

Calibrated By:

Allen Hildebrand

Service Training Calibration Certification Maintenance Universal Thermal Services Allen R. Hildebrand (President) E7064 Knopp Road Manawa, Wisconsin 54949 Phone - Fax 920-596-2983 uts@ wolfnet.net

Miller Thermal 3620 Certificate of Calibration

			Certifica	ate of Cal	IDration		Form #	3620 Rev.	Q 4	/21/2009
Cert. No. :	2009-031								Page: 1	of 10
Customer:	ABC	Console	Miller 3620	Hopper	1262		Power Supply	PS100		
Address:	1365 Newton	S/N:	KB26001B	S/N:	KC560100		S/N:	KB152577		
City:	Boucherville	Device ID#:	M-146							
State:	QU	Booth #:	Booth #1	Hopper						
Zip:	J4B 5H2	With in 3%:	No	S/N:						
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:				
				1						
Test Inst: Low Flow	Mass Flow Meter	Test Inst: Medium Flow	Mass Flow Meter				Console Air Purge	Safety Test:		N/A
Make:	Alicat Scientific 0-75 scfh	Make:	Alicat Scientific 0-400 scfh				Door Switch Safet	v Test:		Pass
Model:	PUC-50SLPM	Model:	PUC-250SLPM				Argon Supply 30-3	5 psi Test:	-	18 psi
Serial No:	44770	Serial #:	44771				System Checked f	or Gas Leaks:	-	Pass
Next Cal. Due:	1/13/20010	Next Cal. Due:	1/13/20010				Hopper Back Psi S	Safety 25 psi:	_	Pass
Gas Orifices	Sizes	Gas	Flow [FS]							
Primary Gas	#56	Argon	511.12							
Secondary 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							
		<u> </u>						[Optic	nal Inform	nation]
	System Performa	nce w/Parameters	as Provided by the	Operator Initially	1			Evid	ence o	f Gas
Gas	Pressure	Gun						Co	ntamin	ation
Ar	40	SG100						Argon:		No
H2		Amps						Helium:		No
N2		950						Hydrogen:		N/A
He	220	Volts	Volts As Left					Nitrogen:		N/A
		46.1	44.9					Air:		N/A
Notes:										
Helium Orifice failed an	id has been replaced. As Left	t values are from the new	orifice.							ľ
								Green 0-3% A	cceptable	•
								Orange 3.1-5%	6 Alert	

5.1 and up Fail Red

R Hildebard allen Calibrated Date: 4/20/2009 Next Calibration Due: 10/20/2009 Signature: All instruments have been calibrated against standards traceable to NIST. This Certification Sheet must not be altered in any way!

Universal T S	Services Service Trainin Calibrat Certific Mainter	e g tion ation nance					Unive Allen E706 Mana Phon uts@	ersal Thermal S R. Hildebrand 4 Knopp Road wa, Wisconsin e – Fax 920-590 wolfnet.net	Services (Presiden 54949 6-2983
Customer:	ABC			Amperag	je Display		Form #	3620 Rev. Q	4/21/2009
Cert. No. :	2009-031							Page	2 of 10
Console:	Miller 3620		Serial Number:	KB26001B				1	20110
Device ID #:	Miller 3020 M-146		Booth Number:	Booth #1					
Device Under Test:	Amp Meter		Device ID #:	200					
Device onder	/ mp motor								
Testing Instrument:	Multi Meter	87V	Serial Number:	88190113	Testing Instrument:	Amp Clamp Meter	i1010	Serial Number:	91562357
Pressure Full Scale [FS] :	= 1500 Amps								
Amps	As Found	As Found	Actual Amps	As Found	As Left	As Left Amps	As Left		
Set Point	Display Reading	NIST Meter	Deviation	Amps % Deviation	Display Reading	Deviation	Amps % Deviation		
500	500	515	15.0	1.0	502	2.0	0.1		
600	600	617	17.0	1.1	602	2.0	0.1		
700	700	720	20.0	1.3	700	0.0	0.0		
800	800	822	22.0	1.5	798	-2.0	-0.1		
900	900	924	24.0	1.6	897	-3.0	-0.2		
1000	1000	1026	26.0	1.7	995	-5.0	-0.3		
Console: Device ID #:	Miller 3620 M-146		Serial Number: Booth #'	KB26001B Booth #1	play				
Device Under Test:	Volt Meter		Device ID #:						
Device onder			E C C C C C C C C C C						
Testing Instrument:	Multi Meter	87V	Serial Number:	88190113					
Volts Full Scale [FS] =	200 Volts								
Volt Meter	Meter	NIST	Volts	Volts %	Volts As Left	As Left	As Left		T
Set Point	Reading	Meter	Deviation	Deviation	Meter Reading	Volt Deviation	Volts % Deviation		
30	30	29.1	-0.9	-0.4	30.0	0.0	0.0		
36	36	35.0	-1.0	-0.5	36.0	0.0	0.0		
38	38	37.0	-1.0	-0.5	37.0	-1.0	-0.5		
	40	39.0	-1.0	-0.5	39.0	-1.0	-0.5		
40			10	0.0	12.0	0.0	0.0		
40 43	43	41.8	-1.2	-0.6	43.0	0.0	0.0		
40 43 45	43 45	41.8 43.8	-1.2 -1.2	-0.6	45.1	0.0	0.0		

	System Perform	nance w/Parameter	rs as Provided	by the Op	perator After Ca	alibration			
Gas	Pressure	Amps							
Ar	40	950							
H2		Volts							
N2		44.9							
Не	220								
		_			2.1	11 , 2			
Calibrated By:	Allen Hildebrand			_	an K ditt	laha b			
Calibrated Date:	4/20/2009	Next Calibration Due:	10/20/2009	Signature:	allen 10 Hild	ward			

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



ABC

2009-031

Service Training Calibration Certification Maintenance Universal Thermal Services Allen R. Hildebrand (President) E7064 Knopp Road Manawa, Wisconsin 54949 Phone – Fax 920-596-2983 uts@ wolfnet.net

Customer:

Cert No ·

Arc Gas Gauge [P1]

Form # 3620 Rev. Q 4/21/2009

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Console:	Miller 3620		Serial Number:	KB26001B					
Device ID #:	M-146		Booth Number:	Booth #1					
Device Under Test:	Arc Gas P1		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 Setting	As Found NIST Pressure	Actual PSI Deviation	As Found PSI% Deviation	As Left Gauge Setting	As Left PSI Deviation	As Left PSI % Deviation		
10	10	19.0	9.0	3.0	19.0	9.0	3.0		
30	30	29.0	-1.0	-0.3	29.0	-1.0	-0.3		
50	50	49.2	-0.8	-0.3	49.2	-0.8	-0.3		
70	70	69.4	-0.6	-0.2	69.4	-0.6	-0.2		
90	90	89.4	-0.6	-0.2	89.4	-0.6	-0.2		
110	110	109.9	-0.1	0.0	109.9	-0.1	0.0		
130	130	129.5	-0.5	-0.2	129.5	-0.5	-0.2		
150	150	149.6	-0.4	-0.1	149.6	-0.4	-0.1		
Console:	Miller 3620		Serial Number:	KB26001B					
Console: Device ID #: Device Under Test:	Miller 3620 M-146 Arc Gas P2		Serial Number: Booth Number: Device ID #:	KB26001B Booth #1					
Console: Device ID #: Device Under Test: Testing Instrument:	Miller 3620 M-146 Arc Gas P2 Multi Meter	87V	Serial Number: Booth Number: Device ID #: Serial Number:	KB26001B Booth #1 88190113	Testing Instrument:	Press. Transducer	PV350	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] =	Miller 3620 M-146 Arc Gas P2 Multi Meter = 160 PSI	87V	Serial Number: Booth Number: Device ID #: Serial Number:	KB26001B Booth #1 88190113	Testing Instrument:	Press. Transducer	PV350	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point	Miller 3620 M-146 Arc Gas P2 Multi Meter = 160 PSI As Found Gauge Setting	87∨ As Found NIST Pressure	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation	KB26001B Booth #1 88190113 As Found PSI% Deviation	Testing Instrument:	Press. Transducer As Left PSI Deviation	PV350 As Left PSI % Deviation	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10	Miller 3620 M-146 Arc Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10	87V As Found NIST Pressure 10.7	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation 0.7	KB26001B Booth #1 88190113 As Found PSI% Deviation 0.4	Testing Instrument: As Left Gauge Setting 10.7	Press. Transducer As Left PSI Deviation 0.7	PV350 As Left PSI % Deviation 0.4	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 30	Miller 3620 M-146 Arc Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30	87V As Found NIST Pressure 10.7 30.7	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation 0.7 0.7	KB26001B Booth #1 88190113 As Found PSI% Deviation 0.4 0.4	Testing Instrument: As Left Gauge Setting 10.7 30.7	Press. Transducer As Left PSI Deviation 0.7 0.7	PV350 As Left PSI % Deviation 0.4 0.4	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 30 50	Miller 3620 M-146 Arc Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50	87V As Found NIST Pressure 10.7 30.7 51.0	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation 0.7 0.7 1.0	KB26001B Booth #1 88190113 As Found PSI% Deviation 0.4 0.4 0.6	Testing Instrument: As Left Gauge Setting 10.7 30.7 51.0	Press. Transducer As Left PSI Deviation 0.7 0.7 1.0	PV350 As Left PSI % Deviation 0.4 0.4 0.6	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 30 50 70	Miller 3620 M-146 Arc Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70	87V As Found NIST Pressure 10.7 30.7 51.0 70.9	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation 0.7 0.7 1.0 0.9	KB26001B Booth #1 88190113 As Found PSI% Deviation 0.4 0.4 0.6 0.6	Testing Instrument: As Left Gauge Setting 10.7 30.7 51.0 70.9	Press. Transducer As Left PSI Deviation 0.7 0.7 1.0 0.9	PV350 As Left PSI % Deviation 0.4 0.4 0.6 0.6	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 30 50 70 90	Miller 3620 M-146 Arc Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70 90	87V As Found NIST Pressure 10.7 30.7 51.0 70.9 90.5	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation 0.7 0.7 1.0 0.9 0.5	KB26001B Booth #1 88190113 As Found PSI% Deviation 0.4 0.4 0.6 0.6 0.6 0.3	As Left Gauge Setting 10.7 30.7 51.0 70.9 90.5	Press. Transducer As Left PSI Deviation 0.7 0.7 1.0 0.9 0.5	PV350 As Left PSI % Deviation 0.4 0.4 0.6 0.6 0.6 0.3	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 30 50 70 90 110	Miller 3620 M-146 Arc Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70 90 110	87V As Found NIST Pressure 10.7 30.7 51.0 70.9 90.5 110.5	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation 0.7 0.7 1.0 0.9 0.5 0.5	KB26001B Booth #1 88190113 As Found PSI% Deviation 0.4 0.4 0.6 0.6 0.3 0.3 0.3	As Left Gauge Setting 10.7 30.7 51.0 70.9 90.5 110.5	Press. Transducer As Left PSI Deviation 0.7 0.7 1.0 0.9 0.5 0.5	PV350 As Left PSI % Deviation 0.4 0.4 0.6 0.6 0.3 0.3	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 30 50 70 90 110 130	Miller 3620 M-146 Arc Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70 90 110 130	87V As Found NIST Pressure 10.7 30.7 51.0 70.9 90.5 110.5 130.8	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation 0.7 0.7 1.0 0.7 1.0 0.9 0.5 0.5 0.5 0.8	KB26001B Booth #1 88190113 As Found PSI% Deviation 0.4 0.6 0.6 0.3 0.3 0.3 0.5	As Left Gauge Setting 10.7 30.7 51.0 70.9 90.5 110.5 130.8	Press. Transducer As Left PSI Deviation 0.7 0.7 1.0 0.9 0.5 0.5 0.8	PV350 As Left PSI % Deviation 0.4 0.6 0.6 0.3 0.3 0.3 0.5	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 30 50 70 90 110 130 150	Miller 3620 M-146 Arc Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70 90 110 130 130	87V As Found NIST Pressure 10.7 30.7 51.0 70.9 90.5 110.5 130.8 150.6	Actual PSI Deviation 0.7 1.0 0.9 0.5 0.8 0.6	KB26001B Booth #1 88190113 As Found PSI% Deviation 0.4 0.6 0.6 0.6 0.3 0.3 0.3 0.5 0.4	As Left Gauge Setting 10.7 30.7 51.0 70.9 90.5 110.5 130.8 150.6	Press. Transducer As Left PSI Deviation 0.7 0.7 1.0 0.9 0.5 0.5 0.8 0.6	PV350 As Left PSI % Deviation 0.4 0.6 0.6 0.3 0.3 0.3 0.5 0.4	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 30 50 70 90 110 130 150 Calibrated By:	Miller 3620 M-146 Arc Gas P2 Multi Meter = 160 PSI = 160 PSI = 160 PSI = 10 Gauge Setting = 10 = 30 = 50 = 70 = 90 = 110 = 130 = 150 Allen Hildebrand	87V As Found NIST Pressure 10.7 30.7 51.0 70.9 90.5 110.5 130.8 150.6	Serial Number: Booth Number: Device ID #: Serial Number: Serial Number: Actual PSI Deviation 0.7 0.7 1.0 0.9 0.5 0.5 0.5 0.8 0.6	KB26001B Booth #1 88190113 As Found PSI% Deviation 0.4 0.6 0.6 0.3 0.3 0.3 0.5 0.4	As Left Gauge Setting 10.7 30.7 51.0 70.9 90.5 110.5 130.8 150.6	Press. Transducer As Left PSI Deviation 0.7 0.7 1.0 0.9 0.5 0.5 0.8 0.6 7	PV350 As Left PSI % Deviation 0.4 0.4 0.6 0.6 0.3 0.3 0.3 0.5 0.4	Serial Number:	107



ABC

2009-031

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Customer:

Cert. No. :

Aux Gas Gauge [P1]

Form # 3620 Rev. Q 4/21/2009

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Console:	Miller 3620		Serial Number:	KB26001B					
Device ID #:	M-146		Booth Number:	Booth #1					
Device Under Test:	Aux Gas P1		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 Setting	As Found NIST Pressure	Actual PSI Deviation	As Found PSI% Deviation	As Left Gauge Setting	As Left PSI Deviation	As Left PSI % Deviation		
10	10	9.9	-0.1	0.0	9.9	-0.1	0.0		
30	30	29.7	-0.3	-0.1	29.7	-0.3	-0.1		
50	50	49.2	-0.8	-0.3	49.2	-0.8	-0.3		
70	70	69.6	-0.4	-0.1	69.6	-0.4	-0.1		
90	90	89.6	-0.4	-0.1	89.6	-0.4	-0.1		
110	110	109.5	-0.5	-0.2	109.5	-0.5	-0.2		
130	130	129.4	-0.6	-0.2	129.4	-0.6	-0.2		
150	150	148.8	-1.2	-0.4	148.8	-1.2	-0.4		
Device ID #: Device Under Test:	M-146		Booth Number:	Booth #1					
	Aux Gas P2		Device ID #:						
Testing Instrument:	Multi Meter	87V	Device ID #: Serial Number:	88190113	Testing Instrument:	Press. Transducer	PV350	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI)	Multi Meter = 160 PSI As Found	87V	Device ID #: Serial Number: Actual PSI	88190113 As Found	Testing Instrument:	Press. Transducer As Left	PV350 As Left	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI) Set Point	Aux Gas P2 Multi Meter = 160 PSI As Found Gauge Setting	87V As Found NIST Pressure	Device ID #: Serial Number: Actual PSI Deviation	88190113 As Found PSI% Deviation	Testing Instrument: As Left Gauge Setting	Press. Transducer As Left PSI Deviation	PV350 As Left PSI % Deviation	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI) Set Point 10	Aux Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10	87V As Found NIST Pressure 10.1	Device ID #: Serial Number: Actual PSI Deviation 0.1	As Found PSI% Deviation 0.1	Testing Instrument: As Left Gauge Setting 10.1 10.1	Press. Transducer As Left PSI Deviation 0.1	PV350 As Left PSI % Deviation 0.1	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI) Set Point 10 30	Aux Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30	As Found NIST Pressure 10.1 30.2	Device ID #: Serial Number: Actual PSI Deviation 0.1 0.2	88190113 As Found PSI% Deviation 0.1 0.1	As Left Gauge Setting 10.1 30.2	Press. Transducer As Left PSI Deviation 0.1 0.2	PV350 As Left PSI % Deviation 0.1 0.1	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI) Set Point 10 30 50	Aux Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50	87V As Found NIST Pressure 10.1 30.2 50.1	Device ID #: Serial Number: Actual PSI Deviation 0.1 0.2 0.1	88190113 As Found PSI% Deviation 0.1 0.1 0.1	As Left Gauge Setting 10.1 30.2 50.1	Press. Transducer As Left PSI Deviation 0.1 0.2 0.1	PV350 As Left PSI % Deviation 0.1 0.1 0.1	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI) Set Point 10 30 50 70	Aux Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70	87V As Found NIST Pressure 10.1 30.2 50.1 69.7	Device ID #: Serial Number: Actual PSI Deviation 0.1 0.2 0.1 0.2 0.1	88190113 As Found PSI% Deviation 0.1 0.1 0.1 -0.2	As Left Gauge Setting 10.1 30.2 50.1 69.7	Press. Transducer As Left PSI Deviation 0.1 0.2 0.1 -0.3	PV350 As Left PSI % Deviation 0.1 0.1 0.1 -0.2	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI) Set Point 10 30 50 70 90	Aux Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70 90	87V As Found NIST Pressure 10.1 30.2 50.1 69.7 89.5	Device ID #: Serial Number: Actual PSI Deviation 0.1 0.2 0.1 -0.3 -0.5	88190113 As Found PSI% Deviation 0.1 0.1 0.1 -0.2 -0.3	As Left Gauge Setting 10.1 30.2 50.1 69.7 89.5	Press. Transducer As Left PSI Deviation 0.1 0.2 0.1 -0.3 -0.5	PV350 As Left PSI % Deviation 0.1 0.1 0.1 -0.2 -0.3	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI) Set Point 10 30 50 70 90 110	Aux Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70 90 110	87V As Found NIST Pressure 10.1 30.2 50.1 69.7 89.5 109.3	Device ID #: Serial Number: Actual PSI Deviation 0.1 0.2 0.1 -0.3 -0.5 -0.7	88190113 As Found PSI% Deviation 0.1 0.1 0.1 0.1 -0.2 -0.3 -0.4	As Left Gauge Setting 10.1 30.2 50.1 69.7 89.5 109.3	Press. Transducer As Left PSI Deviation 0.1 0.2 0.1 -0.3 -0.5 -0.7	PV350 As Left PSI % Deviation 0.1 0.1 -0.2 -0.3 -0.4	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI) Set Point 10 30 50 70 90 110 130	Aux Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70 90 110 130	87V As Found NIST Pressure 10.1 30.2 50.1 69.7 89.5 109.3 129.8	Device ID #: Serial Number: Actual PSI Deviation 0.1 0.2 0.1 -0.3 -0.5 -0.7 -0.2	88190113 As Found PSI% Deviation 0.1 0.1 0.1 0.1 -0.2 -0.3 -0.4 -0.1	As Left Gauge Setting 10.1 30.2 50.1 69.7 89.5 109.3 129.8	Press. Transducer As Left PSI Deviation 0.1 0.2 0.1 -0.3 -0.5 -0.7 -0.2	PV350 As Left PSI % Deviation 0.1 0.1 -0.2 -0.3 -0.4 -0.1	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI) Set Point 10 30 50 70 90 110 130 150	Aux Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70 90 110 130 150	87V As Found NIST Pressure 10.1 30.2 50.1 69.7 89.5 109.3 129.8 149.5	Actual PSI Deviation 0.1 0.2 0.1 -0.3 -0.5 -0.7 -0.5	88190113 As Found PSI% Deviation 0.1 0.1 0.1 0.1 -0.2 -0.3 -0.4 -0.1 -0.3	As Left Gauge Setting 10.1 30.2 50.1 69.7 89.5 109.3 129.8 149.5	Press. Transducer As Left PSI Deviation 0.1 0.2 0.1 -0.3 -0.5 -0.7 -0.2 -0.5 -0.5	PV350 As Left PSI % Deviation 0.1 0.1 -0.2 -0.3 -0.4 -0.1 -0.3	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI) Set Point 10 30 50 70 90 110 130 150	Aux Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70 90 110 130 150	87V As Found NIST Pressure 10.1 30.2 50.1 69.7 89.5 109.3 129.8 149.5	Actual PSI Deviation 0.1 0.2 0.1 -0.3 -0.5 -0.7 -0.5	88190113 As Found PSI% Deviation 0.1 0.1 0.1 -0.2 -0.3 -0.4 -0.1 -0.3	As Left Gauge Setting 10.1 30.2 50.1 69.7 89.5 109.3 129.8 149.5	Press. Transducer As Left PSI Deviation 0.1 0.2 0.1 -0.3 -0.5 -0.7 -0.2 -0.5	PV350 As Left PSI % Deviation 0.1 0.1 -0.2 -0.3 -0.4 -0.1 -0.3	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI) Set Point 10 30 50 70 90 110 130 150 Calibrated By:	Aux Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70 90 110 130 150	87V As Found NIST Pressure 10.1 30.2 50.1 69.7 89.5 109.3 129.8 149.5	Actual PSI Deviation 0.1 0.2 0.1 -0.3 -0.5 -0.7 -0.5	88190113 As Found PSI% Deviation 0.1 0.1 0.1 -0.2 -0.3 -0.4 -0.1 -0.3	As Left Gauge Setting 10.1 30.2 50.1 69.7 89.5 109.3 129.8 149.5	Press. Transducer As Left PSI Deviation 0.1 0.2 0.1 -0.3 -0.5 -0.7 -0.2 -0.5 7	PV350 As Left PSI % Deviation 0.1 0.1 -0.2 -0.3 -0.4 -0.1 -0.3	Serial Number:	107
Testing Instrument: Pressure Full Scale [FS] Pressure (PSI) Set Point 10 30 50 70 90 110 130 150 Calibrated By: Calibrated Date:	Aux Gas P2 Multi Meter = 160 PSI As Found Gauge Setting 10 30 50 70 90 110 130 150	87V As Found NIST Pressure 10.1 30.2 50.1 69.7 89.5 109.3 129.8 149.5 Next Calibration Due:	Device ID #: Serial Number: Actual PSI Deviation 0.1 0.2 0.1 -0.3 -0.5 -0.7 -0.2 -0.5	88190113 As Found PSI% Deviation 0.1 0.1 0.1 0.1 -0.2 -0.3 -0.4 -0.1 -0.3 -0.4 -0.3 -0.4	As Left Gauge Setting 10.1 30.2 50.1 69.7 89.5 109.3 129.8 149.5	Press. Transducer As Left PSI Deviation 0.1 0.2 0.1 -0.3 -0.5 -0.7 -0.2 -0.5 7	PV350 As Left PSI % Deviation 0.1 0.1 -0.2 -0.3 -0.4 -0.1 -0.3	Serial Number:	107



ABC

Customer:

Service Training Calibration Certification Maintenance Universal Thermal Services Allen R. Hildebrand (President) E7064 Knopp Road Manawa, Wisconsin 54949 Phone – Fax 920-596-2983 uts@ wolfnet.net

4/21/2009

Form # 3620 Rev. Q

#1 Carrier Gas Gauge [P1]

2009-031 Cert. No. : Page: 5 of 10 Console: Miller 3620 Serial Number: KB26001B Device ID #: M-146 Booth Number: Booth #1 Device Under Test: #1 Carrier Gas P1 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) As Found As Found Actual PSI As Found As Left As Left As Left Set Point Gauge Setting **NIST Pressure** Deviation **PSI%** Deviation Gauge Setting **PSI** Deviation **PSI % Deviation** 20 20 19.6 -0.4 -0.2 19.6 -0.4 -0.2 29.8 -0.2 29.8 -0.2 30 30 -0.1 -0.1 40 40 39.5 -0.5 -0.3 39.5 -0.5 -0.3 50 50 49.4 -0.6 -0.3 49.4 -0.6 -0.3 60 60 -0.5 -0.3 59.5 -0.5 -0.3 59.5 70 70 69.4 -0.6 -0.3 69.4 -0.6 -0.3 80 80 79.4 -0.6 -0.3 79.4 -0.6 -0.3 90 90 89.9 -0.1 0.0 89.9 -0.1 0.0 #1 Carrier Gas Gauge [P2] Console: Miller 3620 Serial Number: KB26001B Device ID #: M-146 Booth Number: Booth #1 Device Under Test: #1 Carrier Gas P2 Device ID #: Testing Instrument: Multi Meter 87V Serial Number: 88190113 Press. Transducer PV350 Serial Number: 107 Testing Instrument: Pressure Full Scale [FS] = 100 PSI As Left Pressure (PSI) As Found As Found Actual PSI As Found As Left As Left **NIST Pressure** Deviation **PSI%** Deviation **PSI** Deviation **PSI % Deviation** Set Point Gauge Setting Gauge Setting 10.4 0.4 10.4 0.4 10 10 0.4 0.4 20 20.3 0.3 0.3 20.3 20 0.3 0.3 30 30 30.2 0.2 0.2 30.2 0.2 0.2 40 40 40.0 0.0 0.0 40.0 0.0 0.0 50 49.8 50 49.8 -0.2 -0.2 -0.2 -0.2 60 60 59.8 -0.2 -0.2 59.8 -0.2 -0.2 70 70 69.8 -0.2 -0.2 69.8 -0.2 -0.2 80 80 79.5 -0.5 -0.5 -0.5 -0.5 79.5 R Hilleba Allen Hildebrand Calibrated By: allen Calibrated Date: Next Calibration Due: 10/20/2009 Signature: 4/20/2009



#2 Carrier Gas Gauge [P1]

Form # 3620 Rev. Q 4/21/2009

Console:	2009-031							Page:	6 of 10
Device ID #:	Miller 3620 M-146		Serial Number: Booth Number:	KB26001B Booth #1				_	
Device Under Test:	#2 Carrier Gas P1		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 Setting	As Found NIST Pressure	Actual PSI Deviation	As Found PSI% Deviation	As Left Gauge Setting	As Left PSI Deviation	As Left PSI % Deviation		
20	20	20.8	0.8	0.4	20.8	0.8	0.4		
30	30	30.1	0.1	0.1	30.1	0.1	0.1		
40	40	39.9	-0.1	-0.1	39.9	-0.1	-0.1		
50	50	49.6	-0.4	-0.2	49.6	-0.4	-0.2		
60	60	49.8	-10.2	-5.1	49.8	-10.2	-5.1		
70	70	69.2	-0.8	-0.4	69.2	-0.8	-0.4		
80	80	78.8	-1.2	-0.6	78.8	-1.2	-0.6		
90	90	89.9	-0.1	0.0	89.9	-0.1	0.0		
Console: Device ID #:	Miller 3620 M-146		Serial Number: Booth Number:	KB26001B Booth #1					
Console: Device ID #: Device Under Test:	Miller 3620 M-146 #2 Carrier Gas P2		Serial Number: Booth Number: Device ID #:	: KB26001B Booth #1					
Console: Device ID #: Device Under Test: Testing Instrument:	Miller 3620 M-146 #2 Carrier Gas P2 Multi Meter	87V	Serial Number: Booth Number: Device ID #: Serial Number:	KB26001B Booth #1 88190113	Testing Instrument:	Press. Transducer	PV350	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] =	Miller 3620 M-146 #2 Carrier Gas P2 Multi Meter 100 PSI	87V	Serial Number: Booth Number: Device ID #: Serial Number:	KB26001B Booth #1 88190113	Testing Instrument:	Press. Transducer	PV350	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point	Miller 3620 M-146 #2 Carrier Gas P2 Multi Meter 100 PSI As Found Gauge Setting	87∀ As Found NIST Pressure	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation	KB26001B Booth #1 88190113 As Found PSI% Deviation	Testing Instrument: As Left Gauge Setting	Press. Transducer As Left PSI Deviation	PV350 As Left PSI % Deviation	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10	Miller 3620 M-146 #2 Carrier Gas P2 Multi Meter 100 PSI As Found Gauge Setting 10	87V As Found NIST Pressure 9.5	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation -0.5	KB26001B Booth #1 88190113 As Found PSI% Deviation -0.5	As Left Gauge Setting 9.5	Press. Transducer As Left PSI Deviation -0.5	PV350 As Left PSI % Deviation -0.5	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 20	Miller 3620 M-146 #2 Carrier Gas P2 Multi Meter 100 PSI As Found Gauge Setting 10 20	87V As Found NIST Pressure 9.5 19.2	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation -0.5 -0.8	KB26001B Booth #1 88190113 As Found PSI% Deviation -0.5 -0.8	As Left Gauge Setting 9.5 19.2	Press. Transducer As Left PSI Deviation -0.5 -0.8	PV350 As Left PSI % Deviation -0.5 -0.8	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 20 30	Ailler 3620 M-146 #2 Carrier Gas P2 Multi Meter 100 PSI As Found Gauge Setting 10 20 30	87V As Found NIST Pressure 9.5 19.2 29.4	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation -0.5 -0.8 -0.6	KB26001B Booth #1 88190113 As Found PSI% Deviation -0.5 -0.8 -0.6	As Left Gauge Setting 9.5 19.2 29.4	Press. Transducer As Left PSI Deviation -0.5 -0.8 -0.6	PV350 As Left PSI % Deviation -0.5 -0.8 -0.6	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 20 30 40	Ailler 3620 M-146 #2 Carrier Gas P2 Multi Meter 100 PSI As Found Gauge Setting 10 20 30 40	87V As Found NIST Pressure 9.5 19.2 29.4 39.7	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation -0.5 -0.8 -0.6 -0.3	KB26001B Booth #1 88190113 As Found PSI% Deviation -0.5 -0.8 -0.6 -0.3	As Left Gauge Setting 9.5 19.2 29.4 39.7	Press. Transducer As Left PSI Deviation -0.5 -0.8 -0.6 -0.3	PV350 As Left PSI % Deviation -0.5 -0.8 -0.6 -0.3	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 20 30 40 50	Miller 3620 M-146 #2 Carrier Gas P2 Multi Meter 100 PSI As Found Gauge Setting 10 20 30 40 50	87V As Found NIST Pressure 9.5 19.2 29.4 39.7 49.7	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation -0.5 -0.8 -0.6 -0.3 -0.3	KB26001B Booth #1 88190113 As Found PSI% Deviation -0.5 -0.8 -0.6 -0.3 -0.3	As Left Gauge Setting 9.5 19.2 29.4 39.7 49.7	Press. Transducer As Left PSI Deviation -0.5 -0.8 -0.6 -0.3 -0.3 -0.3	PV350 As Left PSI % Deviation -0.5 -0.8 -0.6 -0.3 -0.3	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 20 30 40 50 60	Addition Adiabate Miller 3620 M-146 #2 Carrier Gas P2 Multi Meter 100 PSI As Found Gauge Setting 10 20 30 40 50 60 60	87V As Found NIST Pressure 9.5 19.2 29.4 39.7 49.7 59.4	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation -0.5 -0.8 -0.6 -0.3 -0.3 -0.6	KB26001B Booth #1 88190113 As Found PSI% Deviation -0.5 -0.8 -0.6 -0.3 -0.3 -0.6	As Left Gauge Setting 9.5 19.2 29.4 39.7 49.7 59.4	Press. Transducer As Left PSI Deviation -0.5 -0.8 -0.6 -0.3 -0.3 -0.6 -0.6 -0.6	PV350 As Left PSI % Deviation -0.5 -0.8 -0.6 -0.3 -0.3 -0.3 -0.6	Serial Number:	107
Console: Device ID #: Device Under Test: Testing Instrument: Pressure Full Scale [FS] = Pressure (PSI) Set Point 10 20 30 40 50 60 70	Miller 3620 M-146 #2 Carrier Gas P2 Multi Meter 100 PSI As Found Gauge Setting 10 20 30 40 50 60 70	87V As Found NIST Pressure 9.5 19.2 29.4 39.7 49.7 59.4 69.8	Serial Number: Booth Number: Device ID #: Serial Number: Actual PSI Deviation -0.5 -0.8 -0.6 -0.3 -0.3 -0.6 -0.2	KB26001B Booth #1 88190113 As Found PSI% Deviation -0.5 -0.8 -0.6 -0.3 -0.3 -0.6 -0.2	As Left Gauge Setting 9.5 19.2 29.4 39.7 49.7 59.4 69.8	Press. Transducer As Left PSI Deviation -0.5 -0.8 -0.6 -0.3 -0.6 -0.2	PV350 As Left PSI % Deviation -0.5 -0.8 -0.6 -0.3 -0.3 -0.6 -0.2	Serial Number:	

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

Customer:

ABC



Service Training Calibration Certification Maintenance

Customer: ABC

Argon Flow

Universal Thermal Services Allen R. Hildebrand (President) E7064 Knopp Road Manawa, Wisconsin 54949 Phone - Fax 920-596-2983 uts@ wolfnet.net

							Form #	3620 Rev.	Q	4/21/2009
Cert. No:	2009-031				-				Page:	7 of 10
Console:	Miller 3620	Serial Number:	KB26001B	Type of Gas:	Argon	Full Flow SCFH [I	-S]: 511.12			
Device ID #: Device Under Test:	Critical Orifice Flows	Booth Number: Critical Orifice:	BOOTH #1 #56	Scale Rate:	Flow is in SCEH	Device IC) #·			
Device officer rest.	Childar Office Flows	childar office.	#30	Scale Nate.		Device iL	<i>π</i> .			
Testing Instrument:	Mass Flow Meter	Alicat Scientific 0-400 scfh	Serial Number:	44771						
Primary Arc Gas	Critical Orifices		As Found	As Found	SCFH %	As Left	As Left	As Left SCFH		
Gauge Set Point	SCFH Converted		SCFH Actual	SCFH Deviation	Deviation	SCFH	SCFH Deviation	% Deviation		
20	55.0		54.9	-0.1	0.0	54.9	-0.1	0.0		
40	87.6		87.2	-0.4	-0.1	87.2	-0.4	-0.1		
60	120.2		120.3	0.1	0.0	120.3	0.1	0.0		
80	152.7		152.5	-0.2	0.0	152.5	-0.2	0.0		
100	185.3		185.1	-0.2	0.0	185.1	-0.2	0.0		
120	217.9		217.7	-0.2	0.0	217.7	-0.2	0.0		
160	283.1		201.1	0.0	0.1	201.1	0.0	0.1		
	20011									
	200.0									
	300.0									
	250.0							-		
	20010									
	000.0									
	200.0									
	150.0									
	100.0									
	400.0									
	100.0		-							
			•							
	50.0									
	00.0									
	0.0									
	0.0	1	2	3	1	5	6	7	8	
	<u> </u>		2	5	4	5	0		0	
<u> </u>	th As Found	54.9 8	37.2	120.3	152.5	185.1 2	217.7	251.1		
- - -Sc	fh As Left	54.9 8	37.2	120.3	152.5	185.1 2	217.7	251.1		
- → -Sc	th Set Points	55.0 8	37.6	120.2	152.7	185.3 2	217.9	250.5	283	.1
		I	I				I			
					2/11					
Calibrated Bv:	Allen Hildebrand	7			n K Stillak.	D				
Calibrated Date:	4/20/2000	Next Celibration Due	10/20/2000	Signature:	un 1º maera	ng				

Calibrated Date: 4/20/2009 Next Calibration Due: 10/20/2009 Signature:



Allen Hildebrand

4/20/2009

Service Training Calibration Certification Maintenance

Customer: ABC

Helium Flow

Universal Thermal Services Allen R. Hildebrand (President) E7064 Knopp Road Manawa, Wisconsin 54949 Phone - Fax 920-596-2983 uts@ wolfnet.net

	2000 021								Deges out
. NO.	Z009-031 Miller 3620	Serial Number:	KB26001B	Type of Gas	Helium	Full Flow SCEH [ES]:	110.28		rage: 8 of
⇒ ID #:	Miller 3020 M-146	Booth #:	Booth #1	Type of Odds	ricium		110.20		
e Under Test:	Critical Orifice Flows	Critical Orifice	#80	Scale Rate:	Flow is in SCFH	Device ID #:			
ing Instrument:	Mass Flow Meter	Alicat Scientific 0-400 scfh	Serial Number:	44771					
econdary Gas luge Set Point	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	11.5		13.2	1.7	1.6	12.1	0.6	0.6	
40	18.5		21.1	2.6	2.3	19.0	0.5	0.4	
60	25.6		29.0	3.4	3.1	25.8	0.2	0.2	
100	32.0	+	37.3 45.3	4.7	4.2	32.8	0.2	0.1	+ +
120	46.8		53.3	6.5	5.9	46.7	-0.1	-0.1	
140	53.8		61.3	7.5	6.8	53.4	-0.4	-0.4	
160	60.9		69.3	8.4	7.6	60.3	-0.6	-0.5	
180	67.9		77.5	9.6	8.7	67.1	-0.8	-0.8	
200	75.0		85.8	10.8	9.8	74.0	-1.0	-0.9	
	100.0 90.0 80.0 70.0 60.0								
	100.0 90.0 80.0 70.0 60.0 50.0								
	100.0 90.0 80.0 70.0 60.0 50.0 40.0				*				
	100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0								
	100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0								
	100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0								
	100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0								
	100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 0.0	1 2	3	4	5 6	7 8	9	10	11
Flow SCF	100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 0.0 FH As Found	1 2 13.2 21.1	3 29.0	4 37.3	5 6 45.3 53.3	7 8 61.3 69.3	9 77.5	10 85.8	11 93.9
Flow SCF	100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 0.0 FH As Found FH As Left	1 2 13.2 21.1 12.1 19.0	3 29.0 25.8	4 37.3 32.8	5 6 45.3 53.3 39.8 46.7	7 8 61.3 69.3 53.4 60.3	9 377.5 67.1	10 85.8 74.0	11 93.9 81.0

R Hillebe

allen

Signature:

Calibrated By: Calibrated Date: 10/20/2009 All instruments have been calibrated against standards traceable to NIST. This Certification Sheet must not be altered in any way!

Next Calibration Due:



Training Calibration Certification Maintenance

Service

Customer: ABC

Argon Carrier Flow #1

Universal Thermal Services Allen R. Hildebrand (President) E7064 Knopp Road Manawa, Wisconsin 54949 Phone – Fax 920-596-2983 uts@ wolfnet.net

Cert No:	2009-031							Form #	3620 Rev.	Q Page:	4/21/200 9 of 10
Console:	Miller 3620	Serial Number: Booth Number:	KB26001B Booth #1	Type of Gas:	Argon		Full Flow SCFH [FS]:	46.22		Tage.	30110
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							
Carrier Gas #1 Gauge Set Point	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		8.0	-0.2	-0.4		8.0	-0.2	-0.4		
30	10.5		10.5	0.0	-0.1		10.5	0.0	-0.1		
40	12.7		12.8	0.1	0.2		12.8	0.1	0.2		
50	14.9		15.2	0.3	0.7		15.2	0.3	0.7		
70	19.4		17.5	0.5	1.1		10.0	0.5	11		
80	21.6		22.2	0.6	1.4		22.2	0.6	1.4		
90	23.9		24.7	0.8	1.7		24.7	0.8	1.7		
100	26.1		27.0	0.9	1.9		27.0	0.9	1.9		
	20.0 15.0 10.0 5.0	•				•					
						5	6	7	8	0	
	0.0	1 2	1 3							~	1
Elow SO		1 2	3	0 45	2 4	7 5	10.0		24.7	9	
Flow SC	0.0	1 2 8.0 10.5	3 5 12	8 15	.2 1	7.5	19.9	22.2	24.7	27.0)
Flow SC	0.0 FH As Found FH As Left	1 2 8.0 10.5 8.0 10.5	3 5 12 5 12	8 15 8 15	.2 1 .2 1	7.5 7.5	19.9 19.9	22.2 22.2	24.7 24.7	27.0 27.0)



Service Training Calibration Certification Maintenance

Customer: ABC

Argon Carrier Flow #2

Universal Thermal Services Allen R. Hildebrand (President) E7064 Knopp Road Manawa, Wisconsin 54949 Phone – Fax 920-596-2983 uts@ wolfnet.net

ort No:	20002031								Dage: 10
onsole [.]	Miller 3620	Serial Number:	KB26001B	Type of Gas:	Argon	Full Flow SCEH [ES]:	46.22		i age. 10
vice ID #:	M-146	Booth Number:	Booth #1	1)00 01 000.	rigon		10.22		
vice Under Test:	Critical Orifice Flows	Critical Orifice:	#77	Scale Rate:	Flow is in SCFH	Device ID #:			
	Maga Flow Motor	Alight Opigatific 0 75 acfb	Carial Number	44770					
isting instrument:	Mass Flow Meler	Alical Scientific 0-75 Scin	Serial Number:	44770					
Carrier Gas #2	Critical Orifices		As Found	As Found	SCFH %	As Left	As Left	As Left SCFH	
Gauge Set Point	SCFH Converted		SCFH Actual	SCFH Deviation	Deviation	SCFH	SCFH Deviation	% Deviation	
20	8.2		8.4	0.2	0.4	8.4	0.2	0.4	
30	10.5		10.6	0.1	0.2	10.6	0.1	0.2	
40	12.7		13.0	0.3	0.5	13.0	0.3	0.5	_
50	14.9		15.3	0.4	0.9	15.3	0.4	0.9	_
70	10.4		20.2	0.0	1.2	20.2	0.0	1.2	
80	21.6		20.2	0.8	1.7	20.2	0.0	1.7	
90	23.9		25.3	1 4	3.0	25.3	1.4	3.0	
100	26.0		20.0	1.1	2.5	27.2	1.1	2.5	
	25.0							•	•
	25.0 20.0 15.0 10.0 5.0	•							
	25.0 20.0 15.0 10.0 5.0 0.0								
	25.0 20.0 15.0 10.0 5.0 0.0	1 2	3		4 5	6	7	8	9
Flow SC	25.0 20.0 15.0 10.0 5.0 0.0	1 2 8.4 10.6	3 3 3 3	3 <u>4</u> .0 15	4 5 .3 17.8	6 20.2	7 22.5	8 25.3	9 27.2
Flow SC	25.0 20.0 15.0 10.0 5.0 0.0 FH As Found FH As Left	1 2 8.4 10.6 8.4 10.6	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	3 2 .0 15 .0 15	4 5 .3 17.8 .3 17.8	6 20.2 20.2	7 22.5 22.5	8 25.3 25.3	9 27.2 27.2