

**INSTALLATION AND OPERATING INSTRUCTIONS**

**Differential Pressure Meter  
Model: CBDM 135/60**

This CBDM 135/60 Differential Pressure Meter is a precision measuring instrument designed to measure the differential pressure of liquids between two points in a pressurized system.

The instrument can cover a broad range of differential pressures with accuracies of + 3-2-3% full scale (ascending).

Both gauges are protected against over-range to the maximum working pressure of the system.

While primarily used for balancing HVAC Systems it has numerous other applications such as checking pressure drop across filters, checking pump performance, etc.



**SAFETY PRECAUTIONS**

**Caution!**

The CBDM should only be used by qualified personnel, in accordance with all applicable codes, and following generally accepted safety practices.

**Warning!**

Always exercise extreme caution when connecting any instrument to a pressurized system.

**Warning!**

Prevent operator exposure to pressurized fluid leaks to avoid personal injury.

**Caution!**

Always drain system and hoses after use.

**Caution!**

Never allow liquid to freeze in the system or hoses.

**MATERIALS OF CONSTRUCTION**

Gauges	<ul style="list-style-type: none"> <li>• One Polysulfone Body, One Aluminum Body</li> <li>• Stainless Steel Internals</li> <li>• Buna-N Seals</li> </ul>
Dials	<ul style="list-style-type: none"> <li>• One 4-1/2" Dial Model 130 with 0-135" H<sub>2</sub>O</li> <li>• One 4-1/2" Dial Model 140 with 0-60 ft. H<sub>2</sub>O</li> </ul>
Fitting / Filters	<ul style="list-style-type: none"> <li>• Brass</li> </ul>
Hoses	<ul style="list-style-type: none"> <li>• Nitrile Jacket and "Schrader" 1/4" Brass Coupler. (Connects with 1/4" 37° Flare Male Fittings)</li> </ul>
Case	<ul style="list-style-type: none"> <li>• Plastic, shock-resistant</li> </ul>



## **NORMAL OPERATION**

1. Connect hoses to test connections - red high pressure hose upstream, green low pressure hose downstream.
2. Open valves on device being tested, and read differential pressure.
3. Upon completion of test, close valves, disconnect hoses and store them in test kit case.

The CBDM 135/60 is equipped with filters near the ends of the hoses. If the gauges respond slowly to changes in differential pressure, the filter elements may be partially plugged. Refer to **Maintenance and Repair Procedures – Cleaning Filters** should this condition be encountered.

## **ENVIRONMENTAL CONDITIONS**

The CBDM 135/60 is a precision measuring instrument intended for storage and use indoors only. Keep in a clean, safe, dry place, where ambient temperature is maintained between 32°F and 100°F (0°C and 30°C), and relative humidity is maintained between 5% and 95%.

## **PREVENTATIVE MAINTENANCE PLAN and SCHEDULE**

The CBDM 135/60 does not require any special preventive maintenance. However, before each use, and at least annually, all hoses should be inspected for cracks, and fittings for tightness. Additionally, the system should be calibrated at least every 3 years. Contact S. A. Armstrong Limited, Service Department, for calibration information.

## **MAINTENANCE and REPAIR PROCEDURES**

### **General**

The CBDM 135/60 does not require any special maintenance. Good housekeeping practices should be employed, typical for a precise measuring instrument. All components may be cleaned with water and mild detergent and should be wiped dry promptly with a soft cloth.

### **Cleaning Filters**

It is possible that if proper handling, care, and use of the instrument is not practiced, that the filters near the ends of the hoses can become plugged. To remedy this, unscrew the two halves of the filter housing and remove the brass filter element. It may be cleaned by flushing with mild detergent and water.

## **WARRANTY**

The standard Armstrong warranty (document file number 9.10) applies.

S. A. Armstrong Limited  
23 Bertrand Avenue  
Toronto, Ontario  
Canada, M1L 2P3  
T: (416) 755-2291  
F (Main): (416) 759-9101

Armstrong Pumps Inc.  
93 East Avenue  
North Tonawanda, New York  
U.S.A. 14120-6594  
T: (716) 693-8813  
F: (716) 693-8970

Armstrong Holden Brooke Pullen  
Wenlock Way  
Manchester  
United Kingdom, M12 5JL  
T: +44 (0) 161 223 2223  
F: +44 (0) 161 220 9660



© S.A. Armstrong Limited 2005