

2002 GSI Drying Systems Portable Dryer Sales Manual

Effective: June 16, 2002

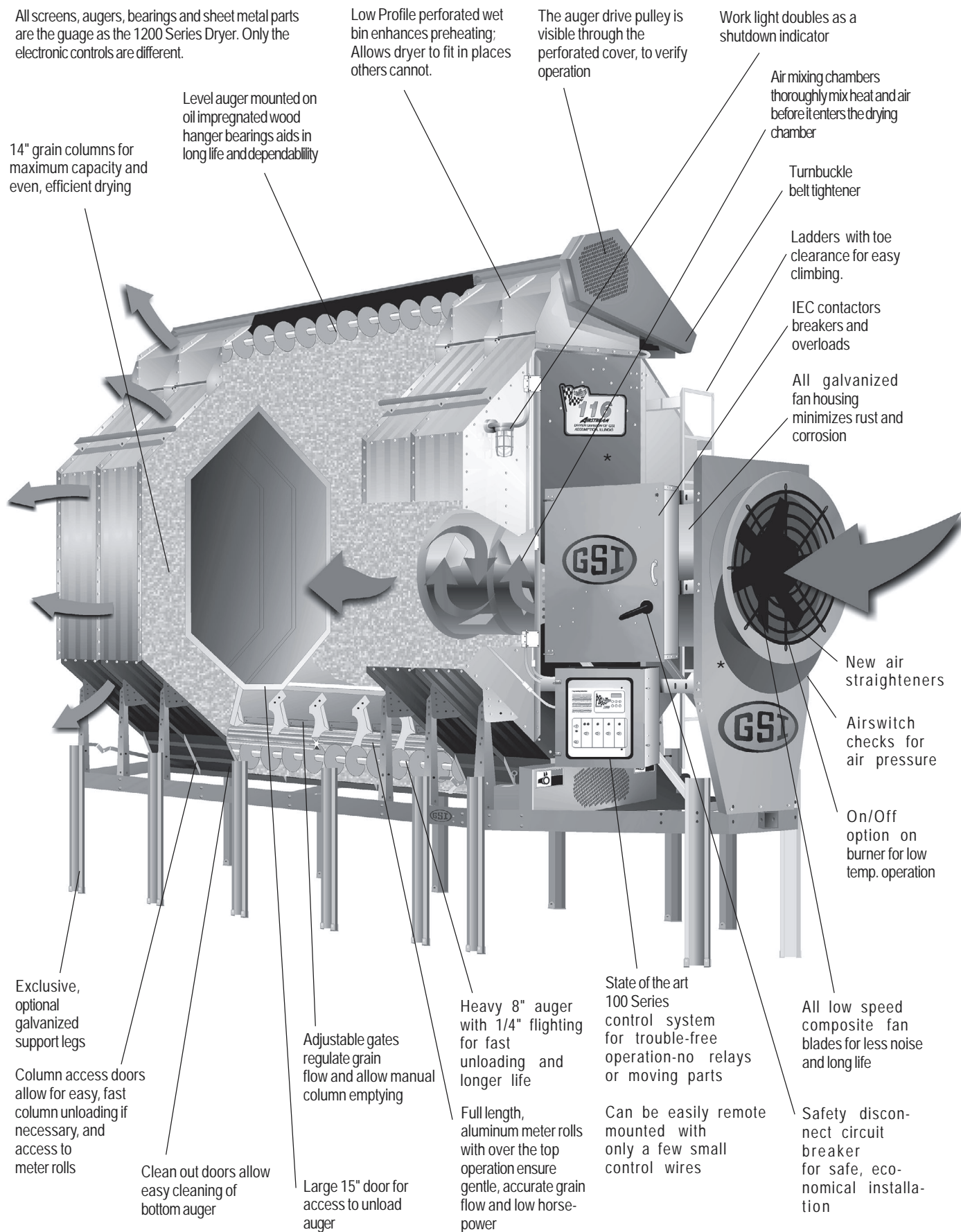
PNEG-561-02



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THE GSI GROUP



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Air Switch

The air switch on the dryer has been changed to a BEC type and is mounted on the front of the dryer. The air switch will be reading air pressure in the plenum instead of airflow from the fan. This will aid in problems with erratic air movements and blockage of the air tube.

Entrelec Terminals

Entrelec terminals are used for all computer control circuits connections.

Two Transformers in 440 Volt Dryers

Control transformer wiring for the 110V control circuit and the 220V SCR drive circuit are separated on all 440V dryers.

IEC Branch Breakers

IEC controls are heavier and meet additional codes. 440 volt dryers have branch breakers. This is needed to meet code in some states or areas.

Ground Rod

A ground rod is included with each dryer. We require that each dryer have a properly installed ground rod.

8" Flight

All unload auger flighting has been standardized to eight inches for fast unloading and longer life.

IEC Motor Overloads

IEC overloads allow for more adjustment. All the motors on the dryer have been modified so that only the motor overload in the control box can sense a shutdown. All internal overloads in the motors have been removed.

Control Box Rails

The upper and lower control box are being mounted on vertical rails instead of only the horizontal rails as in earlier years. This makes it easier for us to lower or raise the control boxes if a customer is going to mount his dryer on taller pedestals.

User Supplied Safety

This shows that periphery equipment shut the dryer down.

Plenum and Grain Temperature Set Points

The plenum and grain temperature set points can be programmed from the control panel of the 100 series dryer. This allows you to monitor and change the grain and plenum temperatures from the control box.

Out of Grain (Unload Cleanout)

The computer knows the difference between a safety that opened indicating a problem with the dryer and a shutdown that occurs during normal operation. For instance if the out of grain timer shuts down the dryer this is not looked at as a safety hazard. So before the dryer completely shuts down the computer will first allow the unload auger and any take away augers to run long enough to clean themselves out. The amount of time they will run is determined by the setting of the unload time delay.

Air Mix Chambers

Complete mixing of heat and ambient air makes for even drying temperature in plenum chamber, front and back and side to side. (New air straighteners enhance the effectiveness of the mixing chambers).

Vane Axial Fans

Low speed fan blades for low noise level. More efficient (cfm/bu/hp) than centrifugal fans, less electrical costs.

Work Light and Shutdown Indicator

The light on the outside of the dryer doubles as a shutdown indicator. When the light switch is placed in the auto position the light will go off whenever the dryer shuts down. The light will also work in the on position even if the dryer is shutdown.

Stainless Steel Trash Pan

A trash pan is available to help distribute trash in the top of the dryer. This will help to keep the grain flowing in the back columns.

Auxiliary Auger IEC Contactors/ Overloads

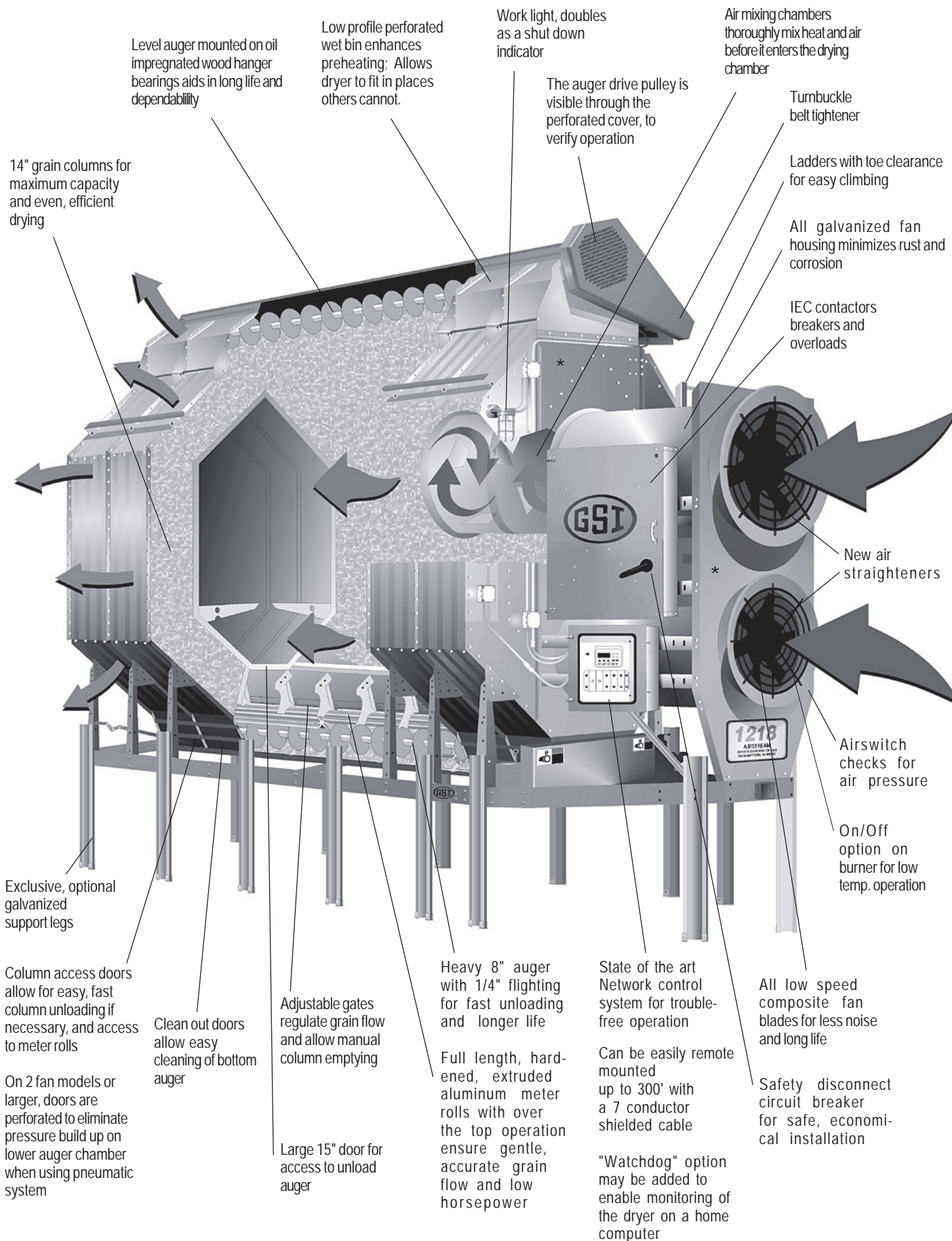
There are no heaterstrips on IEC controls. If a different size motor is to be used these contactor overloads must be changed. Notify GSI and it will come from the factory correct.

Low Temp Burner Options

The on-off fire burner, as opposed to the hi-low fire, is excellent for specialty grain operations.

Dryer Shutdowns

Each of the common shutdowns on the 100 series are displayed individually, so there is no guesswork when these shutdowns occur.



Network Controls

The Network control system uses digital communications between the main control box and each fan/heater unit. The digital communications allow each dryer equipped with Network controls to have added features and simplified wiring. Control wiring on stack models has been reduced to 5 wires. This is a reduction over 100 wires on stack dryers. Installation time should be greatly reduced on all stack dryers.

Temperatures

The Network control system allows the user to both monitor and adjust all temperatures on the dryer from the main control panel. Each burner has its setpoint and actual temperature displayed on the main control box located at eye level. You may adjust all temperatures here or they can be adjusted on the fan/heater unit.

Out of Grain-Refill Timer

When activated the refill timer monitors when the out of grain timer calls for a shutdown. Instead of shutting down the complete dryer, the burners and the unload system will shutdown. They will stay shutdown for a period of time that you program into the computer. If during this refill time the dryer fills back up with grain, the dryer will start the burners and unload and return to normal operation. If the refill time reaches zero the rest of the dryer will shutdown.

Fan/Heater Bypass

The Network controls can keep your dryer running. If you have a shutdown in one of the fan/heater units today, the dryer will shutdown and it will not restart until the problem has been corrected. This may mean a service call from your dealership. By using the **Fan/Heater Bypass** feature you can bypass the fan/heater with the problem. The rest of the dryer will operate normally, while the fan/heater with the shutdown is eliminated from the circuit. This can keep a dryer going until help has arrived.

Out Of Grain (unload cleanout)

The computer knows the difference between a safety that opened indicating a problem with the dryer and a shutdown that occurs during normal operation. For instance if the out of grain timer shuts down the dryer this is not looked at as a safety hazard. So before the dryer completely shuts down the computer will first allow the unload auger and any take away augers to run long enough to clean themselves out. The amount of time they will run is determined by the setting of the unload time delay.

Remoting the Control Box

The Network control box can be remote mounted easier than ever before. The number of wires here have also been reduced. We have decreased the number of wires that run from the power box to the main control box to 7. That is also a reduction of over 100 wires from last years models. This should be a 7 conductor shielded cable, but by using the shielded cable you should be able to remote mount the main control box up to 300 feet away from the dryer.

The "Watchdog" Remote Monitoring System

A system has been designed that will enable a user to "watch" his dryer on a home computer screen. This is for viewing only and will not control the dryer. All switches will be monitored along with the output for each contactor. All temperatures can be monitored. You will be able to see actual temperatures as well as the burner setpoints. Bushels per hour, meter roll setpoints, and RPM will also be indicated so a person can keep a record of all the grain he has dried even if he resets the total bushels on the dryer. All safety shutdowns are also monitored and stored in the computer. This will allow a record of all shutdowns (not just the 256 stored in the dryer) to be kept. You will be able to view or print a graph of grain and plenum temperatures. A picture of the actual front control panel of the dryer can be displayed showing all switch positions and screen displays.

High/Low Speed Averaging

Because the meter roll speed pots are now monitored directly by the Network controls the computer can calculate the amount of time the meter rolls spend on high and low speed. The operator can use this to tell if his meter rolls are adjusted properly.

Meter Roll Reverse

All Network dryers have the ability to use the meter roll reversal feature. This is a very important feature if you are ever drying during extremely trashy conditions. Here is how it works. You will activate the Meter Roll Reverse feature and then set an amount of time that you want the meter rolls to run before they reverse. Then you will set an amount of time that you want the meter rolls to run in reverse. So the rolls will run in the normal direction for a while and then come to a complete stop. Then they will reverse direction for a preset period of time. Another complete stop and resume normal rotation. If you have any trash gathered around the meter rolls this should pass it through the system.

Unit of Measure

Network controls have programming that allow the user to decide what unit of measure that they want to be displayed. You can choose between Fahrenheit and Celcius, and also between Bushels per Hour and Metric Tons.

Error History Viewing

Network controls monitor and log all types of shutdown when they occur. When a shutdown happens it is immediately displayed and recorded in the computer history. When you reach the dryer you will be able to see what shut the dryer down and also the time and date that the shutdown happened. The log is kept in a hard memory that never forgets. If power is pulled from the dryer it will still keep the permanent log of shutdowns and the time and date. The number of shutdown that will be logged is 256.

Additional Features:

Trash Pan

A trash pan is available to help distribute trash in the top of the dryer. This will help to keep the grain flowing in the back columns. **Trash pans are stainless steel on all models.**

Vane Axial Fans

Low speed fan blades for low noise level. More efficient (cfm/bu/hp) than centrifugal fans, less electrical costs.

IEC Branch Breakers, Contactors and Overloads

IEC controls are heavier and meet additional codes. 440 volt dryers have branch breakers. This is needed to meet code in some states or areas. Overloads allow for adjustment.

8" Flight

All unload auger flighting has been standardized to eight inches for fast unloading and longer life.

Two Transformers In 440 Volt Dryers

Control transformer wiring for the 110V control circuit and the 220V SCR drive circuit are separated on all 440V dryers.

Wind Butress For Stack Dryers

In 1995, we started using commercial bin stiffeners in place of the wind buttress. This will allow for easier erection, and less concrete work. The dryer will be approximately 9' over-all width.

Ground Rod

A ground rod is included with each dryer. We require that each dryer have a ground rod installed per local code .

Air Mix Chambers

Complete mixing of heat and ambient air makes for even drying temperature in plenum chamber, front and back and side to side. New air straighteners enhance the effectiveness of the mixing chambers.

All screens, augers, bearings and sheet metal parts are the same as the 1100 Series dryers.
Only the electronic controls are different.

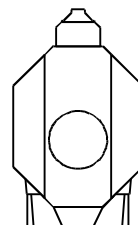
| | |
|-----------------------------------------|--------------------------------------------------------------|
| 100 Series System | Externally adjustable vaporizers |
| Full heat continuous flow or auto batch | Low speed vane axial fans with Blue Burn System on LP models |
| Dry and cool auto batch | Internal and external meter roll cleanout |
| Full safety control system | Heavy duty meter rolls and drive |
| See through control panel door | Solid dividers, every two feet |
| Load and unload auxiliary starters | Galvanized fan housing, control cabinet and auger housing |
| Waterproof controls | Perforated wet bin standard on all models |
| Solid state ignition | |



| Model Number | Electrical Power | | Fuel | List Price Less Transport | Approx. Dryer Wt. | Wet Bushels Full Heat | | Wet Bushels Dry & Cool | |
|---------------------------------------------------|------------------|---------|------|------------------------------|----------------------|--------------------------|--------|---------------------------|--------|
| | Phase | Voltage | | | | 10 pt.* | 5 pt.* | 10 pt.* | 5 pt.* |
| ALL Models are Equipped with a Perforated Wet Bin | | | | | | | | | |
| 108 | 1 or 3 | ALL | ALL | \$27,720.00 | 4,300 lbs. | 190 | 310 | 120 | 155 |
| 110 | 1 or 3 | ALL | ALL | \$31,340.00 | 5,000 lbs. | 240 | 385 | 150 | 200 |
| 112 | 1 or 3 | ALL | ALL | \$39,470.00 | 6,300 lbs. | 335 | 525 | 205 | 270 |
| 114 | 1 or 3 | ALL | ALL | \$48,760.00 | 7,000 lbs. | 390 | 610 | 245 | 320 |
| 116 | 1 or 3 | ALL | ALL | \$50,940.00 | 7,500 lbs. | 440 | 710 | 280 | 370 |
| 118 | 3 | ALL | ALL | \$53,850.00 | 8,000 lbs. | 505 | 815 | 320 | 430 |
| 120 | 3 | ALL | ALL | \$58,460.00 | 8,700 lbs. | 560 | 905 | 360 | 475 |
| 122 | 3 | ALL | ALL | \$66,250.00 | 9,500 lbs. | 610 | 990 | 390 | 520 |
| 126 | 3 | ALL | ALL | \$73,510.00 | 11,000 lbs. | 715 | 1,155 | 455 | 605 |

If a Standard Top is Desired, Consult Page 14 for Deduct Pricing

*Measured in wet bushels per hour (BPH).
**See page 21 for wet bin pricing, if needed.



For CGA approval on above models add \$1100. list.

100 & 1100 Series

For small grain perforations (0.050") add 2% to list price of dryer. Prices and specifications subject to change without notice

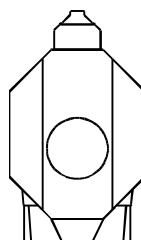
June 16, 2002

| | |
|------------------------------------------------------------------|-------------------------------------------------|
| Network Control System | Low speed vane axial fans with Blue Burn System |
| Fan/Heater bypass | Solid state ignition |
| Every shutdown monitored and saved in the error shutdown history | Externally adjustable vaporizers |
| Out of Grain--Unload Cleanout | Internal and external meter roll cleanout |
| Full heat continuous flow or auto batch | Heavy duty meter rolls and drive |
| Remote capable control center | Solid dividers, every two feet |
| See through control panel door | Perforated wet bin standard |
| Load and unload auxiliary starters | Waterproof controls |



| Model Number | Electrical Power | | Fuel | List Price Less Transport | Approx. Dryer Wt. | Wet Bushels Full Heat | | Wet Bushels Dry & Cool | |
|--------------|------------------|---------|------|---------------------------|-------------------|-----------------------|--------|------------------------|--------|
| | Phase | Voltage | | | | 10 pt.* | 5 pt.* | 10 pt.* | 5 pt.* |
| 1108 | 1 or 3 | ALL | ALL | \$33,400.00 | 4,300 lbs. | 205 | 335 | 130 | 170 |
| 1110 | 1 or 3 | ALL | ALL | \$37,000.00 | 5,000 lbs. | 260 | 420 | 165 | 220 |
| 1112 | 1 or 3 | ALL | ALL | \$45,150.00 | 6,300 lbs. | 345 | 560 | 220 | 290 |
| 1114 | 1 or 3 | ALL | ALL | \$49,960.00 | 7,000 lbs. | 405 | 650 | 260 | 340 |
| 1116 | 1 or 3 | ALL | ALL | \$55,400.00 | 7,500 lbs. | 440 | 710 | 280 | 370 |
| 1118 | 3 | ALL | ALL | \$60,080.00 | 8,000 lbs. | 505 | 815 | 320 | 430 |
| 1120 | 3 | ALL | ALL | \$64,770.00 | 8,700 lbs. | 560 | 905 | 360 | 475 |
| 1122 | 3 | ALL | ALL | \$68,570.00 | 9,500 lbs. | 610 | 990 | 390 | 520 |
| 1126 | 3 | ALL | ALL | \$77,440.00 | 11,000 lbs. | 715 | 1,155 | 455 | 605 |

*Measured in wet bushels per hour (BPH).



For CGA approval on above models add \$1100. list

1100 Series

For small grain perforations (0.050") add 2% to list price of dryer. Prices and specifications subject to change without notice
 Example: 1108 dryer LP small grains \$31,395. x 1.02=\$32,023. list. All items F. O. B. Newton, Illinois. June 16, 2002

Network Control System (See page 6)

All temps set at main control box

Watchdog remote monitoring system

Fan/Heater bypass

Every shutdown monitored and saved in the error shutdown history

Continuous flow or staged batch

Out of Grain--Unload Cleanout

Easily remoteable control center

Load and unload auxiliary starters

Galvanized fan housing, control cabinet and auger housing

Low speed vane axial fans, LP models have the exclusive "Blue Burn System"

Solid state ignition and flame sensing

Externally adjustable vaporizers

Internal and external meter roll cleanout

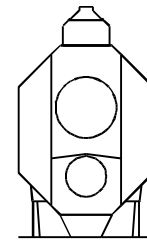
Heavy duty meter rolls and drive

Solid dividers, every two feet

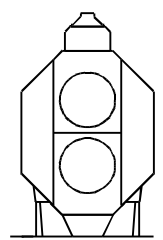
Perforated wet bin standard

Waterproof controls

For CGA approval on 1200 & 1200s Series add \$2200. list



1200 Series



1200S Series

1200 SERIES

| Model Number | Electrical Power | | Fuel | List Price Less Transport | Approx. Dryer Wt. | Wet Bushels Full Heat | | Wet Bushels Dry & Cool | |
|--------------|------------------|---------|----------|---------------------------|-------------------|-----------------------|--------|------------------------|--------|
| | Phase | Voltage | | | | 10 pt.* | 5 pt.* | 10 pt.* | 5 pt.* |
| 1214 | 1 or 3 | ALL | LP or NG | \$53,930.00 | 7,600 lbs. | 415 | 680 | 250 | 400 |
| 1216 | 1 or 3 | ALL | LP or NG | \$58,010.00 | 8,200 lbs. | 475 | 765 | 290 | 465 |
| 1218 | 1 or 3 | ALL | LP or NG | \$62,710.00 | 9,000 lbs. | 520 | 840 | 315 | 505 |
| 1220 | 1 or 3 | ALL | LP or NG | \$69,700.00 | 9,800 lbs. | 590 | 950 | 345 | 560 |
| 1222 | 3 | ALL | LP or NG | \$77,050.00 | 10,500 lbs. | 650 | 1,055 | 395 | 640 |
| 1226 | 3 | ALL | LP or NG | \$84,640.00 | 12,000 lbs. | 730 | 1,180 | 450 | 725 |

1200S SERIES

| | | | | | | | | | |
|-------|---|-----|----------|-------------|-------------|-----|-------|-----|-----|
| 1214S | 1 | ALL | LP or NG | \$60,220.00 | 9,500 lbs. | 381 | 680 | 220 | 325 |
| 1218S | 1 | ALL | LP or NG | \$69,460.00 | 11,500 lbs. | 520 | 840 | 240 | 385 |
| 1220S | 1 | ALL | LP or NG | \$77,140.00 | 14,500 lbs. | 590 | 950 | 280 | 425 |
| 1222S | 1 | ALL | LP or NG | \$85,260.00 | 15,500 lbs. | 650 | 1,055 | 300 | 485 |
| 1226S | 1 | ALL | LP or NG | \$93,390.00 | 18,500 lbs. | 730 | 1,180 | 375 | 600 |

*Measured in wet bushels per hour (BPH).

For small grain perforations (0.050") add 2% to list price of dryer. Prices and specifications subject to change without notice

June 16, 2002

STACKABLE SERIES MODELS

2300 SERIES

| Model Number | Stackable Units | Electrical Power | | Fuel | List Price Less Transport | Approx. Dryer Wt. | Wet Bushels Full Heat | | Wet Bushels Dry & Cool | |
|--------------|-----------------|------------------|---------|----------|---------------------------|-------------------|-----------------------|--------|------------------------|--------|
| | | Phase | Voltage | | | | 10 pt.* | 5 pt.* | 10 pt.* | 5 pt.* |
| 2314 | 2 | 1 or 3 | ALL | LP or NG | \$92,720.00 | 16,000 lbs. | 900 | 1,455 | 615 | 995 |
| 2318 | 2 | 3 | ALL | LP or NG | \$113,090.00 | 19,000 lbs. | 1,120 | 1,805 | 770 | 1,235 |
| 2320 | 2 | 3 | ALL | LP or NG | \$119,320.00 | 21,000 lbs. | 1,245 | 2,010 | 850 | 1,375 |
| 2322 | 2 | 3 | ALL | LP or NG | \$126,550.00 | 22,500 lbs. | 1,355 | 2,195 | 930 | 1,500 |
| 2326 | 2 | 3 | ALL | LP or NG | \$141,240.00 | 25,000 lbs. | 1,670 | 2,700 | 1,130 | 1,835 |

2400 SERIES

| | | | | | | | | | | |
|------|---|--------|-----|----------|--------------|-------------|-------|-------|-------|-------|
| 2414 | 2 | 1 or 3 | ALL | LP or NG | \$99,730.00 | 16,500 lbs. | 900 | 1,455 | 615 | 995 |
| 2418 | 2 | 1 or 3 | ALL | LP or NG | \$120,880.00 | 19,500 lbs. | 1,120 | 1,805 | 770 | 1,235 |
| 2420 | 2 | 3 | ALL | LP or NG | \$127,220.00 | 21,500 lbs. | 1,245 | 2,010 | 850 | 1,375 |
| 2422 | 2 | 3 | ALL | LP or NG | \$134,900.00 | 23,500 lbs. | 1,355 | 2,195 | 930 | 1,500 |
| 2426 | 2 | 3 | ALL | LP or NG | \$160,050.00 | 26,000 lbs. | 1,670 | 2,700 | 1,130 | 1,835 |

*Measured in wet bushels per hour (BPH).

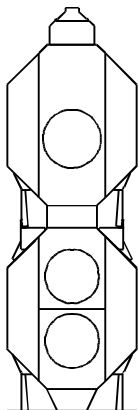
For CGA approval add \$3300.00 for 2300 Series, and add \$4400.00 for 2400 Series.

Pedestal Bases for Stack Stiffner Supports included in List Price of Dryer.

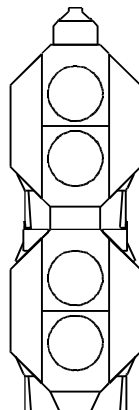
Standard on all Stack Dryers.
D01-1100** 36" Base Unit
LEG-036*** 36" Tall Leg

Available for all Stack Dryers
D01-1104** 18" Base Unit
LEg-018*** 18" Tall Leg

**6 required on 12' & 14' series.
8 required on 18' series
10 required on 20' & 22' series.
12 required on 26' series.



2300 Series



2400 Series

For small grain perforations (0.050") add 2% to list price of dryer. Prices and specifications subject to change without notice

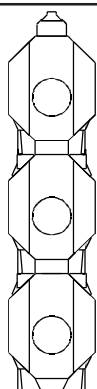
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STACKABLE SERIES MODELS

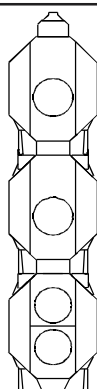
| Model Number | Stackable Units | Electrical Power | | Fuel | List Price Less Transport | Approx. Dryer Wt. | Wet Bushels Full Heat | | Wet Bushels Dry & Cool | |
|--------------|-----------------|------------------|---------|----------|---------------------------|-------------------|-----------------------|--------|------------------------|--------|
| | | Phase | Voltage | | | | 10 pt.* | 5 pt.* | 10 pt.* | 5 pt.* |
| 3312 | 3 | 1 or 3 | ALL | LP or NG | \$109,860.00 | 22,000 lbs. | 1,045 | 1,690 | 640 | 1,035 |
| 3314 | 3 | 1 or 3 | ALL | LP or NG | \$120,100.00 | 23,000 lbs. | 1,355 | 2,190 | 840 | 1,340 |
| 3318 | 3 | 3 | ALL | LP or NG | \$142,800.00 | 28,500 lbs. | 1,680 | 2,720 | 1,035 | 1,665 |
| 3320 | 3 | 3 | ALL | LP or NG | \$156,270.00 | 28,500 lbs. | 1,825 | 2,950 | 1,120 | 1,800 |
| 3322 | 3 | 3 | ALL | LP or NG | \$165,510.00 | 30,000 lbs. | 2,040 | 3,300 | 1,250 | 2,015 |
| 3326 | 3 | 3 | ALL | LP or NG | \$186,100.00 | 34,000 lbs. | 2,475 | 4,000 | 1,520 | 2,445 |
| | | | | | | | | | | |
| 3414 | 3 | 1 or 3 | ALL | LP or NG | \$124,770.00 | 23,000 lbs. | 1,355 | 2,190 | 840 | 1,340 |
| 3418 | 3 | 3 | ALL | LP or NG | \$148,260.00 | 26,500 lbs. | 1,680 | 2,720 | 1,035 | 1,665 |
| 3420 | 3 | 3 | ALL | LP or NG | \$161,060.00 | 29,500 lbs. | 1,825 | 2,950 | 1,120 | 1,800 |
| 3422 | 3 | 3 | ALL | LP or NG | \$170,410.00 | 30,500 lbs. | 2,040 | 3,300 | 1,250 | 2,015 |
| 3426 | 3 | 3 | ALL | LP or NG | \$191,440.00 | 35,000 lbs. | 2,475 | 4,000 | 1,520 | 2,445 |
| | | | | | | | | | | |
| 3614 | 3 | 1 or 3 | ALL | LP or NG | \$133,560.00 | 24,000 lbs. | 1,355 | 2,190 | 840 | 1,340 |
| 3618 | 3 | 1 or 3 | ALL | LP or NG | \$157,720.00 | 28,000 lbs. | 1,680 | 2,720 | 1,035 | 1,665 |
| 3620 | 3 | 1 or 3 | ALL | LP or NG | \$176,300.00 | 31,000 lbs. | 1,825 | 2,950 | 1,120 | 1,800 |
| 3622 | 3 | 1 or 3 | ALL | LP or NG | \$185,100.00 | 33,000 lbs. | 2,040 | 3,300 | 1,250 | 2,015 |
| 3626 | 3 | 3 | ALL | LP or NG | \$219,820.00 | 38,000 lbs. | 2,475 | 4,000 | 1,520 | 2,445 |

*Measured in wet bushels per hour (BPH).

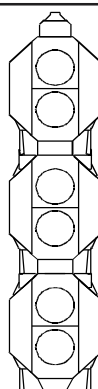
For CGA approval add \$3300.00 for 3300 Series, add \$4400.00 for 3400 Series, AND \$6600.00 for 3600 Series.



3300 Series



3400 Series



3600 Series

Pedestal Bases for Stack Stiffner Supports included in List Price of Dryer.

Standard on all Stack Dryers.
D01-1100** 36" Base Unit
LEG-036*** 36" Tall Leg

Available for all Stack Dryers
D01-1104** 18" Base Unit
LEG-018*** 18" Tall Leg

**6 required on 12' & 14' series.
8 required on 18' series
10 required on 20' & 22' series.
12 required on 26' series.

For small grain perforations (0.050") add 2% to list price of dryer. Prices and specifications subject to change without notice

June 16, 2002

STAINLESS STEEL TRASH PAN

| Part Number | | List Price |
|-------------|--------------------------|------------|
| TP-08 | Trash Pan Kit, 8' Dryer | \$200.00 |
| TP-10 | Trash Pan Kit, 10' Dryer | \$250.00 |
| TP-12 | Trash Pan Kit, 12' Dryer | \$290.00 |
| TP-14 | Trash Pan Kit, 14' Dryer | \$430.00 |
| TP-16 | Trash Pan Kit, 16' Dryer | \$480.00 |
| TP-18 | Trash Pan Kit, 18' Dryer | \$510.00 |
| TP-20 | Trash Pan Kit, 20' Dryer | \$560.00 |
| TP-22 | Trash Pan Kit, 22' Dryer | \$700.00 |
| TP-26 | Trash Pan Kit, 26' Dryer | \$780.00 |

WET BIN

| | Dryer Length | Galvanized Steel List Price | Stainless Steel List Price | Additional Price For Stainless Wet Bin on Dryers With Wet Bin |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------|-------------------------------|---------------------------------------------------------------------|
| All combination dryers are equipped with wet bins as standard equipment, to price with a standard top please deduct the galvanized steel list price from price of dryer. | 8 ft. | \$639.00 | \$1,092.00 | \$453.00 |
| | 10 ft. | \$772.00 | \$1,344.00 | \$572.00 |
| | 12 ft. | \$1,130.00 | \$1,796.00 | \$666.00 |
| | 14 ft. | \$1,313.00 | \$2,090.00 | \$777.00 |
| | 16 ft. | \$1,489.00 | \$2,384.00 | \$895.00 |
| | 18 ft. | \$1,709.00 | \$2,704.00 | \$995.00 |
| Wet Bin prices are in lieu of standard top. | 20 ft. | \$1,886.00 | \$2,993.00 | \$1,107.00 |
| | 22 ft. | \$2,051.00 | \$3,276.00 | \$1,225.00 |
| | 26 ft. | \$2,426.00 | \$3,875.00 | \$1,449.00 |

STAINLESS STEEL PRICING

| Model | Column Length | All Outside Screens | Top Outside Only | Top & Sides Outside Only | *Rice Option All Inside & Outside Screens |
|--------------------|------------------|------------------------|---------------------|-----------------------------|-------------------------------------------------------|
| 108, (short sides) | 8 | \$1,654.00 | \$536.00 | \$971.00 | \$2,966.00 |
| 110, (short sides) | 10 | \$2,063.00 | \$672.00 | \$1,208.00 | \$4,022.00 |
| 112 | 12 | \$2,767.00 | \$803.00 | \$1,733.00 | \$4,289.00 |
| 114, 1214, 1214S | 14 | \$3,229.00 | \$945.00 | \$2,037.00 | \$6,332.00 |
| 116, 1216 | 16 | \$3,691.00 | \$1,076.00 | \$2,326.00 | \$7,245.00 |
| 118, 1218, 1218S | 18 | \$4,148.00 | \$1,208.00 | \$2,615.00 | \$8,138.00 |
| 120, 1220, 1220S | 20 | \$4,615.00 | \$1,349.00 | \$2,914.00 | \$9,056.00 |
| 122, 1222, 1222S | 22 | \$5,077.00 | \$1,481.00 | \$3,202.00 | \$9,949.00 |
| 126, 1226, 1226S | 26 | \$5,996.00 | \$1,748.00 | \$3,791.00 | \$11,750.00 |
| | | Complete | Partial 1 | Partial 2 | |
| 2314, 2414 | 14 | \$6,458.00 | \$4,174.00 | - | \$12,747.00 |
| 2318, 2418 | 18 | \$8,295.00 | \$5,355.00 | - | \$16,380.00 |
| 2320, 2420 | 20 | \$9,230.00 | \$5,964.00 | - | \$18,197.00 |
| 2322, 2426 | 22 | \$10,154.00 | \$6,563.00 | - | \$20,097.00 |
| 2326, 2426 | 26 | \$11,996.00 | \$7,744.00 | - | \$23,730.00 |
| 3312 | 12 | \$8,295.00 | - | \$4,505.00 | \$16,170.00 |
| 3314, 3414, 3614 | 14 | \$9,692.00 | - | \$5,271.00 | \$19,425.00 |
| 3318, 3418, 3618 | 18 | \$12,453.00 | - | \$6,773.00 | \$24,738.00 |
| 3320, 3420, 3620 | 20 | \$13,839.00 | - | \$7,529.00 | \$27,500.00 |
| 3322, 3422, 3622 | 22 | \$15,225.00 | - | \$8,285.00 | \$30,240.00 |
| 3326, 3426, 3626 | 26 | \$17,997.00 | - | \$9,791.00 | \$35,721.00 |

Partial 1: All outside screens of top module and top outside angle of bottom module.

Partial 2: All outside screens of top module and top and side outside screens of middle module.

Small grain perforations (0.050") not available in stainless steel. *GSI recommends this option for drying rice.

June 16, 2002

GRAIN SAMPLER

Item
Grain Sampler
(Standard on new dryer)

Part Number
D01-0405

List Price
\$78.00

HEAT RECLAIMER

Heat Reclaimer

| Dryer | Part Number | List Price |
|--------------------|--------------------|-------------------|
| 1214 | 1214-HR01 | \$5,950.00 |
| 1216 | 1216-HR01 | \$6,180.00 |
| 1218 | 1218-HR01 | \$6,360.00 |
| 1220 | 1220-HR01 | \$6,570.00 |
| 1222 | 1222-HR01 | \$6,820.00 |
| 1226 | 1226-HR01 | \$8,090.00 |
| 2000 Series | | |
| 12 ft. | 2012-HR01 | \$12,480.00 |
| 14 ft. | 2014-HR01 | \$13,180.00 |
| 18 ft. | 2018-HR01 | \$14,780.00 |
| 20 ft. | 2020-HR01 | \$15,540.00 |
| 22 ft. | 2022-HR01 | \$16,300.00 |
| 26 ft. | 2026-HR01 | \$17,830.00 |
| 3000 Series | | |
| 12 ft. | 3012-HR01 | \$16,500.00 |
| 14 ft. | 3014-HR01 | \$17,710.00 |
| 18 ft. | 3018-HR01 | \$19,520.00 |
| 20 ft. | 3020-HR01 | \$20,380.00 |
| 22 ft. | 3022-HR01 | \$21,350.00 |
| 26 ft. | 3026-HR01 | \$23,050.00 |

NOISE SUPPRESSOR KIT

| Noise Suppressor Kit | Dryer | Part Number | List Price |
|------------------------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------|
| | 108, 110, 112, 114, 116, 118, 120, 122, 126 | 1100-NS01 | \$1,390.00 |
| | 1214, 1216, 1218, 1220, 1222, 1226 | 1200-NS01 | \$2,600.00 |
| | 12, 14, 18, 20, 22, & 26 ft. stacked series | 1200S-NS01 2000-NS01 3000-NS01 | \$4,680.00 \$7,860.00 \$11,090.00 |
| For Use With Heat Reclaimer | All Multi Fan Models With Heat Reclaimer | 1200-NSHR 2000-NSHR 3000-NSHR | \$1,560.00 \$4,510.00 \$7,740.00 |

SERVICE PLATFORM

Service Platform
(extra unit)

All

Part Number
SP-01

List Price
\$1,764.00

Moisture Manager

| Part Number | | List Price |
|--------------------|--------------------------------------------|-------------------|
| DO4-0381 | Moisture control when purchased with dryer | \$3495.00 |
| DO4-0379 | Moisture control when purchased separately | \$4387.00 |

SHRINK WRAP For Dryer Transport

| Column Length | Part Number | Net Price After Cash |
|---------------|-------------|----------------------|
| 8'-10' | CD-0313 | \$236.00 |
| 12'-18' | CD-0409 | \$368.00 |
| 20'-26' | CD-0410 | \$499.00 |

DISCHARGE AUGER EXTENSION

| 10" Diameter Tube | Part Number | List Price |
|---------------------------------------------|-------------|------------|
| 2' | CD-AE02 | \$452.00 |
| 4' | CD-AE04 | \$609.00 |
| 6' | CD-AE06 | \$746.00 |
| 8' | CD-AE08 | \$903.00 |
| Fill Extension | MF-AE02L | \$578.00 |
| Discharge Box Bypass In lieu of Standard | D01-1172 | \$48.00 |

Any length needed is available. Call factory for quotation.

TRANSPORT KIT

| Item | Model | Part Number | List Price |
|---------------|-----------------------|-------------|------------|
| Transport Kit | 8-10 ft. series | TK-01 | \$1,785.00 |
| | 12 ft. series | TK-02 | \$3,045.00 |
| | 14, 16 ft. series | TK-02S | \$3,150.00 |
| | 18, 20, 22 ft. series | TK-03 | \$4,515.00 |
| | 26 ft. series | TK-04 | \$6,195.00 |

CRANE BRACKETS

| | | |
|-----------------------------------------------------------------------------------------------|-------------------------|------------------------|
| Crane bracket kit - top models (used on single module dryers and top modules of stack dryers) | Part Number D04-0128 | List Price \$151.00 |
| Crane bracket kit - bottom module (used on bottom and middle modules of stack dryers) | D04-0157 | \$55.00 |

WATCHDOG

| Part Number | | List Price |
|-------------|----------------------------------------|------------|
| DO3-0358 | Standard System (World Wide Access) | \$1995.00 |
| DO3-0359 | Short Haul (No Modem On-site Computer) | \$1995.00 |

Stainless Steel Grain Inverters

| Grain Inverter (per foot of basket) | Part Number | List Price |
|----------------------------------------|-------------|------------|
| | D01-1490S | \$315.00 |

DRYER STEEL LEG SUPPORTS

When ordering leg stands for dryers, please use these part numbers to specify the desired item needed. These groupings have been developed to make ordering legs for dryers easier.

All leg packages include frame step assembly on front and rear.

Individual Leg Assembly

| | | |
|---------|----------|---------|
| LEG-016 | 16" Tall | \$43.00 |
| LEG-018 | 18" Tall | \$44.00 |
| LEG-024 | 24" Tall | \$46.00 |
| LEG-030 | 30" Tall | \$50.00 |
| LEG-036 | 36" Tall | \$53.00 |
| LEG-042 | 42" Tall | \$56.00 |

Leg Packages For An 8' Dryer Module

| | | |
|------------|----------|----------|
| LEG-016-08 | 16" Tall | \$400.00 |
| LEG-018-08 | 18" Tall | \$410.00 |
| LEG-024-08 | 24" Tall | \$450.00 |
| LEG-030-08 | 30" Tall | \$480.00 |
| LEG-036-08 | 36" Tall | \$510.00 |
| LEG-042-08 | 42" Tall | \$560.00 |

Leg Packages For 10' & 12' Dryer Modules

| | | |
|------------|----------|----------|
| LEG-016-10 | 16" Tall | \$480.00 |
| LEG-018-10 | 18" Tall | \$500.00 |
| LEG-024-10 | 24" Tall | \$540.00 |
| LEG-030-10 | 30" Tall | \$580.00 |
| LEG-036-10 | 36" Tall | \$620.00 |
| LEG-042-10 | 42" Tall | \$680.00 |

Leg Packages For 14' & 16' Dryer Modules

| | | |
|------------|----------|----------|
| LEG-016-14 | 16" Tall | \$570.00 |
| LEG-018-14 | 18" Tall | \$580.00 |
| LEG-024-14 | 24" Tall | \$630.00 |
| LEG-030-14 | 30" Tall | \$680.00 |
| LEG-036-14 | 36" Tall | \$720.00 |
| LEG-042-14 | 42" Tall | \$790.00 |

Leg Packages For 18' & 20' Dryer Modules

| | | |
|------------|----------|----------|
| LEG-016-18 | 16" Tall | \$650.00 |
| LEG-018-18 | 18" Tall | \$670.00 |
| LEG-024-18 | 24" Tall | \$720.00 |
| LEG-030-18 | 30" Tall | \$780.00 |
| LEG-036-18 | 36" Tall | \$830.00 |
| LEG-042-18 | 42" Tall | \$900.00 |

Leg Packages For A 22' Dryer Module

| | | |
|------------|----------|------------|
| LEG-016-22 | 16" Tall | \$740.00 |
| LEG-018-22 | 18" Tall | \$760.00 |
| LEG-024-22 | 24" Tall | \$820.00 |
| LEG-030-22 | 30" Tall | \$880.00 |
| LEG-036-22 | 36" Tall | \$940.00 |
| LEG-042-22 | 42" Tall | \$1,020.00 |

Leg Packages For A 26' Dryer Module

| | | |
|------------|----------|------------|
| LEG-016-26 | 16" Tall | \$820.00 |
| LEG-018-26 | 18" Tall | \$840.00 |
| LEG-024-26 | 24" Tall | \$910.00 |
| LEG-030-26 | 30" Tall | \$980.00 |
| LEG-036-26 | 36" Tall | \$1,050.00 |
| LEG-042-26 | 42" Tall | \$1,130.00 |

FRAME STEPS*

To be used to extend ladder on front of non stack dryers for access to fan when dryer is on legs.

| | | |
|------------------------------------------------|----------|---------|
| 2 rung step assembly (extends 6" below frame) | D01-1196 | \$54.00 |
| 3 rung step assembly (extends 18" below frame) | D01-1197 | \$71.00 |
| 4 rung step assembly (extends 30" below frame) | D01-1567 | \$88.00 |

* Not needed if you have purchased a leg assembly package above.

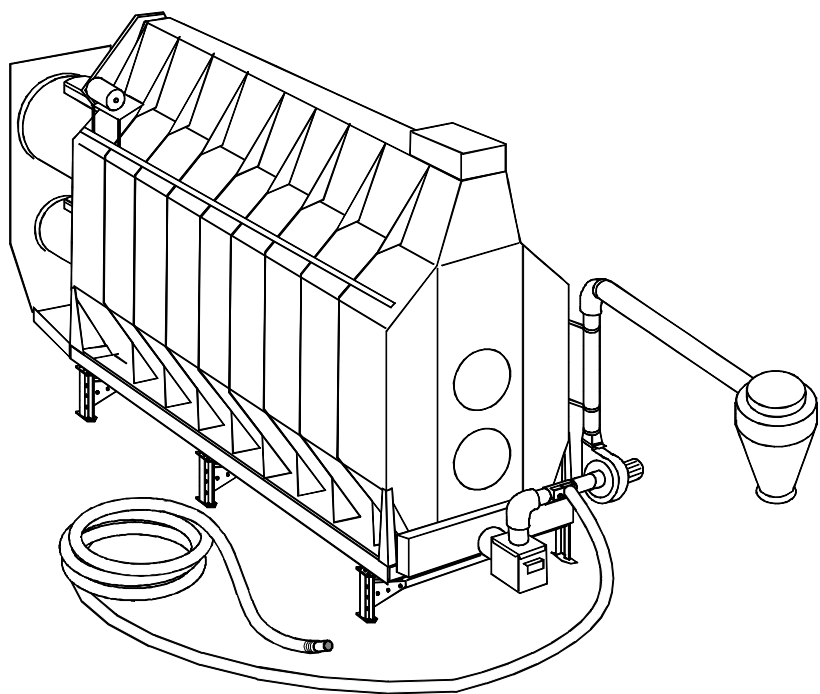
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- * Removal of light foreign materials occurs at the most optimum moment, when grain is in suspension.
- * Removing light materials improves air flow during storage aeration.
- * Removing bees' wings (Red Dog) reduces the potential of plugged aeration floors, elevator leg boots, heads, and distributors.
- * Low cost, low maintenance, high return.
- * The GSI PGC can also be adapted to other areas of the grain system to increase the cleaning potential.
- * Less bees' wings (Red Dog) and foreign matter around the drying facility results in a cleaner more desirable working atmosphere.
- * Includes a PGC Vacuum System, which is designed to allow easy cleanup of the dryer during and at the end of the drying season. Regular cleaning of the fines or bees' wings allows for more efficient drying, reduces fire hazard, and by removing old fines that hold moisture, promotes longer life of the drying and grain handling equipment.

| | | |
|--------------------------|-------------|------------|
| PGC-01 Grain Cleaner Kit | List Price: | \$1,618.00 |
|--------------------------|-------------|------------|

The PGC requires a 1.5 Hp motor not included in the above price.
The following motors are available if desires.

| Part Number | Description | List Price |
|-------------|--------------------------------|------------|
| 002-1338-9 | 1.5 Hp 1 Phase 115/230 TEFC 56 | \$430.00 |
| 002-1339-7 | 1.5 Hp 3 Phase 230/460 TEFC 26 | \$430.00 |



PGC.DS4

Transport Kit Policy

If the transport kit will be kept longer than the stated terms of the invoice, payment needs to be received. Upon return of the kit, credit will be issued. If payment is not made, a 1% per month finance charge will be the responsibility of the dealer. When returning the kit please include the invoice number the kit was billed on. This will help establish the credit more quickly.

Light kits are available for \$200.00 credit upon return only. We would like to encourage our dealers selling several dryers per year to purchase a set of kits.

Cancellations or Changes

\$100.00 is charged to an order for any change made during production and \$1000.00 charge is issued for a dryer order cancellation during production.

Dryer Trailers

Allowable length 45' 0"

Any combinations to = 45' 0"

Dryer Hauling Lengths

| Model Length | Length |
|--------------|--------|
| 8 | 14' 9" |
| 10 | 16' 9" |
| 12 | 18' 9" |
| 14 | 20' 9" |
| 16 | 22' 9" |
| 18 | 24' 9" |
| 20 | 26' 9" |
| 22 | 28' 9" |
| 26 | 32' 9" |

Dryer Freight Charges

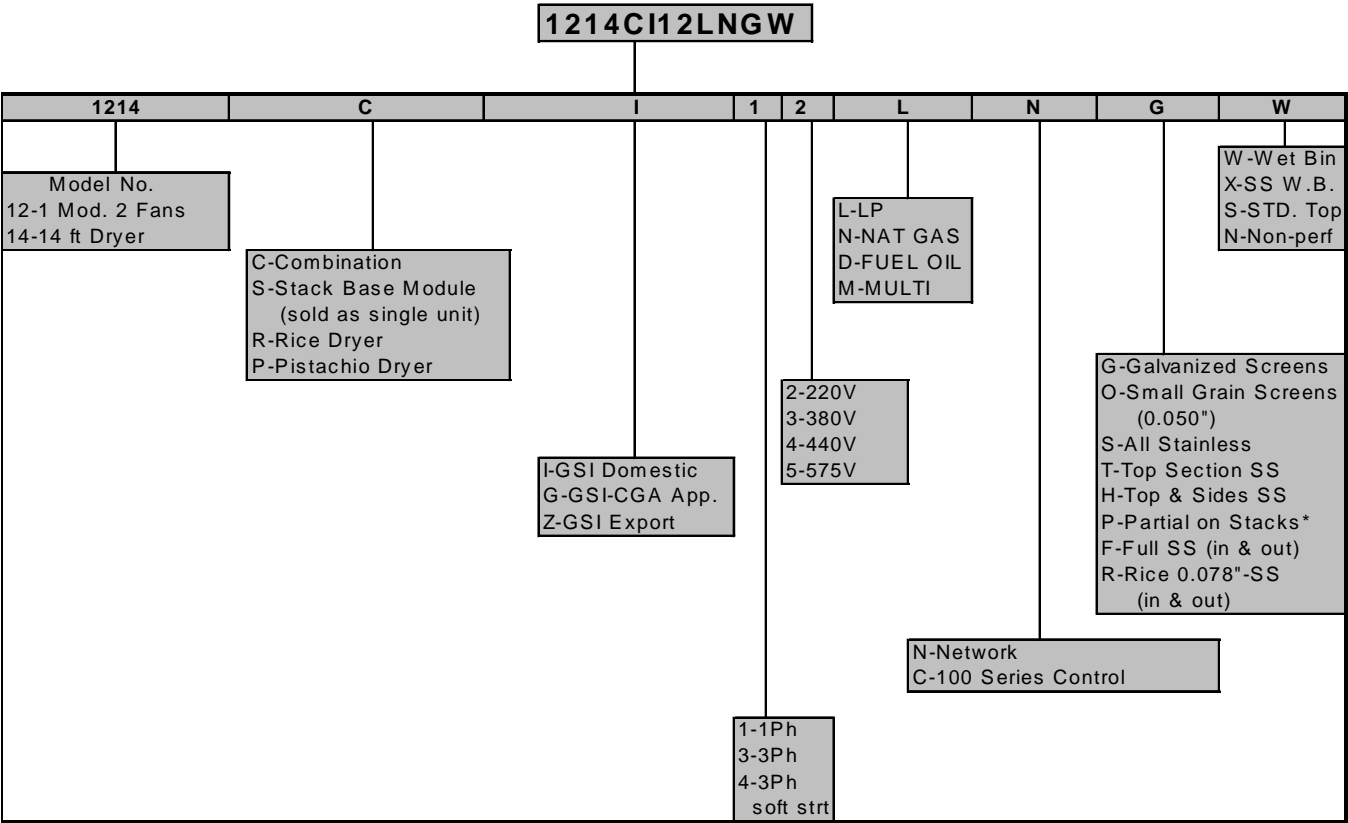
The following freight rates apply to GSI dryer shipments from Newton, Illinois:

Pulled Dryers - For 18' or shorter dryer baskets, the delivery of a single pulled dryer will be \$1.55 per mile. For pulled dryers longer than 18' basket, the delivery charge will be \$2.10 per mile. (The recommended transport kit will be required on all pulled dryers)

Hauled Dryers - The delivery of any hauled dryer or dryers to a single dealership will be \$2.10 per mile per trailer load. (Note: Two dryers with a total basket length of 36' or less can be hauled on the GSI dryer trailer. Three dryers with a total basket length of 30' or less can be hauled on the GSI dryer trailer)

Hauled Dryers, Split Loads Between Different Dealers 150 Mile Radius of Each - The delivery of a dryer(s) combined with another dryer(s) from a different dealer will be \$1.25 per mile per dealership. (Note: Two dryers with a total basket length of 36' or less can be hauled on the GSI dryer trailer. Three dryers with a total basket length of 30' or less can be hauled on the GSI dryer trailer)

Model Number Identification Chart



Here is the 2002 Dryer Model Number Identification Chart. Please use the chart to aid you when ordering a portable dryer. Notice that some of the areas have changed. The changes have been made to help insure that the order you place is correct.

Dryer Capacity Conversion Chart for Various Crop Types.

| Crop to be Dried (Common Types) | Plenum Temperature Setting Drying Rates Calculated on this Recommended Plenum Temperature Setting | Conversion Formula (bu) Corn Production Rate Conversion to New Crop Production Rate | Conversion to Metric Tons Conversion of Crop Production Rate from bushels/hour to Metric Tons/hour |
|------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Canola | 160° F | (corn dryer capacity) x 0.60 | 1 Metric Ton (@ 56 lb / bu) = 39 bu |
| Corn | 210° F | rated capacity given in specs. | 1 Metric Ton (@ 56 lb / bu) = 39 bu |
| Milo / Sorghum | 160° F | (corn dryer capacity) x 0.60 | 1 Metric Ton (@ 56 lb / bu) = 39 bu |
| Rice | 130° F | (dryer column holding capacity) x 2.5 per 2 points of removal | 1 Metric Ton (@ 45 lb / bu) = 49 bu |
| Soybean | 150° F | (corn dryer capacity) x .55 | 1 Metric Ton (@ 60 lb / bu) = 36.75 bu |
| Sunflower | 140° F | (corn dryer capacity) x 1.75 | 1 Metric Ton (@ 32 lb / bu) = 68.9 bu |
| Wheat | 160° F | (corn dryer capacity) x 0.60 | 1 Metric Ton (@ 60 lb / bu) = 36.75 bu |

Example 1: Wheat Capacity Calculation for 1220 : 590 bu/hr (10 point corn) x 0.60 = 354 bu/hr

Example 2: Wheat Capacity Metric Tons for 1220 : 354 bu/hr ÷ 36.75 bu/MT = 9.6 MT/hr

Note: It is recommended that canola be dried in a batch mode only.

Auxiliary Equipment

A.Capacity

Verify the capacity of the loading and unloading equipment. Compare the auxiliary equipment capacities to the maximum values for the dryer. The auxiliary equipment must be able to handle the input and output requirements of the dryer.

B. Electrical

Verify the type of phase, voltage, amperage, and horsepower of the auxiliary equipment. If the dryer is to control the operation of the auxiliary equipment, values for the electrical requirements of this equipment must be taken into account when ordering the components of the dryer control system.

Horsepower required for 6", 8" & 10" Wet Load Augers

3 phase motors

| | |
|-----|--------------------|
| 6" | 3 HP/10' of length |
| 8" | 4 HP/10' of length |
| 10" | 5 HP/10' of length |

1 phase motors

| | |
|-----|--------------------|
| 6" | 2 HP/10' of length |
| 8" | 3 HP/10' of length |
| 10" | 4 HP/10' of length |

Sample Calculations; 25% Shelled Corn Dried to 15% Moisture Content

Use the average drying energy of 1700 Btu / pound of water removed.

Btu required per bushel

To find the Btu required per bushel, multiply the amount of water to be removed for a given point differential by the drying energy used in the dryer for each pound of water removed.

$$\begin{array}{r} 10 \text{ point removal} \end{array} \quad \frac{7.42 \text{ lb H}_2\text{O}}{\text{bushel}} \times \frac{1,700 \text{ Btu}}{\text{lb H}_2\text{O}} = \frac{12,614 \text{ Btu}}{\text{bushel}}$$

Fuel units required per bushel

To find the fuel units required per bushel, divide the amount of Btu required per bushel at a given point removal by the heating value per unit of the fuel to be used.

$$\begin{array}{r} 10 \text{ point removal} \end{array} \quad \frac{12,614 \text{ Btu}}{\text{bushel}} \div \frac{91,500}{\text{gallon LP}} = \frac{0.138 \text{ gallon LP}}{\text{bushel}}$$

The reciprocal of these values is the number of bushels that can be dried per gallon of LP.

Fuel Consumption (units per hour)

Multiply the number of fuel units required by the bushel capacity of the dryer in question at the moisture removal desired.

A 126 dryer has a capacity of 715 bph for 10 point removal. How many gallons of LP are used?

$$\frac{715 \text{ bushels}}{\text{bushel}} \times \frac{0.138 \text{ gallon LP}}{\text{gallon LP}} = \frac{98.67 \text{ gallon LP}}{\text{bushel}}$$

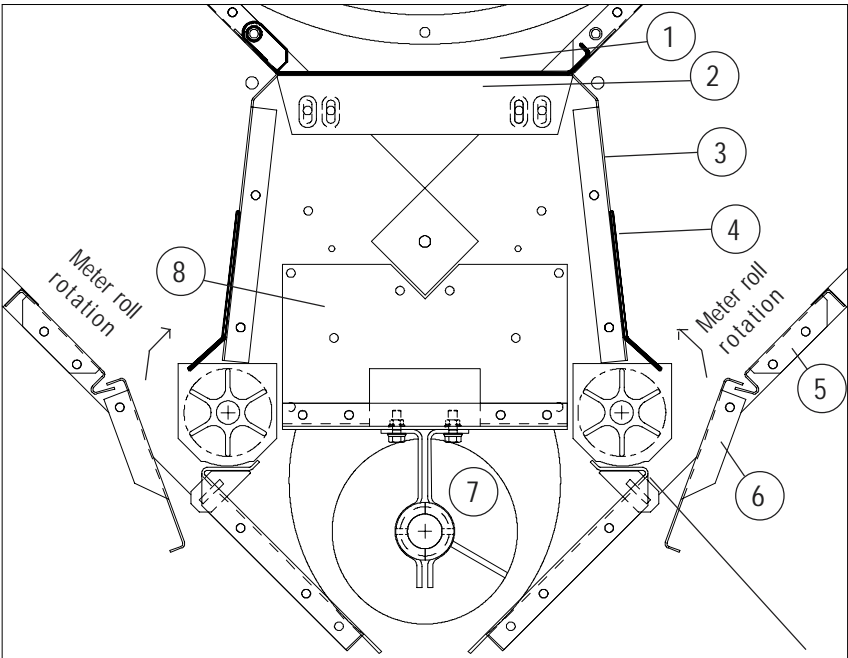
Drying Costs (cost per bushel)

Multiply the cost of fuel per unit by the fuel unit per bushel rate.

Assume LP costs \$0.60 per gallon.

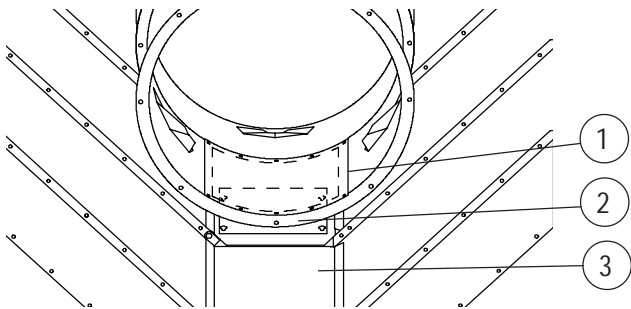
$$\frac{\$0.60}{\text{gallon LP}} \times \frac{0.138 \text{ gallon LP}}{\text{bushel}} = \frac{\$0.083}{\text{bushel}}$$

It will cost \$0.083 per bushel to dry in a 126 dryer at the rated capacity of 710 bushels per hour for 10 point removal.



- 1-Plenum closure door
- 2-Adjustable sealing/ support angle
- 3-Meter roll upper shield
- 4-Meter roll strike off plate
- 5-Perforated connector sheet*
- 6-Perforated access door*
- 7-Bottom auger mounted from above
- 8-Hanger bearing mounting assembly (*2 fan modules only)

Cross section of the metering system unload area.



- 1-Air mixer removable panel
- 2-Forward plenum closure door with access panel
- 3-Plenum closure door

Access to unload area through the airmixer.

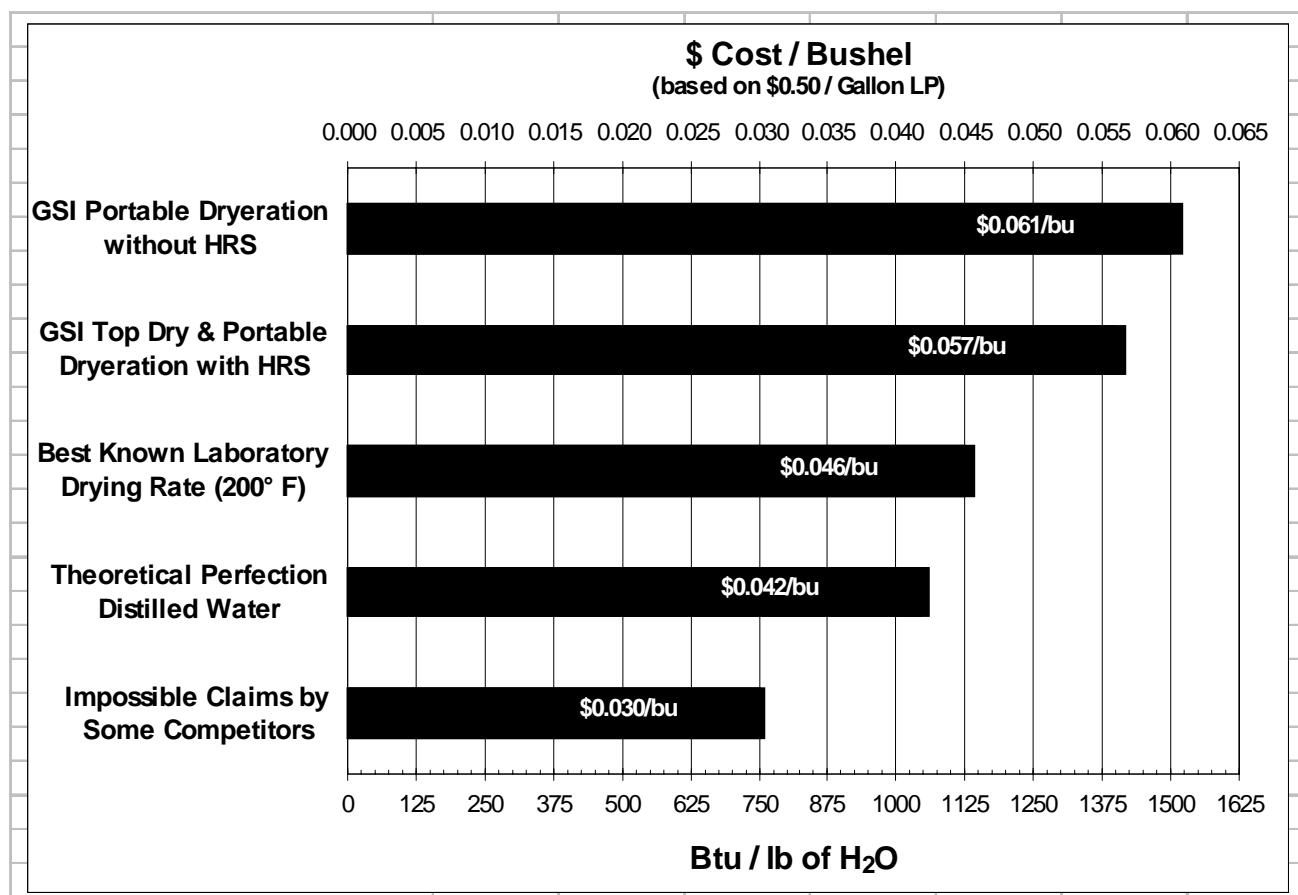
Standard Features On GSI Dryers

1. **GSI 100 Series Control System on single fans, GSI Network Control System on multi fan dryers** (true automation, dependable, self-diagnosing, accurate and easy to use).
2. Network control uses digital communication to reduce the amount of control circuit wiring on stack units by up to 90 %.
3. Network control allows user to **monitor** and **adjust** grain and plenum temps from the main control box. Plenum temps can be adjusted from either the main control box or the individual fan/heater units. Already standard on 100 series.
4. Network control allows user to remote mount the main control box as far as 1000' away using a 7 conductor shielded cable.
5. Network control monitor all of the dryers safety circuits separately. When an error occurs the operator is informed of the nature of the shutdown, plus the time and date it occurred. Up to 256 are permanently saved in the computer memory.
6. Network control monitors all meter roll rotation and uses this to calculate average time the meter rolls spend on each unloading speed. This is an important tool to help optimize capacity and quality of grain.
7. "Watchdog" remote monitoring software available for all Network models (additional equipment required).
8. Grain inverters on stacks option. (Highest grain quality and efficiency possible).
9. All IEC controls in electrical system. (More durable meets more codes).
10. Powder coat in place of painting. (Much longer life).
11. Low profile wet holding bin 14' 6" (lower height, fits more installations)
12. Adjustable metering roll gates, with **grain bypass** (minimizes column plugging, perfect for trashy conditions, quick grain bypass).
13. All fans low speed, low noise, composite blade design (low noise, efficient, more air, less vibration, easier on motors).
14. Galvanized fan housings, control cabinet, & auger housings (much longer life).
15. Full-size, see-through control panel door (convenient & cleaner).
16. Large see-through burner access door (much easier service).
17. Self monitoring start cycle (convenient, more productive).
18. 110 volt control circuit and ignition system (safer, more dependable).
19. Main safety disconnect (easier to wire, no extra cost).
22. Hinged lever operated discharge auger dump doors (convenient, easier to operate).
21. Operational monitor lights (easier operation, remote monitoring).
22. Fully perforated inner screens with standard wet bin (more grain exposed to drying air), wet bin is optional on 8'-14' Series 2000 dryers.
23. 2 speed, 4 point (two in each column) electronic moisture control (precision control, any conditions).
24. **New** DMC sensor ready discharge option. (Ready for optional DMC or GSI moisture control).
25. Double sealed control cabinets.
26. Batch and Multi-Stage controls on all models (operates in any system).
27. Power panel has terminals installed that allows easy hook-up of DMC moisture control and DMC air system.

Dryer Column Holding Capacity Comparison

| GSI | | Farm Fans | | SuperB | | MC | | Sukup | |
|-------|----------------|-------------|----------------|---------|----------------|--------|----------------|--------|----------------|
| Model | Column Holding | Model | Column Holding | Model | Column Holding | Model | Column Holding | Model | Column Holding |
| 108 | 160 | CF/AB-150 | 150 | SD185VQ | 134 | 370EMS | 157 | | |
| 110 | 200 | CF/AB-190 | 190 | SD250VQ | 210 | | | | |
| 112 | 282 | CF/AB-270 | 270 | SE250VQ | 187 | 690EMS | 313 | T1211A | 285 |
| 114 | 329 | CF/AB-320 | 320 | SD375VQ | 251 | | | | |
| 116 | 376 | | | | | | | | |
| 118 | 423 | CF/AB-400 | 420 | | | | | | |
| 120 | 470 | CF/AB-460 | 460 | SD500VQ | 335 | 970C | 413 | T2011B | 475 |
| 122 | 517 | CF/AB-510 | 506 | SD750C | 402 | | | | |
| 126 | 611 | CF/AB-600 | 598 | | | | | | |
| 1214 | 329 | C2120A | 320 | SE375V | 250 | 670EMS | 313 | | |
| 1216 | 376 | | | | | | | T1631A | 380 |
| 1218 | 423 | C2125A | 420 | | | 675EM | 313 | | |
| 1220 | 470 | C2130A | 460 | SE500V | 313 | | | T2031A | 475 |
| 1222 | 517 | | | SE625C | 313 | | | | |
| 1226 | 611 | C2140A | 598 | SE750C | 375 | 980EM | 620 | | |
| 1214s | 329 | CF/SA-320 | 320 | | | | | | |
| 1218s | 423 | CF/SA-410 | 420 | | | | | | |
| 1220s | 470 | CF&CMS500H | 460 | | | | | T2021A | 475 |
| 1222s | 517 | CF/SA-510 | 506 | | | | | T2021B | 475 |
| 1226s | 611 | CF/SA-600 | 598 | | | | | T2421B | 570 |
| 2314 | 679 | CF750H | 735 | | | | | | |
| 2318 | 873 | CF850H | 850 | SE1000C | 500 | 1075EM | 812 | | |
| 2320 | 970 | CF&CMS1000H | 940 | SE1200C | 595 | 1080EM | 927 | | |
| 2322 | 1067 | | | | | | | | |
| 2326 | 1261 | CF1300M | 1254 | | | 1180EM | 1234 | | |
| 3414 | 1022 | | | | | | | | |
| 3418 | 1314 | | | | | | | | |
| 3420 | 1460 | CF&CMS1500H | 1380 | | | | | | |
| 3422 | 1606 | | | | | 2675EM | 1541 | | |
| 3426 | 1898 | CF2000M | 1894 | | | 3175EM | 1848 | | |

Note: All information subject to change without notice.



Approximate Bushels per Gallon of Fuel ⁽¹⁾

Based on 10 Point Removal and 100° F Moisture Control Setting

| Drying Method | Bushels / Gallon LP | Btu / lb H ₂ O |
|-------------------------------|---------------------|---------------------------|
| Dry & Cool | 5 - 6 | 2466 - 2055 |
| Dry & Cool with Heat Recovery | 7 - 8 | 1761 - 1541 |
| All Heat | 7 - 8 | 1761 - 1541 |
| All Heat with Heat Recovery | 8 - 9 | 1541 - 1370 |
| Top Dry Cooling in Bottom | 8 - 9 | 1541 - 1370 |

(1) Historical data from past customer reports.

Fuel Formula Constants

| Fuel Type | Base Unit | Btu Content |
|----------------|------------|-------------|
| Liquid Propane | gallon | 91,500 |
| Natural Gas | cubic foot | 1,040 |
| | therm | 100,000 |
| #2 Fuel Oil | gallon | 136,000 |
| Electricity | kilowatt | 3,413 |

The following information should be used for estimates only.

Drying Energy Constants

Corn

7.42 pounds (lb) of water (H_2O) are removed per bushel at 10 point removal.

3.48 pounds (lb) of water (H_2O) are removed per bushel at 5 point removal.

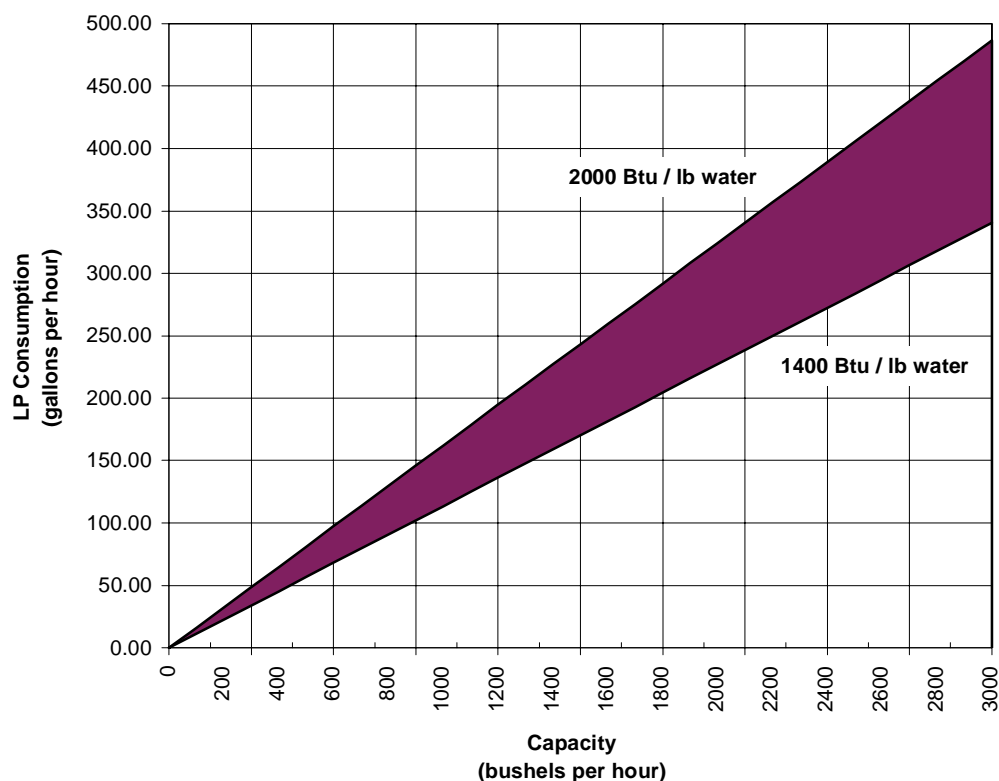
1044 Btu are required to evaporate one pound of free water at 100% efficiency.

Approximately 1400 to 2000 Btu are required to remove 1 pound of water from 25% moisture corn when drying it down to 15% moisture content. Requirements will vary with the type of dryer, method of operation, grain density, grain quality, and outside conditions.

The shaded area in following graph represents the range of values for fuel consumption that can occur for each capacity and between the drying energies of 1400 and 2000 Btu / lb of water removed.

LP Fuel Consumption at 10 Point Removal

Dryer efficiency range of 1400-2000 Btu / lb water



Grain temperature is proportional to what the final moisture will be after the grain is cooled in the bin. Though no two farms or bins will be the same there are some starting points. Moisture testers will read from 17% to 19% after temperature correction.

Commercial Corn 15%125-130 degrees

White Corn 15%120-125 degrees

Waxy Corn 110-120 degrees

Each 5-7 degrees 1 point of moisture

Waxy may lose no points of moisture in bin

Temperatures above these numbers indicate hard drying conditions.

Dryeration Process

After starting with MOISTURE CONTROL settings from the manual, adjust accordingly to get 130 degree corn coming out the back of the discharge on the dryer. On rare occasions hard drying, or immature corn may require higher temperatures. Always use a moisture tester to confirm the temperature reading. Use a large sample (2.5 GAL) and an accurate thermometer(A.W. SPERRY model DT-5A digital preferred) to determine actual temperature. Smaller containers bleed off temperature before the thermometer reaches true temperature.

Bins should have a full aeration floor, 1/3 to 1/2 CFM of air when the bin is full, and a grain spreader. Normally let 2 to 3 feet of warm grain enter the bin before turning on fans to give heat a head start. Small dryers or very large bins may take too long. Do not start fans longer than 2 - 4 hours after starting the dryer. On bins with high airflow (above 1/2 CFM) you may have to cycle fans two hours on, two hours off throughout the day to maintain a thick enough hot grain layer to get proper moisture loss in the bin. Large dryers (1,000 bu/hr and bigger) may require at least 1/2 CFM, and immediate starting of fans. Follow these procedures each time you start putting grain in the bin. Continue aeration until the grain is completely cooled.

Fill each bin completely, do not alternate bins as this will layer the moistures throughout the bin. The first morning after starting your dryer, take a cooled sample from the bin and test it. The grain will be within .2% to .5% of it's final moisture at this time. You should also re-check this moisture again 24 and 48 hours later. Always use this method to decide what the moisture control setpoint should be.

If the sample of grain is too wet, turn the moisture control setpoint up (Higher Temp). If the test is too dry, turn the moisture control setpoint down (Lower Temp). Remember that 5-7 degrees on the moisture control will equal about one point of moisture. For example, if you want 15% and your test sample is 14%, turn the moisture control setpoint down 5 degrees.

Also keep in mind that at the bottom of the bin you have a rather high airflow, and as the bin fills, you will tend to take out more moisture. This is somewhat offset by the grain at the bottom getting more hours of aeration. If you are like most first timers you will over dry some grain, then make changes to get the desired moisture content.

It is very important to write down every setting for a year to year comparison, and to establish a preset dryer starting point.

Installation Notes

When estimating labor to be used to install the dryer, consider the items listed in the Customer Responsibilities II section of this book. It is also important to remember these notes.

- A tractor, forklift, heavy duty truck, or crane should be present to help unload the delivery truck on the day of delivery.
- All parts should be identified to verify all are present, and installation crews should familiarize themselves with the parts to ease the assembly process.
- A three person crew can install a single module dryer in a one day time period.
- A three person crew will need a few days of preparation time before lifting the dryer modules into place.

This allows for time to install stiffeners, platforms, ladders, wet bin, etc. A crane should not be scheduled to stack the dryer on the same day as delivery.

- Single module heat reclaimers will take a few working days to install with an experienced two person crew. Some extra time may be required.
- Stack heat reclaimers will take a minimum of 5 working days to install completely. Most of this installation should be done before stacking the dryer modules as it is much easier to work from the ground rather than from scaffolds or ladders.
- Noise suppressers can be installed in a one day time period.

Time For Stacking a Multi-Module Dryer

Use for estimating time needed for on site labor

Assume 15 minutes per stiffener section and base support.
Assume 10 minutes per support leg.

Assume 2 hours for platform assembly.

*2000 Series Dryers have 4 sections of stiffener per each stiffener.

*3000 Series Dryers have 6 sections of stiffener per each stiffener.

**Minimum 2 hours for setting each module.

| Dryer Model Series | *Number of Stiffeners | Number of Support Bases | Number of Support Legs | Stiffener Assembly Time (Man-hours) | Platform Assembly Time (Man-hours) | Wet Bin Assembly Time (Man-hours) | Total Time (Man hours) | **Minimum Crane Time (hours) |
|--------------------|-----------------------|-------------------------|------------------------|-------------------------------------|------------------------------------|-----------------------------------|------------------------|------------------------------|
| 2312 | 6 | 6 | 2 | 24.00 | 6.00 | 3.00 | 33.00 | 6.00 |
| 2314 | 6 | 6 | 4 | 27.00 | 6.00 | 3.75 | 36.75 | 6.00 |
| 2318 | 8 | 8 | 4 | 33.00 | 6.00 | 4.50 | 43.50 | 6.00 |
| 2320 | 10 | 10 | 2 | 39.00 | 6.00 | 5.25 | 50.25 | 6.00 |
| 2322 | 10 | 10 | 4 | 42.00 | 6.00 | 6.00 | 54.00 | 6.00 |
| 2326 | 12 | 12 | 2 | 48.00 | 6.00 | 7.50 | 61.50 | 6.00 |
| | | | | | | | | |
| | | | | | | | | |
| 3412 | 6 | 6 | 2 | 33.00 | 12.00 | 3.00 | 48.00 | 8.00 |
| 3414 | 6 | 6 | 4 | 36.00 | 12.00 | 3.75 | 51.75 | 8.00 |
| 3418 | 8 | 8 | 4 | 45.00 | 12.00 | 4.50 | 61.50 | 8.00 |
| 3420 | 10 | 10 | 2 | 54.00 | 12.00 | 5.25 | 71.25 | 8.00 |
| 3422 | 10 | 10 | 4 | 57.00 | 12.00 | 6.00 | 75.00 | 8.00 |
| 3426 | 12 | 12 | 2 | 66.00 | 12.00 | 7.50 | 85.50 | 8.00 |

* **Minimum time estimates only. Each installation will vary.

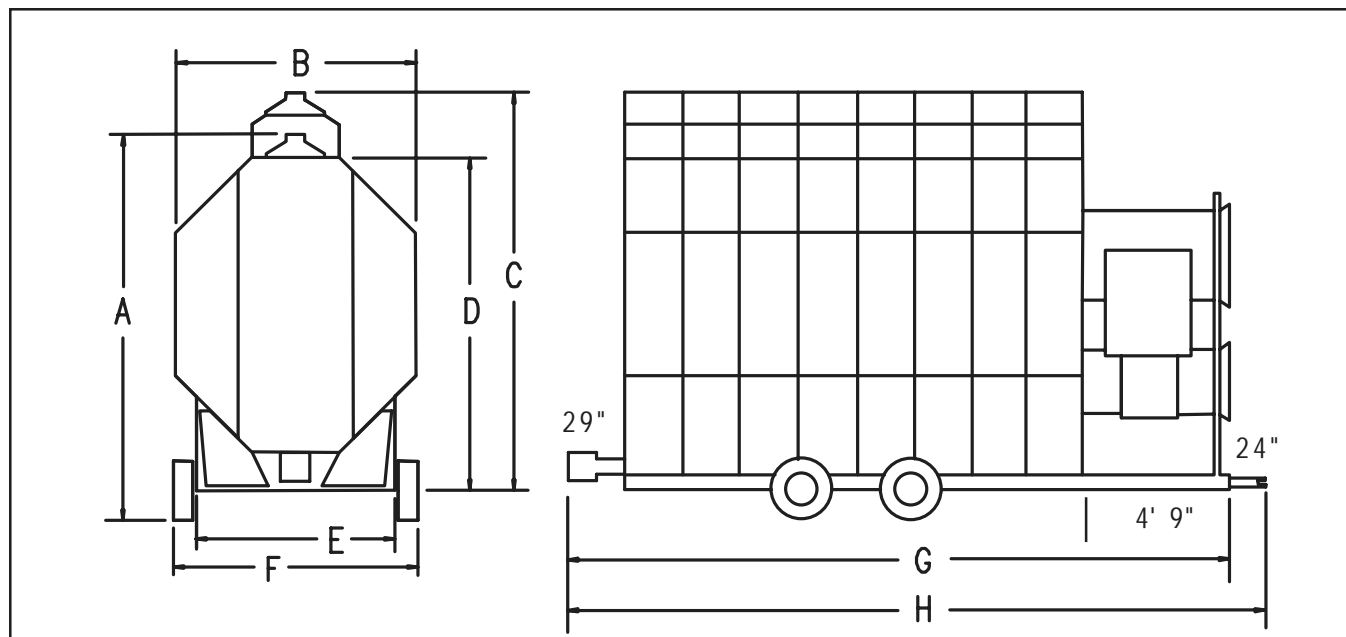


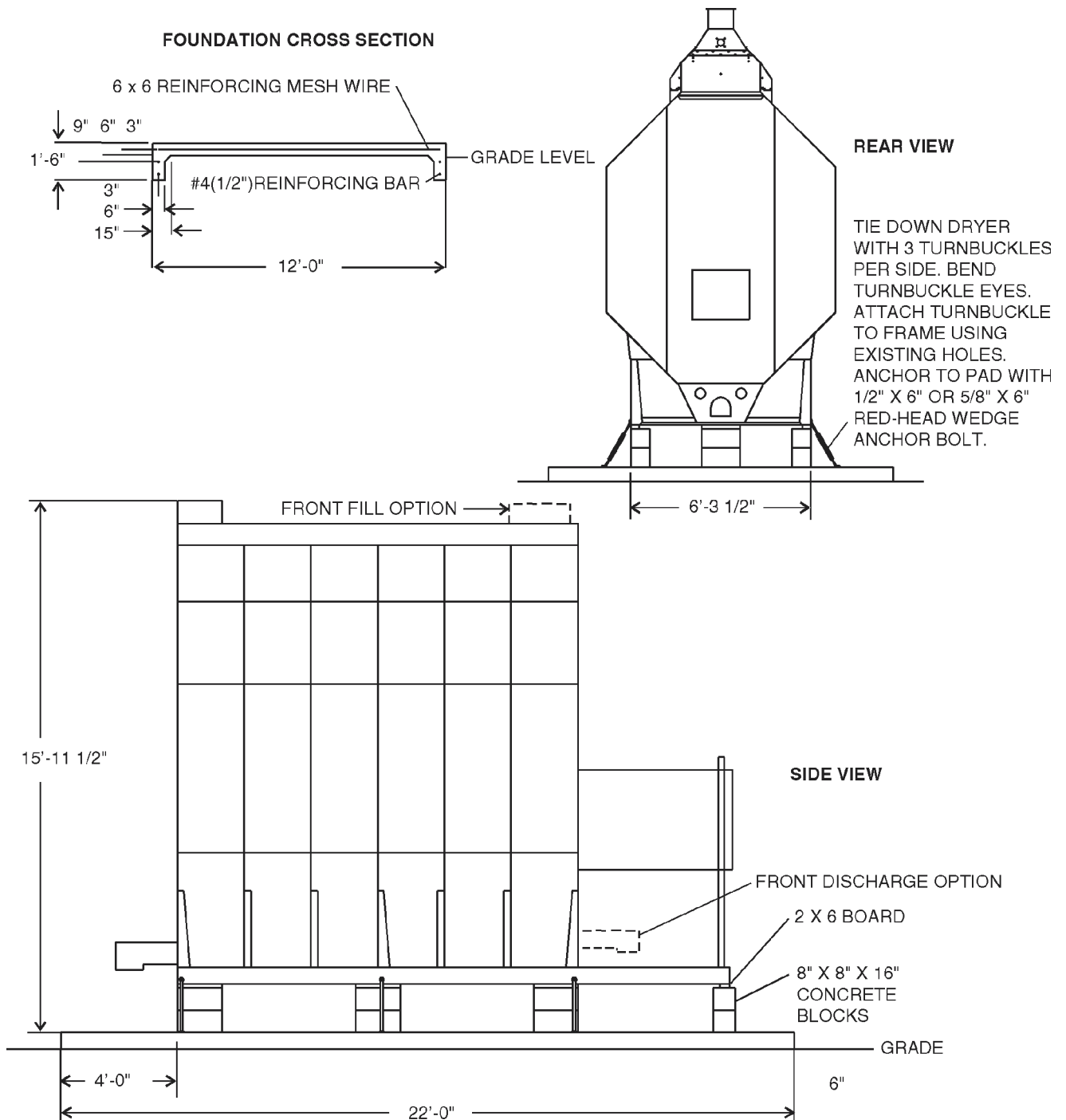
Figure 11: Diagram of dryer dimensions.

Single Module Transport and Installation Dimensions

Values are valid for transportation of stack modules.

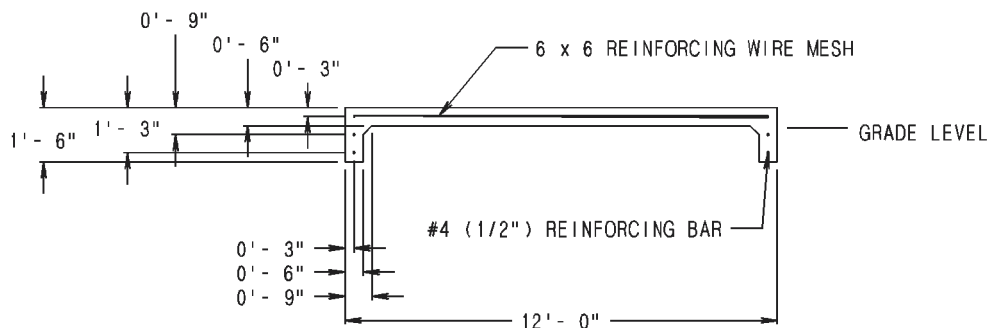
| Dryer Basket | A Transport Height | B Installed Width | C | | D Height w/o Wet Bin | E Frame Width | F Transport Width | G Installed Length | H Transport Length |
|--------------|-----------------------|----------------------|--------------------------|--------------|-------------------------|------------------|----------------------|-----------------------|-----------------------|
| | | | Installed Height Wet Bin | Standard Top | | | | | |
| 108 | 11' 11" | 8' | 13' | 11' 6" | 10' 3" | 6' 5" | 8' | 115' 2" | 117' 2" |
| 110 | 11' 11" | 8' | 13' | 11' 6" | 10' 3" | 6' 5" | 8' | 117' 2" | 119' 2" |
| 112 | 13' 5" | 8' | 14' 6" | 13' | 11' 9" | 6' 5" | 8' | 119' 2" | 121' 2" |
| 114 | 13' 5" | 8' | 14' 6" | 13' | 11' 9" | 6' 5" | 8' | 121' 2" | 123' 2" |
| 116 | 13' 5" | 8' | 14' 6" | 13' | 11' 9" | 6' 5" | 8' | 123' 2" | 125' 2" |
| 118 | 13' 5" | 8' | 14' 6" | 13' | 11' 9" | 6' 5" | 8' | 125' 2" | 127' 2" |
| 120 | 13' 5" | 8' | 14' 6" | 13' | 11' 9" | 6' 5" | 8' | 127' 2" | 129' 2" |
| 122 | 13' 5" | 8' | 14' 6" | 13' | 11' 9" | 6' 5" | 8' | 129' 2" | 131' 2" |
| 126 | 13' 5" | 8' | 14' 6" | 13' | 11' 9" | 6' 5" | 8' | 133' 2" | 135' 2" |
| 1214S | 13' 5" | 8' 8" | 14' 6" | 13' | 11' 9" | 6' 5" | 8' | 121' 2" | 123' 2" |
| 1218S | 13' 5" | 8' 8" | 14' 6" | 13' | 11' 9" | 6' 5" | 8' | 125' 2" | 127' 2" |
| 1220S | 13' 5" | 8' 8" | 14' 6" | 13' | 11' 9" | 6' 5" | 8' | 127' 2" | 129' 2" |
| 1222S | 13' 5" | 8' 8" | 14' 6" | 13' | 11' 9" | 6' 5" | 8' | 129' 2" | 131' 2" |
| 1226S | 13' 5" | 8' 8" | 14' 6" | 13' | 11' 9" | 6' 5" | 8' | 133' 2" | 135' 2" |

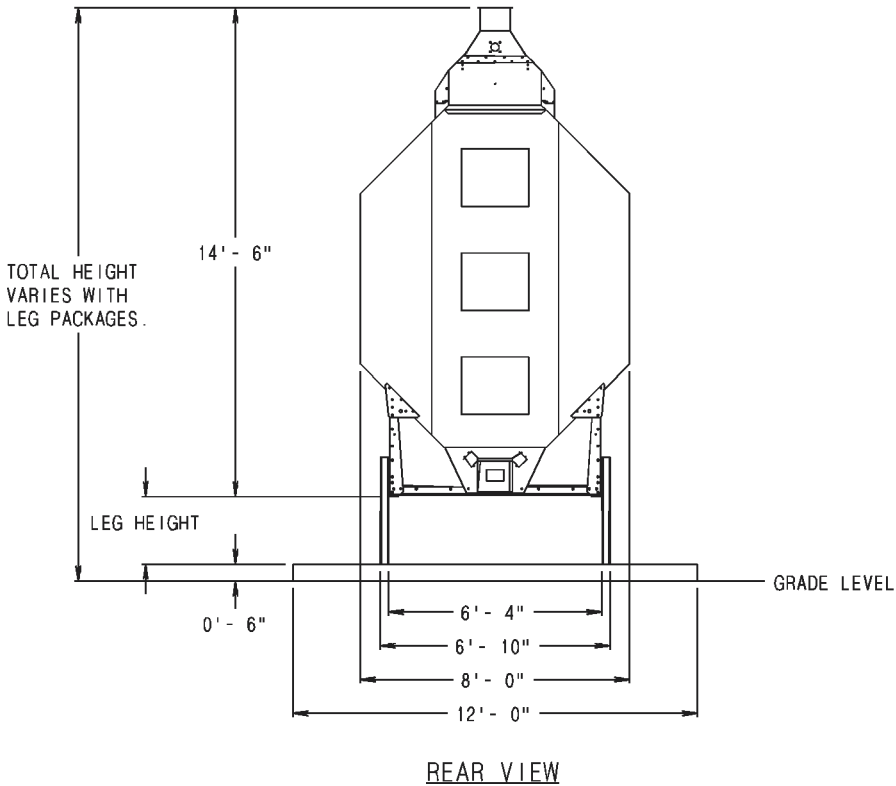
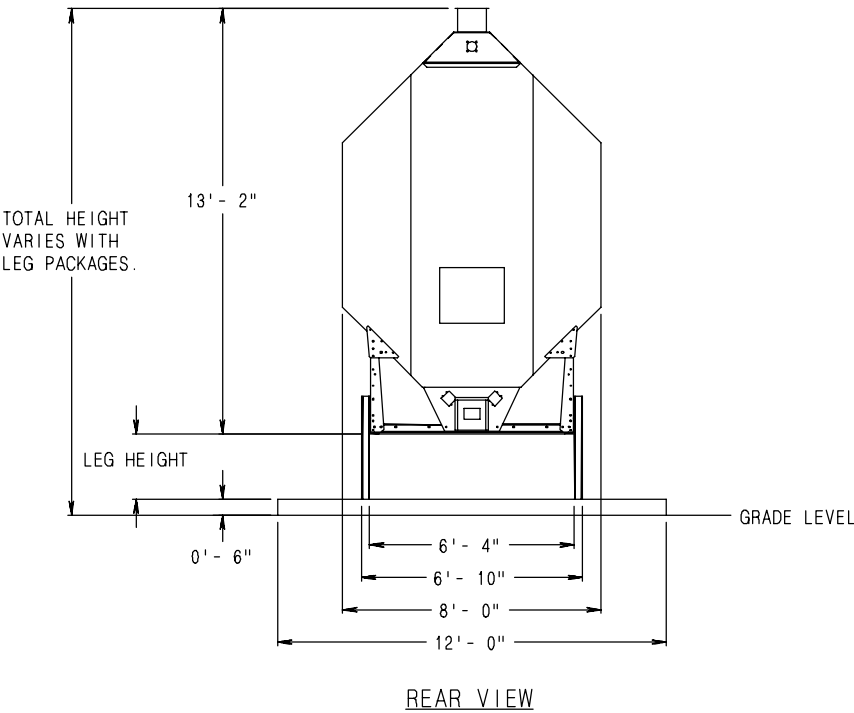
Dimensions For Concrete Block Supports



| | | | | | | | | | | |
|------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Dryer Basket Length | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 26 |
| Concrete Pad Size | 12 x 16 | 12 x 18 | 12 x 20 | 12 x 22 | 12 x 24 | 12 x 26 | 12 x 28 | 12 x 30 | 12 x 32 | 12 x 36 |
| Yards Concrete | 5.3 | 5.9 | 6.5 | 7.1 | 7.7 | 8.3 | 8.9 | 9.2 | 10.1 | 11.3 |
| Reinforcing Rods 20" each | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 9 | 10 |
| Wire Mesh Sq. Ft. | 192 | 216 | 240 | 264 | 288 | 312 | 336 | 360 | 384 | 432 |
| Steel Legs(minimum) | 8 | 8 | 10 | 10 | 12 | 12 | 14 | 14 | 16 | 18 |
| Anchors | 4 | 4 | 4 | 6 | 6 | 6 | 8 | 8 | 8 | 10 |
| Blocks | 10 | 14 | 14 | 18 | 18 | 18 | 22 | 22 | 26 | 30 |
| Foot of 2 x 6 | 10 | 14 | 14 | 18 | 18 | 18 | 22 | 22 | 26 | 30 |
| Tumbuckles | 4 | 4 | 4 | 6 | 6 | 6 | 8 | 8 | 8 | 10 |
| Estimated Manhours | 8 | 10 | 12 | 14 | 18 | 18 | 20 | 22 | 24 | 28 |

Quantities are approximate and requirements may vary due to site elevations.
Setup times do not include preparing site and pouring concrete pad.

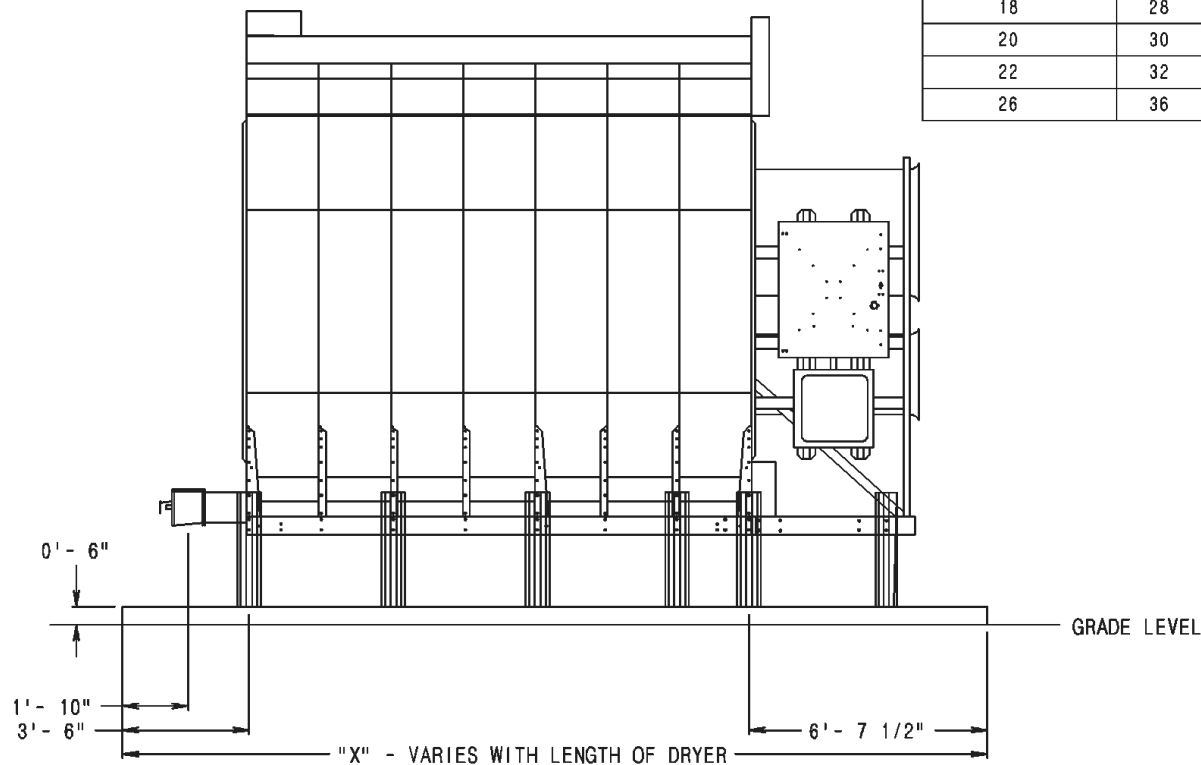




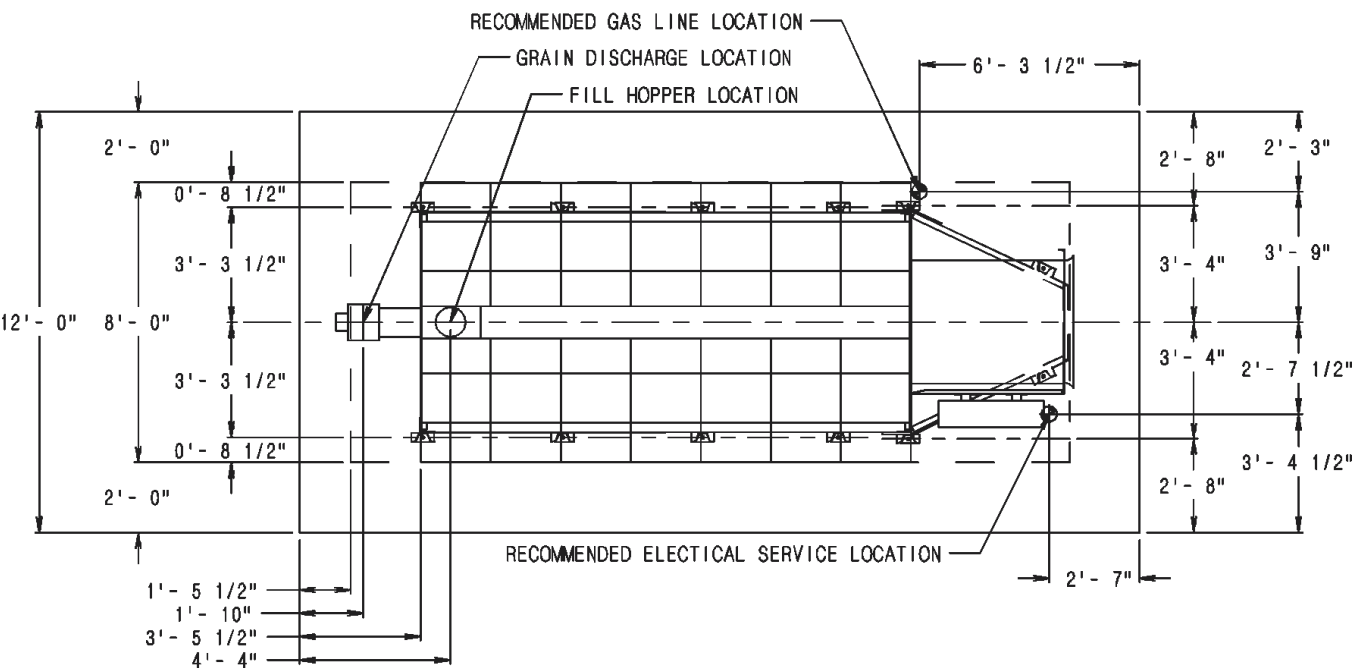
NOTE: INSTALLATION OF THE LEG STANDS SHOULD START AT THE BACK COLUMN LEG OF THE DRYER AND CONTINUE ON EVERY OTHER COLUMN LEG TOWARDS THE FRONT.

SOME DRYERS WILL HAVE TWO LEG STANDS NEAR THE FRONT OF THE BASKET AS SHOWN IN THE DRAWING.

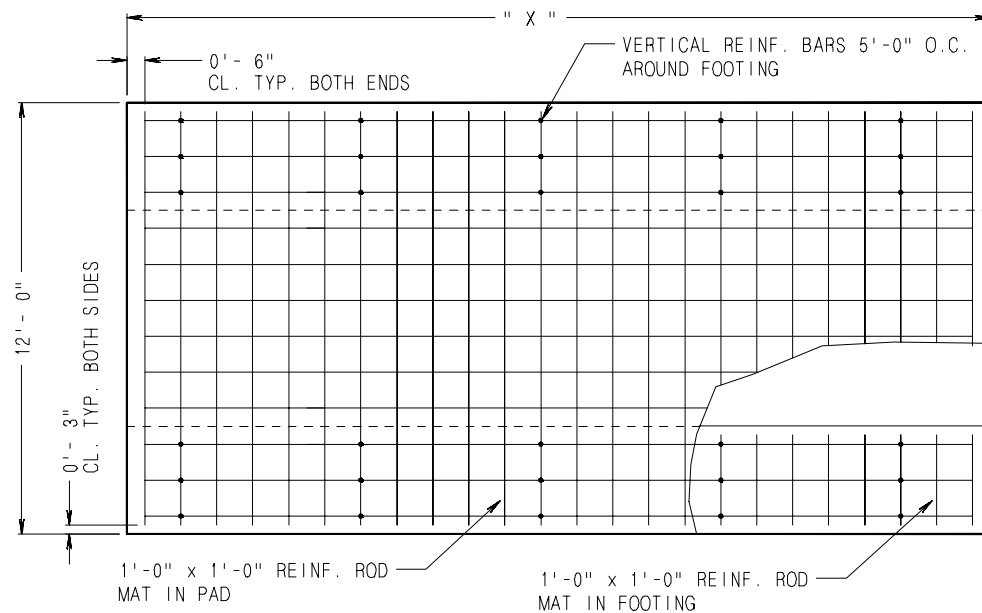
| BASKET LENGTH | X (FEET) |
|---------------|----------|
| 08 | 18 |
| 10 | 20 |
| 12 | 22 |
| 14 | 24 |
| 16 | 26 |
| 18 | 28 |
| 20 | 30 |
| 22 | 32 |
| 26 | 36 |



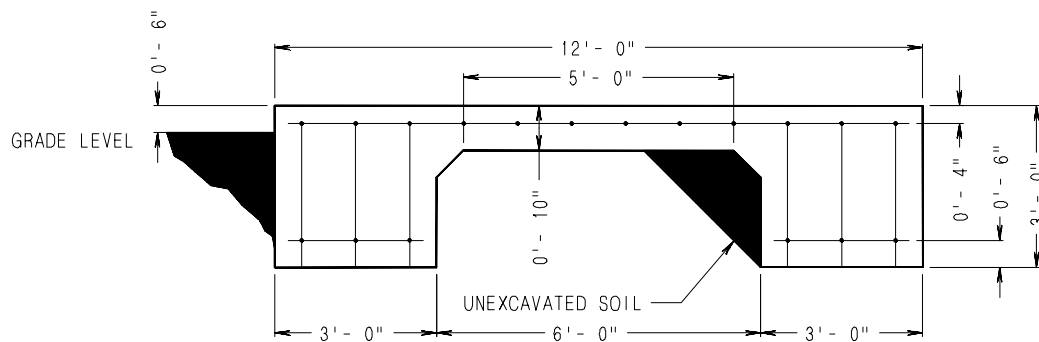
SIDE VIEW



TOP VIEW



FOUNDATION PLAN VIEW



FOUNDATION CROSS SECTION

Stack Dryer Foundation

| Basket Length | 12 | 14 | 18 | 20 | 22 | 26 |
|--------------------------------------------|---------|---------|---------|---------|---------|---------|
| Concrete Pad Size (12' x "X") ₁ | 12 x 22 | 12 x 24 | 12 x 28 | 12 x 30 | 12 x 32 | 12 x 36 |
| Concrete (cubic yards) | 19.00 | 20.75 | 24.25 | 26.00 | 27.50 | 31.00 |
| # 4 Rebar (feet) ₂ | 840 | 900 | 1060 | 1140 | 1220 | 1400 |
| Anchors ₃ | 14 | 16 | 20 | 22 | 24 | 28 |

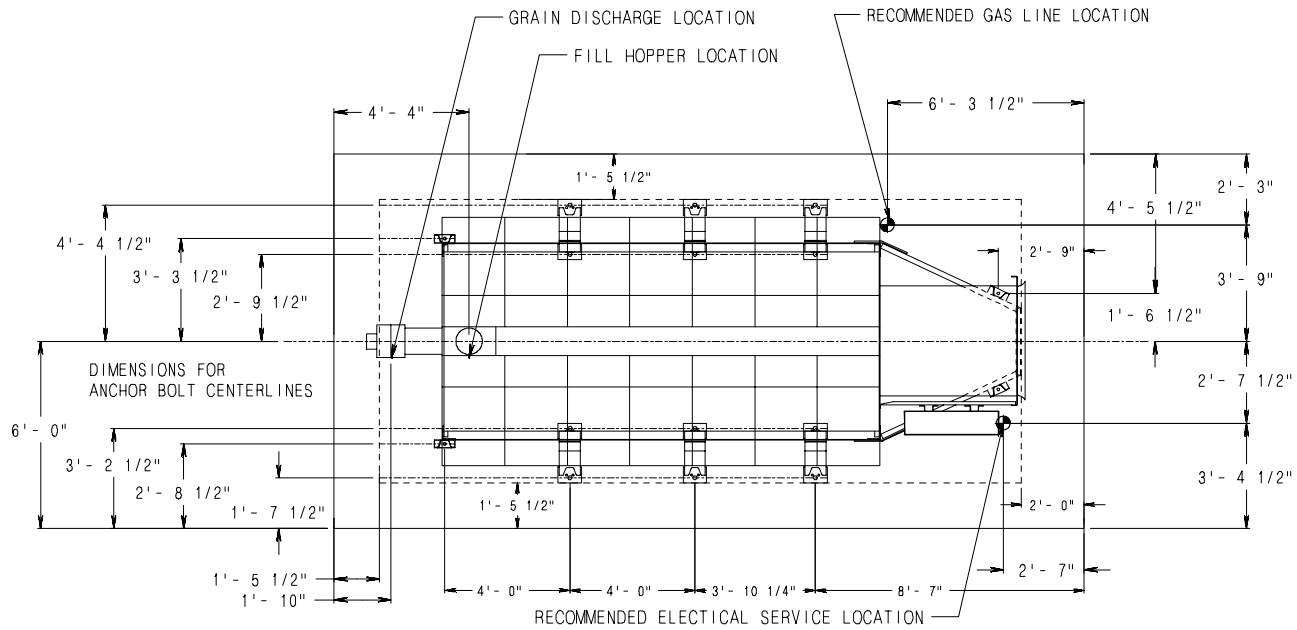
¹ 10" depth with 36" wide x 36" deep footings along each side

² #4 reinforcing rods on 1" - 0" centers. Both directions in slab and bottom of footing.

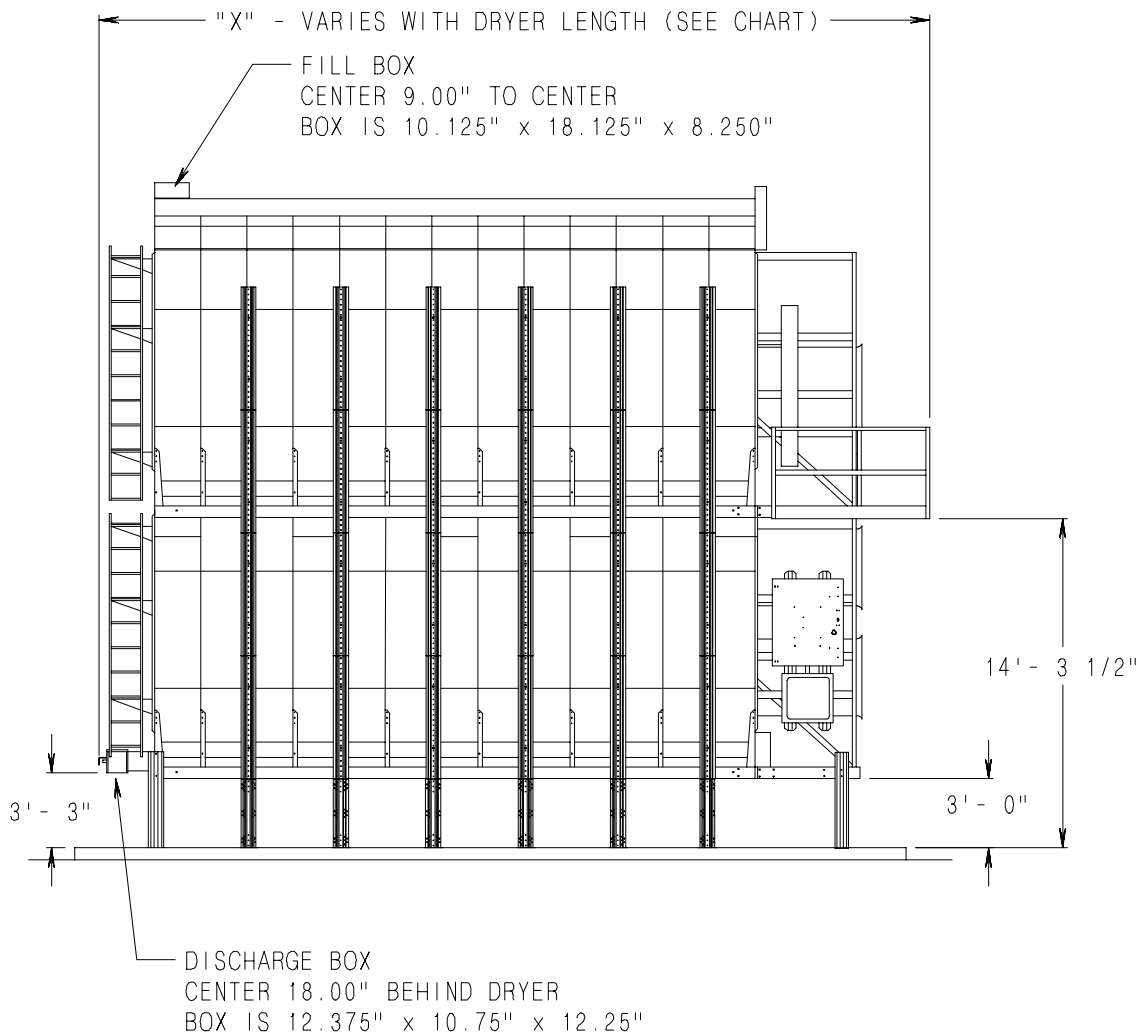
³ Use 3/4" x 9 5/8" minimum anchors with epoxy. GSI part numbers: anchor (GTC-0003) epoxy (GTC-0004)

Minimum soil bearing capacity = 2000 PSF

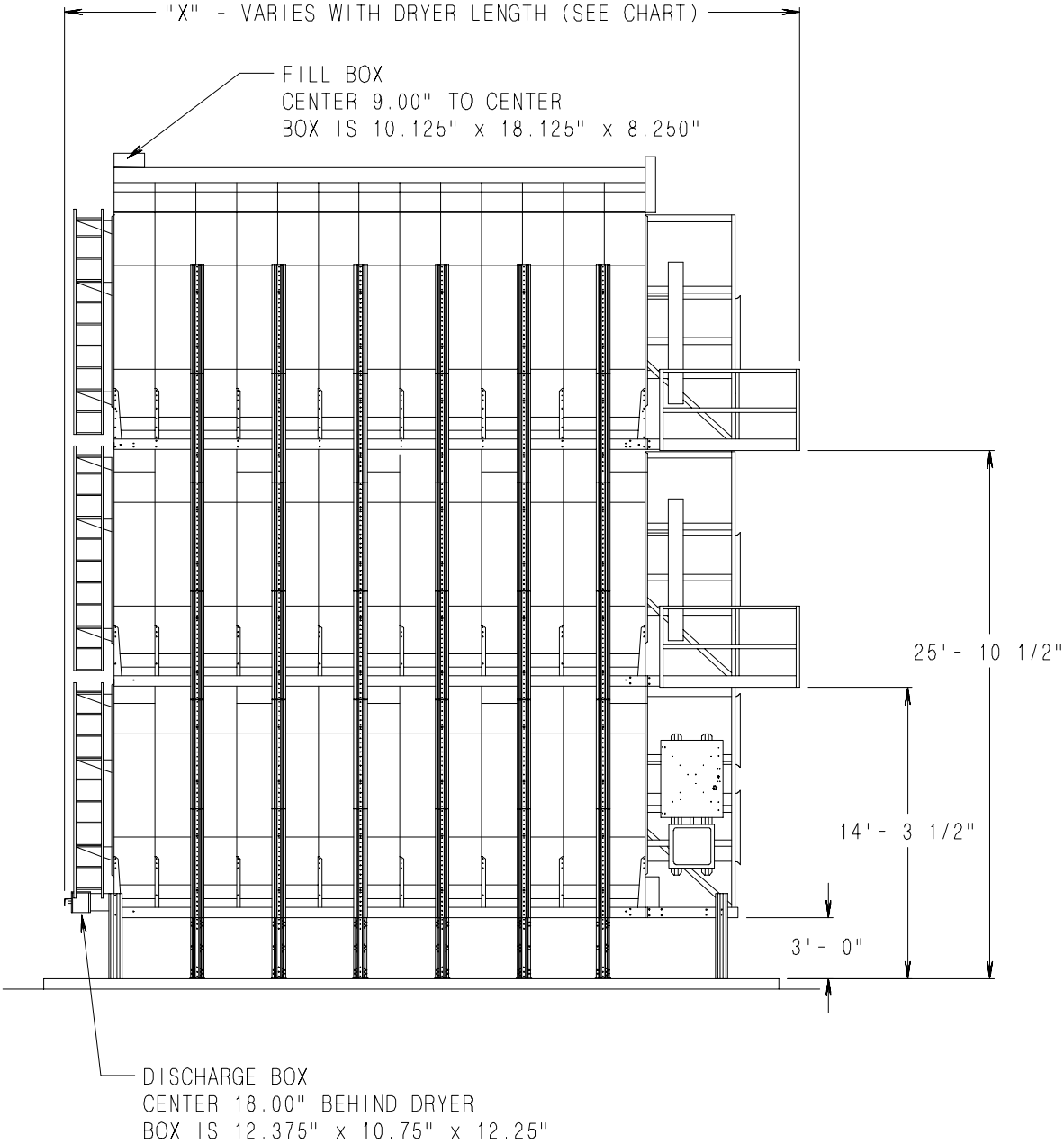
| Concrete Specifications |
|--------------------------------------------|
| Compressive Strength @ 28 days -- 4000 psi |
| Minimum Cement Content -- 6 sacks/yd |
| Maximum Slump -- 4" +/- 1" |



EXAMPLE OF STACK DRYER FOOTPRINT



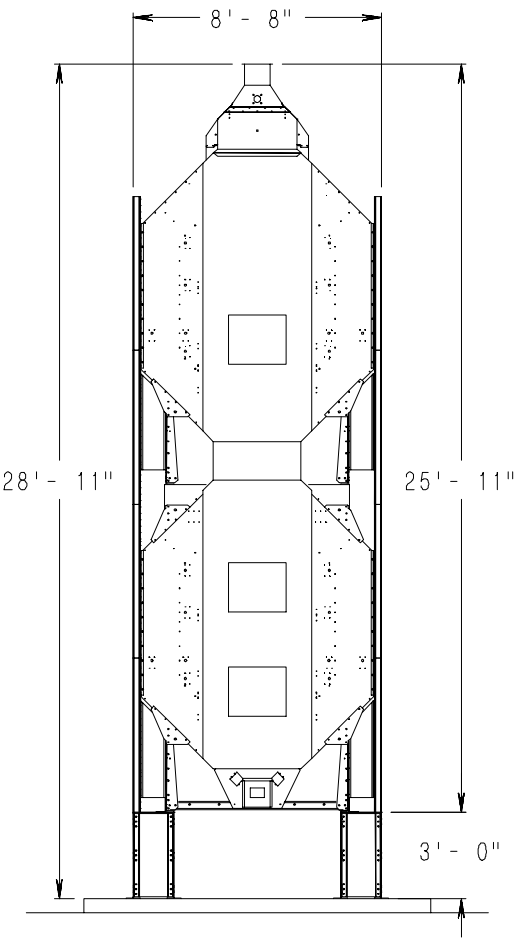
SIDE VIEW - 2 MODULE STACK DRYER



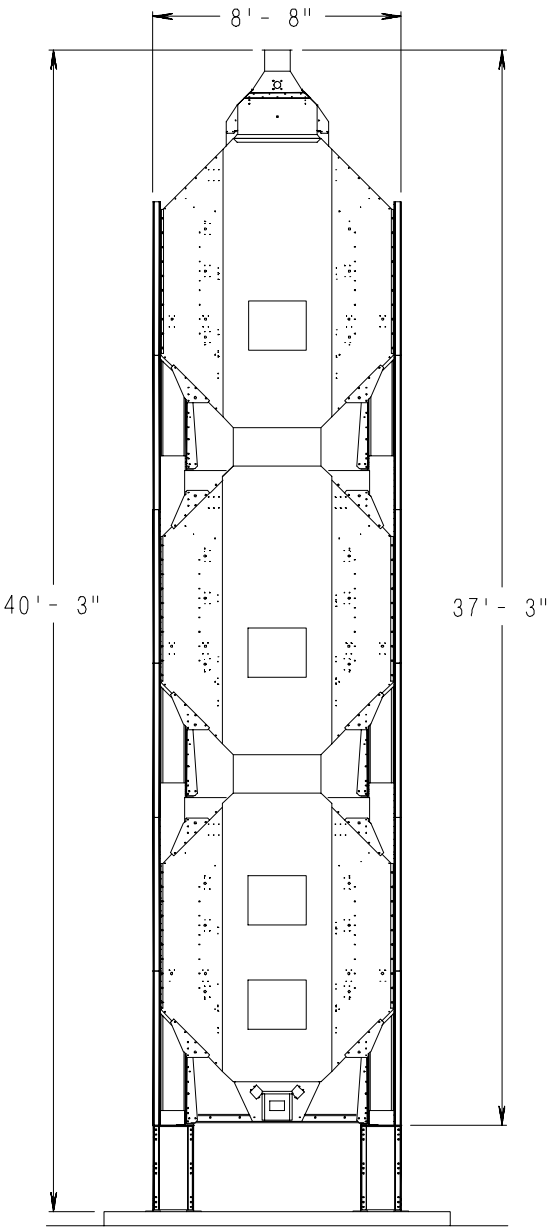
SIDE VIEW - 3 MODULE STACK DRYER

Dryer Installed Length
1, 2, and 3 Module Stacks

| Basket Length | Installed Length ("x") |
|---------------|------------------------|
| 12 ft. | 21 ft. 6 in. |
| 14 ft. | 23 ft. 10 in. |
| 18 ft. | 27 ft. 10 in. |
| 20 ft. | 29 ft. 10 in. |
| 22 ft. | 31 ft. 10 in. |
| 26 ft. | 35 ft. 10 in. |



END VIEW - 2 MODULE STACK DRYER



END VIEW - 3 MODULE STACK DRYER



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