

RIT P14474 Hydrostatic Test Apparatus Installation Instructions

Piping

All the necessary piping has been cut to length, threaded, and painted. The various lengths and their locations are shown in the figure below. When assembling, teflon tape (or equivalent) should be used to ensure a watertight connection, while still being able to orient the pipes correctly. In the event of an unexpected issue, a 3 ft. section of unpainted and non threaded piping has been included to allow for new sections to be made. Also included are the 3 tee connectors and 2 elbows needed, along with an extra elbow.

Installation

1. The main anchor points of the system are the existing valve, manual valve, the drain connection, and the pump outlet (pressure) connection.
 - Assembly should begin at the existing valve and move towards the needle valve
 - After the needle valve, move outwards to drain and pump connections
 - The upper left tee in the figure below is to attach the existing flexible hose that delivers the pressure to the enclosure
2. Two Female-Female unions are provided to assemble to resulting square of piping shown in the figure below.
 - The unions are only rated to 3000 psi, so they must be placed on the drain side of both valves
 - Depending on the placement of the unions, new sections of pipe may need to be made from the 3 ft. section of extra piping
3. The needle valve should be orientated with the stem facing to the right and parallel to the floor
 - Ignore the inlet label on the valve
 - The large shut off valve above the needle valve should be orientated so that the handle faces towards the room
4. When installing the manifold, the side with 3 holes should face towards the floor
 - The 1000 psi and 5000 psi pressure transducers thread into a shut off valves and then uses a male-male nipple to connect to the manifold
 - The 10000 psi transducer is threaded directly into the manifold
 - The hole in the top of the manifold is for the digital pressure gauge from the old system
 - The manifold is made from 7075 aluminum so care should be taken when threading into it

5. The ball screw/ motor mount assembly should be mounted close to the wall.
 - Shims can be used to get the correct spacing from the wall to allow for coupling to the needle valve
 - The motor/gearbox will be delivered at a later date
6. The sheet metal enclosure does not need to be mounted until all testing is completed at a later date
 - When it is mounted, it will bolt directly to the wall and encapsulate the entire upper section of piping
 - The enclosure is not structurally significant and only needs to support its own weight so standard concrete anchors or toggle bolts may be used

