

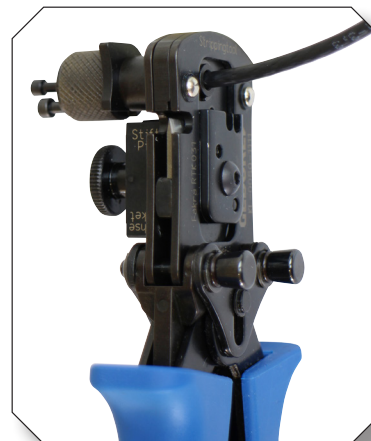


KL-0080-11 K

Crimping Tool Kit for FAKRA Plug Connectors



Product information EN
 ⚠ Read and understand before use!



www.gedore-automotive.com

GEDORE Automotive GmbH

Breslauer Straße 41
 78166 - Donaueschingen
 Postfach 1329
 78154 Donaueschingen - GERMANY

☎ +49 (0) 771 / 8 32 23-0
 ☎ +49 (0) 771 / 8 32 23-90
 ✉ info.gam@gedore.com
 🌐 gedore-automotive.com

GEDORE TOOLS, INC.

Only for USA, Canada & Mexico / Sólo para EE.UU., Canadá y México
 Seulement pour les USA, le Canada et le Mexique
 7187 Bryhawke Circle, Suite 700
 North Charleston, SC 29418, USA

☎ +1-843 / 225 50 15
 ☎ +1-843 / 225 50 20
 ✉ info@gedoretools.com
 🌐 gedore.com

Version 10/2022

1. PRODUCT DESCRIPTION

2.1 KL-0080-11 K - Crimping tool kit for FAKRA plug connectors

Universal fit for cars, commercial vehicles, and vans with FAKRA cable/plug connections (RTK031 and RG174). Installed, for example, on GSM mobile radio antennas, GPS antennas, and in rear-view camera systems.

For stripping, crimping, and repairing FAKRA cable/plug connections. Time-consuming replacement of the entire FAKRA coaxial cable, usually across the vehicle, is not required! Defective, oxidised, or provisionally repaired FAKRA cable/plug connections can lead to system failures on GSM mobile radios, GPS systems, and rear view camera systems.

2.2 Safety instructions and regulations

EN **▼ Prior to each use** of the special tool, read and understand all safety instructions and **follow** them for **safe use!**

▼ Use the special tools **as intended** and **always** carry out maintenance and repair work in compliance with the regulations on occupational safety and accident prevention as well as the vehicle manufacturer's instructions!

▼ **Prior to each use**, check the special tools **carefully** for damage, loose parts or unauthorised modifications. **Never** use it if you notice any such deficiencies!

▼ Always wear your personal protective equipment (*for example safety goggles, protective gloves, safety shoes*) when working!

2.3 Specifications

Cable diameter (RG174):..... 2.8mm

Cable diameter (RTK031):..... 3.2mm

2.4 Scope of delivery / Single part overview

Item	Part no.	Description	Qty.
A	KL-0080-112	Fakra RG174 tool kit	1
A1	KL-0080-1121	Stripping attachment RG174	1
A2	KL-0080-1122	Crimping attachment RG174	1
A3	KL-0080-1126	Pin housings RG174 (5 pcs.)	1
A4	KL-0080-1124	Pin contacts RG174 (10 pcs.)	1
A5	KL-0080-1125	Socket housings RG174 (5 pcs.)	1
A6	KL-0080-1123	Housing contacts RG174 (10 pcs.)	1
A7	KL-0080-1127	Coaxial cable RG174	1
B	KL-0080-111	Fakra RTK031 tool kit	1
B1	KL-0080-1111	Stripping attachment RTK031	1
B2	KL-0080-1112	Crimping attachment RTK031	1
B3	KL-0080-1116	Pin housings RTK031 (5 pcs.)	1
B4	KL-0080-1114	Pin contacts RTK031 (10 pcs.)	1
B5	KL-0080-1115	Socket housings RTK031 (5 pcs.)	1
B6	KL-0080-1113	Housing contacts RTK031 (10 pcs.)	1
B7	KL-0080-1117	Coaxial cable RTK031	1
C	KL-0080-1130	Cable testing gauge (RTK031/ RG174)	1
D	KL-0080-1011	Handle	1
-	KL-0080-1190	Case with foam inserts	1

Scope of delivery / Single part overview

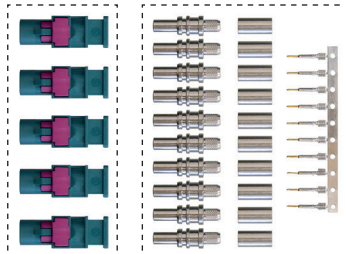
KL-0080-112 - Fakra RG174 tool kit



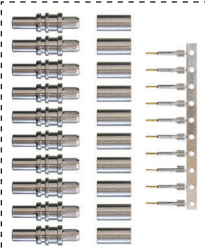
A1



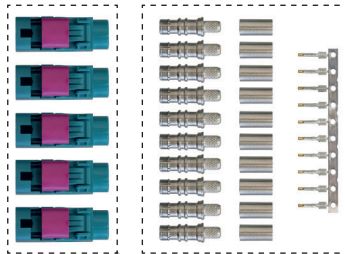
A2



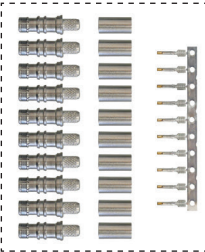
A3



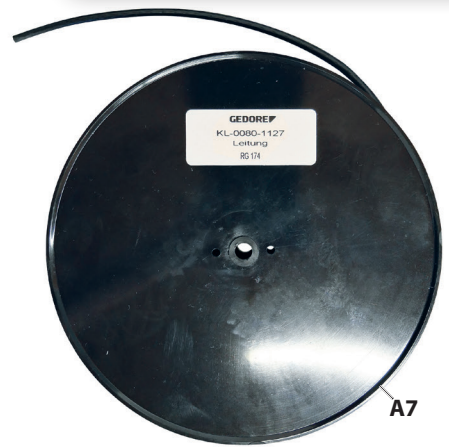
A4



A5



A6



A7

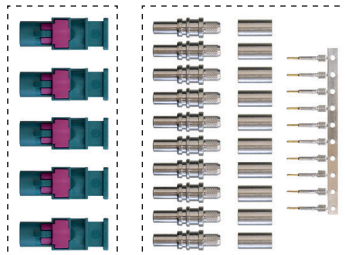
KL-0080-111 - Fakra RTK031 tool kit



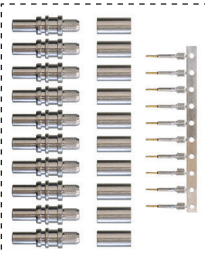
B1



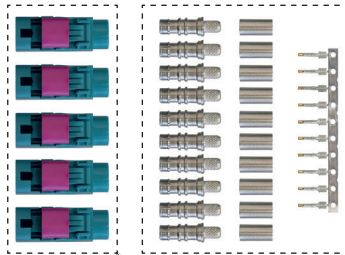
B2



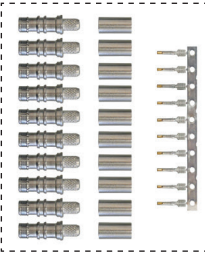
B3



B4



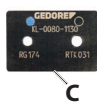
B5



B6



B7



C

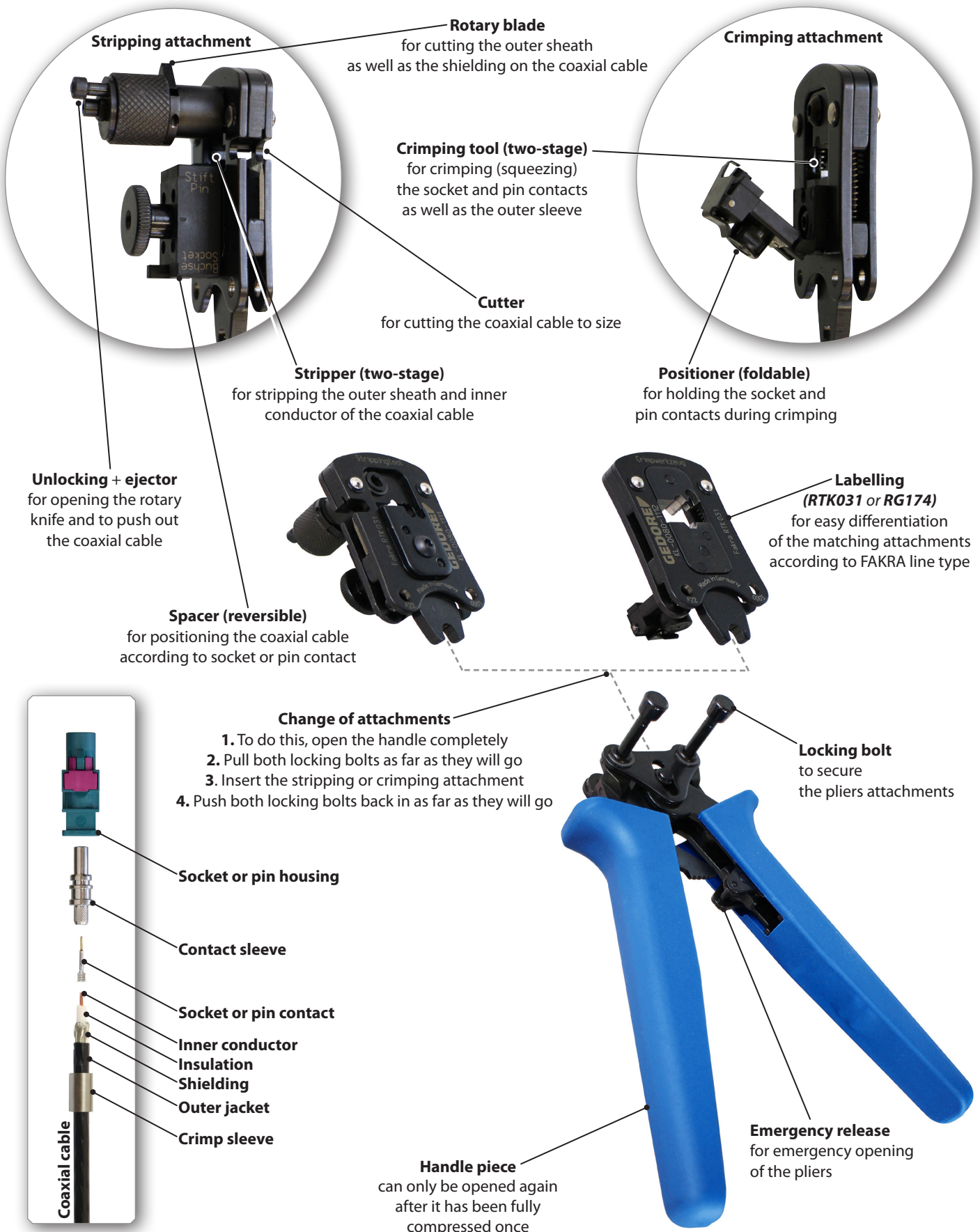


D

EN


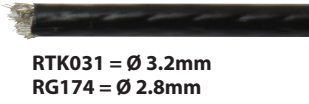


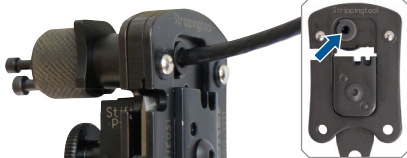



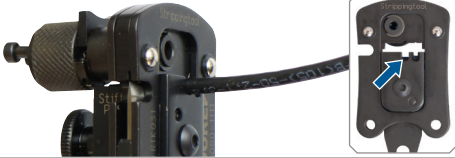

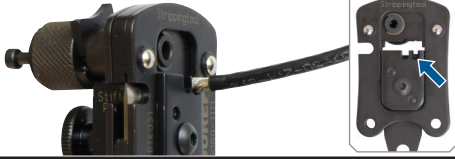

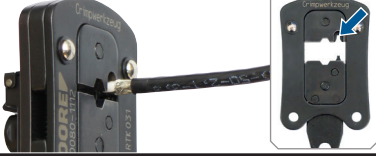

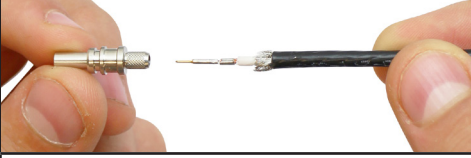

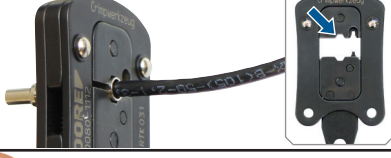

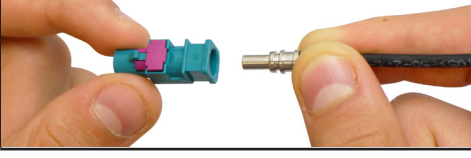

2.5 Component overview

This overview shows basic components, designations, and information on the tool.



3. SHORT APPLICATION OVERVIEW

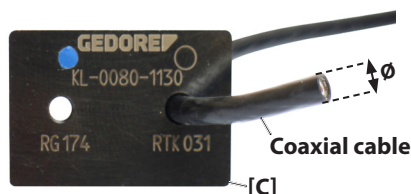
This overview briefly shows the individual work steps; the comprehensive application example can be found in **chapter 4**.

Work step		Result on the coaxial cable
Investigate FAKRA cable type Ø (RTK031 or RG174), for example, by using the cable test gauge, and prepare the appropriate tool set.		
Cut coaxial cable cleanly and straight with the cutter.		
Use the rotary blade and make a cut on the outer sheath and shield, but <u>do not</u> pull them off.		
Push the crimp sleeve onto the coaxial cable beforehand.		
Align the spacer to whether you want to make a socket or pin contact, and cut and strip the outer jacket from the coaxial cable with the wire stripper.		
Cut the insulation of the inner conductor with the wire stripper and pull it off.		
Insert either the socket or pin contact on the positioner and use the crimping tool to crimp it in the correct position on the coaxial cable.		
Push the contact sleeve completely onto the coaxial cable so that the shield wires are above it.		
Push the crimp sleeve onto the contact sleeve and crimp with the crimping tool		
Push the socket or pin housing onto the contact sleeve until it clicks into place.		

4. TYPICAL APPLICATION

This typical application describes the stripping, crimping, and repairing of a **FAKRA RTK031** cable/plug connection with the Fakra **RTK031** tool kit [B..]. The procedure for a **FAKRA RG174** cable/plug connection is basically the same, however, the Fakra **RG174** tool kit is used [A..].

📷1: Investigating the **FAKRA** line type (**RTK031** or **RG174**).

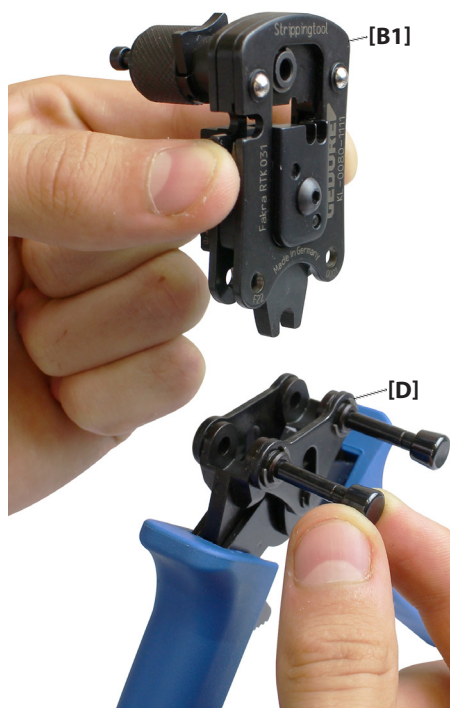


① Line type:
 RTK031 = Ø 3.2mm
 RG174 = Ø 2.8mm

1. First determine which **FAKRA cable type (RTK031 or RG174)** you are dealing with.

See the labelling on the **coaxial cable**, or simply determine it by the diameter (Ø) using the cable test gauge [C].

📷2: Insert the stripping attachment [B1] on the handle [D].



2. Now determine the appropriate tool kit based on the **FAKRA cable type (RTK031 or RG174) [A..] or [B..]** according to the **type of cable (RTK031 or RG174)**.

To avoid confusion, all parts in the tool kit are labelled accordingly with **RTK031** or **RG174**.

①The cable gauge [C] and the handle [D] are always used for both **types of cable**.

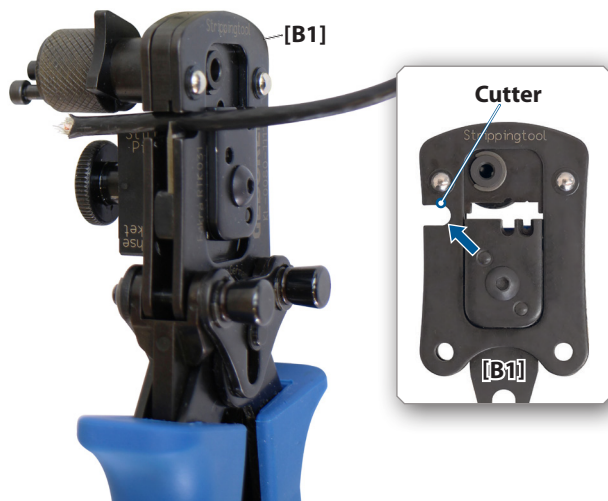
3. Insert the stripping attachment [B1] in the correct position on the handle [D].

To do this, close the handle [D] once completely and open it as far as it will go.

Then pull back both **locking bolts**, insert the stripping attachment [B1] and secure it with the two **locking bolts**.

①If necessary, the handle [D] can also be opened via the **emergency release**. (See Chapter 2.5)

📷3: Cut the coaxial cable with the cutter.

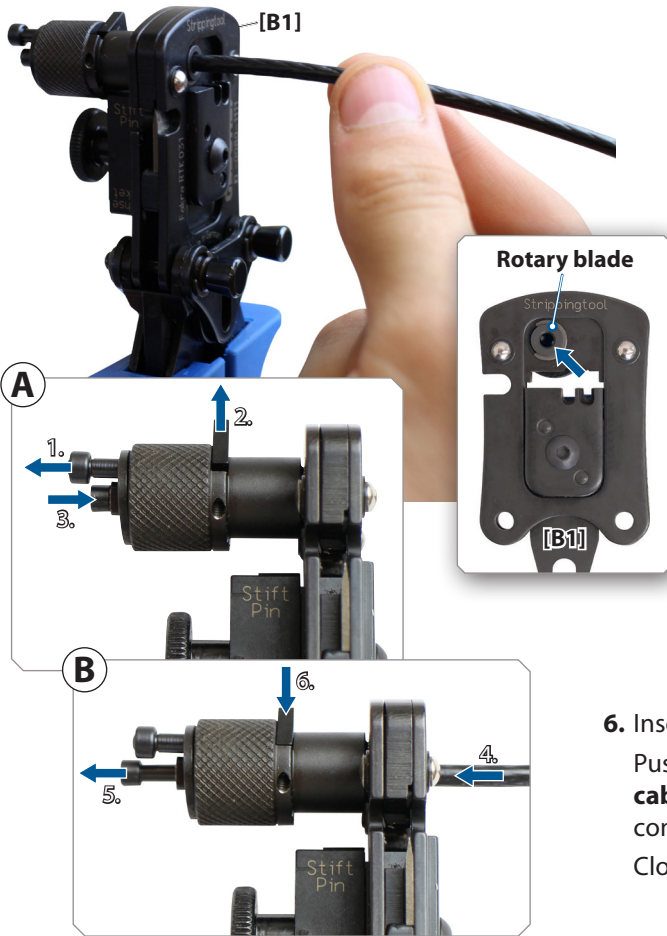


4. Cut the end on the coaxial cable properly and even using the **cutter** on the stripping attachment [B1].

Result on the coaxial cable



4: Open the rotary blade, insert the coaxial cable, and close the rotary blade.



CAUTION

The coaxial cable cannot be fully inserted at the **rotary blade** and is therefore stripped incorrectly.

- Open the **rotary blade** if it is closed.
- If necessary, remove cable residues or other impurities from the **rotary blade**; use compressed air or a wire, for example.

5. Prepare the **rotary blade** on the stripping attachment **[B1]** accordingly.

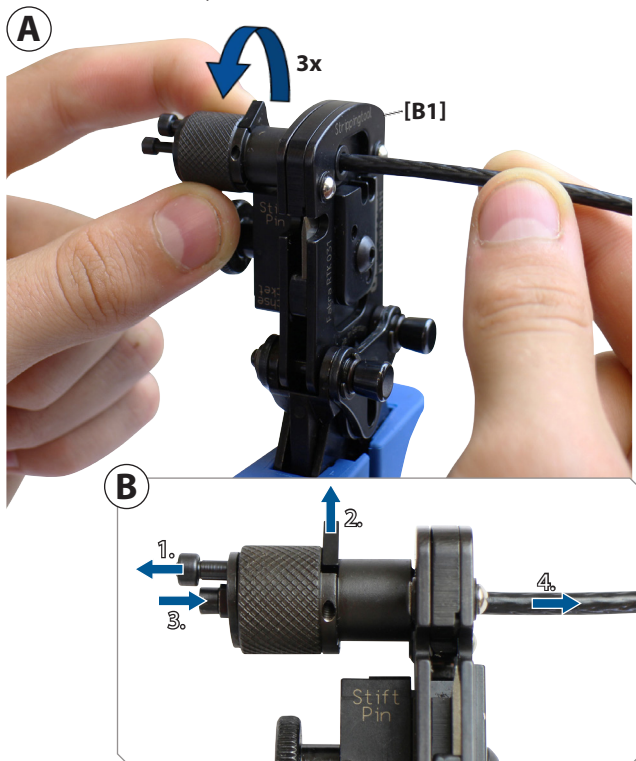
Pull the **release** (1.) and open the **rotary blade** (2.). Then check whether there are any cable remainders or other impurities and remove them, if necessary.

6. Insert the coaxial cable in the correct position on the **rotary blade**.

Push the **ejector** (3.) in as far as it will go, then push the **coaxial cable** (4.) into the **rotary blade** until the **ejector** (5.) protrudes completely again.

Close the **rotary blade** (6.) afterwards until it clicks into place.

5: Use the rotary blade and make a cut on the outer sheath and shield.



CAUTION

The coaxial cable may be damaged when removed from the rotary blade, and parts of the outer sheath and the shielding can get caught in it.

- After cutting the coaxial cable, do **not** simply pull it out after cutting; be **sure** to push it out using the **ejector** from the rotary blade.

7. Cut the outer jacket and shield on the coaxial cable with the **rotary blade** on the stripping attachment **[B1]**.

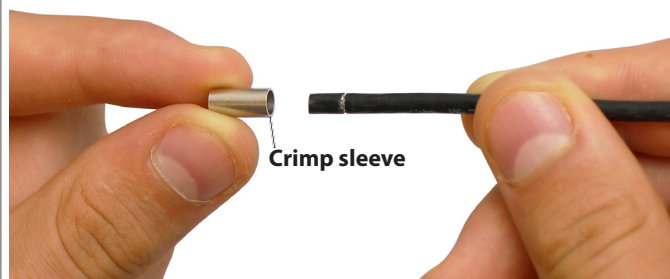
Hold the coaxial cable and turn the **rotary blade** clockwise approx. **3 turns**.

Then pull the **unlocking device** (1.) and open the **rotary blade** (2.). Afterwards, push out the **coaxial cable** (4.) using the **ejector** (3.).

Result on the coaxial cable



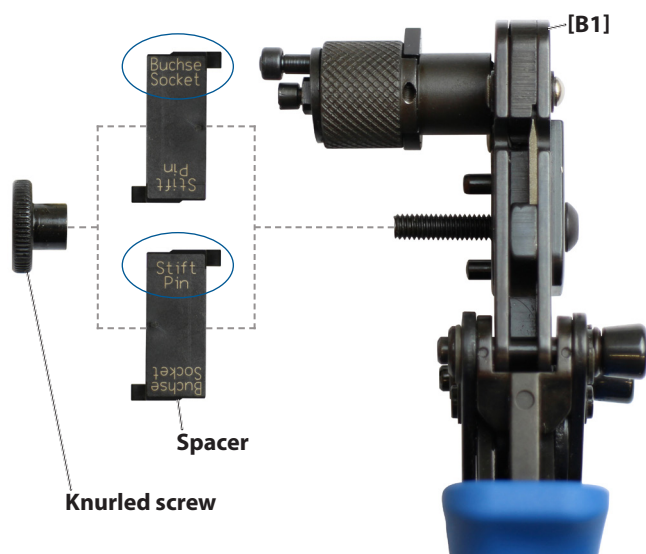
6: Mount the crimp sleeve onto the coaxial cable and secure it.



8. To avoid subsequent damage to the shielding of the coaxial cable, push the **crimp sleeve** far back onto the coaxial cable beforehand.



7: Align spacer according to whether it is to be a socket or pin contact.



9. Depending on whether a socket or pin contact is to be pressed onto the coaxial cable, accordingly align the **spacer** on the stripping attachment [B1] beforehand.

Unscrew the **knurled screw** on the stripping attachment [B1], turn the **spacer** accordingly so that the labelling **socket** or **pin** is facing upwards, and screw the **knurled screw** back on.

8: Strip the outer sheath on the coaxial cable with the wire **stripper (1st stage)**.



① Observe the correct alignment of the **spacer** according to whether it is a **socket** or **pin contact**!

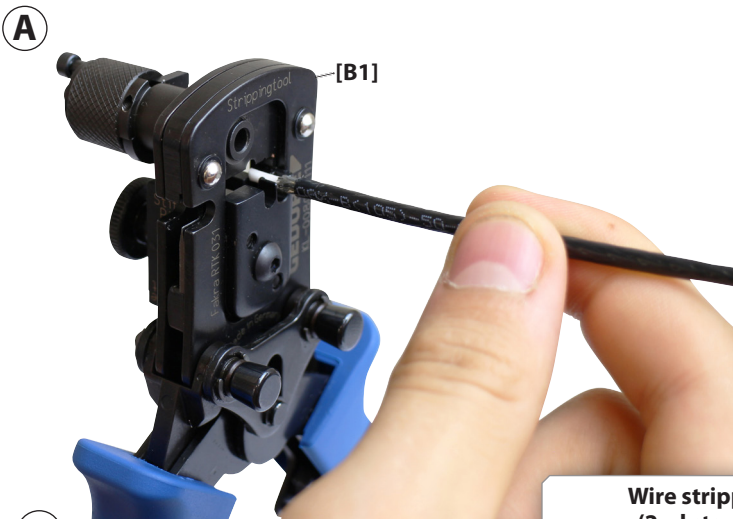
10. Strip off the outer jacket from the coaxial cable.

Insert the coaxial cable on the **stripper (1st stage)** of the stripping attachment [B1] in the **correct position** so that it has a proper contact with the **spacer** at the rear.

Now completely press the handle [D] together once, and pull out the coaxial cable on the **stripper (1st stage)**.



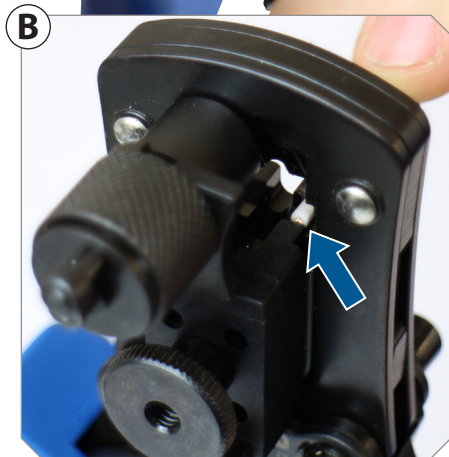
📷9: Cut and pull off the insulation of the inner conductor with the wire **stripper (2nd stage)**.



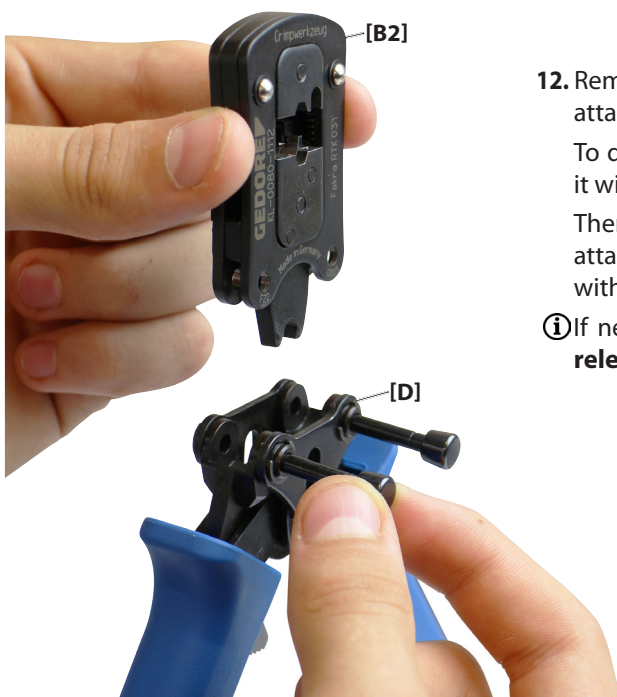
11. Strip off the inner conductor from the coaxial cable.

Insert the coaxial cable on the **stripper (2nd stage)** of the stripping attachment **[B1]** in the **correct position** so that it has a proper contact with the **spacer** at the rear.

Now completely press the handle **[D]** together once, and pull out the coaxial cable on the **stripper (2nd stage)**.



📷10: Take off the stripping attachment **[B1]** and insert the crimping attachment **[B2]** at handle **[D]**.



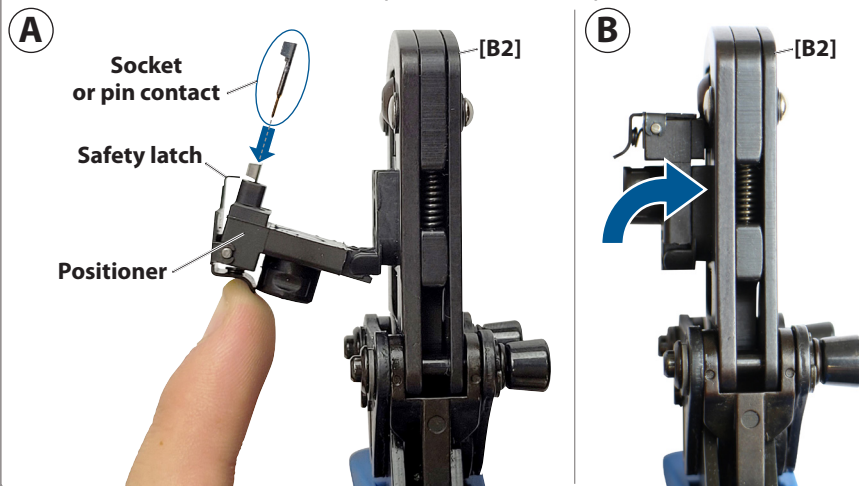
12. Remove the stripping attachment **[B1]** and insert the crimping attachment **[B2]** in the correct position into the handle **[D]**.

To do this, close the handle **[D]** once completely and open it as far as it will go.

Then pull back both **locking bolts**, take off the stripping attachment **[B1]**, insert the crimping attachment **[B2]** and secure it with the two **locking bolts**.

ⓘ If necessary, the handle **[D]** can also be opened via the **emergency release**. (See Chapter 2.5)

11: Insert and secure socket or pin contact on the positioner.

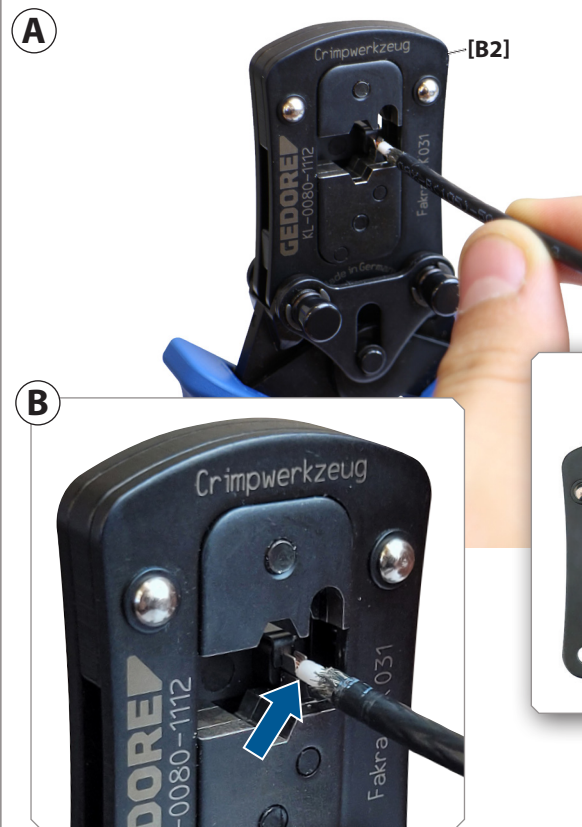


13. First fold the **positioner** on the crimping attachment **[B2]** away to the side.

Then open the **locking tab**, insert the **socket** or **pin contact** in the correct position on the **positioner**, and clamp it in place using the **locking tab**. Then fold the **positioner** back in place.

i Be sure to observe the correct position of the **socket** or **pin contact**!

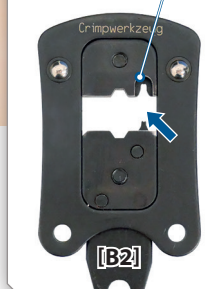
12: Insert the coaxial cable and crimp the socket or pin contact with the crimping attachment **[B2]**.



14. First insert the coaxial cable in the correct position at the socket or pin contact already inserted.

Now crimp the socket or pin contact with the **crimping tool (1st step)** on the crimping attachment **[B2]**. Close the handle **[D]** once completely until it can be opened again.

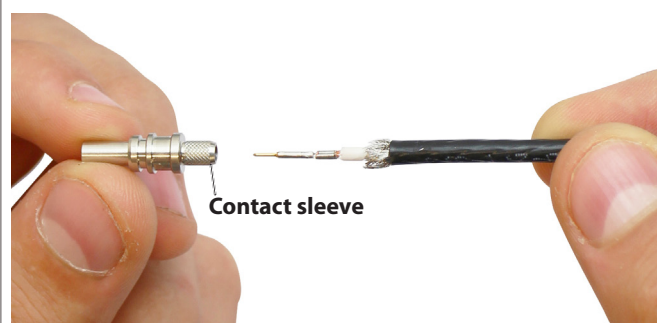
Crimping tool (1st stage)



Result on the coaxial cable



13: Push the contact sleeve onto the coaxial cable in the correct position.



15. Slide the **contact sleeve** onto the coaxial cable in the correct position. The **wires** of the shielding must lie on the outside over the corrugated surface of the **contact sleeve**.

Result on the coaxial cable



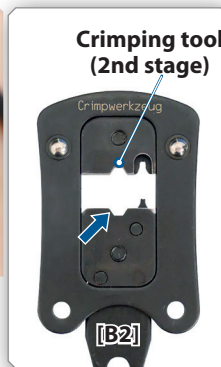
14: Push the crimp sleeve onto the contact sleeve and crimp it with the crimping tool.



16. First push the **crimp sleeve** on the coaxial cable onto the **contact sleeve**.

Then insert the coaxial cable in the correct position at the crimping attachment **[B2]**.

Now crimp the socket or pin contact with the **crimping tool (2nd step)** on the crimping attachment **[B2]**. Close the handle **[D]** once completely until it can be opened again.



15: Push the socket or pin housing onto the contact sleeve until it clicks into place.



17. Place the socket or pin housing in the correct position on the contact sleeve until it clicks into place.



5. CARE / STORAGE

CAUTION

Improper care and storage can damage the special tool. Therefore, **never** immerse the special tool in water, solvents, or other cleaning liquids. After use, clean all parts **only** with a dry and clean cleaning cloth. To protect against corrosion, rub all metal parts with a tool care oil or wax. Store the special tool and the operating instructions at a dry and clean place.

6. ENVIRONMENTALLY COMPLIANT DISPOSAL

Dispose of the special tool and its packaging material in an environmentally compatible way in accordance with the legal requirements. If necessary, ask your local authorities about environmentally friendly disposal options.

GEDORE-Werkzeugfabrik GmbH & Co. KG

Remscheider Straße 149
42899 - Remscheid
Postfach 120361
47873 Remscheid
GERMANY

Vertrieb DEUTSCHLAND

☎ +49 (0) 2191 / 596-0
☎ +49 (0) 2191 / 596-230
✉ info@gedore.com
🌐 www.gedore.com

Sales INTERNATIONAL

☎ +49 (0) 2191 / 596-910
☎ +49 (0) 2191 / 596-911
✉ info@gedore.com
🌐 www.gedore.com

GEDORE TOOLS, INC.

Only for USA, Canada & Mexico
Sólo para EE.UU., Canadá y México
Seulement pour les USA, le Canada et le Mexique
7187 Bryhawke Circle, Suite 700, North Charleston, SC 29418, USA

☎ +1-843 / 225 50 15
☎ +1-843 / 225 50 20
✉ info@gedoretools.com
🌐 www.gedoretools.com

Worldwide GEDORE service centers and offices are listed on the Internet at: www.gedore.com

GEDORE Automotive GmbH

Breslauer Straße 41
78166 - Donaueschingen
Postfach 1329
78154 Donaueschingen
GERMANY

Vertrieb DEUTSCHLAND

☎ +49 (0) 771 / 8 32 23-0
☎ +49 (0) 771 / 8 32 23-90
✉ info.gam@gedore.com
🌐 gedore-automotive.com



www.gedore-automotive.com