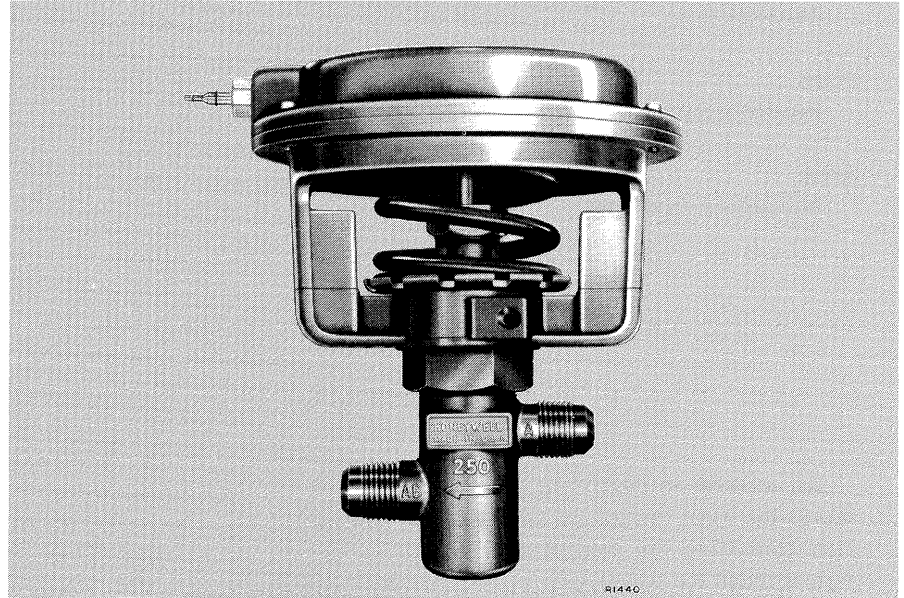


## General

The VP5 13B is a pneumatically operated, high-pressure, single-seated, normally-closed, reverse-acting valve used for proportional control of unit air conditioners using hot and/or cold water as the control agent.

## Features

- » Small physical size.
- » Flare-tube connections.
- » Offset, straight-through body pattern.
- » Operator can be rotated 360 degrees on bonnet to align with air-piping connections.



## Specifications

### MODEL

VP51 3B

### BODY

### PATTERN

Straight-through offset.

### SIZE

Nominal, 1/2 in. for 5/8 in. (16 mm)  
0.0. copper.

### CAPACITY INDEX (Cv)

1.0, 1.6, or 2.5.

### END CONNECTIONS

45 degree SAE Flare.

NOTE: Body threaded for standard flare fitting nuts (not included).

### MAXIMUM PRESSURE OF CONTROL AGENT

250 lb/in<sup>2</sup> (1724 kPa).

### MAXIMUM TEMPERATURE OF CONTROL AGENT

250 F (121 C).

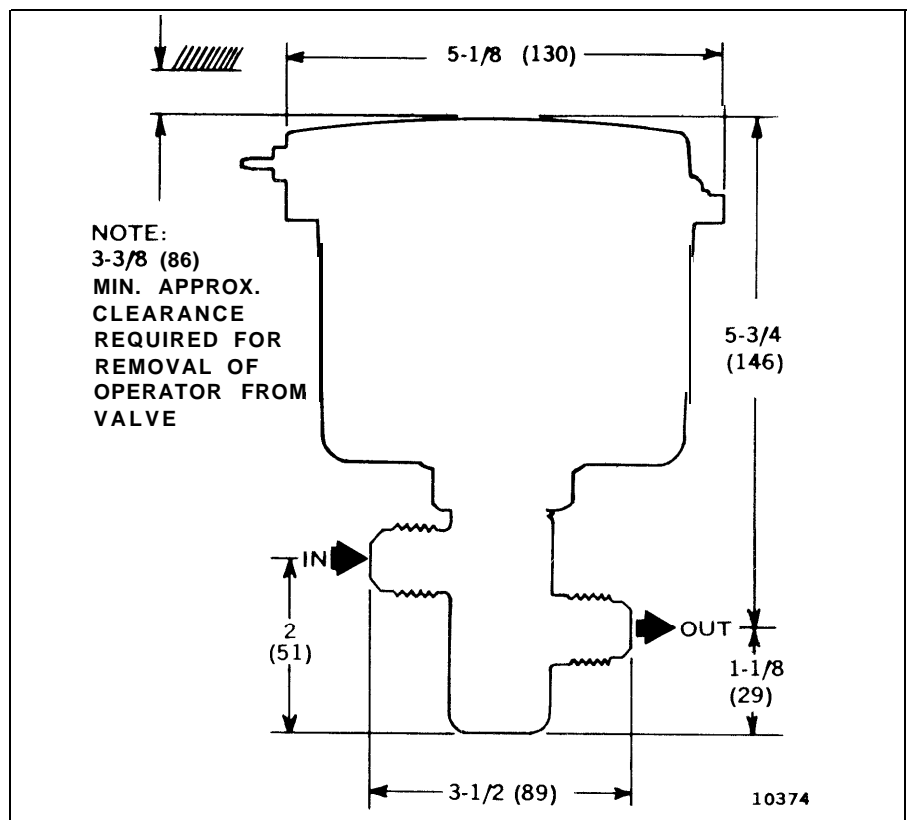


FIG. 1. VP513B APPROXIMATE DIMENSIONS IN INCHES (MILLIMETERS)

**MINIMUM TEMPERATURE OF CONTROL AGENT**  
40 F (4 C).

**DISC**  
Removable composition.

**SEAT**  
Removable brass.

**PLUG**  
Removable stainless steel.

**STEM**  
Removable stainless steel.

**RECOMMENDED FITTINGS**  
Standard 45 degree SAE flare nuts.

**OPERATOR**

**OPERATING RANGE**  
9 to 13 lb/in<sup>2</sup> (60 to 90 kPa), non-adjustable.

**DIAPHRAGM**  
Molded neoprene rolling type, 11 square inch (.007 meters<sup>2</sup>) effective area.

**MAXIMUM SAFE AIR PRESSURE**  
25 lb/in<sup>2</sup> (172 kPa).

**MAXIMUM PRESSURE FOR CLOSE-OFF (With Operator Pressure 2 lb/in<sup>2</sup> [14 kPa] Below Spring Range)**  
50 lb/in<sup>2</sup> (345 kPa).

**AII? CONNECTION**  
Push-on barb for 5/32 or 1/4 in. (4 or 6 mm) 0.0. plastic tubing.

**MAXIMUM SAFE DIAPHRAGM TEMPERATURE**  
160 F (71 C).

**Typical Operation**

An increase in control-air pressure moves the valve toward the open position permitting the control agent to flow through the system coil.

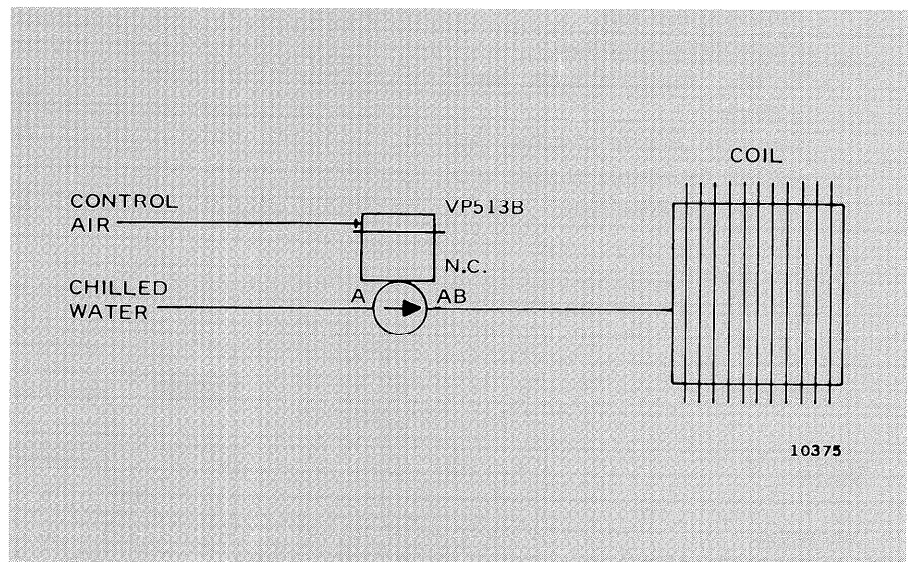


FIG. 2. VP513B TYPICAL OPERATION