Kern & Sohn GmbH

#### **Balances/Pocket balances**

#### 1 Hanging Scale CH

Convenient for hanging loads suitable for case.

- Multi data hold function
- Tape measure, extractable, length 100cm
- Battery operation (9V incl.)

уре	Capacity	Readability	Weight	PK
	g	g	g	
CH 15K20	15	20	250	1
CH 50K50	50	50	250	1
CH 50K100	50	100	250	1



#### 2 Pocket electronic balances, CM series

This wallet-sized balance is well protected by it's hinged cover against all kinds of impacts, pressure and dust and fits neatly into a jacket pocket. With integrated

'Weigh-in' function for mixture preparation and 'Cal' adjustment programme for precise calibration.

Supplied with batteries.

85 x 130 x 25mm Dimensions (WxDxH):

Weight: 175g

Туре	Readability	Capacity	Pan dim.	PK	Cat. No.
	g	g	mm		
CM 60-2N	0.01	60	80 x 70	1	9.901 366
CM 150-1N	0.1	150	80 x 70	1	9.901 364
CM 320-1N	0.1	320	80 x 70	1	9.901 365
CM 1K1N	1.0	1000	80 x 70	1	9.901 362



#### 3 Pocket Balances Type JE

Simple, compact and handy. WxDxH: 13.6 x 8.3 x 2.0cm. Ideal for precise weighing in the field.

- automatic calibration, using external weight.
- large, high-contrast, liquid crystal display with back light.
- robust plastic housing.
- auto-off function prolongs battery life.
- includes protective cover and batteries.

Туре	Readability	Capacity	Pan dim.	PK	Cat. No.
	g	g	mm		
JE120	0.1	120	83 x 76	1	9.902 413
JE250	0.1	250	83 x 76	1	9.902 414
JE500	0.1	500	83 x 76	1	9.902 415

#### 4 Portable electronic balances, CS series

- Compact and practical with choice of weighing ranges from 200g to 5000g
- Sleek, low-profile housing
- Stainless steel weighing pan
- Large, 11mm high digital display
- Energy-saving, automatic switch-off
- Robust plastic construction
- Battery or mains operation

Supplied with 3 x 1.5V AAA batteries and mains adapter.

Dimensions WxDxH: 135 x 193 x 39mm Accessories: 1050ml plastic container

Туре	Readability	Capacity	Weighing pan	PK	Cat. No.
	g	g	mm		
CS200	0.1	200	146 x 133	1	9.950 222
CS2000	1.0	2000	146 x 133	1	9.950 223
CS5000	1.0	5000	146 x 133	1	9.950 224



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Ohaus

#### **Balances/Pocket balances-Precision balances**

#### Accessories for Portable electronic balances, CS series

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Description	PK	Cat. No.
Plastic container, 1050ml	1	9.947 300
Mains adapter	1	9.947 301
Stainless steel weighing pan cover	1	9.947 302

#### 1 2 Portable Balances, Scout Pro series

The Scout Pro offers simple operation and higher resolution to accommodate more applications than ever before:

Ohaus

- high contrast, LCD display.
- parts counting, percentage weighing, check weighing, totalisation, weigh-below facility, display-hold-function
- simple, two-button operation
- density determination kit for automatic specific gravity calculations (optional accessory)
- optional USB or RS232 interface accessories (cable included)
- battery or a.c. operation (a.c. adapter included)
- 1 mg readability model supplied with draught shield
- programmable, energy saving, auto switch-off
- below-balance weighing (weighing hook included)

Туре	Readability	Capacity	Pan	PK	Cat. No.
			dim.		
	g	g	mm		
SPU123	0.001	120	90 dia.	1	9.902 420
SPU202	0.01	200	120 dia.	1	9.902 421
SPU402	0.01	400	120 dia.	1	9.902 422
SPU401	0.1	400	120 dia.	1	9.902 423
SPU602	0,01	600	120 dia.	1	9.902 428
SPU601	0.1	600	165 x 142	1	9.902 424
SPU2001	0.1	2000	165 x 142	1	9.902 425
SPU4001	0.1	4000	165 x 142	1	9.902 426
SPU6000	1	6000	165 x 142	1	9.902 427
SPU6001	0,1	6000	165 x 142	1	9.902 429







#### 3 Precision balance, Adventurer™ Pro series

Ideal for standard weighing tasks in laboratory, industrial and educational routines.

Ohaus

- easy to use and with a robust housing.
- simple 4-button-operation
- backlit, twin-line display with text guidance and weight displays
- parts counting, percentage weighing, below-balance weighing, totalisation, animal weighing, checkweighing facilities, gross/net/tare-function,
- display-hold function
- GLP/GMP protocol with date/time
- RS232 interface
- protective working cover for the display
- electronic filter
- full glass draught shield for the 1mg model
- battery or mains supply with automatic switch-off.
- also available as approved model.

Туре	Readability	Capacity		Description	PK	Cat. No.
			dim.			
	g	g	mm			
AV212	0.01	210	dia. 120	external calibration	1	9.947 651
AV412	0.01	410	149 x 162	external calibration	1	9.947 652
AV812	0.01	810	149 x 162	external calibration	1	9.947 653
AV2101	0.1	2100	149 x 162	external calibration	1	9.947 654
AV4101	0.1	4100	149 x 162	external calibration	1	9.947 655
AV8101	0.1	8100	149 x 162	external calibration	1	9.947 656

**Balances/Precision balances** 

#### 1 Precision Balances Pioneer™

- weighing (18 units + 1 custom unit), parts counting, percentage weighing
- LCD readout
- mains power
- RS232 for sending balance ID and weight
- solid, diecast, metal housing, stainless steel pan
- fixed, integral, weigh-below hook, all-glass draught shield with 3 sliding doors, front levelling bubble, menu and calibration locks



Туре	Readability	Capacity	Plate	Description	PK	Cat. No.
			dia.			
		g	mm			
PA213	1mg	210	120	external calibration	1	9.902 130
PA213C	1mg	210	120	internal calibration	1	9.902 131
PA213CM	1mg	210	120	internal calibration	1	9.902 132
PA413	1mg	410	120	external calibration	1	9.902 133
PA413C	1mg	410	120	internal calibration	1	9.902 134
PA413CM	1mg	410	120	internal calibration	1	9.902 135
PA512	0.01g	510	180	external calibration	1	9.902 136
PA512C	0.01g	510	180	internal calibration	1	9.902 137
PA512CM	0.01g	510	180	internal calibration	1	9.902 138
PA2102	0.01g	2100	180	external calibration	1	9.902 139
PA2102C	0.01g	2100	180	internal calibration	1	6.234 850
PA2102CM	0.01g	2100	180	internal calibration	1	9.902 141
PA4102	0.01g	4100	180	external calibration	1	9.902 142
PA4102C	0.01g	4100	180	internal calibration	1	9.902 143
PA4102CM	0.01g	4100	180	internal calibration	1	9.902 144
PA4101	0.1g	4100	180	external calibration	1	9.902 145
PA4101C	0.1g	4100	180	internal calibration	1	9.902 146
PA4101CM	0.1g	4100	180	internal calibration	1	9.902 147

#### 2 Compact balances Type EMB

Economically priced, battery-operated models. Large LCD readout with 16mm high digits. "Weigh-in" function simplifies mixing. Supplied with 4 x 1.5V AA batteries. With  $\dot{d}$ .c. power connection socket (accessory mains adapter available at extra cost). Auto-off function activates after 3 minutes without use for saving battery power.

Dimensions WxDxH: Net weight:

170 x 240 x 38mm approx. 600g

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Туре	Readability	Capacity	Reproduci-	Linearity	Pan	PK	Cat. No.
			bility		dim.		
	g	g	± g	± g	mm		
EMB 100-3	0.001	100	0.001	0.003	82 dia.	1	6.238 426
EMB 200-2	0.01	200	0.01	0.02	82 dia.	1	9.901 320
EMB 600-2	0.01	600	0.01	0.03	82 dia.	1	9.901 321
EMB 1000-2	0.01	1000	0.01	0.03	150 dia.	1	6.235 728
EMB 500-1	0.1	500	0.1	0.2	105 dia.	1	9.901 322
EMB 1200-1	0.1	1200	0.1	0.3	105 dia.	1	9.901 323
EMB 5.2K1	1.0	5200	1.0	3.0	105 dia.	1	9.901 324
EMB 2200-0	1.0	2200	1.0	2.0	105 dia.	1	9.901 371
EMB 5.2 K 5	5.0	5200	5.0	10.0	105 dia.	1	9.901 372

#### **Balances/Precision balances**

#### Balances, electronic, compact, 440 series

With features including formulation, piece counting programmes and high accuracy these balances are ideal for routine laboratory tasks. Calibration adjustment programme maintains accuracy. Can be battery operated (9V PP3, not supplied). With stainless steel balance platform, except 440-21A.

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Supplied with working cover and mains adapter requiring a 230V 50/60Hz supply.

Overall (WxDxH): 165 x 230 x 80mm Weight: approx. 1kg

Туре	Readability	Capacity	Reproduci- bility	Linearity	Pan dim.	PK Cat. No.
	g	g	± g	± g	mm	
440-21A	0.001	60	0.001	0.003	81 dia.	1 9.901 340
440-33N	0.01	200	0.01	0.02	105 dia.	1 <b>9.901 348</b> 1
440-35N	0.01	400	0.01	0.03	105 dia.	1 <b>9.901 349</b>
440-35A	0.01	600	0.01	0.03	105 dia.	1 <b>9.901 341</b>
440-43N	0.1	400	0.1	0.2	130 x 130	1 <b>9.901 344</b>
440-45N	0.1	1000	0.1	0.2	130 x 130	1 <b>9.901 346</b> 2
440-47N	0.1	2000	0.1	0.2	130 x 130	1 <b>9.901 347</b>
440-49N	0.1	4000	0.1	0.3	170 x 150	1 <b>9.901 343</b> 3
440-49A	0.1	6000	0.1	0.3	170 x 150	1 <b>9.901 342</b>
440-51N	1.0	4000	1.0	2.0	170 x 150	1 <b>9.901 345</b>
440-53N	1.0	6000	1.0	2.0	170 x 150	1 <b>9.901 350</b>





#### 4 Balances, electronic, precision, 572 series

Weighing speed adjustable in two stages. Unit transfer to bullion and non-metric units of weight. With calibration adjustment programme. With net/total weighing. Piece counting:

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1, 5, 10 or 20 reference pieces. Percentage weighing. Bi-directional RS232C data output supplied. Ultra low-profile, metal casing (WxDxH):  $150 \times 310 \times 60$ mm. Supplied with mains adapter for 230V 50/60Hz. Balances can be alternatively operated by accessory batteries.

Also available with DKD certified calibration weight, thermal printer, statistic printer, rechargeable battery pack or label printer at additional cost.

Туре	Readability	Capacity	Reproduci- bility	Linearity	Pan dim.	PK	Cat. No.
	g	g	± g	± g	mm		
572-31*	0.001	301	0.001	0.003	105 dia.	1	9.900 990
572-32*	0.001	421	0.001	0.003	105 dia.	1	6.229 315
572-33	0.01	1610	0.01	0.03	150 dia.	1	9.901 333
572-35	0.01	2410	0.01	0.03	150 dia.	1	9.901 335
572-37	0.01	3010	0,01	0.03	160 x 200	1	6.227 789
572-45	0.1	12100	0.1	0.15	160 x 200	1	9.900 991
572-49	0.1	16100	0.1	0.3	160 x 200	1	9.901 336
572-57	0.1	24100	0.1	0.3	160 x 200	1	9.901 354

\*with removable draught shield

### **Balances/Precision balances**

#### Precision balance KB

Convenience model at an economical price

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- for applications that require verification, please order verification at the same time, verification at a later date is not possible.
- user guidance step by step in the display
- freely programmable weighing units, e.g. display directly in special units such as the length of thread g/m, paper weight g/m², or similar
- precise counting. The automatic reference optimization gradually improves the average value of the piece weighing
- numerical tare deduction for container weighing. Useful when checking loads
- ring-shaped draft shield standard,  $90 \times 40 \text{mm}$  dia. x ht. for models with readability d = 0.001g

also available with DKD certified calibration weight, thermal printer, statistics printer, or label printer at additional cost.

Туре	Readability	Capacity	Reproduci-	Linearity	Pan	PK Cat. No.
	g	g	bility ± g	± g	dim. mm	
KB 120-3N	0.001	121	0.001	0.003	80 dia.	1 <b>6.234 511</b>
KB 200-3N	0.001	201	0.001	0.003	80 dia.	1 9.901 401 1
KB 240-3N	0.001	241	0.001	0.003	80 dia.	1 <b>6.235 214</b>
KB 360-3N	0.001	361	0.001	0.003	80 dia.	1 <b>9.901 402</b>
KB 1200-2N	0.01	1210	0.01	0.03	130 x 130	1 <b>6.233 613</b>
KB 2000-2N	0.01	2010	0.01	0.03	130 x 130	1 <b>6.231 607</b>
KB 2400-2N	0.01	2410	0.01	0.03	130 x 130	1 9.901 403 2
KB 3600-2N	0.01	3610	0.01	0.03	130 x 130	1 9.901 404
KB 10K0.05N	0.05	10100	0.05	0.15	150 x 170	1 <b>9.901 405</b>
KB 10000-1N	0.1	10100	0.1	0.3	150 x 170	1 <b>9.901 406</b>
KB 650-2NM	0.01	650	0.01	0.03	130 x 130	1 <b>9.901 407</b>
KB 2000-2NM	0.01	2000	0.01	0.03	130 x 130	1 <b>9.901 408</b>
KB 6500-1NM	0.1	6500	0.1	0.3	150 x 170	1 <b>9.901 409</b>
KB 10000-1NM	0.1	10000	0.1	0.3	150 x 170	1 <b>9.901 410</b> 3



#### 5 Precision balance PLE

Low-cost precision balance with wide range of functions

Kern & Sohn GmbH

- weighing sum memory adds single weighing results
- weighing with tolerance range (Checkweighing)
- percentage determination: makes it possible to store a given weight value (100%) and to determine deviations from this target value.
- ring-shaped, glass draught shield as standard on all models with readability d = 0.001g]. Removable metal cover with pipette opening. Weighing space  $150 \times 50 \text{mm}$  dia. x ht.
- integral rechargeable battery pack. Operating time approx. 35 hours, charging time approx. 10 hours also available with DKD certified calibration weight, thermal printer, statistics printer, or label printer at additional cost.

Туре	Readability	Capacity	Reproduci- bility	Linearity	Plate dia.	PK	Cat. No.
	g	g	± g	± g	mm		
PLE 310-3N	0.001	310	0.001	0.002	80	1	9.901 325
PLE 3100-2N	0.01	3100	0.01	0.02	135	1	9.901 326



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### 3. Analytical measurement and testing

#### **Balances/Precision balances**



#### 1 Precision balances type EW-N and EG-N

High quality laboratory balances, housed in a robust and stable metal casing. With bar Kern & Sohn GmbH graph capacity display which shows the current available weighing range remaining.

Fitted with protective working cover for casing and keyboard. Suitable for EC verification (factory option at additional cost - details on request). Convenient, internal automatic calibration (only type EG-N) as well as extensive configuration and a menu of applications. Draught shield supplied with all 0.001g readability models. Additionally supplied with parts counting facility, percentage weighing function, flush-mounted platform.

Туре	Readability	Capacity	Reproduci- bility	Linearity	Pan dim.	PK	Cat. No.
	g	g	± g	± g	mm		
EW220-3NM	0.001	220	0.001	0.002	118 dia.	1	9.901 007
EW420-3NM	0.001	420	0.001	0.003	118 dia.	1	9.901 008
EW620-3NM	0.001	620	0.001	0.003	118 dia.	1	9.901 009
EW820-2NM	0.01	820	0.01	0.01	170 x 142	1	9.901 010
EW2200-2NM*	0.01	2200	0.01	0.01	180 x 160*	1	9.901 011
EW4200-2NM*	0.01	4200	0.01	0.02	180 x 160*	1	9.901 012
EW6200-2NM*	0.01	6200	0.01	0.03	180 x 160*	1	9.901 013
EW12000-1NM*	0.1	12000	0.1	0.2	180 x 160*	1	9.901 014
EG220-3NM	0.001	220	0.001	0.002	118 dia.	1	9.901 018
EG420-3NM	0.001	420	0.001	0.003	118 dia.	1	9.901 019
EG620-3NM	0.001	620	0.001	0.004	118 dia.	1	9.901 015
EG2200-2NM*	0.01	2200	0.01	0.01	180 x 160*	1	9.901 016
EG4200-2NM*	0.01	4200	0.01	0.02	180 x 160*	1	9.901 017

<sup>\*</sup> Overall dimensions WxDxH (without glass draught shield): 192 x 265 x 87mm

#### 2 3 Precision balance Type PLS

- ergonomically optimised keypad for left and right-handed users
- ring-shaped glass draught shield standard for all models with 0.001g resolution.
   Removable metal cover with pipette opening. Weighing space 150mm dia., height 60mm
- count/weight switchover at the press of a button
- precise counting. The automatic optimisation of reference weight gradually improves the average value of the piece weight. The automatic optimisation of reference weight gradually improves the average value of the piece weight
- weighing with tolerance range Input of an upper/lower limit value. A visual signal assists with portion division, dispensing or grading
- percentage determination makes it possible to store a given weight value (100%) and to determine deviations from this target value in %
- density determination of liquids and solids with immediate display of the density on the display
- pre-Tare function for manual deduction of a known container weight. Useful for checking fill-levels

Туре	Readability	Weighing	Reproduci-	Linearity	Plate	PK	Cat. No.
		range	bility		dia.		
	g	g	± g	± g	mm		
PLS 310-3F	0.001	310	0.002	0.003	110	1	9.901 411
PLS 510-3A	0.001	510	0.001	0.002	110	1	9.901 412
PLS 720-3A	0.001	720	0.001	0.002	110	1	9.901 413
PLS 1200-3A	0.001	1200	0.001	0.002	110	1	9.901 414
PLS 1200-3DA	0.001/0.01	720/1200	0.001/0.01	0.002/0.02	110	1	9.901 415
PLS 3100-2F	0.01	3100	0.01	0.03	160	1	9.901 416
PLS 4200-2A	0.01	4200	0.01	0.02	160	1	9.901 417
PLS 6200-2A	0.01	6200	0.01	0.02	160	1	9.901 418
PLS 6200-2DA	0.01/0.1	4200/6200	0.01/0.1	0.02/0.2	160	1	9.901 419





**Balances/Precision balances-Analytical balances** 



#### Precision balance Type PCB

Kern & Sohn GmbH

Compact scale for your laboratory. Due to the Recipe and piece counting function, as well as the grand precision this scale is perfect for the daily use in the Laboratory.

- Protective working cover over keyboard and housing is enclosed o standard.
- Modern, baacklit LCD display, digit height 15 mm
- Optional battery operation, 9V Block, not included.
- AUTO-OFF funktion to preserve the battery, can be switched off
- Stainless steel weighing plate

Overall (WxDxH): 163 x 245 x 79mm Weight: approx. 1kg

Туре	Readability	Capacity	Reproduci-	Linearity	Pan	PK Cat. No.
			bility		dim.	
	g	g	± g	± g	mm	
PCB 100-3	0.001	100	0.001	0.003	81 dia.	1 <b>7.619 757</b> 1
PCB 250-3	0.001	200	0.001	0.003	81 dia.	1 <b>6.238 044</b>
PCB 200-2	0.01	200	0.01	0.02	105 dia.	1 <b>7.635 868</b> 2
PCB 1000-2	0.01	1000	0.01	0.03	130 x 130	1 <b>6.228 513</b> 3
PCB 1000-1	0.1	1000	0.1	0.2	130 x 130	1 <b>6.235 098</b>
PCB 2000-1	0.1	2000	0.1	0.2	130 x 130	1 <b>6.229 399</b>
PCB 6000-1	0.1	6000	0.1	0.3	150 x 170	1 <b>6.231 685</b> 4
PCB 6000-0	1	6000	1	2	150 x 170	1 <b>9.901 300</b>

#### 5 6 Analytical balance Pioneer™

- weighing (18 units + 1 custom unit), parts counting, percentage weighing
- LCD readout
- mains power
- RS232 for outputting balance ID and weight
- solid, diecast, metal housing, stainless steel pan
- fixed, integral, weigh-below hook, all-glass draught shield with 3 sliding doors, front levelling bubble, menu and calibration locks
- type-approved versions also available



6

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Туре	Readability	Weighing range	Plate dia.	PK	Cat. No.
	mg	g	mm		
PA64	0.1	65	90	1	6.234 827
PA64C	0.1	65	90	1	9.902 151
PA64CM	0.1	65	90	1	9.902 152
PA114	0.1	110	90	1	6.233 682
PA114C	0.1	110	90	1	9.902 154
PA114CM	0.1	110	90	1	9.902 155
PA214	0.1	210	90	1	9.902 156
PA214C	0.1	210	90	1	6.233 795
PA214CM	0.1	210	90	1	9.902 158



Ohaus

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### 3. Analytical measurement and testing

**Balances/Analytical balances** 

1



#### 1 Analytical balances, Discovery

Premium performance and precision. With internal, motorised calibration, GLP-software and 11 essential analytical software applications, each Analytical Plus balance provides a perfect combination of user-friendly operation and supreme performance.

- GI P-software
- statistics for up to 255 samples
- density and volume determination
- internal autocalibration with two internal weights
- digital temperature compensation
- menu and calibration assurance
- analogue weighing range indication
- bi-directional RS232 interface
- type-approved versions also available.

Туре	Readability	Weighing range	Plate dia.	РК	Cat. No.
	mg	g	mm		
DV114C	0.1	110	90	1	9.902 160
DV 114CM**	0.1	110	90	1	9.902 161
DV214C	0.1	210	90	1	6.232 314
DV 214CM**	0.1	210	90	1	6.233 833
DV 314C	0.1	310	90	1	9.902 164
DV 314CM**	0.1	310	90	1	9.902 165
DV 215CD*	0.01/0.1	81/210	90	1	6.229 783
DV 215CDM* **	0.01/0.1	81/210	90	1	6.227 197

<sup>\*</sup> Autoranging





#### 2 Analytical balances type ABS and ABJ

High performance, low cost analytical balances with a robust and stable metal housing and bar graph capacity display which shows the current available weighing range

remaining. User-programmable, 4-figure balance ID number, LCD readout with 14mm high digits and 80mm diameter weighing pan. For 230V 50/60 Hz supplies.

Also available with DKD certified, calibration weight, ionizer, thermal printer, statistic printer, rechargeable battery pack or label printer at additional cost.

#### Analytical balance ABJ series:

Generally as type ABS, but additionally features automatic internal calibration (except ABJ 320-4) and g to ct conversion function.

Housing (WxDxH):  $225 \times 315 \times 330$ mm Weighing chamber:  $190 \times 155 \times 200$ mm Net weight: approx. 7kg

Туре	Readability	Capacity	Reproducibility	Linearity	Plate	PK	Cat. No.
					dia.		
	mg	g	± mg	± mg	mm		
ABS 80-4	0,1	83	0,1	0,2	80	1	9.901 389
ABS 120-4	0.1	120	0.1	0.2	80	1	9.901 385
ABS 220-4	0.1	220	0.1	0.2	80	1	9.901 386
ABJ 80-4M	0.1	83	0.1	0.2	80	1	9.901 390
ABJ 120-4M	0.1	120	0.1	0.2	80	1	9.901 391
ABJ 220-4M	0.1	220	0.1	0.2	80	1	9.901 392
ABJ 320-4	0,1	320	0,1	0.2	80	1	9.901 421

We can SUPPly this manufactorer's whole product range!





<sup>\*\*</sup>calibrated ex factory

**Balances/Analytical balances-Moisture balances** 

#### 1 Balances, electronic, analytical, AES/AEJ series

High performance, low cost analytical balances with compact housing, bar graph Kern & Sohn GmbH capacity display which shows the current available weighing range and user-programmable LCD readout with 17mm high digits. Also incorporates automatic internal calibration. For 230V 50/60 Hz supplies. Available with DKD certified calibration weight at additional cost. external calibration available. Languages: D, UK, FR, ES, IT, PL.

#### Analytical balance AEJ series:

Generally as type AES, but additionally features automatic internal calibration.



Туре	Readability	Weighing range	Reproducibility	Linearity	Plate dia.	PK	Cat. No.
	mg	g	± mg	± g	mm		
AES 120-4	0.1	120	0.1	0.3	80	1	9.900 950
AES 220-4	0.1	220	0.1	0.3	80	1	9.900 951
AEJ 120-4M	0.1	120	0.1	0.3	80	1	9.900 952
AEJ 220-4M	0.1	220	0.1	0.3	80	1	9.900 953

#### 2 Balances, electronic, analytical, ABT series

Analytical and semi-microbalances which are suitable for verification.

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All models have automatic calibration adjustment function by internal, motor-driven,

calibration weight. It is possible to log ISO/GLP-compliant weighing or calibration data at any time via an accessory printer (not supplied) or data interface (bi-directional RS232-C).

Additionally, the balances have formulation, piece counting and percentage determination functions, as well as a flushmounted weighing platform. All models are supplied with a modern, all-glass draught shield with sliding doors to the

Also available with DKD certified, calibration weight, ionizer, thermal printer, statistic printer, recchargeable battery pack or label printer at additional cost.

80mm dia. Weighing pan, stainless steel: Weighing chamber (WxDxH): 168 x 172 x 223mm Dimensions (WxDxH): 217 x 356 x 338mm

Mains adapter: 220V

Туре	Readability	Weighing	Reproducibility	Linearity	Plate	PK	Cat. No.
		range			dia.		
	mg	g	± mg	± g	mm		
ABT 120-4 M	0.1	120	0.1	0.2	80	1	9.900 955
ABT 220-4 M	0.1	220	0.1	0.2	80	1	9.900 956
ABT 320-4 M	0.1	320	0.1	0.2	80	1	9.900 957
ABT 120-5 DM	0.01 / 0.1	42 / 120	0.02 / 0.1	0.03 / 0.2	80	1	9.900 958
ABT 220-5 DM	0.01 / 0.1	82 / 220	0.05 / 0.1	0.1 / 0.2	80	1	9.900 959

#### 3 Halogen moisture balance MB-35

The basic model MB35 offers fast, halogen heating and powerful software for simple operation. Temperature range: 50° to 160°C. Standard tasks can be achieved quickly, simply and with absolute reliability. Also, with its robust and stable housing, the MB-35 provides accurate and repeatable results where quality has to ensured, even in difficult conditions.

- Halogen-technology (up to 40% faster than infra-red)
- 35g capacity with 0.01%/0.001g readability
- Reproducibility 0.10% 0.03%
- Temperature range: 50° to 160°C (5°C increments)
- Backlit graphics display
- 3 selectable automatic shut-off modes
- Menu-driven in 5 selectable languages
- RS232 Interface
- Compact and robust housing.



Туре	Readability	Weighing range	Plate dia.	PK	Cat. No.
	g	g	mm		
MB 35	0.01% / 0.001	35	90	1	9.947 500

Sample dishes - please see page 321



Ohaus

### 3. Analytical measurement and testing

**Balances/Moisture balances** 

1



#### 1 Moisture balance MB-45

- Halogen heating technology

- Menu navigation in 5 selectable languages
- Four, user defined, temperature profiles
- Large, back-lit graphics LCD readout
- Six selectable automatic shut-off modes
- Fifty, user-defined, drying programmes
- RS232 data interface
- Statistical function

**Specifications** 

Weighing range: 45g

Readability: 0.01%/0.001g

Temperature range: 50 to 200°C (1°C stages)

Timer: 1.0 to 120 mins. (0.1 min. increments)

 $\label{eq:measurement} \mbox{Measurement display:} \qquad \mbox{\% moisture, \% dry substance, \% ratio, gram or user defined}$ 

Shut-off modes: Manual, time-controlled, Auto30, Auto60, Auto90, automatic can be freely selected

Temperature profile: Standard, rapid, gentle, gradual Memory: 50 named drying procedures

Weight calibration: 20g external calibration weight, optional

Dryer calibration.: 100°C and 160°C with optional temperature calibration set

Dimensions WxDxH: 190 x 350 x 150mm

Weight: 4.6kg

Accessories, optional: Disposable sample dishes, reusable sample dishes, glass fibre filters, theft protection,

protection cap, temperature calibration set, calibration weight, printer

Туре	PK	Cat. No.
MB-45	1	9.950 065

#### Moisture balance MB-45, accessories

Ohaus

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Description	PK	Cat. No.
Calibration weight 20g	1	9.947 309
Protective cover	2	9.947 313
Temperature calibration set	1	9.947 314
Theft protection clamp	1	9.947 316





#### 2 Halogen Moisture Analyser MLB 50-3N

- 2 Halogen quartz glass heaters, each 400W

- 10 sample dishes included

- 3 displays for temperature, drying in %, drying time
- Application table. Various examples in the user manual
- CAL adjustment programme. External calibration weights are available at additional cost
- The last value measured remains on the display until it is replaced by a new measurement
- RS 232 interface

Optional accessories: aluminum sample plates , round fiber-glass filter, temperature calibration set, thermo-printer, etiquette-printer, DKD-calibration certificate for analyzer and optional test weight.

#### **Specifications**

Readability: 0.01%/0.001g
Weighing range, max: 50g
Reproducibility: 0.001g
Linearity: ±0.002g
Temperature range: 50 to 160°C

Туре	PK	Cat. No.
MLB 50-3N	1	9.901 400

### **Balances/Moisture balances-Weights**

#### 1 Halogen Moisture Analyzer MLS 65-3A

- Moisture Analyzer with 49 memory possibilities and graphic display

- The last value measured remains on the display until is it replaced by a new measurement
- Easy operation
- Display languages: German, English
- Serial RS 232 interface
- Compact and robust construction
- 10 sample plates included

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#### **Specifications**

0.01%/0.001g Readability:

Weighing range, max: 65g

0.5 to 0.05% Reproducibility: Linearity: ±0.003g Temperature range: 50 to 160°C Plate dia.: 90mm

Dimensions (WxDxH): 250 x 360 x 175mm

Туре	PK	Cat. No.
MLS 65-3A	1	6.239 755

OIML classes							
Classes of Accuracy Nominal value	E		Classes of accura			M 2	M 3
_	E1	E2	F1	F2	M1	M Z	IYI 3
1mg	± 0.003 mg	± 0.006 mg	± 0.020 mg	± 0.006 mg	± 0.20 mg		
2mg	± 0.003 mg	± 0.006 mg	± 0.020 mg	± 0.006 mg	± 0.20 mg		
5mg	± 0.003 mg	± 0.006 mg	± 0.020 mg	± 0.006 mg	± 0.20 mg		
10mg	$\pm$ 0.003 mg	± 0.008 mg	± 0.025 mg	$\pm$ 0.008 mg	± 0.25 mg		
20mg	± 0.003 mg	± 0.010 mg	± 0.03 mg	± 0.10 mg	± 0.3 mg		
50mg	$\pm$ 0.004 mg	± 0.012 mg	± 0.04 mg	± 0.12 mg	± 0.4 mg		
100mg	$\pm$ 0.005 mg	$\pm$ 0.016 mg	$\pm$ 0.05 mg	± 0.16 mg	± 0.5 mg	± 1.6 mg	
200mg	± 0.006 mg	$\pm$ 0.020 mg	± 0.06 mg	± 0.20 mg	± 0.6 mg	± 2.0 mg	
500mg	± 0.008 mg	± 0.025 mg	± 0.08 mg	± 0.25 mg	± 0.8 mg	± 2.5 mg	
1g	± 0.010 mg	± 0.03 mg	± 0.10 mg	± 0.3 mg	± 1.0 mg	± 3.0 mg	± 10 mg
2g	± 0.012 mg	± 0.04 mg	± 0.12 mg	± 0.4 mg	± 1.2 mg	± 4.0 mg	± 12 mg
5g	± 0.016 mg	± 0.05 mg	± 0.16 mg	± 0.5 mg	± 1.6 mg	± 5.0 mg	± 16 mg
10g	± 0.020 mg	± 0.06 mg	± 0.20 mg	± 0.6 mg	± 2.0 mg	± 6.0 mg	± 20 mg
20g	± 0.025 mg	± 0.08 mg	± 0.25 mg	± 0.8 mg	± 2.5 mg	± 8.0 mg	± 25 mg
50g	± 0.03 mg	± 0.10 mg	± 0.3 mg	± 1.0 mg	± 3.0 mg	± 10 mg	± 30 mg
100g	± 0.05 ma	± 0.16 mg	± 0.5 mg	± 1.6 mg	± 5.0 mg	± 16 mg	± 50 mg
200g	± 0.10 mg	± 0.3 mg	± 1.0 mg	± 3.0 mg	± 10 mg	± 30 mg	± 100 mg
500g	± 0.25 mg	± 0.8 mg	± 2.5 mg	± 8.0 mg	± 25 mg	± 80 mg	± 250 mg
1kg	± 0.5 mg	± 1.6 mg	± 5.0 mg	± 16 mg	± 50 mg	± 160 mg	± 500 mg
2kg	± 1.0 mg	± 3.0 mg	± 10 mg	± 30 mg	± 100 mg	± 300 mg	± 1000 mg
5kg	± 2.5 mg	± 8.0 mg	± 25 mg	± 80 mg	± 250 mg	± 800 mg	± 2500 mg
10kg	± 5.0 mg	± 16 mg	± 50 mg	± 160 mg	± 500 mg	± 1600 mg	± 5000 mg
20kg	± 10 mg	± 30 mg	± 100 mg	± 300 mg	± 1000 mg	± 3000 mg	± 10 g
50kg	± 25 mg	± 80 mg	± 250 mg	± 800 mg	± 2500 mg	± 8000 mg	± 25 g
100kg	_ 23 mg	± 160 ma	± 500 mg	± 1600 ma	± 5000 mg	± 16 q	± 50 g
200kg		± 300 mg	± 1000 mg	± 3000 mg	± 10 q	± 30 a	± 100 q
500kg		± 800 mg	± 2500 mg	± 8000 mg	± 25 g	± 80 g	± 250 g
1000kg		± 1600 mg	± 5000 mg	± 16 q	± 50 g	± 160 g	± 500 g
2000kg		= 1000 mg	± 10 q	± 30 g	± 100 q	± 300 g	± 1000 g
5000kg			± 25 g	± 80 g	± 250 g	± 800 g	± 2500 g
Juurg			± 25 g	± 00 g	± 230 g	± 000 g	± 2300 g

#### 2 Calibration weights, class M1

Brass, finely turned (also available in stainless steel). Plastic box with internal foam support available on request. Also available with internationally recognised DKD calibration certification on request.

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Weight	Accuracy	PK	Cat. No.
g	± mg		
1	1.0	1	9.900 501
2	1.2	1	9.900 502
5	1.5	1	9.900 505
10	2.0	1	9.900 510
20	2.5	1	9.900 512
50	3.0	1	9.900 515
100	5.0	1	9.900 520
200	10	1	9.900 522
500	25	1	9.900 525
1000	50	1	9.900 531
2000	100	1	9.900 532
5000	250	1	9.900 535
10000	500	1	9.900 540

Also available: Single weights from 1mg - 2000 kg or complete weight sets from 1mg - 10kg in OIML-classes E1, E2, F1, F2, M1, M2, M3.



**Balances/Weights-Accessories** 

#### 1



#### 1 Calibration weights, class F1

Nickel plated brass (also available in stainless steel). Plastic box with internal foam support available on request. Also available with internationally recognised DKD calibration certification on request.

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Weight	Accuracy	PK	Cat. No.
g	± mg		
1	0.1	1	9.900 566
2	0.12	1	9.900 567
5	0.15	1	9.900 568
10	0.2	1	9.900 569
20	0.25	1	9.900 570
50	0.3	1	9.900 571
100	0.5	1	9.900 572
200	1.0	1	9.900 573
500	2.5	1	9.900 574
1000	5.0	1	9.900 575
2000	10.0	1	9.900 576
5000	25.0	1	9.900 577
10000	50.0	1	9.900 578

Also available: Single weights from 1 mg to 2000 kg or complete weight sets from 1 mg to 10 kg in OIML-classes E1, E2, F1, F2, M1, M2, M3



#### Weighing scoops, stainless steel 18/10

N	ΕV	vi)

GE Healthcare

Capacity ml	PK	Cat. No.
3	1	6.238 169
6	1	6.238 170
10	1	6.238 171



#### 3 Weighing scoops

Glass. Ideal for powders or granules which are dispensed via the tubular stem.

Capacity	PK	Cat. No.
ml		
3	1	9.301 066
6	1	9.301 067
_10	1	9.301 068





#### 4 Weighing scoops

Without counterweight.

Length	Material	PK	Cat. No.
mm			
70	Aluminium	1	9.301 006
90	Aluminium	1	9.301 008
105	Aluminium	1	9.301 010
60	Glass	1	9.301 026
80	Glass	1	9.301 028
100	Glass	1	9.301 030



#### 5 6 Kjeldahl weighing boats 609, parchment paper

Ideal for weighing and transporting all types of sample. Especially for determination of nitrogen according to Kjeldahl (e.g. determination of total protein content in foodstuff).

Made of nitrogen-free parchment paper. Can be dropped into the Kjeldahl flask and be dissolved together with the sample.

Width	Length	Height	PK	Cat. No.
mm	mm	mm		
10	55	10	100	9.069 011



#### Weighing bottles

DURAN®. DIN 12605. With interchangeable standard ground joint stopper, fused ceramic matt marking area, statement of volume and dimensions marked permanently on each weighing bottle.

#### 1 Weighing bottles DURAN® with NS Stopper

DURAN®. With interchangeable NS stopper. With white inscription label. Burned-in imprint of capacity and size.

Available in high or tall shape.

Capacity	Bottom dia.	Height	PK	Cat. No.
ml	mm	mm		
				0.200.022
6	25	25	1	9.300 022
10	25	40	1	9.300 113
15	40	25	1	9.300 021
15	35	30	1	9.300 023
30	50	30	1	9.300 032
45	35	70	1	9.300 123
45	60	30	1	9.300 037
70	40	80	1	9.300 124
80	80	30	1	9.300 041
110	50	80	1	9.300 127



#### 2 LLG-Aluminium weighing dish

Aluminium foil, for sample handling with a flanged, crimped wall for rigidity. Finger-tab handle can be etched for identification prior to weighing. Made from oil-free, lightweight aluminium.

Article 6.236 854 is without finger-tab.



Dia.	Height	PK Cat. No.	
mm	mm		
43	12	100 <b>6.238 138</b>	
57	14	100 <b>6.238 139</b>	
70	16	100 <b>6.238 140</b>	
100	8	50 <b>6.236 854</b>	3



6.236 854

#### 4 Aluminium sample dishes

Ideal for use with infrared moisture analysers. Samples can be evenly distributed horizontally to absorb heat uniformly over the entire dish area. Can also be used as laboratory dishes.

Dia.	Height	PK	Cat. No.
mm	mm		
100	7	80	9.106 265



#### 5 LLG-Weighing boats, PS

Polystyrene, disposable. Available in black or white.

Capacity ml	Dimensions mm	Colour	PK	Cat. No.
30	78 x 56 x 14	white	500	9.950 190
100	119 x 90 x 19	white	250	9.950 191
30	78 x 56 x 14	black	500	9.950 192
100	119 x 90 x 19	black	250	9.950 193



#### 6 LLG-Weighing boats, antistatic, PS

Polystyrene, disposable. Antistatic, manufactured to eliminate the problems caused by static build-up when weighing fine powders.

Capacity	Dimensions	Colour	PK	Cat. No.
ml	mm			
30	78 x 56 x 14	white	500	9.950 194
100	119 x 90 x 19	white	250	9.950 195
30	78 x 56 x 14	black	500	9.950 196
100	119 x 90 x 19	black	250	9.950 197



**Balances/Accessories** 



#### 1 LLG Hexagonal Weighing Boats, antistatic, PS

Bend flexible boats at points to form pour spouts. Flat bottoms and sloping sides provide accurate transfer. These antistatic, polystrene boats are inert to most substances. Resist temperatures up to 150°C.

Size	Dimensions	Colour	PK	Cat. No.
	mm			
Small	38 x 25 x 9	white	500	9.900 893
Medium	64 x 51 x 19	white	500	9.900 894
Large	102 x 76 x 22	white	500	9.900 895
X-Large	127 x 89 x 31	white	500	9.900 896

#### LLG-Weighing boats, PS

Polystyrene.

Size	Dimensions (W x D x H) mm	Colour	PK	Cat. No.
Medium	90 x 90 x 7	white	500	7.930 197



#### 2 LLG-Weighing boats, PS

Polystyrene.

Capacity	Dimensions (W x D x H)	Colour	PK	Cat. No.
ml	mm			
7	46 x 46 x 8	White	1000	9.900 792
100	85 x 85 x 24	White	1000	9.900 794
250	140 x 140 x 22	White	1000	9.900 796
5	Diamond shaped	White	1000	9.900 795



#### 3 LLG-Weighing boats, antistatic, PS

Polystyrene. Antistatic.

Capacity	Dimensions (W x D x H)	Colour	PK	Cat. No.
ml	mm			
7	46 x 46 x 8	White	1000	9.900 785
100	85 x 85 x 24	White	1000	9.900 786
250	140 x 140 x 22	White	1000	9.900 787
5	Diamond shape	White	1000	9.900 788
7	46 x 46 x 8	Black	1000	9.900 789
100	85 x 85 x 24	Black	1000	9.900 791
250	140 x 140 x 22	Black	1000	9.900 800
5	Diamond shape	Black	1000	9.900 801



#### 4 Weighing bottles, PP

PP. Transparent. with push-on lid.

Kartell

Capacity	Dia.	Height	PK	Cat. No.
L	mm	mm		
30	30	50	1	9.300 805
25	40	30	1	9.300 810
65	40	60	1	9.300 815
65	60	35	1	9.300 820
50	50	30	1	9.300 825
200	60	90	1	9.300 830
400	70	120	1	9.300 835



#### 5 Planar weighing apparatus

Glass. For all weighing procedures involving the dispersal of material into a thin layer.

Туре	PK	Cat. No.
Planar weighing apparatus	1	9.300 500

# 3. Analytical measurement and testing Balances/Accessories

MACHEREY-NAGEL

#### 1 Weighing boats MN808, Paper

Pack of 100 pieces.

Paper

Dimensions:	58 x 10 x 10mm

Туре		PK	Cat. No.
MN808	10	00	9.301 069



#### 2 Weighing paper, MN226

Block of 100 sheets.

MACHEREY-NAGEL

Туре	Width	Length	PK	Cat. No.
	mm	mm		
MN 226	90	115	100	9.058 975



#### 3 Playing card rejects

Standard size for use as disposable sample carriers or spatulas. Printed and laminated on both sides

Туре	PK	Cat. No.
Playing card rejects	1	9.190 940



#### 4 Weighing table, TWK I

High quality weighing table for damping the effects of harmonic and impact vibrations when using sensitive microbalances. Tubular steel frame with wood-block cladding. The weighing platform is constructed in shock-absorbing, artificial stone. With integral drawer for weighing utensils.

Damping approx. 7.5% at 5.5-16Hz vertical and horizontal frequency.

Width	Depth	Height	PK	Cat. No.
mm	mm	mm		
900	600	750	1	9.733 060



#### 5 Weighing table, TWK II

Robust weighing table for use with ultramicro balances or vibration-sensitive equipment to dampen vibrations caused by resonance or impact shock. Solid, artificial stone block construction. Damping approx. 7.5% at 13-29 Hz vertical and horizontal frequency.

idth De	pth	Height	PK
	mm	mm	
6	600	750	1



#### 6 Weighing table

For positioning of analytical balances. Vibration-free even for smallest sample quantities.

Köttermann

ription
Width Depth Height
Width De
Width

