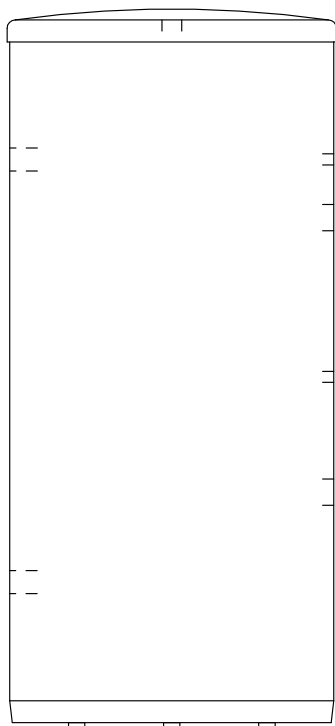
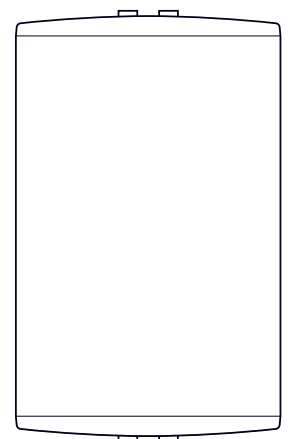
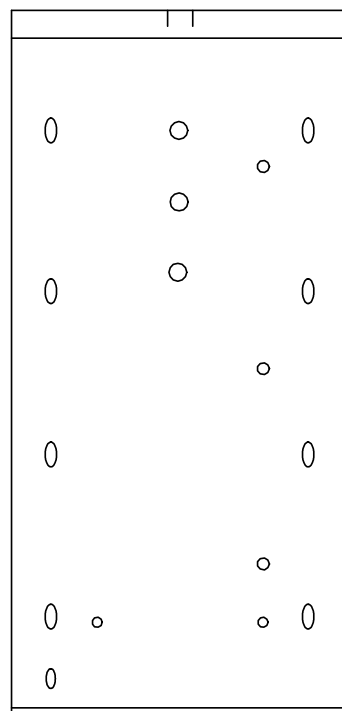


SERIES BUFFER TANKS STRATIFIED STORAGE TANKS



Accessories for heat pumps





Please read first

This operating manual provides important information on the handling of the unit. It is an integral part of the product and must be stored so that it is accessible in the immediate vicinity of the unit. It must remain available throughout the entire service life of the unit. It must be handed over to subsequent owners or users of the unit.

Read the operating manual before working on or operating the unit. This applies in particular to the chapter on safety. Always follow all instructions completely and without restrictions.

It is possible that this operating manual may contain instructions that seem incomprehensible or unclear. In the event of any questions or if any details are unclear, contact the factory customer service department or the manufacturer's local partner.

Since this operating manual was written for several different models of the unit, always comply with the parameters for the respective model.

This operating manual is intended only for persons assigned to work on or operate the unit. Treat all constituent parts confidentially. The information contained herein is protected by copyright. No part of this manual may be reproduced, transmitted, copied, stored in electronic data systems or translated into another language, either wholly or in part, without the express written permission of the manufacturer.

Symbols

The following symbols are used in the operating manual. They have the following meaning:



Information for operators.



Information or instructions for qualified technicians.



DANGER!

Indicates a direct impending danger resulting in severe injuries or death.



WARNING!

Indicates a potentially dangerous situation that could result in serious injuries or death.



CAUTION!

Indicates a potentially dangerous situation that could result in medium or slight injuries.



ATTENTION

Indicates a potentially dangerous situation, which could result in property damage.



NOTICE

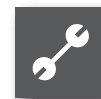
Emphasised information.



Reference to other sections of the operating manual.



Reference to other documents of the manufacturer.



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Intended use

The storage tank may be used only for the intended purpose.

This means as a buffer storage tank in conjunction with:

- Air/water heat pumps
- Brine/water heat pumps
- Water/water heat pumps



NOTICE

It is possible to connect solar systems to solar storage tanks.



NOTICE

Only TPSK-/WTPSK-tanks allowed for cooling



CAUTION!

Do not exceed the operating pressures specified on the rating plate.



CAUTION!

The storage tank is not suitable for domestic hot water storage.



“Technical data” overview and “Technical data/Scope of delivery” overview of the operating manual of the heat pump to which the storage tank is connected.

Disclaimer

The manufacturer is not liable for losses resulting from any use of the unit which is not its intended use.

The manufacturer's liability also expires:

- if work is carried out on the unit and its components contrary to the instructions in this operating manual.
- if work is improperly carried out on the unit and its components.
- if work is carried out on the unit which is not described in this operating manual, and this work has not been explicitly approved by the manufacturer in writing.
- if the unit or components in the unit have been altered, modified or removed without the explicit written consent of the manufacturer.

Safety

The unit is safe to operate for its intended use. The construction and design of the unit conform to current state of the art standards, all relevant DIN/VDE regulations and all relevant safety regulations.

Every person who performs work on the unit must have read and understood the operating manual prior to starting any work. This also applies if the respective person has already worked with such a unit or a similar unit or has been trained by the manufacturer.



WARNING!

Only qualified technicians (trained heating, cooling and electrical technicians) may perform work on the unit and its components.

Customer service

For technical information please contact a qualified technician or the manufacturer's local partner.



“Customer service” overview in the heat pump operating manual.

Warranty / Guarantee

For warranty and guarantee conditions, please refer to the purchase documents.



NOTICE

Please contact your dealer about all matters concerning warranties and guarantees.

Disposal

When decommissioning the unit, always comply with applicable laws, directives and standards concerning recovery, recycling and disposal.



Scope of delivery

- Storage tank
- additional for TPS / STPS / WTPSK: 1 sensor for heating and heat pump regulator.
- additional for TPSK: 2 sensor for heating and heat pump regulator.

Complete the following first:

- ① Inspect the delivery for outwardly visible signs of damage.
- ② Check to make sure that the delivery is complete. Any defects or incorrect deliveries must be claimed immediately.

Refer to the rating plate attached to the delivered storage tank to find out what type of storage tank it is. The abbreviations stand for the following:

- WPS = Series buffer tank, wall-mounted
- UPS = Series buffer tank, base unit type, free-standing
- TPS = Stratified buffer tank (= parallel buffer tank)
- STPS = Stratified solar buffer tank (= parallel buffer tank to which solar systems can be connected)
- WTPSK = Wall-mounted, vapour diffusion tight, insulated, striated buffer tank (suitable for reversible systems)
- TPSK = Vapour diffusion tight, insulated, striated buffer tank (suitable for reversible systems)

ACCESSORIES



ATTENTION

Use only original accessories from the manufacturer of the unit.

Select electrical heating elements from 4.5 to 9 kW for the specific system and order separately.



For information on which electrical heating element is suitable for the storage tank > see "Technical data".

Installation

Observe the following when performing all work:



NOTICE

Always comply with the applicable local accident prevention regulations, statutory regulations, ordinances, guidelines and directives.



WARNING!

The storage tank may only be installed and assembled by qualified technicians!



ATTENTION

The tank must be installed in a frostproof room, to prevent frost damage to the storage tank, pipe system and connections.



NOTICE

Install the storage tank as close as possible to the heat generator, to keep the heat losses as low as possible. Ensure the shortest possible pipe lengths to the load.



ATTENTION

The floor or ground at the place of installation must be dry, firm and able to safely support the weight of the tank.

In the case of wall-mounted storage tanks, the wall must have sufficient load-bearing capacity to safely carry the weight of the storage tank when full.



"Technical data, Weight" overview for the respective type of unit



TRANSPORT TO INSTALLATION LOCATION

To avoid damage during transport, transport the storage tank (secured on the wooden pallet) to its final installation location using a lifting truck.



WARNING!

Make sure to secure tank against slipping during transport.



WARNING!

The tank can tip over when being removed from the wooden pallet and during transport with a hand truck or lifting truck. This can result in personal injuries and damage.

- Take suitable precautions, which prevent the tipping hazard.



NOTICE

The storage tank is delivered fully insulated.

Dispose of the transport and packaging materials properly and under ecological aspects.

INSTALLATION

When installing the tank, ensure sufficient clearance from walls and other objects to enable the connection pipes to be fitted.

Assembly



NOTICE

Always comply with the applicable local accident prevention regulations, statutory regulations, ordinances, guidelines and directives.



WARNING!

The storage tank may only be installed and assembled by qualified technicians!



WARNING!

Electrical heating elements may only be connected by qualified electrician according to the relevant circuit diagram. Always comply with the applicable local standards, guidelines and directives.



ATTENTION

Do not exceed the operating pressures specified on the rating plate.



NOTICE

Close off any connections not required with appropriate plugs or caps.



For position of the connections, please refer to the dimensioned drawing for the respective model.

DRAINING THE STORAGE TANK



ATTENTION

When draining the storage tank, always ensure adequate ventilation.



INSTALLATION OF THE SENSOR FOR THE HEATING AND HEAT PUMP REGULATOR

SERIES BUFFER TANKS

(BASE BUFFER TANK, FREE-STANDING)

The sensor for the heating and heat pump regulator is already installed in the heat pump in the factory.

PARALLEL BUFFER TANK

STRATIFIED BUFFER TANKS TPS AND STPS

On site, you **must** install the sensor included with the tank for the heating and heat pump regulator in one of the sensor pockets provided.



For positioning, see dimensioned drawing for respective model.

STRATIFIED BUFFER TANK COOLING TPSK

On site, you **must** install the two sensors included with the tank for the heating and heat pump regulators, in the sensor pockets provided.



For positioning, see dimensioned drawing for respective model.

STRATIFIED BUFFER TANK WALL-MOUNTED COOLING WTPSK

On site, you **must** install the two sensors included with the tank for the heating and heat pump regulators, in the sensor pockets provided.



For positioning, see dimensioned drawing for respective model.

Insulation of the connections and the storage tank



NOTICE.

Insulate in accordance with applicable local standards and directives.

Proceed as follows:

- ① Check seals of all hydraulic connections. Conduct pressure test...
- ② Insulate all connections, pipes and cables.



ATTENTION

The insulation of TPSK-/WTPSK tanks of the connections and lines must be moistureproof.



Technical Data

		WPS 60/61	UPS 140
Tank type:			
Buffer tank, wall-mounted		•	—
Base buffer tank, free-standing		—	•
Add-on buffer tank		—	—
Stratified buffer tank		—	—
Stratified buffer tank, solar		—	—
Moisture-proof insulated, stratified buffer tank		—	—
Nominal capacity	l	60	140
Dimensions		see dimensioned diagram	see dimensioned diagram
Net weight	kg	24	75
Maximum tank temperature	°C	95	95
Permissible operating pressure	bar	6	3
Connections		see dimensioned diagram	see dimensioned diagram
Max. output of electric heating element	kW	—	9,0

• applicable | — not applicable

		TPS 200	TPSK 200
Tank type:			
Base buffer tank, free-standing		—	—
Add-on buffer tank		—	—
Stratified buffer tank		•	—
Stratified buffer tank, solar		—	—
Moisture-proof insulated, stratified buffer tank		—	•
Nominal capacity	l	200	200
Dimensions		see dimensioned diagram	see dimensioned diagram
Net weight	kg	see dimensioned diagram	see dimensioned diagram
Maximum tank temperature	°C	95	+7 - +95
Permissible operating pressure	bar	3	3
Connections		see dimensioned diagram	see dimensioned diagram
Max. output of electric heating element	kW	6,0	3x 6,0

• applicable | — not applicable

		TPS 500	TPSK 500
Tank type:			
Base buffer tank, free-standing		—	—
Add-on buffer tank		—	—
Stratified buffer tank		•	—
Stratified buffer tank, solar		—	—
Moisture-proof insulated, stratified buffer tank		—	•
Nominal capacity	l	485	477
Dimensions		see dimensioned diagram	see dimensioned diagram
Net weight	kg	see dimensioned diagram	see dimensioned diagram
Maximum tank temperature	°C	95	+7 - +95
Permissible operating pressure	bar	3	3
Connections		see dimensioned diagram	see dimensioned diagram
Max. output of electric heating element	kW	3x 7,5	3x 7,5

• applicable | — not applicable



Technical Data

		TPS 800	STPS 800
Tank type:			
Base buffer tank, free-standing		—	—
Add-on buffer tank		—	—
Stratified buffer tank		•	—
Stratified buffer tank, solar		—	•
Moisture-proof insulated, stratified buffer tank		—	—
Nominal capacity	l	855	855
Dimensions		see dimensioned diagram	see dimensioned diagram
Net weight	kg	see dimensioned diagram	see dimensioned diagram
Maximum tank temperature	°C	95	95
Permissible operating pressure	bar	3	3
Connections		see dimensioned diagram	see dimensioned diagram
Max. output of electric heating element	kW	3x 9,0	3x 9,0
Heat exchanger area		—	see dimensioned diagram

• applicable | — not applicable

		TPS 1500	TPS 2000
Tank type:			
Base buffer tank, free-standing		—	—
Add-on buffer tank		—	—
Stratified buffer tank		•	•
Stratified buffer tank, solar		—	—
Moisture-proof insulated, stratified buffer tank		—	—
Nominal capacity	l	1500	2000
Dimensions		see dimensioned diagram	see dimensioned diagram
Net weight	kg	see dimensioned diagram	see dimensioned diagram
Maximum tank temperature	°C	95	95
Permissible operating pressure	bar	3	3
Connections		see dimensioned diagram	see dimensioned diagram
Max. output of electric heating element	kW	3x 9,0	3x 9,0

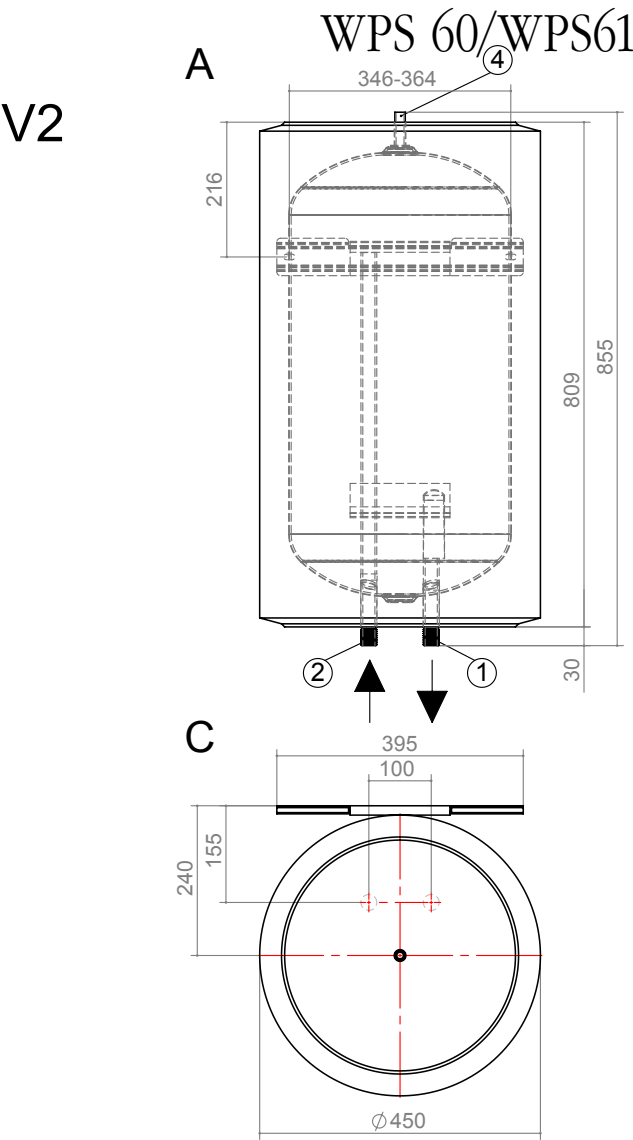
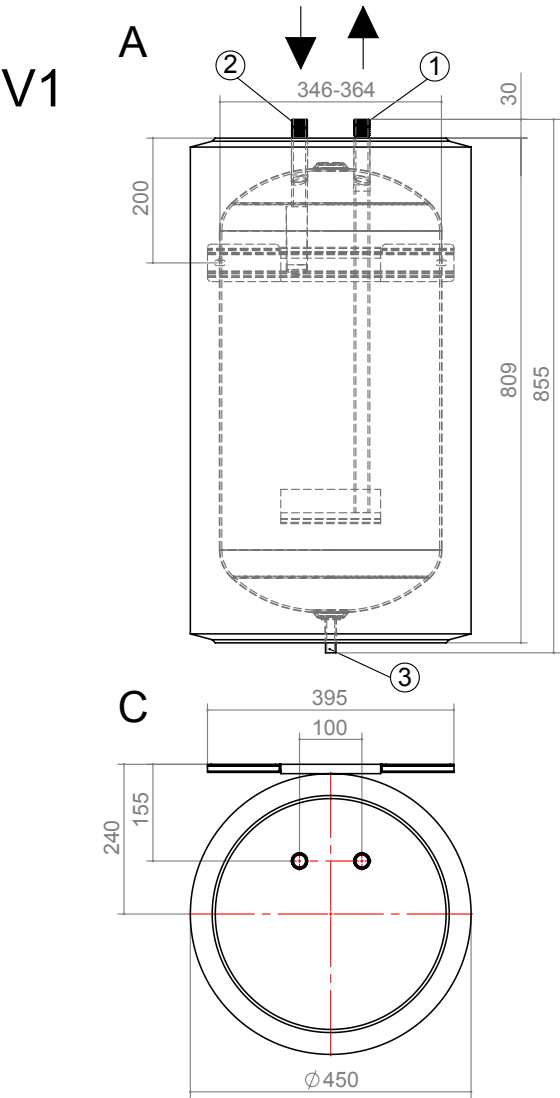
• applicable | — not applicable

		WTPSK 100
Tank type:		
Base buffer tank, free-standing		—
Add-on buffer tank		—
Stratified buffer tank		—
Stratified buffer tank, solar		—
Moisture-proof insulated, stratified buffer tank		•
Nominal capacity	l	100
Dimensions		see dimensioned diagram
Net weight	kg	41
Maximum tank temperature	°C	+5 - +95
Permissible operating pressure	bar	6
Connections		see dimensioned diagram
Max. output of electric heating element	kW	—

• applicable | — not applicable



Dimensional drawings



Legende: DE819421b

V1/V2 Variant 1/ Variant 2

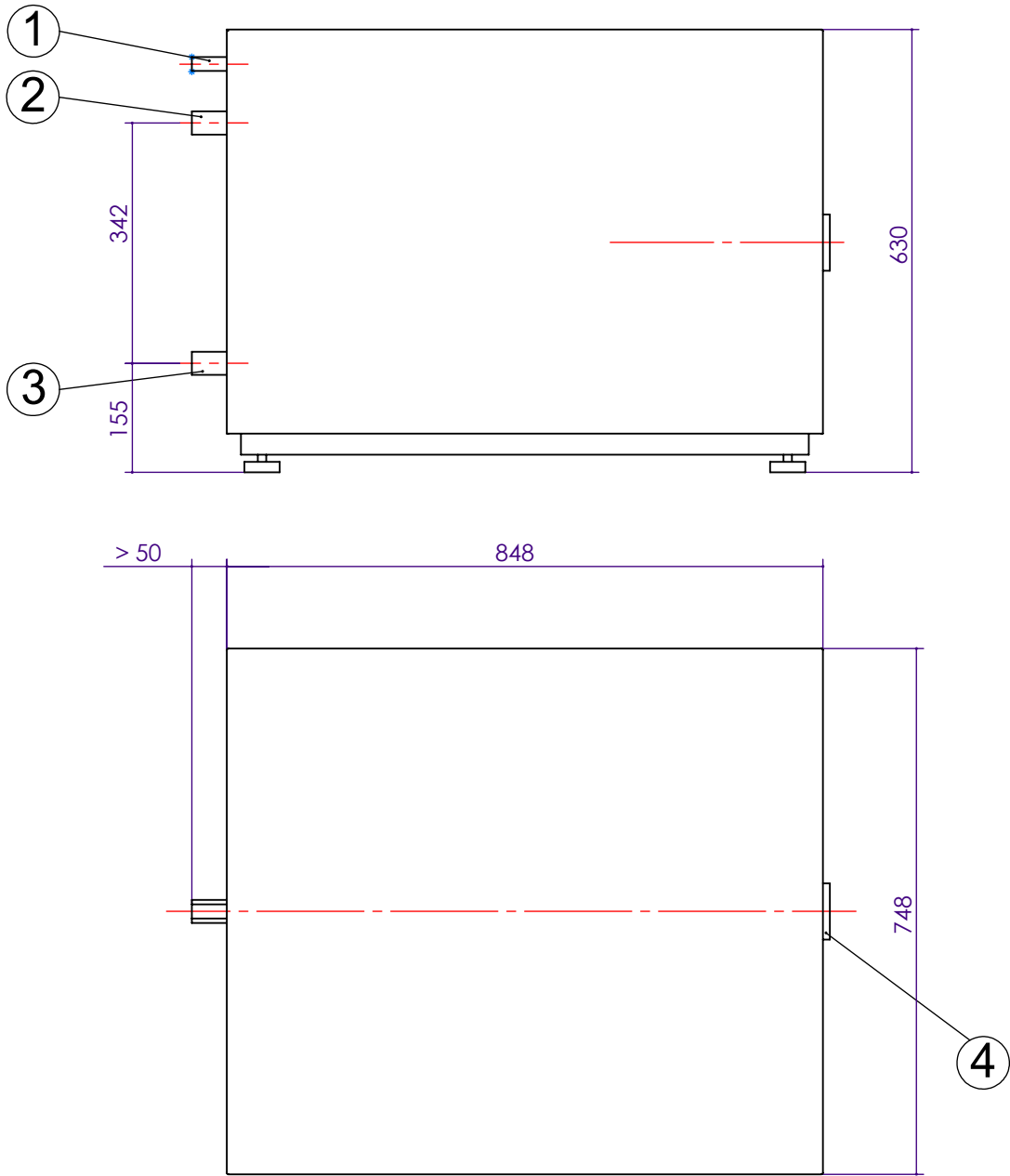
- A Front view
- C Plan view

Item	Name	Dim. WPS 60	Dim. WPS 61
1	Heating water outlet	R1" AG	R 1 1/2" AG
2	Heating water inlet	R1" AG	R 1 1/2" AG
3	KFE tap connection	Rp 1/2" IG	Rp 1/2" IG
4	Bleeding	Rp 1/2" IG	Rp 1/2" IG
Nominal volume	Net weight		
62 litres	24 kg		



UPS 140

Dimensional drawings



Legend: UK819188a

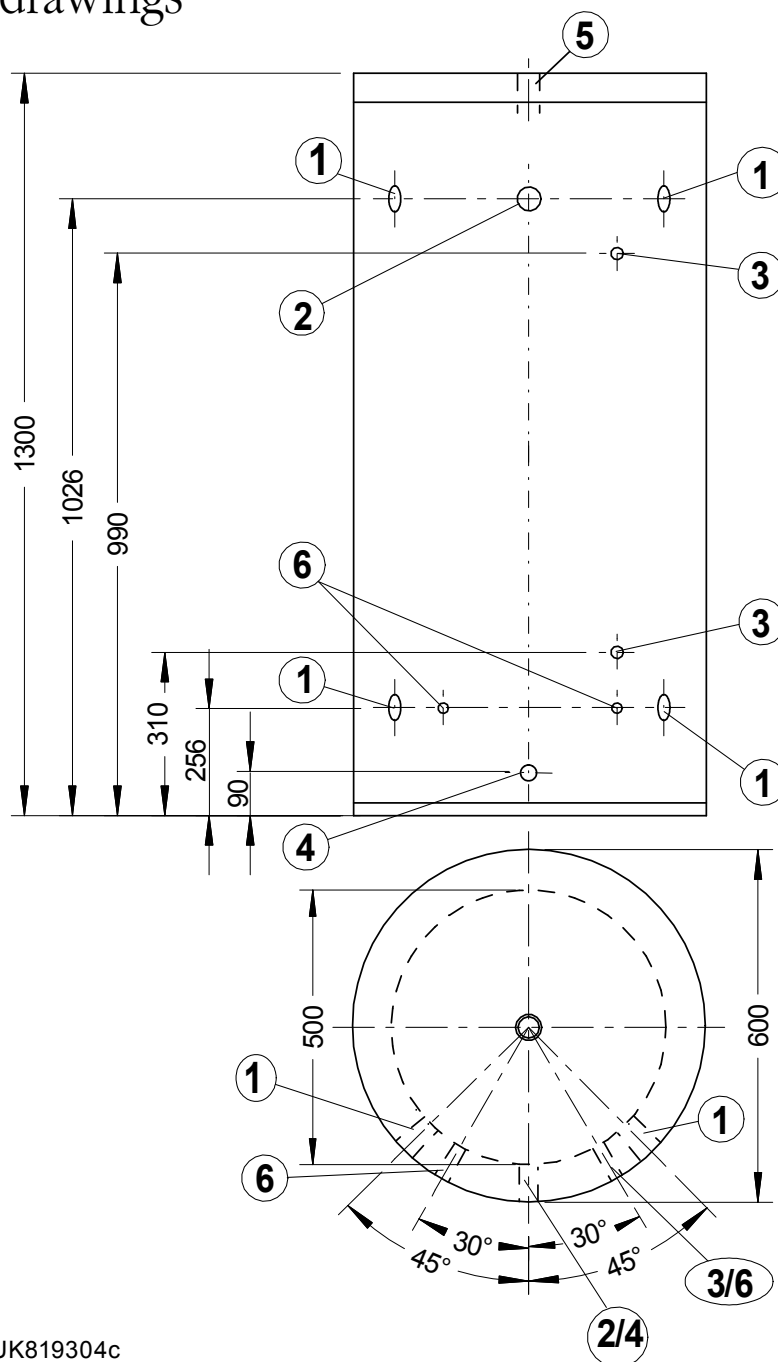
All dimensions in mm.

Item	Name	Dim. UPS 140
1	Sensor / Safety valve	R 1/2" AG
2	Heating water outlet	R 1 1/4" AG
3	Heating water inlet	R 1 1/4" AG
4	Socket for electric heating element	R 1 1/2" IG
Net weight		
UPS 140	75 kg	



Dimensional drawings

TPS 200



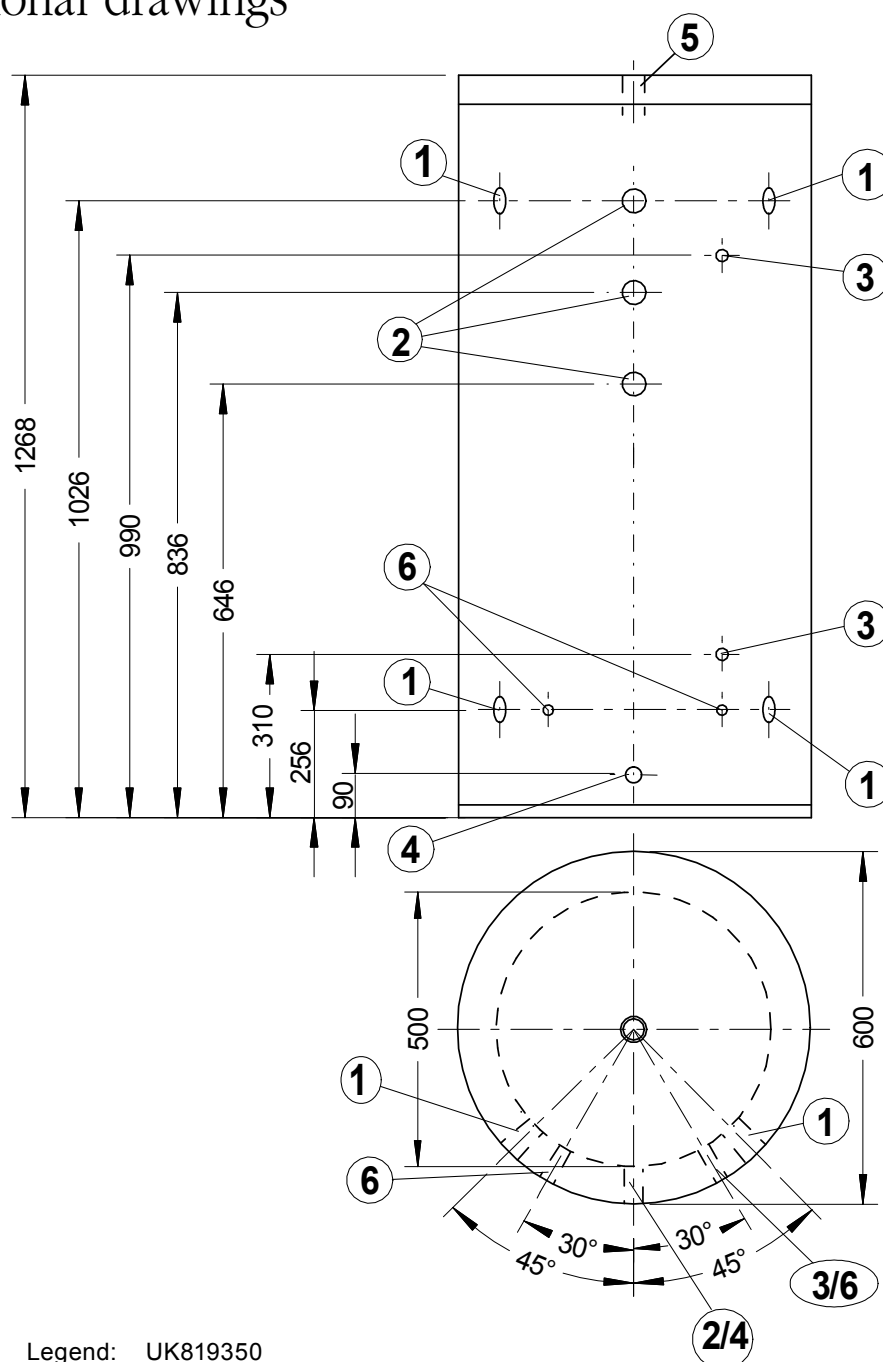
Legend: UK819304c
All dimensions in mm.

Item	Name	Dim. TPS 200
1	Heating water	R 1 1/2" IG
2	Socket for electric heating element	R 1 1/2" IG
3	Socket for sensor pocket	R 1/2" IG
4	Connection for emptying tap	R 3/4" AG
5	Socket for bleed and safety valve	R 1" IG
6	Immersion tube for sensor pocket	Øi = 8mm
Net weight		Tilting dimension
TPS 200	60 kg	1440



Dimensional drawings

TPSK 200



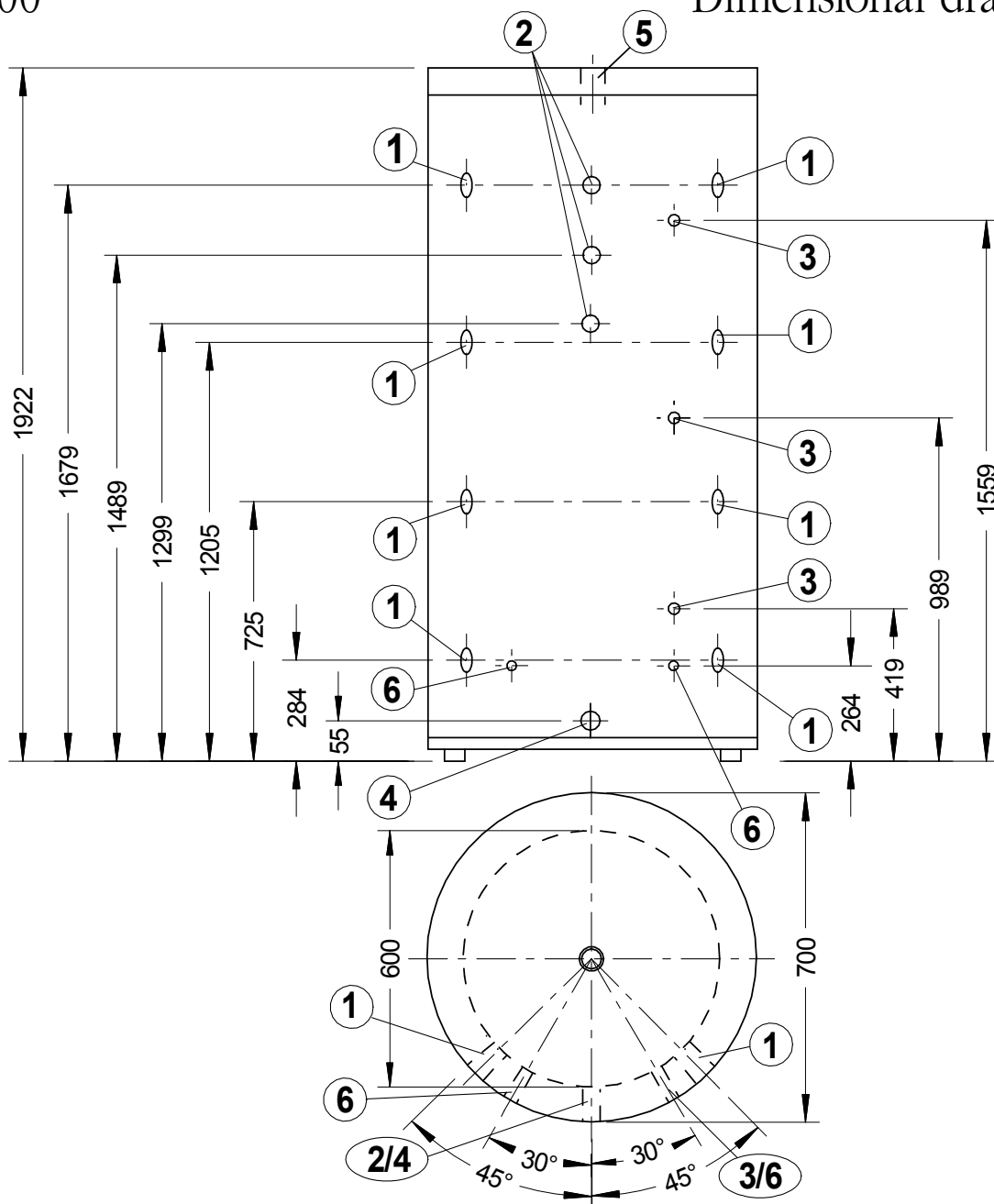
Legend: UK819350
All dimensions in mm.

Item	Name	TPSK 200
1	Heating water	R 1 1/2" IG
2	Socket for electric heating element	R 1 1/2" IG
3	Socket for sensor pocket	R 1/2" IG
4	Connection for emptying tap	R 3/4" AG
5	Socket for bleed and safety valve	R 1" IG
6	Immersion tube for sensor pocket	Øi = 8mm
Net weight		
TPSK 200	60 kg	
Tilting dimension		
1440		



TPSK 500

Dimensional drawings



Legend:

UK819344a

All dimensions in mm

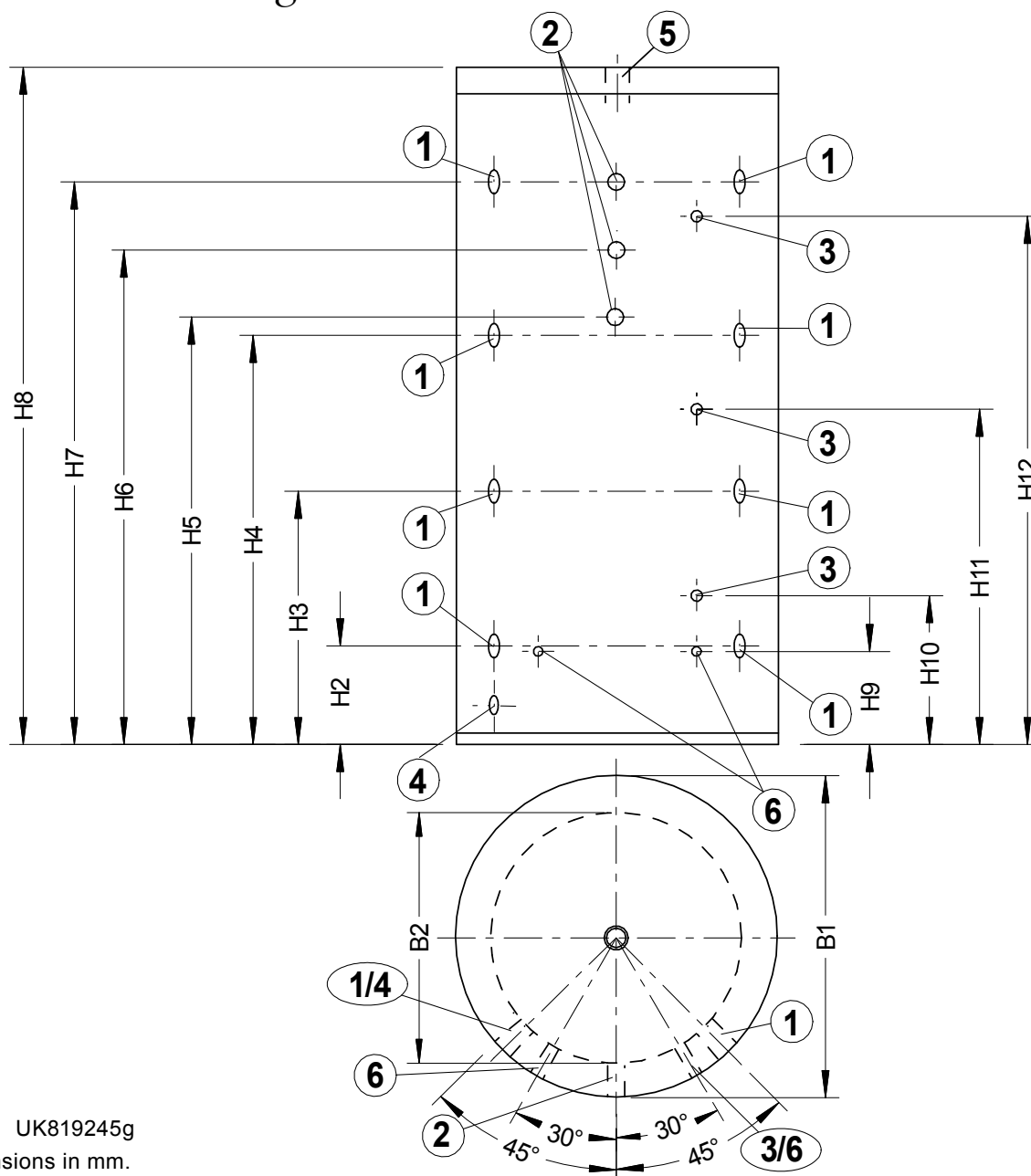
Item	Name	Dim. TPSK 500
1	Heating water	R 2" IG
2	Socket for electric heating element	R 1 1/2" IG
3	Socket for sensor pocket	R 1/2" IG
4	Connection for emptying tap	R 1 " AG
5	Socket for bleed and safety valve	R 1 1/2" IG
6	Immersion tube for sensor pocket	Ø i 8mm

	Net weight	Tilting dimension
TPSK 500	120 kg	2050



Dimensional drawings

TPS 500 • TPS 800



Legend: UK819245g

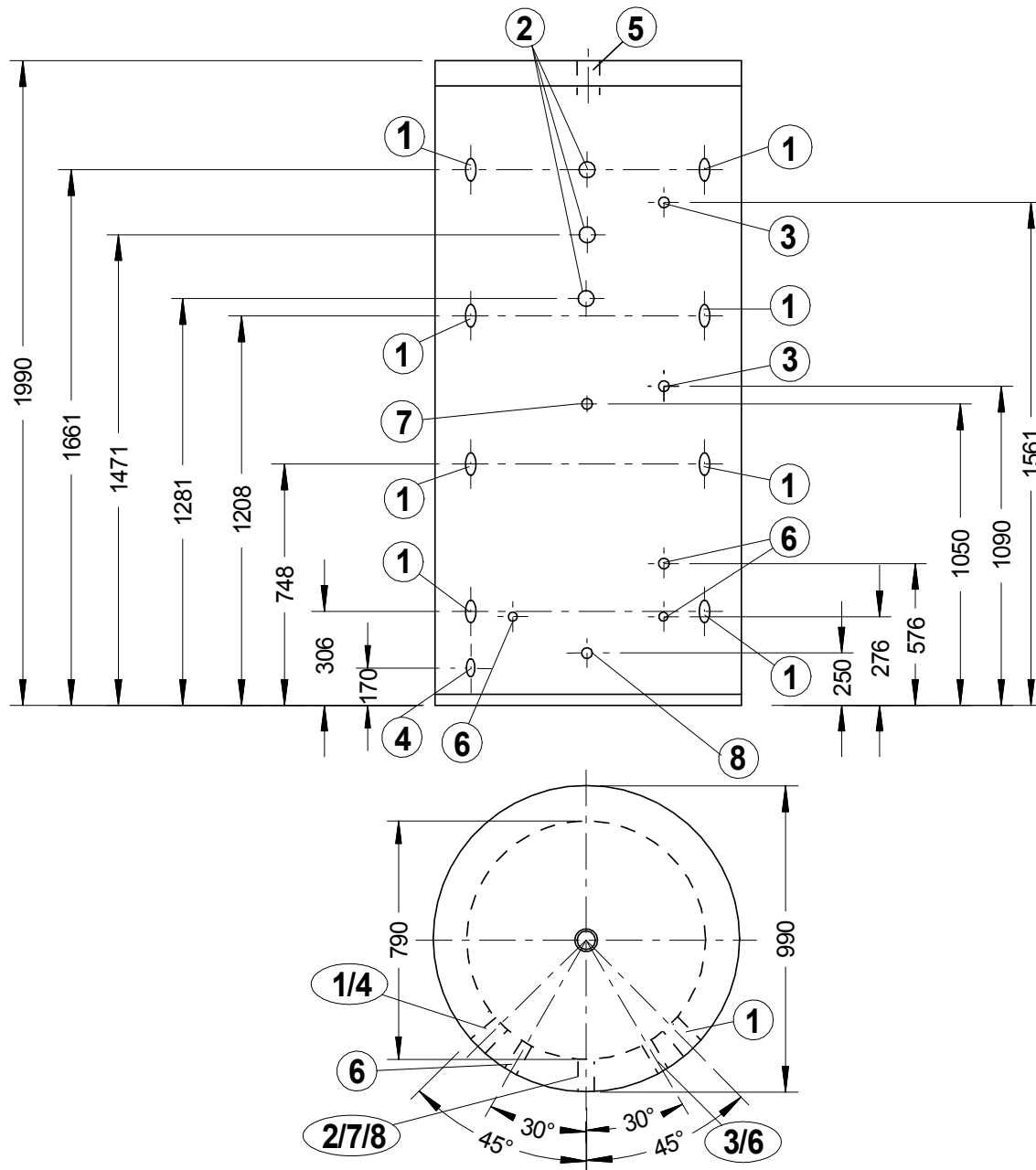
All dimensions in mm.

Item	Name							Dim. TPS 500		Dim. TPS 800			
1	Heating water							R 2" IG		R 2" IG			
2	Socket for electric heating element							R 1 1/2" IG		R 1 1/2" IG			
3	Socket for sensor pocket							R 1/2" IG		R 1/2" IG			
4	Connection for emptying tap							R 1" AG		R 1" AG			
5	Socket for bleed and safety valve							R 1 1/2" IG		R 1 1/2" IG			
6	Immersion tube for sensor pocket							Ø i 13mm		Ø i 13mm			
	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	B1	B2
TPS 500	260	701	1181	1275	1465	1645	1970	240	375	945	1515	800	600
TPS 800	291	748	1208	1281	1471	1661	2000	276	441	991	1561	990	790
Net weight			Tilting dimension (Storage tank without insulation)										
TPS 500	110 kg		2000										
TPS 800	140 kg		2055										



STPS 800

Dimensional drawings



Legend: UK819309d

All dimensions in mm.

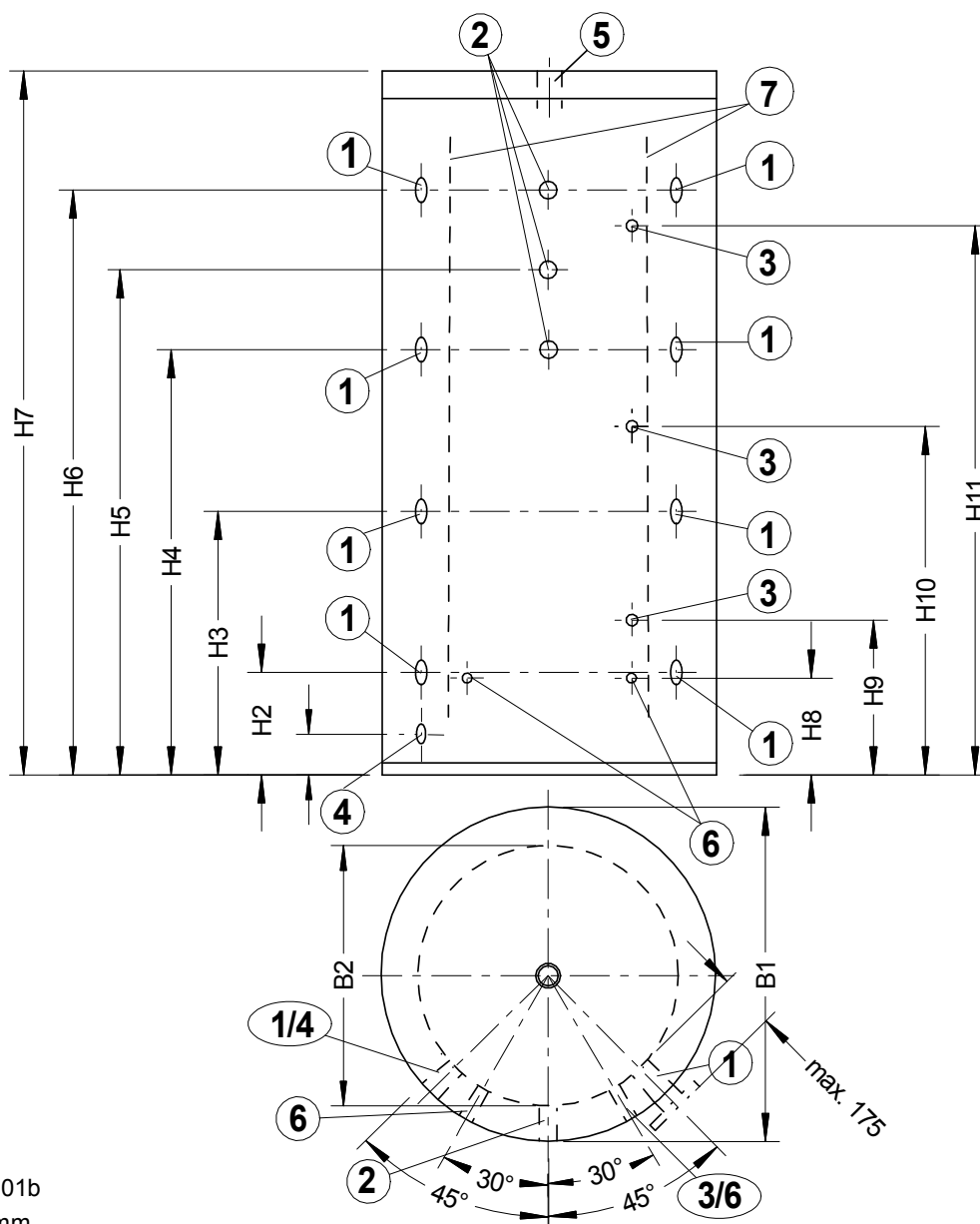
Item	Name	Dim. STPS 800
1	Heating water	R 2" IG
2	Socket for electric heating element	R 1 1/2" IG
3	Socket for sensor pocket	R 1/2" IG
4	Connection for emptying tap	R 1" AG
5	Socket for bleed and safety valve	R 1 1/2" IG
6	Immersion tube for sensor pocket	Di = 13mm
7	Solar flow	R 1" IG
8	Solar return	R 1" IG

	Net weight	Tilting dimension (Storage tank without insulation)	Exchanger area
STPS 800	155 kg	2055	2,8 m ²



Dimensional drawings

TPS 1500 • TPS 2000



Legend: UK819301b

All dimensions in mm.

Item	Name	Dim. TPS 1500	Dim. TPS 2000
1	Heating water 8x flange	DN 80/PN16	DN 80/PN16
2	Socket for electric heating element	R 1 1/2" IG	R 1 1/2" IG
3	Socket for sensor pocket	R 1/2" IG	R 1/2" IG
4	Connection for emptying tap	R 1 " AG	R 1 " AG
5	Socket for bleed and safety valve	R 1 1/2" IG	R 1 1/2" IG
6	Immersion tube for sensor pocket	Di = 7mm	Di = 7mm
7	Sensor strip for sensors	Ø = 6-8mm	Ø = 6-8mm

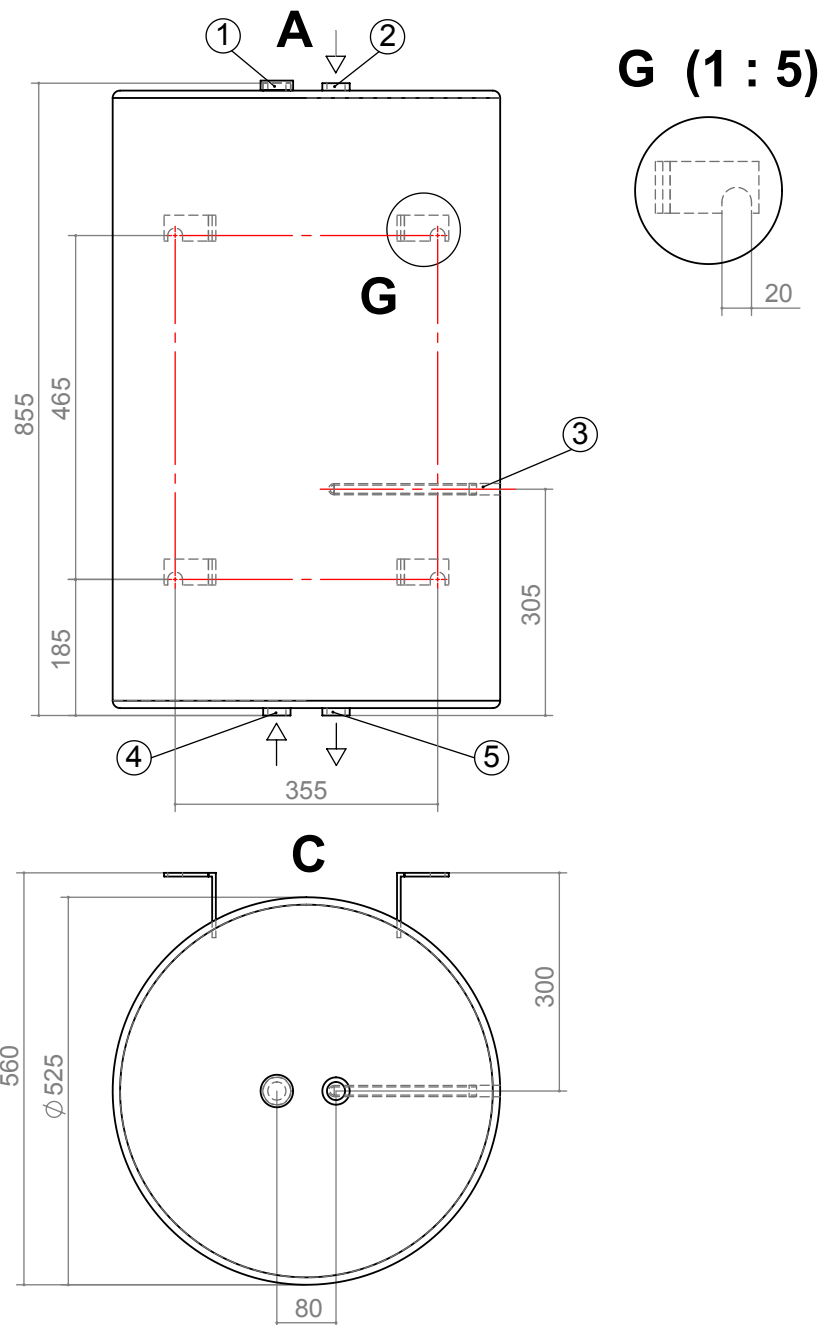
	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	B1	B2
TPS 1500	55	415	765	1405	1585	1765	2165	380	565	1090	1675	1200	1000
TPS 2000	55	429	819	1509	1709	1909	2329	404	594	1169	1809	1300	1100

	Net weight	Tilting dimension (Storage tank without insulation)	Moving dimensions
TPS 1500	230 kg	2230	L: 1100; B: 1090; H: 2165
TPS 2000	261 kg	2400	L: 1200; B: 1160; H: 2329



Dimensional drawings

WTPSK 100



Legend: DE819424
All dimensions in mm.

A Front view
C Plan view
G Detail view

Pos.	Designation	Dim.
1	Filler plug	
2	Flow	Rp 1"
3	Sensor pocket with sensor	Ø i 10
4	Return from heating	Rp 1"
5	Return to heat pump	Rp 1"

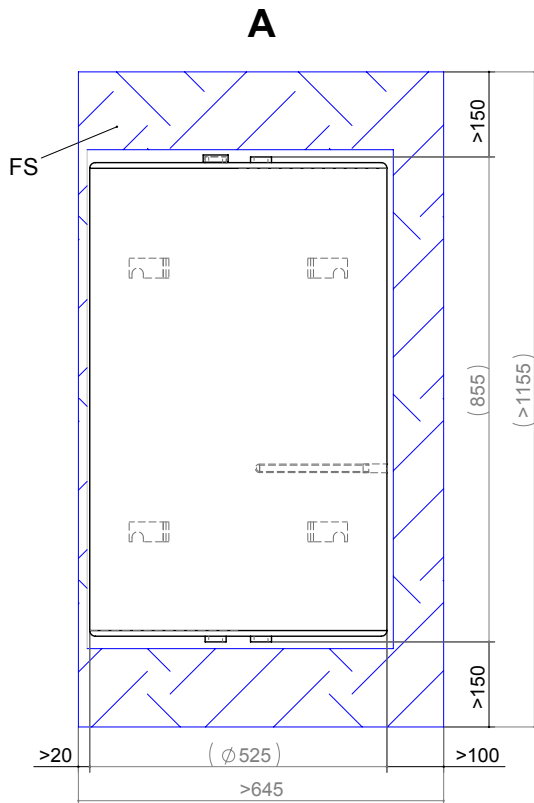
Nominal volume	Net weight
100 Liter	41 Kg



Installation plan

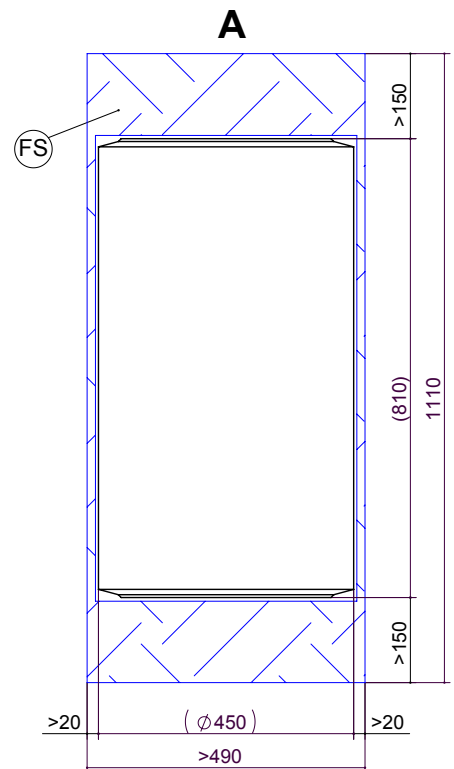
WTPSK 100

WPS60/WPS 61



Legend: DE819425
All dimensions in mm.

A Front view
FS Minimum area to ensure ability to operate and service



Installation plan for floor standing storage tanks

Legend: UK819397
All dimensions in mm.
We reserve the right to modify technical specifications without prior notice.

C	Top view
MF	Minimum area to ensure ability to operate and service
1	Storage tank

