



# GAS LIMITING ORIFICE VALVES LVG SERIES



**WARNING**

These instructions are intended for use only by experienced, qualified combustion start-up personnel. Adjustment of this equipment and its components, by unqualified personnel, can result in fire, explosion, severe personal injury, or even death.

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These instructions are intended to serve as guidelines covering the installation, operation, and maintenance of Hauck equipment. While every attempt has been made to ensure completeness, unforeseen or unspecified applications, details, and variations may preclude covering every possible contingency. **WARNING: TO PREVENT THE POSSIBILITY OF SERIOUS BODILY INJURY, DO NOT USE OR OPERATE ANY EQUIPMENT OR COMPONENT WITH ANY PARTS REMOVED OR ANY PARTS NOT APPROVED BY THE MANUFACTURER.** Should further information be required or desired or should particular problems arise which are not covered sufficiently for the purchaser's purpose, contact Hauck Mfg. Co.



**WARNING**

This equipment is potentially dangerous with the possibility of serious personal injury and property damage. Hauck Manufacturing Company recommends the use of flame supervisory equipment and fuel safety shutoff valves. Furthermore, Hauck urges rigid adherence to National Fire Protection Association (NFPA) standards and insurance underwriter's requirements. Operation and regular preventative maintenance of this equipment should be performed only by properly trained and qualified personnel. Annual review and upgrading of safety equipment is recommended.

**A. GENERAL INFORMATION**

The Hauck LVG Series Limiting Orifice Gas Valves are designed for use with each burner in a multiple furnace application. They allow fine gas flow adjustment of individual burners to achieve the desired air/gas ratio at each burner. The standard LVG series valves can be used as straight through type valves, and are designed for use with any commercial fuel gas.

**B. RECEIVING AND INSPECTION**

Upon receipt, check each item on the bill of lading and/or invoice to determine that all equipment has been received. A careful examination of all parts should be made to ascertain if there has been any damage in shipment.

**C. CAPACITIES**

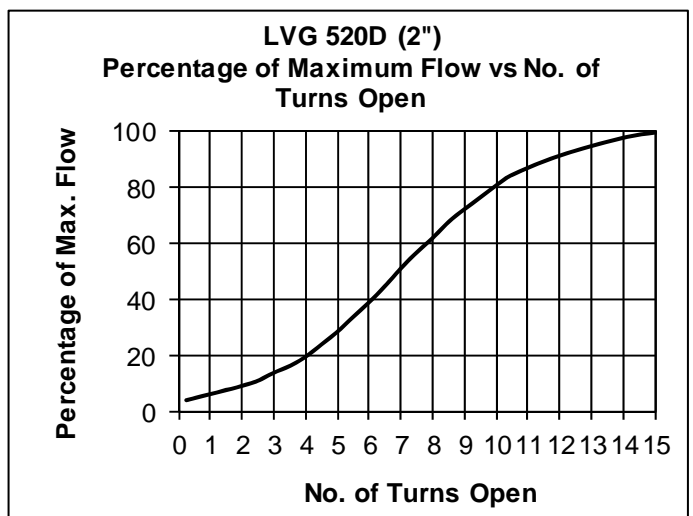
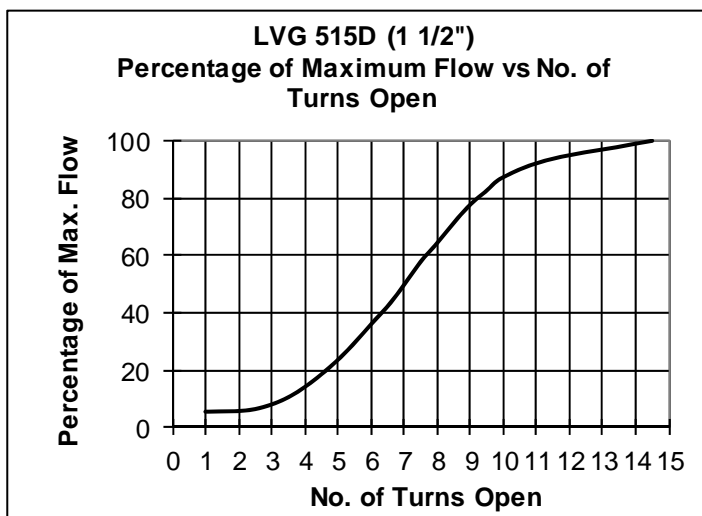
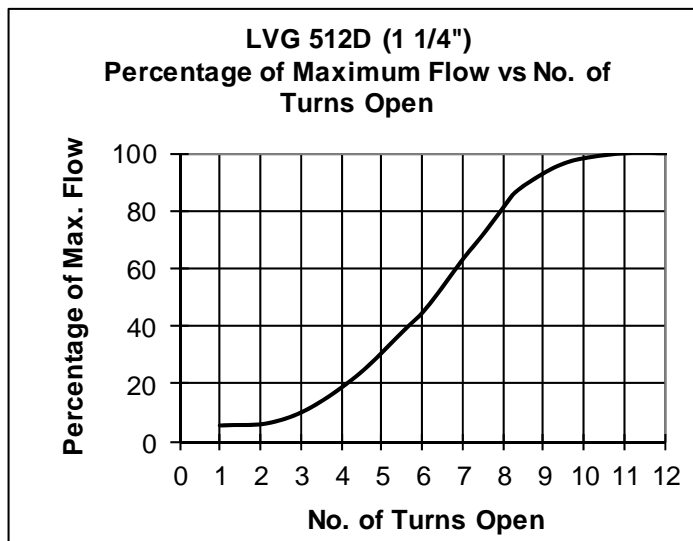
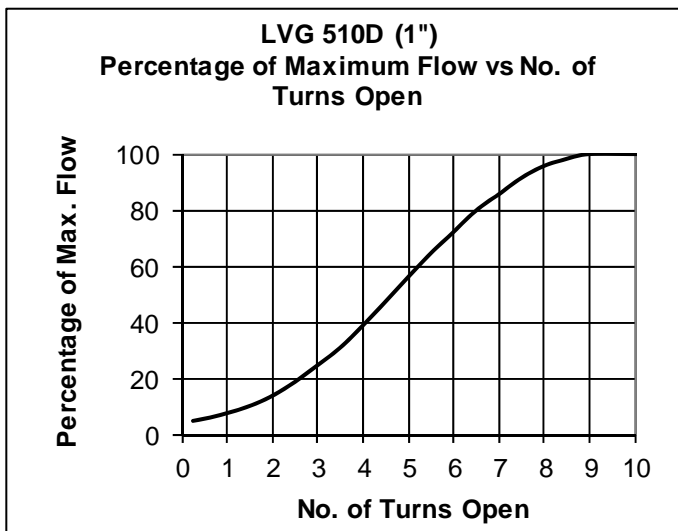
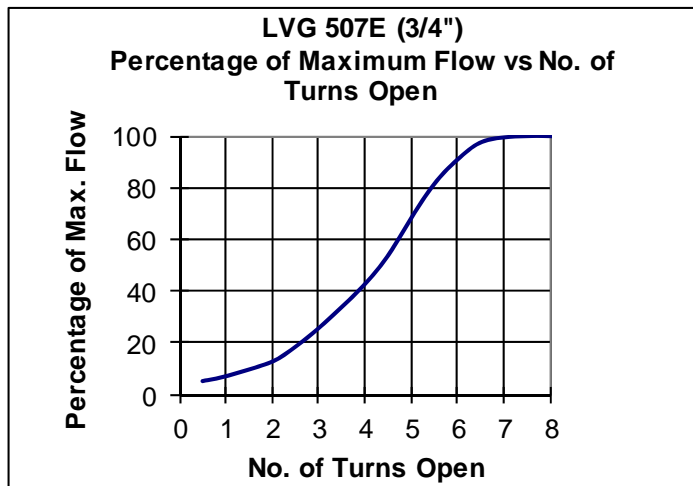
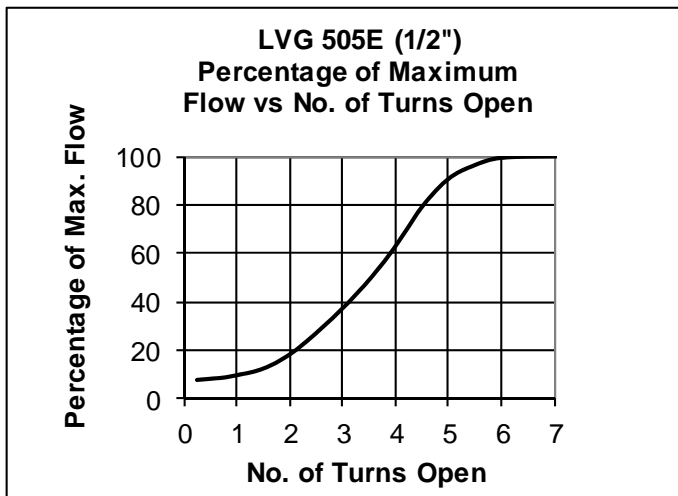
NATURAL GAS  
Full Open Valve Capacity

| Model No. | Pipe Size | PRESSURE DROP    |                |                 |                     |                      |                      |                    |
|-----------|-----------|------------------|----------------|-----------------|---------------------|----------------------|----------------------|--------------------|
|           |           | 1"wc<br>2.5 mbar | 2"wc<br>5 mbar | 4"wc<br>10 mbar | 6.9"wc<br>17.2 mbar | 13.8"wc<br>34.3 mbar | 20.8"wc<br>51.8 mbar | 27.7"wc<br>69 mbar |
| LVG 505E  | 1/2 NPT   | 275              | 410            | 575             | 757                 | 1,055                | 1,290                | 1,470              |
| LVG 507E  | 3/4 NPT   | 405              | 590            | 815             | 1,070               | 1,520                | 1,855                | 2,120              |
| LVG 510D  | 1 NPT     | 635              | 870            | 1,230           | 1,625               | 2,245                | 2,750                | 3,155              |
| LVG 512D  | 1-1/4 NPT | 1,070            | 1,520          | 2,160           | 2,840               | 4,020                | 4,890                | 5,630              |
| LVG 515D  | 1-1/2 NPT | 1,500            | 2,140          | 3,000           | 3,930               | 5,560                | 6,740                | 7,680              |
| LVG 520D  | 2 NPT     | 2,560            | 3,520          | 5,010           | 6,565               | 9,080                | 11,120               | 12,700             |
| LVG 525A  | 2-1/2 NPT | 3,985            | 5,630          | 7,970           | 10,480              | 14,830               | 18,160               | 20,960             |
| LVG 530A  | 3 NPT     | 5,215            | 7,830          | 14,330          | 13,720              | 19,420               | 23,770               | 27,440             |
| LVG 540A  | 4"FLG     | 9,370            | 13,240         | 18,740          | 24,640              | 34,880               | 42,700               | 49,270             |

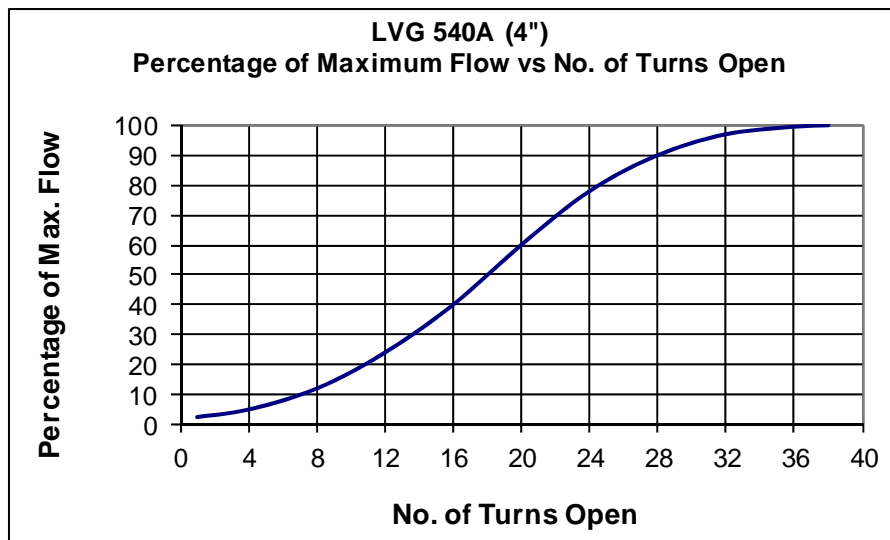
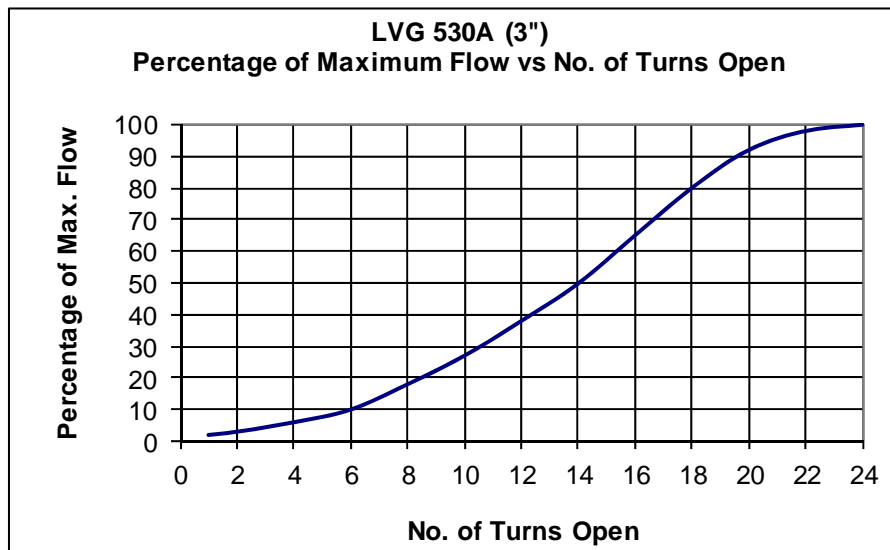
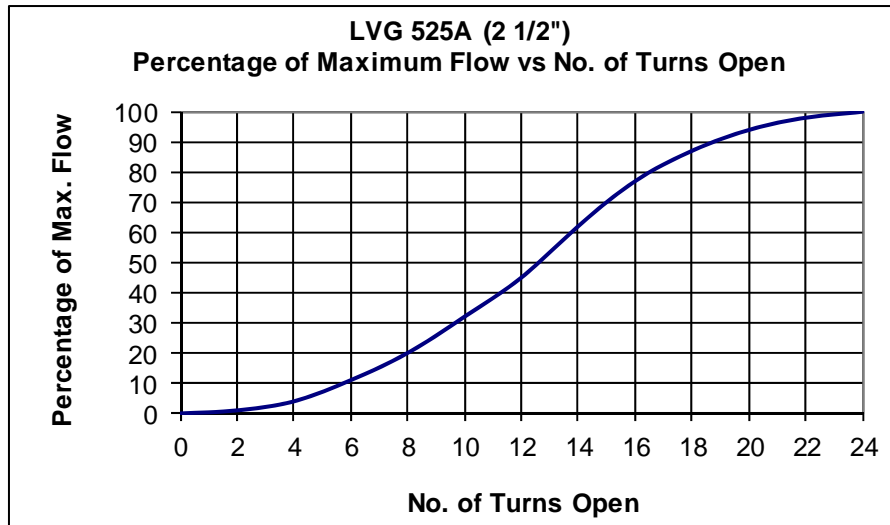
Notes

1. Capacities based on natural gas at 0.60 s.g. and 60°F (or 0°C).
2. Pressure drop measured across full open valve.
3. Maximum inlet pressure is 15 psig (1034 mbar)
4. For natural gas leakage rates with valve fully closed, consult Hauck.

**C. CAPACITIES (Continued)**



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### **D. DIMENSIONS**

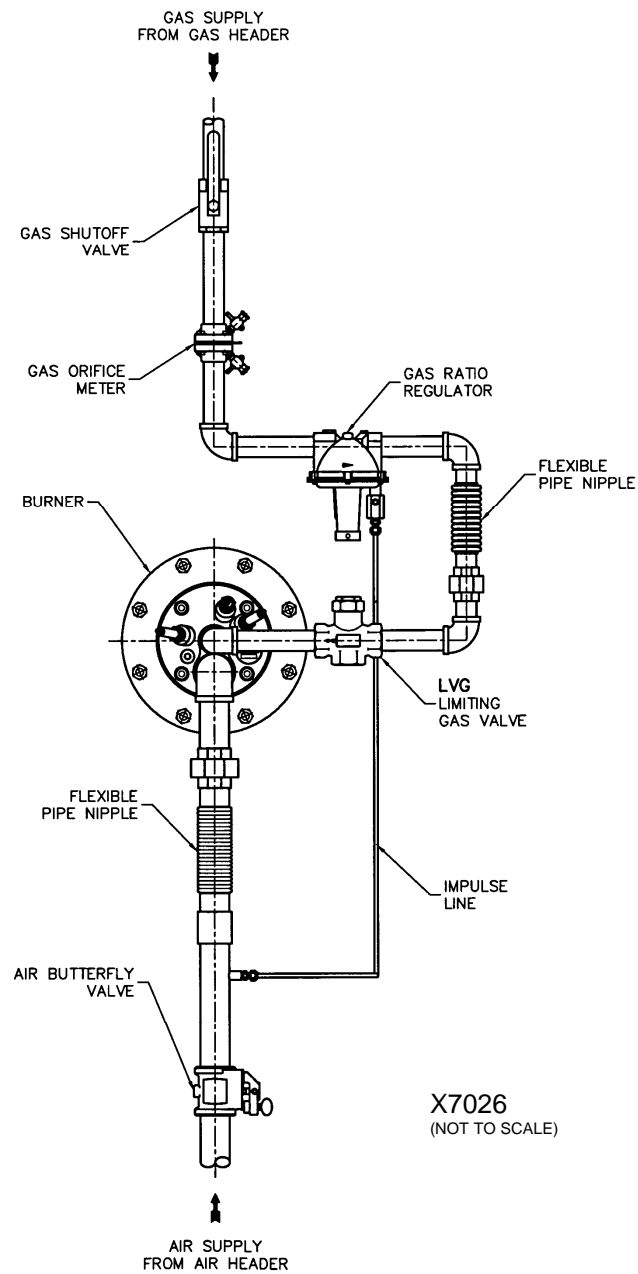
See appropriate Dimension sheet for detailed dimensional information.

### **E. INSTALLATION**

The LVG valves are designed as straight through valves and feature an arrow indicating the intended direction of flow.

**NOTE**  
Tighten all connections to ANSI/ASME B1.20.1 specifications.

Install the LVG in the gas line as close to the burner as possible, downstream of a shutoff valve, gas orifice meter and gas controlling valve, and in an area that allows easy access to the valve's adjusting mechanism.



## **F. OPERATION**

The LVG series valves can be used with any clean commercial fuel gas.

For flow adjustment, remove the hex screw cap from the valve. Using a flat-head screwdriver (1/4" allen wrench on LVG 525 – 540 sizes), adjust the piston assembly until the desired flow rate is achieved. Counterclockwise rotation increases gas flow.

### **IMPORTANT**

Replace the hex screw cap when adjustment is complete to seal the valve.

## **G. MAINTENANCE**

All LVG series valves are designed for maintenance free operation. Under normal usage, no service should be necessary. For the LVG 505 - 520 size valves, the entire piston cartridge may be removed for inspection or maintenance of the valve orifice. Remove the cartridge by unscrewing the brass hex connection. Replace the cartridge when complete.