

SchuF 

***Sampling  
Valves***

**FETTEROLF**

SchuF / Fetterolf offers a large range of sampling valve solutions. Our **standard Type 32 sampling valves** are available from stock for fast deliveries. We also offer **custom-built solutions**.

Either way, our valves are non-clogging and dead space free. They are designed to simplify the extraction of samples from or the injection into tanks, reactors, or pipelines and allow for long, trouble free service!



**FIRE-SAFE AVAILABLE!**

## TECHNICAL INFORMATION:

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### Designs:

**The SchuF / Fetterolf, Type 32 Series**, is available in standard sizes from stock for *fast delivery*:

#### **SchuF / Fetterolf, Type 32FR:**

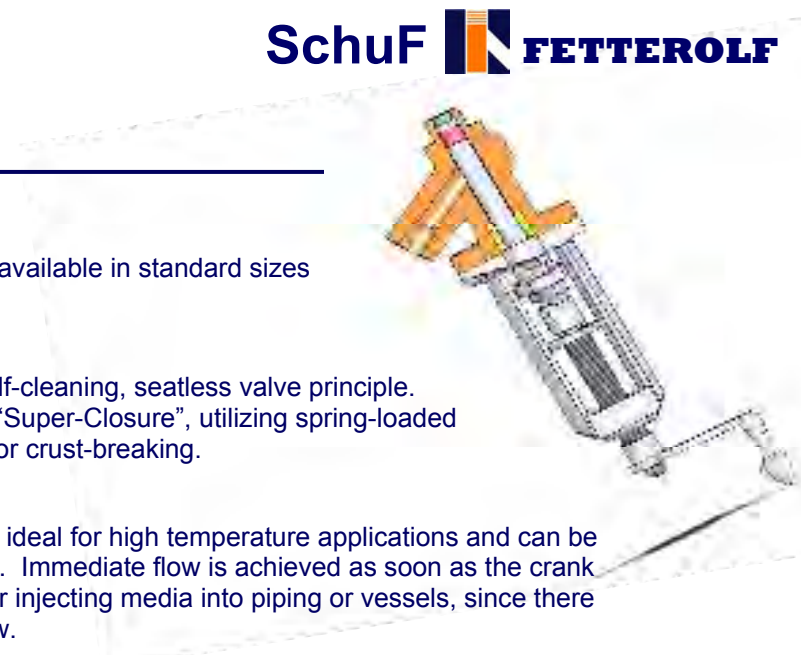
The “ROD SEAL<sup>®</sup>” design embodies the self-cleaning, seatless valve principle. Only SchuF / Fetterolf offers the feature of “Super-Closure”, utilizing spring-loaded components. Ideal for extended plungers for crust-breaking.

#### **SchuF / Fetterolf, Type 32PG:**

This robust, metal seated sampling valve is ideal for high temperature applications and can be manufactured in certified, fire-safe versions. Immediate flow is achieved as soon as the crank handle is turned! The 32PG is also ideal for injecting media into piping or vessels, since there are no soft sealing rings exposed to the flow.

#### **SchuF / Fetterolf, Type 32FG:**

The patented “RAM SEAL<sup>®</sup>” design features replaceable seal rings for ease of maintenance. The combination of a metal compression ring and a soft PTFE seal ring allows the valve to deliver incredibly low leakage rates in a variety of services (gas and liquid) over a long period of time.



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### Features:

- All **Type 32** standard valves are rated to 600 lbs.
- Crank handle manual operators are easy to use.
- The outlet branch is 60 degrees.
- All valves have **Leakage Class VI** shut-off (100% tested).
- Cast yokes and bodies are of a robust design.

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### Materials of Construction:

All wetted parts and bodies manufactured in a variety of materials including:

- 316 stainless steel (standard)
- Titanium
- Nickel Alloys
- Alloy 20
- Monel
- Others available. We will fabricate to the customer's specifications.

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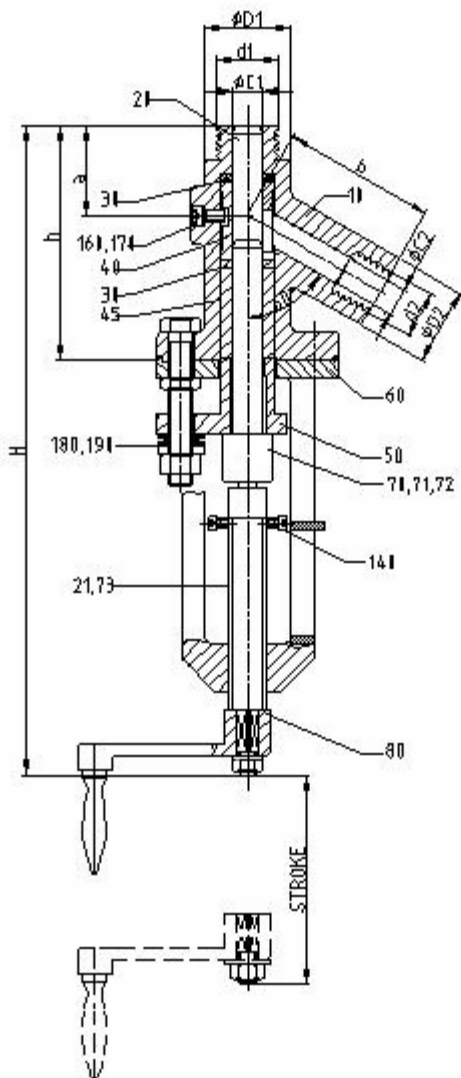
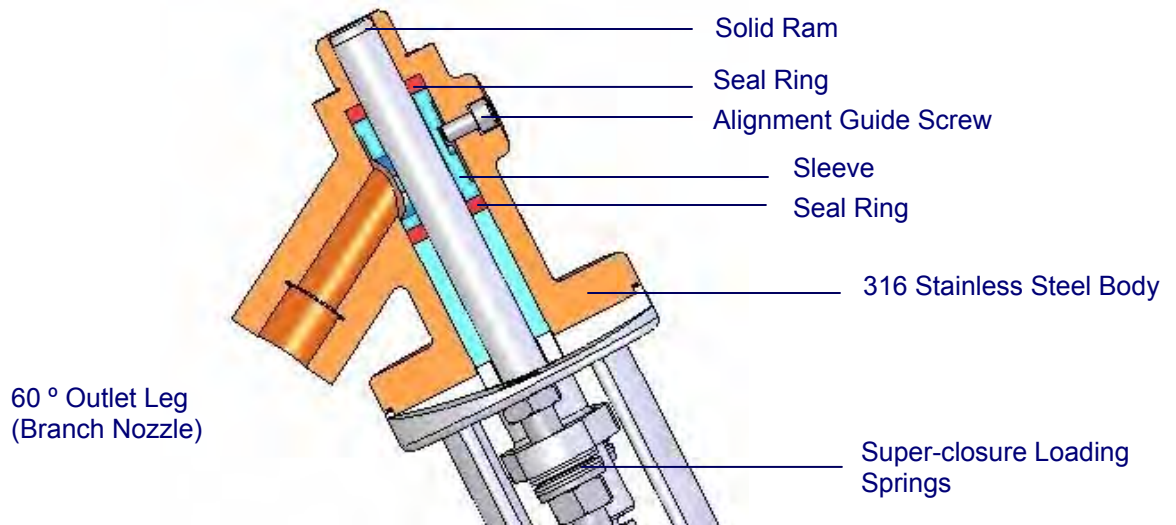
### Actuation:

- Pneumatic
- Deadman's Handle
- Bevel Gears
- Others available

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### Options:

- Sample Bottles
  - Integral Heating Jackets
  - Flushing Ports
  - Extended Rams and Bodies
  - Various Inlet Connections, T-Pieces, Half-Couplings, etc.
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**TYPE 32FR PARTS LIST:**

POS NO	DESCRIPTION	MATERIAL	QTY
10	BODY	ASTM GR.CF-8M / 1.4408	1
20	RAM	SS 316 / 1.4401	1
21	SPINDLE	SS416 / 1.4005	1
30	SEALING RING	PTFE / GLASS 25%	2
40	PRESSURE SLEEVE	SS 316 / 1.4401	1
45	GUIDE BUSH	SS 316 / 1.4401	1
50	STUFFING BOX	ASTM GR.CF-8M / 1.4408	1
60	YOKE	SS 303 / 1.4305	1
70	CONNECTING NUT	SS416 / 1.4005	1
71	ROLL / SPRING PIN	CARBON STEEL	1
72	STEM BUTTON	SS TYPE 17-4 PH / 1.4541	1
73	ROLL / SPRING PIN	CARBON STEEL	1
80	CRANK HANDLE	ASTM GR.CF-8 / 1.4308	1
140	INDICATOR	SS 303 / 1.4305	1
160	SOCKET HEAD CAP SCREW	A2-70	1
170	GASKET	FLUOROLOY K	2
180	CUP SPRING	1.4122	8
190	WASHER	A4	2

*Dimensional Table: (Sizes in inches, others in mm)*

SIZE	ØD1		d1		d2		a	b	h	H	STROKE
	ØD1	ØD2	NPT	NPT	ØC1	ØC2					
1/2" x 1/2"	45	40	1/2"	1/2"	13	15	47	80	123	345	60
3/4" x 1/2"	45	40	3/4"	1/2"	16	15	47	80	123	345	60
3/4" x 3/4"	45	40	3/4"	3/4"	16	15	47	80	123	345	60
1" x 1/2"	45	40	1"	1/2"	16	15	47	80	123	345	60
1" x 3/4"	45	40	1"	3/4"	16	15	47	80	123	345	60
1 1/2" x 1"	60	45	1 1/2"	1"	25	25	47	90	140	360	65

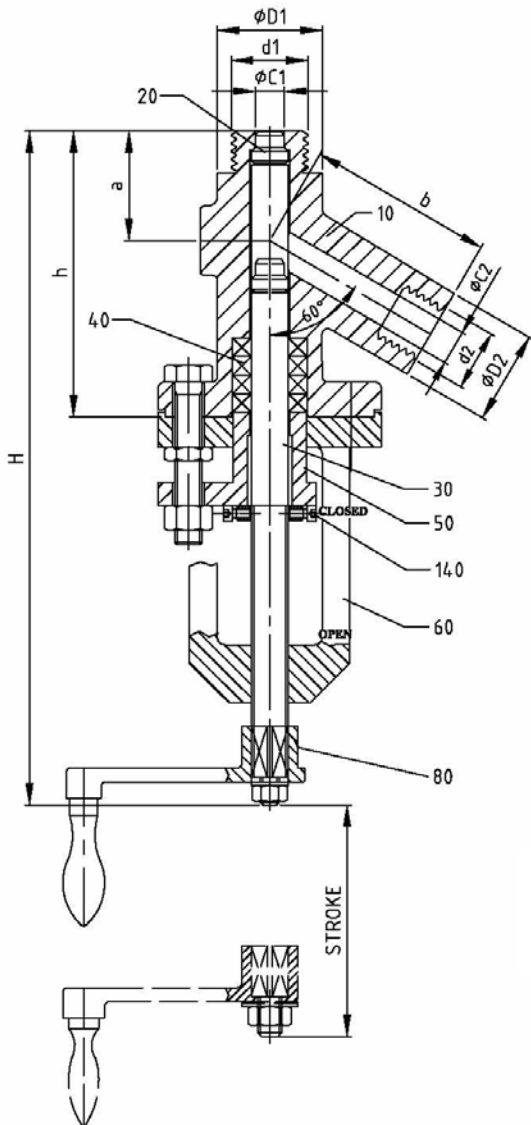
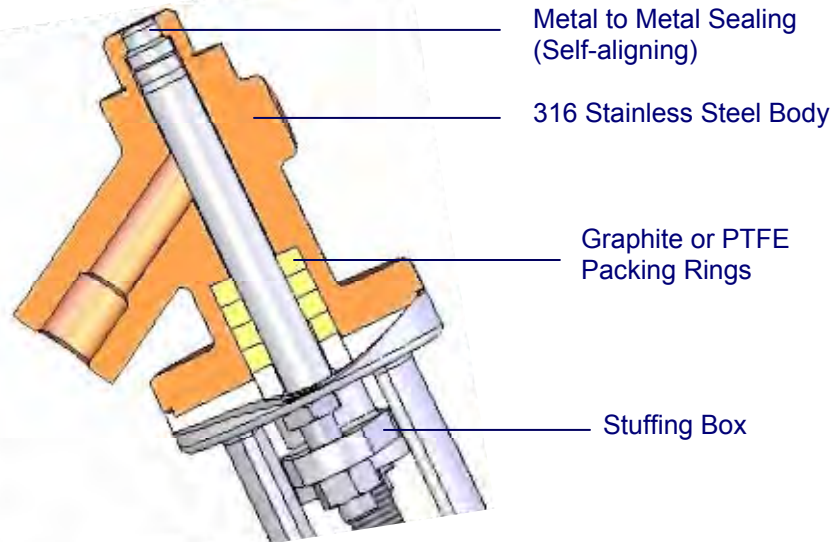
**MAX TEMPERATURE:**  
 PTFE SEALING RINGS: 200 °C  
 BLUE GUARD SEALING RINGS: 370 °C

**PRESSURE RATING:**  
 VALVES RATED TO ANSI 600

# SchuF FETTEROLF SAMPLING VALVES – TYPE 32PG

**FIRE-SAFE AVAILABLE!**

60 ° Outlet Leg  
(Branch Nozzle)



## TYPE 32PG PART LIST:

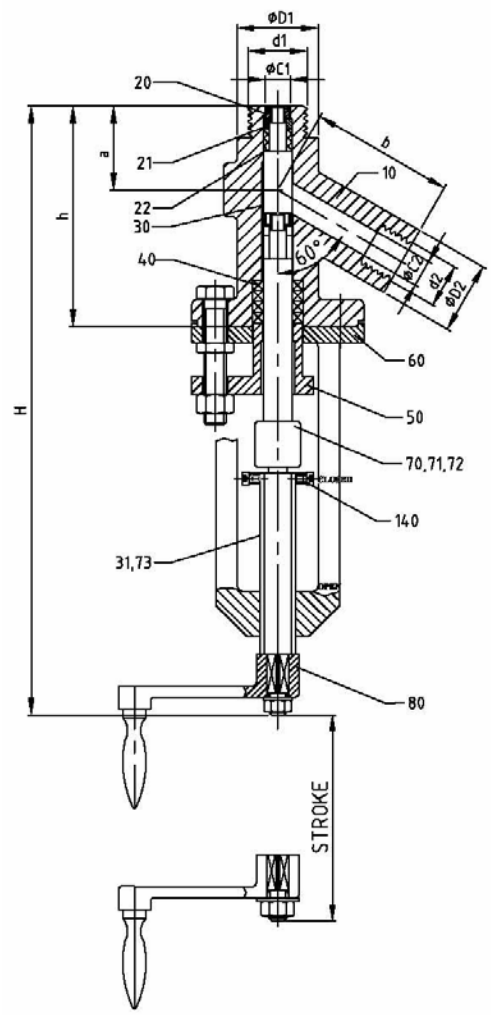
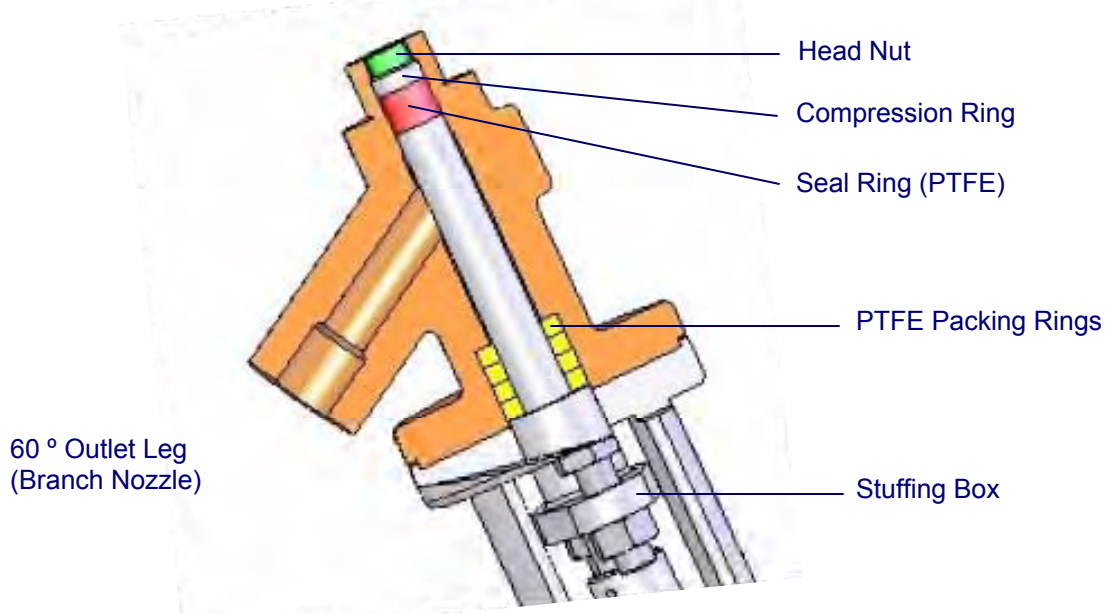
POS NO	DESCRIPTION	MATERIAL	QTY
10	BODY	ASTM GR.CF-8M / 1.4408	1
20	RAM	SS 316 / 1.4401	1
30	SPINDLE	SS 316 / 1.4401	1
40	PACKING RING	PTFE / GRAPHITE	4
50	STUFFING BOX	ASTM GR.CF-8M / 1.4408	1
60	YOKE	SS 303 / 1.4305	1
80	CRANK HANDLE	ASTM GR.CF-8 / 1.4308	1
140	INDICATOR	SS 303 / 1.4305	1

Dimensional Table: (Sizes in inches, others in mm)

SIZE	ØD1	ØD2	d1		d2		a	b	h	H	STROKE
			NPT	NPT	ØC1	ØC2					
1/2" x 1/2"	45	40	1/2"	1/2"	12.5	15	47	80	123	295	55
3/4" x 1/2"	45	40	3/4"	1/2"	12.5	15	47	80	123	295	55
3/4" x 3/4"	45	40	3/4"	3/4"	12.5	15	47	80	123	295	55
1" x 1/2"	45	40	1"	1/2"	12.5	15	47	80	123	295	55
1" x 3/4"	45	40	1"	3/4"	12.5	15	47	80	123	295	55
1 1/2" x 1"	60	45	1 1/2"	1"	25	25	47	90	140	310	55

**MAX TEMPERATURE:**  
 PTFE PACKING RINGS: 260° C  
 GRAPHITE PACKING RINGS: 550 ° C

**PRESSURE RATING:**  
 VALVES RATED TO ANSI 600



**TYPE 32FG PARTS LIST:**

POS NO	DESCRIPTION	MATERIAL	QTY
10	BODY	ASTM GR.CF-8M / 1.4408	1
20	RAM HEAD NUT	SS 316 / 1.4401	1
21	COMPRESSION RING	SS 316 / 1.4401	1
22	SEALING RING	PTFE	1
30	RAM	SS 316 / 1.4401	1
31	SPINDLE	SS416 / 1.4005	1
40	PACKING RING	PTFE / GRAPHITE	4
50	STUFFING BOX GLAND	ASTM GR.CF-8M / 1.4408	1
60	YOKE	SS 303 / 1.4305	1
70	CONNECTING NUT	SS416 / 1.4005	1
71	SPRING DOWEL PIN	CARBON STEEL	1
72	STEM BUTTON	SS TYPE 17-4 PH / 1.4541	1
73	SPRING DOWEL PIN	CARBON STEEL	1
80	CRANK HANDLE	ASTM GR.CF-8 / 1.4308	1
140	INDICATOR	SS 303 / 1.4305	1

*Dimensional Table: (Sizes in inches, others in mm)*

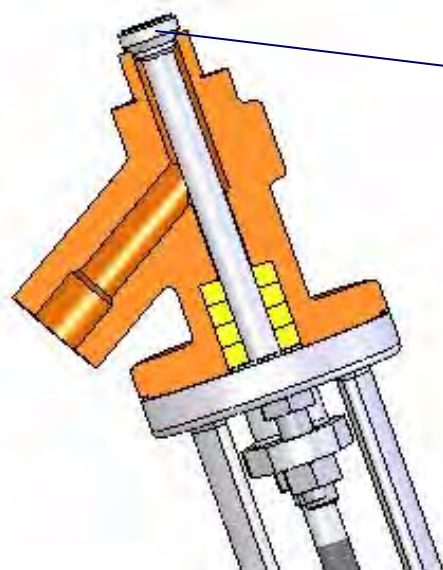
SIZE	d1		d2		$\phi C1$	$\phi C2$	a	b	h	H	STROKE
	$\phi D1$	$\phi D2$	HPT	HPT							
1/2" x 1/2"	45	40	1/2"	1/2"	11	15	47	80	123	340	60
3/4" x 1/2"	45	40	3/4"	1/2"	14	15	47	80	123	340	60
3/4" x 3/4"	45	40	3/4"	3/4"	14	15	47	80	123	340	60
1" x 1/2"	45	40	1"	1/2"	14	15	47	80	123	340	60
1" x 3/4"	45	40	1"	3/4"	14	15	47	80	123	340	60
1 1/2" x 1"	60	45	1 1/2"	1"	23	25	47	90	140	360	60

**MAX TEMPERATURE:**  
PTFE SEALING RING: 260° C

**PRESSURE RATING:**  
VALVES RATED TO ANSI 600

# SchuF FETTEROLF SAMPLING VALVES – TYPE 32PT

**FIRE-SAFE AVAILABLE!**

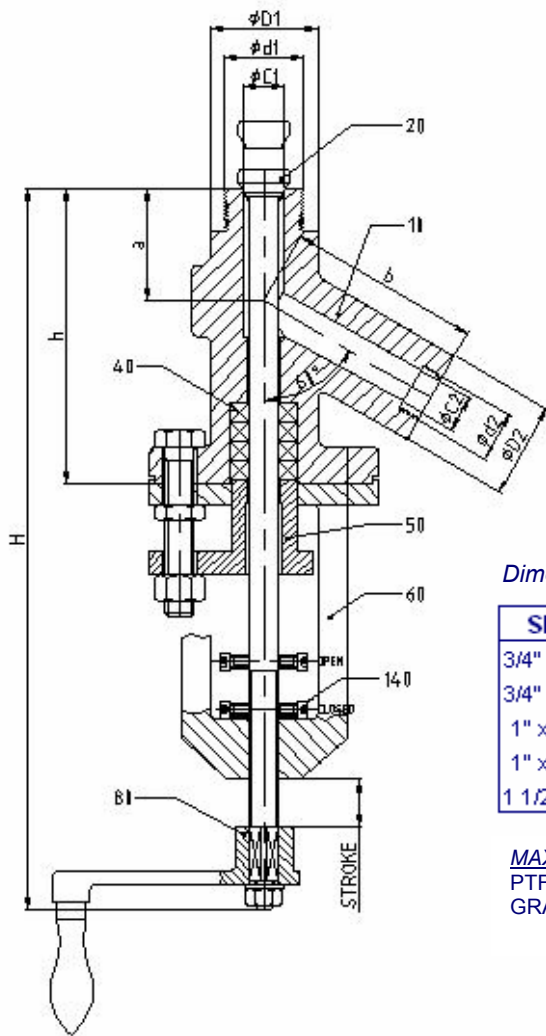


Metal to Metal Seal  
Disc Opens into the Process Medium

The 32PT is a metal seated, disc type sampling valve. When the valve is opened, the disc rises into the vessel or pipe. By doing so, it breaks any crust that can impede the flow of a sample.

The 32PT opens to full flow very quickly thanks to its short stroke.

60 ° Outlet Leg  
(Branch Nozzle)



## TYPE 32PT PARTS LIST:

POS	NO	DESCRIPTION	MATERIAL	QTY
10		BODY	ASTM GR.CF-8M / 1.4408	1
20		DISC WITH SPINDLE	SS 316 / 1.4401	1
40		PACKING RING	PTFE / GRAPHITE	4
50		STUFFING BOX	ASTM GR CF-8M / 1.4408	1
60		YOKE	SS 303 / 1.4305	1
80		CRANK HANDLE	ASTM GR.CF-8 / 1.4308	1
140		INDICATOR	SS 303 / 1.4305	1

Dimensional Table: (Sizes in inches, others in mm)

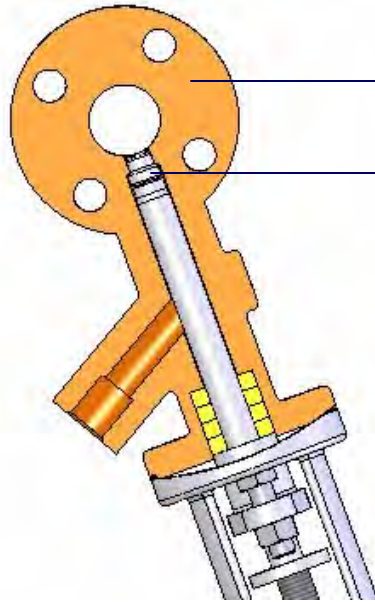
SIZE	$\phi D1$	$\phi D2$	d1 NPT	d2 NPT	$\phi C1$	$\phi C2$	a	b	h	H	STROKE
3/4" x 1/2"	45	40	3/4"	1/2"	17	15	47	80	123	300	20
3/4" x 3/4"	45	40	3/4"	3/4"	17	15	47	80	123	300	20
1" x 1/2"	45	40	1"	1/2"	17	15	47	80	123	300	20
1" x 3/4"	45	40	1"	3/4"	17	15	47	80	123	300	20
1 1/2" x 1"	60	45	1 1/2"	1"	25	25	47	90	140	320	20

### MAX TEMPERATURE:

PTFE PACKING RINGS: 260 ° C  
GRAPHITE PACKING RINGS: 550 ° C

### PRESSURE RATING:

VALVES RATED TO ANSI 600

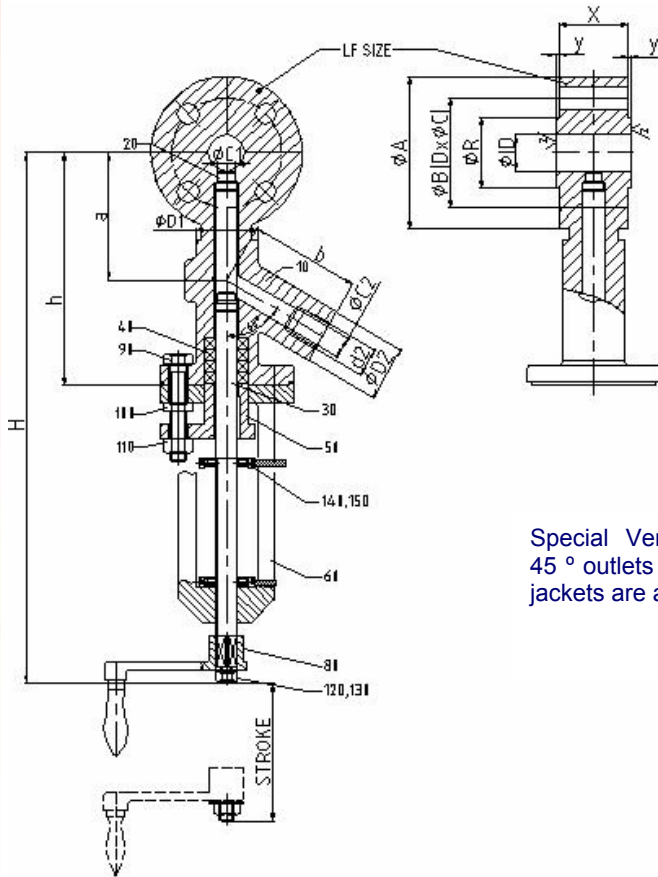


Integral Flange Insert  
(Metal Connection Possible)

Metal to Metal Seal (Soft Seals Available)  
Flush with ID of Insert / Product Pipe

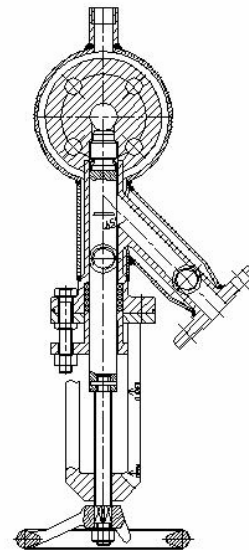
60 ° and 45 ° Outlet Leg  
(Branch Nozzle)

These valves are built with a metal insert that is welded to the valve. The complete assembly is installed in the product line (flanged, clamped or welded). The valve seals flush with the ID of the insert which has the same ID as the product line. Any of the sealing methods shown in the Type 32 drawings (metal or soft seats) can be used in the Type 31PF configuration. In addition to a guaranteed dead space free arrangement, with the Type 31PF, there is no risk of distorting the valve's sealing surfaces during welding and installation work at site.



POS NO	DESCRIPTION	MATERIAL	QTY
10	BODY	ASTM GR.CF-8M / 1.4408	1
20	DISC	SS 316 / 1.4401	1
30	SPINDLE	SS 316 / 1.4401	1
40	PACKING RING	PTFE / GRAPHITE	4
50	STUFFING BOX	ASTM GR CF-8M / 1.4408	1
60	YOKE	SS 303 / 1.4305	1
80	CRANK HANDLE	ASTM GR.CF-8 / 1.4308	1
140	INDICATOR	SS 303 / 1.4305	1

Special Versions such as  
45 ° outlets and full heating  
jackets are also available.

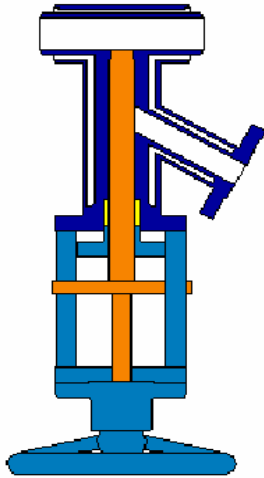


Available insert sizes:

LF SIZE (ANSI) ANSI 150 to 600	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	8"	10"	12"
LF SIZE (DIN) PN 10 to PN 63	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300

**MAX TEMPERATURE:**  
PTFE PACKING RINGS: 260 ° C  
GRAPHITE PACKING RINGS: 550 ° C

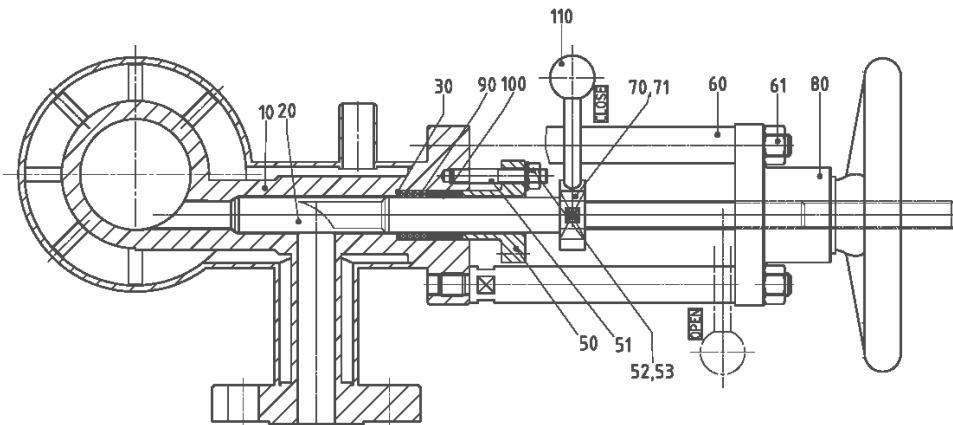
**PRESSURE RATING:**  
VALVES RATED TO ANSI 600



**TYPE 30PR**

Type 30PR valves are also known as core pipe assemblies; they allow the user to take a sample under high temperature and pressure. The valve is welded to a spool piece which is a short piece of the process pipe. The valve assembly is welded directly into the process piping. In polymer applications, the 30PR is usually fully jacketed. The spool piece connections can have weld, Grayloc™ or flanged ends.

The 30PR can also be used to drain a line in a shut-down situation, to flush or purge it or as an injection valve.

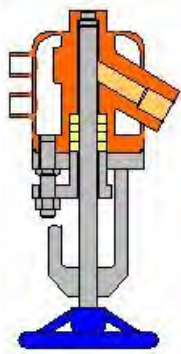


**TYPE 30PT**

Another SchuF innovation, the 30PT, allows the valve to be installed horizontally. This enables the operator to take a vertical sample without having to operate the valve under the pipe - a potentially dangerous situation should hot polymer splash or spill while the sample is being taken.

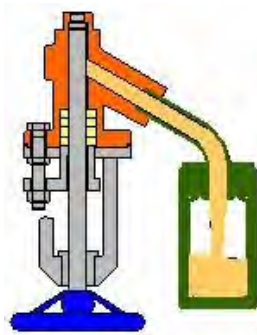
All Type 30 valves are custom-built assemblies. Options include a wide variety of metallurgies, actuators, pressure ratings from full vacuum to ANSI 2500 / PN 400, hardened sealing surfaces and replaceable seats.

**Valve with Heating Jacket**



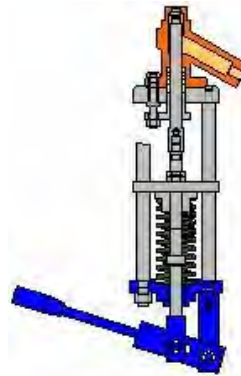
All SchuF / Fetterolf sampling valves can be jacketed. Heating jackets cover the entire valve body fully, and they also heat the packing area. They are welded to the body. Unlike clamp on jackets, there are no cold spots making them ideal for difficult media such as high temperature polymers.

**Valve with Sampling Bottle**



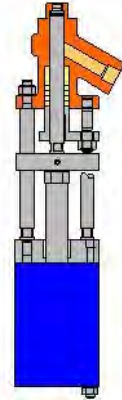
All SchuF / Fetterolf sampling valves can be supplied with sample bottles. High temperature metal containers are also available.

**Valve with Deadman's Handle**



This spring loaded operator ensures that manual valves close very fast... as soon as the handle is released!

**Valve with Piston Actuator**

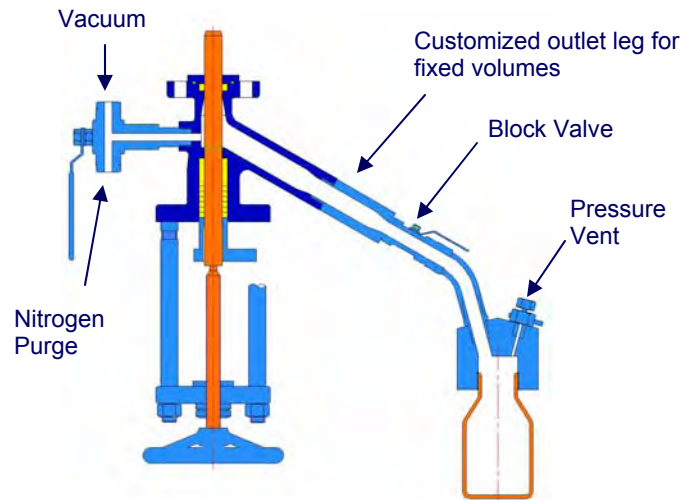


All Sampling Valves can be delivered with double acting or spring return pneumatic piston actuators as well as instrumentation accessories.

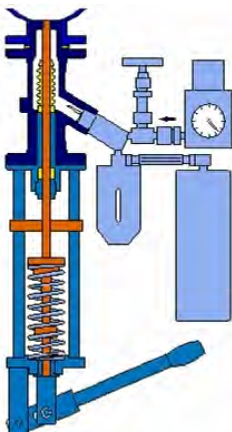
## Solutions for Critical Applications

### Sampling Systems:

SchuF / Fetterolf offers complete sampling valve solutions which may include features such as fixed volume sampling with high pressure sampling containers complete with vent valves. Vacuum ports help draw samples, and purge connections ensure the system is clean after the sampling valve is closed.



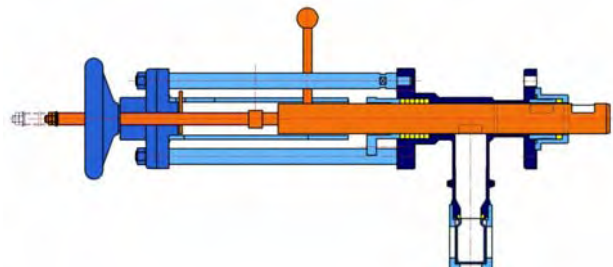
### Lethal Service:



The 32PH has a metal bellows seal for zero leakage to the atmosphere. Options include leak detection chamber and venting canister.

An emergency stuffing box enables the valve to maintain zero leakage through the gland should the bellows break.

The 32 Powder Sampling Valve is mounted horizontally. When the ram is extended into the vessel or pipe, the sampling cavity in the ram will fill with medium. To retrieve the sample, retract the ram back fully into the valve, then turn the lever 180° to rotate the sampling cavity directly over the valve outlet. The powder sample will then drop into the sample bottle.



**How to order a SchuF  FETTEROLF SAMPLING VALVE – Please specify...**



**CONTACT INFORMATION:**

Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 City: \_\_\_\_\_  
 State: \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 email: \_\_\_\_\_

**TYPE / QUANTITY:**

<u>Please choose:</u>	<u>Quantity:</u>
32FR (Radial SEAL): _____	_____
32PG (metal to metal seal): _____	_____
32FG (ram seal <sup>®</sup> ): _____	_____
Other, including custom solution: _____	_____

**MATERIALS:**

Wetted Parts: 316 stainless (standard) or other: \_\_\_\_\_  
 Medium / Temperature / Pressure: \_\_\_\_\_

**HEATING JACKET:**

Yes or No: \_\_\_\_\_  
 Heating medium: \_\_\_\_\_  
 Temperature and Pressure: \_\_\_\_\_  
 Jacket Connections: \_\_\_\_\_

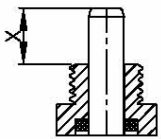
**OPERATION:**

Crank Handle (Standard): \_\_\_\_\_  
 Handwheel: \_\_\_\_\_  
 Deadman's Handle: \_\_\_\_\_  
 Pneumatic, Double-acting: \_\_\_\_\_  
 Pneumatic, Spring Return: \_\_\_\_\_  
 Accessories (solenoid valves, limit switches, etc.): \_\_\_\_\_

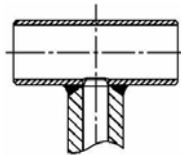
**CONNECTIONS:**  
*Inlet & Outlet*

Rating & Size: \_\_\_\_\_  
 Threaded / Flanged / Socket Weld / Other: \_\_\_\_\_  
 T-Piece (Specify pipe size, material and rating): \_\_\_\_\_  
 Half-coupling (State size, material and rating): \_\_\_\_\_  
 Valve body with Flushing Port (Yes / No): \_\_\_\_\_  
 Extended Body / Seat (x dimension): \_\_\_\_\_  
 Extended Body / Seat (x) and extra  
 extended ram (p dimension): \_\_\_\_\_

**OPTIONS: Extended Rams and Bodies, Valve Connections**



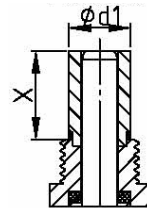
**Ram Extension**



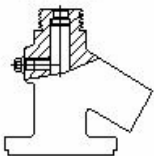
**T-Piece**



**Flange Connection**



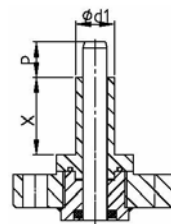
**Fixed Seat**



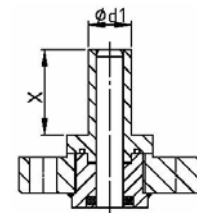
**Flushing Connection**



**Contoured Half Coupling**  
 (Also can be non-contoured)



**Extended Body / Seat / Ram**



**Extended Body / Seat**



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