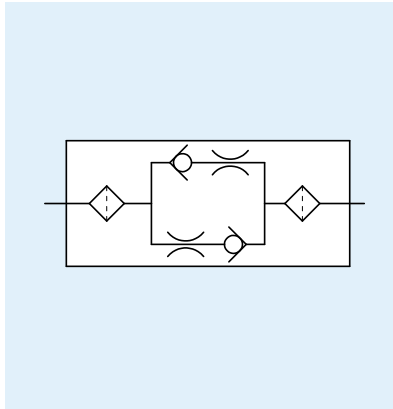


DUAL METERING FLOW CONTROL

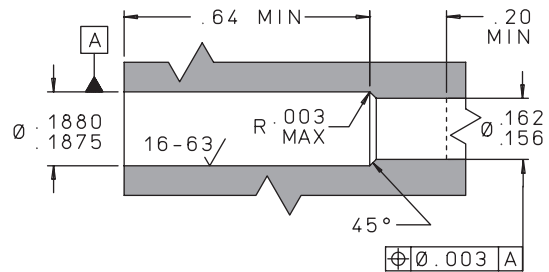
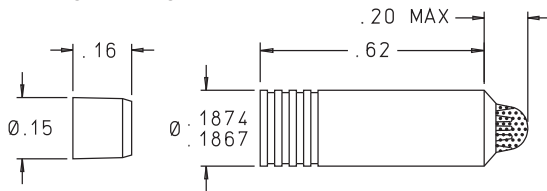
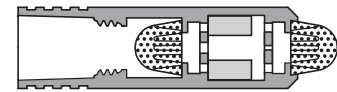
.187 and .281 Diameter Models (3000 psi)

The Lee Company's Dual Metering Flow Control valve is a two way restrictor that allows a designer to specify a different metered flow rate in each direction. This valve is ideal for hydraulic applications with system pressures up to 3000 psi. It features all stainless steel construction for durability and long life and it is available in .187 and .281 diameter models. Each Lee Dual Metering Flow Control is 100% tested in both flow directions to ensure reliable, consistent performance.



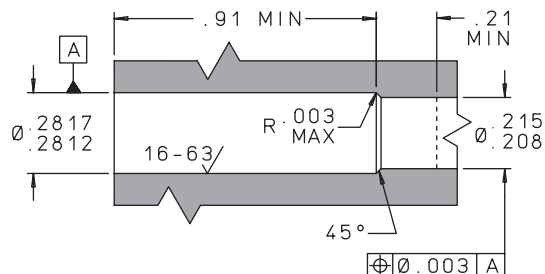
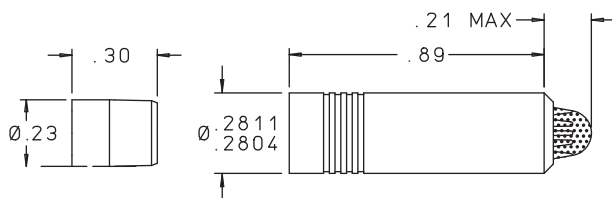
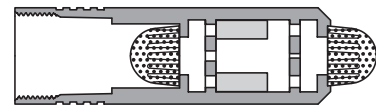
187 DUAL METERING FLOW CONTROL

- Measures only 0.187 of an inch in diameter and 0.62 of an inch in length
- Metered flow rate range: 500 to 20,000 Lohms
- Nominal system pressure: 3000 psid
- Nominal weight: 1.5 grams



281 DUAL METERING FLOW CONTROL

- Measures only 0.281 of an inch in diameter and 0.89 of an inch in length
- Metered flow rate range: 250 to 10,000 Lohms
- Nominal system pressure: 3000 psid
- Nominal weight: 5 grams



187 and 281 DUAL METERING FLOW CONTROL

MATERIALS			
PART	MATERIAL	SPECIFICATION	PASSIVATE
Shuttle Plate	303 CRES	QQ-S-763C	ASTM-A-967
Orifice Plate	303 CRES	QQ-S-763C	ASTM-A-967
Pin	303 CRES	QQ-S-763C	ASTM-A-967
Body	15-5PH CRES	AMS-5659	ASTM-A-967
Spacer	15-5PH CRES	AMS-5659	ASTM-A-967
Screen Assemblies	304L CRES	ASTM A 666	ASTM-A-967
Braze	—	AMS 4774	ASTM-A-967

All dimensions are in inches [mm], unless otherwise specified.

LEE LOHM LAWS

LOHM LAWS (Liquids)

Every engineer will be interested in our simple system of defining the fluid resistance of Lee hydraulic components.

Just as the OHM is used in the electrical industry, we find that we can use a liquid OHM or "Lohm" to good advantage on all hydraulic computations.

When using the Lohm system, you can forget about coefficients of discharge and dimensional tolerances on drilled holes. These factors are automatically compensated for in the Lohm calculations, and confirmed by testing each component to establish flow tolerances. The resistance to flow of any fluid control component can be expressed in Lohms.

The Lohm has been selected so that a 1 Lohm restriction will permit a flow of 100 gallons per minute of water with a pressure drop of 25 psi at a temperature of 80° F.

LIQUID FLOW FORMULA

The following formulas are presented to extend the use of the Lohm laws to many different liquids, operating over a wide range of pressure conditions.

These formulas introduce compensation factors for liquid density and viscosity. They are applicable to any liquid of known properties, with minimum restrictions on pressure levels or temperature.

The units constant (K) eliminates the need to convert pressure and flow parameters to special units.

$$\text{Volumetric Flow Units } L = \frac{KV}{I} \sqrt{\frac{H}{S}} \quad \text{Gravimetric Flow Units } L = \frac{KV}{w} \sqrt{HS}$$

NOMENCLATURE

- L = Lohms
- S = Specific gravity*
- H = Differential pressure
- V = Viscosity compensation factor**
- I = Liquid flow rate: Volumetric
- w = Liquid flow rate: Gravimetric
- K = Units Constant – Liquid (see chart below)
- *S = 1.0 for water at 80°F.
- **V = 1.0 for water at 80°F.

For other fluids and temperatures, contact your Lee Sales Engineer or visit us at www.theleeco.com.

LIQUID FLOW – UNITS CONSTANT K

VOLUMETRIC FLOW UNITS			
Flow Units	Pressure Units		
	psi	bar	kPa
GPM	20	76.2	7.62
L/min	75.7	288	28.8
ml/min	75 700	288 000	28 800
in ³ /min	4 620	17 600	1 760

GRAVIMETRIC FLOW UNITS			
Flow Units	Pressure Units		
	psi	bar	kPa
PPH	10 000	38 100	3 810
gm/min	75 700	288 000	28 800