LEE IMH 5.5 mm INSERT ORIFICE (for liquids*)

The Lee IMH 5.5 mm Insert Orifice for liquids is an economical, reliable, highly accurate miniature restrictor. This orifice is 100% flow tested on water to ensure that every part is within ±5% of its nominal flow rate, providing more consistent system performance and reducing the need for system rework. Flow tolerances as tight as this are only possible if entrance and exit conditions of the orifice are closely controlled. This provides far more accuracy than an orifice specified by hole tolerance. An ordinary hole held to a very tight tolerance will not result in a tight flow tolerance.

Constructed entirely of stainless steel, the 5.5 mm Insert Orifice is available in a range of Lohm** rates and certain models are offered with an integral safety screen.

Installation is simple using Lee's field-proven controlled expansion principle which provides retention and creates a leak tight seal that prevents bypass leakage. To install, simply insert the orifice into a drilled hole and drive the expansion pin into the orifice body to seal and lock the orifice in place.

MORE ACCURATE
THAN ORIFICES SPECIFIED BY HOLE TOLERANCE.

** For gas applications, bidirectional flow requirements, other Lohm rates, or tighter flow tolerances, contact your local Lee Sales Engineer for more information.*

*** Lohm is a measure of flow resistance. See back page for more information.*

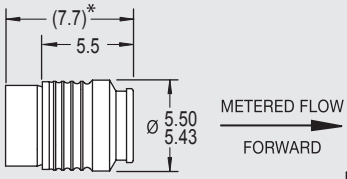
- 100% flow tested
- Consistent part-to-part performance
- All stainless steel construction
- Simple installation
- Screened models available

ACTUAL SIZE (As Installed)

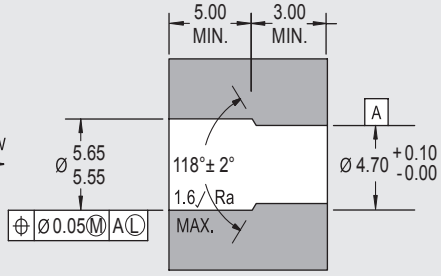
Forward and Unscreened Reverse

Screened Reverse

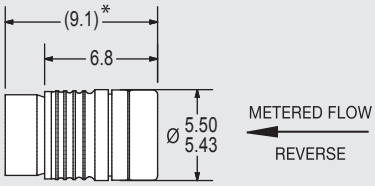
IMH ORIFICE SCREENED FORWARD FLOW



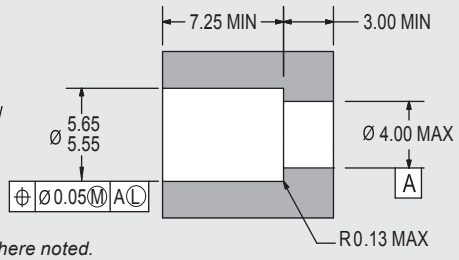
INSTALLATION HOLE SCREENED FORWARD FLOW



IMH ORIFICE SCREENED REVERSE FLOW



INSTALLATION HOLE SCREENED REVERSE FLOW



** LOA before installation.*
All dimensions are in millimeters, except where noted.

SCREENED ORIFICE PART NUMBER		LOHM RATE ± 5%	SCREEN MICRON RATING
FORWARD METERED FLOW DIRECTION	REVERSE METERED FLOW DIRECTION		
RILF5553020S	RILR5557020S	2000	125 micron
RILF5553025S	RILR5557025S	2500	125 micron
RILF5553030S	RILR5557030S	3000	125 micron
RILF5553040S	RILR5557040S	4000	125 micron
RILF5553050S	RILR5557050S	5000	125 micron
RILF5553060S	RILR5557060S	6000	75 micron
RILF5553080S	RILR5557080S	8000	75 micron
RILF5553100S	RILR5557100S	10,000	75 micron
RILF5553120S	RILR5557120S	12,000	75 micron
RILF5553150S	RILR5557150S	15,000	75 micron
RILF5553200S	RILR5557200S	20,000	40 micron
RILF5553250S	RILR5557250S	25,000	40 micron
RILF5553300S	RILR5557300S	30,000	40 micron
RILF5553400S	RILR5557400S	40,000	40 micron
RILF5553450S	RILR5557450S	45,000	40 micron

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Tel: 860-399-6281 • Technical Info.: 860-399-7037
www.leeimh.com

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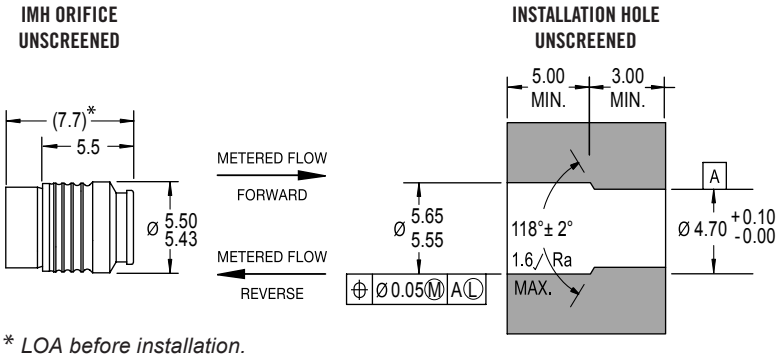
LEE IMH 5.5 mm INSERT ORIFICE (for liquids)



* *LOA before installation.*
All dimensions are in millimeters, except where noted.

UNSCREENED ORIFICE PART NUMBER		LOHM RATE ± 5%
FORWARD METERED FLOW DIRECTION	REVERSE METERED FLOW DIRECTION	
RILF5551005S	RILR5551005S	500
RILF5551006S	RILR5551006S	600
RILF5551008S	RILR5551008S	800
RILF5551010S	RILR5551010S	1000
RILF5551012S	RILR5551012S	1200
RILF5551015S	RILR5551015S	1500

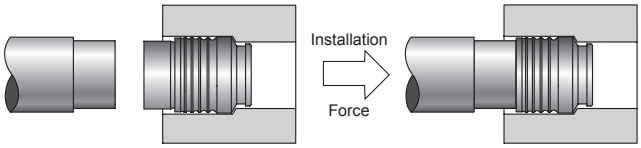
Lohm is a measure of flow resistance.
See below for more information.

SIMPLE TO INSTALL

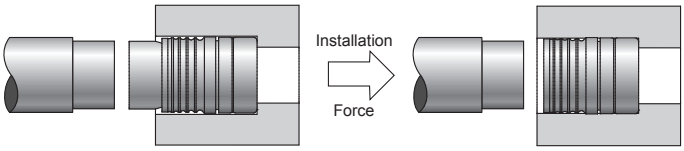
To install, simply insert the orifice into a drilled installation hole. Drive the expander pin flush to within 0.25 mm (0.010") above flush of the orifice body. Use a maximum installation force of 625 KgF (1380 lbs. force).

The installation tool can bottom on the insert body with no consequence. Lee Installation Tool Part Number CCRT0900120S is available.

FORWARD AND UNSCREENED REVERSE INSTALLATION



SCREENED REVERSE INSTALLATION



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.

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 local Lee Sales Engineer or visit us at www.leeimh.com).

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	4620	17,600	1760

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

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