

Solinst®

Electronic Pump Control Unit

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Model 464 Data Sheet



464 Electronic Pump Control Unit

Electronic Pump Control Unit Model 464

The Model 464 Electronic Pump Control Unit is available in 125 psi or 250 psi versions, and uses 4 AA alkaline batteries that last up to 100 hours of normal use. These Controllers can also be operated manually, using only a compressed gas source.

The 464 Electronic Pump Control Unit has automatic preset sample modes from low through high flow settings. In addition, up to 99 user-created flow rates can be saved in FRAM memory. The Pump Control Unit allows faster purge rates and precise low flow control to ensure a representative sample at 100 ml/min or less when sampling for VOCs (Volatile Organic Compounds).

These convenient Pump Control Units are rugged, dependable and suitable for all environments. They are supplied with the drive and supply lines. Quick-connect fittings allow instant attachment to dedicated well caps, portable reel units and to an air compressor or compressed gas source.

Operating Principles

The Pump Control Unit controls the supply of compressed gas to pneumatic pumps, including Solinst Bladder Pumps and Double Valve Pumps. Drive (pressure) and vent periods are cycled to provide water flow. During pressurization periods water is forced into the sample tubing. The Vent period allows water to re-enter (recharge) the pump. Cycle repetition may be controlled manually or automatically using pre-set pumping rates.

Model 464 Specifications

	125 psi	250 psi
Operating Temperature:	-20°C to 50°C	
Weight:	2.3 Kg (5 lbs)	3.5 Kg (7.8 lbs)
Dimensions:	23 x 26 x 12 cm (9.1 x 10.2 x 4.9")	
Drive/Vent Time Range:	1-999 seconds	
Maximum Site Name Length:	16 characters (upper or lowercase and numeric)	
Memory Capacity:	99 user flow rates in non-volatile FRAM 3 preset in Flash	
Battery Life:	40,000 drive/vent cycles @ 25°C from 4 AA alkaline batteries (100 hours based on 10 second drive/vent cycles)	
Maximum Output Pressure:	125 psi (861 KPa)	250 psi (1724 KPa)
Maximum Input Pressure:	150 psi (1034 KPa)	300 psi (2068 KPa)

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Drive and Vent Cycles

There are two ways users can operate the Model 464 Electronic Pump Control Unit to obtain the desired sampling rates - preset and customized user flow rate settings.

Preset flow rates are built into the Pump Control Unit memory. There is the option of Low, Medium, and High Flow settings.

User Flow Rates are customized drive and vent cycles set by the user, then saved in the Control Unit memory for future sampling events. Up to 99 User Flow Rates can be saved to memory.

Manual Operation

The 464 Electronic Pump Control Unit has the unique ability to operate even when the batteries run out. If the batteries run out, the Solenoid closes automatically. This allows you to use the Manual Control Valve on the Front Panel of the Pump Control Unit. When pushed in the Solenoid opens, which allows a drive cycle; when released, the system is allowed to vent. A manual drive/vent cycle can be performed with just a compressed gas source attached.

Manual operation is also an option on hazardous sites where the batteries are required to be removed for safety reasons.

Obtaining High Quality Samples

The 464 Electronic Pump Control Unit comes in two pressure versions, 125 psi and 250 psi. The higher pressure 250 psi version is ideal to use for deeper applications, or applications where faster purge rates are desired. Both versions are ideal for use with Solinst Bladder Pumps and Double Valve Pumps (see Model 407 Bladder Pump, 408 Double Valve Pump and 408M Micro Double Valve Pump Data Sheets).

Accessories

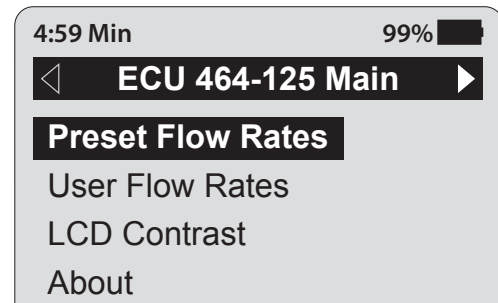
The 464 Electronic Pump Control Unit works with the Solinst 12 Volt Compressor. The 12 Volt Compressor is ideal for low flow applications of less than 30 m (100 ft) depths.

The compressor operates using 12 volt DC power source. It operates at up to 150 psi and is equipped with a 2 US gallon (7.6 L) air tank, rated to 175 psi.

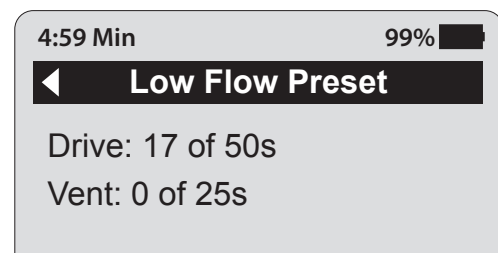
When using the 12 Volt Compressor, or any other air compressor with the Electronic Pump Control Unit, it is recommended to use the External Filter. The External Filter connects to the supply line and traps moisture, reducing the risk of it entering the Pump Control Unit.



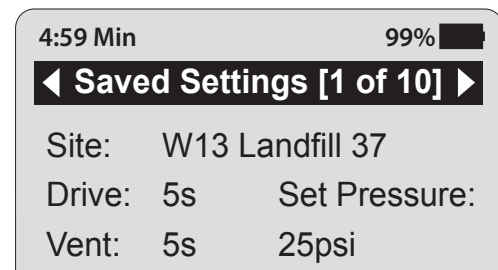
464 External Filter
with Draining Valve



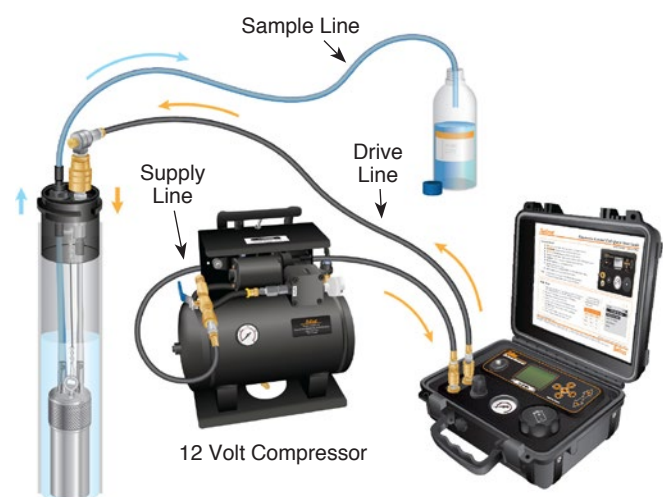
Model 464 Main Menu



Low Flow Preset Flow Rate



Customized User Flow Rate



Pumping Setup with 125 psi Model 464 Electronic Pump Control Unit
and 12 Volt Compressor