

The Problem

When a complex part must be tested, the need for flexibility in testing is often required.

Engineers, scientists, and production test personnel frequently need the ability to configure a tester to accomplish a variety of tests on one product, or on multiple products of identical construction.

Most low-cost bench-top air testers cannot be configured to provide flexibility in valving and test options. In the past, only expensive and complicated test systems were available which could be configured and then re-configured to conduct a wide variety of tests at a rapid rate. Although possible, programming was often confusing.

The Solution

Testing flexibility is offered in the Sprint iQ 4-channel Concurrent and Sequential Tester. The machine is easy to program using simple menus to set up any combination of active test ports. Tests can be concurrent, sequential, or a combination of both concurrent and sequential.

The tester is extremely well-suited for testing catheters and has the ability to check for leakage, occlusion and leaks between passages.

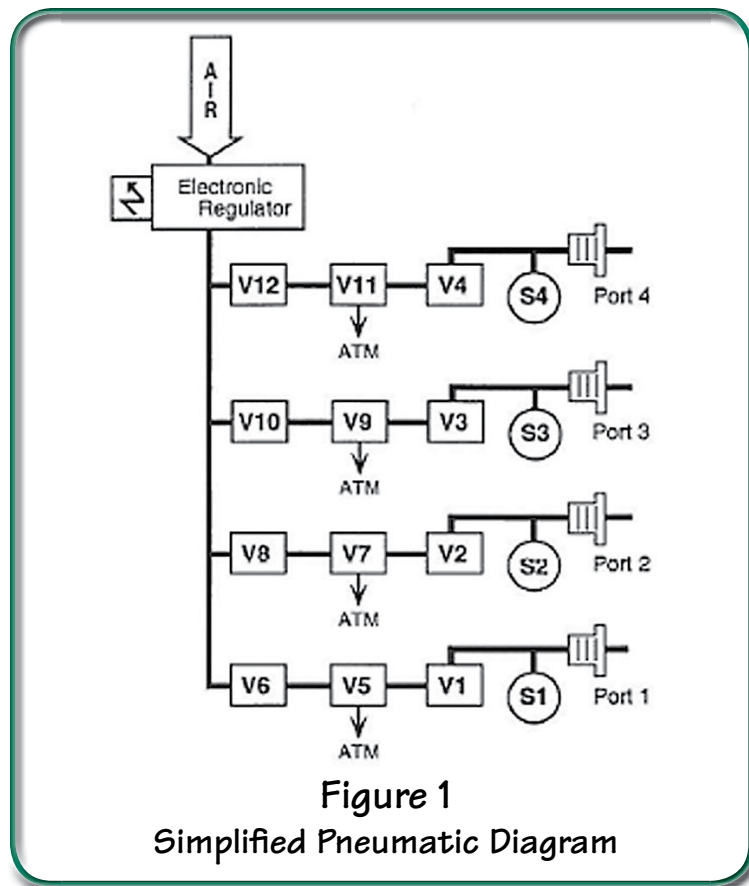
External fixtures can be provided to pinch off unfinished catheter ends. The machine can test two bi-lumen catheters, a tri-lumen, or one four-lumen catheter as well as many other products.

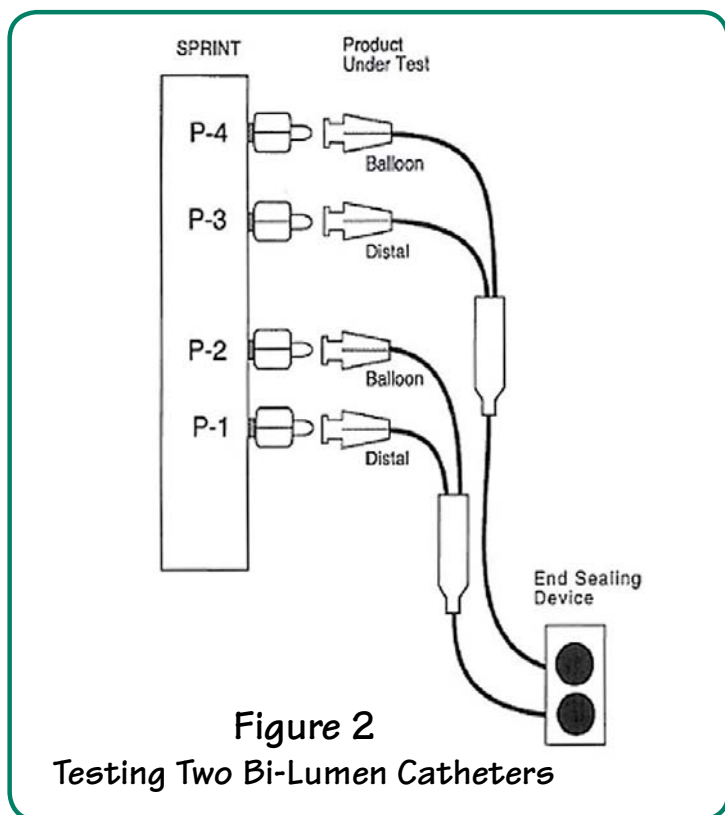
How Sprint iQ Works

The Sprint iQ Concurrent and Sequential tester works like this:

- The tester has four independent sensors and test circuits as shown in Figure 1.
- The tester can be programmed to have any of the four ports act as an air supply or to sense air entering the tester.
- Four ports can conduct a pressure decay test on four products concurrently. Or the tester can be configured, for example, to have port 1 and 3 perform a normal pressure decay test while ports 2 and 4 sense any increase in pressure. One part of a test can sequence to another part of a test.
- Valves are supplied that can open to atmosphere—often used in occlusion testing.

Many other testing arrangements are possible with this tester. This is just one example of how it could be configured.





An Example

Figure 2 illustrates how the Sprint iQ can be programmed to test two catheters each having two lumens (passages). For this example the lumens are called “balloon” and “distal.”

First, the two balloon lumens are pressurized and checked for leaks concurrently. While the pressure decay test is conducted on the balloon lumens, the tester looks for any pressure coming from the two distal lumens. If any pressure is sensed at either distal lumen, then there must be an interlumen leak and the product fails the test.

The tester can next sequence to another test in which both distal ports are pressurized while the tester looks for the slightest pressure increase at the two balloon lumens.

This is just one example of how the Sprint iQ Four-Channel Concurrent and Sequential tester can be applied to product testing. Many other tests are possible with this machine.

The tester is perfect for research or production lines in which many products must be tested in different ways with only one machine.

Features

- Test four products at the same time
- Test four parts of one product at the same time
- Test from one to three ports, then sequence the remaining port or ports
- Program test ports to either supply or sense air pressure
- Perfect for R&D where multiple products can be tested on one machine
- Test for integrity, occlusion, and interlumen leaks
- Supplied with built-in fixture interface
- Available with high-pressure option (up to 400 PSIG)
- Establish multiple test pressures with the programmable regulator
- Built-in RS-232 output for collecting statistical data.

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