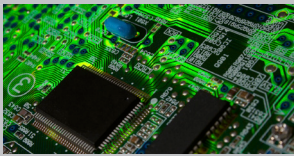




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	Pharmaceutical Industry • Sample preparation in R & D laboratories • Material inspection • Quality assurance of drugs
	Food Industry • Inspection for harvest before export • Quality assurance of processed food • Packaging final products
	Chemical Industry • Reagent preparations • Manufacturing process inspection • Maintain continuous operations (reduced downtime)
	Electronic and Semiconductor • Piece counting for small parts in factories • Measurement of thin film on the surface of silicon wafers • Pass/fail by checkweighing
	Jewelry Market • Jewelry making • In retail shop • Purity check



Electromagnetic Force Restoration: coil in a permanent magnet for the the most accurate weighings



High Resolution Load Cell: strain gauge measure the deformation as change in electrical resistance



Accumulator: Balance has internal accumulator or can be used with optional external accumulator



RS-232 Data Interface: to connect the balance to printer, PC, peripheral devices



Measuring Units: Select the measuring unit that balance will use to display weight



Piece counting function: to count identical items, reference quantities are selectable



Checkweighing: upper and lower limits can be set individually, for dosing and portioning



Percentage Weighing function: calculates the weight of a sample as a percentage from a reference weight (100%)



Totalization Function: measure cumulative weight of multiple items. Shows total and current weight



Animal Weighing: accurate readings under unstable conditions such moving laboratory animals



Battery Operating: Balance can work using AA batteries



Gross-Net-Tare function: shows simultaneously gross, net weight and tare



Suspended Weighing: a support with hook can be loaded on the underside of the balance



Max Load (Peak hold) function: retains the peak value in a series of consecutive weights



Water Resistant: stainless steel housing design to protect it from water damage



Density Determination function: accurately determines density of a solid object or a liquid

OPD-A Series - Resolution 1mg, 0.01g



OPD-A103 --- OPD-A603



OPD-A1002 --- OPD-A6002

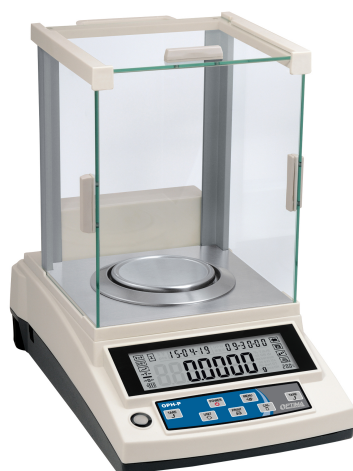


Features	Benefits
Gold-plated ceramic capacitance sensor	High stability, minimizing the influence of temperature change
3-Door Anti-Static Draft Shield (1mg models)	Protect weighing samples from surrounding influences
Large stainless steel pan	Allows for easy weighing of large objects
Leveling feet with 2 points of adjustment	Makes it level even on uneven working surfaces
Below balance weighing	Determines density of large pieces
Configurable RS 232 interface	Allows for communication with peripheral data collection and printing
Multiple weighing units	Allows for flexibility of weighing

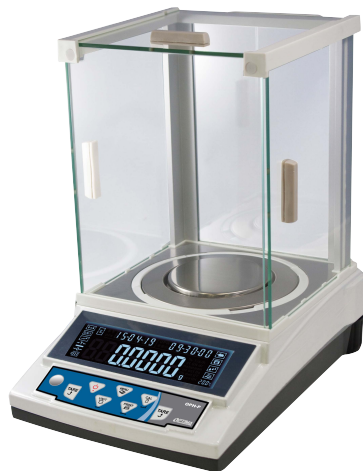
Model	OPD-A 103	OPD-A 203	OPD-A 303	OPD-A 403	OPD-A 503	OPD-A 603	OPD-A 1002	OPD-A 2002	OPD-A 3002	OPD-A 4002	OPD-A 5002	OPD-A 6002
Draft Shield	With Draft Shield						No Draft Shield					
Capacity	120g	210g	310g	410g	510g	600g	1100g	2100g	3100g	4100g	5100g	6100g
Resolution	0.001 g (1 mg)						0.01 g					
Repeatability	± 0.001 g (1 mg)						± 0.01 g					
Linearity Error	± 0.002 g (2 mg)						± 0.02 g					
Response Time	≤ 2 sec											
Calibration	Calibration with External Weight											
Weighing Units	g, ct, lb, oz, ozt, dwt											
Construction	Cast aluminum, static resistant ABS, static-resistant doors (1mg models), stainless steel pan											
Display	Large, easy to read LCD display with backlight and icons, 3/4" (19 mm) high											
Pan Size	Φ 4.5" (115 mm)						Φ 6.3" (160 mm)					
Body dim.	9" x 12" x 13" (230 x 310 x 330 mm)						9" x 12" x 3.5" (230 x 310 x 90 mm)					
Power	110v - 240v, 50HZ / 60HZ											
Operational Temp.	50 °F to 158 °F / 10 °C to 70 °C											
Connectivity	Configurable RS 232 interface											

PRECISION BALANCES (1mg, 0.001g, 0.01g)

OPH-P Series - Resolution 0.1mg, 1mg



0.1mg



1mg



VATN High Contrast LCD Display



Features	Benefits
Efficient filtering-out of vibrations	High stability and reliability
Legendary High Contrast LCD screen	Ensures clear readings in any areas
3-Door Anti-Static Draft Shield	Protect weighing samples from surrounding influences
Large stainless steel pan	Allows for easy weighing of large objects
Leveling feet with 2 points of adjustment	Makes it level even on uneven working surfaces
Optional density determination kit	Determines accurate density of both solid and liquid items
Below balance weighing	Determines density of large pieces
Configurable RS 232 interface	Allows for communication w/ peripheral data collection and printing
Multiple weighing units (17 total)	Allows for flexibility of weighing

Model	OPH-P104	OPH-P204	OPH-P103	OPH-P203	OPH-P303	OPH-P1003	OPH-P2003
Capacity	100 g	200 g	100 g	200 g	300 g	1000 g	2000 g
Resolution	0.0001 g (0.1 mg)		0.001 g (1 mg)				
Repeatability	± 0.0001 g (0.1 mg)		± 0.001 g (1 mg)				
Linearity Error	± 0.0002 g (0.2 mg)		± 0.002 g (2 mg)				
Response Time	≤ 2 sec						
Calibration	Calibration with External Weight					Auto Internal Calibration	
Weighing Units	g, lb, kg, oz, ct, ozt, pcs, tls, tIT, tIH, dwt, GN (grain), dr, ms, bat, mom T/A/R						
Construction	Cast aluminum, static resistant ABS, static-resistant doors (1mg models), stainless steel pan						
Display	Large, easy to read LCD display with backlight and icons, 3/4" (19 mm) high						
Pan Size	Φ 3.5" (90 mm)					Φ 4.25" (108mm)	
Body dimension (W x D x H)	13.5" x 8.75" x 13" (345 x 223 x 330 mm)						
Power	110v - 240v, 50HZ / 60HZ						
Operational Temp.	50 °F to 86 °F / 10 °C to 30 °C						
Connectivity	Configurable RS 232 interface						

OPH-T Series - Resolution 0.01g, 0.1g



Features	Benefits
Economical and reliable	Helps you save money with confidence
Large stainless steel pan	Allows for easy weighing of large objects
Leveling feet with level bubble	Makes it level even on uneven working surfaces
Below balance weighing	Determines density of large pieces
AC-DC available	Able to operate with rechargeable battery (not included)
LCD display with backlight	Allows for easy reading
Multiple weighing units	Allows for flexibility of weighing

Model	OPH-T 202	OPH-T 302	OPH-T 502	OPH-T 602	OPH-T 1002	OPH-T 2002	OPH-T 4002	OPH-T 2001	OPH-T 3001	OPH-T 5001	OPH-T 6001
Pan Size	Round Pan, Φ 5" (130 mm)								Square Pan, 6.3" x 5.7" (165 x 145 mm)		
Capacity	200 g	300 g	500 g	600 g	1000 g	2000 g	4000 g	2000 g	3000 g	5000 g	6000 g
Resolution	0.01 g							0.1 g			
Repeatability	± 0.01 g					± 0.02 g		± 0.1 g			
Linearity Error	± 0.02 g					± 0.03 g		± 0.2 g			
Response Time	≤ 2 sec										
Calibration	Calibration with External Weight										
Weighing Units	g, lb, oz, ct, ozt, N, dwt, GN (grain), tLT										
Construction	Static resistant ABS, stainless steel pan										
Display	Large, easy to read LCD display with backlight and icons, 3/4" (19 mm) high										
Body dims (W x D x H)	10.25" x 6.9" x 2.4" (260 x 175 x 60 mm)										
Power	110v - 240v, 50HZ / 60HZ										
Operat.Temp.	50 °F to 86 °F / 10 °C to 30 °C										

PRECISION BALANCES (0.01g, 0.02g, 0.1g)

OPH-Z Series - Resolution 0.01g, 0.1g



VATN High Contrast LCD Display



Features	Benefits
Large Capacity and High Resolution	Works for various applications
Rugged Construction	Assures fast, stable, and reproducible results
Large stainless steel pan	Allows for easy weighing of large objects
Date, Time and Temperature displays	Advanced, user-friendly features
Legendary VATN High Contrast LCD screen	Ensures clear readings in any conditions
Leveling feet with level bubble	Makes it level even on uneven working surfaces
Below balance weighing	Determines density of large pieces
Configurable RS 232 interface	Allows for communication w/ peripheral data collection and printing
Multiple weighing units	Allows for flexibility of weighing

Model	OPH-Z4002	OPH-Z10001	OPH-Z20001	OPH-Z30001
Capacity	4 kg (8.8 lb)	10 kg (22 lb)	20 kg (44 lb)	30 kg (66 lb)
Resolution	0.01 g	0.1 g		
Repeatability	± 0.02 g	± 0.2 g		
Linearity Error	± 0.02 g	± 0.2 g		
Response Time	≤ 2 sec			
Calibration	Calibration with External Weight			
Weighing Units	g, lb, kg, oz, ct, ozt, pcs, tls, tIT, tIH, dwt, GN (grain), dr, ms, bat, mom T/A/R			
Construction	Cast aluminum, static resistant ABS, stainless steel pan			
Display	Large, easy to read LCD display with backlight and icons, 3/4" (19 mm) high			
Pan Size	10" x 7" (255 x 180 mm)	12" x 9" (295 x 220 mm)		
Body dimension (W x D x H)	13" x 13" x 5" (320 x 320 x 120 mm)			
Power	110v - 240v, 50HZ / 60HZ			
Operational Temperature	50 °F to 86 °F / 10 °C to 30 °C			
Connectivity	Configurable RS 232 interface			

OPF-N Series - Resolution 0.1g, 1g

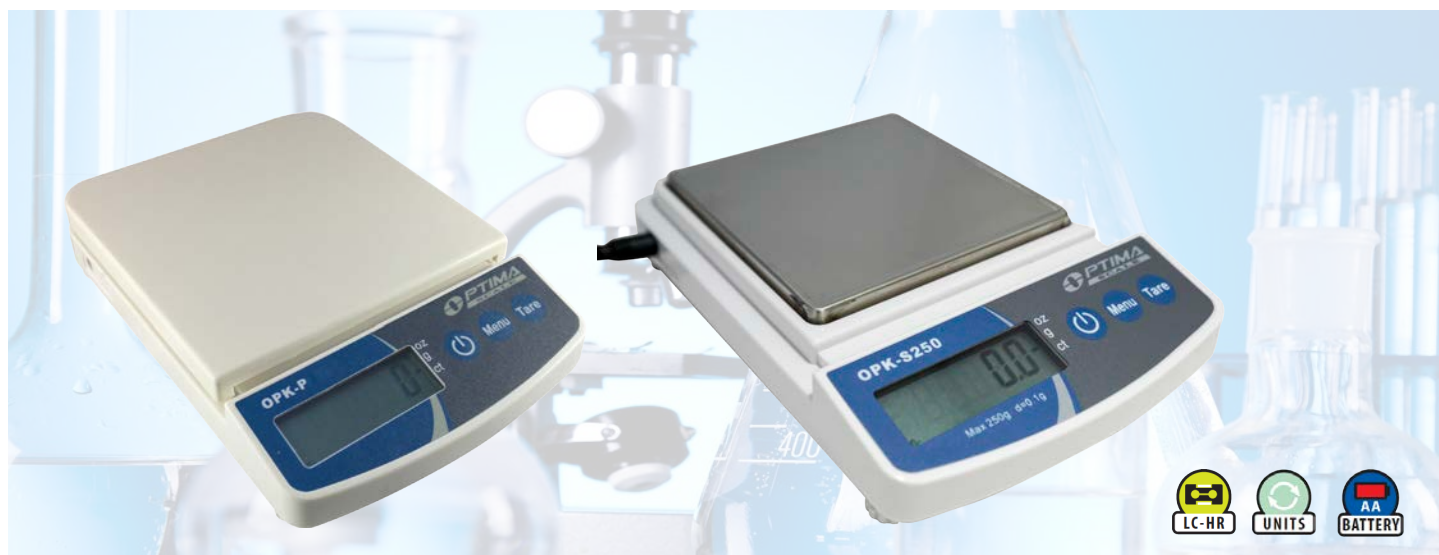


Features	Benefits
Economical and reliable	Cost effective with high performance
Large Capacity and High Resolution	Works for various applications
Rugged Construction	Assures fast, stable, and reproducible results
Large stainless steel pan	Allows for easy weighing of large objects
Leveling feet with level bubble	Makes it level even on uneven working surfaces
AC / Rechargeable battery (100 hours)	Complete mobility

Model	OPF-N3	OPF-N7.5	OPF-N15	OPF-N30
Capacity	3 kg (6.6 lb)	7.5 kg (16.5 lb)	15 kg (33 lb)	30 kg (66 lb)
Resolution	0.1 g	0.2 g	0.5 g	1 g
Repeatability	± 0.1 g	± 0.2 g	± 0.5 g	± 1 g
Linearity Error	± 0.2 g	± 0.5 g	± 1 g	± 2 g
Response Time	3 sec			
Calibration	Calibration with External Weight			
Weighing Units	g, lb, kg, oz			
Construction	Cast aluminum, static resistant ABS, stainless steel pan			
Display	Large, easy to read LCD display with backlight and icons, 3/4" (19 mm) high			
Pan Size	11"x 8.5" / 260 x 220 mm			
Body dimension (W x D x H)	10.5"x 12.5" x 5.5" / 260 x 320 x 140 mm			
Power	110v - 240v, 50HZ / 60HZ; 9V Rechargeable battery (Bat. time: 30-60 hrs)			
Operational Temperature	50 °F to 86 °F / 10 °C to 30 °C			

INDUSTRIAL COUNTING SCALES (0.1g, 0.2g, 0.5g, 1g)

OPK Series Compact Balances - Resolution 0.1g, 1g, 2g

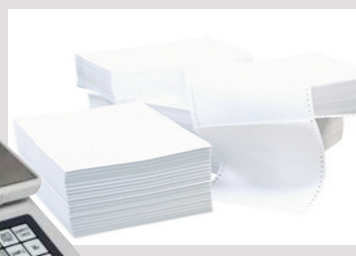


Features	Benefits
Entry level model with lab precision	Cost effective and high performance
Ergonomically optimized key pad w/ large keys	Convenient and efficient performance
Precise tare button	Calculates the net weight of your ingredients
Secure and non-slip positioning with rubber feet	Precise leveling of the scale
Detachable pan	For easy and hygienic cleaning
Both AC and AA batteries (not included)	Complete mobility

Model	OPK-P 250	OPK-P 500	OPK-P 2500	OPK-P 5000	OPK-S 250	OPK-S 500	OPK-S 2500	OPK-S 5000
Pan Type	ABS Plastic Pan				Stainless Steel Pan			
Pan Size	7" x 7" (175 x 175 mm)				5.7" x 5.7" (145 x 145 mm)			
Capacity	250 g	500 g	2500 g	5000 g	250 g	500 g	2500 g	5000 g
Resolution	0.1 g	0.1 g	1 g	2 g	0.1 g	0.1 g	1 g	2 g
Repeatability	± 0.1 g	± 0.1 g	± 1 g	± 2 g	± 0.1 g	± 0.1 g	± 1 g	± 2 g
Linearity Error	± 0.2 g	± 0.2 g	± 2 g	± 2 g	± 0.2 g	± 0.2 g	± 2 g	± 2 g
Response Time	3 sec							
Calibration	Calibration with External Weight							
Weighing Units	oz, g, ct							
Construction	Static resistant ABS, stainless steel pan (OPK-S models)							
Display	Easy to read LCD display 5/8" (16 mm) high							
Body dims (W x D x H)	9" x 16" x 1.6" (230 x 400 x 40 mm)							
Power	110v - 240v, 50HZ / 60HZ (adapter not included); or (4) AA batteries (not included)							
Operat. Temp.	50 °F to 86 °F / 10 °C to 30 °C							

OPF-P Series Counting Scales - Resolution 0.1g, 1g

ACCURATE PARTS COUNTING FOR AN EFFICIENT INVENTORY MANAGEMENT SOLUTION



- Weighing
- Counting
- Checkweighing
- Checkcounting
- Accumulating
- Kitting

ALL IN ONE SCALE

Features	Benefits
QUICKCOUNT™	Jump and count in no time
Three windows (total weight, unit weight, quantity)	Weight and piece count show simultaneously
21 PLU's (product LOOK-UP)	Fast retrieval of stored sample weights
Unit weight memory	Makes it possible to remember the important items counted
Overload alarm	Helps avoid overload
Portable and rugged design	Minimizes chances of damage due to frequent moves
Large stainless steel pan	Large enough to tare regular-sized bins or trays
AC / Rechargeable battery	Complete mobility
Large stainless steel pan	Allows for easy weighing of large objects
Leveling feet with level bubble	Makes it level even on uneven working surfaces
AC / Rechargeable battery (included)	Easy to use anywhere

Model	OPF-P3	OPF-P7.5	OPF-P15	OPF-P30
Capacity	3 kg (6.6 lb)	7.5 kg (16.5 lb)	15 kg (33 lb)	30 kg (66 lb)
Resolution	0.1 g	0.2 g	0.5 g	1 g
Internal Resolution	600,000 graduations			
Count Capacity	999,999 pieces			
Unit Weight Memory	21 items			
Tare	Tare Full Capacity			
Display	Weight, Unit Weight, pcs			
Response Time	2 sec			
Calibration	Calibration with External Weight			
Weighing Units	g, lb, kg, oz, pcs			
Construction	Cast aluminum, static resistant ABS, stainless steel pan			
Display	Large, easy to read LCD display with backlight and icons, 5/8" (16 mm) high			
Pan Size	13.2"x 9" / 335 x 220 mm			
Body Dimension (W x D x H)	13.5"x13"x4" / 340 x 320 x 95 mm			
Power	110v - 240v, 50HZ / 60HZ; 9V Rechargeable battery (Bat. time: 100 hrs)			
Operational Temp.	50 °F to 86 °F / 10 °C to 30 °C			

INDUSTRIAL COUNTING SCALES (0.1g, 0.2g, 0.5g, 1g)

OPF-C Series Counting Scales - Resolution 0.1g, 1g

ACCURATE PARTS COUNTING FOR AN EFFICIENT INVENTORY MANAGEMENT SOLUTION



- Weighing
- Counting
- Checkweighing
- Checkcounting
- Accumulating
- Kitting

ALL IN ONE SCALE

Features	Benefits
QUICKCOUNT™	Jump and count in no time
Three windows (total weight, unit weight, quantity)	Weight and piece count show simultaneously
Blue Backlight for easy visibility	Fast response time
Multiple Units: g, lb, kg, oz, pcs	Full tare capacity
Overload alarm	Helps avoid overload
Portable and rugged design	Minimizes chances of damage due to frequent moves
Large stainless steel pan	Large enough to tare regular-sized bins or trays
AC / Rechargeable battery	Complete mobility
Large stainless steel pan	Allows for easy weighing of large objects
Leveling feet with level bubble	Makes it level even on uneven working surfaces
AC / Rechargeable battery (included)	Easy to use anywhere

Model	OPF-C3	OPF-C7.5	OPF-C15	OPF-C30
Capacity	3 kg (6.6 lb)	7.5 kg (16.5 lb)	15 kg (33 lb)	30 kg (66 lb)
Resolution	0.1 g	0.2 g	0.5 g	1 g
Internal Resolution	600,000 graduations			
Count Capacity	999,999 pieces			
Unit Weight Memory	0 items			
Tare	Tare Full Capacity			
Display	Weight, Unit Weight, pcs			
Response Time	2 sec			
Calibration	Calibration with External Weight			
Weighing Units	g, lb, kg, oz, pcs			
Construction	Cast aluminum, static resistant ABS, stainless steel pan			
Display	Large, easy to read LCD display with backlight and icons, 5/8" (16 mm) high			
Pan Size	11"x 8.5" / 335 x 220 mm			
Body Dimension (W x D x H)	13.5"x11"x4" / 340 x 320 x 95 mm			
Power	110v - 240v, 50HZ / 60HZ; 9V Rechargeable battery (Bat. time: 100 hrs)			
Operational Temp.	50 °F to 86 °F / 10 °C to 30 °C			

OPX-SS Series - Resolution 0.2g, 0.5g, 1g

Built Entirely in Stainless Steel
Ideal for Food Industries



Rear LED display



Features	Benefits
All Stainless Steel	Hermetically sealed from water and dust
Large stainless steel pan	Allows for easy weighing of large objects
Dual LED Display (front and back)	Ideal for portion control
Ideal for wet environment	Automatic power off
DC / Rechargeable battery	Complete mobility
Multiple weighing units	Allows for flexibility of weighing

Model	OPX-SS6	OPX-SS15	OPX-SS30
Capacity	6 kg (13 lb)	15 kg (33 lb)	30 kg (66 lb)
Resolution	0.2 g	0.5 g	1 g
Response Time	3 sec		
Calibration	Calibration with External Weight		
Weighing Units	lb, oz, kg, g		
Construction	All Stainless Steel		
Display	6 digit, 1 in height, LED dual front and back display		
Pan Size	8.4"L x 7"W		
Body dimension	9"L x 10.2"W x 4.5"H		
Power	100V - 240V, 50Hz / 60Hz; 3.7V 2200mA/h Rechargeable lithium battery		
Operational Temp.	50 °F to 86 °F / 10 °C to 30 °C		

PRECISION BALANCES (0.2g, 0.5g, 1g)

REFERENCES BY CAPACITY/RESOLUTION

RES. CAP.	0.0001 G (0.1 MG)	0.001 G (1 MG)	0.01 G	0.1 G	0.2 G	0.5 G	1 G	2 G
100 G	OPH-P104	OPD-A103 OPH-P103						
200 G	OPH-P204	OPD-A203 OPH-P203	OPH-T202					
250 G				OPK-250				
300 G		OPD-A303 OPH-P303	OPH-T302					
400 G		OPD-A403						
500 G		OPD-A503	OPH-T502	OPK-P500				
600 G		OPD-A603	OPH-T602					
1000 G		OPH-P1003	OPD-A1002 OPH-T1002					
2000 G		OPH-P2003	OPD-A2002 OPH-T2002	OPH-T2001				
2500 G							OPK-2500	
3000 G			OPD-A3002	OPH-T3001 OPF-N3 OPF-P3 OPF-P3				
4000 G			OPD-A4002 OPH-T4002 OPH-Z4002					
5000 G			OPD-A5002	OPH-T5001				OPK-5000
6000 G			OPD-A6002	OPH-T6001	OPX-SS6			
7.5 KG					OPF-C7.5 OPF-P7.5 OPF-N7.5			
10 KG				OPH-Z10				
15 KG						OPF-N15 OPF-C15 OPF-P15 OPX-SS15		
20 KG				OPH-Z20				
30 KG				OPH-Z30			OPF-N30 OPF-P30 OPF-C30 OPX-SS30	

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