From The Engineer-in-Chief (Buildings),
Haryana PW(B&R) Department,
Chandigarh.

To
1. All the Administrative Secretaries to Government of Haryana.
2. All the Head of Departments of Haryana Government.
3. All the Managing Directors/Chief Administrators of Board and Corporations of
   Haryana Government.
4. All the Divisional Commissioners in Haryana.
5. All the Deputy Commissioners of the State of Haryana.

Subject: Revised Advisory for operation of Air Conditioners and Ventilation to
Control spread of Covid-19 in Residences, Workspaces & Healthcare facilities

Sir/Madam,

In supersession of this office memo no.PWD/Elect. 57059 Dated 28.04.2020 “Advisory for
operation of Air Conditioner and Ventilation to Control spread of Covid-19 in Residences,
Workspaces & Healthcare facilities”, Now it has been decided by the Government to adopt CPWD
Revised Guidelines issued by their office memo no. CECSQ(E)/Covid19/2020/028 Dated
13.05.2020 for Haryana State . A copy of the CPWD revised guidelines Dated 13.05.2020 are
enclosed.

This issues with the concurrence of Heath Department.

DA/CPWD Guidelines Dated 13.05.2020

Chief Engineer (Electrical),
for Engineer-in-Chief (Buildings), Haryana
PW(B&R) Deptt, Chandigarh

Dated 20.05.2020

A Copy of the above is forwarded to the following for information and necessary action
Please.
1. PS/Dy. CM, PS/CS, PS/PSCM, PS/ACSPW.
2. All the superintending Engineers/Executive Engineers Haryana PW(B&R) Department.

Endst. No. PWD/Elect/64181

DA/CPWD Guidelines Dated 13.05.2020

Chief Engineer (Electrical),
for Engineer-in-Chief (Buildings), Haryana
PW(B&R) Deptt, Chandigarh
In supersession of this OM No. CE CSQ(E) /COVID-19/2020/025 dated 22.04.2020, “Guidelines for Running of Air Circulation, Air cooling and Air conditioning Equipments during COVID-19” are enclosed here for the guidance of field Units of CPWD. Respective Administrative Heads of the Ministries/Departments shall be fully apprised and only after obtaining their concurrence, the decision to operate or not the AC/Air cooling system should be taken. Respective social distancing norms issued by Central Government from time to time may also be adhered to while these guidelines are implemented.

This issues with the approval of DG, CPWD

Encl: As above.

(C.K.Varma)
Chief Engineer CSQ(E)
13/5/2020

To,

SDGs/ADGs/CEs/SEs/EEs of CPWD (Through CPWD Website only)
GUIDELINES FOR RUNNING
OF
AIR CIRCULATION, AIR COOLING
AND
AIR CONDITIONING EQUIPMENTS
DURING
COVID-19
## Committee Composition for Developing the Guidelines

<table>
<thead>
<tr>
<th>1.</th>
<th>Sh. Anant Kumar</th>
<th>ADG(Tech)</th>
<th>Chairman</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Sh. C.K.Varma</td>
<td>CE CSQ(E)</td>
<td>Member</td>
</tr>
<tr>
<td>3.</td>
<td>Sh. Vikas Rana</td>
<td>CE NDZ 1</td>
<td>Member</td>
</tr>
<tr>
<td>4.</td>
<td>Sh Rajiv. Sao</td>
<td>SE &amp; PD, NAHAN</td>
<td>Member</td>
</tr>
<tr>
<td>5.</td>
<td>Sh. Vivek Gupta</td>
<td>SE(E), o/o CE &amp; TA</td>
<td>Member</td>
</tr>
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<td>6.</td>
<td>Sh. S.P.Gupta</td>
<td>SE(E), Dir- ERP</td>
<td>Member</td>
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<tr>
<td>7.</td>
<td>Sh. Prashant Gupta</td>
<td>SE(E), Dir-PM &amp; PG</td>
<td>Member</td>
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<tr>
<td>8.</td>
<td>Sh. Sanjiv Agarwal</td>
<td>EE(E), RML Hospital</td>
<td>Member</td>
</tr>
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<td>9.</td>
<td>Sh. Vishesh Swamiwal</td>
<td>EE(E), SCPD</td>
<td>Member</td>
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<td>10.</td>
<td>Sh. Yogendra Kumar</td>
<td>EE(E), DED-101</td>
<td>Member</td>
</tr>
<tr>
<td>11.</td>
<td>Sh. S. Mandal</td>
<td>EE(E), Delhi PWD</td>
<td>Member</td>
</tr>
<tr>
<td>12.</td>
<td>Sh. M.V.Chalpati Rao</td>
<td>SE (E) o/o CE CSQ(E)</td>
<td>Member Secretary</td>
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</tbody>
</table>
Guidelines for Running of Air Circulation, Air cooling and Air conditioning Equipments during COVID-19

Introduction

Corona Infection through Air flow has become an issues summer has already started and monsoon season will begin soon. The thermal discomfort will therefore be maximum now onwards due to seasonal changes and there can be a possibility of its spread through air flow. Therefore, maximum caution should be exercised to minimise the chances of spread of corona virus through air flow in enclosed spaces like residences, offices, meeting places, assembly places etc. Below are some of the principles to be followed while using the air cooling and conditioning devices.

General Guiding Principles

1. Temperature- The temperature setting of all air conditioning devices should be in the range of 24-30 °C
2. Relative Humidity- should be in the range of 40-70%
3. Intake of Fresh Air- should be as much as possible
4. Recirculation of Air- should be avoided to the extent possible
5. Cross Ventilation- should be adequate
6. Replacement of air by using the facility of exhaust fans in the nearby area
7. Air Sanitisation- should be very frequent by regular cleaning and sanitisation of filters of indoor unit.
8. Observing Social Distancing norms, wearing of mask, avoiding direct contact of air flow, frequent surface decontamination are to be followed compulsorily.

A proper mix of the above principles should be followed depending upon the places and options available.

Options of Devices/Equipments Available

1. Fresh Airintake through open windows and other openings like doors etc.
2. Air circulation through Ceiling fans
3. Window fitted Desert coolers
4. Evaporative Type Air Cooling Plants/Ducted Air-Cooling Plants
5. Room ACUnits (Window/Split type)
6. VRV/VRF Plants
7. Central ACPlants supplying conditioned air through AHUs (Air Handling units)

Guidelines for operating Air Cooling/Conditioning devices

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Application Area</th>
<th>Air Cooling/Conditioning Options without aiding infection/contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Controlled environment and</td>
<td>A. Window fitted Desert coolers/ Room ACs(Window/Split)/Fans aided by maximum Fresh air</td>
</tr>
<tr>
<td>Mild exposure such as Residences, Standalone workspaces/Offices</td>
<td>Intake by opening of doors and or windows and supported by air replacement through exhaust fan facilities in the nearby areas. B. Temperature and Humidity range should be maintained as per General Guidelines wherever applicable.</td>
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<tr>
<td>---</td>
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<td></td>
</tr>
<tr>
<td>Moderate risk of exposure and concentration such as meeting Rooms, Dispensaries etc.</td>
<td>A. Window fitted Desert coolers/ Room ACs (Window/Split)/ VRV/VRF system (Indoor units)/Fans aided by maximum Fresh air intake by opening of doors and or windows and supported by air replacement through exhaust fan facilities in the nearby areas. B. Temperature and Humidity range should be maintained as per General Guidelines wherever applicable.</td>
<td></td>
</tr>
<tr>
<td>Maximum exposure and concentration such as Institutions, Malls etc.</td>
<td>A. Window fitted Desert coolers/ Room ACs (Window/Split)/ VRV/VRF system (Indoor units)/Fans aided by maximum Fresh air intake by opening of doors and or windows and supported by air replacement through exhaust fan facilities in the nearby areas. B. Temperature and Humidity range should be maintained as per General Guidelines wherever applicable. C. It is advisable to avoid Central AC to the extent possible, in case same is not feasible then below mentioned point to be followed: I. AHUs are advised to run on maximum fresh air as possible. II. AHUs are advised to run at least 2 hours prior to office time and stop 2 hours after office time to ensure no contamination remains. This time may be increased at the discretion of maintenance in charge of the building. III. Heat Recovery Wheels wherever fitted should not be used and should be stopped completely.</td>
<td></td>
</tr>
<tr>
<td>Ultimate exposure and concentration such as General Hospitals, Isolation Facilities/Wards etc.</td>
<td>General guidelines issued by NCDC, MoHFW, Delhi A. Ensure adequate room ventilation. If room is air conditioned ensure 12 ACPH (Air Changes per Hour) and filtering of exhaust air. A negative pressure in isolation rooms is desirable for patients requiring aerosolization procedures (intubation, suction nebulisation). B. These rooms may have standalone air conditioning. These areas should not be a part of central air conditioning. C. Temperature and Humidity range should be maintained</td>
<td></td>
</tr>
</tbody>
</table>
as per General Guidelines wherever applicable.

D. If air conditioning is not available negative pressure could also be created through putting up 3-4 exhaust fans driving air out of the room.

Note: For HVAC design for Hospital etc. guidelines mentioned at Sl. No. 9 of references to be used.

Equipment wise guidelines are also given at Annexure A.

References


Disclaimer

The above guidelines are developed based on the available information and knowledge on the spread of Coronavirus in different situations.
<table>
<thead>
<tr>
<th>S.N.</th>
<th>Equipment/Device</th>
<th>Operating guidelines</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ceiling Fan</td>
<td>Should run at low-medium speed with intake of fresh air as much as possible by keeping window and doors opening</td>
<td>It doesn't work at high temperature and humidity. Switch to options 2/3.</td>
</tr>
<tr>
<td>2.</td>
<td>Window Fitted Room Cooler</td>
<td>A. Should run with intake of fresh air and arrangement of exhaust as far as possible. B. The water of the cooler as well as cooler pads must be disinfected at regular intervals.</td>
<td>A. To control high humidity in rainy season exhaust fan must be used. B. It does not work at high humidity. Switch to option 3 supplemented with option 4. C. Guidelines for prevention of Dengue must also be followed.</td>
</tr>
<tr>
<td>3.</td>
<td>Room AC(Window/Split)</td>
<td>Should run with temperature setting between 24-30degree C.</td>
<td>Use with windows partially open for fresh intake of air</td>
</tr>
<tr>
<td>4.</td>
<td>Exhaust Fan</td>
<td>Should run continuously for exhausting the hot air</td>
<td>For supplementing air circulation by all types of air cooling/conditioning devices like Ceiling fan, Air cooler, Room AC etc.</td>
</tr>
<tr>
<td>5.</td>
<td>Evaporative Type Air Cooling/Ducted Air Cooler</td>
<td>A. Should run with intake of fresh air and arrangement of exhaust as far as possible. B. The water, pads of the blower section and ducts must be disinfected at regular intervals.</td>
<td>A. It does not work at high humidity. Switch to option 3 supplemented with option 4. B. Guidelines for prevention of Dengue must also be followed.</td>
</tr>
<tr>
<td>6.</td>
<td>VRF/VRV System (High wall, Cassette type Units etc.)</td>
<td>Should run with temperature range of 24-30 degree C with maximum fresh air and supplemented by adequate exhaust</td>
<td>Wherever this system is installed, filters of indoor units to be disinfected frequently.</td>
</tr>
</tbody>
</table>