

Datasheet

Part no. and prices: See pricelist



VITOCCELL 300-B Type EVBA-A

Floorstanding stainless steel DHW cylinder
With **two indirect coils**; the lower one receives heat input from the solar collectors whilst the upper one is used for reheating by the heat generator as required.

Product information

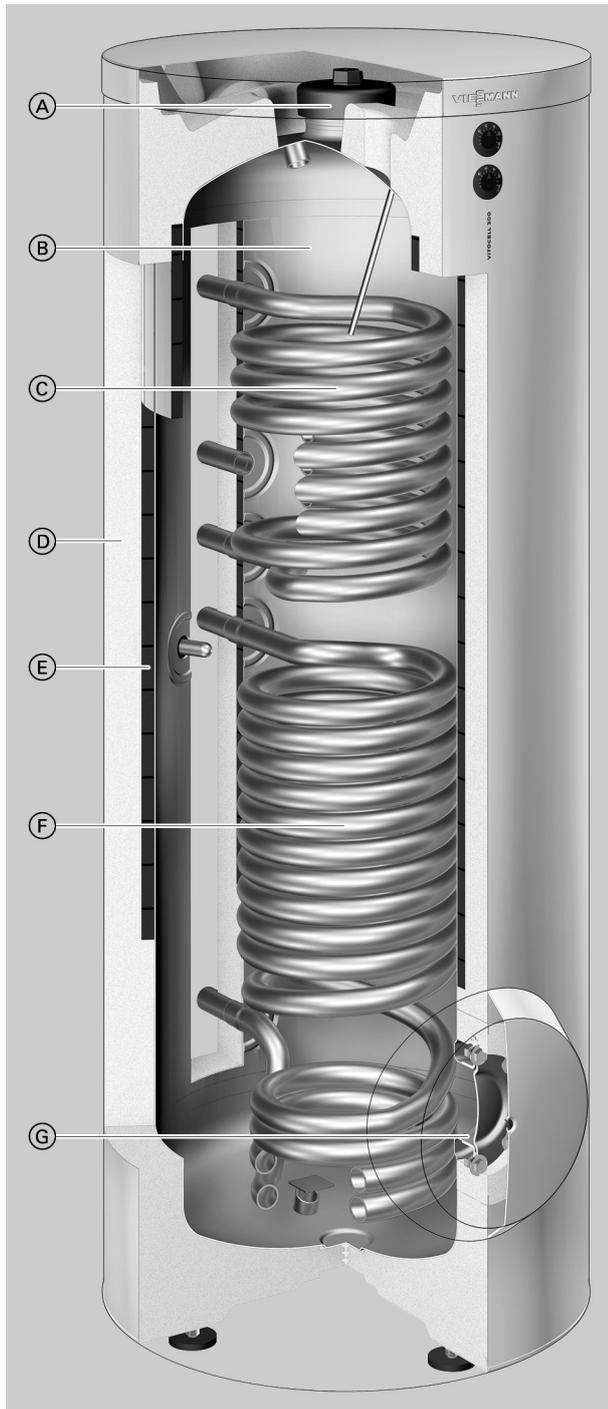
Hygienic, convenient and economical DHW heating in conjunction with solar collectors and a boiler. The heat from the solar collectors is transferred to the DHW by the lower indirect coil.

Benefits at a glance

- Long lasting product thanks to corrosion-resistant stainless steel cylinder.
- Hygienic and made to food hygiene standards with high surface quality.
- Easy to maintain and no protective anode required, meaning no additional running costs.
- Internal indirect coil stretching right down to the cylinder floor heats up the entire water content.
- High DHW convenience through rapid, even heat-up via generously sized indirect coils.
- The DHW cylinder is equipped with vacuum-insulated panels for low heat losses (300 l).
- Easy handling through light weight and removable thermal insulation (500 l).
- For dual mode DHW heating in conjunction with solar collectors and heat generator. The heat from the solar collectors is transferred to the DHW via the lower indirect coil.

Benefits at a glance (cont.)

Vitocell 300-B, type EVBA-A (300 l)



- Ⓐ Upper inspection and cleaning aperture
- Ⓑ Stainless steel cylinder
- Ⓒ Upper indirect coil – DHW is reheated via the indirect coil
- Ⓓ Highly effective all-round thermal insulation
- Ⓔ Vacuum-insulated panel
- Ⓕ Lower indirect coil – connection for solar collectors
- Ⓖ Front inspection and cleaning aperture (also for installation of an immersion heater EHE)

Specification

For DHW heating in conjunction with boilers and solar collectors for dual mode operation.

Suitable for the following systems:

- DHW temperature up to 95 °C
- Heating water flow temperature up to 160 °C

- Solar flow temperature up to 160 °C
- Operating pressure on the heating water side up to 10 bar (1 MPa)
- Operating pressure on the solar side up to 10 bar (1 MPa)
- Operating pressure on the DHW side up to 10 bar (1 MPa)

Type			EVBA-A		EVBA-A	
Cylinder capacity	l		300		500	
Internal indirect coil			upper	lower	upper	lower
DIN registration number			Applied for			
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 l/h	42 1033	51 1247	57 1409	69 1694
	80 °C	kW l/h	35 860	42 1039	48 1175	59 1414
	70 °C	kW l/h	28 684	34 827	38 936	46 1128
	60 °C	kW l/h	20 501	25 607	28 687	34 830
	50 °C	kW l/h	12 294	15 358	16 406	20 493
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 l/h	36 613	43 740	49 838	59 1011
	80 °C	kW l/h	28 482	34 584	38 662	46 799
	70 °C	kW l/h	20 340	24 413	27 469	33 568
Heating water flow rate for the stated continuous outputs		m ³ /h	3.0	3.0	3.0	3.0
Max. connectable heat pump output At a heating water flow temperature of 55 °C and a DHW temperature of 45 °C For the specified heating water flow rate (both indirect coils connected in series)		kW		8.0		10.0
Standby heat loss		kWh/24 h		1.06		1.37
Standby capacity V_{aux}		l		139		235
Solar capacity V_{sol}		l		161		265
Dimensions						
Length a (Ø)	– Incl. thermal insulation	mm		667		1022
		mm		–		715
Width b	– Incl. thermal insulation	mm		744		1084
		mm		–		954
Height c	– Incl. thermal insulation	mm		1734		1852
		mm		–		1667
Height when tilted	– Incl. thermal insulation	mm		1825		–
		mm		–		1690
Weight incl. thermal insulation		kg		113		123
Heating water capacity		l	6.7	11.0	10.0	12.9
Heating surface		m ²	0.9	1.5	1.3	1.7
Connections (male thread)						
Indirect coils	R			1		1
Cold water, DHW	R			1		1¼
DHW circulation	R			1		1
Energy efficiency class			A		A	

Information regarding the upper indirect coil

The upper indirect coil is designed for connection to a heat generator.

Information regarding the lower indirect coil

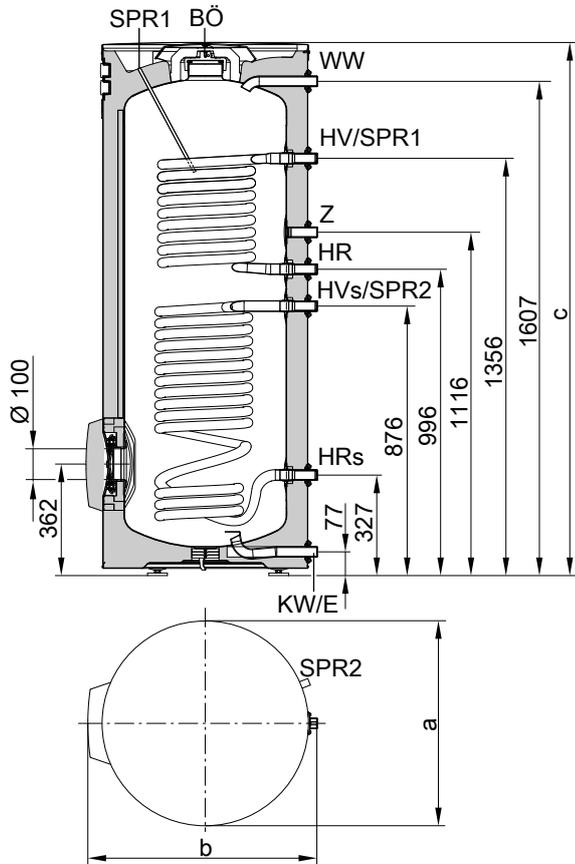
The lower indirect coil is designed for connection to solar collectors. To install the cylinder temperature sensor, use the threaded elbow with sensor well included in standard delivery.

Information regarding continuous output

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

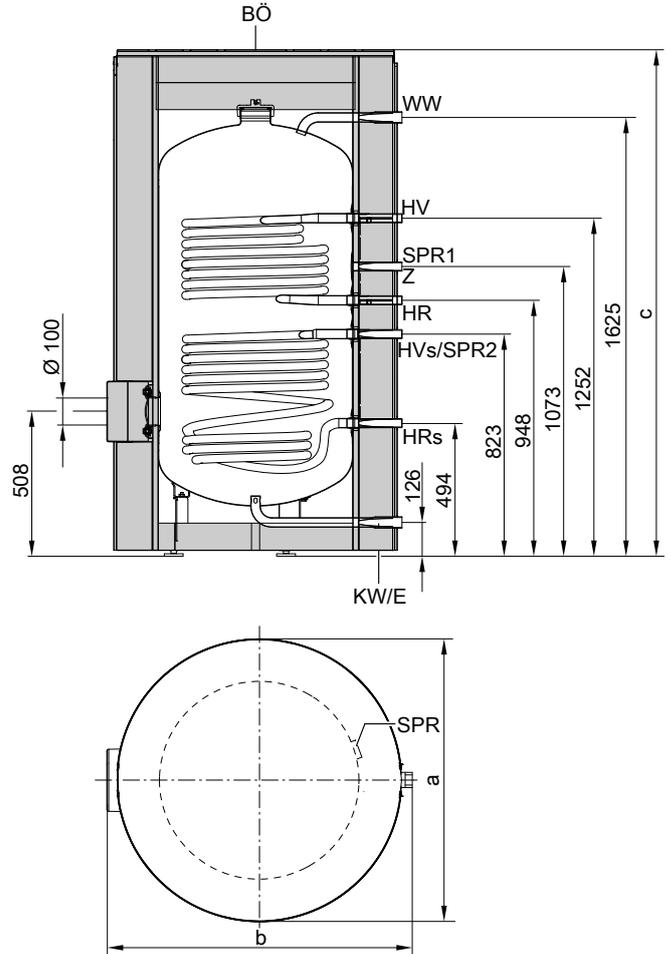
Specification (cont.)

300 l capacity



- BÖ Inspection and cleaning aperture
- E Drain
- HR Heating water return
- HR_s Heating water return, solar thermal system
- HV Heating water flow
- HV_s Heating water flow, solar thermal system
- KW Cold water
- SPR1 Sensor well for cylinder temperature sensor of cylinder temperature controller (internal diameter 7 mm)
- SPR2 Sensor well for cylinder temperature sensor/thermometer sensor (internal diameter 17 mm)
- WW DHW
- Z DHW circulation

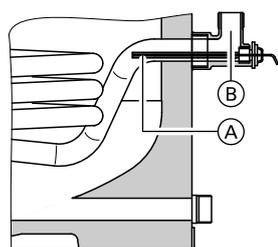
500 l capacity



- BÖ Inspection and cleaning aperture
- E Drain
- HR Heating water return
- HR_s Heating water return, solar thermal system
- HV Heating water flow
- HV_s Heating water flow, solar thermal system
- KW Cold water
- SPR1 Cylinder temperature controller cylinder temperature sensor (clamping system for fixing immersion temperature sensors to the cylinder jacket)
- SPR2 Temperature sensors/thermometer sensors (clamping system for securing immersion temperature sensors to the cylinder jacket)
- WW DHW
- Z DHW circulation

Specification (cont.)

Cylinder temperature sensor for solar operation



- (A) Cylinder temperature sensor (standard delivery of solar control unit)
- (B) Threaded elbow with sensor well (standard delivery)

Arrangement of cylinder temperature sensor in the heating water return HR_s

Performance factor N_L

To DIN 4708 – upper indirect coil.

Cylinder storage temperature $T_{cyl} = \text{cold water inlet temperature} + 50 \text{ K}^{+5 \text{ K}/-0 \text{ K}}$

Cylinder capacity	I	300	500
Performance factor N_L at heating water flow temperature			
90 °C		2.4	7.0
80 °C		2.2	6.5
70 °C		2.0	6.0

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 the performance factor N_L .

DHW heating from 10 to 45 °C.

Cylinder capacity	I	300	500
Peak output (l/10 min) at heating water flow temperature			
90 °C		211	404
80 °C		203	333
70 °C		195	319

Max. draw-off rate (over 10 minutes)

Relative to the performance factor N_L .

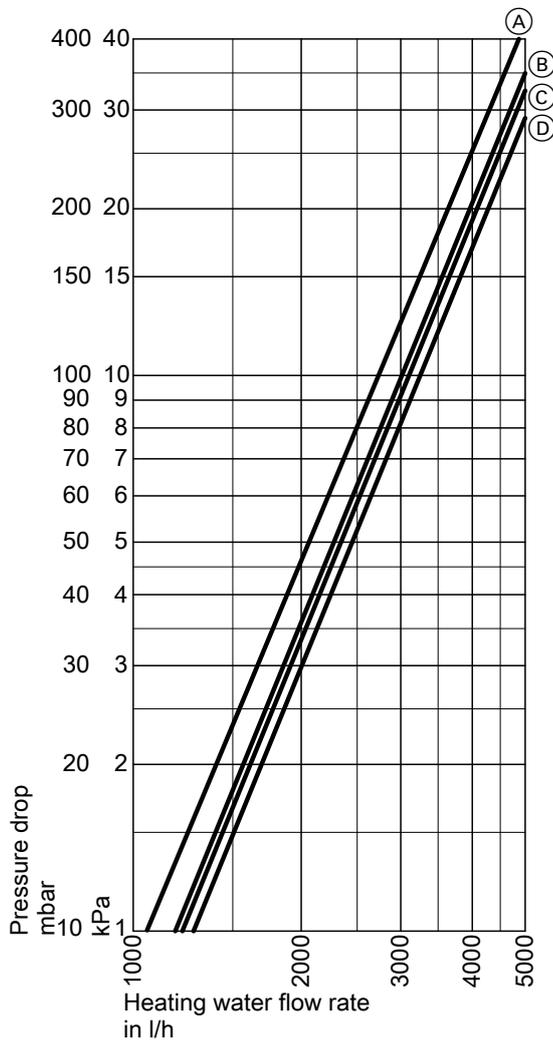
With reheating.

DHW heating from 10 to 45 °C.

Cylinder capacity	I	300	500
Max. draw-off rate (l/min) at heating water flow temperature			
90 °C		21.1	40.4
80 °C		20.3	33.3
70 °C		19.5	31.9

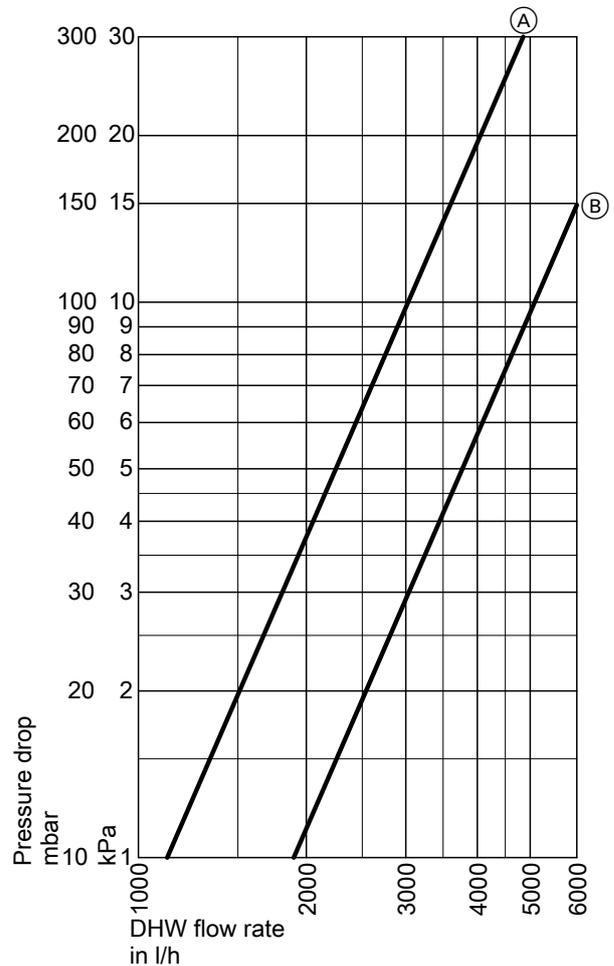
Specification (cont.)

Pressure drops



Pressure drop on the heating water side

- (A) Cylinder capacity 300 l (lower indirect coil)
- (B) Cylinder capacity 300 l (upper indirect coil)
- (C) Cylinder capacity 500 l (lower indirect coil)
- (D) Cylinder capacity 500 l (upper indirect coil)



Pressure drop on the DHW side

- (A) Cylinder capacity 300 l
- (B) Cylinder capacity 500 l

Delivered condition

Vitocell 300-B, type EVBA-A

300 litre capacity

DHW cylinder made from stainless steel.

- Integral welded sensor well (internal diameter 7 mm) for cylinder temperature sensor
- Integral welded sensor well for temperature sensors or thermometer sensors (internal diameter 17 mm)
- Threaded elbow with sensor well (internal diameter 6.5 mm)
- 2 thermometers
- Adjustable feet
- Fitted thermal insulation

Colour of the epoxy-coated sheet steel casing: Vitosilver

Vitocell 300-B, type EVBA-A

500 litre capacity

DHW cylinder made from stainless steel.

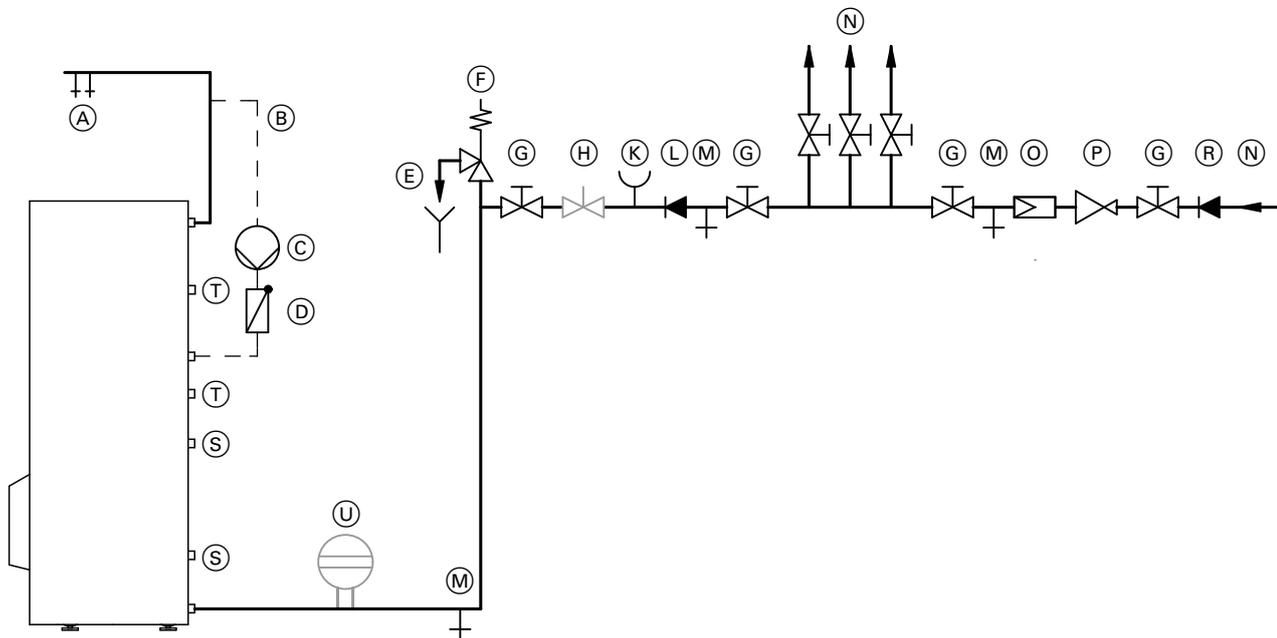
- 2 clamping systems for fixing immersion temperature sensors to the cylinder body (3 fixing points per clamping system)
- Threaded elbow with sensor well (internal diameter 6.5 mm)
- 2 thermometers
- Adjustable feet
- Removable thermal insulation

Colour of the plastic-coated thermal insulation: Vitosilver

Design information

Connection on the DHW side

Connection to DIN 1988



- | | |
|---|--|
| (A) DHW | (M) Drain outlet |
| (B) DHW circulation pipe | (N) Cold water |
| (C) DHW circulation pump | (O) Drinking water filter |
| (D) Spring-loaded check valve | (P) Pressure reducer |
| (E) Visible discharge pipe outlet point | (R) Non-return valve/pipe separator |
| (F) Safety valve | (S) Lower indirect coil, provided for connection to solar collectors or heat pumps
(observe the maximum connectable heat pump output) |
| (G) Shut-off valve | (T) Upper indirect coil, provided for connection to a boiler or heat pumps
(observe the maximum connectable heat pump output) |
| (H) Flow regulating valve
(installation recommended) | (U) Diaphragm expansion vessel, suitable for potable water |
| (K) Pressure gauge connection | |
| (L) Non-return valve | |

The safety valve must be installed.

Recommendation: Install the safety valve higher than the top edge of the cylinder. This means the DHW cylinder will 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 specifies the installation of a type-tested high limit safety cut-out in the DHW cylinder, which restricts 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 surfaces (DHW/heat transfer medium) correspond to version C to DIN 1988-200.

Design information (cont.)

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

Part no. 7180 662, 10 bar (1 MPa)
AT: Part no. 7179 666, 6 bar (0.6 MPa)

- DN 20/R 1
- Max. heat input: 150 kW



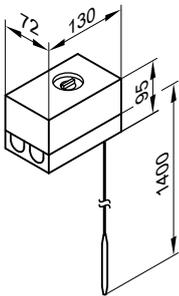
Components:

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

Temperature controller

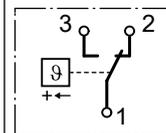
Part no. 7151 989

- With a thermostatic system
- With selector on the outside of the casing
- Without sensor well
- With top-hat rail to be fitted to the DHW cylinder or the wall



Specification

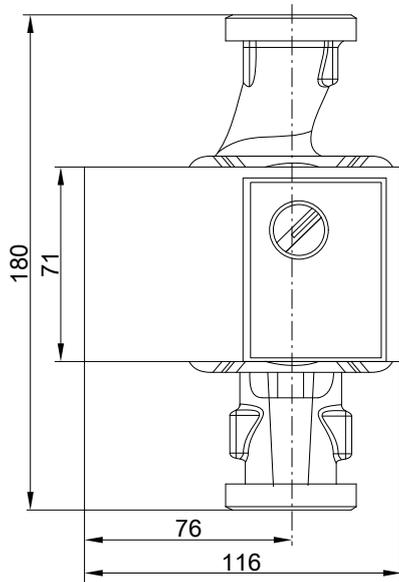
Connection	3-core lead with a cross-section of 1.5 mm ²
IP rating	IP 41 to EN 60529
Setting range	30 to 60 °C, adjustable up to 110 °C
Switching differential	Max. 11 K
Breaking capacity	6 (1.5) A 250 V~
Switching function	with rising temperature from 2 to 3



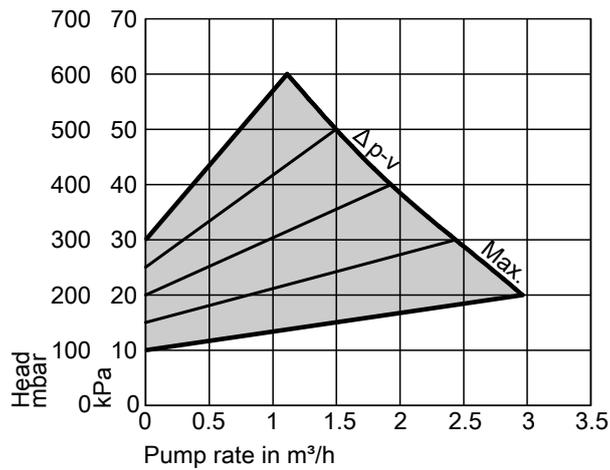
DIN registration number	DIN TR 1168
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Circulation pump for cylinder heating

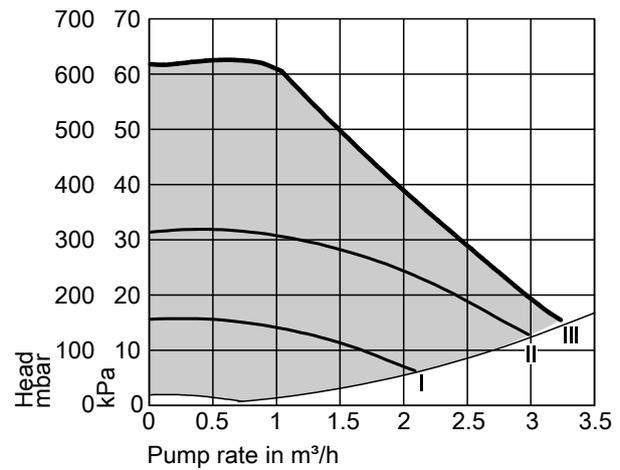
Part no. 7172 611 and 7172 612



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 for boilers	m 5.0 up to 40 kW	5.0 from 40 to 70 kW



Δp-v (variable)

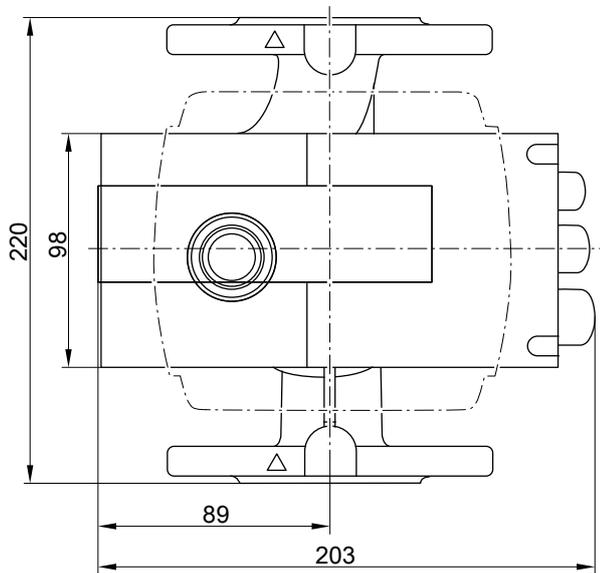


Δp-c (constant)

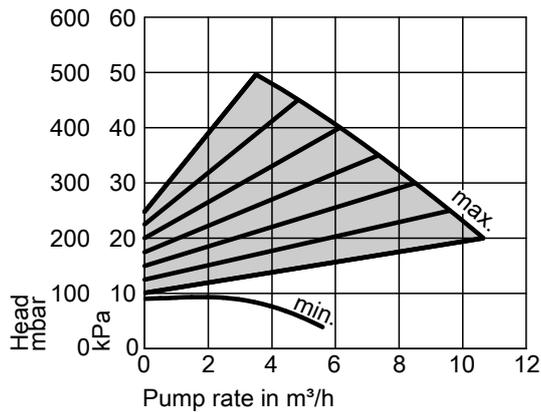
Accessories (cont.)

Circulation pump for cylinder heating

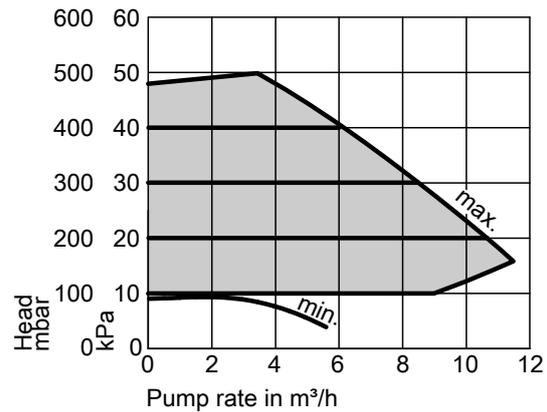
Part no. 7172 613



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	



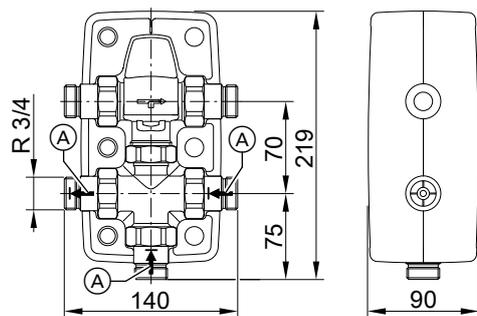
Δp -v (variable)



Δp -c (constant)

Thermostatic DHW circulation set

Part no. ZK01 284



For limiting the DHW outlet temperature in DHW heating systems with DHW circulation pipe

- Thermostatic mixing valve with bypass line
- Integral non-return valves
- Removable insulation shells

Specification

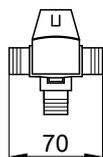
Connections	R	3/4
Weight	kg	1.45
Temperature range	°C	35 to 60
Max. temperature of the medium	°C	95
Operating pressure	bar	10
	MPa	1

Ⓐ Non-return valve

Accessories (cont.)

Automatic thermostatic mixing valve

Part no. 7438 940



For limiting the DHW outlet temperature in DHW heating systems without DHW circulation pipe.

Specification

Connections	G	1
Temperature range	°C	35 to 60 °C
Max. temperature of the medium	°C	95
Operating pressure	bar/MPa	10/1.0

Immersion heater EHE

Selectable heating output: 2, 4 or 6 kW

■ 300 l: Part no. Z012 680

■ 500 l: Part no. Z012 681

■ With high limit safety cut-out and temperature controller

■ Only for use with soft to medium hard water up to 14 °dH (hardness level 2 / 2.5 mol/m³)

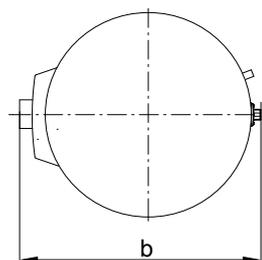
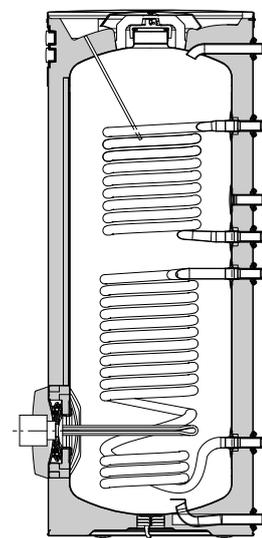
Current type and rated voltage 3/N/PE 400 V/50 Hz

IP rating: IP 44

Rated consumption in standard mode/during quick heat-up	kW	2	4	6	
Rated current	A	8.7	17.4	8.7	
Heat-up time from 10 to 60 °C	300 l	h	7.1	3.6	2.4
	500 l	h	11.0	5.5	3.7

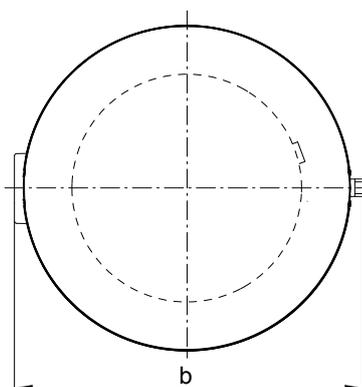
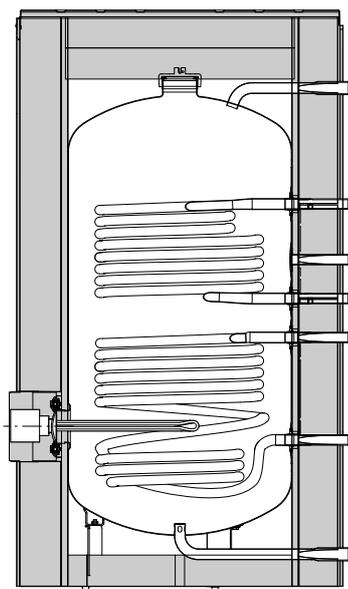
DHW cylinder with an immersion heater EHE

Cylinder capacity	l	300	500
Content that can be heated with an immersion heater	l	245	379
Dimensions			
Width b (with immersion heater)	mm	830	1103
Minimum wall clearance for the installation of an immersion heater EHE	mm	730	670
Weight			
Immersion heater EHE	kg	2	2



300 l capacity

Accessories (cont.)



500 l capacity

Subject to technical modifications.

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