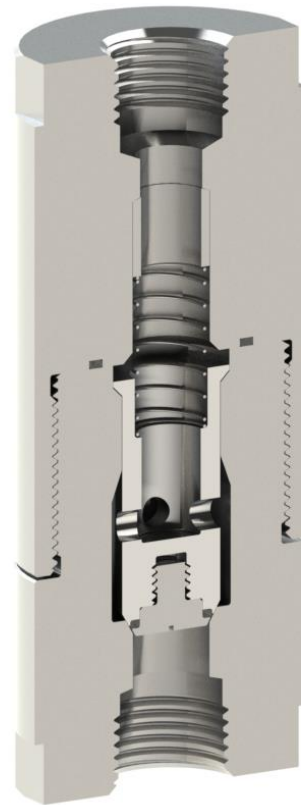


CKVH06-NPT Stainless Steel In-Line High Pressure Check Valve Operating Instructions



- Principle of Operation
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Principle of Operation

This check valve is available in four different fixed cracking pressures (1, 5, 10, 25 psig). The soft seated poppet seals against the valve seat shutting off the fluid flow in a no flow, or reverse flow situation. Once the inlet pressure exceeds the springs pre-set cracking pressure, the poppet will lift off the valve seat and allow fluid flow to pass through the check valve. The cracking pressure for the fixed version cannot be changed without ordering a replacement spring and accompanying spring insert. Before removing the check valve for servicing, or adjustment to the cracking pressure, it is imperative to take all necessary precautions to protect the technician, surrounding people, and equipment.

Applications

This compact, in-line, poppet style check valve allows fluid flow (liquid or gas) to pass through a pipe line in only one direction. If the direction of flow were to reverse, the spring compression would cause the valve poppet to seat preventing back-flow. Unlike some other style check valves, this fully guided poppet – spring design minimizes the potential danger of pressure surges as a result of check valve slam. As the direction of flow reverses, the positive pressure differential across the valve (inlet to outlet) decreases and will want to reverse. As the pressure differential decreases, the poppet will gradually approach the seat so that at full flow reversal the valve is already providing an ANSI Class VI seal.

This check valve is recommended to be used with clean (filtered or strained), non-abrasive liquids and gases including but not limited to: water, steam, non-fluorinated chemicals, inert gases and fluids compatible with the selected materials of construction

Typical applications include:

- Any time back flow prevention is necessary
- Use with pumps in parallel or series
- Applications with mixing
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Maintenance and Repair

When the valve is shipped from the factory it is usually ready for operation. This valve can be preset to any of the four specified cracking pressures.

Check to make sure that there are no obstructions in the process piping. When installed, check to make sure there is no visible leakage coming from the assembly. This is an indication of seal and or seating failure. If excessive seat leakage is experienced due to wear, or if there is an external seal leakage, the valve will require parts to be replaced, cleaned, or be sent in for possible repair. Before removing the valve from service, make sure that the valve is isolated from the piping completely in order avoid any personal injury.

The valve seat is the most likely component to fail due to corrosion or wear. If there is excessive seat leakage, then the seat may require replacement or reworking. Removal of the upper or lower body will expose the internal parts and seals of the valve so they can be visually inspected and replaced if necessary. The valve must be removed from the piping to perform any maintenance. Before removal, any line pressure must be expelled so that the process piping and valve is fully de-pressurized. This ensures the safety of the technician, surrounding people and equipment.

Disassembly/Re-assembly Instructions

Before disassembling the valve, make sure that the process line is depressurized and securely isolated upstream and downstream to avoid any injury to the technician or surrounding people and equipment. Once isolated and de-pressurized, the valve can be removed from the line by using wrenches. Two wrenches will be needed to remove or connect this valve to any piping.

Once safely removed from the process line, remove all internal components and inspect them for noticeable wear or deformation of certain components. This could include rough surfaces that would cause increased friction, parts that look bent or cracked etc. Look for any obstructions in seals or for components that are dirty or contain any foreign objects. These could happen as a result of improper operation. If any of these are present, replacement of parts or re-machining of components may be necessary to restore the valve to its original manufactured state and operating conditions.

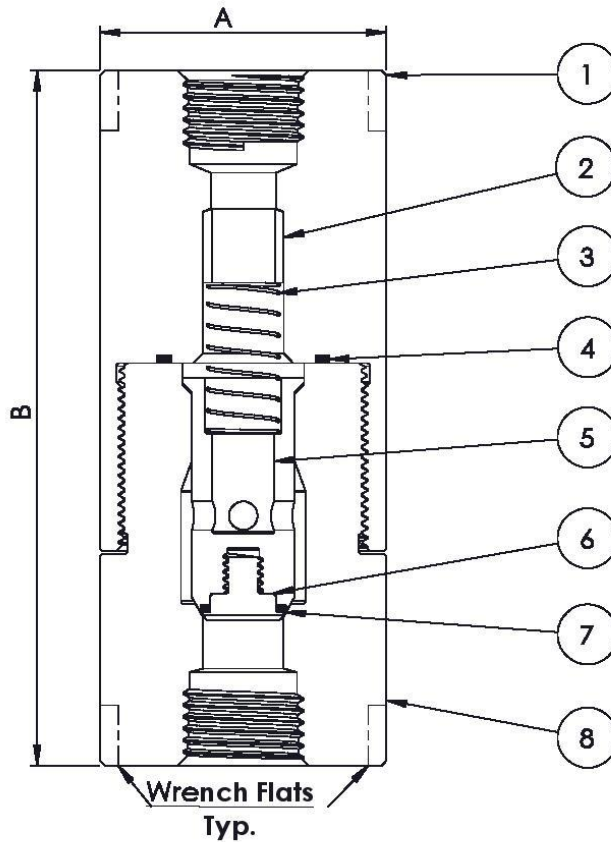
To remove the captive O-Ring, loosen the seat holder from the poppet by turning it counter-clockwise with a flat head screwdriver. The O-Ring can then be replaced and the seat holder can be threaded back on to the poppet by turning it clockwise.

When re-assembling the valve, ensure that the connection between the upper body and lower body is tight. Make sure the same connection does not become loosened when re-installing the valve on the pipe line.

**Replacement parts are usually available for purchase through Straval and may be readily available.

Model CKVH06i-NPT Material List and Schematics

NPS (DN)	Cv	A Inch (mm)	B Inch (mm)	PART NO.	DESCRIPTION	MATERIALS
Fixed Cracking Pressure				1	UPPER BODY	303SS, 316SS
				2	SPRING INSERT	303SS, 316SS
1/4" (8 mm)	0.67	1-5/16 (33)	3-1/4 (83)	3	SPRING	316SS
3/8" (10 mm)	1.82	1-7/8 (48)	4-3/8 (111)	4	O-RING	BUNA®, VITON®, EPDM
1/2" (15 mm)	1.82	1-7/8 (48)	4-3/8 (111)	5	POPPET	303SS, 316SS, HARD CHROMED
3/4" (20 mm)	5.50	2-3/4 (70)	5-5/8 (143)	6	SEAT HOLDER	303SS, 316SS
1" (25 mm)	5.50	2-3/4 (70)	5-5/8 (143)	7	SEAT O-RING	BUNA®, VITON®, EPDM
1-1/4" (32 mm)	9.30	3-1/8 (80)	7 (178)	8	LOWER BODY	303SS, 316SS
1-1/2" (40 mm)	9.30	3-1/8 (80)	7 (178)			
2" (50 mm)	12.02	3-3/4 (96)	8.25 (210)			



ALL DIMENSIONS ARE EXPRESSED NOMINALLY UNLESS NOTED OTHERWISE. PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF STRAVAL MACHINE CO. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF STRAVAL MACHINE CO. IS PROHIBITED.	CLASS CHECK VALVE	NOMINAL CRACKING PRESSURES FIXED: 2 PSIG (0-10.34 BARG) 5 PSIG (0-10.34 BARG) 10 PSIG (0-10.34 BARG) 25 PSIG (0-10.34 BARG)	FINISH 32-64 RA INDUSTRIAL FINISH MINIMUM	PH 973-340-9955 FX 973-340-9923 20 BUSHES LANE ELMWOOD PARK, NJ 07407
	SIZE 1/4" - 2" (DN6 - DN50)	CONNECTIONS THREADED FNPT	SEAT ANSI CLASS VI (SOFT SEATED)	
PRESSURE RATING 6000 PSIG (414 Bar) @ 70 °F	TEMPERATURE RANGE -20°F (-33°C) - (+50°C - 100°C) Operating temperatures are dependent on material selection	DRAWN A.S.	DATE 06/07/2021	DESCRIPTION 1/4" - 2" FNPT HIGH PRESSURE CHECK VALVE DWG. NO. CKVH06-NPT SCALE: 1:1 WEIGHT: SHEET 1 OF 1

Note: Dimensions are approximate and are subject to change without notice.

Product Disclaimer

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Please contact the factory when referencing dimensions from this document. The dimensions shown in this document are nominal and subject to change. They may not reflect the dimensions of the current product revision. Straval is not responsible for any product failing to meet dimensional requirements due to system piping that was installed before the purchase of, or verification of any product and its dimensions.

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