2026
2027
2126
2127

Technical Manual
and
Parts Catalog

INTRODUCTION

This publication is provided solely as a guide for individuals who have received METTLER TOLEDO Technical Training in servicing the METTLER TOLEDO product.

Information regarding METTLER TOLEDO Technical Training may be obtained by writing to:

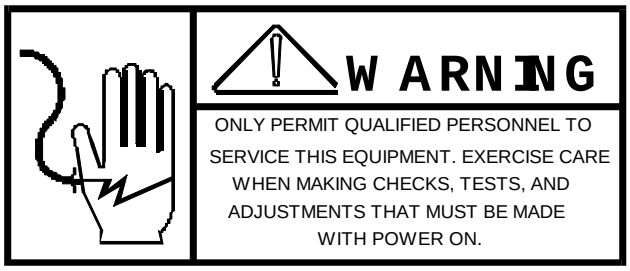
METTLER TOLEDO
Training Center
P.O. Box 1705
Columbus, Ohio 43216
(614) 438-4400

PRECAUTIONS

- **READ** this manual before operating or servicing this equipment.

- **ALWAYS REMOVE POWER** and wait at least 30 seconds **BEFORE** connecting or disconnecting any internal harnesses. Failure to observe these precautions may result in damage to, or destruction of the equipment.

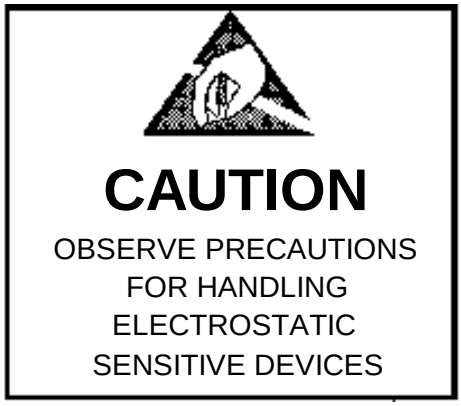
- **ALWAYS** take proper precautions when handling static sensitive devices.



- **DO NOT** connect or disconnect a load cell scale base to the equipment with power connected or damage will result.

- **SAVE** this manual for future reference.

- **DO NOT** allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.



- **ALWAYS DISCONNECT** this equipment from the power source before servicing.

- **CALL** METTLER TOLEDO for parts, information, and service.

I. UNPACKING, HANDLING & PREPARATION FOR CALIBRATION

The 2026 and 2126 are shipped complete in one box; however, there is some assembly required. To unpack and set up the scale, use the following procedure:

A. Check box for any visual signs of damage. IF DAMAGE APPEARS MAKE A CLAIM WITH THE CARRIER.

B. Open the top of the box and remove the packing material. The following contents will be exposed.

1. Indicator (either Toldeo Model 8139 or 3205).
2. Load cell mounting plate with load cell attached.
3. Indicator support frame.
4. Cloth bag containing miscellaneous hardware and indicator power cord.
5. Two (2) threaded rods and one (1) steelyard rod.
6. Four (4) wheels (2126 and 2127 only).
7. Scale base
8. Technical Manual and Parts Catalog.

C. Remove the components and assemble per the drawing in the manual.

D. Follow set up and calibration procedures outlined in the Technical Manual for the Toledo indicator selected. The manual numbers are as follows:

Model 8139: TM 008139I00
(use with Models 2026 and 2126)

Model 3205: TM 003205Ioo
(use with Models 2027 and 2127)

II. GENERAL DESCRIPTION AND THEORY OF OPERATION

The Toledo modesl 2026, 2126, 2027 and 2127 are electro-mechanical, bench and portable scales which combine mechanical under-structure with state-of-the-art electronic indication. The scales, which are designed t be both durable and accurate, are well suited for a variety of industrial applications.

III. FEATURES

- Fabricated steel bases utilizing rugged and long-lasting levers
- Phenolic non-conductive wheels for portability (2126 and 2127 only)
- Choice of indicators which provide a digital display of the weight and in either straight weighing or parts counting modes.
- Automatic, or in the case of the 2027 and 2127, automatic and manual tare
- lb/kg switching
- Printer output (standard with 2027/2127; optional with 2026 and 2126)
- Battery operation (optional with 2027 and 2127 only)

IV. SPECIFICATIONS

A. APPLICATION

1. Bench and floor applications for general weighing and parts counting.

2. These scales are not designed for hose-down applications. Typical examples of mis-application
of these scales include, but are not limited to:

   a. Immersions in liquids
   b. Hosedown
   c. Splashing liquids
   d. Corrosive chemical environments

3. Toldedo Scale manufactures other scales that are suitable for “hosedown” applications.

B. SIZES AND CAPACITIES

(See Table 1)

C. PERFORMANCE

1. Force connection: Pivot and bearing through reduction lever to cone pivot and bearing at load cell.
2. Load Cell: Toledo general purpose 25, 50, 100 and 200.
3. Platform: Slip on 12 gage painted carbon steel.
4. Construction: fabricated, painted carbon steel base and levers.
5. Design Features
   a. Support:
      2026/2027 - four (4) adjustable feet to provide leveling capabilities
      2126/2127 - four (4) wheels for portability
   b. Adjustments:
      shift adjustments by honing pivots.
6. Full scale output: 2 ± .1m V/V
7. Zero balance: ± 1.5% full scale capacity
8. Warm up period: 15 minutes
9. Safe overload rating: 125% full scale capacity
10. Corner loading capacity: 100% full scale capacity
11. Creep: .02% full scale capacity
12. Non-linearity: .02% full scale capacity
13. Hysteresis: .02% full scale capacity
14. Zero temperature compensation 20 PPM/Degree C
15. Span temperature compensation 20 PPM/Degree C
16. Repeatability: .015% full scale capacity
17. Shift: .025 full scale capacity (1/2 load, 1/2 distance to edge)

NOTE: Scales meet or exceed H-44 accuracy of .05% of applied load plus .5 graduation with a minimum tolerance of ± 1.0 graduations.

D. POWER SUPPLY REQUIREMENT

Transducer excitation is provided by the digital indicator.
Power supply provided to the digital indicator must be 115 VAC, 50/60 Hz or 230 VAC, 50/60 Hz. There is a voltage selector switch on each indicator. Be sure that this is set correctly.

TABLE 1

CONFIGURATIONS, SIZES AND CAPACITIES

Scale	Indication	Increments	Load Cell	Initial Pull	Lever Multiple	Indication Pull	Platform Dimension	Base Height
2026	100 x .05 lb	2000				9.5 lb		
	(50 x .02 kg)	2500	25lb	8 lb	10.42	10.5 lb		
Model 2020 Base								
Model 8139 Indctr.	250 x .1 lb	2500				23.9 lb		
	(100 x .05 kg)	2000	50lb	8 lb	10.42	21.1 lb	19 - 1/4" x 20"	7-1/2 "
2126	250 x .1 lb	2500				17.8lb		
	(100 x .05 kg)	2000	50lb	8lb	14.00	15.7lb		
Model 4181 Base								
Model 8139 Indctr.	500 x .2 lb	2500				35.7lb		
	(250 x .1 kg)	2500	100lb	8lb	14.00	39.3lb		
	1000 x .5 lb	2000				71.4lb	19-1.4" x 28-1/8"	7-1/2 "
	500 x .2 kg	2500	200lb	8lb	14.00	78.7lb		
2027	100 x .02 lb	5000				9.6lb		
	(50 x .01 kg)	5000	25lb	8lb	10.42	10.6lb		
Model 2020 Base								
Model 3205 Indctr.	250 x .05 lb	5000				23.9lb		
	(100 x .02 kg)	5000	50lb	8lb	10.42	21.1lb	19-1/4" x 20"	7-1/2 "
2127	250 x .05 lb	5000				17.9lb		
	(100 x .02 kg)	5000	50lb	8lb	14.00	15.8lb		
Model 4181 Base								
Model 3205 Indctr.	500 x .1 lb	5000				35.7lb		
	(250 x .05 kg)	5000	100lb	8lb	14.00	39.3lb		
	1000 x .2 lb	5000				78.7lb	19-1/4 x 28-1/8"	7-1/2 "
	(500 x .1 kg)	5000	100lb	8lb	14.00	78.7lb		

V. SCALE ASSEMBLY

1. The scale is shipped partially assembled. The base and levers are assembled completely and required the attachment of the column, steelyard rod, hooks, load cell and the digital indicator.

2. Make sure that the scale base is stable and level before beginning the column assembly. Adjust the scale base feet is necessary to achieve this.

3. Refer to Figure 1 for the assembly configuration of the column and the digital indicator for the 2026. Refer to Figure 2 for the assembly configurationof the column and the digital indicator for the 2126. Refer to Figure 3 for the assembly configuration of the column and the digital indicator for the 2027. Refer to Figure 4 for the assembly configuration of the column and the digital indicator for the 2127.

VI. DIGITAL INDICATOR

1. Connect the load cell wiring harness to the digital indicator.
2. Program the digital indicator for weighing system calibration. Refer tot he technical manual of the 8139 Digital Indicator for correct switch settings.
3. The internal switches should be set as follows for the models 2027 and 2127.

STRAIGHT WEIGH MODELS (2027 Ram 1 & 2, 2127 Ram 2 & 3)

SWITCH 1 -
1-1 = Expand Enable
1-2 = On For 2127 - Off For 2027
1-3 = Averaging Enable
1-4 = Calibrate Enable

SWITCH 2 -
2-1 - Not Connected

2--2	2-3	2-4	=Capacity as Below	Load Cell Size
1	1	1	100 LB x .02	25 LB
0	1	1	500 LB x .1	100 LB
1	0	1	1000 LB x .2	100 LB
0	0	1	250 LB x .05	50 LB
1	1	0	50 KG x .01	25 LB
0	1	0	250 KG x .05	100 LB
1	0	0	500 KG x .01	100 LB
0	0	0	100 KG x .02	50 LB

2-5 = Tare Interlock Enable
2-6 = Autoclear Enable

2-7	2-8	=Print Format As Below
0	0	= Single Width Display Print
1	0	= Double Width Display Print
0	1	= Tare One Line
1	1	= Tare 3 Line

2-9 = Motion Track Enable

PARTS COUNTING MODELS (2027 Rams 11 & 12, 2127 Ram 12 & 13)

SWITCH 1 -

1-1 = Expand Enable
1-2 = On
1-3 = 1/2 Increment Sample Wt. Enable
1-4 = Calibrate Disable

SWITCH 2 -
2-1 = Not connected

2--2	2-3	2-4	=Capacity as Below	Load Cell Size
1	1	1	100 LB x .02	25 LB
0	1	1	500 LB x .1	100 LB
1	0	1	1000 LB x .2	100 LB
0	0	1	250 LB x .05	50 LB
1	1	0	50 KG x .01	25 LB
0	1	0	250 KG x .05	100 LB
1	0	0	500 KG x .1	100 LB
0	0	0	100 KG x .02	50 LB

2-5 = Tare Inhibit
2-6 = Autoclear Enable

2-7	2-8	=Print Format As Below
0	0	= Single Width Count Print
1	0	= Double Width Count Print
0	1	= WT-APW-Count One Line Print
1	1	= WT-APW-Count 3 Line Print

4. Insert the line cord into 115 VAC, 50/60 Hz, or 230 VAC, 50/60 Hz separate grounded power supply. BE SURE TO SET THE SELECTOR SWITCH ON THE INDICATOR FOR THE PROPER VOLTAGE.

WARNING: For continued protection against shock hazard, connect to properly grounded outlet only. DO NOT remove ground prong.

VII. CALIBRATION

Changing indications, instability, or cause of any mechanical friction must be corrected before proceeding with scale calibration.

Allow the load cell digital instrumentation system to warm-up for a minimumperiod of fifteen (15) minutes before scale calibration.

SCALE CALIBRATION

(Span)
Always calibrate the scale using a test weight equal to the scale capacity.

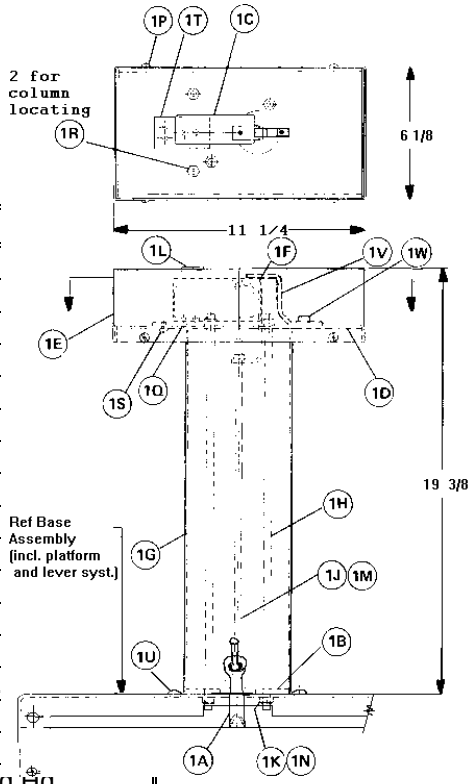
1. With the appropriate test weight, proceed with the calibration of the weighing system according to the instructions described int he technical manual of the 8139 Digital Indicator or the 3205 Digital Indicator.

2. Models 2027 and 2127 which use the model 3205 indicator are equipped with calibration function. Follow the instrucitons given in the 3205 manual for use of this function and use the following chart to select the proper calibration weight:

Model	**Calibration Weight**
2027	100 lb / 50 kg
2127	250 lb / 100 kg

VIII. PRINTS

Figure 1. 2026 Short Column



PARTS SHOWN

SYM	QTY	PART NUMBER	DESCRIPTION
1A	1	08028400A	Hook
1B	2	08028800A	Plate, Column
1D	1	11908200A	Top Channel
1E	1	11908300A	Cover
1F	1	11908600A	Hook Assembly
1G	1	11909000A	Column, Short
1H	2	11909100A	Rod, Column
1J	1	11909200A	Rod, Steelyard
1K	4	00004300A	Nut 3/8”
1L	1	P0016200A	Grommet, Rubber
1M	1	R00433050	Nut 5/16” - 18”
1N	4	R0044000A	Lock Washer 3/8”
1P	4	R00844130	Screw 8-32 Ph.Hd
1R	2	R0118100A	Screw 1/4-28 Hex
1S	2	R0115513A	Screw 10-32 Ph.Ru.Hd.
1U	2	R01899140	Plug Button
1V	1	12123400A	Steelyard Retainer
1W	1	R01388210	Screw

USE ONE OF THE FOLLOWING LOAD CELLS

1C	1	A11454700A Load Cell 50 LB
1Q	2	R01258050 Screw 10-32 Ph.Fl.Hd.
1T	1	11908000A Plate, L.C. Adaptor

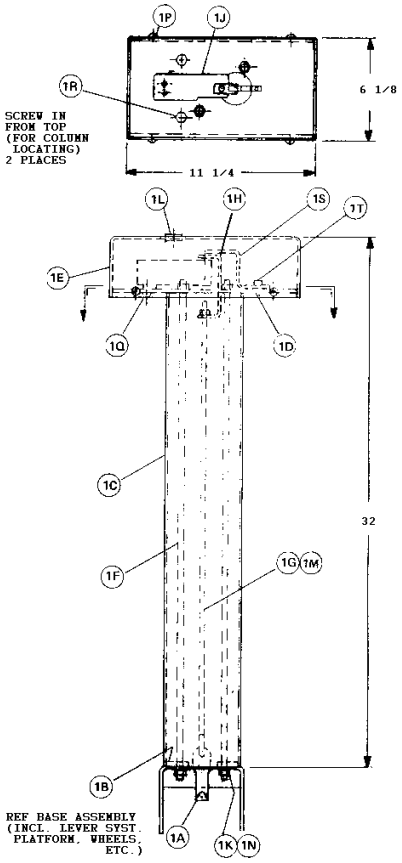
OR

1C	1	11454600A Load Cell 25 LB
1Q	2	R01258050 Screw
1T	11	11908000A Plate, L.C. Adaptor

Figure 2. 2126 Tall Column

PARTS SHOWN

SYM	QTY	PART NUMBER	DESCRIPTION
1A	1	08028400A	Hook
1B	2	08028800A	Plate, Column
1C	1	11908100A	Column, Tall
1D	1	11908200A	Top Channel
1E	1	11908300A	Cover
1F	2	11908400A	Rod, Column
1G	1	11908500A	Rod, Steelyard
1H	1	11908600A	Hook Assembly
1K	4	00004300A	Nut 3/8”
1L	1	P0016200A	Grommet, Rubber
1M	1	R00433050	Nut 5/16” - 18”
1N	4	R0044000A	Lock Washer 3/8”
1P	4	R00844130	Screw 8-32 Ph.Hd.3
1Q	2	R0115513A	Screw 10-32 Ph.Hd.
1R	2	R0118100A	Screw 1/4-28 xx 7/8
1T	1	R01368210	Screw



USE ONE OF THE FOLLOWING LOAD CELLS

1J	1	11692500A	Load Cell 100 LB
1S	1	152123500A	Steelyard Retainer

OR (NOT SHOWN)

	1	A11454700A	Load Cell 50 LB
	1	11908000A	Plate, L.C. Adaptor
	2	R01258050	Screw, Ph.Fl.Hd.10-32 x 3/8
1S	1	12123400A	Steelyard Retainer

OR

1J	1	11692900A	Load Cell 200 LB
1S	1	12123500A	Steelyard Retainer

Figure 3. 2027 Short Column

PARTS SHOWN

SYM	QTY	PART NUMBER	DESCRIPTION
1A	4	4300A	Nut 3/8”
1B	1	8028400A	Hook
1C			
1D	1	11908600A	Hook Assembly
1E	1	11909000A	Column, Short
1F	2	11909100A	Rod, Column
1G	1	11909200A	Rod, Steelyard
1H	1	12103700A	Plate, Column Top
1J	2	12103800A	Bracket, Cover
1M	1	R0043300A	Nut 5/16” - 18”
1N	4	R0044000A	Washer, Lock 3/8”
1P	2	R0115500A	Screw 10-32 Ph.Rd.Hd
1R	4	R01347050	Screw, Hex Hd. & W
1V	2	R01899140	Plug Button
1W	1	12123400A	Steelyard Retainer
1X	1	R0138800A	Screw

USE ONE OF THE FOLLOWING LOAD CELLS

1S	1	A11454700A	Load Cell 50 LB
1T	2	R01258050	Screw 10-32 Ph.F.Hd.
1U	1	11908000A	Plate, L.C. Adaptor

OR

1S	1	11454600A	Load Cell 25 LB
1T	2	SAME	SAME
1U	1	SAME	SAME

OPTIONAL - USE WITH BATTERY

1K	1	12105600A	Shelf, Battery
1L	1	12105700A	Holder, Battery
1Q	6	R01236050	Screw, 8-32 Ph.Rd.Hd-W

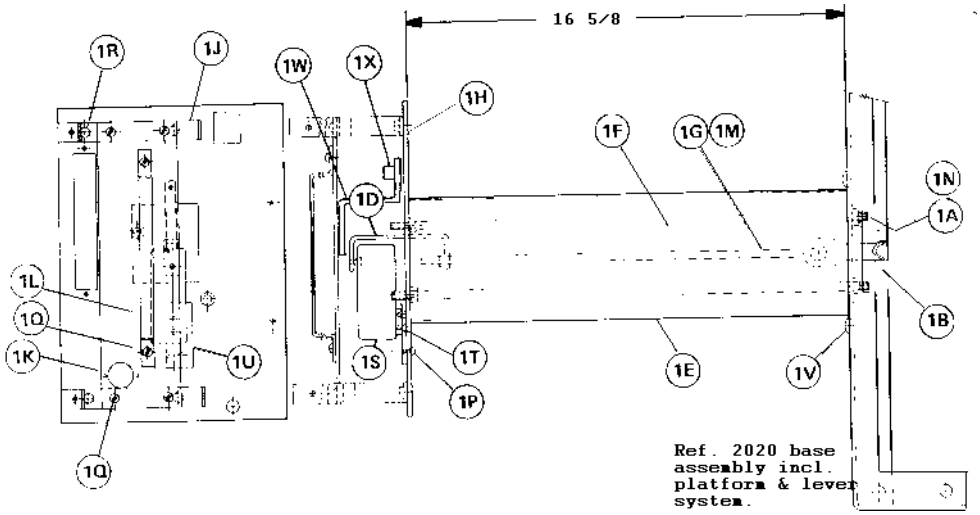


Figure 4. 2127 Tall Column

CONSISTS OF

SYM	QTY	PART NUMBER	DESCRIPTION
1A	4	4300A	Nut 3/8”
1B	1	8028400A	Hook
1C			
1D	1	1190810 A	Column
1E	2	11908400A	Rod, Column
1F	1	11908500A	Rod, Steelyard
1G	1	11908600A	Hook Assembly
1H	1	12103700A	Plate, Column Top
1J	2	12103800A	Bracket, Cover
1M	1	R0043300A	Nut 5/16” - 18”
1N	4	R0044000A	Washer, Lock 3/8”
1P	2	R0115500A	Screw 10-32 Hex Hd. & W
1R	4	R01347050	Screw 10-32 Hex Hd. & W
1U	1	R01388210	Screw

USE ONE OF THE FOLLOWING LOAD CELLS

1S	1	A11454700A	Load Cell 50 LB
1T	2	R01258050	Screw 10-32 Ph.F.Hd.

OR

1S	1	A11454700A	Load Cell 50 LB
*	1	11908000A	Adaptor HP
*	2	R012585050	Screw, 10-32 F.H.
1T	1	12123400A	Steelyard Retainer

OPTIONAL - USE WITH BATTERY

1K	1	12105600A	Shelf, Battery
1L	1	12105700A	Holder, Battery
1Q	6	R01236050	Screw, 8-32 Ph.Rd.Hd-W

** Not Shown*