

# Product Overview | 1008A Valve

## GENERAL INFORMATION

Adjustable Port Valves are ideal for automatic control of fuel or air flow to meet the requirements of modern instrumentation in combustion systems. The adjustable port feature permits sizing the valve to fit the application, after valve has been installed. Linkages can be adjusted for full or limited valve travel.

## CORRECT VALVE SIZING

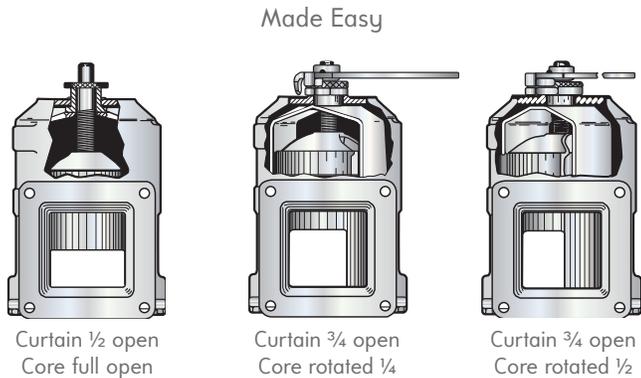


Figure A. Turning curtain adjusting knob changes port opening so valve can constitute optimum resistance in the system for good control.

For a valve operated by a modulating type control, either a linear or an equal percentage characteristic is preferred for most applications. These characteristics are shown in Figure B, together with two curves indicating very common but usually undesirable flow patterns: In their lower parts, change of flow is too fast, causing an "over correction;" while at the upper end there is practically no flow change in response to valve movements.

Shape of a flow curve depends (1) on valve **area characteristic**, and (2) on size of valve port relative to downstream resistances (piping, orifices, and burners), the sum of which is difficult to predict.

An Adjustable Port Valve solves the problem. Its linear area characteristic permits proper "sizing" of valve **after installation** without involved calculations.

Valve Size	Number of turns from full open to fully closed
3/8" and 1/2"	11
3/4"	14
1"	16
1 1/4" and 1 1/2"	23
2"	30
2 1/2"	35
3"	43
4"	60
6v	87

Recommended procedure is to open valve control handle and valve curtain wide, then close curtain until pressure drop across valve is 1/5 to 1/6 of total system pressure drop. Flow characteristics shown as solid lines in **Figure B** can be realized with full valve stroke, enabling desired flow response to movements of the control motor.

Linkage between motor and valve can be "characterized" to produce the desired flow curve, e.g., linear or equal percentage.

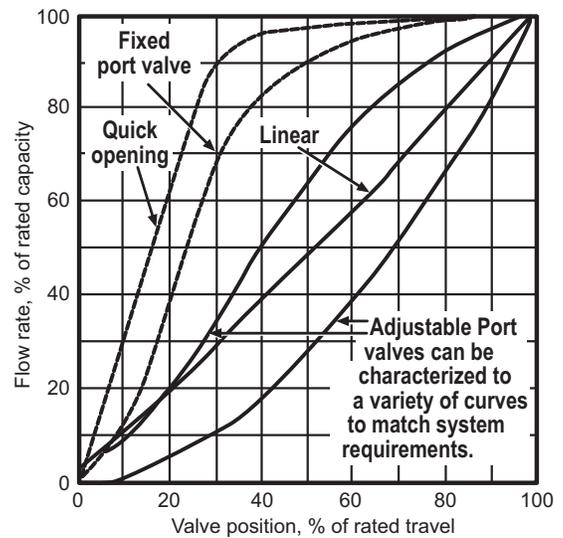


Figure B. Flow characteristics of valves installed in systems with downstream resistance. The three solid lines represent characterizable adjustable port valves.

1008A 1010A	Pipe Size	Cv Valve Coefficient
-02	(3/8")	2.0
-01	(1/2")	2.0
-0	(3/4")	7.9
-1	(1")	12.5
-2	(1 1/4")	19.7
-3	(1 1/2")	28
-4	(2")	49
-5	(2 1/2")	71
-6	(3")	111
-7	(4")	191
-8	(6")	433