

Fluid Power

Fluid Power



Control
Control
every move

Barksdale
CONTROL PRODUCTS

CRANE Barksdale, Inc./Barksdale GmbH
A Subsidiary of Crane Co.

Solutions

Barksdale

State-of-the-art solutions

Today's markets demand suppliers that are flexible and dynamic – offering innovative new products, efficient management and comprehensive customer service. Barksdale's focus is on meeting and exceeding each of these demands.

Barksdale Control Products

Since 1949, Barksdale Control Products has been known for superior product design and quality offering a complete line of pressure, temperature, level, flow and electronic instrumentation to meet critical application requirements for the fluid power industry. Our products provide the highest standards of performance and reliability for the most challenging control tasks and are designed specifically to optimize our customers' systems.

Barksdale has the advantage of over 55 years of experience, facilities in North America, Europe and Asia, and a global network of technology centers and support representatives. With all of this as a foundation, it's easy to see why we stand by our motto: "Control every move."



The Crane Co. Advantage

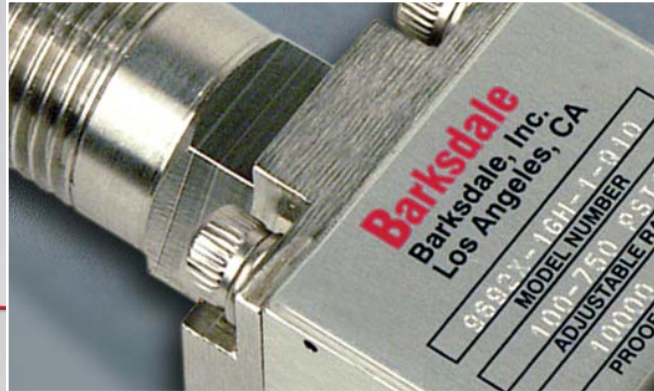
Barksdale is proud to be a part of the Crane Co. family, one of the world's largest manufacturers of engineered products. Founded in 1855, Crane Co. remains committed to the business principles of its founder, R.T. Crane: to always conduct business with honesty and integrity. With over two billion dollars in sales, each of Crane Co.'s business divisions - aerospace & electronics, engineered materials, fluid handling, controls and merchandising systems - work together to develop synergies that grow our business and benefit our customers.



Controls

Barksdale

The business of critical Controls



Custom solutions

Barksdale offers a wide range of options on most of our products, allowing you to customize the products to meet your specific application needs while leveraging our standard components platforms. Our engineers can assist you with requirements that go beyond the available options, even if these require new technologies. R&D at Barksdale is not simply a response to market demands, but an integral part of our vision and strategy.

Finding the right solution

With extensive application experience in the fluid power industry, we have the know-how to assist customers in choosing the right product for their specific requirements. This helps them achieve significant and lasting improvements in efficiency, productivity, and profitability.

We improve on reliability

Our products offer greater reliability and control of your fluid power equipment. We put a priority on maintaining the highest quality, while continually working to improve product performance. Our products comply with most international agency standards such as UL/CSA, FM, CE, ATEX and GOST Russia to provide the highest quality throughout. Our ISO9001:2000 internal processes ensure world-class products that consistently outperform our competitors. Barksdale offers Production Part Approval Process (PPAP) to satisfy your most stringent quality control requirements.

We are ready to work with you to provide a solution that drives results and gives you a competitive advantage in the marketplace. Call us today at 1-800-835-1060. Ask for our Product Manager - or e-mail us at fluidpower@barksdale.com

Markets & Applications

- Machine tool
- Metalworking & steel
- Hydraulic presses
- Oil and gas
- Baler & compactors
- Workholding equipment
- Robotics
- Plastics & rubber
- Construction machinery & heavy vehicles
- Mining & mineral processing
- Marine & shipbuilding
- Power generation
- Testing machines
- Military & aerospace
- Paper & forestry machinery
- Fire & rescue equipment
- Agriculture and farm machinery



Valves

Shear-Seal® Microtorque™ Valve

High pressure
in a compact size

- ▶ 1/4" NPT or SAE porting
- ▶ DO3 manifold mounting
- ▶ Pressures to 10,000 psi (700 bar)
- ▶ Multiple flow patterns
- ▶ Low handle load
- ▶ Zero leakage*
- ▶ Spring centering

Applications

Hydraulic control circuits, mobile hydraulics,
work holding, machine tools, test stands



Shear-Seal® OEM Valve

Flexible design
for any OEM requirement

- ▶ 1/4" to 1 1/2" NPT or SAE porting
- ▶ Selector, bypass, open center, manipulator
- ▶ Pressure to 3,000 psi (200 bar)
- ▶ High velocity flow
- ▶ Tolerates contaminants
- ▶ Spring centering

Applications

High-pressure hydraulic controls, light
industrial applications



Shear-Seal® Directional Control Valve

Handles high pressure
in a rugged design

- ▶ 1/4" to 1 1/2" NPT or SAE porting
- ▶ Selector, open center, shut-off, manipulator
- ▶ Pressures to 6,000 psi (400 bar)
- ▶ High velocity flow
- ▶ Low pressure drop
- ▶ Tolerates contaminants
- ▶ Spring centering

Applications

High-pressure hydraulic controls,
oil and gas field machinery



*Less than 4 cc per minute.

Hydraulic Relief Valve

High performance
and extended seat life

- ▶ Metal to metal sealing
- ▶ Settable pressures up to 6,000 psi
- ▶ 3/4" ports
- ▶ High flow capacity
- ▶ Corrosion resistant materials

Applications

Pressure protection applications



Barksdale the Solution

For over 50 years, Barksdale's revolutionary Shear-Seal® valve principle has been recognized as the industry standard for demanding applications in the Fluid Power industry. Designed to provide years of trouble-free operation and virtually zero leakage, the Shear-Seal® design uses fluid pressure to maintain a leak-free metal-to-metal seal that improves with use. The shearing action between the rotor & pressure seal continually laps the mating surfaces and prevents contaminants from lodging between the sealing surfaces. The result is a valve that doesn't wear out – but wears in over time.



Shear-Seal® Air Valve

Economic Choice
with high reliability

- ▶ 1/4" to 1/2" NPT porting
- ▶ Air pressure to 350 psi (25 bar)
- ▶ Interflow and non-interflow
- ▶ Zero leakage*
- ▶ Spring centering

Applications

Pneumatic circuits, pilot valve,
control panels, air cylinders



Shear-Seal® Integral Control Valve

Save time & money

Patented valve and actuator in one

- ▶ Integrated actuator
- ▶ 1/4" to 1 1/2" NPT porting
- ▶ 2-position and 3-position
- ▶ Corrosion resistant materials
- ▶ Pressures to 6,000 psi (400 bar)
- ▶ Automated valve shifting
- ▶ High velocity flow
- ▶ Position indication (UL approved)

Applications

Remote operated circuits, hydraulic control
systems, shipboard controls

Pressure Pressure



Series 7000

A great platform

when cost and reliability matter the most

- ▶ Snap-action switch for higher reliability
- ▶ Field adjustable, permanently locked or factory pre-set or both
- ▶ Pressure range from 1.5 to 3000 psi
- ▶ SPDT or SPST – High or Low voltage contact type
- ▶ Extensive list of electrical and process port connection options
- ▶ Special gas version available
- ▶ Plastic, brass and stainless steel fitting available
- ▶ UL/CSA- NSF/FDA available PED 97/323/EC Standard

Applications

Mobile hydraulics, stationary hydraulics, pumps & compressors, beverage dispensing systems, food processing equipment, lube oil systems, medical gas service

Series 8000

When flexibility and excellent accuracy is a must

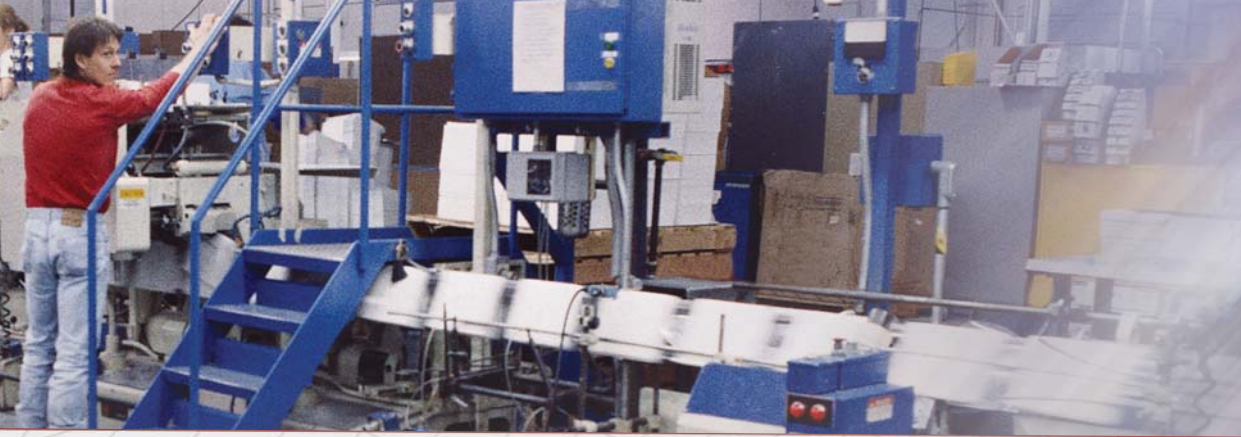
for all your stringent needs

- ▶ 6 ranges to cover pressure from 4.5 to 8700 psi (0.4 ... 600 bar)
- ▶ Easy and very precise setpoint adjustment
- ▶ Full range of straight or side mounted process ports
- ▶ Standard and low deadband options
- ▶ SPDT – snap action - high or Low voltage contacts
- ▶ UL/cUL, EExia, GL, GOST R

Applications

Machine tools, mobile hydraulics, high pressure compressors, hydraulic accumulators, compactors and balers.





Series 96200 & 96210

Copied by all

but never equaled.

- ▶ Pressure range from -30Hg Vac to 7500 psi
- ▶ SPDT, snap-action switch for higher reliability
- ▶ Wide range of factory options available for easy customization
- ▶ Nema 1 and 4
- ▶ Rugged, reliable and used everywhere.
- ▶ UL/CSA, PED 97/23/EC

Applications

Machine tools, mobile hydraulics, high pressure compressors, hydraulic accumulators



Series Explosion Proof 9671X, 9681X and 9692X

For hazardous location

with space environment constraint

- ▶ Pressure range from -30Hg Vac to 7500 psi
- ▶ SPDT and DPDT – snap-action low and high voltage contact
- ▶ Field adjustable with tamper resistant cover
- ▶ UL/CSA listed, PED 97/23/EC
- ▶ Class I, Div 1 & 2; Class II Div 1 & 2
- ▶ EEX-d and EEx-i ATEX - GOST Russia
- ▶ Dual seal approved per ANSI/ISA 12.27.01
- ▶ Nema 4X, 7, 9 explosion proof Div 1 class
- ▶ Super compact version available (-20% shorter)
- ▶ NACE compliant for sour gas applications

Applications

Oil & gas field machinery, hydraulic power packs, hydraulic brakes, compressors



Pressure

Solid State



Electronic Indicating Pressure Switches Analog Output

- ▶ Ranges: 1.5 – 14,503 psi (0...100 mbar up to 1000 bar)
- ▶ 1, 2 or 4 switch points (adjustable)
- ▶ Multi-function digital display
- ▶ Records and stores peak pressure
- ▶ State-of-the-art microprocessor controlled
- ▶ Keypad with easy response push buttons
- ▶ Easily programmable
- ▶ Self diagnostics
- ▶ Option: analog output 4 – 20 mA / 0 – 10 VDC
- ▶ EExi versions
- ▶ GL-, UL-, CSA-approvals

Applications

Automotive industry, machine tools, factory automation and robotics, hydraulic and pneumatic, test bench, steel industry, filter monitoring



Solid State Trip Amplifier

Easily programmable

- ▶ Monitors and controls any sensors with analog output
- ▶ Ability to switch up to four (4) Discrete circuits in one unit
- ▶ Capable of switching AC or DC Loads

Applications

Automotive industry, machine tools, factory automation and robotics, hydraulic and pneumatic, test bench, steel industry, filter monitoring



Electronic Pressure Transducer

- ▶ Pressure range: from vacuum up to 8,801 psi (400 bar) gauge
- ▶ Accuracy 0.5% f.s. IEC 770
- ▶ Output signal 4...20 MA/2-wire, 0...10 V/3 wire
- ▶ Process connection G1/4 M
- ▶ Electrical connection: electrical plug 3-pin + PE according to DIN 43650
- ▶ Protection class: IP65

Applications

General measuring tasks in hydraulics and pneumatics. OEM-applications



Pressure

Pressure



Dual Pressure Switch

Robust and reliable

- ▶ Measuring range: 29 - 5,801 psi (2 - 400 bar), gauge
- ▶ 2 transistor-switching contacts
- ▶ Electrical connection plug M 12 x 1
- ▶ Process connection G1/4 M, 1/4 NPT, 7/16 SAB
- ▶ Switch point accuracy: < +/- 1 % f.s.
- ▶ Protection class: IP67

Applications

Mobile hydraulics and pneumatic, machine tools and systems

Electronic Pressure Sensor & Transmitters

Compact with big performance

- ▶ Ranges: 1.5-72,520 psi (0...100 mbar up to 5000 bar)
- ▶ High temperature (200°C / 392°F)
- ▶ Analog output: 4 - 20 mA / 0 - 10 VDC
- ▶ Compact, accurate, long life
- ▶ EExi versions high temperature
- ▶ GL approvals

Applications

Construction machines, machine tools and systems, hydraulics and pneumatics, mobile hydraulics



Explosion Proof & Industrial Transducer

Tough and accurate

- ▶ Rugged stainless steel construction
- ▶ Superior EMI, ESD and RFI protection
- ▶ Diffused silicon sensor for high accuracy
- ▶ Up to 10,000 PSI (0-680 bar)

Applications

Construction machines, machine tools, factory automation and robotics, hydraulics and pneumatics, mobile hydraulics



Temperature

Temperature Switch

Accurate and dependable

- ▶ Ranges: -50°F to + 600°F (-45°C ... + 316°C)
- ▶ Dual set points
- ▶ UL/CSA Listed- CE
- ▶ Hazardous models: class I, Div 1 & 2; class II Div 1 & 2
- ▶ EEx-d and EEx-I - ATEX - GOST Russia
- ▶ Designed for fluids and gases
- ▶ NEMA 1, 4, 4X, 7, 9, 13
- ▶ Ambient temperature compensation
- ▶ Low to high contact loads

Applications

Chemical process industry, shipbuilding, power stations, heat exchangers, trace heating systems



Electronic Single Temperature Switch

- ▶ Stem and mounting element made of brass or stainless steel
- ▶ Cube plug DIN EN 175301-803-A/ISO 4400, 3-pin without ground connection
- ▶ Temperature switch (PEPI): +70°C (158°F) with NC
- ▶ Length: 40 ... 3.000 mm / 2 ... 118 inch
- ▶ Contact rating: max. 12 or 24 V DC, max. 3 A
- ▶ Operating temperature: -10...+90°C / 14...194°F
- ▶ Operating pressure: max. 40 bar (4.000 kPa = 580 psi)
- ▶ Max. temperature switch: 3 switch points

Applications

Hydraulic systems; temperature switch for hydraulic tanks and power packs



Level & Temperature Switches

No job too big nor too small

- ▶ SPST or SPDT reed contacts
- ▶ All metal and non-metal versions
- ▶ Vertical or horizontal mounting
- ▶ Protection class IP54/IP68

Applications

Everywhere in fluid storage, handling and controlling, ship building



Level

Multi Level Switches

When one level is not enough

- ▶ Top mount, multi-stage to 4 foot length
- ▶ Up to 4 levels SPST or SPDT reed contacts
- ▶ Metal and non-metal versions
- ▶ UL and CSA approvals
- ▶ Protection class IP54

Applications

Pump controller, level monitoring, machine industry, shipbuilding, in mobile and stationary applications



Level Indicating System

Durable design

- ▶ Continuous output transmitter (4-20 mA)
- ▶ Stainless steel construction
- ▶ Magnetic reed switch configuration
- ▶ Available in flange or NPT mountings

Applications

Sump tanks, hydraulic power units, storage tanks, solvent recovery systems, lube oil console systems, marine applications, food & beverage applications



Single Point Series Level Switches

For rugged service in high viscosity liquids

- ▶ Hermetically sealed, magnetically actuated reed switches
- ▶ All metal, compact size
- ▶ Horizontal mounting
- ▶ UL and CSA approvals

Applications

Sump tanks, hydraulic units, storage tanks, marine applications

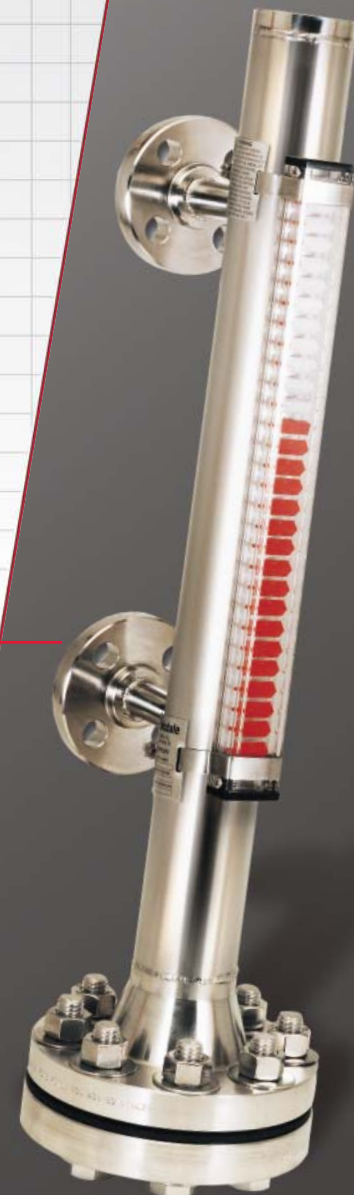


Level Sites

- ▶ Safe and rugged construction
- ▶ Multiple process connection configurations
- ▶ Polycarbonate or aluminum flag assembly
- ▶ Optional 4-20mA transmitter or mechanical limit switches
- ▶ Withstand up to 1000 psi pressure
- ▶ Stainless steel or titanium

Applications

Storage tanks, water/steam systems, lube oil console systems, industrial refrigeration, solvent recovery systems, marine applications, and refineries





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