

## BioDELTA™ CONTINUOUS BIOWASTE INACTIVATION SYSTEMS

Biological waste produced by laboratories and the pharmaceutical and medical industries is considered hazardous to human health and therefore requires deactivation before it can be safely discharged to the sewer.

The BioDELTA™ Continuous Waste Inactivation System is a skid-mounted thermal biological deactivation unit that performs by using heat to elevate and hold a high temperature to "destroy" living microorganisms and biological wastes. Cooling water is used to cool the waste stream prior to discharging from the skid. Instrumentation installed on the discharge piping monitors and records the effluent temperature of the waste being discharged. If for any reason the wastewater does not meet dischargeable specifications the control system automatically recirculates the waste back to the holding tank for re-treatment.



BATCH BIODKILL SYSTEM WITH PH ADJUSTMENT



CONTINUOUS BIODKILL SYSTEM

### Specifications

- 316L SS holding tank
- 316L SS piping
- Steam heating or electric heater
- Economizer heat exchanger
- Thermal retention for complete deactivation
- Alternating duplex transfer pumps with inlet strainers
- Skid-mounted design, ready to install
- Factory-piped, wired, and tested before shipment

### Standard Features

- UL-Listed control panel
- NEMA 4 powder-coated or NEMA 4X steel enclosure
- PLC-based control system with color touchscreen HMI
- Dry contacts for common alarm, influent permissive, and out-of-range temperature
- Run permissive for remote enable/disable
- Temperature probes in process and discharge piping
- Seismic tie-down brackets
- Pumped discharge
- Out-of-Compliance prevention system

### Optional Features

- Cooling heat exchanger
- Duplex heat exchangers
- Integral pH neutralization
- Automated CIP cleaning
- Double containment (includes leak detection)
- Discharge flow meter with totalizer
- Digital data logger for discharge temp, pH, and/or flow
- Piping and tank insulation
- ASME stamped holding tank

ORDERING INFORMATION											
BDC	BioDELTA™ Continuous										
	<b>Major System Options</b> (Choose One, or None)										
	<b>-DUO</b>	Integral pH Neutralization (Chemical Day Tanks, Metering Pumps, and Instrumentation)									
	<b>-TRIO</b>	Integral pH Neutralization AND Integral CIP System (Chemical Day Tanks, Metering Pumps, and Instrumentation)									
	<b>Flow Rate</b> (Choose One)										
	<b>-2</b>	2 Gallons Per Minute									
	<b>-5</b>	5 Gallons Per Minute									
	<b>-10</b>	10 Gallons Per Minute									
	<b>-15</b>	15 Gallons Per Minute									
	<b>-25</b>	25 Gallons Per Minute									
	<b>-XX</b>	Custom Flow Rates Available									
	<b>Inactivation Temperature</b> (Choose One)										
	<b>-XX</b>	Specify Temperature in Degrees Celsius									
	<b>Inactivation Hold Time</b> (Choose One)										
	<b>-XX</b>	Specify Hold Time in Seconds									
	<b>Type of Heating</b> (Choose One)										
	<b>-SH</b>	Steam – Heat Exchanger (Plate and Frame)									
	<b>-SI</b>	Steam – Direct Injection (In-Line)									
	<b>-EH</b>	Electric Heater (Single Pass)									
	<b>Type of Cooling</b> (Choose One)										
	<b>-NC</b>	No Cooling (Inactivation Temperature Must be Lower than Dischargeable Limits)									
	<b>-CW</b>	Chilled Water Heat Exchanger (Plate and Frame)									
	<b>Control Option</b> (Choose One)										
	<b>-AM</b>	Allen-Bradley MicroLogix PLC with 7" Maple HMI									
	<b>-AB</b>	Allen-Bradley MicroLogix PLC with 10" PanelView Plus HMI									
	<b>-AX</b>	Allen-Bradley CompactLogix PLC with 10" PanelView Plus HMI									
	<b>Power Requirements</b> (Choose One)										
	<b>-1</b>	115 VAC / 1 / 60 Hz									
	<b>-2A</b>	208 VAC / 1 / 60 Hz									
	<b>-2B</b>	230 VAC / 1 / 60 Hz									
	<b>-3A</b>	208 VAC / 3 / 60 Hz									
	<b>-3B</b>	230 VAC / 3 / 60 Hz									
	<b>-4</b>	460 VAC / 3 / 60 Hz									
	<b>Enclosure Rating</b> (Choose One)										
	<b>-N4</b>	NEMA4 – Powder Coated Carbon Steel									
	<b>-N4XS</b>	NEMA4X – 304 Stainless Steel									
	<b>Options</b> (Choose Any)										
	<b>-IN</b>	Insulation on All Hot Surfaces									
	<b>-ASME</b>	PE Stamp for ASME Rated Holding Tank									
	<b>-FL</b>	Discharge Line Flow Meter									
	<b>-DL</b>	Data Logger (Temperature), Includes Flow w/ "FL" Option									
<b>Example Part Numbers</b>											
BDC	-TRIO	-5	-100	-60	-SI	-CW	-AM	-4	-N4	-IN	BDC-TRIO-5-100-60-SI-CW-AM-4-N4-IN



Shown: BDC-DUO-10-90-90-SH-CW-AX-4-N4-DL. 10 gpm system, 90 °C, 90 second hold time, steam heat exchanger, chilled water heat exchanger, pH neutralization (separate skid—not pictured), 460 VAC NEMA 4 control panel with Allen Bradley CompactLogix PLC and 10" Maple HMI.



Shown: BDC-DUO-8-140-60-EH-CW-AX-4-N4XS-ASME-DL. 8 gpm system, 140 °C, 60 second hold time, electric heater, chilled water heat exchanger, pH neutralization, includes insulation, 460 VAC NEMA 4X control panel with Allen Bradley CompactLogix PLC and 10" Maple HMI.