

Gauge blocks general

Which gauge block is the most suitable for you?

MATERIALS

Steel

Steel is the oldest material and remains the most commonly accepted for gauge blocks. If well taken care of, steel gauges guarantee many years of useful life. They must be cleaned carefully before and after use and stored in a protective case in a dry environment.

Tungsten carbide

When a higher degree of hardness is needed, tungsten carbide is the material to choose. It is less sensitive to wear and damage compared to hardened steel. Especially when used frequently, tungsten carbide has an increased life span compared to steel gauge blocks.

Ceramics

Ceramics is relatively wear resistant and has a high degree of strength and stability. It will not rust and is unaffected by chemicals.

ACCURACY CLASSES

Gauge blocks are classified in upgrading order of accuracy according to EN ISO 3650: 1998 in the classes: 2, 1, 0, K. The ISO 3650 is an international standard, which is adopted by national standards such as RvA, DAKKS, UKAS, BKO, SCS and COFRAC.



Class 2

Class 2 gauge blocks are intended for general workshop use by skilled workers to set up, for example, measuring instruments.

Class 1

Class 1 gauge blocks are used as working standards in inspection rooms within the production to set and calibrate measuring instruments and equipment as well as to inspect tools, fixtures and machines.

Class 0

Class 0 gauge blocks, with their high accuracy, are intended for use by measuring technicians in environmentally controlled inspection rooms, for example to calibrate measuring equipments.

Class K

Class K gauge blocks have the highest class of accuracy. They are the length standards in a calibration laboratory and other calibration values are derived from these gauges. Only with a UKAS certificate – or with another certificate, accepted by UKAS as equivalent (e.g. DAKKS, RvA and COFRAC) – will these gauge blocks be at their best. The most accurate gauges can meet a tolerance of $\pm 0.05 \mu\text{m}$.

Accuracy according ISO 3650

Nominal size mm	Class K		Class 0		Class 1		Class 2	
	Tolerance on nominal size μm	Deviation* μm	Tolerance on nominal size μm	Deviation* μm	Tolerance on nominal size μm	Deviation* μm	Tolerance on nominal size μm	Deviation* μm
0.5 - 10	± 0.20	0.05	± 0.12	0.10	± 0.20	0.16	± 0.45	0.30
10 - 25	± 0.30	0.05	± 0.14	0.10	± 0.30	0.16	± 0.60	0.30
25 - 50	± 0.40	0.06	± 0.20	0.10	± 0.40	0.18	± 0.80	0.30
50 - 75	± 0.50	0.06	± 0.25	0.12	± 0.50	0.18	± 1.00	0.35
75 - 100	± 0.60	0.07	± 0.30	0.12	± 0.60	0.20	± 1.20	0.35
100 - 150	± 0.80	0.08	± 0.40	0.14	± 0.80	0.20	± 1.60	0.40
150 - 200	± 1.00	0.09	± 0.50	0.16	± 1.00	0.25	± 2.00	0.40
200 - 250	± 1.20	0.10	± 0.60	0.16	± 1.20	0.25	± 2.40	0.45
250 - 300	± 1.40	0.10	± 0.70	0.18	± 1.40	0.25	± 2.80	0.50
300 - 400	± 1.80	0.12	± 0.90	0.20	± 1.80	0.30	± 3.60	0.50
400 - 500	± 2.20	0.14	± 1.10	0.25	± 2.20	0.35	± 4.40	0.60
500 - 600	± 2.60	0.16	± 1.30	0.25	± 2.60	0.40	± 5.00	0.70
600 - 700	± 3.00	0.18	± 1.50	0.30	± 3.00	0.45	± 6.00	0.70
700 - 800	± 3.40	0.20	± 1.70	0.30	± 3.40	0.50	± 6.50	0.80
800 - 900	± 3.80	0.20	± 1.90	0.35	± 3.80	0.50	± 7.50	0.90
900 - 1000	± 4.20	0.25	± 2.00	0.40	± 4.20	0.60	± 8.00	1.00

* Deviation of the measuring face.

Steel gauge blocks with an excellent price-performance ratio.

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Steel gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price EUR	ISO 3650/0 Price EUR
0.5	—		
1	—		
1.0005	—		
1.001 - 1.009	0.001		
1.01 - 1.50	0.01		
1.6 - 2.0	0.1		
2.5 - 7.5	0.5		
8.0 - 10.0	0.5		
10.5 - 25.0	0.5		
30	—		
40	—		
50	—		
60	—		
70	—		
75	—		
80	—		
90	—		
100	—		

High quality steel gauge blocks, can be very well wringed to make a combination size. The steel gauge blocks are available in all accuracy classes of ISO 3650 (2, 1, 0, K). Only the most commonly used sizes can be found in this catalog. Special sizes and sets are available on request, as well as special sets for calibration of micrometers and calipers.

- Hardness: 800 HV.
 - Expansion coefficient: $(11.5 \pm 1) \cdot 10^{-6}/^{\circ}\text{C}$.
 - Cross-section: 0.5 - 10 mm: 30 x 9 mm,
 > 10 mm: 35 x 9 mm.
 - ISO 3650.
- Delivery with a traceable inspection report.
 - Delivery on request with a DAKkS certificate,
UKAS acknowledged.
 - Sets delivered in luxurious case.



Size mm	Increment mm	ISO 3650/1 Price EUR	ISO 3650/0 Price EUR
0.5	—		
1	—		
1.0005	—		
1.001 - 1.009	0.001		
1.01 - 1.5	0.01		
1.6 - 1.9	0.1		
2.0 - 5.5	0.5		
6.0 - 10.0	0.5		
10.5 - 15.0	0.5		
15.5 - 20.0	0.5		
20.5 - 25.0	0.5		
30	—		
40	—		
50	—		
60	—		
70	—		
75	—		
80	—		
90	—		
100	—		



Item No.	Class	Price EUR	Size mm	Increment mm	Pieces
M32:			1.005	—	1
831.915	1		1.01 - 1.09	0.01	9
831.914	0		1.1 - 1.9	0.1	9
			1 - 9	1	9
			10 - 30	10	3
			60	—	1
M47:			1.005	—	1
831.911	1		1.00 - 1.09	0.01	10
831.910	0		1.1 - 1.9	0.1	9
			2 - 25	1	24
			50 - 100	25	3
M87:			0.5	—	1
831.909	1		1.001 - 1.009	0.001	9
831.908	0		1.00 - 1.50	0.01	51
			2.0 - 10.0	0.5	17
			20 - 100	10	9
M103:			0.5	—	1
831.907	1		1.005	—	1
831.906	0		1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
M112:			0.5	—	1
831.905	1		1.0005	—	1
831.904	0		1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
M122:			0.5	—	1
831.903	1		1.0005	—	1
831.902	0		1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			1.6 - 1.9	0.1	4
			2.0 - 25.0	0.5	47
			30 - 70	10	5
			75	—	1
			80 - 100	10	3

High quality tungsten carbide gauge blocks, can be very well wringed to make a combination size. The tungsten carbide gauge blocks are available in all accuracy classes of ISO 3650 (2, 1, 0, K). Only the most commonly used sizes can be found in this catalog. Special sizes and sets are available on request.

- Delivery with a traceable inspection report.
- Delivery on request with a DAkkS certificate, UKAS acknowledged.
- Sets delivered in luxurious case.



SELECT/

Size mm	Increment mm	ISO 3650/1 Price EUR	ISO 3650/0 Price EUR
0.5	—		
1	—		
1.0005	—		
1.001 - 1.009	0.001		
1.01 - 1.50	0.01		
1.6 - 1.9	0.1		
2.0 - 5.5	0.5		
6.0 - 10.0	0.5		
10.5 - 15.0	0.5		
15.5 - 20.0	0.5		
20.5 - 25.0	0.5		
30	—		
40	—		
50	—		
60	—		
70	—		
75	—		
80	—		
90	—		
100	—		

Item No.	Class	Price EUR	Size mm	Increment mm	Pieces
M32:			1.005	—	1
828.592	1		1.01 - 1.09	0.01	9
828.606	0		1.1 - 1.9	0.1	9
			1 - 9	1	9
			10 - 30	10	3
			60	—	1
M46:			1.001 - 1.009	0.001	9
828.590	1		1.00 - 1.09	0.01	10
828.604	0		1.1 - 1.9	0.1	9
			2 - 10	1	9
			20 - 100	10	9
M47:			1.005	—	1
828.589	1		1.00 - 1.09	0.01	10
828.603	0		1.1 - 1.9	0.1	9
			2 - 25	1	24
			50 - 100	25	3
M87:			0.5	—	1
828.587	1		1.001 - 1.009	0.001	9
828.601	0		1.00 - 1.50	0.01	51
			2.0 - 10.0	0.5	17
			20 - 100	10	9
M103:			0.5	—	1
828.585	1		1.005	—	1
828.599	0		1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
M112:			0.5	—	1
828.584	1		1.0005	—	1
828.598	0		1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
M122:			0.5	—	1
828.583	1		1.0005	—	1
828.597	0		1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			1.6 - 1.9	0.1	4
			2.0 - 25.0	0.5	47
			30 - 70	10	5
			75	—	1
			80 - 100	10	3

Ceramic gauge blocks

Ceramic gauge blocks with an excellent price-performance ratio, made of Zirconia ceramics. Because of this, these gauge blocks are highly durable, corrosion proof and completely stable for long-term use.

- Highly wear-resistant. Can be used 5 to 10 times longer than steel gauge blocks.
- Rustproof.

- Hardness: 88-90 HRC.
- Expansion coefficient: $(9.2 \pm 1) \cdot 10^{-6}/^{\circ}\text{C}$.
- Cross-section: 0.5 - 10 mm: 30 x 9 mm,
> 10 mm: 35 x 9 mm.
- ISO 3650.
- Delivery with an inspection report.
- Sets delivered in case.



Ceramic gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price EUR	ISO 3650/0 Price EUR
0.5	—		
1	—		
1.0005	—		
1.001 - 1.009	0.001		
1.01 - 1.49	0.01		
1.5 - 1.9	0.1		
2.0 - 5.5	0.5		
6.0 - 9.5	0.5		
10.0 - 20.0	0.5		
20.5 - 25.0	0.5		
30	—		
40	—		
50	—		
60	—		
70	—		
75	—		
80	—		
90	—		
100	—		

Ceramic gauge blocks in sets

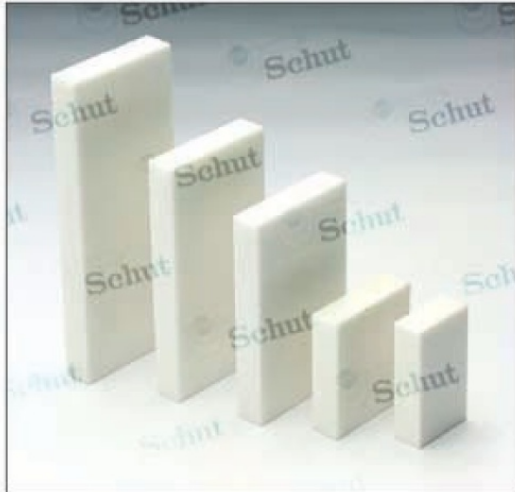
Item No.	Class	Price EUR	Size mm	Increment mm	Pieces
M32:			1.005	—	1
906.646	1		1.01 - 1.09	0.01	9
906.645	0		1.1 - 1.9	0.1	9
			1 - 9	1	9
			10 - 30	10	3
			50	—	1
M47:			1.005	—	1
906.649	1		1.01 - 1.09	0.01	9
906.648	0		1.1 - 1.9	0.1	9
			1 - 24	1	24
			25 - 100	25	4
M87:			1.001 - 1.009	0.001	9
906.652	1		1.01 - 1.49	0.01	49
906.651	0		0.5 - 9.5	0.5	19
			10 - 100	10	10
M103:			1.005	—	1
906.655	1		1.01 - 1.49	0.01	49
906.654	0		0.5 - 24.5	0.5	49
			25 - 100	25	4
M112:			1.0005	—	1
906.658	1		1.001 - 1.009	0.001	9
906.657	0		1.01 - 1.49	0.01	49
			0.5 - 24.5	0.5	49
			25 - 100	25	4



Select ceramic gauge blocks

High quality ceramic gauge blocks, can be very well wringed to make a combination size. The ceramic gauge blocks are available in all accuracy classes of ISO 3650 (2, 1, 0, K). Only the most commonly used sizes can be found in this catalog. Special sizes and sets are available on request, as well as special sets for calibration of micrometers and calipers.

- Hardness: 1350 HV.
- Expansion coefficient: $(9.5 \pm 1) \cdot 10^{-6}/^{\circ}\text{C}$.



- Cross-section: 0.5 - 10 mm: 30 x 9 mm,
> 10 mm: 35 x 9 mm.
- ISO 3650.
- Delivery with a traceable inspection report.
- Delivery on request with a DAKKS certificate, UKAS acknowledged.
- Sets delivered in luxurious case.

Ceramic gauge blocks in sets

Item No.	Class	Price EUR	Size mm	Increment mm	Pieces
M32:			1.005	—	1
831.085	1		1.01 - 1.09	0.01	9
831.084	0		1.1 - 1.9	0.1	9
			1 - 9	1	9
			10 - 30	10	3
			60	—	1
M47:			1.005	—	1
831.081	1		1.00 - 1.09	0.01	10
831.080	0		1.1 - 1.9	0.1	9
			2 - 25	1	24
			50 - 100	25	3
M87:			0.5	—	1
831.079	1		1.001 - 1.009	0.001	9
831.078	0		1.00 - 1.50	0.01	51
			2.0 - 10.0	0.5	17
			20 - 100	10	9
M103:			0.5	—	1
831.077	1		1.005	—	1
831.076	0		1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
M112:			0.5	—	1
831.075	1		1.0005	—	1
831.074	0		1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
M122:			0.5	—	1
831.073	1		1.0005	—	1
831.072	0		1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			1.6 - 1.9	0.1	4
			2.0 - 25.0	0.5	47
			30 - 70	10	5
			75	—	1
			80 - 100	10	3



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SELECT

Ceramic gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price EUR	ISO 3650/0 Price EUR
0.5	—		
1	—		
1.0005	—		
1.001 - 1.009	0.001		
1.01 - 1.50	0.01		
1.6 - 1.9	0.1		
2.0 - 5.5	0.5		
6.0 - 10.0	0.5		
10.5 - 15.0	0.5		
15.5 - 20.0	0.5		
20.5 - 25.0	0.5		
30	—		
40	—		
50	—		
60	—		
70	—		
75	—		
80	—		
90	—		
100	—		