

## Schematic design of the Haase energy tank T 400

**Protective top**

**Top insulation**  
(200 mm mineral wool)

**Support column**  
(to fix the heat exchangers)

**Inner cover**

**Ventilation/  
emergency overflow**

**Filling/  
emptying**

**Wall penetrations**  
(Gasket insert)

**Level indicator**

**Temperature  
sensor pipes**

**Heating system  
heat exchanger (red)**

**Domestic hot water  
heat exchanger (blue)**

**Solar heat  
exchanger (green)**

**Inner jacket**

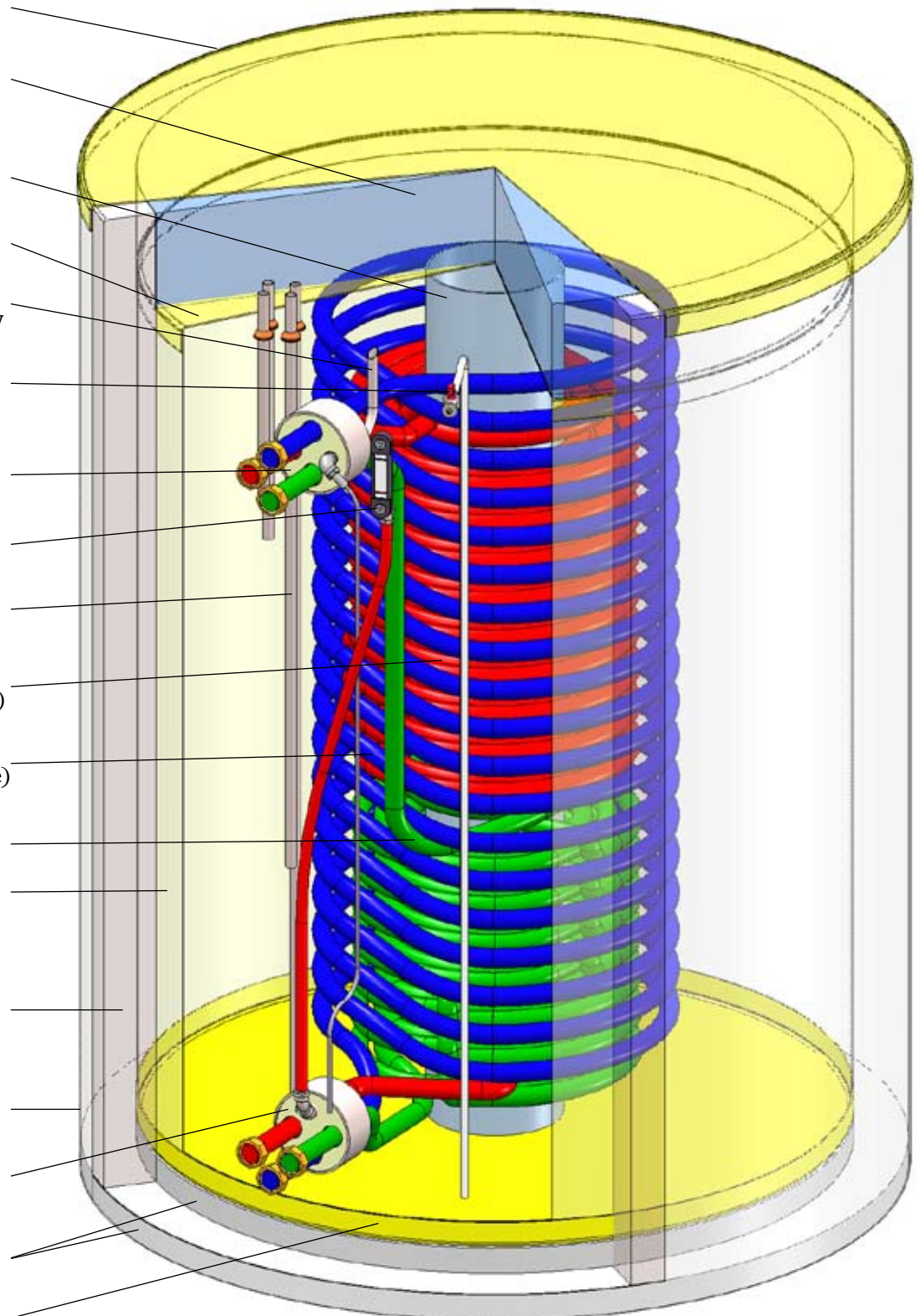
**Jacket insulation**  
(thick depending on the energy tank diameter, min. 100 mm mineral wool)

**Protective jacket**

**Wall penetrations**  
(Gasket insert)

**Bottom insulation**  
(100 mm Styrodur)

**Bottom**





## Performance characteristics of the Haase energy tank T 400

Dimensions of the standard sizes (other sizes on request)

Type	Volume	Dimensions (total)		Tank insulation			Weight (empty), ca.
		Diameter	Height	Top	Jacket	Bottom	
<b>T 410-13</b>	343 gal.	51"	77"	7.9"	5.5"	3.9"	330 lb.
<b>T 413-22</b>	541 gal.	59"	77"	7.9"	3.9"	3.9"	410 lb.
<b>T 415-28</b>	730 gal.	67"	77"	7.9"	3.9"	3.9"	460 lb.
<b>T 417-37</b>	940 gal.	76"	77"	7.9"	4.3"	3.9"	520 lb.
<b>T 419-45</b>	1,200 gal.	87"	77"	7.9"	5.5"	3.9"	600 lb.

Configuration and performance characteristics of the standard types

Type	Standard configuration of the heat exchangers (surface)			Flow rate* (at 20 l/min)	
	Solar	Heating	DHW	litres	percent
<b>T 410-13</b>	S3 (25 sq.ft.)	H4 (50 sq.ft.)	B4 (50 sq.ft.)	ca. 260 gal.	76.9 %
<b>T 413-22</b>	S4 (50 sq.ft.)	H6 (75 sq.ft.)	B6 (75 sq.ft.)	ca. 420 gal.	78.0 %
<b>T 415-28</b>	S6 (75 sq.ft.)	H6 (75 sq.ft.)	B6 (75 sq.ft.)	ca. 580 gal.	79.4 %
<b>T 417-37</b>	S6 (75 sq.ft.)	H9 (100 sq.ft.)	B9 (100 sq.ft.)	ca. 740 gal.	78.7 %
<b>T 419-45</b>	S9 (100 sq.ft.)	H9 (100 sq.ft.)	B9 (100 sq.ft.)	ca. 950 gal.	80.0 %

\* flow rate determined according to DIN ENV 12977-3:2001 "Thermal solar systems and components" (storage medium 60 °C, cold water 10 °C, unloading temperature 45 °C)

## Specifications T 400

Specific feature:	site assembled construction
Storage medium:	water
Max. temperature:	95 °C
Max. pressure of the energy tank:	only unpressurized operation possible
loading and unloading system:	- internal high-grade steel corrugated pipes (1 1/2" flat sealing, max. 6 bar) - layer loading and unloading system (with external heat exchangers) - flanges (with external heat exchangers)

The loading and unloading systems can be combined!

## Thermal conductivity of used materials

Material	Usage	Thermal conductivity in [W/(m*K)]
Mineral wool	Cover- and jacket insulation	0,040
Styrodur	Bottom insulation	0,034
High-grade steel	Heat exchangers	15,000
Glass fibre reinforced plastics	Tank material	0,197
For Comparison: steel	Tank material (other producers)	48 to 58