XSW4301 Impedance Tube Kit

XSW4331 Transmission Loss Tube Kit

Features:

- Acoustical properties of material measurements based on the transfer-function method according to not only absorption coefficient standard of GB/T 18696.2, ISO 10534-2 and ASTM E1050, but also transmission loss standard of ASTM E2611
- Separable sample holder tube is convenient for placement of materials to be test
- Faster and more accurate compared to the standing wave ratio method
- Combined measurements with different microphone spacing can cover a wider frequency range
- The inner diameter is 50 mm, which between the common used diameter of 100mm and 29mm. It meets the requirements for inter-pipe sealing and snap connection structure in the conventional frequency band. The structure has been improved, significantly enhancing the sealing and sound insulation performance, and making the system installation more convenient and rapid

Applications:

- Quantitative measurement of acoustic properties of materials
- Measure the acoustic coefficients of materials which required for simulation software

Introduction

XSW43X1 series impedance tubes are a new type of impedance tube product designed by BSWA based on the transfer-function method. The impedance tubes are compact in design, lightweight, and easy to assemble, making material replacement more convenient and rapid. As a supplement to the SW42X1 and SW46X1 series impedance tubes, they are suitable for users who are concerned about the mid-frequency performance of the materials. One set of tubes can complete the required frequency band testing. If a wider frequency range is needed, please choose the impedance tubes of the SW42X1 and SW46X1 series.

The **XSW43X1** series impedance tubes are designed based on the two-microphone transfer function method. Paired with the MCR impedance tube software, the measurable material parameters include: sound absorption coefficient, reflection coefficient, acoustic impedance rate, acoustic admittance rate, transmission loss, propagation wave number, etc.

Impedance Tube/Transmission Loss Tube

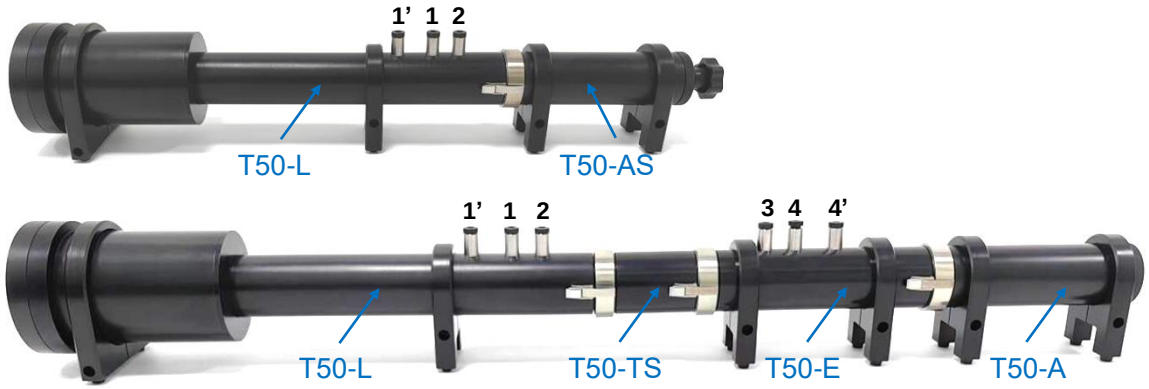
Type	XSW4301	XSW4331
Standard	GB/T 18696.2, ISO 10534-2, ASTM E1050	GB/T 18696.2, ISO 10534-2, ASTM E1050, ASTM E2611
Frequency Range	100 Hz ~ 4 kHz	
Diameter	50 mm	

Microphone Spacing	30 mm / 70 mm	
Matching Microphone	1/4-inch microphone x 2	1/4-inch microphone x 4
Length of Tube[1]	757 mm	1087 mm
Zero Absorption	100 Hz~4 kHz: <5 %(calculated in 1/3-octave band)	
Operating Environment	Temperature: -10 °C~50 °C, Humidity: 5 %RH~95 %RH (non-condensing)	
Vocalization Unit	4 Ω speaker, rated power 10 W, peak power 30 W, banana plug	

Note 1: The length is the minimum combination state.

Kit Including

XSW4301 includes: T50L, T50-AS. **XSW4331** includes: T50L, T50-AS, T50-TS, T50-E, T50-A.



T50-L	Sound source tube: built-in speaker with three microphone slots. The speaker diameter is 3.5-inch, 10 W, 8 Ω, frequency range is 100 Hz to 4000 Hz
T50-AS	Adjustable sound-absorbing test piece tube: hard wall, supported sample thickness range 0 mm ~ 160 mm
T50-TS	Sound insulation test piece tube: the thickness range of the supported sample is 0 mm ~ 100 mm
T50-E	Sound insulation extension tube: used for sound insulation testing, with three microphone slots
T50-A	Strong sound-absorbing end tube: built-in strong sound-absorbing material

Recommended Attachments

XSW4301	✓ PA50 Power Amplifier x 1 ✓ MC3322 Data Acquisition x 1 ✓ MPA416 Microphone x 2 ✓ BNC-SMB Coaxial Cable x 2 ✓ BNC-BNC Coaxial Cable x 1
XSW4331	✓ PA50 Power Amplifier x 1 ✓ MC3242A Data Acquisition x 1 ✓ MPA416 Microphone x 4 ✓ BNC-SMB Coaxial Cable x 4 ✓ BNC-BNC Coaxial Cable x 1

Note: not standard configuration. The specific model may vary depending on the application.

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