NIST Traceable Certification of VRC Vacuum Gauges

All Vacuum Research gauges are carefully calibrated before they are shipped. However, in certain very critical applications your customer or your own Quality or Meteorology department may require written assurance of traceability of calibration. For such situations we can provide a certificate for any of our gauges. Our calibration quality system complies with ANSI/NCSL Z540-1-1994.

All you have to do is contact our customer service department for an "RGA" number and ship your instrument and sensor to us. We'll adjust the zero and full scale of your instrument to agree with our NIST calibration standards. We'll also compare your instrument to these standards throughout the entire range, and certify the actual readings.

This certification can be provided on new instruments or on older instruments whenever you require it. Price is FOB our plant. Shipping costs to and from our plant are not included. Usual time required for certification is seven to 10 days after we receive your instrument.

Ordering Information

Pirani, Convection, or Diaphragm Gauges

Certificates after repair or adjustment only
P/N: 912900 ..... $299

Certificates for as received plus after repair or adjustment
P/N: 912901 ..... $482

100 mTorr Pirani Gauges

Certificates after repair or adjustment only
P/N: 912911 ..... $453

Certificates for as received plus after repair or adjustment
P/N: 912912 ..... $600

Wide Range Diaphragm Manometers

Certificates after repair or adjustment only
P/N: 912902 ..... $447

Certificates for as received plus after repair or adjustment
P/N: 912903 ..... $704

NIST Traceable Vacuum Gauge Calibration Certificate

VACUUM RESEARCH™

We certify that the "Calibration Standards" used in this test are traceable to NIST calibration standards, that the data presented below are true and correct and that the instrument tested met all of manufacturer's performance specifications at the time of this test.

Calibration Quality System complies with ANSI/NCSL Z540-1-1994.

This Test performed by:

Signature _____ **Date** _____

Name _____

John F. Hartnett,
President
Vacuum Research Corp.

Customer Name _____ **Customer Asset No.** _____

Address _____

VRC Device Being Certified:
Instrument P/N: _____
S/N: _____
Transducer PN: _____
S/N: _____

Calibration Standard Used (Primary):
Instrument Model: _____
S/N: _____
Transducer Model: _____
S/N: _____
Accuracy of Standard: _____
Standard's Calib. Date: _____

Calibration Standard Used (2nd if Needed):
Instrument Model: _____
S/N: _____
Transducer Model: _____
S/N: _____
Accuracy of Standard: _____
Standard's Calib. Date: _____

Ambient Conditions During Test:
Temp.: _____ °F % RH: _____

Was Calibration Adjusted Prior To As Received Test? ___Yes ___No

Were Repairs Required? ___Yes ___No

Date of This Certification _____ **SO #** _____

Calibration Standard	Device As Received	Device As Calibrated	Limit Allowed Min.	Limit Allowed Max.	4 to 20 mA Output
0 mTorr			0	0	
5 mTorr			2	8	
10 mTorr			7	13	
25 mTorr			22	28	
50 mTorr			47	53	
75 mTorr			71	78	
100 mTorr			95	105	
250 mTorr			237	262	
500 mTorr			475	525	
750 mTorr			712	787	
900 mTorr			855	945	
1000 mTorr			950	1050	
1250 mTorr			1187	1312	
1500 mTorr			1425	1575	
1750 mTorr			1662	1837	
2000 mTorr			1900	2100	

Remarks: _____

VACUUM RESEARCH™

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Revised 8/28/2015

Pressures Used for NIST Calibrations at Vacuum Research

Wide Range Gauge Calib. Points		100 mTorr Pirani Gauge Calib. Points	2000 mTorr Pirani Gauge Calib. Points	20 Torr Pirani Gauge Calib. Points	50 Torr Pirani Gauge Calib. Points	Convection Gauge Calib. Points	1500 Torr Gauge Calib. Points
000 mT		0.00 mT	0 mT	0.00 mT	0.00 Torr	000 mT	0 Torr
10 mT	2 Torr	.10 mT	5 mT	.50 mT	.10 Torr	10 mT	5 Torr
50 mT	5 Torr	1.00 mT	10 mT	100 mT	.25 Torr	25 mT	10 Torr
100 mT	10 Torr	2.50 mT	25 mT	250 mT	.50 Torr	50 mT	25 Torr
250 mT	50 Torr	5.00 mT	50 mT	500 mT	1.00 Torr	75 mT	50 Torr
500 mT	100 Torr	7.50 mT	75 mT	750 mT	2.50 Torr	100 mT	75 Torr
750 mT	200 Torr	10.00 mT	100 mT	1000 mT	5.00 Torr	250 mT	100 Torr
900 mT	300 Torr	12.50 mT	250 mT	2.50 Torr	9.25 Torr	500 mT	200 Torr
1000 mT	400 Torr	15.00 mT	500 mT	5.00 Torr	10.00 Torr	750 mT	250 Torr
1250 mT	500 Torr	17.50 mT	750 mT	7.50 Torr	12.50 Torr	1000 mT	300 Torr
1500 mT	600 Torr	20.00 mT	900 mT	9.25 Torr	15.00 Torr	5 Torr	400 Torr
1750 mT	ATM	30.00 mT	1000 mT	10.00 Torr	17.50 Torr	10 Torr	500 Torr
		40.00 mT	1250 mT	12.50 Torr	20.00 Torr	20 Torr	600 Torr
		50.00 mT	1500 mT	15.00 Torr	30.00 Torr	30 Torr	700 Torr
		75.00 mT	1750 mT	17.50 Torr	50.00 Torr	50 Torr	ATM
		100 mT	2000 mT	20.00 Torr			

Easy To Use, No Electronics Training Needed

These compact and easy to use electronic calibrators allow you to adjust both zero and full scale of any Vacuum Research gauge without the use of a vacuum system, and without any electronics training. Just follow the step by step procedure on the calibrator front panel to insure performance the same as a new gauge.

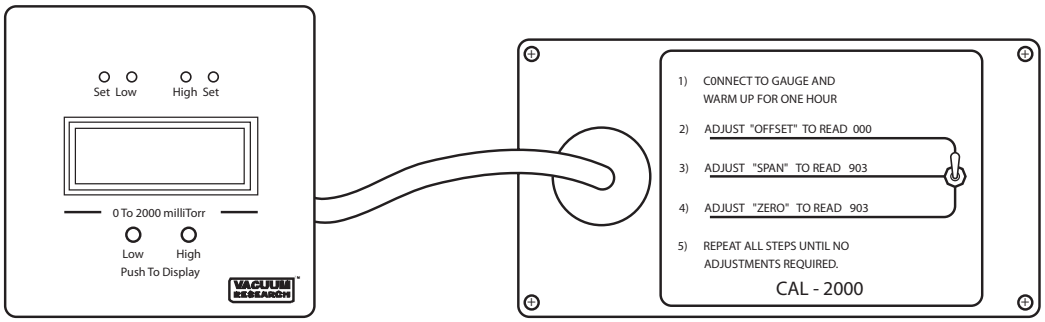
Making sure that your vacuum gauges are working properly has never been easier. These calibrators do not require any electronics training yet they allow you to adjust your Vacuum Research Gauge exactly to like new factory specification.

The procedure is simple. You begin by unplugging the vacuum gauge sensor cable from the gauge tube and plugging it into the calibrator. After allowing one hour for warm up you adjust the offset on the rear of your gauge to read “000”.

You then adjust the “span” to the specified value. Repeat the procedure two or three times until no adjustment is needed and the job is done. Your gauge calibration is now the same as it was when leaving the factory.

After calibrating the electronic portion of your vacuum gauge you may want to install a factory fresh gauge tube. Because the tube is exposed to pump fluid vapors and other dirt from your process it may become contaminated and give erroneous readings. It is good practice to compare on a regular basis the readings with our “working” gauge tube and a brand new tube or one that is known to be clean.

BUY NOW! Go to www.vacuumresearch.com to order online



NIST Traceable Certification of Vacuum Gauge Calibrators

All Calibrators are tested to strict standards prior to shipment. If in addition to this you need certification of the testing, it is available for new and existing calibrators. For recertification of your existing calibrators, please contact the factory for an “RGA” number, and return the calibrator freight prepaid with your purchase order. Time required for certification is 5 to 7 days.

Certificate of NIST Traceable Calibration both as received and after repair and adjustment

For Wide Range and Convection Gauge Calibrators
P/N: 912904 ..... $443

For Pirani, Diaphragm and Thermocouple Gauge Calibrators
P/N: 912905 ..... $226

Certificate of NIST Traceable Calibration after repair or adjustment only

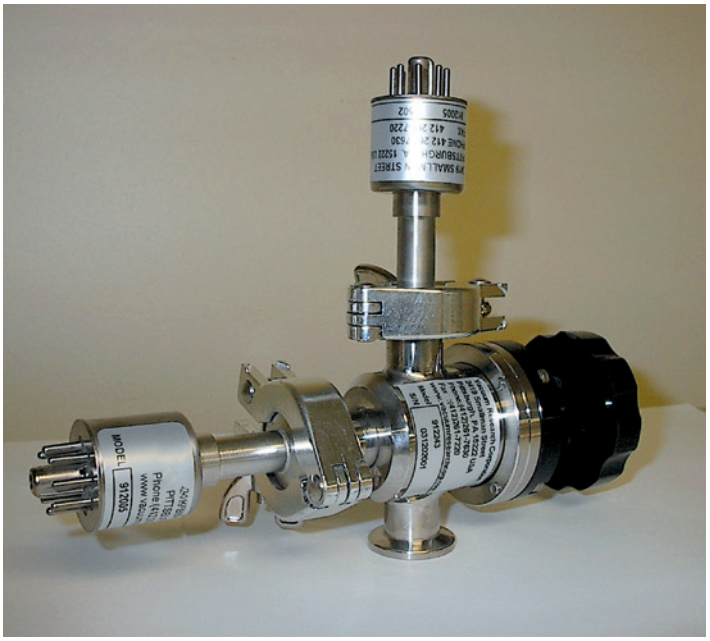
For Wide Range and Convection Gauge Calibrators
P/N: 912906 ..... $284

For Pirani, Diaphragm and Thermocouple Gauge Calibrators
P/N: 912907 ..... $144

Ordering Information

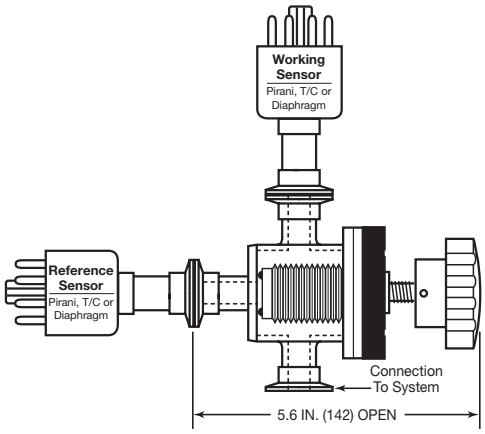
0.5 - 1200 Torr Manometer Calibrator	P/N: 912300	$509
Wide Range Manometer Calibrator Kit	P/N: 912110	$780
Calibrator for Digital Convection Gauge	P/N: 912170	$693
Calibrator for Analog Convection Gauge	P/N: 912183	$343
100 mTorr Pirani Gauge Calibrator	P/N: 912019	$343
2000 mTorr Pirani Gauge Calibrator	P/N: 912008	$343
20 Torr & 50 Torr Pirani Gauge Calibrator	P/N: 912009	$343
Dual Range Pirani Gauge Calibrator	P/N: 912010	$343
1500 Torr Diaphragm Gauge Calibrator	P/N: 912027	$343
30” Hg to 150.0 PSIG Gauge Calibrator	P/N: 912021	$343
Thermocouple Gauge Calibrator	P/N: 902114	$353
0.1 to 20 PSIG Calibrator	P/N: 912039	$343
0.1 to 200 PSIG Calibrator	P/N: 912040	$343
1 to 1000 PSIG Calibrator	P/N: 912041	$343
912105 Gauge Tube Calibrator	P/N: 912279	$399

Vacuum Gauge Calibration Manifolds

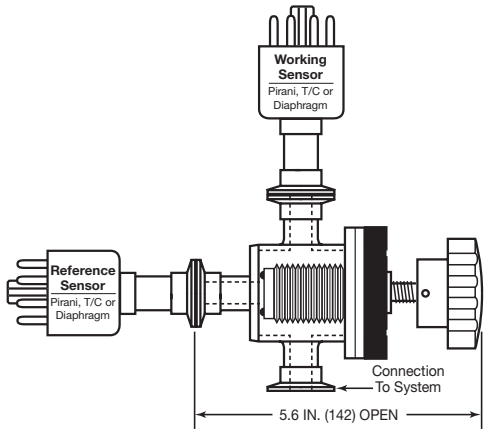


- **Verify complete system; sensor and display**
- **Easily confirm vacuum gauge calibration**
- **Satisfy ISO-9000 auditors and inspectors**
- **Choose Manual or Electro-pneumatic actuator**
- **Use with any brand or type of vacuum gauge**

With ever increasing needs to verify vacuum gauge accuracy many gauge manufacturers, including Vacuum Research, now offer electronic calibrators or “reference tubes.” Although such devices are helpful they only deal with the control or display part of the gauge and do nothing to evaluate the sensor. This is unfortunate because in the real world most vacuum gauge errors involve the sensor. Vacuum Research developed these manifolds to make it easy to compare your working gauge with a reference gauge or a certified standard gauge. Burned out filaments and ruptured diaphragms are easy to diagnose but the most typical failure mode of a vacuum gauge is a gradual shift in calibration due to pump fluid and dirt on the sensor. Such changes can be easily detected with these manifolds because the two sensors are only inches apart.



Manifold with Manual Actuator



Manifold with Air Open-Spring Close Actuator

Ordering Information

BUY NOW! Go to www.vacuumresearch.com to order online

Our standard manifolds have 300 series stainless steel bodies and NW-16 ports for sensor and system connection. Other flanges such as NW-25 are available as are compression type quick connects for 1/8 inch NPT, 1/2 inch O.D. and 0.75 inch O.D. All manifolds use a welded bellows stem seal.

NW-16 Calibration Manifold, Manual Actuator Stainless steel manifold body with welded bellows. All 3 ports NW-16.
P/N: 912274 .....$622

NW-16 Calibration Manifold, Air Open - Spring Close

Stainless steel manifold body with welded bellows. All 3 ports NW-16. (Solenoid and Position Indicators not included.)
P/N: 912275 .....$652

3 Way Solenoid for Air Open-Spring Close Manifold Add suffix to manifold P/N: SOL-120 VAC, SOL-230 VAC or SOL-24 VDC To manifold cost .....Add $204

Position Indicators

Air open-spring close manifolds can be equipped with a pair of SPST switches to indicate valve open and closed. These unpowered switches have contacts rated for 1 amp @ 300V, non-inductive. Add the suffix ‘PI’ to P/N & to price of manifold .....Add $173./pair

Additional Port for Roughing

Add an additional NW-16 port for connection of a roughing pump to the reference tube side of the manifold. Add suffix ‘RP’ to P/N & to price of manifold ..... Add $161