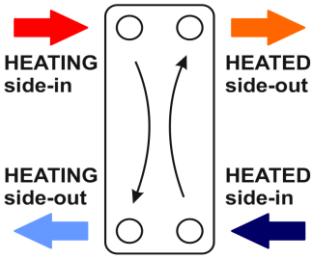
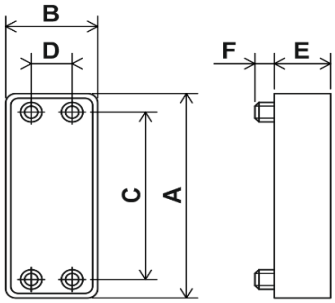
DATA SHEET

Plate heat exchanger DV800, insulated

Inlet / outlet marking



Dimensions



Main features	
Application	suitable for large solar thermal systems, district heating transfer stations or high-performance 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	
10490	*DV800-30E*
10491	*DV800-50E*

Technical data

Type	DV800-30E	DV800-50E
Number of plate	30	50
Heat-exchange surface	4,80 m²	8,00 m²
Liquid volume (heating)	4,40 l	7,70 l
Liquid volume (heated)	4,40 l	7,70 l
Max. working pressure	10 bar	6 bar
Max. working temp.	185 / 150 / 175 °C *	

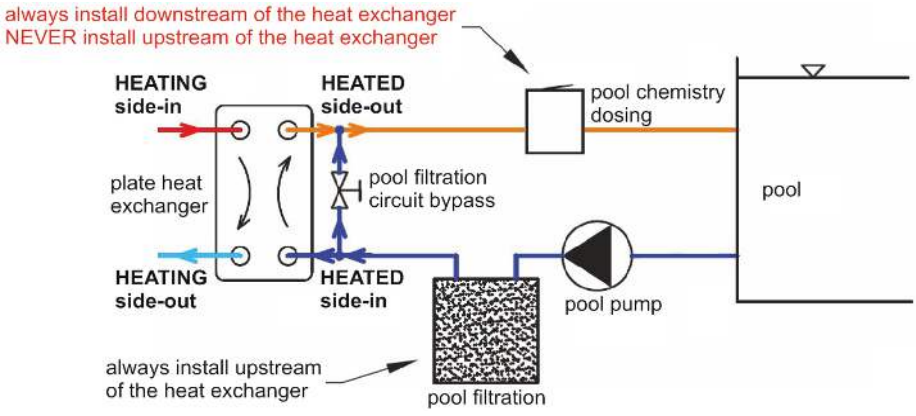
** without insulation / with insulation permanent / with insulation short term*

Materials	
Heat exchanger	AISI 316 L
Insulation	EPDM

Dimensions with insulation and weight

Size of connection pipes	G 2" M	G 2" M
Height (dim. A)	605 mm	605 mm
Width (dim. B)	310 mm	310 mm
Thickness (dim. E)	115 mm	165 mm
Pitch (dim. C)	475 mm	475 mm
Pitch (dim. D)	185 mm	185 mm
Socket height (dim. F)	35 mm	35 mm
Weight incl. insulation	34 kg	47 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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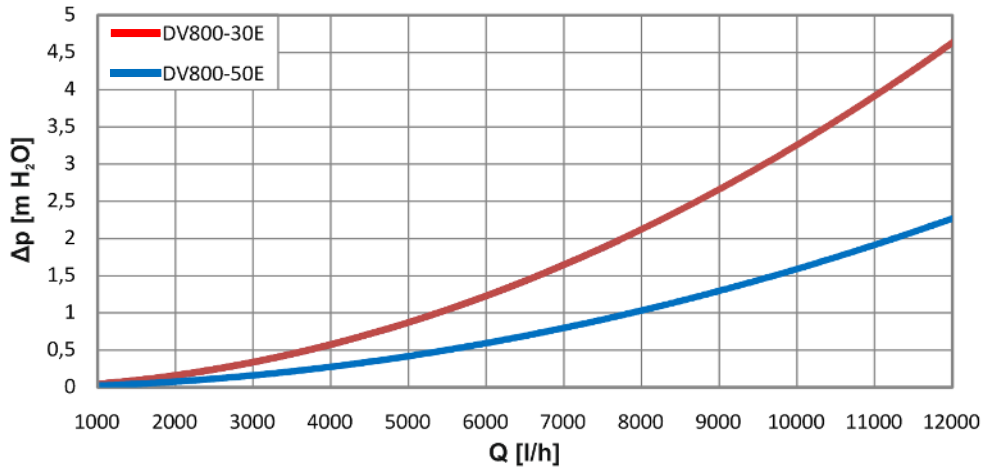
Pressure drop of the heat exchangers



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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