



SUPERIOR
Manufacturing LLC

GRAIN STORAGE - DRYING - HANDLING

FARM BINS





Superior bins prove their strength and ability to protect crops from the harshest elements

DAY after **DAY**,

SEASON after **SEASON**,

GENERATION after **GENERATION**.



THERE'S NOTHING STANDARD ABOUT SUPERIOR.

At Superior, farm bin manufacturing is cut and dried. We use the highest-quality materials and the latest innovations to build the most durable, reliable bins available. Period.

Superior bins prove their strength and ability to protect crops from the harshest elements day after day, season after season, generation after generation. With farm bin capacities ranging from 1,850 to more than 62,000 bushels, they provide the freedom needed to hold crops for better returns.

We're not just talking about structural integrity; we're talking about people, too. Rural character and work ethic go into everything, from taking your order to installation to follow-up support. We are proud to stand behind our products and offer the best service you'll ever experience.

Make sure your bins are the best. Make them **Superior**.

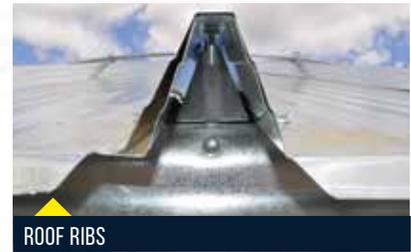


START FROM THE TOP

Bin roofs need to withstand high winds and loads from snow and equipment. More than that, roof strength is crucial to maintaining the entire structure. Superior's roofs can handle 8,000-pound loads, including ground snow loads of 40 pounds per square foot, and withstand wind gusts up to 90 mph. Superior's 20-by-20-inch pre-punched roof vents, the largest in the industry, prevent moisture from entering the bin. The gentle 3-inch corner radius of the vents eliminates metal stretching and failure in these corners.

It's a durable design, backed with an industry-leading **lifetime bin roof warranty**.

- ▶ 3-1/2-inch-deep rigidized roof ribs are locked to the roof wind ring, so the roof acts as a single, dynamic unit.
- ▶ Individual pipe sections are clamped and fastened to the roof with a locking bracket at every rib. This adds security and durability by eliminating twisting and displacement.
- ▶ The flat portion of the roof panel is corrugated for additional strength and finished with a formed drip edge.
- ▶ Full-length roof sheets that run from the eave to the top peak ring cause the entire roof to act as a single unit. This makes the roof stronger as well as easier and faster to assemble.
- ▶ Superior's formed peak ring has three breaks instead of one to resist deformation. The roof panel rests on the peak ring and is pressed into a foam closure to seal it against wind-driven snow or rain.
- ▶ The continuous eave angle spreads the roof load evenly onto the sidewall sheets.
- ▶ Push-up bird clips on eave angles minimize parts and labor.
- ▶ Pre-punched 20-by-20-inch roof vents are made from a high-molecular-weight polyethylene that is injected with a U.V. inhibitor prior to fabrication. Vent holes are pre-punched with a 3-inch corner radius to prevent sheet tearing. A 1-inch tall ridge surrounding the vent hole prevents moisture from entering the bin.



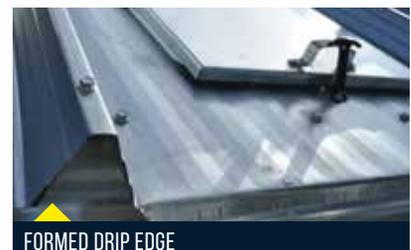
ROOF RIBS



ROOF WIND RING AND CLAMP



CORRUGATED ROOF



FORMED DRIP EDGE



FORMED PEAK RING



20" X 20" ROOF VENTS



PRE-PUNCHED VENT HOLE

SUPERIOR ROOFS ARE BUILT TO WITHSTAND GROUND SNOW LOADS OF **40 POUNDS PER SQUARE FOOT**, UP TO **8,000 POUNDS**, AND WINDS UP TO **90 MPH**.



GETTING IN, OUT AND AROUND YOUR BIN

- ▶ All Superior farm bins come with 66-inch doors. They feature heavy-duty, bolted construction for strength and reliability. The outer door latches on the top and bottom for secure protection against rain or snow. The three inner doors open 170 degrees so you have an easy and unobstructed path into and out of the bin. The inner door panels feature single-cam lock closing hardware on each panel. Finally, the sides of the doors are corrugated to match the sidewall sheets for a tight seal around the door.
- ▶ For safe and easy access, all Superior farm bins come with a standard bin step.
- ▶ Optional peak walk-around platforms add security and provide ample room for performing service. The bolt-together galvanized construction eliminates platform failure, rust formation or the chance of welds cracking. For additional safety, add roof stairs or a rooftop handrail package.
- ▶ Checking your grain has never been so simple. Superior bin stairs provide secure access to the bin's eave. Galvanized stairways with adjustable treads will stand up to the elements and ensure safety for years. A 34-by-60-inch platform, the largest in the industry, comes standard with stair packages. You can save time and money by using one stair and platform combination to access two bins.
- ▶ An interior ladder comes standard on all Superior bins. Optional exterior ladder packages are available for bin access.



66" DOOR



INNER DOORS



BIN STAIRS



LADDER AND SAFETY CAGE



66-INCH DOORS FEATURE HEAVY-DUTY, BOLTED CONSTRUCTION FOR STRENGTH AND RELIABILITY.

GET TO THE BOTTOM

The floor is a major factor in a bin's overall strength. Superior's Herculock floors are formed without removing steel so they're heavier and stronger than other perforated bin floors. Standard Herculock floors feature a 12 percent opening for greater airflow. Herculock canola floors feature an 8 percent opening, which prevents small grains from slipping through the floor while keeping maximum airflow for conditioning. The interlocking floor design locks your floor and your Herculock Z-supports into the floor planks.

- ▶ Optional Herculock Canola floors feature 8 percent openings that keep smaller grains from impeding airflow. Grains that require this type of floor typically have a grain mass opening of around 6 percent.
- ▶ Optional .050-inch and .093-inch perforated floors can only be incorporated into bins up to six rings tall.
- ▶ An interlocking design features a locking tab when the planks are snapped together, ensuring the floor stays in place.
- ▶ The Herculock Z-support features multiple, deep rib supports for a floor that is stronger than others. The supports have more breaks in the steel than competitive designs. The floor locks in place on those breaks to increase strength and reduce floor failures. An additional welded support provides extra strength for larger bin needs.
- ▶ Optional heavy-duty Herculock and Herculock canola floors available.



HERCULOCK FLOORS



INTERLOCKING FLOOR



INTERLOCKING FLOOR



HERCULOCK Z-SUPPORT



WELDED FLOOR SUPPORT



SUPERIOR'S HERCULOCK FLOORS ARE **HEAVIER**
AND **STRONGER** THAN OTHER PERFORATED FLOORS.

UNLOADING MADE EASY

Superior's unloading system features an 11-inch U-Trough. With more space than a round tube, the U-Trough allows the grain to flow freely over the auger, achieving unloading speeds greater than 6,000 bushels per hour without damaging kernels.

- ▶ A sturdy backplate on the power sweep connects to the unload and pressure fit for a secure connection.
- ▶ An aggressive 16:1 gear reduction wheel propels the sweep into the grain mass for faster and easier unloads.
- ▶ All sumps are covered with rack-and-pinion gates that are fixed with roller bearings for easy opening and closing. A next-to-center sump that opens independently from the other intermediate sumps can be opened if the center sump becomes plugged.
- ▶ An over-center engaging lever makes it easy to start and stop the auger, and an adjustable motor mount helps maintain proper belt tension.
- ▶ Hinged discharge covers are easy to open and close. Latch the cover open when unloading. During the off season, you can close and latch the cover shut to prevent snow or rodents from entering the unload.
- ▶ Double flighting in the center sump increases unload capacity.



POWER SWEEP



HANGER BEARING



DRIVE WHEEL



SUMP



UNLOAD/SWEEP CONTROLS



HINGED DISCHARGE COVER



UNLOAD



UNLOADING SPEEDS GREATER THAN **6,000 BUSHEL**
PER HOUR WITHOUT DAMAGING KERNELS.

STRENGTH IN THE DETAILS

All Superior bins feature Grade 50 steel that has a tensile strength up to 65,000 psi. In addition, a G-90 bright galvanized steel coating provides enduring protection against the elements. Our 44-inch wide corrugated sidewall sheets lessen the load pressure on the bin.

- ▶ Superior's farm bins come standard with a pre-rolled base angle and a foam sealant gasket to protect the bin from the elements.
- ▶ Superior was the first to provide a full 44-inch base anchor stiffener on all farm bins, which boosts strength and stability. The anchor holds the bin down and provides extra strength on the bottom ring where the force of grain is greatest.
- ▶ All bins come standard with JS500 grade 8.2 bolts, which are seven times more resistant for exceptional protection compared to standard galvanized bolts. Superior uses 3/8-inch bolts on all the sidewall sheets, making the bin easier to erect and stronger than the competition.
- ▶ Superior bottom ring comes with a lifetime warranty.



STEEL



44" BASE ANCHOR STIFFENER



ANCHORS



3/8" BOLTS



ANCHOR STIFFENERS



WE CONSTRUCT ALL OF OUR BINS WITH **GRADE 50 STEEL**
THAT HAS A TENSILE STRENGTH **UP TO 65,000 PSI.**

HIGH AND DRY

Superior's low-speed centrifugal fans provide greater airflow than the industry standard. Operating at 1,750 rpm, these fans are the ideal choice for most drying conditions and are much quieter than other types of fans.

High-speed centrifugal fans are squirrel cage fans that run at 3,500 rpm. These small fans move low volumes of air at low to moderately high static pressures, so they are ideal for aeration with deep grain depths.

High-speed vane axial fans in a cylindrical housing also run at 3,500 rpm and are typically used on smaller bins.

- ▶ Superior fan transitions direct the airflow from the fan to the bin and are designed to fit any type of fan.
- ▶ Optional fan heaters speed drying time by heating air from the fan before it reaches the plenum area.
- ▶ Optional fan hanging kits allow the fan to settle with the bin, which protects the transition.



FACTORY CUT TRANSITION



LOW-SPEED CENTRIFUGAL FAN



VANE AXIAL FAN



FAN HEATER



FAN HANGING KIT



FANS



LOW-SPEED CENTRIFUGAL FANS RUN AT **1,750 RPM**
AND ARE THE BEST CHOICE FOR MOST DRYING CONDITIONS.

SUPERIOR CONDITIONING, SUPERIOR STORAGE

STIFFENED FARM BINS

- ▶ Stiffened farm bins range from 15- to 54-foot diameters.
- ▶ Available with capacities ranging from 1,850 to 200,000 bushels.

HOPPER BINS

- ▶ Unstiffened models available in 15- to 27-foot diameters with capacities of 1,850 to 11,510 bushels.
- ▶ Stiffened models available in 18- to 30-foot diameters with capacities of 4,295 to 17,120 bushels.
- ▶ Standard ground control remote opener allows for safe and easy operation.

COMMERCIAL BINS

- ▶ Available in 60- to 105-foot diameters with capacities of 53,000 to 790,000 bushels.
- ▶ Structured roofs are standard on commercial bins.
- ▶ Patented sidewall lamination provides twice as much strength as competitive bins.

EXCEL GRAIN DRYERS

- ▶ A larger holding capacity in the EXCEL dryer allows for drying capabilities ranging from 735 to 7,310 bushels per hour.
- ▶ The EXCEL mixed-flow dryers are all G90 galvanized to minimize rust and wear.
- ▶ Under-fan models provide airflow throughout the dryer to eliminate hot and cold spots for better grain quality, lower operating costs and less chance of fire.
- ▶ The mixed-flow design uses almost half the CFM and BTUs of conventional screen dryers, resulting in higher efficiency with increased test weights.
- ▶ With its larger holding capacity, the EXCEL dryer allows grain to be tempered, or heated up over a longer period, which reduces stress cracking and results in higher quality grain and higher test weights.



HOPPER BIN



90' COMMERCIAL BIN



90' COMMERCIAL BIN ROOF



EXCEL GRAIN DRYER



EXCEL BASE



EXCEL DOOR



EXCEL MIXED-FLOW DESIGN



WITH ITS **EFFICIENT MIXED-FLOW DESIGN**, THE EXCEL DRYER CONDITIONS GRAIN GENTLY AND EVENLY TO PRESERVE QUALITY.

SPEC FOR SPEC, SUPERIOR BINS ARE BETTER

Bin Diameter	Rings	Eave Height Feet	Peak Height Feet	Max Bushel Capacity	Max Bushel Capacity w/ Plenum	Level Bushel Capacity w/ Plenum	Eave Height Meters	Peak Height Meters	Max Capacity Cubic Meter	Max Capacity Metric Tons
15' 4.57 Meters	3	11' 1"	15' 4"	1,843	1,690	1,530	3.38	4.67	62	50
	4	14' 9"	19'	2,400	2,247	2,087	4.50	5.79	80	65
	5	18' 5"	22' 8"	2,957	2,804	2,644	5.61	6.91	98	80
	6	22' 1"	26' 4"	3,514	3,361	3,201	6.73	8.03	116	94
	7	25' 9"	30'	4,071	3,918	3,758	7.85	9.14	134	109
	8	29' 5"	33' 8"	4,628	4,475	4,315	8.97	10.26	152	124
	9	33' 1"	37' 4"	5,185	5,032	4,872	10.08	11.38	170	139
18' 5.49 Meters	4	14' 9"	20' 2"	3,502	3,282	3,006	4.50	6.35	109	98
	5	18' 5"	23' 10"	4,304	4,084	3,808	5.61	7.26	143	116
	6	22' 1"	27' 6"	5,106	4,886	4,610	6.73	8.38	169	138
	7	25' 9"	31' 2"	5,908	5,688	5,412	7.85	9.50	195	159
	8	29' 5"	34' 10"	6,710	6,490	6,214	8.97	10.62	221	181
	9	33' 1"	38' 6"	7,512	7,292	7,016	10.08	11.73	247	202
	10	36' 9"	42' 2"	8,314	8,094	7,818	11.20	12.85	273	223
21' 6.40 Meters	4	14' 9"	21'	4,830	4,530	4,091	4.50	6.25	161	134
	5	18' 5"	24' 8"	5,921	5,621	5,183	5.61	7.52	197	161
	6	22' 1"	28' 4"	7,013	6,713	6,275	6.73	8.64	232	190
	7	25' 9"	32'	8,104	7,804	7,366	7.85	9.75	268	219
	8	29' 5"	35' 8"	9,196	8,896	8,458	8.97	10.87	303	248
	9	33' 1"	39' 4"	10,288	9,988	9,550	10.08	11.99	339	277
	10	36' 9"	43'	11,379	11,079	10,641	11.20	13.11	374	306
24' 7.32 Meters	4	14' 9"	22'	6,390	5,998	5,344	4.50	6.50	213	178
	5	18' 5"	25' 8"	7,816	7,424	6,770	5.61	7.82	262	214
	6	22' 1"	29' 4"	9,241	8,850	8,195	6.73	8.94	309	252
	7	25' 9"	33'	10,667	10,275	9,621	7.85	10.06	353	288
	8	29' 5"	36' 8"	12,093	11,701	11,047	8.97	11.18	400	326
	9	33' 1"	40' 4"	13,519	13,127	12,473	10.08	12.29	446	364
	10	36' 9"	44'	14,945	14,553	13,899	11.20	13.41	492	402
27' 8.23 Meters	4	14' 9"	22' 9"	8,191	7,695	6,763	4.50	6.78	274	229
	5	18' 5"	26' 5"	9,995	9,499	8,568	5.61	8.05	335	274
	6	22' 1"	30' 1"	11,800	11,304	10,372	6.73	9.17	392	320
	7	25' 9"	33' 9"	13,604	13,108	12,177	7.85	10.29	451	369
	8	29' 5"	37' 5"	15,409	14,913	13,982	8.97	11.40	510	417
	9	33' 1"	41' 1"	17,213	16,717	15,786	10.08	12.52	569	464
	10	36' 9"	44' 9"	19,018	18,522	17,590	11.20	13.64	627	513

Bin Diameter	Rings	Eave Height Feet	Peak Height Feet	Max Bushel Capacity	Max Bushel Capacity w/ Plenum	Level Bushel Capacity w/ Plenum	Eave Height Meters	Peak Height Meters	Max Capacity Cubic Meter	Max Capacity Metric Tons
30' 9.14 Meters	4	14' 9"	23' 9"	10,240	9,627	8,350	4.50	7.04	343	259
	5	18' 5"	27' 5"	12,468	11,855	10,578	5.61	8.36	365	298
	6	22' 1"	31' 1"	14,695	14,083	12,805	6.73	9.47	437	357
	7	25' 9"	34' 9"	16,923	16,311	15,033	7.85	10.59	510	416
	8	29' 5"	38' 5"	19,151	18,539	17,261	8.97	11.71	582	476
	9	33' 1"	42' 1"	21,379	20,766	19,489	10.08	12.83	655	535
	10	36' 9"	45' 9"	23,606	22,994	21,717	11.20	13.94	727	594
33' 10.06 Meters	4	14' 9"	24' 9"	12,544	11,804	10,103	4.50	7.39	421	318
	5	18' 5"	28' 5"	15,240	14,499	12,799	5.61	8.66	441	360
	6	22' 1"	32' 1"	17,936	17,195	15,494	6.73	9.78	529	432
	7	25' 9"	35' 9"	20,631	19,891	18,190	7.85	10.90	617	504
	8	29' 5"	39' 5"	23,327	22,586	20,886	8.97	12.01	705	576
	9	33' 1"	43' 1"	26,023	25,282	23,581	10.08	13.13	792	647
	10	36' 9"	46' 9"	28,718	27,978	26,277	11.20	14.25	880	719
36' 10.97 Meters	4	14' 9"	25' 10"	15,113	14,231	12,024	4.50	7.67	508	427
	5	18' 5"	29' 6"	18,321	17,440	15,232	5.61	9.00	615	503
	6	22' 1"	33' 2"	21,529	20,647	18,440	6.73	10.11	720	588
	7	25' 9"	36' 10"	24,737	23,855	21,648	7.85	11.24	824	674
	8	29' 5"	40' 6"	27,945	27,064	24,856	8.97	12.35	929	759
	9	33' 1"	44' 2"	31,153	30,272	28,064	10.08	13.47	1,033	844
	10	36' 9"	47' 10"	34,361	33,480	31,272	11.20	14.59	1,138	930
42' 12.80 Meters	4	14' 9"	27' 7"	21,071	19,871	16,365	4.50	8.18	711	597
	5	18' 5"	31' 3"	25,438	24,238	20,732	5.61	9.53	858	771
	6	22' 1"	34' 11"	29,804	28,604	25,098	6.73	10.65	1,000	899
	7	25' 9"	38' 7"	34,171	32,971	29,465	7.85	11.77	1,143	1,027
	8	29' 5"	42' 3"	38,538	37,338	33,832	8.97	12.88	1,285	1,155
	9	33' 1"	45' 11"	42,904	41,704	38,198	10.08	14.00	1,427	1,283
	10	36' 9"	49' 7"	47,270	46,070	42,565	11.20	15.12	1,569	1,411
48' 14.63 Meters	4	14' 9"	29' 4"	28,176	26,608	21,375	4.50	8.71	955	802
	5	18' 5"	33'	33,879	32,312	27,079	5.61	10.06	1,148	938
	6	22' 1"	36' 8"	39,582	38,015	32,782	6.73	11.18	1,333	1,089
	7	25' 9"	40' 4"	45,285	43,718	38,485	7.85	12.30	1,519	1,241
	8	29' 5"	44'	50,989	49,422	44,189	8.97	13.41	1,705	1,393
	9	33' 1"	47' 8"	56,692	55,124	49,891	10.08	14.53	1,891	1,545
	10	36' 9"	51' 4"	62,395	60,828	55,595	11.20	15.65	2,077	1,697



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