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plumbing & hydronic contractor news

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*Jack Wilhelmi,
MCAA president*



MCAA

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FIXTURES**

Choosing sustainabilityPage 48

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PUMPS**

Achieving high efficiencyPgs. 49

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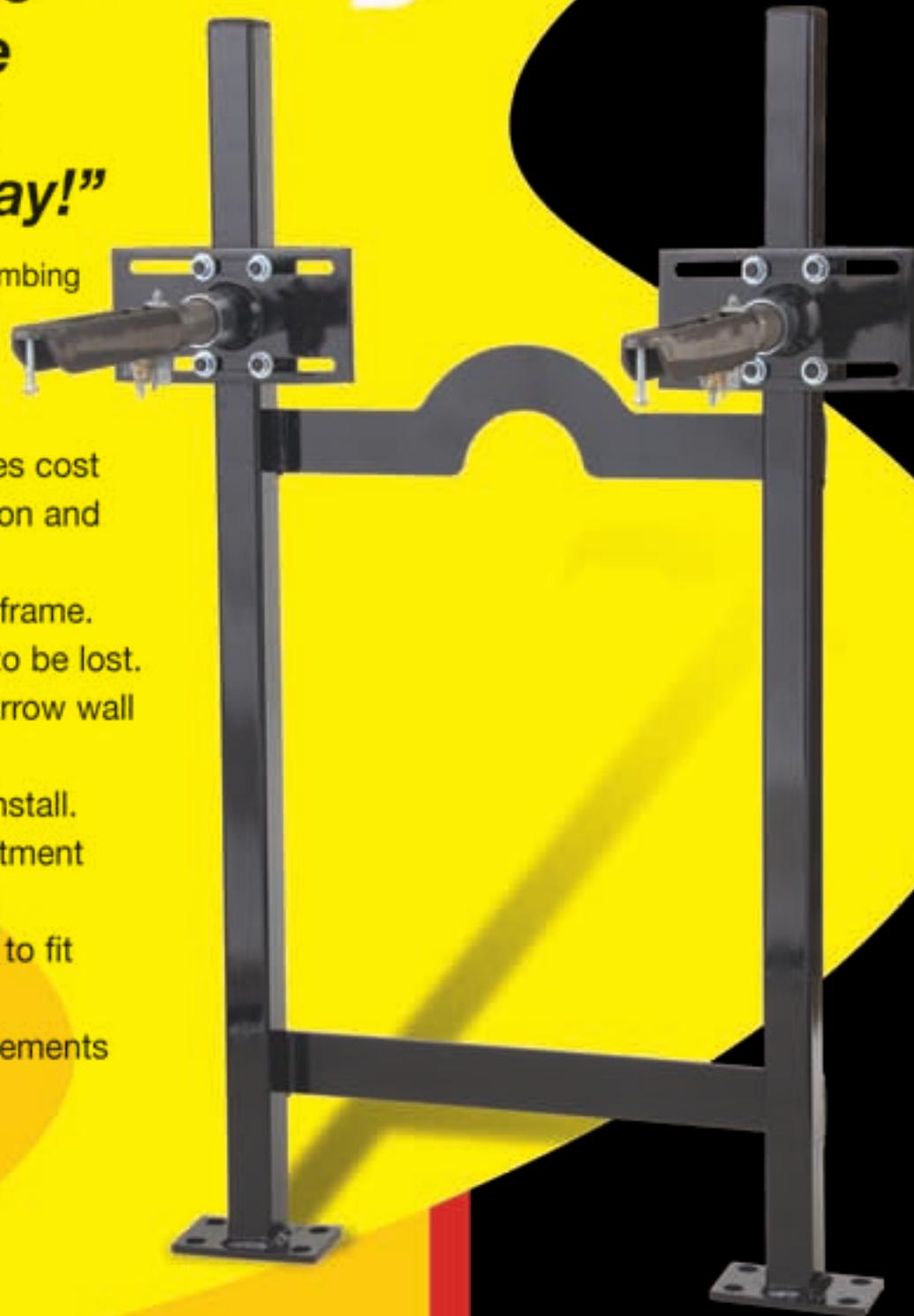
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On the Cover

MCAA's annual convention in Scottsdale, Ariz. — March 1-5 — hosted by MCAA president, Jack Wilhelmi, will be loaded with business-building ideas and strategies for growth that will help contractor members rethink and retool their businesses.

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As energy costs continue to rise, and energy efficiency becomes more important in the operation of HVAC systems, continuing attention by equipment suppliers and operators will revolve around maximizing the efficiency of the system components in order to conserve energy and reduce operating expenses.



Phc News

plumbing & hydronic contractor news

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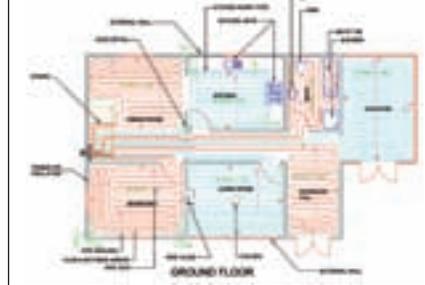
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NSF develops standard for low lead plumbing products in support of requirements in California

Ann Arbor, Mich. — NSF Intl. announced the development of a new compositional standard for products that come in contact with drinking water, including faucets. The new requirements are incorporated into the NSF/ANSI American National Standard for Drinking Water Products to help protect the public from exposure to lead.

Annex G – Weighted Average Lead Content Evaluation Procedure to a 0.25 Percent Lead Requirement allows manufacturers to demonstrate compliance to recently enacted legislation in California that limits the weighted average of lead content in plumbing products, which come in contact with drinking water, to 0.25 percent.

The annex was recently incorporated into NSF/ANSI Standard 61: Drinking Water System Components — Health Effects, a standard that includes procedures to evaluate products that come in contact with drinking water and to screen out those products that could contribute excessive levels of contaminants into drinking water. Products covered in the standard include: pipes and related products; protective and barrier materials (including cements/coatings); joining and sealing materials (including gaskets, adhesives, lubricants); process media (including carbon, sand, zeolite, ion exchange media); mechanical devices (including water meters, in-line valves, filters, process equip-

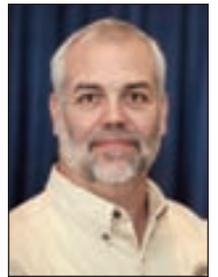
ment); mechanical plumbing devices (faucets, drinking fountains, and components); and potable water materials (non-metallic materials).

New interim Board liaison announced for RPA

LOVELAND, COLO. — The Board of Directors of the Radiant Panel Association (RPA) announced the creation of an interim board liaison position in response to the recent announcement to step down made by long-term executive director Larry Drake. Three-time association president and current board member, Jeff Brennecke, will serve as board liaison effective immediately. Brennecke will take a leave of absence from his board

role while he fulfills the liaison duties.

Drake's role with the RPA ends April 30, 2009, and the search for a new full-time executive director has already begun.



Brennecke



Drake

Brennecke's interim role is intended to facilitate a smooth transition and ensure that the board is well-equipped to assist and guide the new director.



THE WALL

Dan Holohan's Web site, HeatingHelp.com, features a message board called "The Wall" where hydronic heating professionals post questions and offer answers of all kinds regarding hydronic heating systems. Dan has kindly allowed Phc News to reprint some of the more interesting postings here each month. This section will surely whet your curiosity, so log on to the web site and click on "The Wall" for a treasure trove of useful and just plain interesting information.

Heat content vs steam PSI

Q: I am involved with the installation of a steam boiler for industrial application. The boiler will supply steam to heating coils for heating air. The steam will flow through 5/8" copper tubes and the air will flow across aluminum fins. The boiler was fitted to operate up to 50 PSI but new controls have been bought to make it a low pressure boiler, max 15 psi. Does reducing the pressure decrease the heating capacity of the boiler? If so, by how much?

— Ken Sappio

A: Reducing the pressure of the boiler will reduce the max temp output of the boiler.

Steam at 15 PSIG = 250 degrees F.
Steam at 50 PSIG = 298 degrees F.

This will send "cooler" steam to your heating coils and slightly derate them. However, the largest output of heat is in the change of state from steam to water; you get 970 Btus of heat energy (per pound of water) from that change with no drop in temperature. The rest of the heat comes at 1 Btu per degree

temp change per pound of water.

— Rich L.

A: If the coil is to handle outside air, those in my experience have one-inch tubes, often with internal distributor tubes to get steam all the way across the coil for every other tube. This is also a form of freeze protection but is not absolute protection.

Also the fins are, for longevity, often tinned (solder coated).

Rich L. is correct on the principles of pressure and temperature. You can expect a perceptible drop-off in coil capacity if the coil was originally sized for medium pressure and now will be on low.

As for the boiler capacity, Btus are Btus for all practical purposes. Your useful heat (heat of evaporation) will be more per pound though, at the lower pressure. Less fuel will be spent getting up to pressure and you will not be superheating.

If you have boiler operator laws, your actual pressure may even be less than 15 PSI as a practical matter,

often 12 PSI with a 3 PSI margin to relief valve lift pressure.

— Brad White

My father's toolbox

One thing that always impressed me as a kid was my father's toolbox. All the wrenches and sockets, funny "waterpump" pliers, and odd-shaped, but very useful items — all packed into a brown steel toolbox a couple foot long and so heavy! It seemed he could fix almost anything with just the tools in his toolbox. He did have some other larger tools too (pipe wrenches, etc.) that did not fit into the tool box.

There was also pride in how he cared for his tools — and he taught me so much out of that toolbox.

Of course, I wanted one too; and he helped me build my own toolbox starting about when I was 11 — all quality stuff, too. Over the years my personal toolbox — which now number several — has exceeded what my father had. Of course, back then he did not have to have two sets of wrenches and sockets (inches, metric). I also have some specialized tools that he never needed.

But still, every time I went home and we would fix something together, it was my father's toolbox that provided the tools. I always would carry it with pride, knowing that my father and I shared an understanding and knowledge of good tools and how to use them.

Today we started the real process of cleaning out my father's shop in preparations for my parents moving into an elderly housing center in four weeks. I went to my parents house (three-hour drive) with the van — and with people hired to help load stuff to get the bench drill press, the bench bandsaw, and the metal (piping) work bench that my dad had fabricated to his specs about 60 years ago (it has a pipe vise on one end, and a standard vise on the other), and some benches. That is not all of the shop, but the main items I could fit into the van today. I have space waiting for it in my basement, as I had to sell my woodworking tools about 15 years ago when I was unemployed.

But, halfway through the project, dad pointed down to his toolbox and said, "You can take that, too."

So I closed the lid on the toolbox my dad can no longer lift, ensuring all the wrenches and sockets were in place — and carefully carried it to the van.

To say I am honored is an understatement. There is a lot of emotion involved, and I won't hide that I have tears in my eyes as I write this.

Tomorrow I have some people coming over to help unload the van. No one else is going to touch my father's toolbox. I am sure I will use the tools in it for years yet — and hope that I can find someone worth to pass it onto.

— Perry

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InSinkErator honors Women's Council Spike members

RACINE, WIS. — InSinkErator, a leading manufacturer of food waste disposers and hot water dispensers, and the National Association Home Builders (NAHB) Women's Council honored outstanding members with scholarships and awards. The recognition event took place at the 54th annual Women's Council Spike Club Awards Reception at this month's NAHB International Builders' Show in Las Vegas, Nev.

Members who exceeded recruitment expectations in 2008 were awarded scholarships that their local women's council will use to provide financial assistance to students pur-

suing degrees relevant to the building industry. InSinkErator also supports individuals who are valuable members of their communities.

NAHB Women's Council Chair Pam Weaver presented the following scholarship awards:

Robert M. Cox Women's Council Spike of the Nation Awards

Karen Dry, 2009 Women's Council Chair and a member of the Southern California BIA Women's Council was the council's top recruiter in 2008, recruiting 43 new members and achieving a grand total of 325 Women's Council Spike credits. She

was awarded the National Women's Council Spike Award receiving a recognition pin from the Women's Council and a \$500 scholarship.

The following regional award winners received a \$350 scholarship and a recognition pin:

- Northeast Region A: Shonna Stock Cardello of the York County, Penn., BA Women's Council

- Southeast Region B: Alicia Huey of the AHB of Greater Birmingham Women's Council

- Midwest Region C: Polly Marean of Greater Des Moines Women's Council

- Midwest, Mid-South and Texas Region D: Kelly Ranney of the Central Oklahoma BA Women's

Council

- American West Region E: Coleen Wright of the BIA of Southern California Women's Council.

Women's Council Spike Rookies of the Year

These women are the future of the Women's Council membership growth. They both began 2008 with no Women's Council Spike Credits and achieved WC Spike status during the year.

- 1st Place Rookie of the Year: Anne Viricel of the BIA of Southern California Women's Council

- 2nd Place Rookie of the Year: Angela Wilson also of the BIA of Southern California Women's Council.

Proposed infrastructure investments to support 1.85 mil+ jobs in less than 2 yrs

WASHINGTON — New proposed infrastructure and public building investments will create or support almost two million jobs throughout the entire economy in part because of the economic slowdown and massive construction layoffs that have occurred, George Mason University economist Stephen Fuller testified today.

Professor Fuller, who made the arguments during Congressional testimony on behalf of the Associated General Contractors of America, noted that the current stimulus plan's proposed infrastructure investments would create or support more than 1.85 million new jobs between now and the end of 2010. He said that would include more than 620,000 construction jobs, 300,000 jobs in

supplying industries and 930,000 jobs throughout the broader economy.

"The sharp decline in construction employment and activity we have seen over the past two years mean that the sector has plenty of capacity to quickly take on new projects," Professor Fuller told the House Committee on Transportation and Infrastructure. "Two years ago these kinds of investments might have trickled out the door, but in today's climate, they are going to flood out into the economy."

Fuller also said that in addition to the statutory spending deadlines being considered, the new infrastructure investments would flow quickly because an unusually high number of companies and workers are available to begin work immediately.

The Plumbing Museum reopens

WATERTOWN, MASS. — A Worcester landmark, the American Sanitary Plumbing Museum, has officially reopened in its new home along the Charles River in Watertown. Carefully presented inside the confines of a 150-year old ice house, the Plumbing Museum combines the craftsmanship of past industry with the luxuries of modern, everyday life.

The museum's collection is comprised of claw-foot bathtubs, ornate water closets, and antique sinks. It also features a large library of turn-of-the-century trade magazines and newspapers, and a circa 1910 plumbing shop with original tools and equipment. While the museum is entrusted to Plumbing, Heating, Cooling Contractors of Greater Boston (PHCC), it lies on the property of the Watertown-based mechanical contracting firm J.C. Cannistraro,

LLC. John C. Cannistraro, Jr., the company President, has worked closely with the collection to create its new look. "The museum tells the story of American industry," explained Cannistraro. "With the help of the Artists for Humanity, Cambridge Seven Associates, and the PHCC of Greater Boston, this collection will bring a fun, educational, and historical offering to the Watertown community."



The American Sanitary Plumbing Museum now resides in a 150-year-old ice house.

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Inside the trade

What we're hearing



AHRI releases November shipment data

IN WHAT COULD be a true gauge of the industry's economy, the AHRI has released some staggering shipment data for the month of November.

According to figures released by the Air-Conditioning, Heating, and Refrigeration Institute (AHRI), residential electric water heater shipments for November totaled

Residential gas water heater shipments totaled 260,443, a 26.8 percent decrease compared with shipments for the same month last year.

280,019, a 24.2 percent drop from the same month a year ago.

Residential gas water heater shipments totaled 260,443, a 26.8 percent decrease compared with shipments for the same month last year. For the year-to-date, about 3.6 mil-

lion residential gas water heaters have been shipped, a 7.7 percent drop compared with the same period a year ago. For the year-to-date, about 3.9 million residential electric storage water heaters have been shipped, a 4.2 percent drop compared to the same period last year.

Commercial gas water heater shipments for November totaled 4,910, dropping 38.5 percent compared with the same month last year, while commercial electric water heater shipments totaled 4,292, a 26 percent drop compared with the same month a year ago. For the year-to-date, commercial electric water heater shipments (63,842) are 3.3 percent ahead of total shipments of this product during the same period last year (61,800). Commercial gas water heater shipments (82,083) for the year-to-date are up 0.5 percent, compared with the same period a year ago (81,665).

Tool Tips

with Hackman



One tooth wood hole cutters

There are many different drill bit options for boring larger size holes through wood. The options include hole saws, spade bits, wood boring bits and one tooth wood hole cutters. One of the most com-

also add time to the job.

Spade bits are usually made of carbon steel and can quickly burn up the cutting edge when nail encounters occur. Wood bits are made to cut through a floor joist fairly quickly by removing wood chips as you drill. There are real risks involved with nail encounters. Not only does it strip the bit, but the sudden jolt when you hit the nail can also cause arm and shoulder injuries or even throw you off your ladder.

One tooth wood hole cutters are designed to both cut through wood very quickly and work right through a nail without any fear of a jolt; eliminating the potential for injury. The one tooth can also drill holes through wood on an angle when it's necessary to run an angle joint.

Special stubby spade bits are available to pilot the one tooth wood hole cutters. I recommended this for easier

plug ejection because there is less material in the pilot hole; making for easy and quick plug removal. It also has a high speed steel cutting edge that's easily sharpened with a diamond file. Several swipes on the face of the tooth will bring the cutting edge tip back to its original sharpness. But please remember to never file the top of the tooth; this will drastically reduce the life of the cutter.

One tooth wood hole cutters are available in 13 sizes and rang from 1³/₈" to 6¹/₄" with sizes to accommodate pipe, duct pipe and toilet flange.

Give them a try, you won't be disappointed. ■



mon applications is drilling holes through a floor joist. Hole saws can cut through nail embedded wood, but going through a floor joist can be slow and tedious. Ejecting the plug can

Current prices



Fuels

Gasoline			Diesel		
Area	¢/gal.	Change	Area	¢/gal.	Change
U.S. average	183.8	↑	U.S. average	226.8	↓
East Coast	181.6	↑	East Coast	234.4	↓
New England	181.8	↑	New England	259.5	↓
Central Atlantic	183.0	↑	Central Atlantic	249.0	↓
Lower Atlantic	180.5	↑	Lower Atlantic	225.8	↓
Midwest	182.0	↑	Midwest	223.2	↓
Gulf Coast	172.9	↑	Gulf Coast	220.2	↓
Rocky Mountain	164.4	↑	Rocky Mountain	224.3	↑
West Coast	205.7	↑	West Coast	231.9	↑
California	209.5	↑	California	229.6	↑

Metals

*Copper	\$1.45/lb.	↓	**Aluminum	\$.59/lb.	↓
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Prices valid as of 2/02/09. Fuel information courtesy of the U.S. Department of Energy <http://tonto.eia.doe.gov/oog/info/gdu/gasdiesel.asp>. Arrows indicate change from previous issue. * Copper prices according to NYMEX.com. ** Aluminum prices according to metalprices.com.

Training Center

Employee survey shows weak commitment to training in 2009

URBANDALE, IOWA — A new survey of 300 mechanical, electrical, facilities, utilities and plumbing professionals indicates a lax attitude toward training among MEP employers.

Of those responding, nearly 45% said their employer did not have a budget for training, while another 15% said their company's training budget is going down in 2009. What's more, 55% of respondents funded their last professional certification training and testing costs on their own.

When asked about the last time they were trained in a work-related safety procedure or process,

more than 25% of respondents either couldn't remember or hadn't been trained yet.

Ninety percent of respondents were over the age of 31, and 62% were currently employed when the survey was conducted in late December 2008.

"Companies hoping to differentiate themselves during a time when many prospective employees are shopping for jobs should focus on promoting their dedication to continuing education and training," said Jeff Dickey-Chasins, VP of marketing for MEP Jobs.

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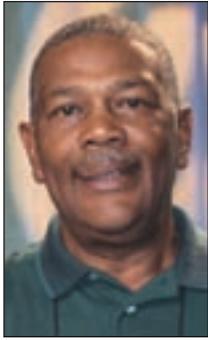
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Industry mourns death of colleague

The PHC industry mourns the untimely death of Roscoe King, friend, teacher and colleague. Roscoe passed away after suffering a heart attack on January 12, 2009.

King was a member of several vital committees representing the City and County of Los Angeles, and his was one of the loudest voices for IAPMO and safe plumbing standards in Southern California. He held several plumbing and contractor licenses as well, and shared his experience in the classroom by instructing engineers, building officials, field inspectors and office managers on code changes on behalf



Roscoe King

of IAPMO.

King also taught courses for the Plumbing, Heating and Cooling Contractors of the Greater Los Angeles Area.

An IAPMO press release said King always brought energy and humor to the meetings that otherwise might have been boring and tedious: "This is a person that has brought so much light into our lives that we have to acknowledge this contribution and give something meaningful back. This is a man who has made everyone else's life more enjoyable through his contributions, and brought countless smiles to our lips at the same time."

With the County of Los Angeles Building & Safety Division, King developed and implemented plumbing and mechanical code training for all county combination building

inspectors and provided technical support for field inspectors on plumbing and mechanical issues.

King recently won the IAPMO Government Person of the Year Award and guided IAPMO's Southern California Chapter for five years.

Kohler, Artisan Group develop specialty dealer program

KOHLER, WIS. — Kohler Co. has developed a specialty dealer program with Artisan Group, a nationwide network of premier stone and granite fabricators.

"Combining two leading brands — Kohler and Artisan Group — fills a need in the marketplace that is currently underserved," said Mally Henne, channel manager for kitchen

products, Kohler Co. "Kohler's wholesale channel is ready to connect and build business in this important surface market. This program ensures customers receive high quality products from recognized brands within their respective industries. It's a win-win for everyone involved."

In a first-of-its-kind program for Kohler, as a Registered Specialty Dealer, the Artisan Group will have access to Kohler and Sterling brand kitchen sinks and Kohler kitchen faucets, aligning with the manufacturer's expansive network of national and regional plumbing wholesalers. Additionally, Artisan Group showrooms will be equipped with displays and product information on kitchen sinks and faucets so customers can better understand their choices to complement countertop surfaces.

20 Noritz tankless models get Energy Star Rating, tax credit

FOUNTAIN VALLEY, CALIF. — Noritz America Corporation, a leading manufacturer of tankless water heaters and the official tankless water heater of Brad Pitt's "Make It Right" project in New Orleans and of TV's "Extreme Makeover: Home Edition for 2008-09", has partnered with Energy Star. Twenty of its models have earned the Energy Star rating from the U.S. Department of Energy and the Environmental Protection Agency.

Yoshi Asano, Noritz America senior marketing manager, said, "Noritz's commitment to environmental awareness prompted the drive to produce more energy efficiency products and, in turn, we now offer the greatest number of tankless water heaters in the industry that have received the much sought-after Energy Star rating." Asano further said all of Noritz's Energy Star products qualify for the \$300 federal tax credit for 2009.

Ferguson opens new showroom

NEWPORT NEWS, VA. — Ferguson announced the opening of a new 10,500-square foot showroom in Fresno, Calif. The new Bath, Kitchen & Lighting Gallery at 704 North Laverne Avenue on the southeast corner of Fowler and Belmont, provides customers with superior merchandise and outstanding service.

Ferguson's showrooms are designed with homeowners, plumbers, builders, remodelers and designers in mind and offer a wide selection of plumbing, appliances, cabinets, countertops and lighting from today's most recognized manufacturers.



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LA-CO celebrates 75 years

ELK GROVE, ILL. — In 1934, Dr. Lester Aronberg established Lake Chemical Company in the heart of Chicago, providing solutions for high-performance industrial marking. Aronberg's prod-

ucts found a niche in dozens of diverse industrial applications, and the company grew to develop three thriving brands — Markal, LA-CO, and All-Weather. Now headquartered in Elk

Grove Village, Ill., family-owned, LA-CO Industries, Inc. is celebrating 75-years of developing unique specialty chemical products designed to meet demanding industrial applications while serving customers with the highest level of quality and convenience.

LA-CO, a leader in plumbing chem-



icals, provides plumbing professionals and HVAC contractors with product offerings that include flux, sealants and heat protection and marking products.

The Markal brand offers the industrial professional both permanent and temporary marking products designed to meet difficult marking applications. Lines include solid paint markers, liquid paint markers, felt-tip markers, metal markers and temperature indicators. The All-Weather brand provides lines of livestock identification products for farm and ranch applications.

EnerWorks receives first ENERGY STAR qualification for solar water heaters

DORCHESTER, ONTARIO — EnerWorks solar water heating appliances are the first to qualify for the Department of Energy's new ENERGY STAR® residential water heater program. EnerWorks two, three and four collector High



Performance appliances as well as all SpaceSaver single tank solar + electric appliances bear the ENERGY STAR registered trademark.

"Being the first solar water heaters to qualify for the new ENERGY STAR program is a testament to EnerWorks's dedication to the program, as well as confirmation of the efficiency and performance of EnerWorks appliances," says Phil Whiting, EnerWorks President and CEO.

Whiting adds, "The ENERGY STAR label is synonymous with energy efficiency so consumers now have added confidence in the selection of solar water heating appliances."

The ENERGY STAR program for residential water heaters went into effect on January 1, 2009. Qualifying products are posted on the ENERGY STAR website; qualifying solar water heaters are posted at www.energystar.gov/index.cfm?fuseaction=solar_wheat.display_products_html.

If Your Customers Have Entran II Radiant Heating, They Could be Entitled to Cash Payments from a \$324 Million Settlement

There is a \$324 million settlement to pay homeowners for claims related to defective hose used in radiant heating and snow melting systems. The hose, called Entran II, was also known as *Twintran, Nytrace, Entran II Trace, Entran II Wire, Entran 2, Entran 2 Trace, and Entran 2 Wire*.

Claim payments vary depending upon the extent of the property damage and the type of installation, for example, in-slab or staple up. The maximum amount payable to any Claimant will be determined by multiplying the square footage of a floor area heated with a particular type of installation by the predetermined costs per square foot of remediating the system.

- Claimants who have or had severe property damage due to leaks in their systems could receive up to 50% or more of their maximum claim.
- Claimants who have or had less severe property damages including corrosion or other problems could receive up to 30% or more of their maximum claim.

Homeowners who have Entran II hose but have not suffered damage may also file a claim.



Contact your customers to notify them of the benefits of this settlement and to assist them with their remediation.

The deadline for filing claims is November 19, 2009.

Only customers who file a claim by that date can receive a cash payment.

For More Information

Visit: www.entraniisettlement.com Call: 1-800-254-9222

or Write: Entran II Claims Administrator, P.O. Box 24, Minneapolis, MN 55440-0024

NSF certifies first geothermal pipes to new Canadian standard

ANN ARBOR, MICH. — NSF International, a public health and safety organization, recently announced that it has certified the first geothermal pipes to Canadian Standards Association's (CSA) standard C448: Design and Installation of Earth Energy Systems for Commercial and Institutional Buildings. NSF is the only organization that certifies polyethylene (PE) piping for geothermal end use.

CSA C448 is North America's only government-recognized design and installation standard for geothermal systems, which use the earth as a heat source and heat sink. They provide heating or cooling by moving heat, rather than by creating heat like a furnace. While conventional heating systems rely on outdoor temperatures that often vary, under-

Third-party certification for geothermal piping systems provides regulators and users assurance that products are independently certified to meet requirements for geothermal end use.

ground temperatures remain relatively constant all year round, producing the desired heating and cooling temperature year round.

NSF's certification program was developed to incorporate all of the critical aspects of geothermal piping, including performance, physical, health effects and quality control requirements. To achieve NSF certification, both Trinus Pipes & Tubes Ltd. and Vanguard Pipe & Fittings Ltd. had to fulfill the requirements of NSF/ANSI Standard 14: Plastic Piping System Components and Related Materials and CSA B137.1: Polyethylene (PE) Pipe, Tubing, and Fittings for Cold Water Pressure Services in addition to the requirements of CSA C448. Both companies also underwent a rigorous facility audit that verified the following:

- Formulation and manufacturing processes
- Use of authorized raw materials
- Quality control requirements
- Sampling of product for monitoring testing
- Product marking
- Product complies with standards and NSF policies

For meeting the requirements, Trinus and Vanguard will bear the CSA-C448, CSA-B137.1 mark and the NSF-geothermal mark on its pipes. These companies are also listed on the NSF web site: www.nsf.org.

Third-party certification for geot-

hermal piping systems provides regulators and users assurance that products are independently certified to meet requirements for geothermal end use. To maintain NSF certification and demonstrate ongoing compliance, Trinus and Vanguard will be

required to pass three unannounced audits annually.

According to Jeremy Brown, NSF code and regulatory manager, "Third-party certification is essential because it helps increase confidence and product acceptance, while helping to ensure product compliance with applicable requirements. Going forward, we will continue to play an active role in building on the quality requirements of

earth energy technologies."

Certification to NSF/ANSI Standard 14 incorporates additional quality control requirements for PE pipes and establishes the minimum physical, performance and health effects requirements for the plastic piping components. The standard includes product testing, long-term strength and quality control requirements that are the key to ensuring product performance in the field.

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Director enhances Code Council PMG mechanical expertise

WASHINGTON — Bob Guenther, International Code Council Senior Technical Staff has accepted a new position with the Code Council's Plumbing, Mechanical and Fuel Gas (PMG) group as Director of Mechanical Programs. He will expand and enhance Code Council mechanical products and services, and bring a new level of expertise and credibility to the Code Council in the HVAC and energy marketplace.

Ferguson veteran to oversee Wolseley Canada shared purchasing center

NEWPORT NEWS, VA. — Furthering the integration of Ferguson and Wolseley Canada, long-time Ferguson veteran Steve David, director of corporate

procurement and shared purchasing center services, will assume leadership of Wolseley Canada's shared purchasing center in Oakville, Ontario.

Elkay elects member to Board of Directors

OAK BROOK, ILL. — Ronald C. Katz, executive chairman of Elkay Manufacturing Co., announced that Timothy Jahnke, Elkay's president and CEO, has been elected to serve on the company's Board of Directors.



David



Jahnke

Zoeller Company VP of marketing retires

LOUISVILLE, KY. — Zoeller Company announced that Mike Babrowski, vice president of marketing will retire, effective February 20, 2009, after 26 years with the company. During Babrowski's tenure, Zoeller Pump Company became an acknowledged leader in the sump and sewage market in the United States. Babrowski was an active member of the Vendor Member Division and the American Supply Association, as well as of other business and professional organizations in Louisville.



Babrowski

Fleet One announces new account execs

NASHVILLE, TENN. — Fleet One, LLC, a provider of fuel cards and fleet-related payment solutions to businesses and government agencies with vehicles, recently announced new account executives for the Fleet One Local and Factoring sales teams. Brian McLarty joins the company as the newest member of the Fleet One Local sales team. Patrick Eakins and Ashli Leonardo are the newest members of the Fleet One Factoring sales team.

Fire-Lite expands sales force

NORTHFORD, CONN. — Fire-Lite Alarms has expanded its US sales force with the hiring of two new reps: Dan Lajoie in the East and Leon Parks to cover the Northwest.

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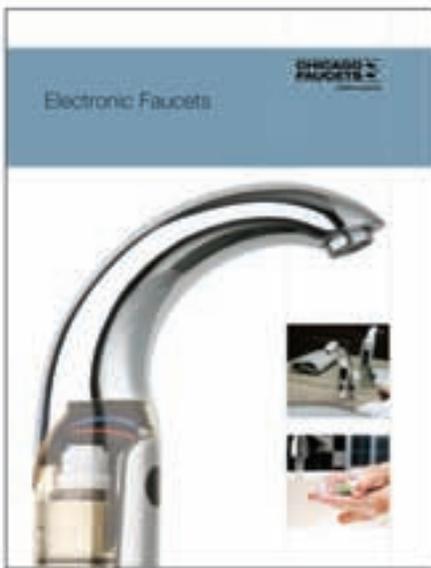
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From the unparalleled HyTronic™, to the affordable E-Tronic™, Chicago Faucets has set a new reliability standard for electronic faucets. Chicago Faucets' complete electronic faucet line is featured in a new brochure that shows how intelligent design, durability and reliable performance are indeed possible with an electronic sensor-operated faucet. Chicago Faucets Electronic Products... advanced technology you can count on.

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Chicago Faucets Commercial Catalog

Chicago Faucets full line of commercial products is featured in this full-color comprehensive catalog. Select from a variety of manual, electronic, food service and laboratory products, plus components and repair parts. With over 500 standard products, and the know-how to custom build faucets to exact needs, you can count on Chicago Faucets for any commercial or institutional installation including; medical facilities, schools, office buildings, restaurants and stadiums. Chicago Faucets... Lasts as long as the building.



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Conservation & Sustainability

Chicago Faucets commitment to water conservation and sustainability is highlighted. The brochure focuses on Chicago Faucets' extensive product offering of components and fixtures designed to assist in maximizing water conservation. Selecting low-consumption, energy saving Chicago Faucet products as new or replacement fittings can help earn green building rating points toward a facility's LEED certification.

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Five water heater types earn ENERGY STAR Label

WASHINGTON — As of January 2009, five types of water heater technologies are eligible to earn the ENERGY STAR label. The new ENERGY STAR water heater program marks the beginning of the transformation of the water heater market from conventional to advanced, energy-efficient technologies.



Types of water heaters now included in the ENERGY STAR program are:

- High-efficiency gas storage
- Whole-home gas tankless
- Gas condensing
- Solar, and
- Heat pump

“Water heating is the second largest energy expenditure in a household behind heating and cooling,” says Richard Karney, ENERGY STAR program manager for the U.S. Department of Energy. “The launch of the new water

heater program is encouraging news for consumers, who can cut their water heating bills anywhere from 7.5% to 55% by installing a qualified model. The new program is also good news for plumbers, who can differentiate themselves from their competitors by stocking and installing qualified models.”

The criteria offer a profitable opportunity for plumbers who want to expand into high-performance, energy-efficient technologies. Such opportunities are available now for installing and maintaining tankless and solar water heaters. Once ENERGY STAR qualified gas condensing and heat pump water heaters reach the market, additional opportunities will arise.

According to the DOE, consumer demand for qualified water heaters will increase with the new criteria. As a result, plumbers will need to learn how to install and maintain the more advanced water heating technologies.

Manufacturers, utilities and non-profit organizations periodically hold training sessions to expand the number of proficient plumbers.

GreenPlumbers USA, for instance, plans to train 50,000 plumbers over the next five years. Also, the Consortium for Energy Efficiency plans to release installation guidance and tips for communicating with consumers. Once trained, plumbers will want to promote their expertise to consumers, builders and remodelers.

Learn more at <http://www.energystar.gov/waterheaters>.

ECR Intl. unveils new look

UTICA, N.Y. — ECR International, a manufacturer of heating and cooling appliances, has announced a logo change.

According to Ronald J. Passafaro, vice president, sales and marketing “We must continually evolve to meet the needs of our ever-changing industry, customers and environment. We

will however remain true to our rich history of innovation, quality and performance initiated by our founder Earle C. Reed since 1928.” The new



logo pays tribute to ECR's history, reflects the heating and cooling sides of the business and speaks to their growing commitment to providing high efficiency, environmentally friendly products.

Roth Industries names new rep

Roth Industries, Inc. announces a new manufacturer representative for the Roth product line. RST, Inc. has



been assigned to represent Roth in Rhode Island, Maine, New Hampshire and eastern Massachusetts. With over 18 years of experience in the field, steady and solid growth representing manufacturers that focus on a system approach, RST, Inc. will be a very good fit with Roth. Roth product line includes the Roth double-wall oil storage tank, radiant heating systems, PEX-c plumbing systems and the recently introduced solar systems.

DiversiTech forms partnership with General Tools

ATLANTA — DiversiTech announces an exclusive partnership with General Tools to provide HVAC technicians with specialty tools such as infrared thermometers, precision metering devices, specialty hand tools, temperature and humidity testing equipment, and more.

Since 1922, General Tools has been a leading designer and manufacturer of specialty tools. By focusing on the needs of its customers in the field and continually working to find innovative solutions, General Tools continues to develop unique tools to make its customers' tasks easier and more successful.

DiversiTech shares General Tools' passion for listening to customers and responding with new products; for this reason, the two companies continue to forge a strong alliance. Moving forward together, DiversiTech and General Tools look to offer the industry even more fine products in the years to come.

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Water efficiency coalition gains traction

WASHINGTON — The newly formed Water Efficiency Coalition, which will be governed by the Alliance for Water Efficiency, is gaining momentum and members. Recently, the International Code Council's (ICC) Plumbing, Mechanical and Fuel Gas (PMG) group, the Alliance for Water Efficiency (AWE), the International Association of Plumbing and Mechanical Officials (IAPMO), the Plumbing Manufacturers Institute (PMI) and the Plumbing-Heating-Cooling Contractors — National Association (PHCC) have signed on.

The ICC joined with a consortium of the best plumbing minds in the U.S. to collaboratively develop solutions for continued worldwide improvement of water efficiency and conservation efforts across the plumbing industry. To advance these goals, a historic Memorandum of Understanding (MoU) was signed to form the Water Efficiency Research Coalition. The MoU was signed in the offices of U.S. EPA administrator Stephen Johnson, who pledged to partner with these plumbing organizations to coordinate water efficiency research.

Representatives from the ICC and four other organizations will jointly develop and implement research programs to further improve water efficiency and sustainable plumbing products, applications and processes.

The coalition will support research projects that will aid or assist in the development of more water efficient and sustainable plumbing products, systems and practices. Sample poten-

tial research topics include: drainline carry research on high-efficiency toilets; water re-use systems and safe applications for re-use water; non-water consuming urinals and sizing of water-efficient plumbing systems. The coalition will seek government grants and private party financing to fund the research projects.

According to the MoU, the coalition seeks "to provide a mechanism for voluntary cooperation on plumbing-related research projects that pertain to water efficiency." It initiates a spirit of cooperation between charter and future coalition members "to find common ground to share technical, scientific, legislative and regulatory information that will result in an orga-

NKBA president announces 2009 goals

Houston — The newly-elected president of the National Kitchen & Bath Association, Suzie Williford, has stated four goals for the NKBA in 2009. As vice president of sales for Kiva Kitchen & Bath, a Houston-based firm with 13 showrooms across Texas and California, Williford is aware of the challenges involved in generating sales in the current economy. Because of that, she has decided that the NKBA will implement programs specifically to support its members in the current down market.

"The NKBA will do even more to support our members to ensure that they successfully weather this difficult economy," said Williford. "In 2009, there will be more value in NKBA mem-

ber than ever before." Williford's first goal is for the NKBA to provide highly targeted professional development courses for members to learn how to strengthen their businesses in a challenging economy. The NKBA's educational offerings will also be diversified to benefit NKBA members across all industry segments.

Second, Williford explains the 2009 Kitchen/Bath Industry Show (K/BIS), a premier trade show in the kitchen and bath industry, will become even more vital to industry professionals. To be held from April 30 to May 3 at the Georgia World Congress Center in Atlanta, K/BIS will provide more valuable business conference sessions than ever before. Economist Terry

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Savage will explain everything kitchen and bath professionals need to know about the current markets, while Andrew Winston will discuss how to use 'green' to increase profits in a down economy and Ken Jones, MBA will show how to develop a competitive edge.

Williford's third goal is to enable members to reduce their expenses and increase revenues through third-party affinity programs. Whether cutting costs on transaction processing, or increasing sales through consumer financing or lead generation, members will benefit from NKBA affinity programs in 2009.

The last goal is to place a renewed focus on leadership opportunities for NKBA members. "In this economy, it's more important than ever for industry professionals to stand out," said Williford.

PEX tubing added to Calif. Plumbing Code

SACRAMENTO, CALIF. — The California Building Standards Commission (CBCS) certified the Environmental Impact Report (EIR) on crosslinked polyethylene, or PEX, tubing, and unanimously adopted regulations approving PEX water distribution systems into the California Plumbing Code.

The new regulations take effect Aug. 1, 2009. Until then, local juris-



dictions can adopt a code to use PEX in new and remodel construction before statewide adoption.

"Today's decision represents a victory for the trade and for the consumer in California," says Rich Houle, Uponor associate product manager, commercial. "Contractors and consumers finally have access to an environmentally superior product that will provide a durable solution to the state's aggressive water conditions, while meeting California's high standards for drinking-water quality."

Uponor has been actively pursuing the adoption of PEX tubing in the California Plumbing Code since 2000. Three years of litigation resulted in a decision by the CBCS to conduct a full EIR on PEX tubing and its impact on air quality, water quality and performance. In addition, the report evaluates PEX tubing installation, use and disposability, as well as manufacturing processes in the areas of waste, recycling, energy consumption and natural resources.

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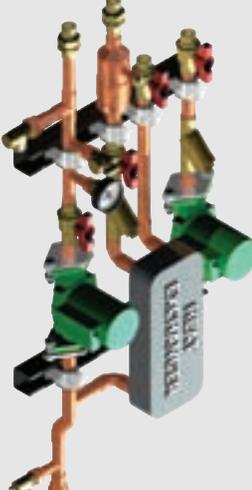


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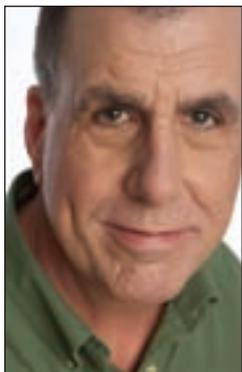
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BY DAN HOLOHAN,
contributing writer

Making connections

Imagine

I was standing on the roof of the Dakota Apartments, looking out at New York's Central Park across the street and thinking about John Lennon who lived and died in this building. I was up there on the roof because the circa-1880 steam heating system was getting a new boiler and the engineer and architect in charge of the project had some questions about the system piping. I jumped at the opportunity to get inside this famous place, which I have looked at all my life.

Most of New York City still heats with steam, a 19th century technology that hangs on like an old uncle. The steam races directly from boiler to radiators without benefit of any sort of heat exchanger. The steam condenses inside the radiators, giving up its latent heat to the air in the room. The water then flows by gravity back to the boiler. Children living with these systems (I was one of them) learn early on that you may touch the radiators if you'd like, but you'll probably only do that once.

In most buildings, the only control available to the tenants is the window. We call these double-hung zone valves. It's quite wasteful, of course, but no one with steam heat in a big building in this country pays directly for the heat, so few consider the cost, or the waste, and besides, the valves are often frozen in place. So there you are.

And let's face it: most of us don't worry about the waste because, in America, there are no heating police. It's not like it is in Europe. We're allowed to own heating systems that started out in the 19th Century burning coal, were converted to fuel oil in the 1930s, and then, perhaps, to natural gas in the '70s. These boilers are as drafty as canyons and as large as small apartments, and many Americans, and certainly most New Yorkers, think this is normal.

The radiators in the Dakota Apartment are from the 1870s. A man named Reed invented them. Each radiator has several rows of capped vertical pipes, and each pipe is sealed at its top. The pipes press into an iron base and the steam rises within each, displacing the heavier air, which works its way from pipe to pipe and leaves the system through a special vent at the end of each radiator. This vent from the 1880s contains a cork, which swells when steam reaches it, closing the vent to the steam. Each of these vents has a small pipe that travels down through the building to what once was the steam-engine room. The steam engine is long gone, but it once provided electricity for the building. They used the waste steam from the engine to heat the radiators, and when other buildings appeared as neighbors to the Dakota, the owners of the Dakota sold power and steam heat to them. The Dakota was one of the world's first co-generation systems.

I know this because I spend most days reading old books. I love this stuff. I spent part of my youth in New York City, skating on the pond in Central Park and looking up at that magnificent old lady of a building. I have an archival photo of people skating on that lake in the 1890s, when the Dakota was the only building around. People come and go, but the buildings stay. And in America, so do the heating systems, and this makes life interesting for those of us in the business because we have to understand the newest technologies, and these 19th-Century systems as well.

My father's father, James Holohan, left Kilkenny in Ireland at the turn of the century and came to America to shovel coal in a public bath. He was a big man and he and

Mary had a bunch of kids before he died far too young. My father went to war in 1941 and came back to work in a plumbing supply house in New York City. We lived across the street and my earliest memories, and they are sweet, are of playing on the loading dock of that place. I went to work with my father in 1970, after he had moved to a manufacturer's representative, and I treasure every moment of those years. I learned much.

These days, there's a large horizontal, fire-tube boiler in the basement of the Dakota. It makes low-pressure steam by burning Number 6 fuel oil, which has the thickness of molasses. The oil waits in an enormous tank in the basement (about 6,000 gallons worth), and they have to heat this thick oil in a shell-and-tube heat exchanger before they can move it to the burner. Six oil is cheaper than Number 2 oil, which is why they use it. No one wants to pay too much for anything in America.

Now here's the best part about the Dakota: Each radiator has two pipes. The supply pipe is 1½" in diameter and the return pipe measures 1¼". There is a valve at each side of every radiator and no other controls (except for the window). The steam enters through the larger valve and the condensate leaves through the smaller valve. When the tenants (all of whom are crazy-rich and variously famous) are too hot, they call downstairs and one of the heating guys will ride the service elevator to their apartment and close the radiator valves. The heating guy then returns to the basement and waits for the next call, which invariably has to do with the same fabulously wealthy tenant being too cold. The heating guy will make the trip upstairs, but this time to open the valve. We call these people two-legged zone valves.

So that's Manhattan and much of it is like this, but things are changing, albeit slowly. About a mile and a half south of the Dakota is the Hearst Tower, which was the first skyscraper to rise in New York City after September 11, 2001, and the greenest building around. Hearst uses outdoor air for cooling and ventilating during most of the year, and this practice delivers a 22% savings in energy use and carbon dioxide emissions (there are no double-hung zone valves in this beauty). The building also has radiant-floor heating in some areas, and motion sensors throughout to control lights and machinery. They collect the rainwater from the roof and store it in a 14,000-gallon tank in the basement. They use this water to replenish evaporation from the building's air-conditioning system, and to water the indoor and outdoor plants. And some of that collected rainwater goes to the three-story waterfall in the atrium lobby. This waterfall helps cool the place. It's breathtakingly modern, green, and efficient and it sits as an example of what can be, and must be in our American future.

I was standing on the roof of the Dakota Apartments, looking out at Central Park and Yoko's "Imagine" memorial to John Lennon. I was with the building's architect and he walked me over to these cast-iron bowls that sat on pipes atop all the ventilating shafts. Those pipes ran down to the basement. "Any thoughts on what these are for?" he asked. I looked and thought about what I had read, and then I realized that these bowls were the collectors for the rainwater that flowed to a long-gone tank in the basement. You see the Dakota once had hydraulic elevators, and these elevators ran on rainwater. They stored the rain in those days, just at the Hearst Tower is storing it today, and all of this is connected through time. And so are we.

Imagine. ■

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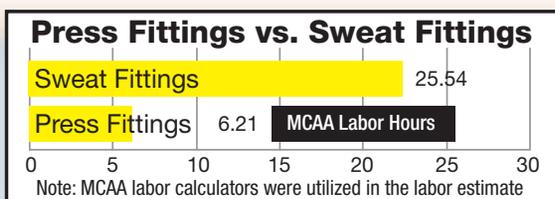
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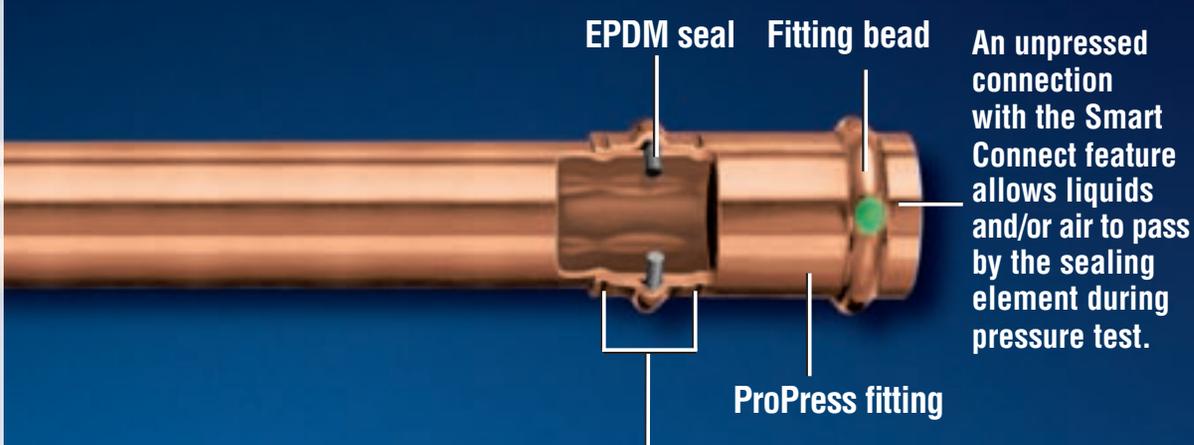


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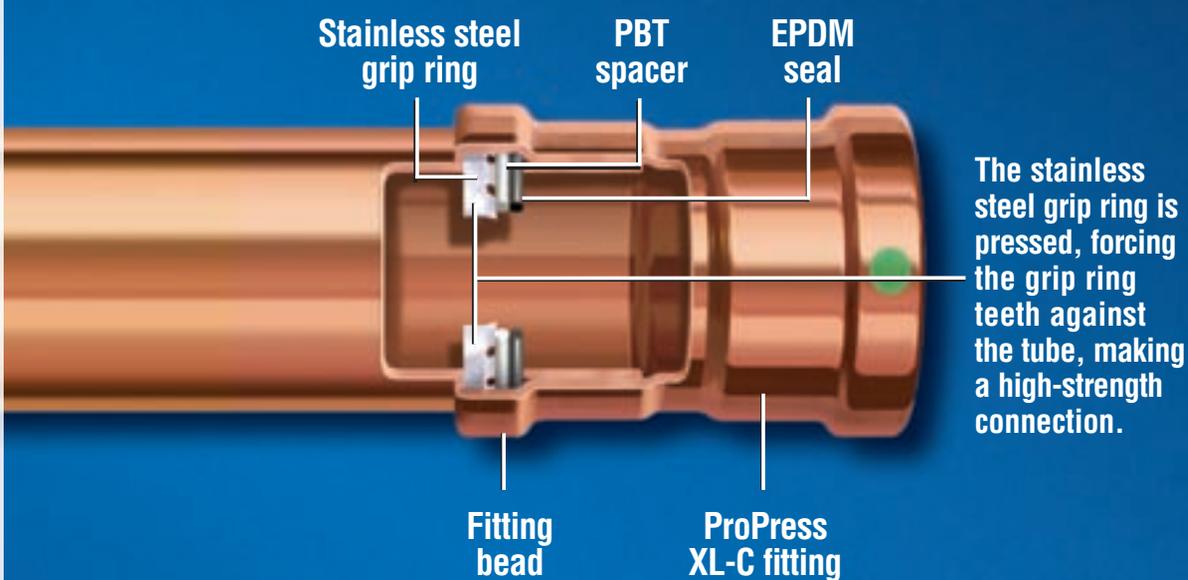
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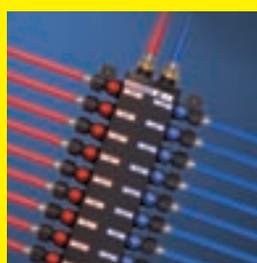
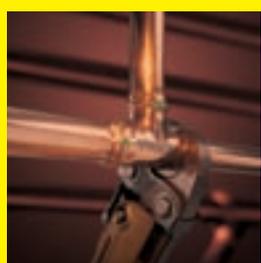


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BY BRISTOL STICKNEY,
contributing writer

Part 8: Solar heat control with two-stage thermostats

Bristol's six principles of good solar hydronic design

The success of any solar hydronic home heating installation depends on the often-conflicting balance between any of these six principles. Finding the balance between them defines the art of solar heating design.

In previous articles, I have been making the case that the key ingredients for solar/hydronic design and installation can be divided into six categories, listed below, roughly in order of their importance.

1. RELIABILITY
2. EFFECTIVENESS
3. COMPATIBILITY
4. ELEGANCE
5. SERVICEABILITY
6. EFFICIENCY

The success of any solar hydronic home heating installation depends on the often-conflicting balance between any of these six principles. Finding the balance between them defines the art of solar heating design.

Good solar heating design requires effective and reliable control of the solar heat. Even the earliest active solar heating systems that used thermostats relied upon some type of two-stage control. Let's take a closer look at two-stage thermostats and some of the finer points related to differential control.

What is a two-stage thermostat?

In its simplest form, a thermostat is a switch that activates at a certain temperature. The temperature (setpoint) is usually adjustable, and, for heating, the switch contacts typically close as the local temperature drops (a.k.a. "open on rise"). A closed switch is the most common signal used as the "call for heat" in any heating control system. An ordinary thermostat with one setpoint (and one switch) may also be called a single-stage thermostat. A two-stage thermostat is one that contains two single-stage thermostats in one unit, where the two setpoints are linked together.

Differential and dead band

Every common thermostat has a differential built into it. Most people assume that their thermostat turns on and off at the setpoint temperature that they choose. This is not exactly true. The setpoint temperature establishes a target for the heating system. The thermostat then turns on and off, cycling the heating system above and below the target temperature. It is not unusual for a common room thermostat to allow the room temperature to fluctuate above and below the setpoint by one or two degrees (F). This total fluctuation (e.g., 2 to 4 degrees F) is known as the differential, defined as the difference between the highest and lowest temperature allowed by the thermostat as it is seeking its target.

Two-stage and other multi purpose thermostats also may have a "dead band" built into them. This is a range of temperature where literally nothing happens. There is no call for heating (or cooling) because the local temperature is between the chosen setpoints and outside of the range of the differentials.

The most common two-stage thermostats have few adjustments and provide a factory-set differential. If you shop around and compare features, you can find thermostats with not only the high limit and low limit setpoints adjustable but also the high and low differential and dead band (if included) may be adjustable, too. The

adjustable models are more easily adaptable to direct-solar heat storage requirements, as I will explain below.

Solar differential heat control

The most common solar control is the solar differential thermostat, which is most often used to control the heat stored in a tank of hot water. A differential is a difference between two temperatures. As I mentioned above, for a room thermostat the differential is the difference between the lower temperature at which the heating system turns on and the higher temperature at which the heat turns off. A solar differential is typically the difference between the hot solar supply temperature and the cooler heating load (e.g., the hot water tank). So, a solar differential control always has a minimum of two temperature sensors, a way of comparing them and a switch that activates only when the hot (solar) sensor is positively hotter than the cool (storage) sensor.

In the early days of active solar controls, this was done with capillary tube sensors and thermo-mechanical switches. These days, virtually all solar differential controllers are built around integrated circuits using thermistor sensors and include other useful functions, such as high limit control. This is an important feature that can be used to prevent a solar heated tank or other heat storage system from getting too hot when the solar heat is not being consumed. It can also be used to activate a cooling mechanism to remove heat from a storage system that has become too hot (before the P&T valve blows off).

A solar differential control with a high limit control is another version of a two-stage thermostat. It turns on and off in response to low limit conditions in the storage tank, defined by the programming of the two temperature sensors. The low limit setpoint is a moving target, changing as the difference between the two temperature sensors changes. The high limit control provides a second stage that activates cooling or, at a minimum, provides a heating dead band when things are getting too hot.

Solar heat storage mass

Many common materials can be used to store solar heat, simply by raising their temperature. In the solar heating world, this is commonly referred to as thermal mass. Water is the most common solar heat storage material, storing one BTU per pound of water for every degree (F) of temperature rise. In fact, this is the definition of the BTU (British thermal unit). Concrete (and any high density masonry material) can also be used to store solar heat, although it absorbs less than half of the heat that water does, given the same volume at the same temperatures. Still, there is a large volume of concrete in every warm concrete floor that can be used as solar heat storage from day to day, and we have found this abundant source of thermal mass to be very useful.

Two-stage heat control

In our region, over the past decade or so, we have been installing increasing numbers of active solar heating systems that are solar-direct hydronic radiant-heated mass (Turn to Controlling all that ...Page 57.)

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BY ELLEN ROHR
contributing writer

Make informed decisions

Should he stay...or go?

Does it seem like 2008 went by in an eye-blink? Is 2009 off to the same rapidly disappearing start? Soon, this year will be winding down...and you may wonder, "What happened?" If you have bigger dreams than you are now realizing, something has to change. You must think differently and act differently. Keep doing what you're doing and what you've got is what you'll get.

Jack Welch, former CEO of General Electric, was asked at the end of his remarkable career, "What would you have done differently." He responded, "I should have moved faster. There were times I had already made the decision and then took too long to act." This is interesting coming from a guy who is known for his decisive action. The GE culture is to be number one or number two in every market they participate in...or they get out of that market. People produce or they go. Yet, even Jack wished he had moved faster.

You are responsible for two things

You are the leader. As such, you have two responsibilities that you can never delegate.

1. You are responsible for the direction of the company. Where are you going and why? It's your job to decide.
2. You are responsible for the financial condition of the company, for keeping the company alive and well.

I work with lots of clients who are struggling to get profitable. One hundred percent of the time, I recommend a selling price increase. It is rarely possible to "cut" your way to profitability. Playing "offense" is increasing sales: good sales at the right price. "Defense" is managing expenses: making sure that you are spending the right amount on the right people, materials and services. In business, you have to play both "offense" and "defense." People are your number one expense. Are you willing to commit time, money and energy to people who are not willing to pick up the pace?

Think about what you want and why you are in business. Update your Biz Plan. Update your Budget. Refine your Organizational Chart. Then — deep breath — consider your team. Who should stay? Who should go? Who is on the "bubble?" Should you adopt a faster approach to business, your team needs to get on board.

Some team members may love it. "Let's go! It's about time to kick things into gear around here."

Some may be more cautious, afraid, perhaps, of letting you down or making a mistake. Visit with each team member, collectively or individually, and let them know it is OK to think and act.

Do you have an Operations Manual? If so, dust it off. If not, commit to building one. You can't put everything in the manual. Let them know that there will be times that they have to make a call. Also let them know that if it is in the manual, you expect them to use the written procedure.

The "Fall On Your Sword" speech

"I've been thinking about what we do here. And, why we do it. I've been working on my Biz Plan and our goals for 2009. Let me share where we've been, where we are now,

and where I see us going in the future. It's about more than just plumbing for me.

"I also realize that I have been negligent in upholding what is important to me. In our Operations Manual, we have laid out the basics; systems and procedures for how we do things here. We can improve our systems and I encourage your feedback and input. As we improve the basic systems, we can update and add to the manual. There may be times that you need to make a call. If it's not in the manual, make the call. If it is in the manual, I am going to hold you accountable for that procedure, for that behavior. We have the opportunity to create something really special together with this business."

Before too much of 2009 slips through the hourglass, consider:

Who should stay and who should go?

The ones who should stay are the willing ones. The ones who want to help you build something special and are willing to play the game straight. Let those team members know how much you appreciate them. Catch them doing the right things and acknowledge it.

What about the ones on the "bubble"?

There may be team members who are on the "bubble" because they have not yet demonstrated that they can do their job successfully. Consider these words for getting someone on track. Let's use a Service Tech for example:

"According to the Organizational Chart, you have assumed the responsibilities of Service Tech. That means you are required to meet minimum standards of sales and production. According to the scoreboard, you are not hitting goal. So, here's the deal. For the next 60 days I am going to give you all the help, support and training I have. I'll ride along with you and role play challenging situations. We'll do what we can to improve your technical skills, sales skills and communication skills. Are you willing to do whatever you can to learn and do what you need to do to be successful in your position? Because at the end of 60 days, we are going to meet again. If you are winning in this position, great! If not, we will both know that we have done all we can. If this position is not a good fit, you can move on to another position or another company. Fair enough?"

Note that simple systems allow you to be objective, not subjective, in this conversation. Aim for measurable standards of performance — and keep score. Track and train. Then, this person has every hope of improving and reaching acceptable performance levels. If he is willing *and* he has the basic capacity, he can win. There is nothing more satisfying then to help someone develop higher levels of performance. And, if he is not willing or able, then he needs to go.

There are others who may be testing the fence. Here are some words for the person who, for instance, has made a habit out of showing up late for work:

"I have looked the other way when you arrive late. It is important to me that you show up on time, and it is important that we deliver on our promise to be on time to our customers' homes. So, this is your verbal warning. I am

(Turn to Be firm, fair...Page 56.)

The ones who should stay are the willing ones. The ones who want to help you build something special and are willing to play the game straight. Let those team members know how much you appreciate them.



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OVERBUILT IS AN UNDERSTATEMENT.™



BY RICHARD P. DiTOMA
L.M.P.

It's no mystery

Smart business is less expensive than cheap business

If you constantly spend more money than you bring in and make wrong decisions you will eventually run out of money and/or the energy to keep up doing things wrong.

I'm sure you have received calls from consumers who have never used your firm. In an effort to soften you up, some say they called you because they were told you are a good contractor and good ones are difficult to find. In the same moment they complain about the last guy they used. Many of these consumers promise you all sorts of work if you do the right thing for them. If you believe those claims, next December 24 at midnight wait by your fireplace for a jolly bearded red-suited fellow to show up with gifts galore.

I don't mean to say that all consumers who call are telling you what they think you want to hear in order to benefit their own cause. The majority are good people who need the services of a good contractor. But, when you hear accolades about your greatness and promises of more work if you do the "right thing" from those who don't know you, beware! When someone starts with these phrases they often just want you to give them top quality service at the lowest possible price they are willing to pay.

In an industry where most contractors sell their services at prices based on their ignorant guesses with no financial reality, the lowest possible price in the caller's mind is more often a price below the cost (to the contractor) for the delivery of top quality service. Excellence costs contractors more to produce than mediocrity. The consumer complained about the other guy because they only received one of the two things they wanted. The other contractor either gave them a low price and poor quality, or, a higher price and top quality. That other contractor did not know how to do the impossible.

Addressing the impossible

To paraphrase a concept that I think is attributed to the U.S. Marines, the difficult we do immediately, the impossible takes a little longer. In order to do the impossible, you must first see the reality of the situation.

Delivering excellence to your clientele is always the smart thing to do. You will get fewer costly callbacks and more profitable repeat and recommended business. But, you can't sell your services for less than, or the same as, it costs you, and, be profitable. That leaves only one choice. You must sell your services for more than it costs you. That requires knowing your true costs and choosing a proper profit margin that will give you an opportunity to reach your goals.

You might feel that if your selling prices are above those of your competition you will lose business to those competitors. However, losing business, which costs you more money to produce than you bring in, is a good thing to lose. It gives you time to properly serve your real clients while having a chance to attain your goals.

If you constantly spend more money than you bring in, and make wrong decisions, you will eventually run out of money and/or the energy to keep up doing things wrong. Just ask the troubled banking institutions, big auto makers and other businesses on the brink of collapse. Wrong choices always produce wrong results.

Delivering top quality for the lowest price in the consumer's mind is impossible. But, you can deliver top quality at a lower price if you calculate your numbers correctly. Start by determining your true operational cost in total and per unit (tech hour), and choose a profit margin

that takes into consideration the fact that a consumer who only uses your business once gives you more risk which, in turn, makes your attempt at success more difficult.

This will allow you to give yourself a benchmark price structure for your business that will afford you the opportunity to succeed. Make that profit margin substantial enough to address the risk you take, and give you the ability to offer discounts to your real clientele (those who actually use you all the time). This method will let you earn the reward you deserve for the value you deliver while rewarding your loyal clientele with lower prices.

By thinking out of the box, you can create and offer your clientele (both existing and potentially new) a service discount program with renewable annual membership fees. This can increase your revenue and can help offset a portion of the discount.

This program gives you the opportunity to continue to deliver excellence; charge the consumer a lower price for the delivery of excellence; commit to the consumer through your top quality performance; and have the consumer commit to your business through their acceptance of the service discount agreement. This type of program turns the impossible into the difficult, which can be done immediately after you set up the program correctly. But remember, if you do it wrong, you will still get wrong results.

Some consumers will only sign up for the service discount program once because it was cost effective for them at the time. When you correctly calculate your numbers you will still be ahead of the game. On the other hand, some consumers will commit to you for the long haul. For them to consider using your company to address their needs again they are obviously satisfied with your services. As an additional bonus to them, they know that a call to your company also gives them a discounted price. They are the people who keep you in business. I have clients who have been utilizing my contracting firm for 31 years. They are the ones who proved that by us doing the right thing, they have given us their business. Either way, my firm has taken care of both types of consumers for the right prices, which allow us to still be around 31 years later.

Deliver excellence, not the shoddiness of mediocrity

You may not have prices comparable to those of your moronic competitors who charge numbers at or below their cost based on the direction the wind blows. But, by educating consumers to the fact that your company's goal is to deliver to them excellence in performance, you can set up a protocol which will allow you to deliver top quality service to them at the lowest price at which excellence can be delivered.

If questioned on the difference between your price and the moronic price, remind them that a job well done will probably last longer and therefore be less expensive over time. Inform them that when you are financially prudent, you will be able to be there to stand behind the service you performed today, as well as take care of their needs of tomorrow.

I recently received a call from a consumer who had never used our firm. He had a water heater installed by *(Turn to Cheap is as cheap does...Page 58.)*

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MCAA 2009: It's good for you and your business



LEARN. ENJOY. GROW.

Businesses across America are looking for new ways to boost their bottom lines and MCAA just may have some ideas. The association's annual convention in Scottsdale, Ariz. (March 1–5, at the JW Marriott Desert Ridge Resort & Spa), hosted by MCAA president Jack Wilhemi, will be loaded with business-building ideas and strategies for growth that will help contractor members rethink and retool their businesses while enjoying a needed break from winter's worst in the warm Arizona sun.

Get on the BIM bandwagon

In response to the growing industry interest in technology-assisted building design, MCAA 2009 will offer three sessions on Building Information Modeling (BIM) and Intelligent Estimating. These sessions will help contractors take the important and increasingly necessary steps into this new age of technology.

Steve Shirley of University Mechanical & Engineering Contractors, Inc./an EMCOR company (El Cajon, Calif.) will lead a session in which he will share insights and the lessons he learned from implementing the BIM process over an eight-year period. He will focus not just on the detailing elements of this new and exciting technology, but on how the adoption of the process and the obstacles encountered have changed and enhanced all aspects of the contracting business.

For those who are just beginning to contemplate BIM for their businesses, Craig Pearson of Pearson Mechanical Services, Inc. (Hugo, Minn.) will lead a session that will explain why information technology (IT) is essential to the successful implementation of BIM and that IT must be treated as a founda-

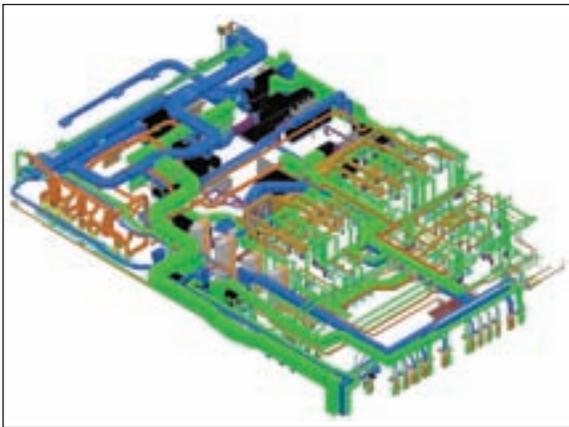
tion for the process and not as an afterthought.

The all-important legal questions that have emerged from this new technology will be the subject of an important session to be led by attorney Kerry Kester with the firm Woods & Aitken LLP (Lincoln, Neb.). Claims, contracting patterns and contract document issues associated with automated estimating and BIM will be addressed, along with the legal ramifications of new technologies and design standards.

Helping the tough get tougher

With markets tightening, "business as usual" is yesterday's news and MCAA has lined up speakers to help contractors find new ways to reposition their business for the changes and challenges that lie ahead.

Dr. Kevin Freiberg will be on hand



MCAA 2009 will offer three sessions on Building Information Modeling (BIM) and Intelligent Estimating that will help contractors take the important and increasingly necessary steps into this new age of technology.

to help business owners sail from a sea of sameness into an ocean of the extraordinary. He will discuss the choices that leaders and their people must make to create a culture of commitment and accountability in which people take charge of their professional lives and create the freedom to achieve incredible business results.

Business growth expert Steven S. Little will shake up contractors' comfortable view of their business with a humorous and insightful look into the growth-stifling behaviors that are keeping new, promising opportunities at bay. He will discuss an array of strategies that business owners need in order to realize substantive change and significant growth.

More than ever in our recent history, business owners are looking for the magic bullet that will help them harness the elusive growth force that will produce new levels of excitement, innovation and energy for the task at hand as well as those envisioned for

the future. Dr. Paul Stolz just may have found it — the Adversity Quotient (AQ), a theory and a method for measuring and strengthening human resilience. Businesses that have applied AQ within their workforces have experienced increased capacity, productivity and innovation as well as lower attrition and higher morale. Dr. Stolz will lead a session at MCAA 2009 to explain the three important facets of AQ science—theory, measures, and methods—that stem from 40 years of research and 20 years of application.

Go green!

It's not just a color anymore, but a new way of doing business and constructing buildings that makes the most of using less. The U.S. Green Building Council, which originated the LEED® rating system for high performance buildings, has instituted major changes to the system and Courtney France of France Sustainable Solutions (Denver) will explain what those changes are and how LEED points apply to them. She also will explain how mechanical and plumbing contractors contribute to a LEED project and what roles and responsibilities they will have within a design team. Contractors who have a LEED project in their future should plan to stop by this session.

How do you make an existing building better? Tim Wentz, University of Nebraska–Lincoln professor and a seasoned former contractor, will facilitate a session that reveals how retro-commissioning can significantly improve the performance characteristics of an existing building by lowering energy costs, avoiding system downtime, and reducing complaints from the building's occupants.

Back to the future

The future is brighter than ever for the 120-plus college students who will attend MCAA 2009. They will meet and greet future employers throughout the week as they explore the mechanical contracting, plumbing and service industry and the career opportunities opening up for the most talented and best qualified.

Those candidates may be found at the finals of MCAA's 2008–2009 Student Chapter Competition. Four teams of six members each will present their proposals for this year's project, a 73,000-square-foot, two-story replacement hospital in northern California owned by the Howard family, owners of the world-famous racehorse Sea Biscuit. The teams, representing Northeastern University,



MCAA President Jack Wilhemi will host the association's annual convention in Scottsdale, Ariz., from March 1–5.

Purdue University, University of Nebraska–Lincoln and University of Washington, will do their best to convince a panel of three judges that they are the best company for the job. The top prize will be \$5,000, and the honor and glory of reaching this pinnacle of MCAA's student chapter program is priceless for these aspiring young professionals.

Inspiring speakers

MCAA 2009 is not all business; the program also will make way for special moments with very special speakers.

Opening the convention is former Speaker of the House Newt Gingrich, who will present his view of our changing world and all of its accompanying challenges with reasoned, thought-provoking ideas. His unique insights are drawn from his study of the natural world; the biological revolution's impact on health; the state of information systems; the effect of mass communications; the infrastructure and implementation of international finance; the benefits of lean manufacturing; the challenges presented by military, terrorist and international crime threats; and of course, America's political system. Gingrich will demonstrate how lessons learned in one discipline can be applied in another — and how all fields of study share a common connection to information technology.

Topping off MCAA's Annual Awards of Excellence Ceremony will be a living legend to Notre Dame University football fans, Daniel "Rudy" Ruettiger. The never-say-die player for the Fighting Irish, against all odds and during the last 27 seconds of Notre Dame's last home game of the season, sacked opponent Georgia Tech's quarterback (the only play in the only game of his college football career) assuring a win for his beloved team. Rudy's inspiring story of how he achieved his life dream, and more important, how he pays forward his success by helping others, is carries (Turn to Meet, mingle... page 34.)

Courtney France of France Sustainable Solutions in Denver...will explain how mechanical and plumbing contractors contribute to a LEED project and what roles and responsibilities they will have within a design team.

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Meet, mingle and learn at MCAA 2009

(Continued from page 32.)
life lessons for us all.

Sports broadcaster extraordinaire Bob Costas will close MCAA 2009 with stories of sports legends and events that only a behind-the-scenes reporter could know. Widely

Opening the convention is former Speaker of the House Newt Gingrich, who will present his view of our changing world and all of its accompanying challenges with reasoned, thought-provoking ideas.

renowned for his thorough, intelligent, easy-listening commentary on regular and major sports events, Costas took center stage last summer as the principal anchor for the “NBC News” coverage of the Olympic Games in Beijing, China. His commentary on the pageantry and beauty of the opening ceremony, his interviews with the champion athletes and the stories behind their achievements brought home the drama and thrills that helped us all feel connected to the Games. He’ll share all of that and more for a memorable Closing Session. What a way to go!

This is just a taste of what MCAA 2009 will encompass. There’s lots more; more speakers to help contractors learn about and try out business-build-



During the finals of MCAA's 2008-2009 Student Chapter Competition, four teams will present their proposals for this year's project, a 73,000-square-foot, two-story replacement hospital in northern California.

ing ideas and ways to better enjoy personal time with family and friends; recreational events for relaxation and fun; and lavish, entertaining parties

that never fail to delight and amaze. Most important, it's a week that brings the mechanical industry together to build lasting relationships. ■

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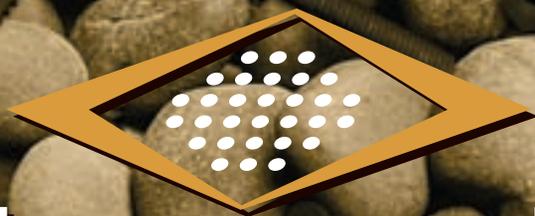


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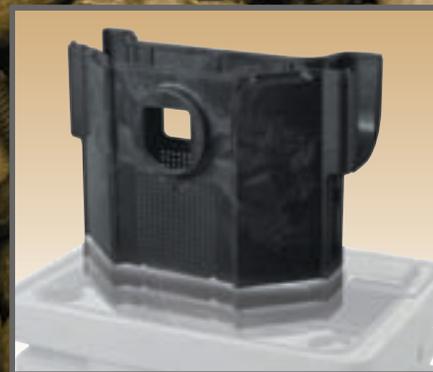
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2009 still looks like solid year for PVF

With all the early year signs pointing to a deepening of the global economic recession, I intensified my efforts to determine whether the PVF sector would continue to maintain its relative strength, as opposed to other elements of the plumbing-heating-cooling-piping industry.

Although these interviews were anecdotal rather than scientific, the geographic breadth and the diversity of the manufacturers and distributors contacted convinced me that there is still plenty of momentum as the first quarter of 2009 unfolds.

However, the economic components that comprise the strength of this three-year surge are changing. It's still uncertain whether the end-use factors, comprising this panorama, will eventually throw a monkey wrench into the ongoing boom.

As the year wears on, the question will be answered by whether those factors which continue to show strength will overcome some aspects of PVF, which are beginning to sputter. Overall, new projects of all types may be restricted by credit availability. But expansion and maintenance of existing facilities — whether power generation, refining, chemical and petrochemical, waterworks, and renewable energy — seem to be in good shape, and show few signs of abating.

The most serious concern is the implosion of oil prices, which is endangering new development projects as well as ongoing production of high cost facilities that are depended on to keep crude flowing into refineries and eventually to the tens of thousands of gas stations throughout the countries.

Although a glut has developed in America's main storage depot in Cushing, Okla., this is primarily due to demand destruction, which has reduced driving by America's 250 million cars and trucks by 5% on a year-to-year comparison with 2007.

Since such derivatives as heating oil, jet and diesel fuel, and production of natural gas are also being affected, it will be only a matter of time before a balance between supply and demand is reached. The wild card is the effect of opec cutbacks, slowdown of oil sands production in Canada, and the already developing reduction of drilling rigs in the Gulf of Mexico.

Also impacting the supply/demand balance will be the upcoming driving season and the rising unemployment which may discourage thousands from driving no matter how low the price at the pump.

One thing is certain, the expansion of off-shore drilling and prospective oil shale conversion in the Rocky Mountains will be put on hold until the price of oil per barrel climbs back up to the high double digits.

One segment relying heavily on

pipe-valve-fittings is power generation. This sector is red-hot and indicating no signs of slowing down. With the discovery of the Enron scam earlier in the decade, creating an illusion of power surplus, projects were either mothballed, or put on the shelf.

America now faces a distorted supply shortage, which could result in blackouts and brownouts later this summer. Although nuclear power is limited to one new generating station soon to come on line in America, the 104 operating units are expanding their existing capacity, which will add anywhere from ten to twenty percent additional electric power to this nation's fast-increasing demands.

Natural gas will become even more important in the months ahead as coal power is eschewed by the Obama administration, which considers this plentiful resource out of bounds for powering electrical utilities or the possibilities to convert coal to oil or gas. But don't shed a tear for the coal producers, they're doing just fine; getting top dollar for all they can mine. Apparently China and others are not that sensitive about putrefying the air.

The repetitious answer I get from both distributors and manufacturers when asked where the action is, is one word, "power."

Fabricators are busier than ever, and some mechanical contractors are getting involved with industrial construction, previously the sole purview of turnkey constructors.

Speaking of mechanical contractors and their activity level, commercial construction is heading toward a standstill. Developers who depend on huge loans from financial institutions are being frozen out by the unavailability of such monies. Simultaneously, hotels, motels, shopping malls, and multi-storied apartment buildings are becoming less in demand as debt deleveraging and reduced consumer spending is puncturing the discretionary spending balloon. The commercial subsector will be the main drag on the PVF arena.

Another intriguing factor that may benefit PVF is a massive infrastructural component of the trillion-dollar stimulus bill. With dams, bridges, and waterworks facilities benefitting from this influx of liquidity, infrastructure should provide another "shot" in the arm to PVF. And if exports hold up as I expect, the wide variety of products provided by PVF will, unquestionably, be beneficial.

All in all, I'm betting on another big year for the PVF sector, even in a down year for the global economy in general.

2009 economic predictions paint mixed picture

Although I have traditionally offered economic predictions at the beginning of each new year, I view

2009 as beset with more imponderables than ever before. But I'm ready to stick my neck out; so here goes:

- After a first quarter 2009 low point in U.S. gross domestic product growth and a peak in unemployment, a slowly-building recovery will be in place by midyear, worldwide.

- A trillion-dollar stimulus plan, passed by Congress early in February, will serve to calm the financial markets and stabilize the gross domestic product of goods and services. U.S. unemployment will crest at 9% during the first three months of the new year.

- The U.S. savings rate will move into positive territory and stay there (2% to 3% annually) as the consumer sector shrinks. The deleveraging process will put a further crimp into discretionary spending, thereby impinging on the retail sector. During the first half of 2009, a record number of stores and shopping malls will be shutting down nationwide.

- Investment banking activities will reach a 10-year low, with mergers and acquisitions few and far between. The age of private banking institutions is nearing an end, as most have already scrambled to become bank holding companies. This allows borrowing at the Fed discount window.

- With the dollar again weakening versus the euro and the yen, exports will maintain a slightly lessened surge, while imports continue to dwindle. This will shrink the trade deficit to its lowest point in this decade.

- China and India, which have taken aggressive stimulative action, will lead the international recovery as they rebound from their second half 2008 fall-offs. These world's largest developing economies will energize an overall global economic rebound. Much of this will come from expansion of their consumer base.

- Commodity prices will be on the comeback trail, as demand improves. Expect oil prices per barrel to reach \$75 to \$80 by mid-year.

- Expect the stock market to leave the doldrums behind and reach the 10,000 Dow Jones Industrial mark and the 1,000 s&p 500 target by June 30.

I'm sure that my rapidly expanding readership will hold me to account for these predictions by mid-year 2009.

World's leading nations face grim economic turnaround attempts

As the 2008 economic year staggers to an ignominious close, there are no oases to be found in a veritable worldwide landscape of severe recession.

Western Europe seems to be the most hard-hit, with industrial superpower Germany leading the pack. Under the guidance of embattled Chancellor Angela Merkel, Berlin is pledging expanded efforts to confront a financial crisis that has toppled



BY MORRIS BESCHLOSS
PVF and economic analyst

banks and stunted that once mighty export nation's growth. A massive national stimulus package is under consideration.

Japan, caught in the web of a decade-long economic stagnation is hoping that an additional \$100-billion cash infusion will finally get this once dominant nation going again.

Industrialized Belgium is facing a major political crisis as that nation's parliamentary government has been toppled in a botched attempt to bail out giant multi-national financial group, Fortis.

Britain's Barclays Bank has warned that worldwide credit conditions have severely impacted the United

I'm betting on another big year for the PVF sector, even in a down year for the global economy in general.

Kingdom. Barclays believes the current crunch may last for as much as two more years.

One global bright spot may be the warming of relations between mainland China and Taiwan. A top leader of China's Communist Party promised Taiwanese President Ma Ying-jeou, a member of once anti-mainland Kuomintang, that Beijing will provide whatever financial aid is needed to keep Taiwan viable. This is remarkable since China, still the world's leading growth engine, has experienced its first significant slowdown in 10 years.

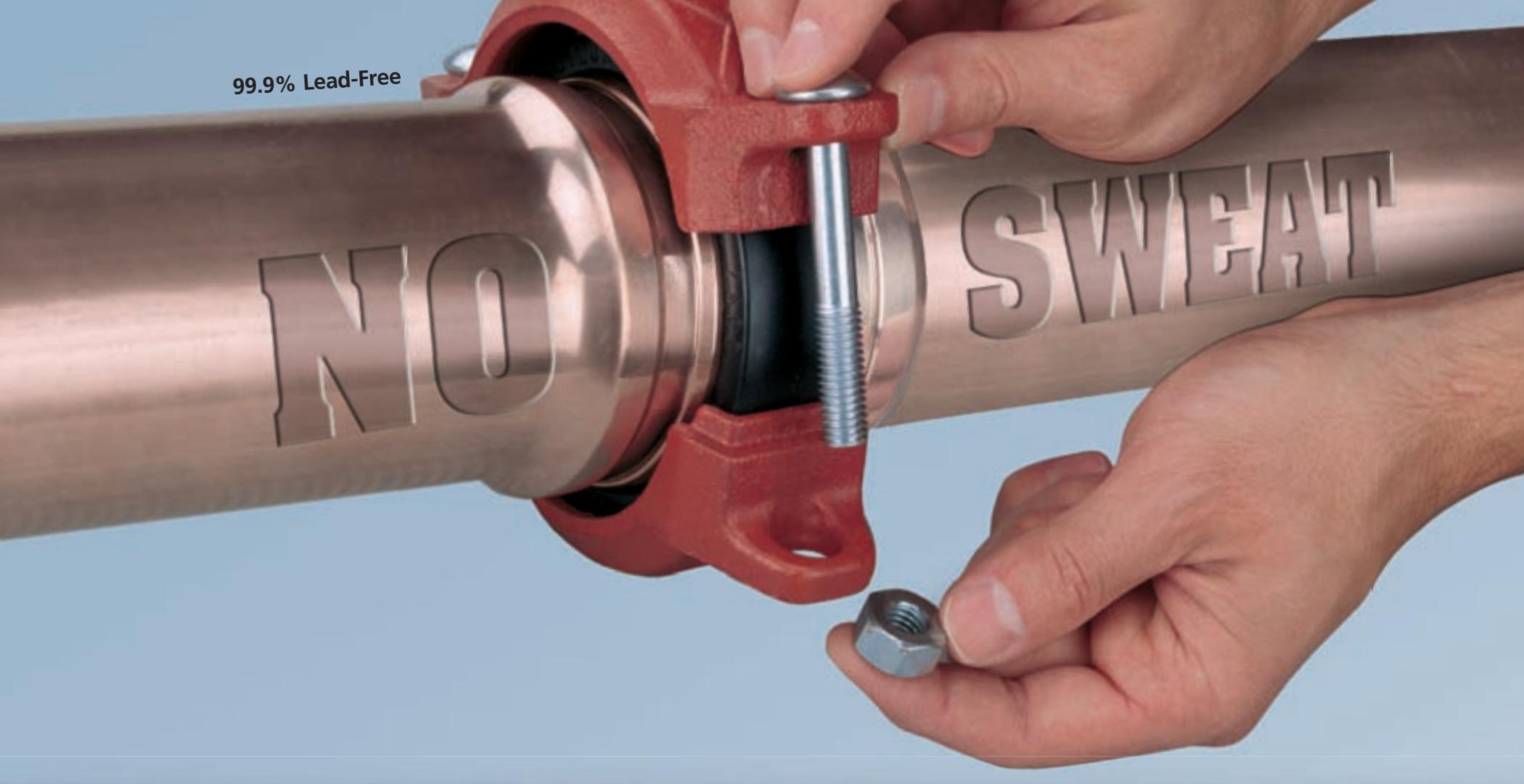
With the world's major nations following the United States in severely cutting interest rates, it's still questionable whether easier access to money will sever the Gordian Knot of the global credit squeeze.

Be sure to log on to my twice daily updated economic blog, which has become one of the most widely read coverages of the ongoing financial and global economic analyses for the nation's largest publishing company.

You can log in by accessing www.theworldreport.org, and then clicking the yellow band marked "Morrie's page." Please recommend if you approve. ■

Morris R. Beschloss, a 52-year veteran of the pipe, valve and fitting industry, is pvf and economic analyst for Phc News.

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Focus on relationships and basics earns high profits for California plumbing contractor

In 2008, when many businesses were contracting with a slower economy, Steve and Lisa Pahler of Atascadero, Calif., grew revenues at their residential plumbing service company more than 200% and achieved 30% profitability. They managed this feat even while taking on additional risk by acquiring a former

“Ultimately, our success goes back to what I consider our fundamental strengths: focusing on relationships and on basic indicators that track our performance.”

competitor’s business. And they are targeting 21% profitability for 2009.

“We know a lot of businesses are hurting right now, but we’ve been careful with our decisions to expand our territory and convert the residential service side of our business to a franchise system,” said Steve Pahler, who owns the Benjamin Franklin Plumbing franchise in California’s Wine Country with his wife, Lisa. “Ultimately, our success goes back to what I consider our fundamental strengths: focusing on relationships and on basic indicators that track our performance.”

It’s about relationships

The Pahlers have been in the plumbing business for 25 of their 28

years of marriage. The strong working partnership they have forged is one element Lisa credits for the growth in their business.

“We trust each other’s judgment and complement one another’s skill sets,” Lisa said. “Steve is a consummate negotiator who maximizes our buying power with suppliers. Those relationships, built over time, allow us to manage hard costs and improve our bottom line through better pricing and rebates.”

Internally, good employee relations led to the return of a valued technician who had left the Pahlers’ employ to start his own business. When he decided the entrepreneurial life was not for him, he was comfortable returning to the Pahlers’ team, bring-



BY TAB HUNTER
contributing writer

ing his customers with him.

“We work hard to establish and maintain a positive environment for our employees,” Steve said. “We compensate well and use performance bonuses to reward employees based on the numbers the company is achieving. This helps everyone stay motivated and helps to keep labor costs in line with revenues.”

Meeting the KPI Challenge

In addition to welcoming their returning employee’s customers, the Pahlers added 12,000 new customers in one stroke when they acquired a former competitor’s plumbing business.

“There’s no doubt that the acquisition and our focus on relationships have helped us achieve profitability,” Steve said. “But I’d have to say that

“We compensate well and use performance bonuses to reward employees based on the numbers the company is achieving. This helps everyone stay motivated and helps to keep labor costs in line with revenues.”

we would be nowhere if we weren’t focused every day on our Key Performance Indicators (KPIs).”

The Pahlers track various factors related to revenues, expenses and operations using a system provided by the franchise company. They review their numbers daily, looking for areas that need improvement or opportunities to reward employees for achieving or surpassing goals.

The Pahlers own their facility and are not faced with rising rents like some business owners. Instead, labor and materials are top priorities among the KPIs the Pahlers track. For example, the business they acquired paid its employees high wages, but with no relationship to the company’s performance. The result was less motivated employees making more
(Turn to Contractor... page 42.)



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Circle 29 on Reader Reply Card

Contractor measures success by performance, relationships

(Continued from page 40.)

than the company could afford to pay. The franchise system the Pahlers use ties the employees' compensation to the company's performance. Lisa says the Pahlers are able to pay employees more than they were making under the arbitrary salaries they were paid under the previous ownership.

Negotiating better prices for materials is another key factor Steve credits for keeping costs in line.

"Being known in the community as one of the larger plumbing companies means we are taken seriously by suppliers," he said. "Vendors want customers whose businesses are growing and that pay their bills on time. We have established a reputation for integrity and good business sense."

Recently, the Pahlers achieved new

cost savings on workers' compensation and liability insurance – costs that are difficult to control. Lisa says being part of the franchise network gave them preferred status to negotiate better deals with insurance providers.

Growth Opportunities in 2009

The Pahlers see continued growth opportunities in 2009. They are ramping up their marketing program and looking for additional acquisition targets to provide a foothold in more territories.

"The slow economy has put a dent in our service calls," Lisa said. "Getting in the door is more difficult. We have met budget, but we've had to work at it very hard. The franchise system taught us how to demonstrate value of the Benjamin Franklin guarantees to



Steve and Lisa Pahler of Benjamin Franklin Plumbing in Atascadero, Calif., achieved 30% profitability in 2008.

prospective customers, so if we can get in the door, we have a very good chance of winning their business."

To that end, the Pahlers plan to ramp up marketing across the board

in 2009 with a combination of tried-and-true (telephone book ads, for example) and more experimental approaches. They partnered with the local television station on a Public Service campaign to award complete water heater installations to deserving families in the Pahlers' community who are in need. Viewers nominate families for consideration. Cultivating

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"In a tough economy, the service companies that aren't strong are going to flounder and fail. We're out there branding ourselves every day when others can't afford to do so."

the relationship with the television station may also lead to a morning news segment with conservation tips from Benjamin Franklin Plumbing.

"In a tough economy, the service companies that aren't strong are going to flounder and fail," Steve said. "We're out there branding ourselves every day when others can't afford to do so. We'll continue to invest a little over 11% of revenues in advertising."

The Pahlers also are watching for expansion opportunities.

"We would love to have another acquisition in 2009," Steve said. "That would put us at \$2 million in annual sales with eight employees."

"In this economy, there will be opportunities to acquire businesses that are struggling," he said. "But we have to keep our own house in order to be ready to act when those opportunities come along." ■

Tab Hunter is president of franchise operations at Clockwork Home Services Inc., which awards and supports Benjamin Franklin Plumbing franchises. Information: www.benjaminfranklinplumbing.com

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Arizona hotel resort makes move towards tankless

Takagi helps Sedona Real Inn & Suites go green

With the growing number of smart and innovative eco-friendly products out on the market that will help save energy and reduce water consumption, more and more hotels are joining the “going green” bandwagon, and increasing their bottom lines in the process.

One of the most innovative products to grab hotel purchasing managers' attentions lately are tankless water heaters.

A tankless water heater is comparable to a boiler furnace system, but without the water and gas waste, bulky size, pilot light and maintenance problems. It is energy-efficient because it only heats water when it is being used. So during non-peak hours when guests are not typically taking showers or using hot water, the system either shuts down so it is not wasting gas, or if someone in the building is still using hot water, it will run at the lowest BTU necessary to produce hot water. This translates to substantial savings because boilers typically run at full strength no matter what the flow rate demand might be.

Tankless water heaters can provide a continuous unlimited supply of hot water so hotels never have to worry about guests complaining about running out of hot water, even when it is peak hours. These units can even be customized to fit the building's hot water needs by linking up to 20 units together using a single main control system. With this type of set-up, it can produce up to a maximum of 192 gallons per minute if need be.

Two years ago, Sedona Real Inn & Suites added four new buildings and 42 rooms to their already existing four-building, 45-room luxurious hotel property in Red Rock Country, Sedona, Arizona. The four older buildings each housed a 100-gallon tank, but the maintenance manager wanted a more economical and efficient alternative for the new additions. After conducting some research, they decided to install a total of seven Takagi tankless water heaters in the four newer buildings.



Replacing an old 100-gallon tank style water heater with two tankless units should yield an ROI within 38 to 42 months in a hotel environment.

incur by installing tankless until he decided to switch the tank-type water heater in one of the older buildings to a tankless. Unlike the newer buildings that have eight to 14 standard rooms each, the older building featured 14 suites, four of which had luxurious hot tubs, so it used much more hot water.

“After switching the 100-gallon tank with two Takagi T-M50 tankless water heaters, we noticed that within a month, our gas usage in that building alone dropped by 40%,” says Dubois. “So we're very pleased.”

Since gas usage in hotels is significantly higher than residential or small business applications, hotels tend to recapture their initial investment much sooner.

“Changing to tankless made a huge difference in water and gas consumption,” said Dubois. “Although there are a lot of factors involved, just based on the savings alone, we believe those units should pay for themselves within 38 to 42 months.”

However, retrofits do come with challenges. Some tankless units like those made by Takagi require four to five inch stainless steel venting and each unit needs its own vent. It cannot use a common vent so often times, the mechanicals need to be installed either on the roof or near an outside wall. But on the upside, stainless steel venting can last a lifetime.

When Dubois retrofitted the older building, he decided against venting through the roof because the building had two stories and he was installing it on the first floor. So instead, he opted to vent right through the wall to the outside.

“The installation was a piece of cake,” said Dubois. “I cannot wait to switch out the tanks in the three older buildings with tankless.”

Like Dubois, more and more hotel maintenance managers are realizing that they cannot go wrong with tankless technology. ■

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Seven Takagi tankless water heaters provide endless hot water to four newer buildings at a luxury hotel, yet cost about \$30 per building per month to operate.

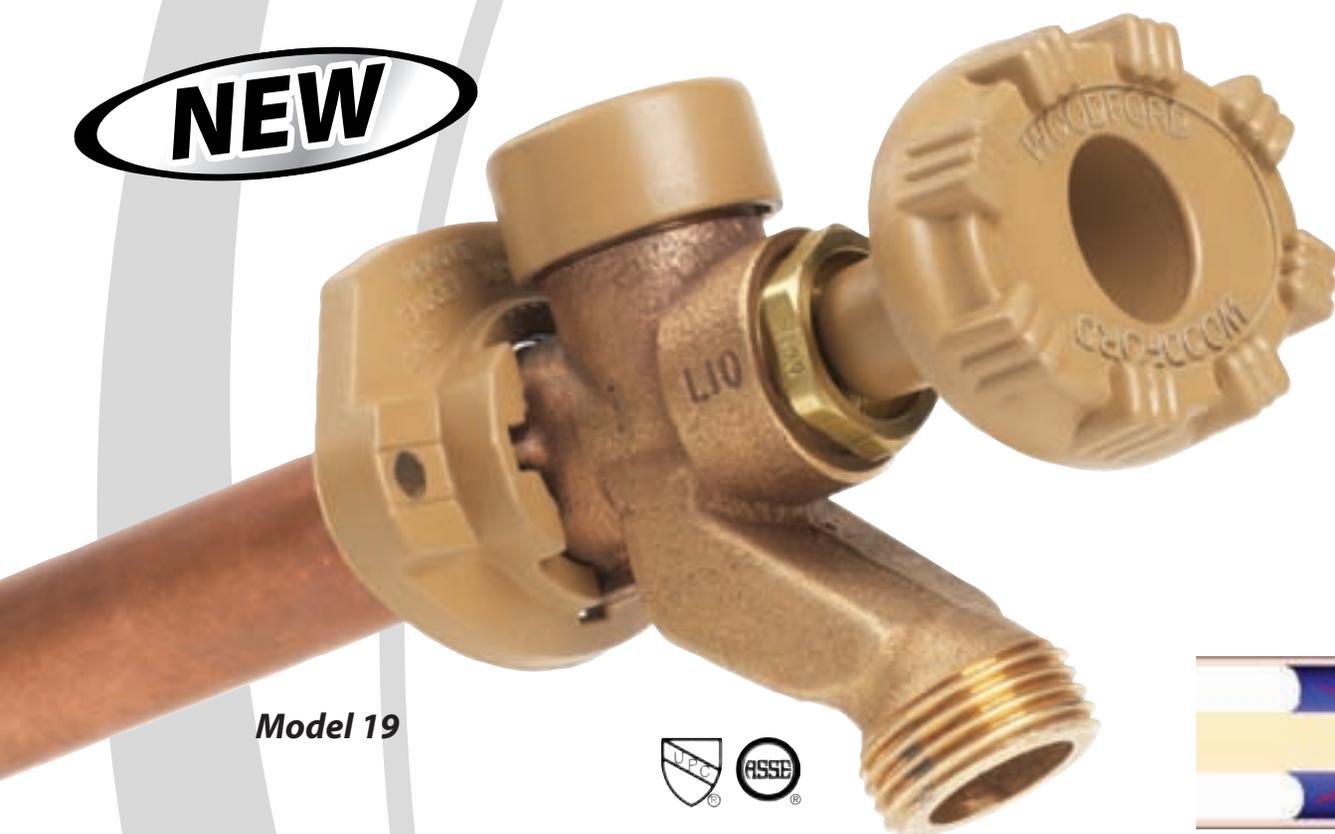
“The tankless water heaters are pretty much flawless,” said Sedona's maintenance and purchasing manager Michael Dubois. “I do not have to worry about pilot lights going out. There is hardly any maintenance involved. Our guests have no complaints about not getting hot water and we're only spending approximately \$30 per month in gas for each new building, which is amazing.”

But Dubois did not realize the true savings he

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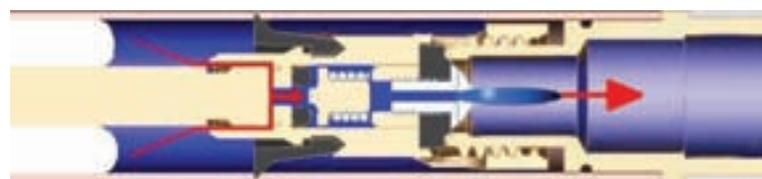


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Circle 34 on Reader Reply Card

Liberty Pumps – expansion mirrors success

This month's installment of the Executive's Club is with Charlie Cook, president of Liberty Pumps.

Liberty Pumps was founded in 1965 by Frederick C. Cook who set up operations in a 4,800-sq.-ft. building in his hometown of Bergen, N.Y. It was initially a sump pump manufacturer with regional distribution in the northeast United States. In order to supplement this weather-dependent product and generate business in dry times of the year, Fred developed a line of sewage pumps and laundry tray pumps, and he pioneered the idea of factory pre-assembly into integral pump/basin systems.

In 1972, the building was expanded to 7,200 sq. ft. Charles Cook joined the company as a design engineer and continued the development of products in response to customer needs. In 1975, Fred retired and sold the company to Charlie. By 1979 the company had outgrown its space and purchased a building roughly four times the size — 27,000 sq. ft. The market and the product line continued to expand with double-digit annual sales growth. The company began to utilize technology and began to aggressively market itself throughout North America. It adopted the practices of Lean Manufacturing and, in 1999, became ISO registered. The whole time its focus was on development of innovative products and responsive service to customers. By 2000, the company had again outgrown its space and this time was able to construct a 60,000-sq.-ft. facility specifically for the way it wanted to do business in terms of workflow, capacity and internal communication. It continued to pick up major accounts and buying groups, and the growth continued to fuel product development, technology utilization and aggressive marketing.

In 2008, the company more than doubled its space, growing to 124,000 sq. ft. Liberty plans to introduce a number of new products again in 2009 and is very optimistic about its future supplying quality, innovative, professional-duty products to the plumbing industry.

How has today's economic climate affected Liberty Pumps?

Cook: It is having an impact. We had modest growth in 2008 and expect the same in 2009, but certainly not at the levels we're used to.

a) Residential — Not only is housing affected in this recession, but consumers are hesitant about any major expenses including remodeling. As a result many of our distributor customers are suffering.

b) Commercial — These markets are affected as well; however, much of our product development has been directed toward non-traditional markets including the specifying engineer, which have remained somewhat stronger. We expect continued growth in these markets.

Any silver linings in the cloudiness of the economy?

Cook: Yes. Although consumers throughout the distribution chain are closely watching expenses, some purchases and projects can only be put off so long. The demand will build and, when the economy begins to turn, well-positioned companies will benefit significantly. In addition, we expect much of our growth in 2009 to come from new customers.

Explain the importance of exhibiting at targeted trade shows such as the Pumper & Cleaner Expo.

Cook: Trade shows in general are an important way to establish and reinforce brand recognition and display new products to a large audience. The Pumper and Cleaner Show is one of the best due to the large, but very specific, target audience that it attracts. Attendees include installers, specifiers and distributors who have a potential interest in some of our most innovative and successful products.

What are some new and exciting happenings at Liberty?

Cook: Probably most exciting is our just-completed plant expansion. Following that is a lineup of new products currently under development.

Can you describe the recent facility expansion?

Cook: The expansion more than doubled our floorspace and is intended to improve our efficiency, increase our capacity and take our customer responsiveness to an even higher level. It also incorporates an expansion of our engineering and R&D departments. This is where the creativity that is so critical to our success is generated.

What are some of your most popular markets/applications?

Cook: We are committed to the professional trade and the distribution system that services them. We don't solicit the retail business and don't make a retail pump. Our level of customer service and responsiveness is unmatched in the industry. In addition to an extensive line of standard products we are equipped to rapidly quote, design and build engineered pump systems (EPSs) to specification.

Can you describe Liberty's pump innovation that distinguishes itself from the competition?

Cook: Since the beginning Liberty has strived to advance pump and system technology when developing new products. Many of these advancements directly assist the installer. We spend time listening to our customers and asking a lot of questions — like "how can we make it easier to install?" or "how can these products be made easier to service?" Then we try to throw in an element that customers don't even know they want — the "wow" factor. We also test a lot of existing products to determine what works and what doesn't. What we learn from this testing helps steer our product development in terms of utility and reliability. It may take us a little longer in the product development cycle, but the end result is worth it when truly advancing pump and system technology.

What are your initiatives for the company?

Cook: Very simply to continue our growth using the same formula that got us here — responsiveness to customers, great customer service, innovative product design and aggressive marketing.

Describe the importance of a solid relationship with wholesalers.

Cook: There is no question this is still a people business. Establishing strong, trusting relationships with distributors, engineers and contractors is key to our success. It requires face-to-face time with our customers. Whether it is training, presenting new products, hosting factory visits or putting on counter days with our traveling display showrooms, the sales team works hard to develop and maintain these relationships. We have expanded this sales team over the past few years with added regional managers to make sure we have adequate factory representation with our customer base.

Where do you see Liberty Pumps within the next five years?

Cook: Our Vision Statement is "Liberty Pumps will continue to be a successful, dynamic, and growing company respected for its vitality and integrity by its customers, members, competitors and community." ■



Charles Cook

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Circle 35 on Reader Reply Card

Navigating a sea of 'green' plumbing fixtures

How to choose the right products in today's eco-conscious marketplace

Going green, or being environmentally friendly, is not just the latest trend, it is a permanent movement that continues to evolve due to the escalating concern for the sustainability of our planet. This concept of "green" has quickly entered into every facet of life from politics to philanthropy to plumbing.

I recently encountered an example of the explosive growth of the green movement when I attended the



Environmentally friendly water coolers and drinking fountains incorporate a large percentage of recycled content materials, exceed energy-efficiency standards and are charged with non-ozone-depleting refrigerants.

Greenbuild® International Conference and Expo in Boston. Elkay® Commercial products participated in the "Project Frog — High Performance School of the Future," during which a school classroom was built on-site to highlight the importance of environmental sustainability.

Greenbuild is the annual conference and trade show of the U.S. Green Building Council (USGBC), the creator of the Leadership in Energy and Environmental Design (LEED®), the third-party green building certification program.

When Greenbuild was first held in 2002, 4,000 people attended, this year more than 28,000 people from all 50 states, 85 countries and six continents attended — that is a seven fold increase in only five years.

The green movement is here to stay, but the question remains; how can plumbing contractors navigate through the sea of green materials and product information and install

the right products that will be durable, functional, stylish, affordable and sustainable?

A good place to start when choosing any environmentally friendly plumbing product is to check three key areas:

1. Is the manufacturer of the product committed to conservation and sustainability and to bringing durable and efficient products to market?

2. Are the product and packaging made from recycled materials, and are the product and packaging recyclable?

3. Is the company manufacturing the product with maximum efficiency in terms of both production and distribution? The following tips and trends should be helpful when trying to

narrow down your choices for eco-friendly water coolers/drinking fountains, sinks and faucets, especially when installing these

products in a commercial setting (although keep in mind that many of the tips apply to both residential and commercial applications).

The latest water cooler conversation

With today's challenging economy and the price of bottled water on the rise, as well as the obstacles associated with storage and disposal of plastic bottles, consumers want water to be easily accessible and affordable. Consumers also want to know that their drinking water has gone through a reliable filtration process to reduce harmful elements, primarily lead and chlorine. Water coolers and fountains are the ideal solution, delivering clean drinking water to the public without littering landfills with plastic bottles.

Plumbing contractors searching for environmentally friendly water coolers and drinking fountains should make sure the products incorporate a large percentage of recycled content

materials and exceed energy-efficiency standards. Also, check that the water cooler manufacturer has converted to refrigerants with an ozone-depletion potential (ODP) ratio of zero percent.

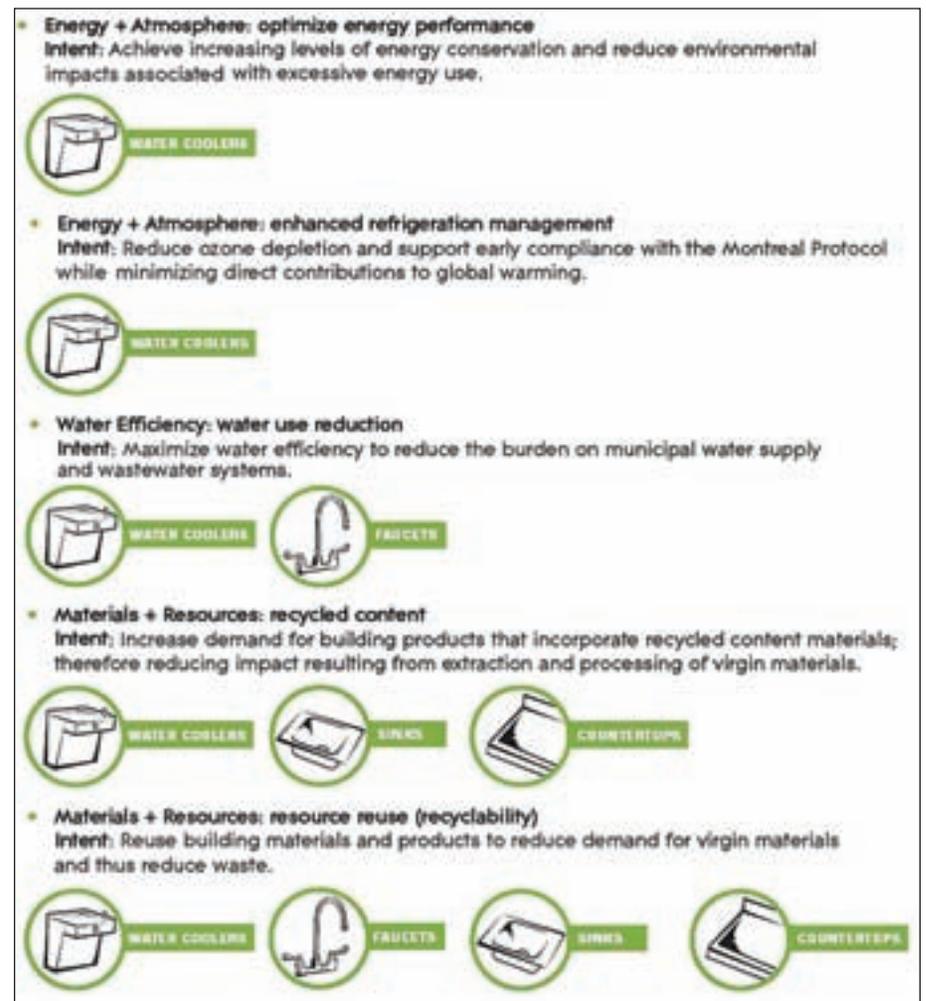
In addition, check if the water cooler or drinking fountain is certified or endorsed by a "green" third-party organization and determine if the cooler or fountain offers tangible energy and water saving features and benefits.

The strong demand from consumers for a clean, inexpensive water source combined with the new, affordable, environmentally friendly water cooler technology and quick



BY JACK KRECEK
contributing writer

most recycled materials, even more than paper or glass, and it never drops out of the recycling chain and can be reclaimed without waste. Also, check that the stainless steel sink is con-



This chart identifies the types of products that work with the criteria established by the LEED guidelines for product design (courtesy Elkay).

installation process opens the door for plumbing contractors to become part of the clean water solution.

Supplying sustainable stainless steel sinks

In terms of supplying a sustainable stainless steel sink, check that the sink is constructed of high quality 300 series stainless steel, one of the most environmentally friendly materials available. Using stainless steel is an ideal choice for commercial applications, due to its durability even in high traffic locations. In addition, stainless steel is one of the world's

constructed from recycled stainless steel material.

Another important tip is to learn the lifespan of any sink you plan to install. If it has an extensive product lifecycle then it is more eco-friendly. For example, an average stainless steel sink has a lifespan of 30 years and most sinks are 100% recyclable after use, resulting in minimal product waste.

Finding environmentally friendly faucets

In terms of commercial faucets, plumbing contractors should also look (Turn to 'Green'... page 55.)

A manufacturer's sustainability process

A manufacturer walking the sustainability walk, Elkay's product packaging is constructed with up to 56% recycled content and most are 100% recyclable, as are the majority of the product components. In addition, Elkay manufacturing facilities are designed for maximum efficiency to generate as little scrap as possible.

Elkay continues to lead the industry in product innovation by bringing a GreenSpec® listed water cooler to market. This means that there is credible third-party verification of its enhanced efficiency and water conscious functionality.

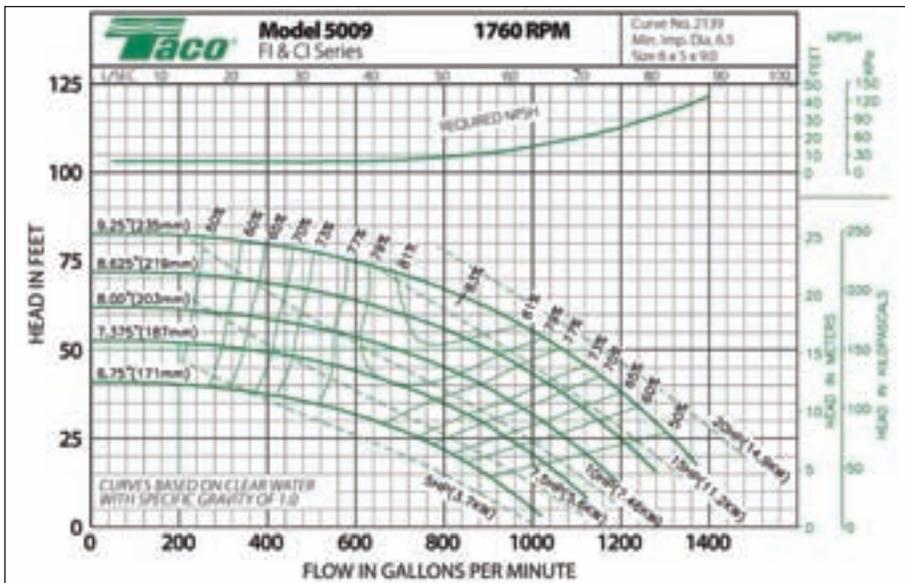


BY GEORGE TABER
contributing writer

As energy costs rise and as achieving energy efficiency becomes more and more important in the operation of HVAC systems, continuing attention by equipment suppliers and operators will center on maximizing the efficiency of the system components in order to conserve energy and reduce operating expenses.

In designing a hydronic heating or cooling system, we should certainly look at the efficiency of the pumps to achieve a certain amount of energy savings. However, system pumps are only one element of the many components in a system that will determine the overall efficiency of that system. Additional components and elements of importance are:

- the boiler or chiller
- proper pipe size and piping design (to reduce losses)
- valves losses
- radiation efficiency
- water temperature (which should vary with outside temperature in order to reduce heating/cooling costs)
- motor efficiency, pump size and use of variable speed controls to match the system load conditions
- operating point
- piping design
- controls to monitor and operate the system to match the load changes.



Pump manufacturers take a lot of the work out of figuring pump sizes by publishing extensive graphs with curves already calculated.

Achieving high pump efficiency

In a piping system, a pump's energy is consumed by the friction of the piping and fittings, heating/cooling coils, control valves, balance valves (manual and automatic) and the use of constant speed pumps. If we eliminate all the friction-wasting devices in a system, we can reduce the pump size and reduce energy.

Instead of using on/off valves and balancing valves, we can pipe the system in a primary/secondary configuration with the coils in the secondary and turn on a low energy pump only when needed. Because it does not have to overcome the friction of all the control valves in a system, the main circulation pump could be a low energy pump.

The pump is one of the elements that will use more or less energy, so we need to look at the elements that affect its energy consumption. The major influences on centrifugal pump selection efficiency are specific speed (NS), pump size, NPSHA&R and the type of pump selected to meet the system conditions.

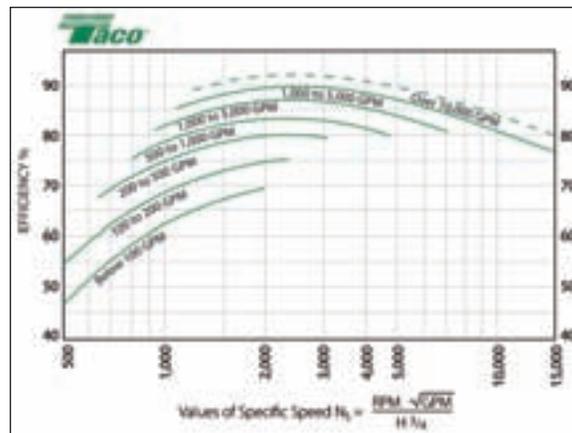
The Hydraulics Institute has charted the expected efficiency of different types of pumps at different NS. NS is a dimensionless number calculated from the formula $NS = N \times Q^{0.5} / H^{0.75}$, where $N = \text{rpm}$; $Q = \text{flow (GPM)}$, $H = \text{head (Ft. of water)}$.

A circulator producing 20 gpm, 20 ft. head at 1725 rpm has a NS = 816. A pump producing 5,000 gpm, 150 ft. head at 1750 rpm has a NS = 2887. The pump efficiency at optimum NS at 816 = 30% and the efficiency correction chart would be 5%. The predicted efficiency = 30% - 5% = 25%. The nor-

mal deviation is +/-16%, so this pump predictive efficiency would be between 9% and 14%.

The 5,000-gpm pump has a NS = 2887 pump efficiency at optimum NS efficiency and would be 89% with no correction factor. The deviation from attainable efficiency is 3%. From these calculations we can see that the low head and flow pumps have low efficiency, and the high flow and head pumps have high efficiency. It is also to be noted that the deviation is a lot smaller in high NS pumps.

Factors that affect the deviation from attainable efficiency are surface roughness, internal clearances, mechanical losses such as bearings, lip seals, mechanical seals, and packing, high suction specific speed, impeller



These curves illustrate specific speed (NS) at different speeds and flow rates.

trim and viscosity of the fluid pumped. The low NS pumps are affected most by surface roughness, internal clearances and mechanical losses. High NS pumps are affected more by high suction speed requirements, impeller trim and viscosity. All pump manufacturers for the same NS pump can only tweak the pump design variables to get close to the attainable efficiency.

A centrifugal pump is designed for best performance at a head and flow at a certain speed. This is called the Best Efficiency Point (BEP). A pump should be selected so that it will always operate near its BEP. Operating a pump at less than or more than the BEP will lower the operational efficiency and place additional stress on the pump shaft and bearing, due to increased thrust and radial load. Higher flows will increase the NPSH required, and erosion due to cavitation could result, along with an increase in noise and vibration.

Pumps are variable torque machines that follow the Affinity Laws. These laws explain the change in performance of a pump when the speed is changed or the impeller diameter is changed. They can be



Properly sizing circulator pumps requires careful calculations, but the effort is rewarded with top efficiency.

used to predict the performance of a pump at a reduced speed or smaller diameter impeller. The energy saving can be calculated. If a pump has excess performance, a greater energy savings can be achieved by using a variable speed drive or correcting the impeller trim to match the system resistance. Throttling the pump adds additional resistance to the system to control the pump and is not as efficient as reducing the speed or diameter of the impeller.

The Affinity Laws are:

$$(\text{RPM}_2/\text{RPM}_1) \times \text{GPM}_1 = \text{GPM}_2;$$

$$(\text{RPM}_2/\text{RPM}_1)^2 \times H_1 = H_2;$$

$$(\text{RPM}_2/\text{RPM}_1)^3 \times \text{BHP}_1 = \text{BHP}_2$$

You can see from the Brake Horse Power (BHP) formula that the BHP changes with the cube of ratios of the speeds, which is a big energy savings for a small change in speed. Replacing the RPMs with the impeller diameter will follow the same rules. Decreasing the diameter of the impeller from full size does reduce the head, flow and BHP. The further we get away from full size diameter there will be a drop in efficiency, but the reduction in horsepower due to a lower head should offset this efficiency drop.

The BHP can be calculated from the formula $\text{BHP} = Q \times F \times \text{Sp Gr} / 3960 \times \text{pump efficiency}$. This formula can also be used to predict the operating cost. The electric motor driving the pump also has an efficiency factor, so to determine the operating cost we would factor in the motor by $\text{BHP} \times 5.746 / \text{efficiency of the motor} = \text{Pump KW}$.

As a heating-cooling system operates at full load for only a small portion of a given day, if the pump speed can be changed, more energy savings can be achieved than worrying about a few ± points on pump efficiency. As mentioned earlier, proper impeller trim, pump size and operating point are all important for best operational efficiency. ■

George Taber is an applications engineer — technical services supervisor, Taco Inc.



Gray water pumping system

The SANISWIFT offers powerful, economical pumping action in a compact, contemporary design. Shipped fully assembled with pump inside its covered bucket-shaped container, ready for installation. Has three different inlets, two on the bottom and one on top to handle up to 18 gpm of wastewater from three different fixtures, including sinks, showers, washing machines and laundry tubs. Measures 8³/₄" high and 10¹/₄" wide, so fits neatly into tight spaces. **SFA SANIFLO Inc.**

Circle 101 on Reader Reply Card

20-26 SEER inverter mini-splits

The split system lineup has been increased with six Energy Star mod-



els, including units with the industry's highest efficiency rating: 26 SEER, making them the most efficient mini-split heat pumps available today. The new 9,000 BTU system provides 26 SEER with an HSPF of 12. The 12,000 BTU system offers 25 SEER with 12 HSPF. Also new to the lineup are 9 and 12,000 BTU 20-SEER system heat pumps with an HSPF of 10. **Fujitsu.**

Circle 102 on Reader Reply Card

Oil detective systems

Three new "Oil Detective" sump systems are job ready and designed to detect/alert the presence of oil in various applications.

The system comes complete with: durable cast iron or cast iron/stainless steel pump, pump controller, audible alarms, visual display lights, preset on/off, 20' piggy-back switch cord, UL508 approved switch and complete easy-to-install Instructions.

With flows up to 65 GPM @ 5', and offer 1/3 HP up to a high head 1/2 HP (50 GPM @ 20'). **Blue Angel Pumps.**

Circle 103 on Reader Reply Card

★ Phc News product of the month ★



Navigator valves meet lead-free requirements

As the plumbing products industry moves toward complying with lead-free legislation, the Navigator® lead-free valves meet these lead-free requirements and make the valves even safer for drinking or cooking water and better for the environment. California's new lead law, CA AB 1953, and a similar law in Vermont, which require reducing the lead levels in fixtures used to convey drinking water to be less than 0.25%, will go into effect January 1, 2010. As of February 2009, all Navigator Thermostatic Mixing Valves – standard, high-low and emergency – will be lead-free. Each valve is made with lead-free brass as the main raw material, complete with lead-free brass castings and bar stock, and stainless steel. Valves will work and look the same way as they did previously to blend incoming hot and cold water to regulate water temperature within a set point and prevent water temperature extremes such as hot-water scalding. **Bradley Corp.**

Circle 100 on Reader Reply Card



Commercial storage tanks

The new Rheem-Ruud 100-gallon commercial storage tank features a space-saving, "stubby" design that fits comfortably through small doorways and into tight spaces, making it ideal for boiler-room environments. Measuring only 46" high and just over 32" wide, the vertical ST100 tank is designed to work in tandem with other Rheem-Ruud commercial water heating equipment to handle applications demanding large quantities of hot water in short periods. **Rheem Mfg. Co.**

Circle 104 on Reader Reply Card

Heavy duty no hub couplings

452H Series heavy duty no hub couplings are manufactured to ASTM specifications for use in demanding soil pipe applications. Consisting of a neoprene rubber gasket (compliant with ASTM C564 requirements) and a heavy gauge stainless steel (300 series) clamp assembly, 452H Series couplings are available with four or six bands,



depending on the coupling size, that come with specially designed bi-directional eyelets. 452H Series couplings' metal components fully conform to ASTM C1540 requirements for heavy duty shielded couplings joining hubless cast iron soil pipe and fittings. AISI (American Iron and Steel Institute) Types 304 and 305 are used for bands, shields, screw housings, screws and eyelets. **Matco-Norca.**

Circle 105 on Reader Reply Card



Tub spout

Tug Spout provides a vastly superior installation than traditional slip fit tub spouts; provides a convenient, secure method for installing slip fit spouts. Fits the stub-out tightly to the wall, eliminating the need for unsightly caulk; tightening action helps compress O-ring seal for leak free installation; installs directly onto 1/2" copper stub out with a #2 Phillips screwdriver. **Sioux Chief.**

Circle 106 on Reader Reply Card

Progressive cavity grinder retrofit

E810 progressing cavity grinder pump retrofit readily adapts to existing pro-



gressing cavity grinder pump systems. Contains a quick-disconnect coupling for easy use, installation and adaptation. The pump's finned class 30 cast iron construction reduces heat, an arch-enemy to any electric motor. All the pumps, with high head capabilities up to 240', are designed for pressure sewer systems and 100% factory tested. **Zoeller Pump Co.**

Circle 107 on Reader Reply Card

Pre-insulated pipe

Ecoflex® pre-insulated pipe offered in 1", 1¹/₄" and 1¹/₂" ASTM sizes. ASTM Ecoflex features hPEX™ plus barrier tubing surrounded by closed-cell, PEX-foam insulation and covered by a water-



proof, corrugated HDPE jacket, making it ideal for direct-burial applications. It is available in continuous lengths up to 600 feet, and uses either durable PROPEX® fittings or the new WIPEX™ dezincification-resistant (DZR) brass compression fittings for a watertight, leak-resistant system. **Uponor.**

Circle 108 on Reader Reply Card

Solar collector

The new Vitosol 100-F flat plate solar collector is an economy option to flat plate and vacuum tube solar collectors. Features rugged, high-quality aluminum frame construction, impact-resistant solar glass, excellent solar energy harvest with a selectively coated copper absorber. Outstanding price/performance ratio in a wide range of solar thermal applications and is ideal for solar domestic hot water or pool heating systems. Now OG-100 certified by the Solar Rating and Certification Corporation; qualifies for available U.S. state and federal incentive programs. **Viessmann.**



Circle 110 on Reader Reply Card

Commercial electric water heaters

The Sandblaster® CSB series units are available with a surface mount thermostat (CSB-S) or an immersion mount thermostat (CSB-I) and are used for standard commercial applications. The Sandblaster CSB and the Statesman™ SSE series units are for heavy-duty commercial applications. 24K gold plated elements standard. The SSE's heavy-duty incoloy elements provide top protection against oxidation, scaling. Corrosion-resistant tanks have commercial quality glass lining, heavy-duty anode rods. **State Water Heaters.**



Circle 111 on Reader Reply Card

Internationally styled faucets

The Avanti Collection blends European design with California individualism. Available at your wholesaler, the collection features 4 new international families of products: Kenzo, Lago, Aria and Isola. Avantgarde, functional, energetic, sophisticated, fun, memorable style. Feature the European valving system, which meets the strictest noise standards to ensure quiet and effective performance in multi-family or commercial settings. **Black & Decker Hardware and Home Improvement Group.**



Circle 112 on Reader Reply Card

★ Phc News product of the month ★

Bathtub replacement kit speeds renovations

The new Swanstone Bathtub Replacement Shower Kit (BK-326072) offers cus-



tomers a way to redesign baths without elaborate, time-consuming renovations. Purchase the Swanstone bathtub replacement kit at your best price as a single item, with freight pre-paid. The kit contains a shower floor, bench seat, 2 soap dishes, recessed shampoo shelf and shower wall kit with installation materials. The kit replaces a standard 32"×60" bathtub. Each kit is compression molded, ensuring superior durability. Available in 29 colors; meets a variety of standards and ratings, including Class 1A fire rating. **The Swan Corporation.**

Circle 109 on Reader Reply Card

CPVC plumbing system

Experience the benefits of an all-CPVC plumbing system. Combine Schedule 80 Iron Pipe Size (IPS) Corzan® CPVC pipe and fittings with copper tube size (CTS) FlowGuard Gold® CPVC pipe and fittings. With its ability to provide three times the impact strength of standard CPVC pipe, Corzan piping is



Pressure vacuum breakers

PVB 4A series of pressure vacuum breakers features a unique modular check valve design. Built around a self-contained "captured spring" check module that is easily removable for maintenance or replacement. Allows for more compact body design that reduces costs. Interchangeable in the same sizes between all three valves in the 4A Series family to simplify repair operations and reduce parts inventory. **Apollo Valves.**

Circle 113 on Reader Reply Card



ideal for mains and risers (available in sizes larger than 2"). It easily transitions to FlowGuard Gold pipe and fittings (available in 1/2" to 2" diameters) to provide a complete CPVC plumbing solution. **Lubrizol Corp.**

Circle 114 on Reader Reply Card

Distinctive faucets

The Value Series addition to this company's line of RO faucets is available in 5 distinctive styles to coordinate with any décor. Features include: plated



zinc alloy outer body; lead-free plastic water passages; lead-free brass goose-neck spout that swivels 360°; 36" pre-installed 1/4" inlet tubing; standard high-polished chrome-plated finish; and optional satin nickel and antique bronze finishes available. **Tomlinson Industries.**

Circle 115 on Reader Reply Card



Mixing valves

Showermaster® 7600 thermostatic mixing valves are designed for shower and bath applications in healthcare, educational, penal, industrial, recreational and other commercial/institutional applications. Provide dependable control of water temperature for showers or baths. Highly responsive copper encapsulated thermostat. Compensates for supply temperature and pressure fluctuations. Built-in shutoff, single-handle operation. Integral checkstops on hot and cold inlets. **Leonard Valve Company.**

Circle 116 on Reader Reply Card

Plastic butterfly valves

These butterfly valves can replace metal valves in a variety of industrial piping systems. Designed for long-term performance and flexibility, BYB Series industrial butterfly valves feature a rugged, one-piece plastic body that can stand up to high flow rates and elevated stress conditions. Lever-operated BYB valves are available in 2"-8" PVC, CPVC, PPL and PVDF bodies with CPVC, PPL and PVDF discs. The 14"-24" sizes are available in the same body and disc materials and feature a high torque gear box. Options include gear boxes on the smaller sizes, stainless steel lugs on all sizes, and electric or pneumatic actuation. **Hayward Flow Control Systems, a division of Hayward Industrial Products.**

Circle 117 on Reader Reply Card

Sophisticated faucets

Tahi kitchen and bath fittings are sophisticated and modern to complement the Satinjet Tahi Shower System. Sleek, geometric minimalist design. Among the options are kitchen and bath faucets or mixers, 3-hole wall and basin mounted faucets, a shower mixer and shower mixer with diverter, and a bath spout. Ultra-flat polished chrome surface is laser etched with hot and cold indicators. **Methven.**

Circle 118 on Reader Reply Card





Solvent cements

All of this company's Weld-on products are now made of environmentally responsible low-VOC formulations. By the end of March 2009, all Weld-on solvent cements, primers and cleaners will meet the most stringent VOC emission limits in the U.S.: Rule 1168/316A, established by SCAQMD. Weld-on solvent cements, primers and cleaners join PVC, CPVC and ABS pipe, valves and fittings in most applications. **IPS Corp.**

Circle 120 on Reader Reply Card

HVAC test instruments

New family of HVAC system performance test instruments with infrared capabilities includes: thermocouple thermometers (P/N 3310/3320), a psychrometer (P/N 3110), anemometer (P/N 3220) and differential pressure meter (P/N 3420, infrared probe not included). Enable technicians to target non-contact surfaces and quickly take accurate differential temperature, pressure and airflow readings.



Technicians can also store Min/Max and AVG readings with these tools. Large, easy-to-read LCD display and rugged design for easy grip and hold. **TIF, an SPX brand.**

Circle 121 on Reader Reply Card

Auger bits

New lines of ship auger and auger bits are designed for deep-hole drilling in wood. High carbon steel with a new cutting head design heat treated to provide optimal life when hitting nails



during cutting. Edge stays sharper longer and reduces the need to be sharpened, for increased productivity and reduced downtime. The bit flutes are polished, then coated with an industrial non-stick material for faster chip ejection and less clogging when drilling deep holes. Sold standard with a 7/16" power groove quick-change shank; available in a variety of diameters in 6" and 18 1/2" lengths. **Milwaukee Electric Tool.**

Circle 122 on Reader Reply Card

★ Phc News tool of the month ★



Freeze unit generates pipe plugs for easy repairs

The SF-2500 SuperFreeze™ pipe freezing unit quickly and easily isolates sections of copper or steel pipe with ice plugs, eliminating complete system shut-downs and draining. Forms ice plugs in as little as 5 min in steel pipes up to 2" and copper tubing up to 2 1/2". One or two plugs can be formed with a single unit at the same time. Operates automatically once freeze heads attach to the pipes and the unit is turned on. Continues to run during repairs, ensuring the ice plugs do not melt. Flexible rubber hoses connect the freeze heads to the unit; makes them easier to handle and allows quicker coiling and storage in its rugged stainless steel carrying case. Does not use any hazardous refrigerants, carbon dioxide or nitrogen. **RIDGID.**

Circle 119 on Reader Reply Card



Leak detection kit

The OPK-300EZ/E EZ-Ject™ A/C leak detection kit is ideal for small to medium size systems. Contains everything necessary for the job: the OPTIMAX™ 3000 cordless, rechargeable led leak detection flashlight that is 15 times brighter than regular led lights. Inspection range is 20 ft or more and a bulb life of 50,000 hours. Also included are the EZ-Ject™ dye injector assembly, hose assembly with check valve and low-loss fitting, two 0.5 oz EZ-Ject universal/POE dye cartridges, 8 oz spray bottle of GLO-AWAY™ dye cleaner, AC and DC battery chargers and fluorescence-enhancing glasses. **Spectronics.**

Circle 123 on Reader Reply Card

Compact root cutter

Economical Metro-Rooter® holds 75 ft of 5/8" Flexicore® wire rope center cable; handles roots and other tough



stoppages in 3" through 6" lines. Or switch to 100 ft of 1/2" cable for smaller jobs. Light and compact, its narrow profile facilitates handling in tight places, on stairs and loading onto trucks. Features a fold-down handle, truck-loading wheel, and tough, lightweight frame on 10" semi-pneumatic wheels for easy transport. **General Pipe Cleaners, a division of General Wire Spring Co.**

Circle 124 on Reader Reply Card

HVAC flushing solvent

The Pro-Flush™ HVAC flushing solvent is formulated for R-410a retrofits, refrigerant conversions and



compressor burnouts. Kit includes a reusable tank with pressure-relief safety valve; a hose; one can of Pro-Flush; and an injector trigger nozzle for accurate, single-hand operation.

Reduces costs since only the 16-oz refillable cans need to be purchased. Solvents are non-voc, conform to EPA snap standards and are non-hazmat. Compatible with CFC and HFC refrigerants and compressor oils. **DiversiTech Corporation.**

Circle 125 on Reader Reply Card

Fuel cylinder options

Max Power Propylene is now available in the familiar yellow Fat Boy fuel cylinders that meet the environmental demands of today's consumers.



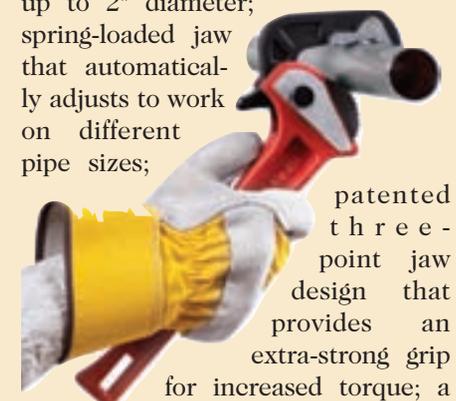
Patent-pending Green Key® device, when inserted into an empty cylinder, releases all remaining fumes, effectively depressurizing the cylinder so it can be recycled by the consumer's local steel recycler. Contain 20% more

fuel than standard 14.1-oz cylinders, providing users with longer run times. **Bernzomatic.**

Circle 126 on Reader Reply Card

Fast pipe wrench

The HAWK wrench features fast ratcheting action for single-handed adjusting and tightening of pipes and fittings up to 2" diameter; spring-loaded jaw that automatically adjusts to work on different pipe sizes;



patented three-point jaw design that provides an extra-strong grip for increased torque; a trigger on the handle quickly disengages the tool from the workpiece; and a valve shut-off key is also molded into the handle. Available in 3 sizes: 10", 14" and 18". **General Tools & Instruments.**

Circle 127 on Reader Reply Card

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Circle 37 on Reader Reply Card

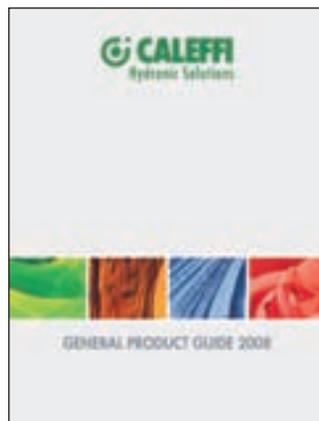


The FlowGuard Gold Connection

Newsletter provides plumbing professionals valuable plumbing tips, technical guidance and a look into successful, real-life CPVC plumbing system installations. Published quarterly for FBC Building Solutions products as a resource to the plumbing industry.

The Lubrizol Corp.

Circle 150 on Reader Reply Card

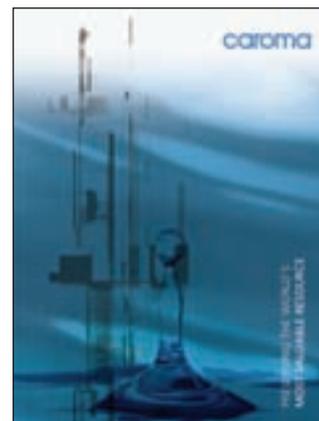


Hydronics solutions product guide

28-page guide covers the company's full line of innovative hydronic solutions and quality components. Specializing in components such as zone valves, air and dirt separators, manifold systems for radiant heating and modular heating distribution and solar thermal products.

Caleffi.

Circle 151 on Reader Reply Card

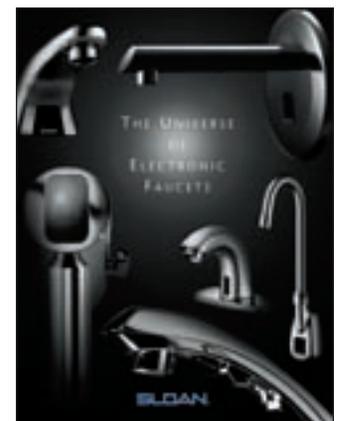


Caroma products brochure

Manufacturer offers high efficiency dual flush toilets, high efficiency and waterless urinals and stylish bathroom sinks. Brochure lists and pictures all products available and the water savings potential compared to other toilets. All 41 floor-mount toilets are WaterSense labeled.

Caroma.

Circle 152 on Reader Reply Card



Sensor-operated faucets

Color brochure covers company's hardwire, battery-powered and solar-powered faucets for commercial, industrial and institutional applications. Highlights select models within each faucet category and available options. Deck- and wall-mount models available.

Sloan Valve Co.

Circle 153 on Reader Reply Card



Smart water delivery for greener home

Manufacturer is a WaterSense® partner, committed to encouraging efficient use of water resources. Most of the manufacturer's lav faucets flow at a maximum of 1.5 GPM, for up to 32% water savings. Select the Dryden™ Bath Collection and other water-efficient products.

Delta.

Circle 154 on Reader Reply Card

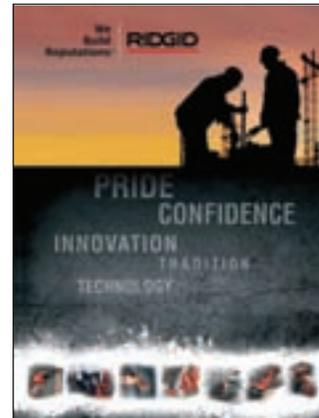


ProRadiant line's Climate Mat

Pre-fabricated Climate Mat system is a roll-up assembly with tandem supply and return headers and 1/2" tubing. Made in two separate 5' sections; may be unrolled one at a time or simultaneously. Lay 20,000 sq.ft. of evenly spaced radiant tubing in only eight hours.

Viega.

Circle 155 on Reader Reply Card



RIDGID product catalog

The 234-page color full-line catalog includes new products and reader-friendly features to help guide customers in choosing products. A visual product index divides the catalog into 13 product categories to enhance the overall navigation of the catalog.

RIDGID.

Circle 156 on Reader Reply Card



Eye/face wash system

The Axion MSR eye wash system is most recommended by eye care professionals. The Axion MSR sweeps contaminants outwardly safely away from the nasal cavity. It received the "Innovative Product of the Year" award at the Expo Protection 2008 Conference in Paris.

Haws Corp.

Circle 157 on Reader Reply Card



Labor Saver® Fixture Support

Figure number 0710 has been designed to speed up the installation process by using a one-piece rigid frame, pre-assembled steel construction. The new oxbow symmetrically designed fixture support allows room for the waste piping and features horizontal and vertical adjustability.

Jay R. Smith Mfg. Co.

Circle 158 on Reader Reply Card



ClearFlow® dielectric waterway fittings

Protect plumbing systems through an exclusive steel-to-plastic design that establishes a dielectric waterway. Thermoplastic-lined steel construction reduces the local galvanic cell corrosion that normally occurs when dissimilar metals are connected in the presence of water.

Elster Perfection.

Circle 159 on Reader Reply Card

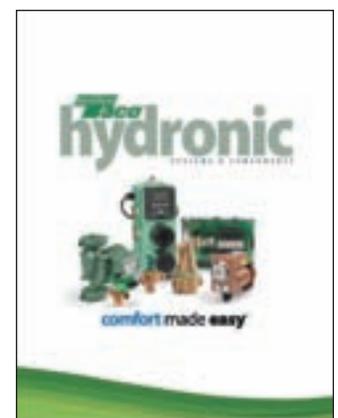


Condensing boiler

SYNC condensing boiler equipped with an advanced touchscreen control system (SMART TOUCH) combines stainless steel heat exchanger technology with modulating/condensing combustion to deliver thermal efficiency as high as 98% in low water temperature operations.

Lochinvar.

Circle 160 on Reader Reply Card



Hydronic systems & components

Features hydronics equipment and accessories for residential/commercial apps. Catalog sections include: circulators; electronic controls, air elimination products, valves, radiant systems and water recirculation. Also contains info on the contractor development and training program FloPro.

Taco Inc.

Circle 161 on Reader Reply Card

'Green' products are smart marketing

(Continued from page 48.)

for longevity in this product and check that the faucet exceeds the national requirements for lead-free design. An environmentally friendly faucet should also meet the national standard of 2.2 gallons per minute in terms of water conservation, but installing a faucet with a low flow (.5 GPM) aerator in a project will help your customers save money and deliver a more water-conscious product. Also, look for faucet manufacturers that include the low flow aerator at no additional cost. This enables you to provide the maximum amount of water conservation at a minimal cost to your business.

Remember to double check that the faucet complies with NSF 61, which

In addition to helping the environment by installing green products, plumbing contractors may also be helping their bottom line.... 47% of U.S. adults agree that they would be willing to pay more for environmentally friendly products.

ensures safe, clean water, is dispensed. In addition, search for faucets and packaging made from recycled and recyclable materials.

Becoming a LEED-er in plumbing fixtures

As a plumbing contractor working with builders and/or architects who may be applying for LEED credits, it may be beneficial to your business to know what types of products work with the criteria established by the LEED guidelines for product design. LEED points are awarded for both new construction and renovations. Elkay developed examples of these adopted guidelines to make it easier for their customers to understand what eco-friendly plumbing products may assist in gaining LEED credits (see chart, page 48). Also, to learn more about the LEED rating system visit www.usgbc.org.

In addition to helping the environment by installing green products, plumbing contractors may also be helping their bottom line. In a 2008 survey conducted by Harris Interactive, 47% of U.S. adults agree that they would be willing to pay more for environmentally friendly products — on average 17% to 19% more depending on the product. In addition, 57% of those surveyed said they would pay the additional costs for products made from recycled materials. In gen-

eral, plumbing contactors want to be sure they are providing products made by companies truly dedicating an abundance of time and resources to engineering durable, functional, eco-friendly products that exceed the

needs of the professional installer and the end user, while minimizing their global impact. By staying alert to environmental issues, we have the opportunity to improve and enrich the world we all share and run a better business

in the process. ■

Jack Krecek is vice president, general manager of Elkay's plumbing products division's commercial business unit. Elkay is an innovative manufacturer of sinks, faucets, water coolers and fountains for residential and commercial use.

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Each Thursday morning at 6 AM, without fail, I email a brief newsletter to thousands of our subscribers. The email newsletter always contains links to technical articles that I think will interest you, news of things that are going on in the world of heating, special discounts on products in our online store, and seminar announcements. I invite you to join our list. It's free and it's definitely not spam. And should you ever decide you want to stop, all you have to do is click the link that's at the bottom of every newsletter I send you. I don't think you will, though. This is really good stuff. I spend my days digging it up. It's a labor of love, and I enjoy sharing it each week. Here is just a taste of what our subscribers enjoy each week. Visit www.heatinghelp.com to sign up today! — Dan Holahan

Lester does ISH

The big ISH show in Frankfurt, Germany happens again next March and this will be my tenth visit. I'm looking forward to it, as always, and my buddy, Lester, is talking about going along. I'm still trying to get over the last time we went together. There's something about his sweat shirt that just endears him to folks in foreign lands. Anyway, here's my story and I'm sticking to it. Enjoy. [Click here to read more.](#)



World's most expensive dog house

The next time The Lovely Marianne sends me to the dog house, I think I'd like to check out this one. Lucky dogs. And it's got geothermal heat. Some people have way too much money. [Click here to read more.](#)



An innovative idea!

How about this for being clever? The hospital's new heating system will collect the heat from the parking lot during the summer and store it 100 feet below the surface until they need it during the winter. It's sort of the reverse of that system I told you about at the Japanese airport, where they're saving the snow and using it to cool the building during the summer. Necessity is indeed the mother of invention. [Click here to read more.](#)

Gas, not wood

The airport in Bangor, Maine will be burning gas instead of oil soon, and all because of the price of oil. What's a bit surprising, though, is that they didn't go with wood. So many of the heating systems in Maine are converting from oil to wood right now, but you should click here to follow the reasoning on this one. Interesting stuff. [Click here to read more.](#)

A very playful radiator

I love the creativity that's going into the new radiators. Some of these units are pure art, and that's helping to change the way consumers see hydronics. This radiator brought me back to when my daughters were small. Trust me; the only thing worse than stepping on a Leggo block in the dark of night, is stepping on a Barbie high heel. Ouch! [Click here to read more.](#)



Portsmouth Abbey opens new solar house

Last winter, my friend, Rich Corcoran, of Viessmann fame took Marianne and me to visit the Portsmouth Abbey, a private Catholic boarding school in Rhode Island, to see what they were doing with green technology. This is quite a place. It was a cold, windy day and we all got to go inside their wind turbine, which was a hair-raising experience. Those things are huge! I was pleased to see this article and learn that the abbey is still at it. They are now home to one of the Solar Decathlon houses. This place is inspirational. [Click here to read more.](#)



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Be firm, fair and realistic when evaluating personnel strengths and weaknesses

(Continued from page 28.)

letting you know that I am drawing the line in the sand. If you want to keep this job, don't cross it. You will be written up, and ultimately let go if you continue to be late for work. Understood?"

Make sure you have a Corrective Action process in the manual. Basically, it should state:

If you do not comply with a procedure listed in the manual, we have a Corrective Action process. The intention is to help you get back on track.

- First offense, verbal warning.
- Second offense, written warning.
- Third offense, suspension of employment.
- Fourth offense, termination of employment.

Make sure everyone on your team

understands and signs off on having read this process. Clean up the house-keeping. Start imposing the discipline that allows you to focus on your vision. Quit wasting time on fence testing.

Some team members just need to go. Now.

As I say that, does a face come into your mind's view? You know, don't you, that it is time to let him (or her) go?

Does my advice seem hard-hearted? I believe that everyone has the right to win. If someone on your team is not winning, it's your job to do everything in your power to help him be successful. And if he is not a good fit for your job, let him go. It is not OK to have someone on your team who

everyone else knows is a loser. That person becomes a ghost. He isn't included in conversations. There is a lot of eye-rolling when his name is mentioned. That is just not right. You may be motivated by wanting to do the right thing, However, continuing to hold the wrong person in a position can cause the financial failure of your company. Even worse, you are complicit in keeping a good person down. What if they left your company and went on to win elsewhere? Wouldn't that be great?

I would be remiss if I didn't encourage you to review your discipline and employment termination strategy with your labor lawyer. Be fair. Engage your policies without prejudice. Hold your team — and yourself accountable.

I believe that everyone has the right to win. If someone on your team is not winning, it's your job to do everything in your power to help him be successful. And if he is not a good fit for your job, let him go.

Your small business is no small thing. This year, crank it up. May 2009 be your best year yet. ■

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Controlling all that solar heat

(Continued from page 26.)

floors. A solar-direct system allows the solar heat to flow directly from the solar collector into the mass floor. It is not diverted or delayed in a water storage tank or other indirect heat storage system on its way to the mass floor. In this way, we eliminate the heat loss and temperature drop associated with time spent in remote storage, delivering more heat per square foot of solar collector to the heating load. Since the mass floor is within the comfort zone of the living space, it is important to control the temperature of the floor to allow for solar heat storage without overheating that zone of the house. We have been using two-stage room thermostats for this purpose.

These thermostats are often called heat pump thermostats, because they are typically used to control air-source heat pump heating systems. Air-source heat pumps operate most effectively when the outdoor air is well above freezing. When the heat pump cannot keep up with the heating load during freezing weather, an electric resistance heating system makes up the difference. So, a two-stage thermostat is used to maintain the room temperature at a slightly higher setpoint with the heat pump, and, as the room temperature drops one or two degrees, a second stage fires up the electric resistance heat.

Solar-direct two-stage heat distribution

Although our climate in Santa Fe is too cold in winter for air-source heat pumps, we use the same principle to control solar-direct heat. The low limit setpoint is used to boost the room temperature to a minimum comfort temperature using a hydronic backup boiler if the solar heat cannot keep up. The high limit setpoint is then wired to a solar control (typically a solar differential) and waits until solar heat is available. It then delivers solar heat to the thermal mass of the floor until the room temperature reaches the limit of the upper differential temperature range. By raising the temperature of the mass floor just one degree (F), we have stored thousands of Btu in the thermal mass, which will radiate out into the room over a period of many hours, delaying the boiler from turning on.

In this way we are putting the "thermal flywheel" effect of the mass floor to good use by prolonging the delivery of solar heat well into the evening. The backup boiler will not fire until the room thermostat drops all the way through its high-limit differential range. This is why it is good to have programmable room thermostats that allow you to change the

high limit differential. The more you allow the room temperature to fluctuate above and below the high limit setpoint, the more solar heat you can store and release in the thermal mass of the floor.

The final settings depend entirely on the comfort preferences of the occupants. I have found most people can accept a four to six degree (F) gradual room temperature fluctuation without complaint, especially when they know that the warmer temperatures are provided by solar heat. In larger houses with ample thermal mass in the floors, we only allow the rooms to fluctuate by two to three degrees so that the warmer rooms will reach their high limit sooner, allowing the cooler rooms to get more of the solar heat distribution. In this way, solar heat is dispersed around the house evenly into all the floors, controlled by the high limit setpoint on each room thermostat. Since two-

stage room thermostats are invisible to the user, owners can operate the system without any special training. They turn the room temperature up and down in the normal way, and the internal setpoints and differentials take care of themselves after the installer programs them.

Control systems are evolving

This article describes some of the simplest thermostat switches that are in common use in existing heat control systems. Newer control systems are beginning to move away from simple switches and more into thermistor sensors, digital logic, variable temperature response capabilities and even remote network accessibility. The design principles of RELIABILITY, COMPATIBILITY and ELEGANCE remind us that, in some applications, maybe all you need is a switch. If so, simpler is better. At Cedar Mountain Solar we are always

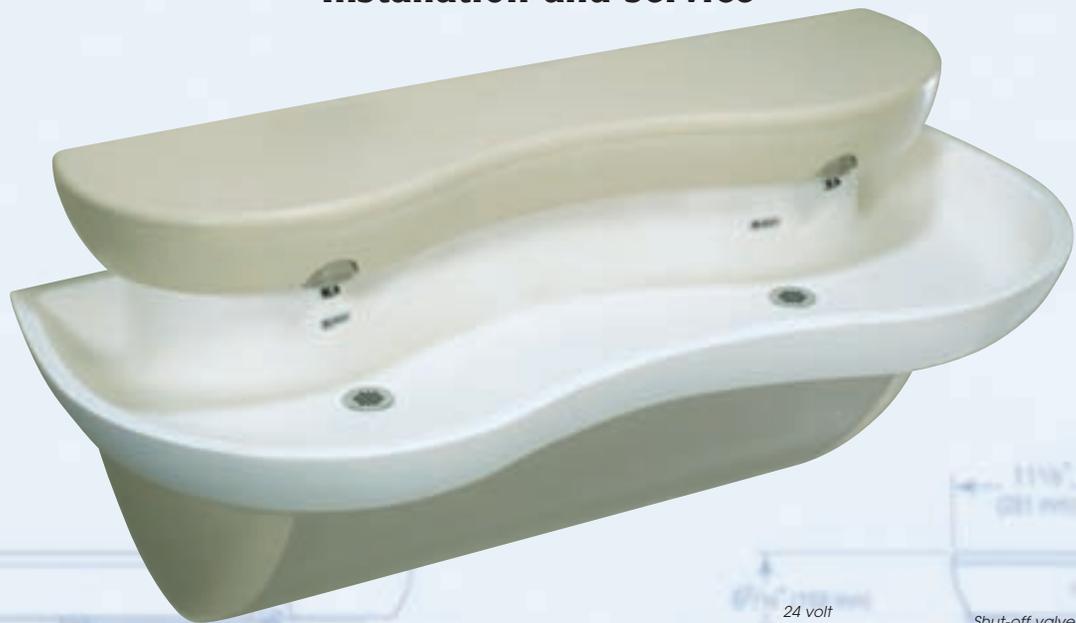
Since two-stage room thermostats are invisible to the user, owners can operate the system without any special training...the internal setpoints and differentials take care of themselves after the installer programs them.

working on that fine balance between providing better controls while keeping them as simple to use as possible. Our control systems will be incorporating new technologies and control strategies as they evolve and prove themselves worthy of the Six Principles. ■

Bristol Stickney, partner and technical director at Cedar Mountain Solar Systems in Santa Fe, N.M., has been designing, manufacturing, engineering, repairing and installing solar hydronic heating systems for more than 30 years.

Stand Tall with SloanStone®

Installation and service

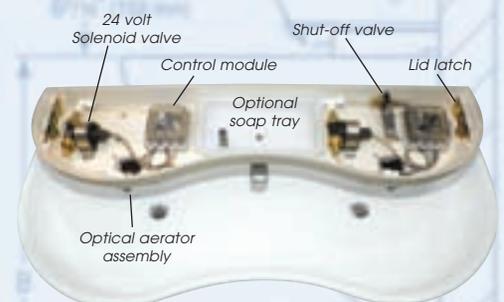


Installation, under-the-lid adjustments and maintenance can be done while standing. SloanStone's one-piece frame and pre-plumbed components make it the fastest installed solid-surface sink on the market to maximize your profit.

For further information on SloanStone sensor-operated solid-surface sink's exclusive features like a 3-year warranty, visit www.sloanvalve.com. Value Alliance Club points are available.



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Circle 38 on Reader Reply Card

Cheap is as cheap does

(Continued from page 30.)

one of my competitors who is a notorious price low-baller. His prices don't allow him the chance to deliver excellence to his customers.

The consumer told me that the hot water pressure was low ever since the new water heater was installed by that competitor. When I asked him about the cold water pressure, he told me it was fine. This immediately told me that the first thing to do was to make certain that the cold water inlet to the water heater was fully opened.

I asked if he had called the other contractor back. He told me that he did. He went on to say that they told him on the phone that the cold water supply valve to the building was faulty and needed to be changed at an additional cost to that consumer. If they knew that to be true, why didn't they offer to change it when they installed the water heater?

Answer: stupid business procedures. The consumer was a bit leery of this over the phone diagnosis. Even

this lay person could figure out that if there was any truth to that diagnosis the cold water also would have a problem. But, it didn't. Sure enough, when the consumer fully opened the valve his problem disappeared.

I don't compete with low-ballers who don't properly care for their customers. They sell mediocrity. We sell excellence. That's the reason we don't offer poor service at below cost prices. My contracting firm gives our clientele excellence in performance backed up by business and technical intelligence, ethics, and financial prudence.

When selling prices don't give contractors the chance to do the right thing for their customers, they are taking the chance of losing that consumer to those contractors who run their businesses in a professional, competent and business-like manner. So, don't be afraid of doing the right thing

Information is the power of smart business

Even after you have properly calcu-

Item & Task Description	QTY	UNIT	PRICE	PRICE AFTER 20% DISCOUNT	PRICE AFTER 10% DISCOUNT	PRICE AFTER 5% DISCOUNT
1 1/2" CP Tubular P Trap	22	TR	\$40.00	\$32.00	\$38.00	\$38.00
1 1/2" RD Tubular Tailpiece	15	TR	\$20.00	\$16.00	\$19.00	\$19.00
1 1/2" CP Tubular P Trap & RD Tailpiece	27	TR	\$120.00	\$96.00	\$114.00	\$114.00
Basket Strainer [Competitive]	15	TR	\$40.00	\$32.00	\$38.00	\$38.00
Basket Strainer [Quality]	15	TR	\$40.00	\$32.00	\$38.00	\$38.00
1 1/2" RD Tailpiece & Competitive Basket Strainer	30	TR	\$100.00	\$80.00	\$95.00	\$95.00

Figure 1. Commercially available pricing information digests can be tailored to your specific costs, chosen profit margin, average travel time and chosen discount rates.

lated your cost per tech hour the confusion of any business day can lead to mathematical mistakes; leaving something out; or figuring in that which shouldn't be included in a task price.

Any of these can cause problems. Prices that are too low to earn a profit above your costs for the task defeat the purpose for which you are in business. If a task price includes cost items that don't pertain to that task, you may have made that price too high to entice the consumer into purchasing your services. For example, if an average task of some type takes an average two hours for your technician to perform without problems and you include eight hours in the price you quote to the consumer, you may not get the opportunity to do the service at a profitable price.

Information is power. By giving yourself and your technical staff information you give your team the necessary power to avoid problems; make everyone's job much easier and less prone to error; and give your business a greater opportunity to succeed. Properly formatted price guides are a fantastic source of knowledge. Obviously, price guides should show your prices during your regular business hours. It would be wise to have them also include after regular business hour prices: discounted prices for your service discount program clientele; senior citizens discounts, etc.; and/or discounted prices for additional services performed during the same visit.

When your technicians have this pricing information at their fingertips they can rapidly and professionally give consumers the price information they need to promptly decide to give your firm their business. In the consumer's mind, fast and intelligent responses instill confidence in your enterprise.

It should be noted that composing your own price guide is a daunting and time consuming task. You may not have, or want to spend, the time making a price guide. In that instance, you should look into purchasing a price guide composed by a



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company who takes all of which I speak into consideration. If you choose to purchase a price guide make sure that the price guide gives you guidance which will afford to you the opportunity to succeed.

Figure 1 shows a sample page from my *Readily Available Pricing Information Digest for the Plumbing Heating Cooling Contractor*®. It is customized to the contractor's labor/overhead costs, chosen profit margin, average travel time, and chosen discount rates.

Things you should keep in mind regarding this sample page:

1) It is not actual size. The actual size of the price information page is 8 1/2" x 11".

2) Sample page prices are for illustration only and based on the following hypothetical factors:

a) a labor/overhead cost to the contractor of \$150.00 per tech hour. You may have a higher or lower labor/overhead cost which can be used for your price guide.

b) an average 1/2 hour travel time to the call location. Your price guide travel time would be based on your tech's average time to take the information regarding the call; to plot the route to get to the call location; and the time to drive to the call location.

c) a profit margin of 50%. This 50% profit margin allows the hypothetical contractor room to offer discounts to service discount clientele while being financially prudent and still able to attain set goals.

d) after-hours task prices based on a 1.33 multiplier of the regular hour price. Your multiplier can be the same, higher or lower. This option is not needed if you don't perform after-hour services.

e) There are two discounts columns. One is for 20% and one is for 10%. If you decide to give discounts

your discount rates could be the same, higher or lower.

3) To the left of the page is the main item for which a price is needed.

4) Below the main item is a description of the task.

5) Below the description of the task is a list of additional potential material you may need for the task.

6) To the right of the main item is the cost allowance to the contractor for the main item (IDC).

7) To the right of IDC is the cost allowance for the additional potential material (APMC).

8) To the right of APMC is the average allotted time to complete the task at the location (TH).

9) To the right of TH is the average technician travel time (TTT).

10) To the right of TTT is the labor & overhead cost to the contractor inclusive of travel time (LOC).

11) To the right of LOC is the breakeven cost to the contractor for the task including task time, travel time and material, if any (BEC).

12) To the right of BEC is the task identification number.

13) To the right of the task identification number is the after regular hour selling price for the task.

14) To the right of the after regular hour selling price are two columns with discounted regular hour prices.

15) To the right of the discount columns is the regular hour selling prices for the task.

16) Note that each item has four lines of prices.

a) The first line of numbers is for the first task of the visit when all material is on your service vehicle.

b) The second line of numbers is for the first task of visit when any material is not on service vehicle and must be picked up. Those prices are in red.

c) The third line of numbers is for additional tasks after the first task of

same visit when all material is on your service vehicle.

d) The fourth line of numbers is for additional tasks after the first task of same visit when any material is not on service vehicle and must be picked up. Those prices are in red.

17) If you order this price guide, it will be customized to your labor/overhead prices, travel time, profit margin, multiplier and discounts. For information or help with numbers, give a call at 845/639-5050.

As you can see, a price guide of this type gives you and your technicians all sorts of information. Your team will have the power to rapidly quote to consumers different profitable selling prices for the same task depending upon the circumstances revolving about the task. You will be able to afford to deliver excellence to your clientele. And, be profitable while doing it.

Remember, smart business is less expensive than cheap business both

for you and your clientele. ■

If you have any questions call me at 845/639-5050.

I wish you good health and much prosperity. Excellence deserves reward!

Richard P. DiToma is a business consultant and contractor with 36 years of experience in the PHC industry. He conducts seminars, evaluates business operations, publishes customized price guides for contractors and offers continuing support.

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EMPLOYMENT OPPORTUNITIES

Rohrs

(Continued from page 24.)

schematic with a cast iron boiler or a mod-con boiler. (See Figure 3.)

Hopefully, this article has given you the information you need to help you

decide whether you would like to purchase the software yourself so that you can draw and a c c o m m o d a t e changes in projects quickly and "in-house." Having the loop layout drawn for you by outside vendors is another way to provide drawings without investing the time and money needed

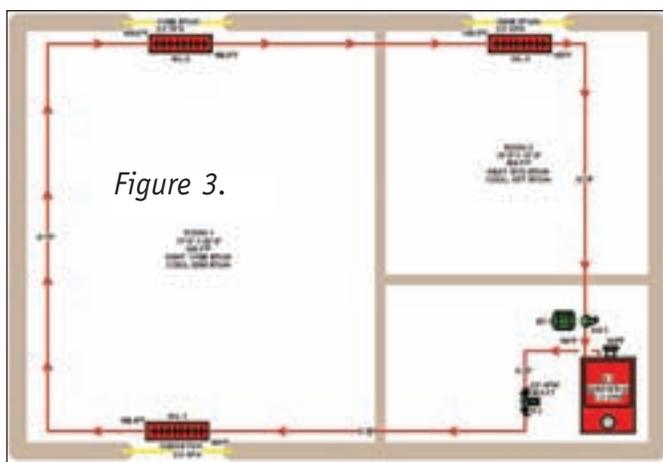


Figure 3.

ware. Whichever avenue you choose, your company will benefit when such drawings are needed. ■

Paul Rohrs welcomes your comments. Contact Paul at paul@biggerstaffradiantsolutions.com.

Figure 3. The new FloPro Design Software from Taco can provide a mechanical room drawing, as well as a material list.

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BY JIM SCHAIBLE,
managing editor

Some years ago my morning drive took me to a certain stop sign at the intersection of a side street and a major thoroughfare

in Chicago. Some mornings I began to notice a shabby-looking young man in the crosswalk in front of my car.

When I say "shabby" I mean just that. His clothes appeared wrinkled and unwashed, his hair and beard unkempt, his shoes scuffed and dirty, and he walked with a shambling gait. He looked as if he'd had a rough 15 years capped off by a worse night. I'd seen hundreds like him in the city, and I didn't pay much notice except to wait for him to cross the street.

But he was consistent in a way that most bums aren't. I generally was at the same intersection at about the same time each day, and most days he was there as well. And after a while he began to change. First I noticed he had been to the barber. One Monday his hair was cut and his beard neatly trimmed.

With that came another change. He gradually lost his hunched-over posture and stepped more lively. His eyes were brighter and he peered down the road rather than at the sidewalk. His clothes, though still worn, had been laundered and maybe even ironed.

It occurred to me the fellow had to be going to a job. I had no idea what his story had been. Perhaps he had been through a rough patch and was bouncing back. Maybe he was recovering from alcohol or drug abuse. Whatever his circumstances, week by week he showed progress. I surmised that each Friday he got his paycheck and used part of it for some personal

improvement. One morning he strode along sporting a new pair of work boots. Another Monday he wore new jeans, and it seemed as if every week he bought another new shirt. His attire was that of a working man, and he seemed pleased with his stature in life.

Then one day I missed him. I checked up and down the street and he failed to appear. Several days passed and all sorts of dire thoughts crossed my mind. I was genuinely worried. Then, on a morning I was running late, the mystery resolved itself. There he was, riding a shiny new bicycle! He didn't need to start for work so early, so our paths stopped crossing.

How many times this scenario has happened across our nation? Gainful employment with the ability to earn a decent living is a cornerstone of a stable society. We all want to be useful, and along with a good job comes confidence and a positive civic spirit.

Now, however, opportunities are fewer. Global competition to reduce costs has chased the old manufacturing jobs from one low-wage country to another. A great many of those manufacturing jobs shifted overseas, never to return. Employees who could provide for their families from honest factory work now have to patch together a schedule of part-time jobs or full-time jobs that pay far less than their old jobs did.

Gone with the old jobs also went the benefits, so along with lower wages, employees struggle to meet health-care costs, and saving for retirement isn't even a dream. The current economic downturn has taken a heavy toll, and millions face bleak days.

All isn't dark, however. America still contains a solid backbone of home-grown businesses, the kind that employ locally and directly benefit the local economy. I'm talking about you contractors, the kind that do plumbing, home repairs, windows and doors, siding and all manner of other jobs for homeowners. Others

write up commercial contracts. Most are smaller businesses, yet they provide those kind of jobs that enable employees to earn a good paycheck and feel well about themselves. Perhaps that young man I saw each day worked for such a business.

Contracting jobs can't be outsourced, either, so your people can feel more secure in their jobs. As long as the local economy supports your business, they are assured they will be able to provide for their families.

I can't overemphasize this fact: Small business always has provided the foundation of this nation's economy, and continues as such. More now than ever, contractors, merchants, retailers and services in their thousands carry more of their economic weight.

To your great credit, you have stepped up and done more than your share by hiring and training a solid core of talent. Anyone who is willing to work and learn has a good chance with a PHC contractor. PHC work is ever more technical and demands more skills, but contractors are willing to train their techs to meet any demand. The work is far more rewarding than those long-gone factory jobs. At the end of each working day your techs can be satisfied in a job well done.

To be sure, the world's economy suffers the blues right now. But it's business owners like you who will provide the good jobs that will get us out of it. ■

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