



 **ULTIMHEAT[®] UNIVERSITY** 

Introduction to hexagonal crimping

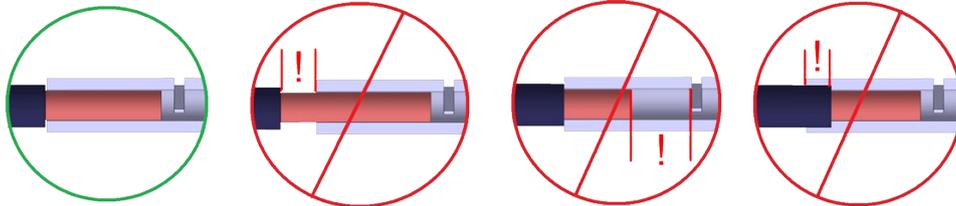


Introduction to hexagonal crimping

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The hexagonal crimping is the fastest way to connect two wires together, especially if this connection should be subjected to repeated thermal shocks. It is also the less bulky connection. Crimping this way is commonly used for cables of gauges higher than 10mm². By proper selection of components to use, good selection of crimping tools, and subject to compliance with certain simple rules, this type of connection is also safer for conductors of smaller gauges, as it makes an evenly distribution of the clamping force on the terminal perimeter.



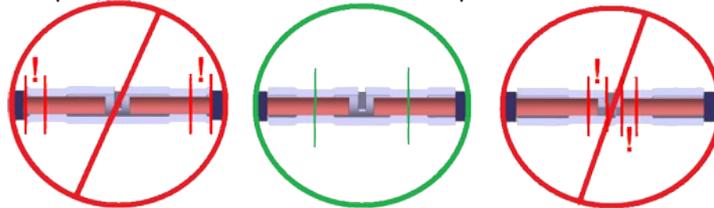
Wire stripping: use a wire stripper uppermost, following the instructions not to cut wires or damage the insulation. Respect the specified strip lengths.

Conductor insertion: A terminal should contain only one single cable at each end.

Insert the wire until the insulation comes into contact with the outside of the connector. The distance between the insulation and the shell of the connector must be less than 1mm. Ensure that all strands are within the barrel of the terminal. Twist them if necessary;

In the case of heating cables with a heating wire wound around a glass silk core, it may be necessary to strip to a greater length, cut the glass silk core strip to the recommended length, then wrap the excess heating wire on the fiberglass core waste. Ensure that in this case, the heating wire does not fill at the entrance when inserted into the connector, because the crimping would be made on the glass silk core only.

Crimping: first crimp one side, to the specified hexagon dimension according to the diameter or wire gauge. The center of crimping must be in the middle of the stripped section of the lead. Crimp until the ratchet automatically releases the opening of the pliers. When the first side is crimped, insert the second lead and crimp.



Once the crimping is correctly carried out, the contact resistance value of is less than 5 milliohms. The total length of the tubular connector increases from 4% to 6% as a result of crimping.

Comparative tests of breakout strengths (daN, single hexagonal crimping)

Terminal type	Heating wire dia. 0.3mm on fiberglass core 0.8mm	0.75 mm ² lead	0.8 mm ² lead (AWG18)	1.5 mm ² lead	1.65 mm ² lead (AWG15)	2,5 mm ² lead
Internal dia. 1.9	10	120	130	340	375	N/A
Internal dia. 2.3	N/A	N/A	N/A	190	200	>500

Note: average values measured with the adjustment of the closed position of the pliers in middle position