



# 10,000 PSI CIRCULATION SYSTEM



This circulation system has been designed to work directly with all our existing overburden cells for pulseless delivery of fluid up to 10,000 psi, 150°C with operational characteristics that are essential for high quality data collection.

The confining fluid is heated by passing through coils immersed in a heating bath to bring the fluid to temperature. The return fluid passes through the back pressure regulator and is then cooled by a passage through an internal heat exchanger regulated by a water bath before returning to the fluid reservoir. Pulse dampening is provided for even the most demanding applications by a piston separated accumulator with a nitrogen charge to absorb any shock.

A touchpad LCD interface provides easy control of the confining pressure and sample temperature. Thermocouples mounted on the top and bottom of the sample provide high accuracy feedback on the sample temperature. All relevant system parameters are displayed on a single screen for quick assessment of the system status. Menus provide control of thermal ramping and pressure steps for user optimized control.

Analog gauges display the return fluid pressure and the charge on the accumulator mounted for easy visibility. Additional built in safety features protect the overburden cell in an overpressure situation. A wheeled cart designed specifically to contain all the components of the circulation system makes this a seamless addition to any overburden system.

|                             |                                                                         |
|-----------------------------|-------------------------------------------------------------------------|
| <b>Pressure range</b>       | Accumulator charge pressure —10,000 psi                                 |
| <b>Flow rate</b>            | Typical 125 ml/min @ 10 SCFM, 90 psi                                    |
| <b>Wetted parts</b>         | 316 and 17-4PH stainless steel are standard.                            |
| <b>Operating medium</b>     | Galden HT fluids, Fluorinert                                            |
| <b>Pressure connections</b> | Inlet / Outlet ports are HiP AF2 (1/2"-20 UNF) for use with 1/8" tubing |

|                                     |                                                                                            |
|-------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Power requirements</b>           | 100-120 VAC / 200-240 VAC, 50/60 Hz                                                        |
| <b>Input current</b>                | Circulator: 0.9 A / 0.45 A<br>Heating bath: 12.5 A / 6.3 A<br>Cooling bath: 11.7 A / 6.8 A |
| <b>Temperature range media</b>      | Ambient to 150°C (standard configuration)                                                  |
| <b>Weight (with cart and baths)</b> | 400 lbs (182 kg)                                                                           |
| <b>Dimensions (cart)</b>            | 40" W x 33" D x 60" H                                                                      |



200 Racoosin Drive, Suite 106  
Aston, PA 19014  
United States

Phone: 610-358-4728  
Fax: 610-361-8509  
E-mail: sales@daedalusinnovations.com