

# StableFlow<sup>®</sup>

## Power Generator Hydrogen Monitoring and Optimization System



<b>MODEL</b>		<b>StableFlow</b>
		Monitors and controls the electric power generator's hydrogen atmosphere to generator OEM specified levels.
<b>APPLICABILITY</b>		
		StableFlow Hydrogen Control system is applicable to all hydrogen-cooled electric power generators.
<b>SYSTEM FUNCTIONS</b>		
Continuous Monitoring	Hydrogen Purity (H <sub>2</sub> in Air) and Dew Point	
Measurement and Control	Hydrogen Purity and Dew Point while maintaining specified pressure	
Re-Gas Monitoring	H <sub>2</sub> in Air, H <sub>2</sub> in CO <sub>2</sub> , Air in CO <sub>2</sub>	
<b>SYSTEM REQUIREMENTS</b>		
Electrical Specification	110 to 240 VAC, single phase, 5 amps, 50 or 60 Hz	
Inlet H <sub>2</sub> Pressure	1.7 to 5.2 barg / 25 to 75 psig	
Electrical Cabinet Purge Gas	Instrument Air - 1/4" Parker CPI™ Compression fitting, < 16 SLPM (≈ 0.6 SCFM, 5.5 to 8.2 barg (80 to 120 psig))	
Purge Gas Quality	Clean, dry air per ISO 8573.1 Class 5.4.5	
Operating Temperature	4° to 50°C / 40° to 120°F	
Communications	Ethernet - RJ45	
Hydrogen Inlet, Outlet Connections	1/4" Parker CPI™ Compression fitting	
<b>SYSTEM FEATURES</b>		
Dimensions, W x D x H	Product Est. Shipping	39" x 23" x 82" / 99 cm x 58 cm x 208 cm 47" x 40" x 90" / 119 cm x 102 cm x 229 cm
Weight	Product Est. Shipping	375 lbs / 170 kg 730 lbs / 332 kg
Standard Features	<ul style="list-style-type: none"> <li>• Fully automated</li> <li>• Data Logging</li> <li>• Remote Telemetry</li> <li>• Local operator interface</li> <li>• StableFlow software control</li> <li>• Integrated System Controller</li> </ul>	
Standard Siting Location	Indoor. Floor mount. ± 3° of level	
IP Rating	IP66	

StableFlow

DEW POINT SENSOR	
Dew Point Range	-80°C to +20°C, (0.5 ppmv min.)
Accuracy	± 3°C or better, (± 0.015 ppmv)
Repeatability	± 0.5°C or better, (± 0.002 ppmv)
Response Time	< 10 seconds for 63% step change in moisture content (wet-up or dry-down cycle)
HYDROGEN PURITY MONITOR	
Measurement Technique	Vibrating Element
Response Time	< 10 sec
Linearity	± (0.001 + 1% of set range)
Repeatability	±0.001
Long Term Stability	±0.003/month
PRESSURE TRANSDUCER	
Operating Pressure Range	0 to 6.9 barg / 0 to 100 psig
Operating Temperature	-30°C to +50°C
Accuracy	±0.25% Full Scale
4 - 20 MA OUTPUTS	
Signals	Pressure, Purity, Dew Point, Bleed Valve Position
Output	4-20 mA DC
Customer Load	≤ 600 ohm Max.
4-20 mA Scale	Pressure: 0 to 6 bar (0 to 100 psig) Dew Point: -80 to 20°C
	H <sub>2</sub> Purity in Air: 85 to 100% Valve Position (Open): 100 to 0%
SAFETY AND REGULATORY CONFORMITY	
Area Classification	Class 1, Div 2 / Zone 2
Approvals	CSA/EN/IEC/UL 61010-1, NFPA 70 (NEC), NFPA 79, NFPA496; EN/IEC 60204-1, EN/ISO 12100-1, EN/ISO 12100-2, EN 1127-1, EN 50014, EN 5020, IEC 60079-0, EN/IEC 60079-1, EN60079-2, IEC 60079-11, IEC 60079-14

Specifications are subject to change. Please consult Proton OnSite for solutions to best fit your needs. Consult Proton OnSite Applications Engineering Department for proper installation guidelines.



PD-0600-0059 Rev E  
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