IN-BIN DRYING

STIRATOR & GRAIN FLOW

PROVEN & DEPENDABLE™

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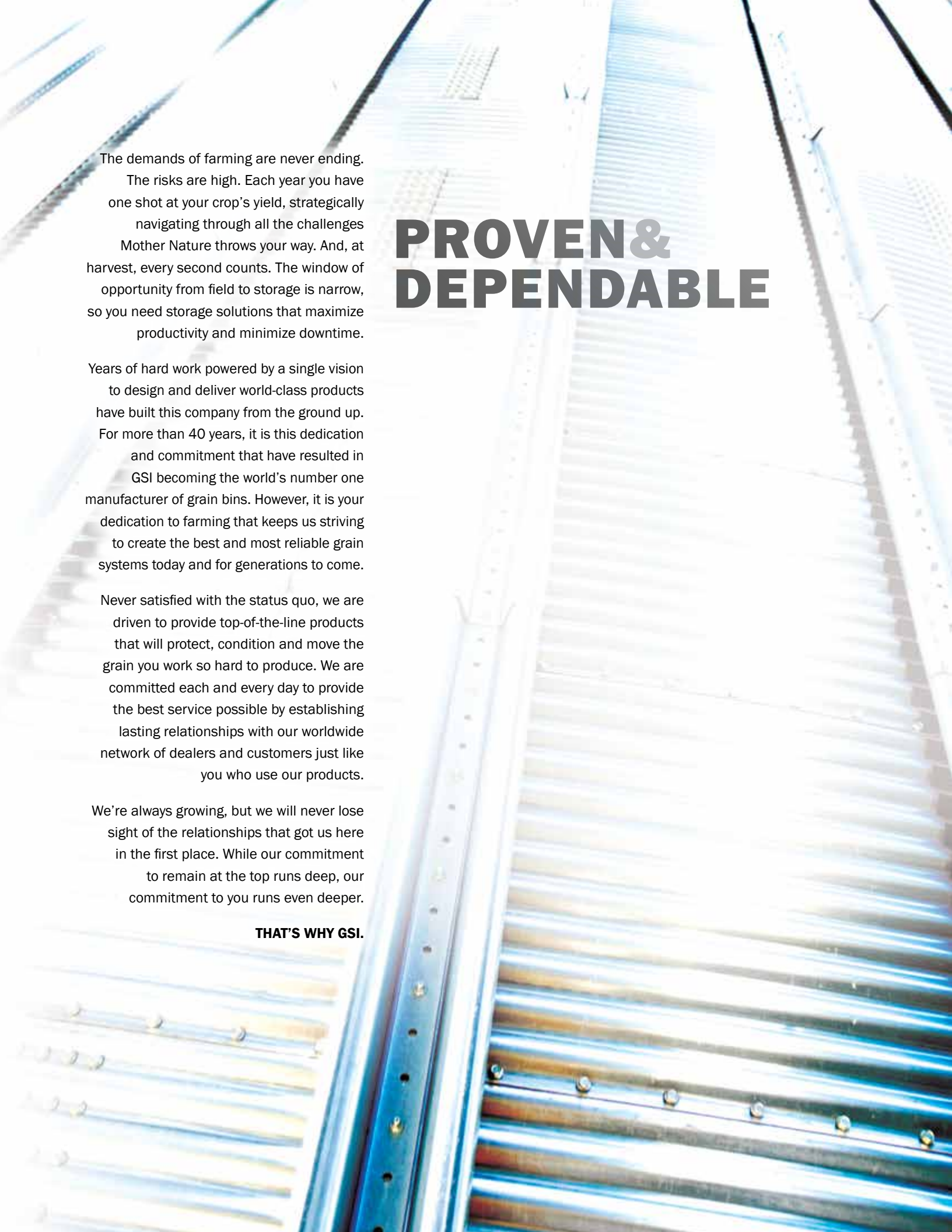

PROVEN& DEPENDABLE

The demands of farming are never ending. The risks are high. Each year you have one shot at your crop's yield, strategically navigating through all the challenges Mother Nature throws your way. And, at harvest, every second counts. The window of opportunity from field to storage is narrow, so you need storage solutions that maximize productivity and minimize downtime.

Years of hard work powered by a single vision to design and deliver world-class products have built this company from the ground up. For more than 40 years, it is this dedication and commitment that have resulted in GSI becoming the world's number one manufacturer of grain bins. However, it is your dedication to farming that keeps us striving to create the best and most reliable grain systems today and for generations to come.

Never satisfied with the status quo, we are driven to provide top-of-the-line products that will protect, condition and move the grain you work so hard to produce. We are committed each and every day to provide the best service possible by establishing lasting relationships with our worldwide network of dealers and customers just like you who use our products.

We're always growing, but we will never lose sight of the relationships that got us here in the first place. While our commitment to remain at the top runs deep, our commitment to you runs even deeper.

THAT'S WHY GSI.

WHY CHOOSE A GSI STIRATOR?

Whether purchasing a new bin or updating present storage for drying, a StirAtor can cut drying time by 50% in a low temperature bin. A StirAtor can also help store grain by serving as a management tool for grain conditioning.

GSI StirAtors provide a thorough, systematic, and time-tested stirring pattern. The efficiency of the Design III StirAtor is enhanced by its spiral stirring pattern which affects the entire grain mass within each stirring cycle. This stirring pattern that allows the augers to spend more time stirring the outside of the bin, rather than the center of the bin — an important feature considering that half of a bin's grain is positioned in the outside one-third of the bin.

Choose a GSI StirAtor with two or three augers for 24' to 36' bins.

TURN YOUR BIN INTO AN EFFICIENT CONTINUOUS FLOW DRYING SYSTEM

GSI Grain Flow and Calc-U-Dri will convert your bin into an automatic in-bin drying system. With the addition of a StirAtor, your bin becomes a wet holding tank with a depth of up to 16 feet, a continuous flow dryer and a dry and store unit.

Model 84 Grain Flow features an 8" discharge auger with 700 BPH discharge capacity using dual floor augers.

The optional Calc-U-Dri is an unparalleled master control for automatic, in-bin continuous flow grain drying. Calc-U-Dri keeps grain moisture content no higher than 0.3% over set point (percentage moisture desired). It also controls the Grain Flow and take-away systems.

The Calc-U-Dri sensor, located in the Grain Flow discharge tube, monitors all the grain leaving the drying bin. Wall-mounted monitors are no match for Calc-U-Dri sensor accuracy.

STIRATORS

DESIGN III STIRATOR

The Design III StirAtor can turn a grain bin into a drying system at a minimum investment. A high temperature, above 10 degree rise, bin dryer has to have a way to dry all the grain to the same moisture. Just running a fan & heater on a bin full of grain will result in 5% grain at the bottom with no moisture removed on the top. A GSI StirAtor ensures that all the grain is the same moisture without requiring a wet tank.

STIRATOR FEATURES

Rugged Drive: A strong 3/16" aircraft cable drives the machine. No reversing switches.

Disconnect Box: Fused disconnect box protects motors.

Automatic Shut-Off: Shuts the StirAtor down if the trolley binds.

Fused Gear Motor: Protects against electrical problems.

Sealed Bearings: Low maintenance.

Solid State Electronic Tilt Switch: Replaces the mercury switch. Controls the forward motion of the machine. No moving parts.

Gear Motor Ratio: GSI StirAtors use a 9 RPM gear motor.

AVAILABLE OPTIONS

Stir-Guard: Protects grain from over-stirring. If the StirAtor does not move forward within 45 minutes, Stir-Guard shuts the StirAtor down.

Hard Surfaced Down Augers: The entire lifting surface of GSI's down augers is covered by a durable, stainless steel surface.

Graduated Pitch Augers: Easier start-ups and more flighting at the bottom of the auger where the most grain is stirred.

GSI Air Tubes: Help prevent bin wall grain spoilage.

In-Out Ladder: Since GSI StirAtors stir all the way to the bin wall, removal of the inside attached ladders is recommended. GSI's strong and lightweight alloy steel tubing In-Out Ladder allows for easy entry into the bin.

GRAIN FLOW

The capacity of your drying bin can be significantly increased by the addition of a GSI Model 84 Grain Flow. It pulls only the dried grain at the floor of the bin, improving efficiency while preserving exceptional grain quality. Plus, with shallow depths the system achieves higher airflows and capacity. The integrated Calc-U-Dri provides complete operation and moisture controls. Grain Flow reduces the necessity of a wet bin though one can be added for maximum capacity.

GRAIN FLOW FEATURES

Rugged Gear Box: The gear box features Timken tapered roller bearings, high temperature grease seals and case hardened gears. Adjustable legs allow the gear box to fit plenums from 12" to 20".

Dual Floor Augers: Grain Flow's gear box uses tough 1-1/4" case hardened shafts to drive dual floor augers with hefty shafts and heavy-duty flighting. These augers unload grain at up to 700 BPH or 1500-2000 BPH using the slide gate. Support feet move floor augers through grain at a smooth even pace.

Hood Design: Grain Flow's unique hood keeps grain from free-flowing from the bin's center. There is no need for a resistor ring or grain paddles that damage grain. Hood and floor auger design allows grain to be evenly removed at up to 700 BPH (limited only by fan and heater drying capacity).

Grain Flow Also Includes:

Exterior control box for operation from one convenient location.

Take-away auger control box.

Incline transfer augers.

Discharge auger extensions.

Trans-Fer pneumatic conveying systems.

8" x 18' or 20' vertical auger with accessories.

Single or three phase, 220V or 440V electrical options.

Bin full switch to stop Grain Flow when storage bin is full.

Hard surfaced floor augers (rice only).

CALC-U-DRI

Unique electronic circuitry makes Calc-U-Dri an accurate and reliable direct moisture sensing control available for in-bin continuous flow grain drying.

Immediately on start-up the Calc-U-Dri automatically allows the grain to dry from 15 to 60 minutes. The operator chooses the initial drying period depending upon the amount of moisture to be removed from the grain. This is followed by a two minute discharge period when grain moisture is sampled as the grain is emptied from the bin.

Calc-U-Dri's stainless steel sensor is simple and uses capacitance-type sensing to accurately calculate grain moisture. As grain passes over the Calc-U-Dri sensor located in the discharge tube, every bushel of grain is checked for moisture content.

Solid state electronics eliminate the need for special equipment or buildings to house the unit. The Calc-U-Dri is designed to be operated in the farm environment.

DRYING CYCLE

MOISTURE LEVEL OF DISCHARGED GRAIN	CALC-U-DRI GOES TO...
Lower than 0.3% above set level	Discharge Cycle
0.3% to 0.9% above set level	15 to 60 minute drying cycle
1.0% to 1.9% above set level	30 to 120 minute drying cycle
2.0% higher above set level	45 to 180 minute drying cycle

CALC-U-DRI FEATURES:

On-Delay Timer: Three seconds before Grain Flow starts, the Calc-U-Dri starts the take-away system, minimizing peak power loads.

Sensor Location: Location of the Calc-U-Dri sensor in the discharge auger accurately checks the moisture content of every bushel of grain being discharged.

Adjustable Off-Delay Timer (1-100 Sec.): The take-away system continues to run 20 seconds after the Grain Flow stops discharging grain, emptying the take-away system of grain.

Universal Usage: Use with all grains in all environmental conditions. Adjustable drying periods on the Calc-U-Dri allow for accurate use with all grain in all types of weather.

Push to Read Temperature: Simple push button displays temperature on digital display.

Easy to Set Moisture Limit: Press the Set Moisture Limit button and turn the Moisture Limit Adjustment knob to the desired grain moisture content.

Moisture Offset: Dial the percentage of moisture that is to be adjusted. This amount will be added to or subtracted from the moisture readout.

Auto/Manual Switch: Calc-U-Dri can be operated in either automatic or manual mode.

Sample Indicator Lamp: Lights up when the two minute sample is being taken.

Drying Time Adjustment: Set the initial drying time from 15 to 60 min. The Calc-U-Dri will automatically double or triple drying time (on whatever position set) depending on grain moisture content.

Take-Away Auger Power Switches: Allows take-away equipment to be run manually, automatically, or turned off.

SPECIFICATIONS

STIRATOR CORN CHART

BIN SIZE AND AIR FLOW						CORN DRYING CAPACITY (BU/24 HRS) AND RECOMMENDED NUMBER OF AUGERS									
		DRYING RATE MULTIPLIER[1] FOR MORE FANS				DRYING CAPACITY (BU/24 HRS) RECOMMENDED NUMBER OF STIRRING AUGERS HEAT RISE ABOVE AMBIENT TEMPERATURE									
BIN SIZE	FAN H.P.	2	3	CFM FOR 1 FAN	STATIC PRESSURE FOR 1 FAN	25°	AUGERS	50°	AUGERS	75°	AUGERS	100°	AUGERS	125°	AUGERS
24	7.0	1.2	na	8,500	2.5	408	2	936	2	1536	3	2112	3	2736	4
	10.0	1.2	na	9,300	2.9	432	2	1032	2	1680	3	2304	3	2976	4
	10C	1.5	na	11,000	3.7	504	2	1224	2	1992	3	2736	3	3552	4
	15 28"	1.2	na	12,500	4.5	576	2	1368	2	2256	3	3096	3	4032	4
	15C	1.4	na	12,700	4.6	600	2	1416	2	2304	3	3198	4	4128	4
	20C	1.3	na	15,400	6.2	720	2	1704	3	2784	3	3840	4	4992	4
27	7.0	1.4	na	9,400	2.1	432	2	1032	2	1704	3	2328	3	3024	4
	10.0	1.3	na	10,300	2.4	480	2	1128	2	1872	3	2568	3	3336	4
	10C	1.6	na	11,500	2.8	528	2	1272	2	2064	3	2880	3	3720	4
	15 28"	1.3	na	14,000	3.7	648	2	1536	2	2544	3	3480	4	4512	4
	15C	1.5	na	13,800	3.7	648	2	1512	2	2496	3	3432	4	4464	4
	20C	1.5	na	16,500	4.8	744	2	1800	3	2976	3	4080	4	5304	4
	30C	1.3	na	20,600	6.7	936	2	2256	3	3720	4	5112	4	6648	4
30	10.0	1.5	na	11,000	2.0	504	2	1224	2	1992	3	2760	4	3576	4
	10C	1.7	na	11,900	2.2	552	2	1320	2	2160	3	2976	4	3840	4
	15 28"	1.4	na	15,200	3.0	696	2	1680	2	2736	3	3792	4	4896	4
	15C	1.6	na	14,600	2.9	672	2	1608	3	2640	3	3624	4	4704	4
	20C	1.6	na	17,200	3.7	762	2	1896	3	3096	4	4272	4	5544	4
	30C	1.5	na	21,800	5.3	984	2	2400	3	3936	4	5424	4	7056	4
33	10.0	1.5	na	11,600	1.6	504	2	1272	2	2088	3	2880	4	3744	4
	10C	1.8	na	12,180	1.7	576	2	1344	2	2208	3	3048	4	3936	4
	15 28"	1.5	na	16,200	2.6	744	2	1776	2	2928	3	4032	4	5232	4
	15C	1.6	na	15,100	2.3	696	2	1656	3	2712	3	3744	4	4872	4
	20C	1.7	na	17,800	3.0	816	2	1944	3	3216	4	4416	4	5736	4
	30C	1.6	na	22,600	4.2	1032	2	2472	3	4056	4	5592	4	7272	4
36	10C	1.8	na	12,400	1.4	576	2	1368	2	2232	3	3096	4	4008	6
	15 28"	1.6	na	17,000	2.2	768	2	1872	3	3072	3	4224	6	5472	6
	15C	1.7	na	15,400	1.9	696	2	1680	3	2784	4	3816	6	4968	6
	20C	1.8	na	18,300	2.4	840	2	1992	3	2388	6	4536	6	5904	6
	30C	1.7	na	23,200	3.4	1056	2	2544	3	4176	6	5784	6	7488	6

STIRATOR RICE CHART

BIN SIZE AND AIR FLOW						RICE DRYING CAPACITY (BU/24 HRS) & RECOMMENDED NUMBER OF AUGERS					
		DRYING RATE MULTIPLIER[1] FOR MORE FANS				DRYING CAPACITY (BU/24 HRS) RECOMMENDED NUMBER OF STIRRING AUGERS HEAT RISE ABOVE AMBIENT TEMP					
BIN SIZE	FAN H.P.	2	3	CFM FOR 1 FAN	STATIC PRESSURE FOR 1 FAN	10°	AUGERS	20°	AUGERS	30°	AUGERS
24	7.0	1.2	na	6,300	3.3	144	2	480	2	792	2
	10.0	1.2	na	6,800	3.6	168	2	504	2	864	2
	15 28"	1.2	na	9,400	5.6	216	2	696	2	1200	3
	10C	na	na	9,500	5.6	216	2	696	2	1200	3
	15C	na	na	10,400	6.4	240	2	744	2	1320	3
	20C	na	na	12,600	8.3	288	2	936	3	1584	3
27	7.0	1.2	na	7,400	3.0	144	2	552	2	936	2
	10.0	1.2	na	8,100	3.4	168	2	576	2	1032	3
	15 28"	1.2	na	11,000	5.0	240	2	816	2	1368	3
	10C	1.4	na	10,300	4.6	216	2	768	2	1320	3
	15C	na	na	11,700	5.5	264	2	864	2	1488	3
	20C	na	na	14,400	7.2	288	2	1056	3	1824	3
30	10.0	1.2	na	9,100	3.0	216	2	672	2	1152	3
	15 28"	1.3	na	12,400	4.5	264	2	912	3	1584	3
	10C	1.5	na	10,900	3.8	240	2	816	2	1392	3
	15C	1.4	na	12,700	4.6	288	2	936	3	1632	3
	20C	1.3	na	15,500	6.0	336	2	1152	3	1968	3
	30C	1.2	na	19,200	8.1	408	3	1416	3	2448	4
33	10.0	1.3	na	9,900	2.6	216	3	744	3	1248	3
	15 28"	1.3	na	13,600	3.9	288	3	1008	3	1728	3
	10C	1.6	na	11,400	3.1	240	3	840	3	1440	3
	15C	1.5	na	13,600	3.9	288	3	1008	3	1728	3
	20C	1.5	na	16,400	5.0	336	3	1176	3	2088	3
	30C	1.4	na	20,500	6.8	432	3	1512	3	2592	4
36	15 28"	1.4	1.5	14,600	3.4	312	3	1080	3	1848	3
	10C	1.7	2.0	11,700	2.6	264	3	864	3	1464	3
	15C	1.5	1.8	14,200	3.3	312	3	1056	3	1800	3
	20C	1.6	1.8	16,900	4.2	360	3	1248	3	2136	4
	30C	1.5	na	21,500	5.7	456	3	1584	3	2736	4

GRAIN FLOW DRYING CAPACITIES

BIN SIZE & AIR FLOW						CORN DRYING CAPACITY (BU/24 HRS)					
		DRYING RATE MULTIPLIER[2] FOR MORE FANS				HEAT RISE ABOVE AMBIENT TEMPERATURE					
BIN SIZE	FAN H.P.	2	3	CFM	STATIC PRESSURE	25	50	75	100	125	150
24'	7.5	1.6	na	11400	1.7	780	1580	2410	3260	4150	5060
	10	1.5	na	13000	2.0	890	1800	2740	3720	4730	5770
	12.5	1.5	na	14000	2.3	950	1940	2950	4010	5090	6220
	10C	1.7	na	12500	1.9	850	1730	2640	3580	4550	5550
	15C	1.6	na	14900	2.5	1010	2060	3140	4260	5420	6610
	20C	1.6	na	17700	3.3	1210	2450	3740	5060	6440	7860
27'	7.5	1.7	na	11900	1.2	810	1650	2510	3400	4330	5280
	10	1.6	na	13300	1.5	910	1840	2810	3810	4840	5900
	12.5	1.6	na	14800	1.7	1010	2050	3120	4230	5380	6570
	10C	1.8	na	12900	1.4	880	1790	2720	3690	4690	5730
	15C	1.7	na	15600	1.9	1060	2160	3290	4460	5670	6930
	20C	1.7	na	18500	2.4	1260	2560	3900	5290	6730	8210
	30C	1.6	na	21400	3.1	1460	2960	4520	6120	7780	9500
30'	7.5	1.8	na	12200	1.0	830	1690	2570	3490	4440	5420
	10	1.8	na	13700	1.1	930	1900	2890	3920	4980	6080
	12.5	1.7	na	15300	1.3	1040	2120	3230	4380	5560	6790
	10C	1.8	na	13200	1.1	900	1830	2790	3780	4800	5860
	15C	1.7	na	16100	1.4	1100	2230	3400	4610	5860	7150
	20C	1.7	na	19100	1.9	1300	2640	4030	5460	6950	8480
	30C	1.7	na	22100	2.3	1510	3060	4660	6320	8040	9810
33'	10	1.8	na	13800	0.9	940	1910	2910	3950	5020	6130
	12.5	1.8	na	15600	1.0	1060	2160	3290	4460	5670	6930
	10C	1.8	na	13400	0.8	910	1860	2830	3830	4870	5950
	15C	1.8	na	16400	1.1	1120	2270	3460	4690	5960	7280
	20C	1.8	na	19500	1.4	1330	2700	4120	5580	7090	8660
	30C	1.8	na	22600	1.8	1540	3130	4770	6470	8220	10030
36'	10	1.9	na	13900	0.7	950	1920	2930	3980	5060	6170
	12.5	1.8	na	15900	0.8	1080	2200	3360	4550	5780	7060
	10C	1.9	na	13600	0.7	930	1880	2870	3890	4950	6040
	15C	1.8	na	16600	0.9	1130	2300	3500	4750	6040	7370
	20C	1.8	na	19800	1.1	1350	2740	4180	5660	7200	8790
	30C	1.8	na	23000	1.4	1570	3180	4850	6580	8360	10210

The **STIRATOR CORN** charts are based on ambient air temperature of 50°F, 60% relative humidity, 16' (4.9 m) of corn, 10% moisture removal (2 points removed in cooling) (25%-17%).

The **STIRATOR RICE** charts are based on ambient air temperature of 80°F, 85% relative humidity, 16' (4.9 m) of rice, 7% moisture removal (19%-13%).

These charts are designed as a guide only. Fan performance will vary considerably from one manufacturer to another and other factors can change the approximate bushels per day. Choose from StirAtor models with two, or three augers to fit bins from 18' (5.5 m) to 48' (14.6 m). Each model gives you all the exclusive StirAtor features that can turn a simple bin into a wet-holding tank, dryer, and storage bin—all in one unit.

[1] All multiple fans are in parallel. Multiply drying rates x 1.6 for 5 point removal (for corn). All multiple fan static pressures (where multipliers are shown) fall within acceptable performance guidelines.

The **GRAIN FLOW DRYING** chart gives approximate corn drying capacities of GSI Grain Flow with various combinations of bin diameter, heat rise and fan and heater sizes. The chart is based on 50°F ambient temperature and 60% relative humidity with a starting grain temperature of 50°F. Moisture removal is from 24% to 16-1/2%. Cooling will remove an additional 1% to 2% moisture content. When grain is dried in depths over 8 ft., a Grain StirAtor installed in conjunction with a Grain Flow will increase drying efficiency.

Capacities given are for shelled corn.

[2] All multiple fans are in parallel. Multiply Drying Rate x .77 for 10 pt. removal. Multiply Drying Rate x 1.35 for 5 pt. removal. All multiple fan static pressures (where multipliers are shown) fall within acceptable performance guidelines.

COMPLETE YOUR GSI SYSTEM

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40-SERIES™ GRAIN BINS

When determining the best system for your operation, we know that what is protected inside the bin is what counts the most. Every product we design, engineer and build is based on this foundation.

MATERIAL HANDLING

GSI's material handling line includes bucket elevators, chain conveyors, belt conveyors, bin unloads, and chain loops. Also available are towers, catwalks, and support structures.

DRYING AND CONDITIONING

Today's farm operations have greatly varied needs for their drying solutions. Size, type, and investment all play a part in the decision for which to use. GSI provides systems of every size and type to help with those needs. Options include TopDry, Portable, Modular, and T-Series Tower Dryers.

GLOBAL SOLUTIONS. LOCAL SUPPORT.

GSI and GSI Dealers alike share the same passion and commitment to our customers. GSI Dealers understand down time is not an option, construction schedules must be met. From site planning to installation and service, GSI Dealers are the proven partners for your operation. When you buy GSI, you get the quality product of a worldwide leader and the dependable service of your local Dealership.

TO FIND YOUR LOCAL GSI DEALER, VISIT THE GSI DEALER LOCATOR AT WWW.GRAINSYSTEMS.COM

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GS-141 SEPTEMBER 2015