

### Model 466 160 & 250 psi Electronic Control Units

#### Air Sources

A Nitrogen cylinder is ideal as it is a clean and dry gas, best for pristine samples and longer life expectancy of the Control Unit.

Our 12V Compressor [9] is low capacity (0.7 ft<sup>3</sup>/min @ 90-125 psi). It should only be used in shallow <100 ft (30 m) low flow applications.

#### Pressure

Pressure supplied from the cylinder or compressor must be maintained at a 100 psi minimum. The Control Unit will not operate properly at lower input pressures.

#### Supply Line

The Supply line [6] from the compressor or gas cylinder to the Control Unit, has a moisture filter [7] that must remain dry. Replace it if the colour changes or if it is visibly wet. If using a compressor, check and drain moisture build-up in the compressor on a daily basis, according to the manufacturer's instructions. Large compressors should be fitted with a dryer to reduce moisture in supply lines.

#### Drive Line [2]

The Drive line wellhead connector with exhaust fitting [3] supplies air or Nitrogen from the Control Unit to the pump and vents from the pump through a filter [4] on the exhaust fitting [3]. The exhaust fitting has an internal rubber valve to allow pressurization of the pump during the drive cycle.

If moisture is observed exiting this filter [4] when the pump is venting; this is because water is present in the drive line and the pump is not operating properly. Remove the pump from the well and check for damage (O-rings, bladder or lines).

#### Venting

If the system will not vent, remove the brass sintered filter [4] on the exhaust fitting as it may be blocked. The system can operate without this filter.

**CAUTION:** Do not remove the rubber valve behind the filter, this is needed for proper venting and pressuring of the system.

If the Control Unit is not cycling from drive to vent, check battery strength by cycling through the menu on the LCD screen. If necessary, replace batteries [8]. The battery level should be maintained at 60% or higher.

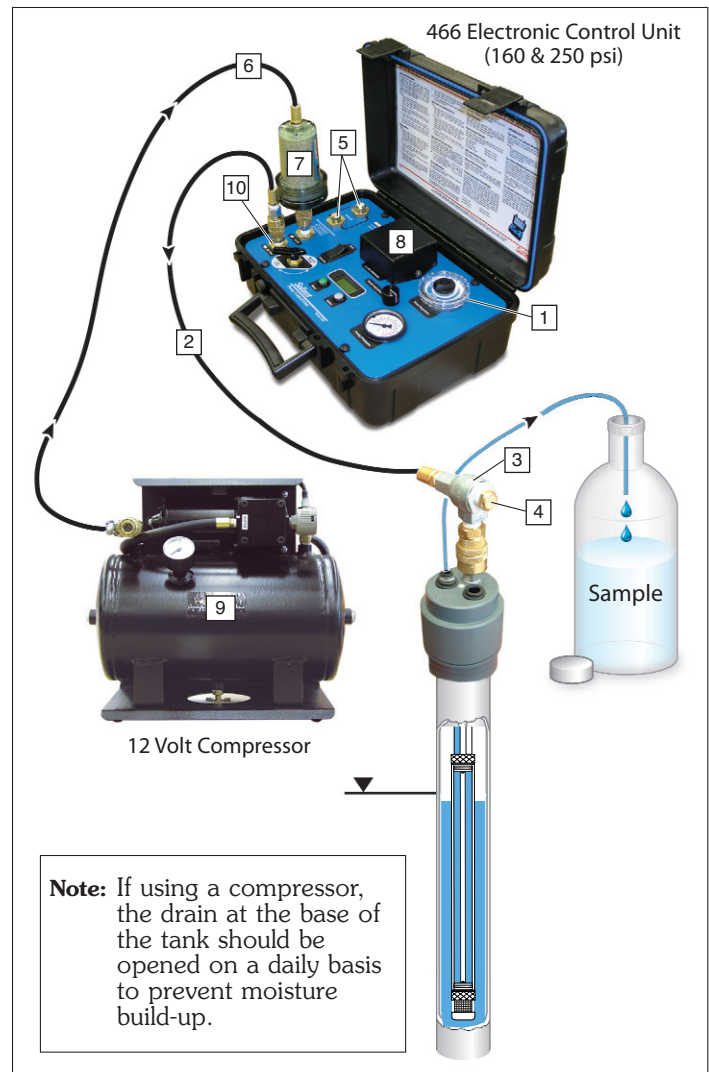
#### Control Unit Exhaust

The exhaust on the Control Unit has two diffusers to allow venting [5], these act similar to the exhaust fitting filter [4] at the well head. If moisture or dirt has entered the unit these will block and prevent venting. The filter should then be removed and replaced.

#### Sample Backflow

Moisture in the Control Unit can adversely affect the solenoid switches, resulting in their failure. The best practice when operating, is to maintain the Control Unit at a higher elevation

### Setup and Trouble Shooting Schematic



than the drive line connection to the wellhead manifold. This height difference limits the potential for backflow into the Control Unit.

With Double Valve Pumps, backflow of sample into the Control Unit can happen and is more apt to occur when the water level is close to ground surface. With Bladder Pumps, leakage in the tubing, a ruptured bladder or damaged O-rings can cause backflow into the drive line and Control Unit.

If water is detected in the Control Unit, it must be disconnected immediately and allowed to dry. Connect a Nitrogen cylinder gas source and let it cycle through the Control Unit, with the drive line unthreaded from the 'M' style nipple [10] at the Control Unit. Set a 10 second drive and 2 second vent cycle. This will create a pulse of air that flushes the system. Maintain the cycle of Nitrogen for 10 minutes.

The regulator [1] in a 160 psi Control Unit may vent air and hiss. This is normal.