

Installation and operating instructions

Support system for displaying and monitoring the
preload force on lashing straps - iGurt



Table of contents

◎ 1	System overview	Page 3
1.1	How it works	Page 3
1.2	System components	Page 3
◎ 2	Safety instructions	Page 4
◎ 3	General information	Page 5
◎ 4	Installing the iGurt	Page 6
◎ 5	Changing the guarantee	Page 8
◎ 6	Operating the iGurt	Page 10
◎ 7	Using the iGurt app	Page 10
◎ 8	Troubleshooting	Page 11
◎ 9	Specifications	Page 11

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1st edition

Subject to change without notice.

Current version and additional information can be found online at www.bpw.de

System overview 1

How it works	1.1
System components	1.2

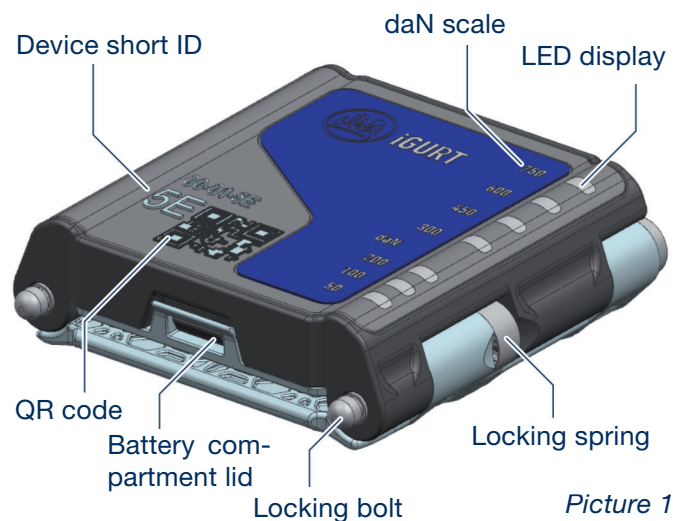
1.1 How it works

The iGurt is an easy-to-use electronic lashing strap monitoring system which is intended to be used as a support system for checking load security. The device is fitted on a lashing strap, measuring its tensioning force. The tensioning force of the strap when lashed is shown directly on the device on an LED display. Furthermore, the iGurt uses Bluetooth to communicate with its corresponding app, which can be used to carry out other functions. In this way, the tensioning forces can also be monitored during the journey. Every iGurt in range is displayed in the app along with their current tensioning force and a summary view of the information. The app is also equipped with an alarm which is triggered if the tensioning force of a lashing strap falls below a critical level during transport, which could mean that the lashing strap has slipped out of place, loosened or broken. In such a case, the journey must be paused as quickly as possible and the load's security must be checked and ensured.

1.2 System components

iGurt

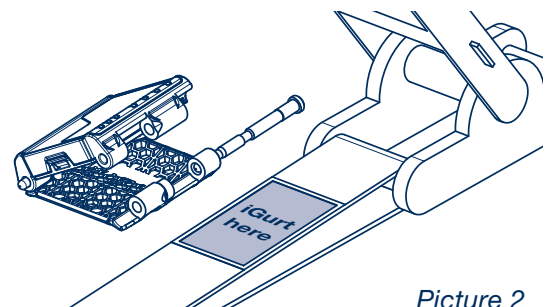
- The force display is located on the top of the iGurt. It is made up of seven LEDs and a daN scale so that a reading of the tensioning force can be taken.
- An identification number (ID), which serves as a unique identifier for the device, can also be found on the top of the iGurt. The last two numbers of the ID are displayed again, separately and more prominently. In the app, both of these numbers are also clearly visible on the tile for each respective iGurt. In this way, the devices can be quickly be associated with their corresponding figures in the app.
- The locking system is on the right-hand side, comprising of a locking spring and locking bolts which can be used to lift up the iGurt so that the device can be mounted on the lashing strap or the battery compartment can be opened.
- Three AAA batteries are inserted into the device. The battery compartment can only be opened when the iGurt is in its folded-out state.



iGurt-compatible lashing strap

The iGurt is used in combination with a corresponding lashing strap which has been designed specifically for use with the iGurt. This can be obtained from BPW. The iGurt sits on the belt clip underneath the ratchet buckle and usually stays mounted there for the entire life cycle of the lashing strap. When the lashing strap is replaced, the iGurt can be dismounted and put onto the new lashing strap. The tensioning force sensor may be distorted when used with lashing straps that are not compatible.

BPW therefore assumes no liability for other lashing straps which are not compatible with the iGurt.



iGurt app

The app is available in the Google Play Store under "BPW iGurt - the intelligent load securing system". If you do not have access to the Play Store, the APK (App installation file) is also available at www.iGurt.de.

Important: When you install the app, please ensure that any previous versions of the iGurt app have been deleted from the end device. Otherwise, it may not be possible to install the app.

Download the app from the Google Play Store and install it on your smartphone. The app is intuitive and straightforward to use. The basic app is free of charge. Its usage will be explained in chapter 7. Furthermore, it is also possible to install the app as an APK. This is available at iGurt.de.

2 Safety instructions

Please observe the following safety instructions in order to avoid damage to persons or property. Improper use and failure to observe usage and safety instructions may result, among other things, in damage to or loss of cargo, other damages to property, risks to other road users, traffic accidents and personal injuries. The iGurt is an information system and is currently not exempt from statutory provisions.

- Keep the device away from heat and open flames.
- Avoid dropping the device.
- Aside from the detachable parts (locking bolts, battery compartment lid and batteries), do not take the device apart.
- Only use original parts and kits from BPW (iGurt replacement parts) or qualified partners (lashing straps). Only use the recommended tools, as described in the corresponding BPW instructions.
- When using the iGurt, only use lashing straps which are specifically designed and designated for use with the iGurt. These lashing straps are explicitly labelled as being compatible with the iGurt and may be obtained from BPW or other qualified partners.
Note: in accordance with VDI guidelines, the fixed and loose ends of a lashing strap set must always be used together. Exchange the whole set periodically in order to avoid risks caused by wear and tear to the lashing strap.
- Please note the instructions listed in Section 4 regarding the proper installation of the iGurt on the lashing strap. The tensioning force sensor can only be secured in the designated area ("iGurt here").
- The use of the iGurt is not exempt from statutory provisions and the sole responsibility for proper, appropriate and sufficient load securing. The iGurt is only a support system and is not a replacement for accurate load securing. It is both the driver's and the loading agent's sole responsibility to ensure that a load has been appropriately secured, even if the iGurt system does not display any warnings, alarms or errors. Always check the tension of the lashing straps yourself and ensure that they are properly installed and that there is a sufficient number for the load.
- The iGurt system does not indicate a correct, minimum or required tensioning force. The appropriate amount of adjusted tensioning force always depends on the loading situation; you must calculate this yourself. Too low of a tensioning force could result in the load not being secured sufficiently, too high of a tensioning force could lead to damages to the load. Both cases could result in damages to property or persons.
Note: the minimum required tensioning force fundamentally depends on the mass of the load, the number of lashing straps used per load, the friction between the load and the loading area and the angle of the lashing straps.
- Before departure, make sure that the iGurt has not been damaged and that the locking bolt is fully inserted and secured.
- The iGurt must not collide with parts of the load or the vehicle in any loading situation in order to avoid dangers or damages. If it cannot be guaranteed that collisions will not occur, dismount the iGurt and use the respective lashing strap without the iGurt for this journey.
- When extracting the locking bolt in particular, make sure that there is nothing close to you in order to avoid collisions due to sudden movements. There is a risk of injury if the hand and ratchet buckle collide.
- Only open the battery compartment lid using objects that are suitable for use as a lever tool to unfasten the battery compartment lid (e.g. one-pence or five-pence piece) as there is a higher risk of injury if the snap-in clasp hook is unfastened by hand (e.g. ripping or breaking of fingernails).

General information 3

Disposal methods

When disposing of electronic components, in particular in regard to products with integrated batteries or rechargeable batteries, make sure to comply with regional regulations or send the products back to BPW.

Guarantee information for guarantee/warranty

The latest version of our Terms and Conditions of Sale and Delivery shall apply.

Notwithstanding Section X (Liability for defects), no. 3, sentence 1 of our Terms and Conditions, a reduced period of warranty shall apply for the iGurt-system: The limitation period regarding claims pertaining to liability for defects of all components of the iGurt-system will expire 12 months after delivery. This reduced limitation period shall not apply in case of intention, gross negligence, fraudulent concealment of a defect or injury to life, body or health.

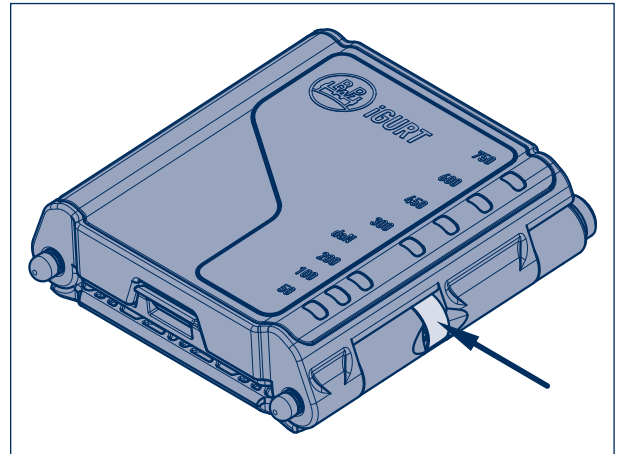
Cleaning the device

Only clean the device with a damp, soft cloth or sponge to avoid scratching the device.

4 Installing the iGurt

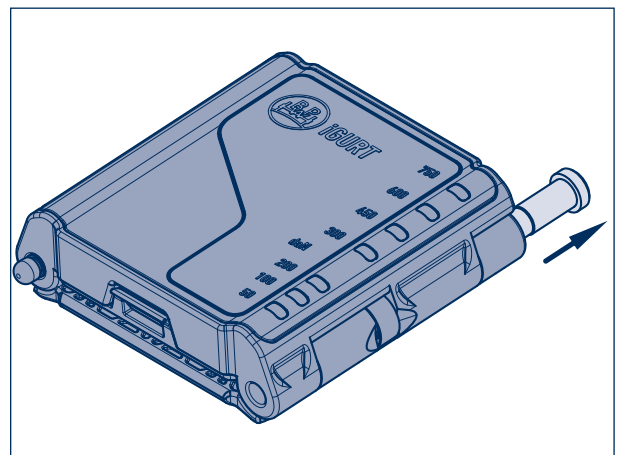
To install the iGurt on the fixed end of the lashing strap, complete the steps described in the following section. No tools are necessary for the installation.

- [1] Operate the locking springs on the right-side of the iGurt by pushing with your finger to unlock the locking bolt.



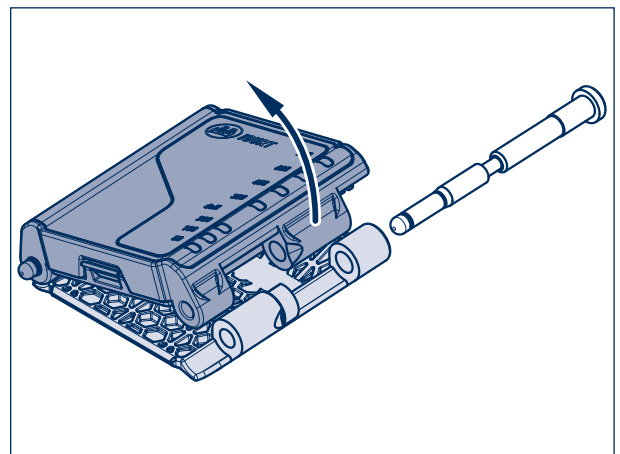
Picture 3

- [2] While holding the locking springs down, press out the locking bolt by around 5 mm. Now, you can let go of the locking springs. Pull the locking bolt out completely.



Picture 4

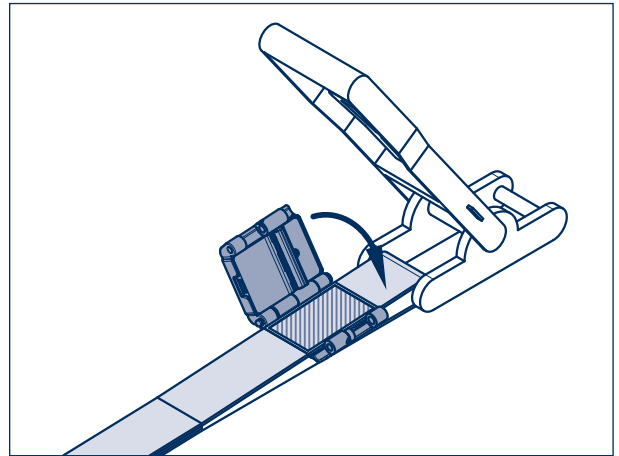
- [3] Put the locking bolt aside and lift the iGurt up.



Picture 5

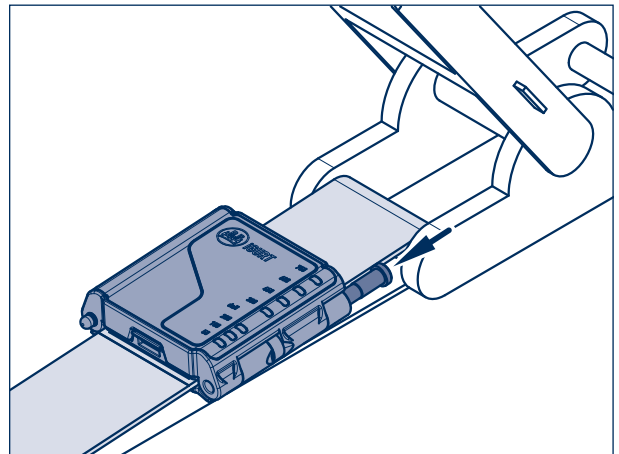
Installing the iGurt 4

- [4] Position the iGurt just above the marked area on the lashing strap and flip the iGurt shut. Please ensure that only the top of both pieces of the lashing strap are inside the iGurt.



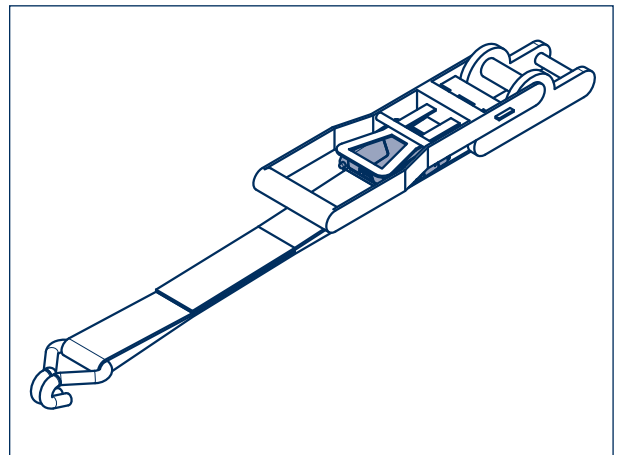
Picture 6

- [5] Now, fully reinsert the locking bolt so that the locking springs are engaged and the locking bolt is secured. Squeeze the iGurt a little to align the holes of both halves of the hinge and to make it easier to insert the bolt.



Picture 7

- [6] The installation of the iGurt on the lashing strap is now complete. The lashing strap may now be used as intended and in compliance with its applicable guidelines. To dismount the iGurt from the lashing strap, proceed in the same way as steps [1] to [3].

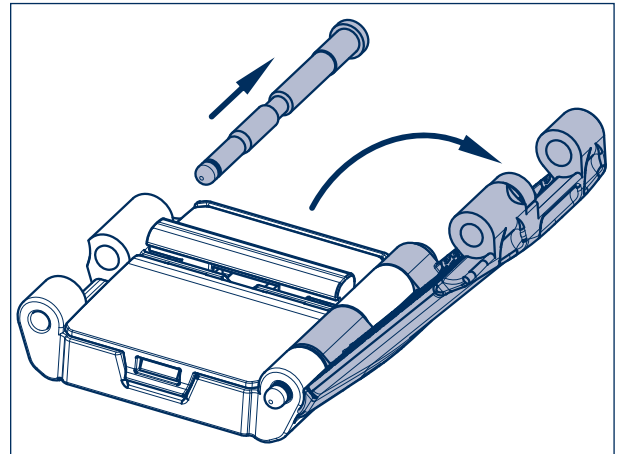


Picture 8

5 Changing the batteries

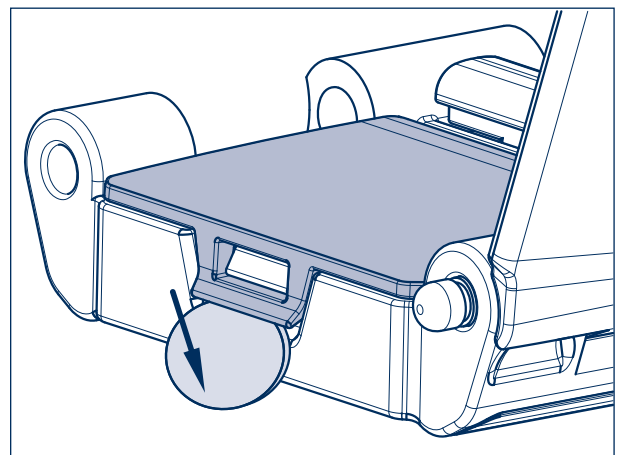
Carry out the steps described in the following section to change the batteries. To open the battery lid, it is necessary to use a one-pence or five-pence piece or a similar object as a levering tool as injuries to the fingers and fingernails cannot be excluded if a levering tool is not used.

- [1] Remove the locking bolt and lift the iGurt up. Proceed with this as per chapter 4 (steps [1] to [3]).



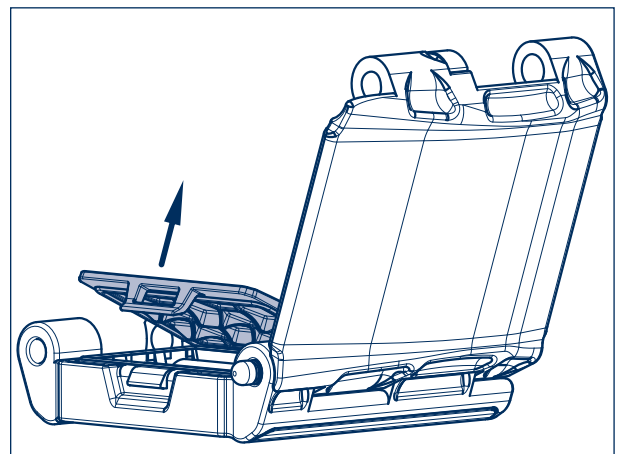
Picture 9

- [2] Open the snap-in clasp hook to open the battery lid. Use a coin or another similar object as a levering tool to help to bend the snap-in hook upwards.



Picture 10

- [3] Completely remove the battery compartment lid and place aside.



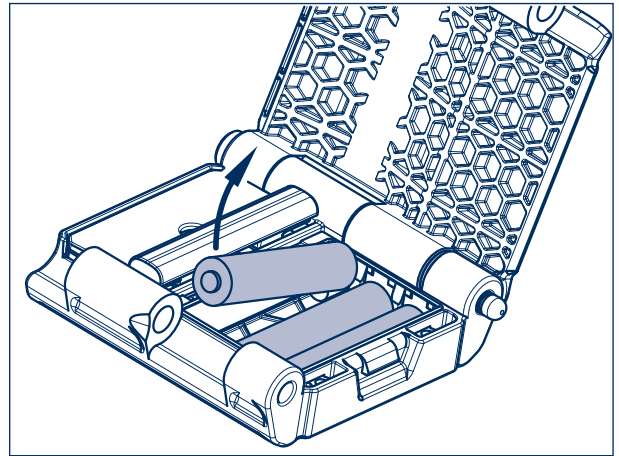
Picture 11

- [4] Now remove the batteries (3 x AAA), clean the battery contacts and paying careful attention to the correct polarity of the new batteries when inserting them (direction of insertion).

After inserting the last battery, the system will automatically calibrate.

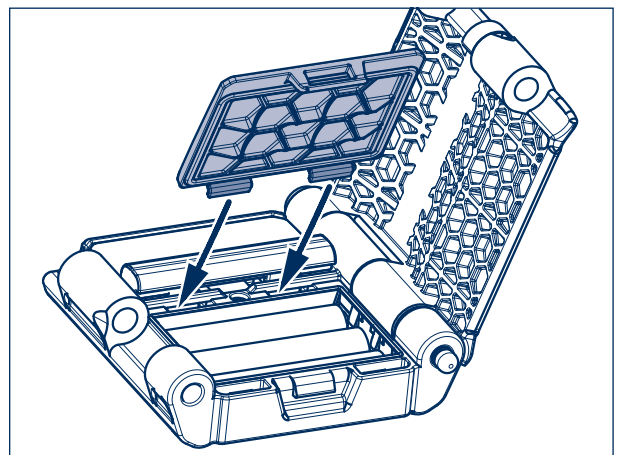
Make sure that the device is not moved for a few seconds after this and, above all else, make sure that the load cell located near the battery compartment is not disturbed. Otherwise, there is a danger that the calibration will be distorted and the device will return false measurements.

If you are unsure about this, remove and reinsert the batteries to repeat the calibration process.



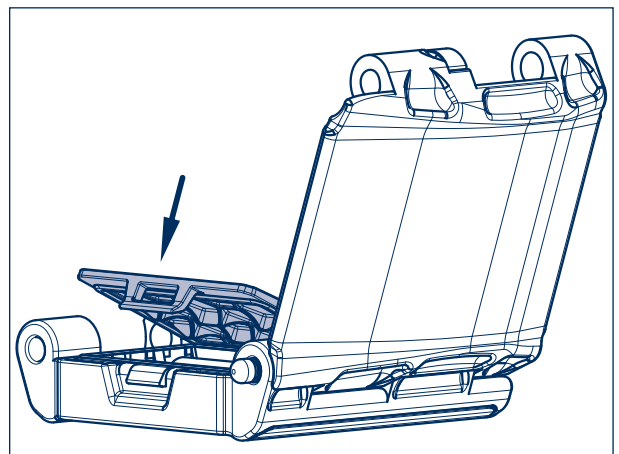
Picture 12

- [5] Replace the battery compartment lid. To do this, first insert both locking elements of the battery compartment lid into their designated slots.



Picture 13

- [6] Now press the battery lid down until the snap-in clasp hooks click into place.



Picture 14

6

7

Operating the iGurt

Using the iGurt app

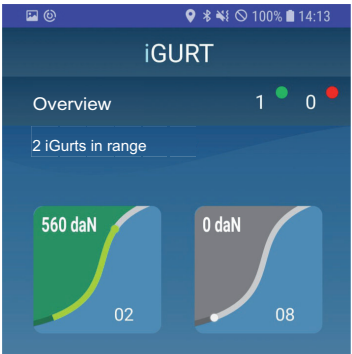
6 Operating the iGurt

- After installing the iGurt on the lashing strap, it may be used like a conventional lashing strap in compliance with the safety and usage instructions.
- Compared to the conventional means of securing cargo with lashing straps, no additional operating steps are necessary when using the iGurt. The device detects if a lashing strap process has begun and powers itself up. Similarly, the device detects when the lashing strap has been unravelled at the end of a journey and turns itself off. It is not possible to turn the device on or off or otherwise control it manually.
- As soon as the lashing strap process begins, the LED display on the device powers itself up. The reading for the current tensioning force can now be taken. The display should be interpreted as follows: a flashing LED means that the amount of tensioning force is higher than the value next to it. The force is displayed in decanewtons (1 daN = 10 N). After the lashing strap process has ended, the display will turn itself off.
- Make sure that the remaining loose end of the lashing strap is still hanging underneath and that it runs through the middle of the iGurt before the ratchet buckle is closed after the lashing strap process has ended in order to prevent the strap material from becoming jammed in the ratchet buckle or between the iGurt and the ratchet buckle.

Note: the lashing strap is only secure when the ratchet buckle is completely shut and the safety-mechanism is engaged.

7 Using the iGurt app

The app automatically detects every iGurt in range, shows how many there are and depicts each iGurt as a tile in the summary view.



The short ID and current amount of tensioning force is shown in each tile.

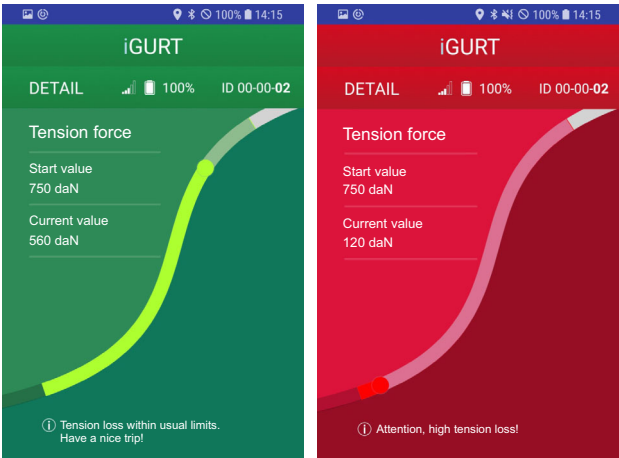
A green tile means that the loss of tensioning force lies in a normal range. The yellow battery symbol indicates that the iGurt's battery level is low.	A grey tile shows that the iGurt does not detect any tensioning force.	A red tile indicates a critical loss of tensioning force. When a red tile appears, an audible alarm is simultaneously triggered. In such cases, pause the journey as quickly as possible and check whether the load is secure.

Troubleshooting8

Specifications9

Open the detailed view for each iGurt by tapping on the tiles in the summary view. There you can view the following additional information:

- Tensioning force as measured at the start of the journey
- Strength of the radio signal
- Battery level of the iGurt, in terms of percentage
- Full device ID



8 Troubleshooting

If a problem arises relating to the iGurt's performance, first try to reinsert or replace the batteries to reset the device.

If a problem with the app arises, first restart the app or the smartphone.

If these actions do not fix the problem, please contact BPW.

9 Specifications

Features	Specifications
Tensioning force range	0 - 800 DaN
Bluetooth Module	Bluetooth low energy v5.0 module 2,4 GHz band, transmission power 5 mW
Type of battery	AAA (type Alkaline recommended)
Protection class	IP6k4k
Size (LxWxH)	75 mm x 77 mm x 25 mm
Weight with batteries	186 g

BPW is a globally leading manufacturer of intelligent running gear systems for trailers and semi-trailers. As an international mobility and system partner, we offer a wide range of solutions for the transport industry from a single source, from axle to suspension and brake to user-friendly telematics applications.

We thereby ensure outstanding transparency in loading and transport processes and facilitate efficient fleet management. Today, the well-established brand represents an international corporation with a wide product and service portfolio for the commercial vehicle industry. Offering running gear systems, telematics, lighting systems, composite solutions and trailer superstructures, BPW is the right system partner for automotive manufacturers.

BPW, the owner-operated company, consistently pursues one target: To always give you exactly the solution which will pay off. To this end, we focus our attention on uncompromising quality for high reliability and service life, weight and time-saving concepts for low operating and maintenance costs as well as personal customer service and a close-knit service network for quick and direct support. You can be sure that with your international mobility partner BPW, you always use the most efficient method.

Your partner on the path to economic viability



BPW Bergische Achsen Kommanditgesellschaft

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