

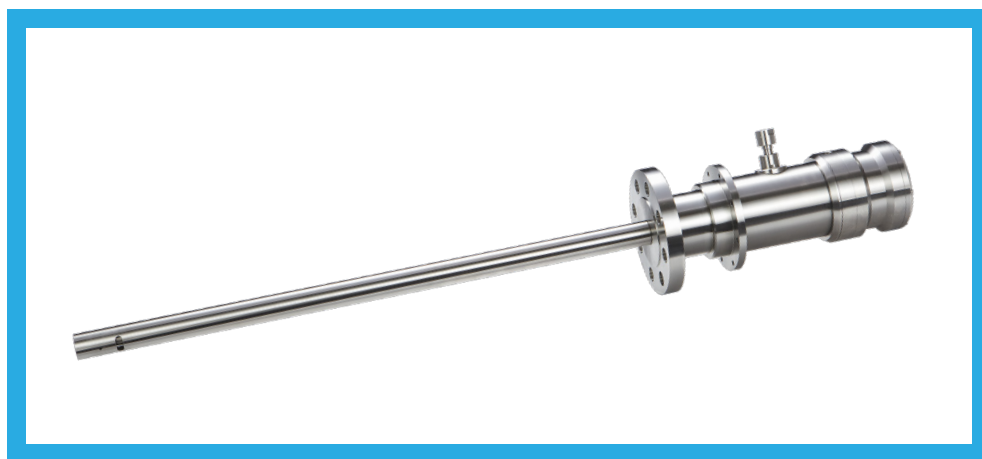
MCS70 Insertion Sampler

The Maurer® range of Crude Oil Sampling equipment was developed in conjunction with BP Exploration in the early 80's to meet all the criteria as laid down in ISO 3171 and related API & IP standards. The novel designs coupled with the precision machining capabilities of Maurer Instruments, resulted in this range becoming an industry standard. (Repeatability of $\pm 5\%$ as standard)

The Maurer® insertion sampler is designed for directly connecting to a 2" NB pipe nozzle flange or to fit through 2" full bore flanged isolation valve on the main pipeline to be sampled. The sampler stem has a flow through port where sampling mechanism will periodically grab a 1cc sample.

Applications

- Fiscal Metering
- Refined Products
- Condensate Sampling
- LPG Sampling
- Custody Transfer



MCS70 Pneumatic Insertion Sampler

Sampler Operation

The sampler is essentially a pneumatically driven metering pump. The sampling mechanism is a tubular stem with an inner concentric capture tube and a piston. Each cycle first captures a precise volume of sample and then pumps it through a back pressure valve to a sample collection receiver. The sampler can be operated up to a maximum of 30 grabs/min.

The in-line sampler installed in a correctly designed system will take representative grabs of sample at a pre-determined rate normally relative to the pipeline flow rate. The composite of the 1,000 to 10,000 grabs collected during a pipeline transfer provides a representative sample of the oil batch, for lab analysis and reference. The rate of the sampler is normally controlled by a flow computer which measures flow in the main export pipeline.

Revision 03.2019



MAURER INSTRUMENTS

MCS70 Insertion Sampler

Product Configurator

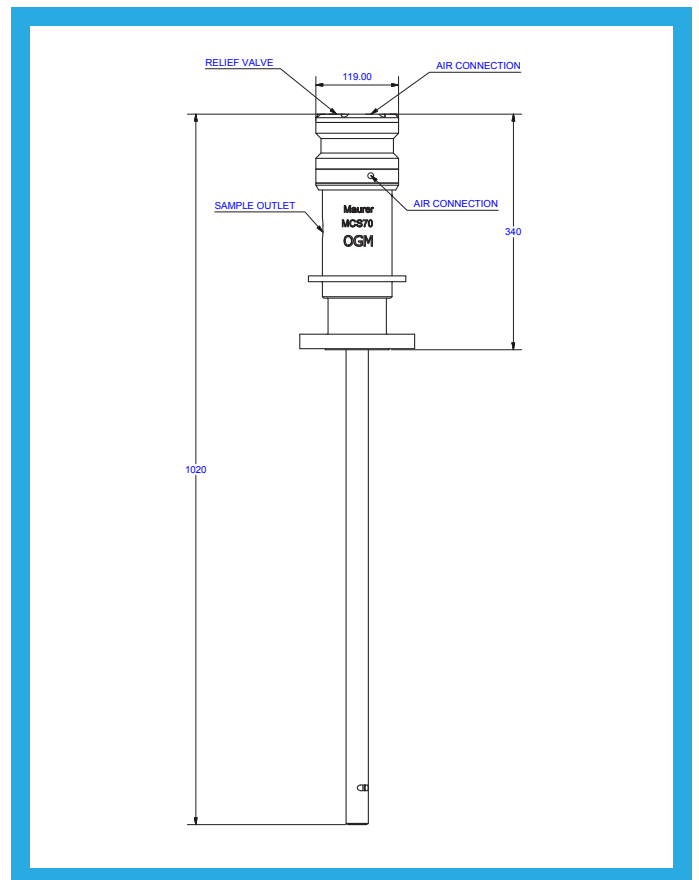
MCS70	Pneumatic Driven Insertion Sampler		Model Code
	316	316 Stainless Steel	Material Wetted Parts
	O	For other options please contact us	Grab Volume
		1 Grab volume 1.0 cc	Quill Length
		577 577mm	
		630 630mm	
		680 680mm	
		O For other lengths please contact us	ANSI Rating
		A300 ANSI rating 300lb	
		A600 ANSI rating 600lb	
		O For other options please contact us	Flange Size
		2 Flange Size 2"	Sampler Relief Valve
		A Atmospheric	
		1 CE	CE Compliance

MCS70	316	1	577	A300	2	A	1
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Example

Specification

Parameter	Min	Max
Fluid		
Viscosity (cSt)	-	700
Process Pressure (bar)	2	50/100
Process Temperature (°C)	-15	+55
Sampler		
Ambient Temperature	-15 to +55	
Quill Length	see table above for options	
Grab Size (cc)	1	
Maximum Grab Rate	30 per minute	
Flange Size Range	2"	
ANSI Range	300/ 600	
Weight (kg)	28	
Control Box Weight (kg)	n/a	
Sampler Outlet Connection	1/4" NPTF	
Sampler Actuation		
Air Supply Pressure (barg)	3	7
Air Consumption (Nl/min)	30 max	
Power Supply (v)	n/a	
Motor Consumption (W)	n/a	
Connection	1/4" NPTF	
Compliance		
Industry Standards	ISO 3171 - API 8.2 - IP 6.2	
CE Compliance	PED - 97/23/EC Machinery Directive - 98/37/EC	



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