

AUTO BALL CHECK NON RETURN VALVE FOR SENSOR INSERTION IN CHILLED WATER SYSTEMS

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ABSTRACT

Embodiments of the invention provide an assembly configured to be fitted onto a wall of a pipe of an HVAC system, for inserting and removing a sensor probe, such that the probe is in direct contact with a fluid in the pipe. The assembly includes a central bore, and a thermowell configured to have an open end within the pipe, such that when the probe is inserted through the central bore, an end of the probe extends from the open end of the thermowell and is in direct contact with the fluid in the pipe. The assembly also includes O-rings arranged along the central bore, and a ball bearing adapter valve including a groove and a ball bearing, wherein the groove is arranged along the central bore such that the ball bearing may be moved into a position within the groove that permits the sensor probe to pass through the central bore when the probe is inserted, and automatically move back into a position blocking the central bore when the probe is withdrawn.

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(FIG. 1)