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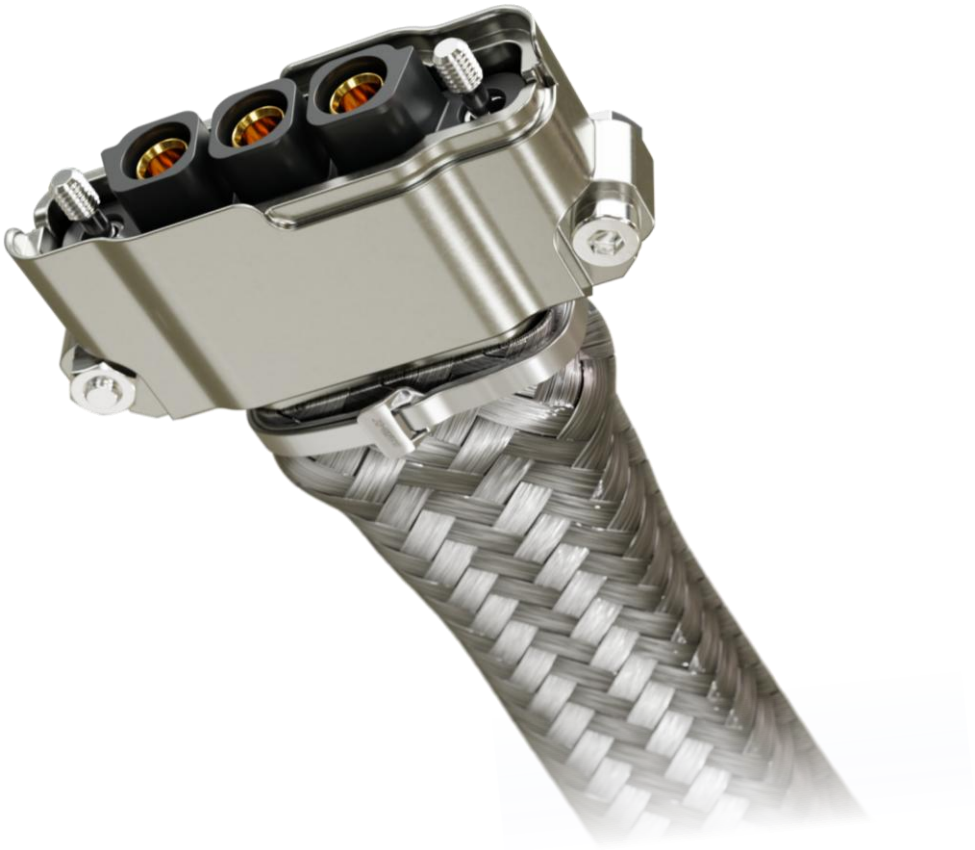
Instruction Sheet

IS-53

Kona Metal Backshells
KA1-96X
KA1-970
KA1-980



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CONTENTS LIST

KA1-96X

INTRODUCTION

This instruction sheet details the assembly of the metal backshells in the Kona range. These backshells are compatible with Male right-angle PCB connectors.

PRODUCT INFORMATION

- **KA1-960##00** .....Metal backshell for Male right-angle PCB Connectors
- **KA1-961##00** .....Metal backshell for panel mount Male right-angle PCB Connectors

/ # = Number of contacts in applicable housing

Nuts and bolts are provided separately.

Other M3 bolts and nuts can be used, to suit other board thicknesses and head styles

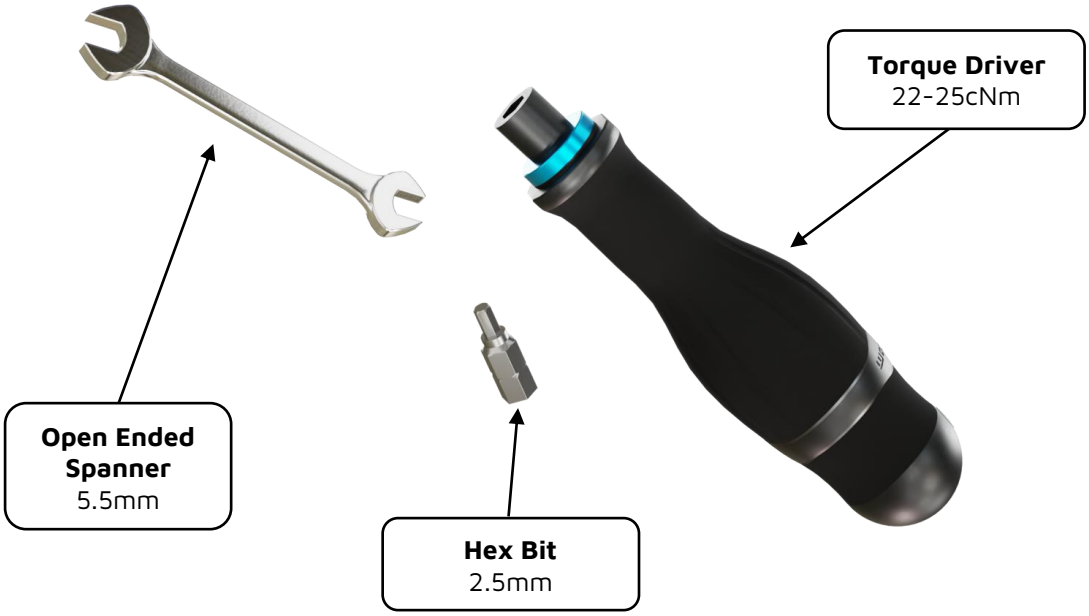
PREPARATION

Confirm the backshell product is the correct type and size for the connector.

Additional Tooling and Products

You will also need the following tools (not available from Harwin):

- Torque driver suitable for 22-25Ncm Torque
- 2.5mm Hex bit compatible with the torque driver
- 5.5mm open-ended spanner



ASSEMBLY METHOD

The assembly of backshell KA1-9600300 to PCB connector KA1-MH10305M3 is shown in these instructions, but the same process applies to other combinations.

1. Start with the connector already mounted to the PCB.

2. Place the backshell over the top of the connector, lining the backshell holes up with the PCB holes.

3. Insert the M3 bolt into the backshell and through the PCB.

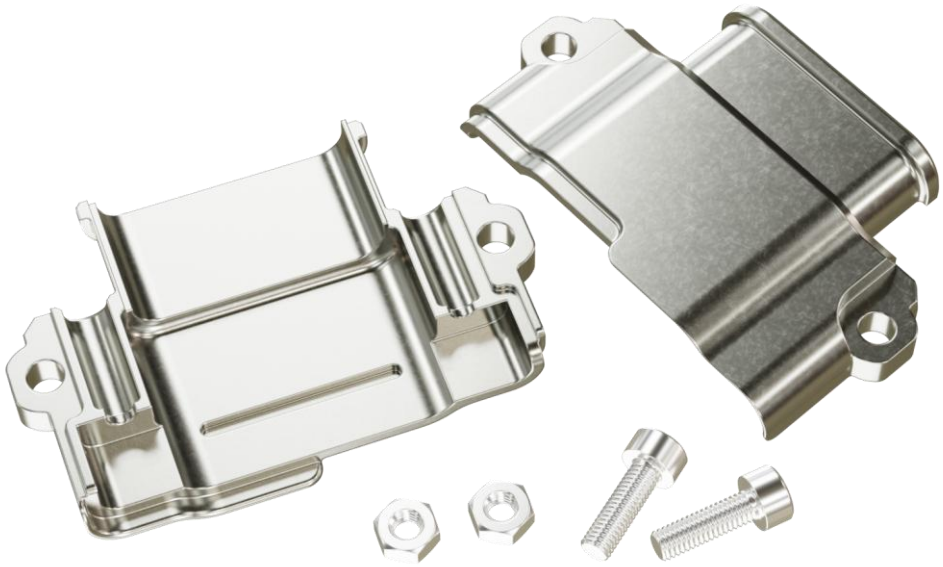
4. Assemble the M3 nuts to the bolts on the underside of the PCB, and tighten by hand.

5. Use the 2.5mm hex bit and the 5.5mm spanner and tighten to 22-25Ncm using the torque driver.

KA1-970

INTRODUCTION

This instruction sheet details the assembly of the straight metal backshell hoods in the Kona range. These backshells are compatible with straight Female and Male cable housings, and are fitted to completed cable assemblies. The backshell includes a braid retention feature for a fully shielded cable assembly.



PRODUCT INFORMATION

- **KA1-970##00**.....Metal plug backshell kit for Male & Female Connectors
- **KA1-201##98M1** .....Female SIL Cable Housing, Thumbscrews
- **KA1-301##98M5**.....Male SIL Cable Housing, Thumbscrews
- **KA1-FSVA1-#-XXXXA-FVA1**.....Female SIL Double Ended Cable Assembly, Thumbscrews
- **KA1-MSVA5-#-XXXXA-MVA5**.....Male SIL Double Ended Cable Assembly, Thumbscrews
- **KA1-MSVA5-#-XXXXA-FVA1**.....Male-Female SIL Cable Assembly, Thumbscrews

/ # = Number of contacts in applicable housing

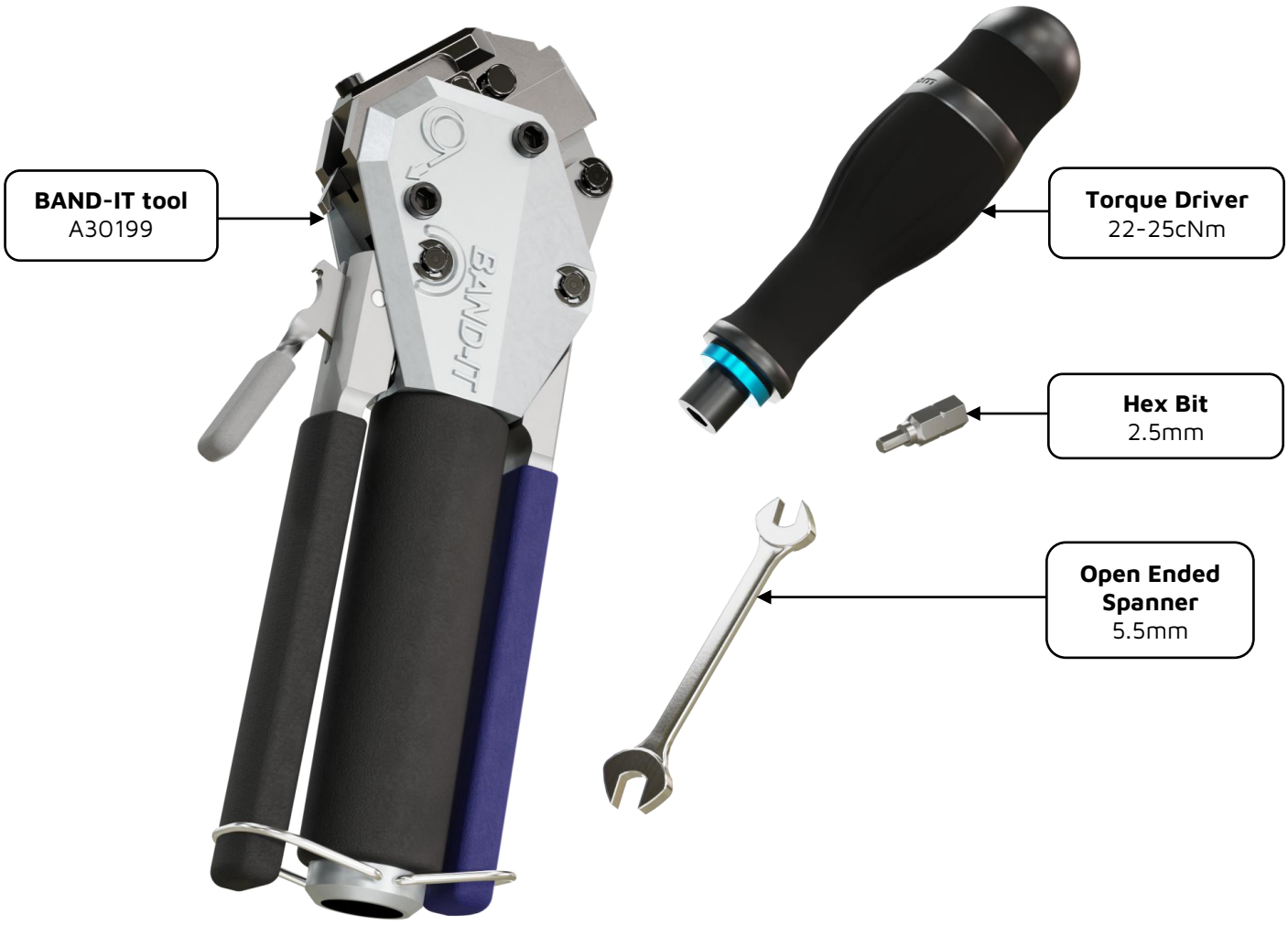
PREPARATION

1. Confirm the backshell product is the correct kit for the connector housing.
2. If braid is being assembled, use Microband M80-9480000 or an equivalent size.
3. When adding a Kona backshell to your own cable assembly construction, complete the solder and assembly of the contacts into the connector housing first - see IS-49 for instructions on the Kona cable assembly process.

Additional Tooling and Products

You will also need the following tools (not available from Harwin):

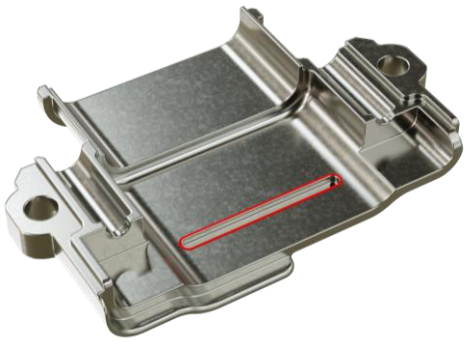
- Torque driver suitable for 22-25Ncm Torque
- 2.5mm Hex bit compatible with the torque driver
- BAND-IT Tie-Dex II A30199 Micro Band tool (to fix the Microband tie) or equivalent
- 5.5mm open-ended spanner



ASSEMBLY METHOD

The assembly of backshell KA1-9700300 to cable assembly KA1-FSVA1-3-0100AFVA1 is shown in these instructions, but the same process applies to other combinations.

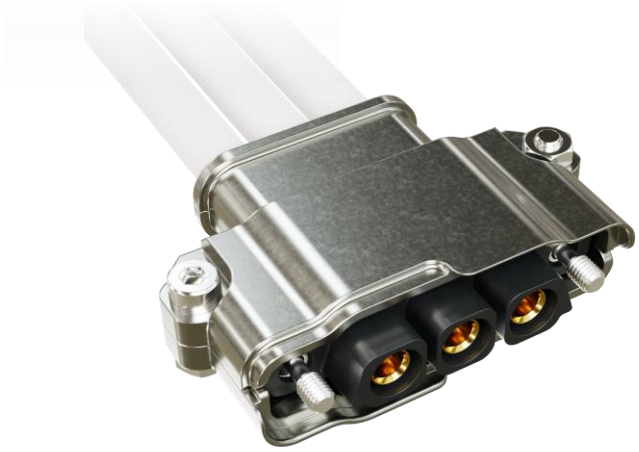
1. Take one half of the Kona backshell and lay it flat as shown on a clean working surface. Pay attention to the slot highlighted in red, as this is important in step 2.



2. Place the cable assembly into the backshell. Ensure the rib on the connector housing sits into the slot highlighted in step 1. There is a rib on each side of the connector body.

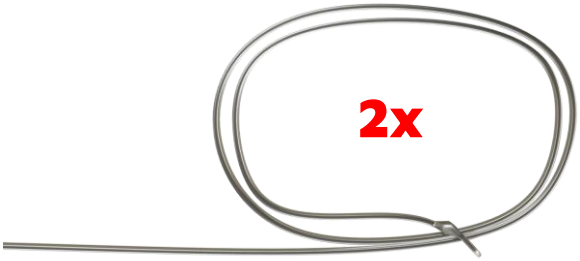
3. Place the second side of the backshell over the assembly, making sure the second rib engages in the slot on the second side.

4. Assemble the M3 hex socket screws and the M3 hexagonal nuts to the two backshell halves, initially tightening by hand.



5. Hold the M3 hexagonal nuts with the 5.5mm open ended spanner and use the torque driver with 2.5mm hex bit to tighten the M3 hex socket screw to 22-25Ncm.
6. Feed the braid over the wire and push it over the ridge on the cable exit of the backshell, as shown.

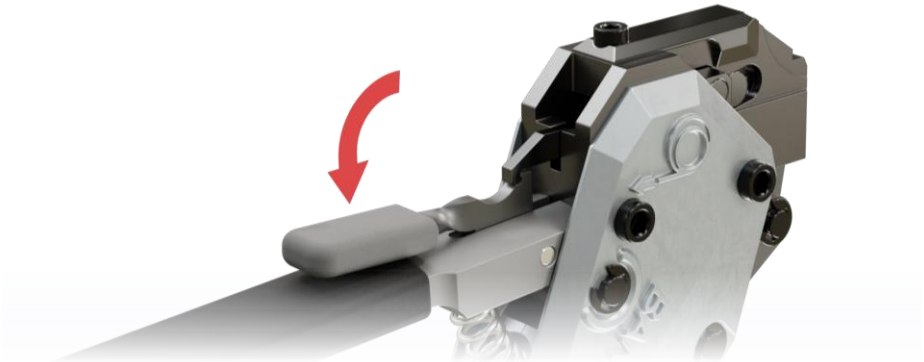
7. The Microband tie is supplied straight. It must be coiled up around the cable assembly as shown. Note: the tie end must pass through the buckle two times.



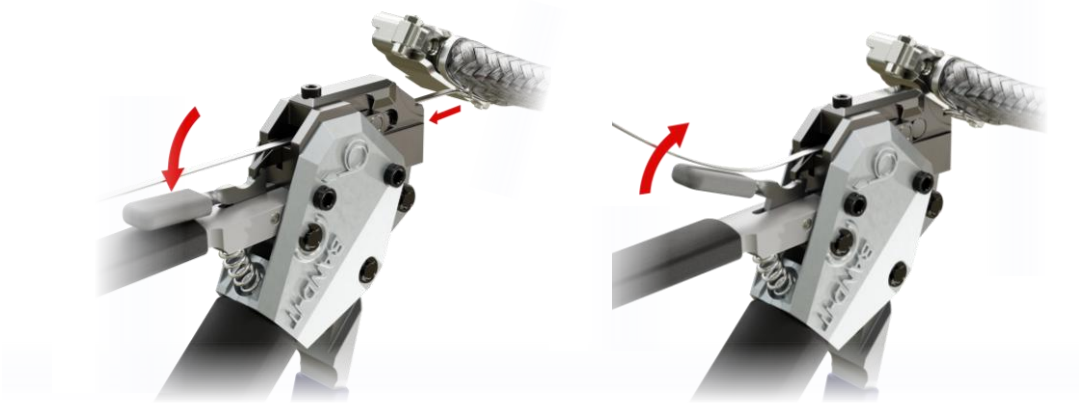
8. Pull the end of the tie through the buckle and remove any slack.

9. Open the BAND-IT tool by flipping the retaining straps out of the way.

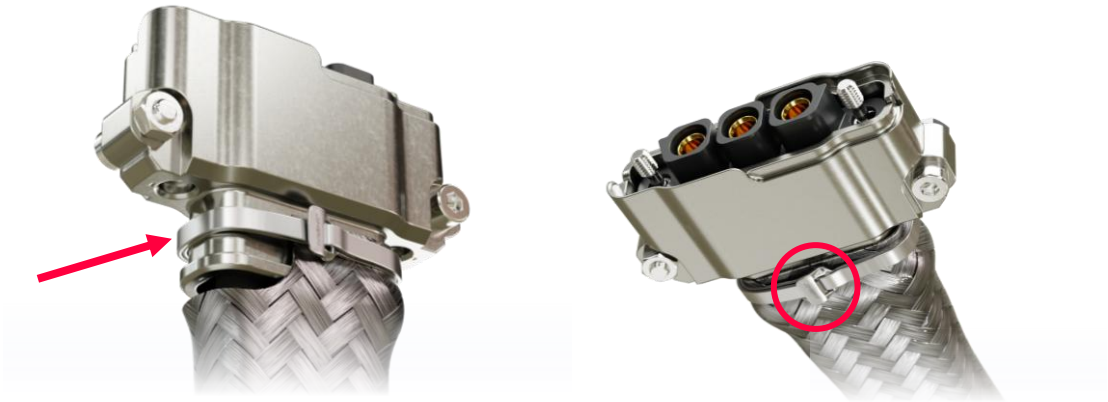
10. Depress the short finger toggle to allow the Microband tie tail to pass through the tool (note the direction of the tie insertion marking on the tool).



11. Once inserted to the full depth (buckle touches tool), then release the short grey lever.

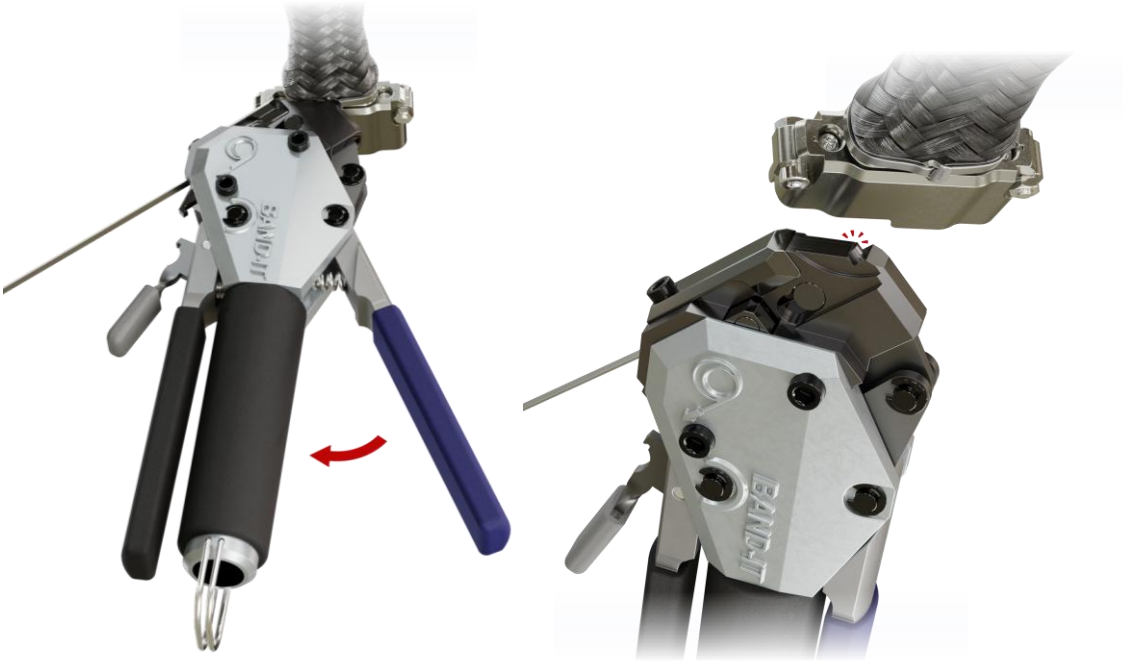


12. Position the buckle of the Microband tie behind the ridge on the backshell cable exit. Rotate the buckle to be centrally orientated on the longest side of the backshell. This is important to achieve uniform clamping of the braid.



13. Once the Microband is correctly positioned, squeeze the two black handles together and release. Repeat until the smaller handle will not return and remains locked.

14. To trim off the Microband tie and complete the assembly process, squeeze the blue handle - the surplus tie will be trimmed off.



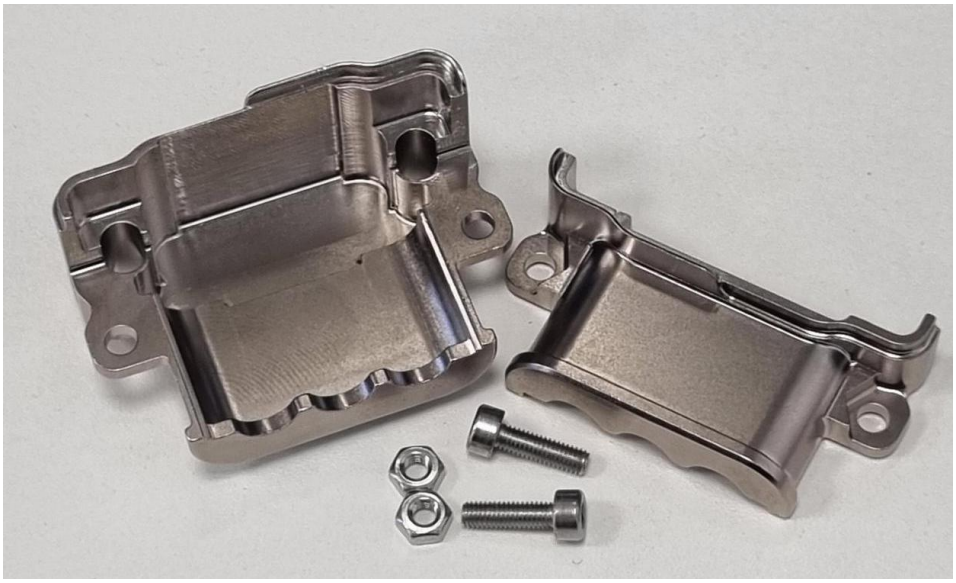
15. Remove the excess tie from the tool by pressing on the small grey handle and pull out the tail from the tool to the rear.

The completed assembly should look like this:

KA1-980

INTRODUCTION

This instruction sheet details the assembly of the right-angle metal backshell hoods in the Kona range. These backshells are compatible with right-angle Female connector housings, and can be fitted to completed cable assemblies. The backshell includes a braid retention feature, for a fully shielded cable assembly.



PRODUCT INFORMATION

- **KA1-980##00** .....Metal backshell kit for right-angle Female Connectors
- **KA1-202##98F1**.....Female SIL right-angle Cable Housing, Thumbscrews
- **KA1-FSHA1-#-XXXXA-FHA1**.....Female SIL Double Ended Cable Assembly, Thumbscrews

/ # = Number of contacts in applicable housing

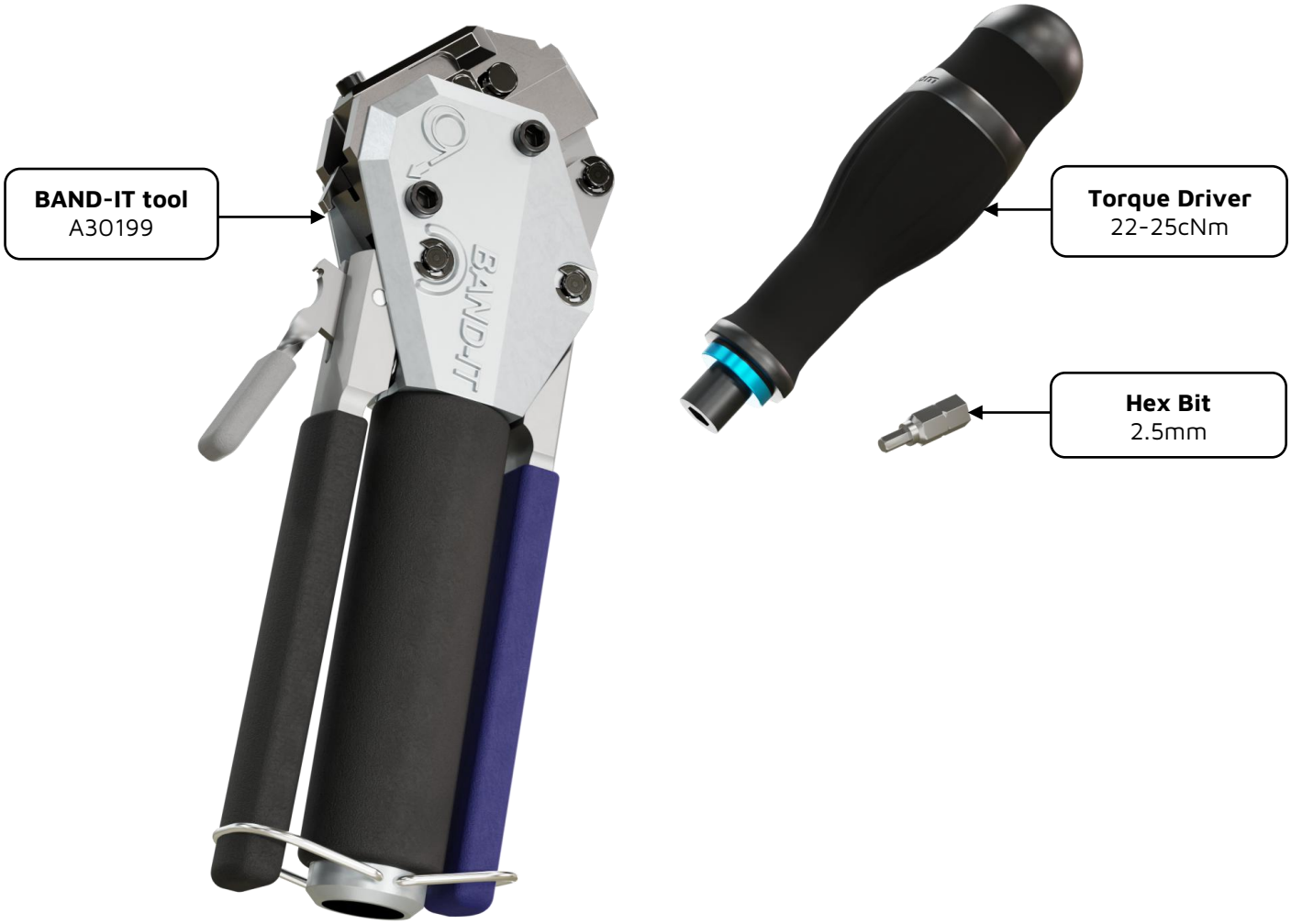
PREPARATION

1. Confirm the backshell product is the correct kit for the connector housing.
2. If braid is being assembled, use Microband M80-9480000 or an equivalent size.
3. When adding a Kona backshell to your own cable assembly construction, complete the solder and assembly of the contacts into the connector housing first - see IS-49 for instructions on the Kona cable assembly process.

Additional Tooling and Products

You will also need the following tools (not available from Harwin):

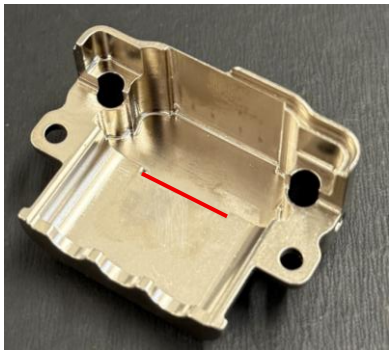
- Torque driver suitable for 22-25Ncm Torque
- 2.5mm Hex bit compatible with the torque driver
- BAND-IT Tie-Dex II A30199 Micro Band tool (to fix the Microband tie)



ASSEMBLY METHOD

The assembly of backshell KA1-9800300 to cable assembly KA1-FSHA1-3-0100A-FHA1 is shown in these instructions, but the same process applies to other combinations.

1. Take one half of the Kona backshell and lay it flat as shown on a clean working surface. Pay attention to the ridge highlighted in red, as this is important in step 2.



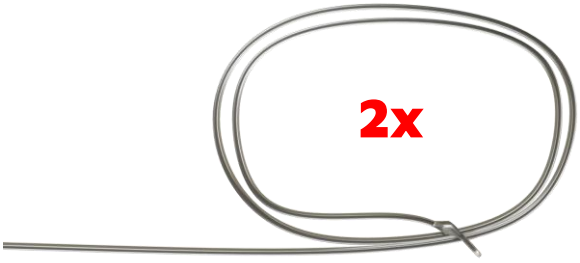
2. Place the cable assembly into the backshell. Ensure the bottom of the connector housing sits into the slot highlighted in step 1.

3. Place the second side of the backshell over the assembly, making sure the two halves are pressed together tightly.

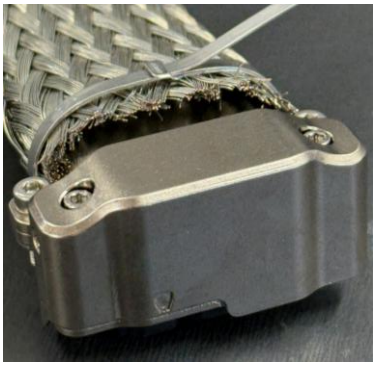
4. Assemble the M3 hex socket screws and the M3 hexagonal nuts to the two backshell halves with the hexagonal nut held in by the retaining feature, initially tightening by hand.

5. The M3 hexagonal nuts will be held by the retaining feature; use the torque driver with 2.5mm hex bit to tighten the M3 hex socket screw to 22-25Ncm.
6. Feed the braid over the wire and push it over the ridge on the cable exit of the backshell as shown.

7. The Microband tie is supplied straight. It must be coiled up around the cable assembly as shown. Note: the tie end must pass through the buckle two times.

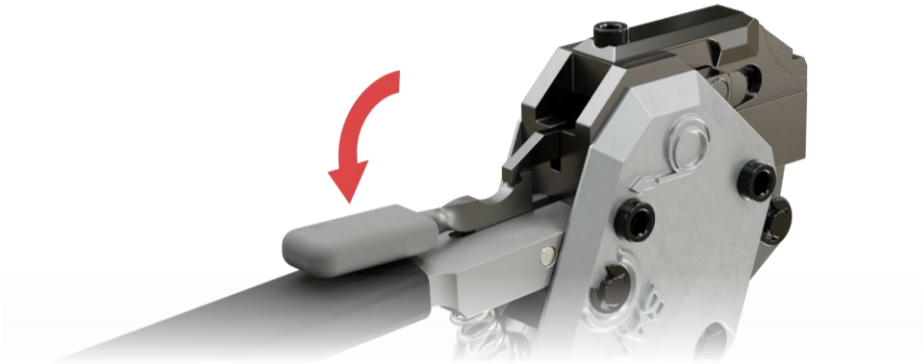


8. Pull the end of the tie through the buckle and remove any slack.

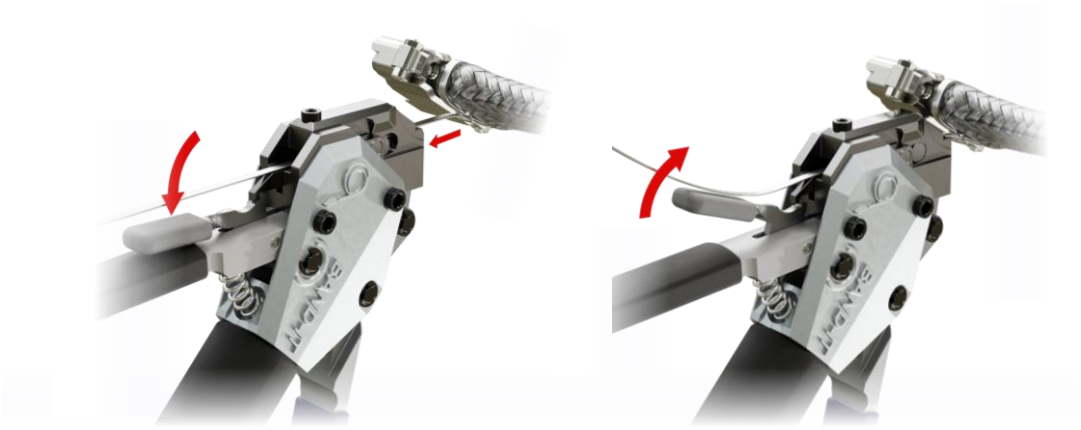


9. Open the BAND-IT tool by flipping the retaining straps out of the way.

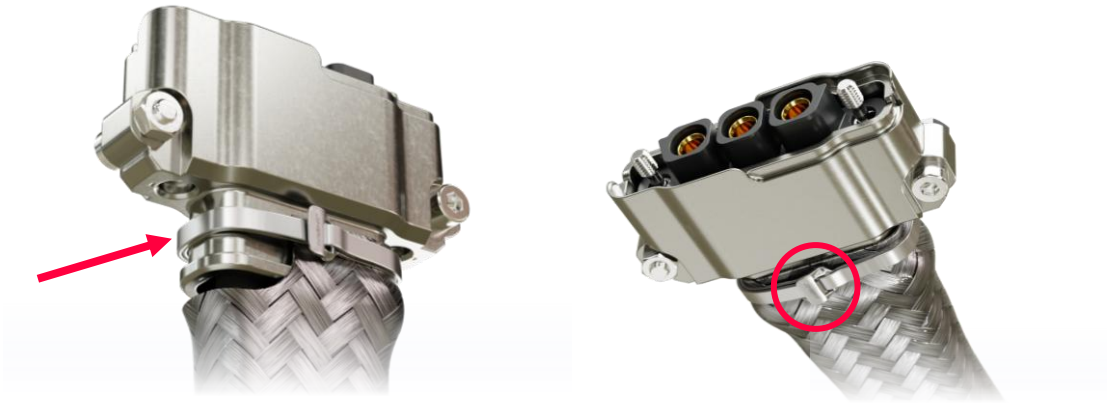
10. Depress the short finger toggle to allow the Microband tie tail to pass through the tool (note the direction of the tie insertion marking on the tool).



11. Once inserted to the full depth (buckle touches tool), then release the short grey lever.
Note: The rest of the steps depict KA1-970 being assembled, but it is the same process for the KA1-980.

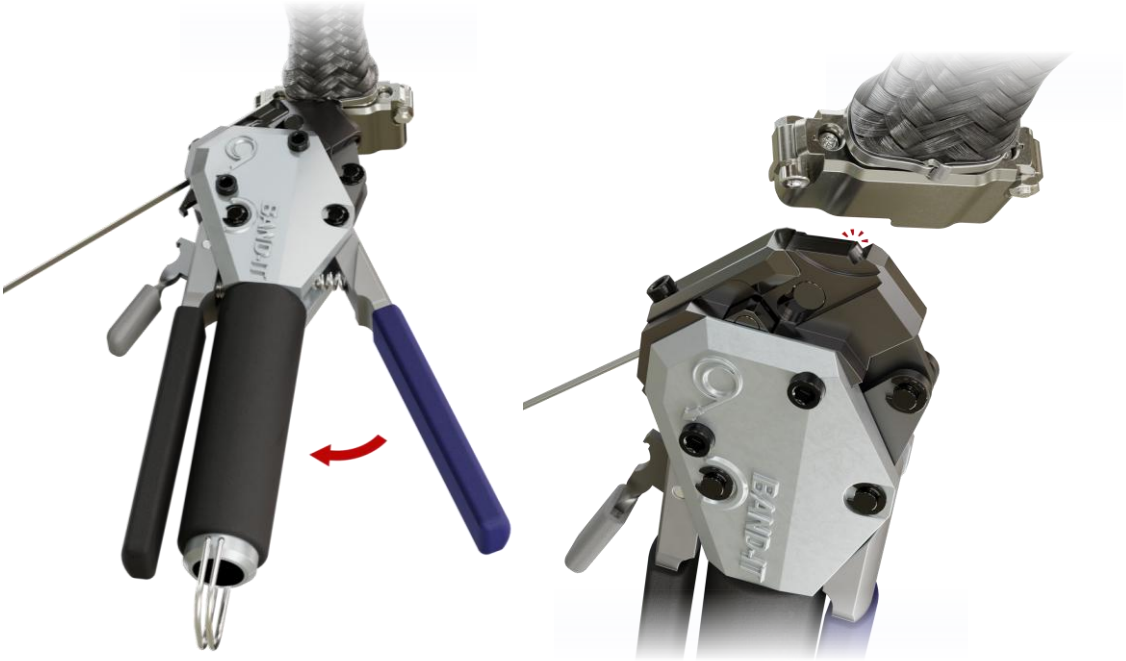


12. Position the buckle of the Microband tie behind the ridge on the backshell cable exit. Rotate the buckle to be centrally orientated on the longest side of the backshell. This is important to achieve uniform clamping of the braid.



13. Once the Microband is correctly positioned, squeeze the two black handles together and release. Repeat until the smaller handle will not return and remains locked.

14. To trim off the Microband tie and complete the assembly process, squeeze the blue handle - the surplus tie will be trimmed off.



15. Remove the excess tie from the tool by pressing on the small grey handle and pull out the tail from the tool to the rear.

The completed assembly should resemble this: