

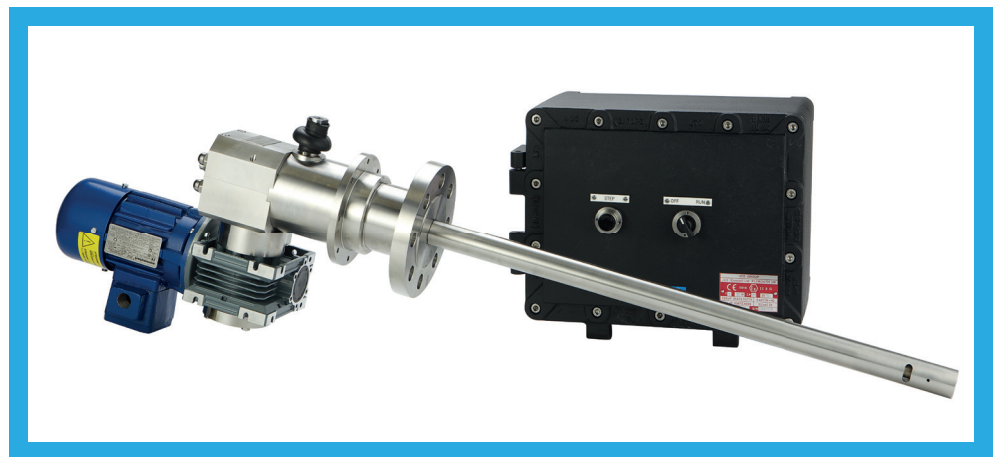
ES50 Insertion Sampler

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 15 grabs/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 10/2018



ES50 Insertion Sampler

MAURER INSTRUMENTS

Product Configurator

ES50	Electric Motor Driven Insertion Sampler		Model Code
316	316 Stainless Steel		Material Wetted Parts
O	For other options please contact us		
1	Grab volume 1.0 cc		Grab Volume
577	577mm		Quill Length
630	630mm		
680	680mm		
O	For other lengths please contact us		
A300	ANSI rating 300lb		ANSI Rating
O	For other options please contact us		
2	Flange Size 2"		Flange Size
A	Atmospheric		Sampler Relief Valve
1	CE		CE Compliance
90W	90 Watts		Motor Power
230	230 Volts		Supply Voltage
G80	80:1		Gearbox Ratio
GXX	Special		

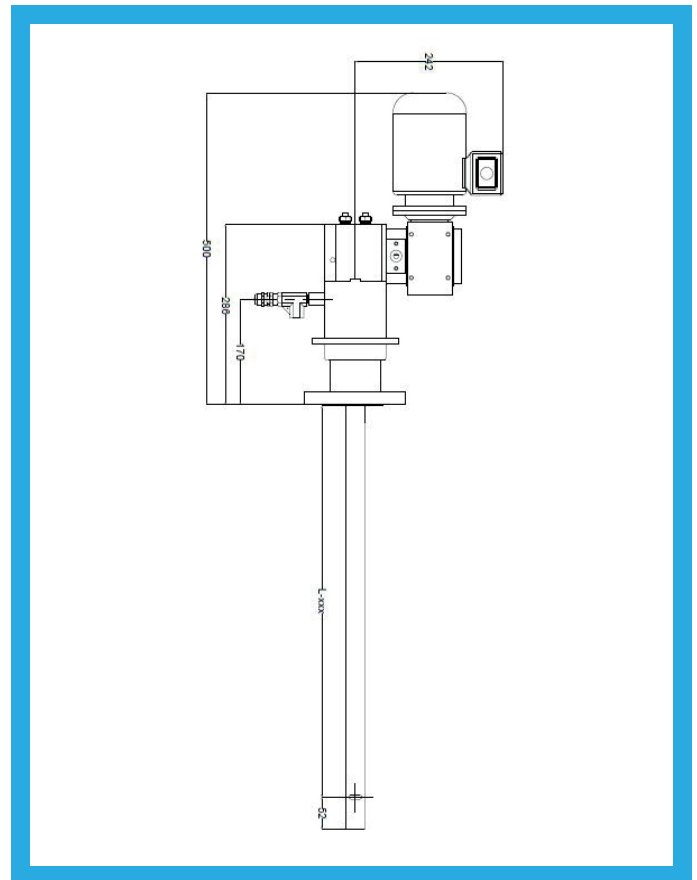
ES50 316 1 577 A300 2 A 1 90W 230 G80

Example

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

Specification

Parameter	Min	Max
Fluid		
Viscosity (cSt)	-	700
Process Pressure (bar)	2	50
Process Temperature (°C)	-15	+40
Sampler		
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	
Sampler Actuation		
Air Supply Pressure (barg)	N/A	
Air Consumption (NI/min)	N/A	
Power Supply (v)	230	
Motor Consumption (W)	90	
Connection	20mm cable gland	
Compliance		
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	



Revision 10/2018

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