

VR-22 Piston Sampler

Positive Displacement Sample Grabber

MARKET

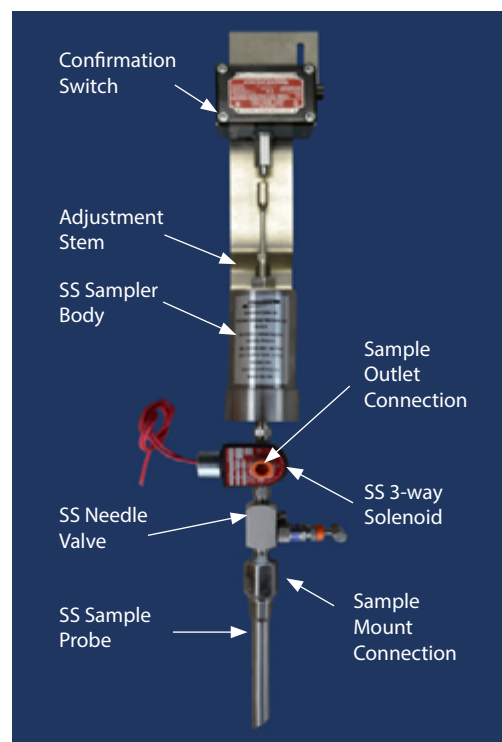
Energy Infrastructure

AVAILABLE

Worldwide

The **Chemtec VR-22** is a spring loaded positive displacement sample grabber utilizing a piston/cylinder assembly. This design offers several advantages over traditional diaphragm samplers while still offering a low cost solution for sampling. The sampler includes a stainless steel body, electric 3-way solenoid valve, needle valve, and inlet probe. The optional confirmation switch can be used to send a confirmation signal at the completion of each sample.

The VR-22 is designed to extract samples from 2-22 cc's. Adjusting the sample size is accomplished via a threaded adjustment stem. The VR-22 is activated by an external signal. This signal, which energizes the VR-22 solenoid, allows samples to enter the sampler body via the inlet probe. Once the sampler body is filled and the solenoid valve is de-energized, the sample is discharged into an external sample container.



FEATURES & BENEFITS

- Simple, low-cost design
- No rust - Stainless steel design
- No diaphragm - Eliminates common component failure
- Piston/cylinder design - offers improved accuracy
- Confirmation Switch - provides sample confirmation feedback loop
- Needle Valve - Isolates solenoid and sampler body for maintenance
- Adjustable sample size from 2-22 cc

SPECIFICATIONS

- Sampler Body: 304 Stainless
- Maximum Pressure: 400 PSI
- Viscosity: 14-56 API
- Pipeline Size: 2-8"
- Solenoid: 3-way, Stainless Steel Body, Class 1, Div I. 12 VDC, 24 VDC or 120VAC options
- Sample Outlet Connection: 1/4" NPT
- Sample Mount Connection: from 1/2" to 1-1/4"

Chemtec Energy Services VR-22 Piston Sampler

Operating Data for Different Sample Volumes

Sample Volume (cc)	Minimum Pressure (PSI)*	Maximum Extractions per Minute	Sample Volume (cc)	Minimum Pressure (PSI)*	Maximum Extractions per Minute	Sample Volume (cc)	Minimum Pressure (PSI)*	Maximum Extractions per Minute
2	20	180	9	31	84	16	41	48
3	22	155	10	32	76	17	43	45
4	23	133	11	34	70	18	44	42
5	25	118	12	35	64	19	46	40
6	26	108	13	37	59	20	47	38
7	28	98	14	38	56	21	49	37
8	29	90	15	40	52	22	50	36

* Minimum system pressure must be increased by the amount of any system back pressure.

TOLERANCE: DIMENSIONS SHOWN ARE +/- 1/8"

ITEM	QTY.	SIZE	TYPE	DESCRIPTION
1	1	3/4"	MNPT	SAMPLE QUILL, 304SS (SEE CHART FOR LENGTH)
2	1	3/8"	NPT	ALCO NEEDLE VALVE, 316SS, MXF P/N: UN2NS-1M
3	2	3/8"	MNPT	HEX NIPPLE, 316SS, SWAGelok P/N: SS-4-HN
4	1	3/8"	FNPT	3-WAY SOL. PARKER, P/N: 7133SSVAL1NH11P3
5	1	3/4"	FNPT	304SS VOLUME REGULATOR, CES VR-22-PD 1-22cc OPER. PRESS: MIN: 16 PSIG / MAX: 400 PSIG

GENERAL NOTES:

- SEE TABLE 1.0 FOR SAMPLE QUILL "L" LENGTHS RESPECTIVE TO PROCESS PIPING SIZE.
- MAXIMUM OPERATING PRESSURE FOR SAMPLE ASSEMBLY IS 300 PSIG.
- SAMPLE ASSEMBLY IS DESIGNED FOR A CLASS 1 DIV 2 AREA.

NOM. PIPE SIZE	"L" DIM.
2"	3.00"
3"	3.50"
4"	4.00"
6"	5.00"
8"	6.00"
10"	7.00"
12"	8.00"

REVISIONS				REVISIONS (CONT'D)					
NO.	REVISION DESCRIPTION	DATE	DNW	CHK	NO.	REVISION DESCRIPTION	DATE	DNW	CHK
S1	ISSUED FOR RECORD	3/29/14	JRG	BD					
S2	ADDED DETAIL 'A' TO DWG.	7/6/15	JRG	BD					

Chemtec
 Chemtec Energy Services, LLC
 11745 Cude Cemetery Road
 Willis, Texas 77318

SCALE: AS SHOWN
 DATE: 07-15-14
 DRAWN BY: JRG
 CHECK BY: JRG
 CHEMTEC ENERGY SERVICES, LLC
 11745 CUDE CEMETERY ROAD, WILLIS, TX 77318
 VR-22-PD SAMPLE EXTRACTOR ASSEMBLY
 STANDARD DRAWING
 DRAWING NUMBER: CES-VR22-STD-001
 REV: S2

