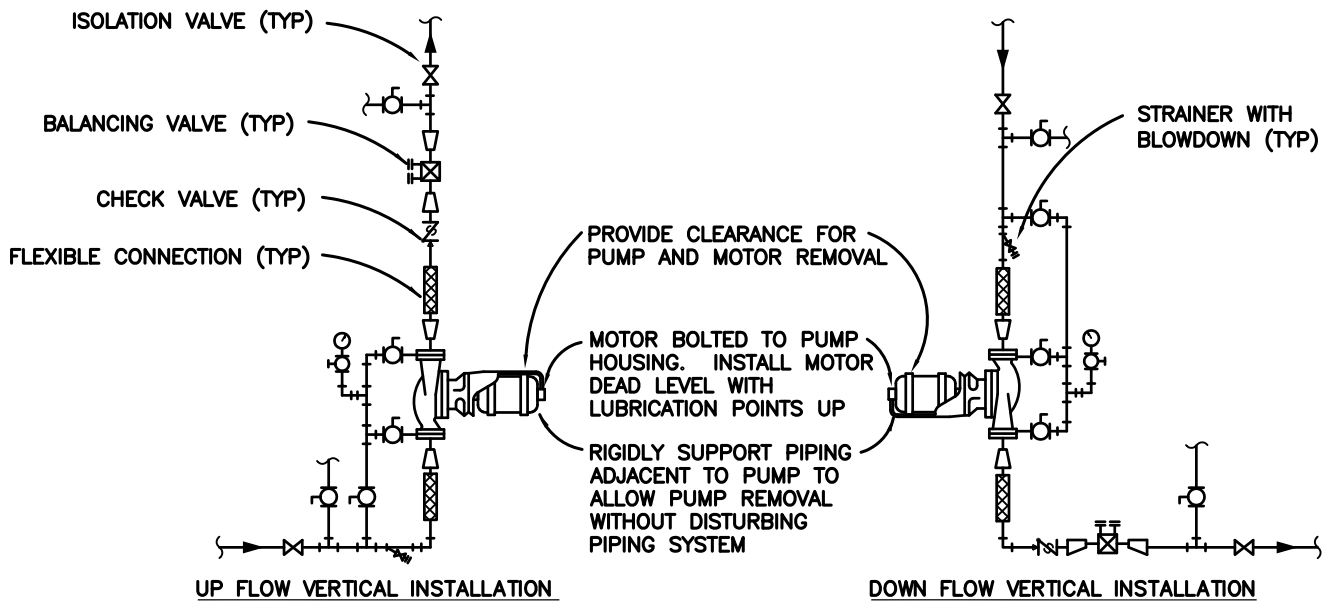


HORIZONTAL INSTALLATION



UP FLOW VERTICAL INSTALLATION

DOWN FLOW VERTICAL INSTALLATION

IN-LINE CIRCULATING PUMP PIPING DIAGRAM

NO SCALE

NOTES:

1. FLEXIBLE COUPLINGS FOR GROOVED SYSTEM MAY BE USED IN LIEU OF FLEXIBLE CONNECTIONS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE FLEXIBLE CONNECTION FOR PUMPS WITH MOTORS 1/2 HORSEPOWER AND GREATER.
2. REFER TO MSU STANDARDS OF CONSTRUCTION FOR GROUTING SPECIFICS
3. BUTTERFLY VALVE NOT ACCEPTABLE FOR BALANCING
4. TRIPLE DUTY VALVES NOT ACCEPTABLE
5. REFER TO MSU STANDARDS OF CONSTRUCTION FOR INSULATION REQUIREMENTS.
6. PUMP SHALL BE SUPPORTED PER MANUFACTURER'S RECOMMENDATIONS.
7. UTILIZE HARD PIPE FOR DIFFERENTIAL PRESSURE GAUGE ASSEMBLY. IN LIEU OF HARD PIPING ASSEMBLY, CONTRACTOR HAS THE OPTION OF SUPPLYING/INSTALLING THREE GAUGES WITH VALVES. THE USE OF RUBBER HOSE IS NOT PERMITTED.

CS_STD_MEC_232123_INLINE_CIRC_PUMP.dwg