THE AIR CONDITIONER MAINTENANCE AND CARE TIPS

IMPORTANT DATA

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“INTEGRANTS OF GROUP THWO”

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- Air conditioning systems play a crucial role in maintaining comfortable and safe environments in homes, offices, and industrial facilities. By regulating temperature, humidity, and air quality, these systems ensure not only human comfort but also the proper operation of electrical and electronic equipment. However, continuous operation without regular maintenance can lead to reduced efficiency, higher energy consumption, and premature component failure.
- Proper maintenance and care of air conditioning systems are essential to guarantee optimal performance and extend their service life. Regular inspection, cleaning, and adjustment of system components—such as filters, coils, and electrical connections—help prevent malfunctions and ensure that the equipment operates safely and efficiently.
- Furthermore, following preventive maintenance routines and technical standards contributes to energy conservation and environmental protection. In this way, maintaining an air conditioning system is not only a matter of comfort but also an important step toward sustainability and operational reliability

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1. INSPECT AND REPLACE AIR FILTERS REGULARLY

Inspect and Replace Air Filters Regularly

- **Key Points:**
- Check the filters **every 15 to 30 days**.
- **Clean or replace** if they are dirty or damaged.
- Dirty filters **reduce airflow** and system efficiency.
- Keeping filters clean **saves energy**.
- Improves **indoor air quality**.
- Always use **original or recommended filter types**

Summary

Regular inspection and replacement of air filters are essential tasks to ensure the proper operation of the air conditioning system. Filters trap dust and particles that, if accumulated, can block airflow, reduce efficiency, and increase energy consumption. By keeping the filters clean or replacing them when necessary, air quality is improved, the equipment is prevented from overworking, and its service life is extended.

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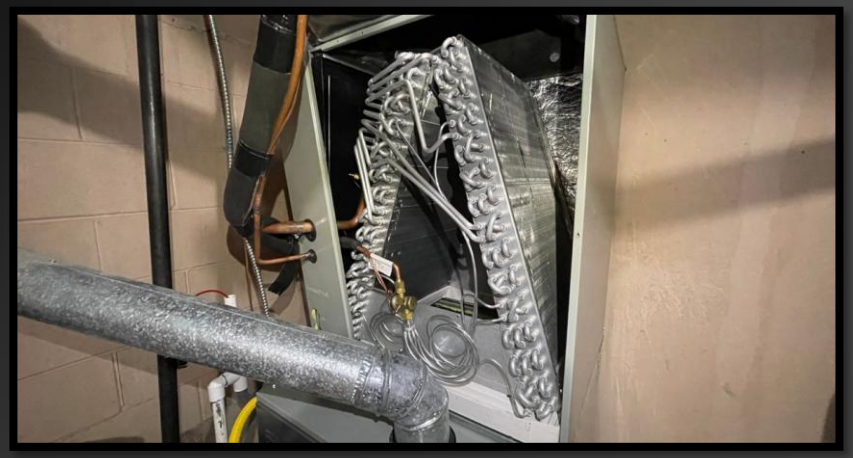
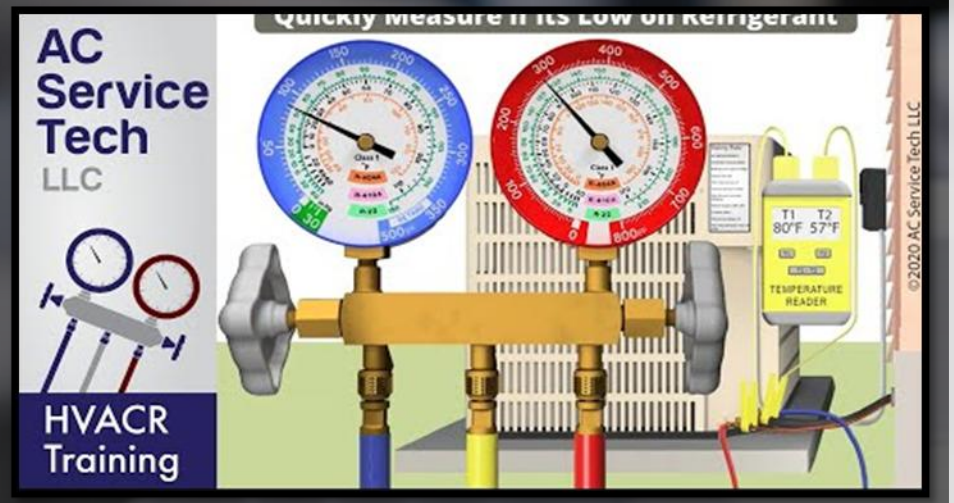
Clean the Evaporator and Condenser Coils



Clean the Evaporator and Condenser Coils

- **Key Points:**
- Clean coils **at least twice a year**.
- Dirt reduces **heat transfer efficiency**.
- Always **turn off the unit** before cleaning.
- Use a **soft brush or coil cleaner**.
- Avoid **bending or damaging** the fins.
- Clean coils **reduce energy use** and extend equipment life.

MONITOR AND REFILL REFRIGERANT LEVELS WHEN NECESSARY



- **Monitor and Refill Refrigerant Levels When Necessary**
- **Key Points:**
- Check refrigerant levels **periodically**.
- Low refrigerant causes **poor cooling** and **higher energy use**.
- Only **qualified technicians** should handle refrigerants.
- Inspect for **leaks** before refilling.
- Use the **correct refrigerant type** as specified by the manufacturer.
- Proper levels ensure **efficient performance** and protect the compressor

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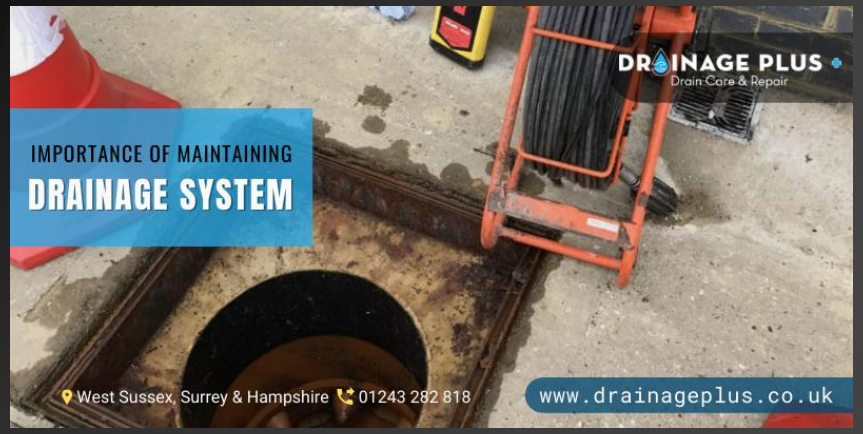
Flush and Maintain the Drainage System



Flush and Maintain the Drainage System

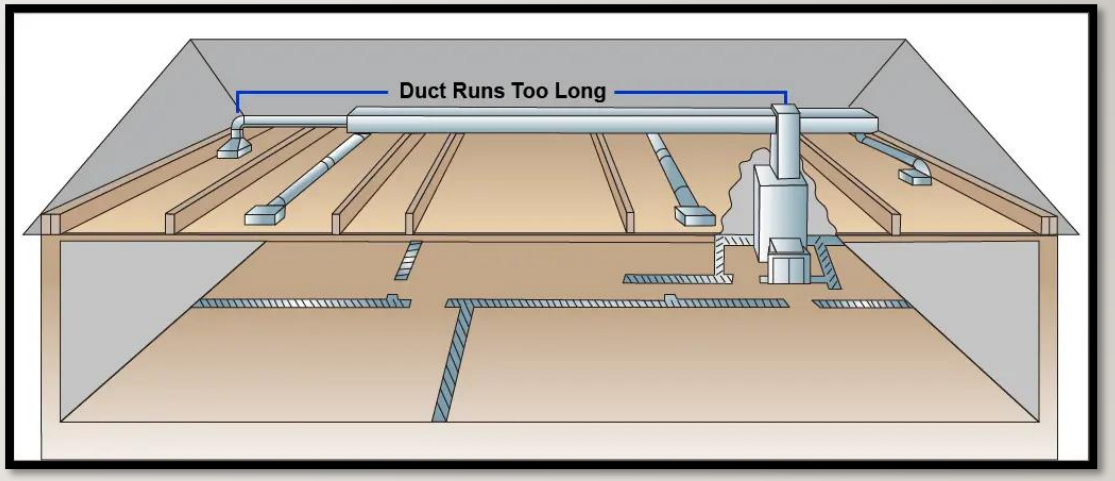
- **Key Points:**
- Check the **drain line regularly**.
- **Clean or flush** to remove dirt and algae.
- Prevent **water leaks** and **mold growth**.
- Use **air pressure or suction** to clear blockages.
- Ensure **free condensate flow** to the outlet.
- Regular care avoids **moisture damage** and odors.

CALIBRATE AND TEST THE THERMOSTAT

- **Calibrate and Test the Thermostat**
- **Key Points:**
- **Check thermostat accuracy** regularly.
- **Calibrate** if temperature readings are incorrect.
- Replace **batteries or faulty sensors** when needed.
- Incorrect calibration causes **poor temperature control**.
- Keep the thermostat **away from heat sources or sunlight**.
- Proper calibration ensures **efficient cooling and comfort**

EXAMINE AIR DUCTS AND VENTILATION PATHS

Examine Air Ducts and Ventilation Paths



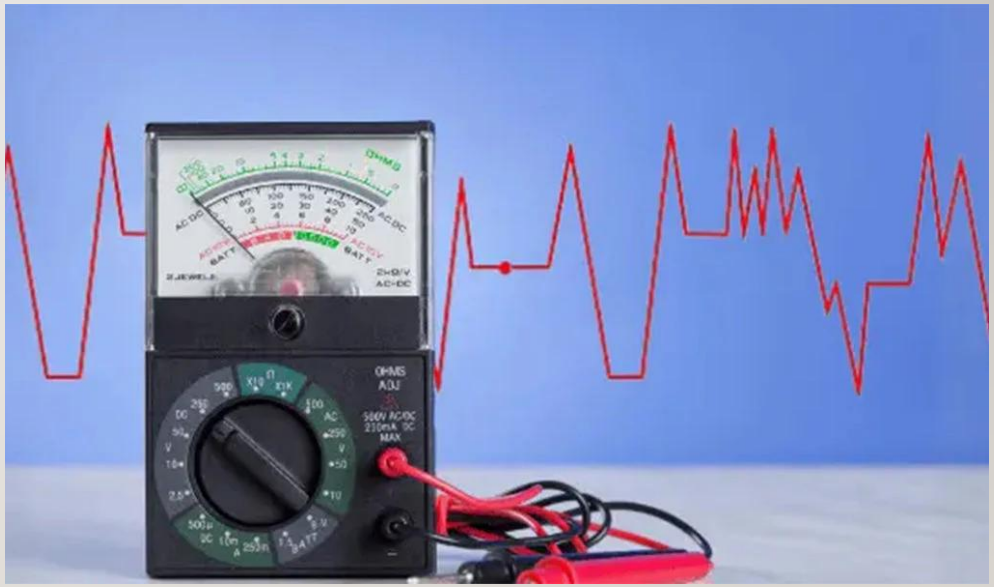
- **Key Points:**
- Inspect ducts **for dust, leaks, and blockages**.
- **Clean ducts** to keep airflow steady.
- Seal **loose joints or cracks**.
- Make sure **vents are not blocked**.
- Good airflow improves **efficiency and air quality**.
- Regular inspection **reduces energy waste**.

INSPECT ELECTRICAL WIRING AND CONTROL COMPONENTS

- **Inspect Electrical Wiring and Control Components**
- **Key Points:**
- Check **wiring connections** for wear or looseness.
- Inspect for **burn marks, corrosion, or damage**.
- Tighten **loose terminals** and replace damaged cables.
- Test **fuses, relays, and contactors** regularly.
- Ensure **proper voltage** and grounding.
- Electrical maintenance **prevents failures and short circuits**

PREVENT POWER SURGES AND VOLTAGE FLUCTUATIONS

- **Prevent Power Surges and Voltage Fluctuations**
- **Key Points:**
- Use a **surge protector** or **voltage regulator**.
- Avoid **overloading electrical circuits**.
- Inspect **power cables** for wear or damage.
- Turn off the unit during **lightning storms**.
- Ensure **proper grounding** of the system.
- Protection devices **extend equipment life** and **prevent damage**.



OPTIMIZE AIR CONDITIONER EFFICIENCY AND OPERATION

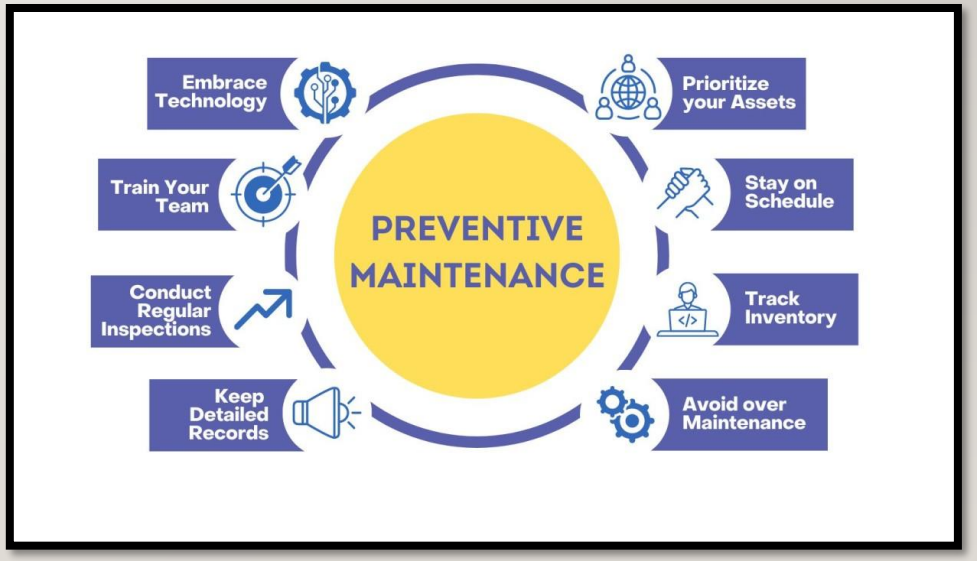
- ✅ **Key Points:**

1. Clean air filters frequently to maintain strong airflow.
2. Keep coils (evaporator and condenser) clean and free of dust.
3. Inspect refrigerant levels and refill if necessary.
4. Ensure proper insulation of ducts and refrigerant lines.
5. Use programmable thermostats to control cooling times
6. Avoid blocking air vents with furniture or curtains.
7. Keep outdoor units shaded and well-ventilated.
8. Turn off the unit when rooms are not in use.
9. Schedule professional maintenance at least once a year.
10. Upgrade to energy-efficient equipment if possible.

PLAN AND PERFORM PREVENTIVE MAINTENANCE SERVICES

- ✅ **Key Points:**

1. Create a **maintenance schedule** based on manufacturer recommendations.
2. Inspect **filters, coils, and ducts** during each service.
3. Check **electrical connections** and tighten any loose wiring.
4. Lubricate **moving parts** to prevent wear and friction.
5. Test **thermostat accuracy** and system controls.
6. Verify **drainage system** to avoid water leaks or blockages.
7. Measure and adjust **refrigerant levels** if necessary.
8. Record all **maintenance actions** for future reference.



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CONCLUSION

- Proper maintenance of an air conditioning system is essential to ensure efficient performance, energy savings, and long-term reliability. Regular inspections, cleaning, and preventive services help detect issues early, reducing costly repairs and extending the unit's lifespan. By keeping filters clean, checking refrigerant levels, and maintaining electrical and mechanical components, users can enjoy a comfortable indoor environment with better air quality and reduced energy consumption. Ultimately, consistent preventive care is the key to optimal operation and sustainable performance of any air conditioning system

AIR CONDITIONER MAINTENANCE AND CARE TIPS

1. **Clean the filters regularly**
   Clean 15 to 30 days or more if there's dust or pets

2. **Check the evaporator and condenser coils**
   Check every 6 months to ensure cooling efficiency

3. **Check the refrigerant level**
   Signs of low gas, weak cooling or ice on pipes. Call a cer-

4. **Clean the outdoor unit (condenser)**
   Clean 3 to 6 months by removing leaves, dirt and

6. **Protect the electrical system**
   Use a voltage stabilizer or surge protector to prevent damage from power fluctuations. Avoid connecting

7. **Keep the right temperature**
   Cut at least 3 minutes before restarting to protect

8. **Schedule professional maintenance yearly**
   Ask a technician at least once a year to check

10. **Protect the unit from sun and rain**
    Install a light cover or shade over the outdoor unit

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THANK YOU

FOR YOUR ATTENTION AND PARTICIPATION

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