

Datasheet

Part no. and prices: see pricelist



VITOCELL 300-H Type EHA

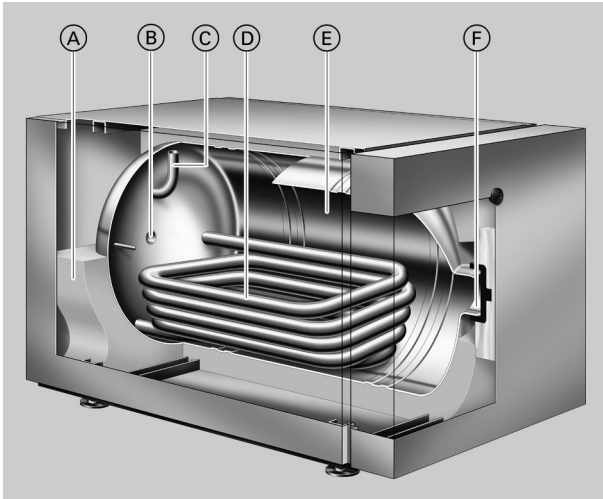
Horizontal DHW cylinder
made from stainless steel

Product information

Hygienic, convenient and economic DHW heating with DHW cylinders made from stainless steel – horizontal version

Benefits at a glance

- Long service life through corrosion-resistant DHW cylinder made from high grade stainless steel
- Hygienic and made to food hygiene standards with high surface quality
- No protective anode required for additional corrosion protection, therefore no additional running costs



- Stainless steel indirect coils that are drawn right down to the cylinder floor heat up the entire water content
- High DHW convenience through rapid, even heat-up via generously sized indirect coils
- Low heat losses through highly effective all-round thermal insulation made of rigid polyurethane foam

- Ⓐ Highly effective all-round thermal insulation made from rigid polyurethane foam
- Ⓑ DHW circulation
- Ⓒ DHW
- Ⓓ Stainless steel indirect coil drawn right down to the cylinder floor – this heats the DHW cylinder fully and hygienically
- Ⓔ High grade stainless steel cylinder
- Ⓕ Inspection and cleaning aperture

Specification

For **DHW heating** in conjunction with boilers, district heating systems and low temperature heating systems

Suitable for systems with

- Heating water flow temperature up to **200 °C**
- Operating pressure on the **heating water side** up to **25 bar (2.5 MPa)**
- Only for 350 and 500 l: **saturated steam at 1 bar (0.1 MPa)** pressure
- Operating pressure on the **DHW side** up to **10 bar (1.0 MPa)**

Type		EHA	EHA	EHA	EHA	
Cylinder capacity	l	160	200	350	500	
DIN registration number		0081/08-10 MC				
Continuous output for DHW heating from 10 to 45 °C and a heating water flow temperature of ... at the heating water flow rate stated below	90 °C	kW litres/h	32 786	41 1007	80 1966	97 2383
	80 °C	kW litres/h	28 688	30 737	64 1573	76 1867
	70 °C	kW litres/h	20 490	23 565	47 1155	55 1351
	65 °C	kW litres/h	17 417	19 467	40 983	46 1130
	60 °C	kW litres/h	14 344	16 393	33 811	38 934
Continuous output for DHW heating from 10 to 60 °C and a heating water flow temperature of ... at the heating water flow rate stated below	90 °C	kW litres/h	28 482	33 568	70 1204	82 1410
	80 °C	kW litres/h	23 396	25 430	51 877	62 1066
	70 °C	kW litres/h	15 258	17 292	34 585	39 671
Heating water flow rate for the stated continuous outputs	m ³ /h	3.0	5.0	5.0	5.0	
Continuous output for DHW heating from 10 to 45 °C and saturated steam from ... with a max. steam velocity of 50 m/s	0.5 bar/ 50 kPa	kW litres/h	–	–	83 2039	83 2039
	1.0 bar/ 100 kPa	kW litres/h	–	–	105 2580	105 2580
Standby heat loss to EN 12897:2006 Q _{ST} at 45 K temp. differential	kWh/24 h	1.18	1.24	1.76	1.95	
Overall dimensions						
Total length	mm	1072	1236	1590	1654	
Total width	mm	640	640	830	910	
Width without casing	mm	–	–	768	–	
Total height	mm	654	654	786	886	
Weight DHW cylinder with thermal insulation	kg	76	84	172	191	
Heating water content	litres	7	8	13	16	
Heating surface	m ²	0.87	0.9	1.7	2.1	
Connections (male thread)						
Heating water flow and return	R	1	1	1¼	1¼	
Cold water, DHW	R	¾	¾	1¼	1¼	
DHW circulation	R	1	1	1	1¼	
Energy efficiency class		B	B	B	B	

Information on width without casing (only 350 l)

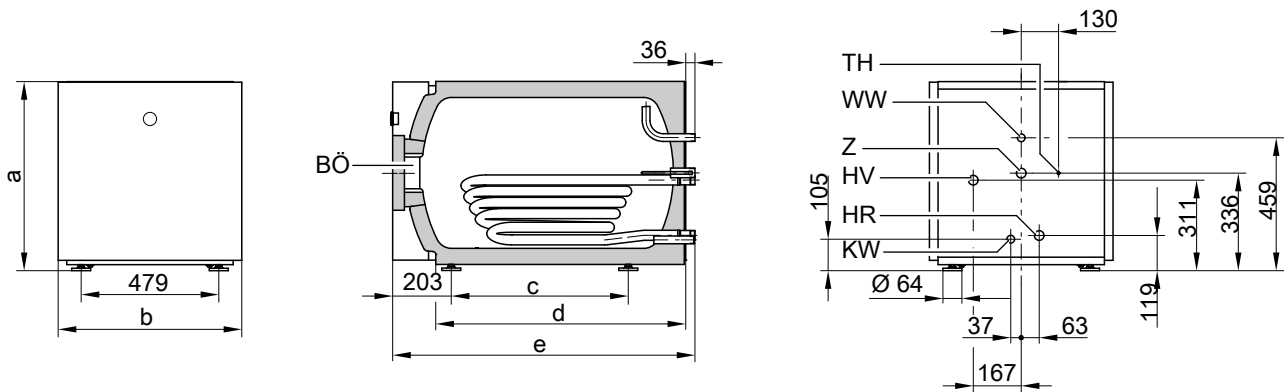
350 l: Where access to the boiler room is difficult, the front panel with thermometer and the side panels can be removed, the adjustable feet can be unscrewed and the DHW cylinder can be turned to one side.

Information regarding continuous output

When engineering systems with the specified or calculated continuous output, select a matching circulation pump. The stated continuous output is only achieved when the rated boiler heating output is ≥ the continuous output.

Specification (cont.)

Vitocell 300-H with 160 to 200 l capacity



BÖ Inspection and cleaning aperture
 HR Heating water return
 HV Heating water flow
 KW Cold water

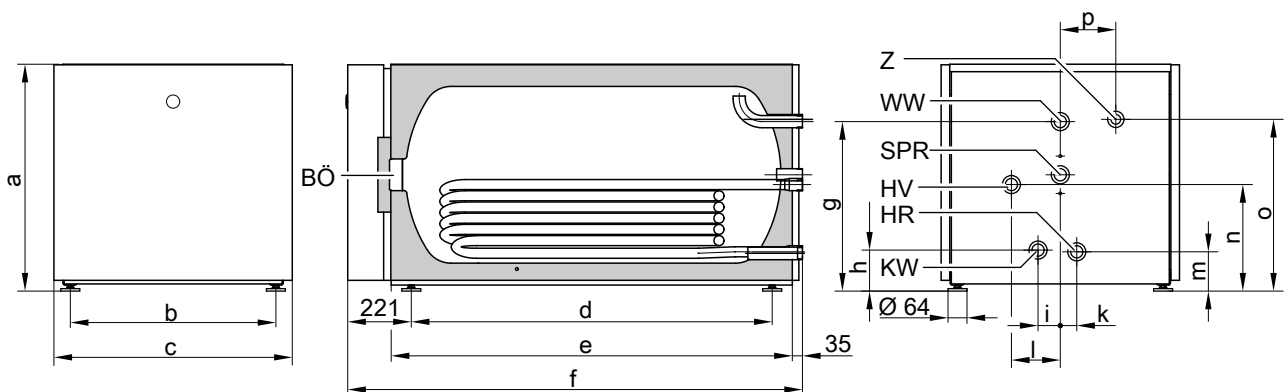
TH Sensor well for cylinder temperature sensor or temperature controller (internal diameter 7 mm)
 WW DHW
 Z DHW circulation

Dimensions

Cylinder capacity	litres	160	200
a	mm	654	654
b	mm	640	640

Cylinder capacity	litres	160	200
c	mm	616	780
d	mm	866	1030
e	mm	1072	1236

Vitocell 300-H with 350 and 500 l capacity



BÖ Inspection and cleaning aperture
 HR Heating water return
 HV Heating water flow
 KW Cold water
 SPR R 1 connector with reducer to R ½ and sensor well internal diameter 14.5 mm (for cylinder temperature sensor or temperature controller)

WW DHW
 Z DHW circulation

Specification (cont.)

Dimensions

Cylinder capacity	litres	350	500
a	mm	786	886
b	mm	716	795
c	mm	830	910
d	mm	1256	1320
e	mm	1397	1461
f	mm	1590	1654
g	mm	586	636
h	mm	140	139
i	mm	78	78
k	mm	57	72
l	mm	170	203
m	mm	134	138
n	mm	368	410
o	mm	594	677
p	mm	193	226

Note

When installing the sensor well and cylinder temperature sensor or temperature controller, maintain a minimum wall clearance of 450 mm behind the DHW cylinder.

Performance factor N_L

To DIN 4708

Cylinder storage temperature T_{cyl} = cold water inlet temperature

+50 K ^{+5 K/-0 K}

Cylinder capacity	litres	160	200	350	500
Performance factor N_L					
at heating water flow temperature					
90 °C		2.3	6.6	12.0	23.5
80 °C		2.2	5.0	12.0	21.5
70 °C		1.8	3.4	10.5	19.0

Information regarding performance factor N_L

The performance factor N_L depends on the cylinder storage temperature T_{cyl} .

Standard values

- $T_{cyl} = 60\text{ °C} \rightarrow 1.0 \times N_L$
- $T_{cyl} = 55\text{ °C} \rightarrow 0.75 \times N_L$
- $T_{cyl} = 50\text{ °C} \rightarrow 0.55 \times N_L$
- $T_{cyl} = 45\text{ °C} \rightarrow 0.3 \times N_L$

Peak output (over 10 minutes)

Relative to performance factor N_L

DHW heating from 10 to 45 °C

Cylinder capacity	litres	160	200	350	500
Peak output (l/10 min)					
at heating water flow temperature					
90 °C		203	335	455	660
80 °C		199	290	445	627
70 °C		182	240	424	583

Max. draw-off rate (over 10 minutes)

Relative to performance factor N_L

With reheating

DHW heating from 10 to 45 °C

Cylinder capacity	litres	160	200	350	500
Max. draw-off rate (l/min)					
at heating water flow temperature					
90 °C		20	33	45	66
80 °C		20	29	45	62
70 °C		18	24	42	58

Specification (cont.)

Drawable water volume

Cylinder content heated to 60 °C
Without reheating

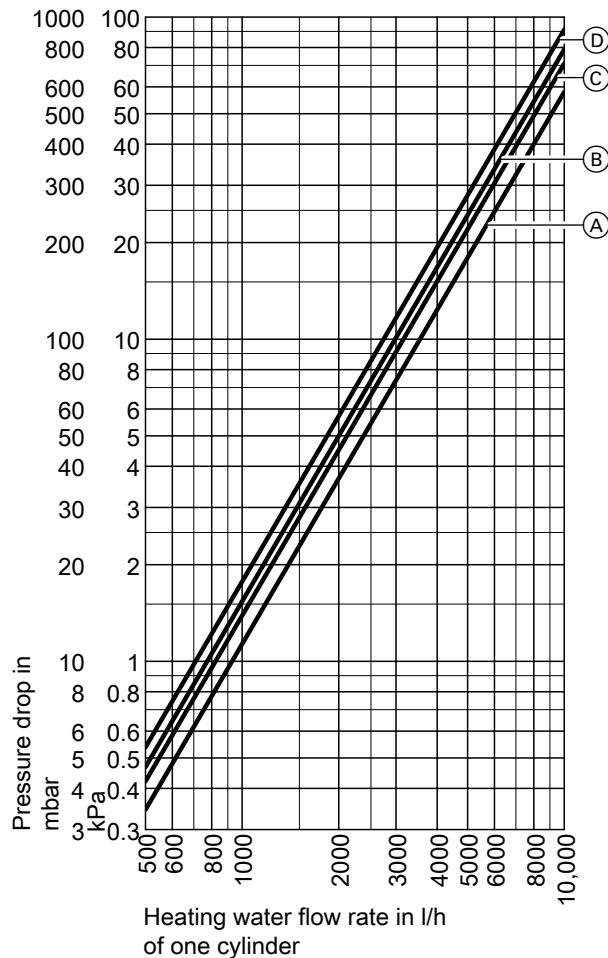
Cylinder capacity	litres	160	200	350	500
Draw-off rate	l/min	10	10	15	15
Drawable water volume	litres	150	185	315	440
Water at t = 60 °C (constant)					

Heat-up time

The specified heat-up times will be achieved when the maximum continuous output of the DHW cylinder is made available at the relevant flow temperature and when DHW is heated from 10 to 60 °C.

Cylinder capacity	litres	160	200	350	500
Heat-up time (minutes)					
at heating water flow temperature					
90 °C		19	18	15	20
80 °C		26	25	20	26
70 °C		34	32	31	40

Pressure drop on the heating water side

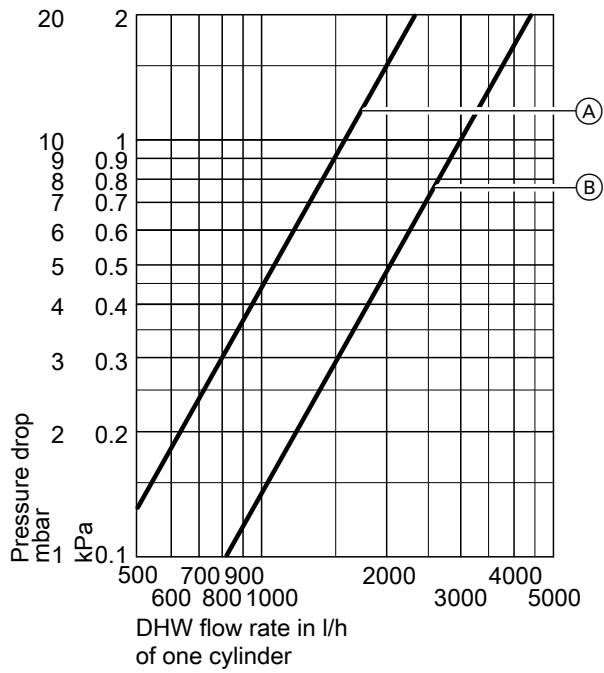


- Ⓐ 160 l cylinder capacity
Ⓑ 200 l cylinder capacity

- Ⓒ 350 l cylinder capacity
Ⓓ 500 l cylinder capacity

Specification (cont.)

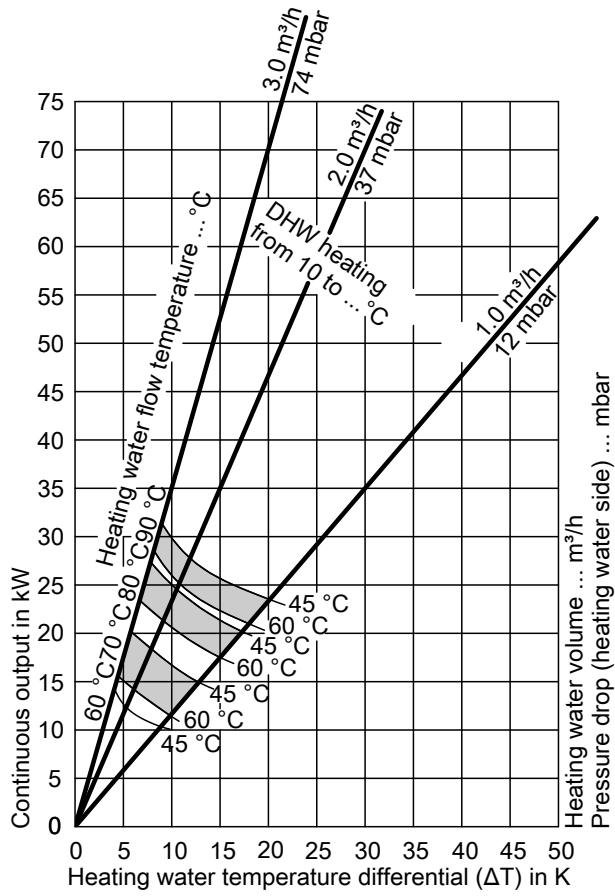
Pressure drop on the DHW side



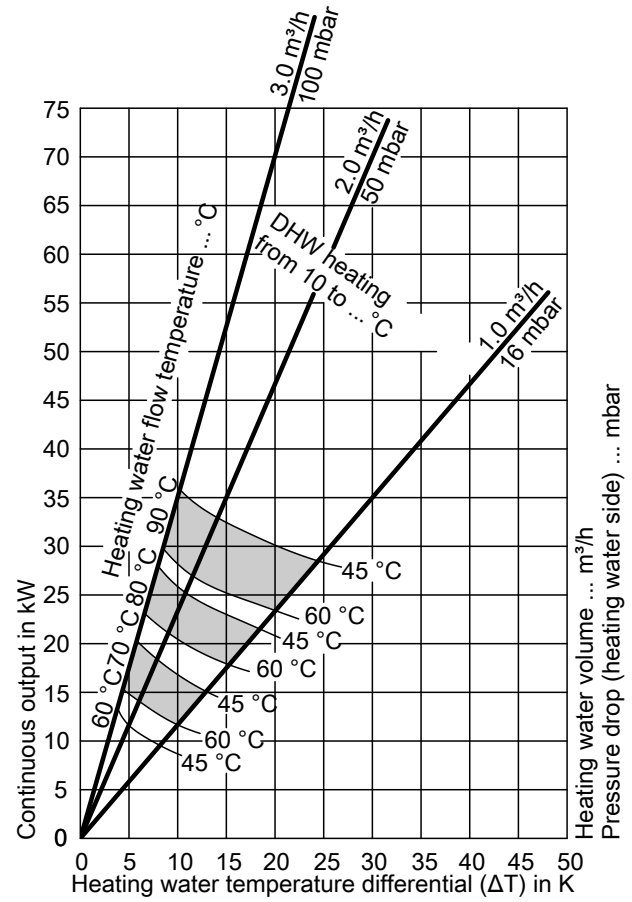
- Ⓐ 160 and 200 l cylinder capacity
- Ⓑ 350 and 500 l cylinder capacity

Continuous output

Vitocell 300-H with 160 litre capacity

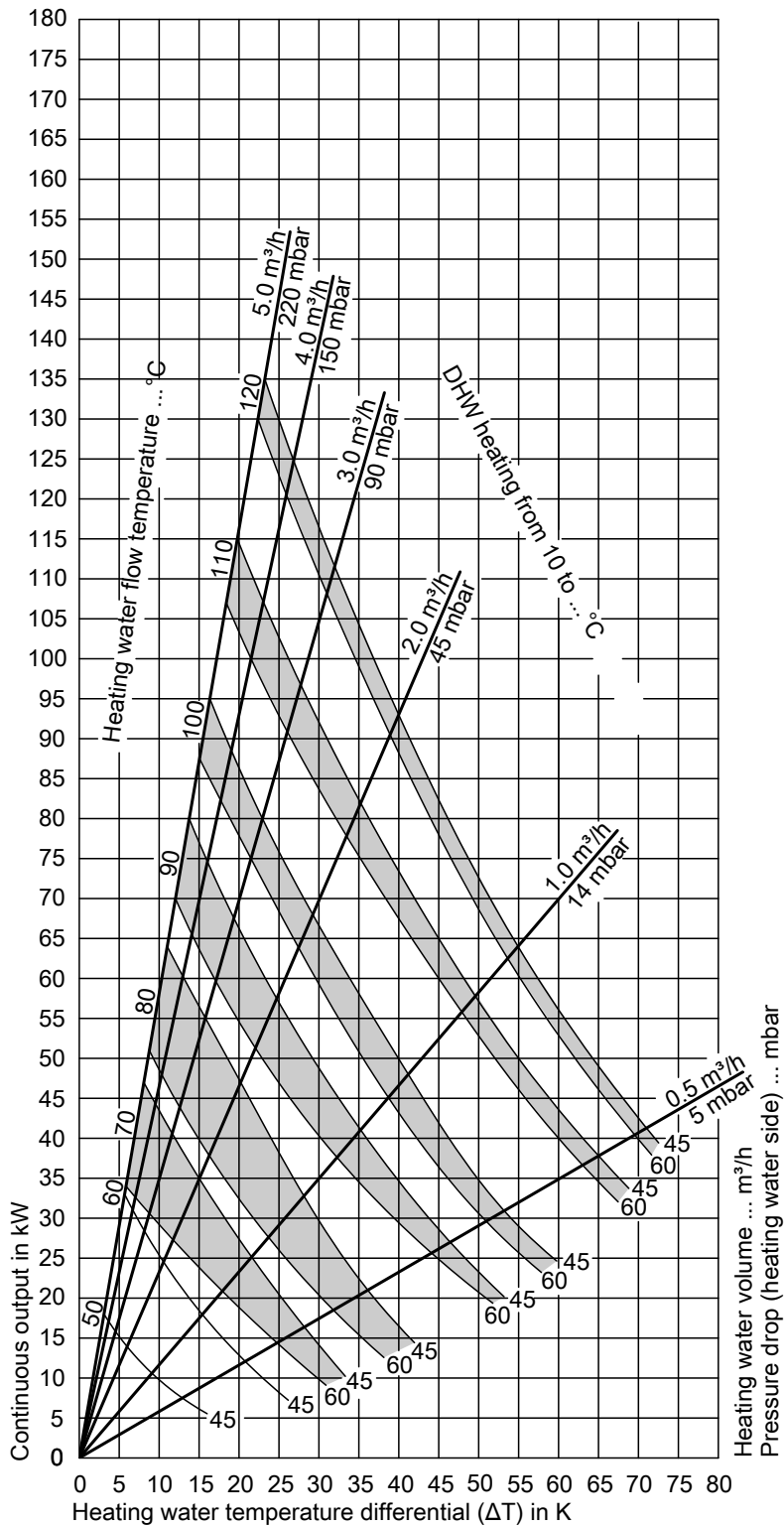


Vitocell 300-H with 200 litre capacity



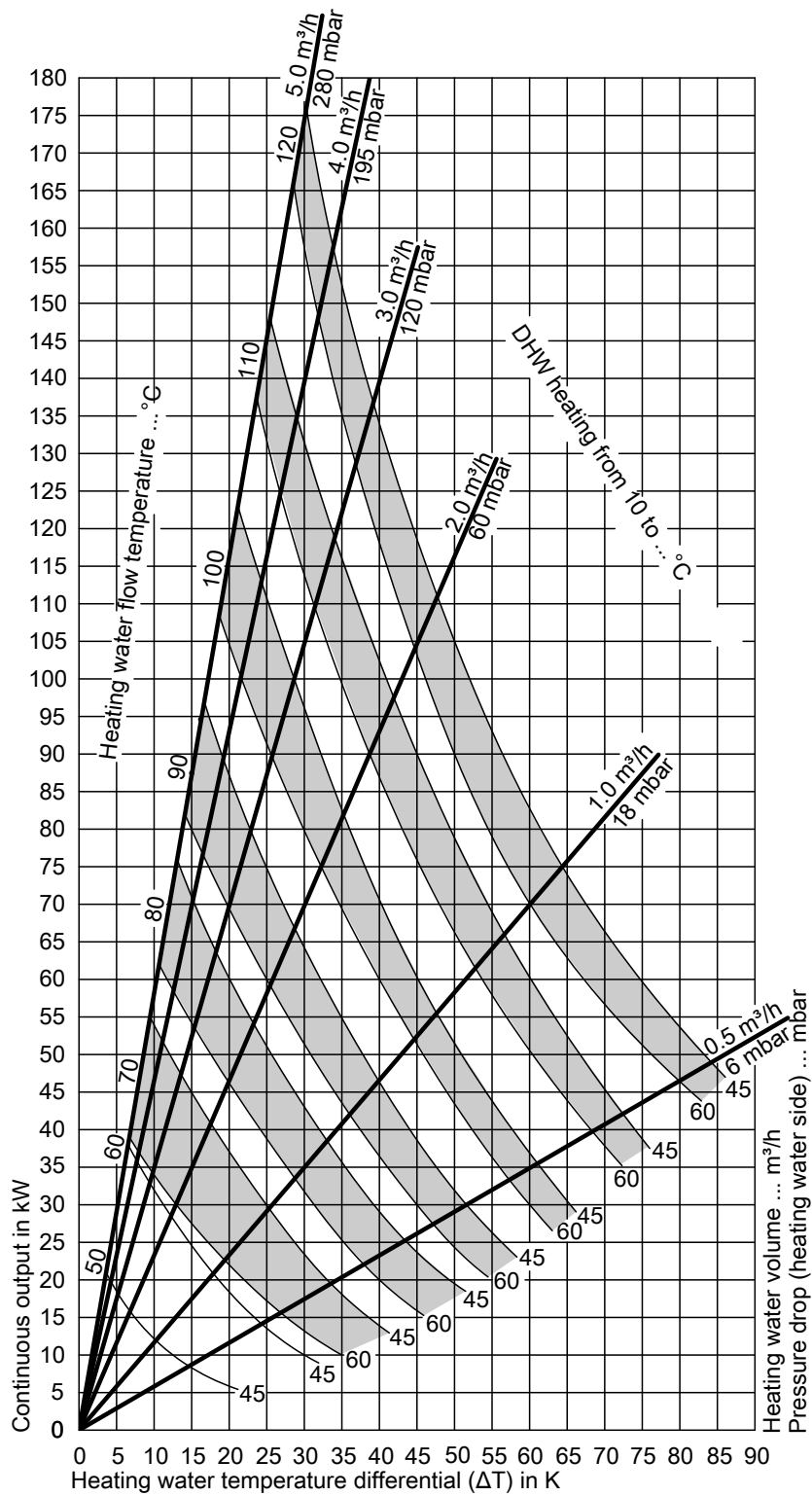
Specification (cont.)

Vitocell 300-H with 350 litre capacity



Specification (cont.)

Vitocell 300-H with 500 litre capacity



Specification Vitocell 300-H as a cylinder bank

Specification

There are 3 possible combinations recommended below. Observe maximum stack height.

Total cylinder bank capacity		litres	700	1000	1500	
Number of cylinders			2	2	3	
Capacity per cylinder		litres	350	500	500	
Arrangement						
Stack height			Max. 2	2	Max. 3	
Continuous output*1						
for DHW heating from 10 to 45 °C and a heating water flow temperature of ... at the heating water flow rate stated below		90 °C	kW litres/h	160 3932	194 4766	291 7149
		80 °C	kW litres/h	128 3146	152 3734	228 5601
		70 °C	kW litres/h	94 2310	110 2702	165 4053
		65 °C	kW litres/h	80 1966	92 2260	138 3390
		60 °C	kW litres/h	66 1622	76 1868	114 2802
Continuous output*1						
for DHW heating from 10 to 60 °C and a heating water flow temperature of ... at the heating water flow rate stated below		90 °C	kW litres/h	140 2408	164 2820	246 4230
		80 °C	kW litres/h	102 1754	124 2132	186 3198
		70 °C	kW litres/h	68 1170	78 1342	117 2013
Heating water flow rate			m ³ /h	10	10	15
for the stated continuous outputs						
Continuous output		0.5 bar/	kW	166	166	249
for DHW heating from 10 to 45 °C and saturated steam from ... with a max. steam velocity of 50 m/s		50 kPa	litres/h	4078	4078	6117
		1.0 bar/	kW	210	210	315
		100 kPa	litres/h	5160	5160	7740

Performance factor N_L

To DIN 4708

Cylinder storage temperature = cold water inlet temperature

+50 K ^{+5 K/-0 K}

Total cylinder bank capacity		litres	700	1000	1500
Performance factor N_L					
at heating water flow temperature					
90 °C			35	64	104
80 °C			35	59	95
70 °C			31	52	85

Peak output (over 10 minutes)

Relative to performance factor N_L and DHW heating from 10 to

45 °C

Total cylinder bank capacity		l	700	1000	1500
Peak output (l/10 min)					
at heating water flow temperature					
90 °C			830	1200	1640
80 °C			830	1137	1545
70 °C			769	1050	1430

Max. draw-off rate (over 10 minutes)

Relative to performance factor N_L

With reheating

DHW heating from 10 to 45 °C

*1 When engineering systems with the specified or calculated continuous output, select a matching circulation pump. The stated continuous output is only achieved when the rated boiler heating output is ≥ the continuous output.

Specification Vitocell 300-H as a cylinder bank (cont.)

Total cylinder bank capacity	l	700	1000	1500
Max. draw-off rate (l/min) at heating water flow temperature				
90 °C		83	120	164
80 °C		83	114	154
70 °C		77	105	143

Drawable water volume

Cylinder content heated to 60 °C
Without reheating

Total cylinder bank capacity	l	700	1000	1500
Draw-off rate	l/min	30	30	30
Drawable water volume	l	630	880	1320
Water at t = 60 °C (constant)				

Delivered condition

Vitocell 300-H, type EHA, 160 and 200 litre capacity

DHW cylinder made from high alloy stainless steel.
 – Fitted thermal insulation made from rigid PUR foam
 – Integral welded sensor well for cylinder temperature sensor or temperature controller (internal diameter 7 mm)
 – Integral thermometer
 – Threaded adjustable feet
 Colour of the epoxy-coated sheet steel casing: Vitosilver.

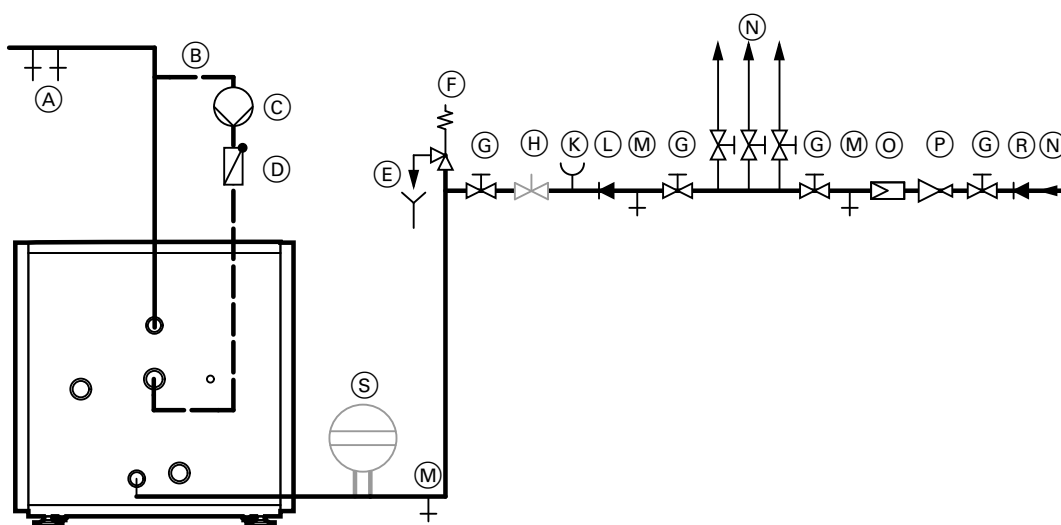
Vitocell 300-H, type EHA, 350 and 500 litre capacity

DHW cylinder made from high alloy stainless steel.
 – Fitted thermal insulation made from rigid PUR foam
 – Connector for cylinder temperature sensor or temperature controller
 – Integral thermometer
 – Threaded adjustable feet
 Packed separately:
 – Reducer R 1 × ½
 – Sensor well (internal diameter 14.5 mm)
 – Thermal insulation for sensor well
 Colour of the epoxy-coated sheet steel casing: Vitosilver.

Design/engineering information

Connection on the DHW side

Connection to DIN 1988



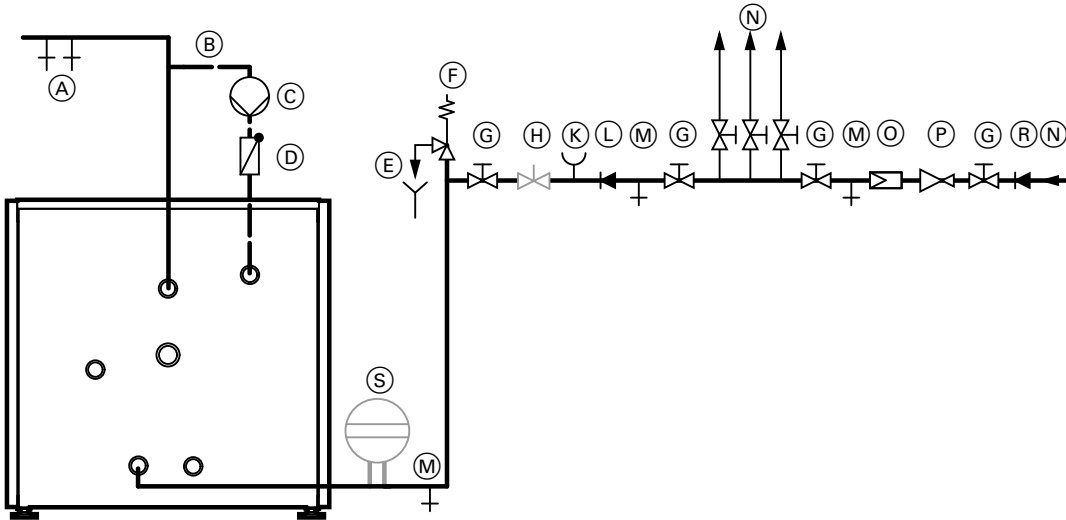
Vitocell 300-H with 160 and 200 l capacity

- (A) DHW
- (B) DHW circulation pipe
- (C) DHW circulation pump
- (D) Spring-loaded check valve

- (E) Visible discharge pipe outlet point
- (F) Safety valve
- (G) Shut-off valve

Design/engineering information (cont.)

- | | |
|---|--|
| (H) Flow regulating valve
(We recommend installation and adjustment of the max. water flow rate in accordance with the 10 minute output of the DHW cylinder (see page 5 and 11)) | (N) Cold water |
| (K) Pressure gauge connection | (O) Drinking water filter |
| (L) Non-return valve | (P) Pressure reducer |
| (M) Drain | (R) Non-return valve/pipe separator |
| | (S) Diaphragm expansion vessel, suitable for potable water |



Vitocell 300-H with 350 and 500 l capacity

- | | |
|---|--|
| (A) DHW | (K) Pressure gauge connection |
| (B) DHW circulation pipe | (L) Non-return valve |
| (C) DHW circulation pump | (M) Drain |
| (D) Spring-loaded check valve | (N) Cold water |
| (E) Visible discharge pipe outlet point | (O) Drinking water filter |
| (F) Safety valve | (P) Pressure reducer |
| (G) Shut-off valve | (R) Non-return valve/pipe separator |
| (H) Flow regulating valve
(We recommend installation and adjustment of the max. water flow rate in accordance with the 10 minute output of the DHW cylinder (see page 5 and 11)) | (S) Diaphragm expansion vessel, suitable for potable water |

The safety valve must be installed:

Recommendation: Install the safety valve higher than the top edge of the cylinder. This protects the valve against contamination, scaling and high temperatures. It also means that the DHW cylinder does not need to be drained when working on the safety valve.

Heating water flow temperatures in excess of 110 °C

For these operating conditions, DIN 4753 recommends the installation of a type-tested high limit safety cut-out in the cylinder, which limits the temperature to 95 °C.

Warranty

Our warranty for DHW cylinders requires that the water to be heated meets the potable water quality in accordance with the current Drinking Water Ordinance [Germany], and that existing water treatment systems work satisfactorily.

Heat transfer surface

The corrosion-resistant, protected heat transfer surface (DHW/heat transfer medium) corresponds to type C to DIN 1988-200.

Design/engineering information (cont.)

Vitocell 300-H as DHW cylinder installed below the boiler

Only those boiler-DHW cylinder combinations in the pricelist are possible. For the Vitocell 300-H with 350 l capacity the boiler can only be positioned on the **front** of the DHW cylinder.

Technical guide

For further information on design and sizing, see the "Technical guide for central DHW heating with Vitocell DHW cylinders".

Intended use

The appliance is only intended to be installed and operated in sealed unvented systems that comply with EN 12828 / DIN 1988, or solar thermal systems that comply with EN 12977, with due attention paid to the associated installation, service and operating instructions. DHW cylinders are only designed to store and heat water of potable water quality. Heating water buffer cylinders are only designed to hold fill water of potable water quality. Only operate solar collectors with the heat transfer medium approved by the manufacturer.

Intended use presupposes that a fixed installation in conjunction with permissible, system-specific components has been carried out.

Commercial or industrial usage for a purpose other than heating the building or DHW shall be deemed inappropriate.

Any usage beyond this must be approved by the manufacturer for the individual case.

Incorrect usage or operation of the appliance (e.g. the appliance being opened by the system user) is prohibited and results in an exclusion of liability.

Incorrect usage also occurs if the components in the system are modified from their intended use (e.g. through direct DHW heating in the collector).

Adhere to statutory regulations, especially concerning the hygiene of potable water.

Accessories

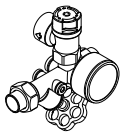
Safety assembly to DIN 1988

Components:

- Shut-off valve
- Non-return valve and test connector
- Pressure gauge connector
- Diaphragm safety valve

Up to 200 litre cylinder capacity

- 10 bar (1 MPa): **Part no. 7219 722**
- **A** 6 bar (0.6 MPa): **Part no. 7265 023**
- DN 15/R ¾
- Max. heat input: 75 kW



From 300 litre cylinder capacity

- 10 bar (1 MPa): **Part no. 7180 662**
- **A** 6 bar (0.6 MPa): **Part no. 7179 666**
- DN 20/R 1
- Max. heat input: 150 kW

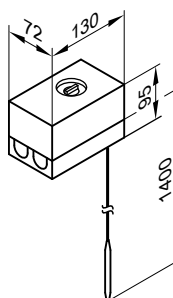


Temperature controller

- With a thermostatic system
 - With selector on the outside of the casing
 - Without sensor well
- The sensor well is part of the standard delivery of DHW cylinders from Viessmann.

Part no. 7151989

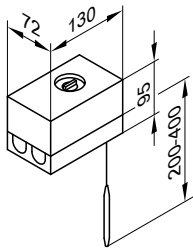
With top-hat rail to be fitted to the DHW cylinder or the wall



Accessories (cont.)

Part no. 7151988

For installation in the DHW cylinder



Setting range

30 to 60 °C,
adjustable up to 110 °C

Switching differential

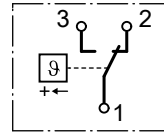
max. 11 K

Breaking capacity

6(1.5) A 250 V~

Switching function

with rising temperature from 2 to 3



DIN registration number

DIN TR 116807

or

DIN TR 96808

Specification

Connection

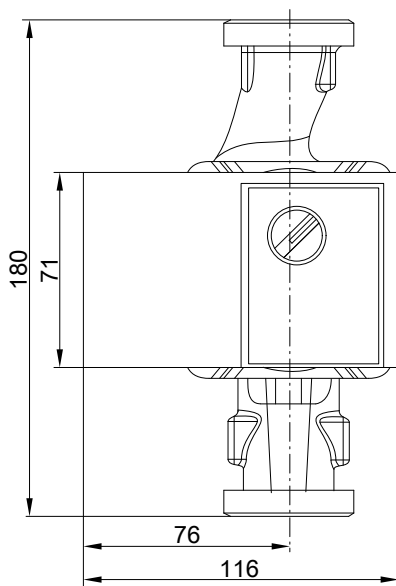
3-core lead with a cross-section
of 1.5 mm²

IP rating

IP 41 to EN 60529

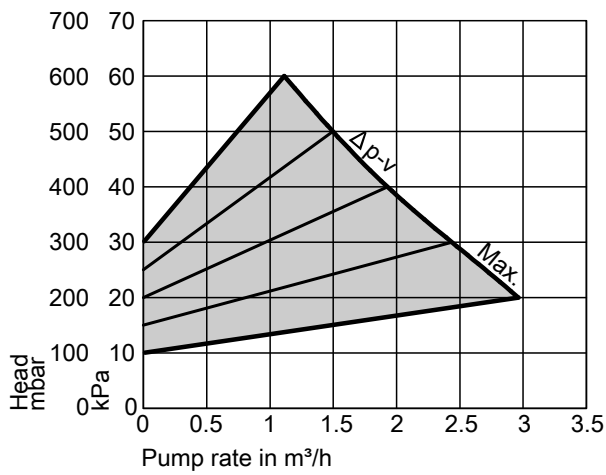
Circulation pump for cylinder heating

Part no. 7172 611 and 7172 612

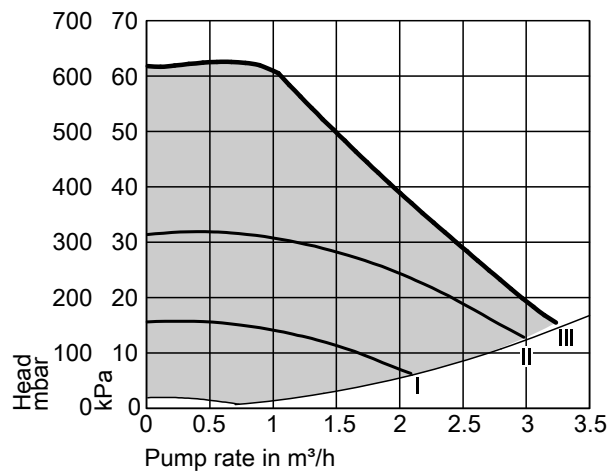


Part no.	7172 611	7172 612
Pump type	Yonos PARA 25/6	Yonos PARA 30/6
Voltage	V~ 230	230
Power consumption	W 3-45	3-45
Connection	G 1½	2
Connecting cable	m 5.0	5.0
for boilers	up to 40 kW	from 40 to 70 kW

Accessories (cont.)



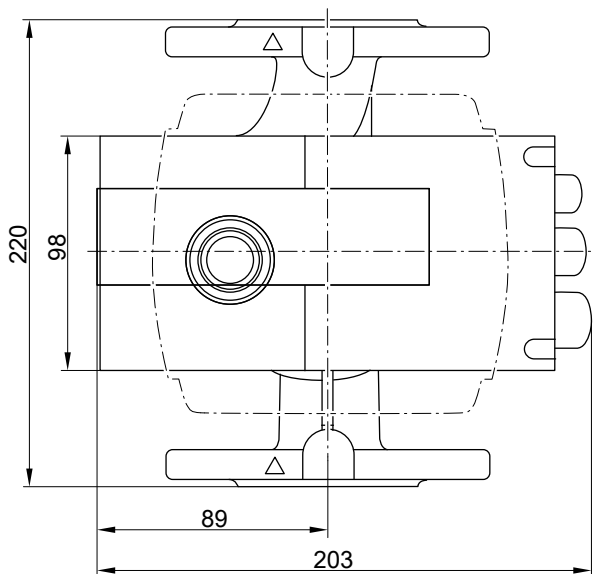
$\Delta p-v$ (variable)



$\Delta p-c$ (constant)

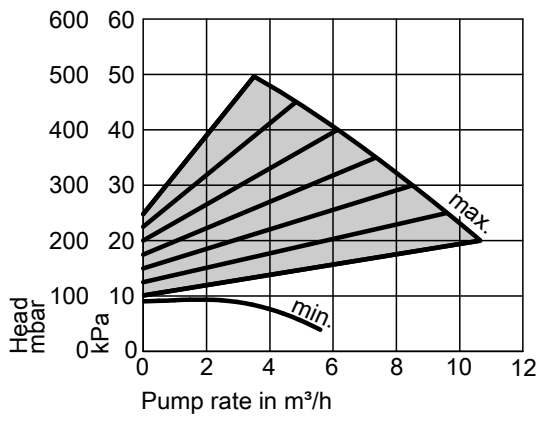
Circulation pump for cylinder heating

Part no. 7172 613

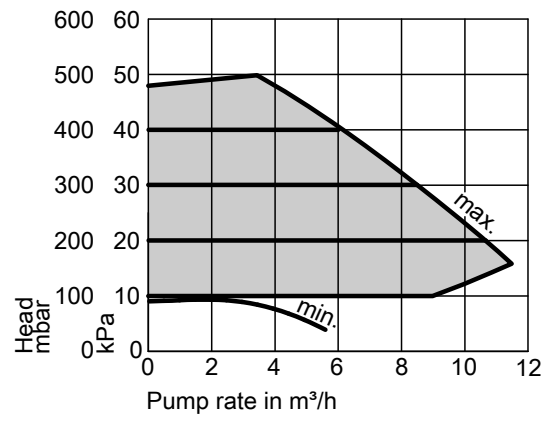


Part no.		7172 613
Pump type		Stratos 40/1-4
Voltage	V~	230
Power consumption	W	14-130
Connection	DN	40
Connecting cable	m	5.0
For boilers		from 70 kW

Accessories (cont.)



$\Delta p-v$ (variable)



$\Delta p-c$ (constant)

Subject to technical modifications.

Viessmann Werke GmbH&Co KG
D-35107 Allendorf
Telephone: +49 6452 70-0
Fax: +49 6452 70-2780
www.viessmann.com

Viessmann Limited
Hortonwood 30, Telford
Shropshire, TF1 7YP, GB
Telephone: +44 1952 675000
Fax: +44 1952 675040
E-mail: info-uk@viessmann.com

5414 648 GB