Valve Sizes

The size designation of a valve is determined by the size of the tube or pipe to which it is connected. Tubing and iron pipe are each sized on a different basis. Tube size is the outside diameter of the tube. Pipe size (nominal) is the approximate inside diameter of standard weight iron pipe. A valve is known by the size of its tube or pipe connections.

When all ports of a valve have pipe connections, the valve is designated by the nominal pipe size in inches, thus a valve having all pipe connection ports for 1/2 in. pipe is a size 1/2 valve.

The size of valves having all tube connections, or a combination of tube and pipe connections, is determined and designated by the size of the tube to be connected to the valve, taking for the size the number of sixteenths of an inch in the outside diameter of the tubing with which the valve is to be used. For example, a valve having one or more tube connection ports for 1/2 in. OD tubing (8/16 in.) would be a size 8 valve. Sizes of any pipe connection ports on the same valve with tube connections are always furnished according to the standards shown in the table below. These combinations have been set up in the industry, are are accepted as standard.

In making up the Ordering Part Number for a valve, the size is used as a Dash Number following the valve number. For example, a size 8 valve (tube) would be indicated by -8 in the Part Number, as 488-8. A size 1/2 valve (pipe) would be indicated by -1/2, as 483-1/2.

Standard Port Sizes on Valves with Tube Only or a Combination of Both Tube and Pipe Port Connections

Tube O.D. Determines Valve Size and Dash No.	Valve Size and Dash No. Pipe	Valve Size and Dash No. Tube	Valve Size and Dash No. SAE#
1/4"	1/8"	4	104, #4 SAE
5/16"	1/8"	5	105, #5 SAE
3/8"	1/4"	6	106, #6 SAE
1/2"	3/8"	8	108, #8 SAE
5/8"	1/2"	10	110, #10 SAE
3/4"	3/4"	12	112, #12 SAE
1"	1"	16	116, #16 SAE
1-1/4"	1-1/4"	20	120, #20 SAE
1-1/2"	1-1/2"	24	124, #24 SAE
2"	2"	32	132, #32 SAE

Material Codes

K

Material codes usually apply to the basic body material only, trim material being 300 Series and/or 400 Series stainless steel in most cases. Other materials are available.

B Brass, free machining.

D Aluminum alloy (MIL-A-8625, Class C, Type II).

S Steel, free machining.

SS Stainless steel, 303 (QQ-S-763).

Y Stainless steel, 316 (QQ-S-763).

Z Stainless steel, 347 (QQ-S-763).