



Prices subject to change at any time. Ohana Steel Buildings reserves the right to correct errors or omissions in this proposal.



Molokai Department of Land and Natural Resources

Building Model # UHAW 90275727
Pre-Engineered Building Kit

October 11, 2022



Ohana Steel Buildings
A Distributor of OutBack™ Buildings

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See our on-line instruction manuals and
construction videos at
www.ohanasteelbuildings.com

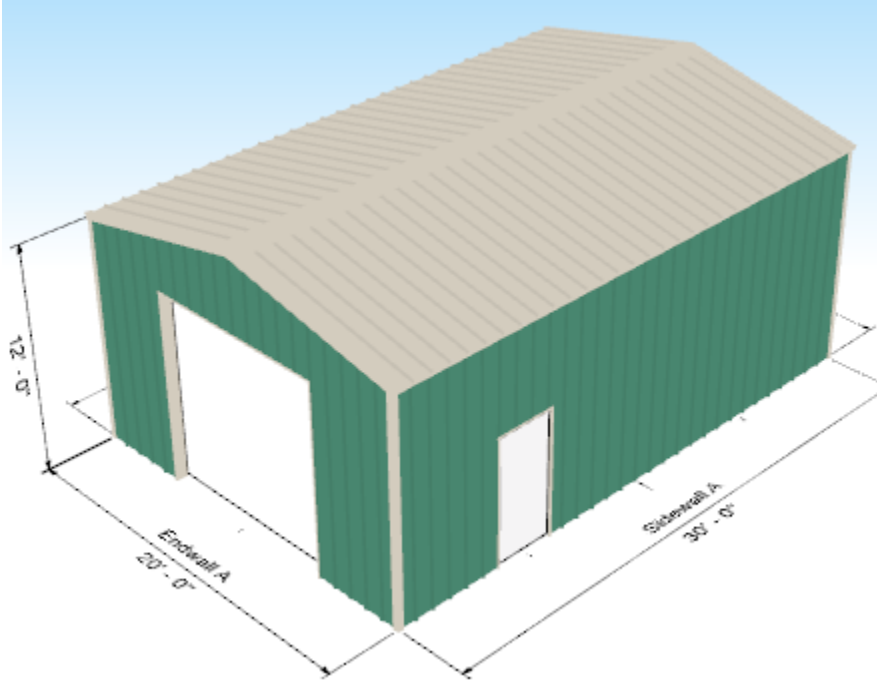


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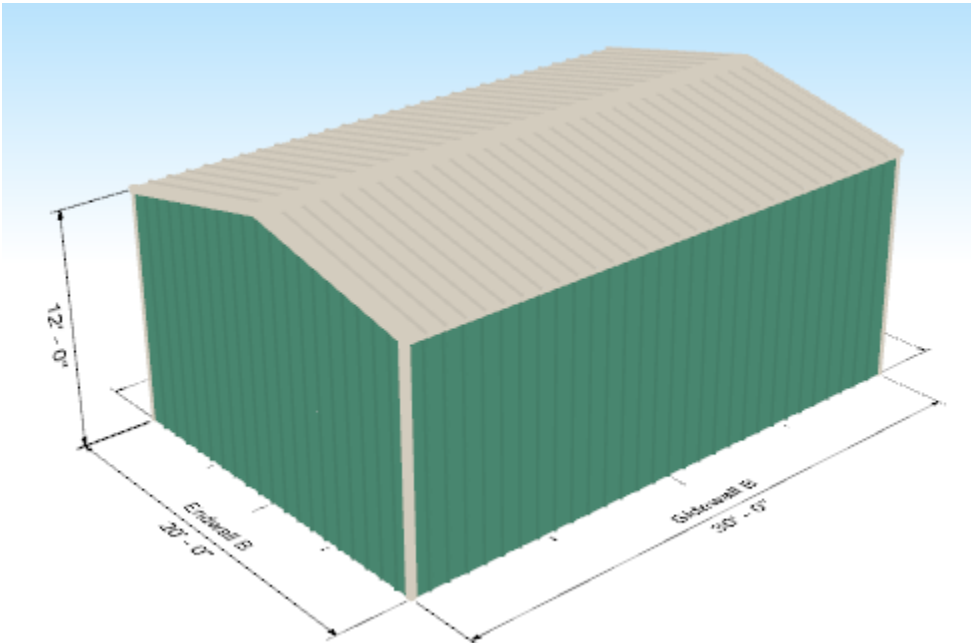


Building layout

3-D view - Side A



3-D view - Side B

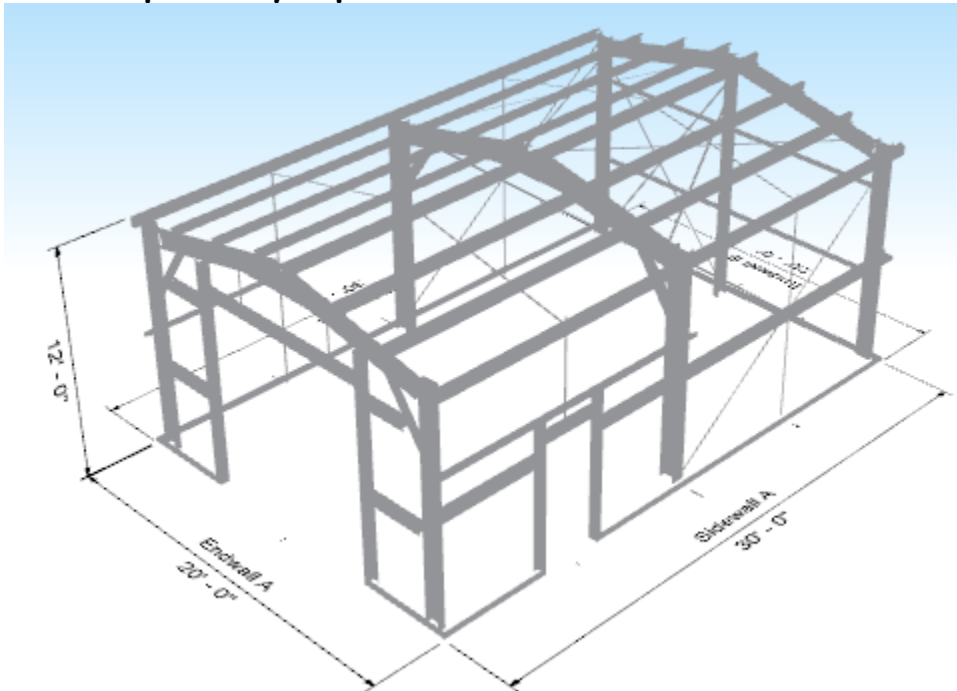




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Building frame showing girts and purlins - interior is completely open



Foundation estimate for your building

Sidewall Foundation Estimate:	4" slab with 1' - 0" deep and 1' - 0" wide thickened edge, with (1)-#4 reinforcing at the top of the slab edge, and (1)-#4 reinforcing at the bottom of the slab edge
Endwall Foundation Estimate:	4" slab with 1' - 0" deep and 1' - 0" wide thickened edge, with (1)-#4 reinforcing at the top of the slab edge, and (1)-#4 reinforcing at the bottom of the slab edge



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Price includes all items specified. Payment in full is required for order. Credit card payments are accepted.

	Description	Price
Kit Price	Price for kit with all listed included items	\$ 35,000.00

All building components will be delivered in approximately 6 weeks to your jobsite in a container. Container must be unloaded by customer and ready for pickup within 7 days. A forklift will be required at customer expense.

Roll-up door may come as a separate shipment depending upon fabrication schedules.



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The building footprint is 600 square feet 20' wide by 30' long and 12' high at the eave. Roof pitch is 2.55"/12" with peak at ~14'. The risk category II building is engineered for wind speed 120 exposure C following 2018 IBC building codes. Foundation is monolithic slab and building is one story. Building frame attaches to slab with anchors, not wet-set J bolts.

Building is made of G90 cold rolled galvanized steel. Your building arrives pre-cut and pre-punched for easy bolt together and self-taping screw assembly. Our buildings require no welding and minimal cutting on site. Minimal cutting includes but is not limited coping knee and apex braces. No shear wall is required - roofing and siding attach directly to structural steel.

Our building system is based upon bays. Your building has 2 side bays and multiple end bays. Our buildings use knee and apex braces for structural support, eliminating the need for trusses or I-beams.



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Included in price - everything you need for the building shell on your foundation:

1. Hawaii State engineer stamped structural drawings and calculations including foundation plan and specifications.
2. Building frame components made from G90 galvanized cold rolled steel. Each piece is specifically marked for exact location during construction.
3. Formed base angle fitted to lay on top of slab correctly aligning wall sheeting.
4. PBR 24-gauge siding and roofing with Kynar 500 finish.
5. Versa vent breathable closure strips for ridge cap, formed closure strips for other areas creating a sealed building.
6. Galvanized screws, bolts, and fasteners for erection.
7. One 10' wide by 10' high Janus model 1000 roll-up garage door
8. One Tell/Spectrum Brand pre-hung steel personal door with lever handle and deadbolt lock
9. Building components consolidated in a container delivered to jobsite



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Versa vent breathable ridge vent closure strips



Color chart for roofing, siding, and trim.

PVDF Paint System

Snowdrift White (W81)	Linen White (81)	Sandstone (W51)	Parchment (W74)	Taupe (74)
Khaki (88)	Medium Bronze (H4)	Weathered Copper (W50)	Mansard Brown (133)	Dark Bronze (50)
Ash Grey (25)	Old Town Grey (W25)	Old Zinc Grey (W29)	Slate Grey (W38)	Matte Black (106)
Aged Copper (65)	Patina Green (W58)	Hemlock Green (M7)	Classic Green (66)	Felt Green (W66)
Patriot Red (73)	Terra Cotta (W72)	Colonial Red (W75)	Brandywine (P8)	River Teal (59)
Metallic Silver (K7)	Champagne Metallic (168)	Mistiqe Plus (W31)	Copper Penny (W92)	Antique Patina (M1)
Tahoe Blue (W71)	Ocean Blue (35)	Regal Blue (W35)	Galvalume® (41) Non-painted Finish	CRRC RATED PRODUCT





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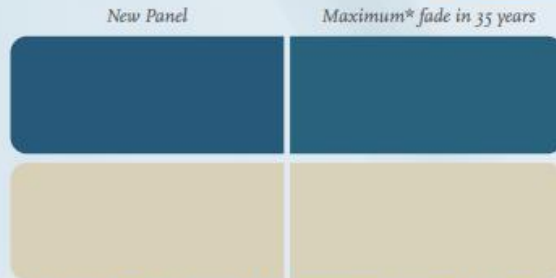
24-gauge roofing and siding is included

PVDF (Kynar 500) Finish

THE WINNING DEFENSE AGAINST NATURE'S OFFENSE

35 Year
COLOR PERFORMANCE
Warranty

Metal Sales PVDF (Kynar 500®) finish couples premium ceramic pigments with fluoropolymer resins for long life resistance against color fading and chalking. As a result color performance is warranted for a full 35 years in accordance with ASTM test standards. All metal panel finishes will fade with years of sun exposure. However, panels from Metal Sales with PVDF (Kynar 500) will look almost as good years from now as they did in their first year. Visit www.metalsales.us.com for complete warranty details.

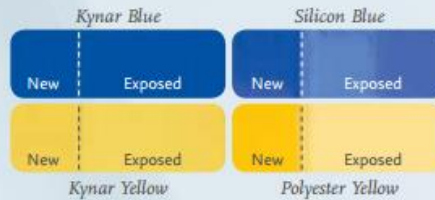


35 YEAR KYNAR 500 FADE PERFORMANCE CHART

* Based on extreme, real outdoor, south Florida exposure performance data; exposure conditions in more northerly climates will likely demonstrate greater performance (less fade). This chart represents a maximum allowable fade over thirty-five years measured as five Hunter units. This chart is a mechanical representation and may vary slightly from actual test panels.

KYNAR COMPARED TO OTHER COATINGS

Blue: 15 years exposure Yellow: 17 years exposure



With excellent exterior durability this PVDF steel panel color coating will keep you in the game right into overtime. PVDF (Kynar 500) coated panels from Metal Sales Manufacturing provide such an outstanding defense against ultraviolet radiation that they are warranted for 35 years against chalking and fading.

This exceptional color and gloss retention is not possible with any other coating available today.

Also warranted against blistering, cracking and peeling for 45 years, PVDF (Kynar 500) coating is architect preferred and your best defense against the rigors of nature and atmospheric pollution.



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metal sales
manufacturing corporation

45 Year
DURABILITY
Warranty

Demonstrating its competitive edge, PVDF (Kynar 500) performance leads the league in defense against the sun, weather and pollution. Its carbon-fluorine chemistry creates one of the strongest bonds in the universe. It is warranted against blistering, cracking and peeling for 45 years. Visit www.metalsales.us.com for complete warranty details.

PVDF (Kynar 500) Coating System

The PVDF (Kynar 500) system is tougher than just the front line; its superior performance is a result of a layered, fluoropolymer bonded coating system, each component layer providing a unique performance characteristic.

Topcoat | Premium ceramic and inorganic pigmented PVDF (PolyVinylidene DiFluoride) for exceptional color durability and gloss retention

Primer | UV & moisture resistant modified polyester, provides corrosion resistance and bonding

Chemical Rinse | Acts as a sealer providing additional corrosion protection

Pretreatment | Promotes adhesion, moisture and corrosion resistance

Galvanized or Galvalume® | Barrier protection on base steel, inhibits corrosion

BARE STEEL | Mill certified meeting ASTM standards

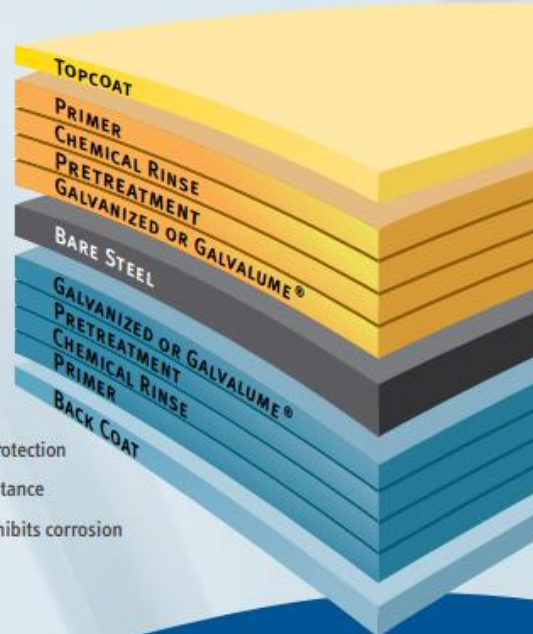
Galvanized or Galvalume®

Pretreatment

Chemical Rinse

Primer

Back coat | Finish coat on backside, covers primer and insures consistent color



Cool Roofing

Reduce building energy use by up to 50% with select PVDF (Kynar 500) colors

Metal Sales recognizes that architects and consumers are becoming more and more concerned with ways of making their building project more energy efficient. All of Metal Sales' PVDF (Kynar 500) colors are ENERGY STAR® listed. They use special pigments for solar reflectance to meet ENERGY STAR guidelines. These

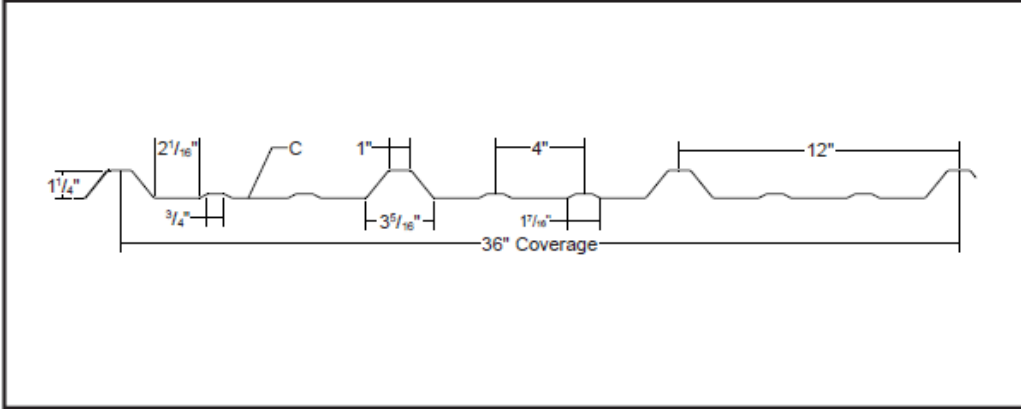
Metal Sales roof panels are "Eligible Building Envelope Components" that



qualify for tax credits for consumers and LEED (Leadership in Energy and Environmental Design) credits for architects. See www.metalsales.us.com for complete details and certificates.

PBR-PANEL

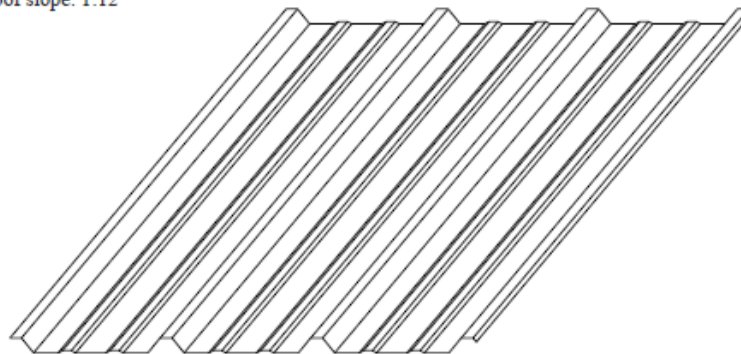
CONDENSED TECHNICAL REFERENCE



COMMERCIAL INDUSTRIAL PANEL
DIRECT FASTEN
36" COVERAGE
MINIMUM SLOPE 1:12
OPEN FRAMING OR SOLID SUBSTRATE

PANEL OVERVIEW

- ▶ Finishes: Kynar 500 (PVDF), MS Colorfast45®, and Acrylic Coated Galvalume®
- ▶ Gauges: 26ga and 24ga standard, 22ga optional
- ▶ 36" panel coverage, 1 1/4" rib height
- ▶ Applies over open framing or solid substrate
- ▶ Exposed fastened metal building panel
- ▶ Trapezoidal rib on 12" centers
- ▶ Minimum roof slope: 1:12



TESTING

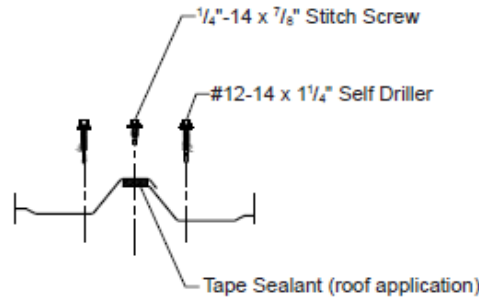
- ▶ UL 2218, Class 4 Impact Resistance
- ▶ UL 790, Class A Fire Resistance Rating
- ▶ Florida Building Code Approved 7490.3, 9482.3
- ▶ UL 580, Class 90 Wind Uplift Construction #161
- ▶ Miami-Dade County Approved Roof: 03-1210.03 Wall: 03-0430.08



PBR-PANEL

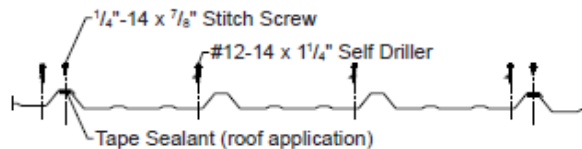
CONDENSED TECHNICAL REFERENCE

ATTACHMENT DETAIL

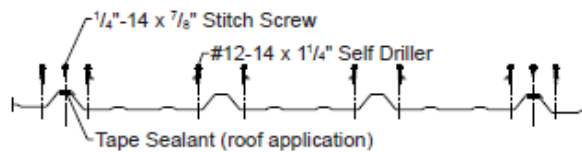


FASTENING PATTERNS

Field of Panel



Ends of Panel



GENERAL INFORMATION

- ▶ **Slope**
The minimum recommended slope for PBR-Panel is 1:12. Metal Sales recommends that in all roof applications, sealants be used on all sidelaps with stitch screw 1'-0" on center.
- ▶ **Substructure**
PBR-Panel is designed to be utilized over open structural framing, but can easily be used with a solid substrate. To avoid panel distortion, use a properly aligned and uniform substructure.
- ▶ **Coverage**
PBR-Panels are available in a 1/4" rib height with a coverage width of 36".
- ▶ **Length**
Minimum factory cut length is 5'-0". Maximum recommended panel length is 45'-0". Longer panels require additional consideration in packaging, shipping, and erection. Please consult Metal Sales for recommendations.
- ▶ **Fasteners**
The fastener selection guide should be consulted for choosing the proper fastener for specific applications. Quantity and type of fastener must meet necessary loading and code requirements.
NOTE: All panels are subject to surface distortion due to improperly applied fasteners. Overdriven fasteners will cause stress and induce oil canning across the face of the panel at or near the point of attachment.
- ▶ **Availability**
Finishes: Acrylic Coated Galvalume®, MS Colorfast45®, or various Kynar 500 (PVDF) colors.
Gauges: 26ga and 24ga standard, 22ga optional

SECTION PROPERTIES								ALLOWABLE UNIFORM LIVE LOADS PSF (3 or More Equal Spans)											
Ga.	Width (In.)	Yield KSI	Weight PSF	Top In Compression		Bottom In Compression		Inward (Gravity / Deflection) Load						Outward Uplift (Stress) Load					
				I _{xx} In ⁴ /ft	S _{xx} In ³ /ft	I _{xx} In ⁴ /ft	S _{xx} In ³ /ft	2'	3'	4'	5'	6'	7'	2'	3'	4'	5'	6'	7'
26	36"	80	0.91	0.0360	0.0358	0.0313	0.0452	256	127	74	49	34	23	217	104	60	39	27	20
24	36"	50	1.17	0.0560	0.0578	0.0457	0.0613	330	153	88	57	39	29	314	145	83	53	37	27
22	36"	50	1.51	0.0800	0.0856	0.0633	0.0813	451	206	117	75	52	39	472	217	123	79	55	40

1. Theoretical section properties have been calculated per AISI 2001 "Specification for the Design of Cold-formed Steel Structural Members." I_{xx} and S_{xx} are effective section properties for deflection and bending.
2. Allowable load is calculated in accordance with AISI 2001 specifications considering bending, shear, combined bending and shear, deflection, and applicable testing when available. Allowable load considers the worst case of 3 and 4 equal span conditions. Allowable load does not address web crippling or fasteners/support connection and panel weight is not considered.
3. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
4. Allowable loads do not include a 1/3 stress increase in uplift.



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Doors with options are included as listed and come in ADA approved width.

Tell
Manufacturing, Inc.

TELSTAR DOORS

Pre-hung door and frame assembly
161 lock prep
Deadbolt ready
ADA compliant threshold
Sweep and seal
Threshold flashing detaches for optional installation
Door reinforced for closer
Insulated core
Left or right hand reverse door
20 gauge galvanized door
18 gauge galvanized frame
Non-removable hinge pin

3 COLORS Available:

Grey Bright White Off White

Actual colors may vary from those shown due to limitations of the production process.

DETACHABLE THRESHOLD FLASHING

(Patent pending)

TELL MFG follows the same set of performance specifications as other door manufacturers, as set forth in the Steel Door Institute (SDI) requirements.

Roll-up doors are included as listed

JANUS

[International]

Janus International has once again raised the bar with the Model 1000 commercial door. The Pre-Assembled Industrial Door (PAID) features the traditional dependability and sturdiness of a commercial door, while significantly saving time and money during installation. How? The push-up operation comes with brackets and tensioner pre-assembled. The reduced drive chain hoist operation is delivered with brackets, tensioner, gears and chain drive pre-assembled on the door. In addition, door and guides install to jamb as a single assembly. Pre-assembly from the factory means less time spent on installation, therefore saving you money. Backed by a one year warranty, our PAID Model 1000 is a solid and economical investment for commercial/industrial usage.

FEATURES



The 26 gauge corrugated door curtain is manufactured from full hard galvanized grade 80 steel and coated with Super Durable Polyester paint that is backed by a 40 year film integrity and a 25 year no-face limited paint warranty. Available in sizes up to 12'0" x 14'0" and in over 20 different colors.

Tough, durable, wide, heavy-duty nylon stripping controls curtain stretch and works in conjunction with the vinyl guide strip to reduce wear and deaden sound.



The slide bolt lock assembly affixed to the bottom bar at each end of the door curtain fastens through the guide to securely keep the door locked and in the down position. Padlocks can be attached to the slide to further secure the door. Bulb astragal is standard on all doors.

The flat door stop slide makes installation quicker. Simply slide through the holder on the guide and affix with a fastener.



9 1/2" diameter drums allow for lower headroom requirements. An enclosed barrel houses the dead axle assembly and protects the factory-lubricated springs from direct contact with environmental elements. The inherent strength provided by the spiral barrel minimizes axle deflection, providing smoother operation. Because the curtain is attached by screws and not seamed to the barrel, cost-effective replacement of either independent assembly is quick and easy.

Grease-filled, shielded radial ball bearings at the drums provide longevity and smooth operation. Drums are embossed for rigidity.



The Janus ratchet tensioning device supplied as standard equipment on our door offers a simpler method of tensioning, while more accurately fine tuning all the springs on the door at the same time. There is no extra hardware required. Eight different positions on the tension wheel allow one to perfectly balance the door every time. There are no pins required to hold the tension on the spring. You simply just click it.



A 4:1 reduced drive chain hoist offers smoother operation on doors over 10'0" wide or 10'0" tall. Chain hoist comes pre-assembled on door.





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superior product + recognized value

Three manufacturing facilities located throughout the United States and a team of experienced door experts are available to assist you with any of your door needs.

1000

commercial

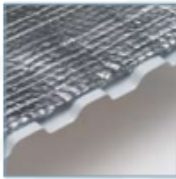
One year warranty on workmanship and material.



Factory-installed galvanized reinforced 12 gauge brackets are designed to easily snap onto the guides, reducing installation time.

OPTIONS

Roll•a•matic electric operators are internally enclosed in the barrel to provide quiet and reliable operation. The operator's design is compatible with transmitters and receivers, pneumatic sensing edges and other electric operation accessories. Right side operation only. Auxiliary operator hand chain not available.



Insulation is made of a foil-backed, dual-layer polyethylene air-bubble insulation secured in place with a strong adhesive and joined by mylar film to provide an R value of 4 (top draft stop and side draft stops are also included). Model 1000I only.



The top draft stop mounted to the door curtain provides a 2 3/4" weather seal between the door and the header.



The header seal attaches directly to the header and extends up to 5" to the door curtain to form an effective barrier from environmental elements.

GUIDE DETAILS

Universal mount 2" deep 16 gauge galvanized steel guides require no pre-installation modifications for wood, steel, concrete or masonry block applications. Guides have deeper engagement, which allows the curtain to stay in place under more severe wind conditions.

