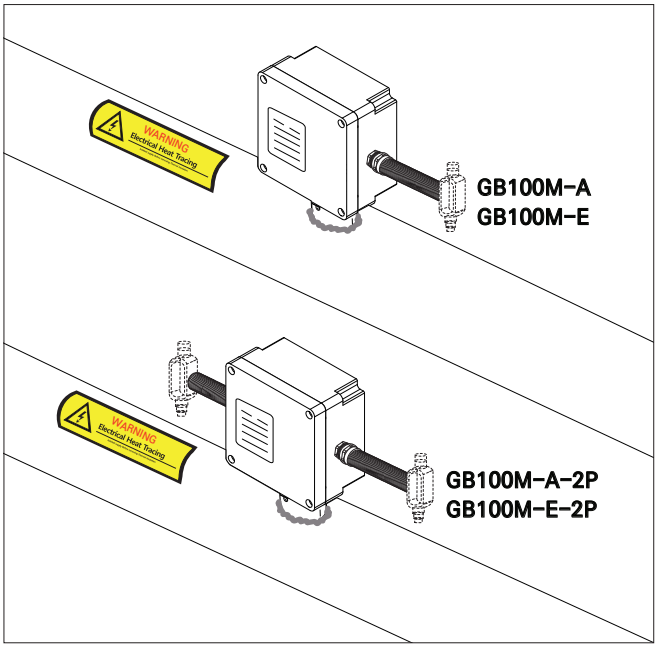
Gaumer Connection Kits
Installation Instructions

GB100M-A(-E) and GB100M-A(-E)-2P

Power Connection Kits with Junction Box for Multiple Heating Cables.



Description

· GB100M Series is an above-insulation power connection kit for use with GAUMER GHT-CR, GHT-CT, GHU-CT and GHK-CT self-regulating heating cables.

■ GB100M-A(or GB100M-E) has one 3/4"(or M25) through hole for 3/4"(or M25) conduit and fittings to connect power to a maximum of three heating cables.
■ GB100M-A-2P(or GB100M-E-2P) has two 3/4"(or M25) through-holes for 3/4"(or M25) conduit and fittings to connect dual power to two heating cables.

· GB100M-A(or GB100M-E) can be used for splice, tee, and end termination if the through hole is blocked with a sealing plug kit.

· GB100M Series employs terminal blocks that accommodate a maximum conductor size of 8AWG(10 mm^2)* for fine-stranded conductors.

* If a maximum conductor size of 6AWG(16 mm^2) is required, please contact Gaumer Process for larger terminal blocks.

Approvals

『 GB100M-A and GB100M-A-2P 』

FM24US0113X, FM24CA0042X
Hazardous (classified) locations, indoors and outdoors
Class I, Division 2, Groups A, B, C and D T*;
Class II/III, Division 2, Groups E, F and G T*;
Class I, Zone 1, AEx/Ex eb IIC T* Gb;
Zone 21, AEx/Ex tb IIIC T* °C Db;
Type 4X, IP66
Ta = -40°C to +55°C

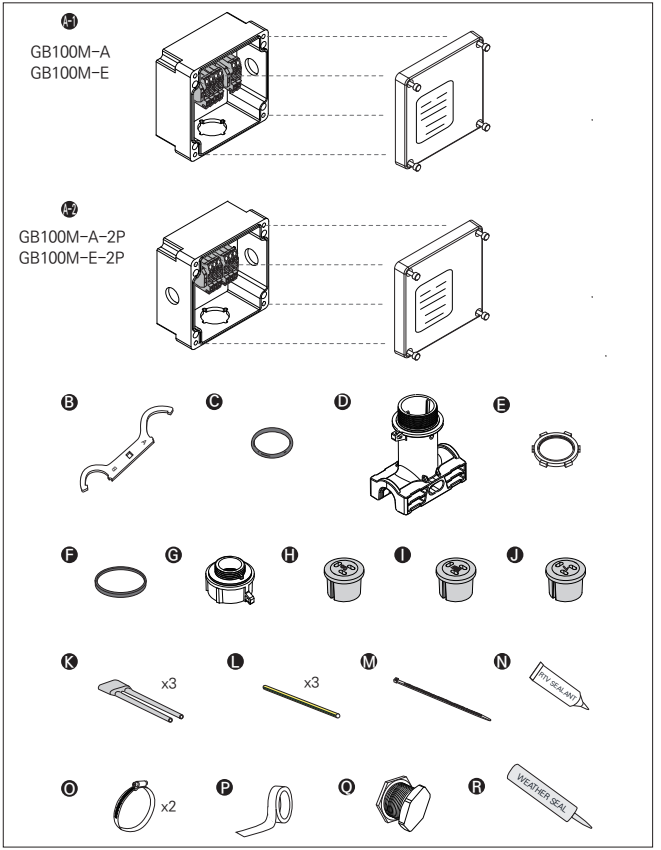
『 GB100M -E and GB100M-E-2P 』

FM24ATEX0018X CE 2813
Ex II 2 G Ex eb IIC T* Gb;
Ex II 2 D Ex tb IIIC T*°C Db;
Ta = -40°C to +55°C IP66

IECEx FMG 24.0017X
Ex eb IIC T* Gb;
Ex tb IIIC T*°C Db

· T* = For T-rating, please refer to cable documentation.

Kit Contents



Item	Description	Qty.
A–1	GB100M–A(–E) Junction Box Assembly	1
A–2	GB100M–A(–E)–2P Junction Box Assembly	
B	Wrench	1
C	Stand O–ring	1
D	Pipe Stand	1
E	Lock Nut	1
F	Square–Ring for Compression Cap	1
G	Compression Cap	1
H	S Grommet for GHU–CT, GHT–CT	1
I	M Grommet for GHT–CR	1
J	L Grommet for GHK–CT	1
K	Core Sealer	3
L	Insulation Tube (Y/G)	3
M	Cable Tie	1
N	RTV Sealant	1
O	Pipe Strap (Sold Separately)	2
P	Fixing Tape (Sold Separately)	1
Q	Sealing Plug (Sold Separately)	1
R	Weather Seal (Sold Separately)	1

Tools Required

- Wire cutters
- Marking pen
- Adjustable pliers
- Needle nose pliers
- Utillity knife
- Large slotted screwdriver
- 3/16" (or 5mm) hex key

Additional Materials Required

- Sealing Plug Kit if GB100M-A / GB100M-E is used for splice, tee, and end termination.

- Pipe Straps

Model	Pipe Size	Unit Qty.
GPS-SS02	Up to 2" Outer Diameter	2ea / bag
GPS-SS05	2" to 5" Outer Diameter	2ea / bag
GPS-SS10	5" to 10" Outer Diameter	2ea / bag
GPS-SS18	10" to 18" Outer Diameter	2ea / bag
GPS-SS24	18" to 24" Outer Diameter	2ea / bag

- Small Pipe Adapter

  For installation on small pipes (≤ 1" or 25mm diameter), contact Gaumer Process for small pipe adapter, GSPA.

- Fixing Tapes
  - GFT-L98 : Fiberglass Tape low temp; 1/2" * 98ft (30m)
  - GFT-H98 : Fiberglass Tape high temp; 1/2" * 98ft (30m)
  - GAT2/3-L164 : Aluminum tape low temp; 2" or 3" * 164ft (50m)

- Pipe Stand Extension
  For installation with insulation thicker than 3" (76mm), or on very hot pipe, contact Gaumer Process for pipe stand extension, GPSE.

User Provided Materials

- Weather seal, Conduit, fittings and conduit drain

CAUTION

- The minimum installation temperature is −40˚F (−40˚C). For more convenient installation, we recommend performing the installation at a temperature above freezing. Store the kit at a temperature above freezing until installation.

WARNING

- Gaumer heat-tracing systems must be installed correctly to ensure proper operation and to prevent shocks and fires. Pay attention to warnings and carefully follow applicable installation instructions.
- For two or more heating cables powered by a single circuit, the total length of all heating cables should not exceed the maximum circuit length allowed in the chart published in the Gaumer self-regulating heating cables datasheets or design guide. Additionally, the total current of all heating cables should not surpass 80% of the circuit breaker rating.
- **Electrical Shock or Fire Hazard :** Follow Gaumer requirements and comply with NEC, CEC, and all relevant local codes. **Ground-fault equipment protection** set at 30 mA must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit breakers.
  For GB100M-A(-E) Only : Remove L1 and L2 jumpers on the terminal blocks when used as an end termination for two heating cables.
- Use wire rated for a temperature of at least 80˚C, which is 5˚C above the rated service temperature.
- The approvals and performance of the heat tracing systems are based exclusively on the use of Gaumer specified parts. It is imperative that parts are not substituted and electrical tape is not used.
- Damaged bus wires have the potential to overheat or cause short circuits. When scoring the jacket or core, it is essential to avoid breaking the bus wire strands.
- Both components and cable ends must be kept dry before

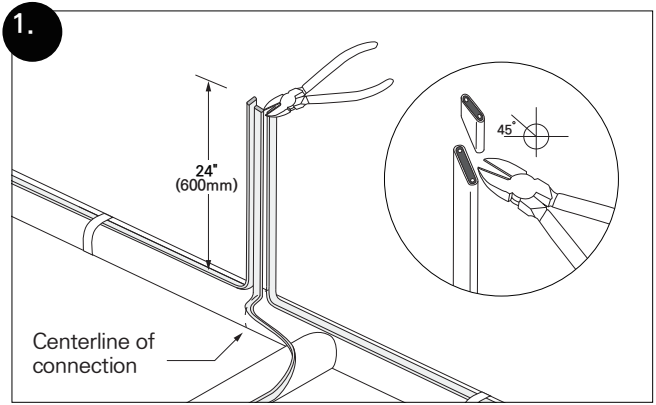
and throughout the installation process.

- The potential for bus wires to overheat or short circuit exists if the bus wire strands are broken while preparing the cable for connection. Reuse of grommets or use of the wrong grommet can result in leaks, cracked components, shocks, or fires. Ensure the type or opening size of grommet is correct for the heating cable being installed. A new grommet is recommended whenever the cable has been pulled out of the component.
- Before and during installation or servicing, all power circuits must be de-energized.
- Read the MSDS for RTV and components carefully.
- Use thermal insulation and attachment tape suitable for the specific application and heat-tracing temperature. Do not secure heating cables with metal straps or wire, as this may damage the cables.

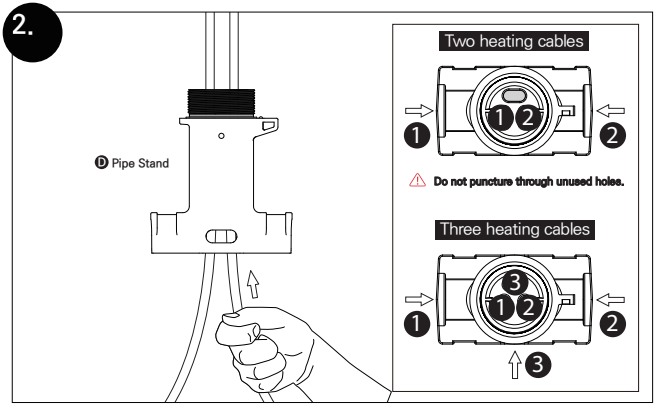
Specific Conditions of Use

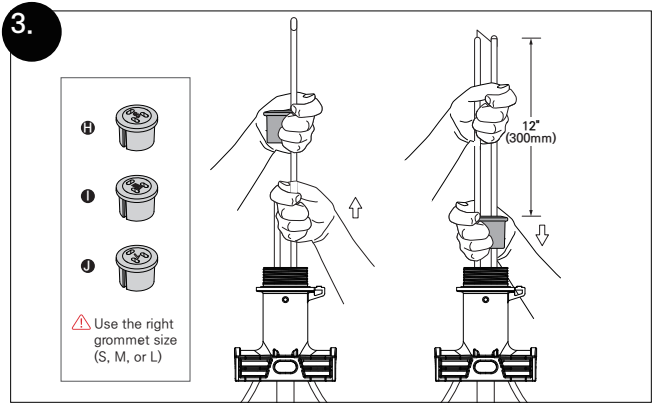
- Gaumer GB100M Series Connection Kits must be installed using Gaumer GHT, GHU, GHK Series Heating Cables.
- Refer to the installation instructions to reduce the potential of an electrostatic charging hazard on the enclosures of the connection kits.
- The end-user shall mount the equipment per Gaumer instructions.
- To use this kit for splice or tee connections, or end termination, Gaumer Sealing Plug kit must be purchased separately.

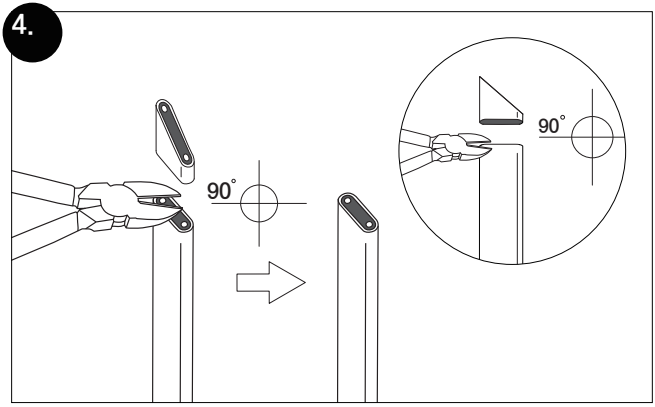
1.


24"
(600mm)
45°
Centerline of
connection

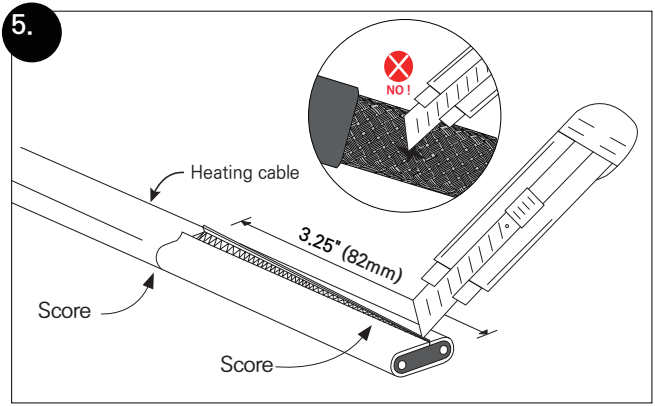
2.


Pipe Stand
Two heating cables
1
2
1
2
Do not puncture through unused holes.
Three heating cables
3
1
2
1
2
3

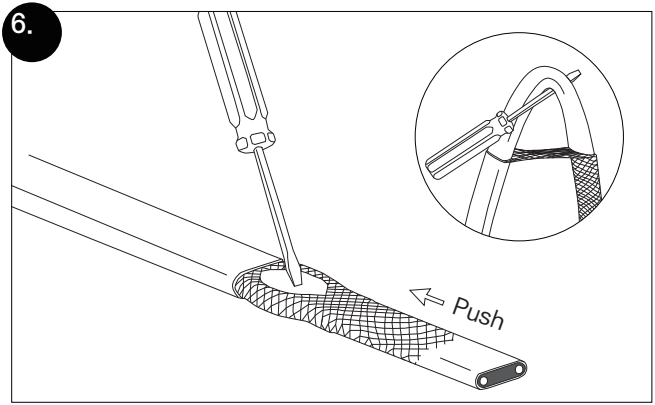

3.
H
I
J
⚠ Use the right grommet size (S, M, or L)
12"
(300mm)


4.
90°
90°

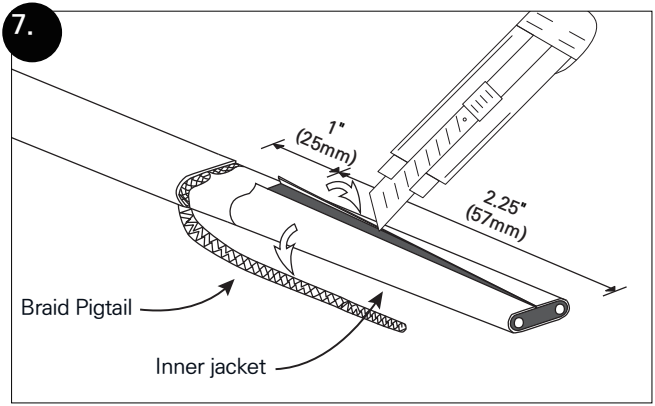
5.



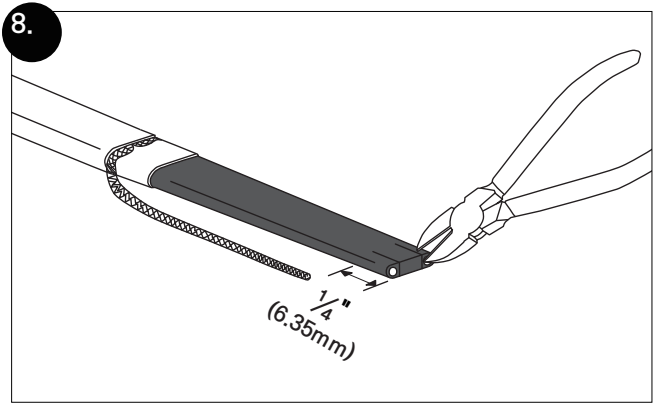
6.



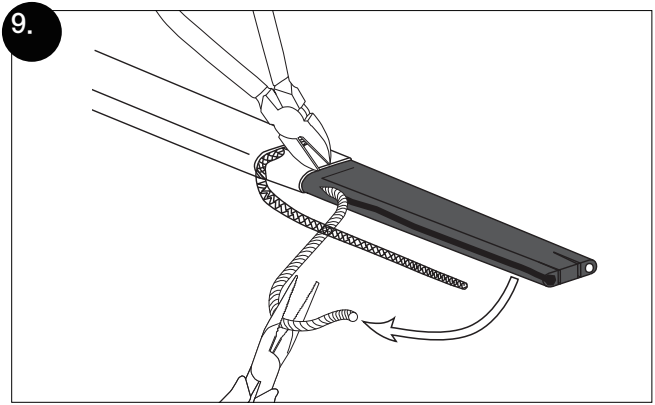
7.



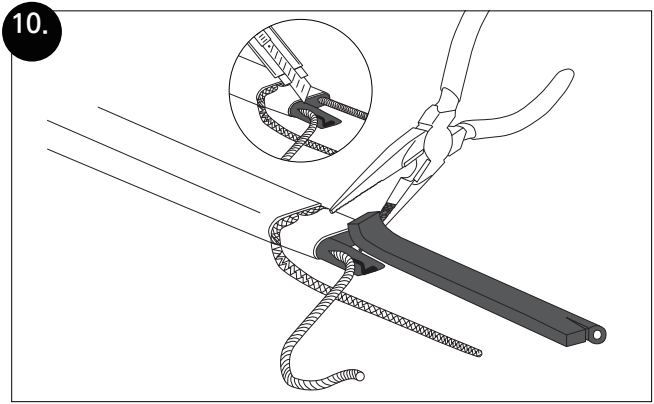
8.



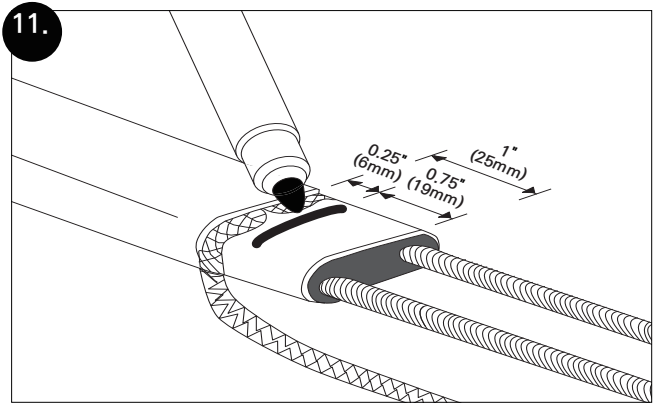
9.



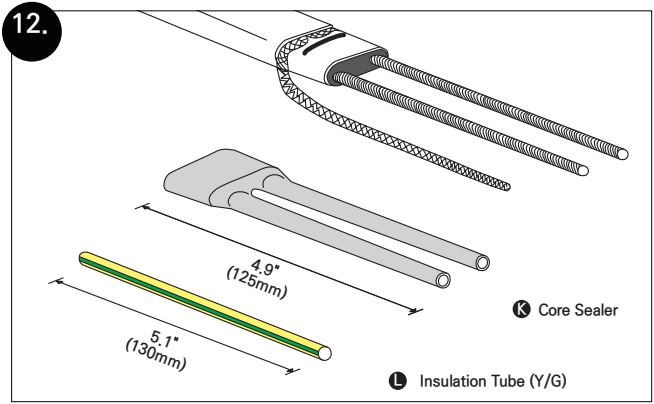
10.



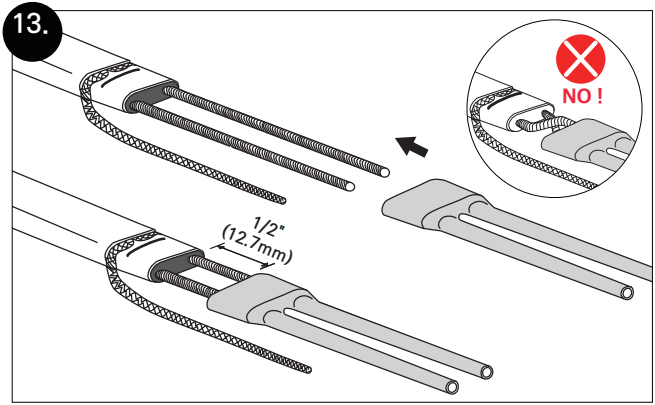
11.


0.25"
(6mm)
0.75"
(19mm)
1"
(25mm)

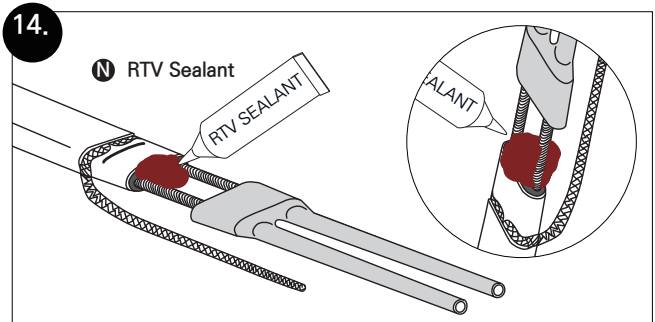
12.


4.9"
(125mm)
5.1"
(130mm)
K Core Sealer
L Insulation Tube (Y/G)

13.

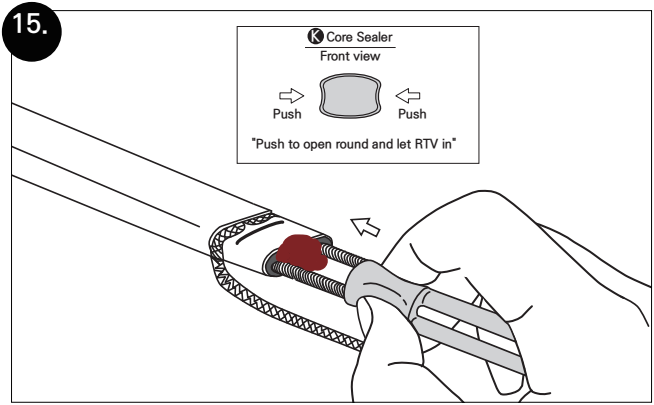


14.

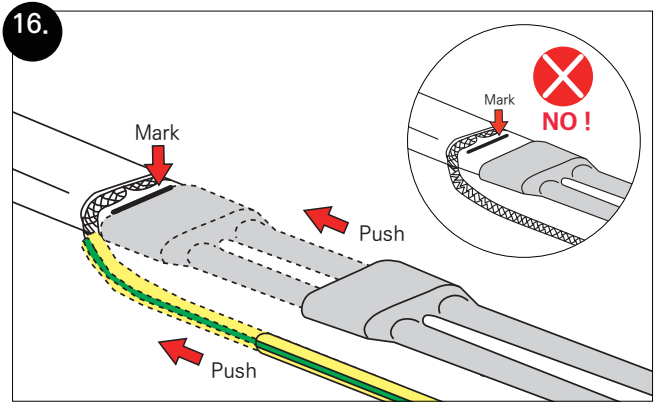


Apply extra RTV for GHU-CT due to its smaller dimensions to ensure proper sealing.

15.

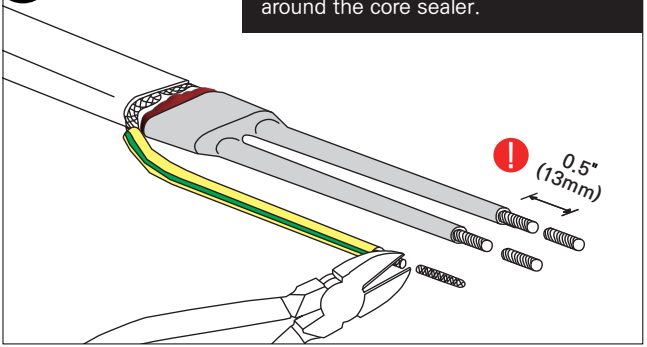

K Core Sealer
Front view
Push
Push
"Push to open round and let RTV in"

16.

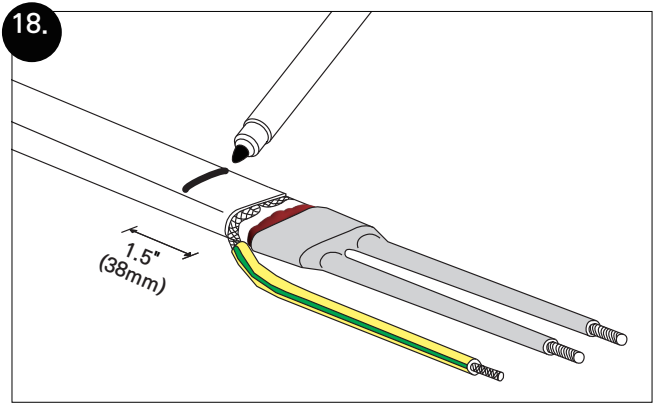

Mark
Push
Push
Mark
NO !

17.

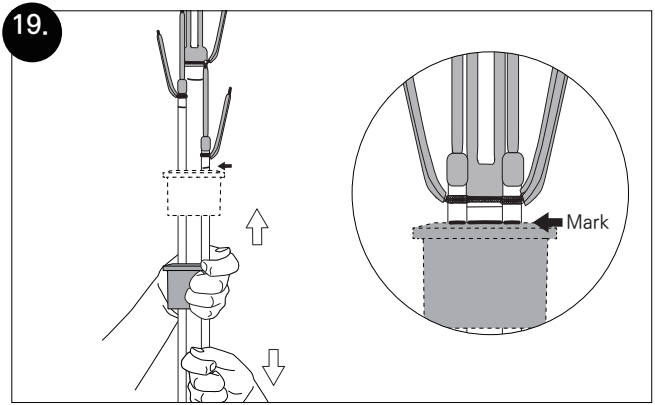
NOTE : RTV adhesive should ooze out around the core sealer.



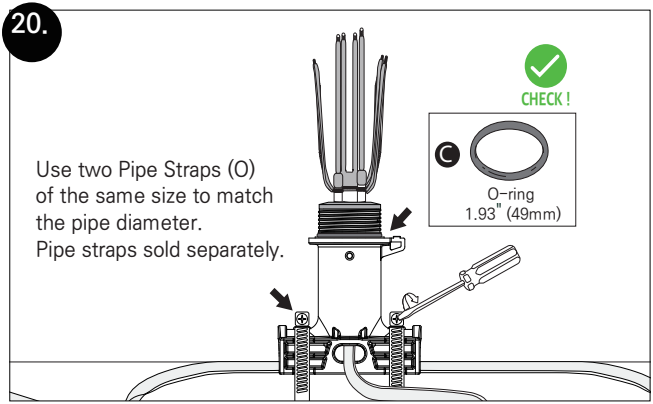
18.



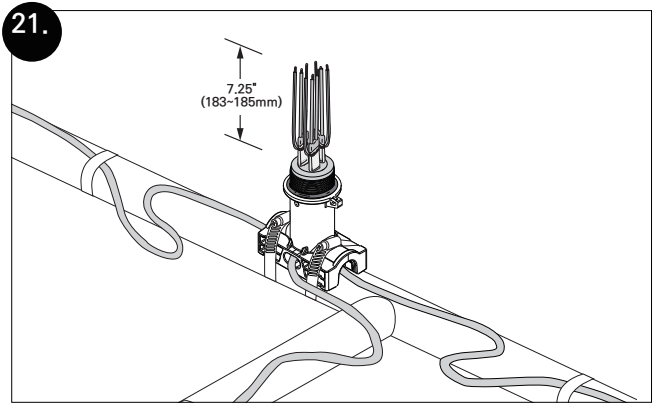
19.


Mark

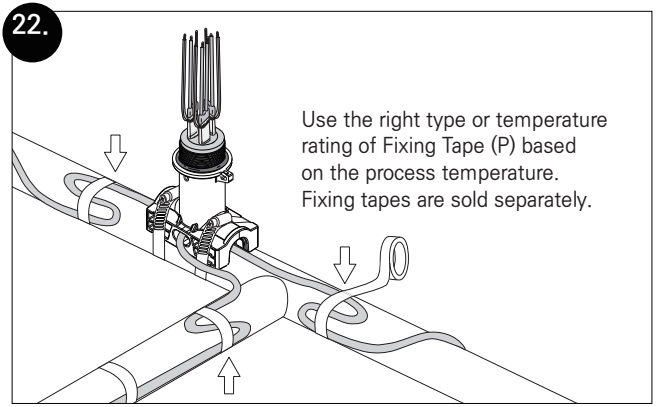
20.


Use two Pipe Straps (O)
of the same size to match
the pipe diameter.
Pipe straps sold separately.
CHECK !
C
O-ring
1.93" (49mm)

21.

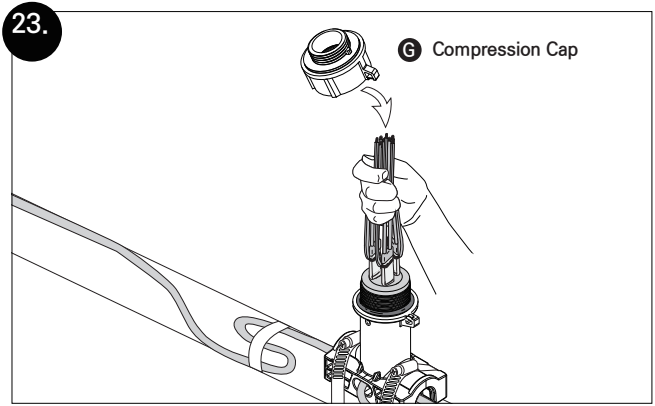


22.

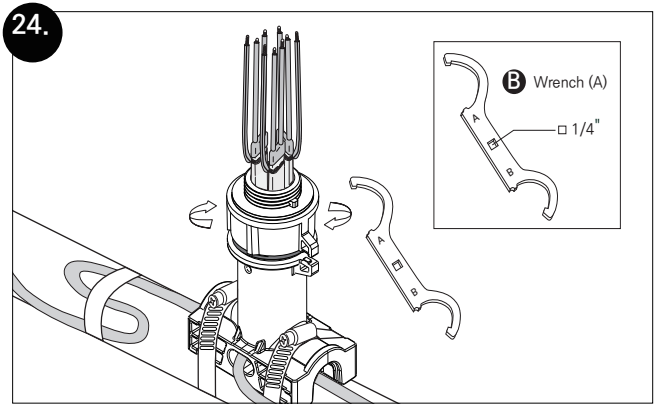


Use the right type or temperature rating of Fixing Tape (P) based on the process temperature. Fixing tapes are sold separately.

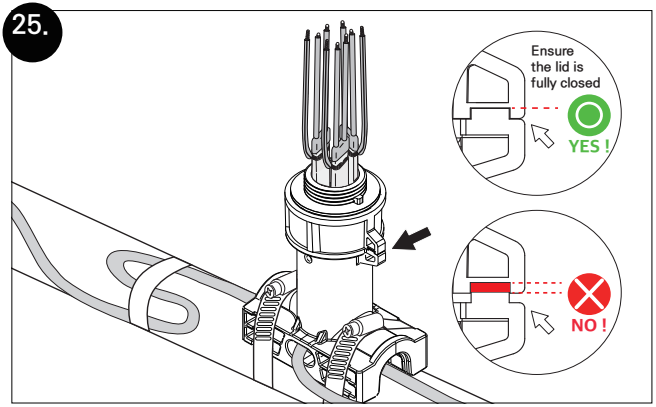
23.



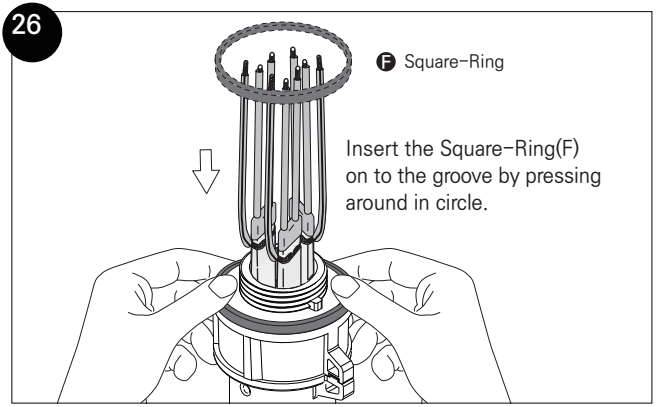
24.



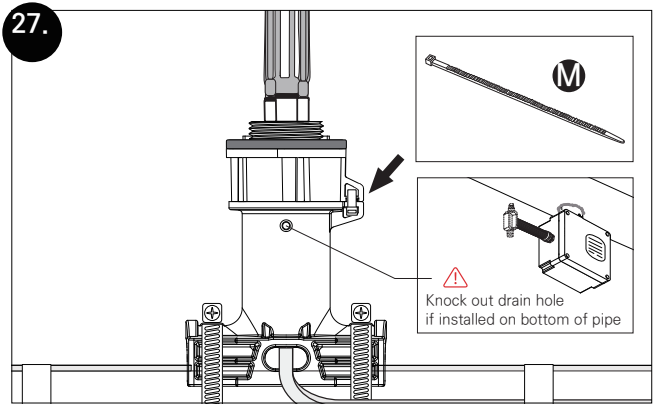
25.


Ensure
the lid is
fully closed
YES !
NO !

26

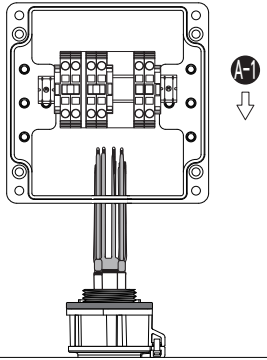

F Square-Ring
Insert the Square-Ring(F)
on to the groove by pressing
around in circle.

27.

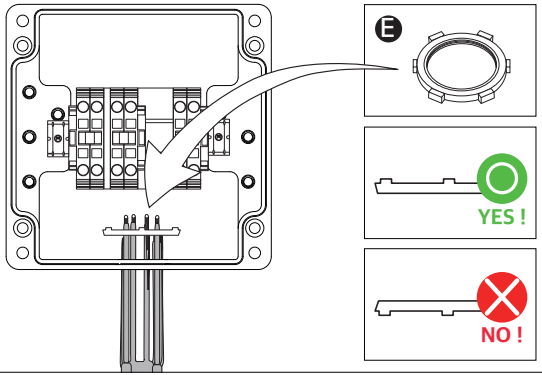


Single Power Entry (GB100M-A / GB100M-E)

28. Follow these steps for single power entry (GB100M-A / GB100M-E).

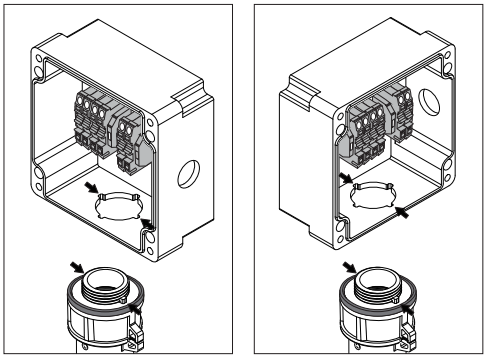


29.

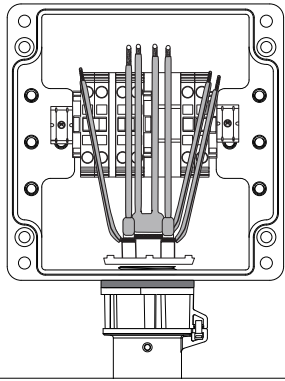


Single Power Entry (GB100M-A / GB100M-E)

30.

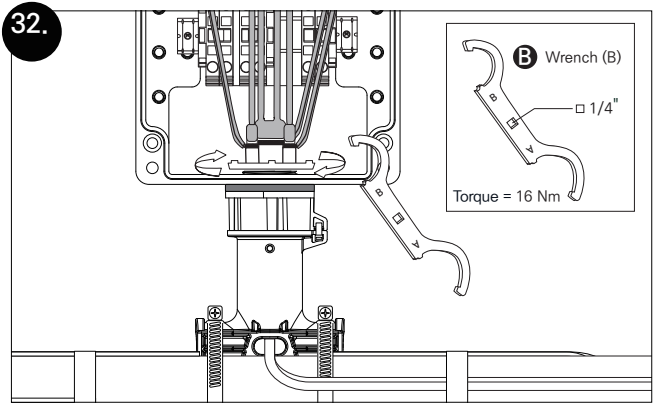


31.

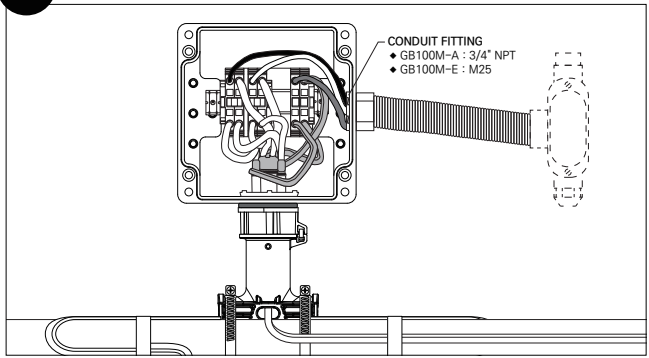


Single Power Entry (GB100M-A / GB100M-E)

32.

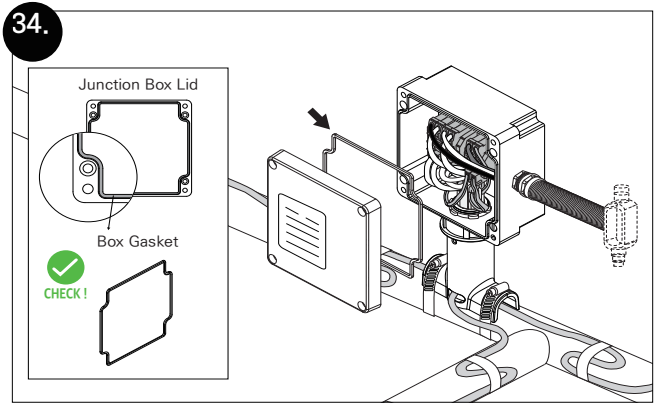


33. Power Connection

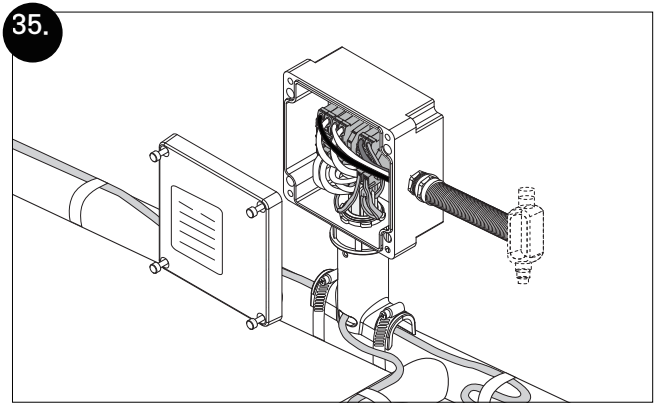


Single Power Entry (GB100M-A / GB100M-E)

34.

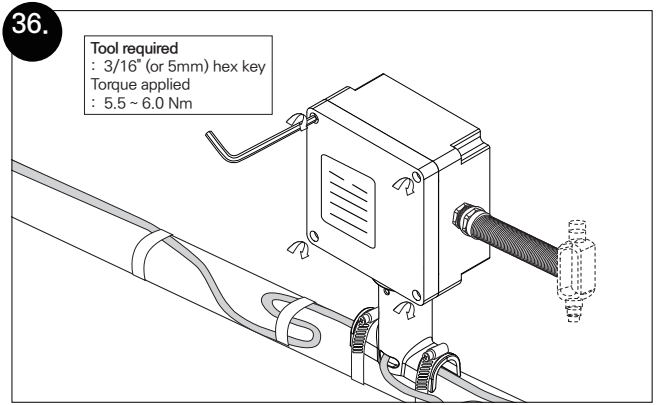


35.

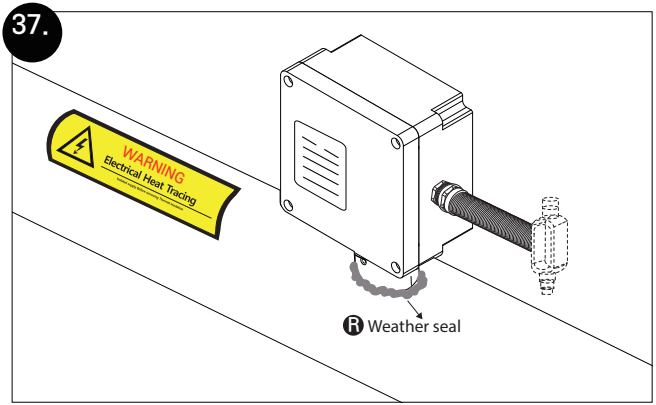


Single Power Entry (GB100M-A / GB100M-E)

36.

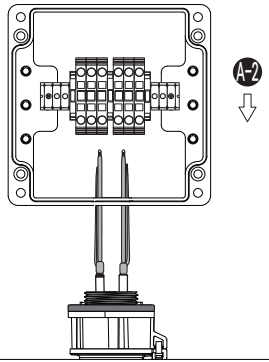


37.

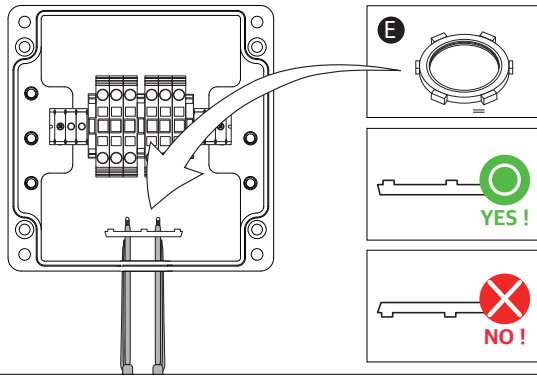


Dual Power Entries (GB100M-A-2P / GB100M-E-2P)

28. Follow these steps for dual power entries (GB100M-A-2P/GB100M-E-2P).

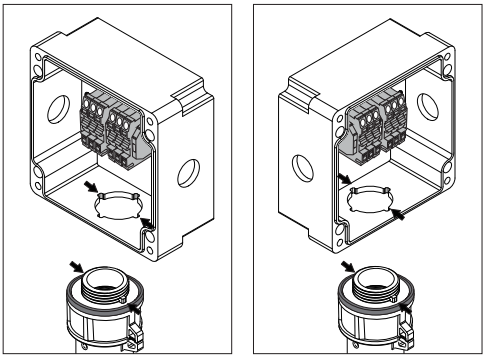


29.

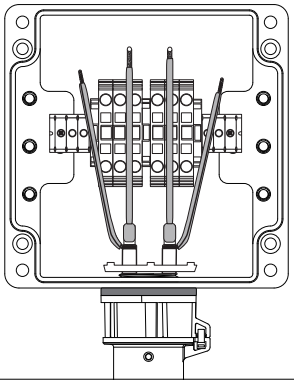


Dual Power Entries (GB100M-A-2P / GB100M-E-2P)

30.

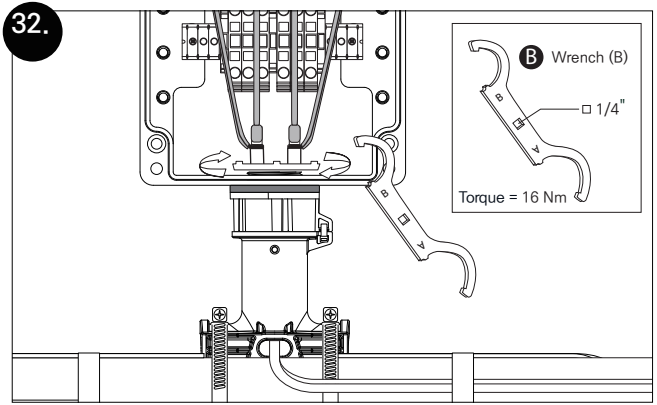


31.

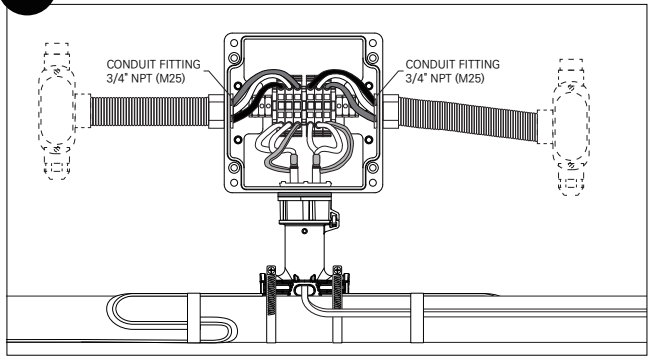


Dual Power Entries (GB100M-A-2P / GB100M-E-2P)

32.

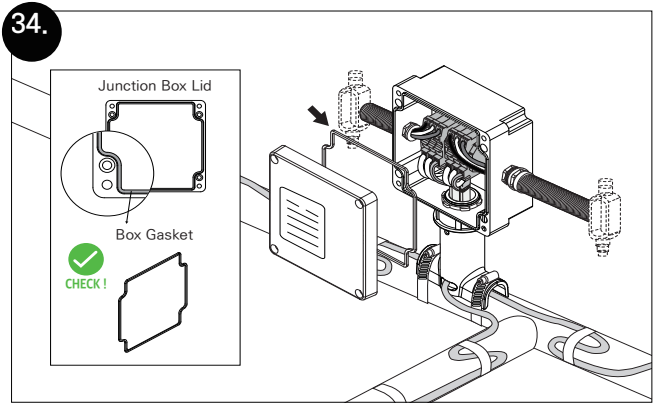


33. Power Connection

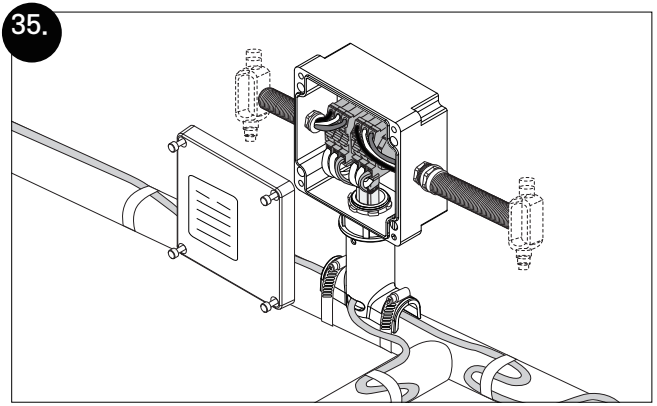


Dual Power Entries (GB100M-A-2P / GB100M-E-2P)

34.

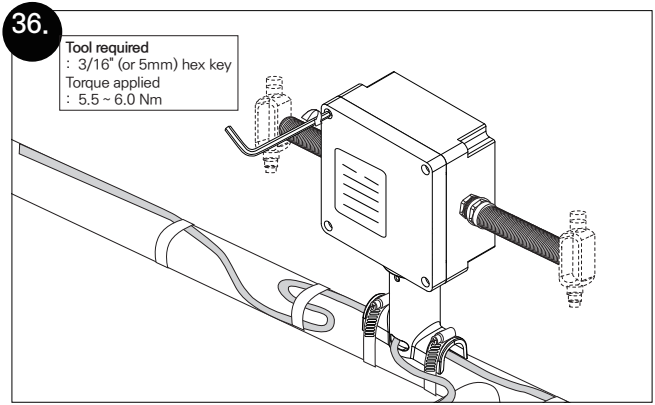


35.

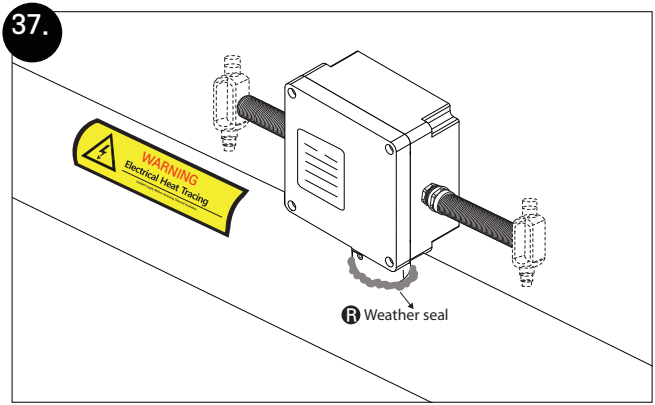


Dual Power Entries (GB100M-A-2P / GB100M-E-2P)

36.

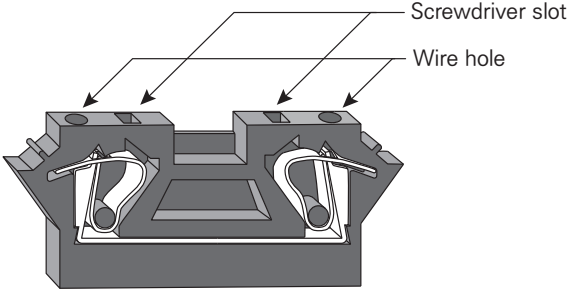


37.

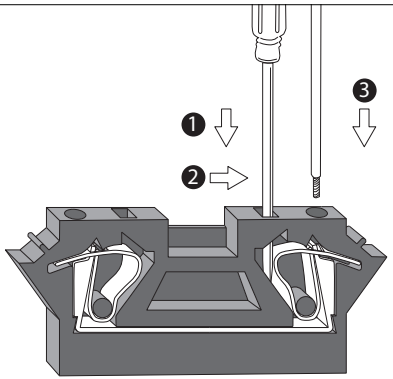


Terminal Blocks

1.

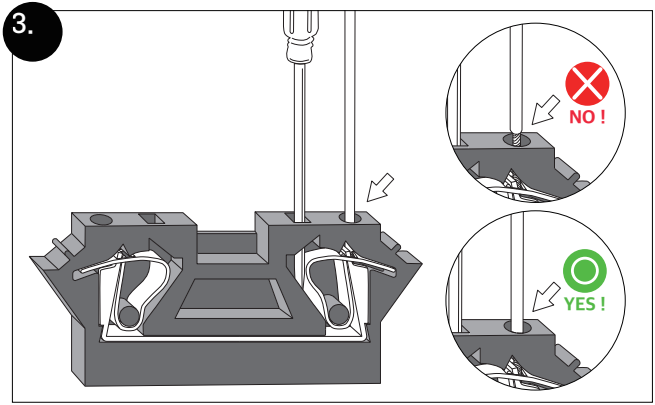


2.

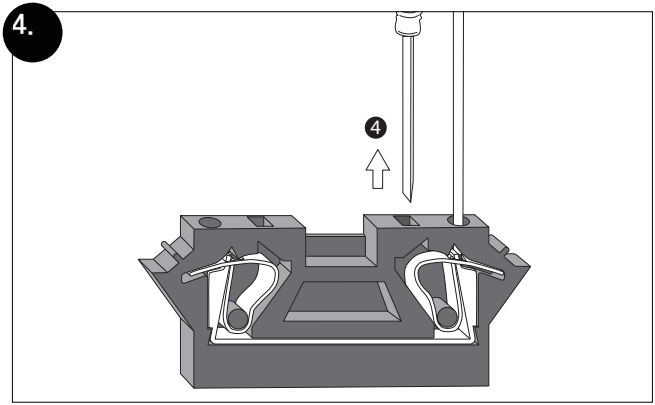


Terminal Blocks

3.

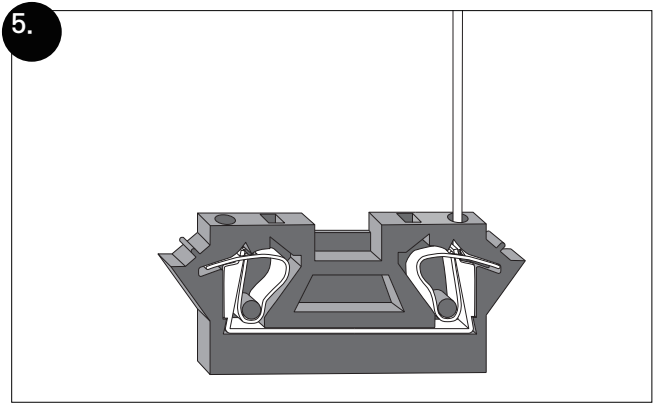


4.



Terminal Blocks

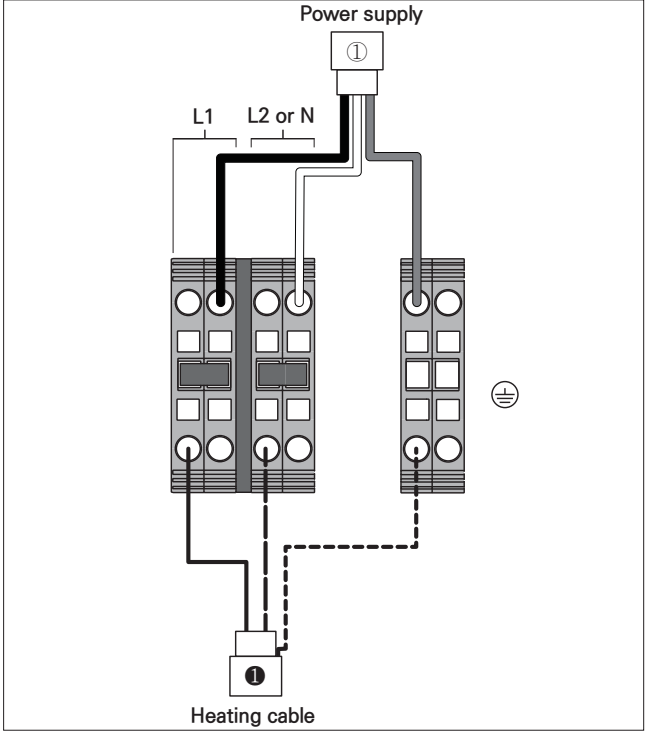
5.



Terminal Blocks Wiring

1A. Power Connection: GB100M-A/GB100M-E with Single Power Entry

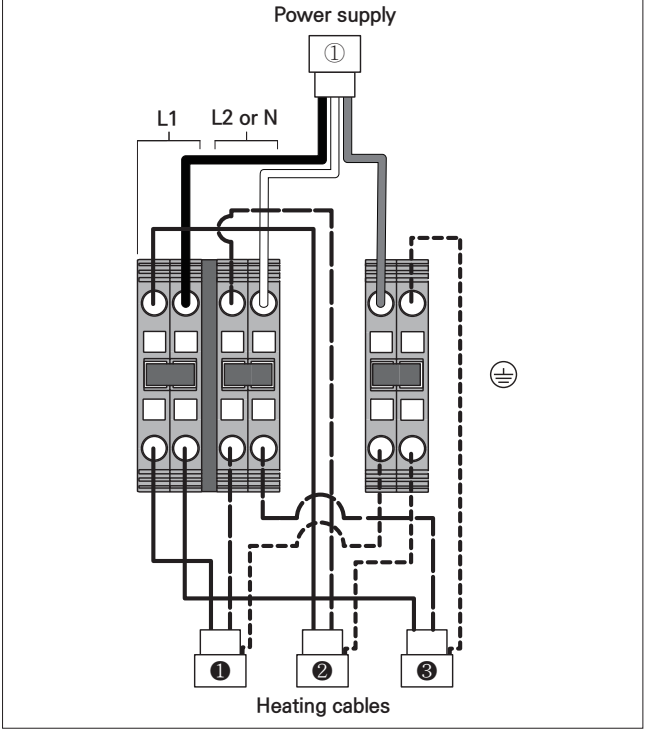
One heating cable



Terminal Blocks Wiring

1A. Power Connection: GB100M-A/GB100M-E with Single Power Entry

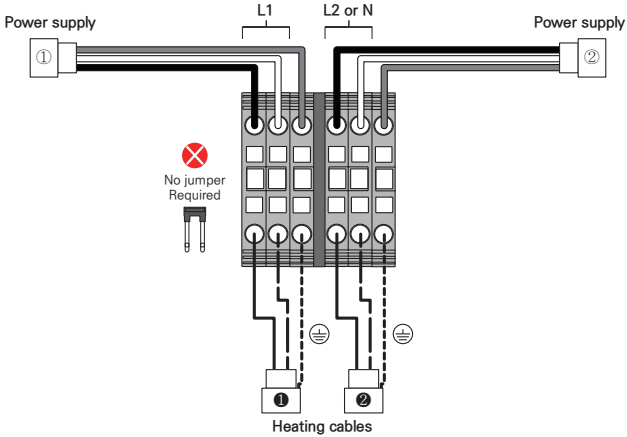
Two or three heating cables



Terminal Blocks Wiring

1B. Power Connection: GB100M-A-2P/GB100M-E-2P with Dual Power Entries

Two heating cable circuits



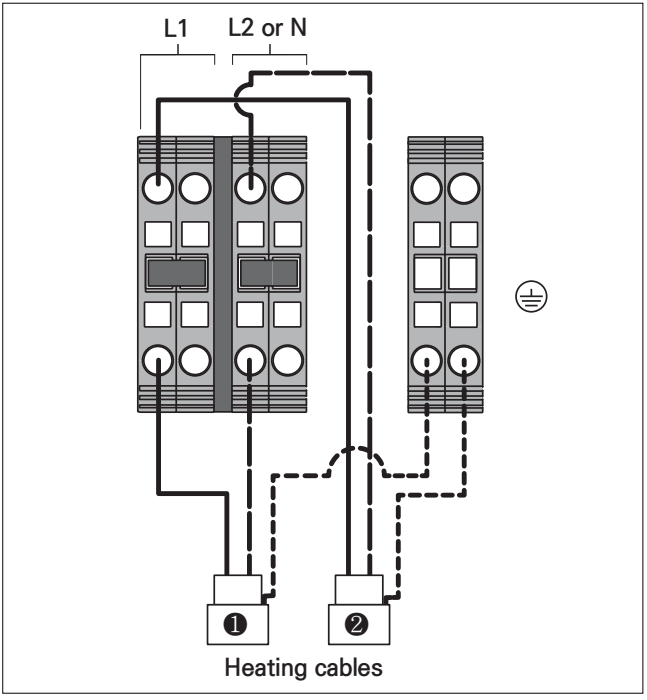
*** NOTE**

- For powering two heating cable circuits, use the designated GB100M-A-2P / GB100M-E-2P junction box available from Gaumer.
- GB100M-A-2P / GB100M-E-2P is supplied with two factory-engineered through-holes for dual power cable entry.
- Do **not** modify or drill additional holes in the standard GB100M-A / GB100M-E enclosure to accommodate dual circuits.

Terminal Blocks Wiring

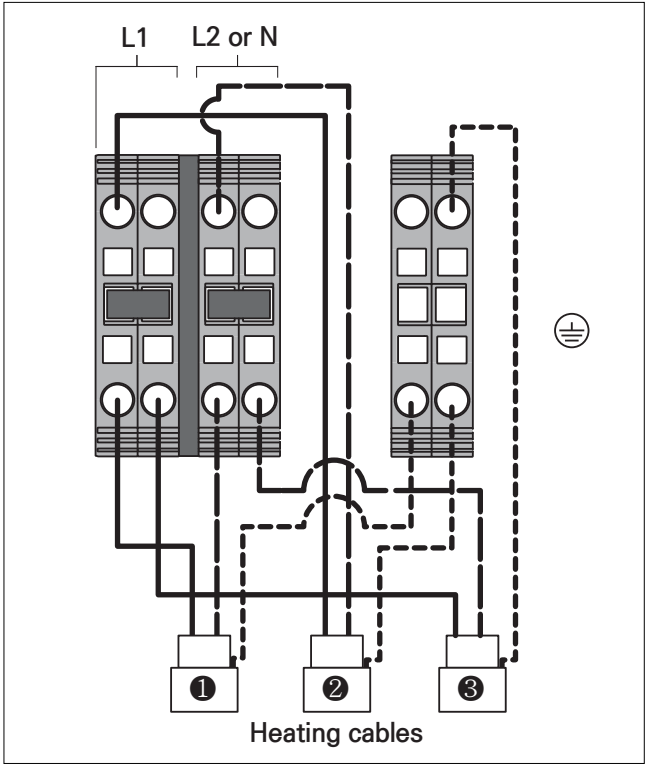
* NOTE: When using the GB100 Series Power Connection Kits for tee, splice, or end termination, unused through-holes must be sealed with Gaumer Sealing Plug Kit (sold separately).

2A. Splice Connection



Terminal Blocks Wiring

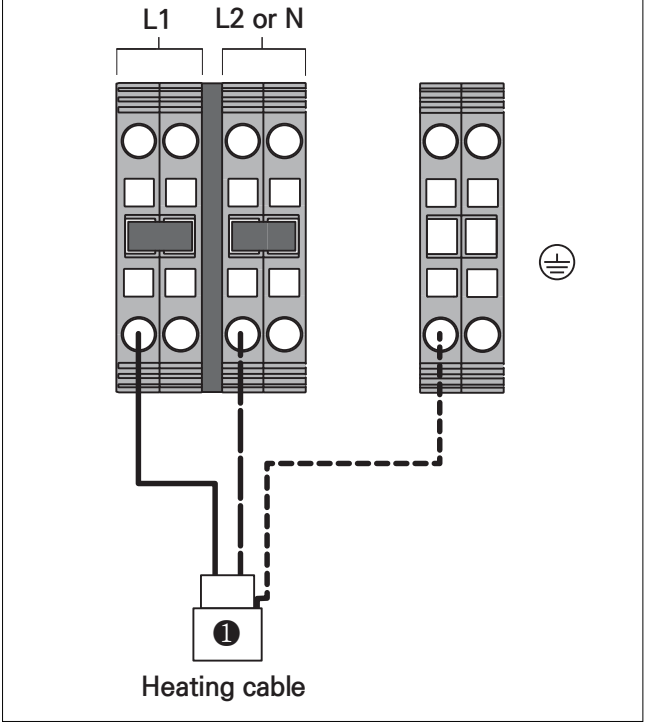
2B. Tee Connection



Terminal Blocks Wiring

2C. End Termination

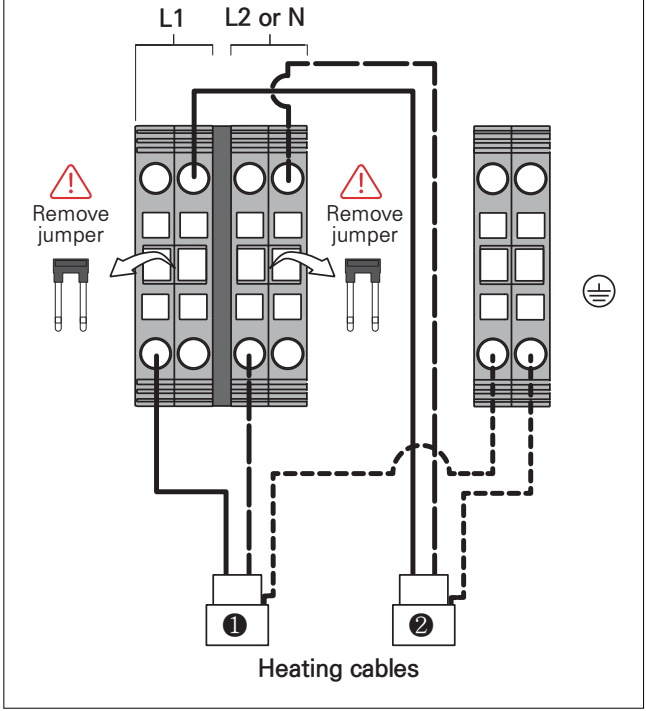
One heating cable



Terminal Blocks Wiring

2C. End Termination

Two heating cables



Gaumer Process

ADDRESS 13616 Hempstead Road · Houston, TX, U.S.A., 77040
WEB www.gaumer.com **TEL** +1 (800) 460 5200 **E-MAIL** sales@gaumer.com