

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

CALIBRATION EXCITER

Manufactured by: **BRUEL & KJAER**
Model No: **4294**
Serial No: **1759815**
Calibration Recall No: **12258**

Submitted By:

Customer: **FELIX CHRISTOPHER**
Company: **WEST CALDWELL CAL.LABS.INC.(USA)**
Address: **1575 STATE ROUTE 96**
VICTOR NY 14564

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. **4294** **BRUE**

Upon receipt for Calibration, the instrument was found to be:

Within (X) see attached Report of Calibration.

the tolerance of the indicated specification.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, MIL-STD-45662A, ANSI/NCSL Z540-1, IEC Guide 25, ISO 9002 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Approved by:

Calibration Date: **27-Jan-04**



Certificate No: **12258 - 1**

Felix Christopher
Quality Manager

QA Doc. #1051 Rev. 2.0 10/1/01

Certificate Page 1 of 1

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.



ANSI/NCSL Z540-1-1994
MIL-STD-45662A
CALIBRATION TRACEABLE
TO N. I. S. T.



Phone: (585) 586 - 3900 Fax.: (585) 586 - 4327

West Caldwell Calibration Laboratories, Inc.
 uncompromised calibration
 1575 State Route 96, Victor NY 14564

ACCREDITATION
 ISO 17025



ANSI/NCSL Z540-1:1994
 MIL-STD-45662A

CALIBRATION TRACEABLE
 TO N.I.S.T.

ISO 9002 REGISTERED
 COMPANY



1533.01

84542

REPORT OF CALIBRATION

Brüel & Kjær Calibration Exciter Model No.: 4294 for Serial No.: 1759815
 Company : WCCL Inc. I. D. No: XXXX

Calibration results:	Before data:	After data:
Vibration Level was 10.04 m/s ² RMS at 159.15 Hz	Before & after data same:	
Measured with 76.6gms. Load	Laboratory Environment:	
Vibration Level: Pass	Ambient Temperature: 20.4 °C	
Frequency: Pass	Ambient Humidity: 24.2 % RH	
Distortion: Pass	Ambient Pressure: 98.84 kPa	
Stability: Pass	Calibration Date: 27-Jan-2004 12:25 PM	
All tested parameters: Pass	Re-calibration Due: 27-Jan-2005	
	Report Number: 12258 -1	
	Control Number: 12258	

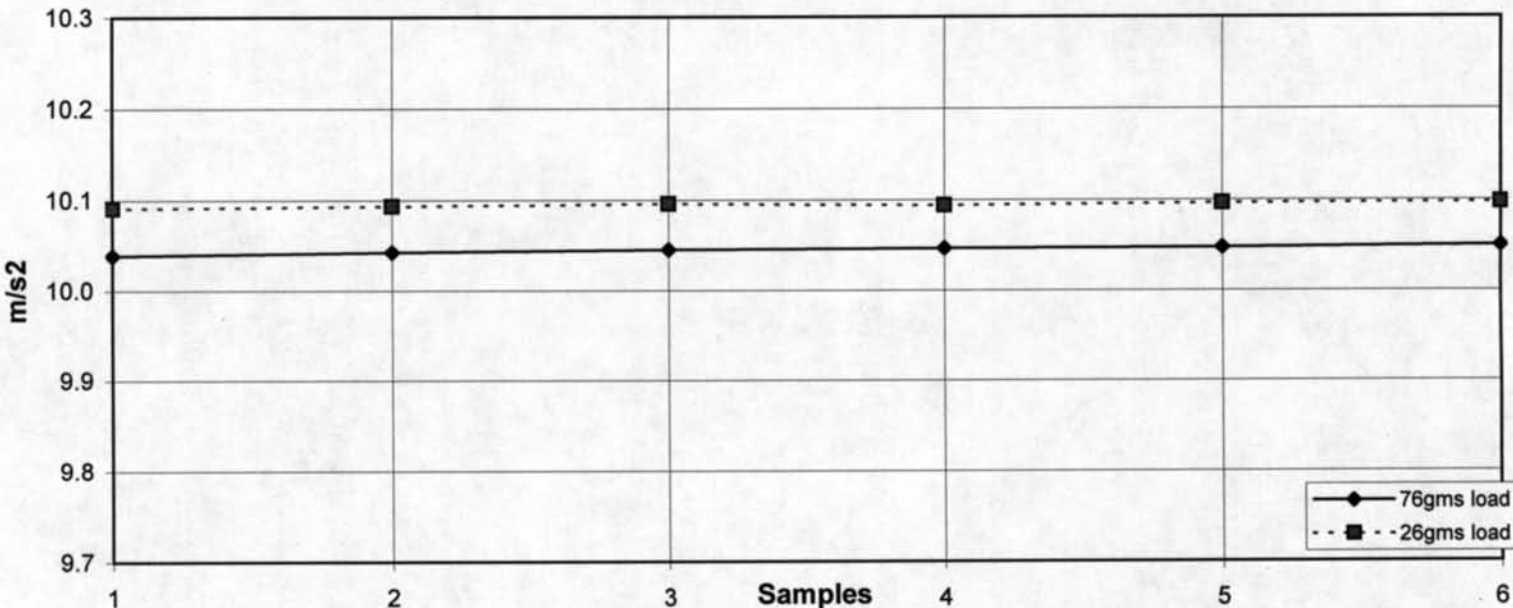
The above listed instrument meets or exceeds the tested manufacturer's specifications.

This Calibration is traceable through NIST test numbers: 822/268875-03

The absolute uncertainty of calibration: 1.12% at 95% confidence level.

Graph represents six samples of Vibration Level measured at 5sec. interval.

Level Stability



The above listed instrument was checked using calibration procedure documented in West Caldwell Calibration Laboratories Inc. procedure : **Rev. 3.0 Nov. 12, 2003 Doc. # 1038 4294B&K**
 Calibration was performed by West Caldwell Calibration Laboratories Inc. under Operating Procedures intended to implement the requirements of IEC Guide 25, ANSI/NCSL Z540-1, (MIL-STD-45662A) and ISO 9002, ISO 17025

Cal. Date: 27-Jan-2004 12:25 PM

Measurements performed by:

Calibrated on WCCL system type 9700

Felix Christopher

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Rev. 3.0 Nov. 12, 2003 Doc. # 1038 4294B&K

West Caldwell Calibration Laboratories Inc.

1575 State Route 96, Victor NY 14564
Tel. (585) 586-3900 FAX (585) 586-4327

Calibration Data Record

TOR

Brüel & Kjær Calibration Exciter

Model No.: 4294

Serial No.: 1759815

Company : WCCL Inc.

All tested parameters: Pass

Measured Level (Six samples measured at 5 sec. interval)

Sample	1	10.038 m/s ² RMS (76g Load)	10.091 m/s ² RMS (26g Load)
	2	10.042	10.093
	3	10.045	10.096
	4	10.047	10.094
	5	10.047	10.097
	6	10.050	10.098
Average		10.04 m/s²	10.09 m/s² Spec. 10m/s ² + - 3%

Frequency measured (Three samples at 15 sec. interval)

Sample	1	159.15 Hz	
	2	159.14	
	3	159.15	
Average		159.15 Hz	Spec. 159.15 + - 0.02%

Distortion measured

-49 dB

Spec. < -34dB

Instruments used for calibration:	Date of Cal.	Traceability No.	Re-cal. Due Date
Brüel & Kjær 8305 S/N 1777437	27-Jun-2003	822/268875-03	27-Jun-2005
Brüel & Kjær 2610 S/N 833541	18-Sep-2003	822/268904-03	17-Sep-2004
Brüel & Kjær 2636 S/N 1324082	23-Apr-2003	822/268904-03	22-Apr-2004

Cal. Date: 27-Jan-2004 12:25 PM

Tested by: Felix Christopher

Calibrated on WCCL system type 9700

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Rev. 3.0 Nov. 12, 2003 Doc. # 1038 4294B&K