

# Technical Data Manual

Model Nos. and pricing: see Price List



## Vitocell 300-B, EVBB

Dual coil, indirect-fired domestic hot water (DHW) storage tank  
79 USG (300 L) capacity

## Vitocell 300-B, EVBB

Dual coil, indirect-fired domestic hot water (DHW) storage tank  
119 USG (450 L) capacity

## VITOCCELL® 300-B



Product may not be exactly as shown

Vertical indirect-fired domestic hot water (DHW) storage tank of high-grade stainless steel with dual coils.

One heat exchanger coil facilitates heat transfer from the solar collectors to domestic hot water, a second heat exchanger coil allows reheating of the water content by the hot water heating boiler.



**CAUTION**

This tank version is not suitable for steam heating applications.



## Benefits

Domestic hot water (DHW) storage tank of high-grade stainless steel highly effective all-around thermal insulation.

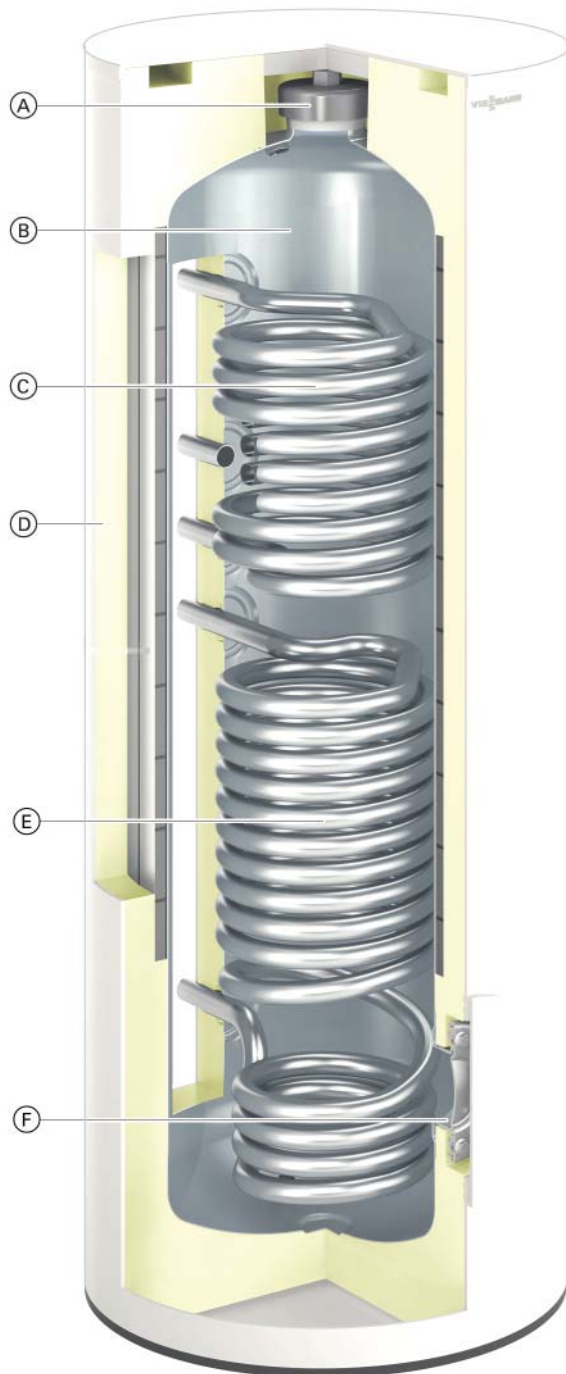
Fully hygienic, efficient and economical domestic hot water production by solar collectors and a hot water heating boiler. Heat from the solar collectors is transferred to the domestic hot water via the lower tank coil.

### Benefits at a glance:

- Corrosion-resistant tank of high-grade stainless steel offers a long service life.
- Fully hygienic due to high quality homogeneous stainless steel surfaces.
- The high-alloy material is immune to cracking or peeling. The tank stays hygienic and requires only minimum service.
- Does not require a consumable anode for corrosion protection.
- The entire water content is heated by a 1 $\frac{3}{8}$  in. (35 mm) diameter (OD) stainless steel heat exchanger surface which extends to the bottom of the tank.
- Large heat exchanger surfaces allow fast and even heating of the entire water content, guaranteeing a high level of domestic hot water comfort.
- Standby losses minimized by highly effective HCFC-free insulation.  
79 USG (300 L) version comes equipped with hard PUR foam.  
119 USG (450 L) version comes equipped with removable soft PET insulation for easier handling.
- Certified to CSA Low Lead Content Certification Program; including US Safe Drinking Water Act, NSF/ANSI 372 as well as other applicable US State requirements.

**Cross Section**

Vitocell 300-B, EVBB 79 USG (300 L)



**Legend**

- Ⓐ Upper inspection and cleaning opening
- Ⓑ Stainless steel cylinder
- Ⓒ Upper indirect coil – DHW is reheated via the indirect coil
- Ⓓ Highly effective all-round thermal insulation
- Ⓔ Lower indirect coil – connection for solar collectors
- Ⓕ Front inspection and cleaning opening

## Technical Data Vitocell 300-B, EVBB-79

For DHW production in conjunction with solar systems, heating boilers and heating systems, without low limit for dual coil operation.

Suitable for heating systems with:

- max. working pressure on heat exchanger side up to 220 psig at 392°F (200°C)
- max. working pressure on DHW water side of up to 150 psig at 210°F (99°C)
- max. testing pressure on DHW side of 300 psig

Model		EVBB				
Storage capacity		79 (300)				
Coil		UPPER *1				
Supply flow rate for the recovery rates stated		GPM (m <sup>3</sup> /h)	22 (5.0)	13.2 (3.0)	8.8 (2.0)	4.4 (1.0)
Recovery rates*3 with a DHW temperature increase from 50 to 113°F (10 to 45°C) and a supply water temperature of.....	194°F (90°C)	MBH (kW)	149 (44)	145 (43)	137 (40)	121 (36)
		GPH (L/h)	283 (1071)	279 (1058)	262 (991)	231 (876)
	176°F (80°C)	MBH (kW)	124 (36)	119 (35)	115 (34)	102 (30)
		GPH (L/h)	235 (891)	227 (861)	218 (826)	193 (733)
	158°F (70°C)	MBH (kW)	98 (29)	95 (28)	91 (27)	82 (24)
GPH (L/h)		187 (707)	185 (701)	174 (658)	155 (588)	
140°F (60°C)	MBH (kW)	72 (21)	68 (20)	67 (20)	61 (18)	
	GPH (L/h)	136 (516)	135 (513)	128 (484)	115 (436)	
122°F (50°C)	MBH (kW)	42 (12)	40 (12)	40 (12)	37 (11)	
	GPH (L/h)	80 (302)	78 (295)	76 (286)	69 (263)	
Recovery rates*3 with a DHW temperature increase from 50 to 140°F (10 to 60°C) and a supply water temperature of.....	194°F (90°C)	MBH (kW)	128 (38)	122 (36)	120 (35)	107 (31)
		GPH (L/h)	171 (648)	165 (628)	159 (603)	142 (540)
	176°F (80°C)	MBH (kW)	101 (30)	98 (29)	94 (28)	85 (25)
		GPH (L/h)	134 (509)	130 (494)	126 (477)	113 (430)
	158°F (70°C)	MBH (kW)	71 (21)	68 (20)	67 (20)	61 (18)
GPH (L/h)		95 (360)	92 (349)	89 (338)	82 (308)	

Model		EVBB				
Storage capacity		79 (300)				
Coil		LOWER *2				
Supply flow rate for the recovery rates stated		GPM (m <sup>3</sup> /h)	22 (5.0)	13.2 (3.0)	8.8 (2.0)	4.4 (1.0)
Recovery rates*3 with a DHW temperature increase from 50 to 113°F (10 to 45°C) and a supply water temperature of.....	194°F (90°C)	MBH (kW)	219 (64)	208 (61)	195 (57)	163 (48)
		GPH (L/h)	418 (1582)	396 (1501)	372(1409)	311 (1178)
	176°F (80°C)	MBH (kW)	183 (54)	174 (51)	163 (48)	137 (40)
		GPH (L/h)	348 (1317)	330 (1252)	311 (1178)	262 (991)
	158°F (70°C)	MBH (kW)	145 (43)	139 (41)	131 (38)	111 (32)
GPH (L/h)		277 (1047)	263 (998)	249 (942)	211 (799)	
140°F (60°C)	MBH (kW)	105 (31)	102 (30)	97 (28)	82 (24)	
	GPH (L/h)	202 (766)	193 (733)	184 (696)	158 (599)	
122°F (50°C)	MBH (kW)	61 (18)	61 (18)	58 (17)	51 (15)	
	GPH (L/h)	119 (449)	114 (434)	110 (416)	97 (369)	
Recovery rates*3 with a DHW temperature increase from 50 to 140°F (10 to 60°C) and a supply water temperature of.....	194°F (90°C)	MBH (kW)	186 (54)	177 (52)	167 (49)	143 (42)
		GPH (L/h)	247 (937)	236 (894)	223 (845)	190 (720)
	176°F (80°C)	MBH (kW)	146 (43)	139 (41)	133 (39)	115 (34)
		GPH (L/h)	195 (737)	186 (706)	177 (670)	153 (578)
	158°F (70°C)	MBH (kW)	103 (30)	98 (29)	94 (28)	83 (24)
GPH (L/h)		137 (520)	132 (501)	126 (478)	111 (420)	

\*1 The upper coil is designated for connection to a hot water heating boiler or a heat pump.

\*2 The lower coil is designated for connection to solar collector panels or heat pumps. The lower coil has been tested to AHRI Standard IWH-TS-1 performance data can be found in the Technical Data Manual for the Vitocell 300-V EVIB-300 single coil tank.

\*3 When planning for the recovery rate as stated or calculated, allow for the corresponding circulation pump. The stated recovery rate is only achieved when the rated output of the boiler is equal to or greater than that stated under "Recovery rate".

**Technical Data Vitocell 300-B, EVBB-79** *(continued)*

Model	EVBB	
<b>AHRI Certified Performance Rating (Coils in Parallel) *4</b>		
Heating Input	MBH (kW)	272 (80)
Boiler Supply Water Temperature	°F (°C)	180 (82)
Heating Supply Flow Rate (each coil)	GPM (LPM)	14 (53)
First Draw	Gal (L)	67 (253)
First Hour Rating	GPH (LPH)	496 (1877)
Continuous Draw Rating	GPH (LPH)	429 (1624)
Standby Heat Loss	°F/hr (°C/hr)	0.6 (0.3)
<b>Tested to AHRI Performance Rating (Coils in Series) *4</b>		
Heating Input	MBH (kW)	249 (73)
Boiler Supply Water Temperature	°F (°C)	180 (82)
Heating Supply Flow Rate	GPM (LPM)	14 (53)
First Draw	Gal (L)	67 (253)
First Hour Rating	GPH (LPH)	460 (1741)
Continuous Draw Rating	GPH (LPH)	393 (1488)
Standby Heat Loss	°F/hr (°C/hr)	0.6 (0.3)
<b>Insulation</b>		
		PUR Foam
<b>Dimensions *5</b>		
Overall length	in. (mm)	26¼ (668)
Overall width	in. (mm)	28 (706)
Overall height *6	in. (mm)	68½ (1740)
Tilt height	in. (mm)	72 (1825)
<b>Weight</b>		
Tank with insulation	lbs (kg)	249 (113)
Heat exchanger coil capacity	USG (L)	2.9 (11)
Heat exchanger surface area	ft. <sup>2</sup> (m <sup>2</sup> )	9.7 (0.9)/16 (1.5)
<b>Upper/Lower Connections</b>		
Coils	∅ in. (male NPT thread)	1
Domestic cold/hot water	∅ in. (male NPT thread)	1
Recirculation	∅ in. (male NPT thread)	1

\*4 AHRI Standard IWH-TS-1 based on domestic water temperature rise of 77°F (42.7°C).

\*5 For additional dimensions, see illustrations and tables on page 9.

\*6 Adjustable feet can be adjusted up to 2 in. (50 mm).

For information regarding other Viessmann System Technology componentry, please reference documentation of the respective product.

## Technical Data Vitocell 300-B, EVBB-119

For DHW production in conjunction with solar systems, heating boilers and heating systems, without low limit for dual coil operation.

Suitable for heating systems with:

- max. working pressure on heat exchanger side up to 220 psig at 392°F (200°C)
- max. working pressure on DHW water side of up to 150 psig at 210°F (99°C)
- max. testing pressure on DHW side of 300 psig

Model		EVBB				
Storage capacity		119 (450)				
Coil		UPPER*1				
Supply flow rate for the recovery rates stated		GPM (m <sup>3</sup> /h)				
Recovery rates*3 with a DHW temperature increase from 50 to 113°F (10 to 45°C) and a supply water temperature of.....	194°F (90°C)	MBH (kW) GPH (L/h)	22 (5.0) 191 (56) 362 (1371)	13.2 (3.0) 182 (53) 346 (1311)	8.8 (2.0) 172 (50) 328 (1241)	4.4 (1.0) 145 (43) 280 (1061)
	176°F (80°C)	MBH (kW) GPH (L/h)	156 (46) 301 (1141)	152 (44) 288 (1092)	143 (42) 274 (1036)	124 (36) 235 (891)
	158°F (70°C)	MBH (kW) GPH (L/h)	126 (37) 239 (907)	121 (35) 230 (870)	115 (34) 218 (827)	99 (29) 189 (717)
	140°F (60°C)	MBH (kW) GPH (L/h)	91 (27) 175 (663)	89 (26) 169 (638)	85 (25) 161 (610)	74 (22) 141 (535)
	122°F (50°C)	MBH (kW) GPH (L/h)	54 (16) 102 (388)	52 (15) 100 (377)	50 (15) 96 (363)	45 (13) 86 (327)
Recovery rates*3 with a DHW temperature increase from 50 to 140°F (10 to 60°C) and a supply water temperature of.....	194°F (90°C)	MBH (kW) GPH (L/h)	160 (47) 214 (811)	154 (45) 206 (779)	147 (43) 196 (742)	128 (38) 171 (647)
	176°F (80°C)	MBH (kW) GPH (L/h)	126 (37) 168 (638)	122 (36) 162 (615)	116 (34) 155 (587)	102 (30) 136 (517)
	158°F (70°C)	MBH (kW) GPH (L/h)	88 (26) 118 (449)	86 (25) 115 (435)	83 (24) 110 (419)	74 (22) 99 (373)

Model		EVBB				
Storage capacity		119 (450)				
Coil		LOWER*2				
Supply flow rate for the recovery rates stated		GPM (m <sup>3</sup> /h)				
Recovery rates*3 with a DHW temperature increase from 50 to 113°F (10 to 45°C) and a supply water temperature of.....	194°F (90°C)	MBH (kW) GPH (L/h)	22 (5.0) 242 (71) 463 (1756)	13.2 (3.0) 230 (67) 438 (1658)	8.8 (2.0) 214 (63) 408 (1545)	4.4 (1.0) 176 (52) 335 (1269)
	176°F (80°C)	MBH (kW) GPH (L/h)	201 (59) 386 (1463)	192 (56) 365 (1383)	179 (53) 341 (1292)	148 (43) 282 (1068)
	158°F (70°C)	MBH (kW) GPH (L/h)	160 (47) 307 (1163)	153 (45) 291 (1103)	143 (42) 273 (1034)	120 (35) 228 (864)
	140°F (60°C)	MBH (kW) GPH (L/h)	119 (35) 225 (852)	113 (33) 215 (812)	106 (31) 202 (766)	90 (26) 171 (649)
	122°F (50°C)	MBH (kW) GPH (L/h)	68 (20) 132 (501)	67 (20) 127 (482)	64 (19) 121 (459)	56 (16) 106 (402)
Recovery rates*3 with a DHW temperature increase from 50 to 140°F (10 to 60°C) and a supply water temperature of.....	194°F (90°C)	MBH (kW) GPH (L/h)	204 (60) 275 (1041)	195 (57) 261 (989)	184 (54) 245 (929)	154 (45) 206 (780)
	176°F (80°C)	MBH (kW) GPH (L/h)	163 (48) 216 (820)	155 (45) 207 (781)	145 (43) 195 (738)	124 (36) 166 (627)
	158°F (70°C)	MBH (kW) GPH (L/h)	115 (34) 152 (579)	110 (32) 147 (555)	105 (31) 139 (528)	91 (27) 121 (458)

\*1 The upper coil is designated for connection to a hot water heating boiler or a heat pump.

\*2 The lower coil is designated for connection to solar collector panels or heat pumps. The lower coil has been tested to AHRI Standard IWH-TS-1 and the performance data can be found in the Technical Data Manual for the Vitocell 300-V EVIB-119 single coil tank.

\*3 When planning for the recovery rate as stated or calculated, allow for the corresponding circulation pump. The stated recovery rate is only achieved when the rated output of the boiler is equal to or greater than that stated under "Recovery rate".

**Technical Data Vitocell 300-B, EVBB-119** *(continued)*

Model		EVBB
<b>AHRI Certified Performance Rating (Coils in Parallel) *4</b>		
Heating Input	MBH (kW)	327 (96)
Boiler Supply Water Temperature	°F (°C)	180 (82)
Heating Supply Flow Rate (each coil)	GPM (LPM)	14 (53)
First Draw	Gal (L)	97 (367)
First Hour Rating	GPH (LPH)	613 (2320)
Continuous Draw Rating	GPH (LPH)	516 (1953)
Standby Heat Loss	°F/hr (°C/hr)	0.5 (0.3)
<b>Tested to AHRI Performance Rating (Coils in Series) *4</b>		
Heating Input	MBH (kW)	295 (86)
Boiler Supply Water Temperature	°F (°C)	180 (82)
Heating Supply Flow Rate	GPM (LPM)	14 (53)
First Draw	Gal (L)	97 (367)
First Hour Rating	GPH (LPH)	558 (2112)
Continuous Draw Rating	GPH (LPH)	461 (1745)
Standby Heat Loss	°F/hr (°C/hr)	0.5 (0.3)
<b>Insulation</b>	USG (L)	Soft PET insulation
<b>Dimensions*5</b>		
Tank length without insulation	in. (mm)	23.9 (609.5)
Overall length with insulation	in. (mm)	32¾ (831)
Tank width without insulation	in. (mm)	32 (811)
Overall width with insulation	in. (mm)	35½ (904)
Tank height without insulation	in. (mm)	74½ (1895)
Overall height with insulation*6	in. (mm)	77(1960)
Tilt height without insulation	in. (mm)	78 (1978)
<b>Weight</b>		
Tank with insulation	lbs (kg)	259 (118)
<b>Heat exchanger coil capacity</b>	USG (L)	3.43 (13)
<b>Heat exchanger surface area</b>	ft.² (m²)	14.1 (1.3)/18.3 (1.7)
<b>Upper/Lower</b>		
<b>Connections</b>		
Coils	∅ in. (male NPT thread)	1
Domestic cold/hot water	∅ in. (male NPT thread)	1¼
Recirculation	∅ in. (male NPT thread)	1

\*4 AHRI Standard IWH-TS-1 based on domestic water temperature rise of 77°F (42.7°C).

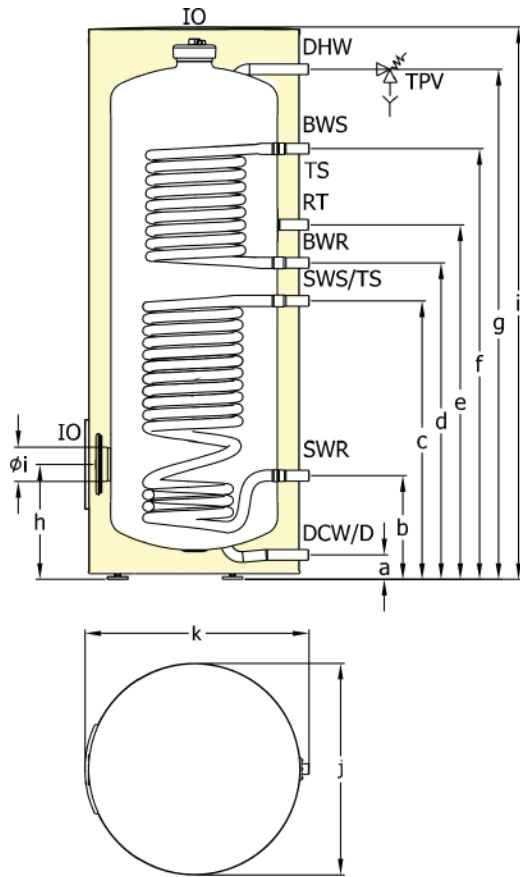
\*5 For additional dimensions, see illustrations and tables on page 10.

\*6 Adjustable feet can be adjusted up to 2 in. (50 mm).

For information regarding other Viessmann System Technology componentry, please reference documentation of the respective product.

**Tank Dimensions**

**79 USG (300 L) Tank**

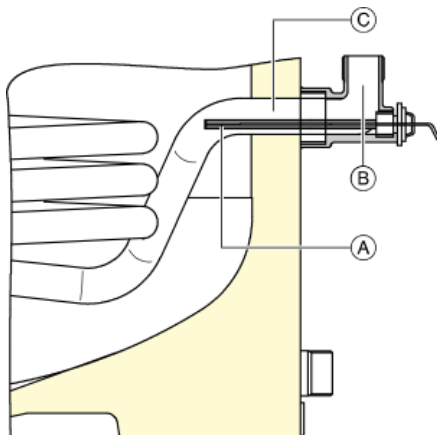


Dimensions		
Model		EVBB
Storage capacity	USG (L)	79 (300)
a	in. (mm)	3 (77)
b	in. (mm)	12 <sup>7</sup> / <sub>8</sub> (327)
c	in. (mm)	34 <sup>1</sup> / <sub>2</sub> (876)
d	in. (mm)	39 <sup>1</sup> / <sub>4</sub> (996)
e	in. (mm)	44 (1116)
f	in. (mm)	53 <sup>3</sup> / <sub>8</sub> (1356)
g	in. (mm)	63 <sup>1</sup> / <sub>4</sub> (1607)
h	in. (mm)	14 <sup>1</sup> / <sub>4</sub> (362)
i	in. (mm)	4 (100)
j	in. (mm)	26 <sup>1</sup> / <sub>4</sub> (668)
k	in. (mm)	28 (706)
l	in. (mm)	68 <sup>1</sup> / <sub>2</sub> (1740)

**Legend**

- IO Inspection and clean-out Opening
- D Drain
- BWR Boiler Water Return (upper coil)
- SWR Solar Water Return (lower coil) or boiler return
- BWS Boiler Water Supply (upper coil)
- SWS Solar Water Supply (lower coil) or boiler supply
- DCW Domestic Cold Water
- TS DHW Sensor well opening ID 1/4 in. (7 mm) for DHW tank Temperature Sensor or tank temperature controller.
- TS Clamp for tank temperature sensor or temperature controller and thermometer sensor.
- DHW Domestic Hot Water
- RT DHW Recirculation Tapping
- TPV Temperature and Pressure relief Valve

DHW tank temperature sensor in solar heating applications 79 USG (300 L).



**Legend**

- (A) DHW tank temperature sensor for solar application (included with solar control unit)
- (B) Brass elbow with sensor well
- (C) Solar collector return connection.

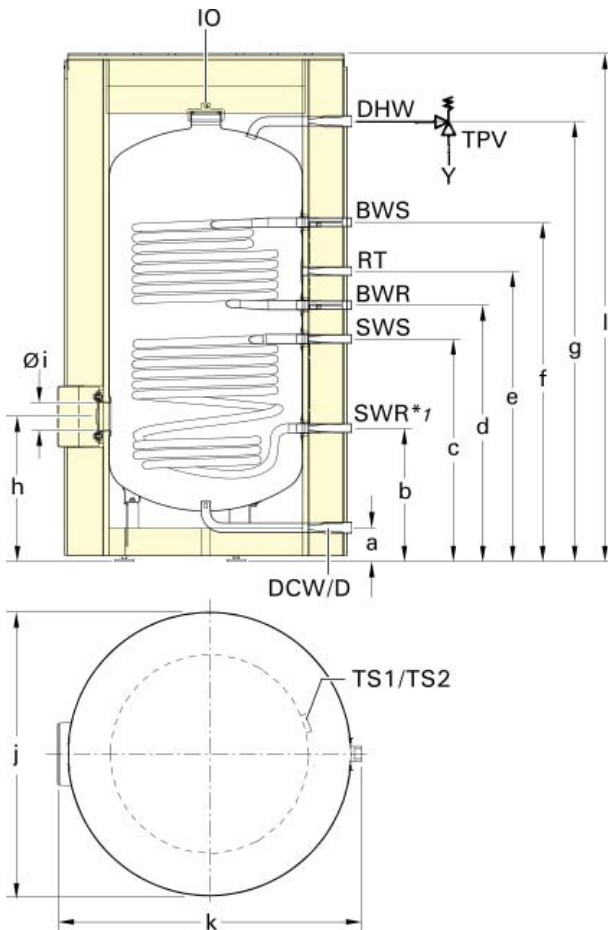
\* 1 For solar heating systems Viessmann recommends placement of the DHW tank temperature sensor in the solar collector return (SWR). This requires a brass elbow with sensor well (see price list, Vitocell 300 accessory).

The DHW tank temperature sensor (TS) of the boiler control or temperature controller placed in (TS DHW).

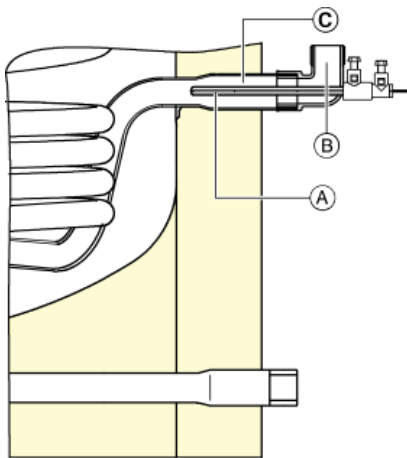


**Tank Dimensions** *(continued)*

**119 USG (450 L) Tank**



DHW tank temperature sensor in solar heating applications 119 USG (450 L).



**Legend**

- ① DHW tank temperature sensor for solar application (included with solar control unit)
- ② Brass elbow with sensor well
- ③ Solar collector return connection.

Dimensions		
Model		EVBB
Storage capacity	USG (L)	119 (450)
a	in. (mm)	3¾ (98)
b	in. (mm)	17¼ (441)
c	in. (mm)	36 (916)
d	in. (mm)	41 (1043)
e	in. (mm)	46 (1168)
f	in. (mm)	56 (1423)
g	in. (mm)	71½ (1821)
h	in. (mm)	19 (484)
i	in. (mm)	4 (100)
j	in. (mm)	32¾ (831)
k	in. (mm)	35½ (904)
l	in. (mm)	77 (1960)

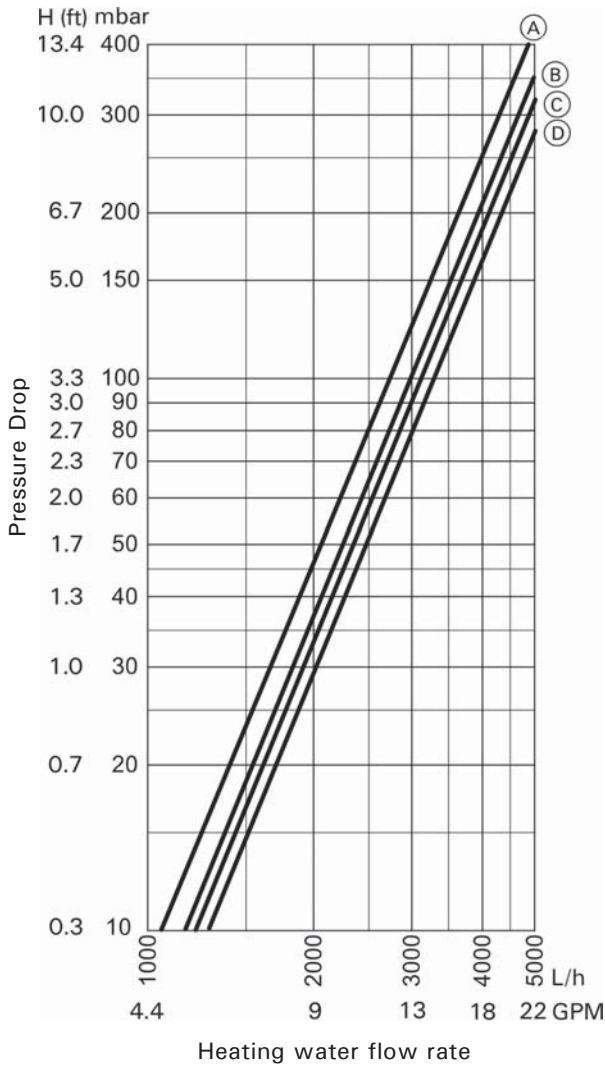
**Legend**

- IO Inspection and clean-out Opening
- D Drain
- BWR Heating Water Return (upper coil)
- SWR Solar Water Return (lower coil) or boiler return
- BWS Heating Water Supply (upper coil)
- SWS Solar Water Supply (lower coil) or boiler supply
- DCW Domestic Cold Water
- DHW Domestic Hot Water
- RT DHW Recirculation Tapping
- TPV Temperature and Pressure relief Valve
- TS1/TS2 Clamping system for fastening temperature sensors to the tank shell. Fastening channels for three temperature sensors per clamping system.

\*1 For solar heating systems Viessmann recommends placement of the DHW tank temperature sensor in the solar collector return (SWR). This requires a brass elbow with sensor well (see price list, Vitocell 300 accessory). The DHW tank temperature sensor or temperature controller is placed in the sensor clamp located at BWS level.

**Water Flow**

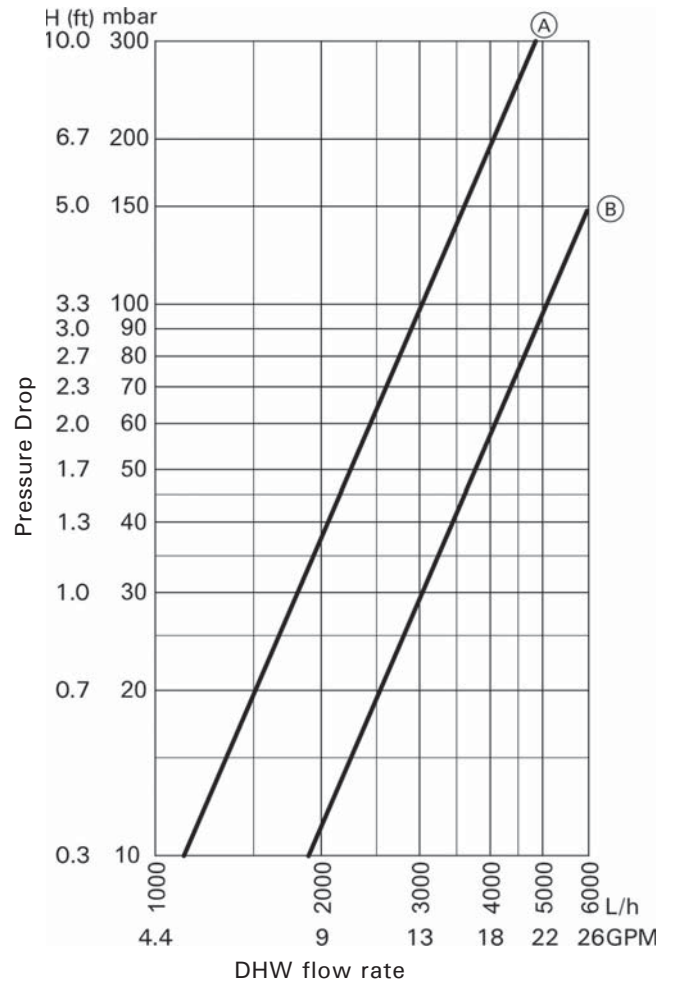
Pressure drop on the heating water side



**Legend**

- Ⓐ Lower indirect coil, 79 USG (300 L) capacity
- Ⓑ Upper indirect coil, 79 USG (300 L) capacity
- Ⓒ Lower indirect coil, 119 USG (450 L) capacity
- Ⓓ Upper indirect coil, 119 USG (450 L) capacity

Pressure drop on the DHW side



**Legend**

- Ⓐ 79 USG (300 L) capacity
- Ⓑ 119 USG (450 L) capacity

## Standard Equipment

### Vitocell 300-B, EVBB 79 USG (300 L) capacity

DHW cylinder made from stainless steel.

- Temperature and pressure relief valve
  - Installation fittings
  - Technical literature set
  - Adjustable feet
  - Fitted thermal insulation
- Color of the epoxy-coated sheet steel casing:  
Vitopearlwhite
- Threaded elbow with solar sensor well (optional)  
[well internal dia. ¼ in. (6.5 mm)]

### Vitocell 300-B, EVBB 119 USG (450 L) capacity

DHW cylinder made from stainless steel.

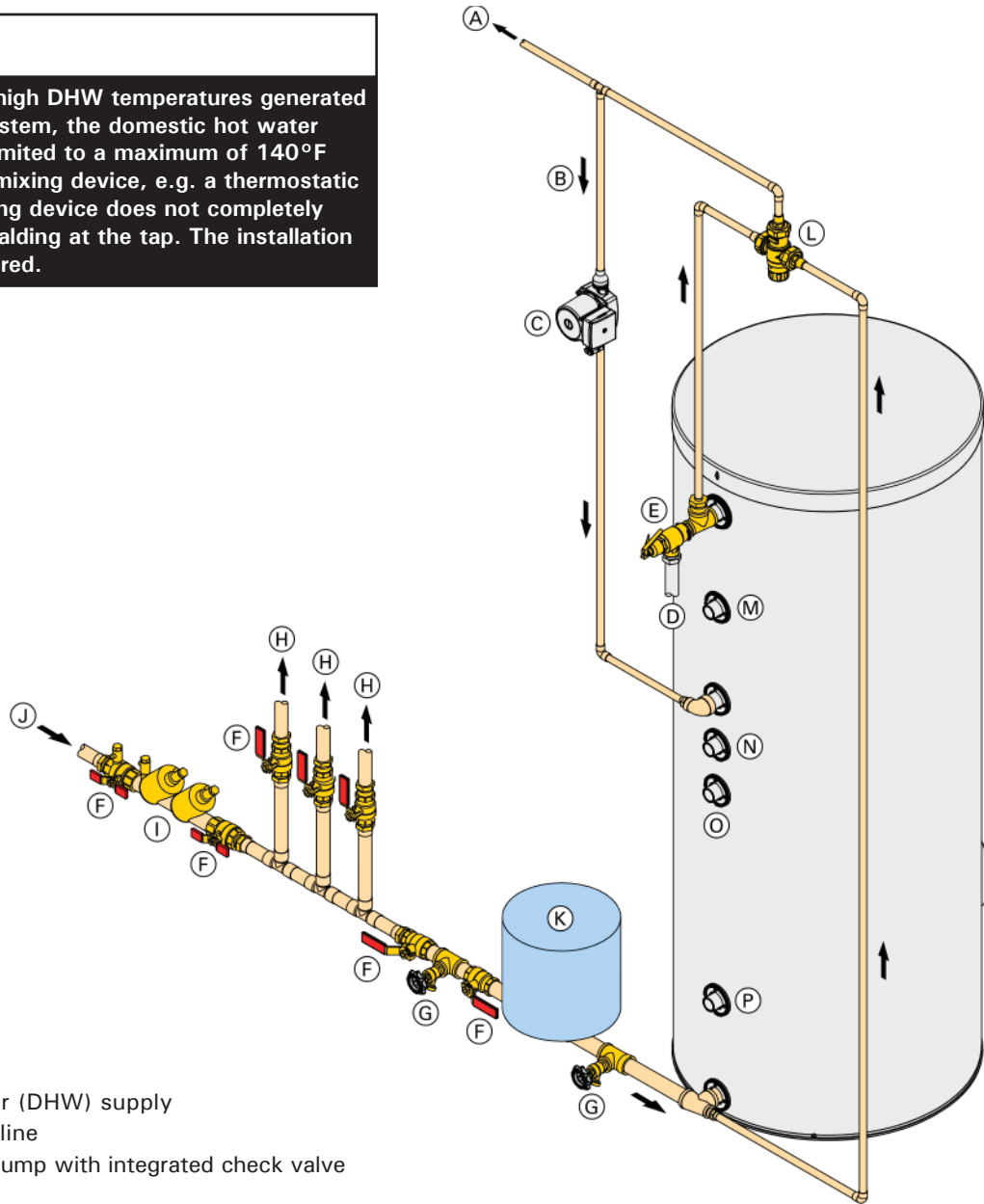
- Two clamping systems with 3 fastening channels for attaching temperature sensors to the tank shell.
  - Temperature and pressure relief valve
  - Installation fittings
  - Technical literature set
  - Adjustable feet
  - Separate carton with removable thermal insulation
- Color of the plastic-coated thermal insulation:  
Vitosilver
- Threaded elbow with solar sensor well (optional)  
[well internal dia. ¼ in. (6.5 mm)]

# System Design Guidelines

## Domestic hot water connection

### WARNING

Due to the potentially high DHW temperatures generated by the solar heating system, the domestic hot water temperature must be limited to a maximum of 140°F (60°C) by installing a mixing device, e.g. a thermostatic mixing valve. The mixing device does not completely eliminate the risk of scalding at the tap. The installation of a mixing tap is required.

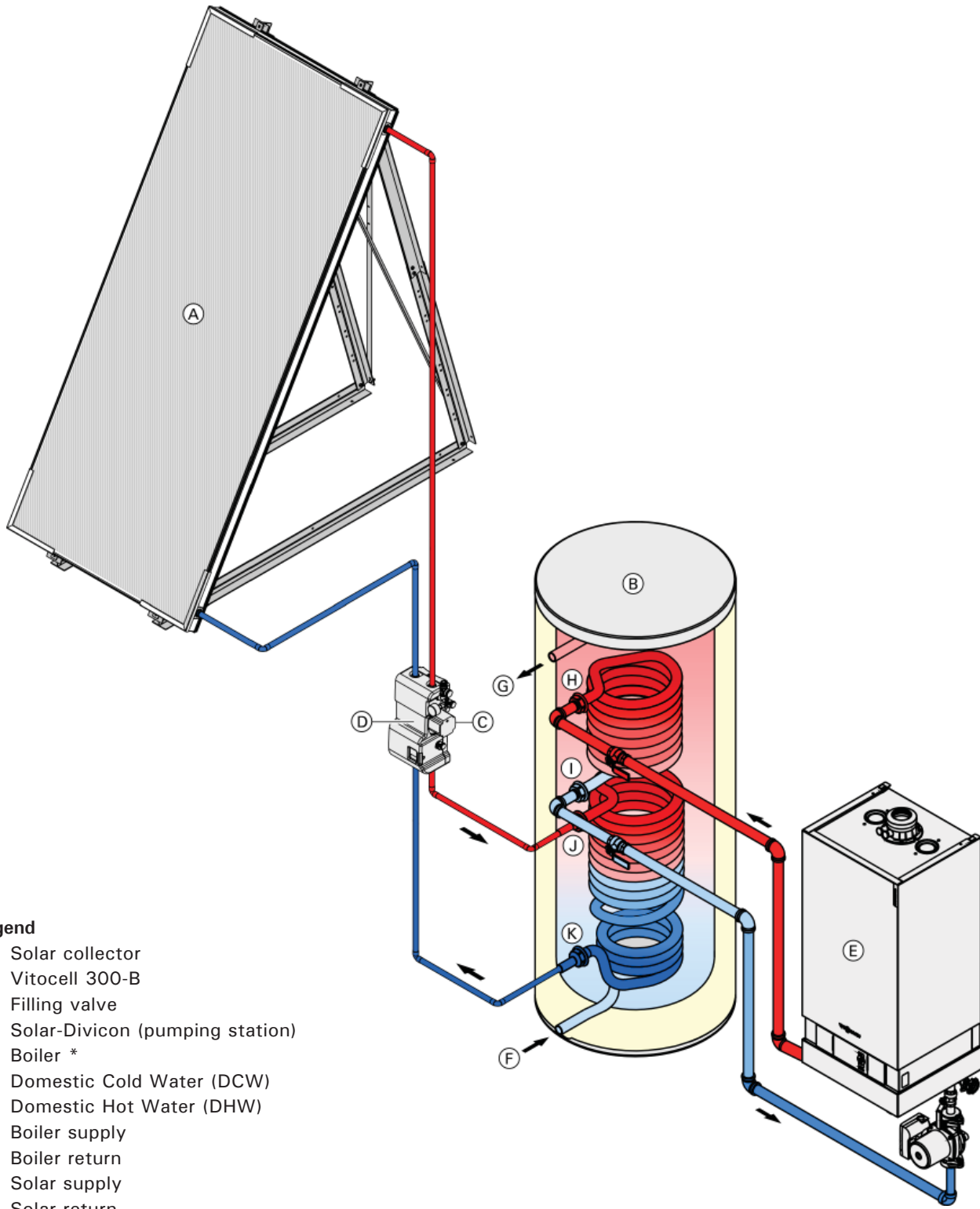


### Legend

- (A) Domestic hot water (DHW) supply
- (B) DHW recirculation line
- (C) DHW recirculation pump with integrated check valve
- (D) Discharge pipe
- (E) Pressure and temperature relief valve
- (F) Shut-off valves
- (G) Drain
- (H) Domestic cold water (DCW) supply lines
- (I) Backflow preventer
- (J) DCW inlet
- (K) Precharged expansion tank  
(required where backflow preventer is installed;  
check local plumbing codes and requirements)
- (L) Thermostatic mixing valve/anti-scald valve
- (M) Boiler supply
- (N) Boiler return
- (O) Solar supply
- (P) Solar return

**System Design Guidelines** *(continued)*

**Solar hot water connection**



**Legend**

- (A) Solar collector
- (B) Vitocell 300-B
- (C) Filling valve
- (D) Solar-Divicon (pumping station)
- (E) Boiler \*
- (F) Domestic Cold Water (DCW)
- (G) Domestic Hot Water (DHW)
- (H) Boiler supply
- (I) Boiler return
- (J) Solar supply
- (K) Solar return

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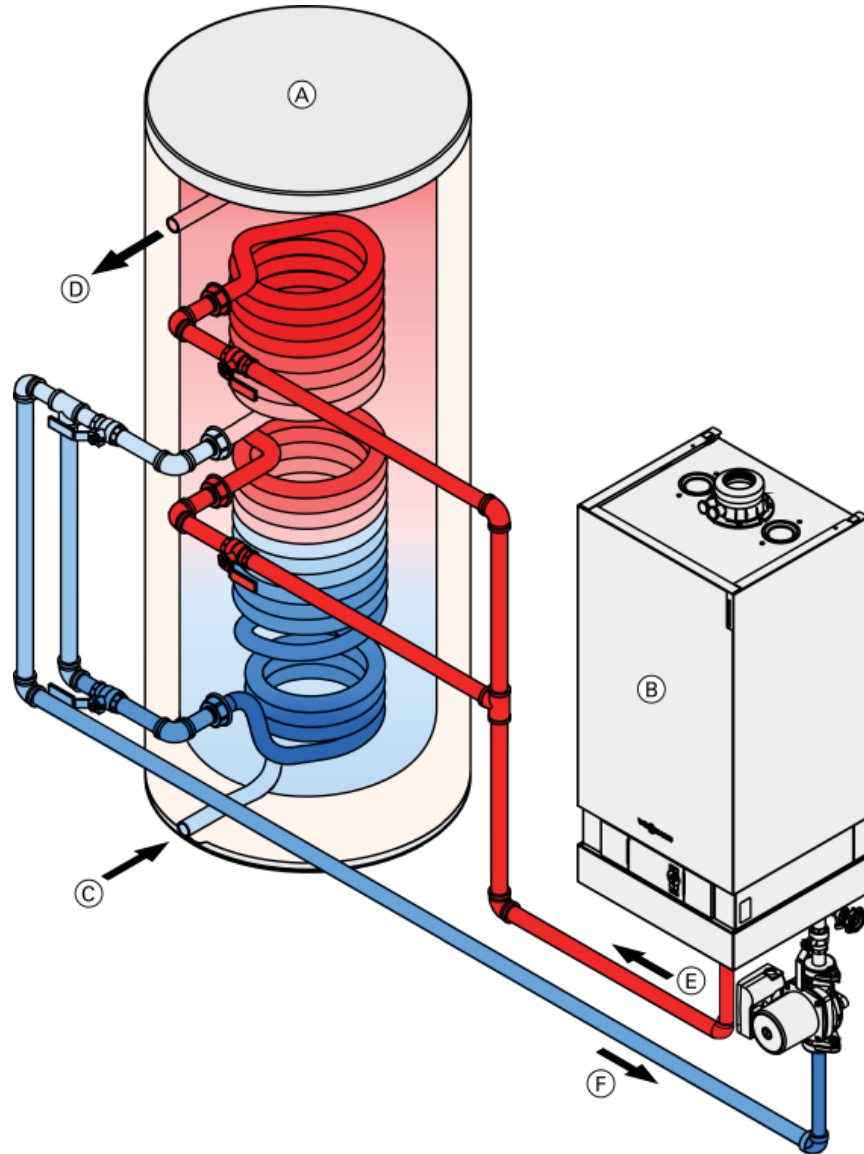


\* Refer to your specific boiler installation manual for specific boiler connection details.

**System Design Guidelines** *(continued)*


**Boiler hot water connections (tank coils in parallel)**

**Note:** See pages 5 and 7 for technical information.



**Legend**

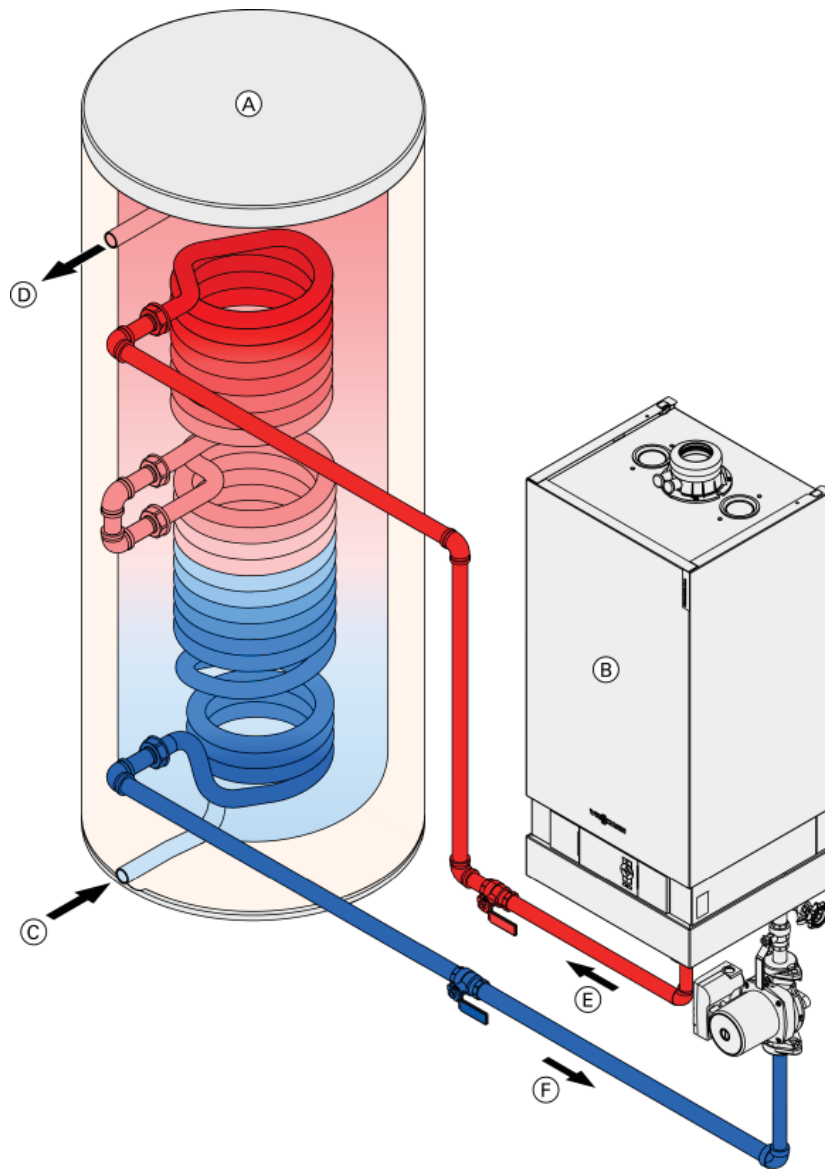
- (A) Vitocell 300-B
- (B) Boiler \*
- (C) Domestic Cold Water (DCW)
- (D) Domestic Hot Water (DHW)
- (E) Boiler supply
- (F) Boiler return

\*  Refer to your specific boiler installation manual for specific boiler connection details.

**System Design Guidelines** *(continued)*


**Boiler hot water connections (tank coils in series)**

**Note:** See pages 5 and 7 for technical information.



**Legend**

- (A) Vitocell 300-B
- (B) Boiler \*
- (C) Domestic Cold Water (DCW)
- (D) Domestic Hot Water (DHW)
- (E) Boiler supply
- (F) Boiler return

\*  Refer to your specific boiler installation manual for specific boiler connection details.

## Additional System Information

### Sensors

The sensor clamps are to be used for control sensors to ensure maximum operational safety. For solar heating systems, Viessmann recommends placement of the DHW tank temperature sensor in the solar collector return. This requires a brass elbow with the sensor well (see pages 8 and 9).

**! WARNING**

To ensure optimum, safe operation, the stainless steel well must be used. The well diameter is large enough to accommodate a wide variety of sensing bulbs. Always use spring clip to ensure proper contact of capillary bulb against the stainless steel well for proper sensing/heat transfer!

### Heating water supply temperature over 230°F (110°C)

These operating conditions require the installation of an additional safety high limit into the DHW storage tank, preventing the temperature from rising above 203°F (95°C). A domestic hot water tempering valve must be used.

### Temperature and pressure relief valve

A 150 psi temperature and pressure relief valve (T&P relief valve) is supplied with the tank. The heating contractor must install the valve on each tank in a method meeting code requirements. If local codes require a different relief valve, substitute the manufacturer's supplied valve. Maximum operating pressure is 150 psig.

The T&P relief valve supplied with the tank is tested under ANSI Z21.22 Code for Relief Valves and Automatic Gas Shut-off Devices for Hot Water Supply Systems.

T&P Valve	150 psig
ASME pressure steam rating	see ratings marked on T&P valve
CSA temperature steam rating	205 MBH
Relief temperature	210°F (99°C)
Inlet thread	¾ in. male
Outlet thread	¾ in. female

### Tempering valve

Ensure that temperature tempering valve(s) is installed if the domestic hot water storage tank temperature exceeds 140°F (60°C) to protect from scalding. Consult plumbing codes and authorities for local requirements.

### Installation of additional high limit temperature device(s)

**! WARNING**

In a multiple-tank installation, it is recommended that an additional high limit temperature device be installed in the common domestic hot water supply header to the system. This safety device should be wired in series to the operating control of the tank battery. The setting on this additional high limit temperature device should be approximately 9°F (5°C) higher than the operating high limit.

### Backflow preventers

Where backflow preventers are required, a domestic water expansion tank installation is recommended in the cold water inlet piping before the cold water enters the Vitocell. For the backflow device, observe local plumbing codes and regulations.

### Recirculation tapping

The recirculation tapping is on a separate tapping. Cap this opening if the tank is not installed with recirculation.

### Warranty consideration

Viessmann DHW tanks require that the water to be heated must be of drinking (potable) water quality and that any water treatment equipment in use must function correctly.

Viessmann accepts no responsibility for damage howsoever caused and reserves the right to withdraw the product warranty if the product has been improperly installed or misapplied by the installer, contractor or final user. In order to qualify for product warranty, strict adherence to the installation and service manuals must be assured.

In the event that Viessmann non-approved components are utilized, Viessmann reserves the right to withdraw all expressed or implied warranties without written notice.

The water to be heated with the Vitocell must be drinking (potable) water quality. If the tank is used to heat other media, the warranty will be null and void. Damage resulting from excessive pressure or temperature is clearly not the responsibility of Viessmann.

The amount of chloride and sulfate acceptable to the tank is limited. In areas where high concentrations of chloride and sulfate are present in drinking water, please consult Viessmann for directions.

For full warranty details, please read the product warranty sheet.

Printed on environmentally friendly (recycled and recyclable) paper.



Technical information subject to change without notice.

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