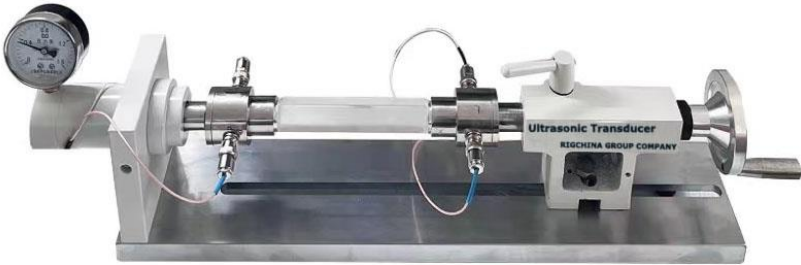
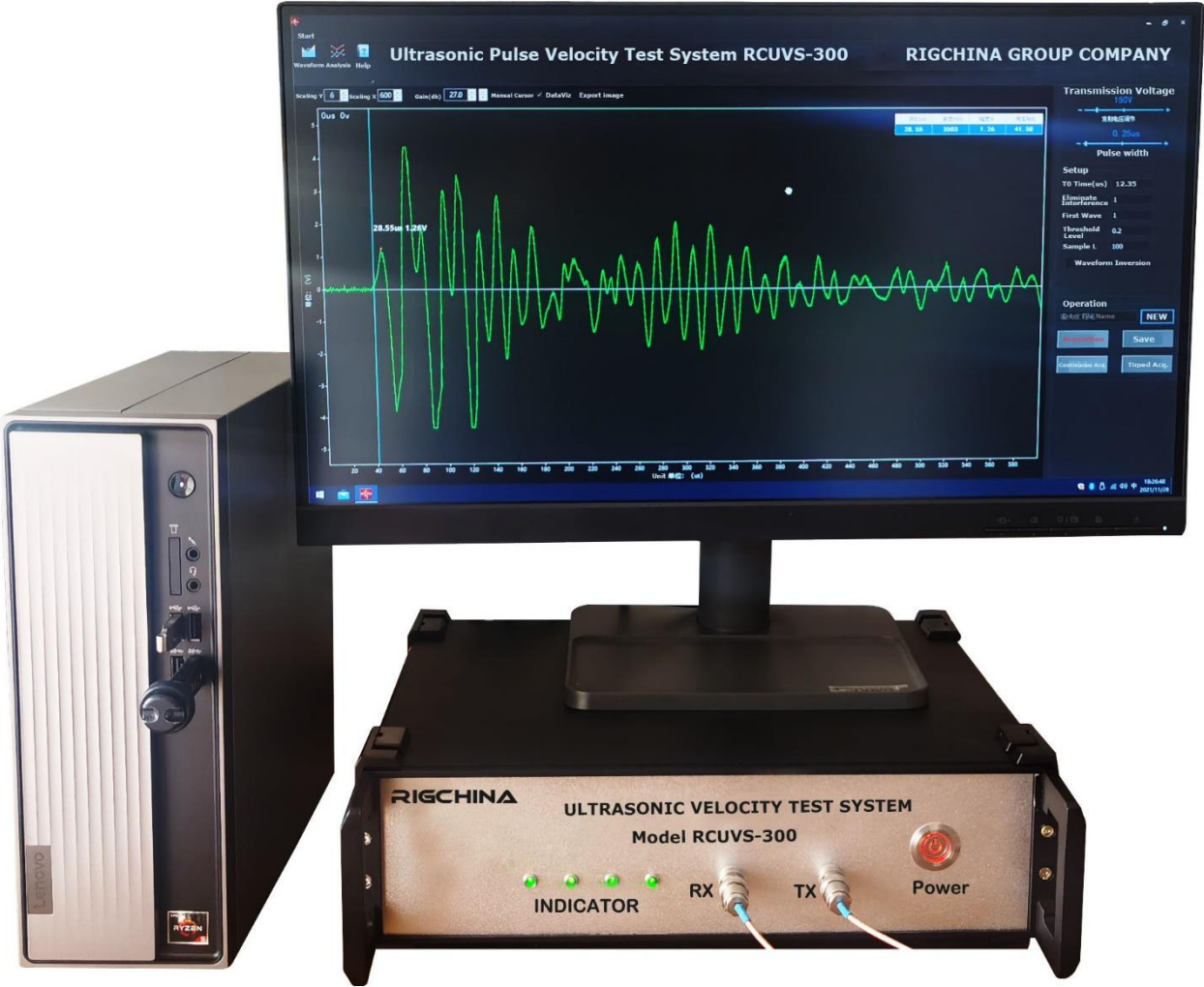


# Ultrasonic Velocity Test Equipment Model RCUVT-300



***...Quality is Everything...***

Ultrasonic Velocity Measurement The RCUVS-300 Ultrasonic Velocity Measurement System is a turnkey system that includes everything required to perform Ultrasonic Velocity measurements on laboratory specimens. The new hardware and software utilize the latest technology to allow for precise determination of compression (P) and shear (S or  $S_1$  &  $S_2$ ) wave velocities.

The RCUVS-300 system uses a fast-acting pulser that provides excitation to the ultrasonic sensor and a very high-speed analog-to-digital converter to store the resulting waveforms signals.

When used with a RIGCHINA system, wave velocity measurements can be taken while performing other test procedures, such as triaxial or unconfined compression tests. The ultrasonic data can be collected at any specified interval, such as time, stress, strain or any other test parameter. The RCUVS-300 can also be used with RCVA-100 Circumferential Velocity Anisotropy Apparatus to determine the compression and shear wave velocities in rock core specimens in different orientations to map anisotropy.

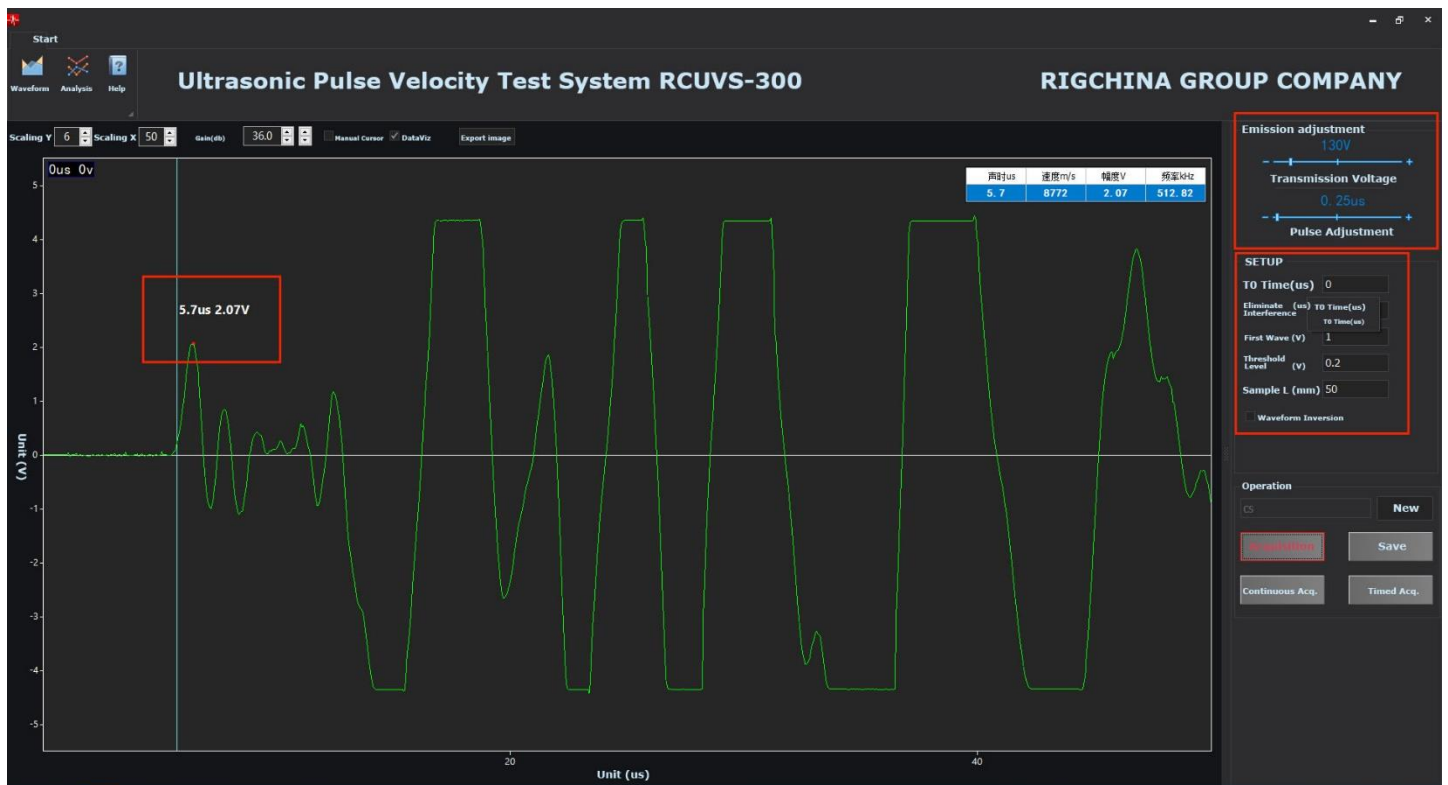
RIGCHINA offers a wide variety of transducers to perform ultrasonic velocity measurements on differently sized test specimens in a variety of conditions.

## HIGHLIGHTS

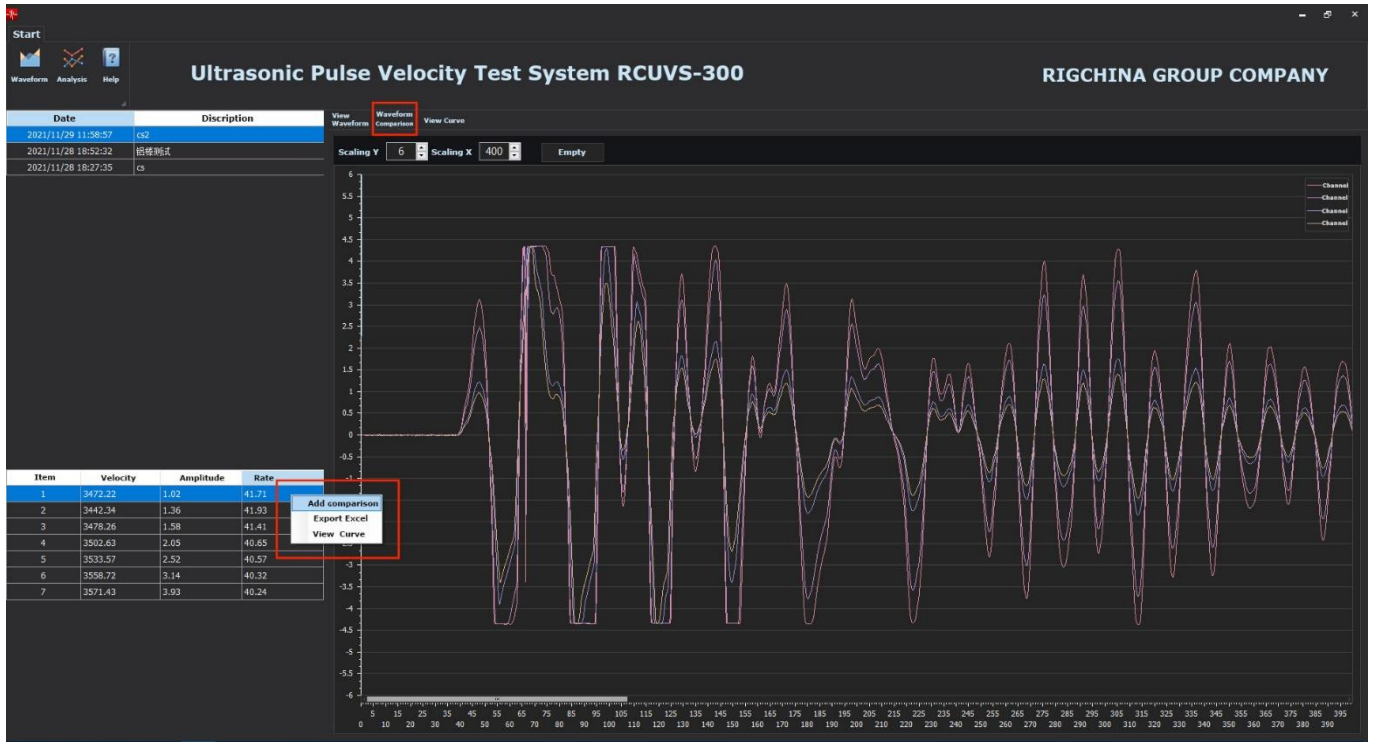
- Ultrasonic velocity measurements of compression and shear waves in asphalt, soil, rock, & concrete specimens
- Hardware and software accommodate P, S<sub>1</sub>, S<sub>2</sub> inputs. Digitally controlled pulser and receiver including a switch to automatically select P- or S-wave transducers. Waveform expansion ratio can be freely selected from 1 to 10 times.
- Selection of the ultrasonic pulse amplitude adjustable from 0 to 1000V, Pulse width: freely adjustable from 0 $\mu$ s to 10 $\mu$ s.
- Frequency range: 20KHz-20MHz.
- Measuring range: 0 - 3000  $\mu$ s - resolution +/- 0,1  $\mu$ s
- Attenuation adjustment range: 1-80dB, with step sizes of 1dB or 0.1dB.
- Automatic display and calibration of T-zero value.
- Longitudinal wave acquisition and display, with single or continuous acquisition functions.
- Timed testing and automatic record saving, no need for manual supervision.
- Interface mini-USB for PC connection, State-of-the-art, smart software for data acquisition, analysis, storage, plotting, & reporting, Automatic numbering and storage of data and waveforms, with the ability to plot curves of each measurement point (velocity and amplitude curves), Data retrieval, calculation, and waveform comparison capabilities, including a database management system. Processing and filing of the test data up to 30.000 samples.

- Available transducers for use inside soil and rock triaxial cells
- Available high temperature transducers for up to 300° C environments
- Measurement of the time required by the ultrasonic pulse to go through the tested material.
- Single or continuous acquisition mode with automatic or manual saving.
- Automatic Zero calibration with depuration of the time for the pulse to go through the probes.
- AC 220V, 50/60 Hz or Batter duration: 6 to 8 hours.

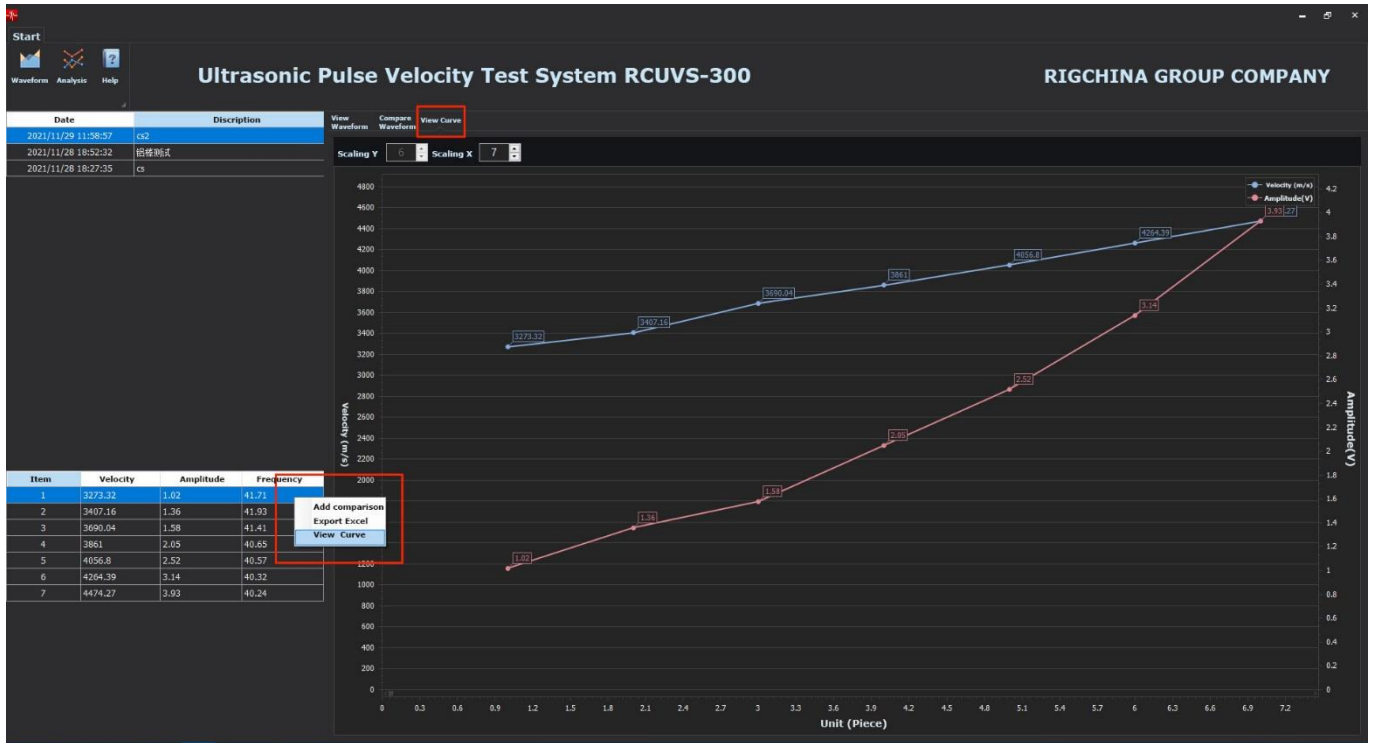
## Software Interface:



# Waveform comparison:



# Curve viewing:



## **Relevant Standards**

*ASTM D2845 Standard Test Method for Laboratory Determination of Pulse Velocities and Ultrasonic Elastic Constants of Rock*

*ASTM D4543 Standard Practices for Preparing Rock Core as Cylindrical Test Specimens and Verifying Conformance to Dimensional and Shape Tolerances.*

*ASTM D7012 Standard Test Methods for Compressive Strength and Elastic Moduli of Intact Rock Core Specimens under Varying States of Stress and Temperatures.*

# Warranty and Returns

## Warranty

Rigchina Group Company warrants its products to be free from defects in material and workmanship for a period of **24** months from the time of shipment. If repair or adjustment is necessary, and has not been the result of abuse or misuse within the twelve-month period, please return, freight prepaid, and correction of the defect will be made without charge.

Out of warranty products will be repaired for a nominal charge.

Please refer to the accompanying warranty statement enclosed with the product.

## Returns

For your protection, items being returned must be carefully packed to prevent damage in shipment and insured against possible damage or loss. Rigchina will not be responsible for damage resulting from careless or insufficient packing.

Before returning items for any reason, authorization must be obtained from Rigchina Instrument Company. When applying for authorization, please include information regarding the reason the items are to be returned.

## Our shipping address is:



### RIGCHINA GROUP COMPANY

**Location::** No.80-82, Qiude Road, West Cheng Industrial Estate,  
Yongkang city, Zhejiang Province,  
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For After-Sales Service: [service@rigchina.com](mailto:service@rigchina.com)



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