



PKP Process Instruments Inc.

10 Brent Drive

Hudson, MA 01749

Tel: +1-978-212-0006

Fax: +1-978-568-0060

PKP Prozessmesstechnik GmbH

Borsigstrasse 24

D-65205 Wiesbaden-Nordenstadt

Tel: 06122 / 7055 - 0

Fax: 06122 / 7055 – 50

Operating Instructions

SNV01/SNV02

Needle Valves

Contents

1 Introduction	2
2 Safety information	2
3 Functional description	3
4 Installation and removal	3
5 Installation with thread connection	3
6 Maintenance	3
7 Specifications	See data sheet in the appendix

1 Introduction

Series SNV01/SNV02 needle valves are noted for their reliable function and easy operation. To obtain the greatest benefit from this device, please observe the following cautionary statement:

Persons who are responsible for setting up or operating this device must be sure to read the and understand the operating instructions and the safety information pertaining to it.

2 Safety Information

2.1 General Instructions

To ensure safe operation, the device must only be operated according to the information in the operating instructions. When the device is in use, the regulations and safety standards applicable to the specific application must also be observed. This statement also applies to the use of accessories.

2.2 Proper Usage

Series SNV01/SNV02 needle valves are designed to regulate the flow by partly opening/closing the valve. Any application extending beyond this specific intended use does not constitute proper usage.

Series SNV01/SNV02 needle valves must not be employed as the sole means of avoiding hazardous conditions in machinery and installations.

The machinery and installations must be designed in such a manner that faulty conditions and malfunctions will not present hazardous situations for operating personnel.

2.3 Qualified Personnel

Series SNV01/SNV02 must only be used by qualified, knowledgeable personnel trained in correct use of these devices. Qualified personnel are those persons familiar with setting up and assembling these devices, placing them in service and operating them. In addition, such personnel must also be qualified to perform the work associated with the application for which the device is being used.

3 Functional Description

Open and close the needle valves by turning the hand wheel. You can regulate the flow by partly opening/closing the valve.

Caution: Don't put your hand inside the flow fitting or insert any objects into it. Otherwise, you could injure yourself or damage the device. If necessary, install a suitable guard on the device.

4 Installation and Removal

- If necessary, remove all transport restrainers and any remaining pieces of packaging from the fitting (e.g. caps or plugs).
- Be sure the piping is properly aligned to avoid mechanical strain on the device.
- Clean the pipe system before installing the fitting. Soiled piping can negatively impact reliability and service life. If necessary, fit a dirt trap upstream of the flow fitting.
- Be sure the piping is properly aligned to avoid mechanical strain on the device.

5 Installation with Thread Connection

Caution: Be sure to observe the direction of flow when installing the device

- Before applying any sealing material, check that you can screw the piping easily into/onto the fitting housing.
- Attach suitable sealing material to the pipe ends. When using PTFE sealing tape or hemp packing note the thread direction. Avoid using sealing material unsuitable for your application.
- Screw the piping into/onto the ends of the threads in the flow fitting. Do not use the hand wheel as a lever.
- Do not pressurize the piping system until the sealing material has hardened. See the manufacturer's specifications for the hardening time for the sealing material.
- Check that all joints are tight.

6 Maintenance

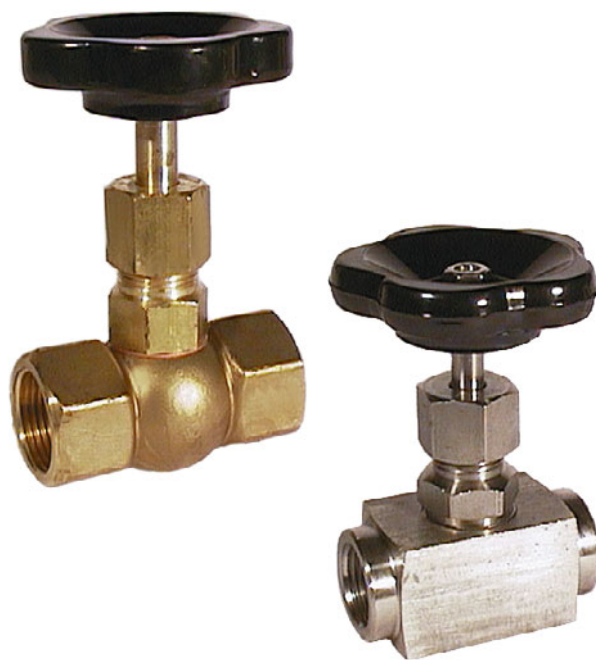
The device needs regular maintenance. How often you carry out this maintenance will depend on how often the device is used and the conditions of use. The following maintenance work should be carried out:

- Check the packing gland for leakage
- If necessary, re-adjust the packing gland

SNV01

Needle valves made of brass or carbon steel

- Nominal pressures PN100 and PN 200
- Liquid temperatures to 350 °C
- Process connection from G 1/8 to G 2
- Wetted parts made of brass or carbon steel, plastic or graphite packing



Description:

PKP needle valves in model series SNV01 accurately regulate the flow of liquids in piping systems. The devices are designed in two parts, the upper part is screwed into the base and is sealed with plastic or graphite packing.

Applications:

PKP needle valves are designed to shut off, reduce and regulate flowing liquids in industrial plant. The devices are ideally suited for use as shut-off valves in flow and level measurement applications.

Designs:

SNV01.G: thread connection G,
to DIN / ISO 228

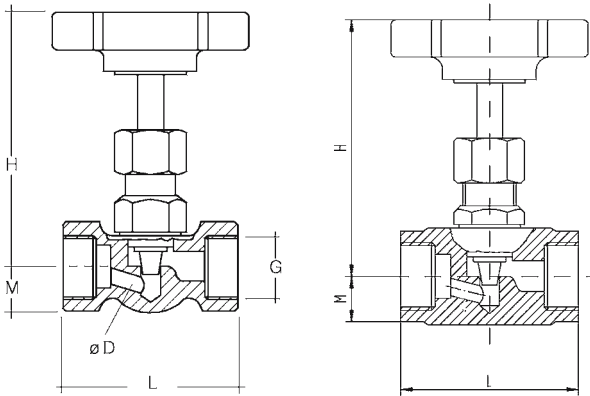
Nominal pressures:

SNV01.x.x.1: PN100 (brass design only)
SNV01.x.x.2: PN200 (carbon steel design only)

Dimension:

PN100, brass

PN200, carbon steel



Model Coding:

Order number: SNV01. G. 1. 15. 0
SNV01 needle valve

Design:
G = G screw thread

Process connection:
1 = female thread on both sides

Material:
1 = brass, PN100
2 = carbon steel, PN200

Nominal pipe size:

06 = 1/8"
08 = 1/4"
10 = 3/8"
15 = 1/2"
20 = 3/4"
25 = 1"
32 = 1 1/4"
40 = 1 1/2"
50 = 2"

Options:

0 = none
9 = custom version, please specify in writing

Process connection G	Dimension (mm)		
	L	H	M
brass, PN100			
1/8"	50	70	12,5
1/4"	50	78	12,5
3/8"	50	78	12,5
1/2"	55	78	14
3/4"	67	90	18
1"	75	95	22,5
1 1/4"	110	105	30
1 1/2"	110	110	32,5
2"	110	110	32,5
carbon steel, PN200			
1/8"	50	72	12
1/4"	50	72	12
3/8"	55	72	12
1/2"	60	77	14
3/4"	75	97	17
1"	100	110	22
1 1/4"	110	145	28
1 1/2"	130	145	33
2"	130	145	33

Technical details:

Materials:

SNV01.G.1.1: brass body
buna N packing
(G 1/8 to G 1/2), or
PTFE (G 3/4 to G2)

SNV01.G.1.2: carbon steel body 9 S 20 K
stainless steel stem
1.4104
graphite packing

Max. pressure:

SNV01.G.1.1: 100 bar
SNV01.G.1.2: 200 bar

Max. temperature:

SNV01.G.1.1: 100 °C
SNV01.G.1.2: 350 °C

SNV02

Needle valves made of stainless steel, high-pressure version

- Max. pressure 3600 psi or 5800 psi / 250 or 400 bar
- Medium temperatures to 480 °F / 250 °C
- For nominal pipe sizes from 1/8" to 2"
- Process connection G or NPT
- Wetted parts made of stainless steel AIS 316 Ti / 1.4571, packing made of PTFE or graphite



Description:

PKP needle valves model SNV02 accurately regulate the flow of liquids in piping systems.

The devices are designed in two parts, the upper part is screwed into the base and is sealed with PTFE or graphite packing.

Applications:

A variety of versions are available in stainless steel AIS 316 Ti / 1.4571 for nominal sizes 1/8" to 2" G or NPT screw threads, and for two nominal pressures (3600 psi or 5800 psi / 250 or 400 bar). These device versions can be deployed in a wide range of applications.

Designs:

SNV02.G: thread connection G, to DIN / ISO 228
SNV02.N: thread connection NPT, to ANSI / ASME B1.20.1-1983

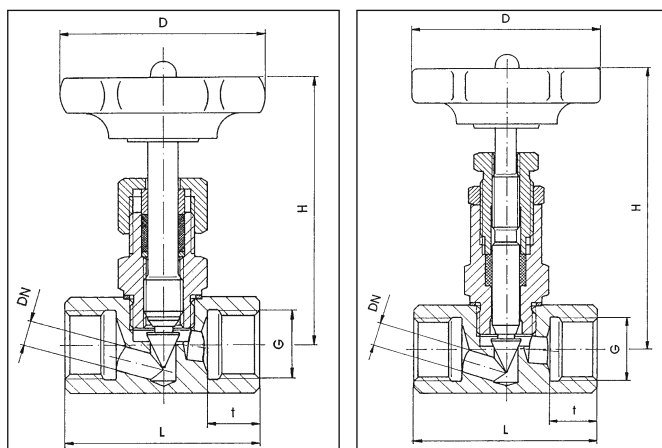
Nominal pressures:

SNV02.x.x.1: 3600 psi / 250 bar
SNV02.x.x.2: 5800 psi / 400 bar

Dimension:

3600 psi / 250 bar

5800 psi / 400 bar



Process connection	Dimension (inch / mm)			
	L screw thread G	L screw thread NPT	H	D
3600 psi / 250 bar				
1/8"	1,77 / 45	1,97 / 50	2,91 / 74	1,97 / 50
1/4"	1,97 / 50	2,17 / 55	2,87 / 73	1,97 / 50
3/8"	2,17 / 55	2,36 / 60	2,83 / 72	1,97 / 50
1/2"	2,36 / 60	2,56 / 65	3,27 / 83	2,48 / 63
3/4"	2,95 / 75	3,15 / 80	3,94 / 100	2,48 / 63
1"	3,94 / 100	4,13 / 105	4,33 / 110	3,15 / 80
1 1/4"	4,72 / 120	4,92 / 125	5,31 / 135	3,94 / 100
1 1/2"	5,12 / 130	5,31 / 135	5,51 / 140	3,94 / 100
2"	6,3 / 160	6,5 / 165	5,91 / 150	3,94 / 100
5800 psi / 400 bar				
1/8"	2,17 / 55	2,36 / 60	3,7 / 94	1,97 / 50
1/4"	2,36 / 60	2,56 / 65	3,66 / 93	1,97 / 50
3/8"	2,95 / 75	3,15 / 80	3,62 / 92	1,97 / 50
1/2"	3,94 / 100	4,13 / 105	3,78 / 96	2,48 / 63
3/4"	4,72 / 120	4,92 / 125	4,25 / 108	2,48 / 63
1"	5,12 / 130	5,31 / 135	4,84 / 123	3,15 / 80

Special versions

- Compression fitting (coupling) to DIN 2353, series S and L
- Clamping tapered ring screw joints
- Non-standard sizes up to 4"
- Maximum pressure version up to 9100 psi / 630 bar upon request

Ordering Code:

Order number: SNV02. G. 1. 1. 15. 0

SNV02 needle valve made of stainless steel

Design:

G = G screw thread
 N = NPT screw thread
 S = custom connection

Process connection:

1 = female thread at both sides
 2 = female/male thread
 3 = male thread at both sides

Max. pressure:

1 = 3600 psi / 250 bar
 2 = 5800 psi / 400 bar
 9 = custom version

Nominal pipe size:

06 = 1/8"
 08 = 1/4"
 10 = 3/8"
 15 = 1/2"
 20 = 3/4"
 25 = 1"
 32 = 1 1/4"
 40 = 1 1/2"
 50 = 2"

Options:

0 = none
 2 = high-temperature design up to 480 °F / 250 °C
 9 = custom version, please specify in writing

Technical details:

Materials:

body: stainless steel AISI 316 Ti / 1.4571
packing: standard up to 212 °F / 100 °C: PTFE
 high-temperature up to 250°C:
 graphite

Max. pressure:

3600 psi or 5800 psi /
 250 or 400 bar
 as per „Ordering Code“

max. temperature:

standard: 212 °F / 100 °C
 high-temperature: 480 °F / 250 °C

PKP Prozessmesstechnik GmbH

Borsigstraße 24 · D-65205 Wiesbaden

+49 (0) 6122-7055-0 · +49 (0) 6122-7055-50
 Email: info@pkp.de · Internet: www.pkp.de

PKP Process Instruments Inc.

10 Brent Drive · Hudson, MA 01749

+1-978-212-0006 · +1-978-568-0060
 Email: info@pkp.eu · Internet: www.pkp.eu

