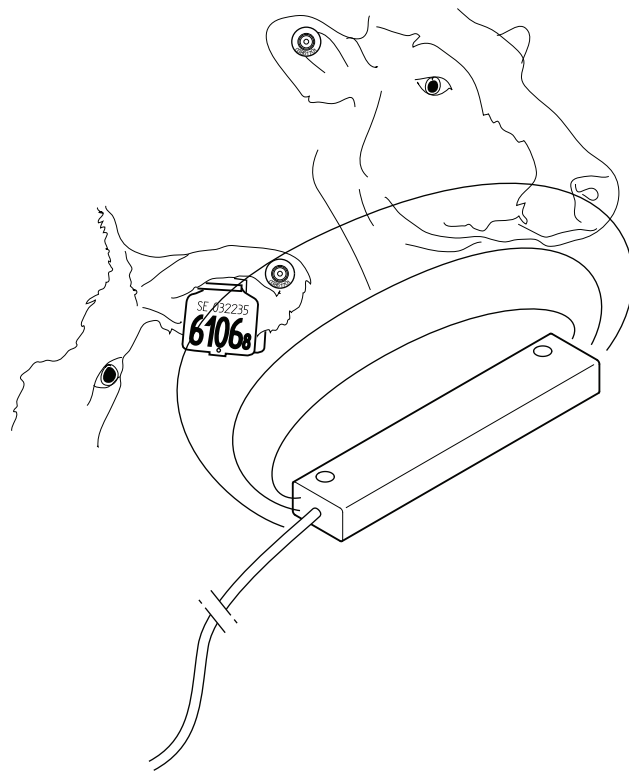


DeLaval multi rod reader

Instruction Book



DeLaval multi rod reader

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EC Declaration of Conformity

Name of product: **DeLaval multi rod reader**
Type: 94648080, 94648081, 94648083
Report No. 80012178 version 0

The product complies with requirements of the following directives:

Radio and Telecommunication Terminal Equipment Directive - 99/5/EEC

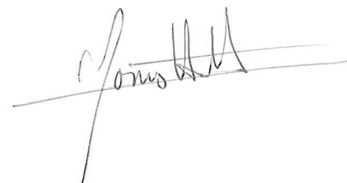
Harmonised standards which have been used:

EN 300 330-2 V1.3.1

Other technical standards and specifications used:

Tumba 2015-11-12

Signed:



Name: Jonas Hällman
Position: Executive Vice President
Department: Business Area Milking Systems

Contact: Product Manager
P.O. Box 39
SE 147 21 TUMBA
Sweden

Name and address of manufacturer:

DeLaval International AB
P.O. Box 39
SE 147 21 TUMBA
Sweden

Safety precautions

DeLaval multi rod reader

1 Foreword

The safety and operational instructions must be observed by any person involved with the use or operation of this equipment. Under no circumstances must the equipment be used if it is damaged or if the operation of the equipment is not completely understood.

2 Disclaimer

The information, instructions and parts listed are applicable and current on the date when issued. DeLaval reserves the right to make changes without notice.

3 Definitions of admonishments

Admonishments are safety related warning messages.

Admonishments provide important information intended to prevent incorrect or hazardous use of equipment, machinery or software, and support risk assessment.

The following list defines the different types of admonishments used in DeLaval documentation:

Danger: Refers to imminent and severe risk. Failure to comply with instruction will result in serious injury or death.

Warning: Refers to a potential but severe risk. Failure to comply with instruction could result in injury or death.


Caution: Refers to a limited risk. Failure to comply with instruction could result in minor injury.

Mandatory: Refers to an action or behaviour which is essential to safe and successful use of the equipment.

Prohibited: Refers to an action or behaviour which is incompatible to safe and successful use of the equipment.

Note! *Is intended to draw attention to specific points of importance in the text and advice to prevent equipment damage.*

 This symbol signals risk of injury.

 This symbol signals risk of electric shock.

4 Safety regulations



Warning!

Intended use

Do not use the equipment for any other purposes than the intended use.



Warning!

Risk of injury!

The system must only be operated by trained personnel. Make sure that children and unauthorised people do not come into contact with the system.



Warning!

Keep safety signs legible!

Read all the safety signs on the machine and in this manual. Replace any lost or damaged signs. Keep safety signs clean and legible at all times.



Mandatory!

Read the instructions carefully before using the equipment. Contact the local DeLaval dealer if there are parts of these instructions that are not understood. Compliance with the instructions ensures a correct and safe use of the equipment. Save the instructions for future reference.

**Prohibited!****Do not use inadequate parts or consumables.**

Using products which do not meet specified requirements, for example spare parts or consumables, or not appropriately trained personnel for the DeLaval product may lead to risks or damage. Consequently it may also void or limit the warranty.

5 FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Note! Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The antenna used for this transmitter must be installed to provide a separation distance

of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

6 Warranty

Note! DeLaval will not take any responsibility for damage resulting from faulty installation, operation, or for improper or inadequate care and maintenance.

Note! DeLaval will not take any responsibility for any damage resulting from frost. The owner/user must take the necessary measurements to prevent the ambient temperature around the equipment from dropping to or below freezing point.

Note! Modification may create risks not covered by the original construction. Do not make any modifications which has not been approved by DeLaval.

General description

DeLaval multi rod reader

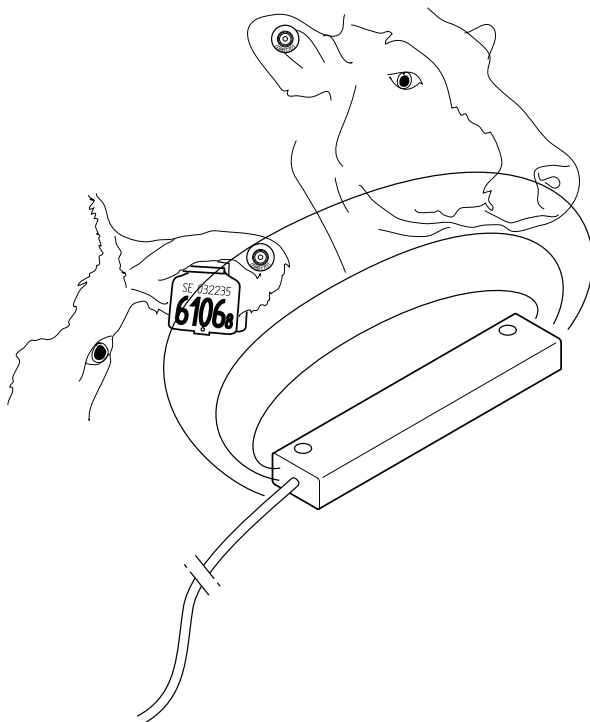
1 Introduction

DeLaval multi rod reader is an electronic unit that is used to identify animals wearing ear tags, ISO half duplex (HDX).

This type of identification is used in feeding and parlour applications where an animal's identity determines the action that should be carried out by the system.

When an ear tag ISO HDX is within the scanning area of the reader, the reader will send the scanned data to a receiving unit, for example a station controller. The data is processed by the receiving unit and the programmed action follows.

For example, a feeding station in a loose-house barn is equipped with a multi rod reader and the cows wear ear tags (ISO HDX). Cows have individual feed rations. When cow 123 approaches the feeding station and the scanning area of the reader, the reader sends the scanned data to the station controller, and the feeding station will dispense the programmed feed ration of cow 123.



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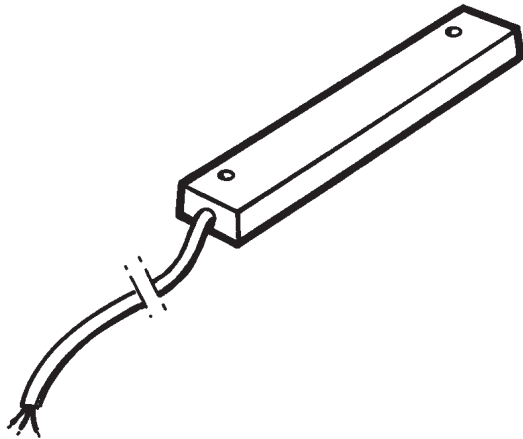
Fig. 1

DeLaval multi rod reader

General description

2 Article numbers

Article number	Description
94648080	DeLaval multi rod reader with 6.0 m cable
94648081	DeLaval multi rod reader with 11.0 m cable



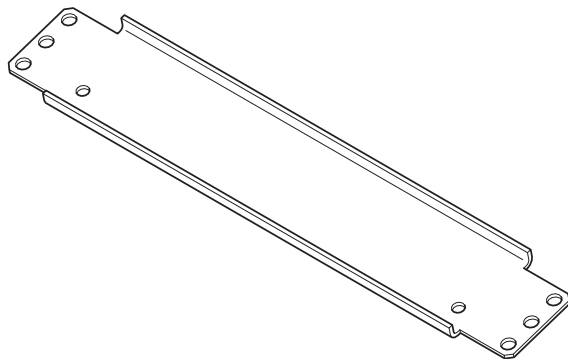
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Fig. 2

2.1 Options

The reader should always be mounted on a metal surface. If the surface is not metal, a metal plate is required between the reader and the surface.

Article number	Description
94633101	Metal plate for milking parlours

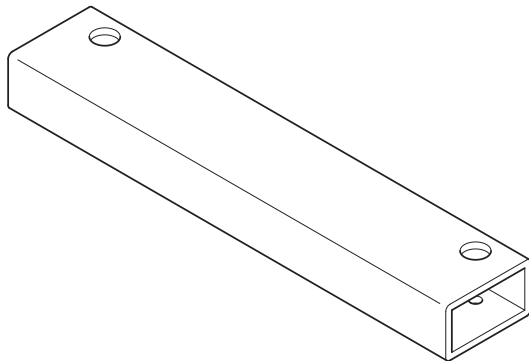


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Fig. 3: Metal plate for milking parlours.

DeLaval multi rod reader

General description



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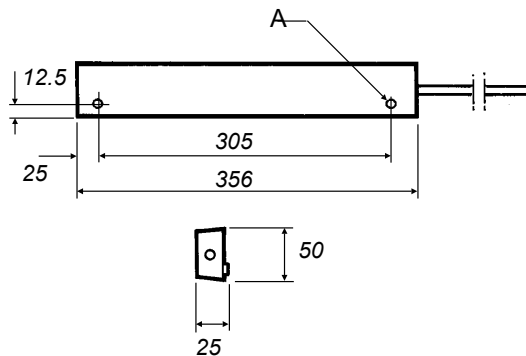
Fig. 4: Protection kit for reader.

It is necessary to use a PVC protection cover in order to protect the reader and to guarantee the minimum gap distance between the reader and the metal plate due to technical specifications.

Article number	Description
92503780	Protection kit for reader

3 Technical data

3.1 General



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Fig. 5: Dimensions of the reader (units in millimetres).

A: Ø6 mm hole

Specification	
Dimensions of the reader (WxLxD)	50 x 356 x 25 mm
Dimensions of the reader protection (WxLxD)	80 x 360 x 40 mm
Weight	0.6 kg
Power supply	12 V DC
Supply current	0.7 A (transmitting/auto-tuning)
Supply current	0.2 A (receiving/standby)
Operation temperature	- 25°C to +55°C
Humidity	20% - 100%
Storage temperature	- 40°C to +70°C

DeLaval multi rod reader

General description

3.2 Scanning area

The scanning signal is best within the inner measurements in the picture and acceptable up to the outer measurements (dashed line).

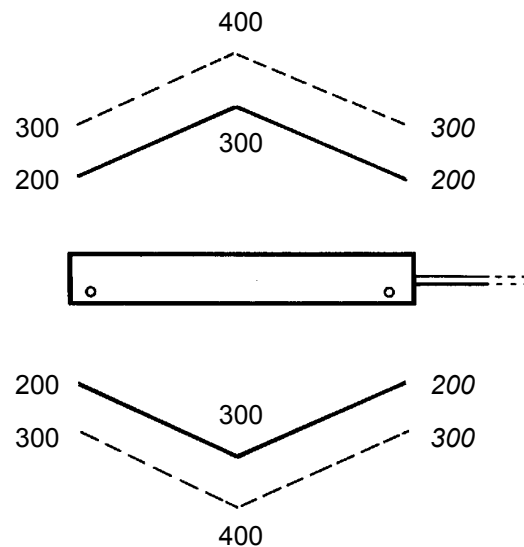
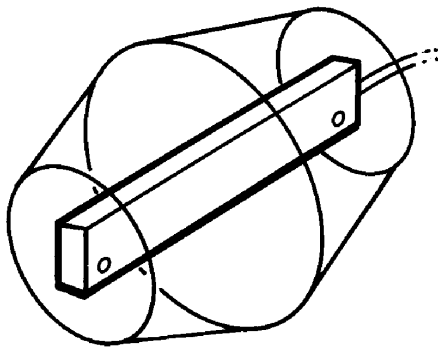


Fig. 6: Range of the reader (units in millimetres).

3.3 Cable

The cable (length - 6 m or 11 m) is connected to the station controller. It is a 4-wire unshielded cable:

- Power supply (red)
- Common/ground (black)
- Data signal (green)
- Clock signal/control (white)

Installation

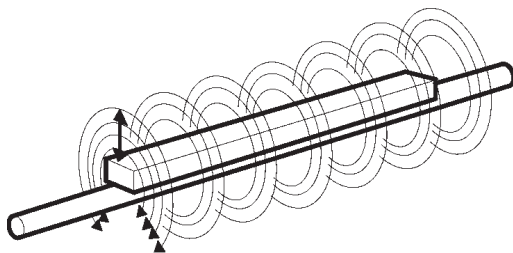
DeLaval multi rod reader

1 General

This chapter gives general advices about the positioning and mounting of DeLaval multi rod reader. For detailed information about how to install and integrate it with a feeding or parlour system, see publications for ALPRO/DelPro solutions.

2 Positioning the reader

- Place the reader keeping in mind its scanning area (see Fig. 7).
- The scanning signal from the reader is sensitive to metal parts. They create a shadow in the scanning area, thereby diminishing it slightly. Fig. 7 shows shadow caused by a parallel metal pipe.
- Place the reader so that the cable is farthest away from animals.



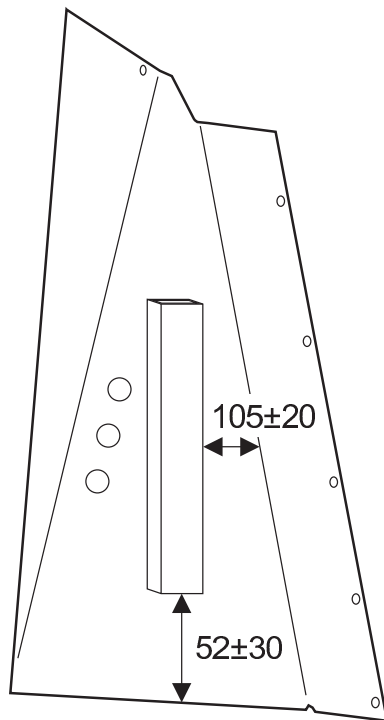
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Fig. 7

3 Mounting the reader

- Fasten and protect the reader cable carefully.
- If the reader is installed inside the pipe, leave the pipe ends open.

If the pipe ends are sealed, water which penetrates the pipe cannot drain off and may damage the reader.

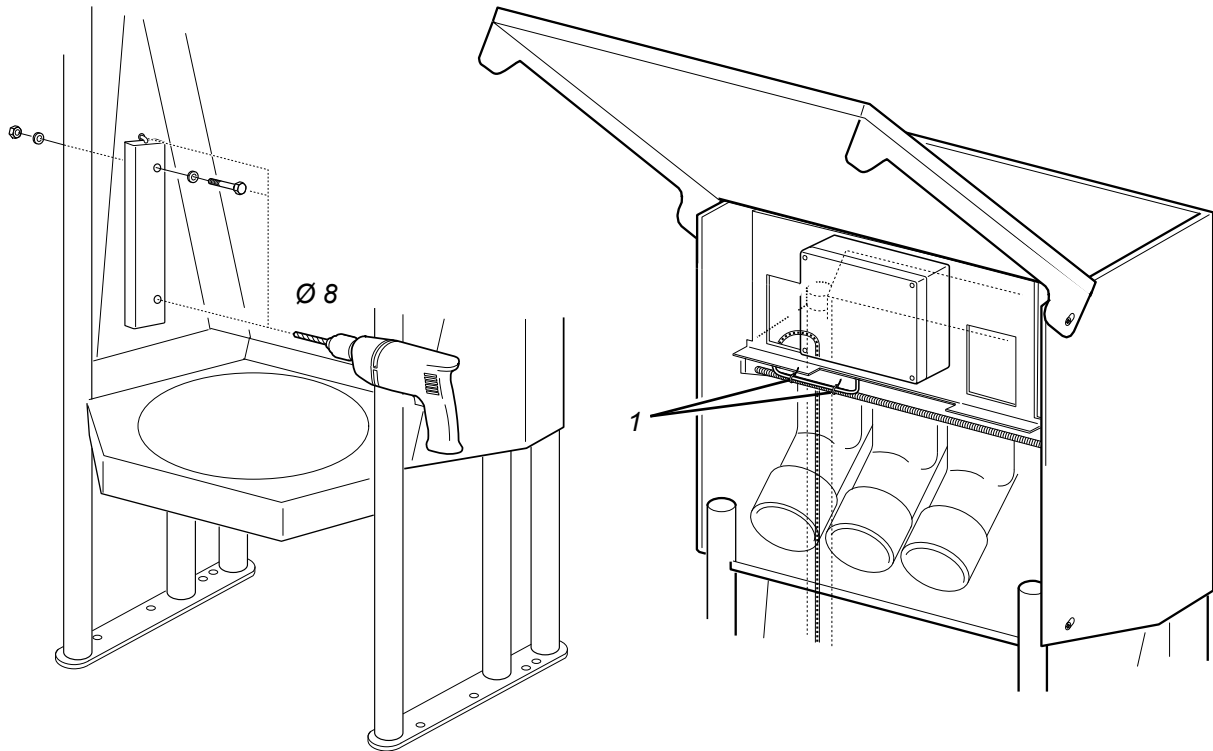


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Fig. 8: (Units in millimetres).

DeLaval multi rod reader

Installation



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Fig. 9: (Units in millimetres).

1: Cable straps

Disposal

DeLaval multi rod reader

1 Disposal and recycling information

When the product reaches end of life, dispose it properly in accordance with local laws and regulations.

1.1 Disposal of packaging material

(Packaging EU Directive 94/62/EC)



This symbol indicates that the product's packaging material can be recycled.

1.2 Disposal of electrical and electronic equipment with or without battery

(WEEE European Directive 2012/19/EU)

(European Battery Directive 2006/66/EC)



These symbols with a crossed-out wheeled bin on the product or its packaging indicates that the equipment is electrical waste, with or without battery, and shall not be disposed of with household waste.



A horizontal bar beneath the bin means that the product is manufactured after August 13, 2005.

To prevent inappropriate waste handling of this product, and its negative consequences on the environment and human health, all products shall be disposed of in accordance with local laws and regulations. Hand it over to an official recycling facility, or use a battery disposal facility when available.

Please contact the local municipal office for information on the nearest recycling station.

