

# Sukup Solutions®



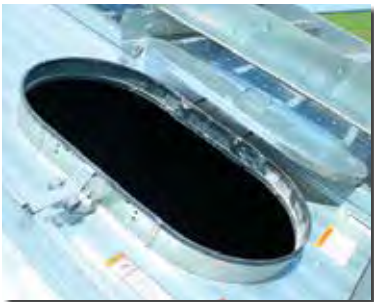
# Sukup® Grain Bins - *Farm Duty*



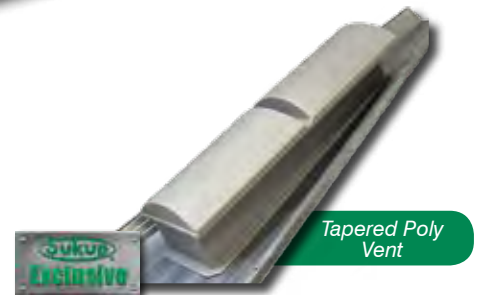
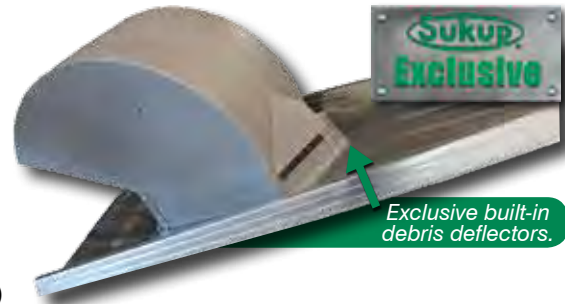
**Sukup Grain Bins** were the first with a 5000 lb. roof standard. They feature precision-engineered, 4" wide corrugated, high-strength - 50,000 psi yield strength, 70,000 psi tensile strength - galvanized steel sidewall sheets to provide better vertical load carrying capacity.

Our advanced roll-forming equipment is the most advanced, most efficient and most accurate in the industry and produces the best fitting bins available.

- Sukup Farm Bins are available in sizes from 15' diameter, 3-rings to 60' diameter, 12-rings.
- Farm bin capacities up to 118,000 bu.
- 5-year limited warranty
- Sukup has designed our 15' - 48' diameter bins with a peak load rating of 5000 lbs. at 40 psf snow load. That translates to 12,125 lb. peak load when based on 30 psf snow load like many of our competitors use.
- 3" ribs serve as rafters for the roof structure, strengthening the sheets.
- Roof rings are standard on all Sukup bins 18' and larger.
- The patented roof ring bracket with U-bolt adds strength and rigidity to the roof. (Patent #7,654,048)
- Double-tab roof clips support roof sheets every 9<sup>3</sup>/<sub>8</sub>" at the eave.



- The large manhole on Sukup Bins measures 20" x 35.5". When open, the door lays flat against the roof, eliminating the mess of water and soggy bees wings.
- Exclusive poly roof vents (Patent Pending) are virtually indestructible and feature a built in debris deflector to prevent fines and dirt from accumulating on the upper side of the vent and causing corrosion of the roof sheet. Poly vents are covered by a 5-year limited warranty.
- The Sukup tapered poly vent mounts near the peak of the bin allowing moisture from that area to escape.
- Patented Sukup anchor brackets (Patent #6,941,712) are 22" high to extend above the plenum area, which reduces the stresses caused by vertical loads on the sidewall sheets at the bottom ring.



- All bolts on Sukup Farm-Duty Grain Bins are SAE Grade 8.2 (the highest in the industry) with JS500 plating or better for ultimate corrosion protection.



# Hopper Bins

## Sukup Medium-Duty and Heavy-Duty Hopper Bottom Bins

are among the strongest in the industry with wide corrugations, extra-strong stiffeners and heavy-gauge hopper panels.

- Tank portion features the same quality sidewall construction as standard Sukup Bins, as well as the same roof.
- Hoppers are made of heavy-gauge, galvanized steel for strength and durability.
- Round-head bolts throughout the hopper portion prevent grain from getting hung up and bridging.
- Standard hoppers are 45°. 60° hoppers also available in some sizes.
- 16" unload outlet has a rack and pinion slide gate standard.
- 22" unload outlet has a rack and pinion slide gate option used for 40 pcf or lighter material density.

## Sukup Medium-Duty Hopper Bins

- 15'-21' dia., 3-6 rings, 45° hopper standard.
- 60° hopper available in 12' dia., 3-5 rings and 15' dia., 3-6 rings.
- Ideal for use as a wet holding tank to feed your Sukup Grain Dryer.
- May be used to store cool, dry grain for an extended period of time.
- May be mounted on overhead structures.
- Panels for the hopper portion attach directly to the sidewall sheets, so there is no ledge to trap grain.
- Legs are formed in our extra-strong stiffener profile and extend to the bottom two rings of the tank for extra support of the sidewalls.
- Angle-shaped leg cross bracing and C-shaped leg-to-hopper bracing provide solid support.



## Sukup Heavy-Duty Hopper Bins

- 15'-36' diameter. 3-12 rings (36' up to 18 rings), 45° hopper.
- May be mounted on overhead super structures for loading of semis or rail cars.
- Can be used to store cool, dry grain for an extended period of time.
- All base configurations start with 70,000 psi tensile strength steel, wide flange (I-beam) legs.
- L-shaped cross-bracing between the legs adds more stability.
- Hopper ring flashing covers the ledge where the tank and cone join to prevent grain from accumulating on the ledge (right).



# Fastir® Stirring Machine

**A heater** can dramatically increase your drying speed. As shown at right, you can dry 6.5 times faster by adding 40°F; however, the bottom layers will be overdried. The invention of the stirring machine solved this problem and made in-bin drying very successful.

<b>Drying Basics</b>				
<b>For every 20°F of temperature rise, relative humidity (RH) is cut by 1/2</b>				
<b>Outside Air</b>	<b>Heated To</b>	<b>RH</b>	<b>Bottom Layer Dried to</b>	<b>Drying Ratio*</b>
50°F 70% RH	No heat added	70%	15%	1.0
50°F 70% RH	70°F	35%	9%	3.5
50°F 70% RH	90°F	15%	6%	6.5

\*Drying Ratio refers to how many times faster grain will dry with heat as compared to drying with natural air.



- Patented mechanical reversing drive on the Fastir® (Patent #5,570,954) makes other stirring machines with cable or chain drives obsolete.
- Sukup track mounts higher in the bin than competing units, giving up to 680 bu. of extra storage in a 36' diameter bin.
- Constant pitch augers move more grain than graduated pitch augers.
- Stabilizer bar is standard to prevent augers lagging behind.
- Exclusive design allows down augers to be added at any time.

## Spredway®

- The pre-spread disc and inner ring, standard on all Sukup Spredways®, combine to create a uniform flow of grain to the spread pan for even distribution.
- Three sizes to choose from:
  - Standard:**  
3000 bph
  - High-Capacity:**  
3000-5000 bph
  - Super High-Capacity:**  
5000-7000 bph



## Sukup Airways®

Perforated, triangular-shaped tubes pipe drying air along the bin wall to remove excess moisture and prevent grain spoilage on the bin walls.



# Fans & Heaters

**When Sukup began** building stirring machines for in-bin drying, we were surprised to learn how much difference there was in the drying rates of different brands of fans with the same motor horsepower. We determined that for in-bin drying to be successful, an excellent fan was needed. So, we designed and built the best fan on the market.

Today, Sukup is the leader in fans. We have the reputation of giving the highest airflow, along with quality and reliability. Just ask our customers - performance has made Sukup fans #1.



## Centrifugal Fans

- 1750 RPM single inlet fans from 3-40 hp. Dual inlet fans from 30-50 hp
- Centrifugal Fans offer quiet operation.
- Sukup was the first in the industry to offer adjustable legs for easy leveling and support.
- Exclusive lip on fans forms a tight seal with the transition to prevent air leakage.
- Hi-Speed (3500 RPM) fans 3-60 hp and 18"-28" in-line centrifugal fans are available for higher static pressure conditions found with small grains and deep grain.

## Centrifugal Heaters

- Special vanes obtain the critical fan and air mixture necessary for efficient burning.
- Large service door for easy access to burner area.
- Three-year warranty on all heater solid state circuit boards.



## Axial Fans

- Patented, built-in venturi on 24" or larger axial fans increases airflow (Patent #5,615,999).
- Fan blades are precision-balanced for vibration-free operation.
- Sukup pioneered the use of square end plates to maintain accurate roundness of the housing and give uniform support all around.
- Sturdy, convenient handles on 24" and 28" fans make it easier to install and move fans.
- Two-year limited warranty.
- Sukup fans feature all-galvanized construction.

## Axial Heaters

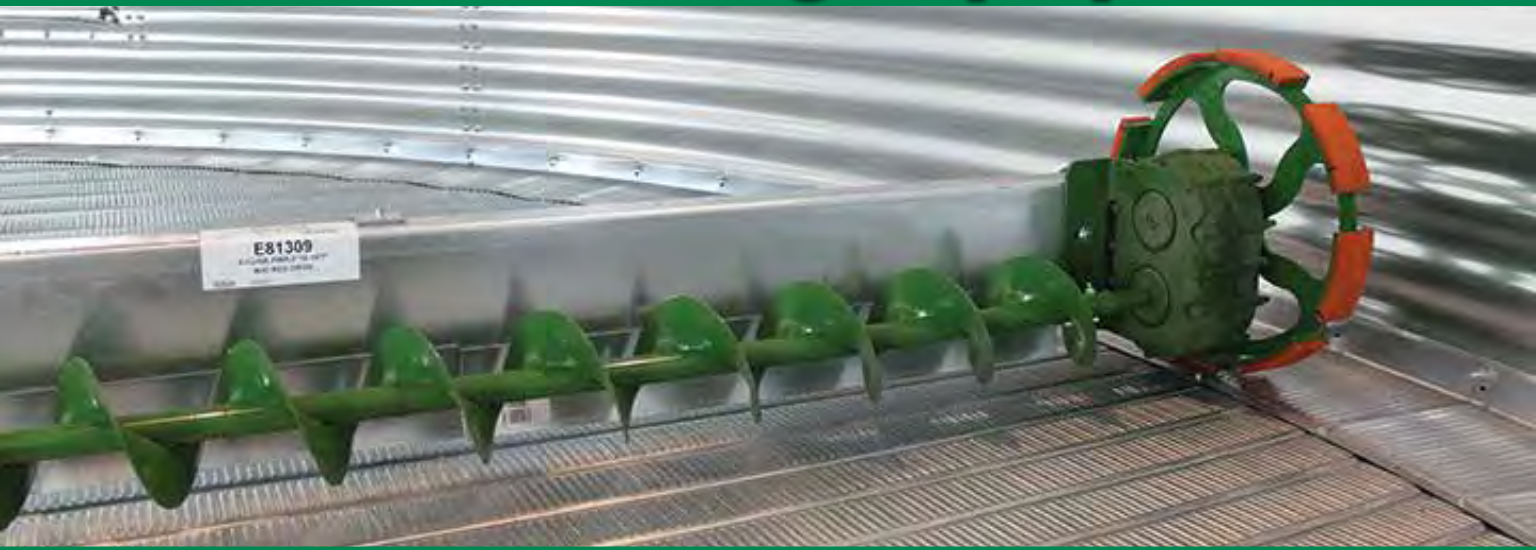
- Starfire-type burners provide the critical gas and air mixture necessary for higher efficiency and even heat distribution.
- Two-way adjustment on vaporizer allows operation over a wider range of outside temperatures.
- Three-year warranty on solid state circuit board.
- Large service door for easy access to burner area.



### Heater Temperature Rise\*

High-Temp	50° - 180°F
Lo-Temp	25° - 75°F
Super Lo-Temp	10° - 30°F

# Sukup® Unloading Equipment -



## Sweepway® Power Sweep Bin Unloading

- Sweepway® Power Sweeps are equipped with a galvanized backboard which keeps the sweep close to the floor as it propels itself around the bin. The tall backboard prevents grain flowing over the top.

- A patented, galvanized scraper (Patent #6,254,329) is attached to the backboard to clear the optimum amount of grain off the floor. The scraper is adjustable to different heights to meet your needs.



- New Exclusive 16:1 reduction drive, standard on 8" and 10" Sweepways® 36' and larger. 4:1 reduction drive wheel is standard on 6", 8" and 10" 33' and smaller.



- An independent intermediate sump is optional on 8" and 10" Sweepways®. The independent intermediate sump can be used to unload bin without stressing sidewalls if center sump becomes blocked.



- 8" center sump is 1-1/2 times larger than a traditional 8" sump. 8" and 10" center sumps have a larger bearing mount and a heavier bearing housing for greater durability.



- All 8" and 10" Sweepway® powerheads are equipped with rack and pinion sump openers. Powerhead design makes belt adjustments easier.



- Sukup Unload Systems are available with a choice of horizontal, vertical or incline powerhead.



- The Cluster Buster™ (patent pending) uses a cable spinning at high speeds to break up grain clumps around the center sump that block the flow of grain. Standard on all Sweepways® and U-Trough unloads.

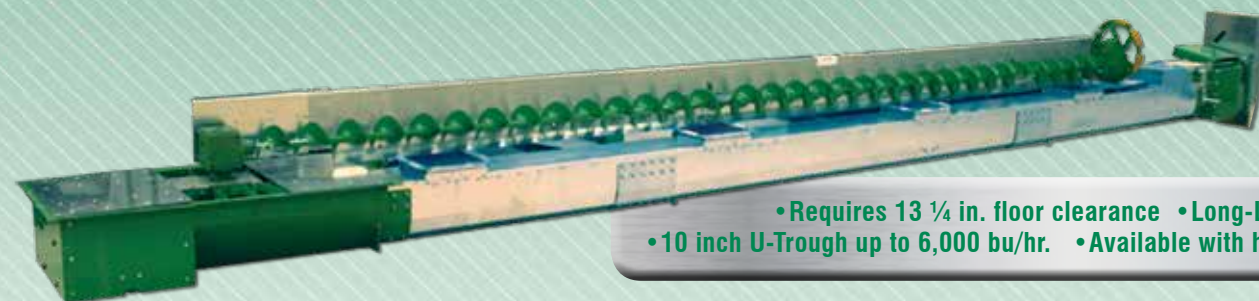


## Unloading Capacities

	6"	8"	10"	12"
<b>Horizontal</b>	1500 bph	2600 bph	4000 bph	6000 bph
<b>Vertical</b>	1250 bph	2500 bph	3750 bph	NA
<b>Incline</b>	1000 bph	2000 bph	3400 bph	NA

- Sukup also offers a tube and well system with carry-in sweep.

# Sweepway® • U-Trough • Drive-Over Hopper



- Requires 13 ¼ in. floor clearance
- Long-Life
- Heavy-Duty
- 10 inch U-Trough up to 6,000 bu/hr.
- Available with horizontal powerhead

## Sukup U-Trough Power Sweep

- The independent intermediate sump is standard on U-Troughs and operates with center sump.
- The independent intermediate sump can be utilized as the primary unload sump if the center sump becomes plugged or blocked. This is the closest intermediate sump to the center sump and is operated on a separate pull rod.
- All Sukup U-Trough intermediate sumps are 1½ times larger than the standard Sweepway® sumps.
- Sealed roller bearings (standard equipment) make it easier for center slide gate to move under pressure from even high grain depths. The intermediate sumps also have sealed roller bearings.

- Hanger Bearings come standard on 36' and larger bins. They can be accessed through an intermediate sump or removed with the auger.
- The Sukup U-Trough comes with two independent rack and pinion openers. One opener controls the center sump and first intermediate sump. The other opener controls the rest of the intermediate sumps in tandem. These openers use machined gears to provide smooth, hassle-free control of the slide gates.



## Drive-Over Hopper - Model S7000

- Spring-loaded ramps that can be easily raised and lowered by one person.
- Ramps can be easily removed.
- Hitch folds up and out of the way when not in use.
- 13" tires.
- Hitch jack is standard.
- Capacity of up to 7,000 Bu/Hr.
- Dual roller chains with UHMW paddles.
- Splash guard keeps grain contained in the center dump area.
- Bolt-on end cover can be easily removed for service and clean-out.
- Jackshaft reduction drive.
- Optional 30" spout extension may be added.
- S7100 available for permanent installations.

# Chain Loop & Double Run



## Chain Loop Conveyors



Inspection Corner

Drive Corner

Standard Corner

90° Discharge Spout

### Inspection Corner

- Optional gravity take-up (pictured).
- Access for inspecting chain and paddle wear, as well as chain tightness.

### Drive Corner

- 1 or 2 per system based on system requirements.
- 8" system up to 60 hp, 10" system up to 100 hp, 12" system up to 120 hp
- Dodge gear reducers shaft mount uses 2 external bearings to take chain load.

### 90° Discharge Spout

- Discharge gates can be operated from the ground using the ground control kit.
- Optional gear motor drives for gate control.
- Access door on side for inspection and service.



**UHMW paddles are pre-attached to the chain, saving assembly time!**



## Double Run Conveyors



Head Section

Intermediate Discharge

Tail Section

### Did You Know?

A Double Run Conveyor can replace a roof auger, transfer auger, dryer take-away auger, or a permanently installed transport auger.

### Head Section

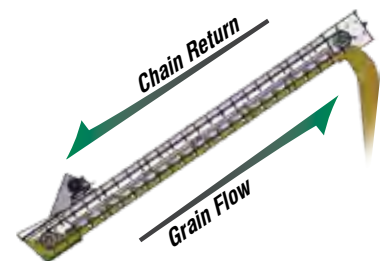
- Optional drive at head.
- Head discharges: 45°, 60° and 90° angles.

### Intermediate Discharge

- Modular design.
- No cutting required during assembly.
- Arrives with tubes attached.
- Access door on side for inspection and service.

### Tail Section

- Standard drive located on tail section.
- Optional dump-through tail section with gate.
- Shaft mount gear reducers (standard on 8", 10", and 12" conveyors).
- Gear reducers are shaft mounted. Shaft uses 2 external bearings to take chain load.
- Optional cover and extension for hopper.





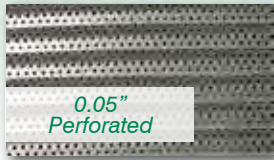
# Bin Floors & Supports

## Hawk Cut® - Twice as Strong

- Sukup Hawk Cut® Flooring, the first of its kind, is twice as strong as other smooth floors to prevent cupping.
- Sukup's exclusive Hawk Cut® process does not remove any steel in forming the large open area in the plank.

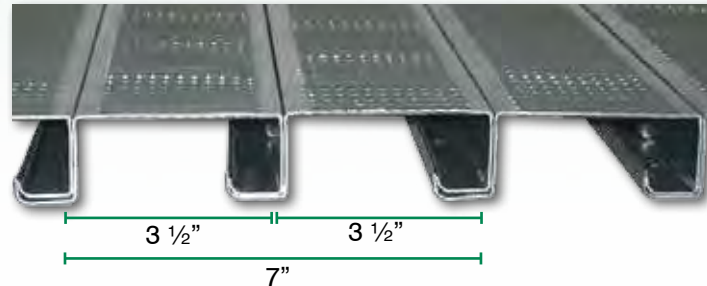
## Perforated - The Perfect Perforation

- Sukup Perforated Flooring is available as standard 7" planks or Heavy-Duty Perforated Planks.
- Both styles are available with either standard 0.094" dia. holes or 0.050" dia. holes. 0.050" is ideal for canola or other small grains.



## Heavy-Duty Perforated - For Deeper Grain Depths

- Sukup Heavy-Duty Perforated Floors were designed for situations where perforated floors are preferred but higher grain depths are needed.
- Sukup Heavy-Duty Perforated Floor planks have weight-bearing support every 3 1/2", rather than 7", so they are able to withstand deeper grain depths.
- Shipped in 7" wide planks.



Sukup Hawk Cut® Floors stand above the rest.



## Z-Post Supports - Precision-Engineered Support

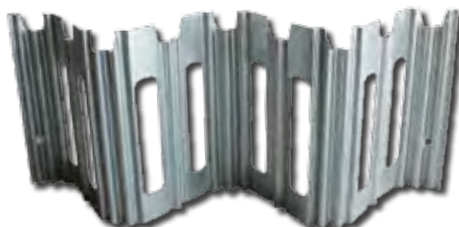
- Sukup Z-Post Supports cover a larger area, giving a wider, more solid base.
- Z-Posts are fast and easy to install.
- Notched sides and the self-tightening spring action lock the supports in place and help prevent shifting.



Notches on Sukup Z-Post Supports lock the supports in place, making installation a snap and forming a more stable base.

## SuperWave® Supports - Sheet Metal Support

- Stamped metal supports work with all Sukup floor planks, but they are particularly well-suited to our Heavy-Duty Perforated Floors.
- Unique wave design provides excellent strength and stability at an economical price. U.S. Patent #8,297,016
- Tabs provide support under the crown of the floor plank.
- Can be used with the deepest grain depths.



## Super Supports™

- The welded-rod frame support lets air flow freely throughout the bin plenum area.
- Tabs provide support under the crown of the floor plank.



## Flat Top Super Supports™

- Flat Top Super Supports™ are used with Sukup Heavy-Duty Perforated Flooring.



# Sukup Dryers - Easy Operation • High



Dryer Size	Total Holding Capacity	Full Heat Dryer Capacity* 25% - 15%
<b>Single Plenum Axial</b>		
8'	220 bu	210 bph
12'	330 bu	350 bph
16'	440 bu	450 bph
20'	550 bu	575 bph
24'	660 bu	660 bph
<b>Single Plenum Centrifugal</b>		
16'	440 bu	450 bph
20'	550 bu	600 bph
24'	660 bu	710 bph
<b>Dual Plenum Axial</b>		
20'	550 bu	620 bph
24'	660 bu	740 bph
<b>Dual Plenum 2/3-1/3 Split</b>		
16'	440 bu	500 bph
20'	550 bu	600 bph
24'	660 bu	710 bph
28'	770 bu	775 bph
<b>Dual Plenum Centrifugal 2/3-1/3 Split</b>		
16'	440 bu	450 bph
20'	550 bu	600 bph
24'	660 bu	710 bph

- Sukup Dryers feature easy-to-use QuadraTouch Pro™ Controls that lead you through start-up and all dryer functions.
- The QuadraTouch Pro™ touch screen is quick to respond and easy to operate.
- Sukup dryers were the first to include actual moisture sensing as a standard feature.
- Our patented Quad Metering Roll System (Patent #5,992,044) and actual moisture sensing produce higher quality dried grain.
- The Quad Metering Roll System moves the hotter, drier grain next to the inner wall down the column faster for more even moisture content, higher test weights and better overall quality.



- Sukup Quad Metering Rolls, Grain Cross-Over™, QuadraTouch™ controls and Single Phase Centrifugal Dryer all received AE50 Awards from American Society of Agricultural and Biological Engineers, recognizing outstanding engineering innovations in agriculture.



- For single phase sites, Sukup has designed a special built-in power converter, making even large dryers single-phase compatible.

# er Quality Grain • High-Capacity Drying



## Sukup Stacked Dryers

- Sukup Stacked Dryers feature the patented Grain Cross-Over™ system, which reduces variation in moisture content within the columns, as well as between the two sides of the dryer.
- Switching the grain from one side of the dryer to the other balances the exposure that each portion of the grain has to cold fall winds.
- The inner, hotter layer of grain in the top module becomes the outer, cooler grain in the bottom module, preventing the grain from overdrying and giving more consistent moisture content.



Dryer Size	Total Holding Capacity	Full Heat Drying Capacity* 25%-15%
<b>Two Module Dryers</b>		
16'	850 bu	1000 bph
20'	1050 bu	1250 bph
24'	1250 bu	1525 bph
<b>Three Module Axial Dryers</b>		
16'	1200 bu	1475 bph
20'	1525 bu	1830 bph
24'	1810 bu	2250 bph

\* Throughout this brochure, Bu/Hr. (bushels/hour) listed are wet bushels, No. 2 shelled yellow corn at listed moisture content with grain discharged hot at 17%, resulting in about 15% moisture after steeping and cooling, and are estimates based on drying principles, field results and computer simulation.

## Cyclone Pneumatic Systems

- Flexibility to move grain to multiple bins and adapt to difficult site layouts.
- An ideal way to move grain from your portable dryer into storage bins.
- High-quality, industrial-grade components.
- 4", 5" and 6" systems are available.
- Best heavy-duty accessories in the industry.



# Sukup® Centrifugal, Hybrid, Tower &

## Centrifugal Dryer Features

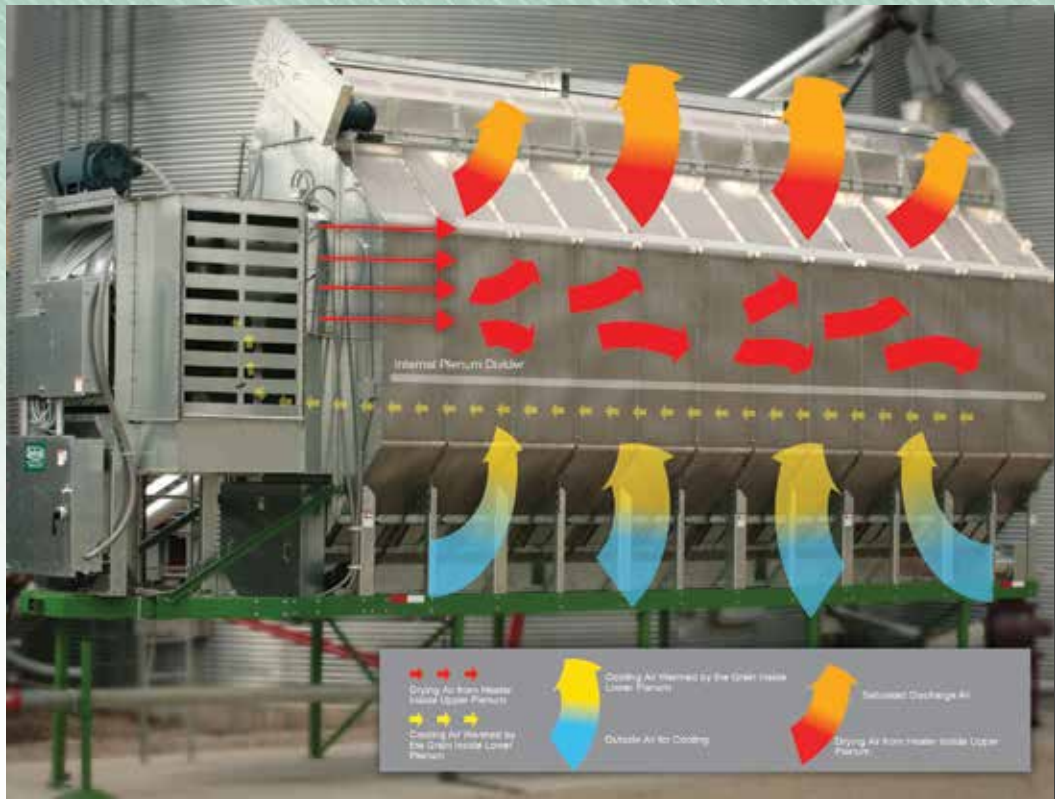
- Quad Metering Roll System
- QuadraTouch Pro™ controls
- Sukup quiet running, belt-driven Dual Inlet Centrifugal Fans.

## 2/3-1/3 Split Plenum Centrifugal Dryers

- Can be equipped to operate in pressure heat/vacuum cool mode.
- More efficient than traditional pressure heat/pressure cool dryers.
- Heat given off by the cooling grain is cycled back into the drying process.
- Less fuel is required to raise the drying air temperature.

## Single Plenum Centrifugal Dryers

- Operate in full heat mode.
- Same features as our single plenum axial dryers, but with the added benefit of quieter operation.



## Centrifugal Stacked Dryers

- Sukup Centrifugal Dryers are available in a Double-Stacked configuration that features the patented Sukup Grain Cross-Over™ System.
- Top module operates in full heat mode.
- Bottom module can operate either in full heat or pressure heat/vacuum cool mode.
- Panels within the plenum area are easily removed or replaced to switch between modes.
- Louvers open completely for full-heat drying.
- Louver openings are variable to adjust output grain temperature during pressure heat/vacuum cool drying.

## Hybrid Stacked Dryers

- An economical way to reap the benefits of a full heat/vacuum cool configuration.
- Axial on top module, centrifugal on bottom.
- The axial module always runs in full heat, so you use less horsepower to get the same airflow.
- Centrifugal module allows you to vacuum cool for maximum efficiency.



# Modular Tower Dryers



## Vacuum Cooling Efficiency Advantage

The Sukup Tower Dryer operates in a heat/vacuum cool mode. The blower(s) and burner are located inside the dryer between the heating and cooling chambers, eliminating ducting and leaving more room for the unload area. Air is pulled through the grain at the bottom of the dryer, cooling the grain while heating the air. The air is then pulled into the blowers, through the burner and into the drying chamber. Reclaiming heat from the grain creates greater efficiency because less fuel is required to get the air to drying temperature.

## Balanced Moisture Content

Grain enters the top of the dryer through a load system that is controlled by rotary switches that allow choke fill (dryer is kept full of grain all the time) or demand fill (the load system is turned on and off as needed). The grain then flows down the dryer in a 12<sup>3/4</sup>" thick column. Drying occurs in the top 2/3 of the dryer with the grain being inverted halfway down the drying section by Grain Exchangers.

## Cooling

The grain flows down the column into the cooling chamber (bottom 1/3 of dryer) and spills out onto the stainless steel table of the unload chamber. A large rotor with curved paddles (the only moving part of the dryer) sweeps grain to the center of the dryer and out the discharge hopper.

## Simple Operation

The temperature of the air in the drying chamber and the speed of the unload rotor are adjustable. The operator selects a desired drying temperature and the speed of the unload rotor is varied to obtain desired moisture output. Unload rotor speed is adjusted automatically based on the grain temperature in the bottom of the heat chamber or on the incoming and outgoing moisture content. If necessary, the unload rotor speed can be adjusted manually.



## Tower Dryer Sizes

	U1010	U1510	U1812	U2012	U2412	U3018	U3518	U4018	U4718	U5024	U6024	U7024
Bu/Hr. 20%-15%*	1000	1500	1800	2000	2400	3000	3500	4000	4700	5000	6000	7000
Bu/Hr. 25%-15%*	600	900	1080	1200	1440	1800	2100	2400	2820	3000	3600	4200
Grain Column	12.75"	12.75"	12.75"	12.75"	12.75"	12.75"	12.75"	12.75"	12.75"	12.75"	12.75"	12.75"
Tower Diameter	10'6"	10'6"	12'0"	12'0"	12'0"	18'0"	18'0"	18'0"	18'0"	24'0"	24'0"	24'0"
Overall Height	50'2"	63'7"	69'	76'	86'	76'	86'	96'	109'	100'	110'	120'

\*Bu/hr. (bushels per hour) listed are wet bushels, No. 2 shelled yellow corn at listed moisture content and are estimates based on drying principles, field results and/or computer simulation at 50° ambient temperature and 60% humidity at 220° F average plenum temperature.

Sukup Manufacturing Co. provides the information contained within this brochure to assist you in choosing the optimal equipment for your situation. Many factors, such as grain variety, maturity levels, grain cleanliness, weather conditions and operation/management, can affect the performance of your equipment and results may vary. This information is calculated and is not a guarantee of product specifications or performance. Based on these factors, Sukup specifications should only be used as estimates, and not as a warranty, expressed or implied, of how a particular Sukup unit will perform under your operating conditions. Because we are continually improving Sukup products, changes may occur that may not be reflected in the specifications



## U1010 & U1510 Modular Tower Dryer

### Efficient Drying. Cost-Effective Installation

Save on installation expenses with the Sukup Modular Tower Dryer. Dryer modules are delivered to the site assembled and ready to be set with a crane. With stacking complete in one day, the Modular Tower Dryer offers many of the same features as the larger Sukup Commercial Tower Dryers (Maxon Burner, In-line Centrifugal Blower, pipetrain with electronic mod-valve and two safety shut-off valves) without the need for extensive on-site construction.

# Sukup Commercial Bins



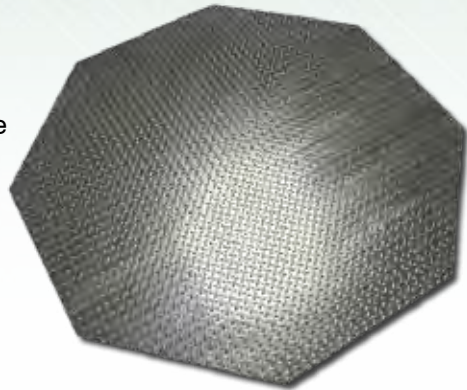
## Million Bushel Bins

More grain means more bushels, and that means bigger bins. We've answered the call for more storage with our 135' and 156' Commercial Bins. With 1.2 million and 1.5 million bushel capacities respectively, you can maximize your storage space, while minimizing the number of bins. Our 135' was the first ever fully-erected free-span bin to hold over one million bushels. 135' and 156' bins are both designed to be unloaded in a single pass partly due to the new stiffener base design.



## Sukup Commercial Peak Lids

Sukup commercial roofs come equipped with a 1/4" thick, 60" diameter, diamond deck steel peak lid that provides a solid base for conveying equipment or fill spouts. The diamond decking provides a non-slip surface for improved worker safety. The lid can be cut on-site to match your conveyor or down spout requirements.



## Exceptional Peak Load Rating

Sukup offers 15,000; 30,000; 50,000 and 100,000 lbs. peak load ratings. The strength of the Sukup roof comes from double C-shaped channels forming I-beam rafters with C-shaped purlins. Rafters and purlins are manufactured from 70,000 PSI tensile strength galvanized steel. The rafters in the 156' bin are constructed with 65,000 PSI tensile strength I-beams.

## Commercial Bin Sizes

Dia.	Peak Heights Available	Max. Cap. Available (Bu)	Standard Roof Peak Load	Optional Roof Peak Load
42'	45'11" - 100'11"	42,969 - 107,213	5,000	15,000 or 30,000
48'	47'9" - 102'9"	56,929 - 140,840	8,000	15,000 or 30,000
54'	49'2" - 104'2"	73,072 - 179,272	15,000	30,000
60'	51' - 106'1"	91,423 - 222,585	15,000	30,000
72'	55'1" - 110'1"	135,353 - 324,153	30,000	15,000
75'	56' - 111'	147,582 - 352,713	30,000	15,000
78'	56'11" - 111'11"	160,982 - 382,560	30,000	15,000
90'	60'8" - 115'8"	219,999 - 514,999	30,000	15,000; 50,000 or 100,000
105'	65'4" - 120'4"	309,096 - 710,624	30,000	50,000 or 100,000
135'	70'11" - 125'11"	542,868 - 1,206,618	50,000	100,000
156'	75'7" - 123'3"	754,727 - 1,522,863	50,000	100,000

Foundation specifications must be designed by a qualified engineer based on local soil conditions. Soil boring test must be done by a competent engineering firm and foundation construction must be done by a knowledgeable concrete contractor.

Eave Heights available: 9-24 rings, 33'1" - 88'1" (156': 9-22 rings, 33'1" - 80'9")

## High Strength Steel Sidewall Sheets

Sukup uses a minimum 70,000 to 75,000 PSI tensile strength steel to provide better hoop tension load carrying capacity. The 4" wide corrugations on Sukup sidewall sheets create less resistance and friction to allow grain to flow more easily. Sukup sheets are 44" high, so there are fewer rings, seams and bolts than bins with 32" sidewall sheets.

## Laminated Splice Plate

On larger commercial bins, our patented laminated splice plates (Patent #8,291,664) ensure there are no gaps along the sidewall seams and are quick to assemble because the bolts fit easily into the properly aligned holes. The double shear connection is designed to maximize the strength of the bolts at the seams.

## Top Quality Bolts

Sidewall bolts on Sukup Commercial Bins are SAE Grade 8.2 (the highest standard in the industry) with JS1000 or equivalent plating. The SAE Grade 8.2 ensures that Sukup bolts will hold up to the stresses placed on them. The JS1000 or equivalent plating ensures the long life of Sukup Commercial Bins.



## Optimum Bolt Usage

The vertical bolt pattern on Sukup Commercial Bins has been evaluated for optimum performance and convenient erection. Sukup engineers use solid imaging computer design analysis to determine the proper bolt size to ensure the integrity of the seams while minimizing the number of bolts needed in order to speed erection and keep costs in line.

## Commercial Stiffeners

Sukup commercial stiffeners are made from 70,000 PSI minimum tensile strength galvanized steel and are computer-engineered specifically to make them extra strong. Sukup stiffeners are externally mounted only. External stiffeners provide excellent support and prevent the accumulation of grain and the resulting spoilage that can occur with internal stiffeners. Wind rings are used to provide greater rigidity to Sukup Commercial Bins when they are empty. Commercial bins are available with 2 or 3 stiffeners per sidewall sheet.



44" Single-Ring



60" Walk-Through



Skid Steer

## Easy Access

- A 44", single-ring door is available on shorter Sukup Commercial Bins. It features Hammer Head latches and the inner panels lay flat against the sidewall when open.
- A 60" walk-through door is available as a convenient option to help enter and exit with ease.
- An optional Skid Steer door is available for even greater access.
- Sukup side draw systems are an option on Commercial Bins up to 105'. (As with any side draw, the grain must be emptied to a uniform height on the sidewall before refilling. Use only Sukup designed side draw units with Sukup Commercial Bins. Never add a side draw system to an existing bin.)





# Material Handling - Buckets

## Bucket Elevators

### Turned, Ground, and Polished Shaft

Sukup utilizes a 1045, turned, ground, and polished (TG&P) shaft that allows your entire elevator to run smoothly.

### Buckets

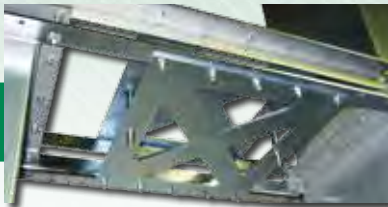
We use high-density, non-sparking, polyethylene buckets. Nylon, Urethane, and Steel buckets are optional when using highly abrasive materials. Vented buckets are also available.



### Low Impact Head Design

The Sukup bucket elevator head is a controlled design. Instead of the product bouncing off the interior of the head, it slides gently along the contour of the hood. Product damage and back-legging are minimized and the need for an internal shroud is eliminated. Split style hood allows for easy interior access.

Squaring Plates with Alignment Pins



- Squaring plates with alignment pins are placed at the top and bottom of every section to align trunking and eliminate the nightmare of twisted trunk sections, making assembly easier.
- Boot section features large, tool free access doors with unique spring latches.

### Squaring Plates Ease Assembly

“The squaring plates made the trunking easy to assemble. Having one end held together with squaring plates made it easy to hold the other end while trying to put an entire section of trunking together. The ladder and rest platforms also assembled easily.”



-Bryan Blakstad,  
Lodermeier's Inc. - Goodhue, MN

U.S. Patent #8,668,079

## Support Towers

### Leg Support Towers

Sukup leg support towers are an excellent choice for supporting bucket elevators. Towers eliminate the need for guying cables that clutter your facility and eat up valuable real estate. In addition to providing the vertical support for the elevator legs, the towers can be designed to support bulk weighers, cleaners, and distributors – either inside or outside the tower.



### Standard Features

- Powder-coated finish; optional hot-dipped galvanized
- Heavy duty bolted construction; knock-down design for economical shipping
- Modules available in 20' and 10' sections
- Computer engineered, strength-staged for wind, seismic, cleaner, catwalk and other loads
- Unique angle iron bracing design
- ASTM A325 structural hardware.

### Optional Features

- Access bracing to accommodate spouting, catwalks, conveyors, etc.
- Catwalk support beams
- Stairs – wrap around or switch back
- Interior or exterior platforms
- Ladder and cage system





## Hy-Flight and Drag Conveyors

### Conveyor Covers

Our conveyor covers are patented and will not be found on competitor's products. Our conveyor cover design reduces the number of tools needed for installation and does not require any sealant at the joints. An added bonus...

**No water running into your conveyor!**



U.S. Patent #8,047,358

Up to 20,000 BPH

- 11 gauge sides come standard on 9", 13" and 17" head and tail sections. 7 gauge sides come standard on 21" and 25" head and tail sections.
- All conveyor bodies utilize 11 gauge sides. Conveyor tops are 14 gauge. Bottoms are 7 gauge.
- Bearing, sprocket and shaft are one removable unit for easier maintenance.
- Sukup Hy-Flight Conveyors feature a bolted "tongue" that prevents the return panel from sagging.

### Removable Bottom

Moving a lot of grain? We made it easy to replace the worn out bottom without replacing the entire body of the conveyor - an additional feature that can save you both time and money. Consider our standard 7-gauge, or optional 3/16", 1/4" and 3/8" abrasion-resistant bottoms.

### Pre-Assembled Chains and Paddles

Our conveyor chains come pre-assembled with paddles to help speed installation. They are engineered for each specific unit and are either roller bushed or welded steel. Chain pitch will vary from 2.609" up to 6.125" with an average ultimate strength of up to 230,000 lbs. UHMW paddles, 1/2" or thicker, eliminate steel-to-steel contact.

Up to 35,000 BPH



# Sukup® Steel Buildings - *Designed*



## Total Customization

The clear span design of Sukup Pre-engineered Steel Buildings permits you to adapt the space to your specific needs. The sturdy, rigid frame structure allows plenty of open area to house machinery and equipment, but is easily customizable to add office space. You can get everything you are looking for in a Sukup Pre-engineered Steel Building.

## Exterior Wall Panels

- 26 gauge
- 36" coverage
- Unique MSP panel profile provides a concealed fastener appearance without the added cost of a true concealed wall panel system.
- Offered in Galvalume® + and all Sukup standard colors.



## Sukup Buildings Feature:

- Clear span up to 200' for large open areas.
- Multi-span construction available to reduce cost.
- Purlins, girts and eave struts are pre-punched to ensure a proper fit and speed installation. This translates to lower construction costs.
- Purlins, girts and eave struts are galvanized for long life.
- Sukup wall and roof panels are made from Galvalume® + AZ-55 substrate for extreme corrosion resistance, so they will look good for years to come.
- Choose from a wide variety of exterior and trim colors.



## Standing Seam Roof

The seams on Sukup standing seam roofs (optional) are mechanically rolled in the field to create a 360° double lock seam. This seam creates a tight, durable, virtually leak-proof seal. Sukup also offers a more economical screw-down roof.



for you. Designed to Last.



**The Colors You WANT. The Savings You DESERVE.**

All Sukup standard colors are coated with CERAM-A-STAR® 1050. This is an industry leading coating system that utilizes superior reflective qualities to effectively and efficiently cool your steel building. It is so effective it even qualifies for an energy credit under the federal tax code. Additionally, CERAM-A-STAR® 1050 offers exceptional abrasion resistance and color life. It features a 40-year adhesion warranty and 30-year fade warranty.



Polar White



Light Stone



Saddle Tan



Ash Gray



Burnished Slate



Charcoal Gray



Fern Green



Bright Red



Rustic Red



Gallery Blue



Hawaiian Blue



Stealth Black

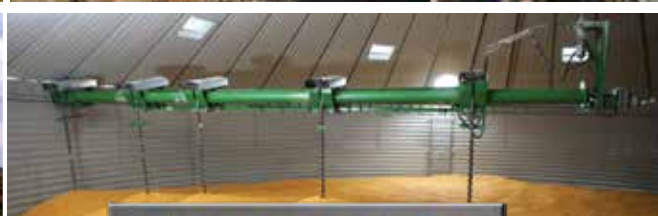
\*Color reproduction may vary. This color chart is for reference only and is not to be used for final color choice. See actual color sample from supplier to determine true color.

Sukup Manufacturing Co. provides the information to assist you in choosing the optimal equipment for your situation. Sukup specifications should only be used as estimates, and not as a warranty, expressed or implied, of how a particular Sukup unit will perform under your operating conditions. Because we are continually improving Sukup products, changes may occur that may not be reflected in the specifications.



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# DRYING, STORAGE and HANDLING SOLUTIONS®

As a family owned business, we've spent over 50 years developing innovative, efficient, and reliable products to meet the ever-expanding needs of grain producers. With a full-line of product Solutions®, you need look no further than Sukup for your grain handling, storage, drying, and steel building needs.



**Sukup Manufacturing Co. ■ [www.sukup.com](http://www.sukup.com)**  
 Box 677 ■ 1555 255th St. ■ Sheffield, IA 50475-0677 ■ ph 641.892.4222  
 fx 641.892.4629 ■ [info@sukup.com](mailto:info@sukup.com)

## Distribution Centers

**Arcola, IL 61910**  
 980 E. State Rte. 133  
 ph 217.268.3026  
[illinois@sukup.com](mailto:illinois@sukup.com)  
 L1116-022015G

**Aurora, NE 68818**  
 1705 Hwy. 34 E.  
 ph 402.694.5922  
[nebraska@sukup.com](mailto:nebraska@sukup.com)

**Cameron, MO 64429**  
 7426 NE 352nd St.  
 ph 816.649.2226  
[missouri@sukup.com](mailto:missouri@sukup.com)

**Defiance, OH 43512**  
 7724 Rte. 66 N.  
 ph 419.784.9871  
[ohio@sukup.com](mailto:ohio@sukup.com)

**Jonesboro, AR 72403**  
 5917 E. Johnson Ave.  
 ph 870.932.7547  
[arkansas@sukup.com](mailto:arkansas@sukup.com)

**Watertown, SD 57201**  
 2701 Piper Ave.  
 ph 605.882.6697  
[southdakota@sukup.com](mailto:southdakota@sukup.com)