

TYPICAL SPECIFICATION FOR HVAC PRESSURE INDEPENDENT COMBINED CONTROL & BALANCING VALVES (PIBCV) DN32-150

- 1.1** The valve should be a control valve with adjustable kvs, i.e a stepless, pre-settable balancing and a built-in dp-controller. It shall be supplied and installed as shown on the drawings to ensure proper balancing and performs the control function for water flows in the hydronic heating and cooling system.
- 1.2** The valve should be pressure independent with integral spring and diaphragm arrangement for integral differential pressure control over built in control section.
- 1.3** The flow for fully open control part should be adjustable down to 20% of maximum flow. In this way, the flow shall be easily adjusted on each valve on site
- 1.4** The valve should have retained EQM characteristic for all recommended pre-settings.
- 1.5** Test points shall be provided for measuring differential pressure, temperature and available differential pressure and be integral with the body and incorporate means for positive leak tight shut-off when not in use.
- 1.6** True flow measurement verification must be possible with a balancing instrument. Flow deviation max $\pm 10\%$ at fully open (accordingly to BS 7350).
- 1.7** The valve should have a rangeability of minimum 50 for all recommended pre-settings.
- 1.8** The valve should have the capacity for manual, leak-tight shut off without the actuator attached for maintenance purposes and to allow measurement of available differential pressure for diagnostics.
- 1.9** It should be possible to perform a high speed flush with the valve installed in the system without causing damage to the product and without removing/replacing any parts.
- 1.10** The valve should have a pressure balanced cone to provide low force actuating and easy maneuvering.
- 1.11** The valve should be able to work in a temperature range of minimum $-20 - +120$ °C.
- 1.12** Material and Pressure Ratings
 - a)** Valve bodies with thread connections in sizes from 32 to 50mm shall be made in a dezincification resistant copper alloy equivalent to CuZn33Pb2Si-S (CC751S) according to EN 1982, and a pressure temperature rating of at least PN 16 and capable of operating under maximum differential pressure of 800kPa.
 - b)** Valves with flange connections from 65 to 150mm shall be made in ductile iron equivalent to EN-GJS-400-15 according to EN 1563 and a pressure temperature rating of at least PN 16 and capable of operating under maximum differential pressure of 800kPa.
- 1.13** All valves shall be manufactured in accordance ISO 9001 and ISO 14001.
- 1.14** Certificate of Origin and Certificate of Quality from factory shall be submitted for inspection when the valves are delivered to site before installation.