

Fact Sheet

Heatpump and gas radiator thermostats

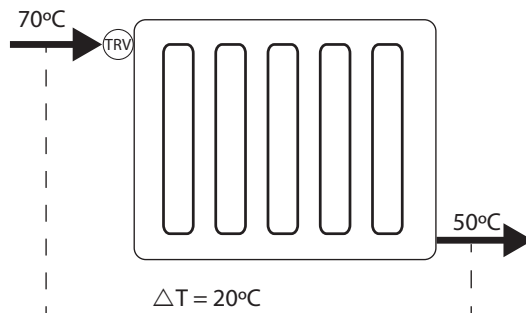
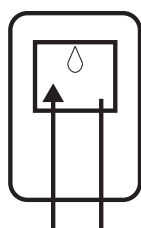
Why gas radiator thermostats are the best for heat pump systems.

Are you upgrading your heating?

When changing from an oil or gas boiler to a heat pump, the flow temperature and the differential temperature in the system is lowered drastically.

This will require a higher flow in the system.

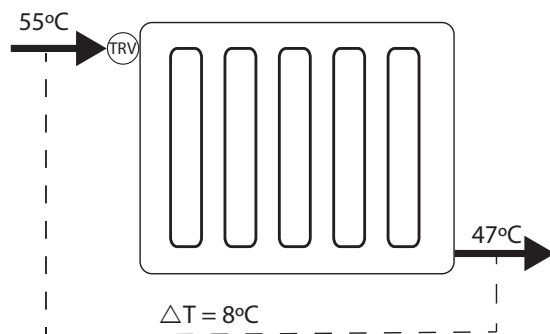
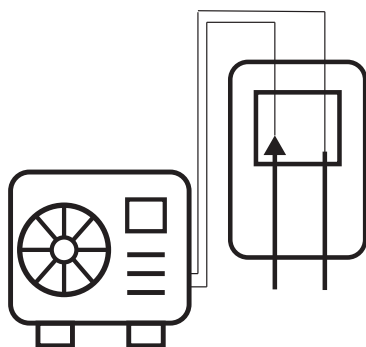
Oil or Gas Boiler



For 600 /1800 /22 ~ 2382W

Flow=102 l/h

Heatpump



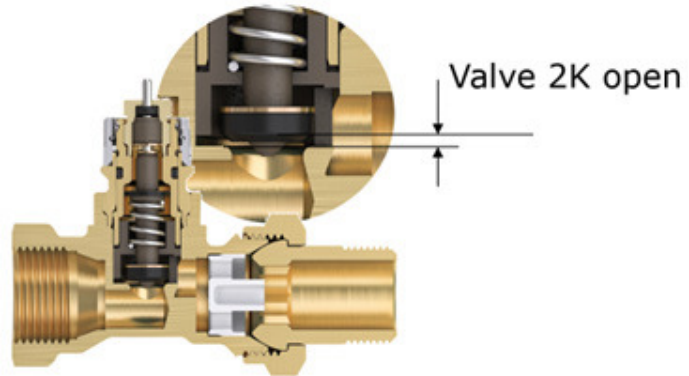
For 600 /1800 /22 ~ 1759W
(27% less Watt)

Flow=189 l/h

	Oil/ gas boiler	Heatpump
Temperature flow (°C)	70	55
Temperature return (°C)	50	47
Room temperature (°C)	20	
Delta T (°C)	20	8
Watt	2382	1759
Flow	102	189

Calculation example of Radiator output 600/1800/22 using DIN EN 442

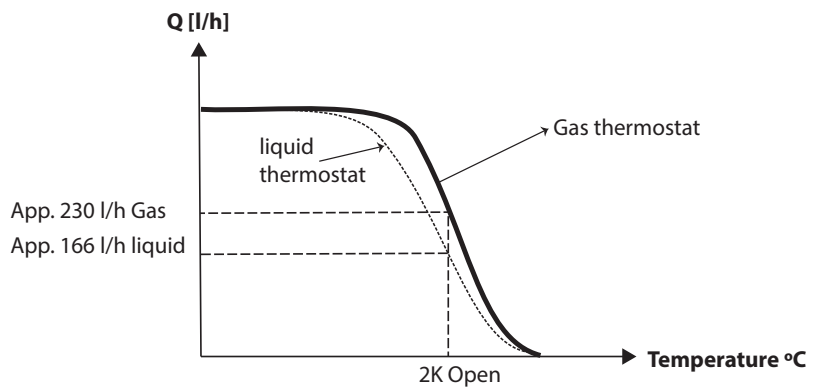
Installing a radiator thermostat with a gas-filled bellow proves advantageous due to its higher amplification (0.37 mm/°C) compared to a standard liquid-filled bellow (0.23 mm/°C).



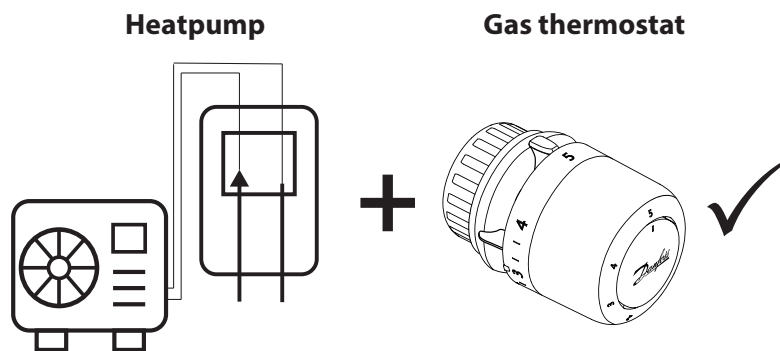
Danfoss Values	Gas thermostat	Liquid thermostat
Xp [mm/K] RA Valve	~0.37	~0.23

When the sensor is 2°C open compared to a close valve (Normal system design parameter KV2) the gas thermostatic sensor allows more water running through the valve.

RA-N 15 ~ Max FLOW [l/h] xp2 ΔP=10kPa



A higher flow through the radiator valve can be achieved by installing a radiator thermostat with a Gas filled bellow.



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