

**Customer Information**

EKOPOWER Systems  
 Eindhoven  
 Holland

**Instrument Under Test (IUT)**

Model No: MAX40+  
 Serial No: 179500184918  
 Output: Sine Wave  
 IUT Power: 0 VDC  
 Heater Power: 0 VDC  
 Mount Diameter: 12.7 mm  
 Test Procedure: OTECH-CP-001

**Wind Tunnel Test Facility**

Otech Tunnel ID: WT2B  
 Type: Eiffel (open circuit, suction)  
 Test Section Size: 0.61 m x 0.61 m x 1.22 m  
 Manufacturer: Engineering Laboratory Design, Inc.

**Data Acquisition**

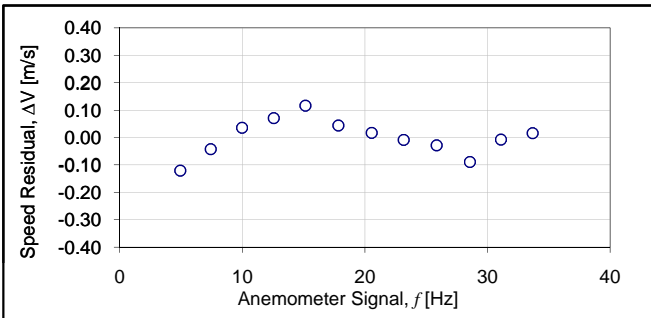
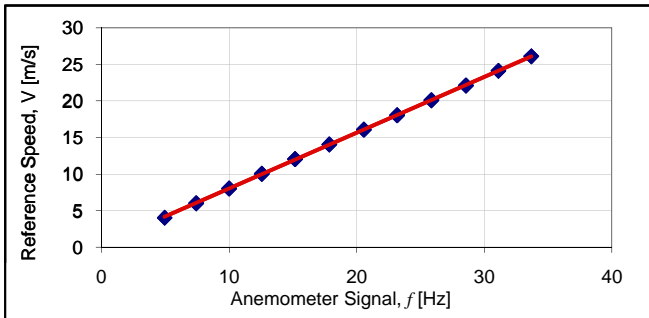
Hardware: National Instruments CDAQ-9172 USB 2.0 chassis  
 with NI 9205 32-chan 16-bit AI module  
 Software: National Instruments LabVIEW 2010  
 Signal Reduction Method for IUT: FFT Analysis

**Measuring Equipment**

Reference Speed: Four United Sensor Type PA Pitot-static tubes sensed by an MKS Barotron Type 220D Differential Pressure Transducer (NIST traceable)  
 Amb. Pressure: Setra Model 270 Barometer (NIST traceable)  
 Amb. Temperature: OMEGA HX94 SS Probe (NIST traceable)  
 Relative Humidity: OMEGA HX94 SS Probe (NIST traceable)

**Test Conditions**

Reference Speed Position Correction = 1  
 Reference Speed Blockage Correction = 1.00735  
 Mean Ambient Pressure = 100,987 Pa  
 Mean Ambient Temperature = 23.2 deg C  
 Mean Relative Humidity = 46.7% RH  
 Mean Density = 1.1817 kg/cubic meter

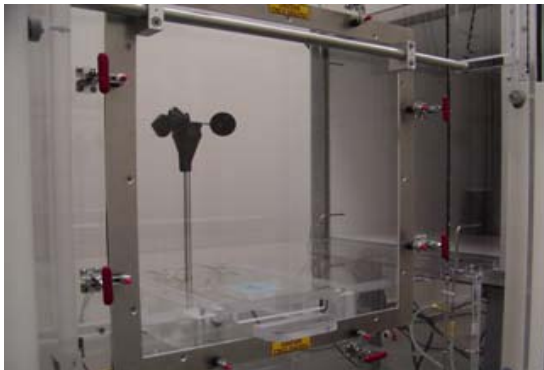


**Transfer Function Test Results:**

**$V \text{ [m/s]} = 0.763 f \text{ [Hz]} + 0.38$**

**Regression Parameters**

$r = 0.99996$                       std. err. estimate = 0.0688 m/s  
 slope = 0.763 m/s per Hz        std. err. slope = 0.00219 m/s per Hz  
 offset = 0.38 m/s                    std. err. offset = 0.04648 m/s



**Note:** Generic photo of test set-up

Approved by: Adam Havner,  
 Lab Manager

Reference Speed [m/s]	Anemometer Output [Hz]	Residual [m/s]	Ref. Speed Uncertainty
4.028	4.932	-0.121	0.624%
8.037	9.979	0.036	0.614%
12.060	15.144	0.116	0.595%
16.077	20.536	0.017	0.598%
20.077	25.835	-0.029	0.600%
24.106	31.087	-0.008	0.595%
26.101	33.669	0.016	0.596%
22.089	28.550	-0.089	0.604%
18.043	23.145	-0.009	0.612%
14.040	17.833	0.044	0.595%
10.033	12.549	0.070	0.622%
5.997	7.410	-0.043	0.612%

This document reports that the above IUT was tested at Otech Engineering, Inc., a wind tunnel laboratory accredited in accordance with the recognised International Standard ISO/IEC 17025:2005 (Certificate number CL-126). This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated January 2009). Uncertainties estimated at 95 % confidence level. This report shall not be reproduced except in full, without written approval from Otech Engineering, Inc.

