Product Note, PN 450
Regulator and Valve Body Marking Codes Guide

May 10, 2021

There are several possible markings on AP Tech regulator and valve bodies. Marks can be stamped or engraved. This product note explains the most common markings and what they mean.

Heat Lot Code Marking:

The heat lot is an alphanumeric code permanently marked on the regulator or valve body. The location of the valve and regulator heat lot codes vary by product and are shown in Figure 1 and Figure 2 for the most common products.

The heat lot code is used as a way to identify the specific lot of bar or round stock used to make the body and the heat treatment received. The heat lot number can be used to trace an item back to the mill.

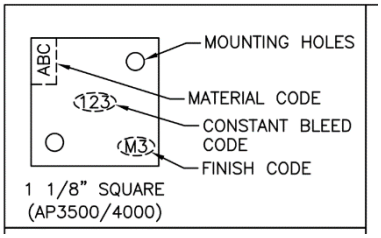

Figure 1 AP Tech 1.125 inch valve body engravings used on 3 and 4 series valves.

The code on the body will match the item's code assigned by AP Tech's QC department on the Mill Test Certificate, sometimes referred to as a Mill Sheet or Material Test Report. Copies of the Mill Test Certificate are available for a fee.

Surface Finish Marking:

AP and SL series regulator and AP series valve bodies are marked with a code denoting surface finish when the standard post-electropolished surface receives further polishing operations. The possible codes are "M3, "73", or "X3".

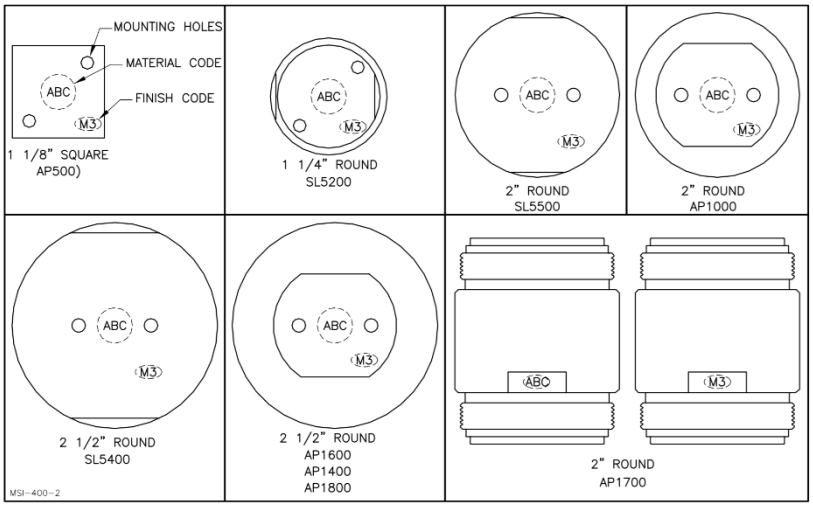

Figure 2 AP Tech regulator engravings.

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The following table explains the different surface finish options for AP and SL series products. Please see this test report for more information.

Surface Finish Grade (code)	Ra Maximum	Ra Average
Standard (no code)	15 µin (0.38 µm)	7 µin (0.18 µm)
10 Ra (M3)	10 µin (0.25 µm)	5 µin (0.13 µm)
7 Ra (73)	7 µin (0.18 µm)	3.6 µin (0.09 µm)
5 Ra (X3)	5 µin (0.13 µm)	3.3 µin (0.08 µm)

Serial Number Marking:

Regulator and valve serial numbers with corresponding bar codes are printed on a label affixed to the side of the body. Only in the case of high temperature valves and some high temperature regulators are the serial numbers marked on the body. High temperature valves have the serial number marked on the side of the body. Please see this product note for further information.

Port Marking:

Valves and Back Pressure (BP) regulators: “IN” and “OUT” are marked on the sides of the valve body. For valves this mark only denotes the connector porting, not a requirement for flow direction. The Inlet (IN) connection(s) is ported under the valve seat and the Outlet (OUT) connection(s) is ported in the diaphragm cavity. All AP Tech valves are flow bidirectional up to maximum operating pressure. For more information about AP Tech valve porting, see our valve port training. For back pressure (BP) regulators, the inlet (IN) is ported to the diaphragm cavity and the outlet (OUT) is ported below the seat.

Regulators: “LP” and “HP” are marked on regulator inlet and outlet ports. High pressure (HP) connector(s) is ported below and upstream of seat and poppet and low pressure (LP) connector(s) are ported to the diaphragm cavity, downstream of the seat and poppet.

Constant Bleed (CB) Option Marking:

If there is a three number code “009”, “013” or “023” on a valve body, it indicates the valve was configured with the constant bleed option. The AP, AZ, and AK 1/4 inch 3 and 4 series valves are available with a constant bleed option. As the name of the option implies, it provides a continuous, low flow of gas through the valve even when the valve is closed.

The CB options have the following nominal flows of N2 at 80 psig (5.5 bar) and designations:

“009” - 5 slpm, “013” - 8 slpm, “023” - 15 slpm

If you have any questions about AP Tech products, please do not hesitate to contact your distributor or AP Tech here.