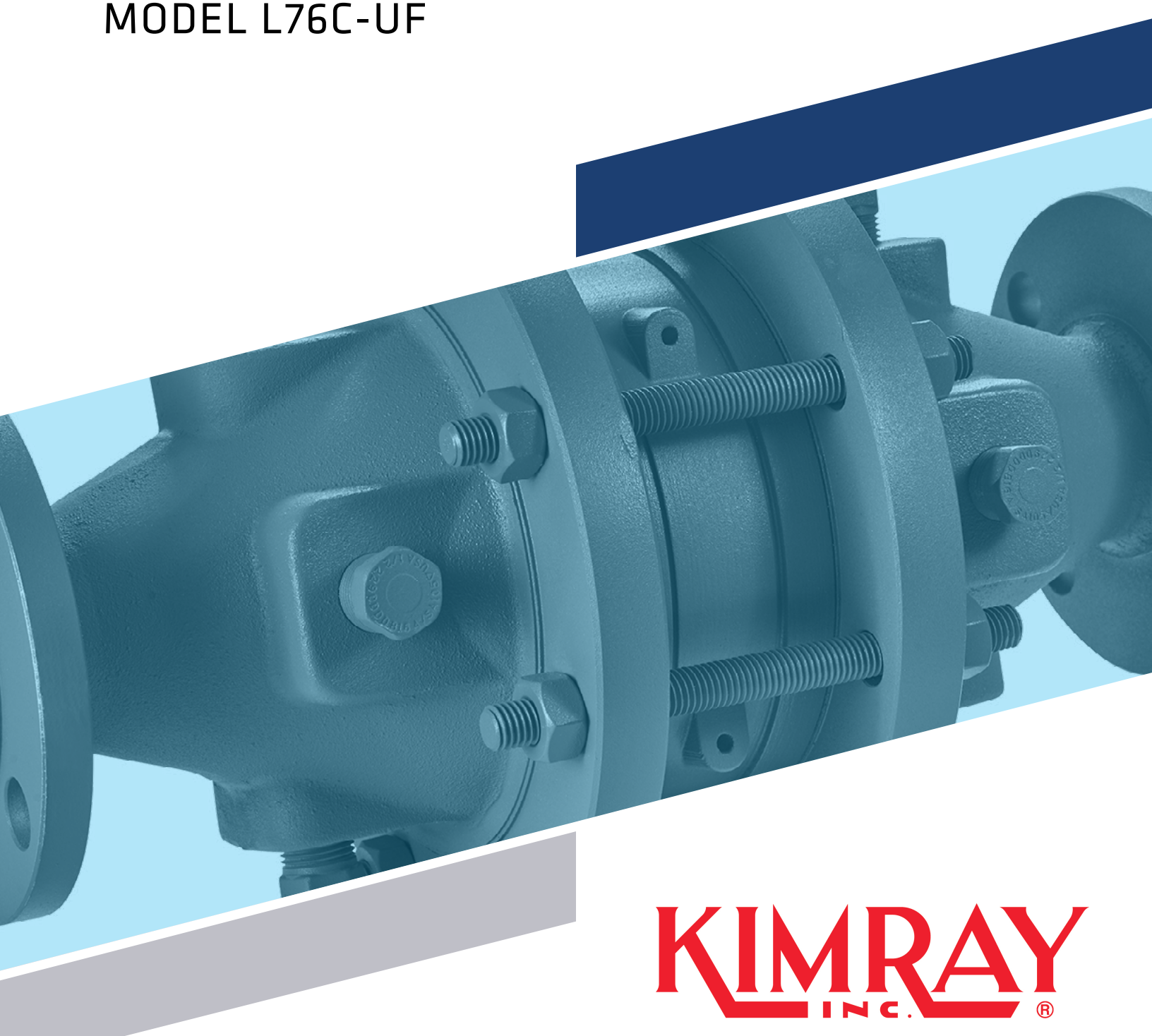
LAMOT®

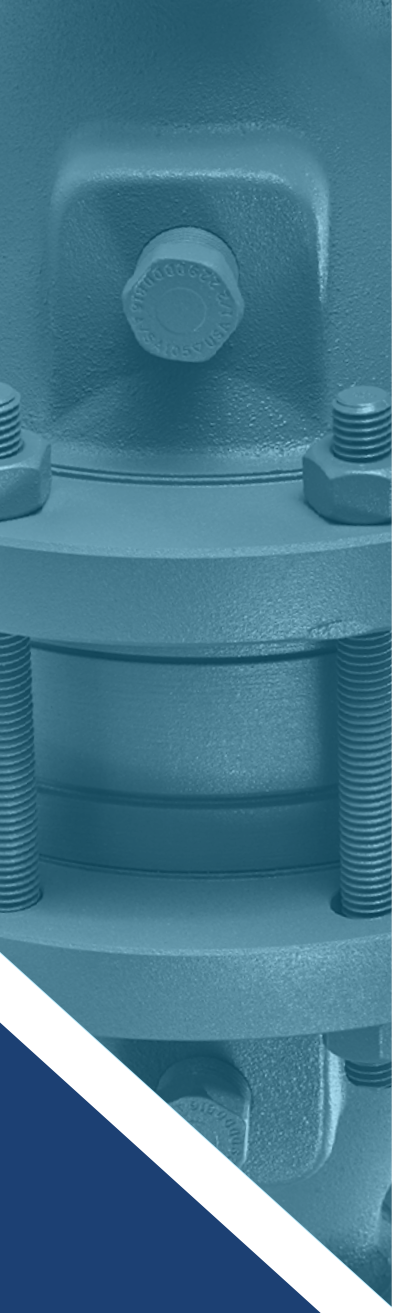
VALVE & ARRESTOR

# FLAME ARRESTOR

MODEL L76C-UF



KIMRAY INC.®



# MODEL L76C-UF

The LaMOT Valve and Arrestor Model L76C-UF is a Deflagration Flame Arrestor designed to inhibit flame propagation in gas piping systems and to protect low pressure tanks containing flammable liquids. Arrestors protect low flash point liquids from external sources of ignition providing increased fire protection and safety.

**Technical Details**

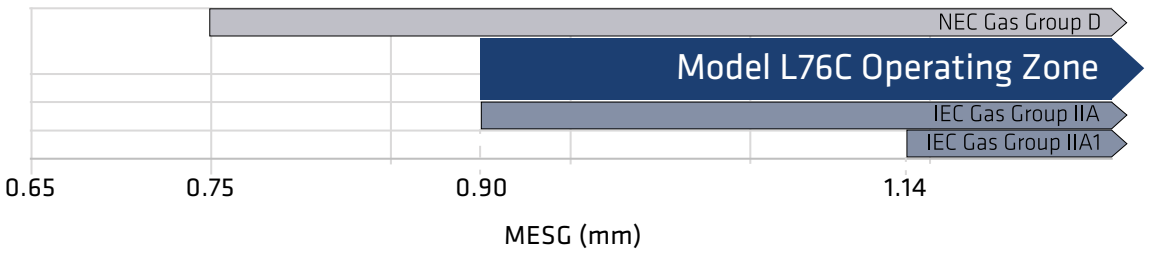
- Connection Sizes: 2" through 12" 150# ASME Flanged Connection
- Housing standard material: Carbon Steel, Stainless Steel
- Bases standard material: Aluminum (2"-6" only), Carbon Steel, Stainless Steel
- Flame element standard material: 316 Stainless Steel
- Operational Temperature Range: -4 to 140 °F (-20 to 60 °C)
- Gas Group: IEC IIA (NEC D), MESG > 0.90 mm, see chart below
- Maximum Operational Pressure: see charts and IOM
- Burn Time: $t_{BT}$ 2.5 minutes or better at Atmospheric Pressure (see IOM)

**Features**

- Flame arrestor element geometry maximizes flame quenching capability while minimizing pressure drop
- Removable element housing for ease of maintenance
- Spiral-wound, crimped ribbon flame element
- Flame elements made standard with premium 316SS material, reducing corrosion
- Bi-directional with respect to flow and ignition source

**Options**

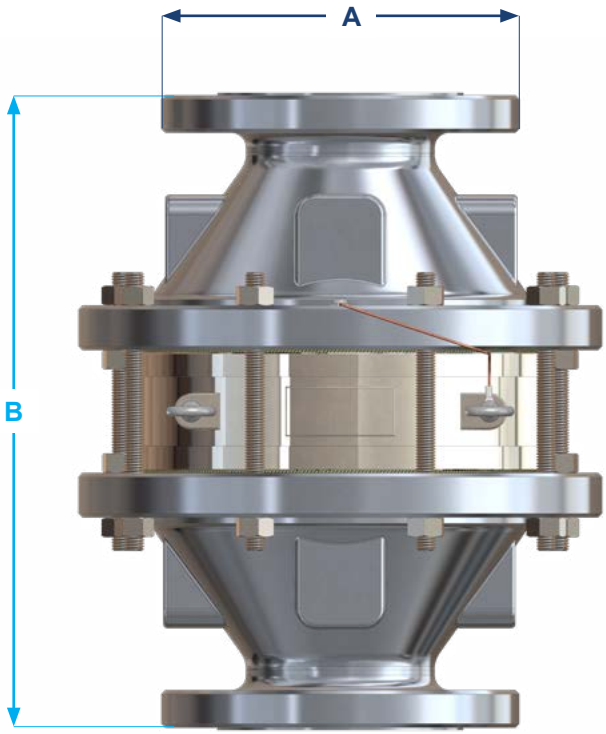
- Exterior painting or coating available
- Drains and instrumentation ports available
- Factory installed thermocouples for flame sensing available




The NEC and IEC are the two recognized standards for gas groupings. The NEC is used in the United States while the IEC is international in scope and widely used in Europe. Both the NEC and IEC classify gases into explosion groups based on their maximum experimental safety gap ("MESG"). Customer is responsible for ensuring product selection based on MESG.

# SPECIFICATIONS

| Connection Size 150# ASME | Housing Nominal Size | A Width | B Height ± 1.0" | | Approx Ship. Wt. Lbs. (kg) Carbon Steel Bases | Approx Ship. Wt. Lbs. (kg) Aluminum Bases |
|---|---|---|---|---|---|---|
| Inches (Nominal mm) | Inches (Nominal mm) | Inches (mm) | CS/SS Base Material inches (mm) | AL Base Material inches (mm) | | |
| 2 (50.8) | 6 (152.4) | 9.2 (233.68) | 16 (406.4) | 16.5 (419.1) | 63 (29) | 32 (15) |
| 3 (76.2) | 8 (203.2) | 11.2 (284.48) | 16 (406.4) | 16.5 (419.1) | 111 (50) | 64 (29) |
| 4 (101.6) | 10 (254) | 13.2 (335.28) | 16 (406.4) | 16.5 (419.1) | 132 (60) | 68 (31) |
| 6 (152.4) | 16 (406.4) | 20 (508) | 21 (533.4) | 21.5 (546.1) | 298 (135) | 181 (82) |
| 8 (200) | 20 (500) | 23.5 (597) | 33 (838) | n/a | 538 (244) | n/a |
| 10 (250) | 24 (600) | 27.1 (688) | 38.0 (965) | n/a | 772 (350) | n/a |
| 12 (300) | 28 (700) | 32.3 (820) | 41.0 (1041) | n/a | 1120 (508) | n/a |




Specifications subject to change without notice. Certified dimensions available upon request.

# SPECIFICATIONS

For an arrestor to be properly applied, all the requirements for one of the two following configuration scenarios must be met:

### 1) Straight Pipe, Closed End Configuration:

| Connection Size x Housing Size | Gas Group | End Condition | Maximum Pipe Length from Ignition Source to Flame Arrestor | Maximum Operational Pressure | Allowable Bend(s)* | Maximum Burn Time at Atmospheric Pressure | Operational Temperature Range °F (°C) |
|---|---|---|---|---|---|---|---|
| 2" x 6" thru 12" x 28" | IIA (D) [MESG ≥ 0.90mm] | Closed or Open End | 50 pipe diameters | 17.4 psia (1.2 bara) or better, see IOM | None | 2.5 minutes or better, see IOM | -4 to 140 (-20 to 60) |

Model L76C-UF, Straight Pipe, Closed End Configuration, is designed and tested according to EN ISO 16852:2016, except for:
1. The short time burn test was conducted at atmospheric pressure, for a time period extending past 1 minute.
*No additional bends or restrictions are allowed.

### 2) Configuration with Bend, Open End Configuration:

| Connection Size x Housing Size | Gas Group | End Condition | Maximum Pipe Length from Ignition Source to Flame Arrestor | Maximum Operational Pressure | Allowable Bend(s)* | Maximum Burn Time at Atmospheric Pressure | Operational Temperature Range °F (°C) |
|---|---|---|---|---|---|---|---|
| 2" x 6" thru 4" x 10" | IIA (D) [MESG ≥ 0.90mm] | Open End | 20 ft total length: A = max of 15 ft B = max of 5 ft | 15.5 psia (1.07 bara) or better, see IOM | One 90 Degree | 2.5 minutes or better, see IOM | -4 to 140 (-20 to 60) |
| 6" x 16" | IIA (D) [MESG ≥ 0.90mm] | Open End | 25 ft total length: A = max of 20 ft B = max of 5 ft | 17.4 psia (1.2 bara) or better, see IOM | One 90 Degree | 3 minutes | -4 to 140 (-20 to 60) |
| 8" x 20" | IIA (D) [MESG ≥ 0.90mm] | Open End | 26 ft total length: A = max of 20 ft B = max of 6 ft | 17.4 psia (1.2 bara), see IOM | One 90 Degree | 3 minutes | -4 to 140 (-20 to 60) |
| 10" x 24" | IIA (D) [MESG ≥ 0.90mm] | Open End | 33 ft total length: A = max of 25 ft B = max of 8 ft | 17.4 psia (1.2 bara), see IOM | One 90 Degree | 3 minutes | -4 to 140 (-20 to 60) |
| 12" x 28" | IIA (D) [MESG ≥ 0.90mm] | Open End | 40 ft total length: A = max of 30 ft B = max of 10 ft | 17.4 psia (1.2 bara), see IOM | One 90 Degree | 3 minutes | -4 to 140 (-20 to 60) |

Model L76C-UF, Configuration with Bend, Open End Configuration, is designed and tested according to EN ISO 16852:2016, except for:
1. The piping on the unprotected side, consisted of ignition source, "A" ft of straight pipe, one 90 degree bend, "B" ft of straight pipe, then the arrester.
2. The short time burn test was conducted at atmospheric pressure, for a time period extending past 1 minute.
***No additional bends or restrictions are allowed. Bends and flow restrictions can cause additional turbulence, which can increase the intensity of the flame propagation; potentially compromising the performance of the flame arrestor.**
**See below configuration with bend diagram

# SPECIFICATIONS

Figure 1: Straight Pipe, Allowable Installation Configuration

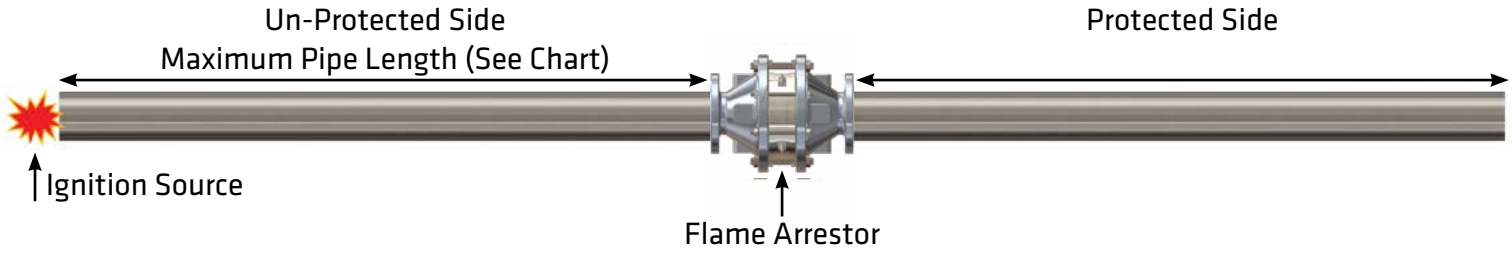
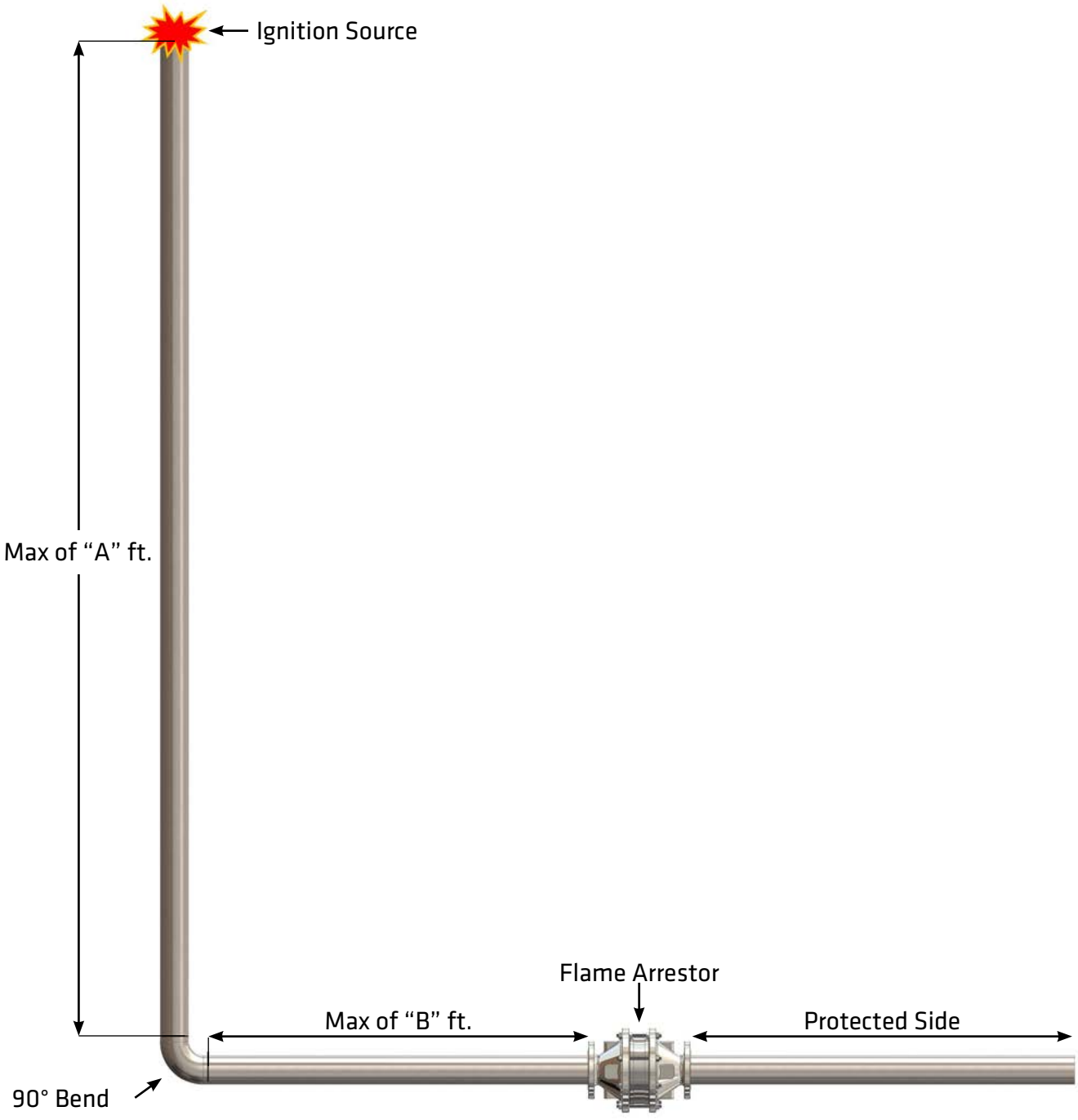
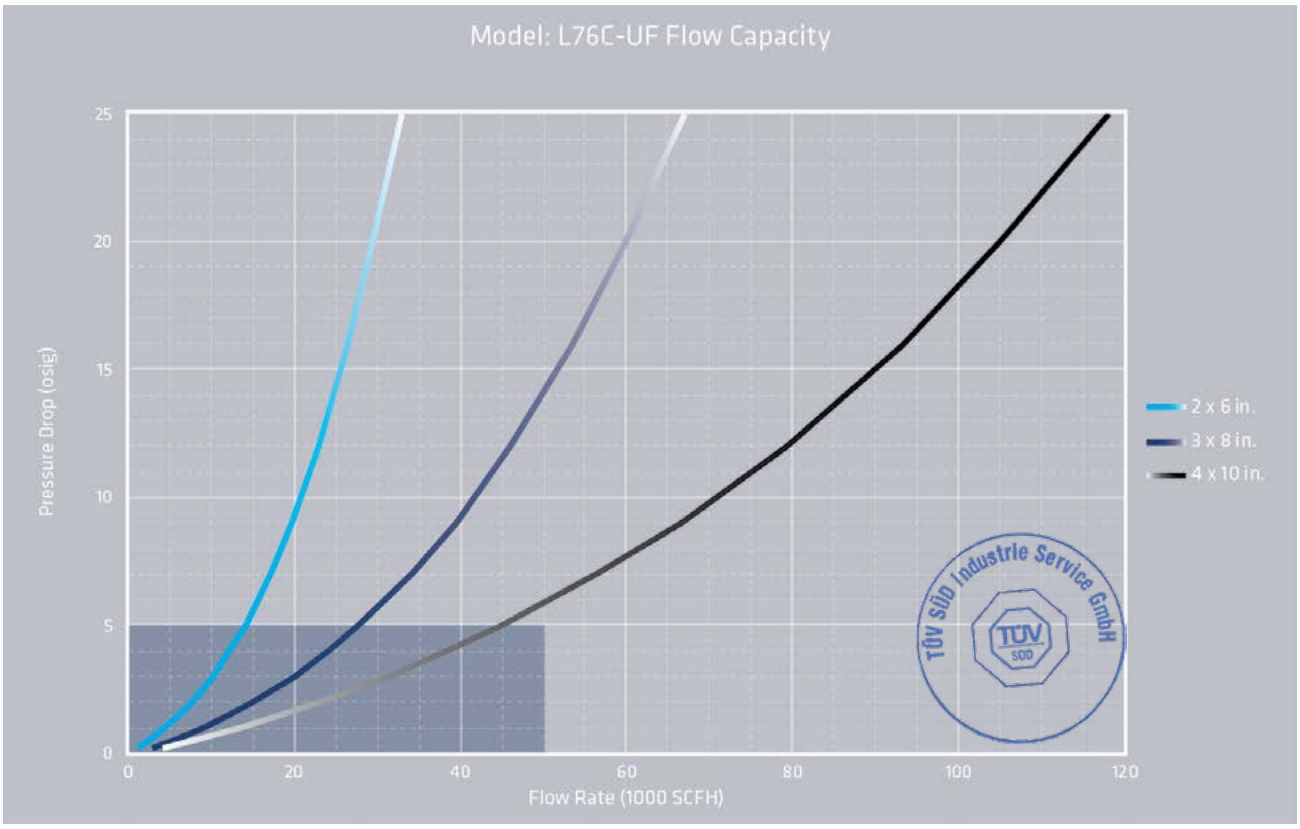
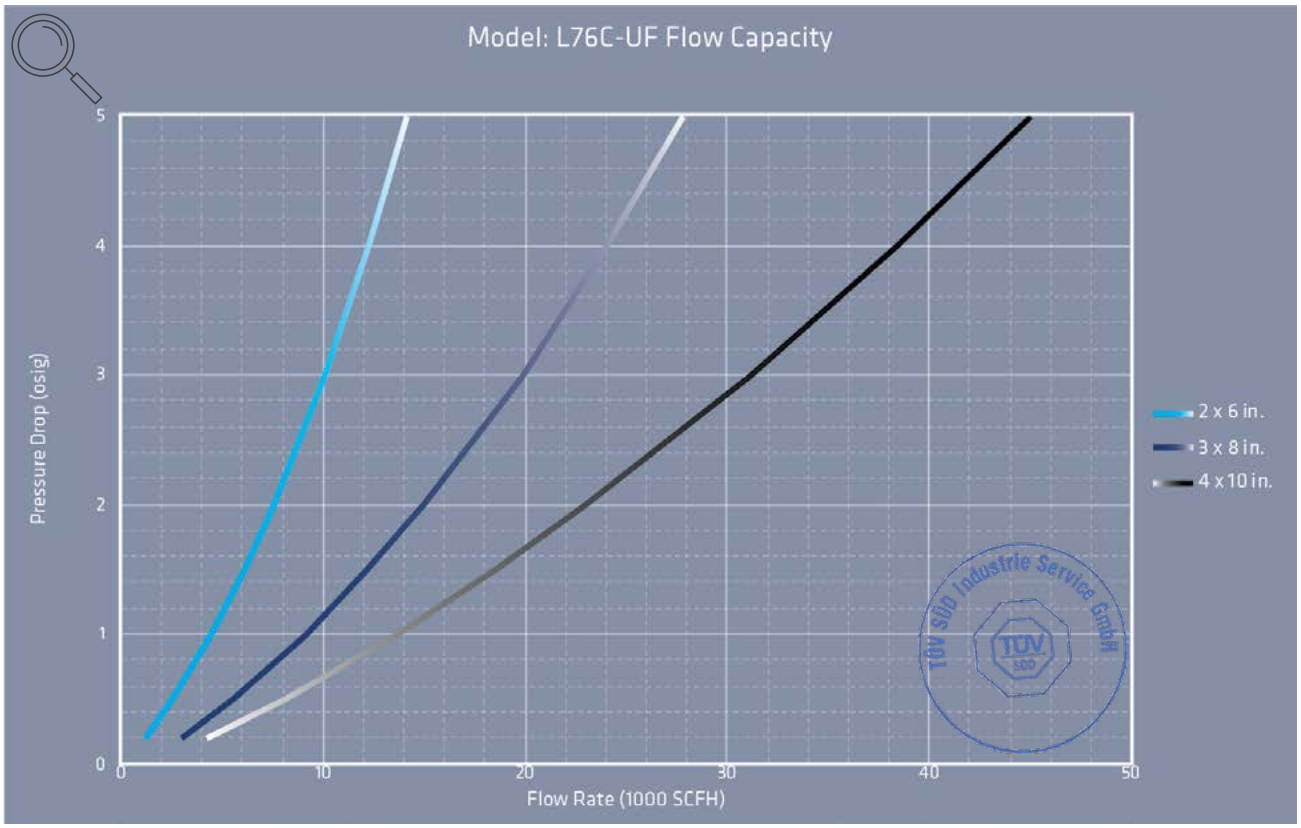



Figure 2: Configuration with Bend, Allowable Installation Configuration



# FLOW CAPACITY




The test equipment, procedures, and reporting methods utilized by Groth Corporation are based upon the standards API 2000/ISO 28300 and ISO 16852. The equipment, procedures, and methods have been reviewed and certified by TÜV SÜD.
Flow data are for in-line mounting and does not include entrance losses or exit losses.
Flow values based on air at 60°F venting to atmospheric pressure of 14.6959 psia.

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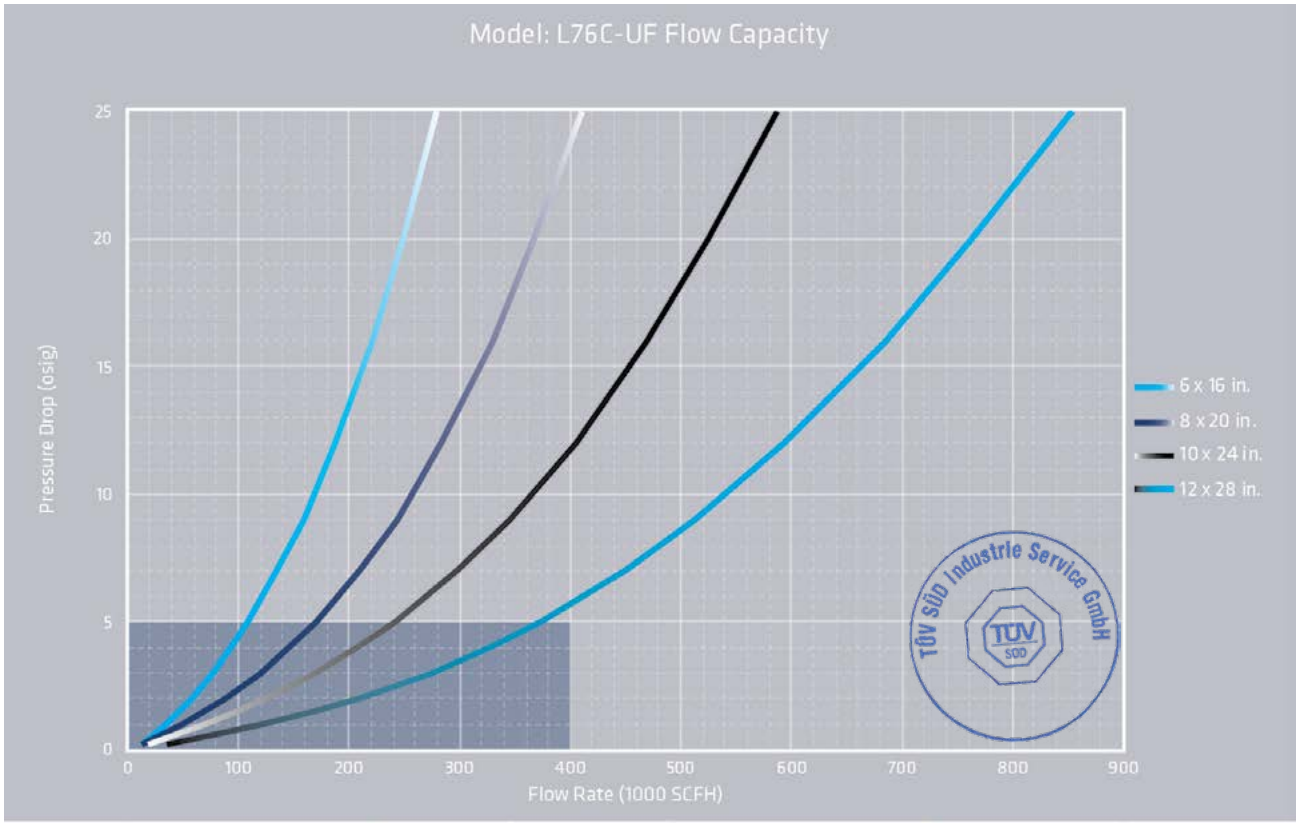


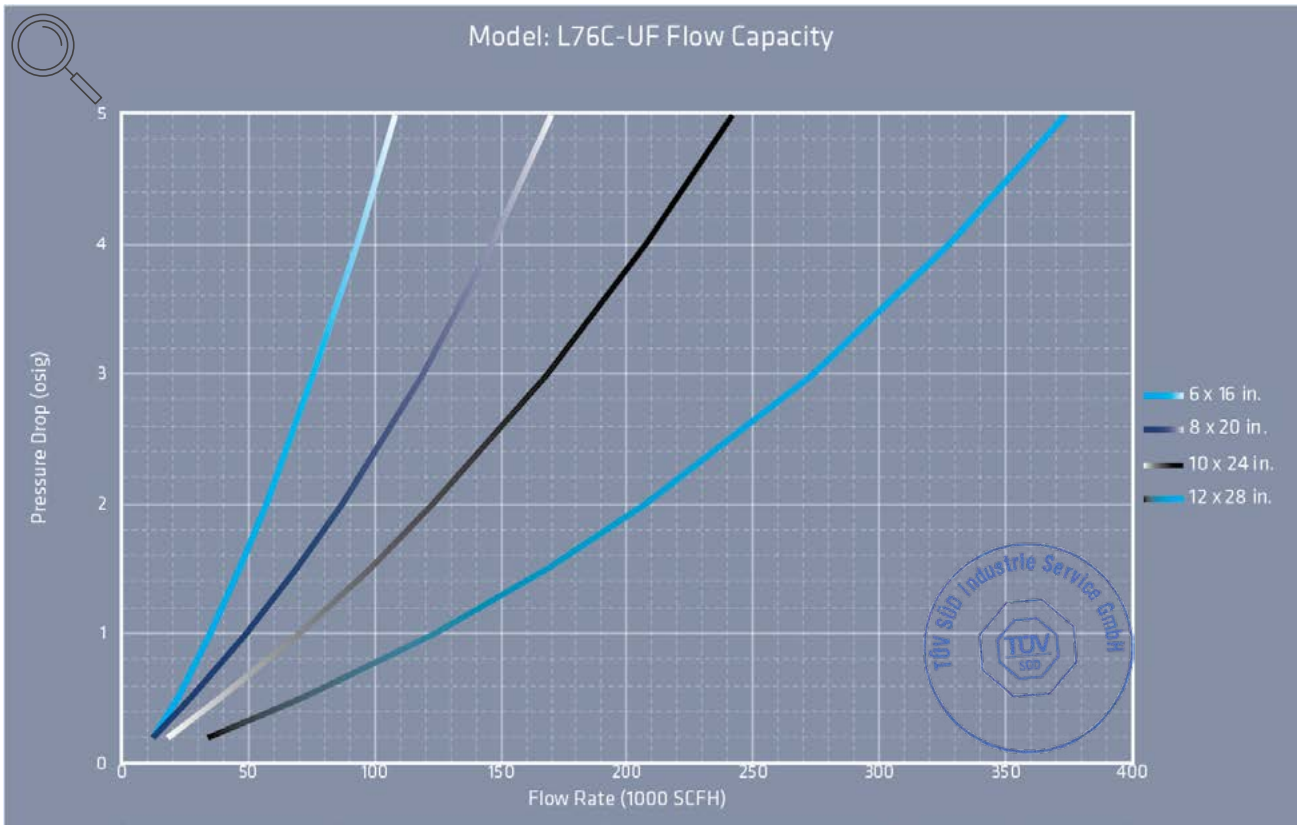


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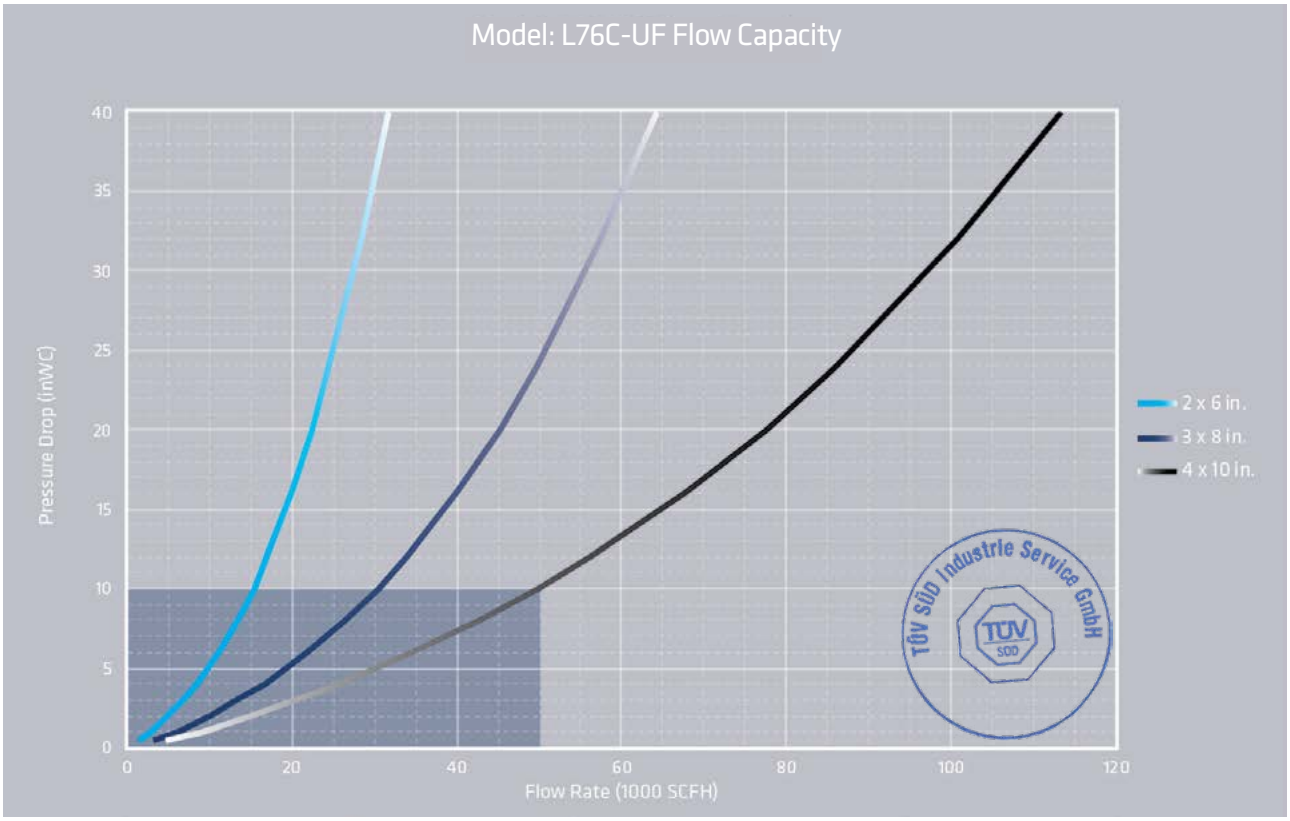


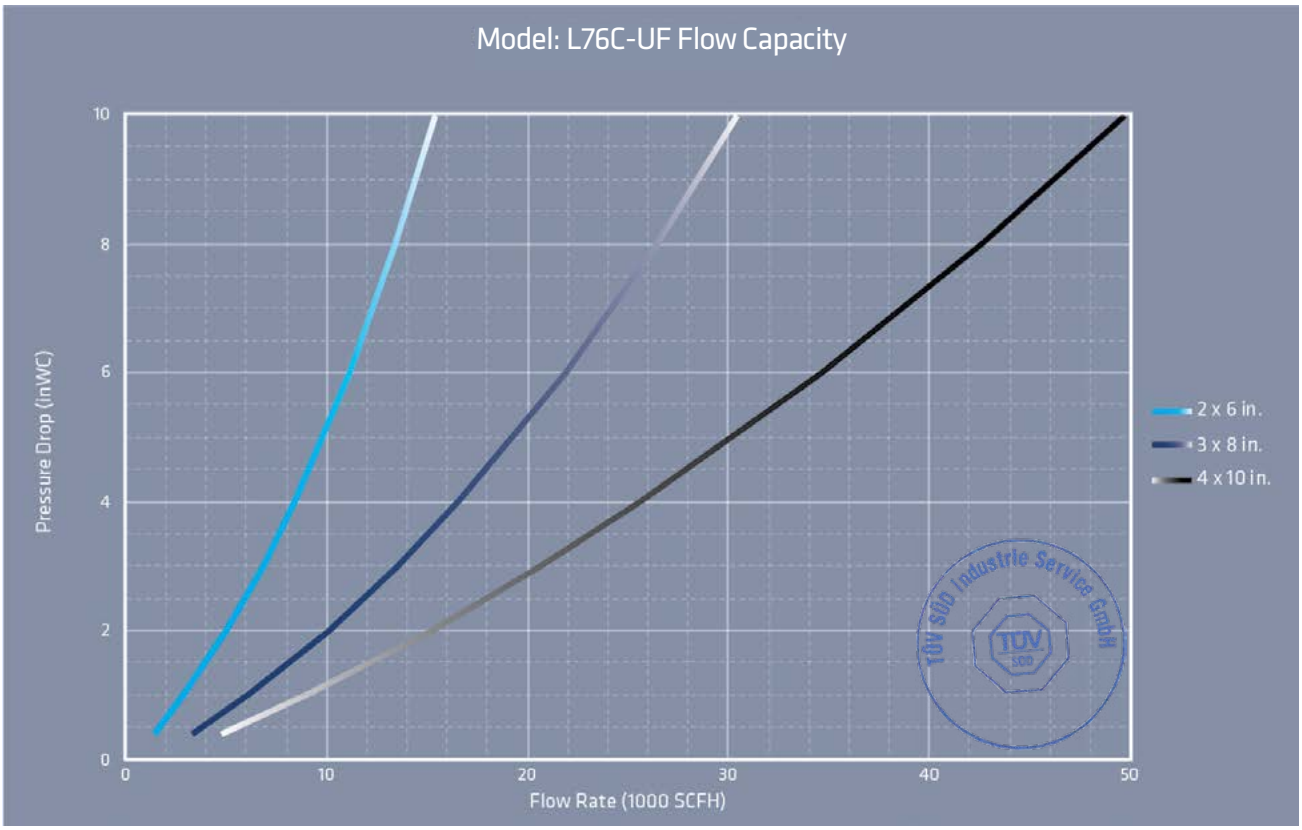


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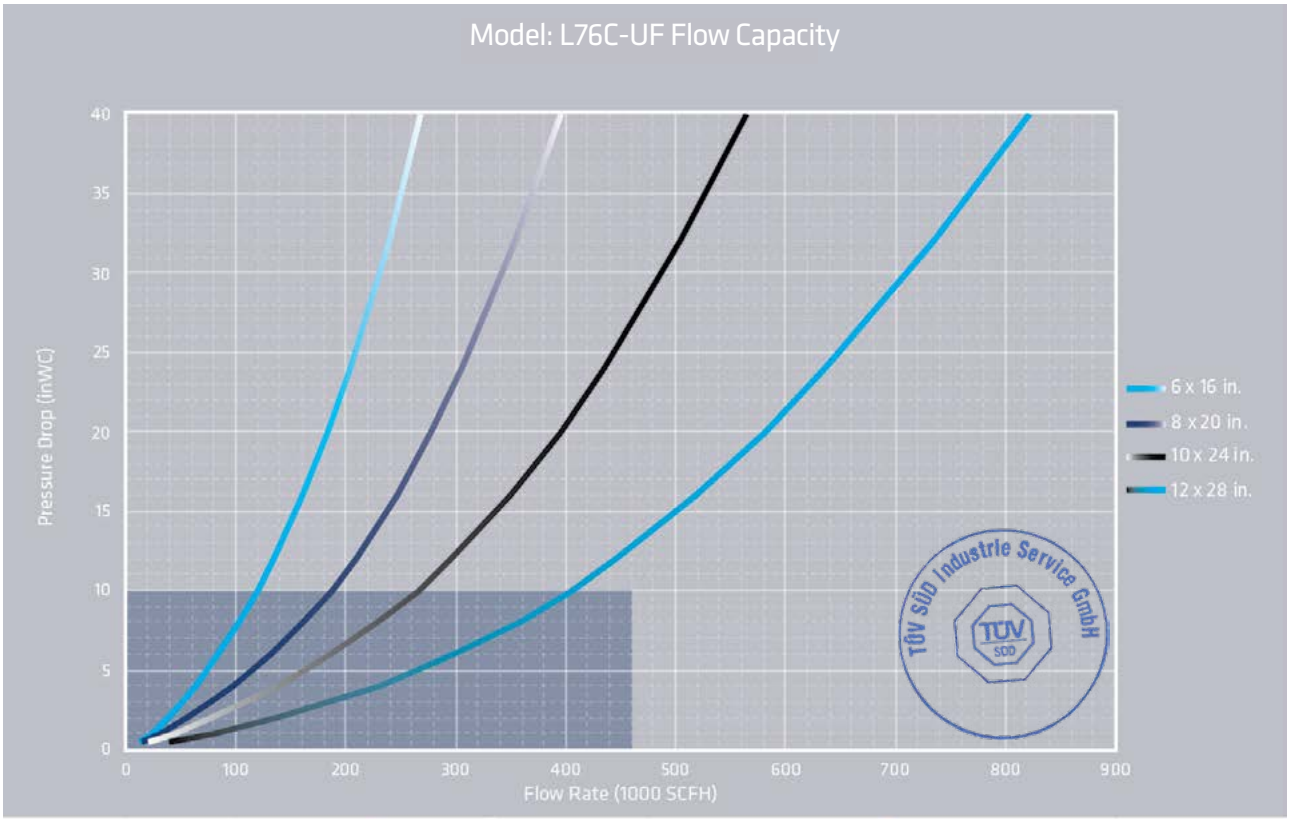


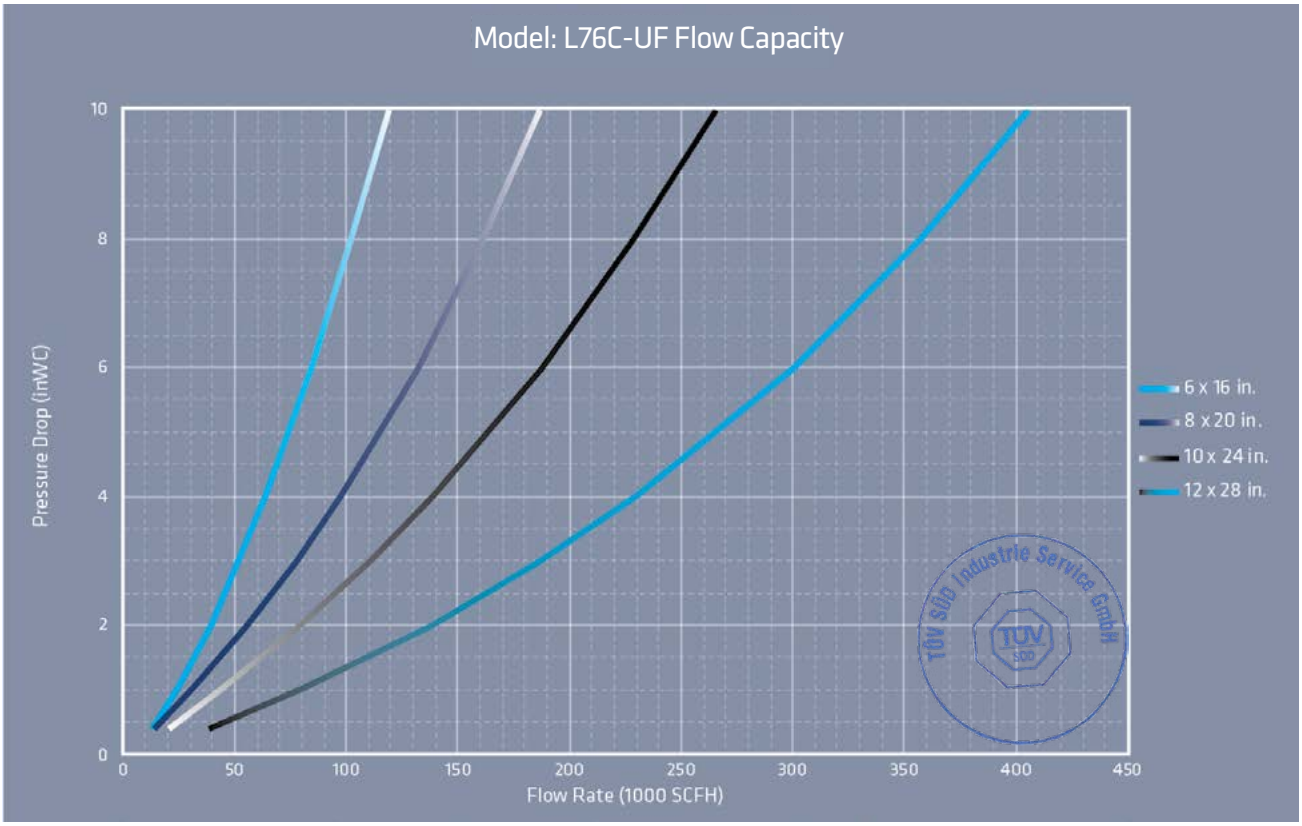


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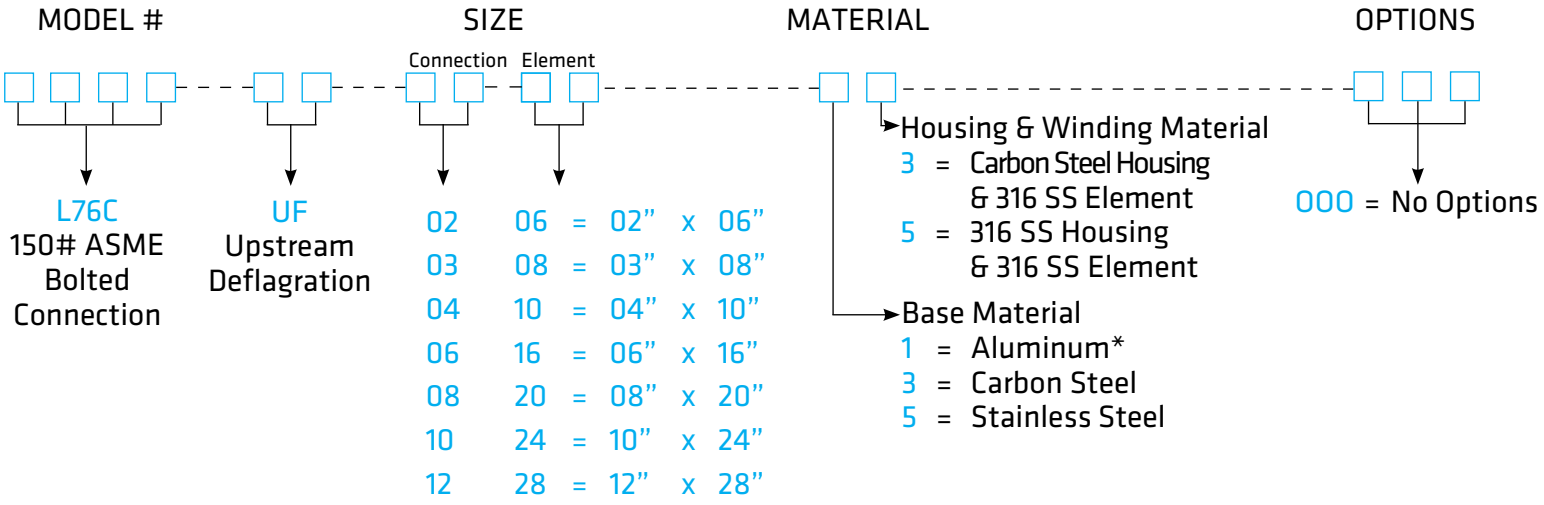
# HOW TO ORDER

For easy ordering, select proper model numbers




**Notes**

- Include model number and setting when ordering
- For special options, consult factory
- *Aluminum base material is only available in connection sizes 2" through 6"

**Example** L 7 6 C – U F – 0 2 0 6 – 3 3 – 0 0 0

Indicates a LaMOT Model L76C-UF, Upstream Configuration, 2" ASME 150# Bolted Connection, with a 6" Housing Size, Carbon Steel Bases, Carbon Steel Housing with 316 SS element, and no other options.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