



Australian Government

AHCIRG345 Install pressurised irrigation systems

Release: 1

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Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to organise resources, set out and prepare an irrigation installation site and install, commission and complete pressurised irrigation system installation.

The unit applies to individuals who install pressurised irrigation systems under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Organise resources for installation work	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Select required materials, tools, equipment and machinery and check for safe operation 1.3 Check that parts and equipment match system drawings and specifications 1.4 Select, fit, use and maintain safety and personal protective

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	equipment applicable to the task 1.5 Carry out pre-operational checks on tools, equipment and machinery 1.6 Identify environmental considerations of irrigation installation activities 1.7 Check water supply to ensure that it is compatible with system specifications
2. Set out and prepare site	2.1 Measure and mark out irrigation lines 2.2 Confirm trenches are at the specified depth without damage to services, facilities, features and established plants 2.3 Observe regulations relevant to the situation 2.4 Use work practices that reflect sustainable horticulture principles and environmental requirements
3. Install irrigation components	3.1 Interpret the irrigation system plan and, where applicable, supervise contractors and monitor work to ensure it conforms to the plan 3.2 Assemble and connect components and complete and test joints 3.3 Fit and adjust fittings and valves and secure all joints 3.4 Maintain a clean and safe work area while installation work is carried out
4. Commission irrigation system	4.1 Calibrate testing and monitoring equipment 4.2 Confirm start-up sequence according to operations manual 4.3 Flush system as required 4.4 Identify operating faults and take corrective where required 4.5 Record work outcomes and report to supervisor
5. Complete installation work	5.1 Finish off earthworks to specifications 5.2 Confirm system configuration and capacity matches installation plan 5.3 Restore site and clear materials and equipment from the site on completion of maintenance works 5.4 Clean and store tools and equipment according workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	Use the correct terminology to document irrigation installation activities
Oral communication	Use clear language to report irrigation installation activities
Numeracy skills	Confirm part numbers
Navigate the world of work	Recognise and follow workplace requirements, including safety and environmental requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG345 Install pressurised irrigation systems	AHCIRG331 Install pressurised irrigation systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG345 Install pressurised irrigation systems

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has installed pressurised irrigation systems on at least one occasion and has:

- applied workplace health and safety requirements
- selected materials, tools, equipment and machinery appropriate to the scope of works
- organised resources for installation work
- set out and prepared the site
- completed installation work
- calibrated testing and monitoring equipment
- commissioned irrigation system.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for installing pressurised irrigation systems
- water quality and water filtration techniques
- the behaviour of water on varying terrain and soil types
- soil characteristics
- soil water retention testing techniques
- calculations for installing pressurised irrigation systems
- characteristics and operation of joints, valves and sprinkler components
- components of a pressurised irrigation system
- methods and techniques of installing pressurised irrigation
- operation of pumps and water flow rates.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - pressurised irrigation system operation and maintenance manual
 - pressurised irrigation system installation equipment
 - personal protective equipment applicable to installing pressurised irrigation systems
- specifications:
 - work instructions and workplace procedures applicable to installing pressurised irrigation systems workplace requirements applicable to health and safety in the workplace and installing pressurised irrigation systems
 - pressurised irrigation system installation tools and equipment and procedures
 - recording procedures
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

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