

Comfort System

The Comfort System uses a patented Comfort Valve® and pump to provide instant availability of hot water at the point of use.

Operation

The Comfort Valve® is installed at the fixture furthest away from the hot-water tank. With a built-in timer, the pump allows hot water to circulate along the loop through the valve using the cold-water side as a return line. As the temperature rises to 100 °F (38 °C), the valve closes directing hot water to the tap, thus resulting in a constant availability of hot water.

Savings

The Comfort System saves up to 16,000 gallons (60,566 liters) of water per year and per household (based on average modern household usage) and uses less energy than a 25 W light bulb.

Applications

- Domestic hot-water recirculation systems in single- and two-family houses.

Pumped liquids

- Domestic hot water
- Potable and non-potable water



Fig. 7 Comfort System

Motor

- Insulation class: F.
- Power consumption: 25 W.
- Voltage: 115 V.
- Current 0.23 A.
- Phase: 1.

Description (UP open systems)	Material
Inlet cone, bearing plate, bearing retainers, rotor can, rotor cladding, shaft retainer	Stainless steel
Volute retainer (SU & SF models) and stator housing	Aluminium
Shaft, upper and lower radial bearings	Aluminium oxide ceramic
Thrust bearing	Carbon bearing and EPDM retainer
Pump housing (volute)	Silicon bronze C875 or stainless steel 300 series.
O-ring and gaskets	EPDM (ethylene propylene rubber)
Impeller	PES composite (30 % glass-filled)
Terminal box	Noryl® with EPDM gasket

Grundfos Comfort Valve body materials

Description	Trade name	Material
Springs, pins, screens	300 Series	Stainless steel
Valve body	Ryton	PPS
Thermal actuator body	300 Series	Stainless steel
Check valve O-ring		EPDM
Check valve body		Acetal
Check valves plunger		Thermoplastic

Ambient and liquid temperatures

Liquid temperature: 36 °F (2 °C) to 150 °F (66 °C).

It is recommended to keep the operating temperature as low as possible (e.g. 140 °F (60 °C)) to avoid calcium precipitation.

The ambient temperature should always be lower than the liquid temperature, as otherwise condensation may form in the stator housing.

Maximum system pressure

145 psi (10 bar).

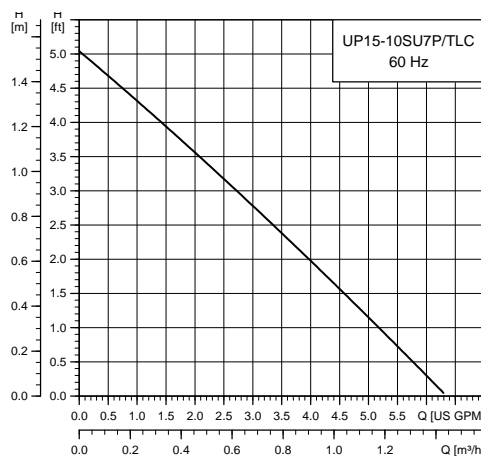


Fig. 8 Performance curve for the Comfort System