



**Ultraviolet Water Purification Systems** 

# NSF/ANSI 55 Class A applications

UV Pure Technologies' Hallett<sup>™</sup> line of water purification systems, with patented Crossfire Technology,<sup>™</sup> are engineered for efficient multiple unit configuration to treat flows up to 1 MGD



#### THE MOST EFFECTIVE UV TREATMENT

- 55 mJ/cm² at 14.6 US GPM and 70% transmittance
- · Elliptical reflectors eliminate UV shadowing
- Lamp output maximized from freezing to 40°C (105°F), air and water
- Effective in the broadest range of pre-treatment conditions

#### **PATENTED SELF-CLEANING**

 Automatic 316 SS self-cleaning mechanism and on-board automatic purge valve eliminates quartz fouling, manual cleaning and quartz removal

### PATENTED SMART TECHNOLOGY ENGINEERED TO BE FAIL-SAFE AND RISK-FREE

- Dual UV sensors continuously monitor UV intensity and net UV transmittance
- Digital monitor, visual and audible caution and alarm notification
- On-board data logging and self-diagnostic troubleshooting logic is standard
- Standard automatic solenoid shut-off valve engineered to be fail-safe
- Optional wireless remote monitor, 4-20 mA output and modem

#### VIRTUALLY MAINTENANCE-FREE

- No labor-intensive quartz cleaning or removal required
- Eliminates risk of quartz breaking
- Engineered to eliminate false alarms
- Lamp changes are a simple two-minute job every 9000 hours
- Constructed entirely of corrosion resistant materials

#### **QUICK AND EASY TO INSTALL**

- Small footprint and compact size
- No wasted space required for lamp removal
- Standard SS flexible hoses mean no hard piping is required
- Standard solenoid shut-off valve with manual override makes bypass piping optional

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## Hallett<sup>™</sup> 15xs with Crossfire Technology<sup>™</sup> Specifications

Certification	INSF/ANSI 55 Class A: minimum dose of 40 mJ/cm² – 4 log (99.99%) reduction of viruses; 6 log (99.9999%) reduction of bacteria; 8 log (99.999999%) reduction of cysts			
UV Dose	The Hallett <sup>™</sup> 15xs achieved NSF/ANSI 55 Class A certification with a dose of <b>55 mJ/cm</b> <sup>2</sup>			
Minimum UV Transmittance	75%			
Maximum Flow Capacity	14.6 US GPM (55.3 LPM)			
Water Pressure	10 psi (69 kPa) to 100 psi (690 kPa); tested to 240 psi (1.6 MPa)			
Dynamic Flow Restrictor	Installed as standard			
Pressure Drop	14 psi (96 kPa) at 75% of rated capacity			
Multiple System Flow Capacity	Engineered for multiple systems in parallel configuration			
Redundancy	Additional back-up systems can be added to meet regulatory requirements cost effectively			
Solenoid Valve	1" NPT female to female, external 24 volt AC automatic shut-off, fail-safe (normally closed) valve is included as standard; solenoid valve requires a minimum of 10 psig to operate; valves are one-way directional and include a manual override			
Inlet and Outlet Connections	1" NPT male 316 SS manifold connections; flexible 1" NPT SS female to female 12" hoses eliminate the need for hard pipe installations			
Operating Pressure	100 psi, 690 kPa (tested to 240 psi, 1.65 MPa)			
Voltage	104 to 126 volts (North American models), 100 to 240 volts (international models)			
Maximum Power Consumption	175 watts			
Electrical Certification	North American models: Intertek ETL (UL and CSA equivalent); international models: CE equivalent (IEC 60335.1 Ed4 Std.)			
Lamps	Low pressure, high output proprietary lamps contain 30 mg of mercury (Hg); rated for 9000 hours of continuous use (approximately one full year)			
Maintenance	Lamps are mounted in air and easily removable, so changing lamps is a simple two-minute process			
Electronic Ballast	Auto power-regulated smart ballast is integrated with micro-processor control system; protected from power fluctuations			
Self-Cleaning	316 SS patented automatic wiper-blade system keeps quartz free from scaling or bio-film			
On-Board Micro-Processor and Monitor	Patented dual smart UV sensors monitor lamp output (UVI) and water transmittance (UVT) continuously; three thermistors continuously monitor air temperature and water temperature; on-board LCD displays system performance, lamp hours, data logged operating events, and self-diagnosis including when to change lamps, and troubleshooting assistance for service issues; on-board LED's indicate system status: OK, caution or alarm conditions			
Dry Contacts	Included as standard for applications that require remote alarm or auto dialers			
Optional Wireless Remote Monitor	RF 2.4 GHz remote monitor with LCD displays system status; operates up to 150 feet (50 meters) away from main system			
Optional 4-20 mA Output *	On-board analog capability allows for continuous hard-wire transmission of UVI and % UVT			
Optional RS 485 Output *	On-board RS 485 output for one or multiple systems and connection to a PLC or other controller			
Optional Modem *	On-board modem will access real-time operating data; includes software			
Dimensions (Height, Width, Depth)	35.8" x 7.5" x 9.3" (90.8 cm x 19.0 cm x 23.6 cm)			
Weight - Dry	25.0 lbs. (11.3 kg)			
Weight - Wet	27.3 lbs. (12.4 kg)			
Warranty	Lamps - one year; electronics - three years; mechanical - five years			
Corrosion Resistance	Hallett™ systems are constructed completely of corrosion resistant components and materials: cast and machined 316 stainless steel, anodized aluminum extrusions, ABS, and quartz; all fasteners are stainless steel; circuit boards are conformal coated to resist moisture			
EPA FIFRA Certified	EPA Est. No. 075213-CAN-001			
Patents	US Pat 6,707,048; patents pending in Canada, Australasia, Europe, Eurasia, Mexico, Japan and UK			

<sup>\*</sup> Not available with all models

## Hallett<sup>™</sup> 15xs System Pre-Treatment and Environmental Operating Conditions with crossfire technology<sup>™</sup>, no water softener is required

#### Water Conditions

#### **Effective Treatment Range**

		MIN	MAX
	Hardness	0	50 grains (855 mg/L)
	Iron	0	3 mg/L (ppm)
	Manganese	0	0.5 mg/L (ppm)
	% UVT	75%	100%
	рН	6.00	9.00
	Total Dissolved Solids (TDS)	0	1000 mg/L
	Water Temperature	1°C (34°F)	40°C (104°F)
	Air Temperature	1°C (34°F)	40°C (104°F)
	Turbidity	0 NTU	1 NTU
	Water Pressure (Operating)	10 psi (69 kPa)	100 psi (690 kPa)
	Water Pressure (Test)		240 psi (1.6 MPa)
	Filtration	5 micron pre-filtration recommended	