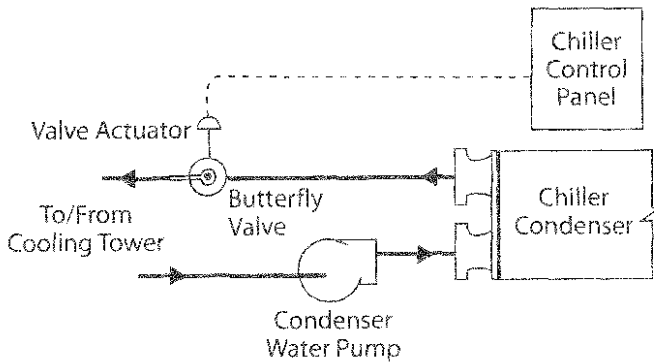


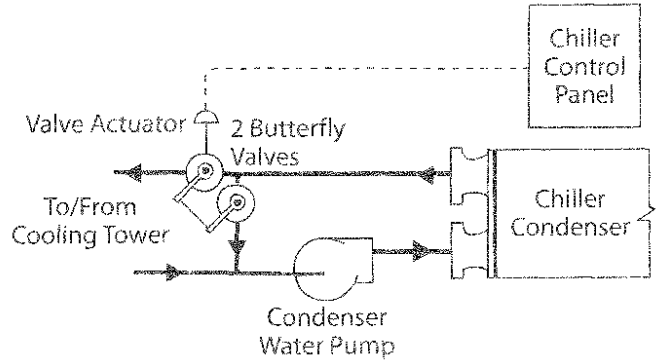
# CHILLER HEAD PRESSURE VALVE PIPING ARRANGEMENTS



**2-Way Valve Arrangement**

**Advantages:**  
 Good Control at low cost.  
 Pumping Cost can be reduced.

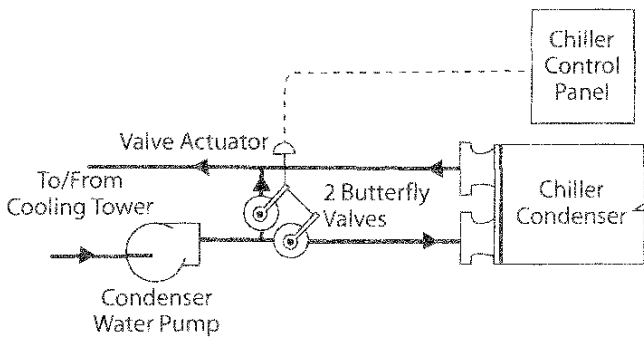
**Disadvantages:**  
 Cooling Tower water flow may fall below the minimum limit.  
 Pump must accommodate variable flow.



**3-Way Valve Arrangement with Dedicated CNW Pump**

**Advantages:**  
 Best Control by maintaining constant Flow through Condenser.

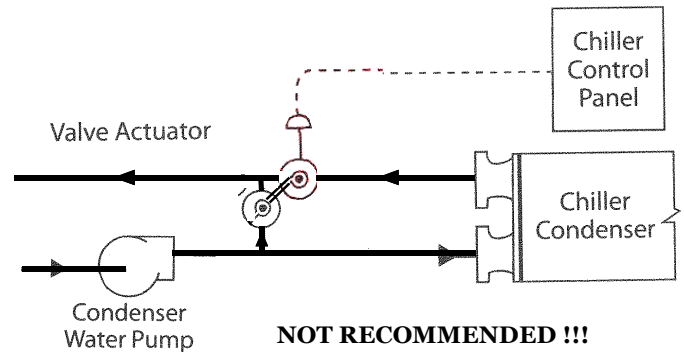
**Disadvantages:**  
 Cooling Tower water flow may fall below the minimum limit—Bypassing Tower.  
 3-Way is more expensive than 2-Way.



**3-Way Valve Arrangement with NonDedicated CNW Pump With Valve located on the CNW Entering side of Chiller**

**Advantages:**  
 Faster Temperature Response since not bypassing Cooling Tower.  
 Number of CNW Pumps can be reduced.

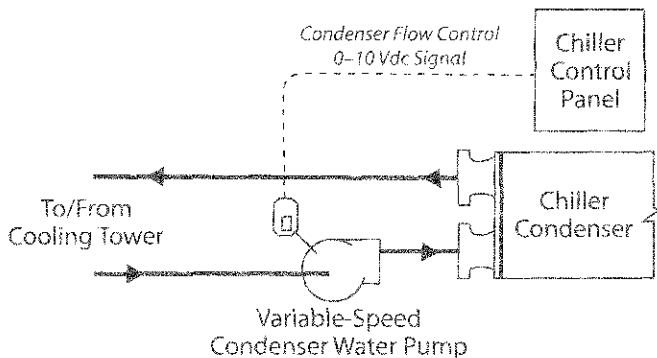
**Disadvantages:**  
 3-Way is more expensive than 2-Way.



**NOT RECOMMENDED !!!**

**3-Way Valve Arrangement with NonDedicated CNW Pump With Valve located on the CNW Leaving side of Chiller**

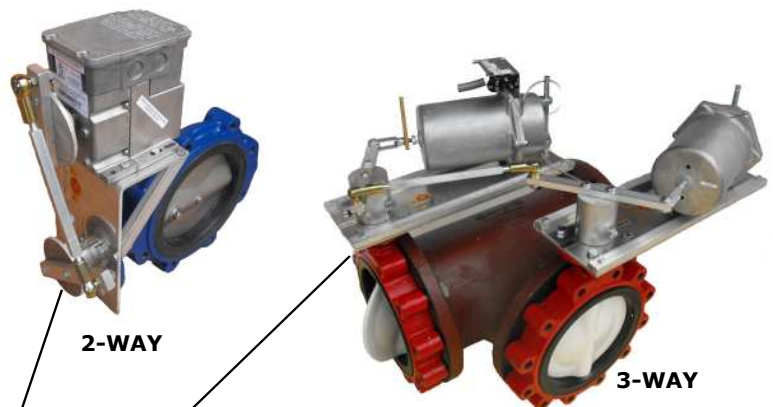
**Disadvantages:**  
 Installing the 3-Way Valve on the CNW Leaving side will cause Unequal Valve Port Pressures and may render Valve inoperable.  
 If this arrangement is required, the only solution is to provide a stronger actuator for more torque.



**Variable Speed Drive Pump Arrangement**

**Advantages:**  
 Good Control.  
 Pumping Utility Cost can be reduced.

**Disadvantages:**  
 Cooling Tower water flow may fall below the minimum limit.  
 Pump, Motor, and Drive combination must be suitable.



**CONDENSER WATER VALVES**



**WESLEY VALVE CO.**

MFGRS OF AUTOMATED BUTTERFLY VALVES  
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 Atlanta, GA 30339  
 PHN: (404) 351-8744 FAX: (404) 351-9340  
[www.wesleyvalve.com](http://www.wesleyvalve.com)

The Valve Assemblies shown provide more modulating resolution than 1/4 Turn Actuator assemblies—Electric or Pneumatic. The actuator stroke time must be 1 minute or less, but then modulating resolution is required to overcome the Butterfly Valve Control capabilities and it's oversize.