

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. The legendary reliability and accuracy is well documented. (Repeatability of  $\pm 5\%$  as standard)

## Applications

- Fiscal Metering / Custody Transfer
- Refined Products
- Condensate Sampling
- LPG Sampling
- Crude Oil Sampling



MCS31 Pneumatic Cell 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 at up to a maximum of 30 grabs/min.

The 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 05/2020

## Product Configurator

<b>MCS31</b>	Pneumatic Cell Sampler		<b>Model Code</b>
	<b>316</b>	316 Stainless Steel	<b>Material Wetted Parts</b>
	<b>O</b>	For other options please contact us	<b>Grab Volume</b>
		<b>1</b> Grab volume 1.0 cc	<b>Cell Bore Size</b>
		<b>B26</b> Cell sampler bore 1"	<b>ANSI Rating</b>
		<b>O</b> For other options please contact us	<b>Flange Size</b>
		<b>A300</b> ANSI rating 300lb	<b>Sampler Relief Valve</b>
		<b>A600</b> ANSI rating 600lb	<b>CE Compliance</b>
		<b>O</b> For other options please contact us	
		<b>1</b> Flange size 1"	
		<b>O</b> For other options please contact us	
		<b>A</b> Atmospheric	
		<b>1</b> CE	

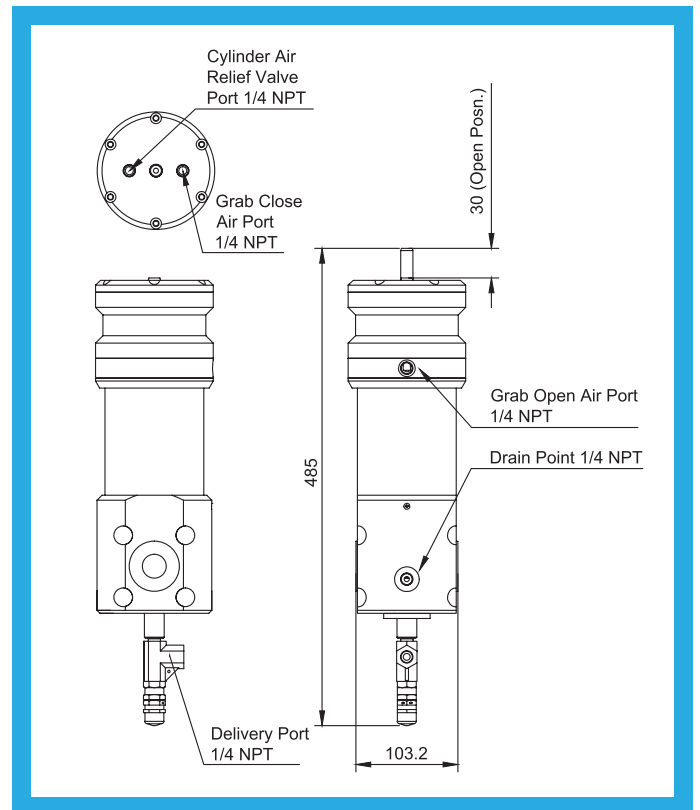
**MCS31 316 1 B26 A300 1 A 1**

**Example**

## Specification

Parameter	Min	Max
<b>Fluid</b>		
Viscosity (cSt)	-	700
Process Pressure (bar) for ANSI 300	2	48.2 @ 50°C
Process Pressure (bar) for ANSI 600	2	96.2 @ 50°C
Process Temperature (°C)	-15	+55
<b>Sampler</b>		
Ambient Temperature (°C)	-15	+55
Grab Size (cc)	1	
Maximum Grab Rate	30 per minute	
Flange Size Range	1"	
ANSI Range	300	600
Sampler Weight (kg)	28	
Sampler Outlet Connection	¼" NPTF	
<b>Sampler Actuation</b>		
Air Supply Pressure (barg)	3	7
Air Consumption (NI/min)	-	30
Connection	¼" NPTF	
<b>Compliance</b>		
Industry Standards	ISO 3171 - API 8.2 - IP 6.2	
CE Compliance	PED - 97/23/EC Machinery Directive - 97/37/EC	

Please contact us for alternative options



Revision 05/2020

T: +44 1353 666640

E: sales@maurerinstruments.com

W: www.maurerinstruments.com

A: Denmark House, St. Thomas Place, Ely, Cambridgeshire, CB7 4EX, UK



Oil & Gas Measurement Limited