



smaXtec User Manual: Classic Bolus SX.2

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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 Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil contient des émetteurs / récepteurs exemptés de licence conformes aux RSS (RSS) d'Innovation, Sciences et Développement économique Canada. Le fonctionnement est soumis aux deux conditions suivantes:

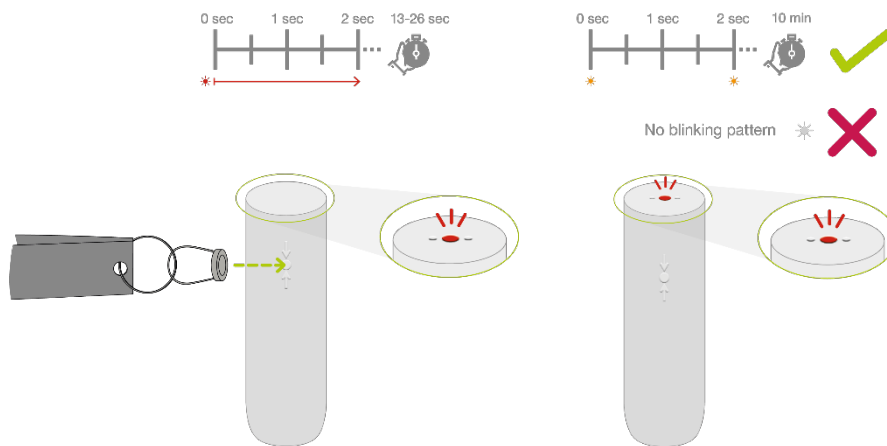
- (1) Cet appareil ne doit pas causer d'interférence
- (2) Cet appareil doit accepter toutes les interférences, y compris celles susceptibles de provoquer un fonctionnement indésirable de l'appareil.

The following steps need to be completed to use the smaXtec Classic Bolus SX.2:

1. Activation process, consisting of
 - Switching on the Classic Bolus SX.2
 - Assigning the bolus to an animal
2. Bolus administration

Please note that you need an activated smaXtec Base Station SX.2 as well as a smaXtec account with an organisation before using smaXtec Classic Boluses SX.2.

1: Activation: Switching on the Classic Bolus SX.2



Ensure that your smaXtec Base Station SX.2 is activated and ready for use before starting the bolus activation process.

Switch on the smaXtec Classic Bolus using the magnet delivered with the smaXtec Base Station.

The bolus starts the initialisation process. It lights up continuously for 13 to 26 seconds. If the bolus then blinks every two seconds, the process was successful.

Overview of the different LED displays

Bolus starts initialisation	LED lights up continuously for 13 to 26 seconds
Bolus successfully initialised	LED flashes every two seconds for 10 minutes
Error during initialisation	if the LED does not flash, an error during initialisation occurred

Procedure in case of error during initialisation

If the bolus doesn't show the indicated blinking pattern, ensure that you are within the read-out range of the smaXtec Base Station SX.2 and repeat the process once or twice. If it doesn't work then, please get in touch with the smaXtec support. **Do not administer the bolus to an animal in this case!**

2: Activation: Assigning the bolus to an animal



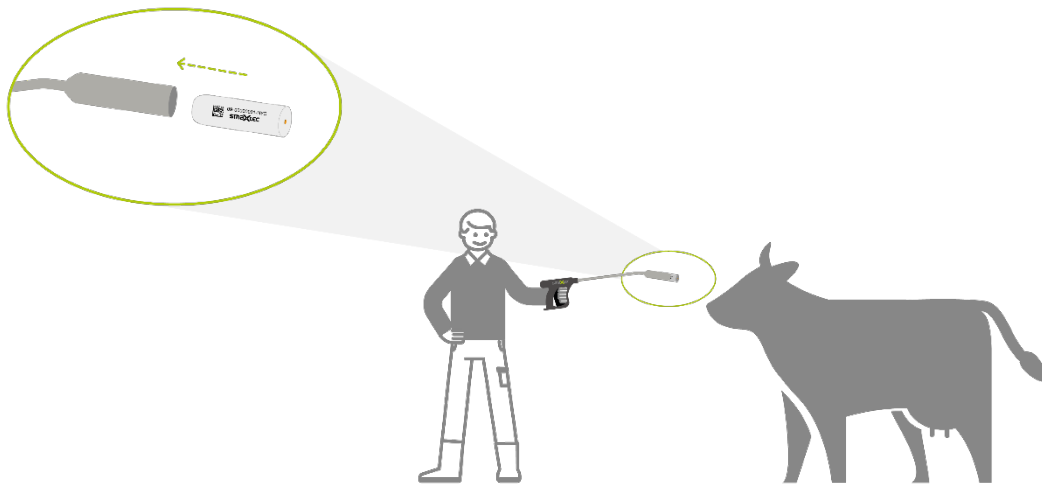
After switching on the bolus successfully, start with the second step of the activation process: Assigning the bolus to an animal. This can be done both in the smaXtec Messenger and the smaXtec App. You can either create a new animal in the system or assign the bolus to an existing animal (e.g. that was created upfront via the animal importer).

ATTENTION:

The activation process is only completed after the bolus has been assigned to an animal. If the bolus is not assigned, no data or alerts will be generated or displayed.

3: Bolus administration

After completing the activation process (switching on the bolus using the magnet and assigning it to an animal), administer the bolus on the same day with the smaXtec bolus applicator.

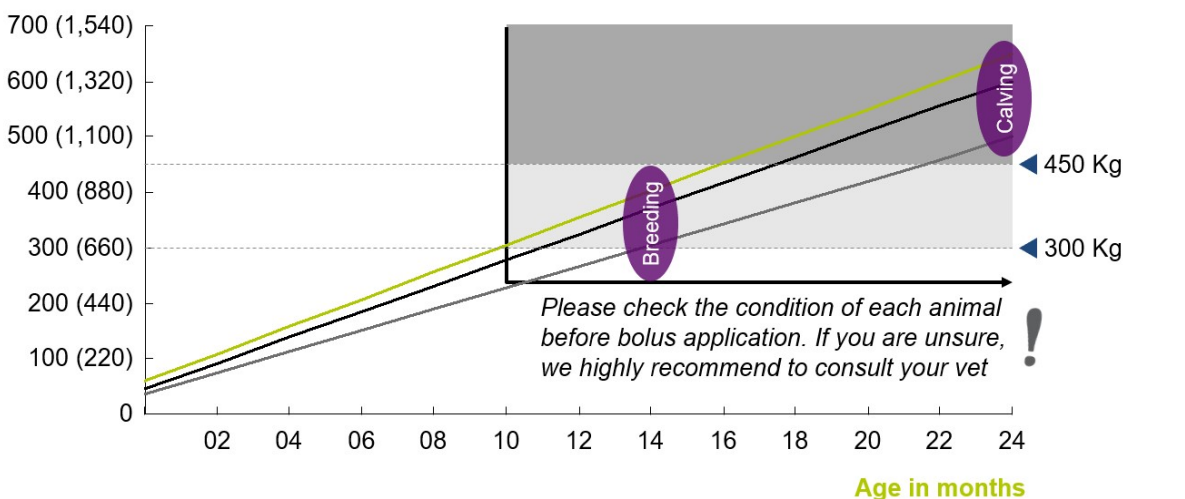


Caution: The smaXtec smaXtec Classic Bolus SX.2 is exclusively for use in cows. Under no circumstances may they be used for other animals or for humans. The minimum body weight for both sensors is 450 kg when administered by trained staff (approximately 18 months for Holstein cows) and 300 kg when administered under veterinary supervision. This graph gives more information about the age/weight of different breeds:

Bolus application

Body weight

kg (lbs)



Cows that are to be fitted with smaXtec Classic Bolus should not eat right before bolus application.

Application Procedure:

Position the smaXtec Classic Bolus SX.2 into the applicator with the sensor shaft (bottom end) at the head. Insert the smaXtec Classic Bolus SX.2 into the applicator in such a way that sensor shaft comes to rest at the far end of the applicator.



Picture: application procedure

With the cow's head and neck angled in an extended and straightened position you can now administer the smaXtec Classic Bolus SX.2. The front end of the applicator must extend beyond the base of the tongue before the bolus is released.



Warning: After insertion, the smaXtec Classic Bolus SX.2 needs to settle on the floor of the reticulum as quickly as possible. For this reason, it is important to ensure that the fibrous material in the rumen is not too dense, i.e. the cow should not recently have eaten anything.

It takes at least 30 minutes after bolus administration until first cow data will be visible in the software.

Technical Details

- Model: UX-2042
- Dimensions: 105 × 35 mm (length × diameter)
- Weight: 210 gr
- Certificate Rumen fluid resistant – materials tested by the German Agricultural Society (Deutsche Landwirtschafts-Gesellschaft DLG)
- Antenna: Internal
- Readout range: typically 50 meters; up to 300 meters*
- Memory: Internal measurement value memory: 6 days (24h/day); after 6 days old data will be replaced by new data
- Battery: Lithium Metal Battery
- Battery life: up to 4 years
- Measurement interval: 10 min (for temperature and activity)
- Temperature:
 - Measurement range: 20 – 60 °C/68 – 140 °F
 - Measurement resolution: 0,01 °C/0,02 °F
 - Measurement accuracy:
 - at 30 – 50 °C/86 – 122 °F: ± 0,1 °C/± 0,18 °F
 - other temperatures: ± 0,30 °C/± 0,54 °F
- Activity index: 0 to 100
- Rumination activity: 0 to 50 % in 24h

*depending on farm layout, country regulations obstructions, surroundings