

# Sukup Tower Dryers

- 1800-7000 Bu/Hr.
- QuadraTouch™ Controls
- 69'-120' Heights





# 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. Reclaiming heat from the grain means less fuel is required to get the air to drying temperature. The air is then pulled into the blowers, through the burner and into the drying chamber.



### 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 3/4" 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. Inverting the grain takes the faster-drying grain from the inside of the column and moves it to the outside, resulting in more balanced moisture content.

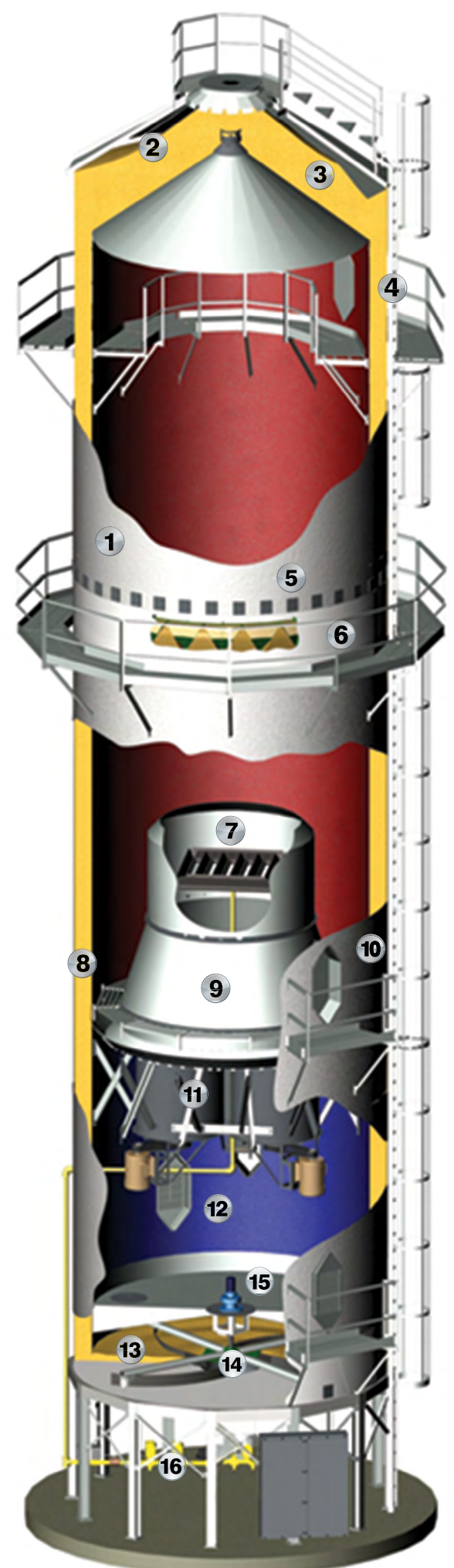


### GRAIN FLOW

The grain then flows into the cooling chamber and spills out onto the flat, stainless steel grain 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.

### EFFORTLESS 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.



# An Efficient Dryer that's easy to use... Now that's a Solution™

## FEATURES

- **STAINLESS STEEL** outer screens, nuts, and bolts resist rust and keep your dryer looking good for years to come. **1**
- **PERFORATED SHEETS** allow air to move easily through the grain, yet retain the bulk of the particulate matter. **1**
- **ROTARY SENSORS** for choke fill or demand fill are standard. **2**
- **EXTRA-LARGE WET HOLDING BIN** features solid sheeting to keep grain dust and particulate matter confined within the dryer. **3**
- **12 3/4" WIDE GRAIN COLUMNS** for longer air retention and maximum efficiency. **4**
- **TWO CLEAN-OUT DOORS** per panel in grain exchange section allow for easy removal of debris. **5**
- **GRAIN EXCHANGERS** move grain from inside of the column to the outside for more even moisture content and consistent grain temperature. **6**
- **SOLID OUTER SHEETING in GRAIN EXCHANGER SECTION** to maintain balanced heat/air distribution in the plenum and avoid blowing large amounts of particulate matter into the atmosphere. **6**
- **LOW PRESSURE BURNER** is aluminum so holes do not rust shut, giving wide operating temperature range, high fuel efficiency, and low emissions. **7**
- **RTD COLUMN SENSOR** monitors grain temperature at its hottest point in the heat chamber. **8**
- **REDUCER CONE** channels the air from blower(s) evenly past the burner unit. **9**
- **ENTRY AREAS** in outer screens and reducer cone allow access to the burner area for easy interior cleaning. **10**



- **INDUSTRIAL GRADE INLINE CENTRIFUGAL BLOWERS** quietly provide high airflow even with vacuum cooling. **11**
- **LOUVERED AIR VENTS** allow control over the amount of ambient air being pulled through the grain for cooling. **12**
- **LEVELING WHEELS (patented)** on paddles ensure consistent grain flow, maximum removal, and keep unload paddles from scraping against the floor. **13**
- **PADDLES and GRAIN TABLE on UNLOAD SYSTEM** are stainless steel for long life. **14**
- **POSITIVE UNLOADING SYSTEM** uses paddles to evenly sweep grain to the center discharge hopper. **15**
- **GEARBOX** requires minimal maintenance, since it maintains positive lubrication even with variable speed operation. **15**
- **PIPETRAIN has TWO STANDARD SAFETY SHUT-OFF VALVES** that are electronically operated from the touchscreen. The push of a button activates the heater. **16**
- **SIGNALS FOR AUXILIARY CONTROLS** on incoming/outgoing side are standard and adjustable.
- **UNLOAD RATE** is controlled automatically based on grain temperature or moisture. Unload rate can also be manually controlled.
- **SPOUT on DISCHARGE** provides a safe and easy way to sample grain for calibrating moisture sensor.
- **INCOMING and OUTGOING MOISTURE SENSORS** are standard.
- **ELECTRONIC MOD-VALVE** heater control maintains a fuel efficient, steady plenum temperature.
- **GALVANIZED LEGS** are hot-dipped for resistance to rusting.
- **ANGLE RING INLET and DISCHARGE** allow for easy hook-up to fill and take-away equipment.



The Sukup *QuadraTouch*™ control system creates:  
**EASY START-UP & OPERATION**

**SIMPLE, MENU-DRIVEN SYSTEM**

The Sukup *QuadraTouch*™ control system, standard on all Sukup Dryers, was designed to be easy to use with simple menus guiding you through dryer functions. Operator inputs are simple with a pop-up keypad for entering numbers. The *QuadraTouch*™ can be placed up to 200' away from the dryer using just an ethernet cable.

**THE *QuadraTouch*™ is a PLC-BASED SYSTEM.**

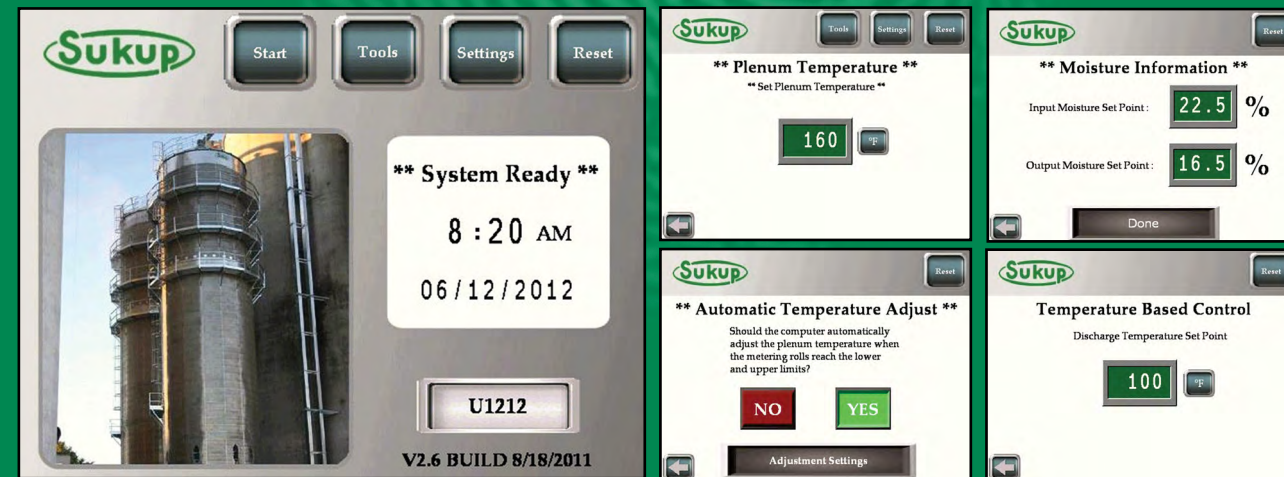
The PLC is a rugged controller built to withstand harsh environments and offer superior electrical noise protection, eliminating nuisance shut downs and providing you with a reliable system.

**THE *QuadraTouch*™ SYSTEM USES ADVANCED CONTROL ALGORITHMS TO INCREASE DRYER EFFICIENCY AND REDUCE LARGE SWINGS IN TEMPERATURE AND MOISTURE.**

This system minimizes under and over-shooting of your set target moisture content. It also helps the dryer to run more efficiently since large temperature swings are eliminated.

**COMPREHENSIVE INFORMATION WITH THE TOUCH OF A BUTTON**

The easy to use Sukup *QuadraTouch*™ control system gives you access to information critical for your operation.



**TWO OPTIONS FOR REMOTE MONITORING**

**THE GSM PHONE MODEM WORKS WITH *QuadraTouch*™ CONTROLS and OPERATES THROUGH GSM CELL PHONE SERVICE.** If the dryer shuts down, the GSM service sends a text message to a predetermined cell phone number, noting the fault. You can also text message the dryer to receive current dryer status, or adjust moisture, unload speed, and plenum temperature settings.

**REMOTE MONITORING SOFTWARE ALLOWS YOU TO VIEW THE *QuadraTouch*™ SCREEN ON YOUR COMPUTER.** You can set up a network on location with dryer or through the internet to view it anywhere and adjust settings including temperature and moisture.



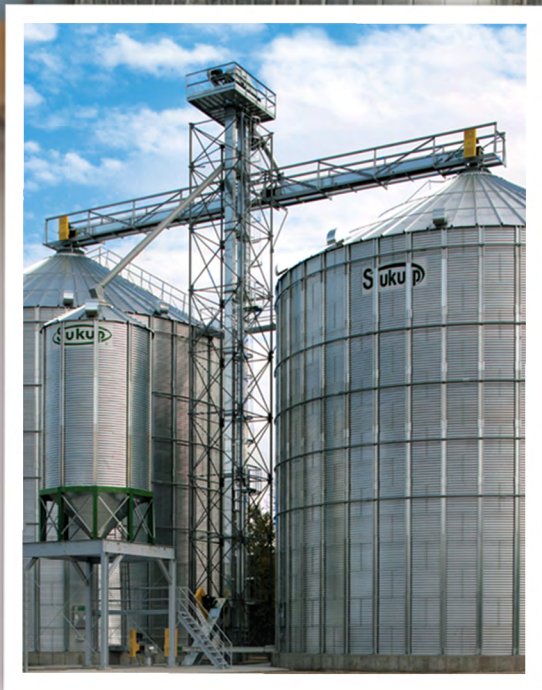
**Tower Dryer SPECIFICATIONS**

	U1812	U2012	U2412
Bu/Hr. 20%-15%*	1800	2000	2400
Bu/Hr. 25%-15%*	1080	1200	1440
Heat Holding Bu.	1113	1275	1521
Cool Holding Bu.	400	434	481
Total Holding Bu.	1982	2178	2471
Drying Airflow (CFM)	85,600	94,600	110,300
Burner Cap. (BTUx1000)	18,490	20,434	23,825
Ave. Heat (BTUx1000)	10,632	11,749	13,699
Blower HP	75	100	100
AC Drive Metering HP	1 ½	1 ½	1 ½
Grain Column	12.75"	12.75"	12.75"
Tower Diameter	12'0"	12'0"	12'0"
Overall Height	69'	76'	86'

	U3018	U3518	U4018	U4718	U5024	U6024	U7024
Bu/Hr. 20%-15%*	3000	3500	4000	4700	5000	6000	7000
Bu/Hr. 25%-15%*	1800	2100	2400	2820	3000	3600	4200
Heat Holding Bu.	1925	2208	2642	2941	3469	4026	4436
Cool Holding Bu.	642	812	831	1136	1238	1295	1499
Total Holding Bu.	3543	3996	4449	5053	6336	6950	7564
Drying Airflow (CFM)	148,200	174,300	206,400	226,200	275,100	296,100	343,500
Burner Cap. (BTUx1000)	32,011	37,649	44,582	48,859	59,422	63,958	74,196
Ave. Heat (BTUx1000)	18,406	21,648	25,635	28,094	34,167	36,776	42,663
Blower HP	(3) 50	(3) 60	(3) 75	(3) 75	(3) 100	(3) 100	(3) 125
AC Drive Metering HP	2	2	2	2	3	3	3
Grain Column	12.75"	12.75"	12.75"	12.75"	12.75"	12.75"	12.75"
Tower Diameter	18'0"	18'0"	18'0"	18'0"	24'0"	24'0"	24'0"
Overall Height	76'	86'	96'	109'	100'	110'	120'

Sukup Manufacturing Co. provides this information 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 tower dryer 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.

\*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.



## A Sukup Solution™ for **COMMERCIAL STORAGE**

- 42'-135' Diameter Commercial Tanks.
- 42,000-1.2 Million Bu. maximum capacity.
- Roofs available with 15,000, 30,000, and 50,000 lb. peak load ratings.
- Sukup Bucket Elevators, Drag Conveyors and Hy-Flights complete your system.



**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)

**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)