

GT-H, GT-HR, GT-U

Installation and operating instructions



GT-H, GT-HR, GT-U

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English (GB) Installation and operating instructions

Original installation and operating instructions

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1. General information

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.



Read this document before you install the product. Installation and operation must comply with local regulations and accepted codes of good practice.

1.1 Hazard statements

The symbols and hazard statements below may appear in Grundfos installation and operating instructions, safety instructions and service instructions.



DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious personal injury.



WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious personal injury.



CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate personal injury.

The hazard statements are structured in the following way:



SIGNAL WORD

Description of the hazard

Consequence of ignoring the warning

- Action to avoid the hazard.

1.2 Notes

The symbols and notes below may appear in Grundfos installation and operating instructions, safety instructions and service instructions.



Observe these instructions for explosion-proof products.



A blue or grey circle with a white graphical symbol indicates that an action must be taken.



A red or grey circle with a diagonal bar, possibly with a black graphical symbol, indicates that an action must not be taken or must be stopped.



If these instructions are not observed, it may result in malfunction or damage to the equipment.



Tips and advice that make the work easier.

1.3 Target group

These installation and operating instructions are intended for professional as well as non-professional users.

2. Product introduction

2.1 Product description

The Grundfos GT-U, GT-H, and GT-HR are long-life pressure tanks ideally suited for controlling the pressure in domestic and industrial applications.



Example of GT-U tank

2.2 Intended use

- GT-U is a vertical tank for use in cold-water systems.
- GT-H is a horizontal tank for use in cold-water systems. The tank has a base plate for mounting a pump.

- GT-HR for use in cooling or heating systems.

The table below shows the tank types in relation to the application.

Application	Tank type		
	GT-U	GT-H	GT-HR
Drinking water	●	●	-
Grey wastewater *	●	●	-
Chilled water	●	-	●
Heating	-	-	●

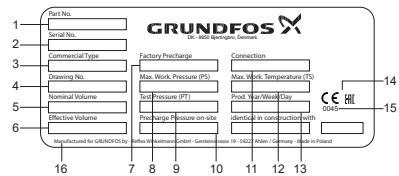
- Recommended

- Not recommended

* Grey wastewater is domestic wastewater, for example, from dishwashers, washing machines, and cabinet showers.

2.3 Identification

2.3.1 Nameplate for GT-H, GT-HR, GT-U



Nameplate

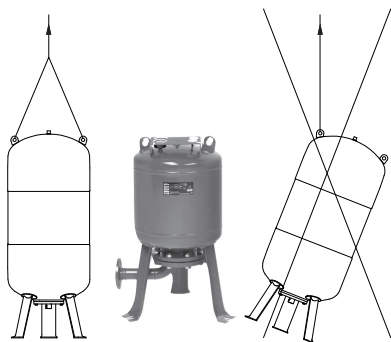
Pos.	Description
1	Product number
2	Serial number
3	Type designation
4	Drawing number
5	Nominal volume
6	Effective volume
7	Factory precharge
8	Max. operating pressure
9	Test pressure
10	Precharge pressure
11	Connection
12	Max. operating temperature

Pos.	Description
13	Production code (year and week)
14	Marks of approval
15	Notified body
16	Production company

3. Receiving the product

3.1 Lifting the product

If the GT tank has lifting eyes, use all lifting eyes.



Lifting the tank

4. Installation requirements



Installation and operation must comply with local regulations and accepted codes of good practice.

Before installation, check the following:

- Do the GT tank specifications correspond to your order?
- Are all visible parts intact?
- Is the maximum system pressure lower or equal to the maximum operating pressure for the GT tank? See tank nameplate.

4.1 Location

- The GT tank must be installed in the outlet pipe as close to the pump as possible.
- The GT tank must be installed in a frost-free room. It must be possible to inspect the GT tank from all sides.
- The gas-filling valve, water shut-off, and outlet must be accessible, and the nameplate must be visible.

- The GT tank must be installed so that it is not stressed by the pipes. If vibrations are likely to occur, we recommend that the GT tank is installed so that vibrations are absorbed.

4.2 Precharge pressure

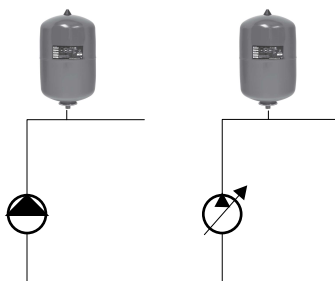
The GT tanks are supplied from factory with a precharge pressure. See tank nameplate.

The precharge pressure must be adjusted according to the actual application and the installed pump.

The precharge pressure must be slightly below the pump cut-in setting.

Recommended precharge pressures:

- 0.9 x setpoint for fixed-speed pumps
- 0.7 x setpoint for variable-speed pumps.



Precharge pressure

4.2.1 Adjusting the precharge pressure



If there is no precharge pressure in the tank, you must fill the tank with nitrogen.

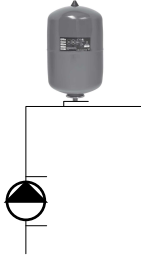
If the precharge pressure is not suitable for the application, it should be adjusted according to the following steps:

1. Use a suitable pressure gauge to check the precharge pressure.
2. We recommend using nitrogen to achieve the recommended precharge pressure.

4.3 Maximum operating pressure

The maximum operating pressure of the pump (P2) and the actual inlet pressure (P1) must not exceed the maximum operating pressure of the GT tank (P3). See fig. Maximum operating pressure.

See pump and tank nameplates.



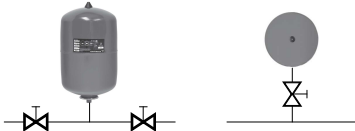
Maximum operating pressure

4.4 System check

The GT tank must be bypassed if the system pressure exceeds the maximum operating pressure of the GT tank during a system check.

4.5 Isolating valves

We recommend installing an isolating valve on either side of the GT tank.



Isolating valves

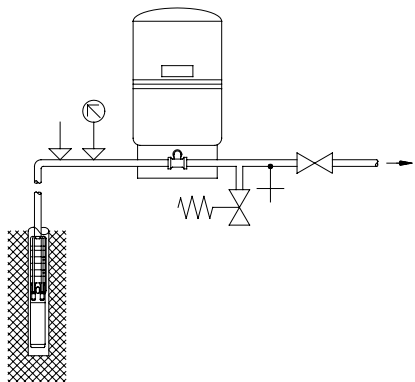
4.6 Installing the relief valve

1. Set the relief valve to open at the maximum operating pressure. This will protect the GT tank and other system components.
2. Install the relief valve at the connection of the GT tank to the pipe system. It should have an outlet equal to the pump capacity at maximum operating pressure.

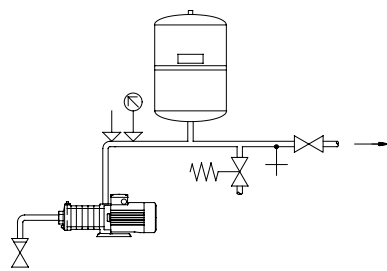


Relief valve

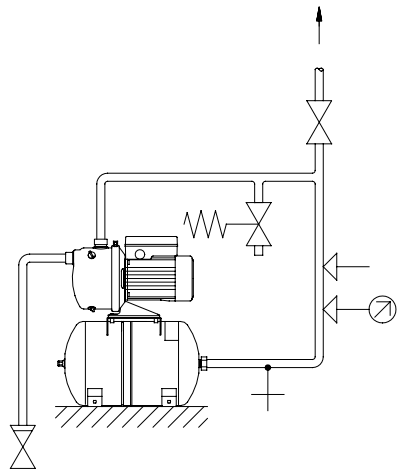
4.7 Installation examples



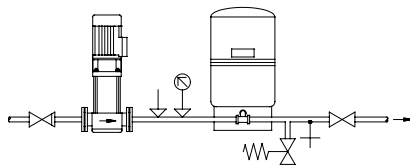
TM010499



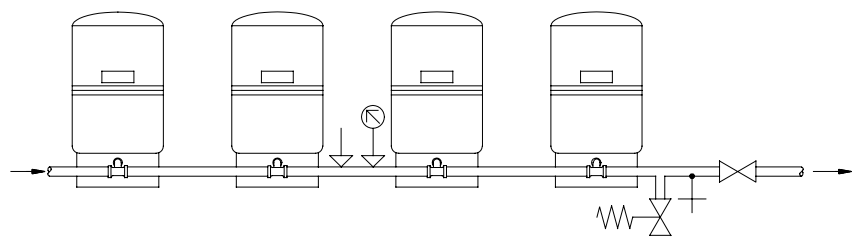
TM010503









TM010502



TM010500



TM010501

Symbol	Description
	TM027804 Isolating valve
	TM027806 Pressure gauge
	TM027805 Relief valve
	TM027807 Non-return valve
	TM027808 Pressure switch
	TM027809 Drain

5. Mechanical installation

5.1 Positioning the product

We recommend following these steps:

1. Lift and position the GT tank.
2. Level as required (horizontally and vertically).
3. Secure the GT tank.
4. Connect the pipes and fittings.
5. Check/adjust the precharge pressure.
6. Start the pump or application.



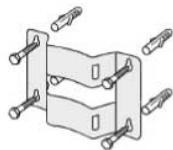
No additional loads from the pipe system or equipment are allowed.

5.1.1 Floor installation

GT tanks must be placed on the floor without bolts.

5.1.2 Wall installation

Small GT tanks of up to 33 litres must be secured to a wall or similar.



*Example of wall installation with wall bracket
(product no. 00ID9070)*

6. Maintenance

The GT tank is maintenance-free, but we recommend checking the tank for damage two times a year.



If the tank is removed, when the tank and/or the system is still pressurized, make sure that the tank is without pressure.

Close the isolating valves and remove the precharge pressure through the air valve.

6.1 Maintenance schedule

- Check the precharge pressure annually.
- Before checking the pressure, make sure that there is no water in the GT tank (switch off the pump, and open a tap).
- If water escapes during the precharge pressure check, the bladder is defective.

GT tank bladder with a volume larger than 80 litres can be replaced.

6.2 Checking the GT tank for damage

During maintenance, check the following:

1. Is corrosion visible?
2. Are scratches, dents, etc. visible?

In case of serious damage, contact your nearest Grundfos company.

7. Technical data

See tank nameplate.

8. Disposing of the product

This product or parts of it must be disposed of in an environmentally sound way.

1. Use the public or private waste collection service.
2. If this is not possible, contact the nearest Grundfos company or service workshop.



The crossed-out wheellie bin symbol on a product means that it must be disposed of separately from household waste. When a product marked with this symbol reaches its end of life, take it to a collection point designated by the local waste disposal authorities. The separate collection and recycling of such products will help protect the environment and human health.

TMR0224

See also end-of-life information at
www.grundfos.com/product-recycling.

9. Declaration of Conformity

For more information on the Declaration of Conformity, scan the QR code to access Reflex Winkelmann GmbH website:



CERTIM078112

<https://www.reflex-winkelmann.com/en/the-company/company-quality/conformity-and-standards/>

10. Certificates

For more information on the product certificates, scan the QR code to access Reflex Winkelmann GmbH website:



CERTIM078113

<https://www.reflex-winkelmann.com/en/the-company/company-quality/norms-and-certificates/>

RUS

GT-H, GT-HR, GT-U

Расширительные баки GT сертифицированы на соответствие требованиям Технического регламента Таможенного союза ТР ТС 010/2011 «О безопасности машин и оборудования».

Сертификат соответствия:

№ ЕАЭС № RU Д-ДК.БЛ08.В.02746, сроком действия с 21.12.2017 по 17.12.2022г.

Расширительные баки GT прошли подтверждение соответствия требованиям Технического регламента Таможенного союза ТР ТС 032/2013 «О безопасности оборудования, работающего под избыточным давлением».

Декларации о соответствии:

№ ЕАЭС N RU Д-ДК.БЛ08.В.02751, сроком действия с 21.12.2017 по 19.12.2022г. (1 категория, исполнения: GT-U, GT-H, GT-HR)

№ ЕАЭС N RU Д-ДК.БЛ08.В.02752, сроком действия с 21.12.2017 по 19.12.2022г. (2 категория, исполнения: GT-U, GT-H, GT-HR, GT-D)

Сертификаты соответствия:

№ ТС RU С-ДК.БЛ08.В.01057, сроком действия с 21.12.2017 по 19.12.2022г. (3 категория, исполнения: GT-H, GT-U, GT-HR, GT-D)

№ ТС RU С-ДК.БЛ08.В.01058, сроком действия с 21.12.2017 по 19.12.2022г. (4 категория, исполнения: GT-U, GT-HR, GT-D)

Выданы: Органом по сертификации продукции «ИВАНОВО-СЕРТИФИКАТ» ООО «Ивановский Фонд Сертификации». Адрес: 153032, Российская Федерация, г. Иваново, ул. Станкостроителей, д.1.

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Revision Info

Last revised on 09-09-2020

96550312 02.2021

ECM: 1307749
