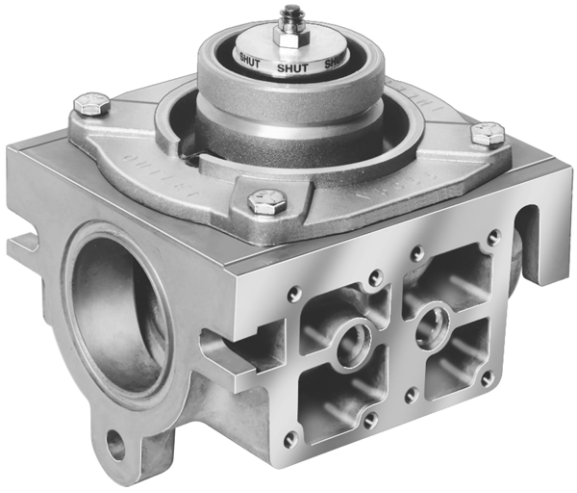
Honeywell

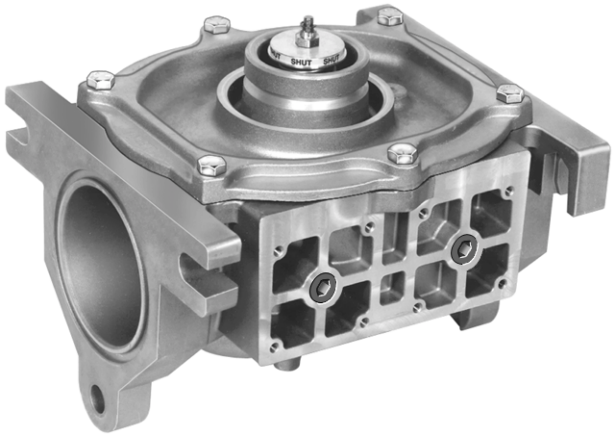
V5097 Industrial Gas Valves

GAS FLOW VS. VALVE OPENING

GAS FLOW CURVES



3/4 to 2 in. valves



2 to 3 in. valves

Contents

70-8351-1

INTRODUCTION

The following curves relate gas flow through the V5097 Industrial Gas Valve to stem travel. These curves show valve performance under American Gas Association (AGA) standard conditions:

1. Specific gravity of gas: 0.64
2. Temperature: 60°F (16°C)
3. Inlet pressure (inches of water): 2.0 (0.5 kPa)
4. Pressure drop across valve (inches of water): 1.0 (0.25 kPa)

The flow is given in both cubic feet per hour (cfh) and cubic meters per hour (m3/hr) on the left side of the graph and percent of rated flow on the right side of the graph. Maximum stem travel is 1.05 inches (26.6 mm).

The V5097 Industrial Gas Valves are designed as follows:

1. V5097A Industrial Gas Valve is designed for on-off service.
2. V5097B Industrial Gas Valve has a characterized guide for use with low-high or modulating actuators, or with on-off actuators to aid in smooth light-off.
3. V5097C Industrial Gas Valve is designed for on-off service. When used with the correct actuator, the V5097C meets Factory Mutual requirements for valve closed indication and Underwriters Laboratories Inc. requirements for valve seal overtravel interlock.
4. V5097D Industrial Gas Valve is designed for on-off service in high pressure applications.
5. V5097E Industrial Gas Valve is designed for on-off service in high pressure applications. When used with the correct actuator, the V5097E meets Factory Mutual requirements for valve closed indication and Underwriters Laboratories Inc. requirements for valve seal overtravel interlock.

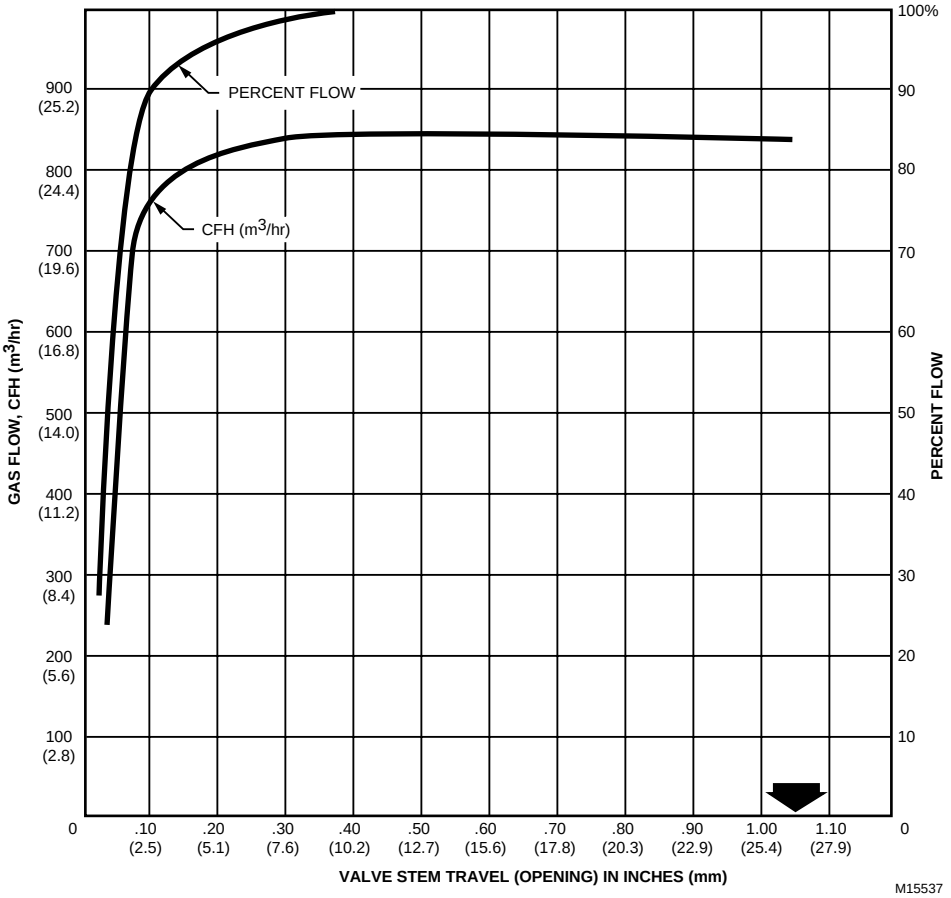


Fig. 1. V5097A,D (3/4 in. NPT pipe adapter) gas flow related to stem travel.

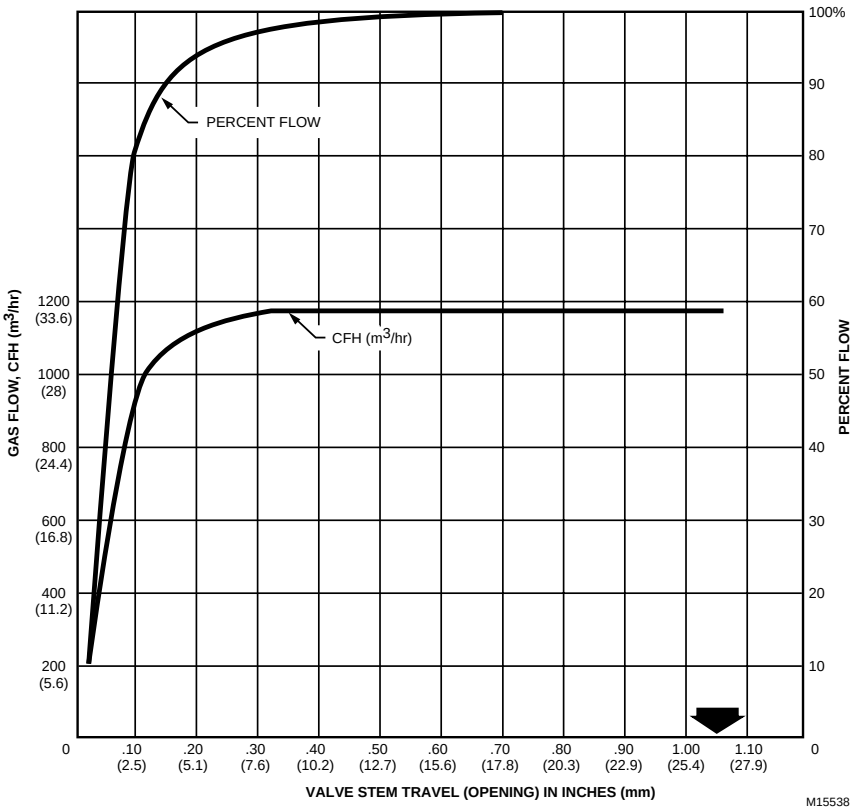


Fig. 2. V5097A,D (1 in. NPT pipe adapter) gas flow related to stem travel.

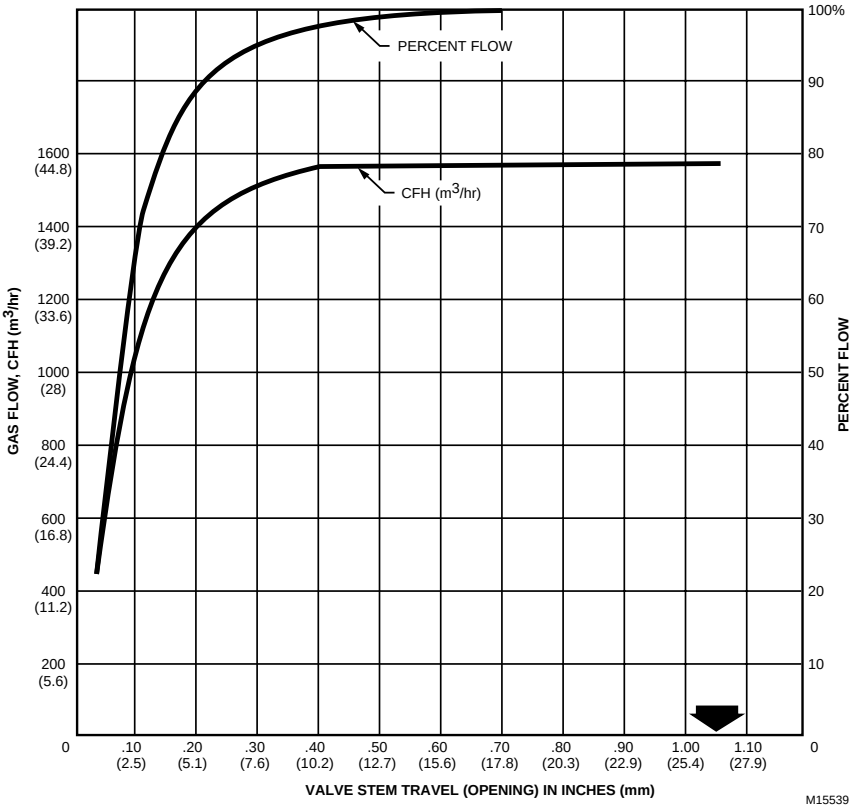


Fig. 3. V5097A,D (1-1/4 in. NPT pipe adapter) gas flow related to stem travel.

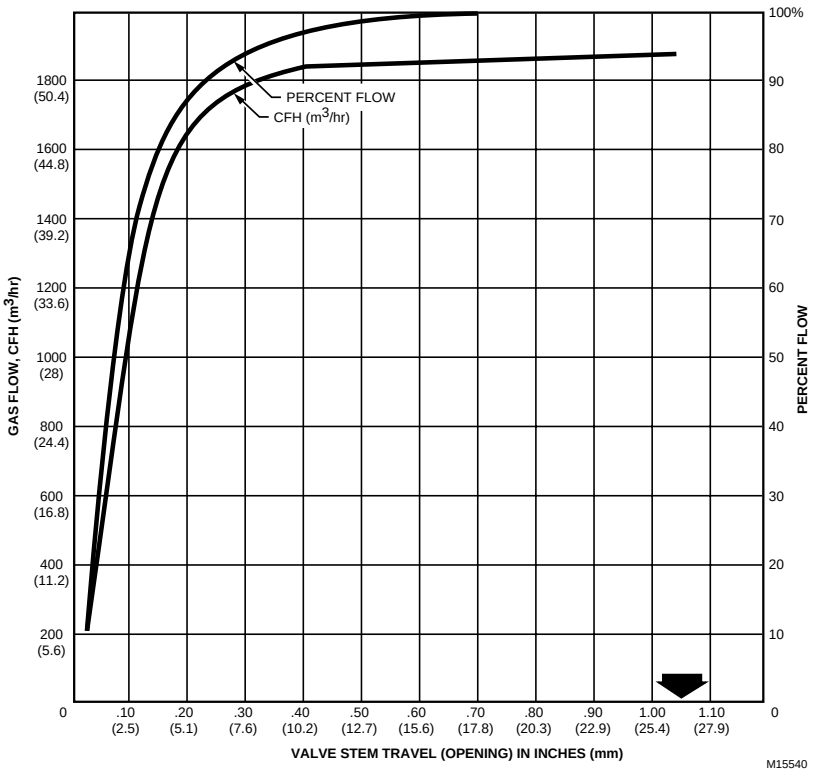


Fig. 4. V5097A,D (1-1/2 in. NPT pipe adapter) gas flow related to stem travel.

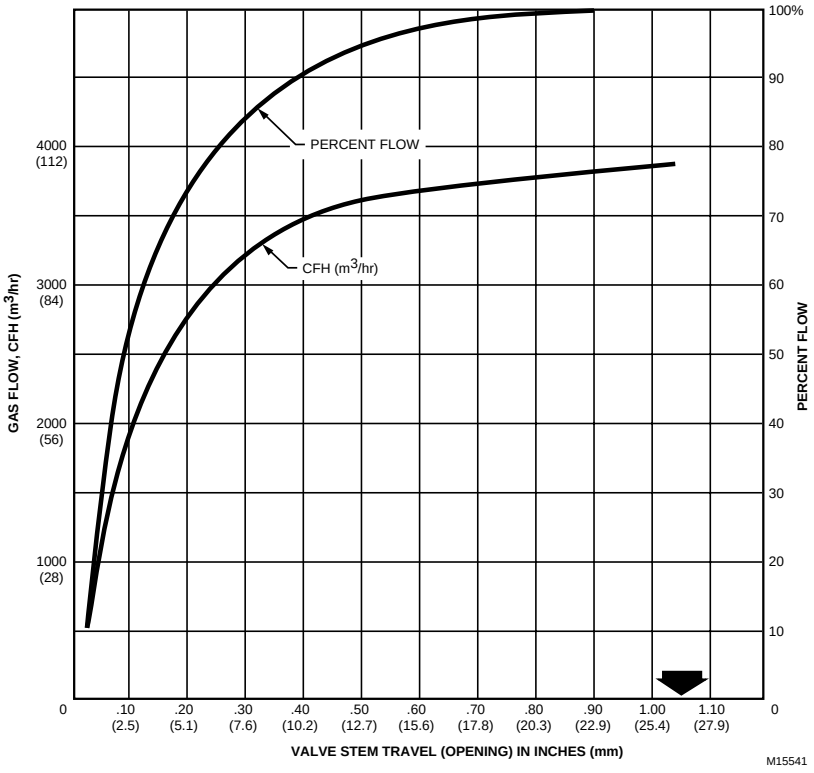


Fig. 5. V5097A,D (2 in. NPT large body pipe adapter) gas flow related to stem travel.

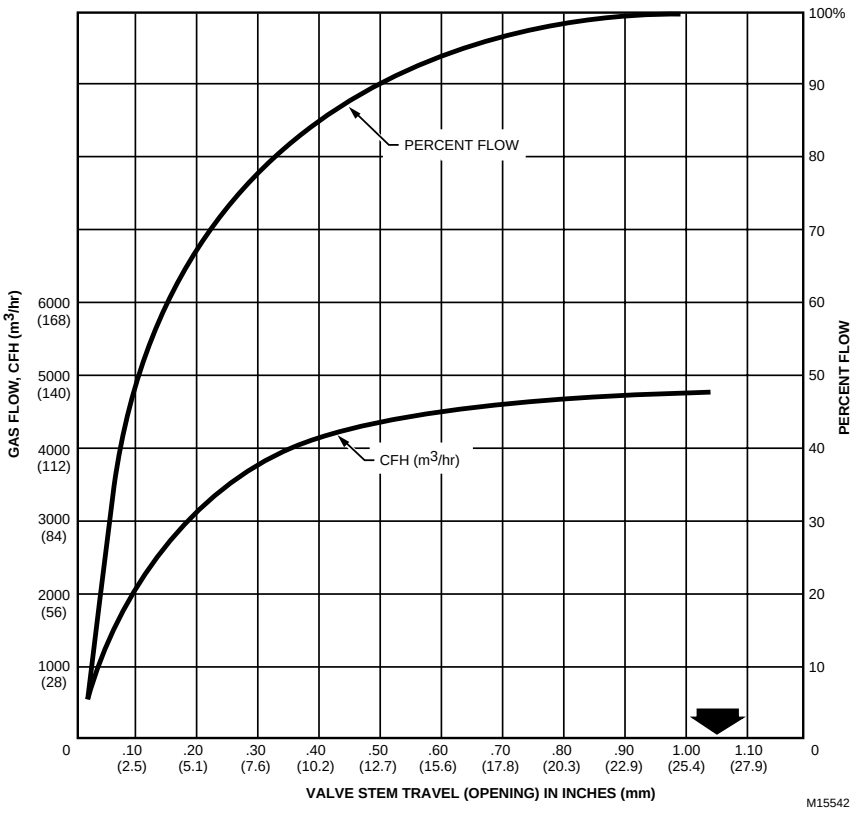


Fig. 6. V5097A,D (2-1/2 in. NPT pipe adapter) gas flow related to stem travel.

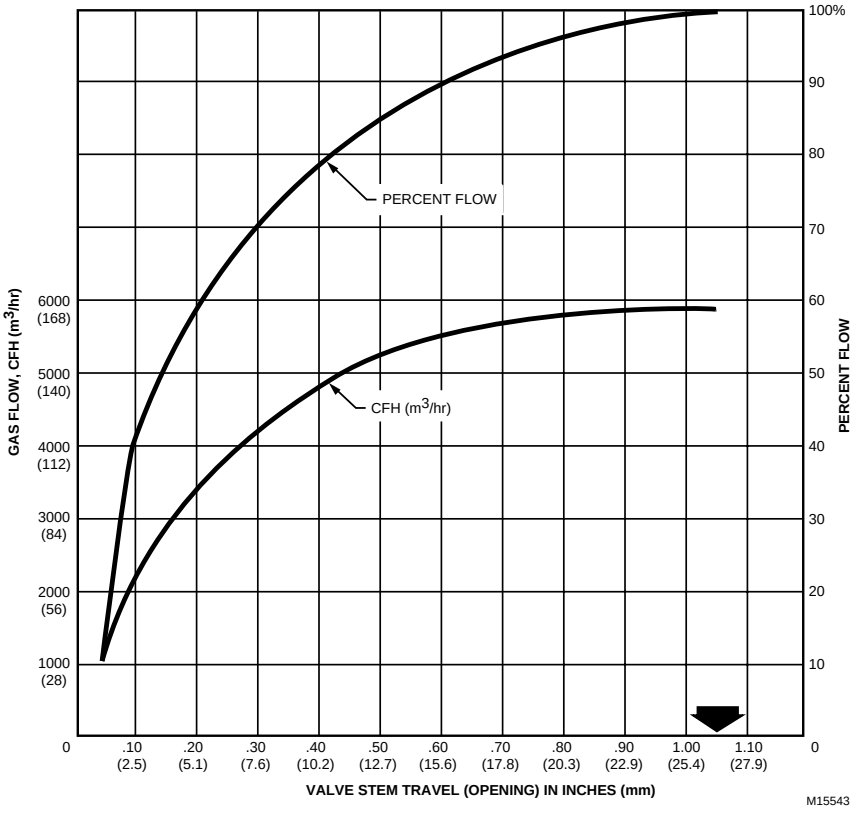


Fig. 7. V5097A,D (3 in. NPT pipe adapter) gas flow related to stem travel.

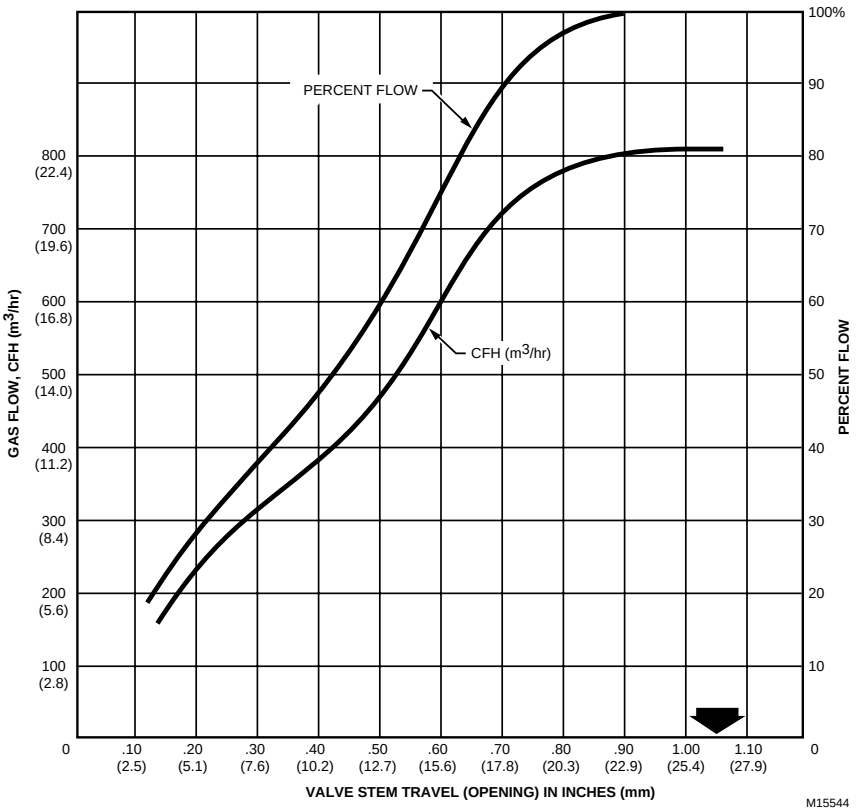


Fig. 8. V5097B (3/4 in. NPT pipe adapter) gas flow related to stem travel.

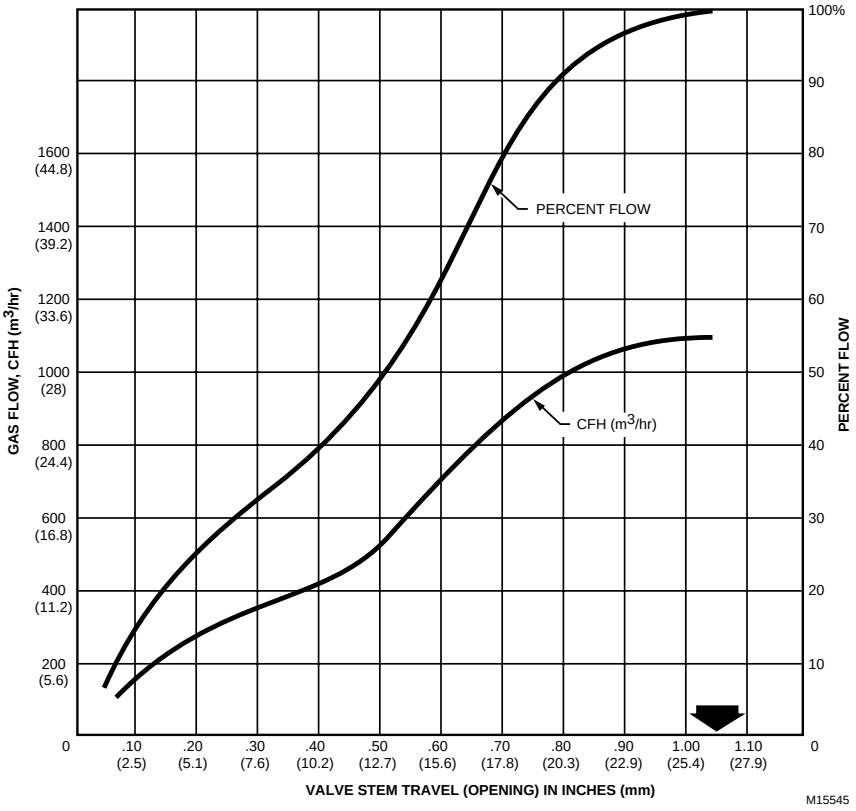


Fig. 9. V5097B (1 in. NPT pipe adapter) gas flow related to stem travel.

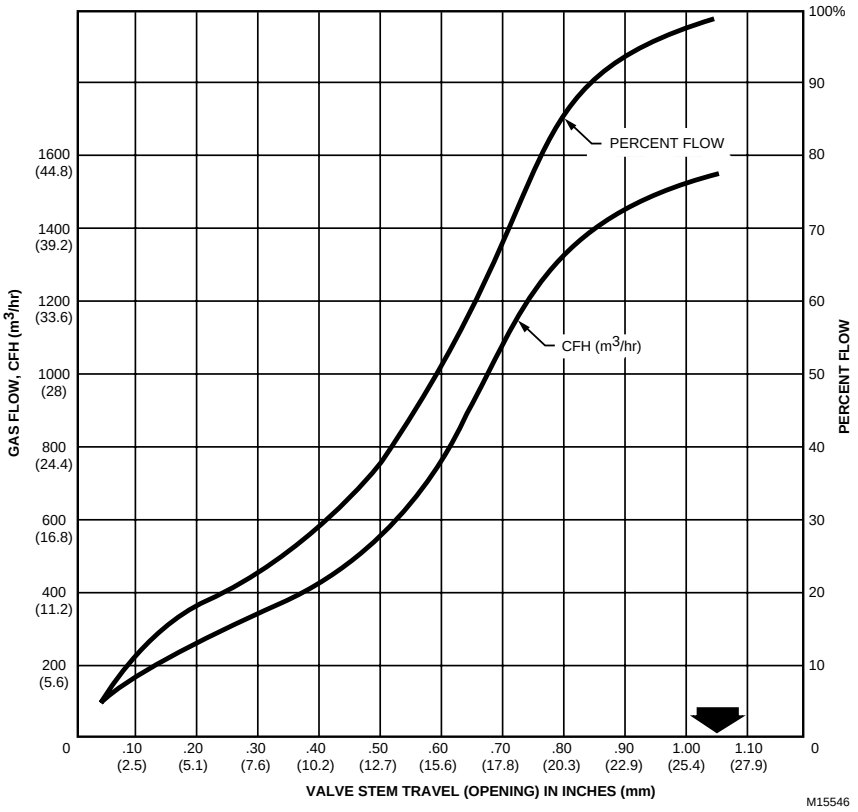


Fig. 10. V5097B (1-1/4 in. NPT pipe adapter) gas flow related to stem travel.

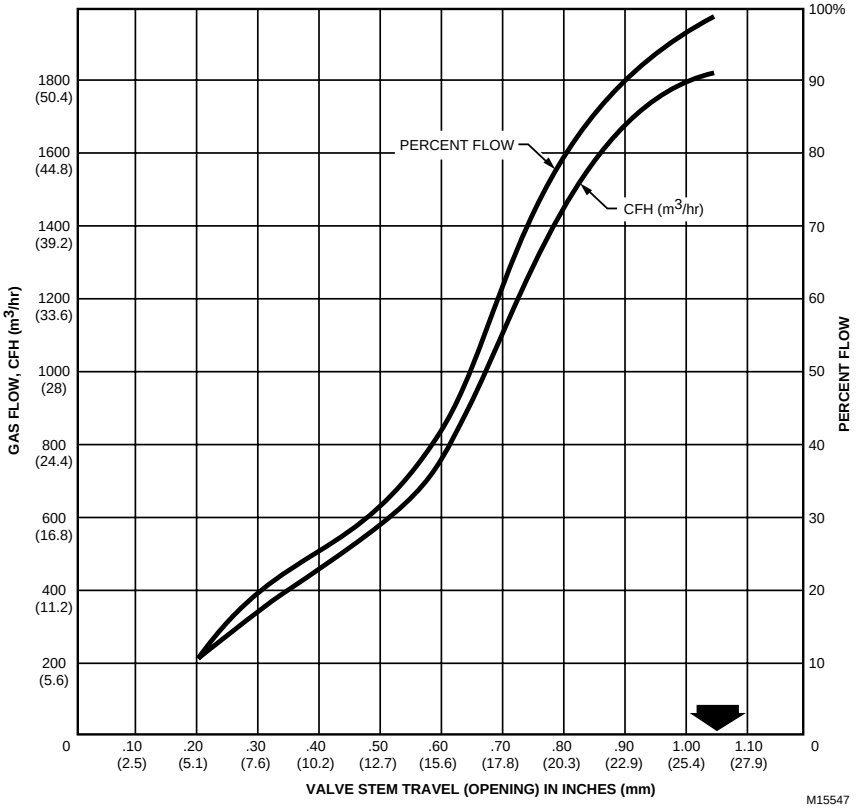


Fig. 11. V5097B (1-1/2 in. NPT pipe adapter) gas flow related to stem travel.

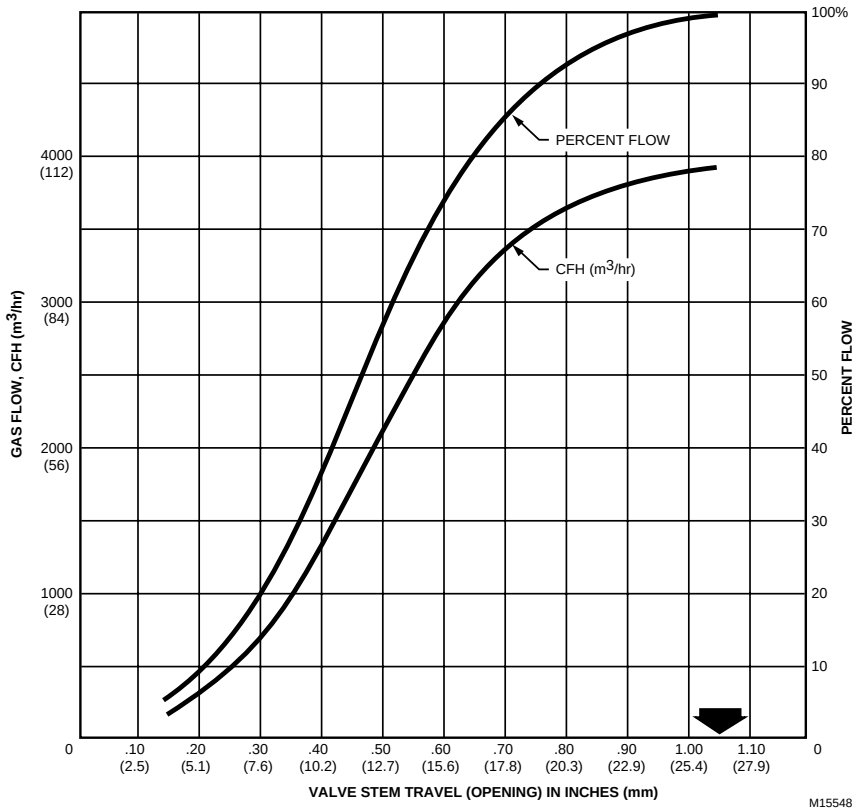


Fig. 12. V5097B (2 in. NPT large body pipe adapter) gas flow related to stem travel.

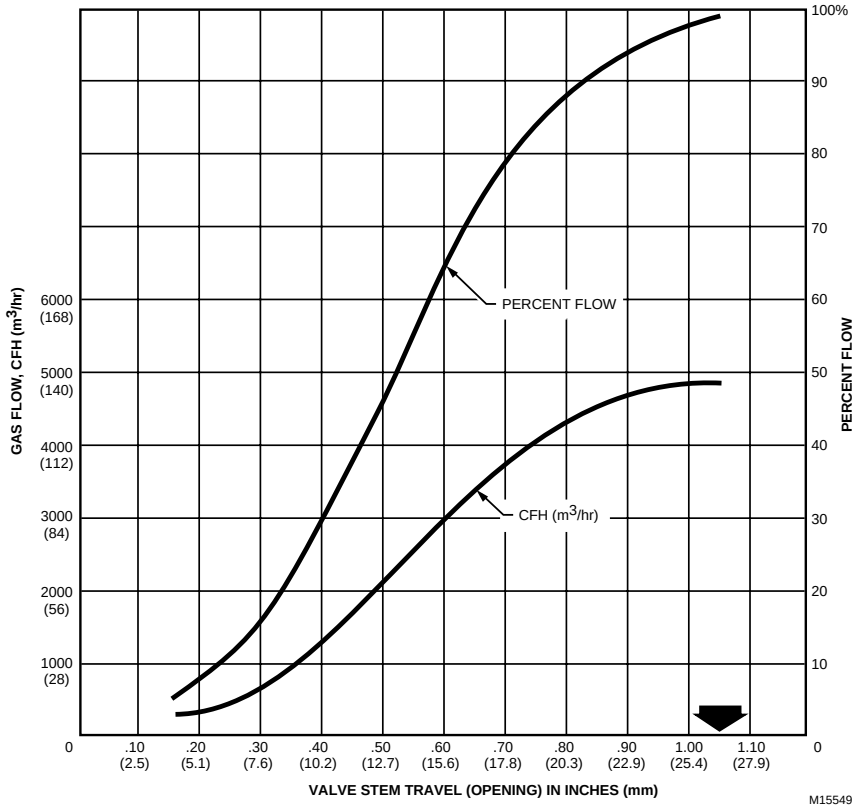


Fig. 13. V5097B (2-1/2 in. NPT pipe adapter) gas flow related to stem travel.

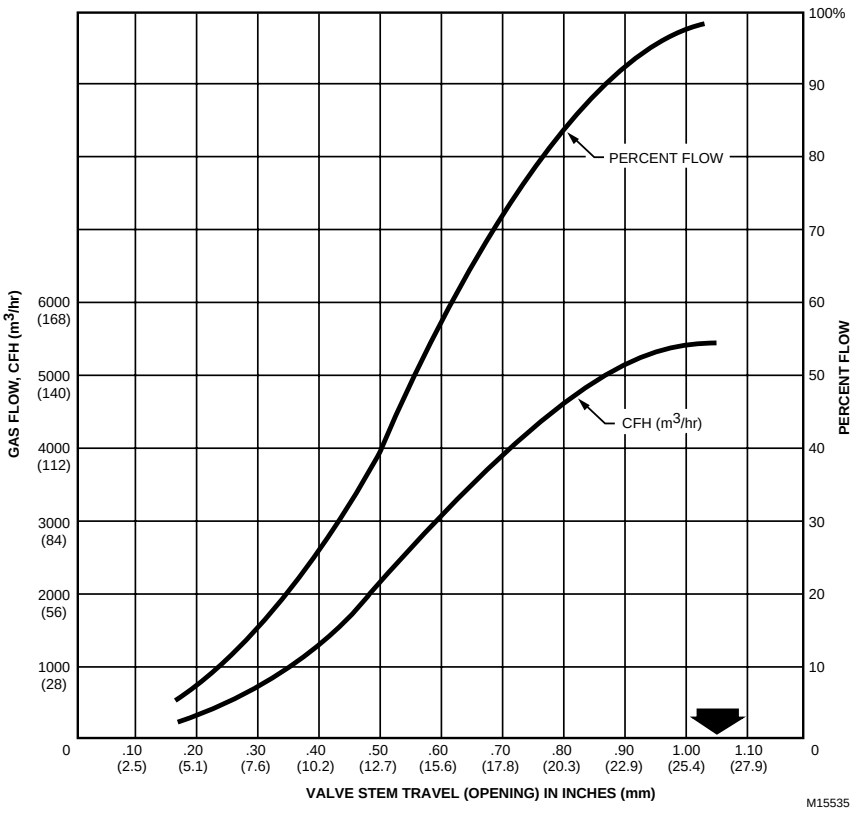


Fig. 14. V5097B (3 in. NPT pipe adapter) gas flow related to stem travel.

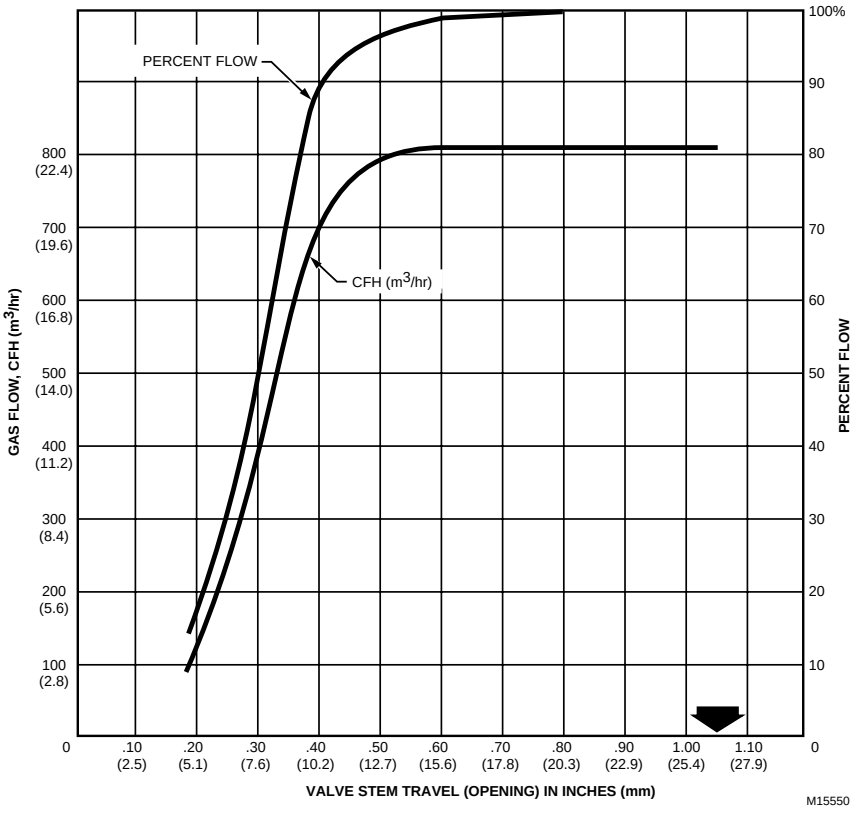


Fig. 15. V5097C,E (3/4 in. NPT pipe adapter) gas flow related to stem travel.

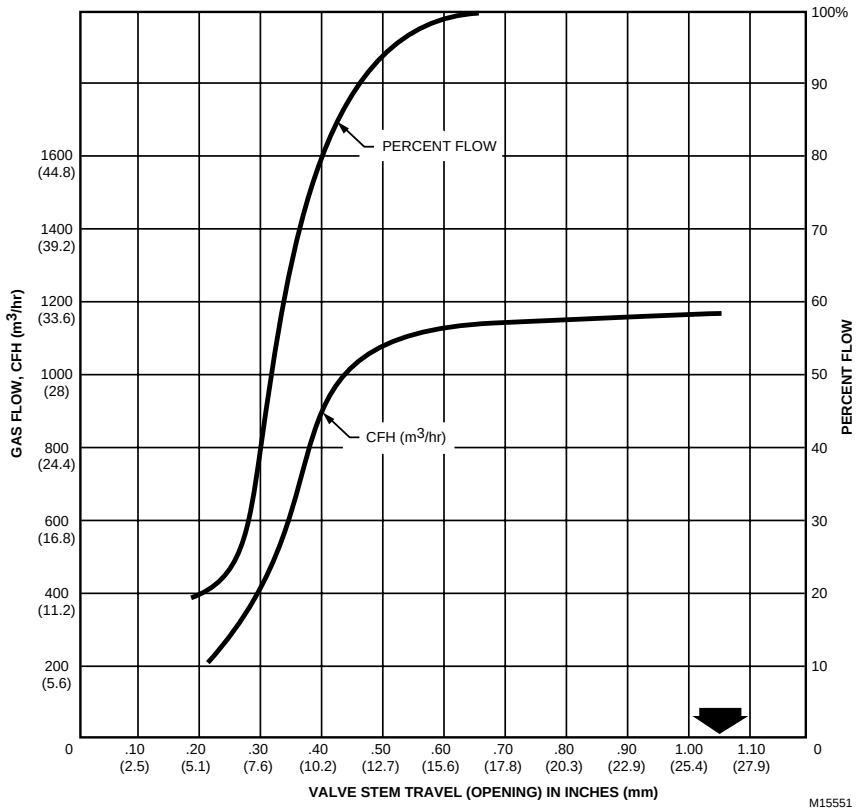


Fig. 16. V5097C,E (1 in. NPT pipe adapter) gas flow related to stem travel.

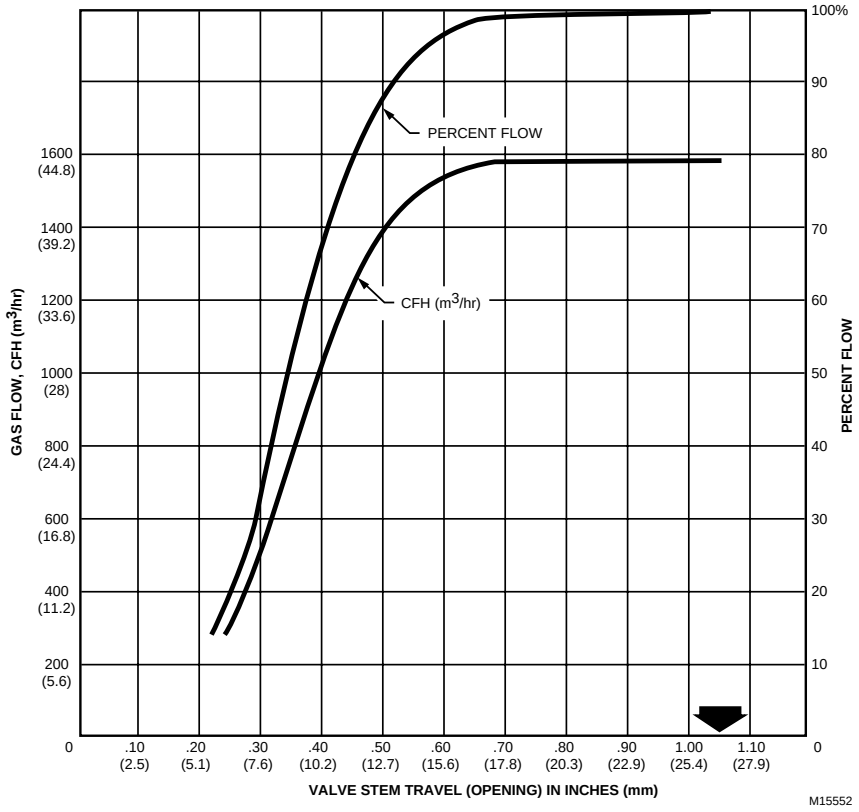


Fig. 17. V5097C,E (1-1/4 in. NPT pipe adapter) gas flow related to stem travel.

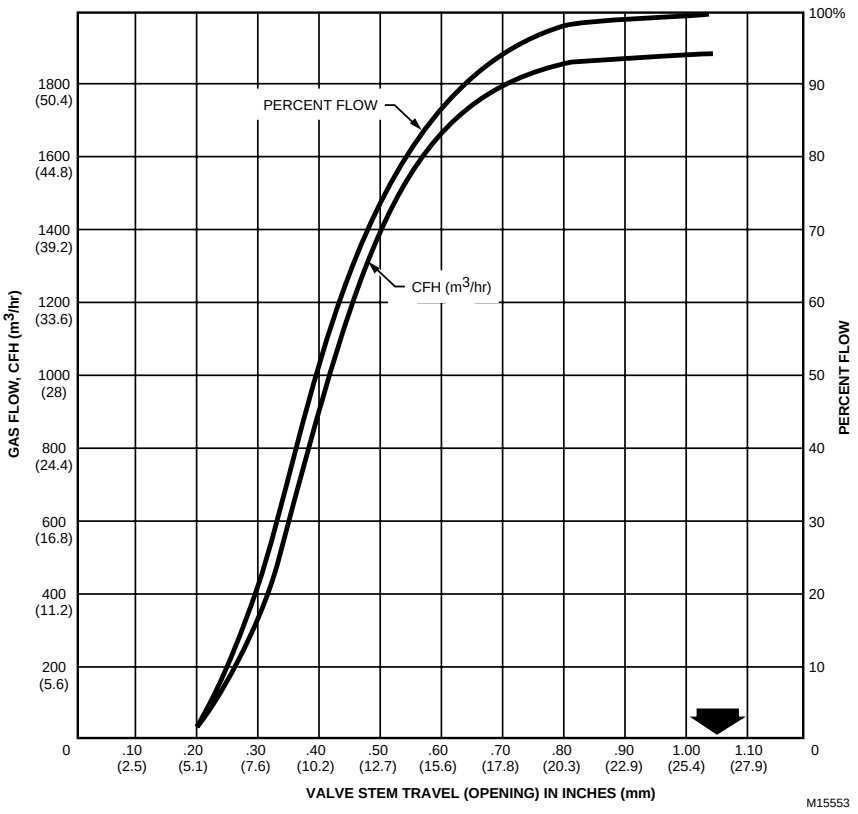


Fig. 18. V5097C,E (1-1/2 in. NPT pipe adapter) gas flow related to stem travel.

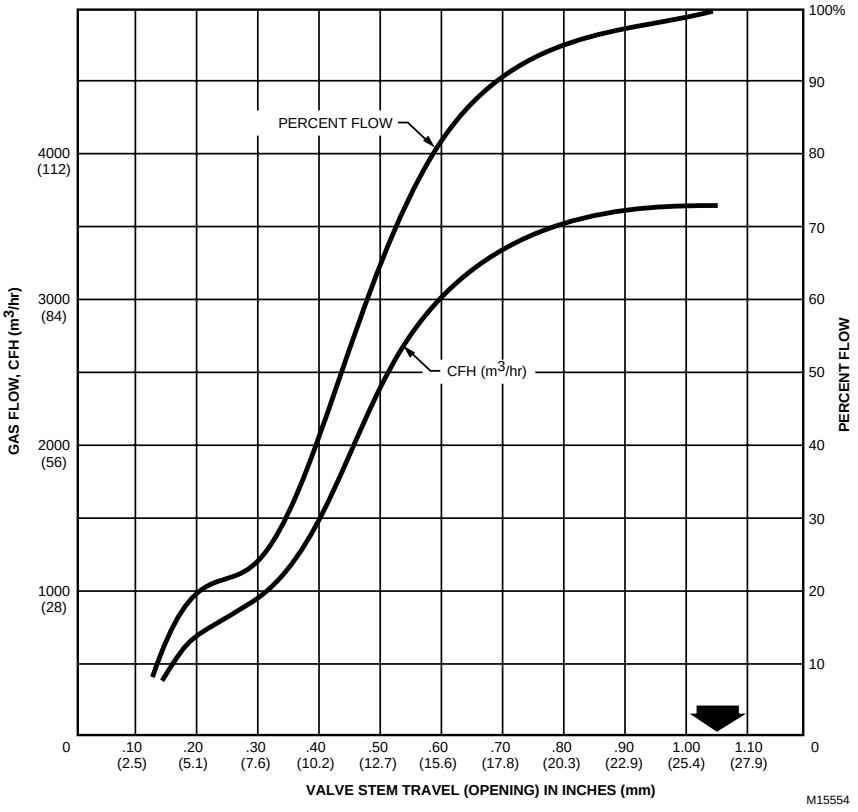


Fig. 19. V5097C,E (2 in. NPT large body pipe adapter) gas flow related to stem travel.

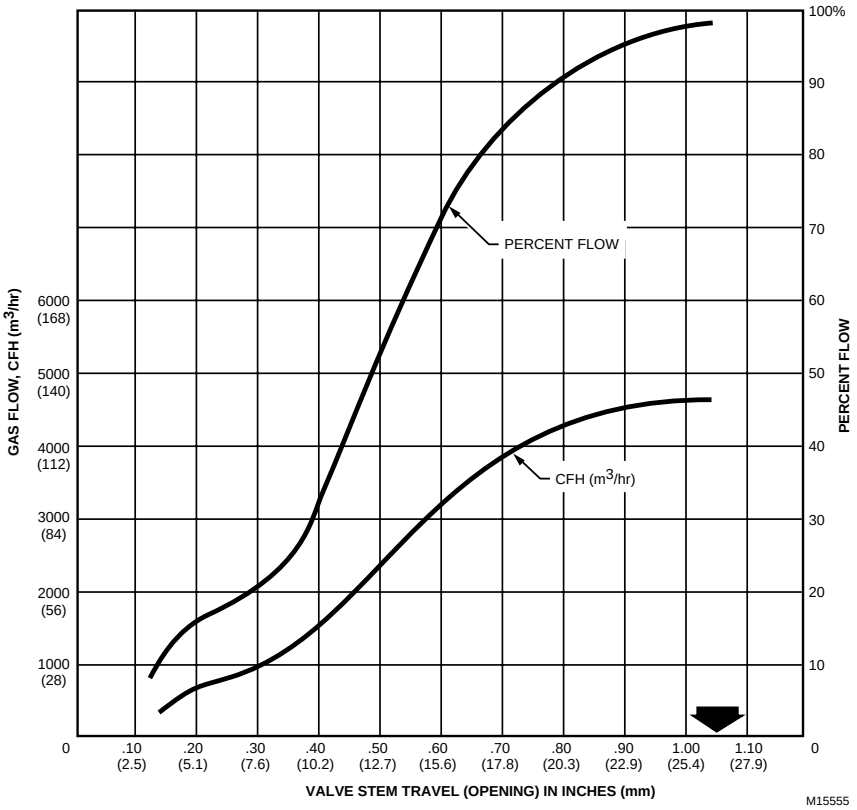


Fig. 20. V5097C,E (2-1/2 in. NPT pipe adapter) gas flow related to stem travel.

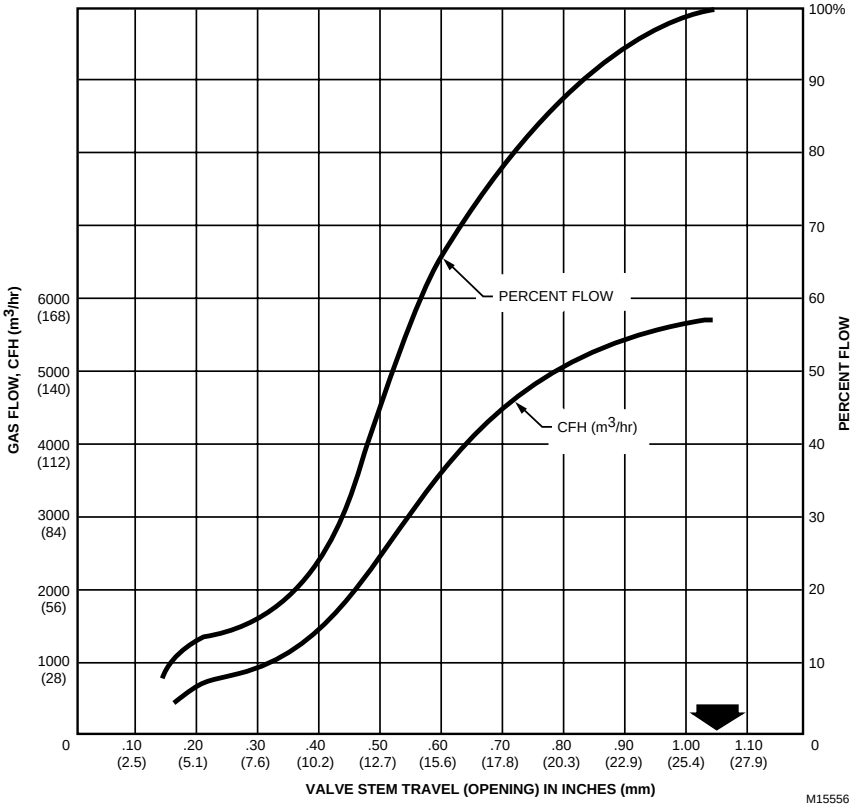


Fig. 21. V5097C,E (3 in. NPT pipe adapter) gas flow related to stem travel.

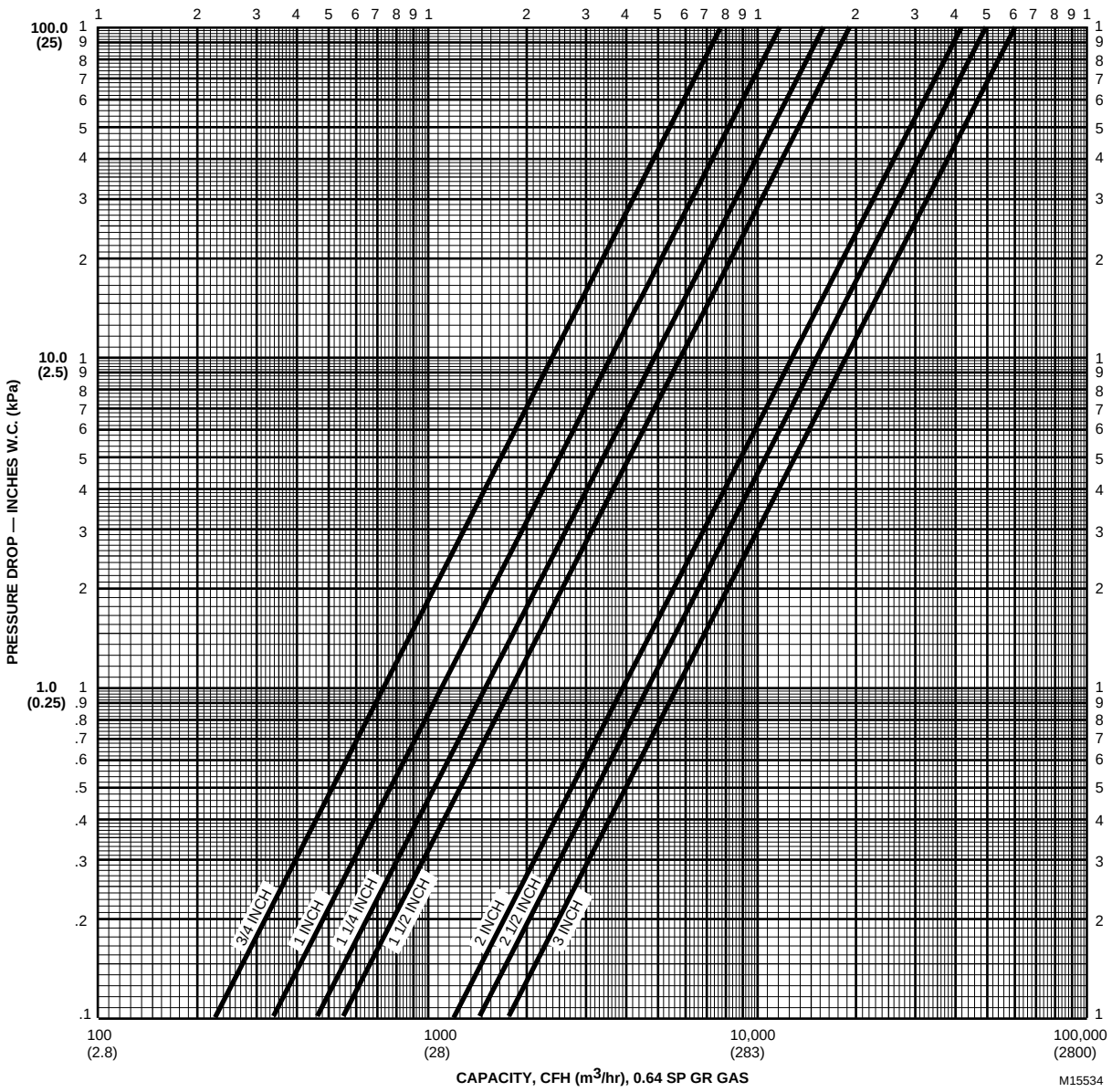


Fig. 22. Capacity vs. Pressure Drop for all V5097 Valves.

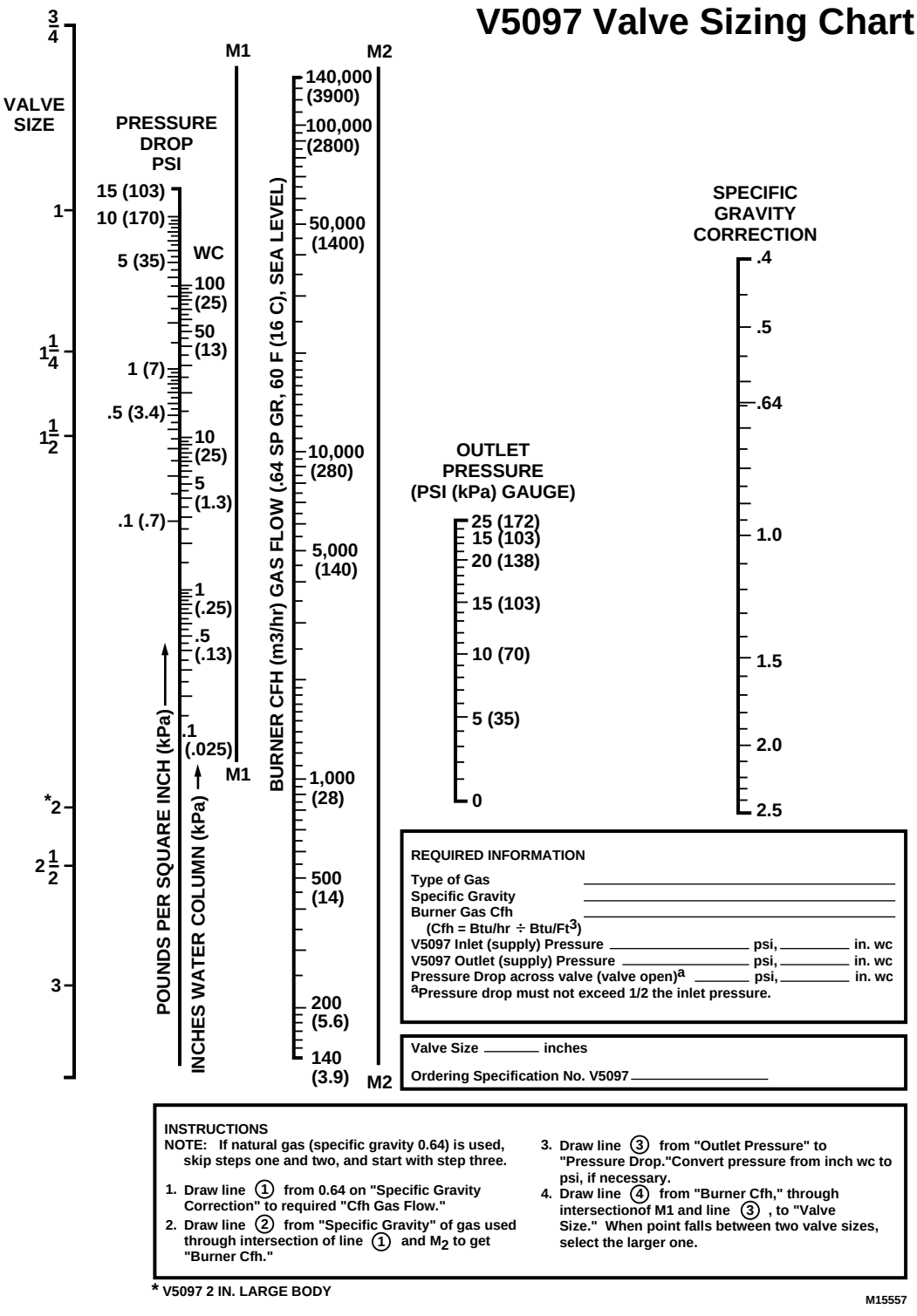


Fig. 23. V5097 Valve Sizing Chart.

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