Strahman®
PROCESS VALVES

THE ORIGINATOR OF PISTON-TYPE SAMPLING VALVES

# SAMPLE VALVES

## SV SERIES | MS SERIES | QS SERIES | QA SERIES




STRAHMAN® GROUP

an fch business

STRAHMAN GROUP

PRECISION AND PERFORMANCE

# ABOUT US

Our journey began in 1921 with the distribution of high-performance valves, gauges, and packing materials. Strahman was the first Company to develop a free-flowing, non-clogging piston tank bottom and drain valve for the USA Dairy market. This design and engineering expertise led to the development of a complete line of high-quality, innovative valves that were quickly adopted across numerous markets.

We excel at design, engineering, and customized solutions where critical functionality or severe service is the criterion. We have valves for numerous industries, including oil and gas, chemical, petrochemical, polymer, and refining, to name a few; with an extensive range for the transfer of fluid and flow control, we have a solution for you.

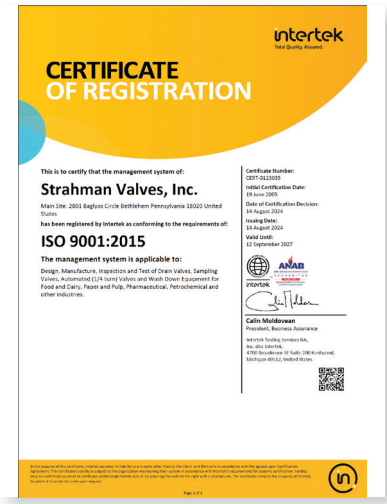
> **For nearly 100 years, Strahman has been known as a global leader in the manufacturing and distribution of process valve products and industrial washdown equipment.**

## OUR MANUFACTURING CAPABILITIES & EXCEPTIONAL CUSTOMER SERVICE

- All our manufacturing facilities are ISO9001 certified and SIL2 Certified on specified valves
- Approximately 50K sq ft facility for production and administration in Bethlehem, Pennsylvania – standardized process valves, custom process valves, automated and fire safety valves, and washdown equipment
- Infrastructure adoption and utilization of Lean Concepts (5S, Kaizen, 6 Sigma)
- A robust Quality Management System
- Engineering-To-Order (ETO) providing custom niche product solutions for critical projects and services to include extensive design, engineering, and machining support needed to satisfy requirements
- Precision CNC manufacturing centers, fully certified welding experts, sandblasting, and assembly technicians

Today, we are a trusted industrial equipment manufacturer that provides quality, dependability, and reliable solutions for customers worldwide. We work hard to get the answers you need when you need them. We foster an environment that strengthens and builds customer loyalty by providing our internal sales team with the autonomy to make sound decisions in answering customer inquiries. We are not just building parts, but we are building relationships.

Get in touch with us today and let us know how we can help you!


intertek
Total Quality Assured.

CERTIFICATE OF REGISTRATION

This is to certify that the management system of:

Strahman Valves, Inc.

Main Site: 2801 Baglios Circle Bethlehem Pennsylvania 18020 United States

has been registered by Intertek as conforming to the requirements of:

ISO 9001:2015

The management system is applicable to:

Design, Manufacture, Inspection and Test of Drain Valves, Sampling Valves, Automated (1/4 turn) Valves and Wash Down Equipment for Food and Dairy, Paper and Pulp, Pharmaceutical, Petrochemical and other Industries.

Certificate Number: CERT-0123035
Initial Certification Date: 19 June 2005
Date of Certification Decision: 14 August 2024
Issuing Date: 14 August 2024
Valid Until: 12 September 2027

ANAB ACCREDITED

intertek

Calin Moldovean
President, Business Assurance

Intertek Testing Services NA, Inc. dba Intertek, 4700 Broadmoor SE Suite 200 Kentwood, Michigan 49512, United States


exida

Certificate / Certificat
Zertifikat / 合格証
STR 1011040 C001

exida hereby confirms that the:

Metal Seated & Soft Seated Piston Valves

Strahman Valve, Inc.
Bethlehem, PA - USA

Has been assessed per the relevant requirements of:

IEC 61508 : 2010 Parts 1-2

and meets requirements providing a level of integrity to:

Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type A, Route $2_H$ Device

PFH/$PFD_{avg}$ and Architecture Constraints must be verified for each application

Safety Function:
The Metal Seated and Soft Seated Piston Valves will move to the designed safe position per the actuator design within the specified safety time.

Application Restrictions:
The unit must be properly designed into a Safety Instrumented Function per the Safety Manual requirements.

CERTIFIED SIL 2 CAPABLE

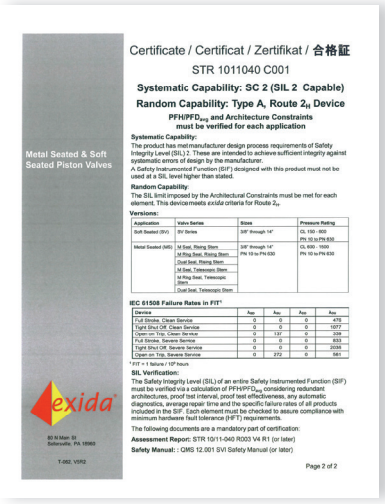
Revision 2.0 April 29, 2022
Surveillance Audit Due May 1, 2025

ANAB ACCREDITED

Evaluating Assessor

Certifying Assessor

Page 1 of 2


exida

Metal Seated & Soft Seated Piston Valves

Certificate / Certificat / Zertifikat / 合格証
STR 1011040 C001

Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type A, Route $2_H$ Device

PFH/$PFD_{avg}$ and Architecture Constraints must be verified for each application

Systematic Capability:
The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 2. These are intended to achieve sufficient integrity against systematic errors of design by the manufacturer.
A Safety Instrumented Function (SIF) designed with this product must not be used at a SIL level higher than stated.

Random Capability:
The SIL limit imposed by the Architectural Constraints must be met for each element. This device meets exida criteria for Route $2_H$.

Versions:

| Application | Valve Series | Sizes | Pressure Rating |
|---|---|---|---|
| Soft Seated (SV) | SV Series | 3/8" through 14" | CL 150 - 900<br>PN 10 to PN 630 |
| Metal Seated (MS) | M Seat, Rising Stem<br>M Ring Seat, Rising Stem<br>Dual Seat, Rising Stem<br>M Seat, Telescopic Stem<br>M Ring Seat, Telescopic Stem<br>Dual Seat, Telescopic Stem | 3/8" through 14"<br>PN 10 to PN 630 | CL 600 - 1500<br>PN 10 to PN 630 |

IEC 61508 Failure Rates in FIT*

| Device | $\lambda_{SD}$ | $\lambda_{SU}$ | $\lambda_{DD}$ | $\lambda_{DU}$ |
|---|---|---|---|---|
| Full Stroke, Clean Service | 0 | 0 | 0 | 478 |
| Tight Shut-Off, Clean Service | 0 | 0 | 0 | 1077 |
| Full Stroke, Severe Service | 0 | 137 | 0 | 359 |
| Full Stroke, Severe Service | 0 | 0 | 0 | 833 |
| Tight Shut-Off, Severe Service | 0 | 0 | 0 | 2056 |
| Open on Trip, Severe Service | 0 | 272 | 0 | 661 |

* FIT = 1 failure / $10^9$ hours

SIL Verification:
The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFH/$PFD_{avg}$ considering redundant architectures, proof test interval, proof test effectiveness, any automatic diagnostics, average repair time and the specific failure rates of all products included in the SIF. Each element must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

The following documents are a mandatory part of certification:

Assessment Report: STR 10/11-040 R003 V4 R1 (or later)

Safety Manual: : QMS 12.001 SVI Safety Manual (or later)

80 N Main St
Sellersville, PA 18960

T-002, V3R2

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Strahman® PROCESS VALVES

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ASSEMBLED AND/OR MADE IN THE USA

# THE ORIGINAL PISTON-TYPE SAMPLING VALVES

## CANNOT CLOG - DOES NOT LEAK

Since 1921, Strahman Valves, Inc. has been a pioneer and leader in the Sampling Valve industry by first developing the Piston-Type Sampling Valve Series. At the time, the unique design of dual sealing rings was truly innovative and set Strahman apart from other valve companies. The quality and integrity of manufacturing excellence has provided Strahman customers with a long lasting, reliable product that works for years with trouble-free performance.

Visit out website at www.strahmangroup.com and learn more about the Strahman product line that differentiates us from other manufacturers of Sampling Valves.

- Piston moves through the valve clearing out any material that may harden
- Piston extension breaks through any crust or scale that forms
- Dual sealing ring arrangement keeps the valve from leaking to the atmosphere
- No dead spot - piston completely fills the valve interior
- Always gives a live sample - new product is introduced into the sampling area when the piston retracts
- Opening indicator provides operators clear and simple indication of the valve position
- 316 stainless steel body is standard - available in the following materials:
  - Alloy 20
  - Hastelloy B or C
  - Titanium
  - Nickel
  - Monel
  - Inconel
  - Other stainless steels and materials available on request
- Body extensions can be customized for special applications and installations
- Couplings, tees, adapters and inserts allow a wide variety of installation possibilities
- Standard and custom piston extensions are available to unclog almost any depth of piping dead space
- Strahman offers a wide range of product options that provide great flexibility of choice to the user. These options are:
  - Inlet and outlet connections can be threaded, flanged or socket welded
  - Connections can be US Standard, DIN, BSP, JIS or other
  - Actuation can be hand crank, handwheel, gear operator, electric actuator or cylinder actuator (air or hydraulic)
  - Local and remote position indication available
  - Positioners available
  - Sampling bottles, flushing connection and other accessories are available upon request

Pressure and temperature ratings are in accordance with ASME B16.34 pressure class 600. See below for 316 and 316L stainless steel material. For Pressure/Temperture ratings in other materials, consult Strahman Valves.

NOTE: Maximum temperature allowable for 316L

**Pressure/Temperature Ratings Table**

| | | | | | | | | | | | | 316L MAX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Pressure** | **psig** | **275** | **235** | **215** | **195** | **170** | **140** | **110** | **80** | **50** | **35** | **65** |
| **316** | **CL 150** | (barg) | (19.0) | (16.2) | (14.8) | (13.4) | (11.7) | (9.7) | (7.6) | (5.5) | (3.4) | (2.4) | (4.5) |
| **& 316L** | **Tempera-ture** | Deg. F | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 950 | **850** |
| | | (Deg. C) | (37.8) | (93.3) | (148.9) | (204.4) | (260.0) | (315.6) | (371.1) | (426.7) | (482.2) | (510.0) | (454.4) |
| | | | | | | | | | | | | | 316L MAX |
| | **Pressure** | psig | 720 | 620 | 560 | 515 | 480 | 450 | 430 | 420 | 415 | 385 | 420 |
| **316** | **CL 300** | (barg) | (49.7) | (42.8) | (38.6) | (35.5) | (33.1) | (31.0) | (29.7) | (29.0) | (27.6) | (26.6) | (29.0) |
| **& 316L** | **Tempera-ture** | Deg. F | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 950 | **850** |
| | | (Deg. C) | (37.8) | (93.3) | (148.9) | (204.4) | (260.0) | (315.6) | (371.1) | (426.7) | (482.2) | (510.0) | (454.4) |
| | | | | | | | | | | | | | 316L MAX |
| | **Pressure** | psig | 1440 | 1240 | 1120 | 1025 | 955 | 900 | 870 | 845 | 830 | 775 | 835 |
| **316** | **CL 600** | (barg) | (99.3) | (85.5) | (77.2) | (70.7) | (65.9) | (62.1) | (60.0) | (58.3) | (57.2) | (53.4) | (57.6) |
| **& 316L** | **Tempera-ture** | Deg. F | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 950 | **850** |
| | | (Deg. C) | (37.8) | (93.3) | (148.9) | (204.4) | (260.0) | (315.6) | (371.1) | (426.7) | (482.2) | (510.0) | (454.4) |

| **MAX. TEMP** | | |
|---|---|---|
| | LAM/TFE, TFM | 450° |
| | MR (medium range) rings | 650° |
| | Graphite rings | 1000° |

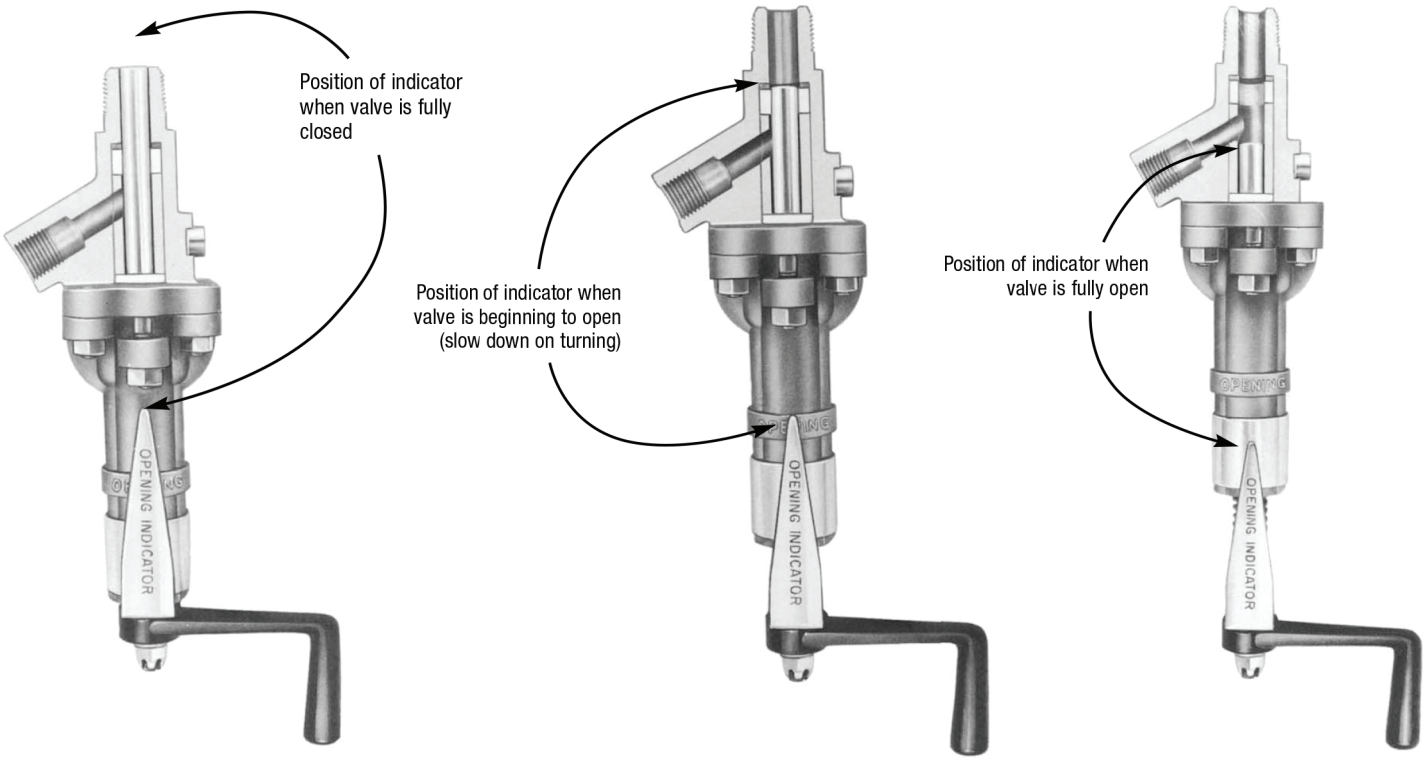
## SAMPLING VALVE WITH OPENING INDICATOR

To keep abreast of our customers' requirements, Strahman Valves, Inc. includes an OPENING INDICATOR on its line of hand-operated Piston-Type Sampling Valves (on all models up to 6" piston extensions*). The indicator shows the operator of the valve that the product, which is normally under pressure, is in position to start flowing through the valve and tells him to be cautious and open the valve slowly so there will not be a sudden surge of product.

The INDICATOR is attached to the valve directly under the valve handle and extends up the side of the bonnet. When the valve is in the fully closed (extended) position, the indicator extends beyond the upper edge of a raised ring on the bonnet, which is marked "OPENING."

As the operator turns the valve handle counter-clockwise, the indicator lowers as the piston is being retracted to the fully open position. When the tip of the indicator is flush with the upper edge of the "OPENING" ring on the bonnet it is indicating that the piston is moving through the sealing ring and the product is ready to flow through the valve. At this point, the operator should turn the handle slowly to avoid any sudden burst of product which would be under pressure.

* Not available on valves above 6" piston extensions.




### AVAILABLE ON MODELS

| | |
|---|---|
| SV-500 ⅜" x ¼" | SV-700 ¾" x ½" |
| SV-600 ½" x ⅜" | SV-800 1" x ¾" |
| SV-700 FLG | SV-800 FLG |
| SV-900 | SV-1000 |

- No dead spot - piston completely fills valve and extends to inner surface of pipe
- Always gives a live sample
- Open-piston is retracted into body allowing full free flow
- Valve is kept tight by two compressible valve rings

### PISTON-TYPE SAMPLING VALVE SPECIFICATION

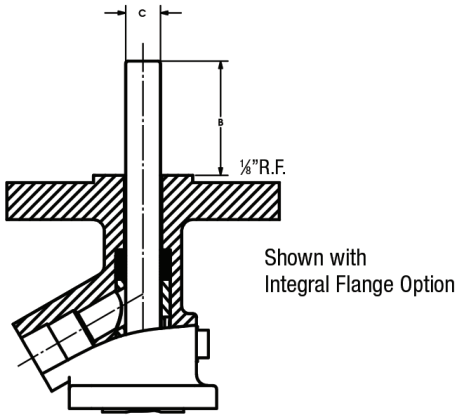
The Sampling Valve shall be Model SV700 ¾" MNPT inlet* by ____" FNPT (½" or ¾") outlet*. The body shall be investment cast 316 SST and internals of 316 SST fabricated wetted parts. The valve shall be a soft seat design of PTFE and shall meet ANSI Class VI, bubble tight shutoff. The piston shall have linear travel with mutli-turn handle for manual operation, or a pneumatic or hydraulic cylinder for automatic operation. The piston shall completely fill the valve interior allowing for no cavities (dead space), the valve will be self-pigging and will not clog. The Sampling Valve will insure new product samples are always taken with no prior sample material remaining. The piston shall have a ____" extension that shall extend beyond the threaded inlet to break through any product crust, insuring proper sample flow.

*Also available with Flanged, or SW inlet and outlet connection. For other Sampling Valve Models, refer to the size tables.

## HAND OPERATED SAMPLING VALVES SV-500, SV-600, SV-700 AND SV-800

New Sampling Valves SV-500, SV-600 and SV-700 body no longer require a base ring. For older valves base rings, item #719 may be required as spare parts. Please consult your Strahman representative for verification.

| Part No. | Description | Material | Part No. | Description | Material |
|---|---|---|---|---|---|
| 701 | LOCK NUT | 304 SST | 717* | PISTON | 316 SST |
| 704 | BUSHING LOCK SCREW | 304 SST | 718* | INLET RING | TFE |
| 705* | BUSHING | BRONZE | 720 | BODY | 316 SST |
| 706 | BONNET | 304 SST | 724 | GLAND NUTS | 303 SST |
| 707* | STEM | 416 SST | 725 | GLAND STUDS | 304 SST |
| 708 | GLAND | 304 SST | 731 | CAGE LOCK | 316 SST |
| 712 | BONNET NUTS | 303 SST | 740* | CAGE LOCK GASKET | RTFE |
| 713 | BONNET STUDS | 304 SST | 741 | OPENING INDICATOR | 304 SST |
| 714* | GLAND RING | TFE | 742 | CRANK HANDLE | MALLEABLE IRON |
| 715 | CAGE | 316 SST | | | |
| 716* | SPLIT NUT | 316 SST | | | |



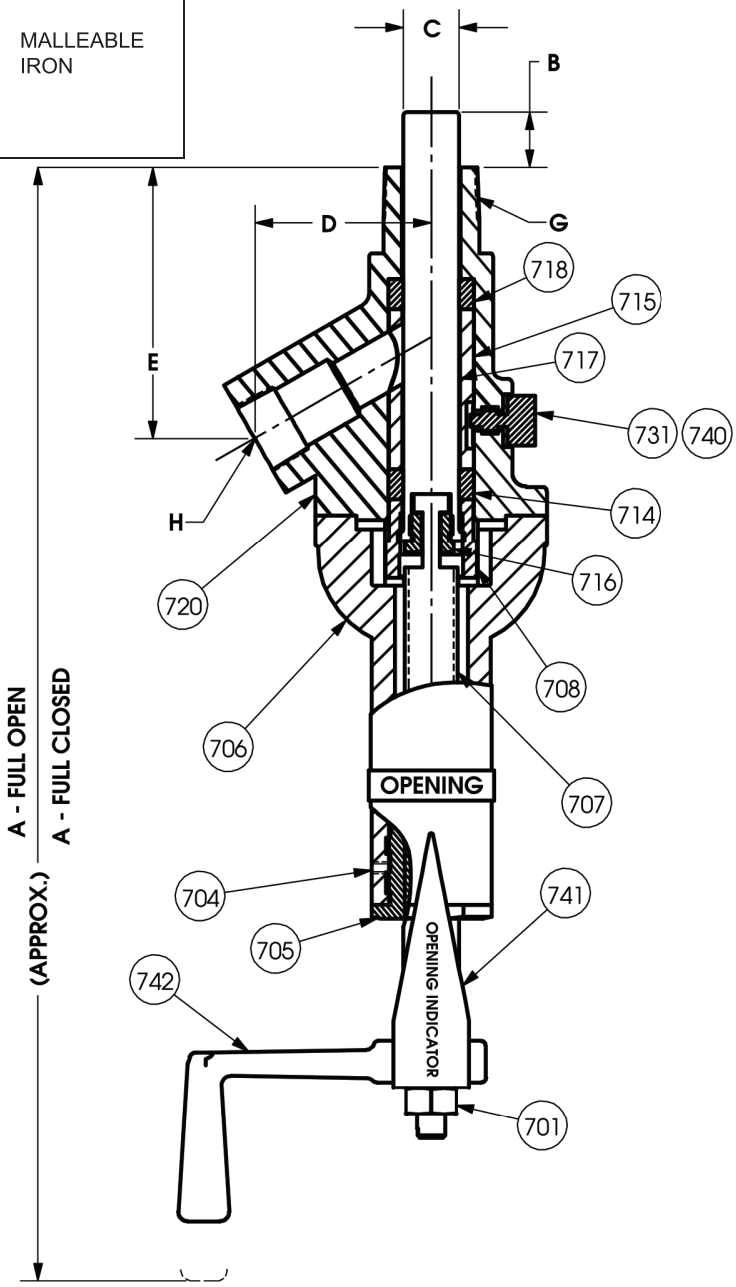

Shown with Integral Flange Option

| SV-500 ⅜" x ¼" ANSI 600 | | | | | | | |
|---|---|---|---|---|---|---|---|
| A Closed | A Open | B | C | D | E | G NPT | H NPT |
| 11 ⅜" | 13 ¾" | 0" | .243" | 1 ⅞" | 3 1/32" | ⅜" | ¼" |
| 13 ⅜" | 17 ¾" | 2" | .243" | 1 ⅞" | 3 1/32" | ⅜" | ¼" |
| 15 ⅜" | 21 ¾" | 4" | .243" | 1 ⅞" | 3 1/32" | ⅜" | ¼" |
| 17 ⅜" | 25 ¾" | 6" | .243" | 1 ⅞" | 3 1/32" | ⅜" | ¼" |

| SV-600 ½" x ⅜" ANSI 600 | | | | | | | |
|---|---|---|---|---|---|---|---|
| A Closed | A Open | B | C | D | E | G NPT | H NPT |
| 11 ⅜" | 13 ¾" | 0" | .368" | 1 ⅞" | 3 1/32" | ½" | ⅜" |
| 13 ⅜" | 17 ¾" | 2" | .368" | 1 ⅞" | 3 1/32" | ½" | ⅜" |
| 15 ⅜" | 21 ¾" | 4" | .368" | 1 ⅞" | 3 1/32" | ½" | ⅜" |
| 17 ⅜" | 25 ¾" | 6" | .368" | 1 ⅞" | 3 1/32" | ½" | ⅜" |

| SV-700 ¾" x ½" and ¾" x ¾"ANSI 600 | | | | | | | |
|---|---|---|---|---|---|---|---|
| A Closed | A Open | B | C | D | E | G NPT | H NPT |
| 11 ⅜" | 13 ⅞" | 0" | .590" | 1 ⅞" | 3 1/32" | ¾" | ½", ¾" |
| 13 ⅜" | 17 ⅞" | 2" | .590" | 1 ⅞" | 3 1/32" | ¾" | ½", ¾" |
| 15 ⅜" | 21 ⅞" | 4" | .590" | 1 ⅞" | 3 1/32" | ¾" | ½", ¾" |
| 17 ⅜" | 25 ⅞" | 6" | .590" | 1 ⅞" | 3 1/32" | ¾" | ½", ¾" |

| SV-800 1" x ¾" and 1" x 1" ANSI 600 | | | | | | | |
|---|---|---|---|---|---|---|---|
| A Closed | A Open | B | C | D | E | G NPT | H NPT |
| 12 ⅝" | 15 ½" | 0" | .787" | 2 ⅜" | 3 ⅝" | 1" | ¾", 1" |
| 14 ⅝" | 19 ½" | 2" | .787" | 2 ⅜" | 3 ⅝" | 1" | ¾", 1" |
| 16 ⅝" | 23 ½" | 4" | .787" | 2 ⅜" | 3 ⅝" | 1" | ¾", 1" |
| 18 ⅝" | 27 ½" | 6" | .787" | 2 ⅜" | 3 ⅝" | 1" | ¾", 1" |

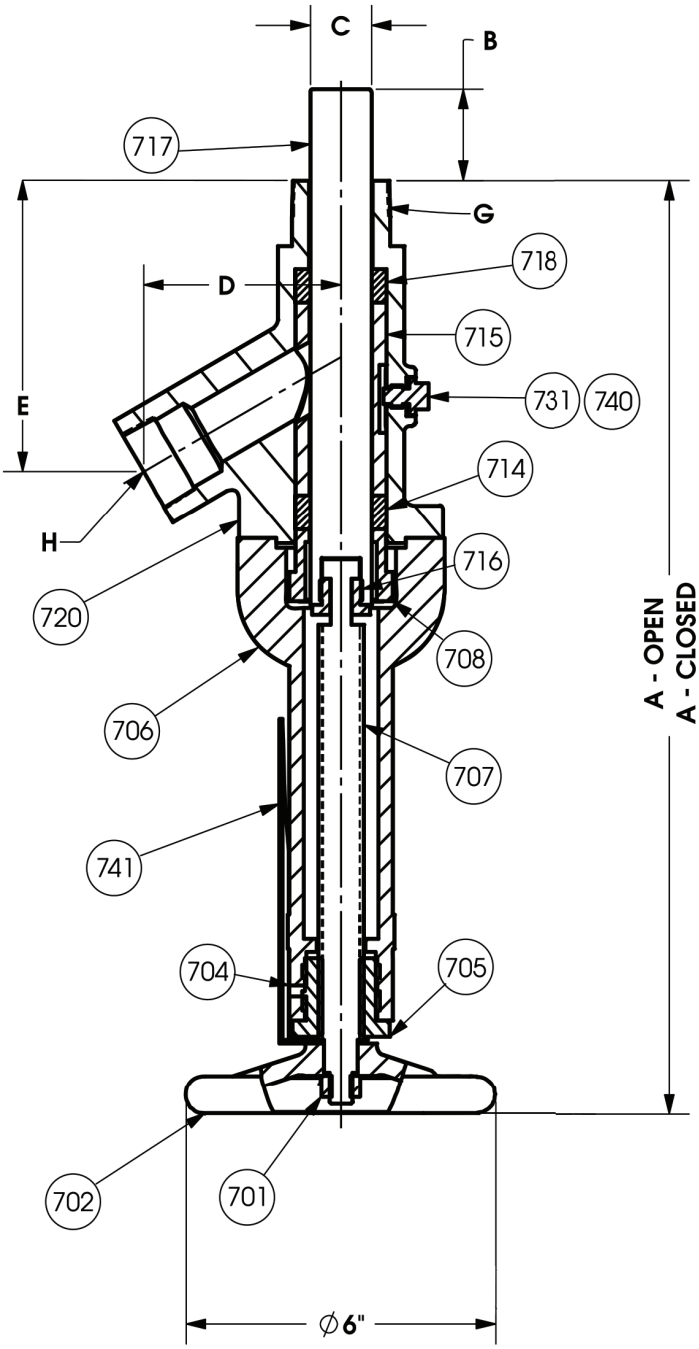



"B" DIM ± 1/16"
"C" DIM ± .002"
Forward Deck details see page 7, Item #712, #713, #724, #725

# HAND OPERATED SAMPLING VALVES SV-900 AND SV-1000

| Part No. | Description | Material |
|---|---|---|
| 701 | WHEEL NUT | CARBON STEEL |
| 702 | HANDWHEEL | CAST IRON |
| 704 | BUSHING LOCK SCREW | 304 SST |
| 705* | BUSHING | BRONZE |
| 706 | BONNET | 304 SST |
| 707* | STEM | 416 SST |
| 708 | GLAND | 304 SST |
| 712 | BONNET NUTS | 303 SST |
| 713 | BONNET STUDS | 304 SST |
| 714* | GLAND RING | TFE |
| 715 | CAGE | 316 SST |
| 716* | SPLIT NUT | 316 SST |
| 717* | PISTON | 316 SST |
| 718* | INLET RING | TFE |
| 720 | BODY | 316 SST |
| 724 | GLAND NUTS | 303 SST |
| 725 | GLAND STUDS | 304 SST |
| 731 | CAGE LOCK | 316 SST |
| 740* | CAGE LOCK GASKET | RTFE |

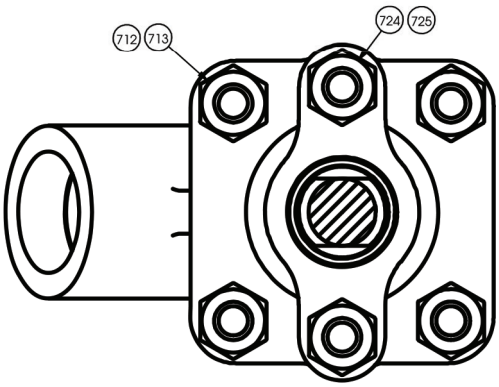
* Denotes recommended spare parts; Wetted parts outlined




| SV-900 1¼" x 1" ANSI 600 | | | | | | | |
|---|---|---|---|---|---|---|---|
| A Closed | A Open | B | C | D | E | G NPT | H NPT |
| 14 3/16" | 18 1/16" | 0" | .984" | 3 1/4" | 4 7/8" | 1 1/4" | 1" |
| 16 3/16" | 22 1/16" | 2" | .984" | 3 1/4" | 4 7/8" | 1 1/4" | 1" |
| 18 3/16" | 26 1/16" | 4" | .984" | 3 1/4" | 4 7/8" | 1 1/4" | 1" |
| 20 3/16" | 30 1/16" | 6" | .984" | 3 1/4" | 4 7/8" | 1 1/4" | 1" |

| SV-1000 1½" x 1¼" ANSI 600 | | | | | | | |
|---|---|---|---|---|---|---|---|
| A Closed | A Open | B | C | D | E | G NPT | H NPT |
| 15 9/16" | 20 1/16" | 0" | 1.181" | 3 13/16" | 5 9/16" | 1 1/2" | 1 1/4" |
| 17 9/16" | 24 1/16" | 2" | 1.181" | 3 13/16" | 5 9/16" | 1 1/2" | 1 1/4" |
| 19 9/16" | 28 1/16" | 4" | 1.181" | 3 13/16" | 5 9/16" | 1 1/2" | 1 1/4" |
| 21 9/16" | 32 1/16" | 6" | 1.181" | 3 13/16" | 5 9/16" | 1 1/2" | 1 1/4" |

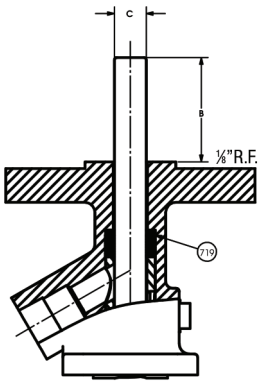
"B" DIM ± ⅛"
"C" DIM ± .002"




VALVE DECK DETAIL

# AIR OPERATED SAMPLING VALVES

New Sampling Valves SV-500, SV-600 and SV-700 body no longer require a base ring. For older valves base rings, item #719 may be required as spare parts. Please consult your Strahman representative for verification.




Shown with
Integral Flange Option

| SV-500 ⅜" x ¼" ANSI 600 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | As | B | C | D | E | G NPT | H NPT | J NPT | AIR CYL. BORE |
| 15 7/16" | 21 5/8" | 0" | .243" | 1 7/8" | 3 1/32" | ⅜" | ¼" | ⅜" | 2 ½" |
| 19 7/16" | 23 5/8" | 2" | .243" | 1 7/8" | 3 1/32" | ⅜" | ¼" | ⅜" | 2 ½" |
| 23 7/16" | 25 5/8" | 4" | .243" | 1 7/8" | 3 1/32" | ⅜" | ¼" | ⅜" | 2 ½" |

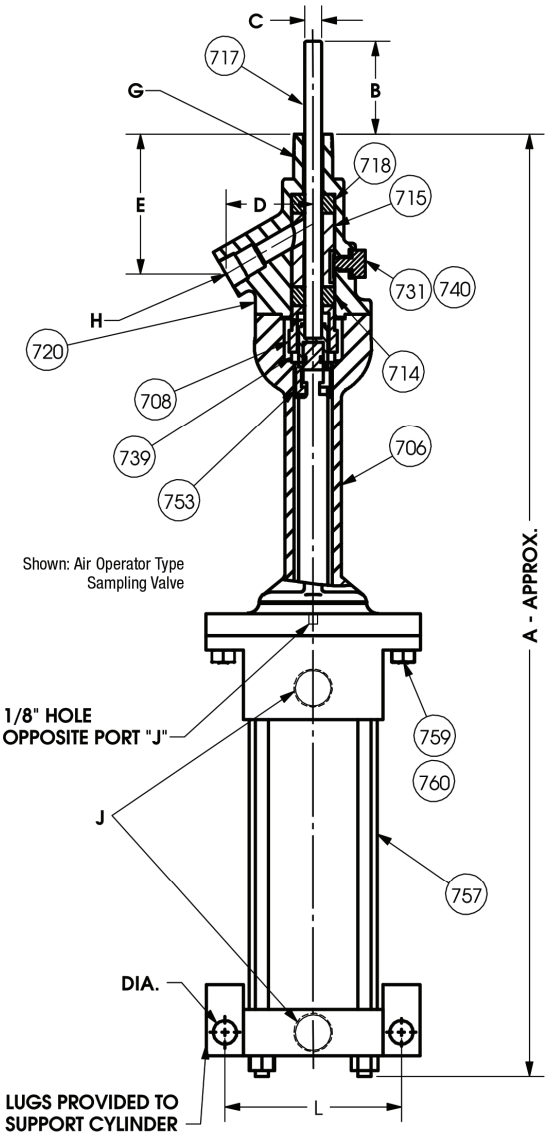
| SV-600 ½" x ⅜" ANSI 600 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | As | B | C | D | E | G NPT | H NPT | J NPT | AIR CYL. BORE |
| 15 7/16" | 21 5/8" | 0" | .368" | 1 7/8" | 3 1/32" | ½" | ⅜" | ⅜" | 2 ½" |
| 19 7/16" | 23 5/8" | 2" | .368" | 1 7/8" | 3 1/32" | ½" | ⅜" | ⅜" | 2 ½" |
| 23 7/16" | 25 5/8" | 4" | .368" | 1 7/8" | 3 1/32" | ½" | ⅜" | ⅜" | 2 ½" |

| SV-700 ¾" x ½" and ¾" x ¾"ANSI 600 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | As | B | C | D | E | G NPT | H NPT | J NPT | AIR CYL. BORE |
| 15 ⅝" | 21 ¾" | 0" | .590" | 1 7/8" | 3 1/32" | ¾" | ½", ¾" | ⅜" | 2 ½" |
| 19 ⅝" | 23 ¾" | 2" | .590" | 1 7/8" | 3 1/32" | ¾" | ½", ¾" | ⅜" | 2 ½" |
| 13 ⅝" | 25 ¾" | 4" | .590" | 1 7/8" | 3 1/32" | ¾" | ½", ¾" | ⅜" | 2 ½" |

| SV-800 1" x ¾" and 1" x 1" ANSI 600 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | As | B | C | D | E | G NPT | H NPT | J NPT | AIR CYL. BORE |
| 19 1/16" | 25 1/16" | 0" | .787" | 2 ⅜" | 3 ⅝" | 1" | ¾", 1" | ½" | 3 ¼" |
| 23 1/16" | 27 1/16" | 2" | .787" | 2 ⅜" | 3 ⅝" | 1" | ¾", 1" | ½" | 3 ¼" |
| 27 1/16" | 29 1/16" | 4" | .787" | 2 ⅜" | 3 ⅝" | 1" | ¾", 1" | ½" | 3 ¼" |

| SV-900 1 ¼" x 1" ANSI 600 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | As | B | C | D | E | G NPT | H NPT | J NPT | AIR CYL. BORE |
| 23 ⅝" | 31 ⅛" | 0" | .984" | 3 ¼" | 4 ⅞" | 1 ¼" | 1" | ½" | 4" |
| 25 ⅝" | 33 ⅛" | 2" | .984" | 3 ¼" | 4 ⅞" | 1 ¼" | 1" | ½" | 4" |
| 27 ⅝" | 35 ⅛" | 4" | .984" | 3 ¼" | 4 ⅞" | 1 ¼" | 1" | ½" | 4" |

| SV-1000 1 ½" x 1 ¼" ANSI 600 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | As | B | C | D | E | G NPT | H NPT | J NPT | AIR CYL. BORE |
| 29 ⅞" | 33 15/16" | 0" | 1.181" | 3 13/16" | 5 9/16" | 1 ½" | 1 ¼" | ½" | 5" |
| 31 ⅞" | 35 15/16" | 2" | 1.181" | 3 13/16" | 5 9/16" | 1 ½" | 1 ¼" | ½" | 5" |
| 33 ⅞" | 37 15/16" | 4" | 1.181" | 3 13/16" | 5 9/16" | 1 ½" | 1 ¼" | ½" | 5" |




Shown: Air Operator Type
Sampling Valve

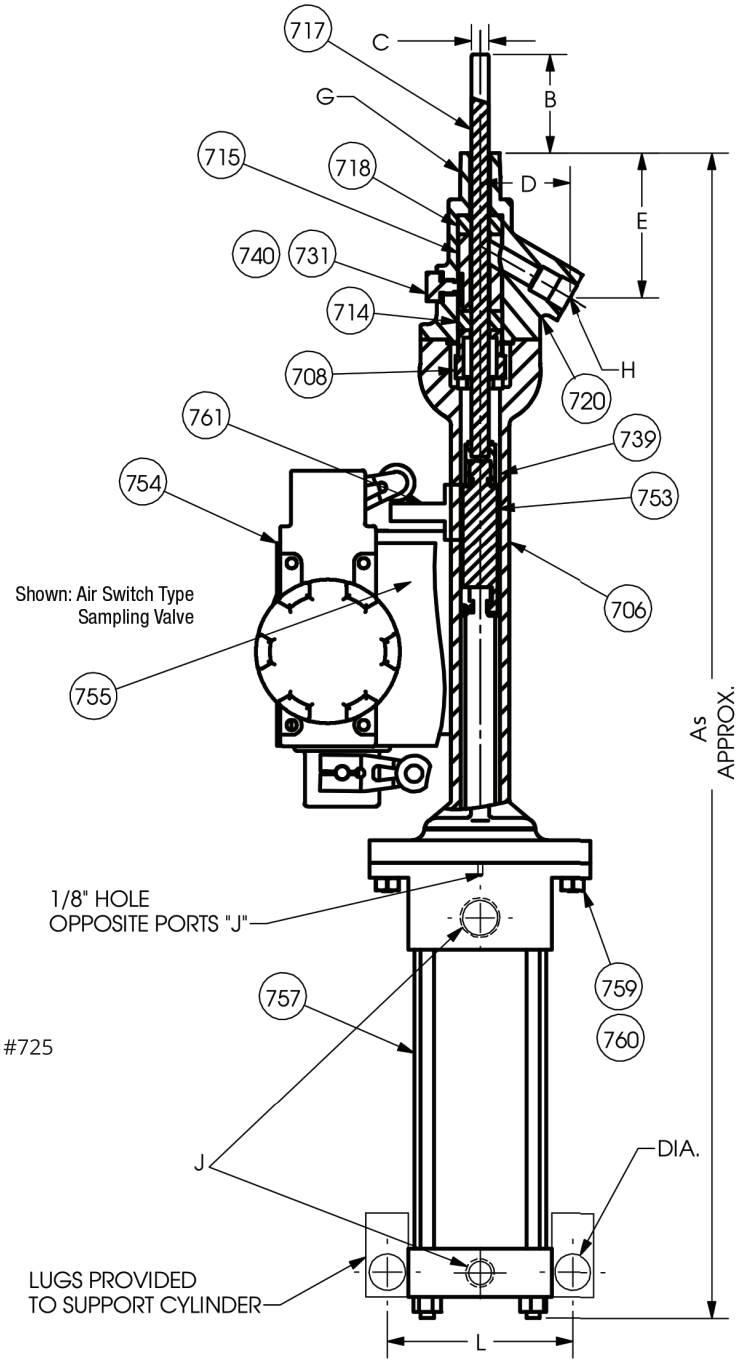
A = Air Operated
AS = Air Switch Type
"B" DIM ± 1/16"
"C" DIM ± .002"

For Air Cylinder support information see page 9
Forward Deck details see page 7, Item #712, #713, #724, #725

# AIR OPERATED SWITCH TYPE SAMPLING VALVES

| Part No. | Description | Material |
|---|---|---|
| 706 | BONNET | 304 SST |
| 708 | GLAND | 304 SST |
| 712 | BONNET NUTS | 303 SST |
| 713 | BONNET STUDS | 304 SST |
| 714* | GLAND RING | TFE |
| 715 | CAGE | 316 SST |
| 717* | PISTON | 316 SST |
| 718* | INLET RING | TFE |
| 720 | BODY | 316 SST |
| 724 | GLAND NUTS | 303 SST |
| 725 | GLAND STUDS | 304 SST |
| 731 | CAGE LOCK | 316 SST |
| 739 | PISTON SET SCREW | 304 SST |
| 740* | CAGE LOCK GASKET | RTFE |
| 753* | PISTON CONNECTOR | BRONZE |
| 754** | SWITCHES | |
| 755** | SWITCH BRACKET | 304 SST |
| 757 | CYLINDER | |
| 759 | CYLINDER STUD | 304 SST |
| 760 | CYLINDER NUTS | 303 SST |
| 761* | SWITCH TRIP | 304 SST |

* Denotes recommended spare parts
Wetted parts outlined
** Denotes as air operated switch type parts only
Forward Deck details see page 7, Item #712, #713, #724, #725




| AIR CYLINDER SUPPORT | | | |
|---|---|---|---|
| Valve | Cyl Bore | L | DIA |
| SV-500 | 2 ½ | 3 ¾ | 7/16 |
| SV-600 | 2 ½ | 3 ¾ | 7/16 |
| SV-700 | 2 ½ | 3 ¾ | 7/16 |
| SV-800 | 3 ¼ | 4 ¾ | 9/16 |
| SV-900 | 4 | 5 ½ | 9/16 |
| SV-1000 | 5 | 6 ⅞ | 13/16 |

## AIR SUPPLY REQUIREMENTS FOR THE SV-500 AND SV-600

Minimum air to operate against atmospheric pressure - 50 PSI
Minimum air to operate against maximum pressure
Temperature rating per ANSI B16.34 - 80 PSI

## AIR SUPPLY REQUIREMENTS FOR THE SV-700 AND SV-800

Minimum air to operate against atmospheric pressure - 70 PSI
Minimum air to operate against maximum pressure
Temperature rating per ANSI B16.34 - 150 PSI

## AIR SUPPLY REQUIREMENTS FOR THE SV-900 AND SV-1000

Minimum air to operate against atmospheric pressure - 50 PSI
Minimum air to operate against maximum pressure
Temperature rating per ANSI B16.34 - 135 PSI

# SAMPLING VALVES SV-700 AND SV-800 FLG WITH INTEGRAL INLET FLANGE

## INTEGRAL FLANGE SAMPLING VALVES

Strahman Valves can supply flanged connections on any sampling
For applications where welded flanges are prohibited, Strahman offers investment cast valves that feature an integral flanged inlet and female threaded outlet. This option is available on a limited range of valve models.

Integral Flanged Valves are available in the following sizes and ANSI Flange Ratings:

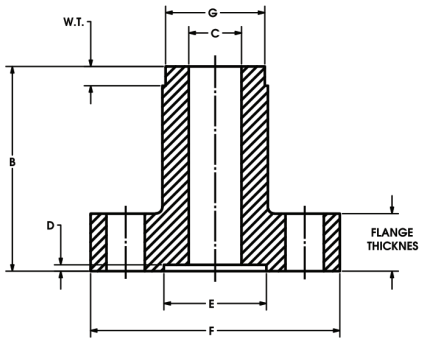
- ¾ SV-700 Class 150#, 300# and 600#
- 1" SV-700 and SV-800 150# only



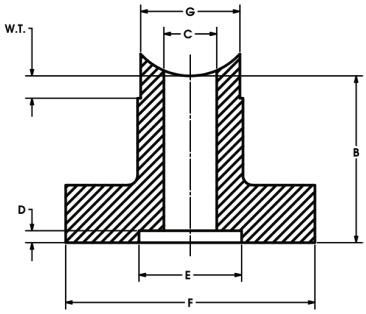
All other sizes and flange ratings are available in 316L Stainless Steel body with a flange fitted and backwelded to the inlet. The flange rating can not exceed the ANSI 600# rating of the body.

The Valve Raised Face is ⅛" standard and 1⁄16" available upon request. The Adapt- is recessed to facilitate the piloting of the valve, as shown in the diagram on page Strahman can provide a mating flange nozzle, or an adapter that has a female to match the male raised face of the Strahman Valve. This insures that the valve flange are concentric and that no scoring of the piston occurs on the inside of nozzle that may cause the valve to leak.

**CAUTION:** If there is no proper recess in the mating flange as supplied by customer, or no Strahman Nozzle or Adapter is supplied there must be a ¼" clearance between the outside diameter of the piston and the inside of the nozzle. The following chart is a guide of proper measurements to scoring of the piston. Strahman Adapters are shown on page 11.




NON-CONTOURED NOZZLE




CONTOURED NOZZLE

| Valve Type | Piloting Diameter 150#, 300# and 600# - see E | Piston Diameter | Nozzle Bore with Piloting - see C | Nozzle Bore without Piloting - see C | Piloting Depth 150/300#* - see D | Flange Thickness 150# | Flange Thickness 300/600#* |
|---|---|---|---|---|---|---|---|
| SV-500 (½") | 1.379" | .243 | .293 | .493 | ⅛" | 1" | 1" |
| SV-600 (½") | 1.379" | .368 | .418 | .618 | ⅛" | 1" | 1" |
| SV-700 (¾") | 1.692" | .590 | .640 | .840 | ⅛" | 1" | 1 ⅛" |
| SV-700 (1") | 2.004" | .590 | .640 | .840 | ⅛" | 1" | 1 ⅛" |
| SV-800 (1") | 2.004" | .787 | .837 | 1.037 | ⅛" | 1" | 1 ⅛" |
| SV-900 (1 ¼") | 2.504" | .984 | 1.034 | 1.234 | 11/64" | 1" | 1 ⅛" |
| SV-1000 (1 ½") | 2.879" | 1.181 | 1.233 | 1.431 | 11/64" | 1" | 1 ⅛" |

* 600 lbs. = **¼**" all sizes

| SPECIAL NOTE - ALL NOZZLES |
|---|
| Where required, give pipe size and schedule or tank wall thickness and radius. |

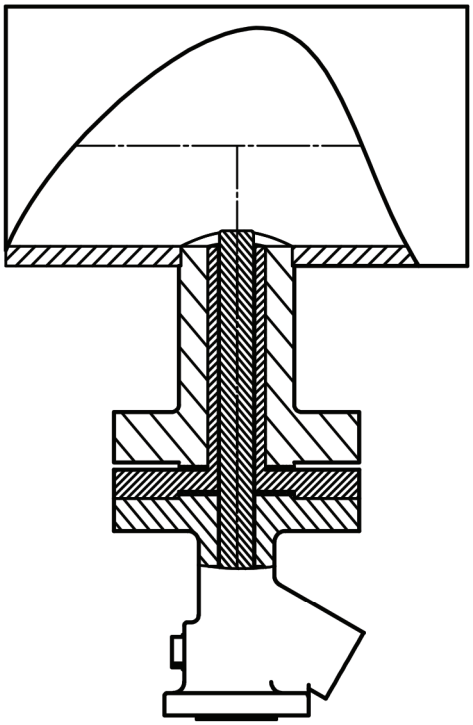
## SAMPLING VALVE ADAPTER

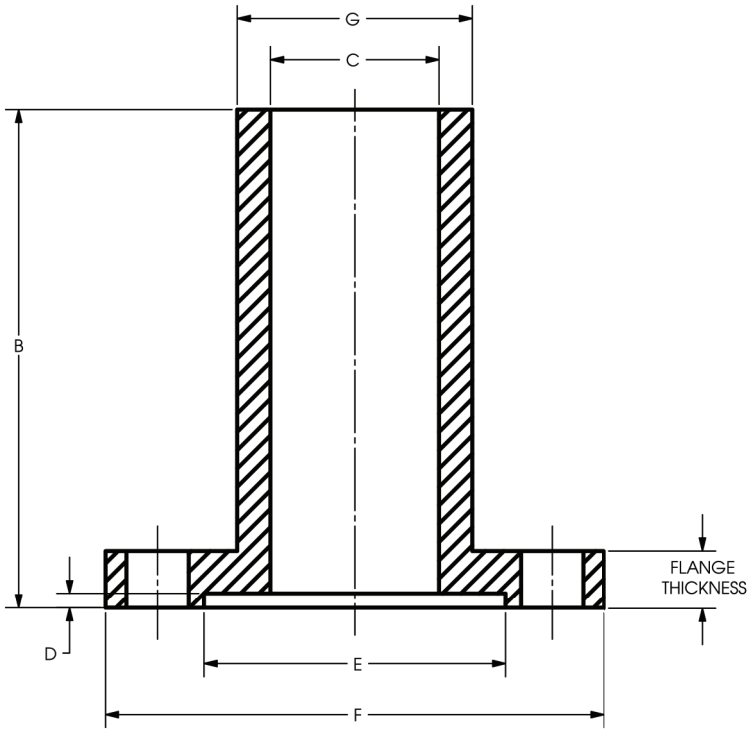
The standard adapter for sampling valves is constructed of 316 stainless steel, but available in other custom alloys. The adapter is positioned between the existing nozzle and the piston of the valve. The OD (outside diameter) of the adapter conforms with the ID (inside diameter) of the nozzle and ID of the adapter conforms with the OD (outside diameter) of the piston. The adapter fills the space between the nozzle and piston for a snug fit, this accommodates an accurate alignment and reduces gouging of the piston.

The sampling adapter prevents the possibility of process fluid from collecting around the piston and hardening, causing binding and making operating the valve difficult. In addition, no particles can lodge in the space between the nozzle and the piston that could damage the piston.

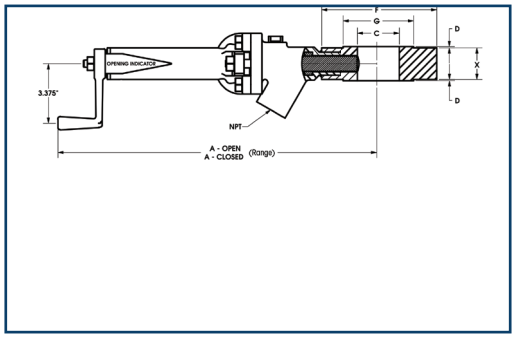
Misalignment of the valve during installation can cause scoring damage to the piston. Misalignment can come from the clearance holes of raised face flanges which can cause the sampling valves to be as much as ¼" out of alignment. If the nozzle diameter is not large enough, the piston can rub against the nozzle causing the nozzle to scratch and damage the valve piston. The adapter provides piloting that aligns the nozzle and the piston as shown on page 10.

**Special option:** For special applications, the nozzle or adapter can be supplied with a PTFE liner for a tight fit.





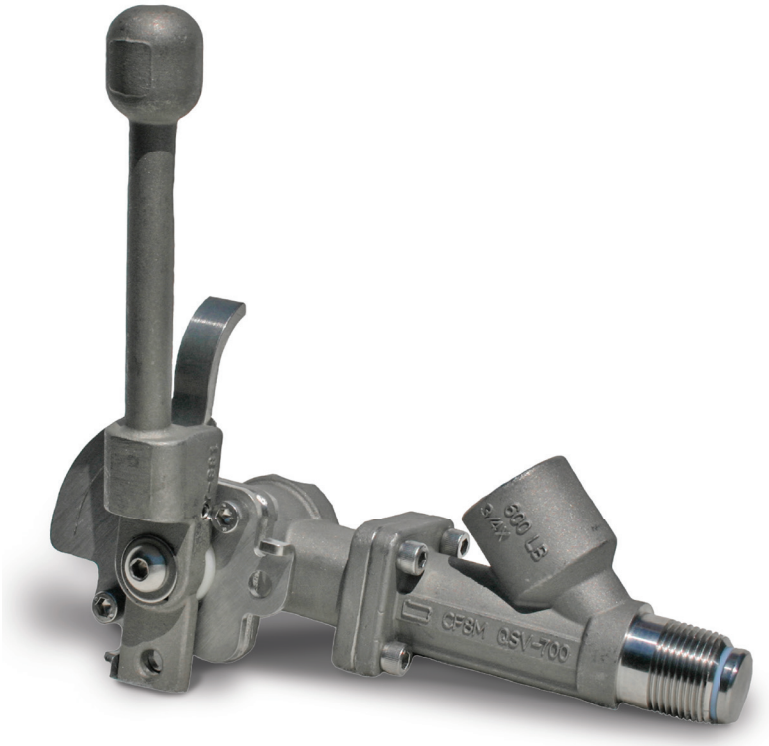
## QUIK™ SAMPLING VALVE




The innovative Quick Sampling Valve (QSV-700) was designed specifically for industrial applications that require precise sampling control and operator safety. The QSV-700 combines a Linear Rising Valve Stem with a quarter-turn actuation. The QSV-700 has an ANSI Class 600 Body Rating.

The unique QSV-700 soft-seat design and the bubble tight shut-off with live loaded packing is rated to ANSI Seat Leakage Class VI to assure leak-free service. The valve features a spring-loaded and fail-close safety design. The self-contained manual hand actuator with an ergonomic handle features multiple positions for control.

- 45 degree outlet for larger flow capacity
- Piston stem end breaks through any crust or scale that forms
- 316 stainless steel body is standard - available in the following materials:
  - Alloy 20
  - Hastelloy B or C
  - Titanium
  - Nickel
  - Monel
  - Inconel
- Other stainless steels and materials available on request
- Body extensions can be customized for special applications and installations up to 6"
- Couplings, tees and adapters allow a wide variety of installation possibilities
- Standard and custom body extensions are available to unclog almost any depth of piping dead space
- Strahman offers a wide range of product options that provide great flexibility of choice to the user. These options are:
- Inlet and outlet connections can be threaded, flanged or socket welded
- Connections can be US Standard, DIN, BSP, JIS or other
- Actuation can be hand, electric actuator or pneumatic (Standard ISO 150 5211 F5 mounting)
- Local and remote position indication available
- Positioners available
- Sampling bottles, flushing connection and other accesories are available upon request



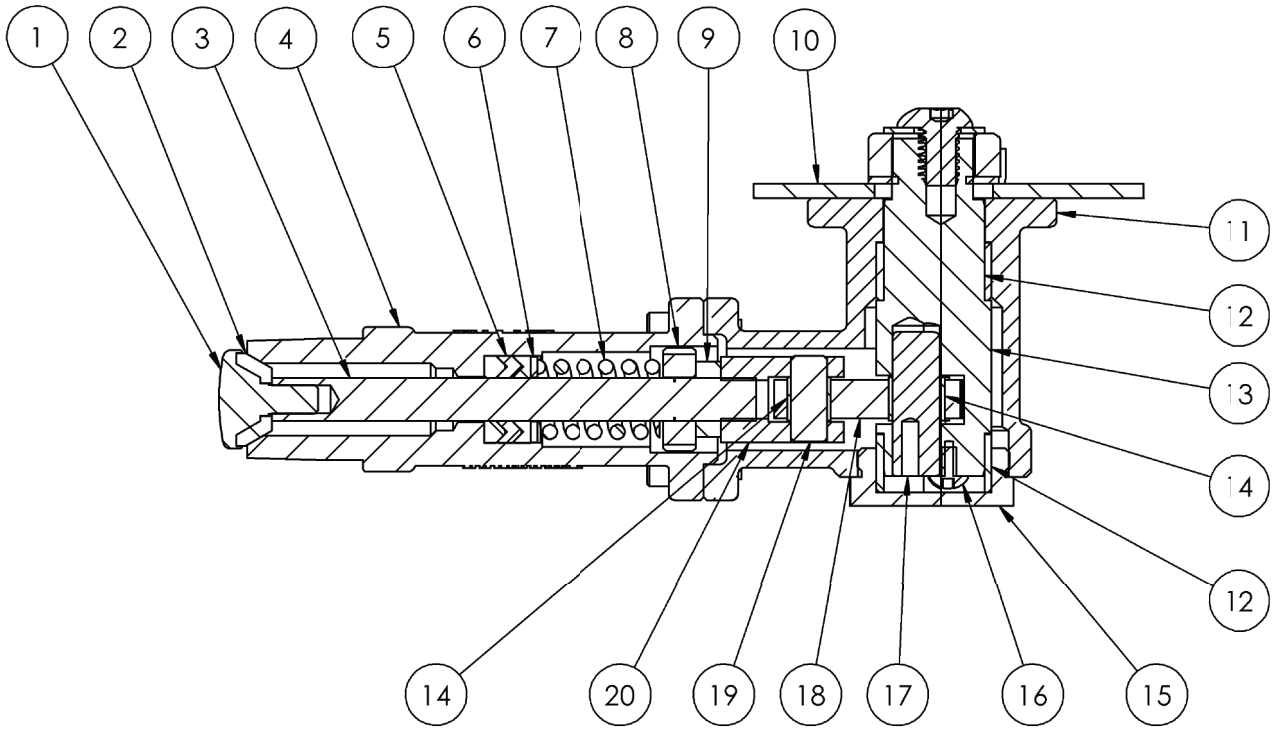

Please refer to page 4 for pressure and maximum temperature ratings for 316 stainless steel. Pressure and temperature ratings are in accordance with ASME B16.34 pressure class 600. For pressure/temperature ratings in other materials, consult Strahman Valves.

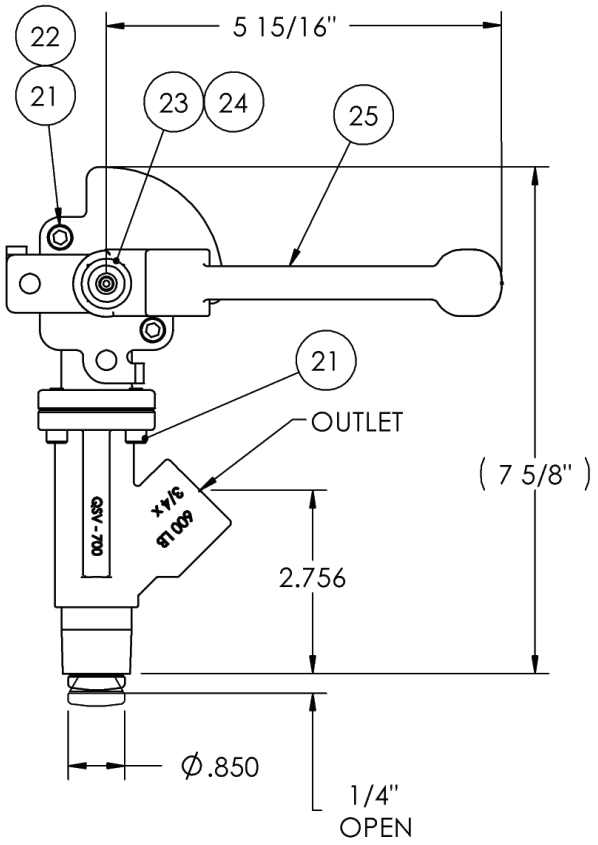
**NOTE:** Minimum temperature -328°F (-200°C)
Maximum temperature 450°F (232°C)

This US made valve has a wide range of industrial applications for a variety of sampling needs. It can be used for injection service (reverse flow) of process chemicals, cleaning agents and other applications. It is best suited for handling fluids that do not have suspended solids that can be lodged under the seat.

**NOTE:** When installing Quik Sampling Valve, use only a Strahman half coupling; use of any other coupling may affect performance.

# QUIK™ SAMPLING VALVE




| Part No. | Description | Material |
|---|---|---|
| 1* | STEM END | 316 SST |
| 2* | MAIN SEAL | TFM |
| 3* | STEM | 316 SST |
| 4 | BODY | 316 SST |
| 5* | PACKING | TFM |
| 6* | PACKING FOLLOWER | 303 SST |
| 7 | SPRING | 303 SST |
| 8* | STEM GUIDE BUSHING | PEEK |
| 9 | JAM NUT | 303 SST |
| 10 | DETENT PLATE | 304 SST |
| 11 | ACTUATOR HOUSING | 316 SST |
| 12* | SHAFT BEARINGS (2) | PEEK |
| 13 | ACTUATOR SHAFT | 303 SST |
| 14* | LINK BEARING (2) | PEEK |
| 15 | HOUSING COVER | 303 SST |
| 16 | BUTTON HEAD SCREW | SST |
| 17 | LINK SHAFT PIN | SST |
| 18 | LINK | 303 SST |
| 19 | CLEVIS PIN | 303 SST |
| 20 | CLEVIS | 303 SST |
| 21 | SHCS | SST |
| 22 | NUT | SST |
| 23 | HANDLE SCREW | SST |
| 24 | HANDLE WASHER | SST |
| 25 | HANDLE | 304 SST |

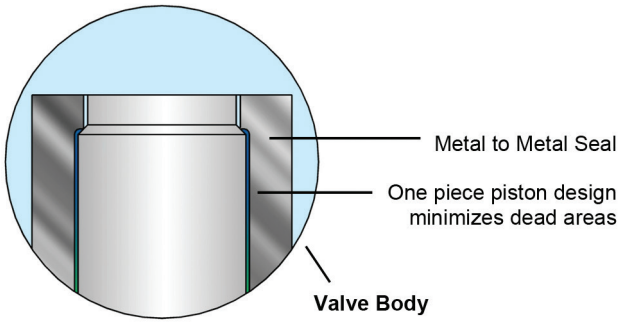
* Denotes recommended spare parts

## SEALING SYSTEM

### M SEAL

This sealing system offers a wide range of material combinations selected to create a differential hardness between body and plunger seat. The maintenance friendly design of the **M Seal** system provides long and reliable valve performance and is suitable for almost all process conditions.

- **Temperature:** Min.: -200°C / -330°F
  Max.: 540°C / 1000°F
- **Pressure:** ANSI 600: 100 bar / 1440 PSI max
  ANSI 1500: 250 bar / 3600 PSI max




In order to keep abreast of customer requirements, Strahman has developed a Metal Seated Sampling Valves for use in ANSI Class 600, 1000°F applications. This valve is dimensionally identical to the Strahman SV Series of Sampling Valves which are the world-wide standard for industrial sampling. A special fabricated bar-stock design is available for ANSI 1500, 1000°F service.

- Piston moves through the valve clearing out any material that may solidify within the body
- Piston extension breaks through scale or crust
- No dead spot - piston fills valve interior
- Always gives a true live sample
- 316 stainless steel body is standard. Also available: Alloy 20, Hastelloy, Titanium, Nickel and Monel
- Threaded, flanged, SW ends to US Standards, DIN BSP, JIS with manual, electric, air actuation
- Lever operated, quick-opening design available

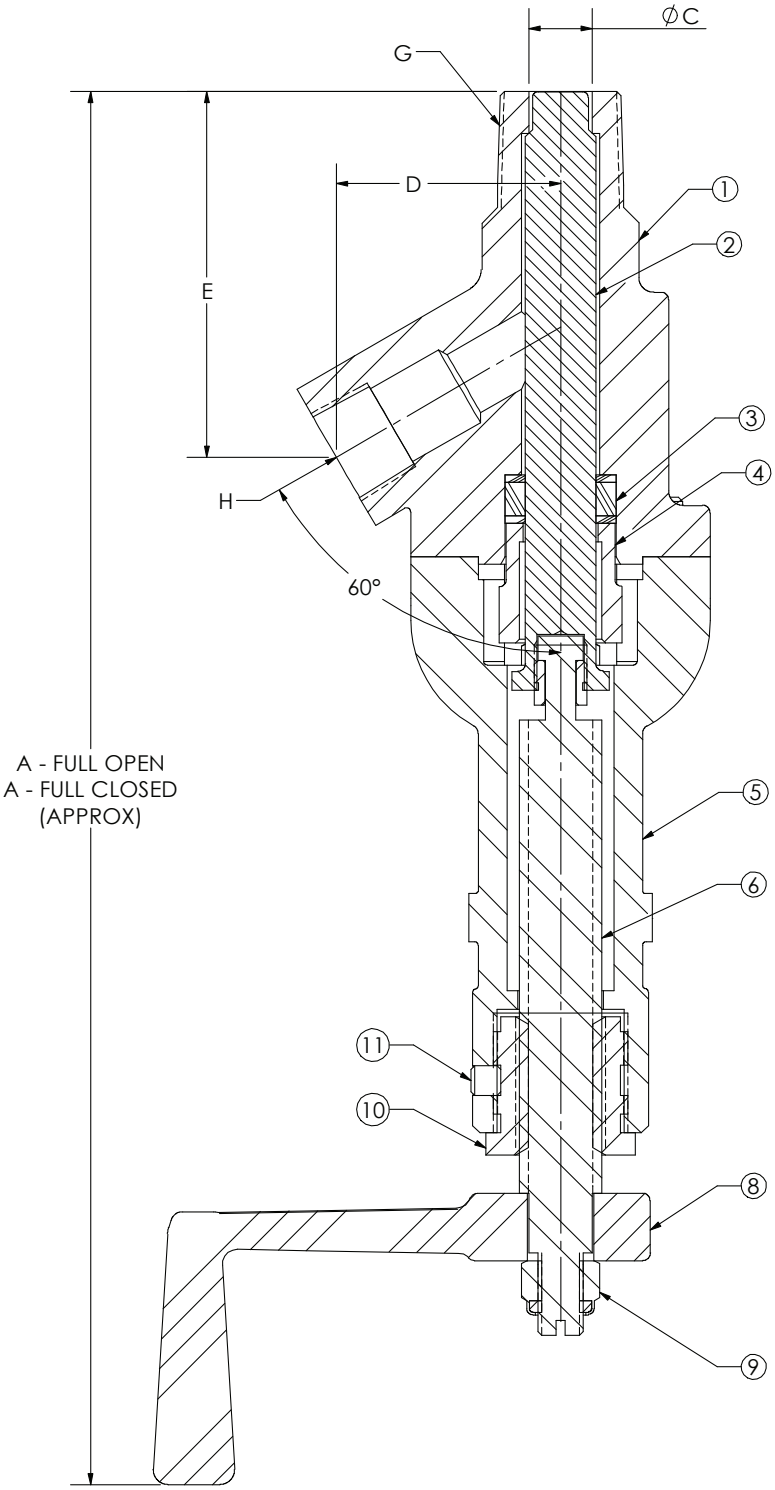
### METAL SEATED SAMPLING VALVES SPECIFICATIONS

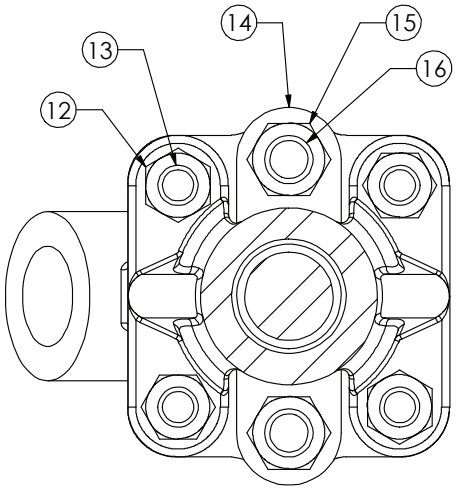
The Sampling Valve shall be Model SV ¾” MNPT inlet* by ¾” or ½” FNPT outlet*.
The body shall be of investment cast 316 SST and internals of 316 SST fabricated
wetted parts. The valve shall be a hard seal design and shall meet ANSI Class IV
shutoff. The piston shall have linear travel with mutli-turn handle for manual operations,
or pneumatic/hydraulic cylinder actuator. The piston shall fill the valve interior allowing
for no cavities (dead space), will be self-pigging and will not clog. The Sampling Valve
will assure new product samples are always taken with no prior material remaining.
The piston shall have a specified extension that shall extend beyond the threaded
inlet to break through any product crust, insuring proper product flow.

* Flanged or SW connections available to be specified by the Customer.



# METAL SEATED SAMPLE VALVES FOR HIGH TEMPERATURE SERVICE




VALVE DECK DETAIL

| Dimensions | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Valve Size** | **A** CLOSED | **A** OPEN | **C** | **D** | **E** | **G** NPT | **H** NPT |
| SV-7HS | 11-⅞" | 14-⅜" | .531" | 1-⅞" | 3-$^{1}/_{32}$" | ¾" | ½", ¾" |
| SV-8HS | 13-⅛" | 16" | .688" | 2-⅜" | 3-⅝" | 1" | ¾", 1" |

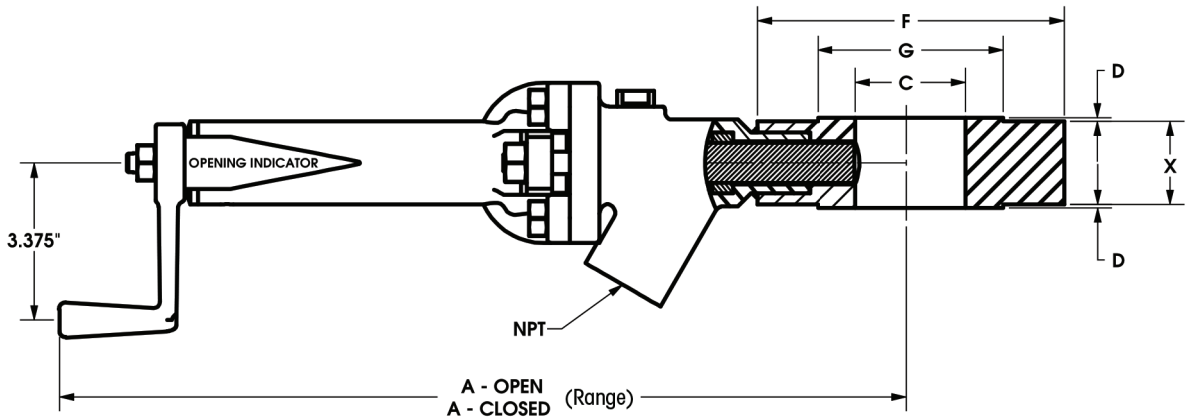
| Part No. | Description | Material |
|---|---|---|
| 1 | BODY † | 316 SST |
| 2 | PISTON *† | 316 SST |
| 3 | PACKING | GRAPHITE |
| 4 | GLAND | 304 SST |
| 5 | BONNET | 304 SST |
| 6 | STEM | 416 SST |
| 8 | CRANK HANDLE | M. IRON |
| 9 | LOCK NUT | 304 SST |
| 10 | BONNET BUSHING | BRONZE |
| 11 | BUSHING LOCK SCREW | 304 SST |
| 12 | BONNET NUT | 303 SST |
| 13 | BONNET STUD | 304 SST |
| 14 | SPRING WASHER | 17.7 PH |
| 15 | GLAND NUT | 303 SST |
| 16 | GLAND STUD | 304 SST |

* Denotes recommended spare parts
† Denotes wetted parts

## INSERT WITH SAMPLING VALVE

### MODELS SV-500, SV-600, SV-700, SV-800, SV-900, SV-1000

FOR USE IN PIPELINE INSTALLATIONS




For use with Ram-Type Drain Valves a recess is required. Use piloting dimensions as discussed on page 10.

| FLANGE THICKNESS (DIMENSION X) | | | |
|---|---|---|---|
| SV-500/600/700 | SV-800 | SV-900 | SV-1000 |
| 1 5/8" | 2" | 2 3/8" | 2 3/4" |

| DRILLING: 150 PSI - ANSI STANDARD BOLT HOLES STRADDLE C'S. | | | | | |
|---|---|---|---|---|---|
| FLANGE SIZE | A OPEN | A CLOSED | D | F | G |
| 1" | 19 3/8" | 14 5/8" | 1/16" | 4 1/4" | 2.000" 1.995" |
| 1 1/2" | 23 3/16" | 15" | 1/16" | 5" | 2.875" 2.870" |
| 2" | 23 1/2" | 15 1/2" | 1/16" | 6" | 3.625" 3.620" |
| 2 1/2" | 24 5/16" | 15 15/16" | 1/16" | 7" | 4.125" 4.120" |
| 3" | 24 5/8" | 16 3/16" | 1/16" | 7 1/2" | 5.000" 4.995" |
| 4" | 25 5/8" | 16 15/16" | 1/16" | 9" | 6.187" 6.182" |
| 6" | 26 13/16" | 19 15/16" | 1/16" | 11" | 8.500" 8.495" |
| 8" | 30 13/16" | 21 3/16" | 1/16" | 13 1/2" | 10.625" 10.620" |

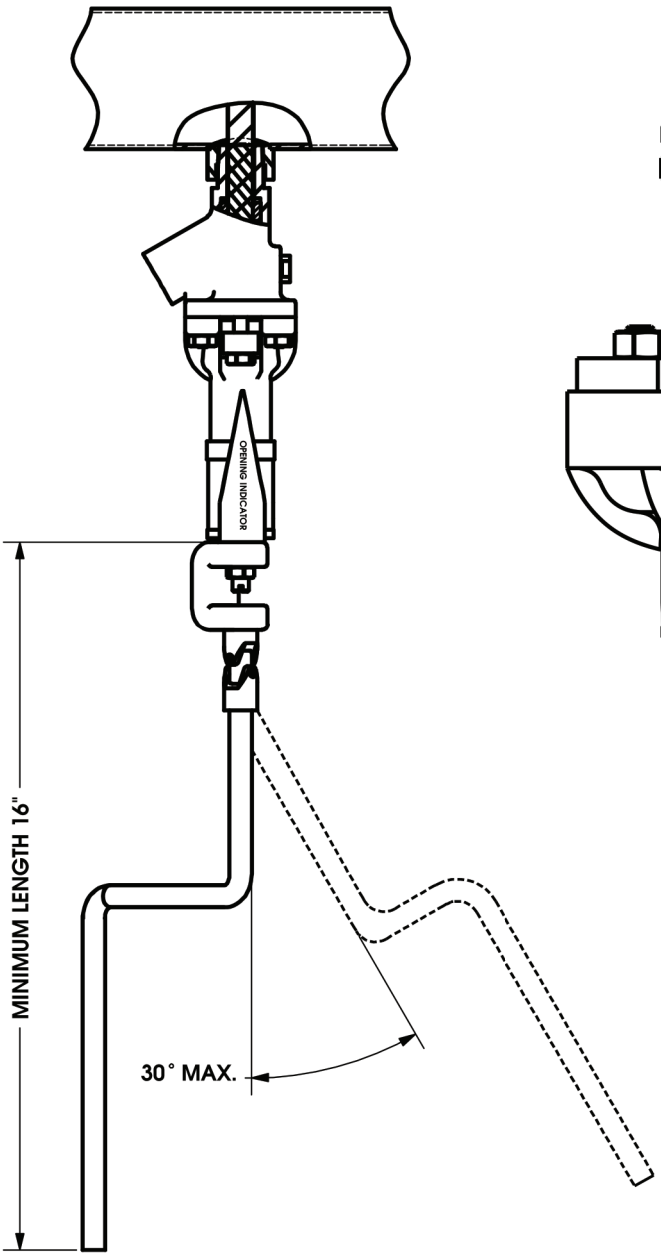
**NOTE:** Customer must specify pipe ID.
**NOTE:** Insert can be furnished with NPT female tapping for all size sampling valves.
**NOTE:** Insert also available for use with Strahman Drain Valves.

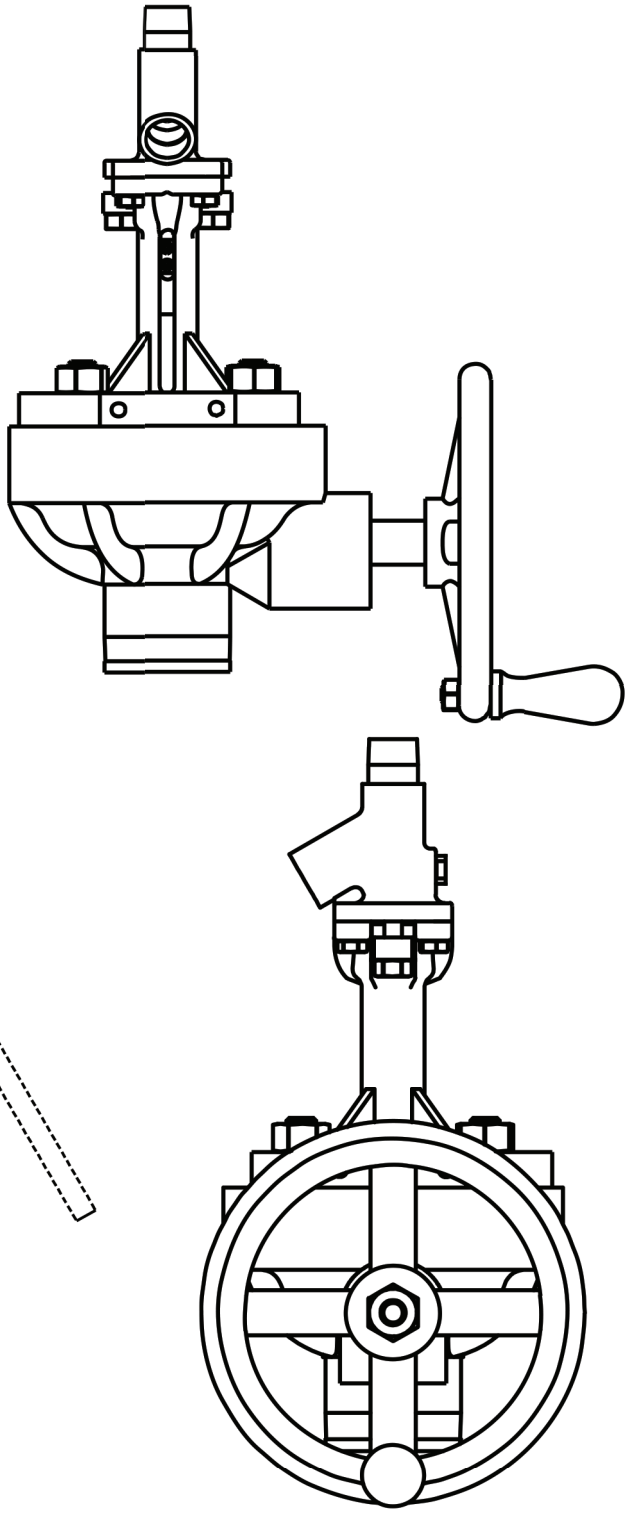
| DRILLING: 300 PSI - ANSI STANDARD BOLT HOLES STRADDLE C'S. | | | | | |
|---|---|---|---|---|---|
| FLANGE SIZE | A OPEN | A CLOSED | D | F | G |
| 1" | 22 11/16" | 14 15/16" | 1/16" | 4 7/8" | 2.000" 1.995" |
| 1 1/2" | 23 13/16" | 15 1/2" | 1/16" | 6 1/8" | 2.875" 2.870" |
| 2" | 20 1/2" | 15 3/4" | 1/16" | 6 1/2" | 3.625" 3.620" |
| 2 1/2" | 23 13/16" | 16 3/16" | 1/16" | 7 1/2" | 4.125" 4.120" |
| 3" | 25 7/16" | 16 9/16" | 1/16" | 8 1/4" | 5.000" 4.995" |
| 4" | 28 5/8" | 19 7/16" | 1/16" | 10" | 6.187" 6.182" |
| 6" | 30 1/4" | 20 3/4" | 1/16" | 12 1/2" | 8.500" 8.495" |
| 8" | 32 3/8" | 21 15/16" | 1/16" | 15" | 10.625" 10.620" |

| DRILLING: 600 PSI - ANSI STANDARD BOLT HOLES STRADDLE C'S. | | | | | |
|---|---|---|---|---|---|
| FLANGE SIZE | A OPEN | A CLOSED | D | F | G |
| 1" | 21 1/16" | 14 15/16" | 1/4" | 4 7/8" | 2.000" 1.995" |
| 1 1/2" | 23 13/16" | 15 1/2" | 1/4" | 6 1/8" | 2.875" 2.870" |
| 2" | 20 7/16" | 15 3/4" | 1/4" | 6 1/2" | 3.625" 3.620" |
| 2 1/2" | N/A | N/A | N/A | N/A | N/A |
| 3" | 25 7/16" | 16 9/16" | 1/4" | 8 1/4" | 5.000" 4.995" |
| 4" | 29 3/8" | 19 7/8" | 1/4" | 10 3/4" | 6.187" 6.182" |
| 6" | 29 3/4" | 21 1/2" | 1/4" | 14" | 8.500" 8.495" |
| 8" | 37 1/8" | 24 3/4" | 1/4" | 16 1/2" | 10.625" 10.620" |

## SPECIAL EXTENDED CRANK HANDLE AND GEAR OPERATOR OPTIONS

Special Strahman Extended Sampling Valve Crank Handle can be furnished in lengths from 16 in. to 10 ft. The Extended Crank Handle can be furnished for use on any sampling valve now in service, by removing the original crank handle and replacing it with an extended crank handle in the length required.



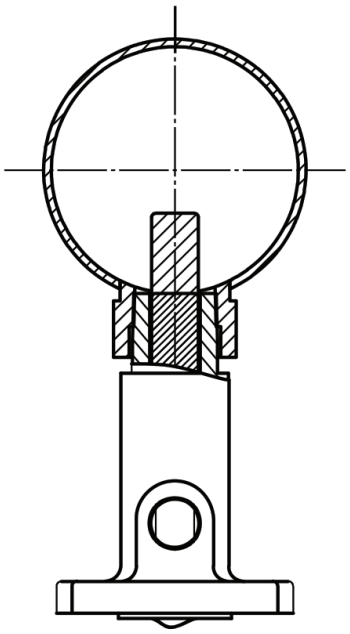
Front and Side View Shown:
Gear Box with easy turn hand wheel

# HALF COUPLINGS AND SPECIAL TEES

## HALF COUPLINGS

*Contoured and Non-Contoured Couplings*

Strahman Couplings slide into a hole drilled in a pipeline and a socket weld type weld is used to attach it to the pipe. Contoured couplings (shown right) are normally used for smaller pipe sizes up to 6". Contouring of the coupling allows it to match the inside of the pipe and not obstruct the flow. The contour should be installed in line with the pipe. Non-contoured couplings can be supplied for pipe sizes 8" and above, but normally the non-contoured couplings (shown below) are used because there is little obstruction of flow.

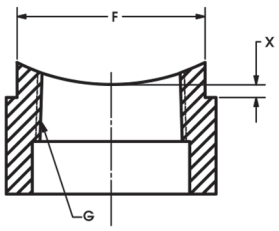


### HALF COUPLING INSTALLATION INSTRUCTIONS

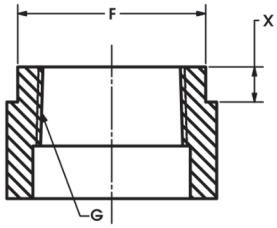
The Sampling Valve inlet connection should be flush with the contour of the half coupling, AFTER WELDING INTO PIPE OR VESSEL, to assure proper satisfactory operation of Sampling Valve. To ensure proper installation and sealing of threaded connection, retapping of the half coupling may be necessary
to correct distortion caused by welding.

### SPECIAL NOTE - ALL HALF COUPLINGS

Dimension X - Pipe size and schedule number or tank wall thickness. Please specify when ordering. Couplings for wall thickness greater than those shown above available and
priced on request.



CONTOURED
UP TO 6" PIPE



NON-CONTOURED
ABOVE 6" PIPE

| Valve | F | G NPT | Maximum Wall Thickness |
|---|---|---|---|
| SV-500 | 1 11/32" | 3/8" | 1/2" Cont. 11/16" Non-Cont. |
| SV-600 | 1 11/32" | 1/2" | 1/2" Cont. 11/16" Non-Cont. |
| SV-700 | 1 11/32" | 3/4" | 1/2" Cont. 11/16" Non-Cont. |
| SV-800 | 1 3/4" | 1" | 11/16" |
| SV-900 | 2 3/32" | 1 1/4" | 13/16" |
| SV-1000 | 2 5/16" | 1 1/2" | 7/8" |

Socket weld and BSP Threaded half couplings are also available.

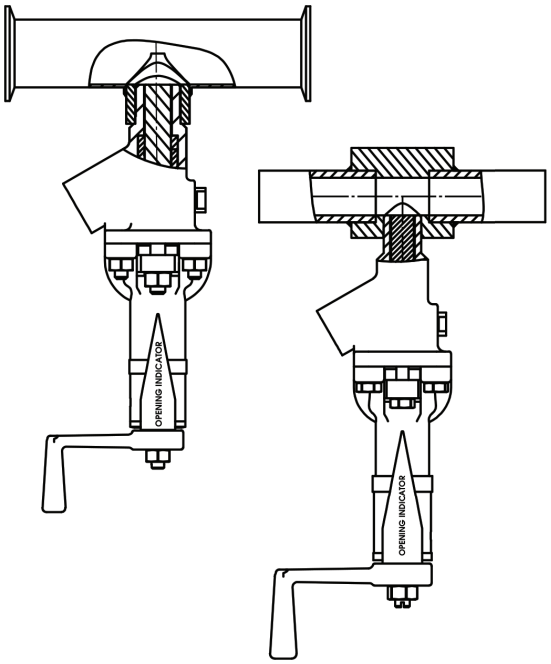
## SPECIAL TEES

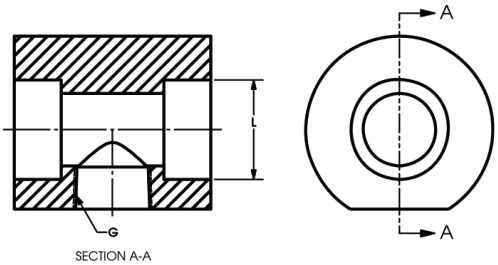
*Quick Disconnect Tee with Sampling Valve*

**Special Tee for pipe or tubing below L DIM where required, give actual pipe size and schedule.**

SV-500, SV-600 and SV-700 special tee required for pipe size under 2".

SV-800, SV-900 and SV-1000 special tee required for pipe size under 3".



SECTION A-A

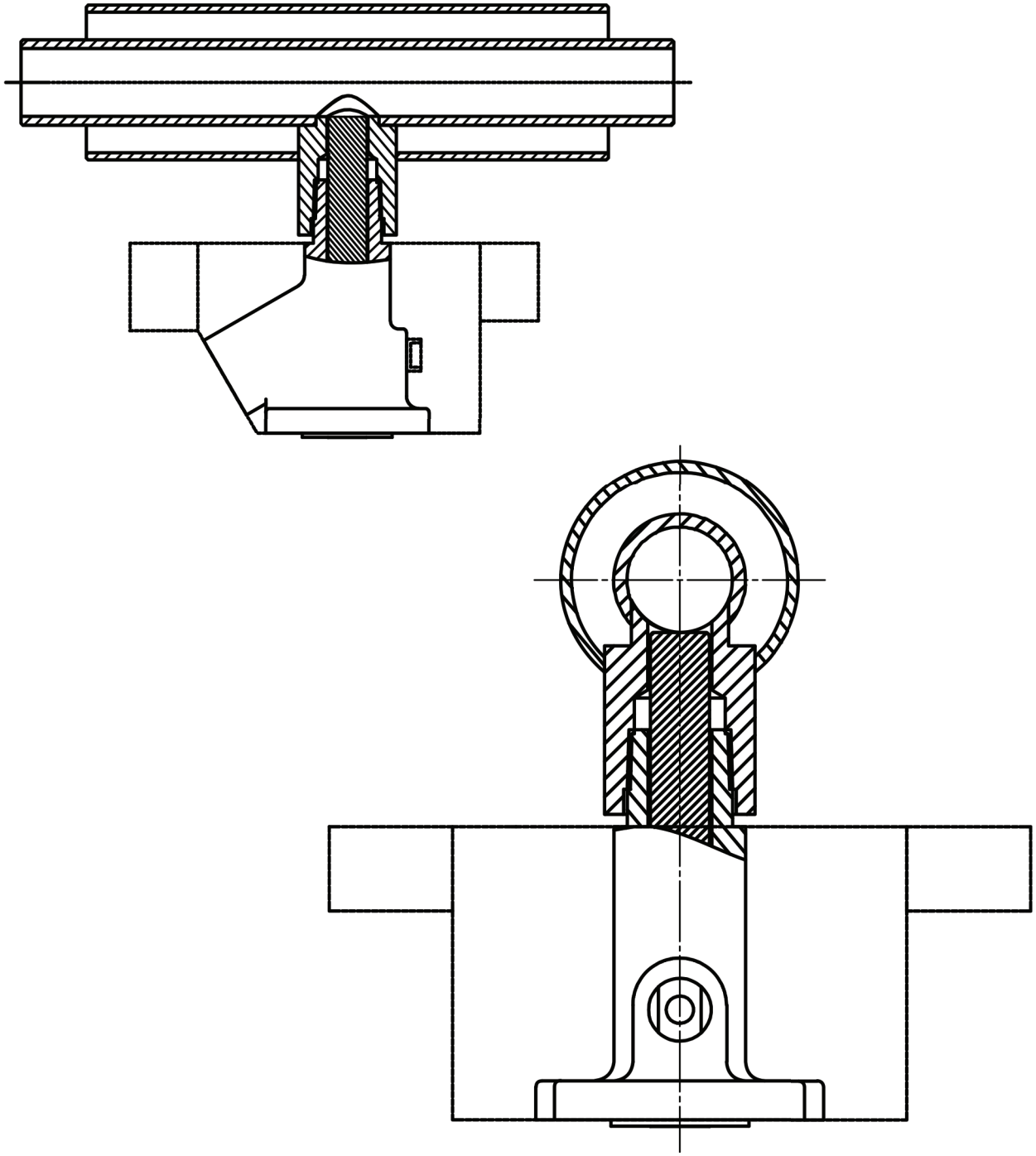
## JACKETED TEES

Jacketed tees are supplied for installation into a process line with a steam jacket. Customer must specify the core pipe size and schedule along with the jacket pipe size and schedule. This determines the size and length of the extended coupling.

Example: 3" sch. 40 core with 4" sch. 10 jacket.

Available with SV-500, SV-600, SV-700 and SV-800

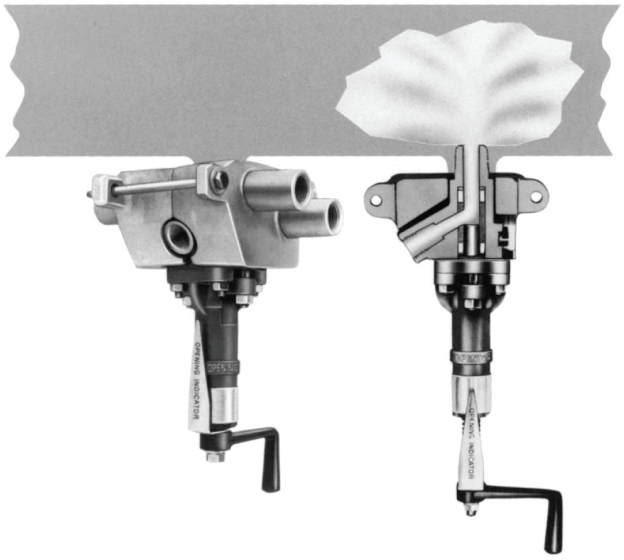
Also available with air cylinder.



## HEAT JACKETS FOR SAMPLING VALVES

### 1 PIECE JACKET AVAILABLE FOR SV-500, SV-600, SV-700 AND SV-800

Bolt On Heat Jackets offer superior performance and reliability for a cost-competitive price. CSI Heat Jackets are cast to conform precisely to the Strahman sampling valve body so that there are almost no air gaps. The special aluminum based alloy acts as an efficient heat transfer agent to evenly distribute heat throughout the valve body ensuring no cool spots. A carbon steel ASME coded pressure vessel chamber contains either steam, or heat transfer fluid.



**Pressure:** 300 PSI
**Temperature:** 600°F

½" FNPT connections standard

Standard Design is a two-piece bolt on jacket; single piece designs are available for certain sizes and configurations. For flanged valves, the casting is shaped to envelope the flange, so that there is absolutely no exposed surface area where cooling may occur. Compared to a fabricated jacket that is welded to a valve, the bolt on jacket is much more compact and efficient.

**Benefits of the bolt on jacket versus the welded type are:**

- No dissimilar metals welded together (carbon steel jacket on stainless steel valve body).
- No distortion of the valve body due to welding (heat) that can affect the piston travel.
- No heat affected zone that can cause inter-granular corrosion by changing grain structure of the body material.
- No post weld heat treatment that can cause distortion in the valve body leading to piston misalignment.
- The jacket does not need to be removed to service the valve.
- If the valve needs to be replaced, the jacket can be reused offering substantial savings
- Standard Strahman Valves are purchased, not custom fabrications
- Quick deliveries with many standard jackets in stock

An option for the CSI Heat Jacket is the use of electrical energy as a heating medium instead of Steam or Heat Transfer Fluids. At lower temperatures, the electrical CSI Heat Jacket maintains a constant temperature, more accurately, than steam or transfer fluids.

**Accessories for the Heat Jackets are:**

1. Custom formed Insulation Blankets conserve energy and also prevent personnel hazards from direct contact with a high temperature surface. Sold separately.
2. Special jumpers connect the two halves of the heat jacket easily and conveniently. Sold separately.
3. Heat Transfer Cement to fill in any voids between the jacket and the valve body. For most applications, less than one quart is required. Sold separately.

For details on these custom accessories, contact your Strahman Distributor to find out the extraordinary performance and value.

## QUICK-ADVANCE PISTON-TYPE SAMPLING VALVES



## QUICK-ADVANCE PISTON-TYPE SAMPLING VALVES

Piston Type Sampling Valves are widely employed in the sampling of thick slurries and viscous materials because their design provides little to no dead space within the valve and vessel or line connection. The piston completely fills the valve and connection bores and provides a self-cleaning (self-pigging) action during the closing stroke of the valve. The common design of this type of valve also utilizes a very long stroke to completely withdraw the piston from the media flow.

Typical designs for a manually operated piston type valve used for draining or sampling liquids utilize a hand wheel attached to a threaded stem which in turn is connected to the piston. The stem typically turns in a fixed threaded bushing that is generally found in the yoke (or bonnet) or the piston itself. Rotary motion of the hand wheel causes a linear movement of the piston.

Although the effort used to draw a sample using a piston type valve is greater than using a ball valve, the advantages quickly outweigh any of the disadvantages. For instance, ball valves are operated with a quarter-turn. A ball valve allows material to accumulate around the ball which prevents a representative sample from being drawn unless the valve is first properly purged.

Strahman's new Quick Advance Sampling Valves offer all of the features typically found in piston type sampling valves with the convenience of a quick open/close feature of a ball valve. The QA series uses a rack and gear combination to maintain the linear motion of the piston and provides the valve with a full piston design while traveling just 1/3 turn. This results in less time and labor required to collect a true, representative sample.

All QA Series Valves feature a safety stop detent that prevents the valve from opening under process pressure. The QA-700 is rated to ANSI Class 300 and is available in the same materials as Strahman's standard Sampling Valve line. The new QA Series is available with standard packing rings and zero or two inch piston extensions. Conversion kits for existing valves are also available.

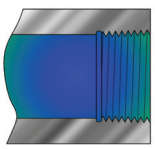
## STANDARD FEATURES FOR QA SERIES PISTON TYPE SAMPLING VALVES

1. FAST OPENING: SINGLE PULL ACTUATION TO OPEN/CLOSE — using just a 1/3 turn the valve can be stroked from full open to full closed position. The rack and gear combination translates the rotary motion into linear movement.
2. NO DEAD SPACE: FULL PISTON DESIGN — the piston fills the entire bore of the valve with no clearance. A true representative sample is always assured.
3. COMPRESSIBLE PACKING RINGS — employing a pair of rings above and below the valve discharge provides a seatless design that meets the requirements of ANSI leakage Class VI.
4. FLOW CONTROL — inherent design features flow control sample positions and provide metering flow options to ensure accurate sample quantities
5. INTEGRAL HANDLE LOCK — The handle includes a locking device that ensures the valve will not open under process pressure, vibration or by incidental contact.
6. SAFETY STOP — prevents the QA series valve from opening if the handle is released.

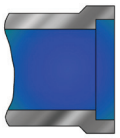
## AVAILABLE END CONNECTIONS



Flanges

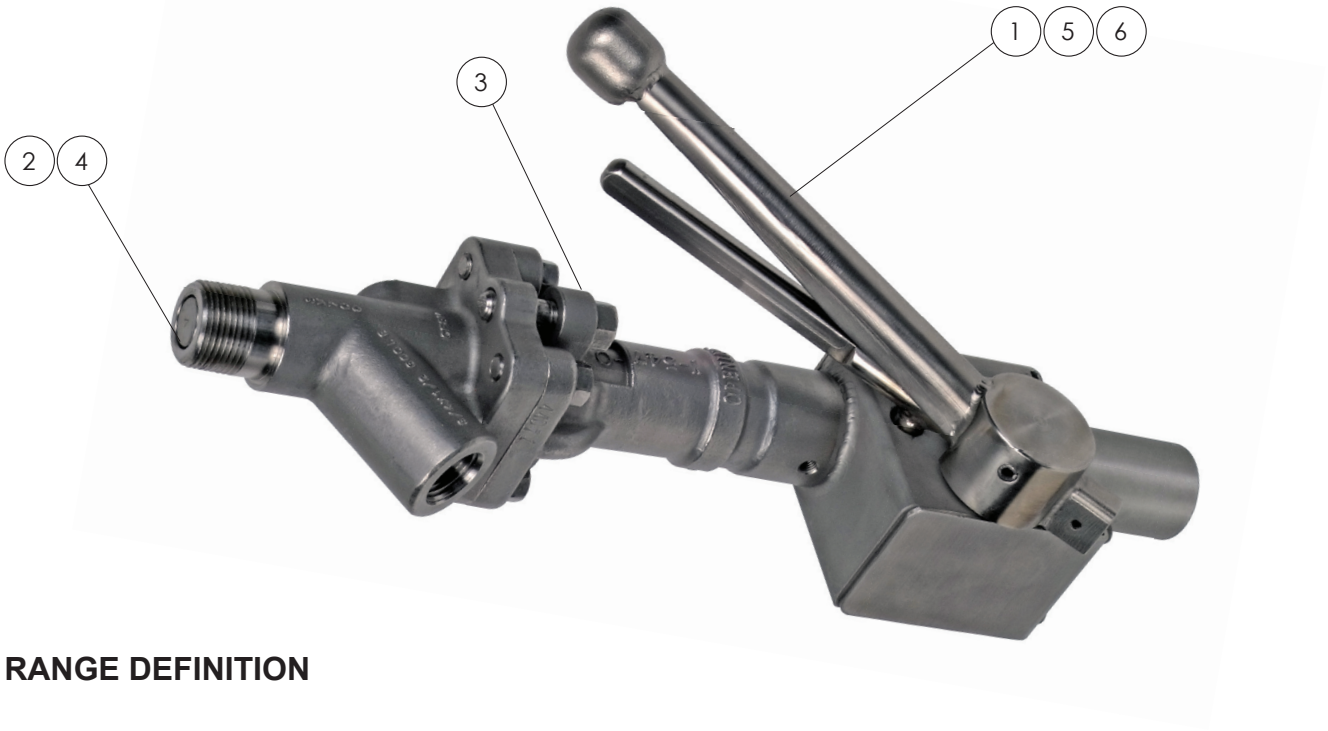


Threaded connections NPT & BSP



Socket Weld

# QUICK-ADVANCE PISTON-TYPE SAMPLING VALVES




## RANGE DEFINITION

| | 3/8" x 1/4", 0" PE | 3/8" x 3/8", 0" PE | 1/2" x 3/8", 0" PE | 1/2" x 1/2", 0" PE | 3/4" x 1/2", 0" PE | 3/4" x 3/4", 0" PE | 3/8" x 1/4", 2" PE | 3/8" x 3/8", 2" PE | 1/2" x 3/8", 2" PE | 1/2" x 1/2", 2" PE | 3/4" x 1/2", 2" PE | 3/4" x 3/4", 2" PE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PN 10 | | | | | | | | | | | | |
| PN 16 | | | | | | | | | | | | |
| ANSI 150/PN 20 | | | | | | | | | | | | |
| PN 25 | | | | | | | | | | | | |
| PN 40 | | | | | | | | | | | | |
| ANSI 300/PN 50 | | | | | | | | | | | | |

Available Sizes

## TECHNICAL & GENERAL INFORMATION

### DESIGN CODE & CONSTRUCTION

- Design standard compliant with ASME B16.34, ASME B31.3 and ASME B16.10
- International standards include ANSI, DIN, JIS and API.
- Wide range of materials available including carbon steel, stainless steel, titanium, Hastelloy, duplex steel, monel, inconel and chrome-moly steels.
- Cast design standard, fabricated forged and bar stock designs available.
- Qualify by design to API 6FA Fire Safe requirements using graphite rings.

### QUALITY ASSURANCE & TESTING

- ISO 9001 compliant
- PED/ATEX/CE marking
- TA Luft
- Standard Strahman testing procedures

## Wash Down Equipment

Cleaning and sanitizing equipment for applications where safety is the number one concern — built to outlast and outperform all others.

## Valve Automation

FM Approved Fire-Safe Thermal Shut-off Valves, Fusible Links, Actuators, Ball Valves, Butterfly Valves, and Accessories

## Engineered Valves

High quality customized tailored solutions for unique applications challenges for powders, dry bulk materials, and slurries.

## Process valves

Engineered solutions for the transfer of fluid and flow control for highly critical applications from sampling to inline process to permanent isolation.




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# CONTACT US

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