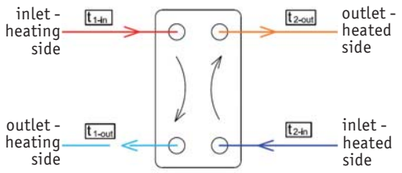
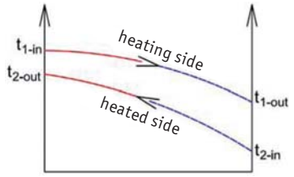
Simplified medium difference between the primary and secondary circuit of a heat exchanger

$$\Delta T_{stf} = \frac{(t_{1\text{-in}} - t_{1\text{-out}})}{2} - \frac{(t_{2\text{-in}} - t_{2\text{-out}})}{2} \quad [K]$$





Technical data for DV503 insulated heat exchangers

Model		DV503-20	DV503-40	DV503-60
Number of plates		20	40	60
Dimensions h × w × th	[mm]	533 × 153 × 105	533 × 153 × 146	533 × 153 × 195
Weight	[kg]	9	13	17
Heat transfer surface area	[m²]	1.1	2.2	3.3
Max. pressure	[bar]	12		
Max. temperature	[°C]	150 °C/175 °C (short term)		
Material		AISI 316 L		

Due to their design, heat exchangers of DV503 series are especially suitable for instantaneous DHW heating or for large solar systems. We offer heat exchanger sizing individually upon request, based on specific parameters of a heating system.

Technical data for DV800 insulated heat exchangers

Model		DV800-30	DV800-50
Number of plates		30	50
Dimensions h × w × th	[mm]	605 × 310 × 115	605 × 310 × 165
Weight	[kg]	33	46
Heat transfer surface area	[m²]	4.8	8
Max. pressure	[bar]	10	6
Max. temperature	[°C]	150 °C/175 °C (short term)	
Material		AISI 316 L	

Due to their design, heat exchangers of DV800 series are suitable for large solar systems, district heating transfer stations or high output systems. We offer heat exchanger sizing individually upon request, based on specific parameters of a heating system.

Heat exchangers of DV800 series are not designed for use with salt water pools.

Other heat exchanger types are supplied upon order, incl. gasket heat exchangers that can be disassembled and cleaned.

Pressure drop, performance characteristics at different flow rates and temperature differences and other technical data on these heat exchangers are available in the respective data sheets and at **www.regulus.eu**.

v1.0-05/2011

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DV Plate Heat Exchangers

Regulus

Energy-saving solutions

Application of DV plate heat exchangers

Plate heat exchangers are designed for efficient heat transfer between various fluids. They are made of thin, pressed stainless-steel sheets in AISI 316L quality and soldered with copper. In order to reduce heat loss they are fitted with Aeroflex insulation that resists even 175 °C in short term and can be used with solar systems.

Typical application examples:

» Accumulation tank heating from a solar system «
» Storage water heater heating from a solar system «
» Instantaneous water heating by an accumulation tank or boiler «
» Pool heating by a solar system «
» Pool heating by a boiler or heat pump «

Technical data for DV193 and DV285 insulated heat exchangers

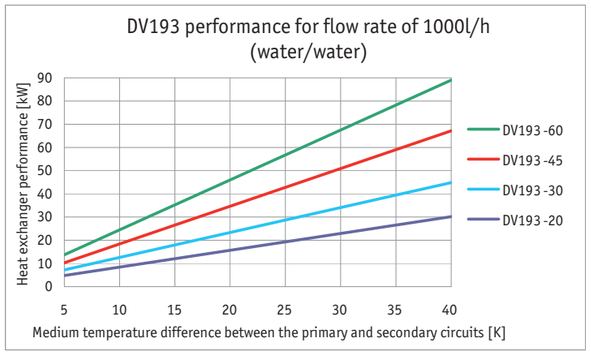
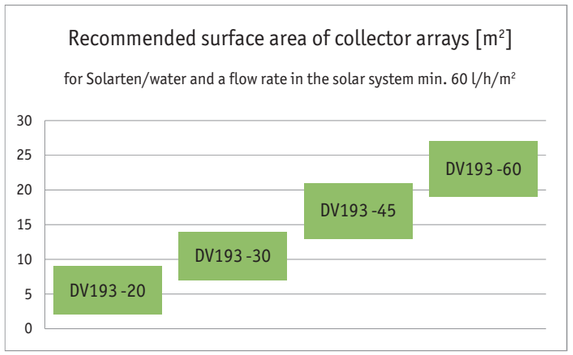
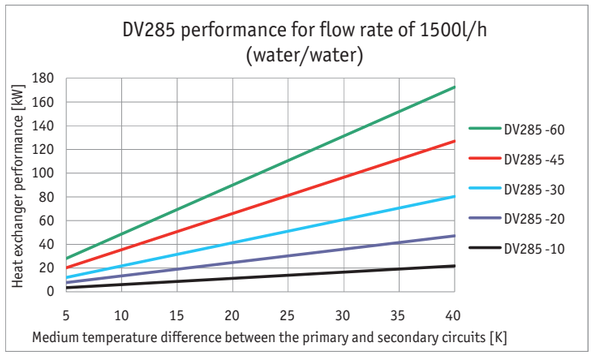
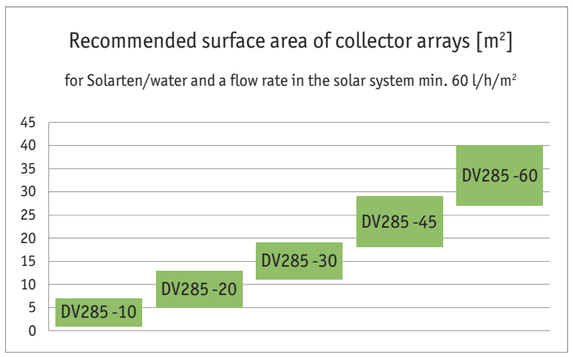
Model		DV193-20	DV193-30	DV193-45	DV193-60
Number of plates		20	30	45	60
Dimensions h × w × th	[mm]	223 × 113 × 80	223 × 113 × 102	223 × 113 × 135	223 × 113 × 168
Weight	[kg]	1.4	2	2.8	3.6
Heat transfer surface area	[m²]	0.28	0.42	0.63	0.84
Max. pressure	[bar]	29,4			
Max. temperature	[°C]	150 °C/175 °C (short term)			
Material		AISI 316 L			

Model		DV285-10	DV285-20	DV285-30	DV285-45	DV285-60
Number of plates		10	20	30	45	60
Dimensions h × w × th	[mm]	315 × 135 × 70	315 × 135 × 95	315 × 135 × 120	315 × 135 × 150	315 × 135 × 190
Weight	[kg]	2.7	4	5.2	7	8.9
Heat transfer surface area	[m²]	0.27	0.54	0.81	1.22	1.62
Max. pressure	[bar]	29,4				
Max. temperature	[°C]	150 °C/175 °C (short term)				
Material		AISI 316 L				

Performance parameters of DV193 and DV285 plate heat exchangers

Performance of a heat exchanger changes with many factors, esp. with the difference between temperatures of fluids in the two circuits and with fluid type. That is why a heat exchanger performance cannot be presented without specifying its working conditions. Generally speaking, the higher the temperature difference between the primary and secondary sides and the higher the flows on both sides of the heat exchanger, the higher performance the heat exchanger shows. The higher temperature drop is designed for the heat exchanger, the smaller its needed heat exchange surface area is, which brings lower investment costs.

For applications with a solar system, heat pump or a condensing boiler, it is necessary to use a heat exchanger for a low temperature drop (6 °C, max. 10 °C). Higher temperature drop means a higher working temperature of the solar system or heat pump and its worse efficiency /COP.

For applications with a current gas boiler or a solid-fuel boiler, a heat exchanger for a higher temperature drop can be used (e.g. 20 °C or even more). This means a smaller and less costly one because the efficiency of the source does not drop with its higher working temperature.

Performance characteristics of individual heat exchangers at different temperatures and flow-rate parameters are available in data sheets of the individual heat exchangers and at **www.regulus.eu**.