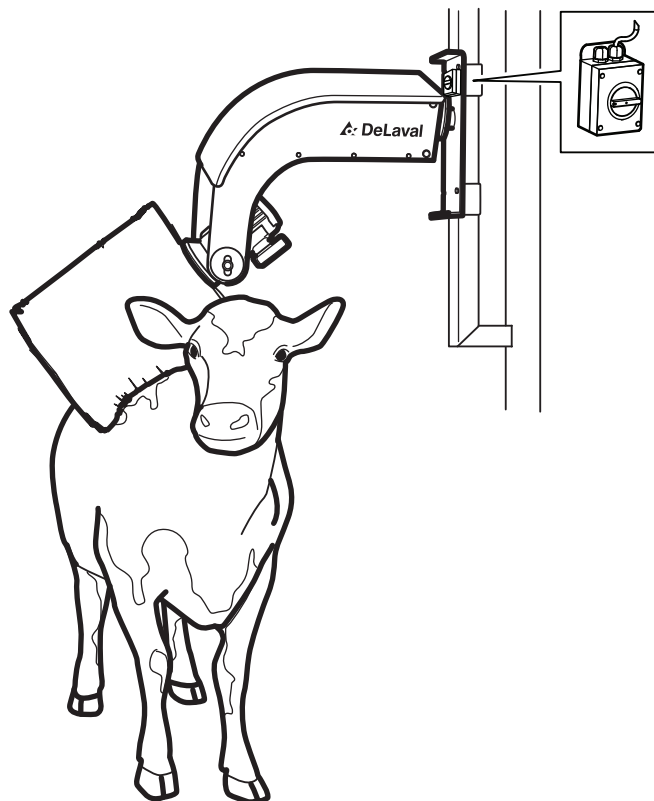


# DeLaval swinging cow brush SCB3

## Instruction Book





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# EC Declaration of Conformity

Name of product: **DeLaval swinging cow brush SCB3**  
Type: 89863516  
230V  
Report No. 80005746

The product complies with requirements of the following directives:

Machinery directive - 2006/42/EC  
Electro magnetic compatibility directive - 2004/108/EC

Harmonised standards which have been used:

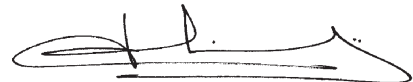
EN ISO 12100-1: 2003, EN 61000-4-2:2001  
EN ISO 12100-2: 2003, EN 61000-4-3: 2008  
EN ISO 14121-1: 2007, EN 61000-4-4: 2004  
EN 61000-6-3: 2007, EN 61000-4-5: 2006  
EN 61000-6-2: 2005, EN 61000-4-6: 2007  
EN 61000-4-8: 2001, EN 61000-4-11: 2004  
CISPR 16-1-2:2003, CISPR 16-2-3  
CISPR 16-2-1:2003

Other technical standards and specifications used:

PEDAL5546-80005738

Tumba 2014-06-25

Signed:



Name: Tim Nicolai  
Position: Executive Vice President  
Department: Business Area Aftermarket, Services & Barn Environment

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 swinging cow brush SCB3

## 1 General

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.

Keep this user manual near the DeLaval swinging cow brush SCB3, so it could be easily accessible on the farm.

DeLaval is not legally responsible for damage and indirect damage due to operating errors, lack of correct maintenance and/or any way of use which is not described in this manual.

The responsibility of DeLaval expires as soon as you or any third party, without written agreement from DeLaval, executes any operation like adjustments or extensions to the function of the DeLaval swinging cow brush SCB3 or its accessories.

DeLaval continuously strives for improvement of our physical products and offerings. DeLaval reserves the right to alter the specification shown without prior notice.

Note that despite following these safety precautions, caution should be applied in all usage situations to avoid injuries.

## 2 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.

# DeLaval swinging cow brush SCB3

## Safety precautions

**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.

### 3 Safety regulations

204216

Fig. 1



#### **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.

2010053



#### **Danger!**

##### **Risk of electric shock!**

Always disconnect the main power supply, and if present lock the main switch in off position, before performing any installation, inspection, adjustment, maintenance, or service on the equipment.

# DeLaval swinging cow brush SCB3

## Safety precautions

200614

Fig. 2



### Warning!

Make sure the plug is taken out from the wall socket before maintenance.

Make sure that no one else, by accident or due to misunderstanding, re-plugs the plug in the wall socket during maintenance work.



### Warning!

Danger for injuries if stuck between main part and shaft.



### Warning!

Danger for a serious injury by jamming. Always pull out the plug from the wall socket before dismantling the protective cover and maintaining the driving device.

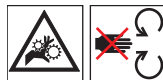


### Mandatory!

Disconnect the electrical supply before removing shields, covers or guards.

200614

Fig. 3



### Warning!

Stay out of reach of the DeLaval swinging cow brush SCB3 when it is switched on.



### Danger!

#### Risk of electric shock!

The electrical installation or any work on the electrical equipment must be done by an authorised electrician. The work must also be performed in accordance with national regulations.

**Note!** See type plate for requirements of cable diameter, safety fuse, earth connection, etc.

# DeLaval swinging cow brush SCB3

## Safety precautions



### Warning!

Make sure other operators are informed about the safety precautions as well as installing procedure.



### Prohibited!

Do not operate, service, inspect or otherwise handle this equipment unless the user have read the Instruction book and have been properly trained in its intended usage. Do not allow children or inexperienced adults to operate this machine.



### Warning!

Loose hanging clothes should not be used when being close to moving parts. Long hair should be protected.



### Warning!

The DeLaval swinging cow brush SCB3 must not be used by animals with hair longer than 3 cm (including tail hair).

The body and the tail hair length should be measured in all directions.

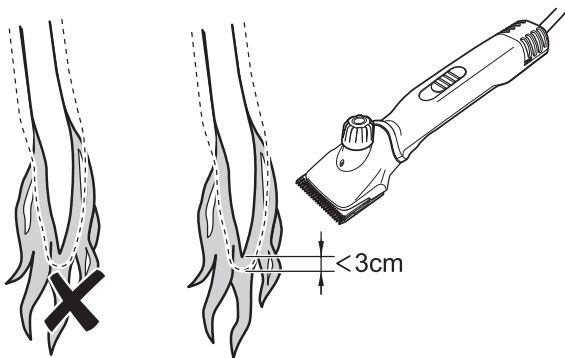


Fig. 4



# DeLaval swinging cow brush SCB3

## Safety precautions

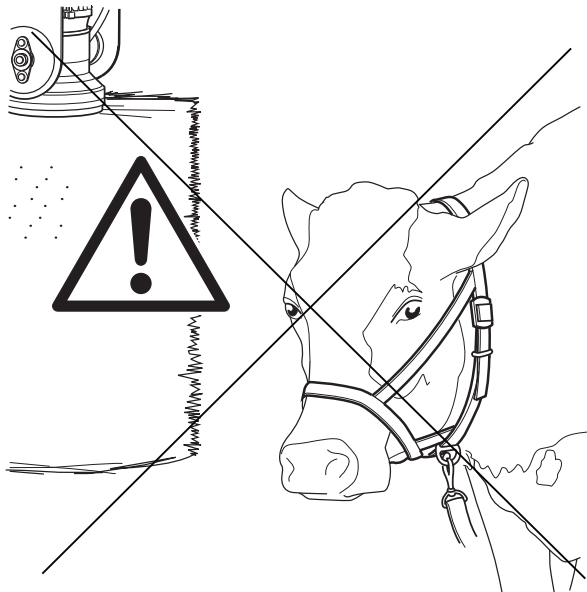


Fig. 5



Fig. 6



### Warning!

Animals in herds with access to the DeLaval swinging cow brush SCB3 **must not** wear head halters when the brush is in operation. Wearing a head halter is associated with a safety risk.



### Caution!

#### Risk of injury

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



### Danger!

#### Risk of electric shock

Do not spray or flush water on electrical components even when they are switched off or disconnected. Water on electrical components can cause an electric shock, and could destroy the equipment.



### 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.



### Warning!

#### Intended use

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

# DeLaval swinging cow brush SCB3

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## General description

### General description

#### DeLaval swinging cow brush SCB3

## 1 General

The DeLaval swinging cow brush SCB3 increases cow health, comfort, welfare, hygiene and improves milk production. It is equipped with an automatic on/off feature which makes the brush rotate whenever a cow pushes it, and turns it off 10 seconds after the cow has left.

The cow brush is available in two executions:

- Wall-mounted
- Post installation, for post diameters 2" - 2.5", 3" - 3.5", 4" and 100 mm square posts

Additional information:

- Suitable for dairy cows over one year old
- The capacity for optimal use: 50 - 60 cows

**Note!** *The cow brush must be used for the mentioned application only. Any other use is strictly prohibited.*

**Note!** *The cow brush is not watertight and should be used indoors or under well protected roofs only.*

*Outdoor installation can cause electrical short-cuts.*

After mounting the DeLaval swinging cow brush SCB3 and having the electrical installation and power supply approved by an authorized electrician, the brush is ready for operation. Turn the switch to the ON position and as soon as the cow pushes the brush, it starts automatically. When the cow leaves the brush, it will stop after approximately 10 seconds.

# DeLaval swinging cow brush SCB3

## General description

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### 2 Technical data

	Swinging cow brush SCB / 230 V	Swinging cow brush SCB / 110 V
Dimensions (length x width x height)	100 x 50 x 132 cm	100 x 50 x 132 cm
Weight ■ Brush alone ■ Brush including pallet	■ 70 kg ■ 85 kg	■ 70 kg ■ 85 kg
Power supply	230 V AC - 1 ph	110 V AC - 1 ph
Frequency	50-60 Hz	60 Hz
Rotating speed	26/31 rpm	31 rpm
Power of motor	0.06 kW	0.06 kW

# DeLaval swinging cow brush SCB3

## General description

### 3 Components

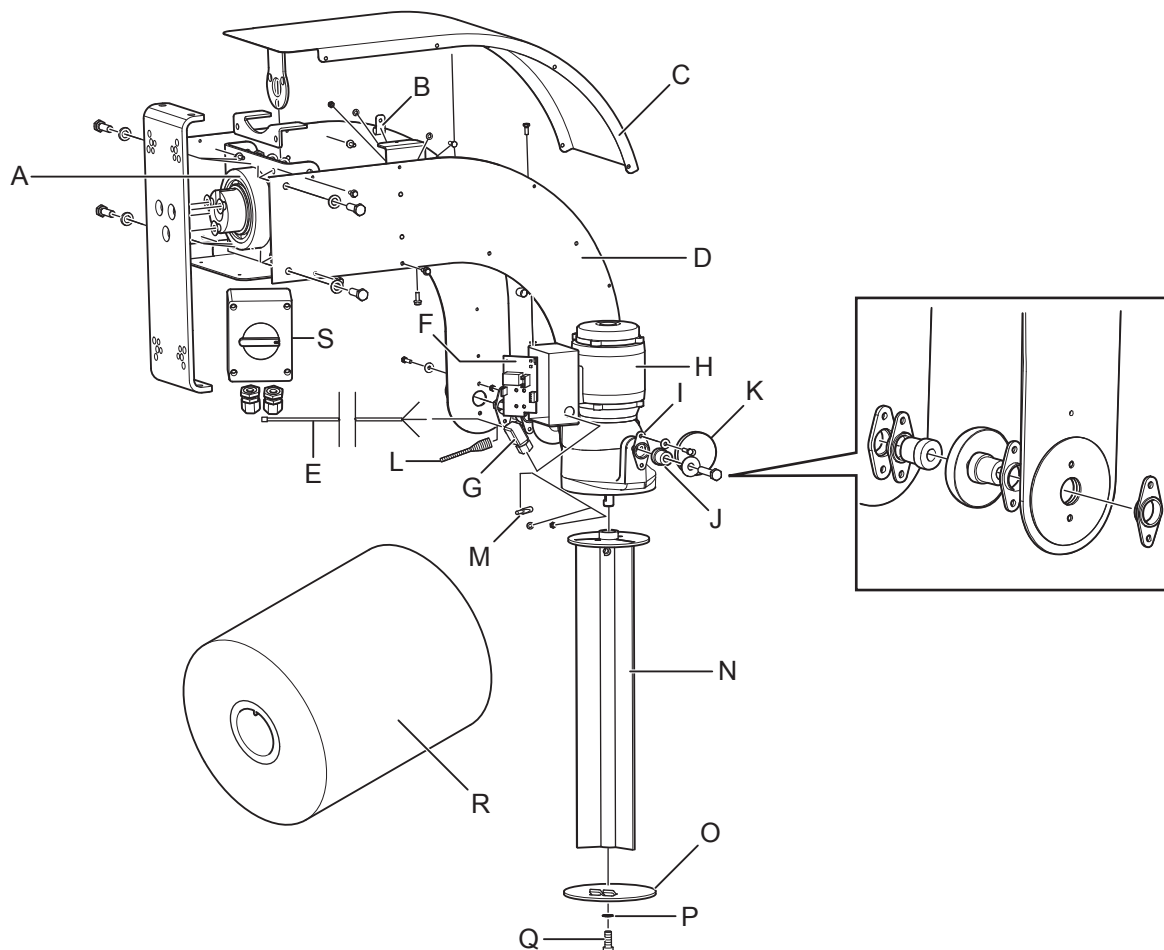


Fig. 7: DeLaval swinging cow brush SCB3.

- |    |                               |    |                        |
|----|-------------------------------|----|------------------------|
| A: | Hingepoint                    | K: | Bearing protection SCB |
| B: | Brace cable protection spring | L: | Cable bit protection   |
| C: | Hood                          | M: | Bike pin               |
| D: | Side board                    | N: | Brush shaft            |
| E: | Cable SCB                     | O: | Bottom plate SCB       |
| F: | PCB SCB                       | P: | Locking M12            |
| G: | Cable gland complete          | Q: | Brush plate bolt SCB   |
| H: | Motor SCB + Gearbox           | R: | Brush cylinder         |
| I: | Synthetic bearing             | S: | Switch, manual         |
| J: | Piston                        |    |                        |

# DeLaval swinging cow brush SCB3

## General description

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### 4 Article numbers

#### 4.1 Swinging cow brush

Article number	Description
89863516	DeLaval swinging cow brush SCB - 230 V
89863515	DeLaval swinging cow brush SCB - 110 V, cULus
89863514	DeLaval swinging cow brush SCB - 230 V, cULus

#### 4.2 Accessories

Article number	Article type	Description
91526242	<b>Brush cylinder</b>	Brush Cylinder SCB 1,2,3
87365701		Eccentric brush cylinder SCB
91526224	<b>Mounting bracket SCB</b>	Post mounting bracket set SCB 2"
91526225		Post mounting bracket set SCB 2.5"
91526226		Post mounting bracket set SCB 3"
91526227		Post mounting bracket set SCB 3.5"
91526228		Post mounting bracket set SCB 4"
84988302		Post bracket set square 100 mm
86183601		Wall mounting bracket set SCB

# DeLaval swinging cow brush SCB3

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## Installation

### Installation

#### DeLaval swinging cow brush SCB3

#### 1 General

Electrical installation must be performed by an authorized electrician.

Due to the weight of the brush, it is strongly recommended to perform the installation by 2 - 3 persons.

A hook is pre-mounted on the brush to facilitate lifting the brush with an elevator or similar. The hook is placed on the top of the mounting frame.

For two or three persons working together, using a ladder and a rope, the installation takes approximately 1.5 hours (assuming electricity connection is available).

**Note!** *Make sure the electrical connection fulfills general and local requirements and that it is within reach from the brush.*

After the installation, check that the DeLaval swinging cow brush SCB3 runs smoothly. If not, switch off the mains connection immediately.

**Note!** *The cow brush is not watertight and should be used indoors or under well protected roofs only.*

*Outdoor installation can cause electrical short-cuts.*

# DeLaval swinging cow brush SCB3

## Installation

### 2 Transporting the brush

The brush is packed in a box and mounted on a pallet to be secured during transport. For safety reasons, three protection plates are mounted to the unit during transport, see Fig. 8.

The weight of the brush including pallets is 85 kg (the brush alone: 70 kg).

Use an elevator to move and lift the unit. Use the pre-mounted hook.

**Note!** The protection plates (A) should be kept during installation but removed before turning on the brush.

**Note!** Unscrew the brush from the wooden transport pallet after the transport.

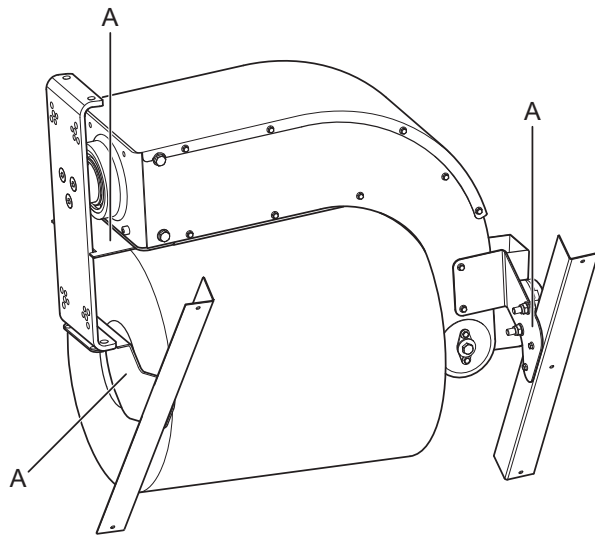


Fig. 8: SCB3 packed for transport.

A: The protection plates

### 3 Installing the brush

#### 3.1 Installing the brush on a wall

**Note!** The wall must be sufficiently strong. It should be comparable with a reinforced concrete wall.

# DeLaval swinging cow brush SCB3

## Installation

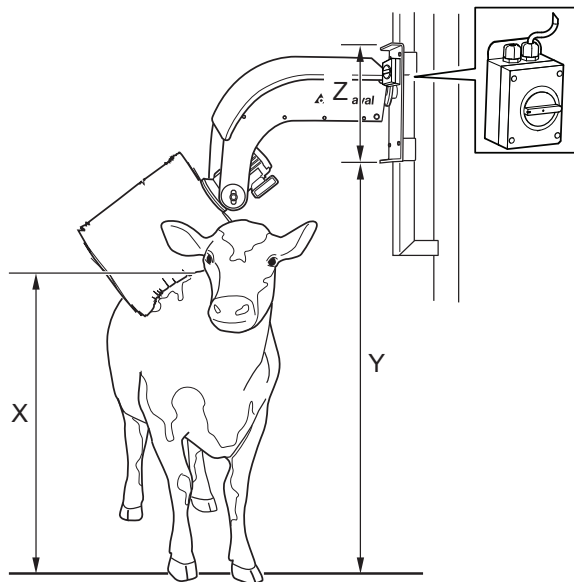


Fig. 9: Determining the height of the wall mounting bracket before the fixation.

X: Average height of withers  
 Y: Installation height of lower bracket  
 Z: 52 cm

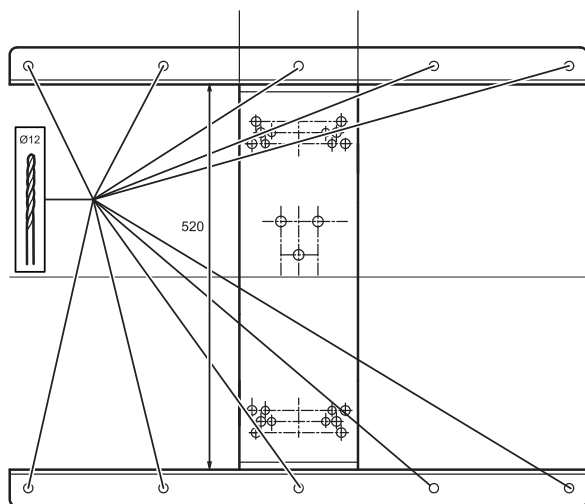


Fig. 10

1. Make sure that the wall is good enough for stable installation of the DeLaval swinging cow brush SCB3.
2. Measure and calculate the average height of withers within the herd. The mounting height of SCB depends on the average size of cows (see X in Fig. 9). To match the mounting height (Y) with corresponding X size, see [Table "Average heights of withers and corresponding mounting heights for SCB" on page 16.](#)

### Average heights of withers and corresponding mounting heights for SCB

Centimetres		Inches	
X	Y	X	Y
120	160	47.2	63.0
125	165	49.2	65.0
130	170	51.2	66.9
135	175	53.1	68.9
140	180	55.1	70.9
145	185	57.1	72.8
150	190	59.1	74.8
155	195	61.1	76.8
160	200	63.0	78.7
165	205	65.0	80.7

3. Determine the position of the bracket. For correct measurements, use the separate mounting stencil provided with the wall mounting bracket.
4. Mark positions of four fixation holes on the wall using the separate mounting stencil as reference.
5. Drill four Ø12 mm holes.
6. Mount the brush using threaded (M12) bolts. They should be cut at the length of the wall thickness + 70 mm.  
 Put the bolts in the drilled holes, mount the brush and fix it with washers and nuts.  
**Note!** To support the assembly, it is recommended to add a plate reinforcement connecting two screw joints at the other side of the wall.
7. Remove the swing protection plates (see Fig. 8).
8. Check the fixation after one week.



# DeLaval swinging cow brush SCB3

## Installation

### 3.2 Installing the brush on a post

**Note!** It is recommended to install the brush on a steel post with 10 cm (4") diameter. The bar should be anchored at the top and at the bottom.

1. Mount the DeLaval swinging cow brush SCB3 with the original fixation U-brackets including nuts.
2. Determine the height of the wall mounting bracket before the fixation.
3. The mounting height of SCB depends on the average size of cows. Measure and calculate the average height of withers within the herd (see X in Fig. 9). To match the mounting height (Y) with corresponding X size, see [Table "Average heights of withers and corresponding mounting heights for SCB"](#) on page 16.
4. Fix the nuts carefully. Make sure that it is not possible to turn the DeLaval swinging cow brush SCB3 around the post.
5. Check the fixation after one week.

### 4 Installing the switch plate

- Unscrew two upper nuts after the installation.
- Insert the metal switch plate on the bolts and screw the nuts (A).
- Place the cable near the wall bracket.

**Note!** The switch should not be used to switch the brush on and off for daily operation.

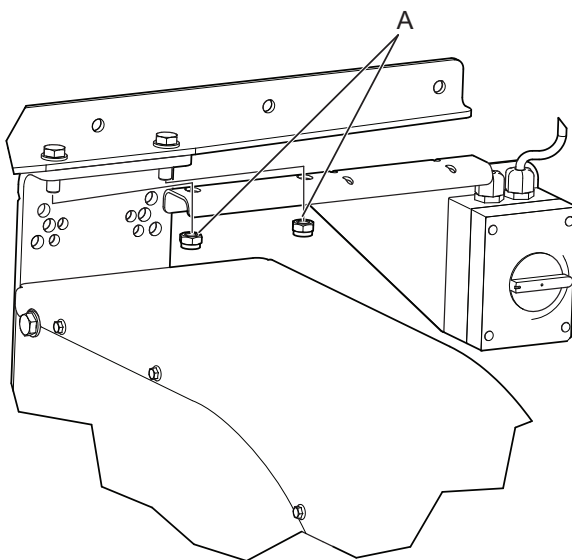


Fig. 11: Installing the switch plate.

A: Upper nuts

### 5 Electrical installation

#### 5.1 Electrical connection of the DeLaval swinging cow brush SCB3



**Danger!**

**Risk of electric shock!**

The electrical installation or any work on the electrical equipment must be done by an authorised electrician. The work must also be performed in accordance with national regulations.

The DeLaval swinging cow brush SCB3 should be installed by an authorized electrician, in accordance with local regulations.

The DeLaval swinging cow brush SCB3 must be connected to an earthed power supply socket equipped with or supplied by a Residual Current Device (RCD), also known as a Ground Fault Circuit Interrupter (GFCI), rated according to local regulations.

For US and Canada, the machine must be connected to a grounded, metal, permanent wiring system; or an equipment-grounding conductor must be run with the circuit conductor and connect to the equipment-grounding terminal or lead on the machine.

Ensure to protect supply cord route from damage and/or chewing by cows.

If the supply cord is damaged, it must be replaced by an authorized person, in order to avoid hazard.

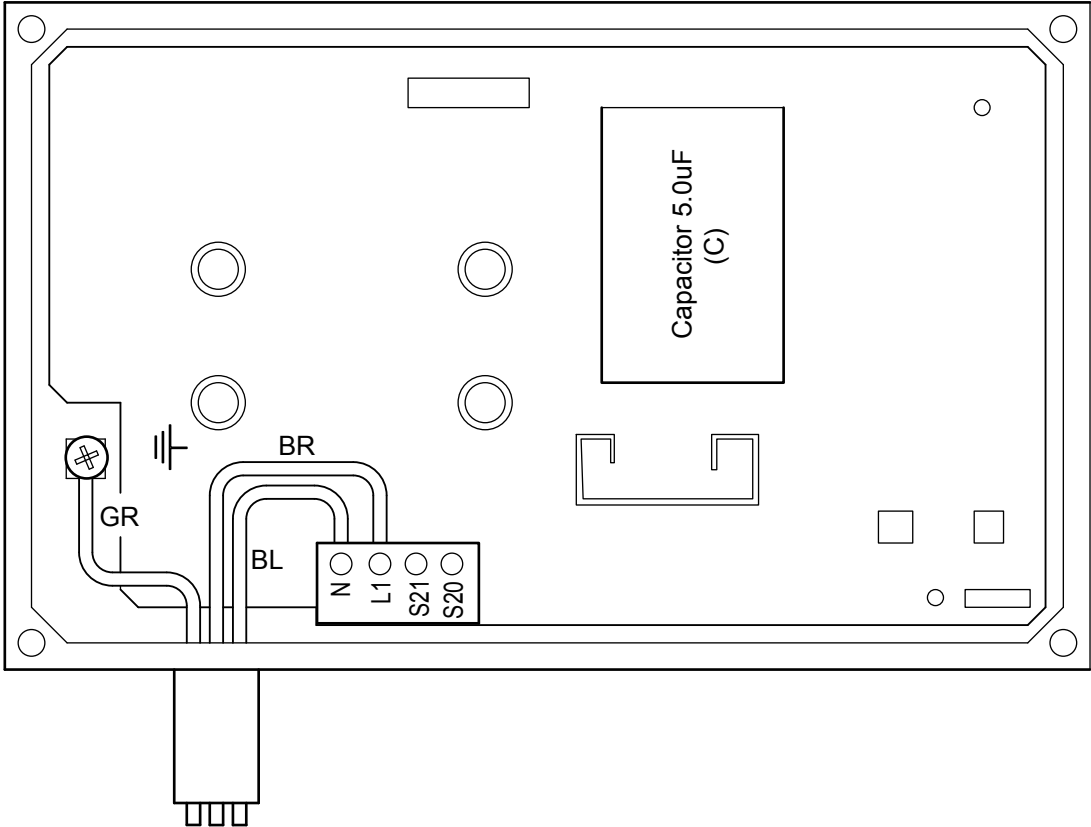
**Note!** *The motor is protected against overloads by means of a built-in thermal protection. After cooling down of the motor, this thermal protection will automatically be reset.*

**Note!** *For safety reasons, turn the switch to the OFF position and switch OFF the mains before starting any job at the electric installation.*

# DeLaval swinging cow brush SCB3

## Installation

### 5.2 Wiring diagram



211120

Fig. 12

BL: Blue/Neutral  
BR: Brown/Phase

C: Capacitor 5.0 uF  
GR: Green/GFCI

# DeLaval swinging cow brush SCB3

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## Operation

### Operation

#### DeLaval swinging cow brush SCB3



#### **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.

*Note! For more information, see chapter "Safety precautions".*

### 1 Turning the brush on

Switch on the mains supply and turn the switch to the ON position. The brush is now ready for use.

### 2 Turning the brush off

The built-in automatic stop function has a delayed stop, which makes the brush rotate for 10 seconds after it has reached its vertical position.

To switch the brush off completely, turn the switch to the OFF position. For additional safety, disconnect the plug from the wall socket, remove the fuse from the main switchboard, and wait at least 5 minutes to ensure the capacitors are discharged.

# DeLaval swinging cow brush SCB3

## Operator's maintenance

### Operator's maintenance

#### DeLaval swinging cow brush SCB3

**Note!** Follow the safety precautions during maintenance work.

**Note!** Maintenance tasks can be executed only by an authorized person.

## 1 Foreword

- Turn the switch to the OFF position before starting any maintenance work. For additional safety, disconnect the plug from the wall socket and remove the fuse from the main switchboard.
- Clean the DeLaval swinging cow brush SCB3 carefully before starting maintenance.
- Always contact a DeLaval service technician in case of any doubts.
- The following maintenance instructions are based on normal use, when 60 cows have free access to the brush.

## 2 Maintenance tasks

No	Operator's maintenance task	Frequency	Max. interval	Replacement parts or kits
1	Checking the gearbox for oil leakage.	-	Monthly	
2	Cleaning the brush cylinder	-	Every second month	
3	Replacing the brush cylinder	-	Yearly	

Frequency	-
Max. interval	Monthly
Estimated time:	-
Service type:	

### No 1 Checking the gearbox for oil leakage.

1. Check the gearbox for oil leakage.
2. In case of leakage, contact the DeLaval service technician.

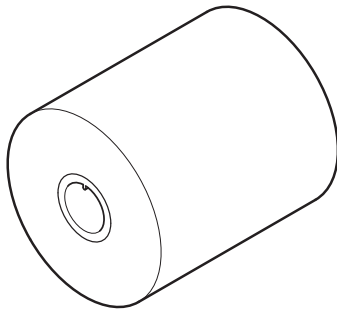
# DeLaval swinging cow brush SCB3

## Operator's maintenance

Frequency	-
Max. interval	Every second month
Estimated time:	-
Service type:	

### No 2 Cleaning the brush cylinder

Special tool: ■ High-pressure cleaner



218123

Fig. 13: The brush cylinder.

1. Remove the brush cylinder from the motor drive before cleaning.
2. Clean the cylinder using a high pressure cleaner or any similar device.

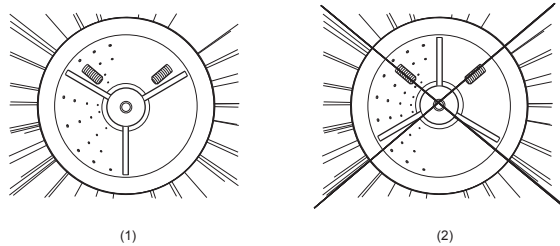
**Note!** The motor unit is IP65 protected. It will not withstand high pressure cleaning.

Frequency	-
Max. interval	Yearly
Estimated time:	-
Service type:	

### No 3 Replacing the brush cylinder

# DeLaval swinging cow brush SCB3

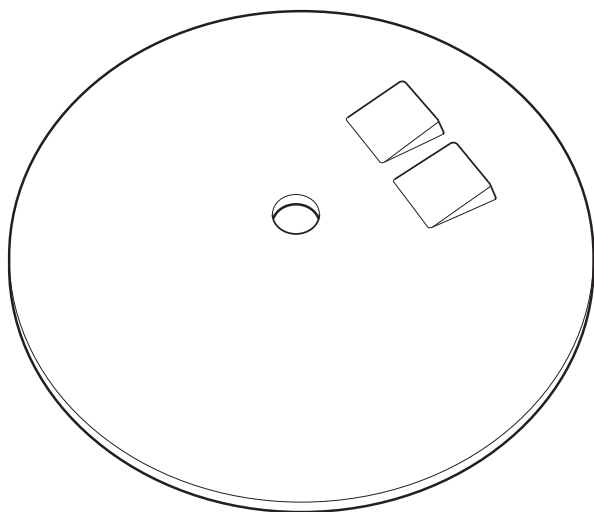
## Operator's maintenance



218130

Fig. 14: Fitting new brush cylinder.

- 1: Correct
- 2: Wrong



218124

Fig. 15: The bottom plate.

1. Unlock the fixation bolt.
2. Remove the bottom plate and the brush cylinder.  
**Note!** The motor unit is IP65 protected. It will not withstand high pressure cleaning.
3. Fit the brush cylinder to the axle. Make sure that both screws are placed in the same area.

**Note!** It is possible to choose between yellow brush cylinder (article number 91526242) and eccentric blue brush cylinder (article number 87365701).

4. Fit the bottom plate and the bolt.  
**Note!** One of three splines of the brush axle should be located between two locking tabs on the bottom plate.

# DeLaval swinging cow brush SCB3

## Troubleshooting

### Troubleshooting

#### DeLaval swinging cow brush SCB3

No.	Symptom	Cause	Action
1	The brush does not spin.	The mains power supply disconnected or no voltage.	Check the wiring and the fuse.
		The plug is removed from the wall socket.	Pull the plug.
		The brush is blocked.	Clean the shaft and the brush.
2	The brush does not switch off.	The printed circuit board does not switch off.	Contact the DeLaval technician.
		Incorrect/faulty electrical installation.	Contact the DeLaval technician.
3	The brush makes strange noises.	Bearing or gearwheel problem.	Contact a DeLaval technician.





