

# GT pressure tanks

For cold-water and heating applications



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# 1. Product data

## Applications

The Grundfos GT pressure tanks are long-life tanks ideally suited for controlling the pressure in domestic, commercial as well as industrial applications in the following systems:

- cold-water (drinking-water) systems. See [Applications](#), page 6.
- heating systems. See [Heating](#), page 19.

Grundfos GT tanks ensure long, maintenance-free, reliable and controlled operation.

GT tanks can be integrated in many different systems with a wide variety of pumps. The large number of tank sizes and types available makes it possible to select the pressure tank that best suits the application and system in question.

## Intended use

Grundfos tanks can be used both indoors and outdoors as they are rated C2 corrosivity category according to ISO 12944.

ISO 12944 distinguishes six corrosivity categories for atmospheric environments:

| Corrosivity category | Environment examples according to ISO 12944   |   |
|----------------------|---|---|
|                      | Outdoors  | Indoors   |
| C1                   | -   | Heated buildings with a clean atmosphere such as offices, shops, schools, hotels.                                     |
| C2                   | Atmosphere contaminated to a small extent, mainly rural regions.                        | Buildings which are not heated, where condensation may occur e.g. storehouses, sports halls.                          |
| C3                   | Industrial and urban atmosphere with an average sulphur oxide (IV) contamination level. | Production space of high humidity and certain air contamination e.g. foodstuff plants, laundries, breweries, dairies. |
| C4                   | Inshore areas of low salinity.  | Chemical plants, swimming pools, ship repair yards.   |
| C5                   | Industrial areas and inshore areas of medium salinity.                                  | Buildings and areas of almost constant condensation and high contamination.   |
| C5                   | Inshore areas and offshore areas of high salinity.                                      | Buildings and areas of almost constant condensation and high contamination.   |

## Volume range

| Application | Position   | Volume range [l] |
|-------------|------------|------------------|
| Cold water  | Vertical   | 8 to 5000        |
|             | Horizontal | 20 to 100        |
| Heating     | Vertical   | 8 to 3000        |

## Product range

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

| Symbol | Description     |   |
|--------|-----------------|---|
|        | •               | ○ |
| •      | Recommended     |   |
| ○      | Applicable      |   |
| -      | Not recommended |   |

| Application    | Tank type |        |       |       |        |       |        |        |
|----------------|-----------|--------|-------|-------|--------|-------|--------|--------|
|                | GT -U     | GT -U+ | GT -H | GT -D | GT -DF | GT -C | GT -CF | GT -HR |
| Heating        | -         | •      | -     | -     | -      | -     | -      | •      |
| Chilled water  | ○         | •      | -     | -     | -      | -     | -      | •      |
| Sea water      | -         | -      | -     | -     | -      | •     | -      | -      |
| Grey water     | •         | •      | ○     | ○     | -      | ○     | -      | -      |
| Drinking water | •         | •      | •     | •     | •      | •     | •      | -      |

For chilled water, a glycol-water mixture with a maximum of 50 % glycol is permissible for freeze protection.

Grey water, also known as sullage, is non-industrial wastewater generated from domestic processes, such as dish washing, laundry and bathing.

## Approvals and markings

| Tank type | Approvals |     |     | Markings |     |
|-----------|-----------|-----|-----|----------|-----|
|           | WRAS      | NSF | ACS | CE       | EAC |
| GT-U      | •         | -   | •   | •        | •   |
| GT-U+     | •         | -   | •   | •        | -   |
| GT-H      | •         | -   | •   | •        | •   |
| GT-D      | -         | -   | •   | •        | •   |
| GT-DF     | -         | -   | •   | •        | -   |
| GT-C      | -         | -   | •   | •        | -   |
| GT-CF     | -         | -   | •   | •        | -   |
| GT-HR     | -         | -   | -   | •        | •   |

| Tank type                                   | Compliance UBA METALLE |
|---|------------------------|
| GT-U, GT-U+, GT-H, GT-D, GT-DF, GT-C, GT-CF | •                      |
| GT-HR                                       | -                      |

## Type key

| Code                 | Example  | GT | - U | - 25 | PN 10 | G 1/2 | V |
|----------------------|--|----|-----|------|-------|-------|---|
| Type range           |  |    |     |      |       |       |   |
| <b>Tank type</b>     |  |    |     |      |       |       |   |
| U                    | Bladder  |    |     |      |       |       |   |
| U+                   | Bladder  |    |     |      |       |       |   |
| H                    | Diaphragm  |    |     |      |       |       |   |
| D                    | Double diaphragm                                   |    |     |      |       |       |   |
| DF                   | Double diaphragm with FlowThru                     |    |     |      |       |       |   |
| C                    | Composite tank                                     |    |     |      |       |       |   |
| CF                   | Composite tank with FlowThru                       |    |     |      |       |       |   |
| HR                   | Non-replaceable diaphragm for heating applications |    |     |      |       |       |   |
| Tank volume [litres] |  |    |     |      |       |       |   |
| Pressure rating      |  |    |     |      |       |       |   |
| Pipe connection      |  |    |     |      |       |       |   |
| <b>Position</b>      |  |    |     |      |       |       |   |
| V                    | Vertical   |    |     |      |       |       |   |
| H                    | Horizontal   |    |     |      |       |       |   |

## 2. Construction

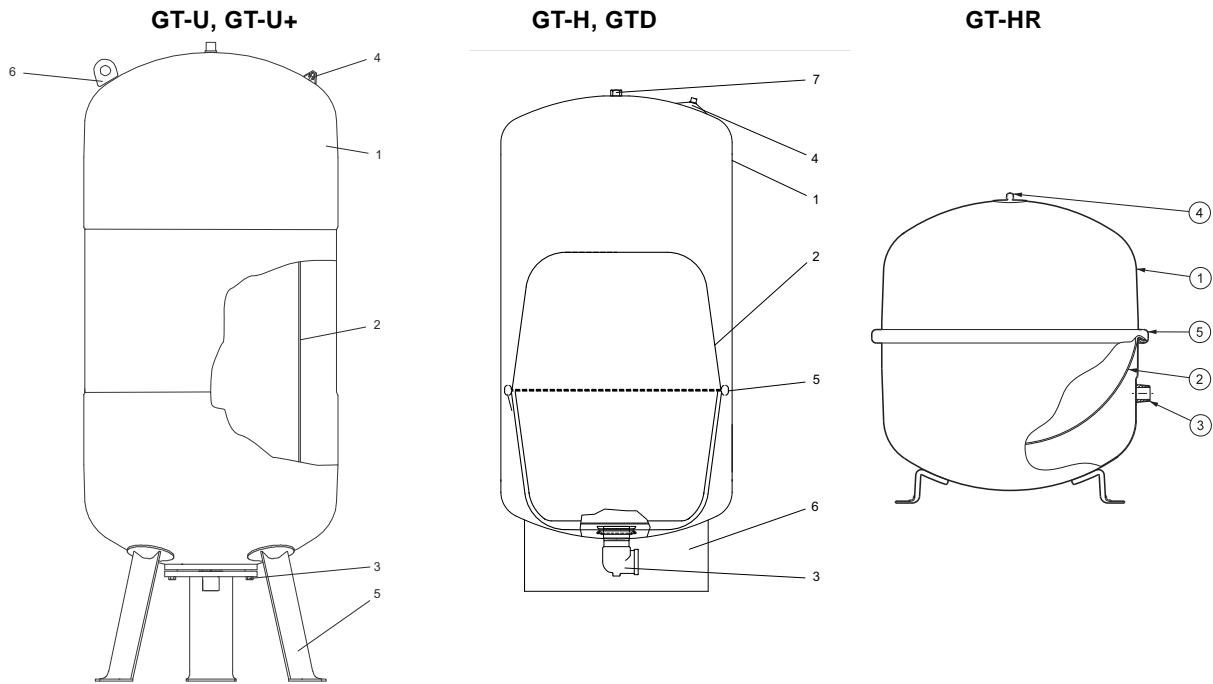


Fig. 1 Sectional drawings, examples of tanks. The actual GT tank may look different from the examples shown above.

TM03 8262 0907 - TM02 9095 0907 - TM03 1677 2705

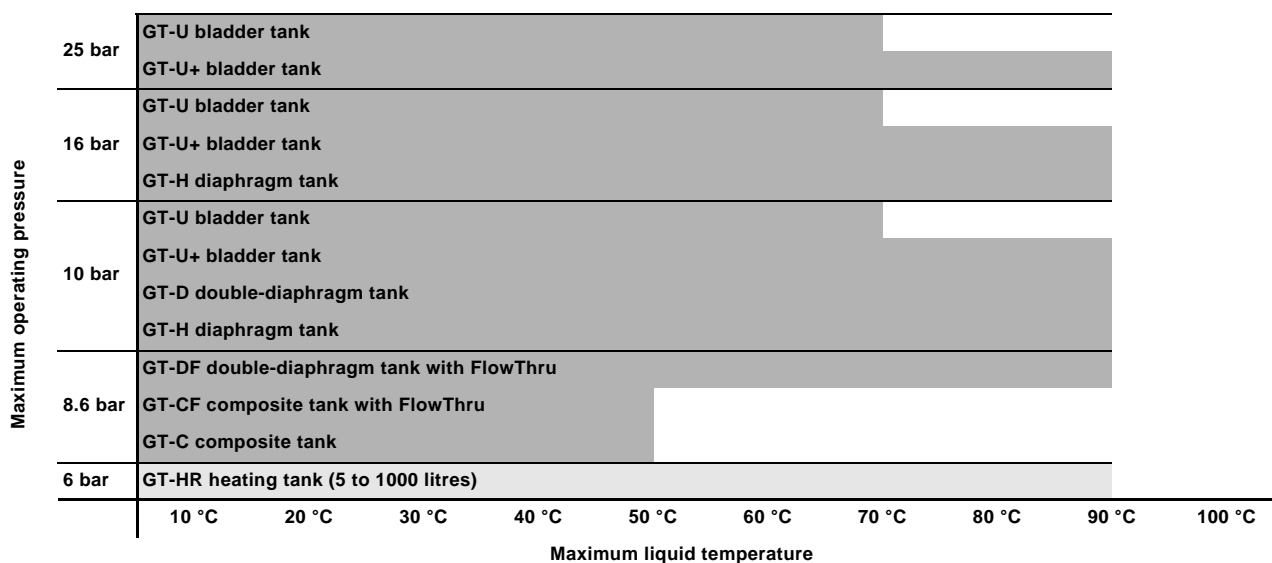
## Material specifications

| Pos. | Component              | Material                              | Tank type  |
|------|------------------------|---------------------------------------|--|
| 1    | Tank body              | Low-carbon sheet steel                | GT-U, GT-U+, GT-H, GT-D, GT-DF, GT-HR              |
|      |                        | Fibreglass, epoxy resin, composite    | GT-C, GT-CF  |
| 2    | Bladder, diaphragm     | Butyl                                 | GT-U, GT-H, GT-D, GT-DF, GT-C, GT-CF               |
|      |                        | EPDM                                  | GT-U+  |
|      |                        | SBR rubber                            | GT-HR  |
| 3    | Flange/pipe connection | Stainless steel EN 1.4301/AISI 304    | GT-H, GT-D, GT-DF                                  |
|      |                        | Stainless steel EN 1.4401/AISI 316 Ti | GT-U, GT-U+  |
|      |                        | Polyvinyl chloride (PVC)              | GT-C, GT-CF  |
|      |                        | Low-carbon sheet steel                | GT-HR  |
| 4    | Air valve              | Steel/brass                           | GT-U, GT-U+, GT-H, GT-D, GT-DF, GT-C, GT-CF, GT-HR |
| 5    | Clamping ring/feet     | Low-carbon sheet steel                | GT-U, GT-U+, GT-H, GT-D, GT-DF, GT-HR              |
|      |                        | Polypropylene (PP)                    | GT-C, GT-CF  |
| 6    | Lifting eye/skirt      | Low-carbon sheet steel                | GT-U, GT-U+, GT-H, GT-D, GT-DF, GT-HR              |
|      |                        | Polypropylene (PP)                    | GT-C, GT-CF  |
| 7    | Tapped hole            | Low-carbon sheet steel                | GT-U, GT-U+  |

## Tank colour

| Tank type                                       | Colour | Colour code                 |
|---|--------|-----------------------------|
| GT-U<br>GT-U+<br>GT-H<br>GT-D<br>GT-DF<br>GT-HR | Grey   | NCS S7005-R80B, gloss 20-35 |
| GT-C<br>GT-CF                                   | Grey   | -                           |

### 3. Operating conditions



## 4. Cold water

### Applications

The Grundfos GT pressure tanks for cold-water applications are long-life tanks ideally suited for controlling the pressure in domestic, commercial as well as industrial applications.

Typical applications:

- domestic water supply systems
- booster systems
- irrigation systems
- industrial systems.

GT tanks can be integrated in many different systems with a wide variety of pumps. The large number of tank sizes and types available makes it possible to select the pressure tank that best suits the application and system in question.

### Tank range

#### GT-U, bladder tank

The pressure tank body is made of steel and is factory-precharged with nitrogen. All parts in contact with water are either made of stainless steel or coated for protection against corrosion.

The replaceable bladder for tanks with a volume exceeding 60 litres is made of high-quality rubber material suitable for potable-water and grey-water applications, such as booster systems, pressurisation and water hammer arresting.

#### GT-U+, bladder tank

GT-U+ has a built-in pressure gauge placed on the tank body.

You can install a pressure switch by the air valve on top of the tank in order to start and stop the pump.

The pressure tank body is made of steel.

The replaceable bladder is suitable for potable-water and grey-water applications where high-pressure ratings are required, such as booster systems, heating expansion, pressurisation and water-hammer arresting.

#### GT-H, diaphragm tank

The polypropylene liner combined with an FDA-approved high-grade butyl diaphragm makes up the water chamber. This is held against the tank wall with a steel clench ring.

The brass air valve, sealed by a threaded O-ring valve cap, prevents air leaks.

#### GT-D, double-diaphragm tank

The diaphragm is a chlorine-resistant 100 % butyl diaphragm with a precision-moulded copolymer polypropylene liner for superior air and water separation.

The diaphragm assembly is clenched together with a positive lock internal clench ring which contains drawdown water in a precharged air atmosphere, thus providing separation between the diaphragm and tank wall. This air buffer means less problems with condensation. The air chamber is sealed with a fixed O-ring and closed cell foam.

#### GT-DF, double-diaphragm tank with FlowThru

The GT-CF pressure tank has a steel body and the same double diaphragm as the CT-D tank.

The FlowThru connection diverts system water into and more importantly out of the tank while the pump is running. This constant flushing ensures that the water in the tank remains fresh and eliminates the risk of stagnant water during normal system operation. See fig 2.

#### GT-C, composite tank

The GT-C pressure tank is a lightweight pressure tank. The diaphragm is a chlorine-resistant 100 % butyl diaphragm with a precision-moulded copolymer polypropylene liner for superior air and water separation. This design allows each tank size to have a properly sized water chamber matched to the drawdown performance of that tank. A steel clench ring regulates movement and prevents the diaphragm from rubbing against the tank wall.

#### GT-CF, composite tank with FlowThru

The GT-CF lightweight pressure tank has the same diaphragm as the CT-C tank. The FlowThru connection diverts system water into and more importantly out of the tank while the pump is running. This constant flushing ensures that the water in the tank remains fresh and eliminates the risk of stagnant water during normal system operation. See fig 2.

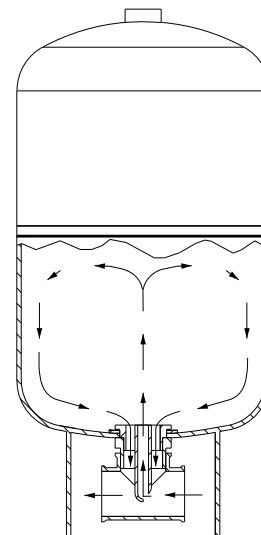


Fig. 2 Illustration of the FlowThru function

TM04 5524 3309

### Selection of cold water tank

#### Tank sizes not exceeding 450 litres

For tank sizes not exceeding 450 litres, use the diagram in fig 4 to select the optimum tank size. All you need to know is the cut-in pressure and the flow rate.

The diagram below is based on the following values:

- differential pressure: 1 bar
- number of starts and stops per hour: 20
- constant for tank precharge pressure: 0.9.

#### Tank sizes exceeding 450 litres

Calculate tank sizes exceeding 450 litres with the formula below.

$$V_0 = \frac{1000 \times Q_s \times (p_1 + 1) \times (p_2 + 1)}{4 \times N \times (p_0 + 1) \times (p_2 - p_1)}$$

- $V_0$ : Tank volume [litres]
- $V_L$ : Air volume in tank [litres]
- $V_V$ : Water volume in tank [litres]
- $Q_s$ : Mean flow rate [ $m^3/h$ ]
- $p_1$ : Cut-in pressure [bar]
- $p_2$ : Cut-out pressure [bar]
- $p_0$ : Precharge pressure, tank [bar]
- $Q_P$ : Flow rate, pump [ $m^3/h$ ]
- $Q_T$ : Flow rate, pressure tank [ $m^3/h$ ]
- $N$ : Maximum number of starts/stops per hour

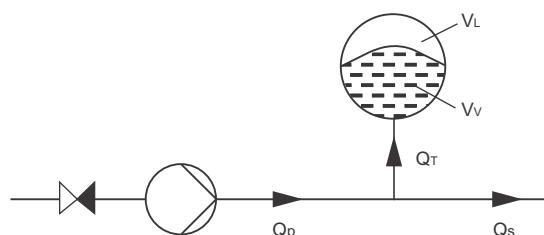


Fig. 3 Calculation of the tank volume

TM04 5567 3409

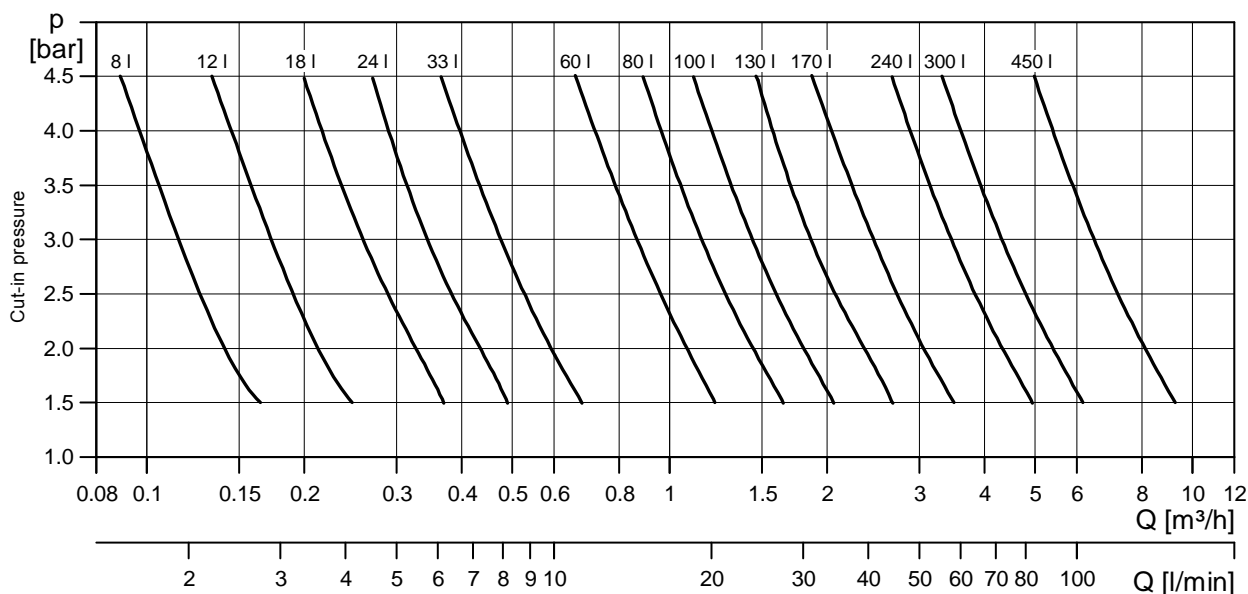


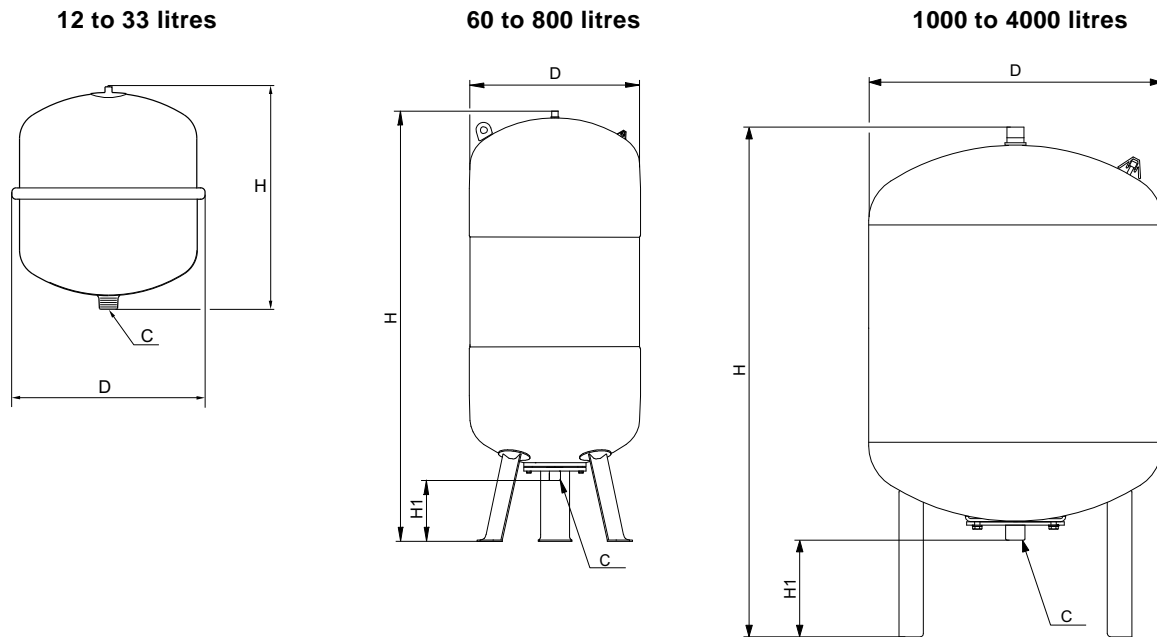
Fig. 4 Tank size in relation to the cut-in pressure and flow rate. For tank sizes not exceeding 450 litres.

TM02 8938 2405

## GT-U, 10 bar

Vertical installation.  
Maximum pressure: 10 bar.  
Precharge pressure: 4 bar.

### Dimensions, weights and product numbers



TM03 1681 2809 - TM03 8257 2809 - TM03 8258 0518

Fig. 5 Dimensional sketches

| Tank type                 | Size [l] | Dimensions [mm] |      |     |         | Gross weight [kg]      |               | Replaceable bladder | Product number         |               |
|---------------------------|----------|-----------------|------|-----|---------|------------------------|---------------|---------------------|------------------------|---------------|
|                           |          | D               | H    | H1  | C       | Stainless-steel flange | Coated flange |                     | Stainless-steel flange | Coated flange |
| GT-U-12 PN 10 G 3/4 V     | 12       | 280             | 307  | -   | G 3/4   | 2.5                    | -             | -                   | 96989120               | -             |
| GT-U-25 PN 10 G 3/4 V     | 25       | 280             | 520  | -   | G 3/4   | 5.5                    | -             | -                   | 96573253               | -             |
| GT-U-33 PN 10 G 3/4 V     | 33       | 354             | 454  | -   | G 3/4   | 6.7                    | -             | -                   | 96573254               | -             |
| GT-U-60 PN 10 G 1 V       | 60       | 409             | 734  | -   | G 1     | 14.3                   | -             | -                   | 96989123               | -             |
| GT-U-80 PN 10 G 1 V       | 80       | 480             | 745  | 153 | G 1     | 26                     | 17            | •                   | 96573255               | 96573266      |
| GT-U-100 PN 10 G 1 V      | 100      | 480             | 750  | 153 | G 1     | 30                     | 22            | •                   | 96573257               | 96573267      |
| GT-U-200 PN 10 G 1 1/4 V  | 200      | 634             | 967  | 150 | G 1 1/4 | 50                     | 50            | •                   | 96573258               | 96573268      |
| GT-U-300 PN 10 G 1 1/4 V  | 300      | 634             | 1267 | 150 | G 1 1/4 | 50                     | 55            | •                   | 96573259               | 96573269      |
| GT-U-400 PN 10 G 1 1/4 V  | 400      | 740             | 1245 | 139 | G 1 1/4 | 76                     | 76            | •                   | 96603444               | 96603450      |
| GT-U-500 PN 10 G 1 1/4 V  | 500      | 740             | 1475 | 133 | G 1 1/4 | 85                     | 78            | •                   | 96573260               | 96573280      |
| GT-U-600 PN 10 G 1 1/2 V  | 600      | 740             | 1859 | 263 | G 1 1/2 | 161                    | 161           | •                   | 96603445               | 96603451      |
| GT-U-800 PN 10 G 1 1/2 V  | 800      | 740             | 2325 | 263 | G 1 1/2 | 187                    | 200           | •                   | 96603446               | 96603452      |
| GT-U-1000 PN 10 G 1 1/2 V | 1000     | 740             | 2604 | 263 | G 1 1/2 | 258                    | 258           | •                   | 96603447               | 96603453      |
| GT-U-1500 PN 10 DN 65 V   | 1500     | 1200            | 1991 | 286 | DN 65   | -                      | 535           | •                   | -                      | 96573283      |
| GT-U-2000 PN 10 DN 65 V   | 2000     | 1200            | 2451 | 291 | DN 65   | -                      | 710           | •                   | -                      | 96573284      |
| GT-U-3000 PN 10 DN 65 V   | 3000     | 1500            | 2521 | 320 | DN 65   | -                      | 1050          | •                   | -                      | 96573285      |
| GT-U-4000 PN 10 DN 65 V   | 4000     | 1500            | 3070 | 320 | DN 65   | -                      | 1140          | •                   | -                      | 96603454      |

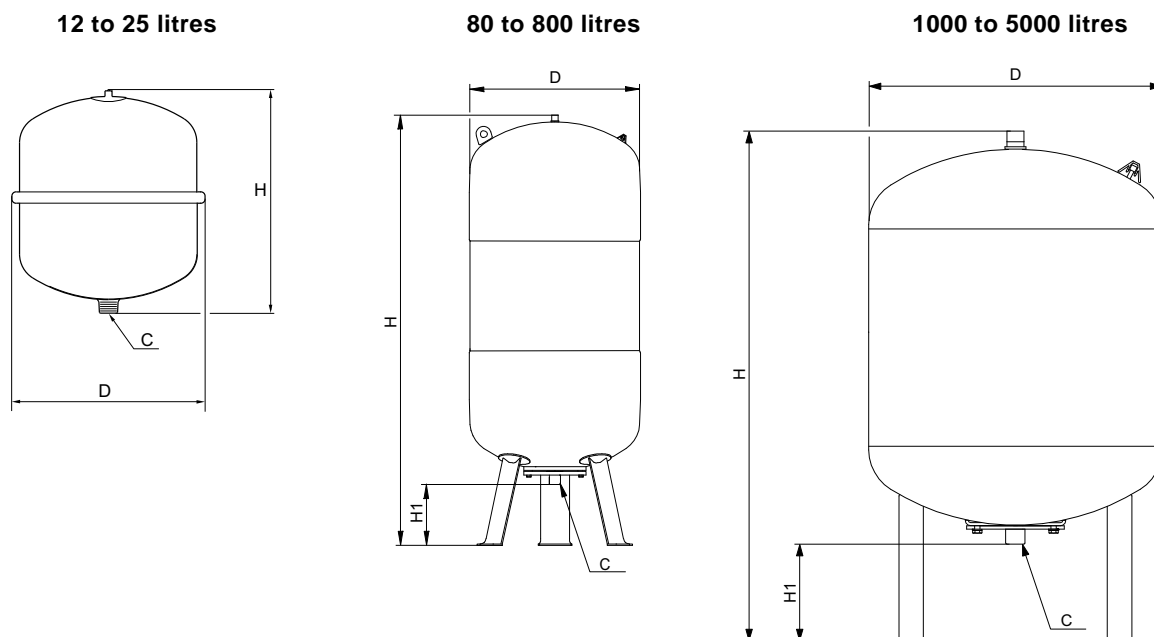
**Note:** For some GT-U tanks, the bladder is available as a spare part. The part number can be found on Grundfos.com (GPC).



### GT-U, 16 bar

Vertical installation.  
 Maximum pressure: 16 bar.  
 Precharge pressure: 4 bar.

#### Dimensions, weights and product numbers



TM03 1681 2809 - TM03 8257 2809 - TM03 8258 0518

Fig. 6 Dimensional sketches

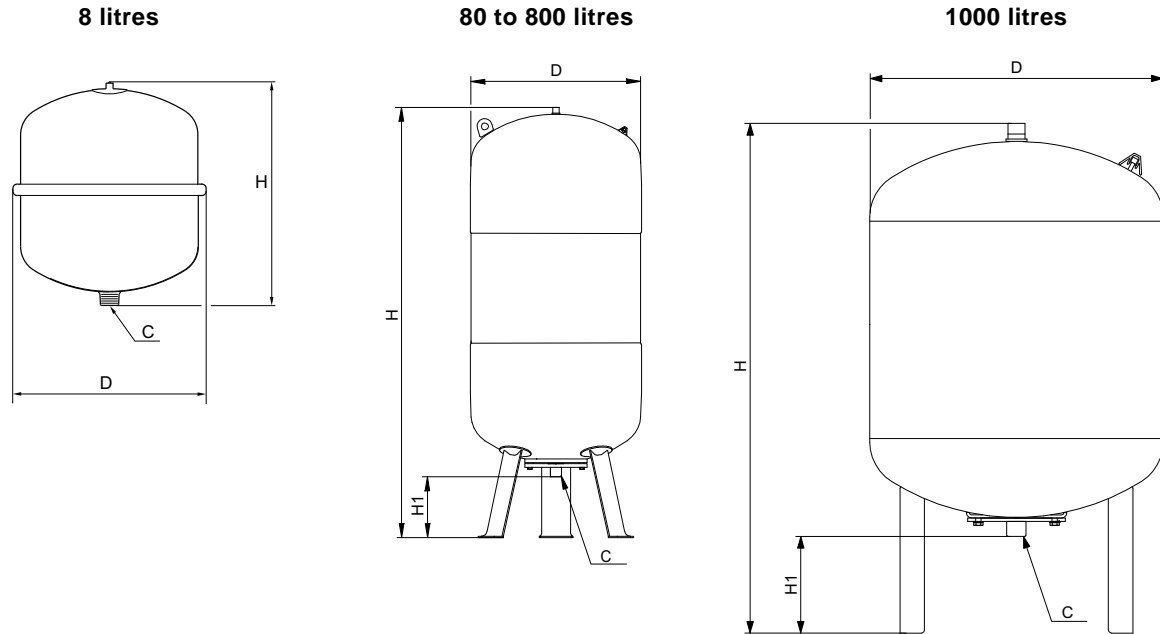
| Tank type                 | Size [l] | Dimensions [mm] |      |     |         | Gross weight [kg]      |               | Replaceable bladder | Product number         |               |
|---------------------------|----------|-----------------|------|-----|---------|------------------------|---------------|---------------------|------------------------|---------------|
|                           |          | D               | H    | H1  | C       | Stainless-steel flange | Coated flange |                     | Stainless-steel flange | Coated flange |
| GT-U-12 PN 16 G 3/4 V     | 12       | 280             | 309  | -   | G 3/4   | 3.6                    | -             | -                   | 96573348               | -             |
| GT-U-25 PN 16 G 3/4 V     | 25       | 280             | 520  | -   | G 3/4   | 9.0                    | -             | -                   | 96573349               | -             |
| GT-U-80 PN 16 G 1 V       | 80       | 480             | 745  | 153 | G 1     | 22                     | 22            | •                   | 96603410               | 96603420      |
| GT-U-100 PN 16 G 1 V      | 100      | 480             | 850  | 153 | G 1     | 29                     | 36            | •                   | 96603411               | 96603421      |
| GT-U-200 PN 16 G 1 1/4 V  | 200      | 634             | 967  | 150 | G 1 1/4 | 58                     | 49            | •                   | 96603413               | 96603422      |
| GT-U-300 PN 16 G 1 1/4 V  | 300      | 634             | 1267 | 150 | G 1 1/4 | 66                     | 77            | •                   | 96603414               | 96603423      |
| GT-U-400 PN 16 G 1 1/2 V  | 400      | 740             | 1394 | 265 | G 1 1/2 | 117                    | 215           | •                   | 96603415               | 96603424      |
| GT-U-500 PN 16 G 1 1/2 V  | 500      | 740             | 1614 | 265 | G 1 1/2 | 129                    | 124           | •                   | 96603416               | 96603425      |
| GT-U-600 PN 16 G 1 1/2 V  | 600      | 740             | 1859 | 265 | G 1 1/2 | 173                    | 161           | •                   | 96603417               | 96603426      |
| GT-U-800 PN 16 G 1 1/2 V  | 800      | 740             | 2324 | 265 | G 1 1/2 | 223                    | 223           | •                   | 96603418               | 96603427      |
| GT-U-1000 PN 16 G 1 1/2 V | 1000     | 740             | 2604 | 265 | G 1 1/2 | 275                    | 264           | •                   | 96603419               | 96603428      |
| GT-U-1500 PN 16 DN 65 V   | 1500     | 1200            | 1991 | 291 | DN 65   | -                      | 694           | •                   | -                      | 96603429      |
| GT-U-2000 PN 16 DN 65 V   | 2000     | 1200            | 2451 | 291 | DN 65   | -                      | 904           | •                   | -                      | 96603430      |
| GT-U-3000 PN 16 DN 65 V   | 3000     | 1500            | 2521 | 320 | DN 65   | -                      | 1249          | •                   | -                      | 96603431      |
| GT-U-4000 PN 16 DN 65 V   | 4000     | 1500            | 3110 | 320 | DN 65   | -                      | 1364          | •                   | -                      | 96603432      |
| GT-U-5000 PN 16 DN 65 V   | 5000     | 1500            | 3645 | 320 | DN 65   | -                      | 1616          | •                   | -                      | 96603433      |

**Note:** For some GT-U tanks, the bladder is available as a spare part. The part number can be found on Grundfos.com (GPC).

## GT-U, 25 bar

Vertical installation.  
Maximum pressure: 25 bar.  
Precharge pressure: 4 bar.

### Dimensions, weights and product numbers



TM03 1681 2809 - TM03 8257 2809 - TM03 8258 0518

Fig. 7 Dimensional sketches

| Tank type               | Size [l] | Dimensions [mm] |      |     |       | Gross weight [kg] | Replaceable bladder | Product number         |               |
|-------------------------|----------|-----------------|------|-----|-------|-------------------|---------------------|------------------------|---------------|
|                         |          | D               | H    | H1  | C     |                   |                     | Stainless-steel flange | Coated flange |
| GT-U-8 PN 25 G 3/4 V    | 8        | 206             | 335  | -   | G 3/4 | 8                 | -                   | 96573347               | -             |
| GT-U-80 PN 25 DN 50 V   | 80       | 450             | 942  | 159 | DN 50 | 107               | •                   | -                      | 96603459      |
| GT-U-120 PN 25 DN 50 V  | 120      | 450             | 1253 | 159 | DN 50 | 142               | •                   | -                      | 96603460      |
| GT-U-180 PN 25 DN 50 V  | 180      | 450             | 1528 | 159 | DN 50 | 179               | •                   | -                      | 96603462      |
| GT-U-300 PN 25 DN 50 V  | 300      | 750             | 1318 | 160 | DN 50 | 201               | •                   | -                      | 96603463      |
| GT-U-400 PN 25 DN 50 V  | 400      | 750             | 1423 | 160 | DN 50 | 302               | •                   | -                      | 96603465      |
| GT-U-600 PN 25 DN 50 V  | 600      | 750             | 1868 | 159 | DN 50 | 404               | •                   | -                      | 96603466      |
| GT-U-800 PN 25 DN 50 V  | 800      | 750             | 2268 | 159 | DN 50 | 150               | •                   | -                      | 96603468      |
| GT-U-1000 PN 25 DN 50 V | 1000     | 750             | 2768 | 159 | DN 50 | 559               | •                   | -                      | 96603469      |

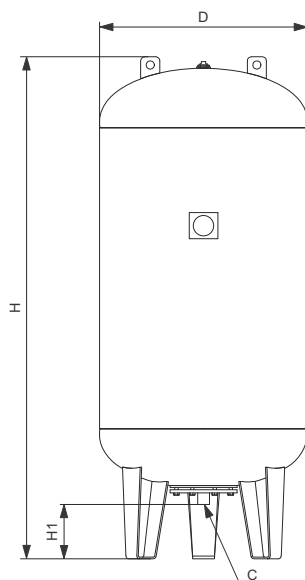
**Note:** For some GT-U tanks, the bladder is available as a spare part. The part number can be found on Grundfos.com (GPC).

### GT-U+, 10 bar

Vertical installation.  
 Maximum pressure: 10 bar.  
 Precharge pressure: 4 bar.

#### Dimensions, weights and product numbers

100 to 3000 litres



TM07 0604 0418

Fig. 8 Dimensional sketch

| Tank type        | Size [l] | Dimensions [mm] |      |     |         | Gross weight [kg] | Replaceable bladder | Product number |
|------------------|----------|-----------------|------|-----|---------|-------------------|---------------------|----------------|
|                  |          | D               | H    | H1  | C       |                   |                     |                |
| GT-U+ 100 PN 10  | 100      | 453             | 983  | 130 | G 1     | 76.5              | •                   | 99082696       |
| GT-U+ 150 PN 10  | 150      | 504             | 1056 | 125 | G 1     | 91.5              | •                   | 99082697       |
| GT-U+ 200 PN 10  | 200      | 604             | 1103 | 115 | G 1 1/4 | 123.3             | •                   | 99082698       |
| GT-U+ 300 PN 10  | 300      | 654             | 1286 | 190 | G 1 1/4 | 148.3             | •                   | 99082699       |
| GT-U+ 500 PN 10  | 500      | 754             | 1561 | 190 | G 1 1/4 | 195.5             | •                   | 99082700       |
| GT-U+ 750 PN 10  | 750      | 756             | 1834 | 190 | G 2     | 231.0             | •                   | 99082701       |
| GT-U+ 1000 PN 10 | 1000     | 806             | 2376 | 280 | G 2     | 327.5             | •                   | 99082702       |
| GT-U+ 1500 PN 10 | 1500     | 958             | 2435 | 270 | G 2     | 391.5             | •                   | 99082703       |
| GT-U+ 2000 PN 10 | 2000     | 1110            | 2505 | 270 | G 2     | 459.0             | •                   | 99082704       |
| GT-U+ 3000 PN 10 | 3000     | 1210            | 2932 | 250 | G 2 1/2 | 892.0             | •                   | 99082705       |

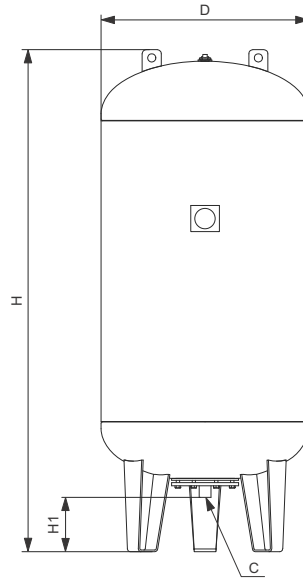
**Note:** For some GT-U+ tanks, the bladder is available as a spare part. The part number can be found on Grundfos.com (GPC).

## GT-U+, 16 bar

Vertical installation.  
Maximum pressure: 16 bar.  
Precharge pressure: 4 bar.

### Dimensions, weights and product numbers

100 to 3000 litres



TM07 0604 0418

Fig. 9 Dimensional sketch

| Tank type        | Size [l] | Dimensions [mm] |      |     |         | Gross weight [kg] | Replaceable bladder | Product number |
|------------------|----------|-----------------|------|-----|---------|-------------------|---------------------|----------------|
|                  |          | D               | H    | H1  | C       |                   |                     |                |
| GT-U+ 100 PN 16  | 100      | 454             | 983  | 130 | G 1     | 76.5              | •                   | 99082706       |
| GT-U+ 150 PN 16  | 150      | 506             | 1058 | 125 | G 1     | 91.5              | •                   | 99082707       |
| GT-U+ 200 PN 16  | 200      | 606             | 1105 | 115 | G 1 1/4 | 123.3             | •                   | 99082708       |
| GT-U+ 300 PN 16  | 300      | 656             | 1288 | 190 | G 1 1/4 | 148.3             | •                   | 99082709       |
| GT-U+ 500 PN 16  | 500      | 760             | 1565 | 190 | G 1 1/4 | 254.5             | •                   | 99082710       |
| GT-U+ 750 PN 16  | 750      | 760             | 1862 | 190 | G 2     | 297.5             | •                   | 99082711       |
| GT-U+ 1000 PN 16 | 1000     | 810             | 2376 | 280 | G 2     | 409.5             | •                   | 99082712       |
| GT-U+ 1500 PN 16 | 1500     | 962             | 2443 | 270 | G 2     | 498.0             | •                   | 99082713       |
| GT-U+ 2000 PN 16 | 2000     | 1116            | 2511 | 270 | G 2     | 717.0             | •                   | 99082714       |
| GT-U+ 3000 PN 16 | 3000     | 1216            | 2938 | 250 | G 2 1/2 | 1055.0            | •                   | 99082715       |

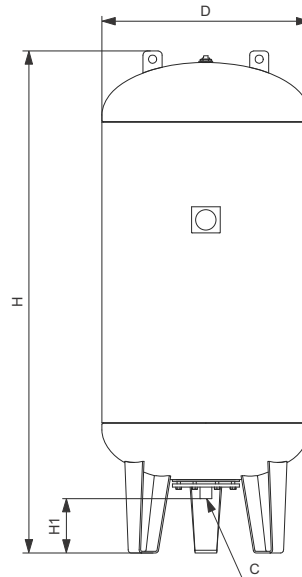
**Note:** For some GT-U+ tanks, the bladder is available as a spare part. The part number can be found on Grundfos.com (GPC).

**GT-U+, 25 bar**

Vertical installation.

Maximum pressure: 25 bar.

Precharge pressure: 4 bar.

**Dimensions, weights and product numbers****100 to 3000 litres**

TM07 0604 0418

**Fig. 10** Dimensional sketch

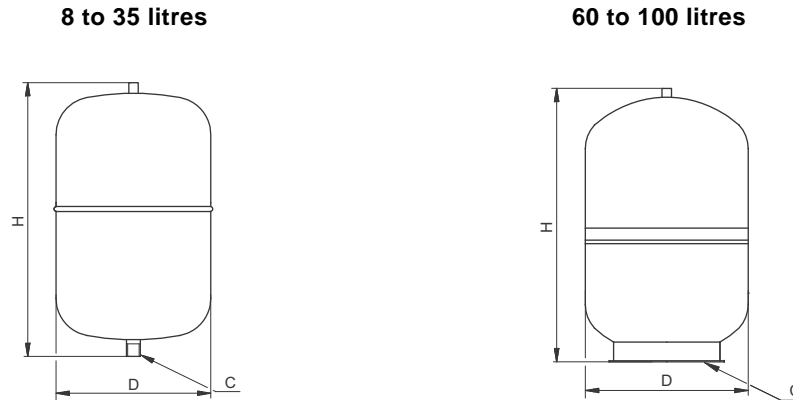
| Tank type        | Size [l] | Dimensions [mm] |      |     |         | Gross weight [kg] | Replaceable bladder | Product number |
|------------------|----------|-----------------|------|-----|---------|-------------------|---------------------|----------------|
|                  |          | D               | H    | H1  | C       |                   |                     |                |
| GT-U+ 100 PN 25  | 100      | 458             | 985  | 130 | G 1     | 76.5              | •                   | 99082716       |
| GT-U+ 150 PN 25  | 150      | 508             | 1060 | 125 | G 1     | 91.5              | •                   | 99082717       |
| GT-U+ 200 PN 25  | 200      | 610             | 1109 | 115 | G 1 1/4 | 151.3             | •                   | 99082718       |
| GT-U+ 300 PN 25  | 300      | 666             | 1301 | 190 | G 1 1/4 | 183.3             | •                   | 99082719       |
| GT-U+ 500 PN 25  | 500      | 766             | 1594 | 190 | G 1 1/4 | 306.5             | •                   | 99082720       |
| GT-U+ 750 PN 25  | 750      | 766             | 1866 | 190 | G 2     | 358.5             | •                   | 99082721       |
| GT-U+ 1000 PN 25 | 1000     | 816             | 2384 | 280 | G 2     | 504.5             | •                   | 99082722       |
| GT-U+ 1500 PN 25 | 1500     | 970             | 2447 | 270 | G 2     | 713.0             | •                   | 99082723       |
| GT-U+ 2000 PN 25 | 2000     | 1124            | 2519 | 270 | G 2     | 854.0             | •                   | 99082724       |
| GT-U+ 3000 PN 25 | 3000     | 1224            | 2950 | 250 | G 2 1/2 | 1405.0            | •                   | 99082725       |

**Note:** For some GT-U+ tanks, the bladder is available as a spare part. The part number can be found on Grundfos.com (GPC)

## GT-H, 10 bar

Vertical installation.  
Maximum pressure: 10 bar.  
Precharge pressure: 1.9 bar.

### Dimensions, weights and product numbers



TM02 9086 2809 - TM02 9087 2809

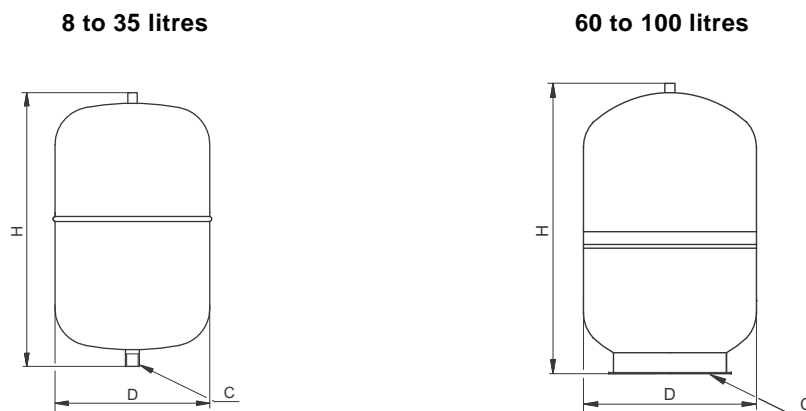
Fig. 11 Dimensional sketches

| Tank type             | Size [l] | Dimensions [mm] |     |       | Gross weight [kg] | Product number |
|-----------------------|----------|-----------------|-----|-------|-------------------|----------------|
|                       |          | D               | H   | C     |                   |                |
| GT-H-8 PN 10 G 3/4 V  | 8        | 210             | 340 | G 3/4 | 2.6               | 96528335       |
| GT-H-8 PN 10 G 1 V    | 8        | 204             | 327 | G 1   | 2.6               | 96526321       |
| GT-H-12 PN 10 G 3/4 V | 12       | 242             | 392 | G 3/4 | 3.2               | 96528336       |
| GT-H-12 PN 10 G 1 V   | 12       | 230             | 367 | G 1   | 3.2               | 97506558       |
| GT-H-18 PN 10 G 3/4 V | 18       | 280             | 385 | G 3/4 | 4.3               | 96526322       |
| GT-H-18 PN 10 G 1 V   | 18       | 280             | 385 | G 1   | 4.3               | 96528337       |
| GT-H-24 PN 10 G 3/4 V | 24       | 300             | 460 | G 3/4 | 5.5               | 97506559       |
| GT-H-24 PN 10 G 1 V   | 24       | 300             | 461 | G 1   | 5.6               | 96528339       |
| GT-H-35 PN 10 G 3/4 V | 35       | 321             | 558 | G 3/4 | 7.4               | 96556002       |
| GT-H-35 PN 10 G 1 V   | 35       | 321             | 497 | G 1   | 7.4               | 96528340       |
| GT-H-60 PN 10 G 1 V   | 60       | 391             | 636 | G 1   | 12.4              | 96528341       |
| GT-H-80 PN 10 G 1 V   | 80       | 391             | 830 | G 1   | 17.0              | 96894291       |
| GT-H-100 PN 10 G 1 V  | 100      | 436             | 827 | G 1   | 20.6              | 97527968       |

### GT-H, 16 bar

Vertical installation.  
 Maximum pressure: 16 bar.  
 Precharge pressure: 4 bar.

#### Dimensions, weights and product numbers



TM02 9086 2809 - TM02 9087 2809

Fig. 12 Dimensional sketches

| Tank type            | Size [l] | Dimensions [mm] |     |     | Gross weight [kg] | Product number |
|----------------------|----------|-----------------|-----|-----|-------------------|----------------|
|                      |          | D               | H   | C   |                   |                |
| GT-H-8 PN 16 G 1 V   | 8        | 204             | 327 | G 1 | 2.6               | 96528356       |
| GT-H-12 PN 16 G 1 V  | 12       | 242             | 392 | G 1 | 3.9               | 96528357       |
| GT-H-18 PN 16 G 1 V  | 18       | 280             | 385 | G 1 | 5.1               | 96528358       |
| GT-H-24 PN 16 G 1 V  | 24       | 300             | 461 | G 1 | 6.5               | 96528360       |
| GT-H-35 PN 16 G 1 V  | 35       | 321             | 497 | G 1 | 7.5               | 96528361       |
| GT-H-60 PN 16 G 1 V  | 60       | 391             | 636 | G 1 | 15.6              | 96528362       |
| GT-H-80 PN 16 G 1 V  | 80       | 391             | 830 | G 1 | 21.3              | 96528363       |
| GT-H-100 PN 16 G 1 V | 100      | 436             | 827 | G 1 | 27.6              | 99040996       |

## GT-H, 10 bar

Horizontal installation.  
Maximum pressure: 10 bar.  
Precharge pressure 1.9 bar.

### Dimensions, weights and product numbers

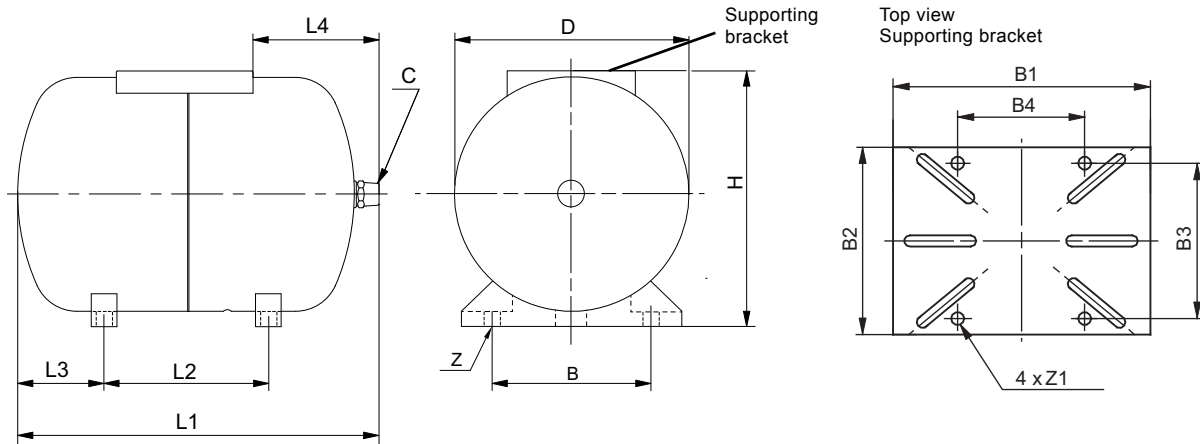


Fig. 13 Dimensional sketches

TM02 9085 2809 - TM02 1611 1501

| Tank type            | Size [l] | Dimensions [mm] |     |     |     |     |      |     |   |     | Gross weight [kg] | Product number |
|----------------------|----------|-----------------|-----|-----|-----|-----|------|-----|---|-----|-------------------|----------------|
|                      |          | D               | H   | B   | L1  | L2  | L3   | L4  | Z | C   |                   |                |
| GT-H-20 PN 10 G 1 H  | 20       | 264             | 292 | 230 | 447 | 265 | 92.5 | 118 | 4 | G 1 | 5.0               | 98990807       |
| GT-H-24 PN 10 G 1 H  | 24       | 289             | 444 | 235 | 447 | 250 | 84   | 156 | 4 | G 1 | 6.5               | 96528388       |
| GT-H-60 PN 10 G 1 H  | 60       | 414             | 528 | 342 | 532 | 299 | 102  | 199 | 4 | G 1 | 12.8              | 96528389       |
| GT-H-80 PN 10 G 1 H  | 80       | 414             | 724 | 342 | 730 | 229 | 201  | 306 | 4 | G 1 | 18.0              | 96528390       |
| GT-H-100 PN 10 G 1 H | 100      | 430             | 475 | 380 | 720 | 380 | 125  | 156 | 4 | G 1 | 19.8              | 97527981       |

### Supporting bracket

| Tank type            | Size [l] | Dimensions [mm] |     |     |     |    |
|----------------------|----------|-----------------|-----|-----|-----|----|
|                      |          | B1              | B2  | B3  | B4  | Z  |
| GT-H-20 PN 10 G 1 H  | 20       | 225             | 201 | 177 | 161 | -  |
| GT-H-24 PN 10 G 1 H  | 24       | 220             | 165 | 139 | 107 | 10 |
| GT-H-60 PN 10 G 1 H  | 60       | 220             | 165 | 139 | 107 | 9  |
| GT-H-80 PN 10 G 1 H  | 80       | 220             | 165 | 139 | 107 | 9  |
| GT-H-100 PN 10 G 1 H | 100      | 225             | 201 | 177 | 161 | -  |



**GT-D, 10 bar, GT-DF, 8.6 bar**

Vertical installation.

GT-D: Maximum pressure: 10 bar.  
Precharge pressure: 1.4 bar.

GT-DF: Maximum pressure: 8.6 bar.  
Precharge pressure: 1.4 bar.

**Dimensions, weights and product numbers**

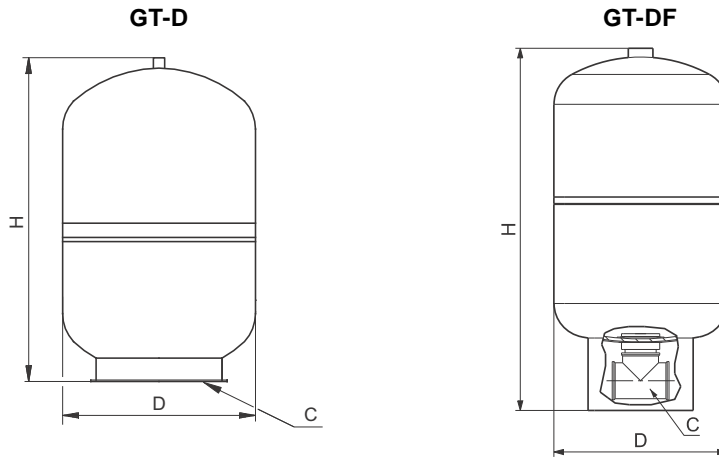


Fig. 14 Dimensional sketches

TM02 9087 2809 - TM04 5936 4409

| Tank type                  | Size [l] | Dimensions [mm] |      |         | Gross weight [kg] | Product number |
|----------------------------|----------|-----------------|------|---------|-------------------|----------------|
|                            |          | D               | H    | C       |                   |                |
| <b>GT-D</b>                |          |                 |      |         |                   |                |
| GT-D-130 PN 10 G 1 V       | 130      | 420             | 1120 | G 1     | 24.7              | 96528344       |
| GT-D-200 PN 10 G 1 1/4 V   | 200      | 550             | 1080 | G 1 1/4 | 38.4              | 97792897       |
| GT-D-240 PN 10 G 1 1/4 V   | 240      | 550             | 1250 | G 1 1/4 | 43.8              | 96528346       |
| GT-D-300 PN 10 G 1 1/4 V   | 300      | 540             | 1520 | G 1 1/4 | 52.9              | 96528347       |
| GT-D-450 PN 10 G 1 1/4 V   | 450      | 700             | 1600 | G 1 1/4 | 80.8              | 96528348       |
| <b>GT-DF</b>               |          |                 |      |         |                   |                |
| GT-DF-80 PN 8.6 G 1 1/4 V  | 80       | 432             | 864  | G 1 1/4 | 20.0              | 96980804       |
| GT-DF-170 PN 8.6 G 1 1/4 V | 170      | 533             | 965  | G 1 1/4 | 29.7              | 96980807       |
| GT-DF-325 PN 8.6 G 1 1/4 V | 325      | 660             | 1156 | G 1 1/4 | 53.6              | 96980808       |

**GT-C, GT-CF, 8.6 bar**

Vertical installation.

Maximum pressure: 8.6 bar

Precharge pressure: 1.4 bar.

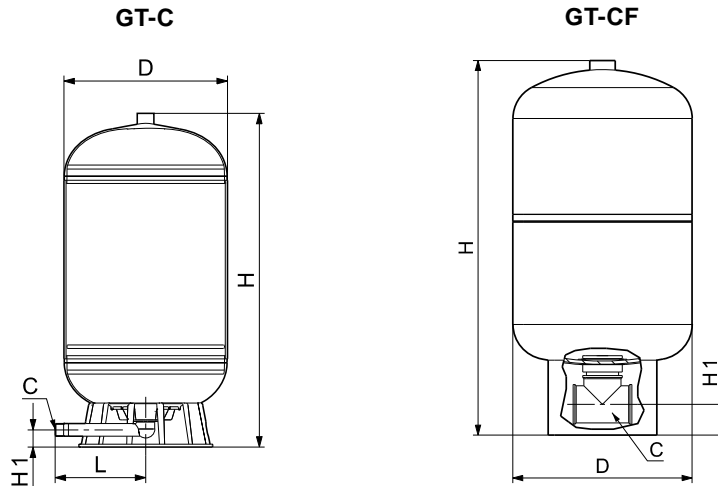
**Dimensions, weights and product numbers**

Fig. 15 Dimensional sketches

TM04 5588 3509 - TM04 5423 3309

| Tank type                  | Size [l] | Dimensions [mm] |      |      |     |         | Gross weight [kg] | Product number |
|----------------------------|----------|-----------------|------|------|-----|---------|-------------------|----------------|
|                            |          | D               | H    | H1   | L   | C       |                   |                |
| <b>GT-C</b>                |          |                 |      |      |     |         |                   |                |
| GT-C-60 PN 8.6 G 1 V       | 60       | 430             | 660  | 44.5 | 239 | G 1     | 8.6               | 96733303       |
| GT-C-80 PN 8.6 G 1 V       | 80       | 430             | 860  | 44.5 | 239 | G 1     | 10.9              | 96733304       |
| GT-C-100 PN 8.6 G 1 V      | 100      | 430             | 980  | 44.5 | 239 | G 1     | 10.0              | 96733305       |
| GT-C-130 PN 8.6 G 1 V      | 130      | 430             | 1240 | 44.5 | 239 | G 1     | 15.4              | 96733306       |
| GT-C-200 PN 8.6 G 1 1/4 V  | 200      | 560             | 1110 | 57   | 302 | G 1 1/4 | 20.2              | 96733307       |
| GT-C-250 PN 8.6 G 1 1/4 V  | 250      | 560             | 1310 | 57   | 302 | G 1 1/4 | 25.0              | 96733308       |
| GT-C-300 PN 8.6 G 1 1/4 V  | 300      | 560             | 1655 | 57   | 302 | G 1 1/4 | 28.2              | 96733309       |
| GT-C-350 PN 8.6 G 1 1/4 V  | 350      | 625             | 1460 | 57   | 340 | G 1 1/4 | 33.1              | 96733310       |
| GT-C-450 PN 8.6 G 1 1/4 V  | 450      | 626             | 1840 | 57   | 340 | G 1 1/4 | 36.3              | 96733311       |
| <b>GT-CF</b>               |          |                 |      |      |     |         |                   |                |
| GT-CF-60 PN 8.6 G 1 1/4 V  | 60       | 432             | 686  | 45   | -   | G 1 1/4 | 8.6               | 96980809       |
| GT-CF-80 PN 8.6 G 1 1/4 V  | 80       | 432             | 864  | 45   | -   | G 1 1/4 | 10.9              | 96980810       |
| GT-CF-150 PN 8.6 G 1 1/4 V | 150      | 635             | 800  | 57   | -   | G 1 1/4 | 15.7              | 96980811       |
| GT-CF-200 PN 8.6 G 1 1/4 V | 200      | 559             | 1118 | 57   | -   | G 1 1/4 | 20.2              | 96980822       |

## 5. Heating

### Applications

Grundfos supplies two types of tanks that are suitable for both closed heating systems and chilled-water applications.

These tanks can be incorporated in an expansion system in a tiny household or a large multi-storey building.

Typical applications:

- domestic-heating and chilled-water systems
- commercial-building heating and chilled-water systems
- industrial heating and chilled-water systems.

### Tank range

#### GT-HR, diaphragm tank

GT-HR tanks are conventional diaphragm-type expansion tanks suitable for vertical installation.

GT-HR tanks range from 8 to 1000 litres with a maximum pressure of 6 bar. The tanks have a non-replaceable diaphragm that is precharged with nitrogen at 1.5 bar.

GT-HR tanks have a non-toxic SBR rubber diaphragm that divides the tank chamber into two compartments. The upper compartment contains compressed nitrogen. The lower compartment has a liner of polypropylene (PP) and is filled with water from the pump.

You can use GT-HR tanks with any Grundfos pump.

#### GT-U+, bladder tank

GT-U+ tanks are bladder tanks ranging from 100 to 3000 litres with a maximum pressure of either 10, 16 or 25 bar. The tanks have a replaceable bladder precharged at 4 bar.

GT-U+ tanks are suitable for both heating and cold-water applications. For more information, see [GT-U+, bladder tank](#), page 6.

### Selection of a GT-HR tank

The required tank volume can be calculated from the formula below:

$$V_e = \frac{(0.07 \times t - 2.5) \times (p_s + 1)}{100 \times (p_s - p_e)} \times V \text{ [litres]}$$

$V_e$ : Tank volume [litres]

$t$ : Maximum temperature in system [°C]

$p_s$ : Maximum system pressure [bar] (safety valve pressure)

$p_e$ : Precharge pressure [bar]

$V$ : Total volume of water in system [litres]

If the necessary information required to calculate the tank according to the formula is not available, the sizing of the tank can be based on heat input to the installation and maximum system pressure.

#### Pre-conditions

Heating systems:

- flat radiators
- specific water volume of 11.3 l/kW
- flow-pipe temperature of 70 °C
- return-pipe temperature of 50 °C.

| Maximum system pressure [bar] | 6    |               |
|-------------------------------|------|---------------|
| Precharge pressure [bar]      | 1.5  | Tank size [l] |
|                               | 4    | 8             |
|                               | 8    | 12            |
|                               | 16   | 18            |
|                               | 27   | 25            |
|                               | 44   | 35            |
|                               | 60   | 50            |
|                               | 100  | 80            |
|                               | 120  | 100           |
| Heat input [kW]               | 170  | 140           |
|                               | 250  | 200           |
|                               | 310  | 250           |
|                               | 370  | 300           |
|                               | 490  | 400           |
|                               | 620  | 500           |
|                               | 740  | 600           |
|                               | 990  | 800           |
|                               | 1230 | 1000          |

#### Grundfos recommendation

- Set the tank precharge pressure to at least 0.2 bar above the static pressure of the heating system.
- The tank precharge pressure must not be lower than 1 bar.

#### Sizing example

A heating system has a heat input of 160 kW, the maximum system pressure is 6 bar, and the heating system will be precharged by 1.5 bar.

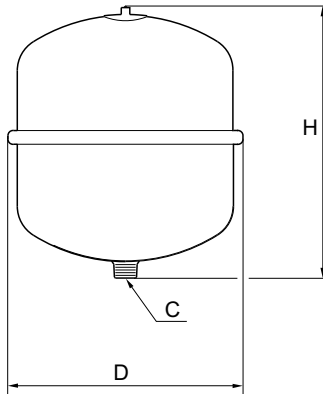
Use the column for 6 bar maximum system pressure. The nearest value above 160 kW is 170 kW. This corresponds to a tank size of 140 litres.

**GT-HR, 6 bar**

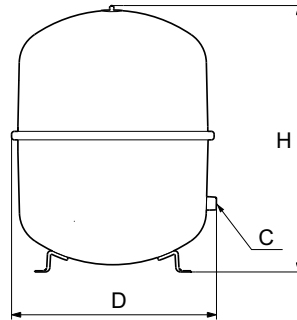
Vertical installation.  
Maximum pressure: 6 bar.  
Precharge pressure: 1.5 bar.

**Dimensions, weights and product numbers**

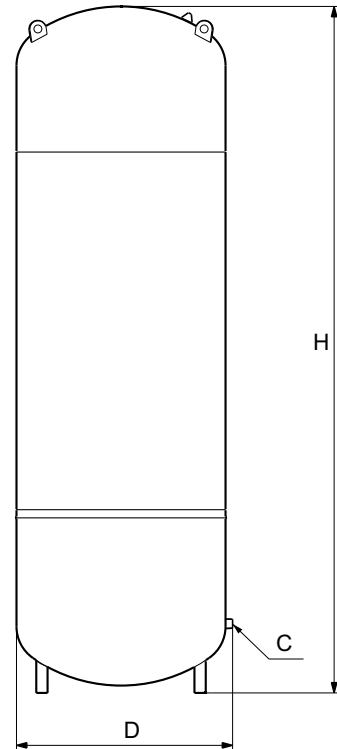
8 to 25 litres



35 to 140 litres



200 to 1000 litres



TM03 1681 2809 - TM03 1682 2809 - TM03 1694 2809

Fig. 16 Dimensional sketches

| Tank type             | Size [l] | Dimensions [mm] |      |       | Gross weight [kg] | Product number |
|-----------------------|----------|-----------------|------|-------|-------------------|----------------|
|                       |          | D               | H    | C     |                   |                |
| GT-HR-8 PN 6 R 3/4 V  | 8        | 206             | 305  | R 3/4 | 1.9               | 96573376       |
| GT-HR-12 PN 6 R 3/4 V | 12       | 280             | 275  | R 3/4 | 2.6               | 96573377       |
| GT-HR-18 PN 6 R 3/4 V | 18       | 280             | 380  | R 3/4 | 3.5               | 96573378       |
| GT-HR-25 PN 6 R 3/4 V | 25       | 280             | 490  | R 3/4 | 4.6               | 96573390       |
| GT-HR-35 PN 6 R 3/4 V | 35       | 354             | 460  | R 3/4 | 5.4               | 96573393       |
| GT-HR-50 PN 6 R 3/4 V | 50       | 409             | 493  | R 3/4 | 12.5              | 96573395       |
| GT-HR-80 PN 6 R 1 V   | 80       | 480             | 565  | R 1   | 17.0              | 96573396       |
| GT-HR-100 PN 6 R 1 V  | 100      | 480             | 670  | R 1   | 20.5              | 96573397       |
| GT-HR-140 PN 6 R 1 V  | 140      | 480             | 912  | R 1   | 28.6              | 96573398       |
| GT-HR-200 PN 6 R 1 V  | 200      | 634             | 758  | R 1   | 36.7              | 96573399       |
| GT-HR-250 PN 6 R 1 V  | 250      | 634             | 888  | R 1   | 45.0              | 96573400       |
| GT-HR-300 PN 6 R 1 V  | 300      | 634             | 1092 | R 1   | 52.0              | 96573401       |
| GT-HR-400 PN 6 R 1 V  | 400      | 740             | 1102 | R 1   | 65.0              | 96573403       |
| GT-HR-500 PN 6 R 1 V  | 500      | 740             | 1312 | R 1   | 79.0              | 96573404       |
| GT-HR-600 PN 6 R 1 V  | 600      | 740             | 1531 | R 1   | 85.0              | 96573405       |
| GT-HR-800 PN 6 R 1 V  | 800      | 740             | 1996 | R 1   | 103.0             | 96573407       |
| GT-HR-1000 PN 6 R 1 V | 1000     | 740             | 2406 | R 1   | 120.0             | 96573408       |

## 6. Grundfos Product Center

Online search and sizing tool to help you make the right choice.

<http://product-selection.grundfos.com>



"SIZING" enables you to size a pump based on entered data and selection choices.

"REPLACEMENT" enables you to find a replacement product. Search results will include information on the following:

- the lowest purchase price
- the lowest energy consumption
- the lowest total life cycle cost.

The screenshot shows the Grundfos Product Center website. At the top, there is a navigation bar with the logo and 'PRODUCT CENTER' text. Below this is a search bar with a 'SEARCH' button. The main content area features four large buttons: 'SIZING' (with a subtext 'Enter pump sizing'), 'CATALOGUE' (with a subtext 'Products and services'), 'REPLACEMENT' (with a subtext 'Replace an old pump with a new'), and 'LIQUIDS' (with a subtext 'Find pump by liquid'). Below these buttons is a 'QUICK SIZING' section with input fields for 'Flow (Q)\*' and 'Head (H)\*', and radio buttons for 'Select what to size by' (application, pump design, pump family). A 'START SIZING' button is also present.

"CATALOGUE" gives you access to the Grundfos product catalogue.

"LIQUIDS" enables you to find pumps designed for aggressive, flammable or other special liquids.

### All the information you need in one place

Performance curves, technical specifications, pictures, dimensional drawings, motor curves, wiring diagrams, spare parts, service kits, 3D drawings, documents, system parts. The Product Center displays any recent and saved items - including complete projects - right on the main page.

### Downloads

On the product pages, you can download installation and operating instructions, data booklets, service instructions, etc. in PDF format.

Subject to alterations.

be think innovate

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