

## Avoid these pipe pitfalls

Install any one of these new irrigation system components and it's likely the job will involve solvent-cemented joints for the PVC piping.

Be happy with the new system – do the job right. Thomas Christy of T. Christy Enterprises, Orange, CA, says that solvent-cemented joints are foolproof if the installer is sure:

- ▶ the joining surfaces are cut square, cleaned and softened,
- ▶ sufficient cement is applied,
- ▶ assembly is done while the joining surfaces are still wet, and
- ▶ the joint is left to cure before it is moved.

Among the most common reasons for failure Christy sees are application of solvent cement to only the surface, or insufficient application to both surfaces; drying of solvent prior to assembly, or using a partly gelled or stringy cement which can't bite into the pipe or fitting; failure to prepare the cementing surfaces, or using the wrong solvent cement; excessive gap between pipes, not properly bottoming the pipe or failure to cut the pipe square; or climatic conditions.

Excessive humidity coupled with low temperature creates water while excessive heat

causes the fusion solvent to evaporate too quickly. Either can ruin a job.

### AGRIFIM, USA

559/431-2003

[www.agrifimusa.com](http://www.agrifimusa.com)

A complete catalog of sprinkler parts is available from Agrifim, Fresno, CA. Included is the Micro-Flo adjustable micro-sprinkler, rated at flows from zero to 25 gal. per hour. This adjustable micro-sprinkler comes with shut-off (10-32 NPT inlet). In addition, the company sells a complete line of Ever-Flo mini-dripperline and a range of tubing and pipe for every irrigation application.

Circle #260

### T. CHRISTY ENTERPRISES

800/258-4583

Be sure all lines and valves are marked correctly. A complete line of marking and identification products is available from T. Christy Enterprises, Orange, CA. Specializing in markers for recycled/reclaimed water, the company offers a complete catalog of valve box plates, adhesive labels, marking tape, warning tags, poly sleeving and paint products for use on any irrigation project.

Circle #261



Rain Bird's sensing and transmitting components

### what to avoid

- ▶ Application of solvent cement to only the surface
- ▶ Insufficient application to both surfaces
- ▶ Drying of solvent prior to assembly
- ▶ Using a partly gelled or stringy cement which can't bite into the pipe or fitting
- ▶ Failure to prepare the cementing surfaces
- ▶ Using the wrong solvent cement
- ▶ Excessive gap between pipes
- ▶ Drying of solvent prior to assembly

## ELECTRONIC INDUSTRIAL CONTROLS

303/290-9159

[www.eiconinc.com](http://www.eiconinc.com)

Get computerized control of your irrigation with Ceres and Universal systems from Eicon, Englewood, CO. On the Ceres version, rain off may be initiated down to the valve level using the central computer, field controller keypad or hand held transceiver. Contact closure alarm is fully programmable in field controllers with data retrieval board. Runs under Windows 95 and Windows 98. Full two-way communication is available via digital data radio, telephone modem, hardwire connection or any combination. A hand-held transceiver allows for remote control of field controllers. The two way hand-held transceiver allows placing and receiving telephone calls with the optional telephone patch.

Circle #262

## GNC INDUSTRIES

800/462-2005

[www.gncindustries.com](http://www.gncindustries.com)

No longer is it necessary to broadcast spray chemicals that are only needed in specific areas. A new pumping system from GNC Industries, Pocahontas, AR allows the lawn technician to apply the chemicals only when needed, which reduces spray time and chemical usage but still allows the broadcast spraying of the fertilizer on one passing of the lawn. It consolidates two units into one. The system allows green crews to broadcast spray and spot spray using only one unit. The new unit consists of one hose, reel, spray gun and one engine. By combining a split piston pump and a new spot spraying option, it is possible to spray two chemicals simultaneously without mixing them together.

Circle #263

## HUNTER INDUSTRIES

800/733-2823

[www.hunterindustries.com](http://www.hunterindustries.com)

A pump relay device from Hunter Industries, San Marcos, CA ensures timely and consistent irrigation pump operation on all resi-



### Hunter Industries' pump relay devices

dential and commercial landscapes. The Hunter PSR is available in three models. A compact 7x5x4 in., it is designed to activate on-site booster pumps and can help pull water directly from a creek or pond. Compatible with all 24-VAC controllers, it offers a range of contractor conveniences including flying leads that allow for 24-volt connections and a series of "knockouts" on the cabinet to simplify wiring and mounting.

Circle #264

## KIFCO, INC.

309/543-4425

[www.kifco.com](http://www.kifco.com)

The Series-B Water Reels from Kifco, Havana, IL are designed with turf in mind. The B140P will irrigate a football field with a single pass down the centerline.

There are a dozen other models, with longer tubes and machines for larger areas. They feature automatic shutdown for the water motor, stabilizer feet to anchor the machine during operation, pressure gauge, hose guide and disengagement lever for drive and anti roll-back pawl. Flow rates range from 4-100 gpm with pressures from 35 to 119 psi.

Circle #265

## MULTI-FITTINGS

800/523-3539

The Cycle Tough 4000 line from MultiFittings Corp., Port Huron, MI can handle the typical pressure surges encountered every day by golf course irrigation systems. The

4000 line of PVC pressure fittings for IPS pipe is engineered to meet long-term pressures of 200 psi. They are molded from 1.5 to 8 in. and fabricated from 10 to 24 in. Reinforcing ribs provide added strength in the body of molded fittings by reducing surge-pressure effects.

Circle #266

## NELSON IRRIGATION

509/525-7660

[www.nelson@nelsonirr.com](http://www.nelson@nelsonirr.com)

The R5 Rotator micro sprinkler from Nelson Irrigation, Walla Walla, WA emits a water stream from the nozzle and directs it onto an offset channel on the rotor plate. This creates reactionary drive force. A viscous silicone fluid in the rotor motor controls rotation speed, giving superb uniformity and distance of throw. Models range from the 10 to 23 gph R5 through the .61 to 1.25 gpm R10 Turbo and the big 1.64 to 5.4 gpm R2000VF.

Circle #267

## POINT SOURCE IRRIGATION

559/498-6800

The wear-resistant, clog-resistant design of the Dan 2001 PC spinner head from PSI, Fresno, CA makes it perfect for tough applications. This pressure compensating, pop-up micro-spinner allows a regulated flow from 18 to 60 psi. The diaphragm is made of chemical and wear-resistant EPDM. The

pressure compensating design reduces abrasion and wear on the nozzle and spinner. Also check out the firm's Dan Revolver, an economical alternative to impact sprinklers.

Circle #268

## RAIN BIRD

800/247-3782

The Rain Bird Flow Meter line of 11 sensing and transmitting components makes it practical to incorporate flow metering into new or existing systems. The firm's turf division is located in Azusa, CA and sells tee-type sensors available in 1-in. brass and 1.5-, 2- and 3-in. plastic models. Color coded irrigation-type wire leads and clearly marked flow direction ease installation. Models operate up to 400 psi and temperatures to 221° F. All provide accuracy to 1%. Signal-alone models can be used with all central control systems. Stand-alone models provide an LCD display which shows actual and total flow.

Circle #269

## SYNCRIFOLO

800/866-4443

[www.syncroflo.com](http://www.syncroflo.com)

The Gator line from SyncroFlo, Norcross, GA is perfect for small irriga-



### Low profile Gator pump unit

tion applications that require a reliable and affordable pump station

# lm reports

for flows from 30 to 250 gpm at 130 psi. The Gator Pumping Systems blend with the environment as low-profile units concealed in weather-resistant, snap-hinged, lockable steel enclosures. Units react to flow pressure requirements. Digital flow display and backflow prevention devices available.

Circle #269

## RAINMAN 800/433-6745

Several irrigation controller enclosures are available from Rain Man, Anaheim, CA. The stainless steel model is made of 14-gauge 304 stainless and has waterproof silicon gaskets. Despite its low price, it has a 6-year warranty. A cold-rolled steel version offers a 3-year warranty. Both units come in a variety

of widths and depths, and stand either 36 or 40 in. tall. The finishes on these boxes are as good or better than those found on a typical car, the manufacturer says.

Circle #270

## TORO 909/688-9221 [www.toro.com](http://www.toro.com)

The Flo-Pro line of valves from Toro, Bloomington, MN features no-leak performance and a three-



Toro's Flo-Pro line

year warranty. It delivers between 0.25 gpm water for drip irrigation

up to 30 gpm for full irrigation of residential landscapes. Available in 1-in. electric in-line and 1-in. angle models, it includes the optional QuickLink solenoid that provides watertight connection with the controller, 1-in. and 0.75-in. anti-vacuum breaker models, and a variety of connection options.

Circle #271

## TRANSITIONAL SYSTEMS MFGR.

### 530/751-2610

The Doubler valve control module allows more valves to be installed using existing control wires and controller. When pressure drops, another valve may be added next to an existing valve to serve one or two sprinklers. Priced at \$139 from Transitional Systems, Yuba

City, CA, the Doubler is the answer to any drop in supply volume or pressure. It requires an 8-amp circuit and operates on 24 VAC.

Circle #272

## WATTS ACV 713/943-0688

Whether it's float control, solenoid control or pump control valves, Watts Automatic Control Valves, Houston, TX has an efficient model. The main valve, globe or angle pattern is diaphragm actuated, hydraulically operated. It consists of only four major components: body and cover plus interior seat and diaphragm/stem assembly, which is the only moving part in the main valve. Irrigation valves come sized from 1.25 to 6 in.

Circle #273

## The Landscape Management Handbook

*The best single-source reference containing the most current and comprehensive information on the basics of turfgrass and landscape management available today!*

*edited by William E. Knoop*

125 pages, softcover • Item #LSMB830

**\$24<sup>95</sup>** plus shipping/handling

- ✔ Provides an overall understanding of turf and landscape care and management and covers all the basics of the green industry
- ✔ Covers all the topics golf course superintendents and students of turfgrass and landscape management need to know
- ✔ Combines practical information with the tried and true basics of management to provide a single, practical, affordable and up-to-date text
- ✔ Features detailed information, charts, diagrams, figures and tables to illustrate key information points

**The Landscape Management Handbook** provides a unique, single-source reference of comprehensive information on a variety of turf and landscape topics. It's an ideal handbook for golf course and lawn care superintendents and crew members, and is also appropriate for schools that teach basic turf and landscape management.

## Call 1-800-598-6008

Fax: 218-723-9146 • Outside the U.S. 218-723-9180

Order on-line at [www.landscapegroup.com](http://www.landscapegroup.com)

**Please mention code H-LM when ordering**

950854