

QUICK-ADVANCE PISTON-TYPE SAMPLING VALVES

QA SERIES



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.

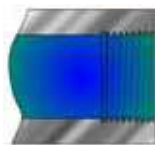
STANDARD FEATURES FOR QA SERIES PISTON TYPE SAMPLING VALVES

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

	$\frac{3}{8}'' \times \frac{1}{4}''$, 0'' PE	$\frac{3}{8}'' \times \frac{3}{8}''$, 0'' PE	$\frac{1}{2}'' \times \frac{3}{8}''$, 0'' PE	$\frac{1}{2}'' \times \frac{1}{2}''$, 0'' PE	$\frac{3}{4}'' \times \frac{1}{2}''$, 0'' PE	$\frac{3}{4}'' \times \frac{3}{4}''$, 0'' PE	$\frac{3}{8}'' \times \frac{1}{4}''$, 2'' PE	$\frac{3}{8}'' \times \frac{3}{8}''$, 2'' PE	$\frac{1}{2}'' \times \frac{3}{8}''$, 2'' PE	$\frac{1}{2}'' \times \frac{1}{2}''$, 2'' PE	$\frac{3}{4}'' \times \frac{1}{2}''$, 2'' PE	$\frac{3}{4}'' \times \frac{3}{4}''$, 2'' PE
PN 10												
PN 16												
ANSI 150/PN 20												
PN 25												
PN 40												
ANSI 300/PN 50												

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

The Strahman family of products include:

SAMPLING AND DRAIN VALVES

Strahman has a full line of sampling and drain valves. Our sampling and drain valves use a unique design to prevent failure caused by sediment or clogging.

POLYMER VALVES

Strahman Polymer Valves are designed to prevent clogging. They are ideal for use in liquid and gas service or with slurries, polymers, and high viscosity fluids that tend to solidify at room temperature.

WASH DOWN EQUIPMENT

Strahman offers a full line of mixing units, hose stations, hoses, nozzles and wash down accessories. Our wash down line is designed for industrial use and is used in a wide variety of industries including food, beverage, pharmaceutical, chemical and other applications.

LINE BLINDS

Strahman Line Blinds provide zero leakage down stream and total isolation on process pipelines, vessels, and maritime applications. No pipeline movement is required when blind position is changed.

BALL VALVES

Strahman offers a full range of Trunnion Mounted, Metal Seated Ball Valves.

Please contact your local Strahman representative for further details
or visit our website: www.strahmanvalves.com



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ISO 9001
OMI-SAI Global

Last Updated: July 12, 2012

SV SERIES

THE ORIGINATOR OF PISTON-TYPE

SAMPLING VALVES



STRAHMAN VALVES, INC.

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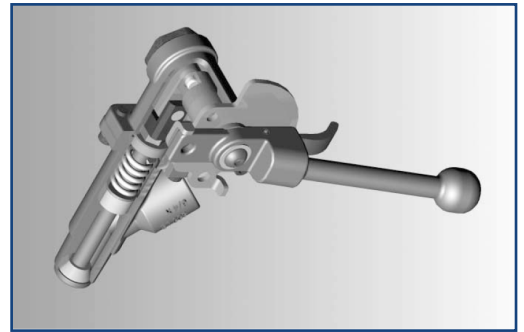
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Strahman Piston-Type Sampling Valves comply with the Pressure Equipment Directive (PED) No. 97/23/EC under SEP. Strahman Drain Valves 3" NB through 12" NB ANSI classes 150, 300, and 600 and 2" NB ANSI classes 300 and 600 comply under Category II liquid service.

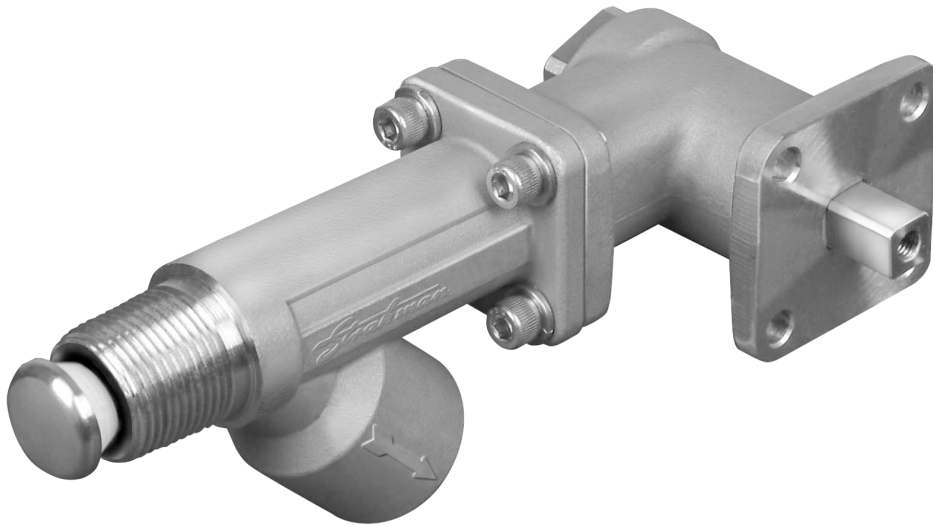
QUIK™ SAMPLING VALVE

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 accessories are available upon request



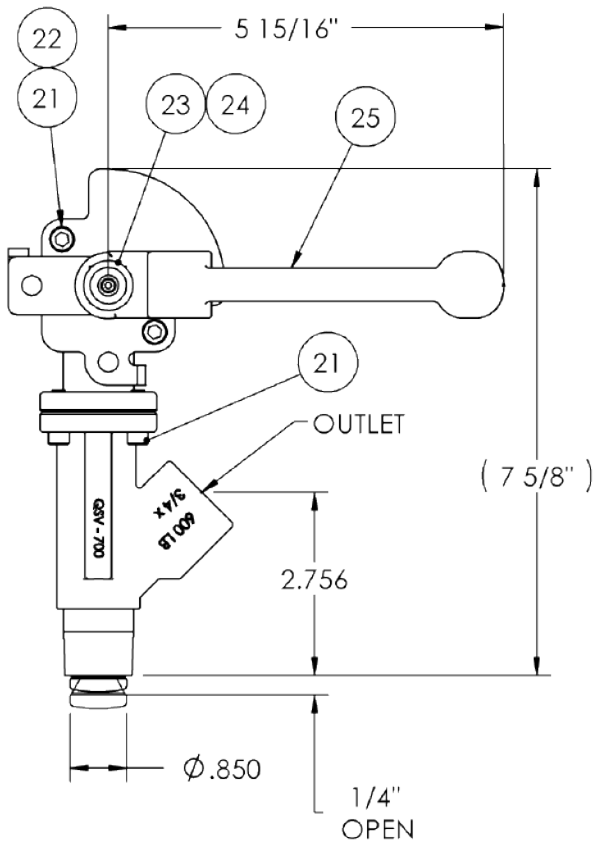
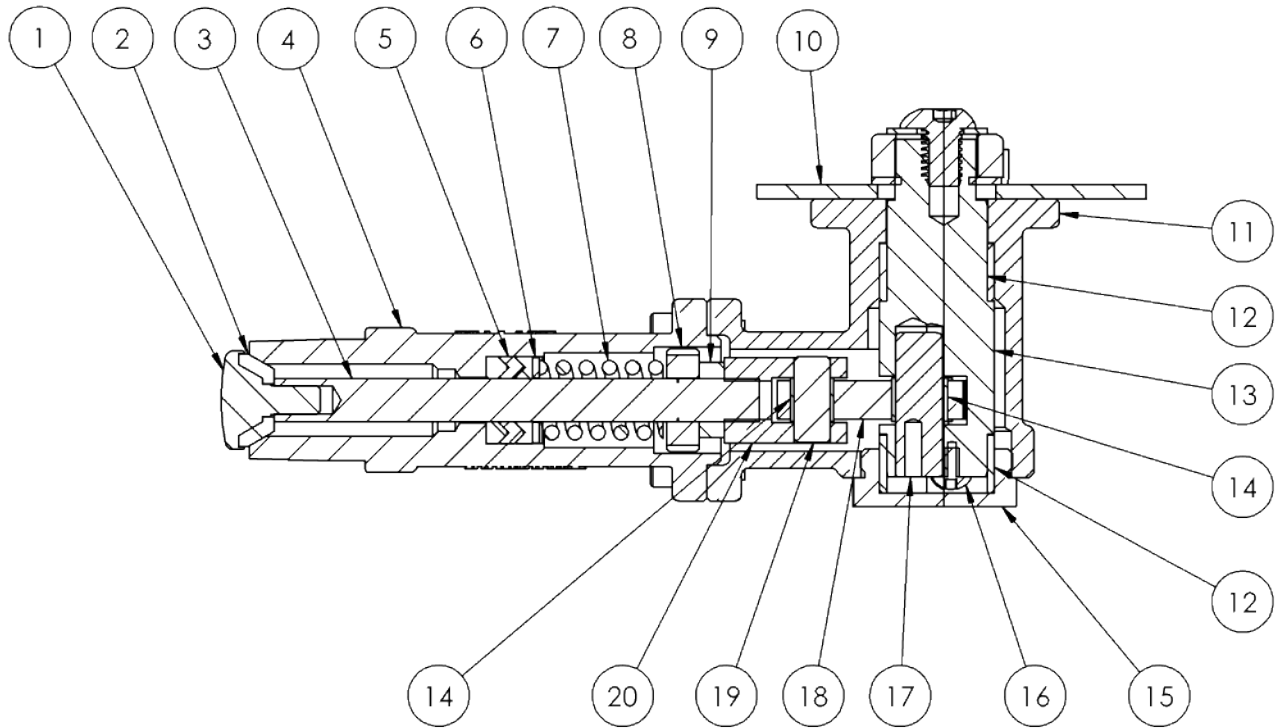
Please refer to page 4 for pressure and maximum temperature ratings for 316 stainless steel. Pressure and temperature ratings are in accordance with ASME B16.34 pressure class 600. For pressure/temperature ratings in other materials, consult Strahman Valves.

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

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 our website at www.strahmanvalves.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/Temperature 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 Temperature	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 Temperature	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 Temperature	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°

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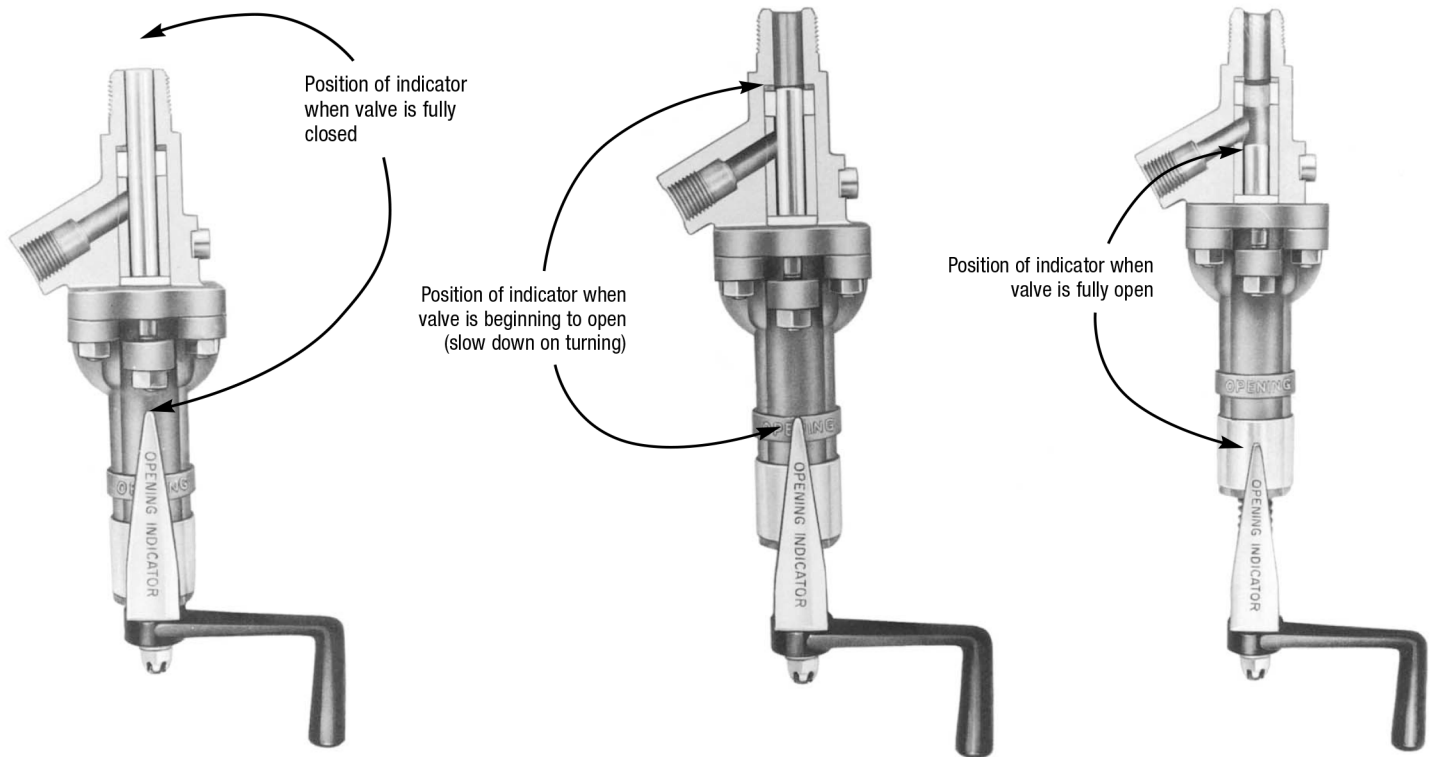
SAMPLING VALVE WITH OPENING INDICATOR

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 3/8" x 1/4"	SV-700 3/4" x 1/2"
SV-600 1/2" x 3/8"	SV-800 1" x 3/4"
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 3/4" MNPT inlet* by ____" FNPT (1/2" or 3/4") 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 multi-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.

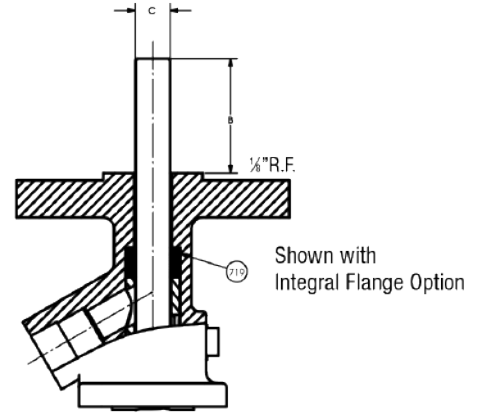
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HAND OPERATED SAMPLING VALVES SV-500, SV-600, SV-700 AND SV-800

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	719	BASE RING	
706	BONNET	304 SST	720	BODY	316 SST
707*	STEM	416 SST	724	GLAND NUTS	303 SST
708	GLAND	304 SST	725	GLAND STUDS	304 SST
712	BONNET NUTS	303 SST	731	CAGE LOCK	316 SST
713	BONNET STUDS	304 SST	740*	CAGE LOCK GASKET	RTFE
714*	GLAND RING	TFE	741	OPENING INDICATOR	304 SST
715	CAGE	316 SST	742	CRANK HANDLE	MALLEABLE IRON
716*	SPLIT NUT	316 SST			

* Denotes recommended spare parts
Wetted parts outlined



SV-500 3/8" x 1/4" ANSI 600							
A Closed	A Open	B	C	D	E	G NPT	H NPT
11 3/8"	13 3/4"	0"	.243"	1 1/8"	3 1/32"	3/8"	1/4"
13 3/8"	17 3/4"	2"	.243"	1 1/8"	3 1/32"	3/8"	1/4"
15 3/8"	21 3/4"	4"	.243"	1 1/8"	3 1/32"	3/8"	1/4"
17 3/8"	25 3/4"	6"	.243"	1 1/8"	3 1/32"	3/8"	1/4"

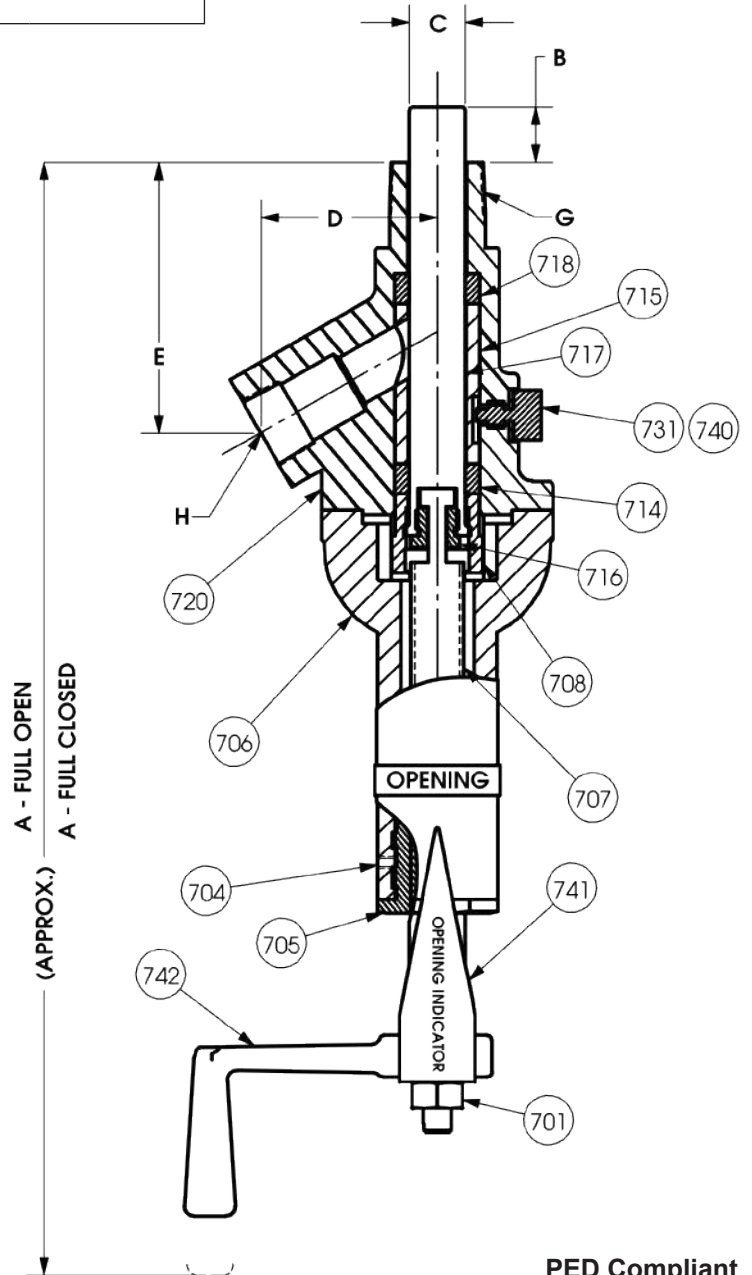
SV-600 1/2" x 3/8" ANSI 600							
A Closed	A Open	B	C	D	E	G NPT	H NPT
11 3/8"	13 3/4"	0"	.368"	1 1/8"	3 1/32"	1/2"	3/8"
13 3/8"	17 3/4"	2"	.368"	1 1/8"	3 1/32"	1/2"	3/8"
15 3/8"	21 3/4"	4"	.368"	1 1/8"	3 1/32"	1/2"	3/8"
17 3/8"	25 3/4"	6"	.368"	1 1/8"	3 1/32"	1/2"	3/8"

SV-700 3/4" x 1/2" and 3/4" x 3/4" ANSI 600							
A Closed	A Open	B	C	D	E	G NPT	H NPT
11 3/8"	13 7/8"	0"	.590"	1 1/8"	3 1/32"	3/4"	1/2", 3/4"
13 3/8"	17 7/8"	2"	.590"	1 1/8"	3 1/32"	3/4"	1/2", 3/4"
15 3/8"	21 7/8"	4"	.590"	1 1/8"	3 1/32"	3/4"	1/2", 3/4"
17 3/8"	25 7/8"	6"	.590"	1 1/8"	3 1/32"	3/4"	1/2", 3/4"

SV-800 1" x 3/4" and 1" x 1" ANSI 600							
A Closed	A Open	B	C	D	E	G NPT	H NPT
12 5/8"	15 1/2"	0"	.787"	2 3/8"	3 5/8"	1"	3/4", 1"
14 5/8"	19 1/2"	2"	.787"	2 3/8"	3 5/8"	1"	3/4", 1"
16 5/8"	23 1/2"	4"	.787"	2 3/8"	3 5/8"	1"	3/4", 1"
18 5/8"	27 1/2"	6"	.787"	2 3/8"	3 5/8"	1"	3/4", 1"

"B" DIM ± 1/16"
"C" DIM ± .002"

Forward Deck details see page 7, Item #712, #713, #724, #725

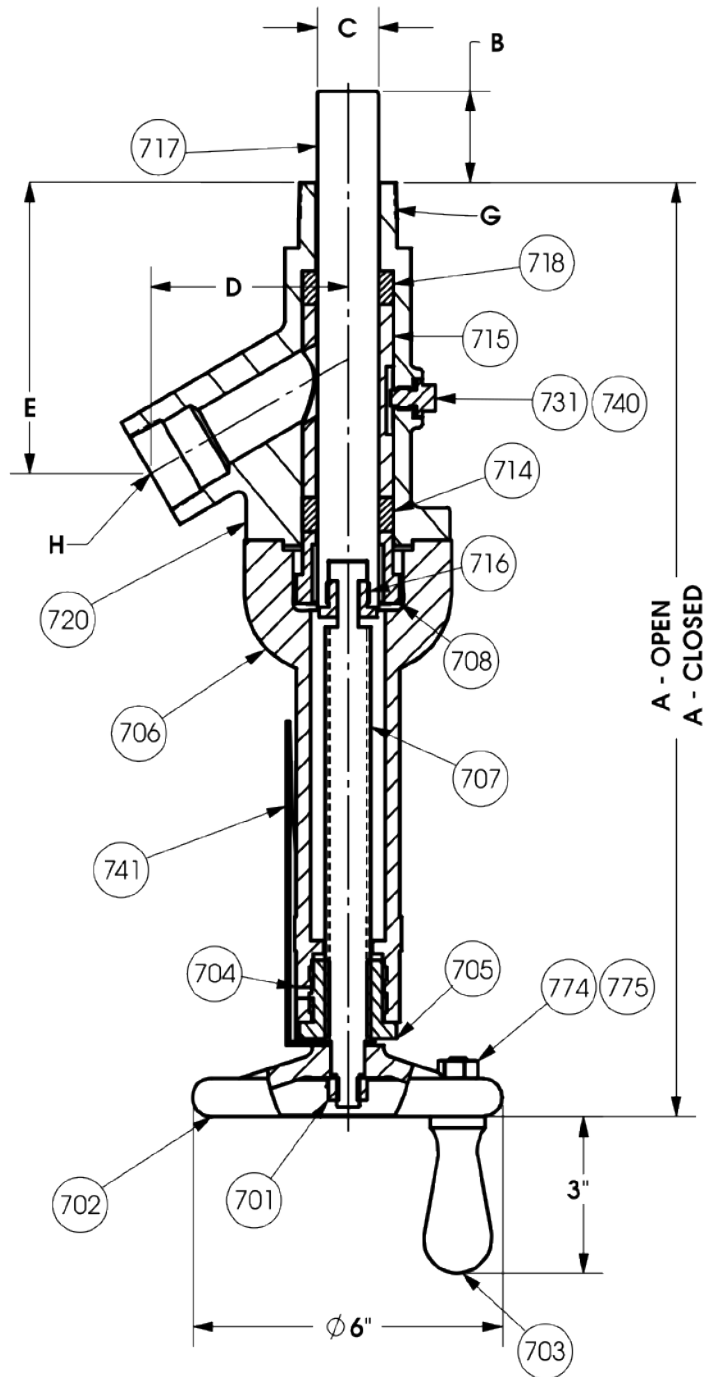


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HAND OPERATED SAMPLING VALVES SV-900 AND SV-1000

Part No.	Description	Material
701	WHEEL NUT	CARBON STEEL
702	HANDWHEEL	CAST IRON
703	TURN KNOB	416 SST
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
774	TURN KNOB NUT	303 SST
775	TURN KNOB WASHER	

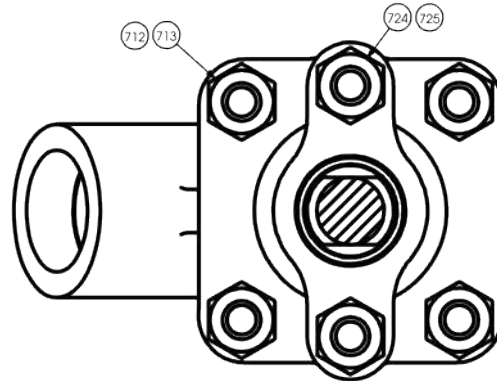
* Denotes recommended spare parts
Wetted parts outlined



SV-900 1 1/4" 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 1 1/2" x 1 1/4" 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 ± 1/16"
"C" DIM ± .002"



VALVE DECK DETAIL

PED Compliant

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.

SV-500 3/8" x 1/4" 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"	3/8"	1/4"	3/8"	2 1/2"
19 7/16"	23 5/8"	2"	.243"	1 7/8"	3 1/32"	3/8"	1/4"	3/8"	2 1/2"
23 7/16"	25 5/8"	4"	.243"	1 7/8"	3 1/32"	3/8"	1/4"	3/8"	2 1/2"

SV-600 1/2" x 3/8" 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"	1/2"	3/8"	3/8"	2 1/2"
19 7/16"	23 5/8"	2"	.368"	1 7/8"	3 1/32"	1/2"	3/8"	3/8"	2 1/2"
23 7/16"	25 5/8"	4"	.368"	1 7/8"	3 1/32"	1/2"	3/8"	3/8"	2 1/2"

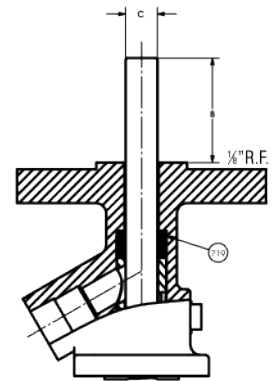
SV-700 3/4" x 1/2" and 3/4" x 3/4" ANSI 600									
A	As	B	C	D	E	G NPT	H NPT	J NPT	AIR CYL. BORE
15 5/8"	21 3/4"	0"	.590"	1 7/8"	3 1/32"	3/4"	1/2", 3/4"	3/8"	2 1/2"
19 5/8"	23 3/4"	2"	.590"	1 7/8"	3 1/32"	3/4"	1/2", 3/4"	3/8"	2 1/2"
13 5/8"	25 3/4"	4"	.590"	1 7/8"	3 1/32"	3/4"	1/2", 3/4"	3/8"	2 1/2"

SV-800 1" x 3/4" 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 3/8"	3 5/8"	1"	3/4", 1"	1/2"	3 1/4"
23 1/16"	27 1/16"	2"	.787"	2 3/8"	3 5/8"	1"	3/4", 1"	1/2"	3 1/4"
27 1/16"	29 1/16"	4"	.787"	2 3/8"	3 5/8"	1"	3/4", 1"	1/2"	3 1/4"

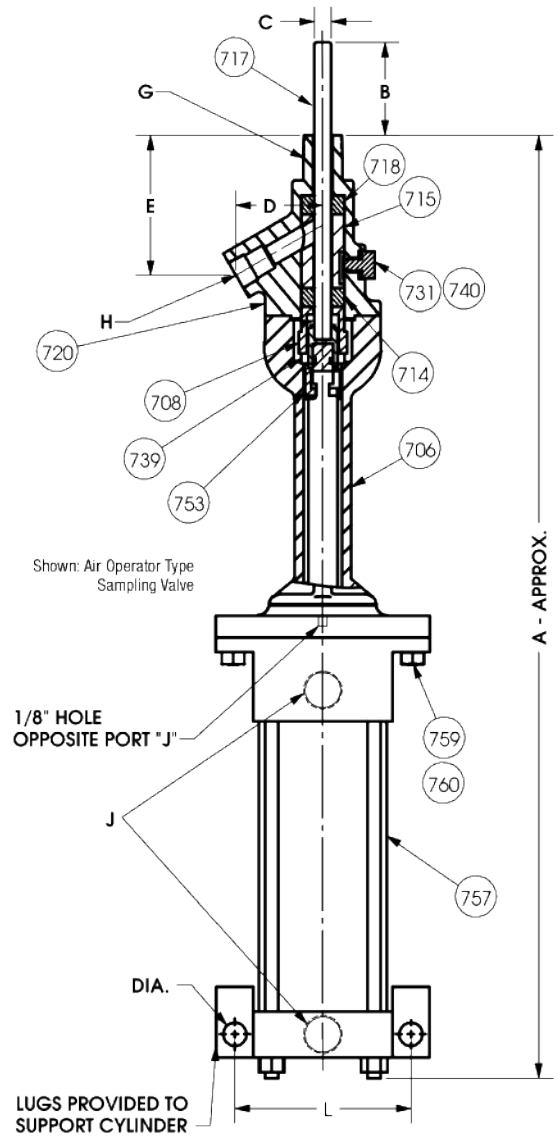
SV-900 1 1/4" x 1" ANSI 600									
A	As	B	C	D	E	G NPT	H NPT	J NPT	AIR CYL. BORE
23 5/8"	31 1/8"	0"	.984"	3 1/4"	4 7/8"	1 1/4"	1"	1/2"	4"
25 5/8"	33 1/8"	2"	.984"	3 1/4"	4 7/8"	1 1/4"	1"	1/2"	4"
27 5/8"	35 1/8"	4"	.984"	3 1/4"	4 7/8"	1 1/4"	1"	1/2"	4"

SV-1000 1 1/2" x 1 1/4" ANSI 600									
A	As	B	C	D	E	G NPT	H NPT	J NPT	AIR CYL. BORE
29 7/8"	33 15/16"	0"	1.181"	3 13/16"	5 9/16"	1 1/2"	1 1/4"	1/2"	5"
31 7/8"	35 15/16"	2"	1.181"	3 13/16"	5 9/16"	1 1/2"	1 1/4"	1/2"	5"
33 7/8"	37 15/16"	4"	1.181"	3 13/16"	5 9/16"	1 1/2"	1 1/4"	1/2"	5"

A = Air Operated "B" DIM ± 1/16"
 AS = Air Switch Type "C" DIM ± .002"
 For Air Cylinder support information see page 9
 Forward Deck details see page 7, Item #712, #713, #724, #725



Shown with Integral Flange Option



Shown: Air Operator Type Sampling Valve

1/8" HOLE OPPOSITE PORT "J"

LUGS PROVIDED TO SUPPORT CYLINDER

A - APPROX.

PED Compliant

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

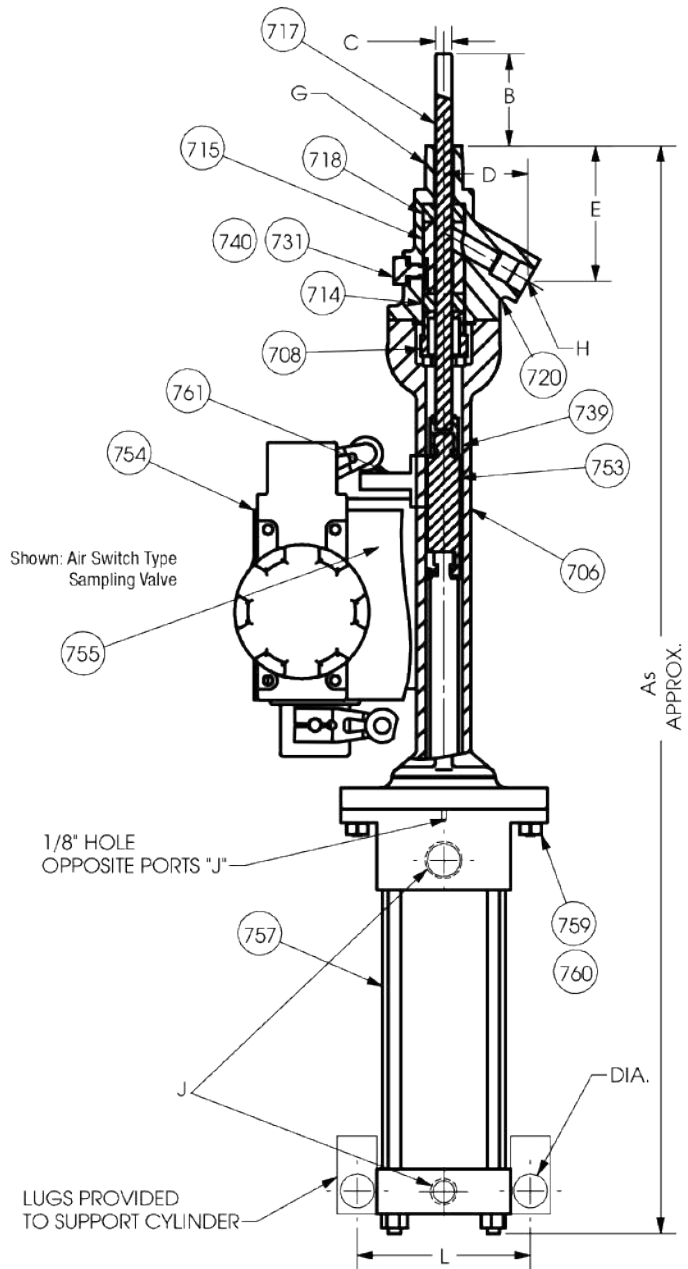
* Denotes recommended spare parts

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 1/2	3 3/4	7/16
SV-600	2 1/2	3 3/4	7/16
SV-700	2 1/2	3 3/4	7/16
SV-800	3 1/4	4 3/4	9/16
SV-900	4	5 1/2	9/16
SV-1000	5	6 1/8	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

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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 valves. 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.

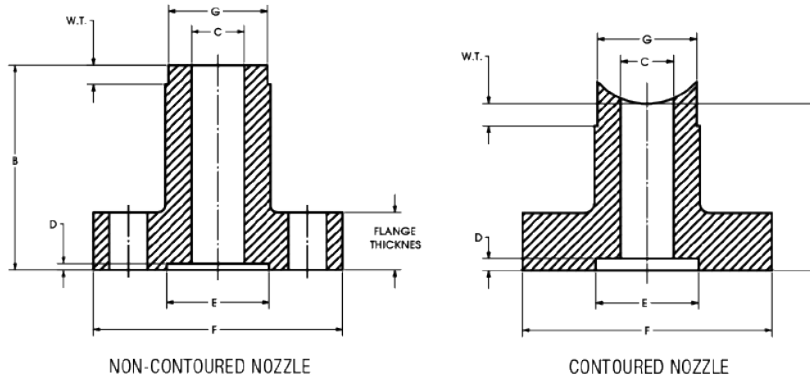
Integral Flanged Valves are available in the following sizes and ANSI Flange Ratings:

- 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 1/8" standard and 1/16" available upon request. The Adapter is recessed to facilitate the piloting of the valve, as shown in the diagram on page 11. Strahman can provide a mating flange nozzle, or an adapter that has a female recess to match the male raised face of the Strahman Valve. This insures that the valve and flange are concentric and that no scoring of the piston occurs on the inside of the nozzle that may cause the valve to leak.

CAUTION: If there is no proper recess in the mating flange as supplied by the customer, or no Strahman Nozzle or Adapter is supplied there must be a required 1/4" clearance between the outside diameter of the piston and the inside diameter of the nozzle. The following chart is a guide of proper measurements to prevent scoring of the piston. Strahman Adapters are shown on page 11.



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	1/8"	1"	1"
SV-600 (½")	1.379"	.368	.418	.618	1/8"	1"	1"
SV-700 (¾")	1.692"	.590	.640	.840	1/8"	1"	1 1/8"
SV-700 (1")	2.004"	.590	.640	.840	1/8"	1"	1 1/8"
SV-800 (1")	2.004"	.787	.837	1.037	1/8"	1"	1 1/8"
SV-900 (1 ¼")	2.504"	.984	1.034	1.234	11/64"	1"	1 1/8"
SV-1000 (1 ½")	2.879"	1.181	1.233	1.431	11/64"	1"	1 1/8"

* 600 lbs. = ¾" all sizes

SPECIAL NOTE - ALL NOZZLES

Where required, give pipe size and schedule or tank wall thickness and radius.

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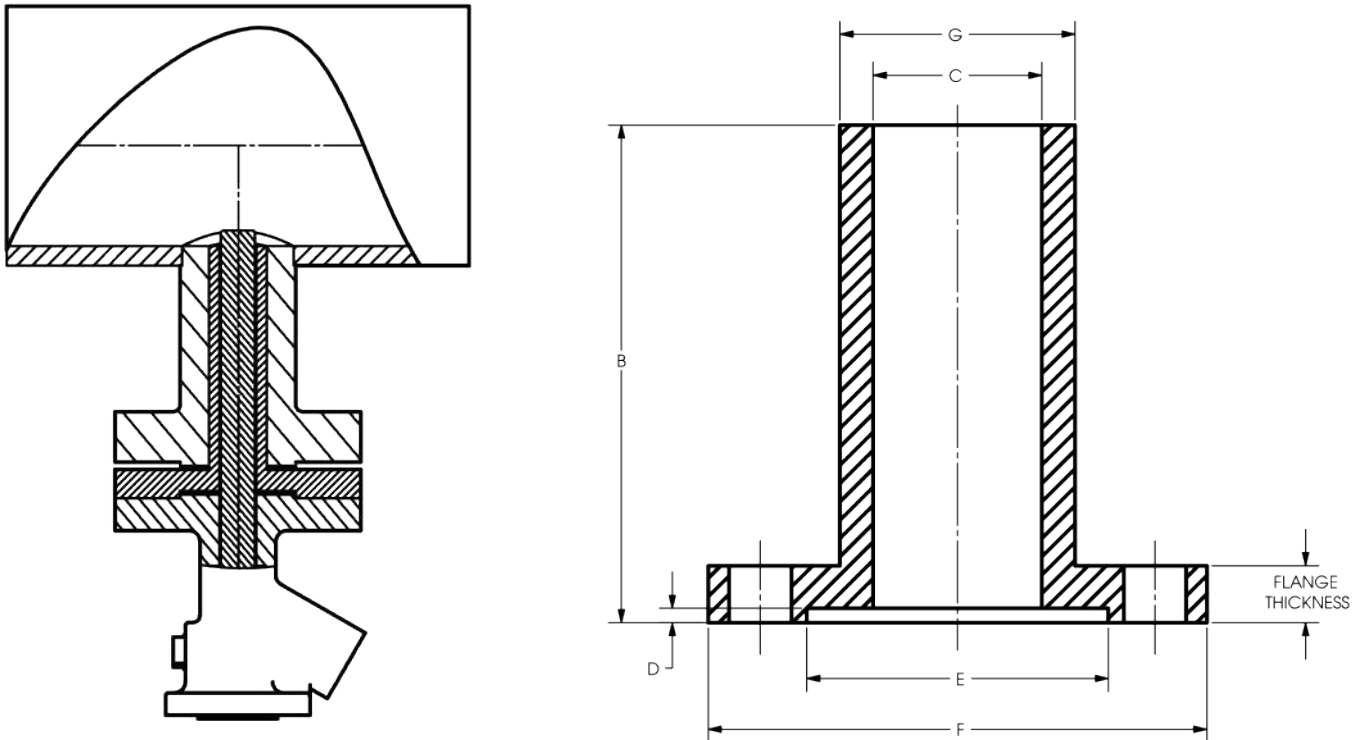
SAMPLING VALVE ADAPTER

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 1/4" 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.

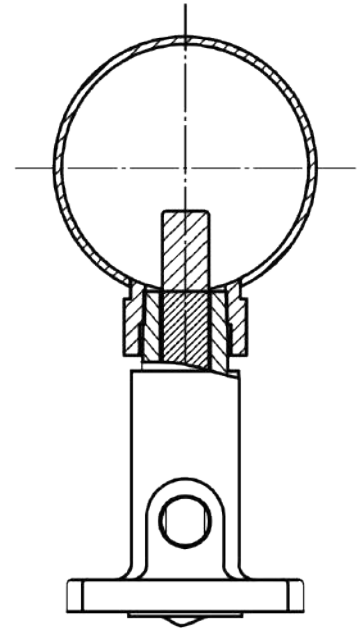


HALF COUPLINGS AND SPECIAL TEES

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.

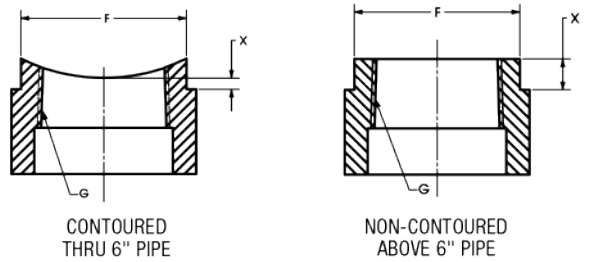


HALF COUPLING INSTALLATION INSTRUCTIONS

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.



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.

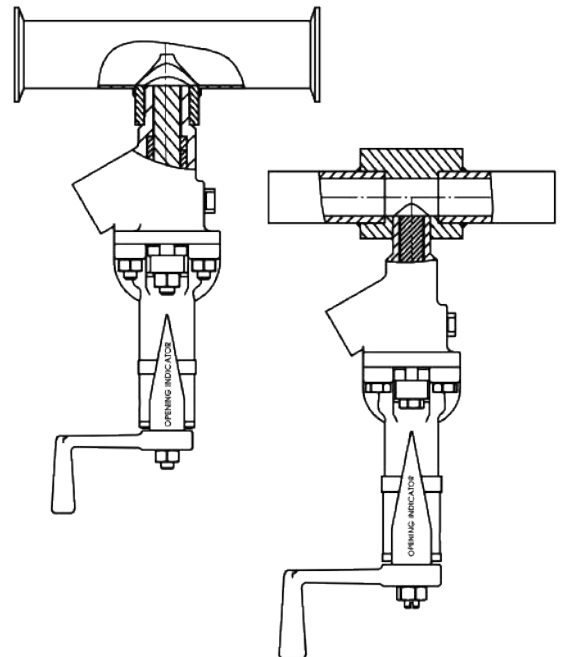
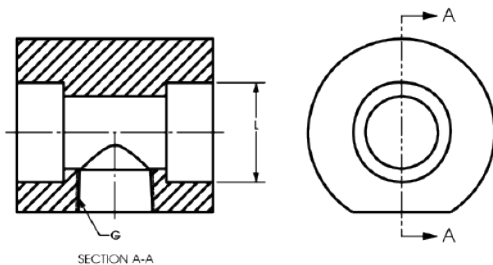
SPECIAL TEES

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".



PED Compliant

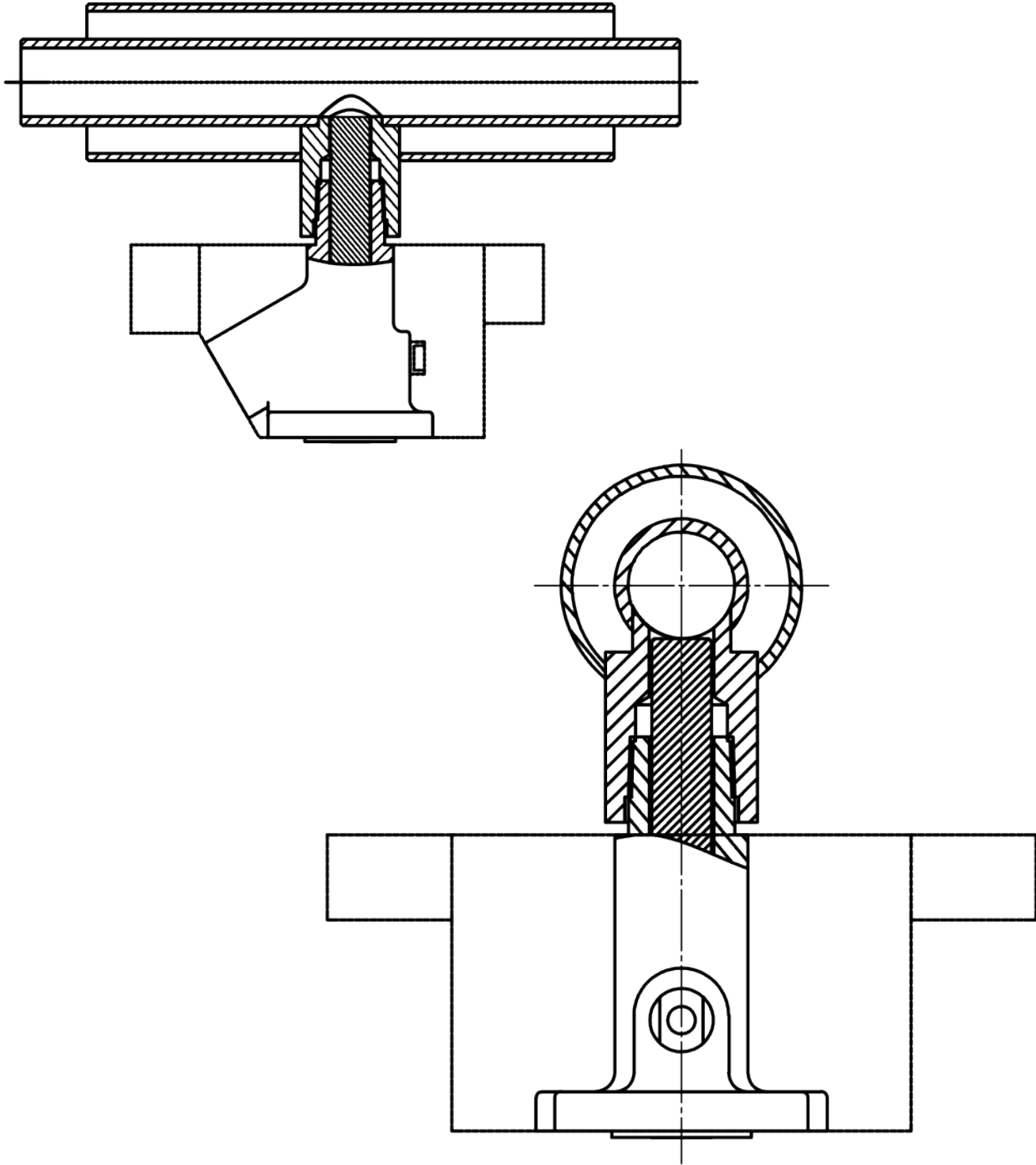
JACKETED TEES

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.

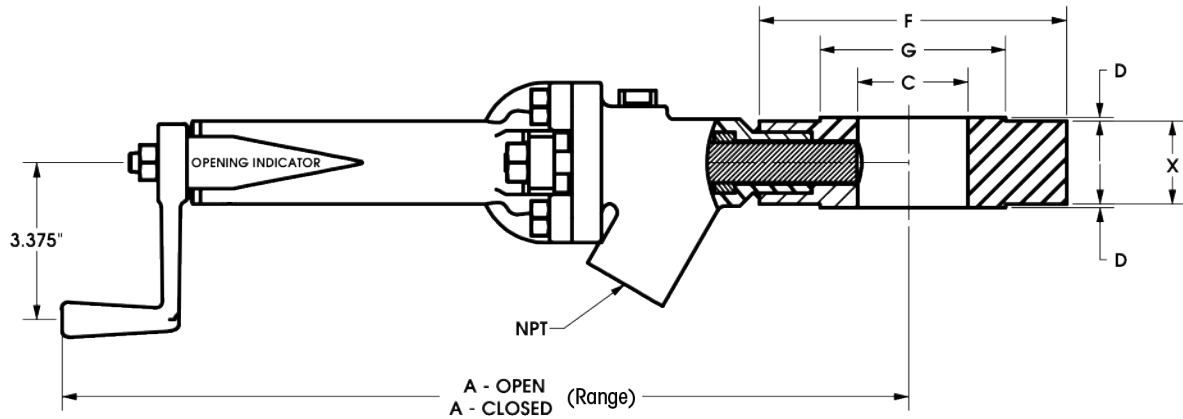
Example: 3" sch. 40 core with 4" sch. 10 jacket.

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

Also available with air cylinder.



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 Q'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.

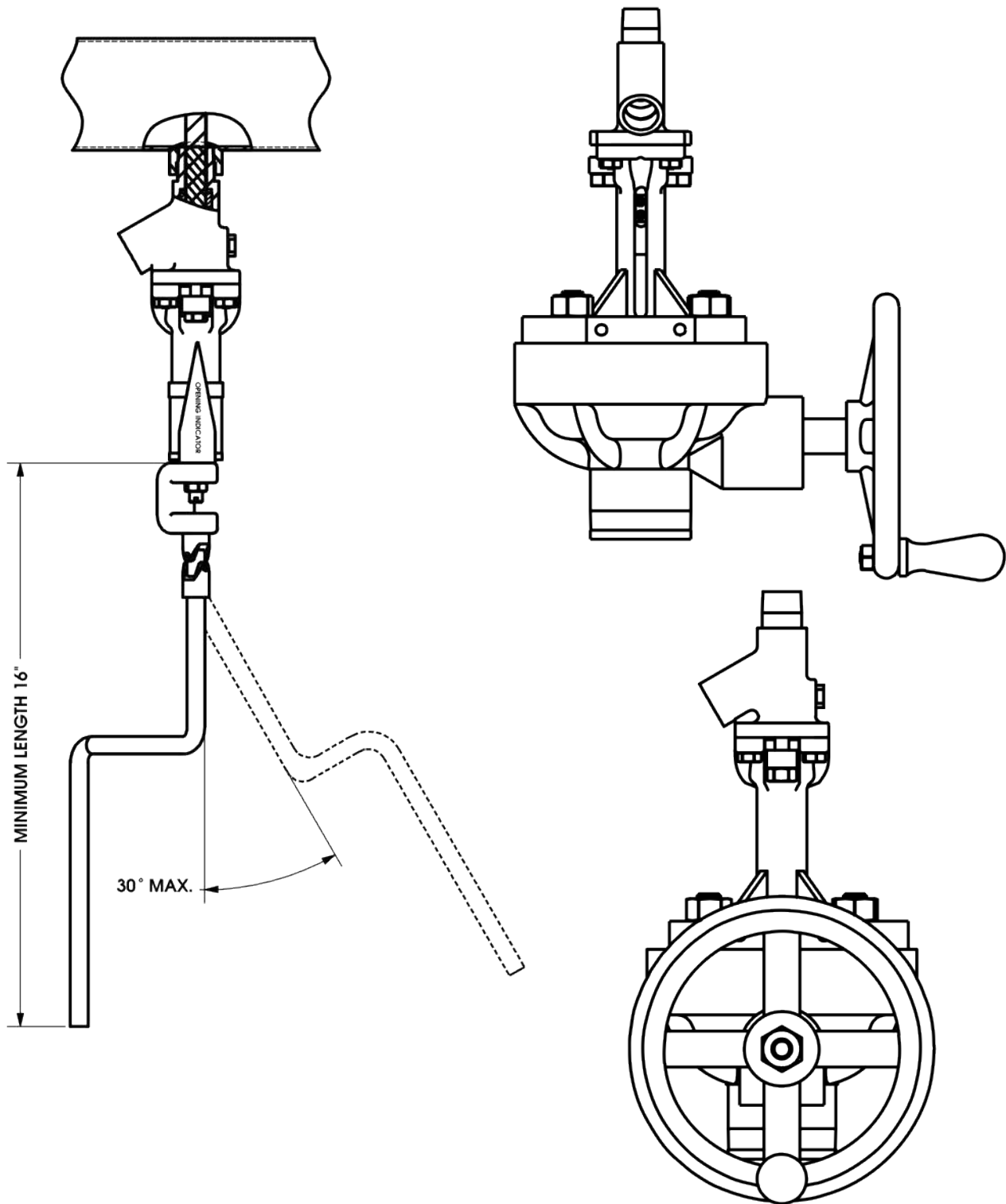
DRILLING: 300 PSI - ANSI STANDARD BOLT HOLES STRADDLE Q'S.					
FLANGE SIZE	A OPEN	A CLOSED	D	F	G
1"	22 11/16"	14 15/16"	1/16"	4 7/8"	2.000" 1.995"
1 1/2"	23 13/16"	15 1/2"	1/16"	6 1/8"	2.875" 2.870"
2"	20 1/2"	15 3/4"	1/16"	6 1/2"	3.625" 3.620"
2 1/2"	23 13/16"	16 3/16"	1/16"	7 1/2"	4.125" 4.120"
3"	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 Q'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"

PED Compliant

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

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.

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:

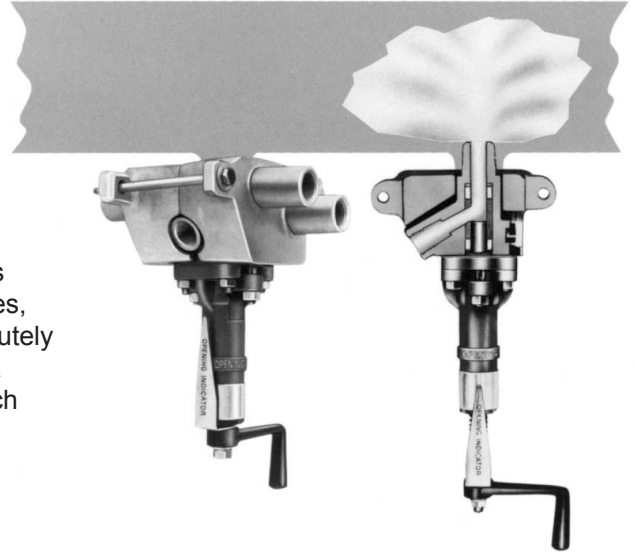
- No dissimilar metals welded together (carbon steel jacket on stainless steel valve body).
- No distortion of the valve body due to welding (heat) that can affect the piston travel.
- No heat affected zone that can cause inter-granular corrosion by changing grain structure of the body material.
- No 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.



Pressure: 300 PSI
Temperature: 600°F

½" FNPT connections standard

The Strahman family of products include:

SAMPLING VALVES

Strahman has a full line of sampling valves that produce live samples without exception. Our sampling valves unique designs prevent failure caused by sediment or clogging.

DRAIN VALVES

Strahman Drain Valves are designed to prevent clogging. They are ideal for use in liquid and gas service or with slurries, polymers, and high viscosity fluids that tend to solidify at room temperature.

LINE BLINDS

Strahman Line Blinds provide zero leakage down stream and total isolation on process pipelines, vessels and maritime applications. No pipeline movement is required when blind position is changed.

AUTOMATED VALVES & FIRE SAFE PRODUCTS

Strahman automated valve packages with floating ball valves and resilient seated butterfly valves come complete with electric or pneumatic actuators for a wide array of industrial applications. Additionally, a full suite of API 607 fire safe valve products are offered as actuated units or to be used in conjunction with our FM approved thermal shut-off assemblies. Resettable Emergency Block Valves (R-EBV) are also available for the oil & gas and chemical industries.

WASH DOWN EQUIPMENT

Strahman offers a full line of mixing units, hose stations, hoses, nozzles and wash down accessories. Our wash down line is designed for industrial use and is used in a wide variety of industries including food, beverage, pharmaceutical, chemical and other applications.

Please contact your local Strahman representative for further details or visit our website: www.strahmanvalves.com



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DV & VL SERIES

VESSEL & REACTOR VALVES

SOFT SEAL PISTON VALVES



 *Strahman*

PROCESS VALVES

SERIES DV, STANDARD RANGE

ORIGINAL STRAHMAN RAM-TYPE DRAIN VALVE

FEATURES

- Quality System Registered to ISO 9001:2008 Certificate #003264
- Valve flanges meet the requirements of ANSI B16.5
- All valves manufactured in accordance to ASME/ANSI B16.34 standard
- All Valves 100% Leak Tested for bubble tight shut-off
- Vacuum pressure tested to 28 vacuum inches of mercury (0.94 PSIA) upon request
- Strahman 1-inch to 6-inch 150, 300, & 600 Class ANSI drain valves qualify by design to API Fire Test for Valves
- 3/16-inch RF on the inlet flange for mating to Strahman drain valve nozzles, adapters and inserts.
- 45° and 60° straight neck discharges are standard
- Packing Materials:
 - PTFE rated -328°F (-200°C) to 450°F (232°C)
 - MR to 650°F (343°C)
 - Graphite rated to 1000°F (538°C)
 - TFM 1600 rated -328°F (-200°C) to 450°F (232°C)



AVAILABLE SIZES

- 1-inch, 2-inch and 3-inch, 900, 1100 and 1500 Class ANSI RF flanges*
- 1-inch through 6-inch 150, 300 and 600 Class ANSI RF flanges*
- 8-inch, 10-inch and 12-inch, 150 and 300 Class ANSI RF
- Optional flanges include DIN, British Standard, JIS, ANSI RJ, flat face and quick disconnect*

AVAILABLE OPERATORS

- Manual Handwheel
 - Gear Operator
 - Air Cylinder (with or without external switches)
 - Hydraulic Cylinder (with or without external switches)
 - Motor (electric or pneumatic) with external switches
 - Multi-turn Electric Rotork motor with internal switches†
- * For 316 and 316L stainless steel pressure and temperature ratings see the tables below.
 For all other sizes and materials consult Strahman direct.
 † Other multi-turn operators available upon request.

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	Temperature	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	Temperature	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

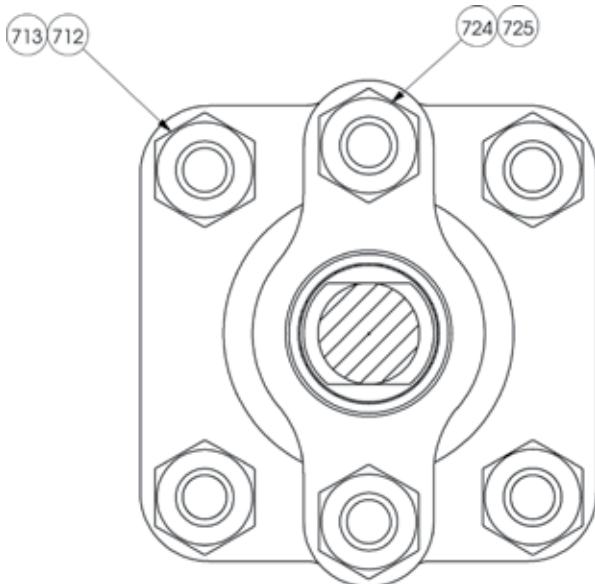
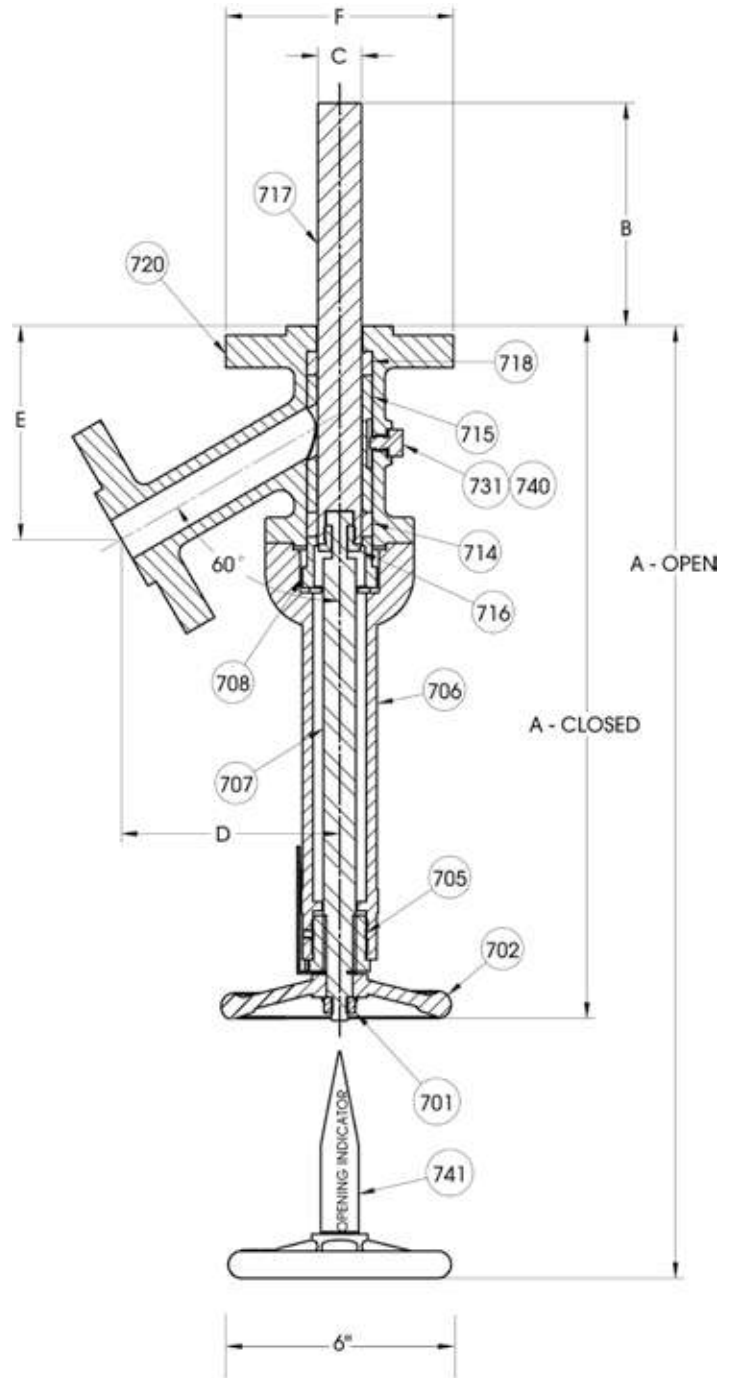
	Pressure	psig	1440	1240	1120	1025	955	900	870	845	830	775	835
316	CL 600	(barg)	(99.3)	(85.5)	(77.2)	(70.7)	(65.9)	(62.1)	(60.0)	(58.3)	(57.2)	(53.4)	(57.6)
& 316L	Temperature	Deg. F	100	200	300	400	500	600	700	800	900	950	850
		(Deg. C)	(37.8)	(93.3)	(148.9)	(204.4)	(260.0)	(315.6)	(371.1)	(426.7)	(482.2)	(510.0)	(454.4)

SERIES DV, STANDARD RANGE

1" & 1½" HAND OPERATED RISING STEM RAM-TYPE DRAIN VALVES

Part No.	Description	Std. Material
701	Hand Wheel Nut	304SST
702	Hand Wheel	Cast Iron
704	Bushing Lock Screw	304SST
705	Bushing	Bronze (SST Avail.)
706	Bonnet	304SST
707	Stem *	416SST
708	Gland	304SST
712	Bonnet Nut	316SST
713	Bonnet Stud	304SST
714	Gland Ring *	Braided TFE
715	Cage †	316SST
716	Split Nut *	316SST
717	Piston * †	316SST
718	Inlet Ring * †	TFE
720	Body †	316SST
724	Gland Nut	316SST
725	Gland Stud	304SST
731	Cage Lock †	316SST
740	Cage Lock Gasket * †	TFE
741	Opening Indicator	304SST

* Indicates recommended spare parts
 † Denotes wetted parts



1" through 2 ½" Valve Body Deck

CAUTION

When a Strahman adapter is not supplied with the drain valve, or the customer's nozzle does not have a piloting recess, the nozzle bore must be ¼" larger than the piston diameter. This clearance prevents the piston from scoring on the inside of the nozzle which could cause the valve to leak.

STANDARD DIMENSIONS FOR 1" & 1½" HAND OPERATED RISING STEM RAM-TYPE DRAIN VALVES

1" Drain Valve with Standard 60 Degree Straight Neck Discharge							
Pressure Class	A Closed	A Open	B ± 1/8"	C ± .002"	D	E	F
ANSI Class 150	12 ¼"	16 ½"	2"	0.984"	4 1/8"	3 ¾"	4 ¼"
	14 ¼"	20 ½"	4"	0.984"	4 1/8"	3 ¾"	4 ¼"
	16 ¼"	24 ½"	6"	0.984"	4 1/8"	3 ¾"	4 ¼"
	18 ¼"	28 ½"	8"	0.984"	4 1/8"	3 ¾"	4 ¼"
	22 ¼"	36 ½"	12"	0.984"	4 1/8"	3 ¾"	4 ¼"
ANSI Class 300	13"	17 1/16"	2"	0.984"	4 13/16"	4 5/8"	4 7/8"
	15"	21 1/16"	4"	0.984"	4 13/16"	4 9/16"	4 7/8"
	17"	25 1/16"	6"	0.984"	4 13/16"	4 9/16"	4 7/8"
	19"	29 1/16"	8"	0.984"	4 13/16"	4 9/16"	4 7/8"
	23"	37 1/16"	12"	0.984"	4 13/16"	4 9/16"	4 7/8"
ANSI Class 600	13 3/16"	18 1/8"	2"	0.984"	5"	4 7/8"	4 7/8"
	15 3/16"	22 1/8"	4"	0.984"	5"	4 7/8"	4 7/8"
	17 3/16"	26 1/8"	6"	0.984"	5"	4 7/8"	4 7/8"
	19 3/16"	30 1/8"	8"	0.984"	5"	4 7/8"	4 7/8"
	23 3/16"	38 1/8"	12"	0.984"	5"	4 7/8"	4 7/8"

1½" Drain Valve with Standard 60 Degree Straight Neck Discharge							
Pressure Class	A Closed	A Open	B ± 1/8"	C ± .002"	D	E	F
ANSI Class 150	13 5/8"	18 7/16"	2"	1.181"	5"	4 5/8"	5"
	15 5/8"	22 7/16"	4"	1.181"	5"	4 5/8"	5"
	17 5/8"	26 7/16"	6"	1.181"	5"	4 5/8"	5"
	19 5/8"	30 7/16"	8"	1.181"	5"	4 5/8"	5"
	23 5/8"	38 7/16"	12"	1.181"	5"	4 5/8"	5"
ANSI Class 300	14 5/16"	19 1/2"	2"	1.181"	5 5/16"	5 1/4"	6 1/8"
	16 5/16"	23 1/2"	4"	1.181"	5 5/16"	5 1/4"	6 1/8"
	18 5/16"	27 1/2"	6"	1.181"	5 5/16"	5 1/4"	6 1/8"
	20 5/16"	31 1/2"	8"	1.181"	5 5/16"	5 1/4"	6 1/8"
	24 5/16"	39 1/2"	12"	1.181"	5 5/16"	5 1/4"	6 1/8"
ANSI Class 600	14 5/8"	20 1/8"	2"	1.181"	5 7/8"	5 1/4"	6 1/8"
	16 5/8"	24 1/8"	4"	1.181"	5 7/8"	5 3/4"	6 1/8"
	18 5/8"	28 1/8"	6"	1.181"	5 7/8"	5 3/4"	6 1/8"
	20 5/8"	32 1/8"	8"	1.181"	5 7/8"	5 3/4"	6 1/8"
	24 5/8"	40 1/8"	12"	1.181"	5 7/8"	5 3/4"	6 1/8"

1" Drain Valve with Standard 45 Degree Straight Neck Discharge							
Pressure Class	A Closed	A Open	B ± 1/8"	C ± .002"	D	E	F
ANSI Class 150	14"	18 7/8"	2"	0.984	4 1/2"	6 1/4"	4 1/4"
	16"	22 7/8"	4"	0.984	4 1/2"	6 1/4"	4 1/4"
	18"	26 7/8"	6"	0.984	4 1/2"	6 1/4"	4 1/4"
	20"	30 7/8"	8"	0.984	4 1/2"	6 1/4"	4 1/4"
	24"	38 7/8"	12"	0.984	4 1/2"	6 1/4"	4 1/4"
ANSI Class 300	14"	18 7/8"	2"	0.984	4 5/8"	6 3/8"	4 7/8"
	16"	22 7/8"	4"	0.984	4 5/8"	6 3/8"	4 7/8"
	18"	26 7/8"	6"	0.984	4 5/8"	6 3/8"	4 7/8"
	20"	30 7/8"	8"	0.984	4 5/8"	6 3/8"	4 7/8"
	24"	38 7/8"	12"	0.984	4 5/8"	6 3/8"	4 7/8"
ANSI Class 600	14"	18 7/8"	2"	0.984	4 3/4"	6 3/8"	4 7/8"
	16"	22 7/8"	4"	0.984	4 3/4"	6 3/8"	4 7/8"
	18"	26 7/8"	6"	0.984	4 3/4"	6 3/8"	4 7/8"
	20"	30 7/8"	8"	0.984	4 3/4"	6 3/8"	4 7/8"
	24"	38 7/8"	12"	0.984	4 3/4"	6 3/8"	4 7/8"

1½" Drain Valve with Standard 45 Degree Straight Neck Discharge							
Pressure Class	A Closed	A Open	B ± 1/8"	C ± .002"	D	E	F
ANSI Class 150	15 5/16"	21 1/16"	2"	1.181"	5 1/4"	7 7/16"	5"
	17 5/16"	25 1/16"	4"	1.181"	5 1/4"	7 7/16"	5"
	19 5/16"	29 1/16"	6"	1.181"	5 1/4"	7 7/16"	5"
	21 5/16"	33 1/16"	8"	1.181"	5 1/4"	7 7/16"	5"
	25 5/16"	41 1/16"	12"	1.181"	5 1/4"	7 7/16"	5"
ANSI Class 300	15 5/16"	21 1/16"	2"	1.181"	5 5/16"	7 9/16"	6 1/8"
	17 5/16"	25 1/16"	4"	1.181"	5 5/16"	7 9/16"	6 1/8"
	19 5/16"	29 1/16"	6"	1.181"	5 5/16"	7 9/16"	6 1/8"
	21 5/16"	33 1/16"	8"	1.181"	5 5/16"	7 9/16"	6 1/8"
	25 5/16"	41 1/16"	12"	1.181"	5 5/16"	7 9/16"	6 1/8"
ANSI Class 600	15 1/2"	21	2"	1.181"	5 1/2"	7 5/8"	6 1/8"
	17 1/2"	25	4"	1.181"	5 1/2"	7 5/8"	6 1/8"
	19 1/2"	29	6"	1.181"	5 1/2"	7 5/8"	6 1/8"
	21 1/2"	33	8"	1.181"	5 1/2"	7 5/8"	6 1/8"
	25 1/2"	41	12"	1.181"	5 1/2"	7 5/8"	6 1/8"

* Strahman piston extensions are measured from the height of the RF for an ANSI standard flange. For ANSI 600 class valves the extension is equal to the actual RF provided by Strahman. For ANSI 150 and 300 class valves the ANSI standard RF height is 1/8" while Strahman provides 3/8" height for piloting as standard. Customers can request a 1/8" RF height for RF-to-RF flange installation and the piston extension will equal the actual distance from the RF. For the Strahman standard (3/8" height) the distance measured from the RF to the tip of the piston will be 1/8" less than the description. Example: 2" ANSI 150 Drain Valve with 6" piston extension will measure 5 7/8" from a standard Strahman RF to the tip of the piston. Piston extension tolerances tighter than 1/8" available upon request.

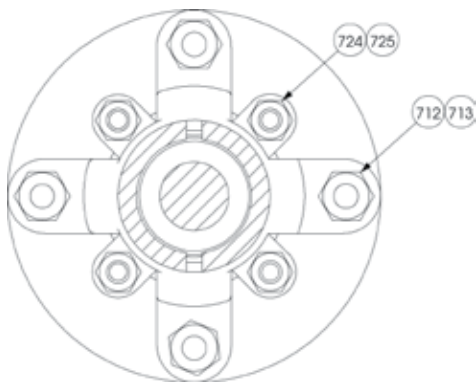
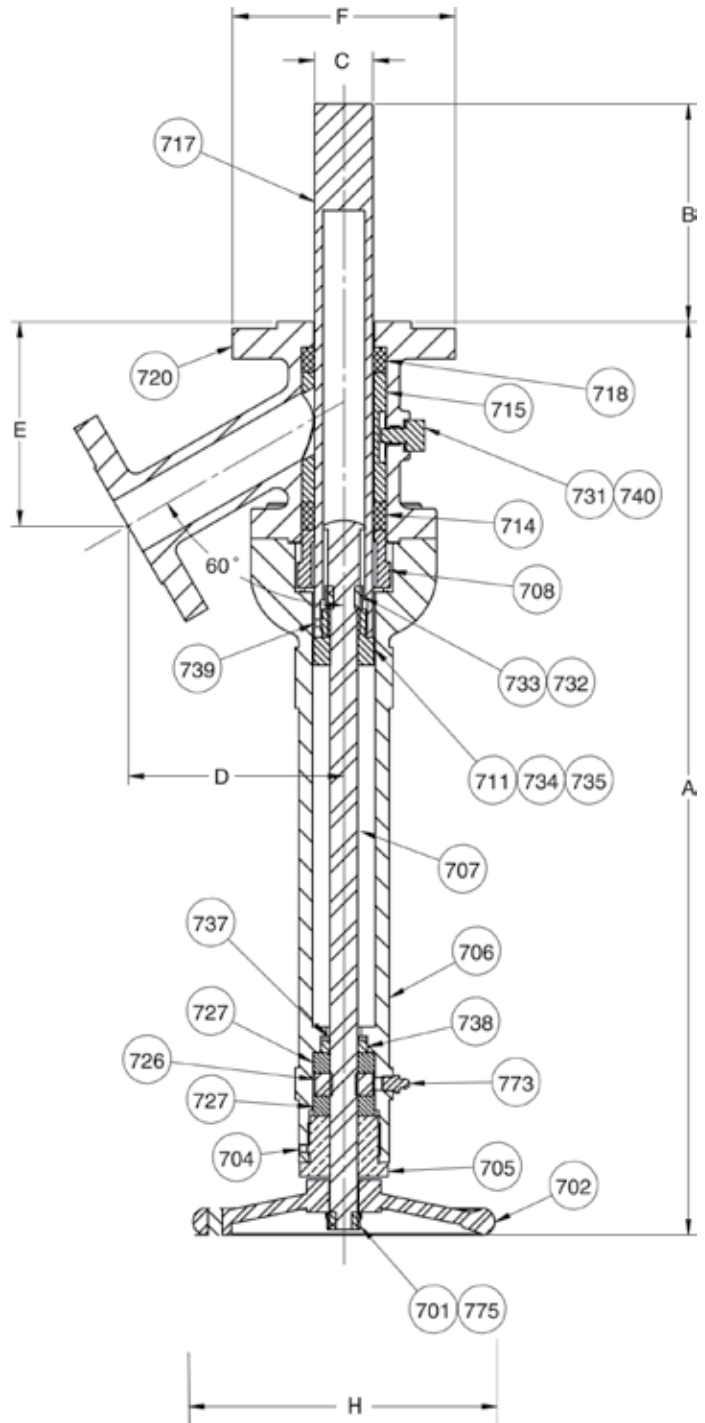
SERIES DV, STANDARD RANGE

HAND OPERATED TELESCOPING STEM RAM-TYPE DRAIN VALVES

Part No.	Description	Std. Material
701	Hand Wheel Nut	304SST
702	Hand Wheel	Cast Iron
704	Bushing Lock Screw	304SST
705	Bushing *	303SST
706	Bonnet	Carbon Steel
707	Stem *	416SST
708	Gland	304SST
711	Crosshead*	Bronze (SST Avail.)
712	Bonnet Nut	316SST
713	Bonnet Stud	304SST
714	Gland Ring *	Braided TFE
715	Cage †	316SST
717	Piston * †	316SST
718	Inlet Ring * †	TFE
720	Body †	316SST
724	Gland Nut	316SST
725	Gland Stud	304SST
726	Bearing Collar	303SST
727	Bearing *	Carbon Steel
731	Cage Lock †	316SST
732	Stop Collar	303SST
733	Collar Pin	304SST
734	Stem Guide	304SST
735	Guide Screws	304SST
737	Bearing Retainer	303SST
738	Bearing Seal	TFE
739	Piston Set Screw	304SST
740	Cage Lock Gasket * †	TFE
773	Grease Fitting	Steel

* Indicates recommended spare parts

† Denotes wetted parts



3" and Larger Valve Body Deck

CAUTION

When a Strahman adapter is not supplied with the drain valve, or the customer's nozzle does not have a piloting recess, the nozzle bore must be 1/4" larger than the piston diameter. This clearance prevents the piston from scoring on the inside of the nozzle which could cause the valve to leak.

STANDARD DIMENSIONS FOR HAND OPERATED TELESCOPING STEM RAM-TYPE DRAIN VALVES

ANSI Class 150 Drain Valve with standard 60 Degree Straight Neck Discharge									
Valve Size	A Std.	B ± 1/8"*	C ± .002"	D	E	F	H	A Max.	B Max.
2"	23"	6"	1.575"	5 1/16"	5 1/4"	6"	8 1/8"	29"	12"
2 1/2"	23 7/8"	6"	1.968"	6 1/4"	5 3/4"	7"	8 1/8"	29 7/8"	12"
3"	26 7/8"	6"	2.362"	7 3/8"	6 5/8"	7 1/2"	10 3/4"	32 1/8"	12"
4"	29 5/8"	6"	3.149"	8 3/8"	7 1/2"	9"	10 3/4"	35 5/8"	12"
6"	39 1/4"	6"	4.921"	11"	10 1/2"	11"	18"	42 1/4"	9"

ANSI Class 150 Drain Valve with standard 45 Degree Straight Neck Discharge									
Valve Size	A Std.	B ± 1/8"*	C ± .002"	D	E	F	H		
2"	26 3/8"	6"	1.575"	6 1/2"	8 3/8"	6"	8 1/8"		
3"	31 3/8"	6"	2.362"	8 5/8"	11"	7 1/2"	10 3/4"		
4"	34 7/8"	6"	3.149"	10 3/8"	12 3/4"	9"	10 3/4"		
6"	45 13/16"	6"	4.921"	13 5/8"	17 3/8"	11"	18"		

ANSI Class 150 Drain Valve with standard 90 Degree Straight Neck Discharge									
Valve Size	A Std.	B ± 1/8"*	C ± .002"	D	E	F	H	A Max.	B Max.
4"	38 7/8"	6"	3.149"	6 3/4"	6 3/4"	9"	10 3/4"	38 1/2"	6"
6"	39 3/8"	0"	4.921"	8 3/4"	7 1/4"	11"	18"	39 3/8"	7 1/2"

ANSI Class 300 Drain Valve with standard 60 Degree Straight Neck Discharge									
Valve Size	A Std.	B ± 1/8"*	C ± .002"	D	E	F	H	A Max.	B Max.
2"	23 1/2"	5 1/2"	1.575"	6 1/8"	5 9/16"	6 1/2"	8 1/8"	29 1/2"	11 1/2"
3"	27 3/8"	5 1/2"	2.362"	7 1/4"	7"	8 1/4"	10 3/4"	33 3/8"	11 1/2"
4"	30 1/8"	5 1/2"	3.149"	8 3/4"	8 3/8"	10"	10 3/4"	36 1/8"	11 1/2"
6"	39 3/8"	5 7/8"	4.921"	12"	11"	12 1/2"	18"	39 3/8"	5 7/8"

ANSI Class 300 Drain Valve with standard 45 Degree Straight Neck Discharge									
Valve Size	A Std.	B ± 1/8"*	C ± .002"	D	E	F	H		
2"	26 3/8"	6"	1.575"	6 1/2"	8 1/2"	6 1/2"	8 1/8"		
3"	31 1/2"	6"	2.362"	8 5/8"	11 1/4"	8 1/4"	10 3/4"		
4"	34 3/4"	6"	3.149"	10 3/8"	13 1/8"	10"	10 3/4"		
6"	46 3/8"	6"	4.921"	13 5/8"	17 3/4"	12 1/2"	18"		

ANSI Class 600 Drain Valve with standard 60 Degree Straight Neck Discharge									
Valve Size	A Std.	B ± 1/8"*	C ± .002"	D	E	F	H	A Max.	B Max.
2"	25 1/2"	6"	1.575"	6 1/16"	6 3/8"	6 1/2"	8 1/8"	25 1/2"	6"
3"	29 1/2"	6"	2.362"	8 1/8"	8"	8 1/4"	10 3/4"	29 1/2"	6"
4"	33 1/2"	6"	3.149"	10"	9 5/8"	10 3/4"	10 3/4"	33 1/2"	6"
6"	44 1/8"	6"	4.921"	12 7/8"	12"	14"	18"	44 1/8"	6"

ANSI Class 600 Drain Valve with standard 45 Degree Straight Neck Discharge									
Valve Size	A Std.	B ± 1/8"*	C ± .002"	D	E	F	H		
2"	26 1/2"	6"	1.575"	6 1/2"	8 3/4"	6 1/2"	8 1/8"		
3"	31 1/16"	6"	2.362"	8 5/8"	11 7/16"	8 1/4"	10 3/4"		
4"	35"	6"	3.149"	10 3/8"	13 7/8"	10 3/4"	10 3/4"		
6"	46 3/8"	6"	4.921"	13 5/8"	18 1/4"	14"	18"		

* Strahman piston extensions are measured from the height of the RF for an ANSI standard flange. For ANSI 600 class valves the extension is equal to the actual RF provided by Strahman. For ANSI 150 and 300 class valves the ANSI standard RF height is 1/8" while Strahman provides 3/16" height for piloting as standard. Customers can request a 1/16" RF height for RF-to-RF flange installation and the piston extension will equal the actual distance from the RF. For the Strahman standard (3/16" height) the distance measured from the RF to the tip of the piston will be 1/8" less than the description. Example: 2" ANSI 150 Drain Valve with 6" piston extension will measure 5 7/8" from a standard Strahman RF to the tip of the piston. Piston Extension tolerances tighter than 1/8" available upon request.

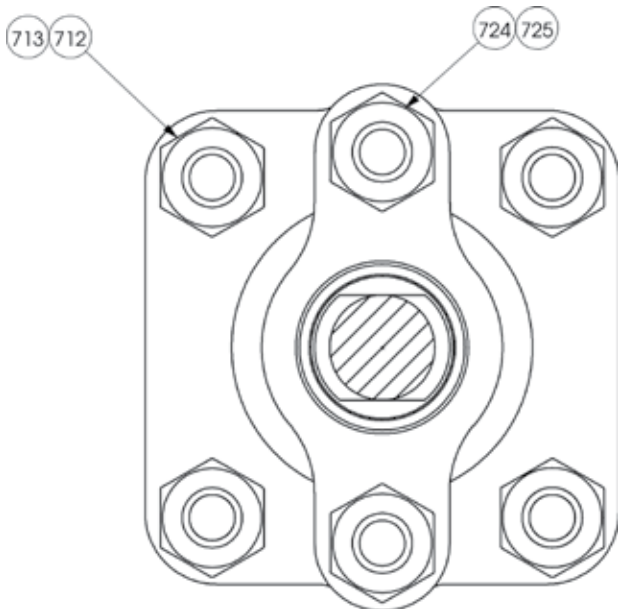
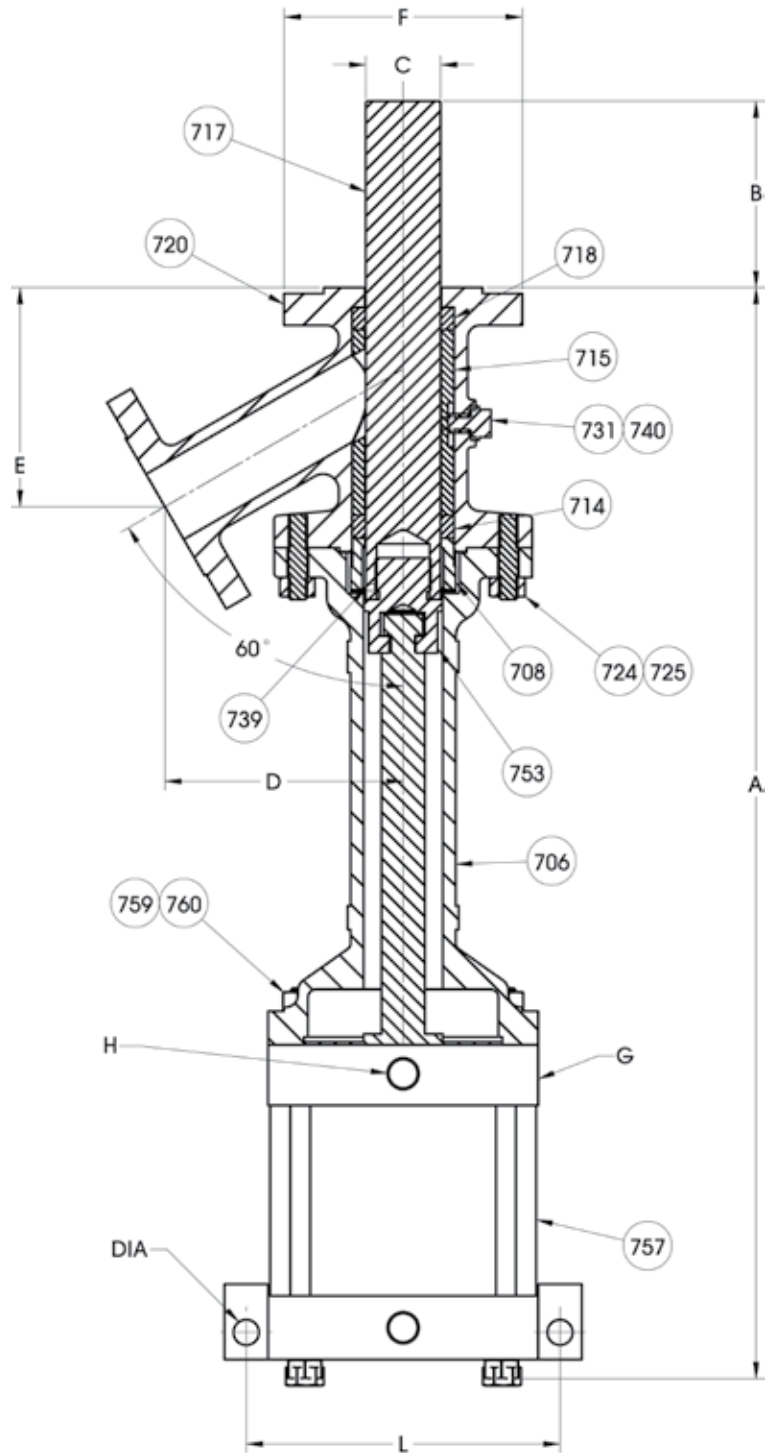
SERIES DV, STANDARD RANGE

AIR CYLINDER OPERATED RAM-TYPE DRAIN VALVES

Part No.	Description	Std. Material
706	Bonnet	Carbon Steel
708	Gland	304SST
712	Bonnet Nut	316SST
713	Bonnet Stud	304SST
714	Gland Ring *	Braided TFE
715	Cage †	316SST
717	Piston * †	316SST
718	Inlet Ring * †	TFE
720	Body †	316SST
724	Gland Nut	316SST
725	Gland Stud	304SST
731	Cage Lock †	316SST
739	Piston Set Screw	304SST
740	Cage Lock Gasket * †	TFE
753	Piston Connector *	Bronze (SST Avail.)
757	Air Cylinder	
759	Cylinder Stud	304SST
760	Cylinder Nut	316SST

* Indicates recommended spare parts

† Denotes wetted parts



1" through 2 1/2" Valve Body Deck

CAUTION

When a Strahman adapter is not supplied with the drain valve, or the customer's nozzle does not have a piloting recess, the nozzle bore must be 1/4" larger than the piston diameter. This clearance prevents the piston from scoring on the inside of the nozzle which could cause the valve to leak.

DIMENSIONS FOR AIR OPERATED RAM-TYPE DRAIN VALVES

ANSI Class 150 Drain Valve with standard 60 Degree Straight Neck Discharge										
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F	G*(NPT)	H*(NPT)	L*	DIA.
1"	22"	2"	0.984"	4 1/4"	3 15/16"	4 1/4"	1/8"	1/2"	5 1/2"	9/16"
1 1/2"	24"	2"	1.181"	5"	4 5/8"	5"	1/8"	1/2"	6 7/8"	13/16"
2"	34 7/8"	6"	1.575"	5 13/16"	5 3/8"	6"	1/8"	3/4"	7 7/8"	13/16"
2 1/2"	38 3/16"	6"	1.968"	6 13/16"	6 5/8"	7"	1/8"	3/4"	7 7/8"	13/16"
3"	40"	6"	2.362"	7 1/2"	6 3/4"	7 1/2"	1/4"	3/4"	9 7/8"	13/16"
4"	46 1/16"	6"	3.149"	8 13/16"	7 15/16"	9"	1/4"	1"	12 3/8"	1 1/16"
6"	56 1/8"	6"	4.921"	11"	10 3/8"	11"	1/4"	1"	14 1/2"	1 1/16"
8"	66 15/16"	6"	5.905"	12 13/16"	11 7/8"	13 1/2"	1/4"	1"	14 1/2"	1 1/16"

ANSI Class 150 Drain Valve with standard 45 Degree Straight Neck Discharge										
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F	G*(NPT)	H*(NPT)	L*	DIA.
1"	24 3/8"	2"	0.984"	4 1/2"	6 1/4"	4 1/4"	1/8"	1/2"	5 1/2"	9/16"
1 1/2"	26 3/4"	2"	1.181"	5 1/4"	7 7/8"	5"	1/8"	1/2"	6 7/8"	13/16"
2"	37"	6"	1.575"	6 1/2"	8 3/8"	6"	1/8"	3/4"	7 7/8"	13/16"
3"	48"	6"	2.362"	8 5/8"	11"	7 1/2"	1/4"	3/4"	9 7/8"	13/16"
4"	49 1/8"	6"	3.149"	10 3/8"	12 3/4"	9"	1/4"	1"	12 3/8"	1 1/16"
6"	60 5/8"	6"	4.921"	13 5/8"	17 3/8"	11"	1/4"	1"	14 1/2"	1 1/16"

ANSI Class 300 Drain Valve with standard 60 Degree Straight Neck Discharge										
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F	G*(NPT)	H*(NPT)	L*	DIA.
1"	23 1/4"	2"	0.984"	4 7/8"	4 5/8"	4 7/8"	1/8"	1/2"	5 1/2"	9/16"
1 1/2"	24 1/4"	2"	1.181"	5 5/8"	5 1/4"	6 1/8"	1/8"	1/2"	6 7/8"	13/16"
2"	35 1/8"	5 5/8"	1.575"	6 1/8"	5 15/16"	6 1/2"	1/8"	3/4"	7 7/8"	13/16"
2 1/2"	38 13/16"	6"	1.968"	6 7/8"	6 13/16"	7 1/2"	1/8"	3/4"	7 7/8"	13/16"
3"	40 3/8"	5 5/8"	2.362"	8 1/8"	7 1/2"	8 1/4"	1/4"	3/4"	9 7/8"	1 1/16"
4"	46 7/8"	5 3/8"	3.149"	9 7/8"	8 13/16"	10"	1/4"	1"	12 3/8"	1 1/16"
6"	56 1/8"	6"	4.921"	12"	11"	12 1/2"	1/4"	1"	14 1/2"	1 1/16"

ANSI Class 300 Drain Valve with standard 45 Degree Straight Neck Discharge										
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F	G*(NPT)	H*(NPT)	L*	DIA.
1"	24 3/8"	2"	0.984"	4 5/8"	6 3/8"	4 7/8"	1/8"	1/2"	5 1/2"	9/16"
1 1/2"	27"	2"	1.181"	5 5/16"	7 3/16"	6 1/8"	1/8"	1/2"	6 7/8"	13/16"
2"	37 3/8"	6"	1.575"	6 1/2"	8 1/2"	6 1/2"	1/8"	3/4"	7 7/8"	13/16"
3"	48 3/8"	6"	2.362"	8 5/8"	11 1/4"	8 1/4"	1/4"	3/4"	9 7/8"	1 1/16"
4"	49 1/2"	6"	3.149"	10 3/8"	13 1/16"	10"	1/4"	1"	12 3/8"	1 1/16"
6"	61 1/2"	6"	4.921"	13 5/8"	17 3/4"	12 1/2"	1/4"	1"	14 1/2"	1 1/16"

ANSI Class 600 Drain Valve with standard 60 Degree Straight Neck Discharge										
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F	G*(NPT)	H*(NPT)	L*	DIA.
1"	23 5/8"	2"	0.984"	5"	4 7/8"	4 7/8"	1/8"	1/2"	5 1/2"	9/16"
1 1/2"	25 7/8"	2"	1.181"	5 7/8"	5 3/4"	6 1/8"	1/8"	1/2"	6 7/8"	13/16"
2"	36 15/16"	6"	1.575"	6 11/16"	6 9/16"	6 1/2"	1/8"	3/4"	7 7/8"	13/16"
3"	47 15/16"	6"	2.362"	8 7/8"	8"	8 1/4"	1/4"	1"	9 7/8"	1 1/16"
4"	53 7/8"	6"	3.149"	10"	9 5/8"	10 3/4"	1/4"	1"	12 3/8"	1 1/16"

ANSI Class 600 Drain Valve with standard 45 Degree Straight Neck Discharge										
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F	G*(NPT)	H*(NPT)	L*	DIA.
1"	24 1/2"	2"	0.984"	4 3/4"	6 3/8"	4 7/8"	1/8"	1/2"	5 1/2"	9/16"
1 1/2"	26 5/8"	2"	1.181"	5 1/2"	7 5/8"	6 1/8"	1/8"	1/2"	6 7/8"	13/16"
2"	37 7/8"	6"	1.575"	6 1/2"	8 3/4"	6 1/2"	1/8"	3/4"	7 7/8"	13/16"
3"	50 1/2"	6"	2.362"	8 5/8"	11 1/16"	8 1/4"	1/4"	1"	9 7/8"	1 1/16"
4"	51"	6"	3.149"	10 3/8"	13 1/16"	10 3/4"	1/4"	1"	12 3/8"	1 1/16"
6"	62 5/8"	6"	4.921"	13 5/8"	18 1/4"	14"	1/4"	1"	14 1/2"	1 1/16"

* Dimensions G, H, L are for Air-Operated Drain Valves. For Hydraulic Drain Valve dimensions, please consult factory. Strahman piston extensions are measured from the height of the RF for an ANSI standard flange. For ANSI 600 class valves the extension is equal to the actual RF provided by Strahman. For ANSI 150 and 300 class valves the ANSI standard RF height is 1/16" while Strahman provides 3/16" height for piloting as standard. Customers can request a 1/16" RF height for RF-to-RF flange installation and the piston extension will equal the actual distance from the RF. For the Strahman standard (3/16" height) the distance measured from the RF to the tip of the piston will be 1/8" less than the description. Example: 2" ANSI 150 Drain Valve with 6" piston extension will measure 5 7/8" from a standard Strahman RF to the tip of the piston. Piston Extension tolerances tighter than 1/8" available upon request.

SERIES DV, STANDARD RANGE

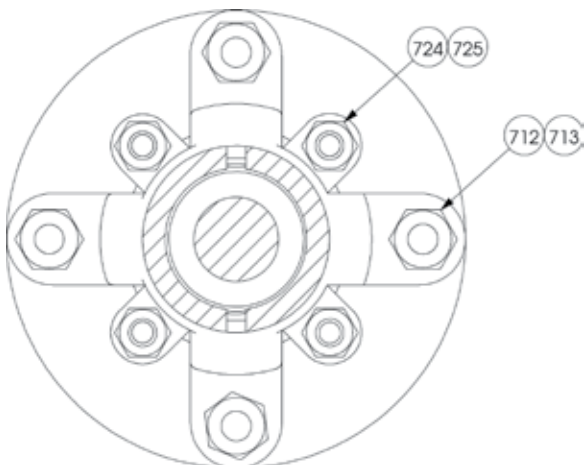
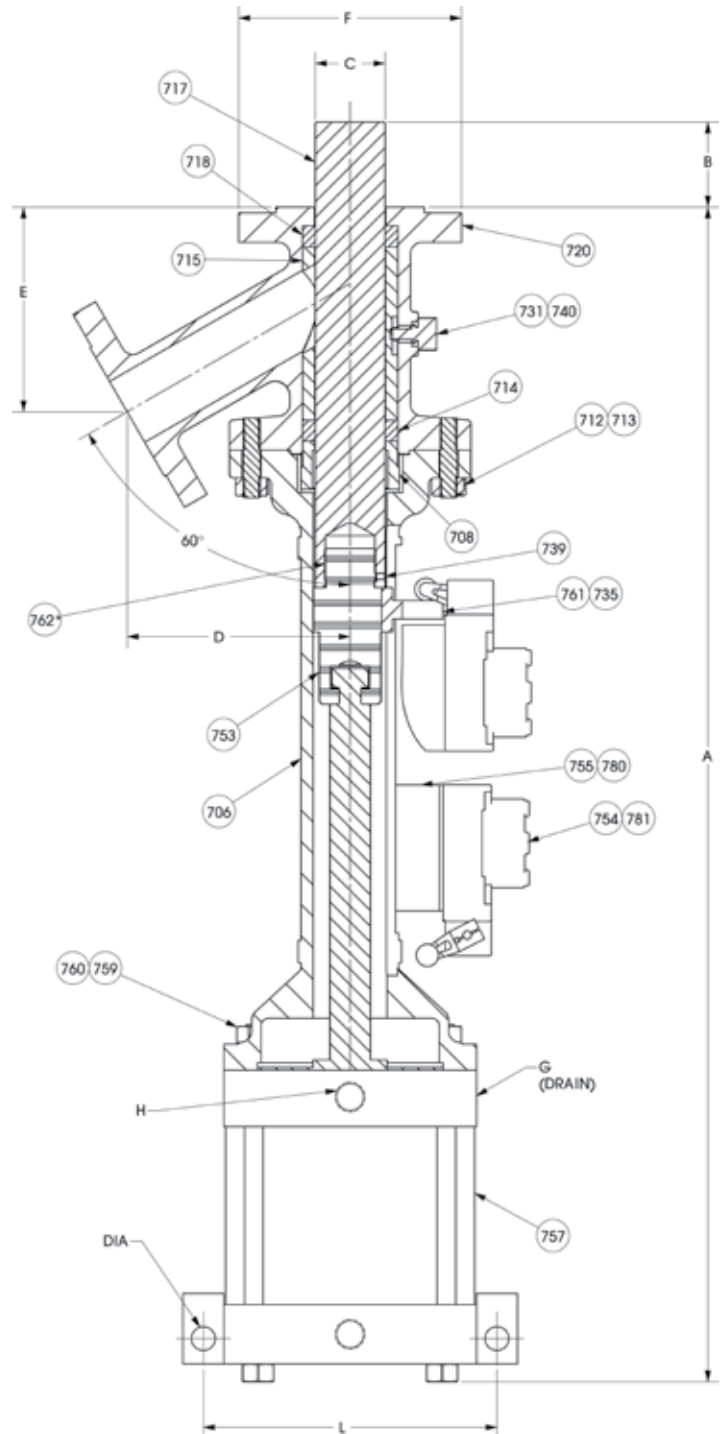
AIR AND HYDRAULIC OPERATED RAM-TYPE DRAIN VALVES WITH INDICATOR SWITCHES

Part No.	Description	Std. Material
706	Bonnet †	Carbon Steel
708	Gland	304SST
712	Bonnet Nut	316SST
713	Bonnet Stud	304SST
714	Gland Ring *	Braided TFE
715	Cage †	316SST
717	Piston * †	316SST
718	Inlet Ring * †	TFE
720	Body †	316SST
724	Gland Nut	316SST
725	Gland Stud	304SST
731	Cage Lock †	316SST
733	Collar Pin **	304SST
735	Switch Trip Screw	304SST
739	Piston Set Screw	304SST
740	Cage Lock Gasket * †	TFE
753	Piston Connector *	Bronze (SST Avail.)
754	Indicator Switch	
755	Switch Bracket	304SST
757	Cylinder	
759	Cylinder Stud	304SST
760	Cylinder Nut	316SST
761	Switch Trip	304SST
762	Piston Connector Nut**	304SST
780	Bracket Mtg. Screw	304SST
781	Switch Mtg. Screw	304SST

* Indicates recommended spare parts

** Collar Pin #733 and Piston Connector Nut #762 not shown, only for Hydraulic.

† Denotes wetted parts



3" and Larger Valve Body Deck

CAUTION

When a Strahman adapter is not supplied with the drain valve, or the customer's nozzle does not have a piloting recess, the nozzle bore must be 1/4" larger than the piston diameter. This clearance prevents the piston from scoring on the inside of the nozzle which could cause the valve to leak.

DIMENSIONS FOR AIR AND HYDRAULIC CYLINDER OPERATED RAM-TYPE DRAIN VALVES WITH SWITCHES

ANSI Class 150 Drain Valve with standard 45 Degree Straight Neck Discharge						
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F
1"	35 7/8"	6"	0.984"	4 1/2"	6 1/4"	4 1/4"
1 1/2"	38 13/16"	6"	1.181"	5 1/4"	7 7/16"	5"
2"	43 1/2"	6"	1.575"	6 1/2"	8 3/8"	6"
3"	48"	6"	2.362"	8 5/8"	11"	7 1/2"
4"	53 15/16"	6"	3.149"	10 3/8"	12 3/4"	9"
6"	66 7/8"	6"	4.921"	13 5/8"	17 3/8"	11"

Air Switch with 60 Degree Straight Neck Discharge		
Valve Size	A Std.	B ± 1/8"
1"	33 13/16"	6"
1 1/2"	36 3/8"	6"
2"	42 11/16"	6"
2 1/2"	43 3/8"	6"
3"	45 1/4"	6"
4"	51 1/8"	6"
6"	62 3/8"	6"
8"	66 15/16"	6"

Hydraulic Operated with 60 Degree Straight Neck		
Valve Size	A Std.	B ± 1/8"
1"	33 13/16"	6"
1 1/2"	36 3/8"	6"
2"	42 11/16"	6"
2 1/2"	41 1/16"	6"
3"	43 3/16"	6"
4"	46 5/16"	6"
6"	57 3/8"	6"
8"	64 1/2"	6"
10"	75 1/16"	6"
12"	96"	6"

ANSI Class 300 Drain Valve with standard 45 Degree Straight Neck Discharge						
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F
1"	35 7/8"	6"	0.984"	4 5/8"	6 3/8"	4 7/8"
1 1/2"	38 13/16"	6"	1.181"	5 5/8"	7 3/16"	6 1/8"
2"	43 7/8"	6"	1.575"	6 1/2"	8 1/2"	6 1/2"
3"	48 3/8"	6"	2.362"	8 5/8"	11 1/4"	8 1/4"
4"	54 3/16"	6"	3.149"	10 3/8"	13 1/16"	10"
6"	67 3/4"	6"	4.921"	13 5/8"	17 3/4"	12 1/2"

Air Switch with 60 Degree Straight Neck Discharge		
Valve Size	A Std.	B ± 1/8"
1"	34 3/4"	6"
1 1/2"	37 5/16"	6"
2"	43 3/16"	6"
2 1/2"	43 3/8"	6"
3"	45 11/16"	5 5/8"
4"	52 1/4"	6"
6"	62 3/8"	6"

Hydraulic Operated with 60 Degree Straight Neck		
Valve Size	A Std.	B ± 1/8"
1"	34 3/4"	6"
1 1/2"	37 5/16"	6"
2"	43 3/16"	6"
2 1/2"	41 1/16"	6"
3"	44 1/16"	6"
4"	47 3/16"	6"
6"	57 3/8"	6"
8"	65 1/2"	6"
10"	75 1/16"	6"
12"	96"	6"

ANSI Class 600 Drain Valve with standard 45 Degree Straight Neck Discharge						
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F
1"	35 7/8"	6"	0.984"	4 3/4"	6 3/8"	4 7/8"
1 1/2"	38 3/4"	6"	1.181"	5 1/2"	7 5/8"	6 1/8"
2"	44 3/8"	6"	1.575"	6 1/2"	8 3/4"	6 1/2"
3"	50 1/4"	6"	2.362"	8 5/8"	11 7/16"	8 1/4"
4"	55 15/16"	6"	3.149"	10 3/8"	13 1/16"	10 3/4"
6"	68 7/8"	6"	4.921"	13 5/8"	18 1/4"	14"

Air Switch with 60 Degree Straight Neck Discharge		
Valve Size	A Std.	B ± 1/8"
1"	35 1/8"	6"
1 1/2"	37 15/16"	6"
2"	43 7/16"	6"
3"	47 1/4"	5 5/16"
4"	54"	6"

Hydraulic Operated with 60 Degree Straight Neck		
Valve Size	A Std.	B ± 1/8"
1"	35 1/8"	6"
1 1/2"	37 15/16"	6"
2"	43 7/16"	6"
3"	44 11/16"	6"
4"	50 3/8"	6"
6"	59 3/8"	6"

* Strahman piston extensions are measured from the height of the RF for an ANSI standard flange. For ANSI 600 class valves the extension is equal to the actual RF provided by Strahman. For ANSI 150 and 300 class valves the ANSI standard RF height is 1/16" while Strahman provides 3/16" height for piloting as standard. Customers can request a 1/8" RF height for RF-to-RF flange installation and the piston extension will equal the actual distance from the RF. For the Strahman standard (3/16" height) the distance measured from the RF to the tip of the piston will be 1/8" less than the description. Example: 2" ANSI 150 Drain Valve with 6" piston extension will measure 5 7/8" from a standard Strahman RF to the tip of the piston. Piston Extension tolerances tighter than 1/8" available upon request.

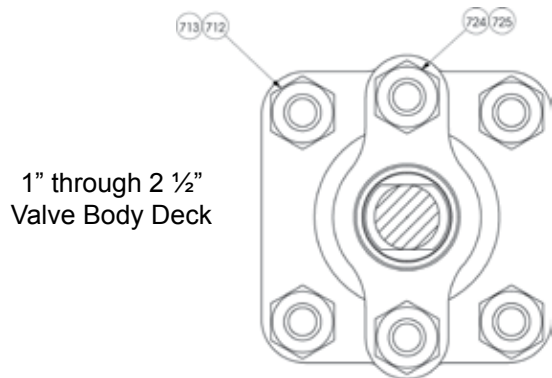
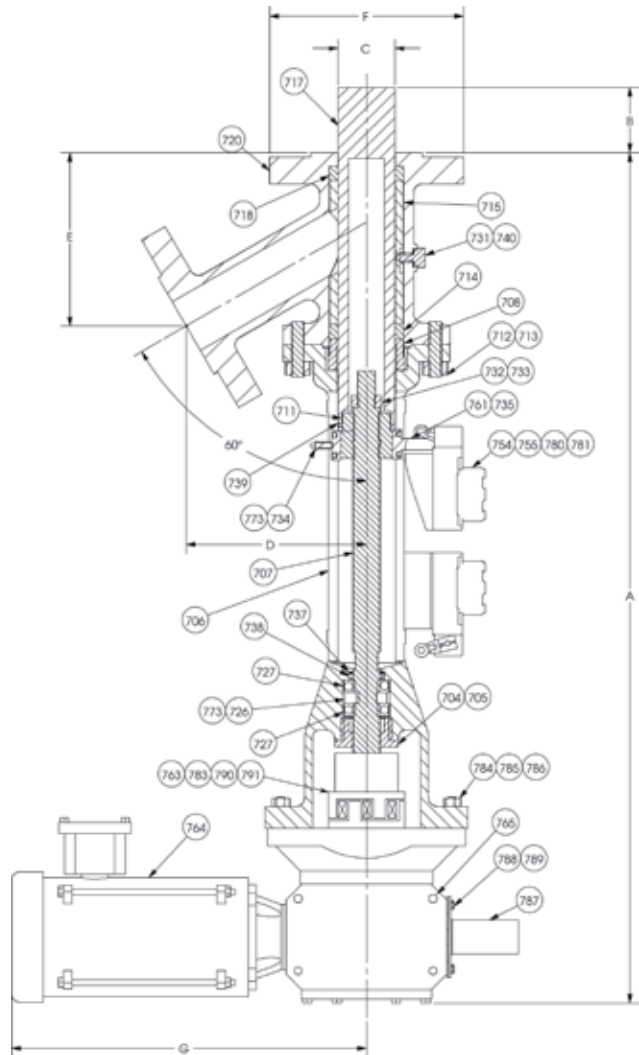
SERIES DV, STANDARD RANGE

ELECTRIC ACTUATOR AND AIR MOTOR OPERATED

RAM-TYPE DRAIN VALVES

Part No.	Description	Std. Material
704	Brushing Lock Screw	304SST
705	Insert/Bushing	Bronze /303SST
706	Bonnet	Carbon Steel
707	Stem *	416SST
708	Gland	304SST
711	Crosshead *	Bronze (SST Avail.)
712	Bonnet Nut	316SST
713	Bonnet Stud	304SST
714	Gland Ring *	Braided TFE
715	Cage †	316SST
717	Piston††	316SST
718	Inlet Ring* †	TFE
720	Body †	316SST
724	Gland Nut	316SST
725	Gland Stud	304SST
726	Bearing Collar	303SST
727	Bearing*	Carbon Steel
731	Cage Lock †	316SST
732	Stem Stop	303SST
733	Stem Stop Pin	304SST
734	Crosshead Guide *	303SST
735	Switch Trip Screw *	304SST
737	Retaining Ring *	303SST
738	Bearing Seal *	TFE
739	Piston Set Screw	304SST
740	Cage Lock Gasket*	RTFE
754	Indicator Switch	
755	Switch Bracket	304SST
761	Switch Trip	304SST
763	Reducer Coupling	
764	Motor	
765	Gear Reducer	
773	Grease Fitting	Steel
780	Bracket Mtg. Screw	304SST
781	Switch Mtg. Screw	304SST
783	Key	
784	Reducer Mtg.Stud	304SST
785	Reducer Mtg. Nut	316SST
786	Reducer Mtg. Washer	304SST
787	Safety Shield	304SST
788	Safety Shield Screw	304SST
789	Safety Shield Washer	304SST
790	Stem Coupling	
791	Insert	Bronze

* Denotes recommended spare parts
 † Denotes wetted parts



CAUTION

When a Strahman adapter is not supplied with the drain valve, or the customer's nozzle does not have a piloting recess, the nozzle bore must be 1/4" larger than the piston diameter. This clearance prevents the piston from scoring on the inside of the nozzle which could cause the valve to leak.

STANDARD DIMENSIONS FOR ELECTRIC AND AIR MOTOR OPERATED RAM-TYPE DRAIN VALVES

ANSI Class 150 Drain Valve with standard 60 Degree Straight Neck Discharge									
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F	G	A Max.	B Max.
2"	41 13/16"	6"	1.575"	5 13/16"	5 3/8"	6"	18 13/16"	41 13/16"	6"
3"	46"	6"	2.362"	7 1/2"	6 3/4"	7 1/2"	18 13/16"	46"	6"
4"	47"	6"	3.149"	8 13/16"	7 15/16"	9"	18 13/16"	47"	6"
6"	55 3/8"	6"	4.921"	11"	10 3/8"	11"	18 13/16"	61 3/8"	12"
8"	61"	6"	5.905"	12 13/16"	11 5/8"	13 1/2"	18 13/16"	61"	6"
10"	72 3/4"	6"	7.480"	16 5/8"	15 5/8"	16"	18 13/16"	72 3/4"	6"

ANSI Class 150 Drain Valve with standard 45 Degree Straight Neck Discharge									
Contact Strahman factory for details									

ANSI Class 300 Drain Valve with standard 60 Degree Straight Neck Discharge									
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F	G	A Max.	B Max.
2"	42 3/16"	6"	1.575"	6 1/8"	5 15/16"	6 1/2"	18 13/16"	42 13/16"	6"
3"	46 3/8"	6"	2.362"	8 1/8"	7 1/2"	8 1/4"	18 13/16"	46 3/8"	6"
4"	47 1/2"	5 1/2"	3.149"	9 7/16"	8 13/16"	10"	18 13/16"	47 1/2"	5 1/2"
6"	55 3/8"	6"	4.921"	12"	11"	12 1/2"	18 13/16"	61 3/8"	12"
8"	61 1/2"	6"	5.905"	13 9/16"	12 13/16"	15"	18 13/16"	61 1/2"	6"
10"	72 3/4"	6"	7.480"	16 5/8"	15 5/8"	17 1/2"	20 9/16"	72 3/4"	6"

ANSI Class 600 Drain Valve with standard 60 Degree Straight Neck Discharge									
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F	G	A Max.	B Max.
2"	42 13/16"	6"	1.575"	6 1/16"	6 9/16"	6 1/2"	18 13/16"	42 13/16"	6"
3"	46 9/16"	6"	2.362"	8 7/16"	8"	8 1/4"	18 13/16"	46 9/16"	6"
4"	48 1/16"	4 15/16"	3.149"	10"	9 5/8"	10 3/4"	18 13/16"	48 1/16"	4 15/16"
6"	59 3/16"	6"	4.921"	12 7/8"	12"	14"	18 13/16"	59 3/16"	6"

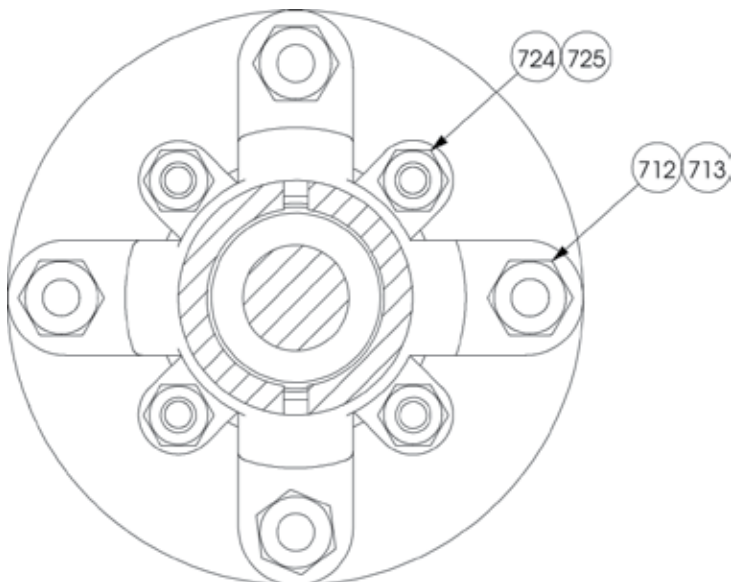
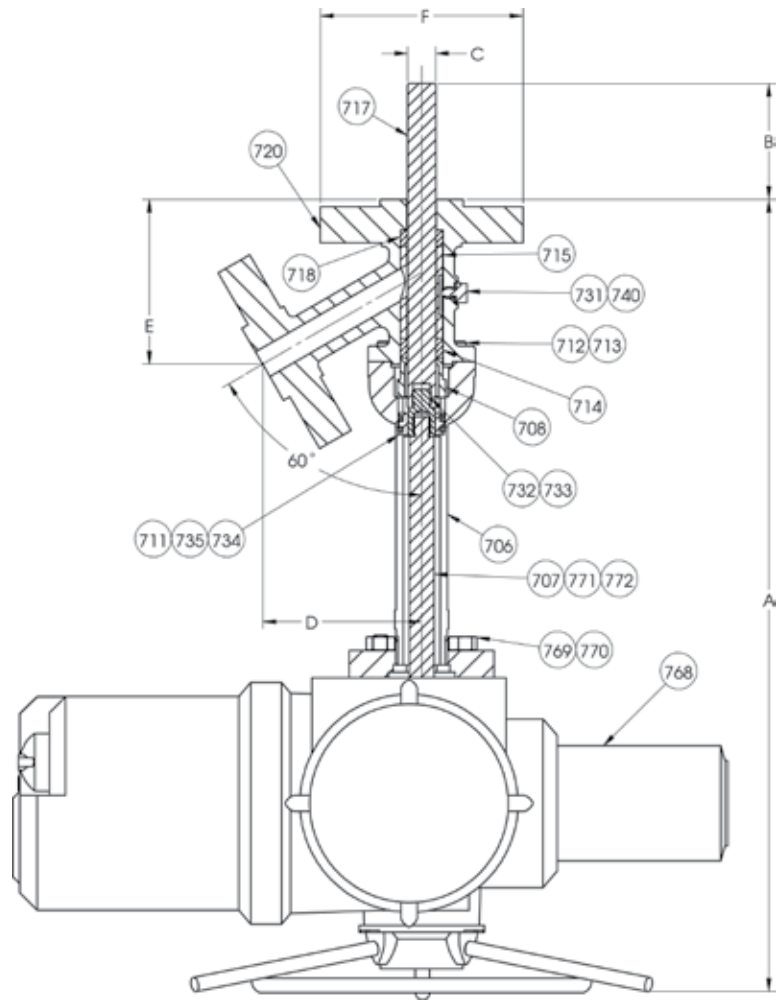
* Strahman piston extensions are measured from the height of the RF for an ANSI standard flange. For ANSI 600 class valves the extension is equal to the actual RF provided by Strahman. For ANSI 150 and 300 class valves the ANSI standard RF height is 1/8" while Strahman provides 3/8" height for piloting as standard. Customers can request a 1/16" RF height for RF-to-RF flange installation and the piston extension will equal the actual distance from the RF. For the Strahman standard (3/8" height) the distance measured from the RF to the tip of the piston will be 1/8" less than the description. Example: 2" ANSI 150 Drain Valve with 6" piston extension will measure 5 7/8" from a standard Strahman RF to the tip of the piston. Piston extension tolerances tighter than 1/8" available upon request.

SERIES DV, STANDARD RANGE

ROTORK OPERATED RAM-TYPE DRAIN VALVES

Part No.	Description	Std. Material
706	Bonnet	Carbon Steel
707	Stem *	416SST
708	Gland	304SST
711	Crosshead *	Bronze (SST Avail.)
712	Bonnet Nut	316SST
713	Bonnet Stud	304SST
714	Gland Ring * †	Braided TFE
715	Cage †	316SST
717	Piston *†	316SST
718	Inlet Ring * †	TFE
720	Body †	316SST
724	Gland Nut	316SST
725	Gland Stud	304SST
731	Cage Lock †	316SST
732	Stop Collar	303SST
733	Collar Pin	304SST
734	Crosshead Guide*	304SST
735	Guide Screw*	304SST
739	Piston Set Screw	304SST
740	Cage Lock Gasket*	TFE
768	Rotork Actuator	
769	Rotork Mtg. Stud	304SST
770	Rotork Mtg. Nut	316SST
771	Stem Washer	302SST
772	Stem Nut	304SST

* Denotes recommended spare parts
 † Denotes wetted parts



3" and Larger Valve Body Deck



Rotork Operated Drain Valve

CAUTION

When a Strahman adapter is not supplied with the drain valve, or the customer's nozzle does not have a piloting recess, the nozzle bore must be 1/4" larger than the piston diameter. This clearance prevents the piston from scoring on the inside of the nozzle which could cause the valve to leak.

STANDARD DIMENSIONS FOR ROTORK OPERATED RAM-TYPE DRAIN VALVES

ANSI Class 150 Drain Valve with standard 60 Degree Straight Neck Discharge						
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F
2"	35 1/16"	6"	1.575"	5 13/16"	5 3/8"	6"
3"	43 1/8"	6"	2.362"	7 1/2"	6 3/4"	7 1/2"
4"	45 7/16"	6"	3.149"	8 13/16"	7 15/16"	9"
6"	54 3/16"	6"	4.921"	11"	10 3/8"	11"
8"	62 3/8"	6"	5.905"	12 13/16"	11 1/8"	13 1/2"
10"	70 3/8"	6"	7.480"	16 5/8"	15 5/8"	16"

ANSI Class 150 Drain Valve with standard 45 Degree Straight Neck Discharge						
Contact Strahman factory for details						

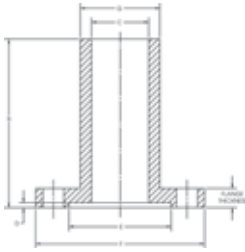
ANSI Class 300 Drain Valve with standard 60 Degree Straight Neck Discharge						
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F
2"	36 5/8"	6"	1.575"	6 1/8"	5 15/16"	6 1/2"
3"	43 13/16"	6"	2.362"	8 1/16"	7 1/2"	8 1/4"
4"	46 1/16"	6"	3.149"	9 7/16"	8 13/16"	10"
6"	56 1/16"	6"	4.921"	12"	11"	12 1/2"
8"	64 13/16"	6"	5.905"	13 3/16"	12 13/16"	15"
10"	70 3/8"	6"	7.480"	16 5/8"	15 5/8"	17 1/2"

ANSI Class 600 Drain Valve with standard 60 Degree Straight Neck Discharge						
Valve Size	A Std.	B ± 1/8"	C ± .002"	D	E	F
2"	36 1/16"	6"	1.575"	6 1/16"	6 9/16"	6 1/2"
3"	45 1/16"	6"	2.362"	8 7/16"	8"	8 1/4"
4"	49"	6"	3.149"	10"	9 5/8"	10 3/4"
6"	59 9/16"	6"	4.921"	12"	12"	14"

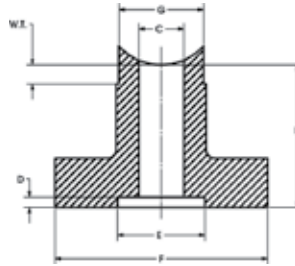
* Strahman piston extensions are measured from the height of the RF for an ANSI standard flange. For ANSI 600 class valves the extension is equal to the actual RF provided by Strahman. For ANSI 150 and 300 class valves the ANSI standard RF height is 1/16" while Strahman provides 3/16" height for piloting as standard. Customers can request a 1/16" RF height for RF-to-RF flange installation and the piston extension will equal the actual distance from the RF. For the Strahman standard (3/16" height) the distance measured from the RF to the tip of the piston will be 1/16" less than the description. Example: 2" ANSI 150 Drain Valve with 6" piston extension will measure 5 9/16" from a standard Strahman RF to the tip of the piston. Piston extension tolerances tighter than 1/8" available upon request.

SERIES DV, STANDARD RANGE

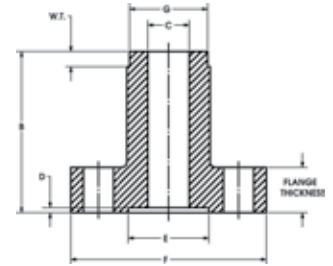
OPTIONAL ADAPTERS FOR DEAD SPACE FREE CONNECTION TO PROCESS



Drain Valve Adapter



Contoured Nozzle



Non-Contoured Nozzle

ANSI Class 150 Adapters							
Flange Size	Flange Thickness	C	D	E	F	B Std	G
1"	1/2"	1.031"	1/8"	2.007"	4 1/4"	2"	
1 1/2"	5/8"	1.230"	11/64"	2.882"	5"	2"	
2"	11/16"	1.630"	11/64"	3.632"	6"	6"	
2 1/2"	3/4"	2.031"	11/64"	4.132"	7"	6"	
3"	3/4"	2.420"	3/16"	5.007"	7 1/2"	6"	
4"	7/8"	3.211"	3/16"	6.194"	9"	6"	
6"	15/16"	4.983"	3/16"	8.507"	11"	6"	
8"	1 1/16"	5.967"	3/16"	10.632"	13 1/2"	6"	
10"	1 1/8"	7.541"	3/16"	12.757"	16"	6"	
12"	1 3/16"	11.062"	3/16"	15.007"	19"	6"	

ANSI Class 150 Nozzles							
Flange Size	Flange Thickness	C	D	E	F	B Std	G
1"	1"	1.031"	1/8"	2.007"	4 1/4"	6"	1 1/8"
1 1/2"	1"	1.230"	11/64"	2.882"	5"	6"	2 1/8"
2"	1 1/8"	1.630"	11/64"	3.632"	6"	6"	2 1/2"
2 1/2"	1 1/8"	2.031"	11/64"	4.132"	7"	6"	2 15/16"
3"	1 3/16"	2.420"	3/16"	5.007"	7 1/2"	6"	3 3/8"
4"	1 3/16"	3.211"	3/16"	6.194"	9"	6"	4 3/8"
6"	1 1/4"	4.983"	3/16"	8.507"	11"	6"	6 1/8"
8"	1 3/8"	5.967"	3/16"	10.632"	13 1/2"	6"	7 1/4"
10"	1 1/2"	7.541"	3/16"	12.757"	16"	6"	9 1/8"
12"	1 1/2"	11.062"	3/16"	15.007"	19"	6"	13 1/4"

ANSI Class 300 Adapters							
Flange Size	Flange Thickness	C	D	E	F	B Std	G
1"	1/2"	1.031"	1/8"	2.007"	4 7/8"	2"	
1 1/2"	5/8"	1.230"	11/64"	2.882"	6 1/8"	2"	
2"	11/16"	1.630"	11/64"	3.632"	6 1/2"	5 1/2"	
2 1/2"	3/4"	2.031"	11/64"	4.132"	7 1/2"	5 1/2"	
3"	3/4"	2.420"	3/16"	5.007"	8 1/4"	5 1/2"	
4"	7/8"	3.211"	3/16"	6.194"	10"	5 1/2"	
6"	15/16"	4.983"	3/16"	8.507"	12 1/2"	5 1/2"	
8"	1 1/16"	5.967"	3/16"	10.632"	15"	6"	
10"	1 1/8"	7.541"	3/16"	12.757"	17 1/2"	6"	
12"	1 3/16"	11.062"	3/16"	15.004"	20 1/2"	6"	

ANSI Class 300 Nozzles							
Flange Size	Flange Thickness	C	D	E	F	B Std	G
1"	1 1/8"	1.031"	1/8"	2.007"	4 7/8"	6"	1 15/16"
1 1/2"	1 1/8"	1.230"	11/64"	2.882"	6 1/8"	6"	2 1/8"
2"	1 1/8"	1.630"	11/64"	3.632"	6 1/2"	6"	2 1/2"
2 1/2"	1 1/4"	2.031"	11/64"	4.132"	7 1/2"	6"	2 15/16"
3"	1 3/8"	2.420"	3/16"	5.007"	8 1/4"	6"	3 3/8"
4"	1 1/2"	3.211"	3/16"	6.194"	10"	6"	4 3/8"
6"	1 11/16"	4.983"	3/16"	8.507"	12 1/2"	6"	6 1/8"
8"	1 7/8"	5.967"	3/16"	10.632"	15"	6"	7 1/4"
10"	2 1/8"	7.541"	3/16"	12.757"	17 1/2"	6"	9 1/8"
12"	2 1/4"	11.062"	3/16"	15.007"	20 1/2"	6"	13 1/4"

ANSI Class 600 Adapters							
Flange Size	Flange Thickness	C	D	E	F	B Std	G
1"	9/16"	1.031"	15/64"	2.007"	4 7/8"	2 3/16"	
1 1/2"	5/8"	1.230"	15/64"	2.882"	6 1/8"	2 3/16"	
2"	11/16"	1.630"	15/64"	3.632"	6 1/2"	6 3/16"	
3"	3/4"	2.420"	15/64"	5.007"	8 1/4"	6 3/16"	
4"	7/8"	3.211"	15/64"	6.194"	10 3/4"	6 3/16"	
6"	15/16"	4.983"	15/64"	8.507"	14"	6 3/16"	
8"	1 1/16"	5.967"	15/64"	10.632"	16 1/2"	6 3/16"	

ANSI Class 600 Nozzles							
Flange Size	Flange Thickness	C	D	E	F	B Std	G
1"	1 1/8"	1.031"	15/64"	2.007"	4 7/8"	6 3/16"	1 15/16"
1 1/2"	1 1/8"	1.230"	15/64"	2.882"	6 1/8"	6 3/16"	2 1/8"
2"	1 1/4"	1.630"	15/64"	3.632"	6 1/2"	6 3/16"	2 1/2"
3"	1 1/2"	2.420"	15/64"	5.007"	8 1/4"	6 3/16"	3 3/8"
4"	1 3/4"	3.211"	15/64"	6.194"	10 3/4"	6 3/16"	4 3/8"
6"	2 1/8"	4.983"	15/64"	8.507"	14"	6 3/16"	6 1/8"

Nozzle Drilling: ANSI standard, bolt holes straddle centerlines.
For nozzles with sampling valves contact Strahman direct.

Adapter Drilling: ANSI standard, bolt holes straddle centerlines.
For adapters with sampling valves contact Strahman direct.

SERIES VL, CUSTOM MADE RANGE

TECHNICAL AND GENERAL INFORMATION

FEATURES

- Extended body for flush connection to the process
- Combinations of extended body and extended piston
- Outlet angles to customer requirements
- Integral welded jackets
- Extended stuffing box with live loaded packing
- Inlet or outlet flanges in different sizes
- Connection flanges to any standard or custom design
- Custom made port sizes to optimize flow
- Wide range of metallurgy available

DESIGN CODE AND CONSTRUCTION

- Design standard compliant with ASME B16.34
- International standards include ANSI, DIN, JIS, API etc.
- Wide range of material selections including carbon steel / stainless steel / Titanium / Hastelloy / Duplex / Monel / Tantalum / Zirconium
- Fabricated, cast, forged and bar stock designs
- Combinations of fabricated, sand and investment castings, and bar stock available

SURFACE FINISH

- For polymer applications, Strahman recommends a surface finish of 300 (Ra 0.4) for all parts are in contact with the medium

QUALITY ASSURANCE AND TESTING

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

RANGE DEFINITION														
VL Manufacturing Range	PN 10	PN 16	IPN 20-150 lbs.	IPN 25	IPN 40	PN 50 300 lbs.	PN 64 400 lbs.	PN 100 600 lbs.	PN 150/160-900 lbs.	PN 250 - 1500 lbs.	PN 320	PN 420 - 2500 lbs.	PN 630 - 4500 lbs.	
3/8" - DIN10	Fig. 020													
1/2" - DIN15														
3/4" - DIN20														
1" - DIN25														
1 1/4" - DIN32	Fig. 025													
1 1/2" - DIN40														
2" - DIN50														
2 1/2" - DIN65														
3" - DIN80														
4" - DIN100														
5" - DIN125														
6" - DIN150														
8" - DIN200														
10" - DIN250														
12" - DIN300														
14" - DIN350														
16" - DIN400														
18" - DIN450														
20" - DIN500														
24" - DIN600														



Series VL, 025S, for Poly Propylene service



Series VL, 025D with integral Welded Jacket

SERIES VL, CUSTOM MADE RANGE

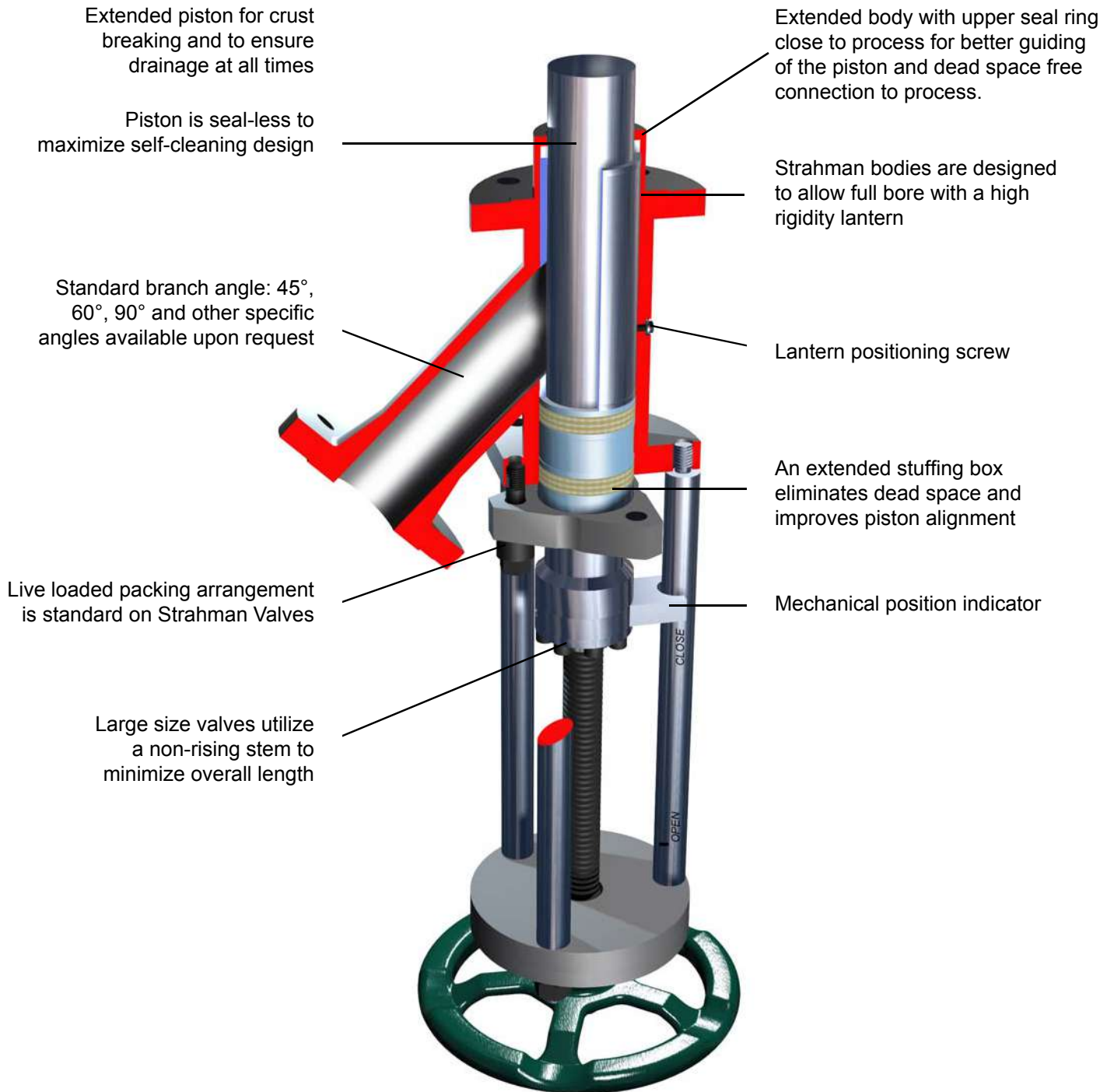
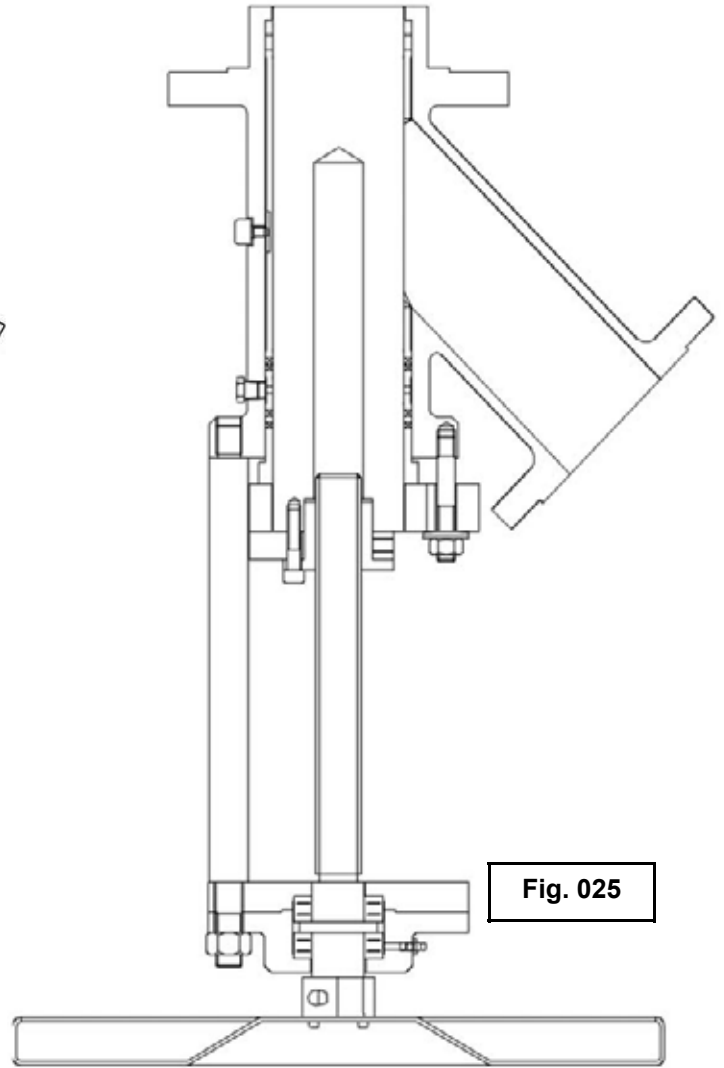
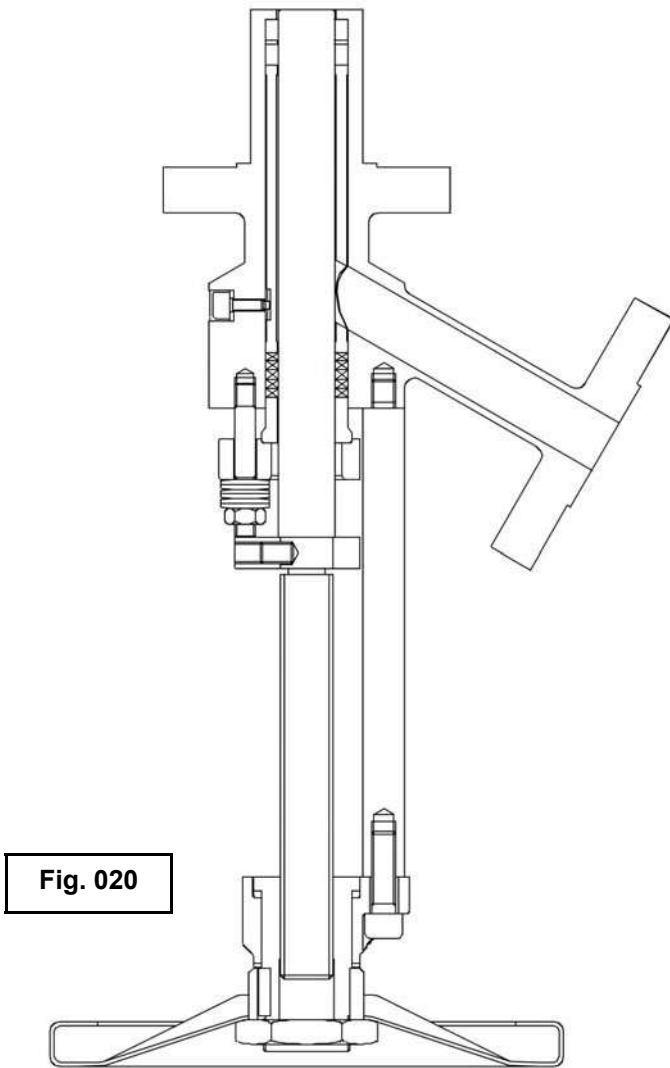


Fig. 025S

SERIES VL, CUSTOM MADE RANGE BODY ARRANGEMENTS

The Strahman VL series uses the following two stem designs:

- Figure 020 for small piston sizes to approximately 25 mm (1") uses a rising stem design
- Figure 025 for piston sizes 32 mm and larger uses a non-rising stem design



SERIES VL, CUSTOM MADE RANGE

SEALING SYSTEM

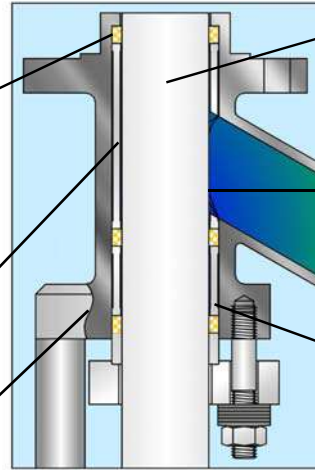
Soft Seal- The **Soft Seal** is a seat-less sealing system that assures superior performance. While closing, the plunger moves through the valve bore and effectively rods any remaining product out of the valve.

Temperature
Min: -50° C / -60° F
Max: 200° C / 1000° F
Pressure
Max: 100 bar / 1450 psig

Rigid soft seat ring provides dimensional stability with temperature variations

High rigidity lantern is designed to avoid distortion or contact with the piston

Valve Body



Greater piston hardness resists scratches that are the primary cause of damage to the seal and resulting in leakage

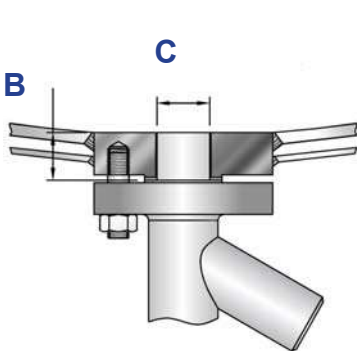
A second lantern gland packing arrangement improves piston guidance and minimizes retention areas

The standard live loaded packing arrangement avoids over-compression of the upper seal ring while the valve is in the open position

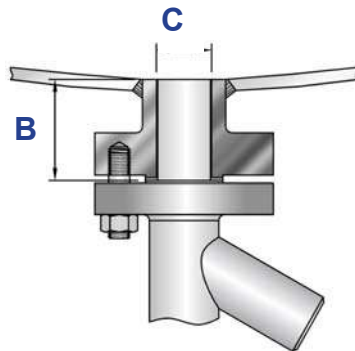
VESSEL CONNECTIONS

To connect valves to existing vessels or reactors, there are two possibilities: a nozzle or a pad connection. In both cases, the customer must specify the following vessel connection details: « **C** » (inside diameter), « **B** » (height), **DN** (nominal size), **PN** (pressure rating) and connection **standard** (ISO, ANSI, DIN, etc.). To eliminate retention areas radius « **R** » can be specified for optional contouring. For new projects Strahman can supply valves with easy-to-fit standardized pads that are ready to be installed.

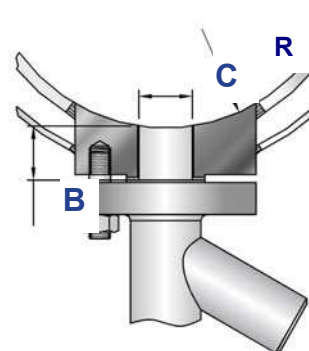
Vessel Pad



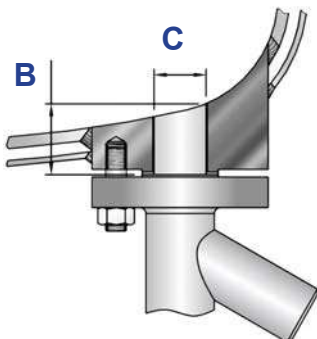
Vessel Nozzle



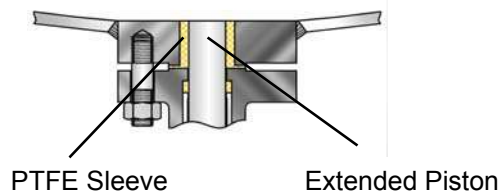
Pipe Assembly Pad



Custom Vessel Pad



Top Hat



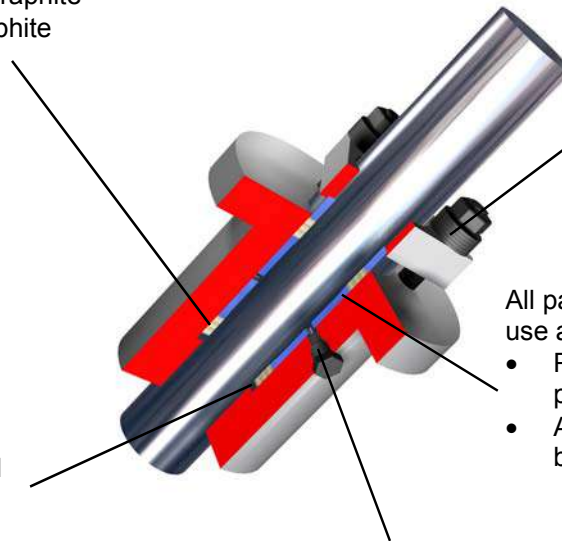
SERIES VL, CUSTOM MADE RANGE

PACKING DEFINITION

Typical Packing Materials:

- PTFE
- PTFE / Aramide Braid
- Carbon / Graphite Braid
- Graphite Braid
- PTFE / Aramide Braid + Graphite
- Lamellar + Expanded Graphite
- Pure Graphite

Bottom ring material is selected with a differential hardness from the piston to prevent piston damage



Live loaded packing arrangement minimizes valve maintenance

All packing arrangements use a lantern ring that:

- Provides better stem piston guiding
- Avoids dead space in body cavities

Optional 1/4 inch NPTF available for leak detection or inert gas injection to avoid leakage to atmosphere by creating an over pressure

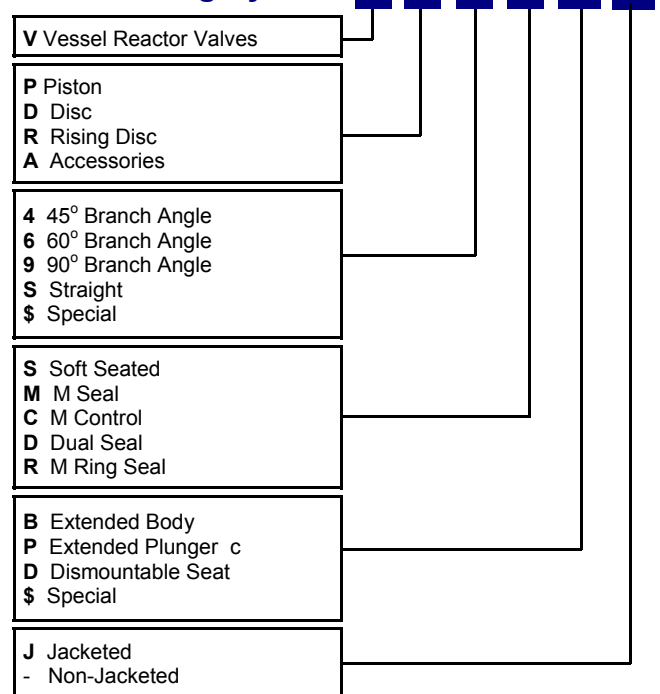
STANDARD PAD GASKET RANGE

- PTFE
- Aramide / Nitrile
- Carbon / Aramide
- Laminated Graphite
- Laminated Graphite / 316
- Spiral Wound 316L / PTFE
- Spiral Wound 316L / Graphite
- Spiral Wound 321 / Graphite
- Spiral Wound Inconel / Graphite
- Spiral Wound Titanium / Graphite
- Perfluoroelastomer (Kalrez) O Ring
- Welded Lips
- Metallic O Ring Helicoflex Gasket Aluminium/316
- Metallic O Ring Helicoflex Gasket Nickel/Nimonic 90
- 316L RTJ
- Nitrile O Ring
- EPDM O Ring
- Silicone O Ring
- Fluorocarbon (Viton) O Ring
- Silicone FEP Jacketed O Ring

STANDARD BODY GASKET RANGE

- PTFE
- Aramide / Nitrile
- Carbon / Aramide
- Laminated Graphite
- Laminated Graphite / 316
- Spiral Wound 316L / PTFE
- Spiral Wound 316L / Graphite
- Spiral Wound 321 / Graphite
- Spiral Wound Inconel / Graphite
- Spiral Wound Titanium / Graphite
- Welded Lips

Valve Coding System

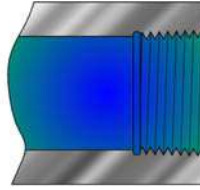


SERIES VL, CUSTOM MADE RANGE LINE AND BRANCH CONNECTIONS

Soft Seal Valves can be equipped with the following end connections:



Flanges ANSI,
DIN, JIS



Threaded
connections
NPT & BSP

ACTUATION OPTIONS



Hand Wheel



Bevel Gear



Electric Actuator



Air Motor



Double or single
acting Air Cylinder



Double or single acting Air
Cylinder with Safety Hand Wheel



Double or single acting Air
Cylinder with side mounted
Safety Hand Wheel



Hydraulic
Cylinder

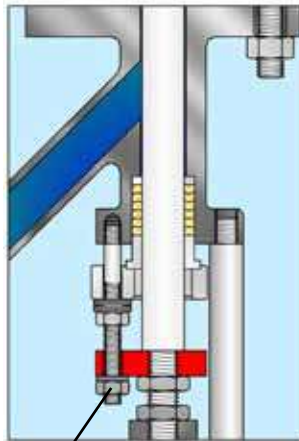
SERIES VL, CUSTOM MADE RANGE PISTON LOCKING DEVICE

Often times safety regulations require an additional locking device to keep a valve closed. Strahman provides three different arrangements.



Arrangement A

Special half pipe blocks the stem within top works and prevents valve from stroking



Arrangement B

Extended stuffing box bolts provide locking with special position indicator.



Arrangement C

Lockable handwheel cover.

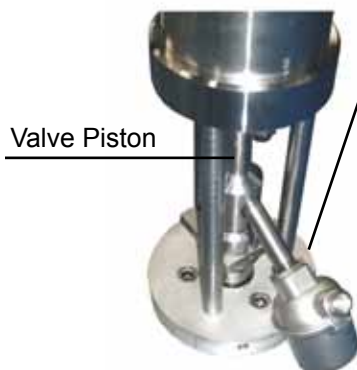
TEMPERATURE PROBE IN THE PISTON RTD SENSORS

A bottom valve is located right in the middle of your process. For this reason, an optional temperature probe installed in the piston will provide you with temperature information without the need of any extra nozzle or reactor modification.

For temperature sensitive processes, Strahman Valves offers piston-mounted single or dual Resistance Temperature Detectors (RTDs). The standard RTD unit has a platinum element and is available in materials to match the wetted parts of the drain valve.

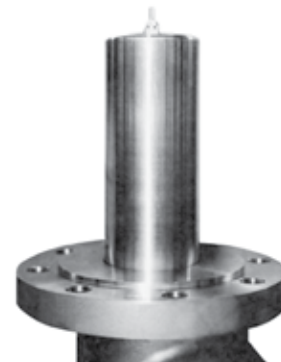
Drain valves with RTDs provide several advantages over traditional thermocouples. Temperature sampling and vessel draining can be done from the same vessel nozzle. Since the drain valve is typically mounted to the bottom of the vessel, the location of the RTD at the end of the drain valve piston allows for a better temperature reading than a thermocouple mounted above the vessel agitator. RTDs provide a more stable and repeatable operation than thermocouples.

Each RTD equipped drain valve is complete with a bonnet-mounted junction box. The signal output of a RTD can be connected to a computer or data collector. An optional valve mounted temperature transmitter is also available.



Single or Double PT100
Temperature Probe.
Ex-proof or standard.
Temperature range:
-50°C / 400°C
-60°F / 750°F

Piston Mounted
RTD Sensor



SERIES VL, CUSTOM MADE RANGE

MULTI POSITION AND BOTTOM VESSEL SAMPLING

OPTIONAL CRUST BRACKING AND SAMPLING POSITION

An option exclusive to soft seal piston valves is the multiple piston position. This particular arrangement allows to move the piston while still sealing between process and outlet. This way a multi-purpose valve becomes a multi-purpose tool.

1. The ram can extend into the tank (Fig. 1). This breaks through any crust or build-up that may form on the tank bottom. The normal piston position is flush with the tank bottom.
2. The piston completely fills the valve bore so the valve cannot clog.
3. As the valve opens, the piston retracts (Fig. 2). Before the drain valve opens, the piston clears the insert ring/flange and a sample can be taken.
4. After taking the sample and closing the sampling valve, the piston continues to retract until the drain valve opens and drains the tank. (Fig. 3)
5. After draining the tank, the ram valve can be closed. The piston extends through the insert ring/flange and into the tank removing all material.

Bottom Vessel Sampling

A Strahman sampling valve combined with a sampling assembly can be used to sample product prior to tank draining

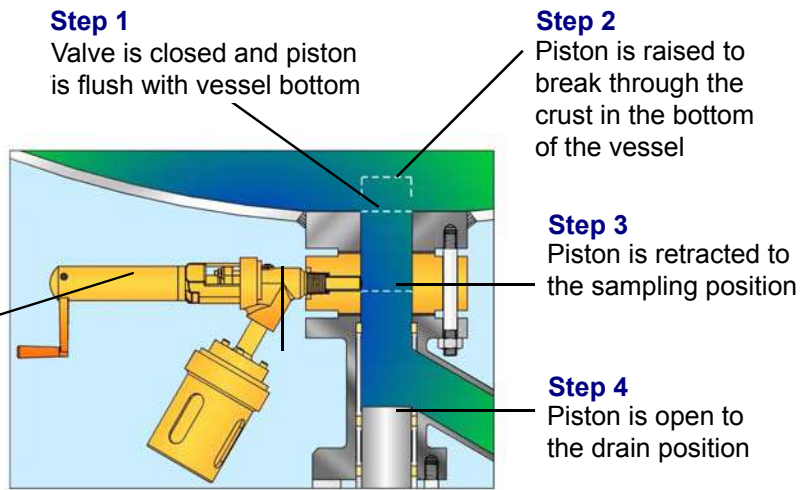


Fig. 1 - Drain Valve Fully Closed



Fig. 2 - Drain Valve Open for Sample



Fig. 3 - Drain Valve Fully Open

*Shown: Strahman Insert and Sampling Valve in conjunction with the Ram-Type Drain Valve

The Strahman family of products include:

SAMPLING VALVES

Strahman has a full line of sampling valves that produce live samples without exception. Our sampling valves unique designs prevent failure caused by sediment or clogging.

DRAIN VALVES

Strahman Drain Valves are designed to prevent clogging. They are ideal for use in liquid and gas service or with slurries, polymers, and high viscosity fluids that tend to solidify at room temperature.

WASH DOWN EQUIPMENT

Strahman offers a full line of mixing units, hose stations, hoses, nozzles and wash down accessories. Our wash down line is designed for industrial use and is used in a wide variety of industries including food, beverage, pharmaceutical, chemical and other applications.

LINE BLINDS

Strahman Line Blinds provide zero leakage down stream and total isolation on process pipelines, vessels and maritime applications. No pipeline movement is required when blind position is changed.

Please contact your local Strahman representative for further details
or visit our website: www.strahmanvalves.com



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