

## API 6D BORE SIZE

NPS	API 6D Minimum bore (full) by class [mm]				API 6D Equivalent area reduction for reduced bore [%]							
	#150	#300	#600	#900	#1500	#2500	#150	#300	#600	#900	#1500	#2500
1/2	12.7	12.7	12.7	12.7	12.7	12.7	-	-	-	-	-	-
3/4	19	19	19	19	19	19	44.68%	44.68%	44.68%	44.68%	44.68%	44.68%
1	25	25	25	25	25	25	57.76%	57.76%	57.76%	57.76%	57.76%	57.76%
1 1/4	31.8	31.8	31.8	31.8	31.8	31.8	61.81%	61.81%	61.81%	61.81%	61.81%	61.81%
1 1/2	38	38	38	38	38	38	70.03%	70.03%	70.03%	70.03%	70.03%	70.03%
2	49	49	49	49	49	42	60.14%	60.14%	60.14%	60.14%	60.14%	81.86%
2 1/2	62	62	62	62	62	52	62.46%	62.46%	62.46%	62.46%	62.46%	65.24%
3	74	74	74	74	74	62	70.20%	70.20%	70.20%	70.20%	70.20%	70.34%
4	100	100	100	100	100	87	54.76%	54.76%	54.76%	54.76%	54.76%	50.79%
6	150	150	150	150	144	131	44.44%	44.44%	44.44%	48.23%	48.23%	44.11%
8	201	201	201	201	192	179	55.69%	55.69%	55.69%	56.25%	56.25%	53.56%
10	252	252	252	252	239	223	63.62%	63.62%	63.62%	64.54%	64.54%	64.43%
* 12	303	303	303	303	287	265	69.17%	69.17%	69.17%	69.35%	69.35%	70.81%
14	334	334	334	334	315	292	56.93%	56.93%	56.93%	61.25%	57.57%	58.32%
16	385	385	385	385	360	333	61.94%	61.94%	61.94%	65.99%	63.56%	63.33%
18	436	436	436	436	406	374	58.68%	58.68%	58.68%	57.95%	60.2%	60.96%
20	487	487	487	487	454	419	62.50%	62.50%	62.50%	62.72%	62.88%	63.16%
22	538	538	538	538	500	-	65.68%	65.68%	65.68%	65.67%	65.93%	-
24	589	589	589	589	546	-	68.36%	68.36%	68.36%	68.28%	69.14%	-

There is no definition in API 6D or API 599 for plug valve bore sizes, hence it is important to compare the port size shown above for “reduced port” ball valves in API 6D to ensure “regular pattern” plug valve port. Many manufacturers use the terminology “regular pattern” but their port size is smaller than above, as API 6D & API 599 only specified a face to face dimension requirement for regular pattern plug valves, not a port size. Typically, with most manufacturers, if the port size is under 50% of the API 6D port size for that class, it is referred to as “venturi pattern”. Over 100NB “short pattern” 150 & 300 class also has a smaller port size similar to venturi pattern. APV regular pattern plug valves generally conform to the above chart or larger.

\*The only anomaly is 300NB (12”) 600LB ~ 2500LB, and in 150 ~ 600LB 250 ~ 600NB where the port size may be lower than percentage shown. However, even in these sizes, APV regular pattern port sizes are generally almost never below 55%. (Venturi pattern can be as low as 40%).

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