

# Compressor Works

## Featured Company—ACI Services, Inc. An Innovative Solutions Provider with Years of Experience

The present ACI Services, Inc. started operations in 1960 as Yorde Machine Products in Nelsonville, OH. Yorde Machine established an enviable reputation as a precision contract machine shop servicing the hydraulic, aerospace and gas compression industries.

Yorde machine achieved additional recognition within the compression industry with the early development of compressor valve manufacturing using electrical discharge machining (EDM) to produce low cost, high efficiency components.

Compressor Valve Services (CVS) was formed in Mount Vernon, OH as the sales and engineering arm of Yorde Machine. This addition led to the manufacture of proprietary designs for valves, unloaders, and other compressor components. By 1978 CVS moved beyond components to complete cylinder assemblies, including proprietary and application specific designs as well as duplicate or functional equivalents, under the direction of Richard Deminiski. CVS (now known as ACI) designed and produced the unique "four poster" compressor cylinder as well as many other innovative designs. Mr. Deminiski still serves as an engineering consultant for special projects for ACI Services, Inc.



The company (CVS) was officially reorganized as Anglo Compression, Inc. after a failed buy-



out by a holding company. ACI Services, Inc. was created when the assets of Anglo Compression were purchased by the BSI Group in 1999.

ACI Services, Inc. brought an added dimension to an already strong portfolio within the BSI Group. The BSI Group is known for its engineering, automation, fabrication, construction, and project management capabilities serving the oil, natural gas, refining, and petrochemical industries. The company's goal has been to provide multilevel solutions to these industries. Through the acquisition of ACI, The BSI Group now has the capability of offering compression expertise along with its other capabilities to companies for projects that involve compression equipment.



ACI Services Leadership team is headed by Norm Shade, Executive Vice President, Larry Burnett, General Manager, Chad Brahler, Director of Compressor Products, Dwayne Hickman, Director of Software Development, and Tom Bauer, CFO.

ACI Services, Inc. today continues to design and manufacture

innovative reciprocating compressor cylinders and components, along with providing a practical alternative to Original Equipment Manufacture's replacement parts. In addition to the hardware products offered, ACI provides automation software and consultation.

ACI's in house design and production team includes Design Engineers, Richard Doup, Art Henry, and Dan Umbaugh and Fred Tharp, Project Manager, Joe Reiheld, Technical Services Manager, Darwin Kinney, and Order Analyst, Phyllis Kovalski. A network of experienced contract staff complements our in-house capabilities when required. Supporting ACI in the field are, Cloyd Yough, John Gower, Leonard Jensen, Fred Boudreaux, Garth Warren, and Terry Furlong.

The BSI Group, in August 2001, announced the acquisition of the majority of the stock of Starr Machine, Inc. in Nelsonville, OH. Starr had previously acquired the former Yorde Machine facilities. In February 2001. This acquisition brought forth yet another dimension to the BSI Group to further support the initiatives and projects of each company.

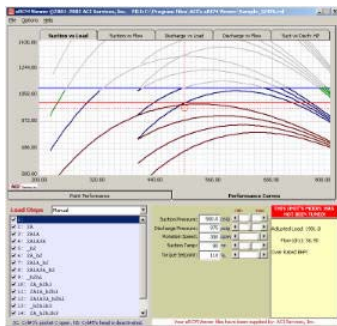
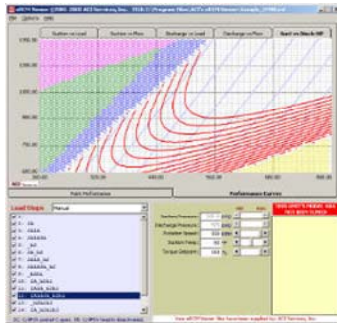
ACI is well positioned to assist you with your compression requirements. Please contact us at (740) 685-8784 for more information or visit us on the web at [www.AciServicesInc.com](http://www.AciServicesInc.com).

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### Look for ACI at these Events:

- February 10-11 Gas Electric Partnership; Hess Club; Houston, TX*
- March 7—9 GCA 10th Annual Suppliers Expo; Moody Gardens; Galveston, TX*
- May 10 –12 Eastern Gas Roundtable Conference; Robert Morris University, PA*
- October 3-5 Gas Machinery Conference; Covington, KY*



Example screen shots of eRCM™ Viewer

## Software Product Highlight—eRCM Viewer™

One software product that has created excitement for owners and operators of reciprocating compressors is ACI's eRCM Viewer™ software. This free software may be downloaded via ACI's website, ([www.ACIServciesInc.com](http://www.ACIServciesInc.com)) and installed on PCs with any version of Windows®.

Initially released in 2001, eRCM Viewer empowers the user with the ability to dynamically change operating conditions and instantaneously preview point and curve performance in either Imperial or Metric units. Performance plots include Pressure vs. Load/Flow curves and Suction Pressure vs. Discharge Pressure curves. Since its initial release, eRCM Viewer formats have now been implemented in some OEM performance software, in many of the major gas compression companies, in internal PLC add-

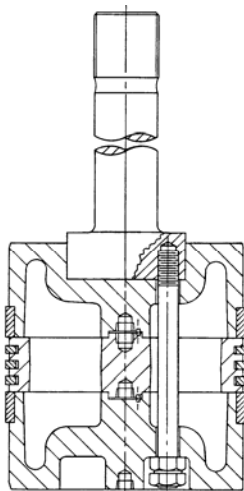
on devices, and is being used by some major compressor packagers/engineers.

The days of looking up predicted performance via stacks of printouts, sheets of tabled data, or via static graphs are history. The worries of overlooking unsafe areas of operations based on trying to interpolate between a handful of static curves are vanquished. With today's high-speed compressors, exceeding specified limits can lead to severe consequences within seconds: with eRCM Viewer, you'll see those potential issues and their consequences simply by sweeping the curves.

By perusing detailed information on individual stages, throws, and cylinder ends, the user can determine exactly how their unit

will perform under various operating conditions. With available PLC algorithms, both the PC and the PLC will predict compressor performance and best operating load step with near identical results. Put an end to gas control using one method to predict performance, operators using another, and whoever automates the units using still yet another method. eRCM Viewer provides all groups with complementing solutions.

Finally, for those needing real-time power, eRCM Viewer™ can be linked to your HMI software via DDE or OPC for dynamic monitoring from any networked PC. In fact, the ActiveX component version of eRCM Viewer can be added directly to your HMI screens for unparalleled power.



3 Piece Piston Design

## Equipment Modernization—3 Piece Piston Design

Replacement pistons and rods are available in numerous sizes, configurations and materials. Replacement components can generally be categorized as replications or performance enhanced. Replicated components simply clone the original design, thus offering no design upgrade. Performance enhanced components provide redesigned concepts that optimize maintenance ease, service life, and safety.

An example of a performance enhanced design is a Three-Piece Piston. A Three-Piece Piston offers the following features:

- Complete piston removable from cylinder without disturbing the rod.
- Piston accurately torqued (with a standard torque wrench) to rod flange with multi studs.
- Piston end clearances are

not disturbed.

- Heavy radial thickness rider rings for greater stability, install in open end grooves.
- Riders can be indexed to new angular running positions.
- Cost effective, individual piston piece replacement if damage or wear occurs.

## Product Highlight—Compact Crane Scale

Another innovation from ACI.

- Affordable hanging weight scales 1.35 ton to 10 ton capacity
- Handy for weighing heavy components and bulky items
- Suspend from cranes, for lift or stationary mounting
- Compact design with high accuracy, +/- 0.5% of load over entire range

Do not guess when accuracy counts. You do not estimate the size. Why estimate the weight? You know you should have one of these in your shop, and now it is available at a size and price that is attractive.

P/N	Capacity	Price	App. Wt.
<b>WS 1.3</b>	2,700 lb	\$600.00	25 lb
<b>WS 2.5</b>	5,000 lb	\$695.00	30 lb
<b>WS 5.0</b>	10,000 lb	\$1,075.00	40 lb
<b>WS 10.0</b>	20,000 lb	\$1,575.00	55 lb

The table to the right details the available sizes.



*“Safety matters when you have a lot hanging on the line. It is better to know than to accidentally exceed your load limits.”*

## ACI’s New Line of Innovation Ideas

Continuing a long line of innovative ideas, ACI is pleased to announce a new service – **Compression Equipment Connection** - that we are introducing in this new year. Tom Drenan, a 24-year engineering and operations veteran with Tennessee Gas Pipeline Company, has joined ACI as the leader of this exciting initiative, which we think will provide great value to buyers and sellers of used compression equipment and components.

Watch for more information in the coming months.

*“What one cannot, another can” - William Davenant*

**At ACI we are able to provide an innovative solution to your compression needs where others may not be able.**

## ACI Team Profile — Chad Brahler

ACI Services, Inc. is pleased to announce Chad Brahler has joined the team as Director, Compressor Products. Chad comes to ACI Services, Inc. with more than 10 years of industry experience. Most recently he was a territory manager for Nalco Company specializing in the implementation of energy savings program through the utilization of water treatment chemicals and equipment. In addition, Chad obtained valuable natural gas industry experience

while working for Cooper Energy Services and Caterpillar in various capacities within each organization.

Chad is a graduate of the United States Merchant Marine Academy in Kings Point, NY. While at the academy, he spent a period of time working for various shipping companies in the engineering department aboard merchant ships. He is a licensed engineering officer for Steam and Diesel

Propelled Vessels of Unlimited Horsepower. Chad graduated from the USMMA with a degree in Marine Systems Engineering and a commission in The United States Navy.

In his spare time, Chad enjoys spending time with his wife, Christine, and two daughters, Alexis and Audrey, coaching softball for his daughters, playing golf, and distance running.



*Chad Brahler*  
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**The Innovation Resource for  
Reciprocating Compressors**

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

## Compression Problem Solvers



**Manufactured Products**

**Custom Design Work**

**Field Service and Consulting**

**Pulsation Studies**

**Software Products**

Compression is our world. That's why we are called to solve some of the toughest problems in compression. At ACI Services, we have resources, the people and a track record of accomplishments to help you with your most difficult compressor-related issues. In addition to our production hardware and software products, we design and manufacture custom products: cylinders, unloaders, automatic variable volume pockets, pistons, rods, liners, and specialized software to analyze and control compression systems. Our engineering and field services are helping end users get the most out of their compression equipment in production and process applications around the world.

### A Note from ACI's Business Leader — aka Norm's Notes

It's my great pleasure to be on board at ACI Services! I joined ACI as Executive Vice President in February 2004, after a year running my own consulting business and more than 32 years with Cooper Energy Services in various engineering, technical management, operations and executive positions.

In my previous life I often used ACI as a supplier of products and design services, developing a great measure of respect for the company and its capabilities. Now that I'm part of the ACI Team, I'm even more impressed with the innovative technology, design expertise and manufacturing excellence that the company has demonstrated for almost three decades.

ACI's mission is not only to continue the impressive legacy built by industry legends, Dick Deminski, Ed Miller, Bill Hartwick and others, but to become an even more comprehensive solutions provider for the compression industry.

ACI Services continues to focus its business on solving customer problems with custom automated compressor unloaders, new purpose-built compressor cylinders, and reliable, maintenance-friendly pistons, rods, slip-fit liners, valves, rings, packing, ExactoTorque™ nuts, and other cylinder components and accessories. We also provide re-engineered components, engineering studies and services and SGA analog acoustic studies.

And don't forget our user-friendly eRCM™ software products, which I think outperform any other compressor performance software available in the industry.

In closing, you may have seen my name as the author of articles in *COMPRESSORTech*™ magazine. I very much enjoy writing for this respected periodical, which promotes the gas compression industry; and I continue to serve them as a contributing editor.



**"Those who say it  
can't be done are usually  
interrupted by  
others doing it"....Joel  
A. Baker**