



TRADE AND COMMERCE
CANADA

S-GA.227

STANDARDS BRANCH

OTTAWA May 24, 1962.

TYPE APPROVALBARTON TYPE 199 METER BODY AND TYPES 202 AND 208 FLOW METERS

The apparatus specified herein has been duly approved by the Standards Branch under the provisions of the Gas Inspection Act, Chapter 129, R.S. 1952, and may be admitted to verification in Canada.

Apparatus Approved: Barton Type 199 Meter Body and Barton Types 202 and 208 Flow Meters, manufactured by the Barton Instrument Corporation, Monterey Park, California, U.S.A., and distributed in Canada by Precision Oilfield Services (1962) Ltd., 121 - 14th Street North West, Calgary, Alberta.

Application: Measurement of gas in conjunction with standard orifice plates.

Rating of Apparatus:

Differential Ranges*	0-15, 0-20, 0-25, 0-50, 0-100, 0-150, 0-200 inches water gauge
Working Pressure	Brass 300 p.s.i.
(depends on chamber material)	Forged Stainless 2500 p.s.i. Forged Steel 1000 and 2500 p.s.i. Forged Alloy 4500 p.s.i.
Static Pressure Ranges	0-50 p.s.i. to 0-5000 p.s.i.

*Note: The standard ranges are listed; however, intermediate ranges between the limits of 0-15 and 0-300 inches water gauge are approved.

Description: The Model 199 Meter Body is a bellows type differential element which the manufacturer considers to be rupture proof. The unit consists essentially of a central support plate to which are attached a pair of opposed, mechanically-linked, liquid-filled metallic bellows, pressure housings surrounding the bellows, and a torque-tube drive for transmitting movement of the bellows to the indicating or recording mechanism.

The outer or closed ends of the bellows are joined by a dual valve stem which passes through a hole in the central support plate. The bellows thus form twin chambers joined by an annular passage around the valve stem. These chambers are filled and permanently sealed with clean, non-corrosive, low-freezing-point liquid. Therefore, when a differential pressure is applied to the unit, the bellows assembly moves as a unit in the direction of the lower pressure. In doing so, the bellows on the higher pressure side decreases its volume while the bellows on the opposite side expands and the liquid within the bellows assembly must pass from one bellows chamber to the other through the annular passage between the valve stem and the central plate. Movement of the

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