Leak Test Program Explained

Select the required PROGRAM NUMBER that has the Leak Test program set-up via the Control Panel.

Leak Test.   When the program type is set to Leak Test, each time that program is run a leak test will be performed instead of a normal cycle. As leakage of air into the chamber will cause evacuated air to be replaced with air instead of steam it is essential to regularly test the chamber and interconnecting pipe-work for leaks. This is an automatic system for performing a leak test. This follows the following procedure during which pressures and elapsed times are recorded on the autoclave printer if fitted, and logged to the autoclave log file. If a printer is not fitted, or a higher level of pressure measurement accuracy than that provided by the built in pressure transducer is required that a reference vacuum gauge may be connected to the pressure instrument port, and the readings noted at the appropriate times.

Leak Test Procedure (automatic):

1. Evacuate chamber to leak test pressure set-point as set above. The time and pressure are logged
2. Note elapsed time to achieve vacuum level. (This may be used to compare to measurements made during commissioning to assess deterioration of vacuum pump performance)
3. After five minutes the pressure and time are logged again.
4. After a further 10 minutes the time and pressure are logged again. The pressure increase over this final ten-minute period is used to assess the leak rate. If the pressure rise is greater than that set in the leak test increase set-point box a failed leak test is recorded, otherwise a passed leak test is recorded. The first five-minute period allows for evaporation of gases within the chamber.
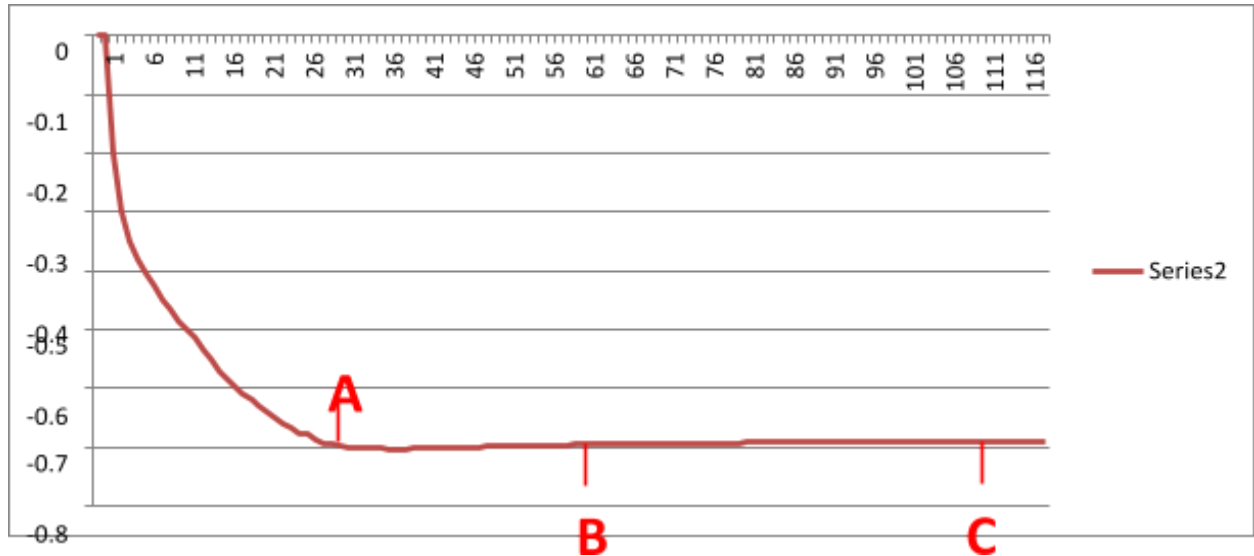
Leak test pressure set-point:

Leak test pressure setpoint:	-0.700

Leak Test Relative Increase:

Leak test relative increase:	0.100

Notes:

A typical Leak Test cycle will operate as follows:

Stage **ONE** will be the initial pull-down.	Once at the pre-set value (A), the vacuum pump will **STOP**
Stage **TWO** is the first timer:	A software timer will operate for a period of 5 minutes, during which time the vacuum level will naturally 'recover' a little.
Stage **THREE** is the Analysis Timer	After the 5-minutes, a second timer will commend the vacuum level analysis for a period of 10 minutes (between points B and C)
	During this 10 minutes, the vacuum level recovery must **NOT** be greater that the pre-set 'Relative Increase'
	If the Relative Increase is within the limit, the Leak Test will **PASS**.