

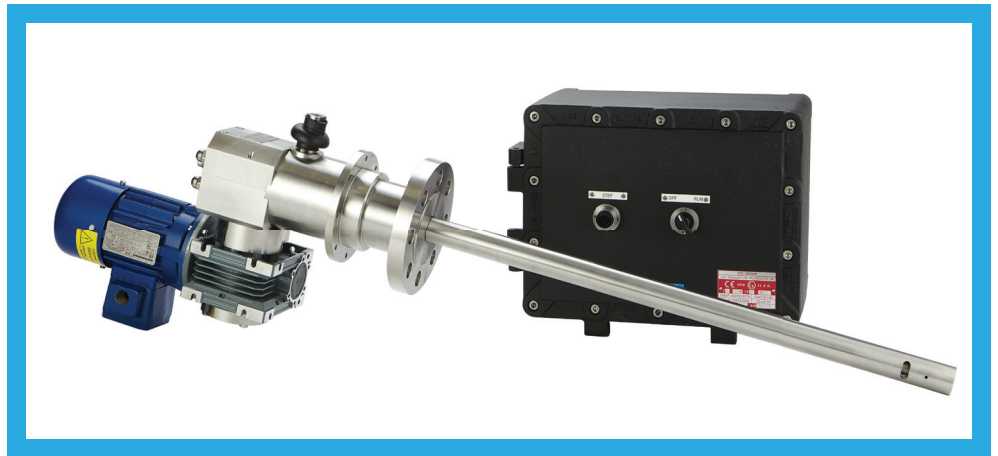
# ES50 Insertion Sampler

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.

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
- Crude Oil Sampling
- Custody transfer



ES50 Electric Insertion Sampler with Control Box

## 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 sampler can be operated up to a maximum of 15grabs/min.

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

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 pipeline.

Revision 03/2018



# ES50 Insertion Sampler

MAURER INSTRUMENTS

## Product Configurator

<b>ES50</b>	Electric Motor Driven Insertion 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>1</b>	Grab volume 1.0 cc	<b>Grab Volume</b>
<b>577</b>	577mm	<b>Quill Length</b>
<b>630</b>	630mm	
<b>680</b>	680mm	
<b>O</b>	For other lengths please contact us	
<b>A300</b>	ANSI rating 300lb	<b>ANSI Rating</b>
<b>O</b>	For other options please contact us	
<b>2</b>	Flange Size 2"	<b>Flange Size</b>
<b>A</b>	Atmospheric	<b>Sampler Relief Valve</b>
<b>1</b>	CE	<b>CE Compliance</b>
<b>90W</b>	90 Watts	<b>Motor Power</b>
<b>230</b>	230 Volts	<b>Supply Voltage</b>
<b>G80</b>	80:1	<b>Gearbox Ratio</b>
<b>GXX</b>	Special	

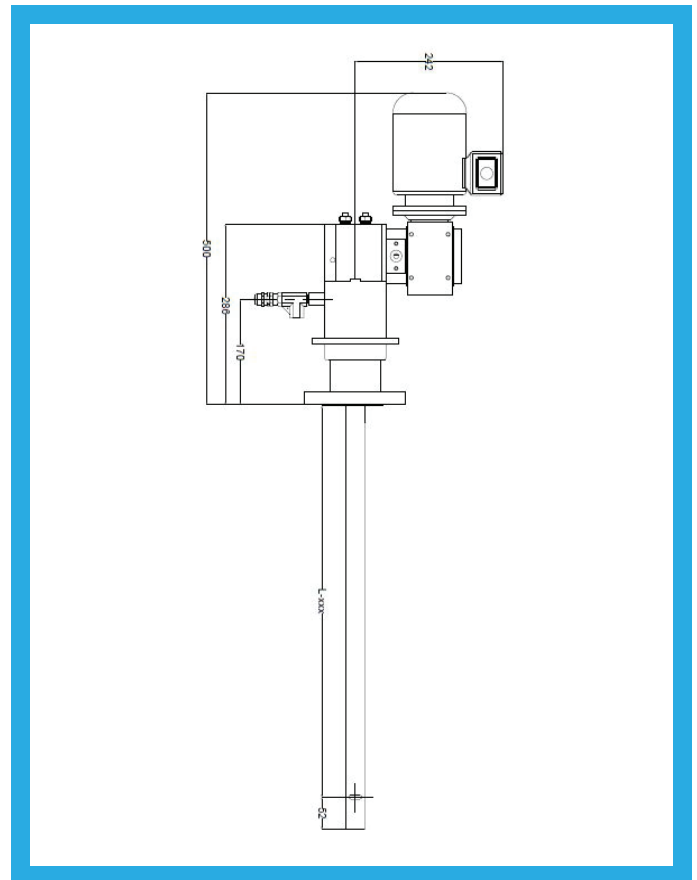
**ES50 316 1 577 A300 2 A 1 90W 230 G80**

**Example**

This sampler only works in conjunction with an additional controller (pictured overleaf). 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
Quill Length	See above product configurator	
Grab Size (cc)	1	
Maximum Grab Rate	15 per minute	
Flange Size Range	2"	
ANSI Range	300	
Sampler Weight (kg)	34	
Control Box Weight (kg)	23	
Sampler Outlet Connection	1/4" 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	



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