

Sukup[®]

Solutions[™]



Drying ■ Storage ■ Handling



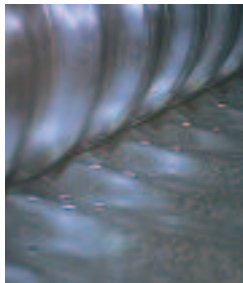
The Innovative Spirit of the American Farmer

In 1962, Eugene Sukup, a young, innovative farmer, bought his first grain bin to dry and store shelled corn. Unfortunately, he had problems, like crusting and hot spots. So, Eugene developed a hand-held stirring device that solved the problems.

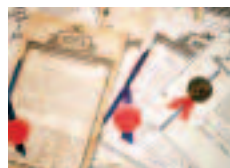
After selling only three units (for \$29 each), he determined that, for the device to be successful, it needed to be automatic. He came up with an automatic design, patented his idea and Sukup Manufacturing Company was born.



Sukup Manufacturing Co. Headquarters, Sheffield, Iowa, USA. Over 450,000 sq. ft. of manufacturing space, housing welding robots (top left), computer-controlled lasers (middle), computer-controlled punching centers, CNC lathes and machining centers. Sukup is also home to the most advanced bin production equipment in the industry (below).



Eugene Sukup has been inducted into the Iowa inventors Hall of Fame, where he joins the likes of George Washington Carver and John Atanasoff, the inventor of the digital computer. The innovative spirit that earned Eugene that honor is what drives Sukup Manufacturing Company to be the leader in grain handling innovations. The company holds over 80 patents that have helped to improve grain drying and storage processes.



Over nearly 50 years, Eugene and his sons, Charles and Steve, and their talented employees have grown Sukup Manufacturing Company into the worldwide leader in drying, handling and storage equipment.

Over 30% of Sukup employees have been with the company for more than 10 years. That adds up to centuries of experience you won't find with any other grain handling equipment manufacturer.



Steve Sukup (left)
Eugene Sukup (center)
Charles Sukup (right)



Sukup Farm Bins - Strong, Innovative, Top-Quality

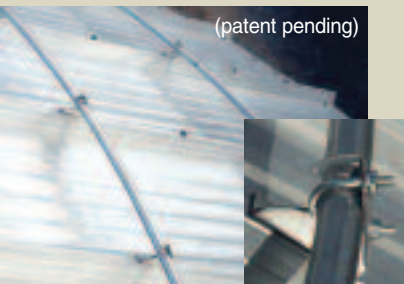
After looking at bins from the inside out for nearly 40 years, Sukup started building bins to complete our line of grain handling, drying and storage equipment. We gathered input from bin dealers and erectors and designed our bins from scratch, unhindered by years of “we’ve always done it that way.” We then invested in new bin manufacturing equipment that is the most advanced, most efficient and most accurate in the world.

The result is the most advanced, best-fitting bin from the leader in grain drying, handling and storage.

Sukup Bins were the first with a 5000 lb. roof standard. They feature precision-engineered, 4” wide corrugated, high-strength- 50,000 psi yield strength, 65,000 psi tensile strength - galvanized steel sidewall sheets to provide better vertical load carrying capacity.



(patent pending)



- The larger manhole opening 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.

- Roof rings are standard on all Sukup Bins 18’ and larger. The exclusive roof ring bracket with u-bolt (patent pending) adds strength and rigidity to the roof.

- Sukup Farm Bins are available in sizes from 15’ diameter, 3-rings to 60’ diameter, 12-rings.

- Capacities to 118,000 bu.

- Patented Sukup anchor brackets are 22” high to extend above the plenum area (US Patent #6,941,712), which reduces the stresses caused by vertical loads on the sidewall sheets at the bottom ring.



Quality Super-Sized - Sukup Commercial Bins

Outstanding Roof Strength

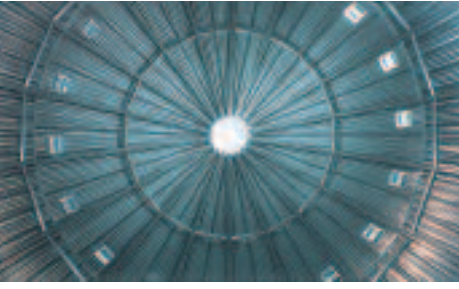
Sukup Commercial Tanks are available in sizes from 43,000 bushel, 42' diameter up to 1,200,000 bushel, 135' diameter, with a variety of roof options. The Sukup 30,000 lb. roof features an internal rafter system and external roof rings. The external roof rings are standard on all Sukup Commercial Storage Tanks.

5-Year Warranty

We have so much confidence in the quality of Sukup Commercial Tanks that we give a 5-year limited warranty.

Stronger Stiffeners

Sukup commercial stiffeners are made from 65,000 psi tensile strength steel and were computer-engineered specifically to make them extra strong.



Sukup offers both Medium-Duty and Heavy-Duty Hopper Bins.

- Medium-Duty Hopper Bins are available in 15'-21' diameter, 3-6 rings.
- Legs on the Medium-Duty Hopper Bins are formed in our extra-strong stiffener profile and extend to the bottom two rings, providing additional support for the sidewalls.
- Sukup Medium-Duty Hopper Bins are available in 15'-30' diameter, 3-12 rings.
- Heavy-Duty Hopper Bins may be mounted on overhead super structures, used as working bins and used to store cool, dry grain for extended periods.



Medium-Duty Hopper Bin



Heavy-Duty Hopper Bin



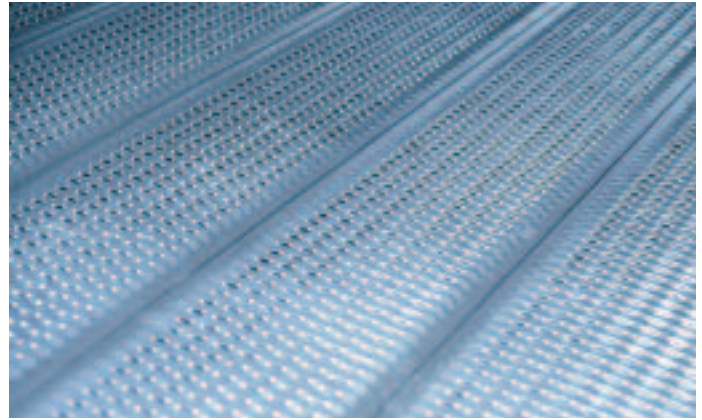
Heavy-Duty Hopper Bin

Solid Support - Excellent Airflow

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



Sukup Hawk Cut™ Flooring



Sukup Perforated Flooring

- Choose from either standard 0.0945" diameter hole perforated flooring or 0.050" diameter holes. 0.050" is ideal for canola and other very small grains.



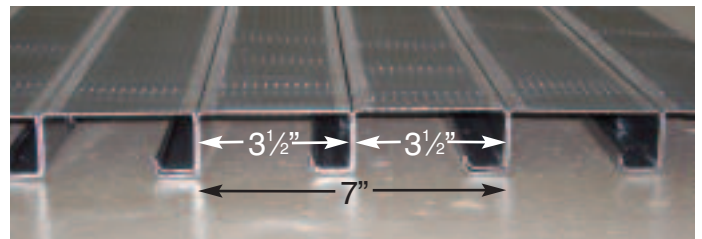
0.0945" Perf



0.050" Perf

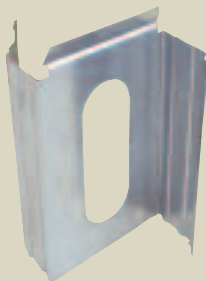
- Sukup Heavy-Duty Perforated Floors were designed for those situations where perforated floors are preferred, but grain depths exceed those recommended for our standard perforated floors.
- Sukup Heavy-Duty Perforated Floor planks have weight-bearing support every 3 1/2", rather than the normal 7", so they are able to withstand deeper grain depths.

**Hawk Cut™
Floors
Stand
Above the
Rest!**



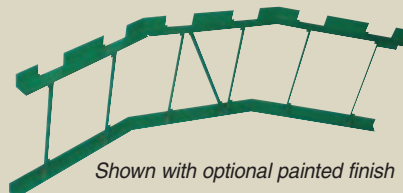
Z-Post Supports

- Sukup Z-Post Supports cover a larger area, giving a wider, more solid base.
- Notched sides and the self-tightening spring action lock the supports in place to prevent them from moving around under the weight of the grain.



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.



Shown with optional painted finish

Flat Top Super Supports

- Flat Top Super Supports are used with Sukup Heavy-Duty Perforated Flooring.
- Installation of Super Supports is quick and easy.



Sukup® - The Leader in Fans and 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.

Centrifugal Fans

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

So, we set out to design and build 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.

Axial Fans

- Patented, built-in venturi on 24" or larger axial fans increases airflow. (US Patent #5,615,999)
- 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. (US Patent #6,857,850)
- Two-year limited warranty.
- All Sukup fans feature all-galvanized construction.



Centrifugal Heaters

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

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.



Heater Temperature Rise*

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

*These figures are estimates and may vary.



Efficient In-Bin Drying - Sukup Fastir™

A heater can dramatically increase your drying speed. As shown below, 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 and popular.

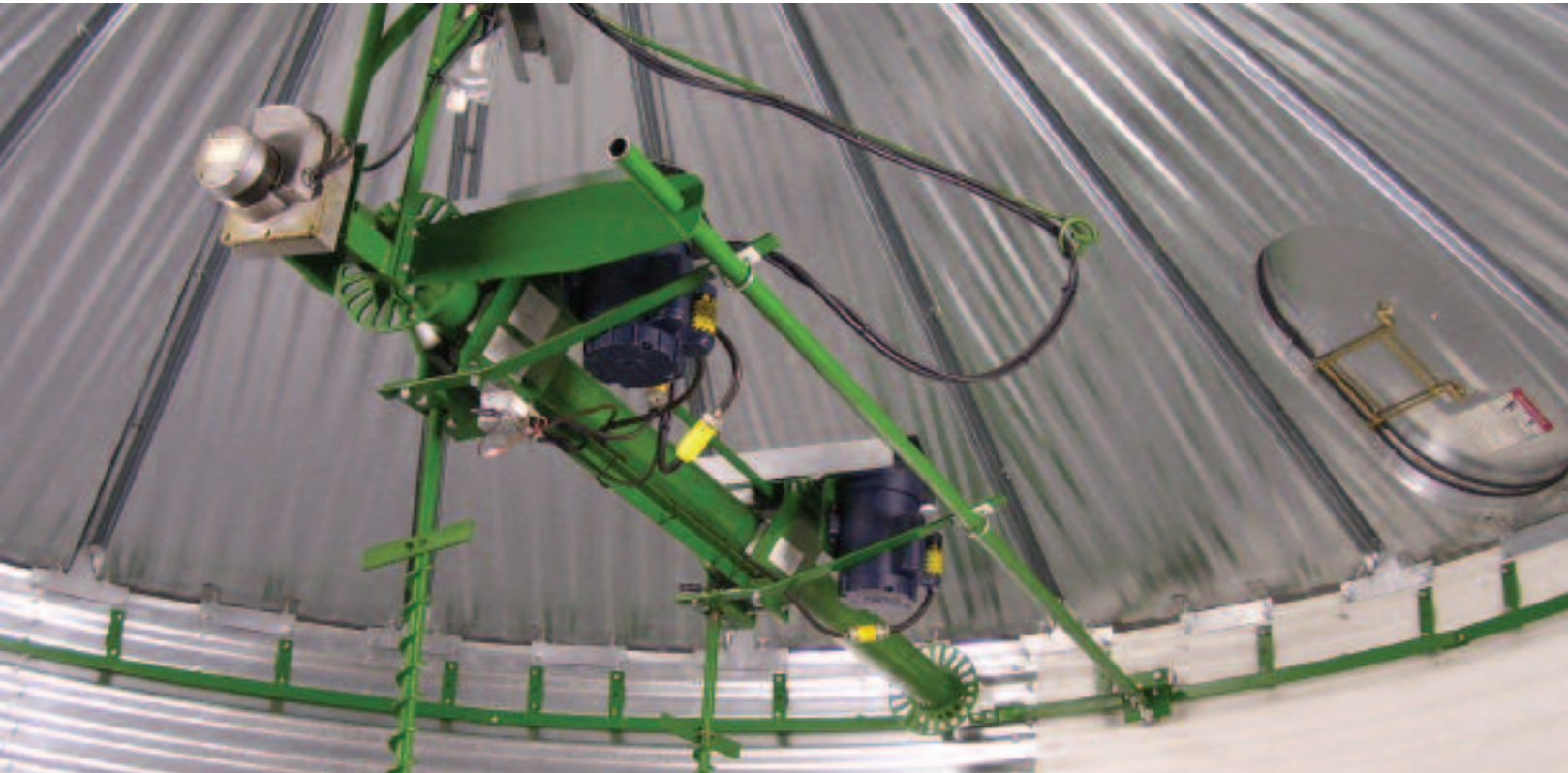
For every 20°F temperature rise, relative humidity (RH) is cut by 1/2.

Drying Basics

Outside Air	Heated To	RH	Bottom Layer Dried To	Drying Ratio*
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.

- The patented mechanical reversing drive on the Fastir™ (US Patent #5,570,954) makes other stirring machines with cable or chain drives obsolete.
- Sukup's exclusive design allows you to add extra down augers at any time.
- 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 on the Fastir™ move more grain than graduated pitch augers.



Spredway®

- The pre-spread disc and inner ring, standard on all Spredways®, combine to create a uniform flow of grain to the spread pan for even distribution. The optional pre-spread funnel further enhances even spreading.



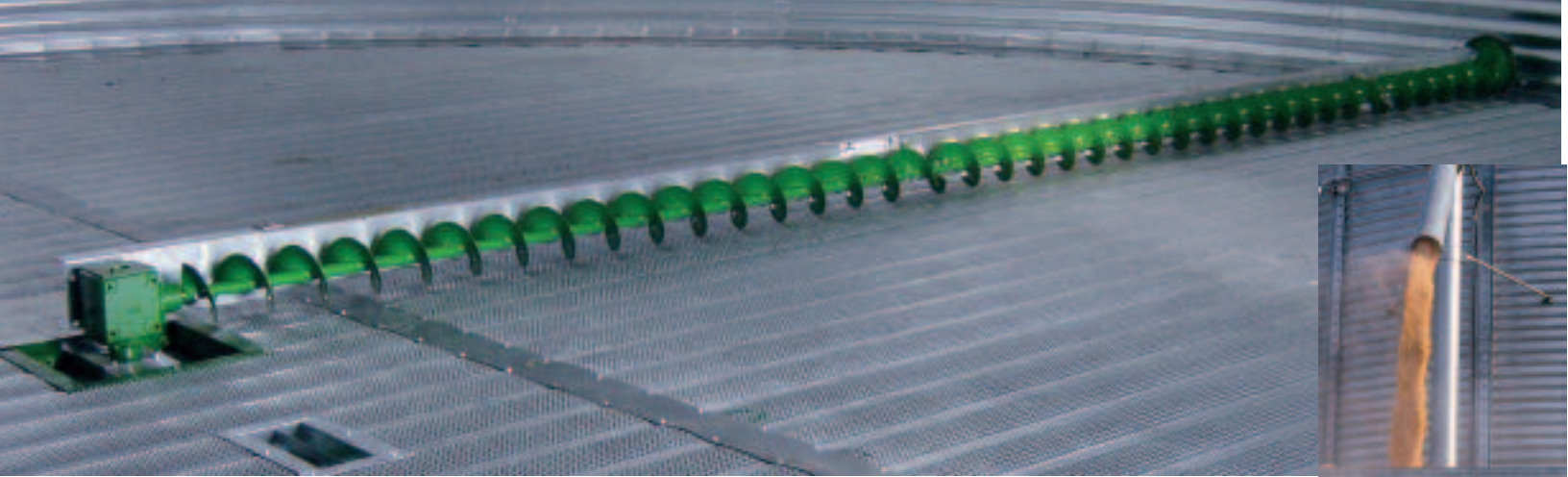
- Three sizes to choose from:
Standard Spredway® - 3000 bph
High-Capacity Spredway® - 3000-5000 bph
Super High-Capacity Spredway® - 5000-7000 bph



Sukup Airways®

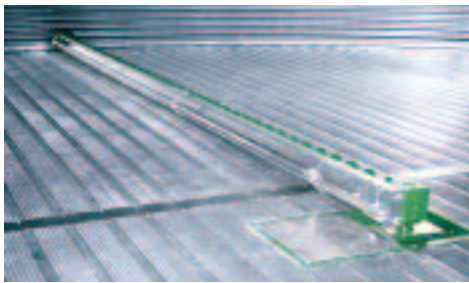
- Perforated, triangular-shaped tubes pipe drying air along the bin wall to remove excess moisture and prevent grain spoilage on bin walls.



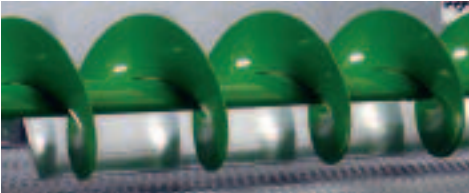


The Fastest, Easiest Way to Unload Grain

- 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 flow over the top.



- A patented, galvanized scraper (US 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.



- Exclusive reduction drive, standard on all Sweepway™ Power Sweeps, decreases drive wheel speed to reduce wheel slippage and prolong wheel life.
- Powerhead design makes belt adjustments easier.
- Sukup also offers a tube and well system with carry-in sweep.
- Both Sweepway™ and Tube and Well Systems are available with a choice of horizontal, vertical or incline powerhead.



Unloading Capacities

	6"	8"	10"	12"
Horizontal	1500 bu/hr	2600 bu/hr	4000 bu/hr	6000 bu/hr
Vertical	1250 bu/hr	2500 bu/hr	3750 bu/hr	NA
Incline	1000 bu/hr	2000 bu/hr	3400 bu/hr	NA

Chain Loop Conveyors

- Chain loop conveyors are another great way to convey grain to multiple bins. They also make it easier to mix grain.
- Paddles on Sukup Chain Loop Conveyors are made of heavy-duty UHMW, which is non-abrasive and tough, so they will stand up to the pressures of moving your grain without damaging it.
- Ideal for new grain storage facilities.
- 90° discharge spout includes gate and control wheel and is operated from the ground.



Sukup Material Handling Equipment - Safe & Efficient

Sukup Drag Conveyors

- Heavy-gauge, galvanized steel construction for years of dependable service.
- Shaft, sprocket, and bearings can be removed as one piece.
- ½" UHMW flights prevent steel-to-steel contact.
- Roller chain is engineered for each conveyor to maximize working load and prolong system life.
- Hi-flight conveyors are also available.



Model	Width	Depth	Conveyor Speed			
			100 ft/min.	125 ft/min.	150 ft/min.	180 ft/min.
1209	12"	9"		2379	2854	3425
1213	"	13"	3334	4168	5002	6002
1217	"	17"	4829	6036	7244	8693
1609	16"	9"	2525	3156	3787	4545
1613	"	13"	4425	5531	6637	7965
1617	"	17"	6408	8010	9612	11,535
2109	21"	9"	3225	4031	4837	5805
2113	"	13"	5651	7064	8477	10,731
2117	"	17"	8185	10,231	12,277	14,733

Sukup Bucket Elevators

Sukup invested a lot of engineering time in their low-impact elevator head shape, which is an instrumental part of minimizing cracking and damaging of grain kernels.



- Split head design allows for easy interior access.
- Slide lagged pulley, durable SOFR rubber belting and high quality poly buckets are standard.
- Heavy-duty angle iron framework at the head and boot sections add strength, so Sukup Bucket Elevators will stand strong for years to come.



Sukup Drive-Over Hopper

- Fast, convenient, portable unloading.
- Capacities up to 7000 bph.



Easy Operation, Higher Quality Grain

- Sukup Dryers feature easy-to-use QuadraTouch™ Controls that lead you through start-up and all dryer functions.
- Our patented Quad Metering Roll System (US Patent #5,992,044) and actual moisture sensing produce higher quality dried grain.
- Sukup was the first to include actual moisture sensing as a standard feature on their dryers.

Dryer Size	Total Holding Capacity	Full Heat Drying Capacity* 25% - 15%
Single Plenum Axial		
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
Single Plenum Centrifugal		
16'	440 bu.	450 bph
20'	550 bu.	600 bph
24'	660 bu.	710 bph
Dual Plenum Axial 50/50 Split		
20'	550 bu.	620 bph
24'	660 bu.	740 bph
Dual Plenum Axial ⅓-⅔ Split		
16'	440 bu.	500 bph
20'	550 bu.	600 bph
24'	660 bu.	710 bph
28'	770 bu.	775 bph
Dual Plenum Centrifugal ⅓-⅔ Split		
16'	440 bu.	450 bph
20'	550 bu.	600 bph
24'	660 bu.	710 bph



- Split plenum Centrifugal Dryers can be equipped to function in pressure heat/vacuum cool mode.
- Pressure heat/vacuum cool is more efficient because heat from the cooling grain is cycled back into the drying process, so less fuel is required to raise the dryer air temperature.



- The Sukup Quad Metering Roll System, Grain Cross-Over™ System and the QuadraTouch™ controls were all presented AE50 Awards by the American Society of Agricultural and Biological Engineers. The award recognizes outstanding engineering innovations in agriculture.
- The Quad Metering Roll System moves the hotter, drier grain next to the inner wall down the column faster.
- The process produces more even moisture content in dried grain, minimizes damage and maintains higher test weights and overall quality.

- Sukup QuadraTouch™ controls use advanced algorithms and calculus to increase dryer efficiency and reduce large swings in temperature and discharge moisture.
- The touch screen is quick to respond and easy to operate.

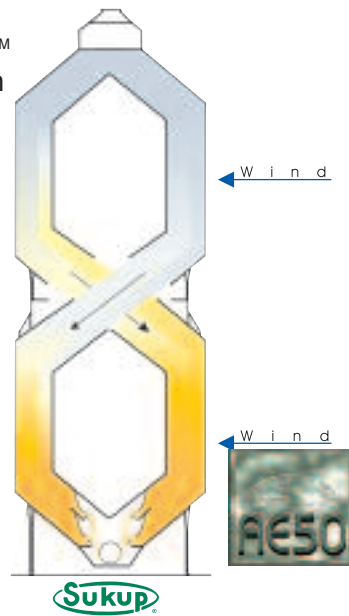
US Patent #5,992,044



Sukup Dryers Provide High-Capacity Drying

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, which prevents the grain from over-drying and gives more consistent moisture content.



- Sukup Tower Dryers provide fast, efficient drying for large farm operations and commercial elevators.
- Heat/cool capacities range from 1200 bushel/hour to 7000 bushel/hour with 5 point removal.
- Sukup QuadraTouch™ controls provide unmatched dryer efficiency and moisture content accuracy.
- 12', 18' and 24' diameters.
- 48' - 120' heights.



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



Cyclone Pneumatic Systems

- A Sukup Cyclone System gives you flexibility to move grain to multiple bins and adapt to difficult site layouts.
- These systems are an ideal way to move grain from your portable dryer into storage bins.
- 4", 5" and 6" systems are available.
- Sukup offers the most advanced velocity compensator valve available.





DANGER! DO NOT ENTER BIN!
Keep clear of all augers.



Your safety is important to us.
Please heed these warnings to keep yourself and your family safe.

- If you must enter the bin:
- Shut off and lock out all power.
 - Use a safety harness and safety line.
 - Station another person outside the bin.
 - Avoid the center of the bin.
 - Wear proper breathing equipment or respirator.
 - Purchase ladder and safety cages and use a safety harness.
 - Maintain secure hand and foot hold when climbing.
 - Metal is slippery when wet.
 - To avoid falls, never carry items while climbing on bin.
 - Failure to heed these warnings will result in serious injury or death.

Follow all applicable safety regulations.

**Sukup Dryer capacities bph (bushels per hour) are based on shelled corn wet bushels at listed input moistures discharged at 17% moisture, resulting in about 15% moisture after steeping and cooling. Drying variances may occur due to grain kernel size, variety, maturity levels, excessive fines, adverse weather conditions, etc.*

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 Sukup 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, express 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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 816-649-2226

Aurora, NE 68818
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 419-784-9871

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