



Macrosonix Inc.

Linear Resonance Compressors

Key Goals and Accomplishments

Variable Capacity
Oilless Air/Gas Compression Technology
Scalability from Miniature to Industrial with Modularity
Extreme Reliability
Extremely Clean and Inert (Coating, Materials and Membranes)

Approach and Key Tools

Concept Generation: Acoustic Resonance, Electronics and S Algorithm
Lumped Parameter Simulation
Dynamic Instrumentation and DOE Optimization
Structured Problem Solving and Reliability Growth

Results and Recognition

Publications, e.g., International Compressor Engineering Conference, 2002, Linear Resonance Compressor Driven by A Variable Gap-Reluctance Linear Motor, Lawrenson, Popham and Burr.

Patented: Linear resonance pump and methods for compressing fluid
United States Patent 6514047, Burr, Popham, Lawrenson and Shelley.

Government funded research grants to develop and deploy technology (Phase I and II).

Created commercial custom OEM products (e.g., membrane nitrogen generator and others).