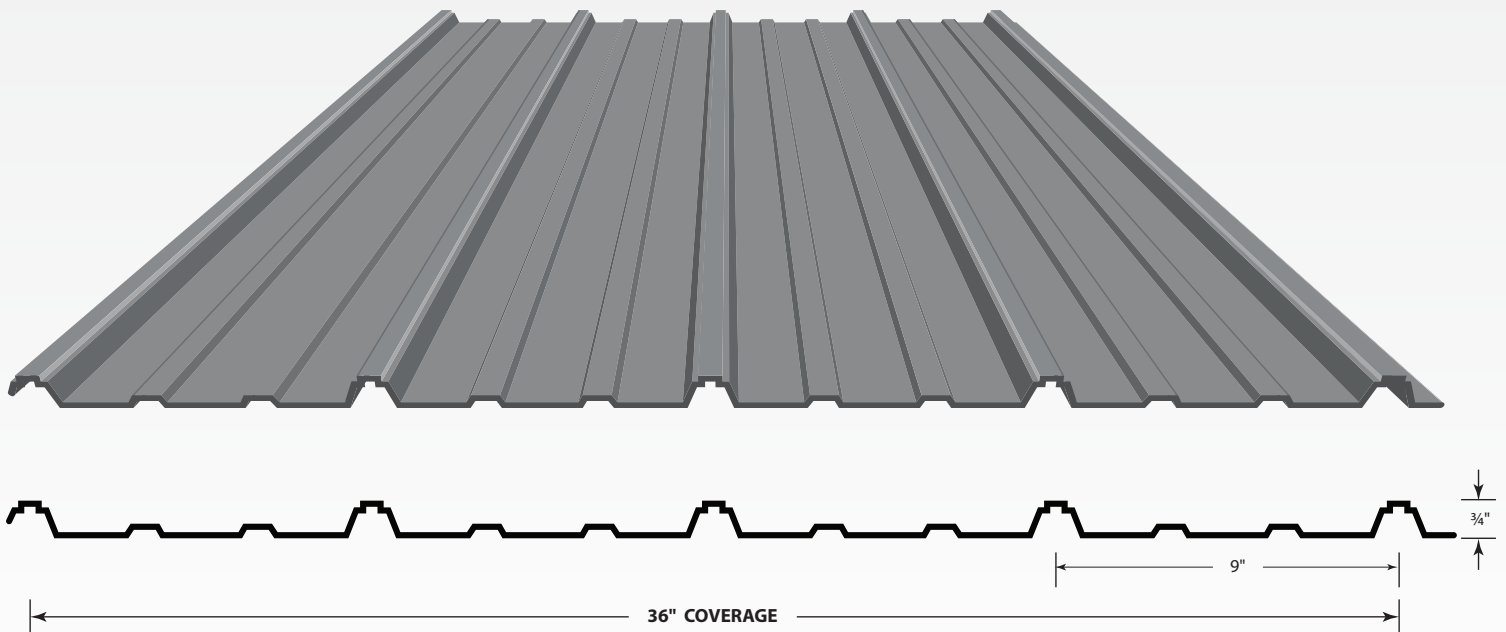


Panel-Loc Plus™

Product Guide

HELPFUL INFORMATION ON PANELS, TRIMS, GUTTERS AND ACCESSORIES



INCLUDES REGIONAL PRODUCTS

Panel-Loc™
CD 2000®



OUR MISSION

The men and women at Central States Manufacturing, Inc. would like to welcome you.

Central States Manufacturing, Inc. is a **100% employee-owned** company devoted to the **personal growth and well-being** of our owners. We are dedicated to **increasing the value of our company** by **making Raving Fans** of our customers through **exceeding their expectations**, being **easy to do business with**, demonstrating **excellence** in all aspects of our business and being committed to **improving their business**.

It is our promise to maintain **honesty and integrity** with everyone our lives may touch. With thanksgiving for the blessings we have been given, we are committed to **serving the communities** where we live and work by giving back a portion of our time, talents and profits.



Right.
On Time.
Every Time.®

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*Information in the catalog may vary by plant location.
Please call your salesperson to verify product availability.*

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Notice: *The application and detail drawings in this manual are strictly for illustration purposes and may not be applicable to all building designs or product installations. Projects should conform to local building codes. Central States Manufacturing is not responsible for the performance of the material if it is not installed correctly.*

Information contained in this booklet was in effect at the time of publication and is subject to change without notice.

PANEL CODES

Use the panel and color codes below to create the code you need. For example: Panel-Loc Plus™ Ultra Rustic would be HRR+

PANEL PROFILE	TYPE	CODE
Panel-Loc Plus™	Fluropon®	K(color)+
Panel-Loc Plus™	Ultra SMP	HR(color)+
Panel-Loc Plus™	Prime SMP	P(color)+
Panel-Loc Plus™	Thrifty26 SMP	6(color)5+
Panel-Loc Plus™	Thrifty29 SMP	(color)5+
Panel-Loc™	Ultra SMP	HR(color)LOC
Panel-Loc™	Prime SMP	P(color)LOC
Panel-Loc™	Thrifty SMP	(color)5LOC
CD 2000®	Ultra SMP	HR(color)CD
CD 2000®	Prime SMP	P(color)CD
CD 2000®	Prime G90	P(color)ZCD
CD 2000®	Thrifty SMP	(color)5CD

**CD2000® is
manufactured in
South Dakota and
is not available for
intercompany transfer.
Ask your salesperson
for details.**



COLOR CODES

Color availability may vary by product and location. Fluropon® manufactured in Indiana only. Contact your sales consultant for details.

SMP	CODE	FLUROPON®	CODE
Alamo	W	Antique Ivory	AI
Black	K	Ash	AS
Brilliant	BI	Autumn	AU
Brown	BR	Beige	BE
Burgundy	BG	Brandywine	BW
Burnished Slate	BS	Brite	BT
Charcoal	C	Bronze	BZ
Colony	CG	Clay	CL
Copper Metallic*	CM	Evergreen	EV
Crimson	CR	Hartford Green	HG
Desert	DS	Matte Black	MB
Forest	DGR	Roman	RB
Gallery	GB	Sand	SA
Galvalume®	GL	Smoke	SM
Galvanized	Z	Terratone	TE
Gray	G	Tudor	TU
Hunter	GR		
Ivory	I		
Light Stone	S		
Ocean	B		
Pewter	PG		
Rustic	R		
Tan	T		
Taupe	TA		

* Copper Metallic is Fluropon®. Galvalume® is a registered trademark of BIEC International, Inc..

PANEL-LOC PLUS

Panel-Loc Plus™ is available in 29ga and 26ga painted Galvalume®, bare galvanized, and bare Galvalume®. Central States uses the CentralGuard® paint system on all Prime painted metals. The paint has a 40 year limited warranty, and Galvalume® substrate has a 20 year limited warranty. Fluropon® 70% PVDF paint system is also available – contact sales rep for details. Bare (non-painted) metals from Central States will have an acrylic coating. This acrylic coating helps protect the metal during manufacturing and installation. This clear organic treatment applied over the Galvalume® and galvanized coating is invisible, but provides enhanced performance applicability and retained heat reflectivity. There is no need for oils to be applied during forming. This organic treatment eliminates fingerprinting and foot marking during installation.

The minimum roof slope for the ¾" Panel-Loc Plus™ is 3:12. The minimum pitch, along with Panel-Loc Plus' siphon groove, will allow for sufficient drainage of water. For added protection, a sealant tape can be used on the laps of the panel.



FASTENER SPACING

Screws may be placed either in the rib or the flat for both roof and wall panels. Stitch screws also available.

Fastener Pattern at
Eave and Endlap



Fastener Pattern at
Interior of Panel



Galvalume® is a registered trademark of BIEC International, Inc.

SECTION PROPERTIES

36" WIDE, CSMI PANEL-LOC PLUS™ PANEL

Gauge	Thickness (inches)	Weight (psf)	Yield Stress (ksi)	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
				Ixx	Sxx	Ma	Ixx	Sxx	Ma
				in ⁴ /ft	in ³ /ft	in.kips/ft	in ⁴ /ft	in ³ /ft	in.kips/ft
26	0.0185	0.866	80.0	0.0133	0.0220	0.7913	0.0093	0.0198	0.7123
29	0.0150	0.704	80.0	0.0110	0.0181	0.6493	0.0073	0.0160	0.5760

Section properties and allowables are calculated in accordance with 1996 AISI Specifications and 1999 AISI Supplement No. 1. I +/- is for deflection determination. S +/- is for bending determination. Ma is allowable bending moment. All values are for one foot of panel width. These loads are for panel strength. Frames, purlins, fasteners and all supports must be designed to resist all loads imposed on the panel. Allowable outward loads based on stress have been increased by 33.33% for wind uplift. Allowable loads for deflection are based on deflection limitation of span/180 or span/240. For roof panels, self weight of the panel has to be deducted from the allowable inward load to arrive at the actual "live load" carrying capacity of the panel. Minimum bearing length must be checked. Minimum deliverable bare steel thickness should not be less than 0.95 of design thickness.

THEORETICAL ALLOWABLE LIVE & WIND LOADS

SINGLE SPAN CONDITION

Span (feet)	29 Gauge & 80 ksi				26 Gauge & 80 ksi			
	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)
2	108.2	108.2	90.1	127.7	131.9	131.9	109.3	157.9
2.5	69.3	61.5	46.2	81.7	84.4	74.6	55.9	101.1
3	48.1	35.6	26.7	56.7	58.6	43.2	32.4	70.2
3.5	35.3	22.4	16.8	41.7	43.1	27.2	20.4	51.6
4	27.1	15.0	11.3	31.9	33.0	18.2	13.7	39.5
4.5	21.4	10.6	7.9	25.2	26.1	12.8	9.6	31.2
5	17.3	7.7	5.8	20.4	21.1	9.3	7.0	25.3
6	12.0	4.5	3.3	14.2	14.7	5.4	4.0	17.5

TWO SPAN CONDITION

Span (feet)	29 Gauge & 80 ksi				26 Gauge & 80 ksi			
	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)
2	96.0	96.0	96.0	121.0	118.7	118.7	118.7	175.4
2.5	61.4	61.4	60.1	77.5	76.0	76.0	72.8	112.3
3	42.7	42.7	34.8	53.8	52.8	52.8	42.2	78.0
3.5	31.3	29.2	21.9	39.5	38.8	35.4	26.5	57.3
4	24.0	19.6	14.7	30.3	29.7	23.7	17.8	43.9
4.5	19.0	13.7	10.3	23.9	23.5	16.7	12.5	34.6
5	15.4	10.0	7.5	19.4	19.0	12.1	9.1	28.1
6	10.7	5.8	4.3	13.4	13.2	7.0	5.3	19.5

THREE OR MORE SPAN CONDITION

Span (feet)	29 Gauge & 80 ksi				26 Gauge & 80 ksi			
	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)
2	112.1	112.1	112.1	168.1	138.7	138.7	138.7	204.9
2.5	71.8	71.8	71.8	107.6	88.8	88.8	88.8	131.1
3	49.8	49.8	49.8	74.7	61.6	61.6	61.1	91.1
3.5	36.6	36.6	31.7	54.9	45.3	45.3	38.5	66.9
4	28.0	28.0	21.3	42.0	34.7	34.4	25.8	51.2
4.5	22.2	19.9	14.9	33.2	27.4	24.1	18.1	40.5
5	17.9	14.5	10.9	26.9	22.2	17.6	13.2	32.8
6	12.5	8.4	6.3	18.7	15.4	10.2	7.6	22.8

Theoretical allowable loads are based on uniform span lengths. LL (S) is allowable live load based on stress limitation. LL (D) is allowable live load based on deflection limitation of L/180 or L/240. WL is allowable wind load and has been increased by 33.33%.

PANEL-LOC

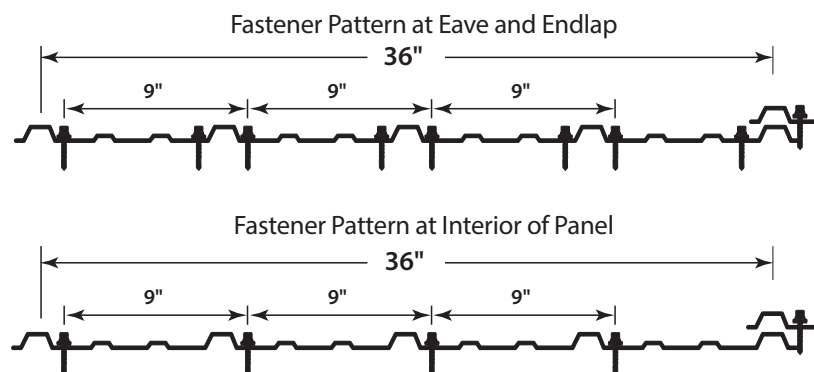
Panel-Loc™ is available in 29ga and 26ga painted Galvalume®, bare galvanized, and bare Galvalume®. Central States uses the CentralGuard™ paint system on all Prime painted metals. The paint has a 40 year limited warranty, and Galvalume® substrate has a 20 year limited warranty. Bare (non-painted) metals from Central States will have an acrylic coating. This acrylic coating helps protect the metal during manufacturing and installation. This clear organic treatment applied over the Galvalume® and galvanized coating is invisible, but provides enhanced performance applicability and retained heat reflectivity. There is no need for oils to be applied during forming. This organic treatment eliminates fingerprinting and foot marking during installation.

The minimum roof slope for the 5/8" Panel-Loc™ is 3:12. The minimum pitch, along with Panel-Loc's siphon groove, will allow for sufficient drainage of water. For added protection, a sealant tape can be used on the laps of the panel.



FASTENER SPACING

Screws may be placed either in the rib or the flat for both roof and wall panels. Stitch screws also available.



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SECTION PROPERTIES

36" WIDE, CSMI PANEL-LOC™ PANEL

Gauge	Thickness (inches)	Weight (psf)	Yield Stress (ksi)	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
				Ixx	Sxx	Ma	Ixx	Sxx	Ma
				in ⁴ /ft	in ³ /ft	in.kips/ft	in ⁴ /ft	in ³ /ft	in.kips/ft
26	0.0185	0.860	80.0	0.0097	0.0198	0.7097	0.0070	0.0189	0.677
29	0.0150	0.698	80.0	0.0073	0.0152	0.5460	0.0053	0.0152	0.5477

Section properties and allowables are calculated in accordance with 1996 AISI Specifications and 1999 AISI Supplement No. 1. I +/- is for deflection determination. S +/- is for bending determination. Ma is allowable bending moment. All values are for one foot of panel width. These loads are for panel strength. Frames, purlins, fasteners and all supports must be designed to resist all loads imposed on the panel. Allowable outward loads based on stress have been increased by 33.33% for wind uplift. Allowable loads for deflection are based on deflection limitation of span/180 or span/240. For roof panels, self weight of the panel has to be deducted from the allowable inward load to arrive at the actual "live load" carrying capacity of the panel. Minimum bearing length must be checked. Minimum deliverable bare steel thickness should not be less than 0.95 of design thickness.

THEORETICAL ALLOWABLE LIVE & WIND LOADS

SINGLE SPAN CONDITION

Span (feet)	29 Gauge & 80 ksi				26 Gauge & 80 ksi			
	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)
2	91.0	80.1	60.1	121.4	118.3	105.6	79.2	150.2
2.5	58.2	41.0	30.8	77.7	75.7	54.1	40.6	96.1
3	40.4	23.7	17.8	54.0	52.6	31.3	23.5	66.8
3.5	29.7	15.0	11.2	39.6	38.6	19.7	14.8	49.1
4	22.8	10.0	7.5	30.3	29.6	13.2	9.9	37.6
4.5	18.0	7.0	5.3	24.0	23.4	9.3	7.0	29.7
5	14.6	5.1	3.8	19.4	18.9	6.8	5.1	24.0
6	10.1	3.0	2.2	13.5	13.1	3.9	2.9	16.7

TWO SPAN CONDITION

Span (feet)	29 Gauge & 80 ksi				26 Gauge & 80 ksi			
	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)
2	91.3	91.3	78.2	121.0	112.9	112.9	103.1	157.3
2.5	58.4	53.4	40.1	77.5	72.3	70.4	52.8	100.7
3	40.6	30.9	23.2	53.8	50.2	40.7	30.6	69.9
3.5	29.8	19.5	14.6	39.5	36.9	25.7	19.2	51.4
4	22.8	13.0	9.8	30.3	28.2	17.2	12.9	39.3
4.5	18.0	9.2	6.9	23.9	22.3	12.1	9.1	31.1
5	14.6	6.7	5.0	19.4	18.1	8.8	6.6	25.2
6	10.1	3.9	2.9	13.4	12.5	5.1	3.8	17.5

THREE OR MORE SPAN CONDITION

Span (feet)	29 Gauge & 80 ksi				26 Gauge & 80 ksi			
	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)
2	106.6	106.6	106.6	141.1	131.9	131.9	131.9	183.8
2.5	68.2	68.2	58.1	90.5	84.4	84.4	76.5	117.6
3	47.4	44.8	33.6	62.8	58.6	58.6	44.3	81.7
3.5	34.8	28.2	21.2	46.2	43.1	37.2	27.9	60.0
4	26.7	18.9	14.2	35.3	33.0	24.9	18.7	45.9
4.5	21.1	13.3	10.0	27.9	26.1	17.5	13.1	36.3
5	17.1	9.7	7.3	22.6	21.1	12.8	9.6	29.4
6	11.8	5.6	4.2	15.7	14.7	7.4	5.5	20.4

Theoretical allowable loads are based on uniform span lengths. LL (S) is allowable live load based on stress limitation. LL (D) is allowable live load based on deflection limitation of L/180 or L/240. WL is allowable wind load and has been increased by 33.33%.

CD 2000

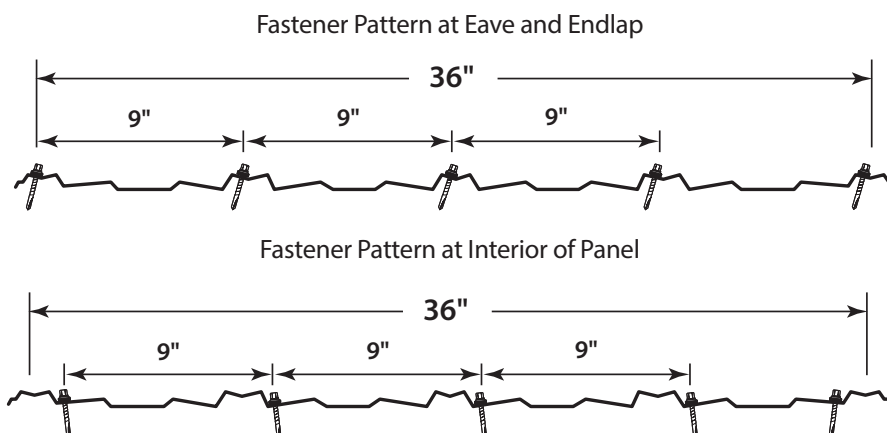
CD 2000® is available in 29ga and 26ga painted Galvalume®, bare galvanized, bare Galvalume® and painted 29ga G90. Central States uses the CentralGuard™ paint system on all Prime painted metals. The paint has a 40 year limited warranty, and Galvalume® substrate has a 20 year limited warranty. Bare (non-painted) metals from Central States will have an acrylic coating. This acrylic coating helps protect the metal during manufacturing and installation. This clear organic treatment applied over the Galvalume® and galvanized coating is invisible, but provides enhanced performance applicability and retained heat reflectivity. There is no need for oils to be applied during forming. This organic treatment eliminates fingerprinting and foot marking during installation.

The minimum roof slope for the 5/8" CD-2000® is 3:12. The minimum pitch, along with CD 2000's siphon groove, will allow for sufficient drainage of water. For added protection, a sealant tape can be used on the laps of the panel.



FASTENER SPACING

Screws may be placed either in the rib or the flat for both roof and wall panels. Stitch screws also available.



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SECTION PROPERTIES

36" WIDE, CSMI CD 2000® PANEL

Gauge	Thickness (inches)	Weight (psf)	Yield Stress (ksi)	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
				Ixx	Sxx	Ma	Ixx	Sxx	Ma
				in ⁴ /ft	in ³ /ft	in.kips/ft	in ⁴ /ft	in ³ /ft	in.kips/ft
26	0.0185	0.861	80.0	0.0123	0.0260	0.933	0.0103	0.0246	0.883
29	0.0150	0.698	80.0	0.0097	0.0205	0.737	0.0077	0.0197	0.710

Section properties and allowables are calculated in accordance with North American Specification for the Design of Cold-Formed Steel Structural Members (2012 Edition). I +/- is for deflection determination. S +/- is for bending determination. Ma is allowable bending moment. All values are for one foot of panel width. These loads are for panel strength. Frames, purlins, fasteners and all supports must be designed to resist all loads imposed on the panel. Allowable load based on stress is the smallest load due to bending, shear, distortional buckling and combined bending and shear. Allowable uplift load based on stress have not been increased 33.33% for wind uplift. For roof panels, self weight of the panel has to be deducted from the allowable inward load to arrive at the actual 'live load' carrying capacity of the panel. Minimum bearing length must be checked. Minimum deliverable bare steel thickness should not be less than 0.95 of design thickness.

THEORETICAL ALLOWABLE LIVE & WIND LOADS

SINGLE SPAN CONDITION

Span (feet)	29 Gauge & 80 ksi				26 Gauge & 80 ksi			
	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)
1.5	155.9	155.9	155.9	210.4	207.2	207.2	207.2	261.7
1.75	114.5	114.5	114.5	154.6	152.2	152.2	150.9	192.3
2	87.7	87.7	79.2	118.3	116.5	116.5	101.1	147.2
2.5	56.1	54.1	40.6	75.7	74.6	69.0	51.7	94.2
3	39.0	31.3	23.5	52.6	51.8	39.9	29.9	65.4
4	21.9	13.2	9.9	29.6	29.1	16.8	12.6	36.8
4.5	17.3	9.3	7.0	23.4	23.0	11.8	8.9	29.1
4	14.0	6.8	5.1	18.9	18.6	8.6	6.5	23.6

TWO SPAN CONDITION

Span (feet)	29 Gauge & 80 ksi				26 Gauge & 80 ksi			
	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)
1.5	196.5	196.5	196.5	155.9	244.0	244.0	244.0	207.2
1.75	146.8	146.8	146.8	114.5	182.4	182.4	182.4	152.2
2	113.7	113.7	113.7	87.7	141.3	141.3	141.3	116.5
2.5	73.8	73.8	73.8	56.1	91.8	91.8	74.6	74.6
3	51.7	51.7	51.7	39.0	64.2	64.2	51.8	51.8
4	29.3	29.3	23.8	21.9	36.4	30.4	29.1	29.1
4.5	23.2	22.3	16.7	17.3	28.8	28.5	21.4	23.0
5	18.8	16.3	12.2	14.0	23.4	20.8	15.6	18.6

THREE OR MORE SPAN CONDITION

Span (feet)	29 Gauge & 80 ksi				26 Gauge & 80 ksi			
	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)	LL (S)(psf)	LL (D) L/180(psf)	LL (D) L/240(psf)	WL(psf)
1	225.2	225.2	225.2	181.9	279.5	279.5	279.5	241.8
1.5	169.1	169.1	169.1	133.7	210.0	210.0	210.0	177.7
1.75	131.3	131.3	131.3	102.3	163.2	163.2	163.2	136.0
2	85.5	85.5	76.5	65.5	106.3	106.3	106.3	87.0
3	60.0	59.1	44.3	45.5	74.6	74.6	74.6	60.5
4	34.1	24.9	18.7	25.6	42.4	42.4	42.4	34.0
4.5	27.0	17.5	13.1	20.2	33.6	22.3	16.7	26.9
5	21.9	12.8	9.6	16.4	27.3	16.3	12.2	21.8

Theoretical allowable loads are based on uniform span lengths. LL (S) is allowable live load based on stress limitation. LL (D) is allowable live load based on deflection limitation of L/180 or L/240. WL is allowable wind load.

DELIVERY

Deliveries will be made using a 65' tractor/trailer weighing approximately 80,000 lbs. It is imperative that all delivery locations be accessible by a vehicle of this size. Our drivers have the authority to refuse delivery to any location they see as unsafe or inaccessible. The customer is responsible

for any charges incurred if truck is detained for any reason. The customer is responsible for unloading all trucks. Any damage that occurs at this point is the customer's responsibility. There must be equipment or at least 3 people available to unload the truck.

CARE AND HANDLING

STAGE

Galvalume® steel sheets have a good service life when exposed to normal weather conditions however, to protect the appearance of panels and trims from damage, there are a few simple precautions that can be taken. The steel sheets are subject to stain when water sits upon, or becomes trapped between the sheets. If the Galvalume® sheets are to be stored for any period of time, they should be stored only in a dry place, preferably under a roof. Stand panels on end and fan them out at the bottom to provide air circulation and moisture run off. If space does not allow this, the panels should be separated, blocked off of the floor at least 12 inches to allow air flow, and stored at an incline to encourage drainage. The panels should then be covered, yet still have good air flow through the sheets to prevent condensation. Do not use a plastic cover, as this may cause the panels to sweat or condensation to occur.

STORAGE

Failure to follow these steps may result in wet storage stains and premature rusting. The manufacturers warranty will be void at this time, and the manufacturer will not be responsible.

HANDLING

When unloading panels, extreme caution must be employed. Care needs to be used when unloading panels with a forklift. Panel edges and underside paint may become damaged if the forklift driver does not use caution. Once at the job site, care must be taken in order to protect the painted surface. When unbundling the panels, never drag them across the surface of one another. This may cause scratches across the underneath panels. It is recommended that the panels be "rolled" off the top of the bundle to prevent scratching. Never lift panels by the ends, instead lift the panels longitudinally and carry vertically.

Panel edges are very sharp, therefore, safety equipment should be worn by all workers handling the material.

CARE AND HANDLING

CUTTING

A portable field shear is the ideal method for cutting panels. Nibblers or a power shear may also be used. Although we do not recommend it, if you decide to cut with a saw, it is very important that the panels be turned upside down during cutting so that hot shavings do not come in contact with the painted surface. Make sure all adjacent panels are covered so that shavings are not imbedded in these panels. If metal shavings become imbedded in the paint surface, they will quickly rust. To avoid this, panels should be thoroughly wiped of all filings on both sides of the panel. Failure to comply with the recommended cutting procedures releases the manufacturer of any responsibility.

DRILLING

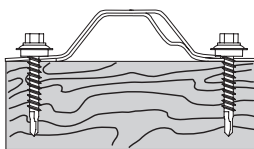
Panels should not be drilled while stacked. This will cause shavings that will become imbedded in the paint surface.

Shavings created by saw cutting or drilling may cause the panel to rust and will void warranties in affected areas.

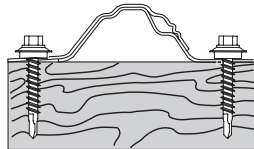


SIPHON GROOVE

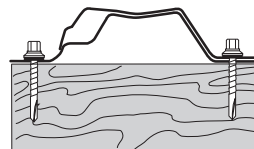
Panels should be installed with the sidelap facing away from the prevailing wind. It is extremely important that the first panel attached be perfectly square, as this will affect the squareness of the entire building. When installing panels, the siphon groove should be on the underlap panel. It is important that the siphon groove not be "clogged" with butyl tape or fasteners.



Panel-Loc™ Siphon Groove



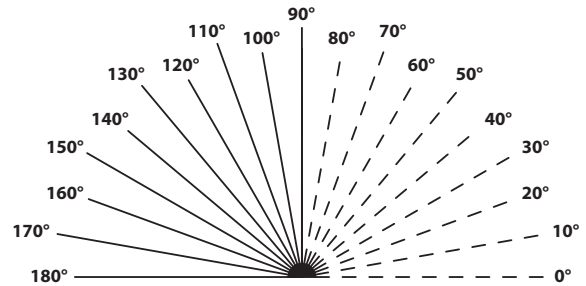
Panel-Loc Plus™ Siphon Groove



CD 2000® Siphon Groove

CONVERTING PITCH TO DEGREE

Use these charts to calculate degrees when designing custom trim.
Please specify pitch when ordering.



SINGLE SLOPE PITCHES

Fascia, Eave, Endwall, Tie-In, Gutter

DOUBLE SLOPE PITCHES

Hip, Valley

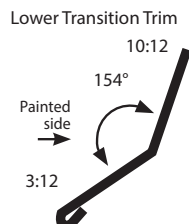
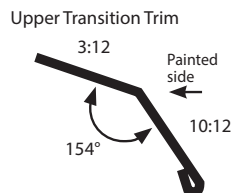
RIDGE CAP

1:12 PITCH	2:12 PITCH	3:12 PITCH	4:12 PITCH	5:12 PITCH	6:12 PITCH	7:12 PITCH	8:12 PITCH	9:12 PITCH	10:12 PITCH	11:12 PITCH	12:12 PITCH
94°	99°	104°	108°	112°	116°	120°	123°	126°	129°	132°	135°
173°	167°	160°	154°	148°	143°	138°	134°	130°	126°	123°	120°
170°	161°	152°	143°	135°	127°	120°	113°	106°	100°	95°	90°

TRANSITION TRIM

Find the box that intersects your lower and upper roof pitches.

If the intersection lands in the gray area, select an Lower Transition trim.



LOWER ROOF PITCH (INCHES OF RISE OVER 12" OF RUN)

	1:12 PITCH	2:12 PITCH	3:12 PITCH	4:12 PITCH	5:12 PITCH	6:12 PITCH	7:12 PITCH	8:12 PITCH	9:12 PITCH	10:12 PITCH	11:12 PITCH	12:12 PITCH	13:12 PITCH	14:12 PITCH	15:12 PITCH	16:12 PITCH	17:12 PITCH	18:12 PITCH
1:12 PITCH		175°	171°	166°	162°	158°	155°	151°	148°	145°	142°	140°	137°	135°	133°	132°	130°	128°
2:12 PITCH	175°		175°	171°	167°	163°	159°	156°	153°	150°	147°	144°	142°	140°	138°	136°	135°	133°
3:12 PITCH	171°	175°		176°	171°	167°	164°	160°	157°	154°	152°	149°	147°	145°	143°	141°	139°	138°
4:12 PITCH	166°	171°	176°		176°	172°	168°	165°	162°	159°	156°	153°	151°	149°	147°	145°	144°	142°
5:12 PITCH	162°	167°	171°	176°		176°	172°	169°	166°	163°	160°	158°	155°	153°	151°	149°	148°	146°
6:12 PITCH	158°	163°	167°	172°	176°		176°	173°	170°	167°	164°	162°	159°	157°	155°	153°	152°	150°
7:12 PITCH	155°	159°	164°	168°	172°	176°		177°	173°	170°	168°	165°	163°	161°	159°	157°	155°	154°
8:12 PITCH	151°	156°	160°	165°	169°	173°	177°		177°	174°	171°	169°	166°	164°	162°	161°	159°	157°
9:12 PITCH	148°	153°	157°	162°	166°	170°	173°	177°		177°	174°	172°	170°	167°	166°	164°	162°	161°
10:12 PITCH	145°	150°	154°	159°	163°	167°	170°	174°	177°		177°	175°	173°	170°	168°	167°	165°	163°
11:12 PITCH	142°	147°	152°	156°	160°	164°	168°	171°	174°	177°		178°	175°	173°	171°	169°	168°	166°
12:12 PITCH	140°	144°	149°	153°	158°	162°	165°	169°	172°	175°	178°		178°	176°	174°	172°	170°	169°

UPPER ROOF PITCH (INCHES OF RISE OVER 12" OF RUN)

SQUARE CONVERSIONS

For 26ga and 29ga low rib panels there are 2 formulas; one for panels measured in inches and one for panels measured in feet. While the actual panel width is 38", there will only be 36" of coverage per panel. Squares are figured based on actual width. One square is equal to a panel 31.579 feet long. One square of metal will give you approximately 94.5 square feet of coverage. One square is equal to 14,400 square inches.

EXAMPLE USING INCHES:

38 (or width in inches) multiplied by length in inches
multiplied by # of pieces divided by 14,400

Number of panels = 12 $\frac{38" \times 144" \times 12}{14,400}$ equals 4.56 squares of metal
Panel width = 38"
Panel length = 144"
Square inches = 14,400

EXAMPLE USING FEET:

length in feet multiplied by # of pieces
divided by 31.579*

Number of panels = 12 $\frac{12 \times 12}{31.579}$ equals 4.56 squares of metal
Panel width = 38"
Panel length = 12'
Square inches = 14,400

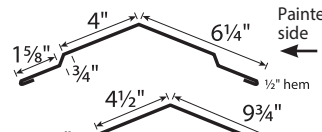
*For 26ga. Thrifty Panel-Loc Plus or Panel-Loc, use 31.373 in place of 31.579.

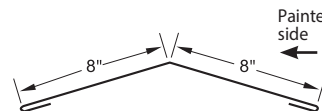
COMMON RAFTER LENGTHS (PEAK TO SIDEWALL)

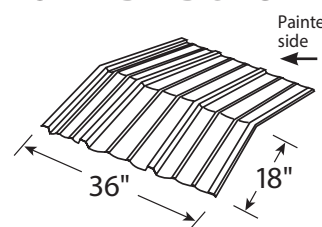
Running Feet	1:12 Pitch	2:12 Pitch	3:12 Pitch	4:12 Pitch	5:12 Pitch	6:12 Pitch
1	1' 0"	1' 1/8"	1' 3/8"	1' 5/8"	1' 1"	1' 1-3/8"
2	2' 1/8"	2' 3/8"	2' 3/4"	2' 1-1/4"	2' 2"	2' 2-7/8"
3	3' 1/8"	3' 1/2"	3' 1-1/8"	3' 2"	3' 3"	3' 4-1/4"
4	4' 1/8"	4' 5/8"	4' 1-1/2"	4' 2-5/8"	4' 4"	4' 5/8"
5	5' 1/4"	5' 7/8"	5'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

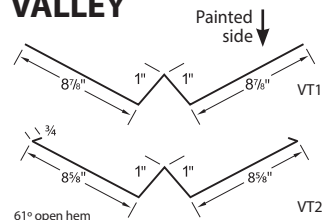
TRIMS

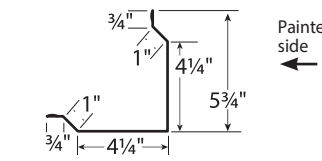
Orders for trims other than 10'2" in length must be in 9:00 am the day of your cutoff.
All angles are 90° or 45° unless otherwise noted. All trims are 29 gauge unless otherwise specified. See page 5 for color codes.

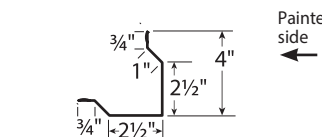
	PART #	LENGTH	GIRTH	NOTES
RIDGE CAP 	RCP(color)	10'6"	13.75"	Recommended 6:12 or less Recommended all pitches Specify pitch
	RC2(color)	10'2"	20.75"	

RESIDENTIAL RIDGE CAP 	RRCP(color)	10'2"	17"	Specify pitch
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FORMED RIDGE CAP 	FRCP(color)	3'	n/a	Panel-Loc Panel-Loc Plus Specify pitch up to 4:12
	FRCP(color)+	3'	n/a	

VALLEY 	VT1(color)	10'2"	19.75"	Specify pitch
	VT2(color)	10'2"	20.75"	Specify pitch

RAKE & CORNER 	COR(color)10	10'0"	13"	
	COR(color)12	12'0"	13"	
	COR(color)14	14'0"	13"	
	COR(color)16	16'0"	13"	
	COR(color)18	18'0"	13"	
	COR(color)20	20'0"	13"	

MINI CORNER 	MCRN(color)10	10'2"	9.5"	
	MCRN(color)12	12'2"	9.5"	26ga
	MCRN(color)14	14'2"	9.5"	26ga
	MCRN(color)16	16'2"	9.5"	26ga
	MCRN9(color)12	12'2"	9.5"	29ga long trim available in Michigan City plant only.
	MCRN9(color)14	14'2"	9.5"	
	MCRN9(color)16	16'2"	9.5"	

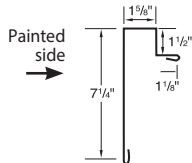
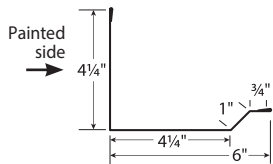
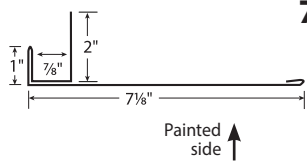
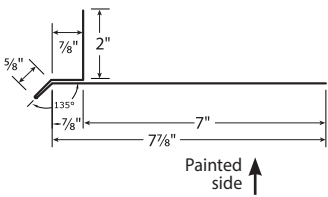
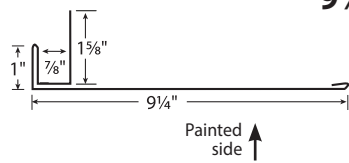
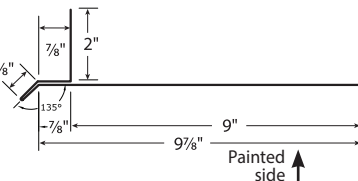
TRIMS

Orders for trims other than 10'2" in length must be in 9:00 am the day of your cutoff.
All angles are 90° or 45° unless otherwise noted. All trims are 29 gauge unless otherwise specified. See page 5 for color codes.

	PART #	LENGTH	GIRTH	NOTES
INSIDE CORNER				
	IC1(color)	10'2"	13"	
GABLE TRIM				
	GT6(color)	10'2"	16.5"	
RESIDENTIAL RAKE				
	RRT(color)	10'2"	10.75"	
PEAK PLATE				
	PEAK(color) LRPBOXF(color)		n/a	Standard 4:12
RESIDENTIAL EAVE TRIM				
	RET(color)	10'2"	6.5"	Specify pitch
RESIDENTIAL DRIP EDGE				
	RDC(color)	10'2"	9.5"	Specify pitch 90° pitch if not specified
FASCIA				
	FT(color)	10'2"	9"	Specify pitch

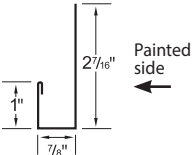
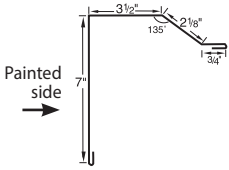
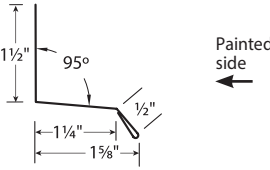
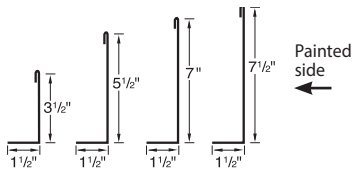
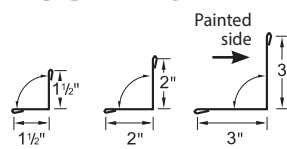
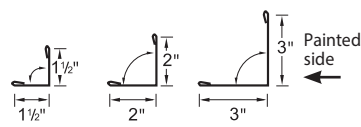
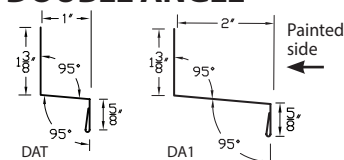
TRIMS

Orders for trims other than 10'2" in length must be in 9:00 am the day of your cutoff.
All angles are 90° or 45° unless otherwise noted. All trims are 29 gauge unless otherwise specified. See page 5 for color codes.

	PART #	LENGTH	GIRTH	NOTES
DOOR POST TRIM				
	DJ8(color)	10'2"	12.5"	
DOOR EDGE				
	DJ10(color)	10'2"	11.25"	
OVERHEAD DOOR JAMB				
	OHDJ(color)	10'2"	12.5"	
	OHDJ12(color)	12'2"	12.5"	
	OHDJ14(color)	14'2"	12.5"	
	OHDJ16(color)	16'2"	12.5"	
OVERHEAD DOOR JAMB WITH DRIP EDGE				
	OHDJ(color)WD	10'2"	12"	
	OHDJ12(color)WD	12'2"	12"	
	OHDJ14(color)WD	14'2"	12"	
	OHDJ16(color)WD	16'2"	12"	
OVERHEAD DOOR JAMB				
	OHDJ9(color)	10'2"	14.3"	
	OHDJ916(color)	16'2"	14.3"	
OVERHEAD DOOR JAMB WITH DRIP EDGE				
	OHDJ9(color)WD	10'2"	14"	
	OHDJ916(color)WD	16'2"	14"	

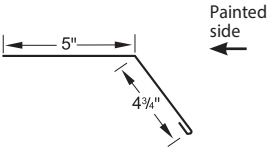
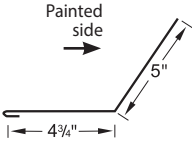
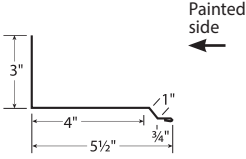
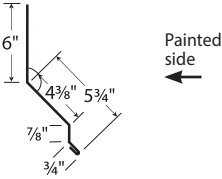
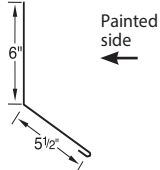
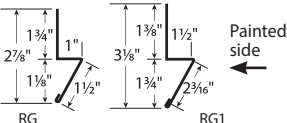
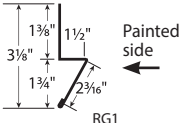
TRIMS

Orders for trims other than 10'2" in length must be in 9:00 am the day of your cutoff.
All angles are 90° or 45° unless otherwise noted. All trims are 29 gauge unless otherwise specified. See page 5 for color codes.

	PART #	LENGTH	GIRTH	NOTES
J-TRIM				
	JT(color)	10'2"	4.81"	
TRACK DOOR JAMB				
	TDJT10(color)	10'2"	14.375"	
	TDJT16(color)	16'2"	14.375"	
WINDOW DRIP CAP				
	WC(color)	10'2"	3.75"	
POST TRIM				
	SA(color)312	10'2"	5.5"	1.5" X 3.5"
	SA(color)512	10'2"	7.5"	1.5" X 5.5"
	SA(color)7	10'2"	9"	1.5" X 7"
	SA(color)712	10'2"	9.5"	1.5" X 7.5"
INSIDE ANGLE				
	IA(color)112	10'2"	4"	1.5" X 1.5"
	IA(color)2X2	10'2"	5"	2" X 2"
	IA(color)3X3	10'2"	7"	3" X 3"
SINGLE ANGLE				
	SA(color)112	10'2"	4"	1.5" X 1.5"
	SA(color)2X2	10'2"	5"	2" X 2"
	SA(color)3X3	10'2"	7"	3" X 3"
DOUBLE ANGLE				
	DAT(color)	10'2"	3.5"	
	DA1(color)	10'2"	4.5"	

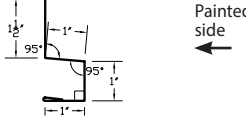
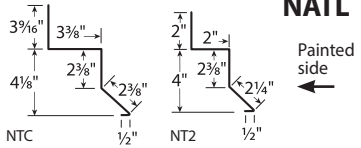
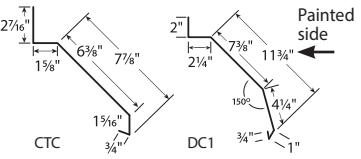

TRIMS

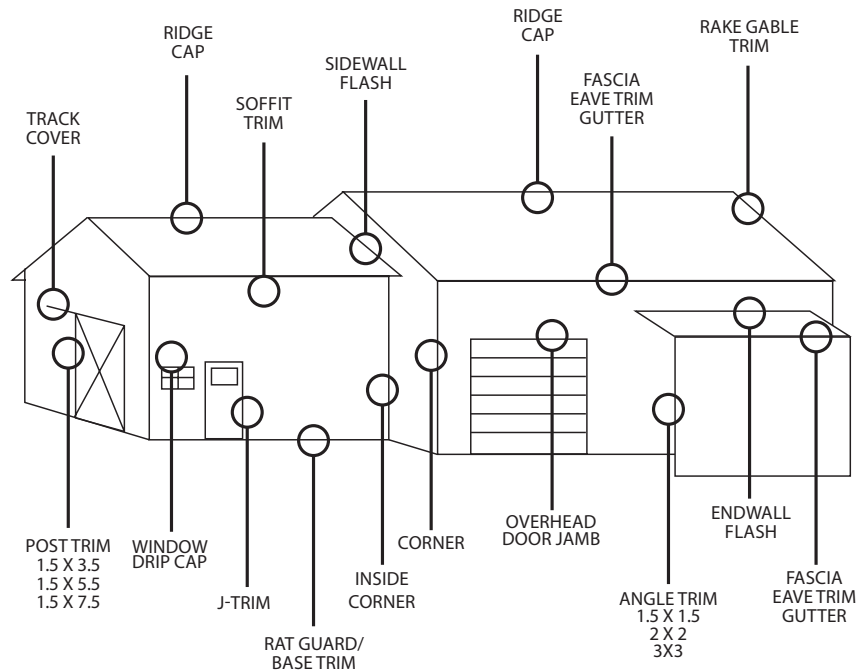
Orders for trims other than 10'2" in length must be in 9:00 am the day of your cutoff.
All angles are 90° or 45° unless otherwise noted. All trims are 29 gauge unless otherwise specified. See page 5 for color codes.

	PART #	LENGTH	GIRTH	NOTES
GAMBREL TRIM UPPER				
	GTU(color)	10'2"	10.25"	Specify pitch
GAMBREL TRIM LOWER				
	GTL(color)	10'2"	10.25"	Specify pitch
UNIVERSAL SIDEWALL				
	SF1(color)	10'2"	9.25"	
UNIVERSAL ENDWALL				
	EF(color)	10'2"	12.5"	Specify pitch
ENDWALL FLASHING				
	EFF(color)	10'2"	12"	Specify pitch
RAT GUARD				
	RG(color)	10'2"	4.75"	
	RG1(color)	10'2"	5.5625"	

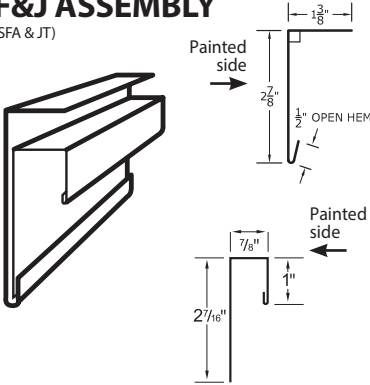
TRIMS

Orders for trims other than 10'2" in length must be in 9:00 am the day of your cutoff.
All angles are 90° or 45° unless otherwise noted. All trims are 29 gauge unless otherwise specified. See page 5 for color codes.

	PART #	LENGTH	GIRTH	NOTES
SQUARE BASE 	SBA(color)	10'2"	5"	
SQUARE TRACK COVER NATL 	NTC(color)	10'2"	12.19"	Hardware not available
	NT2(color)	10'2"	9.125"	Hardware not available
ROUND TRACK COVER 	CTC(color)	10'2"	13"	
	DC1(color)	10'2"	17.625"	
FLAT SHEET 	(color)CQ	10'2"	43"	Additional pallet charge on orders of 10 or more. Order quantity under 10 sheet will be packaged in a roll.



SOFFIT

	PART #	LENGTH	GIRTH	NOTES
F&J ASSEMBLY (SFA & JT) 	SOFFIT F ADAPTOR			
	SFA	10'2"	4.75"	Random Color
	J-TRIM			
	JT(color)	10'2"	4.81"	

SOFFIT J-TRIM

	SJT(color)	10'2"	3.625"	
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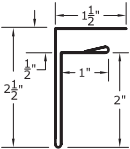
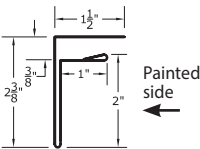
SOFFIT F&J

	SFJ(color)	10'2"	9.375"	
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PANEL LOC PLUS F&J

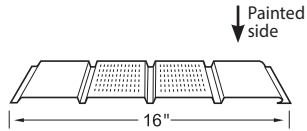
	PFJ(color)	10'2"	9.125"	
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F CHANNEL

	FC12(color)	10'2"	7.5"	
	FC38(color)	10'2"	7.375"	

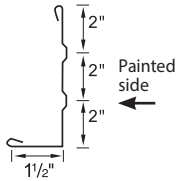
SOFFIT

ALUMINUM SOFFIT



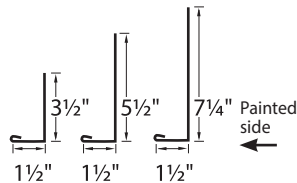
PART #	LENGTH	GIRTH	NOTES
VS(color)12	12'0"	n/a	Vented
SS(color)12	12'0"	n/a	Solid

BEADED FASCIA



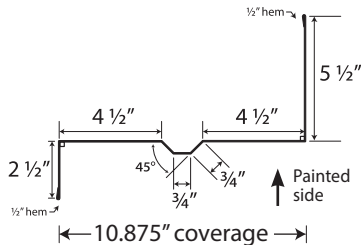
BFT(color)	10'2"	8.25"	Longer lead times may apply.
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RESIDENTIAL FASCIA TRIM

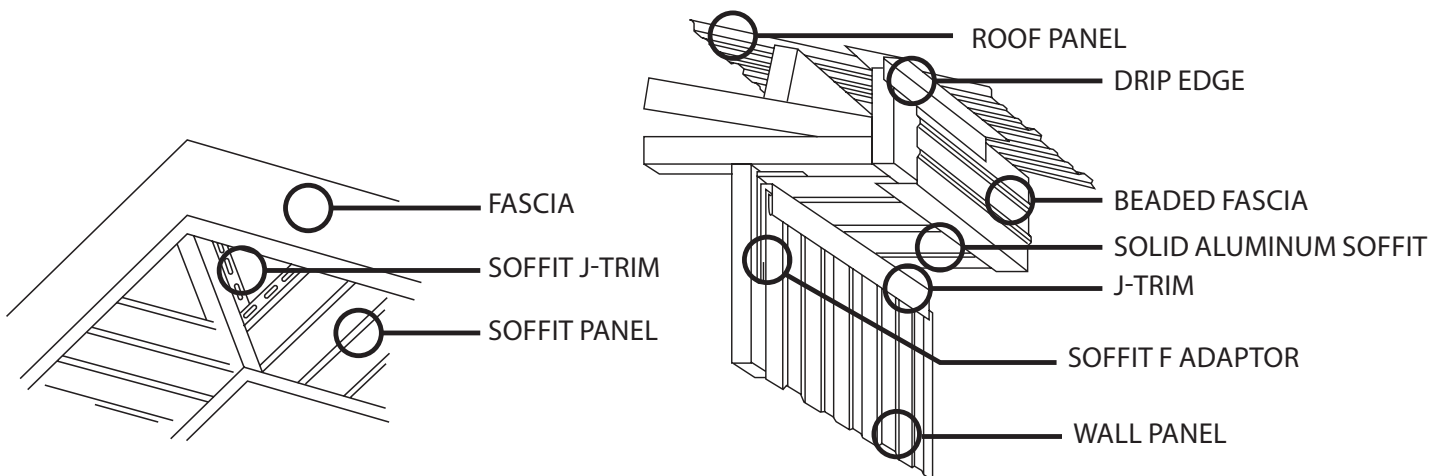


RFT312(color)	10'2"	5.5"
RFT512(color)	10'2"	7.5"
RFT712(color)	10'2"	9.25"

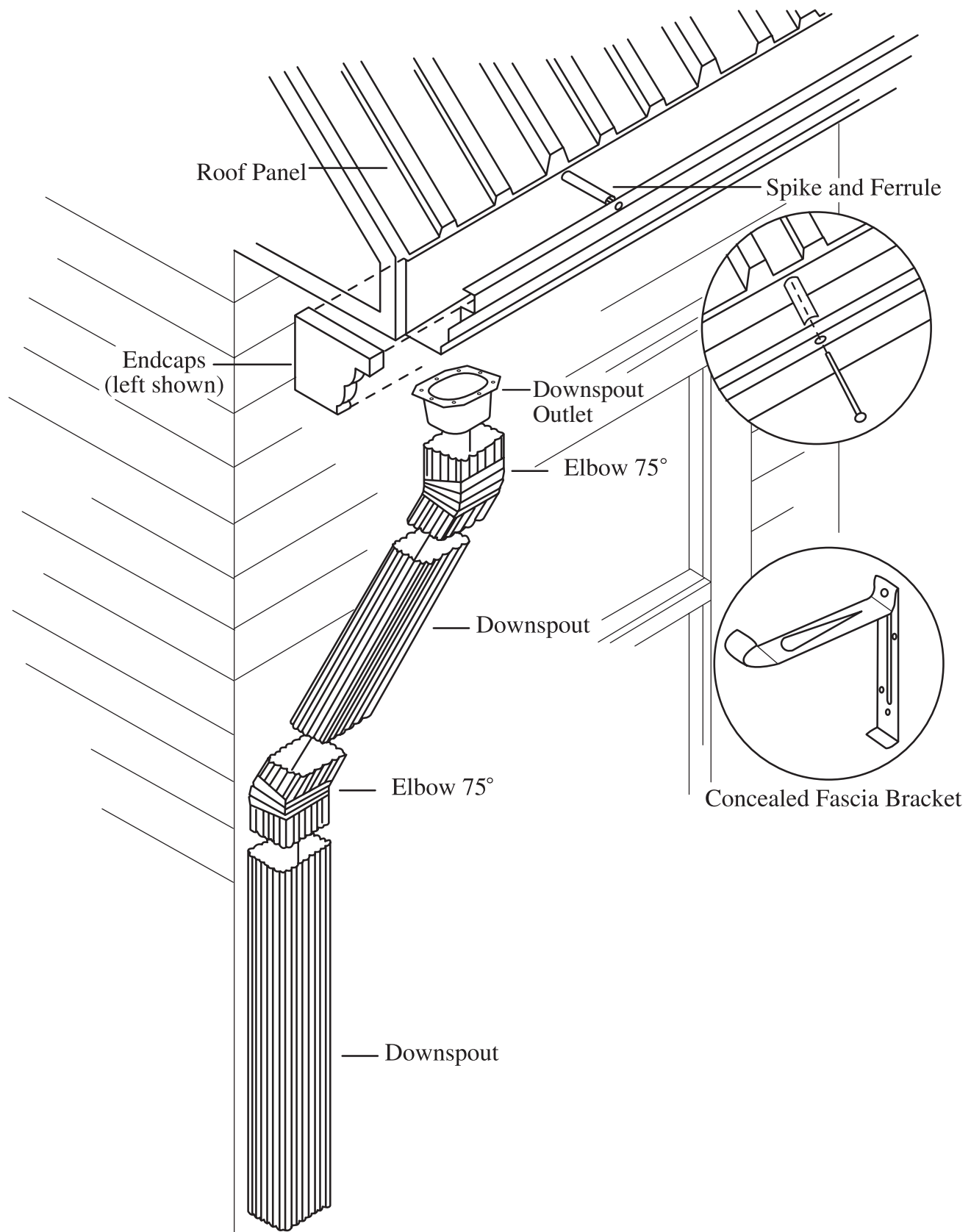
GABLE BASE SOFFIT



GB1(color)	10'2"	20.5"
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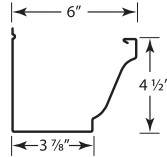
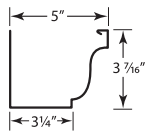
K-5 / K-6 GUTTERS



K-5 / K-6 GUTTERS

K5 Gutters not available in Galvalume®, Hawaiian or Polar. *Available from our Michigan City plant only.

GUTTER



PART

K5G206(color)

LENGTH

20'6"

GIRTH

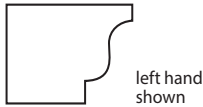
NOTES

K6G206(color)*

20'6"



GUTTER END CAP



K5GECR(color)

K5GECL(color)

K6GECR(color)*

K6GECL(color)*

Right

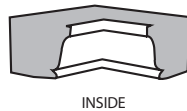
Left

Specify right or left hand

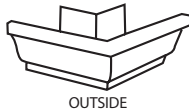
Right

Left

CORNER BOXES



INSIDE



OUTSIDE

K5GISQCR Inside

K5GOSQCR Outside

K6GISQCR* Inside

K6GOSQCR* Outside

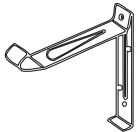
White only

White only

White only

White only

CONCEALED FASCIA BRACKET



K5GCFZ

Sold separately or 100 per box

K6 GUTTER HANGER



K6GUTTERHG*

Sold separately or 100 per box

SPIKES & FERRULES



K5GS8

K5GF5

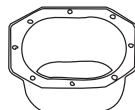
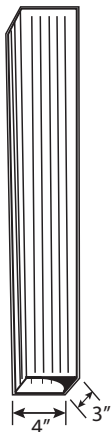
8" Spike

5" Ferrule

Sold separately or 100 per box

Sold separately or 100 per box

FLUTED



DOWNSPOUT

K6GDS10(color)

10'0"

K6GDS14(color)*

14'0"

FLUOROPON® ONLY

Sold separately or 15 per box

Sold separately or 15 per box

DOWNSPOUT STRAP

K6GSCB(color)

Sold separately or 100 per box

DOWNSPOUT ELBOW

K6GEA(color)

Sold separately or 20 per box

DOWNSPOUT OUTLET W/FLANGE


K5GOOFZ - Fits inside K5 Gutter

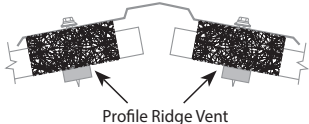
K6GOOFZ* - Fits inside K6 Gutter


Sold separately or 20 per box

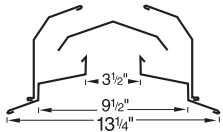
Sold separately or 20 per box


ACCESSORIES


	PART #	LENGTH	WIDTH	THICKNESS
CLOSURE VENT 	CLV+ (PANEL-LOC PLUS)	3'		
	Closure is 1 3/8" tall and may require longer screws for installation. Item may vary from sample shown.			25 per box (MARCO)

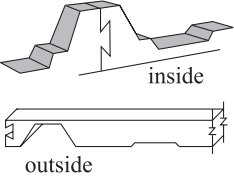
PROFILE RIDGE VENT 	PLPVENT	100'	3/4"	1 1/2"
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FLEXOVENT 	FLEXOVENT	10'	3"	1 1/2" (2) 10' rolls per box
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CONTINUOUS RIDGE VENT 	RLW available in white only	10'		
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UNIVERSAL POLYFOAM 	Part # POLYG with adhesive	LENGTH 25'	WIDTH 1 1/2"	THICKNESS 1 1/2"	ROLLS PER BOX 10
--	----------------------------------	---------------	-----------------	---------------------	---------------------

RETRO-EASE 	RETROEASE	300'			
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CLOSURES 	PART #	LENGTH
	CLOUT	(Panel-Loc outside no adhesive) 3'
	CLOUT+	(Panel-Loc Plus outside no adhesive) 3'
	CLIN	(Panel-Loc inside no adhesive) 3'
	CLIN+	(Panel-Loc Plus inside no adhesive) 3'
	CLOUTWGLUE	(Panel-Loc outside with adhesive) 3'
	CLOUT+GLUE	(Panel-Loc Plus outside with adhesive) 3'
	CLINWGLUE	(Panel-Loc inside with adhesive) 3'
	CLIN+GLUE	(Panel-Loc Plus inside with adhesive) 3'

ACCESSORIES

METAL/ WOOD SCREW #10

1/4" head

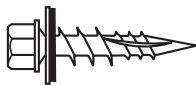


PART #	COLOR	LENGTH	#PER BAG	#PER BOX
1(color)MW	all	1"	250	3000
112(color)MW	all	1 1/2"	250	2500
2(color)MW	all	2"	250	2000
212(color)MW	all	2 1/2"	250	1500
3(color)MW	all	3"	250	1000

*order in increments of 250pc

STITCH SCREW #12

1/4" head

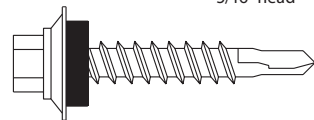


34(color)ST	all	3/4"	250	3000
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*order in increments of 250pc

METAL/ METAL SCREW #12

5/16" head

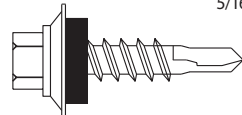


34(color)MM	all	3/4"	250	2500
114(color)MM	all	1 1/4"	250	2500
112(color)MM	White, Hunter, Brilliant, Stone, Bare galvanized	1 1/2"	250	2500
2ZMM		2"	250	2000

*order in increments of 250pc

LAP SCREW #14

5/16" head

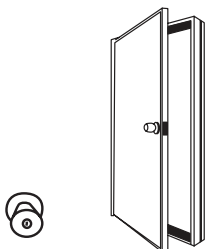


78(color)LAP	all	7/8"	250	2500
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*order in increments of 250pc

Color availability may vary by location. Contact your sales consultant for details.

DOOR SET



PART #	SIZE
3068DR (Steel Jamb)	3068 39 13/16" x 80 5/8"
4068DR (Steel Jamb)	4068 49 13/16" x 80 5/8"

KNOB

KNOBS SOLD SEPARATELY

WINDOW

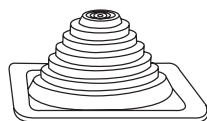


WD3X3	3X3
WD3X2	3X2

SLIDER WITH SCREEN NON-INSULATED

ACCESSORIES

MASTER PIPE FLASHING

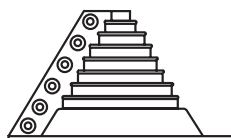


PART #	PIPE SIZE	PART #	PIPE SIZE
MPF	.25" to 5.75"	3SMPF	.25" to 4"
MPF2	.875" to 4"	4SMPF	2.75" to 7"
MPF4	2.75" to 7"	6SMPF	4.75" to 10"
MPF5	4" to 7"	8SMPF	6.75" to 13.5"
MPF6	4.75" to 10"	10SMPF	12" to 28.5"
MPF7	5.5" to 11.5"		
MPF8	6.75" to 13.5"		
MPF9	9.5" to 20.5"		

MAXIMUM TEMPERATURE 500 DEGREES

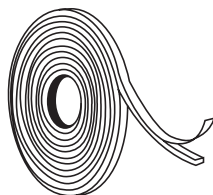
MAXIMUM TEMPERATURE 250 DEGREES

MASTER PIPE FLASHING WITH ZIPPER



MPF1ZIP	.5" - 4" with zipper
MPF2ZIP	4" - 9.25" with zipper

BUTYL TAPE



Part #	LENGTH	WIDTH	THICKNESS	ROLLS PER BOX	PROFILE
BTR	40'	7/8"	3/16"	10	Horizon-Loc
BTL	45'	3/4"	3/32"	24	R-Loc/M-Loc
BT3/8	45'	3/8"	3/32"	40	Panel-Loc Plus

Install between fastener and exposed edge.
Rolls per box may vary by location and vendor. Check with your sales person for details.

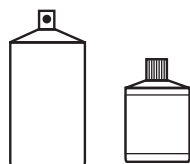
GRAYFLEX



Part #	LENGTH	WIDTH	THICKNESS	ROLLS PER BOX
GRAYFLEX-6	20'	1"	1"	24

For use with hips and valleys.

TOUCH UP PAINT



PART #	SIZE
4(color)SP	0.6oz bottle with brush
12PURSP	12oz spray can (purlin paint)

SEALANT

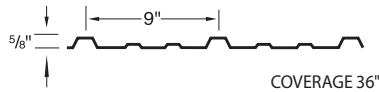


GEO(color)	10.3oz tube	clear, gray, white
MRS(color)	10.3oz tube	call for colors
MRSCLEAR	10.3oz tube	clear
MRSSKY	10.3oz tube	clear

Approved for skylight use.

ACCESSORIES

SKYLIGHTS



PART #

COLOR

LENGTH

NOTES

FIBERGLASS

SKY12

White

12'

Panel-Loc only
5oz sqft weight

POLYCARBONATE

SKYPCW8+

White

8'

Panel-Loc Plus only

SKYPCC8+

Clear

8'

Panel-Loc Plus only

SKYPCW10+

White

10'

Panel-Loc Plus only

SKYPCC10+

Clear

10'

Panel-Loc Plus only

SKYPCW12+

White

12'

Panel-Loc Plus only

SKYPCC12+

Clear

12'

Panel-Loc Plus only

For best results, use approved sealant (MRSSKY) and washer (118WASHER)

WASHER



PART #

COLOR

DESCRIPTION

#PER BAG

118WASHER

White

1 1/8" outside diameter, 1/4" inside diameter

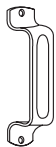
100

If used for skylights, do not overtighten to allow for expansion of material.

SLIDING DOORS

Longer lead times may apply on all sliding door parts. Illustrations may not match actual parts. Contact sales consultant for details.

DOOR PULL



PART #

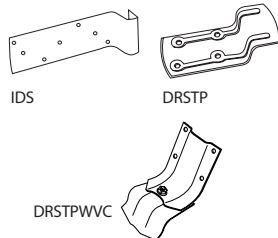
DESCRIPTION

LENGTH

DRPUL

Available in white only

DOOR STOPS



IDS

DRSTP

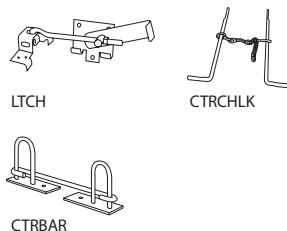
DRSTPWVC

Inside Door Stop

Heavy Duty Stop

Adjustable Stop

DOOR LOCKS



LTCH

CTRCHLK

CTRBAR

Jamb Latch (Cam Latch)

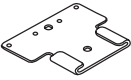



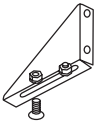

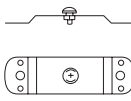
Center Chain Lock

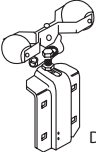
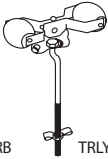
Center Bar Lock

SLIDING DOORS

Longer lead times may apply on all sliding door parts. Illustrations may not match actual parts. Contact sales consultant for details.

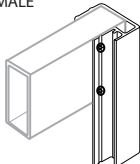
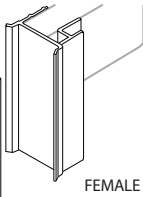
	PART #	DESCRIPTION	LENGTH
SLOTTED TRACK 	8STRK		8'
	10STRK		10'
	12STRK		12'

TRACK MOUNTING BRACKETS       	TMB	Top Mount Bracket	
	TMB/CS	Top Mount Bracket w/cover support	
	SMB	Side Mount Bracket	
	SMB/CS	Side Mount Bracket w/cover support	
	DTB	Double Mount Bracket	
	DTB/CS	Double Mount Bracket w/cover support	
	SDMB	Stud Mount Bracket	

TROLLEYS  	DSRLLRWRB	Plate Trolley with roller bearing (includes endcaps)	
	TRLYWRB	9.5" Bolt with roller bearing	
	2 per bag		

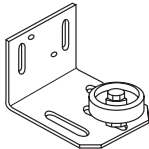
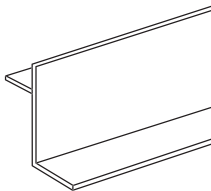
SPLICE CLIP 	SPLCLP		
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TRACK END CAPS 	ENDCAPS		
	sold in pairs		

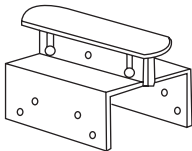
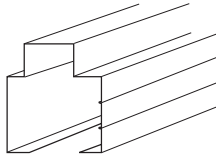
	PART #	LENGTH
ALUMINUM VERTICAL RAILS  	10VTRTL	10' AV Male
	12VTRTL	12' AV Male
	14VTRTL	14' AV Male
	16VTRTL	16' AV Male
	10VRTWH	10' HV Female
	12VRTWH	12' HV Female
	14VRTWH	14' HV Female
	16VRTWH	16' HV Female

SLIDING DOORS

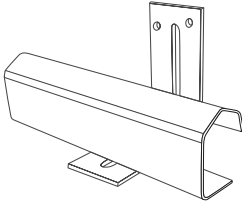
Longer lead times may apply on all sliding door parts. Illustrations may not match actual parts. Contact sales consultant for details.

	PART #	LENGTH	
HEAVY DUTY STAY ROLLER 	STYRLLR		these two components are designed to go together as a guide system
ALUMINUM BOTTOM RAIL FOR STAY ROLLER 	ABRL12	12'	

CENTER DOOR GUIDE

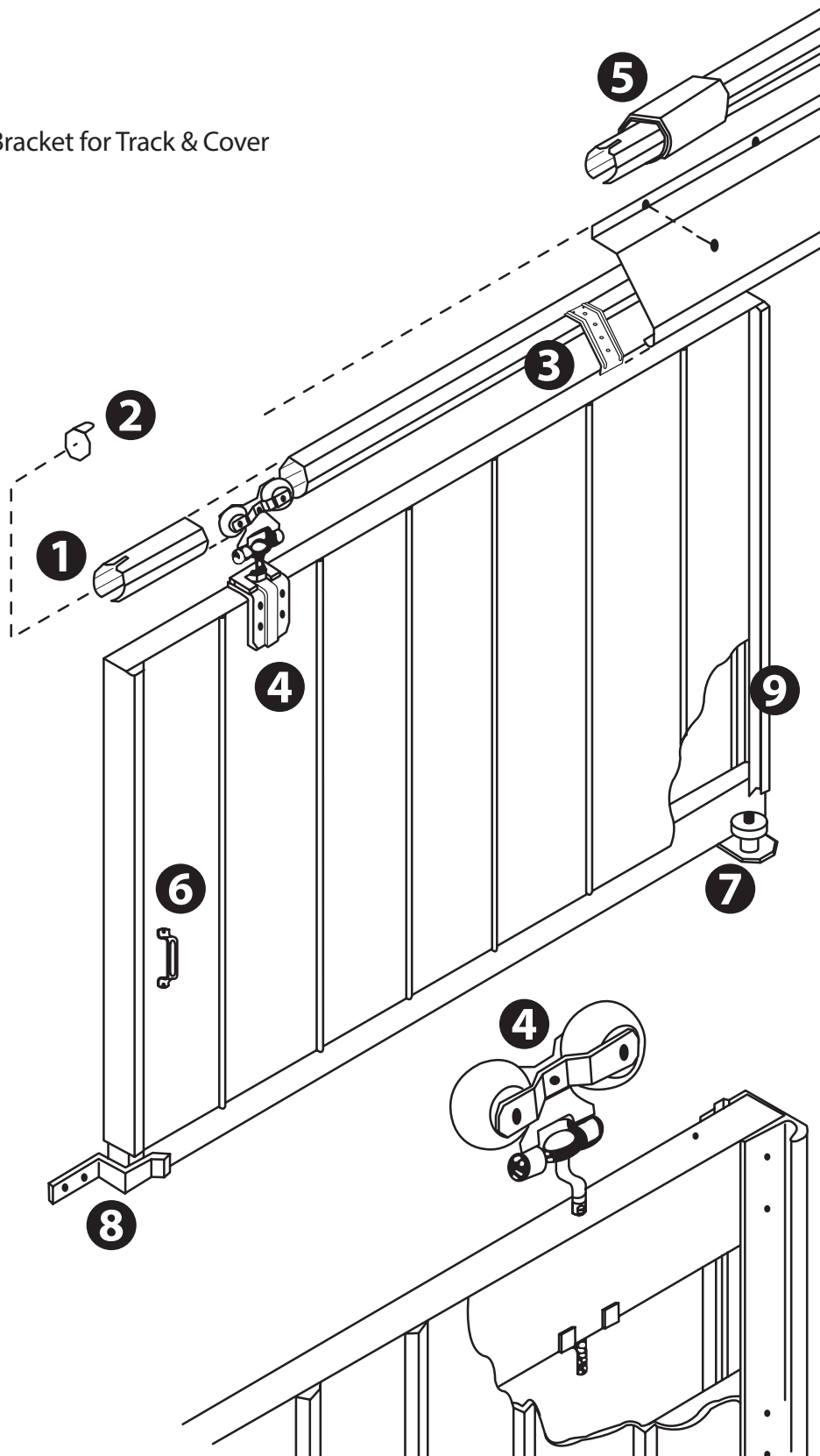
	CGWHD		
ALUMINUM BOTTOM RAIL FOR CENTER DOOR GUIDE 	8BRL	8'	these three components are designed to go together as a guide system
	10BRL	10'	
	12BRL	12'	
	14BRL	14'	
	16BRL	16'	

BOTTOM RAIL GUIDE

	6BGRL	6'
	8BGRL	8'
	10BGRL	10'

SLIDING DOORS

1. Slotted Track
2. End Cap
3. Track Mount Bracket for Track & Cover
4. Trolley
5. Splice Clip
6. Door Pull
7. Stay Roller
8. Door Stop
9. Vertical Rail



SLIDING DOORS

What you **HAVE** to know to figure a sliding door:

1. What is the door opening width?
2. What is the door height?
3. Is it a single or double door?
4. Do they want track cover?
5. Do they want to attach the door using a side mount or top mount hanger?

What are the minimum items for a sliding door?

1. **Door Track** – You need twice the footage for the door opening. A 10' door will need 20' of track.
2. **Splice Collars** – You need these to connect the track sections together.
3. **Trolleys** – 1 Pair per door is usually enough.
4. **Track Hangers** – Either side mount or top mount (with or without cover supports). Divide the total track footage in half and add one.

What extras can be added?

1. **Endcaps** – One pair per each door opening.
2. **Vertical Rails** – If it is a single door, two male vertical rails are needed. Length is determined by the door height. If it is a double door, three male rails and one female vertical rail are needed.
3. **Latches** – Used to snug the door tight to the jambs when closed.
4. **Center Bar or Chain Latch** – Use either one on a double door to close the door together at the center.
5. **Door Pulls** – One needed per door.
6. **Door Stops** – Used to stop the door from sliding too far.
7. **Bottom guide rail system** – Either use the aluminum bottom rail for guide along with the bottom guide rail, or use the aluminum bottom rail for stayroller along with a stayroller. To figure amount of guide needed, take the length closest to 60% of the door width.
8. **Track Cover** – Used to cover the sliding door track. Combo track cover is used with a round track system. National track cover is used with a square track system. You need to make sure to use the track hangers with cover supports if track cover is used.
9. **Box Girt** – Used in place of wood horizontal members to eliminate warping of door panels. Use one box girt for every two foot of door height.

Example piece count for a 20' wide door opening, with double doors,
14' tall with track cover, using side mount brackets.

10STRK – 4	SMB/CS – 21	14VRTRL – 3	CGWHD - 1
SPLCLP – 3	DRPUL – 2	14VRTRWH – 1	DRSTPVWC – 2
ENDCAP – 2	LTCH – 2	10BRL – 2	CTC – 4
TRLYWRB – 2	CTRCHLK – 1	6BGRL – 2	BOXGIRT10 – 14

CENTRAL STATES PRIME 40 YEAR LIMITED PAINT WARRANTY

FOR CENTRAL STATES MANUFACTURING (CSM) ROOFING AND SIDING PANELS. **THIS WARRANTY COVERS PRIME MATERIAL ONLY**, PAINTED WITH OUR CENTRALGUARD PAINT SYSTEM. THRIFTY MATERIAL IS COVERED BY A SEPARATE WARRANTY.

CSM warrants that the color-coated finish applied to its steel roofing and siding panels will not, within a period of forty years after installation or forty years and one month after the date of shipment (whichever comes first), crack, check, peel or lose adhesion. This does NOT include minute fracturing, which may occur in proper fabrication of the building parts. Failure due to substrate corrosion is excluded. This warranty does not apply to the reverse side finish of the product.

CSM also warrants that the color-coated finish applied to its steel roofing and siding panels will not, within a period of thirty years after installation or a period of thirty years and one month after the date of shipment (whichever comes first), chalk or lose color according to the following grids. Additionally, chalk ratings are measured in accordance with the standard procedures specified in ASTM-D-4214-98 method D659. Color (fade) ratings are measured in accordance with the standard procedures specified in ASTM-D-2244-02. 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 elements.

Sidewall		Roof	
Color	Chalk	Color	Chalk
5	8	7	6

(Exception: Gallery Blue - Sidewall: Color: 8/Chalk: 6, Roof: Color: 10/Chalk: 5).

- 1) **DISCLAIMER OF WARRANTY:** THE EXPRESS WARRANTY STATED HEREIN IS THE EXCLUSIVE WARRANTY APPLICABLE TO CSM PRIME PAINTED MATERIAL ONLY, ROOFING AND SIDING PANELS. CSM MAKES NO WARRANTIES OR GUARANTEES, EITHER EXPRESSED OR IMPLIED, BEYOND THE FACE HEREOF INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. CSM SHALL HAVE NO OTHER LIABILITY WITH RESPECT THERETO. This warranty will apply to those panels refinished or replaced but only for the period of time left on the original warranty. No employee or representative of CSM is authorized to change this limited warranty in any way or grant any other warranty regarding the product.
- 2) **LIMITATION OF LIABILITY:** THE EXCLUSIVE REMEDY FOR ANY AND ALL CLAIMS ARISING FROM THIS LIMITED WARRANTY SHALL BE LIMITED TO CSM REFINISHING OR REPLACING DEFECTIVE PANELS OR REFUNDING THE PURCHASE PRICE OF SUCH PANELS AS CSM SHALL ELECT. CSM SHALL NOT BE LIABLE FOR ANY LOSSES, DAMAGES, OR EXPENSES, WHETHER DIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. IF OUR CENTRALGUARD™ SILICONIZED POLYESTER COATINGS FAIL TO COMPLY WITH OUR LIMITED WARRANTY, WE WILL PAY FOR THE LABOR AND THE MATERIALS REASONABLY NECESSARY TO REPAINT, REPAIR OR REPLACE, AT OUR OPTION, THE BUILDING PART SHOWING THE FAILURE. CSM'S TOTAL LIABILITY IS EXPRESSLY LIMITED TO THE PURCHASE PRICE OF THE CSM STEEL ROOFING AND SIDING PANELS.
- 3) Claims under this warranty must be made in writing to CSM at the address set forth below within 30 days after the discovery of the defect. The notice to CSM shall include adequate identification of the material involved, nature of the claimed defect, date of the installation, date of shipment and order number. Failure of the claimant to provide such information in the time provided shall be deemed as a waiver of the claimant's rights herein. CSM shall have an additional 30 days to inspect the CSM steel roofing and siding panels before any further action shall be taken.
- 4) CSM does not warrant or guarantee the interior or reversed side finish or preprepared materials used for interior application.
- 5) CSM does not warrant or guarantee claims arising from damage to panels due to exposure to salt and salt water, water spray, corrosive or harmful chemicals (whether solids, liquids or gases), airborne contaminants, hail or other agents of a similar nature.
- 6) CSM does not warrant or guarantee claims arising from the following:
 - a) Damage or defects caused by acts of God, falling objects, external forces, explosion, fire, riots, civil commotion, acts of war, excessive radiation, or other similar or dissimilar occurrences beyond CSM's control.
 - b) Minor hairline cracking of the paint finish.
 - c) Defects or damages to the painted steel roofing and siding panels caused by handling, shipping, transit, processing, storage or installation; damage due to failure of the substrate.
 - d) Damage caused by moisture or other contamination prior to installation.
 - e) Steel shavings or minute iron particles from sawing sparks that come in contact with the painted surface.
 - f) Non-vertical panels that don't have an adequate degree of pitch so as not to allow any free standing or accumulation of standing water.
 - g) Stored or installed in a way that allows for contact with animals or animal waste.
 - h) Deterioration to the panels caused directly or indirectly by panel contact with fasteners. The selection of suitable fasteners rests solely with the buyer.
 - i) Weather uniformity under non-uniform conditions.
 - j) Unusual harmful fumes, chemically aggressive environment, foreign substances in the atmosphere, standing water or direct salt spray.
 - k) Damage due to green, wet or treated lumber.
- 7) The warranty applies to panels installed in the continental United States, Alaska, and Canada.
- 8) CSM extends this warranty solely to the buyer. This warranty is not transferable and non-assignable. Further, it is applicable only to the original owner of any structure where the material is installed.



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800-356-2733

Congratulations.

You are now covered by one of the best limited paint warranties in the business. Please fill this out for your records and keep it for your files.

Central States Order Number*
or Project Number

Contractor/Installer Name Date

Owner's Name

Structure's Address

City State

*Order Number can be found on the Material Package label and the Order Verification paperwork.

E PRIMEWARRANTY131126

CENTRAL STATES 20 YEAR AZ50 SUBSTRATE WARRANTY

Central States Manufacturing (CSM) warrants that steel sheets coated with hot-dipped aluminum-zinc alloy AZ50 or Galvalume® AZ50 and sold for use as painted steel roofing and siding panels, if erected in the United States, WILL NOT rupture, fail structurally or perforate within a period of twenty (20) years after shipment due to exposure to normal atmospheric corrosion.

This warranty DOES NOT APPLY to sheets exposed at any time to corrosive or aggressive atmospheric conditions, including but not limited to:

- Areas subject to salt water marine atmospheres or to constant spraying of either salt or fresh water.
- Areas subject to fallout or exposure to corrosive chemicals, fumes, ash, cement dust or animal waste.
- Areas subject to water run-off from lead or copper flashings or areas in metallic contact with lead or copper.
- Conditions/circumstances where corrosive fumes or condensates are generated or released inside the building.

This warranty DOES NOT APPLY in the event of:

- Mechanical, chemical or other damage sustained during shipment, storage, erection, or after erection.
- Failure to provide free drainage of water, including internal condensation from overlaps and all other surfaces of the sheets or panels.
- Failure to remove debris from overlaps and all other surfaces of the sheets or panels.
- Damage caused to the metallic coating by improper scouring or cleaning procedures.
- Deterioration of the panels caused by contact with green or wet lumber, or storage stain caused by water damage or condensation.
- Presence of damp insulation or other corrosive materials in contact with or close proximity to the panel.
- Deterioration to the panels caused directly or indirectly by panel contact with concrete, asphalt, gravel, dirt, mulch, or any corrosive material.
- Deterioration of the panels caused directly or indirectly by panel contact with fasteners. Selection of suitable long-lasting fasteners to be used with Galvalume roofing and siding panels rests solely with the Buyer.
- A degree of bending less than 2T for sheet gauges up to 0.030 in. and degree of bending less than 4T for sheet gauges 0.031 in. and thicker.
- Slopes of roof or sections of the roof flatter than 1/4:12.

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

The remedy for any claims on steel roofing and siding panels shall be at the discretion of Central States Manufacturing and shall be limited to refinishing or replacing the defective panels.

CENTRAL STATES MANUFACTURING SHALL NOT BE LIABLE FOR ANY LOSSES, DAMAGES OR EXPENSES WHETHER DIRECT, INCIDENTAL OR CONSEQUENTIAL, CAUSED BY OR RESULTING FROM THE USE OF DEFECTIVE OR NON-CONFORMING STEEL ROOFING AND SIDING PANELS OR FOR ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. CENTRAL STATES MANUFACTURING'S TOTAL LIABILITY IS EXPRESSLY LIMITED TO THE PURCHASE PRICE OF THE STEEL ROOFING AND SIDING PANELS PROVIDED BY CENTRAL STATES MANUFACTURING.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply in your state. This warranty provides specific legal rights and other rights which vary from state to state that may apply.

Central States Manufacturing's liability for breach of this warranty shall be limited exclusively to the cost of either repairing non-conforming, rupturing, perforating or structurally failing panels, or at CSM's sole option, of furnishing FOB Buyer's plant sufficient sheet product to enable Buyer to fabricate replacement panels for the non-conforming, rupturing, perforating or structurally failing panels. CSM shall not in any event be liable for the cost of labor expended by others on any non-conforming, rupturing, perforating or structurally failing sheet or for any special, indirect, or consequential loss of profits or any other incidental, general, special or compensatory damages to anyone by reason of the fact that such panels shall have been non-conforming, rupturing, perforating, or structurally failing.

Claims under this warranty must be made in writing to Central States Manufacturing at the address set forth below within 30 days after discovery of the defect. CSM shall have an additional 30 days to inspect the steel roofing and siding panels before any further action shall be taken. Adequate identification of material involved in the claim, including date of installation, order number, invoice number and date of shipment must be established by the Buyer.

Buyer shall exercise diligence in inspection of sheets as received from CSM so as to mitigate repair or replacement. CSM extends this warranty solely to the original owner of any structure where the material is installed. This warranty is not transferable and non-assignable. CSM reserves the right to terminate this warranty at any time (except as to orders already accepted) upon the giving of written notice thereof.

The Law of the State of Arkansas shall govern the rights and duties of the parties under this agreement and jurisdiction and venue is fixed in Benton County, Arkansas.

CENTRAL STATES MANUFACTURING MAKES NO GUARANTEES, EITHER EXPRESSED OR IMPLIED BEYOND THE FACE HEREOF, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF FITNESS AND MERCHANTABILITY, AND SHALL HAVE NO OTHER LIABILITY WITH RESPECT THERETO.



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Central States Order Number*
or Project Number

Contractor/Installer Name _____ Date _____

Owner's Name _____

Structure's Address _____

City _____ State _____

*Order Number can be found on the Material Package label and the Order Verification paperwork.

E AZ50WARRANTY131126

CENTRAL STATES FLUROPON® 40 YEAR LIMITED PAINT WARRANTY

LIMITED WARRANTY AND LIMITATION OF LIABILITY FOR CENTRAL STATES MANUFACTURING (CSM) STEEL ROOFING AND SIDING PANELS. **THIS WARRANTY COVERS FLUROPON® MATERIAL ONLY.** PRIME AND THRIFTY MATERIAL ARE COVERED BY SEPARATE WARRANTIES.

CSM is pleased to present you with our 40-year Fluoropon limited warranty.

For forty (40) years from the date of installation, the color coated finish WILL NOT crack, check or peel (lose adhesion). This does not include minute fracturing, which may occur in proper fabrication of the building parts. Failure due to substrate corrosion is excluded.

Sidewall		Roof	
Color	Chalk	Color	Chalk
5	9	6	8

SIDEWALL PANELS (for thirty (30) years from installation or thirty and one half (30-1/2) years from coating application)

- WILL NOT chalk in excess of ASTM-D-4214-98 method A D659 number nine (9) rating.
- WILL NOT change color more than five (5.0) Hunter ΔE units as determined by ASTM method D-2244-02. 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 elements.

ROOFING PANELS (for thirty (30) years from installation or thirty and one half (30-1/2) years from coating application)

- WILL NOT chalk in excess of ASTM D-4214-98 method A D659 number eight (8) rating.
- WILL NOT change color more than six (6.0) Hunter ΔE units as determined by ASTM method D-2244-02. 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 elements.

In case of a complaint, you will provide access to us and assist us as necessary in determining the exact cause of the failure. ASTM and NCCA testing procedures will be used.

If our Fluoropon® coatings fail to comply with our limited warranty, we will pay for the labor and material reasonably necessary to repaint, repair or replace, at our option, the building part showing the failure. In order for the warranty to be effective, however, you must notify us in writing of the failure within thirty (30) days of the discovery of such problem and provide any documentation we may require. If we repaint, we will use normal painting practices using the same paint system or other suitable alternatives. This warranty also applies to the part we repaint, repair, or replace, but only for the unexpired portion of the warranty period applicable to the original part.

Our LIMITED WARRANTY DOES NOT APPLY to circumstances which we do not control, including:

- Acts of God, falling objects, explosions, fire or other such similar or dissimilar occurrences beyond CSM's control;
- Unusual harmful fumes, foreign substances in the atmosphere, standing water, or salt spray;
- Improper treatment of or defects in the metal or in the fabrication;
- Stored or installed in a way that allows for poor air circulation;
- Stored or installed in a way that allows for contact with animals or animal waste;
- Mishandled Products, e.g., ANY PRODUCT THAT HAS BEEN ABUSED, ALTERED, MODIFIED, USED IN A MANNER NOT ORIGINALLY INTENDED, OR STORED CONTRARY TO OUR INSTRUCTIONS. Including a) damage to the product occasioned by condensation attributable to improper packaging, handling, shipping, processing and/or installation; b) damage due to failure of the substrate.

This warranty will apply only to metal which is coated with Fluoropon® and used on property located within the continental United States, Alaska, and Canada.

Some colors may not meet our high standards. The warranty applies only to colors that are on our approved color list. Metallics are not color measurable and are not applicable to section 1b.

For our warranty to apply, you must maintain certain records necessary to identify the Fluoropon® panels involved in a complaint. You need to make them available to us for inspection and copying.

This is our only warranty concerning the Fluoropon® products color coated finish. We have no other obligations concerning them. Please read and understand the following:

Except for this warranty, we make NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, WITH RESPECT TO OUR FLUROPON® PRODUCTS COLOR COATED FINISH. IMPLIED WARRANTIES OR FITNESS AND MERCHANTABILITY ARE EXCLUDED. Further, we have no other liability with respect to our Fluoropon® products color coated finish, whether based on warranty, negligence or any other legal theory. For example, we have no liability for consequential damages.

That is our complete warranty. It sets out all of our obligations regarding our Fluoropon® product coil coatings. It is only for your benefit and is not assignable. Such things as your purchase order forms or our acceptance forms cannot change it, but it can be changed if CSM agrees in writing.



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*Order Number can be found on the Material Package label and the Order Verification paperwork.

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**Right.
On Time.
Every Time.**

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