



Tire sensor container

Mounting the container and installing the tire sensor

 /  Installation instructions

Tire sensor container with REMA TIP TOP

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NOTE	
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<p>Use these installation instructions only in conjunction with the "General Safety Notes" (article no.: 17342240000).</p>
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1 Introduction

1.1 Use

1.1.1 Intended use

The tire sensor container is intended to be installed exclusively in a commercial vehicle tire according to the specifications (see chapter **“4.4 Approved tires”**) and to accommodate a corresponding tire sensor and hold it safely in the tire for operation.

1.1.2 Foreseeable misuse

Any use of the tire sensor container and the system other than the intended use and/or other use is not permitted.

No claims of any kind will be accepted for damage resulting from use for other than the intended purpose.

1.2 Safety precautions

In addition to the safety instructions specified in these installation instructions, the "General Safety Notes" (article no.: 17342240000) belonging to the product must be observed.

Hazards that could occur during a particular action are described before the instructions for each step.

Failure to observe the "General Safety Notes" and procedural instructions specified in these installation instructions can lead to considerable hazards.

1.3 Information on this installation instructions

These installation instructions are intended for qualified staff in workshops for tire fitting, tire repair and tire service.

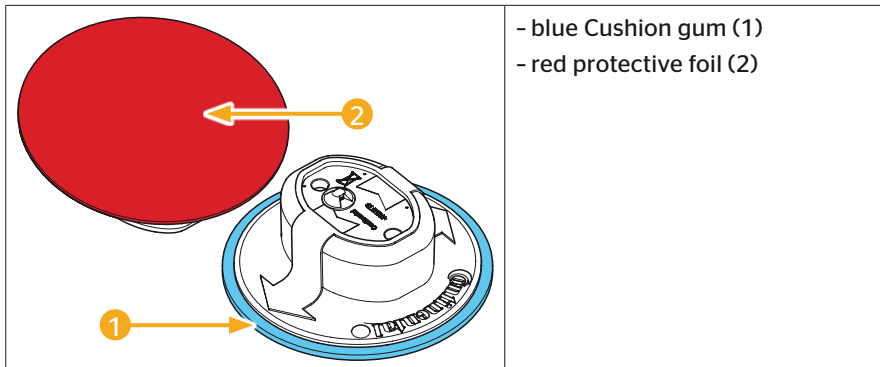
Qualified staff is defined as staff that:

- has expertise in tire fitting and repair,
- was trained by a qualified trainer who holds an official certificate from REMA TIP TOP AG

The certification of the trainer and the training certificate of the installation staff must be documented.

The contents of these installation instructions help to install the tire sensor container into the tires of commercial vehicles.

The information and procedural instructions contained herein refer exclusively to the tire sensor container with the following features:



Introduction

1.4 Warranty terms

The respective relevant "Continental AG terms and conditions" apply with the exception of possible different contractual agreements.

1.5 Liability disclaimer

Continental Reifen Deutschland GmbH assumes no liability for damage and operational faults resulting from:

- Failure to observe these installation instructions,
- use for other than the intended purpose,
- employment of unqualified or insufficiently qualified and correspondingly instructed staff,
- faulty installation,
- not using original replacement and accessory parts,
- technical modifications and alterations, conversions and changes to the system are expressly prohibited.
- Failure to perform the prescribed visual inspections (see chapter ***"3.3 Final inspection of the vulcanisation compound of the tire sensor container"***) after installing the tire sensor.

NOTE	
<ul style="list-style-type: none">▶ Installing the tire sensor may invalidate the tire manufacturer's warranty. Please check with the respective tire manufacturer in advance. Continental is not liable for any damages, costs or claims arising from the loss of warranty coverage and guarantee.▶ The fitter assumes all risks associated with improper installation.▶ The functionality of the sensor In conjunction with the use of balancing substances may be impaired and warranty claims may expire.	

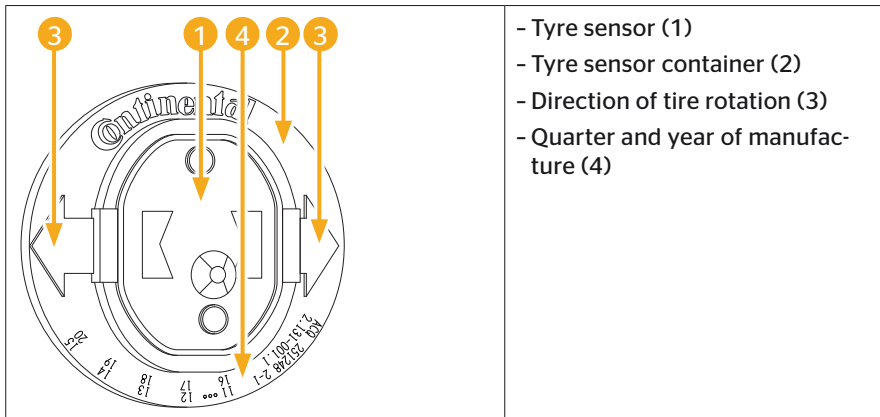
2 Design and function

2.1 Description of functions

The tire sensors are mounted in tire sensor containers on the inside of the tires. The tire sensor containers and their cushion gum are attached to a preprepared surface on the inner layer of the tire by a special cold vulcanising agent.

The tire sensors are inserted into a tire sensor container and consist of a pressure sensor, temperature sensor, acceleration sensor, evaluation circuit, radio transmitter and lithium battery. The unit is cast in a plastic housing.

2.2 Overview



3 Installation



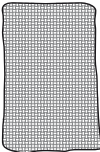
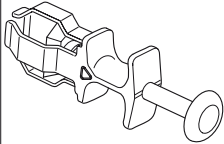
3.1 General instructions

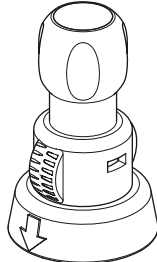
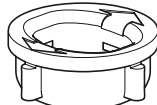

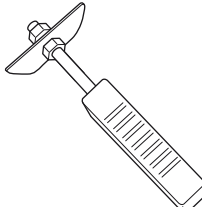
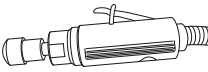
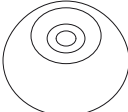
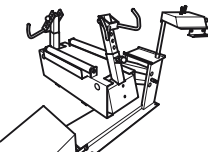
- To install correctly, it is essential to follow the sequence of steps described below.
- The tire sensor and tire sensor container must be installed no later than 2 years after packaging due to ageing of the plastics (especially the tire sensor container) and due to the battery storage time of the tire sensor before use (service life in operation).
- The period of use may be shorter for the chemical and auxiliary materials (note the information on storage time and type on the packaging).

3.2 Installing the tire sensor container with tire sensor

3.2.1 Tools required


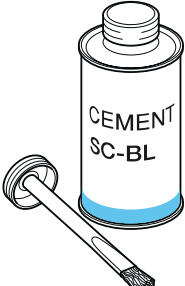
All tools and materials listed below are not included in the scope of delivery.

Protective gloves	
1 x brass brush For removing dust particles from the prepared surfaces	
1 x lint-free paper disposable cleaning wipes Cleaning wipes for cleaning the vulcanisation surfaces.	
1 x HAZET tool article no.: 17341410000 Tool for inserting the tire sensor into the tire sensor container.	

<p>1 x pressing tool 2 article no.: 17341750000 Tool for pressing the tire sensor with tire sensor container when applying to the vulcanisation surface.</p>	 A cylindrical tool with a rounded top and a base that has a small arrow pointing to the left.
<p>1 x Inlax (inlay) for pressure tool 2 Inlay for holding the tire sensor container in the pressure tool</p>	 A circular ring-shaped component with a central hole and several small protrusions around its outer edge.
<p>1 x tire repair/pressure roller Tool for pressing the vulcanisation surface of the tire sensor container</p>	 A long, thin handle with a circular roller at the end that has a textured surface.
<p>1 x cleaning scraper article no.: 17341080000 Scraper for pre-treating inner layer of the tire.</p>	 A long handle with a flat, rectangular blade at the end.
<p>Pneumatic grinder, slow-running (max. 4000 rpm)</p>	 A cylindrical tool with a handle and a grinding disc at the end.
<p>Contour disc, for low speeds (65 mm, K 36)</p>	 A circular disc with a central hole and a textured surface.
<p>1 x tire spreader For fixing and spreading the tire during processing.</p>	 A mechanical device with two handles and a central mechanism for spreading a tire.

Installation

3.2.2 Materials required

ATTENTION	Damage to equipment!
<p>If agents other than the prescribed cold vulcanising agent and the prescribed cleaning agent are used or the installation instructions are not observed, the tire sensor or the tire sensor container may come loose. This could lead to damage to both the tire and the tire sensor.</p> <ul style="list-style-type: none"> ▶ "Liquid Buffer" or "Pre-Buff Cleaner" from REMA TIP TOP is prescribed for cleaning the installation area. When using other products, it cannot be guaranteed that the adhesive bond is sufficient. ▶ Use CEMENT SC-BL from REMA TIP TOP always when installing the tire sensor. ▶ Observe safety instructions for the CEMENT SC-BL cold vulcanising agent. ▶ The tire and the tire sensors container must correspond to the recommended ambient temperature. ▶ After the recommended pressing time, the adhesive exhibits enough basic stability to allow tire fitting. 	
<p>Cleaner</p> <p>1 x naphtha-containing cleaner ("Liquid Buffer" or "Pre-Buff Cleaner" from REMA TIP TOP) Cleaner for pre-treatment of the tire inner layer and the vulcanisation surface of the tire sensor.</p>	
<p>CEMENT SC-BL cold vulcanising agent.</p> <p>1 x CEMENT SC-BL from REMA TIP TOP Cold vulcanising agent for fixing the tire sensor container.</p>	

3.2.3 Fixing position in the tire

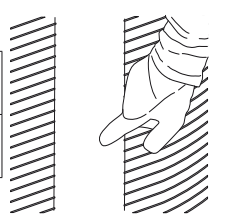
The correct position of the installation area is:

- in the middle, on a smooth surface on the inner layer of the tire outside the venting ribs and other bumps.

The aim is for the tire sensor container to cover the entire surface.

It is particularly important to ensure that the edge area of the tire sensor container is flush.

Dimensions of the installation area:	approx. 6.6 x 6.6 cm (approx. 2.6 x 2.6 inches)
Dimensions of the area to be cleaned:	approx. 8 x 8 cm (approx. 3.15 x 3.15 inches)

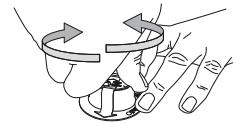
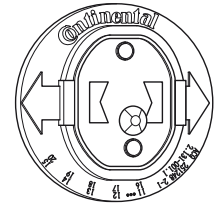
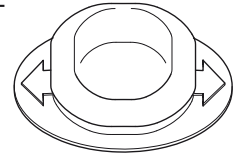
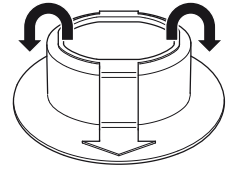


Installation

3.2.4 Inserting the tire sensor into the tire sensor container

Inserting without tool

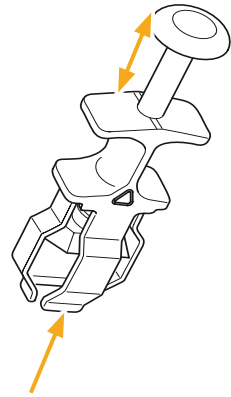
- Turn the sealing lip of the tire sensor container inside out.
Tip: Turning the sealing lip inside out on the short side of the tire sensor container is the easiest way (see black arrow in the adjacent illustration).
- Moisten the remaining surface in the tire sensor container slightly with fitting paste.
- Insert the tire sensor into the tire sensor container. The direction of rotation arrows on the tire sensor container continue onto the sensor (see illustration). Make sure that the pressure channel of the tire sensor is not installed upside down when fitting.
- Push the sealing lip of the tire sensor container back up. The sealing lip of the tire sensor container must rest evenly over the circumference on the top of the sensor.
- In order for the tire sensor to sit better inside the container, it is recommended to position the tire sensor in the container by turning it correspondingly to the right/left.



Alternative:

Inserting with tool (HAZET tool)

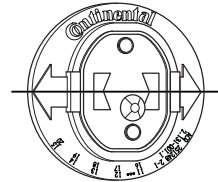
- HAZET- Press and hold the tool so that the holder for the tire sensor opens.
- Insert the tire sensor into the HAZET tool with the upper side first and stop operating the HAZET tool. The tire end sensor is held by the HAZET tool.
- Insert the tire sensor into the tire sensor container with the HAZET tool. The direction of rotation arrows on the tire sensor container continue onto the sensor (see illustration). Make sure that the pressure channel of the tire sensor is not installed upside down when fitting.
- Hold the HAZET tool and pull it out of the tire sensor container. The sensor remains in the tire sensor container and is held by the sealing lip.



The tire sensor is installed in the tire sensor container correctly when:

1. the direction of rotation arrows continue exactly flush to the tire sensor.
2. a slight elevation on the surface of the tire sensor is visible and can be felt.

Faulty installation causes damage to the tire sensor during operation. The system indicates "**CHECK SENSOR / DISMANTLE TYRE**" in this case.

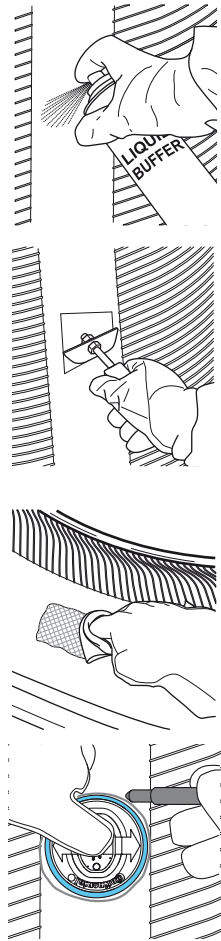


Installation

3.2.5 Pre-treatment of the installation area

Cleaning:

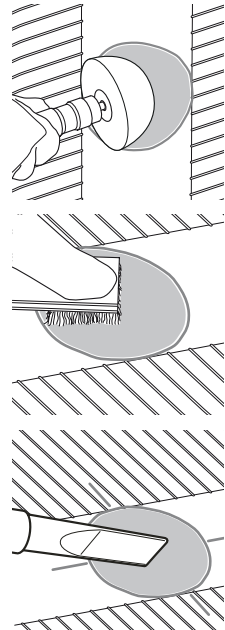
- To clean the installation area, align the tire so that excess cleaning agent can flow out of the area.
- Shake the spray can (Liquid Buffer or Pre-Buff Cleaner).
- Spray the installation area to be cleaned completely with the cleaner at a distance of approx. 20 cm (8 inches).
- Immediately afterwards, use considerable pressure to scrape the installation area to be cleaned several times until the surface is dry. Take care not to damage the inner layer of the tire.
- Repeat the cleaning process at least twice.
- Afterwards, moisten the entire installation area to be cleaned with the cleaning agent and clean thoroughly with the cleaning paper.
- Wipe in one direction only and always use clean areas of the cleaning paper.
- Do not rub any dirt into the installation area.
- Repeat this process until the area to be cleaned clearly differs from the uncleaned area.
- Remove any residue from the tire caused by scraping and cleaning.
- Allow the cleaned surface to air for approx. 3 minutes after the cleaning steps.
- Mark the area to be roughened using the tire sensor container or a suitable die and a marker pen or chalk. Circle an area that corresponds to the installation area of the tire sensor container with an allowance of approx. 1.25 mm.



Roughening:

ATTENTION	Damage to equipment!
<p>Incorrect treatment of the inner surface of the tire can destroy the tire or render it or the roughened surface unusable.</p> <ul style="list-style-type: none"> ▶ Have the work carried out only by staff correspondingly trained in tire repairs (see chapter “1.3 Information on this installation instructions”). ▶ If a surface roughness of > 0.14 mm (5.5 thou) is determined or if the carcass is damaged, the tire must be replaced and disposed of. ▶ Do not apply any cleaning agent (Liquid Buffer) to the roughened vulcanisation surface. This reduces the adhesive effect during cold vulcanisation. 	

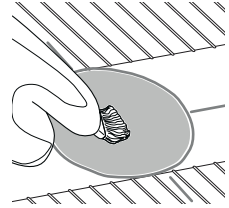
- Roughen the inner layer of the tire with a contour disk.
- Only press the buffing tool lightly and move continuously to prevent holding down at one place.
- Use the contour disk to create a surface with a type RMA 1-2 buffing texture (approx. 0.12 mm/4.7 thou) as installation surface.
- Remove dust with a brass brush and vacuum cleaner.
- Clean the roughened area with a brass brush only intended for repairing tires.
- Brush the area several times in one direction and make sure that no dirt from the surrounding areas gets into the cleaned area.
- Remove all roughening dust with a vacuum cleaner. Make sure that the roughened surface is not touched by the vacuum cleaner nozzle



Installation

Apply the vulcanisation agent:

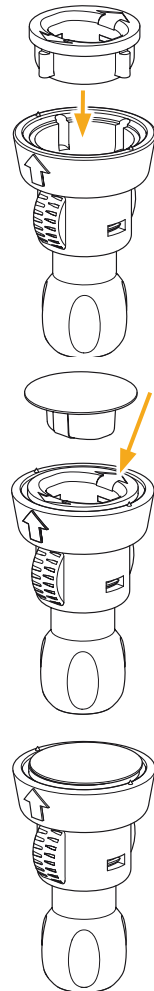
- Apply a thin, even layer of CEMENT SC-BL (approx. 0.45 g to 0.75 g) with a brush (the brush is mounted on the inside of the vessel lid) within 60 min after buffing. (Alternatively, use a clean brush intended only for this application)
- Apply CEMENT SC-BL in circular movements to optimise the drying process. Make sure that the brush is only moved in the prepared installation area. This prevents the brush from getting dirty.
- After applying the cold vulcanising agent CEMENT SC-BL, ensure that the CEMENT SC-BL and the contact surface are not touched.



NOTE	
<p>The expected drying time of the CEMENT SC-BL cold vulcanising agent is:</p> <ul style="list-style-type: none">- Minimum 2 minutes- Maximum 15 minutes <p>If necessary, perform a tensile stress test after the drying time to determine whether the cold curing agent has dried.</p>	

3.2.6 Apply the tire sensor with container to the prepared installation surface.

- Check the inlay for dirt.
Replace a dirty inlay.
- Place the inlay part in pressing tool 2 so that both arrows on the inlay part correspond with those on pressing tool. Do not use the pressing tool without the inlay part.
- Insert the tire sensor container with integrated tire sensor into the inlay so that the two rotation direction arrows of the tire sensor match those of the inlay. Make sure that the protective film of the tire sensor container is undamaged and fully adhered to the blue cushion gum. Dispose of a tire sensor container with damaged or detached protective film because permanent attachment in the tire can no longer be ensured.
- Remove the protective film from the tire sensor container and expose the contact surface of the blue cushion gum.
- After removing the protective film, make sure that the blue cushion gum is not touched or soiled.

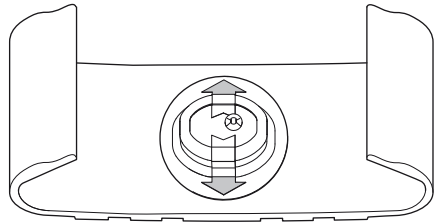


Installation

ATTENTION

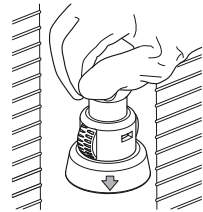
The tire sensor container with integrated tire sensor must be positioned optimally to function properly.

- Positioning of the tire sensor is correct when the arrow on the tire sensor container points in the direction of motion of the tires.



Positioned properly

- Align the arrows on the pressing tool with the direction of travel of the tire and press blue "X" installation surface onto the prepared installation surface in the tire.
- The contact pressure required is indicated by the spring stop.
- Ensure contact pressure for at least 10 s.
Do not move the pressing tool during the pressing time!
- Then remove the pressing tool carefully.
- Press the edges of the tire sensor container with the tire repair/pressure roller. Work out air and excess vulcanising agent.



3.3 Final inspection of the vulcanisation compound of the tire sensor container

Pay attention to the The following points after installation:

- The vulcanisation time depends on the ambient conditions (temperature and humidity). The ambient temperature must be at least 18°C (65°F).
Never try to shorten the drying time by using other means (e.g., compressed air, hair dryer, hot air dryer, ...).
- Do not pull on the tire sensor or the tire sensor container during (at least) the first 15 minutes.
- Inspect the vulcanisation compound visually.
When vulcanised properly, the tire sensor container with integrated tire sensor is in full contact with the inner layer of the tire.

NOTE	
<ul style="list-style-type: none">▶ If other agents (e.g., Tech720 tire mounting fluid) are used when fitting the tires on the rim, the full curing time of 24 hours must be observed so that the fluid does not damage the cold curing system.▶ If mounting pastes are used (only the bead area is coated with mounting paste), the tire can be fitted on the rim immediately after vulcanisation.	

Installation

3.4 Instructions for fitting tires

ATTENTION	Damage to equipment!
<p>Improper tire fitting can cause damage to the tire sensor.</p> <ul style="list-style-type: none">▶ Do not fit the tires until the full curing time of 24 hours has elapsed.▶ Make sure that the tire sensor is not damaged when fitting tires using tools such as tire irons.	

- For tire pairs:
To simplify the teach-in process of the tire sensors, fit the tire pairs so that the valves and therefore the position of the tire sensors are offset at 180° to one another.
- It is recommended to mark the tires that contain a tire sensor after fitting the tires.
Coloured valve caps and corresponding stickers for the wheel housing/ mudguard can be used for this purpose.

NOTE	
<p>Suitable valve caps and stickers can be ordered. Contact the authorised seller or an authorised partner workshop.</p>	

3.5 Retreading

- Remove the tire sensor before retreading the tire. The tire sensor container can remain in the tire, but must no longer be used to hold a tire sensor.

NOTE	
<p>After retreading, the tire sensor must be placed in a new tire sensor container and fitted according to chapters “3.2.4 Inserting the tire sensor into the tire sensor container” to “3.2.6 Apply the tire sensor with container to the prepared installation surface.”.</p>	

3.6 Continued use of the tire sensor after changing a tire

When the tire sensor is to be used again or replaced/or refitted, pay attention to the specified battery service life or operating time of the sensors according to chapter “**4.3 Tyre sensor**” into consideration.

4 Technical data

4.1 Ambient conditions

Storage temperature (according to applicable standard)	15 to 25 59 to 77	°C °F
Processing temperature	18 to 45 65 to 113	°C °F
Relative humidity	30 - 80	%

4.2 Tyre sensor container

Diameter incl. blue underlayer	66 2.6	mm inch
Height	22.2 0.874	mm inch
Weight	20 0.71	g oz

4.3 Tyre sensor

Dimensions (L x W x H)	38 x 28 x 22 1.5 x 1.1 x 0.87	mm inch
Weight	26 0.92	g oz
Transmission frequency	433.92	MHz
Reception frequency	125	kHz
Typical service life* of the permanently installed battery, approx.	6 or 600 000 372 820	years km miles
Temperature measuring range	-40 to 120 -40 to 248	°C °F
Pressure measuring range (rel.)	0 to 12 0 to 173	bar psi

* Constantly high tire inside temperatures (caused for example by high ambient temperature, low tire pressure, etc.) can decrease the battery service life.

4.4 Approved tires

With proper installation, all standard commercial tubeless tires are fundamentally suitable for the installation of a tire sensor as long as the surface of the tire inner layer corresponds to the normal market conditions.

The tire sensor must not be used in tires with inner tube.

NOTE	Approved tires
<p>The current table of approved tires can be found at https://www.continental-tires.com/products/b2b/services-and-solutions/ContiConnect/ Contact local customer service for information on approved Continental Commercial Specialty Tires (CST).</p>	

5 Disposal



Consumables and packaging material

Dispose of materials no longer needed, including packaging materials according to local regulations.



Tyre container and tyre sensor

The tyre sensor container remains in the tyre and is disposed of with the tyre.

NOTE	
The tyre sensor must be removed before disposing of the tyre. If the tyre sensor is to be used further, take the specified battery life or mileage of the sensor into account according to the chapter “4.3 Tyre sensor” .	

The tyre sensor contains a lithium battery that is cast into the housing and cannot be replaced.

After reaching the end of its service life, the tyre sensor must be disposed of according to all current local, regional and national laws and regulations. For this purpose, it is necessary to return it to an authorised Continental sales partner or the central collection point.

Address of the central collection point:

Georg Ebeling Spedition GmbH
An der Autobahn 9-11
30900 Wedemark

Germany

Continental Reifen Deutschland GmbH
Continental-Plaza 1
30175 Hannover
Germany

www.conticonnect.com
www.continental-tires.com

