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## 1. Supplied

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<tr>
<td>Battery 9Ah / 11Ah Typ 13</td>
<td>Battery holder</td>
<td><img src="image1" alt="Battery Holder" /></td>
</tr>
<tr>
<td>Battery charger Typ 13</td>
<td>Central engine MM13</td>
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<tr>
<td>Magnetic disc cover</td>
<td>Luggage carrier with attachments</td>
<td><img src="image3" alt="Magnetic Disc Cover" /></td>
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<tr>
<td>Controller with cover for battery holder</td>
<td>Throttle with cable 1970mm</td>
<td><img src="image4" alt="Controller" /></td>
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<tr>
<td>LCD-Display with cable</td>
<td>Speedsensor with magnet</td>
<td><img src="image5" alt="LCD Display" /></td>
</tr>
<tr>
<td>Cadence Sensor</td>
<td>Sensor disc (magnetic disc)</td>
<td><img src="image6" alt="Cadence Sensor" /></td>
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<tr>
<td>Crank (1x left, 1x right) with 2 plastic covers</td>
<td>Chain guard with 2 chain guard brackets</td>
<td><img src="image7" alt="Crank" /></td>
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<tr>
<td>Part Description</td>
<td>Qty</td>
<td>Notes</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Light module 6V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2x Screw M3x for cadence sensor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4x Tapping screw 16mm for controller cover</td>
<td></td>
<td>4x Screw M5x12 for battery holder</td>
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<tr>
<td>2x Washer M5 for chain guard brackets</td>
<td></td>
<td>2x Locknut M5 for chain guard bracket</td>
</tr>
<tr>
<td>2x Screw M4x8 for chain guard</td>
<td></td>
<td>1x Spacer 0,5mm</td>
</tr>
</tbody>
</table>

Unpack the parts and remove any packaging.
Check the part if it is complete and undamaged.
In the case of transport damage, please immediately contact the sender.
2. **Prepare the Frame**

First, the existing bottom bracket should be removed completely.

![Warning Symbol]

**Attention:** The engine installation is only possible with frames that have installed a BSA stock!

All gear and brake cables and light cords should be routed so that they do not extend between the frame and engine.
3. **Determine the position of the engine**

Position the black electric motor as close as possible to the frame (without it touching) to ensure maximum ground clearance!

4. **Prepare the torque recesses supporting bolt**

Position the engine in the correct position and fasten the motor to the mounting pipe.

Loosen the screws and remove the motor again!
By tightening the motor you get two prints of torque supporting-pins, which show you the correct position for cutting the recesses.

Draw on the size of the recess. This should be 5mm!

Draw on the depth of the recess next. This should be 5mm!
Check again for proper position of the motor and the observance of the measurements. Then you can cut the recesses.

**5. PREPARE THE ENGINE**

Attach the two mounting bracket for the chain guard. To do this, use 2x washer M5 and 2x lock nut M5!
Lubricate the mounting tube and the axis of the engine with a heat-resistant, tough multi-purpose grease!

6. INSTALLATION OF THE ENGINE

Bolt the motor to the mounting tube in the frame. For this we recommend the special tool which you get from the company Schachner GmbH or your local dealer!
Pull the mounting tube with a torque of 85Nm fixed!
7. Mounting the Cadence Sensor

Attach the magnetic disk spacer ring on the axis.

Now plug the magnetic disc on the axle. Make sure that the magnetic disc is free to rotate on the axle!
Now you can attach the magnetic disc cover. Look again on the free movement of the magnetic disk! Screw not too tight, as this is the only cover around an optical cover and is not intended to fix the engine!

Now mount the sensor with the two M3 screws for the pedal sensor.
8. **Adjust the Chain**

Adjust the length of the chain for your bike and pay attention to the correct chain tension. It is recommended to use a reinforced chain that exist specifically for electric bikes!

![Chain Image](image-url)

9. **Mounting of the Chain Guard**

To install the chain guard you use 2x lens screw M4x8.

![Chain Guard Image](image-url)
10. MOUNTING THE CRANKS

Mount the cranks and pay attention to left and right side of the cranks!

11. MOUNTING THE LUGGAGE CARRIER

Mount the special luggage carrier horizontally on the bike.

12. CONTROL PANEL AND CONTROL ASSEMBLY

Mount the display and the rotary at the bike handle. The speedsensor must be mounted on the front wheel and the magnet are fixed in the spokes.

Secure the controller to the battery holder. To do this, use the 4 piece 12mm Self-tapping screws. Make sure that you perform all the cables in the recess of the battery holder!
Now connect all the cables using the wiring diagram right below!

1) Engine cable (yellow, blue, green)
2) Programming cable white (not relevant for customers)
3) Speedsensor cable front wheel (blue, red, yellow)
4) Cadencesensor cable (red, blue, black)
5) Display cable (yellow, green, black, blue, red)
6) Throttle cable (green, black, red)
7) Light module cable (red, black, violet)

The integrated back light at the battery is automatically connected to the controller and need not be specially connected. In the light module you can connect the front light. It is possible on the second light module connector to connect an additional back light. However, this is not absolutely necessary since the battery light has a mark of checkmark.

**Attention:** If you connect the bike light to the light module, the dynamo must be switched off!
13. Mounting of the Battery Holder

Screw the battery holder, which includes the controller, with 4x lens screw M5x14, washer 4x 4x M5 and M5 lock nut on the carrier.

Finally remove the rubber cover of the battery terminals.
Now the battery can be inserted and the kit is fully assembled.
The function and operation of the drive, refer to the user manual provided!

If you still have any questions about assembly, which are not explained in the manual, please feel free to contact our service department. Our technicians are happy to help!

We hope you enjoy your bike
and have a good trip with your Schachner electric bike!