



The right connection  
The right environment

## Needle Valves - Inline and Right angle NLG / NLWG

Ref. No. H02310  
Release: Apr 2025

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### Description

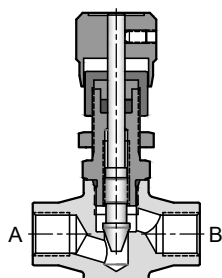
Needle valve model NL, NLW are two way Throttle valves.

The Valve allows accurate adjustment of flow by throttling action. The throttling can be varied by rotation of the Hand knob. These valves offer constant flow rate so long as the pressure drop across the valve and the viscosity of oil remains constant.

The throttle is effective in either direction.



### Section

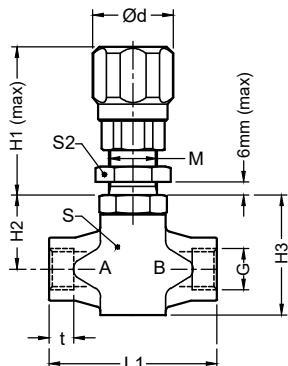


Hydraulic Symbol



### Unit Dimensions

In-line threaded ports



Right angle threaded ports

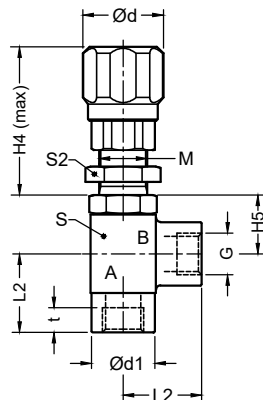
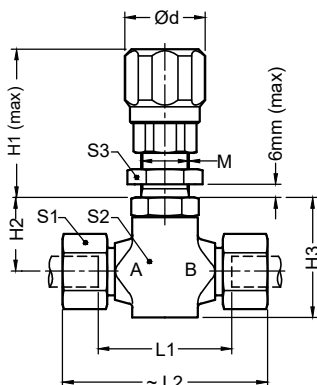


Table-1

Dimensions in mm.

G	Ød1	Pr. (bar)	L1	t	L2	H1	H2	H3	H4	H5	Ød	S	S2	M
G 1/4	22	350	70	14	30							30		
G 3/8	25	350	70	14	30	76.5	34.0	55.0	77.0	27.0	40	30	30	M22x1.5
G 1/2	29	350	77	17	36							30		
G 3/4	35	350	93	17	45	78.0	44.0	70.0	78.0	32.0	48	36	36	M26x1.5
G1	44	350	93	18	45							46		
G1.1/4	58	250	162	22	65	95.5	66.5	117.0	95.0	47.0	68	60	50	M42x2.0
G1.1/2	58	250	162	24	65							60		

In-line Tube mounting



Right Angle Tube mounting

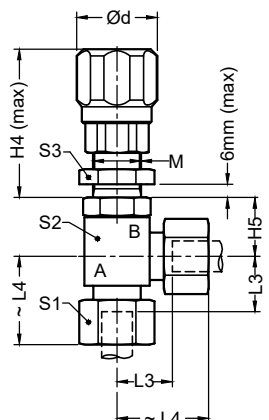


Table-2

Tube OD	Pr. (bar)	L1	L2	L3	L4	H1	H2	H3	H4	H5	Ød	S1	S2	S3	M
10	350	55	88		39.0						22				
12	350	55	88	22	39.0	76.5	34.0	55.0	76.5	27.0	40	24	30	30	M22x1.5
16	350	60	97		41.0							30			
20	350	72	115		68.0	78.5	43.5	71.5	78.0	32.0	48	36	41	36	M26x1.5
25	350	69	117		73.5							46			
30	250	135	188		63.0	95.5	66.5	118.0	95.0	48.0	68	50	60	50	M42x2.0
38	250	130	192	40	67.0							60			



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### Technical Specifications

Construction ----- Rising conical spindle.

Mounting style ----- Inline or right angle port or  
tube mounting.

Mounting position ----- Optional

Flow direction ----- Either side.

Operating pressure ----- Refer Table -1 and Table-2.

Hydraulic medium ----- Mineral oil.

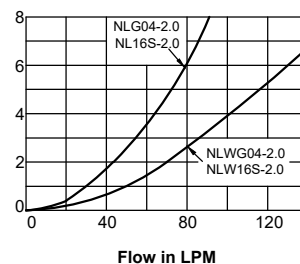
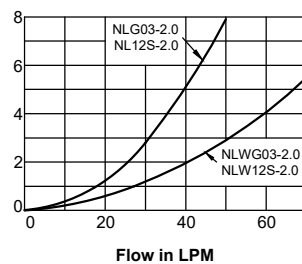
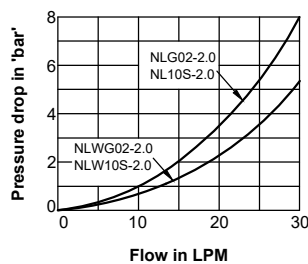
Viscosity range ----- 10 cSt to 380 cSt.

Fluid temperature range ----- -20 °C to +80 °C

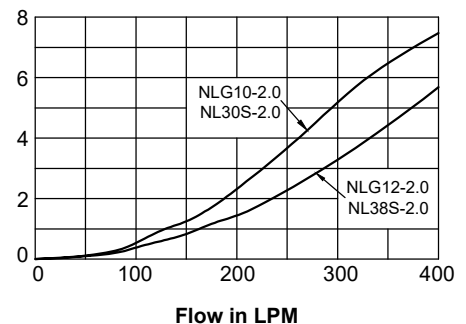
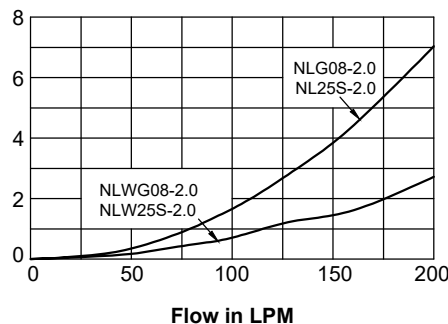
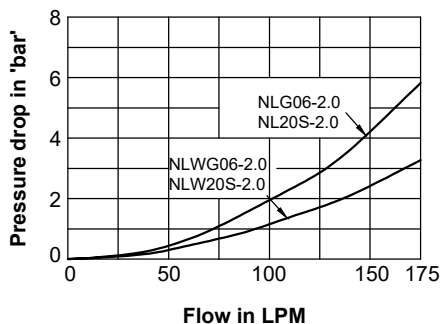
Fluid cleanliness requirement ----- As per ISO 4406 20/18/15

Nom. flow handling capacity ----- Refer graphs

### Performance curves



Oil used : ISO VG 68  
Viscosity : 68 cSt @ 40 °C  
Test conducted at : 50 °C  
Condition : Valve fully opened



### Ordering Code

NL		G02		2.0	
Needle Valve		Mounting style		Design Series Subject to revision	
Omit for In-line		Right angle		Seals	
		W		Omit for Nitrile	
				V	
				FKM (Viton)	
For Valves with G (BSPP) Ports		G 1/4		G02	
		G 3/8		G03	
		G 1/2		G04	
		G 3/4		G06	
		G1		G08	
		G1 1/4		G10	
		G1 1/2		G12	
For Valves with Tube ends (Will have Double bite ferrule)		10 OD		10S	
		12 OD		12S	
		16 OD		16S	
		20 OD		20S	
		25 OD		25S	
		30 OD		30S	
		38 OD		38S	

Note : Add prefix 316 to the above part code for SS 316 Valves.  
e.g. **316-NLG04-2.0**

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the actual product supplied may look different than shown above.