

"NV", "SV" SERIES Needle Valve Instruction Manual



Hy-Lok

◆ *Installation*

Installation Preparation

1. Remove protective cap and packing material
2. Before installing the valve, assure the specified pressure and temperature range is sufficient and piping line is installed properly.
3. The environment of installing valve should be suitable to the operation.
4. Make sure the piping system line is free of contaminants.
5. Do not carry the valve with getting the handle.

Connection of Taper Thread

1. Before assembly, make sure male and female threads are free of dirt and debris.
2. Teflon tape should be applied to male thread with 5 or 6 turns.
3. After wrapping the threads, make sure that the tape is properly fixed by pressing the tape with hands.
4. During installation, dirt and debris should not contaminate the threads.

Connection of Hy-Lok Tube Fitting

1. Insert prepared tubing into Hy-Lok fitting until tubing end is firmly seated on the body shoulder and make sure the nut is finger-tight.
2. Mark the nut at 9 o'clock position for identification of starting point.
3. Tighten the nut 1 1/4 turns with a wrench keeping the fitting body steady with a back-up wrench. After the nut is tightened 1 1/4 turn, the marking made at 9 o'clock position before, will now be at 12 o'clock position.

◆ *Operating*

⚠ CAUTION

1. System design should ensure adequate space for proper valve actuation without obstruction.
2. The Valve should be operated manually by an authorized person or trained personnel to ensure proper valve operation.
3. Operate the Valve after complete installation in system.
4. Operate the Valve in accordance with the specified user's procedure.
5. Operate the Valve with the Handle. Actuating the valve with a spanner, pipe wrench, etc. is not recommended.

Open and Close the Valve

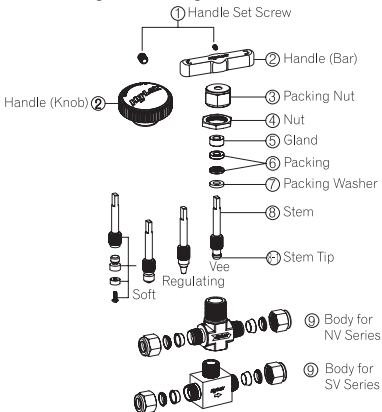
1. Turn the **Handle(2)** about 4~5 1/2 turns clockwise or counterclockwise to close or open.
2. Turn the **Handle(2)** completely clockwise to fully closed position, counterclockwise to fully open position.

◆ *Maintenance*

⚠ CAUTION

1. Check to ensure operation is within a safe temperature range and is free from any power source. To properly check the valve the line should be fully depressurized and any fluids should be drained before attempting any maintenance.
2. The valve being removed should be operated at least once and left in the open position before removal.
3. The Valve should be operated manually by an authorized person or trained personnel to insure proper valve operation

General Arrangement Drawings



Torque Table

(unit : N · m)

Series	Spanner Size	Body Material	Stem Packing Material
			PTFE
NV1	5/8" (16mm)	SS316	13
		Brass	
NV2	5/8" (16mm)	SS316	13
		Brass	
NV3	7/8" (22mm)	SS316	19
		Brass	9
NV4	1 1/16" (27mm)	SS316	25
		Brass	15
SV1	5/8" (16mm)	SS316	9
		Brass	
SV2	7/8" (22mm)	SS316	17
		Brass	9

Replacement of part components

If no further adjustment of **Packing Nut(3)** is possible and stem leakage is still evident or seat leakage is suspected, the valve will need to be removed from the line in order for new seats/seals to be installed.

After removal of the valve, adopt the following procedure to remove, replace and reassemble the individual valve components.

Disassembly

1. Loosen the **Packing Nut(3)** by using the spanner.
2. Turn the **Handle(2)** counterclockwise to remove the **Stem(8)**.
3. Remove the **Handle(2)**, **Packing Nut(3)**, **Gland(5)**, **Packing(6)**, **Packing Washer(7)** from the **Stem(8)**.

Leakage

1. Stem leakage

In case of stem leakage, tighten the **Packing Nut(3)**. If the leakage remains after tightening, remove the **Handle(2)**, **Stem(8)**, **Gland(5)**, **Packing(6)**, **Packing Washer(7)** and check for damage to the **Stem(8)** and **Packing(6)**, replace the damaged parts or component(s) as needed.

2. In-Line leakage

If the leakage happens inside of valve, ensure whether the valve is in fully closed condition. If the reason of leakage is seat (**Body(9)** / **Stem Tip(8-1)**) damage, replace the component.

Reassembly

1. Before valve reassembly, check if any damage and corrosion in all part components of the valve.
2. If the damage is minor, polish the part by sandpaper.
If the damage is considerable, replace the part component.
3. Insert the **Packing Washer(7)**, **Packing(6)**, **Gland(5)** on the **Stem(8)**.
4. Tighten the **Handle Set Screw(1)** after inserting the **Handle(2)** into key of **Stem(8)**.
5. Insert the Stem thread in the **Body(9)** and turn it to clockwise direction, and keep it open. (Make sure the Stem thread is lubricated before inserting.)
6. Tighten the **Packing Nut(3)** in accordance with Torque Table.

◆ Removal

CAUTION

The valve must be depressurized in the open position before removal.
Close the valve after fluids are fully drained.

1. Get permission to remove the valve.
2. To prevent damage to the seat, careful attention is needed when removing the valve.
3. After removal, clean the valve and cap the ends with plastic covers.