

The logo for Smart Buildings Academy (SBA) features the letters 'SBA' in a bold, white, sans-serif font. The letters are enclosed within a white oval shape that is surrounded by several concentric, hand-drawn style orange and blue lines, creating a sense of motion and energy.

SBA

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HVAC 101 Mini Course Guided Notes



Lesson 4: CHW System - Parts and Pieces

In this lesson, keep note of the following **Key Points**:

- Chillers and their components
- Compressors
- Air-cooled vs water-cooled chillers

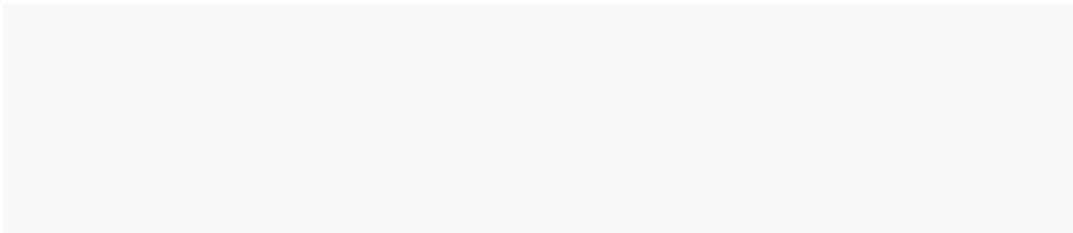
A chiller is a mechanical machine that's part of a refrigeration system designed to _____.

The _____ is considered to be the heart of the chiller system because it's responsible for compressing the refrigerant gas through the chiller.

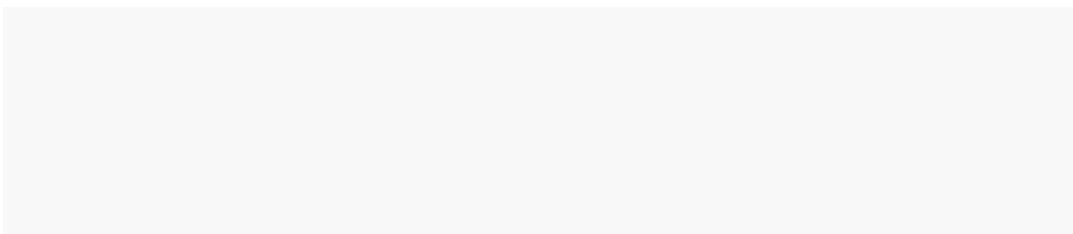


Lesson 4: CHW System - Parts and Pieces

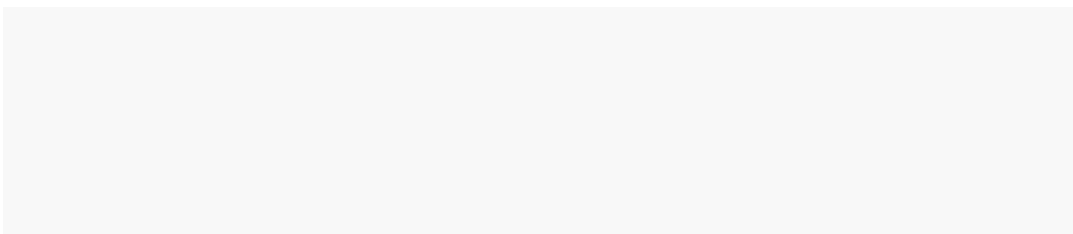
The _____ is a heat exchanger device in a chiller that facilitates the heat transfer from the refrigerant to the cooling water, causing the refrigerant to condense into a liquid state.



The expansion valve in a chiller system regulates the flow of the _____ from the condenser to the evaporator.



An _____ chiller uses air as the primary cooling medium, whereas a _____ chiller uses a cooling tower as its cooling medium.



BAS200: Control Sequence Fundamentals Course



BAS200: Control Sequence Fundamentals provides a comprehensive study of HVAC control sequences. This course combines theory with more than a decade's experience working on some of the world's most complex BAS projects. Students will learn the why behind BAS control strategies and will leave with a solid understanding of "how" systems work.

- Length: 19h16m
- CEUs: 1.9



BAS200: Control Sequence Fundamentals

Course Objectives:

- Master how HVAC systems function and how to control them
- Demonstrate knowledge of BAS controls theory in HVAC systems
- Develop the ability to make design and programming decisions based on system requirements

Some Key Topics:

- Learn what control sequences are and how control sequences are structured.
- Master the step-by-step process of interpreting control sequences.
- Create the foundational system knowledge that allows the student to understand the relationship between space control and upstream systems.
- Discover the different ways of controlling and conditioning the air stream along with the interrelationships between air systems and water systems.
- Learn what hot water systems are, how they are controlled, and how other systems interact with and influence hot water systems.
- Gain an awareness of how and why chilled water systems are used, the methods and processes that control chilled water systems, and the limitations of chilled water systems.
- Learn what the different strategies for pumping and piping are and how these strategies effect the control and efficiency of water based heating and cooling.
- Learn how unitary systems are controlled and how the effect existing building systems.
- Learn what a 2-pipe system is and how to properly control building systems that are supplied by 2-pipe systems.

<https://www.smartbuildingsacademy.com/control-sequence-fundamentals>