



# Calibration Certificate

Name ○○○○○○○○

Address ○○○○○○○○

Description Digital Force Gauge  
 Model ZTS-500N  
 Serial No. ○○○○○○  
 Range / Resolution Range 500 N / Resolution 0.1 N  
 Tolerance ± 0.2 % F.S. Required Accuracy 0.2 % F.S.  
 Calibrated Range 500N  
 Procedure In accordance with 'IMADA Co., Ltd. ISO/IEC17025 Calibration Procedure'  
 Direction Compression  
 Ambient Conditions As stated on the following page  
 Results As stated on the following page  
 Calibrated Date ○○○○/○○/○○  
 Location of Laboratory IMADA CO., LTD.  
 99 Jinnoshinden-cho aza Kanowari Toyohashi Aichi JAPAN 441-8077

We hereby certify that the calibration result was as stated above.

**IMADA CO., LTD.**

99 Jinnoshinden-cho aza Kanowari Toyohashi Aichi JAPAN 441-8077

Managing Director ○○○○○○○○

This is to certify that the above instrument was calibrated using equipment traceable to the national standards.

This certificate shall not be reproduced except in full, without written approval from IMADA CO., LTD.

IMADA CO., LTD. is accredited to ISO/IEC17025 by PJLA (PERRY JOHNSON LABORATORY ACCREDITATION,INC.).

### Calibration Conditions

1) This calibration has been conducted using the reference standards as below:

Reference Standards	Category No.	Serial No.	Certificate No.
Load Cell LUH-500KF(Compression 5KN)	JC1020001	LUH-500KF	51-85729-1

- 2) The procedure followed is as specified in 'IMADA CO., LTD. ISO/IEC17025 Calibration Procedure'.
- 3) The calibration has been carried out after preloading.  
(500N or less: 3 times / 1000N and above: over 10 secs.)
- 4) Estimated gravitational acceleration at the laboratory is 9.79749m/s<sup>2</sup>.
- 5) The temperature of the laboratory was 22 °C and the humidity 41 %

### Calibration Results

Test Point <i>Fr</i> (N)	Reading <i>Fm</i> (N)	Deviation <i>Pa</i> (%)	Test Point <i>Fr</i> (N)	Reading <i>Fm</i> (N)	Deviation <i>Pa</i> (%)
500	500	0			
1000	1002	0.04			
1500	1501	0.02			
2000	2002	0.04			
2500	2502	0.04			
3000	3003	0.06			
3500	3503	0.06			
4000	4004	0.08			
4500	4504	0.08			
5000	5004	0.08			
Max. Expanded Uncertainty (K=2)			0.026 %		

Max. expanded uncertainty is based on the combined standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

The deviation *Pa* is the referential value resolution calculated as below;

$$Pa = \{(Fm - Fr) / C\} \times 100 \text{ [%]}$$

Without considering the uncertainty and the combined standard uncertainty, this instrument was calibrated and the readings thereof were found to meet the required accuracy of " 500 N ± 0.2 % F.S. " ; provided, however, that this may not apply when the uncertainty and the combined standard uncertainty are taken into consideration.