

Bell & Gossett legacy established by century of growth and innovation



E.J. Gossett



William Boone

Though it's now a leading brand for Xylem Inc., one of the world's largest pure play water technology companies, Bell & Gossett got its start as a family owned business. The B&G brand marks its centennial in 2016, remaining true to the precepts instilled by its founders 100 years ago.

When William A. Boone led a sales meeting for the Bell & Gossett Co., he was known to wear his B&G spirit sweater to rally the troops. The B&G president's sales meetings were legendary – they were as much pep rally as they were instructional.

"There was nothing like going to a sales meeting run by dad," said Andy Boone. "He respected all his representatives and made sure everyone had a good time."

Boone's spirit sweater was emblazoned with the B&G logo, and underneath, he wore his signature bow tie. "His spirit sweater more than anything exemplifies dad's positive, enthusiastic personality," said daughter K.O. Strohhenn. "Dad expected himself to do the best he could and he expected his reps to do the same."

Boone was president of B&G from 1941 to 1972, ushering the company through a period of unprecedented growth and a host of accomplishments and changes, including aiding the U.S. effort during World War II and the acquisition by ITT Corp. in 1963, which introduced the B&G brand to a global audience. Boone began his tenure as president carrying the mantle of expectation as a successor to company founder E.J. Gossett.

"As the son-in-law of the founder, dad always felt challenged to do even more than was expected. Dad always gave 110 percent," Bill Boone said.

Boone had married Gossett's daughter, Eleanor, and worked his way up through the company. He capably carried on the company legacy, sharing E.J. Gossett's business philosophy: "Sell, sell, sell!" recalled Bill Boone. "Also, they both believed that innovation was an imperative business goal."

As the B&G brand celebrates its 100th anniversary, core values such as continuous innovation and a people-first mentality are chronicled throughout its history – long-held attributes that today's most admired companies strive to emulate. Honesty, respect and pride in product were other characteristics that Gossett and Boone shared and were intertwined into all aspects of the company.

"Both grandpa and dad were hard acts to follow," Bill Boone said. "Grandpa set a good example for others," Strohhenn said, "and dad created a work environment that made employees feel valued and encouraged them to work hard to live up to his high expectations."

Early aspirations

E.J. Gossett and W.C. Bell first went into business to manufacture and sell case hardening compounds in Chicago in 1916, adding side-arm water heaters two years later. It was that entrepreneurial spirit that spurred the company's rapid growth, sending Bell to Cleveland to preside over the acquisition of another case hardening company, while Gossett directed the company's expanding Chicago operations. Gossett later bought out Bell's interest in B&G and ran the company for 46 years until his death in 1962.

This path set the course for B&G to become one of the world's leading manufacturers of pumps, valves, heat exchangers and accessories for plumbing, wastewater and HVAC applications. In 1930, the company introduced a better booster pump – its most important development – establishing a legacy of ingenuity, quality and affordability that continues to inspire innovation in the field of hydronic heating.



Bell & Gossett

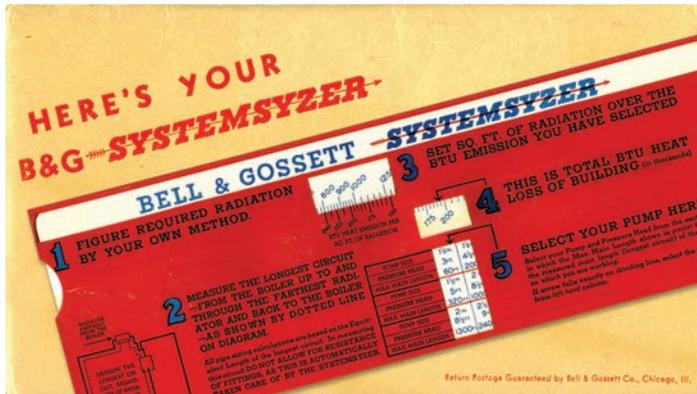
a xylem brand

"Finding solutions to our customers' business challenges has led to many B&G inventions that have revolutionized commercial building heating systems," said Mark Handzel, Vice President, Product Regulatory Affairs and Director, HVAC Commercial Buildings, for Xylem, now the parent company of the B&G brand.

Take, for instance, renowned B&G engineer Gilbert Carlson, who developed the concept of primary/secondary pumping in 1953 while on a problem job in New York City. The contractor had used Monoflo tees to install perimeter radiation loops in a large office building. The problem was that the pressure drop through each Monoflo circuit was too high; water simply wouldn't move through the radiators. After a few calculations, Carlson suggested the contractor use small booster pumps on each circuit and run the main pump continuously. It solved the problem then and is still a standard tool of engineers, contractors and boiler manufacturers today.

"He was a genius," Handzel said of Carlson, who held seven U.S. patents and was an international authority on hydronic heating and an ASHRAE Fellow. "He not only invented heating products, but he developed new ways to design systems, which often began with a problem and led to breakthrough thinking in the science of hydronic heating," Handzel said.

The Bell & Gossett System Syzer Head Loss Calculator, recognized as one of B&G's most significant contributions to the HVAC consulting engineering community, was created by Carlson from the cardboard back of his yellow sketchpad. One of two "Gil's wheel" prototypes is now part of the permanent collection at The General Society of Mechanics and Tradesmen of the City of New York; the other is in the Little Red Schoolhouse in Morton Grove, Illinois.



1939 B&G System Syzer

Rapid expansion

As the company grew during the 1930s, '40s and '50s, it concentrated on engineering, developing and producing components to improve heating systems.

During the 1940s, B&G developed a mechanical sealed pump, known as the Series 1522. It also implemented hydraulic designs in another new line of end-suction industrial pumps known as the Series 1531. In 1943, B&G began manufacturing large centrifugal pumps as commercialization led to the construction of larger buildings with hydronic systems.

In 1949, a new design of forced hydronic heat booster pumps was added to B&G's product family – including the still popular 100 series – incorporating motors from its newly formed motor department.



1945 Research Residence in Glenview, IL

In 1950, B&G created a revolutionary mechanical seal that used a ceramic material with an aluminum oxide base. Trademarked as Remite, the material proved to be as hard as diamonds and able to withstand many of the fluids and system issues that prevented the use of mechanical seals in the pump industry.

During this period of growth, the company also acquired a number of companies to fortify its portfolio. It expanded from 144 employees in 1939 to a nationwide company with 947 employees in 1955. Sales for those years jumped from \$1.3 million to \$25.2 million. On Dec. 7, 1941, B&G moved its headquarters from Chicago to a newly constructed 200,000 square-foot-facility on 20 acres of land in Morton Grove, Illinois.

Call of duty

During World War II, B&G was commissioned to produce no less than 15 products for the war effort, which accounted for 60 percent of its business during that time. Relying on its experience in building centrifugal pumps, it redesigned another company's existing bilge pump line used on amphibious trucks and landing craft, producing more than 50,000 pumps valued at \$1 million. The Higgins Boat Co. of New Orleans, maker of the amphibious landing craft used in the D-Day Invasion, was also a B&G customer.

B&G's wartime production included making 5,000 to 6,000 tank track pins each day, for a total of 2.5 million during the war, and filling a critical need. The pins connect the metal links on the moving track that covers the wheels of the tank. Other wartime products included evaporators for Navy cargo ships, laundry tanks for Army portable laundry equipment and self-contained steam jet cleaners for use on airplane and other engines.

"Our work during the war was something everyone at B&G was very proud of – from the people on the manufacturing floor to the president of the company – and still is a source of pride for the brand," Handzel said. "In fact, B&G earned official commendations from the U.S. government for providing high-quality products and was rewarded with additional war contracts," he said.

Strength in numbers

The strong network of B&G stocking representatives also has played an all-important role in the company's success, with many of those relationships established in the 1930s. R.D. Bitzer, R.L. Deppmann and Mulcahy companies and Blackmore and Glunt Inc. are among B&G's longest associations.

Through the years, the B&G reps have informally created their own loyal community, one that is quick to action when one of their own needs assistance. A July 1968 edition of the ITT Bell & Gossett Booster newsletter recounted the 1965 natural disaster that destroyed a large section of Denver when the banks of the Platte River overflowed, its raging torrents cutting a path four miles wide and submersing the area in 20 feet of water.

That put Joe McNevin – known as the B&G Man around Denver – in a bad spot. The J.E. McNevin Co. building withstood the flood, but it was a total loss – its entire stock of pumps, motors, valves, tanks and heat exchangers ruined; its office records swept away or soaked and illegible. B&G reps from around the country, led by George Bornquist of Bornquist Inc. in Chicago, rallied to restore operations at McNevin. Aided by matching contributions from B&G, more than \$28,000 was converted to inventory to help McNevin recover.

"The actions of B&G and the rep network literally saved McNevin Co. in those days," said Chris Dilg, current president of McNevin. "Mr. McNevin liked to tell the story, capping it off by showing the watermarks about 12 feet high on the steel columns in the warehouse. It was tough to imagine how terrible that storm was until you actually saw the waterline."

When Hurricane Katrina hit New Orleans in 2005 and the office and warehouse of the local B&G rep, Hydronic Technologic Inc. was under 6 feet of water, the B&G provided temporary offices, computers and extended billing terms. The B&G reps provided emergency funds for employees, some of whom had lost their homes, and supplied inventory to help get the company back on its feet.

"During our time of need, B&G and the B&G reps financially helped our employees above and beyond anything that ever could have been imagined," HTI principal Scott Dees wrote in a heartfelt 2006 email. "I attribute much of our survival and success to them."

A tradition of training

B&G is well known for its emphasis on education through its Little Red Schoolhouse, a former cafeteria turned training center on the company's Morton Grove campus. Since its inception in 1954, more than 62,000 engineers, contractors and other HVAC professionals have been educated at the Little Red Schoolhouse on the latest advancements in centrifugal pumps and HVAC system design.

B&G's focus on education dates back to 1934, when the company issued a Six-step Manual as a training supplement for company sales representatives. That led to a training



1954 Little Red Schoolhouse established

manual in 1940 containing the very latest in technical instructions for design and installation of B&G products – thousands of which were distributed to government procurement agencies and contractors and subsequently used by universities and technical schools.

Handzel credits Gossett for the vision to create a training facility that taught HVAC and plumbing system design rather than focus on products. "I saw a quote from Mr. Gossett in which he said, 'At Bell & Gossett, people are our most important product and training them for their future is going on at all times ...' His commitment to training the industry exemplified this," Handzel said.

Today, B&G is educating even greater numbers of HVAC professionals in the basics of hydronic systems with the debut of its Online Little Red Schoolhouse in 2015.

Robert Thompson has the distinction of being in the very first class in the Little Red Schoolhouse in 1954, then a 23-year-old B&G sales trainee recently discharged from service in the Korean War. "I knew what a circulator was and a relief valve, but I didn't know how they were applied in a residential heating system. The school was very important to the success of the manufacturer's reps who handled B&G products."

Soon after, Thompson took a job with Mulcahy Co. in Minneapolis, where he continued to learn about new B&G products and innovations through the Little Red Schoolhouse. "The schoolhouse was one of the best sales tools Mulcahy Co. ever had," Thompson said, who retired from Mulcahy in 1994 as its president.

A global brand

B&G's acquisition by ITT Corp. in 1963 offered increased opportunities for sales of the B&G brand worldwide as its continued its industry leadership. In the 1960s, B&G introduced the following innovative products to the market: Rolairtrol Air Separators (1964); Suction Diffusers (1967); Triple Duty Valves (1966); VSC Pumps (1966); and Circuit Setters (1968).

The Morton Grove campus has since expanded to more than 500,000 square feet on 31 acres, most of which took place during the 1960s and 1970s; a multimillion-dollar plant revitalization occurred from 1988 to 1993.

During the 1980s, B&G engineers pioneered microprocessor control of pumping systems, pressure boosting, variable speed pumping and heat transfer packages. In 1982, the Series 90 close-coupled inline mounted pump was introduced, and in 1987 B&G released its highly acclaimed equipment selection software, ESP Plus.

In 2011, the B&G brand became part of a new company, Xylem Inc., after it split from ITT. Just as they did in the early days of B&G, Xylem's engineers are scrutinizing every aspect of HVAC and plumbing system design to develop more efficient and cost-effective solutions for customers. Today, B&G products are installed in high-profile facilities around the United States, where innovation and efficiency are highly prized, including Levi's Stadium in California and the National Renewable Energy Lab in Colorado.

"Today we focus on bringing products to market that incorporate the latest technologies and deliver the highest levels of efficiency," Handzel said. "That has always been the mission of B&G, and it hasn't changed since our very early days."

B&G's current portfolio of award-winning and industry-leading products is based on its POWER OF e platform, which focuses on energy efficiency and system solutions. Its Efficiency Islands concept is unique in the industry and is a critical element of the POWER OF e as it creates higher levels of efficiency over a broader range of operating conditions. The redesigned Series e-1510 end suction centrifugal pump, its Series e-80 centrifugal pumps and its ecocirc XL large wet rotor circulator pump are just a few of the latest products.

"B&G has been an industry leader in efficiency, expertise and education for 100 years—a credit to our extremely



knowledgeable representatives, industry-leading training and highly efficient products," Handzel said. "As we look ahead to the next century, our goal is to continue to provide customers with solutions that help them achieve greater overall system efficiency."

Gossett, Boone, Carlson and others who were influential in the rise of Bell & Gossett might not be around today to celebrate its success, but their collective drive for excellence continues to influence the spirit of the brand and all who represent it.

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