

Micro-Adjustable Torque Screwdriver

An excellent tool for flexible production. This driver allows instant changes to the torque value with the easy-to-read window scale and a precise pull-to-set, push-to-lock adjustment knob. The Micro-Adjustable series includes three models ranging from 10 to 450 Ncm or 20 in. ozs. to 40 in. lbs.

All models in the MA range are ESD safe. 



Adjusting the screwdriver is simple. Just pull the adjusting knob to unlock, then turn it to the desired torque while keeping an eye on the major window scale and the minor knob scale. When the correct setting is reached push in the knob until it clicks. And it's ready to use!

High Precision Torque Screwdrivers

True to tradition of offering only the best in high precision tools, Lindstrom introduces a new generation of Torque Screwdrivers. The unique cam-over torque limiting design eliminates over-application of force, thereby reducing damages, rejects, and rework costs.

The elegant and robust Torque Screwdrivers are user-friendly designed with a comfortable shape and a non-slip grip. There are two models available, the Micro-Adjustable and the Preset Torque Screwdriver.

The Micro-Adjustable Torque Screwdriver.

A flexible tool for varied tasks. Torque is easily and accurately changed with a unique adjusting knob and an easy-to-read window scale.

<i>Torque ranges*Prod code</i>	
10-80 Ncm	MA 500-1
40-200 Ncm	MA 500-2
50-450 Ncm	MA 500-3
20-100 in. ozs.	MAL 500-1**
3-15 in. lbs.	MAL 500-2**
5-40 in. lbs.	MAL 500-3**

*Accuracy +/- 6%.

**Available in US only.



MA500-1



MA500-2



MA500-3

Distributed by: All-Spec Industries
Wilmington, NC

Ph: 800-537-0351
Fx: 800-379-9903

sales@all-spec.com
www.all-spec.com

Tools shown in actual size

Non-magnetic spring-loaded bit holder to avoid damaging sensitive equipment or components

Cam-over torque limiting clutch for repeatability and accuracy

Lightweight yet rugged construction, built to last

Permanently lubricated internal mechanism, never needs oil

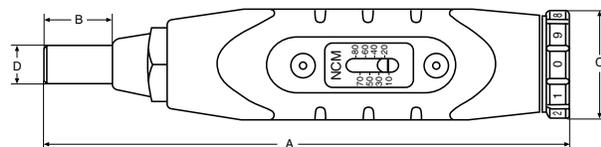


Stainless steel 1/4" Hex receiver allows use of all standard drive bits (Phillips, Torx, etc.)

Certified to the following industry specifications:
ASME B107.14-2004 and
ISO 6789-2003(E)

Comfortable shape and non-slip grip prevent friction injuries

Easy-to-read window scale and adjustment knob for precise settings



Assortment

Product code	EAN-code +731415	Torque capacity**		A		B		C		D		in.	g	in.
		Ncm	in. ozs./in. lbs	mm	in.	mm	in.	mm	in.	mm	in.			
MA500-1	112395	10-80		138	5.43	18.2	0.72	28	1.10	9.6	0.38	1/4	195	1
MA500-2	112401	40-200		157	6.18	18.2	0.72	28	1.10	9.6	0.38	1/4	260	1
MA500-3	112418	50-450		171	6.73	18.2	0.72	32	1.26	9.6	0.38	1/4	306	1
MAL500-1*	112593	20-100 in. ozs.		138	5.43	18.2	0.72	28	1.10	9.6	0.38	1/4	195	1
MAL500-2*	112609	3-15 in. lbs.		157	6.18	18.2	0.72	28	1.10	9.6	0.38	1/4	260	1
MAL500-3*	112616	5-40 in. lbs.		171	6.73	18.2	0.72	32	1.26	9.6	0.38	1/4	306	1

* Available in US only.

** Store driver in protective case at lowest torque setting. Do not force adjusting knob below lowest setting.

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APPROVAL

FOR ESD PROTECTIVE PRODUCTS ACCORDING TO IEC 61340

Validity of the approval

Until 2010-05-11.

Holder of the approval

SNA Europe [Industry] AB, Enköping, Sweden

Category of product

Screwdrivers

Products

Manufacturer/ supplier	Type designation	Description
SNA Europe [Industry] AB	MA500-1 MA500-2 MA500-3	Dynamometric screwdrivers made of blue painted metal

The tools are marked "Lindstrom".

Documentation for approval

Test report F7 04781.

The ESD-approval does not include any requirements regarding electrical safety properties. If work will be performed close to live voltages, requirements according to national regulations shall be obeyed.

Conditions for approval

General conditions, according to SP-Method 2472, for approval and registration of approved products with regard to ESD-protection qualities.

SP Sveriges Tekniska Forskningsinstitut Electronics - Product Safety


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CERTIFICATION

This torque screwdriver as calibrated at the factory, is certified to meet the accuracy in specifications: ASME B107.14-2004 and ISO 6789.

Additionally all torque screwdrivers are calibrated on a torque standard traceable to the National Institute of Standards Technology (N.I.S.T.).

CONVERSION TABLE

To convert from	To	Multiply by
lb.in.	oz.in	16
lb.in.	lb.ft.	.08333
lb.in.	kg.cm.	1.1519
lb.in.	kg.m.	.011519
lb.in.	N.m.	.113
lb.in.	dN.m.	1.13
lb.ft.	kg.m.	.1382
lb.ft.	N.m.	1.356
N.m.	dN.m.	10
N.m.	kg.cm.	10.2
N.m.	kg.m.	.102
oz.in.	lb.in.	.0625
lb.ft.	lb.in.	12
kg.cm.	lb.in.	.8681
kg.m.	lb.in.	86.81
N.m.	lb.in.	8.85
dN.m.	lb.in.	.885
kg.m.	lb.ft.	7.236
N.m.	lb.ft.	.7376
dN.m.	N.m.	.10
kg.cm.	N.m.	.09807
kg.m.	N.m.	9.807

FOR YOUR PERMANENT FILE

Wrench
Model
Number _____

Serial
Number _____

LINDSTROM®

EUROPE AND NORDIC CUSTOMER SERVICE

Lindstrom Precision Tools
SE-745 82 ENKOPING
SWEDEN

TEL: +46 171 227 00
FAX: +46 171 228 44

U.S. CUSTOMER SERVICE

Lindstrom U.S.
1440 W. Taft Avenue
ORANGE, CA 92865
U.S.A.

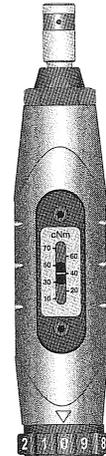
TEL: 714 921 9950
FAX: 714 921 9595

FORM 20-275-LIND
02/08 REV. C

LINDSTROM®

OPERATION MANUAL

MICROMETER ADJUSTABLE TORQUE SCREWDRIVER



Lindstrom Precision Tools
The choice of professionals
throughout the world for accuracy,
durability and reliability

SAFETY MESSAGES



WARNING



Read operation manual completely before using torque instrument and store for future reference.



Wear safety goggles-both user and bystanders



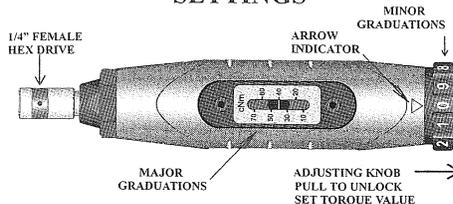
- An out of calibration torque wrench can cause part or tool breakage
- Periodic re-calibration is necessary to maintain accuracy
- Do not exceed rated torque as overtorquing can cause wrench or part failure
- Do not use torque instrument to break fasteners loose
- Do not use cheater extension on the handle to apply torque
- Broken or slipping tools can cause injury



MAINTENANCE / SERVICE

1. The torque screwdrivers internal mechanism is permanently lubricated during assembly. **Do not attempt to lubricate the internal mechanism.**
2. Clean torque screwdriver by wiping. **Do not immerse.**
3. Store torque screwdriver in protective case at its lowest torque setting. **Do not force handle below lowest setting.**

ADJUSTMENTS OF TORQUE SETTINGS



- A. To unlock adjusting knob hold body of screwdriver and firmly pull knob to rear. (See Figure IV)
- B. Set screwdriver to desired torque as follows:

EXAMPLE - 22 cNm.

 1. Turn adjusting knob clockwise until the major graduation line is aligned with the **20** on scale (See Figure I) and arrow indicator on screwdriver body is in line to "0" graduation on the adjusting knob.
 2. Turn adjusting knob two increments clockwise. Screwdriver is now set at 22 cNm. (See Figure II)

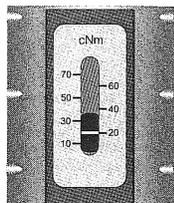


Figure I

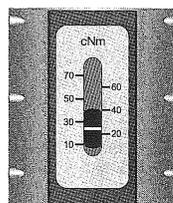


Figure II

3. To lock adjusting knob, push towards the drive until it clicks into the lock position. (See Figure III)
4. To torque fastener, keep hand centered on the screwdriver grip. Turn screwdriver clockwise until a click/impulse is heard or felt. The screwdriver will automatically reset for the next operation.

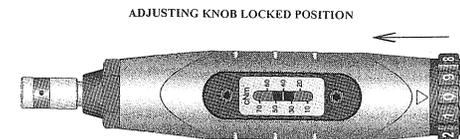


Figure III

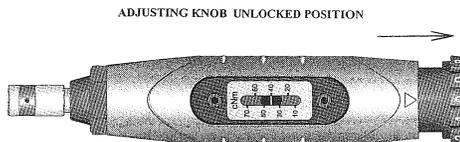


Figure IV

>LINDSTROM® ALL-SPEC INDUSTRIES

*** Example of Calibration Certificate Included with Tool *** Certificate of Calibration

Model no.	MAL500-3	Serial Number	XXXXXXXXXX
Type	Adjustable Screwdriver	Calibration equipment	MULTITEST POO64D-BI
Range	8.000 in-lb - 40.000 in-lb	Accuracy of calibrator	±0.25%
Manufacturer	LINDSTROM		

Set Torque [in-lb]	Readings [in-lb]									
Clockwise torque (Tolerance: ± 6.0%)										
8.000	8.137	1.7%	8.076	0.9%	8.148	1.9%	8.066	0.8%	7.941	-0.7%
24.000	23.890	-0.5%	23.647	-1.5%	23.501	-2.1%	23.723	-1.2%	23.755	-1.0%
40.000	40.522	1.3%	40.286	0.7%	40.003	0.0%	40.276	0.7%	39.833	-0.4%

Result: Measured values are within tolerance according to :ASME B107.14-2004 / ISO 6789.2003(E)

Date: 6/18/08

Operator: V. P. Bathan

Supervisor: Rosemary Atkinson

Calibration is performed by comparison with reference standards which have been calibrated by a recognized NIST-laboratory and are therefore traceable to the National Institute of Standards and Technology. The issuer of this certificate bears sole responsibility for calibration and documentation thereof. Duplication of this certificate or parts hereof is prohibited.
THIS CALIBRATION CERTIFICATE IS VALID ONE YEAR, FROM DATE THE TOOL WAS FIRST USED.