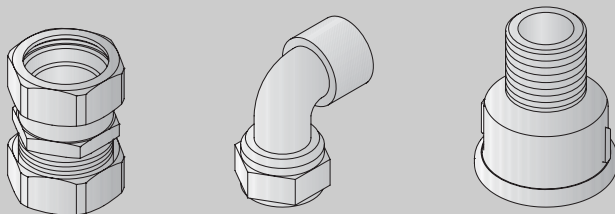


Installation instructions



63043977.00-1.SD

Connection set Twin Tube 1/2"

For heating engineers

Please read carefully prior
to installation.

6 720 615 165 - 01/2008 US

Buderus

1	Scope of supply	3
1.1	Connection set Twin Tube 1/2"	3
2	General	4
3	Cutting to length	4
4	Installation	5
4.1	Installing Twin Tube 1/2"	5
4.1.1	Connecting compression ring sets to collector connection pipes	5
4.1.2	Connecting compression ring sets to the solar pump station	6
4.1.3	Connecting to the DHW tank	6
4.1.4	Fitting the Twin Tube 1/2"	7

1 Scope of supply

- Before commencing the installation check that all listed components have been delivered.

1.1 Connection set Twin Tube 1/2"

- | | | |
|----------------|--|-----|
| Item 1: | Compression fitting 1/2" × 1/2" for fastening or extending the Twin Tube | 2 × |
| Item 2: | Reducing coupling Rp 1 × R¾ for reducing R1 cylinder connections | 2 × |
| Item 3: | Elbow compression fitting 5/8" × 1/2" for connection to cylinder | 2 × |
| Item 4: | Twin Tube 1/2" x 50 ft
(picture not shown) | |

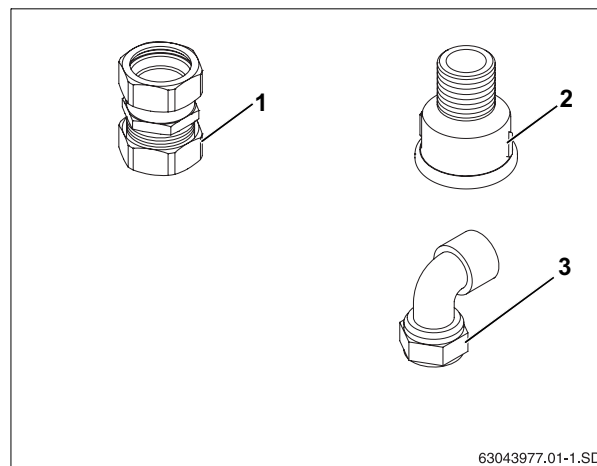


Fig. 1 Twin Tube 1/2" – scope of supply

2 General

Please take the thermal expansion of the copper pipe into consideration when routing the Twin Tube 1/2".

It is recommended that you unroll the Twin Tube 1/2" on the floor – like a bare copper pipe.

Special pipe cleats (ovals) with dowels and screws are available as an option for fixing the Twin Tube 1/2" to walls and ceilings.

Use the connection set, which is also available as option, for the installation of the Twin Tube 1/2". This comprises all necessary fasteners to create the connection between the individual components.

You can bend the Twin Tube 1/2" like any normal soft copper tube with a minimum radius of 4 inch (100 mm).

The Twin Tube 1/2" can be bent around a round, solid object.

Tighter radii can be achieved by cutting the thermal insulation open across the pipes and by fitting either solder or compression elbows. You can close the cut area with the enclosed PE tape.



USER NOTE

You can repair any damage on the protective PE cover caused by the installation work, with the enclosed PE tape.

Store the Twin Tube 1/2" and all residues horizontally inside the carton, as this prevents unnecessary pressure points occurring.

3 Cutting to length

- Slit the thermal insulation at the required place with a sharp knife.



SYSTEM DAMAGE

- through damaged sensor cable.

CAUTION Pay particular attention to the sensor cable when separating the Twin Tube 1/2".

- Push the insulation hose away on the r.h. and l.h. side of the cut.
- Make a square cut through the copper pipe using a saw or a pipe cutter (Fig. 2, **Item 1** and **2**).



DANGER OF INJURY

through protruding burrs.

- WARNING**
- Please ensure that you cut the copper pipe cleanly. Remove any possible burrs with a metal file.

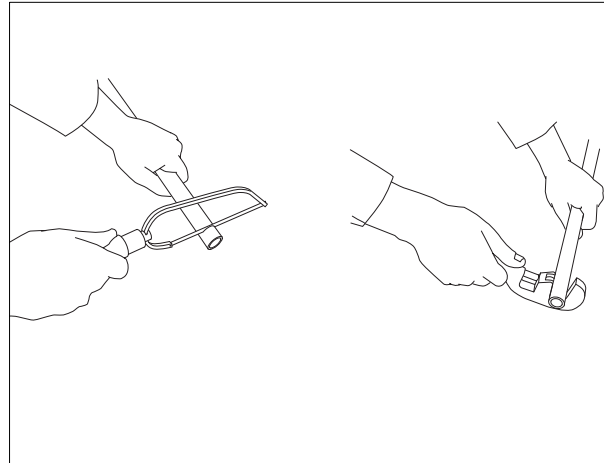


Fig. 2 Cutting to length

Item 1: Metal saw

Item 2: Pipe cutter

4 Installation

The connection sets are used to connect different parts of the solar heating system.

The Twin Tube is an insulated double pipe. In the following illustrations the double pipe is shown without insulation.



USER NOTE

The Twin Tube pipe must be cut to the correct length if necessary. Relevant instructions can be found in the installation guide for the Twin Tube pipe.



USER NOTE

Please also follow the instructions for header pipes in the installation instructions for collectors and the complete station.



USER NOTE

Observe all standards and guidelines applicable to the installation and operation of this system in your country.

4.1 Installing Twin Tube 1/2"

On smaller solar heating systems, the collector array, complete station and DHW tank can be connected using Twin Tube 1/2" pipes.

4.1.1 Connecting compression ring sets to collector connection pipes

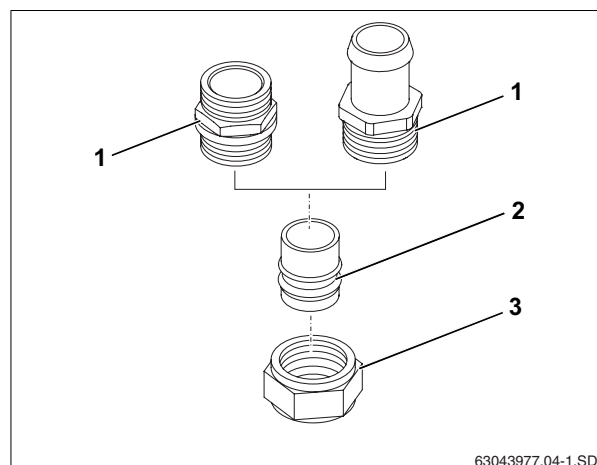
Each collector array has parts for connecting header pipes to collectors. These terminate with 5/8" (18 mm) compression fittings.

- Remove union nuts from connectors and replace clamping rings with 5/8" x 1/2" (18 mm x 15 mm) reducers (Fig. 3, **Item 2**).



USER NOTE

All 5/8" x 1/2" reducers are supplied within the solar pump station KS and the collector connection sets.



63043977.04-1.SD

Fig. 3 Replacing clamping rings on collector connections

Item 1: Possible existing connectors on the collector array (union nut and clamping ring already removed)

Item 2: Reducer 5/8 x 1/2" (18 x 15 mm)

Item 3: Union nut

4.1.2 Connecting compression ring sets to the solar pump station

The solar pump station KS0110 (Fig. 4, **Item 1**) has four compression fittings for 5/8" (18 mm) copper pipes.

- Replace existing compression rings with 5/8" x 1/2" (18 mm x 15 mm) reducer (Fig. 4, **Item 2**).

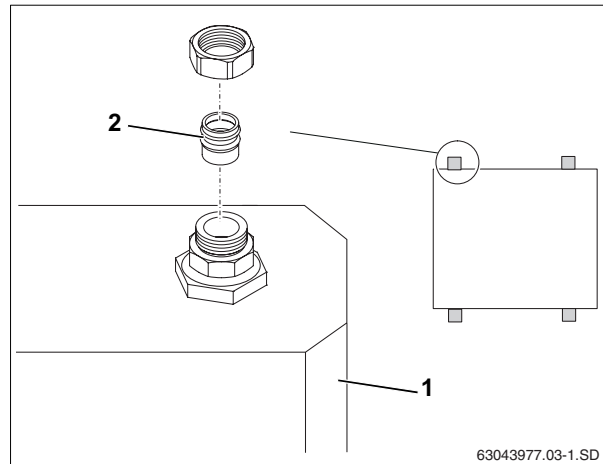


Fig. 4 Replacing compression rings on complete station

4.1.3 Connecting to the DHW tank

DHW tank with R $\frac{3}{4}$ connections (PL750/2S)

The Twin Tube can be connected to the DHW tanks via the elbow compression fitting.

- Screw the elbow compression fitting (Fig. 5, **Item 1**) onto the tank connection (Fig. 5, **Item 2**).

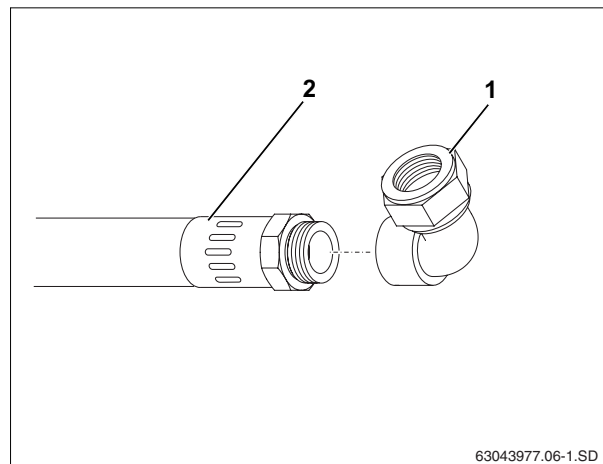


Fig. 5 Connecting the elbow compression fitting

DHW tank with R1 connections (SM300/400)

For DHW tanks with R1 connections, proceed as follows:

- Fit reducing coupling (Fig. 6, **Item 1**) and elbow compression fitting (Fig. 6, **Item 2**) to the tank.

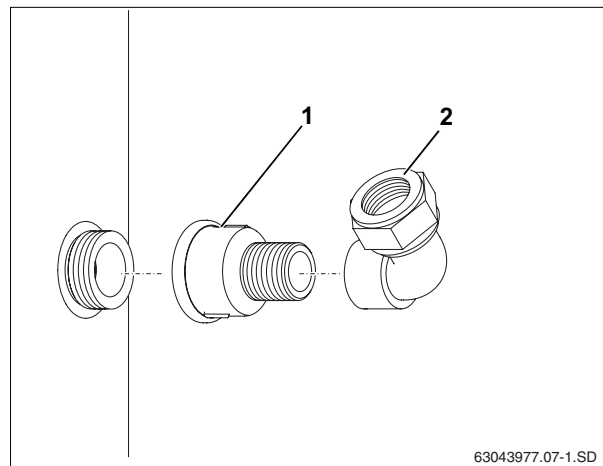


Fig. 6 Connecting the reducing coupling and elbow compression fitting to the cylinder

4.1.4 Fitting the Twin Tube 1/2"

- Cut the Twin Tube 1/2" pipes (Fig. 7, **Item 3**) to the correct length so that they can be pushed 0.8-1.2 inch (2-3 cm) inside the compression fittings (Fig. 7, **Item 1**).



USER NOTE

If it is necessary to extend individual pipe sections, this can be done by means of the compression fitting (Fig. 7, **Item 1**).

- Insert the support ferrules (Fig. 7, **Item 2**) into the Twin Tube 1/2" pipes (Fig. 7, **Item 3**).
- Push the shortened Twin Tube 1/2" pipes (Fig. 7, **Item 3**) as far as possible into the prepared compression ring connections.
- Lock the union nut against the compression fitting (Fig. 7, **Item 1**) using a suitable spanner.

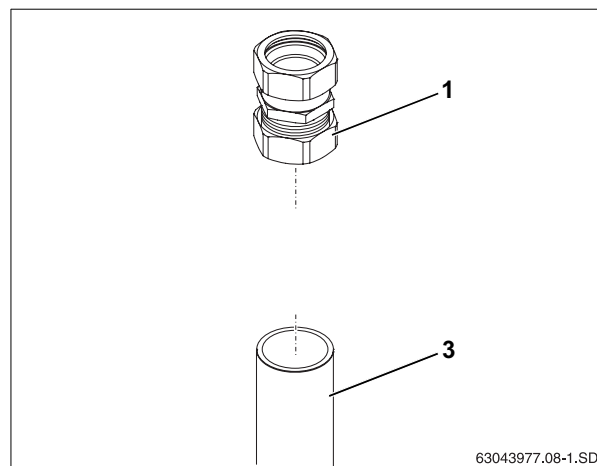


Fig. 7 Installing compression union

BBT North America Corporation

50 Wentworth Avenue
Londonderry, NH 03053
Tel: (603) 552-1100
Fax: (603) 584-1681
www.buderussolar.com

Buderus is a trading mark of the Robert Bosch
(Bosch) Corporation

Manufactured by:
BBT Thermotechnik GmbH
D-35573 Wetzlar
www.heiztechnik.buderus.de
info@heiztechnik.buderus.de

Buderus