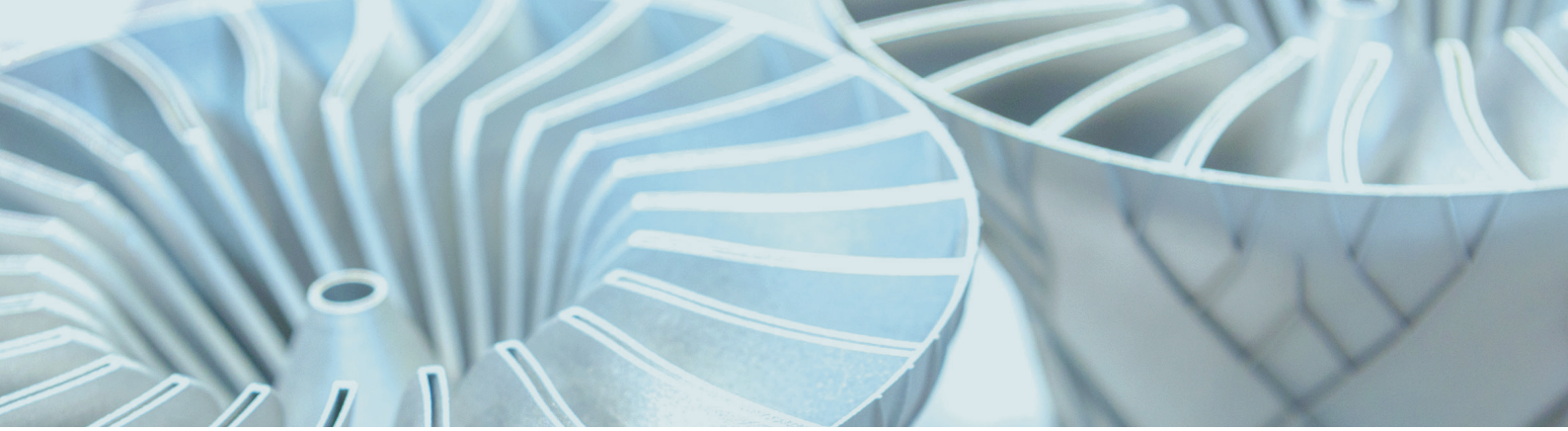
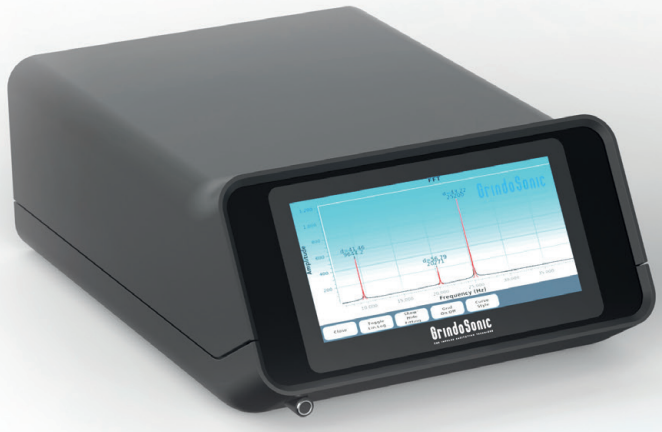


A powerful measurement system for Quality Management and Material R&D

GrindoSonic® develops, manufactures and commercializes non-destructive testing solutions for R&D, Engineering, Production and Quality Control.



We measure mechanical properties of materials, such as **Young's modulus, shear modulus, Poisson's ratio, relative porosity, damping capacity and asymmetry.** Precise and accurate measurements are guaranteed up to 1600°C.

Property changes and the presence of propagating microcracks are easily monitored, enabling fast **detection of internal defects and property degradation** in an early stage, leading to better products and more efficient production.

Quality Control through fast and accurate measurement of property changes on final products at the end of the manufacturing process or at any intermediate stage. Our measurement solutions include **automated** and production line **integrated** systems.

GrindoSonic

FOR CONSISTENT PRODUCT QUALITY

The Impulse Excitation Technique is the basis for our technology

By applying a single tap, we make a material (test specimen or finished product) resonate. The physical data of this resonance – frequencies and damping – are measured, stored and subsequently converted to the elastic properties of this material. The impulse excitation technique is described in international standards such as ASTM E1876, C1259, C215, E3397 and many more.

The technique is applicable to all materials that resonate, from test-specimen to finished products, ranging from a 200µm sheet to slabs of multiple m² or very long tubes and complex geometries.

The GrindoSonic® solutions

GrindoSonic® **MK7 Main System**

This system is widely used to measure resonance frequencies, elasticity moduli (Young's, shear, Poisson's ratio), and damping properties of materials. It includes a high-speed data acquisition system, specialized software for data analysis, and a range of sensors and accessories.

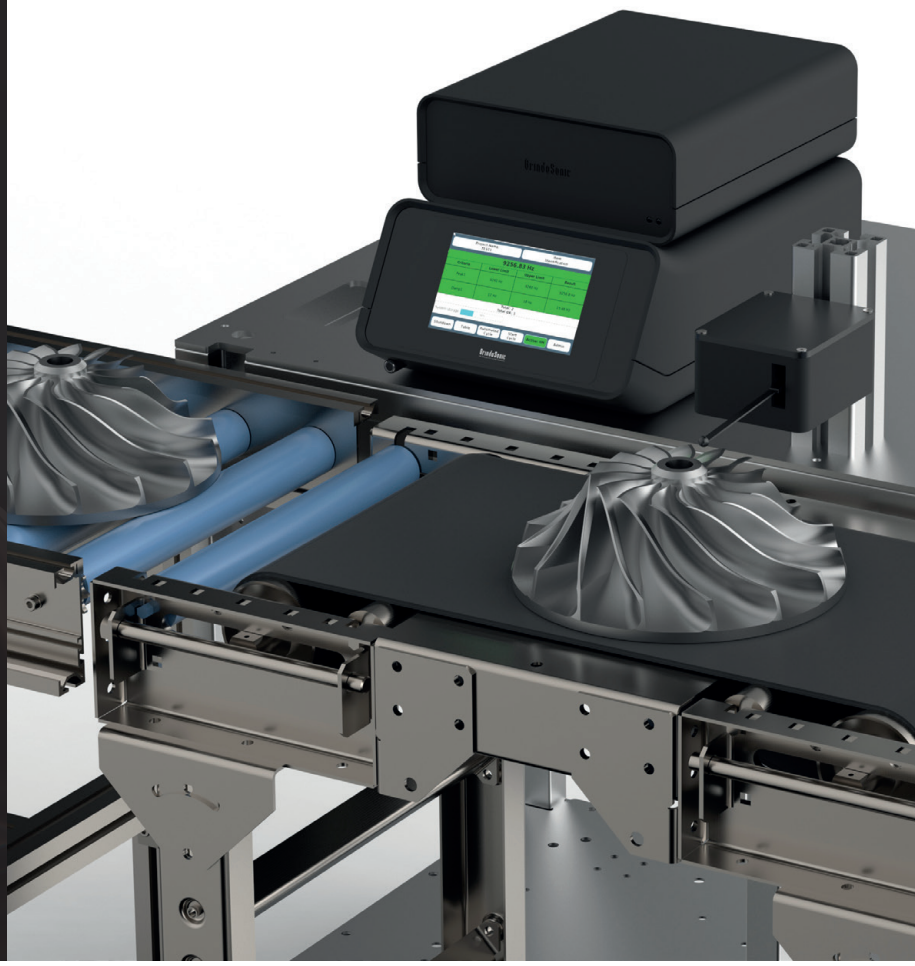
GrindoSonic® **Measurement Station**

For frequent measurements of identical parts and to avoid human error, we have developed a measurement station with automated and adjustable excitation and acoustic recording of the resonance response.

GrindoSonic® **AS-Controller**

For use in a continuous manufacturing process, we provide the AS-Controller for PLC-communication and integration of the individual components like the MK7, automated impulse hammer, pneumatic probe drive.

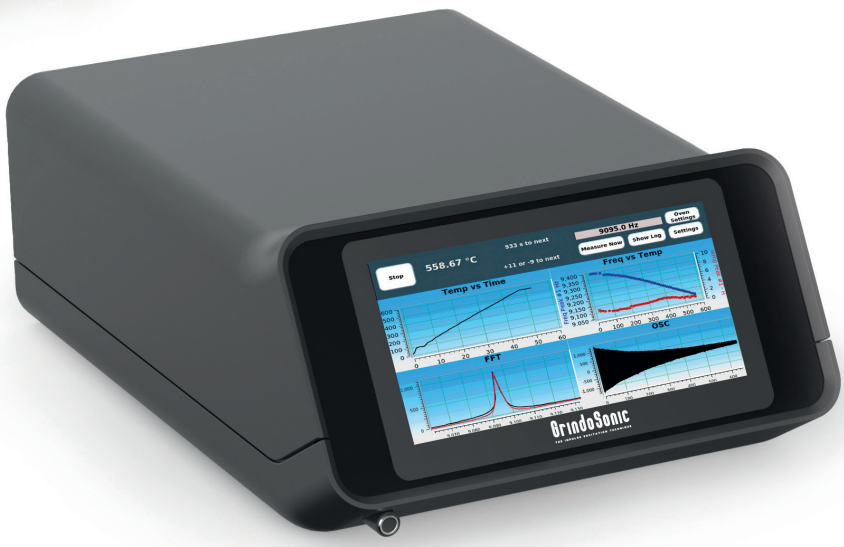
Typically over 1000 products per hour can be tested.



GrindoSonic® **HT systems**

The High Temperature system is designed for advanced research applications, such as the study of mechanical properties at temperatures up to 1600°C. It includes a range of specialized sensors and accessories for measuring properties under these conditions.

High accuracy measurement at elevated temperatures.



GrindoSonic® Advanced measurement Software

We provide the programmable gain instrumentation amplifier for signal conditioning of multiple modes with large differences in amplitude (for damping too strong signals and/or boosting weak signals).

GrindoSonic® 3-D Visualization Waterfall Plot Software

For graphical representation of larger numbers of measurements, to study material evolution, production quality variation and high temperature measurements over the full frequency spectrum.

GrindoSonic® Quality Control Software

GO/NOGO decision criteria, expressing the acceptance limits, can be programmed based on frequency, damping and amplitude values.

GrindoSonic® Material testing services

GrindoSonic offers testing services to evaluate the mechanical properties of various materials and products, including metals, ceramics, composites, polymers and many more. These services can help clients understand the technique and their material behavior under different conditions.

GrindoSonic® MK7 specifications

Frequency range	20 Hz - 150 kHz
Frequency filter bands	8 x 8th order band pass analog filters
	4 x programmable digital filters
System accuracy	Absolute accuracy greater than 0,005 %
Measurement resolution	1/10.000.000 (0,1 ppm)
System repeatability	3/10.000.000 (0,3 ppm)
Sample frequency	10 kHz – 1 MHz
Number of samples	1k – 524k
System display	7-inch multicolor touch screen
Data storage	10 GB (optional up to 58 GB) and stored as .csv files
Network connection	Ethernet cable
Power supply	100 – 240 VAC / 50-60 Hz / max. 42 W
Protection classification	IP50

Would like to have more information about material testing, microcrack detection or how to achieve consistent product quality?

Schedule a cost-free feasibility test of your products or samples.

GrindoSonic
FOR CONSISTENT PRODUCT QUALITY

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