



## Series NVM Needle Valves Installation and Operating Instructions

KOBOLD Instruments, Inc. 1801 Parkway View Drive, Pittsburgh, PA 15205  
Telephone: (412) 788-2830 FAX: (412) 788-4890 www.koboldusa.com

### Precautions

**User's Responsibility for Safety:** KOBOLD manufactures a wide range of process sensors and technologies. While each of these technologies are designed to operate in a wide variety of applications, it is the user's responsibility to select a technology that is appropriate for the application, to install it properly, to perform tests of the installed system, and to maintain all components. The failure to do so could result in property damage or serious injury.

**Proper Installation and Handling:** Use a proper sealant with all installations. Never over tighten the sensor within its fittings. Always check for leaks prior to system start-up.

**Temperature and Pressure:** Temperature and pressure maximums vary depending upon the material selected. Operation outside these limitations will cause damage to the unit.

**Material Compatibility:** Make sure that the material of construction is chemically compatible with the application liquids. While the sensor's outer housing is liquid resistant when installed properly, it is not designed to be immersed. It should be mounted in such a way that it does not normally come into contact with fluid.

**Flammable, Explosive and Hazardous Applications:** This unit is not an explosion-proof design. It should not be used in applications where an explosion-proof design is required.

**Make a Fail-Safe System:** Design a fail-safe system that accommodates the possibility of sensor or power failure. In critical applications, KOBOLD recommends the use of redundant backup systems and alarms in addition to the primary system

### Description:

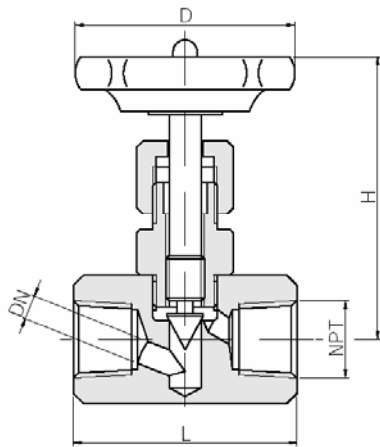
Stainless steel needle valves are used to vary the flow cross section, thus regulating the flow volume. The flow is regulated by a cone-shaped valve that is moved by means of a spindle away from or toward the valve seat. The amount of flow change is determined by the size of the resulting angular gap between the cone and seat. The rate of flow change is determined by how much the valve spindle is turned as well as the pitch of the valve spindle thread.

### Specifications:

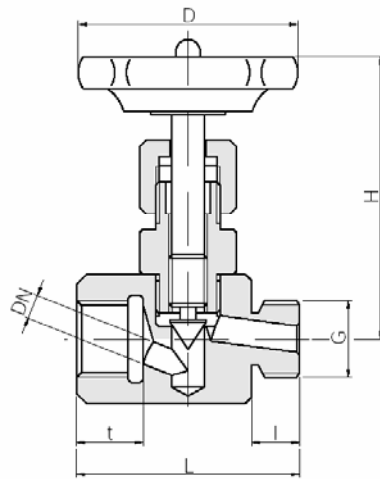
<b>Maximum pressure:</b>	3600 PSIG
<b>Medium temperature:</b>	480°F (at atmospheric Pr)
<b>Materials:</b>	
Body:	316 Ti stainless steel
Seal:	PTFE
Hand wheel:	molded resin

**Dimensions:**

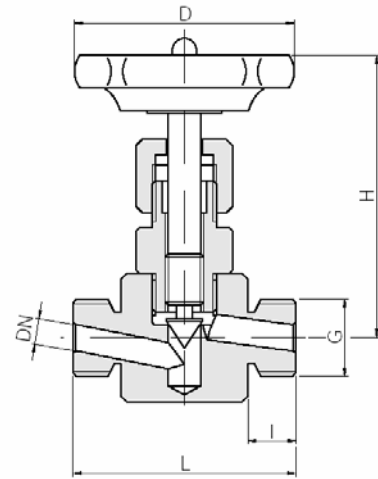
**Female thread NPT**



**Female/male thread**



**Male thread**



DN mm	NPT	L <sup>1</sup> mm	L <sup>2</sup> mm	t mm	I mm	H mm	D mm	k <sub>v</sub> - value m <sup>3</sup> /h	Weight kg
4	1/8	45	50	10	9	74	50	0.27	0.30
5	1/4	50	55	13	11	73	50	0.48	0.32
6	3/8	55	60	14	11	72	50	0.54	0.32
8	1/2	65	65	16	13	83	63	0.75	0.46
10	3/4	75	80	18	16	100	63	1.2	0.76
12	1	100	105	22	18	110	80	2.7	1.58
15	1 1/4	120	-	24	20	135	100	3.6	2.82