



# Madanapalle Institute of Technology & Science

(UGC- AUTONOMOUS INSTITUTION)

Madanapalle-517325, Annamayya Dist., Andhra Pradesh

## TECHNICAL SKILL DEVELOPMENT INSTITUTE (t-SDI)

### APSSDC SIEMENS- R & AC LAB

#### R & AC LAB

The refrigeration and Air Conditioning Lab is initiated to educate learners about the transfer of thermal energy from a cold temperature to a higher temperature that occurs in refrigeration. Thermal energy is removed from the air in AC to keep it cool. Parts such as a compressor, condenser, and evaporator are all refrigeration system components.

#### OBJECTIVES:

The lab's main objective is to teach learners about the basics of Refrigeration and Air Conditioning working, design, and troubleshooting. After completion of the course, students will be able to:

- ✓ Enumerate various Components of Vapour Compression Refrigeration.
- ✓ Infer the System (VCRS) like Compressor, Condenser, Evaporator and Expansion device.
- ✓ Examine the performance of the refrigeration cycle by determining the coefficient of performance (COP).
- ✓ Explain the functioning and troubleshooting of Air conditioning unit.

#### Major Equipment and Tools:

- Window A.C 1 ton, HFC blend reciprocating compressor
- Split A.C 1.5 ton, reciprocating compressor-Highwall split
- Ductable split A.C, reciprocating-ducted split unit
- Cassette air conditioner 4500 kcal/hr-Cassette unit
- Circulating water pump 0.5 hp with stainless steel tank



## APSSDC

Andhra Pradesh State Skill Development Corporation





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- Bottle cooler visible 200 L carrying with HFC 134 a & compressor-Bottle Cooler Hard Top - 300 Ltr
- Deep freezers 200 L carrying with HFC 134 a reciprocating- Deep Freezer Hard Top - 100 Ltr
- Scroll Chiller (Aircooled) - 10 TON
- Bottle Water Dispenser

### View of R & AC Lab:



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**View of R & AC Lab**



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**View of R & AC Lab**



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**View of R & AC Lab**



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