Unichrome®

HÄFNER
THE PERFECT WEIGHT

HÄFNER
THE PERFECT WEIGHT

made in Germany

WEIGHTS FOR THE BEST

WEIGHTS AND WEIGHT SETS

Registrier-Nr. 059993 QM08
DIN EN ISO 9001:2008

DIN EN ISO / IEC 17025:2005

DAkkS Deutsche Akkreditierungsstelle D-K-15192-01-00

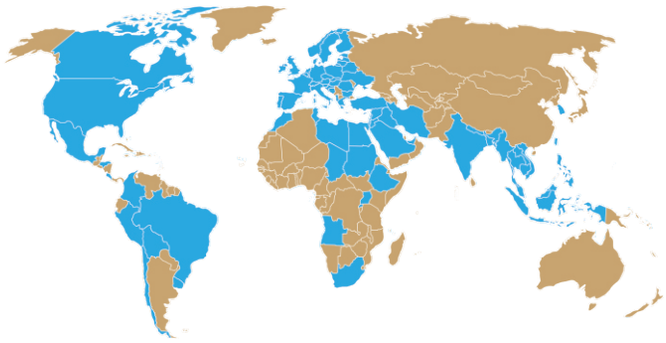
DKD

Unichrome®

HÄFNER
THE PERFECT WEIGHT

WE SUPPLY RELIABLE AND HIGH QUALITY WEIGHTS WORLDWIDE.

OUR PRODUCTS



Our weights range from milligrams to tons, all made under one roof. In addition to meeting everyday customer needs, HÄFNER sets great store in accommodating special wishes:

made in Germany

+ very small weights (down to to 0.1 mg)
+ very large weights (up to 5000 kg)
+ Special forms such as load weights or bent-wire milligram weights
+ Accessories such as bell jars or forks
+ Special markings (e.g. barcodes and signs)
+ Boxes and cases according to customer demands

HÄFNER - SPECIALIST FOR WEIGHTS AND WEIGHT SETS

EVER SINCE OUR COMPANY WAS FOUNDED IN 1933 IN OBERROT, A SMALL TOWN IN THE SWABIAN REGION OF GERMANY, WE HAVE BEEN MANUFACTURING WEIGHTS FOR A WIDE RANGE OF APPLICATIONS.

These weights range from milligrams to tons, all made under one roof. We are certified to EN ISO 9001:2008 and are known worldwide for our high reliability and quality.

With the advent of electronic weighing devices, the role of weights has changed. Originally used as weighing instruments in conjunction with scales, weights are now used as adjusting, calibration and test equipment for balances and force measuring devices. The demands on weights are constantly rising with the continuosly increasing accuracy and resolution of electronic load cells.

We recognised this trend early on and responded to the challenge. Rationalisation and the utilisation of advanced technology form the basis for our leading position in modern weights manufacturing.

Furthermore, our calibration laboratory MASSCAL is accredited by the German Accreditation Body (DAkkS) and is a member of the German Calibration Service (DKD).

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HÄFNER
THE PERFECT WEIGHT

WHEN **PERFORMANCE** COUNTS

OUR QUALITY EXPECTATIONS

Over many decades and in the history of our family-owned business, perfection and the name HÄFNER have become inseparable.

Worldwide trust and recognition by national metrology institutes (NMIs) such as PTB, NPL etc., as well as accredited calibration laboratories, state offices for verification, scale and balance manufacturers, companies for repair and maintenance, distributors for laboratory equipment, companies in all industrial sectors and not least our competitors, testify to our exceptional performance and our success.

Customer wishes and requirements for perfect weights can only be fulfilled by an ongoing development process that creates the necessary conditions and means for improvement.

We strive to repay your trust in HÄFNER with our quality and performance. **Challange us!**

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HÄFNER
THE PERFECT WEIGHT

QUALITY MANAGEMENT

HÄFNER utilises a quality management system and is certified to EN ISO 9001:2008 by DQS (registration number 059 993).

We are always up-to-date in science and technology thanks to our active participation in the technical committee of the German Calibration Service (DKD) and close cooperation with the German National Metrology Institute PTB.

OUR WEIGHTS ARE **SO GOOD** THAT OUR STAFF ARE **PROUD OF EVERY ONE OF THEM.**

PERFECT WEIGHTS

At HÄFNER every blank is formed from special materials. Advanced casting technology and extremely precise CNC machine tools are key parts of the production process.

Consistently high precision of all HÄFNER blanks is ensured by our exceptional expertise and advanced surface processing technology. What happens afterward is pure craftsmanship.
With considerable experience and sensitivity, our employees machine each weight to the specified value. Every step in the process is checked using extremely accurate scales with calibrated standard weights, and ambient conditions are monitored continuously. HÄFNER marks the weights using special corrosion-proof laser technology to ensure that the weights retain their values. This allows weight standards in classes E2, E1 and E0 to be identified reliably without confusion.

Another key factor for manufacturing perfect weights is our special HE210 steel, which was developed to meet the requirements of class E0.

As a result, for many years national metrology institutes have been able to rely on their primary weight standards (class E0) and secondary mass standards (class E1) from HÄFNER.
Before delivery, each HÄFNER weight is again cleaned and checked, and if requested by the customer a calibration certificate (e.g. a DAkkS calibration certificate) is prepared to document quality and traceability to the national kilogram prototype.
HÄFNER perfection is only possible with staff who are experts at their trade.

Service and reliability at an attractive price.

Unichrome®

HÄFNER
THE PERFECT WEIGHT

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THE PERFECT WEIGHT

PROCESS SECURITY AND RELIABILITY

QUALITY MANAGEMENT

Assuring the quality of your products is an important part of your business success, which is why an accredited quality management system is indispensable in the world of measuring and weighing.

Quality management standards and guidelines, such as the ISO 9001 family, VDA 6.1, ISO 10012, ISO/TS 16649, ISO 17025 and the GLP/GMP regulations, help ensure reproducible measurement results by means of reliable and suitable measuring and test equipment, which includes scales and standard weights (calibration and test weights).

Documented monitoring of measuring and test equipment is therefore a key obligation and provides essential evidence of compliance with product liability and due diligence regulations.

As a worldwide leader in the manufacture of weights, HÄFNER supports you in planning test processes and test equipment with:

- expertise and experience;
- advice and competence;
- extremely high precision and quality;
- flexibility;
- special production according to individual customer requirements;
- service and reliability at an attractive price.

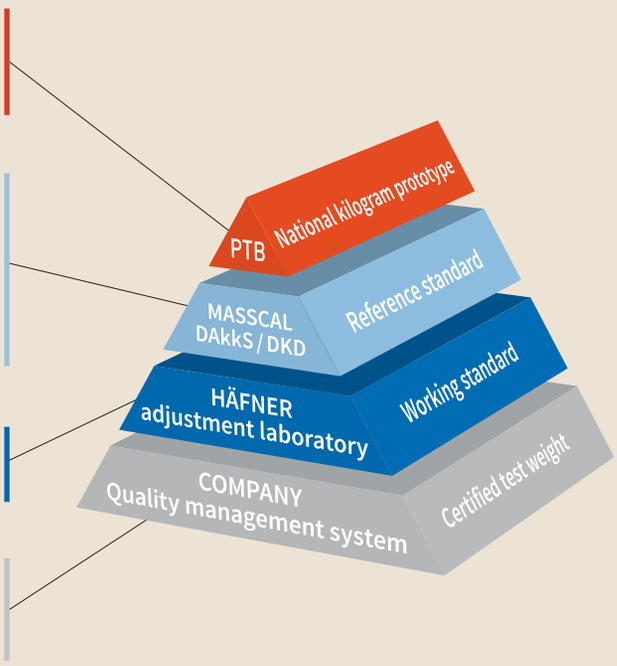
TRACEABILITY TO THE NATIONAL WEIGHT STANDARD

In Germany the Physikalisch Technische Bundesanstalt (PTB) is the National Metrology Institute (NMI) and provides access to the physical SI mass standards.

Our MASSCAL calibration laboratory is accredited as a DAkkS calibration laboratory (registration number D-K-15192-01-00) by the PTB. The internationally valid DAkkS calibration certificates meet the requirements for test equipment monitoring and serve as evidence for traceability to the national weight standard.

HÄFNER works with a quality management system and is certified to EN ISO 9001:2008 by DQS (registration number 059 993).

In the world of measuring and weighing, a certified quality management system is essential as a basis for ensuring the quality of your products.



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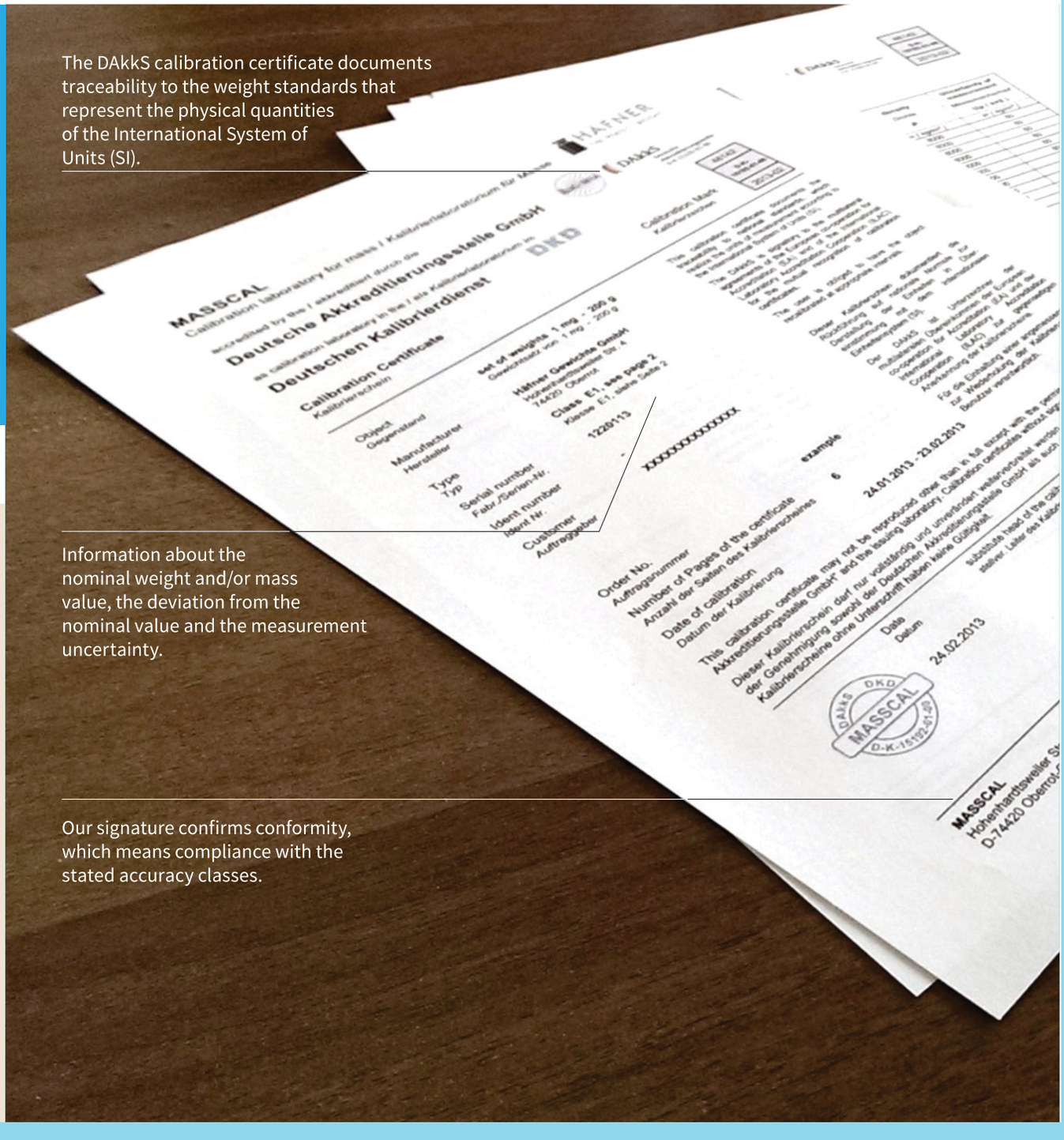
HÄFNER
THE PERFECT WEIGHT

MASCAL ADJUSTMENT AND CALIBRATION LABORATORY

HÄFNER has a spacious adjustment and calibration laboratory dubbed MASSCAL, which meets the highest metrological requirements. We invest considerable sums to keep our measuring devices at the state of the art.

MASSCAL conforms to the EN ISO/IEC 17025 international standard and is accredited within the scope of the German Accreditation Body (DAkkS) (Reg, Nr. D-K-15192-01-00) of the German national metrology institute PTB, which means that our calibration certificates are recognised internationally.

ilac-MRA DAkkS Deutsche Akkreditierungsstelle



The DAkkS calibration certificate documents traceability to the weight standards that represent the physical quantities of the International System of Units (SI).

Information about the nominal weight and/or mass value, the deviation from the nominal value and the measurement uncertainty.

Our signature confirms conformity, which means compliance with the stated accuracy classes.

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HOW TO DETERMINE THE NECESSARY TEST WEIGHTS

MAXIMUM TOLERANCE FOR WEIGHTS ACCORDING TO OIML R111:2004

Nominal value	E1	E2	F1	F2	M1	M1-2	M2	M2-3	M3
	+/- mg	+/- mg	+/- mg	+/- mg	+/- mg	+/- mg	+/- mg	+/- mg	+/- mg
1 mg	0,003	0,006	0,020	0,06	0,20				
2 mg	0,003	0,006	0,020	0,06	0,20				
5 mg	0,003	0,006	0,020	0,06	0,20				
10 mg	0,003	0,008	0,025	0,08	0,25				
20 mg	0,003	0,010	0,03	0,10	0,3				
50 mg	0,004	0,012	0,04	0,12	0,4				
100 mg	0,005	0,016	0,05	0,16	0,5		1,6		
200 mg	0,006	0,020	0,06	0,20	0,6		2,0		
500 mg	0,008	0,025	0,08	0,25	0,8		2,5		
1 g	0,010	0,030	0,10	0,3	1,0		3,0		10
2 g	0,012	0,040	0,12	0,4	1,2		4,0		12
5 g	0,016	0,050	0,16	0,5	1,6		5,0		16
10 g	0,020	0,060	0,20	0,6	2,0		6,0		20
20 g	0,025	0,080	0,25	0,8	2,5		8,0		25
50 g	0,030	0,10	0,3	1,0	3,0		10		30
100 g	0,05	0,16	0,5	1,6	5		16		50
200 g	0,10	0,30	1,0	3,0	10		30		100
500 g	0,25	0,80	2,5	8,0	25		80		250
1 kg	0,5	1,6	5	16	50		160		500
2 kg	1,0	3,0	10	30	100		300		1.000
5 kg	2,5	8,0	25	80	250		800		2.500
10 kg	5	16	50	160	500		1.600		5.000
20 kg	10	30	100	300	1.000		3.000		10.000
50 kg	25	80	250	800	2.500	5.000	8.000	16.000	25.000
		+/- g	+/- g	+/- g	+/- g	+/- g	+/- g	+/- g	+/- g
100 kg		0,16	0,5	1,6	5	10	16	30	50
200 kg		0,30	1,0	3,0	10	20	30	60	100
500 kg		0,80	2,5	8,0	25	50	80	160	250
1.000 kg		1,6	5	16	50	100	160	300	500
2.000 kg			10	30	100	200	300	600	1.000
5.000 kg			25	80	250	500	800	1.600	2.500

DEFAULT DENSITIES FOR WEIGHT MATERIALS

Ident.	Material	Density at 68°F	Density uncer-tainty U(k=2)
		kg/m³	kg/m³
GG	Cast iron	7200	400
ST	Steel	7800	200
AL	Aluminium	2700	120
NS	German silver ickel silver	8600	170
MS	Brass finely turned	8400	100
MSN	Brass nickel plated	8400	100
MSM	Brass miralloy	8400	100
VA	Stainless steel	7900	140
HF12	austenit stainless steel	7950	80
HE210	Special stainless steel	8000	30

LIMITS OF MAGNETIC CHARACTERISTICS

Class	Magnetization	Magnetic susceptibility X		
	µoM (µT)	m ≤ 1 g	2 g ≤m ≤ 10 g	m ≤ 20 g
E1	< 2,5	< 0,25	< 0,06	< 0,02
E2	< 8	< 0,9	< 0,18	< 0,07
F1	< 25	< 10	< 0,7	< 0,2
F2	< 80	-	< 4	< 0,8
M1	< 250	-	-	-
M1-2	< 500	-	-	-
M2	< 800	-	-	-
M2-3	< 1600	-	-	-
M3	< 2500	-	-	-

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HÄFNER
THE PERFECT WEIGHT

Reference Mass Standards and Weights of Class E1

Adjustment, testing and calibration instrument within the quality assurance of balances with steps > 1 000 000 according to DIN EN ISO 9001ff etc. For calibration of weights of the class E2 according to OIML R111. Within high-precision weighing or comparisons weight on mass comparators.

Weights in the exclusive assortment case.

ACCESSORIES

All weight sets include gloves, two brushes and two tweezers.

Up to 50 g without big tweezers, big brush and gloves.

CLEAN ROOM PLASTIC CASES

MAHOGANY WOODEN BOX

SERVICE CASE

CLEAN ROOM CASE
removeable inserts

PLASTIC BOXES WITH SCREWED TOP

E1 REFERENCE MASS STANDARDS

Milligramm weights

SPECIAL STAINLESS STEEL HE210 highly polished

Wire shape

SINGLE WEIGHT

Nominal value	Tol.	without box	Plastic boxes with screwed top	Clean room plastic cases	Mahogany wooden box	**PTB** Calibration certificate	**DAkkS** Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
1 mg	0,003	9.DBHO-010	9.DBHD-010	9.DBHP-010	9.DAHM-010	…016	…011
2 mg	0,003	9.DBHO-020	9.DBHD-020	9.DBHP-020	9.DAHM-020	…026	…021
5 mg	0,003	9.DBHO-030	9.DBHD-030	9.DBHP-030	9.DAHM-030	…036	…031
10 mg	0,003	9.DBHO-040	9.DBHD-040	9.DBHP-040	9.DBHM-040	…046	…041
20 mg	0,003	9.DBHO-050	9.DBHD-050	9.DBHP-050	9.DBHM-050	…056	…051
50 mg	0,004	9.DBHO-060	9.DBHD-060	9.DBHP-060	9.DBHM-060	…066	…061
100 mg	0,005	9.DBHO-070	9.DBHD-070	9.DBHP-070	9.DBHM-070	…076	…071
200 mg	0,006	9.DBHO-080	9.DBHD-080	9.DBHP-080	9.DBHM-080	…086	…081
500 mg	0,008	9.DBHO-090	9.DBHD-090	9.DBHP-090	9.DBHM-090	…096	…091

SET

Nominal value	Qty.	Content	Clean room plastic cases	Mahogany wooden box *	**PTB** Calibration certificate	**DAkkS** Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	1,11 g	9.XEHP-710	9.XEHM-710	9.0000-716	9.0000-711

* wooden box, inside plastic case with antistatic stainless steel coating, tweezer and brush

Milligramm weights

ALUMINIUM / SPECIAL STAINLESS STEEL HE210

Flat polygonal sheets

highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	Plastic boxes with screwed top	Clean room plastic cases	Mahogany wooden box	**PTB** Calibration certificate	**DAkkS** Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
1 mg *	0,003	9.PAHO-010	9.PAHD-010	9.PAHP-010	9.PAHM-010	…016	…011
2 mg *	0,003	9.PAHO-020	9.PAHD-020	9.PAHP-020	9.PAHM-020	…026	…021
5 mg *	0,003	9.PAHO-030	9.PAHD-030	9.PAHP-030	9.PAHM-030	…036	…031
10 mg	0,003	9.PBHO-040	9.PBHD-040	9.PBHP-040	9.PBHM-040	…046	…041
20 mg	0,003	9.PBHO-050	9.PBHD-050	9.PBHP-050	9.PBHM-050	…056	…051
50 mg	0,004	9.PBHO-060	9.PBHD-060	9.PBHP-060	9.PBHM-060	…066	…061
100 mg	0,005	9.PBHO-070	9.PBHD-070	9.PBHP-070	9.PBHM-070	…076	…071
200 mg	0,006	9.PBHO-080	9.PBHD-080	9.PBHP-080	9.PBHM-080	…086	…081
500 mg	0,008	9.PBHO-090	9.PBHD-090	9.PBHP-090	9.PBHM-090	…096	…091

* 1 mg - 5 mg made of aluminium

SET

Nominal value	Qty.	Content	Clean room plastic cases	Mahogany wooden box	**PTB** Calibration certificate	**DAkkS** Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	1,11 g	9.XNHP-710	9.XNHM-710	9.0000-716	9.0000-711

Unichrome®

HÄFNER
THE PERFECT WEIGHT

Knob weights

SPECIAL STAINLESS STEEL HE210

highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	Plastic boxes with screwed top	Clean room plastic cases *	Mahogany wooden box	**PTB** Calibration certificate	**DAkkS** Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
1 g	0,010	9.MBHO-110	9.MBHD-110	9.MBHP-110	9.MBHM-110	…116	…111
2 g	0,012	9.MBHO-120	9.MBHD-120	9.MBHP-120	9.MBHM-120	…126	…121
5 g	0,016	9.MBHO-130	9.MBHD-130	9.MBHP-130	9.MBHM-130	…136	…131
10 g	0,020	9.MBHO-140	9.MBHD-140	9.MBHP-140	9.MBHM-140	…146	…141
20 g	0,025	9.MBHO-150	9.MBHD-150	9.MBHP-150	9.MBHM-150	…156	…151
50 g	0,03	9.MBHO-160	9.MBHD-160	9.MBHP-160	9.MBHM-160	…166	…161
100 g	0,05	9.MBHO-170	9.MBHD-170	9.MBHP-170	9.MBHM-170	…176	…171
200 g	0,10	9.MBHO-180	9.MBHD-180	9.MBHP-180	9.MBHM-180	…186	…181
500 g	0,25	9.MBHO-190	9.MBHD-190	9.MBHP-190	9.MBHM-190	…196	…191
1 kg	0,5	9.MBHO-210	9.MBHD-210	9.MBHP-210	9.MBHM-210	…216	…211
2 kg	1,0	9.MBHO-220	9.MBHD-220	9.MBHP-220	9.MBHM-220	…226	…221
5 kg	2,5	9.MBHO-230	9.MBHD-230	9.MBHP-230	9.MBHM-230	…236	…231
10 kg	5	9.MBHO-240	9.MBHD-240	9.MBHP-240	9.MBHM-240	…246	…241
20 kg	10	9.MBHO-250			9.MBHM-250	…256	…251
50 kg	25	9.MBHO-260			9.MBHM-260	…266	…261

Nominal value	Tol.	Clean room case removeable inserts	Service case	**PTB** Calibration certificate	**DAkkS** Calibration certificate
	+/- mg	Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
100 g	0,05	9.MBHR-170		…176	…171
200 g	0,10	9.MBHR-180		…186	…181
500 g	0,25	9.MBHR-190		…196	…191
1 kg	0,5	9.MBHR-210		…216	…211
2 kg	1,0	9.MBHR-220		…226	…221
5 kg	2,5	9.MBHR-230	9.MBHS-230	…236	…231
10 kg	5	9.MBHR-240	9.MBHS-240	…246	…241
20 kg	10	9.MBHR-250	9.MBHS-250	…256	…251
50 kg	25	9.MBHR-260	9.MBHS-260	…266	…261

* up from 100 g in a plastic case with foam insert

& RECALIBRATION

Recalibration

E0 PTP-test or calibration*

Uncertainty of measurement: 1/5 of the tolerance of class E1

SINGLE WEIGHT

Nominal value	Art.no.
1 mg - 500 mg	1431
1 g - 1 kg	1432
2 kg	1433
5 kg	1434
10 kg	1435
20 kg	1436
50 kg	1437

SETS

Nominal value	Art.no.
1 g - 50 g	1440
1 g - 100 g	1441
1 g - 200 g	1442
1 g - 500 g	1443
1 g - 1 kg	1444
1 g - 2 kg	1445
1 g - 5 kg	1446
1 g - 10 kg	1447

Nominal value	Art.no.
1 mg - 500 mg	1448
1 mg - 50 g	1449
1 mg - 100 g	1450
1 mg - 200 g	1451
1 mg - 500 g	1452
1 mg - 1 kg	1453
1 mg - 2 kg	1454
1 mg - 5 kg	1455
1 mg - 10 kg	1456

*Certification of the conventional weighing value and the mass, if the values of the determination of the volume/density are available.

E1 PTP-test or calibration*

Uncertainty of measurement: 1/3 of the tolerance of class E1

SINGLE WEIGHT

Nominal value	Art.no.
1 mg - 500 mg	1401
1 g - 1 kg	1402
2 kg	1403
5 kg	1404
10 kg	1405
20 kg	1406
50 kg	1407

SETS

Nominal value	Art.no.
1 g - 50 g	1410
1 g - 100 g	1411
1 g - 200 g	1412
1 g - 500 g	1413
1 g - 1 kg	1414
1 g - 2 kg	1415
1 g - 5 kg	1416
1 g - 10 kg	1417

Nominal value	Art.no.
1 mg - 500 mg	1418
1 mg - 50 g	1419
1 mg - 100 g	1420
1 mg - 200 g	1421
1 mg - 500 g	1422
1 mg - 1 kg	1423
1 mg - 2 kg	1424
1 mg - 5 kg	1425
1 mg - 10 kg	1426

*Certification of the conventional weighing value and the mass, if the values of the determination of the volume/density are available.

DAkkS-Calibration certificate

SINGLE WEIGHT

Nominal value	Art.no.
1 mg - 500 mg	1325
1 g - 1 kg	1326
2 kg - 10 kg	1327
20 kg	1328
50 kg	1329

The examination of the magnetic properties according OMIL R 111-2004 is included in these prices.

SETS

Nominal value	Art.no.
1 g - 50 g	1384
1 g - 100 g	1385
1 g - 200 g	1386
1 g - 500 g	1387
1 g - 1 kg	1388
1 g - 2 kg	1389
1 g - 5 kg	1390
1 g - 10 kg	1391

Nominal value	Art.no.
1 mg - 500 mg	1392
1 mg - 50 g	1393
1 mg - 100 g	1394
1 mg - 200 g	1395
1 mg - 500 g	1396
1 mg - 1 kg	1397
1 mg - 2 kg	1398
1 mg - 5 kg	1399
1 mg - 10 kg	1400

E2 DAkkS-Calibration certificate

SINGLE WEIGHT

Nominal value	Art.no.
1 mg - 50 g	1320
100 g - 1 kg	1321
2 kg - 10 kg	1322
20 kg	1323
50 kg	1324

SETS

Nominal value	Art.no.
1 g - 50 g	1367
1 g - 100 g	1368
1 g - 200 g	1369
1 g - 500 g	1370
1 g - 1 kg	1371
1 g - 2 kg	1372
1 g - 5 kg	1373
1 g - 10 kg	1374

Nominal value	Art.no.
1 mg - 500 mg	1375
1 mg - 50 g	1376
1 mg - 100 g	1377
1 mg - 200 g	1378
1 mg - 500 g	1379
1 mg - 1 kg	1380
1 mg - 2 kg	1381
1 mg - 5 kg	1382
1 mg - 10 kg	1383

F1 / F2 DAkkS-Calibration certificate

SINGLE WEIGHT

Nominal value	Art.no.
1 mg - 50 g	1470
100 g - 1 kg	1471
2 kg - 10 kg	1311
20 kg	1312
50 kg	1313
100 kg, nur F2	1314
200 kg, nur F2	1315
500 kg, nur F2	1316
100 kg, F1, PTB-Kalibrierung	1461
200 kg, F1, PTB- Kalibrierung	1462
500 kg, F1, PTB- Kalibrierung	1463
1000 kg, F1, PTB- Kalibrierung	1464
2000 kg, F1, PTB- Kalibrierung	1465

SETS

Nominal value	Art.no.
1 g - 50 g	1350
1 g - 100 g	1351
1 g - 200 g	1352
1 g - 500 g	1353
1 g - 1 kg	1354
1 g - 2 kg	1355
1 g - 5 kg	1356
1 g - 10 kg	1357

Nominal value	Art.no.
1 mg - 500 mg	1358
1 mg - 50 g	1359
1 mg - 100 g	1360
1 mg - 200 g	1361
1 mg - 500 g	1362
1 mg - 1 kg	1363
1 mg - 2 kg	1364
1 mg - 5 kg	1365
1 mg - 10 kg	1366

Individual nominal values or intermediate values like newton weights or weights in other units are calculated with an extra charge of 10,00 € /piece. Neccesary costs for reparation and adjustment are calculated after prior consultation in a cost estimation.

M1 / M2 / M3 DAkkS-Calibration certificate

SINGLE WEIGHT

Nominal value	Art.no.
1 mg - 50 g	1301
100 g - 1 kg	1302
2 kg - 10 kg	1303
20 kg	1304
50 kg	1305
100 kg	1306
200 kg	1307
500 kg	1308
1000 kg	1309
2000 kg	1310

SETS

Nominal value	Art.no.
1 g - 50 g	1333
1 g - 100 g	1334
1 g - 200 g	1335
1 g - 500 g	1336
1 g - 1 kg	1337
1 g - 2 kg	1338
1 g - 5 kg	1339
1 g - 10 kg	1340

Nominal value	Art.no.
1 mg - 500 mg	1341
1 mg - 50 g	1342
1 mg - 100 g	1343
1 mg - 200 g	1344
1 mg - 500 g	1345
1 mg - 1 kg	1346
1 mg - 2 kg	1347
1 mg - 5 kg	1348
1 mg - 10 kg	1349

Individual nominal values or intermediate values like newton weights or weights in other units are calculated with an extra charge of 7,00 € /piece. Neccesary costs for reparation and adjustment are calculated after prior consultation in a cost estimation.