

1999 GSI Drying Systems Portable Dryer Sales Manual

PNEG-561



GSI
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Competitor Series 2000 Pricing.....	4
C-Series 1 Fan Pricing.....	5
C-Series & H-Series 2 Fan Pricing.....	6
C-Series 3 Fan Pricing.....	7
Stackable Series Pricing.....	8
Automatic Batch Pricing.....	12
Options Pricing.....	13
Accessories	14
Aspirator.....	17
Customer Survey.....	18
Dryer Selection Process.....	20
Dryer Selection Sales Worksheet.....	24
Transport Kits.....	26
Order Form.....	27
Dryer Number Breakdown.....	28
Dryer Preparation.....	29
Competitor Dryer Features (Illustration).....	30
C-Series Dryer Features (Illustration).....	31
Competitor Dryer Control Panel.....	32
C-Series Dryer Control Panel.....	33
Competitor Dryer Control System.....	34
C-Series Dryer Control System.....	36
Unload Area.....	40
Grain Columns.....	41
GSI Versus Farm Fans.....	42
Price Comparisons.....	43
GSI Versus Super B.....	44
Price Comparisons.....	45
GSI Versus MC.....	46
Price Comparisons.....	47
Drying Rates & Costs.....	48
Capacities Comparisons.....	51
Drying Corn With All Heat.....	52
Towing.....	53
Installation Notes.....	54
Dryer Dimensions.....	56
Single Module Specifications.....	57
Stack Dryer Specifications.....	61
Heat Reclaimer For 2020 Series.....	65
2420 Stack Dryer With Stiffeners.....	66

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

Competitor Series 2000 System

Full heat continuous flow or auto batch

Dry and cool auto batch

Full safety control system

See through control panel door

Load and unload auxiliary starters

Waterproof controls

Solid state ignition

Externally adjustable vaporizers

Low speed vane axial fans with
Blue Burn System

Internal and external meter roll cleanout

Heavy duty meter rolls and drive

Solid dividers, every two feet

Galvanized fan housing, control
cabinet and auger housing

Perforated wet bin standard on 116-
126 models (optional on 108-114)



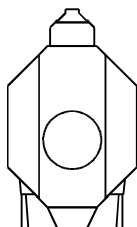
Model Number	Electrical Power		Fuel	List Price Less Transport	Approx. Dryer Wt.	Wet Bushels Full Heat		Wet Bushels Dry & Cool	
	Phase	Voltage				10 pt.*	5 pt.*	10 pt.*	5 pt.*
Equipped With A Standard Top**									
108	1 or 3	ALL	LP	\$22,575.00	4,300 lbs.	190	310	120	155
	1 or 3	ALL	NG	\$23,940.00	4,300 lbs.	190	105	120	155
110	1 or 3	ALL	LP	\$25,935.00	5,000 lbs.	240	385	150	200
	1 or 3	ALL	NG	\$27,510.00	5,000 lbs.	240	385	150	200
112	1 or 3	ALL	LP	\$32,235.00	6,300 lbs.	335	525	205	270
	1 or 3	ALL	NG	\$33,705.00	6,300 lbs.	335	525	205	270
114	1 or 3	ALL	LP	\$41,370.00	7,000 lbs.	390	610	245	320
	1 or 3	ALL	NG	\$42,315.00	7,000 lbs.	390	610	245	320

Equipped With A Perforated Wet Bin

116	1 or 3	ALL	LP	\$47,565.00	7,500 lbs.	440	710	280	370
	1 or 3	ALL	NG	\$48,930.00	7,500 lbs.	440	710	280	370
118	3	ALL	LP	\$50,295.00	8,000 lbs.	505	815	320	430
		ALL	NG	\$50,925.00	8,000 lbs.	505	815	320	430
120	3	ALL	LP	\$54,600.00	8,700 lbs.	560	905	360	475
		ALL	NG	\$55,965.00	8,700 lbs.	560	905	360	475
122	3	ALL	LP	\$58,380.00	9,500 lbs.	610	990	390	520
		ALL	NG	\$60,060.00	9,500 lbs.	610	990	390	520
126	3	ALL	LP	\$65,415.00	11,000 lbs.	715	1,155	455	605
		ALL	NG	\$66,885.00	11,000 lbs.	715	1,155	455	605

*Measured in wet bushels per hour (BPH).

**See page 21 for wet bin pricing, if needed.



100 Series

For CGA approval on above
models add \$1050. list.

For small grain perforations (0.050") add 2% to list price of dryer. Prices and specifications subject to change without notice
Example: 108 dryer LP small grains \$22,575. x 1.02=\$23,027. list. All items F. O. B. Newton, Illinois. January 1, 1999

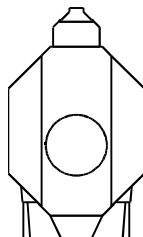
Full heat continuous flow or auto batch
Dry and cool auto batch
Electronic Monitoring Control System
Full safety control system
Remote capable control center
See through control panel door
Load and unload auxiliary starters
Galvanized fan housing, control cabinet and auger housing

Low speed vane axial fans with Blue Burn System
Solid state ignition
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



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	LP	\$31,395.00	4,300 lbs.	205	335	130	170
	1 or 3	ALL	NG	\$32,760.00	4300 lbs.	205	335	130	170
1110	1 or 3	ALL	LP	\$33,810.00	5,000 lbs.	260	420	165	220
	1 or 3	ALL	NG	\$35,070.00	5,000 lbs.	260	420	165	220
1112	1 or 3	ALL	LP	\$39,165.00	6,300 lbs.	345	560	220	290
	1 or 3	ALL	NG	\$40,740.00	6,300 lbs.	345	560	220	290
1114	1 or 3	ALL	LP	\$46,200.00	7,000 lbs.	405	650	260	340
	1 or 3	ALL	NG	\$47,775.00	7,000 lbs.	405	650	260	340
1116	1 or 3	ALL	LP	\$51,240.00	7,500 lbs.	440	710	280	370
	1 or 3	ALL	NG	\$51,765.00	7,500 lbs.	440	710	280	370
1118	3	ALL	LP	\$55,020.00	8,000 lbs.	505	815	320	430
		ALL	NG	\$56,490.00	8,000 lbs.	505	815	320	430
1120	3	ALL	LP	\$59,325.00	8,700 lbs.	560	905	360	475
		ALL	NG	\$60,795.00	8,700 lbs.	560	905	360	475
1122	3	ALL	LP	\$63,315.00	9,500 lbs.	610	990	390	520
		ALL	NG	\$64,785.00	9,500 lbs.	610	990	390	520
1126	3	ALL	LP	\$70,770.00	11,000 lbs.	715	1,155	455	605
		ALL	NG	\$72,240.00	11,000 lbs.	715	1,155	455	605

*Measured in wet bushels per hour (BPH).



I 100 Series

For CGA approval on above models add \$1050. list

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. January 1, 1999

Full heat continuous flow or staged batch

Dry and cool continuous flow or staged batch

Electronic Monitoring Control System

Full safety control system

Remote capable control center

See through control panel door

Load and unload auxiliary starters

Galvanized fan housing, control cabinet and auger housing

Low speed vane axial fans with Blue Burn System

Solid state ignition

Externally adjustable vaporizers

Internal and external meter roll cleanout

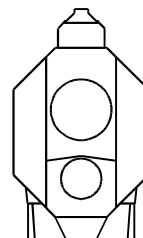
Heavy duty meter rolls and drive

Solid dividers, every two feet

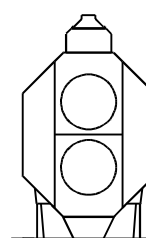
Perforated wet bin standard

Waterproof controls

For CGA approval on 1200 Series add \$2100. list



1200 Series



1200H Series

TWO FAN MODELS

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	\$49,875.00	7,600 lbs.	415	680	250	400
1216	1 or 3	ALL	LP or NG	\$53,655.00	8,200 lbs.	475	795	290	465
1218	1 or 3	ALL	LP or NG	\$57,435.00	9,000 lbs.	520	840	315	505
1220	1 or 3	ALL	LP or NG	\$63,840.00	9,800 lbs.	590	950	345	560
1222	3	ALL	LP or NG	\$70,560.00	10,500 lbs.	650	1,055	395	640
1226	3	ALL	LP or NG	\$77,280.00	12,000 lbs.	730	1,180	450	725

TWO FAN MODELS (50/50 PLENUM)

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.*
1214H	1	1 or 3	ALL	LP or NG	\$53,340.00	7,600 lbs.	430	700	200	325
1218H	1	1 or 3	ALL	LP or NG	\$61,425.00	9,200 lbs.	535	860	240	385
1220H	1	1 or 3	ALL	LP or NG	\$68,250.00	11,500 lbs.	600	970	280	445
1222H	1	1 or 3	ALL	LP or NG	\$75,495.00	12,500 lbs.	670	1,080	300	485
1226H	1	1 or 3	ALL	LP or NG	\$82,740.00	15,000 lbs.	775	1,255	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
 Example: 1214 dryer LP small grains \$49,875. x 1.02=\$50,873. list. All items F. O. B. Newton, Illinois. January 1, 1999

Full heat continuous flow or staged batch

Dry and cool continuous flow or staged batch

Electronic Monitoring Control System

Full safety control system

Remote capable control center

See through control panel door

Load and unload auxiliary starters

Galvanized fan housing, control cabinet and auger housing

Low speed vane axial fans with Blue Burn System

Solid state ignition

Externally adjustable vaporizers

Internal and external meter roll cleanout

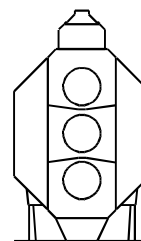
Heavy duty meter rolls and drive

Solid dividers, every two feet

Perforated wet bin standard

Waterproof controls

For CGA approval on 1300 Series add \$3150. list.



1300 Series

THREE FAN MODELS

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.*
1314	1 or 3	ALL	LP or NG	\$57,750.00	8,000 lbs.	435	710	265	425
1318	1 or 3	ALL	LP or NG	\$63,735.00	9,400 lbs.	520	840	315	505
1322	1 or 3	ALL	LP or NG	\$73,080.00	10,750 lbs.	650	1,055	395	640

*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
 Example: 1314 dryer LP small grains \$57,750. x 1.02=\$58,905. list. All items F. O. B. Newton, Illinois. January 1, 1999

Stackable Series Pricing

Portable Dryer Sales Manual

Full heat continuous flow or staged batch
 Dry and cool continuous flow or staged batch
 Electronic Monitoring Control System
 Full safety control system
 Remote capable control center
 See through control panel door
 Load and unload auxiliary starters
 Waterproof controls
 Galvanized fan housing, control cabinet and auger housing
 Low speed vane axial fans with Blue Burn System

Crane lifting brackets
 Solid state ignition
 Externally adjustable vaporizers
 Internal and external meter roll cleanout
 Heavy duty meter rolls and drive
 Solid dividers, every two feet
Perforated wet bin standard
S-Series Features
 Controls contain components for 2 additional fans
 Stiffener base and first module stiffeners included
 Stack ladders included



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.*
1112S	1	1 or 3	ALL	LP or NG	\$46,410.00	8,000 lbs.	345	560	220	290
1114S	1	1 or 3	ALL	LP or NG	\$54,495.00	9,200 lbs.	405	650	260	340
1118S	1	3	ALL	LP or NG	\$64,365.00	11,200 lbs.	505	815	320	430
1120S	1	3	ALL	LP or NG	\$69,300.00	12,000 lbs.	560	905	360	475
1122S	1	3	ALL	LP or NG	\$73,815.00	13,000 lbs.	610	990	390	520
1126S	1	3	ALL	LP or NG	\$82,320.00	14,500 lbs.	715	1,155	455	605
1214S	1	1 or 3	ALL	LP or NG	\$56,805.00	9,500 lbs.	430	700	200	325
1218S	1	1 or 3	ALL	LP or NG	\$65,520.00	11,500 lbs.	535	860	240	385
1220S	1	1 or 3	ALL	LP or NG	\$72,765.00	14,500 lbs.	600	970	280	445
1222S	1	1 or 3	ALL	LP or NG	\$80,430.00	15,500 lbs.	670	1,080	300	485
1226S	1	1 or 3	ALL	LP or NG	\$88,095.00	18,500 lbs.	775	1,255	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
 Example: 1112S dryer LP small grains \$46,410. x 1.02=\$47,338. list. All items F. O. B. Newton, Illinois. January 1,1999

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.*
2212	2	3	ALL	LP or NG	\$71,085.00	14,000 lbs.	700	1,135	330	525
2214	2	3	ALL	LP or NG	\$82,950.00	16,000 lbs.	820	1,325	380	615
2218	2	3	ALL	LP or NG	\$101,535.00	18,500 lbs.	1,025	1,655	480	775
2220	2	3	ALL	LP or NG	\$108,150.00	20,500 lbs.	1,135	1,840	530	855
2222	2	3	ALL	LP or NG	\$114,870.00	22,500 lbs.	1,245	2,015	580	935
2226	2	3	ALL	LP or NG	\$128,835.00	24,500 lbs.	1,490	2,410	695	1,120
2314	2	3	ALL	LP or NG	\$87,465.00	16,000 lbs.	900	1,455	615	995
2318	2	3	ALL	LP or NG	\$106,680.00	19,000 lbs.	1,120	1,805	770	1,235
2320	2	3	ALL	LP or NG	\$112,560.00	21,000 lbs.	1,245	2,010	850	1,375
2322	2	3	ALL	LP or NG	\$119,385.00	22,500 lbs.	1,355	2,195	930	1,500
2326	2	3	ALL	LP or NG	\$133,245.00	25,000 lbs.	1,670	2,700	1,130	1,835

Pedestal Bases for Stack Stiffener Supports **included** in List Price of dryer.

Standard with 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 for 12' & 14' series.
8 required for 18' series.
10 required for 20' & 22' series.
12 required for 26' series.

*** 4 required for 14', 18', 22' & 26' series.
2 required for 12' & 20' series.

***Measured in wet bushels per hour (BPH).**

For CGA approval on 1220S Series add \$2100. list. \$2100. for 2200 Series, \$3150. for 2300 Series.

Grain Inverters for use with Stacks only.

2 Stack-part #DO1-1490 \$300. per foot of basket (includes access door)
3 Stack-part #DO1-1490P \$300. per foot of basket (includes access door)
Dry and cool use only. Can be used all heat with somewhat reduced effectiveness.

For small grain perforations (0.050") add 2% to list price of dryer. Prices and specifications subject to change without notice
Example: 2212 dryer LP small grains \$71,085. x 1.02=\$72,507. list. All items F. O. B. Newton, Illinois. January 1,1999

Stackable Series Pricing

Portable Dryer Sales Manual

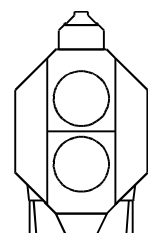
Model Number	Stackable Units	Electrical Power		Fuel	List Price Less Transport	Approx. Dryer Wt.	Wet Bushels Full Heat		Wet Bushels Dry & Cool	
		Phase	Voltage				10 pt.*	5 pt.*	10 pt.*	5 pt.*
2414	2	1 or 3	ALL	LP or NG	\$94,080.00	16,500 lbs.	900	1,455	615	995
2418	2	1 or 3	ALL	LP or NG	\$114,030.00	19,500 lbs.	1,120	1,805	770	1,235
2420	2	3	ALL	LP or NG	\$120,015.00	21,500 lbs.	1,245	2,010	850	1,375
2422	2	3	ALL	LP or NG	\$127,260.00	23,500 lbs.	1,355	2,195	930	1,500
2426	2	3	ALL	LP or NG	\$150,990.00	26,000 lbs.	1,670	2,700	1,130	1,835
3312	3	1 or 3	ALL	LP or NG	\$103,635.00	22,000 lbs.	1,045	1,690	640	1,035
3314	3	1 or 3	ALL	LP or NG	\$113,295.00	23,000 lbs.	1,355	2,190	840	1,340
3318	3	3	ALL	LP or NG	\$134,715.00	28,500 lbs.	1,680	2,720	1,035	1,665
3320	3	3	ALL	LP or NG	\$147,420.00	28,500 lbs.	1,825	2,950	1,120	1,800
3322	3	3	ALL	LP or NG	\$156,135.00	30,000 lbs.	2,040	3,300	1,250	2,015
3326	3	3	ALL	LP or NG	\$175,560.00	34,000 lbs.	2,475	4,000	1,520	2,445

*Measured in wet bushels per hour (BPH).

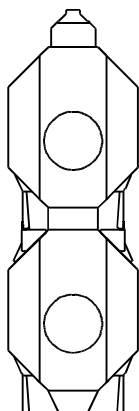
For CGA approval on stacked dryers add \$4200. for 2400 Series, \$3150. for 3300 Series

Grain Inverters for use with Stacks only.

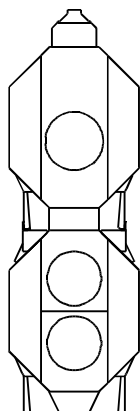
2 Stack-part #DO1-1490 \$300. per foot of basket (includes access door)
 3 Stack-part #DO1-1490P \$300. per foot of basket (includes access door)
 Dry and cool use only. Can be used all heat with somewhat reduced effectiveness.



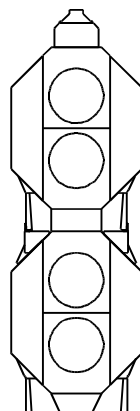
I 200S Series



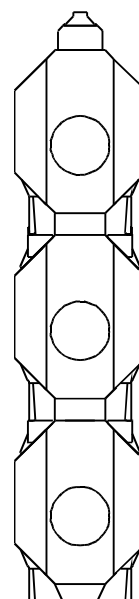
2200 Series



2300 Series



2400 Series



3300 Series

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

All items F. O. B. Newton, Illinois

January 1, 1999

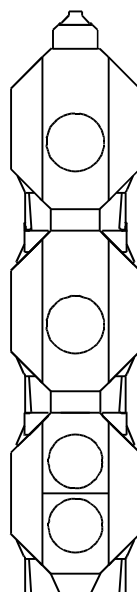
Model Number	Stackable Units	Electrical Power		Fuel	List Price Less Transport	Approx. Dryer Wt.	Wet Bushels Full Heat		Wet Bushels Dry & Cool	
		Phase	Voltage				10 pt.*	5 pt.*	10 pt.*	5 pt.*
3414	3	1 or 3	ALL	LP or NG	\$117,705.00	23,000 lbs.	1,355	2,190	840	1,340
3418	3	3	ALL	LP or NG	\$139,860.00	26,000 lbs.	1,680	2,720	1,035	1,665
3420	3	3	ALL	LP or NG	\$151,935.00	29,000 lbs.	1,825	2,950	1,120	1,800
3422	3	3	ALL	LP or NG	\$160,755.00	30,000 lbs.	2,040	3,300	1,250	2,015
3426	3	3	ALL	LP or NG	\$180,600.00	35,000 lbs.	2,475	4,000	1,520	2,445
3614	3	1 or 3	ALL	LP or NG	\$126,000.00	24,000 lbs.	1,355	2,190	840	1,340
3618	3	1 or 3	ALL	LP or NG	\$148,785.00	28,000 lbs.	1,680	2,720	1,035	1,665
3620	3	1 or 3	ALL	LP or NG	\$166,320.00	31,000 lbs.	1,825	2,950	1,120	1,800
3622	3	1 or 3	ALL	LP or NG	\$174,615.00	33,000 lbs.	2,040	3,300	1,250	2,015
3626	3	3	ALL	LP or NG	\$207,375.00	38,000 lbs.	2,475	4,000	1,520	2,445

*Measured in wet bushels per hour (BPH).

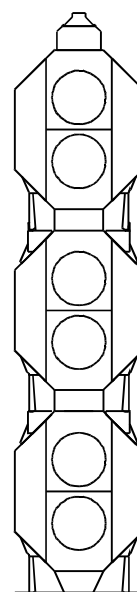
Grain Inverters for use with Stacks only.

2 Stack-part #DO1-1490 \$300. per foot of basket (includes access door)
 3 Stack-part #DO1-1490P \$300. per foot of basket (includes access door)
 Dry and cool use only. Can be used all heat with somewhat reduced effectiveness.

For CGA approval on stacked dryers add \$4200. for 3400 Series, \$6300. for 3600 Series



3400 Series



3600 Series

For small grain perforations (0.050") add 2% to list price of dryer. Prices and specifications subject to change without notice.
 All items F. O. B. Assumption, Illinois

January 1, 1999

Automatic Batch Pricing

Portable Dryer Sales Manual

Full heat or dry and cool auto batch	See through control panel door	Solid state ignition
Competitor Series 2000 System	Load and unload auxiliary starters	Externally adjustable vaporizers
Low speed vane axial fans with Blue Burn System	Galvanized fan housing, control cabinet and auger housing	Solid dividers, every two feet
Full safety control system	Perforated wet bin not available.	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.
One Fan Models									
160AB	1 or 3	ALL	LP	\$17,850.00	3,500 lbs.	160	312	114	178
	1 or 3	ALL	NG	\$19,215.00	3,500 lbs.	160	312	114	178
210AB	1 or 3	ALL	LP	\$21,525.00	4,000 lbs.	208	415	150	237
	1 or 3	ALL	NG	\$22,890.00	4,000 lbs.	208	415	150	237
300AB	1 or 3	ALL	LP	\$26,040.00	4,800 lbs.	295	590	214	337
	1 or 3	ALL	NG	\$27,510.00	4,800 lbs.	295	590	214	337
375AB	1 or 3	ALL	LP	\$29,610.00	5,700 lbs.	350	700	230	400
	1 or 3	ALL	NG	\$31,080.00	5,700 lbs.	350	700	230	400
400AB	1 or 3	ALL	LP	\$34,125.00	6,200 lbs.	400	800	275	450
	1 or 3	ALL	NG	\$35,595.00	6,200 lbs.	400	800	275	450
Two Fan Models									
415AB	1 or 3	ALL	LP	\$38,745.00	6,700 lbs.	415	828	300	472
	1 or 3	ALL	NG	\$40,005.00	6,700 lbs.	415	828	300	472
600AB	1 or 3	ALL	LP	\$51,135.00	7,800 lbs.	591	1,182	430	675
	1 or 3	ALL	NG	\$52,710.00	7,800 lbs.	591	1,182	430	675

*Measured in wet bushels per hour (BPH).

For CGA approval on above models add \$1050. list for 1 fan models and \$2100 list for 2 fan models

TRANSPORT KIT

Item	Model	Part Number	List Price
Transport Kit	6-10 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

CENTER FILL FOR EMCS MODELS ONLY

Call plant for price.

DRYER INSTALL JACKS

Call plant for price.

WET BIN

	Dryer Length	Galvanized Steel	Stainless Steel	Additional Price For Stainless Wet Bin on Dryers with Wet Bin
		List Price	Price List	
All combination dryers are equipped with wet bins as standard equipment except Competitor models 108, 110, 112 & 114	8 ft.	\$609.00	\$1,092.00	\$483.00
	10 ft.	\$735.00	\$1,344.00	\$609.00
	12 ft.	\$1,076.00	\$1,796.00	\$720.00
	14 ft.	\$1,250.00	\$2,090.00	\$840.00
	16 ft.	\$1,418.00	\$2,384.00	\$966.00
	18 ft.	\$1,628.00	\$2,704.00	\$1,076.00
	20 ft.	\$1,796.00	\$2,993.00	\$1,197.00
Wet Bin prices are in lieu of standard top.	22 ft.	\$1,953.00	\$3,276.00	\$1,323.00
	26 ft.	\$2,310.00	\$3,875.00	\$1,565.00

STAINLESS STEEL PRICING

Model	Column Length	All Outside Screens	Top Outside Only	Top & Sides Outside Only	*Rice Option All inside & Outside Screens
160 AB (short sides)	6	\$1,239.00	\$410.00	\$725.00	\$2,242.00
1108, 210AB (short sides)	8	\$1,654.00	\$536.00	\$971.00	\$2,966.00
1110 (short sides)	10	\$2,063.00	\$672.00	\$1,208.00	\$4,022.00
300AB	10	\$2,300.00	\$672.00	\$1,460.00	\$4,079.00
1112, 375AB	12	\$2,767.00	\$803.00	\$1,733.00	\$4,289.00
1114, 1214, 1214S, 1314, 400AB, 415AB	14	\$3,229.00	\$945.00	\$2,037.00	\$6,332.00
1116, 1216,	16	\$3,691.00	\$1,076.00	\$2,326.00	\$7,245.00
1118, 1218, 1218S, 1318	18	\$4,148.00	\$1,208.00	\$2,615.00	\$8,138.00
1120, 1220, 1220S, 600AB	20	\$4,615.00	\$1,349.00	\$2,914.00	\$9,056.00
1122, 1222, 1222S, 1322	22	\$5,077.00	\$1,481.00	\$3,203.00	\$9,949.00
1126, 1226, 1226S	26	\$5,996.00	\$1,748.00	\$3,791.00	\$11,750.00
		Complete	Partial 1	Partial 2	
2212	12	\$5,534.00	\$3,570.00	-	\$10,920.00
2214, 2314, 2414	14	\$6,458.00	\$4,174.00	-	\$12,747.00
2218, 2318, 2418	18	\$8,295.00	\$5,355.00	-	\$16,380.00
2220, 2320, 2420	20	\$9,230.00	\$5,964.00	-	\$18,197.00
2222, 2322, 2422	22	\$10,154.00	\$6,563.00	-	\$20,097.00
2226, 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.

GRAIN SAMPLER

Item	Model	Part Number	List Price
Grain Sampler (Standard on new dryer)		D01-0405	\$78.00

HEAT RECLAIMER

Heat Reclaimer	1214	1214-HR01	\$5,408.00
	1216	1216-HR01	\$5,618.00
	1218	1218-HR01	\$5,775.00
	1220	1220-HR01	\$5,964.00
	1222	1222-HR01	\$6,195.00
	1226	1226-HR01	\$7,350.00
	1314	1314-HR01	\$5,387.00
	1318	1318-HR01	\$5,786.00
	1322	1322-HR01	\$6,195.00
	2000 Series		
	12 ft.	2012-HR01	\$11,340.00
	14 ft.	2014-HR01	\$11,981.00
	18 ft.	2018-HR01	\$13,430.00
	20 ft.	2020-HR01	\$14,123.00
	22 ft.	2022-HR01	\$14,816.00
	26 ft.	2026-HR01	\$16,202.00
	3000 Series		
	12 ft.	3012-HR01	\$14,994.00
	14 ft.	3014-HR01	\$16,097.00
	18 ft.	3018-HR01	\$17,745.00
	20 ft.	3020-HR01	\$18,522.00
	22 ft.	3022-HR01	\$19,404.00
	26 ft.	3026-HR01	\$20,948.00

NOISE SUPPRESSOR KIT

Noise Suppressor Kit	1108, 1110, 1112, 1114, 1116, 1118, 1120, 1122, 1126	1100-NS01	\$1,260.00
	1214, 1216, 1218, 1220, 1222, 1226	1200-NS01	\$2,363.00
	1314, 1318, 1322	1300-NS01	\$2,363.00
	12, 14, 18, 20, 22 & 26 ft. series stacked series	1200S-NS01 2000-NS01 3000-NS01	\$4,253.00 \$7,140.00 \$10,080.00
For Use With Heat Reclaimer	All Multi Fan Models With Heat Reclaimer	1200-NSHR 2000-NSHR 3000-NSHR	\$1,418.00 \$4,095.00 \$7,035.00

SERVICE PLATFORM

Service Platform (extra unit)	All	SP-01	\$1,764.00
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CATWALKS

Call plant for price.

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 (Automatic Batch Models)	MF-AE02L	\$578.00
Discharge Box Bypass In lieu of Standard	D01-1172	\$48.00

Any length needed is available. Call factory for quotation.

DISCHARGE WITH PROVISION FOR DMC CAPACITANCE SENSOR

Call plant for price.

TRASH PAN

Part Number		List Price
TP-08	Trash Pan Kit, 8' Dryer	\$121.00
TP-10	Trash Pan Kit, 10' Dryer	\$150.00
TP-12	Trash Pan Kit, 12' Dryer	\$174.00
TP-14	Trash Pan Kit, 14' Dryer	\$257.00
TP-16	Trash Pan Kit, 16' Dryer	\$286.00
TP-18	Trash Pan Kit, 18' Dryer	\$309.00
TP-20	Trash Pan Kit, 20' Dryer	\$338.00
TP-22	Trash Pan Kit, 22' Dryer	\$421.00
TP-26	Trash Pan Kit, 26' Dryer	\$473.00

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)	\$551.00
DO3-0359	Short Haul (No Modem On-site Computer)	\$473.00

PULLEY UPGRADES

Part Number		List Price
DO4-0164	16" to 18" pulley upgrade	\$261.00
DO4-0165	16" to 20" pulley upgrade	\$362.00

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.

Individual Leg Assembly

LEG-016	16" Tall	\$39.00
LEG-018	18" Tall	\$40.00
LEG-024	24" Tall	\$42.00
LEG-030	30" Tall	\$45.00
LEG-036	36" Tall	\$48.00
LEG-042	42" Tall	\$51.00

Leg Packages For An 8' Dryer Module

LEG-016-08	16" Tall	\$360.00
LEG-018-08	18" Tall	\$369.00
LEG-024-08	24" Tall	\$404.00
LEG-030-08	30" Tall	\$432.00
LEG-036-08	36" Tall	\$461.00
LEG-042-08	42" Tall	\$505.00

Leg Packages For 10' & 12' Dryer Modules

LEG-016-10	16" Tall	\$436.00
LEG-018-10	18" Tall	\$448.00
LEG-024-10	24" Tall	\$488.00
LEG-030-10	30" Tall	\$524.00
LEG-036-10	36" Tall	\$556.00
LEG-042-10	42" Tall	\$610.00

Leg Packages For 14' & 16" Dryer Modules

LEG-016-14	16" Tall	\$513.00
LEG-018-14	18" Tall	\$525.00
LEG-024-14	24" Tall	\$572.00
LEG-030-14	30" Tall	\$613.00
LEG-036-14	36" Tall	\$654.00
LEG-042-14	42" Tall	\$713.00

Leg Packages For 18' & 20' Dryer Module

LEG-016-18	16" Tall	\$588.00
LEG-018-18	18" Tall	\$605.00
LEG-024-18	24" Tall	\$654.00
LEG-030-18	30" Tall	\$703.00
LEG-036-18	36" Tall	\$751.00
LEG-042-18	42" Tall	\$818.00

Leg Packages For A 22' Dryer Module

LEG-016-22	16" Tall	\$665.00
LEG-018-22	18" Tall	\$684.00
LEG-024-22	24" Tall	\$738.00
LEG-030-22	30" Tall	\$793.00
LEG-036-22	36" Tall	\$849.00
LEG-042-22	42" Tall	\$922.00

Leg Packages For A 26" Dryer Module

LEG-016-26	16" Tall	\$742.00
LEG-018-26	18" Tall	\$762.00
LEG-024-26	24" Tall	\$821.00
LEG-030-26	30" Tall	\$884.00
LEG-036-26	36" Tall	\$947.00
LEG-042-26	42" Tall	\$1,027.00

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

Aspirator Package

Basic Aspirator - Dryer Discharge Removal Only			
PGC-0-1 PGC-0-3	Aspirator Starter Kit Aspirator Starter Kit Kit includes: 1-3 hp blower and motor with steel blade 1-Fill hopper adapter tube Mounting hardware 2-6" Compression clamps 1-6" x 8.0' Stainless Flex-tubing	3 hp, 1 phase 3 hp, 3 phase	List \$2,340.00 \$2,340.00

Aspirator Component Parts

Blower Components

CD-0439	3 HP Blower Unit Less Motor	\$660.00
CD-0438	3 HP Blower Fan Housing Assembly	\$427.00
CD-0444	3 HP Blower Blade Assembly	\$174.00
CD-0449	Inlet Tube Weldment	\$ 73.00
D01-1267	Blower Mounting Bracket	\$ 51.00
FH-5474	Motor, 3 HP Single Phase 60 Hz 115-208/230 volt	\$703.00
FH-5475	Motor, 3 HP Three Phase 60 Hz 208-203/460 volt	\$494.00

Discharge Settling Chamber Components

D01-1263	Discharge Box Side	\$ 22.00
D01-1264	Discharge Box Bypass Chute	\$ 58.00
D01-1265	Settling Box Fan Side	\$ 66.00
D01-1266	Settling Box Top Side	\$ 38.00
D03-0286	Grill Vent with Gasket	\$ 12.20

Miscellaneous Tubing Components

D01-1268	Tubing Mounting Bracket	\$ 30.00
D01-1269	6' Pipe Section Weldment	\$ 90.00
D01-1270	3' Pipe Section	\$ 42.00
D03-0278	6" Compression Coupling	\$ 63.00
D03-0279	6" 90° Elbow	\$167.00
S-7936	U-bolt, 5/8-11 x 6	\$ 8.20
6GT	6.00" Galvanized Tubing (up to 20' length) / foot	\$ 9.72

Expanded Aspirator Additional Components

D01-1236	Fill Hopper Adapter Weldment	\$ 32.00
D01-1283	8' Tube Weldment	\$121.00
D01-1285	42.5" Tube Weldment	\$ 73.00
D01-1287	Settling Box Adapter Tube	\$ 40.00
D01-1293	27.5" Tube Section	\$ 56.00
D01-0100	Fill Hopper Assembly	\$148.00
D04-0101	T-valve Control Assembly	\$309.00

Electrical Options

D04-0132	1 Phase 230 volt Control Option Kit	\$253.00
D04-0133	3 Phase 230 volt Control Option Kit	\$423.00
D04-0134	3 Phase 380 volt Control Option Kit	\$622.00
D04-0135	3 Phase 460 volt Control Option Kit	\$623.00

What the customer needs to know before purchasing a dryer.

The customer has determined a need or been approached by a sales representative to purchase a portable dryer. Several items must be addressed to assist in the decision to purchase the correct dryer model. The type of grain to be dried, the quantity of grain to be dried, electrical and fuel services, site space, auxiliary equipment, and dryer options will need to be known in the dryer selection process. The sales representative must help the customer evaluate these items and postulate any future items that may arise. The following questions are tools to use in the customer survey.

Drying Needs

- What type of grains will be dried today?
- Will other types of grain be dried in the future?
- How much grain will be dried on a daily basis?
- Are there any special considerations associated with the grains to be dried?

Dryer Location

- How much space is available for the dryer and auxiliary equipment?
- If the dryer is placed between or near bins, is there enough open area around the dryer?

- Are there any height restrictions?
- How much ground clearance is desired?
- How much ground clearance is required for unloading system?
- Does the dryer need to be orientated so noise is projected away from work areas?
- Will there be enough room for future expansion in the stackable series?
- Are there any special considerations associated with the dryer location?

Auxiliary Handling Equipment

- What type of auxiliary handling equipment is available?
- Will auxiliary handling equipment capacities match what will be needed for the increased capacity of a drying system?
- Will auxiliary equipment handle increased capacities from 2-3 point removal drying?
- Are there any special considerations associated with the auxiliary handling system?
- Size of auxiliary motors for sizing of contactors and overloads

Electrical Service

- What is the phase and voltage of electrical service currently available?
- What is the capacity (amperage) of electrical service currently available?
- Are there any special considerations associated with the current electrical service?
- Is 110 volt control voltage available?

Fuel Service

- What is the type of fuel service currently available?
- What is the capacity of fuel service currently available?
- Are there any special considerations associated with the current fuel service?

Dryer Options

- Are there any options desired to enhance the drying system?

After the basic questions of the customer survey have been answered, the sales representative and customer can begin the dryer selection process. Dryer model selection is made based on type of dryer desired, capacity to be dried, electrical service, fuel service, and space available. Auxiliary equipment must be taken into account during the selection process to size electrical and installation options correctly. Dryer accessories can also be determined at this time.

Make the dryer model selection based on the following criteria:

Capacity

- A. Crop Type
Verify the crop type to be dried.

B. Volume

Verify the volume of grain to be dried in a one hour time period. Match the volume of grain to be dried with a dryer model of the same capacity. The capacities listed for all dryer types in the specification pages are for corn. Other crop capacities can be found using the following chart for the corresponding crop.

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 in 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.

Dryer Options

Determine which dryer options are needed for the customer's drying needs and are desired by the customer.

Examples of options available for the portable dryer.

- Phase and voltage type
- Fuel type
- Controls type
- Drying basket screen type (galvanized or stainless)
- Top auger type (standard or wet bin)
- Fill location (front or rear) on Competitor Series. (Front, rear or center) on EMCS models
- Discharge location (front or rear)

See pages on dryer options for complete list and pricing.

Dryer Accessories

Determine which dryer accessories would enhance the customer's drying needs or are desired by the customer.

Examples of accessories available for the portable dryer.

- Leg Stands
- Trash Pan
- Aspirator
- Heat Reclaimer
- Noise Suppressor
- Grain Inverter on stacks
- Discharge with provision for DMC Capacitance Sensor

See pages on dryer accessories for complete list and pricing.

Site Requirements

A.Space

Match the dryer dimensional requirements for proper operation with the space available. If the dryer is too large to fit into the given space, another dryer must be selected.

B.Electrical

Verify the electrical service available. Compare phase, voltage, and amperage required with the values listed in the specifications pages. If single phase is not available or amperage exceeds current service, another dryer must be selected or alternatives for phase and voltage must be considered.

C.Fuel

Verify the fuel service available. Compare the fuel requirements with the values listed in the specification pages. If sufficient fuel is not available, the customer must evaluate his service with fuel supplier or consider other fuel type.

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

Electrical Service

A. Drying Method

Determine the method of drying the desired crop. Drying methods are dependent upon the handling, storage, and conditioning apparatus of the customer, but these methods influence the capacities of the dryer model selected.

Methods of drying in GSI Portable Dryers

Full Heat Continuous Flow: Grain flows through the dryer and is heated continuously. It is discharged hot from the dryer at desired moisture percentage.

Dry and Cool Continuous Flow: Grain flows through the dryer and is heated and cooled continuously at different levels. It is discharged near ambient air temperature and near desired moisture percentage.

Staged Batch: The dryer operates in stages (processing 1/3 of the grain in each stage) at timed rates for loading, heating, cooling, and unloading. Grain can be discharged hot or cooled from the dryer as needed.

Batch: The dryer operates the same as Staged Batch, but the grain is all unloaded at one time. Grain can be discharged hot or cooled from the dryer as needed.

Dryer Models

Choose the type of dryer desired from the capacity requirements above.

The five model number series of the GSI portable dryer line are:

Competitor: Single fan dryers with metering rolls capable of staged batch or continuous flow operation utilizing the Series 2000 control. Model number is a three digit number signifying number of fans and length of drying basket.

example: 116; 1 fan , 16 feet long.

C-Series: Single and multiple fan dryers with metering rolls capable of staged batch or continuous flow operation utilizing the Electronic Monitoring Control System. Model number is a four digit number signifying number of modules, number of fans, and length of drying basket.

example: 1216; 1 module, 2 fans, 16 feet long.

S-Series: Single and two fan dryers of the "C-Series" that are integrated with parts for future expansion into multi-module dryers. Model number is the same as the "C-Series" followed by the suffix "S" for stackable.

example: 1216S; 1 module, 2 fans, 16 feet long, stackable

AB-Series: Single and two fan dryers designed for batch drying utilizing the Series 2000 control. Model number is a three digit number following by the "AB" suffix.

example: 210AB

H-Series: Two fan dryers of the "C-Series" type that have equal size fans top and bottom and plenum split 50/50. **Not for future expansion.**

See dryer features and comparison pages for more information on dryer model types.

Capacity

- What type of grain is to be dried? _____
- What volume of grain is to be dried in a one hour time period? _____
- What drying method will be used?
____ Full Heat Continuous Flow
____ Dry and Cool Continuous Flow
____ Staged Batch

Dryer Models

- Which dryer model matches the hourly capacity for the given method chosen? (may be more than one) _____

Site Requirements

- Will the dryer fit into the site chosen? ____ Yes ____ No (select again)
- Is the electrical service adequate for the dryer? ____ Yes ____ No (consider alternative)
- Is the fuel service adequated for the dryer? ____ Yes ____ No (consider alternatives)

Auxiliary Equipment

- What is the capacity of the loading and unloading equipment? _____
- What is the maximum input and output of the dryer chosen? _____
- Compare the two capacities. Will auxiliary equipment handle the maximum requirements of the dryer? 7.5 HP maximum. Larger sizes available with an additional charge.
____ Yes ____ No (consider alternatives)
- What are the these values for the auxiliary load auger?
____ Horsepower
____ Phase
____ Voltage
____ Amperage
- What are the these values for the auxiliary unload auger?
____ Horsepower
____ Phase
____ Voltage
____ Amperage
- Are auxiliary components larger than standard dryer components? If so, larger components must be added to dryer at additional cost. 7.5 HP maximum standard?
____ Yes (call for quote) ____ No

Dryer Options (required for production)

- Select geographic type.

_____ Domestic
 _____ Canadian
 _____ Export

- Indicate electrical service.

Phase _____
 Voltage _____

- Indicate fuel type.

- Select drying basket screen type.

___ Galvanized (standard)
 ___ Galvanized Small Grain
 ___ Stainless Steel - Outside Complete
 ___ Stainless Steel - Top Only
 ___ Stainless Steel - Top and Sides
 ___ Stainless Steel - Stack Partial
 ___ Stainless Steel - Inside and Outside
 ___ Stainless Steel - 0.078" Perf. for Rice

- Select top auger type.
 (see pricing pages for standard setup)

___ Standard Top
 ___ Wet Bin Top
 ___ Stainless Steel Wet Bin Top

- Indicate fill location.

___ Rear Fill (standard)
 ___ Front Fill (optional)
 ___ Center (optional on EMCS models, at
 additional cost)

- Indicate discharge location.

___ Rear Discharge (standard)
 ___ Front Discharge (optional)

List dryer accessories desired for dryer.
 (see pricing pages for examples)

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 Series	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"

*Special Trailer available that allows dryer to be delivered with Wet Bin in place.

Following are rates for delivery of dryers:

1. \$1.35 per mile for delivery of a single dryer pulled behind the pickup. 18' & smaller basket dryers.
2. \$1.10 per mile for delivery of a standard single dryer combined with another dryer from a different dealer within a 150 mile radius.
*Special Trailer \$1.25 per mile
3. \$1.90 per mile for delivery of two dryers to the same dealer.
*Special Trailer \$2.15 per mille

If you should have any questions or problems in the future concerning your freight charges, please contact GSI factory.

Prepared by: _____

Date: _____

Customer Information (end user)

name: _____

street: _____

city, state, zip: _____

phone: _____

fax: _____

GSI Dealer Information

GSI dealer number: _____

name: _____

street: _____

city, state, zip: _____

phone: _____

fax: _____

District Manager: _____

Dryer Information

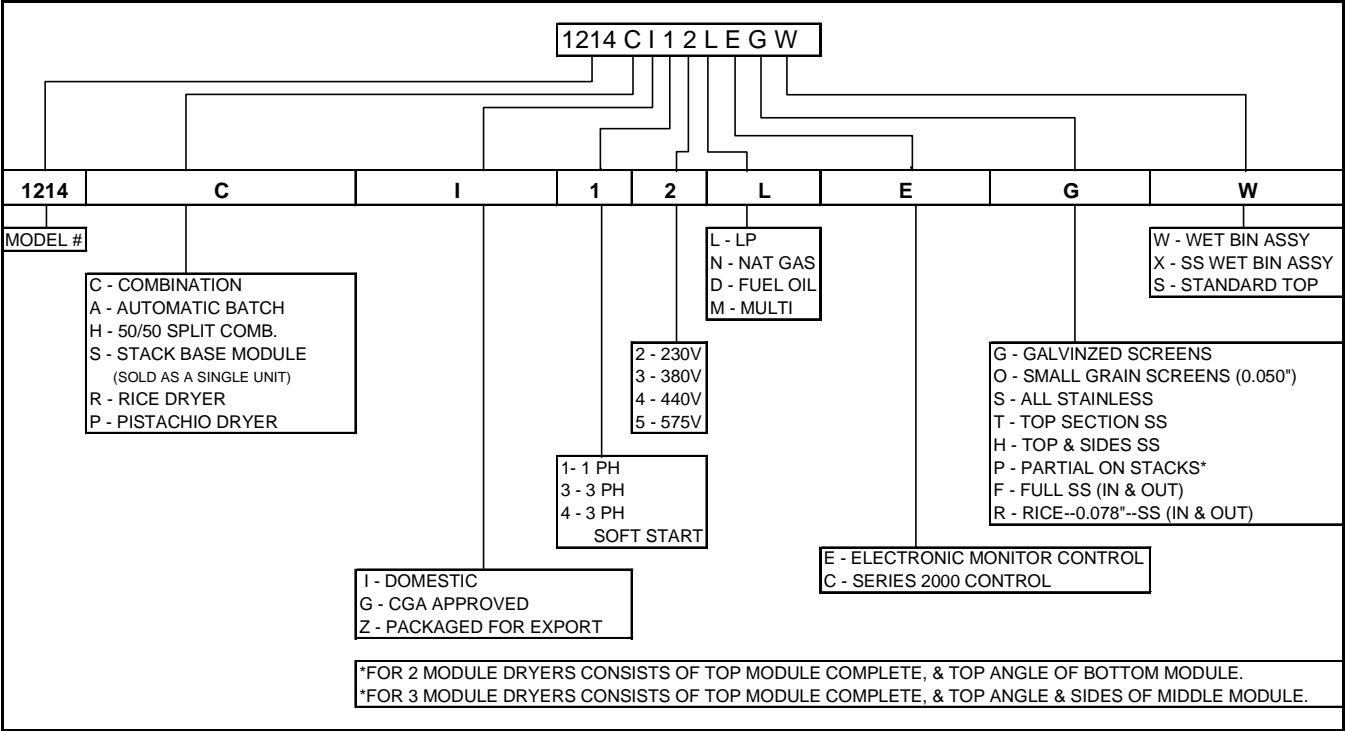
PART NUMBER (ALL CAPS PLEASE)

--	--	--	--	--	--	--	--	--	--	--

SHIPPING METHOD: _____

ACCESSORIES: _____

COMMENTS: _____



What the customer needs to do prior to delivery.

The customer has several items that need to be done prior to taking delivery of the dryer. By accomplishing these items before receiving the dryer, installation can proceed in a manner that is time efficient and cost conservative.

Site Preparation

Arrange for the dryer to be installed on a level surface. Consult local building codes for the proper grading, fill, and concrete requirements for the specific geographical location where the dryer is to be installed. GSI provides recommendations in this book for a minimum foundation necessary for supporting the dryer models offered.

See the foundation requirements section of this book or contact GSI for dryer foundation information.

Electrical

Arrange for the main power supply to be installed at dryer location.

See electrical specifications for each dryer model for power requirements.

Fuel

Arrange for the fuel supply to be installed at dryer location.

See fuel specifications for each dryer model for fuel requirements.

Auxiliary Handling Equipment

Arrange for delivery and installation of auxiliary handling equipment.

Dryer Shipment

GSI Haul: Consult GSI for delivery date, time, and contact person for shipping. Arrange for labor and equipment (crane, forklift, etc.) to unload the dryer on site at time of delivery.

Customer Pickup: Consult GSI for delivery date and time, contact person for shipping, vehicle requirements, and safety equipment (light bar, safety chains, etc.) necessary for pulling a portable dryer.

What the customer needs to do upon delivery.

Once the dryer has been delivered, the customer has the responsibility of installation and startup. GSI will provide technical advice as needed.

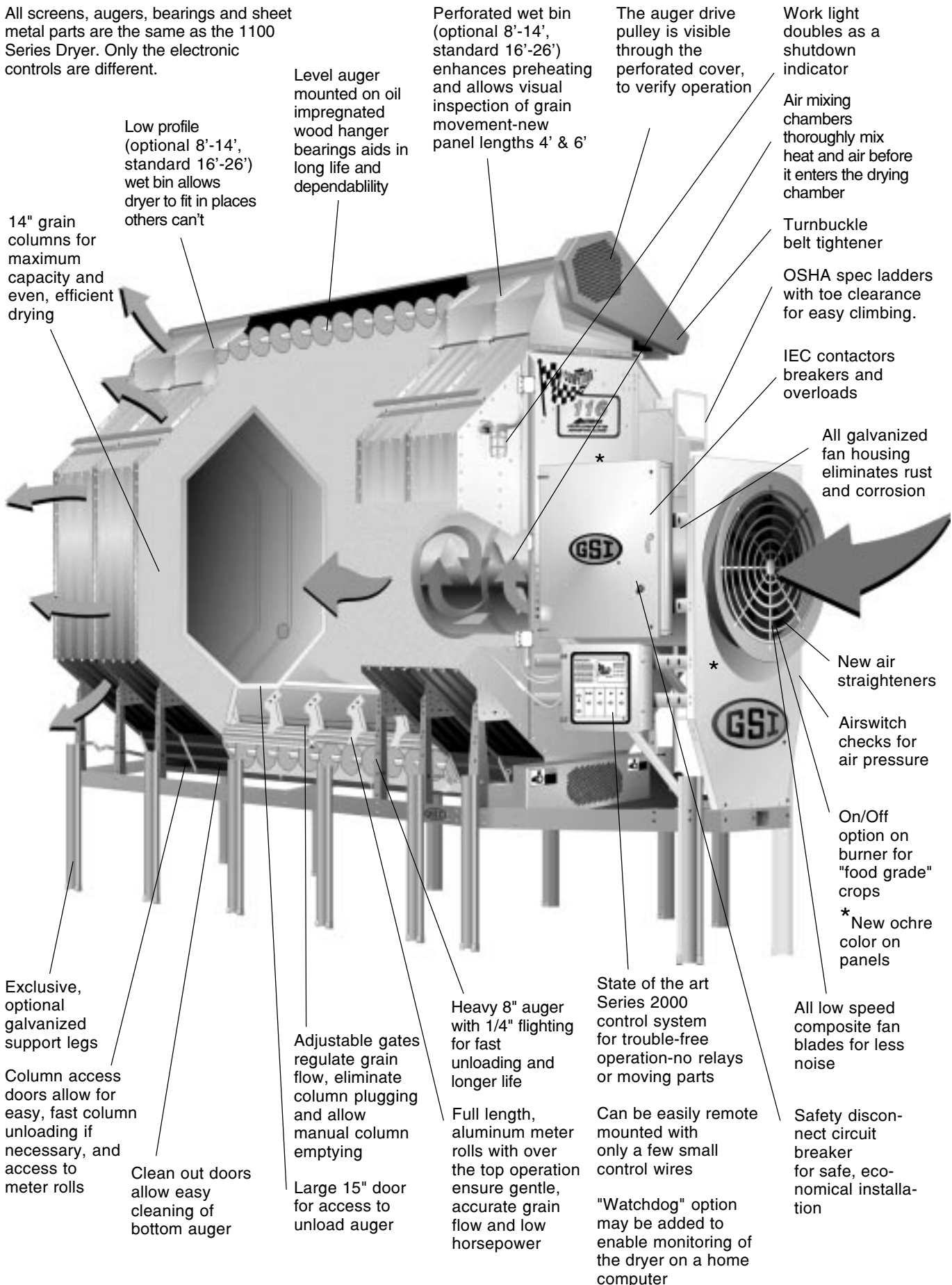
Single Module Dryer

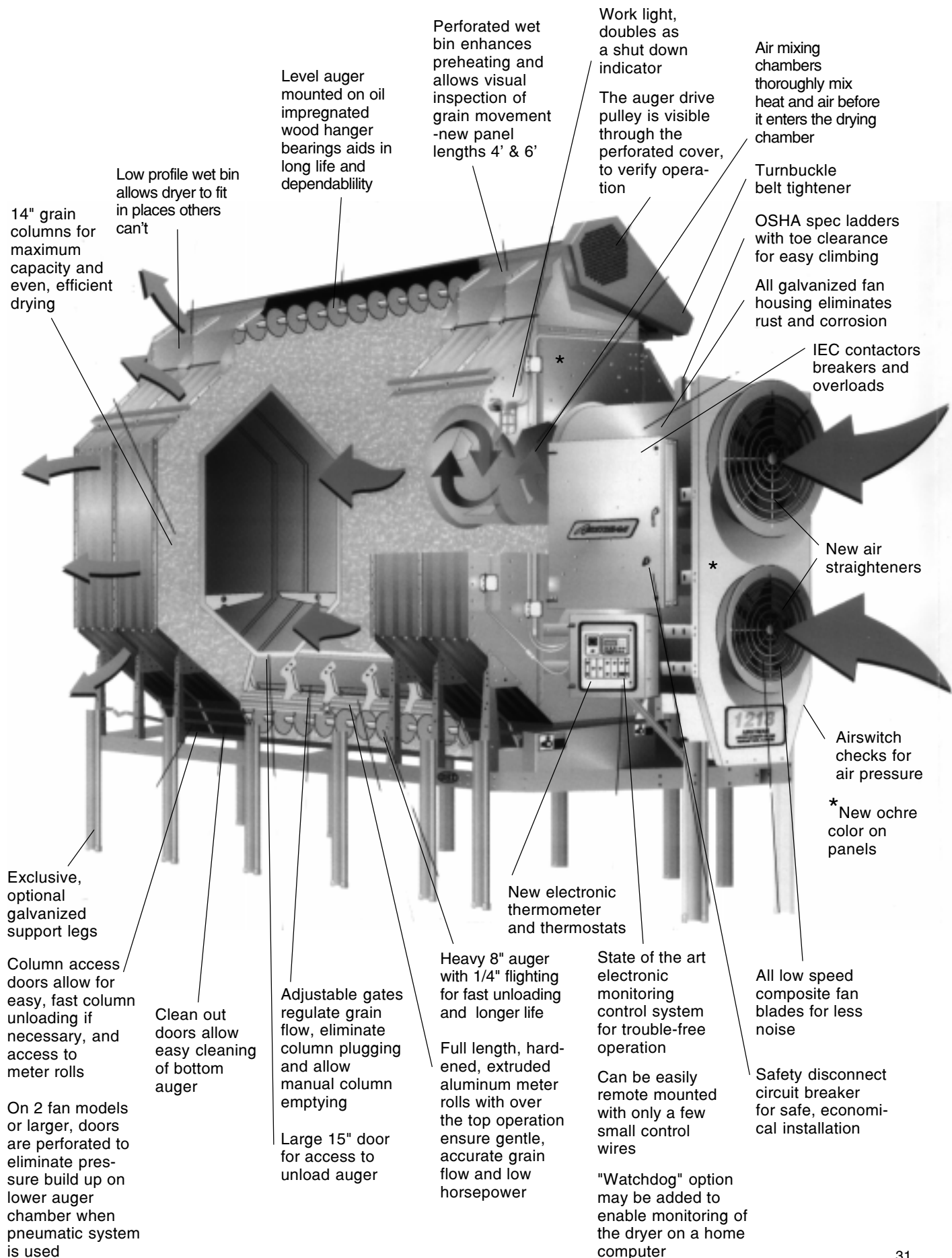
- Installation of proper dryer supports.
- Wet bin setup if required.
- Assembly of top auger drive mechanism and guarding.
- Connection of main power.
- Connection of fuel line.
- Installation of auxiliary handling equipment.
- Connection of auxiliary handling equipment power, control and safety circuits.
- Installations of dryer accessories.
- Dryer startup.

Multi-module Stack Dryer

- Installation of proper dryer supports.
- Stacking of dryer modules.
- Installation of dryer stiffener supports.
- Assembly of service platforms(s).
- Wet bin setup.
- Assembly of top auger drive mechanism and guarding.
- Connection of main power.
- Interconnection of electrical circuits between modules.
- Connection of fuel lines.
- Interconnection of fuel lines between modules.
- Installation of auxiliary handling equipment.
- Connection of auxiliary handling equipment power, control and safety circuits.
- Installations of dryer accessories.
- Dryer startup.

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





Programming Instructions

Setting timers, time delays and temperatures

1. Press the button for the program that you wish to change the time or temperature in.
2. Use the increase and decrease buttons to change the present time or temperature.
3. After the time or temperature has been changed, the computer automatically accepts the new value.

Using the mode select

1. Pressing the mode select button will toggle the display between timer values, grain temperature and plenum temperature.

Checking the hour meter

Pressing the increase button changes the display to the total hours on the dryer. It will automatically return to the main screen after the button is released.

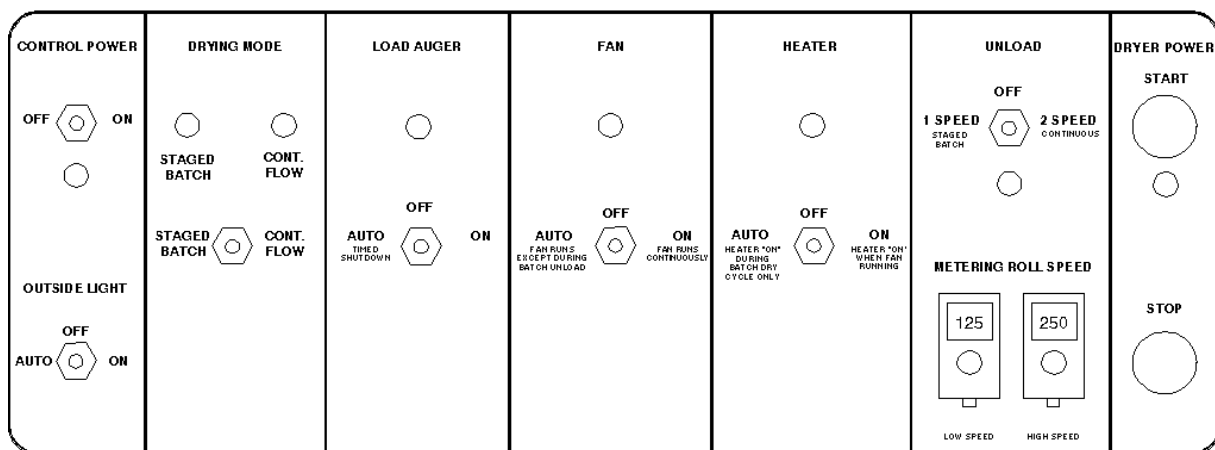
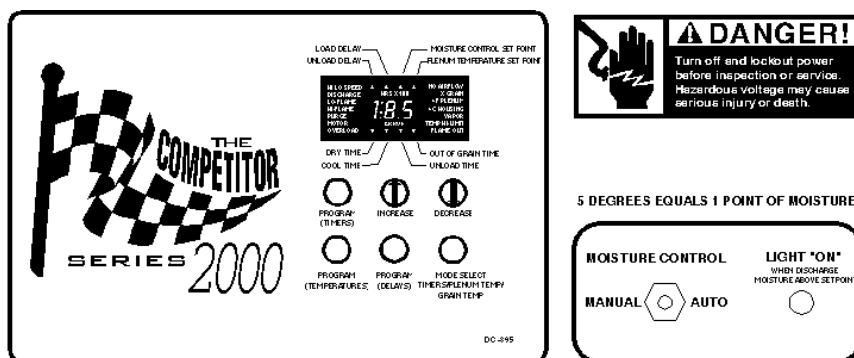


Figure 1: The Competitor Series Control Panel.

Dryer Line Features

EMCS Dryer (1000-3000 series)

- Perforated wet bin standard on all models
- Solid state electronic ignition system
- Computer monitors and calculates BPH, RPM and total bushels. It also provides protection of metering roll system in case of a jammed metering roll or a failure during operation
- Control panel operation switches are illuminated
- 25 error shutdown history

Competitor Dryer (100 series-single fan only)

- Grain and plenum chamber temperatures programmed and monitored on control panel display
- Perforated wet bin standard on 116 model and larger models
- Ignition transformer used for burner ignition system
- Hi-low fire cycling of burner controlled by computer not an external thermostat allows on/off operation for lo temp drying
- Control panel may be remotely located

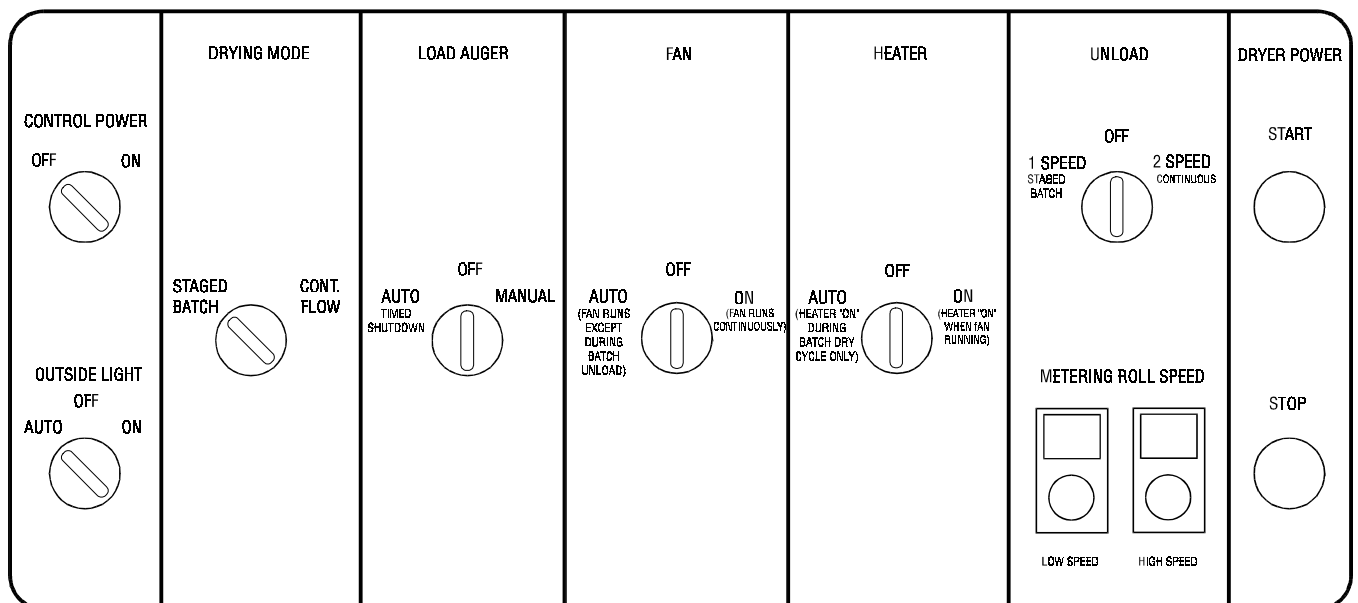
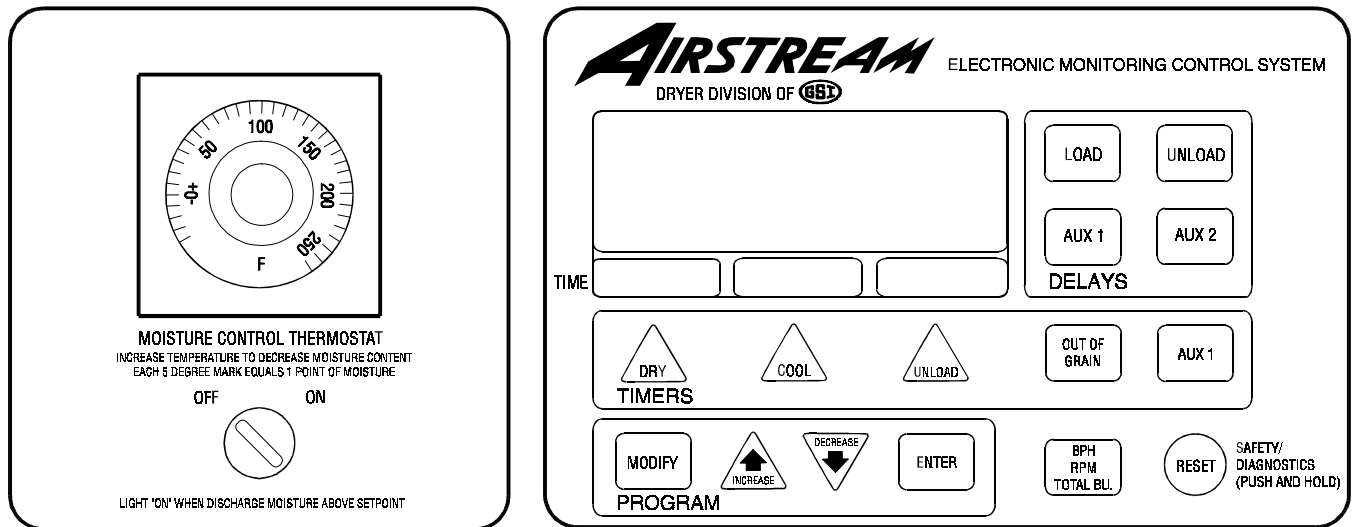
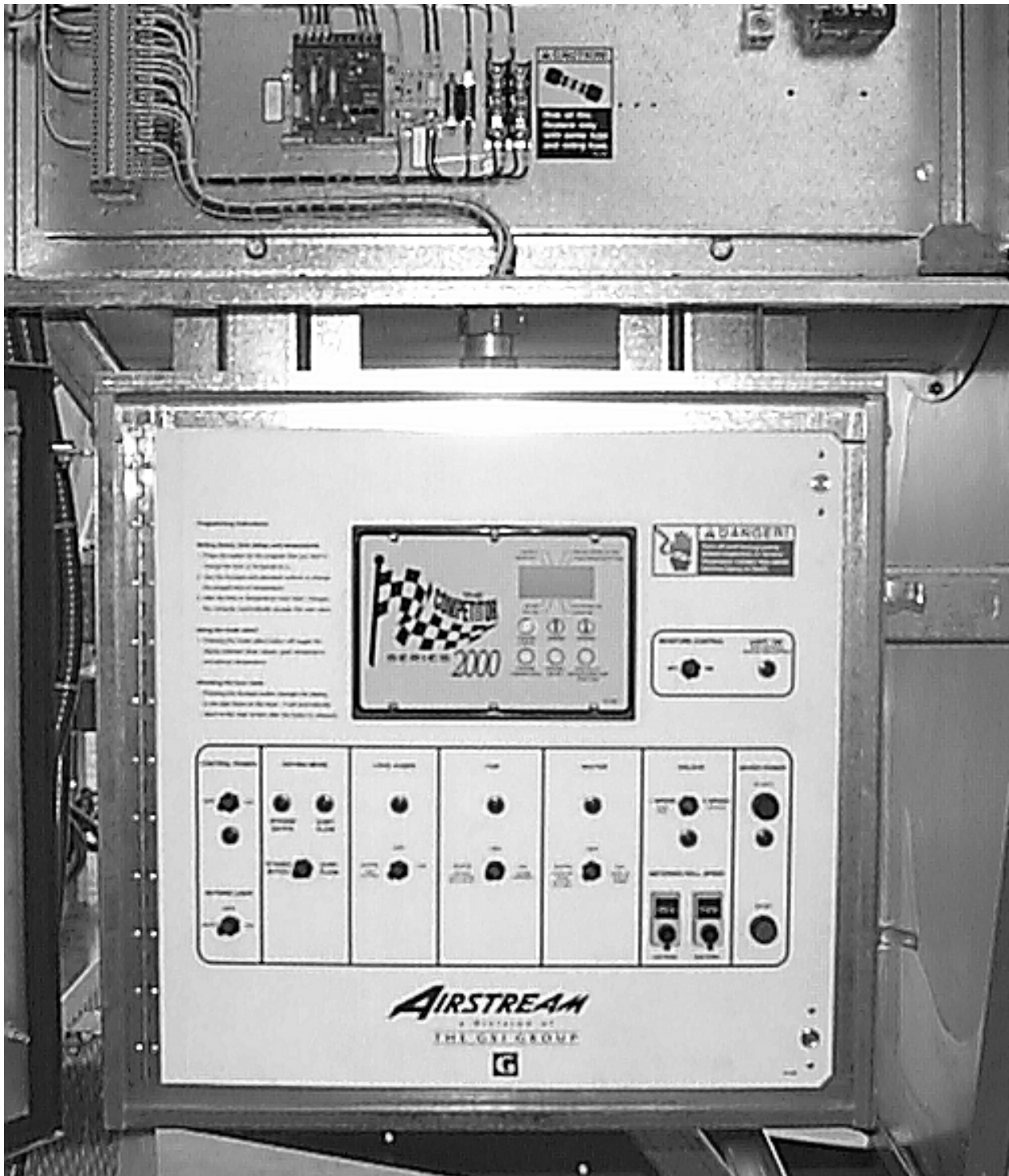


Figure 2: The Electronic Monitoring Control Panel features easy access computerized controls.



**The Competitor
Series 2000 Control
System Gives You
The Competitive
Edge**

Air Switch

The air switch on the dryer has been changed to a BEC type and will now be mounted on the front of the dryer. The air switch will now 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 motor connections as well as computer control circuits.

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 (error 10)

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 2000 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.

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 burner, as opposed to the hi-low type, is excellent for specialty grain operations.

Dryer Shutdowns

Each of the common shutdowns on the 2000 series are displayed individually, so there is no guesswork when these shutdowns occur.



**The Electronic
Monitoring Control
System Is Our Top
Of The Line Grain
Drying Control**

User Safety

A user supplied safety hook up point is supplied. There is a jumper wire installed between J5-8 and J1-20 on all dryers sent from the factory. To install a user safety, simply remove this wire and connect each end across any normally closed set of contacts that opens when a problem occurs and the dryer is to shut down completely.

Emergency Cooling

All Airstream dryers have an emergency cooling mode. This enables an Airstream to run only the fans whenever a grain high limit safety has caused a shutdown. Whenever a shutdown occurs the screen will inform the user how to enter the emergency cooling mode. Once the fans are running the computer continues checking each safety and knows when the grain high limit safety has returned to it's normally closed position. At this time the dryer will shut down and wait for the user to restart it back to normal operation.

New Electronic Thermometers and Thermostats

All temperature reading and settings are done 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.

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 now work in the on position even if the dryer is shutdown.

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. Any internal overload in the motors has been wired around.

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. Bushels per hour 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 25 stored in the dryer) to be kept. Another feature on the monitoring system is the alarm feature. This uses a phone modem to call a user if a dryer has a shutdown for any reason day or night. We are also looking at using a modem to call the computer and see the status of the inputs and outputs.



The work light switch can indicate a dryer shutdown.

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.

Message Editing

The message across the top of the LCD that formerly only said "Grain Systems, Inc." is now able to be changed to say whatever a dealer or a customer would prefer.

Meter Roll Reverse Option

Optional part number CD-0466 enables the computer to automatically stop and reverse the meter rolls for a preprogrammed time. After this time the meter rolls stop again and return to normal operation. This is extremely useful in high trash situations.

8" Flight

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

Error History Viewing

This provides a review of the shutdown history of the dryer. The last 25 shutdowns can be displayed at any time.

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.

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.



The air switch box at the bottom of the picture, is mounted on the front of the dryer, below the heater.

Auxiliary Auger IEC Contactors/ Overloads

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

Vane Axial Fans

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

Startup

A start up video is included with each dryer and should help aid in any questions that a person has when first starting a dryer.

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.

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.

Wind Buttress 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' overall width.

Ground Rod

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

Electronic Control Monitoring System

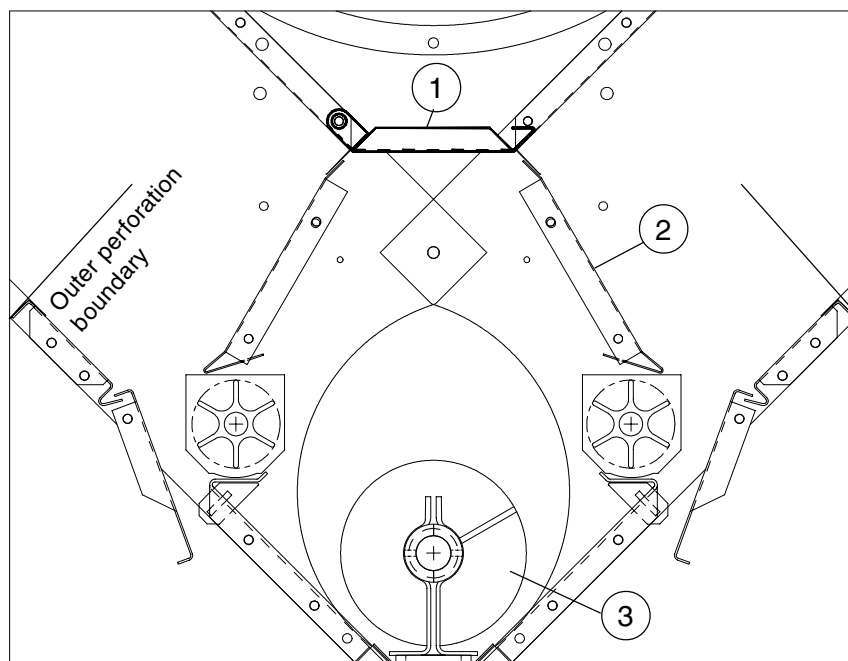
State of the art computerized control of the dryer operating functions.

Entrelec Terminals

Entrelec terminals are used for all non motor electrical connections as well as computer control circuits.

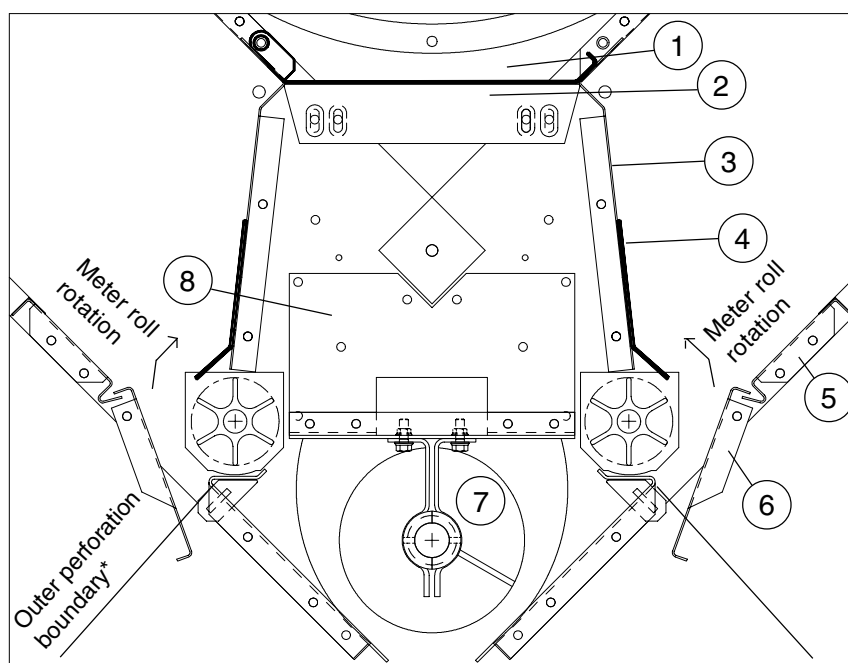


The lighted start switch indicates that the dryer is operational.



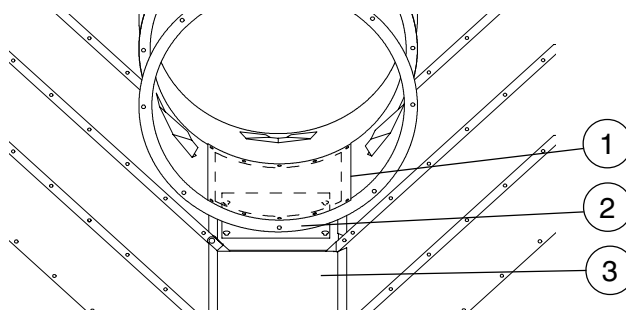
- 1-Plenum closure door
- 2-Meter roll upper shield
- 3-Bottom auger mounted from below

Figure 4: Cross section of the old style unload area.



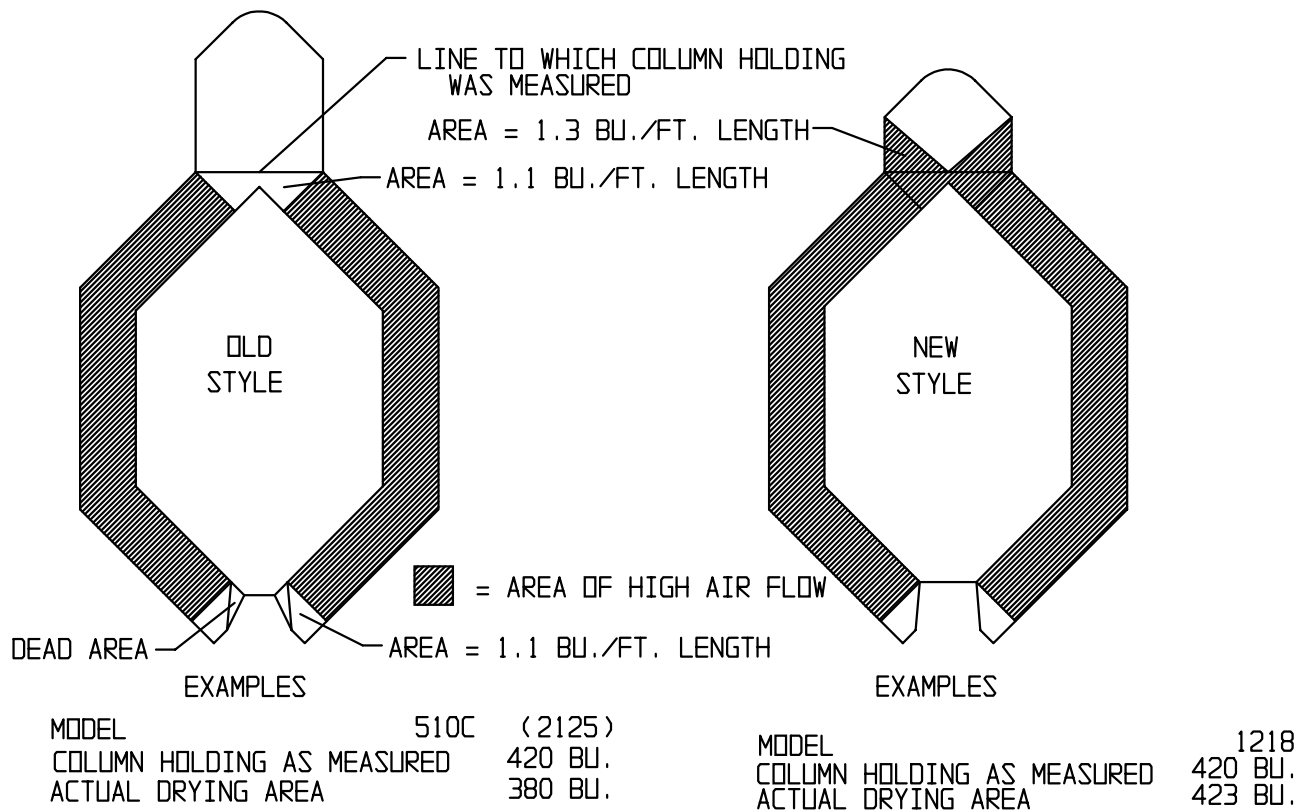
- 1-Plenum closure door
- 2-Adjustable sealing/support angle
- 3-Meter roll upper shield
- 4-Meter roll strike off plate
- 5-Perforated connector sheet*
- 6-Perforated access door*
- 7-Bottom auger mounted from above
- 8-Hanger bearing mounting assembly
- (*2 fan modules only)

Figure 5: Cross section of the new style unload area.



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

Figure 6: Access to unload area through the airmixer.



COMPETITIVE COLUMN COMPARISON

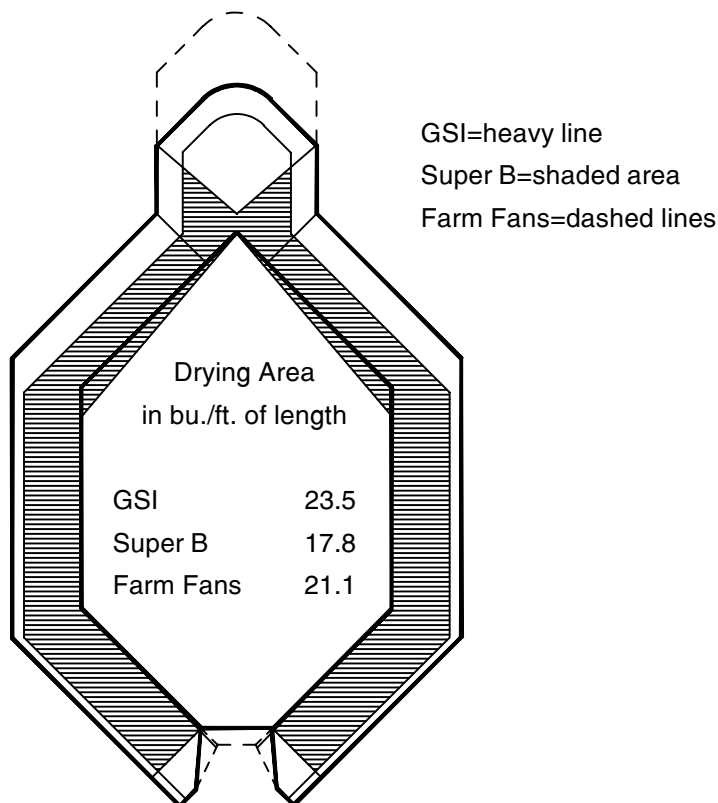


Figure 7: The grain column comparison shows GSI's new design, compared to the previous version and competitor's designs.

Farm Fans

GSI versus Farm Fans Dryer Pricing

Model GSI	Column Holding	List GSI	List Farm Fans	Column Holding	Model Farm Fans
160AB	120	17,850.	_____	120	AB-120A
210AB	160	21,525.	_____	180	AB-180A
300AB	235	26,040.	_____	250	AB-250A
415AB	329	38,745.	_____	350	AB-350A
600AB	470	51,135.	_____	500	AB-500A
108	160	22,575.	_____	150	CF/AB-150
110	200	25,935.	_____	190	CF/AB-190
112	282	32,235.	_____	270	CF/AB-270
114	329	41,370.	_____	320	CF/AB-320
1214S	329	56,805.	_____ (1 2)	320	CF/SA-320
1214	329	49,875.	_____ (3)	320	C-2120A
118	423	50,295.	_____ (1)	420	CF/AB-400
1218	423	57,435.	_____	420	C-2125A
1218S	423	65,520.	_____ (1 2)	420	CF/SA-410
120	470	54,600.	_____ (1)	460	CF/AB-460
1220	470	63,840.	_____	460	C-2130A
1220S	470	72,765.	_____	460	CF & CMS-500H
122	506	58,380.	_____ (1)	506	CF/AB-510
126	611	65,415.	_____ (1)	598	CF/AB-600
1226	611	77,280.	_____	598	C-2140A
1226S	611	88,095.	_____	598	CF & CMS-650M
2314	679	87,465.	_____	735	CF-750H
2318	873	106,680.	_____	850	CF-850H
2320	970	112,560.	_____	940	CF & CMS-1000H
2420	970	120,015.	_____		
2326	1261	133,245.	_____	1254	CF-1300M
2426	1261	150,990.	_____		
3420	1460	151,935.	_____	1380	CF & CMS-1500H
3620	1460	166,320.	_____		
3426	1898	180,600.	_____	1894	CF-2000M
3626	1898	207,375.	_____		
1220	470	63,840.	_____	460	C-2130B
1226	611	77,280.	_____	600	C-2140B
2314	679	87,465. (4)	_____	781	C-2160B
2318	873	106,680. (4)	_____	781	C-2175B
2320	970	112,560. (4)	_____	873	C-21100B
		(4)			
		(4)			

Prices as of 1/1/96, 1 phase, where available LP gas.

The following are variations to make comparisons as equal as possible and are as accurate as our information allows.

Focus 1, and Focus 2 are no longer listed in the Farm Fans Price List. Why is unknown.

- (1) No preheating wet bin losing 10-15% of effective holding area.
- (2) Have 50/50 column split. Our S models are heavier, have a perforated wet bin, and are stackable.
- (3) Low speed lower fan not available on this model.
- (4) Add noise suppressor kit if quietness is an issue.

Note: All information subject to change without notice.

Standard On GSI

1. **GSI Competitor Series 2000 Control System on single fans, GSI Electronic Monitoring Control System (EMCS) on multi fan dryers** (true automation, dependable, self-diagnosing, accurate and easy to use).
2. **New** grain inverters on stacks option. (Highest grain quality and efficiency possible).
3. **New.** All IEC controls in electrical system. (More durable, meets more codes).
4. **New** air straighteners (Enhances heat mix and burner).
5. **New** powder coat in place of paint. (Much longer life).
6. Adjustable metering roll gates, with **grain bypass** (minimizes column plugging, perfect for trashy conditions, quick grain bypass).
7. Positive pressure cooling (no vacuum, better grain quality - less internal dirt).
8. 60 minute plus drying retention time (better grain quality - less stress cracks).
9. **Effective** all heat operation **on all models** (flexible & high capacity) - with no column width changes.
10. Multiple heat chambers on multi-fan models (better grain quality & max. capacity).
11. Heat mixing ducts all chambers (much better heat mix in long dryers).
12. All fans use a composite blade design - standard (efficient, more air, easier on motors).
13. Low speed 1750 RPM fan blade (low noise, less vibration).
14. On EMCS models proven Fenwal solid state electronic ignition system (dependable, safe, longer life).
15. **Full-size**, see-through control panel door (convenient & cleaner).
16. **Large see-through burner access door** (much easier service).
17. Galvanized fan housings, control cabinet & auger housings (much longer life).
18. Self monitoring start cycle (convenient, more productive).
19. Column temperature limit **both columns** (safer)..
20. Metering roll external total clean out doors (**complete cleaning**, service access).
21. Solid dividers each two foot (stronger, convenient).
22. 4 point (two in each column) electronic moisture control (precision control, any conditions).
23. Gas train oil trap - **not drip leg** (optional) (minimizes oil in gas train).
24. Easily extended unload auger (standard sizes, less expensive) available from several sources.
25. Main **safety** disconnect - standard (easier to wire, safe).
26. Batch & multistage controls - standard (operates in any system).
27. **New** DMC sensor ready discharge option. (Ready for optional DMC Moisture Control).
28. IEC Load & unload auxiliary starters - **standard** (easier to wire, less cost).
29. Stackable Series-All Airstream dryers with EMCS (future expansion, more flexible).
30. Remote location of dryer controls is optional; customer provides wire (convenient, productive, flexible).
31. Maxon gas valve (except 1 fan LP models) (only valve recognized by some insurance co.).
32. Ladder at front and back-multi fan models only (safer, more convenient).
33. "Watchdog" available for all Airstream models (additional equipment required).

Super B

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Available only on SD Series with optional batch timer kit

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1750 RPM fan blade optional on SD Series

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Except SD Series

?

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Available only from Super B

Optional

Optional on SD models only
Not available on Quantum

?

Optional at extra cost

?

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?

GSI versus Super B Dryer Pricing

Model GSI	Column Holding	List GSI	List Super B	Column Holding	Model Super B
600AB	470	51,135.	_____ (1)	400	ABS-1000Q
Super B has discontinued all batch dryers.					
108	160	23,184.	_____ (1 6)	134	SD185VQ
110	200	26,670.	_____ (1 6)	210	SD250VQ
112	282	33,311.	_____	187	SE250VQ
114	329	42,620.	_____ (1 6)	251	SD375VQ
1214	329	49,875.	_____ (2 3 4 5)	250	SE375V
120	470	54,600.	_____ (6)	335	SD500VQ
1220	470	63,840.	_____ (2 3 4 5)	313	SE500V
1220	470	63,840.	_____ (2 3 4 5)	250	SE500C
122	517	58,380.	_____ (6)	402	SD750C
1222	517	70,560.	_____ (2 3 4 5)	313	SE625C
1226	611	77,280.	_____ (2 3 4 5)	375	SE750C
2318	873	106,680.	_____ (2 3 4 5)	500	SE1000C
2220	970	108,150.	_____ (6)	535	SD1000C
2320	970	112,560.	_____ (2 3 4 5)	595	SE1200C
2222	1067	114,870.	_____ (6)	635	SD1200C
2318	873	106,680.	_____ (2 3 4 5)	?	MYER 1000C
2318	873	106,680.	_____ (2 3 4 5)	?	1200C
2322	1067	119,385.	_____ (2 3 4 5)	?	1400C
3418	1314	139,860.	_____ (2 3 4 5)	?	1500C
3422	1606	160,755.	_____ (2 3 4 5)	?	1800C
3422	1606	160,755.	_____ (2 3 4 5)	?	2000C

Prices as of 12/1/95, 1 phase, where available LP gas.

The following are variations to make comparisons as equal as possible and are as accurate as our information allows.

- (1) GSI models should be priced with wet bin option for accurate comparison.
- (2) Vacuum cool meaning higher H. P. requirements, but some heat recovery.
- (3) GSI model may be priced with optional heat recovery system, if an issue.
- (4) Moisture equalizers are available at \$100. list per foot. This relieves some of their grain damage from high airflow.
- (5) PLC panel (programmable logic controller is available for \$6,300. list as an option).
- (6) Add \$1,000. list for batch timer kit to allow operation as batch dryer.
- (7) Stainless outer skin now available for \$170. per foot of basket length.
- (8) For 1996 gravity fill is available for all models.
- (9) Batch dryers have been discontinued except for the model AS-1000 as long as 6 last.
- (10) Burner cycling timer now available for \$300. list on all models to help make up for uneven heat.
- (11) A (C) after the model number designates a centrifugal fan. Use our noise suppressor kit if noise is an issue.

Note: All information subject to change without notice.

Standard On GSI

1. **GSI Competitor Series 2000 Control System on single fans, GSI Electronic Monitoring Control System (EMCS) on multi fan dryers** (true automation, dependable, self-diagnosing, accurate and easy to use).
2. **New** grain inverters on stacks option. (Highest grain quality and efficiency possible).
3. **New.** All IEC controls in electrical system. (More durable, meets more codes).
4. **New** heat mix chamber and air straighteners.
5. **New** powder coating inplace of painting. (much longer life).
6. Low profile wet holding bin 14' 6" (lower height, fits more installations) (optional on 8'-14' Series 2000 dryers). **New design!**
7. Standard perforated wet bin - sides & top (more grain in process better productivity) (optional on 8'-14' Series 2000 dryers). **New design!**
8. Adjustable metering roll gates, with **grain bypass** (minimizes column plugging, perfect for trashy conditions, quick grain bypass).
9. Batch & multistage controls on all models (operates in any system).
10. Externally adjustable vaporizers (simple, adjust on the go).
11. IEC load & unload auxiliary starters are standard (easier to wire, no extra cost).
12. Weatherproof, shielded controls - **double sealed** (cleaner, longer life, more dependable).
13. All fans use a composite blade design (lower noise, more efficient, more air, easier on motors).
14. **Solid** dividers every two feet (stronger, eliminates trash accumulation on straps).
15. Metering roll external total clean out doors on all models (complete cleaning, service access).
16. Galvanized fan housings, control cabinet & auger housings (much longer life).
17. Full-size, see-through control panel door (convenient & cleaner).
18. Large see-through burner access door (much easier service).
19. Self monitoring start cycle (convenient, more productive).
20. 4 point (two in each column) temperature electronic moisture control (precision control, any conditions).
21. Main **safety** disconnect (easier to wire, no extra cost).
22. Column temperature limit both columns (safer).
23. New! Gas train oil trap - not drip leg (optional) (minimizes oil in gas train).
24. Heavy duty SCR metering roll drive (RC 40 chain, 3/4 HP motor & gear box) on 14' & longer.
25. Easily extended unload auger (use standard size).
26. 440 volt kit (optional at no charge).
27. DMC sensor ready discharge option. (Ready for optional DMC Moisture Control).
28. Electronic grain and plenum temperature read out on all models (allows easy monitoring).
29. Electronic grain and plenum temperature set points can be changed from control panel (all models).
30. Stackable Series-All GSI dryers with EMCS (future expansion, more flexible).
31. Remote location of dryer controls is optional customer provides wire (convenient, productive, flexible).
32. Maxon gas valve (except 1 fan LP models) (only valve recognized by some insurance co.).
33. Ladder at front and back-multi fan models only (safer, more convenient).
34. "Watchdog" available for all Airsream models (additional equipment required).

Mathews Co.

- | |
|--|
| ? |
| ? |
| ? |
| ? |
| ? |
| ? |
| ? |
| ? |
| ? |
| ? |
| One model weatherproof, none double sealed |
| ? |
| ? |
| ? |
| ? |
| ? |
| ? |
| ? |
| ? |
| ? |
| ? |
| ? |
| (1/3 HP motor, 1/4 HP gear box) |
| Opt. special order 2' |
| Optional extra charge |
| ? |
| ? |
| ? |
| Some models |
| ? |
| Optional with fire alarm system |
| No ladders on single module dryers |
| ? |

GSI versus MC Dryer Pricing

Model GSI	Column Holding	List GSI	List MC	Column Holding	Model MC
108	160	22,575.	_____	157	370EMS
112	282	32,235.	_____	313	690EMS
112	282	32,235.	_____	313	690EM
112	282	32,235.	_____ *	313	690C
	No comparable model			313	570EMS
1214	329	49,875.	_____	313	670EMS
1218	423	57,435.	_____ *	313	675EM
1218	423	57,435.	_____ *	413	680EM
120	470	54,600.	_____ *	413	970C
1220	470	63,840.	_____	470	970EMS
1220	470	63,840.	_____	470	970EM
1226	611	77,280.	_____ *	620	975EM
1226	611	77,280.	_____ *	620	980EM
2318	873	106,680.	_____ *	812	1075EM
2318	873	106,680.	_____ *	812	985EM
2320	970	112,560.	_____ *	927	1080EM
2420	970	120,015.	_____ *	927	1175EM
2326	1261	133,245.	_____ *	1234	1180EM
2326	1261	133,245.	_____ *	1234	1195EM
3422	1606	160,755.	_____ *	1541	2675EM
3426	1898	180,600.	_____ *	1848	3175EM

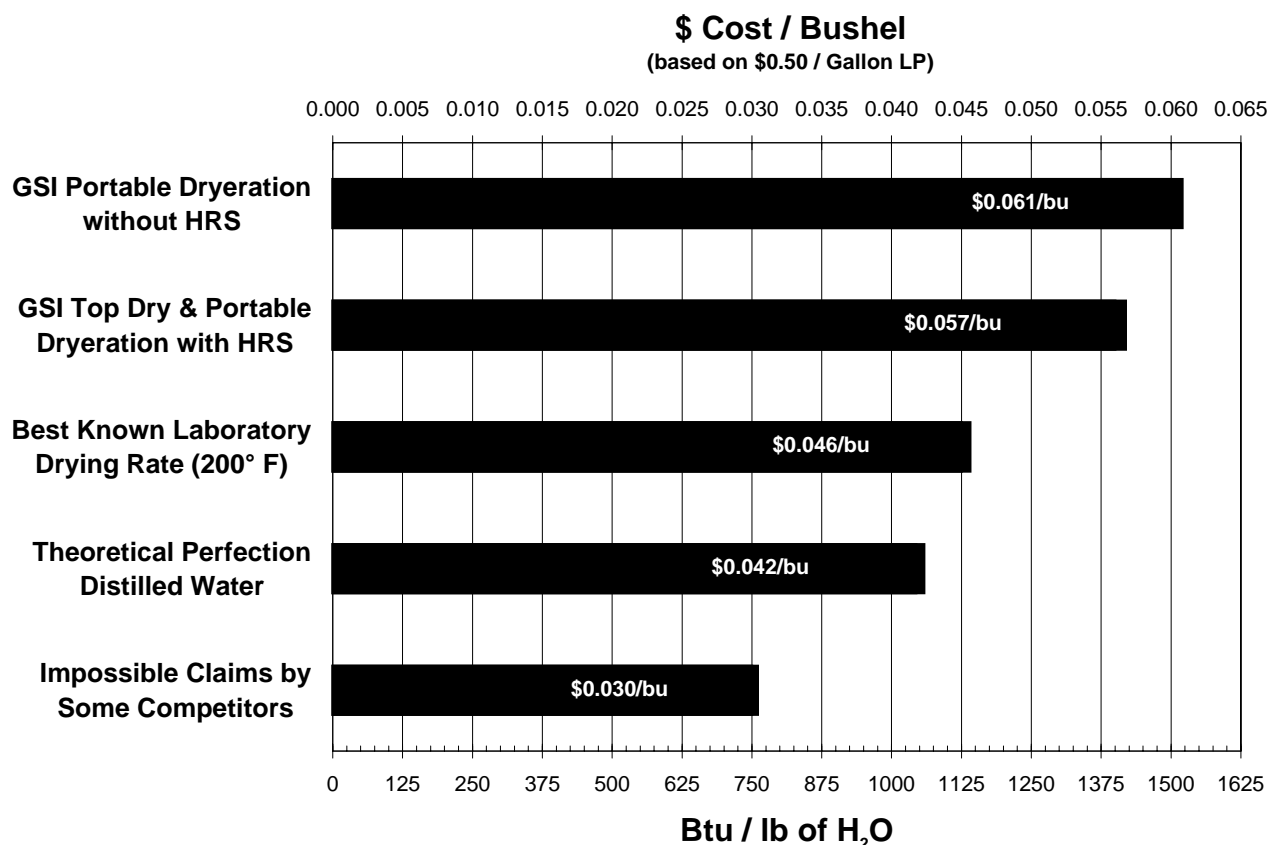
Prices as of 12/1/95, 1 phase, where available LP gas.

The following are variations to make comparisons as equal as possible and are as accurate as our information allows.

* Denotes where MC uses centrifugal fans. Use our noise suppressor kit if noise is an issue.

- (1) All MC dryers now have the lower chamber burner standard.
- (2) New in 1996 - all MC dryers now have stainless steel feed roll pans.
- (3) It is reported that all MC dryers now have slide gate access to the metering rolls from the inside, but do not have true total cleanout doors.
- (4) Note that the majority of MC dryers are now sold direct at 5% over cost.

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.

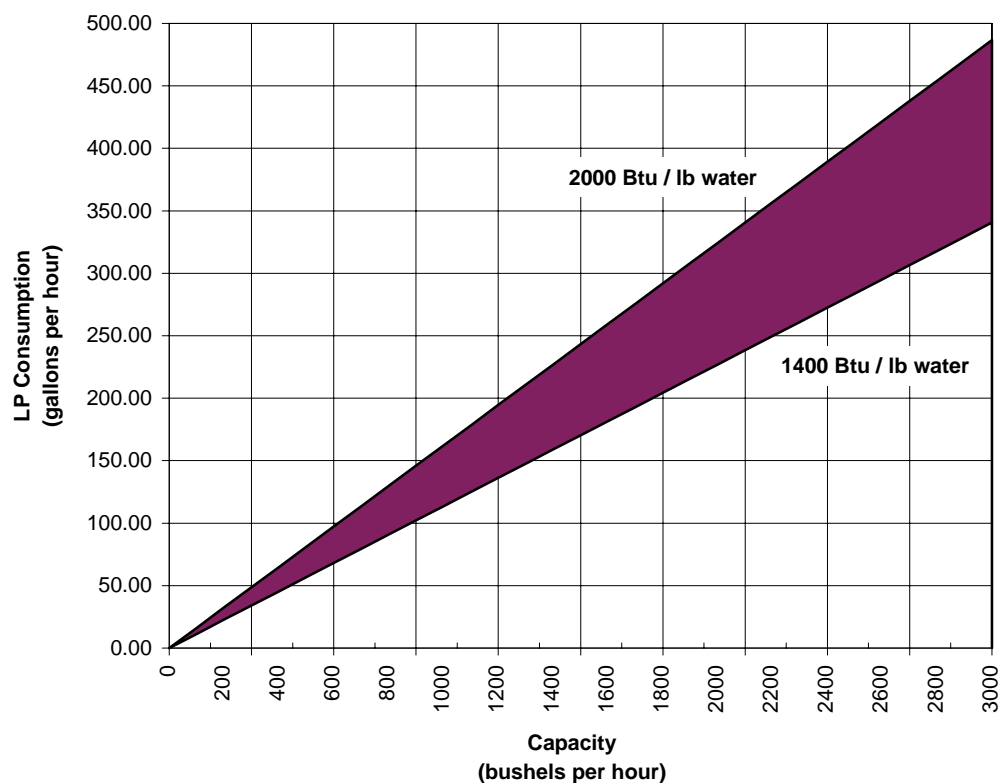
1044 Btu are required to evaporate one pound of free water at 100% efficiency.

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



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.**

Operating in the Dry and Cool Mode

	BATCH minutes	STAGED BATCH minutes	CONTINUOUS minutes
5pt. removal			
FILL	15	-	-
HEAT	35	35	35
COOL	20	15	17.5
UNLOAD	12	15	-
TOTAL TIME	82 min.	65 min.	52.5 min.
10 pt. removal			
FILL	15	-	-
HEAT	60	60	60
COOL	20	15	30
UNLOAD	12	15	-
TOTAL TIME	107 min.	90 min.	90 min.
15 pt. removal			
FILL	15	-	-
HEAT	90	90	90
COOL	20	15	45
UNLOAD	12	15	-
TOTAL TIME	137 min.	120 min.	135 min.
OVERALL TOTAL	326 min.	275 min.	275 min.

CAPACITIES ESTIMATED FROM ABOVE INFORMATION

(To illustrate principle, no adjustments made for airflow differences or drying occurring in wet bin holding area.)

	BATCH		STAGED BATCH		CONTINUOUS	
CAPACITIES	329 BU.		329 BU.		329 BU.	
DRY & COOL	Wet	Dry	Wet	Dry	Wet	Dry
5 point rem.	258	241	+326	305	+365	341
10 point rem.	207	185	+245	219	+245	219
15 point rem.	171	145	+195	165	+172	146

+ Allows no value for grain preheated in wet holding bin.

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 out back of 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 moistures in the bin. The first morning after starting, take a cooled sample from the bin and test



A single fan all heat dryer.

it. The grain will be within .2% to .5% of final moisture at this time. Check again 24 and 48 hours later. Always use this test to decide what moisture setting is correct.

If test is too wet, turn moisture control up (higher temp.). If test is too dry, turn MOISTURE CONTROL down (lower temp.). Each small mark on face of the MOISTURE CONTROL dial is approximately ONE POINT of moisture. In other words, if you want 15% and your test mark was 14% turn MOISTURE CONTROL down one small mark, and retest the next morning.

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 the first year, and will alter your settings the second year.

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

The dryer is available with an optional transport kit for transporting the unit by truck or tractor. Make certain to observe the following safety precautions.

1. Recommended towing hitch height 14-17 inches. (Figure 1)
2. Hitch bolt to be not less than 3/4 inch in diameter and securely fastened with a locking nut, so it will not come out in travel and hitch will not bend. (Figure 2)
3. Minimize vertical hitch play with washers. (Figure 2)
4. Use safety chain. (Figure 1)
5. Dryer must be towed empty and in accordance with applicable state or provincial regulations. Dryer must never be towed with grain or other material in it.
6. Recommended tire pressures 55-60 P. S. I. (cold)
7. Maximum towing speed is 45 miles per hour or speed limit, which ever is lower.
8. After the first 50 miles and every 200 miles thereafter:
 - a. Check dryer wheel hub and spindle temperature immediately after stopping. Temperature should not exceed 150° F. It may be hot to touch, but not melting lubricant.
 - b. Check wheel lug nuts. They are factory torqued at 115 to 120 ft. lbs. Retighten, if required.

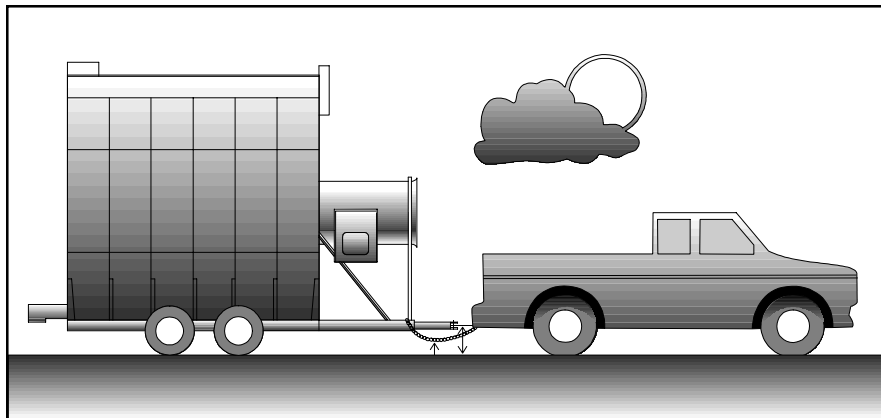


Figure 8: Use a 14-17 inch towing hitch height and a safety chain.

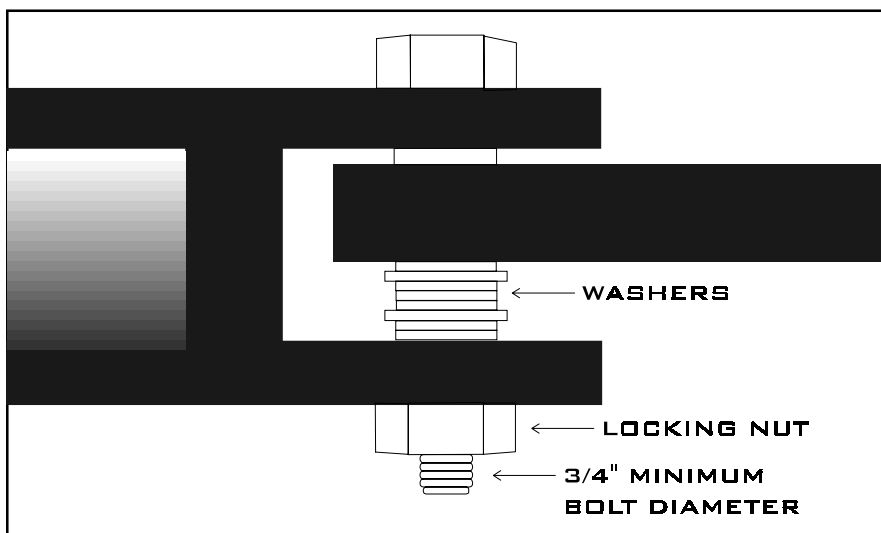


Figure 9: A 3/4 inch hitch bolt and washers fastened with a locking nut at the bottom of the hitch.

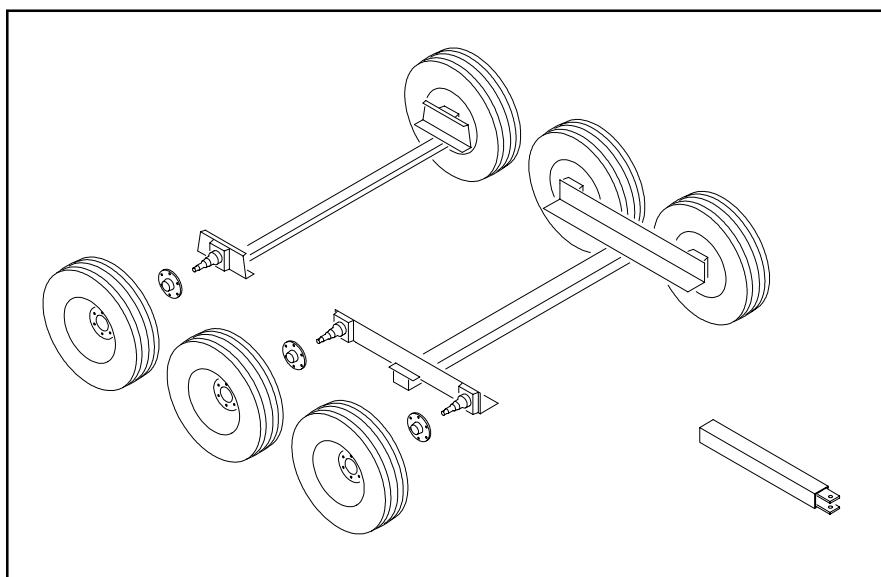
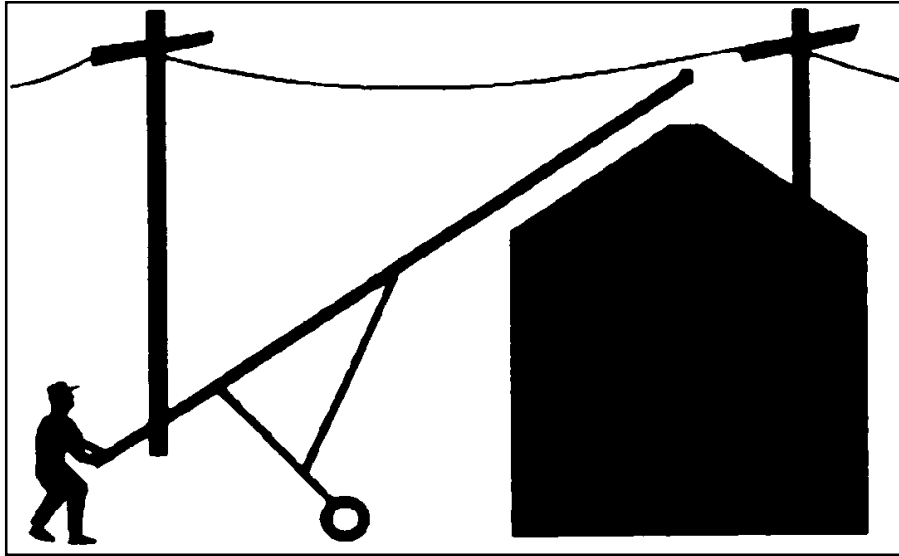


Figure 10: The grain dryer transport kit.



Do not maneuver augers in a raised position.

Location Of The Dryer

When considering the exact location of the dryer, keep in mind the wet grain supply and dry grain discharge, also the location of storage bins and other grain handling equipment. Do not install the dryer inside a building or any other area where electrical codes, fuel installation regulations and/or insurance requirements do not allow. Maintain a minimum distance of at least three feet from other structures, or air flow problems may occur. See page 13. Do not operate in an area where combustible materials can be drawn into the fans, or where load and unload augers can come in contact with power lines.

Foundation

A reinforced concrete pad or similar permanent foundation is recommended for dryer stability. See pages 14 and 15 for details.

Supporting The Dryer

The wheels are for transporting the empty dryer only. Before loading any grain into the dryer, it is necessary to support the frame of the unit on each side. Support the frame with concrete blocks every six feet on each side plus at the hitch mount location with the hitch removed. The blocks must support the dryer plus the weight of grain when full. Use shims to provide uniform, level support. The dryer should be at least 16 inches off the pad to allow for clean out and the use of auxiliary grain handling equipment. The hitch tongue

should be removed, but the hitch assembly and the fan support must be left on during operation; they are not part of the transport tie down assembly.

Supporting The Dryer With The Optional Steel Support Legs

Anchor points may be cast into the concrete slab, or the dryer may be tied down by cable and turn-buckle to anchors installed at the edge of the slab. This is to prevent overturn or lateral movement by wind or other forces.

Wet Grain Supply

A wet grain holding bin provides gravity flow to the dryer or loading conveyor. This conveyor may be electrically connected to the power circuit provided in the main control box. At the beginning, the dryer will completely fill. During drying, the top auger will start and stop as required depending upon the dry grain discharge rate, and grain shrinkage to maintain the dryer fill. If the dryer does not fill within the time that you preset on the out of grain timer (see owners manual), the dryer will shut down.

Dry Grain Removal

The dry grain is normally discharged out of the rear end of the dryer. Front discharge is an optional feature. A take away system needs to be provided to remove grain from the drying system. This conveyor may be electrically connected to the power circuit provided in the main control box.

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.
- Aspirators can be installed in a few hours.

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)
2012	6	6	2	8.00	2.00	1.00	11.00	4.00
2014	6	6	4	9.00	2.00	1.25	12.25	4.00
2018	8	8	4	11.00	2.00	1.50	14.50	4.00
2020	10	10	2	13.00	2.00	1.75	16.75	4.00
2022	10	10	4	14.00	2.00	2.00	18.00	4.00
2026	12	12	2	16.00	2.00	2.50	20.50	4.00
3012	6	6	2	11.00	4.00	1.00	16.00	6.00
3014	6	6	4	12.00	4.00	1.25	17.25	6.00
3018	8	8	4	15.00	4.00	1.50	20.50	6.00
3020	10	10	2	18.00	4.00	1.75	23.75	6.00
3022	10	10	4	19.00	4.00	2.00	25.00	6.00
3026	12	12	2	22.00	4.00	2.50	28.50	6.00

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

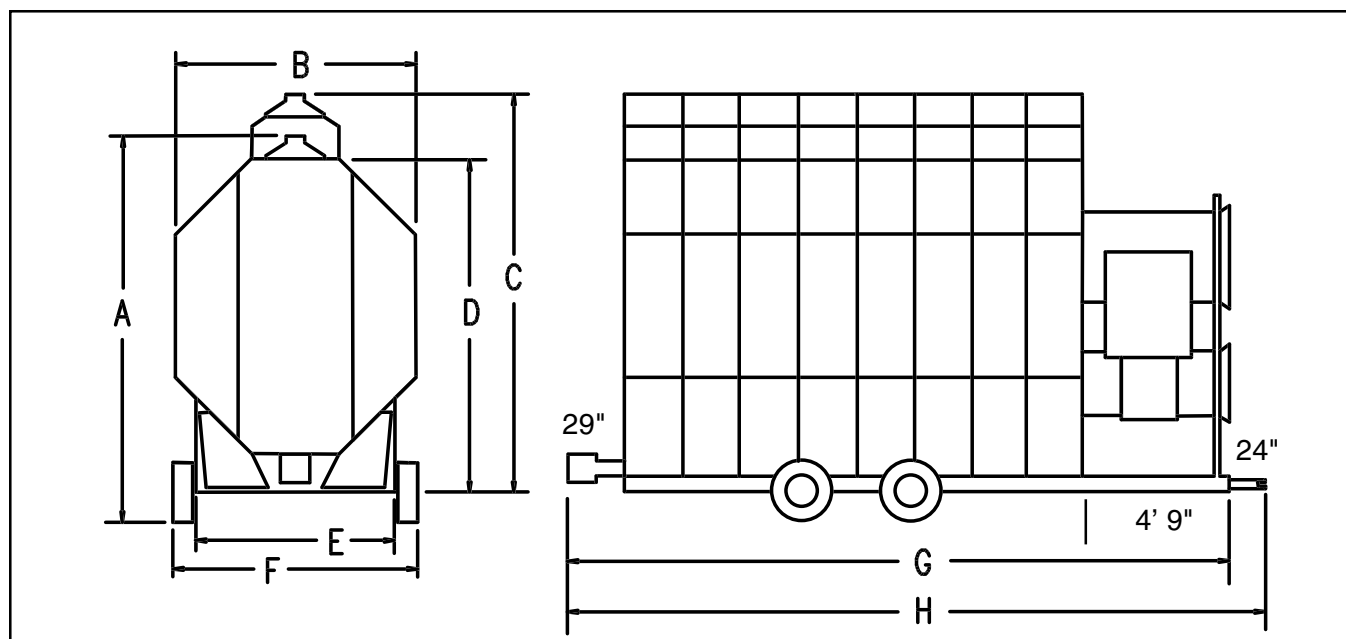


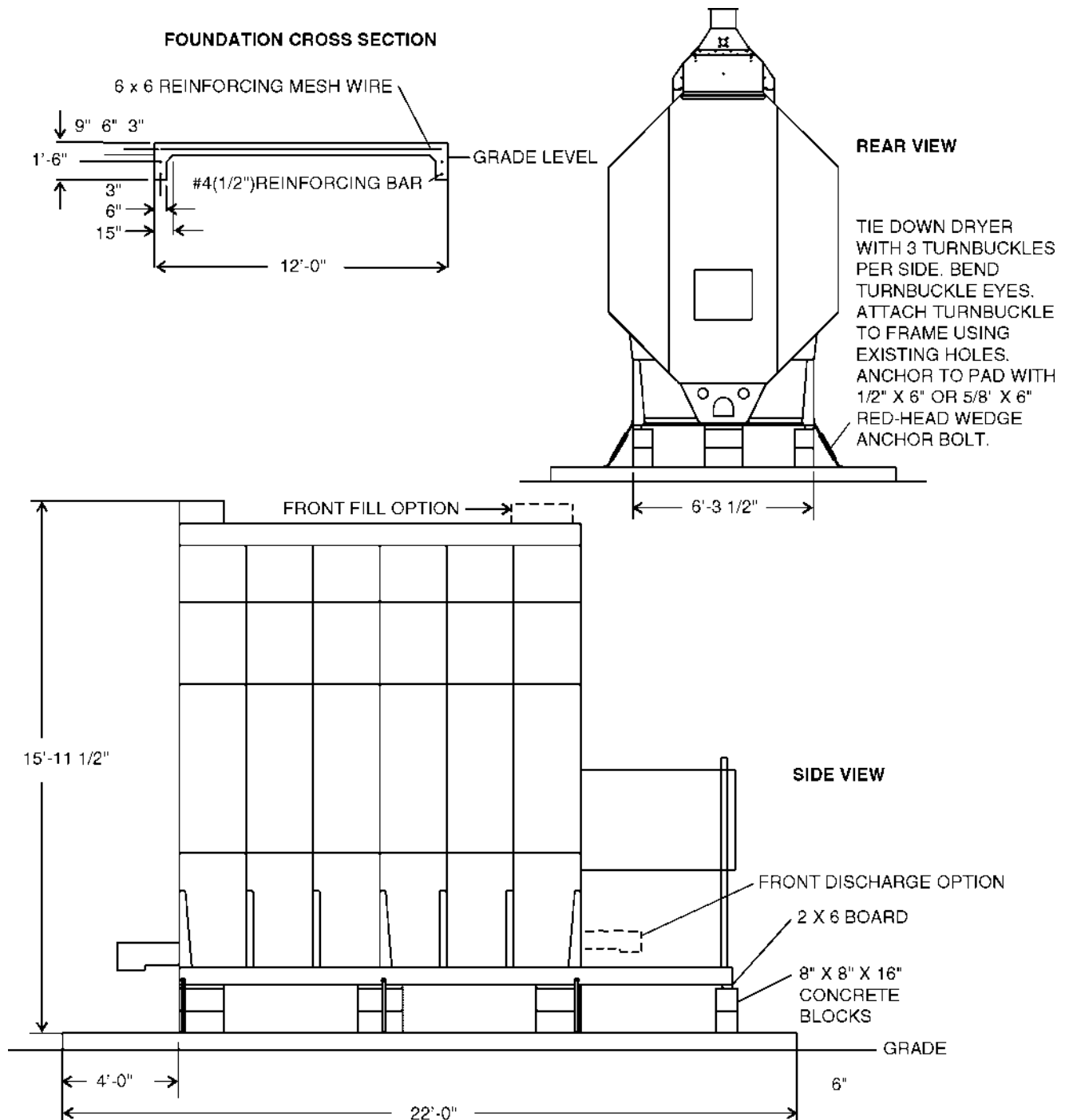
Figure 11: Diagram of dryer dimensions.

Single Module Transport and Installation Dimensions

Values are valid for transportation of stack modules.

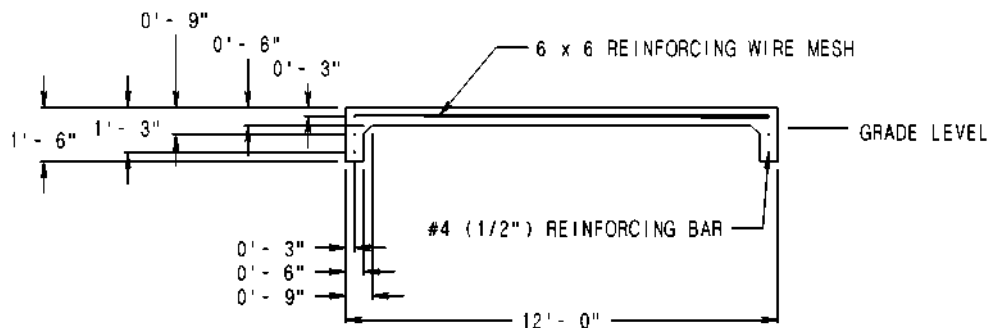
Dryer Basket	A Transport Height	B Installed Width	C		D Height w/o Wet Bin	E Frame Width	F Transport Width	G Installed Length	H Transport Length
			Installed Height Wet Bin	Standard Top					
8 ft.	11' 11"	8'	13'	11' 6"	10' 3"	6' 5"	8'	15' 2"	17' 2"
10 ft.	11' 11"	8'	13'	11' 6"	10' 3"	6' 5"	8'	17' 2"	19' 2"
12 ft.	13' 5"	8'	14' 6"	13'	11' 9"	6' 5"	8'	19' 2"	21' 2"
14 ft.	13' 5"	8'	14' 6"	13'	11' 9"	6' 5"	8'	21' 2"	23' 2"
16 ft.	13' 5"	8'	14' 6"	13'	11' 9"	6' 5"	8'	23' 2"	25' 2"
18 ft.	13' 5"	8'	14' 6"	13'	11' 9"	6' 5"	8'	25' 2"	27' 2"
20 ft.	13' 5"	8'	14' 6"	13'	11' 9"	6' 5"	8'	27' 2"	29' 2"
22 ft.	13' 5"	8'	14' 6"	13'	11' 9"	6' 5"	8'	29' 2"	31' 2"
26 ft.	13' 5"	8'	14' 6"	13'	11' 9"	6' 5"	8'	33' 2"	35' 2"
1214S	13' 5"	8' 8"	14' 6"	13'	11' 9"	6' 5"	8'	21' 2"	23' 2"
1218S	13' 5"	8' 8"	14' 6"	13'	11' 9"	6' 5"	8'	25' 2"	27' 2"
1220S	13' 5"	8' 8"	14' 6"	13'	11' 9"	6' 5"	8'	27' 2"	29' 2"
1222S	13' 5"	8' 8"	14' 6"	13'	11' 9"	6' 5"	8'	29' 2"	31' 2"
1226S	13' 5"	8' 8"	14' 6"	13'	11' 9"	6' 5"	8'	33' 2"	35' 2"
160AB	11' 11"	8'	N/A	11' 6"	10' 3"	6' 5"	8'	13' 2"	15' 2"
210AB	11' 11"	8'	N/A	11' 6"	10' 3"	6' 5"	8'	15' 2"	17' 2"
300AB	13' 5"	8'	N/A	13'	11' 9"	6' 5"	8'	17' 2"	19' 2"
375AB	13' 5"	8'	N/A	13'	11' 9"	6' 5"	8'	19' 2"	21' 2"
400AB	13' 5"	8'	N/A	13'	11' 9"	6' 5"	8'	21' 2"	23' 2"
415AB	13' 5"	8'	N/A	13'	11' 9"	6' 5"	8'	21' 2"	23' 2"
600AB	13' 5"	8'	N/A	13'	11' 9"	6' 5"	8'	27' 2"	29' 2"

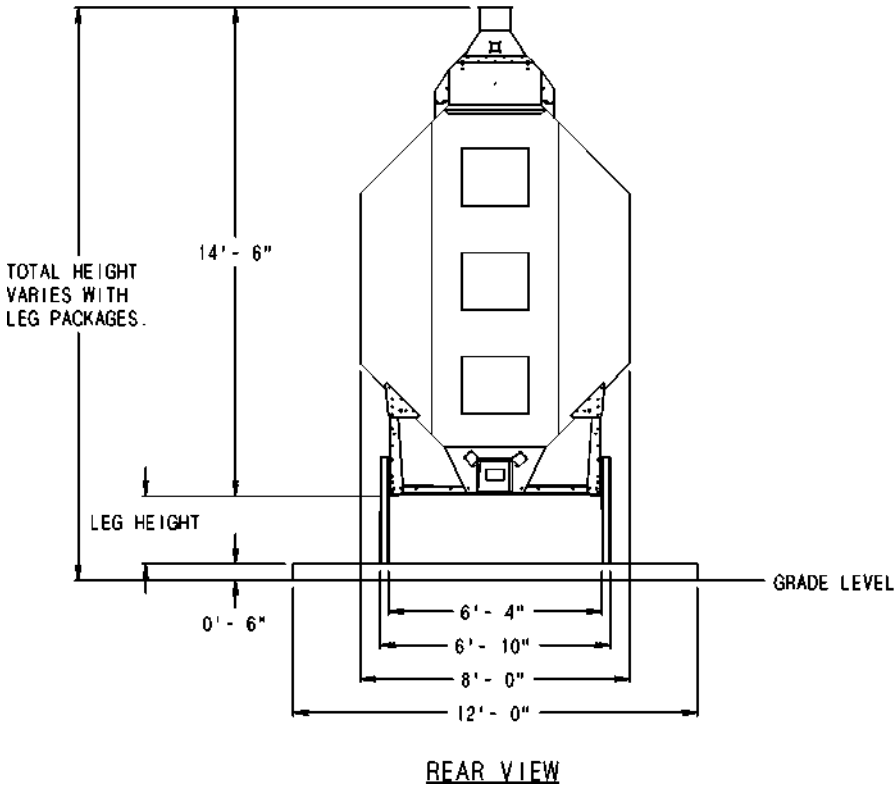
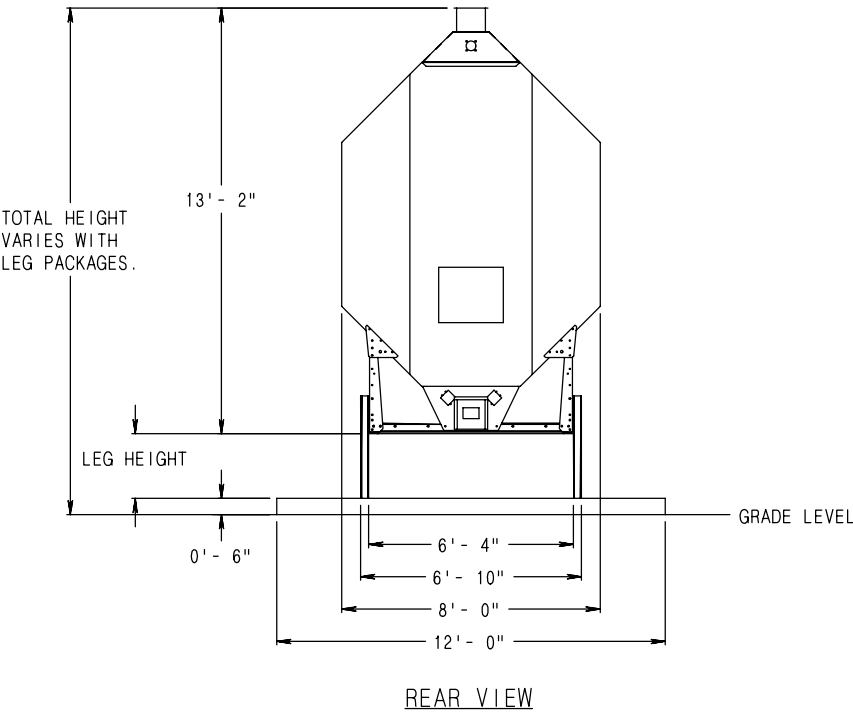
Dimensions For Concrete Block Supports



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
Turnbuckles	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.

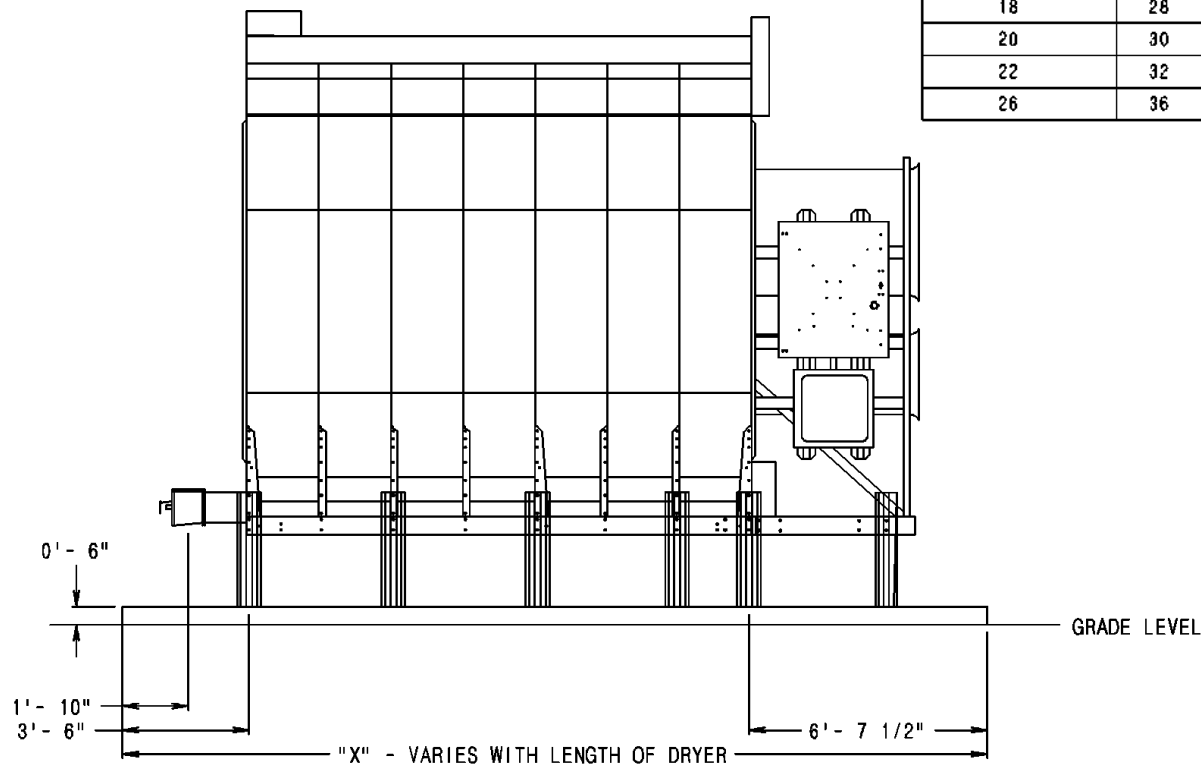




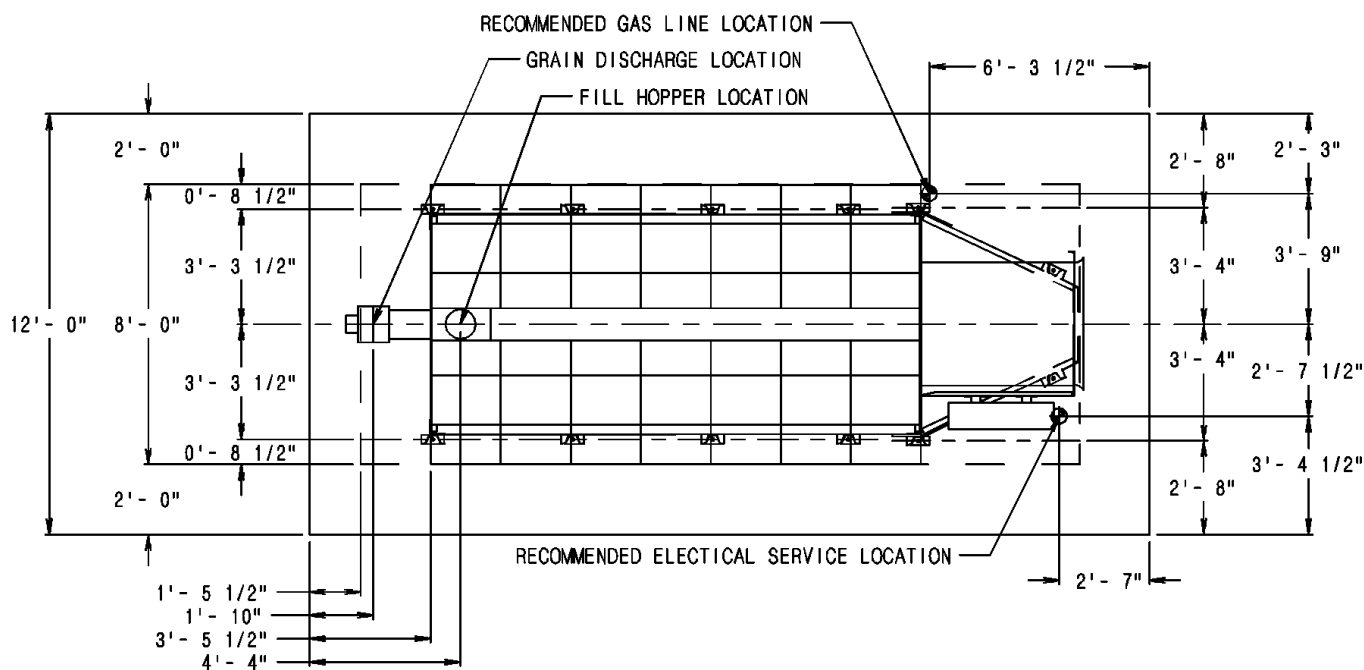
NOTE: INSTALLATION OF THE LEG STANDS SHOULD START AT THE BACK COLUMN LEG OF THE DRYER AND CONTINUE ON EVERY OTHER COLUMN LEG TOWARDS THE FRONT.

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

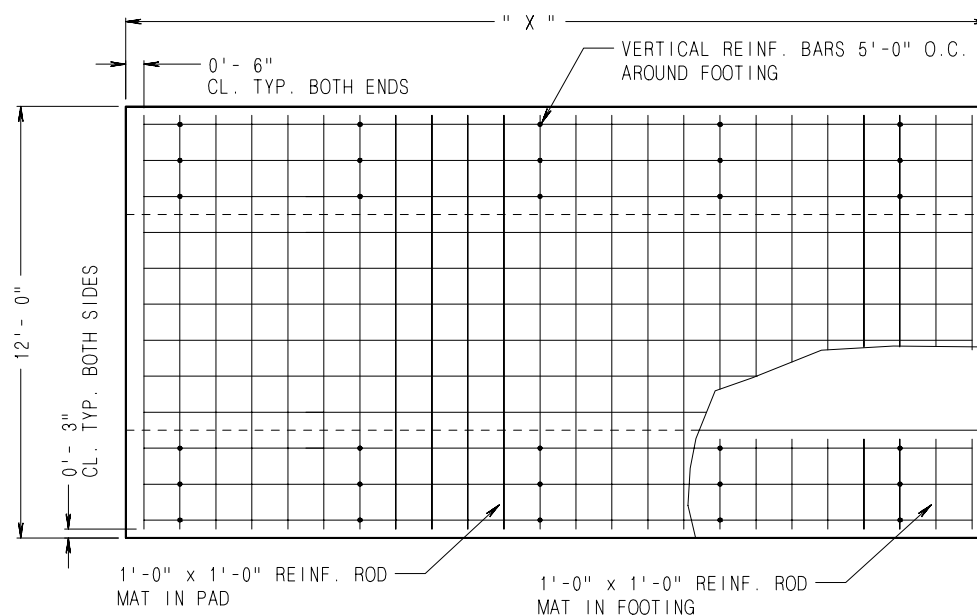
BASKET LENGTH	X (FEET)
08	18
10	20
12	22
14	24
16	26
18	28
20	30
22	32
26	36



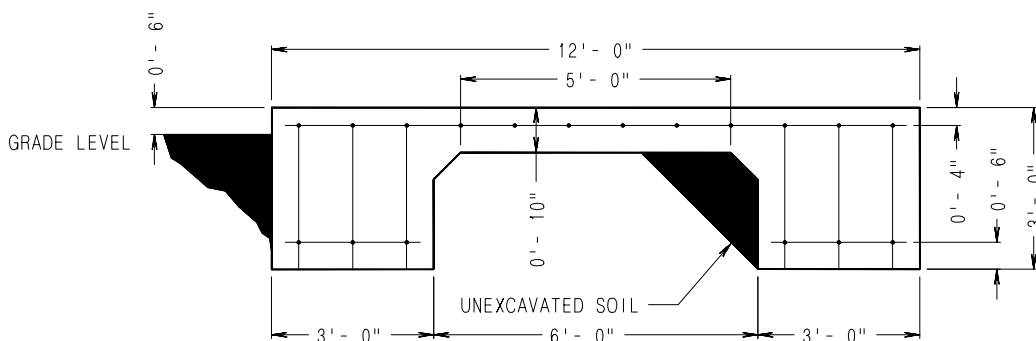
SIDE VIEW



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

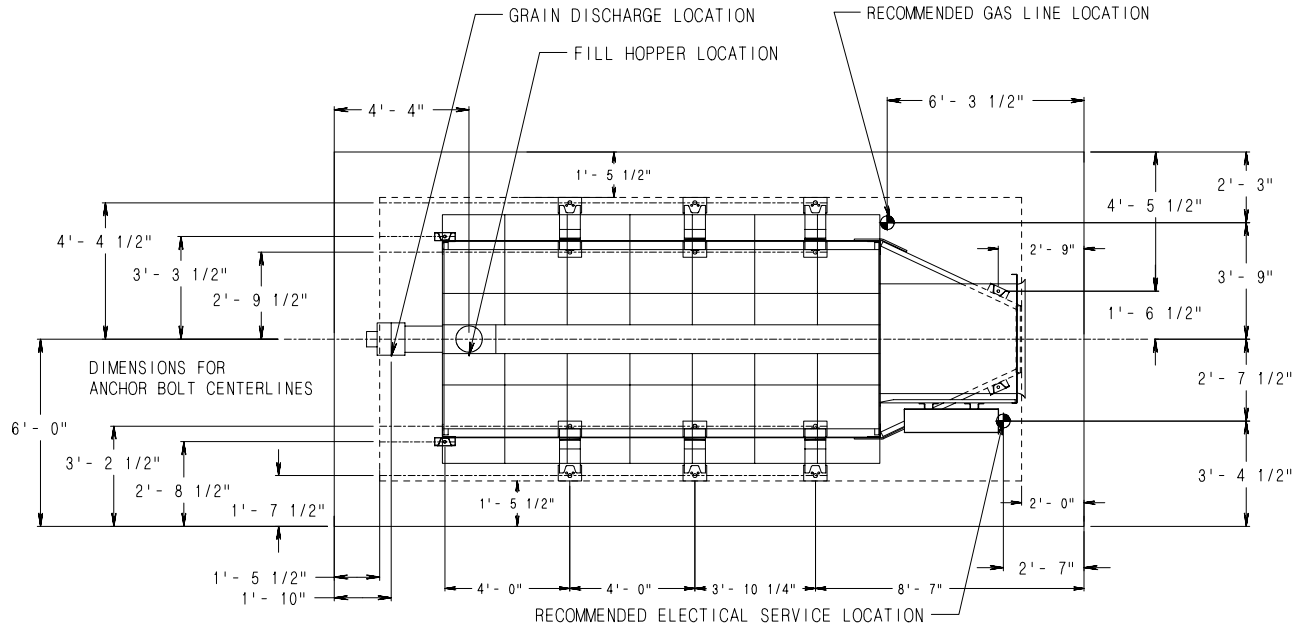
¹ 10" depth with 36" wide x 36" deep footings along each side

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

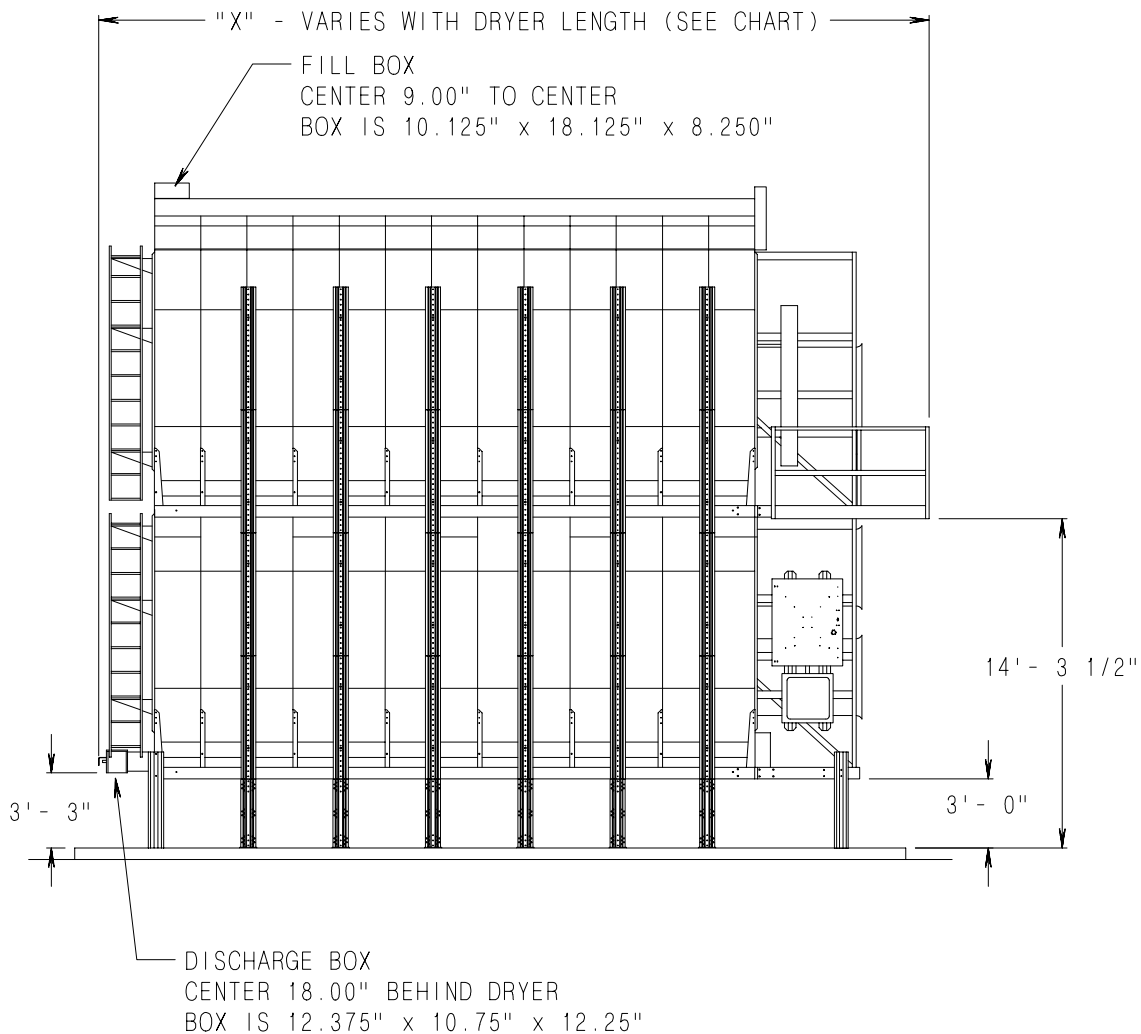
³ Use 3/4" x 9 5/8" minimum anchors with epoxy. GSI part numbers: anchor (GTC-0003) epoxy (GTC-0004)

Minimum soil bearing capacity = 2000 PSF

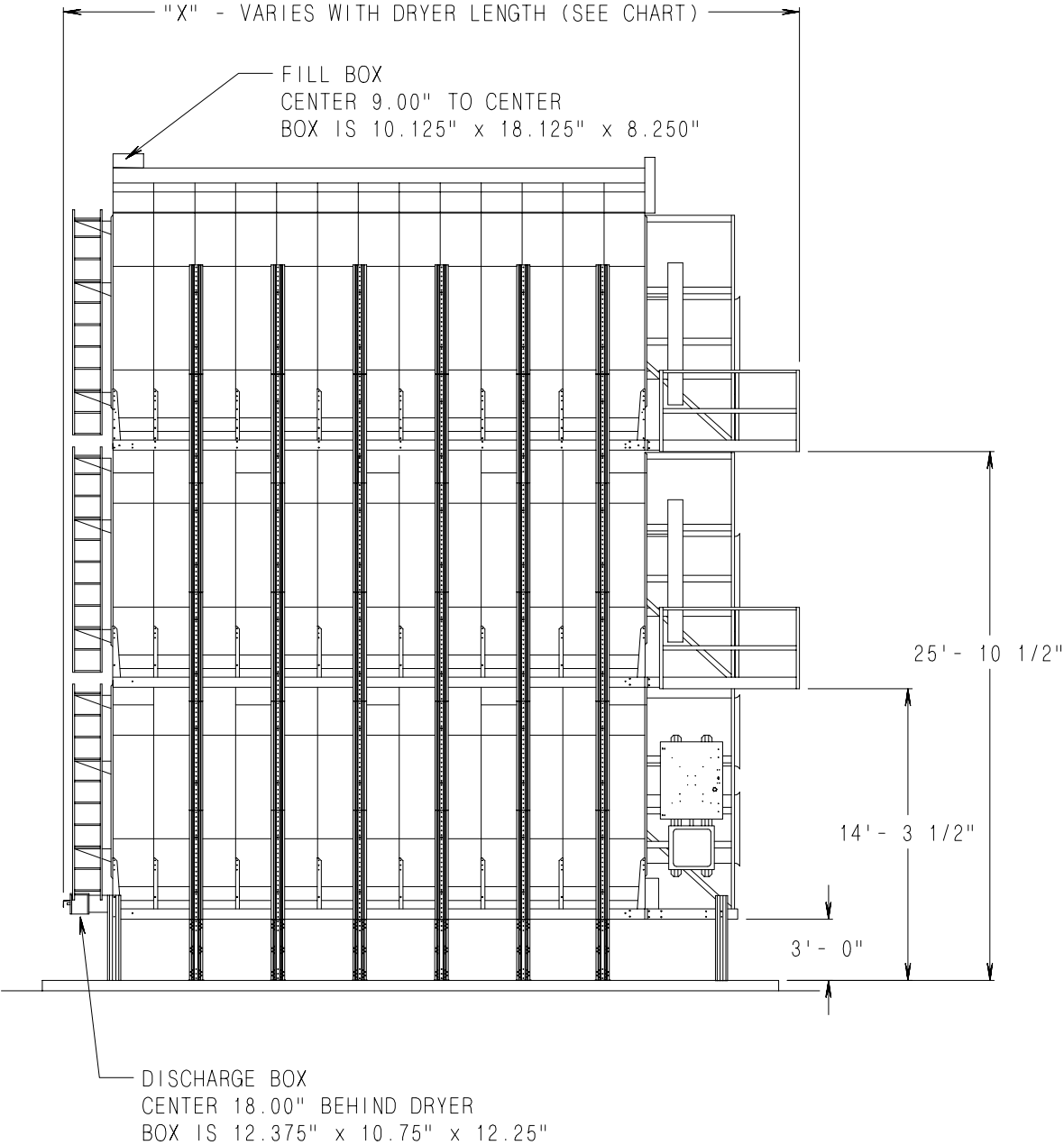
Concrete Specifications
Compressive Strength @ 28 days -- 4000 psi
Minimum Cement Content -- 6 sacks/yd
Maximum Slump -- 4" +/- 1"



EXAMPLE OF STACK DRYER FOOTPRINT



SIDE VIEW - 2 MODULE STACK DRYER

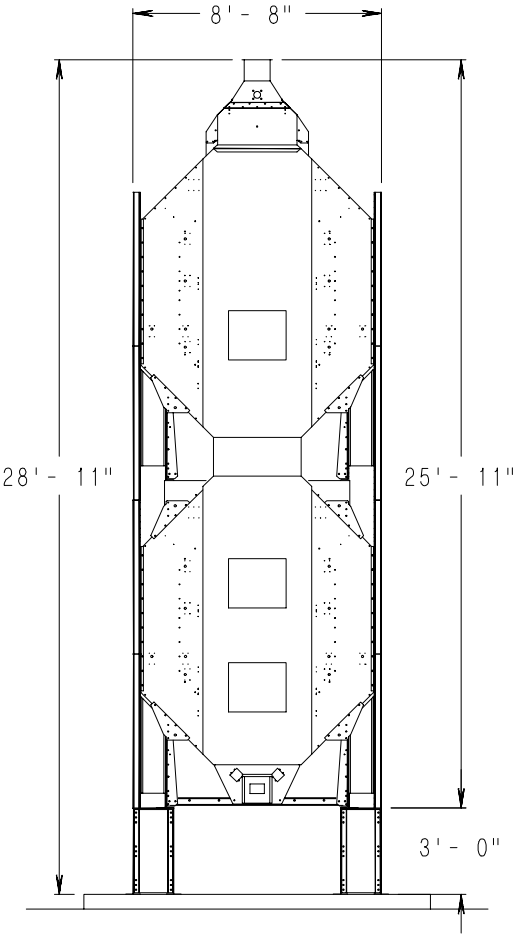


SIDE VIEW - 3 MODULE STACK DRYER

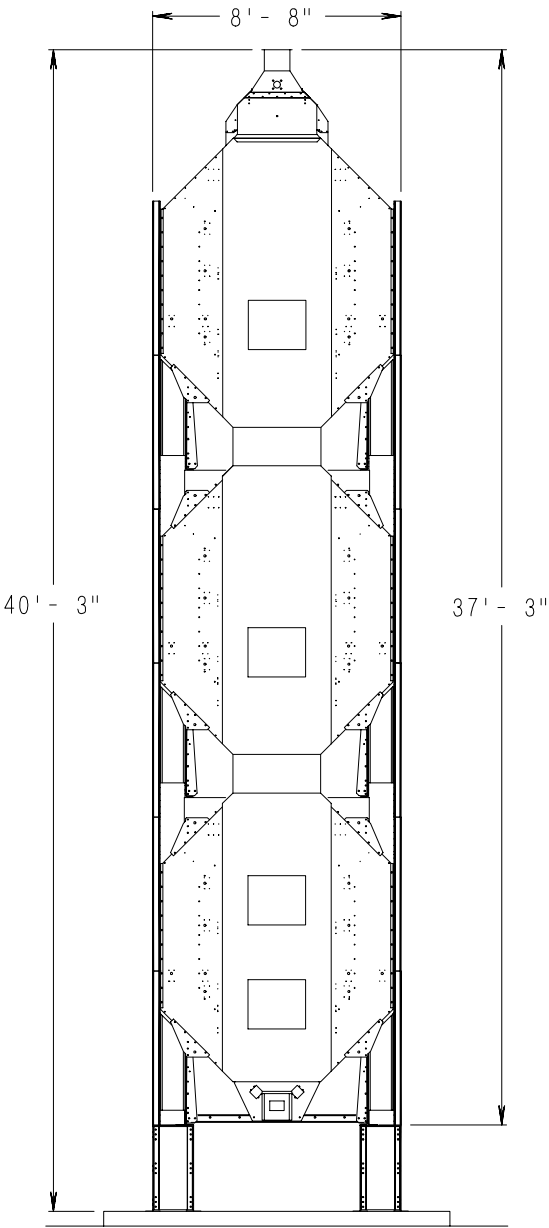
Dryer Installed Length

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

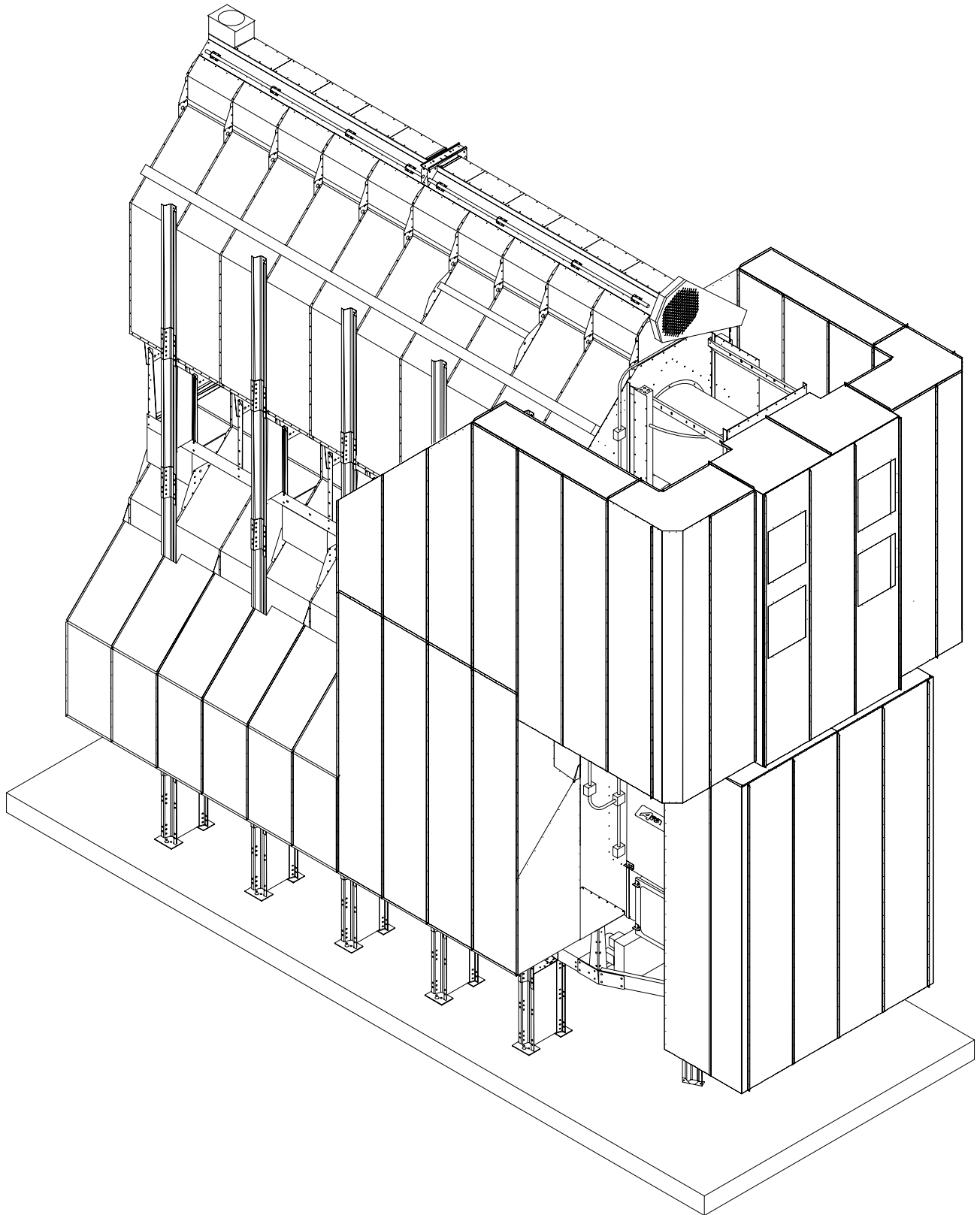


Figure 12: The Airstream Heat Reclaimer recirculates warmed air and provides energy savings. (Shown with optional noise suppressor on lower module.)

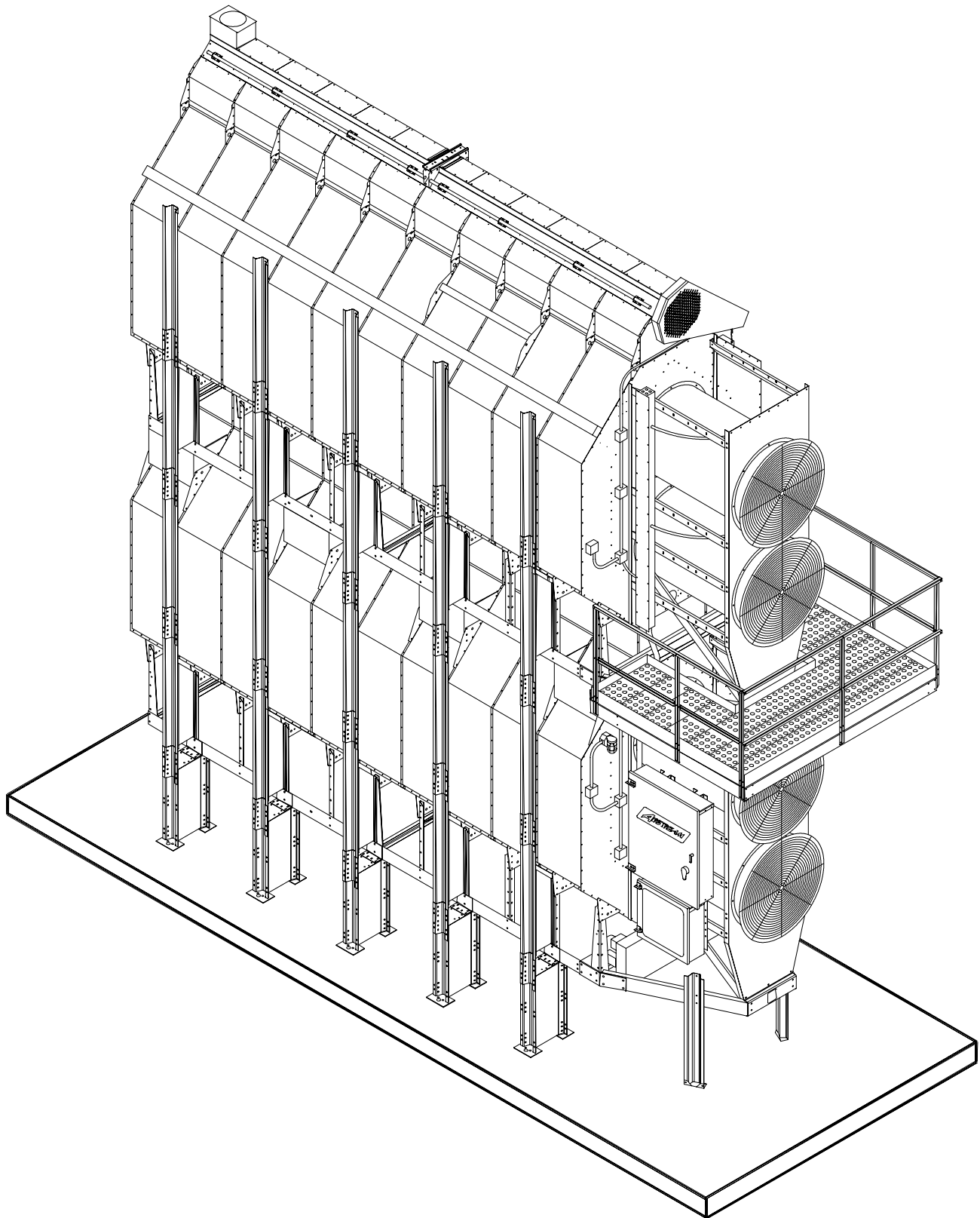


Figure 13: The new stiffener package for use on all stack dryers.



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