Room Pressure Monitor/Alarm System

The cost-effective solution to monitoring negative or positive room air pressure continuously and accurately

SARS and the need for Emergency Preparedness have dramatically increased the number of negative pressure rooms required

Peace Medical, Inc.
Serving the Medical Community for over 30 Years
What is a Room Pressure Monitor/Alarm?
A Room Pressure Monitor/Alarm provides continual, accurate indication of positive or negative pressure in rooms where pressure maintenance is critical. When improper pressure or reversal of flow occurs, an audible and visible alarm is triggered to communicate the hazard. The visual portion of the alarm utilizes universal color coded displays to enable untrained personnel to properly respond to the indicated alarm status.

Why do you need them?
Hospitals and laboratories have long used pressure differentials between rooms (the flow of air from one room to another) as a method of protecting patients and staff from potentially dangerous chemicals and infectious pathogens. While this is an effective technique, it is often difficult to set up and maintain. The every day influences of building draft, temperature and filter loading cause these pressure differentials to fluctuate, and flow reversals to occur. Unintentional hazard conditions are thus created. Therefore, an effective monitoring system must be implemented to alert hospital/laboratory staff.

Are they cost-effective?
The appearance of SARS, tuberculosis and preparing for potential biological attacks have dramatically increased the number of negative pressure infectious isolation rooms hospitals must create and monitor. OSHA regulations dictate that rooms where potentially infectious patients are hospitalized, treated or receive cough-inducing procedures, must be checked for negative pressure on a daily basis. This can be accomplished by means of smoke tubes or air pressure sensing devices. Experienced test and balance contractors estimate smoke tube testing takes an average of 15 minutes per room, per day. If hospital maintenance staff are used to perform these tests, the costs can exceed $3000 per room, per year, and much more if an outside contractor is hired. When you factor in the cost of purchasing large quantities of smoke tubes, the cost rises further.

“Real Time” continuous Room Pressure Monitors need only be verified once a month according to CDC guidelines. The Monitors will pay for themselves in a matter of months while greatly reducing testing manhours, supply expenses, and the related OSHA paperwork.

Room Pressure Monitor/Alarms Feature:
- Measurement of dynamic pressure differential
- Adjustable time delay to allow for opening of doors
- Green, Yellow and Red universal status display
- Audible alarm with mute and automatic reset
- Pressure check valve that assures an alarm will sound if flow reversals occur
- Industrial quality for long term, low maintenance
- Low temperature sensors eliminate possible fire risk
- Remote alarm signal contact
- Analog contact to interface with building automation computers
- Easy installation and calibration with complete engineering support
- Two year warranty

Meets OSHA, ANSI and ASHRAE requirements

Typical Applications
Negative Rooms: Patient Isolation Rooms, Bronchoscopy Suites, Autopsy Rooms, Hospital Laboratories.
Positive Rooms: Operating Suites, Protective Patient Isolation Rooms, Radiology, Catheterization Labs.

Room Pressure Monitors
The RAM-2350 and RAM-2350-DKS Room Pressure Monitor/Alarm Systems provide a continuous, accurate indication of negative or positive airflow in areas where pressure differential is required. Pressure is read through a patented unidirectional check valve containing a mechanical seal that prevents the migration of contaminants into or out of the referenced area. This design eliminates flow reversal problems common to many other types of room pressure devices. Flow reversal can occur for a variety of reasons, turning a negative pressure room into a positive pressure room. The RAM unit will alarm when this situation occurs. Most devices on the market simply sense flow, they will not alarm when flow reversal occurs. This creates an extremely hazardous condition that will not be noticed until physical verification is performed.

Room Alert Monitors
The RAM Monitors utilize highly visible lighted displays (green, yellow, red) to indicate room pressure status. During a hazard condition, the red display lights and an audible alarm sounds. While the audible alarm may be manually muted, the red display remains lit until normal pressure has been restored (audible alarm will automatically rearm when normal pressure resumes). The audible alarm has an adjustable time delay (up to 90 seconds) to allow for staff entry and exit.

The Monitor system is installed through the wall between the negative pressure room and an adjacent area (see Diagram 1). The display plate mounts flush with the wall and is about the size of a normal light switch. The units can be installed and operational in less than an hour.

The RAM-2350-DKS includes a digital readout which displays the exact “Real Time” pressure differential in inches of water column.

Optional Remote Sensors
Both systems are available with Remote Sensors which are used when the Monitor/Alarm faceplate is desired at a different location. The Sensor allows pressure differential readings between the negative pressure room and an anteroom while condition status can be viewed at a nursing station, engineering room, hallway, etc.

Toll-Free: 800-537-9564 • Fax: 973-672...
**Check Valve Specifications**

**Body Material:** Carbon steel with epoxy coating

**Check Valve Material:** Polymide disc; temperature range of −269° to 400° C; yield strength of 10,000 psi

**Chemical Resistance:** Paraformaldehyde gas and ethylene oxide gas (standard decontamination gas)

**Ranges:**
- 0.1” to 0.001” wc normal differential pressure (RPC-1)
- 2.0” to 0.1” wc high differential pressure (RPC-2)
## Room Pressure Monitor/Alarm System Ordering Information

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>RAM-2350</td>
<td>Room Alert Monitor – complete with all components required to install and operate system</td>
</tr>
<tr>
<td>RAM-2350-DKS</td>
<td>Digital Readout Room Alert Monitor with alarm mute Key Switch – complete with all components required to install and operate system</td>
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<tr>
<td>Room Balance Capability</td>
<td>Automatic Damper Control Systems available to maintain a desired room pressure differential</td>
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<tr>
<td>RAM-2350-RAK</td>
<td>Remote Alarm Kit – allows hard-wiring of RAM-2350-DKS to a remote panel (i.e. nurse’s station) generating a visual and audible alarm at that location. Includes key switch to mute audible alarm.</td>
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**Call for more information and ask about a FREE thirty day Alert Monitor trial evaluation!**

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## Related Products Available From Peace Medical
- HEPA Filter Negative Pressure Room Conversion Systems, ceiling or floor configurations
- Fume Hood and Biosafety Cabinet Monitor/Alarms
- HEPA Filter Infectious “Source Control” Isolation and Transport Systems

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**Monitors**  
**Cost-Effective**  
Room Monitoring and Operating suites mandate negative pressure rooms  
Many states are mandating continuous monitoring of negative pressure rooms  
Over 5,000 installed and operating nationwide!