

GT tanks

For heating applications



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Product range

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Applications

The Grundfos GT fixed diaphragm tanks are suitable for a number of domestic and industrial applications where a controlled pressure is required.

Typical applications:

- domestic heating systems
- commercial building heating systems
- industrial heating systems.

The GT tanks can be used with any Grundfos pump.

Type key

Example	GT	- H	- 80	V
Type range				
Tank type:				
H = Diaphragm				
D = Double diaphragm				
U = Bladder				
HR = Non-replaceable diaphragm for heating application				
Tank capacity [l]				
Position:				
V = Vertical				
H = Horizontal				

Tank range

The **GT-HR tanks** are available in sizes from 8 to 1000 litres suitable for vertical installation.

The **GT-HR tanks** have a non-replaceable diaphragm precharged with nitrogen (1.5 bar).

Sizing

The required tank capacity can be calculated as follows:

Capacity

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

V_e	Tank volume [litres]
t	Max. temperature in system [C°]
p_s	Max. system pressure [bar] (Safety valve pressure)
p_e	Pre-charge pressure [bar]
V	Total volume of water in system [litres]

If sufficient information is not available to calculate the tank according the formula, 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 11.3 l/kW.

Heating system: 70/50°C.

Maximum system pressure [bar]	3	6	
Precharge pressure [bar]	1.5	3	Tank size [l]
	3	-	8
	4	-	12
	8	-	18
	16	-	25
	27	-	35
	44	60	50
	75	100	80
	90	120	100
Heat input [kW]	130	170	140
	180	250	200
	230	310	250
	270	370	300
	370	490	400
	460	620	500
	550	740	600
	730	990	800
	910	1230	1000

Grundfos recommend:

- set the precharge pressure of the tank to at least 0.2 bar above static pressure of the heating system,
- the precharge pressure of the tank should not be below 1 bar.

Sizing example:

A heating system has a heat input of 160 kW, Max system pressure is 6 bar, The heating system will be precharged by 3 bar.

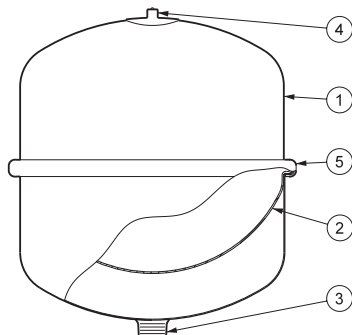
Use the column for 6 bar max. system pressure.

The nearest value above 160 kW is the value 170 kW.

This corresponds to a tank size of 140 litres.

Material specifications

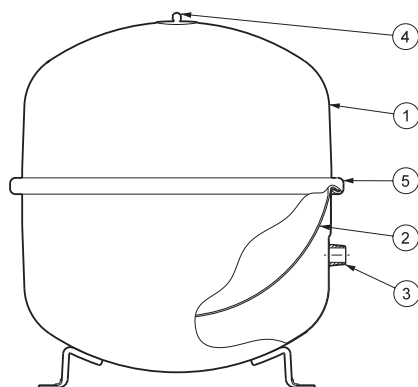
Sectional drawing, example: GT-HR-12 V



TM03 1676 2705

Pos.	Component	Material
1	Tank body	Carbon steel
2	Diaphragm	SBR rubber
3	Pipe connection	Steel DIN 2393
4	Air valve	Brass
5	Clamping ring	Carbon steel

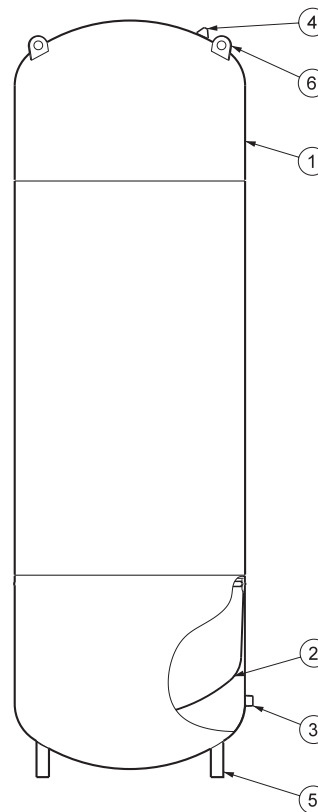
Sectional drawing, example: GT-HR-50 V



TM03 1677 2705

Pos.	Component	Material
1	Tank body	Carbon steel
2	Diaphragm	SBR rubber
3	Pipe connection	Steel DIN 2393
4	Air valve	Brass
5	Clamping ring	Carbon steel

Sectional drawing, example: GT-HR-1000 V



TM03 1678 2705

Pos.	Component	Material
1	Tank body	Carbon steel
2	Diaphragm	SBR rubber
3	Pipe connection	Steel DIN 2393
4	Air valve	Brass
5	Clamping ring	Carbon steel
6	Lifting eye	Carbon steel

Operating conditions

Max. liquid temperature, continuously: 70°C

- For short periods of time: 99°C

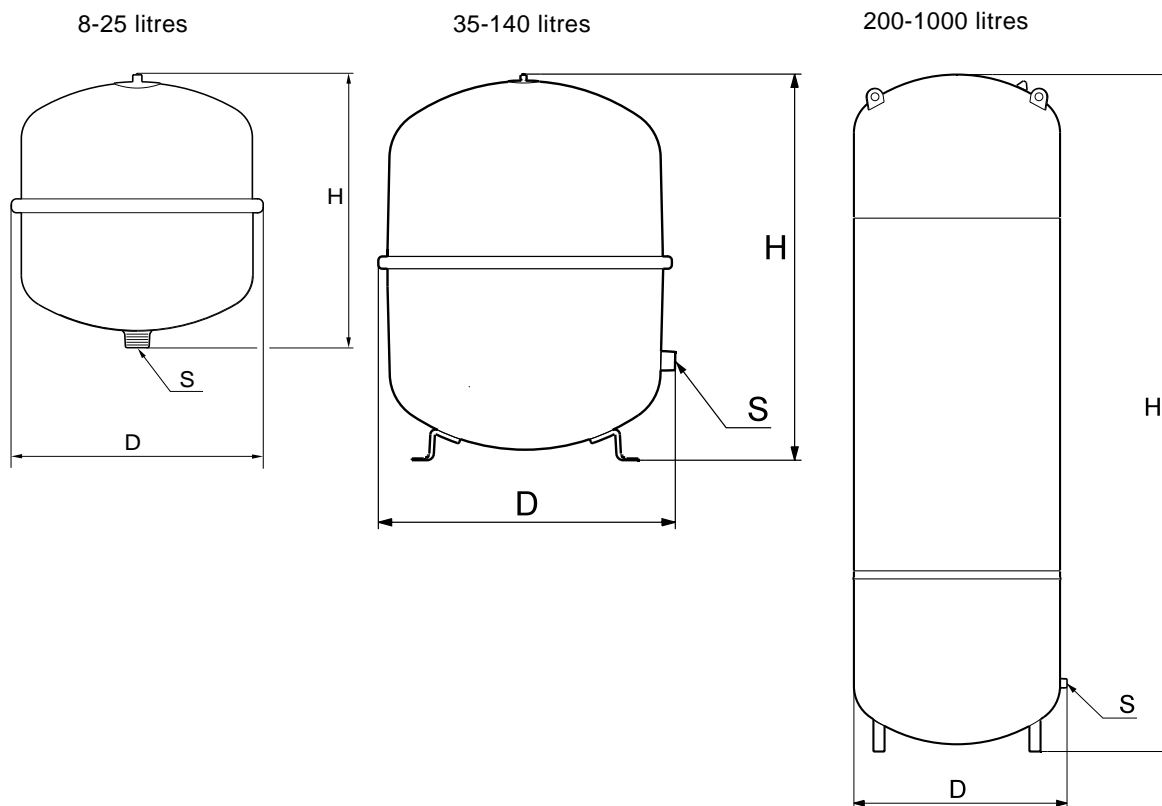
Max. operating pressure: 8 to 35 litres: 3 bar

50 to 1000 litres: 6 bar

Pre-charge pressure: 1.5 bar

Note: The pre-charge pressure must be checked at least twice a year.

GT-HR vertical installation



TM03 1681 2705 - TM03 16827 2705 - TM03 1694 2705

Dimensions and weights

Type	Max. pressure [bar]	Size [l]	Dimensions [mm]			Gross weight [kg]	Product number
			D	H	S		
GT-HR-8 V	3	8	272	233	R3/4	1.9	96573376
GT-HR-12 V	3	12	272	315	R3/4	2.6	96573377
GT-HR-18 V	3	18	308	360	R3/4	3.5	96573378
GT-HR-25 V	3	25	308	480	R3/4	4.6	96573390
GT-HR-35 V	3	35	376	465	R3/4	5.4	96573393
GT-HR-50 V	6	50	441	495	R3/4	12.5	96573395
GT-HR-80 V	6	80	512	570	R3/4	17.0	96573396
GT-HR-100 V	6	100	512	680	R1	20.5	96573397
GT-HR-140 V	6	140	512	890	R1	28.6	96573398
GT-HR-200 V	6	200	634	785	R1	36.7	96573399
GT-HR-250 V	6	250	634	915	R1	45	96573400
GT-HR-300 V	6	300	634	1085	R1	52	96573401
GT-HR-400 V	6	400	740	1075	R1	65	96573403
GT-HR-500 V	6	500	740	1295	R1	79	96573404
GT-HR-600 V	6	600	740	1530	R1	85	96573405
GT-HR-800 V	6	800	740	1990	R1	103	96573407
GT-HR-1000 V	6	1000	740	2430	R1	120	96573408

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Subject to alterations.