



Application

Determining the forces required to operate the piston is important for ensuring that syringes perform reliably and safely during use, particularly in medical settings. The test measures the force needed to operate the piston, which is critical for both ease of use and patient safety.

Working Mechanism

SSR-01 Syringe Sliding Resistance Tester is capable of attaching on to the syringe under test and of depressing the syringe piston at the constant linear rate, while simultaneously measuring and recording the force required to move the piston with an accuracy of 0.5% of full-scale reading.

Test Principle

A mechanical testing machine SSR-01 is used to expel water from a syringe and simultaneously record the force required to move the piston.

Procedure

Connect the nozzle of the syringe to the tubing of the reservoir. Fill the syringe with water to beyond the nominal capacity, mount the syringe in the test fixture and attach the syringe push button to the driving head of SSR-01. Align the water level in the reservoir and the mid-point of the syringe barrel.

Start the SSR-01 Syringe Sliding Resistance Tester at a rate of 100mm/min and stop at no more than 10 % of the nominal volume. Record the forces required to initiate movement of the piston and sustain the travel of the piston.

Technical Features

1. PLC-controlled and 7-inch HMI touchscreen-operated
2. Precision ball lead screw
3. Variable test speed
4. Initiating force, mean force and maximum force are measured in the meantime
5. Multiple fixtures available for downward force tests
6. Overload protection is available
7. Automatic returning after the test
8. Microprinter

Main Parameters

Load Cell	200N (or as required)
Test Speed	1~500mm/min
Accuracy	0.01mm
Power	110~220V

Standards: GB 15810, ISO 7886-1 Annex E (Test method for the determination of forces required to operate the piston)

Configuration

SSR-01 Syringe Sliding Resistance Tester, syringe fixture, reservoir, tubing, power cord, fuse.

Related Models

BST-01 Ampoule Breaking Tester
MPT-01 Medical Packaging Tester
MST-01 Medical Syringe Tester
SLT-02 Syringe Leak Tester



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