

Assembly instructions for cable lugs and connectors

- 1 Strip conductor in line with insertion depth (+ 10 % because of length change of crimp sleeve).
- 2 The conductor ends must be cleaned mechanically prior to assembly.
- 3 Insert conductor fully into cable lug or connector.
- 4 Observing the crimping direction, crimp the cable lug or connector using the appropriate tools. The crimping direction for cable lug and connector is indicated in the diagram opposite.
- 5 Remove excess compound emerging from aluminum cable lugs and connectors.

We recommend the following number of crimps for individual cross sections:

Cross-section mm ²	Tubular cable lugs			Cable lugs DIN 46235		Al-Cable lugs		
	5 mm Crimping die	width Crimping dies	EKM60ID	5 mm Crimping die	width Crimping dies	7 mm Crimping die	width Crimping dies	EKM60ID
6	1			2				
10	1		1	2				
16	1	1	1	2	1	4	2	
25	2	1	1	2	1	4	2	
35	2	1	1	2	1	5	2	
50	2	1	1	3	1	5	2	2
70	2	1	1	3	1	6	3	3
95	2	1	1	4	2	6	3	3
120	2	1	1	4	2	6	3	3
150	2	1	1	4	2	6	3	3
185	2	1*	1	4	2	6	3	3
240	4	2	2	5	2	8	3	3
300	4	2			2 (17 mm)** 5 (7 mm)***	8	3	
400	4	2			3		4	
500					3		4	
625					3			
800					3			
1000					4 (20 mm) 2 (40 mm)****			

* when using quad-point indent crimping (HK60VP, EK60VP/FT etc.) Number of crimping operations: 2
 ** Crimp with crimping dies of Series 25 and Series 45
 *** Crimp with crimping dies of Series 13
 **** Crimp with crimping dies of Series 100

i When crimping F-series cable lugs and solderless terminals according to DIN 46234 by using indent crimping dies, for each cross section only one crimp is necessary.

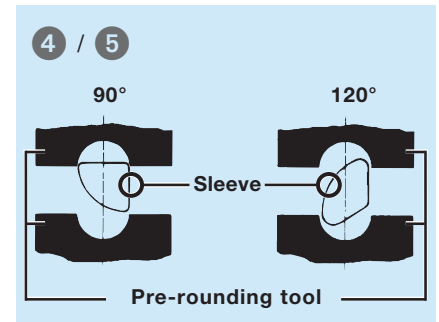
Assembly instructions for sleeves for type VHR and VHD compacted conductors

We recommend the use of additional VHR and VHD sleeves for compacted round conductors to ensure that the tubular cable lugs and connectors fit accurately.

For sector-shaped conductors, we recommend the use of additional sector sleeves VHR 3 or VHR 4 and VHD 3 or VHD 4 with Cu cable lugs and connectors to prevent the conductor recoil. Sleeves need to be rounded with pre-rounding tools.

Please note:

- 1 Ensure that the conductor is deformed as little as possible when cutting to length.
- 2 Strip the conductor insulation in line with the insertion length.
- 3 Slip the sleeve up to the front cut edge of the conductor.
- 4 Place the conductor and sleeve in the pre-rounding tool as per the diagram.
- 5 Crimp the sleeve
 - a) Crimping operation as per the diagram (1st pre-crimp)
 - b) Crimp turned through 90° (2nd pre-crimp)
 - c) Crimp turned through 30° (finish-crimp)
 - d) Crimp turned through 30° as required (finish-crimp)



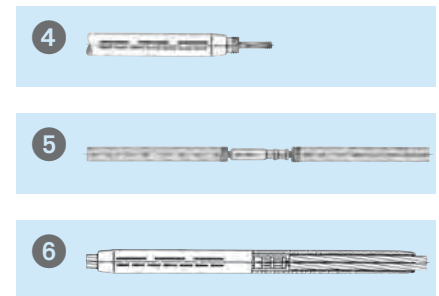
Instructions for fitting reduction sleeves

Only wide hydraulic crimping dies to be used when crimping more than two cross-sections.

Assembly instructions for full tension Al/steel connectors to DIN 48085, part 3

The connectors consist of an Al sleeve (E-Al 99.5) and a soft steel sleeve (St 52).

- 1 Straighten cable ends, remove dirt and any oxide layer.
- 2 Slip the Al-compression joint onto one of the cable ends.
- 3 Tie off the cable end and strip the Al cores.
- 4 Tie off Al and steel cores.
- 5 Slip on the steel sleeve and crimp through according to the crimping marks.
- 6 Slide the Al sleeve centrally over the crimped steel sleeve and crimp according to the crimping marks



Caution: Do not crimp in the centre, in the area of the steel connector. Do not crimp in the area of the cones.

- 7 Remove excess compound after crimping the connector.



Warning: The compound must not be removed, either fully or partially, prior to assembly.

The tool dies can be assigned either by colour-coding, or preferably based on the code assigned to the cross-section. The dies for the steel sleeve have a black finish, those for the Al sleeve are zinc-coated.

General information:

The crimping process has to be continued until the dies are completely closed, otherwise a proper crimp cannot be guaranteed.



General notes

Crimping dies:

The crimping dies of the series 18 as well as the series 25 correspond in the external dimensions of DIN 48083 part 1 or part 3. For all interchangeable dies, for mechanical tools as well as hydraulic tools, the series D (= for DIN cable lugs and connectors 46235 and 46267) and the series A (aluminium cable lugs and connectors as well as aluminium/copper cable lugs and connectors) the hexagonal dimensions are of DIN 48083 part 4.

Surfaces:

All mentioned dies are supplied "chrome-yellow" or „blue coated“ for copper and "galvanized" for aluminum and nickel.

Testing of our copper and aluminium connecting material was carried out with the following maximum torque on the connecting bolt.

Size of thread	Tightening torque (Nm)	Size of thread	Torque (Nm)
M 5	5	M 12	75
M 6	9	M 14	120
M 7	15	M 16	190
M 8	22	M 20	380
M 10	44		