

Title (en)

Aspirator water circulation apparatus

Title (de)

Wasserumwälzanlage mit Wasserstrahlpumpe

Title (fr)

Appareil de circulation d'eau avec pompe à jet d'eau

Publication

**EP 0809079 A1 19971126 (EN)**

Application

**EP 96303555 A 19960520**

Priority

EP 96303555 A 19960520

Abstract (en)

A water circulation apparatus to provide instant hot water to faucets (27) remote from the heater (40) in residential and small commercial buildings when water is periodically used in the building. The apparatus comprises a body (21) containing an aspirator and a check valve, and provisions for installation in the water supply line (22) to the heater and cold water faucets (41). It uses a small water return line (24) from a tee (25) installed in the hot water pipe (26) near the remote faucet (27), to a connector on the water circulation unit, thereby establishing a circulation loop from the water heater, through the hot water pipe, the tee and return line, and through the water circulation unit back to the heater. The aspirator is a tapered bore in the body with a concentric nozzle positioned in the large end, and a low pressure chamber located in the vicinity of the nozzle outlet and communicating with the outlet of the check valve. The check valve uses a neutrally buoyant poppet to minimize friction. The unit is responsive to the user and is self regulating in that it causes water to flow in the circulation loop only when water is being used in the building. Water is conserved since there is no need to run water to waste awaiting hot water from the heater to reach the remote faucet. When the building is unoccupied, the unit is dormant, thus conserving heat that would be lost if the pipes were kept hot at all times. The unit needs no gas or electrical power, and operates with only one moving part. <IMAGE>

IPC 1-7

**F24D 17/00**

IPC 8 full level

**F24D 17/00** (2006.01)

CPC (source: EP)

**F24D 17/0078** (2013.01)

Citation (search report)

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Designated contracting state (EPC)

AT BE CH DE DK ES FI FR GB GR IT LI NL PT SE

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