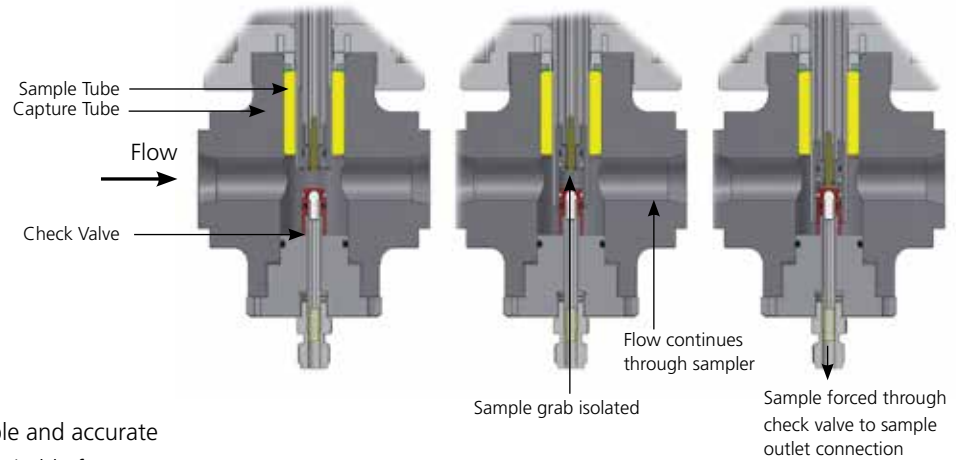


JISKOOT 210P Cell and 210P-HP Cell Air-Actuated Flow-Through Sample Extractor



Three-Stage Positive Displacement Action



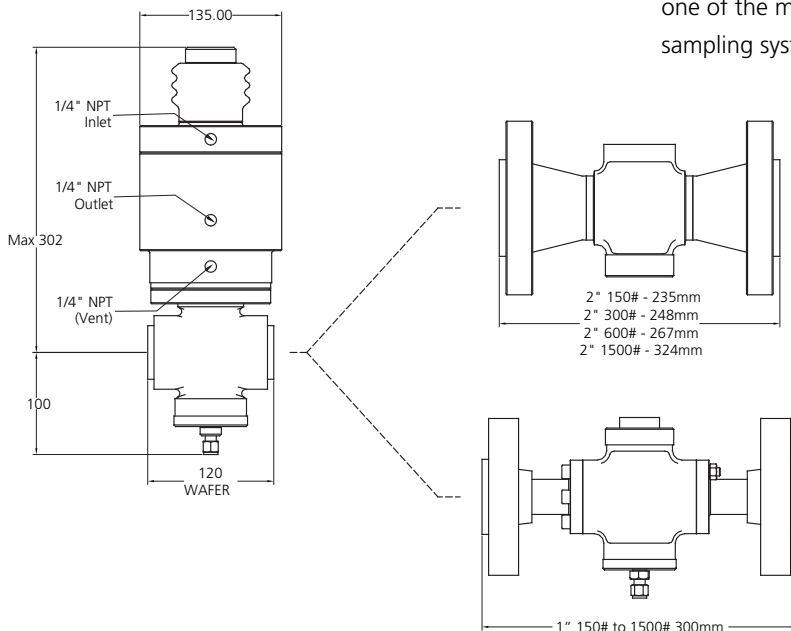
Cameron's JISKOOT™ 210P cell is a reliable and accurate flow-through sample extraction device, suitable for use as part of an externally pumped, fast loop bypass sampling system.

Available in standard and high-pressure (210P-HP) versions, it is the ideal solution for a wide range of liquid sampling applications, from natural gas liquid at -4° F (-20° C) to refined products and crude oils up to 212° F (100° C).

The 210P cell has a unique three-stage positive displacement action, giving accurate sampling irrespective of variations in process pressure or fluid viscosity.

The sample extractor is designed for use with 1" to 2" diameter lines, where the entire stream passes through the body of the device. The flow-through 210P 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 210P has a vast worldwide installed base and is seen as one of the most reliable platforms on which to build a sampling system.



Specifications

Fluids Sampled	Crude oil, refined hydrocarbons (including non-lubricating products), and non-corrosive chemicals				
Viscosity Range	Consult JISKOOT if over 4000cST				
Ambient Temperature Range	-4° F to 149° F (-20° C to 65° C)				
Pressure/Temp De-rating (standard materials of construction)	Class	100° F (38° C)	122° F (50° C)	212° F (100° C)	Model
	150#	19	18.4	16.2	210P
	300#	49.6	48.1	42.2	210P
	600#	99.3	96.2	84.4	210P or 210P-HP
	900#	148.9	144.3	126.6	210P-HP
	1500#	248.2	240.6	211.0	210HP
Operating Temperature	-4° F to 212° F (-20° C to 100° C)				
Design Temperature	-4° F to 266° F (-20° C to 130° C)				
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" and 2" flanged versions ANSI class 150, 300, 600, and 1500 available on request)				
Sample Grab Size (nominal)	1.04 cc or 2.04 cc				
Grab Size Repeatability	Better than ±2%				
Grab Size Adjustment	1 cc version ±20% – 2 cc version +0 / -10%				
Maximum Grab Rate**	210P: 120 grabs per minute		210P-HP: 60 grabs per minute (1/2" hose)		
Sample Capture Time	< 250 ms				
Sample Outlet Connection	1/4" Swagelock®				
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)		

Actuation Data

Actuation Method	Pneumatic
Air Supply Range**	4 to 10 bar/60 to 145 psi (filtered air recommended)
Air Consumption (30 grabs/min)	210P: 0.47 ft ³ /min [CFM] – (0.8m ³ /hr) at 5 bar 210P-HP: 1.0 ft ³ /min [CFM] – (1.67m ³ /hr) at 5 bar
Actuator Connections	2 x 1/4" NPT female

* Charges made for these items

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

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