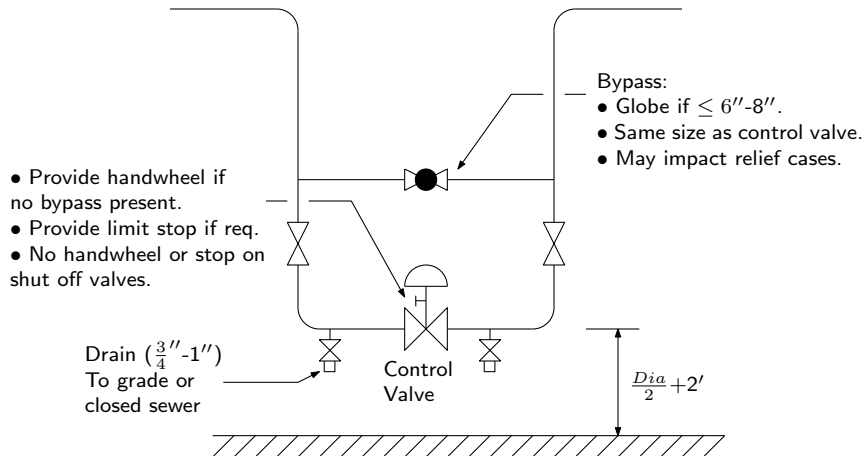
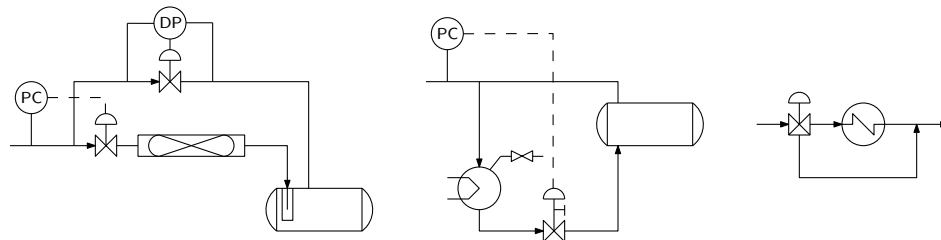


7.7 Valve Installation

- Most control valves are installed in an E-assembly to simplify maintenance:



- An E-assembly is not used when it would be:
 - Unsafe. An example is shut off valves.
 - Impractical. Examples are FCC slide valves and tower overhead vapour valves.
 - Unnecessary. Examples are 3-way valves, intermittent service, on-off valves or when they are proven unnecessary.



Some services without control valve bypasses (tower overhead, 3-way valve)

- Case : A new natural gas control valve was equipped with whisper trim. No bypass was provided to prevent higher than design flare loads. Valve blocked solid during startup, and flare gas velocity and heating value could not be maintained.