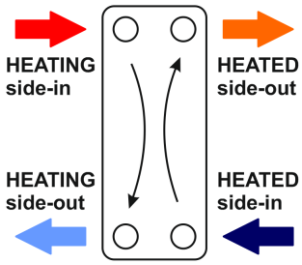
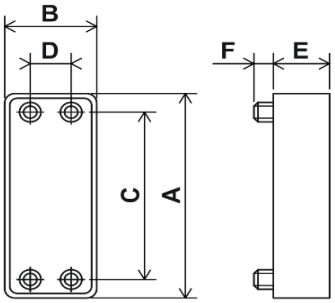
DATA SHEET

Plate heat exchanger DV503, insulated

Dimensions



Dimensions



Main features	
Application	suitable esp. for continuous DHW heating or large solar thermal systems due to its design
Description	consisting of thin pressed stainless-steel plates, copper soldered, it comes in thermal insulation
Working fluid	water, antifreeze fluid for heating and solar thermal systems and heat pumps

Codes	
11045	*DV503-20E*
10495	*DV503-40E*
10496	*DV503-60E*

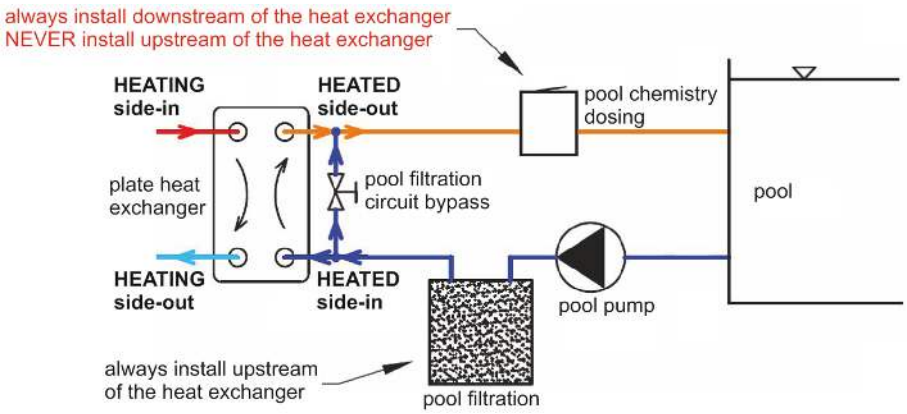
Technical data			
Type	**DV503-20E**	**DV503-40E**	**DV503-60E**
Number of plate	20	40	60
Heat-exchange surface	1,10 m²	2,20 m²	3,30 m²
Liquid volume (heating)	1,20 l	2,30 l	3,40 l
Max. working pressure	1,20 l	2,30 l	3,40 l
Max. working pressure	12 bar		
Max. working temp.	185 / 150 / 175 °C *		

** without insulation / with insulation permanent / with insulation short term*

Materials	
Heat exchanger	AISI 316 L
Insulation	EPDM

Dimensions with insulation and weight			
Size of connection pipes	G 1" M	G 1" M	G 1" M
Height (dim. A)	533 mm	533 mm	533 mm
Width (dim. B)	153 mm	153 mm	153 mm
Thickness (dim. E)	90 mm	130 mm	195 mm
Pitch (dim. C)	445 mm	445 mm	445 mm
Pitch (dim. D)	70 mm	70 mm	70 mm
Socket height (dim. F)	23 mm	23 mm	23 mm
Weight incl. insulation	11 kg	14 kg	19 kg

Connection of the heat exchanger with a pool by-pass



The heat exchangers are designed individually on order, based on the specific parameters of a heating system.

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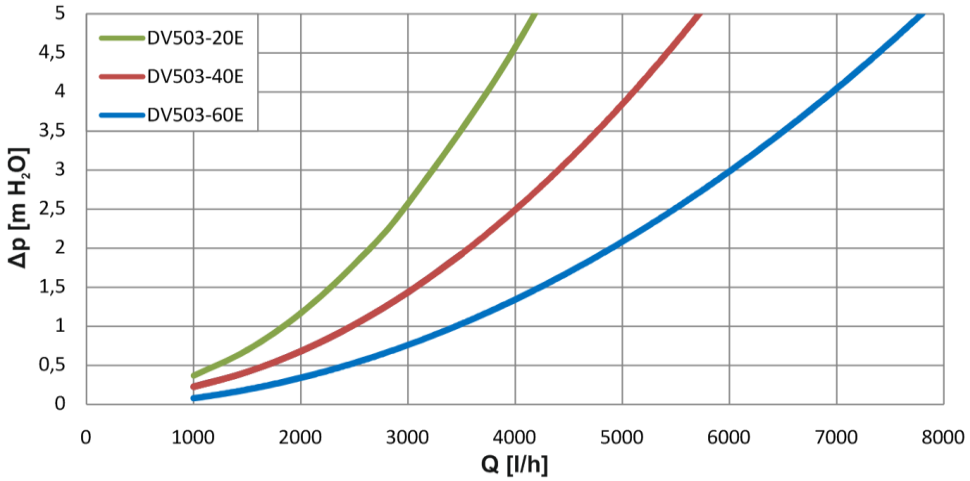
Pressure drop of the heat exchangers



Calculations

Output curves

$$P = \dot{m}_1 \cdot c_1 \cdot \Delta T_1 = \dot{m}_2 \cdot c_2 \cdot \Delta T_2 \ [W]$$

Mean temperature drop of a heat exchanger ΔTstř:

$$\Delta T_{stř} = \frac{\Delta T_1 - \Delta T_2}{ln \frac{\Delta T_1}{\Delta T_2}} \ [W]$$

WHERE:

$m_{1,2}$ [kg/s] … mass fluid flow rate on the primary (1) and secondary (2) sides

$\Delta T_{1,2}$ [K] … temp. diff. between the incoming and outgoing temp. of the primary (1) and secondary (2) side of a H.E.

$c_{1,2}$ [J/kg·K] … specific heat capacity

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