

TUBING FLOW RATES

The fluid flow velocities in water systems should not exceed certain limits to avoid noise and damage to pipes and fittings. The Plastic Pipe and Fitting Association (PPFA) recommends a maximum flow-rate velocity of 5 to 8 feet per second (fps) through Schedule 40 PVC pipe, with the highest efficiencies and lowest risk of damage at about 5 fps max for larger pipe sizes. Besides possible pipe failure, higher flows create huge resistance to water flow, necessitating higher power requirements and higher operating costs. The table below can be used as a guideline to maximize pumping efficiency:

Inside Diameter of Pipe or Tubing	Max Flow (GPH)	Max Flow (GPM)
1/2"	300	5
3/4"	720	12
1"	1,200	20
1.5"	2,700	45
2"	4,400	75
2.5"	5,400	90
3"	7,500	125
4"	12,000	200