

Mechanical Engineer and industry specialist with over 15 years of experience in **compressed air systems, flow measurement, and thermo-fluid engineering**. Recognized for developing **high-precision testing technologies and industrial systems** used by global manufacturers.

Inventor and developer of one of the **first fully automated portable sonic nozzle test systems** enabling laboratory-grade compressor performance verification directly in field conditions. Proven track record of delivering **original engineering solutions with measurable performance gains**, supporting OEMs in achieving compliance with international standards and improving product reliability.

KEY ACHIEVEMENTS & ORIGINAL CONTRIBUTIONS

- Developed one of the **first fully automated portable sonic nozzle test benches** for on-site compressor performance verification
- Engineered high-precision sonic nozzles with **validated accuracy of $\pm 0.15\%$** , achieving near-perfect agreement between CFD models and experimental results
- Designed ultra-precise temperature control systems with **$\pm 0.1^\circ\text{F}$ stability**, applicable to refrigeration and compressed air testing systems
- Established and commissioned **9+ industrial-scale compressed air laboratories** for global OEM manufacturers, supporting R&D and certification processes
- Designed high-cycle durability test systems validating **>9 million load cycles**, significantly exceeding typical industry benchmarks (~200,000 cycles)
- Led the complete development of **flow measurement systems, test benches, and supporting software**, integrating CFD, FEA, and real-world validation

PROFESSIONAL EXPERIENCE

Founder & Lead Engineer Revindus – Revolutionary Industries

Jan 2018 - Present

- Founded and lead a specialized engineering company focused on high-precision flow measurement and compressor performance validation systems
- Developed and commercialized portable sonic nozzle flow measurement systems, positioning the company among a limited number of global manufacturers in this niche field
- Led end-to-end product development including concept design, CFD/FEA validation, hardware manufacturing, and software development
- Advised global compressor and air dryer manufacturers on performance optimization and compliance with international standards (CAGI, DOE)
- Designed advanced air-oil separation systems improving separation efficiency while reducing pressure drop
- Engineered precision-controlled refrigeration systems capable of extreme temperature testing down to -78°F
- Eliminated dependency on external suppliers by developing in-house high-precision flow components and systems

R&D Manager Mikropor

June 2012 – Jan 2018

- ✓ Established and led the company's **R&D department and compressed air laboratory infrastructure**
- ✓ Transformed academic research into a **commercially successful refrigerated air dryer product line**, widely adopted in international markets
- ✓ Developed advanced test systems to evaluate separator performance and durability, increasing lifecycle capability from **~200,000 cycles to over 9 million cycles**
- ✓ Supported product development for a company exporting to **150+ countries**, improving competitiveness in global markets
- ✓ Delivered technical training programs for customers in the **United States and international markets**, increasing product adoption and technical understanding
- ✓ Acted as a key technical expert in solving field issues and optimizing system performance

Research Assistant Middle East Technical University

December 2009 – June 2012

- ✓ Conducted research in **thermofluid sciences** during Master's studies
- ✓ Supported undergraduate and graduate courses as a **teaching assistant**
- ✓ Collaborated with industry (Mikropor) to develop **applied engineering solutions and product improvements**

INDUSTRY RECOGNITION & PROFESSIONAL ENGAGEMENT

- Invited **Speaker and Session Chair (2x)** at CABP Expo, presenting on compressor performance testing and flow measurement technologies
- Published technical article on **sonic nozzle flow measurement** in CABP, a recognized industry magazine
- Featured by CABP for innovation in **portable sonic nozzle test systems**, highlighting industry impact and technological advancement
- Board Member, **Compressed Air and Gas Institute (CAGI)**
- Trusted consultant to **global compressor and air treatment manufacturers**
- Delivered **technical training programs internationally**, including the United States

TECHNICAL EXPERTISE

- Flow Measurement & Sonic Nozzle Systems
- Compressor Performance Testing & Validation
- Thermo-fluid Systems Design
- CFD (ANSYS Fluent) & FEA (ANSYS Structural)
- Test Bench Design & Industrial Instrumentation
- Refrigeration Systems & Precision Temperature Control
- Data Acquisition, Sensor Integration & Software Development

EDUCATION

Master of Science, Mechanical Engineering

Middle East Technical University (METU) – 2012

Bachelor of Science, Mechanical Engineering

Erciyes University – 2008

PROFESSIONAL TRAINING

- Compressed Air Systems Assessment & Project Development, Compressed Air Challenge by Ron Mashall and Frank Moskowitz, February 2022
- Advanced Management of Compressed Air System, Compressed Air Challenge by Ron Mashall and Frank Moskowitz, April 2021

VOLUNTEER EXPERIENCE

Voluntary Worker

2008 –2009

Tools for Solidarity (UK)

- Refurbishment of industrial tools and machinery for developing regions
- Designed and manufactured missing mechanical components
- Coordinated work activities for volunteers with physical disabilities
- Supported fundraising and operational activities

ADDITIONAL INFORMATION

- Extensive experience working with international OEM engineering teams
- Strong ability to translate advanced engineering theory into practical, high-performance industrial solutions