

On the tag there is sufficient room to write the desired flowrate or the pressure signal. The tag can be fixed to the valve with the provided plastic tie. By keeping the tie long, it is possible to leave the tag on the outside of any thermal isolation, thus simplifying the identification of the hidden device.



DISCLAIMER

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9400 series

How to use the BOSS 9400 series metering stations (Installation, Operating and Maintenance Instructions)

GENERAL INFORMATION

BOSS 9400 series metering stations allow evaluation of the flow passing through the branch of the circuit in which they are installed by measuring the differential pressure between their test points.

BOSS 9400 series valves are intended to be used for non hazardous liquids only, therefore liquids which are included in the Group 2 fluid classification as defined by the Pressure Equipment Directive 97/23/EC: this, together with the Pressure/Temperature rating shown below, places the 9400 series valves in the SEP category, for which the CE logo is not required.

Please refer to the 9400 series technical data sheets for further information.

PRESSURE AND TEMPERATURE RATINGS

End Connections	Non-shock pressure at temp. range	Non-shock pressure at maximum temp.
Threaded	25 bar from -10°C (*) to 100°C	20 bar at 130°C (**)

(*) = Only for below zero water temperatures where antifreeze fluids have been added.

(**) = Only for water temperatures over 100°C where anti - boiling fluids have been added.

The operative conditions shown above are intended for non-shock operating conditions: water hammer, impacts, stress loads, corrosive or erosive external environmental elements and the transport of fluids with abrasive properties should be avoided.

INSTALLATION

BOSS 9400 series valves $\frac{1}{2}$ " and $\frac{3}{4}$ " have male/female end connections threaded ISO 228/1.



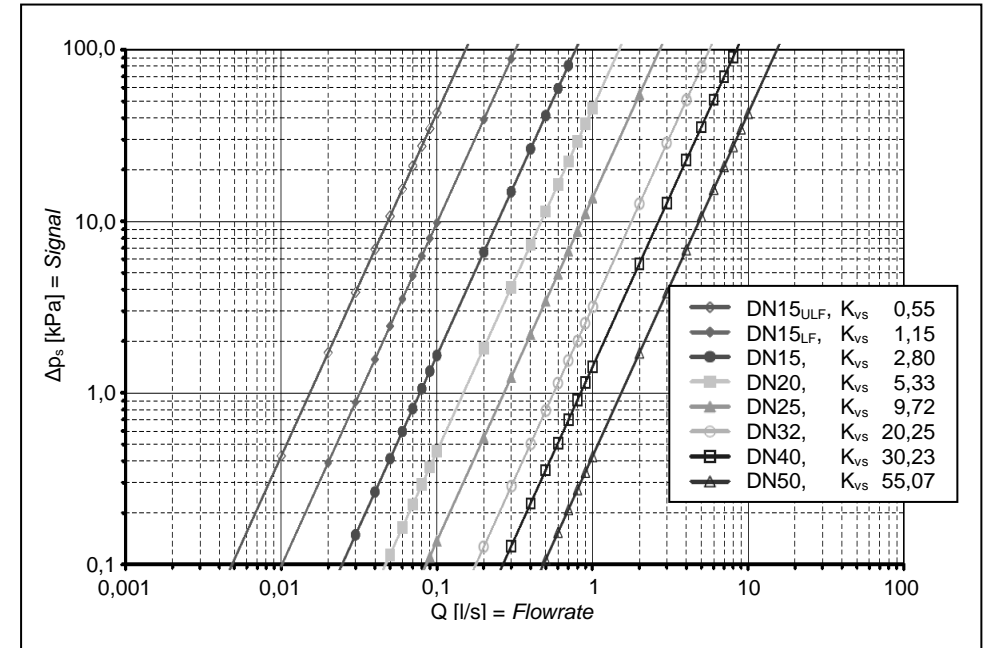
BOSS 9400 series valves from 1" to 2" have male/female end connections threaded ISO 7/1 Rp.

It is important that the flow direction matches the direction of the arrow indicated on the valve body. In order to obtain the best flow measurement accuracy, it is advisable to install the 9400 series valves:

- Using pipes of the same nominal size of the valve;
- With a minimum straight pipe length equal to 5 pipe diameters at the inlet (10 when installed at the outlet of a pump) and 2 pipe diameters at the outlet;
- Avoiding that any material used to connect the pipes or that any burrs present on the pipe ends themselves protrude inside the bore and obstruct part of the flow (it's advisable to flush the line before its start or after eventual maintenance on the system).

The valves should be installed in such a way so that the pipeline does not subject the valve to any torsion, bending or tension. During the installation of valves with test points, please ensure to leave sufficient space around them in order to allow enough room to connect the manometer probe.

FLOW MEASUREMENTS



The flow passing through the valve can be derived in any moment from the differential pressure signal measured at the two test points (see flow chart above). "Low Flow" and "Ultra Low Flow" versions are identified by a letter marked on body (L for "Low Flow", U for "Ultra Low Flow").

VALVE TAG

BOSS 9400 series valves are supplied with a data tag indicating:

- the Fig. Number of the valve type;
- the nominal size;
- the value of the flow coefficient K_{vs}