

STEELMASTER BUILDINGS

AGRICULTURAL STORAGE

PRODUCT GUIDE







STEELMASTER® BUILDING SYSTEMS

Agricultural Storage

Steel Buildings for Farming & Agriculture

SteelMaster Buildings understands that both time and money are important to any farm's success, so we have the ability to design a steel agricultural building that is the perfect solution for your storage needs.

We offer a wide range of customizable agricultural storage buildings that come in different models and sizes. Our agricultural building kits have been used to store large tractors and other equipment, hay storage, sand storage, grain storage and much more.

Not only do we offer prefabricated kits, our talented team of professional building specialists can customize a structure to fit your needs and budget.

One of the most popular benefits of owning a Quonset Hut storage building is the 100% usable space. Every SteelMaster building is self supporting, which leaves plenty of room on the interior to easily store large items and plenty of products.

When you're looking for a structure that is versatile, durable, and reliable, SteelMaster's agricultural buildings are the top choice.





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Agricultural Storage Projects













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Steel Building Construction



Step 1: Build Arch on the Ground



Step 2: Lift Arch & Guide with Rope



Step 3: Bring Arch to Vertical Position



Step 4: Set Arch in Place/Secure to Foundation



Step 5: Raise Remaining Arches

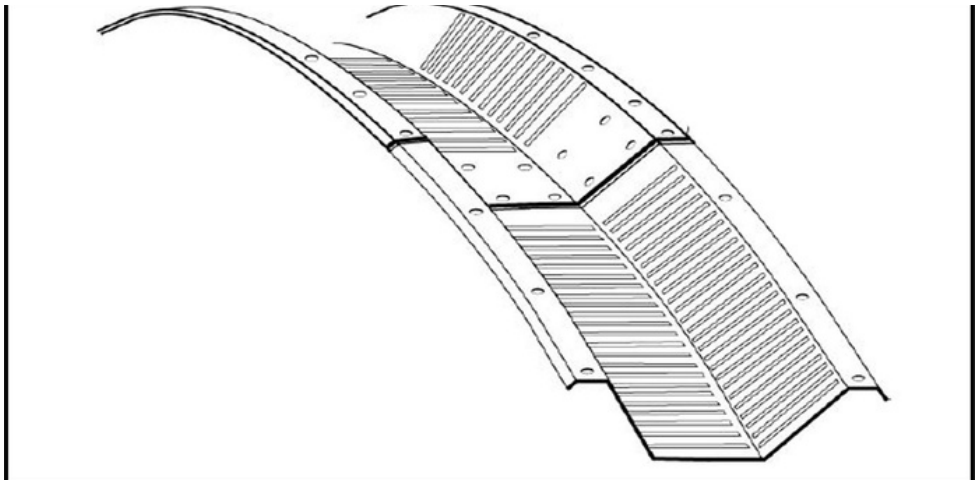


Step 6: Complete Building

**Keyway foundation is standard on all buildings. Industrial Base foundation plate option is for illustration purposes only.*

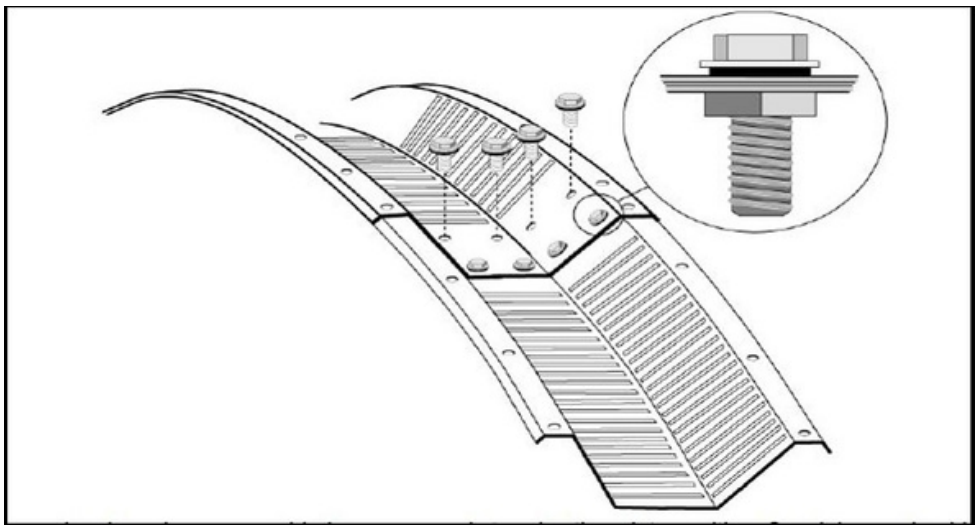
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Arch Construction



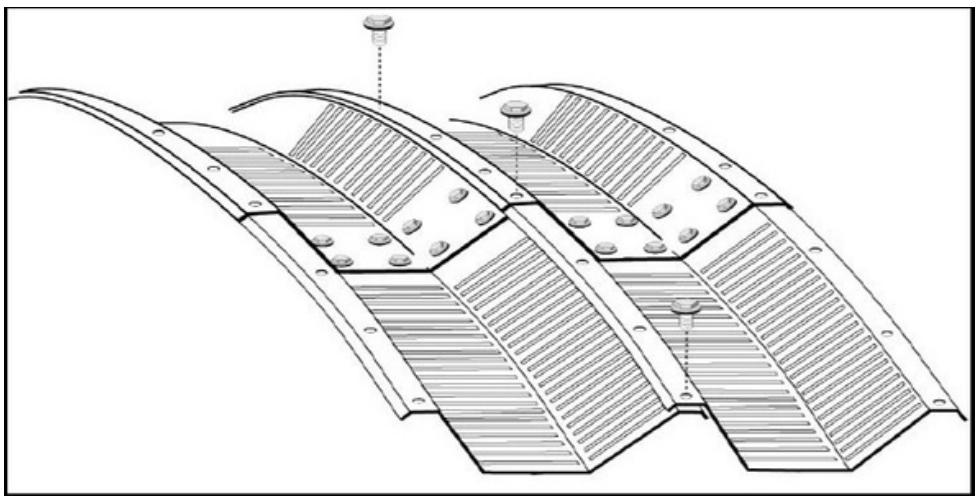
Arches are put over each other with an overlap of 9 inches

- All panels are pre-cut to fit



Connecting panels with commercial grade nuts & bolts

- All holes are pre-punched



Connecting arch to arch during construction

- 3.5" radius overlap ensures tight seal

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Capability Statement

Company Designations:



- GSA Number GS-07F-0458T
- FL Product Approval #FL-15623-R4
- Cage Code: 8A2W4
- Duns Number: 555569065
- NAICS: 444190, 332311
- SIC Code: 3448
- CSA - A660 QA
- CE Marking Certification: 2797 CPR 734085
- High Velocity Hurricane Zone Certified (HVHZ)

Company Overview:

SteelMaster is a manufacturer and distributor of prefabricated steel storage buildings with an emphasis on clear span arch structure design. The company has been in business since 1982. SteelMaster provides structures ranging from sheds to garages, workshops to warehouses as well as complex custom designs for architects and the government/military. SteelMaster has delivered more than 50,000 buildings throughout the United States and on 6 continents worldwide.

Product Capabilities:

- Specialize in buildings from 10' to 150' wide to any length.
- Buildings are clear span and easy to assemble.
- Buildings can be portable and/or designed to be liftable.
- Galvalume Plus ® is maintenance free with a 40 year mill (ArcelorMittal NYSE MT) & manufacturer-backed warranty.
- In-house factory design and engineering.
- Designed to meet wind, snow and seismic load requirements worldwide (subject to local variations).
- Rapid turn around on high priority projects.
- International distribution expertise.

U.S. owned & operated | A+ BBB Rated | GSA Contract GS-07F-0458T | Florida Product Approval FL-15623-R2 | High Velocity Hurricane Zone Certified | Energy Star Rated LEED | 2797 CPR 734085

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About Our Steel





- Gauge 22-14
- Galvalume Plus ® coating (dry coating, composed of 55% Aluminum and 45% Zinc)
  - Qualified as an approved roof product by the U.S. EPA-ENERGY STAR Program.
  - Latest technology in coating
  - Clear organic coating
  - Achieves greater protection to the steel
  - Roll-formed dry to eliminate the need for rolling lubricants which are susceptible to smudging, smearing and fingerprinting due to oil coating
  - Superior resistance to storage stains
  - Natural reflector of heat

- Commercial grade 50,000 and 80,000 psi steel
  - Strongest in the industry
  - Highest Yield and Tensile mechanical properties
  - 40-Year Steel Mill (ArcelorMittal NYSE MT) & Manufacturer-Back Warranty
  - 40-year rust perforation warranty backed by the steel mill

Transporation:
Your SteelMaster building will arrive on a flatbed truck. It can easily be unloaded by hand or by using a forklift. International delivery may vary.







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Technical Specs & Certifications

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Design Requirements:

"International Building Code"; as required

Design Criteria: This cold-formed steel building shall be designed based on the "International Building Code", published by the International Code Council, the "North American Specification for the Design of Cold-formed Steel Structural Members", published by the American Iron and Steel Institute (AISI), and the "Minimum Design Loads for Buildings and Other Structures", published by the American Society of Civil Engineers (ASCE 7).

Harmonized Standard:

CE Marking: EN 1090-1:2009+A1:2011 - Execution of steel structures and aluminum structures. The design, manufacturing (including welding) and installation of structural work in steel up to and including Execution Class 2.

All designs and calculations will be stamped by a licensed Professional Engineer.

Size and fabricate wall and roof systems free of distortion or defects materially detrimental to appearance or performance.

The structures are designed to meet code requirements in effect at the time of purchase. Unless otherwise requested, it will maintain a clear span with no immediate vertical supports and no intrusion on the floor area.

The structure shall comply with the current version of AISC, AISI, NEMA and ASTM specifications at the time of manufacturing.

Storage and Handling:

Materials delivered to the site shall be immediately unloaded and stored on site in a clean, dry environment, stored at least 6" above ground in a secure area, well ventilated, protected from the weather and secure from leaning or toppling in accordance with storage guidelines supplied.

Warranty:

SteelMater provides a written, manufacturer and steel mill (ArcelorMittal NYSE MT) backed 40-year non-prorated warranty for rust protection due to oxidation of the metal arch building.

Materials:

Unless otherwise specified, all standard metal components of the structure including, but not limited to, the arch panels, end wall panels, sliding doors, service doors, door frames, headers, wind and snow bracing, specialty foundation base connectors, and other framing materials are fabricated from Heavy Commercial AZM180/AZ60 minimum triple spot Galvalume Plus steel, in accordance with ASTM A792 & A792M.

Grade Steel	Gauge	Yield Strength (min. ksi)	Tensile Strength (min. ksi)
80	22 & 20	80,000	82,000
50	14, 16, 18	50,000	65,000

Arch Panels: Arch panels shall be precision cold-formed and manufactured to specifications of exacting form and fit. Each arch panel shall be 7.5" or 9.75" deep corrugation with cross corrugations to produce the required curvatures. Arch panels shall be pre-cut, die-punched, and designed to overlap and align perfectly with each adjacent panel. Bolt holes shall be punched 6.9375" apart down each seam with a double row of holes at 9" overlap to create a weather tight seal Dimensions above are design dimensions which may vary within tolerable production and construction allowances. Said tolerances also provide enhanced ease of construction.

Hardware:

I. Bolt: Zinc Aluminum Hex Flange; Nominal Diameter 5/16" x 3/4" (18 threads/inch). Bolt consists of hex flange with an indented head to receive the pre-set sealing washer.

Mechanical Properties	(Optional) Grade 2 (SAE)
Tensile Strength	74,000 psi
Yield Strength	57,000 psi
Proof Load Test	55,000 psi
Coating	JS1000 hour

II. Sealing Washer: Low-Density Polyethylene Washer.

The washer is pre-set into the bolt and when fastened properly, it will fit within the bolt's head, sealing the bolt to the building and ensuring a watertight fit.

Properties of polyethylene washers:

Tensile Strength: up to 2,000 psi
Water Absorption Potential: less than 0.04% when fully exposed and submerged.
Brittleness Temperature: When exposed to less than -180F for prolonged periods.
Softening Temperature: When exposed to 212F for prolonged periods.

III. Nut: 5/16" Serrated Hex Head Locking Nut - Grade 5

Coatings:

Unless otherwise specified, the structure shall be produced from AZM180/AZ60 Galvalume Plus steel. The Galvalume Plus coating, which is applied by the continuous hot-dip process, shall be an alloy consisting of approximately 55% aluminum, 43.4% zinc, and 1.6% silicon by weight.

Galvalume Plus has a clear, organic resin coating, which is applied to both sides. Once applied, the coating is then thermally cured. Galvalume Plus provides a bright, attractive appearance with a find spangle and gentle sheen. It also reduces the need for lubricating oils during panel-forming which can be dirty and slippery.

Test results qualifed Galvalume Plus coated steel as an approved roof product by ENERGY STAR Program, both for low-slope and high-slope applications. On newly-manufactured Galvalume Plus, heat reflectivity was also rated above the minimum EPA requirement of 0.65. For weathered roofs over three years of age, the solar reflectance also exceeded the minimum EPA requirement of 0.50 for maintenance.

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