

CONVERTING FROM GRAVITY FLOW



SELECTION GUIDE FOR  
FLOOD IRRIGATORS





# How can I get more value out of less water?

## COMPARE YIELD AND WATER USAGE

Studies show that in nearly all cases, mechanical move irrigation produces higher yields.<sup>†</sup> Equally important, it uses an average of 35 percent less water, allowing significant reductions in energy cost, and pump wear and tear.

Zimmatic<sup>®</sup> combines the latest in sprinkler, control and mechanical move technology to:

- Provide even, precise water application across the row
- Minimize water loss to evaporation
- Allow precise timing and measurement of water applied

### *How much labor and pumping cost can I save?*


A Zimmatic system eliminates the hours required to move pipes or tubes, maintain ditches and open and close floodgates. And, because less water is required, pumping costs are lower.

### COMPARABLE PIVOT AND FLOOD OPERATIONS COSTS\*

	Flood	Pivot	Pivot Savings
Annual fuel cost	\$12,390	\$7,848	\$4,542
Annual labor cost (@ \$12/hr)	\$2,880	\$624	\$2,256
Operator labor (hours/acres)	1.5	0.4	75% reduction

Sprinkler		
	Average Yield	Average Acre-feet Applied per Acre
Corn (grain)	167 bu	1.1
Soybeans	48 bu	0.7
Sugar Beets	26 tons	2.0
Peanuts	3,313 lb	1.1
Potatos	378 cwt	1.7
Gravity Flow		
Corn (grain)	148 bu	1.5
Soybeans	36 bu	1.0
Sugar Beets	25 tons	3.0
Peanuts	2,875 lb	2.5
Potatos	282 cwt	2.5

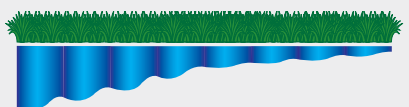
### FULL COVERAGE PLUS EVEN DISTRIBUTION



**Center Pivot/Lateral Irrigation**

With center pivot irrigation, a precise application of water is achieved and evenly distributed.

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**Flood Irrigation**

With flood irrigation, water is overapplied at the upper end of the field and underapplied at the far, lower end of the field.

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

<sup>†</sup> Farm and Ranch Irrigation Survey, 1998.

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.



# Zimmatic... durability, reliability, field proven

## Even water coverage means higher yield

Gravity flow irrigation has changed very little over the years, but mechanical move irrigation has kept up with farming technology. This makes it a better management tool for increasing efficiency, so you can stay competitive.

Applying the correct amount of water at the right time is crucial to getting a good yield, but it's also important to apply it uniformly. Surface irrigation systems fall short in this area, providing too much water in some areas and not enough in others. A Zimmatic mechanical move irrigation system applies water evenly throughout your field.

Plus, a Zimmatic can deliver fertigation and chemigation exactly where and when your crops need it most, without the cost and uncertainty you get with traditional application methods.

## Enjoy many money-saving years

With a Zimmatic irrigation system, not only will you save as much as 75 percent on labor, but you'll also use an average of 35 percent less water.<sup>†</sup> And in nearly every case, yields are higher than on crops grown with gravity flow.

You'll also save energy. A Nebraska study\* comparing gravity flow v. 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.

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

<sup>†</sup> Farm and Ranch Irrigation Survey, 1998.



### Even Water Distribution

Get even, precise water application throughout your fields, eliminating idle land and areas that are over- or under-watered.



### Efficient Water Delivery

Stop losing water to evaporation and runoff when you control the timing and amount you apply.



### Multiple Crop Versatility

Take on multiple crops and terrains with custom, durable spans, flexible flow joints and multiple height options.



## Frequently asked questions about converting from gravity flow

### *What are my options for conversion?*

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-acre (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.

### *Will my present water source be adequate?*

In most cases, yes. In fact, acre-for-acre, mechanical move irrigation saves an average of 35 percent of water over gravity flow irrigation.<sup>†</sup>

### *Where is the best system location?*

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.

### *What kind of power will I need?*

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.

<sup>†</sup> Farm and Ranch Irrigation Survey, 1998.



### Monitor and Control

Team your system with GrowSmart™ technology for precision application, easy monitoring and remote control.



### Chemigation/Fertigation

Zimmatic offers systems that are ideal for precisely and evenly applying chemicals and fertilizer where and when it's needed, while avoiding runoff.



### 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.



### MAXfield Corner

- Create a custom irrigation program based on your unique field characteristics
- SmartChip Technology remembers your field and adjusts application rates accordingly
- New MAP (MAXfield Application Planner) software allows you and your dealer to test a virtual irrigation system custom made for your field
- Improve the performance of a new or current corner system by adding a Corner 4x4 drive system with four wheels

### Lateral Pivot

- Bring up to 98% of your square or rectangular field into full production with one of these two options:
  - **Ditch-fed** - can accommodate grades of up to one percent
  - **Hose-fed** - designed for fields where the grade and/or soil makes ditch-fed systems impractical, supplying water to the machine from a pressurized mainline through a large-diameter hose

### FieldVISION

- 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

### FieldBOSS

- 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

### FieldNET™

- Real-time, Web-based irrigation management
- Networks all of your pivots, no matter what brand - and gives you access and control from any computer or phone
  - The user-friendly Web portal lets you configure irrigation requirements and make adjustments quickly and easily
  - Precise application of water for maximum efficiency
  - Text message alerts keep you updated on pivot status

## Gain Efficient Control with Smart Technology

Zimmatic® and GrowSmart™ technology work together to provide the most efficient way to deliver, monitor and control water and chemical application in your fields.

For more information, visit [www.zimmatic.com](http://www.zimmatic.com) or talk to your Zimmatic dealer.



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