

# FrostByte

## ACD launches an on-line WebStore

**A**CD's newest offering to the industry falls in line with the latest means of purchasing product: over the Internet. The Webstore allows new and existing ACD customers to search, select, and purchase spare parts and standard pump assemblies that are manufactured or supplied by ACD. Customers can also now track their own orders using either ACD's sales order number or their own purchase order number.

Customers have unique numbers controlled by ACD. Each customer number is based off the 'ship-to' address so a customer with multiple ship-to locations can easily search for the correct number, enter it, and be able to select and purchase the parts needed for that location with a purchase order number or credit card. Applicable discounts, terms, and shipping methods are automatically entered so re-entering profile information is not needed. It's simple point-and-click purchasing.

The Webstore allows the customer to search for parts using several methods:

- Search by Name
- Search by Pump Assembly
- Search by Previous Order

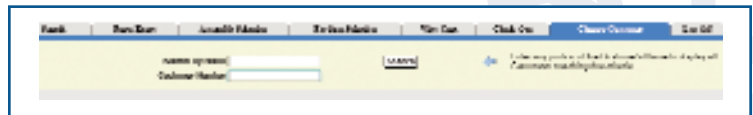
Once the parts are found and entered, the customer can check availability in ACD's inventory and input a quantity needed. If there is available inventory, the parts can be shipped within 24 hours or per the customer's delivery date(s).

A powerful feature of the Webstore is the ability to upload the customer's purchase order file, eliminating the need to double-key the order. The customer's purchase order file needs to be saved in a flat (text) file or in a comma/tab delimited file and when the

*...continued on page 2*



Logging into the Webstore is easy. Either go to ACD's website [www.acdcom.com](http://www.acdcom.com) and link to the Webstore, or go directly to it at [www.acdcom.com/webstore](http://www.acdcom.com/webstore).



Parts entry →



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## ACD launches an on-line WebStore ...continued from cover

customer gets to the 'parts entry' screen, it is easy to browse and select the purchase order file and upload. The file will be loaded automatically. Once loaded, the customer can easily review the order, go to the 'check out' screen, and submit it.

After the parts have been entered, the customer clicks to the 'Check Out' tab to verify profile information (shipping address, contact name, phone number, etc...) and the parts to be ordered. At this point, the customer either enters their own delivery date for the entire order or individual parts, or accepts the default delivery date. A pull-down menu is available to assist in selecting delivery dates.

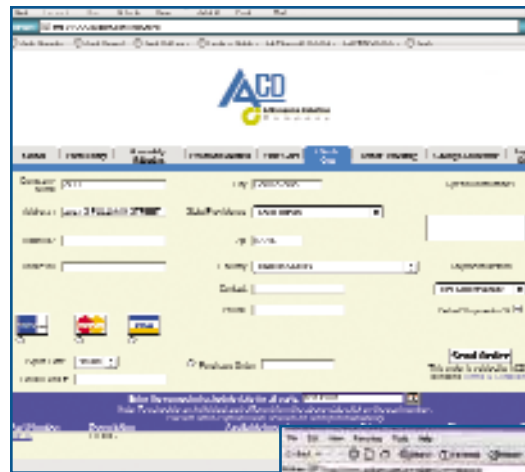
Once the order has been sent via the Webstore, the customer will receive an immediate emailed order confirmation from ACD's Customer Service Department with an order number and a detailed description of what has been purchased.

When the order is received by ACD through the Webstore, a Sales Order Acknowledgment is also emailed to the customer within 24 hours with a delivery date(s) confirmation.

Order tracking is another useful tool of ACD's Webstore. The customer can easily review their order and see if the parts have been shipped and by what method (UPS, DHL, Ocean, etc.). By selecting the 'Order Tracking' tab, the customer will have several ways to review and/or track their order.

After the customer selects the inquired-about sales order or purchase order number, the Webstore provides a summary of the order, including if the parts have shipped and by what method.

The Webstore is completely interactive with ACD's operating system and provides up-to-the-minute information. Customers who have traveling service technicians needing spare parts quickly now have the capability to purchase parts using a credit card to avoid more time-consuming corporate purchasing practices.



Once the customer verifies all information, simply click on the 'Send Order' button and your order is sent to ACD.

Webstore order confirmation



Email order confirmation

For quick re-ordering, simply click where indicated.



Order Tracking

Shipment Tracking



For more information, and to ensure your company is properly registered, contact Vicki Cantuna at ACD, tel +1.949.261.7533 or [vcantuna@acdcom.com](mailto:vcantuna@acdcom.com).

# New alternator system uses permanent magnet excitation

New high-voltage alternators now available from Pittsburgh Cryogenic Services (PCS) employ advanced technology for high output, high reliability, and long life. The new AC Servo Alternator System employs permanent magnet excitation, which eliminates the DC excitation power supply of conventional machines. "It is important for anyone having a need for mobile power generating systems to look at this new system," says Carl Henningson, General Manager, PCS.

Permanent magnet excitation simplifies alternator wiring by eliminating the need for a battery connection to the alternator's exciter field. In addition, the new permanent magnet exciter removes a potential failure source and thereby increases system reliability. A slight weight reduction is also achieved through PM excitation, another important benefit to mobile power system users.

Permanent magnet excitation offers several unique advantages over electromagnetic excitation, including:

- Higher torque than units of comparable output
- Less variation in output
- Far greater starting amperage, resulting in almost instantaneous starting

AC Servo Alternator Systems are available from PCS in 15, 30, and 60 kVA outputs. All units produce 480 Vac, 120 Hz power at 3600 rpm. For added versatility, the alternators can be operated at 1800 rpm to produce 230 Vac, 60 Hz power at half their rated kVA.

The entire alternator series is available in standard motor frame sizes, making them directly interchangeable with conventional machines. No special mounting provisions are required. In addition,

the internal components of the new servo alternator can be installed in standard alternators to convert them to the new permanent magnet exciter configuration.

Unique design features of the servo alternator ensure maintenance-free operation even in hostile environments. The machine is totally enclosed and, with its specially designed shaft seals that fully exclude water entry, the servo alternator is virtually waterproof. This makes it the ideal choice for use in high-moisture conditions. In addition, elimination of the excitation windings and rectifiers, as well as the rotor winding, dramatically reduces failure potential. In fact, the rotor bearings are the only parts subject to wear.

Since it is directly interchangeable with alternators employing electromagnetic excitation, installation of the servo alternator in an existing alternator system requires minimal modifications. For controlling the voltage to the pump drive motor, a switch is added to the trailer

panel in the rear compartment. No other modifications are required to convert an existing electrical power system to use the servo alternator.

The innovative, powerful AC Servo Alternator System opens up new marketing opportunities for PCS. "Not limited to just meeting the electrical power needs of mobile cryogenic pumping systems, the servo alternator can satisfy energy requirements for many wide-ranging applications," says Henningson.

"For example," he adds, "this system can power portable refrigeration units used in food product transportation. It can also be used to provide electricity for refrigeration units onboard tractor trailers. Another application might be to supply power for offloading pumps used to deliver fuels and food products." Additional uses for the new PCS system will emerge as industry continues to search for innovation in portable electric power generation.

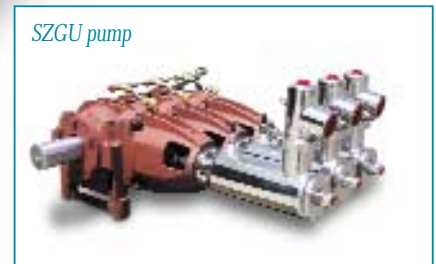


For more information, contact Carl Henningson at PCS, tel +1.724.695.1910 or [pittcryo@pittcryogenic.com](mailto:pittcryo@pittcryogenic.com).

# ACD pump products meet oil-well industry needs



SLS pump



SZGU pump

SLS Drive End Configurations	
3-SLS	<ul style="list-style-type: none"> <li>• internal oil pump</li> </ul>
3-SLSCB	<ul style="list-style-type: none"> <li>• counter balance</li> <li>• no oil pump</li> </ul>
3-SLSCBGR	<ul style="list-style-type: none"> <li>• counter balance</li> <li>• gear reduction</li> <li>• no oil pump</li> </ul>
3-SLSBGPD	<ul style="list-style-type: none"> <li>• counter balance</li> <li>• gear reduction</li> <li>• internal oil pump</li> <li>• diverted cooling</li> </ul>
3-SLSCBOPD	<ul style="list-style-type: none"> <li>• counter balance</li> <li>• internal oil pump</li> <li>• diverted cooling</li> </ul>
3-SLSCBOGR	<ul style="list-style-type: none"> <li>• counter balance</li> <li>• off-set gear reducer</li> <li>• no oil pump</li> </ul>

SLS Cold End Configurations	
SIZES	<ul style="list-style-type: none"> <li>• 2"</li> <li>• 2.5"</li> <li>• 2.875"</li> <li>• 3.25"</li> </ul>
OPTIONS	<ul style="list-style-type: none"> <li>• Non-Unloader (standard)</li> <li>• Unloader</li> <li>• High Pressure</li> <li>• High Pressure Unloader</li> </ul>

ACD announces the release of two new pump products specifically designed to meet the needs of the oil-well service industry. The first new pump is the rugged and compact SLS pump. The SLS comes with five (5) drive end and four (4) cold end options allowing for multiple configurations yielding optimal performance based on field specifications. The second new pump is the SZGU, which has a built-in boost chamber, eliminating the need for the traditional boost pump.

Coupled with the release of these two new pumps, ACD now provides direct support to local oil and gas companies through the group's newest sales and service company, Cryogenic Industries - Houston. CI-Houston provides sales support, as well as field and service support for all oil-well service pumps, including pump repair. Contact them directly at [sales@cihouston.com](mailto:sales@cihouston.com) or your nearest sales and service center (see page 6).

# - Newest service center located in Texas

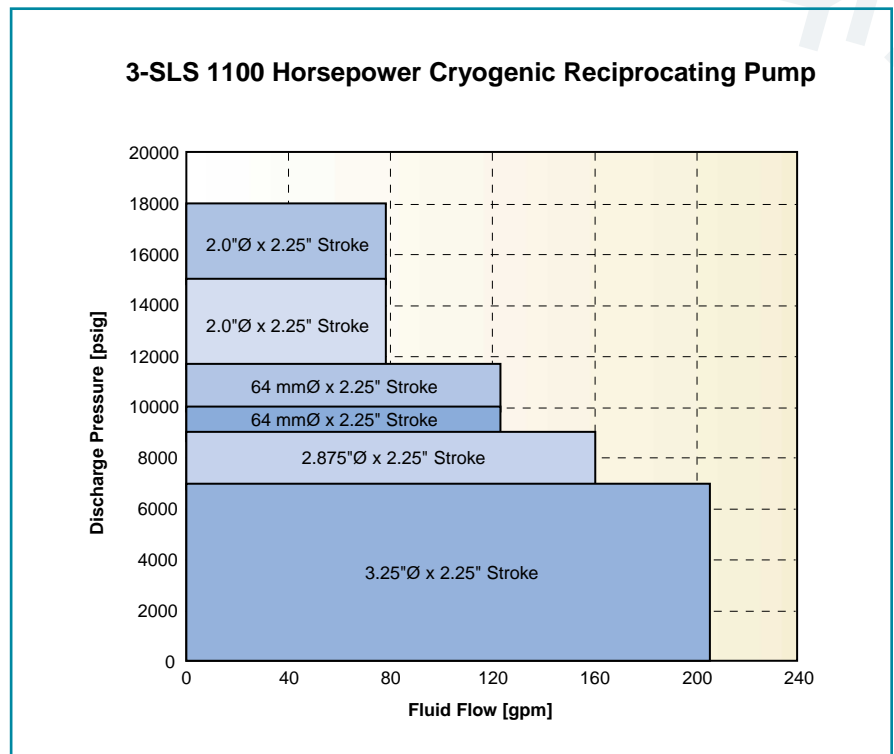
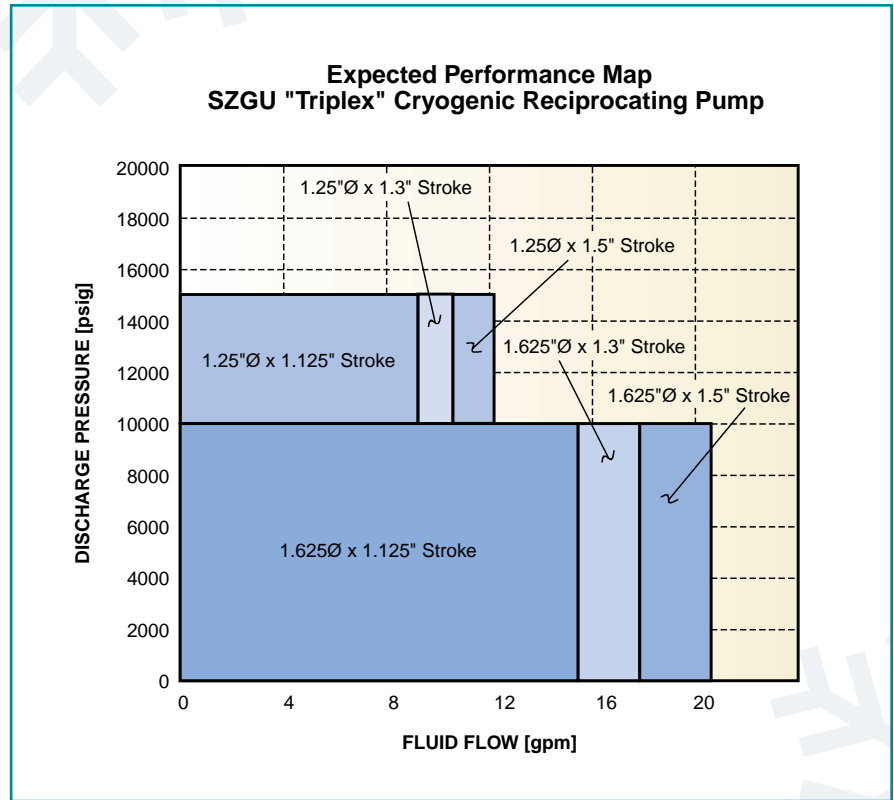


The SLS drive end has been redesigned to provide cooler operating temperatures, which increases operating life and decreases maintenance requirements. The drives are designed for 1,100 horsepower operation, providing a wide range of flow and pressure ratings. The unloading features of ACD's cold ends, coupled with gear reducing options, allow for significant turndown ratios and flexibility for customer applications. The SLS units have the ability to be used for high flow, high pressure fracking units, as well as, low flow, high pressure coiled-tubing applications.

The SZGU models (Sub-Zero design) allow the pump platform to operate without a boost pump requirement feeding the high pressure reciprocating pump. The two-stage cold end design provides sub-cooling of the liquid and allows for very low NPSH requirements. The Sub-Zero design is truly the latest in pumping technology that actually equates to lower operating costs. This equates to savings not only on the initial capital expense of the new equipment and platform configurations, but also with the actual operation of the pumping system and lower maintenance costs associated with the boost pump.

ACD continues to create innovative pumping systems to meet the needs of the oil-well service industry. A pump debut is anticipated in 2002, which will further solidify ACD's position in the oil-well service industry.

Other available oil-well service pumps include the 3-GMPD, 3-GUPD, 3-LMPD, and the AC-18 HD boost pump.



For more information, contact one of our authorized service center locations or Bruce Brown at ACD, tel: +1.949.261.7533 or [bbrown@acdcom.com](mailto:bbrown@acdcom.com).



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## Group hires



**ACD CRYO** recently hired a new sales and marketing manager for Europe. Mehmet Oezkent, Mechanical

Engineer, is responsible for marketing the ACD and ACD CRYO product line to Europe, the Middle East, and Africa. He graduated university in Germany and has over 12 years experience as a sales and marketing manager in these regions.

Oezkent replaces Brent West who has moved within the group to **Cryoquip Limited**, where he assumes the role of general manager. West replaces Acting General Manager Bryan Smith who will return to the company's headquarters in Murrieta, Calif. USA.

## Cryoquip-Australia claims manufacturer-of-the-year award

Cryoquip-Australia took the top award at this year's Deloitte Consulting Industry Awards 2001, held in Sydney. They collected the award for Australian Manufacturing Company-of-the-Year, as well as picking up a 'highly commended' in the export category.

# Cosmodyne announces a unique application for its Kryoaire plant

**K**ryoaire, a Cosmodyne-manufactured refrigeration unit using low temperature air, has been integrated into a unique, environmentally-conscious tire recycling system.

Crumb Rubber Technology, a New York-based company, holds several patents on their system for freezing tires, which integrates the Cosmodyne Kryoaire unit. Two inch rubber chips are fed into a chamber and down a hopper where they are exposed to -150° F (-101° C) air from the Kryoaire system. Freezing the chips in this way keeps them brittle and allows grinding without the use of liquid nitrogen. Once ground in a hammermill, the "crumbs" are transported on a series of beds to eliminate unwanted material. First, a fiber separator is employed, and then steel is removed using magnetic tables. In the final stage,

the product is spread on a classification table and separated into different mesh sizes. By using cold air from the Kryoaire unit, this system will freeze three times more rubber chips than a liquid nitrogen generator with equal power.

The first system, with the freezing chamber and Kryoaire plant, has completed testing at Cosmodyne's facility and has been accepted by the customer. The end user intends to recycle test vehicle tires and mix the crumb rubber with polymers for specific end uses such as fiberglass bumpers, door handles, asphalt, etc. The recycling system has been erected on site and has been operating successfully at a major automotive manufacturer's facility in Detroit, Michigan, USA.

The Crumb Rubber system processes 4000 lbs (1814 kg) of rubber per hour.

Capacities doubling this output can be achieved utilizing the same Kryoaire unit with the addition of another air compressor and an additional tire recycling system. And while tire freezing is not new, freezing with air in lieu of the high power requirements of liquid nitrogen makes this system extremely economical.

How to dispose of used tires has become a global problem. In the U.S alone, there are approximately three billion tires discarded above ground as of 2000. Nearly 300 million are being added yearly. If recycled, the cleaned tire crumbs can be used for a variety of purposes including truck bed covers, playgrounds, running tracks, etc. Additionally, 5% of the crumb product can go back into new tires and 30% into offroad tires. The Crumb Rubber/Cosmodyne system offers a viable and timely solution.

*For more information on the tire recycling system and other applications for the Kryoaire refrigeration plant, contact Joan Boitano at Cosmodyne, +1.310.320.5650 or [jboitano@cosmodyne.com](mailto:jboitano@cosmodyne.com).*

# ACD CRYO and Sponsler announce strategic relationship in Europe

**A**CD CRYO and Sponsler Co. Inc. have formed an agreement where ACD CRYO will provide sales and service support for Sponsler flow meter systems for the cryogenic market.

Sponsler, located in Westminster, South Carolina, USA, has been manufacturing precision turbine flowmeters and truck totalizers for cryogenic service for over 25 years. With a 6000 ft<sup>2</sup> (557 m<sup>2</sup>) dedicated calibration facility and over 50 highly skilled professionals, Sponsler incorporates the most widely accepted meteorological standards in the industry.

ACD CRYO will be providing service support on meter repairs and recalibration

services as well as exchange programs on the Sponsler Totalizer and printer systems. Similar to the cryogenic pump exchange program, this will support the customer in eliminating expensive downtime of equipment. This is part of ACD CRYO efforts as they continue to expand it cryogenic pump service capabilities throughout Europe.

In addition to the service support, the products of Sponsler and ACD CRYO also go hand in hand. The new Sponsler Model T675 Flow Totalizer and precision turbine meter system interface with the cryogenic pump control output to allow for proper cooldown and loss of prime detection.

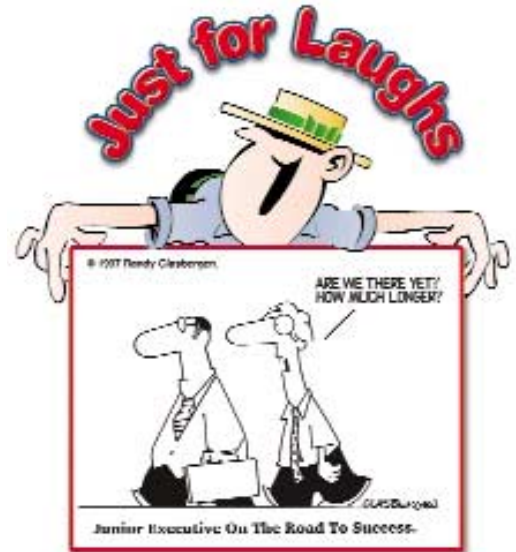
This gives the customer greater control on how they operate their pump and saves on unnecessary maintenance costs.

The Totalizer, with 10 point flowmeter linearization, comes with a large, user-friendly graphic display. It has the ability to support eight individual products and maintains a complete audit trail. The handheld portable printer works with an infrared system which downloads all information from the Totalizer to the printer. As an option, European customers are able to customize the Totalizer in four different languages including English, French, German, and Spanish. Additional language options are available upon request.

*For more information, contact Mehmet Oezkent at ACD CRYO, tel +49.7635.8105.0 or [mehmet.oez kent@acd cryo.com](mailto:mehmet.oez kent@acd cryo.com).*

# Calendar of Events

- MAR 4-7**    **MAX INTERNATIONAL 2002**  
*Manufacturing Applications Expo International*  
Chicago, Illinois, USA  
tel +1.877.277.2820 or +1.301.694.5243  
zapata@aws.org, www.aws.org, www.maxinternationalexpo.com
- MAR 17-22**    **PITTCON 2002**  
New Orleans, Louisiana, USA  
tel +1.412.825.3220  
pittconinfo@pittcon.org, www.pittcon.org
- APR 23-26**    **THE SEVENTH CRYOGENICS 2002**  
*The Technology of Low Temperatures*  
Praha, Czech Republic  
tel +420-2-684 7056, 683 6100  
icaris@icaris.cz, www.isibmo.cz/cryogenics2002/
- JUL 22-26**    **ICEC19**  
*19th International Cryogenic Engineering Conference*  
Grenoble, France  
tel +33.476.88.1291  
sec@icec19.org, www.icec19.org
- AUG 4-9**    **APPLIED SUPERCONDUCTIVITY CONFERENCE**  
Houston, Texas, USA  
tel +1.303.499.2299  
asc@centennialconferences.com, www.ascinc.org
- OCT 13-16**    **GASTECH 2002**  
*The 20th International Conference & Exhibition for the LNG, LPG and Natural Gas Industries*  
Doha, Qatar  
tel +44(0) 1895.454533  
j.tyler@turret-rai.co.uk, www.gastech.co.uk



**"People ask the difference between a leader and a boss...the leader works in the open, and the boss in covert. The leader leads, and the boss drives."**  
—Theodore Roosevelt

*Quote*



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