




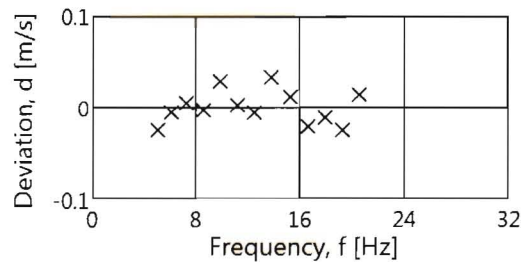
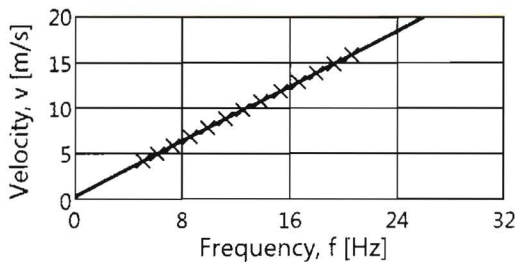
SOH Wind Engineering LLC

141 Leroy Road · Williston, VT 05495 · USA
Tel 802.316.4368 · Fax 802.735.9106 · www.sohwind.com

CERTIFICATE FOR CALIBRATION OF CUP ANEMOMETER

Certificate number: 16.US2.04647 **Date of issue:** April 25, 2016
Type: A75-104 **Serial number:** 8280-3366
Manufacturer: Comptus Inc., 202 Tamarack Rd, Thornton, NH 03285
Client: Comptus Inc., 202 Tamarack Rd, Thornton, NH 03285
Anemometer received: April 25, 2016 **Anemometer calibrated:** 14:16 April 25, 2016
Calibrated by: mej **Procedure:** MEASNET, IEC 61400-12-1:2005(E) Annex F
Certificate prepared by: Software Revision 7 **Approved by:** Calibration engineer, rds
Calibration equation obtained: $v \text{ [m/s]} = 0.75402 \cdot f \text{ [Hz]} + 0.34996$ 
Standard uncertainty, slope: 0.00147 **Standard uncertainty, offset:** 0.04300
Covariance: -0.0000156 (m/s)²/Hz **Coefficient of correlation:** $\rho = 0.999988$
Absolute maximum deviation: 0.034 m/s at 10.788 m/s
Barometric pressure: 1003.5 hPa **Relative humidity:** 19.4%

Succession	Velocity	Temperature in		Wind	Frequency,	Deviation,	Uncertainty $u_c \text{ (k=2)}$ [m/s]
	pressure, q. [Pa]	wind tunnel [°C]	d.p. box [°C]	velocity, v. [m/s]	f. [Hz]	d. [m/s]	
2	10.27	21.6	28.7	4.165	5.0920	-0.025	0.024
4	14.62	21.7	28.8	4.970	6.1344	-0.005	0.025
6	20.24	21.7	28.8	5.848	7.2851	0.005	0.027
8	27.60	21.7	28.8	6.829	8.5972	-0.003	0.029
10	36.26	21.7	28.8	7.828	9.8786	0.029	0.032
12	45.87	21.7	28.8	8.804	11.2088	0.003	0.035
13-last	56.52	21.7	28.9	9.774	12.5058	-0.006	0.038
11	68.86	21.7	28.8	10.788	13.7986	0.034	0.041
9	83.63	21.7	28.8	11.889	15.2873	0.012	0.045
7	98.08	21.7	28.8	12.875	16.6396	-0.021	0.048
5	113.98	21.7	28.8	13.879	17.9578	-0.011	0.052
3	130.75	21.7	28.8	14.865	19.2837	-0.025	0.055
1-first	149.24	21.6	28.7	15.880	20.5770	0.015	0.058



AC-1746



EQUIPMENT USED

Serial Number	Description
Njord 2	Wind tunnel, blockage factor = 1.002
13924	Control cup anemometer
-	Mounting tube, D = 12.7 mm
TT002	Summit RT-AUI, wind tunnel
TP001	Summit RT-AUI, differential pressure box
DP007	Setra Model 239 pressure transducer
HY002	Dwyer Instruments RHP-2D20 humidity transmitter
BP003	Setra Model 278 barometer
PL3	Pitot tube
XB001	Computer Board. 16 bit A/D data acquisition board
66GSPS1	PC dedicated to data acquisition

Traceable calibrations of the equipment are carried out by external accredited institutions: Atlantic Scale, & Furness Controls. A real-time analysis module within the data acquisition software detects pulse frequency.



Photo of the wind tunnel setup. The cross-sectional area is 2.5 x 2.5 m.

UNCERTAINTIES

The documented uncertainty is the total combined uncertainty at 95% confidence level ($k=2$) in accordance with EA-4/02. The uncertainty at 10 m/s comply with the requirements in the IEC 61400-12-1:2005 procedure. See Document US.12.01.004 for further details.

Certificate number: 16.US2.04647