

HIGH PRESSURE 281 FLOSER[®]

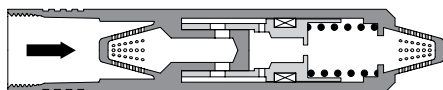
The Lee Company's new High Pressure 281 Flosert is the latest addition to Lee's line of miniature flow regulating valves. These valves are pressure compensated to provide a constant flow over a wide range of pressure differentials. This new valve is ideal for high pressure hydraulic applications with system pressures up to 5,000 psi. The metal components are constructed entirely of stainless steel for durability and long life. Nominal weight is just 7 grams.

The High Pressure 281 Flosert is available in forward and reverse regulated flow configurations, with regulated flow rates from 0.1 to 1.0 GPM. Each Flosert is 100% tested and inspected to ensure reliable, consistent performance. Contact your local Lee Sales Engineer for more information and technical assistance.

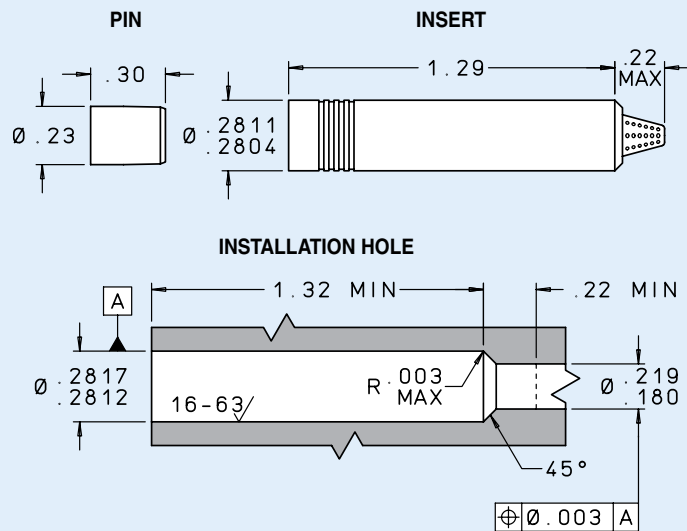
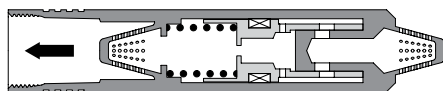
- Provides Regulated Flow up to 5000 psid
- Regulated Flow Rate Available from 0.1 to 1.0 GPM
- Regulated Flow Tolerance: $\pm 10\%$
- Weighs only 7 grams
- 100% Tested and Inspected
- Endurance Tested to 100,000 Cycles



REGULATED FLOW FORWARD



REGULATED FLOW REVERSE



PERFORMANCE
Regulated Flow Tolerance: $\pm 10\%$
Nominal System Pressure: up to 5000 psi
Nominal Weight: 7 grams

INSTALLATION AND EXTRACTION
Tool Set Part No.: CUTA2810114C
Replacement Pin Part No.: SHBA2810003A

MATERIALS		
PART	MATERIAL	SPECIFICATION
Body	15-5PH Cres	AMS 5659
Pin	15-5PH Cres	AMS 5659
Filter Screens	15-5PH Cres	AMS 5659
Spring Seat	304 Cres	AMS 5639
Spool	13-8 MO	AMS 5629
Orifice Plate	304 Cres	ASTM-A-666
Piston	416 Cres	QQ-S-763C
Spring	17-7PH Cres	AMS 5678
Internal Seal	GFP with 316 or MP35N Spring	—

See reverse side for Part Numbers and Flow Rates.

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				
FLFA2812510D	1.0	200	5000	280
FLFA2812590L	0.9	175	5000	300
FLFA2812580L	0.8	150	5000	340
FLFA2812570L	0.7	125	5000	380
FLFA2812560L	0.6	100	5000	425
FLFA2812550L	0.5	100	5000	485
FLFA2812540L	0.4	100	5000	550
FLFA2812535L	0.35	100	5000	625
FLFA2812530L	0.3	100	5000	680
FLFA2812525L	0.25	100	5000	800
FLFA2812520L	0.2	100	5000	850
FLFA2812515L	0.15	100	5000	1600
FLFA2812510L	0.1	100	5000	1900
Regulated Flow Reverse				
FLRA2812510D	1.0	200	5000	280
FLRA2812590L	0.9	175	5000	300
FLRA2812580L	0.8	150	5000	340
FLRA2812570L	0.7	125	5000	380
FLRA2812560L	0.6	100	5000	425
FLRA2812550L	0.5	100	5000	485
FLRA2812540L	0.4	100	5000	550
FLRA2812535L	0.35	100	5000	625
FLRA2812530L	0.3	100	5000	680
FLRA2812525L	0.25	100	5000	800
FLRA2812520L	0.2	100	5000	850
FLRA2812515L	0.15	100	5000	1600
FLRA2812510L	0.1	100	5000	1900

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	75700	288000	28800
in ³ /min	4620	17600	1760

GRAVIMETRIC FLOW UNITS			
Flow Units	Pressure Units		
	psi	bar	kPa
PPH	10000	38100	3810
gm/min	75700	288000	28800

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)
- *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