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technical modification

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Truck and Off-Highway Multimedia Systems 2010 | 2011



BOSCH
Invented for life



Bosch Multimedia Systems – Reliable, Entertaining, Professional

The development of the Bosch Multimedia Systems is geared to the special requirements of trucks and off-highway vehicles. These systems are subjected to special quality testing and are thoroughly prepared to work in these demanding environments.

Experience, reliability, innovation and quality – our concept to guarantee your satisfaction.

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Multimedia Truck Navigation



Camera systems



Radios



Telematics



Speakers



Radios

Innovative features and optimum sound in combination with ergonomic design are the main characteristics of the Bosch radios for trucks and off-highway vehicles, all available in 12-volt or 24-volt versions.

The Bluetooth interface integrated into the Rotterdam UBT provides for added convenience when using the telephone and hands-free operation in the vehicle. Thanks to audio streaming, it also offers the option of playing music stored on a cell phone over the radio.



Rotterdam UBT

Radio

- ▶ Tuner for Europe: FM, MW, LW, SW
- ▶ Tuner for North America: FM, AM, WX
- ▶ RDS-EON-PTY radio
- ▶ 36 station presets on 6 levels
- ▶ Travelstore and Traffic Announcement
- ▶ Radiotext
- ▶ Pre-equipped for XM for North America

USB

- ▶ Easy, direct connection of USB-compatible devices
- ▶ USB slot (type A/B) on front panel

- ▶ Plays MP3/WMA files
- ▶ Title display of ID3 tags and WMA headers, folders and file names
- ▶ Supports the USB 2.0 standard

Aux input

- ▶ Stereo audio input to connect external audio sources
- ▶ 3.5-mm cinch jack on front panel
- ▶ Up to two additional Aux inputs via the ISO connection

Bluetooth

- ▶ Hands-free phone operation thanks to integrated Bluetooth module for safe use of the phone while driving
- ▶ Front panel with integrated microphone
- ▶ Easy call answer and call end
- ▶ Storage of the last 10 dialed, answered and missed calls
- ▶ Download of up to 250 contacts from the cell phone phonebook
- ▶ Bluetooth audio streaming to play audio files from portable devices

- ▶ Bluetooth Multilink for simultaneous use of audio streaming and the phone connection
- ▶ Automatic attempt to connect with the last used device when the radio is switched on
- ▶ Storage of pairing information of the five last cell phones used
- ▶ Supported profiles: HFP (hands-free phone), A2DP (transmission of audio data), PBAP (phonebook access profile)

Amplifier

- ▶ 12 V: 4 x 20 W RMS / 24 V: 2 x 20 W RMS
- ▶ Bass/Treble/Balance/Fader
- ▶ Source-specific tone control
- ▶ Pre-amp out for additional amplifier

Special features

- ▶ Available in 12 V or 24 V
- ▶ 12-V radio available with North American tuner (FM, AM, WX)
- ▶ Illumination and night design: yellow
- ▶ DOT matrix display

- ▶ Scroll function for ID3 tags
- ▶ Dust cap for USB and Aux-In
- ▶ Phone input and mute
- ▶ Speed-dependent volume adjustment (GALA)
- ▶ Integrated infrared receiver for optional remote control
- ▶ Anti-theft code
- ▶ Clock (12 h/24 h) and alarm function
- ▶ Subwoofer output
- ▶ 12-V antenna voltage supply (max. 150 mA)

Optimum Reception – Worldwide

Whether in Europe, North America or anywhere else in the world – Bosch radios will play all the stations available. That's why each of the truck radios – the Rotterdam UBT, the Calais USB or the Dover USB – is equipped with all the wavebands for any particular region. With the USB and AUX slots integrated directly into the front panel, the radios from Bosch also provide for connectivity on the road, making it possible to hook up USB sticks, external hard disks or MP3 players quickly and easily. As a result, your personal music collection becomes your loyal companion wherever you go.

Multimedia systems from Bosch – integrated connectivity for professional applications in commercial vehicles.



Calais USB

Radio

- ▶ Tuner for Europe: FM, MW, LW, SW
- ▶ Tuner for North America: FM, AM, WX
- ▶ RDS-EON-PTY radio
- ▶ 36 station presets on 6 levels
- ▶ Travelstore and Traffic Announcement
- ▶ Radiotext
- ▶ Pre-equipped for XM for North America

USB

- ▶ Easy, direct connection of USB-compatible devices
- ▶ USB slot (type A/B) on front panel
- ▶ Plays MP3/WMA files
- ▶ Title display of ID3 tags and WMA headers, folders and file names
- ▶ Supports USB 2.0 standard

Aux input

- ▶ Stereo audio input to connect external audio sources
- ▶ 3.5-mm cinch jack on front panel
- ▶ Up to two additional Aux inputs via ISO connection

CD

- ▶ CD drive for audio CD/MP3/WMA playback from CD/R/RW
- ▶ Display of CD text, ID3 tags, WMA headers, folders and file names
- ▶ Scan, Repeat and Shuffle functions

Amplifier

- ▶ 12 V: 4 x 20 W RMS / 24 V: 2 x 20 W RMS
- ▶ Bass/Treble/Balance/Fader
- ▶ Pre-amp out for additional amplifier

Special features

- ▶ Available in 12 V or 24 V versions
- ▶ Illumination and night design: yellow
- ▶ DOT Matrix Display
- ▶ Scroll function for ID3 tags
- ▶ Dust cap for USB and Aux-In slots
- ▶ Phone input and mute
- ▶ Speed-dependent volume adjustment (GALA)
- ▶ Integrated infrared receiver for optional remote control
- ▶ Anti-theft code
- ▶ Clock (12 h/24 h) and alarm function
- ▶ Subwoofer output
- ▶ 12-V antenna voltage supply (max. 150 mA)



Dover USB

Radio

- ▶ Tuner for Europe: FM, MW, LW
- ▶ Tuner for North America: FM, AM, WX
- ▶ RDS-EON-PTY radio
- ▶ 36 station presets on 6 levels
- ▶ Travelstore and Traffic Announcement
- ▶ Radiotext

USB

- ▶ Easy, direct connection of USB-compatible devices
- ▶ USB slot (type A/B) on front panel
- ▶ Plays MP3/WMA files
- ▶ Title display of ID3 tags and WMA headers, folders and file names
- ▶ Supports USB 2.0 standard

Aux Input

- ▶ Stereo audio input to connect external audio sources
- ▶ 3.5-mm cinch jack on front panel
- ▶ Additional Aux-In via ISO connection

Amplifier

- ▶ 12 V: 4 x 20 W RMS / 24 V: 2 x 20 W RMS
- ▶ Bass/Treble/Balance/Fader
- ▶ 24-V radio with pre-amp out for additional amplifier

Special features

- ▶ Available in 12-V or 24-V versions
- ▶ Illumination and night design: yellow
- ▶ 13-segment LCD display

- ▶ Scroll function for ID3 tags
- ▶ Dust cap for USB and Aux-In slots
- ▶ Phone input and mute
- ▶ Anti-theft code
- ▶ Clock (12 h/24 h) and alarm function
- ▶ 12-V antenna voltage supply (max. 150 mA)

Multimedia Truck Navigation

Acoustic and visual route guidance. Easy operation thanks to intuitive, clearly structured menus. An easy-to-read display with such additional information as arrival time and distance from destination. Multimedia Truck Navigation from Bosch affords great convenience along with precise navigation. Once the individual truck attributes have been entered, the system calculates a customized route for that specific commercial vehicle.



Truck-specific attributes

Multimedia Truck Navigation from Bosch makes it possible to provide route guidance for commercial vehicles by taking into account any legal and physical limitations. Setting the individual truck parameters allows the calculation of routes that avoid any obvious obstacles. The attributes include individual length, width, height, weight, axle load and hazardous goods class, if applicable. Such data as cargo weight or hazardous goods class can be altered quickly and easily at any time – after the vehicle has been loaded or unloaded for the return trip, for example.

Once the vehicle data has been keyed in, the destination is entered and the truck-specific route calculated. During this process, the different vehicle attributes are compared with the information stored in the map data; this can include the height of underpasses, the width of winding routes or the load-bearing capacity of bridges.

This makes it possible to take into account the vehicle-specific criteria and to recommend only the corresponding truck-specific routes. As a result, the commercial vehicles are not guided through small towns and villages on very narrow streets; any complicated turning maneuvers in front of low bridges or underpasses can thus be avoided as well.

Special destinations for commercial vehicles

The truck-specific navigation data on the micro SD card also includes special points that can be selected as specific destinations for commercial vehicles. These might include truck stops, service centers, Ad-Blue filling stations or truck repair shops. And in addition to this, the Multimedia Truck Navigation USB slot makes it possible to upload individual points of interest (POIs) at any time as special destinations that are added to the map data.

Dynamic navigation

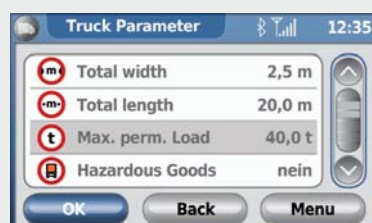
What is more, Multimedia Truck Navigation can also take advantage of dynamic navigation. Current traffic conditions are automatically evaluated on the basis of the data broadcast by radio stations on the Traffic Message Channel (TMC), making it possible to recognize any traffic problems on the route up ahead and – if it makes better sense – detour the driver around that specific traffic congestion.

Intuitive operation

With its easy-to-read map, Multimedia Truck Navigation clearly visualizes the road geometry and route guidance for the individual truck route. In combination with the ergonomic keys and two encoders, the color touch screen provides an intuitive, simple operating concept.

All the Features of the Future Right on Board

Multimedia Truck Navigation is equipped to play back different types of media. The USB slot can be used to play a memory stick or to connect an external hard disk just as easily and conveniently as an iPod®. The audio data are transmitted to the system digitally via USB. The large color screen enables the user to easily search for radio stations or choose the sound files via touch screen and provides an exceptionally good overview of the program or music selections. Other functions are also optionally available, e.g. as the video screen for a rear-view camera.



Your truck. Your route.

In route calculation, Multimedia Truck Navigation from Bosch is able to access the individual vehicle characteristics. This information is entered into the navigation system using the special menus provided for this purpose. In this context, the outer dimensions and the weight of the vehicle in particular are taken into account. Depending on these attributes, the Bosch Multimedia Truck Navigation system then calculates a route that is customized for the commercial vehicle concerned, i.e. the navigation system guides the driver safely past low bridges and uses only those roads that are able to bear the total vehicle weight.

Rear-view camera connection

With the optionally available Bosch rear-view cameras to be connected to the Multimedia Truck Navigation system, the video picture can be shown directly on the navigation monitor. This means that the driver can always keep a close eye on everything around him when backing up, parking or leaving the work yard – another important contribution to increased driving safety.

Bluetooth connectivity

- ▶ Allows the automatic connection of a cell phone to the vehicle audio system
- ▶ Hands-free operation: Ensures safe operation of the telephone without having to take your hands from the wheel
- ▶ Automatic download of phonebook and call list when the cell phone is paired with the system for the first time
- ▶ Bluetooth 2.0
- ▶ Audio streaming

USB interface with iPod® connectivity

- ▶ In addition to playing CDs, the USB interface provides for another alternative audio source
- ▶ Multimedia Truck Navigation allows the playback of audio files from an iPod® or other MP3 players, USB sticks or external USB hard disks
- ▶ Multimedia Truck Navigation enables complete iPod® control and easy browsing

Accessories

As a system supplier, Bosch also offers you accessories that have been specially designed for your radio or your truck navigation system. This includes, for example, rear-view cameras that can be optionally connected to the navigation system to ensure that the driver can see everything around the vehicle when backing up, parking or leaving the work yard.

Bosch speakers and amplifiers for commercial vehicles round out the offer and provide for excellent sound in the cab.



Color camera

The camera is very small and specially designed to withstand the effects of water, dirt and impact damage. It can be installed at all different angles and in different locations. This camera stands out in particular by its high image resolution and thanks to its high light sensitivity, it can also be used at night. In addition, it was specially developed to meet specific OEM requirements.

This camera is available in the following versions:

CC 90 color camera: with a 90° viewing angle

CC 90m color camera: with a 90° viewing angle

The image is reversed.

CC 138m color camera: with a 138° viewing angle.

The image is reversed.

WVCi color camera: the viewing angle is adjustable in this version.

A special feature of the WVCi color camera is the extra-wide viewing angle of 180°, so that the entire area behind the vehicle can be captured for the driver with just one camera.

This camera has a resolution of 1.3 million pixels.

- ▶ Operating voltage: 12 V
- ▶ Operating temperature: -30 °C to +70 °C
- ▶ Dimensions (W x H x D): 23.4 x 23.4 x 22.6 mm
- ▶ Weight: approx. 20 g
- ▶ Picture format: 16:9
- ▶ Power consumption: approx. 1.2 W
- ▶ Enclosure type: IP69
- ▶ Standards: e1, CE, WEEE



Camera holder

Thanks to its flexible material, this holder is able to protect the Bosch cameras from damage. The camera holder is integrated into the vehicle to provide for theft protection and makes it possible to adjust the camera as desired afterwards. So now, you can have your eyes everywhere.

- ▶ Temperature range: -40 °C to +90 °C
- ▶ Length: 55 mm
- ▶ Diameter: 50 mm
- ▶ Weight: 70 g
- ▶ Enclosure type: IP67



Camera switch

The camera switch automatically controls up to four cameras. It can be integrated directly into the 12-V or 24-V on-board network and supplies the cameras as well as the optional monitor with a constant voltage of 12 V. An optional switch module can be connected to enable manual operation.

- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Dimensions (W x H x D): 180 x 26 x 108 mm
- ▶ Weight: approx. 250 g
- ▶ Standards: e1, CE, WEEE

For Anyone Who Still Wants More

Navigation with the rear-view camera

The FBAS/RGB converter makes it possible to show the rear-view camera picture or other video sources with an FBAS signal on navigation systems or monitors with an RGB input.

- ▶ Also available in reverse as an RGB/FBAS converter
- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Dimensions (W x H x D): 178 x 39.3 x 101 mm



Automatic camera switch

The camera switch is able to control up to four cameras automatically and manually. An optional switch module is required for manual operation. The camera switch can also be connected to the Multimedia Truck Navigation system.

- ▶ Connection of up to four cameras with different viewing angles
- ▶ Optional manual control with optional switch module
- ▶ Optional control using signal indicator and back-up signals
- ▶ Adjusts to individual driving situation



USB interface

The USB interface was specially developed to upgrade the Bosch Calais MP48 and Calais MP89 radios and makes it possible to play MP3 and WMA files directly over the radio.

- ▶ Connection of USB-compatible devices (mass-storage devices) to the Bosch Calais MP48 and Calais MP89 radios
- ▶ USB interface available as additional audio source
- ▶ Plug & Play installation
- ▶ MP3 bit rate of max. 320 kb/s
- ▶ Title display using ID3 tags on the radio display
- ▶ Supports USB 2.0 standard (compatible with 1.x)
- ▶ Attractive interface design with high-gloss finish
- ▶ USB voltage 5 V/current 0.5 A
- ▶ Dimensions (W x H x D): approx. 97 x 96 x 16 mm



TA41 audio amplifier

- ▶ THD: ≤ 0.3 % (0.5 – 17 W/kHz)
- ▶ Frequency range: 60 Hz – 25 kHz (-3 dB)
- ▶ Switched input: Remote In +12/24 V (Pin9)
- ▶ Power-on sensitivity: 800 mV (4.0 V/1 kHz)
- ▶ Power consumption: I_{min.} 0.13 A, I_{max.} 2.5 A (20 W)
- ▶ Maximum output: 2 x 20 W (4 Ω)
- ▶ Speaker output: ≥ 4 Ω
- ▶ Dimensions (W x H x D): 132 x 54 x 70 mm
- ▶ Weight: approx. 450 g
- ▶ Operating voltage: 24 V (20 – 32 V)

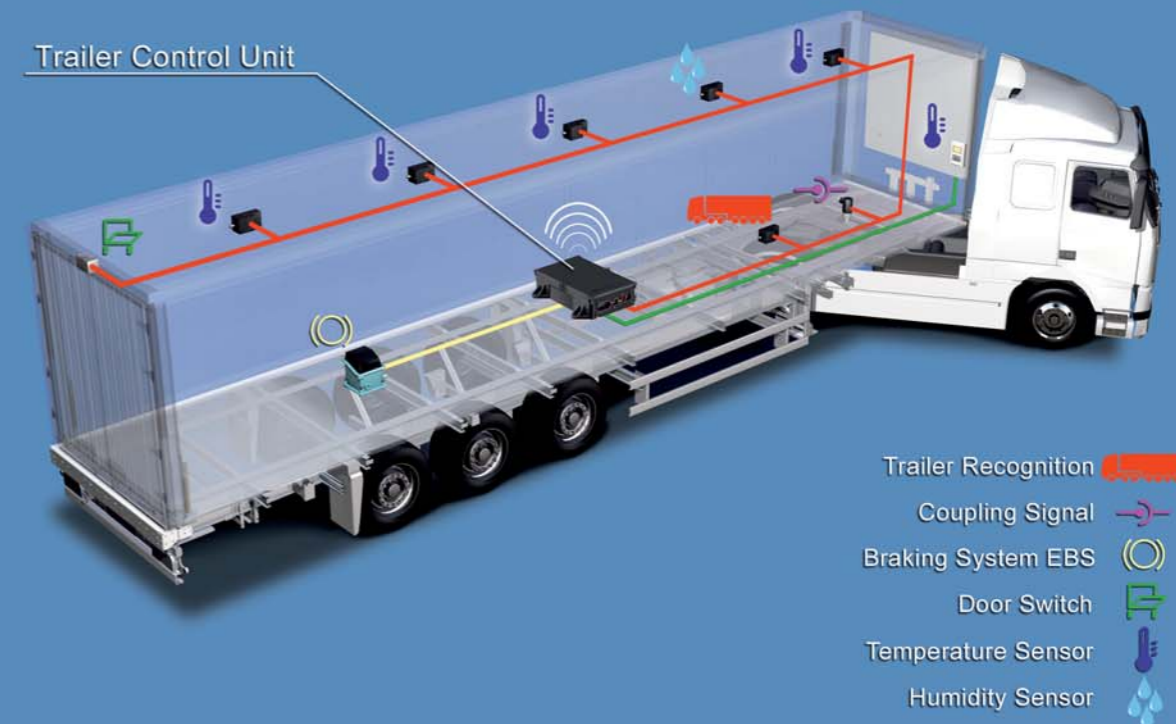
| Speakers | AL 100 | | AL 120 | | AL 130 | |
|--------------------|--------------|----------------|--------------|--------|--------------|----------------|
| Max. load | 25 W | | 30 W | | 50 W | |
| Sensitivity | 87 dB | | 87 dB | | 88 dB | |
| Frequency response | 80–20,000 Hz | | 70–20,000 Hz | | 70–20,000 Hz | |
| Installation depth | 44 mm | | 28 mm | | 50 mm | |
| Diameter | 100 mm | | 114 mm | | 115 mm | |
| Nominal resistance | 4 Ω | 4 Ω | 4 Ω | 8 Ω | 4 Ω | 4 Ω |
| Diameter | 135 mm | without grille | 152 mm | | 165 mm | without grille |
| Grille colors | black | | gray | | black | |
| Packaging unit | 2 pcs | 36 pcs | 16 pcs | 16 pcs | 2 pcs | 24 pcs |



Telematics

Due to the changing demands made on modern logistics systems, conventional logistical processes rapidly reach their limits. That's why it is necessary to integrate the dispatching processes of the vehicle fleets and the control of the flow of goods into one system. The combination of devices in the vehicles with the use of industry-specific software in the dispatch office creates professional system solutions. Solutions that factor in the attributes of the truck as well as of the trailer.

Telematics devices from Bosch are already being used by customers with different requirements in many different versions and applications. The flexible use of our products is evidence of our cooperation with strong system partners.



TCU Trailer Control Unit

This powerful, compact control unit was specially developed for use under very tough environmental conditions. It is ideally suited to being mounted on the outside of trailers. The self-sufficient power supply allows the unrestricted use of all functions even in unaccompanied transport. High flexibility in vehicle integration is guaranteed by the integrated antennas and an innovative networking concept.

Electrical properties

- ▶ Worldwide use thanks to the integrated quad-band GSM
- ▶ Reliable and quick to locate thanks to highly sensitive GPS
- ▶ Nominal voltage 10 V – 24 V

Mechanical properties

- ▶ Enclosure type: IP69
- ▶ Temperature range: -37 °C +85 °C
- ▶ Dimensions (L x W x H): 177 x 160 x 54 mm

Refrigeration and temperature recorder

Trailer Telematics offers a reliable tool for monitoring temperature-controlled transports to detect any problems in the controlled temperature chain early.

Electronic braking system

Networking with the electronic braking system delivers reliable data on cargo conditions and kilometers traveled as well as speed.

Security door sensors

Door contact switches deliver information to differentiate between planned and unplanned loading processes.

Tire pressure control system

Tire wear and tire pressure can be monitored insofar as the vehicle has been equipped with the systems required.

Identification of the tractor truck

The unique identification of the tractor truck delivers valuable information for efficient vehicle administration.



All Products at a Glance

| Audio | Part number | Page |
|--|-------------------|------|
| Rotterdam UBT80 12 V EU | 7 620 000 142 001 | 4 |
| Rotterdam UBT40 24 V EU | 7 620 000 143 001 | 4 |
| Rotterdam UBT80 12 V US | 7 620 000 144 001 | 4 |
| Calais USB80 12 V US | 7 620 000 130 001 | 6 |
| Calais USB40 24 V US | 7 620 000 131 001 | 6 |
| Calais USB80 12 V EU | 7 620 000 132 001 | 6 |
| Calais USB40 24 V EU | 7 620 000 133 001 | 6 |
| Dover USB80 12 V US | 7 620 000 120 001 | 7 |
| Dover USB40 24 V US | 7 620 000 121 001 | 7 |
| Dover USB80 12 V EU | 7 620 000 122 001 | 7 |
| Dover USB40 24 V EU | 7 620 000 123 001 | 7 |
| Navigation | | |
| For more detailed information, please contact your sales partner | | 8–11 |
| Accessories | | |
| CC 90 color camera (90° viewing angle) | 7 620 500 006 001 | 12 |
| CC 90m color camera (90° viewing angle reversed) | 7 620 500 005 001 | 12 |
| CC 138m color camera (138° viewing angle reversed) | 7 620 500 003 001 | 12 |
| WVCi color camera (90–180° viewing angle, optionally reversed) | 7 620 500 012 001 | 12 |
| Camera holder | 7 620 500 024 001 | 13 |
| Camera switch for up to 4 cameras | 7 607 500 004 001 | 13 |
| FBAS/RGB converter | 7 607 005 718 001 | 14 |
| RGB/FBAS converter | 7 620 330 001 001 | 14 |
| USB interface | 7 607 541 576 001 | 14 |
| TA41 audio amplifier | 7 607 273 007 001 | 14 |
| AL 100 speaker, with grille, black, 4 Ω, 2 pcs | 7 620 250 014 001 | 15 |
| AL 100 speaker, without grille, 4 Ω, 36 pcs | 7 620 250 016 001 | 15 |
| AL 120 speaker, with grille, gray, 4 Ω, 16 pcs | 7 620 250 011 001 | 15 |
| AL 120 speaker, with grille, gray, 8 Ω, 16 pcs | 7 620 250 012 001 | 15 |
| AL 130 speaker, with grille, black, 4 Ω, 2 pcs | 7 620 250 015 001 | 15 |
| AL 130 speaker, without grille, 4 Ω, 24 pcs | 7 620 250 018 001 | 15 |
| Telematics | | |
| TCU Trailer Control Unit | 7 620 000 405 001 | 16 |



Coach, Truck and Telematics
Our product program includes audio, video and navigation systems for coaches, trucks and other commercial vehicles that can be customized to meet individual customer needs. In addition, Professional Systems offer state-of-the-art telematics systems to control entire vehicle fleets as well as for use in the toll business.

We get you moving!

Bosch has a network of service centers in all the European countries that are popular travel destinations. Our staff there is ready to help you with their expert knowledge. We can solve your problems then and there to get you moving again quickly. Are you looking for more accessories? Then pay us a visit on the Internet at www.bosch-professional-systems.com

Need help fast? No problem!

All our products work reliably even under the toughest conditions. However, if a problem should occur, the Bosch Customer Service makes sure that your equipment is up and running again quickly.