# Proteus Industries Inc.



Coolant control, leak detection, and expulsion prevention for robotic welding systems



**FEATURING KEYPAD & DISPLAY!** 

The WeldSaver 6 Passport<sup>™</sup> with a local keypad and display is the fastest flow control device for leak detection and coolant-expulsion prevention in robotic welding applications. Whether monitoring coolant flow to weld guns or to the entire cooling circuit for a weld cell, the WeldSaver rapidly and reliably detects changes in flow continuity created by slow leak, cap loss, hose burst, or other catastrophic events and significantly reduces or prevents the expulsion of coolant on expensive equipment and weld cell floors.

- » Continuously monitors and reports coolant flow and temperature conditions based on user-selectable operating parameters and alarm settings.
- » Displays the measured flow rate and temperature in real time on a browser-based user interface and local display with keypad controls.
- » Enables fast weld cycles by sending alarm to weld controller in less than 0.4 seconds using proprietary leak-detection algorithm.
- » Reduces unsafe coolant expulsion by shutting off flow in less than 1 second after cap loss.
- » Easily integrates with your PLC, robot, and weld controller using industry-standard EtherNet/IP<sup>™</sup> and PROFINET<sup>®</sup> control interface options.
- » Available with many options\* to enable tool changes, pressure sensing, auxiliary power, air line purge, and third-sensor applications.

\*Subject to availability.



STANDARD PNEUMATIC OR ELECTRIC SHUTOFF VALVE





- » Single assembly with built-in 3-way pneumatic valve and check valve is fully integrated into the WeldSaver system and firmware—not a bolt-on.
- » Keeps expensive equipment dry by redirecting coolant flow during cap change or cap loss.
- » Remote control of valve and system states to support tool changers and weld-cap changers.

## Industry-Leading Graphical User Interface

The WeldSaver offers a state-of-the-art web-based GUI for easy setup and control. Critical information on device status is displayed in real time, with clear visual indicators and descriptions, on any JavaScript<sup>™</sup>-enabled browser. The control capabilities and information display are far more intuitive and robust than a simple keypad alone. The real-time status indication and control capabilities of the WeldSaver GUI are fully compatible with popular teach pendants for convenient configuration and operation.

WeldSaver	VALVE BYPASS SETUP		
FLOW OK	<b>23.5</b> LPM <b>20.3</b> •с		
TEMP. OK	OK TO WELD Flow conditions are within the established limits for welding.		
VALVE ON	<ul> <li>Select VALVE to turn coolant flow OFF</li> <li>Select BYPASS to disable leak detection</li> <li>Select SETUP to change operational settings</li> </ul>		
DETECTION ENABLED	Settings         Measurements           Flow warning         10.8 LPM         Flow         Temp.           Flow fault         6.4 LPM         Iniet         23.5 LPM         19.4 vc           Primary Detection         Normal         Outlet         23.5 LPM         19.4 vc		



# **Performance Characteristics**

Product Line	WeldSaver 6 Passport with Standard Shutoff Valve	WeldSaver 6 Passport with eVac™ Coolant Retraction Module	
Control Interface Options	EtherNet/IP <sup>™</sup> • PROFINET <sup>®</sup>		
User Interface	Browser-based user interface • Local display with keypad		
Flow Range	6.0 – 50 LPM / 1.5 – 13 GPM		
Temperature Range	4.0 - 110 °C / 39 - 230 °F		
<b>Connection Options</b>	G 3/4" (BSPP) • 3/4" NPT	G 3/4" (BSPP) standard • 3/4" NPT with adapters	
Shutoff Valve Options	Electric Solenoid • Pneumatic	Integrated 3-Way Pneumatic	
Check Valve	Poppet-Style Standard	Integrated Swing Gate	
<b>Coolant Supply Pressure</b>	83 – 689 kPa / 12 – 100 psig		
Coolant Return Pressure	52 – 689 kPa / 7.5 – 100 psig		
Differential Pressure	14 – 620 kPa / 2.0 – 90 psig	138 – 414 kPa / 20 – 60 psig	
Compressed Air Pressure	300 – 800 kPa / 43.5-116 psig		
Low Flow Response	< 0.2 sec.		
Reset / Override Response	< 1.0 sec.		
Leak Detection Response	0.3 – 1.0 sec. depending on response time selection and back pressure		
Leak Sensitivity	Able to detect a loss of flow continuity from 1–20 balanced parallel flow paths		
Accuracy	± 3% of full scale		
Repeatability	$\pm$ 1% of full scale from 0.1 to 1.0 × full scale		
Operating Environment	Indoor use only		
Ambient Temperature	4.0 – 50 °C / 39 – 122 °F (DO NOT FREEZE)		
Max. Relative Humidity	80%		
Enclosure Protection	IP66 / NEMA 4X		

#### Weld Cell Integration

The WeldSaver communicates with your robot controller or PLC using industry-standard I/O data formats, making integrations streamlined. Customized bit-mapping may be available for your specific requirements.



## **Nominal Dimensions**



## **Count on Proteus**

For over 25 years, leading automotive OEMs have depended on Proteus Industries' WeldSaver technology to monitor critical cooling circuits, detect leaks and cap-loss, and automate valve shutoff—reliably and automatically. Now, with the NEW eVac Coolant Retraction Module to evacuate coolant away from the weld circuit, Proteus is delivering even more value to its automotive robotic welding customers. Contact Proteus today to learn how we can enhance the efficiency and protection of your system!

Contact WeldSaver Applications Support at weldsaver@proteusind.com or (650) 448-3285 and let our experts create a product configured to your exact requirements!



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eVac Module Operating Pressures