Universal Thermal Services
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Manawa, Wisconsin 54949
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uts@ wolfnet.net

Service
Training
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Maintenance

Thermach AT3000
Certificate of Calibration

Form # AT3000 Rev C 3/19/2009

Cert. No. : 2009-930

Customer:	ABC	**Console**	AT 3000	**Hopper**	AT1200 #2		**Power Supply**	AT1000	
Address:	1365 Newton	**S/N:**	ATCP100102	**S/N:**	RPFT100274		**S/N:**	LF440413C	
City:	Boucherville	**Device ID#:**	M280						
State:	QU	**Booth #:**	2	**Hopper**	NA				
Zip:	J4B 5H2	**With in 3%:**	No	**S/N:**	NA				
Name:	John	**Adjustments:**	Yes						
Phone #:	451-449-4612								

N.I.S.T. Instruments Used for This Calibration

Test Inst:	Press. Transducer	**Test Inst:**	Multi Meter	**Test Inst:**	Amp Clamp Meter	**Test Inst:**	
Make:	Fluke	**Make:**	Fluke	**Make:**	Fluke	**Make:**	
Model:	PV350	**Model:**	87V	**Model:**	i1010	**Model:**	
Serial No:	107	**Serial No:**	88190113	**Serial No:**	91562357	**Serial No:**	
Next Cal. Due:	1/6/2010	**Next Cal. Due:**	6/27/2009	**Next Cal. Due:**	3/11/2009	**Next Cal. Due:**	

Test Inst: Low Flow	Mass Flow Meter	**Test Inst: Medium Flow**	Mass Flow Meter
Make:	Alicat Scientific 0-75 scfh	**Make:**	Alicat Scientific 0-400 scfh
Model:	PUC-50SLPM	**Model:**	PUC-250SLPM
Serial No:	44770	**Serial #:**	44771
Next Cal. Due:	1/13/20010	**Next Cal. Due:**	1/13/20010

Gas Orifices	**Sizes**	**Gas**	**Flow [FS]**
Primary Gas	#56	Argon	511.12
Primary Gas	#80	Helium	110.28
Secondary Gas	#97 or #103	Hydrogen	31.43 or 7.34
Powder Carrier Gas	#77	Argon or Nitrogen	46.2 or 50.2

System Performance w/Prameters as Provided by the Operator Initially

Gas	**Pressure**	**Gun**					
Ar	40	SG100					
H2		**Amps**					
N2		950					
He	220	**Volts**	**Volts after Calibration**				
		44.1	**47.6**				

Evidence of Gas Contamination

Argon:		No
Helium:		No
Hydrogen:		N/A
Nitrogen:		N/A
Air:		N/A

Notes:
Changed the #56 Orifice out, due to above 5% error on the low side. It now is below 3% error on the low side. Please note volts after calibration vs volts before calibration!

Green 0-3% Acceptable
Orange 3.1-5% Alert
Red 5.1 and up Fail

Calibrated By:	Allen Hildebrand			
Calibrated Date:	4/20/2009	**Next Calibration Due:**	10/20/2010	**Signature:** Allen R Hildebrand

All instruments have been calibrated against standards traceable to NIST. This Certification Sheet must not be altered in any way!

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Customer: ABC

Amperage Display

Cert. No. : 2009-930

Console:	AT 3000	**Serial Number:**	ATCP100102
Device ID #:	M280A	**Booth Number:**	2
Device Under Test:	Arc Gas Gauge	**Device ID #:**	

Testing Instrument:	Multi Meter	87V	**Serial Number:**	88190113	**Testing Instrument:**	Amp Clamp Meter	i1010	**Serial Number:**	91562357

Pressure Full Scale [FS] = 1500 Amps

Amps Set Point	As Found Display Reading	As Found NIST Meter	Actual Amps Deviation	As Found Amps % Deviation	As Left Display Reading	As Left Amps Deviation	As Left Amps % Deviation			
500	500	507	7.0	**0.5**	507	7.0	**0.5**			
600	600	611	11.0	**0.7**	611	11.0	**0.7**			
700	700	711	11.0	**0.7**	711	11.0	**0.7**			
800	800	816	16.0	**1.1**	816	16.0	**1.1**			
900	900	917	17.0	**1.1**	917	17.0	**1.1**			
950	950	969	19.0	**1.3**	969	19.0	**1.3**			

Volts Display

Console:	AT 3000	**Serial Number:**	ATCP100102
Device ID #:	M280B	**Booth Number:**	2
Device Under Test:	Arc Gas Gauge	**Device ID #:**	

Testing Instrument:	Multi Meter	87V	**Serial Number:**	88190113

Volts Full Scale [FS] = 200 Volts

Volt Meter Set Point	Meter Reading	NIST Meter	Volts Deviation	Volts % Deviation	Volts As Left Meter Reading	As Left Volt Deviation	As Left Volts % Deviation			
30	30	29.5	-0.5	**-0.3**	29.5	-0.5	**-0.3**			
32	32	31.1	-0.9	**-0.4**	31.1	-0.9	**-0.4**			
35	33	34.1	-0.9	**-0.4**	34.1	-0.9	**-0.4**			
39	39	38.2	-0.8	**-0.4**	38.2	-0.8	**-0.4**			
42	42	41.3	-0.7	**-0.4**	41.3	-0.7	**-0.4**			
45	45	44.3	-0.7	**-0.4**	44.3	-0.7	**-0.4**			

System Performance w/Prameters after Calibration

Gas	Pressure	Gun	Amps	Volts						
Ar	40	SG100	950	47						
H2										
N2										
He	220									

Calibrated By:	Allen Hildebrand				
Calibrated Date:	4/20/2009	**Next Calibration Due:**	10/20/2010	**Signature:**	Allen R Hildebrand

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Customer: ABC

Arc Gas Gauge [P1]

Form # AT3000 Rev C 3/19/2009

Cert. No. : 2009-930

Console:	AT 3000	**Serial Number:**	ATCP100102
Device ID #:	M280C	**Booth Number:**	2
Device Under Test:	Primary Gas Gauge	**Device ID #:**	

Testing Instrument:	Multi Meter	87V	**Serial Number:**	88190113	**Testing Instrument:**	Press. Transducer	PV350	**Serial Number:** 107

Pressure Full Scale [FS] = 300 PSI

Pressure (PSI) Set Point	As Found Gauge Reading	As Found NIST Pressure	Actual PSI Deviation	As Found PSI% Deviation	As Left Gauge Reading	As Left PSI Deviation	As Left PSI % Deviation
10	10	9.9	-0.1	**0.0**	9.9	-0.1	**0.0**
30	30	29.3	-0.7	**-0.2**	29.3	-0.7	**-0.2**
50	50	50.1	0.1	**0.0**	50.1	0.1	**0.0**
70	70	69.9	-0.1	**0.0**	69.9	-0.1	**0.0**
90	90	90.0	0.0	**0.0**	90.0	0.0	**0.0**
110	110	109.7	-0.3	**-0.1**	109.7	-0.3	**-0.1**
130	130	129.9	-0.1	**0.0**	129.9	-0.1	**0.0**
150	150	150.4	0.4	**0.1**	150.4	0.4	**0.1**

Arc Gas Pressure [P2]

Console:	AT 3000	**Serial Number:**	ATCP100102
Device ID #:	M280D	**Booth Number:**	2
Device Under Test:	Primary Gas Gauge	**Device ID #:**	

Testing Instrument:	Multi Meter	87V	**Serial Number:**	88190113	**Testing Instrument:**	Press. Transducer	PV350	**Serial Number:** 107

Pressure Full Scale [FS] = 160 PSI

Pressure (PSI) Set Point	As Found Gauge Reading	As Found NIST Pressure	Actual PSI Deviation	As Found PSI% Deviation	As Left Gauge Reading	As Left PSI Deviation	As Left PSI % Deviation
10	10	9.8	-0.2	**-0.1**	9.8	-0.2	**-0.1**
30	30	29.0	-1.0	**-0.6**	29.0	-1.0	**-0.6**
50	50	48.7	-1.3	**-0.8**	48.7	-1.3	**-0.8**
70	70	49.0	-21.0	**-13.1**	49.0	-21.0	**-13.1**
90	90	89.3	-0.7	**-0.4**	89.3	-0.7	**-0.4**
110	110	109.7	-0.3	**-0.2**	109.7	-0.3	**-0.2**
130	130	130.2	0.2	**0.1**	130.2	0.2	**0.1**
150	150	150.4	0.4	**0.3**	150.4	0.4	**0.3**

Calibrated By:	Allen Hildebrand				
Calibrated Date:	4/20/2009	**Next Calibration Due:**	10/20/2010	**Signature:**	Allen R Hildebrand

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Aux Gas Gauge [P1]

Cert. No. : 2009-930

Console:	AT 3000	**Serial Number:**	ATCP100102
Device ID #:	M280E	**Booth Number:**	2
Device Under Test:	Secondary Gas Gauge	**Device ID #:**	

Testing Instrument:	Multi Meter	87V	**Serial Number:**	88190113	**Testing Instrument:**	Press. Transducer	PV350	**Serial Number:** 107

Pressure Full Scale [FS] = 300 PSI

Pressure (PSI) Set Point	As Found Gauge Reading	As Found NIST Pressure	Actual PSI Deviation	As Found PSI% Deviation	As Left Gauge Reading	As Left PSI Deviation	As Left PSI % Deviation			
10	10	9.5	-0.5	**-0.2**	9.5	-0.5	**-0.2**			
30	30	29.8	-0.2	**-0.1**	29.8	-0.2	**-0.1**			
50	50	48.4	-1.6	**-0.5**	48.4	-1.6	**-0.5**			
70	70	69.0	-1.0	**-0.3**	69.0	-1.0	**-0.3**			
90	90	89.3	-0.7	**-0.2**	89.3	-0.7	**-0.2**			
110	110	109.2	-0.8	**-0.3**	109.2	-0.8	**-0.3**			
130	130	129.8	-0.2	**-0.1**	129.8	-0.2	**-0.1**			
150	150	149.2	-0.8	**-0.3**	149.2	-0.8	**-0.3**			

Aux Gas Pressure [P2]

Console:	AT 3000	**Serial Number:**	ATCP100102
Device ID #:	M280F	**Booth Number:**	2
Device Under Test:	Secondary Gas Gauge	**Device ID #:**	

Testing Instrument:	Multi Meter	87V	**Serial Number:**	88190113	**Testing Instrument:**	Press. Transducer	PV350	**Serial Number:** 107

Pressure Full Scale [FS] = 160 PSI

Pressure (PSI) Set Point	As Found Gauge Reading	As Found NIST Pressure	Actual PSI Deviation	As Found PSI% Deviation	As Left Gauge Reading	As Left PSI Deviation	As Left PSI % Deviation			
10	10	10.8	0.8	**0.5**	10.8	0.8	**0.5**			
30	30	30.0	0.0	**0.0**	30.0	0.0	**0.0**			
50	50	50.4	0.4	**0.2**	50.4	0.4	**0.2**			
70	70	70.4	0.4	**0.3**	70.4	0.4	**0.3**			
90	90	90.7	0.7	**0.4**	90.7	0.7	**0.4**			
110	110	111.0	1.0	**0.6**	111.0	1.0	**0.6**			
130	130	131.2	1.2	**0.7**	131.2	1.2	**0.7**			
150	150	151.2	1.2	**0.7**	151.2	1.2	**0.7**			

Calibrated By:	Allen Hildebrand				
Calibrated Date:	4/20/2009	**Next Calibration Due:**	10/20/2010	**Signature:**	Allen R Hildebrand

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#1 Carrier Gas Gauge [P1]

Form # AT3000 Rev C 3/19/2009

Cert. No. : 2009-930

Console:	AT 3000			**Serial Number:**	ATCP100102						
Device ID #:	M280G			**Booth Number:**	2						
Device Under Test:	Arc Gas Gauge			**Device ID #:**							
Testing Instrument:	Multi Meter	87V		**Serial Number:**	88190113	**Testing Instrument:**	Press. Transducer	PV350	**Serial Number:**		107

Pressure Full Scale [FS] = 200 PSI

Pressure (PSI) Set Point	As Found Gauge Reading	As Found NIST Pressure	Actual PSI Deviation	As Found PSI% Deviation	As Left Gauge Reading	As Left PSI Deviation	As Left PSI % Deviation			
10	10	11.0	1.0	**0.5**	11.0	1.0	**0.5**			
20	20	19.8	-0.2	**-0.1**	19.8	-0.2	**-0.1**			
30	30	29.9	-0.1	**-0.1**	29.9	-0.1	**-0.1**			
40	40	39.7	-0.3	**-0.1**	39.7	-0.3	**-0.1**			
60	60	59.6	-0.4	**-0.2**	59.6	-0.4	**-0.2**			
80	80	79.4	-0.6	**-0.3**	79.4	-0.6	**-0.3**			
90	90	89.5	-0.5	**-0.3**	89.5	-0.5	**-0.3**			
100	100	97.1	-2.9	**-1.5**	97.1	-2.9	**-1.5**			

#1 Carrier Gas Gauge [P2]

Console:	AT 3000			**Serial Number:**	ATCP100102						
Device ID #:	M280H			**Booth Number:**	2						
Device Under Test:	Arc Gas Gauge			**Device ID #:**							
Testing Instrument:	Multi Meter	87V		**Serial Number:**	88190113	**Testing Instrument:**	Press. Transducer	PV350	**Serial Number:**		107

Pressure Full Scale [FS] = 100 PSI

Pressure (PSI) Set Point	As Found Gauge Reading	As Found NIST Pressure	Actual PSI Deviation	As Found PSI% Deviation	As Left Gauge Reading	As Left PSI Deviation	As Left PSI % Deviation			
10	10	9.6	-0.4	**-0.4**	9.6	-0.4	**-0.4**			
20	20	19.6	-0.4	**-0.4**	19.6	-0.4	**-0.4**			
30	30	29.6	-0.4	**-0.4**	29.6	-0.4	**-0.4**			
40	40	39.4	-0.6	**-0.6**	39.4	-0.6	**-0.6**			
60	60	59.1	-0.9	**-0.9**	59.1	-0.9	**-0.9**			
80	80	79.2	-0.8	**-0.8**	79.2	-0.8	**-0.8**			
90	90	89.4	-0.6	**-0.6**	89.4	-0.6	**-0.6**			
100	100	99.4	-0.6	**-0.6**	99.4	-0.6	**-0.6**			

Calibrated By:	Allen Hildebrand				
Calibrated Date:	4/20/2009	**Next Calibration Due:**	10/20/2010	**Signature:**	Allen R Hildebrand

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Customer: ABC

#2 Carrier Gas Gauge [P1]

Cert. No. : 2009-930

Console:	AT 3000	**Serial Number:**	ATCP100102
Device ID #:	M280J	**Booth Number:**	2
Device Under Test:	Arc Gas Gauge	**Device ID #:**	

Testing Instrument:	Multi Meter	87V	**Serial Number:**	88190113	**Testing Instrument:**	Press. Transducer	PV350	**Serial Number:** 107

Pressure Full Scale [FS] = 200 PSI

Pressure (PSI) Set Point	As Found Gauge Reading	As Found NIST Pressure	Actual PSI Deviation	As Found PSI% Deviation	As Left Gauge Reading	As Left PSI Deviation	As Left PSI % Deviation			
10	10	10.8	0.8	**0.4**	10.8	0.8	**0.4**			
20	20	20.0	0.0	**0.0**	20.0	0.0	**0.0**			
30	30	29.8	-0.2	**-0.1**	29.8	-0.2	**-0.1**			
40	40	39.8	-0.2	**-0.1**	39.8	-0.2	**-0.1**			
60	60	59.8	-0.2	**-0.1**	59.8	-0.2	**-0.1**			
80	80	79.9	-0.1	**0.0**	79.9	-0.1	**0.0**			
90	90	89.4	-0.6	**-0.3**	89.4	-0.6	**-0.3**			
100	100	99.4	-0.6	**-0.3**	99.4	-0.6	**-0.3**			

#2 Carrier Gas Gauge [P2]

Console:	AT 3000	**Serial Number:**	ATCP100102
Device ID #:	M280K	**Booth Number:**	2
Device Under Test:	Arc Gas Gauge	**Device ID #:**	

Testing Instrument:	Multi Meter	87V	**Serial Number:**	88190113	**Testing Instrument:**	Press. Transducer	PV350	**Serial Number:** 107

Pressure Full Scale [FS] = 100 PSI

Pressure (PSI) Set Point	As Found Gauge Reading	As Found NIST Pressure	Actual PSI Deviation	As Found PSI% Deviation	As Left Gauge Reading	As Left PSI Deviation	As Left PSI % Deviation			
10	10	10.8	0.8	**0.8**	10.8	0.8	**0.8**			
20	20	20.0	0.0	**0.0**	20.0	0.0	**0.0**			
30	30	29.8	-0.2	**-0.2**	29.8	-0.2	**-0.2**			
40	40	39.8	-0.2	**-0.2**	39.8	-0.2	**-0.2**			
60	60	59.8	-0.2	**-0.2**	59.8	-0.2	**-0.2**			
80	80	79.9	-0.1	**-0.1**	79.9	-0.1	**-0.1**			
90	90	89.4	-0.6	**-0.6**	89.4	-0.6	**-0.6**			
100	100	99.4	-0.6	**-0.6**	99.4	-0.6	**-0.6**			

Calibrated By:	Allen Hildebrand			
Calibrated Date:	4/20/2009	**Next Calibration Due:**	10/20/2010	**Signature:** Allen R Hildebrand

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Customer: ABC

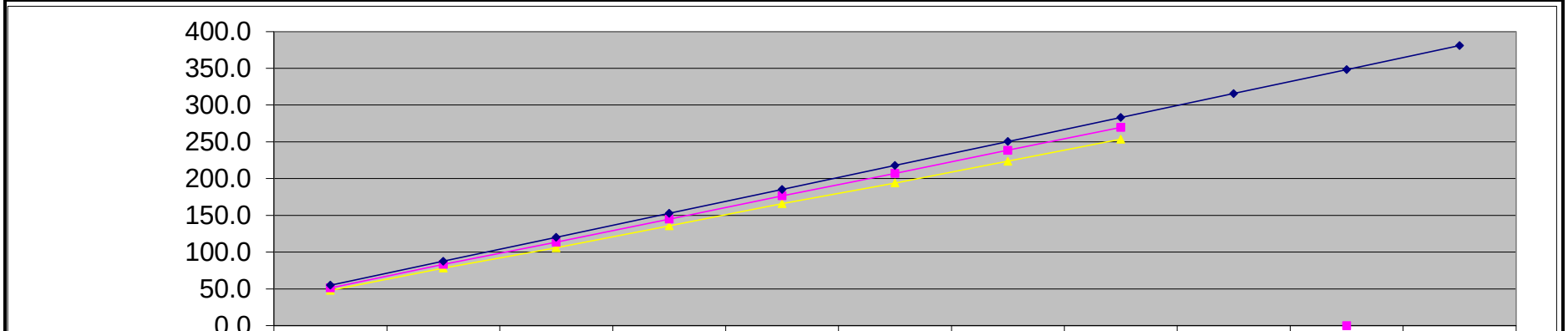
Argon Flow

Cert. No: 2009-930

Console:	AT 3000	**Serial Number:**	ATCP100102	**Type of Gas:**	Argon	**Full Flow SCFH [FS]:**	511.12
Device ID #:	M280L	**Booth Number:**	2				
Device Under Test:	Critical Orifice Flows	**Critical Orifice:**	#56	**Scale Rate:**	Flow is in SCFH		

Testing Instrument: Mass Flow Meter Alicat Scientific 0-400 scfh **Serial Number:** 44771

Set Point Pressure	Critical Orifices SCFH Converted		As Found SCFH Actual	As Found SCFH Deviation	SCFH % Deviation		As Left SCFH	As Left SCFH Deviation	As Left SCFH % Deviation		
20	55.0		48.0	-7.0	**-1.4**		51.3	-3.7	**-0.7**		
40	87.6		78.3	-9.3	**-1.8**		83.2	-4.4	**-0.9**		
60	120.2		105.9	-14.3	**-2.8**		113.4	-6.8	**-1.3**		
80	152.7		135.8	-16.9	**-3.3**		144.9	-7.8	**-1.5**		
100	185.3		165.8	-19.5	**-3.8**		176.5	-8.8	**-1.7**		
120	217.9		194.1	-23.8	**-4.7**		207.0	-10.9	**-2.1**		
140	250.5		223.6	-26.9	**-5.3**		238.5	-12.0	**-2.3**		
160	283.1		253.6	-29.5	**-5.8**		269.5	-13.6	**-2.7**		
180	315.6										
200	348.2				**Failed**		**Pass**		**Pass**		
220	380.8										



	1	2	3	4	5	6	7	8	9	10	11
Flow SCFH As Found	48.0	78.3	105.9	135.8	165.8	194.1	223.6	253.6			
Flow SCFH As Left	51.3	83.2	113.4	144.9	176.5	207.0	238.5	269.5		0.0	
Set Point SCFH	55.0	87.6	120.2	152.7	185.3	217.9	250.5	283.1	315.6	348.2	380.8

Changed the #56 orifice due to failure outside 5%.

Calibrated By: Allen Hildebrand
Calibrated Date: 4/20/2009 **Next Calibration Due:** 10/20/2010 **Signature:** Allen R Hildebrand

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Customer: ABC

Helium Flow

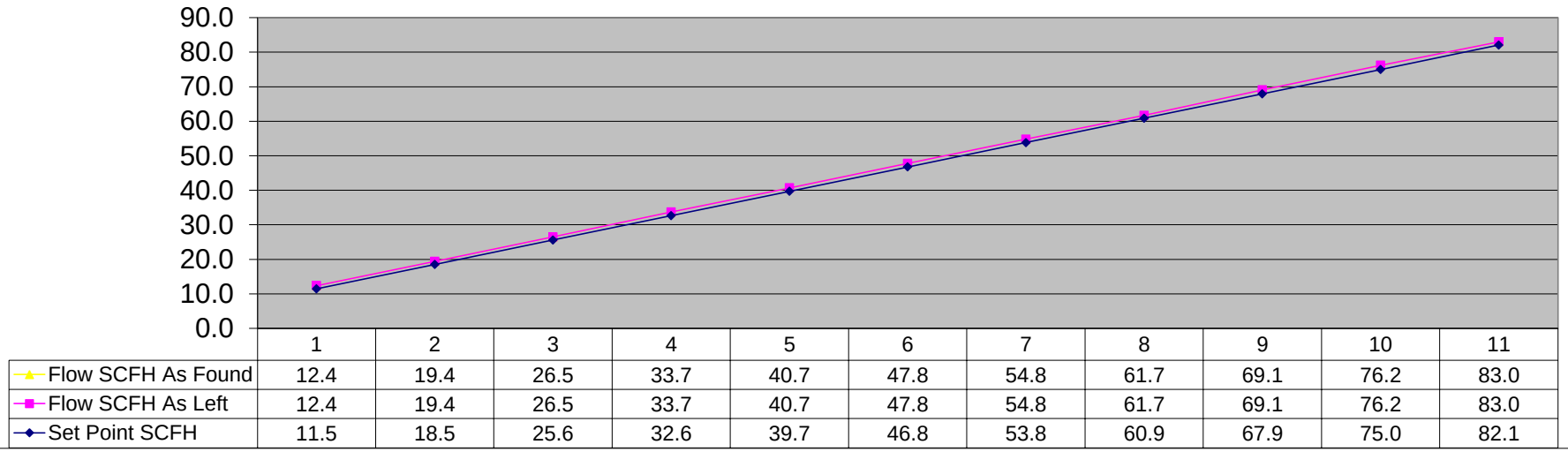
Form # AT3000 Rev C 3/19/2009

Cert. No: 2009-930

Console:	AT 3000	**Serial Number:**	ATCP100102	**Type of Gas**	Helium	**Full Flow SCFH [FS]:**	110.28
Device ID #:	M280M	**Booth #:**	2				
Device Under Test:	Critical Orifice Flows	**Critical Orfice**	#80	**Scale Rate:**	Flow is in SCFH		

Testing Instrument: Mass Flow Meter Alicat Scientific 0-400 scfh **Serial Number:** 44771

Set Point Pressure	Critical Orifices SCFH Converted	As Found NIST Volts	As Found SCFH Actual	As Found SCFH Deviation	SCFH % Deviation	As Left NIST Volts	As Left SCFH	As Left SCFH Deviation	As Left SCFH % Deviation
20	11.5		12.4	0.9	**0.8**		12.4	0.9	**0.8**
40	18.5		19.4	0.9	**0.8**		19.4	0.9	**0.8**
60	25.6		26.5	0.9	**0.8**		26.5	0.9	**0.8**
80	32.6		33.7	1.1	**1.0**		33.7	1.1	**1.0**
100	39.7		40.7	1.0	**0.9**		40.7	1.0	**0.9**
120	46.8		47.8	1.0	**0.9**		47.8	1.0	**0.9**
140	53.8		54.8	1.0	**0.9**		54.8	1.0	**0.9**
160	60.9		61.7	0.8	**0.7**		61.7	0.8	**0.7**
180	67.9		69.1	1.2	**1.1**		69.1	1.2	**1.1**
200	75.0		76.2	1.2	**1.1**		76.2	1.2	**1.1**
220	82.1		83.0	0.9	**0.9**		83.0	0.9	**0.9**



	1	2	3	4	5	6	7	8	9	10	11
Flow SCFH As Found	12.4	19.4	26.5	33.7	40.7	47.8	54.8	61.7	69.1	76.2	83.0
Flow SCFH As Left	12.4	19.4	26.5	33.7	40.7	47.8	54.8	61.7	69.1	76.2	83.0
Set Point SCFH	11.5	18.5	25.6	32.6	39.7	46.8	53.8	60.9	67.9	75.0	82.1

Calibrated By: Allen Hildebrand
Calibrated Date: 4/20/2009 **Next Calibration Due:** 10/20/2010 **Signature:** Allen R Hildebrand

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Service
Training
Calibration
Certification
Maintenance

Customer: ABC

Argon Carrier Flow #1

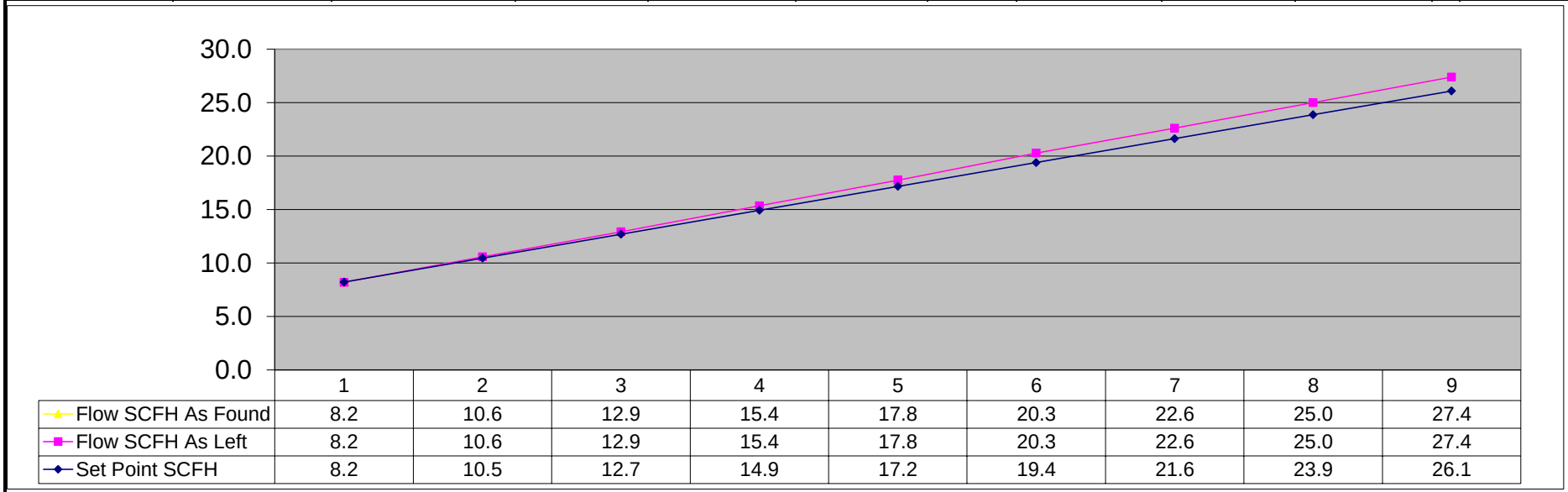
Form # AT3000 Rev C 3/19/2009

Cert. No: 2009-930

Console:	AT 3000	**Serial Number:**	ATCP100102	**Type of Gas:**	Argon	**Full Flow SCFH [FS]:**	46.22
Device ID #:	M280N	**Booth Number:**	2				
Device Under Test:	Critical Orifice Flows	**Critical Orifice:**	#77	**Scale Rate:**	Flow is in SCFH		

Testing Instrument: Mass Flow Meter Alicat Scientific 0-75 scfh **Serial Number:** 44770

Set Point Pressure	Critical Orifices SCFH Converted		As Found SCFH Actual	As Found SCFH Deviation	SCFH % Deviation		As Left SCFH	As Left SCFH Deviation	As Left SCFH % Deviation		
20	8.2		8.2	0.0	**-0.1**		8.2	0.0	**-0.1**		
30	10.5		10.6	0.1	**0.3**		10.6	0.1	**0.3**		
40	12.7		12.9	0.2	**0.5**		12.9	0.2	**0.5**		
50	14.9		15.4	0.4	**0.9**		15.4	0.4	**0.9**		
60	17.2		17.8	0.6	**1.3**		17.8	0.6	**1.3**		
70	19.4		20.3	0.9	**1.9**		20.3	0.9	**1.9**		
80	21.6		22.6	1.0	**2.1**		22.6	1.0	**2.1**		
90	23.9		25.0	1.1	**2.4**		25.0	1.1	**2.4**		
100	26.1		27.4	1.3	**2.8**		27.4	1.3	**2.8**		



	1	2	3	4	5	6	7	8	9
Flow SCFH As Found	8.2	10.6	12.9	15.4	17.8	20.3	22.6	25.0	27.4
Flow SCFH As Left	8.2	10.6	12.9	15.4	17.8	20.3	22.6	25.0	27.4
Set Point SCFH	8.2	10.5	12.7	14.9	17.2	19.4	21.6	23.9	26.1

Calibrated By: Allen Hildebrand
Calibrated Date: 4/20/2009 **Next Calibration Due:** 10/20/2010 **Signature:** Allen R Hildebrand

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Service
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Customer: ABC

Argon Carrier Flow #2

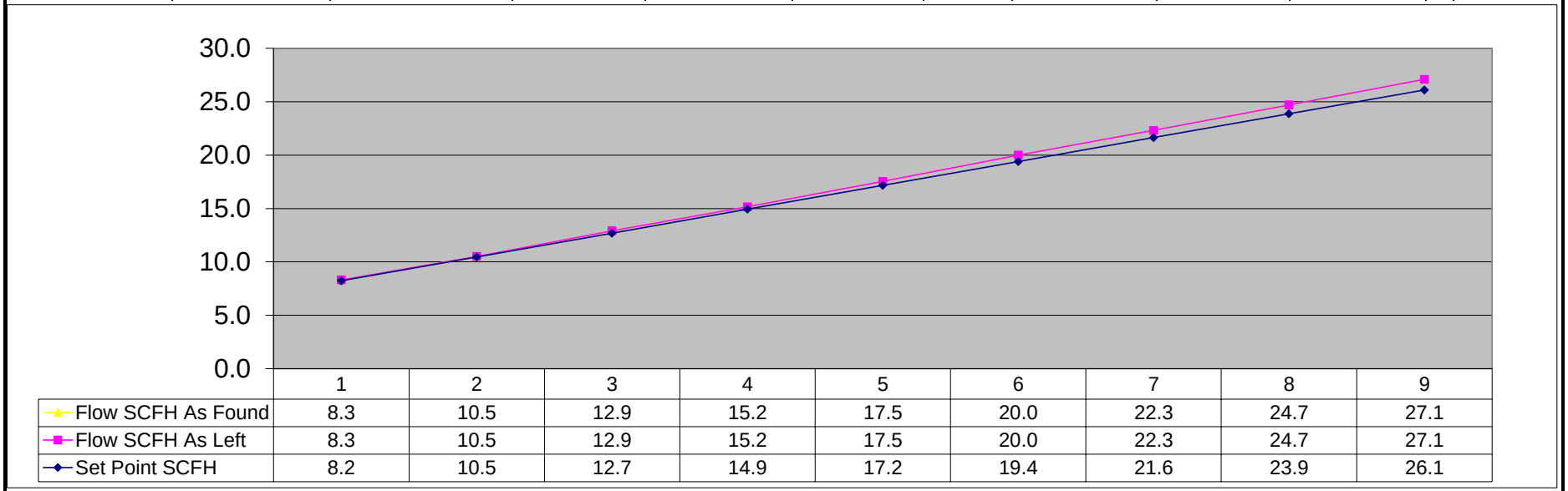
Form # AT3000 Rev C 3/19/2009

Cert. No: 2009-930

Console:	AT 3000	**Serial Number:**	ATCP100102	**Type of Gas:**	Argon	**Full Flow SCFH [FS]:**	46.22
Device ID #:	M280P	**Booth Number:**	2				
Device Under Test:	Critical Orifice Flows	**Critical Orifice:**	#77	**Scale Rate:**	Flow is in SCFH	**Device ID #:**	

Testing Instrument: Mass Flow Meter Alicat Scientific 0-75 scfh **Serial Number:** 44770

Set Point Pressure	Critical Orifices SCFH Converted		As Found SCFH Actual	As Found SCFH Deviation	SCFH % Deviation		As Left SCFH	As Left SCFH Deviation	As Left SCFH % Deviation		
20	8.2		8.3	0.1	**0.2**		8.3	0.1	**0.2**		
30	10.5		10.5	0.0	**0.1**		10.5	0.0	**0.1**		
40	12.7		12.9	0.2	**0.5**		12.9	0.2	**0.5**		
50	14.9		15.2	0.2	**0.5**		15.2	0.2	**0.5**		
60	17.2		17.5	0.4	**0.8**		17.5	0.4	**0.8**		
70	19.4		20.0	0.6	**1.3**		20.0	0.6	**1.3**		
80	21.6		22.3	0.7	**1.5**		22.3	0.7	**1.5**		
90	23.9		24.7	0.8	**1.8**		24.7	0.8	**1.8**		
100	26.1		27.1	1.0	**2.1**		27.1	1.0	**2.1**		



	1	2	3	4	5	6	7	8	9
Flow SCFH As Found	8.3	10.5	12.9	15.2	17.5	20.0	22.3	24.7	27.1
Flow SCFH As Left	8.3	10.5	12.9	15.2	17.5	20.0	22.3	24.7	27.1
Set Point SCFH	8.2	10.5	12.7	14.9	17.2	19.4	21.6	23.9	26.1

Calibrated By: Allen Hildebrand
Calibrated Date: 4/20/2009 **Next Calibration Due:** 10/20/2010 **Signature:** Allen R. Hildebrand

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