



# Tower Dryers



- **1,200 - 12,000 bu/hr**
- **QuadraTouch Pro™ Controls**
- **Industrial Grade Components**





# ADVANTAGES

**1 ROTARY SENSOR** for choke fill or demand fill are standard.

**2 STAINLESS STEEL** outer screens, nuts, and bolts resist rust and keep your dryer looking good for years to come.

**PERFORATED SHEETS** allow air to move easily through the grain, yet retain the bulk of the particulate matter.

**3 GRAIN EXCHANGERS** move grain from inside of the column to the outside for more even moisture content and consistent grain temperature.

**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.

**4 LOW PRESSURE BURNER** is aluminum so holes do not rust shut, giving wide operating temperature range, high fuel efficiency, and low emissions.

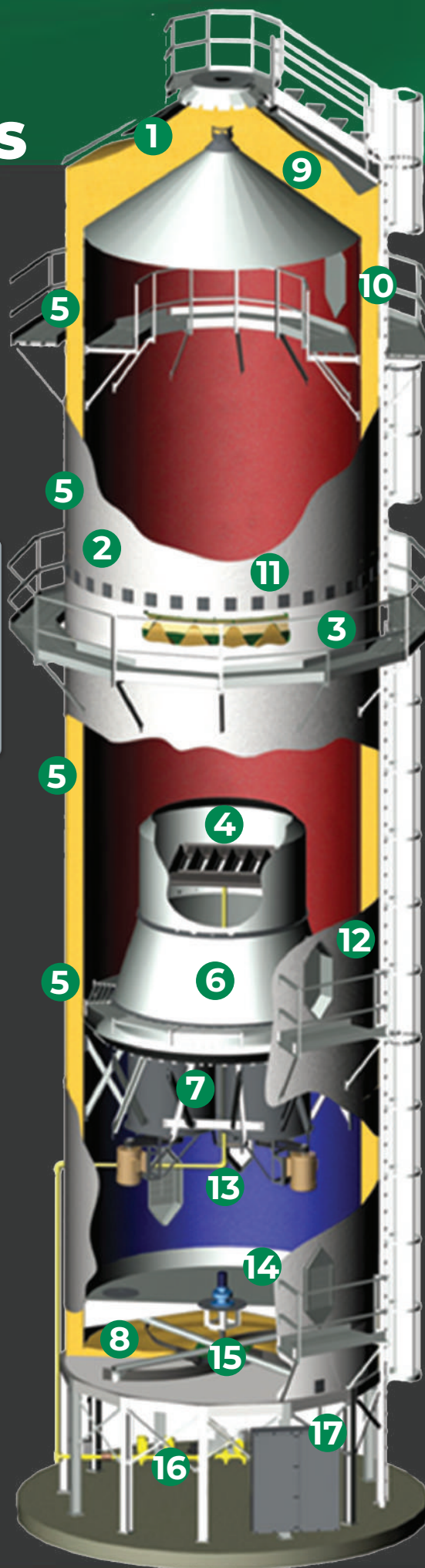
**5 MULTI-POINT GRAIN TEMP SENSOR** monitors grain temperature throughout the heat chamber.

**6 REDUCER CONE** channels the air from blower(s) evenly past the burner unit.

**7 INDUSTRIAL GRADE IN-LINE CENTRIFUGAL BLOWERS** quietly provide high airflow even with vacuum cooling.

**8 LEVELING WHEELS** (patented) on paddles ensure consistent grain flow, maximum removal, and keep unload paddles from scraping against the floor.

**9 EXTRA-LARGE WET HOLDING BIN** features solid sheeting to keep grain dust and particulate matter confined within the dryer.



**12 ¾" WIDE GRAIN COLUMNS** for longer air retention and maximum efficiency.

**TWO CLEAN-OUT DOORS** per panel in grain exchange section allow for easy removal of debris.

**ENTRY AREAS** in outer screens and reducer cone allow access to the burner area for easy interior cleaning.

**LOUVERED AIR VENTS** allow control over the amount of ambient air being pulled through the grain for cooling.

**GEARBOX** requires minimal maintenance, since it maintains positive lubrication even with variable speed operation.

**POSITIVE UNLOADING SYSTEM** uses paddles to evenly sweep grain to the center discharge hopper.

**PADDLES and GRAIN TABLE on UNLOAD SYSTEM** are stainless steel for long life.

**PIPETRAIN has TWO STANDARD SAFETY SHUT-OFF VALVES** operated electronically from the touchscreen. The push of a button activates the heater.

**MAIN POWER BOX** holds all of the electrical controls such as fan motor starters, PLCs, and VFDs.

**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 on stick built towers for resistance to rusting.

**ANGLE RING INLET AND DISCHARGE** allow for easy hook-up to fill and take-away equipment.

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# An Efficient Dryer that's easy to use... We have your Solutions®

## VACUUM COOLING EFFICIENCY ADVANTAGE

- The Sukup® Tower Dryer operates in a heat/vacuum cool mode.
- The **1.** blower(s) and **2.** 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.



## 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 manually or automatically based on the grain temperature in the bottom of the heat chamber or on the incoming and outgoing moisture content.

## 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 3/4 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 stainless steel paddles (the only moving part of the dryer) sweeps grain to the center of the dryer and out the discharge hopper.



## MULTI POINT GRAIN TEMPERATURE SENSING

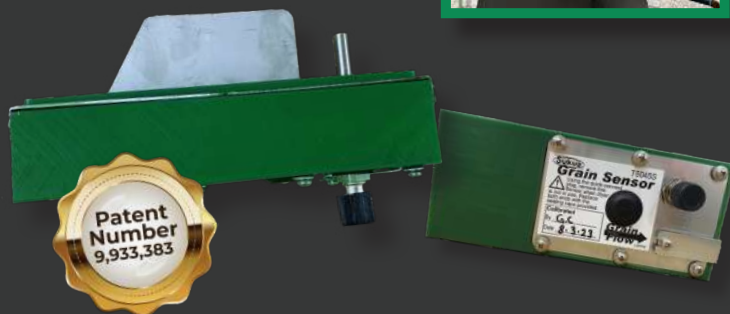
- Tower dryers use multi point grain column sensors.
- Readings from the sensors are fed into control software, helping improve dryer performance.



Column temperature sensor in mounting plate

## STATIC MOISTURE SAMPLER

- The Static Moisture Sampler tests the grain as it leaves the dryer.
- It catches a sample of grain, measures the moisture and temperature then drops it.
- The moisture sensor is mounted vertically to minimize any fines buildup.
- There is also a large opening for the operator to take a grain sample.





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

## **SIMPLE, MENU-DRIVEN SYSTEM**

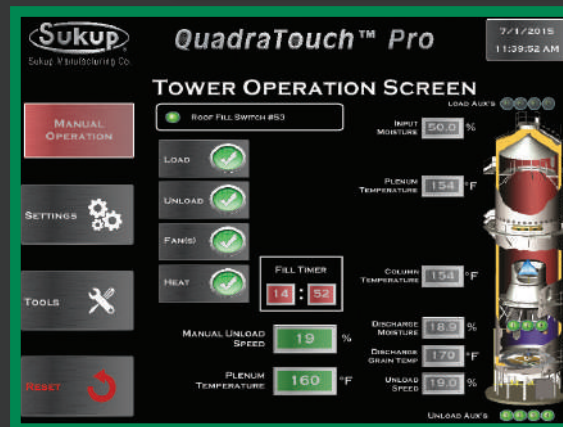
The Sukup QuadraTouch Pro™ control system, standard on all Sukup Dryers, was designed to be easy to use with simple menus guiding you through dryer functions. Operator inputs are simple with a pop-up keypad for entering numbers. The QuadraTouch Pro™ can be placed up to 200' away from the dryer using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

## **THE QuadraTouch Pro™ IS A PLC-BASED SYSTEM.**

The PLC (Programmable Logic Controller) is a rugged controller built to withstand harsh environments and offer superior electrical noise protection, eliminating nuisance shut downs.

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

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

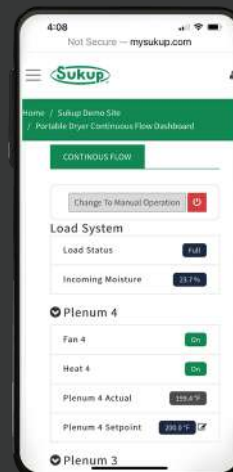
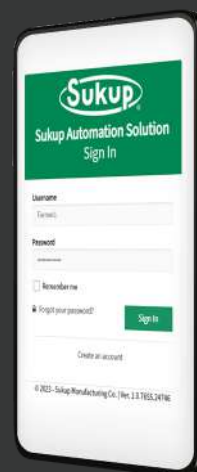


# **MYSUKUP REMOTE WEB ACCESS**

MySukup allows you to monitor and control your Sukup Dryer from a smart phone, tablet, or PC.

## **FEATURES:**

- Dryer shutdown alerts
- View dryer performance charts
- Ability to switch between manual and auto unload control
- Adjust moisture and/or temperature settings
- Shut dryer off remotely
- Set up multiple users with permission to view only, or view and make changes



Must have internet access via Ethernet cable at QuadraTouch Pro™ control system to use. Requires yearly license fee. Please note that the dryer cannot be started remotely.



# Tower Dryer SPECIFICATIONS

|                               | U1212  | U1512   | U1812   | U2012   | U2412   | U2712   |
|-------------------------------|--------|---------|---------|---------|---------|---------|
| Bu/Hr. 20%-15% Corn*          | 1270   | 1500    | 1800    | 2000    | 2400    | 2700    |
| Bu/Hr. 25%-15% Corn*          | 760    | 900     | 1080    | 1200    | 1440    | 1620    |
| Heat Holding Bu.              | 765    | 924     | 1113    | 1275    | 1521    | 1691    |
| Cool Holding Bu.              | 308    | 308     | 400     | 434     | 481     | 505     |
| Total Holding Bu.             | 1392   | 1551    | 1982    | 2178    | 2471    | 2671    |
| Drying Airflow (CFM)          | 55,000 | 67,000  | 85,600  | 94,600  | 110,300 | 117,500 |
| Max. Burner Btu/Hr (x 1000)** | 12,000 | 15,000  | 18,490  | 20,434  | 23,825  | 27,000  |
| Avg. Burner Btu/Hr (x 1000)** | 7500   | 9400    | 10,632  | 11,749  | 13,699  | 14,600  |
| Blower HP                     | 60     | 75      | 75      | 100     | 100     | 125     |
| AC Drive Metering HP          | 1 ½    | 1 ½     | 1 ½     | 1 ½     | 1 ½     | 1 ½     |
| Grain Column                  | 12.75" | 12.75"  | 12.75"  | 12.75"  | 12.75"  | 12.75"  |
| Tower Diameter                | 12'0"  | 12'0"   | 12'0"   | 12'0"   | 12'0"   | 12' 0"  |
| Overall Height***             | 52'    | 59'     | 69'     | 76'     | 86'     | 93'     |
| Full Load Amp. (230v/460v)    | 164/82 | 223/114 | 223/114 | 290/147 | 290/147 | NA/176  |

|                               | U3018   | U3518   | U4018   | U4718   | U5024   | U6024   | U7024   | U10030  | U12030  |
|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Bu/Hr. 20%-15% Corn*          | 3000    | 3500    | 4000    | 4700    | 5000    | 6000    | 7000    | 10,000  | 12,000  |
| Bu/Hr. 25%-15% Corn*          | 1800    | 2100    | 2400    | 2820    | 3000    | 3600    | 4200    | 6000    | 7200    |
| Heat Holding Bu.              | 1925    | 2208    | 2642    | 2941    | 3469    | 4026    | 4436    | 6266    | 7,818   |
| Cool Holding Bu.              | 642     | 812     | 831     | 1136    | 1238    | 1295    | 1499    | 2117    | 2,761   |
| Total Holding Bu.             | 3543    | 3996    | 4449    | 5053    | 6336    | 6950    | 7564    | 10,684  | 13,260  |
| Drying Airflow (CFM)          | 148,200 | 174,300 | 206,400 | 226,200 | 275,100 | 296,100 | 343,500 | 495,000 | 550,000 |
| Max. Burner Btu/Hr (x 1000)** | 32,011  | 37,649  | 44,582  | 48,859  | 59,422  | 63,958  | 74,196  | 106,000 | 118,000 |
| Avg. Burner Btu/Hr (x 1000)** | 18,406  | 21,648  | 25,635  | 28,094  | 34,167  | 36,776  | 42,663  | 63,500  | 70,800  |
| Blower HP                     | (3) 50  | (3) 60  | (3) 75  | (3) 75  | (3) 100 | (3) 100 | (3) 125 | (4) 125 | (4) 150 |
| AC Drive Metering HP          | 2       | 2       | 2       | 2       | 3       | 3       | 3       | 7.5     | 7.5     |
| Grain Column                  | 12.75"  | 12.75"  | 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"   | 30' 0"  | 30'0"   |
| Overall Height***             | 76'     | 86'     | 96'     | 109'    | 100'    | 110'    | 120'    | 127'    | 153'    |
| Full Load Amp. (230v/460v)    | 390/196 | 462/233 | 566/285 | 566/285 | 743/374 | 743/374 | NA/455  | NA/692  | NA/731  |

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.

\*Capacities listed are wet-basis ESTIMATES based on drying principles, field results, and computer simulations at 50° F ambient temperature, 60% humidity, drying a minimum of US #2 Yellow Corn at 220° F average plenum temperature. Variations may occur due to grain kernel size, variety, maturity levels, excessive fines, adverse weather conditions, etc. This information is provided to assist in choosing optimal equipment, it is not a guarantee of dryer performance.

\*\*6-9 psi incoming pressure required for natural gas or vapor propane dryers.

\*\*\*Overall height measurement is from foundation to grain inlet.



# DRYING, STORAGE, and HANDLING SOLUTIONS®

Sukup Manufacturing Co. is the world's largest family-owned and operated manufacturer of grain storage, drying, and handling equipment. The company is headquartered in America's heartland – Sheffield, Iowa – and covers over one million square feet of office, manufacturing, and warehouse space.

Sukup® constantly strives to push the boundaries of innovation and quality and currently holds the record for the world's largest grain bin that holds 2.2 million bushels of corn. The company prides itself on their philanthropic efforts in giving back to local, statewide, and international charities including the design and construction of Safe T Home®, a patented structure suitable for recovery efforts.



**Sukup Manufacturing Co. ■ [www.sukup.com](http://www.sukup.com)**

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