



LABORATORY/OFFICE:
54043 County Rd. 37
Nunn, Colo. 80648
Phone: 970-897-2711
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COLORADO ENGINEERING EXPERIMENT STATION INC.

...the primary source for flow measurement solutions...



IOWA HIGH FLOW FACILITY
2365 240th St.
Garner, IA 50438
Phone: 641-923-3664
FAX: 641-923-3693

Calibration of a Coriolis Flow Meter

Model:

Serial Number:

For: Order:

Data File: 09XXX-0001_1 Job: CE00000 Date: 18 January 2009

Inlet Diameter: 4 inches

Test gas: AIR Standard density= 0.074896 lbm/ft³

at standard conditions of 529.67 °R, and 14.696 Psia

Freq: Meter frequency output in Hz

KGPH: Mass Flowrate in Kilograms per Hour

K Factor: KGPH/Freq

ReyNo: Meter diameter Reynolds number

Density: Density at Meter in Lb/ft³

Ind: Flowrate indicated from meter frequency output

% FS: Error in percent of full scale

Pt.	Freq	KGPH	KFactor	ReyNo	Density	Ind.	% FS
1	587.34	5846.51	9.954	1131916	0.203	5873.41	0.448
2	586.40	5843.65	9.965	1131798	0.203	5863.96	0.338
3	585.78	5836.01	9.963	1131552	0.203	5857.84	0.364
4	413.13	4118.88	9.970	796504	0.203	4131.28	0.207
5	412.91	4116.68	9.970	795998.3	0.202	4129.11	0.207
6	412.89	4118.18	9.974	796157.5	0.203	4128.89	0.179
7	205.23	2053.35	10.005	395232.7	0.202	2052.29	-0.018
8	205.33	2055.45	10.010	395590.9	0.202	2053.34	-0.035
9	204.94	2051.93	10.012	394777.9	0.201	2049.42	-0.042
10	60.04	602.46	10.034	115643.8	0.201	600.42	-0.034
11	59.95	601.84	10.039	115541.7	0.201	599.52	-0.039
12	59.97	601.87	10.036	115547.5	0.201	599.70	-0.036
13	614.90	6129.90	9.969	1183553	0.203	6149.04	0.319
14	617.66	6153.66	9.963	1190159	0.203	6176.62	0.383
15	622.85	6215.71	9.979	1207780	0.204	6228.52	0.214
16	624.53	6224.43	9.967	1212205	0.204	6245.26	0.347
17	625.36	6223.67	9.952	1212362	0.204	6253.56	0.498



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STATEMENT OF UNCERTAINTIES

Calibration of a Coriolis Flow Meter

Model: Serial Number:

For: Order:

Data File: 09XXX-0001_1 Job: CE00000 Date: 18 January 2009

Freq: Uncertainty in Frequency at a 95% confidence(%)

KGPH: Uncertainty in Mass Flowrate at a 95% confidence(%)

KFactor: -

ReyNo: Uncertainty in Reynolds Number at a 95% confidence(%)

Density: Uncertainty in Density at a 95% confidence(%)

Ind: -

% FS: -

Pt.	Freq	KGPH	KFactor	ReyNo	Density	Ind.	% FS
1	0.5000	0.331	-	2.027	0.107	-	-
2	0.5000	0.331	-	2.027	0.107	-	-
3	0.5001	0.331	-	2.027	0.107	-	-
4	0.5000	0.321	-	2.026	0.107	-	-
5	0.5000	0.321	-	2.026	0.107	-	-
6	0.5000	0.321	-	2.026	0.107	-	-
7	0.5001	0.305	-	2.023	0.107	-	-
8	0.5001	0.306	-	2.023	0.107	-	-
9	0.5000	0.305	-	2.023	0.107	-	-
10	0.5002	0.289	-	2.021	0.107	-	-
11	0.5002	0.289	-	2.021	0.107	-	-
12	0.5002	0.289	-	2.021	0.107	-	-
13	0.5001	0.332	-	2.027	0.107	-	-
14	0.5002	0.332	-	2.027	0.107	-	-
15	0.5001	0.333	-	2.027	0.107	-	-
16	0.5000	0.333	-	2.027	0.107	-	-
17	0.5001	0.333	-	2.027	0.107	-	-



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CEESI CALIBRATION CHECK LIST

Job #: CE00000

Data File #: 09XXX-001_1

Meter Type: CORIOLIS	For:
Model #:	Serial #:
Tag #:	Part #:
Flow Range: 0.3674-3.6744 LBMS	Pressure: Amb Temp: Amb
Purchase Order #:	Date: 01-18-09

Calibration conditions: Inlet P & T

Q/C No.	Instrument Description	Calibration Due
1803	DAQ	11-21-09
60176	100 psi digital output	10-1-09
60576	500 psi digital output	10-19-09

Initial When Check Performed

Nozzle Number	CFV11	CFVC 250				
Leak Check-Piping	DST	DST				
Leak Check-Gages/Gage Lines	DST	DST				
Pressure Rating-Piping	DST	DST				
Pressure Rating-Gages/Gage Lines	DST	DST				
Barometric Pressure Recorded	DST	DST				
Gages and Instruments Zeroed	DST	DST				
Manometer Temperatures Recorded	-	-				

Supervisor:
Quality Control: Eric Hirsch