Australian Standard®

MILKING MACHINE INSTALLATIONS

Part 2—CONSTRUCTION AND PERFORMANCE

This Australian standard was prepared by Committee DS/6, Dairy Farm Equipment. It was approved on behalf of the Council of the Standards Association of Australia on 30 September 1985 and published on 6 January 1986

The following interests are represented on Committee DS/6:

Australian Dairy Farmers Federation

Australian Dairy Institute

Australian Milking Machine Technicians' Association

Australian Society of Dairy Technology Inc.

Confederation of Australian Industry

Department of Agriculture, N.S.W.

Department of Agriculture, S.A.

Department of Agriculture, Tas.

Department of Agriculture, Vic.

Department of Agriculture, W.A.

Department of Primary Industries, Qld

Department of Primary Industry

Food Industry Suppliers Association of Australia

Metal Trades Industry Association of Australia

United Dairyfarmers of Victoria

University of Melbourne

Representatives of the following interests also participated in the preparation of this Australian standard:

Ministry of Agriculture and Fisheries, New Zealand

New Zealand Farm Machinery Association

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Part 2—CONSTRUCTION AND PERFORMANCE

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PREFACE

This standard was prepared by the Association's Committee on Dairy Farm Equipment. It is based on ISO 5707, Milking Machine Installations — Construction and Performance. It is a simplified version of the ISO standard, containing only information relevant to Australian and New Zealand conditions. For instance, requirements for bucket units and direct-to-can installations have been omitted. This standard does not differ from ISO 5707 in principle or in any critical measurements or performance specifications except for the requirements for effective reserve and milkline sizes for certain types of installations. Some additional terminology has been included (also listed in AS 2844, Part 1 — Glossary of Terms) and certain installation and performance requirements have been added to suit local conditions. These additional requirements have been taken mainly from the current guidelines developed by the Australian Milking Machine Technicians' Association.

The following Australian standards have been superseded by this standard:

AS 1778—1975	SAA Milking Machine Code
AS N37—1969	Vacuum Regulators for Milking Machines
AS N38—1969	End-of-milking Indicators
AS N56—1965	Austenitic Stainless Steel Pipes for Milking Machines and Auxiliary Equipment
AS N57—1965	Glass Pipes and Fittings for Milking Machines and Auxiliary Equipment
AS N59—1966	Materials in Milking Machines (for Surfaces in Contact with Milk or Detergent Solutions)

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Australian Standard
for
MILKING MACHINE INSTALLATIONS

PART 2—CONSTRUCTION AND PERFORMANCE

1 SCOPE. This standard specifies performance requirements and certain dimensional requirements for the satisfactory functioning of milking machines. It also specifies requirements for materials, construction and installation.

2 APPLICATION. This standard applies to milking machines intended for milking cows. The qualitative requirements apply also to installations for milking sheep and goats.

3 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 2536 Surface Texture

AS 2844 Milking Machine Installations
Part 1—Glossary of Terms
Part 3—Mechanical Tests

AS 3000 SAA Wiring Rules

ISO 5707 Milking Machine Installations—Construction and Performance

ISO 6690 Milking Machine Installations—Mechanical Tests

4 DEFINITIONS. For the purpose of this standard, the definitions in AS 2844, Part 1 apply.

5 GENERAL.

5.1 Tests for compliance. Characteristics established by mechanical testing are based on the tests specified in AS 2844, Part 3. Those tests shall, therefore, be used for the purpose of verifying compliance with the requirements of this standard.

5.2 Power failure. Most milking machines depend on a public electricity supply which may occasionally fail. Where possible, the installation should be designed so that the user can arrange alternative means for operating the machine in cases of emergency.

5.3 Noise. It is important to design and install the equipment so that noise levels in the farm dairy and in the vicinity are as low as possible. Installations shall comply with requirements for noise level in State legislation, if applicable.

5.4 Safety.

5.4.1 *General.* All installations shall comply with the health and safety requirements contained in legislation.

The plant must also be designed and installed to eliminate hazards to people and animals during normal milking and cleaning or servicing operations by—

(a) removing or protecting protruding ends and sharp points on mounting brackets in the milker's area and walkways;

(b) removing or protecting protruding ends of carrier pipes, milklines or air lines;

(c) ensuring any spillage from the vacuum pump, vacuum tank or wash water is drained away from the installation in order to minimize slipping hazards;

(d) preventing a fire hazard developing outside the building from a build up of oil deposits exhausted from the vacuum pump.

5.4.2 *Barrier guards.* Barrier guards shall comply with the following requirements:

(a) Effective barrier guards shall be constructed and fitted to cover all moving pulleys, belts, shafts and couplings to prevent access to moving parts by children, adults and animals, as follows:

  (i) A cover made from wire mesh, sheet steel or other suitable material to completely encase and prevent access to the pulleys, belts and rotating shafts.

  (ii) A cover made from wire mesh, sheet steel or other suitable material to completely encase the pump installation. Pulleys and belts should be located against the wall to prevent accidental contact.

(b) All guards shall be secured by means of bolts.

(c) The mesh size shall prevent fingers and hands of young children contacting the moving parts.

5.4.3 *Electrical.* Electrical equipment shall comply with the following requirements:

(a) Electrical installations shall comply with legal wiring codes and AS 3000.

(b) All switches, wiring, connectors, etc., shall be installed and located so as not to constitute a hazard should water come into contact with the installations.

(c) An electrical switch to isolate the prime mover shall be installed at or near the vacuum pump assembly.

5.5 Workmanship. All components shall be mounted or connected so that they remain correctly positioned and aligned, and firm. Joints shall be properly finished, free from burrs and effected without reduction in internal diameter of the lines being joined.

Pipeline mountings shall allow the amount of free movement of pipes required to withstand expansion or contraction of the system due to temperature variation. All couplings and joints should be able to withstand such movement. Welds to supporting pipework should be painted.