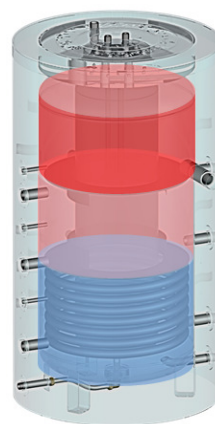


 **INTEGRA**
Universal water tanks



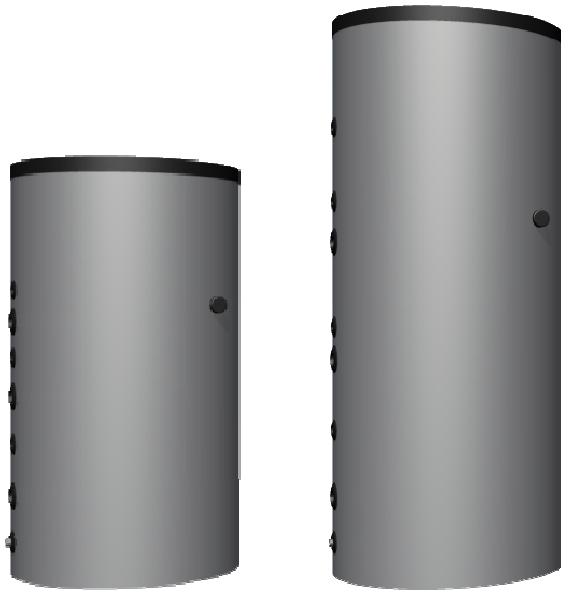
1

Construction, operation principle...

INTEGRA – universal water tanks

General features

INTEGRA series



- Universal water heaters used for DHW heating and CH support
- Integrated DHW tank ("tank in tank")
- Supporting a variety of heat sources:
 - solar installation
 - gas, electric or oil boiler
 - solid fuel burner / fireplace
 - heat pump
 - electric heater
 - solar installation
- Hydraulic coupling function for a heating system → flexible cooperation of heat sources in a single system
- High efficiency thanks to the separation of different thermal zones of the tank

INTEGRA – universal water tanks

Basic technical data

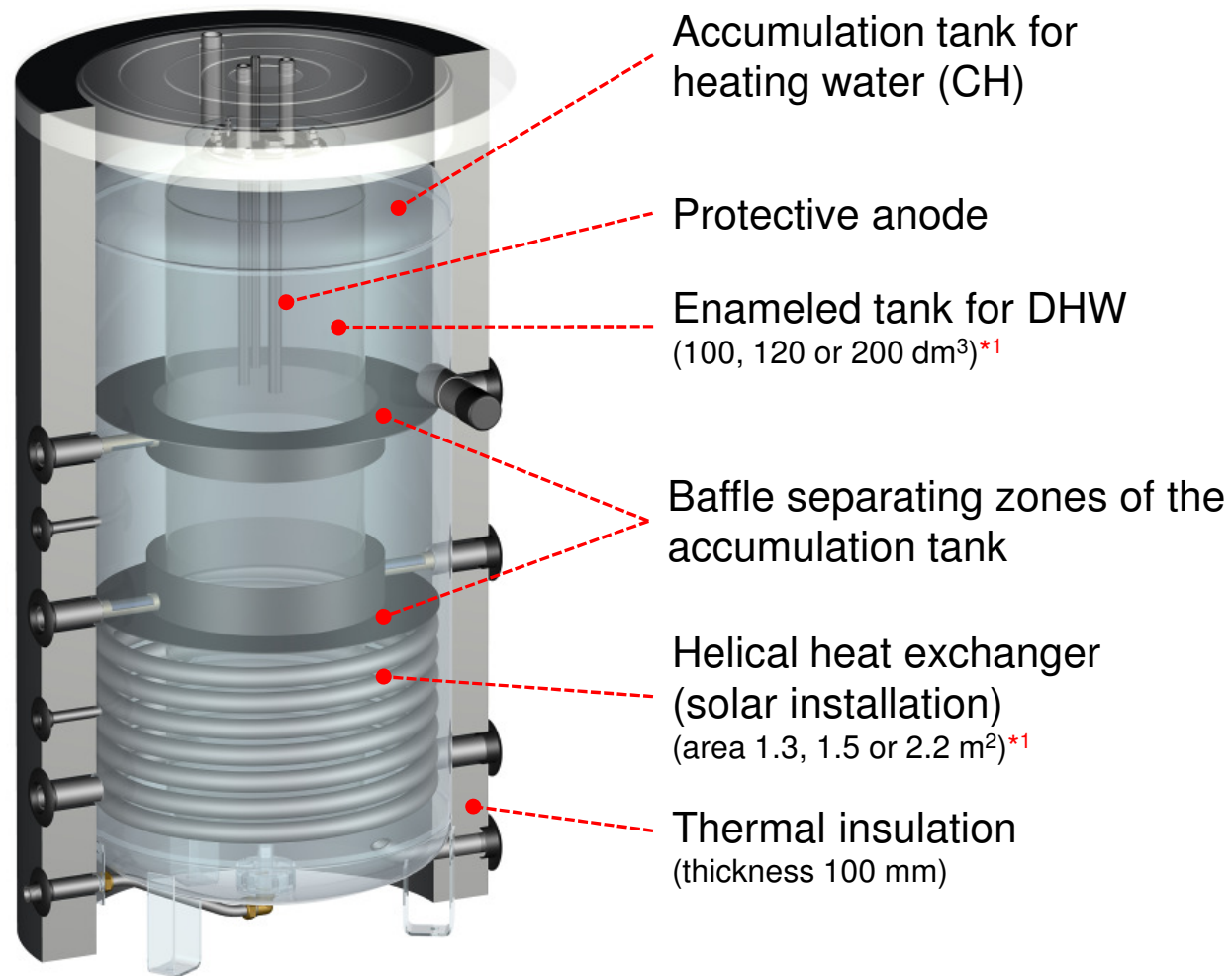


- Magnesium anode as protection against corrosion
- Maximum operating pressure
 - 3 bar – for Central Heating circuit
 - 6 bar – for Domestic Hot Water circuit
- Thermal insulation 100 mm
- Plastic, silver cover
- 2kW electric heater as an optional article

		INTEGRA 400/100	INTEGRA 500/120	INTEGRA 800/200
Nominal Capacity	dm³	330	480	800
DHW capacity	dm ³	100	120	200
Area of „solar heat exchanger”	m ²	1.3	1.5	2.2
Diameter/Height (mm), with thermal insulation	mm	800/1473	850/1850	990/1915
Weight	kg	130	158	210

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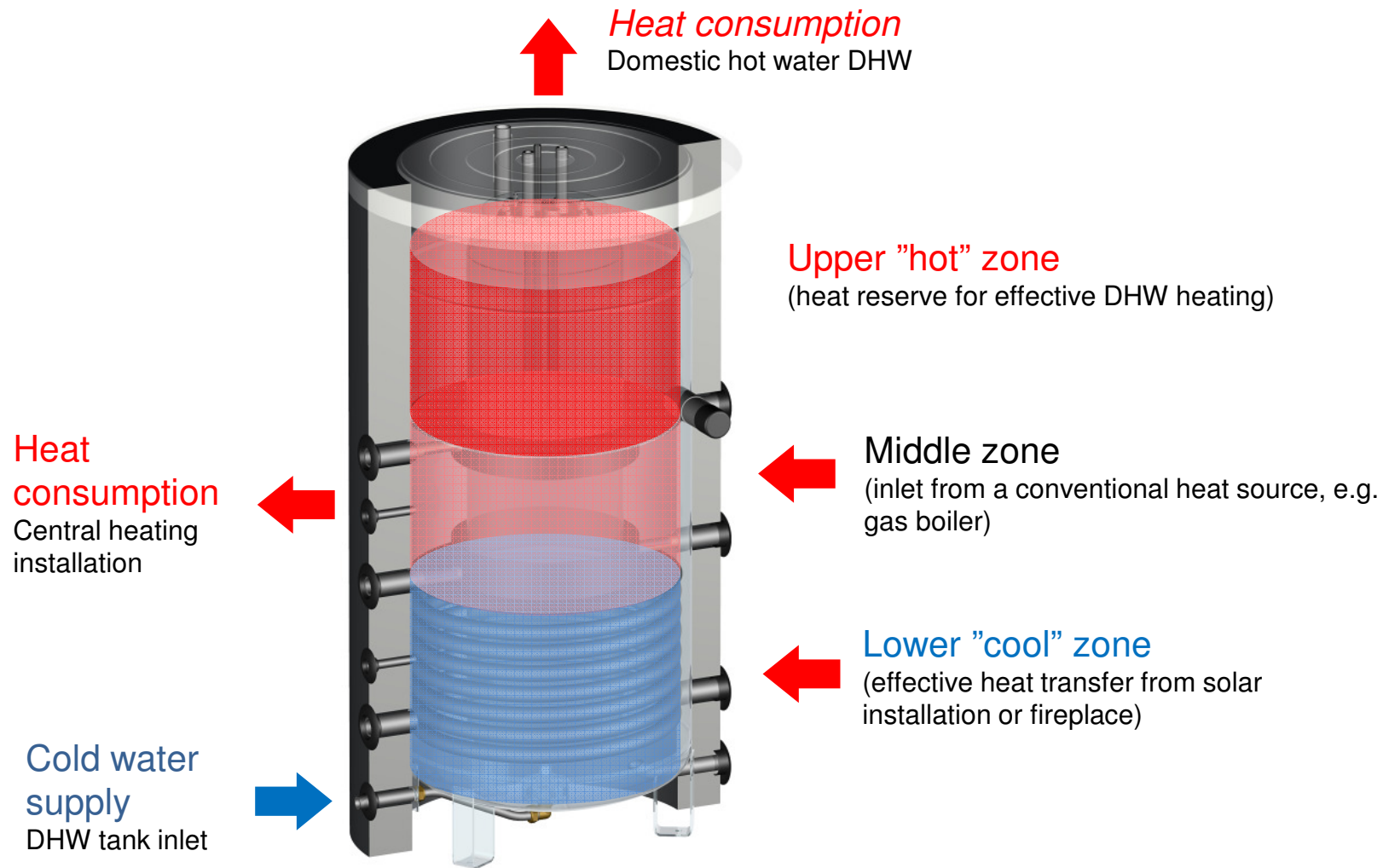
Basic elements



*¹ – depending on the version, respectively for INTEGRA 400/100, INTEGRA 500/120 i INTEGRA 800/200

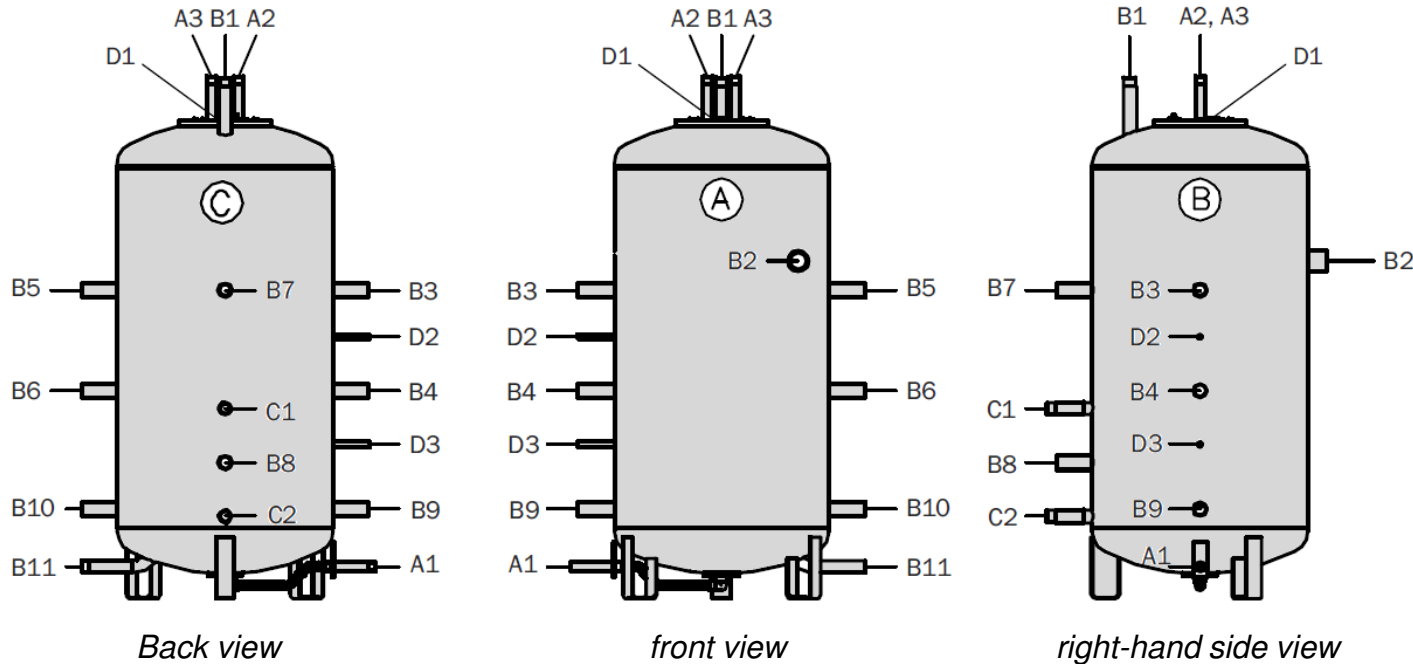
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Stratification into thermal zones



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Connections of the tank



Connections "A" – DHW circuit

(A1-supply water, A2-DHW outlet, A3-DHW circulation)

Connections "B" – CH circuit

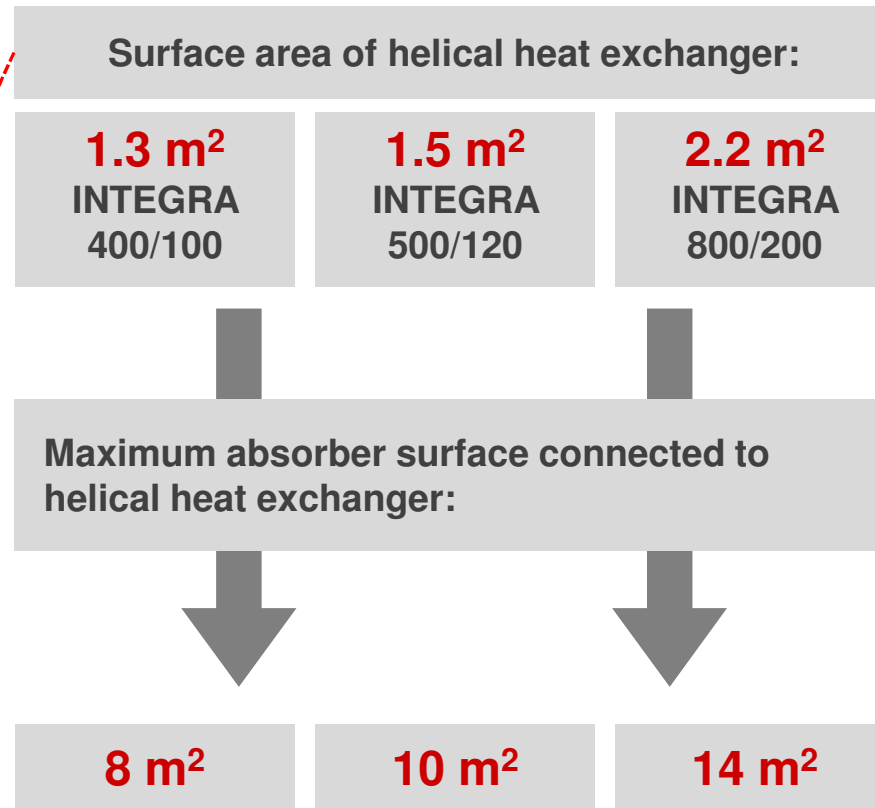
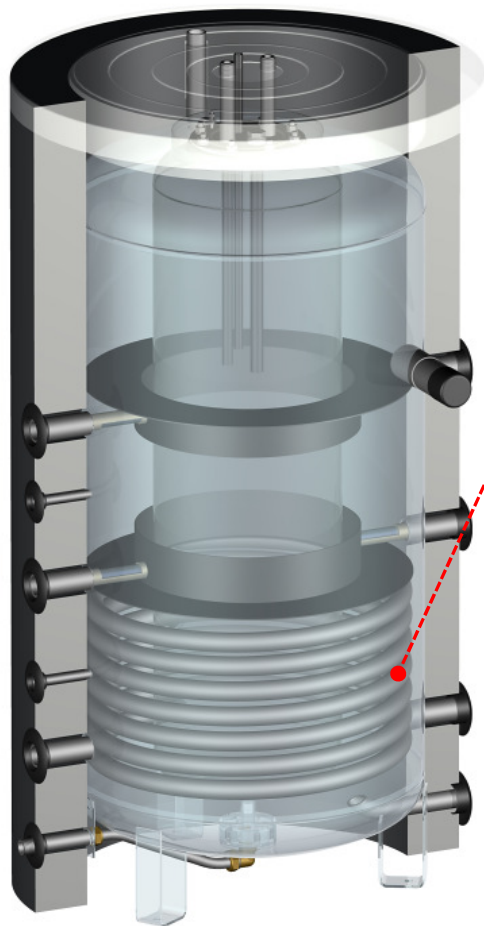
(B1-deaeration, B2-electric heater, B3-B10-heating water, B11-filling in)

Connections "C" – helical heat exchanger for solar installation

Connections "D" – temperature sensors' sleeves

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Possibilities of operation with solar installations



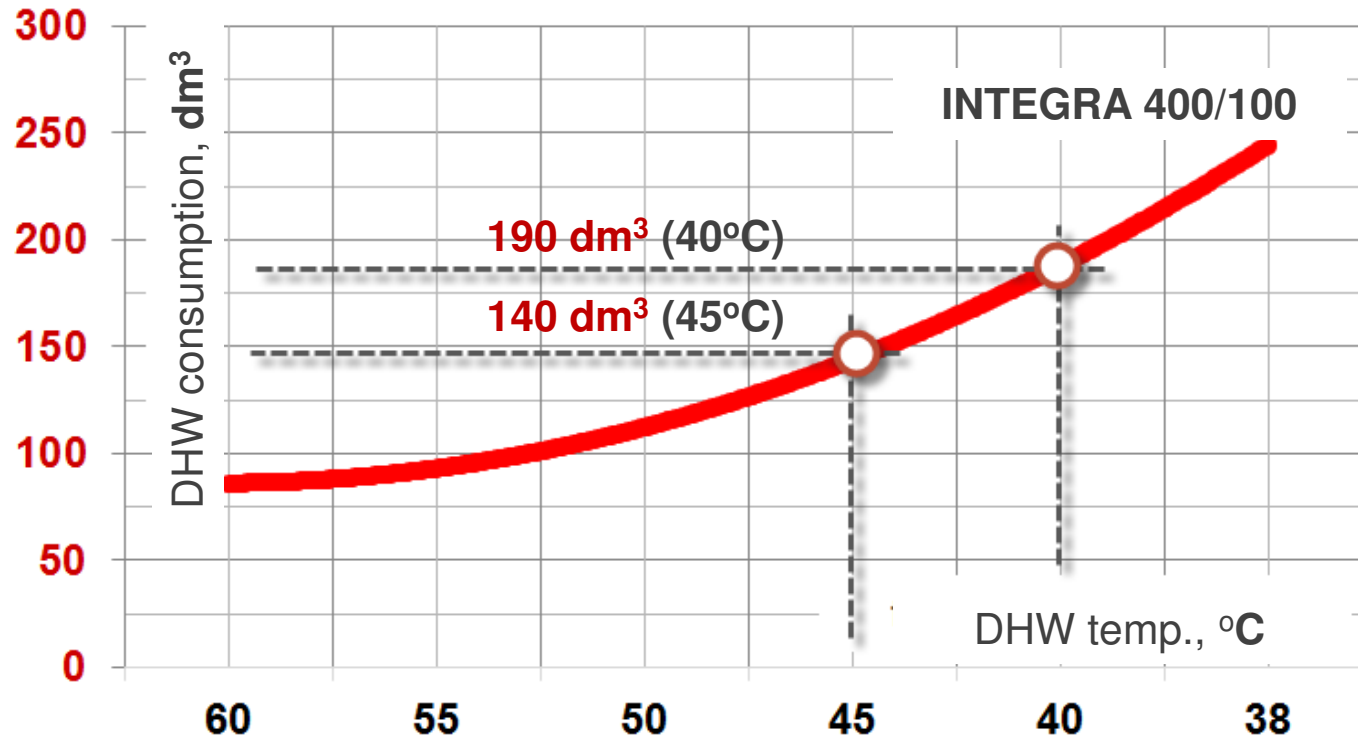
2

Performance parameters

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Efficiency of DHW

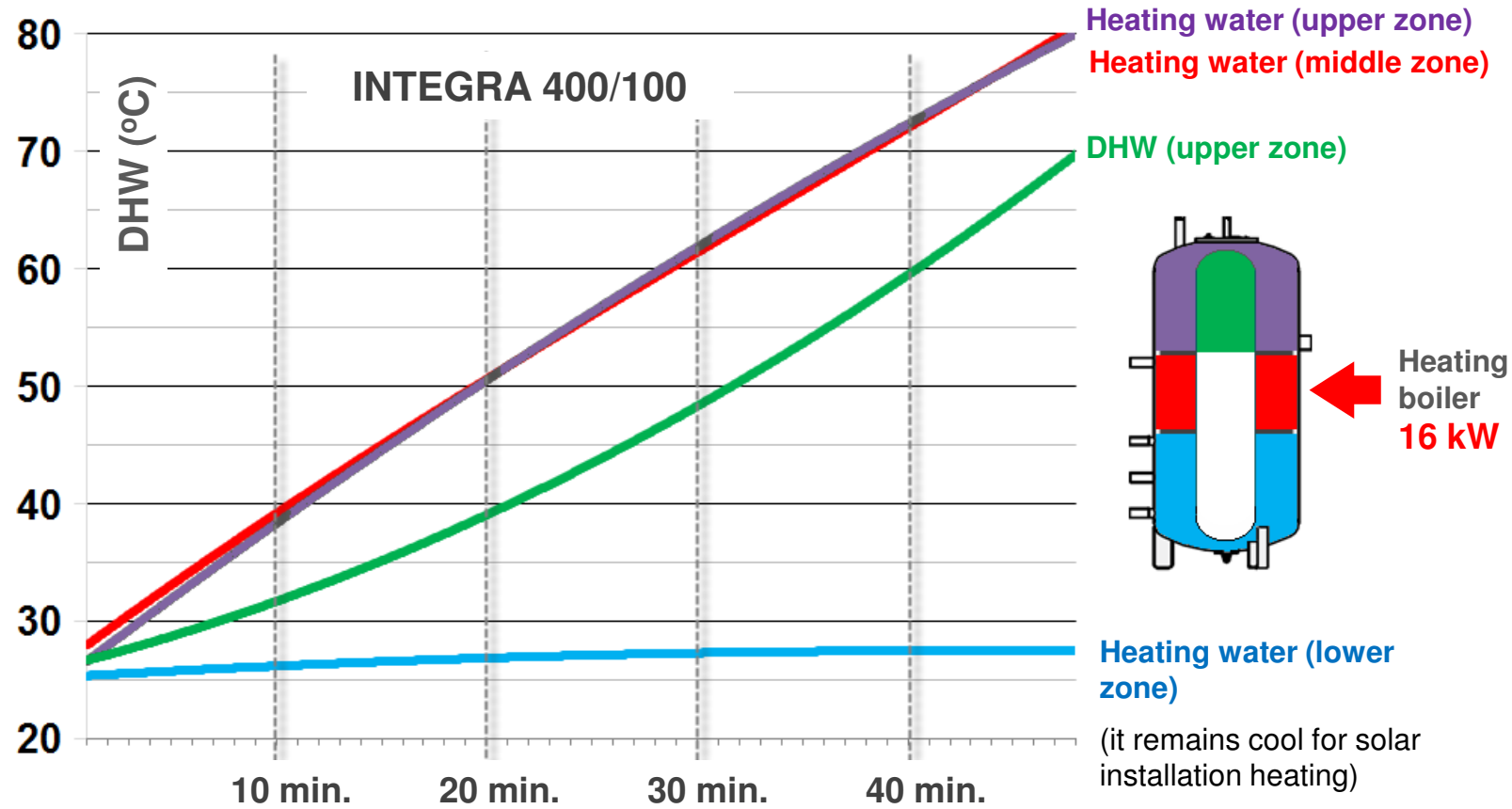
- Efficiency of DHW defined for the following measurement conditions:
 - initial DHW in the tank = **70°C**
 - amount of DHW consumed during the measurement = **8 dm³/min.**



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Heating times of thermal zones

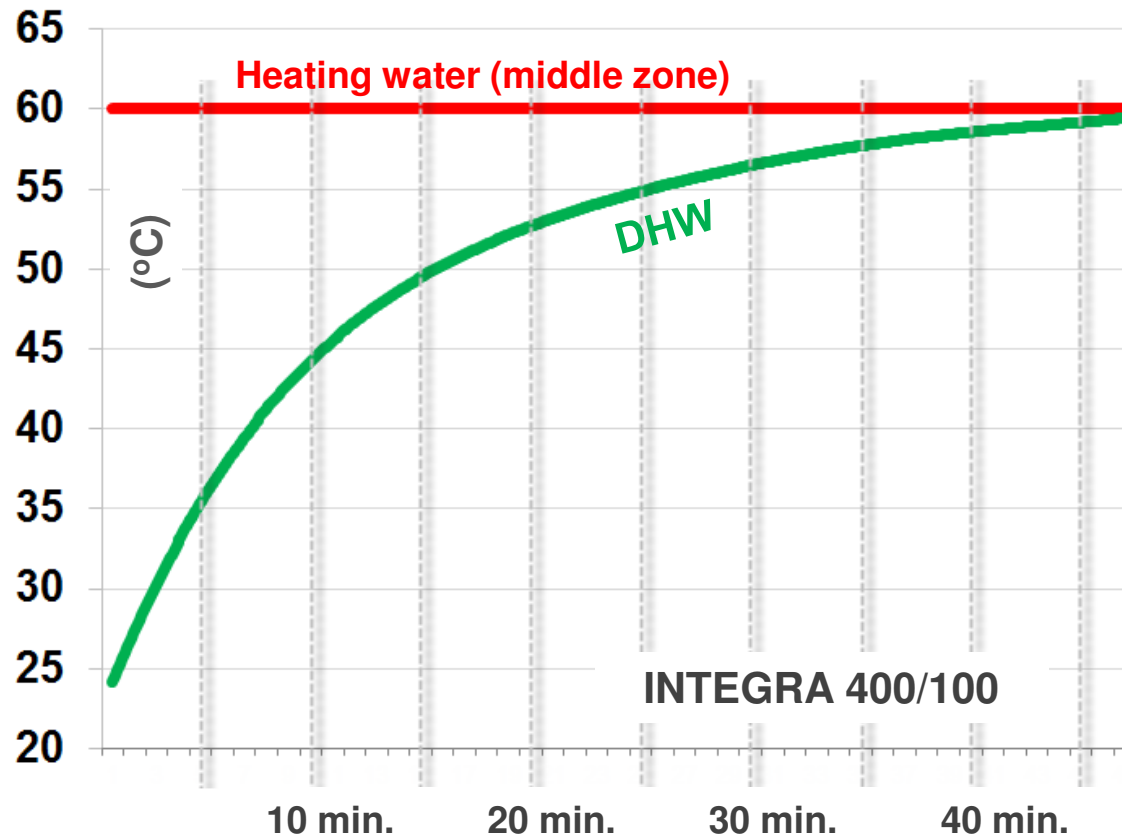
- Heating times for 16kW heating boiler:
 - DHW at 45°C temperature → $t = 26$ min.



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Heating times for DHW heating at constant CH inlet temperature

- Heating time for DHW heating for constant CH inlet temperature of 60°C
 - DHW at 40°C → t = 9 min.
 - DHW at 45°C → t = 12 min.
 - DHW at 55°C → t = 26 min.



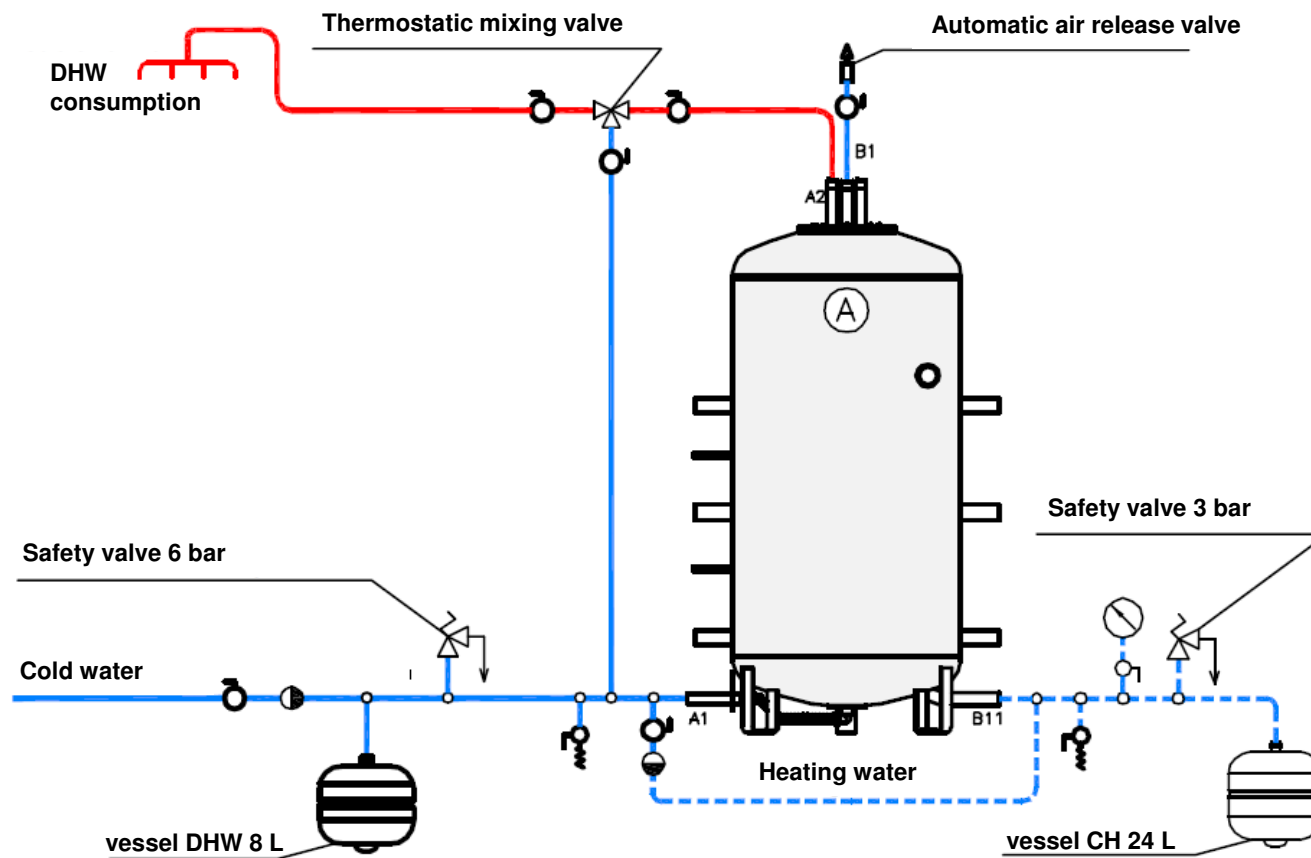
3

Installation schemes

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Schemes – Domestic Hot Water installation DHW (1)

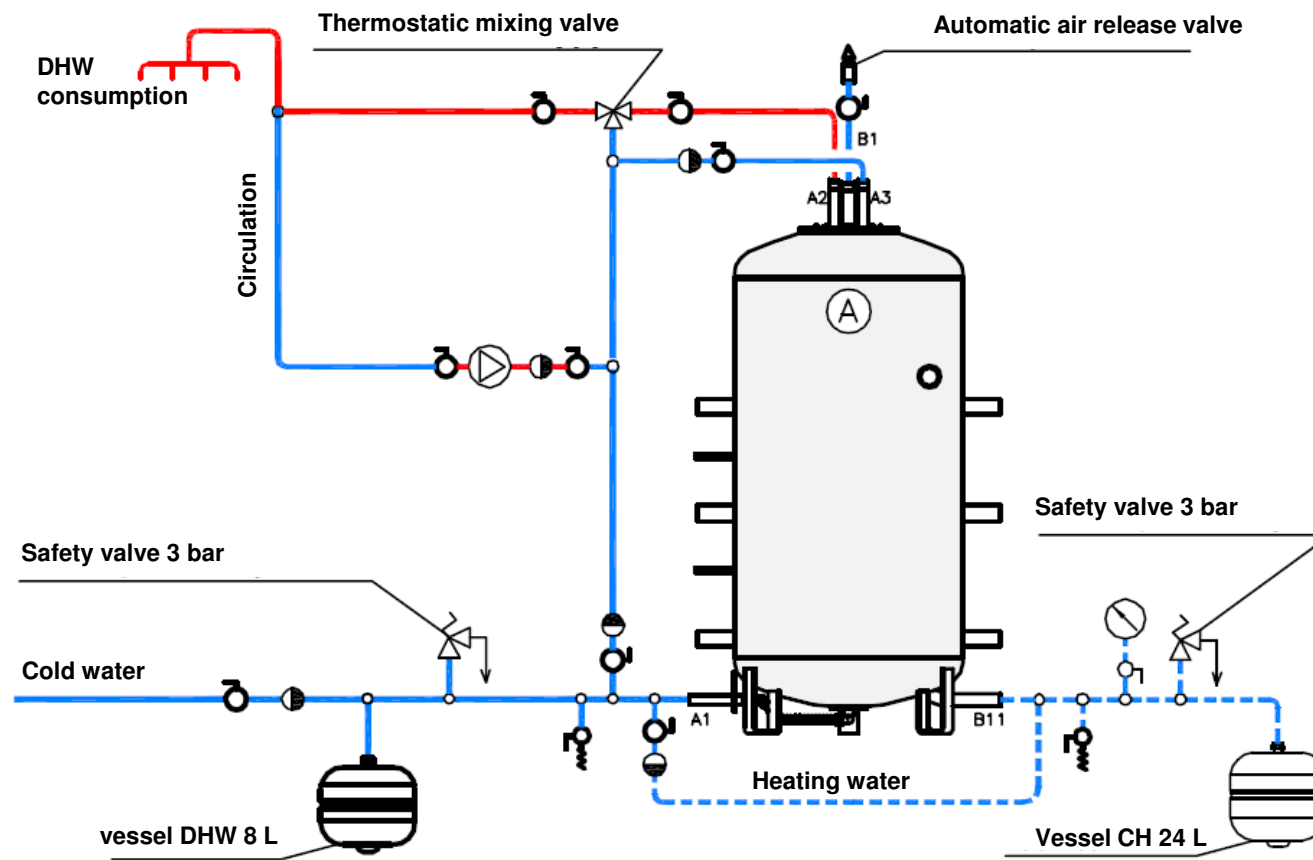
Without DHW circulation



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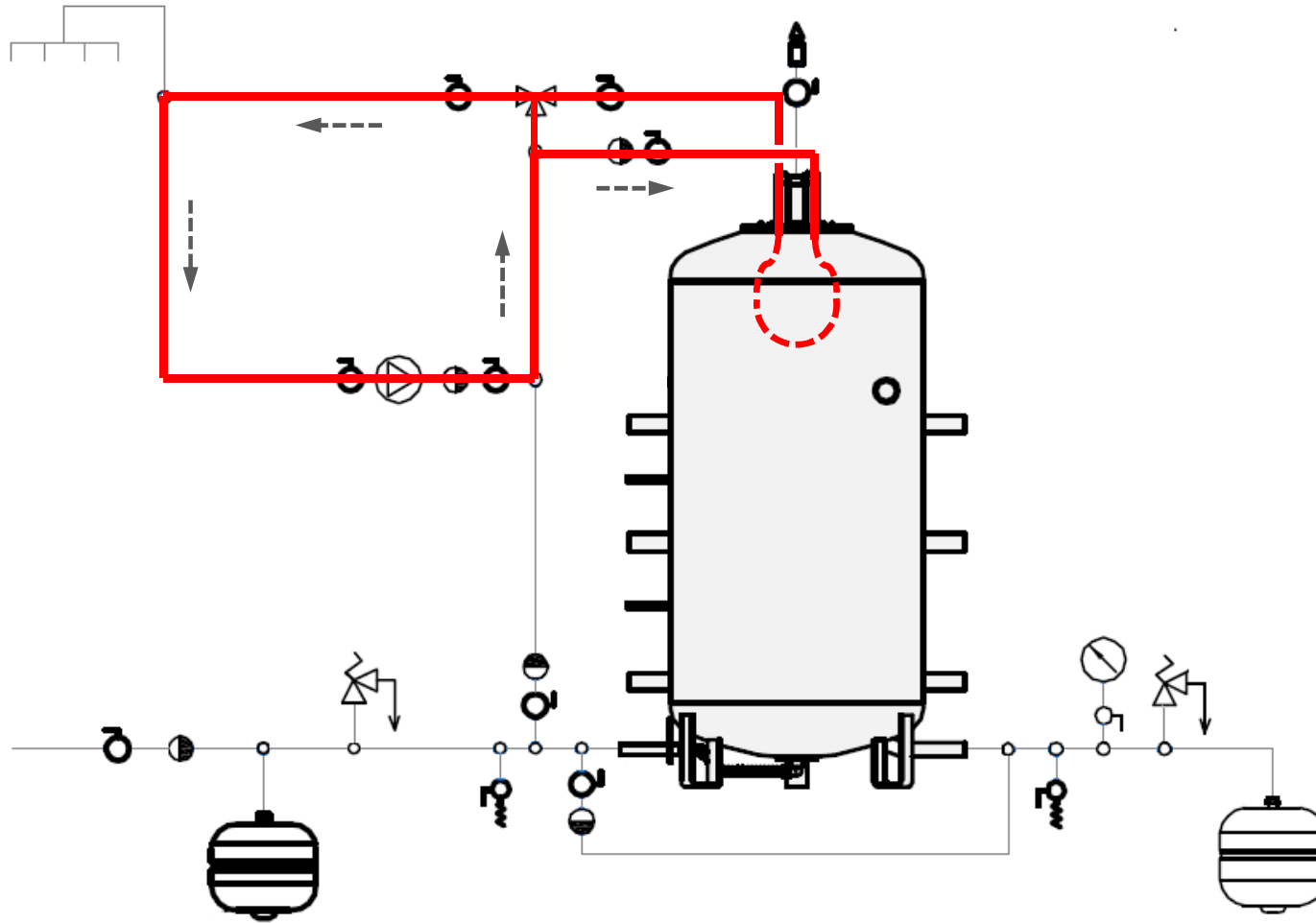
Schemes – Domestic Hot Water installation DHW (2)

With DHW circulation



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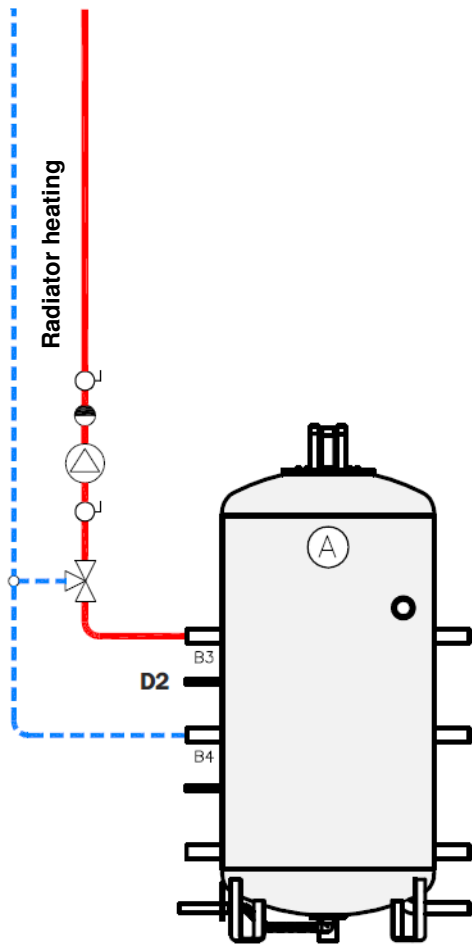
Schemes – operation principle for DHW circulation circuit



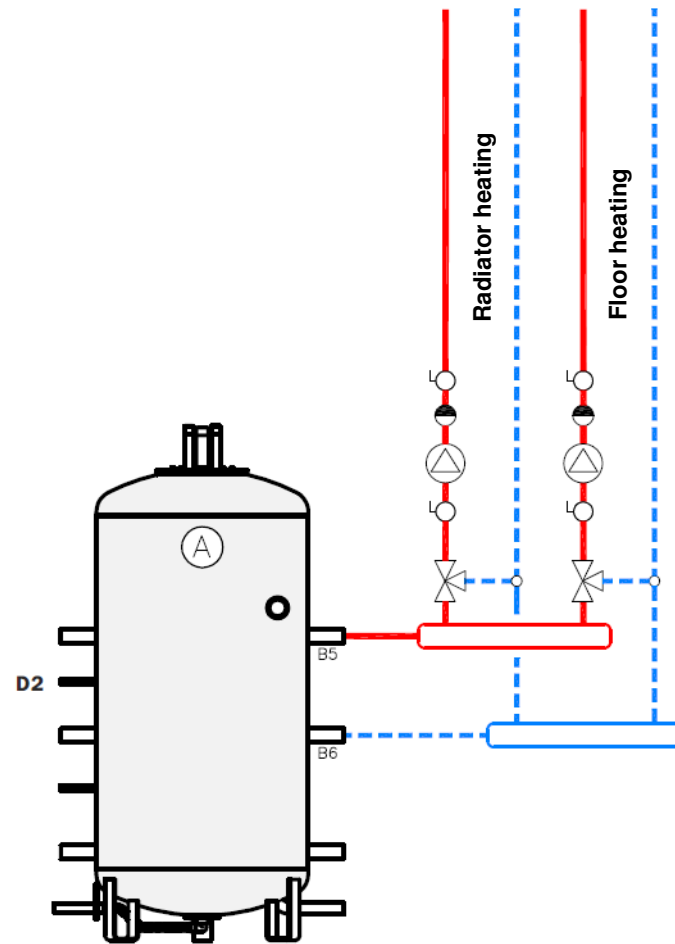
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Schemes – Central Heating installation

Single heating type



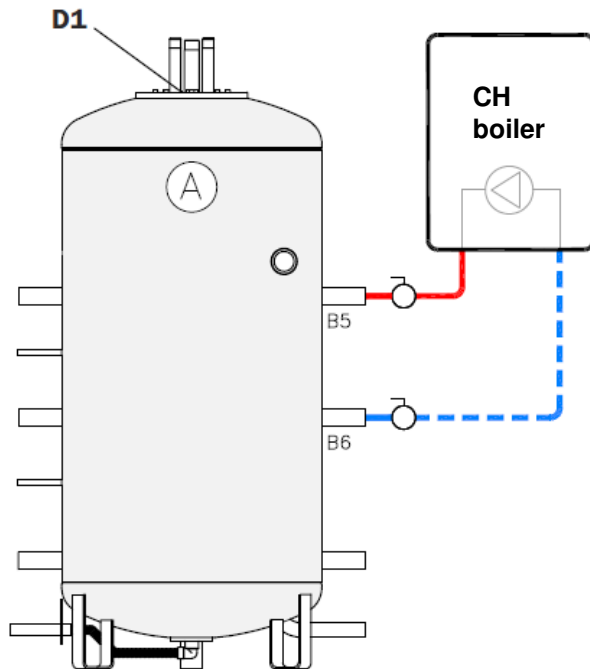
Various heating types



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Schemes – connection of gas, oil or electric boiler

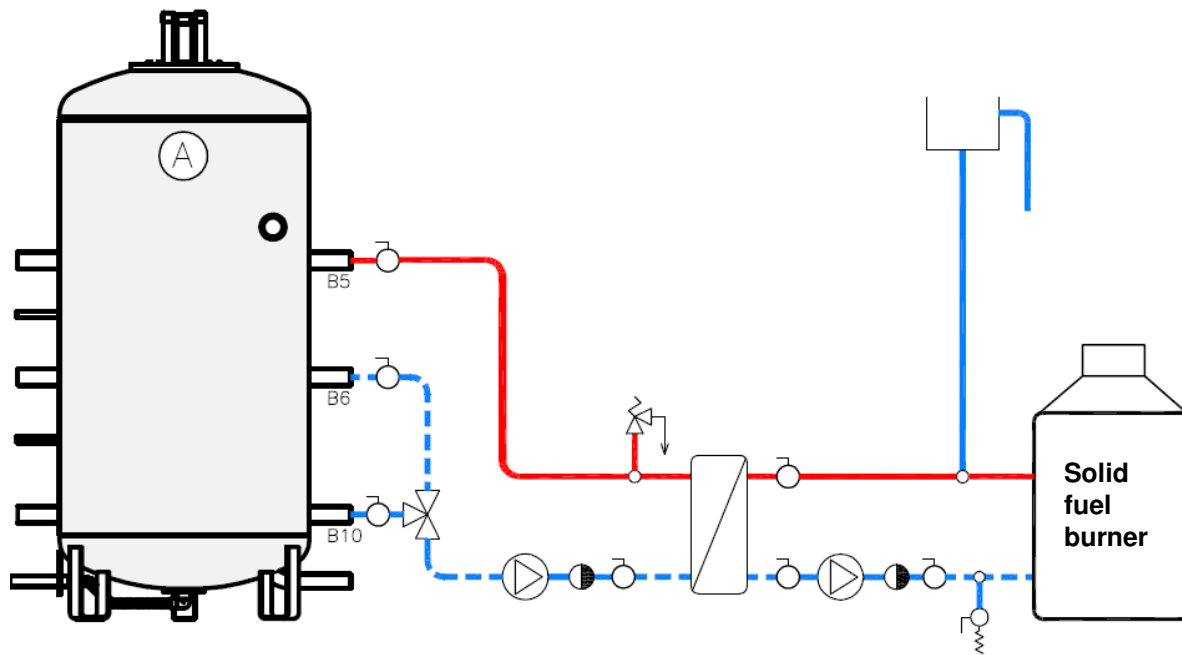
Connection of the boiler for heating the entire zone



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Schemes – connection of solid fuel burner / fireplace (1)

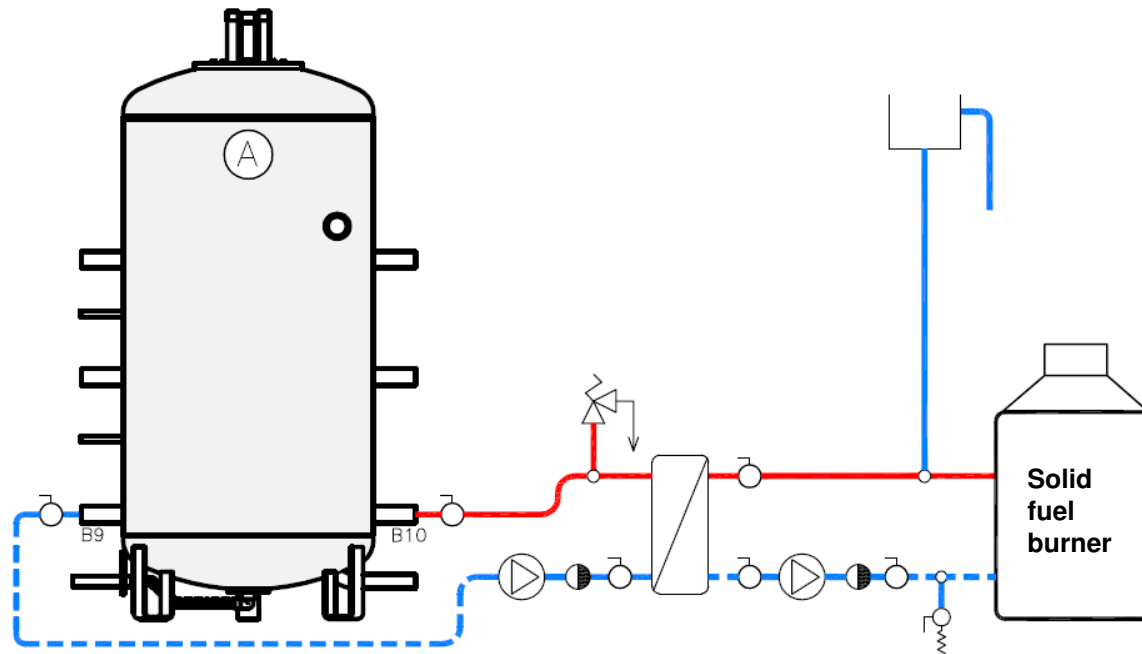
Connection of the burner with power regulation



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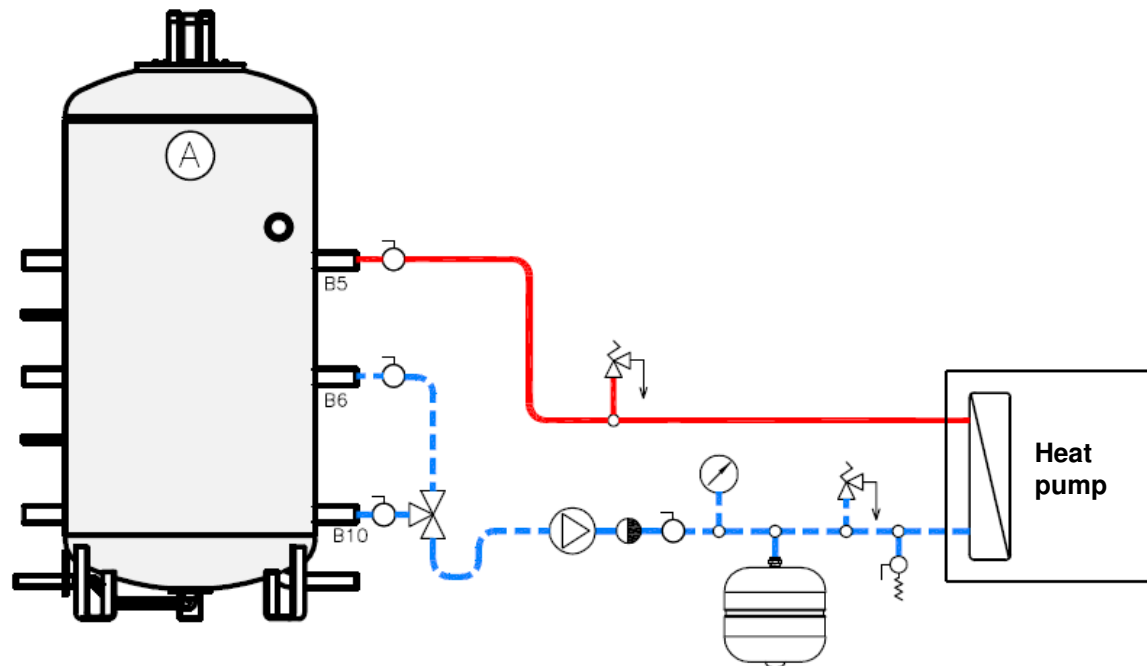
Schemes – connection of solid fuel burner / fireplace (2)

Connection of the burner with a limited power / combustion process regulation



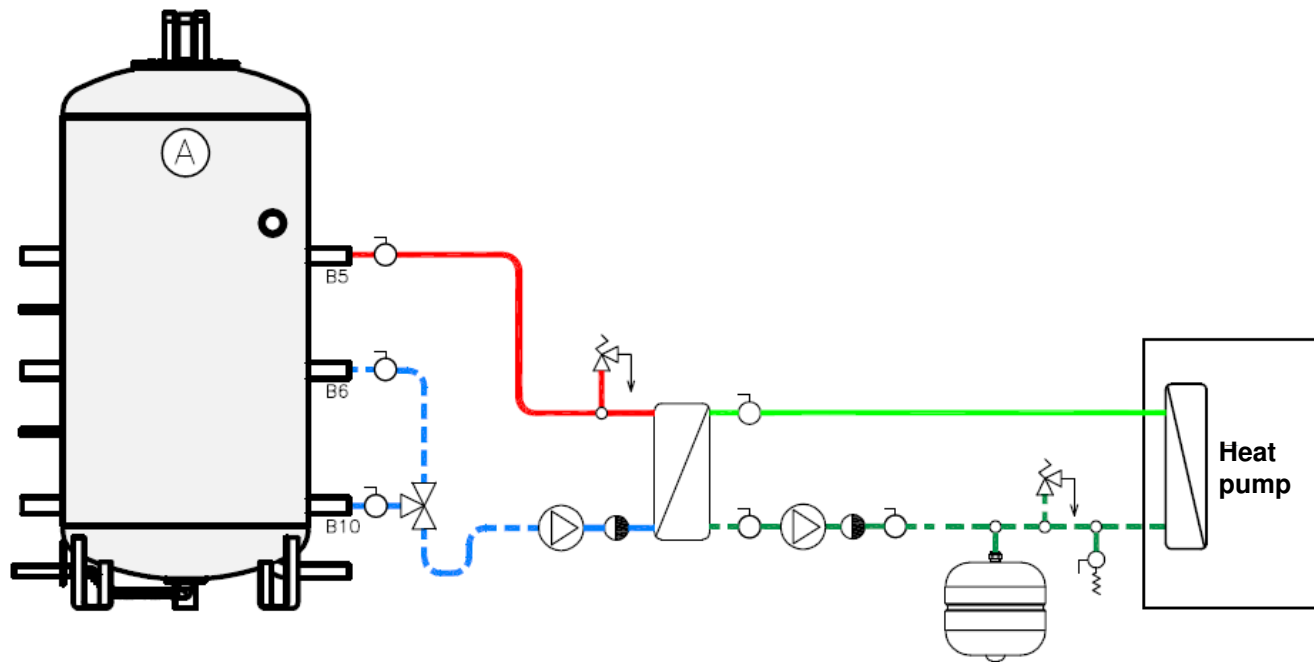
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Schemes – **connection of heat pumps (1)**

Connection of a ground heat pump



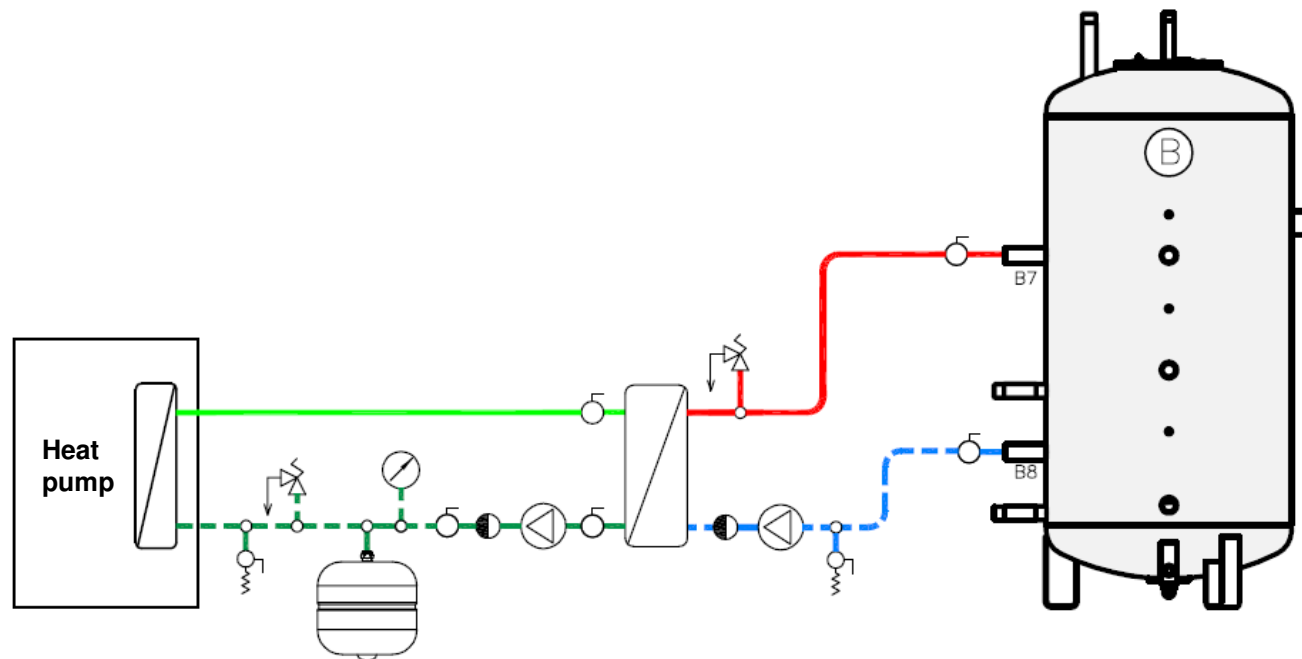
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Schemes – **connection of heat pumps (2)**

Connection of air heat pump of greater power



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Schemes – **connection of heat pump (3)**

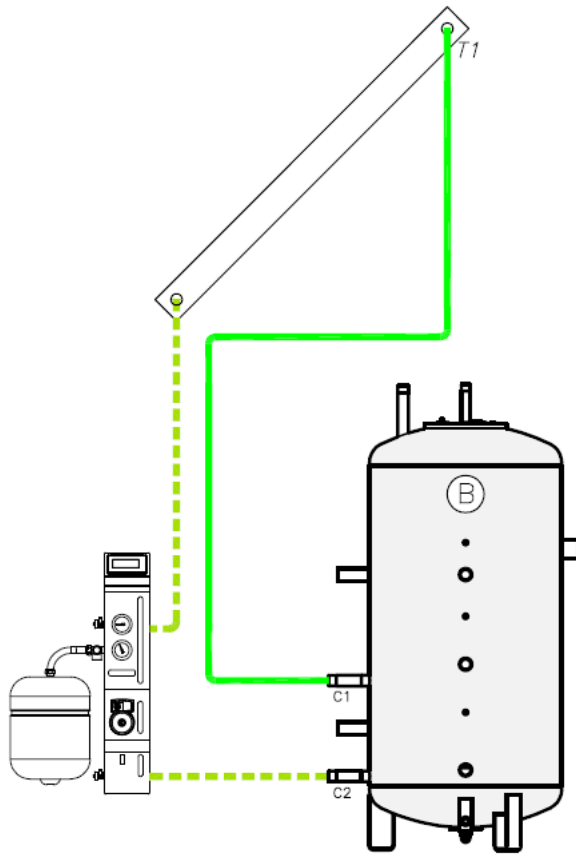
Connection of heat pump of low power



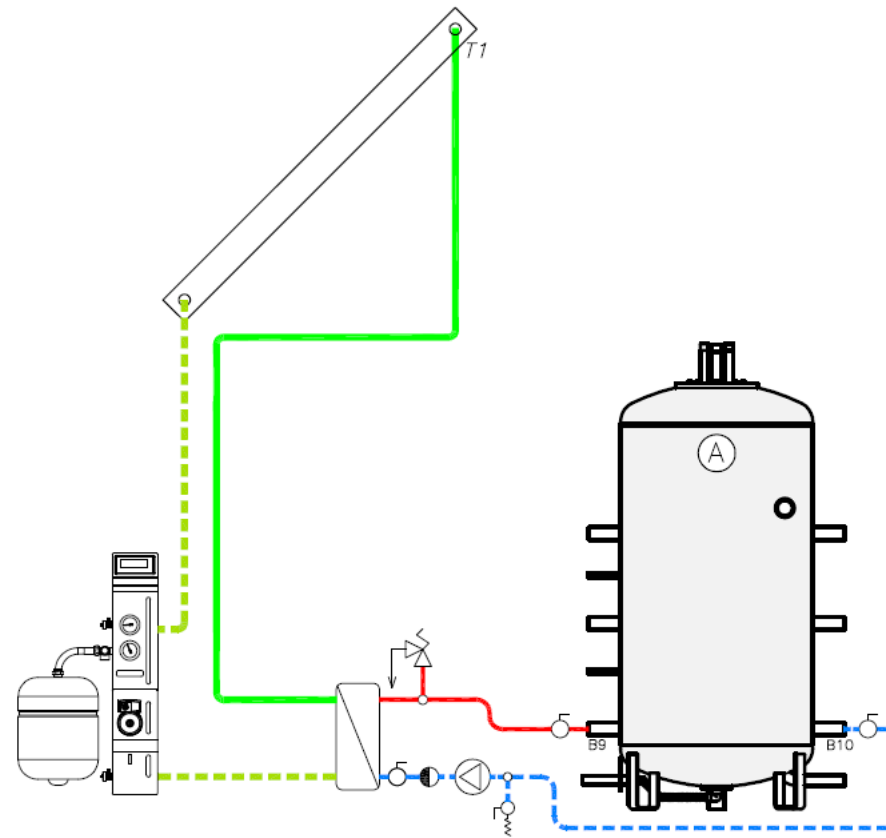
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Schemes – connecting solar installation

Installation up to 8 m²
(as for INTEGRA 400/100)

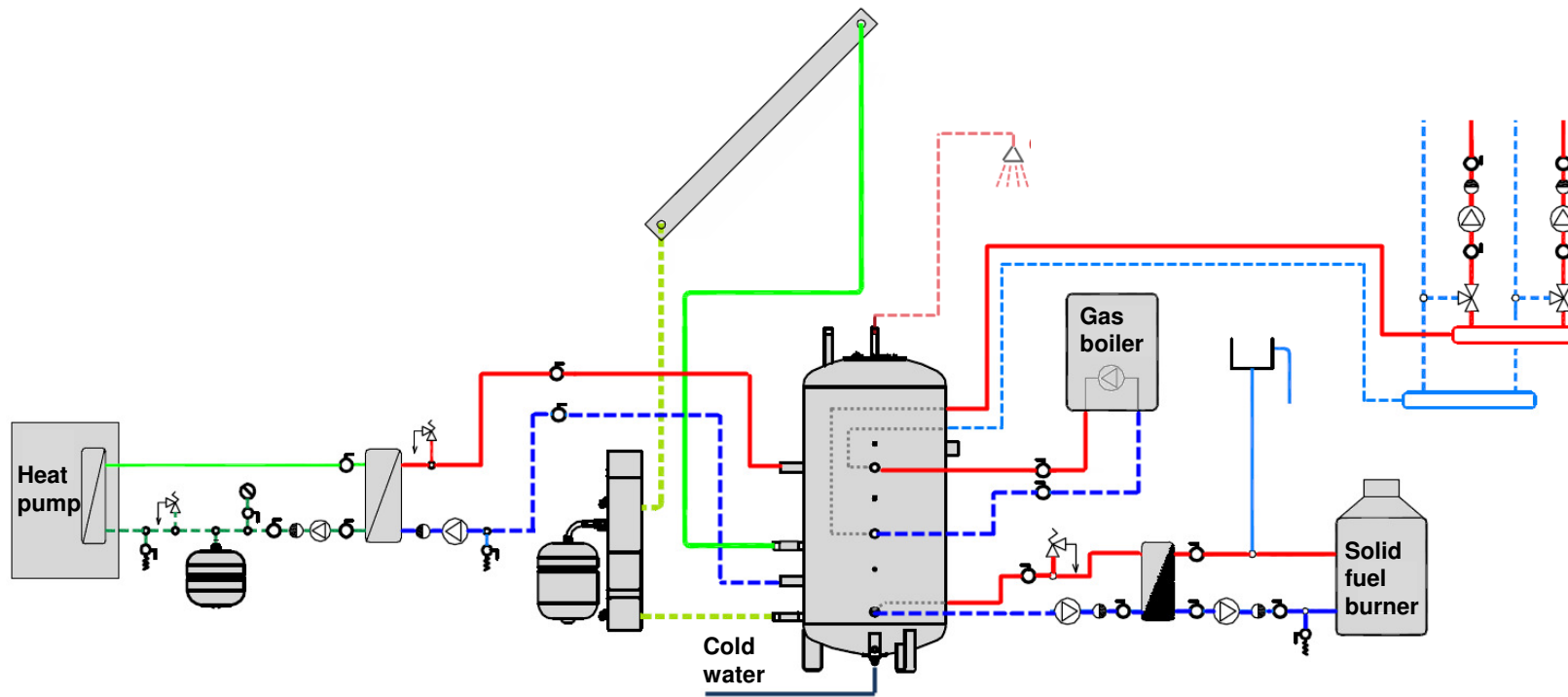


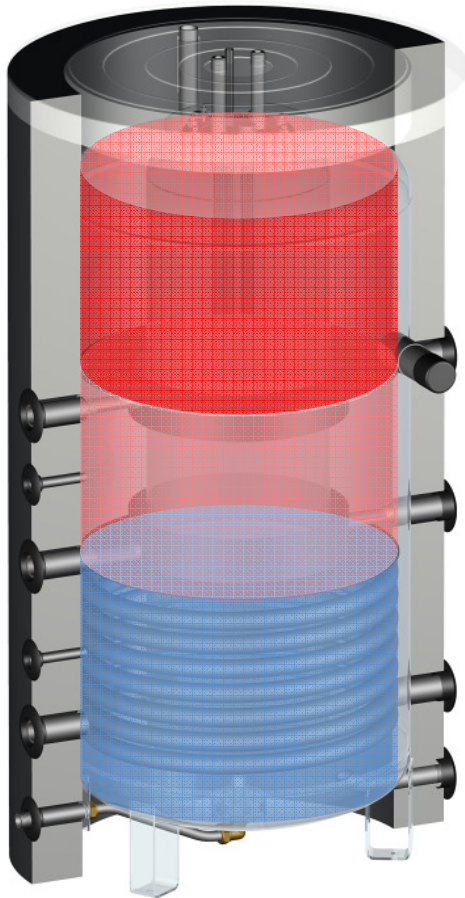
Installation above 8 m²
(as for INTEGRA 400/100)



INTEGRA – universal water tanks

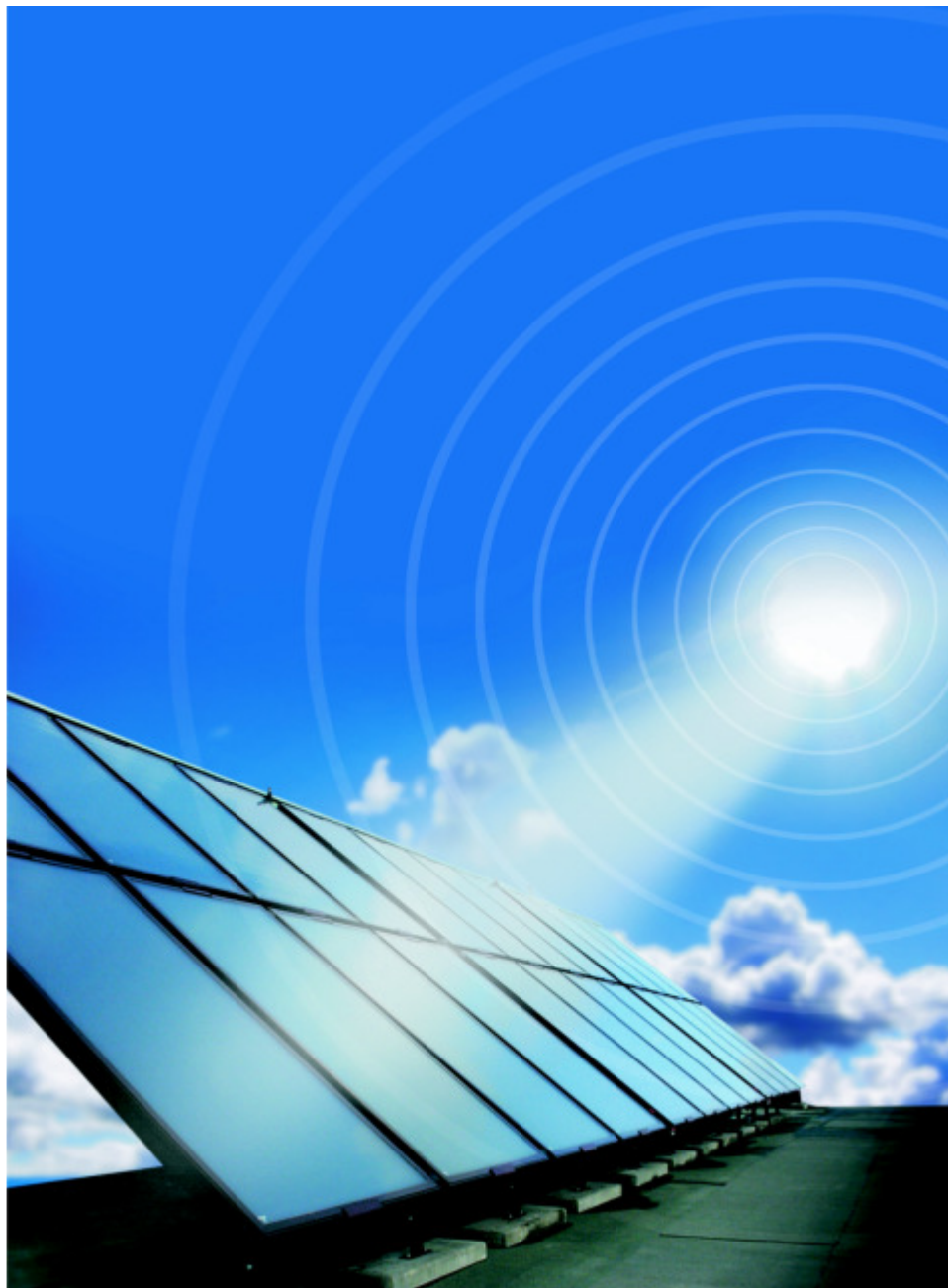
Schemes – **example of installation with various heat sources**





INTEGRA

- Integration of heat sources
- Effectiveness of heat utilization
- Comfort of use



OÜ Smart AC
Tulika 19
10613 Tallinn

tel. +372 56 045 388

veeb: www.smartac.eu

e-mail: info@smartac.eu

HEWALEX