



ESSCO CALIBRATION LABORATORY
DIVISION OF WALSH ENGINEERING SERVICES, INC.
CALIBRATION/REPAIR OF ALL TYPES OF ELECTRONIC / MECHANICAL TEST EQUIPMENT
27 INDUSTRIAL AVE, CHELMSFORD, MA 01824-3618
TEL: (800) 325-2201 (978) 250-0880 www.esscolab.com

SUMMARY OF SUBCONTRACTED CALIBRATION

ISSUE DATE: 8/22/2017

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Certificate #: **1550628**

CUSTOMER / LOCATION
WOODS HOLE OCEANOGRAPHIC INST - 1
266 WOODS HOLE ROAD
WOODS HOLE, MA 02543

PURCHASE ORDER: M219394

EQUIPMENT INFORMATION
MANUFACTURER DILLON
MODEL NO: EDXTREME
SERIAL NO: N/A
CONTROL NO. 1205166
TYPE: DYNAMOMETER

AS FOUND	IN TOLERANCE
AS LEFT	IN TOLERANCE

Remarks:

CALIBRATION

CALIBRATION DATE 8/17/2017

CALIBRATION DUE: 8/17/2018

VENDOR: C.S.C. FORCE MEASUREMENT

**This equipment was calibrated and/or repaired by an approved subcontractor.
Please review the attached quality documentation for more information.**

C.S.C. Force Measurement, Inc.

Calibration Certificate



Certificate #: 145787

Customer: WALSH ENGINEERING SERVICES, INC.

Address 27 INDUSTRIAL AVE

City/State: CHELMSFORD MA 01824

Date: 8/17/2017


PO # 28942

The calibrations / test within the certificate / report are traceable through NIST or another National Metrology Institute to the International System of Units (SI units). Unless otherwise indicated the tolerance specified does not take into account the uncertainty of measurement for pass/fail indication. Accredited by L.A.B. #L1142-1 to ISO/IEC 17025. Also ANSI/NCCL Z540-1-1994 compliant.

Equipment Information

I.D.:	1205166
Serial Number:	DEDX2600306
Manufacturer:	DILLON
Model Number:	ED XTREME
Gage Type:	DYNAMOMETER, DIGITAL
Capacity:	25,000 lbf
Accuracy:	+/- 0.2% FULL SCALE

Calibration Information

Calibration Date:	8/17/2017
Recall Date:	8/17/2018
Temp./RH:	70 °F / 40 %
Condition Received:	IN TOLERANCE
Test Results:	PASS
Cal Procedure:	SCP-81 Rev. C
Performed By:	JUSTIN BARBER
Quality Review:	
Reviewed By:	Justin Barber
Reviewer Title:	CALIBRATION TECH
Date Reviewed:	8/17/2017
Calibration Location:	OUR LAB
Unit of Measure:	lbf

Calibration Notes

Measurement Uncertainty using a coverage factor of
k = 2 at a 95% confidence: 21.228 lbf

Test Points

No.	Description	Standard	Tolerance -	Tolerance +	As Found	As Left
1	TENSION	5000	4950	5050	5020	5020 lbf
2	TENSION	5000	4950	5050	5020	5020 lbf
3	TENSION	10000	9950	10050	10020	10020 lbf
4	TENSION	10000	9950	10050	10020	10020 lbf
5	TENSION	15000	14950	15050	15040	15040 lbf
6	TENSION	15000	14950	15050	15040	15040 lbf
7	TENSION	20000	19950	20050	20040	20040 lbf
8	TENSION	20000	19950	20050	20040	20040 lbf
9	TENSION	25000	24950	25050	25020	25020 lbf
10	TENSION	25000	24950	25050	25020	25020 lbf

Standards Used To Calibrate Equipment

Description	I.D. No.	Last Calibrated	Cal. Due Date	Certificate No.
DILLON FI-127 / L1600 LOADCELL	093	5/11/2016	5/31/2018	261982E1116

The above equipment has been carefully tested in accordance with above methods, results related only to items calibrated. This inspection is limited to defects disclosed from above method only. Our liability not to exceed cost of re-inspection or re-test. This certificate or report shall not be reproduced except in full without the written approval of the laboratory. C.S.C. Force Measurement utilizes an electronic signature sign-off process. Use of an electronic signature is a legal method of signing a document as stated in the federal E-SIGN law (Pub.L. 106-229, 14 Stat. 464, enacted June 30, 2000, 15 U.S.C. ch.96)

FORM 101 REV 7

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