

Modification history

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

AHCMKH4XX	Design and install milk cooling and storage systems
Application	<p>This unit of competency describes the skills and knowledge required to design and install on-farm milk cooling and storage systems.</p> <p>This unit applies to technicians who design and install milking equipment components for dairy facilities.</p> <p>All work is carried out to comply with workplace policies and procedures, according to state/territory work health and safety, animal welfare, environmental and biosecurity legislation, regulations and standards that apply to the workplace.</p> <p>No licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
Prerequisite Unit	Nil
Unit Sector	Milk Harvesting (MKH)

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. Determine cooling and storage system requirements	1.1 Determine available cooling water supply quantity and test the quality of the water supply 1.2 Confirm planned milk cooling and storage systems meet industry standards and facility herd needs 1.3 Determine and record design considerations and components placement 1.4 Determine work health and safety hazards, assess risks, determine controls and report as required
2. Determine milk pre-cooling requirements	2.1 Measure and record maximum peak flow of milk delivery 2.2 Check cooling water temperatures and quality against design specifications 2.3 Compare available milk cooling equipment with design requirements and select suitable equipment 2.4 Determine work health and safety and human health regulatory requirements and establish compliance targets 2.5 Determine water cooling system requirements according to planned equipment and available resources
3. Determine milk storage requirements	3.1 Determine facility milk production levels and projected production increases 3.2 Establish milk entry temperature and other critical design considerations in consultation with facility and available data 3.3 Select milk vat to meet shed production requirements and bulk milk collection routines
4. Install milk cooling and storage equipment	4.1 Install plate cooler and other required components of pre-cooling system according to system design and industry standards 4.2 Install vat and refrigeration equipment to meet design specifications 4.3 Complete commissioning tests to ensure operation of cooling and storage system complies with performance targets and milk supply quality standards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
5. Operate and maintain milk cooling and storage equipment	5.1 Complete routine maintenance program requirements according to manufacturer recommendation 5.2 Determine and document repair and service requirements and rectification of operational faults as part of maintenance routines

Foundation Skills	
<i>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.</i>	
Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information from manufacturer and regulatory documentation
Oral communication	<ul style="list-style-type: none"> Gather information through open-ended questioning, active listening, paraphrasing and summarising Use appropriate language and tone to communicate with internal and external installation participants
Writing	<ul style="list-style-type: none"> Complete documentation and plans using the required formal, logical structure and industry terminology
Numeracy	<ul style="list-style-type: none"> Calculate costings, time and application rates

Unit Mapping Information			
Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMKH4XX Design and install milk cooling and storage system	AHCMKH403 Design and install enterprise milk cooling and storage	Minor changes performance criteria, performance and knowledge evidence. Foundation skill added. Assessment conditions expanded	Equivalent

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

TITLE	Assessment requirements for AHCMKH4XX Design and install milk cooling and storage systems
Performance Evidence	
<p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that the individual has designed and installed at least one milk cooling and storage system, including:</p> <ul style="list-style-type: none"> established cooling and storage system design to facility requirements conducted testing and research to establish milk pre-cooling and milk storage requirements conducted commission testing on installed milk cooling and storage equipment documented the maintained routines for milk cooling and storage equipment applied work health and safety requirements in design and installation. 	
Knowledge Evidence	
<p>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:</p> <ul style="list-style-type: none"> requirements, components and considerations for designing, planning, siting and installing milk cooling and milk storage systems and their components, and to meet the needs of the facility and industry standards types, functions, cleaning, operating, monitoring and maintenance of milk cooling and milk storage systems and all components requirements, criteria and assessment methods for determining water quality and the impacts of water quality on maintenance and performance of milk cooling and milk storage systems possible faults, problems and poor performance with milk cooling and milk storage systems and their components, impacts on facility operations and corrective actions for these faults and problems criteria and methods for assessing performance of milk cooling and milk storage systems and their components requirements and assessment methods for determining enterprise milk production levels relevant work health and safety requirements for the design and installation of milk cooling and storage systems. 	
Assessment Conditions	
<p>Assessment of the skills in this unit of competency must take place under the following conditions:</p> <ul style="list-style-type: none"> physical conditions: <ul style="list-style-type: none"> skills must be demonstrated in a dairy milking facility or an environment that accurately represents workplace conditions resources, equipment and materials: <ul style="list-style-type: none"> milk cooling and storage system and components tools and equipment to install and test system personal protective equipment resources to document maintenance program specifications: <ul style="list-style-type: none"> facility milk cooling and storage system specifications workplace policies and procedures for milking cooling and storage system installation, including advice on health and safety and hygiene requirements manufacturer specifications on installation and maintenance requirements. <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
Links	<p>Companion Volumes, including Implementation Guides, are available at VETNet:</p> <p>https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72</p>