

Components & Control Devices

Phase 5 **BLOCK 2**

Phase 5 — Block 2 Overview

Learning Block 2 builds upon refrigeration fundamentals by introducing the components, controls, and metering devices that regulate refrigeration system operation. Technicians will learn how refrigerant flow is controlled, how system protection devices safeguard equipment, and how

various control strategies influence dryer performance. By understanding the purpose and operation of these components, technicians will be better prepared to diagnose system faults, interpret operating conditions, and make informed troubleshooting decisions in the field.

Block Completion Requirements

For Block 2, complete all requirements listed below. Assigned *Absorb* resources can be accessed through the learning platform. Contact your mentor or supervisor if you need assistance with any topic or requirement.

1. Review all *Absorb* resources
2. Complete all *Articulate* questions
3. Complete the *Mastery Evaluation*

Absorb Resources

Refer to the DRW Learning Block online for the complete list of assigned resources for this block. Topics to review include:

AST580 TRAINING MATLS.

- Air & Refrigerant Flow
- NVC Heat Exchange Diagrams
- Valves, Switches, Pumps & Metering Devices

SUPPLEMENTAL

- Refrigeration Videos
- Tech Direct Articles
- Manufacturer Resources
- Control Device Op. & Troubleshooting Resources

DRYERS AT A GLANCE

- Refr. Dryer Op. & Components
- System Configurations

Resources

Key Competencies

By completion of this Learning Block, technicians should demonstrate competency in:

- | | | |
|---|--|---|
| <input type="checkbox"/> Refrigeration Component Identification | <input type="checkbox"/> Superheat Application & Relevance | <input type="checkbox"/> Glycol Pump Function & Diagnostics |
| <input type="checkbox"/> Refrigeration Component Functions | <input type="checkbox"/> High Pressure Cutout (HPCO) Operation | <input type="checkbox"/> Hot Gas Bypass Valve Operation |
| <input type="checkbox"/> Refrigerant Flow Control | <input type="checkbox"/> Low Pressure Cutout (LPCO) Operation | <input type="checkbox"/> Condensate Drain Systems |
| <input type="checkbox"/> Thermostatic Expansion Valve (TXV) Op. | <input type="checkbox"/> System Protection Strategies | <input type="checkbox"/> Refrigeration Control Logic |
| <input type="checkbox"/> Capillary Tube Operation | <input type="checkbox"/> Fan Cycling Switch Operation | <input type="checkbox"/> Alarm Recognition & Interpretation |
| <input type="checkbox"/> Fixed vs. Modulating Metering Devices | <input type="checkbox"/> Liquid Line Solenoid Operation | <input type="checkbox"/> Component-Based Troubleshooting |
| <input type="checkbox"/> Refr. Dryer Diagnostic Methodology | | |

Competencies

Name: _____

Phase Start Date: _____

DRW