Department of consumer and corporate affairs / Ministère de la consommation et des corporations

STANDARDS BRANCH - DIRECTION DES NORMES

NOTICE OF APPROVAL

G-54

OTTAWA October 23, 1969

MERCURY INSTRUMENTS, INC. RECORDERS WITH METER DRIVEN CHARTS

Apparatus

Approved Models

(1) Pressure-Volume Recorders, Models 705 and 805
(11) Pressure-Volume-Time Recorder, Model 706
(111) Pressure-Volume-Temperature Recorders, Models 707 and 807
(1V) Pressure-Volume-Temperature-Time Recorder, Model 717
(V) Volume-Time Recorder, Model 820

Static pressure ranges, psig

(1) Diaphragm elements — from 0-0.25 to 0-30
(11) Helical elements — from 0-31 to 0-3,000

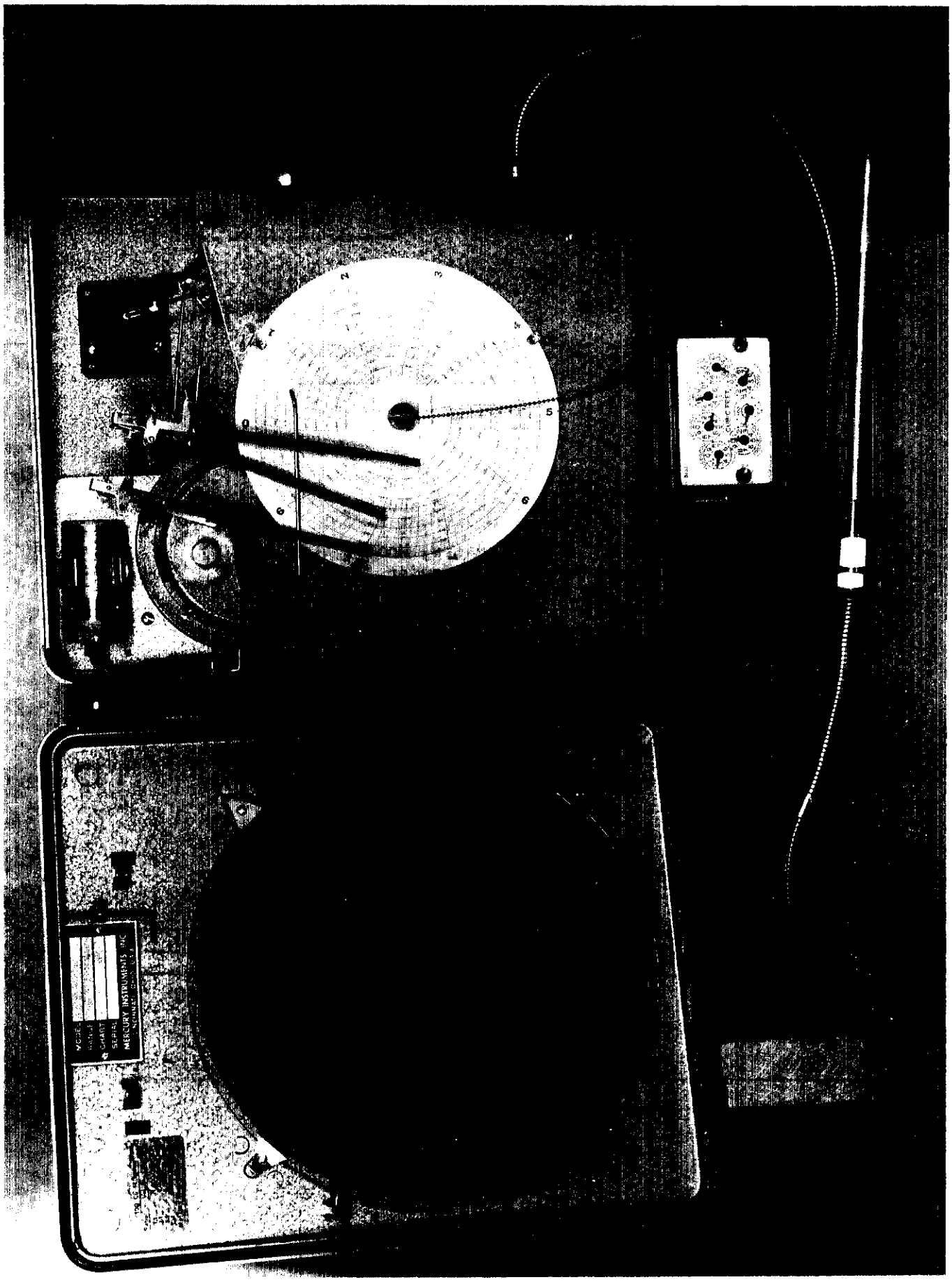
Temperature ranges, °F — 0 to +100; 0 to +150; -20 to +130; -30 to +120

Time marking — Every hour or every 24 hours

Volume per chart revolution, cu. ft.

Change Gear Ratio	Meter Test Hand Volume - Cu. Ft. Per Rev.		
	5	10	100
1:1	50,000	100,000	1,000,000
2:1	100,000	200,000	2,000,000
5:1	250,000	500,000	5,000,000
10:1	500,000	1,000,000	10,000,000

MERCURY INSTRUMENTS, INC. RECORDERS WITH METER DRIVEN CHARTS



NOTE: Above volume data corresponds to a gear train ratio of 10,000:1 from the register to the chart hub. A 100,000:1 gear train is also available and the volumes per chart revolution would be changed accordingly.

Description

The recorders with meter-driven charts perform basically similar function to the recorders with clock-driven charts, approved under circular G-55.

They may incorporate suitable pressure and/or temperature measuring systems with appropriate linkages to their recording pens. Each recorder in the models 706, 717 and 820 is equipped with an approved chart drive clock which carries a suitable cam on its hub. This cam is arranged to actuate an additional pen which produces time pips, or marks, on the outer edge of the chart.

All recorders are mounted on a die-cast aluminum housing which carries an index selected to match the size of the meter. At the lower end of this housing a reversible base plate is attached, suitably drilled to match the meter. Reversible gearing is also incorporated in the index housing to match the drive output of the meter to which the recorder is attached.

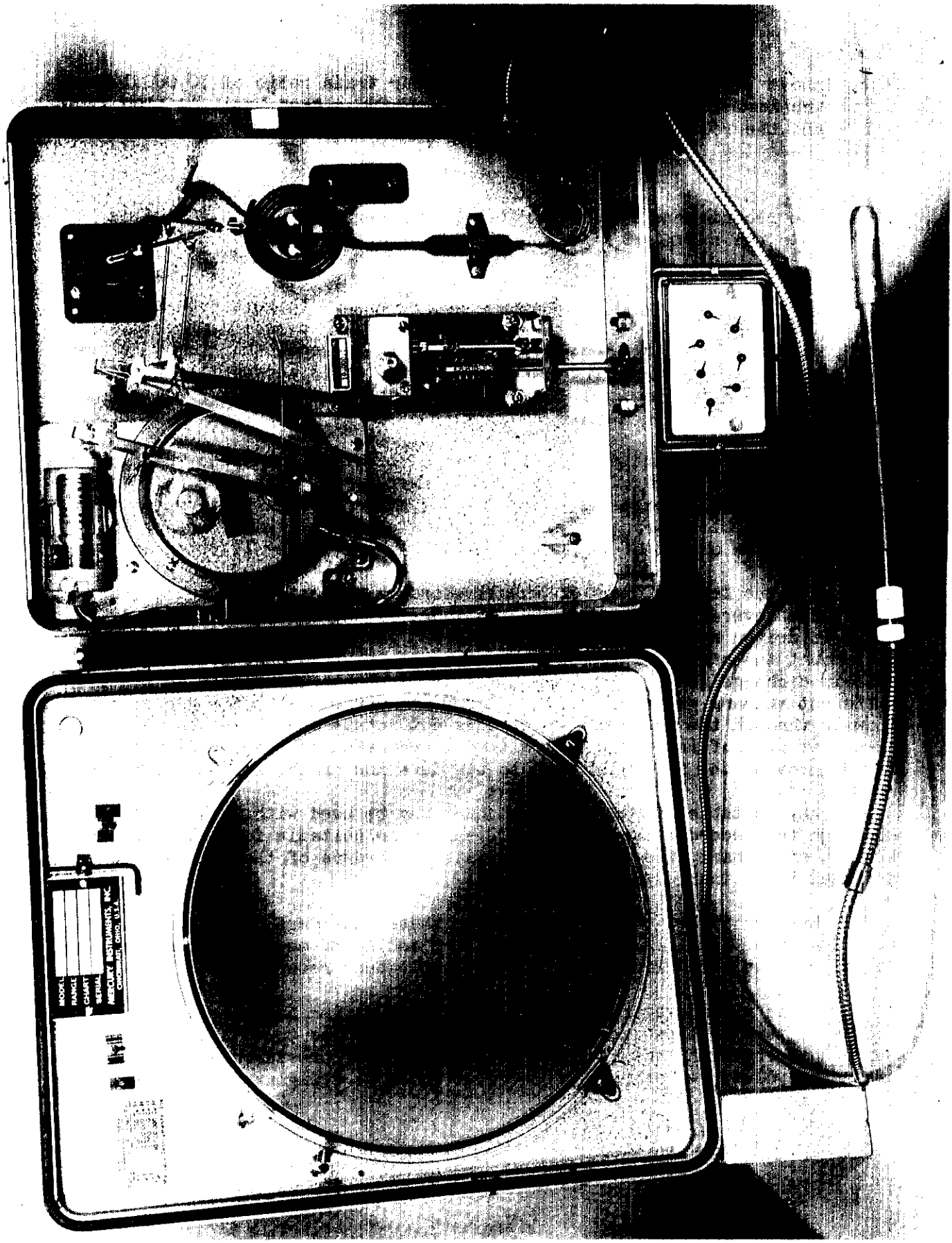
The hub for the chart in these recorders connects, through a gear train with several change gears to the index of the meter. In this way the chart is driven by the meter and the metered gas volume is represented by the amount the chart has rotated. The gear drive train has four self-contained change gears which permits selecting a chart rotation to represent different volumes per revolution. During the periods when the gas is not flowing through the meter the chart does not rotate and it may be noted that this type of recorder, even with the inclusion of the time marking pen, cannot provide the information as to the duration of the gas shut-off period.

Any suitable approved 8 inch chart may be used with these recorders. Although the recorder case of the 700 series is suitable for accepting the 12 inch size chart, the meter-driven chart recorders of that series are designed for 8 inch size chart only.

Mercury filled thermal systems in these recorders comprise a five foot length of flexible, armoured capillary and a chrome-molybdenum steel spiral element which links up with the temperature recording pen.

These recorders are intended for use on larger capacity diaphragm, rotary or turbine type gas meters. The chart is used to establish required weighted correction factors for temperature and/or pressure in order to express the volume registered by the meter index at designated base conditions for billing.

MERCURY INSTRUMENTS, INC. RECORDERS WITH METER DRIVEN CHARTS



Each recorder shall have a nameplate which includes, where applicable, makers name, model and serial number of the instrument, pressure and temperature ranges, time marking increment and volume per chart revolution.

Approval granted to:

Parkinson Cowan (Canada) Limited,
Chatham, Ontario.

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