M&M Quality

MACHINING & METALWORKS INC.

Installation
&
Operating Instructions

Installation

Inspect and consider the following points before installation of Quality Gauges and Valves.

- Upon receipt of a liquid level gauge, check all components carefully for any possible damage incurred during shipment. If any damage is evident or suspected, do not attempt installation.

- Make sure the gauge chamber is not supporting any pipeline in order to avoid any undue strain on the gauge.

- When the gauge is longer then four feet or weighs more then one hundred pounds, consider supporting the gauge with brackets, especially when there is any vibration. This will prevent any overloading of the gauge and valve connections.

- To prevent injury or loss of product should glass breakage occur, always provide shut off valves with an automatic ball check between the gauge and the vessel. It is highly recommended that one uses Quality Valves with Quality Gauges.

- Bolt torque is very important for the proper operation of liquid level gauges. Due to gauge gaskets compressing over a period of time, the bolt torque should be checked before the gauge is installed. The gauge should always be isolated from the process system by closing the upper and lower valves. Drain the gauge to relieve pressure before performing any torque inspections or any general maintenance.

- Make sure that the model number and assembly number stamped on the name plate is as your purchase order indicates. Also verify the operating condition at the installation site is the same as indicated on your purchase order and that those conditions correspond to the technical data for that particular gauge.

Torque for:

standard gasket of grafoil	**30 - 35 ft.lb.**
25% glass filled Teflon	**20 ft.lb**
Pure Teflon and Kel-F shield	**15 ft.lb**

- The user must create maintenance schedules, safety manuals and inspection reports for the use of liquid level gauges and valves. The onus is on the end of the product since the end user is most familiar with the application and process conditions.

Operating Instructions

All Quality Gauges should be slowly brought into service. These gauges should be warmed up at a slow and even rate when they are used with vessel containing hot fluid. This is accomplished by slowly and carefully opening the shut-off valve. Wait until the gauge is fully warmed up and free of any signs of leakage before proceeding with the operating process. The gauges should be isolated periodically for the bolt torque to be checked. The shut-off valve must be fully open while the gauge is in operation. A partially open valve will prevent automatic ball checks from seating.

Danger:

Never exceed the pressure rating. This could result in mechanical failure of the gauge components and cause a serious personal injury, death or property damage.

Maintenance Procedures

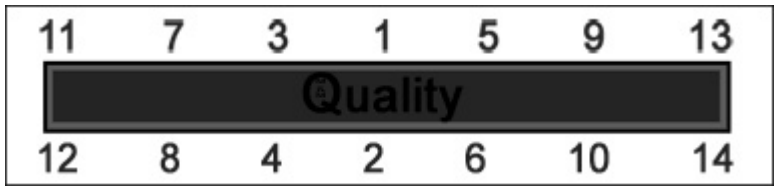
Gauge Glass should be given regular and careful attention. Inspect glass for any clouding, etching, scratching, cracks or corrosion. Shields showing any signs of clouding, wear or deterioration, are an indication that the gauge glass has been exposed or could be exposed to the contained fluid. Check for gasket leaks. Check for leaks in the connections.

Quality Machining & Metalworks Inc.

Quality Gauge Assembly

Numbers indicate proper bolt torquing sequence
For Q10 & Q20 Series torque at 32 ft. lb
For Q30 Series torque at 42 ft. lb

Even Pair of Bolts



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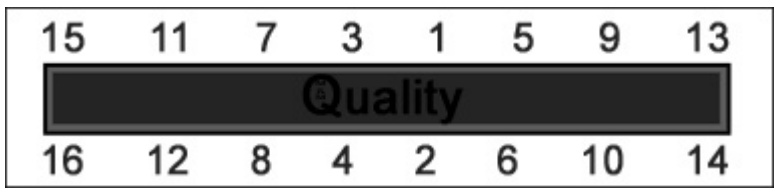

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