

Unit of Competency CPCPWT3022

Install and commission water heating systems and adjust controls and devices

Application

This unit specifies the skills and knowledge required to install and commission water heaters and install and adjust controls and mixing devices used to manually control water mix and flow.

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Prerequisite Unit

CPCPCM2043 Carry out WHS requirements

Elements and Performance Criteria

1. Identify installation requirements.	1.1	Access, read and determine water heating system and control device installation requirements from job specifications, relevant Australian Standards, codes, manufacturers' instructions and jurisdictional requirements.
	1.2	Identify and apply workplace, work health and safety (WHS) and environmental requirements.
2. Prepare for work.	2.1	Create a materials list and collect materials.
	2.2	Select and check serviceability of appropriate tools and equipment including personal protective equipment (PPE).
3. Install water heating system and service control device.	3.1	Position water heating system in accordance with relevant Australian Standards, manufacturers' instructions and jurisdictional requirements.
	3.2	Install and connect pipework and valves to water heating system in accordance with relevant Australian Standards, manufacturers' instructions and jurisdictional requirements.
	3.3	Determine tempered water control device size from available pressure and number of fixtures supplied in accordance with Australian Standards, manufacturers' instructions and jurisdictional requirements.
	3.4	Install tempered water device and connect to pipework in accordance with Australian Standards, manufacturers' instructions and jurisdictional requirements.
	3.5	Commission water heating system and control device.
	3.6	Test installed pipework according to Australian Standards, manufacturers' instructions and jurisdictional requirements.
	3.7	Complete installation and documentation according to relevant regulatory and workplace requirements.
4. Clean up.	4.1	Clear the work area and dispose of, reuse or recycle materials in accordance with state or territory legislation and workplace requirements.

	4.2	Clean tools and equipment, check for serviceability and report any damage, and store and secure.
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Foundation skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is non-equivalent to CPCPWT3022A Install and adjust water service controls and devices, and CPCPWT3023A Install and commission water heating systems.

Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCPWT3022

Install and commission water heating systems and adjust controls and devices

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria for this unit by:

- installing and commissioning three different water heaters, including one manifold system from the following:
 - a vented storage water heater
 - an unvented storage water heater
 - a continuous flow water heater
 - a solar water heater
 - a water service consisting of a tempering valve
- adjusting water service controls and devices from the above installations to manufacturers' instructions, Australian Standards and jurisdictional requirements.

Knowledge Evidence

To be competent in this unit, a person must demonstrate knowledge of:

- approved materials and components of water heating systems and control devices
- processes, procedures and techniques for:
 - installing water heaters
 - using testing equipment
- properties of water, including pressure and flow rates
- water service controls and mixing devices
- how to access relevant information, including drawings conventions, symbols and abbreviations, codes and standards
- tools, materials and equipment used to install and commission water heating systems and adjust controls and devices
- work health and safety (WHS) requirements for installing and commissioning water heating systems and adjust controls and devices.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation using realistic workplace conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

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