

Title	Operate pumping or powder transport equipment in a dairy processing operation		
Level	4	Credits	5

Purpose	People credited with this unit standard are able to: describe the principles of pumping or powder transport, and the operation of equipment; prepare pump or powder transfer equipment for operation; and start up and monitor pumping or powder transfer equipment, in a dairy processing operation.
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Classification	Dairy Processing > Milk Processing
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Available grade	Achieved
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Guidance Information

- 1 Legislation and regulations relevant to this unit standard include but are not limited to:
 - Health and Safety at Work Act 2015;
 - Health and Safety in Employment Regulations 1995;
 - Animal Products Act 1999;
 - Animal Products (Dairy) Regulations 2005;
 - Food Act 2014;
 - Hazardous Substances and New Organisms Act 1996;
 - Resource Management Act 1991;
 - and any subsequent amendments.
- 2 All evidence presented in this unit standard must be in accordance with:
 - organisational requirements.
- 3 Definitions

Control points – refer to those key points in a work process which must be monitored and controlled. This includes food safety, quality and regulatory control points as well as inspection points.

Organisational requirements – instructions to staff on policies and procedures which are documented in memo, electronic or manual format and are available in the workplace. These requirements include but are not limited to – site specific requirements, company quality management requirements.
- 4 Assessment must be carried out in a realistic workplace environment. The candidate must be under realistic time pressures and use relevant commercial equipment.
- 5 Pumping refers to moving liquid from one point to another whereas powder transport refers to moving powder from one point to another either via blowing or vacuum.

Outcomes and performance criteria

Outcome 1

Describe the principles of pumping or powder transport, and the operation of equipment in a dairy processing operation.

Performance criteria

- 1.1 Describe the operating principles of a main pump type or powder transfer equipment used in dairy processing in terms of their advantages and disadvantages.

Range main types of pumps may include but are not limited to – positive rotary displacement, centrifugal;
powder transfer equipment may include but is not limited to – powder blower, vacuum transfer, liquid ring, screw type;
evidence of one pump or powder transfer equipment is required.

- 1.2 Describe the operation of a main pump type or powder transfer equipment used in dairy processing in terms of flow control and means of identifying correct rotation direction.

Range positive rotary displacement pumps, centrifugal pumps or powder blower, vacuum transfer;
evidence of one equipment type is required.

Outcome 2

Prepare pump or powder transfer equipment for operation in a dairy processing operation.

Performance criteria

- 2.1 Identify production requirements for dairy processing operations.

- 2.2 Confirm that ingredients and services necessary to the pumping or powder transfer process are available to meet production requirements.

- 2.3 Check pumping or powder transfer equipment in terms of status, condition and readiness for use, and rectify and/or report findings.

Outcome 3

Start up and monitor pumping or powder transfer equipment in a dairy processing operation.

Performance criteria

- 3.1 Start up the pumping or powder transfer equipment.

3.2 Monitor pumping or powder transfer equipment and process control points to confirm that performance is maintained within specifications.

Range monitoring may include but is not limited to – monitoring control points and parameters, adjusting operating parameters, equipment checks, identifying sampling and testing requirements, taking samples, handling samples, dispatch of samples, conducting tests; evidence of three monitoring examples is required.

3.3 Identify any defective pumping or powder transfer equipment performance and rectify and/or report findings.

3.4 Clean and sanitise pumping or powder transfer equipment.

3.5 Collect, treat, and dispose of, store or recycle waste.

3.6 Record workplace information related to the set up and monitoring of pumping or powder transfer equipment.

3.7 Shut down pumping or powder transfer equipment.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	30 June 2003	31 December 2014
Rollover	2	26 January 2007	31 December 2014
Rollover and Revision	3	17 July 2009	31 December 2016
Review	4	18 June 2015	31 December 2022
Review	5	26 September 2019	31 December 2024
Review	6	27 May 2021	N/A
Revision	7	26 January 2023	N/A

Consent and Moderation Requirements (CMR) reference	0022
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact the Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.