

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



ES11 Electric Motor Driven Cell Sampler

## Sampler Operation

The sampler is essentially a power 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 ES11 sampler can be operated at a minimum of 20 grabs/min.

An additional electrical control box is required for normal operation. Please contact us for details.

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



MAURER INSTRUMENTS

# ES11 Cell Sampler

## Product Configurator

<b>ES11</b>	Electric Motor Driven 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>B40</b>	Cell sampler bore 1.5"	
<b>A150</b>	ANSI rating 150lb	<b>Flange Size</b>
<b>A300</b>	ANSI rating 300lb	
<b>O</b>	For other options please contact us	
<b>1</b>	Flange Size 1"	<b>Sampler Relief Valve</b>
<b>2</b>	Flange Size 1.5"	
<b>A</b>	Atmospheric	<b>Motor Power</b>
<b>90W</b>	90 Watts	<b>Motor Voltage</b>
<b>230</b>	230 Volts	<b>Gearbox Ratio</b>
<b>G80</b>	80:1	
<b>O</b>	For other options please contact us	<b>CE Compliance</b>
<b>1</b>	CE	

**ES11 316 1 B26 A300 1 A 90W 240 G80 1**

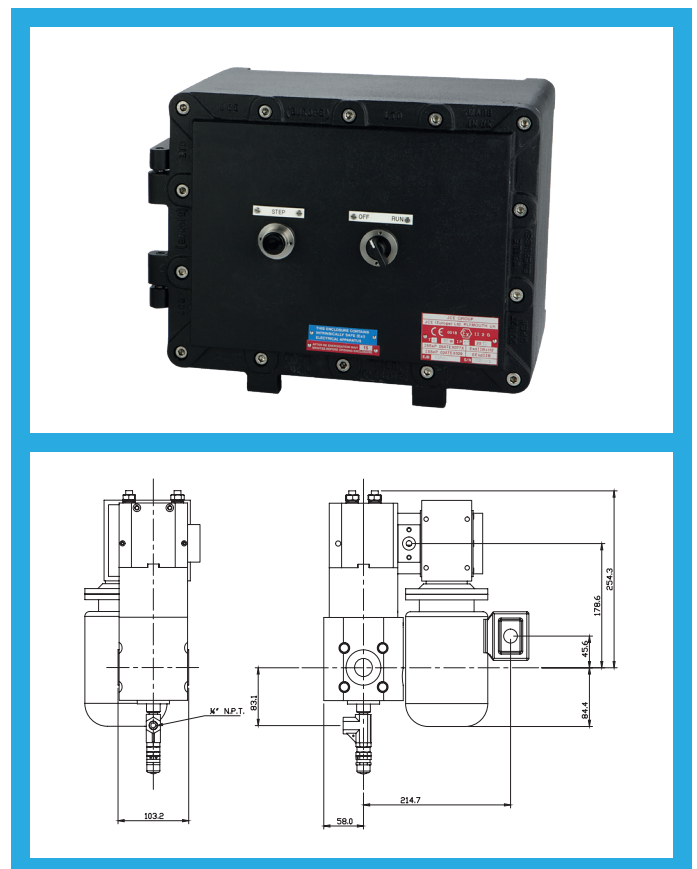
**Example**

This sampler only works in conjunction with an additional controller (pictured below). Please contact us for more information.

## Specification

Parameter	Min	Max
<b>Fluid</b>		
Viscosity (cSt)	-	700
Process Pressure (bar)	2	50
Process Temperature (°C)	-15	+40
<b>Sampler</b>		
Ambient Temperature (°C)	-15	+40
Grab Size (cc)	1	
Minimum Grab Rate	20 per minute	
Flange Size Range	1"	1.5"
ANSI Range	150	300
Weight (kg)	24	
Control Box Weight (kg)	23	
Sampler Outlet Connection	¼" NPTF	
<b>Sampler Actuation</b>		
Air Supply Pressure (barg)	N/A	
Air Consumption (NI/min)	N/A	
Power Supply (v)	230	
Motor Consumption (W)	90	
Connection	20mm cable gland	
<b>Compliance</b>		
Industry Standards	ISO 3171 - API 8.2 - IP 6.2	
CE Compliance	ATEX - 97/9/EC PED - 97/23/EC Machinery Directive - 97/37/EC	

Please contact us for alternative options



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