



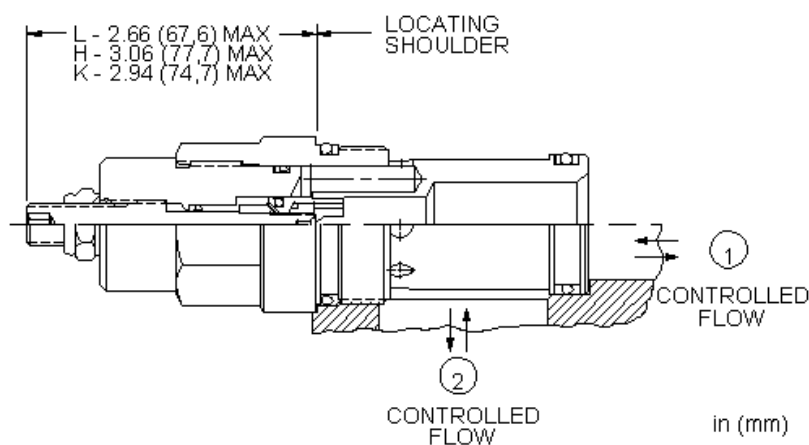
## Fully adjustable needle valve

Capacity:  
.38 in. (9,7 mm)

Model:  
NFE

### Product Description

Needle valves are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. They are not pressure-compensated. They may be used as flow controls or as shutoff valves.

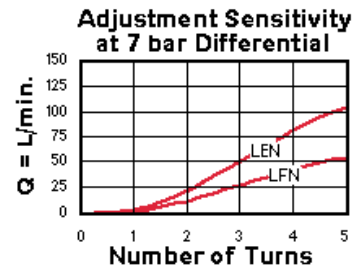
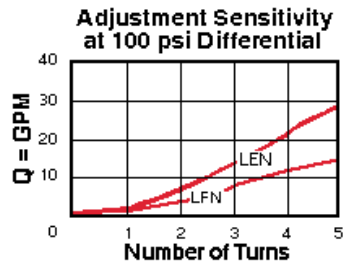


### Technical Features

- All 2-port flow control cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size). However, cartridge extension dimensions from the mounting surface may vary.
- Because needle valves are non-compensating devices, the fixed orifice size will regulate flow through the valve in proportion to the square root of the pressure differential across ports 1 and 2.
- A balanced adjustment mechanism allows for easy adjustment even at high pressures.
- The sharp-edged orifice design minimizes flow variations due to viscosity changes.
- The flow path through this valve is bi-directional. The preferred path is port 1 to 2, to allow interchangeability with other flow controls.
- There is no leakage when the adjustment mechanism is turned to the shut-off position.

### Technical Data

|                                                                            | U.S. Units         | Metric Units |
|----------------------------------------------------------------------------|--------------------|--------------|
| Cavity                                                                     | T-16A              |              |
| Capacity                                                                   | .38 in.            | 9,7 mm       |
| Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open | 5                  |              |
| Maximum Operating Pressure                                                 | 5000 psi           | 350 bar      |
| Series (from Cavity)                                                       | Series 3           |              |
| Valve Hex Size                                                             | 1 1/4 in.          | 31,8 mm      |
| Valve Installation Torque                                                  | 150 - 160 lbf ft   | 200 - 215 Nm |
| Adjustment Screw Internal Hex Size                                         | 5/32 in.           | 4 mm         |
| Adjustment Locknut/Cap Hex Size                                            | 9/16 in.           | 15 mm        |
| Adjustment Nut Torque                                                      | 80 - 90 lbf in.    | 9 - 10 Nm    |
| Seal Kits - Cartridge                                                      | Buna: 990-016-007  |              |
| Seal Kits - Cartridge                                                      | Viton: 990-016-006 |              |
| Model Weight                                                               | 1.22 lb.           | 0.55 kg.     |



## NFEC-LEN

| Control                                         | Maximum Orifice Diameter               | Seal Material                |
|-------------------------------------------------|----------------------------------------|------------------------------|
| Preferred Options                               | Preferred Options                      | Preferred Options            |
| L Standard Screw Adjustment<br>Standard Options | E .38 in. (9,7 mm)<br>Standard Options | N Buna-N<br>Standard Options |
| H Calibrated Handknob with<br>Detent Lock       | F .28 in. (7,1 mm)                     | V Viton                      |
| K Handknob                                      |                                        |                              |