

Usage

Primary sample conditioning occurs in a virtually in-situ fashion with the DRS approach. Condensable components are removed and are used to support particulate removal before they can present problems in the sample transport system's downstream components and the analyzer.

Description


The DRS is essentially a fixed temperature distillation derived from the need to remove water as a condensable component from low boiling point gases. Cooling is provided by way of a vortex cooler controlled by an electronic temperature controller.

- High Sample Throughput
- Provides Clean Sample to the Analyzer
- Uniform Representative Sample
- Self Cleaning
- Precise Temperature Control
- Set-point tunable for Optimum Control
- Certified for Hazardous Areas

Physical

Ambient Temperature Range:	32°F to 140°F (0°C to 60°C)
Sample Inlet	2 inches ANSI Class 150# Standard. Also available in ANSI Class 300, 600, 900, 1500 inlet connection with Certification
Materials	All 316SS Class 3000 fittings Standard All welded column 316SS construction certified to ASTM pressure vessel requirements to meet CE / CSA / CRN requirements. Teflon, Viton, Glass

Safety Area Classification

NEC  Class I; Gas Groups B,C,D; Division 1; T3C (160°C)
Zone 1: CE II 2G, EEx dm [ia] ia IIB+H2 T4 (135°C)



Service suitability Ethylene furnace (GC, MS, Photometer)
Naphtha Cracker furnace gas (GC, MS, Photometer)
Ammonia Production (MS)
Fluidized cat crackers (O2, GC, MS, Photometer)
Acetylene (O2, GC)

Electrical & Control

(Hot, Neutral, Ground)

Power requirements	120 VAC or 240 VAC, 50-60 Hz
Controller	Electronic PID, Self tuning
Temperature Set point	Local Manual adjust, 4-20mA input, and Remote PC Monitoring and Setup with RS485 communications and software available



Cooling

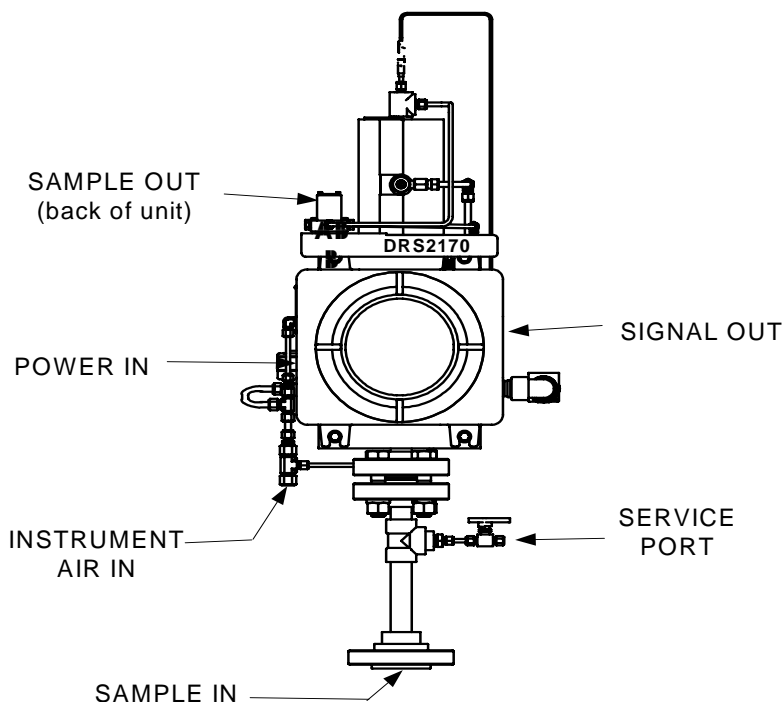
Air Supply	
Connection Fittings	1/2" tube, Swagelok
Pressure	Coolant: Air, Vortex cooling, 60 -100 psig (412 - 689 kPa)
Volume	10-15 SCFM
Quality	Plant grade; clean, oil free <i>Liquid Cooled Version Available</i>

Sample Section

Sample Outlet Fittings	1/4" tube
Flow rate	2-5 LPM @ 50% Condensable 37°F (3°C)
Temperature	Sample gas temperature control $\pm 0.5^\circ\text{C}$ Minimum outlet sample temperature of 3°C
Pressure	50 to 1000°F Class 150# Flange; 1000 to 1500°F Class 300# up Standard 150# Flange; ASME Certified 80 psig at 800°F (550 kPa at 426°C) -20 to 1000°F (-28 to 537°C) Up to 3600 psig at 50°F and 205 psig at 1500°F

Dimensions

Height - 45" (1143 cm), Width: 15" (381 mm), Depth: 25" (636 mm)



SYSTEM EXAMPLE: DRAWING



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