MEASUREMENT SOLUTIONS

JISKOOT 210P, 210P-HP and 210EH, 210EH-HP

Extreme Temperature Cells

sensia
Rockwell Automation + Schlumberger

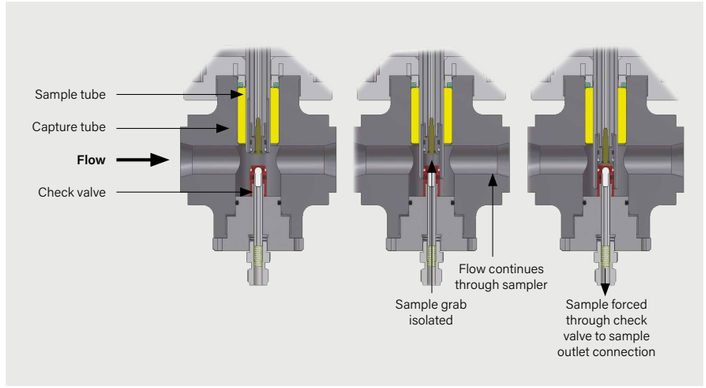
JISKOOT™ 210 Extreme Temperature Cell is a reliable and accurate flow-through sample extraction device, suitable for use as part of an externally pumped, bypass fast-loop sampling system.

Available in standard and high-pressure versions, it is the ideal solution for a wide range of liquid sampling applications with an extended temperature range of -71° F to 482° F (-57° C to 250° C).

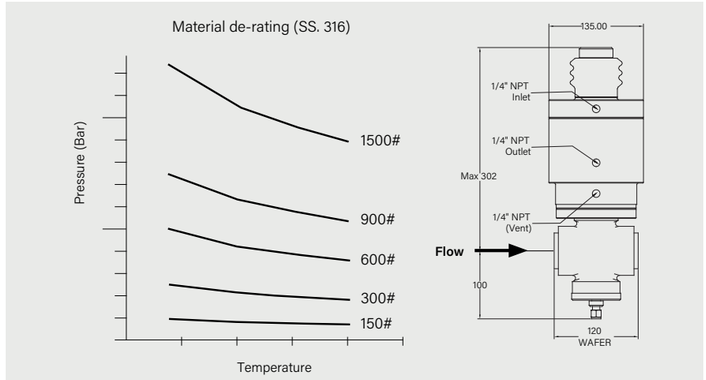
The 210 Cell has a unique three-stage positive displacement action giving accurate sampling irrespective of variations in process pressure or fluid viscosity. Designed for use with 1" to 2" diameter lines, the entire stream passes through the body of the device.
The flow-through 210 Cell sampler has 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 210 has a vast worldwide installed base and is seen as one of the most reliable platforms on which to build a sampling system.



Three-stage positive displacement action



Material de-rating (SS. 316)

Specifications							
Fluids sampled	Crude oil, refined hydrocarbons (including non-lubricating products), and non corrosive chemicals						
Viscosity range	0.5–8,000 cSt						
Process temperature range	Flange dependent—see chart below						
Ambient temperature range	-4–149 degF [-20–65 degC]						
Maximum operating pressure	Class	100 degF [38 degC]	122 degF [50 degC]	212 degF [100 degC]	302 degF [150 degC]	392 degF [200 degC]	Model
(standard materials of construction) see chart above for material de-rating	150#	19.0	18.4	16.2	14.8	13.7	210P, 210EH
	300#	49.6	48.1	42.2	38.5	35.7	210P, 210EH
	600#	99.3	96.2	84.4	77.0	71.3	210P or 210P-HP, 210EH or 210EH-HP
	900#	148.9	144.3	126.6	115.5	107.0	210HP, 210EH-HP
	1500#	248.2	240.6	211.0	192.5	178.3	210P-HP, 210EH-HP
Operating Temperature	71–482 degF [-57–250 degC]			Process wetted parts		Design temp: 71–482 degF [-57–250 degC]	
Configuration	Full bore—flow-through cell						
Size range	1–2-in nominal bore						
Mounting arrangements	1-in nominal bore—ANSI class 150, 300 or 600—wafer type (standard) (1-in, 1½-in, and 2-in 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 ± 10%						
Maximum grab rate† (per min)	210P: 100		210P-HP: 60		210EH: 50		210EH-HP: 15 (½-in NB hose)
Sample outlet connection	1/4-in Swagelok‡						
Capture time	Less than 250 ms						
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—2006/42/EC, ATEX 94/9/EEC		
Approximate weight	210P: 27 lb [12.5 kg]		210P-HP: 29 lb [13.5 kg]		210EH: 27 lb [12.5 kg]		210EH-HP: 29 lb [13.5 kg]

Actuation data		
Actuation method	210P and 210P-HP: Pneumatic	210EH and 210EH-HP: Hydraulic
Air Supply range††	210P and 210P-HP: 60–145 psi [4–10 bar] (lubricated)	210EH and 210EH-HP: N/A
Air Consumption†† (30 grabs/min)	210P: 0.47 ft^3/min [0.8m^3/hr] (ACFM) at 5 bar	
	210P-HP: 1 ft^3/min [1.67m^3/hr] (ACFM) at 5 bar	
Actuator connections	2-in × 1/4-in NPT female	

† Maximum grab rate, consumption, seal life, and supply requirements are dependent on process conditions, i.e., line pressure and fluid viscosity
§ Charges made for these items.
†† ACFM reflects the actual swept volume for 30 sample cycles without allowance for interconnection piping

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