

2FSA-1000 – 1-Liter Fluid Sampler

Overview

The 2FSA-1000, one liter Fluid Sampler Probe operates from a single conductor wireline. The probe can be lowered to a desired depth where the sample chamber can be opened by applying the proper voltage polarity to the cable line. Reversing the voltage polarity closes the sample chamber. Power requirements for the probe are a minimum of 50 volts D.C. negative and positive (at the probe top) to operate the sampler motor. Negative voltage applied to the wireline conductor with respect to the wireline armor opens the sample chamber valve. The reverse closes the sample chamber valve. Typically the sample chamber valve is opened and closed using built in caliper open and close commands, respectively, of the logger.

Theory of Operation

A motor in the probe is operated by voltage on the wire line. The motor turns an O-ring valve, which in turn allows fluid to enter the sample chamber. The valve travels in both directions and is limited by mechanical switches that interrupt the voltage to the motor thereby preventing further movement with that particular polarity of voltage applied.

The sample is removed by means of a valve located inside a removable cap on the bottom of the probe. With the cap removed, a tube can be attached between the valve outlet and a container for the sample. Operating the valve allows the sample to be drawn from the sample chamber into an external container.



Removing the 1 –liter fluid sample through valve

Specifications

Operating pressure rating:	2000psi	13.79 MPa
Length, overall:	74"	188 cm
Diameter, maximum:	1.5"	38 mm
Weight, empty:	15 lb	6.8 kg
Sample point	16"	41 cm below probe top
Sample chamber:	265 gal	approximately one liter