

MT Series - Série MT

**Tension/Compression Mechanical Test Stand
Bancs d'essais de traction & compression**

User Manual - Manuel d'utilisation



PRODUCT WARRANTY

This instrument is warranted against defects in workmanship, material and design for one (1) year from date of delivery to the extent that AMETEK will, at its sole option, repair or replace the instrument or any part thereof which is defective, provided, however, that this warranty shall not apply to instruments subjected to tampering or abuse, or exposed to highly corrosive conditions.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES WHETHER EXPRESS OR IMPLIED AND AMETEK HEREBY DISCLAIMS ALL OTHER WARRANTIES, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY. AMETEK SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, ANY ANTICIPATED OR LOSS PROFITS.

This warranty is voidable if the purchaser fails to follow any and all instructions, warnings, and cautions in the instrument's Instruction Manual.

If a manufacturing defect is found, AMETEK will replace or repair the instrument or replace any defective part thereof without charge; however, AMETEK's obligation hereunder does not include the cost of transportation which must be borne by the customer. AMETEK assumes no responsibility for damage in transit, and any claims for such damage should be presented to the carrier by the purchaser.

GARANTIE DU PRODUIT

Cet instrument est garanti contre tout défaut de fabrication pour un an (1), pièces et main-d'œuvre. Cette garantie ne s'applique pas si l'appareil a été soumis à une tentative de réparation, à une mauvaise utilisation, ou s'il a été exposé à des conditions fortement corrosives.

CETTE GARANTIE REMPLACE TOUTES AUTRES GARANTIES QUELLES QU'ELLES SOIENT. AMETEK NE SERA PAS TENU RESPONSABLE DES DOMMAGES CONSECUTIFS A L'UTILISATION DU MATERIEL QUI ENTRAINERAIT UNE PERTE D'EXPLOITATION EVENTUELLE.

Cette garantie ne s'applique pas si l'acheteur ne tient pas compte des avertissements et précautions décrits dans le présent manuel d'utilisation.

Si un défaut de fabrication est trouvé, AMETEK remplace ou répare l'appareil, ou toutes pièces défectueuses sans frais ; cependant l'engagement de AMETEK ci-dessus n'inclut pas les frais de transports qui doivent être payés par le client. AMETEK n'assume aucune responsabilité de possibles dommages lors du transport, et toutes les réclamations pour de tels dommages devraient être présentés au transporteur par l'acheteur.

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1.0 INTRODUCTION

The CHATILLON MT test stand is designed to perform various tension or compression tests utilizing the full range of CHATILLON force gauges. The MT test stand has two available capacities 150 LBF (660 N) and 500 LBF (2.2 KN). Each capacity has a quick-action lever or precision hand-wheel operating mechanism available. The MT test stand can be positioned vertically and mounted to a bench or wall mounted. The MT test stand can also be horizontally mounted and fastened to a bench. The wall mounting and horizontal mounting utilize the same components. The MT column comes in three selectable heights 750mm, 1000mm and 1500mm to accommodate various test sample heights. A ruler assembly is available for measurements that require minimal travel accuracy. A digital indicator is available for measurements that require accurate travel measurements. The MT test stand is lightweight and modular in design. The MT test stand comes with standard accessories that will allow many CHATILLON and LLOYD grips and fixtures to adapt to the test stand.

2.0 SPECIFICATION

2.1 Capacities	150 LBF (660 N) 500 LBF (2.2 KN)
2.2 Drive Mechanism	Quick-Action Lever Precision Hand-Wheel
2.3 Travel Rate	Quick-Action Lever – 75 mm (3 in) per Rev Precision Hand-Wheel – 12 mm (0.5 in) per Rev
2.4 Total Column Length	Standard – 750 mm (29.5 in) Extended – 1000 mm (39.4 in) Ultra – 1500 mm (59.1 in)
2.5 Stroke	150 mm (6 in)
2.6 Throat Depth	150 mm (6 in)
2.7 MT Weight	12.2 KG (26 LB) approx. weight

3.0 ASSEMBLY AND SPARE PARTS LIST

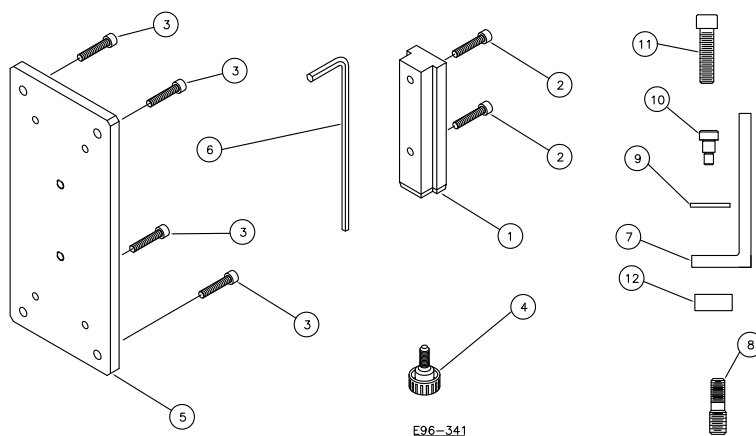
3.1 Bench/Wall Mounting

Place MT test stand on a firm, flat level work surface that is free from vibration to ensure accurate readings. It is recommended that the MT test stand is vertically mounted to a work bench utilizing the four Ø8 mm (Ø.31 in) holes in the base. For horizontal or wall mounting there are four Ø8.5mm (Ø.33 in) holes in two mounting plates that are used for mounting the MT test stand to a bench or wall.

3.2 Force Gauge Mounting Kits

PART NUMBER	FORCE GAUGE	CAPACITY (LBF/N)	① MTG ADAPTER	② MTG SCREW	③ MTG SCREW	④ LOCKING SCREW	⑤ MTG PLATE	⑥ HEX KEY 5/32"
SPK-MT-0001	DFE2/DFS2/DFX2/LG	150/660	NTT/0186	01-90027	N/A	SCT/0292	N/A	NC000846
SPK-MT-0002	DPPH/DFIS	500/2.2K	NC002699	01-90036	E08-240	SCT/0292	NC002700	NC000846
SPK-MT-0003	DFM	150/660	NTT/0187	01-90027	N/A	SCT/0292	N/A	NC000846
SPK-MT-0004	DFE2/DFS2/DFX2	500/2.2K	NC002701	01-90036	3573	SCT/0292	NC002700	NC000846
SPK-MT-0005	DG	500/2.2K	NC002741	01-90064	3573	SCT/0292	NC002742	NC000846
SPK-MT-REMOTE	SLC	200/890	NTT/0186	01-90027	N/A	SCT/0292	N/A	NC000846
SPK-MT-REM500	SLC-500	500/2.2K	NTT/0186	01-90027	N/A	SCT/0292	N/A	NC000846

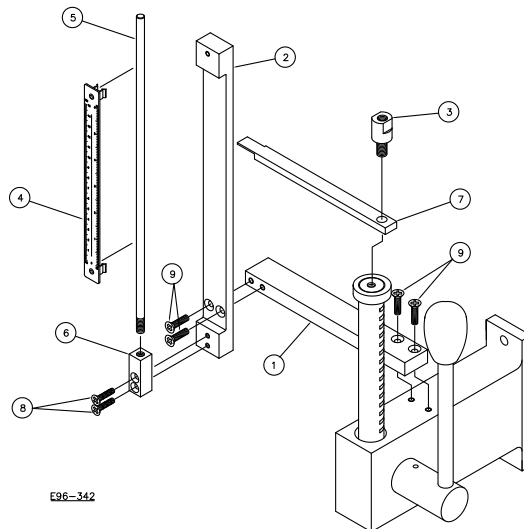
PART NUMBER	⑦ BRACKET	⑧ MALE ADAPTER	⑨ WASHER	⑩ SHOULDER SCREW	⑪ SHC SCREW	⑫ SPACER											
SPK-MT-0001	N/A	N/A	N/A	N/A	N/A	N/A											
SPK-MT-0002	N/A	N/A	N/A	N/A	N/A	N/A											
SPK-MT-0003	N/A	N/A	N/A	N/A	N/A	N/A											
SPK-MT-0004	N/A	N/A	N/A	N/A	N/A	N/A											
SPK-MT-0005	N/A	N/A	N/A </tr <tr> <td>SPK-MT-REMOTE</td> <td>NC000298</td> <td>NC000296</td> <td>900-30-021</td> <td>NC000299</td> <td>01-90038</td> <td>NC000244</td> </tr> <tr> <td>SPK-MT-REM500</td> <td>NC002872</td> <td>N/A</td> <td>NC002874</td> <td>N/A</td> <td>NC002873</td> <td>N/A</td> </tr>	SPK-MT-REMOTE	NC000298	NC000296	900-30-021	NC000299	01-90038	NC000244	SPK-MT-REM500	NC002872	N/A	NC002874	N/A	NC002873	N/A
SPK-MT-REMOTE	NC000298	NC000296	900-30-021	NC000299	01-90038	NC000244											
SPK-MT-REM500	NC002872	N/A	NC002874	N/A	NC002873	N/A											



When ordering a force gauge mounting kit the parts shown in FIGURE 1 will be supplied as indicated. For DFE2/DFS2/DFX2 Series Gauges use SPK-MT-0001 mounting kit from 0 to 150 LBF testing and use SPK-MT-0004 mounting kit for 150 to 500 LBF testing.

3.3 Ruler Assembly Kit

PART NUMBER	① CROSS BEAM	② MTG PLATE	③ ADAPTER 5/16-18	④ RULER ASSEMBLY	⑤ ROD, RULER	⑥ ROD HOLDER	⑦ POINTER ARM	⑧ SCREW #8-32 X 3/4	⑨ SCREW #10-32 X 3/4
SPK-MT-RULER	NC002702	NC002703	NC002706	23132	12159	NC002707	NC002708	E08-237	E08-238

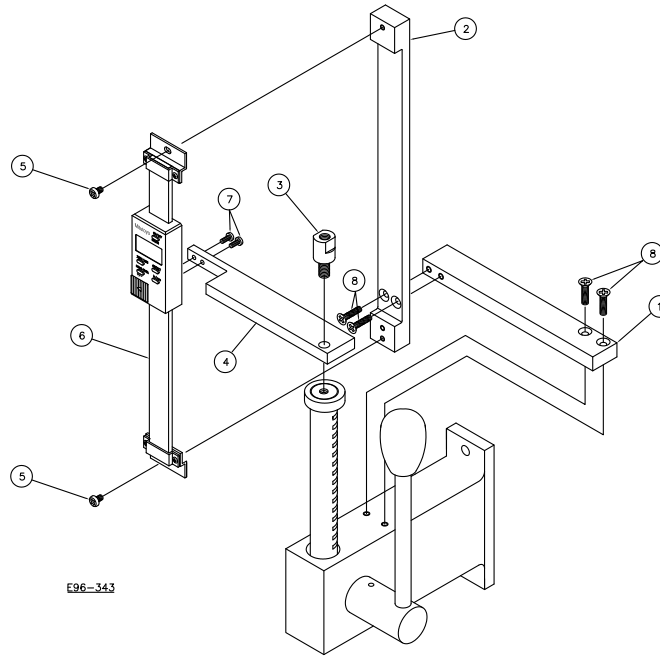


The ruler assembly instructions are as follows:

- 3.3.1 Assemble CROSS BEAM (Item 1) to top of lever or hand-wheel assembly of MT test stand using two SCREWS (Item 9).
- 3.3.2 Assemble MTG PLATE (Item 2) to CROSS BEAM (Item 1) using two SCREWS (Item 9).
- 3.3.3 Thread RULER ROD (Item 5) to ROD HOLDER (Item 6).
- 3.3.4 Assemble ROD HOLDER (Item 6) to MTG PLATE (Item 2) using two SCREWS (Item 8).
- 3.3.5 Press on RULER ASSEMBLY (Item 4) to RULER ROD (Item 5).
- 3.3.6 Assemble POINTER ARM (Item 7) to movable RACK on MT test stand using 5/16-18 ADAPTER (Item 3). The pointer arm should be located in front of the ruler assembly.

3.4 Digital Indicator Assembly Kit

PART NUMBER	① CROSS BEAM	② MTG PLATE	③ ADAPTER 5/16-18	④ ACTUATOR ARM	⑤ SCREW #8-32 X 1/4	⑥ DIGITAL INDICATOR	⑦ SCREW #5-40 X 5/16	⑧ SCREW #10-32 X 3/4
SPK-MT-DIGITAL	NC002702	NC002703	NC002706	NC002704	E08-236	NC002705	E08-239	E08-238

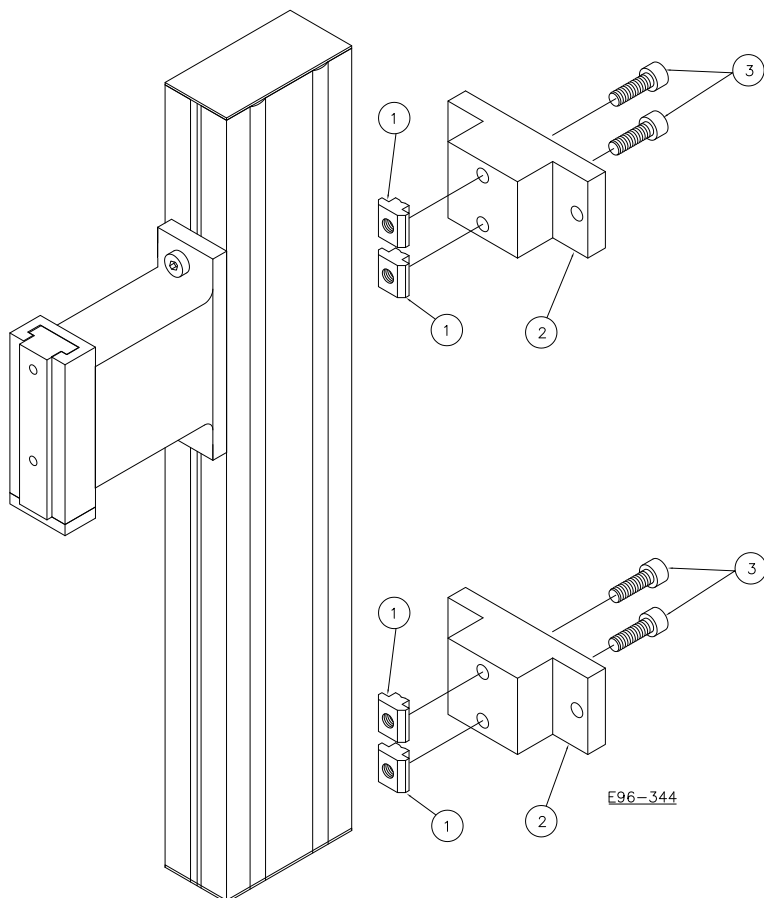


The digital indicator assembly instructions are as follows:

- 3.4.1 Assemble CROSS BEAM (Item 1) to top of lever or hand-wheel assembly of MT test stand using two SCREWS (Item 8).
- 3.4.2 Assemble MTG PLATE (Item 2) to CROSS BEAM (Item 1) using two SCREWS (Item 8).
- 3.4.3 Assemble ACTUATOR ARM (Item 4) to the lower two screw holes of the DIGITAL INDICATOR (Item 6) using two SCREWS (Item 7).
- 3.4.4 Assemble DIGITAL INDICATOR (Item 6) to MTG PLATE (Item 2) using two SCREWS (Item 5).
- 3.4.5 Assemble ACTUATOR ARM (Item 4) to movable RACK on MT teststand using 5/16-18 ADAPTER (Item 3).

3.5 Horizontal / Wall Mounting Kit

PART NUMBER	① T-BLOCK	② MTG PLATE	③ SCREW M8 x 25mm
SPK-MT-WALL-HORZ	NC002719	PLT/1219	70104408025



The Horizontal/Wall mounting assembly instructions are as follows:

- 3.5.1 Remove top plastic cap from top of column using a small screw driver.
- 3.5.2 Assemble two SCREWS (Item 3) to MTG PLATE (Item 2) and thread on two LONG NUTS (Item 1).
- 3.5.3 Slide bottom mounting plate assembly to lower part of the MT test stand column and fully tighten two screws using a 6mm hex key.
- 3.5.4 Repeat step 3.5.2 for the top mounting plate assembly.
- 3.5.5 Slide top mounting plate assembly to upper part of the MT test stand column and fully tighten two screws using a 6mm hex key.
- 3.5.6 The four Ø8.5mm (Ø.33 in) holes in the two mounting plates are used for mounting the MT test stand to a bench (horizontally) or wall (vertically).
- 3.5.7 Replace the top plastic cap to the column by pressing it on.

3.6 Additional Spare Parts

3.6.1. Load Actuation Assemblies

- SPK-MT-L150 Lever Actuation Model, 150 LB/660 N
- SPK-MT-L500 Lever Actuation Model, 500 LB/2.2 KN
- SPK-MT-H150 Hand Wheel Actuation Model, 150 LB/660 N
- SPK-MT-H500 Hand Wheel Actuation Model, 500 LB/2.2 KN

3.6.2. Miscellaneous Spare Parts

- SPK-MT-REMOTE Remote load cell MTG kit (0.55 LB/250 G to 200 LB/890 N)
- SPK-MT-REM500 Remote load cell MTG kit (500 LB/2.2 KN)

4.0 STANDARD ACCESSORIES

The Standard accessories that come with the MT test stand are as follows:

NC000714	Hex Key, 6mm
NC002660	Operation Manual
SPK-FMG-012B	Hook Assembly, 150 LB (STD with 150 LB test stand)
SPK-FMG-012C	Hook Assembly, 500 LB (STD with 500 LB test stand)
17012	Compression Platen, Ø3 in
NC002686	Set Screw, 5/16-18 X 1 in
P-10020	Adapter, 5/16-18 M to #10-32 F (STD with 150 LB test stand)
NC002292	Registration Card
13048	Coupling, 1/4-28 F to 5/16-18 F
ADT/0115	5/16-18 F to 5/8 in Eye End
3157	Set Screw, #10-32 X 3/4 in (STD with 150 LB test stand)

5.0 COMPRESSION TESTING PROCEDURE

- 5.1. Establish the platform location in reference to its travel so that the deflection requirements for the test to be made will be accomplished before the platform reaches the limit of its stroke. For example: if the test requires 2 inches of deflection, ensure the platform will travel the required 2 inches before stopping. Allow additional travel for the deflection of the force gauge.
- 5.2. Center the test specimen on platform and adjust height of force gauge above platform to desired height using the 6mm hex key provided.
- 5.3. If deflection measurements using the ruler assembly are required, take note of reading on ruler when gauge plate touches the test specimen. This point can be determined by monitoring the force gauge indicator while slowly raising the platform. Stop the platform travel the moment a force is registered on the gauge and then back off very slightly. At this point, note the reading on the ruler. The ruler may be adjusted on the rod to line up with the pointer for easier reading. The CHATILLON force gauges have different deflection and this must be accounted for when taking deflection measurements. Refer to TABLE 1 for deflection of each model gauge at full scale. Example: If A DPP 50 LB gauge was loaded at 50 LB (full scale) and the deflection on the ruler indicated 2.0 inches, the true movement of the sample was 1.9 inches due to the shaft of the DPP force gauge moving 0.1 inches.

Gauge Model	Load Cell/Spring Deflection
DPP, DPPH	.100 inches at full scale (1 revolution)
LG/DG	10mm (.394 inches) at full scale (1 revolution)
DFM	.015 inches at full scale
DFIS/DFE2/DFS2/DFX2	.007 inches at full scale
DFGS integral load cell	.010 inches at full scale
DFS-R 250 g to 10 LB	.015 inches at full scale
DFS-R 50 LB to 500 LB	.008 inches at full scale

TABLE 1

- 5.4. When using the digital indicator it is necessary to compensate for deflection of the force gauge when performing a compression test. To obtain the true deflection of the test specimen refer to TABLE 1 for the full scale deflection for each force gauge model. Example: If A DPP 50 LB gauge was loaded at 25 LB (half scale) and the deflection on the digital indicator was 2.000 inches, the true movement of the sample was 1.950 inches due to the shaft of the DPP force gauge moving .05 inches.

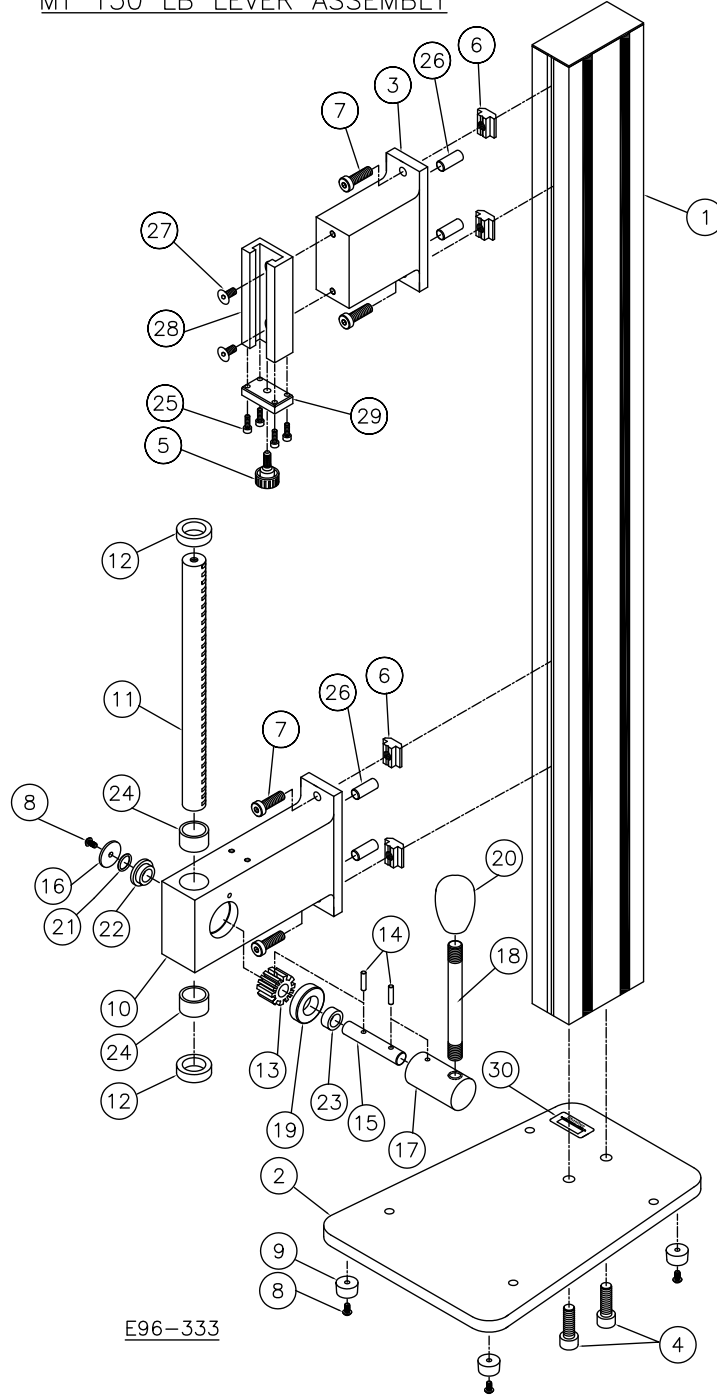
6.0 TENSION TESTING PROCEDURE

- 6.1. Establish the platform location in reference to its travel so that the deflection requirements for the test to be made will be accomplished before the platform reaches the limit of its stroke. For example: if the test requires 2 inches of deflection, ensure the platform will travel the required 2 inches before stopping. Allow additional travel for the deflection of the force gauge.
- 6.2. Place test specimen in upper grip or hook and zero the force gauge. Then attach test specimen to lower grip or hook.
- 6.3. If deflection measurements using the ruler assembly are required, take note of reading on ruler when the test specimen is taut between the grips or hooks. This point can be determined by monitoring the force gauge indicator while slowly lowering the lower grip or hook. Stop the platform travel the moment a force is registered on the gauge and then back off very slightly. At this point, note the reading on the ruler. The ruler may be adjusted on the rod to line up with the pointer for easier reading. The CHATILLON force gauges have different deflection and this must be accounted for when taking deflection measurements. Refer to TABLE 1 for deflection of each model gauge at full scale. Example: If A DPP 50 LB gauge was loaded at 50 LB (full scale) and the deflection on the ruler indicated 2.0 inches, the true movement of the sample was 1.9 inches due to the shaft of the DPP force gauge moving 0.1 inches.
- 6.4. When using the digital indicator it is necessary to compensate for deflection of the force gauge when performing a tension test. To obtain the true deflection of the test specimen refer to TABLE 1 for the full scale deflection for each force gauge model. Example: If A DPP 50 LB gauge was loaded at 25 LB (half scale) and the deflection on the digital indicator was 2.000 inches, the true movement of the sample was 1.950 inches due to the shaft of the DPP force gauge moving .05 inches.

7. REPAIR OF MT TEST STAND

If MT test stand becomes damaged, please contact a local AMETEK distributor to obtain spare parts or repair service.

8. PRTS LIST
MT 150 LB LEVER ASSEMBLY

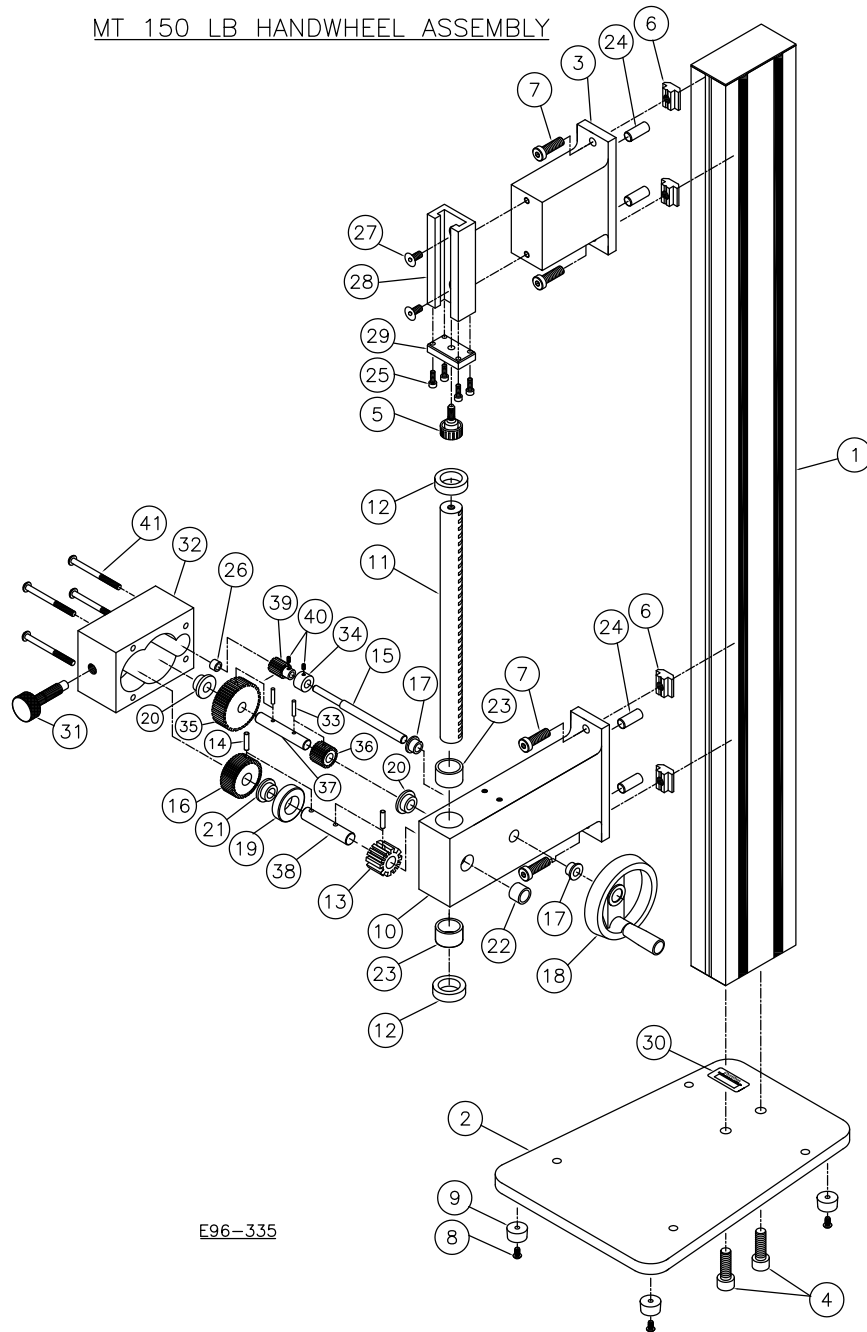


MT 150 LB LEVER ASSEMBLY

30	LABEL, LOGO	NC002621	1	
29	RETAINING PLATE	PLT/1206	1	
28	ADAPTER, FIXED 'T' SLOT	BLK/0426	1	
27	SCREW, FLAT HEAD M6 X 16mm	70113406016	2	
26	DOWEL PIN ϕ 10mm X 20mm LONG	NC002723	4	
25	SCREW, SHC M4 X 12mm	E08-235	4	
24	BUSHING, SLEEVE	BUT/0203	2	25 OD X 20 ID X 15 LONG
23	BUSHING, SLEEVE	BUT/0198	1	18 OD X 12 ID X 8 LONG
22	BUSHING, FLANGED	BUT/0196	1	18 OD X 12 ID X 8 LONG
21	WAVE SPRING	SRT/0206	1	
20	KNOB, HANDLE	HDL/0142	1	
19	BEARING RING	BGT/0172	1	
18	LEVER, SHORT	LVT/0157	1	
17	LEVER BOSS	BOT/0427	1	
16	WASHER, TENSIONING	WST/0247	1	
15	SHAFT, PINION	SHT/0289	1	
14	PIN, ϕ 4mm X 18mm	PIN/0444	2	
13	GEAR WHEEL	WHT/0245	1	
12	END STOP	SPT/0304	2	
11	RACK, ROUND 150 LB	EXT/0115	1	
10	BEAM, 150 LB LEVER ASSY	BMT/0120	1	
9	FOOT, RUBBER	FTT/0142	4	
8	SCREW, PAN HEAD M4 X 10mm	70101204010	5	
7	SCREW, SHC M8 X 20mm	E08-255	4	
6	T-BLOCK, 10mm SLOT, M8 THREAD	NC002719	4	
5	SCREW, LOCKING	SCT/0292	1	
4	SCREW, HEX HEAD M12 X 30mm	E08-254	2	
3	BEAM, FIXED GAUGE	BMT/0117	1	
2	BASE	BST/0036	1	
1	COLUMN ASSEMBLY, ULTRA	SPK-MT150-1500	1	150 LB, 1500 mm LENGTH
1	COLUMN ASSEMBLY, EXTENDED	SPK-MT150-1000	1	150 LB, 1000 mm LENGTH
1	COLUMN ASSEMBLY, STANDARD	SPK-MT150-0750	1	150 LB, 750 mm LENGTH
ITEM NO.	NAME	PART NUMBER	QTY	NOTE

E96-334

MT 150 LB HANDWHEEL ASSEMBLY



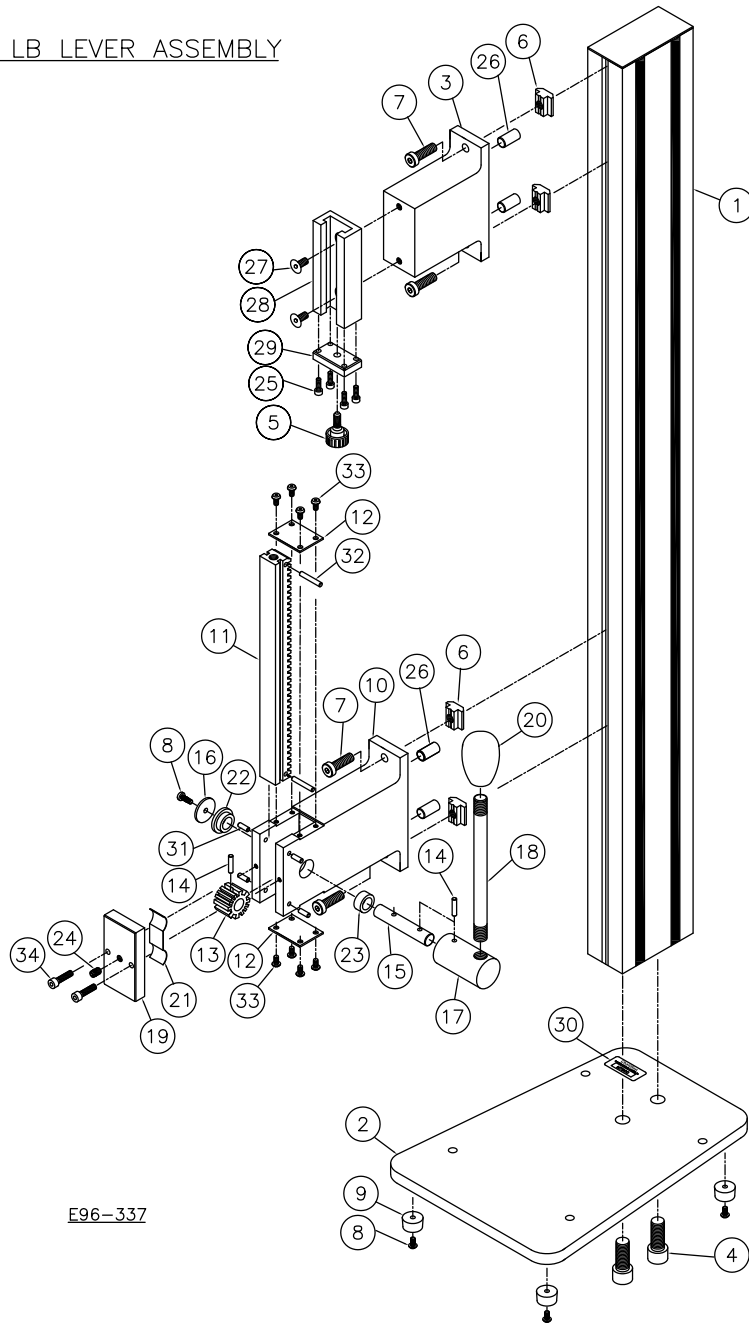
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MT 150 LB HANDWHEEL ASSEMBLY

41	SCREW, M5 X 60mm BUTTON	70108405060	4	
40	SET SCREW, M3 X 5mm	70106203005	2	
39	PINION	PUT/0448	1	
38	SHAFT, PINION	SHT/0285	1	
37	SHAFT, GEARTRAIN	SHT/0286	1	
36	GEAR, 18 TEETH	GRT/0060	1	
35	GEAR, 45 TEETH	GRT/0059	1	
34	BOSS SPACER	BOT/0422	1	
33	PIN, DOWEL ϕ 3mm X 16mm LONG	PIN/0443	2	
32	GEAR COVER	COV/0638	1	
31	LOCKING SCREW	SCT/0300	1	
30	LABEL, LOGO	NC002621	1	
29	RETAINING PLATE	PLT/1206	1	
28	ADAPTER, FIXED 'T' SLOT	BLK/0426	1	
27	SCREW, FLAT HEAD M6 X 16mm	70113406016	2	
26	BUSHING, SLEEVE	BUT/0202	1	9 OD X 6 ID X 6 LONG
25	SCREW, SHC M4 X 12mm	E08-235	4	
24	DOWEL PIN ϕ 10 X 20 LONG	NC002723	4	
23	BUSHING, SLEEVE	BUT/0203	2	25 OD X 20 ID X 15 LONG
22	BUSHING, SLEEVE	BUT/0198	1	18 OD X 12 ID X 8 LONG
21	BUSHING, FLANGED	BUT/0196	1	18 OD X 12 ID X 8 LONG
20	BUSHING, FLANGED	BUT/0197	2	16 OD X 10 ID X 8 LONG
19	BEARING RING	BGT/0172	1	
18	HANDWHEEL, 150 LB	HDL/0145	1	
17	BUSHING, FLANGED	BUT/0201	2	12 OD X 8 ID X 8 LONG
16	GEAR, 36 TEETH	GRT/0061	1	
15	SHAFT, DRIVE	SHT/0283	1	
14	PIN, ϕ 4MM X 18mm	PIN/0444	2	
13	GEAR WHEEL	WHT/0245	1	
12	END STOP	SPT/0304	2	
11	RACK, ROUND 150 LB	EXT/0115	1	
10	BEAM, 150 LB GEAR ASSY	BMT/0119	1	
9	FOOT, RUBBER	FTT/0142	4	
8	SCREW, PAN HEAD M4 X 10mm	70101204010	4	
7	SCREW, SHC M8 X 20mm	E08-255	4	
6	T-BLOCK, 10mm SLOT, M8 THREAD	NC002719	4	
5	SCREW, LOCKING	SCT/0292	1	
4	SCREW, HEX HEAD M12 X 30mm	E08-254	2	
3	BEAM, FIXED GAUGE	BMT/0117	1	
2	BASE	BST/0036	1	
1	COLUMN ASSEMBLY, ULTRA	SPK-MT150-1500	1	150 LB, 1500 mm LENGTH
1	COLUMN ASSEMBLY, EXTENDED	SPK-MT150-1000	1	150 LB, 1000 mm LENGTH
1	COLUMN ASSEMBLY, STANDARD	SPK-MT150-0750	1	150 LB, 750 mm LENGTH
ITEM NO.	NAME	PART NUMBER	QTY	NOTE

E96-336

MT 500 LB LEVER ASSEMBLY



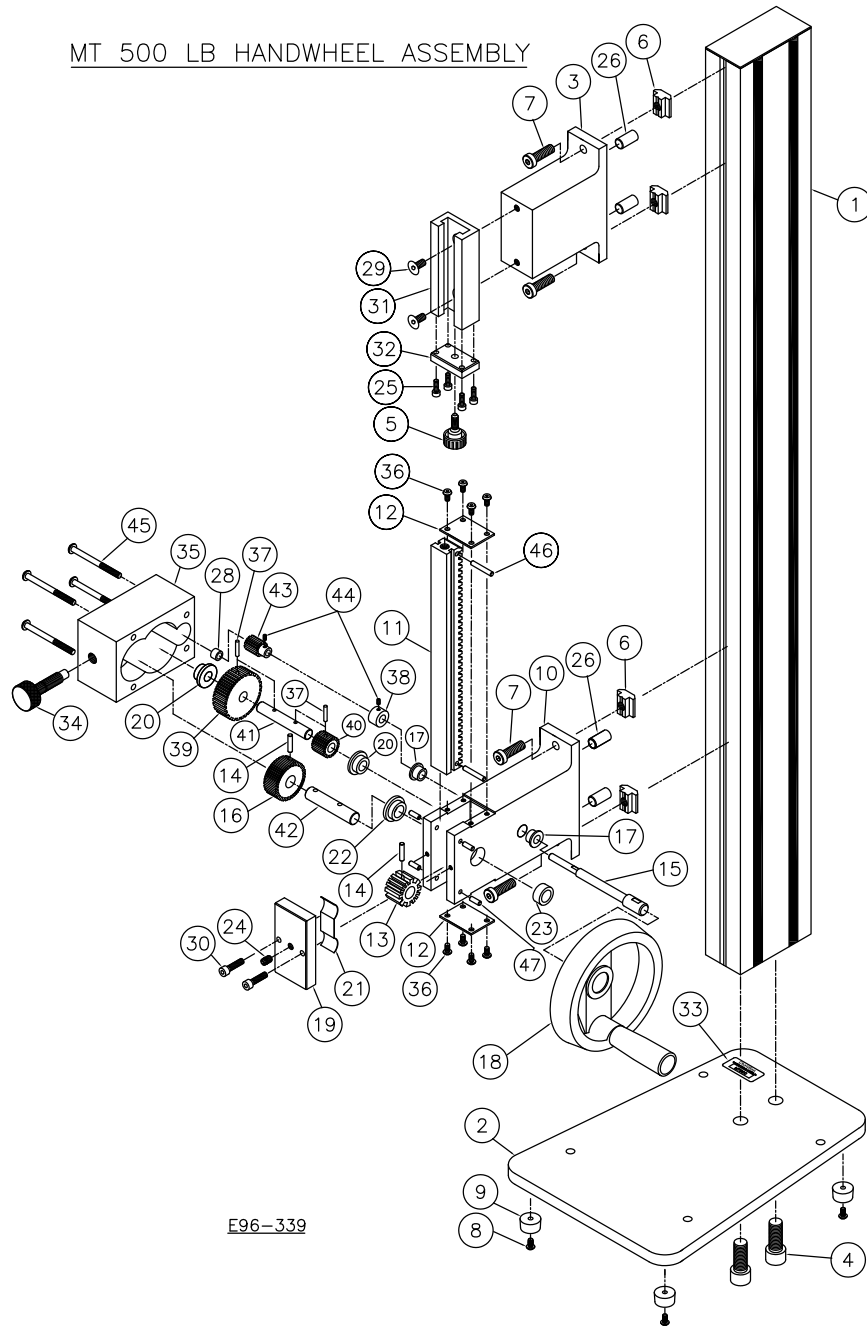
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MT 500 LB LEVER ASSEMBLY

34	SCREW, SHC M5 X 20mm	E08-247	2	
33	SCREW, BHS M4 X 8mm	E08-253	8	
32	PIN, DOWEL, Ø4mm x 30mm LONG	NC002743	2	
31	PIN, DOWEL, Ø4mm x 12mm LONG	NC002744	4	
30	LABEL, LOGO	NC002621	1	
29	RETAINING PLATE	PLT/1206	1	
28	ADAPTER, FIXED 'T' SLOT	BLK/0426	1	
27	SCREW, FLAT HEAD M6 X 16mm	70113406016	2	
26	DOWEL PIN Ø10mm X 20mm LONG	NC002723	4	
25	SCREW, SHC M4 X 12mm	E08-235	4	
24	SCREW, SET M6 X 10mm	E08-248	1	
23	BUSHING, SLEEVE	BUT/0198	1	18 OD X 12 ID X 8 LONG
22	BUSHING, FLANGED	BUT/0196	1	18 OD X 12 ID X 8 LONG
21	SPRING, LEAF	SRT/0210	1	
20	KNOB, HANDLE	HDL/0142	1	
19	PLATE, PRESSURE	PLT/1204	1	
18	LEVER, LONG	LVT/0395	1	
17	LEVER BOSS	BOT/0427	1	
16	WASHER, TENSIONING	WST/0247	1	
15	SHAFT, PINION	SHT/0289	1	
14	PIN, Ø4mm X 18mm	PIN/0444	2	
13	GEAR WHEEL	WHT/0245	1	
12	PLATE, COVER	PLT/1203	2	
11	RACK, SQUARE 500 LB	02/0572	1	
10	BEAM, 500 LB LEVER ASSY	BMT/0116	1	
9	FOOT, RUBBER	FTT/0142	4	
8	SCREW, PAN HEAD M4 X 10mm	70101204010	5	
7	SCREW, SHC M8 X 20mm	E08-255	4	
6	T-BLOCK, 10mm SLOT, M8 THREAD	NC002719	4	
5	SCREW, LOCKING	SCT/0292	1	
4	SCREW, HEX HEAD M12 X 30mm	E08-254	2	
3	BEAM, FIXED GAUGE	BMT/0117	1	
2	BASE	BST/0036	1	
1	COLUMN ASSEMBLY, ULTRA	SPK-MT500-1500	1	500 LB, 1500 mm LENGTH
1	COLUMN ASSEMBLY, EXTENDED	SPK-MT500-1000	1	500 LB, 1000 mm LENGTH
1	COLUMN ASSEMBLY, STANDARD	SPK-MT500-0750	1	500 LB, 750 mm LENGTH
ITEM NO.	NAME	PART NUMBER	QTY	NOTE

E96-338

MT 500 LB HANDWHEEL ASSEMBLY



E96-339

MT 500 LB HANDWHEEL ASSEMBLY

47	PIN, DOWEL M4 X 12mm LONG	NC002744	4	
46	PIN, DOWEL M4 X 30mm LONG	NC002743	2	
45	SCREW, M5 X 60mm BUTTON	70108405060	4	
44	SET SCREW, M3 X 5mm	70106203005	2	
43	PINION	PUT/0448	1	
42	SHAFT, DRIVE	SHT/0285	1	
41	SHAFT, GEARTRAIN	SHT/0286	1	
40	GEAR, 18 TEETH	GRT/0060	1	
39	GEAR, 45 TEETH	GRT/0059	1	
38	BOSS SPACER	BOT/0422	1	
37	PIN, DOWEL ø3mm X 16mm LONG	PIN/0443	2	
36	SCREW, BHS, M4 X 0.7 X 8mm	E08-253	8	
35	GEAR COVER	COV/0638	1	
34	LOCKING SCREW	SCT/0300	1	
33	LABEL, LOGO	NC002621	1	
32	RETAINING PLATE	PLT/1206	1	
31	ADAPTER, FIXED 'T' SLOT	BLK/0426	1	
30	SCREW, SHC M5 X 20mm	E08-247	2	
29	SCREW, FLAT HEAD M6 X 16mm	70113406016	2	
28	BUSHING, SLEEVE	BUT/0202	1	9 OD X 6 ID X 6 LONG
27				
26	DOWEL PIN ø10 X 20 LONG	NC002723	4	
25	SCREW, SHC M4 X 12mm	E08-235	4	
24	SCREW, SET, M6 X 10mm	E08-248	1	
23	BUSHING, SLEEVE	BUT/0198	1	18 OD X 12 ID X 8 LONG
22	BUSHING, FLANGED	BUT/0196	1	18 OD X 12 ID X 8 LONG
21	SPRING, LEAF	SRT/0210	1	
20	BUSHING, FLANGED	BUT/0197	2	16 OD X 10 ID X 8 LONG
19	PLATE, PRESSURE	PLT/1204	1	
18	HANDWHEEL, 500 LB	NC002754	1	
17	BUSHING, FLANGED	BUT/0201	2	12 OD X 8 ID X 8 LONG
16	GEAR, 36 TEETH	GRT/0061	1	
15	SHAFT, DRIVE	NC002755	1	
14	PIN, ø4MM X 18mm	PIN/0444	2	
13	GEAR WHEEL	WHT/0245	1	
12	PLATE, COVER	PLT/1203	2	
11	RACK, SQUARE 500 LB	02/0572	1	
10	BEAM, 500 LB WHEEL ASSY	BMT/0115	1	
9	FOOT, RUBBER	FTT/0142	4	
8	SCREW, PAN HEAD M4 X 10mm	70101204010	4	
7	SCREW, SHC M8 X 20mm	E08-255	4	
6	T-BLOCK, 10mm SLOT, M8 THREAD	NC002719	4	
5	SCREW, LOCKING	SCT/0292	1	
4	SCREW, HEX HEAD M12 X 30mm	E08-254	2	
3	BEAM, FIXED GAUGE	BMT/0117	1	
2	BASE	BST/0036	1	
1	COLUMN ASSEMBLY, ULTRA	SPK-MT500-1500	1	500 LB, 1500 mm LENGTH
1	COLUMN ASSEMBLY, EXTENDED	SPK-MT500-1000	1	500 LB, 1000 mm LENGTH
1	COLUMN ASSEMBLY, STANDARD	SPK-MT500-0750	1	500 LB, 750 mm LENGTH
ITEM NO.	NAME	PART NUMBER	QTY	NOTE

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