



VISHWAKARMA GOVERNMENT ENGINEERING COLLEGE, CHANDKHEDA

Brief Report of webinar on “Selection of Air Conditioning System”

Name of Department/Organizer	:	Mechanical Department and IEI Students’ Chapter, Vishwakarma Government Engineering College
Date & Time	:	17/09/2020 02:00 p.m. to 03:00 p.m
Venue	:	Online Platform: Google Meet
No of Participants	:	95

Objective of the Event:

The main objective of the webinar is to introduce the field of HVAC and Air Conditioning Systems to the students, make them aware about different types of air distribution systems, recent developments and future scope and opportunities. The second major objective is to make HVAC systems more compact, good design aesthetically and design a system in such a way that it affects the environment as minimum as possible using different tools, techniques and softwares available in the market.

Experts:

Patel Gaurangkumar P.

- Engineering Manager – MEP, Ramboll India
- Chair for ISHRAE Technical Group

Outcome of the Event:

- The main outcome of the webinar will be knowing and understanding fundamentals of HVAC and air conditioning systems, psychrometric air properties.
- Students will be able to identify design aspects and considerations, perform load calculations and select the appropriate HVAC system for given conditions.
- Students will be aware about the current scenario of global warming and learn about the rules and regulations applied globally for designing HVAC systems.
- Speaker will share his experience of working in this field and also guide the students for future obstacles and challenges that they can tackle in this field.

Event Photographs:

Air conditioning system

- Non Ducted system
 - Split system
 - Window system
- Ducted system
 - Package system
 - Central system
 - Water based system
 - Aircooled chiller
 - Water cooled chiller
 - Absorption chiller
 - DX system
 - VRF system

Non Ducted system - Split units

1. Wall mounted
2. Floor mounted units
3. Ceiling mounted units

Capacity: 1 to 4 TR

VRF system

Capacity: 4 TR to 24 TR

Air cooled & water cooled ODU

VRF system

Capacity: 4 TR to 60 TR

Salient feature:

- Bigger capacity than Dx.
- Multiple indoor unit with one outdoor
- Refrigerant piping up to 1000 mtr
- Energy efficient

Limitation of Split system

- Capacity of units
- Refrigeration piping length
- Exterior views
- Life cycle cost

Advantages:

- Low initial cost
- Low space requirements
- Simpler control and easy operation
- Easy to commission

Disadvantages:

- High Power consumption

Application:

1. Constant load applications i.e. process cooling area with constant heat load