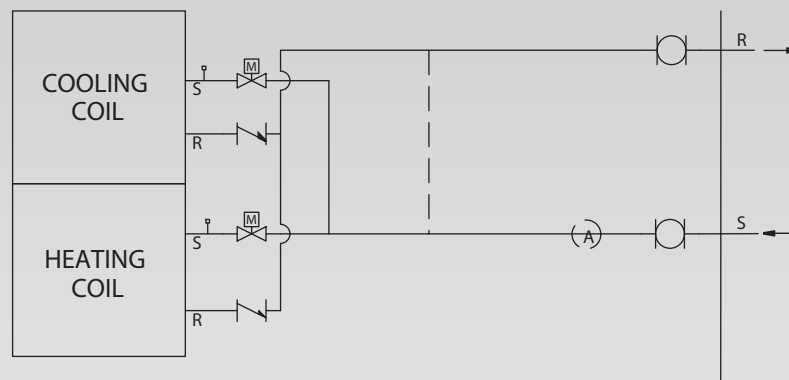


4-Pipe Temperature Control in a 2-Pipe System

APPLICATION GUIDE

UNIT PIPING DIAGRAM 4-PIPE UNIT WITH 2-PIPE SYSTEM



LEGEND

↑	MANUAL AIR VENT	1/2" FLOW CONTROL VALVE
⊗	1/2" 2-WAY MOTORIZED CONTROL VALVE	(A) AQUASTAT
⊙	1/2" BALL VALVE	--- AQUASTAT BLEED BY-PASS

BENEFIT: Prevent short cycling, avoid temperature swings, increase occupant comfort, and reduce power consumption.

MODELS: All

DESCRIPTION: The package starts with a standard 4-pipe coil. The chilled water coil and hot water coil each have a dedicated control valve and auto-flow device. The supply and return for each coil is tied to a common set of isolation ball valves. An aquastat or pipe sensor is installed upstream of the bleed-bypass, and allows the thermostat to operate the seasonally appropriate control valve.

Unit performance is determined in the IEC Rating Software using a 4-pipe model. The heating and cooling auto-flow devices should have unique flow-rates.

The benefit of this piping strategy is to properly utilize a coil that is designed for its intended duty. A standard 2-pipe coil, when sized to provide adequate cooling, will always over-heat the space unless a modulating valve or boiler set-back is employed.

(Over)

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Modulating control valves may cause low-flow related issues such as loss of cooling and heating capacity due to laminar flow, and boiler set-back is not always an available option. As a secondary feature, lower system flow in the heating season will allow a variable frequency drive (VFD) to reduce pump output, which provides additional energy savings by reducing power consumption.

Contact your local IEC Sales Representative for further details and pricing applicable to this product feature.



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