

CPI

CONTROL & POWER, INC.
An ESOP Company

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1-877-835-5274

Summer 2004

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Jim Shackelford.....joined Control & Power in January, 2001. He is responsible for the northwest Alabama and northeast Mississippi territory. Jim tells us the following:



"I was born in Birmingham on July 29, 1958, and have a brother that is two years younger than me. We grew up in the Birmingham area and attended Mountain Brook city schools. During my childhood, I went everywhere my Dad went -- hunting, fishing, camping, working in the garden -- all things that I continue to love to do with my kids.

My Dad instilled a great love of history, especially the history of the War Between the States. During the summers we would go to spend time with my Uncle Jack, a history Professor at Auburn. With a grandfather, a father and a great uncle that were all Auburn graduates, it was natural for us to be indoctrinated into the Auburn way of life. My Dad passed away when I was 16. Next to Jesus, he was and still is my best friend. I still miss him very much!

During the Summer after my senior year of High School, I met my future wife (though I never dreamed it at the time), Patti Lynn Ross. She was and is the most beautiful and amazing girl I have ever met. We met at a birthday party of a friend of mine. She came with a girl friend of his. She was very mature and reserved. I just knew she was a lot older than me and must have a steady boyfriend -- thank goodness she didn't. To make a long story short, we started dating and soon were deeply in love. We got married while we were both still in school at Auburn. We both worked after school and weekends to pay our way through, and when I graduated in December of 1980 with a B.S. in Business Administration, Patti transferred to St. Vincent's School of Nursing in Birmingham.

Our first child, Sarah Margaret, was born in May of 1983, while Patti was still in school. She was followed by her little sister, Catherine Anne, in May of 1989, and then a little brother, James Ross, in August of 1993. Currently Patti is working as a registered nurse in the operating room at Carraway Methodist Medical Center in Birmingham. Sarah is following in her mothers footsteps into the nursing profession by attending nursing school at Wallace State in Hanceville. Catherine went to live with Jesus after a tragic automobile accident in the Fall of 1999. The Lord took the one of us that was most prepared to go. James Ross "Rossman" is active in middle school, is an offensive and defensive tackle on his 125LB football team, and loves to go fishing.

As for me, after college I spent 5 years working in my grandfathers' wholesale hardware distributorship and 15 years with a Parker seal distributor covering most of Alabama and Mississippi. We are active in our church, Briarwood Presbyterian, where I am currently serving as a Deacon. In January, 2001, I came to work at Control and Power, and it is the greatest job I have ever had. I love what I do and the people that I am privileged to work with are the absolute best!"

40 Years
40 Years

Control & Power, Inc. Celebrates 40 Years

The employee-owners of Control & Power take this opportunity to thank all of our customers and vendor-partners for 40 years of friendship, support, and patronage. Because of the efforts of our founders and many hard working individuals over the years, we are proud to have grown into a major distributor of instrumentation, control, and automation products. We look forward to the next 40 years and to continuing our tradition of offering "Solutions to Industry".

Thank you for everything you do to help us become the best...



Series 8290 Angle Body Piston Valves

ASCO's 8290 **Proportional Valve** incorporates compact positioner technology to provide proportional control of fluids. The 8290 Proportional Valves are completely pre-assembled and preset at the factory for tight disc shutoff. Respond to either a 0 - 10 VDC, 0 - 20 mA or 4 - 20 mA variable control signal. Linearity is +/- 5% and hysteresis is less than 1%.

ASCO's 8290 **Linear Position Indicators** can be supplied with two mechanical or Viper switches and mounts on top of the 8290 valve operator in place of the standard visual indicator. HS2 and HS3 indicators are suitable for hazardous locations while the HS4 indicator is suitable for non-hazardous locations. Optional ASi and DeviceNet communications are available.



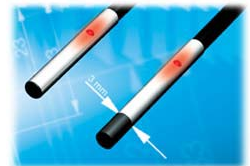
Multi-Function Instrument Assembly

The Ashcroft® **Multi-Instrument Assembly** allows a pressure gauge, switch and transducer, or any combination of the three, on one iso-ring and flange assembly. In flow-thru applications, when it is necessary to isolate instruments from the process, an iso-ring is used. Often, more than one type of pressure instrument is needed, requiring several iso-ring/instrument assemblies. Now, only one iso-ring, flange and flange assembly is required for up to three Ashcroft pressure instruments, with no effect on accuracy. A built-in needle valve dampens pulsation and allows the process to be locked off for safe removal of the instruments for recalibration.



3mm Inductive Sensor

Balluff's 3mm **Inductive Sensor** offers maximum sensing distance in a mini size housing for even more functional reserve and application flexibility. Balluff's new 3 mm diameter sensors have not only the smallest diameter available, but also the longest sensing distances available for any 3 mm sensors.



Micropulse AT Linear Transducer

Balluff's **Micropulse BTL6 AT Magnetostrictive Linear Transducer** is a superior non-contact alternative to traditional low-cost linear feedback devices such as linear potentiometers (pots). Balluff designed the Micropulse AT in a modular fashion to simplify manufacturing and reduce component costs to be competitive with these devices.



Extruded Linear Thruster

The Bimba **Extruded Thruster** is a rugged, guided actuator that incorporates the cylinder and switch tracks in an integrated body. The sleek body incorporates switch mounting for a clean, space-efficient package. The Extruded Linear Thruster offers self-lubricated nylon guide shaft bearings and stainless steel guide shafts, anodized aluminum housing and tooling plate, and high side load capabilities.



Twist Clamp Cylinder

The Bimba **Twist Clamp Cylinder** combines linear and 90-degree rotary motion with an internal pin/cam mechanism. The rotary action moves a clamping arm away from the workpiece, allowing for easy loading and unloading of parts.



DrumQuik Chemical Dispense System

Colder Products **DrumQuik™** chemical dispense systems incorporate the award winning ChemQuik™ CQN Quick Disconnect Coupling technology (Patented) into a modular dip-tube based system for the extraction of aggressive or ultra-pure chemicals from Jerrycans, Drums, and large Intermediate Bulk Containers (IBC's/Totes). A true closed system, DrumQuik™ offers the operator unparalleled ease of use, safety and reliability for 1000's of instant, non-spill & fume-free connections of rigid chemical containers to chemical distribution systems. Feature for feature, no other method for extracting chemicals from a rigid container performs like a DrumQuik™!



ENIDINE

An IMC Company

Wire Rope Isolators

Wire Rope Isolators are comprised of stainless steel stranded cable, threaded through aluminum alloy retaining bars, crimped and mounted for effective vibration isolation. With their corrosion resistant, all-metal construction, Enidine Wire Rope Isolators are environmentally stable, high-performance shock and vibration isolators that are unaffected by temperature extremes, chemicals, oils, ozone and abrasives.

**Humphrey**
Committed to Excellence.**310/410 Series Valves**

The Humphrey Series 310/410 valves are compact 1/8" ported 3-way and 4-way direct acting solenoid valves delivering high reliability in a variety of pneumatic applications.

**MINIMIZER Series Valves**

The Humphrey MINI-MIZER Series 2-way and 3-way valves are designed for applications requiring high cycling, small flow and low power consumption at temperatures from -40° to +150° F.

KOGANEI**Air Hands - Long stroke! Lever type! Clean compatible!**

Three new models are added to the Linear Guide Parallel Type Air Hand Series; (1) "Long stroke" having twice the opening/closing strokes, (2) "Lever type" with easy fabrication of a claw, and (3) "Clean system compatible" with class 10 at suction. These optimize equipment requiring steady gripping and accuracy.

Parker**ChangeOver System**

Veriflo's ChangeOver System is a compact turnkey module designed for continuous gas and fluid management. The ChangeOver System combines the IR Series pressure reducing regulator with the NOVA Series diaphragm valves to create a compact gas delivery system for continuous gas or fluid applications.

**Stainless Sanitary Fittings and Valves**

Parker Performance Stainless Sanitary Fittings and Valves meet the high standards and demands of the food, beverage, dairy, pharmaceutical and health & beauty industries.

ROSS**Valves for ISO Bases**

Both spool valves (Series W60, 63, and W65) and poppet valves (Series W64) are available for mounting on bases conforming to the international ISO standard 5599/I and 5599/II (interface sizes 1, 2, and 3). Solenoid pilot valves have non-locking manual overrides and electrical power is supplied via dropcord (W60, W63, & W64) and plug-in (W65) connectors. Valves for remote pressure control are also available in all series.

**TRD****Micro-Adjust Cylinder**

- Allows precise adjustment of cylinder extend stroke
- Easy to read precision scale (.001" calibration)
- Enclosed, no "pinch point" design
- Available on standard and multi-stage cylinders
- Available on 1½" to 8" bore cylinders
- Up to 6" stroke and adjustment

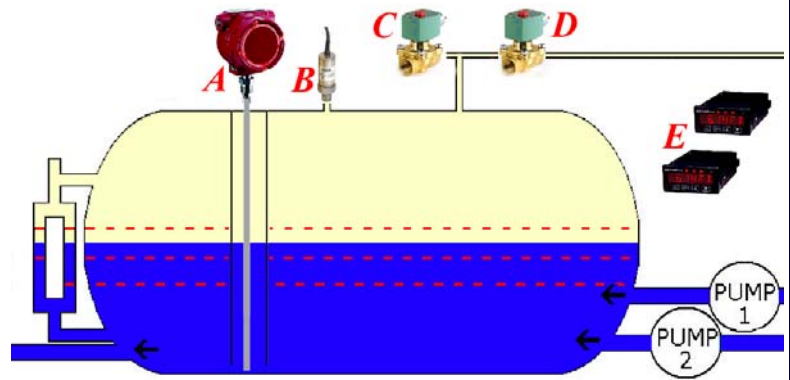
Solutions for Industry



Solution - Updating Control of Pressurized Water Tank

Control & Power, Inc. was asked to provide a *solution* to a problem with a pressurized water tank. The basic operation of the control system needed to maintain water level at the midpoint of the tank while maintaining the air pressure at about 70psi. There were two pumps used to add water to the tank when necessary, a primary and a secondary. The existing level control was utilizing a bypass style capacitance switch with three capacitors: #1 to turn off both pumps, #2 to turn on pump 1, and #3 to turn on pump 2 if necessary. A pressure switch performed two tasks: A) it controlled two normally-closed solenoid valves in order to maintain 70psi air pressure in the tank, B) it latched to the relays from the level controls in order to turn the pumps on. The controls were outdated and failed often. There were safety concerns because of the use of mercury switches. Quite often the tank would become waterlogged because of the lack of control of the air within the tank.

Our *solution* is illustrated in the picture below. It included installing a Dwyer RF Capacitance Probe (A) with a 4-20mA output scaled to the height of the tank, an ASCO Pressure Sensor (B) with a 4-20mA output scaled from 0-100psi, two ASCO Normally-Closed 2-Way Solenoid Valves (C & D), and two Devar Pump Controls (E) with multiple relays. The Dwyer Probe (A) is installed in a standpipe within the tank to limit the effects of turbidity as water is pumped into the tank, and it provides reliable level outputs to one of the Devar Controllers (E). The ASCO Sensor (B) provides reliable pressure outputs to the other Devar Controller (E). The relays in the Devar Controllers are wired in series so that the pumps will be energized only if the level and the pressure are within certain parameters (one relay being a permissive). One of the ASCO Valves (D) adds air to the tank when the pressure drops below 68psi and the other (C) purges air from the tank when the pressure rises to 72psi. While pressure and level are dependent on each other, it is absolutely necessary that both air and water can NOT be added to the tank at the same time - this is made possible by the simple logic involved in the wiring of the relays. In addition, because of the number of relays available, we were able to provide annunciation every time a pump is energized or air is added. Since the installation, which we were present for and provided programming support, the system has worked flawlessly.



Just another *solution* using various products available from Control & Power, Inc.

In an ongoing effort to provide superior service and support to our customers, CPI has announced and made available an electronic catalog on both CD and at our website. The eCatalog includes thousands of pages of manufacturer literature and technical & engineering information. The NEW revision includes more technical data and links to various software that aid in the specification and sizing of cylinders, valves, industrial shock absorbers, steam traps, and more. Please contact us for your copy of the CD and access the information now at:

<http://www.controlandpower.com/catalog/>



Corporate Headquarters
2720 7th Avenue South
Birmingham, AL 35233

Fax: (205)870-7015

Email: info@controlandpower.com

Call Toll Free 1-877-TELLCPI (835-5274)

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