

Model D-06200-00

MULTI-POINTER GAUGES

Hays Cleveland Model D-06200-00 MULTI-POINTER GAUGES offer indicating measurement of several pressure variables in one compact enclosure for easily scanned readings.

DESCRIPTION

Hays Cleveland Model D-06200-00 MULTI-POINTER GAUGES, available in semi-flush or surface-mounted enclosures, are designed for applications requiring two or more indicating scales in a limited area and on a limited budget.

A three-way selector valve is a standard feature that permits the operator to reset to zero and clean the sample lines without disturbing the unit's factory-set calibration. Another standard feature is a special beryllium calibrating spring that provides permanent, unvarying tension.

OPERATION

Each gauge segment has a pressure-sensing element (moveable diaphragm) and a single pressure port on one side of the diaphragm for either low air pressure or draft applications. Gauge pointer movement is in proportion to variations of input pressure.

A wide range of standard scales is available, including pressure and draft ranges as well as compound or zero-crossing ranges, calibrated to inches water column (w.c.). Please consult the Standard Indicating Scales table on the back of this bulletin, or consult your local **Hays Cleveland** technical representative for the availability of special-order ranges.



SPECIFICATIONS

Power: 120 v AC, 60 Hz. (with illumination option only).

Scales: Translucent Lucite with large numbers.

Adjustments: External zero, front-adjustable.

Calibration: Factory-set.

Segments: Field-removable.

Labels: Engraved plastic identification for each segment. Standard are: Pressure, Draft, Furnace, Last Pass, Windbox, Uptake, Underfire, Overfire, Outlet, Exit Gas, Oxygen, Boiler 1, Boiler 2, Boiler 3. Specials are available.

Mounting: Surface or semi-flush panel mounting.

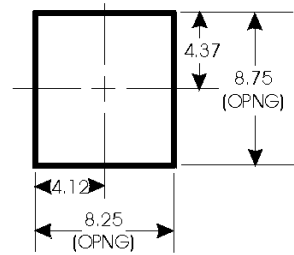
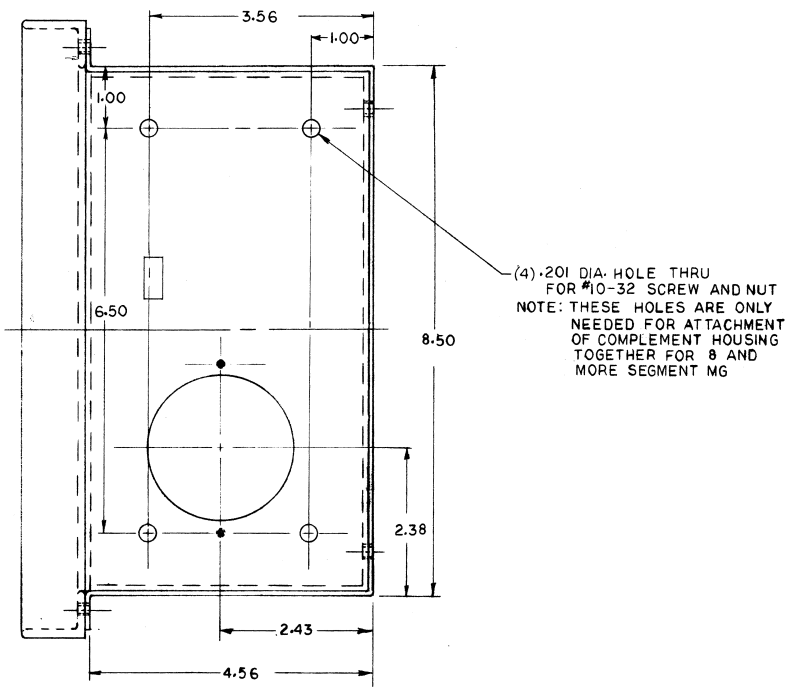
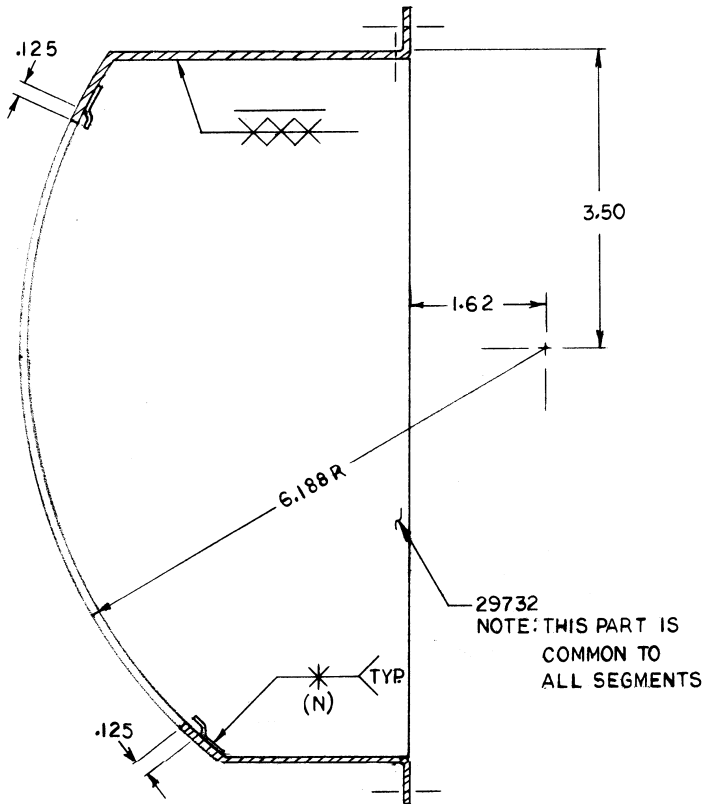
Construction Material: Durable, dust-tight sheet metal construction, fully gasketed.

Finish: Black baked enamel.

Diaphragm Material: Buna-N and Thiokol-coated nylon.

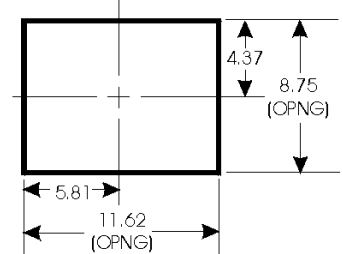
Shipping Weight (Approximate): 20 lbs. (2 segment model), 24 lbs. (3 segment model), 40 lbs. (4 segment model), 44 lbs. (5 segment model).

Specifications subject to change.



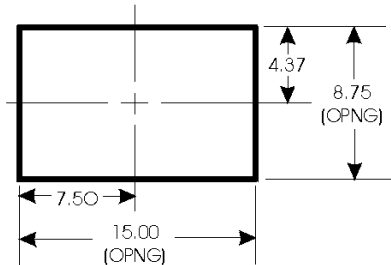
2 SEGMENT PANEL CUTOUT

FRAME SIZE:
9.88H x 8.63W x 4.56D



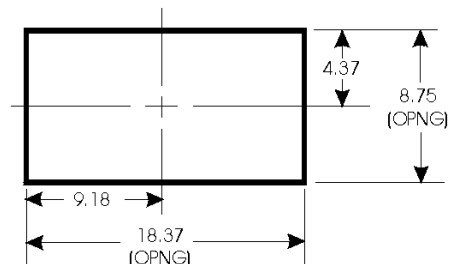
3 SEGMENT PANEL CUTOUT

FRAME SIZE:
9.88H x 12.00W x 4.56D



4 SEGMENT PANEL CUTOUT

FRAME SIZE:
9.88H x 15.38W x 4.56D



5 SEGMENT PANEL CUTOUT

FRAME SIZE:
9.88H x 19.00W x 4.56D

MOUNTING

Install in any convenient location in the boiler room where temperature is not excessive, preferably on a panel or in a cabinet with other controls and instruments.

PIPING

Sample fittings are standard 1/4" pipe taps at the top of each segment. 3-way valves are supplied for each sample line, which should be installed in these fittings. Use any standard fitting for 1/4" pipe or tubing for connection to the valve.

Sample lines should be run to the locations best suited for obtaining good samples. The following line sizing is recommended:

<u>Linear Length*</u>	<u>Inside Diameter of Pipe or Tubing</u>
Less than 20 feet	1/4"
20 to 60 feet	1/2"
Over 60 feet	3/4 or 1"

**When computing length of line where pipe is used, add an extra 4 feet for each 90° fitting.*

If a common sample line is used for an automatic draft controller and one of the gauge segments, follow sizing instructions furnished with the controller for this line. If pipe is used, all joints should be doped and air-tight. Wherever possible a tee and plug should be used instead of an ell, to facilitate cleaning the line. Union connections should be installed close to the gauge.

For furnace draft or pressure indication, where the sample line enters the boiler, it should be a 1 1/2" pipe in a 2" sleeve. On new installations boiler specifications should call for overfire sample line of 1 1/2" pipe welded in proper location. On existing installations a 2" sleeve should be installed through a side wall, close to the center of the furnace and well above the fire. The opening should be chamfered at the inside surface, and sample line should end at the chamfer – not extending into the firing chamber. See Figure 1 for typical furnace connections.

For windbox pressure indication, the air sample should be taken from a location in the passage between the fan and the boiler where it will not be affected by turbulence or a damper opening. Avoid "dead air" spaces in corners or ells of a passage, and any obstructions that will prevent an accurate air sample.

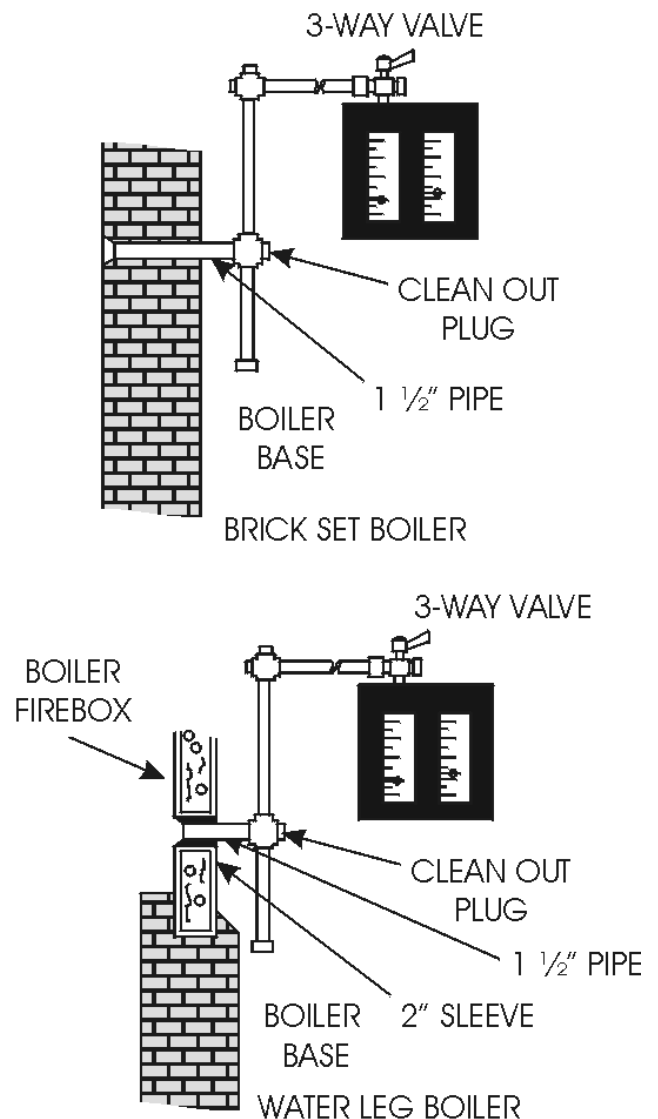
For last pass draft or pressure indication, sample should be taken from the breeching at the boiler outlet where it is not affected by damper openings or "dead air." If the boiler has two outlet passages, sample should be taken from the common breeching.

ZERO ADJUSTMENT

All gauge segments have provisions for resetting to zero without disturbing the calibration, which has been accurately made at the factory. The zero adjustments are small slotted screw heads externally located above each segment. Zero adjustments are made by simply turning the 3-way valves to "off" position and turning the adjusting screws with a screwdriver until the pointers read exactly zero.

Zero adjustments should be made after the gauge has been installed and in operation for several days. This allows the diaphragm to attain its normal operating position, which is sometimes temporarily dislocated during shipment or storage. Original calibration is fixed, and it is recommended that gauges be returned to the factory if recalibration is required.

FIGURE 1: TYPICAL FURNACE DRAFT OR PRESSURE SAMPLE CONNECTION



HOW TO ORDER

The basic catalog number for the **Hays Cleveland Model D-06200-00 MULTI-POINTER GAUGE** is D-062. To this model designation, add suffixes A through EE to build the complete catalog number for your particular indicating gauge. Selection of the suffix numbers can be made from the table by choosing the number adjacent to the desired element and from the Standard Indicating Scale table.

Where a suffix is not applicable, use a zero or double zero. The number of segments (A) will indicate the model nomenclature length and segments. Complete the model number after the last segment with the illumination options (EE).

List segment labels separately (reading from left to right). For other than standard headings, words are limited to 10 characters and there is an additional cost.

To order, continue segments to complete model designation. For example:

D-062AB-CCDD-CCDD-(etc.)-EE

All units will be shipped matching position of model designation from left to right.

Available Options:

- Internal Illumination
- Special Segments
- Identification Labels

A. Number of Segments:

- Two (A=2)
- Three (A=3)
- Four (A=4)
- Five (A=5)

B. Enclosure Mounting Style:

- Semi-Flush Panel Mount (B=1)
- Surface Mount (B=2)

CCDD: Complete a set of these designations for each segment required. Repeat even if values are identical.

CC. Segment Pointer Elements:

- Single-Scale, Pressure or Draft Range, Inches w.c. (CC=01)
- Compound (Zero-Crossing) Range, Inches w.c. (CC=02)

DD. Segment Scale Range Options:

- Select from Standard Indicating Scale Table (DD=03 to 41).
- Specify the Desired Range Information for Custom Scales. Consult factory for range availability. (DD=90)

EE. Internal Illumination:

- Without Illumination (EE=00)
- Illumination Provided (EE=01)

Service Legends: Please Provide a Label Legend for Each Segment. Maximum 10 Characters. Standard Headings Include:

- Windox
- Draft
- Furnace
- Outlet
- Last Pass
- Uptake
- Boiler 1
- Boiler 2
- Boiler 3
- Pressure
- Underfire
- Overfire
- Exit Gas
- Economizer

STANDARD INDICATING SCALES (DD)

Scales listed in Section One are Draft/ Suction and Pressure Range Scales used with Element CC=01.

Scales listed in Section Two are Compound Range Scales used with Element CC=02.

Section One		Section Two	
03	0 to -0.5	25	-0.2 to +0.6
04	0 to -0.6	26	-0.2 to +4.0
05	0 to -1.0	27	-0.2 to +7.0
06	0 to -1.5	28	-0.2 to +8.0
07	0 to -2.5	29	-0.3 to +3.0
08	0 to -5.0	30	-0.5 to +1.0
09	0 to -8.0	31	-0.5 to +2.0
10	0 to -10.0	32	-0.5 to +3.0
11	0 to -20.0	33	-0.5 to +5.0
12	0 to +2.5	34	-0.5 to +8.0
13	0 to +3.0	35	-1.0 to +1.0
14	0 to +4.0	36	-1.0 to +6.0
15	0 to +5.0	37	-2.0 to +1.0
16	0 to +6.0	38	-2.0 to +2.0
17	0 to +8.0	39	+1.0 to -4.0
18	0 to +9.0	40	+1.0 to -0.5
19	0 to +10.0	41	+1.0 to -1.0
20	0 to +12.0		
21	0 to +14.0		
22	0 to +15.0		
23	0 to +20.0		
24	0 to +30.0		

Note: If input signal is other than standard scale range listed, please specify required range and scale separately and insert DD=90 in model designation.

Other ranges, including metric, are available upon special order.

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