









# Ultra-Dek<sup>®</sup> & Double-Lok<sup>®</sup>

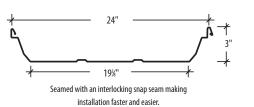
Standing Seam Roof Systems



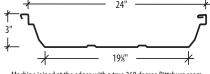




#### Ultra-Dek<sup>®</sup> Panel Profile







Machine joined at the edges with a true 360 degree Pittsburg seam, which is mechanically locked with the Double-Lok<sup>®</sup> seamer.

#### SUBSTRATE Galvalume° coated steel. Unpainted panels are acrylic coated.

#### WARRANTY

20-year finish warranty standard.

- □ SEALANT Factory applied thermal set sealant, which resists dirt accumulation and thermal separation.
- INSULATION
  - Varying thickness up to an R-Value of 38.
- WIND UPLIFT
- UL 90 rated. FM 1-60 thru 1-105 ratings available.

## Panel Specifications

- □ FASTENERS Eave = self driller with neoprene washer Endlaps = self tapper with washer Ridge = Lap Tek self driller with neoprene washer Clips to purlins = Tek 2 self driller with washer Clips to Long Bay = Tek 2 self driller with washer Trim to panel = Lap Tek self driller with neoprene washer
- LIGHT TRANSMITTING PANELS Optional skylights are available insulated or non-insulated, with or without a UL 90 rating.

INSURANCE

Our UL & FM ratings allow for reduced building insurance rates.

Engineering Properties for Double-Lok® Steel Panels													
			Top Flat in Compression			Bottom Flat in Compression							
Gauge	F <sub>y</sub> (KSI)	Weight (PSF)	lxe (IN⁴/FT)	Sxe (IN³/FT)	Maxo (IN-KIP)	lxe (IN⁴/FT)	Sxe (IN³/FT)	Maxo (KIP-IN)					
24	50	1.23	0.153	0.115	2.713	0.270	0.115	3.427					
22	50	1.56	0.207	0.162	3.567	0.363	0.150	4.488					

- All calculations for the properties of Double-Lok<sup>\*</sup> panels are calculated in accordance with the 2001 1 edition of the COLD-FORMED STEEL Design Manual - published by the American Iron and Steel Institute (AISI).
- 4. Maxo is allowable bending moment.

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- Ixe is for deflection determination.

3. Sxe is for bending.

#### 5. All values are for one foot of panel width.

Please inquire for Ultra-Dek<sup>®</sup> Engineering Properties. 6.

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#### Allowable Uniform Loads in Pounds Per Square Foot 24 Gauge (F<sub>v</sub> = 50 KSI) (Standard) SPAN IN FEET SPAN LOAD TYPE TYPE 2.5 3.0 3.5 4.0 4.5 5.0 5.5 1-SPAN LIVE LOAD 142 119 102 89 79 71 65 LIVE LOAD 2-SPAN 128 107 91 80 71 64 58 3-SPAN LIVE LOAD 146 121 104 91 81 73 66

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#### 22 Gauge ( $F_v = 50$ KSI) (Optional)

4-SPAN

SPAN TYPE	LOAD TYPE	SPAN IN FEET								
		2.5	3.0	3.5	4.0	4.5	5.0	5.5		
1-SPAN	LIVE LOAD	215	180	154	135	120	108	98		
2-SPAN	LIVE LOAD	207	172	148	129	115	103	94		
3-SPAN	LIVE LOAD	235	196	168	147	131	118	107		
4-SPAN	LIVE LOAD	226	189	162	141	126	113	103		

1. Allowable loads are based on uniform span lengths and panel yield strength (Fy) = 50 ksi.

LIVE LOAD is limited by bending, shear and combined shear & bending. Above loads consider a maximum deflection ratio of L/180. 2. 3.

LIVE LOAD

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THE ABOVE LOADS ARE NOT FOR USE WHEN DESIGNING PANELS TO REDUCE WIND UPLIFT.

5. Weight of the panel has not been deducted from allowable loads. Please contact manufacturer or manufacturer's website for most current allowable wind 6. uplift loads.

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7. The use of any field seaming machine other than that provided by the manufacturer may damage the panels, void all warranties and will void all engineering data

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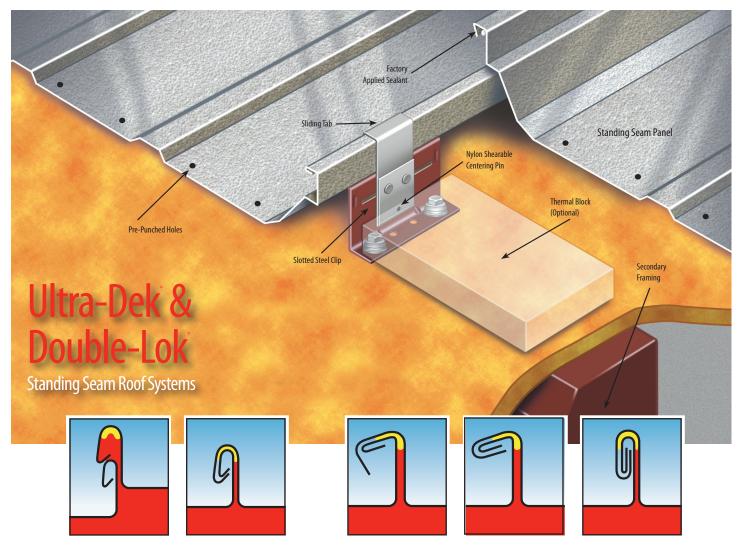
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Ultra-Dek<sup>®</sup> Seamed with an interlocking snap seam making installation faster and easier.

- Floating Roof: Designed to eliminate the damage caused by thermal expansion and contraction.
- Fire Resistance Rating: UL "Class A" Fire Rating.
- UL 90 Rating: Over 7 different UL 90 construction numbers, each available with several options.
- FM: "Class 1" Standards: The Double-Lok<sup>®</sup> roof has met the rigorous "Class 1" standards for fire, wind, foot traffic, hail damage resistance and water leakage resistance.
- Flexibility: Wall covering can be erected before or after the roof is installed.
- Durability: Every unpainted panel is manufactured from acrylic coated Galvalume Plus<sup>®</sup>.
- Colors & Finishes: Panels are available in 22 popular colors.

### Double-Lok®

Machine joined at the edges with a true 360 degree Pittsburg locked seam, which is mechanically locked with the Double-Lok\* seamer.

- Prepunched: Our prepunched system, combined with self-engaging back-up plates, ensures panel modularity and speeds up roof installation.
- Acceptance: The most utilized standing seam roofing system. One million square feet of Ultra-Dek<sup>®</sup> and Double-Lok<sup>®</sup> ship weekly.
- Quality Control: Superior panel finish quality control from corporately owned coating operations.
- R&D: The most comprehensive research and development program in the industry, including UL and FM in-house testing.
- Design: Designed to avoid water and debris build-up and panel scoring.
- Training: Superior installation training programs which include a "Certified Installer" program.

# The most popular and accepted standing seam roofing system sold today. Demand the best!

#### Life Cycle Costing

The most important measure of the cost efficiency of a roof system is life cycle costing. MESCO standing seam roofs are virtually maintenance free for 30 years. Conventional roofing requires much more maintenance and generally needs to be replaced in 8–12 years. Standing seam roofing is vastly more resistant to ultraviolet breakdown than conventional roofs, giving our roofs much greater longevity.

#### Weathertightness

MESCO standing seam roof systems are designed to accommodate roof expansion and contraction caused by daily and seasonal temperature changes. The special slotted clip panel attachment allows the roof system to float. Ultra-Dek<sup>\*</sup> and Double-Lok<sup>\*</sup> essentially eliminate fastener penetrations—the major cause of most leaks in metal roofs.

#### **Energy Efficiency**

MESCO standing seam roof systems easily accommodate all thicknesses of roof insulation. Optional thermal blocks eliminate the short

circuit associated with compressed insulation over the purlins. MESCO standing seam roofs have received Energy Star<sup>\*</sup> ratings, assuring the customer of an energy efficient roof system.

#### **Material Longevity**

Ultra-Dek<sup>\*</sup> and Double-Lok<sup>\*</sup> panels are available in 24 or 22 gauge and Galvalume Plus<sup>\*</sup> or MESCO's superior Signature<sup>\*</sup> 300 finish. Galvalume Plus<sup>\*</sup> combines Galvalume<sup>\*</sup> with an acrylicbased polymer resin coating, a safer surface than the traditional oil coating. The acrylic coating also offers more resistance to marring and marking than oil-coated Galvalume<sup>\*</sup>.

MESCO's Signature<sup>®</sup> 300 is a premium fluorocarbon paint system. Signature<sup>®</sup> 300 coating is formulated with Kynar 500<sup>°</sup>/ Hylar 5000° polyvinylidene fluoride resin and modified with a proprietary resin for toughness. This long-life finish offers the ultimate in color retention, film flexibility and durability. A standard 20-year finish warranty is available for all MESCO panels.

#### **Research & Development**

MESCO tests its standing seam panels for Underwriters Laboratories (UL) and Factory Mutual (FM) compliance in its own research and development facility in Houston, Texas. MESCO's parent company, NCI, has built an authorized replica of the UL test chamber and a working model of the FM test chamber, making it the only company that has made this commitment to ensure the performance of its standing seam roofing systems.

### Double-Lok<sup>®</sup> Seaming Machine

MESCO's popular Double-Lok<sup>®</sup> field seamer is easy to maneuver. The seamer comes with

a quick release handle that allows the installer to remove the machine from a seam in under five seconds. In addition, nylon rollers are used to make the Double-Lok<sup>\*</sup> seam, avoiding the scoring and potential rusting of panels associated with seamers with metal rollers.

#### Maintenance

MESCO standing seam panels assure adequate drainage from snow and rain, effectively solving ponding problems that can occur with flat

built-up roofs. MESCO standing seam panels have fluted minor ribs that are parallel to the major ribs. This prevents water and debris

build-up that can take place on roofs with horizontal fluting.

## The BEST coverage you can

## have on your building!

#### Installation

The entire design of the standing seam roof system has the MESCO installer in mind. In addition to eliminating the oil coating on its standing seam roof panels, MESCO has developed an easy to follow installation manual —written in Spanish and English—with

step-by-step instructions for the installation process. Proper installation is most important to ensure weathertightness and performance

of your standing seam roof. MESCO offers, by far, the most comprehensive installation train-the-trainer program in the industry to make sure that your roof is being installed properly. These classes include hands-on installation at MESCO's state-of-the-art training facility in Houston.

From training and certification, through research and development, to the nation's largest network of manufacturing facilities, MESCO's Ultra-Dek<sup>\*</sup>

and Double-Lok<sup>\*</sup> standing seam roof systems provide you with the best value and quality available today.



PEOPLE BUILDING SOLUTIONS

"MAKING BUILDINGS THAT MAKE OUR BUILDERS THE BEST"