Twenty year warranty**
Just fit it and forget it - we've got you covered

Selection Guide

Product Code			Description	Pipe OD	Base OD	Roof Pitch	Carton Qty
Black EPDM	Grey EPDM	Red Silicone					
DF100B	DF100G	DF200RE	Dektite Original #0	0 - 1.5	3.75	¹² / ₁₂	40
DF101B	DF101G	DF201RE	Dektite Original #1	0.25 - 2.5	4.75	¹⁰ / ₁₂	10
DF102B	DF102G	DF202RE	Dektite Original #2	1.75 - 3.75	6.5	¹⁰ / ₁₂	10
DF103B	DF103G	DF203RE	Dektite Original #3	0.25 - 5	8	¹⁰ / ₁₂	10
DF104B	DF104G	DF204RE	Dektite Original #4	3 - 6.25	9.5	¹⁰ / ₁₂	10
DF105B	DF105G	DF205RE	Dektite Original #5	4.25 - 7.5	11	¹⁰ / ₁₂	5
DF106B	DF106G	DF206RE	Dektite Original #6	5 - 9	12.75	¹⁰ / ₁₂	5
DF107B	DF107G	DF207RE	Dektite Original #7	6 - 11	14.75	¹⁰ / ₁₂	5
DF108B	DF108G	DF208RE	Dektite Original #8	7 - 13	16.75	¹⁰ / ₁₂	5
DF109B	DF109G	DF209RE	Dektite Original #9	10 - 19	25.5	¹⁰ / ₁₂	1

Available in Black and Grey EPDM or Red Silicone.

EPDM will withstand constant temperatures at the roofline of -58°F to 239°F and up to 302°F intermittently.

Red Silicone will withstand constant temperatures at the roofline of -58°F to 392°F and up to 482°F intermittently.

Please Note that the outside temperature of the pipe may be significantly different to the exit temperature of the appliance.

Installation Information



1

Cut Dektite at appropriate pipe diameter marking.



2

Slide Dektite flashing down over pipe.



3

Apply sealant on underside of flexible aluminum base.



4

Press Dektite base into contours of panel configuration.



5

Fasten Dektite to surface with long-life, self-drilling fasteners. Apply additional sealant around base if desired.

- Always use the neutral cure low modulus silicone for sealing
- In corrosive and coastal environments, fix using blind aluminum rivets

Dektite Retrofit



Dektite Original



Need to flash a tiled roof? Contact DEKS to discuss the tile roof flashing range.



EMSEAL AST Hi-Acrylic

Metal Roof & Building Sealants



Product Description:

AST is a self-adhering tape seal made from resilient, open-cell polyurethane foam impregnated with a water-based acrylic-modified asphalt emulsion and then compressed to a sealing density level appropriate to the application. Typically, higher compression levels are required for watertightness in water run-off applications; lower compression can be used, for example, for snow seals at roof ridges.

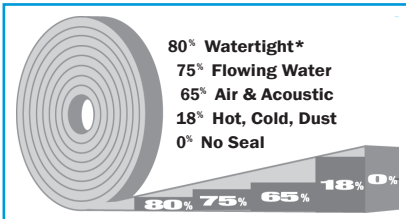
AST replaces and outperforms liquid and butyl-tape sealants as well as closed-cell and unimpregnated open-cell foam closures.

Product Uses:

AST sealant tape is used to seal out dust, air, wind-driven snow, and moisture through joint details in metal buildings and roofs. **AST** is ideal as a filler in expansion/compression joints subject to movement from thermal expansion and contraction, and as a gasket in mechanically fastened, non-moving applications such as lap seams. **AST** is suitable for use against metal, plastic, wood, concrete, and other materials common in metal building structures.



Compression Levels



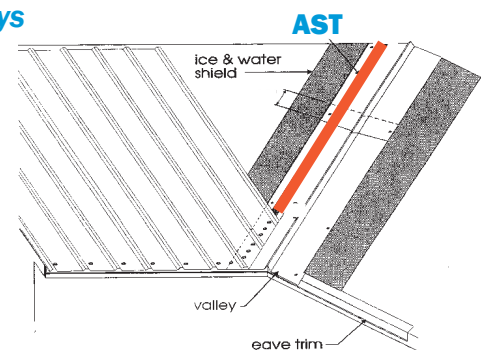
Higher levels of compression offer greater protection

* Watertight up to 5 PSF per ASTM E-331 modified to run 24 hours instead of standard 15 minutes. This equates to a 1-inch standing head of water for 24 hours without leakage.

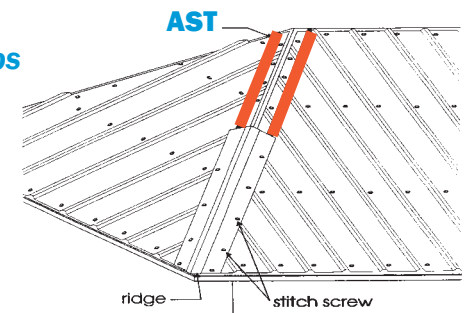
Product Features:

- Will not dry out and become hard and brittle
- UV-stable
- Highly resistant to bugs and vermin
- Will not extrude from between joints like caulk or butyl tapes
- Conforms to contours and fills gaps
- Maintains a seal during thermal expansion and contraction of building panels
- Excellent compressibility and recovery (minimal compression set)
- Good thermal and sound insulator
- No shrinkage or blow-out due to closed-cell breakage
- Supplied with self-adhesive on one side. After removal of packaging, material begins gradual expansion - more slowly in cold weather than in hot.

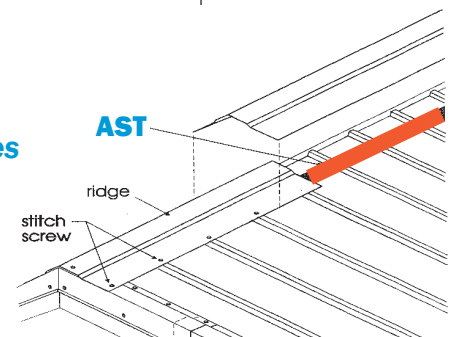
Valleys



Hips



Ridges





EMSEAL AST Hi-Acrylic

Metal Roof & Building Sealants

Filling Voids and Panel Contours

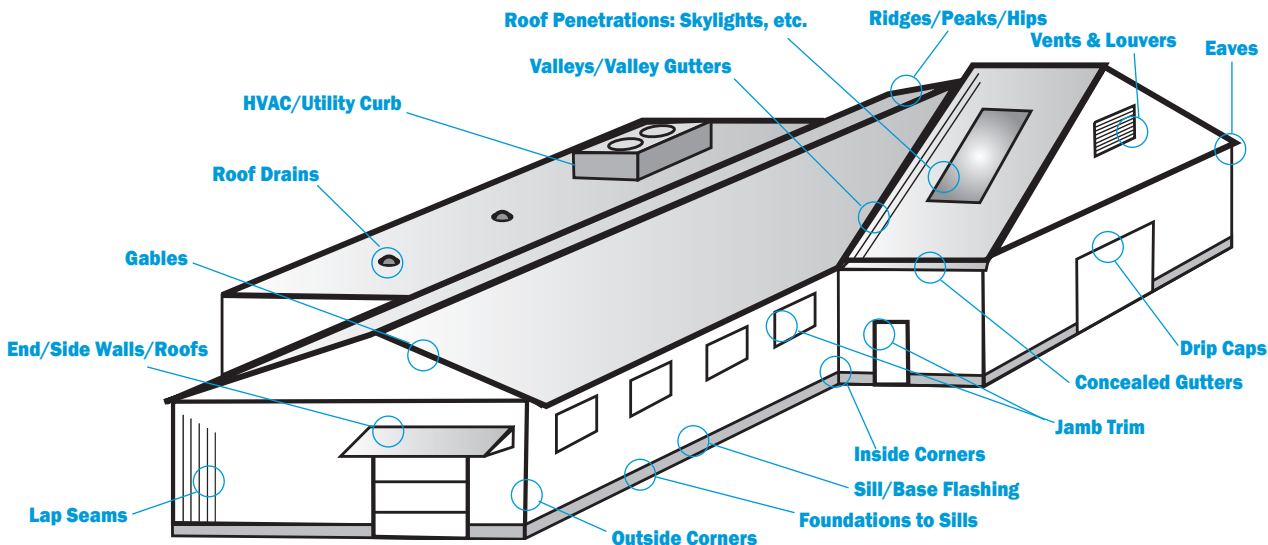
Use AST Hi-Acrylic in all applications where the material will be allowed to expand to fill voids or follow panel contours.

- Ridges, Peaks, Hips
- Valleys, Valley Gutters
- Gables
- Inside/Outside Corners
- Window/Door Jambs
- Eaves

Gasketing Applications

Use AST Hi-Acrylic in flat-on-flat "gasket" applications where the material will be held at a high degree of compression by fasteners such as clips, screws, etc.

- Lap Seams
- Roof Penetrations, Skylights
- Vents and Louvers
- Base Angles
- HVAC/Utility Curbs



Property	Value	Test Method
Base Material	Open cell, high density, polyurethane foam	N/A
Impregnation	Acrylic-modified asphalt	N/A
Color	Black	N/A
Tensile strength	21 psi min (145 kPa)	ASTM D3574
Elongation - ultimate	150% min	ASTM D3574
Temperature range		ASTM C711
High - permanent	185 °F (85 °C)	
High - short term	203 °F (95 °C)	
Low	-40 °F (-40 °C)	
Softening point	140 °F min (60 °C)	ASTM D816
UV resistance	Excellent	
Mildew resistance	Excellent	
Resistance to aging	Excellent	
Bleeding -40 °F to 180 °F (-40 °C to 85 °C)	None (when compressed down to 20% of uncompressed thickness)	
Compression set 70 °C 50% RH after 72hrs	3% max	ASTM D3574
Thermal conductivity	0.34 Btu. in/hr. ft ² . °F (0.05 W/m. °C)	ASTM C518
Low temp. flexibility 32 °F to -10 °F (0 °C to -23 °C)	No cracking or splitting	ASTM C711
Water vapor transmission at 25% compression	0.011 perms	ASTM C355-64

Standard & Custom Sizes Available

The following are the most popular sizes for void-filling applications.

Supplied Size	Expanded Size	Box Quantity	Reels Per Box	Reel Length	Product Code
1/4" x 3/4" (6 x 20mm)	1" x 3/4" (25 x 20mm)	629.76 LF (192m)	32	19.68' (6m)	ASH-25-20-06
1/4" x 1" (6 x 25mm)	1" x 1" (25 x 25mm)	511.68 LF (156m)	26	19.68' (6m)	ASH-25-25-06
5/16" x 3/4" (8 x 20mm)	1 1/4" x 3/4" (30 x 20mm)	419.84 LF (128m)	32	13.12' (4m)	ASH-30-20-04
3/8" x 1 1/4" (10 x 30mm)	1 1/2" x 1 1/4" (40 x 30mm)	262.40 LF (80m)	20	13.12' (4m)	ASH-40-30-04

The following are the most popular sizes for tightly-squeezed gasketing applications.

Supplied Size	Expanded Size	Box Quantity	Reels Per Box	Reel Length	Product Code
3/32" x 3/8" (2.5 x 10mm)	3/8" x 3/8" (10 x 10mm)	1968 LF (600m)	60	32.8' (10m)	ASH-10-10-10
1/8" x 1/2" (3 x 12mm)	1/2" x 1/2" (12 x 12mm)	1640 LF (500m)	50	32.8' (10m)	ASH-12-12-10



CoverLite[®]



**CORRUGATED
POLYCARBONATE
SHEET**



AmeriLux
INTERNATIONAL, LLC
www.ameriluxinternational.com



CoverLite® Corrugated Polycarbonate

If you are looking for a quality polycarbonate sheet which features the latest in product technology and which comes with the kind of personal service you need, call AmeriLux International, LLC! Our polycarbonate sheets are an effective alternative to traditional glazings in a wide variety of applications including:

- Sidelites
- Home Greenhouses
- Office Partitions
- Vertical Glazing
- Industrial Roofing
- Pool Enclosures
- Patio Covering
- Window Replacement
- Metal Buildings
- Skylights
- Domes
- Shelters
- Canopies
- Sheds
- Walkways
- Carports
- Sunrooms
- Commercial Greenhouses

Several types of corrugated polycarbonate panels are offered by AmeriLux International,

Corrugated for Metal Buildings available in standard colors: clear, bronze and opal

In addition to the qualities of our standard corrugated, CoverLite® corrugated sheet matches most standard metal roofing profiles. Making a simple skylight or sidelight is a snap with CoverLite® Corrugated for Metal Buildings!

Greca Corrugated Polycarbonate available in standard colors: clear, bronze, opal, softlite

Ideal for greenhouses and other applications where excellent light transmission is needed in a lightweight sheet. Extensive research and development ensure all corrugated sheets have a high resistance to the harmful effects of weather: both in the impact strength to resist hail damage and in UV protection.



NAME	OVERALL WIDTH	OVERALL LENGTH	NET COVERAGE	PITCH	DEPTH	THICKNESS	LT
MR 9"	38"	UP TO 39'	36"	9"	.75"	.032"	Clear: 90% Bronze: 31% Opal: 66%
MR 9" FLAT	38"	UP TO 39'	36"	9"	.625"	.032"	Clear: 90% Bronze: 31% Opal: 66%
MR 12"	38"	UP TO 39'	36"	12"	1.25"	.032"	Clear: 90% Bronze: 31% Opal: 66%
GRECA	26"	8' & 12'	24"	3"	.625"	.032"	Clear: 90% Smoke: 29%
GRECA	50"	UP TO 48'	48" & 72"	3"	.625"	.033"	Clear: 90% Opal: 52% Bronze: 25% Softlite: 85%
RIDGE CAP	24"	10'6"	—	—	—	.047"	Clear: 90% Opal: 43%

Call today for complete product information and for a distributor in your area!



CoverLite®

Corrugated Polycarbonate Sheet



HIGH LIGHT TRANSMISSION

CoverLite® sheet offers a high degree of light transmittance due to its high optical properties.

VIRTUALLY UNBREAKABLE

CoverLite® is economical and light weight, yet is 10 times stronger than acrylic and 200 times stronger than glass!

EASILY FABRICATED ON SITE

Highly flexible, a CoverLite® sheet can be easily cold formed and will not crack or splinter when fabricated.

ANTI-DRIP/ANTI-FOG COATING

This high tech discovery ensures that greenhouse condensation is carried away from the roofing so that droplets will not damage your nursery stock. **Available for GRECA only.** Call for more information and availability.

WARRANTY

CoverLite® carries a prorated 10 year warranty against yellowing.





CoverLite® Metal Roofing

Property	Test Method	Average Index
Specific Gravity	ASTM D792	1.20 +/-5%
Tensile Strength	ASTM D638	9.2 lbs/in ²
Elongation	ASTM D638	7
Compressive Strength	ASTM D695	830 kgf/cm ²
Modulus of Elasticity	ASTM D638	345000PSI +/-10%
Flexural Strength	ASTM D790	950 kgf/cm ²
Yellowing Index (only UV-Grade apply)	ASTM D1925	Below 3.0
Light Transmittance	Wave Length 500nm (UV/VIS)	90% (Clear)
UV-Ray Penetrability (only UV-Grade apply)	Wave Length 300nm (UV/VIS) (continuously exposed to sunlight for 3,000 hours)	2.4%
Impact Strength	ASTM 3029	Unbreakable (Temp. range -40° - 250°F)
Inflammability	UL 94V2 (contact with flame for 10 seconds and move away)	Self-Extinguishing
Deflection Temperature	ASTM D648, 18.6 kgf/cm ²	135°C (The highest temp. is about 120°C in continuous uses)
Brittle Temperature	ASTM D764	-135°C (The lowest temp. is about -30°C in continuous uses)
Linear Thermal Expansion Coefficient	—————	Pertains to smaller coefficient of synthetic resin



TITANIUM® UDL 25 PLUS

SYNTHETIC ROOFING UNDERLAYMENT

**PREMIUM
LEAK PROTECTION**

VALUE & PERFORMANCE



STRONGER LIGHTER FASTER SAFER GREENER

TITANIUM® UDL 25 PLUS

SYNTHETIC ROOFING UNDERLAYMENT

**AIR, WATER & VAPOR BARRIER
FOR USE UNDER: METAL, SHAKE & SHINGLE ROOFING**

Titanium® UDL25 Plus is a highly engineered, mechanically attached, coated woven synthetic roofing underlayment for sloped roofs. UDL25 represents the future in 30 lb felt replacement technology, and used in conjunction with PSU30 self adhered underlayment for ice damming and valley areas, offers a truly revolutionary system of safety, security and simplicity... Two products (UDL25 & PSU30) are ALL your sloped roof needs.

UDL25's advanced polymers combine to deliver a unique gray synthetic roofing underlayment that can be used under primary roofing materials to replace 30 lb felt. Gray technology provides for a cooler working surface during installations and up to a 6 month UV exposure. Unlike smooth surfaced underlayments, UDL25 has a unique ridged Sure-Grip® walking surface plus our new Diamond-Plate slip resistant coating technology that allows for easier steep slope walk-ability, even when wet.

UDL25 is 20 times stronger than 30 lb felt, gone are the days of blow-offs and call backs! A 10 square roll weighs only 31 lbs! This super low weight combined with 48" width and 250 ft. run length means big savings in time and labor (over 30% faster to install than felt!). Fewer laps, cuts and roll handling means you can do more jobs in less time. Inventory fewer rolls and gain an edge in productivity and profits.

UDL25 is 100% synthetic and therefore totally unaffected by water. This means it is 100% inert to mold, lays flat, and will not absorb water and wrinkle like felt. Roofers can leave their roof uncovered without the need for tarps or immediate dry-in. Furthermore, unlike oil saturated felt, UDL25 does not dry out, leach oils in the heat, nor does it become stiff, difficult to roll or crack in the cold.

The unique features of UDL25 combined with exceptional tear strength and up to 6 months exposure time allows your job to stay on track through all kinds of wind and weather. Less material damage and waste during installation and fewer post-install repairs result in significant savings in time and money.

UDL25 will continue to protect your high cost, long life rated primary roofing long after felt has turned to dust!



weaving a better world™

Turn your next roofing job into a

MASSIVE BILLBOARD!

Print your logo here



DUAL LOGO

Custom Printing Available!

- 8 times lighter and 20 times stronger than 30 lb felt
- 30 Year limited warranty (See website for warranty details)
- Class A Fire ASTM E108, Meets & exceeds ASTM D226
- Meets Class 4 Hail Rating
- Synthetic construction inert to mold growth
- Sure-Grip® ridged walking surface plus our Diamond-Plate slip resistant coating technology!
- Contributes to LEED® points
- Certified minimum of 20% reclaimed content (100% Recyclable)
- All temperature performance -40°F to 240°F (-40°C to 115°C)
- 6 month UV exposure
- Cool gray surface, doesn't expand or contract
- Dual logo custom printing available



TITANIUM® UDL25 PLUS | SPECS

LENGTH PER ROLL:	250' / 76.2 m
WIDTH PER ROLL:	48" / 122 cm
WEIGHT PER ROLL:	31 lbs / 14 kg
ROLL SIZE:	10 sq / 93 m ²
ROLLS PER PALLET:	42
PALLET WEIGHT:	1352 lbs / 613 kg

This product is manufactured in accordance with national standards which allow for non-critical variances in weights and measures.



TITANIUM® UDL25 PLUS | TECHNICAL DATA

TEST & STANDARD	TITANIUM UDL25 PLUS TYPICAL VALUE	ASTM #30 FELT TYPICAL VALUE
Class A Fire ASTM E108	Pass	N/A
Nail Sealability Modified ASTM D1970	Pass	N/A
Permeability ASTM E96	.06 perms	1.75 perms
Water Transmission ASTM D4869	Pass	Pass
Tear Strength ASTM D4533	MD 40 lbs (18 kg) CD 35 lbs (17 kg)	MD 4 lbs (1.8 kg) CD 2 lbs (0.9 kg)
Tensile Strength ASTM D751	MD 154 lbs (70 kg) CD 110 lbs (50 kg)	MD 70 lbs (32 kg) CD 38 lbs (17 kg)
Burst Strength ASTM D751	220 psi (1517 kPa)	62 psi (430 kPa)
Elongation ASTM D751	MD 18% CD 18%	MD 2% CD 2%
Weight per Square ASTM D5261	2.9 lbs (1.3 kgs)	27.5 lbs (12.5 kgs)
Minimum Thickness ASTM D1777	17 mils (0.43 mm)	60 mils (1.5 mm)

Test data is based on average taken over several production runs and should not be considered or interpreted as minimum or maximum values. Values are typical data and not limiting specifications. All values ± 10%



InterWrap® Roofing Products Division
 Charleston, SC • Vancouver, BC • Mission, BC • Montréal, QC
www.InterWrap.com/titanium
 Toll Free: 888 713 7663 | Tel: 778 945 2888
 E-mail: info@interwrap.com

Titanium brand products are manufactured in accordance with national standards which allow for non-critical variances in weights and measurements. © 2014 InterWrap. All rights reserved. * Recyclable where facilities exist. UDL25_18Mar2014

TITANIUM® UDL 25 PLUS

SYNTHETIC ROOFING UNDERLAYMENT

INSTALLATION INSTRUCTIONS

Titanium® UDL25 is an air, water and vapor barrier. It must be installed above properly ventilated spaces (follow ALL building codes applicable to your geographical regions and structure type) as it is considered a vapor barrier (.06 perms). The use of a rosin paper slip-sheet is not required underneath metal roofing systems. Protrusions from the deck area must be removed and decks shall have no voids, damaged or unsupported areas. The use of straight edge cutting knives is recommended. UDL25 is laid out horizontally (parallel) to the eave with the printed side up, and using 4" horizontal laps and 6" vertical laps. Follow building codes for low slopes as defined as 2:12 to 4:12 and steep slopes greater than 4:12 applications.

FASTENERS: If leaving UDL25 exposed longer than 5 days product must be attached to the structural roof deck material using a minimum 1" diameter plastic or metal caps with either ring shank nails (preferred) or smooth leg nails (acceptable). Miami Dade approved tin tags/metal caps acceptable with the rough edge facing up. If product is going to be covered with asphalt shingles or metal roofing panels within 5 days UDL25 can be installed with the use of corrosive resistant 3/8" head x 1" minimum length leg roofing nails (ring shank nail leg is recommended). **DO NOT USE STAPLES:** use of staples to penetrate UDL25 will void warranty.

Anchoring to be installed at a minimum as per surface markings printed on the product, spaced 6" on center in the vertical and horizontal laps, and at 12" along the center of the roll in the field. If underlayment will be covered by primary roofing within 5 days of application, and not subject to heavy traffic or high wind, then the option to use every other printed anchoring point in the center field is acceptable.

All anchoring devices must be flush, 90 degrees to the roof deck, tight with the underlayment surface and the structural roof deck. For extended exposure (months) and or high wind, double the lap widths as a minimum. Alternatively: Use a compatible sealant between the laps; use a peel and stick tape between the laps; or fold the overlay laps forming a "J" channel configuration before nailing.

For batten secured installations, use only adequate length ring shank nails or screws (preferred), smooth leg nails (acceptable) to secure battens to the structural roof deck material. The use of cap nails is only required to secure UDL25 and prevent blow-off until the batten system is installed. Do not install battens directly over any cap nails. If this occurs, remove cap nail, patch the hole, then install cap outside batten field and continue.

Where seams and joints require sealant or adhesive, use a high quality, low solvent asbestos free, plastic roofing cement meeting ASTM D-4586 Type 1 (Asbestos Free) Federal Spec SS-153 Type 1 (Asbestos Free) such as Karnak, Henry, DAP, MB, Geocel or equivalent. Acceptable alternatives are butyl rubber, urethane, and EDPM based caulk or tape sealant. Depending on roof pitch and surface conditions, blocking may be required to support materials on the roof.

UDL25 is not designed for indefinite outdoor exposure. Final roofing should be installed within 6 months.

CAUTION - READ GOOD SAFETY PRACTICES BELOW

As with any roofing product, always follow safe roofing codes & practices (OSHA) and always use and wear fall protection devices when working on roofs. Use caution when walking or standing on UDL25 as slip resistance may vary with surface conditions, weather, footwear and roof pitch. Failure to use proper safety gear and footwear can result in serious injury.

Distributed by:



	TITANIUM®	FELT
Warranty	✓	✗
Inert to mold growth	✓	✗
*Class A fire rating	✓	✗
High resistance to wind	✓	✗
Does not absorb water & wrinkle	✓	✗
Does not dry out and degrade	✓	✗
Does not leach oil	✓	✗
Supports building green	✓	✗

DESCRIPTION	UDL-25	15 lb FELT	30 lb FELT
Width	48"	36"	36"
Length per roll	250 ft.	144 ft.	72 ft.
Rolls per 1000 sq. ft.	1 roll	3 rolls	5 rolls
Rolls required per 5000 square ft. roof	5 rolls (155 lbs)	12 rolls (600 lbs)	24 rolls (1200 lbs)

- NOTES**
- *ASTM D226 UL marked Felts are the only felts with a Class A rating
- D226 Felt weights and measures are nominal and may vary from manufacturer to manufacturer.
- Over 500,000 homes are protected under Titanium
 - Titanium does not break down, dry out and degrade like felt
 - Up to 20 times stronger than 30 lb felt paper
 - Titanium's wider rolls offer 33% more net coverage per lap
 - Reduces liability - safer slip resistant walking surface



For more information about InterWrap's recycling programs go to: www.interwrap.com/recycle





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COMPLETE FULL PANEL PREPARATION **IN SECONDS!**

The SnapTable PRO is an all-in-one metal panel preparation system designed to deliver a consistent quality, standing-seam roof in less time and for less money. The system is made up of three key components: STANDING SEAM NOTCHER, PANEL CUTTER, EAVE & VALLEY HEMMER.

- ◆ Meant for standing-seam and snap-lock metal roof panels
- ◆ Compatible with any manufacturers' panels or panel roll forming machine
- ◆ Provides consistent notches, cuts and hems at your eaves, hips and valleys
- ◆ Produces factory-like cuts
- ◆ Allows operator to create tab to close rib of metal panel
- ◆ Does not require electricity
- ◆ Minimizes material waste
- ◆ Transportable with adjustable jacks for leveling
- ◆ Tax deductible





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with the

HEAVY DUTY PIVOT SHEAR



SHEAR HEAVY GAUGE EXPOSED-FASTENER PANELS AT 90° & UP TO AN 8/12 PITCH.

The Heavy Duty Pivot Shear is the best, user-friendly metal roof cutting tool on the market. With the Heavy Duty Pivot Shear, you can count on a clean cut on your metal roof panel every time.

- ◆ Eliminates burred edges and flying metal on your metal roof panel or sheet metal
- ◆ Makes cutting exposed fastener panels easy
- ◆ Ideal for shearing heavy gauge exposed-fastener panels
- ◆ Able to shear straight at 90° and up to an 8/12 gable
- ◆ Weighs 120 lbs





METAL BUILDING SUPPLY, INC

DOORS & WINDOWS

[Back to TABLE OF CONTENTS](#)

FEATURES AND BENEFITS

- Fully welded frame and sash corners assures strength, durability, and years of trouble-free service in the home.
- Single main frame.
- Continuous Head & Sill.
- Sloped sill for maximum water run-off.
- Lead-free composite cam lock and keeper.
- 3/4" insulated glass.
- Positive interlock at meeting rail for added security and structural integrity.
- Heavy duty weatherstripping on frame and sash to protect against air infiltration and water penetration.
- Time tested maintenance free block and tackle balances are designed for years of smooth, easy sash operation and never needs adjustment.
- Solid vinyl warrantied against rotting, rusting, cracking, warping, pitting, corroding, peeling, blistering and color failure.
- 1-1/4" Integral, pre-punched nailing fin for easy and accurate installation.
- Molded sash lift rail for easy operation.
- Tilt-in lower sash for easy cleaning.



Rough Opening * 36"

Unit Size 35 1/2"



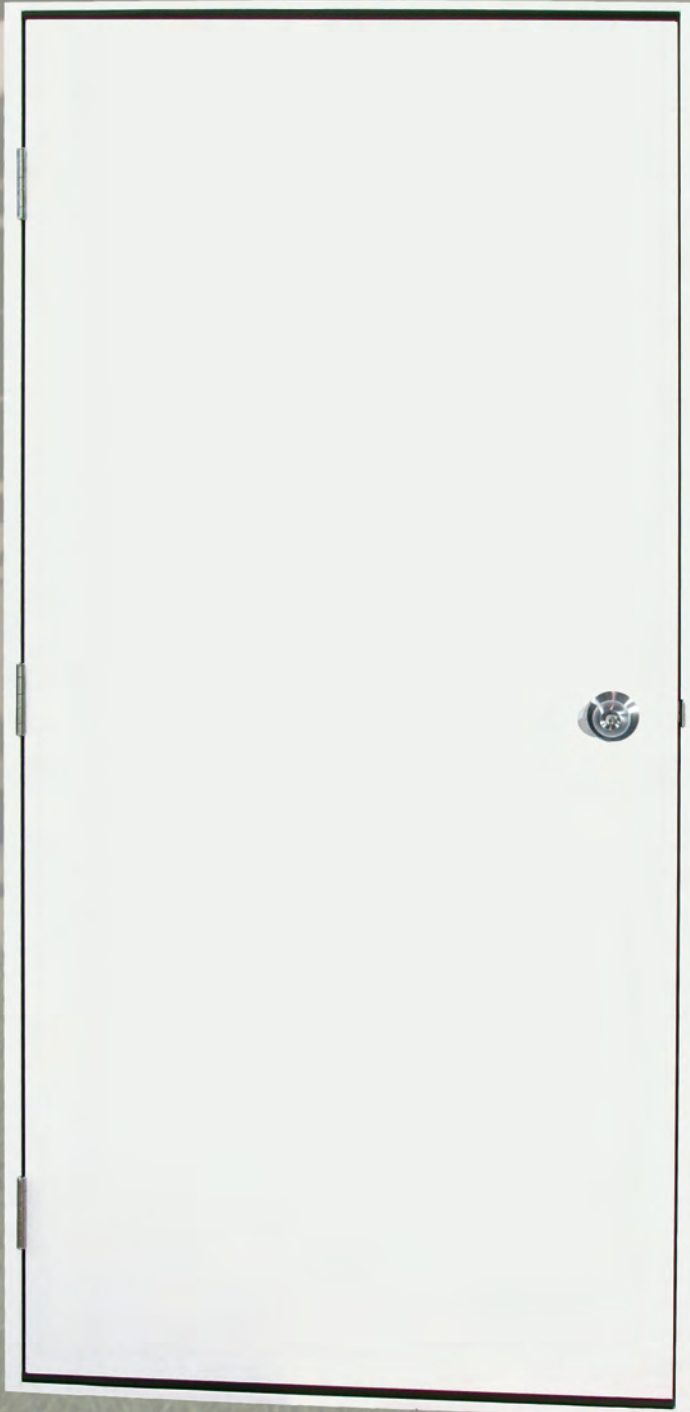
PLYCO

CORPORATION
PO BOX Q • ELKHART LAKE, WI 53020

SERIES 95EV UTILITY DOORS

SERIES 95EV
UTILITY DOORS

- *Low Maintenance*
- *Economy*
- *Easy Installation*
- *Energy Saving*



- *Roll Edge*
- *Durable and Attractive*
- *4 Way Universal*
- *Single Piece 16 ga Jamb*



Weather Fin and bulb help keep bad weather outside and good air inside

Windows:

■ Many light kits are available

1-LU 4 X 48 1-LE 16 X 16 1-LA 20 X 24
1-LI 20 X 24 1-B 22 X 36 1-LW 16 X 16 W/GRID
9-LB 22 X 36 W/GRIDS

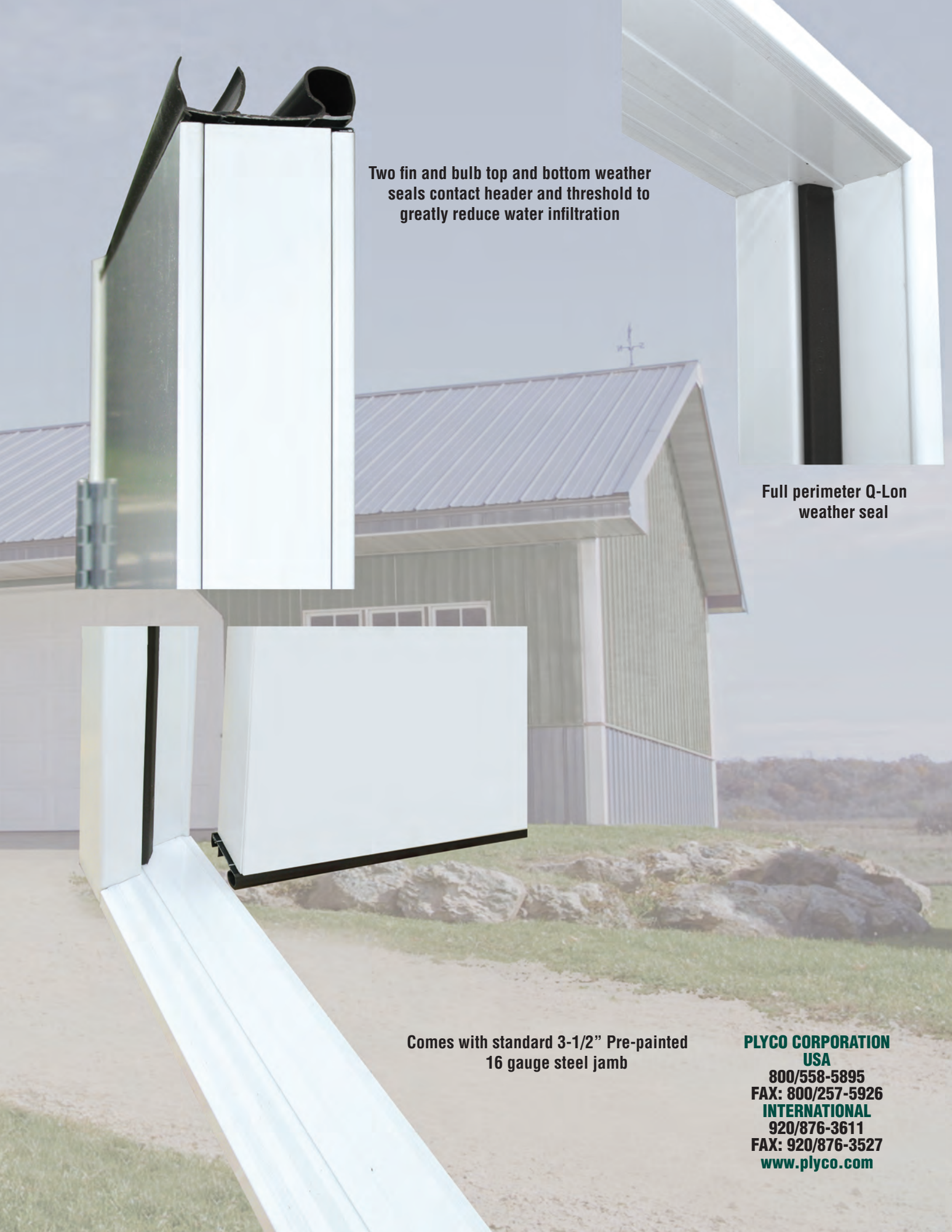


PLYCO Series 95 Utility Door

We have incorporated:

- Universal swing feature, and is fully reversible in the 3 1/2" thick jamb
- Polyurethane Foam Core which reduces sound and possesses superior insulating qualities, R-13
- Three 4 x 4 butt hinges per door - prevents wracking and assures smooth positive operation
- Heavy duty 16 gauge steel frame
- Full perimeter weather stripping.
- Variety of locks, hardware and windows available (optional)





Two fin and bulb top and bottom weather seals contact header and threshold to greatly reduce water infiltration

Full perimeter Q-Lon weather seal

Comes with standard 3-1/2" Pre-painted 16 gauge steel jamb

PLYCO CORPORATION
USA
800/558-5895
FAX: 800/257-5926
INTERNATIONAL
920/876-3611
FAX: 920/876-3527
www.plyco.com

PLYCO Series 95 Door

SIZES	2/4 x 6/8 2/6 x 6/8 2/8 x 6/8 3/0 x 6/8 3/6 x 6/8 4/0 x 6/8 Dbl. 6/0 x 6/8 Dbl. 8/0 x 6/8 3/0 x 7/0 3/6 x 7/0 4/0 x 7/0 Dbl. 6/0 x 7/0 Dbl. 8/0 x 7/0
OVERALL DIMENSIONS	Special sizes are available in picture pane style panels a) For correct out to out dimensions see Data Sheet DO-3 b) For Rough Opening dimensions, use dimensions (above - a) and add 1/2" to width and 3/8" to height.
MULLION / ASTRAGAL	Double doors have attached astragal on the inactive panel of the pair - shipped knocked- down. Hinges are attached to jambs. Manual head and foot bolt concealed in the astragal
HINGES	(3) 4" x 4" zinc plated fixed-pin hinges are standard, SS/NRP available as an option
THRESHOLD	Aluminum

DOOR PANEL

THICKNESS	1 3/4"
SKIN	Smooth 26 ga. Galvanized steel painted finish Polar White
EDGES	Rolled edge in aluminum core rails
BLOCKING	HDPE lock reinforced structure, optional patented heavy duty aluminum closer blocking Special lock blocking is available
INSULATION	Panel R-13 (u=.077)
EMBOSSING	3/0 x 6/8 only - Six panel style
COLORS	Polar White only finish paint
LOCK FACE PREP	Standard with 2 1/8" lockset bore, backset of 2 3/4" (no bore is optional)
DEAD BOLT	Prep is optional, latchguard available as an option
SWEEP	Durable Alcryn Bulb & fin
LITE KITS	1-LI-2 20" x 24" Insulated 1-LA-2 20" x 24" Single glazed 1-LE-2 16" x 16" Insulated 1-LB-2 22" x 36" Insulated 1-LU-2 4" x 48" Single glazed 9-LB-2 22" x 36" Insulated with 9-Lite internal grids Other glass sized available - lite kits listed above are most common

JAMB

TYPE	PREHUNG
MATERIAL	16 ga Steel
FEATURES	Q-Lon Weather Seal
FLASHING	N/A
HINGE REINFORCEMENT	N/A
THERMAL BREAK	N/A

Because of its ongoing commitment to product improvement, Plyco Corporation reserves the right to change, without notice, product specifications, availability, prices and conditions of sale.



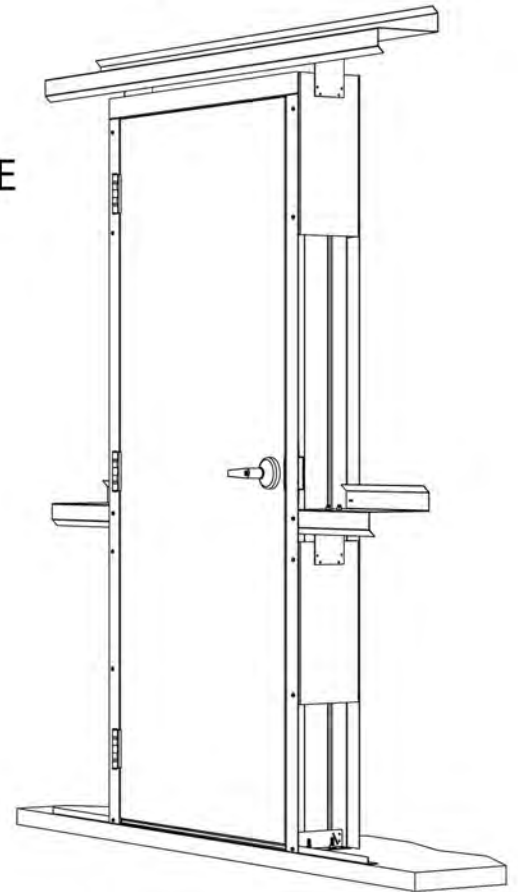
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**WINDOWS • WALK DOORS • WALL VENTS • RIDGE VENTS
SLIDING DOOR TRACK • SLIDE DOOR RAILS • PLY-FOIL INSULATION
HORSE STALLS • FASTENERS & CLOSURES • SPECIALTY PRODUCTS**

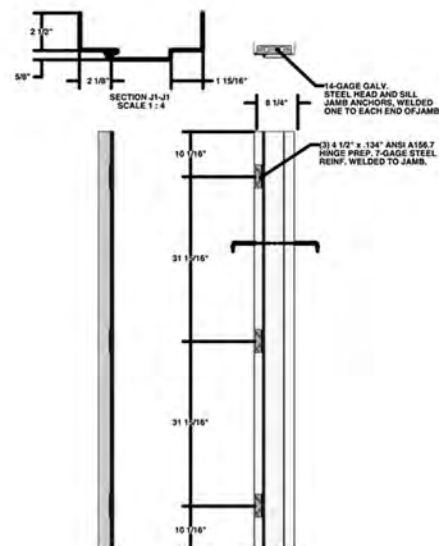
Knock-down Door System

Features and Benefits

- 20G heavy duty reversable insulated door
- Solid (windowless) 3070 door finished in WHITE
- 16G reinforced reversable frame
- 7G hinge reinforcements
- Lever locks included
- Fire rated up to 3 hours
- Meets ANSI standards
- ADA compliant threshold
- Adjustable weather seal
- Heavy duty hinges and hardware included



8-1/4" DEPTH KERFED



knock-down door systems

Features and Benefits:

- 16 Gauge Galvanized Frame
- 20 Gauge Textured White Steel Door Slab
- Kerf Weather Stripping
- Completely Reversible (non-handed door systems)
- Full Line of Hardware Items
- Clip-On Threshold



solid
F-style



typical door
installation

Premier Knock-Down Door Systems offer you, the building manufacturer, the greatest degree of design flexibility. These reversible (non-handed) units install quickly and eliminate costly handing errors. Knock-Down door units are typically provided with 20 gauge textured steel door skins in both white and bronze paint finishes.

Door units are individually polybagged and cartoned. The Knock-Down frame systems utilize a prepack concept where all required hardware items, hinges, locksets, thresholds, etc., are packaged with the frame. Everything you need for a proper installation is right in the carton. Several frame profiles are available for almost any girt size.

In addition, Premier can customize a Knock-Down door system to fit your exact specifications or requirements.

Our custom designed programs



frame pre-pack
concept

offer you options for door cores, door sizes, frame profiles and depths, as well as numerous hardware options.

We don't stop there either. We realize that specialty doors, frames, or hardware may be required for a particular project. Premier is a full line manufacturer capable of meeting almost any door and hardware specification. We are a member of the Door and Hardware Institute, NAAMM (HMMA), and the Construction Specifications Institute. Premier's doors and frames are also listed and have been tested with both Underwriters Laboratories and Warnock Hersey. Regional distribution centers are strategically located to help ensure prompt delivery and service. From hurricane tested to fire rated to ADA accessible openings, Premier is capable of handling all of your door, frame, and hardware needs.



8" girt
installation



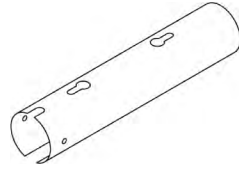
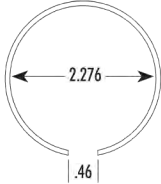
"Premier offers a wide variety of quality construction products which we are proud to specify for our projects. And the service... incredible!"

specifier: **Jodie A. Meyers, AHC/CDT**
firm: **Meyers Consulting Services**
Atlanta, GA





SLIDING DOOR ACCESSORIES



BC201 Versa Track

14 gauge round track with key slots for doors up to 600 lbs. Used with round track brackets for single and double runs. Keyhole slots are reverse punched every 24" for mounting brackets.

Available 8', 10' and 12' lengths



BC1SP-201 - 102010100

Splice collar for use of connecting two sections of round track



PB201ECS - 102010219

End caps for round track. Packaged in pairs with fastening hardware.



PB208S/L208 8" - 102080000

Door Pull
white door pulls.



BC3-201 - 102010103

Face mount track bracket for cover. Use with BC201 versa track.



PB25T9 - 100250309

For use on wood/metal frame doors up to 600 lbs. Includes 1 1/2" washer with flexible seat for 9" offset bolt



PB97S - 100970000

Used to hold a sliding door against the wall. Adjustable for 1 3/4" to 3 3/4" doors. 2" diameter wheel

Also fits in the 2244 bottom rail.



BC76 - 100760000

Center Door Guide

Center door guide with stop. Mounts over a 6X6 post. For use with 1600WB bottom rail.



PB121 with 7" Hook - 101210100

Cam action jamb latch used to hold the door against the jamb.

Packaged with:
(3) #12x1" Flat Head Wood Screws



PB128 - 101280100

Center Latch

Cam action center latch used to secure split wood or metal doors.

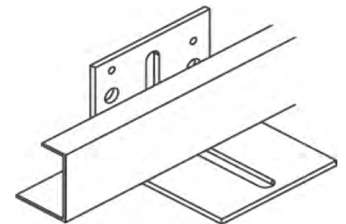


PB66 Zinc - 100660000

Door Stop

Heavy duty adjustable stop

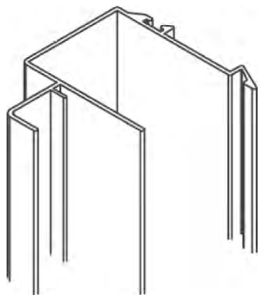
1 1/2" ALUMINUM DOOR RAILS



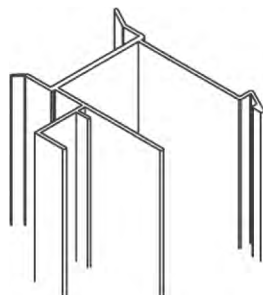
TRG Bottom guide with brackets & door stop.

Available 10' lengths

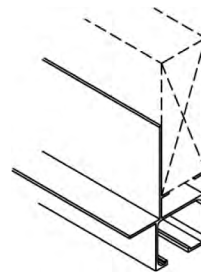
(use with 1600WB Bottom Rail)



1600AV Vertical Side Rail
Available 12' and 16' lengths



1600HV Vertical H-Rail
Available 12' and 16' lengths



1600WB Horizontal Bottom Rail
(use with TRG Bottom Guide)
Available 12' and 16' lengths





SLIDING DOOR COMPONENT LIST-ITEMS MARKED WITH * ARE OPTIONAL

SINGLE DOOR

- 8' OPENING
- 2-RFM08 2-8' TRACK
 - 9-COVER SUPPORTS
 - 2-END CAPS
 - 1-PR TROLLY HANGERS
 - 1-SPLICE COLLAR
 - 2-CAM LATCH
 - 1-DOOR PULL
 - 1-DOOR STOP
 - 2-10' COMBO COVER
 - *2-AV 12' OR 16' TALL
 - *1-BOTTOM RAIL
 - *1-GUIDE RAIL

DOUBLE DOOR

- 8' OPENING
- 2-RFM08 2-8' TRACK
 - 9-COVER SUPPORTS
 - 2-END CAPS
 - 2-PR TROLLY HANGERS
 - 1-SPLICE COLLAR
 - 2-CAM LATCH
 - 1-CENTER LATCH
 - 2-DOOR PULL
 - 2-DOOR STOP
 - 2-10' COMBO COVER
 - *3-AV 12' OR 16' TALL
 - *1-HV 12' OR 16' TALL
 - *1-BOTTOM RAIL
 - *1-GUIDE RAIL
 - *1-CENTER GUIDE

SINGLE DOOR

- 10' OPENING
- 2-RFM10 2-10' TRACK
 - 11-COVER SUPPORTS
 - 2-END CAPS
 - 1-PR TROLLY HANGERS
 - 1-SPLICE COLLAR
 - 2-CAM LATCH
 - 1-DOOR PULL
 - 1-DOOR STOP
 - 2-10' COMBO COVER
 - *2-AV 12' OR 16' TALL
 - *1-BOTTOM RAIL
 - *1-GUIDE RAIL

DOUBLE DOOR

- 10' OPENING
- 2-RFM10 2-10' TRACK
 - 11-COVER SUPPORTS
 - 2-END CAPS
 - 2-PR TROLLY HANGERS
 - 1-SPLICE COLLAR
 - 2-CAM LATCH
 - 1-CENTER LATCH
 - 2-DOOR PULL
 - 2-DOOR STOP
 - 2-10' COMBO COVER
 - *3-AV 12' OR 16' TALL
 - *1-HV 12' OR 16' TALL
 - *1-BOTTOM RAIL
 - *1-GUIDE RAIL
 - *1-CENTER GUIDE

SINGLE DOOR

- 12' OPENING
- 2-RFM12 2-12' TRACK
 - 13-COVER SUPPORTS
 - 2-END CAPS
 - 1-PR TROLLY HANGERS
 - 1-SPLICE COLLAR
 - 2-CAM LATCH
 - 1-DOOR PULL
 - 1-DOOR STOP
 - 2-12' COMBO COVER
 - *2-AV 12' OR 16' TALL
 - *1-BOTTOM RAIL
 - *1-GUIDE RAIL

DOUBLE DOOR

- 12' OPENING
- 2-RFM12 2-12' TRACK
 - 13-COVER SUPPORTS
 - 2-END CAPS
 - 2-PR TROLLY HANGERS
 - 1-SPLICE COLLAR
 - 2-CAM LATCH
 - 1-CENTER LATCH
 - 2-DOOR PULL
 - 2-DOOR STOP
 - 2-12' COMBO COVER
 - *3-AV 12' OR 16' TALL
 - *1-HV 12' OR 16' TALL
 - *2-BOTTOM RAIL
 - *2-GUIDE RAIL
 - *1-CENTER GUIDE

SINGLE DOOR

- 14' OPENING
- 2-RFM10 1-RFM08 2-10' 1-8'TRACK
 - 15-COVER SUPPORTS
 - 2-END CAPS
 - 1-PR TROLLY HANGERS
 - 2-SPLICE COLLAR
 - 2-CAM LATCH
 - 1-DOOR PULL
 - 1-DOOR STOP
 - 3-10' COMBO COVER
 - *2-AV 12' OR 16' TALL
 - *1-BOTTOM RAIL
 - *1-GUIDE RAIL

DOUBLE DOOR

- 14' OPENING
- 2-RFM10 1-RFM08 2-10' 1-8'TRACK
 - 15-COVER SUPPORTS
 - 2-END CAPS
 - 2-PR TROLLY HANGERS
 - 2-SPLICE COLLAR
 - 2-CAM LATCH
 - 1-CENTER LATCH
 - 2-DOOR PULL
 - 2-DOOR STOP
 - 3-10' COMBO COVER
 - *3-AV 12' OR 16' TALL
 - *1-HV 12' OR 16' TALL
 - *2-BOTTOM RAIL
 - *2-GUIDE RAIL
 - *1-CENTER GUIDE

SINGLE DOOR

- 16' OPENING
- 2-RFM10 1-RFM12 2-10' 1-12'TRACK
 - 17-COVER SUPPORTS
 - 2-END CAPS
 - 1-PR TROLLY HANGERS
 - 2-SPLICE COLLAR
 - 2-CAM LATCH
 - 1-DOOR PULL
 - 1-DOOR STOP
 - 3-12' COMBO COVER
 - *2-AV 12' OR 16' TALL
 - *1-BOTTOM RAIL
 - *1-GUIDE RAIL

DOUBLE DOOR

- 16' OPENING
- 2-RFM10 1-RFM12 2-10' 1-12'TRACK
 - 17-COVER SUPPORTS
 - 2-END CAPS
 - 2-PR TROLLY HANGERS
 - 2-SPLICE COLLAR
 - 2-CAM LATCH
 - 1-CENTER LATCH
 - 2-DOOR PULL
 - 2-DOOR STOP
 - 3-12' COMBO COVER
 - *3-AV 12' OR 16' TALL
 - *1-HV 12' OR 16' TALL
 - *2-BOTTOM RAIL
 - *2-GUIDE RAIL
 - *1-CENTER GUIDE

SINGLE DOOR

18' SINGLE DOORS ARE NOT RECOMMENDED
18' OPENING

- 3-RFM12 3-12'TRACK
- 19-COVER SUPPORTS
- 2-END CAPS
- 1-PR TROLLY HANGERS
- 2-SPLICE COLLAR
- 2-CAM LATCH
- 1-DOOR PULL
- 1-DOOR STOP
- 4-10' COMBO COVER
- *2-AV 12' OR 16' TALL
- *1-BOTTOM RAIL
- *1-GUIDE RAIL

DOUBLE DOOR

- 18' OPENING
- 3-RFM12 3-12'TRACK
 - 19-COVER SUPPORTS
 - 2-END CAPS
 - 2-PR TROLLY HANGERS
 - 2-SPLICE COLLAR
 - 2-CAM LATCH
 - 1-CENTER LATCH
 - 2-DOOR PULL
 - 2-DOOR STOP
 - 4-10' COMBO COVER
 - *3-AV 12' OR 16' TALL
 - *1-HV 12' OR 16' TALL
 - *2-BOTTOM RAIL
 - *2-GUIDE RAIL
 - *1-CENTER GUIDE

20' AND 24' SINGLE DOORS ARE NOT RECOMMENDED

DOUBLE DOOR

- 20' OPENING
- 4-RFM10 4-10' TRACK
 - 21-COVER SUPPORTS
 - 2-END CAPS
 - 2-PR TROLLY HANGERS
 - 3-SPLICE COLLAR
 - 2-CAM LATCH
 - 1-CENTER LATCH
 - 2-DOOR PULL
 - 2-DOOR STOP
 - 4-10' COMBO COVER
 - *3-AV 12' OR 16' TALL
 - *1-HV 12' OR 16' TALL
 - *2-BOTTOM RAIL
 - *2-GUIDE RAIL
 - *1-CENTER GUIDE

DOUBLE DOOR

- 24' OPENING
- 4-RFM12 4-12' TRACK
 - 25-COVER SUPPORTS
 - 2-END CAPS
 - 2-PR TROLLY HANGERS
 - 3-SPLICE COLLAR
 - 1-CENTER LATCH
 - 2-CAM LATCH
 - 2-DOOR PULL
 - 2-DOOR STOP
 - 4-12' COMBO COVER
 - *3-AV 12' OR 16' TALL
 - *1-HV 12' OR 16' TALL
 - *2-BOTTOM RAIL
 - *2-GUIDE RAIL
 - *1-CENTER GUIDE

HV AND AV TAKE THE PLACE OF WOODEN RAILS ON THE SIDES OF THE DOOR PANEL. THEY ARE STRONGER, SAVE ON TRIM AND HAVE A MORE FINISHED LOOK THAN WOOD RAILS AND TRIM.

ITEM NOT LISTED: ADJUSTABLE STAY ROLLER-THIS PIECE KEEPS THE DOOR PANEL AGAINST THE BUILDING. IT KEEPS THE PANEL FROM BLOWING AWAY FROM THE BUILDING IN HIGH WINDS WHEN THE DOOR IS OPEN. IT CAN TAKE THE PLACE OF A BOTTOM RAIL/GUIDE RAIL SYSTEM.



METAL BUILDING SUPPLY, INC

INSULATION

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EcoTouch® Certified R Metal Building Insulation



Description

Owens Corning® EcoTouch® Certified R Metal Building Insulation is a light density fibrous glass blanket. EcoTouch® Certified R is labeled with both a pre-laminated and post-laminated R value. Standard roll widths are 36", 48", 60" and 72". Made-to-Order widths are also available in 2" increments (i.e. even number).

Applications

Owens Corning® EcoTouch® Certified R Metal Building Insulation is used as part of the insulation system in the roofs and side walls of metal buildings. It is designed to be laminated with a variety of facings to provide attractive interior finishes, abuse resistance, and assistance in control of moisture. It can also be used when unfaced insulation is required in metal building roof and wall systems.

Physical Properties

Property	Test Method	Value	
Thermal Resistance	ASTM C 177/C 518	Thickness	
		Pre-lam.	
		Post-lam.	
		3.4"	R-10.8 R-10
		3.7"	R-11.9 R-11
		4.3"	R-14.1 R-13
		5.3"	R-17.3 R-16
		6.3"	R-20.6 R-19
		6.5"	R-21.7 R-20
8.0"	R-27.1 R-25		
9.25"	R-32.5 R-30		
Surface Burning	ASTM E 84 / UL723 ¹ CAN/ULC S102	Flame spread index < 25 Smoke developed index < 50	
Combustion Characteristics	ASTM E 136 CAN/ULC S114	Non-combustible	
Water Vapor Sorption	ASTM C 1104 / C 1104M	≤ 0.2% by volume	
Fungi Resistance	ASTM C 1338	Passes	
Corrosiveness	ASTM C 665, sec. 13.8	Passes	
Odor Emission	ASTM C 1304	Passes	
Dimensional Tolerances	ASTM C 167	Length, - 0" / + 1/2"	
		Width, - 1/4" / + 1/4"	

1. The surface burning characteristics of these products have been determined in accordance with UL 723. The standard should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating.

Features

- Certified thermal performance
- Excellent recovery provides outstanding thermal and acoustical performance
- Contains an average of 65% recycled content
- GREENGUARD Gold Certified
- Easy to handle and laminate

Standards, Codes Compliance

- ASTM C991-08, Standard Specification for Flexible Fibrous Glass Insulation for Metal Buildings; Type I
- NAIMA 202-96 (Rev. 2000) Standard for Flexible Fiber Glass Insulation to be Laminated for Use in Metal Buildings

Technical Information

Owens Corning® EcoTouch® Certified R Metal Building Insulation is manufactured in compliance with ASTM C991, "Standard Specification for Flexible Fibrous Glass Insulation for Metal Buildings." This standard includes all performance and physical properties required of thermal insulation for use in metal building construction (see Physical Properties Table).

Owens Corning® EcoTouch® Certified R Metal Building Insulation is regularly tested to ensure compliance to the NAIMA 202-96 (Rev. 2000) Standard. Sampling and testing is performed by the National Association of Home Builders Home Innovation Research Lab. The product is labeled on the top surface of each roll with the nominal R-value and the "NAIMA 202-96" (Rev. 2000) to indicate compliance. The NAIMA 202-96 (Rev. 2000) standard specifies thermal performance which provides the capability of obtaining nominal thermal resistance (R-values) after laminating. The actual thermal performance obtained from the laminated product will depend primarily on the recovered thickness. Note that these nominal R-values are for the insulation only and do not include the effects of facings, air films, compression of insulation at framing members, conductance through fasteners, or other heat transfer paths particular to an installation.

The recovered thickness achieved will depend on a number of variables determined in the laminating process and hence are outside of Owens Corning's control. To address these issues, a number of leading metal building insulation laminators produce products which meet the National Insulation Association's "Certified Faced Insulation Standard" (NIA 404). Samples of faced products are periodically tested by a nationally recognized laboratory and determined to meet the NIA standard.

Installation

Several methods are used to insulate metal buildings. The usual method is to apply the insulation over the structural members (purlins and girts) and inside the exterior panels. This method generally accommodates single layer installations. Methods are also available to apply insulation between purlins so as to accommodate greater insulation thicknesses and better thermal performance.

Availability

Owens Corning® EcoTouch® Certified R Metal Building Insulation is fabricated and distributed by a nation wide network of independent laminators assuring prompt service and delivery. Contact your Owens Corning Sales Representative for the names of insulation laminators servicing your area.

Environmental and Sustainability

Owens Corning is a worldwide leader in building material systems, insulation and composite solutions, delivering a broad range of high-quality products and services.

Owens Corning is committed to driving sustainability by delivering solutions, transforming markets and enhancing lives. More information can be found at www.sustainability.owenscorning.com

Notes

For additional information, refer to the Safe Use Instruction Sheet (SUIS) found in the SDS Database via <http://sds.owenscorning.com>

Certifications and Sustainable Features

- Certified by SCS Global Services to contain a minimum of 65% recycled glass content, 18% pre-consumer and 47% post-consumer
- GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg
- Received the Cradle to Cradle Products Innovation Institute's Gold Level Material Health Certificate
- This product's Environmental Product Declaration (EPD) has been certified by UL Environment



Disclaimer of Liability

Technical information contained herein is furnished without charge or obligation and is given and accepted at recipient's sole risk. Because conditions of use may vary and are beyond our control, Owens Corning makes no representation about, and is not responsible or liable for the accuracy or reliability of data associated with particular uses of any product described herein. SCS Global Services provides independent verification of recycled content in building materials and verifies recycled content claims made by manufacturers. For more information, visit www.SCSglobalservices.com.



OWENS CORNING INSULATING SYSTEMS, LLC
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO, USA 43659

1-800-GET-PINK®
www.owenscorning.com

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Metal & Post Frame Building Insulation

(2500 Series)

rFOIL™ Applications:

- Pre-Engineered Steel Buildings
- Post Frame / Pole Barns
- Agricultural Buildings
- Residential Metal Roofs
- Mini Storage
- Livestock Confinement

rFOIL™ Benefits:

- Blocks 96% of Radiant Heat Transfer
- Prevents Interior Condensation
- Class 1 / Class A Fire-Rated (ASTM E84-09)
- Puncture and Tear-Resistant
- Unaffected by Humidity
- Will not Promote Mold and Mildew
- Safe, Non-Toxic and Non-Carcinogenic
- Easy to Handle and Install
- Various Tab Options
- UV-Resistant



rFOIL™ reflective Insulation is a single or double layer of polyethylene bubbles bonded to and sandwiched between a radiant barrier metalized foil and white polyethylene sheet.

rFOIL™ is specifically designed to control heat gain or loss, and prevent interior condensation, in all types of metal and metal-clad buildings.



PATENTED

(See website for details)

www.rFOIL.com

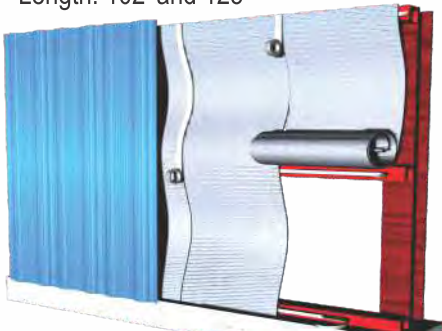
FEATURES **BENEFITS**

<p>Reflective Metalized Surface Facing</p>	<ul style="list-style-type: none"> - Reduces Radiant Heat Gain and Loss - Blocks 96% of Radiant Heat Transfer - Saves Energy Use - Lowers Heating/Cooling Costs - Improves Interior Comfort
<p>Multi-Layer Bubble Core</p>	<ul style="list-style-type: none"> - Provides Continuous Thermal Break - Lowers Risk of Interior Surface Condensation - Durable and Long-Lasting - Superior Puncture, Tensile and Tear Strength - Will Not Absorb Water or Vapor - Does Not Harbor Moisture or Mold - Clean, Safe, No-Itch Material
<p>White Interior Facing Option</p>	<ul style="list-style-type: none"> - Brightens Building Interior - Attractive Appearance - Easy to Clean
<p>Practical Tab/Edge Options</p>	<ul style="list-style-type: none"> - Various Options for All Metal Building Applications - Simplifies Installations - Improves Vapor-Sealing Efforts
<p>QuickSeam (Adhesive Tape on Tab)</p>	<ul style="list-style-type: none"> - Saves Time and Labor - Ensures a Continuous Vapor and Condensation Barrier - Simplifies and Speeds Installation

PRODUCTS **SPECIFICATIONS**

AVAILABLE IN:

- Single or Double Bubble
- Square Edge, Tab 1 Side, Tab 2 Sides, Quick Seam Adhesive Strip
- Width: 12", 16", 18", 24", 48" and 72"
- Length: 102' and 125'



Physical Properties	Test	Double Layer	Single Layer
NOMINAL THICKNESS	—	5/16"	3/16"
FIRE RATING	ASTM E84-09	CLASS 1 / CLASS A	
EMISSIVITY	ASTM C1371-04A	0.04	0.04
REFLECTIVITY	ASTM E903	0.96	0.96
WATER VAPOR PERMEABILITY	ASTM E96	0.42 Perms	0.01 Perms
RESISTANCE TO FUNGI & BACTERIA	ASTM C1149	DOES NOT PROMOTE GROWTH	
PLIABILITY	ASTM C1224-03	NO CRACKING	
BLEEDING AND DELAMINATION	ASTM C1224-03	NO BLEEDING OR DELAMINATION	
CORROSIVENESS	ASTM D3310-00	PASSES	
FIRE RATING - FULL ROOM BURN TEST	NFPA 286	PASSES	

Warranty, Specific Applications and Installation Guides can be found on our Applications Manuals or at www.rfoil.com



rFOIL™ Approvals

- ASTM E84-09 Fire Test
- ASTM 1224 Standard Specifications for Reflective Insulations and Building Applications



279 Humberline Drive Etobicoke, ON M9W 5T6
 Call Toll Free: 1-800-837-8961 Fax: 416-798-1342
 Email: sales@rfoil.com Website: www.rfoil.com



METAL BUILDING SUPPLY, INC

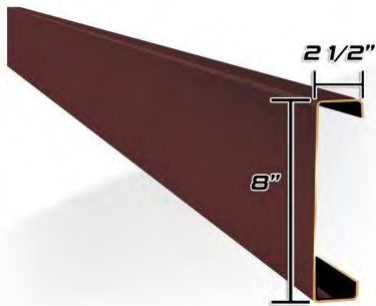
RED IRON

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Structural Members

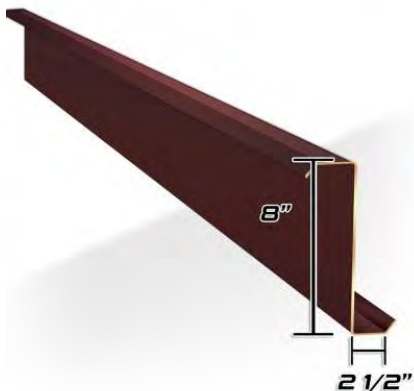
All Structural Members are 14ga Red Oxide



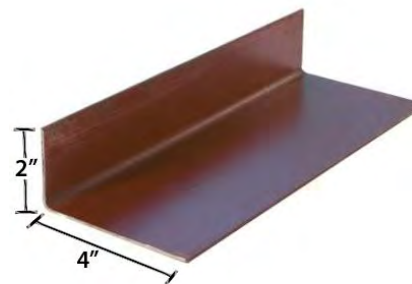
8"x2.5" Cee Purlin
20', 25', 30'



4"x2" Cee Purlin
20'



8"x2.5" Zee Purlin
22' & 27'



4"x2" Base Angle
20' & 25'

Custom Lengths Available On Request



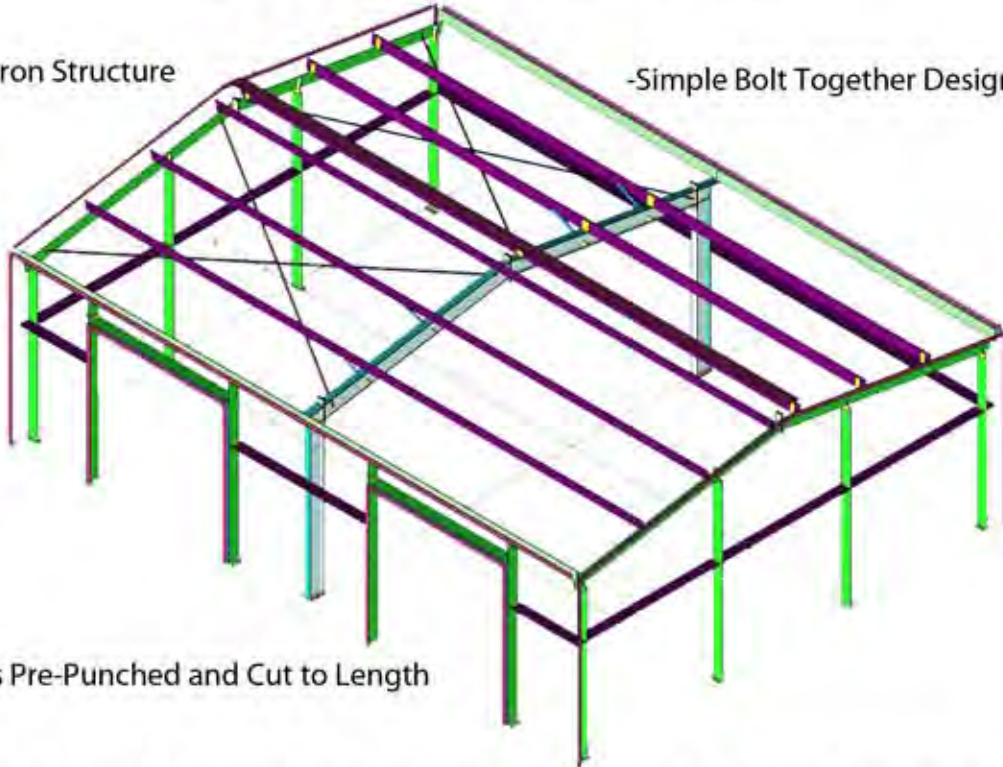
NEW **Express Metal Building Kits** by MBS

30'x40'x12' Available for Rapid Delivery or Pickup

3-10 Day Typical Leadtime

-Pre-Engineered Red Iron Structure

-Simple Bolt Together Design in 2:12 Pitch



-Structural Members Pre-Punched and Cut to Length

-Meets or exceeds IBC building codes for Arkansas, Missouri, Oklahoma, and Kansas

Express Metal Building Kit Includes:

- 26G Hi-Rib PBR Panel Walls and Roof in your choice of colors
- Standard Trim in your choice of colors
- Two 10'x10' Framed Openings
- One 3070 Commercial Entrance Door
- Plans and Erection Drawings
- 3/4" Butyl & Screws
- Closures

Express Metal Building Kit Does NOT Include:

Gutter, Concrete Foundation/Slab, Insulation, Overhead Doors, Installation, Sales Tax, or Freight

more Express Metal Building Kits in a variety of sizes & options coming soon

(800) 467-0626

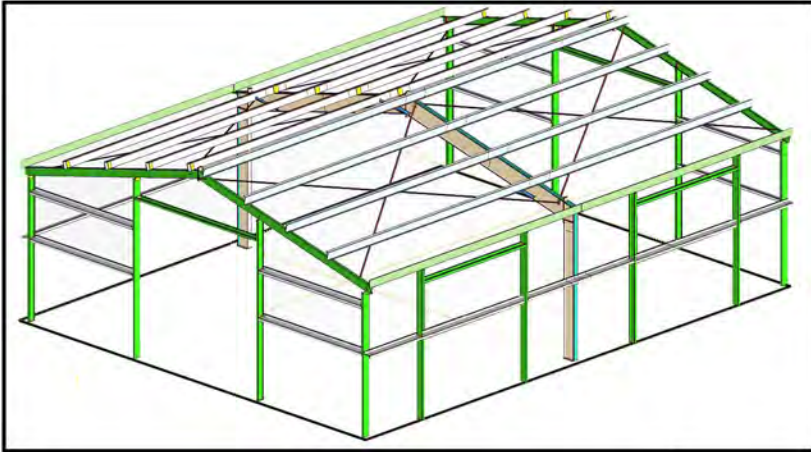
www.metalbuildingsupply.com



40'x50'x14' Express Building Kits by MBS!

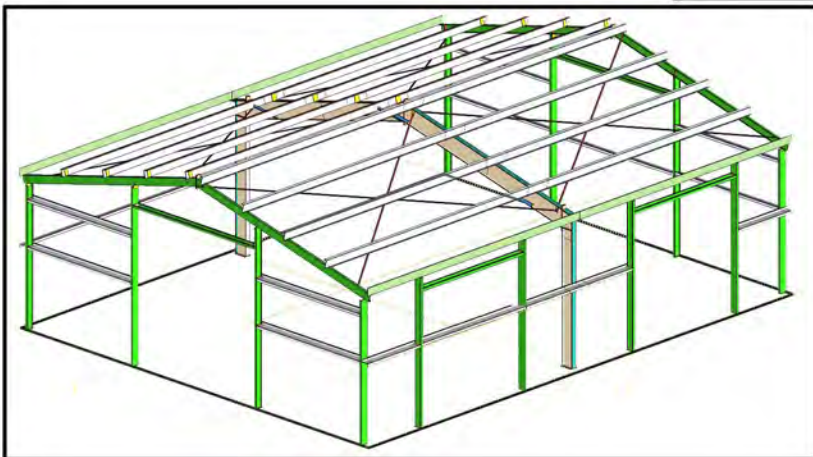
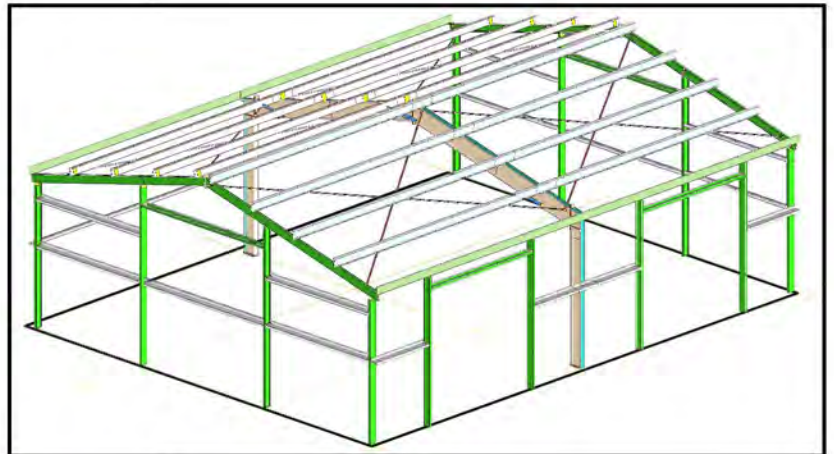
Featuring extremely versatile overhead door placement!

Each figure represents a different configuration of the frame



- One 14'x14' framed opening on each end of the building
- Can be sheeted over or utilized as doorways

- Two 12'x12' framed openings on one side of the building
- All framed openings include a girt for optional wall panel installation



- Simple bolt together design
- 3:12 pitch
- One building kit with multiple framed opening configurations

(800) 467-0626

www.metalbuildingsupply.com



40x50x14 Express building kit includes:

- 26G HiRib PBR Panel Walls and Roof in your choice of colors
- Standard Trim in your choice of colors
- Possibility of Two 12'x12' Framed Openings
- Possibility of Two 14'x14' Framed Openings
- One 3070 Commercial Entrance Door
- Plans and Erection Drawings
- 3/4" Butyl & Screws
- Closures
- Structural Members Pre-Punched and Cut to Length
- Simple Bolt Together Design in 3:12 Pitch
- Pre-Engineered Red Iron Structure
- Meets or Exceeds IBC Building Codes for Arkansas, Missouri, Oklahoma, and Kansas

Express building kit does not include:

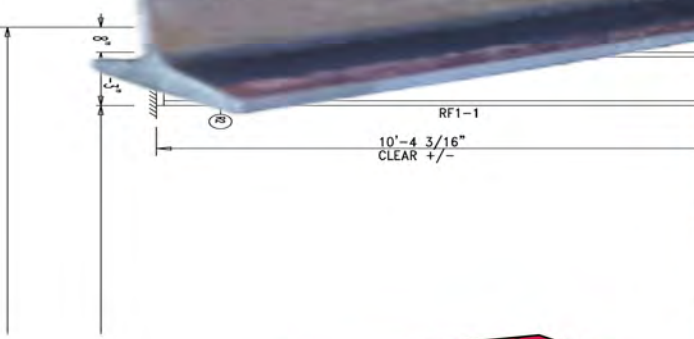
- Gutter, Concrete Foundation/Slab, Insulation, Overhead Doors, Installation, Sales Tax, anchor bolts, engineer stamp, or Freight

Disclaimer**

The builder/purchaser must secure all required approvals and permits from the appropriate agency as required.

Pre-Engineered Steel Buildings

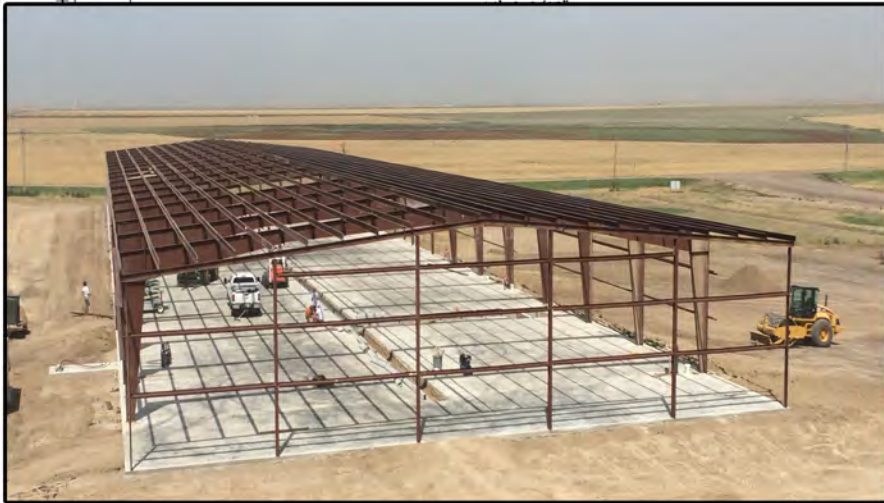
Sheet (2) Two Sides



METAL BUILDING SUPPLY, INC

01-10-001 OF STEEL

36'-7" CLEAR

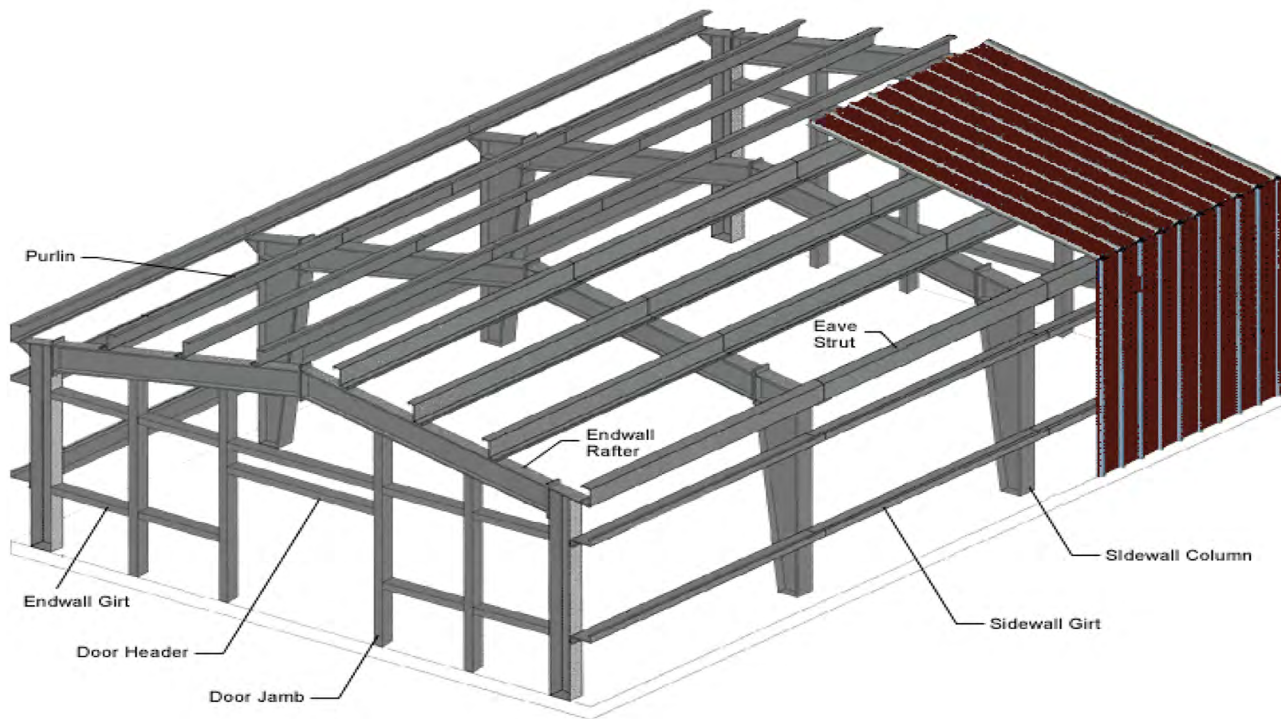




800-476-0626

FAX 888-638-2580

Metal Building Supply, Inc. steel buildings are completely engineered to your local specifications. Call your MBS representative today and have the confidence of working with a leading manufacture in the steel building and component industry.



Why **MBS** ?

- PBR Panel 26 ga. on wall and roof
- Panels have a 45 year warranty for color
- 20year warranty on bare galvalume panels

Frame options:

- Straight or tapered columns for cost efficiency
- By-Pass sidewall zee girts and flush endwall zee girts standard
- Flush girts are available on all four sides as an option

Other options available:

- Gutters, Downspouts
- Sculptured or Shadow Rake profiles
- Wainscot
- Insulation, Doors & Windows
- Deluxe trim packages are available with head & jamb covers and base trims.



Metal Building Quotation



800-467-0626

Fax #: 888-638-2580

Customer Name: _____ Project Name: _____ Project Location: _____

Phone#: _____ Date: ___/___/___ Building Use: _____ Zip Code: _____

Building Size: Width _____ Length _____ Eave Height _____ Roof Slope _____ Peak Offset _____

Bay Size: _____ (bay spacing is even spacing – specify if special bay spacing is needed)

Lean To: _____

Foundation: Slab _____ Piers _____ Base Angle (slab default) _____ Base Channel (pier and liner panel default) _____

Slab Sheet Notch: Yes No

Sheeting Type: Roof _____ Walls _____ **Color:** Roof _____ Walls _____

Wainscot Type: Bi Pass or Double Angle Height _____ Color _____
Location _____ (specify surfaces or all)

Liner Panel Height _____ Liner Panel Color _____ Liner Panel Location _____ (specify surface or all)

Building code will be determined by zip code-specify below if any code needs to be altered from zip code specifications.

Building Code & Year _____ Roof Live Load _____ Wind Load _____

Ground Snow Load _____ Roof Snow Load _____

Gable End Extension Left End wall Dimension _____ Right End wall Dimension _____

Soffit Type: HiRib NuMag NuAg Surface 2 Dimension _____ Surface 3 Dimension _____

Insulation: Fiberglass Thickness _____ Bubble Type _____

Gutter? YES NO Down Spouts? YES NO

Engineered Seal required on drawings? YES NO

Alternate Adds (comments): _____

Overhead Opening(s): Yes No

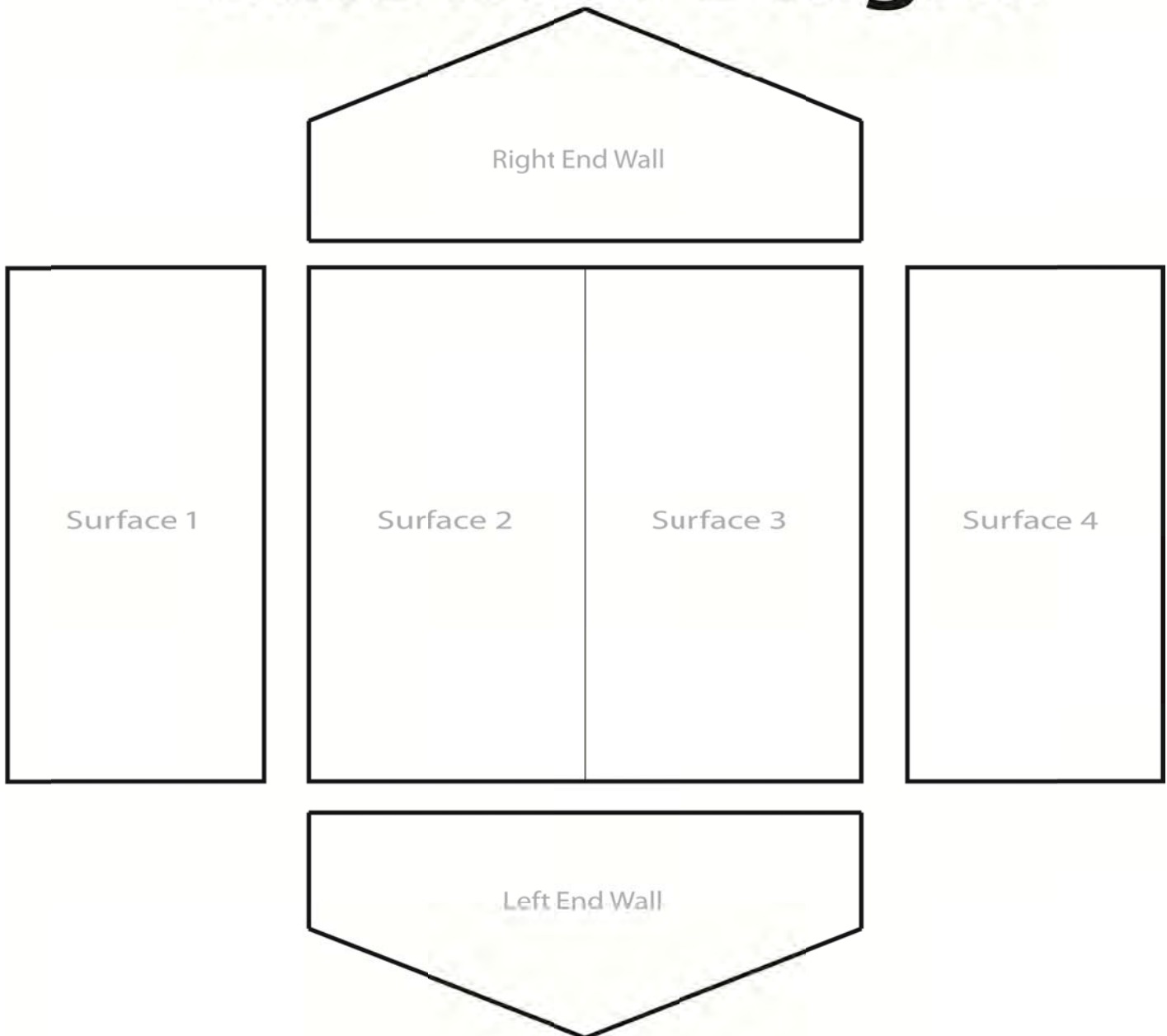
SW _____ EW _____

Jamb Cover Trim: Yes No

Please locate frame spacing, all overhead framed openings, doors, canopies, lean-tos, all roof framed openings, hanging loads of 100 lbs. or more and crane location on diagram.

overhead doors will default to regular bay openings. If bay opening has to be in a specified location that may change frame spacing it will change the quote.

Gable Roof Diagram



Overhead Opening(s): Yes No SW _____ EW _____

Jamb Cover Trim: Yes No

Please locate frame spacing, all overhead framed openings, doors, canopies, lean-tos, all roof framed openings, hanging loads of 100 lbs. or more and crane location on diagram.

overhead doors will default to regular bay openings. If bay opening has to be in a specified location that may change frame spacing it will change the quote.

Single Slope Roof Diagram

