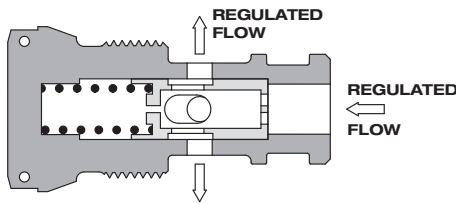
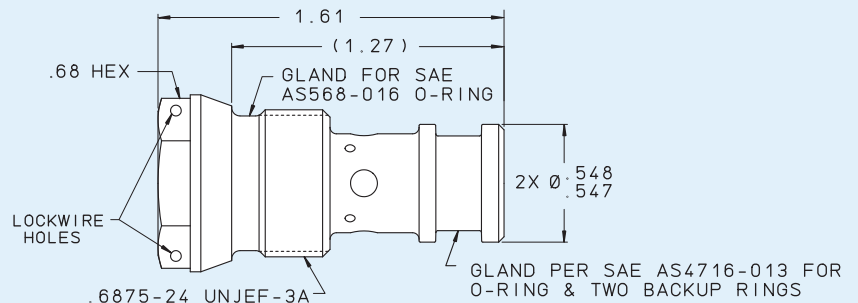


## 687 SIDE EXIT FLOSER

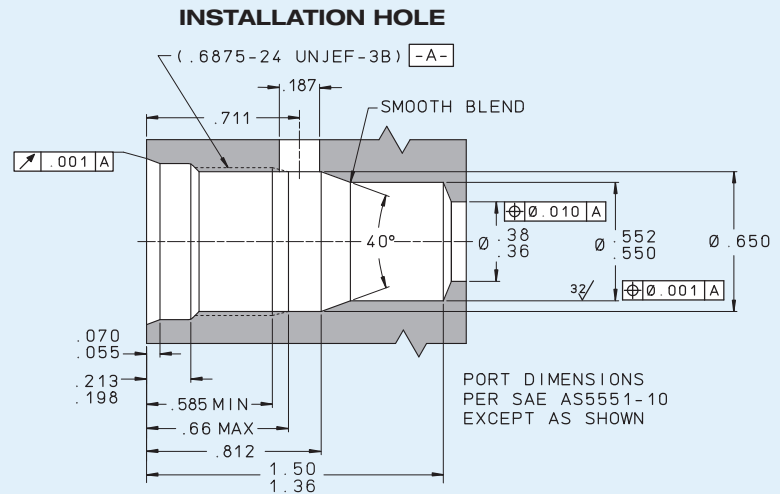
The Lee Company's new 687 Side Exit Flosert is the latest addition to Lee's line of miniature flow regulating valves. These valves are pressure compensated to provide a constant flow over a wide range of pressure differentials. This new valve is ideal for high pressure hydraulic applications with system pressures up to 5000 psi. Nominal weight is just 48 grams.

The 687 Side Exit Flosert is constructed entirely of stainless steel for durability and long life. Regulated flow rates are available from 1.5 to 5.0 GPM. Each Flosert is 100% tested and inspected to ensure reliable, consistent performance.

- Regulated Flow Rates Available from 1.5 to 5.0 GPM
- Designed for System Pressures up to 5000 psi
- Regulated Flow Tolerance: +/- 10%
- Weighs only 48 grams
- 100% Tested and Inspected
- Endurance Tested to 100,000 Cycles Minimum



PERFORMANCE	
Regulated Flow Tolerance:	+/-10%
Nominal System Pressure:	up to 5000 psi
Nominal Weight:	48 grams



MATERIALS		
PART	MATERIAL	SPECIFICATION
Body	316 or 316L CRES	AMS 5648 or AMS 5653
Retainer	304 CRES	AMS 5639
Piston	440C CRES	AMS 5630
Orifice Plate	303 CRES	QQ-S-763C
Spring	17-7PH CRES	AMS 5678
Optional Shims	300 Series CRES	ASTM A 666

LEE PART NUMBER	REGULATED FLOW MIL-PRF-83282 (GPM at 85°F ± 15°F) +/- 10%	FLOW REGULATION RANGE (psi)		NOMINAL LOHM RATE NON REGULATING FLOW DIRECTION
		ΔP Min.	ΔP Max.	
FLVA0687550D	5.0	200	5000	80
FLVA0687545D	4.5	175	5000	80
FLVA0687540D	4.0	175	5000	85
FLVA0687535D	3.5	150	5000	90
FLVA0687530D	3.0	150	5000	100
FLVA0687525D	2.5	125	5000	115
FLVA0687520D	2.0	100	5000	140
FLVA0687515D	1.5	100	5000	170

Finish: All CRES Parts Passivated.

# LEE LOHM LAWS

## LOHMS 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.

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

## 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 <sup>3</sup> /min	4 620	17 600	1 760

GRAVIMETRIC FLOW UNITS			
Flow Units	Pressure Units		
	psi	bar	kPa
PPH	10 000	38 100	3810
gm/min	75 700	288 000	28 800

## 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 above)

\*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](http://www.theleeco.com).