

# BIDDLE'S GUIDE ON:

## PIC VALVES & PIC VALVE SETS

Designing for the Future



**Biddle**

## INTRODUCTION

---

Biddle's expert engineering team created a useful and informative guide on how the use of PIC valves can improve efficiency onto Fan Coil Units installation.

---

### **Projects increasingly ask for preassembled valve set solutions that fit directly onto FCUs.**

Biddle works in close collaboration with valve manufacturers, therefore the local assembly and stock enables a fast turn-around of project orders with maximum design flexibility, helping project engineers to achieve A-grade consultant approvals and to deliver their projects on time and within budget.

## WHAT IS A PIC VALVE AND WHY ARE THEY USED?

---

PIC valves are sometimes referred to as PICV, Pressure Independent Control Valves, and also PICC, Pressure Independent Characterised Control valves. They allow a controlled amount of hot or chilled water through the FCU, independently of the pressure within the system. Whilst the PIC valve is just one component, it's typically put into a larger commissioning set that gives additional features to the installer or building user during installation, commissioning and use.

---

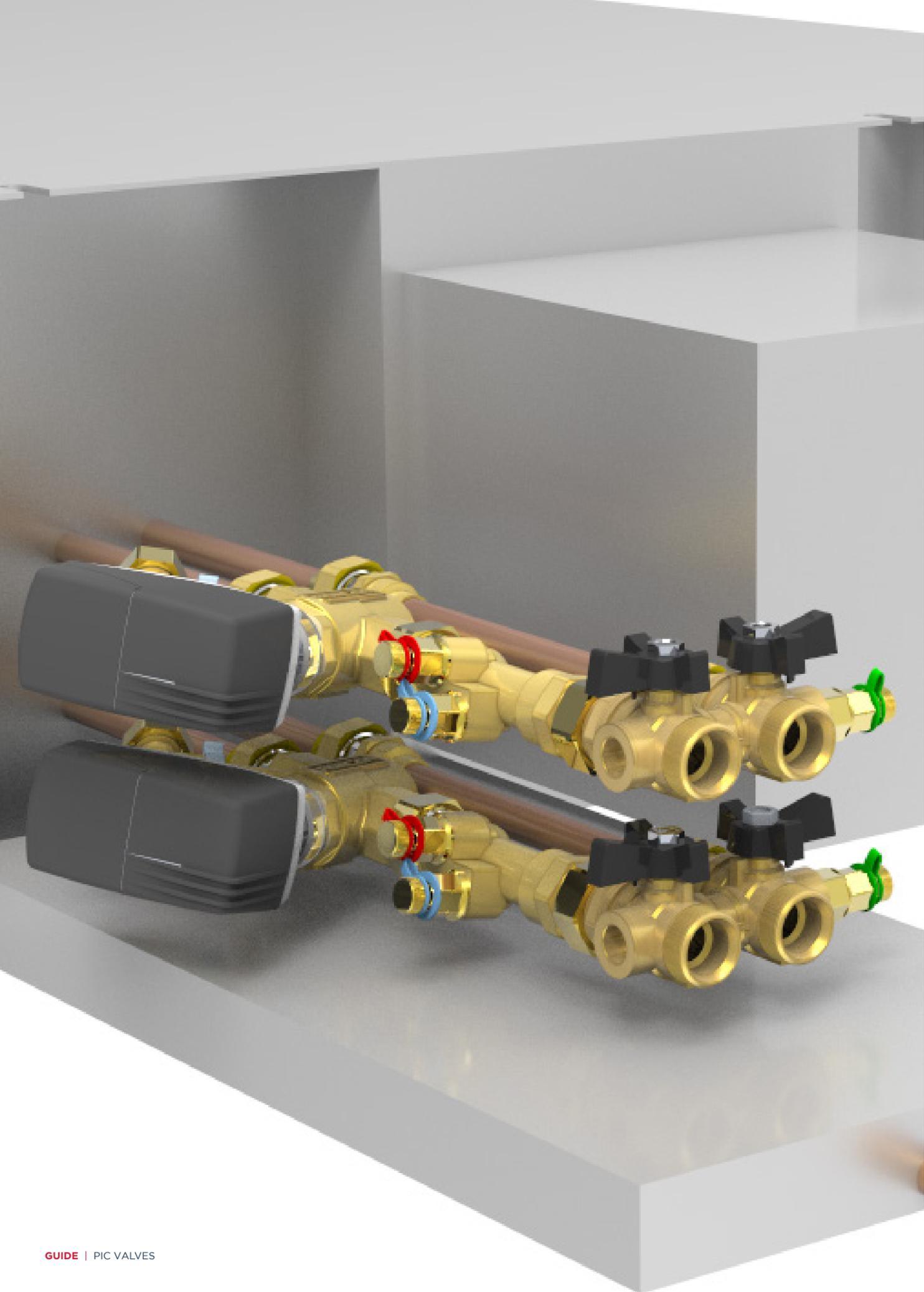
### **KEY BENEFITS**

Systems with pressure independent control valves don't need to be balanced and rebalanced during commissioning. They regulate and maintain a constant flow to the coil as water pressure in the system varies with the changing loads.

#### **This delivers:**

- Easier Commissioning
- Easier Maintenance
- Energy savings

PIC valves allow the system to perform better by sending the right flow to each coil. The full assembly is made up of different parts and some items are optional, depending on the system's design. Individual components include a Flushing By-pass, Strainer, PT Plug & Drain Valve, Flow Measuring Station, Actuator and the PIC Valve itself.

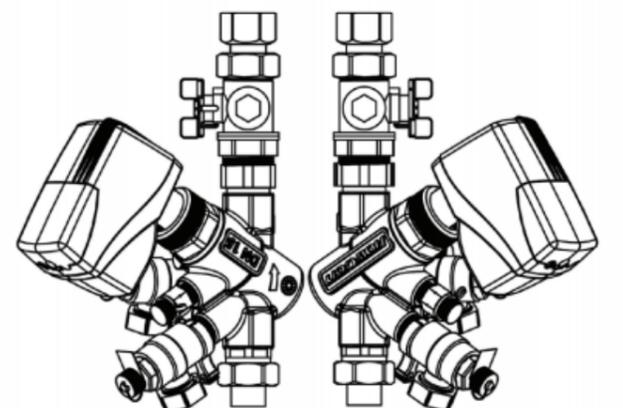
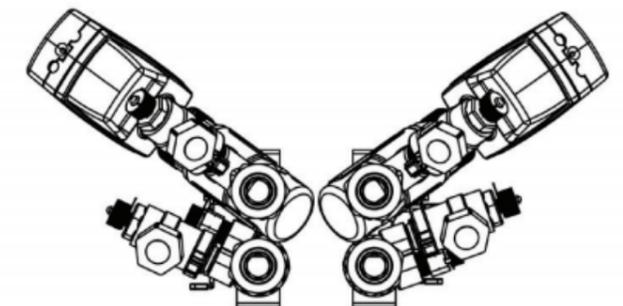
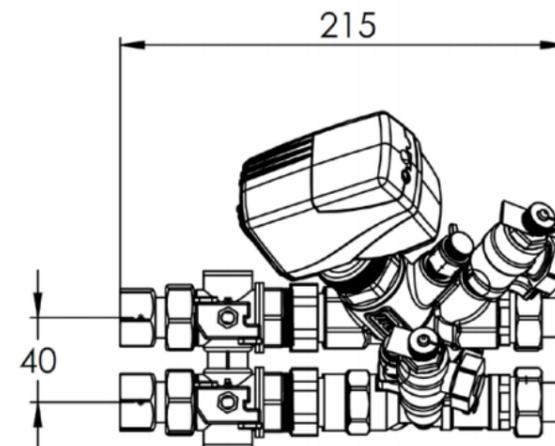


## COMPACT PIC FCU VALVE SETS ARE DESIGNED TO SIMPLIFY SELECTION, INSTALLATION, COMMISSIONING, CONTROL AND MAINTENANCE

With union connections at every joint and valve bodies, along with removable and interchangeable inserts, the concept allows for a totally versatile approach to design the valve set for both heating and cooling duties.

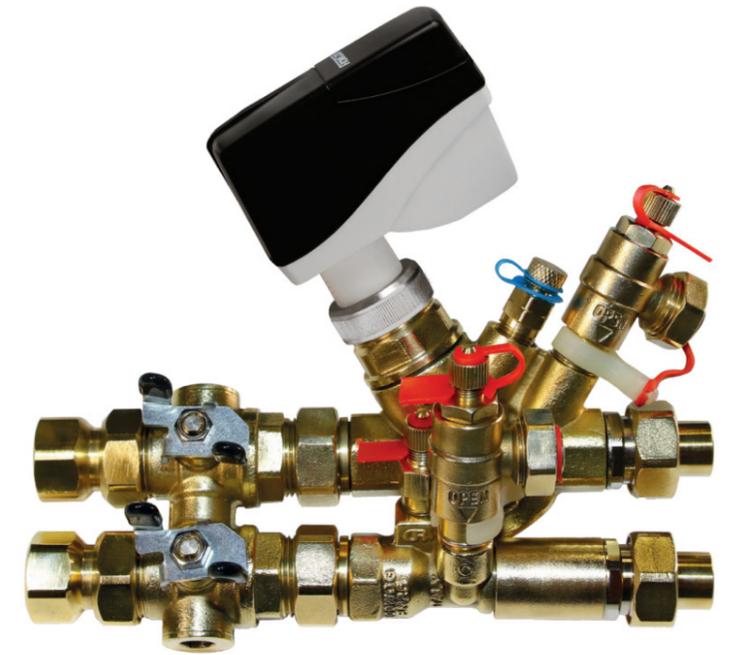
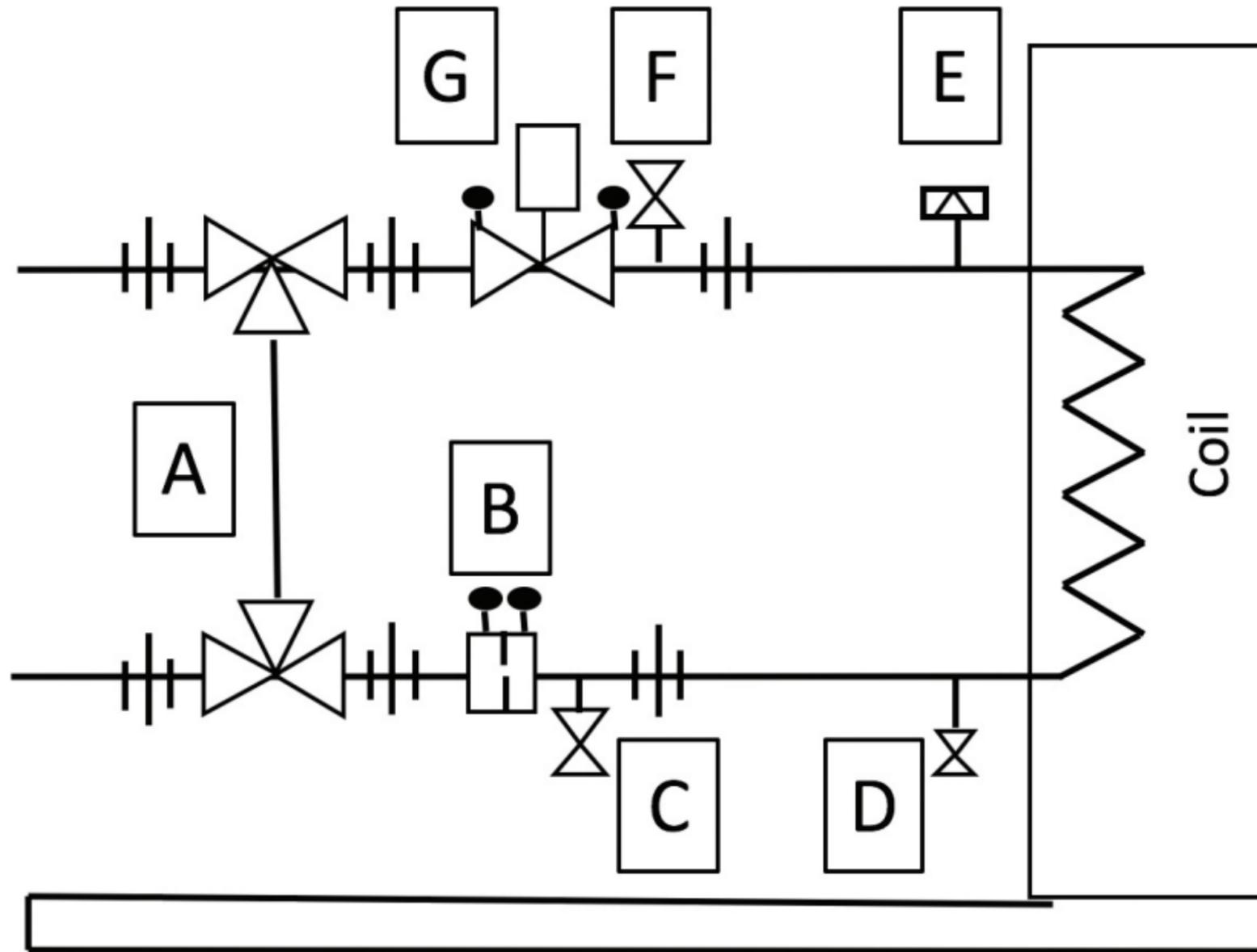
### THE HEART OF VALVE SETS

The PIC Valve, which combines a 4mm full stroke Control Valve, an Automatic Balancing Valve and a Differential Pressure Control Valve in one valve housing, provides flow, temperature and pressure control at all flow rate settings.



**FULLY CONFIGURED  
FCU VALVE SET**

# SCHEMATIC



- A** - Flushing By-Pass
- B** - Metering Station
- C** - Valve Set Union Drain Valve
- D** - FCU Drain
- E** - FCU Manual Air Vent
- F** - Union Drain Valve
- G** - PIC Valve with two PT Plugs

**BIDDLE AIR SYSTEMS**

St. Mary's Road  
Nuneaton  
Warwickshire  
CV11 5AU

**T** +44 24 7638 4233  
**E** sales@biddle-air.co.uk  
**www.biddle-air.co.uk**



**Biddle**