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1 609 92A 28G (2016.02) I / 102



1 609 92A 28G

## GAL 3680 CV Professional

## GAL 1880 CV Professional



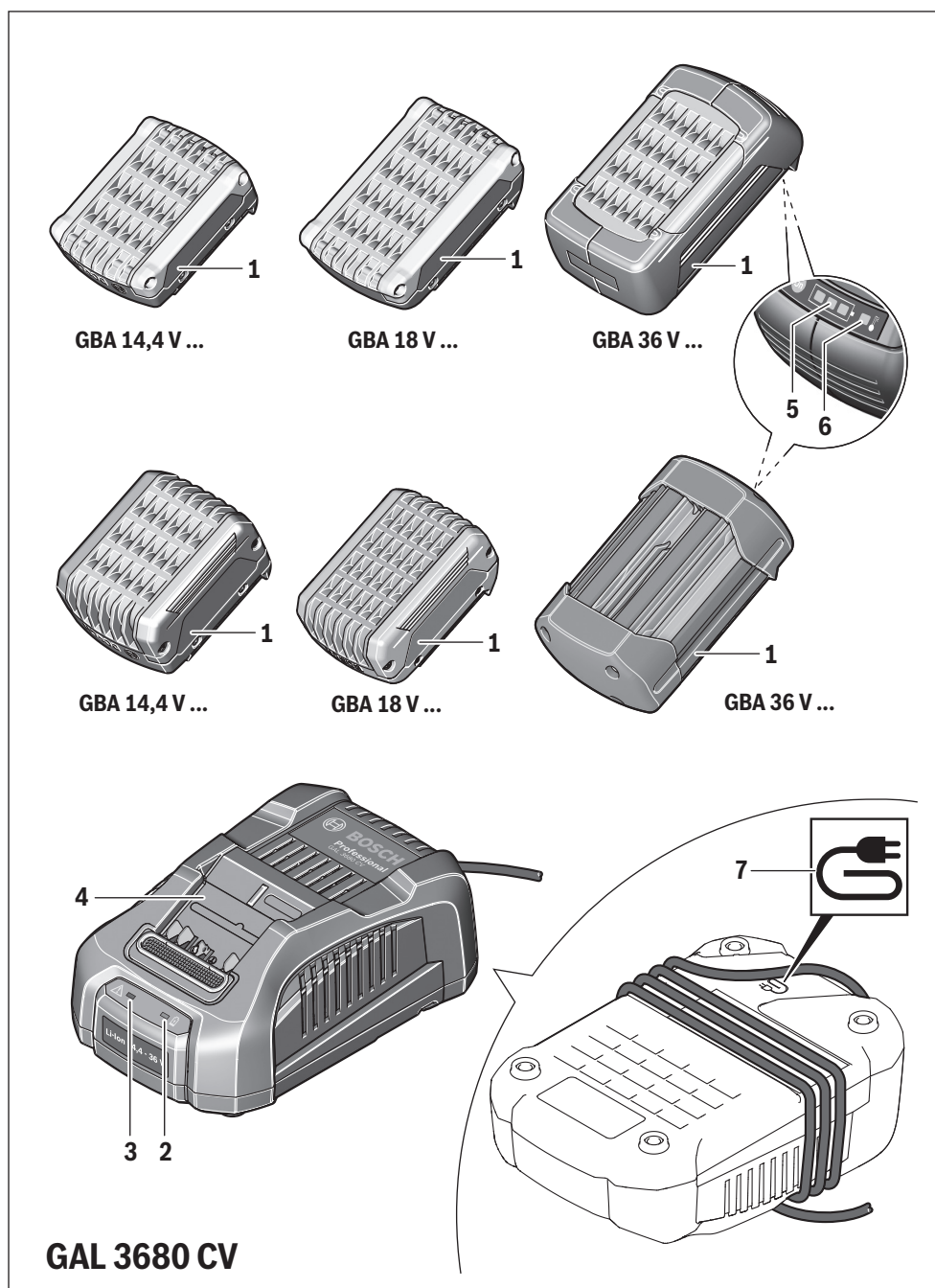
# BOSCH

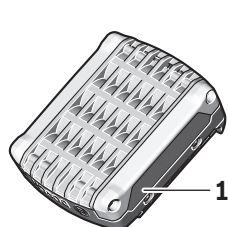
**de** Originalbetriebsanleitung  
**en** Original instructions  
**fr** Notice originale  
**es** Manual original  
**pt** Manual original  
**it** Istruzioni originali  
**nl** Oorspronkelijke  
gebruiksaanwijzing  
**da** Original brugsanvisning  
**sv** Bruksanvisning i original  
**no** Original driftsinstruks  
**fi** Alkuperäiset ohjeet  
**el** Πρωτότυπο οδηγών χρήσης  
**tr** Orijinal işletme talimatı

**pl** Instrukcja oryginalna  
**cs** Původní návod k používání  
**sk** Pôvodný návod na použitie  
**hu** Eredeti használati utasítás  
**ru** Оригинальное руководство  
по эксплуатации  
**uk** Оригінальна інструкція з  
експлуатації  
**kk** Пайдалану нұсқаулығының  
түпнұсқасы  
**ro** Instrucțiuni originale  
**bg** Оригинална инструкция  
**mk** Оригинална упатство за работа  
**sr** Originalno uputstvo za rad

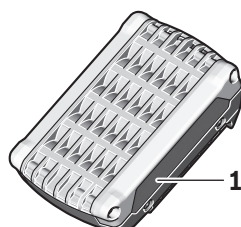
**sl** Izvirna navodila  
**hr** Originalne upute za rad  
**et** Algupärane kasutusjuhend  
**lv** Instrukcijas oriģinālvalodā  
**lt** Originali instrukcija  
**ko** 사용 설명서 원본  
**ar** تعليمات التشغيل الأصلية  
**fa** دفترچه راهنمای اصلی



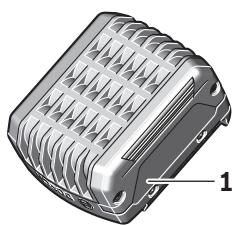




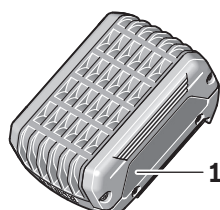
**GBA 14,4 V ...**



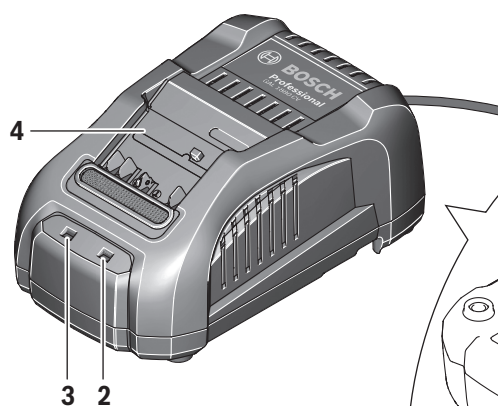
**GBA 18 V ...**



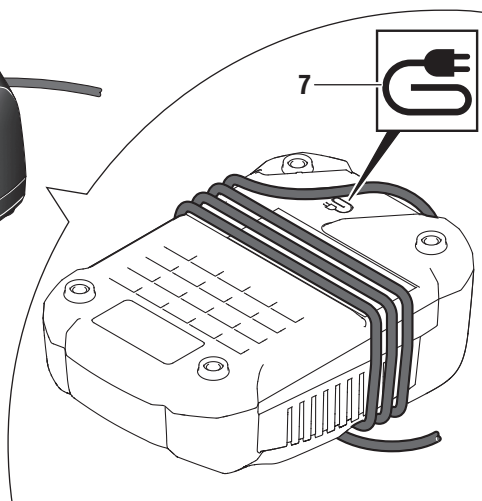
**GBA 14,4 V ...**



**GBA 18 V ...**



**GAL 1880 CV**



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## English

## Product Description and Specifications



**Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

**Save these instructions.**

Use the battery charger only when you fully understand and can perform all functions without limitation, or have received appropriate instructions.

## Safety Notes

- ▶ **This charger is not intended for use by children and persons with physical, sensory or mental limitations or a lack of experience or knowledge. This charger can be used by children aged 8 and above and by persons who have physical, sensory or mental limitations or a lack of experience or knowledge if a person responsible for their safety supervises them or has instructed them in the safe operation of the charger and they understand the associated dangers.** Otherwise, there is a danger of operating errors and injuries.
- ▶ **Supervise children during use, cleaning and maintenance.** This will ensure that children do not play with the charger.
- ▶ **Only charge Bosch lithium-ion batteries with a capacity of 1.3 Ah or more (4 battery cells or more). The battery voltage must match the battery charging voltage of the charger. Do not charge non-re-**

**chargeable batteries.** Otherwise there is danger of fire and explosion.



**Keep the battery charger away from rain or moisture.** Penetration of water in the battery charger increases the risk of an electric shock.

- ▶ **Keep the battery charger clean.** Contamination can lead to danger of an electric shock.
- ▶ **Before each use, check the battery charger, cable and plug. If damage is detected, do not use the battery charger. Never open the battery charger yourself. Have repairs performed only by a qualified technician and only using original spare parts.** Damaged battery chargers, cables and plugs increase the risk of an electric shock.
- ▶ **Do not operate the battery charger on easily inflammable surfaces (e. g., paper, textiles, etc.) or surroundings.** The heating of the battery charger during the charging process can pose a fire hazard.
- ▶ **In case of damage and improper use of the battery, vapours may be emitted. Ventilate the area and seek medical help in case of complaints.** The vapours can irritate the respiratory system.
- ▶ **Do not cover the ventilation slots of the battery charger.** Otherwise, the battery charger can overheat and no longer operate properly.

**Products sold in GB only:** Your product is fitted with a BS 1363/A approved electric plug with internal fuse (ASTA approved to BS 1362).

If the plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place by an authorised customer service agent. The replacement plug should have the same fuse rating as the original plug.

The severed plug must be disposed of to avoid a possible shock hazard and should never be inserted into a mains socket elsewhere.

## Product Features

The numbering of the product features refers to the illustration of the battery charger on the graphics page.

- 1 Battery pack\*
- 2 Green battery charge indicator
- 3 Red battery charge indicator
- 4 Charging compartment
- 5 Battery charge-control indicator\*
- 6 Temperature control indicator\*
- 7 Cable reel

\*Accessories shown or described are not part of the standard delivery scope of the product. A complete overview of accessories can be found in our accessories program.

## Technical Data

| Battery Charger  |                 | GAL 3680 CV   |      | GAL 1880 CV   |      |
|--|-----------------|---------------|------|---------------|------|
| Article number   |                 | 2 607 225 ... |      | 2 607 225 9.. |      |
|  |                 | 2 607 226 ... |      | 2 607 226 0.. |      |
| Battery charging voltage (automatic voltage detection) | V $\overline{}$ | 14.4–36       |      | 14.4–18       |      |
| Charging current                                       | A               | 8.0           |      | 8.0           |      |
| Allowable charging temperature range                   | °C              | 0–45          |      | 0–45          |      |
| Charging time for battery capacity, approx.            |                 | (80%)         | 100% | (80%)         | 100% |
| – 1.3 Ah   | min             | (10)          | 25   | (10)          | 25   |
| – 1.5 Ah   | min             | (10)          | 25   | (10)          | 25   |
| – 2.0 Ah   | min             | (15)          | 30   | (15)          | 30   |
| – 2.6 Ah   | min             | (15)          | 30   | (15)          | 30   |
| – 3.0 Ah   | min             | (20)          | 35   | (20)          | 35   |
| – 4.0 Ah   | min             | (25)          | 35   | (25)          | 35   |
| – 5.0 Ah   | min             | (35)          | 45   | (35)          | 45   |
| – 6.0 Ah   | min             | (35)          | 55   | (35)          | 55   |
| Number of battery cells                                |                 | 4–30          |      | 4–10          |      |
| Weight according to EPTA-Procedure 01:2014             | kg              | 0.9           |      | 0.7           |      |
| Protection class                                       |                 | □ / II        |      | □ / II        |      |

## Operation

### Starting Operation

- **Observe the mains voltage!** The voltage of the power supply must correspond with the data given on the nameplate of the battery charger. Battery chargers marked with 230 V can also be operated with 220 V.

### Charging Procedure

The charging procedure starts as soon as the mains plug of the battery charger is plugged into the socket outlet and the battery **1** is inserted into the charging compartment **4**.

Due to the intelligent charging method, the charging condition of the battery is automatically detected and the battery is charged with the optimum charging current, depending on battery temperature and voltage.

This gives longer life to the battery and always leaves it fully charged when kept in the charger for storage.

### Meaning of the Indication Elements

#### Flashing Green Battery Charge Indicator 2



The rapid-charging procedure is signalled by a **flashing green** battery charge indicator **2**. The battery can be removed at any time and used.

**Note:** The charging procedure is only possible when the battery temperature is within the allowable charging temperature range, see "Technical Data" section.



Once approx. 80 % of the battery capacity has been reached, the flashing of the green battery charge indicator slows down. The rapid-charging process is now completed. If the battery re-

mains in the charger, the charging process will be completed in the Long Life charging mode.

#### Continuous Lighting of the Green Battery Charge Indicator 2



**Continuous lighting** of the **green** battery charge indicator **2** indicates that the battery is fully charged.

Afterwards, the battery can be removed for immediate use.

When the battery is not inserted, **continuous lighting** of the battery charge indicator **2** indicates that the mains plug is inserted in the socket and that the battery charger is ready for operation.

#### Continuous Lighting of the Red Battery Charge Indicator 3



The **continuous light** of the **red** battery charge indicator **3** shows that the temperature of the battery is outside of the permitted charge-temperature range, see section "Technical Data".

The charging process begins as soon as the permitted temperature range has been reached.

#### Flashing Red Battery Charge Indicator 3



A **flashing red** battery charge indicator **3** indicates a different malfunction of the charging procedure, see section "Troubleshooting – Causes and Corrective Measures".

#### Indications on 36 V Batteries

During the charging procedure, the three **green charge-control indicators 5** of the battery light up one after the other and briefly go out. The battery is fully charged when the three green indicators light up continuously. After approx. 5 minutes after the battery has been fully charged, the three green indicators go out again.

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When the **red temperature control indicator 6** lights up when placing the battery into the charger, the temperature of the battery is not within the charge-temperature range (see section "Technical Data"). The battery cannot be charged until after the allowable operating temperature range has been reached.

### Troubleshooting – Causes and Corrective Measures

| Cause   | Corrective Measure   |
|---|--|
| <b>Flashing red battery charge indicator 3</b>          |  |
| <b>No charging procedure possible</b>                   |  |
| Battery not (properly) inserted                         | Properly insert battery into battery charger   |
| Battery contacts contaminated                           | Clean the battery contacts (e.g. by inserting and removing the battery several times) or replace the battery               |
| Battery pack defective                                  | Replace the battery  |
| <b>Battery charge indicators 2 or 3 do not light up</b> |  |
| Mains plug of battery charger not plugged in (properly) | Insert mains plug (fully) into the socket outlet   |
| Socket outlet, mains cable or battery charger defective | Check the mains voltage; have the battery charger checked by an authorised after-sales service agent for Bosch power tools |

### Working Advice

With continuous or several repetitive charging cycles without interruption, the charger can warm up. This is not meaningful and does not indicate a technical defect of the battery charger.

A significantly reduced working period after charging indicates that the battery is used and must be replaced.

#### Battery Cooling (Active Air Cooling)

The fan control integrated into the charger monitors the temperature of the inserted battery. As soon as the battery temperature is above approx. 0 °C, the battery will be cooled by a fan. The fan generates a ventilation sound when switched on.

If the fan does not run, it is defective or the battery temperature is <0 °C. This can increase the charging time.

## Maintenance and Service

### Maintenance and Cleaning

If the replacement of the supply cord is necessary, this has to be done by Bosch or an authorized Bosch service agent in order to avoid a safety hazard.

### After-sales Service and Application Service

Our after-sales service responds to your questions concerning maintenance and repair of your product as well as spare

parts. Exploded views and information on spare parts can also be found under:

**www.bosch-pt.com**

Bosch's application service team will gladly answer questions concerning our products and their accessories.

In all correspondence and spare parts orders, please always include the 10-digit article number given on the nameplate of the product.

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At [www.bosch-pt.co.uk](http://www.bosch-pt.co.uk) you can order spare parts or arrange the collection of a product in need of servicing or repair.

Tel. Service: (0344) 7360109

E-Mail: [boschservicecentre@bosch.com](mailto:boschservicecentre@bosch.com)

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**Disposal**

Battery chargers, accessories and packaging should be sorted for environmental-friendly recycling.

Do not dispose of battery chargers into household waste!

**Only for EC countries:**

According to the European Guideline 2012/19/EU for Waste Electrical and Electronic Equipment and its implementation into national right, battery chargers that are no longer usable must be collected separately and disposed of in an environmental correct manner.

Subject to change without notice.

**Français****Description et performances du produit**

**Il est impératif de lire toutes les consignes de sécurité et toutes les instructions.** Le non-respect des avertissements et instructions indiqués

ci-après peut conduire à une électrocution, un incendie et/ou de graves blessures.

**Garder précieusement ces instructions.**

N'utilisez le chargeur qu'après vous être familiarisé avec toutes ses fonctions et que vous êtes capable de l'utiliser sans réserves ou après avoir reçu des instructions correspondantes.

**Avertissements de sécurité**

► **Ce chargeur n'est pas prévu pour être utilisé par des enfants ni par des personnes souffrant d'un handicap physique, sensoriel ou mental ou manquant d'expérience ou de connaissances. Ce chargeur peut être utilisé par les enfants (âgés d'au moins 8 ans) et par les personnes souffrant d'un handicap physique, sensoriel ou mental ou manquant d'expérience ou de connaissances, lorsque ceux-ci sont sous la surveillance d'une personne responsable de leur sécurité ou après avoir reçu des instructions sur la façon d'utiliser le chargeur en toute sécurité et après avoir bien compris les dangers inhérents à son utilisation.** Sinon, il existe un risque de blessures et d'utilisation inappropriée.

► **Ne laissez pas les enfants sans surveillance lors de l'utilisation, du nettoyage et de l'entretien.** Faites en sorte que les enfants ne jouent pas avec le chargeur.

► **N'utilisez le chargeur que pour recharger des accus Lithium-Ion Bosch d'une capacité d'au moins 1,3 Ah (à partir de 4 cellules). La tension des accus doit correspondre à la tension de charge du chargeur. Ne rechargez pas de piles non rechargeables.** Il existe sinon un risque d'explosion et d'incendie.



**Ne pas exposer le chargeur à la pluie ou à l'humidité.** La pénétration d'eau dans un chargeur augmente le risque d'un choc électrique.

► **Maintenir le chargeur propre.** Un encrassement augmente le risque de choc électrique.