Innovation in Miniature

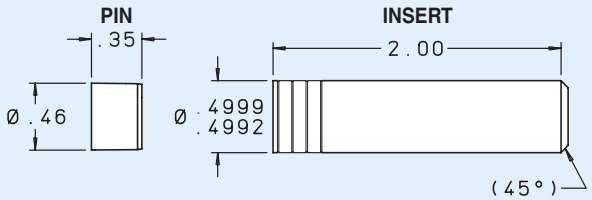
PRODUCT DATA SHEET

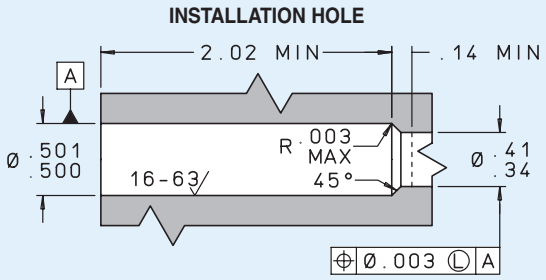
HIGH PRESSURE 500 FLOSERT

The Lee Company's new High Pressure 500 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 32 grams.

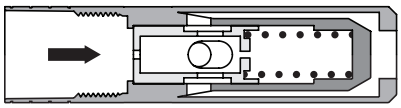
Available in forward and reverse regulated flow configurations, the High Pressure 500 Flosert is constructed entirely of stainless steel for durability and long life. Regulated flow rates are available from 1.5 to 5.0 GPM. Each Flosert is 100% tested and inspected to ensure reliable, consistent performance. Contact your local Lee Sales Engineer for additional information and technical assistance.

- Designed for System Pressures up to 5000 psi
- Regulated Flow Rate Available from 1.5 to 5.0 GPM
- Weighs only 32 grams
- 100% Tested and Inspected
- Endurance Tested to 100,000 Cycles
- Regulated Flow Tolerance: ±10%

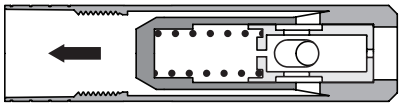




REGULATED FLOW FORWARD



REGULATED FLOW REVERSE



MATERIALS		
PART	MATERIAL	SPECIFICATION
Body	15-5PH Cres	AMS 5659
Pin	15-5PH Cres	AMS 5659
Sleeve	416 Cres	QQ-S-763C
Spring	17-7PH Cres	AMS 5678
Piston	440C Cres	AMS 5630
Spring Seat	303 Cres	QQ-S-763C
Retainer	13-8 MO Cres	AMS 5629
Washer	15-5PH Cres	AMS 5659
Damping Orifice	303 Cres	QQ-S-763C

PERFORMANCE

Regulated Flow Tolerance: ±10%
Nominal System Pressure: up to 5000 psi
Nominal Weight: 32 grams

INSTALLATION AND EXTRACTION

Tool Set Part No.: CUTA5000716C
Replacement Pin Part No.: SVBA5000003A

LEE PART NUMBER	REGULATED FLOW MIL-PRF-83282 (GPM at 85°F ± 15°F)	FLOW REGULATION RANGE (psi)		NOMINAL LOHM RATE NON REGULATING FLOW DIRECTION
		Δ P Min.	Δ P Max.	
Regulated Flow Forward				
FLFA5001550D	5.0	200	5000	80
FLFA5001545D	4.5	175	5000	80
FLFA5001540D	4.0	175	5000	85
FLFA5001535D	3.5	150	5000	90
FLFA5001530D	3.0	150	5000	100
FLFA5001525D	2.5	125	5000	115
FLFA5001520D	2.0	100	5000	140
FLFA5001515D	1.5	100	5000	170
Regulated Flow Reverse				
FLRA5001550D	5.0	200	5000	80
FLRA5001545D	4.5	175	5000	80
FLRA5001540D	4.0	175	5000	85
FLRA5001535D	3.5	150	5000	90
FLRA5001530D	3.0	150	5000	100
FLRA5001525D	2.5	125	5000	115
FLRA5001520D	2.0	100	5000	140
FLRA5001515D	1.5	100	5000	170

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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 – UNITS CONSTANT K

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

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.

Volumetric Flow Units $L = \frac{KV}{I}\sqrt{\frac{H}{S}}$

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

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