Complete Irrigation Solutions
Irrigation.
One more way to consider us part of your crew.

We bring the same philosophy to irrigation as we do everything else. Working hand-in-hand with you to develop convenient, effective real-world solutions. Then, supporting you 24/7 with a team of professionals who take your success personally.
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Superior water conservation. Custom-built options.

From convenient control choices to smart water management, John Deere Golf irrigation represents a saner way to manage the most valuable system on the course.

Control options which revolve around you.

With Aurora, you’re the central. So no matter what your situation, we have the control system for you. From field-based to completely web-synced.

Components you can trust.

Our complete line of rotors, valves, retrofit parts and accessories meets the same high standards as everything else that wears the John Deere name.

The irrigation system you’ve been thirsting for.
Support online, and on site.
When your course is on the line, so are we. Our control systems allow remote diagnosis of service issues down to the individual solenoid.

Compatible with competitive systems.
Whether you have a complete renovation planned, or are just redoing a single hole, our irrigation components will easily integrate with the most popular systems. See your distributor for details.
Choose a conventional desktop or affordable web-based central.

With John Deere Golf irrigation, you can select a conventional full-featured desktop-PC based central. Or, if you don’t want to be chained to your desk, you can pick our eAurora Web Central option, which allows management of your irrigation system from any web-enabled device, and doesn’t require the purchase of a dedicated PC and expensive software.

With eAurora Web Central, you can log in on an iPhone®, Windows® Smartphone or any laptop, and program and monitor your course. User-friendly, logical menus and graphics make inputting data easy. Real-time ET-Adjusted irrigation schedules transmit to each controller in the network. And software upgrades and related programming are handled automatically – eliminating the time-consuming hassle of you having to do it yourself.
Take advantage of the industry’s only system that runs things from an internet-connected device, and doesn’t chain you to a costly pc in your office.

Our desktop system includes comprehensive management options and a user-friendly, easy-to-program interface.
So advanced, it’s easy to use.

This full-featured software makes complex management tasks easy, and allows you to take full advantage of the unique capabilities of our field controllers, like “to-the-second” programming and peer-to-peer networking (Peer-to-peer networking enables programming the entire course from any controller out on the course.)

FEATURES

High Performance
- Weather station monitoring for automatic ET-adjusting of irrigation schedules.
- Powerful water budgeting from 0–999%.
- Hardwire and radio communications can be used on same network.
- Self-monitoring feature finds open and shorted circuits, activates alarms and pagers, and shuts down automatically if necessary.
- Independent programming allows control of each station in any sequence, with multiple repeats and pauses.
- True two-way communication between central controls and satellites.
- Operates lighting, fountains, security gates, etc.
- English and metric units.
- Multilingual instructions including Spanish.

Easy To Use
- Windows-based graphical user interface displays landscape and irrigation plans on screen for real-time monitoring and control. Add plans via scanning or with AutoCAD.

Software Features
- Independent station control
- ET-based irrigation
- Percentage-based irrigation 0–999%
- ET management
- Dry run
- Real-time monitoring and control
- Report generation
- Alarm paging
- Station database
- Manufacturer rotor & nozzle database
- Site management
- Weather data utilization
- Precipitation data utilization
- Sensor data utilization
- Flow Graph™

- Cycle & soak
- English and metric
- Individually adjust station run time by percentage
## COMPUTER REQUIREMENTS

### Standard
- Intel Core 2 Duo Processor T7500 (2.2GHz, 4MB L2, 667MHz FSB)
- 2 GB PC2-5300 DDR2 SDRAM
- 667 MHz SODIMM Memory 1 DIMM
- 100 GB Hard Disk Drive, 7200rpm
- CD-RW/DVD-ROM 24x/24x/24x/8x Max Ultrabay Slim
- 15.4" WXGA
- Genuine Windows XP Professional
- Norton Anti-Virus™
- System Graphics: NVIDIA Quadro FX570M
- Card Reader: 4 in 1 Media Card Reader
- Wireless Cards: Thinkpad 11 a/b/g Wi-Fi Wireless LAN Mini-PC1e

### Premium
- Intel Core 2 Duo Processor E6850 (3.0GHz, 4MB L2, 3000MHz FSB)
- 4 GB PC2-5300 DDR2 SDRAM
- 667 MHz SODIMM Memory 1 DIMM
- 160 GB Hard Disk Drive, 7200rpm Serial ATA
- CD-RW/DVD-ROM 24x/24x/24x/8x Max Ultrabay Slim
- 15.4" WXGA
- Genuine Windows XP Professional
- Norton Anti-Virus™
- System Graphics: NVIDIA Quadro FX570M
- Card Reader: 4 in 1 Media Card Reader
- Wireless Cards: Thinkpad 11 a/b/g Wi-Fi Wireless LAN Mini-PC1e
- Integrated Video GMA3100
- Integrated Audio AD1882HD
- DVD Recordable SATA
- Networking: Integrated Intel Pro 1000T Gigabit
The ultimate in control system convenience. Now available for you to access anywhere in the world.

It’s the industry’s only truly web-enabled central control system. There’s no need to invest in a desktop pc – all data is securely backed by a triple web-based server and accessible through most internet-connected devices anywhere in the world.

High Performance
• eAurora accesses any new or existing Aurora network system with the addition of a single eAurora modem.
• Enjoy the same power and performance of your Aurora networks with no hardware modifications.
• Only one access point is required in each Aurora network.
• Hardwire, radio, fiber optic or Ethernet communications can be combined on the same network.
• Flexible programming operates lighting, fountains, security gates and locks, etc.
• Flow managed program capabilities.

Easy To Use
• eAurora requires no extensive backups; we handle all upgrades, support, maintenance and data storage.
• Upgrades are uploaded seamlessly; when you log on they are ready.
• Menus are user friendly and intuitive using graphical user interface.
• On-screen help menus provide user with detailed instructions for simple set-up and fast launch.
• Online troubleshooting to read alarms, events, and flow meters.

Cost Effective
• eAurora requires no expensive desktop software purchases or support.
• Eliminates need for dedicated irrigation computer and extended service plans.
• Abolishes time-consuming software upgrades and related programming.
• For seasonal users, access fees are waived during “off” months.

Weather-Based Irrigation Scheduling (ET)
• eAurora uses real-time weather data (ET) and transmits it to each controller in your network.
• Smart controller functions save water, time, and expense.
• Eliminates requirement to purchase a weather station or other weather services.
• Removes any vandalism and maintenance issues with weather stations and sensors.
• Irrigate using ET from installation of first controller.

Secure
• All programs and site data are stored in your personal and secure eAurora account; multi-user environment with multi-level passwords and access controls.
REMOTE ACCESS

• Any internet-capable computer or smartphone* anywhere in the world.
• eAurora is accessible from any Internet-capable computer anywhere in the world.
• All programs and site data are stored on our secure server and available 24/7.

• Remotely monitor sites — across the city, state, or world — from one location or an infinite number of locations.
• All programs and site data are stored in your personal and secure eAurora account.
• Multi-user environment with multi-level passwords and access controls.

* Windows Mobile and Internet Explorer browsers are supported. See your distributor for details.
Upgrade at any time to peer-to-peer networking, and have total control, from any controller on the course.

Aurora’s advanced software-based controllers have two exclusive capabilities no other controllers in the industry have.

First, they offer the ability to be upgraded at any time. So unlike competitive systems, if you want to add features, you simply upload firmware, instead of having to physically replace the old controller.

Secondly, when you upgrade, you greatly increase the number of programs possible (to 128), and enable a unique feature we call “peer-to-peer networking.”

With this expanded information sharing, each and every controller can communicate with and share data with every other controller on the course.

On a practical level, this means you can go to any controller and make and save changes to any other controller’s programs.

Our base configuration ALT controllers offer great programming flexibility – up to 32 independent programs per day, powerful water budgeting (from 0-999%) and run times to the second, which save water and energy costs.

All systems come standard with data/communication ports. Besides adding handheld radios and sensors, these ports can also be used for wireless links to hard-to-reach holes like across a water hazard.

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Standard on every Aurora controller

**Superior lightning protection.** Every Aurora Field Controller comes standard with lightning protection on the incoming power main and field wiring.

**“To-the-second” programming.** Programming rotor run times to-the-second, instead of to-the-minute enables significant water and power cost savings.

**Available Peer-to-Peer networking.** Only Aurora controllers can be set up to control the entire system from any controller on the course, at any time.

**Hybrid conventional/decoder capability.** The Aurora system is the only one which offers the capability to activate standard and decoder modules in one individual controller.

**Upgrade just by uploading.** Unlike competitive systems, if you want to add features, you simply upload firmware, instead of having to physically replace the old controller.
## Aurora controller models feature comparison

<table>
<thead>
<tr>
<th>Feature</th>
<th>AUR</th>
<th>ALT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer-to-peer enabled</td>
<td>Yes</td>
<td>Can be upgraded</td>
</tr>
<tr>
<td>Keypad</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Programs per controller</td>
<td>128</td>
<td>32</td>
</tr>
<tr>
<td>Sensor log entries</td>
<td>90</td>
<td>7</td>
</tr>
<tr>
<td># of pumpmaster valves starts (normally closed)</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td># of pumpmaster valves starts (normally open)</td>
<td>2</td>
<td>N/A</td>
</tr>
<tr>
<td>Local sensors</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Remote sensors</td>
<td>4 per controller</td>
<td>N/A</td>
</tr>
<tr>
<td>Phone modem support</td>
<td>Yes</td>
<td>Can be upgraded</td>
</tr>
</tbody>
</table>
AURORA® “AUR” FIELD CONTROLLER

Peer-to-peer enabled.
Besides offering enormous programming flexibility, our top-of-the-line controller can act as a central controller.

High Performance
• Built-in micro processor, patented firmware and true two-way communication allows Aurora to operate as a stand-alone controller within a network, as a part of any other controller in a network or as a central controller within a network.
• Monitors, stores and shares data from multiple sensors across the network or Internet.
• Uses hardwire, telephone and radio communications on the same network.
• Handheld radios and cell phones control field controller/satellites without a central computer or software.
• 128 independent programs per day allow calendar control of each station in any sequence, with multiple repeats and pauses.
• Powerful water budgeting from 0–999%.
• Self-monitoring feature finds open and shorted circuits and activates alarms, pagers or via text messaging.
• Pedestal accommodates 8–96 stations with 8 or 16 valve modules.
• Superior protection from lightning for all stations with Premium selection.
• Operates conventional valve output and decoder modules.
• Operates lighting, fountains, security gates, etc. with the same controller.

Easy To Use
• Multilingual instructions including Spanish.
• Bold LCD with step-by-step menus.
• Operates from a central computer or a variety of remote devices.

Cost Effective
• Retrofits to most Buckner®, Hunter, Rain Bird®, Thompson® and Toro® locations.
• Compatible with a central computer and eAurora® software.
• Hardwire-ready configuration allows for quick and inexpensive installation.
• Intelli-Sat™ radio technology is already FCC narrowband compliant.
• Digital ready: integrates new technologies without replacing equipment.
• Easy field updates to FCC & spread spectrum compliant radio technology.
• Modular design increases life span.
• High speed digital tech compliant.
• Compatible with the complete line of Aurora sensor products.
• Forward & backward compatible.

SPECIFICATIONS

Dimensions
Plastic Pedestal:
16 in. W × 45 in. H × 11⅝ in. D
(406 mm W × 1143 mm H × 305 mm D)

Electrical Specifications
Input Power:
115 VAC, 60 Hz
0.20 amps @ 115 VAC, 60 Hz (no load)
0.50 amps @ 115 VAC, 60 Hz (max. load)
220 VAC, 60 Hz
0.11 amps @ 220 VAC, 60 Hz (no load)
0.27 amps @ 220 VAC, 60 Hz (max. load)

Station Output Power: 24 VAC (120 VA) total
Station Draw: 14 stations or 3.2 amps

OPTIONS
• 8- or 16-station valve module.
• Decoder expansion module.
• Stand-alone or centrally controlled fertigation and pump stations.
• Primary surge protection.
• Two-wire decoders with satellite integration.
• Grounding kits for advanced surge protection.
• 220 volt.
• Flow meter.
• Remote control with VHF handheld and off-the-shelf radios.
• Twisted pair cable, fiber optic cable, telephone via modem, VHF and two-way radio, and spread-spectrum two-way radio communications.
Upgradeable standard controller.
Handy keypad allows custom programming to run any station, in any order, with multiple start times, in cycle and soak times and water budgeting between 0 and 999%.

High Performance
- Built-in micro processor, patented firmware and true two-way communication allows Aurora to operate as a stand-alone controller or as a controller within a network.
- Modular design allows for maximum flexibility for configuring for differing site conditions & applications.
- Hardwire, telephone and radio communications can be used on same network.
- Web-enabled PDAs, cell phones and two-way radios can control field satellites without a central computer or software (with eAurora).
- 32 independent programs per day allow calendar control of each station in any sequence, with multiple repeats and pauses.
- Upload Event, Alarm & Status Logs to manage operation and field activity.
- Powerful water budgeting from 0–999%.
- Operates conventional valve output and decoder modules in the same controller.
- Self-monitoring feature finds open and shorted circuits, activates alarms and pagers, and shuts down automatically if necessary.
- Pedestal accommodates 8–96 stations & multiple sensor inputs.
- Superior protection from lightning for all stations with Premium selection.
- Operates pumps, filter banks, aeration units, lighting, fountains, etc.

Easy To Use
- Operates from a central computer or a variety of remote devices.
- Maximum flexibility with independent station control.
- Multilingual instructions including Spanish.
- Bold LCD with step-by-step menus.

Cost Effective
- Hardwire-ready configuration for quick and inexpensive replacement installation of Buckner®, Hunter, Rain Bird® or Toro® controllers.
- Easy field upgrades to FCC Spread Spectrum compliant radio technology for expansion projects.
- Modular design increases life span without the risk of early product obsolescence.
- High-speed digital technology compliant; no need to replace equipment as new technologies are developed.
- Compatible with complete Aurora family of products.
- Postpones or eliminates the purchase of a central computer and software.
- Forward- and backward-compatible satellites, with automated in-field updates.
- Radio-ready configuration allows for quick and inexpensive installation.

SPECIFICATIONS

Dimensions
Plastic Pedestal:
16 in. W × 45 in. H × 11½ in. D
(406 mm W × 1143 mm H × 305 mm D)

Electrical Specifications
Input Power:
115 VAC, 60 Hz
0.20 amps @ 115 VAC, 60 Hz (no load)
0.50 amps @ 115 VAC, 60 Hz (max. load)
220 VAC, 60 Hz
0.11 amps @ 220 VAC, 60 Hz (no load)
0.27 amps @ 220 VAC, 60 Hz (max. load)

Station Output Power: 24 VAC (120 VA) total
Station Draw: 14 stations or 3.2 amps

OPTIONS
- 8- or 16-station valve module.
- Decoder expansion module.
- Stand-alone or centrally controlled fertigation and pump stations.
- Primary surge protection.
- Two-wire decoders with satellite integration.
- Grounding kits for advanced surge protection.
- 220 volt.
- Agronomic sensors [oxygen, moisture, temperature, pH & conductivity, etc.].
- Remote control with PDAs, VHF handheld, mobile phones, etc.
- Aurora Interface Unit (AIU) provides a remote link to the field enabling programming from your office.
**EXAMPLE CONFIGURATIONS**

### John Deere AUR controllers

- Aurora Desktop Central (optional)
- AIU (optional, hardwire or wireless)
- Data from sensors connected to any AUR controller can be shared with whole network.
- eAurora Web Central (optional)

No computer necessary for maintenance radio and cell phone remote communications.

### John Deere ALT controllers

- Aurora Desktop Central (optional)
- AIU (optional, hardwire or wireless)
- Data from sensors must go to AIU or be connected locally to one controller. Not shared between controllers.
- eAurora Web Central (optional)

No computer necessary for maintenance radio and cell phone remote communications. AIU required for cell phone.
Upgradeable wall-mount controller.

Handy keypad allows custom programming to run any station, in any order, with multiple start times, in cycle and soak times and water budgeting between 0 and 999%.

High Performance
- Built-in micro processor and patented firmware providing true two-way communication allow the Aurora Interface to operate as a central controller within a network using a function called Intraccontrol. Intraccontrol is the ability for any controller within a network to program any other controller in the network and provide instantaneous confirmation that the program was acknowledged and received. Intraccontrol also has the ability to read alarms, flow or any of the many sensors within other controllers in the network. Intraccontrol has the ability to send out alarm notices via pager, text messaging or directly to your cell phone.
- Monitors, stores and shares data from multiple sensors across the network or Internet.
- Uses hardwire, telephone and radio communications on the same network.
- Handheld radios and cell phones control field controller/satellites without a central computer or software.
- Up to 128 independent programs per day allow calendar control of each station in any sequence, with multiple repeats and pauses.
- Powerful water budgeting from 0–999%.
- Self-monitoring feature finds open and shorted circuits and activates alarms, pagers or via text messaging.

Easy To Use
- Multilingual instructions including Spanish, French, Dutch, German and others.
- Bold backlit LCD display with step-by-step menus.

Cost Effective
- May be used with or without a central desktop computer or may be used with eAurora via the Internet.
- Hardwire-ready configuration allows for quick and inexpensive installation.
- Intelli-Sat™ radio technology is already FCC narrowband compliant.
- Digital ready, integrates new technologies without replacing equipment.

OPTIONS
- Forward and backward compatible with all earlier or future firmware versions.
- Additional station configurations available.
- Unit required for Aurora Professional and eAurora central control systems with communication networks.

SPECIFICATIONS

Dimensions
Stainless-Steel Wall Mount:
14 in. W × 13 in. H × 5 in. D
(355 mm W × 330 mm H × 127 mm D)

Electrical Specifications
Input Power:
115 VAC, 60 Hz
0.20 amps @ 115 VAC, 60 Hz (no load)
0.50 amps @ 115 VAC, 60 Hz (max. load)
220 VAC, 60 Hz
0.11 amps @ 220 VAC, 60 Hz (no load)
0.27 amps @ 220 VAC, 60 Hz (max. load)

HOW TO ORDER/SPECIFY

Model
AIU = Aurora Interface Unit

Enclosure Type
DLWY = Wall-Mount Stainless-Steel Enclosure

Package
STD = 2-hardwire lines, 1-handheld remote port and 1-network radio port
MID = Same as STD with 1-additional landline modem port

Communication
H = Hardwire
T = Telephone
S = Spread-spectrum radio (two-way)
E = Ethernet network device

Remote
0 = Hardwire
1 = VHF Remote
2 = Telephone (land line)
3 = Cellular GU-Modem (Cingular and T-Mobile)
4 = GE-Modem (GSM Networks Europe)
5 = VU-Modem (Verizon Networks)
6 = Spread Spectrum Networks

Example: An Aurora Interface Unit in a wall-mount, stainless-steel enclosure, with hardwire network communication package and cellular remote communication:
AIU-DLWY-100-MID-H-3

Note: Radio networks require a Radio Site Survey to be performed to determine acceptable performance & license applications if required.
AURORA® DECODER CONTROLLER

Break the code on cost.

Aurora Decoder Controllers use technology widely accepted internationally to reduce the need for hardwire between stations. Unlike conventionally activated stations, where a wire is linked to each individual rotor, a decoder-based system requires only one wire to run around the entire hole or zone. This greatly reduces the wire, digging and turf disruption of installing rotors. Decoders are then attached to this one wire, and they in turn activate individual rotors or wires operating blocks of rotors when a coded signal is sent from the field controller. Ask your John Deere Golf distributor whether a decoder-based system is right for you. Depending on the size of your course, using one could result in significant cost savings.

- The Aurora Decoder and Decoder Controller offers an affordable alternative to central-computer controlled golf course decoder systems.
- The controller is powerful enough to function as a stand-alone controller or as part of a satellite network without a central computer for unprecedented control and unparalleled value.
- Operates with a handheld remote control or as part of an Aurora network.
- Decoders operate single, dual and quad stations, allowing for one-, two- or, four-solenoid independent programming operation.
- Pedestal accommodates 2x125 station modules.
- Wall mount accommodates 2x125 station modules.
- Superior protection from lightning for all modules.
- Available in either AUR “Peer to Peer” or ALT “Standard” network platform.

High Performance
- Increase flexibility and confidence with CE, CSA listed, wall mount/pedestal, modular controller.
- Improve field aesthetics and reduce costs with buried in-field decoders.
- Protect against the elements with completely encapsulated electronic components.
- Efficient utilization of field wiring uses less than conventional satellite systems.
- Simple two-wire system can be spliced adding more stations during installation.
- User ID addressing system permits custom numbering, eliminating confusion associated with fixed-ID based addressing systems.
- Operates as a stand-alone controller or as a central computer-controlled satellite.
- In-field control allows for maximum control, without the need for control panels or plug-in devices.
- Central-to-satellite communications via hardware; telephone and radio.
- Up to 128 independent programs per day allow calendar control of each station in any sequence, with multiple repeats and pauses.
- Water budgeting from 0–999%.
- Self-monitoring feature finds open and shorted circuits, activates alarms and shuts down automatically if necessary.

Cost Effective
- Simple installation requirements and the absence of protective enclosures keep the cost of installation and maintenance low.
- Conventional satellite controller installations generally use large quantities of field station wire.
- Decoders utilize a two-way wire path connecting the decoders to solenoids.
- FCC-narrowband and digital compliant eliminates need for expensive upgrades.
- Remotes offer maximum in-the-field control without the expense of a central computer, thus making decoder relatively inexpensive to maintain and operate.

SPECIFICATIONS

Dimensions
Plastic Pedestal:
16 in. W × 45 in. H × 11 ¾ in. D
(406 mm W × 1143 mm H × 305 mm D)

Electrical Specifications
Input Power:
115 VAC, 60 Hz
0.20 amps @ 115 VAC, 60 Hz (no load)
0.50 amps @ 115 VAC, 60 Hz (max. load)
220 VAC, 60 Hz
0.11 amps @ 220 VAC, 60 Hz (no load)
0.27 amps @ 220 VAC, 60 Hz (max. load)

Station Output Power: 24 VAC (120 VA) total
Station Draw: 14 stations or 3.2 amps

OPTIONS
- 125-decoder station decoder modulator.
- Alarm pager (requires telephone modem).
- Primary surge protection.
- Grounding kits for advanced surge protection.
- Flow meter.
- Remote control with VHF handheld.
- Twisted pair cable, telephone via modem, VHF and UHF two-way radio, and spread-spectrum two-way radio communications.
Maximum communication flexibility. Minimum hassle.

Aurora controllers offer two standard data connection ports. So it’s easy to add wireless links in places hardwiring is impractical, like across a water hazard or road. You can opt for spread spectrum radio, to virtually eliminate the possibility of interference. And our AUR controllers enable linking up to four remote sensors each.

**Hardwire [Standard]**
All Aurora controllers are configured to accepted standard hardwire options such as 18-gauge stranded wire and fiber optic wire.

**DTMF Maintenance Radio (VHF) [Standard]**
The ability to program Aurora Controllers using a maintenance radio is a standard feature – not a separately priced option.

**Spread Spectrum, US (900 MHz), and INTL (2.4 GHz)**
System employs frequency hopping to eliminate potential interference on any particular frequency. This digital spread spectrum is also available at the higher 2.4 GHz frequency typically used internationally.

**Available hardwire modems**
Choose either an ethernet or telephone landline modem.

**Variety of cellular modems available**
- GSM for SMS Applications
- GSM for eApplications
- CDMA for eApplications

**Sensor ports**
AUR controllers can be linked to four sensors, and transmit this data directly to other controllers, or the central control.

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[Image of electronic components]
Trust them to make every drop count

Ultra-reliable, efficient and affordable, John Deere Golf water delivery components can deliver a consistent pattern of quality anywhere on your course.

Evaluated by the Center for Irrigation Testing. All John Deere rotors undergo testing by the Center for Irrigation Testing, internationally recognized as an independent testing laboratory.

Meet ASAE standards, 1000’s in service. Over 100,000 rotors are installed and working at courses all over the world. And they all meet ASAE standard S398.1.

Internal replacements available for competitive systems. Our internal replacement assemblies not only match the flow-rate and spray pattern, they also meet or exceed the service life specs of the parts they’re replacing.

Three-year limited warranty.

NEW MC50 Series Re-engineered for 2010 with:

1. Click-Set Design
   - Continuous full- or part-circle in one rotor
   - Adjustable part-circle pattern in 5° increments

2. Gear Drive
   - Water lubricated gear motor – oil-free, quiet, reliable performance
   - Heavy-duty gear teeth – for consistent performance and debris tolerance

3. Bypass Valve
   - Regulates pressure for consistent performance regardless of pressure variations
   - Protects internal from damaging high-pressure situations during system blow-out and charging

4. Redesigned bottom valve internals
   - Ensures better performance and reliability

5. Cylindrical Filter
   - Self-flushing, minimizes debris and contaminants flowing into valve

6. Rock-Screen Design
   - Top-serviceable, better flow characteristics for better valve performance
   - Cage design for higher strength
Full-line of reliable rotors:

**MC70 Series**  
Longer range, full-circle and part-circle, stainless-steel-riser rotors for your course.

**MC50 Series**  
Shorter range, full-circle and part-circle, stainless-steel-riser rotors for the course.

**X-Series**  
Revolutionary technology offers dual adjustable patterns.

**MC05/MC15 Series**  
Shorter range block rotors ideal for landscaped areas, like around the clubhouse.

**MC25/MC35/MC45 Series**  
Longer range block rotors perfect for landscaped areas.

Precise valves, hose ends, and swivel ells.

**Quantum valves**  
Strong, fast and debris-resistant.

**Quick coupling valves and keys**  
Use Acme® threads for slow and steady flow control instead of immediate on/off.

**Hose ends**  
Precise application patterns, guaranteed.

**Swivel ells**  
Quality brass construction.
MC70 SERIES SPRINKLER HEADS

Stay true, no matter which way the wind blows.

Even in blustery conditions, the 70 Series Rotors offer an excellent blend of high performance and ease. The series has a built-in rear nozzle for improved coverage in gusty conditions. Its unique design eliminates blow-by and the part-circle model features a field-adjustable arc that matches the spray pattern to the turf area. A stainless-steel riser resists damage and pops up to a full three inches to clear taller grasses. Dual-direction flushing protects internals from debris. All internal components are serviceable from the rotor’s top. And the interchangeable nozzles deliver superior precipitation rates in a variety of radii and flows.

High Performance

• A full 3-inch pop-up clears tall turfgrass for even coverage.
• Rolled-over flange head keeps turfgrass clear of riser and nozzle.
• Stainless-steel riser resists damage and vandalism.
• Special design eliminates blow-by and reduces pressure loss to improve system performance.
• Dual-direction flushing protects internals from debris and ensures positive pop-up/down.
• Uniform coverage with square or triangular spacing.
• Full-circle and adjustable patterns for maximum flexibility.
• Easy arc adjustment in the field without any tools.
• AUTO/OFF/ON selector for electric and hydraulic VIH rotors.
• Heavy-duty spring assures positive retraction.
• Additional nozzles available to customize application.
• Three-year limited warranty.

SPECIFICATIONS

Models:
Full-Circle:
MC70E: Electric Valve-in-Head
MC70C: Check Valve-in-Head
Part-Circle:
MC75E: Electric Valve-in-Head
MC75C: Check Valve-in-Head

Arc:
MC70-Series: Full Circle, 360°
MC75-Series: Part-Circle, 35° to 360°

Maximum Inlet Pressure:
MC70E and MC75E: 150 psi (10.3 bar)
MC70C and MC75C: 150 psi (10.3 bar)

Pressure Regulation Range:
60 to 90 psi (4.1 to 6.2 bar)

Factory Pressure Settings:
MC70E and MC75E available in 60, 70, 80, 90 psi

Standard Factory Setting:
80 psi (5.5 bar)

Rotation Time:
MC70-Series: 360° in 150 seconds (nominally)
MC75-Series: 180° in 75 seconds (nominally)

Inlet Threads:
1¼” ACME female threaded
1½” NPT female threaded
1½” BSP female threaded*
*Standard Factory Threads

Check:
MC70C and MC75C Series: 15’ (4.6 m) elevation

Nozzle Trajectory: 25°

Dimensions:
Body Height: 10.75” (27.3 cm)
Top Diameter: 7.50” (19.1 cm)
Pop-Up Height: 3.00” (7.6 cm)

Riser:
Stainless Steel

Solenoid:
24 VAC 50/60 Hz
Inrush Amps: 0.30
Holding Amps: 0.20
**HOW TO ORDER/SPECIFY**

### MC70-Series Full-Circle Golf Rotors

<table>
<thead>
<tr>
<th>Model</th>
<th>Valve Type</th>
<th>Nozzle</th>
<th>Base Pressure (psi)</th>
<th>Thread Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC70 = Full-Circle Rotor</td>
<td>E = Electric Valve-in-Head</td>
<td>37 = #37-Red</td>
<td>60 = 60 psi (4.1 bar)</td>
<td>A = ACME (1¼)</td>
</tr>
<tr>
<td></td>
<td>C = Check Valve-in-Head</td>
<td>40 = #40-Brown</td>
<td>70 = 70 psi (4.8 bar)</td>
<td>B = BSP (1½)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45 = #45-Green</td>
<td>80 = 80 psi (5.5 bar)</td>
<td>N = NPT (1½)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 = #50-Black</td>
<td>90 = 90 psi (6.2 bar)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>57 = #57-Blue</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Base Pressure setting is ONLY used on E types [Electric Valve-in-Head]; it is omitted for C types.
2. Highlighted boxes (■) indicate standard factory setting.

Examples:
(a) 70-Series, Full-Circle, Electric Valve-in-Head, #50-Black Nozzle, 80 psi (5.5 bar) pressure setting, BSP connection. Final Part No. would be: MC70E5080B
(b) 70-Series, Part-Circle, Check Valve-in-Head, #32-Yellow Nozzle, BSP connection. Final Part No. would be: MC75C32B

### PERFORMANCE DATA

#### MC70-Series Full Circle Sprinkler Performance Data (UK)

<table>
<thead>
<tr>
<th>Base Pressure (psi)</th>
<th>#37 RED</th>
<th>#40 BROWN</th>
<th>#45 GREEN</th>
<th>#50 BLACK</th>
<th>#57 BLUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>57.6</td>
<td>27.6</td>
<td>37.5</td>
<td>78.9</td>
<td>89.8</td>
</tr>
<tr>
<td>70</td>
<td>73.0</td>
<td>30.0</td>
<td>32.0</td>
<td>87.0</td>
<td>78.9</td>
</tr>
<tr>
<td>80</td>
<td>77.9</td>
<td>39.9</td>
<td>42.0</td>
<td>95.0</td>
<td>89.8</td>
</tr>
<tr>
<td>90</td>
<td>73.0</td>
<td>30.0</td>
<td>35.4</td>
<td>83.0</td>
<td>94.9</td>
</tr>
</tbody>
</table>

#### MC70-Series Full Circle Sprinkler Performance Data (Metric)

<table>
<thead>
<tr>
<th>Base Pressure (bars)</th>
<th>#37 RED</th>
<th>#40 BROWN</th>
<th>#45 GREEN</th>
<th>#50 BLACK</th>
<th>#57 BLUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>32.4</td>
<td>2.3</td>
<td>2.7</td>
<td>20.4</td>
<td>22.4</td>
</tr>
<tr>
<td>5.5</td>
<td>32.4</td>
<td>3.0</td>
<td>3.2</td>
<td>25.8</td>
<td>27.9</td>
</tr>
<tr>
<td>6.2</td>
<td>22.2</td>
<td>2.3</td>
<td>2.7</td>
<td>25.2</td>
<td>27.9</td>
</tr>
</tbody>
</table>

#### MC70-Series Part Circle Sprinkler Performance Data (UK)

<table>
<thead>
<tr>
<th>Base Pressure (psi)</th>
<th>#32 YELLOW</th>
<th>#36 GREY</th>
<th>#41 ORANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>20.4</td>
<td>1.7</td>
<td>12.1</td>
</tr>
<tr>
<td>70</td>
<td>21.0</td>
<td>1.8</td>
<td>12.4</td>
</tr>
<tr>
<td>80</td>
<td>21.0</td>
<td>2.0</td>
<td>12.6</td>
</tr>
<tr>
<td>90</td>
<td>21.6</td>
<td>2.1</td>
<td>12.6</td>
</tr>
</tbody>
</table>

#### MC70-Series Part Circle Sprinkler Performance Data (Metric)

<table>
<thead>
<tr>
<th>Base Pressure (bars)</th>
<th>#32 YELLOW</th>
<th>#36 GREY</th>
<th>#41 ORANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>20.4</td>
<td>1.7</td>
<td>12.1</td>
</tr>
<tr>
<td>4.8</td>
<td>21.0</td>
<td>1.8</td>
<td>12.4</td>
</tr>
<tr>
<td>5.5</td>
<td>21.0</td>
<td>2.0</td>
<td>12.6</td>
</tr>
<tr>
<td>6.2</td>
<td>21.6</td>
<td>2.1</td>
<td>12.6</td>
</tr>
</tbody>
</table>

Note all data is current at the time of printing & subject to change. Please check with the manufacturer for updated values before specifying. All nozzles were tested at a Base Pressure 10 psi above Regulated Pressure. P.R. = Precipitation rate, depending on whether the sprinkler heads are laid out in a square ■ or triangle ▲ format.
MC50 SERIES SPRINKLER HEADS

High Performance
- A full 4-inch pop-up clears tall turfgrass for even coverage.
- Rolled-over flange keeps turfgrass clear of riser and nozzle.
- Stainless-steel riser resists damage and vandalism.
- Tough, industrial-grade plastic case stands up to punishment.
- Special design eliminates blow-by and reduces pressure loss to improve system performance.
- Dual-direction flushing protects internals from debris and ensures positive pop-up/down.
- Uniform coverage with square or triangular spacing.
- Full-circle and adjustable patterns for maximum flexibility.
- Easy arc adjustment in the field without any tools.
- Nozzle tree offers a variety of fully interchangeable nozzles.
- Heavy-duty spring assures positive retraction.
- Additional nozzles available to customize application.
- Compact cartridge design allows for quick and easy repair.
- Quicklock® design allows internals to be serviced from the rotor’s top.
- AUTO/OFF/ON selector on electric and hydraulic VIH models.
- Three-year limited warranty.

Bottom valve ensures even better performance and reliability. Cylindrical filter is self-flushing and minimizes contaminants flowing into valve. Rock screen is now a cage design for higher strength.

Now redesigned with a new click-set design, more rugged gear drive, a bypass valve for more consistent performance regardless of pressure variations, and better protection during high-pressure situations.

Redesigned, re-engineered.

SPECIFICATIONS

Models:
- Full-Circle:
  - MC50E: Electric Valve-in-Head
  - MC50C: Check Valve-in-Head
- Part-Circle:
  - MC55E: Electric Valve-in-Head
  - MC55C: Check Valve-in-Head

Arc:
- MC50-Series: Full-Circle, 360°
- MC55-Series: Part-Circle, 35° to 360°

Rotation Time:
- MC50-Series: 360° in 150 seconds (nominally)
- MC55-Series: 180° in 75 seconds (nominally)

Inlet Threads:
- 1” ACME female threaded
- 1” NPT female threaded
- 1” BSP female threaded*
* Standard Factory Threads

Pressure Regulation Range:
- 60 to 80 psi (4.1 to 5.5 bar)

Factory Pressure Settings:
- MC50E and MC55E available in 60, 70, 80 psi

Standard Factory Setting:
- 70 psi (4.8 bar)

Maximum Inlet Pressure:
- MC50E and MC55E: 150 psi (10.3 bar)
- MC50C and MC55C: 150 psi (10.3 bar)

Check:
- MC50C and MC55C Series: 15’ (4.6 m) elevation

Nozzle Trajectory:
- 25°

Dimensions:
- Body Height: 9.75” (24.7 cm)
- Top Diameter: 6.50” (16.5 cm)
- Pop-Up Height: 4.00” (10.2 cm)

Riser: Stainless Steel

Solenoid:
- 24 VAC 50/60 Hz
- Inrush Amps: 0.30
- Holding Amps: 0.20

Now redesigned with a new click-set design, more rugged gear drive, a bypass valve for more consistent performance regardless of pressure variations, and better protection during high-pressure situations.

High Performance
- A full 4-inch pop-up clears tall turfgrass for even coverage.
- Rolled-over flange keeps turfgrass clear of riser and nozzle.
- Stainless-steel riser resists damage and vandalism.
- Tough, industrial-grade plastic case stands up to punishment.
- Special design eliminates blow-by and reduces pressure loss to improve system performance.
- Dual-direction flushing protects internals from debris and ensures positive pop-up/down.
- Uniform coverage with square or triangular spacing.
- Full-circle and adjustable patterns for maximum flexibility.
- Easy arc adjustment in the field without any tools.
- Nozzle tree offers a variety of fully interchangeable nozzles.
- Heavy-duty spring assures positive retraction.
- Additional nozzles available to customize application.
- Compact cartridge design allows for quick and easy repair.
- Quicklock® design allows internals to be serviced from the rotor’s top.
- AUTO/OFF/ON selector on electric and hydraulic VIH models.
- Three-year limited warranty.

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Now redesigned with a new click-set design, more rugged gear drive, a bypass valve for more consistent performance regardless of pressure variations, and better protection during high-pressure situations.

Redesigned, re-engineered.

SPECIFICATIONS

Models:
- Full-Circle:
  - MC50E: Electric Valve-in-Head
  - MC50C: Check Valve-in-Head
- Part-Circle:
  - MC55E: Electric Valve-in-Head
  - MC55C: Check Valve-in-Head

Arc:
- MC50-Series: Full-Circle, 360°
- MC55-Series: Part-Circle, 35° to 360°

Rotation Time:
- MC50-Series: 360° in 150 seconds (nominally)
- MC55-Series: 180° in 75 seconds (nominally)

Inlet Threads:
- 1” ACME female threaded
- 1” NPT female threaded
- 1” BSP female threaded*
* Standard Factory Threads

Pressure Regulation Range:
- 60 to 80 psi (4.1 to 5.5 bar)

Factory Pressure Settings:
- MC50E and MC55E available in 60, 70, 80 psi

Standard Factory Setting:
- 70 psi (4.8 bar)

Maximum Inlet Pressure:
- MC50E and MC55E: 150 psi (10.3 bar)
- MC50C and MC55C: 150 psi (10.3 bar)

Check:
- MC50C and MC55C Series: 15’ (4.6 m) elevation

Nozzle Trajectory:
- 25°

Dimensions:
- Body Height: 9.75” (24.7 cm)
- Top Diameter: 6.50” (16.5 cm)
- Pop-Up Height: 4.00” (10.2 cm)

Riser: Stainless Steel

Solenoid:
- 24 VAC 50/60 Hz
- Inrush Amps: 0.30
- Holding Amps: 0.20
### HOW TO ORDER/SPECIFY

**MC50-Series Golf Rotors Medium Range**

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
<th>Nozzle</th>
<th>Base Pressure</th>
<th>Thread Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC50 = 1&quot; Full-Circle Rotor</td>
<td>E = Electric Valve-in-Head</td>
<td>#08-Black</td>
<td>60 = 60 psi (4.1 bar)</td>
<td>A = ACME</td>
</tr>
<tr>
<td>MC55 = 1&quot; Part-Circle Rotor</td>
<td>C = Check Valve-in-Head</td>
<td>#12-Grey</td>
<td>70 = 70 psi (4.8 bar)</td>
<td>B = BSP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>#14-Yellow</td>
<td>80 = 80 psi (5.5 bar)</td>
<td>N = NPT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>#16-Orange</td>
<td>90 = 90 psi (6.2 bar)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>#18-Brown</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>#19-Red</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>#25-Blue</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>#28-Green</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Base Pressure setting is ONLY used on E types [Electric Valve-in-Head]; it is omitted for C types. (2) Highlighted boxes (■) indicate standard factory setting.
2. Example: 50-Series, Full-Circle, Electric Valve-in-Head, #25-Blue Nozzle, 70 psi (4.8 bar) pressure setting, BSP thread type. Final Part No. would be: MC50E2570B

### PERFORMANCE DATA

**MC50 Series Full Circle Sprinkler Performance data (UK)**

<table>
<thead>
<tr>
<th>Base Pressure [psi]</th>
<th>#08 BLACK</th>
<th>#12 GREY</th>
<th>#14 YELLOW</th>
<th>#16 ORANGE</th>
<th>#18 BROWN</th>
<th>#19 RED</th>
<th>#25 BLUE</th>
<th>#28 GREEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>3.7</td>
<td>5.6</td>
<td>7.5</td>
<td>9.2</td>
<td>11.2</td>
<td>14.0</td>
<td>16.8</td>
<td>17.6</td>
</tr>
<tr>
<td></td>
<td>0.56</td>
<td>0.84</td>
<td>1.17</td>
<td>1.50</td>
<td>1.90</td>
<td>2.37</td>
<td>2.83</td>
<td>3.05</td>
</tr>
<tr>
<td>70</td>
<td>3.7</td>
<td>5.6</td>
<td>7.5</td>
<td>9.2</td>
<td>11.2</td>
<td>14.0</td>
<td>16.8</td>
<td>17.6</td>
</tr>
<tr>
<td></td>
<td>0.56</td>
<td>0.84</td>
<td>1.17</td>
<td>1.50</td>
<td>1.90</td>
<td>2.37</td>
<td>2.83</td>
<td>3.05</td>
</tr>
<tr>
<td>80</td>
<td>5.3</td>
<td>7.4</td>
<td>10.0</td>
<td>12.1</td>
<td>15.2</td>
<td>19.0</td>
<td>22.2</td>
<td>24.0</td>
</tr>
</tbody>
</table>

**MC50-Series Part-Circle Rotor Performance data (UK)**

<table>
<thead>
<tr>
<th>Base Pressure [psi]</th>
<th>#08 BLACK</th>
<th>#12 GREY</th>
<th>#14 YELLOW</th>
<th>#16 ORANGE</th>
<th>#18 BROWN</th>
<th>#19 RED</th>
<th>#25 BLUE</th>
<th>#28 GREEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>17.2</td>
<td>23.2</td>
<td>32.6</td>
<td>42.4</td>
<td>51.2</td>
<td>64.4</td>
<td>80.3</td>
<td>93.5</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>0.7</td>
<td>1.0</td>
<td>1.3</td>
<td>1.7</td>
<td>2.2</td>
<td>2.8</td>
<td>3.0</td>
</tr>
<tr>
<td>4.8</td>
<td>17.2</td>
<td>23.2</td>
<td>32.6</td>
<td>42.4</td>
<td>51.2</td>
<td>64.4</td>
<td>80.3</td>
<td>93.5</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>0.7</td>
<td>1.0</td>
<td>1.3</td>
<td>1.7</td>
<td>2.2</td>
<td>2.8</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**MC55-Series Part-Circle Sprinkler Performance data (Metric)**

<table>
<thead>
<tr>
<th>Base Pressure [psi]</th>
<th>#08 BLACK</th>
<th>#12 GREY</th>
<th>#14 YELLOW</th>
<th>#16 ORANGE</th>
<th>#18 BROWN</th>
<th>#19 RED</th>
<th>#25 BLUE</th>
<th>#28 GREEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>17.2</td>
<td>23.2</td>
<td>32.6</td>
<td>42.4</td>
<td>51.2</td>
<td>64.4</td>
<td>80.3</td>
<td>93.5</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>0.7</td>
<td>1.0</td>
<td>1.3</td>
<td>1.7</td>
<td>2.2</td>
<td>2.8</td>
<td>3.0</td>
</tr>
<tr>
<td>4.8</td>
<td>17.2</td>
<td>23.2</td>
<td>32.6</td>
<td>42.4</td>
<td>51.2</td>
<td>64.4</td>
<td>80.3</td>
<td>93.5</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>0.7</td>
<td>1.0</td>
<td>1.3</td>
<td>1.7</td>
<td>2.2</td>
<td>2.8</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Note all data is current at the time of printing & subject to change. Please check with the manufacturer for updated values before specifying. All nozzles were tested at a Base Pressure 10 psi above Regulated Pressure. P.R. = Precipitation rate, depending on whether the sprinkler heads are laid out in a square ■ or triangle ▲ format.
MC50 BLOCK SPRINKLER HEADS

All the MC50 advantages.
Now available in a block rotor.

Now redesigned with a new click-set design, more rugged gear drive, a bypass valve for more consistent performance regardless of pressure variations, and better protection during high-pressure situations.

Bottom valve ensures even better performance and reliability. Cylindrical filter is self-flushing and minimizes contaminants flowing into valve.

Rock screen is now a cage design for higher strength.

High Performance
- A full 4-inch pop-up clears tall turfgrass for even coverage.
- Rolled-over flange keeps turfgrass clear of riser and nozzle.
- Stainless-steel riser resists damage and vandalism.
- Tough, industrial-grade plastic case stands up to punishment.
- Special design eliminates blow-by and reduces pressure loss to improve system performance.
- Dual-direction flushing protects internals from debris and ensures positive pop-up/down.
- Uniform coverage with square or triangular spacing.
- Full-circle and adjustable patterns for maximum flexibility.
- Easy arc adjustment in the field without any tools.
- Choose from multiple interchangeable nozzles that deliver superior precipitation rates in a variety of radii from 37 to 72 ft. (11.3 – 21.9 m) and flows from 6.6 to 27.0 gpm (30.0 to 122.6 l/s).
- Unique manual On/Off control for hydraulic rotors.
- Heavy-duty spring assures positive retraction.
- Additional nozzles available to customize application.
- Compact cartridge design allows for quick and easy repair.
- Quicklock™ design allows internals to be serviced from the rotor’s top.
- Three-year limited warranty.

SPECIFICATIONS

Models:
- Full-Circle:
  MC50B: Block Rotor
- Part-Circle:
  MC55B: Block Rotor

Arc:
- MC50B-Series: Full-Circle, 360°
- MC55B-Series: Part-Circle, 35° to 360°

Maximum Inlet Pressure:
- MC50B and MC55B: 150 psi (10.3 bar)

Rotation Time:
- MC50B-Series:
  360° in 150 seconds (nominally)
- MC55B-Series:
  180° in 75 seconds (nominally)

Inlet Threads:
- 1” ACME female threaded
- 1” NPT female threaded
- 1” BSP female threaded

Standard Factory Threads:
- 1” BSP female threaded

Check:
- Checks water up to 15’ of elevation change

Nozzle Trajectory: 25°

Riser: Stainless Steel
### HOW TO ORDER/SPECIFY

**MC50-Series Block Rotors**

<table>
<thead>
<tr>
<th>Model</th>
<th>Nozzle</th>
<th>Thread Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC50B = 1&quot; Full-Circle Block Rotor</td>
<td>#08 = #08-Black</td>
<td>A = ACME</td>
</tr>
<tr>
<td>MC55B = 1&quot; Part-Circle Block Rotor</td>
<td>#12 = #12-Grey</td>
<td>B = BSP</td>
</tr>
<tr>
<td></td>
<td>#14 = #14-Yellow</td>
<td>N = NPT</td>
</tr>
<tr>
<td></td>
<td>#16 = #16-Orange</td>
<td></td>
</tr>
<tr>
<td></td>
<td>#18 = #18-Brown</td>
<td></td>
</tr>
<tr>
<td></td>
<td>#19 = #19-Red</td>
<td></td>
</tr>
<tr>
<td></td>
<td>#25 = #25-Blue</td>
<td></td>
</tr>
<tr>
<td></td>
<td>#28 = #28-Green</td>
<td></td>
</tr>
</tbody>
</table>

#### Notes:
- Highlighted boxes [ ] indicate standard factory setting.
- Example: 50 Series Full Circle Block Rotor, #25-Blue Nozzle, BSP thread type.
- Final Part No. would be: MC50B25B

### PERFORMANCE DATA

**MC50-Series Full Circle Block Sprinkler Performance data (UK)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Nozzle</th>
<th>Scale Value</th>
<th>Flow Rate (l/s)</th>
<th>Flow Rate (gpm)</th>
<th>P.R. (psi/hr)</th>
<th>Base Pressure (psi)</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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<tr>
<td>MC50B</td>
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<td>15.6</td>
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<td>20.1</td>
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**MC50-Series, Full Circle, Block Sprinkler, Performance data (Metric)**

<table>
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<tr>
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<th>Scale Value</th>
<th>Flow Rate (l/s)</th>
<th>Flow Rate (gpm)</th>
<th>P.R. (psi/hr)</th>
<th>Base Pressure (psi)</th>
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<tr>
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<td>20.1</td>
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**MC55-Series, Part Circle, Block Sprinkler, Performance data (UK)**

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<th>Flow Rate (gpm)</th>
<th>P.R. (psi/hr)</th>
<th>Base Pressure (psi)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>#14</td>
<td>#16</td>
<td>#18</td>
<td>#25</td>
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<td>0.45</td>
<td>0.39</td>
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<td>18.4</td>
<td>15.6</td>
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<td>12.1</td>
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<td>42.3</td>
<td>20.1</td>
<td>17.3</td>
<td>15.1</td>
<td>14.0</td>
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**MC50-Series, Full Circle, Block Sprinkler, Performance data (Metric)**

<table>
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<tr>
<th>Model</th>
<th>Nozzle</th>
<th>Scale Value</th>
<th>Flow Rate (l/s)</th>
<th>Flow Rate (gpm)</th>
<th>P.R. (psi/hr)</th>
<th>Base Pressure (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>#12</td>
<td>#14</td>
<td>#16</td>
<td>#18</td>
<td>#25</td>
</tr>
<tr>
<td></td>
<td>BLACK</td>
<td>GREY</td>
<td>ORANGE</td>
<td>BROWN</td>
<td>RED</td>
<td>BLUE</td>
</tr>
<tr>
<td>MC55B</td>
<td>#08</td>
<td>0.6</td>
<td>0.53</td>
<td>0.45</td>
<td>0.39</td>
<td>0.31</td>
</tr>
<tr>
<td></td>
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<td>10.8</td>
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<tr>
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<td>18.4</td>
<td>15.6</td>
<td>13.3</td>
<td>12.1</td>
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<tr>
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<td>42.3</td>
<td>20.1</td>
<td>17.3</td>
<td>15.1</td>
<td>14.0</td>
</tr>
</tbody>
</table>

Note all data is current at the time of printing & subject to change. Please check with the manufacturer for updated values before specifying. All nozzles were tested at a Base Pressure 10 psi above Regulated Pressure. P.R. = Precipitation rate, depending on whether the sprinkler heads are laid out in a square ■ or triangle ▲ format.
X-SERIES SPRINKLER HEADS

When the flow you need isn’t the same all around.

Sometimes, what’s in front of you is not the same as what’s behind you. Say for instance, the green is in front and a bunker is in back. It’s the perfect situation for our X-Series Golf Rotors. The revolutionary X™ Technology offers dual adjustable patterns from front and back nozzles of the same sprinkler head. It’s like getting two rotors in one body. Each nozzle achieves a similar radius at different flow rates, giving you precise irrigation at the transitional areas of your golf course. No other rotor can match the X-Series in the irrigation of greens and aprons and at fairway edges for supplemental watering of roughs.

Water where you need it, less where you don’t. It’s truly water conservation at its finest.

High Performance
• Electric Valve-In-Head, Check Valve-in-Head.
• X-Series rotor features a full four-inch pop-up clearing tall turfgrass for even coverage. 1¼” X-Series rotor features a full three-inch pop-up.
• Rolled-over flange head keeps turfgrass clear of riser and nozzle.
• Stainless-steel riser resists damage.
• Special design eliminates blow-by and reduces pressure loss to improve system performance.
• Dual-direction flushing protects internals from debris and ensures positive pop-up/down.
• Easy arc adjustment in the field without any tools.
• Heavy-duty spring assures positive retraction.
• Additional nozzles allow coverage pattern to be customized to the application.
• Dual-180° radius part circle operation.
• AUTO/OFF/ON selector on the electric VIH models.
• MC75X uses the same case as the MC70-Series but with a different internal drive. The drives are available separately and are retrofittable to all existing 70-Series.
• MC55X uses the same case as the MC50-Series but with a different internal drive. The drives are available separately and are retrofittable to all existing 50-Series.
• Three-year limited warranty.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Spec</th>
<th>MC55X</th>
<th>MC75X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pop-up Height</td>
<td>4”</td>
<td>3”</td>
</tr>
<tr>
<td>Radius</td>
<td>15’–70’</td>
<td></td>
</tr>
<tr>
<td>Flow Rate</td>
<td>25.4 – 44.1 gpm (1.9 –3.3 l/s)</td>
<td></td>
</tr>
<tr>
<td>Inlet (bottom)</td>
<td>1” ACME</td>
<td>1½” ACME</td>
</tr>
<tr>
<td></td>
<td>1” BSP*</td>
<td>1½” BSP*</td>
</tr>
<tr>
<td></td>
<td>1” NPT</td>
<td>1½” NPT</td>
</tr>
<tr>
<td>Check</td>
<td>Checks water up to 15’ of elevation change</td>
<td></td>
</tr>
<tr>
<td>Pressure Regulation &amp; Range</td>
<td>Standard at 80 psi MC75X and 70 psi MC55X</td>
<td></td>
</tr>
<tr>
<td>Operating Pressure Range</td>
<td>60–90 psi</td>
<td>150 psi</td>
</tr>
<tr>
<td>Maximum Pressure</td>
<td>10.75” MC75X and 9.75” MC55X</td>
<td></td>
</tr>
<tr>
<td>Body Height</td>
<td>7.5” MC75X and 6.5” MC55X</td>
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</tr>
<tr>
<td>Top Diameter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Standard factory thread
**HOW TO ORDER/SPECIFY**

**MC55X Golf Rotors Dual-Nozzle, Dual-Part Circle**

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
<th>Nozzle Configuration</th>
<th>Front Radius</th>
<th>Rear Radius</th>
<th>Base Pressure (E-Models Only)</th>
<th>Thread Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC55X = 1” X-Series Rotor</td>
<td>E = Electric Valve-in-Head</td>
<td>25 = #25-Blue</td>
<td>10/32</td>
<td>10/32</td>
<td>60 psi (4.1 bar)</td>
<td>A = ACME</td>
</tr>
<tr>
<td></td>
<td>C = Check Valve-in-Head</td>
<td>12 = #12-Grey</td>
<td>70/32</td>
<td>70/32</td>
<td>70 psi (4.8 bar)</td>
<td>B = BSP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14 = #14-Yellow</td>
<td>80/32</td>
<td>80/32</td>
<td>80 psi (5.5 bar)</td>
<td>N = NPT</td>
</tr>
</tbody>
</table>

**MC75X Golf Rotors Dual-Nozzle, Dual-Part Circle**

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
<th>Nozzle Configuration</th>
<th>Front Radius</th>
<th>Rear Radius</th>
<th>Base Pressure (E-Models Only)</th>
<th>Thread Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC75X = 1½” X-Series Rotor</td>
<td>E = Electric Valve-in-Head</td>
<td>35 = #35-Yellow</td>
<td>60/32</td>
<td>60/32</td>
<td>60 psi (4.1 bar)</td>
<td>A = ACME</td>
</tr>
<tr>
<td></td>
<td>C = Check Valve-in-Head</td>
<td>16 = #16-Orange</td>
<td>70/32</td>
<td>70/32</td>
<td>70 psi (4.8 bar)</td>
<td>B = BSP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18 = #18-Brown</td>
<td>80/32</td>
<td>80/32</td>
<td>80 psi (5.5 bar)</td>
<td>N = NPT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>90/32</td>
<td>90/32</td>
<td>90 psi (6.2 bar)</td>
<td></td>
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</tbody>
</table>

**Notes:**
1. Base Pressure setting is ONLY used on E types (Electric Valve-in-Head); it is omitted for C types.
2. Highlighted boxes indicate standard factory setting.

**Example:**
X-Series Rotor, Check Valve-in-Head, #25-Blue Nozzle (Front), #12-Grey Nozzle (Rear), BSP thread type. Final Part No. would be: MC55XC2512B.

**PERFORMANCE DATA**

**MC55X Series Sprinkler Performance data (UK & Metric)**

<table>
<thead>
<tr>
<th>Nozzle</th>
<th>Radius m/ft</th>
<th>l/s/gpm</th>
<th>Nozzle</th>
<th>Radius m/ft</th>
<th>l/s/gpm</th>
<th>Total l/s, gpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>#25 BLUE</td>
<td>18.29/60</td>
<td>1.52/19.9</td>
<td>#08 BLACK</td>
<td>10.66/35</td>
<td>0.51/6.6</td>
<td>2.02/26.6</td>
</tr>
<tr>
<td></td>
<td>18.29/60</td>
<td>1.52/19.9</td>
<td>#12 RED</td>
<td>13.72/45</td>
<td>0.76/10</td>
<td>2.28/29.9</td>
</tr>
<tr>
<td></td>
<td>18.29/60</td>
<td>1.52/19.9</td>
<td>#14 YELLOW</td>
<td>16.76/55</td>
<td>0.89/11.6</td>
<td>2.40/31.5</td>
</tr>
</tbody>
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**MC75X Series Sprinkler Performance data (UK & Metric)**

<table>
<thead>
<tr>
<th>Nozzle</th>
<th>Radius m/ft</th>
<th>l/s/gpm</th>
<th>Nozzle</th>
<th>Radius m/ft</th>
<th>l/s/gpm</th>
<th>Total l/s, gpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>#35 YELLOW</td>
<td>21.34/70</td>
<td>2.21/29.1</td>
<td>#14 YELLOW</td>
<td>15.54/50</td>
<td>0.89/11.6</td>
<td>3.10/40.7</td>
</tr>
<tr>
<td></td>
<td>21.34/70</td>
<td>2.21/29.1</td>
<td>#16 ORANGE</td>
<td>16.76/55</td>
<td>1.01/13.3</td>
<td>3.23/42.3</td>
</tr>
<tr>
<td></td>
<td>21.34/70</td>
<td>2.21/29.1</td>
<td>#18 BROWN</td>
<td>18.29/60</td>
<td>1.14/14.9</td>
<td>3.35/44.0</td>
</tr>
</tbody>
</table>

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MC25, 35 AND 45 MEDIUM RANGE SPRINKLER HEADS

Ideal for larger areas.

Like their shorter-range siblings, MC25, MC35 and MC45 gear drive rotors blend in well with landscaping and deliver high quality, high performance coverage to medium and large turf areas. Plus include a patented Click-Set disk for quick and easy pattern adjustment.

**MC25 Series**
- **MC25A** Standard with anti-drain valve (ADV)
- **MC25B** High speed rotation and stainless steel piston sleeve
- **MC25C** Stainless steel piston sleeve, heavy-duty spring and anti-drain valve (ADV)

**MC35 Series**
- **MC35A** Standard with anti-drain valve (ADV)
- **MC35B** Stainless steel piston sleeve, heavy-duty spring and anti-drain valve (ADV)
- **MC35C** Stainless steel piston sleeve, heavy-duty spring and anti-drain valve (ADV)

**MC45 Series**
- **MC45A** Standard with anti-drain valve (ADV)
- **MC45B** High speed rotation, stainless steel piston sleeve, and anti-drain valve (ADV)

### SPECIFICATIONS

#### MC25 Series
- **Pressure regulation range:** 40 – 75 psi (2.7 to 5.2 bar)
- **Maximum inlet pressure:** 80 psi (5.5 bar)
- **Discharge:** 1.9 to 10.5 gal/min (10.6 to 50.0 l/min)
- **Spray trajectory:** 25°
- **Pop-up height:** 3.9 in (10 cm)
- **Body height:** 8.0 in (20.3 cm)
- **Exposed cap diameter:** 1.9 in (4.7 cm)
- **Cap diameter:** 2.8 in (7.3 cm)
- **Type of cap:** Rubber with locking screw
- **Inlet size:** 1 in (25.4 mm) female NPT (MC25AN, MC25BN, MC25CN)
  1 in (25.4 mm) female BSP (MC25AB, MC25BB, MC25CB)
- **ADV models:** Holds back up to 9.8 ft (3 m) difference in elevation

#### MC35 Series
- **Pressure regulation range:** 40 – 90 psi (2.7 to 6.2 bar)
- **Maximum inlet pressure:** 100 psi (6.9 bar)
- **Discharge:** 7.8 to 22.9 gal/min (35.5 to 104.1 l/min)
- **Spray trajectory:** 25°
- **Pop-up height:** 4.5 in (11.4 cm)
- **Body height:** 9.5 in (24.1 cm)
- **Exposed cap diameter:** 2.5 in (6.3 cm)
- **Type of cap:** Rubber with locking screw
- **Inlet size:** 1 in (25.4 mm) female NPT (MC35AN, MC35BN)
  1 in (25.4 mm) female BSP (MC35AB, MC35BB, MC35CB)
- **ADV models:** Holds back up to 9.8 ft (3 m) difference in elevation

#### MC45 Series
- **Pressure regulation range:** 40 – 90 psi (2.7 to 6.2 bar)
- **Maximum inlet pressure:** 100 psi (6.9 bar)
- **Discharge:** 7.8 to 22.9 gal/min (35.5 to 104.1 l/min)
- **Spray trajectory:** 25°
- **Pop-up height:** 4.5 in (11.4 cm)
- **Body height:** 9.5 in (24.1 cm)
- **Exposed cap diameter:** 2.5 in (6.3 cm)
- **Type of cap:** Rubber with locking screw
- **Inlet size:** 1 in (25.4 mm) female NPT (MC45AN, MC45BN, MC45CN)
  1 in (25.4 mm) female BSP (MC45AB, MC45BB, MC45CB)
- **ADV models:** Holds back up to 9.8 ft (3 m) difference in elevation
### PERFORMANCE DATA

#### MC35 SERIES – 25° Trajectory

<table>
<thead>
<tr>
<th>Nozzle Colour</th>
<th>Model</th>
<th>Pressure</th>
<th>PSI</th>
<th>FT</th>
<th>FT GPM (UK) IN/HR</th>
<th>BAR</th>
<th>kPa</th>
<th>m</th>
<th>m l/min</th>
<th>m 3/hr</th>
<th>mm/hr</th>
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<tbody>
<tr>
<td>Dark Grey</td>
<td>45</td>
<td>46 44 36</td>
<td>2.0</td>
<td>0.20</td>
<td>0.03</td>
<td>5.4</td>
<td>37.9</td>
<td>3.1</td>
<td>83.1</td>
<td>1.12</td>
<td>13.5</td>
</tr>
<tr>
<td>Dark Grey</td>
<td>50</td>
<td>51 47 38</td>
<td>2.2</td>
<td>0.20</td>
<td>0.03</td>
<td>5.4</td>
<td>37.9</td>
<td>3.1</td>
<td>83.1</td>
<td>1.12</td>
<td>13.5</td>
</tr>
<tr>
<td>Dark Grey</td>
<td>55</td>
<td>56 48 40</td>
<td>2.4</td>
<td>0.20</td>
<td>0.03</td>
<td>5.4</td>
<td>37.9</td>
<td>3.1</td>
<td>83.1</td>
<td>1.12</td>
<td>13.5</td>
</tr>
<tr>
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<td>61 48 40</td>
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<td>0.05</td>
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<td>13.5</td>
</tr>
<tr>
<td>Dark Grey</td>
<td>65</td>
<td>66 48 40</td>
<td>2.8</td>
<td>0.22</td>
<td>0.05</td>
<td>5.4</td>
<td>37.9</td>
<td>3.1</td>
<td>83.1</td>
<td>1.12</td>
<td>13.5</td>
</tr>
<tr>
<td>Dark Grey</td>
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<td>71 48 40</td>
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<td>0.25</td>
<td>0.07</td>
<td>5.4</td>
<td>37.9</td>
<td>3.1</td>
<td>83.1</td>
<td>1.12</td>
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</tr>
<tr>
<td>Dark Grey</td>
<td>75</td>
<td>76 49 40</td>
<td>3.2</td>
<td>0.25</td>
<td>0.07</td>
<td>5.4</td>
<td>37.9</td>
<td>3.1</td>
<td>83.1</td>
<td>1.12</td>
<td>13.5</td>
</tr>
<tr>
<td>Dark Grey</td>
<td>80</td>
<td>81 49 40</td>
<td>3.4</td>
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<td>0.11</td>
<td>5.4</td>
<td>37.9</td>
<td>3.1</td>
<td>83.1</td>
<td>1.12</td>
<td>13.5</td>
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#### MC36 SERIES – 25° Trajectory

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<tr>
<th>Nozzle Colour</th>
<th>Model</th>
<th>Pressure</th>
<th>PSI</th>
<th>FT</th>
<th>FT GPM (UK) IN/HR</th>
<th>BAR</th>
<th>kPa</th>
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<th>m l/min</th>
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### FEATURES

- Continuous full or part-circle options in one sprinkler head eliminates need for multiple models; choose from 40°-310° or a complete 360° rotation.
- Full rubber cover on pop-up models is safe and vandal resistant with standard locking screw and through the cap – NIR® (nozzle insertion/radius reduction) on all models. Model number is stamped in cover for easy identification.
- Patented Click-Set® Disc offers adjustable part-circle patterns in 5° increments.
- Double-lipped wiper seal and stainless steel retraction spring reduce unnecessary service calls by assuring positive retraction, even in sandy soils.
- Exclusive memory ring maintains part-circle patterns in 5° increments even if sprinkler is turned out of arc position.
- Acu-Cover® nozzles provide better close-in watering and eliminate dry spots around head.
- Ratcheting slip clutch protects gears and motor from damage while adjusting turret for part-circle adjustments – wet or dry.
- Water lubricated gear motor provides oil-free, quiet, reliable performance.
- Triple bearings support the rotating turret and increase durability.
- Bypass valve reduces pressure loss and standardizes rotation speed regardless of nozzle size, flow rate and inlet pressures.
- Large area filter provides excellent resistance against sand and debris.
- Anti-drain valve and heavy-duty spring (ADV models only) help eliminate low head drainage and puddling.
Perfect for smaller landscaped areas—even windy ones.

These inconspicuous small ¾” inlet gear-drive rotors blend in well with landscaping, and provide superior coverage for small and medium areas. Plus work well in windy locations, thanks to their optional 13° low trajectory nozzles. They include continuous, full-circle and half circle options in one head and our exclusive Click-Set® Disk adjustment allowing for quick, easy pattern adjustment. Each series also offers various model configurations including stainless steel riser sleeves, heavy-duty retraction springs, and drain check valves.

MC05/MC15 SHORT RANGE BLOCK ROTORS

MC05 Series
- **MC05A**: Standard
- **MC05B**: Shrub head
- **MC05C**: Stainless steel sleeve, heavy-duty spring, anti-drain valve (ADV) and locking screw
- **MC05D**: 12” (30.5 cm) High Pop, heavy-duty spring and anti-drain valve (ADV)

MC15 Series
- **MC15A**: Standard
- **MC15B**: Shrub head
- **MC15C**: Stainless steel sleeve, heavy-duty spring and anti-drain valve (ADV)
- **MC15D**: Stainless steel sleeve, heavy-duty spring, anti-drain valve (ADV) and locking screw
- **MC15E**: 12” (30.5 cm) High Pop, heavy-duty spring and anti-drain valve (ADV)

**SPECIFICATIONS**

### MC05 Series
- **Pressure regulation range**: 20–65 psi (1.4 to 4.5 bar) (MC05A, MC05B) 25–65 psi (1.7 to 4.5 bar) (MC05C, MC05D)
- **Maximum inlet pressure**: 75 psi (5.2 bar)
- **Discharge**: 0.42 to 2.1 gal/min (1.9 to 9.5 l/min)
- **Spray trajectory**: 13°
- **Pop-up height**: 3.9 in (10 cm) (MC05A, MC05C) 12” (30.5 cm) (MC05D)
- **Body height**: 7.5 in (19 cm) (MC05B) 7.4 in (18.7 cm) (MC05A, MC05C) 16.9 in (43 cm) (MC05D)
- **Exposed cap diameter**: 1.8 in (4.7 cm)
- **Cap diameter**: 2.9 in (7.3 cm)
- **Type of cap**: Rubber (MC05A, MC05C, MC05D) Plastic (MC05B)
- **Inlet size**: ¾ in (1.9 cm) female (NPT and BSP)
- **ADV models**: Holds back up to 9.8 ft (3 m) difference in elevation

### MC15 Series
- **Pressure regulation range**: 20–65 psi (1.4 to 4.5 bar) (MC15A, MC15B, MC15C) 25–65 psi (1.7 to 4.5 bar) (MC15D, MC15E)
- **Maximum inlet pressure**: 75 psi (5.2 bar)
- **Discharge**: 0.83 to 7.9 gal/min (3.8 to 36 l/min)
- **Spray trajectory**: 25° (13° optional)
- **Pop-up height**: 3.9 in (10 cm) (MC15A, MC15D) 12” (30.5 cm) (MC15E)
- **Body height**: 7.5 in (19 cm) (MC15B) 7.4 in (18.7 cm) (MC15A, MC15C, MC15D) 16.9 in (43 cm) (MC15D)
- **Exposed cap diameter**: 1.8 in (4.7 cm)
- **Cap diameter**: 2.9 in (7.3 cm)
- **Type of cap**: Rubber (MC15A, MC15C, MC15D, MC15E) Plastic (MC15B)
- **Inlet size**: ¾ in (1.9 cm) female (NPT and BSP)
- **ADV models**: Holds back up to 9.8 ft (3 m) difference in elevation
• Continuous full or part-circle options in one sprinkler head eliminate need for multiple models; choose from 40°–310° or a complete 360° rotation.

• Full rubber cover on pop-up models is safe and vandal resistant with standard locking screw and through the cap – NIR2 (nozzle insertion/radius reduction) on all models. Model number is stamped in cover for easy identification.

• Patented Click-Set® Disk offers adjustable part-circle patterns in 5° increments.

**Performance Data**

**MC05 Series – 13° Trajectory**

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**MC15 Series – 25° Trajectory**

*Precipitation rate depending on whether the sprinkler heads are laid out in a square ■ or triangle ▲ format*
One brand fits all.

John Deere Golf Irrigation Internals perfectly fit most Toro® or Rain Bird® systems. Get some today. Be prepared for tomorrow.

REPLACEMENT GUIDE

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## PERFORMANCE DATA

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<td>Radius (ft)</td>
<td>Flow (gpm)</td>
<td>Flow (gpm)</td>
</tr>
<tr>
<td>630</td>
<td>31</td>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>660</td>
<td>–</td>
<td>62</td>
<td>63</td>
</tr>
<tr>
<td>730</td>
<td>31</td>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>760</td>
<td>62</td>
<td>63</td>
<td>64</td>
</tr>
</tbody>
</table>

### Notes:
1. Highlighted boxes indicate standard factory setting.
2. Light grey boxes indicate nozzle performance is not optimum at designated pressure.
3. All data is current at the time of printing & subject to change. Please check with the manufacturer for updated values before specifying. All nozzles were tested at a Base Pressure 15 psi above design pressure.
VALVES, KEYS AND SWIVEL ELLS

Versatile and affordable.
The most versatile valves available in the market today, with excellent flexibility, high quality construction, and simple reliable designs. Quick coupling valves and keys use Acme* threads for slow and steady flow control instead of immediate on/off.

Our Quantum Valves are as strong, fast and debris-resistant as brass alternatives, and much more affordable.

QUANTUM VALVES FEATURES

- High Performance
- Low pressure loss
- Unique snap ring serviceability
- 200 PSI pressure rating
- Common solenoid with valve-in-head (E-models)
- Male pipe threads for strength and high-pressure rating

SPECIFICATIONS

Electric Pressure Regulated Valves
- MC100EB-1" Angle BSP
- MC150EB-1½" BSP
- MC200EB-2" BSP

Factory Pressure Settings:
- Available in 35, 50, 65 and 80 psi

Standard Factory Settings:
- 80 psi (5.5 bar)

Solenoid:
- 24 VAC 50/60 Hz
- Inrush Amps: 0.30
- Holding Amps: 0.20

QUICK COUPLING VALVES & KEYS

Quick coupling valves and keys use Acme* threads for slow and steady flow control instead of immediate on/off. All models feature rubber cover. Optional locking cover available (MCQCVKN). Optional lavender rubber cover (MCQCVKLN) identifies reclaimed water site – molded in “RECLAIMED WATER – DO NOT DRINK”: in English and Spanish.

QUICK COUPLING VALVES

Model
- MCQCVN – Quick Coupling Valve
- MCQCVKN – Quick Coupling Valve with locking cover
- MCQCVLN – Quick Coupling Valve with lavender cap
- MCQCVKLN – Quick Coupling Valve with non-potable locking cover

PERFORMANCE DATA

<table>
<thead>
<tr>
<th>Quantum Series Valve Pressure Loss (UK)</th>
<th>Flow Rate (gpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>psi Loss</td>
<td>30</td>
</tr>
<tr>
<td>1½”</td>
<td>1.2</td>
</tr>
<tr>
<td>2”</td>
<td>1.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quantum Series Valve Pressure Loss (Metric)</th>
<th>Flow Rate (l/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bar Loss</td>
<td>1.90</td>
</tr>
<tr>
<td>38.1 mm</td>
<td>0.10</td>
</tr>
<tr>
<td>50.8 mm</td>
<td>0.10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bar Loss</th>
<th>Flow Rate (l/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.4 mm</td>
<td>0.32</td>
</tr>
<tr>
<td>38.1 mm</td>
<td>0.14</td>
</tr>
</tbody>
</table>

QUICK COUPLING KEYS

<table>
<thead>
<tr>
<th>Model</th>
<th>For Valve Models</th>
<th>Thread Size</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCQCVKKEY075</td>
<td>MCQCVN</td>
<td>N* (19.05 mm)</td>
<td>84°C (13.35 cm)</td>
</tr>
<tr>
<td>MCQCVKKEY100</td>
<td>MCQCVN, MCQCVN</td>
<td>N* (19.05 mm)</td>
<td>84°C (13.35 cm)</td>
</tr>
</tbody>
</table>
HOSE END NOZZLES AND ACCESSORIES

Hand-watering is an art. But a little science doesn’t hurt.

With the growing emphasis on water conservation and quality playing surfaces, an average hose end can’t deliver the precise application pattern you need. The solution: John Deere hose ends. Most are made from high tech aircraft aluminum and include spray patterns inspired by years of experience. Your greens will know the difference — and so will you.

**HOSE END ACCESSOIRES**

**CoolShot™ & CoolShot™ Plus with Regulator Shower Nozzles**
The new CoolShot’s improved shower pattern is now unbeatable for cooling and soaking your greens. CoolShot Plus with regulator includes ON/OFF and flow control.

- CoolShot
  - MCN100CS CoolShot 2.5 cm (1 in) hose thread
- CoolShot Plus
  - MCN100CS CoolShot Plus 2.5 cm (1 in) hose thread

**CoolShot™ Plus with Regulator Economy Shower Nozzle**
Not as sleek as its aircraft aluminium brother, but this Economy version of the CoolShot Plus with regulator offers the same great shower pattern and features, high-strength composite construction and a nice low price.

- CoolShot Plus Economy
  - MCN075CPE CoolShot Plus Economy 1.9 cm (0.75 in) hose thread
  - MCN100CPE CoolShot Plus Economy 2.5 cm (1 in) hose thread

**HotShot™ with Regulator Multi-Pattern Nozzle**
If you could only have one nozzle, this would be it. This heavy-duty HotShot sprays hot spots, jet cleans equipment, and soaks greens.

- HotShot
  - MCN100HSM HotShot 2.5 cm (1 in) hose thread

**Valve-In-Head Adapters & Hose**
Economical 360° swivel action hose adapter for John Deere, TORO, Rain Bird, and Hunter sprinklers. 1.9 cm (0.75 in) and 2.5 cm (1 in) hose outlet. Includes brass 1.9 cm (0.75 in) x 2.5 cm (1 in) adapter (Part # MC115B).

- Hose Adapters
  - MC1125 Hose adapter, 2.5 cm (1 in)
  - MC1126 adapter, 3.8 cm (1.5 in)
- Hose Swivels
  - MC100HS Hose swivel 2.5 cm (1 in)
  - HoseHead™ All-In-One Hose Adapters & Swivels
  - MC50HA Hose adapter and swivel for 50-Series
  - MC70HA Hose adapter and swivel for 70-Series

**Valve-In-Head Hose Adapter & Swivel — Competitive Replacement**

- MC100HA Hose adapter, 2.5 x 2.5 cm (1 x 1 in) inlet, Deere and Toro
- MC150HA Hose adapter, 2.5 x 3.8 cm (1.5 in) inlet, Deere and Toro
- MC700RHA Hose adapter, 2.5 cm (1 in) Eagle 700

**FanShot™ Spray Nozzles**
Slotted fan spray nozzles designed for various flows both with and without regulators.

- FanShot Nozzles
  - MCN100FSP20 FanShot 20 gpm, 1.26 l/s (20 gpm), 2.5 cm (1 in) hose thread
  - FanShot Plus with Nozzles
  - MCN100FSP20D FanShot Plus 20 gpm, 1.26 l/s (20 gpm), 2.5 cm (1 in) hose thread
  - FanShot Plus with 3 Nozzle Combos
  - MCN100FSP FanShot Plus w/3 nozzle combos, 2.5 cm (1 in) hose thread

**Wetting Agent Applicator**
Apply your costly wetting agents evenly and efficiently. On/off, variable flow control unit connects easily to the beginning or end of your hose. Two-tablet (6.3 cm (2.5 in) dia. x 7.6 (3 in) length max) capacity yields 0.81 Hectares (2 acre) coverage.

- Wetting Agent Applicators
  - MC100APL Wetting agent applicator, 2.5 cm (1 in) hose inlet – 1.9 cm (0.75 in) outlet
  - Wetting Agent Applicators with CoolShot Nozzles
  - MC100APLCS Wetting agent applicator, 2.5 cm (1 in) hose inlet – 1.9 cm (0.75 in) outlet w/ CoolShot
  - Guzzler
  - MCN100G Ground water extraction device

**Recycled Water I.D. Option**
CoolShot, HotShot, CoolShot Plus, nozzles also available in “non-potable” purple.
Please be aware that all part numbers prefix with a "D" will be replaced with a prefix "MC" for Europe.

**Typical Grounding**

No Scale

**John Deere Irrigation Central**

No Scale
RESOURCES

JOHN DEERE D50E, 1" FULL CIRCLE VALVE-IN-HEAD ROTOR
NO SCALE

JOHN DEERE D50E FULL CIRCLE ROTOR
NO SCALE
RESOURCES

DECODER DIAGRAMS

ADO SINGLE ADDRESS FIELD DECODER
SINGLE SOLENOID
100’ MAXIMUM DISTANCE FROM DECODER TO SOLENOID

1. DBR-6 (2 PER VALVE)
2. DBR-6 (1 PER CONNECTION)
3. 3 WIRE TWISTED

ALL DECODER WIRE CONNECTIONS SHALL BE CRIMPED AND SOLDERED
ALL DECODERS SHALL BE INSTALLED IN ECONO VALVE BOX

ADO SINGLE ADDRESS DECODER
NO SCALE

AD1 SINGLE ADDRESS FIELD DECODER
DUAL SOLENOID
100’ MAXIMUM DISTANCE FROM DECODER TO SOLENOID

1. DBR-6 (2 PER VALVE)
2. DBR-6 (1 PER CONNECTION)
3. 3 WIRE TWISTED

ALL DECODER WIRE CONNECTIONS SHALL BE CRIMPED AND SOLDERED
ALL DECODERS SHALL BE INSTALLED IN ECONO VALVE BOX

AD1 SINGLE ADDRESS DECODER (DUAL SOLENOID)
NO SCALE
DECODER DIAGRAMS

AD2 DUAL ADDRESS DECODER
100' MAXIMUM DISTANCE FROM DECODER TO SOLENOID

1. DBR-6 (2 PER VALVE)
2. DBR-6 (1 PER CONNECTION)
3. 3 WIRE TWISTED

ALL DECODER WIRE CONNECTIONS SHALL BE CRIMPED AND SOLDERED
ALL DECODERS SHALL BE INSTALLED IN ECONO VALVE BOX

AD3 TRIPLE ADDRESS DECODER
100' MAXIMUM DISTANCE FROM DECODER TO SOLENOID

1. DBR-6 (2 PER VALVE)
2. DBR-6 (1 PER CONNECTION)
3. 3 WIRE TWISTED

ALL DECODER WIRE CONNECTIONS SHALL BE CRIMPED AND SOLDERED
ALL DECODERS SHALL BE INSTALLED IN ECONO VALVE BOX
1) AD4 Four Pack Field Decoder
100' Maximum Distance from Decoder to Solenoid

2) DBR-6 (2 per solenoid)
3) DBR-6 (1 per connection)
4) 3 Wire Twisted

All decoder wire connections shall be crimped and soldered
All decoders shall be installed in econo valve box

AD4 Four Address Decoder
No Scale
Consider us part of your team.

Innovation that’s perfect for any renovation.
Our complete irrigation solutions include advanced digital controllers, one of the first web-based control systems available on the market, quality rotors and internal replacements. And you needn’t wait for new construction – this technology retrofits many competitive systems.

Replacement parts to give you an edge.
There’s no replacement for John Deere parts. Reels and bedknives with low attrition, long lasting tines and rollers precisely machined for a true height-of-cut. The benefits: A sharper looking course, less downtime and a more cost-effective overall operation.

www.JohnDeere.co.uk
www.JohnDeereInternational.com