

SPHERICAL EXCHANGER



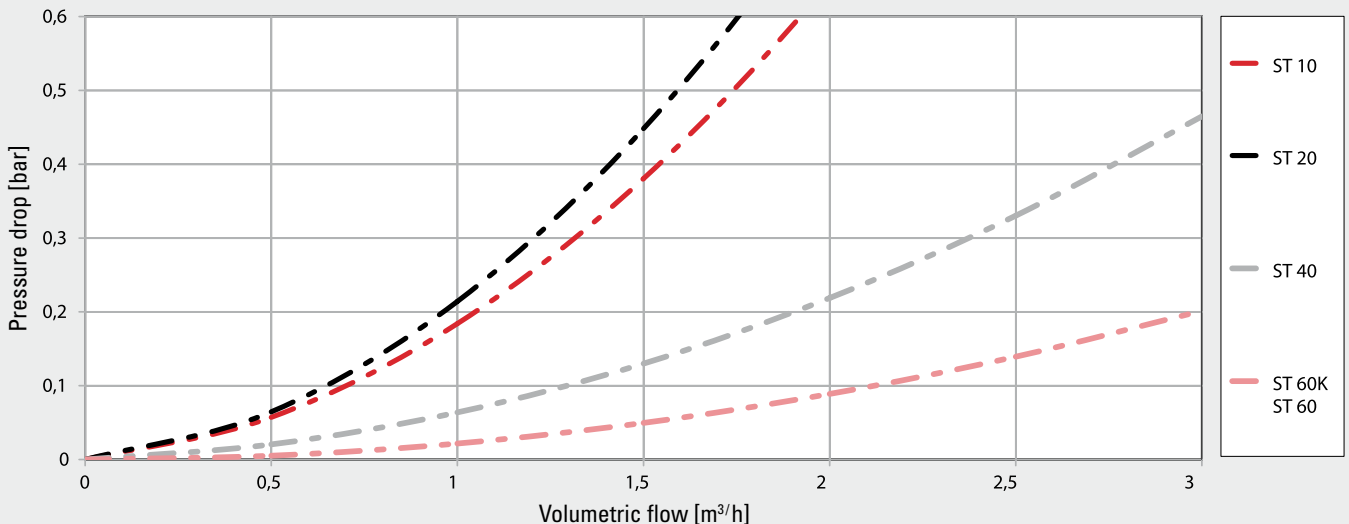
Spherical exchanger for solar stratified tank Pro-Clean® / 2WR / Pro-Heat

The spherical exchanger ensures optimum charging of the stratified tank. Includes an integrated copper finned tube heat exchanger.

General information

Type	ST 10	ST 20	ST 40	ST 60	ST 60K
Item no.	1620093	1620094	1620095	1620003	1620002
Material	Housing: S 235 JR/heat exchanger: Cu				
Installation	Install via flange to Pro-Clean® and Pro-Heat tank				
Housing	3 bar / 110°C				
Max. operating pressure / max temp.	3 bar / 110°C				
Heat exchanger	10 bar / 110°C				
Max. operating pressure / max temp.	10 bar / 110°C				
Height without insulation	1457 mm		1927 mm		1457 mm
Diameter without insulation	216 mm		300 mm		
Total volume with heat exchanger	32 litres		67.5 litres		
Volume of housing without heat exchanger	29.9 litres	29.6 litres	27.8 litres	60 litres	
Heat exchanger volume	2.1 litres	2.4 litres	4.2 litres	7.5 litres	
Empty weight	40 kg	44 kg	50 kg	59 kg	61 kg
Heat exchanger outer diameter	190 mm		257 mm		
Length (insertion depth) of heat exchanger	570 mm	665 mm	850 mm	980 mm	
Surface area of heat exchanger	2.63 m ²	3.87 m ²	5.5 m ²	9.5 m ²	
Max. recommended collector surface area	10 m ²	20 m ²	40 m ²	60 m ²	

Heat exchanger pressure drop (medium: water)

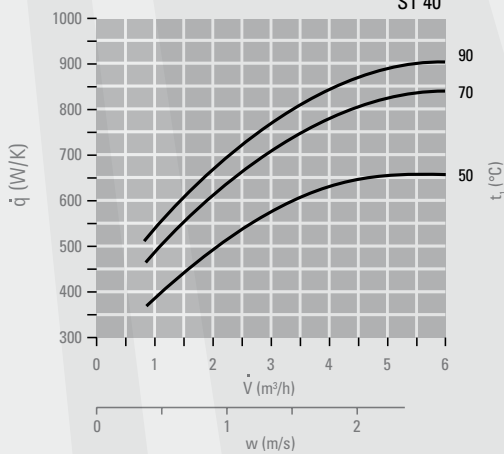
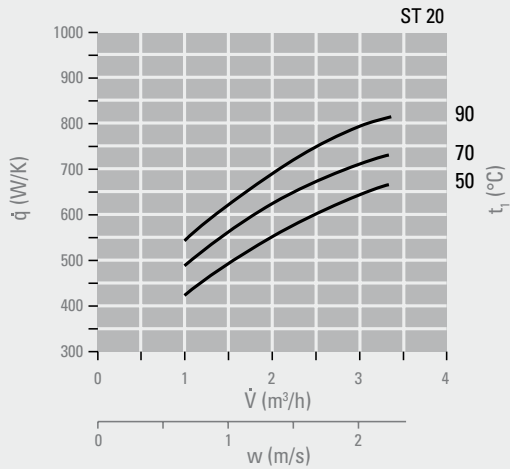
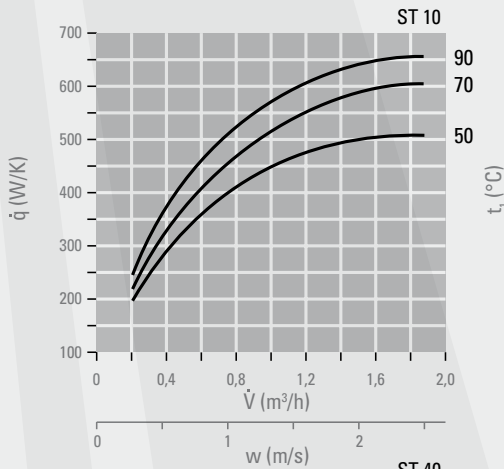


1) All size specifications have a tolerance range of +/- 3%

STRATIFIED TANK ACCESSORIES

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Finned tube heat exchanger performance curves



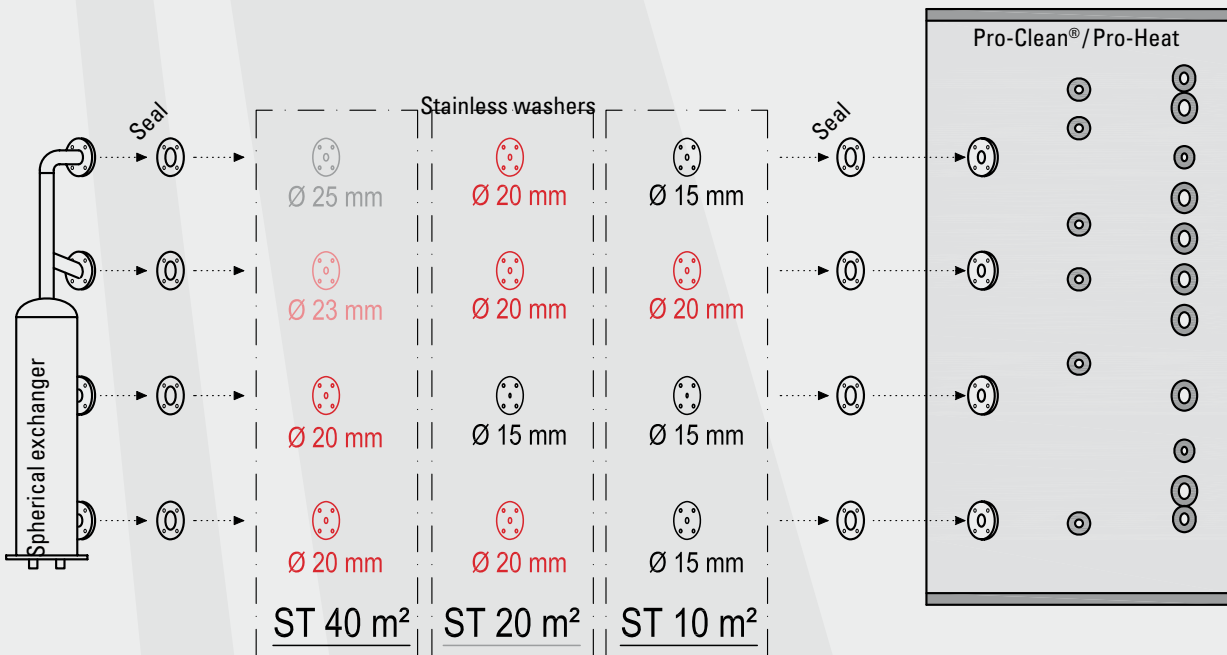
Power

Q [W]	Output to be transferred
q [W/K]	Output per 1 K temperature difference
t1 [°C]	Heating water on entry
ts [°C]	Average tank temperature
V [m³/h]	Heating water volume flow
w [m/s]	Heating water velocity (should not be greater than 1.8 m/s if possible)

Formula for calculation: $Q = f1 \times q \times (t1 - ts)$

f1 = Factor for frost protection: 0.85 (for 40% antifreeze content)

SPHERICAL EXCHANGER INSTALLATION



No layer washers are installed in ST 60 and ST 60K.