




WORCESTER P 120-5 W Worc Buffer Cylinder Installation Guide

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WORCESTER P 120-5 W Worc Buffer Cylinder



Specifications

- **Model:** P 120-5 W Worc
- **Part Number:** 6 720 805 267-00.1ITL
- **Year of Manufacture:** 2012/11

Product Information

Key to Symbols and Safety Instructions

The manual uses symbols to indicate warnings and important information:

- Warnings are framed and identified by a warning triangle printed against a grey background.
- Important information is indicated with a symbol bordered by lines above and below the text.

Explanation of Symbols

The symbols in the manual have the following meanings:

- **Warning Triangle:** Indicates warnings that require attention.
- **Symbol:** Indicates important information with no risk to people or property.

General Safety Instructions

These installation and maintenance instructions are intended for competent installers. Failure to observe the safety instructions can result in serious injuries. Follow these instructions to ensure trouble-free operation:

- Read and follow the safety instructions.

- Install and commission heat sources and their accessories according to the relevant installation instructions.
- Never use open feed and expansion cistern.

Correct Use

The buffer cylinder is designed for heating systems and should only be filled with heating water. It is recommended to use the buffer cylinder in sealed heating systems, preferably designed with heat pumps. Any other use is considered inappropriate and may result in damage not covered by liability. It is not suitable for use as a method of potable hot water (Domestic Hot Water) storage.

Data Plate

The data plate is located at the top of the rear of the buffer cylinder and includes the following details:

1. Model Designation
2. Serial Number
3. Actual Content
4. Standby Heat Loss
5. Year of Manufacture
6. Max. DHW Cylinder Temperature

Product Usage Instructions

Startup

Before using the buffer cylinder, follow the steps below:

1. **Commissioning the buffer cylinder:** Follow the instructions provided in the commissioning section of the manual.
2. **Instructing users:** Provide users with instructions on how to operate and maintain the buffer cylinder. Refer to the user instructions section of the manual for detailed information.

De-commissioning

If you need to de-commission the buffer cylinder, refer to the de-commissioning section of the manual for step-by-step instructions.

Environmental Protection/Disposal

When disposing of the buffer cylinder, follow the environmental protection guidelines provided in the manual.

Maintenance

To ensure proper maintenance of the buffer cylinder, follow these recommendations:

- **Recommendations for users:** Provide users with guidelines on regular maintenance tasks, such as cleaning and inspection. Refer to the user instructions section of the manual for detailed information.
- **Service and repair:** If the buffer cylinder requires service or repair, follow the instructions provided in the service and repair section of the manual.
- **Emptying:** If you need to empty the buffer cylinder, follow the emptying instructions provided in the manual.

FAQ

• **Q: Can I use the buffer cylinder for storing potable hot water?**

A: No, the buffer cylinder is not suitable for use as a method of potable hot water (Domestic Hot Water) storage.

• **Q: Where is the data plate located?**

A: The data plate is located at the top of the rear of the buffer cylinder.

Key to symbols and safety instructions

Explanation of symbols

Warnings

Warnings in this document are framed and identified by a warning triangle printed against a grey background.



Signal words at the start of a warning indicate the type and seriousness of the ensuing risk if measures to prevent the risk are not taken.

- **NOTE** indicates that material losses may occur.
- **CAUTION** indicates possible minor to medium personal injury.
- **WARNING** indicates possible severe injury.
- **DANGER** indicates that severe personal injury may occur.

Important information

Important information where there is no risk to people or property is indicated with the adjacent symbol. It is bordered by lines above and below the text.



Additional symbols

Symbol	Meaning
▶	Action step
→	Cross-reference to other parts of this document or to other documents
•	List/list entry
–	List/list entry (second level)

General safety instructions

General information

- These installation and maintenance instructions are intended for competent installers.
- Failure to observe the safety instructions can result in serious injuries.
- Read and follow the safety instructions.
- Observe these installation and maintenance instructions to ensure trouble-free operation.
- Install and commission heat sources and their accessories according to the relevant installation instructions.
- Never use open feed and expansion cistern.

Product information

Correct use

- The buffer cylinder may only be filled with heating water. Only use the buffer cylinder in sealed heating systems. Heating systems should preferably be designed with heat pumps.
- Any other use is considered inappropriate. Any damage that may result is excluded from liability.
- Not for use as a method of potable hot water (Domestic Hot Water) Storage.

Data plate

The data plate is located at the top of the rear of the buffer cylinder and includes the following details:

Item	Description
1	Model designation
2	Serial number
3	Actual content
4	Standby heat loss
6	Year of manufacture
8	Max. DHW cylinder temperature
9	Max. flow temperature, heat source
17	Max. operating pressure, heat source side

Tab. 2 Data plate

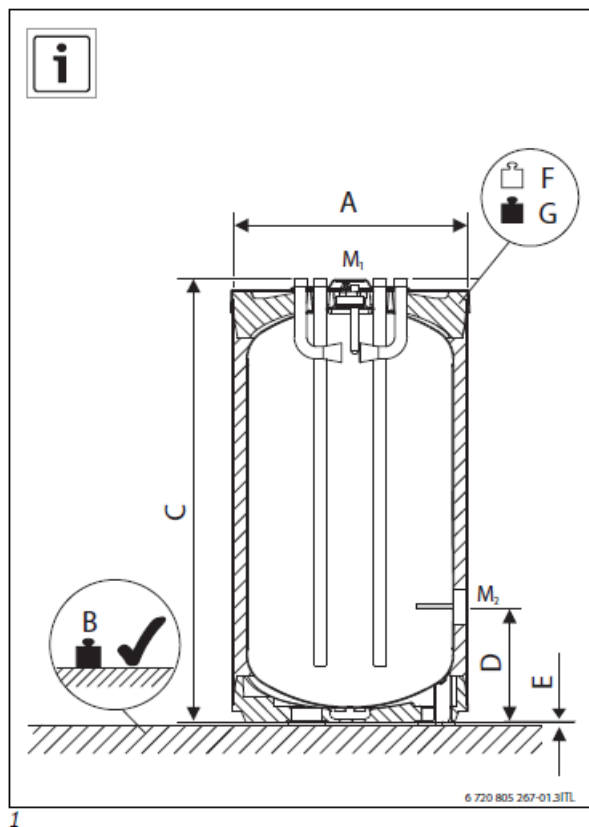
Scope of supply

- Buffer tank
- Installation and servicing instructions

Technical data

	Unit	P 120-5 W Worc
General information		
Dimensions		à Fig. 1, page 6
Height when tilted	mm	1120
Connections		à Tab. 4, page 4
Connection size, heating water	DN	R ³ / ₄ "
Internal diameter, test port cylinder temperature sensor	mm	10
Weight (dry, excl. packaging)	kg	53
Total weight when filled	kg	173
Cylinder capacity		
Available capacity (total)	l	120
Standby heat loss (24h) according to DIN 4753 part 81)	kWh/24h	1.6
Maximum heating water temperature	°C	90
Max. heating water operating pressure	bar (positive)	3

Tab. 3 Dimensions and specifications (Fig. 1, page 6 and Fig. 2, page 6)

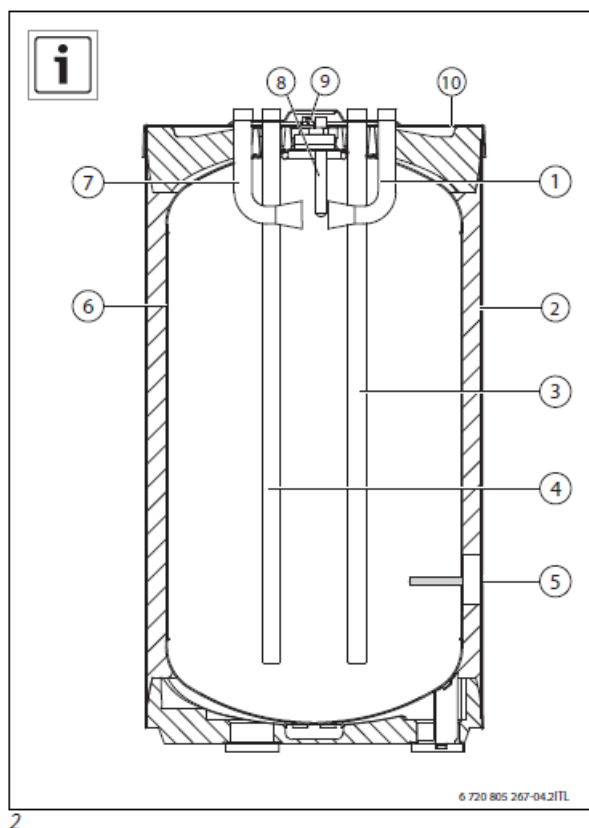


Excluding distribution losses outside the buffer cylinder.

Product description

Item	Description
1	Heating system flow
2	Casing, painted sheet metal with rigid polyurethane foam insulation
3	Heating system return
4	Return to heat source
5	Sensor pocket
6	Storage cylinder, steel
7	Flow from heat source
8	Plug with sensor pocket
9	Air vent valve
10	PS casing lid

Tab. 4 Product description (Fig. 1, page 6 and Fig. 2, page 6)



Regulations

This appliance must be installed and serviced only by a competent person in accordance with the current:

- IEE regulations, construction regulations
- Construction regulations (Scotland) (consolidation)
- Construction regulations (Northern Ireland)
- Local water statutes
- Document 63S on Health and Safety at Work (Electricity at Work Regulations 1989,

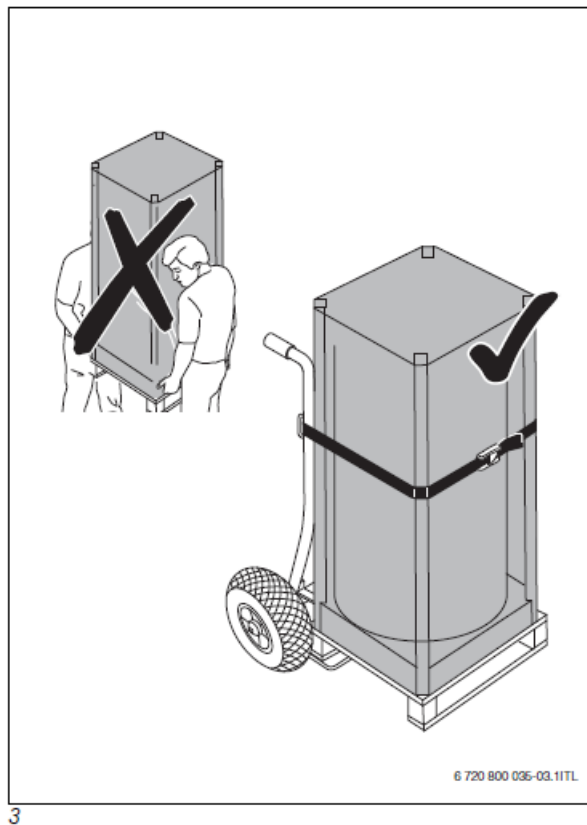
- IS813 (Ireland))
- and further local requirements.

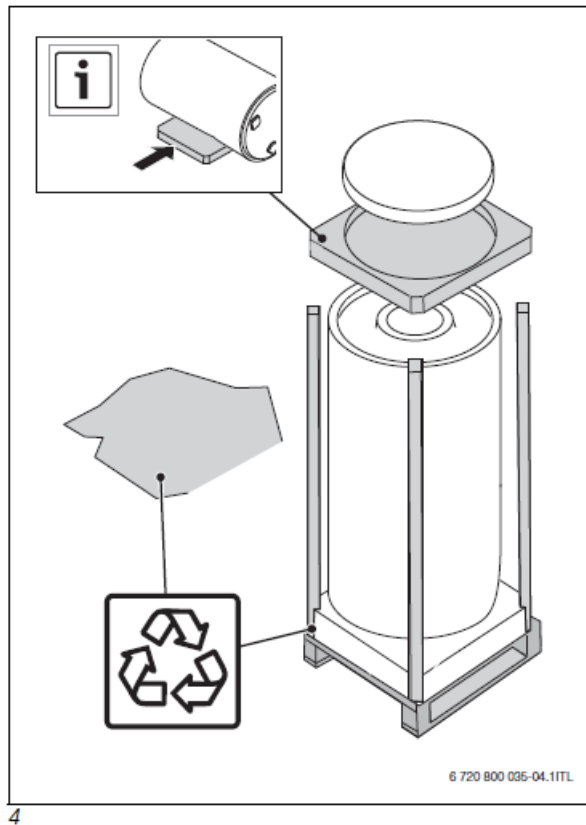
If no special regulations are specified, the relevant codes of practice apply.

- BS7074:1: Code of practice for domestic heating and drinking water supply
- EN:12828: Central heating in residential buildings

Transport

- Secure the buffer cylinder to prevent it falling during transport.
- Move packed buffer cylinder with a sack trolley and strap (Fig. 3, page 6).
– or –
- Move unpacked buffer cylinder with a transport net; during handling, protect connections against possible damage.





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Fitting

The buffer cylinder is delivered fully assembled.

Check that the buffer cylinder is complete and undamaged.

Siting

Requirements for the installation site

NOTICE: System damage through inadequate load bearing capacity of the supporting surface or unsuitable substrate.

Ensure that the installation area is level and offers sufficient load-bearing capacity.

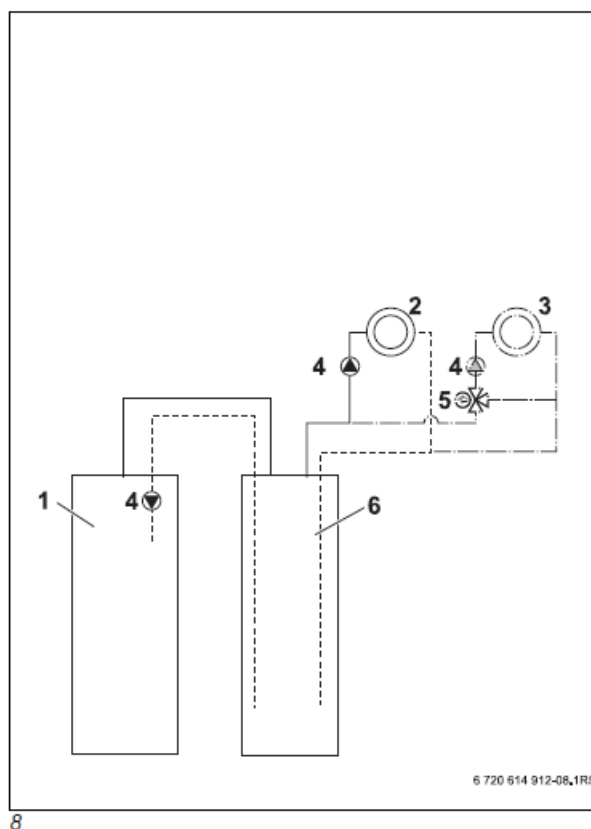
- Site the buffer cylinder on a plinth if there is a risk that water may collect at the installation site.
- Site the buffer cylinder in dry internal areas that are free from the risk of frost.

System components

Function diagram for connecting the buffer cylinder to the heat source Fig. 8, page 8).

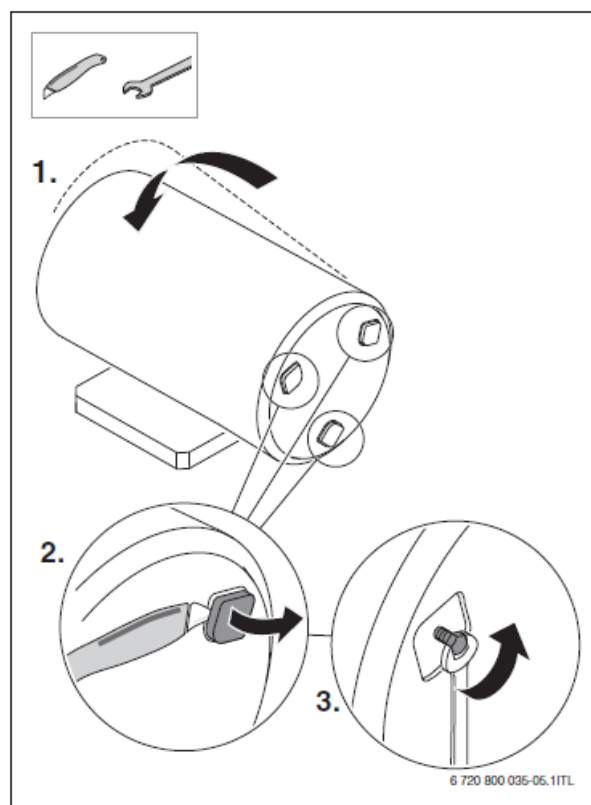
Item	Description
1	Heat source
2	Heating system
3	additional heating system (in case of expansion)
4	Pump
5	3-way mixer
6	Buffer tank

Tab. 5 System components (Fig. 8, page 8)

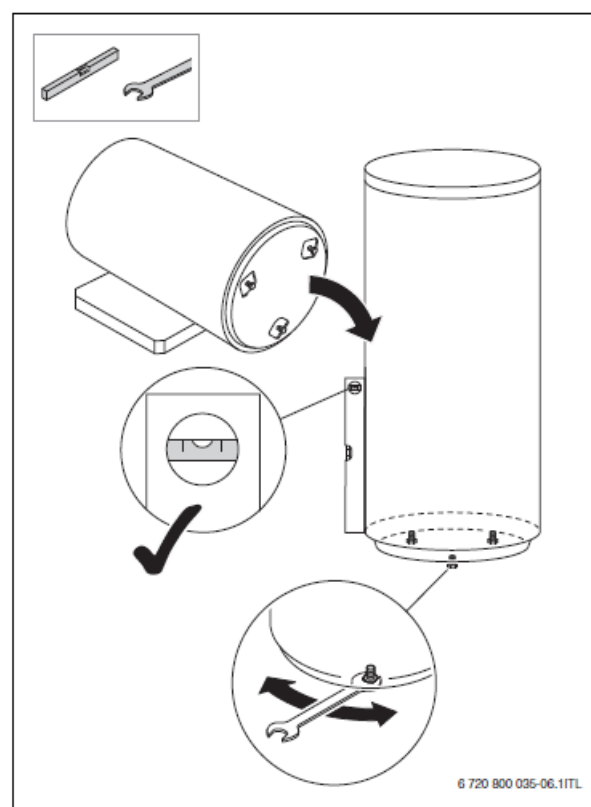


Installing the buffer cylinder

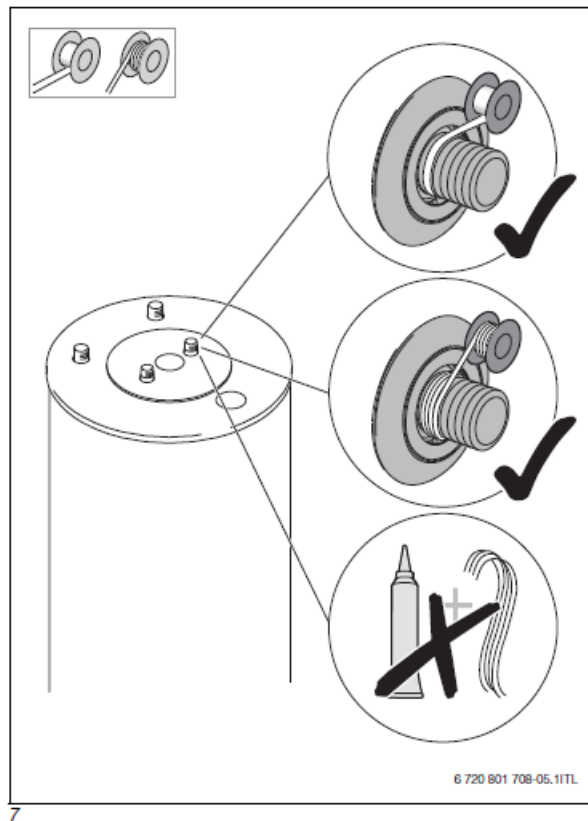
- Stand the buffer cylinder upright and level it (Fig. 5, page 7 and Fig. 6, page 7).
- Remove the protective caps.
- Apply Teflon tape or Teflon string (Fig. 7, page 7).



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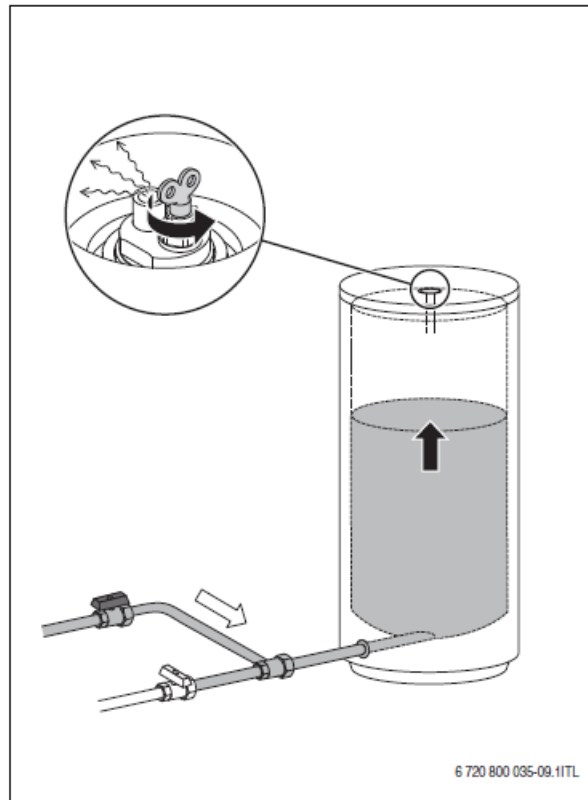
Final installation work for the buffer cylinder

DANGER: Risk of fire from soldering and welding!

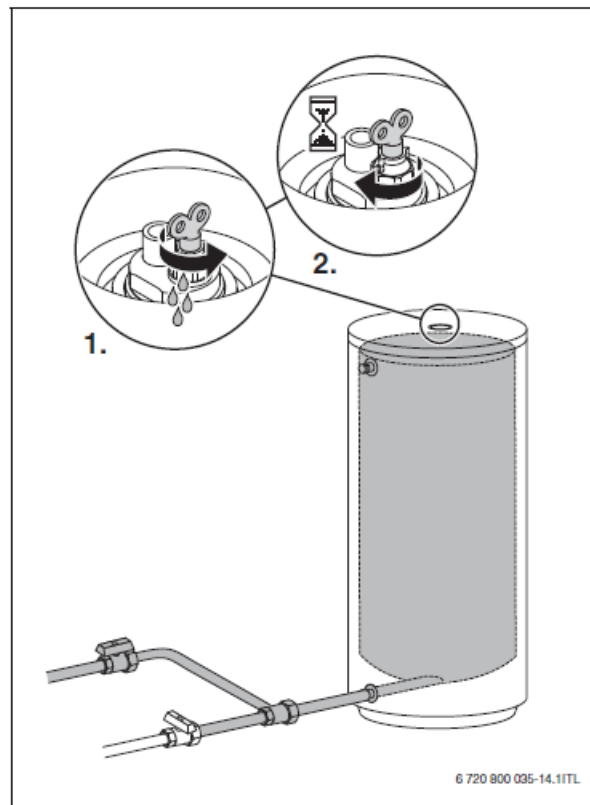
- Take appropriate protective measures when soldering and welding as the thermal insulation is flammable; for example, cover the thermal insulation.
- Check the integrity of the thermal insulation after completing work.
- When sizing the heating system expansion vessel, take the cylinder capacity into consideration.
- Route the connection cables for the cylinder temperature sensors from the back of the cylinder to the heat pump or controller.

CAUTION: Risk of damage to non heat-resistant installation materials (e. g. plastic piping)!

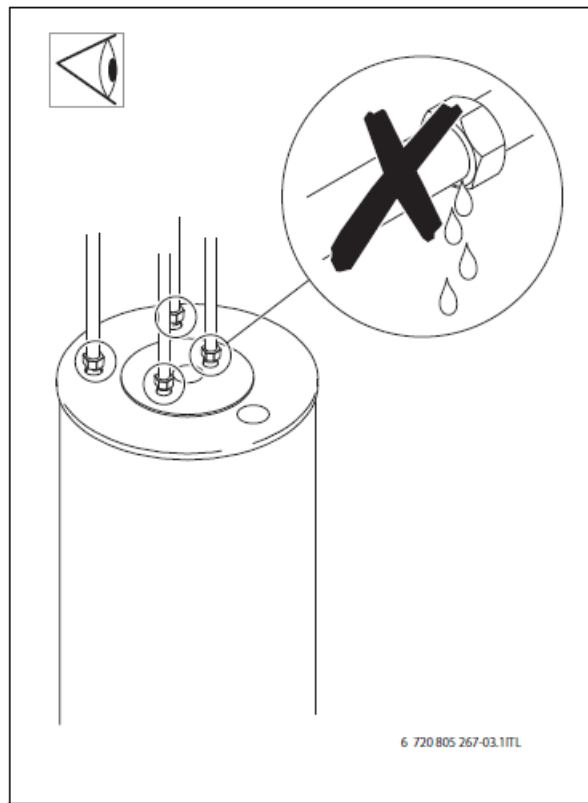
- Use installation material which is heat resistant to ≥ 80 °C.
- Install pipework runs so that natural circulation is prevented.
- Installing connection lines free of stress.
- Install the buffer cylinder pipework on site.
- When filling the buffer cylinder, manually release the air via the air vent (Fig. 2, [9], page 6) on the top side of the cylinder (Fig. 11, page 8 and Fig. 12, page 9).
- Check all connections for tightness (Fig. 13, page 9).



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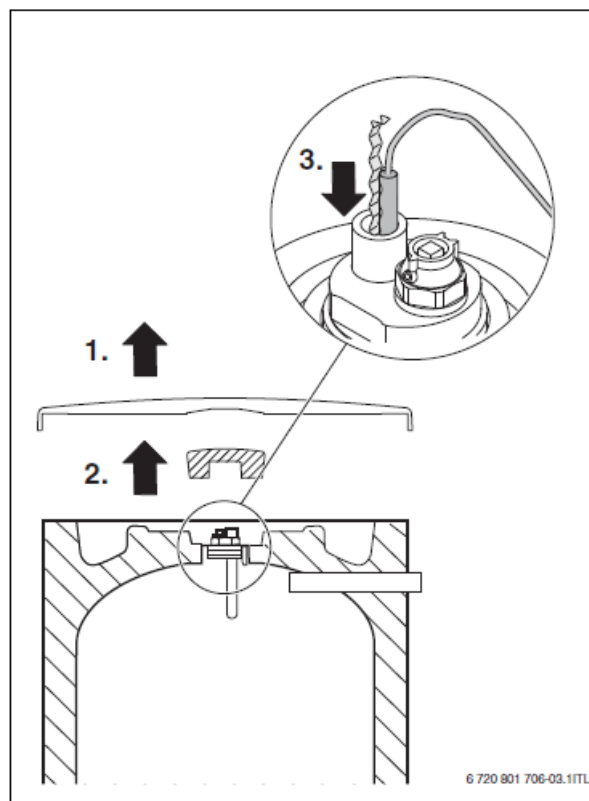
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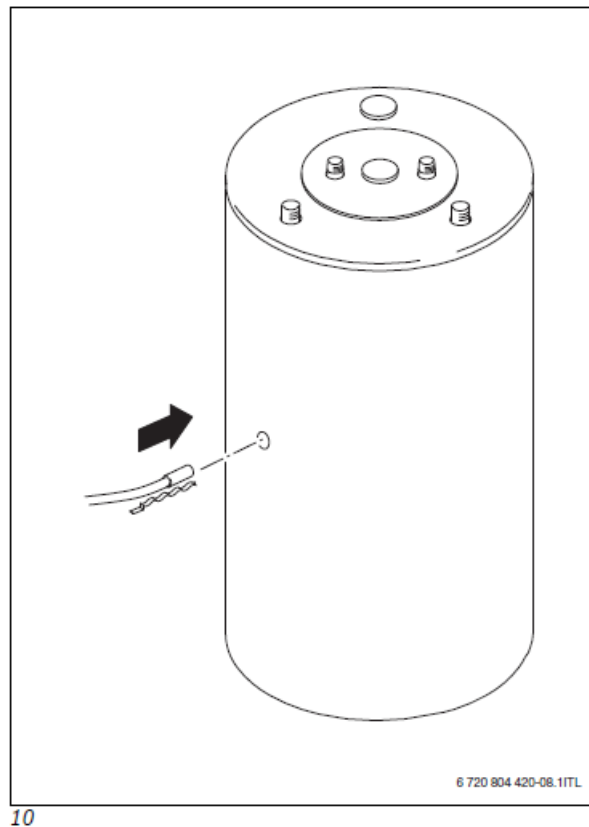
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Fitting temperature sensors

- Fit the temperature sensors (Fig. 9 and 10, page 8).
- Ensure that the sensor area has contact with the sensor pocket area for the sensor's full length.



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Sensor positions:

- M1 = Measuring point for flow temperature sensor (T1) top
- M2 = Measuring point for return temperature sensor (GT1) bottom (Fig. 1, page 6)

For information on this refer to the documentation for the heat pump or control unit.

Startup

- **NOTICE:** Risk of system damage through excessive pressure!
- Never close the blow-off line of the safety relief valve.
- Commission all assemblies and accessories as specified in the manufacturer's technical documentation.

Commissioning the buffer cylinder

Check the buffer cylinder for leaks using potable water only.

The test pressure must not exceed 3 bar positive pressure.

Instructing users

- Explain the operation and handling of the heating system and buffer cylinder, making a particular point of safety-relevant features.
- Explain the function and checking of the safety valve.
- Hand all enclosed documents over to the owner/operator.
- Highlight the following for the user:
 - Recommendation in the case where there is a risk of frost and when the user is briefly away: Keep the

buffer cylinder in operation and select the lowest possible water temperature.

De-commissioning

Switch off the temperature controller at the control unit.

WARNING: Risk of scalding from hot water. Allow the buffer cylinder to cool down sufficiently.

- Drain the buffer cylinder (chapter 9.3, page 5).
- Decommission all assemblies and accessories of the heating system as specified in the manufacturer's technical documentation.
- Close the shut-off valves.

Environmental protection/Disposal

- Environmental protection is a fundamental principle of the Bosch Group.
- Quality of products, efficiency and environmental protection are equally important objectives for us. All legislation pertaining to the environment is strictly observed.

Packaging

We are dedicated in adhering to country specific disposal standards as they relate to packaging to ensure optimum recycling. All packaging materials are environmentally friendly and can be recycled.

Obsolete equipment

Old appliances contain materials that should be recycled.

The relevant assemblies are easy to separate, and all plastics are identified. In this manner the individual components are easily sorted and added into the recycling and disposal systems.

Maintenance

Recommendations for users

Sign a maintenance and inspection contract with an authorized contractor.

Service and repair

- Apart from occasional visual inspection, storage tanks do not require any particular servicing or cleaning.
- Use original spare parts only!

Emptying

- **WARNING:** Risk of scalding!
- Hot water can cause severe scalding.
- Allow the storage tank time to cool down after decommissioning.

If required, drain the buffer cylinder. For instance, if there is a risk of frost.

- Unscrew plug (Fig. 2 [8], page 6) using an open-ended spanner (spanner size 38).

- Drain the buffer cylinder using a hose or suction device.
- Then use Teflon tape or Teflon cord to seal the plug.
- Check for leaks once it has been refilled.

		P 120-5 W Worc
A	mm	550
B	kg	173
C	mm	980
D	mm	248
E	mm	12.5
F	kg	53
G	kg	173

Tab. 6

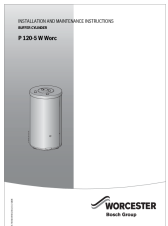
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- **TECHNICAL SUPPORT:** 0844 892 3366
- **APPOINTMENTS:** 0844 892 3000
- **SPARES:** 01905 752571
- **LITERATURE:** 0844 892 9800
- **TRAINING:** 01905 752526
- **SALES:** 01905 752640

Worcester, Bosch Group

- Cotswold Way, Warndon, Worcester WR4 9SW.
- Tel. 0844 892 9900
- Worcester, Bosch Group is a brand name of Bosch Thermotechnology Ltd. worcester-bosch.co.uk
- 6 720 804 668

Documents / Resources

	<p>WORCESTER P 120-5 W Worc Buffer Cylinder [pdf] Installation Guide P 120-5 W, P 120-5 W Worc Buffer Cylinder, Worc Buffer Cylinder, Buffer Cylinder, Cylinder</p>
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References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)