During a pandemic there is a sudden increase in demand for airborne infectious isolation rooms (AIIR). Traditionally hospitals are built with very few AIIR as these spaces are seldom used and are more expensive to build and operate than standard patient rooms. The pandemic ready patient room solution from Price and Antec Controls allows the hospital to build one room that can be used for either standard patient care or an AIIR, and can change between operational modes at the touch of a button.
ROOM REQUIREMENTS
ASHRAE Standard 170-2017 Ventilation of Health Care Facilities dictates the following requirements for standard patient rooms and airborne infectious isolation rooms.

<table>
<thead>
<tr>
<th>Standard Patient Room</th>
<th>Normal Operation</th>
<th>Airflow – Fresh</th>
<th>2 ACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Airflow – Total</td>
<td>4 ACH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure Differential</td>
<td>No requirement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exhaust</td>
<td>Washroom exhaust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Return</td>
<td>Room return grille located near door</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recirculation</td>
<td>Allowed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supply Diffuser</td>
<td>Not specified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Airborne Infectious Isolation Room</th>
<th>Isolation Mode</th>
<th>Airflow – Fresh</th>
<th>2 ACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Airflow – Total</td>
<td>12 ACH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure Differential</td>
<td>Negative 0.01 in. w.g. pressure monitor required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exhaust</td>
<td>Washroom Exhaust. Room exhaust located near patient head and directed ducted outdoors.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Return</td>
<td>Return not allowed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recirculation</td>
<td>Only allowed if room air is recirculated locally through a HEPA filter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supply Diffuser</td>
<td>Located near entry door. Air moves from clean to less-clean.</td>
</tr>
</tbody>
</table>
**Room Pressure Monitor (PMT)**
- **Normal Operation:** No room pressure requirement.
- **Isolation Mode:** Measures and displays room pressure. Activates FFU, closes return damper, and modulates exhaust damper to maintain negative room pressure.

**Recirculation Diffuser (SMD)**
- **Normal Operation:** Not in use.
- **Isolation Mode:** Recirculated, HEPA filtered air from FFU supplied to the room.

**Exhaust Grille (73SH)**
- **Normal Operation:** Exhausts air out of washroom.
- **Isolation Mode:** Exhausts air out of washroom.

**Exhaust Damper/Actuator**
- **Normal Operation:** Damper closed.
- **Isolation Mode:** Damper modulates to control exhaust airflow and maintain negative room pressure based on PMT control signal.

**Return Damper/Actuator**
- **Normal Operation:** Damper open to allow return airflow to the air handler.
- **Isolation Mode:** Damper closed to prevent return airflow to the air handler.

**Return Grille (80SR)**
- **Normal Operation:** Room air is returned to the air handler.
- **Isolation Mode:** Not in use.

**Combination Exhaust and Recirculating Fan Filter Unit (FFU)**
- **Normal Operation:** FFU not in use.
- **Isolation Mode:** FFU turns on based on PMT control signal. Air is drawn out of the room through a HEPA filter, exhausting a portion and recirculating the remainder.

**Supply Diffuser (SMD)**
- **Normal Operation:** Fresh air supplied to the room.
- **Isolation Mode:** Fresh air supplied to the room.

**Single Duct Terminal Unit with Reheat (SDV)**
- **Normal Operation:** Modulates supply airflow to the room.
- **Isolation Mode:** Modulates supply airflow to the room.

**CO₂/Humidity LCD Thermostat (TSTAT)**
- **Normal Operation:** Controls room temperature setpoint.
- **Isolation Mode:** Controls room temperature setpoint.

**Room Pressure Monitor (PMT)**
- **Normal Operation:** No room pressure requirement.
- **Isolation Mode:** Measures and displays room pressure. Activates FFU, closes return damper, and modulates exhaust damper to maintain negative room pressure.
Exhaust Grille (735H)
- Normal Operation: Exhausts air out of washroom.
- Isolation Mode: Exhausts air out of washroom.

Exhaust Damper/Actuator
- Normal Operation: Damper closed.
- Isolation Mode: Damper modulates to control exhaust airflow and maintain negative room pressure based on PMT control signal.

Return Grille (80SR)
- Normal Operation: Room air is returned to the air handler.
- Isolation Mode: Not in use.

Return Damper/Actuator
- Normal Operation: Damper open to allow return airflow to the air handler.
- Isolation Mode: Damper closed to prevent return airflow to the air handler.

Combination Exhaust and Recirculating Fan Filter Unit (FFU)
- Normal Operation: Not in use.
- Isolation Mode: FFU turns on based on PMT control signal. Air is drawn out of the room through a HEPA filter, exhausting a portion and recirculating the remainder.

CO₂/Humidity LCD Thermostat (TSTAT)
- Normal Operation: Controls room temperature setpoint.
- Isolation Mode: Controls room temperature setpoint.

Room Pressure Monitor (PMT)
- Normal Operation: No room pressure requirement.
- Isolation Mode: Measures and displays room pressure. Activates FFU, closes return damper, and modulates exhaust damper to maintain negative room pressure.

Single Duct Terminal Unit with Reheat (SDV)
- Normal Operation: Modulates supply airflow to the room.
- Isolation Mode: Modulates supply airflow to the room.

Supply Diffuser (SMD)
- Normal Operation: Fresh air supplied to the room.
- Isolation Mode: Fresh and recirculated, HEPA filtered air from FFU supplied to the room.
Exhaust Grille (735H)
- **Normal Operation:** Exhau... out of washroom.
- **Isolation Mode:** Exhau... out of washroom.

Return Damper/Actuator
- **Normal Operation:** Damper open to allow return airflow to the air handler.
- **Isolation Mode:** Damper closed to prevent return airflow to the air handler.

Exhaust Damper/Actuator
- **Normal Operation:** Damper closed.
- **Isolation Mode:** Damper modulates to control exhaust airflow and maintain negative room pressure based on PMT control signal.

Combination Exhaust and Recirculating Fan Filter Unit (FFU)
- **Normal Operation:** Air is drawn out of the room through a HEPA filter, and returned to the air handler or recirculated to the room.
- **Isolation Mode:** Airflow through FFU is increased in response to PMT control signal. Air is drawn out of the room through a HEPA filter, exhausting a portion and recirculating the remainder.

Supply Diffuser (SMD)
- **Normal Operation:** Fresh and recirculated, HEPA filtered air from FFU supplied to the room.
- **Isolation Mode:** Fresh and recirculated, HEPA filtered air from FFU supplied to the room.

CO₂/Humidity LCD Thermostat (TSTAT)
- **Normal Operation:** Controls room temperature setpoint.
- **Isolation Mode:** Controls room temperature setpoint.

Room Pressure Monitor (PMT)
- **Normal Operation:** No room pressure requirement.
- **Isolation Mode:** Measures and displays room pressure. Activates FFU, closes return damper, and modulates exhaust damper to maintain negative room pressure.

Single Duct Terminal Unit with Reheat (SDV)
- **Normal Operation:** Modulates supply airflow to the room.
- **Isolation Mode:** Modulates supply airflow to the room.
EQUIPMENT FOR LAYOUT A

Combination Exhaust and Recirculating Fan Filter Unit

Room Pressure Monitor
PMT-1-4/I/II/S/RET/12/24V

Return Damper/Actuator
MISCF-GRD-CE/S/I/RET/12/24V

Exhaust Damper/Actuator
MISCF-GRD-CE/S/I/EX/12/24V

Single Duct Terminal Unit with Reheat & LCD Thermostat

Supply Diffuser
SMD/I/18/36/4/A/24/24/SR/12//B12

Exhaust Grille
735H/I/24.000/16.000/F/S/##/4

Return Grille
80SR/I/24/24///2//TOP/12/BN///B12

Recirculating Diffuser
SMD/I/18/36/3/A/24/24/SR/12//B12

EQUIPMENT FOR LAYOUT B

Combination Exhaust and Recirculating Fan Filter Unit

Room Pressure Monitor
PMT-1-4/I/II/S/RET/12/24V

Return Damper/Actuator
MISCF-GRD-CE/S/I/RET/12/24V

Exhaust Damper/Actuator
MISCF-GRD-CE/S/I/EX/12/24V

Single Duct Terminal Unit with Reheat & LCD Thermostat

Supply Diffuser
SMD/I/18/36/4/A/24/24/SR/12//B12

Exhaust Grille
735H/I/24.000/16.000/F/S/##/4

Return Grille
80SR/I/24/24///2//TOP/12/BN///B12

Recirculating Diffuser
SMD/I/18/36/3/A/24/24/SR/12//B12

EQUIPMENT FOR LAYOUT C

Combination Exhaust and Recirculating Fan Filter Unit

Room Pressure Monitor
PMT-1-4/I/II/S/RET/12/24V

Return Damper/Actuator
MISCF-GRD-CE/S/I/RET/12/24V

Exhaust Damper/Actuator
MISCF-GRD-CE/S/I/EX/12/24V

Single Duct Terminal Unit with Reheat & LCD Thermostat

Supply Diffuser
SMD/I/18/36/4/A/24/24/SR/12//B12

Exhaust Grille
735H/I/24.000/16.000/F/S/##/4

Return Grille
80SR/I/24/24///2//TOP/12/BN///B12

Recirculating Diffuser
SMD/I/18/36/3/A/24/24/SR/12//B12

RETURN GRILLE NOT REQUIRED

RECURCULATING DIFFUSER NOT REQUIRED

RECURCULATING DIFFUSER NOT REQUIRED
Product Improvement is a continuing endeavor at Price. Therefore, specifications are subject to change without notice. Consult your Price Sales Representative for current specifications or more detailed information. Not all products may be available in all geographic areas. All goods described in this brochure are warranted as described in the Limited Warranty shown at priceindustries.com. The complete Price product catalog can be viewed online at priceindustries.com.