

HVAC System

AHU Control & Troubleshooting

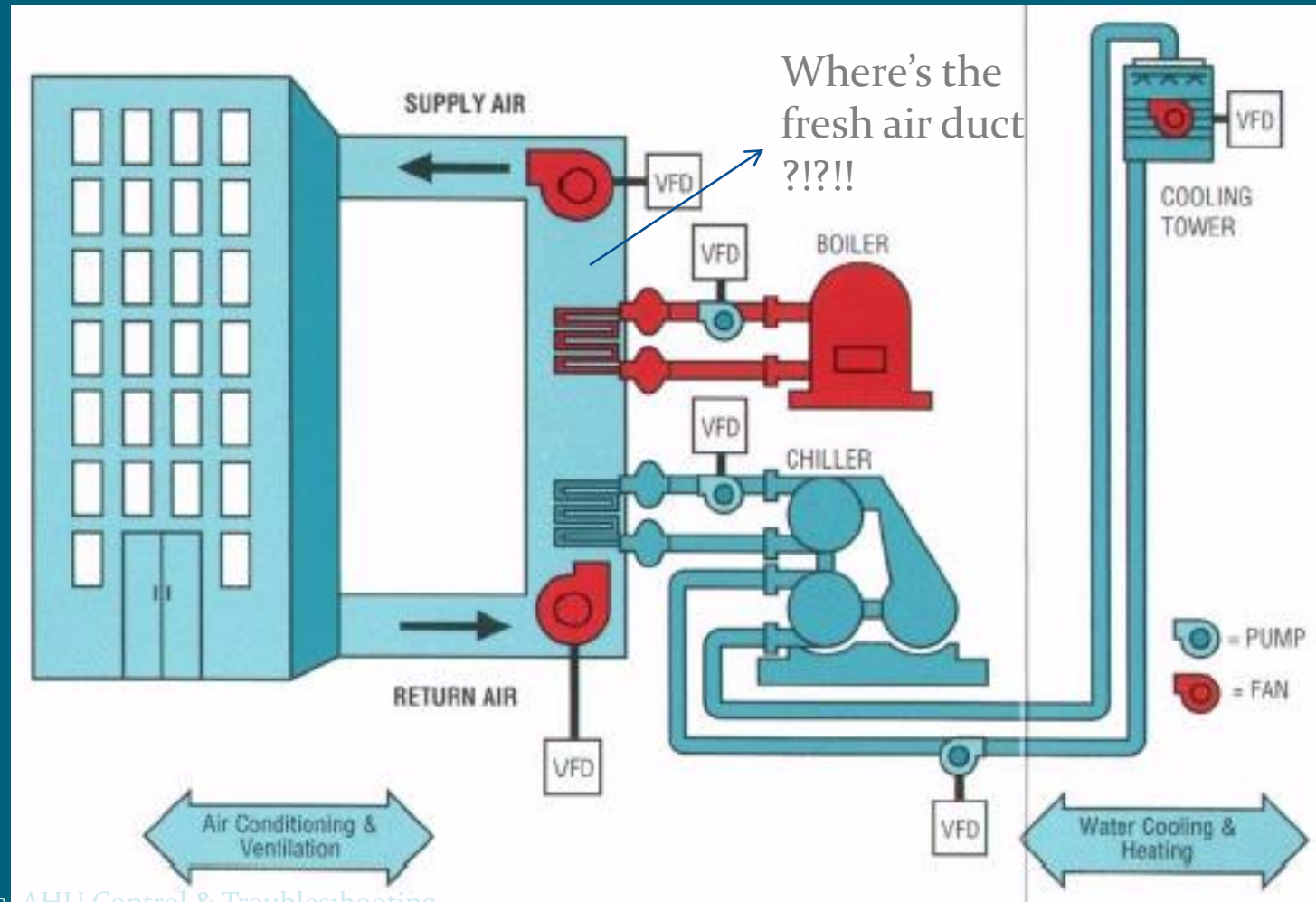
ARCH 326 Spring 2015-2016
Dr . Hassan Hassoon ALDelfi

Introduction to HVAC Systems

- Objective → Comfort Zone
- Temperature → 22 °C → 26 °C
- Relative Humidity → 40 % R.H → 60 % R.H
- Comfort Zone → 24 °C & 50 % R.H

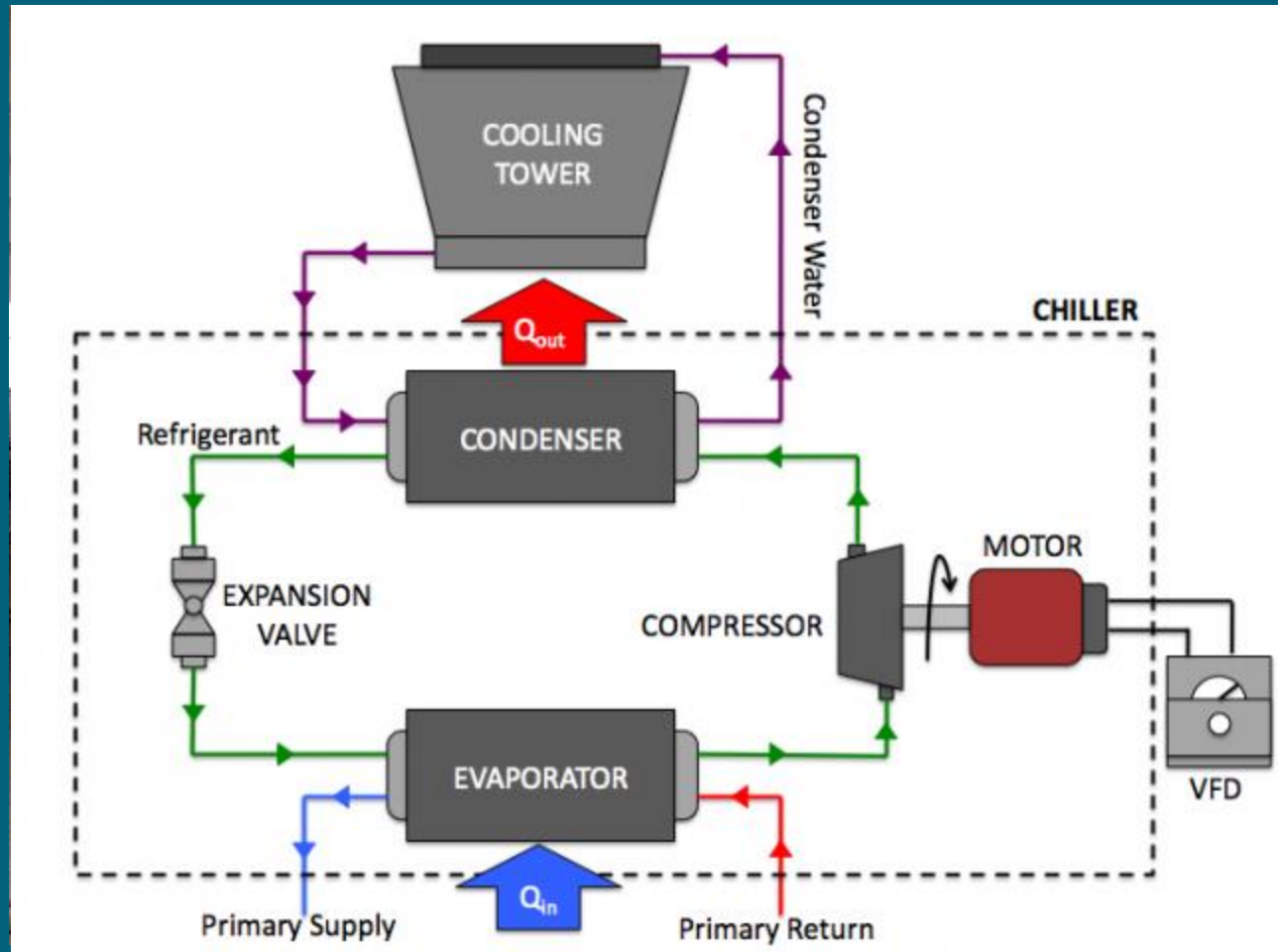


HVAC System Components



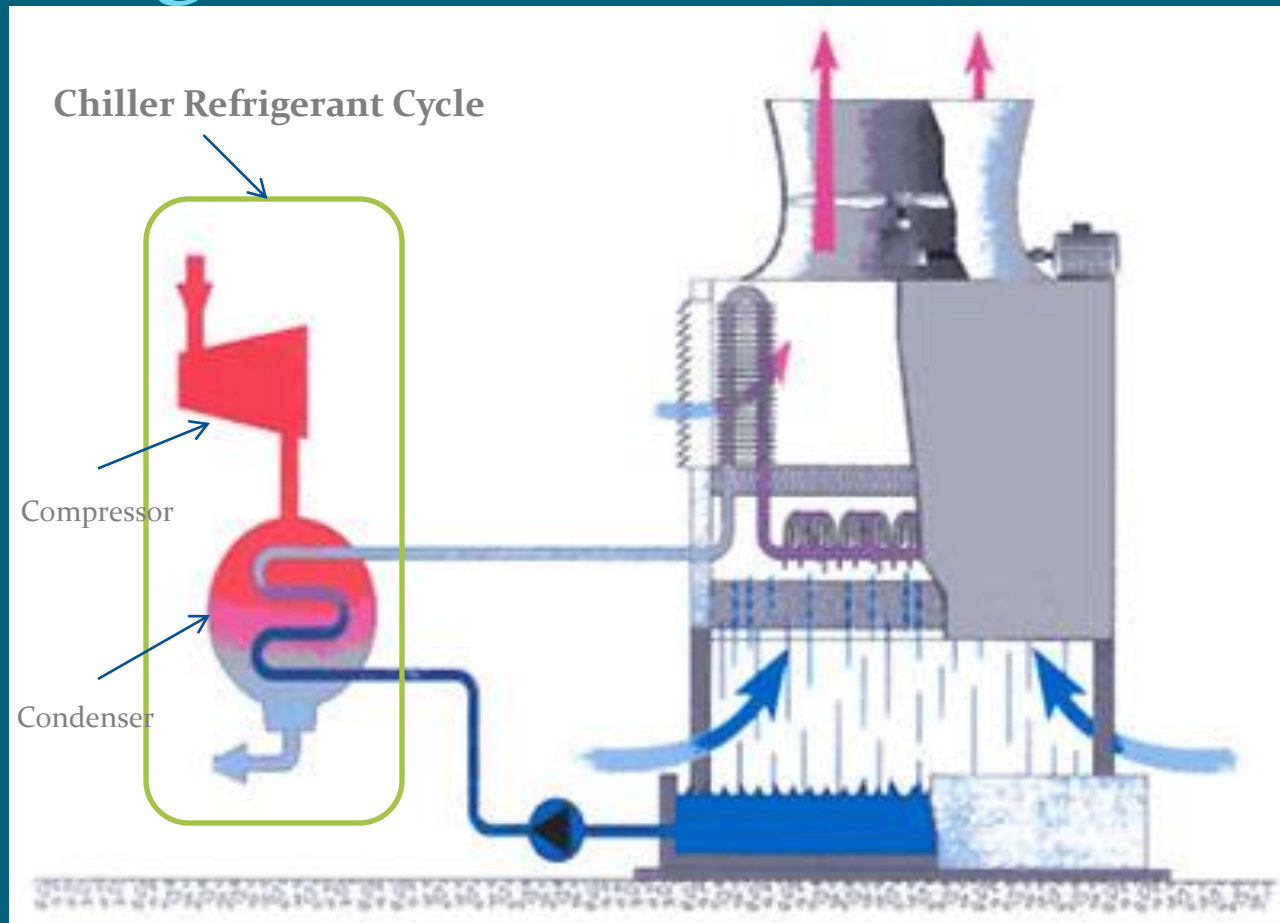
HVAC System Components

1. Chiller



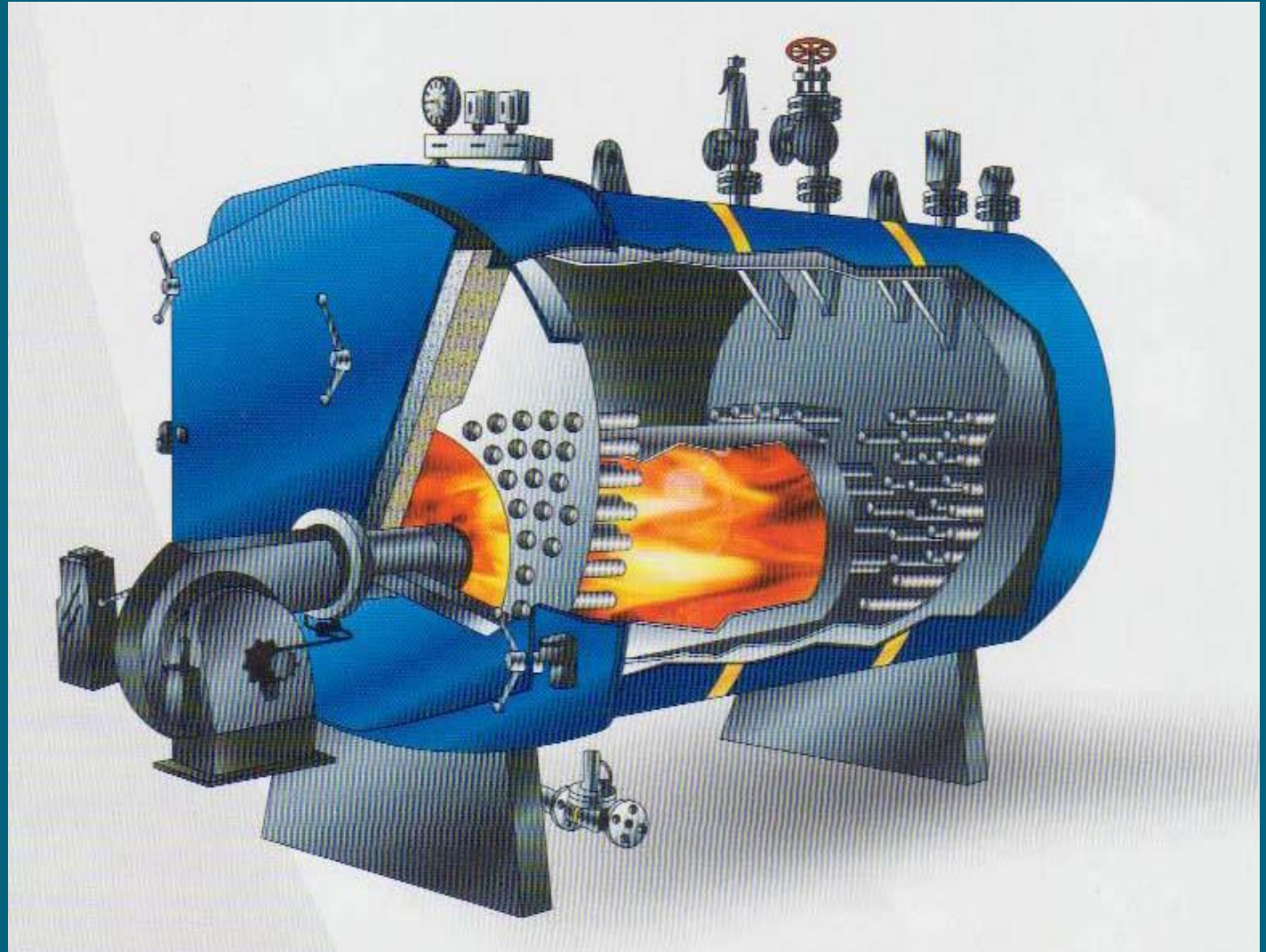
HVAC System Components

2. Cooling Tower



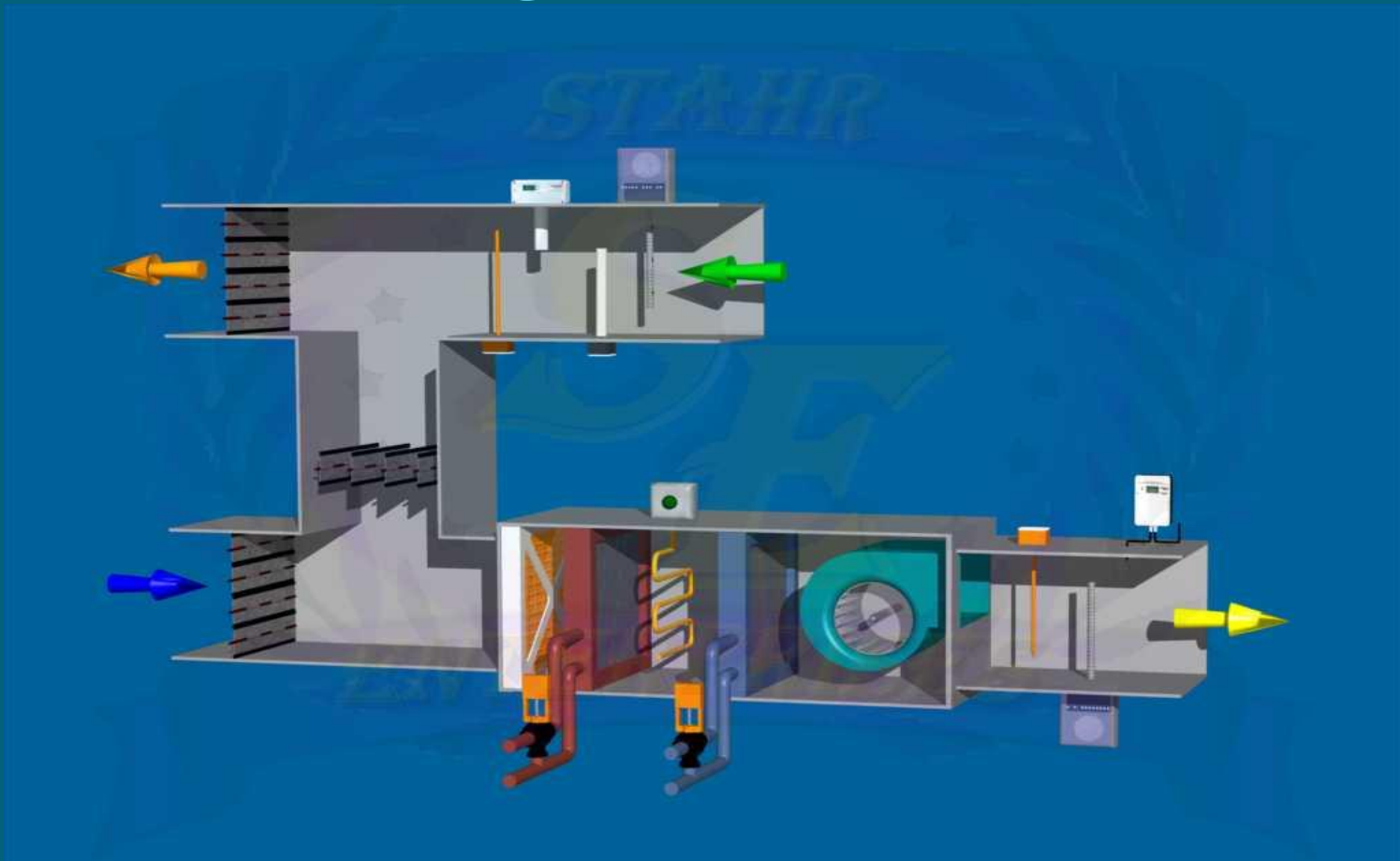
HVAC System Components

3. Boiler



HVAC System Components

4. Air Handling Unit (AHU)



HVAC System Components

5. VAV (Variable Air Volume)



HVAC System Components

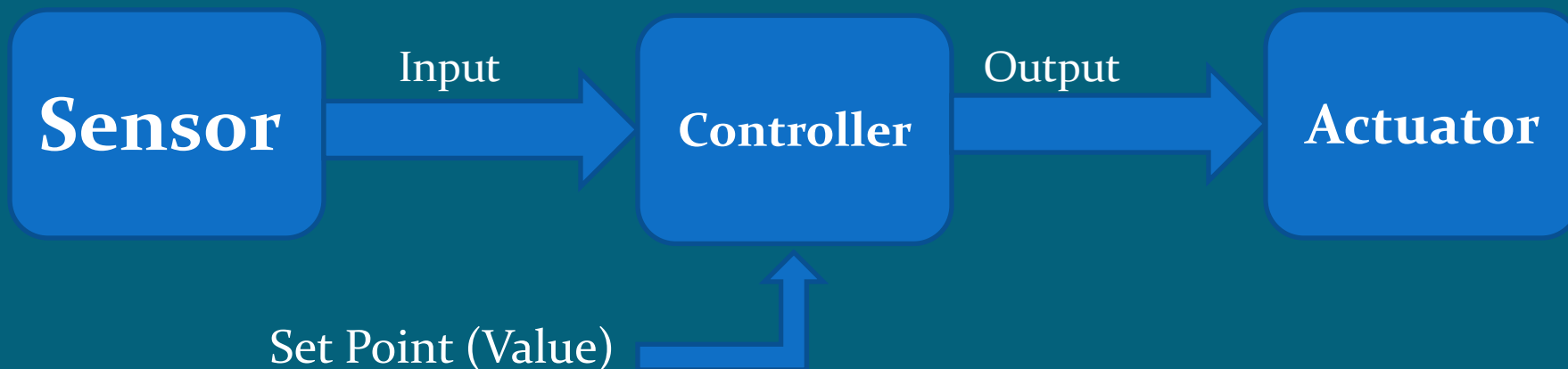
6. Ductworks & Air Terminals



AHU Control & Troubleshooting

- Control Concept

1. Sensor
2. Controller Device (Brain)
3. Actuator



AHU Control & Troubleshooting



- 1- Thermostat
- 2- Pressure Gauge
- 3- R.H % Sensor
- 4- DPS
- 5- Flow Switch

BMS
DDC
MCC

- 1- Motorized Damper
- 2- Two-way Valve
- 3- Three-way Valve
- 4- VSD

AHU Control

