PHOTOCATALYTIC AIR CLEANER

MC704VM
Clean air is essential for a comfortable environment

Daikin has a worldwide reputation based on over 70 years’ experience in the successful manufacture of high quality air conditioning equipment for industrial, commercial and residential use.

Daikin’s unique position as a manufacturer of air conditioning equipment, compressors and ozone-friendly refrigerants has led to its close involvement in environmental issues. For several years Daikin has had the intention to become a leader in the provision of environmental friendly products. This challenge demands the eco design and development of a wide range of products and an energy management system which involves energy conservation and reduction of waste.

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DAIKIN’S PHOTOCATALYTIC AIR CLEANER REMOVES BACTERIA,

01 Antibacterial photocatalytic filter eliminates viruses and removes bacteria

99.99%

Antibacterial photocatalytic filter:

1 Removes mold spores and has antiviral action

2 Removes diseases causing bacteria
Many disease causing bacteria (mold, microbes and viruses) exist in unclean air. The photocatalytic filter removes or deactivates almost 99.99% of these organisms so that air blown from the unit is always clean.

When light strikes titanium oxide, hydrogen peroxide (H₂O₂) and hydroxyl radicals (OH) are formed. These 2 substances possess powerful oxidising properties and through mutual interaction they are able to decompose odorous substances into odourless carbon dioxide and water. A powerful oxidative also removes bacteria and deactivates viruses.

1 Filter roll
Antibacterial photocatalytic filter
rear surface

- Breaks down odour molecules in trapped dust and other particles!
- Mold spores trapped by the filter are eliminated.

2 Photocatalyst 1st stage
Antibacterial photocatalytic filter

- Odour modules that slip through the filter are broken down
- Antibacterial and antiviral (deactivates viruses)

3 Photocatalyst 2nd stage
Antibacterial photocatalytic filter

- Even hard-to-decompose chemical pollutants are broken down!

Special Inverter lamp
- Photocatalyst is activated by non-harmful ultraviolet light source

How the photocatalytic filter works to deodorise, remove bacteria and deactivate viruses

Photocatalytic method of breaking down odour molecules

Not exposed to light

Exposed to light

Surface coated with titanium oxide

Break down into water and carbon dioxide
**Breaks down odours and deodorises**

Photocatalytic power breaks down odours and cleans the air

85%

Eliminates smells in even the furthest corners of a spacious living area

Powerful air flow and 4-directional suction ensure the efficient collection of odours. The photocatalytic deodoriser offers a performance comparable with the very best in the industry.

### Rapid deodorisation of tobacco smoke

Rating of 85% for deodorisation refers to the ability of the photocatalytic air cleaner to deodorise the smoke from five burned cigarettes in a one-cube-meter enclosed space. One minute after operation, the amounts of ammonia, acetaldehyde and acetic acid are reduced by 85%.

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Although the sensitivity of individual noses does vary, most people are not able to detect the smell when the odour level is reduced by 80%. This unit rapidly cuts odours to undetectable levels. In just one minute, photocatalytic air cleaners speedily cut the odour level by 85%.

### Photocatalytic technology provides the power to break down odours

Typical test results show that when tobacco tar is evenly coated on a surface, the tar is broken down only where the surface is exposed to light (see the right hand side of the image).

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*Be aware that the unit is unable to remove the harmful carbon monoxide that results from cigarette smoking.*
**Impressive air flow and 4-directional suction**
(Applicable room size up to 41 m² max)

Powerful air movement for rapid purification

Hard to beat air flow characteristics, ensure speedy particle collection and rapid breakdown of odours. Performance levels of this order make the unit ideal for use in homes as well as in offices, shops, clinic waiting rooms and other business premises.

Insufficient air cleaner suction power or air flow capacity (even with a 100% efficient filter) lengthens the time required to clean the air in the room. The key to rapid air purification is a filter that efficiently collects dust plus powerful air movement.

4-directional suction

Even when the unit is located at floor level, the newly conceived 4-directional air suction feature of the unit results in unbeatable collection (from above, left, right and front) of dust and odours from all corners of the room.

**Ultra quiet operation**
(Ultra quiet in “Silent” mode)

Quiet enough for any room!

As well as powerful dust collection and deodorising characteristics, the unit is super silent in operation and can be used in noise sensitive locations such as office meeting rooms and domestic bedrooms.

The secret is in the fan

The newly developed fan and a non-clogging photocatalytic filter ensure noise free operation, not only in ‘Silent’ mode but also during ‘Turbo’ mode.

Noise generated in different operation modes

Operational silence enables people to sleep while the unit cleans the air.
**Operational functions**

1. **Energy saving automatic operation**
   Air flow is adjusted to the amount of dirt in the air.
   Cleaner air causes the energy saving mode to cut in.

2. **Silent mode**
   Silent mode allows undisturbed sleep

3. **High power turbo mode**
   High power turbo mode for rapid air purification when necessary

4. **Clean monitor (dust)**
   Indicates the level of air contamination detected by dust sensor

5. **Pollen mode**
   Pollen is trapped easily by changing the air flow setting

6. **Negative ion mode**
   Indicates that negative ions are being generated

7. **Operation mode**
   Lamp indicates unit is operating

8. **Off timer**
   Enables the unit to be set to turn off in 1, 2 or 4 hours

9. **Clean indicator**
   Indicates the need to clean the ionizer

10. **Filter replacement indicator**
    Indicates the need to replace the filter

11. **Clean monitor (odour)**
    Indicates the level of air contamination detected by odour sensor

12. **Dust sensor**

13. **Odour sensor**
    These sensors monitor air quality in the room and automatically set the necessary level of operation

**Easy to use**

1. **Flat panel**
   Rather than a grille, the flat panel is easy to clean

   The plasma ionizer is also easy to clean. You can use water to clean the opposing electrode plates

   To clean the ionizer, all you have to do is wipe with tissue paper

2. **Child lock**
   Even if a curious child handles the remote control, the child lock ensures continued operation at the chosen settings

3. **Easy to carry**
   The unit is portable and can easily be carried from one room to another

4. **Store**
   The new design allows the remote control to be stored inside the unit
DAIKIN FILTER SYSTEM

Long-lasting 7-year filter roll
Annual refresh assures hygiene

When the filter replacement indicator turns on, you throw away the old filter. To maintain deodorising power and dust-collecting performance, all you have to do is replace the old filter with a new filter from the roll. The front side of the two-sided filter roll works to collect dust, pollen, mite droppings and detritus, mold spores and other particles that have been positively charged by the plasma dust collector. Daikin’s newly developed photocatalytic filter works on the reverse side to decompose the constituents of the absorbed odours of clinging dust and mold.

Economical filter roll

Unrolled, the filter roll is 2.4 meters long. This means there is no need to buy a replacement for seven years.

Dirty air

**Pre filter**
Large dust particles and pet hairs are caught

**Plasma ionizer**
Under high voltage, dust is positively charged

**Filter roll**
Electrostatic filter (front surface)
Positively charged micro size dust particles are securely collected

**Antibacterial photocatalytic filter** (rear surface)
Smell of filtered molds and particles are broken down and deodorised. Mold spores trapped by the filter are eliminated

Dirty air

**Plasma dust collection**

**Long-lasting 7-year filter roll**

Air with negative ions
Close to the air you breathe in nature

Clean air made even fresher with negative ion generator. Refreshed air flows throughout the room with the press of a switch. The unit pumps out negative ions so that one meter from the outlet there are 300,000 negative ions per cubic meter of air. Negative ions, which are normally quite vulnerable and easily eliminated, spread to the corners of your room and restore a favorable overall ion balance to your surroundings.

**HEPA FILTERS ARE NOT SUITABLE FOR HOMES, OFFICES, OR SHOPS**

HEPA filters are designed to remove microfine dust particles from clean rooms and other sealed environments. In open situations, such as homes, offices and shops, the filter quickly clogs, air flow is impeded and performance rapidly deteriorates. Also the use of glass fibers as a filter medium keeps HEPA filters from being completely environmentally safe.

**1st layer**

Dust
Odours

**Corresponding to the room**

**Approx. 12 m²**

**12,000 per cc**

**One meter**

**300,000 per cc**
Energy-saving functions

By converting electrical frequencies it is possible to control the motor revolutions over a wide range from ultraslow to high speed. This, combined with the use of a highly efficient DC motor, cuts the amount of power consumed during operation.

Energy-saving automatic operation

Air flow is adjusted to the level of dirt in the air. When the air is cleaner, energy-saving mode cuts in. This avoids wasted use of electricity.

Photocatalyst 1st stage antibacterial photocatalytic filter

Breaks down odour molecules that slip through the filter. Mold removing and antiviral (deactivates viruses)

Special Inverter lamp

Radiates non-hazardous ultraviolet to activate photocatalyst

Photocatalyst 2nd stage antibacterial photocatalytic filter

Extra power: even hard-to-decompose chemicals are broken down.

Inverter motor

Inverter provides energy efficiency

Newly developed fan

Quiet operation, even with large air flow

Antibacterial photocatalytic filter

3 photocatalytic layers are highly effective at breaking down odour molecules and removing mold spores

Purified air

Negative ion generator

Generates large amounts of the same negative ions that are found in abundance in forests, at waterfalls, and around other natural places

What are negative ions?

Positive ions attract atmospheric pollutants, particles of house dust and other harmful airborne matter into interior spaces and keep them there. Negative ions, which are abundant in natural places such as forests, waterfalls, and the seaside, cancel the effects of positive ions and clean the air.

Typical amounts of negative ions at natural places

<table>
<thead>
<tr>
<th>Location</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Forests</td>
<td>2,500 per cc</td>
</tr>
<tr>
<td>Waterfalls</td>
<td>10,000 to 18,000 per cc</td>
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</tbody>
</table>
**Technical specifications for Daikin Photocatalytic air cleaner**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>MC704VM</th>
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</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>1~, 220-240V, 50Hz</td>
</tr>
<tr>
<td>Dimensions (H x W x D) mm</td>
<td>498x400x198</td>
</tr>
<tr>
<td>Colour</td>
<td>sparkling silver and metallic ocean blue</td>
</tr>
<tr>
<td>Weight kg</td>
<td>7.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MODE (50Hz)</th>
<th>Turbo</th>
<th>H</th>
<th>M</th>
<th>L</th>
<th>Silent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power input kW</td>
<td>0.052</td>
<td>0.024</td>
<td>0.020</td>
<td>0.017</td>
<td>0.015</td>
</tr>
<tr>
<td>Running current A</td>
<td>0.46</td>
<td>0.26</td>
<td>0.19</td>
<td>0.16</td>
<td>0.15</td>
</tr>
<tr>
<td>Sound pressure level dB(A)</td>
<td>47</td>
<td>36.5</td>
<td>32</td>
<td>24</td>
<td>16</td>
</tr>
<tr>
<td>Air flow rate m³/h</td>
<td>420</td>
<td>270</td>
<td>210</td>
<td>120</td>
<td>60</td>
</tr>
<tr>
<td>Pre filter</td>
<td>polypropylene screen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dust collecting element</td>
<td>plasma ionizer (electrostatic dust collection) + electrostatic filter roll</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deodorising filter</td>
<td>photocatalytic filter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catalyst</td>
<td>titanium oxide + special inverter lamp</td>
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<td></td>
</tr>
<tr>
<td>Safety devices</td>
<td>front panel switch (safety switch)</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Power cord</td>
<td>2 wire 0.75 mm² (2.5 m)</td>
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</tr>
<tr>
<td>Standard accessories</td>
<td>operation manual, wireless remote control, batteries, filter roll</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement filter roll</td>
</tr>
</tbody>
</table>