



210EH Cell & 210EH-HP Cell

Hydraulically actuated flow-through sample extractor



The 210EH Cell is one of the most reliable and accurate flow-through sample extraction devices, suitable for use as part of an externally pumped, bypass fast-loop sampling system.

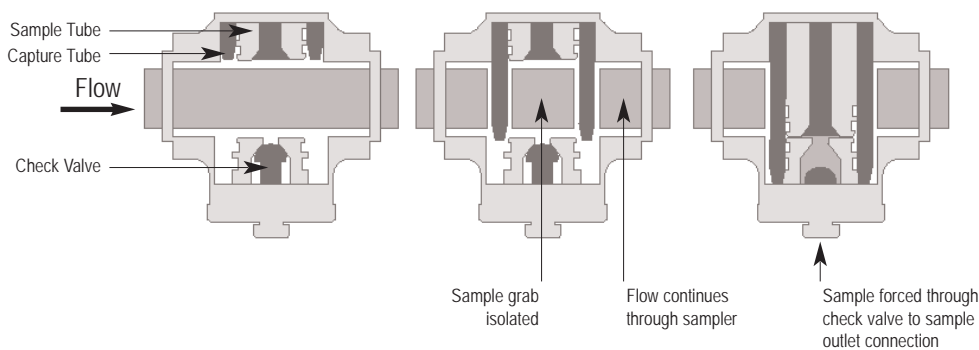
Available in standard and high pressure (210EH-HP) versions the 210EH is hydraulically operated and includes a self-contained hydraulic pack making it the ideal solution for a wide range of liquid sampling applications where an air supply is unavailable.

The 210EH Cell has a unique three-stage positive displacement action giving accurate sampling irrespective of variations in process pressure or fluid viscosity. Designed for use with 1" or 2" diameter lines, the entire stream passes through the body of the device. The flowthrough 210EH Cell sampler has a bottom exit sample outlet, which avoids any possible water separation, and reduces any dead volume to an insignificant amount within the sampler.

Maintenance and replacement of seals can be performed without removing the sampler from the fast-loop. Established as one of the key instruments in the sampling process for fiscal transfer and quality assessment, the 210EH has a vast world-wide installed base and is seen as one of the most reliable platforms on which to build a sampling system.

Data Sheet S103-0709-4 • 210EH Cell & 210EH-HP Cell

Three stage positive displacement action





Specification

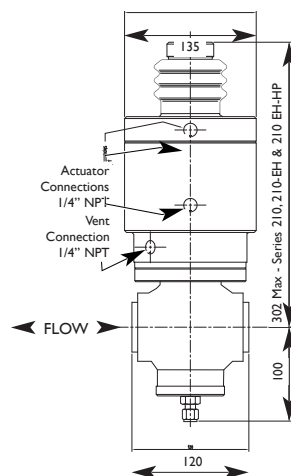
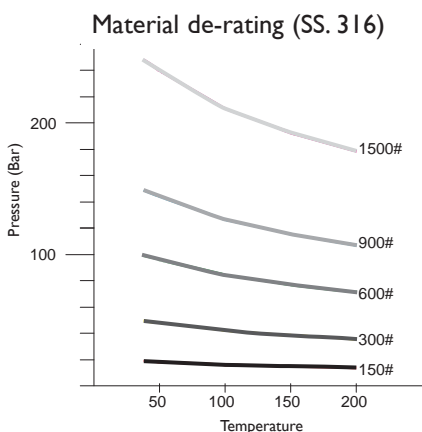
Fluids sampled	Crude oil, refined hydrocarbons (including non-lubricating products) & non corrosive chemicals					
Viscosity range	0.5 to 8000 cSt.					
Process temperature range	Flange dependant - see chart below					
Ambient temperature range	-20°C to +65°C (-4°F to +149°F)					
Max. operating pressure (standard materials of construction) *see chart below for material de-rating	Class	38°C	50°C	100°C	150°C	200°C
	150#	19	18.4	16.2	14.8	13.7
	300#	49.6	48.1	42.2	38.5	35.7
	600#	99.3	96.2	84.4	77	71.3
	900#	148.9	144.3	126.6	115.5	107
	1500#	248.2	240.6	211.0	192.5	178.3
Seal Temperature	-20°C to +200°C (-4°F to +392°F) Process wetted parts					
Configuration	Full bore - flow through cell					
Size range	1" to 2" Nominal bore					
Mounting arrangements	1" nominal bore – ANSI class 150, 300 or 600 – wafer type (standard) (1", 1-1/2" & 2" flanged versions available on request)					
Sample grab size (nominal)	1.04cc or 2.04cc					
Grab size repeatability	Better than ±2%					
Grab size adjustment	1cc version ±20% - 2cc version +0 / -10%					
Max. grab rate** (per min)	210EH: 30			210EH-HP: 15		
Sample outlet connection	1/4" Swagelok®					
Standard materials	Pressure retaining:	316/304 Stainless steel				
	Standard seals:	Graphite filled P.T.F.E.				
	Standard O' rings	Viton (Kalrez available*)				
	(NACE certification available*)					
Operating standards and CE compliance	ISO 3171, API 8.2, IP 6.2, PED - 97/23/EC, Machinery directive - 98/37/EC					
Approximate weight	210EH: 12.5kg (27lb),			210EH-HP: 13.5kg (29lb)		

Actuation data

Actuation method	Hydraulic	
Hydraulic supply**	20l/min @ 7 bar	
Consumption**	210EH: 7.62 l/min @ 30 grabs/min	210EH-HP: 2.4 l/min @ 15 grabs/min
Actuator connections	2 x 1/4"NPT female	

*Charges made for these items,

**Maximum grab rate, consumption, seal life and supply requirements are dependant on process conditions, i.e. line pressure and fluid viscosity.



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