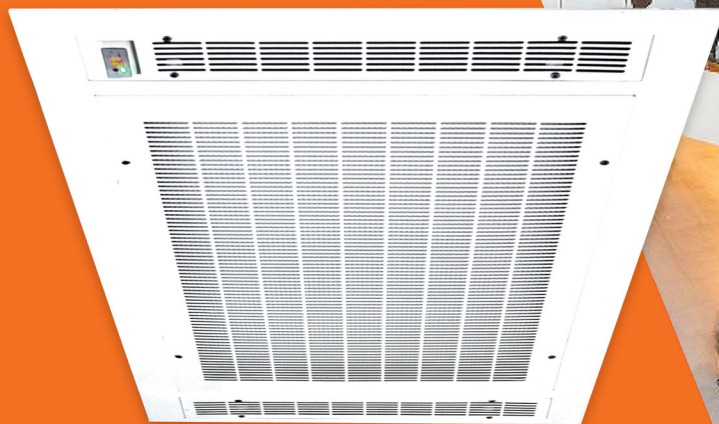
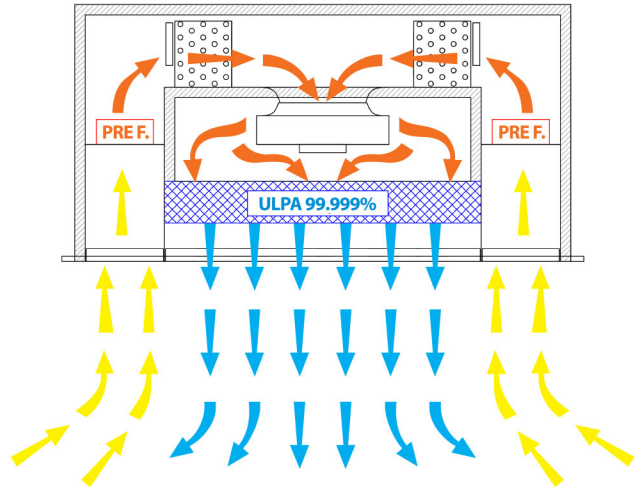


Clean Air Conditioner

Healthy & Hygienic Breeze

CEILING CASSETTE with ULPA Filter





- Indoor Air Quality ●
- Clean Air Conditioning ●
- Clean Air Quality ●

How does clean air conditioner unit work?

By applying the new filter air conditioning for commercial use, clean air will be circulated within a room. The filter that will be used is ULPA 15 (U15) with 0.12 micron standard particle size. Most of viruses, bacterias, dust and other common particles will be filtered by this ULPA. Our Research and Development Team has done particle count inside the conditioned room and data has shown that the particle size will be significantly reduced.

Having said that, we can proudly confirm that the total particles standard in non-clean room will be the same as the total particle standard in clean room class E during at rest condition (Based on CPOB standard or ISO 8 on ISO-14644 Standard)

Who can build the customized clean air conditioner unit?

ATS products are the answer to build customized clean air conditioner unit. We support delivery throughout global market and do installation completely.

| Type | Scale Unit | AFU01 | AFU02 | AFU03 | AFU05 |
|------------------------------|----------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Cooling capacity | Btuh/Kw | 10.000 / 2.94 | 20.000 / 5.88 | 30.000 / 8.82 | 40.000 / 11.75 |
| | | 15.000 / 4.41 | 25.000 / 7.35 | 35.000 / 10.30 | 50.000 / 14.70 |
| Dimension | L x W x H (mm) | 1020 x 800 x 500 | 1020 x 1020 x 500 | 1320 x 1120 x 500 | 1320 x 1120 x 500 |
| Material Body | | Galvanised Steel | Galvanised Steel | Galvanised Steel | Galvanised Steel |
| Power Consumption | Watts | 135 | 210 | 280 | 375 |
| Refrigerant | | R407C, R410A, Chiller | R407C, R410A, Chiller | R407C, R410A, Chiller | R407C, R410A, Chiller |
| Dimension ULPA Filter | L x W x H (mm) | 600 x 600 x 70 | 600 x 900 x 70 | 600 x 1200 x 70 | 600 x 1200 x 70 |
| Class ULPA Filter | | ULPA 15 | ULPA 15 | ULPA 15 | ULPA 15 |
| Type ULPA Filter | | Disposable | Disposable | Disposable | Disposable |
| Class Pre Filter | | G4 / Pre Filter | G4 / Pre Filter | G4 / Pre Filter | G4 / Pre Filter |
| Type Pre Filter | | Disposable/Washable | Disposable/Washable | Disposable/Washable | Disposable/Washable |
| Dimension Pre Filter | L x W x H (mm) | 600 x 200 x 70 | 600 x 200 x 70 | 600 x 200 x 70 | 600 x 200 x 70 |
| Operational | | Remote | Remote | Remote | Remote |
| Weight | Kg | 50 | 55 | 64 | 65 |
| Coverage Vol.* (max) | M ³ | 60 | 100 | 140 | 200 |

* Must be calculated based on heat load and coefficient due to ULPA Filter



Ceiling Cassette Air Distribution



Clean Air Conditioner

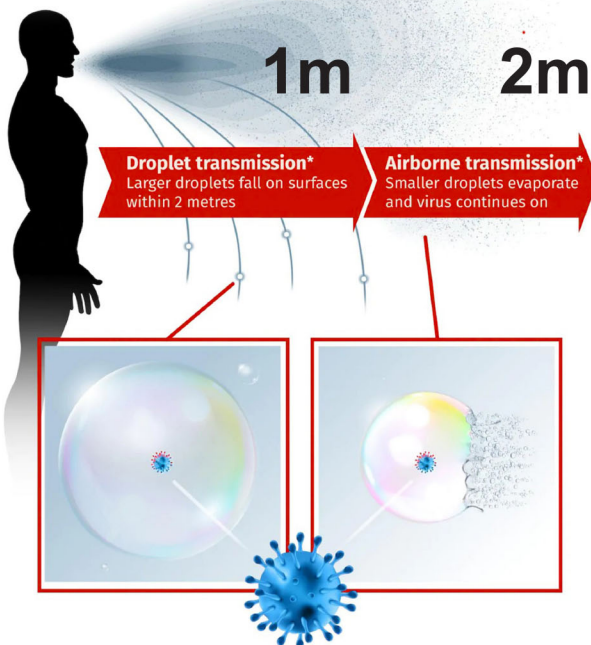
Clean Air-Conditioner will provide a hygienic environment with excellent air quality for workplaces. People who do activities mostly indoors (such as office building, hospitals, restaurants, malls, etc.) are more prone to have their health compromised due to viruses and bacterias in the air circulation. Therefore, cleaner and safer air quality should be top priority.

Air Particles Transmission

Most viruses and bacterias that are infectious to the respiratory system are airborne transmitted. Based on WHO Standard, "Airborne transmission is defined as the spread of an infectious agent caused by the dissemination of droplet nuclei (aerosols) that remain infectious when suspended in air over long distances and time".

Human exert droplets when they do any activities that involves using their mouth and nose (breathing, talking, sneezing and coughing) which potentially carries various infectious agents to other human nearby.

What Happens When Someone Coughs?



| Diameter Range (μm) | Numbers of Particles in a Cough | Numbers of Particles in a Sneeze |
|----------------------------------|---------------------------------|----------------------------------|
| 1-2 | 50 | 26.000 |
| 2-4 | 290 | 160.000 |
| 4-8 | 970 | 350.000 |
| 8-16 | 1600 | 280.000 |
| 16-24 | 870 | 97.000 |
| 24-32 | 420 | 37.000 |
| 32-40 | 240 | 17.000 |
| 40-50 | 110 | 9.000 |
| 50-75 | 140 | 10.000 |
| 75-100 | 85 | 4.500 |
| 100-125 | 48 | 2.500 |
| 125-150 | 38 | 1.800 |
| 150-200 | 35 | 2.000 |
| 200-250 | 29 | 1.400 |
| 250-500 | 34 | 2.100 |
| 500-1000 | 12 | 1.000 |
| 1000-2000 | 2 | - |

In a respiratory behaviours test with optical particle counter method, 12 patients infected with influenza from air particles size range **0.15 to 0.19 μm** (COVID 19 - 0.125 μm)



PT Alam Teknik Semesta

Jalan Pintu Besi 1 Blok A No. 31

Jakarta 10710 - Indonesia

Tel. (+6221) 3500586 - 3807931 - 3802637

Fax. (+6221) 3519568 - 3803072

Email. office@alamteknik.com