



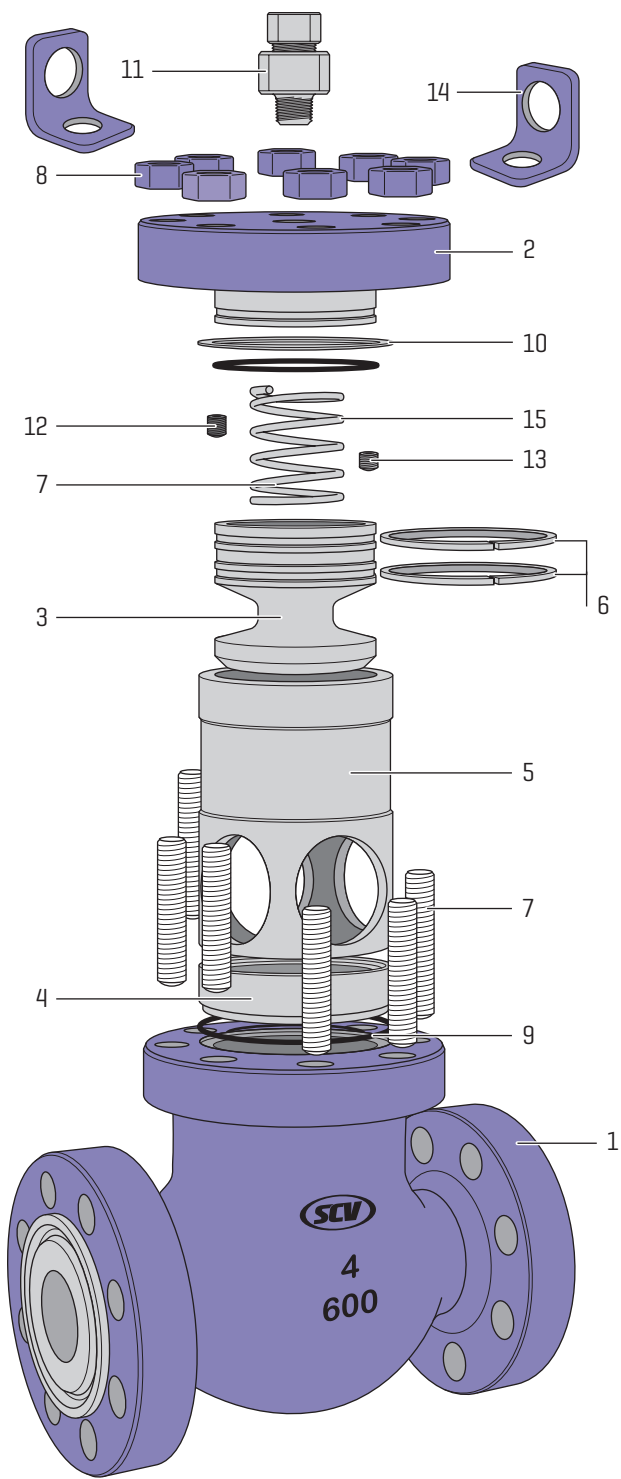
# **API 6D Piston Check Installation, Operation & Maintenance Manual**

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An API 6D & API 6A Monogrammed Company

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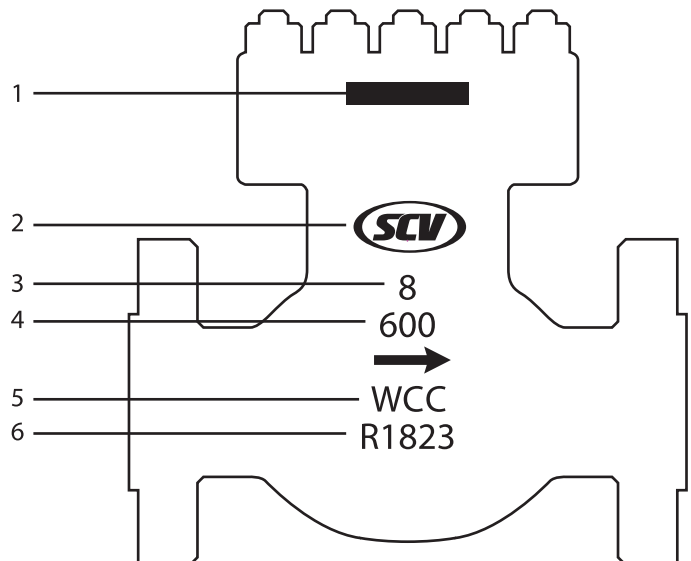
### Expanded View

Bill of Materials		
No.	Part	WCC
1	Body	A216 WCC
2	Bonnet	A105
3	Piston	A105+NI-TRID+ST. 6
4	Seat	A105+St. 6
5	Cage	A105+ENP
6	Piston Ring	PEEK/Glass Filled
7	Stud	A193 B7M
8	Heavy Hex Nut	A193 2HM
9	O-ring	Viton AED
10	Bonnet Gasket	SS/Graphite
11	Vent Fitting	316 SS
12	Ball Check	316 SS
13	Orifice Fitting	316 SS
14	Lift Lug	Steel
15	Spring	X-750

All piston check valves 2" thru 6", in all pressures, comes standard with a X-750 spring installed.  
 Note: Available in other materials upon request.

### Valve Markings

No.	Valve ID Components
1	Tag
2	Brand
3	Size
4	Pressure Class
5	Body Material
6	Heat Number



## SCV PISTON CHECK FUNCTION

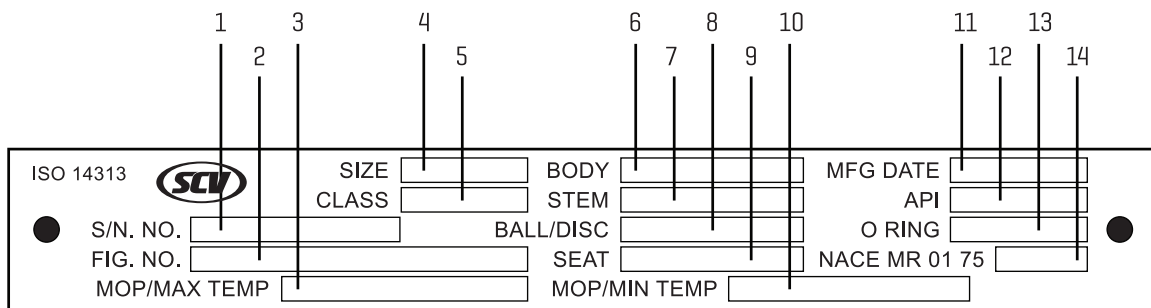
As upstream flow pressure increases over the downstream pressure, the SCV Piston Check Valve has an internal piston that rises from the seat allowing flow to pass thru the valve. Piston rings maintain proper piston sealing and alignment which allows the piston's beveled sealing surface to seat against the body's metal seat.

**Caution:** Do not apply pressure to the closed piston that exceeds one-and-a-half times greater than the valve's rated working pressure.

**Caution:** Continuous operating temperatures should never exceed 400° Fahrenheit [204° Celsius]. Please advise when the intended service will exceed 400° Fahrenheit [204° Celsius].

## GENERAL INFORMATION

- 1.1 The SCV cast carbon or stainless steel "non-slam" piston check valve prevents media back flow in pulsating flow pipelines. The cast body design conforms to API 6D. Flanged End dimensions are in accordance with ANSI B16.5 and Butt-Weld End dimensions in accordance ANSI/ASME B16.25.
- 1.2 The valve ID tag located on the valve cover plate provides applicable information including the serial number, figure number, temperature ratings, size, pressure class, and materials.



No.	Figure Number Code	Description
1	Serial Number	Identifies certified manufacturers serial number
2	Figure Number	Identifies the detailed valve configuration (valve type, bore size, pressure class, materials, etc.)
3	MOP/Max. Temp.	Identifies the maximum operating pressure in PSI and maximum operating temperature in Fahrenheit
4	Size	Identifies nominal bore size
5	Pressure Class	Identifies pressure classifications per API requirements
6	Body Material	Identifies body metal material composition (A105, WCB, F51, CF8M, etc.)
7	Stem Material	Identifies stem material composition (A105, 410SS, 17-4pH, etc.)
8	Ball/Disc Material	Identifies ball/disc material composition (A105, 316SS, ENP, etc.)
9	Seat Material	Identifies seat material composition (PEEK, Teflon, Nylon, etc.)
10	MOP/Min. Temp.	Identifies the maximum operating pressure in PSI and minimum operating temperature in Fahrenheit
11	Manufacturing Date	Identifies the date the valve manufacturing completion date
12	API Conformance	Identifies API conformance (600, 6D, 6A, etc.)
13	O Ring	Identifies the O Ring material composition (Viton, Viton GLT, etc.)
14	NACE MR-01-75	Identifies corrosion resistance

- 1.3 To ensure efficient request processing for valve service and parts, please have your valve serial number available when contacting SCV. This will expedite any request and insure that correct information is given.

## UNPACKING AND RECEIVING INSPECTION

**Note:** Upon delivery, prepare to inspect the valve.

- 2.1 Remove all wrapping, end protectors, and shipping supports from the valve.
- 2.2 Inspect valve for missing or damaged components.
- 2.3 Verify the interior of the valve is free of damage and/or foreign debris.
- 2.4 Install any loose items as soon as possible to prevent loss or damage.

## HANDLING

- 3.1 When moving the SCV piston check, use an approved lifting device and rigging.
  - 3.1.1 Secure the rigging to the valve body as shown when moving smaller piston check valves.
  - 3.1.2 Attach the rigging to the provided eyebolt threaded into the cover when moving larger piston checks.

## HORIZONTAL FLOW SERVICE INSTALLATION/OPERATION - ALL SIZES

- 3.1 Prior to installation, use an approved solvent and cloth to clean all valve and pipe mating surfaces.

**Important:** To prevent strain on the pipeline and ensure proper valve function, the valve must be properly supported.

**Caution:** SCV Piston Check valves are designed for horizontal service!
- 3.2 Install the SCV Piston Check valve horizontally with the valve bonnet in the upward facing position, with the flow-direction-arrow on valve body pointing in the direction of the intended flow.

**Caution:** Never install SCV Piston Check valves in the upside down or sideways position.

**Note:** SCV recommends that piston check valves (**6" and smaller**) intended for compressor, gas pump, or vertical service must be equipped with a piston spring for faster closing.

## VERTICAL FLOW SERVICE INSTALLATION/OPERATION - 6" AND SMALLER

- Important:** The end-user must specify when an SCV Piston Check valve will be used in vertical service. To ensure proper operation, SCV Piston Check valves used in vertical service must be equipped with a piston spring.
- Note:** Only SCV Piston Check valves 6" and smaller, equipped with a piston spring are recommended for vertical flow service.
- 4.1 Prior to installation, use an approved solvent and cloth to clean all valve and pipe mating surfaces.

**Important:** To prevent strain on the pipeline and ensure proper valve function, the valve must be properly supported.
  - 4.2 Install the SCV Piston Check valve vertically [with the valve bonnet in the vertical position] with the flow-direction-arrow on valve body pointing in the direction of the intended flow.

**Caution:** Never install SCV Piston Check valves in the upside down position.

## MAINTENANCE

- 5.1 SCV piston check valves are practically maintenance free when used in normal applications. The recommended spare parts for the SCV piston check include: piston, piston rings, cover seals, ball check, orifice plug, and seat. When ordering spare parts, specify the valve serial number, valve size, ANSI pressure class, and type of service in which it is being used.

**Caution:** Prior to servicing any valve, review all necessary pipeline media MSDS, regulations, and pipeline maintenance procedures. Properly isolate the valve. Bleed pressure from the line and valve prior accessing any internal parts of the piston check valve.