



## Uni-Grip 616™ Proportional Plow Control

<b>Product Summary</b>	<ul style="list-style-type: none"> <li>• Single, 3 axis joystick for proportional control of hydraulic devices (i.e. hoist, plow, wing, etc)</li> <li>• Utilizes <b>Mako Trim™</b>, a Windows® compatible program to set the speed of each direction of motion individually without wiring or hydraulic modifications;</li> </ul>
<b>Product Application</b>	<ul style="list-style-type: none"> <li>• Multiple vehicle types (Patrol Trucks for snow/ice, garbage and leaf collection);</li> <li>• Combination of multiple hydraulic and electrical functions controlled from single joystick (requires Hammerhead™ 12 Switch module);</li> </ul>
<b>Device &amp; Signal Capacity</b>	<ul style="list-style-type: none"> <li>• Up to 5 devices; control motion up to 16 ways;</li> <li>• 16 independent PWM channels; Expandable to 32 with UG-632 option package;</li> <li>• Frequency settable from 40 – 450 Hz;</li> </ul>
<b>Joystick Buttons</b>	<ul style="list-style-type: none"> <li>• Six programmable buttons: (4) hydraulic and (2) remote blast &amp; pass (spreader function)</li> </ul>
<b>Axis and Range of Joystick Motion</b>	<ul style="list-style-type: none"> <li>• Three axes of joystick motion: X, Y, &amp; Z;</li> <li>• 27 degrees of motion available in each axis;</li> </ul>
<b>Joystick Signal</b>	<ul style="list-style-type: none"> <li>• True "Hall Effect" (Magnetic) joystick with no mechanical contacts;</li> </ul>
<b>Joystick Self Test and Diagnostics</b>	<ul style="list-style-type: none"> <li>• <b>Mako™</b> completes a self test of the joystick during each power up cycle;</li> <li>• <b>SafeStik™</b> automatically disables the axis if an axis fails during use;</li> <li>• Joystick diagnostics for each axis of motion is visible to technician on LCD &amp; at valve body;</li> <li>• <b>Channel Safe™</b> detects and protects against open or short circuits in hydraulic drive channels;</li> </ul>
<b>Float Functions</b>	<ul style="list-style-type: none"> <li>• User settable float controls for any 4 output channels. (i.e. plow down, toe down, etc);</li> </ul>
<b>Combination Functions</b>	<ul style="list-style-type: none"> <li>• Combination of functions assignable to a single button to allow movement of up to 3 devices simultaneously (i.e. plow up, wing heel up, wing toe up);</li> <li>• Use Uni-Grip buttons to actuate HammerHead™ switches using Cirus Bus;</li> </ul>
<b>Plow Control Interlocked Features</b>	<ul style="list-style-type: none"> <li>• Hoist lock, Hoist Limit, Plow, Wing &amp; Blade lock (requires external sensor, key or switch);</li> </ul>
<b>Electronic Backpack</b>	<ul style="list-style-type: none"> <li>• <b>Mako™</b> System communicating on Cirus Bus;</li> </ul>
<b>System Controller</b>	<ul style="list-style-type: none"> <li>• <b>Mako Trim™</b> works on any Windows© 2000 or newer computer; software included;</li> <li>• Field configurable buttons and function names;</li> </ul>
<b>Display Type</b>	<ul style="list-style-type: none"> <li>• 8 character lines, 40 characters per line on the Graphic LCD; remote mountable;</li> </ul>
<b>System Mounting</b>	<ul style="list-style-type: none"> <li>• Seat-mounted or pedestal mounted Flip-Arm Console;</li> <li>• Seat-mounted or pedestal mounted Mongoose Deck Console;</li> </ul>
<b>Warning Indicators</b>	<ul style="list-style-type: none"> <li>• Up to 8 labeled and colored indicators integrated into the joystick housing;</li> </ul>
<b>Optional Equipment</b>	<ul style="list-style-type: none"> <li>• Electronic Plow Force Control (EPVFC™) - controls down force on plow cutting edge manually or based on truck speed.</li> </ul>
<b>Operating Temperature Range</b>	<ul style="list-style-type: none"> <li>• Minimum: -20 degrees Centigrade; Maximum: 70 degrees Centigrade;</li> </ul>
<b>Power Requirements</b>	<ul style="list-style-type: none"> <li>• Minimum: 11 Volts DC; Maximum: 15 Volts DC</li> <li>• Maximum: 10 Amps (Internal fuses rated at 10 Amps)</li> </ul>

© 2005 Cirrus Controls, LLC