Big Bin Series
M40 - M48 (131' - 157')

BEHLEN
GRAIN SYSTEMS

Engineered to a Higher Standard
Behlen does it BIGGER and BETTER.

**BIG BIN® SERIES**

Behlen is proud to introduce the Big Bin® series designed for high capacity operations. As with our entire line of equipment, Behlen includes outstanding features, with an extensive history of excellence in design, quality, and service. The Big Bin® Series includes clear-span roof structures and capacities of more than 1,500,000 bushels of storage. In addition to larger capacities, the Big Bin® series has higher load ratings, and larger equipment mounting areas, all with the Behlen reputation of sturdy, long-lasting construction. The clear-span roof system allows for an open floor to improve unloading efficiencies which adds to bottom-line profitability.
UNMATCHED ROOF SYSTEM

The Big Bin® Series offers an enormous, clear span roof system designed for strong winds, snow loads, temperature cables and high volume filling equipment. The 30° roof allows for optimum filling, and the huge deck at the peak easily accepts today’s ever larger catwalks and higher capacity filling equipment.

The 11” or 15” deep continuous I-beam rafters from eave to peak provide a strong framework for roof loads. The compression beams, tension pipes, and zee-spreaders supplement the rafters to develop maximum load-carrying capacity. This roof system is capable of supporting uniform loads of 50,000-70,000 lbs. (depending on model) at the peak and 40 lbs. per sq. ft. ground snow load.

INNOVATIVE ROOF DESIGN

The Behlen roof is supplied with many exclusive features that work together to provide a strong system that keeps the weather out and grain secure. This system uses a “standing seam” panel (right) to elevate the roof fasteners above the roof valley, reducing the potential for leaks. The 3½” tall, four step ribs provide additional strength, and are roll formed for a precise fit.

The roof panels are attached to the roof skeleton with standing seam roof straps (above) minimizing penetrations in the valley and creating a more weather tight roof. The roof panels are rigidized (right) across the entire width to produce a more rigid panel for longer life. The roof panels attach with numerous bolts to the wall system through a continuous angle (below) at the eave. This Behlen feature prevents roof panels from tearing loose in high wind conditions.
EXTRA HEAVY-DUTY TENSION PIPE

The use of large diameter structural pipe with welded end plates at the eave brings all of the major components of the bin together. These massive pipes (up to 4½" diameter) connect the rafters to the wall panels and stiffeners for outstanding strength at this critical location. This full-circle ring at the eave stabilizes the roof and walls under all loading conditions and provides unmatched strength in both tension and compression situations, and provides support of non-uniform loads created by snow-drifts, high winds and earthquake forces.

LARGE ROOF DECK

The Big Bin® series boasts an immense 13’ 4” diameter deck with easily accessible catwalk attachment points. The fill opening can easily accommodate up to 4’ diameter spouting for maximum flexibility in choosing your fill equipment.
STIFFENERS WITH EXCEPTIONAL LOAD CARRYING CAPABILITIES

The Behlen hat-shaped stiffeners provide superior resistance to grain loads. Each stiffener is formed from a single piece of steel up to 5/16” thick. This use of thick, solid steel eliminates the need to laminate stiffener material. Each of the stiffeners supports the next with a load bearing plate to ensure positive load transfer into the concrete foundation. The use of three heavy duty stiffeners per wall sheet gives Behlen bins the ability to be cleaned with a single pass sweeping operation.

ACCESS DOORS

Behlen stiffened bins offer ample sized openings for access to the interior.

1. All stiffened bins come standard with a 27” square single ring door.
2. Optional walk through door comes with inner and outer doors with 2’ wide by 5’ tall opening.

ROOF VENTS

3. A pre-punched opening in the roof panel has a raised lip for improved weather protection.
4. Behlen’s 1.56 sq. ft. opening gooseneck vents used with pre-punched opening allow for fast assembly.
5. Behlen exclusive low profile roof vents. These vents set down close to the roof panel to reduce the potential for wind damage. They are an excellent choice in port facilities or high wind locations. This design is available in 3.13 sq. ft. openings reducing the number of vents.

STIFFENER EXTENSIONS

6. Stiffener extensions are offered to transfer loads from the base of the stiffener columns to the bottom of customer installed aeration tunnels. They are available in heights of 12¼”, 11¾” and 7¾”. These extensions reduce the time and expense of field fabrication of this critical component.
Accessories to meet ever increasing demands for safety and convenience.

**LADDERS AND PLATFORMS**

Behlen now offers as standard equipment double wide eave and rest platforms, along with hoop and strap safety cage.

Standard outside ladder.

**PLATFORMS AND STAIRS**

Behlen offers two options of exterior wall stairs. Our commercial stairs offer sturdy industrial construction with rest platform landings. The light duty version provides an economical alternative, giving our customers the ability to select the option that best fits their needs.

Optional commercial grade wall stairs pictured above.

**SAFETY RAIL AND ROOF STAIRS**

The Behlen Big Bin® series can be supplied with an optional peak safety rail. The rail encloses the flat peak area for added safety protection.

The Behlen hot-dipped galvanized roof stairs come in pre-assembled sections. The mounting brackets and handrails are easily attached and make quick work of installation on the bin roof. The full tread steps and handrails offer safe and secure access from eave to peak.
<table>
<thead>
<tr>
<th>Model (dia. x eave ht. in meters)</th>
<th>Eave Height (ft/in)</th>
<th>Overall Height (ft/in)</th>
<th>Overall Height (meters)</th>
<th>Bushels* (maximum)</th>
<th>Metric Tons* (maximum)</th>
<th>Cubic Meters</th>
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Typical Grain Densities: • Wheat approximately 800 kg/m³ (50 lb/ft³) • Corn approximately 720 kg/m³ (45 lb/ft³) • Rice approximately 580 kg/m³ (36 lb/ft³) *Capacities based on bin filled to eave with grain peaked in roof area at 28-degree slope. Bushels based on 1.25 cubic ft./bu. Metric ton calculations assume wheat at 800 kg/cubic meter; corn at 720 kg/cubic meter and rice at 580 kg/cubic meters. All maximum capacities include a 6% compaction allowance as determined by the American Society of Agricultural Engineers (ASAE) standard S54.13
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<tr>
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Typical Grain Densities: • Wheat approximately 800 kg/m³ (50 lb/ft³) • Corn approximately 720 kg/m³ (45 lb/ft³) • Rice approximately 580 kg/m³ (36 lb/ft³)

*Capacities based on bin filled to eave with grain peaked in roof area at 28 degree slope. Bushels based on 1.25 cubic ft/bu. Metric ton calculations assume wheat at 800 kg/cubic meter; corn at 720 kg/cubic meter and rice at 580 kg/cubic meters. All maximum capacities include a 6% compaction allowance as determined by the American Society of Agricultural Engineers (ASAE) standard S413.
GRAIN STORAGE BUILDINGS

Behlen flat storage buildings offer the versatility of storing grain or equipment. They can be designed to meet virtually any grain storage requirement. Behlen engineers can turn all-steel, rigid frame buildings into highly efficient, low-cost grain storage structures, allowing you to store grain up to 20’ against building sidewalls. Behlen buildings can provide the storage alternative you have been looking for to solve your large storage needs.

GRAIN STORAGE SYSTEMS

Behlen offers large capacity bins with diameters from 16’ to 157’ and capacities exceeding 1,500,000 bushels. Our bins are offered in a multitude of sizes to ensure we will have the bin you need to meet your storage requirements. With our years of experience we know the importance of quality products and dedication to customer service. We are ready to help you with storage solutions that can assist you in gaining a competitive advantage.

COMMERCIAL HOPPER TANKS

Behlen Hoppers offer flow-through convenience with many of the same features found in our Big Bin™ Series. They’re designed with state-of-the-art computer technology to ensure strength, ease of assembly, and trouble-free operation. We invite you to compare the features and benefits of these tanks. We believe you will recognize that Behlen tanks provide exceptional value.