

Electronic and Mechanical Balances

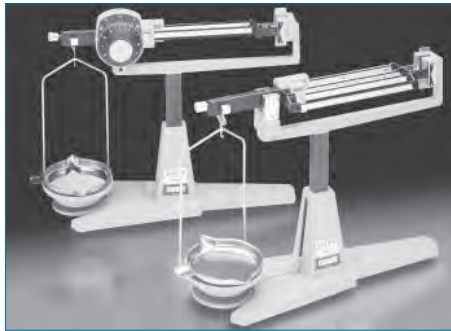
When selecting a scale, you may wish to consider these four points prior to your selection:

- ❖ Do you want mechanical or electronic scales and balances?
- ❖ What is the maximum amount you wish to weigh? Increased weighing capacity does not necessarily mean an increase in price.
- ❖ What is the desired readability and precision of the scale? Typically, the more accurate or precise the scale is, the costlier it is. The most expensive scales have high capacity with high precision.
- ❖ ASTM D 4753 and AASHTO M 231 address specifications and requirements for scales and balances.

APPLICATIONS												
Model No.	Soil Moisture		Soil Density		Proctor, CBR, LBR Soil Cement	Liquid + Plastic Limit Soils	Sieve Analysis	Specific Gravity		Concrete		Asphalt
	<200 g Sample	>200 g Sample	Drive Cyl Method	Sand Cone Method				Soils	Granular Material	Unit Weight	Mix Design	Mix Design
GW-111	X					X		X				
GW-114							X					
GW-115		X	XXX									
GW-120					XXX			XXX		X		X
GW-130				XXX								
GW-135									XXX	X		
GW-30313								X	X			
GW-30315					X			X	X	X	XXX	XXX
GW-30316									X		X	X
GW-33010	X					X						
GW-33020	X				X	X						
GW-33030		X					X	X				
GW-33601			X									
GW-342	XXX	XXX				XXX	XXX	XXX				
GW-345					X		X	X		X		
GW-346									X	X		
GW-401				X				X	X			
GW-40520				X	X				X	X		
GW-40523										X	X	
<b>Applicable Standards</b>												
<b>ASTM</b>	D 2216	D 2216	D2939	D 1556	D 698 D 1557 D 1883	D 4318	D 421	D 854	C 125	C 9 C 138 C232 C 388		
<b>AASHTO</b>				T 191	T 99 T 180 T 193	T 89		T 100		T 19 T 121		

The most common standards are listed. Other ASTM and AASHTO designations may be applicable. XXX indicates most popular model for application shown, X indicates suitable for application shown.

## High Precision Mechanical Balances



(L - R) GW-110, GW-111

We offer two mechanical balances with a sensitivity of 0.01 g and capacity of 310 g. They are used for weighing soil samples in moisture determinations. No attachment weights are necessary. The three-point base, together with the special floating bearing and beam design, eliminates the need for a level adjustment. Each scale has a spring-loaded zero adjust compensator, parallax end reading, magnetic damping and a specific gravity platform. The removable stainless steel pan is 3 $\frac{3}{8}$ -in (9.2 cm) diameter by 1/2 in (2.7 cm) deep with two round spouts.

Specifications for	GW-110	GW-111
Capacity:	310 g	311 g
Readability:	0.01 g	0.01 g
Front Beam:	100 x 10 g	1x 0.01 g
Second beam:	-	10 x 1 g
Third Beam	-	100 x 10 g
Rear Beam:	200 x 100 g	200 x 100 g
Dial & Vernier	10 x 0.01 g	-
Dimensions (Wx DxH):	15 x 6 x 12 in ( 38.1 x 15.2 x 30.5 cm)	

GW-110	Dial-O-Gram Mechanical Balance	6 lb
GW-111	Cent-O-Gram Mechanical Balance	6 lb
<b>Related Item</b>		
GW-11101	Vinyl Dust Cover for GW-110 & GW-111	

## Compact Digital Scale (2600 g)

Alternative to the Triple Beam Scale.  
2600 g capacity.  
Certified Accurate to  $\pm 0.1$  g.  
Batteries or AC adapter.  
Stainless steel platform 5 $\frac{3}{4}$ " X 5 $\frac{3}{4}$ ".



GW-2600 with GW-26099

GW-2600	Digital Scale, 2600 x 0.1 g, AC/Batt	2 lb
<b>Related Item</b>		
GW-26099	Carrying Case for GW-2600	

## Triple Beam Scales

Four models of 2610-g capacity scales are offered for field and laboratory testing. Each has tiered, notched beams and magnetic damping and comes with a 500 g weight and two 1 kg attachment weights. These scales have a sensitivity of 0.1 g.



GW-115

GW-114 has a removable stainless steel scoop for a weighing platform, the other models have a flat, stainless steel platform. Accessory GW-11520, footed stainless steel scoop with counter weight, is for models GW-115/6/7 during sieve analysis and weighing. GW-116 features an undivided tare beam for zeroing or taring weights up to 225 g. GW-117 has the Dial-O-Gram™ feature. The base of all four models is contoured to store the attachment weights.

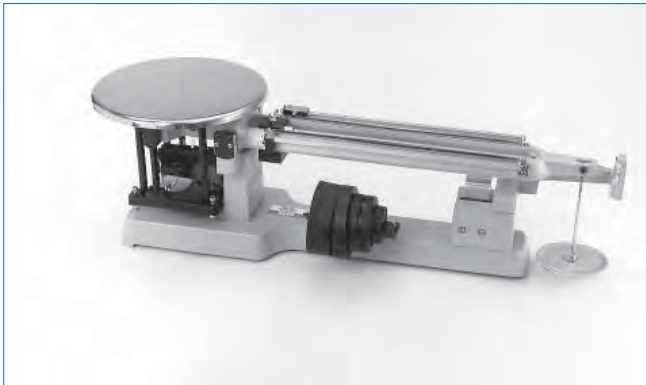
GW-113	Triple Beam Scale w/ Poly. Scoop	9 lb
GW-114	Triple Beam Scale w/ S.S. Scoop	9 lb
GW-115	Triple Beam Scale	9 lb
GW-116	Triple Beam Scale w/ Tare Beam	9 lb
GW-117	Triple Beam Dial-O-Gram Scale	10 lb

### Related Items

GW-11405	500 g attachment weight	
GW-11410	1000 g attachment weight	
GW-11430	Tare Beam Assembly	
GW-11520	Footed Stainless Steel Scoop & Counter Weight for GW-115/116/117	
GW-11525	Footed Polyethylene Scoop & Counter Weight for GW-115/116/117	
GW-11630	Footed Polyethylene Scoop (for GW-113)	
GW-118	Specific Gravity Rod & Clamp Assembly	
GW-11415	Metric Weight Set, (2) 1000g. (1) 500 g	
GW-119	Vinyl Dust Cover for GW-114/5/6/7	
GW-11905	Plastic Carrying Case GW-115/6	

Specifications for	GW-113/4/5/6	GW-117
Capacity:	2610 grams	2610 grams
Readability:	0.1 gram	0.1 gram
Front Beam:	10 x 0.1 gram	225 gram tare
Middle Beam:	500 x 100 gram	500 x 100 gram
Rear Beam:	100 x 10 gram	100 x 10 gram
Dial & Vernier:	-	10 x 0.1 gram
Platform:	6 in (15.2 cm) Dia.	6 in (15.2 cm) Dia.

Heavy Duty Solution Balance



GW-120

The Heavy Duty Solution Balance, with a capacity of 20 kg and a sensitivity of 1 g, is suitable for weighing Proctor specimens. Auxiliary weights are provided for weighing over 1.1 kg. A 2.27 kg sliding weight tare beam and an 11 in (27.9 cm) circular stainless steel platform are included. Bearings are covered and self-aligning and the notched beam has a sliding center indicating poise. It meets ASTM requirements for a GP5 Class scale with 1 g readability.

GW-120	Heavy Duty Solution Balance, 20 kg x 1 g	44 lb
<b>Related Items</b>		
GW-12001	1 kg weight	
GW-12002	2 kg weight	
GW-12005	5 kg weight	
GW-12010	10 kg weight	

Specifications for <b>GW-120</b> Heavy Duty Solution Balance	
Capacity:	20 kg
Readability:	1 g
Front Beam:	100 x 1 g
Rear Beam:	1000 x 100 g
S/S Platform:	11 in (27.9 cm) Dia.

Portable Bench Beam Scale



GW-135

This is a self-contained portable scale with a 131-lb capacity and 0.01-lb resolution designed for the materials testing industry. It has a unique 22-lb capacity tare bar that will permit rapid taring of a 0.5-ft<sup>3</sup> concrete yield bucket. It also has the accuracy necessary for soil density weighing. Specifically engineered for fast readability with minor poise graduations of 1 lb x 0.01 lb. Beam graduations are:

- top: 125 lb x 5 lb
- bottom left: 5 lb x 1 oz
- bottom right: 1 lb x 0.01 lb

It is factory calibrated and features mirrored balance indicators and a notched reading beam of anodized aluminum alloy. Hardened steel pivots with self-aligning bearings ensure long life and low maintenance.

The scale has a 12 x 17 in. (30.5 x 43.2 cm) floating platform and is housed in a baked enamel, steel case. Platform and beam-locking mechanisms prevent damage when being carried. The scale has adjustable legs and a bubble leveling indicator. Beam length carrying handle provides convenience and beam protection.

Note: Refer to our electronic balance section for equivalent metric scales and scales with capacities higher than 131 lb.

GW-135	Portable Bench Beam Scale	28 lb
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Specifications for <b>GW-135</b> Portable Bench Beam Scale	
Capacity:	131 lb
Readability:	0.01 lb
Main Beam:	125 x 5 lb
Fractional Beam:	5 x 0.1 lb
Tare Beam:	1 x 0.01 lb
Platform Size:	12 x 16 in ( 305 x 406 mm)

## Platform Scale



GW-150 through GW-153

Weigh, count, checkweigh, percent weigh — the Ohaus EB Series Scale is an affordable multi function weighing scale which is versatile, portable and dependable.

- Maximum displayed resolution: 1:30,000
- Stainless steel weighing pan
- Four weighing units: kg, g, lb and oz
- User programmable weight and parts HI/LO checking mode
- Power-saving auto-shut off feature
- In use cover is included.

Note: No weigh-below capability.

GW-150	Platform Scale 3000 g x 0.1g (6.6 lb x 0.0002 lb)	12 lb
GW-151	Platform Scale 6000 g x 0.2 g (13 lb x 0.0005 lb)	12 lb
GW-152	Platform Scale 15,000 g x 0.5 g (33 lb x 0.001 lb)	12 lb
GW-153	Platform Scale 30,000 g x 1 g (66 lb x 0.002 lb)	12 lb

### Specifications for Electronic Platform Scales

Model ▶	GW-150	GW-151	GW-152	GW-153
Capacity x Readability	3 kg x 0.0001 kg 3000 g x 0.1 g 6.6 lb x 0.0002 lb 105 oz x 0.005 oz	6 kg x 0.0002 kg 6000 g x 0.2 g 13 lb x 0.0005 lb 208 oz x 0.01 oz	15 kg x x 0.0005 kg 15,000 g x 0.5 g 33 lb x 0.001 lb 528 oz x 0.02 oz	30 kg x x 0.001 kg 30,000 g x 1 g 66 lb x 0.002 lb 1056 oz x 0.05 oz
Power	AC Adapter 12 V (dc) / 800 mA			
Battery Life	80 hours continuous use with 12 hr recharge time.			
Pan Size	11.6 in x 8.9 in (294 x 226 mm)			
Scale Dimensions	12.8 x 13 x 4.5 in (325 x 330.5 x 114 mm)			
Shipping Dimensions	17.3 x 14.2 x 6.3 in (440 x 360 x 160 mm)			
Shipping Weight	11.7 lb (5.3 kg)			

## Multipurpose Field Scale

The Multipurpose Field Scale has either Metric or Avoirdupois scales with capacities of 16 kg or 36 lb and readabilities of 5 g or 0.01 lb, respectively. They are the scale of choice for sand cone density tests, but are designed for general laboratory and field weighing. Includes round, slotted, iron weights that are conveniently stored in a weight storage rack and covered, self-aligning bearings for maintenance-free use. 11-in (28 cm) diameter stainless steel weighing platform.



GW-130 or GW-131

GW-130	Avoirdupois Multipurpose Scale	23 lb
GW-131	Metric Multipurpose Scale	23 lb
<b>Related Items</b>		
GW-13001	1 lb ratio weight	GW-13105 500 g ratio weight
GW-13002	2 lb ratio weight	GW-13110 1 kg ratio weight
GW-13005	5 lb ratio weight	GW-13120 2 kg ratio weight
GW-13010	10 lb ratio weight	GW-13150 5 kg ratio weight

Specifications for	GW-130	GW-131
Capacity:	36 lb	16 kg
Readability:	0.01 lb	5 g
Front Beam:	1 x 0.01 lb	500 x 5 g
Dimensions (WxDxH):	8 x 11 x 10 in ( 20.3 x 27.9 x 25.4 cm)	

OHAUS ELECTRONIC SCALES AND BALANCES

See selection table on next page



**ADVENTURER PRO:** Large LCD display and ergonomic leveling system for easy setup and operation; RS232 output for connection to computers and printers; 16 different user selectable weighing units.



**EXPLORER PRO:** Weighs in g, lb, kg, oz and other units; Extra large LCD display with text prompts; Selectable Average and Stability Levels; Available with Internal Calibration; RS232 Output; Percent Weighing; Dynamic Weighing



**SCOUT PRO:** Weighs in g, oz or lb (lb unit available only on 1200-6000 g model) Sealed Front Panel and Molded Spill Ring; RS232 Output available.



**TROOPER:** Weighs in kg, g, lb or oz Units; Stainless Steel Platform; Backlit LCD Display; RS232 Output



**COMPACT:** Large, high contrast display for easy viewing; low battery, overload and underload indicators and auto shut-off



**ES SERIES:** Weighs in kg, lb, oz or lb:oz units; Stainless Steel Platform and Painted Steel Frame; Three-Way Mounting Bracket Included

**Selection Table for Electronic Scales and Balances**

Durham Model No.	Capacity Units	Readability	Capacity Units	Readability	Weigh Below	Elec/Mech	Mfgr. Series	Ohaus Model No.	Pan/Platform Size inches/centimeters
GW-33001	51 g	0.001 g			Y	B/AC	Adventurer Pro	AV53	3.9 / 10 Dia.
GW-300	110 g	0.1 mg			N	AC	Adventurer Pro	AV114	3.5 / 9 Dia.
GW-205**	200 g	0.1 g			N	Batt only	Compact	CS200	5.75 x 5.25 / 14.6 x 13.3
GW-33010**	200 g	0.01 g			Y	B/AC	Scout Pro	SP202	4.7 / 12 Dia.
GW-33101	210 g	0.01 g			Y	B/AC	Adventurer Pro	AV212	4.7 / 12 Dia.
GW-302	260 g	1.0 mg			N	AC	Adventurer Pro	AV264	3.5 / 9 Dia.
GW-110	310 g	0.01 g			N	Mechanical	Dial-O-Gram	310-00	3.5 / 8.9 Dia.
GW-111	311 g	0.01 g			N	Mechanical	Cent-O-Gram	311-00	3.5 / 8.9 Dia.
GW-33015**	400 g	0.1 g			Y	B/AC	Scout Pro	SP401	4.7 / 12 Dia.
GW-33017**	400 g	0.01 g			Y	B/AC	Scout Pro	SP402	4.7 / 12 Dia.
GW-30309	410 g	0.001 g			Y	AC	Explorer Pro	EP413	4.7 / 12 Dia.
GW-33022	600 g	0.01 g			Y	AC	Explorer Pro	EP612	6.8 x 6.8 / 17.2 x 17.2
GW-33020**	600 g	0.1 g			Y	B/AC	Scout Pro	SP601	6.5 x 5.5 / 16.5 x 14.2
GW-33025**	600 g	0.01 g			Y	B/AC	Scout Pro	SP602	4.7 / 12 Dia.
GW-33105	810 g	0.01 g			Y	B/AC	Adventurer Pro	AV812	5.8 x 6.3 / 14.9 x 16.2
GW-210**	2000 g	1 g			N	Batt only	Compact	CS2000	5.75 x 5.25 / 14.6 x 13.3
GW-33030**	2000 g	0.1 g			Y	B/AC	Scout Pro	SP2001	6.5 x 5.5 / 16.5 x 14.2
GW-33501	2100 g	0.1 g			Y	B/AC	Adventurer Pro	AV2101	6.6 x 7.1 / 16.8 x 18
GW-34300	2100 g	0.01 g			Y	AC	Adventurer Pro	AV2102	6.6 x 7.1 / 16.8 x 18
GW-30312	2100 g	0.01 g			Y	AC	Explorer Pro	EP2102	6.8 x 6.8 / 17.2 x 17.2
GW-2600**	2600 g	0.1 g			N	B/AC	MyWeigh	i2600	6.5 x 5.5 / 16.5 x 14.2
GW-115**	2610 g	0.1 g			N	Mechanical	TripleBeam	750SW	6 / 15.2 Dia.
GW-116**	2610 g	0.1 g			N	Mechanical	Tri-Beam w/tare	760SW	6 / 15.2 Dia.
GW-113	2610 g	0.1 g			N	Mechanical	TripleBeam	720 Series	Poly Scoop
GW-114	2610 g	0.1 g			N	Mechanical	TripleBeam	720 Series	Stainless Steel Scoop
GW-150**	3000 g	0.1 g	6.6 lb	0.0002 lb	N	B/AC	EB Series	EB3	11.6 x 8.9 / 29.4 x 22.6
GW-34301	3100 g	0.01 g			Y	AC	Adventurer Pro	AV3102	6.6 x 7.1 / 16.8 x 18
GW-33035**	4000 g	0.1 g			Y	B/AC	Scout Pro	SP4001	6.5 x 5.5 / 16.5 x 14.2
GW-344	4100 g	0.1 g			Y	B/AC	Adventurer Pro	AV4101	5.8 x 6.3 / 14.9 x 16.2
GW-30313	4100 g	0.1 g			Y	AC	Explorer Pro	EP4101	8 x 8 / 20.3 x 20.3
GW-220**	5000 g	2 g			N	Batt only	Compact	CS5000	5.75 x 5.25 / 14.6 x 13.3
GW-33040**	6000 g	1 g			Y	B/AC	Scout Pro	SP6000	6.5 x 5.5 / 16.5 x 14.2
GW-33045**	6000 g	0.1 g			Y	B/AC	Scout Pro	SP6001	6.5 x 5.5 / 16.5 x 14.2
GW-151**	6000 g	0.2 g	13 lb	0.0005 lb	N	B/AC	EB Series	EB6	11.6 x 8.9 / 29.4 x 22.6
GW-30318	6100 g	0.1 g			Y	AC	Explorer Pro	EP6101	8 x 8 / 20.3 x 20.3
GW-30319	6100 g	0.01 g			Y	AC	Explorer Pro	EP6102	6.8 x 6.8 / 17.2 x 17.2
GW-33601	8100 g	0.1 g			Y	B/AC	Adventurer Pro	AV8101	5.8 x 6.3 / 14.9 x 16.2
GW-30314	8100 g	0.1 g			Y	AC	Explorer Pro	EP8101	8 x 8 / 20.3 x 20.3
GW-30315	12000 g	0.1 g			Y	AC	Explorer Pro	EP12001	11 x 14 / 28 x 35.6
GW-152**	15000 g	0.5 g	33 lb	0.001 lb	N	B/AC	EB Series	EB15	11.6x8.9 / 29.4x22.6
GW-30316	22001 g	0.1 g			Y	AC	Explorer Pro	EP22001	11 x 14 / 28 x 35.6
GW-153**	30000 g	1 g	66 lb	0.002 lb	N	B/AC	EB Series	EB30	11.6 x 8.9 / 29.4 x 22.6
GW-30317	32000 g	0.1 g			Y	AC	Explorer Pro	EP32001	11 x 14 / 28 x 35.6
GW-342	4100/1000 g	0.1/0.01 g			Y	AC	Explorer Pro	EP4102D	6.8 x 6.8 / 17.2 x 17.2
GW-131	16 kg	5 g			N	Mechanical	Field Scale	2400-11	11 / 27.9 Dia.
GW-120	20 kg	1 g			N	Mechanical	HD Solution Bal	1119-D0	11 / 27.9 Dia.
GW-50010**	6 lb	0.01 lb	3 kg	0.0005 kg	N	B/AC	Trooper	TR3RS	13.5 x 9 / 34 x 23
GW-50020**	15 lb	0.002 lb	6 kg	0.001 kg	N	B/AC	Trooper	TR6RS	13.5 x 9 / 34 x 23
GW-43006	25 lb	0.002 lb	10 kg	0.001 kg	N	B/AC	Defender 5000	D51P10QR1	12 x 12 / 30 x 30
GW-50030**	30 lb	0.005 lb	15 kg	0.002 kg	N	B/AC	Trooper	TR15RS	13.5 x 9 / 34 x 23
GW-130	36 lb	0.01 lb			N	Mechanical	Field Scale	2400-12	11 / 27.9 Dia.
GW-43008	50 lb	0.005 lb	25 kg	0.002 kg	N	B/AC	Defender 5000	D51P25QR1	12 x 12 / 30 x 30
GW-43010**	60 lb	0.01 lb	30 kg	0.005 kg	N	B/AC	Defender	D31P30BR	12 x 14 / 30.5 x 35.5
GW-50040**	60 lb	0.01 lb	30 kg	0.005 kg	N	B/AC	Trooper	TR30RS	13.5 x 9 / 34 x 23
GW-345	66 lb	0.05 lb	30 kg	0.01 kg	N	B/AC	ES Series	ES30R	12.2 x 10.8 / 31 x 27
GW-43018	100 lb	0.01 lb	50 kg	0.005 kg	N	B/AC	Defender 5000	D51P50QL2	18 x 18 / 45 x 45
GW-346	110 lb	0.05 lb	50 kg	0.02 kg	N	B/AC	ES Series	ES50R	12.2 x 10.8 / 31 x 27
GW-135	131 lb	0.01 lb			N	Mechanical	Benchbeam Bal	PBB	12 x 17 / 30.5 x 43.2
GW-43020**	150lb	0.02 lb	60 kg	0.01 kg	N	B/AC	Defender	D31P60BR	12 x 14 / 30.5 x 35.5
GW-348	220 lb	0.1 lb	100 kg	0.05 kg	N	B/AC	ES Series	ES100L	20.5 x 15.7 / 52 x 40
GW-43030	250 lb	0.02 lb	100 kg	0.01 kg	N	B/AC	Defender 5000	D51P100QL2	18 x 18 / 45 x 45

\*\* Case Available