

CONVERTING FROM GRAVITY FLOW





**Even Water Distribution**



**Efficient Water Delivery**



**Multiple Crop Versatility**

## Why convert from gravity flow to Zimmatic?

The reasons are clear. When you convert to mechanical move irrigation, you're using a proven method of conserving water and improving your return on investment in time, labor, fertilizer and chemicals, while virtually eliminating deep percolation and runoff.

### Yields: maximized

A Zimmatic® by Lindsay irrigation system will provide proper application to every part of a field throughout the growing season, even in those areas that are currently underutilized. Only Lindsay offers FieldNET® – the industry's first Web-based wireless solution to manage pivot irrigation systems remotely.

### Energy, water, labor and time: saved

When compared to other irrigation methods, a Lindsay system will help maximize crop yields, while saving as much as 75 percent on labor and using an average of 45 percent less water.† A Nebraska study\* comparing gravity flow and pivot recorded 47 percent fewer pumping hours for the pivot system, and overall energy cost (using a diesel-driven pump

and generator) was 36 percent less. Plus, when using commercial power, pivots using a programmed control system make it easier to take advantage of off-peak rates.

### Application: precision

Zimmatic dealers analyze each grower's operation to customize a sprinkler package based on crop and climate conditions.

### Downtime: minimized

Lindsay irrigation systems are designed and engineered for life on the farm. They're constructed using only the highest quality components for superior performance season after season.

### Support: certified

Our worldwide network of certified dealers are trained to customize,

install and service our entire range of irrigation systems.

Yield of Various Crops with and without Irrigation		
Crop	Irrigated	Non-Irrigated
Alfalfa <sup>1</sup>	4.9 tons/ac (11.0 MT/ha)	2.5 tons/ac (5.6 MT/ha)
Corn <sup>1</sup>	180 bu/ac (11.3 MT/ha)	144 bu/ac (9.0 MT/ha)
Grain Sorghum <sup>1</sup>	86.9 bu/ac (5.5 MT/ha)	69.2 bu/ac (4.3 MT/ha)
Potatoes <sup>2</sup>	391 cwt/ac (43.8 MT/ha)	215 cwt/ac (24.1 MT/ha)
Soybeans <sup>1</sup>	45.3 bu/ac (3.0 MT/ha)	40.2 bu/ac (2.7 MT/ha)
Sugar Cane <sup>2</sup>	39.6 ton/ac (88.8 MT/ha)	32.6 ton/ac (73.1 MT/ha)
Wheat <sup>1</sup>	80.3 bu/ac (5.4 MT/ha)	37.0 bu/ac (2.5 MT/ha)

Table Sources: <sup>1</sup>2007 USDA Census of Agriculture (Table 32. US wide)  
<sup>2</sup>2002 USDA Census of Agriculture (Table 32. US wide)

\*Chart costs are based on studies from the University of Nebraska: "Estimated Irrigation Costs, 1997"; "Estimated Irrigation Costs, 2001"; "Comparison of Irrigation Distribution Systems"

†Farm and Ranch Irrigation Survey, 2008.

Sprinkler			Gravity Flow		
	Average Yield per acre (MT/ha)	Average Water Applied feet (mm)		Average Yield per acre (MT/ha)	Average Water Applied feet (mm)
Corn (grain) <sup>3</sup>	183 bu (11.5)	1.0 (305)	Corn (grain)	170 bu (10.7)	1.1 (335)
Soybeans <sup>3</sup>	52 bu (3.5)	0.7 (213)	Soybeans	45 bu (3.0)	0.8 (244)
Sugar Beets <sup>4</sup>	30 tons (67.3)	2.4 (732)	Sugar Beets	28 tons (62.8)	3.2 (975)
Peanuts	3,313 lb (3.7)	1.1 (330)	Peanuts	2,875 lb (3.2)	2.5 (760)
Potatoes <sup>4</sup>	401 cwt (45.0)	1.8 (549)	Potatoes	308 cwt (34.5)	1.9 (579)

Table Sources: <sup>3</sup>Farm and Ranch Irrigation Survey, 2008; <sup>4</sup>Farm and Ranch Irrigation Survey, 2003

This information should be used as a guide and is not intended to be a guarantee on cost of ownership or yield improvement. Actual results may vary due to soil make-up, water quality, chemigation, fertigation, regional climate, management practices, crop selection, irrigation techniques and marketing.

# Get more value out of less water

Getting the correct amount of water on your crop at the right time is crucial to getting top yields, but it's also important to apply it uniformly. Zimmatic irrigation systems bring a cost-effective solution to alleviate risk when the weather turns dry.

## Increases yields through more uniform application

Gravity flow irrigation has changed very little over the years, but mechanical move irrigation has kept up with farming technology, making it a more efficient management tool so you can stay competitive. Uniform application of water, chemicals and fertilizers generally results in improved plant yield, growth and quality. A Zimmatic irrigation system can provide proper application to every part of your field throughout the growing season, even in those areas that are currently over- or under-irrigated. If you have fields where water retention is

poor, especially with sandy soils, using an irrigation system can increase your yields by 10% up to 50%.<sup>1</sup>

## Reduce waste

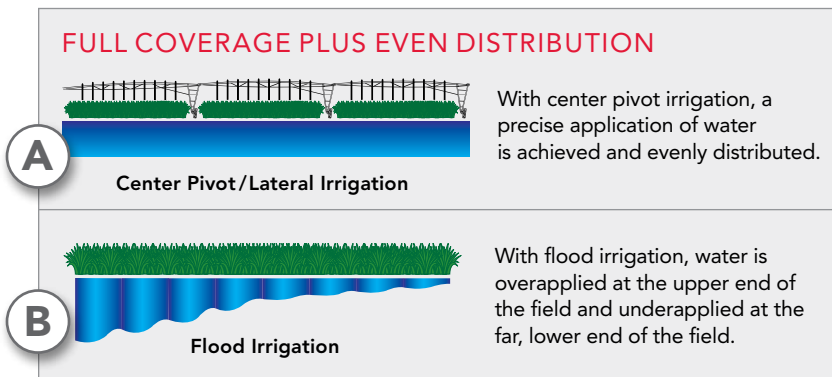
Because water and chemicals are applied uniformly over the field, a pivot or lateral system produces less waste, especially when compared to flood. With a Zimmatic system, you get even, precise water application across the field (Figure A), rather than having too much water at one end and not enough water at the other end (Figure B).

Plus, you won't lose water to over-irrigation because you can control the

timing and amount of water that is applied. Eliminating runoff and deep percolation helps prevent contamination of the water table and nearby streams.

## Lower seasonal labor and maintenance costs

The Zimmatic system is automated, so no one has to move pipes, or open and close gates. In fact, there's virtually no labor required to apply water. Plus, remote control and monitoring options are available. There is no emitter clogging, and no filter maintenance – it requires only a screened intake.



Comparable Pivot and Flood Operation Costs\*

	Flood	Pivot	Pivot Savings
Annual fuel cost (diesel at \$3.50/gal)	\$14,918	\$11,987	\$2,931
Annual labor cost (at \$12/hr)	\$2,880	\$624	\$2,256
Operator labor (hrs/acres)	1.5	0.4	75% reduced

\* Chart costs are based on studies from the University of Nebraska: "Estimated Irrigation Costs, 2001"

<sup>1</sup> Freddie Lamm, Daniel O'Brien, Danny Rodgers, Troy Dumler, "Sensitivity of Center Pivot Sprinkler and SDI Economic Comparisons." American Society of Agricultural Engineers (ASAE) Meeting Paper. #MC02-201 (4/2002).

## ZIMMATIC IS BUILT TO LAST

Tough, durable, field proven. Zimmatic irrigation systems have been the choice of the world's irrigators for more than 40 years. They pay for themselves many times over during their lifespan and they've been tested successfully in many climates, with specially engineered features.



Hot-dipped galvanized steel legs and heavy-duty cross members form a rugged foundation. Exclusive collector ring is mounted externally, eliminating water flow restriction.



Built to last towers in a variety of tower heights. The exclusive Uni-Knuckle with split coupler ensures a solid, watertight connection.



A full line of diameters are available. Zimmatic's standard 6 5/8" pipe wall is the thickest on the market. Pipe options include poly-lined, galvanized steel, stainless steel and aluminum.



## FAQs

**Q: What are my conversion options?**

**A:** Most producers converting to mechanical move irrigation choose center pivot or lateral move systems. A typical seven-tower Zimmatic pivot will cover 131 acres (53 ha) of a standard quarter section. Add a corner arm and you can cover up to 154 acres (62 ha) or, in a rectangular 240-hectare (97 ha) field, up to 182 acres (74 ha). Zimmatic mobile pivots also give you the option of using one system on multiple fields. A lateral move gives you equal versatility, plus the ability to irrigate up to 98 percent of square or rectangular fields.

<sup>2</sup> Farm and Ranch Irrigation Survey, 2008.

**Q: Will my present water source be adequate?**

**A:** In most cases, yes. In fact, acre-for-acre, mechanical move irrigation saves an average of 45 percent of water over gravity flow irrigation.<sup>2</sup>

**Q: What kind of power will I need?**

**A:** Zimmatic systems require a 480-volt, three-phase power source which can be supplied either by plowing in a line to the pivot location or by an engine-powered generator at the site. If three-phase power is not available, a phase converter can be used to adapt available 230- or 480-volt single-phase commercial power.

**Q: Where is the best system location?**

**A:** Your Zimmatic dealer will consult with you on the best location and discuss what site preparation will be needed. His recommendation will balance maximum coverage of the field and safely avoiding obstacles that may affect system operations.



## Structural Design

Zimmatic offers irrigation options like center pivots, lateral moves or steerable corner arm systems that can handle anything from irregular fields to rugged terrain to multiple crops.

## Durability

Heavy-duty spans, trusses and drivelines deliver even water distribution. There are varying heights to provide the proper irrigation for different types of crops. And it's proven to withstand the elements in nearly any environment.

## Control

Flexible, intuitive Zimmatic irrigation control products make scheduling and operation simple, while FieldNET Web-based remote control options offer comprehensive management of precision application.



**Rugged Driveline**

Field-proven for more than a quarter century. Designed for superior durability, efficiency and speed.



**Custom sprinkler packages**

From rotating spray to LEPA, your dealer can help you select the right options to provide optimum coverage.



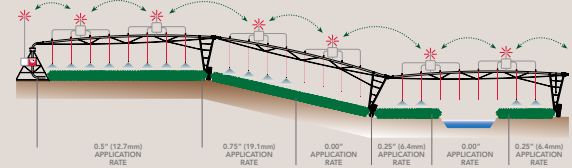
**Long-Lasting Parts**

Genuine Lindsay Parts are built to last for years – and replacements are just a phone call away. Plus, installing replacements is quick and easy.

## PRECISION VRI – FULL VARIABLE RATE CONTROL FOR UNLIMITED FLEXIBILITY

This technology allows you to apply exactly the right amount of water or chemicals to each area of your field – giving you full control over every centimeter foot to maximize yields and profitability.

- Works on almost any brand of center pivot or lateral system
- Zone and individual sprinkler control
- Field-proven pulsing technology
- Easy-to-use map-based software
- GPS for accurate control and programming



*Each sprinkler is programmed to turn on/off or pulse at a customized rate depending on crop, terrain or obstacle.*

## FieldNET® Wireless Irrigation Management

Providing the most comprehensive options to control entire irrigation systems – from pivots and laterals to pumps and sensors – FieldNET is the only wireless management tool with an app on both major smartphone and tablet platforms.

Fast and user-friendly, FieldNET provides an integrated water, fertilizer, chemigation solution with real-time alerts, people and equipment management tools, remote control of pivots, laterals, end guns, injectors and pumps, and the ability to monitor and record everything from water and energy usage to rainfall and humidity. It all adds up to less time in the field, less spent on valuable resources, and greater control of your operations.



### FieldNET Mobile

*Real-time control and monitoring designed exclusively for smartphone and tablet app technology.*

## LEADERSHIP IN IRRIGATION BASED ON ZIMMATIC TECHNOLOGY



### BASIC

- Sets the standard for manual system control
- Easy-to-understand icons speed and simplify operation
- LEDs provide quick review of system status



### VISION

- Easiest to operate
- Unique graphic display provides quick visual status to enhance irrigation management
- Automated area plans save on water, energy and labor
- Accurately adjust water application depths by selecting from a customized list
- History log tracks water usage and pivot performance



### BOSS

- Most powerful, programmable and expandable
- Versatile operation in automated or manual mode
- Step-by-step planning options help you save water, labor and energy
- More memory than most other control panels



## An international irrigation leader

Lindsay continues to be a leader in technological innovations – developing systems that increase irrigation efficiency, boost productivity and reduce energy and labor costs. With hundreds of dealers across the world as well as strategically located parts distribution centers, we offer growers immediate certified service, customer training and helpful advice.




### THE LINDSAY ADVANTAGE

STRONG • LONG LASTING • DURABLE • RUGGED • EASY TO USE •  
PLUG-AND-PLAY FAMILY OF ADD-ONS



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 **Lean, Clean and Green.** Lindsay Corporation is committed to developing environmental awareness and implementing sustainable practices to reduce the use of and protect energy, water, and all other resources.



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