CS 87 & CCS 2000 SERIES
OXYGEN PROBES

United PROCESS CONTROLS

OXYGEN PROBES
for measuring the oxygen partial pressure in furnace atmospheres

Suitable for carburizing amtospheres, carbonitriding and endothermic gas generators

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Overview

Probes CS 87 and CCS 2000 featuring a zirconium dioxide element at the tip are used in measuring systems for detecting oxygen partial pressure in furnace atmospheres for heat treatment of metallic and ceramic materials.
The outer tubes made of Inconel 600 (CS 87) or ceramic (CCS 2000) have very high mechanical strength, excellent temperature-shock resistance, and resistance to corrosion and oxidation at high temperatures.

A continual cleaning effect at the interface between the zirconium dioxide and the outer electrode is produced by a special rotating mechanism.

All electrical connections are made by means of plug-and-socket devices. It is possible to admit flush air via a special connection. Each measuring cell has a platinum thermocouple (Type S / Pt10RhPt).

The electrical signals of these oxygen measuring cells can be converted to quantities which can be derived from oxygen partial pressure with the aid of an electrical evaluation unit.

Applications

Suitable for carburizing atmospheres, carbonitriding and endothermic gas generators.

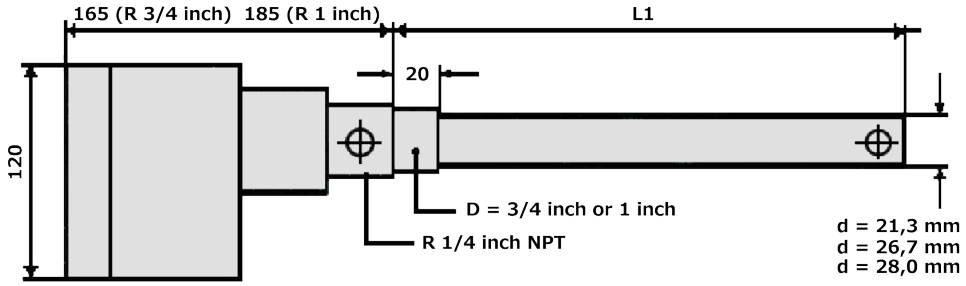
- **CS 87 ¾ inch**
  Available in two standard lengths 700 and 900 mm (27.5 and 35.4") and in eight other lengths with an outer diameter of 21,3 mm (3/4").
- **CS 87 1 inch**
  Available in two standard lengths 700 and 900 mm (27.5 and 35.4") and in eight other lengths with an outer diameter of 26,7 mm (1").
- **CS 2000**
  Available in two standard lengths 700 and 900 mm (27.5 and 35.4") with an outer diameter of 28 mm (1.1"). The ceramic outer tube makes it possible to install the probe in a horizontal position.

Technical data

Oxygen measuring range:	1 - 10 $^{-24}$ bar
Temperature range:	600°C-1100 °C (1112°F-2012°F)
Thermocouple:	Type S / Pt10RhPt
Purge air:	50-100 l/h (1.76-3.53 cfh)
Reference air:	5 - 10 l/h
Ambient temperature of the connection head:	max. 80 °C (176°F)

Features and Benefits

- Easily installed and connected to your equipment
- Modular construction allows easy disassembly /assembly and fast replacement of parts
- Robust design withstands thermal shocks
- Self-cleaning mechanism ensures constant accuracy of signal detection
- Accuracy +/- 0.05 weight percent carbon in normal operating range
- Response time less than 1.0 second



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