

# Garrett Gas Train



**Brand:** OFI Testing Equipment, Inc.

**Product Code:** 151-00

**Availability:** Call for availability

## Description

The Garrett Gas Train is the most widely used portable instrument for the determination of soluble sulfides and carbonate concentrations in drilling fluid. Soluble sulfides include  $\text{H}_2\text{S}$  and the sulfide ( $\text{S}^{2-}$ ) and bisulfide ( $\text{HS}^-$ ) ions. Total soluble carbonates include  $\text{CO}_2$  and the carbonate ( $\text{CO}_3^{2-}$ ) and bicarbonate ( $\text{HCO}_3^-$ ) ions. Mud filtrate is acidified inside the gas train, converting all sulfides to  $\text{H}_2\text{S}$  or all carbonates to  $\text{CO}_2$ , depending upon the test. The gas train separates the gas from the liquid and an inert carrier gas transports the gasses through the separate chambers. In chamber three, the gas stream is passed through a Dräger-Tube™, which responds to  $\text{H}_2\text{S}$  or  $\text{CO}_2$  by darkening along its length, with the stain length proportional to the amounts of concentrations in the filtrate. For qualitative  $\text{H}_2\text{S}$  analysis, lead acetate paper disks may be inserted to determine the presence or absence of sulfides. The OFITE Garrett Gas Train consists of a transparent train, pressure regulator assembly,  $\text{CO}_2$  and  $\text{N}_2\text{O}$  cartridges, Dräger-Tubes™ for  $\text{H}_2\text{S}$  and carbonate detection, and a convenient carrying case. For determining active sulfides in oil-based fluids, OFITE offers a separate kit that analyzes whole mud samples.

## Components

- #142-58: O-ring, Small
- #143-00-003: Regulator, Low Pressure
- #143-02-10:  $\text{CO}_2$  Puncture Head Assembly
- #143-03: Barrel for  $\text{CO}_2$  Bulb
- #145-601: Hydrogen Sulfide Test Papers, Package of 100

- #151-00-001: Gas Train Body, Acrylic
- #151-00-003: Binding Head Machine Screw, Nylon
- #151-00-005: Washer, #10, Nylon
- #151-05: Thumb Screw for Lid
- #151-06: Gas Bag, 1 Liter
- #151-07: 2-Way Bore Stopcock with Teflon® Plug
- #151-09: Hand Vacuum Pump, Dräger Model 31
- #151-14: Hose, 3/8" OD x 1/4" ID x 1/16" Thick, 1' Length, Rubber
- #151-14-1: Tube, 3" Length, Nylon
- #151-15: Fitting for Filter Flow Tube, Nylon
- #151-16: Septum for Injection, Rubber
- #171-90-14: Hose Barb, 1/8" NPT x 1/4"

## **Dräger-tubes®**

- #151-02: Dräger-tube®, H<sub>2</sub>S 100/a, Range 100 - 2,000 ppm, Package of 10
- #151-03: Dräger-tube®, H<sub>2</sub>S 0.2%/A, Range 0.2 - 7 Vol.%, Package of 10
- #151-04: Dräger-tube®, CO<sub>2</sub> 100/a, Range 100 - 3,000 ppm, Package of 10

## **Glassware**

- #151-01: Dispersion Tube, Glass
- #151-08: Flow Meter Tube, API
- #153-34: Pipette, 1 mL x .01 mL, Glass
- #153-40: Pipette, 10 mL x .1 mL, Glass
- #153-63: Syringe with Needle, Disposable, 10 mL

## **O-rings**

- #142-58: O-ring for Nylon Fitting
- #143-02-13: O-ring for CO<sub>2</sub> Bulb Puncture Pin
- #143-02-14: O-ring for Puncture Pin Holder Assembly
- #151-10: O-ring for Dräger-tube® Pump
- #151-11: O-ring for Flow Meter Tube Floating Ball
- #151-12: O-ring for 2nd and 3rd Chamber
- #151-13: O-ring for 1st Chamber

## **Reagents**

- #151-17: Defoamer, Octanol/Octyl Alcohol, 2 oz (60 mL)
- #230-15: Sulfuric Acid, 5 N, 2 oz (60 mL) UN2796 Case
- #151-53: Case with Foam Insert

## Optional

- #143-05: CO<sub>2</sub> Bulbs, Box of 10, UN2037
- #143-08: N<sub>2</sub>O Bulbs, Box of 10, UN1070
- #151-00-LH: Garrett Gas Train Kit Without HAZMAT Items
- #151-00-SP: Spare Parts Kit

Size: 18.75" × 14.5" × 8" (48 × 37 × 20 cm)

Weight: 17 lb 5 oz (7.9 kg)