

Datasheet

Part numbers and prices: see pricelist

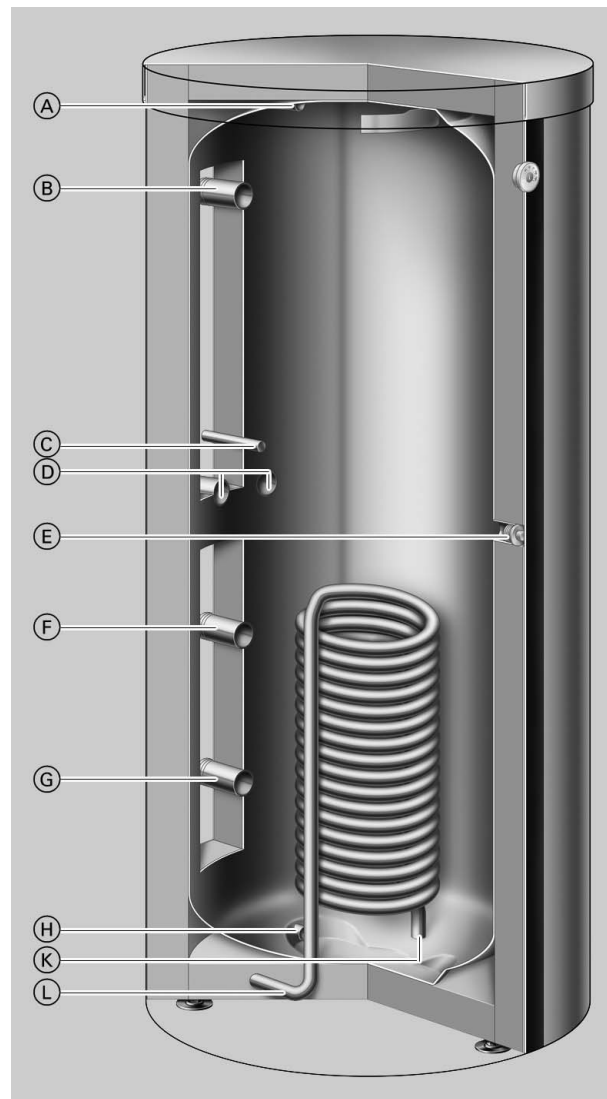
**VITOCELL 100-E** Type SVWFor storing heating water in conjunction with heat pumps.
Version to DIN 4753.**VITOCELL 100-E** Type SVPFor storing heating water in conjunction with solar heating systems, heat pumps and solid fuel boilers.
Version to DIN 4753.**VITOCELL 140-E** Type SEIFor storing heating water in conjunction with solar heating systems, heat pumps and solid fuel boilers. With integral internal indirect coil for connection to solar collectors.
Version to DIN 4753.**VITOCELL 160-E** Type SESFor storing heating water in conjunction with solar heating systems, heat pumps and solid fuel boilers. With internal indirect coil for the connection to solar collectors plus stratification primary facility.
Version to DIN 4753.

Vitocell 100-E – Benefits at a glance

- Optional electric booster heater for integration.
- Versatile applications in heating systems with two or more heat sources and several consumers, enabled by several flow and return connectors, plus three additional connectors for test ports. Particularly suitable in conjunction with solar heating systems, heat pumps and solid fuel boilers.
- With 200 litre capacity specially as accessory heat pump heating systems.
- Economical operation of solar heating systems, heat pumps or solid fuel boilers, independent of the actual heat demand, excess heat is stored in a buffer.
- 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 for integration (200 litre capacity).

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
- Improvement of the 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 for integration.



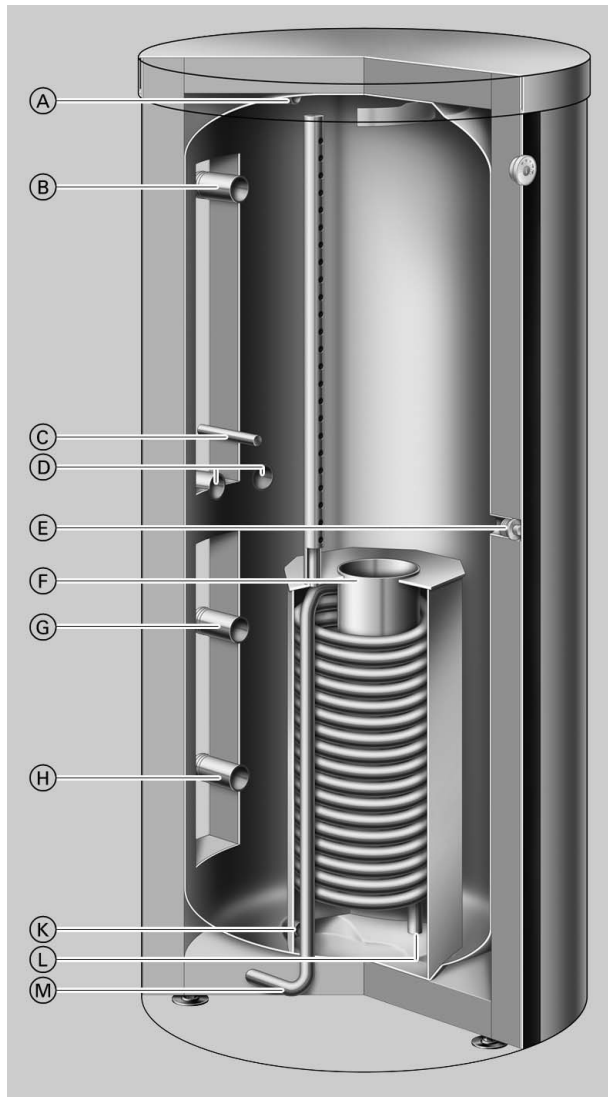
Vitocell 140-E (type SEI) – multi-mode heating water buffer cylinder

- Ⓐ Heating water flow 1 / air vent valve
- Ⓑ Heating water flow 2
- Ⓒ Sensor well temperature sensor/controller
- Ⓓ Heating water return 1 / heating water flow 3
- Ⓔ Electric 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 heating system drain
- Ⓛ Heating water flow / Solar heating system air vent valve



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

- Ⓐ Heating water flow 1 / air vent valve
- Ⓑ Heating water flow 2
- Ⓒ Sensor well temperature sensor/controller
- Ⓓ Heating water return 1 / heating water flow 3
- Ⓔ Electric immersion heater EHE
- Ⓕ Stratification primary system
- Ⓖ Heating water return 2
- Ⓗ Heating water return 3
- Ⓚ Drain / heating water return
- Ⓛ Heating water return / Solar heating system drain
- Ⓜ Heating water flow / Solar heating system air vent valve

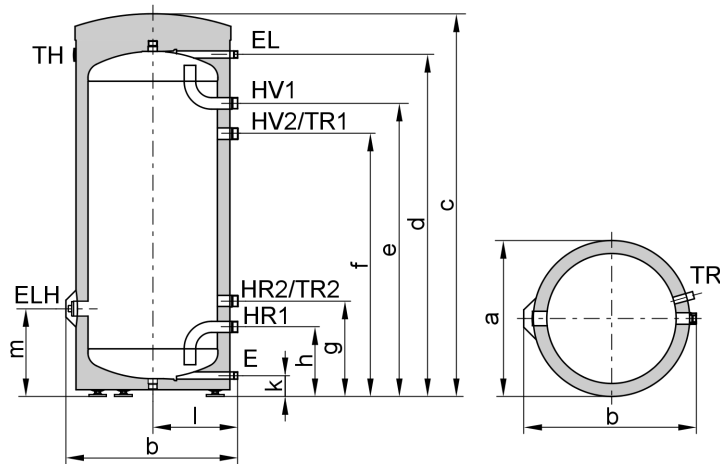
Specification Vitocell 100-E (type SVW)

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

Suitable for the following systems:

- Heating water flow temperature up to 110 °C
- primary operating pressure up to 3 bar

Cylinder capacity	I	200
Dimensions		
Length (∅)	a	mm 581
Width	b	mm 640
Height	c	mm 1409
Height when tilted		mm 1460
Weight (incl. thermal insulation)	kg	80
Connections		
Heating water flow and return	R	1¼"
Drain/ventilation valve	R	¾"
Standby heat loss q_{BS} at 45 K temperature differential (product-specific parameter for calculating the system expenditure of energy value to EnEV or DIN 4701-10)	kWh/24 h	1.70



Vitocell 100-E (type SVW, 200 litre)

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

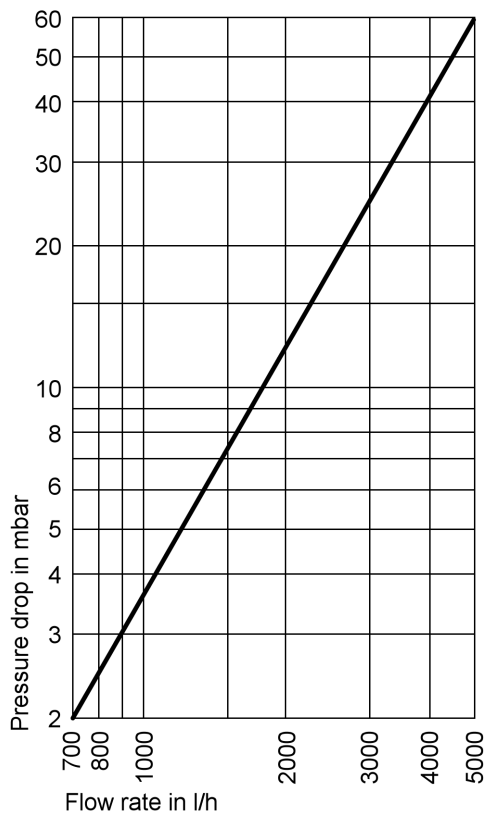
HV Heating water flow
 TH Thermometer
 TR Sensor well for cylinder temperature sensor or control thermostat

Dimensions Vitocell 100-E

Cylinder capacity	I	200
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 capacity

Heating water buffer cylinder, made from steel.

- 2 welded-in sensor wells
- 1 Thermometer

- Threaded adjustable feet
 - Fitted thermal insulation made from rigid PU foam
- Colour of the epoxy-coated sheet steel casing: Vitosilver.

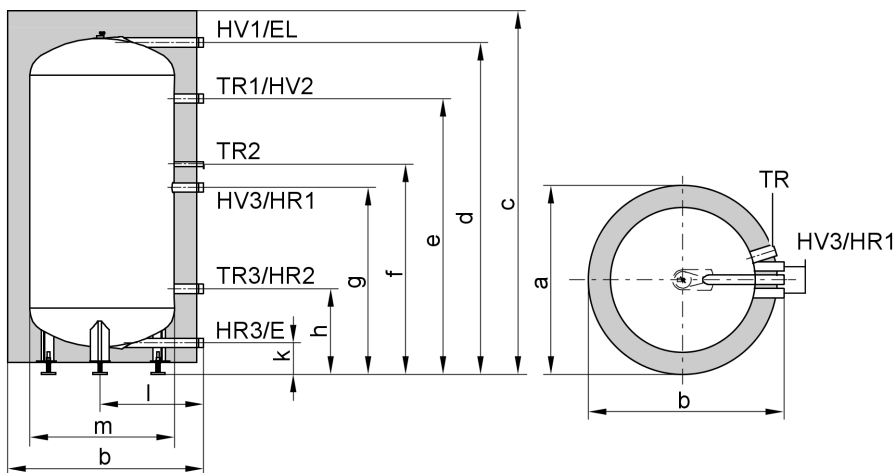
Specification Vitocell 100-E (type SVP)

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
- primary operating pressure up to 3 bar

Cylinder capacity	I	400	750	1000	
Dimensions					
Length (∅)					
– incl. thermal insulation	a	mm	850	960	1060
– excl. thermal insulation		mm	650	750	850
Width	b	mm	888	1020	1120
Height					
– incl. thermal insulation	c	mm	1630	2100	2100
– excl. thermal insulation		mm	1506	2042	2021
Height when tilted		mm	1550	2100	2100
Minimum installation height		mm	—	2190	2190
Weight					
– incl. thermal insulation		kg	122	153	176
– excl. thermal insulation		kg	105	128	146
Connections					
Heating water flow and return	R		1¼"	2"	2"
Standby heat loss q_{BS} at 45 K temperature differential (standard parameter)	kWh/24 h		2.48	3.15	3.53



Vitocell 100-E (type SVP, 400 litre)

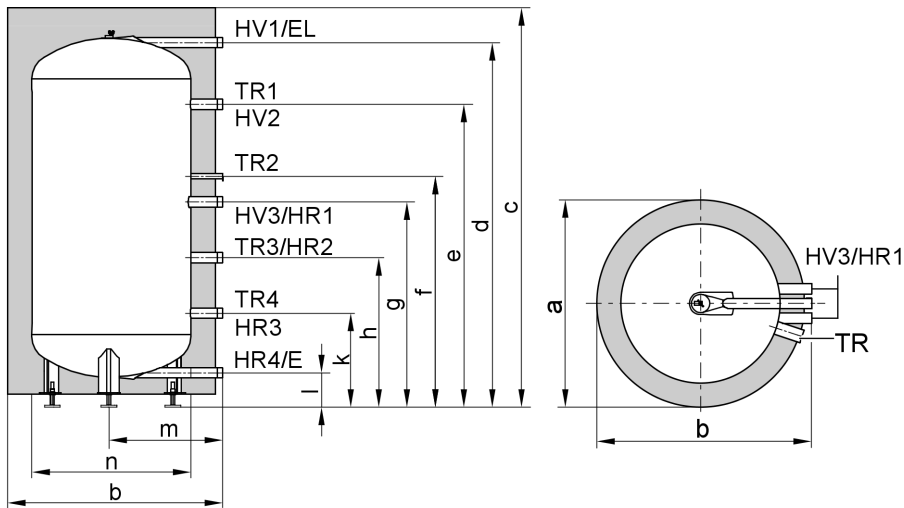
E Drain
EL Air vent valve
HR Heating water return

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

Dimensions Vitocell 100-E

Cylinder capacity	I	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

Specification Vitocell 100-E (type SVP) (cont.)



Vitocell 100-E (type SVP, 750 and 1000 litre)

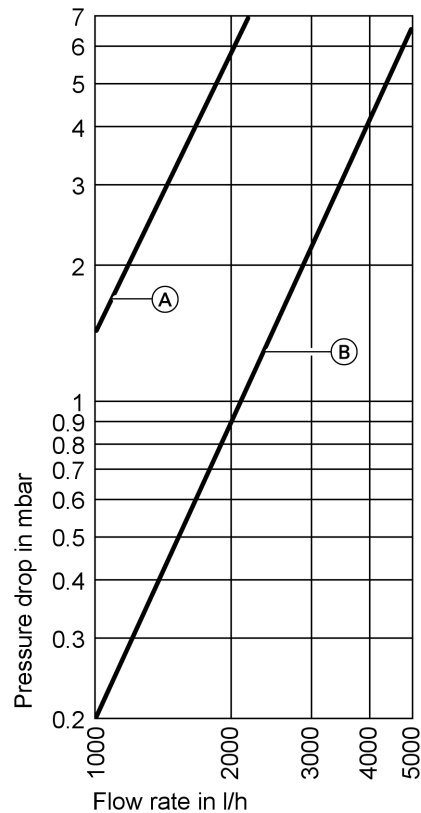
E Drain
EL Air vent valve
HR Heating water return

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

Dimensions Vitocell 100-E

Cylinder capacity			750	1000
Length (∅)	a	mm	960	1060
Width	b	mm	1020	1120
Height	c	mm	2100	2100
	d	mm	2012	1990
	e	mm	1744	1696
	f	mm	1181	1148
	g	mm	1082	1048
	h	mm	745	722
	k	mm	409	397
	l	mm	139	103
	m	mm	515	565
∅ excl. thermal insulation	n	mm	∅ 750	∅ 850

Pressure drop on the heating water side



Vitocell 100-E (type SVP)

- Ⓐ 400 litre capacity
- Ⓑ 750 and 1000 litre capacity

Delivered condition

Vitocell 100-E, type SVP

400, 750 and 1000 l

Heating water buffer cylinder, made from steel.

- Welded sensor wells
 - 3 sensor wells for 400 l
 - 4 sensor wells for 750 and 1000 l
- 1 Thermometer

- Adjustable feet
 - Thermal insulation made from flexible polyurethane foam (packed separately)
- The colour of the plastic-coated thermal insulation is Vitosilver.

Specification Vitocell 140-E/160-E (type SEI/SES)

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

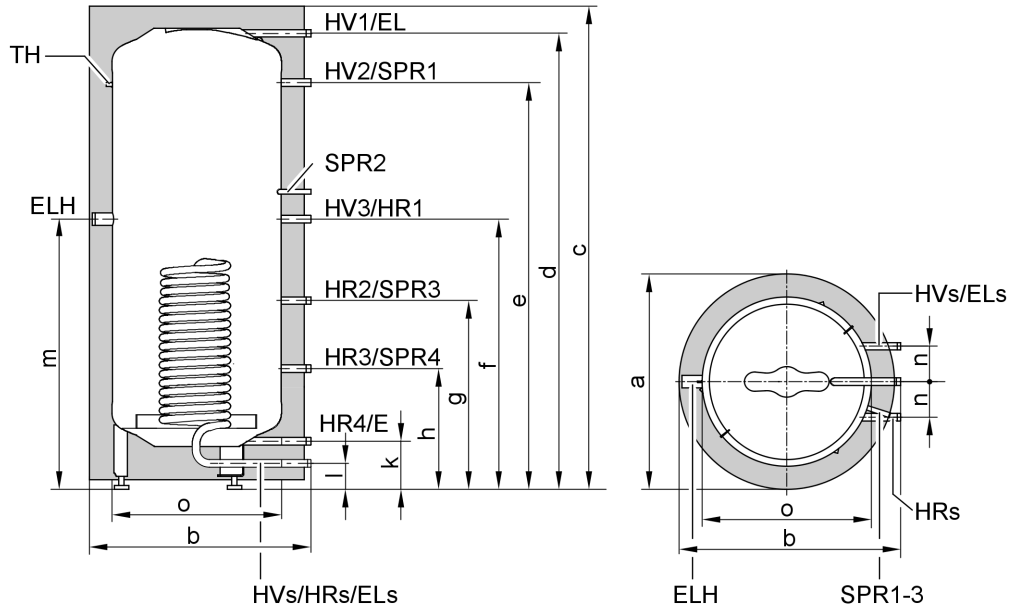
Suitable for the following systems:

- 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
- Solar side operating pressure up to 10 bar

		Vitocell 140-E		Vitocell 160-E	
Cylinder capacity		750	1000	750	1000
Solar indirect coil content		12	14	12	14
Dimensions					
Length (∅)					
– incl. thermal insulation	a mm	960	1060	960	1060
– excl. thermal insulation	mm	750	850	750	850
Width	b mm	1015	1115	1015	1115
Height					
– incl. thermal insulation	c mm	2100	2100	2100	2100
– excl. thermal insulation	mm	2042	2051	2042	2051
Height when tilted					
– excl. thermal insulation	mm	2060	2100	2060	2100
Minimum installation height	mm	2190	2190	2190	2190
Weight					
– incl. thermal insulation	kg	179	208	187	218
– excl. thermal insulation	kg	154	178	162	188
Connections					
Heating water flow and return	R	2"	2"	2"	2"
Heating water flow and return (solar)	G	1"	1"	1"	1"
Solar heat exchanger					
Heating surface	m ²	1.8	2.1	1.8	2.1
Max. connectable aperture surface					
Vitosol	m ²	12	20	12	20
Standby heat loss q_{BS} (standard parameter)					
	kWh/24 h	1.61	1.72	1.61	1.72
Standby capacity V_{aux}					
	l	374	482	374	482
Solar capacity V_{sol}					
	l	376	518	376	518

Specification Vitocell 140-E/160-E (type SEI/SES) (cont.)



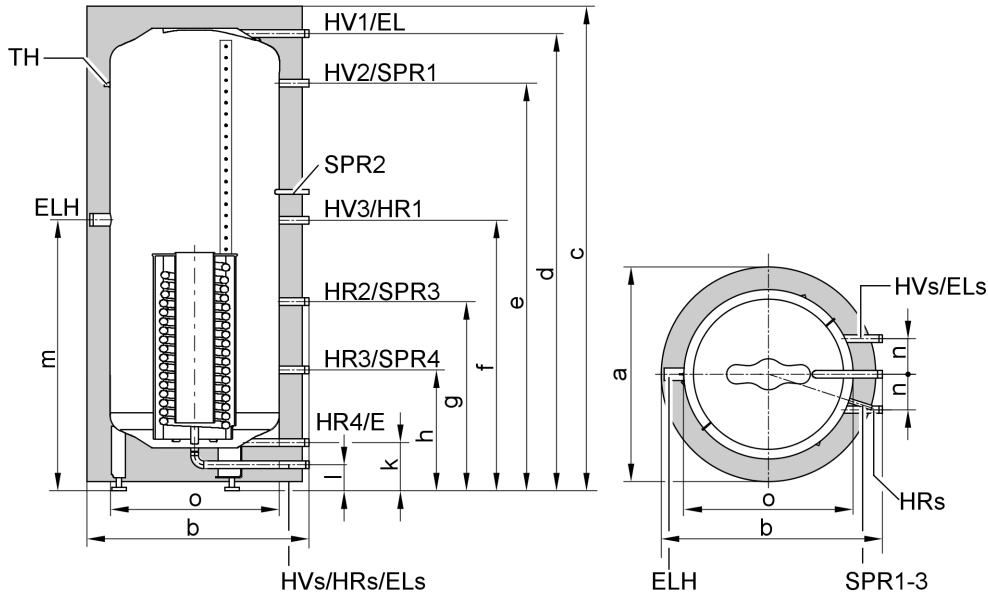
Vitocell 140-E

E Drain
 EL Air vent valve
 EL_s Solar indirect coil ventilation
 ELH Immersion heater
 (Fem. connection Rp 1½")
 HR Heating water return

HR_s Heating water return, solar heating system
 HV Heating water flow
 HV_s Heating water flow, solar heating system
 TH Thermometer
 SPR Temperature sensor or thermostat

Cylinder capacity		750	1000
Length (∅)	a mm	960	1060
Width	b mm	1015	1115
Height	c mm	2100	2100
	d mm	2012	2022
	e mm	1744	1728
	f mm	1082	1080
	g mm	745	754
	h mm	409	429
	k mm	140	136
	l mm	75	75
	m mm	1106	1142
	n mm	157	185
Length without thermal insulation	o mm	750	850

Specification Vitocell 140-E/160-E (type SEI/SES) (cont.)



Vitocell 160-E

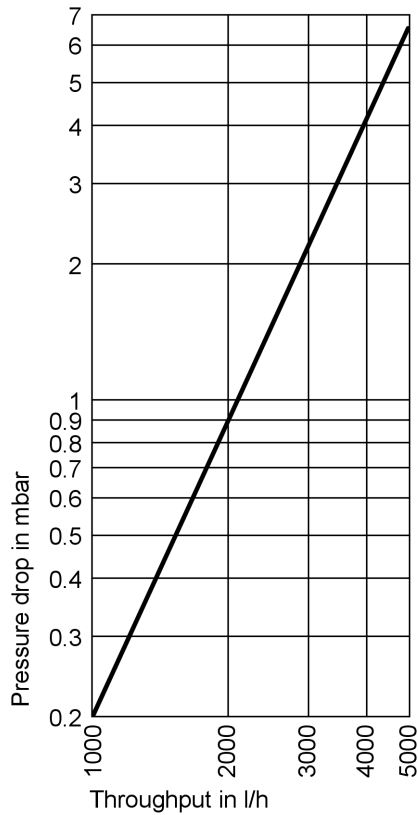
E Drain
 EL Air vent valve
 EL_s Solar indirect coil ventilation
 ELH Immersion heater
 (Fem. connection Rp 1½")
 HR Heating water return

HR_s Heating water return, solar heating system
 HV Heating water flow
 HV_s Heating water flow, solar heating system
 TH Thermometer
 SPR Temperature sensor or thermostat

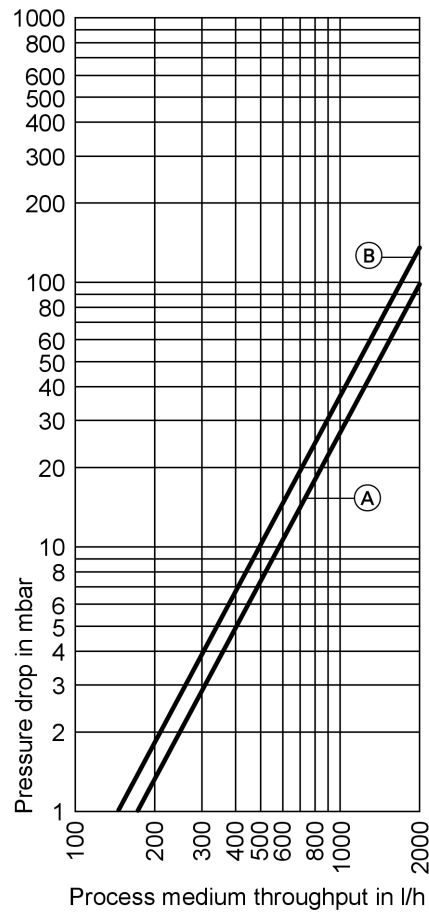
Cylinder capacity		750	1000
Length (∅)	a mm	960	1060
Width	b mm	1015	1115
Height	c mm	2100	2100
	d mm	2012	2022
	e mm	1744	1728
	f mm	1082	1080
	g mm	745	754
	h mm	409	429
	k mm	140	136
	l mm	75	75
	m mm	1106	1142
	n mm	157	185
Length without thermal insulation	o mm	750	850

Specification Vitocell 140-E/160-E (type SEI/SES) (cont.)

Pressure drop



Pressure drop on the heating water side



Pressure drop on the solar side

- (A) Cylinder capacity 750 l
- (B) Cylinder capacity 1000 l

Delivered condition

Vitocell 140-E, type SEI

750 and 1000 litre

Heating water buffer cylinder, made from steel.

- 4 welded-in sensor wells
- 1 Thermometer

- 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 SES

750 and 1000 litre

Heating water buffer cylinder, made from steel.

- 4 welded-in sensor wells
- 1 Thermometer

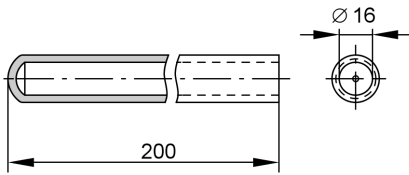
- Adjustable feet
- Air vent valve for the indirect solar coils
- Thermal insulation made from polyester fleece (packed separately)

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

Specification sensor well

Sensor well for all types (200, 400, 750 and 1000 litre)

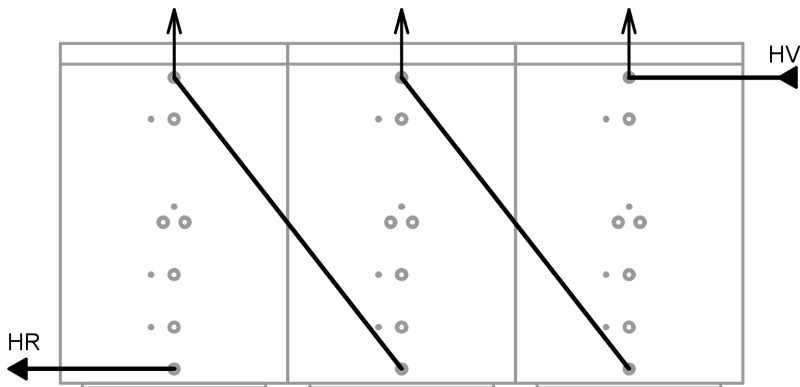
The sensor wells are welded into the heating water buffer cylinder.



Design information

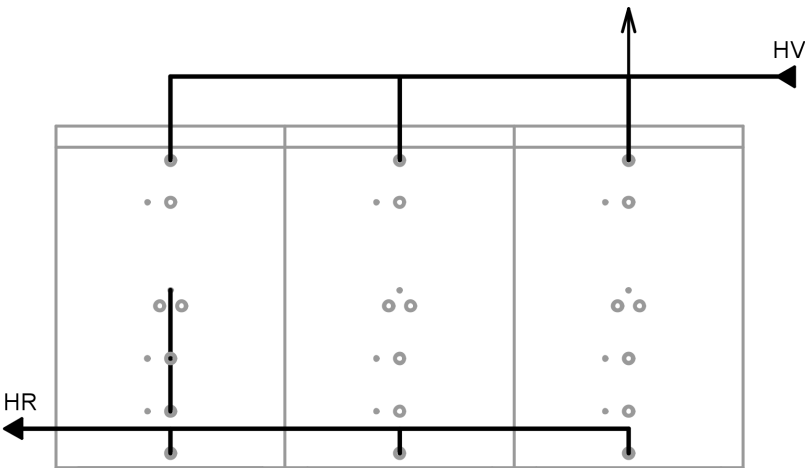
Cylinder banks

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 site (shown: type SVP 750/1000 litre).



Connection in series

HR Heating water return
HV Heating water flow



Parallel boiler control

HR Heating water return
HV Heating water flow

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Design information (cont.)

Immersion heater

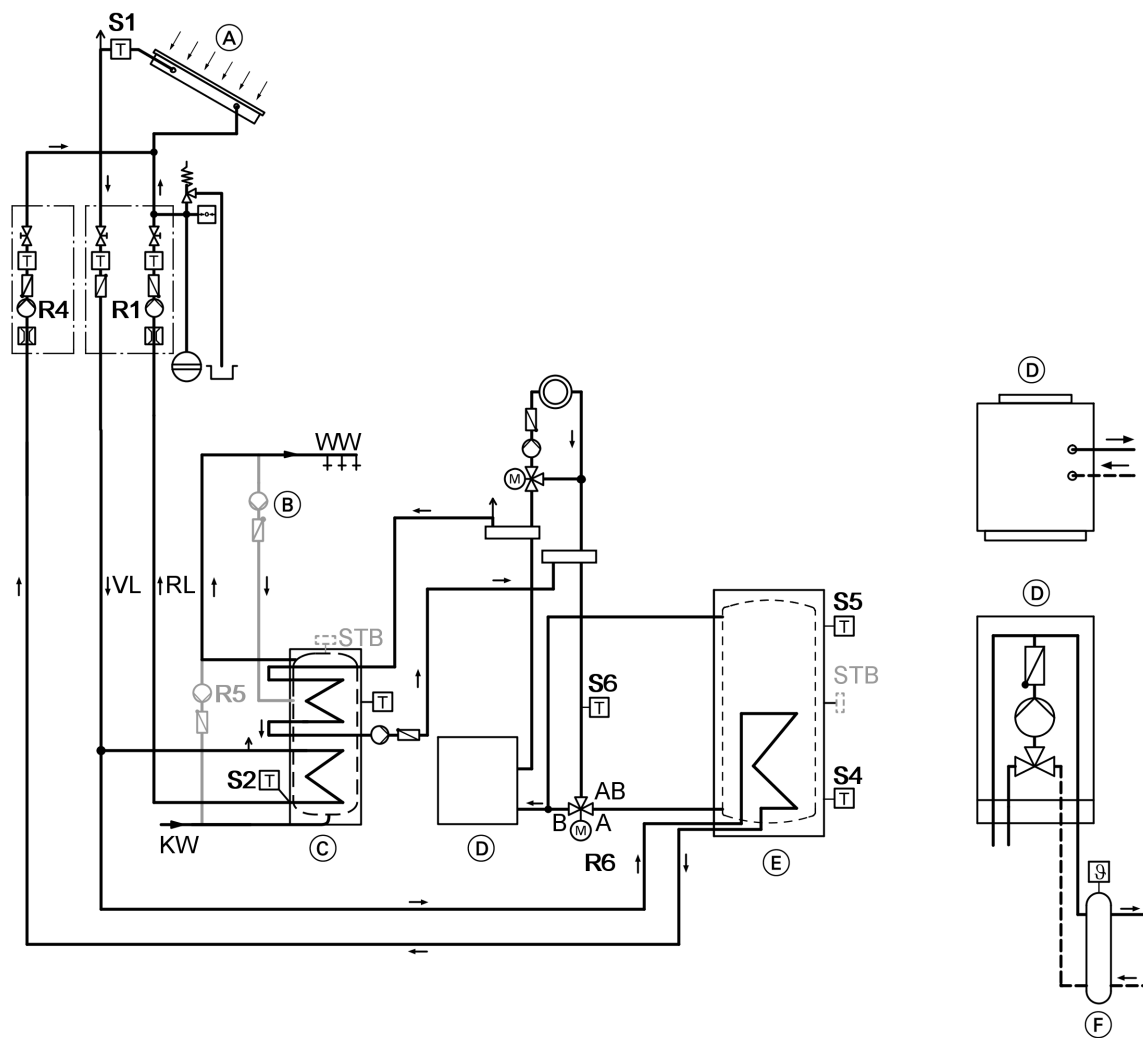
When using third party products, the threaded heater element must have an unheated length of at least 100 mm.

Technical guide

Further design and sizing information see technical guides:

- Vitocal
- Vitosol
- Vitoligno/Vitolig

Installation example Vitocell 140-E/160-E



- KW Cold water
- WW DHW
- RL Return
- VL Flow
- (A) Solar collector
- (B) DHW circulation pump
- (C) DHW cylinder
- (D) ■ Oil/gas fired boiler
- Wall mounted oil/gas fired boiler
- (E) Heating water buffer cylinder (Vitocell 140-E/160-E)

- (F) Low loss header
- R1 Solar circuit pump
- R4 Solar circuit pump as buffer cylinder primary pump
- R5 Stratification pump
- R6 3-way diverter valve
- S1 Collector temperature sensor
- S2 Cylinder temperature sensor
- S4 Temperature sensor (buffer cylinder), heating up
- S5 Temperature sensor (buffer cylinder), discharge
- S6 Return temperature sensor (heating circuit)

Accessories Vitocell 100-E (type SVW), 140-E and 160-E

Electric immersion heater EHE

Only for the following cylinders:

- Vitocell 100-E, type SVW (200 l capacity)
- Vitocell 140-E, type SEI (750 and 1000 l capacity)
- Vitocell 160-E, type SES (750 and 1000 l capacity)

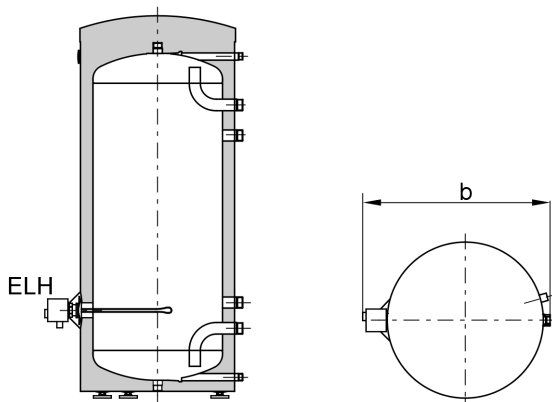
Current type and rated voltage 3/N/PE 400 V/50 Hz

Protection: IP 54

Power range		max. 6 kW			max. 12 W		
		2	4	6	4	8	12
Rated power consumption in standard operation/ during quick heat-up	kW						
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	10.0	5.0	3.4	5.0	2.5
	1000 l	h	13.2	6.6	4.4	6.6	3.3

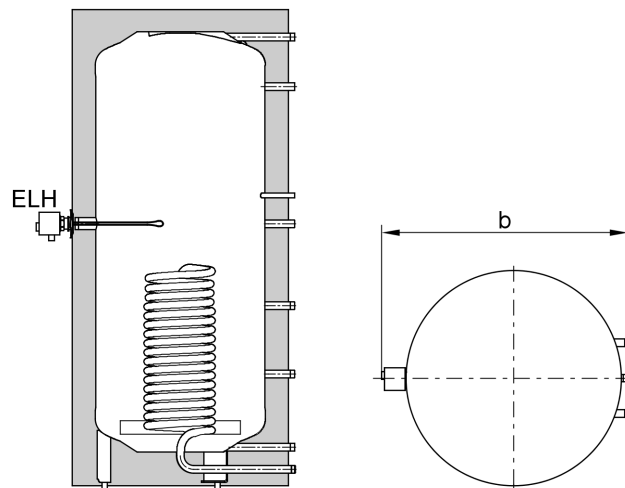
Heating water buffer cylinder with an electric immersion heater EHE

Vitocell		100-E	140-E		160-E	
Cylinder capacity	l	200	750	1000	750	1000
Available capacity to be heated with an immersion heater	l	163	347	455	347	455
Dimensions						
Width b (with electric immersion heater EHE)	mm	773	1139	1239	1116	1239
Minimum clearance for the installation of the electric immersion heater EHE						
	2/4/6 kW	mm	650	650	650	650
	4/8/12 kW	mm	—	950	950	950
Weight						
Vitocell	kg	80	179	208	187	218
Electric immersion heater EHE	2/4/6 kW	kg	2	2	2	2
	4/8/12 kW	kg	—	3	3	3



Vitocell 100-E (type SVW, 200 litre) with electric immersion heater EHE

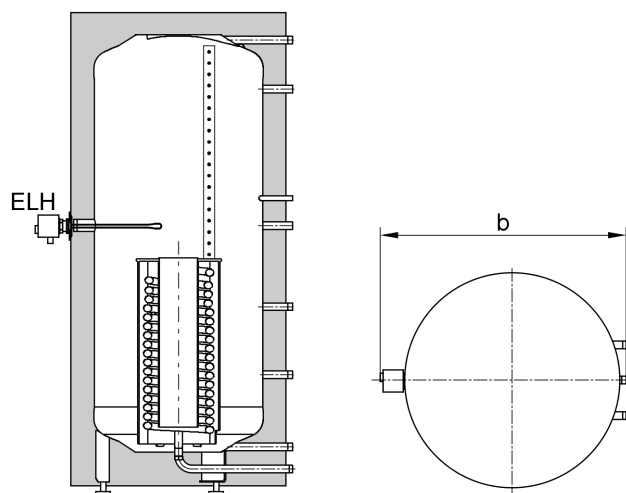
b = Width incl. electric immersion heater EHE



Vitocell 140-E with electric immersion heater EHE

b = Width incl. electric immersion heater EHE

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



Vitocell 160-E with electric immersion heater EHE

b = Width incl. electric immersion heater EHE

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Subject to technical modifications.

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