Mark II Molded Plastic Manometers
3% Accuracy For Stationary And Portable Applications

Dwyer® Mark II series molded manometers are of the inclined and inclined-vertical types. The curved inclined-vertical tube of the Model 25 gage provides higher ranges with more easily read increments at low readings. The Model 2520 is excellent for general purpose work. The Model 40 inclined gage provides linear calibration and excellent resolution throughout its range. The Model 40 is ideally suited for air velocity and air filter gage applications. Both gage types are capable of pressure measurements above and below atmospheric as well as differential pressure measurements.

CONSTRUCTION
Mark II manometers are economically priced, compact and available in both stationary and portable configurations. Portable stand is standard on Model 40, available as optional A-612 stand for Model 25. Construction is simple with virtually indestructible molded white styrene-acrylonitrile housing, indicating tube and fluid wells, molded ABS knobs and zero adjust plungers, shock mounted glass level vial and leak proof O ring seals. Moderate overpressures are accommodated by an overflow tank incorporated in the Model 25. Greater protection is provided by float wells, molded ABS knobs and zero adjust plunger, shock mounted glass level vial and epoxy coated.

INSTALLATION
Mark II manometers can be mounted on any vertical surface with the two mounting screws provided. A built-in spirit level simplifies leveling before mounting screws are tightened. Simply fill the reservoir, adjust fluid level to zero, connect the tubing, and the gage is ready for operation.

ACCESSORIES
Included with each Mark II manometer are two tubing connectors for 1/8˝ pipe or sheet metal ducts, two mounting screws, 1 ounce bottle of indicating fluid, red and green pointer flags and complete instructions.

The Model 25 also includes 8´ of flexible double column plastic tubing. Portable operation of the Model 25 is made possible by the use of the optional A-612 portable stand. A short piece of tubing can be slipped over the Model 25 pressure connections to contain the gage fluid in transit. The Model 40 contains two 4-1/2˝ lengths of clear plastic tubing, a plastic swing-out shutoff pressure connections and integral overpressure safety traps.

OEM SPECIALS
All Dwyer® Mark II molded plastic manometers can be supplied in OEM quantities with your name or special graphics and scales.

SPECIFICATIONS

INCLINED/VERTICAL
Accuracy: ±3% FS.
Temperature Limits: 140°F (60°C).
Pressure Limits: 10 psi (70 kPa).
Weight: 1.04 lb (472 g).

SPECIFICATIONS
INCLINED
Accuracy: ±3% FS.
Temperature Limits: 150°F (65°C).
Pressure Limits: 15 psi (100 kPa).
Scale Length: Approx. 8-1/4˝ (21 centimeters).
Weight: 1.23 lb (558 g).

ACCESSORIES
A-612, Portable Stand
A-606, Air Filter Kit
A-480, Plastic Static Pressure Tip
A-489, 4˝ Straight Static Pressure Tip with Flange

*Require Pitot tube at additional cost.

Model
Range
Fluid Used
Mark II 25
0-3 in w.c. Red fluid, .826 s.g.
Mark II 26
0-7 in w.c. Blue oil, 1.91 s.g.
Mark II 27
0-7000 fpm Red fluid, .826 s.g.
Mark II MM-80
0-80 mm w.c. Red fluid, .826 s.g.
Mark II M-700PA
10-0-700 Pa Red fluid, .826 s.g.

Model
Range
Fluid Used
Mark II 40-1
1-0-1.0 in w.c. Red fluid, .826 s.g.
Mark II 40-25MM
0-26 mm w.c. Red fluid, .826 s.g.
Mark II 40-250PA
10-0-250 Pa Red fluid, .826 s.g.
Mark II 41-60MM
0-60 mm w.c. Blue oil, 1.91 s.g.
Mark II 41-600PA
20-0-600 Pa Blue oil, 1.91 s.g.

Process Tubing Options: See page 547 (Gage Tubing Accessories)
Pitot tube: See pages 107-138 (Air Quality section)
Inclined Manometer Air Filter Gages
Precision Machined, Solid Acrylic Plastic Gages, Accurate To ±1% Of Full Scale

FEATURES
Highly accurate and easy to use yet almost indestructible, Dwyer® Series 250-AF Inclined Air Filter Gages are foolproof and dependable. There are no moving parts — no mechanical linkages — nothing to wear out, jam or deteriorate from vibration. They never need calibration. The mirror polished inclined scale allows the operator to easily read minute differences in differential pressure across the filter accurately without parallax error. The only servicing required is occasional zeroing. If cleaning is necessary, it is easily done with soap and water.

CONSTRUCTION
Dwyer® DURABLOCK® Series 250-AF Gages are precision machined 1” thick solid acrylic plastic, virtually unbreakable and free of distortion. The fluid bore is precision drilled to ±0.0002” to assure life long accuracy. A glass spirit level is built into the body and encapsulated to prevent damage or tampering. The scale is mirror polished chrome plated brass to assure parallax free reading by alignment of the meniscus with its reflection. Safety traps are incorporated in the body to prevent loss of fluid due to pressure surges. Red and green signal flags indicate clearly when a filter change is necessary. Gages are suitable for use in ambient temperatures of -20 to 150°F. Connection fittings are positively sealed by O rings but easily removed for change is necessary. Gages are of 5/8” thick acrylic and scales are mirror polished, epoxy coated aluminum.

Economy Model 452-AF is similar to the 250 Series except they are not equipped with over pressure traps. Two A-324 1/4” compression fittings are included with each gage but not shown. Bodies are of 5/8” thick acrylic and scales are mirror polished, epoxy coated aluminum.

<table>
<thead>
<tr>
<th>Model</th>
<th>Range: Water Column</th>
<th>Minor Divisions</th>
<th>Scale Length (Inclined)</th>
<th>Overall Size (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>250-AF</td>
<td>10-0-1.0”</td>
<td>.02”</td>
<td>5-1/2</td>
<td>8-1/2 x 4-1/8 x 1</td>
</tr>
<tr>
<td>250.5-AF</td>
<td>10-0-1.0”</td>
<td>.01”</td>
<td>8</td>
<td>11-3/8 x 4 x 1</td>
</tr>
<tr>
<td>251-AF</td>
<td>05-0-1.0”</td>
<td>.01”</td>
<td>5-1/2</td>
<td>8-1/4 x 3-3/8 x 1</td>
</tr>
<tr>
<td>252-AF</td>
<td>20-0-2.0”</td>
<td>.02”</td>
<td>11-1/8 x 6-1/2 x 1</td>
<td></td>
</tr>
<tr>
<td>260-AF</td>
<td>0-1.5”</td>
<td>.02”</td>
<td>5-1/2</td>
<td>8-3/8 x 5-7/8 x 1</td>
</tr>
<tr>
<td>452-AF</td>
<td>0-2”</td>
<td>.02”</td>
<td>8</td>
<td>11 x 4 x 5/8</td>
</tr>
</tbody>
</table>

▲ 2 PSI Maximum Working Pressure

ACCESSORIES
A-310B, 3-way vent valve, 1/8” NPT to 1/4” metal tubing, 10 psi rating
A-31T, Gage connector, 1/8” pipe thread opening, less OD thread, for slip fit in 3/4” diameter opening in Series 250-AF gages

Durablock® Solid Plastic Stationary Gages
Suitable for Total Pressures Up to 100 psig, Temperatures Up to 150°F
Accuracy ±2% of Full-Scale (1% on Models 215, 244, 246 Only)

Dwyer® solid plastic stationary gages — or draft gages — are offered in inclined and vertical (weld-type) styles for highly accurate laboratory or general industrial service, for measurement of low range gas and air pressures, positive, negative or differential. To assure the accuracy required in instruments of this type, all machining of bores and wells is to the highest standards of precision backed by Dwyer’s years of experience in the fabrication of acrylic instruments.

Over-Pressure Safety Traps Prevent Fluid Loss
Exclusive Dwyer® over pressure safety traps assure that over range pressures whether gradual or a sudden surge will not force the liquid out of the gage. Over pressures simply raise the float, force the O-ring over the opening and seal the fluid in the gage. When pressure is reduced, float drops down releasing the O-ring safety trap opens and the gage continues in operation.

Incline Type
Model of Water | Range Inches | Minor Scale Divisions | Scale Length | Weight lbs
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>200.5</td>
<td>10-0-1.0”</td>
<td>.01</td>
<td>8-1/4</td>
<td>3-11</td>
</tr>
<tr>
<td>202.5</td>
<td>20-0-2.0”</td>
<td>.01</td>
<td>8-3/4</td>
<td>4-7</td>
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<tr>
<td>209</td>
<td>10-0-4”</td>
<td>.02</td>
<td>8-3/4</td>
<td>4-11</td>
</tr>
<tr>
<td>215</td>
<td>05-0-25</td>
<td>.005</td>
<td>6</td>
<td>2-14</td>
</tr>
<tr>
<td>244</td>
<td>0-4”</td>
<td>.02</td>
<td>13-1/4</td>
<td>9-11</td>
</tr>
<tr>
<td>246</td>
<td>0-6”</td>
<td>.02</td>
<td>13-14</td>
<td>13-14</td>
</tr>
</tbody>
</table>

Vertical or Well-Type
Model | Range | Minor Scale Divisions | Scale Length | Weight lbs
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>310</td>
<td>0-10”</td>
<td>.02</td>
<td>11-1/8</td>
<td>3-10</td>
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</tbody>
</table>


OPTION
For NIST traceable calibration certificate, add suffix -NIST to model numbers. Example: 244-NIST.
Dwyer® Inclined-Vertical Manometers

424-10 Inclined-Vertical Manometer.

Ranges And Dimensions – Suitable for Total Pressure up to 100 psig, Temperatures up to 150°F

<table>
<thead>
<tr>
<th>Model</th>
<th>Inclined Range Inches of Water</th>
<th>Inclined Minor Scale</th>
<th>Length of Inclined Scale</th>
<th>Vertical Range Inches of Water</th>
<th>Vertical Minor Scale</th>
<th>Length of Vertical Scale</th>
<th>Dimensions</th>
<th>Weight lb-oz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>2-0</td>
<td>.01</td>
<td>6-1/2</td>
<td>1.1-10</td>
<td>10</td>
<td>9</td>
<td>10-1/8</td>
<td>25-1/4</td>
</tr>
<tr>
<td>Column</td>
<td>1-10</td>
<td>.01</td>
<td>6-1/2</td>
<td>1.1-10</td>
<td>10</td>
<td>4-5/8</td>
<td>6-1/2</td>
<td>3-1/4</td>
</tr>
<tr>
<td>Double</td>
<td>2-0</td>
<td>.01</td>
<td>6-1/2</td>
<td>1.1-10</td>
<td>10</td>
<td>4-5/8</td>
<td>6-1/2</td>
<td>3-1/4</td>
</tr>
</tbody>
</table>

*Single column metric-ranges and divisions in millimeters.

Dwyer® Model 424 inclined-vertical manometers are extremely accurate instruments designed and made especially for precision measurement of low differential pressures in laboratory and test applications. The inclined range bore has a length of 20" to provide ample multiplication of indicating fluid movement in this critical lower part of the range.

Series 420 Inclined-Vertical Manometers Accurate To ±1%

Typical of Series 420 Inclined-Vertical Manometers is Model 422-10 double column manometer with a total range of 0 to 10" of water. Single column models are also furnished. Design features are essentially the same as for the Series 424. They are accurate to ±1% and are particularly suited for use with pilot tubes and in flow measurement or similar applications.

STANDARD ACCESSORIES
Include two 1 oz bottles of .826 red gage fluid (1.91 blue gage oil for models 421-23 and 422-23), rapid shut-off type “a” connections, two 3 ft lengths of clear plastic tubing and two 1/8˝ NPT tubing adapters — two sets for double column models.

Series 1230 & 1235 Flex-Tube® Well-Type Manometers

Dwyer® Flex-Tube® Well Type Manometers are designed to meet the need for a direct reading single column instrument providing highly accurate pressure readings; positive, negative or differential. Unlike other makes, Dwyer® manometers have no hidden wells or packing glands. These instruments are constructed of shatterproof clear plastic tubing permanently bonded to well assemblies with leakproof glued joints. Well assemblies are precisely machined from solid acrylic plastic. Overpressure safety traps assure protection against loss of fluid. Heavy pure white acrylic plastic scales have sharp black silk screened figures and graduations sealed with clear mylar coating. Scales are adjusted with quick-acting positive mechanism. Heavy heat treated aluminum back plates have durable gray hammerfinish finish. These manometers are rated to 100 psig (69 bar). Not recommended for vacuum service beyond 5 in. Hg (68 in w.c.).

OPTION
For NIST traceable calibration certificate, add suffix -NIST to model numbers. Example: 1222-8-W/W-NIST.