

Nelson Environmental Remediation Ltd.

TDU Technical Specifications Sheet

Tech Specifications ↓	Unit Description →	RS-20 TDU	RS-40 TDU	RS-45 TDU
Feedstock:				
• Contaminant Type		Volatile Organic Compounds (VOCs)	Volatile Organic Compounds (VOCs)	Volatile Organic Compounds (VOCs)
• Contaminant Level		Up to 50,000 mg/kg (5% by mass)	Up to 50,000 mg/kg (5% by mass)	Up to 50,000 mg/kg (5% by mass)
• Material Sizing		< 75 mm (3 inch minus)	< 75 mm (3 inch minus)	< 75 mm (3 inch minus)
• Moisture Content		Preferred < 25% BDW	Preferred < 25% BDW	Preferred < 25% BDW
• Production Rate		Average 15-25 tonnes/hour	Average 30-45 tonnes/hour	Average 35-50 tonnes/hour
Operating Parameters				
• Primary Desorber		ALL UNITS: Soil discharge up to 500° Celsius (900°F), 5-15 minute retention time		
• Oxidizer Discharge		750-1000°Celsius (1400-1800°F) 1 second+ retention time	750-1000°Celsius (1400-1800°F) 2 second retention time	750-1000°Celsius (1400-1800°F) 2 second retention time
Process Flow				
• Cold Plant Configuration		Desorber Kiln > Baghouse > Oxidizer	Desorber Kiln > Baghouse > Oxidizer	Desorber Kiln > Baghouse > Oxidizer
• Hot Plant Configuration		N/A	N/A	Desorber Kiln > Oxidizer > Heat Exchanger > Baghouse
Product Effluents				
• Soil		ALL UNITS: Remediation to site-specific criteria for organic contaminant		
• Stack Emission		N ₂ (Nitrogen), H ₂ O (Water), O ₂ (Oxygen) and, CO ₂ (Carbon Dioxide) – destruction of extracted VOC > 99.99%		
Component Sizing				
• Desorber & Burner		5' x 24', Hauck 24 mm BTU/hour	7' x 34', Hauck 30 mm BTU/hour	7' x 34', Hauck 37 mm BTU/hour
• Baghouse		240 m ² filter surface (2,570 ft ² -11,000 CFM)	500 m ² filter surface (5,200 ft ² -20,000 CFM)	675 m ² filter surface (7,260 ft ² -30,000 CFM)
• Oxidizer & Burner		5' x 34', Hauck 25 mm BTU/hour	7'8" x 31', Hauck 30 mm BTU/hour	8' x 34', Hauck 30 mm BTU/hour
Utilities				
• Fuel Choices		ALL UNITS: Natural Gas, Diesel/Oil, Propane, Recycled Fuel Blends		
• Average Consumption		30-35 mm BTU/hour	40-50 mm BTU/hour	45-60 mm BTU/hour
• Electrical		480 Volts, 60 Hertz, 300 Amperes	480 Volts, 60 Hertz, 500 Amperes	480 Volts, 60 Hertz, 1000 Amperes
• Water		ALL Units: Average 200 L / tonne (45 gallons/ton)		