

## Datasheet

Part numbers and prices: See pricelist



### **VITOCCELL 100-E** Type SVW

For storing heating water in conjunction with heat pumps. Version to DIN 4753.

### **VITOCCELL 100-E** Type SVP/SVPA

For storing heating water in conjunction with solar thermal systems, heat pumps and solid fuel boilers. Version to DIN 4753.

### **VITOCCELL 140-E** Type SEIA

For storing heating water in conjunction with solar thermal systems, heat pumps and solid fuel boilers.  
With internal indirect coil for connection to solar collectors.  
Version to DIN 4753.

### **VITOCCELL 160-E** Type SESA

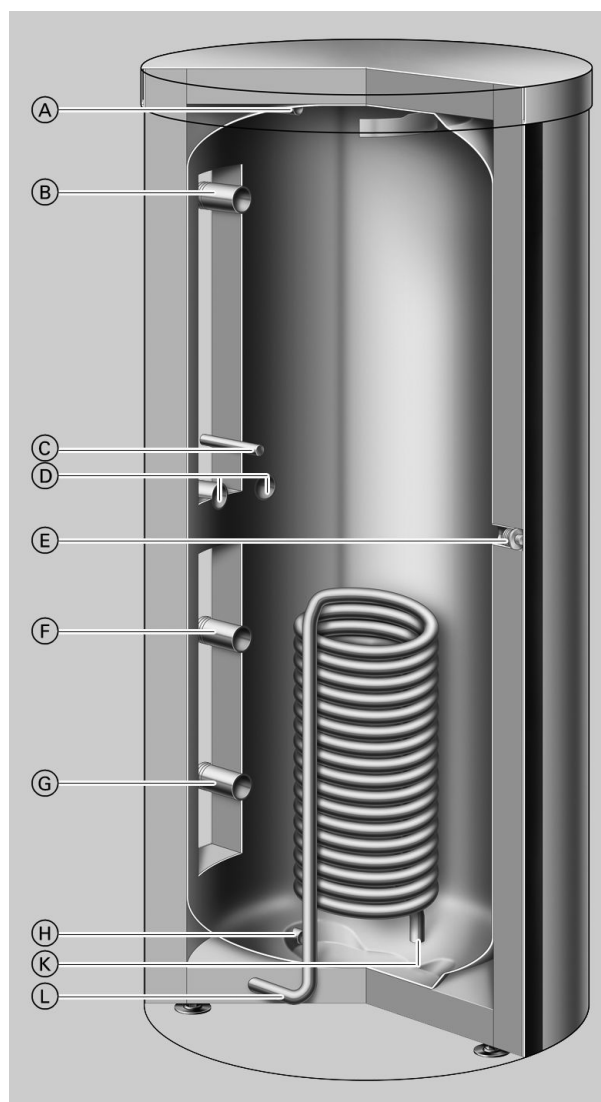
For storing heating water in conjunction with solar thermal systems, heat pumps and solid fuel boilers. With internal indirect coil for the connection to solar collectors plus stratification system. Version to DIN 4753.

## Vitocell 100-E – Benefits at a glance

- Versatile applications in heating systems with two or more heat sources and several consumers, enabled by several flow and return connectors, plus additional connectors for test ports. Particularly suitable in conjunction with solar thermal systems, heat pumps and solid fuel boilers.
- With 200 litre content specially as accessory for heat pump heating systems.
- Economical operation of solar thermal systems, heat pumps or solid fuel boilers, independent of the actual heat demand; excess heat is stored.
- Clean combustion with solid fuel boilers through operation at full load, even during the spring, summer and autumn.
- Low heat losses through high-grade all-round thermal insulation (CFC-free).
- Optional electric booster heater may be integrated (heats up to 200 litres).

## Vitocell 140-E/160-E – Benefits at a glance

- Simplified installation through integral solar heat exchanger. Requires no additional pump.
- Optimised connection arrangement for integrating several heat sources, including heat pumps and solid fuel boilers
- Improved solar yield through additional stratification system (Vitocell 160-E) – therefore more rapid availability of solar energy in the upper cylinder area.
- DHW heating via a separate freshwater module for the Vitocell 140-E and 160-E (option).
- Optional electric booster heater may be integrated.



**Vitocell 140-E (type SEIA) – multi-mode heating water buffer cylinder**

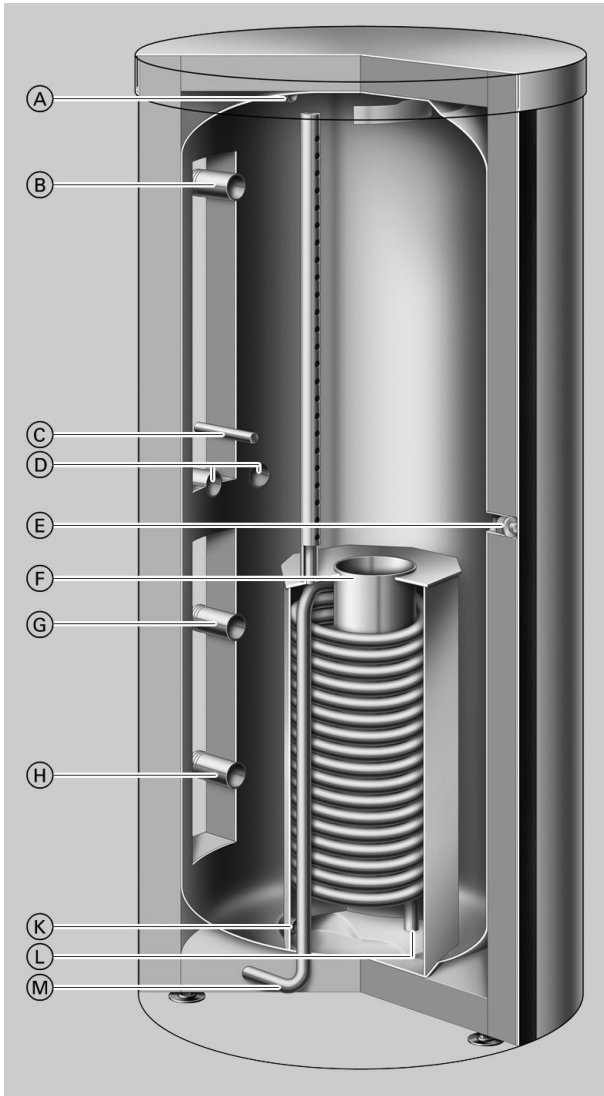
- Ⓐ Heating water flow 1 / air vent valve
- Ⓑ Heating water flow 2
- Ⓒ Sensor well for temperature sensor/controller and thermometer sensor
- Ⓓ Heating water return 1 / heating water flow 3
- Ⓔ Immersion heater EHE
- Ⓕ Heating water return 2
- Ⓖ Heating water return 3
- Ⓗ Drain / heating water return 4

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## Vitocell 140-E/160-E – Benefits at a glance (cont.)

- Ⓚ Heating water return / solar thermal system drain
- Ⓛ Heating water flow / solar thermal system air vent valve



- Ⓒ Sensor well for temperature sensor/controller and thermometer sensor
- Ⓓ Heating water return 1 / heating water flow 3
- Ⓔ Immersion heater EHE
- Ⓕ Stratification system
- Ⓖ Heating water return 2
- Ⓗ Heating water return 3
- Ⓚ Drain / heating water return 4
- Ⓛ Heating water return / solar thermal system drain
- Ⓜ Heating water flow / solar thermal system air vent valve

### Vitocell 160-E (type SESA) – multi-mode heating water buffer cylinder with stratification system

- Ⓐ Heating water flow 1 / air vent valve
- Ⓑ Heating water flow 2

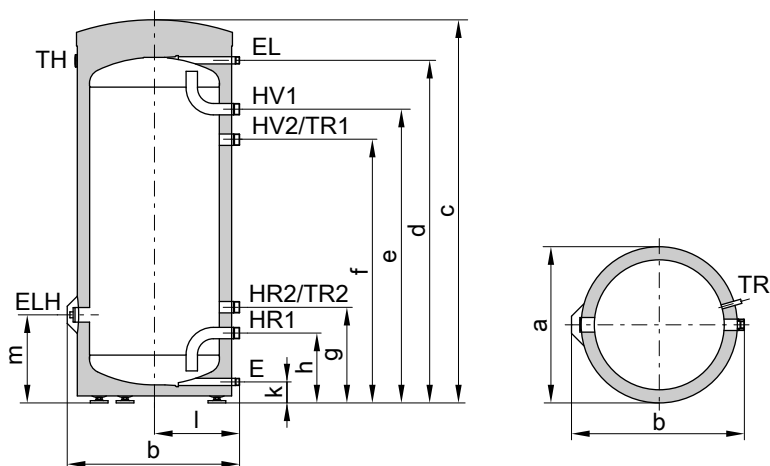
## Specification Vitocell 100-E (type SVW)

For storing heating water in conjunction with heat pumps up to 17 kW output, optionally with immersion heater.

Suitable for the following systems:

- Heating water flow temperature up to 110 °C
- Operating pressure on the heating water side up to 3 bar

<b>Cylinder content</b>	I	<b>200</b>
<b>Dimensions</b>		
Length (∅)	a	mm 581
Width	b	mm 640
Height	c	mm 1409
Height when tilted		mm 1460
<b>Weight (incl. thermal insulation)</b>		kg 80
<b>Connections</b>		
Heating water flow and return	R	1¼"
<b>Drain/ventilation valve</b>	R	¾"
<b>Standby heat loss</b> $q_{BS}$ at 45 K temperature differential (actual value to DIN 4753-8)	kWh/24 h	1.8



Vitocell 100-E (type SVW, 200 litre)

E Drain  
 EL Air vent valve  
 ELH Female connection Rp 1½" for immersion heater EHE  
 HR Heating water return

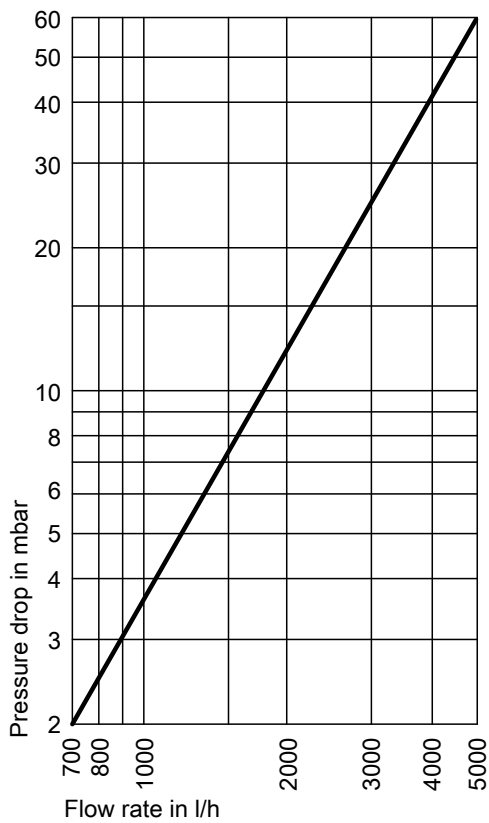
HV Heating water flow  
 TH Thermometer  
 TR Sensor well for cylinder temperature sensor or control thermostat

### Dimensions Vitocell 100-E

<b>Cylinder capacity</b>		I	<b>200</b>
Length (∅)	a	mm	581
Width	b	mm	640
Height	c	mm	1409
	d	mm	1256
	e	mm	1073
	f	mm	973
	g	mm	354
	h	mm	254
	k	mm	72
	l	mm	317
	m	mm	323

## Specification Vitocell 100-E (type SVW) (cont.)

### Pressure drop on the heating water side



### Vitocell 100-E (200 l)

## Delivered condition

### Vitocell 100-E, type SVW

#### 200 litre content

Heating water buffer cylinder, made from steel.

- 2 welded-in sensor wells
- 1 Thermometer
- Threaded adjustable feet
- Fitted thermal insulation made from rigid polyurethane foam

Colour of the epoxy-coated sheet steel casing: Vitosilver.

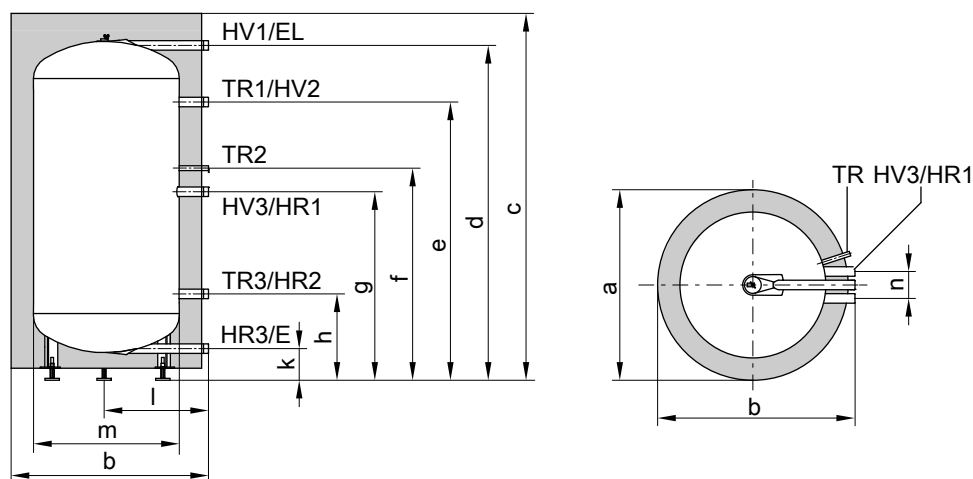
## Specification Vitocell 100-E (type SVP/SVPA)

For storing heating water in conjunction with solar collectors, heat pumps and solid fuel boilers.

Suitable for the following systems:

- Heating water flow temperature up to 110 °C
- Operating pressure on the heating water side up to 3 bar

Cylinder content		400	750	950
<b>Dimensions</b>				
Length (∅)				
– incl. thermal insulation	a	mm	850	1004
– excl. thermal insulation		mm	650	790
Width	b	mm	888	1060
Height				
– incl. thermal insulation	c	mm	1630	1895
– excl. thermal insulation		mm	1506	1814
Height when tilted excl. thermal insulation and adjustable feet (750 and 950 litres)		mm	1550	1890
<b>Weight</b>				
– incl. thermal insulation		kg	122	147
– excl. thermal insulation		kg	105	125
<b>Connections</b>				
Heating water flow and return		R	1¼"	2"
<b>Standby heat loss</b> $Q_{BS}$ at 45 K temperature differential (actual value to DIN 4753-8)		kWh/24 h	2.7	3.4



Vitocell 100-E (type SVP, 400 litre)

E Drain  
EL Air vent valve  
HR Heating water return

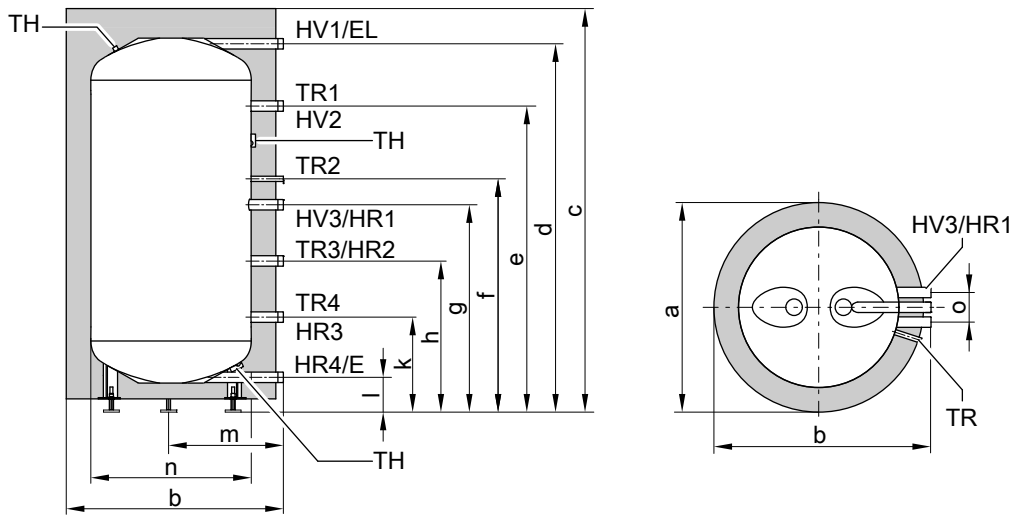
HV Heating water flow  
TR Sensor well for cylinder temperature sensor or control thermostat

### Dimensions Vitocell 100-E

Cylinder content		l	400
Length (∅)	a	mm	850
Width	b	mm	888
Height	c	mm	1630
	d	mm	1458
	e	mm	1206
	f	mm	911
	g	mm	806
	h	mm	351
	k	mm	107
	l	mm	455
∅ excl. thermal insulation	m	mm	∅ 650
	n	mm	120

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## Specification Vitocell 100-E (type SVP/SVPA) (cont.)



Vitocell 100-E (type SVPA, 750 and 950 litres)

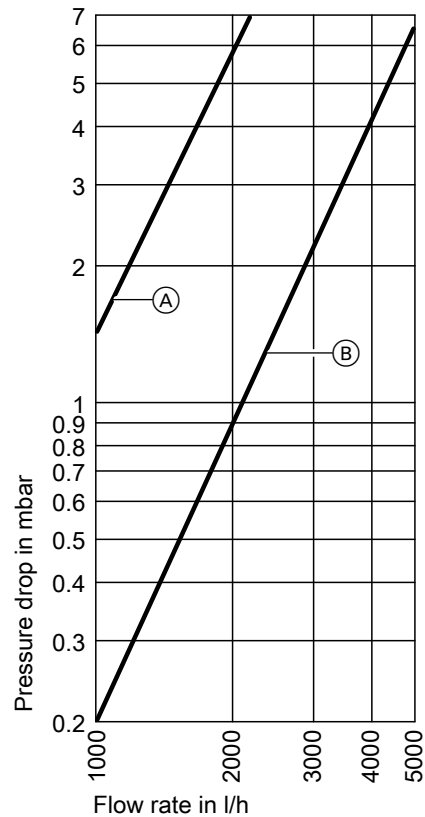
E Drain  
 EL Air vent valve  
 HR Heating water return  
 HV Heating water flow

TH Fitting for thermometer sensor or additional sensor  
 TR Sensor well for cylinder temperature sensor or control thermostat

### Dimensions Vitocell 100-E

Cylinder content	l	750	950	
Length (∅)	a	mm	1004	1004
Width	b	mm	1060	1060
Height	c	mm	1895	2195
	d	mm	1777	2083
	e	mm	1547	1853
	f	mm	1067	1219
	g	mm	967	1119
	h	mm	676	752
	k	mm	386	386
	l	mm	155	155
∅ excl. thermal insulation	m	mm	∅ 790	∅ 790
	n	mm	∅ 790	∅ 790
	o	mm	140	140

### Pressure drop on the heating water side



### Vitocell 100-E

- (A) Type SVP, 400 litre capacity
- (B) Type SVPA, 750 and 1000 litre capacity

## Delivered condition

### Vitocell 100-E, type SVP/SVPA

400, 750 and 950 litres

Heating water buffer cylinder, made from steel.

- Welded sensor wells
  - 3 sensor wells for 400 l
  - 4 sensor wells for 750 and 950 l
- 3 additional fittings for thermometer sensors or additional sensors (for 750 and 950 litres)

- 1 thermometer (only for 400 litre capacity)
- Adjustable feet
- Separately packed thermal insulation made of flexible PUR foam (for 400 litres), or of polyester fleece (for 750 and 950 litres)

The colour of the plastic-coated thermal insulation is Vitosilver.

## Specification Vitocell 140-E/160-E (type SEIA/SESA)

For storing heating water in conjunction with solar collectors, heat pumps and solid fuel boilers.

Suitable for the following systems:

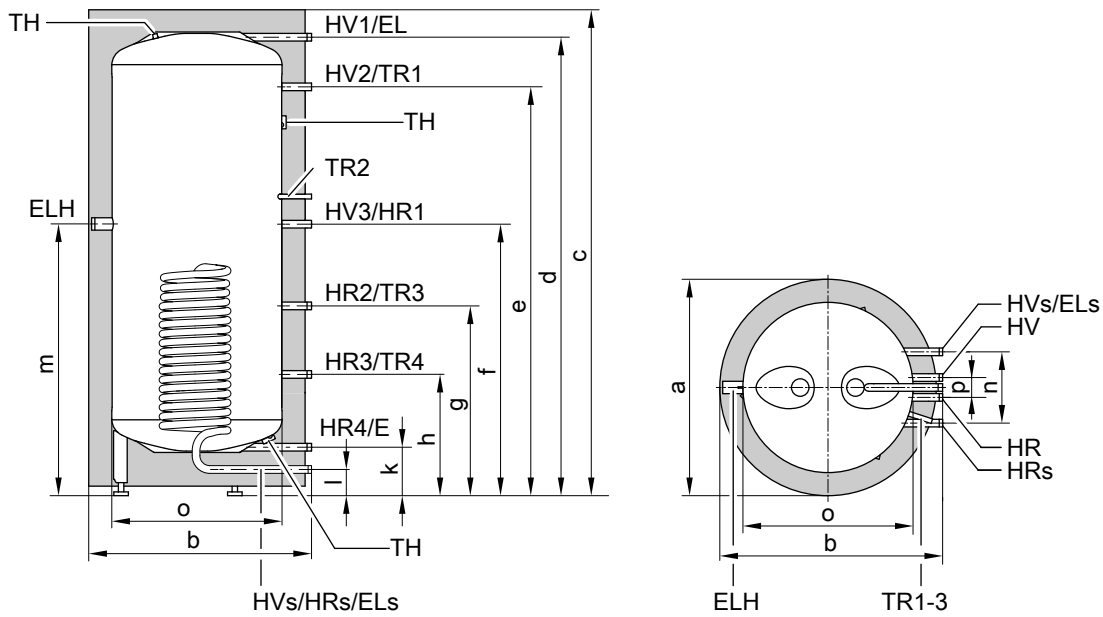
- Heating water flow temperature up to **110 °C**
- Solar flow temperature up to **140 °C**
- Operating pressure on the **heating water side** up to **3 bar**
- Operating pressure on the **solar side** up to **10 bar**

		Vitocell 140-E		Vitocell 160-E	
		750	950	750	950
<b>Cylinder content</b>	l				
Solar indirect coil content	l	12	14	12	14
<b>Dimensions</b>					
Length (∅)					
– incl. thermal insulation	a mm	1004	1004	1004	1004
– excl. thermal insulation	mm	790	790	790	790
Width	b mm	1060	1060	1060	1060
Height					
– incl. thermal insulation	c mm	1895	2195	1895	2195
– excl. thermal insulation	mm	1814	2120	1814	2120
Height when tilted					
– excl. thermal insulation and adjustable feet (750 and 950 litres)	mm	1890	2195	1890	2195
<b>Weight</b>					
– incl. thermal insulation	kg	174	199	183	210
– excl. thermal insulation	kg	152	174	161	185
<b>Connections</b>					
Heating water flow and return	R	2"	2"	2"	2"
Heating water flow and return (solar)	G	1"	1"	1"	1"
<b>Solar indirect coil</b>					
Heating surface	m <sup>2</sup>	1.8	2.1	1.8	2.1
<b>Max. connectable aperture surface</b>					
Vitosol	m <sup>2</sup>	12	20	12	20
<b>Standby heat loss q<sub>BS</sub></b> (standard parameter)	kWh/24 h	1.63	1.67	1.63	1.67
<b>Standby capacity V<sub>aux</sub></b>	l	380	453	380	453
<b>Solar capacity V<sub>sol</sub></b>	l	370	497	370	497

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## Specification Vitocell 140-E/160-E (type SEIA/SESA) (cont.)



Vitocell 140-E

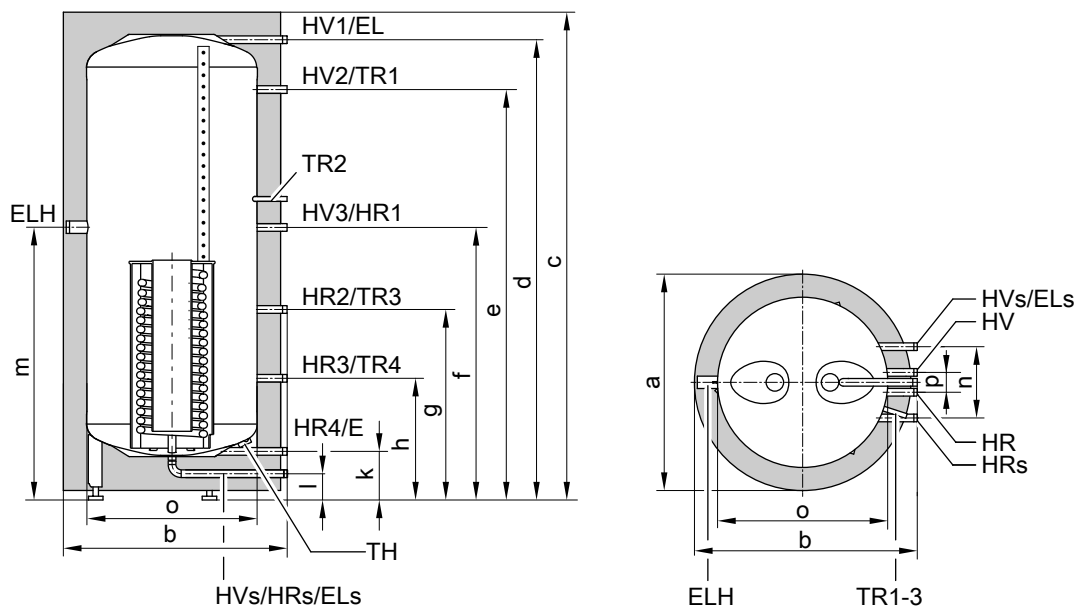
- E Drain
- EL Air vent valve
- EL<sub>s</sub> Solar indirect coil air vent valve
- ELH Immersion heater  
(Fem. connection Rp 1½")
- HR Heating water return

- HR<sub>s</sub> Heating water return, solar thermal system
- HV Heating water flow
- HV<sub>s</sub> Heating water flow, solar thermal system
- TH Fitting for thermometer sensor or additional sensor
- SPR Temperature sensor or thermostat

### Dimensions Vitocell 140-E

Cylinder content		l	750	950
Length (∅)	a	mm	1004	1004
Width	b	mm	1060	1060
Height	c	mm	1895	2195
	d	mm	1777	2083
	e	mm	1547	1853
	f	mm	967	1119
	g	mm	676	752
	h	mm	386	386
	k	mm	155	155
	l	mm	75	75
	m	mm	991	1181
	n	mm	370	370
Length (∅) excl. thermal insulation	o	mm	790	790
	p	mm	140	140

## Specification Vitocell 140-E/160-E (type SEIA/SESA) (cont.)



Vitocell 160-E

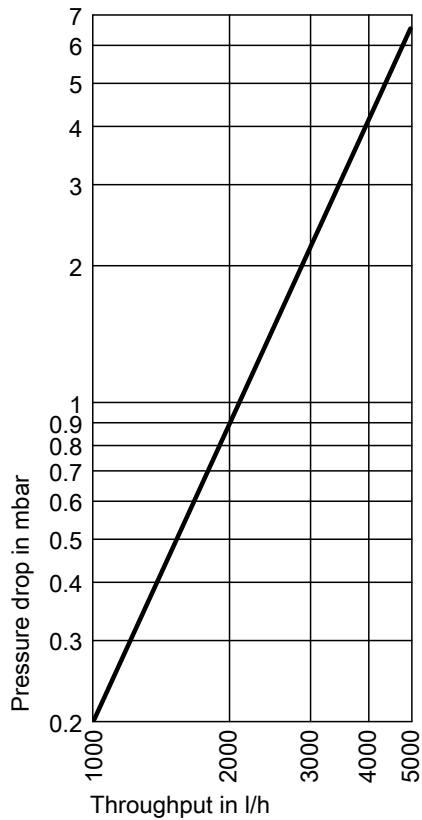
E	Drain	HR <sub>s</sub>	Heating water return, solar thermal system
EL	Air vent valve	HV	Heating water flow
EL <sub>s</sub>	Solar indirect coil air vent valve	HV <sub>s</sub>	Heating water flow, solar thermal system
ELH	Immersion heater (Fem. connection Rp 1½")	TH	Fitting for thermometer sensor or additional sensor
HR	Heating water return	SPR	Temperature sensor or thermostat

### Dimensions Vitocell 160-E

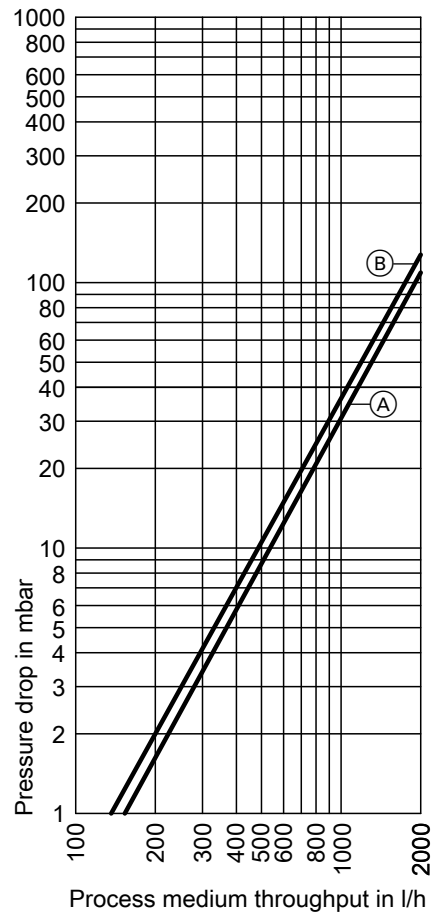
Cylinder content		l	750	950
Length (∅)	a	mm	1004	1004
Width	b	mm	1060	1060
Height	c	mm	1895	2195
	d	mm	1777	2083
	e	mm	1547	1853
	f	mm	967	1119
	g	mm	676	752
	h	mm	386	386
	k	mm	155	155
	l	mm	75	75
	m	mm	991	1181
	n	mm	370	370
Length (∅) excl. thermal insulation	o	mm	790	790
	p	mm	140	140

## Specification Vitocell 140-E/160-E (type SEIA/SESA) (cont.)

### Pressure drop



Pressure drop on the heating water side



Pressure drop on the solar side

- (A) Cylinder content 750 l
- (B) Cylinder content 950 l

## Delivered condition

### Vitocell 140-E, type SEIA

#### 750 and 950 litres

Heating water buffer cylinder, made from steel.

- 4 welded-in sensor wells
- 3 additional fittings for thermometer sensors or additional sensors
- Adjustable feet

- Air vent valve for the indirect solar coils
- Thermal insulation made from polyester fleece (packed separately)

The colour of the plastic-coated thermal insulation is Vitosilver.

### Vitocell 160-E, type SESA

#### 750 and 950 litres

Heating water buffer cylinder, made from steel.

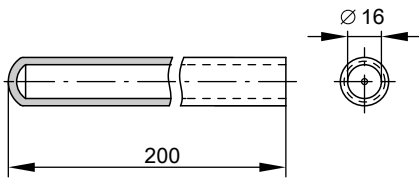
- 4 welded-in sensor wells
- 3 additional fittings for thermometer sensors or additional sensors
- Adjustable feet

- Air vent valve for the indirect solar coils
- Thermal insulation made from polyester fleece (packed separately)

The colour of the plastic-coated thermal insulation is Vitosilver.

## Specification sensor well

### Sensor well for all types (200, 400, 750 and 950 litre)

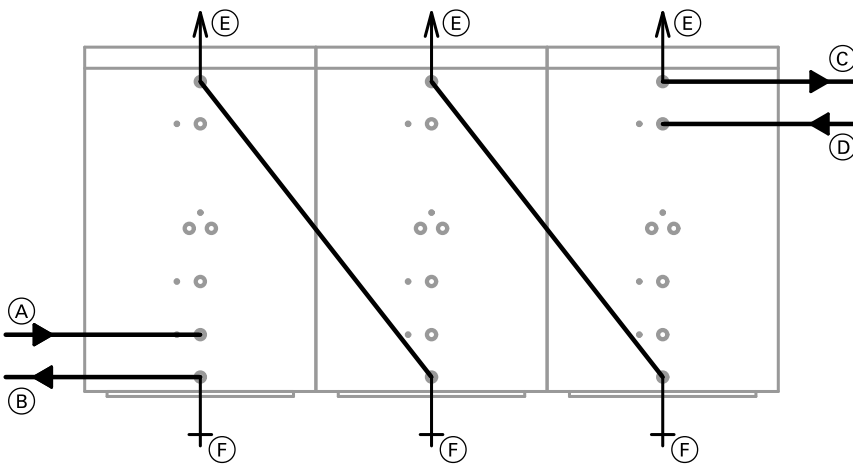


The sensor wells are welded into the heating water buffer cylinder.

## Design information

### Cylinder banks

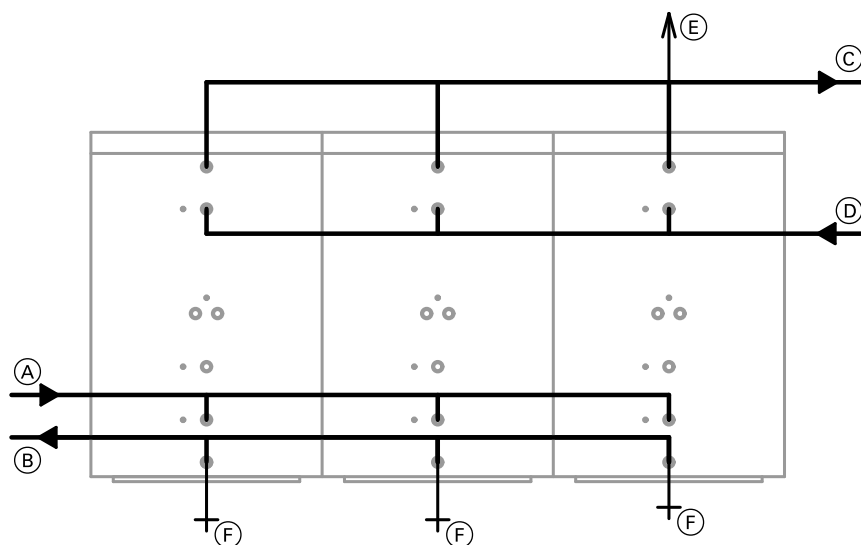
The Vitocell 100-E heating water buffer cylinders can be combined either in parallel or serial configuration with any number of units. Provide interconnecting pipework and air vent valves on site (shown: type SVPA 750/950 litres).



### Connection in series

- |  |   |
|--|---|
| (A) Heating water return 3 (HR3) from the heating circuits | (D) Heating water flow 2 (HV2) from the heat source |
| (B) Heating water return 4 (HR4) to the heat source        | (E) Ventilation (EL)                                |
| (C) Heating water flow 1 (HV1) to the heating circuits     | (F) Drain (E)                                       |

## Design information (cont.)



### Parallel boiler control

- |  |   |
|--|---|
| Ⓐ Heating water return 3 (HR3) from the heating circuits | Ⓓ Heating water flow 2 (HV2) from the heat source |
| Ⓑ Heating water return 4 (HR4) to the heat source        | Ⓔ Ventilation (EL)                                |
| Ⓒ Heating water flow 1 (HV1) to the heating circuits     | Ⓕ Drain (E)                                       |

### Immersion heater

When using third party products, the threaded heater element must have an unheated length of at least 100 mm.

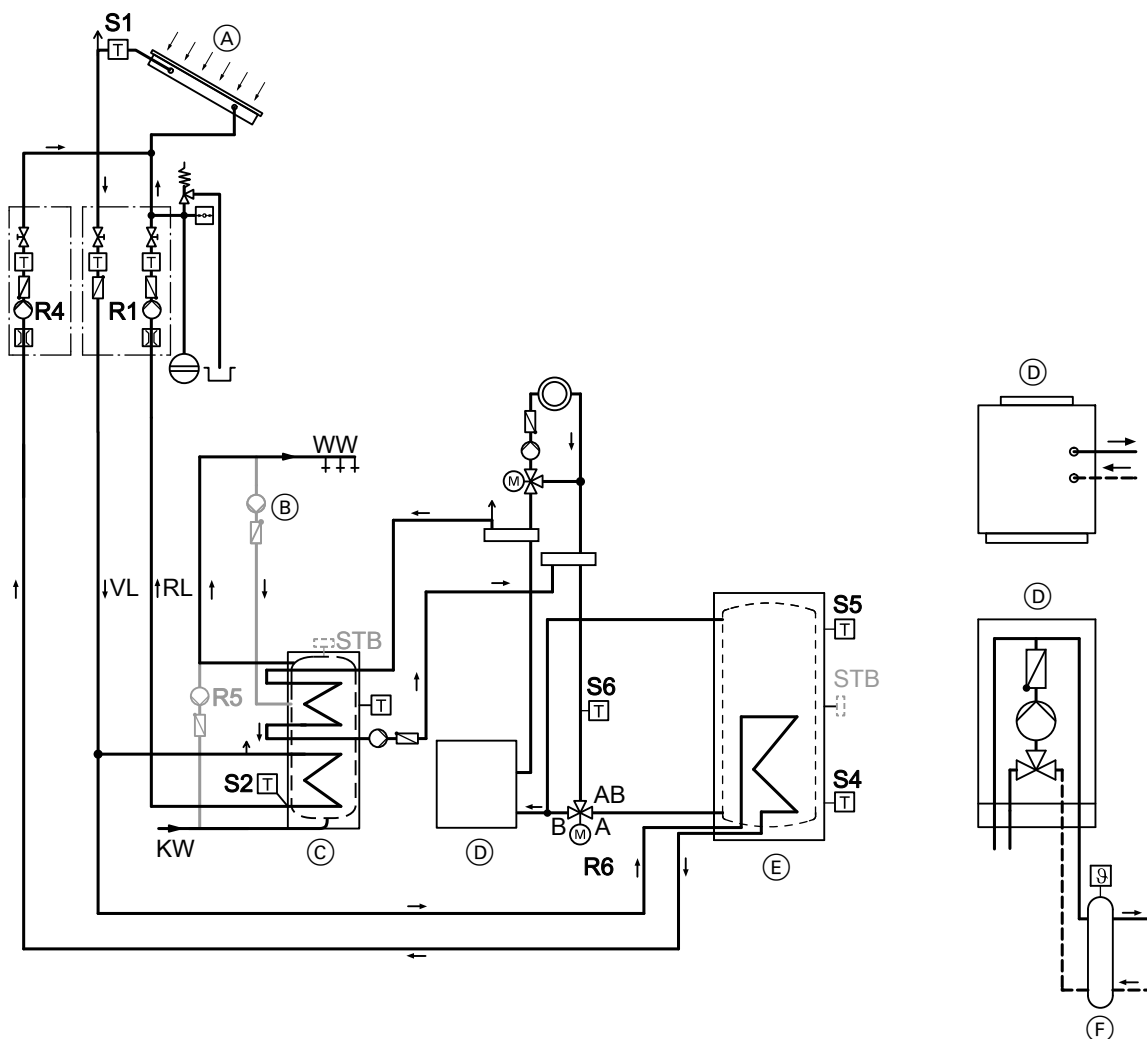
### Technical guide

Further design and sizing information  
See technical guides:

- Vitocal
- Vitosol
- Vitoligno/Vitolig

## Design information (cont.)

### Installation example Vitocell 140-E/160-E



- |    |  |    |  |
|----|--|----|--|
| KW | Cold water   | Ⓣ  | Low loss header                                    |
| WW | DHW  | R1 | Solar circuit pump                                 |
| RL | Return   | R4 | Solar circuit pump as buffer cylinder primary pump |
| VL | Flow   | R5 | Circulation pump (transfer)                        |
| Ⓐ  | Solar collector                                      | R6 | Three-way diverter valve                           |
| Ⓑ  | DHW circulation pump                                 | S1 | Collector temperature sensor                       |
| Ⓒ  | DHW cylinder   | S2 | Cylinder temperature sensor                        |
| Ⓓ  | ■ Oil/gas boiler<br>■ Wall mounted oil/gas boiler    | S4 | Temperature sensor (buffer cylinder), heating up   |
| Ⓔ  | Heating water buffer cylinder (Vitocell 140-E/160-E) | S5 | Temperature sensor (buffer cylinder), discharge    |
|    |  | S6 | Return temperature sensor (heating circuit)        |

## Accessories Vitocell 100-E, 140-E and 160-E

### Thermometer

#### Part no. 7819 509

To be installed in the thermal insulation for cylinders with 750 and 950 litre content.

#### Note

Up to four thermometers can be installed to scan the temperature profile in the cylinder (e.g. in conjunction with solid fuel boilers)

### Immersion heater EHE

Only for the following cylinders:

- Vitocell 100-E, type SVW (200 l content)
- Vitocell 140-E, type SEIA (750 and 950 l content)
- Vitocell 160-E, type SESA (750 and 950 l content)

## Accessories Vitocell 100-E, 140-E and 160-E (cont.)

### Current type and rated voltage 3/N/PE 400 V/50 Hz

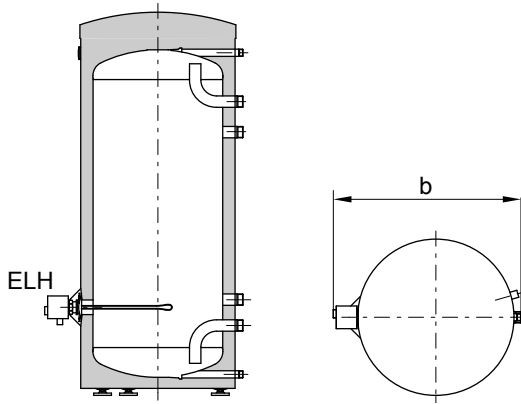
IP rating: IP 54

Output range		max. 6 kW			max. 12W		
Rated power consumption in standard operation/during quick heat-up	kW	2	4	6	4	8	12
Rated current	A	8.7	8.7	8.7	17.4	17.4	17.4
Heat-up time from 10 to 60 °C	200 l	h	4.7	2.4	1.6	—	—
	750 l	h	10.9	5.4	3.6	5.4	2.7
	950 l	h	13.7	6.8	4.8	6.8	3.4

### Heating water buffer cylinder with an immersion heater EHE

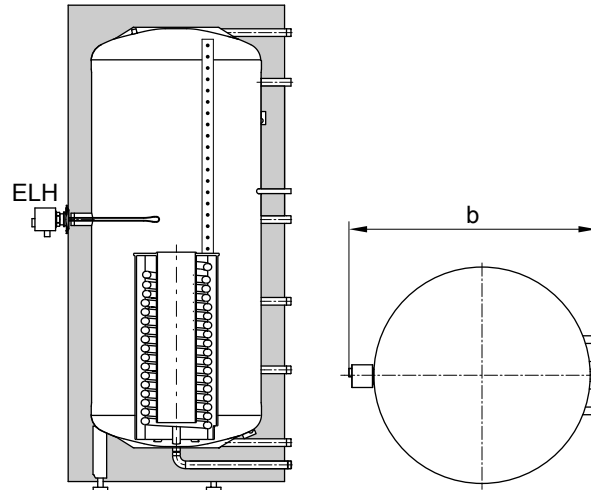
Vitocell		100-E	140-E		160-E	
Cylinder content	l	200	750	950	750	950
Content to be heated with an immersion heater	l	163	375	431	375	431
<b>Dimensions</b>						
Width b (with immersion heater EHE)	mm	773	1180	1180	1180	1180
<b>Minimum wall clearance</b>						
for the installation of the immersion heater EHE						
	2/4/6 kW	mm	650	650	650	650
	4/8/12 kW	mm	—	950	950	950
<b>Weight</b>						
Vitocell		kg	80	177	199	183
Immersion heater EHE	2/4/6 kW	kg	2	2	2	2
	4/8/12 kW	kg	—	3	3	3

**Accessories Vitocell 100-E, 140-E and 160-E (cont.)**



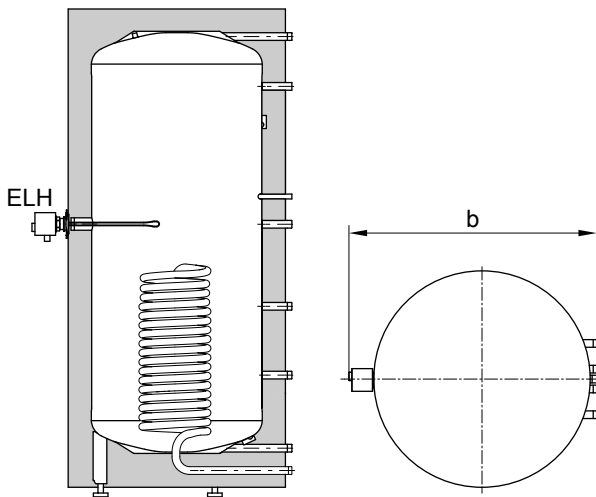
**Vitocell 100-E (type SVW) with immersion heater EHE**

b = Width incl. immersion heater EHE



**Vitocell 160-E with immersion heater EHE**

b = Width incl. immersion heater EHE



**Vitocell 140-E with immersion heater EHE**

b = Width incl. immersion heater EHE

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Subject to technical modifications.

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