

ET + 0.22"
0.14" ET + 0.22" ET - 0.09" ET r
27" ET (H₂O requirement)
0.09" ET (rainfall)

Calculate

Communicate

Validate

TUCOR
INC

Total-Cycle Management

Tucor's Total-Cycle Management solution uses weather stations in combination with soil-moisture sensors to provide the most accurate data about your site's irrigation needs. And accurate data means accurate irrigation, so you use only the water you need, conserving water and promoting plant health.

Before Tucor's Total-Cycle Management, irrigation systems provided water monitoring via soil or climate data – not both. But each of these methods has drawbacks when used alone. For example, soil-moisture sensors and probes may not be practical for projects with inconsistent soil types. Weather stations, on the other hand, do not measure the soil's true water content, watering based on climate conditions when the soil could be saturated. By combining these two technologies – along with Tucor's intelligent controllers – Total-Cycle Management provides you with irrigation scheduling you can trust.

APPLICATIONS

Recreational

Sports fields
Outdoor arenas
Municipal parks

Corporate & Residential

Office buildings
Roadway projects
School districts
Housing complexes

Green Roofs

Flat roofs
City skyscrapers
Rooftop gardens

Agricultural

Nurseries
Orchards
Vineyards

Industrial

Feedlots
Dust suppression
Wastewater
SCADA

1

Two-Wire = Too Easy

Tucor's two-wire controllers can operate up to 100 valves with one two-wire path, connecting valves in a series like a string of ornamental lights.

2

Retrofitting? No Problem!

In addition to our two-wire controllers, Tucor also offers the RKS, a conventional controller perfect for projects that require retrofitting existing systems.

3

Easy Networking

Tucor's systems can work with LAN, cellular GPRS or WiFi networks, and controllers can link in with hard wires or wirelessly. Have an existing network? We'll use it. Need a network? We'll build it. We can even combine different types of networks into one master system. Whatever your situation, we'll find a networking solution that fits.

4

Track Weather Data

With weather stations, you can monitor climate conditions and calculate evapotranspiration (ET), which is the measurement of water lost through soil evaporation and plant transpiration.

5

Track Soil Moisture

Monitor root depth and the amount of moisture in each zone with soil-moisture sensors or probes. In doing so, you'll improve your water-use efficiency and maximize water conservation.

6

Add-a-Zone

Tucor's Add-a-Zone program provides ultimate flexibility by allowing you to purchase only the zones you need. When it's time to scale up, you can add new zones with ease. We'll e-mail you an upgrade code that programs the new zones into your existing system.

7

Cycle Manager Web-Based Software

With Cycle Manager, Tucor's Web-based monitoring software, you can manage flow, adjust programs, track alarms and review the entire network to spot leaks, breaks or plugged nozzles from any Web-enabled computer.

8

Mobile Alerts

Get urgent alerts sent from your system directly to your handheld device. You'll be instantly notified of any failure, and you'll be directed to its exact location.

Calculate ET rates using real-time weather data. **Communicate** with Cycle Manager, Tucor's Web-based monitoring software. **Validate** your irrigation schedules with soil-moisture sensors.

About Us

In 1995, Tucor was the first company to bring proven two-wire controller technology from Europe to the American landscape irrigation industry. For more than 10 years now, Tucor has been developing and introducing new products to satisfy a broad variety of irrigation control requirements. And we continue to provide our customers with expertise that guarantees a successful project every time. We're with you every step of the way, making sure that you get the right system for your unique needs.

PRODUCTS FOR EVERY JOB

Tucor's irrigation products are available in a **variety of configurations for any size project**, from basic residential systems to multi-site industrial applications.

INFINITE SCALABILITY

Our two-wire system adapts to your growing project, allowing you to **add or modify valves on the fly**, with no need for costly rewiring or upgrades.

REMOTE MANAGEMENT

Control irrigation programs and **review daily logs and schedules for multiple sites** from any Web-enabled computer or mobile device – anywhere in the world.

INSTANT TROUBLESHOOTING

With Tucor's built-in monitors and alarms, you can **receive automatic notifications** and pinpoint the exact location of leaks, breaks or plugged nozzles.

LABOR SAVINGS

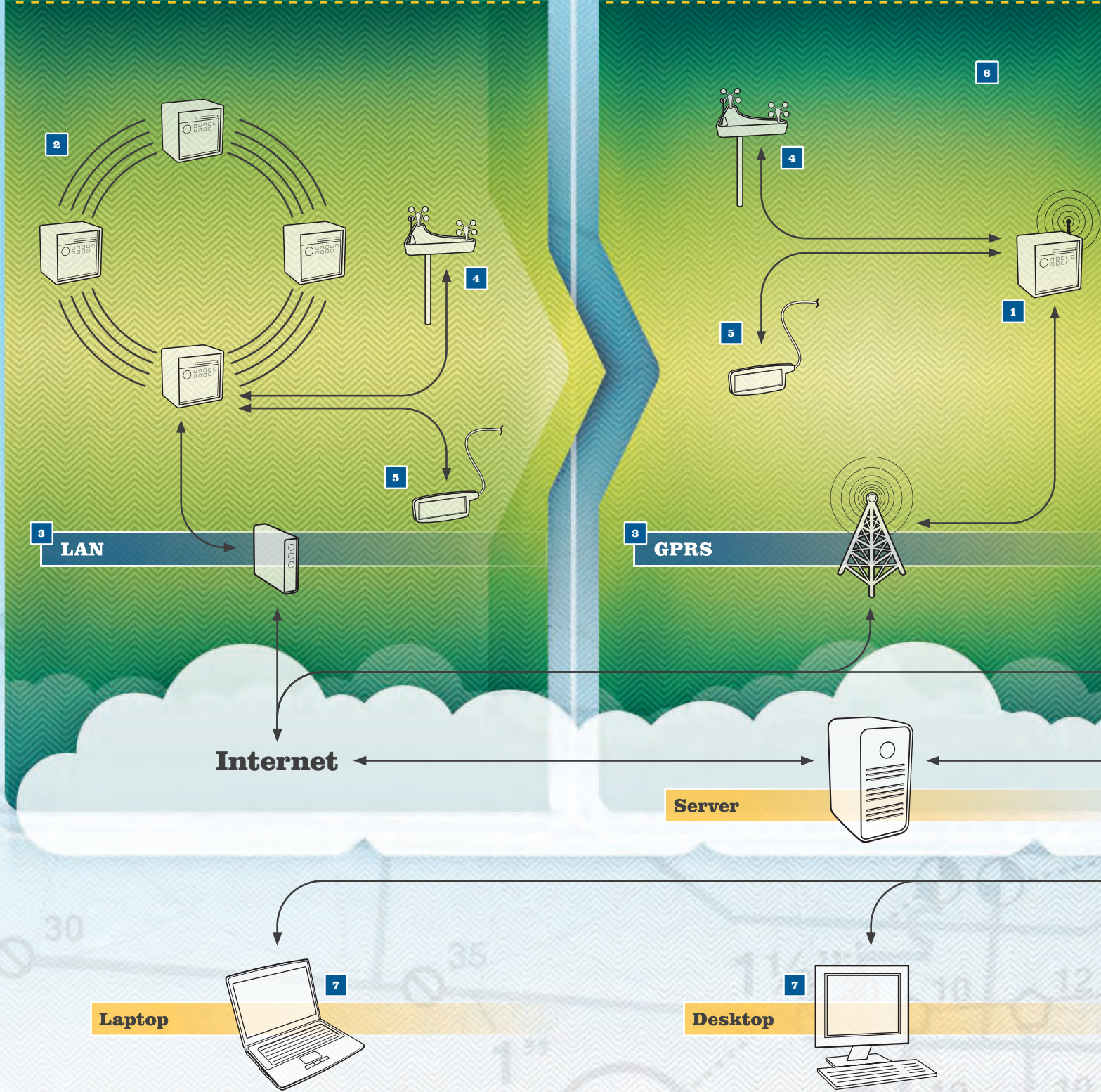
Our system keeps a daily log of all activity and **identifies problem areas**, eliminating the need for manual valve control and time-consuming field diagnostics.

ENERGY EFFICIENCY

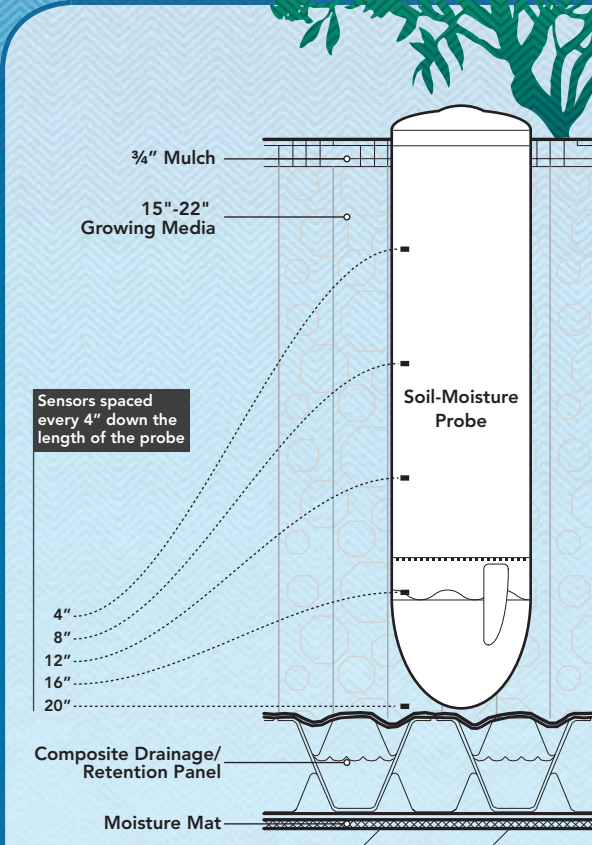
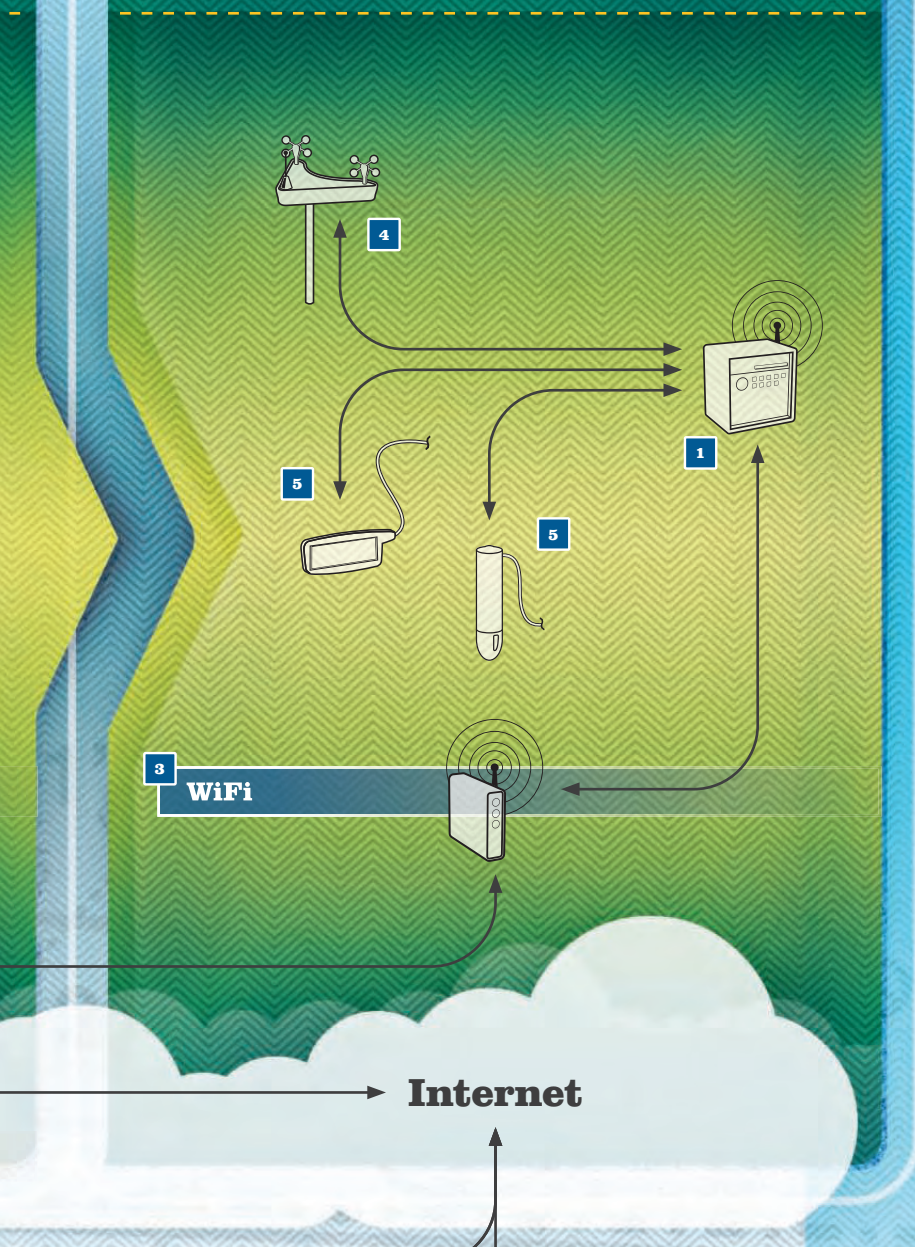
The two-wire cable carries both power and signal to control each valve, **using one-tenth the power** of a conventional system.

Recreational

Residential & Commercial











Green Roof



The Power of Green

With increasing public eco-awareness, green-roof projects are gaining in popularity. It's no wonder: by converting tar rooftops into green spaces, building owners are reducing heat reflection by as much as 50%. Other green roof benefits include reduced maintenance costs, energy savings, reduced air and stormwater pollution and improved LEED scores. And Tucor can help protect your green roof with an irrigation system suited perfectly for rooftop gardens.

Key

- | | | | |
|--|-----------------|---|--------------|
|  | RKD or RKS |  | Wireless RKD |
|  | LAN Router |  | WiFi Router |
|  | Soil Sensor |  | Soil Probe |
|  | Weather Station |  | Cell Tower |

PDA

Internet

WiFi

Moisture Mat

Composite Drainage/
Retention Panel

Sensors spaced
every 4" down the
length of the probe

Soil-Moisture
Probe

3/4" Mulch

15"-22"
Growing Media

4

5

5

1

3

8

Total-Cycle Management System Components



MANAGEMENT SOFTWARE

Cycle Manager

Tucor's Cycle Manager is a Web-based software program accessible from any computer

connected to the Internet via any Java-enabled Web browser on any operating system. Cycle Manager supports real-time

remote control and monitoring capabilities, including hourly, daily and monthly reports on water use, ET, rain, soil

moisture and temperature. All programming functions, along with full manual and automatic operations, are supported.



CONTROLLERS

RKD

The RKD decoder-based, two-wire controller supports 1-100 valves, operates up to 12 stations simultaneously, and can run 10 programs concurrently. The RKD uses the RKLD-050 programmable line decoder, which can be addressed and tested at the controller. The integrated diagnostics test for decoder operation as well as the two-wire path conditions.

This inexpensive two-wire controller provides ultimate flexibility with:

- **Mist Manager** Valve operations controllable in one-second increments
- **FloStack™** Program stacking based on flow for up to 10 simultaneous programs
- **RealNet** Real-time, Internet-based water management via WiFi, cellular GPRS or a LAN
- **IntellisET** Smart irrigation

using ET and moisture sensors

- **FloGuard** Alarm and control options based on flow

RKS

The RKS conventional controller is designed to convert conventional systems to Tucor's innovative Total-Cycle Management system. The RKS supports from 1-100 valves, operates up to 12 stations simultaneously, and can run 10 programs concurrently.

Our unique Add-a-Zone program allows you to add stations one at a time as your system grows. The RKS's simple, intuitive programming comes with a wealth of controller capabilities. Available in 25-station modules, up to three 25-station expansion boards can be added to the base controller via hard wiring or wirelessly with Tucor's own ZigBee-based mesh radios.



WEATHER STATIONS

ET-300-W

The Tucor ET-300-W is a low-cost alternative for onsite weather stations. The ET-

300-W connects directly to your Tucor controller and produces a pulse output for both ET and rain. The ET-300-W

is a solar-powered, wireless weather station that can be located up to 1000' line of site (LOS) from any number of

RKD or RKS controllers on a single site or connected to our Cycle Manager software for retransmission to multiple sites.



SOIL-MOISTURE SENSORS & PROBES

SMS-100

The Tucor SMS-100 soil moisture sensor is a single capacitance sensor that provides soil monitoring data including soil moisture and temperature.

SMP-12

The Tucor SMP-12 soil monitoring probe is a single 12" probe with six sensors equally spaced 2" apart. This probe

is ideal for monitoring the soil profile in turf applications.

SMP-20

The Tucor SMP-20 soil monitoring probe is a single 20" probe with five sensors equally spaced 4" apart. This probe is ideal for monitoring the soil profile in plant bed applications.

SMP-40

The Tucor SMP-40 soil monitoring probe is a single 40"

probe with 10 sensors equally spaced 4" apart. This probe is ideal for monitoring the soil profile in crop applications.

SMP-60

The Tucor SMP-60 soil monitoring probe is a single 60" probe with 15 sensors equally spaced 4" apart. This probe is ideal for monitoring the soil profile in crop and tree pit applications.

Along with these products, Tucor has a wealth of additional components that can be combined to create a custom Total-Cycle Management irrigation system to suit your project's unique needs. Start building your Total-Cycle Management system today by calling us at 800.272.7472.



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