10000023663-P1

HELIFLEX® Coaxial Cable Connectors

Installation Instruction

10000023663-P1

2HB12-50JPLR

OMNI FIT™ D01 Connectors

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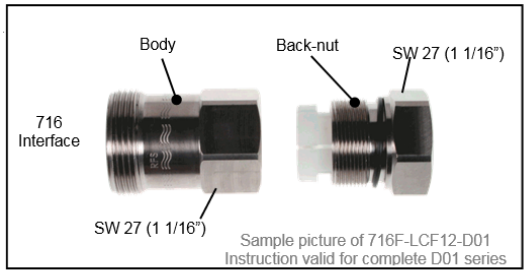
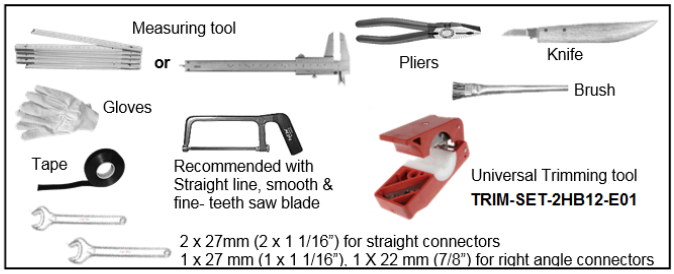
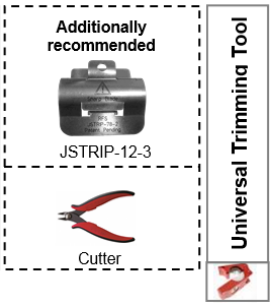
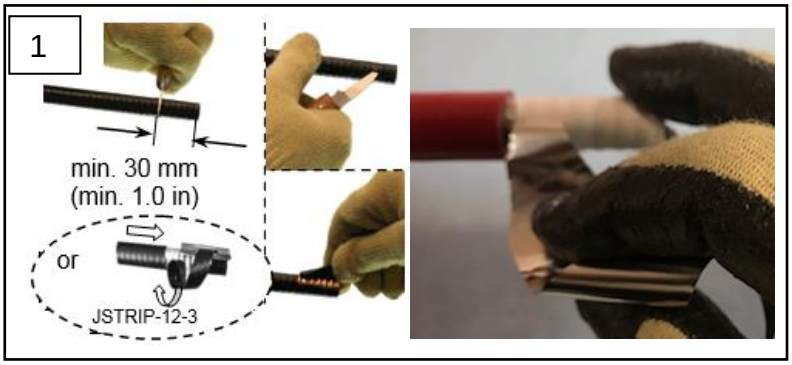
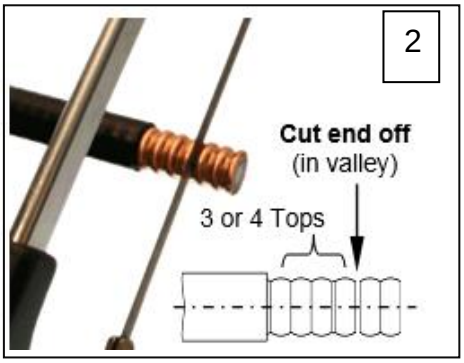


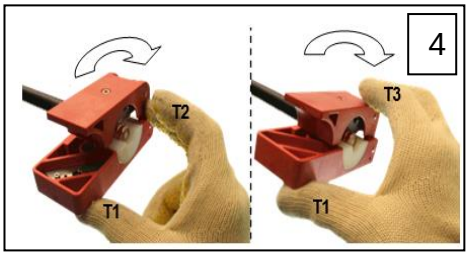


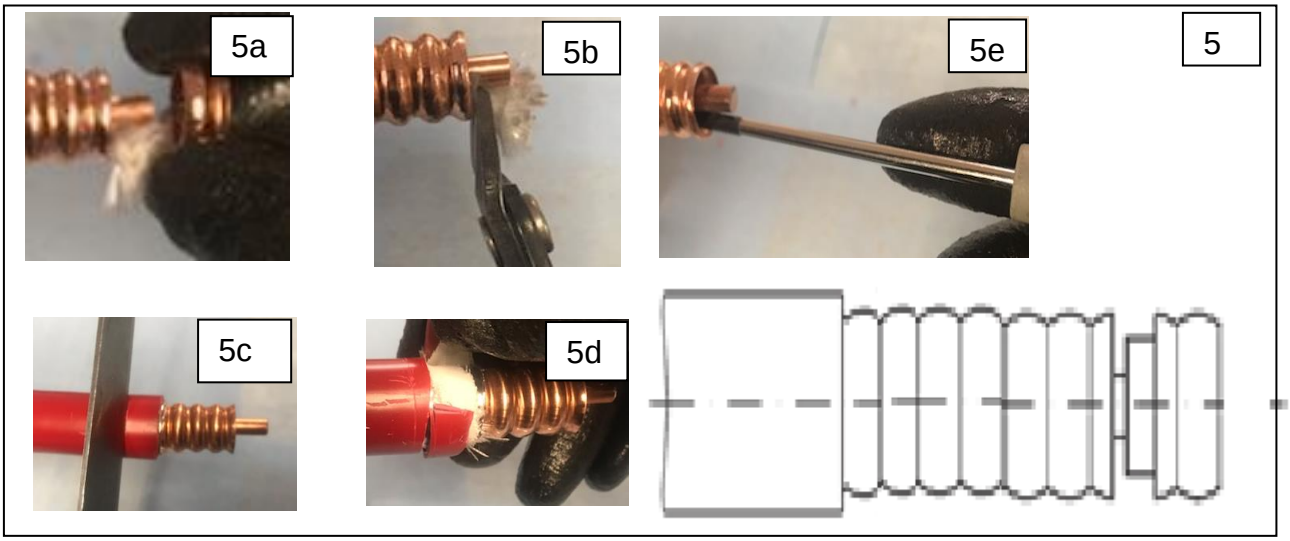


Safety precaution: **Sharp blade => Protective gloves required!**









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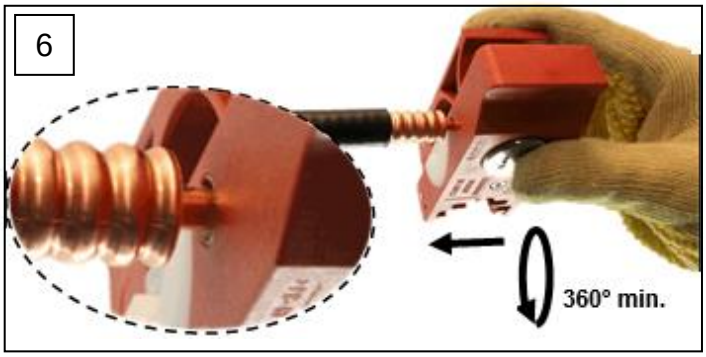

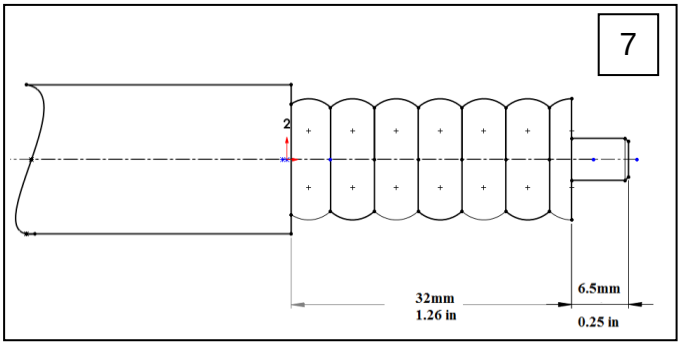

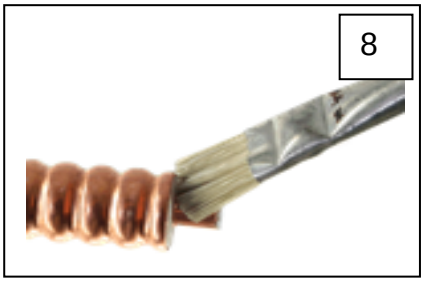

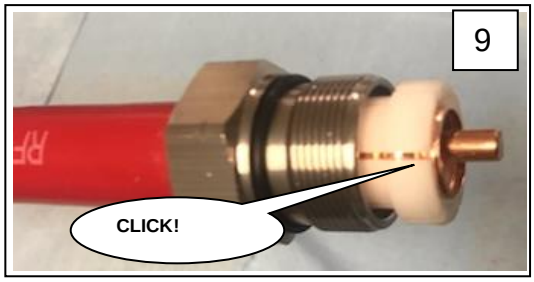

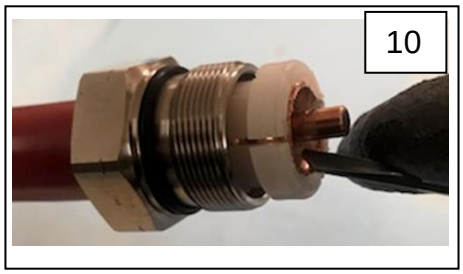

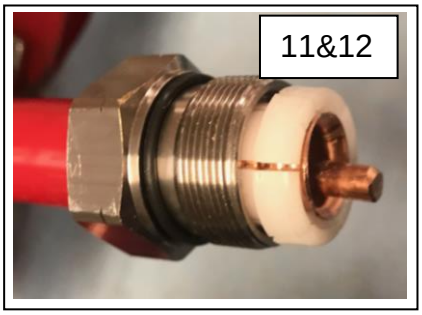

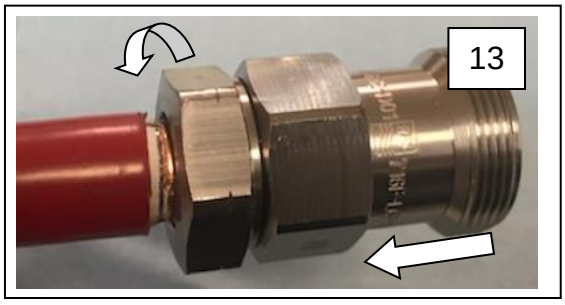

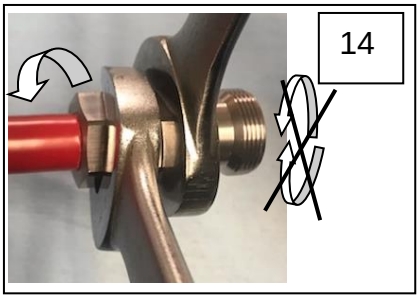

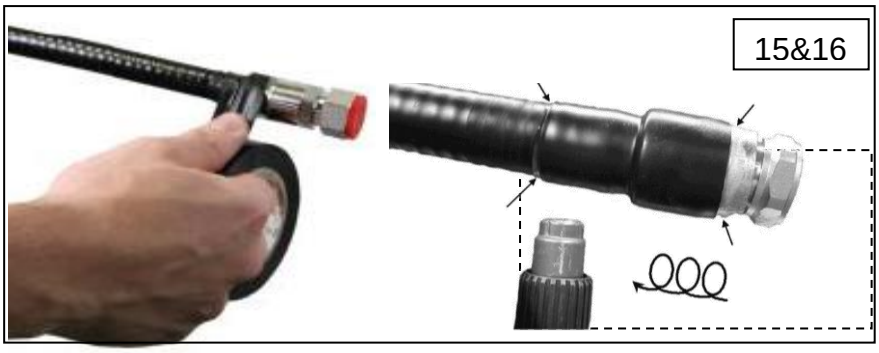

Installation method with the Universal Trimming Tool

TRIM-SET-2HB12-E01

Attention:
The trimming tool SHOULD be handled and used with great care, blades are extremely sharp! It is recommended to use protective gloves. Do not use great force.

For additional information, please refer to the installation instructions of the Universal Trimming Tool!

Keep the cable end downwards in order to prevent particles from entering during preparation.

1. Straighten the front of the cleaned cable for a minimum length of 200mm / 8 in.
   Remove the jacket and the three layers of protective tape with a knife in the length as shown (RFS recommends using the stripping tool JSTRIP-12-3 to remove the jacket). Do NOT damage the outer conductor!

2. Cut the cable with a fine toothed hacksaw in a corrugation valley in a right angle to the cable axis to prepare a reference length for the inner conductor. Leave 3 or 4 corrugation tops dismantled.

3. Insert the cable into the trimming tool, so that the collet guide is placed in the second corrugation valley from the frontend. The main blade is located on the second crest (top) of corrugation. The cable fits properly to the complete base of the tool. Close the blade housing of the tool.

4. Rotate the trimming tool clockwise around the cable – as indicated by the arrow on the tool by touching tool turning points T1 and T2 only. Do not use any additional force greater than the pre-set trimming tool spring tension. Once the outer conductor is cut, continue turning the tool whereby the tool can be touched on tool turning points T1, T2 and T3 until the dielectric and jacket is cut. Then, open the blade housing and remove the tool.

5. Remove the trimmed outer conductor by carefully cutting the dielectric lengthwise and removing it. Push the excess amount inside the outer conductor. Carefully cut the jacket and the three layers of protective tape lengthwise with a knife. Do not damage the outer conductor.

6. Provide the cable's inner conductor with a chamfer using the deburr functionality. For this purpose, insert the cable inner conductor into the chamfer tool, then press carefully and rotate the Trimming Tool clockwise several times.

7. Inspect the prepared cable dimensions.

8. Clean the cable end; remove any particles very carefully with a brush. It is not recommended to use steel or similar type hard brushes because they can press particles deep inside the dielectric. Adhesive tape can also be used to remove the finest particles. Careful preparation is the key to good VSWR and especially to proper PIM performance.

9. Push the back-nut of the connector onto the cable until the claws fall into the first corrugation valley as shown.

10. Keep the back-nut in position while running the tip of a screwdriver (rounded edges) around the outer conductor to create an outer conductor flare. The flare diameter has to be evenly round and concentric to the cable axis.

11. The flared area (cone) MUST be free of any dielectric material, if necessary push the dielectric back to the center. Clean the prepared cable end, remove any particles very carefully with a brush. It is not recommended to use steel or similar type hard brushes because they can press particles deep inside the dielectric. Adhesive tape can also be used to remove the finest particles.

12. **Check the complete preparation. Careful preparation is the key to good VSWR and especially to proper PIM performance.**

13. Push the front part of the connector onto the prepared cable end; NEVER turn the front part! Pay attention to ensure that the connector parts are well aligned while tightening them by turning the back-nut only (first by hand). Again, NEVER turn the front part of the connector!

14. Keep the connector body steady and tighten the connector back nut by using an open end wrench. Tighten properly to mechanical stop (no visible gap between body and back nut). **Keep the interface of the connector clean!**

15. **Important Remarks** – Weatherproofing: **A heat shrink sleeve with adhesive lining** (e.g. HEAT-2HB-20) **must be used for 2HB12 Series cables!**

16. Roughen the jacket with fine grained sandpaper (e.g. 180 grain) and clean the shrinking area e.g. with cable cleaner. Pre-heat the cable jacket to hand warm and the connector to approx. 60°C (140°F). Slide the heat shrink sleeve into place over the connector body as shown. Shrink the sleeve with a soft yellow flame if using a gas burner or go for hot air gun. Shrink the sleeve onto the connector by smoothly applying a constant flame (heat) with a circular motion until the sleeve will lay flat all around and the hot solvent adhesive discharged all around. Continue with an even circular motion proceeding in direction of the cable until it shrinks smoothly forming a weatherproof seal and the hot solvent adhesive discharged all around on both ends. Note: Do not overheat especially the jacket - max. temperature = 70°C (158°F), shrinking temperature is typically around 130°C (266°F).

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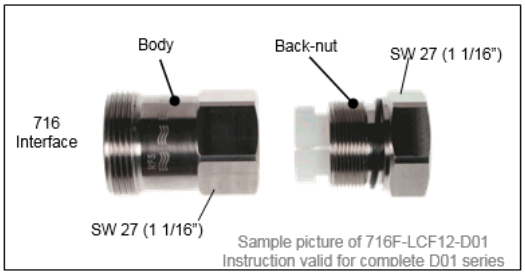
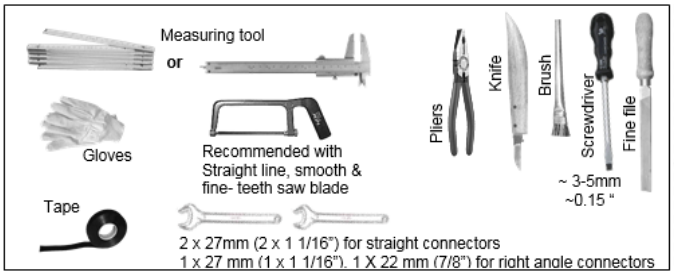
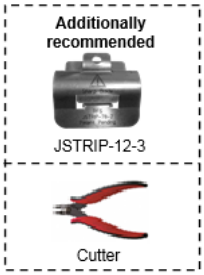
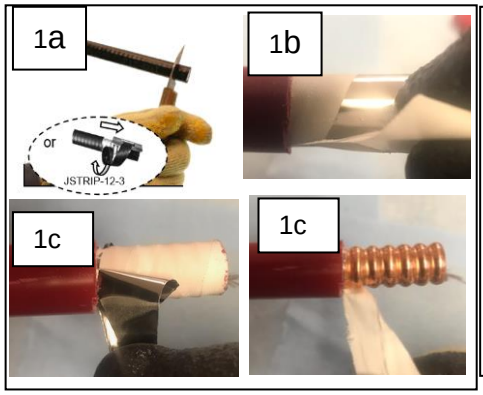


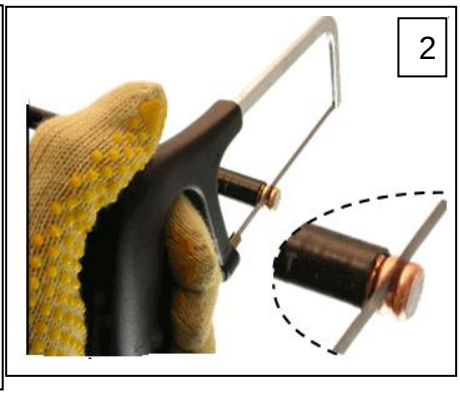


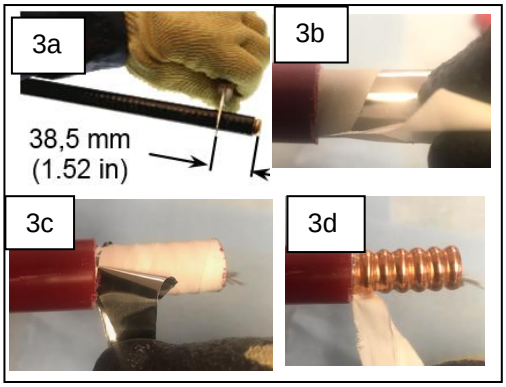


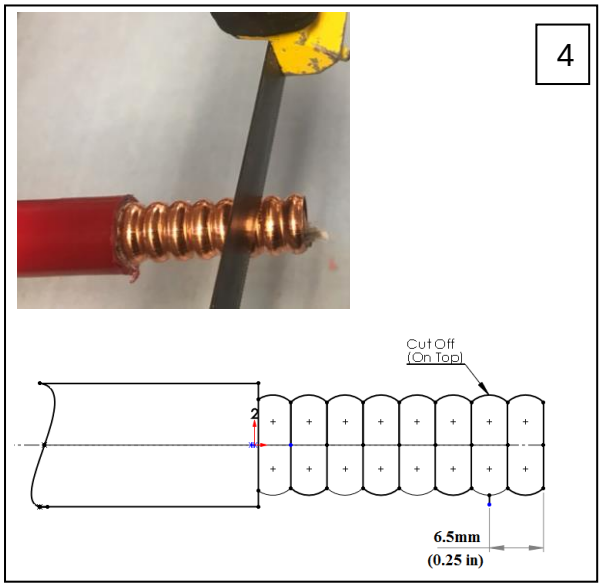
manual method

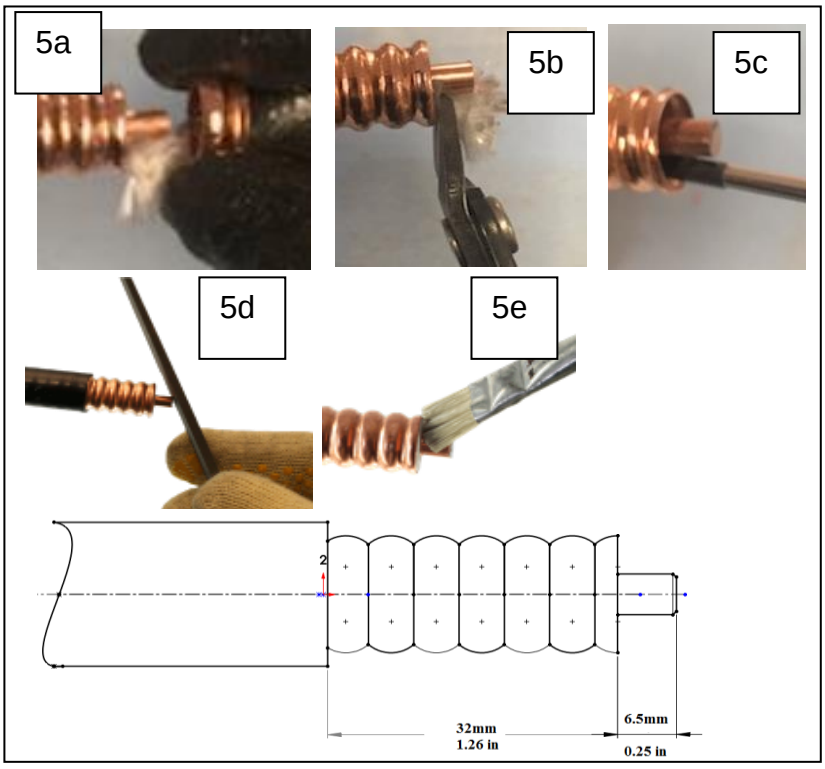
Safety precaution: **Sharp blade => Protective gloves required!**

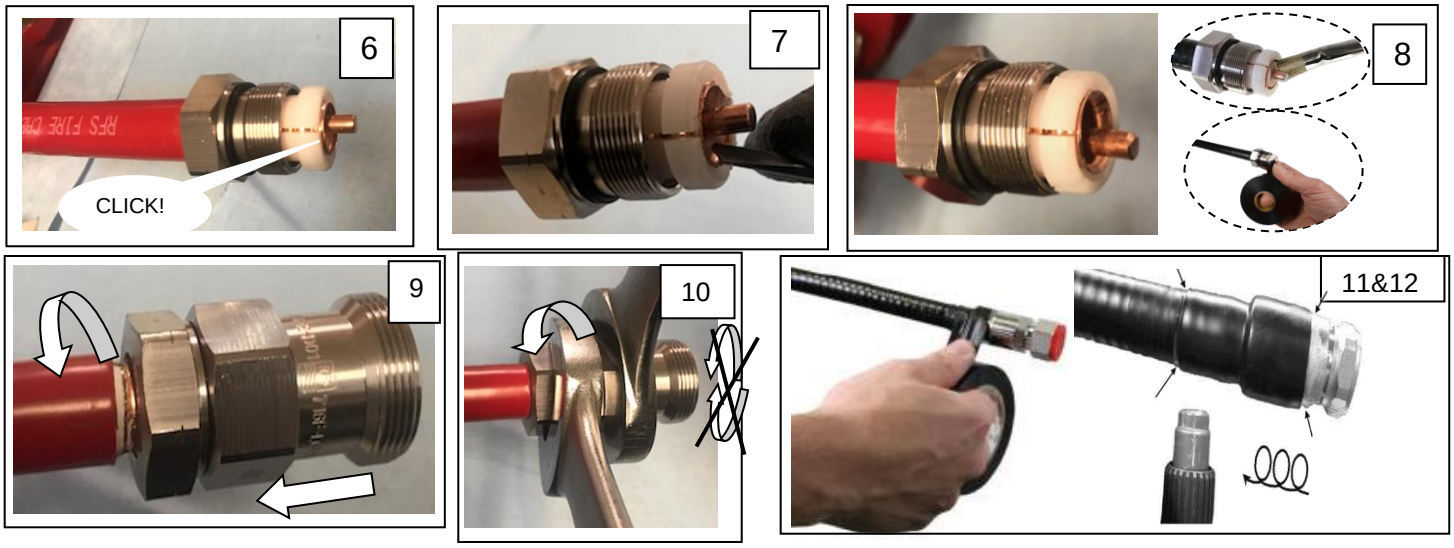












Manual installation method with standard hand tools

1. Straighten the front of the cleaned cable for a minimum length of 200mm / 8 in. Keep the cable end downwards in order to prevent particles from entering during preparation. Remove a short piece of the jacket and the three layers of protective tape with a knife (~ 10-20 mm / ~ 0.4-0.8 in).
2. Cut the cable with a fine toothed hacksaw in a corrugation valley in a right angle to the cable axis to prepare a reference length for the inner conductor.
3. Remove the jacket and three layers protective tape with a knife to the dimension shown. Do NOT damage the outer conductor!
4. Cut the outer conductor only with a fine toothed hacksaw just forward to the crest of the second corrugation. Continue to cut the dielectric with a Cutting Plier. Do not cut or damage the inner conductor.
5. Remove the outer conductor. Carefully cut the dielectric lengthwise and remove it. Make a chamfer on the inner conductor with a fine file. **It is imperative to achieve a pure metallic contact surface on the protruding length of the inner conductor.** Do this by cutting the dielectric with a cutting plier and push the excess amount inside the outer conductor. Do NOT scratch the copper conductor or bend the inner conductor out of a straight line. Remove all particles with a brush.
6. Push the back-nut of the connector onto cable until the claws fall into the first corrugation valley as shown.
7. Keep the back-nut in position while running the tip of a screw driver (rounded edges) around the outer conductor to create an outer conductor flare. The flare diameter has to be evenly round and concentric to the cable axis.
8. The flared area (cone) MUST be free of any dielectric material. Clean the prepared cable end; remove any particles very carefully with a brush. It is not recommended to use steel or similar type hard brushes because they can press particles deep inside the dielectric. Adhesive tape can also be used to remove the finest particles. **Check the complete preparation. Careful preparation is the key to good VSWR and especially to proper PIM performance!**
9. Push the front part of the connector onto the prepared cable end; NEVER turn the front part! Pay attention to ensure that the connector parts are well aligned while tightening them by turning the back-nut only (first by hand). Again, NEVER turn the front part of the connector!
10. Keep the connector body steady and tighten the connector back nut by using an open end wrench. Tighten properly to mechanical stop (no visible gap between body and back nut). **Keep the interface of the connector clean!**
11. **Important Remarks** – Weatherproofing: **A heat shrink sleeve with adhesive lining** (e.g. HEAT-2HB-20) **must be used for 2HB12 Series cables!**
12. Roughen the jacket with fine grained sandpaper (e.g. 180 grain) and clean the shrinking area e.g. with cable cleaner. Pre-heat the cable jacket to hand warm and the connector to approx. 60°C (140°F). Slide the heat shrink sleeve into place over the connector body as shown. Shrink the sleeve with a soft yellow flame if using a gas burner or go for hot air gun. Shrink the sleeve onto the connector by smoothly applying a constant flame (heat) with a circular motion until the sleeve will lay flat all around and the hot solvent adhesive discharged all around. Continue with an even circular motion proceeding in direction of the cable until it shrinks smoothly forming a weatherproof seal and the hot solvent adhesive discharged all around on both ends. Note: Do not overheat especially the jacket - max. temperature = 70°C (158°F), shrinking temperature is typically around 130°C (266°F).