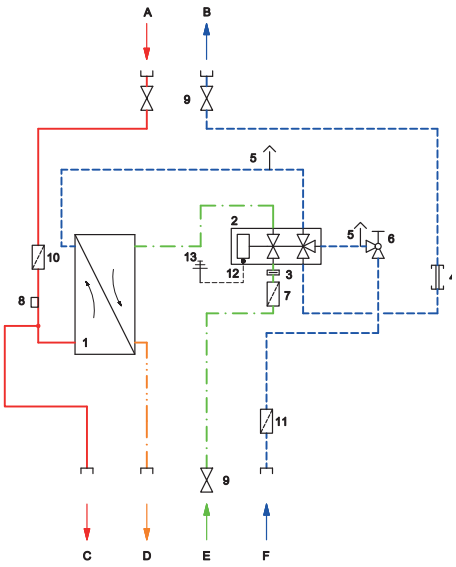
warm up
your system

Thermal replacement unit TES-S1000

TES-S1000-10 ↗ TES-S1000-14 ↗ TES-S1000-20 ↗ TES-S1000-30

↗ Basic unit

↗ Hydraulic diagram

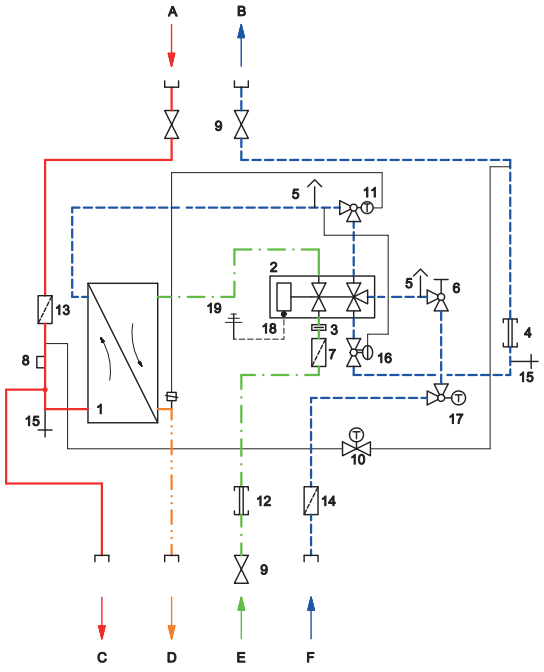


A	Heating flow, primary
B	Heating return, primary
C	Heating flow, secondary
D	Domestic hot water home
E	Drinking water from the line
F	Heating return, secondary

1	Plate heat exchanger GBS-240H-14, GBS-240H-20, GBS-240H-30
2	Proportional quantity controller
3	Cold water orifice (in screw connection)
4	Heat quantity meter adapter (110 mm x DN20)
5	Ventilation
6	Zone valve for limiting heating volume flow – home
7	Cold water dirt trap
8	Sensor pocket Heat quantity meter M10x1, wet submerging
9	Shut-off ball valves
10	Dirt catcher: heating flow from line
11	Dirt catcher: heating return (heating)
12	Connection for potential equalisation
13	Earthing provided on site

↗ Equipment example

↗ Hydraulic diagram



A	Heating flow, primary
B	Heating return, primary
C	Heating flow, secondary
D	Domestic hot water home
E	Drinking water from the line
F	Heating return, secondary
1	Plate heat exchanger
	GBS-240H-10, GBS-240H-14, GBS-240H-20, GBS-240H-30
2	Proportional quantity controller
3	Cold water orifice (in screw connection)
4	Heat quantity meter adapter (110 mm x DN20)
5	Ventilation
6	Zone valve for limiting heating volume flow – home
7	Cold water dirt trap
8	Sensor pocket Heat quantity meter M10x1, wet submerging
9	Shut-off ball valves
10	Thermostatic temperature holding module
11	Thermostatic hot water controller
12	Cold water meter adapter (110 mm x DN 20)
13	Dirt catcher: heating flow from line
14	Dirt catcher: heating return (heating)
15	Emptying, 3/4" hose connection
16	Differential pressure controller, primary, in the unit inlet
17	Return temperature limiter
18	Connection for potential equalisation
19	Earthing provided on site

↗ Technical data

Materials

Fittings	Sanitary/heating: according to DIN 50930 Part 6
Sanitary fittings	CW617N
Heating fittings	CW617N, partially CW614N
Seal	DVGW, VP401 (HTB), KTW and BAM tested and approved
Heat exchanger	Plates: 1.4404 Solder: copper or nickel or without screwed exchanger
Pipeline	Stainless steel: 1.4401

Sanitary

Max. operating pressure	PN 10
min. pre-pressure	2,0 bar

Heating

Max. operating pressure	PN 10
Max. operating temperature	85 °C
Max. primary differential pressure	2,5 bar

Electrical

Power connection	230 V/50 Hz with the use of: zone valve with room thermostat, otherwise functional without power connection

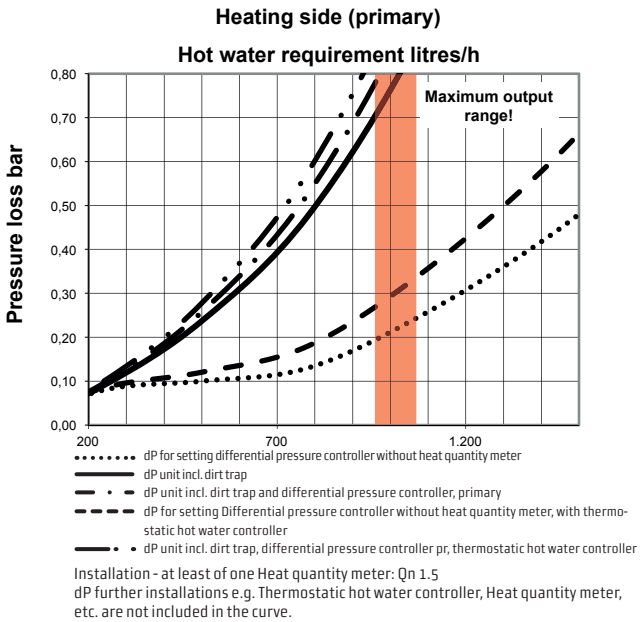
Dimensions

Width x height x depth	435 mm x 600 mm x 150 mm
Weight	12,7 kg - TES-S1000-10 13,2 kg - TES-S1000-14 13,9 kg - TES-S1000-20 15,3 kg - TES-S1000-30

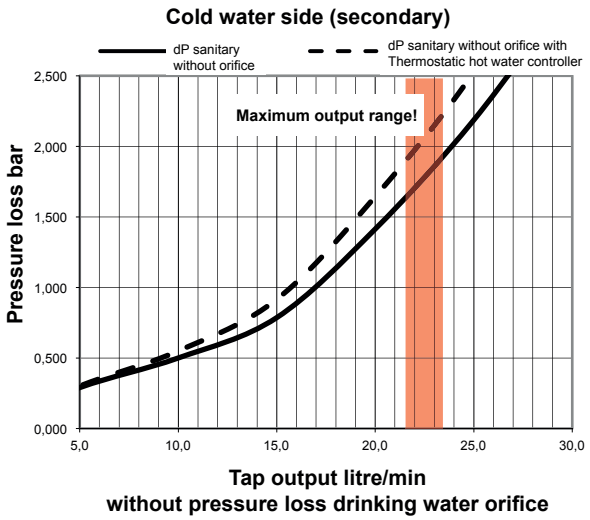
Article no.

102 544 9	TES-S1000-10
102 317 3	TES-S1000-14
102 317 2	TES-S1000-20
102 317 1	TES-S1000-30

↗ Pressure loss TES-S1000-10

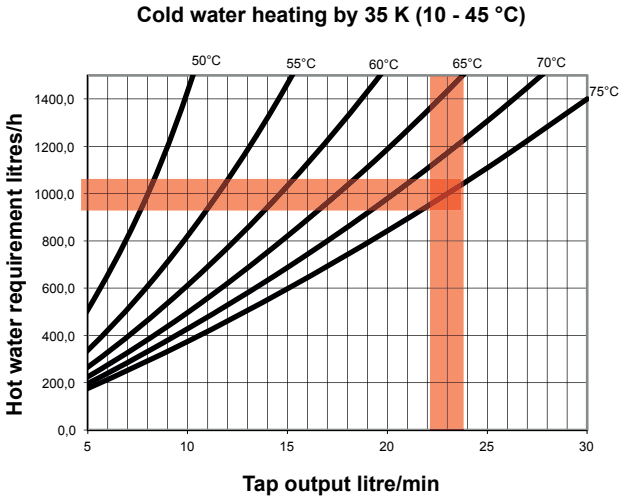


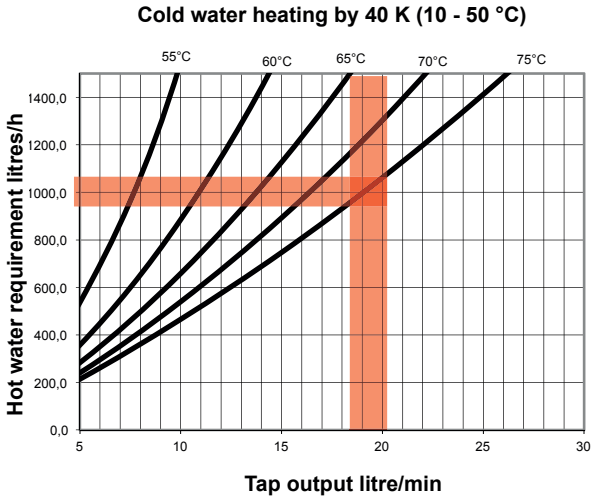
Installation - at least of one Heat quantity meter: Qn 1.5
dP further installations e.g. Thermostatic hot water controller, Heat quantity meter, etc. are not included in the curve.

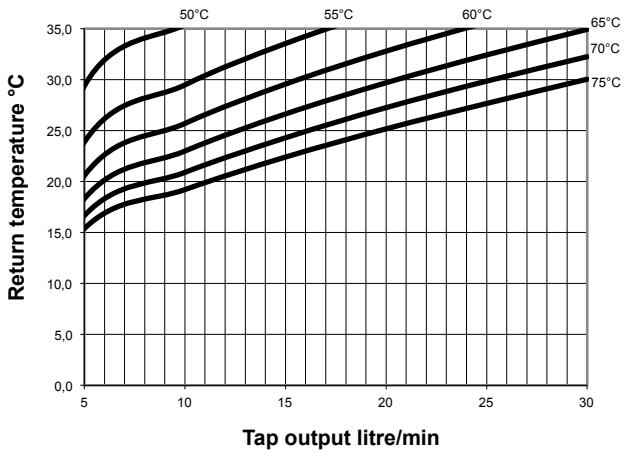


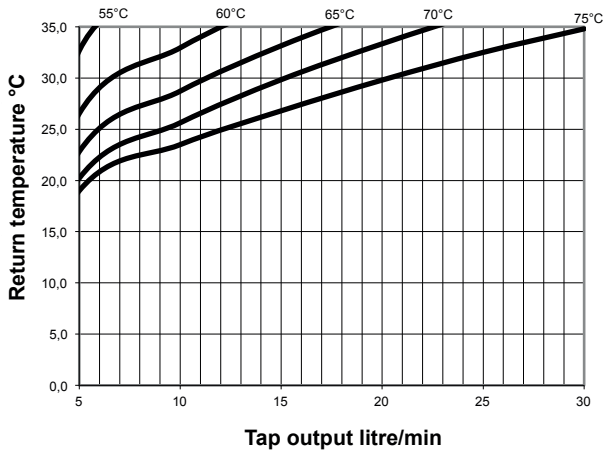
Pressure losses drinking water orifices (add to the diagram):
12 l/min = 0.68 - 0.88 bar; 15 l/min = 0.70 - 0.90 bar; 17 l/min = 0.75 - 0.95 bar

↗ Output curves and return temperatures TES-S1000-10





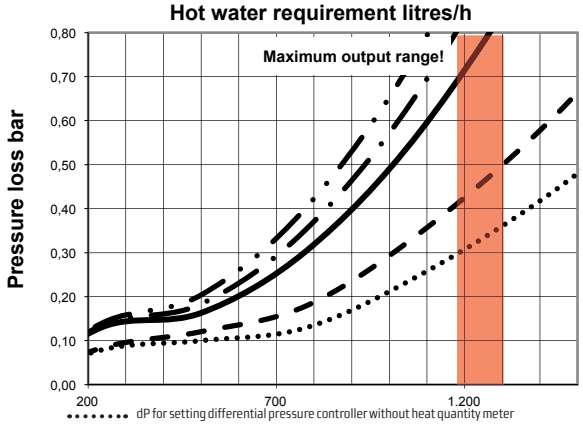




↗ Pressure loss TES-S1000-14

Heating side (primary)

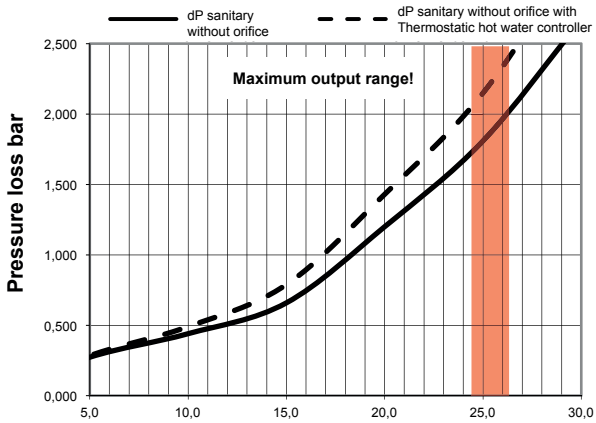
Hot water requirement litres/h



dP for setting differential pressure controller without heat quantity meter
dP unit incl. dirt trap
dP unit incl. dirt trap and differential pressure controller, primary
dP for setting Differential pressure controller without heat quantity meter, with thermo-static hot water controller
dP unit incl. dirt trap, differential pressure controller pr, thermostatic hot water controller

Installation - at least of one Heat quantity meter: Qn 1.5
dP further installations e.g. Thermostatic hot water controller, Heat quantity meter, etc. are not included in the curve.

Cold water side (secondary)

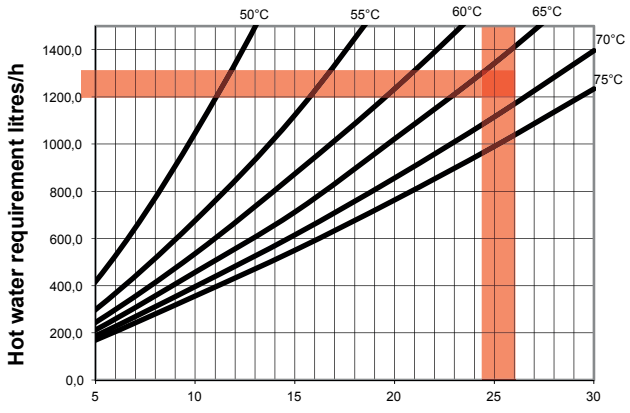


Tap output litre/min
without pressure loss drinking water orifice

Pressure losses drinking water orifices (add to the diagram):
12 l/min = 0.68 - 0.88 bar; 15 l/min = 0.70 - 0.90 bar; 17 l/min = 0.75 - 0.95 bar

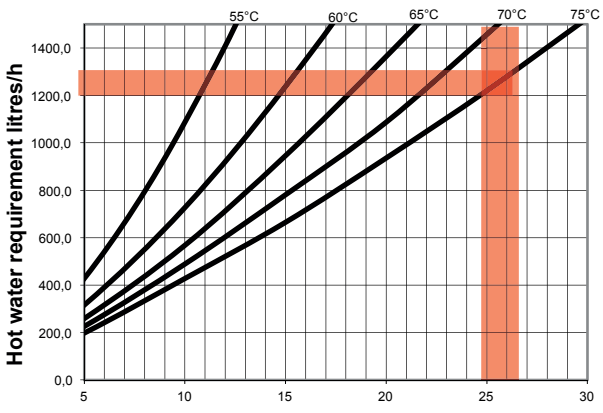
↗ Output curves and return temperatures TES-S1000-14

Cold water heating by 35 K (10 - 45 °C)

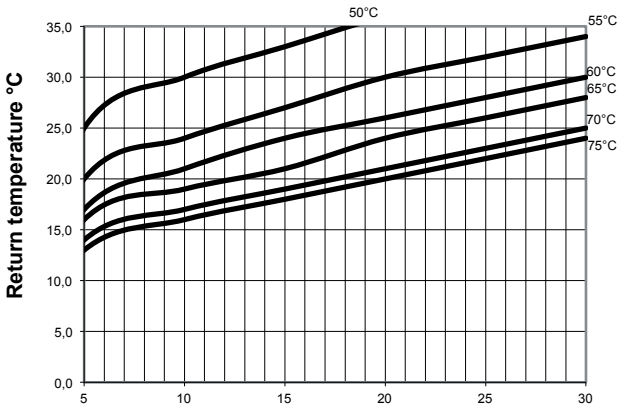


Tap output litre/min

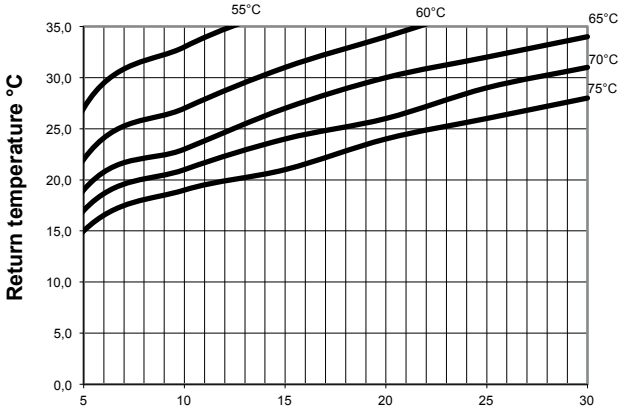
Cold water heating by 40 K (10 - 50 °C)



Tap output litre/min

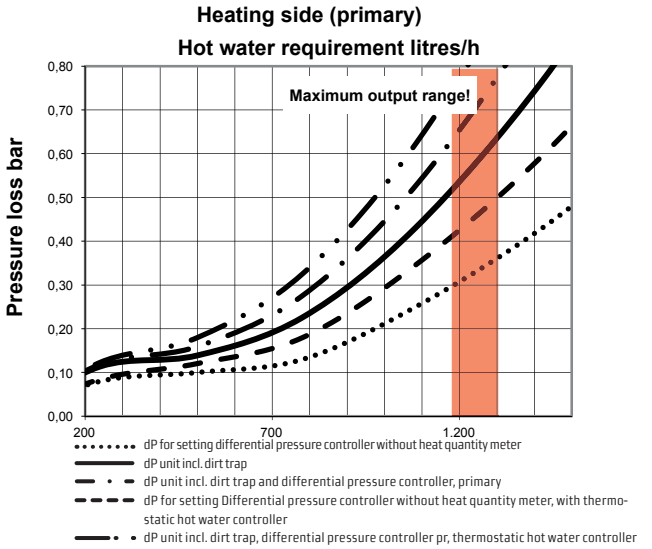


Tap output litre/min

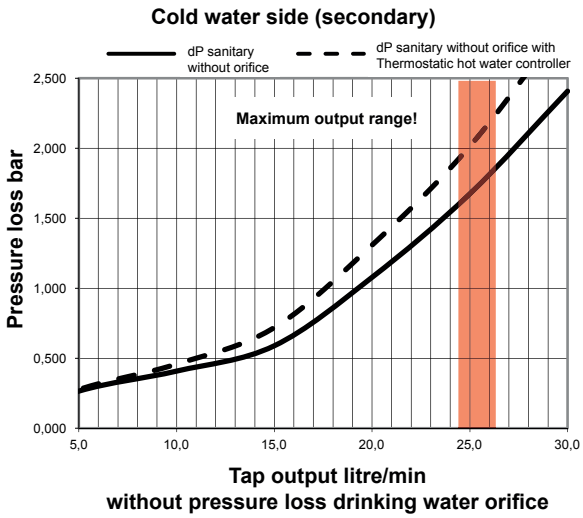


Tap output litre/min

↗ Pressure loss TES-S1000-20



Installation - at least of one Heat quantity meter: Qn 1.5
dP further installations e.g. Thermostatic hot water controller, Heat quantity meter, etc. are not included in the curve.



Pressure losses drinking water orifices (add to the diagram):
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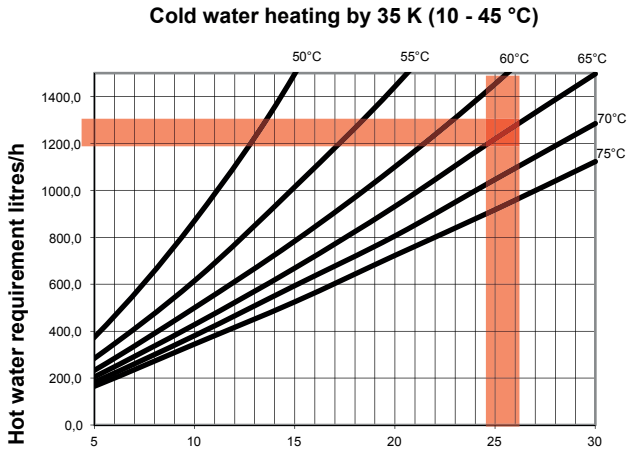
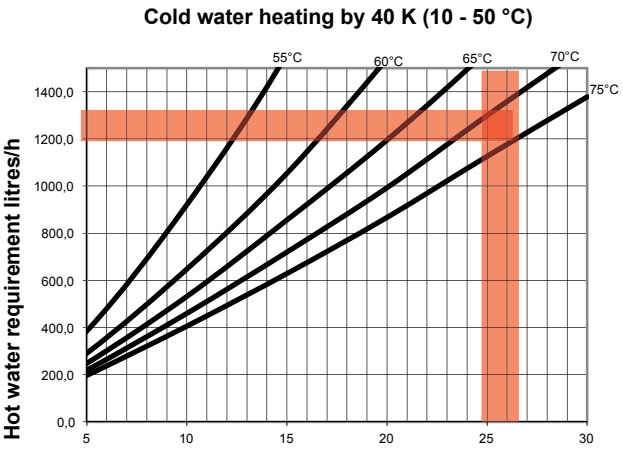
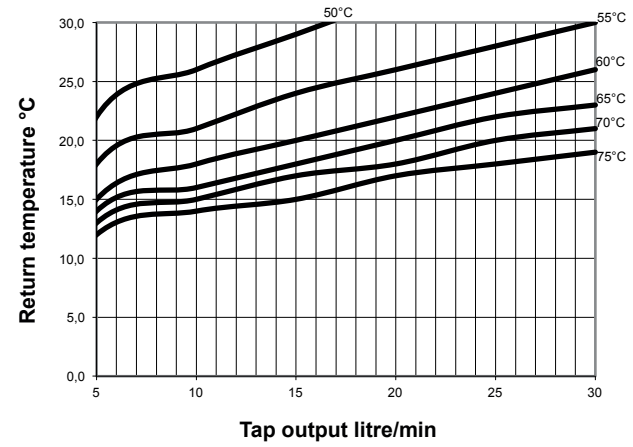
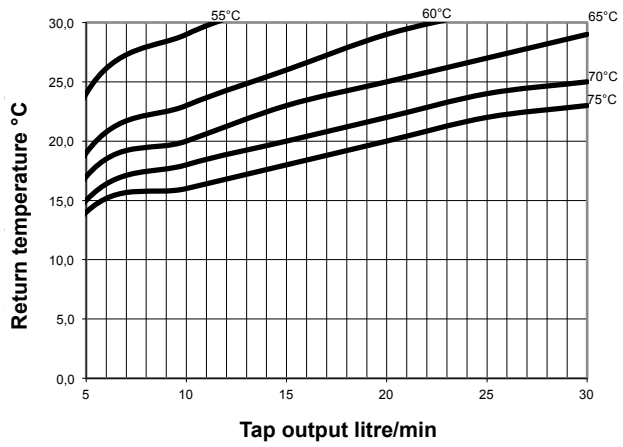
↗ Output curves and return temperatures TES-S1000-20

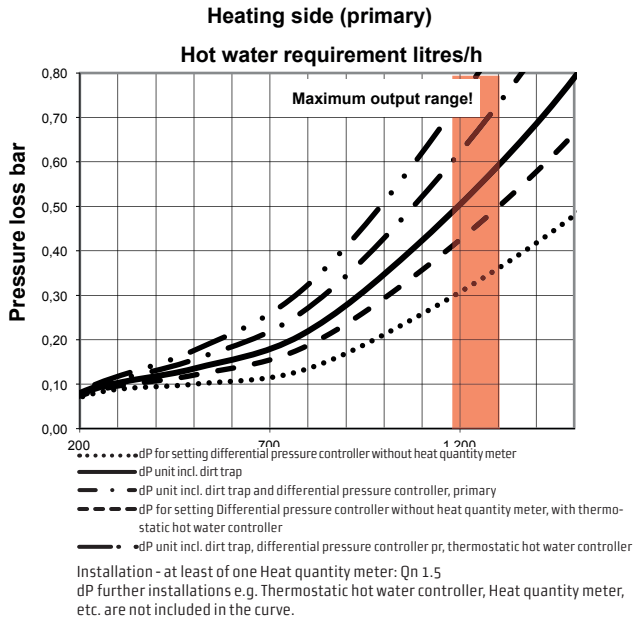








↗ Pressure loss TES-S1000-30



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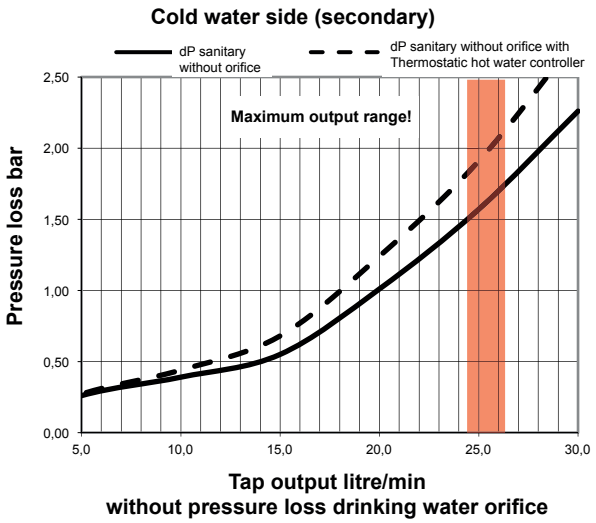

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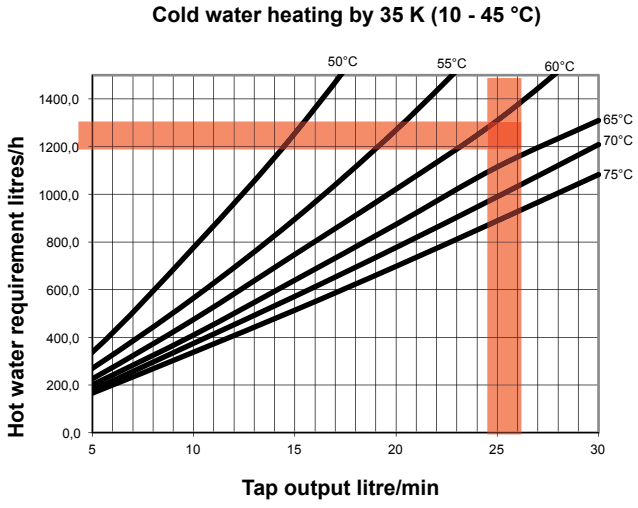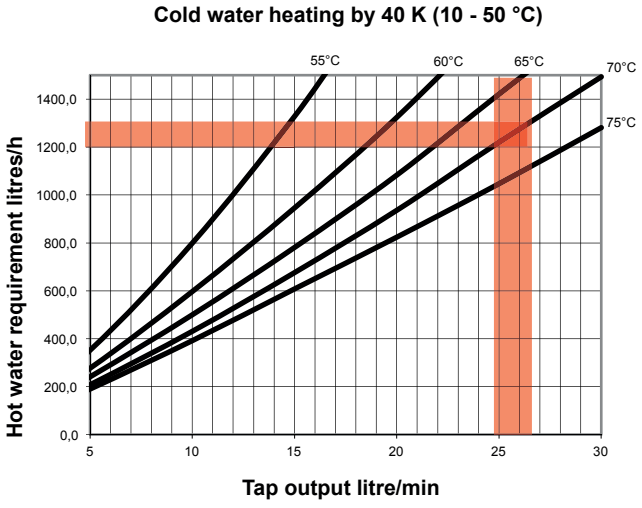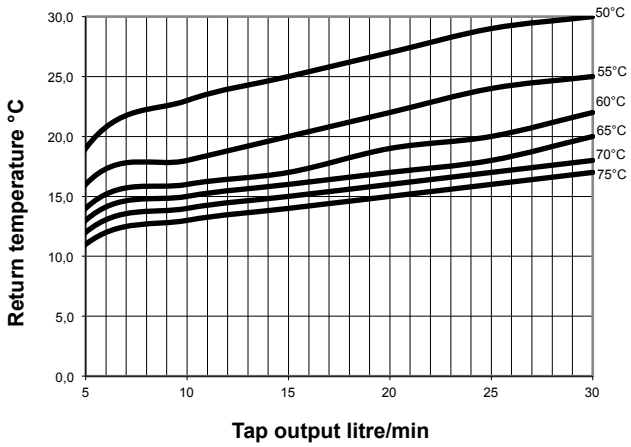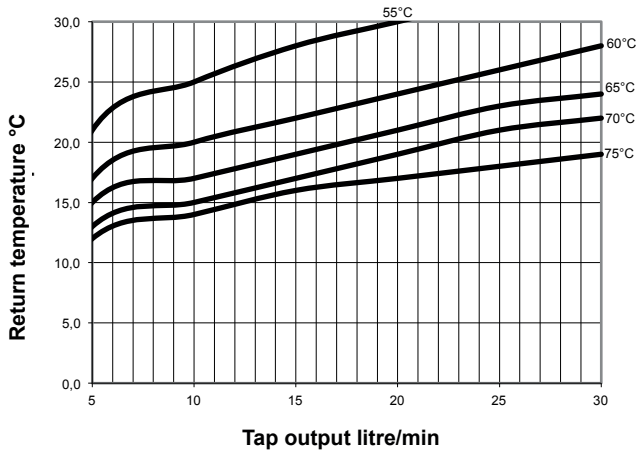
↗ Output curves and return temperatures TES-S1000-30