

IRRIGATION SYSTEMS PRODUCT GUIDE



Zimmatic™
STRENGTH TO GROW ON



Why Pivots/Laterals?

GET MORE VALUE OUT OF LESS WATER

Getting the correct amount of water on your crop at the right time is crucial to getting higher yields, but it's also important to apply it uniformly. Zimmatic® irrigation systems bring a cost-effective solution, alleviating risk when the weather isn't ideal for planting and growing conditions.

Increase yields through more uniform application

Uniform application of water, chemicals and fertilization 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 underutilized. 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%.¹

Reduce waste

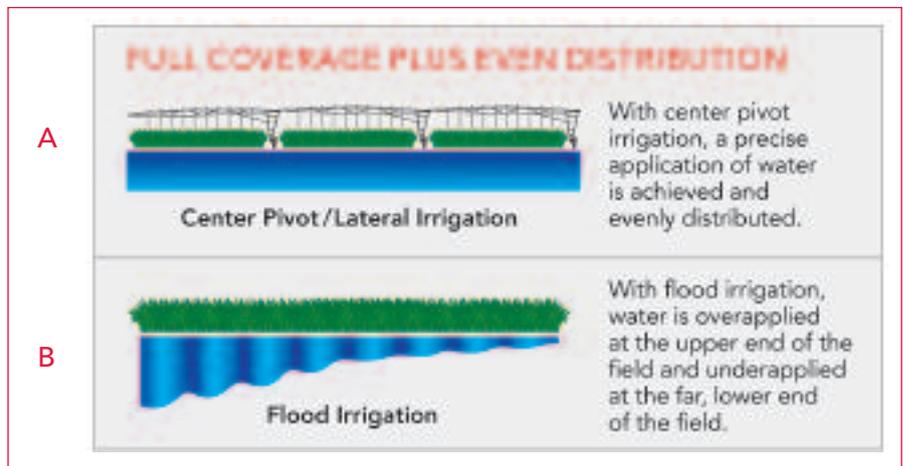
Because water and chemicals are applied directly to the root zone, a pivot or lateral system produces less waste, especially when compared to flood or drip irrigation. With a Zimmatic system, you get even, precise water application across the rows (Figure A), rather than having too much water at one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

Plus, you won't lose water to evaporation and you can control the timing and amount of water that is applied. There's also less runoff, helping prevent contamination of the water table and nearby streams.

Lower labor and maintenance costs

The Zimmatic system is automated, so no one has to move pipes, or open and close floodgates. In fact, there's virtually no labor input after the initial setup. 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	\$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

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



ENJOY MANY MONEY-SAVING YEARS

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 reducing runoff into streams.



High return on investment

Your initial investment in a pivot or lateral system is relatively small compared to the money you'll save in the long term. In fact, a drip irrigation system costs over 200% more than a pivot system to install on a 125-acre field.² On larger fields, the cost difference is even greater.

The long life of a pivot or lateral system will save you money year after year. You'll use less water, reducing your energy costs. A Zimmatic system also helps you gain consistently higher yields by applying chemicals and fertilizers evenly, accurately and inexpensively. Plus, if you ever want to sell, there's a high resale value on a pivot or lateral system.

¹ Irrigation of Agricultural Crops, ASA Monograph No. 30, 1990. Prairie Farm Rehabilitation Administration Paper, Report on "The Potential for Irrigation Expansion in Western Canada."

² 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).

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.



Why Zimmatic?

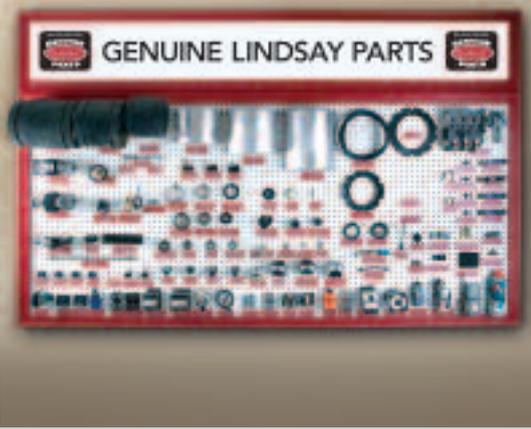
THE ZIMMATIC DIFFERENCE

Tough, dependable Zimmatic irrigation systems have been the choice of the world's irrigators for more than thirty years. Unlike many other long-term equipment investments, Zimmatic irrigation systems pay for themselves many times over their life span.

Strength to grow on

- **Maximize your yields**
By applying the right amount of water and chemicals in the right place at the right time, you can get more from your crops.
- **Reduce waste**
Through precision application, you can target water and chemicals to your crop's root zone – not past it.
- **Improve irrigation control with GrowSmart™ products**
Only Zimmatic offers powerful, easy-to-use GrowSmart irrigation management products.
- **Save time and labor**
When compared with other irrigation methods, a Zimmatic irrigation system will help you maximize the efficiency of both time and labor. Plus, flexible, intuitive GrowSmart irrigation control products make scheduling and operation a snap.
- **Minimize downtime**
Zimmatic irrigation machines are designed and engineered for life on the farm. They're constructed using only the highest quality components, so they're built to last, season after season.
- **Receive support from certified Zimmatic professionals**
Your Zimmatic dealer will work with you to customize a system that meets your specific irrigation needs. He'll also be there to install the system and help you with any after-sales service.
- **Finance your system through USAID**
Because Zimmatic pivots are made in the USA, sometimes they can be financed with USAID funds.



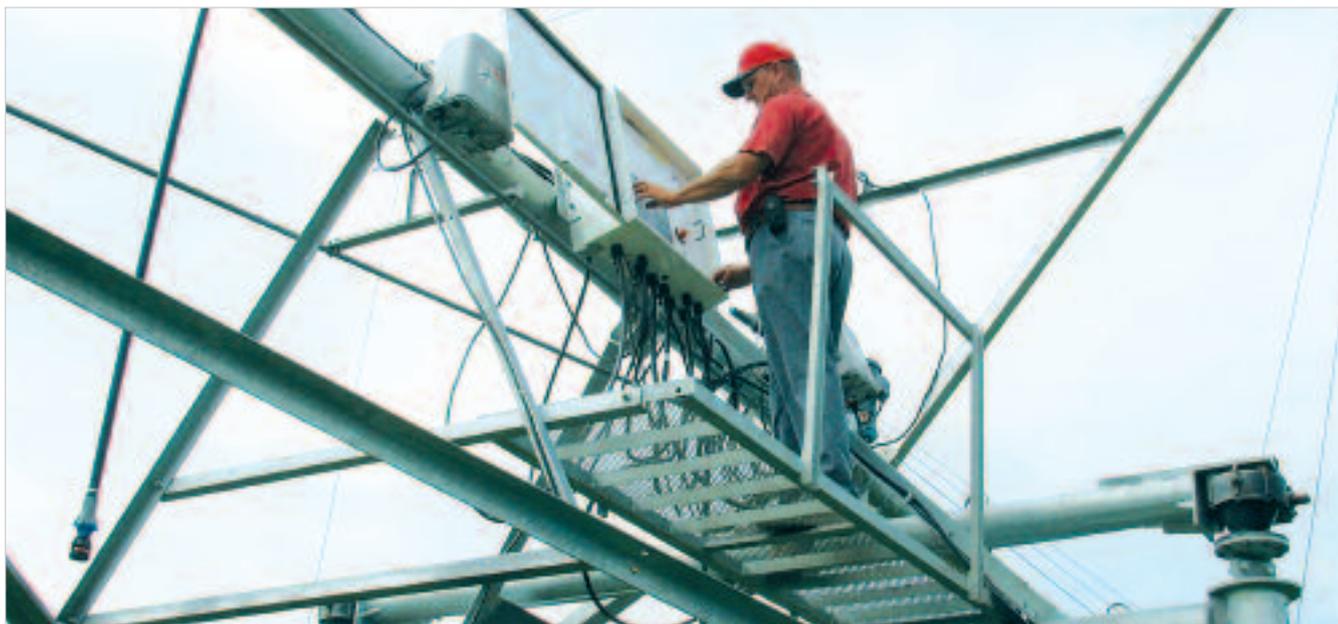


Dealer Service/Support

FRIENDLY. FAST. KNOWLEDGEABLE.

Your Zimmatic dealer is there for you before, during and after the sale of any irrigation system. He's committed to keeping your system up and running, regardless of make or model. Zimmatic dealers offer:

- **Genuine Lindsay parts**
Your dealer will provide you with the quality Lindsay parts you need to keep your system running smoothly – no matter who the manufacturer is, season after season.
- **Replacement components for any system**
Zimmatic components – including center drives, gearboxes and electrical controls – are the preferred after-market choice when repairing or converting irrigation systems from other manufacturers.
- **Service when you need it**
From the initial pre-sale planning and customization stage to routine maintenance and emergency field repairs, certified Zimmatic technicians are always there to keep your system up and running.
- **Certified support**
Your Zimmatic dealer is an experienced irrigation professional who has undergone rigorous training to achieve certification. After completing certification, your Zimmatic dealer receives ongoing training to keep them up-to-date with the latest trends in irrigation technology and service.
- **Customer training**
When you buy a Zimmatic system, you get more than just the hardware. You'll also receive hands-on training sessions and field demonstrations that will keep you up-to-date with the latest irrigation methods and maintenance techniques. These sessions are provided by one of several mobile Technical Training Centers.





Pivot Point

CENTER PIVOTS ARE OUR CORE BUSINESS

We've been making Zimmatic center pivots for more than thirty years for one reason: to help producers get more from their fields. A GrowSmart control panel allows a Zimmatic system to apply precisely the right amount of water at precisely the right time, improving both yield and quality – regardless of the crop grown. What's more, a long-lasting, water-saving Zimmatic pivot can significantly reduce operating and labor costs over time. Whatever you grow, you'll grow it better under a Zimmatic.

Heavy-Duty Pivot Point Structure (a)

The pivot point itself consists of 3/8-inch (.95-cm) hot dipped galvanized steel legs and heavy-duty (3/16-inch/.48-cm) cross members that form a sturdy foundation for even the longest systems.

Exclusive Collector Ring (b)

The Zimmatic collector ring is mounted externally, eliminating water flow restriction – unlike the internal designs on other irrigation systems. The unit is entirely encased in fiberglass and features dual sliding contacts that ensure uninterrupted power for each tower drive unit.

Positive Position Encoder (c)

Zimmatic's precision machine-tooled encoder gives the control panel the ability to read the pivot's exact position relative to a 360° circle. It even "remembers" the pivot's location in the event of a power interruption.



Load-Bearing Compact Pivot Point

The compact pivot point makes system retrofits possible. The concrete pad is 16 percent smaller to reduce installation costs, and it's compatible with other smaller pad systems. Designed and tested with state-of-the-art engineering analysis and 3D modeling technology, this pivot point holds strong in the field – even in high-stress areas.



Control Panels

CENTER PIVOT CONTROL MADE EASY FOR YOU

Depending on your needs, each user-friendly GrowSmart control panel offers a different level of control, convenience and maintenance options.

What options do you need?				
Key Features	FieldBASIC	NEW FieldVISION w/o position	NEW FieldVISION w/position	FieldBOSS w/position
Controls				
Select percent rate	✓	✓	✓	✓
Select depth (inches/mm)		✓	✓	✓
Stop or start forward/start reverse	✓	✓	✓	✓
Water on/off	✓	✓	✓	✓
Accessories on/off		1	1	3
Programmable service stop			✓	✓
Programmable end guns			2	2
Simple direction plan		✓	✓	
Programmable field area plans			✓	✓
Step-by-step programmability by date/time, day of the week, etc.				✓
Power auto-restart		✓	✓	✓
Pressure auto-restart		✓	✓	✓
Programmable soft barrier			✓	✓
Water hold time at a barrier		✓	✓	✓
Pressure, flow, voltage and temperature shutdown limits		✓	✓	✓
Pump and pressurization limits/delays		✓	✓	✓
Load control feature to prevent operation during peak rates				✓
Monitoring				
Field position			✓	✓
Direction or stopped	✓	✓	✓	✓
Pressure reading		✓	✓	✓
Voltage reading	✓	✓	✓	✓
Temperature reading		✓	✓	✓
Flow sensor reading and logger		✓	✓	✓
Calculated hours per revolution		✓	✓	✓
Specific fault status display		✓	✓	✓
History log of pivot events		✓	✓	✓
Number of function timers	1	6	6	8
Rainfall and wind sensors for programmable shutdowns				✓
Design				
Backlit display		✓	✓	✓
Lightning arrestor	✓	✓	✓	✓
Transient and induced voltage protection		✓	✓	✓

✓ Requires optional sensor

Controllers with field position provide position accuracy and repeatability for precise control of chemigation and other accessories.



Support Structure

Pipeline (a)

Standard 11-gauge Zimmatic pipelines feature 15 percent thicker walls than those of the competition, providing additional strength and stability to each span. Available sizes include:

- 5 9/16 inch (14.1 cm)
- 6 5/8 inch (16.8 cm)
- 8 inch (20.3 cm)
- 10 inch (25.4 cm)

Truss Rods (b) & Trusses (c)

Zimmatic's exclusive "V-Jack" truss design distributes the load evenly, providing superior support and durability. Forged-head truss rods in heavy pocket-type brackets add strength and support to each span.

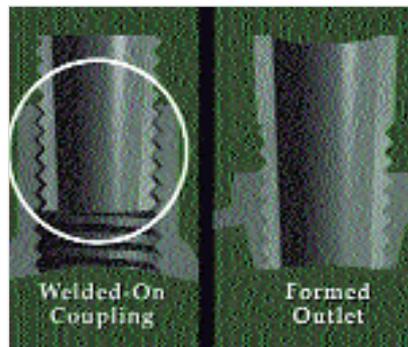
Crossed Stabilizer Angles (d)

"X-type" bracing links each span with the next tower, absorbing torsional stress that can be caused by uneven terrain.



Formed Outlets (e)

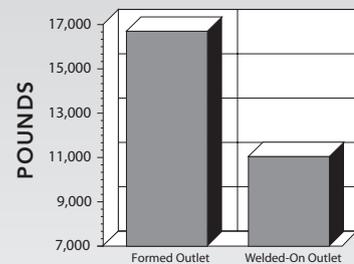
Rather than relying on welded outlets that can leak over time, Zimmatic systems feature sprinkler outlets that are formed as an integral part of the pipeline, ensuring precisely matched threads for a watertight seal. Zimmatic formed outlets come with a 20-year warranty.



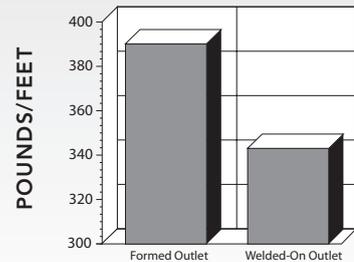
Zimmatic's formed outlet (right) uses a tapered-to-tapered thread connection instead of looser fit welded-on couplings that can contribute to rusting and leakage.

Formed outlets outperform welded-on outlets

PULL TEST



TORQUE/TWISTING FORCE TEST





Pipe Options

THICKER PIPE MEANS LONGER LIFE

Zimmatic's standard 6 5/8-inch (16.8 cm) pipe is 15 percent thicker than that of the competition. Other diameters are available to provide maximum efficiency.

Pipeline Construction

- **Galvanized steel**
Offering the lowest cost per foot, galvanized steel pipe is ideal for "mild" corrosive situations.
- **Aluminum**
Zimmatic's high-strength aluminum piping provides superior corrosion resistance even under the harshest water conditions. In addition, its ultra-smooth interior surface means less friction loss for greater efficiency. For a combination of strength, versatility and efficiency, aluminum piping is the right choice for many irrigators.
- **Stainless steel**
For serious problem water, high-alloy stainless steel pipe

offers a high level of corrosion resistance. This method is ideal for long-term service in industrial and food processing applications – in addition to offering potentially higher resale value.

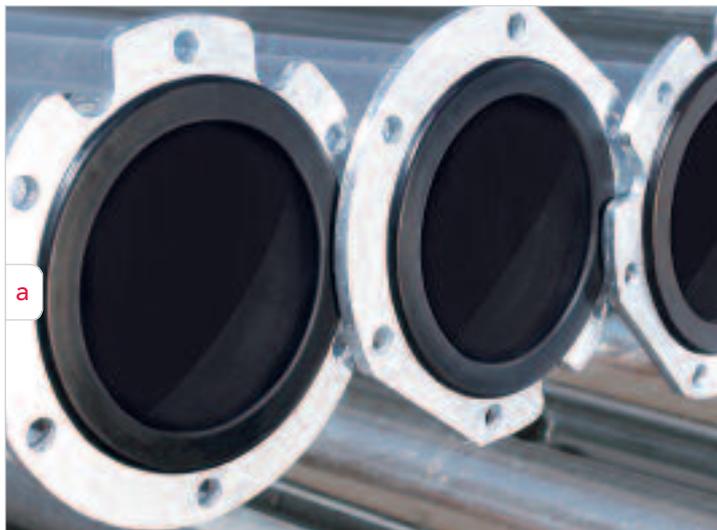
- **Poly-Lined Pipeline (a)**
Ideal for most corrosive water conditions – municipal, industrial and agricultural.

This includes a variety of applications: municipalities, food processing, chemical, textiles, mining, pulp and paper industries – just to name a few. This is a top-of-the-line alternative pipeline that offers excellent waste water management solutions. Heavy-duty H.D.P.E. Liner (High

Density Polyethylene) can handle corrosive elements, saline and acidic water.

Pipe Diameters (b)

- **10-inch (25.4 cm)**
Can be used for inboard spans to reduce horsepower requirements.
- **8-inch (20.3 cm)**
Used on inboard spans of longer systems – 1,800 feet (549 m) or more.
- **6 5/8-inch (16.8 cm)**
The industry standard diameter, commonly used on 1,300-foot (396 m) systems with flow rates of 1,000 gpm (63 lps) or less.
- **5 9/16-inch (14.1 cm)**
For shorter systems with lower flow rates.





a



b



c

Tower Structure

BUILT TO LAST

Expand your pivot options to increase water efficiency and maximize yield. Zimmatic offers durable parts, quality components and a wide range of tower structure heights to customize your pivot to best serve your field.

Uni-Knuckle Span Connector (a)

This heavy-duty universal joint provides stress-free flexibility on slopes up to 30 percent. All components are mounted externally to eliminate flow restriction. The unit functions as a support between spans, permitting coupler and boot replacement without a crane.

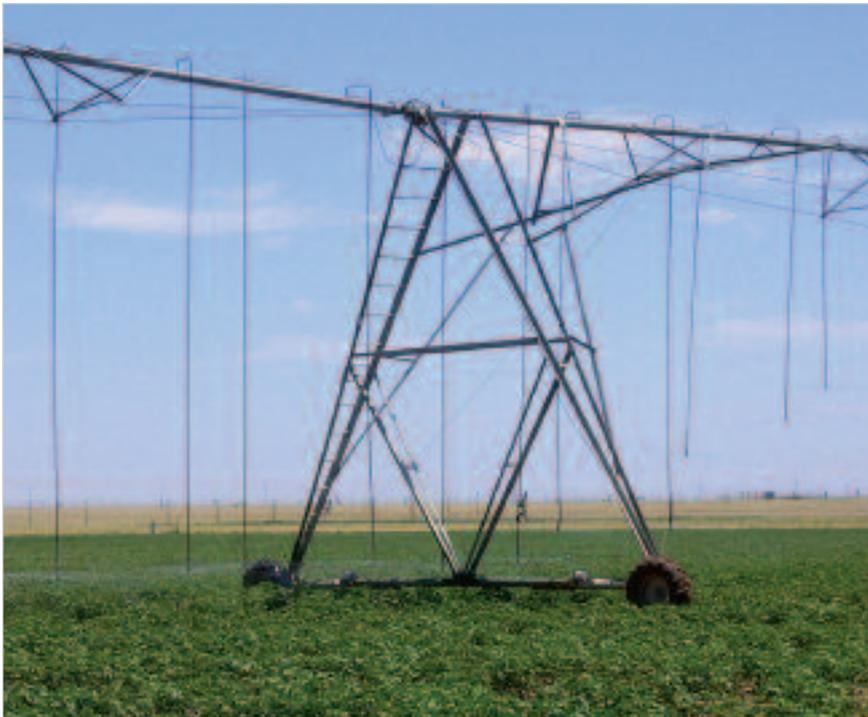
Split Coupler (b)

An exclusive Zimmatic design innovation, the split coupler encloses an inner boot that ensures a solid, watertight connection.

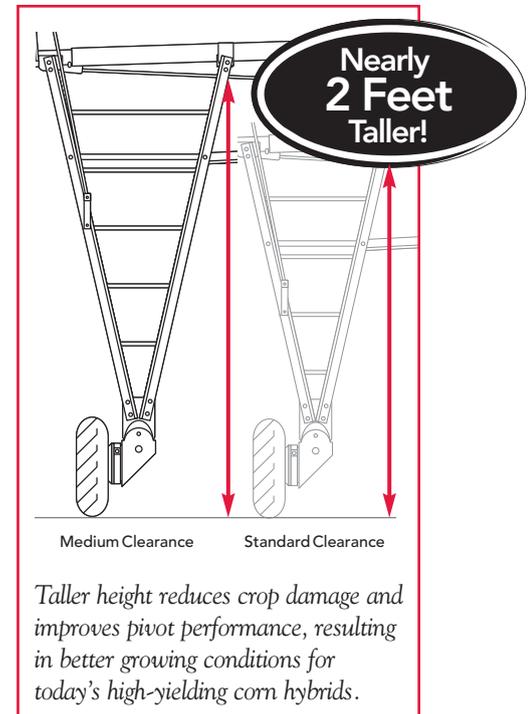
Tower Controls (c)

Housed in a weather-tight enclosure, these ultra-reliable controls turn the drive system on and off as needed. Suppressor circuits that guard against voltage irregularity, combined with rigorous testing, result in Zimmatics being known as some of the straightest running pivots in the industry.

Durable High and Ultra High Clearance models provide needed crop clearance and stable operation in varying terrains



The right height to fit any field





HEIGHT OPTIONS FOR EVERY FIELD

Expand your pivot options to increase water efficiency and maximize yield. Zimmatic offers durable parts, quality components and a wide range of tower structure heights to customize your pivot to best serve your field.

Standard Tower Structure (d)

Zimmatic's four-legged tower structure is mated to a heavy-duty drive tube using an exclusive double-sided welded brace. Wide-spread legs distribute the load over a greater area.

Medium-clearance Crops (e)

Zimmatic offers the industry's first Medium Clearance Tower, designed for today's high-yielding genetically enhanced corn hybrids. These hybrids stand taller and stronger in the fields, forcing a change in how they are irrigated. Taller height reduces crop damage and truss structure drag, resulting in better growing conditions, less wear on equipment and better track management – an ideal option for hilly and uneven terrain.

High-clearance Crops (f)

Zimmatic offers several pivot options to be used with various high-clearance crops, including sugar cane and bananas – and tall structures like oil rigs. Choosing a high-clearance pivot or lateral over flood or drip irrigation will result in fewer hassles, better yields and better ROI.





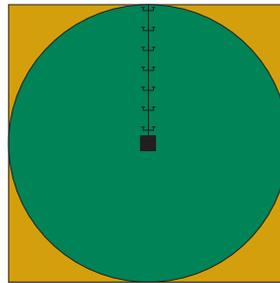
Center Drive

DURABILITY. EFFICIENCY. SPEED.

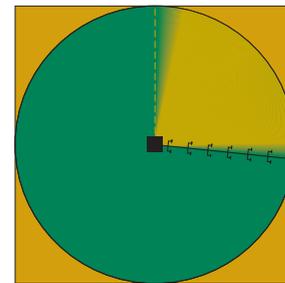
Every Zimmatic system is powered by the industry's most durable and efficient drivetrain. Center drive motor features include:

- Designed to operate at 480V or 380V
- Heavy-duty stator shell is coated to resist chemicals or corrosive water
- Rotor and stator can be replaced independently, simplifying maintenance
- A 3/4 hp motor engages a spur gear drive, producing a 9 rpm increase over the competition (43 rpm versus 34 rpm)
- Triple reduction spur gear provides the industry's highest efficiency
- Non-helical gear design results in less heat, friction and overall wear
- Also available: 1.0 hp (59 rpm) motor, reducing rotation time by 37%

Zimmatic pivot with 43 rpm motor



Competitor's pivot with 34 rpm motor



A seven-tower Zimmatic pivot with a 43 rpm motor can complete a circle in under 13 hours, compared to more than 16 hours for a competitive system with a 34 rpm motor – a 27 percent savings.



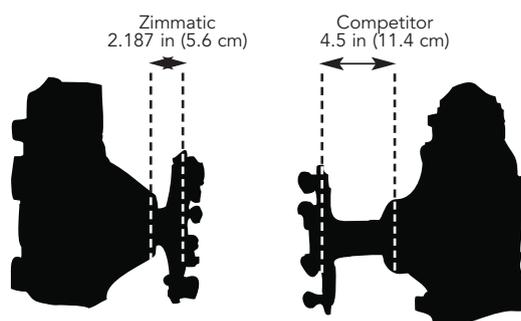


PowerDrive Gearbox

THE TOUGHEST IN THE BUSINESS

The Zimmatic PowerDrive gearbox is built stronger to last longer. Features include:

- Heavy-duty reinforced housing means greater overall strength and reduced wear
- Extra protection from dirt and moisture is provided by cartridge input and output shaft seals (a) that turn with the shaft
- Two large input bearings (b) increase load capacity by 55%
- Hot-forged 1045 steel worm gear with thicker teeth provides extra strength and better contact with the bull gear
- Operating life and increased torque consistency are achieved thanks to a super-strong, cast iron bull gear (c)
- Steel-reinforced end caps maintain bearing pre-load under the most extreme operating conditions
- A special six-inch (15.2 cm) pilot ring means accurate wheel alignment
- Shorter output shaft eliminates high overhang load, which extends bearing life
- Comprehensive multi-barrier sealing system protects input and output shafts for longer life
- Zimmatic's drivetrain warranty is unsurpassed in the industry – see dealer for details





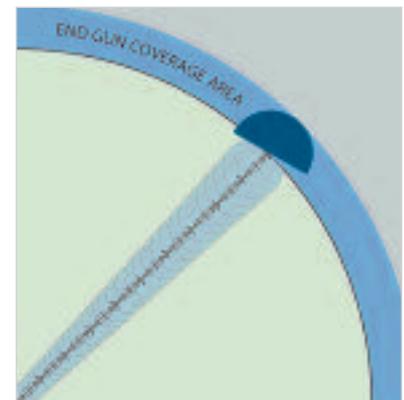
Sprinkler Options

WE'LL HELP YOU MAKE THE RIGHT CHOICE

Your Zimmatic dealer will analyze your operation to help you customize a sprinkler package that meets your irrigation needs.

- **Drops (a)**
Fabricated from galvanized steel, PVC pipe or reinforced hose – drops are designed to minimize water loss due to evaporation and wind drift. Lengths can vary from just below the unit's truss rods to approximately 18 inches (45.7 cm) above the ground.
- **Offsets (b)**
Allowing drops to be angled away from the pipeline, offsets provide increased coverage and longer soak times.
- **Boombacks (b)**
Designed to minimize wheel-track problems, boombacks place the sprinkler behind the drive unit.
- **Pressure regulators (c)**
Available in both standard and heavy-duty versions, pressure regulators help ensure uniform water distribution. Zimmatic pressure regulators are intended to operate from 6 to 50 psi (0.4 to 3.5 bar).

- **End guns (d)**
End guns can add five to ten more irrigated acres (2 to 4 ha) in a standard quarter section. Booster pumps are available in either 130 gpm (8.2 lps) or 200 gpm (12.6 lps) sizes when additional pressure is required to increase end gun reach.





COVERAGE FIT FOR YOUR NEEDS

Your Zimmatic dealer will analyze your operation to help you customize a sprinkler package that meets your irrigation needs.

- Rotating-spray sprinklers (e)**
 Featuring changeable plates and a choice of individual stream designs, rotating-spray sprinklers are designed for greater coverage on heavier soils or rolling terrain.



Coverage/Pressure

35' to 65'-15 to 50 p.s.i.
(10.5 m to 19.8 m-1 bar to 3.5 bars)



- Fixed-spray sprinklers (f)**
 Available in a variety of options to match crop, climate and wind conditions, fixed-spray sprinklers are intended for use on lighter soils or flat terrain and can be adapted for in-furrow applications. These units are also compatible with both germination and chemigation plates.



Coverage/Pressure

25' to 35'-10 to 40 p.s.i.
(7.6 m to 10.7 m-0.7 bar to 2.8 bars)



- LEPA sprinklers (g)**
 Operating in both bubble and spray modes, LEPA (Low Energy Precision Application) sprinklers are designed to reduce surface evaporation. Chemigation pads are available for most crops.



Coverage/Pressure

2' to 20'-6 to 20 p.s.i.
(0.6 m to 6.0 m-0.4 bar to 1.4 bars)





Chemigation/Fertigation

THE MOST ADVANCED INJECTION SYSTEM TO HELP YOU GROW

GrowSmart's Hydra Inject chemical injection series makes managing chemical and fertilizer resources easier than ever. With simple operation, precision application and built-to-last durability, you can apply the chemicals and fertilizer your fields need to increase crop quality and yields:

- Simple control and setup
- Pulse-free flow for precise adjustment of injection rates
- Built-in safety features for reliable and accurate performance
- Integrate with GrowSmart control systems for simple monitoring and management
- Three available lines to match your system and application needs
- Trailers feature large cone-bottom tank with mixer, for easy towing to multiple fields
- System integrates with FieldBOSS control panel for automated startup and shutdown

GrowSmart Injection Systems Hydra Inject I – easy-to-use, low-cost system

- Variable-frequency motor drive
- Potentiometer-controlled rate adjustment
- Visual flowmeter
- Low maintenance
- Optional calibration tube

Hydra Inject II – computer controlled injection requires no calibration

- Variable-frequency motor drive
- Easy rate adjustment
- Visual flowmeter
- Digital readout of flow rates and totalizers
- Scalable low injection rate shutdown





Tire Options

WHERE THE RUBBER MEETS THE FIELD

Your Zimmatic dealer will work with you to match your system with its intended soil and crop type.

Tire Sizes – All tires sizes include corrosion-resistant galvanized rims.

- **11.2 x 24**
Designed for limited hours on sandy soils (available in electro-coated or galvanized)
- **11.2 x 38**
Offers good clearance and flotation, but with a narrow wheel track
- **14.9 x 24**
Recommended for heavier and longer spans
- **16.9 x 24**
Intended for longer spans, this option provides more flotation

Tire Size	Tread Width	Diameter	Contact Area
11.2 x 24	10.4" (26.4 cm)	43.0" (109.2 cm)	242 in ² (1561 cm ²)
11.2 x 38	11.2" (28.4 cm)	57.0" (144.8 cm)	320 in ² (2084 cm ²)
14.9 x 24	14.5" (36.8 cm)	49.8" (126.5 cm)	346 in ² (2232 cm ²)
16.9 x 24	16.9" (42.9 cm)	53.0" (134.6 cm)	533 in ² (3439 cm ²)

Lindsay offers four different tire size options to choose from, depending on your crop clearance and soil texture.





Tracking Solutions

SUPERIOR TRACTION. BETTER PERFORMANCE. HIGHER YIELDS.

The strength and traction you need to keep your irrigation systems running smoothly. Zimmatic offers a comprehensive line of tracking solutions to handle the most difficult terrains so you can deliver water and chemicals to every area of your field, eliminating idle acres and increasing yields.

Z-TRAX (a)

IDEAL FOR DIFFICULT AREAS AND ALL TERRAINS

For your toughest tracking problems, Z-TRAX tackles any terrain. Superior tread eliminates ruts with no tires to change. Enclosed in a high-ribbed, wide-based tread, Z-TRAX distributes weight evenly creating 13 square feet of surface contact to avoid rutting and pivot shut downs.

- Wider base for better floatation and lower ground pressure
- Greater traction for improved climbing ability
- Sealed components for longer product life and low maintenance
- Quick and easy to install – no additional modifications needed
- Uses existing pivot tire hub and the same bolts
- Reduces drivetrain and truss structure wear and tear





Three-Wheel Tower Structure (b)

IDEAL FOR MARSHY AREAS AND PROBLEM SOILS

Add power to increase traction and prevent rutting with Zimmatic's three-wheel tower structure.

- Spend less time dealing with stuck machines
- Increase tire life
- Reduce drivetrain wear and tear
- Irrigate acres currently left idle



Z-MAT (d)

AN INEXPENSIVE SOLUTION TO PROBLEM AREAS

When water and mud are already present in the wheel-track, Z-MAT delivers the traction you need to keep moving. Avoid expensive mid-season track repairs with this inexpensive solution for managing deep and slippery wheel tracks. Simply cut the track mat to fit existing wheel tracks.

- Quick, simple and inexpensive to use
- Works with any type of equipment
- Helps minimize track repairs

Corner 4x4s for Corner Irrigation Systems

WHEEL DESIGN OPTION FOR CORNERS

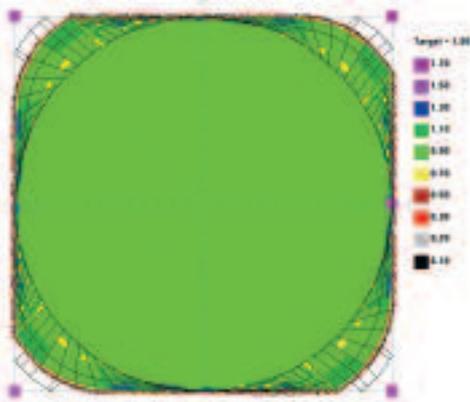
Improve the performance of a new or current corner system by adding a Corner 4x4 drive system – four wheels that work together to

provide better traction and more even weight distribution of the swing tower.



- Works with both new and old Zimmatic machines, as well as competitors' systems
- Better performances in ruts and on ridged crops
- Better track management (c)
- Greatly reduces chance of getting stuck
- Fits on any currently offered tire size combination
- Utilizes genuine Lindsay parts

MAP software



a



b



MAXfield Custom Corner

A NEW, MORE PRECISE CORNER SYSTEM—FEATURING SMARTCHIP TECHNOLOGY

With its unique ability to create a custom irrigation program based on your field's characteristics, the MAXfield Custom corner system delivers application rates with the same uniformity you get from your center pivot.

- SmartChip Technology**
 After completing an initial “mapping rotation,” the MAXfield Custom “remembers” every unique aspect of your field, adjusting its application rates accordingly. This results in a far more uniform application pattern than ever before.*
- MAP software (a)**
 Zimmatic’s new MAP (MAXfield Application Planner) software allows your Zimmatic dealer to design an irrigation system for virtually any field. By inputting your field’s unique characteristics, your dealer creates a

computerized model of your land, allowing him to build and test a virtual irrigation system without turning a single wrench.

- High-Flow joint (b)**
 The MAXfield Custom’s exclusive High-Flow joint transmits water internally, without the need for a leak-prone hose. In addition, the new joint’s simplicity results in longer life and reduced water friction loss.
- AccuFlow sprinkler packages**
 Utilizing a rapid-cycling concept, the MAXfield Custom’s sprinkler banks turn

on and off according to the corner’s swing angle. This proprietary feature improves application uniformity by allowing a customized water program to be selected for the user’s field, based on its location and other characteristics.

- Bring more acres under irrigation**
 The MAXfield Custom’s steerable corner arm has a maximum extended reach of 280 feet (85.3 m). Depending on field shape, this extra reach allows you to bring between 23 and 51 more acres (9-21 ha) under irrigation.

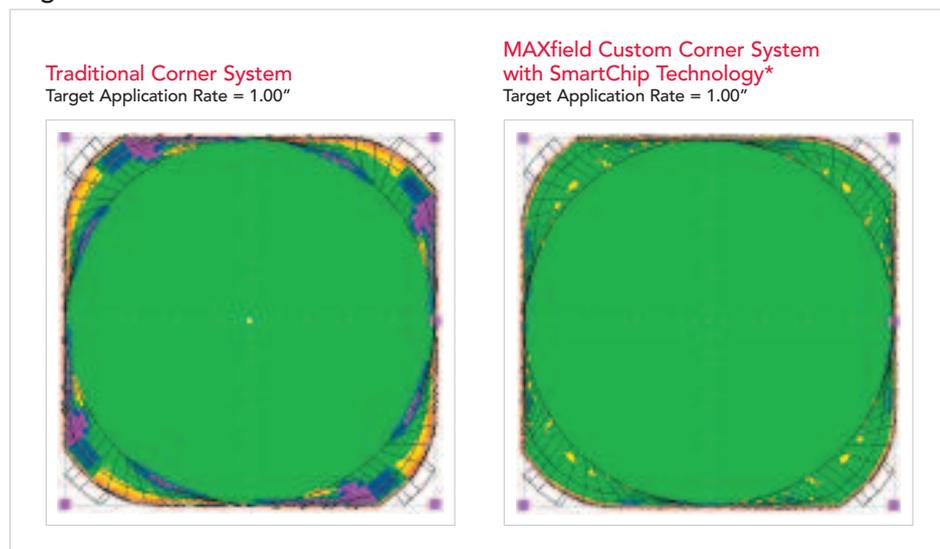




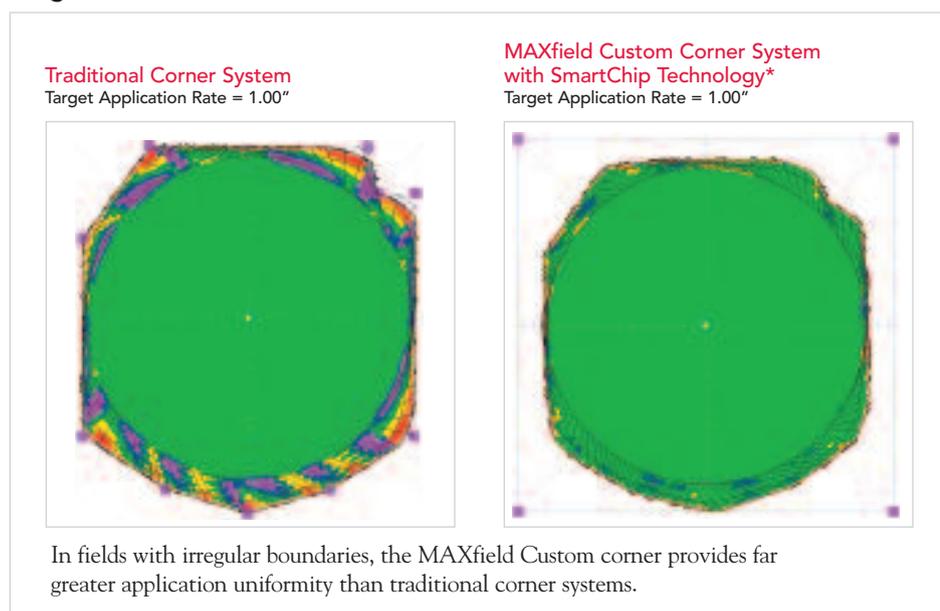
WATER APPLICATION BENEFITS

The Zimmatic MAXfield Custom is the most technologically advanced corner system on the market. With its SmartChip Technology, it provides you with more uniform application throughout the field – because unlike competing corner systems – a MAXfield Custom corner system actually “learns” and “remembers” the various unique characteristics of your field.

Regular Boundaries



Irregular Boundaries



* To take advantage of the SmartChip function, your pivot must be equipped with the GrowSmart FieldBOSS control panel.



FieldPLUS Articulated Pivot

EXTEND YOUR IRRIGATION REACH

Not every field is a perfectly square quarter-section. Out buildings, natural obstacles or irregular boundaries can also prevent traditional pivots from irrigating portions of some fields. The FieldPLUS articulated pivot – a Zimmatic exclusive – allows producers to bring more acres into production in irregularly shaped fields or in fields that contain immovable obstacles.

- Pivoting joint (a)**
 The exclusive FieldPLUS joint can be placed at any tower, allowing the creation of a system that is customized for a particular field.
- Nylon bearings (b)**
 Spans can pivot up to 165° in either direction on nylon bearings that ensure smooth operation and enhanced durability.
- Watertight coupler (b)**
 Standard 6 5/8-inch (16.8-cm) coupler allows unrestricted flow with a secure, watertight seal.
- Automatic realignment**
 The pivoting joint assembly automatically realigns the entire system, allowing it to function as a standard pivot.
- Barricade (c)**
 The tower stops automatically when it reaches the barricade, while the outer spans continue to operate.
- Outer spans (d)**
 Spans can continue up to 1,000 feet (304.8 m) past the joint, bringing large, previously unreachable areas of land under irrigation.
- Works with existing systems**
 The FieldPLUS pivoting joint can be quickly and easily retrofitted to most existing Zimmatic irrigation systems.
- GPS (e)**
 Add the power of the GrowSmart GPS Controller for more precise control of water and chemicals. You'll be able to control irrigation via end-guns or a bank of sprinklers – and add irrigated acres to increase your ROI.





Mobile Systems

IRRIGATE MORE ACRES WITHOUT BUYING MORE EQUIPMENT

Zimmatic offers three mobile irrigation solutions that allow you to spread your investment over multiple fields. All Zimmatic mobile pivots feature reinforced wheel hubs that swivel easily into towing position.

- Two-wheel agri-tow (a)**
 Ideal for frequent moves to fields up to 40 acres (16 ha), this easy-to-set-up system features a two-wheeled pivot rotating around a fixed anchor pad.
- Three-wheel mobile (b)**
 Easily towed in any direction, the three-wheel mobile unit is held securely in place with earthen or concrete pad anchors and can irrigate fields up to 160 acres (64 ha).
- Four-wheel mobile (c)**
 This system provides the necessary stability for towing over rough terrain and is intended for use in situations where pivot points are arranged in a straight line.



Zimmatic's tow/non-tow final-drive gearbox uses a bale engagement lever to disengage the gearbox for towing. When you're ready to irrigate, simply re-engage the gearbox with the lever.

System Type	Two-Wheel Agri-Tow	Three-Wheel Mobile	Four-Wheel Mobile
Maximum Length	660 feet (200 m) 4 towers	1,350 feet (411 m) 10 towers	1,350 feet (411 m) 10 towers
Power Supply	On-board diesel engine and generator set	On-board diesel engine and generator set or commercial power	Trailer-mounted stationary diesel engine generator set or commercial power



Standard Lateral Systems

MULTIPLE OPTIONS. MAXIMUM COVERAGE.

If you've got a square or rectangular field, you may want to consider a lateral move irrigation system that could bring up to 98 percent of your crop into full production.

- Ditch-fed (a)**
 Able to accommodate grades of up to one percent, this method relies on water supplied from a ditch located either in the center of or adjacent to the field.
- Fertigation (b)**
 In order to assure that your system is delivering the best nutrients for your field in the most efficient way possible, your Zimmatic dealer can customize fertigation and chemigation equipment to your requirements.
- Hose-fed (c)
(Two-Wheel & Four-Wheel)**
 Designed for fields where the grade and/or soil makes ditch-fed systems impractical, this method supplies water to the machine from a pressurized mainline through a large-diameter hose.

System Type	Hose-Fed	Ditch-Fed
Power Source	On-board diesel generator or electrical cable	On-board diesel generator and pump or electric cable
Guidance System	Furrow, buried cable or above ground cable	Above ground cable or buried cable

Cart and Power Options

- Two- or four-wheel carts are available, depending on system requirements.
- Power can be supplied by an onboard diesel and generator set (plus onboard pump for ditch-fed systems) or by commercial power delivered through a heavy-duty, mining-type cable.

Guidance Systems

- Zimmatic lateral move irrigation systems can be guided by furrow, aboveground cable or buried-cable methods.





Pivoting Lateral System

ZIMMATIC GEOLATERALSM THE PIVOTING LATERAL ADVANTAGE – GREATER FLEXIBILITY, LOWER INPUT COSTS AND HIGHER YIELDS.

Increase your yields by making better use of your land with a Zimmatic GEOLateral irrigation system. Apply the correct amount of water at the right time uniformly – in every part of your field. Furrow irrigation systems fall short in this area, providing too much water in some areas and not enough in others. But this easy-to-use, economical and reliable hose-fed system can replace your wheel line or flood irrigation system for better results year after year.

Versatile Dependable Cart

- Pivoting lateral hose-fed with electrical pull cable or engine generator set
- Exclusive Zimmatic collector ring designed to eliminate water flow restrictions
- Four-wheel versatile common platform allowing for 720-foot (219 m) hose (d)
- Six-wheel high-traction platform allowing for 920-foot (280 m) hose (e)

Flexibility for your Field

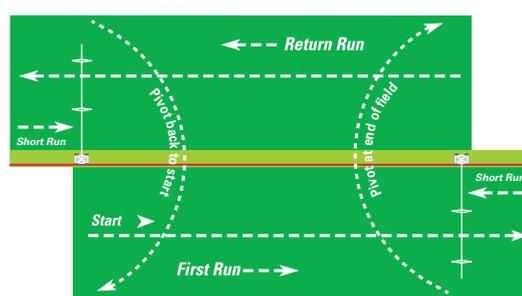
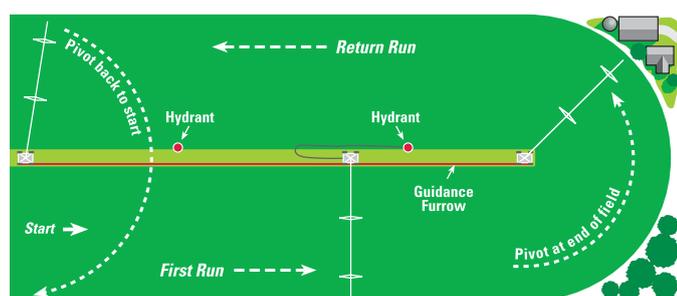
- Up to seven towers plus overhang equals a total distance of up to 1,341 feet (408 m) – for maximum field coverage (f)
- Able to irrigate multiple crops
- Zimmatic standard, medium and high clearance tower options to meet specific crop height needs
- Available pipe in 6 5/8-inch (16.8275 cm) or 8-inch (20.32 cm) diameter

Leading Control Technology

- Specially designed GrowSmart controls with multilingual and metric capabilities
- Informative display makes irrigation management easier than ever
- Manage the system from Web or phone with optional FieldNET controls
- Easily program water application rate by selecting irrigation amount
- Apply fertigation and chemigation using integrated accessory control

COMBINE THE ADVANTAGES OF PIVOT AND LATERAL SYSTEMS–

Maximize your field's production with up to 98% coverage and uniform water application on rectangular fields



Pivot can easily handle offset fields and adjacent fields utilizing its pivoting feature.



GrowSmart FieldBASIC Control Panel

SIMPLE, DEPENDABLE AND ECONOMICAL

Housed in a rugged, waterproof case, the FieldBASIC provides easy-to-use, reliable service under the toughest conditions.

- LED system indicators guide you through start-up and provide instant information
- Easily start, change direction and turn water supply on or off with intuitive pump and direction controls
- Solid-state percentage timer precisely controls speed
- Easy-to-read voltage monitor provides real-time power status

FieldBASIC Options

- Automatic shutdown
- Automatic reverse
- Automatic power restart
- Low-temperature shutdown
- Accessory interface
- Magnetic water meter for enhanced capabilities and increased regulatory compliance



For more information, visit www.growsmart.com.



GrowSmart FieldVISION Control Panel

USER-FRIENDLY. INTERNET-READY.

The GrowSmart FieldVISION control panel provides all of the information you need at a glance – with all of the advanced features you want to make irrigation easy and efficient.

FieldVISION features more powerful benefits than standard and basic controllers – and it's still extremely easy to use.

The Vision Zone graphic display provides vital pivot status information in just one glance. And because FieldVISION is internet-ready, you can add FieldSENTRY™ as a pre-installed option for instant wireless and online capabilities.

Additional Benefits

- Save time and labor by reducing trips to the field
- Informative status displays reduce service calls and downtime
- Includes multilingual and metric capabilities
- Modular with expandable options



A graphical backlit display provides effortless operation even at night



- 1 Vision Zone**
See the field boundary for your pivot and immediately know pivot location and proximity to boundaries or stops
- 2 Status report**
Informative display makes irrigation management easier than ever
- 3 Status indicators**
Quickly view your pivot's operational status
- 4 Function controls**
Stop the pivot, change direction, control water or an accessory, change the application rate, or set a programmable stop
- 5 Navigation controls**
Easily navigate menus using an interface similar to your cell phone or TV remotes

a



b



GrowSmart FieldBOSS Control Panel

SMART, INTUITIVE AND EXPANDABLE

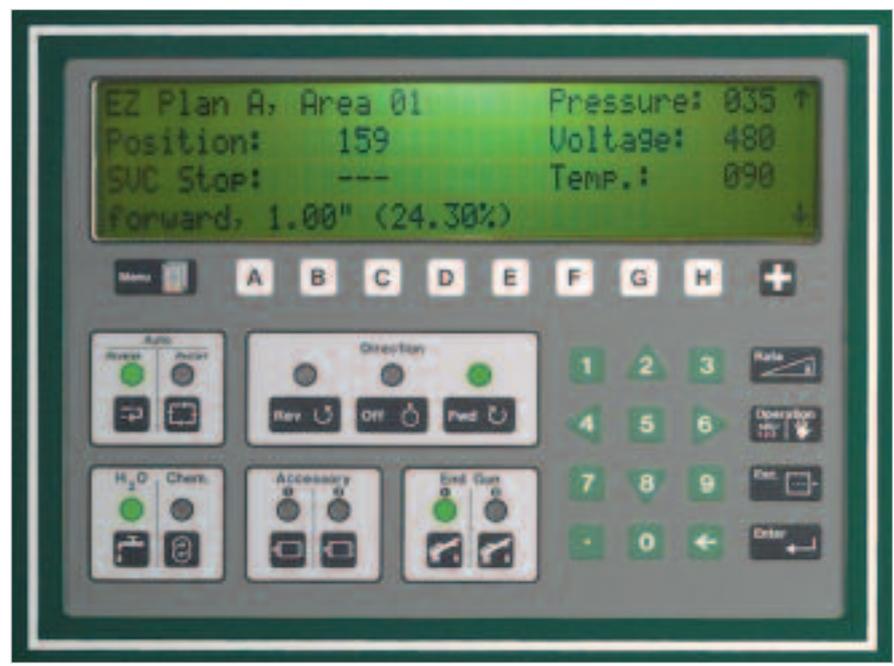
Depending on the options you choose, GrowSmart remote management products allow you to manage your irrigation systems from just about anywhere you have access to a computer, phone or radio.

- EZ Plan feature gives fast access to commonly used scheduling options
- Water delivery can be tailored to specific crop requirements
- Application rates can be adjusted to match soil water-holding capacity, reducing the chance of over-application
- Four accessory options allow more chemigation, fertigation and end gun controls
- Scheduling option allows for easy customization of irrigation programs for multiple crops, part circles, variable soil conditions or uneven terrain
- Self-diagnostic function uncovers problems and minimizes downtime
- Depending on use, the FieldBOSS panel can help you conserve energy, minimize leaching and reduce chemical and labor input

FieldBOSS Options

- **Magnetic water meter (a)** for enhanced capabilities and increased regulatory compliance
- **Rainfall collector (b)** allows shutdown due to operator-selected rainfall threshold
- **Wind speed/direction sensor** allows wind speed shutdowns to eliminate wasteful drift

- **Pressure transducer** allows automatic pressure shutdowns and warnings
- **Accessory interface** enables the integration of accessories such as fertilizer injection pumps or agitators



For more information, visit www.growsmart.com.



The GrowSmart GPS Controller

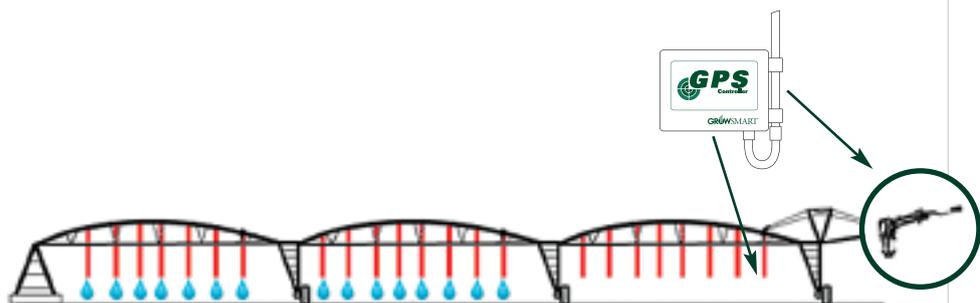
SAVE WATER AND CHEMICALS WITH PRECISE CONTROL

The GrowSmart GPS Controller uses the power of global positioning to identify the exact position of the controller in relation to the pivot point. This allows you to control water and fertilizer application through your end-guns or an entire bank of sprinklers – maintaining maximum control over all areas of your field.

GPS Controller Benefits

- Add acres to increase ROI
- Enhances any pivot system – regardless of brand
- Integrates with FieldBOSS and FieldVISION controllers – and Zimmatic FieldPLUS articulated pivots
- Keeps end-gun water off roads
- Stand-alone mode does not require an added computer panel
- Add more control options without the cost of additional span cable

By maintaining maximum control over all areas of your field, the GPS Controller keeps the important areas irrigated, while greatly reducing the amount of water used in zones that don't.



GPS Controller gives you precise control of end-guns or sprinklers, saving water, labor and chemicals.

FieldLink™ Pump Control

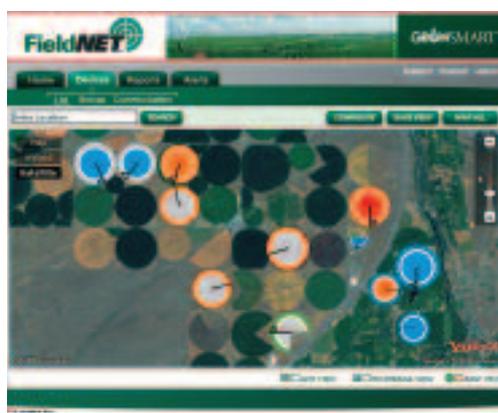
FieldLINK's wireless irrigation controls give you the power to start and stop pumps automatically, so you'll make fewer trips to your fields – and save on water and fuel. The FieldLINK Pump Control base unit communicates with up to 100 remote units located at pumps or valves, constantly monitoring the pump circuit – and making sure remote units remain up and running.

- Compact design installs in minutes and easily moves from pivot to pivot
- Control pumps, valves and more – anything that can interface with normally open/closed contacts
- Adjustable restart delay timer for power interruptions to prevent water hammer
- Add more units quickly without special manufacturer configurations





FIELDNET VISION ZONE



FIELDNET MAP VIEW



FIELDNET WATER USE

GrowSmart FieldNET™ Web-based Irrigation

THE POWER TO MANAGE ALL OF YOUR PIVOTS AT YOUR CONVENIENCE

Monitor and manage your pivots – *any pivot, anytime and anywhere.*

Any pivot.

You can monitor any pivot with FieldNET – no matter what brand it is. FieldNET builds a network between pivots, giving you full control and monitoring capabilities.

Anytime.

You'll receive real-time text message alerts to any cell phone, so you can stay informed on pivot status – day or night. And fewer trips to your field means substantial savings on fuel, labor and most importantly, time.

Anywhere.

FieldNET also gives you fast, easy access to your pivots from the Internet – so no matter where you are, it's easy to manage them. The user-friendly Web portal provides a quick view of every pivot, information on location, status and water usage.

Upgrade at your own pace

FieldNET gives you the option of upgrading from a FieldNET Advance service plan to a FieldNET Premier service plan – providing you monitoring and control choices designed for your needs.

Customer service

If you'd like more information on our products or services, a Lindsay customer care representative will be happy to answer any questions.



FieldNET is now available with Map View, which uses GPS coordinates to let you view all of your pivots simultaneously, providing a clear, comprehensive update on pivot status.



For more information, visit www.lindsayfieldnet.com.



Management System

	FieldNET ADVANCED		FieldNET PREMIER	
Basic Pivot Features	Monitor	Control	Monitor	Control
Pivot stop	✓	✓	✓	✓
Pivot start	✓	✓ ¹	✓	✓
Pivot direction	✓		✓	✓
Percent rate	✓		✓	✓
Application depth			✓	✓
Water on/off	✓		✓	✓
Accessory on/off	✓		✓	✓
Pivot position	✓ ²		✓ ³	✓
Power company load control			✓	
Pivot power on/off	✓		✓	
Integrated Sensor Features	Monitor / Alerts	Shutdown Control	Monitor / Alerts	Shutdown Control
Water pressure			✓	✓
Voltage			✓	✓
Water flow			✓	✓
Chemical flow			✓	✓
Temperature			✓	✓
Rainfall ⁴			✓	✓
Wind speed ⁴			✓	✓
Wind direction ⁴			✓	
Programmable Pivot Features	Advanced		Premier	
End-guns				✓
Service stops or stop-in-slots				✓
Automated Area Plans				✓
Soft barriers				✓
Enable/disable auto-start				✓
Auto-stop/auto-reverse				✓
Load management schedule ⁴				✓
Compatible pivot brands ⁵	Any		Any	
Compatible pivot controllers	Any		Any FieldBOSS FieldVISION AIMS Advance	

Two levels of pivot control

Choose FieldNET, a unique service that gives you a choice that best fits each individual pivot on your farm. Both FieldNET Advanced and FieldNET Premier provide a comprehensive array of monitoring features, so talk with your Zimmatic dealer to determine which option best suits your needs – and your farm.

- ¹ Requires start control kit.
- ² Advanced Plan pivot position is estimated – based on a calculation of direction, speed, and time.
- ³ Premier Plan pivot position is actual – based on an encoder position system or GPS sensor.
- ⁴ FieldBOSS and AIMS Advance controller feature only.
- ⁵ Electric driven pivots.



Comprehensive updates. Complete control.

FieldNET's Web portal provides all of the information you need to know to keep your pivots running smoothly.



Our commitment

By providing you with quality Zimmatic® products and GrowSmart™ technology, our ultimate goal is to give you the power of precision farming, while saving you time and money. With every new product we introduce and every advancement we make in irrigation technology, we remain committed to saving natural resources and improving resource management. It's a simple goal that will help your bottom line. . . and improve the lives of people everywhere.

**For more information visit www.zimmatic.com and www.growsmart.com
or talk to your Zimmatic dealer.**



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