Installation instructions - Sealing case 2LINE G-BOX

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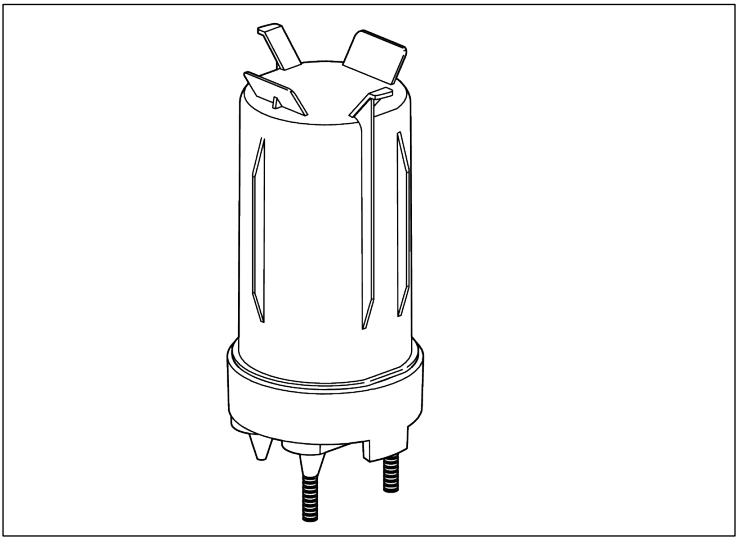

Read the instructions prior to installation and keep them in a safe place!

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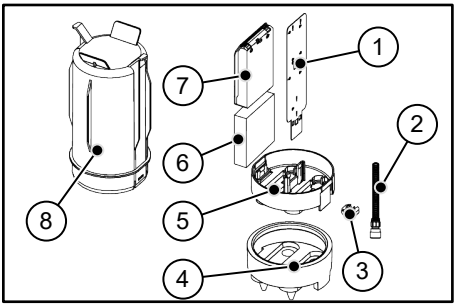

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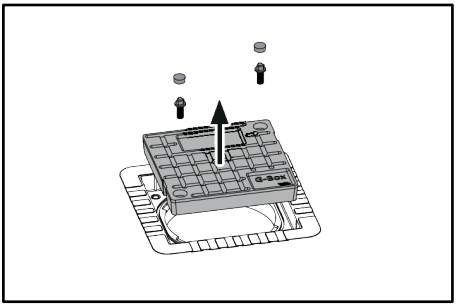

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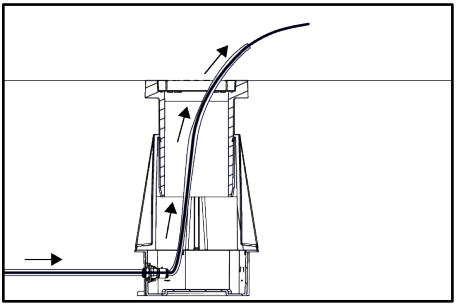

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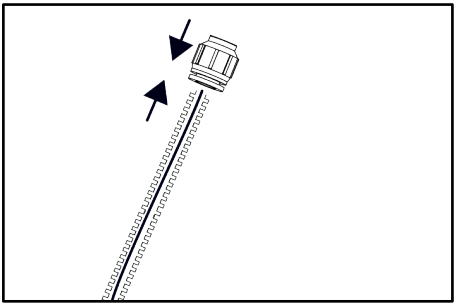

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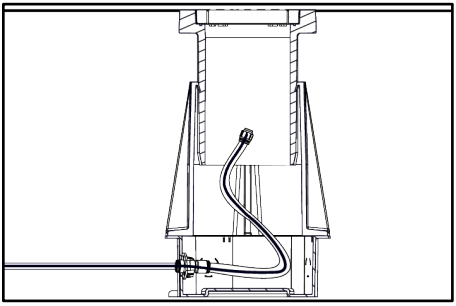

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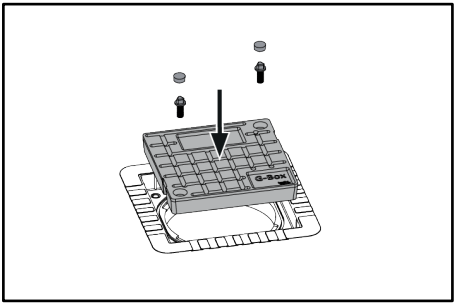

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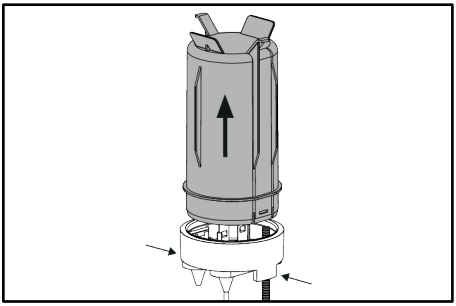

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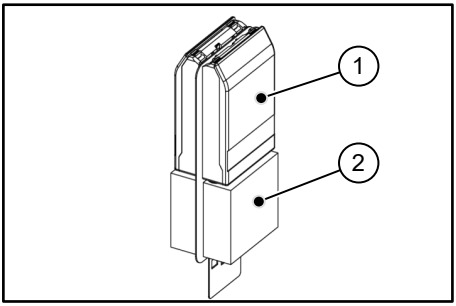

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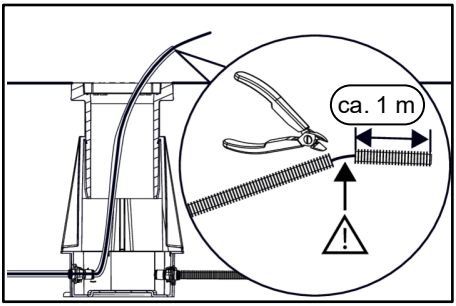

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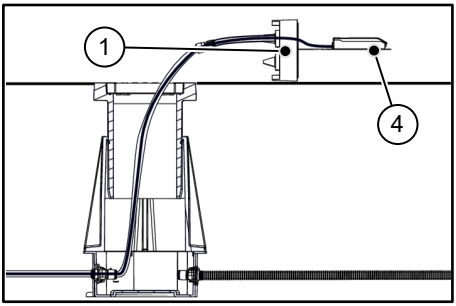

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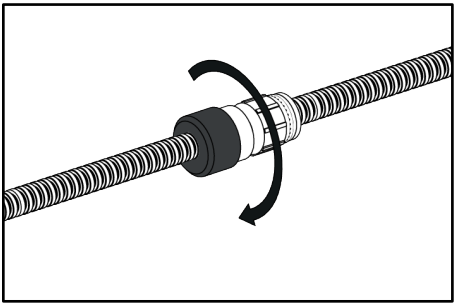

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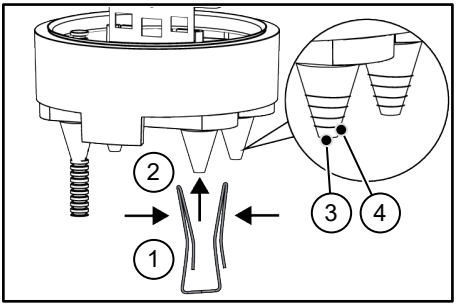

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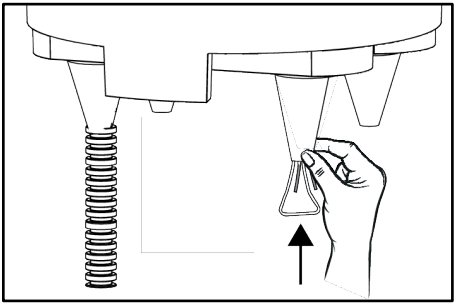

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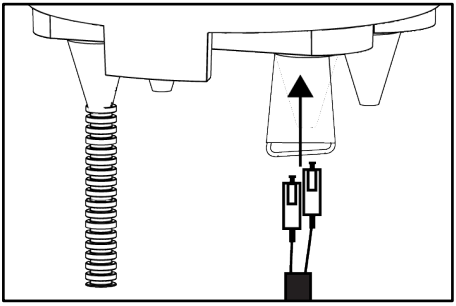

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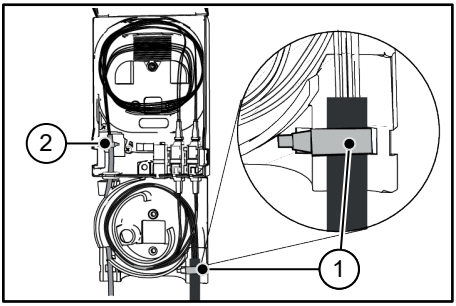

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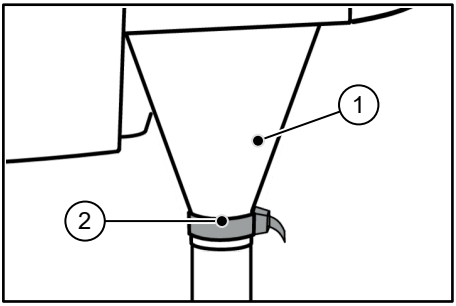

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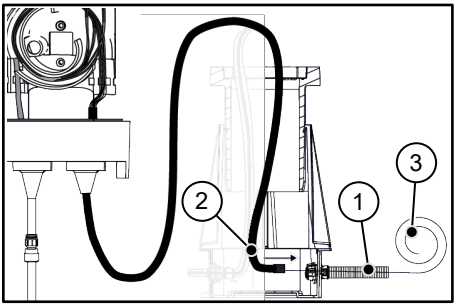

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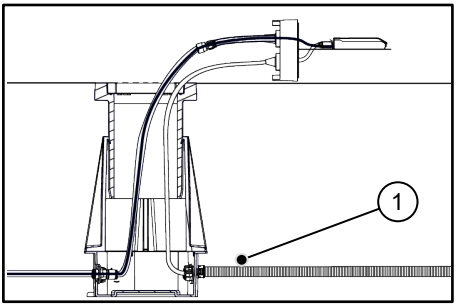

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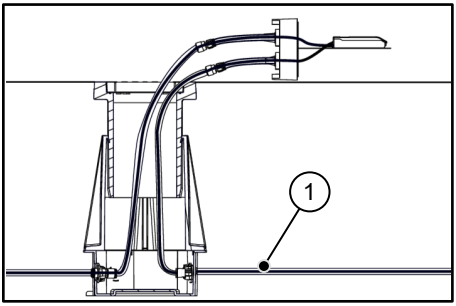

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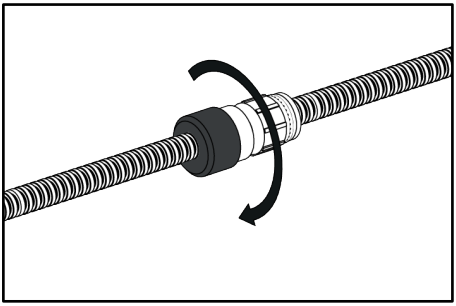

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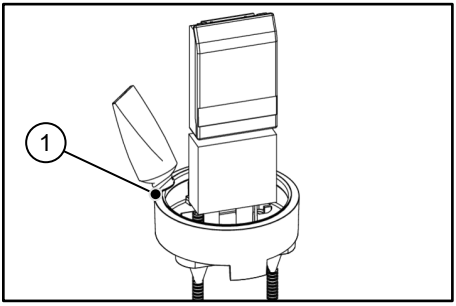

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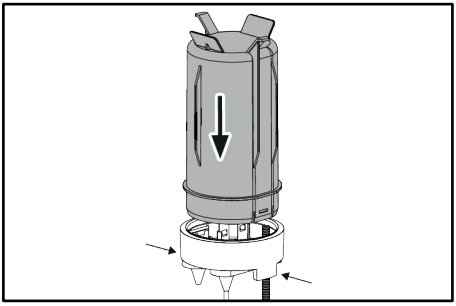

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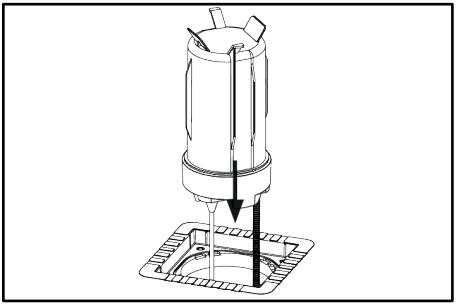

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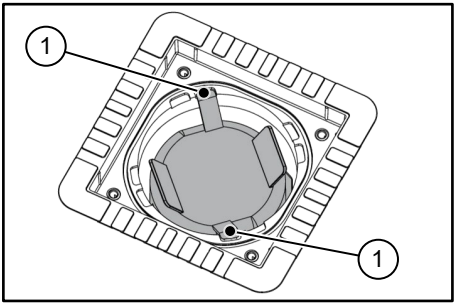

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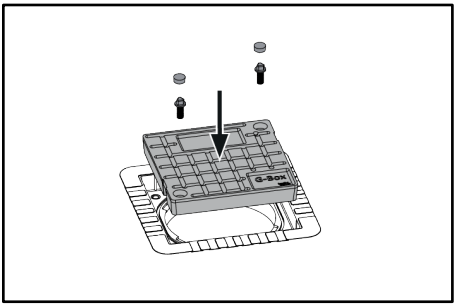

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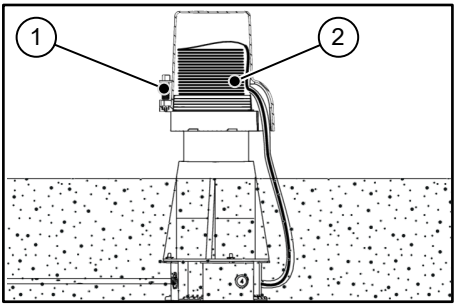

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EN Safety Instructions and Information

Target Group

The installation may only be carried out by technical experts.

Qualified and trained individuals carrying out installation must have
- knowledge of general safety and accident prevention regulations as amended,
- knowledge of how to use safety equipment,
- knowledge of how to use hand tools and electric tools,
- knowledge of the relevant standards and guidelines for laying pipes/cables and for backfilling utility trenches as amended,
- knowledge of the regulations and installation guidelines of the supply company as amended,
- knowledge of the waterproof concrete directive and building waterproofing standards as amended.

General information and intended use

In line with their intended use, our products have been developed solely for installation in buildings made of state-of-the-art materials. Insofar as no express written confirmation has been provided by us, we do not accept any liability for any other purposes or purposes going beyond the above.
For warranty conditions, please see our current General Terms and Delivery Conditions. We explicitly draw your attention to the fact that no warranty whatsoever applies for any subsequent damage occurring as a result of failure to follow the installation instructions or if our products are used incorrectly or combined with third-party products.

The 2LINE G-BOX is a modified street cap made of glass fibre reinforced plastic, which is placed as a fixed transfer point for the fibre optics as a mini shaft in the ground at the boundary between the property and the pavement. It serves as a supply point for microcable ducts and as a depot for the fibre optics, which can be blown into the ducts immediately after the 2LINE G-BOX has been installed or at a later point in time. There is the option of integrating a demarcation point.
The 2LINE G-BOX thus acts as an interface between the network operator and the house connection at the property line. The G-Box is suitable for installation in public and private areas. The 2LINE G-BOX can be tarred into road surfaces (not suitable for heavy-duty paving) or integrated into other suitable surfaces.

Safety

This section provides an overview of all the main safety aspects for optimum protection of personnel and a safe installation process.
A failure to observe the instructions and safety information set out here may result in significant hazards.
During installation of the 2LINE G-BOX it is imperative to observe the relevant professional association rules, the VDE provisions, the relevant national safety and accident prevention regulations and your company's guidelines (work and procedure instructions).
The fitter must wear the relevant protective clothing.
Only intact components may be installed.

The following instructions are to be observed prior to installation of the 2LINE G-BOX Sealing case:

⚠ **WARNING!**
Risk of injury in the event of improper installation!
Improper installation can result in significant bodily harm and property damage.
- Appropriate protective clothing must be worn when handling fibre optics.
- The ends of the fibre optics should not be touched. Broken fragments can enter the body.
- Observe the nationally applicable laying and filling regulations for pipes and cables.
- Seal the underground and cable substructure well prior to laying pipes or cables so that the latter cannot subside.

! NOTICE!
No sealing due to incorrect installation!
Improper installation can result in damage.
- Micropipes/corrugated pipes must always be pushed into the fittings as far as they will go.
- Micropipes and fibre optics must not be kinked or excessively bent.
- The incorrect laying of cables or ducts and improper filling of the cable trench causes settlement, which can lead to damage and leaks.
- Do not use cleaning agents containing solvents to clean the 2LINE G-BOX. We recommend using the cable cleaner KRMTX.
- For details of other accessories and further information, see **www.hauff-technik-gridcom.de** and the technical data sheets as well as the safety data sheet.

Personnel requirements

Qualifications

⚠ **WARNING!**
Risk of injury in case of inadequate qualification!
Improper handling can result in significant bodily harm and property damage.
- Installation may only be carried out by qualified and trained individuals who have read and understood these instructions.

Skilled experts

Based on their specialist training, skills, experience and familiarity with the relevant provisions, standards and regulations, skilled experts are able to carry out the work assigned, independently identifying and avoiding potential hazards.

Transport, packaging, scope of delivery and storage

Safety instructions in connection with transport

! NOTICE!
Damage in the event of improper transport!
Significant damage can occur in the event of improper transport.
- When unloading packaging items on delivery and in the course of in-house transport, proceed with care and observe the symbols on the packaging.

Transport inspection

Inspect the delivery immediately on receipt for completeness and transport damage. In the event of transport damage being visible from the outside, proceed as follows:
- Do not accept the delivery or only do so subject to reservations.
- Make a note of the extent of damage in the transport documentation or delivery note provided by the transporter.

ℹ
- Submit a claim for every defect as soon as it has been identified.
- Claims for damages can only be asserted within the applicable claim period.

Scope of supply

The scope of delivery of the Sealing case set includes:
- 1x sealing case with prepared feed-in points
- 1x nozzle spreader
- 1x adapter plate with pre-assembled fibre optic termination point/excess cable length box

Storage

! NOTICE!
Damage due to improper storage!
Significant damage can occur in the event of improper storage.
- The 2LINE G-BOX is to be protected from damage, damp and soiling prior to installation. Only intact components may be installed.

Disposal

If no return or disposal agreement has been concluded, recycle dismantled components after they have been properly dismantled:
- Metal remains are to be scrapped according to existing environmental regulations.
- Dispose of elastomers according to existing environmental regulations.
- Dispose of plastics according to existing environmental regulations.
- Dispose of packaging material according to existing environmental regulations.

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1 Publishing Notes

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2 Explanation of Symbols

1 Work stages

► Effect/result of a work step

① Reference numerals in drawings

3 Tools and Aids required

For the correct installation of the 2LINE G-BOX **Sealing case** the following tools and aids are required in addition to the usual standard tools:

Tools:

1 Triangular spanner key (article no.: 3030317358)

1 Three-piece mandrel (only for expansion stages 2 and 3) (article no.: 3030337031)

1 Pulling aid

Aids

Lubricant

4 Description

Description **2LINE G-BOX sealing case with fibre optic termination point** (assembly varies depending on configuration) (see Fig.: 1)

Legend for Fig.: 1	
1	Adaptor plate
2	Corrugated pipe with gas stop fitting
3	Corrugated pipe clips
4	Rubber grommet
5	Sealing case lid
6	Excess cable length box (optional)
7	Termination point (optional)
8	Sealing case cover

5 Installing the 2LINE G-BOX basic unit

ℹ *For installation of the basic unit, see **separate installation instructions, '2LINE G-BOX – basic unit'.***

6 Blow in fibre optics

1 If a pylon is mounted on the 2LINE G-BOX, it must be removed first. To do this, open the screw and pull off the pylons.

2 Remove the closing caps and open the cover of the 2LINE G-BOX with a triangular spanner key (see Fig. 2).

ℹ *The rear end of the triangular spanner key can be inserted into a screw hole in the cover to lever the cover out.*

3 Before blowing in, lay the connection set straight (see Fig. 3).

4 Blow in the fibre optics (see Fig. 3).

► If you have any difficulties blowing in, see Chapter 8 Questions about blowing in fibre optics, page 9.

5 Push fibre optics back flush into the connection set or cut them to length so that they are flush.

► If the fibre optics are to be spliced here, allow approx. 1 m to protrude and do not seal the connection set with an end plug.

6 Close the connection set with an end plug (not included as standard) and stow the connection set back

in the 2LINE G-BOX with a twisting movement (see Fig. 5).

7 Close the cover of the 2LINE G-BOX until the sealing case is in place, fasten with the screws and reinsert the closing caps (see Fig. 6).

8 Optional: reattach the pylons removed in Step 1.

7 Installing the sealing case

Depending on the version, the sealing case will have one or more pre-assembled connections with a gas stop.

- Supply-side connection with gas stop fitting, see 7.1 Supply side (corrugated pipe set).
- Consumer-side connection without gas stop fitting/corrugated pipe set, see 7.2 Consumer side (cable system).
  or
  consumer-side connection with gas stop fitting/corrugated pipe set, see 7.3 Consumer side (corrugated pipe set).

7.1 Supply side (corrugated pipe set)

If a pylon is mounted on the 2LINE G-BOX, it must be removed first. To do this, open the screw and pull off the pylons. The cable (consumer-side connection set) for the house connection is stored in this.

1 Remove the closing caps and open the cover of the 2LINE G-BOX with a triangular spanner key (see Fig. 2).

2 Open the sealing case (gently press in the tabs, see Fig. 7).

► The equipment consists of a termination point and an optional excess cable length box (see Fig. 8).

► If no excess cable length box is installed, this **must** be installed later (Hauff item no.: 3030354893).

► The silicate bag inside absorbs moisture and must remain in the sealing case.

Legend for Fig. 8	
1	Termination point
2	Excess cable length box

Concentrated laser radiation from the fibre optic ends.
Irreparable damage to eyes.
- *Wear laser safety goggles.*
- *Do not look directly into the fibre optic ends.*
- *If possible, make sure that no active laser is connected to the fibre optics during the work.*

A second termination point and a second excess cable length box can be optionally installed (see Fig. 8).

3 Remove the end plugs from the supply-side connection set.

4 Shorten the corrugated pipe of the supply-side connection set by approx. 1 m (see Fig. 9).

► **Do not damage the fibre optics in the process!**

5 Insert the supply-side fibre optics through the pre-installed connection and press the corrugated pipe into the gas stop fitting **as far as it will go** (see Fig. 10).

Legend for Fig. 10	
1	Lower part of sealing case
4	Termination point

6 Close the gas stop fitting (see Fig. 11).

7 Splice the fibre optics into the termination point.

► Observe the installation instructions for the respective termination point.

7.2 Consumer side (cable system)

1 Pierce the grommet of the sealing case in the middle with the grommet spreader (**cable < 7 mm**) or cut off **before** the first ring (**cable 7–12 mm**) (see Fig. 12).

2 Widen the grommet of the sealing case with the grommet spreader (see Fig. 12).

► Press the grommet flat and insert the grommet spreader.

► Hold the grommet and push in the grommet spreader (see Fig. 13). The grommet must not turn inside out or unfold.

► Push in the grommet spreader completely until the grommet is wide enough (see Fig. 14). The opening can be enlarged even further by squeezing the ends of the grommet spreader apart.

Legend for Fig. 12	
1	Squeeze the grommet spreader
2	Insert the grommet spreader into the grommet and release
3	Pierce the grommet for cables < 7 mm
4	Cut the grommet for cables 7–12 mm

3 Guide the lucent connector of the cable system all the way through (see Fig. 14).

4 Place the connector cables in the excess cable length box according to Fig. 15 (short connector 1 turn, medium connector 2 turns, long connector 3 turns) (see Fig. 15).

5 Plug in the connectors at the termination point, removing the plugs first if necessary.

6 Fasten the sheathed end of the cable system to the excess cable length box with a cable tie (cable relief) (see Fig. 15). If you are not using an excess cable

length box, fasten the cable system to the grommet with a cable tie (see Fig. 16).

Legend for Fig. 15	
1	Cable system secured with cable ties (cable relief)
2	Cable ties (cable relief) for supply-side fibre optics

Legend for Fig. 16	
1	Grommet
2	Cable system secured with cable ties (cable relief)

7 Remove the grommet spreader.

8 Guide the other end of the cable system outwards through the corrugated pipe from the basic unit of the G-Box using a pull-in aid (see Figs. 17 and 18).

► When pulling in, the grommet spreader can be used to help widen the grommet at the end of the corrugated pipe.

► Only guide the cable system through until the residual length corresponds to that of the connection set. The cables can be rolled up evenly and stowed in the 2LINE G-BOX. If a cable is much longer, it must be inserted a few turns beforehand.

Legend for Fig. 17	
1	Consumer-side connection (corrugated pipe set)
2	Cable system
3	Pulling aid

Legend for Fig. 18	
1	Consumer-side connection (corrugated pipe set)

7.3 Consumer side (corrugated pipe set)

1 Remove the end plugs from the consumer-side connection set.

2 Insert the consumer-side fibre optics through the pre-installed connection and press the corrugated pipe into the gas stop fitting **as far as it will go** (see Fig. 19).

Legend for Fig. 19	
1	Consumer-side connection (pipe)

3 Close the gas stop fitting (see Fig. 20).

4 Splice fibre optics into the termination point/splice connectors and insert fibre optics.

► Observe the installation instructions for the respective termination point.

7.4 Complete installation

1 Check all connections.

2 Check the edge of the rubber grommet of the sealing case for clean positioning and lubricate the inside (see Fig. 21).

3 Gently operate the snap-in noses on the lower part, place on the upper part and snap into place until you hear a click (see Fig. 22).

4 Insert the cable/corrugated pipe and sealing case into the 2LINE G-BOX (see Fig. 23). In doing so, ensure that the cables/corrugated pipes have a sufficient bending radius and insert them in a spiral. The lugs of the sealing case must be placed in the corresponding recesses on the 2LINE G-BOX (see Fig. 24).

Legend for Fig. 24	
1	Recesses

5 Close the cover of the 2LINE G-BOX, fasten with the screws and reinsert the closing caps (see Fig. 25).

► Check that the O-ring is lying cleanly in the contour of the opening.

6 Establish the house connection.

► If the house connection has not yet been established, store the cable back in the pylon (see Fig. 26).

Legend for Fig. 26	
1	Triangular screw for securing
2	Pylons with cable depot

8 Questions about blowing in fibre optics

Problem	Recommended course of action
Fibre optics get stuck when blowing in.	Blow fibre optics in with a cable guide head. Using a cable guide head is generally recommended so that the fibre optics do not get caught on abutting edges.
Fibre optics get stuck in connection set.	Remove the connection set and, after blowing in, push it back onto the fibre optics and plug into the G-Box.

Table 1

Service telephone + 49 7967 9008-30

Subject to change!

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