Compression Clamp Kit

Instruments: LabScan (LSXE-COMP), ColorQuest XE (D01-1011-131), UltraScan PRO (L02-(D02-1011-131)

Purpose: The compression clamp kit provides an air-driven compression clamp assembly to be used in place of existing sample clamp. This accessory is used for compressing fibers into a compact mass that permits repeatable color analysis. The assembly, modified port insert and glass sample cup, may also be used to hold carpet, fabric, and other soft samples at the reflectance port with constant pressure. The option consists of the following components.

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- Modified port insert
- Protective cap for port plate
- Glass 2.5-inch (64-mm) sample cup
- Modified sample clamp
- Ten feet of 1/4-inch tubing line
- Pressure valve
- Required: A compressed air source and filter dryer are also required. Thirty (30) psi of air pressure is needed to operate the Compression arm in an optimal fashion. There is pressure adjustment with meter on the compression arm, which allows the user to fine tune the incoming air pressure. As a standalone unit, an air compressor pump in the 1/12 - 1/6 HP range capable of producing 35 psi of pressure in an interrupted mode would be sufficient.

Installation:

1. Remove the original port insert and replace it with the modified port insert (after removing the protective cap). The white lining of the insert should face in toward the instrument.
2. Replace the original sample clamp with the modified sample clamp.
3. Connect the air compressor to the lower input port of the modified sample clamp assembly using the 1/4" tubing. Also connect the compressor to a power source.

Sample Measurement:

1. Temporarily replace the modified port insert with the original port insert.
2. Standardize the instrument and then return the modified port insert to the port.
3. Weigh the specified amount of sample material into the sample cup. The fibers should completely fill the sample cup. For comparability of measurements, the same weight of sample should always be used.
4. Place the sample cup into the cup holder port plate. Adjust the location of the sample clamp to hold the cup in place. The front button on the arm raises and lowers the arm, while the back button moves the clamp in and out.
5. Turn on the flow of clean, dry, compressed air to the clamp. You should attach a filter dryer to the assembly.
6. Pull out the knob on the sample clamp and turn it until the desired pressure is obtained as shown on the pressure gauge. The recommended pressure is 30-40 psi, but must not exceed 100 psi. Push the knob back in. For comparability of measurements, all samples should be measured under the same pressure. Monitor the pressure so that fluctuations that might affect measurements are known.
7. Flip the pressure switch on the sample clamp to the on position (up). The clamp will compress the sample into the sample cup.
8. Initiate a reading.
9. Turn off the air pressure, remove the sample from the port, and continue with measurement of additional samples.

Note: Always return the modified port insert to its protective cap after use.

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