

Tuning Your System

Maintaining your thermal fluid system's design flow rate is critical for system performance. Quantitative output can be provided by flowmeters, but for a simpler and less costly method of tuning a system, users should consider the installation of pressure gauges.

While pressure gauges don't provide the data for actual flow calculations, they can track valuable information for troubleshooting. For example, should a Y-strainer become blocked, a compound pressure/vacuum gauge installed on the pump suction will identify it before it becomes a major problem. Similarly, a malfunctioning control valve can be readily detected by pressure gauges installed on the inlet and outlet lines of a heat user. Pressure gauges can also be used for certain functions which are vital to overall system performance. For example, if there is more than one user on a loop, a 3-way control valve mounted on the bypass leg can equalize the user pressure drop.

Pressure gauges should be located at the end of the supply header, the beginning of the return header, at the heater inlet and outlet, at pump suction and discharge, and also before and after every heat user (between the control valve and the user).

Pressure gauges should always be installed with enough connecting tubing to dissipate heat. Moreover to make sure the gauge can be easily removed for maintenance or purging of solids, the installation of a block valve is necessary as well.