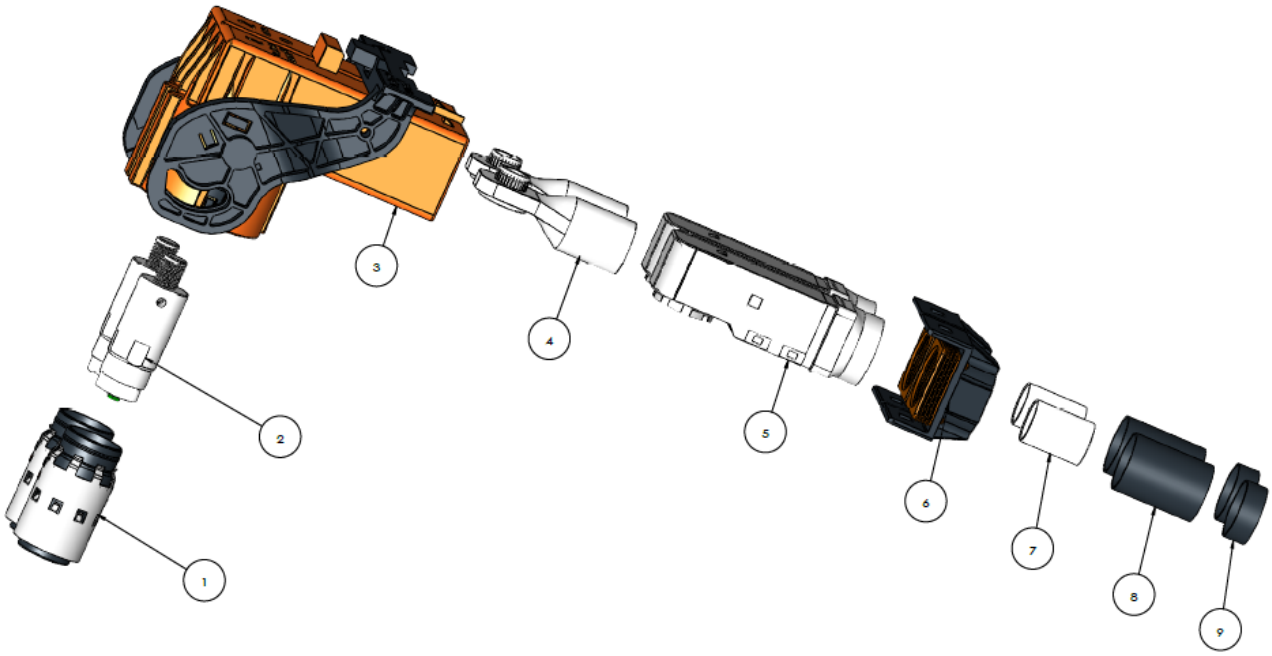
Amphenol Industrial

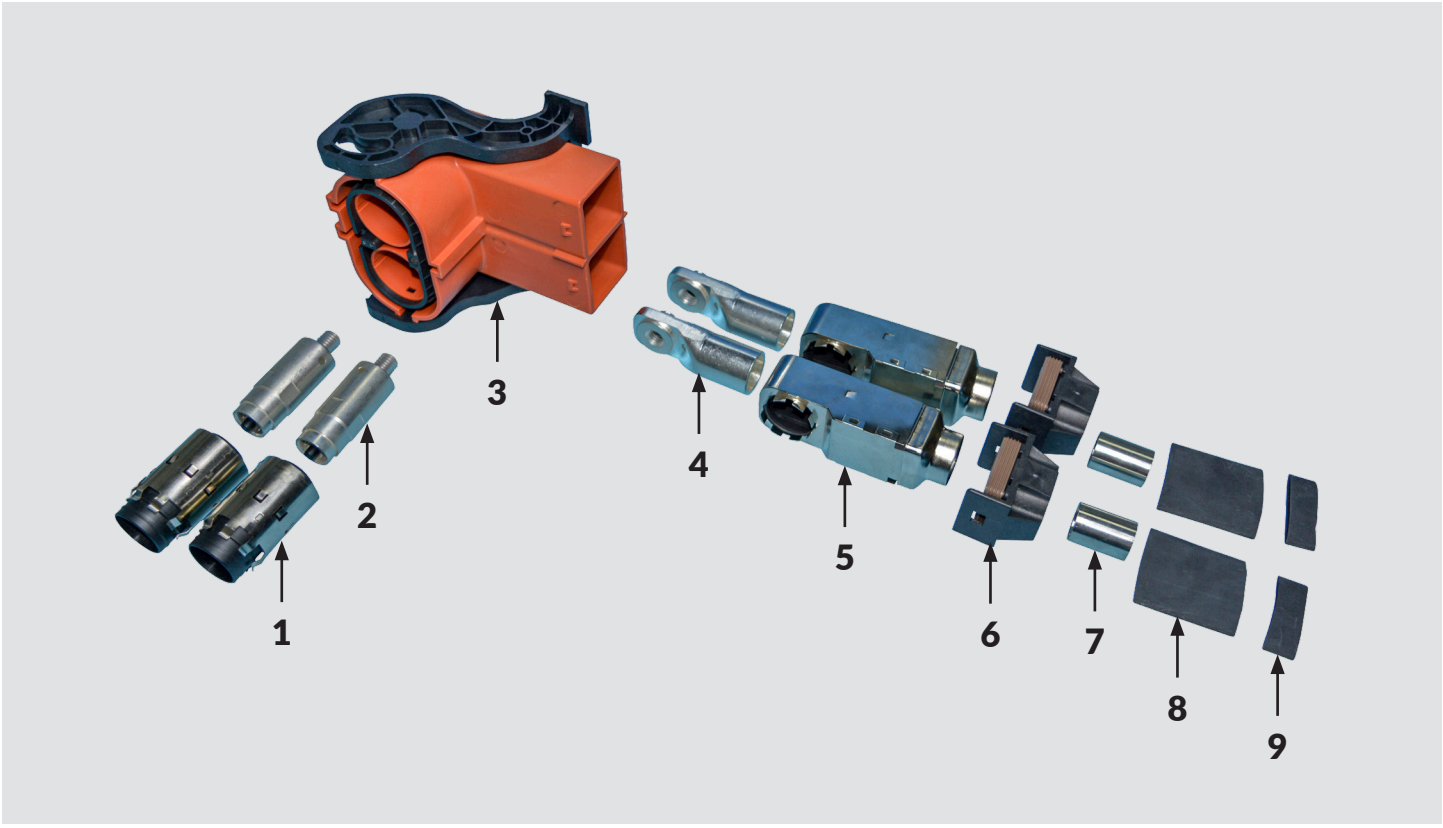
CABLE ASSEMBLY WORK INSTRUCTION

14.0mm RADSOK for UPC Right Angle Plug Connector

UPC 14.0mm RADSOK

Part 1: Package Contents





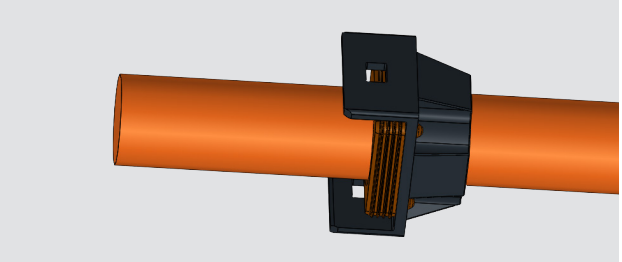
1. Connector Body

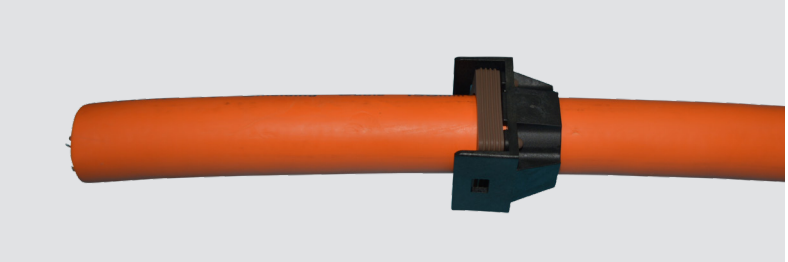
- **1:** Barrel sealing (not included when there is no sealing requirement)
- **2:** O-Ring (not included when there is no sealing requirement)
- **3:** Plug shell sub assembly
- **4:** Contact lug
- **5:** Shielding shell assembly
- **6:** Cable gland
- **7:** Crimping barrel
- **8:** Heat shrink tube
- **9:** Heat shrink tube

Note: Don't include part 7 when using 150mm² cable

Part 2: Ports Plug Assembly

Step 1: Pass the cable through the grommet and cap (Figure 1.1)

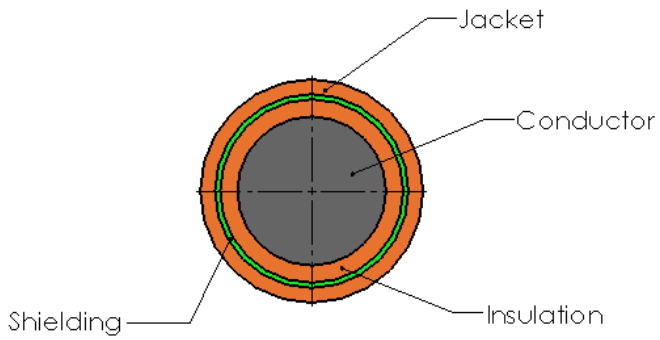




Cable	OD/mm		
	Conductor ref	Insulation	Jacket
95 mm²	14.6 max	18.2±0.5	22.6±0.6
120 mm²	16.4 max	20.2±0.5	24.6±0.7
150 mm²	18.3 max	22.5±0.5	27.1±0.8

Note: If the cable is different from recommended cable specification, it must be tested and confirmed according to the cable provided by the customer.

Step 2: Wire cutting and stripping.



Step 2.1: Jacket stripping.
Stripping jacket: 40+0/-1mm (Figure 2.1)

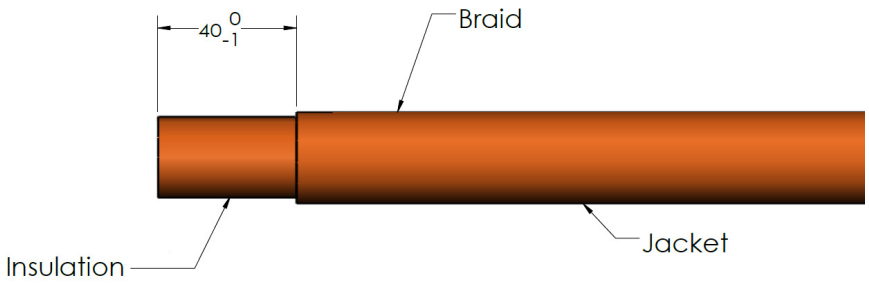


Figure 2.1

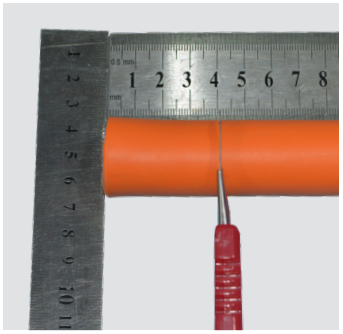


Figure 2.1a

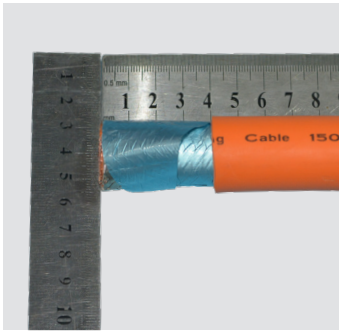


Figure 2.1b

Figure 2.1c

Figure 2.1d

Step 2.2: Inner insulation.
Stripping conductor: 28+0/-1mm (Figure 2.2)

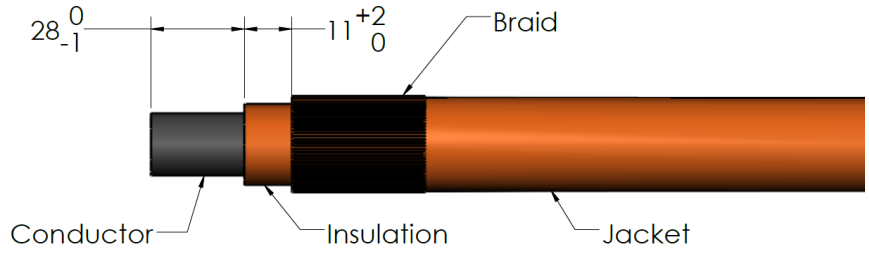


Figure 2.2

Figure 2.2a

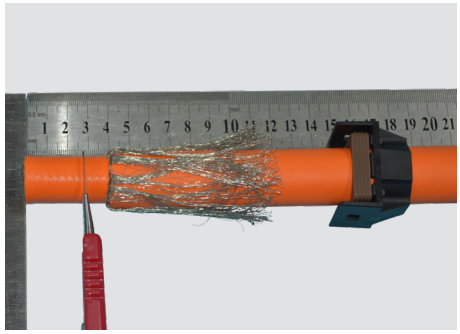


Figure 2.2b

Figure 2.2c

Step 3: Preassemble crimping barrel. Insert the wire conductor into the crimping barrel (Figure 3.1)
Notes: Do not include step 3 when using 150mm² cable

Figure 3.1

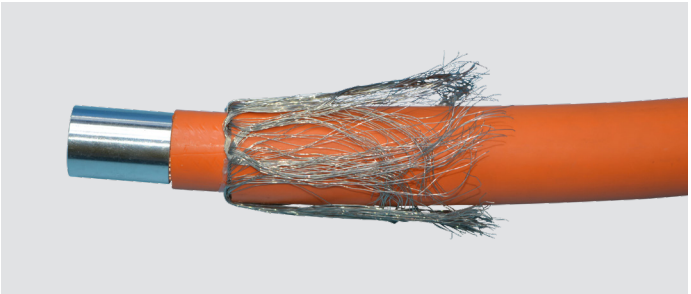
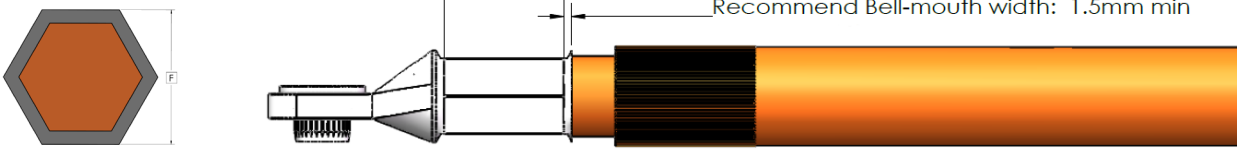


Figure 3.1a

Step 4: Crimping the contact lug to the wire (Figure 4.1)



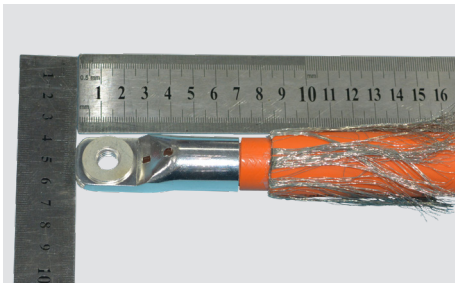


Figure 4.1a

Figure 4.1b

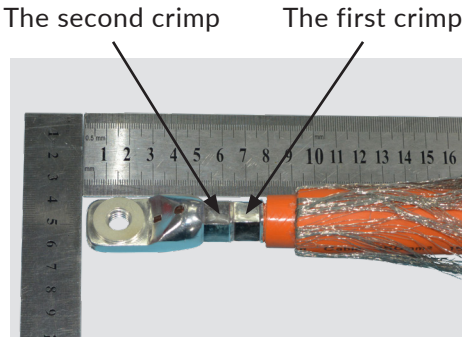


Figure 4.1c

Cable	Recommended connect crimp height (CCH) "F"	Cable pullout force
150 mm²	16.2 0.1	3000 N Min.
120 mm²	16.3±0.1	2700 N Min.
95 mm²	16.35±0.1	2700 N Min.

Note: No sharp burrs after crimping, and single copper wire cannot be exposed, if it has, it must be cut out.

Step 5: Assemble the shrink tube (Figure 5.1&5.2)

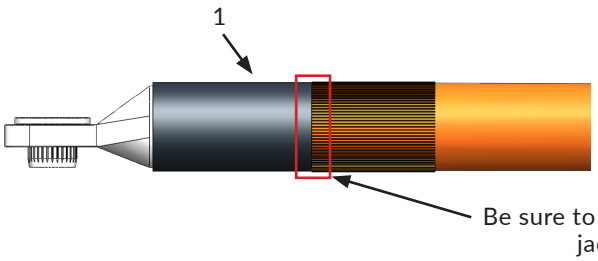


Figure 5.1

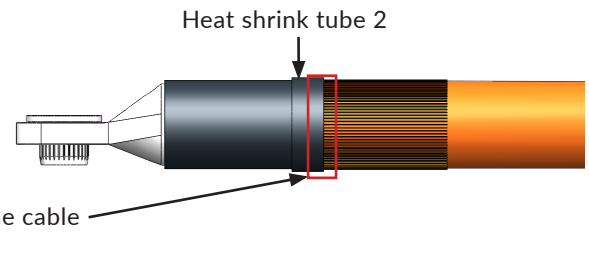


Figure 5.2

Step 5.1: Assemble heat shrink tube 1

Figure 5.1a

Figure 5.1b

Figure 5.1c

Step 5.2: Assemble heat shrink tube 2

Figure 5.2a

Figure 5.2b

Figure 5.2c

Note: Don't let the shrink tubing cover the braid

Step 6: Install the shielding ring and the plug shielding shell assembly to wire (Figure 6.1.1&6.1.2)

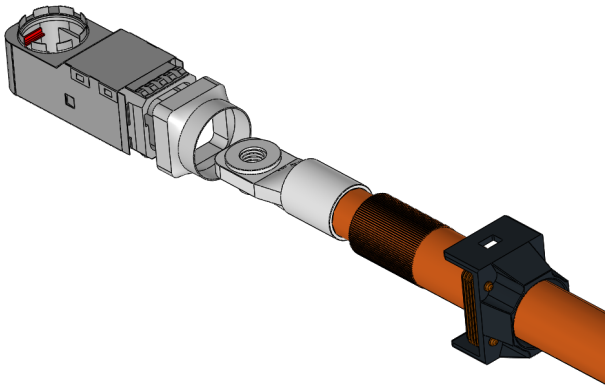


Figure 6.1.1

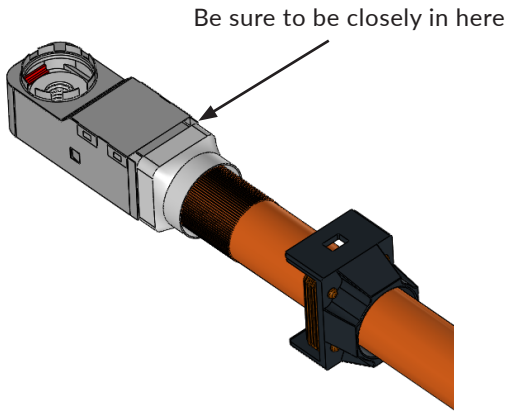


Figure 6.1.2

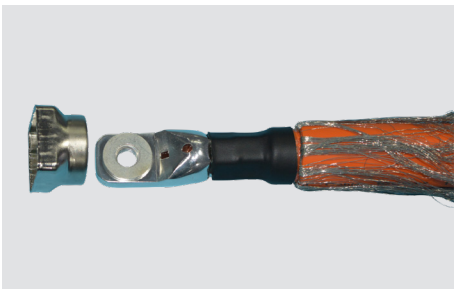


Figure 6.1a

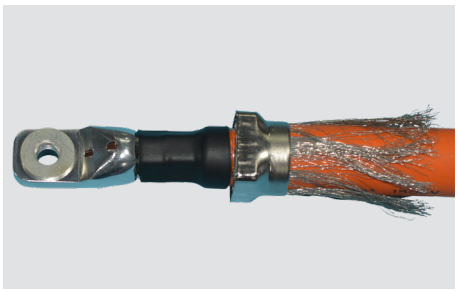


Figure 6.1b

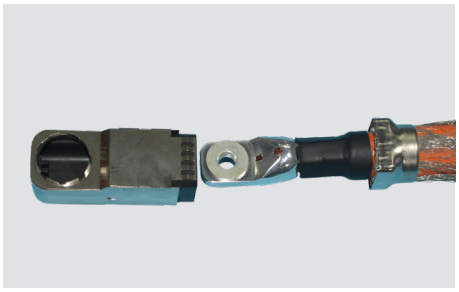


Figure 6.1c

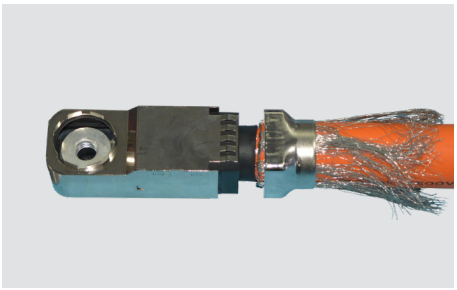


Figure 6.1d

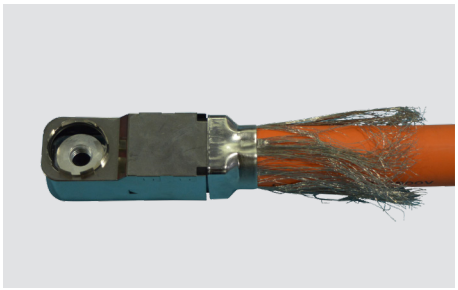


Figure 6.1e

Note: the plug must be pushed the bottom of the shielding shell assembly.

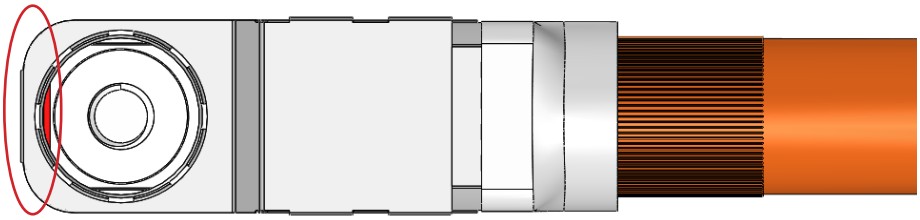
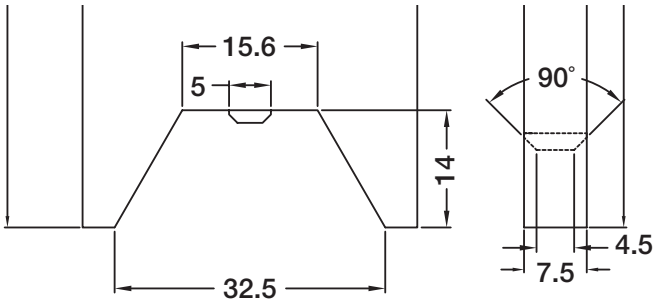


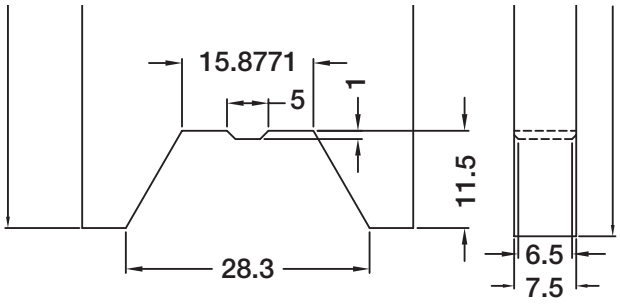
Figure 6.2

Step 7: Fix and crimping the shielding ring

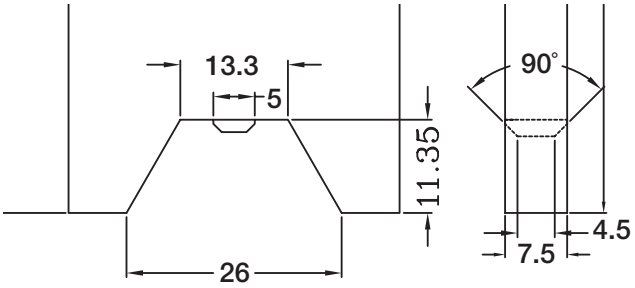
Recommended crimping tool: Hydraulic press (Tonnage: 30 T)



150mm² shielding ring



150mm² shielding ring



95mm² shielding ring

The down crimping die is the same size as the up crimping die.

Note: The die need to be closed and crimp the shielding ring near the shell edge as shown below.

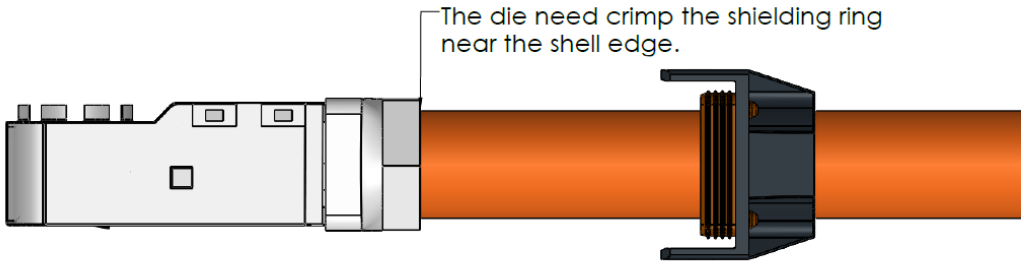


Figure 7.1

Fix and crimping the shielding ring (Figure 7.2.1 & 7.2.2)

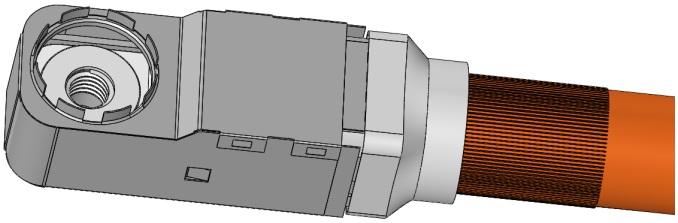


Figure 7.2.1

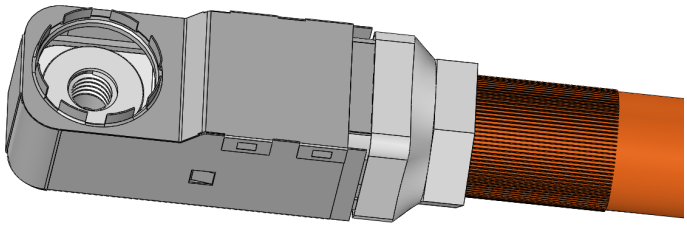


Figure 7.2.2

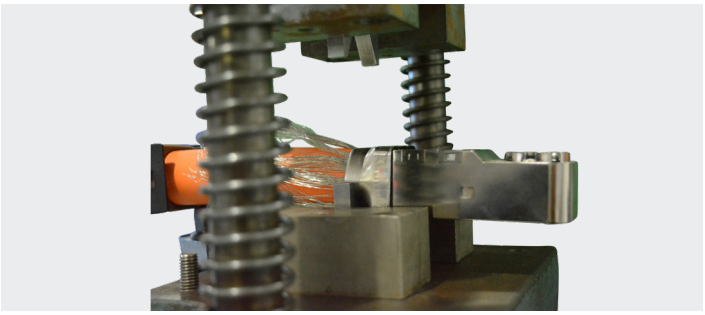


Figure 7.2a

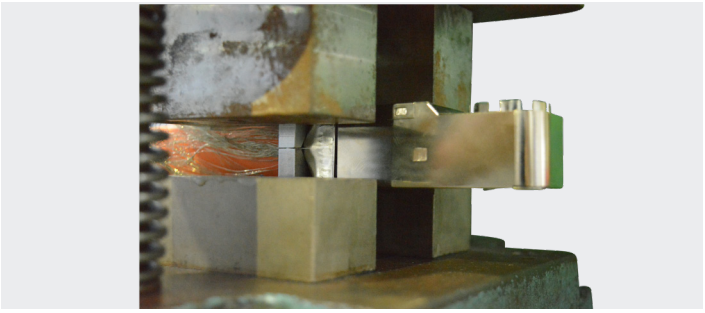


Figure 7.2b

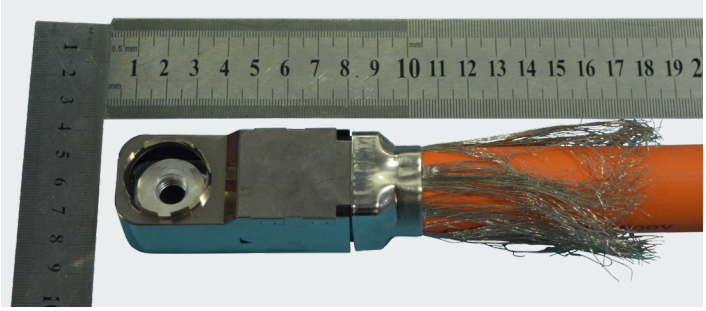


Figure 7.2c

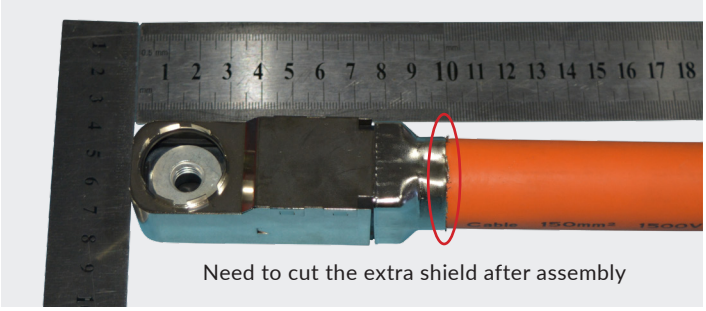


Figure 7.2d

Suggestion: Once finished crimping, insulation resistance and DWV test are needed
Insulation Resistance test: 1000V/DV, 60s, 500Ω Min
DWV: 3000V/AC, 60s, leakage current <5mA

Step 8: Repeat step 1 to step 7 for another port (Figure 8.1)

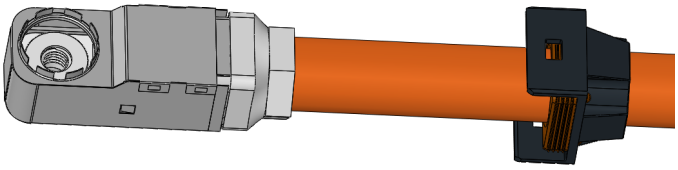


Figure 8.1

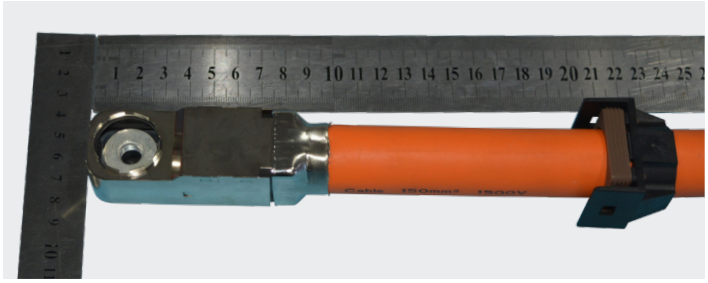


Figure 8.1a

Step 9: Insert the cable assembly into the plug shell assembly (Figure 9.1.1 & 9.1.2)

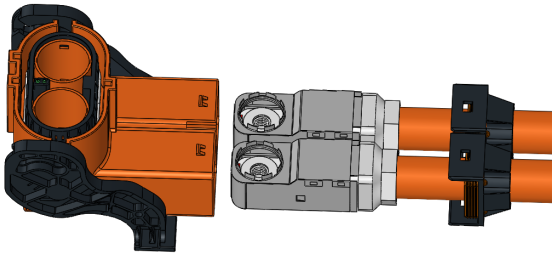


Figure 9.1.1

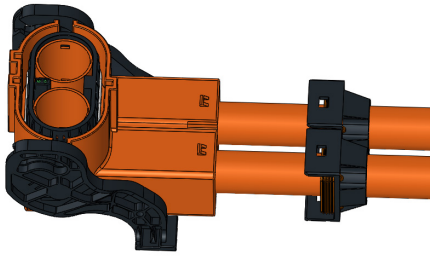


Figure 9.1.2

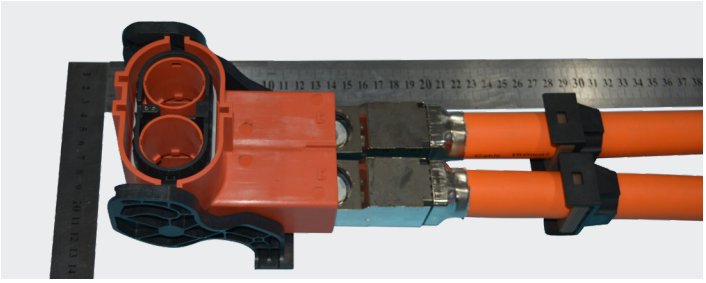


Figure 9.2.1

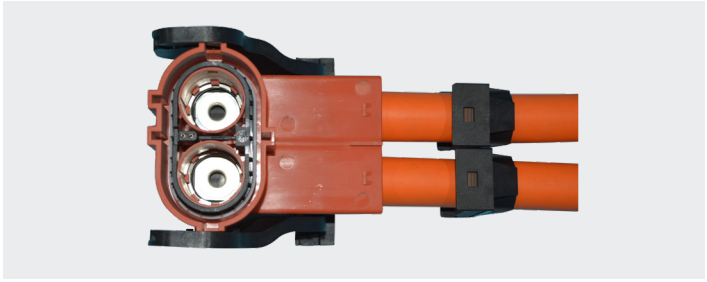


Figure 9.2.2

Note: When hearing a click and handing gently pull, then it isn't quit, so it shows that assembly is OK.

Step 10: Socket contact sub assembly

Insert the socket contact sub into the plug shell sub and use the special hex wrench lockthe socket (Figure 10.1.1 & 10.1.2)

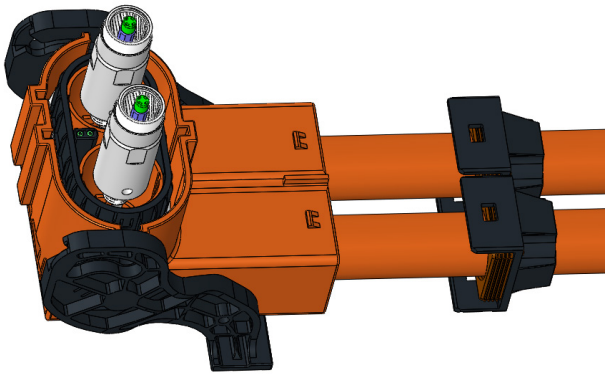


Figure 10.1.1

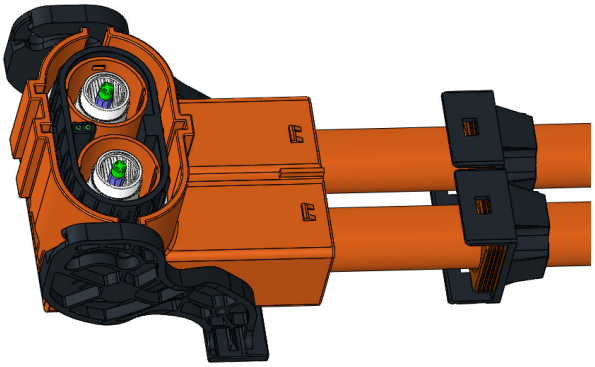


Figure 10.1.2

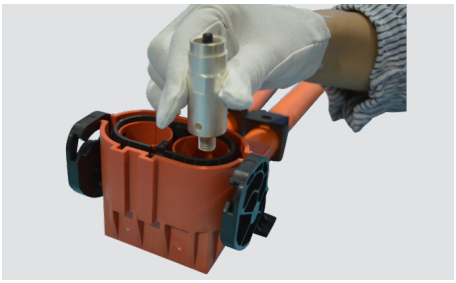


Figure 10.1a

Figure 10.1b

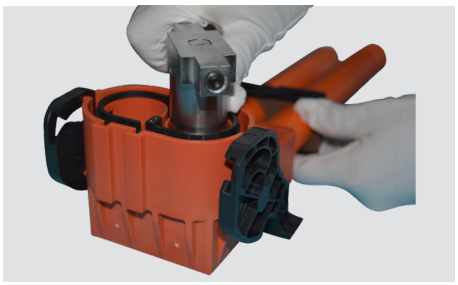


Figure 10.1c

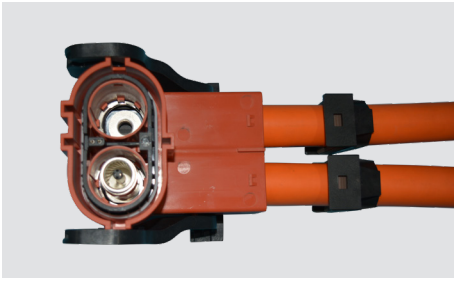


Figure 10.1d

Figure 10.1e

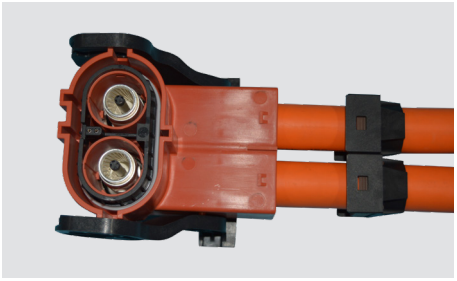


Figure 10.1f

Note: Recommended torque of the special hex wrench: 19.5-21.5 N·m

Tool assembly diagram: FX3-0037-001

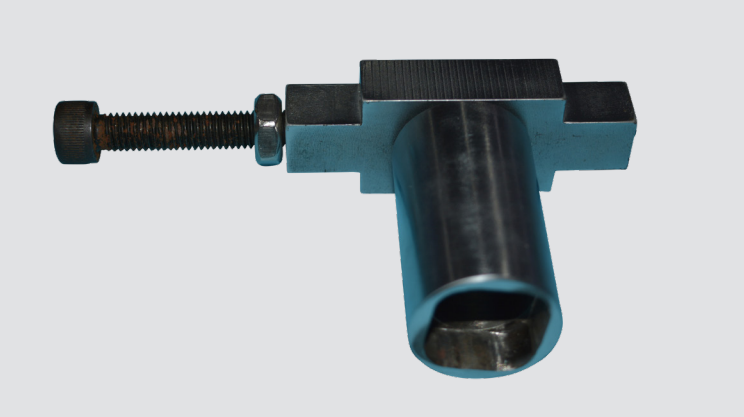
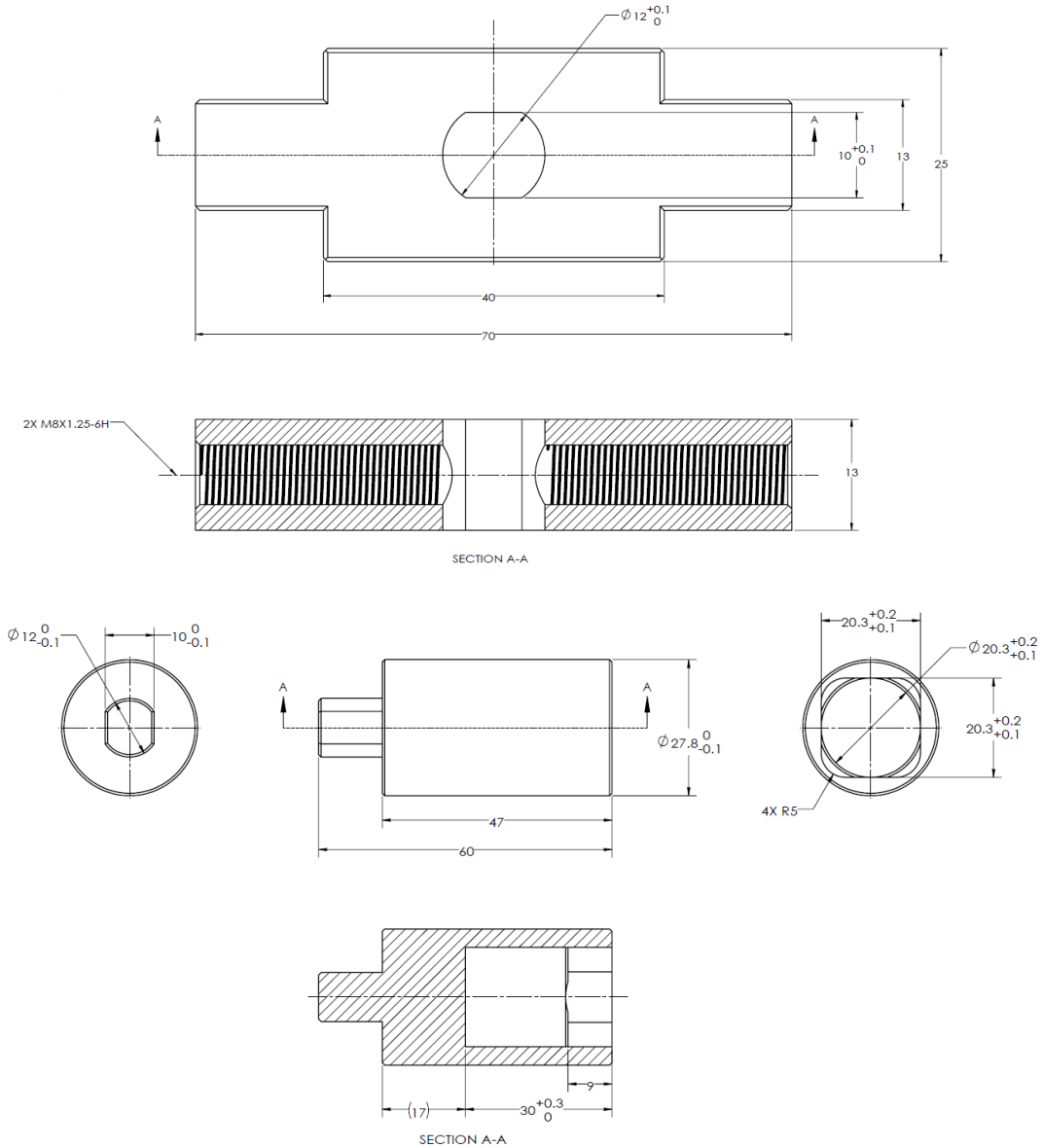


Figure 10.2

Tool processing figure as below:



Step 11: Insert sleeve and the front shielding shell into the plug assembly by the manual press with the right position (one convex of insulation plastic sleeve should be toward the groove of shell). (Figure 11.1.1 & 11.1.2)

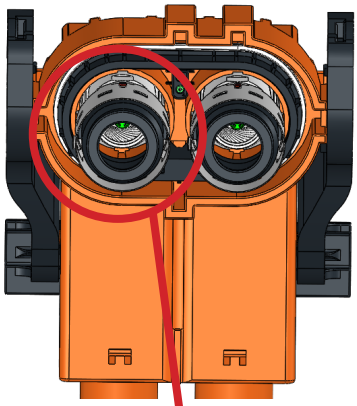


Figure 11.1.1

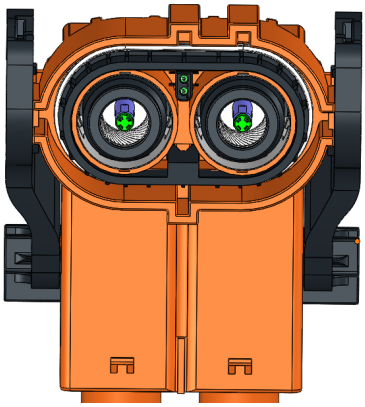


Figure 11.1.2

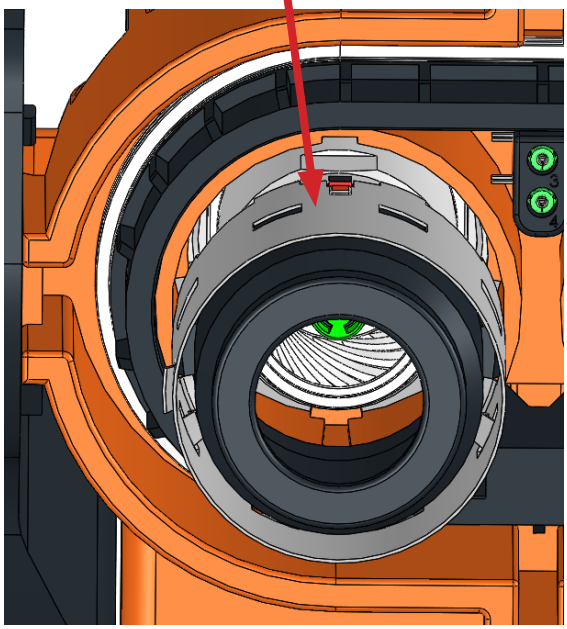


Figure 11.1.3

The red sign of the shielding shell should assemble in the direction of the plug shell grooves.

Figure 11.1a

Figure 11.1b

Figure 11.1c

Figure 11.1d

Figure 11.1e

Figure 11.1f

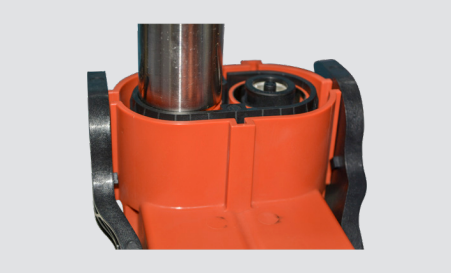


Figure 11.1g

Figure 11.1h

Note: Recommended torque of the special hex wrench: 19.5-21.5 N·m

When assembling OK, the dimension refer to the below picture:

Basic dimension:

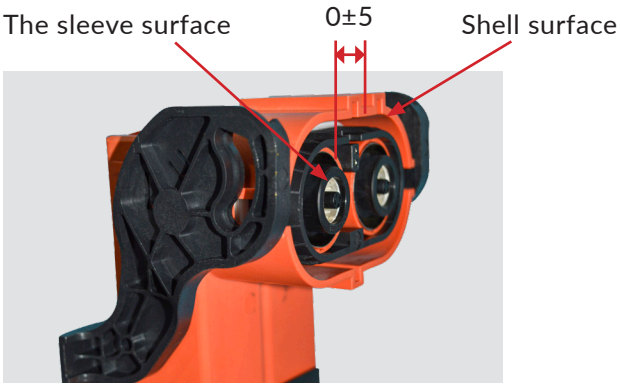


Figure 11.2.1

Confirm the assembled dimension:

When assembling OK, the dimension refer to the below picture.

Figure 11.2a

Figure 11.2b

Figure 11.2c

Step 12: Assemble the cable gland (Figure 12.1.1 & 12.1.2)

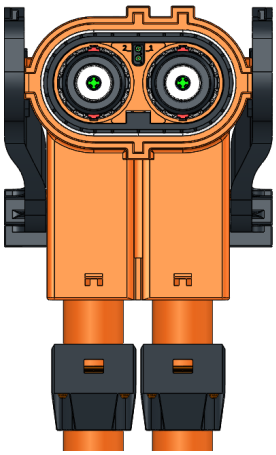


Figure 12.1.1

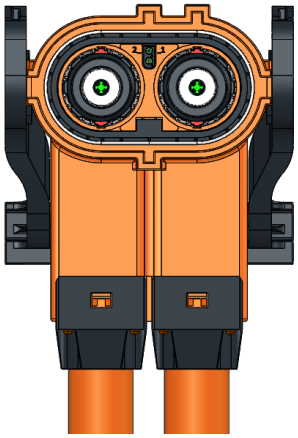


Figure 12.1.2

Figure 12.2a

Figure 12.2b

Figure 12.2c

Notes: When hearing a click, so it shows that cable cap assembly is OK.

Part 3: Plug and Receptacle Mating and Un-mating

Mating:

Unmating: