

Fact Sheet

# Heatpump and gas radiator thermostats

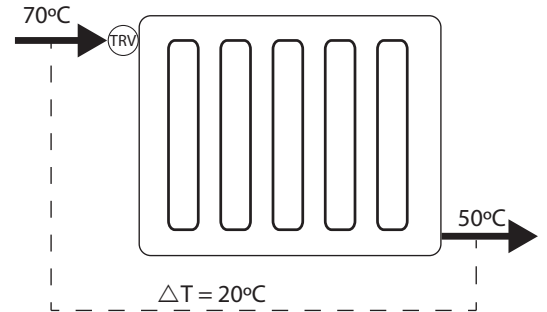
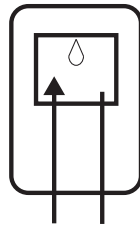
Why gas radiator thermostats are the best for heat pump systems.

**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.

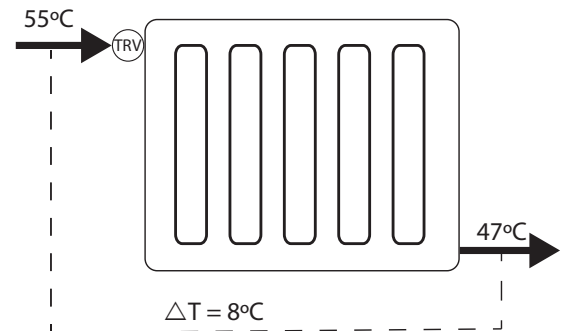
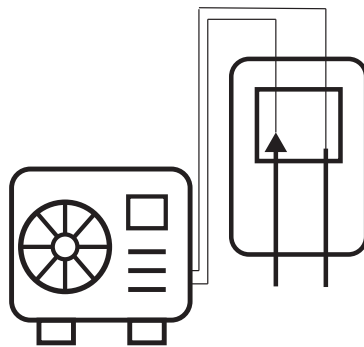
## Oil or Gas Boiler



For 600 /1800 /22 ~ 2382W

Flow=102 l/h

## Heatpump



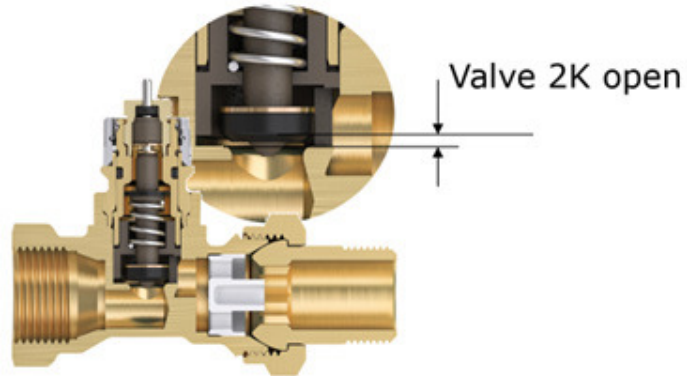
For 600 /1800 /22 ~ 1759W  
(27% less Watt)

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

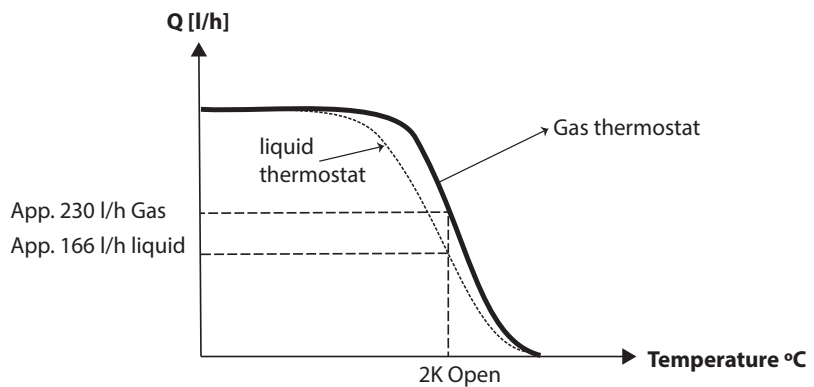
Installing a radiator thermostat with a gas-filled bellow proves advantageous due to its higher amplification (0.37 mm/°C) compared to a standard liquid-filled bellow (0.23 mm/°C).



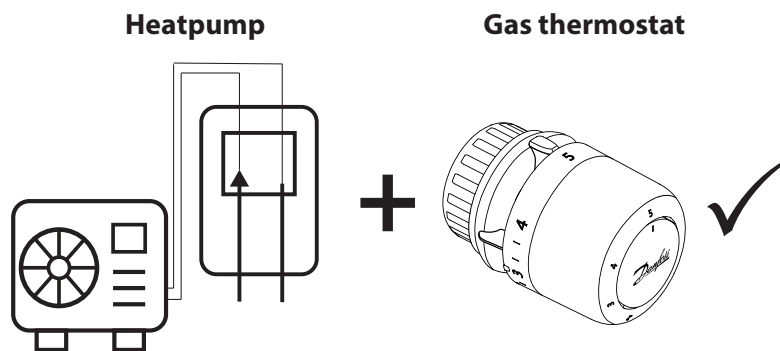
Danfoss Values	Gas thermostat	Liquid thermostat
Xp [mm/K] RA Valve	~0.37	~0.23

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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