

# Advanced UV RL to improve TOC reduction

- Founded In 2002
  - Dr. Randy Cooper
  - Formerly UV Sciences
- High Efficiency Chambers
  - Prototypes : 2007
  - Seed Market : 2008
  - Launched : 2009
  - NSF 50&EPA-ETV Appr. : 2011
  - >175 Installed Systems
  - > 40 Customers Worldwide
- Five (5) Models
  - 2 TOC Reduction
  - 3 Disinfection



- Patents :
  - UV Chamber & Usage : US 7,511,281
  - EXCEED Lamp & Usage : US 7,439,663
  - 3 Additional Applications in Progress

# Product Features

## Patented High Reflectivity Chamber

Lower UV Power Required

[Uniform UV Dosage](#)

## Low Pressure Mercury Lamps

[Lower Operating Cost](#)

Low Power Consumption

Long Life (9000 Hrs)

## Ultra Compact Size

[Small Operational Footprint](#)

Reduced Maintenance Area

Horizontal & Vertical Installation

## Static No Flow Capability

[60 Minute Standby Mode](#)

## Real Time Control and Monitoring

NIST Traceable UV Monitor

[100% Dosage Assurance](#)

## Wide Range of Flow Rates

50 to 500 gpm Single Unit

Up to 4000 gpm Blades

## Compact Nema4X Controller

[Controls Up to 4 Systems](#)

Remote Operation, Alarms and  
Indicators

## Pressure & Temperature

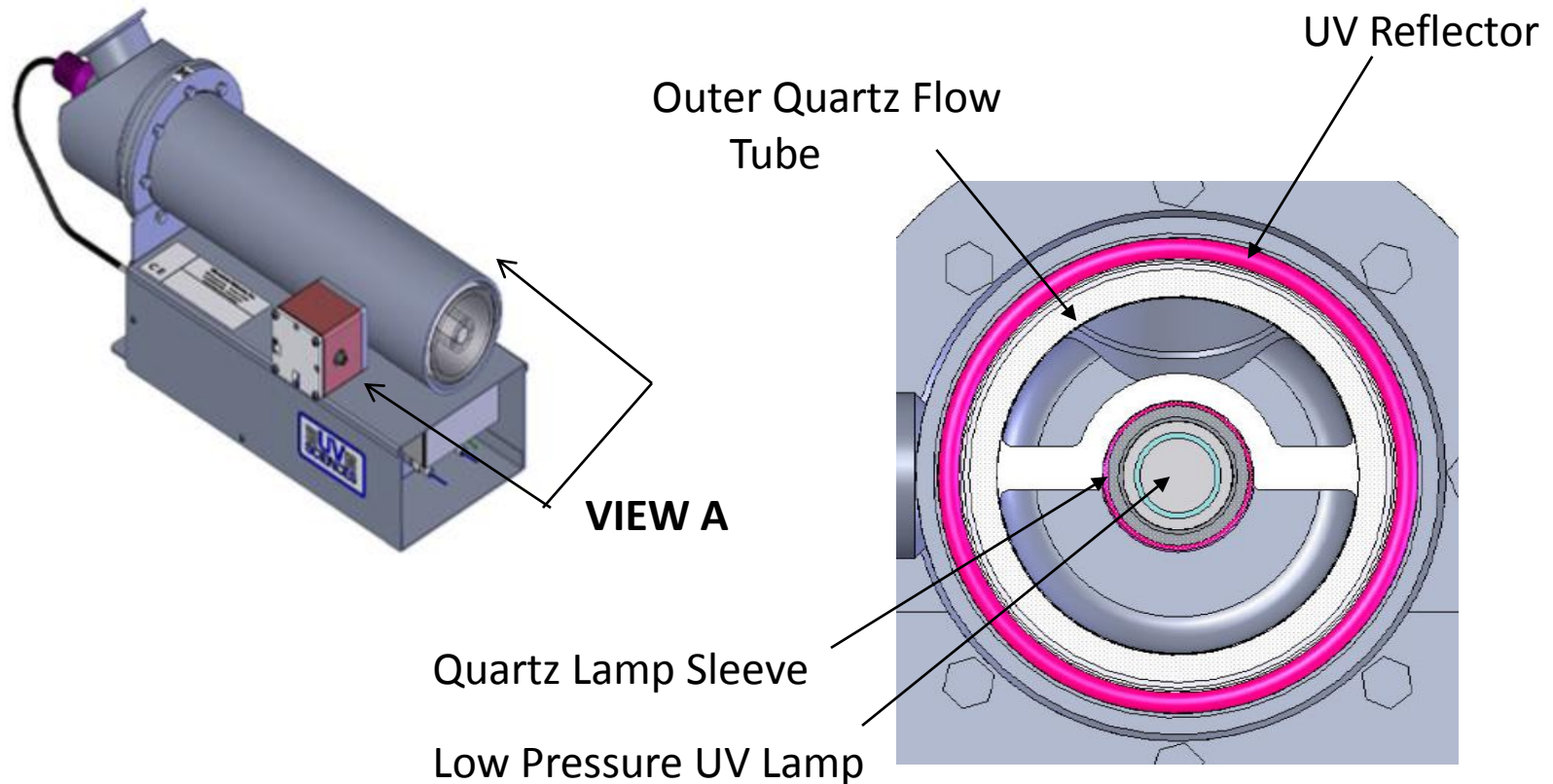
150 PSI Max.

36 to 104 Deg. F

Steam Clean, Clean In Place

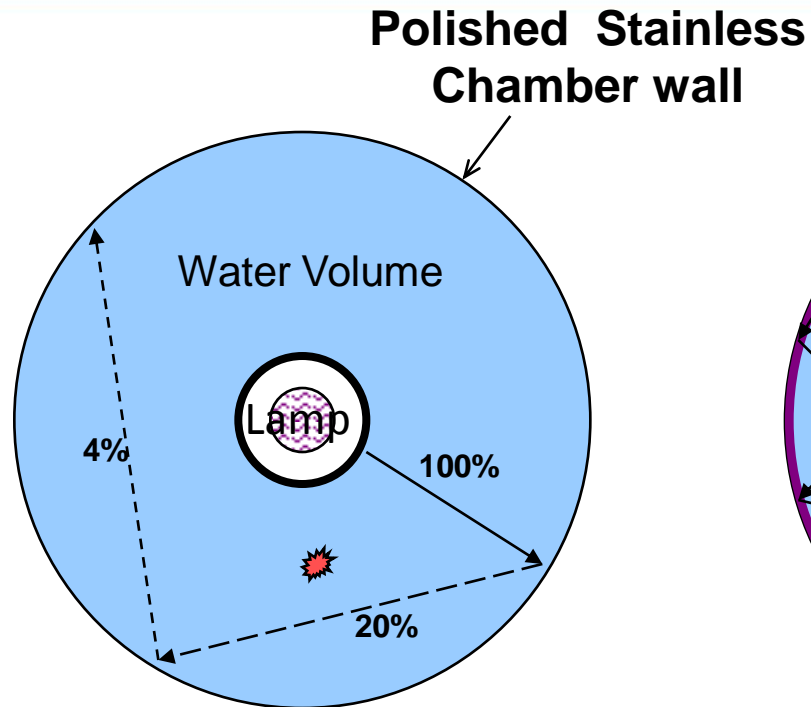
## Material Finish : 316SS, Ra-15

# Patented Chamber Design : US 7,511,281

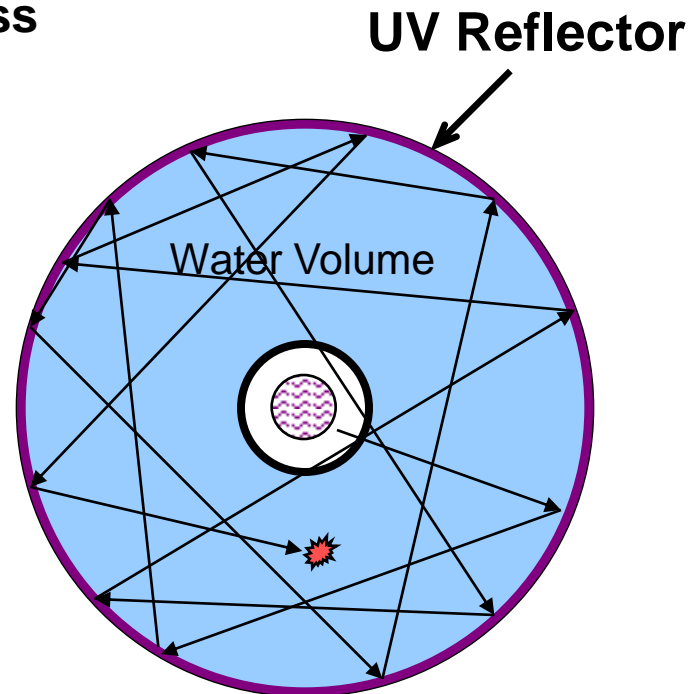


**VIEW A: Cut Away View , Flow Tube Interior**

# Highly Reflective Chamber : ReFleX™

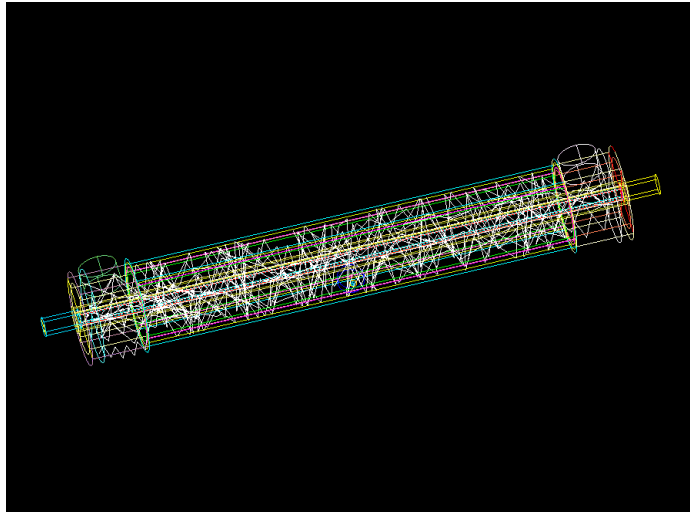


**Conventional Chamber**  
**Low UV Reflection**



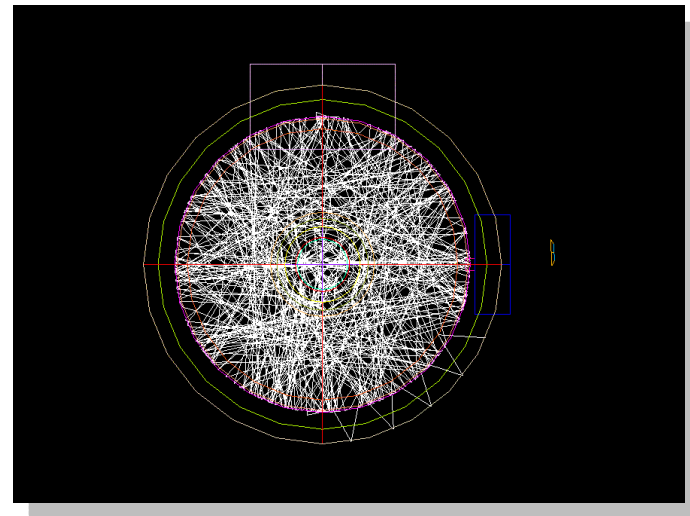
**ReFleX™ Chamber**  
**>99% UV Reflected**

# UV Ray Trace Analysis



***10 Ray Tracing in 3 In. Chamber***

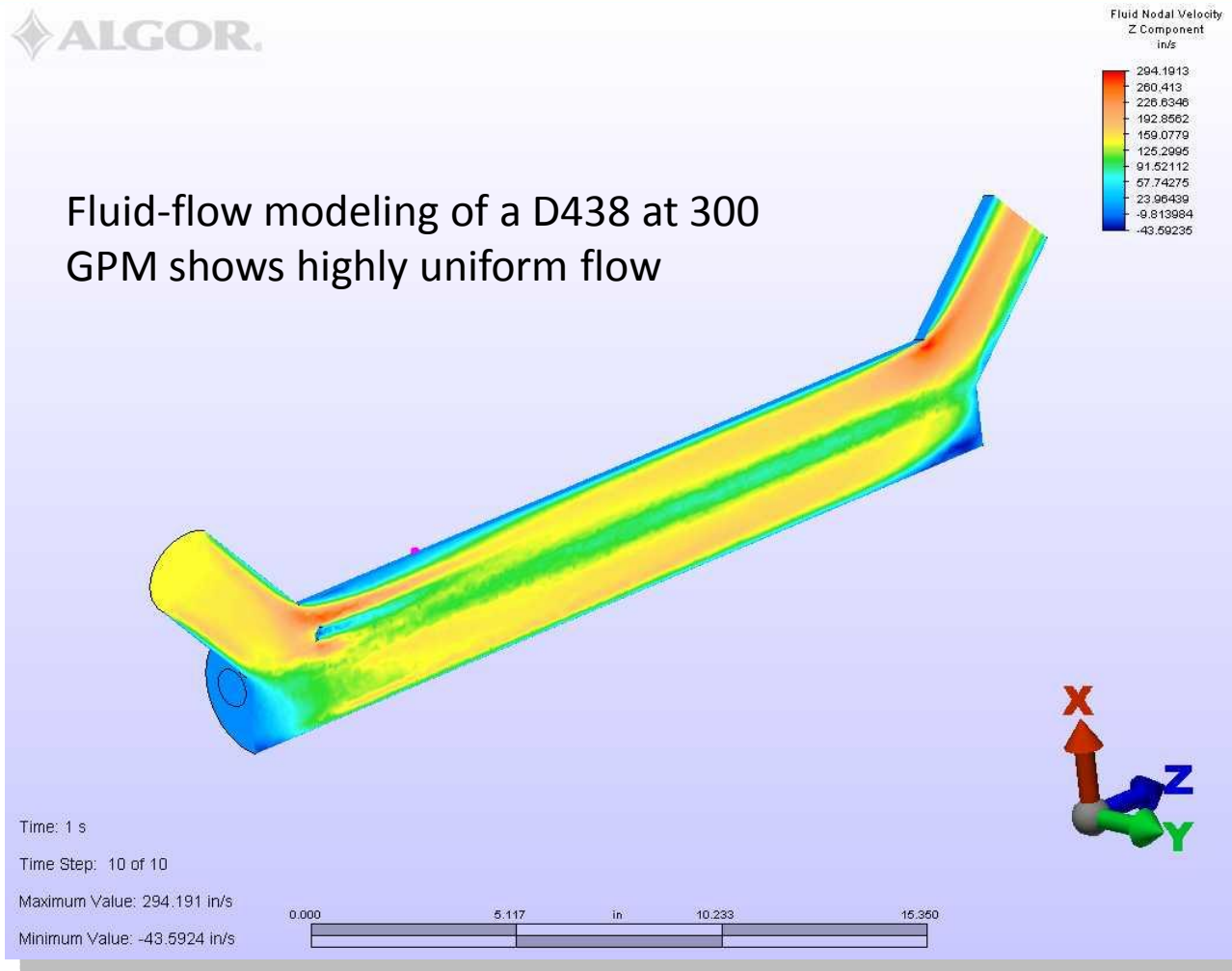
***100% Dose Assurance***



# Chamber Flow Analysis

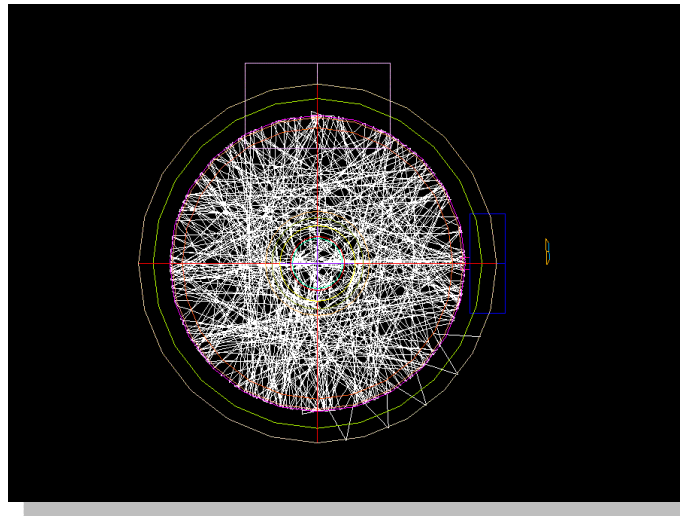


Fluid-flow modeling of a D438 at 300 GPM shows highly uniform flow

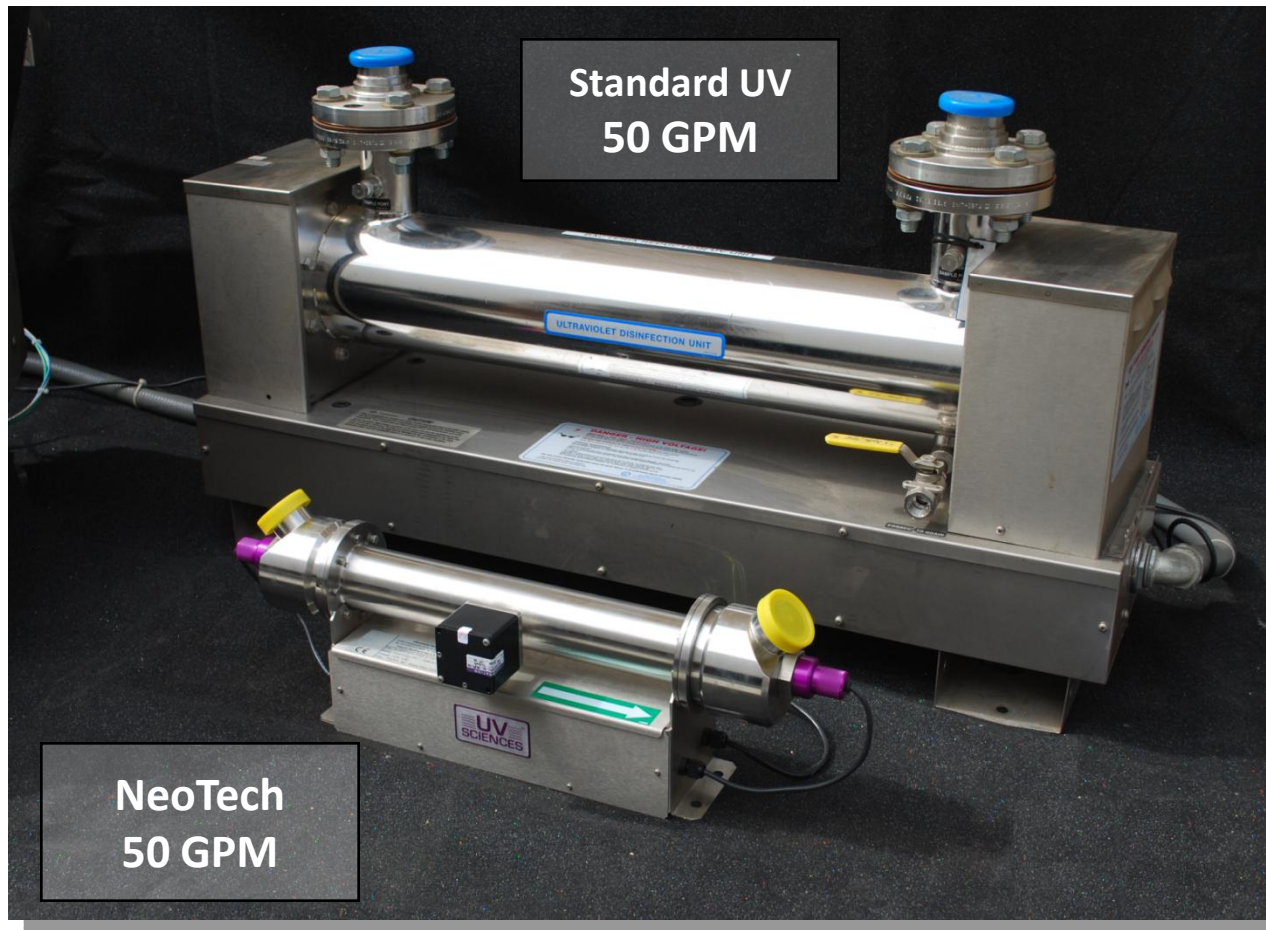




# 100% Dosage Assurance in the ReFlex™ Chamber

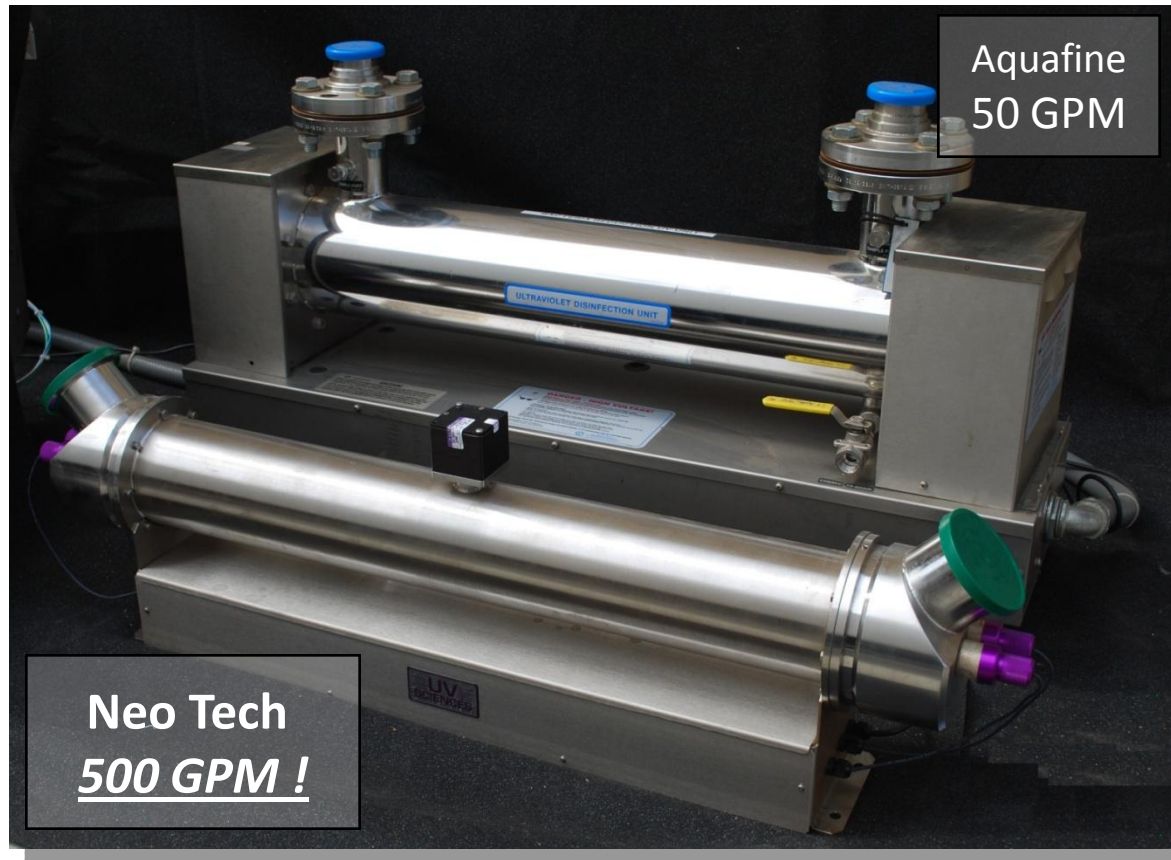


# 75% Decrease in Operating Footprint





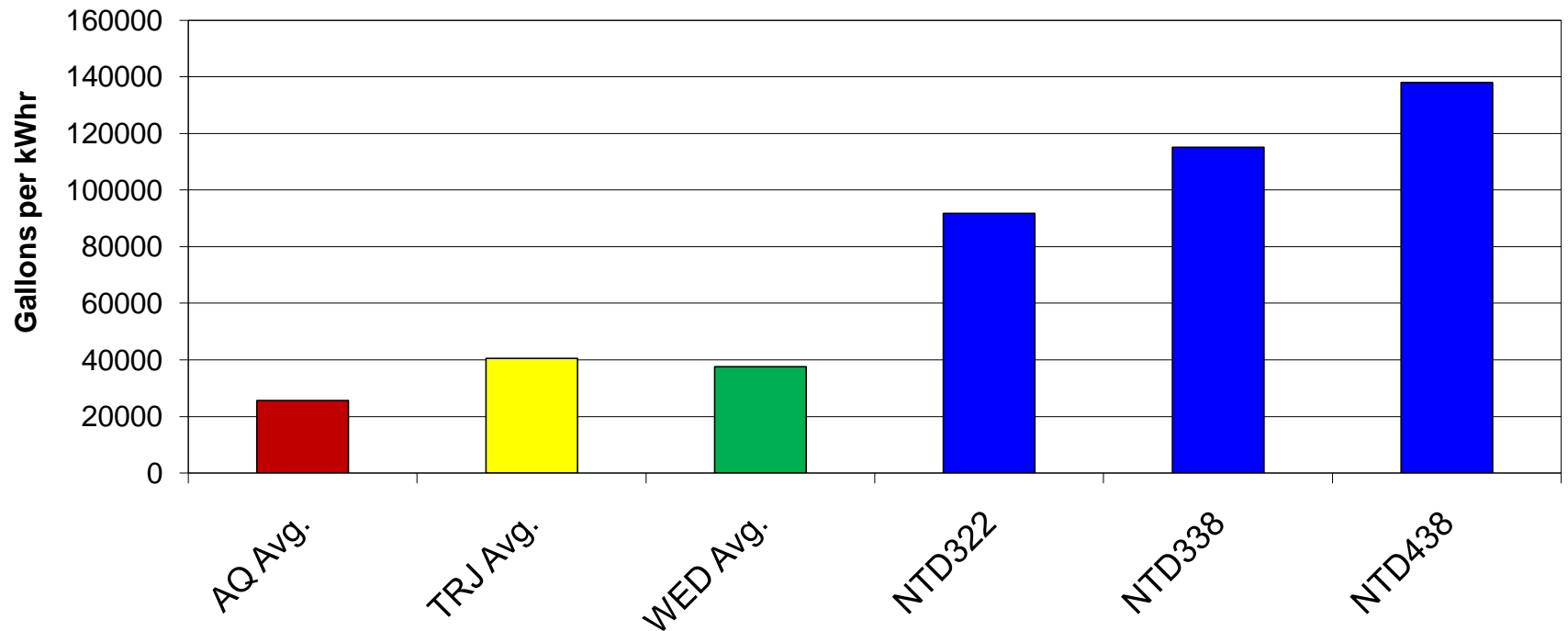
# 10X Performance in Equal Footprint



	NeoTech	Aquafine
Flow	<u>500</u> GPM	50 GPM
Power	200 W	<u>230</u> W
# Lamps	2	4
Size [in]	41x11x6	40x24x8
Ctl Box	10x9x5	9x24x30
Weight	<70 lb	>150 lb
UV Mon.	NIST std.	NIST opt.
No Flow	No problem	Problem
100% Dosage Assurance	Yes	No

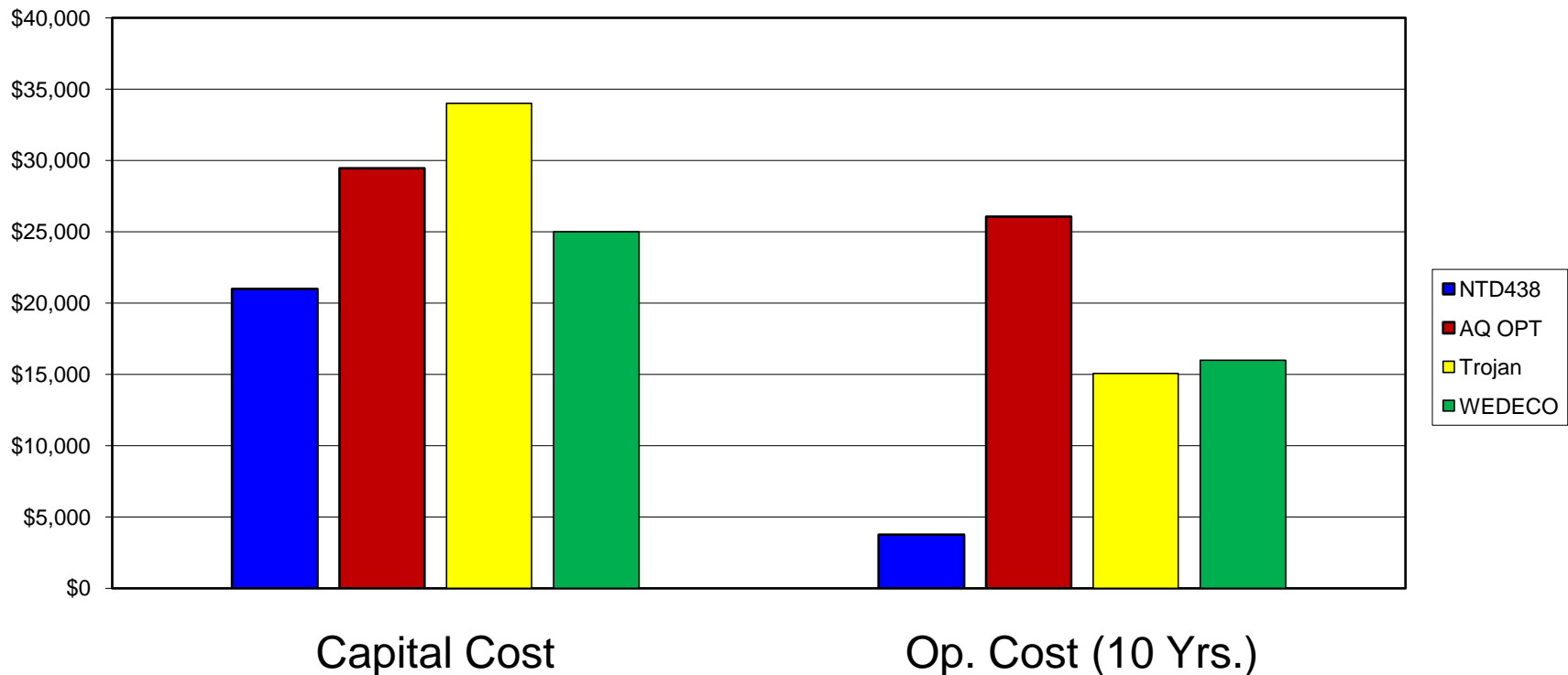
# Performance : Gal. per KW Hr.

**Disinfection Performance (Gal/KW Hr @ 95% UVT)  
AQ/TR/WED/NeoTechD**



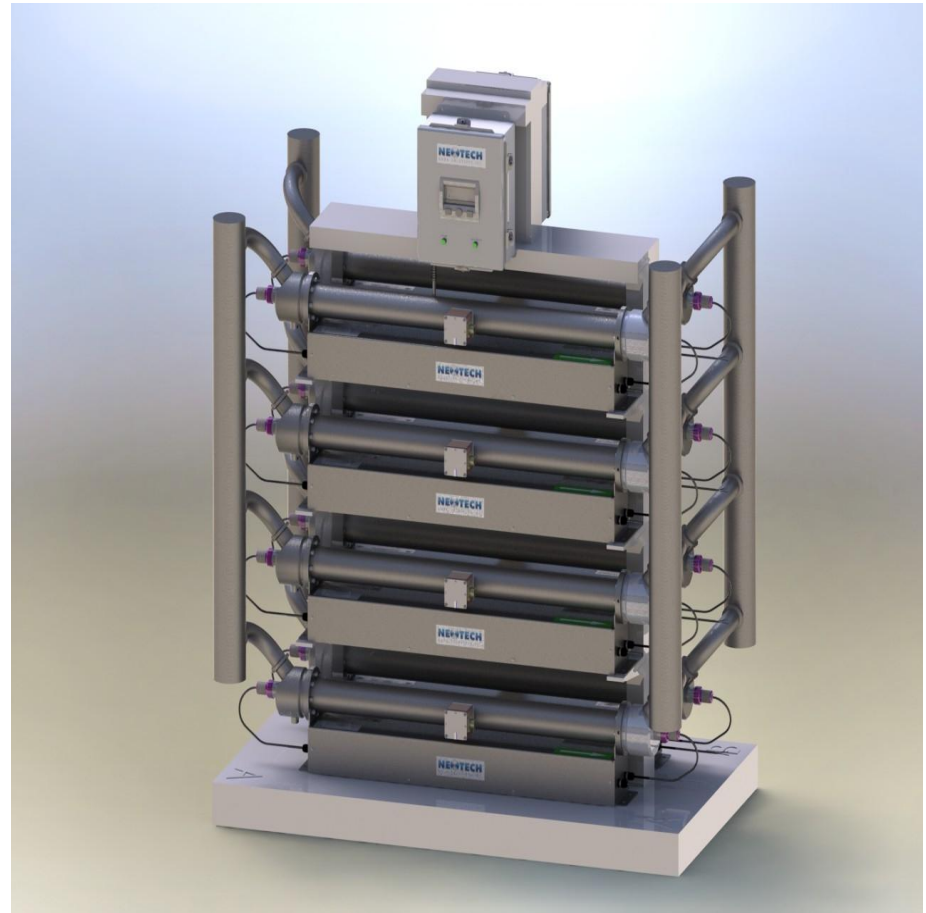
# Capital & Operating Costs

**NT vs AQ / TRJ / WED**  
**Lifetime Capital & Operating Cost**



# High Volume Skids: Disinfection

- **Modular Design**
  - Eight (8) NT438-500 Chambers
  - Two (2) Controllers
  - Stainless Steel Rack Assembly
  - Interconnection Tubing
- **Ease of Maintenance**
  - Two (2) Lamps per Chamber
  - Sixteen (16) Lamps Total
  - Minimal Maintenance Clearance
  - Real Time Dosimetry
- **High Disinfection Rating**
  - >4000 gpm @ 40 mJ/cm<sup>2</sup>
- **Low Power Consumption**
  - 250 Watts / Chamber
  - 2000 Watts per Skid



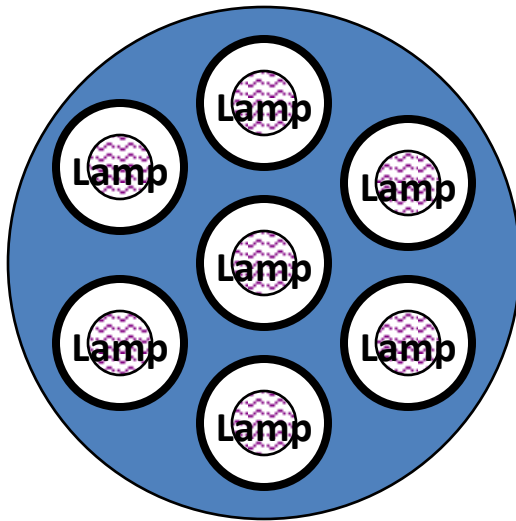
# Organic Compound (TOC) Reduction Systems

- **NeoTech Models**
  - NT222 : 10 gpm
  - NT238 : 20 gpm
- **Key Features**
  - 50% Size Reduction
  - 15% Lower Capital Cost
  - 80% Lower Operating Cost
  - Low Cost / LP Mercury Lamps
- **Target Markets**
  - Industrial : Ultrapure Water (UPW)
    - Pharmaceutical
    - Microelectronics
  - Biotech / Life Sciences

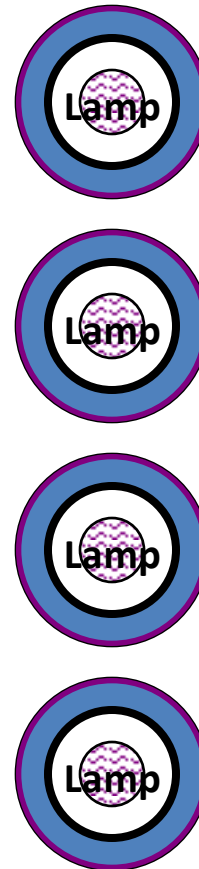




# UVSI : Single Lamp & Single Chamber



**Conventional Chamber**  
**Multiple Lamps**  
**w/ Baffles**



**NeoTech Aqua**  
**Single Chambers**  
**Reduce Annulus**  
**No Baffles**  
**High Hydroxyl**  
**Generation**

# High Volume Skids: TOC Reduction



- **Modular Design**
  - Eight (8) NT238 Chambers
  - Two (2) Controllers
  - Stainless Steel Rack Assembly
  - Interconnection Tubing
- **Ease of Maintenance**
  - One (1) Lamp per Chamber
  - Eight (8) Lamps Total
  - Minimal Maintenance Clearance
  - Real Time Dosimetry
- **TOC Reduction Rating**
  - 160 gpm @ 1 Log Reduction
- **Low Power Consumption**
  - 125 Watts / Chamber
  - 1000 Watts per Skid

# Authorized Representative:

## Authorized Representative

For Additional Information, Quotes, Power Points, & Specifications contact:



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