Dewconect®

Together We Grow

PRODUCT INSTALLATION GUIDEBOOK

Cable Lugs • Terminals • Connectors • Cable Glands
Ferrules • Earthing & Grounding • Transmission Line Hardware



A Practical Installation Reference for Electrical Connection Products

Dewconect®	**DEVAS ELEKTRO WERKE**	**QUALITY**
Reliable Connections. Consistent Quality. Trusted Supply.	Electrical Connection Products	ISO 9001:2015 Certified

product visuals are illustrative. Exact selection, dimensions and installation must follow the approved DEWCONECT catalogue/product instruction.

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DOCUMENT CONTROL: This guide is an installation aid, not a substitute for the exact DEWCONECT product drawing, customer specification, approved method statement, applicable electrical code, or site safety procedure.

DIMENSION RULE: The supplied catalogue states: tolerances ±5% unless otherwise specified; all dimensions are in mm. Use the exact catalogue row for the exact DEWCONECT catalogue number.

PURPOSE, SCOPE & HOW TO USE THE GUIDE

This guide explains the practical workflow for selecting, preparing, installing and inspecting DEWCONECT electrical connection products. It covers the product families represented in the supplied 48-page catalogue and translates the installation logic into simple site language. The catalogue remains the controlling source for exact product dimensions and catalogue numbers.

1.1 What this guide covers

- Compression and tube-type copper cable lugs and terminals.
- Copper inline connectors, reducers and long-barrel variants.
- Aluminium terminals, including XLPE-oriented families.
- Bi-metallic terminals/connectors for aluminium-to-copper interfaces.
- Ring, fork, pin, insulated and pre-insulated terminals.
- Ferrules and end-sealing ferrules.
- Single compression, heavy-duty/SIBG and double-compression cable glands.
- Shrouds, earth tags, earthing/grounding accessories and transmission-line hardware.

1.2 The basic installation logic

1. Identify the cable: conductor material, cross-sectional area, insulation, number of cores and—where relevant—armour and overall diameter.

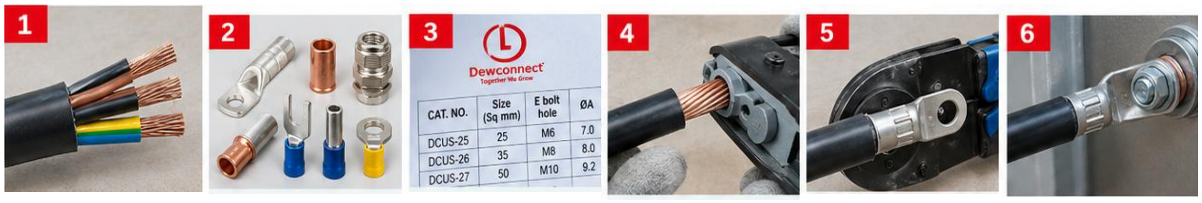
2. Select the product family: choose copper, aluminum, bi-metallic, terminal, connector or gland family that matches the cable construction and application.

3. Match the exact catalogue number: do not select only by nominal size; confirm the exact code, bolt-hole/thread and dimensional row.

4. Prepare the cable: strip only what is required, preserve conductor strands and insulation, and keep the work clean.

5. Install with the specified method: use the correct crimping tool/die or gland assembly sequence for the exact product.

6. Inspect and record: check seating, crimp quality, mechanical condition, clearances, gland sealing and continuity as applicable.



IMPORTANT: Where a project drawing, equipment manufacturer, cable manufacturer or approved installation procedure gives a more specific requirement, that project-specific requirement governs.

Electrical termination work can create shock, arc-flash, fire and mechanical hazards if the circuit is not properly isolated or if a connection is incorrectly prepared. The steps below are control principles; site safety rules, permits and statutory requirements must always be followed.

2.1 Minimum controls before work

- Isolate the circuit using the approved isolation procedure.
- Apply lockout/tagout where required by the site.
- Prove dead using an approved test instrument and the site's verification method.
- Discharge stored energy where applicable.
- Use task-appropriate PPE, insulated tools and eye protection.
- Keep metal swarf, loose strands, oil and debris away from the termination.
- Do not work on energized equipment unless a formally controlled procedure specifically permits it.

2.2 Installation quality controls

- Verify the exact catalogue number before cutting or stripping the cable.
- Use only tooling and dies approved for the selected lug/connector and conductor size.
- Do not guess crimp locations, die sizes, crimp counts or torque values.
- Do not reuse a damaged, deformed or incorrectly crimped termination.
- Do not substitute an armoured gland for an unarmoured gland because the nominal thread looks similar.
- Where a hazardous-area/flameproof gland is specified, use the correct certified assembly and installation requirements for the actual equipment and cable system.

WHY THIS MATTERS? A termination is a complete system: conductor + connector + tooling + installation method + enclosure/equipment interface. A correct-looking component can still produce a poor connection if the system is mismatched.

CORE COMPONENTS OF A CABLE TERMINATION SYSTEM

A good installation starts by understanding what each component actually does. The names below are used throughout this guide.

3.1 Core components of a lug termination

Component	Function	Installer check
Conductor barrel	Receives the stripped conductor and forms the electrical/mechanical connection.	Correct conductor size; full insertion; no damaged strands.
Palm / tongue	Connects the lug to a stud, busbar or equipment terminal.	Correct hole diameter; flat seating; adequate clearance.
Bolt hole	Provides the mechanical interface to the equipment.	Match M-size/hole requirement; do not force a mismatched hole.
Inspection area / end	Helps confirm conductor insertion where the design provides it.	Conductor should reach the intended insertion depth.
Crimp zone	Area compressed by the approved die/tool.	Correct die and sequence; no cracks or severe distortion.
Plating / finish	Provides the specified surface condition and helps protect the contact interface.	Do not remove plating unnecessarily.

3.2 Core components of a cable gland

Component	Function	Installer check
Gland body	Main mechanical interface to enclosure/equipment.	Correct thread/entry and physical condition.
Sealing ring	Seals around the cable outer diameter.	Cable OD lies within the selected catalogue range.
Compression ring	Applies controlled compression to the sealing system.	Correct orientation and seating.
Lock/check nut	Secures the gland to the enclosure where the design uses one.	Correct thread; full seating.
Armour clamping parts	Provide mechanical/electrical connection to cable armour in applicable gland families.	Armour length and clamping path follow the product design.
Earth tag / bonding accessory	Provides an earth/bonding interface where required by the installation.	Correct material, orientation and continuity path.
Shroud	Provides external protection/covering around the gland area where selected.	Correct OD/length; no interference with seals.

3.3 The installer should be able to answer five questions

- What conductor material and size am I terminating?
- Which exact DEWCONECT product code is approved?
- How far should the conductor/cable be prepared for this product?
- Which tool, die, gland sequence or fastening method is specified?
- How will I verify the finished connection?

Selection should be made from the cable construction outward, not from the connector shape inward. The supplied catalogue contains multiple families with similar nominal sizes but different geometry and intended use.

4.1 Selection sequence

1. Conductor material: Copper, aluminium or an aluminium-to-copper transition.

2. Cross-sectional area: Select the exact mm^2 row; do not round to the nearest size.

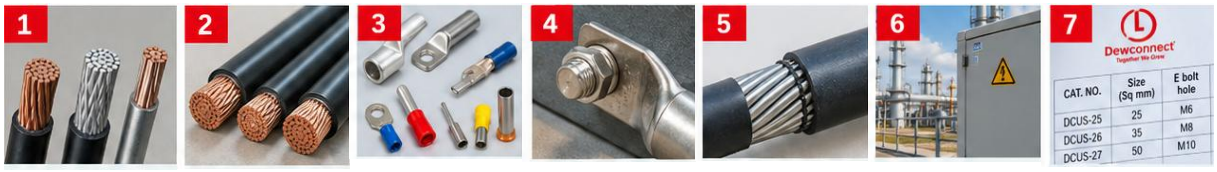
3. Connection type: Lug, inline connector, reducer, ring/fork/pin terminal or ferrule.

4. Equipment interface: Confirm bolt hole, stud size, palm geometry or terminal arrangement.

5. Cable construction: For glands, identify armoured/unarmoured construction and overall cable diameter.

6. Environment: Consider enclosure entry, sealing, temperature, corrosion, outdoor exposure and any hazardous-area requirements.

7. Exact code: Record the DEWCONECT catalogue number and revision/date of the drawing or catalogue used.



4.2 Common selection mistakes

- Choosing a lug only because its nominal mm^2 matches the cable while ignoring the bolt-hole size.
- Using a copper lug on an aluminium conductor without an approved transition/interface.
- Using a gland based on thread size while ignoring the cable's actual overall diameter.
- Using a heavy-duty or flameproof gland where the cable construction and equipment do not require it.
- Assuming two products with similar appearance have identical stripping, crimping or tightening requirements.

CATALOGUE RULE: The supplied DEWCONECT catalogue gives product-code-specific dimensions. Always select the exact row rather than applying a generic dimension to an entire family.

Use the correct tool for the exact termination. The guide deliberately does not invent universal die numbers or torque values because those are product/tool specific and must come from the approved DEWCONECT tooling data or project procedure.

5.1 Typical tools

- Cable cutter suitable for the cable construction.
- Insulation stripping tool appropriate to the insulation type.
- Approved crimping tool and correct die set for the connector.
- Calibrated torque tool where a specified torque is provided.
- Deburring/cleaning tools that do not damage the conductor.
- Suitable spanners for gland assembly.
- Approved electrical test instruments for continuity/insulation checks as required.

5.2 pre-installation inspection

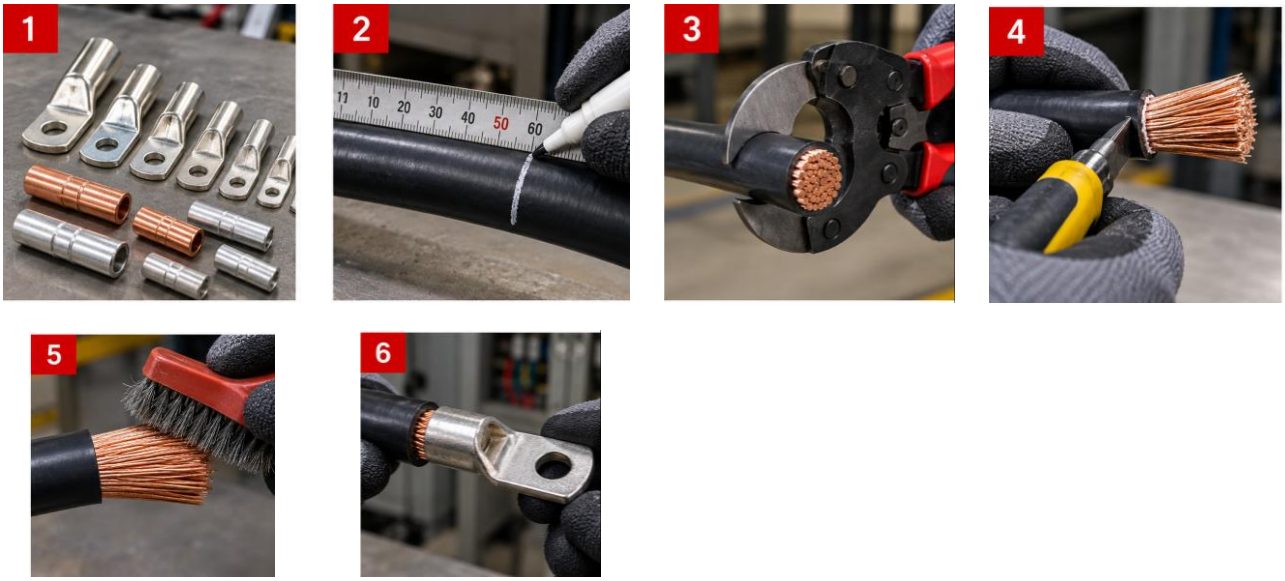
Check	Accept when
Product identity	Catalogue number and size match the work order/drawing.
Material	Copper/aluminium/bi-metallic construction matches the conductor/application.
Dimensions	Required hole, barrel and gland OD/thread match the catalogue.
Surface	No cracks, dents, burrs, corrosion or damaged insulation.
Tooling	Tool is suitable for the connector and conductor size.
Cable	Correct cable, clean end, no crushed strands or insulation damage.
Environment	Work area is clean, safe and suitable for the termination.

CABLE PREPARATION

Cable preparation is one of the highest-value quality steps because an otherwise correct connector can fail if strands are cut, insulation is damaged or the conductor is not inserted to the intended depth.



6.1 General preparation workflow



1. Measure and mark: use the approved stripping/preparation dimension for the exact connector and cable.

2. Cut cleanly: make a square, controlled cut without flattening the conductor.

3. Remove insulation carefully: avoid nicking strands or reducing the effective conductor cross-section.

4. Clean the conductor: remove loose debris and contamination; for aluminium, follow the approved oxide-removal/joint-compound procedure if specified.

5. Form the conductor: keep strands together and do not twist or spread them unnecessarily.

6. Dry fit: insert into the connector before crimping where the design permits, confirming the conductor reaches the intended depth.

6.2 What not to do

- Do not cut individual conductor strands to make insertion easier.
- Do not hammer or crush the conductor end into shape.
- Do not strip insulation farther than necessary unless the approved method requires it.
- Do not allow insulation to enter the conductor barrel.
- Do not apply random grease, paste or compound unless specified for that conductor/product/application.

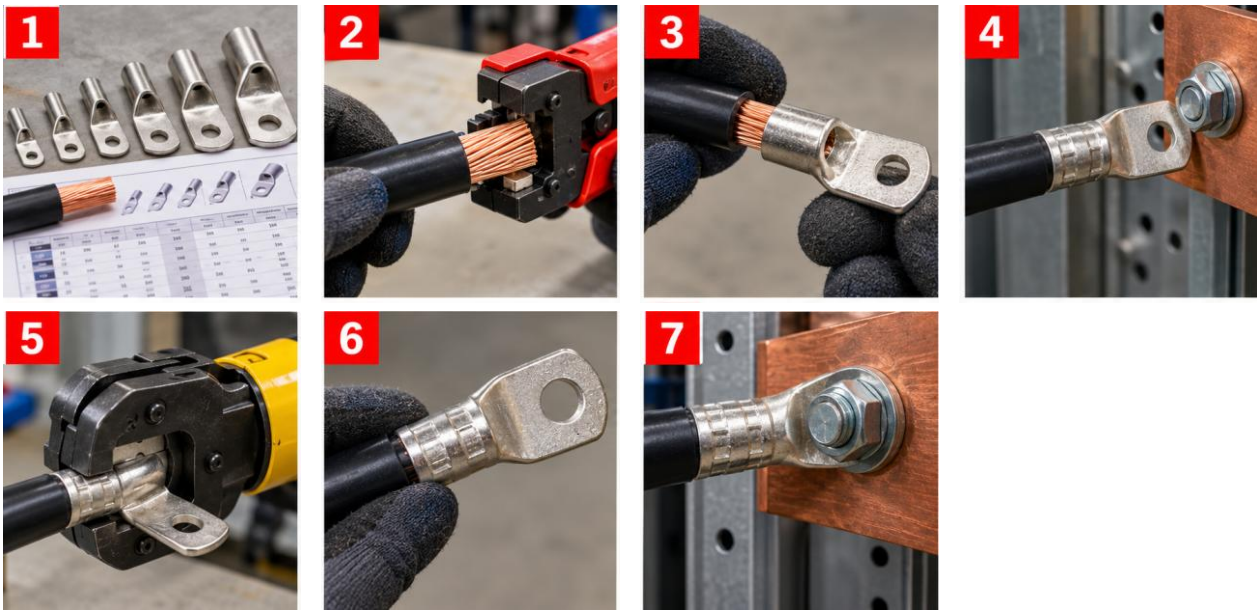
ALUMINIUM NOTE: Aluminum forms an oxide layer quickly. If the approved installation method requires brushing and joint compound, perform those steps immediately before insertion and use the specified compound.

The DEWCONECT catalogue contains several copper terminal families, including medium-duty tube terminals, heavy-duty long-barrel variants, open-at-K styles and DIN 46235 families. Exact dimensions vary by catalogue number.

7.1 Catalogue families

Family / examples	Catalogue pages	Typical use logic
DCUS medium-duty copper tube terminals	4	Cable-to-equipment termination; select exact size and bolt hole.
DCUS-282 to DCUS-294 heavy-duty long barrel	5	Longer barrel geometry for the listed conductor sizes.
DWPC family	6	Copper terminals with the catalogue's listed geometry.
DCUS open-at-K family	7	Open-at-K style terminals with product-specific bolt-hole dimensions.
DCB / DEH inline connectors	8	Straight-through conductor joining.
DCBL long-barrel inline connectors	9	Long-barrel straight-through joining.
DCEB family	10	Copper tube terminal family with extended geometry.
DIN 46235 families	11–12	Copper tube terminal geometry shown in the catalogue.

7.2 Installation procedure



1. Verify the exact lug: check catalogue number, conductor size and bolt-hole requirement.

2. Prepare the cable: strip to the approved insertion depth without damaging strands.

3. Insert the conductor: push the conductor fully into the barrel.

4. Position the lug: align the palm/hole with the equipment connection and ensure the cable is not under damaging side load.

5. Crimp: use the approved tool and die for the exact lug/conductor combination.

6. Inspect: look for correct insertion, uniform compression, no cracks, no severe deformation and no loose strands.

7. Connect: fit the lug to the equipment using the approved hardware and specified tightening method.

Catalogue example	Size	Bolt	ØA	ØC	J
DCUS-05	2.5 mm^2	M5	2.0	3.7	20
DCUS-10	25 mm^2	M6	7.0	9.0	37
DCUS-12	35 mm^2	M8	8.0	10.0	37
DCUS-17	70 mm^2	M10	11.6	13.8	56
DCUS-23	120 mm^2	M16	14.8	17.8	62
DCUS-29	240 mm^2	M16	22.0	26.0	97
DCUS-35	630 mm^2	M20	35.0	41.5	137

SOURCE: Dimensions above are catalogue-derived examples from page 4 of the supplied DEWCONECT catalogue. The catalogue states ±5% tolerance unless otherwise specified and all dimensions in mm.

Crimping creates the permanent electrical/mechanical interface between the conductor and the connector. The correct sequence is more important than simply applying high force.

8.1 Before the first crimp

- Confirm connector code and conductor cross-section.
- Confirm the approved crimping tool and die.
- Check the tool for damage and required calibration/inspection status.
- Confirm the connector is fully seated on the conductor.
- Confirm the palm orientation and cable bend direction.

8.2 General crimping sequence



1. Position the die: install the die specified for the connector/conductor combination.

2. Position the connector: place the barrel in the correct die location; keep the palm clear.

3. Confirm insertion: make sure the conductor remains fully seated while the tool is positioned.

4. Complete the crimp: operate the tool through the required cycle; do not partially compress and release unless the approved method permits it.

5. Repeat only as specified: if multiple crimps are required, follow the manufacturer's specified sequence and spacing.

6. Inspect the finished crimp: check compression, cracks, sharp edges, conductor insertion and overall alignment.

7. Record: where required, record tool identification, die, operator and inspection result.

8.3 Why this guide does not publish one universal crimp count

Crimp count, die identification, indentation pattern and crimp location can vary by connector design and tooling system. A generic number could be wrong for a particular DEWCONECT product. Use the exact approved DEWCONECT crimping instruction or tooling chart for production work.

REJECT IF: the connector is cracked, the conductor has backed out, the crimp is visibly incomplete, the tool was not suitable, or the conductor insulation has been damaged beyond the permitted preparation zone.

COPPER INLINE CONNECTORS & REDUCERS

Inline connectors join two conductors without a terminal palm. The catalogue includes DCB, DCBL and DCEB-related families and reducer/inline configurations.



9.1 Inline connection workflow



1. **Identify both conductors:** confirm material and cross-section on each side.
2. **Select the connector:** use a catalogue family that is intended for the exact combination.
3. **Prepare both ends:** strip each conductor to the approved insertion depth.
4. **Insert side A:** ensure full seating before the first crimp.
5. **Crimp side A:** use the approved die and sequence.
6. **Insert side B:** repeat the seating check.
7. **Crimp side B:** complete the approved sequence.
8. **Inspect the complete connector:** check both ends and the central body for damage or distortion.

Family	Examples from catalogue	Selected catalogue range
DCB	DCB-3, DCB-24, DCB-43	1.5 to 1000 mm^2 shown
DCBL	DCBL-3, DCBL-8, DCBL-22	1.5 to 1000 mm^2 shown
DCEB	DCEB-05 through DCEB-76	2.5 to 1000 mm^2 shown

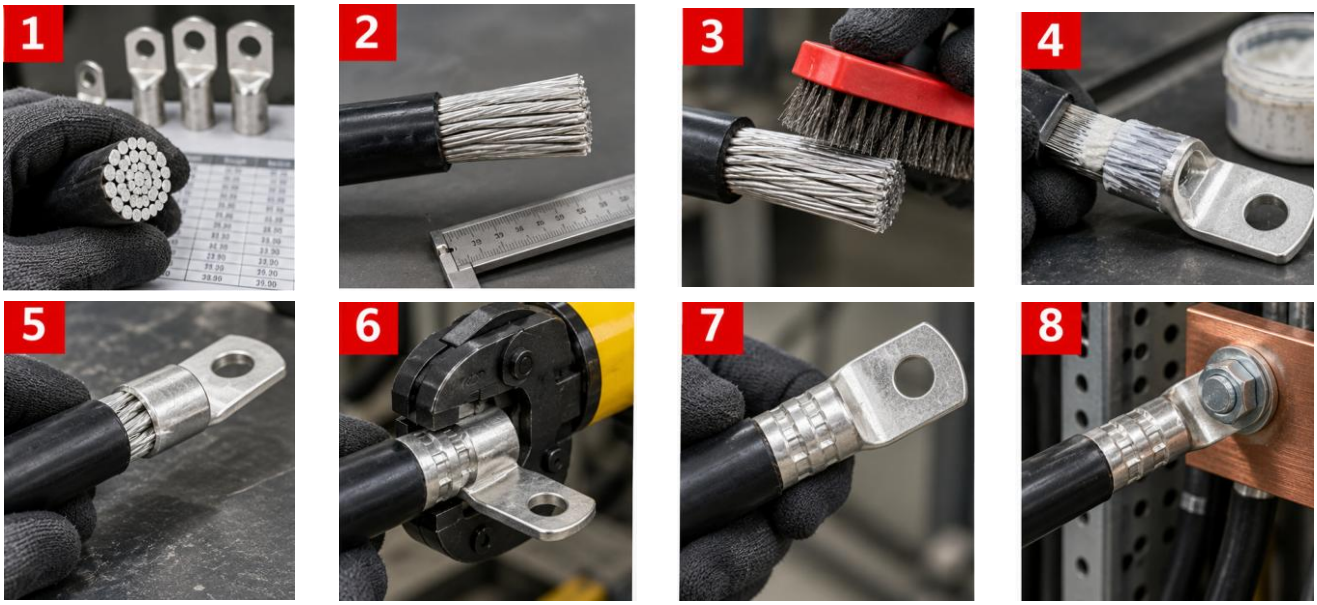
INLINE RULE: Both conductor ends must be prepared and crimped according to the exact connector design. Never assume both sides use the same die simply because the connector body looks symmetrical.

ALUMINIUM LUGS & XLPE APPLICATIONS

The catalogue contains DALS aluminium families, including standard tube terminals, extended/longer variants and DALS-XL families. Aluminium installations require particular attention to surface preparation and conductor compatibility.



10.1 Aluminum termination workflow



1. **Confirm aluminium conductor size:** match the exact mm^2 row.
2. **Prepare insulation:** strip to the approved insertion dimension.
3. **Remove oxide as specified:** use the approved brush/cleaning procedure without removing excessive conductor material.
4. **Apply compound if specified:** use only the specified joint compound and amount.
5. **Insert fully:** make sure the conductor reaches the intended depth.
6. **Crimp:** use the approved aluminium-compatible tooling/die.
7. **Inspect:** check barrel compression and the conductor/insulation interface.
8. **Complete equipment connection:** ensure the palm is correctly seated and the cable is not mechanically stressed.

10.2 XLPE-oriented catalogue families

Family	Catalogue range shown	Examples
DALS-XL	25–1000 mm^2	DALS-XL1 to DALS-XL16
DALS-XL long/terminal variants	25–1000 mm^2	DALS-XL17 to DALS-XL32
DAWP	2.5 mm^2 upward in listed rows	DAWP-1, DAWP-25, DAWP-45

DO NOT SUBSTITUTE: Do not treat a copper termination and aluminium termination as interchangeable. Conductor material, oxide behaviour, tooling and interface requirements are different.

Bi-metallic products provide a transition between aluminium and copper sides where the selected product is designed for that application. The catalogue includes DBL and DCACF families.

11.1 Installation workflow



1. **Identify the aluminium side:** match the aluminium conductor size to the catalogue.
2. **Identify the copper side:** match the copper conductor size to the catalogue.
3. **Confirm orientation:** do not reverse the intended material side.
4. **Prepare both conductors:** use the appropriate preparation for each material.
5. **Insert to full depth:** verify both sides before crimping.
6. **Crimp each side:** use the approved tool/die for that side and product.
7. **Inspect the transition:** look for cracks, distortion or damage at the transition joint.
8. **Connect to equipment:** use the specified palm/interface and avoid mechanical strain.

DCACF example	Aluminium mm^2	Copper mm^2	ØA	ØA-1	J
DCACF-16-16	16	16	5.5	5.6	88
DCACF-25-16	25	16	6.5	5.6	88
DCACF-35-35	35	35	8.0	8.0	88
DCACF-50-50	50	50	9.0	9.5	88
DCACF-70-70	70	70	11.0	11.0	90
DCACF-95-95	95	95	12.5	13.0	90

SOURCE: The DCACF values above are taken from catalogue page 29. Other DCACF combinations are listed in the catalogue; always use the exact row for the required combination.

Smaller terminals are used where the cable interfaces with studs, screws, terminal blocks or equipment points. The catalogue separates non-insulated, insulated and pre-insulated families.

12.1 Terminal choice

Terminal type	Selection principle	Typical check
Ring	Closed tongue around a stud/screw.	Hole size, conductor size and palm orientation.
Fork	Open fork around a stud/screw.	Correct hole width and secure seating after tightening.
Pin	Pin-shaped interface for a compatible terminal point.	Pin dimensions and conductor size.
Insulated	Insulation sleeve integrated around the terminal barrel.	Correct conductor size and insulation fit.
Pre-insulated	Factory-insulated terminal family with the catalogue's listed dimensions.	Correct code, conductor size and insulation support.

12.2 Installation













1. Select exact terminal: match conductor size and the required interface.

2. Strip cleanly: expose only the conductor length required by the terminal.

3. Insert fully: keep conductor strands together.

4. Crimp: use the approved terminal crimping method.

5. Inspect insulation support: for insulated/pre-insulated terminals, confirm the sleeve is not cracked or displaced.

6. Fit to equipment: seat the ring/fork/pin correctly and apply the specified fastening method.

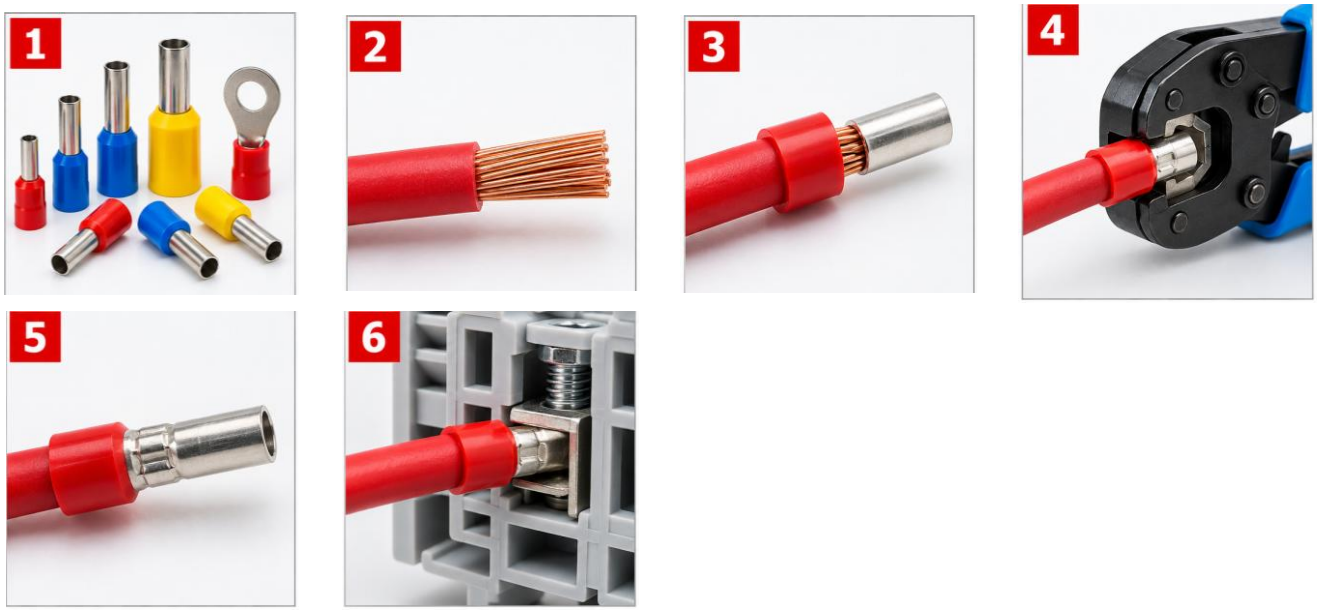
SMALL TERMINALS: For small conductors, even one damaged strand can materially change the effective conductor area. Do not nick, cut or remove strands during preparation.

FERRULES & END-SEALING FERRULES

Ferrules improve the termination of fine-stranded conductors in compatible terminal blocks and equipment. The catalogue includes DEHI ferrule families and DEH end-sealing ferrules.



13.1 Ferrule workflow



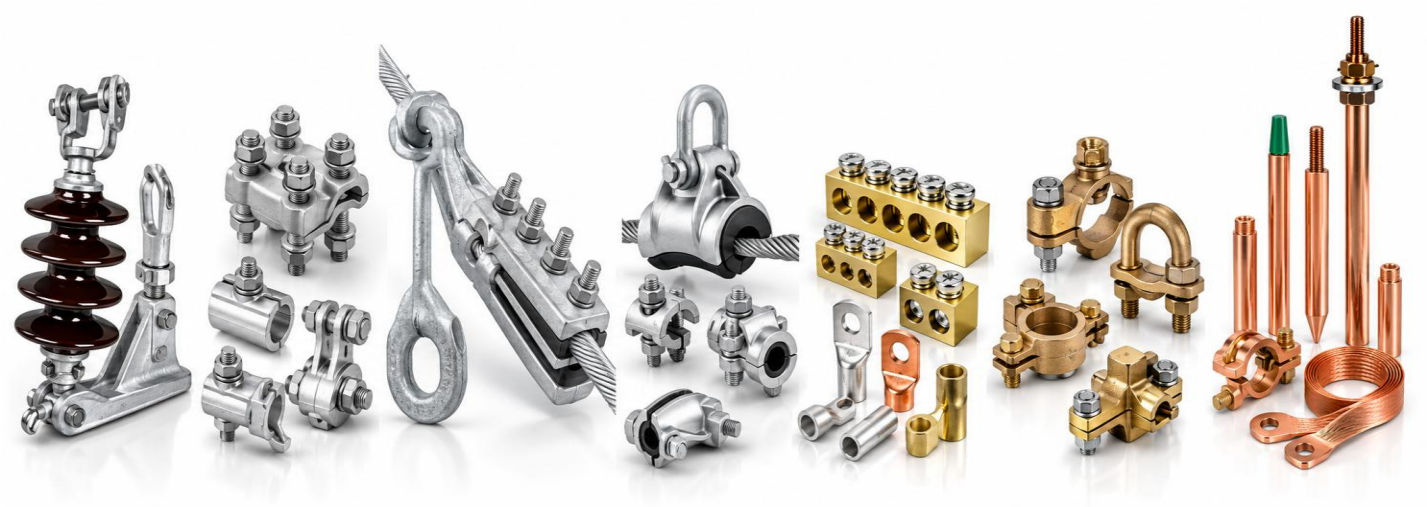
1. **Select ferrule:** match conductor cross-section and barrel dimensions.
2. **Strip conductor:** use a clean, square strip without damaging strands.
3. **Insert:** push all strands fully into the ferrule barrel.
4. **Crimp:** use the correct ferrule crimping tool/die.
5. **Inspect:** confirm no loose strands and that the insulation support is correctly positioned.
6. **Terminate:** insert into the terminal block/device and apply its specified clamping method.

DEHI example	Size mm²	ØA	ØC	J	J-1
DEHI-508	0.5	1.0	1.4	6.0	12.0
DEHI-509	0.75	1.4	1.8	6.0	12.0
DEHI-510	1.0	1.6	2.0	6.0	12.0
DEHI-512	1.5	1.8	2.2	7.0	13.0
DEHI-514	2.5	2.3	2.7	7.0	13.0
DEHI-516	4.0	2.8	3.2	9.0	16.0
DEHI-518	6.0	3.7	4.1	10.0	18.0
DEHI-521	10.0	4.6	5.0	12.0	22.0

SOURCE: Representative ferrule dimensions above are from catalogue page 32. The exact product row controls.

SINGLE COMPRESSION CABLE GLANDS

Single compression glands are selected from the cable's overall diameter and the gland's catalogue range. The DEWCONECT DSC family on catalogue page 30 provides suitable overall OD ranges for each gland size.



14.1 Component sequence

- Check nut / locknut as applicable.
- Gland body.
- Metal washer where provided.
- Sealing ring.
- Compression ring.
- Entry/thread interface to the enclosure.

14.2 Installation workflow



1. **Measure cable OD:** use the actual finished cable, not a nominal cable size.
2. **Select gland:** choose the DSC code whose suitable overall OD range contains the measured cable OD.
3. **Prepare cable:** remove outer covering only as required for the gland design.
4. **Fit gland components:** assemble in the catalogue's intended order.
5. **Insert cable:** ensure the cable passes through the gland without damaging the seal.
6. **Tighten:** use the approved gland assembly method; do not invent a torque.
7. **Inspect seal:** check that the cable is retained and the seal is uniformly engaged.

DSC code	Suitable overall OD (mm)	Thread/size family
DSC-3/8"	06.0–12.5	3/8"
DSC-1/2"	12.6–14.0	1/2"
DSC-3/4"	15.6–16.5	3/4"
DSC-1"	19.1–22.0	1"
DSC-1.1/2"	34.6–38.5	1.1/2"
DSC-2"	43.6–50.5	2"
DSC-3"	68.1–74.0	3"
DSC-4"	87.1–100.0	4"

SELECTION RULE: The catalogue's suitable OD range is part of the product selection. Do not select the gland from thread size alone.

The catalogue page 31 provides a heavy-duty gland family with defined suitable overall OD ranges and component descriptions. The assembly contains a gland body, check nut, washers, sealing ring and compression ring as listed.

15.1 Catalogue component set

Particular	Material	Nos. per listed assembly
Check nut	Brass	1
Gland body	Brass	1
Metal washer	M.S.	3
Sealing ring	Natural	1
Compression ring	Brass	1

15.2 Installation workflow

1. Match OD: select the gland from the catalogue's suitable overall OD range.

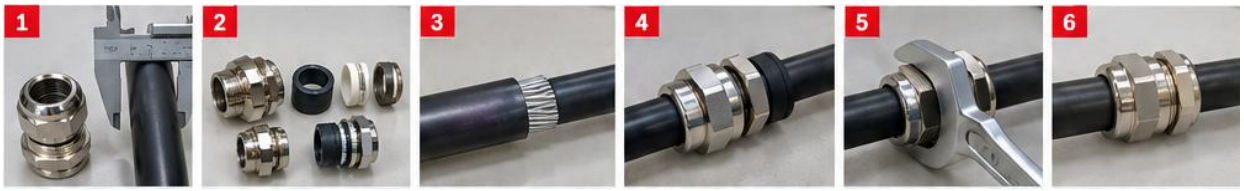
2. Check components: confirm all required parts are present and undamaged.

3. Prepare cable: prepare the outer cable surface according to the gland design.

4. Assemble in order: fit gland parts without cross-threading or trapping the seal.

5. Compress the seal: tighten using the approved gland method until the seal is correctly engaged.

6. Inspect retention: confirm the cable cannot move excessively and the seal is not cut or extruded abnormally.



DO NOT OVER-TIGHTEN: Excessive tightening can damage a sealing ring or distort the assembly. Use the product's approved tightening guidance where specified.

DOUBLE COMPRESSION GLANDS — ARMOURED CABLE

The DEWCONECT DDBW and DDBF families on catalogue pages 33–34 are shown for armoured cable applications, with weather-proof and flame-proof families respectively. The exact cable OD range and entry size must be matched to the catalogue row.

16.1 Typical component logic

- Outer body / gland body.
- Compression and sealing system.
- Armour clamping arrangement.
- Earth/bonding path where required.
- Locknut/washer/earth tag or related accessories as specified.
- Shroud where required for the installation.

16.2 Armoured cable workflow

1. **Identify cable construction:** confirm armour type and overall diameter.
2. **Select exact gland:** match the suitable OD range and entry/thread.
3. **Measure and mark:** use the approved armour-strip dimension for the exact gland/cable.
4. **Prepare armour:** expose and arrange armour evenly without damaging the cable core insulation.
5. **Install gland body:** position the cable through the body and seal system.
6. **Engage armour:** bring armour into the designed clamping path.
7. **Tighten and seal:** complete the assembly using the approved method.
8. **Bond/earth:** where the installation requires it, verify the armour/earth path is continuous.
9. **Fit shroud:** if specified, install the correct size without obstructing the gland or seal.



Family	Catalogue pages	Key selection
DDBW	33	Weather-proof armoured gland; exact suitable OD + entry.
DDBF	34	Flame-proof armoured gland; exact suitable OD + entry and application requirements.

FLAMEPROOF NOTE: A flameproof gland is not simply a stronger weatherproof gland. Use it only when the equipment/cable system and applicable certification or hazardous-area requirements call for that specific product.

The DDBW(UN) family on catalogue page 35 is listed for unarmoured cable with suitable overall diameter ranges. The gland family must not be interchanged with the armoured version merely because the nominal thread looks similar.

Catalogue example	Suitable OD (mm)	Entry	D
DDBW-01SS(UN)	0.6–12.5	3/4"	15
DDBW-01S(UN)	12.6–14.0	3/4"	15
DDBW-01A(UN)	14.1–17.0	1"	15
DDBW-02(UN)	17.1–19.0	1"	15
DDBW-03SP(UN)	19.1–22.0	28 mm	15
DDBW-04A(UN)	22.1–25.0	1.1/4"	15
DDBW-05A(UN)	25.1–29.0	1.1/2"	15
DDBW-08(UN)	35.1–40.0	2"	15
DDBW-010A(UN)	43.1–51.0	2.1/2"	20
DDBW-015(UN)	79.1–89.0	4"	20

17.1 Installation workflow

1. **Measure the finished cable OD:** select the exact DDBW(UN) row.
2. **Prepare the cable:** remove only the covering required by the gland design.
3. **Assemble sealing components:** keep seals clean and correctly oriented.
4. **Insert the cable:** ensure the cable passes smoothly and is not forcing the seal sideways.
5. **Compress:** tighten the gland using the approved procedure.
6. **Inspect:** verify retention, seal engagement and enclosure interface.



SHROUDS, EARTH TAGS, EARTHING & GROUNDING

The catalogue includes shrouds, earth tags and grounding-related accessories. These parts are important for protection, bonding, mechanical coverage and installation completeness.

18.1 Shrouds

- Select shroud size from the actual gland/termination OD and catalogue family.
- Install after the gland/termination is correctly completed.
- Ensure the shroud does not distort seals or obstruct the gland interface.
- The catalogue page 37 gives shroud OD and length examples with specified tolerances.

18.2 Earth tags

- Use where the installation design requires an earth/bonding connection at the gland.
- Confirm the tag is properly seated and the bonding path is mechanically secure.
- Keep the contact surfaces clean and free from insulating debris.

18.3 Grounding / bonding checks

1. **Identify the bonding path:** equipment body, gland, armour/earth conductor and earth bar as applicable.
2. **Check mechanical integrity:** all interfaces must be physically secure.
3. **Check electrical continuity:** use the project's approved continuity/earth-bond test method.
4. **Protect the connection:** install shrouds or protective components where specified.



IMPORTANT: An earth tag or bonding accessory is not a substitute for the complete earthing design. Follow the project earthing drawing and applicable electrical requirements.

The supplied catalogue also contains grounding and transmission-line hardware sections. These products have different mechanical functions from cable lugs and should be installed according to the approved line/hardware arrangement.

19.1 Hardware installation principles

- Confirm the exact hardware type and line application before installation.
- Inspect clamps, hooks, fittings and interfaces for damage or deformation.
- Ensure the hardware orientation matches the approved arrangement.
- Use the specified fasteners and tightening method; do not substitute hardware based only on appearance.
- Check mechanical seating and clearance before energization or service.

SCOPE LIMIT: The cable-termination procedures in this guide do not define installation loads, sag/tension values, tower design loads or line-specific mechanical calculations. Those must come from the approved transmission-line design.

Inspection should be performed at three stages: before installation, during installation and after completion. The exact electrical tests depend on the project and equipment.

20.1 Visual inspection

- Correct catalogue number and conductor size.
- Correct bolt hole, palm or thread interface.
- Conductor fully inserted.
- No exposed loose strands.
- No insulation damage outside the approved preparation area.
- Crimp is complete and free from visible cracks or severe distortion.
- Gland seal is seated and cable retention is satisfactory.
- Earth/bonding accessories are correctly fitted where required.

20.2 Mechanical verification

- Fasteners tightened to the approved equipment/product requirement.
- Connector is not carrying an unintended cable bending load.
- Cable is supported so the termination is not used as a structural support unless specifically designed for it.
- Gland is firmly retained in the enclosure and does not rotate excessively.

20.3 Electrical verification

- Continuity testing where required.
- Earth/bond continuity where required.
- Insulation resistance or other commissioning tests as specified by the project.
- Additional testing for medium/high-voltage accessories must follow the approved test procedure and applicable standard.

STANDARD CONTEXT: IEC 61238-1-1:2018 covers test methods and requirements for compression/mechanical connectors on power cables up to 1 kV tested on non-insulated conductors. IEC 61238-1-3:2018 covers above 1 kV up to 30 kV on non-insulated conductors. These standards are test/requirements references; they do not replace the exact DEWCONECT installation instruction.

Use this section when a completed termination does not look, fit or test as expected. Do not attempt to hide a non-conforming termination; stop, identify the cause and rework using the approved method.

21.1 Troubleshooting table

Observed condition	Likely installation issue	Action
Conductor will not fully enter	Wrong size, wrong strip length, damaged strands or debris.	Stop; verify code/size and re-prepare correctly.
Lug palm does not align	Wrong bolt-hole version or cable orientation.	Verify exact catalogue number; do not enlarge the hole.
Crimp looks uneven	Wrong die position, tool issue or conductor not centered.	Stop; inspect tooling and connector; rework only per approved method.
Insulation is trapped in barrel	Over-strip/under-strip or poor insertion control.	Reject/rework; conductor barrel must receive the intended conductor section.
Gland does not seal	Wrong OD range, wrong gland family or incorrect assembly.	Check actual cable OD and exact catalogue row.
Armour not clamped correctly	Incorrect preparation or wrong gland family.	Stop; verify cable construction and gland instructions.
Seal damaged	Over-tightening, contamination or wrong OD.	Replace affected sealing component and reassemble correctly.
Continuity/earth test fails	Poor contact, incomplete crimp or bonding path issue.	Isolate, inspect the full connection path and correct the cause.

NON-CONFORMANCE: A termination that has been incorrectly crimped should not be 're-crimped until it looks right' unless the approved procedure specifically permits rework. Replace/rework according to the documented method.

The following tables provide selected catalogue-derived reference values. They are intentionally representative rather than a replacement for the 48-page catalogue. The exact catalogue row remains controlling.

22.1 Copper tube terminal examples

Cat. No.	Size mm²	Bolt	ØA	ØC	D	J
DCUS-05	2.5	M5	2.0	3.7	9	20
DCUS-10	25	M6	7.0	9.0	13	37
DCUS-17	70	M10	11.6	13.8	20	56
DCUS-20	95	M12	12.8	15.6	23	58
DCUS-23	120	M16	14.8	17.8	26	62
DCUS-29	240	M16	22.0	26.0	35	97
DCUS-31	300	M16	24.0	28.7	42	103
DCUS-34	500	M20	30.0	36.0	53	120
DCUS-35	630	M20	35.0	41.5	61	137

22.2 Aluminum examples

Cat. No.	Size mm²	Bolt	ØA	ØC	D	J
DALS-151	2.5	M3	2.0	5.5	7	18
DALS-214	10	M6	4.4	7.4	10	30
DALS-218	25	M8	7.0	10.0	14	44
DALS-256	70	M8	11.6	16.0	22	60
DALS-227	95	M10	12.9	17.1	25	64
DALS-257	120	M10	14.8	19.6	28	73
DALS-236	240	M12	22.0	28.0	40	102
DALS-300	300	M16	24.0	31.0	45.7	115
DALS-260	400	M20	28.0	36.0	51	130

22.3 DIN 46235 examples

Cat. No.	Size mm²	Bolt	ØA	ØC	D	J
DIN 6-5	6	M5	3.8	5.5	9	30.5
DIN 16-8	16	M8	5.5	8.5	13	46.0
DIN 25-10	25	M10	7.0	10.0	17	50.0
DIN 50-16	50	M16	10.0	14.5	28	68.0
DIN 95-16	95	M16	13.5	19.0	32	81.0
DIN 120-20	120	M20	15.5	21.0	32	91.0
DIN 240-20	240	M20	21.5	29.0	42	113.0
DIN 400-20	400	M20	27.5	38.5	55	140.0
DIN 800-20	800	M20	40.0	52.0	75	195.0
DIN 1000-21	1000	M21	44.0	58.0	85	190.0

CATALOGUE TOLERANCE: The supplied catalogue states ±5% unless otherwise specified, and all dimensions are in mm. Gland pages use their own stated tolerance conventions such as ±2 mm for selected OD/length data.

These checklists are designed for printing or completing electronically in Word. Each checkbox is editable text and can be replaced with a tick mark or site form control.

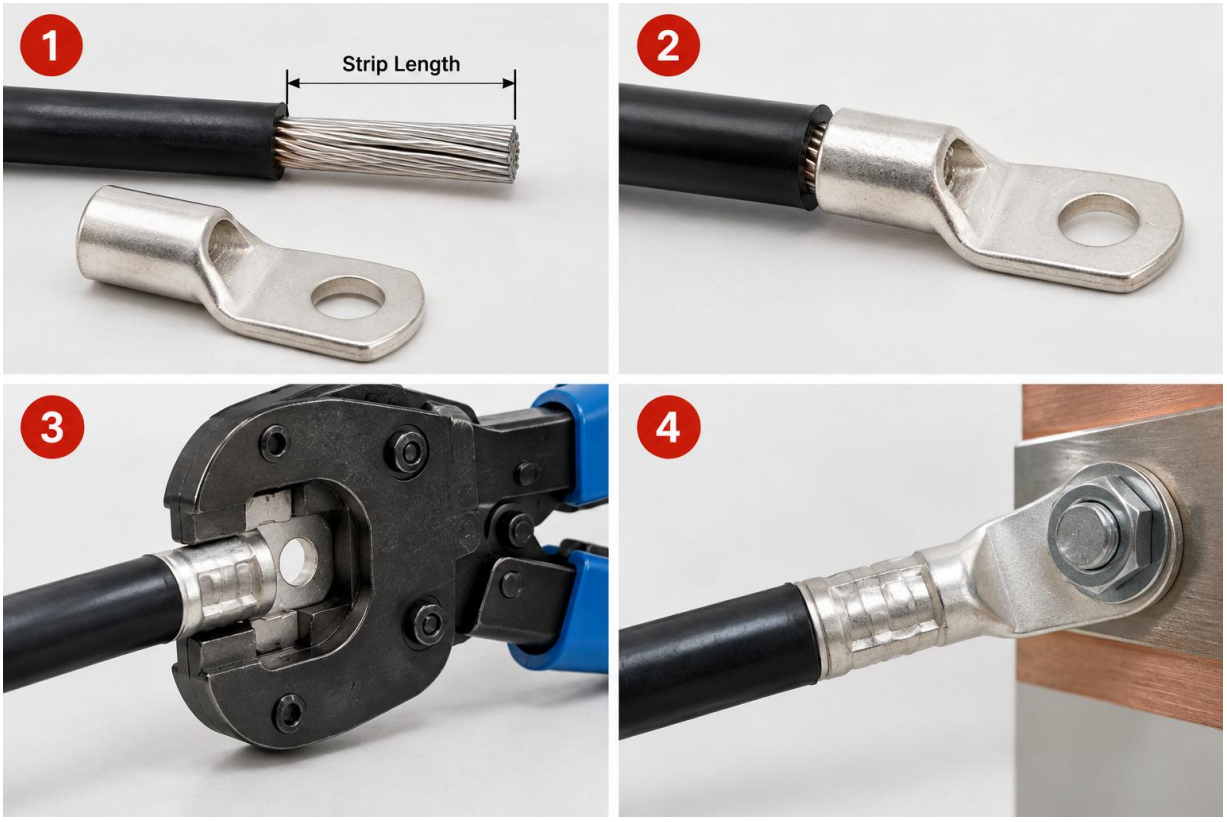
23.1 pre-installation checklist

- ☐ Correct work order/drawing reviewed.
- ☐ Correct cable identified.
- ☐ Conductor material and size confirmed.
- ☐ Exact DEWCONECT catalogue number confirmed.
- ☐ Bolt hole / terminal interface confirmed.
- ☐ For glands: armoured/unarmoured construction confirmed.
- ☐ Actual cable OD measured where required.
- ☐ Correct tool/die available.
- ☐ Product and components inspected.
- ☐ Safety isolation and PPE requirements completed.

23.2 Installation checklist

- ☐ Cable preparation dimension confirmed.
- ☐ Insulation removed without conductor damage.
- ☐ Conductor fully inserted.
- ☐ Correct crimping method used.
- ☐ Crimp visually acceptable.
- ☐ Lug/terminal seated correctly.
- ☐ Gland components installed in correct order.
- ☐ Seal engaged and cable retained.
- ☐ Earth/bonding path installed where required.
- ☐ Shroud fitted where specified.

23.3 Final acceptance checklist



- ☐ Visual inspection passed.
- ☐ Mechanical inspection passed.
- ☐ Continuity/earth test completed where required.
- ☐ Electrical commissioning tests completed where required.
- ☐ non-conformances closed.
- ☐ Installation record completed.
- ☐ Product code and batch/traceability information recorded where required.

TECHNICAL NOTES, STANDARDS CONTEXT & SOURCE BASIS

This final section separates what is directly derived from the supplied DEWCONECT catalogue from broader installation principles used to explain the workflow.

24.1 Primary source: DEWCONECT catalogue

- Supplied DEWCONECT catalogue: 48 pages.
- Catalogue pages 4–12: copper terminal/connector families and DIN 46235 families.
- Catalogue pages 13–18: aluminium and XLPE-related families.
- Catalogue pages 19–29: bi-metallic, insulated/pre-insulated, ring/fork/pin and related terminal families.
- Catalogue page 30: DSC single compression cable glands.
- Catalogue page 31: heavy-duty/SIBG gland family and listed components.
- Catalogue page 32: ferrules.
- Catalogue pages 33–34: DDBW/DDBF double-compression gland families.
- Catalogue page 35: DDBW unarmoured family.
- Catalogue page 37: shrouds.
- Catalogue page 38: earth tags.
- Catalogue page 39: DC gland family.

24.2 Standards context

- IEC 61238-1-1:2018 — compression and mechanical connectors for power cables up to 1 kV (Um = 1.2 kV) tested on non-insulated conductors.
- IEC 61238-1-2:2018 — insulation-piercing connectors for power cables up to 1 kV tested on insulated conductors.
- IEC 61238-1-3:2018 — compression and mechanical connectors for power cables above 1 kV up to 30 kV (Um = 36 kV) tested on non-insulated conductors.
- IEC 60502-4:2023 — test requirements for accessories for certain extruded-insulation power cable applications from 6 kV up to 30 kV.
- These standards provide test/requirements context. They do not establish a universal crimp count, stripping length, gland tightening torque or installation sequence for every DEWCONECT product.

24.3 Technical limitations

- Where the supplied catalogue does not publish a value, this guide does not invent one.
- Crimp count, die identification, stripping dimensions, tightening torque and special installation tooling must come from the exact approved product/tool instruction when required.
- Product photographs/illustrations in this guide are AI-generated or illustrative and must not be used as dimensional drawings.
- Catalogue prices are intentionally excluded from this installation guide.
- Always use the latest approved catalogue, drawing and project documentation at the time of installation.

FINAL RULE: If you are unsure about a product size, conductor preparation, crimping method, gland selection or equipment interface: STOP. Verify the exact DEWCONECT catalogue number and approved installation instruction before proceeding.



For enquiries, product information and business opportunities, visit our website: www.dewconect.com