

# Troemner Stainless Steel Electronic Balance Calibration Weights

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## ANSI/ASTM Classes 1, 2, 3 and 4 and Troemner UltraClass



**General Information** – To get all the accuracy your electronic balance and/or scale provides, you need to perform routine calibrations and verifications using precision calibration weights. Troemner's Stainless Steel Electronic Balance Calibration Weights are intended for this purpose and are available in Troemner UltraClass and ANSI/ASTM Classes 1, 2, 3 and 4 in sizes ranging from 10 g to 30 kg. Weights are available in a cylindrical design up to 5 kg and a stackable grip-handle design from 5 kg to 30 kg for all necessary testing, calibration and adjustment of electronic scales and balances. All ANSI/ASTM E617 class weights

meet or exceed specifications for tolerance, construction, surface finish, and magnetism as outlined in ANSI/ASTM E617. Weights 5 kg and below are supplied in protective cases.

It is recommended that the tolerance of the weight you select have a tolerance limit that is 1/3 of the readability of the balance and/or scale you are checking or calibrating. For more information refer to the Weight Selector Guide on our website at [www.troemner.com](http://www.troemner.com) or check the Mass Standards Handbook in the back of this desk reference.

**Why UltraClass?** – Troemner UltraClass weights are the most precise type II two-piece weights available with weight tolerances 50% greater than ANSI/ASTM E617 Class 1 tolerances. UltraClass weights combine high precision with the advantage of two-piece construction (1 g and larger) avoiding costly replacement issues associated with one-piece weights.



## Electronic Balance Calibration Weights

### **ANSI/ASTM Class Tolerances –**

Stainless Steel Electronic Balance Calibration Weights are adjusted to ANSI/ASTM classes 1, 2, 3 and 4 and Troemner UltraClass. Troemner UltraClass weight tolerances are 50% better than ANSI/ASTM E617 Class 1. Please see the Tolerance Chart within the Mass Standards Handbook in the back of this desk reference for specific tolerances for each weight.

### **Construction and General Shape –**

All ANSI/ASTM E617 class weights and Troemner UltraClass meet or exceed specifications for tolerance, construction, surface finish, and magnetism as outlined in ANSI/ASTM E617. Troemner's Electronic Balance Calibration Weights are manufactured from the highest quality stainless steel alloy, possessing closely controlled density, low magnetic susceptibility, good stability and resistance to corrosion and damage through handling. All of Troemner's Electronic Balance

Calibration Weights are type II which have an adjusting cavity to allow for adjustment during future calibrations. Within the weight there is a cavity that is filled with adjusting material, typically the same material from which the weight is made. This cavity is sealed during the production process to ensure the stability of the weight. Electronic Balance Calibration Weights are cylindrical in shape and flat on top, to stack easily on center.

- Weights from 10 g to 500 g are machined as straight cylinders with the adjusting cavity opening in the bottom of the weight.
- Cylindrical weights from 1 kg to 5 kg are machined as cylinders and have a groove around the diameter approximately 25% from the top of the weight to allow for easier handling. The adjusting cavity opening is in the bottom of the weight for the 1 kg weight and on the top of the weight for the 2 kg through 5 kg.



- Grip handle weights from 5 kg to 30 kg have a recess in the top center of the weight with a lifting handle spanning the recess slightly below the top surface of the weight. The recess allows the user to pick up the weight using the handle and provides clearance for the user's hand. Grip handle weights 5 kg to 10 kg are 5 inches in diameter. Grip handle weights above 10 kg to 30 kg are 6 inches in diameter. The adjusting cavity for grip handle weights is within the lifting handle.

Grip handle

Cylinder with groove

Straight cylinder



# Electronic Balance Calibration Weights



The following table describes the material used in the construction of all of Troemner’s Electronic Balance Calibration Weights:

DESCRIPTION	BASE MATERIAL	DENSITY
10 g—1 kg	316 Stainless Steel	7.95 g/cm <sup>3</sup>
1200 g—30 kg	303 Stainless Steel	7.86 g/cm <sup>3</sup>

**Surface Finish –** Troemner UltraClass as well as ANSI/ASTM Classes 1, 2, and 3 have all surfaces polished to a perfect, mirror like finish. ANSI/ASTM Class 4 weights have a satin like appearance and finish. All surface finishes meet or exceed ANSI/ASTM E617 specifications. For ANSI/ASTM E617 surface finish specifications see the Mass Standards Handbook in the back of this desk reference. Surface finish for Troemner UltraClass meets or exceeds ANSI/ASTM E617 Class 1 specifications.

## Suggested Applications –

- It is recommended that the weight selected to calibrate a balance and/or scale have a tolerance small enough as not to be detected by the balance and/or scale. Troemner recommends the tolerance of a weight selected for calibrating a balance and/or scale is no more than 1/3 of the readability or precision of the balance and/or scale being calibrated. If this cannot be achieved, it is suggested that a Class 1 or Troemner UltraClass Electronic Balance Calibration Weight with a NVLAP certificate be ordered which provides the actual mass value for the weight which reduces measurement uncertainty.

- Electronic Balance Calibration Weights can also be used to check or verify the accuracy of your balance and/or scale between calibrations. It is recommended that the user check a balance and/or scale prior to each use. Keeping the weight at or near the balance and/or scale keeps the weight at the same temperature as the equipment.

## Presentation –

- To safeguard your Electronic Balance Calibration Weights, impact resistant polypropylene weight cases are provided with 10 g to 5 kg weights. These self-hinged cases have snug-fitting foam interiors to protect weights when not in use. A white cotton glove for handling weights is provided in each case or carton.
  - Cases with handles for larger Electronic Balance Calibration Weights (8 kg through 30 kg) are available at an additional cost. These cases are made of high-impact plastic, reinforced with metal edges/corners and have a padded carrying handle. To ensure proper handling, a white cotton glove is provided with all weights.
- \*\*Caution\*\*** Weight cases are not intended to be used as shipping containers. When you ship your weights to be calibrated, the weights and weight sets must be overpacked in larger containers and/or cartons to protect your weight cases.
- See the Accessories Table for part numbers for cases.



## Electronic Balance Calibration Weights

**Weight Set Configuration Information** – One weight set is available in Electronic Balance Calibration Weight design. The set consists of one 1 kg, one 500 g, one 300 g, one 200 g, and one 100 g. The set is supplied in a plastic case with a handle on top, and with a white cotton glove.

**Ordering a Certificate With Your Weight or Weight Set** – There is a choice of certificates available for your Electronic Balance Calibration Weight or Weight Set to meet your traceability and compliance needs. Complete information on our calibration certificates is located in the Weight Calibration Certificate Options section of this desk reference. Sample certificates are available for viewing on our website at [www.troemner.com](http://www.troemner.com).

- Weights and Weight Sets supplied without weight certificates come with **Troemner's Statement of Accuracy**.
- To order **Troemner's NVLAP Weight Calibration Certificate**, specify the Troemner part number using the table at the end of this section followed by "W."
- To order **Troemner's UKAS Certificate of Calibration**, specify the Troemner part number followed by "NA."
- To order **Troemner's Traceable Certificate**, specify the Troemner part number followed by "T."
- To order **Troemner's Mass Code Report of Mass Values**, specify the Troemner part number followed by "M."



Troemner's online Weight Selector takes the guess work out of choosing the correct weight for your application. Visit us at [www.troemner.com](http://www.troemner.com) and let us help you find exactly what you need.



Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of Accreditation under Lab Code 105013.



No. 0516





# Electronic Balance Calibration Weights

STAINLESS STEEL ELECTRONIC BALANCE CALIBRATION WEIGHTS						
Weight	Description	UltraClass <sup>SM</sup> Part #	Class 1 Part #	Class 2 Part #	Class 3 Part #	Class 4 Part #
30 kg	Grip Handle	8000	8100	8200	8300	8400
25 kg	Grip Handle	8002	8102	8202	8302	8402
24 kg	Grip Handle	8004	8104	8204	8304	8404
20 kg	Grip Handle	8006	8106	8206	8306	8406
16 kg	Grip Handle	8008	8108	8208	8308	8408
10 kg	Grip Handle	8010	8110	8210	8310	8410
8 kg	Grip Handle	8012	8112	8212	8312	8412
5 kg	Grip Handle	8014	8114	8214	8314	8414
5 kg	Cylindrical	8016	8116	8216	8316	8416
4 kg	Grip Handle	8018	8118	8218	8318	8418
4 kg	Cylindrical	8020	8120	8220	8320	8420
3 kg	Cylindrical	8022	8122	8222	8322	8422
2 kg	Cylindrical	8024	8124	8224	8324	8424
1500 g	Cylindrical	8026	8126	8226	8326	8426
1000 g	Cylindrical	8028	8128	8228	8328	8428
600 g	Cylindrical	8030	8130	8230	8330	8430
500 g	Cylindrical	8032	8132	8232	8332	8432
400 g	Cylindrical	8034	8134	8234	8334	8434
300 g	Cylindrical	8036	8136	8236	8336	8436
200 g	Cylindrical	8038	8138	8238	8338	8438
160 g	Cylindrical	8040	8140	8240	8340	8440
150 g	Cylindrical	8042	8142	8242	8342	8442
100 g	Cylindrical	8044	8144	8244	8344	8444
80 g	Cylindrical	8046	8146	8246	8346	8446
70 g	Cylindrical	8048	8148	8248	8348	8448
60 g	Cylindrical	8050	8150	8250	8350	8450
50 g	Cylindrical	8052	8152	8252	8352	8452
40 g	Cylindrical	8053	8153	8253	8353	8453
30 g	Cylindrical	8054	8154	8254	8354	8454
20 g	Cylindrical	8056	8156	8256	8356	8456
10 g	Cylindrical	8058	8158	8258	8358	8458
1 kg-100 g	Weight Set	8070	8170	8270	8370	8470



## Hummingbird Help

Troemner Electronic Balance Calibration Weights are also available in Avoirdupois denominations. Please contact a Troemner sales representative for more information.

## Electronic Balance Calibration Weights



**Accessories** – Troemner can provide you with all the accessories you need to properly handle and protect your Electronic Balance Calibration Weights. A case and cotton glove are included for weights 10 g through 5 kg. Cases for larger

weights are available at an additional cost. Please contact a Troemner sales representative for specific information on new cases, replacement cases, or special cases you need to store and protect your Electronic Balance Calibration Weights.

### ELECTRONIC BALANCE CALIBRATION WEIGHT ACCESSORIES

Description	Part #
<b>Electronic Balance Calibration Weight Cases</b>	
Optional Case for 30 kg	TW-100-30KG
Optional Case for 25 kg	TW-100-25KG
Optional Case for 16 kg and 20 kg	TW-100-20KG
Optional Case for 8 kg and 10 kg	TW-50-10KG
Replacement Case for 5 kg to 1kg Individual Weights	8C5000
Replacement Case for 600 g to 10 g Individual Weights	8C1000
Replacement Case for 1 kg – 100 g Set	8C8000
<b>Gloves for Electronic Balance Calibration Weights</b>	
Leather Glove (Specify left or right)	WA436
Cotton Glove (Single glove, fits either hand)	WA061

