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Steel Metric Gauge Block Sets Overview

Mitutoyo provides a wide selection of boxed sets of gauge blocks to meet the various needs of industry. Selecting the best set, or sets, to acquire usually depends on the accuracy required by the target applications, the level of convenience desired and the environmental conditions in which they will be used.



Steel 32-block set



Steel 34-block set



Steel 46-block set



Steel 47-block set



Steel 56-block set



Steel 76-block set



Steel 87-block set



Steel 88-block set



Steel 103-block set



Steel 112-block set

Steel Metric Gauge Block Sets Grade K with ISO JCSS Certificate

Grade K with ISO JCSS Certificate



Calibration Certificate

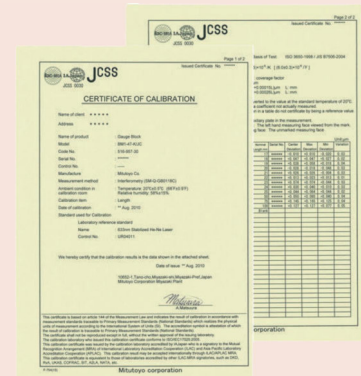
Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-596-60	122	K	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 1,6-1,9 mm (0,1 mm step / 4 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 30-100 mm (10 mm step / 8 blocks) 25, 75 mm (50 mm step / 2 blocks)	3700
516-937-60	112	K	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3700
516-941-60	103	K	Steel	1005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3800
516-945-60	87	K	Steel	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	3300
516-949-60	76	K	Steel	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-40 mm (10 mm step / 4 blocks) 50-100 mm (25 mm step / 3 blocks)	2400
516-953-60	56	K	Steel	0,5 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2600
516-957-60	47	K	Steel	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2400
516-961-60	47	K	Steel	1005 mm (1 block) 1,01-1,19 mm (0,01 mm step / 19 blocks) 1,2-1,9 mm (0,1 mm step / 8 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2800
516-994-60	46	K	Steel	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2800
516-128-60	34	K	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-5 mm (1 mm step / 5 blocks) 10 mm (1 block)	1200
516-965-60	32	K	Steel	1005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-30 mm (10 mm step / 3 blocks) 60 mm (1 block)	1100

Specifications

Accuracy

EN ISO 3650



JCSS Calibration Certificate

These Gauge Block Sets are delivered with a JCSS Certificate of Calibration (Japan Calibration Service System).

A JCSS Certificate of Calibration is comparable with e.g. DAKKS COFRAC, RVA or UKAS Certificate of Calibration.

This calibration result is accepted internationally.

Steel Metric Gauge Block Sets Grade 0 with ISO Inspection Certificate

Grade 0 with ISO Inspection Certificate

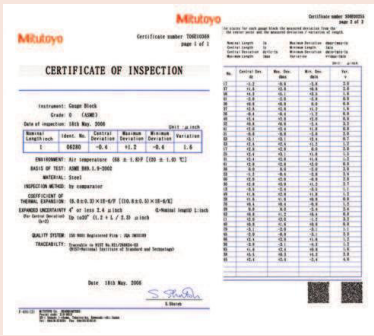
Specifications

Accuracy

EN ISO 3650



Inspection Certificate



Inspection Certificate

Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.

Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-597-10	122	0	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 1,6-1,9 mm (0,1 mm step / 4 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 30-100 mm (10 mm step / 8 blocks) 25, 75 mm (50 mm step / 2 blocks)	3700
516-938-10	112	0	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3700
516-942-10	103	0	Steel	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3800
516-970-10	88	0	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	3300
516-946-10	87	0	Steel	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	3300
516-950-10	76	0	Steel	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-40 mm (10 mm step / 4 blocks) 50-100 mm (25 mm step / 3 blocks)	2400
516-954-10	56	0	Steel	0,5 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2080
516-958-10	47	0	Steel	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2400
516-962-10	47	0	Steel	1,005 mm (1 block) 1,01-1,19 mm (0,01 mm step / 19 blocks) 1,2-1,9 mm (0,1 mm step / 8 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2800
516-995-10	46	0	Steel	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2800
516-129-10	34	0	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-5 mm (1 mm step / 5 blocks) 10 mm (1 block)	1200
516-966-10	32	0	Steel	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-30 mm (10 mm step / 3 blocks) 60 mm (1 block)	1100

Steel Metric Gauge Block Sets Grade 1 with ISO Inspection Certificate

Grade 1 with ISO Inspection Certificate



Inspection Certificate

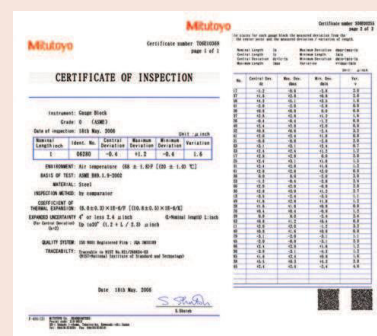
Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-598-10	122	1	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 1,6-1,9 mm (0,1 mm step / 4 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 30-100 mm (10 mm step / 8 blocks) 25, 75 mm (50 mm step / 2 blocks)	3700
516-939-10	112	1	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3700
516-943-10	103	1	Steel	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3800
516-971-10	88	1	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	3300
516-947-10	87	1	Steel	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	3300
516-951-10	76	1	Steel	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-40 mm (10 mm step / 4 blocks) 50-100 mm (25 mm step / 3 blocks)	2400
516-955-10	56	1	Steel	0,5 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2600
516-959-10	47	1	Steel	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2400
516-963-10	47	1	Steel	1,005 mm (1 block) 1,01-1,19 mm (0,01 mm step / 19 blocks) 1,2-1,9 mm (0,1 mm step / 8 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2800
516-996-10	46	1	Steel	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2800
516-130-10	34	1	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-5 mm (1 mm step / 5 blocks) 10 mm (1 block)	1200
516-967-10	32	1	Steel	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-30 mm (10 mm step / 3 blocks) 60 mm (1 block)	1100

Specifications

Accuracy

EN ISO 3650



Inspection Certificate

Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.

Steel Metric Gauge Block Sets Grade 2 with ISO Inspection Certificate

Grade 2 with ISO Inspection Certificate

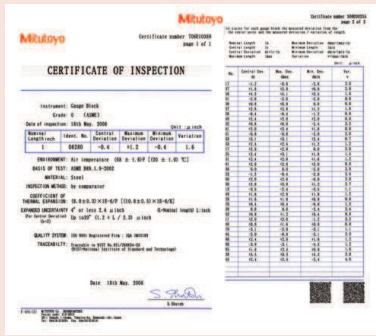
Specifications

Accuracy

EN ISO 3650



Inspection Certificate



Inspection Certificate

Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.

Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-599-10	122	2	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 1,6-1,9 mm (0,1 mm step / 4 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 30-100 mm (10 mm step / 8 blocks) 25, 75 mm (50 mm step / 2 blocks)	3700
516-940-10	112	2	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3700
516-944-10	103	2	Steel	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3800
516-972-10	88	2	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	3300
516-948-10	87	2	Steel	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	3300
516-952-10	76	2	Steel	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-40 mm (10 mm step / 4 blocks) 50-100 mm (25 mm step / 3 blocks)	2400
516-956-10	56	2	Steel	0,5 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2600
516-960-10	47	2	Steel	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2400
516-964-10	47	2	Steel	1,005 mm (1 block) 1,01-1,19 mm (0,01 mm step / 19 blocks) 1,2-1,9 mm (0,1 mm step / 8 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2800
516-997-10	46	2	Steel	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2800
516-131-10	34	2	Steel	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-5 mm (1 mm step / 5 blocks) 10 mm (1 block)	1200
516-968-10	32	2	Steel	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-30 mm (10 mm step / 3 blocks) 60 mm (1 block)	1100

Steel Gauge Blocks - Thin Block Sets with 0,001/0,05 mm step and ISO Inspection Certificate

With ISO Inspection Certificate



Inspection Certificate



Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-974-10	18	0	Steel	0,991-0,999 mm (0,001 mm step / 9 blocks) 1,001-1,009 mm (0,001 mm step / 9 blocks)	500
516-975-10	18	1	Steel	0,991-0,999 mm (0,001 mm step / 9 blocks) 1,001-1,009 mm (0,001 mm step / 9 blocks)	500
516-976-10	18	2	Steel	0,991-0,999 mm (0,001 mm step / 9 blocks) 1,001-1,009 mm (0,001 mm step / 9 blocks)	500
516-982-10	9	0	Steel	1,001-1,009 mm (0,001 mm step / 9 blocks)	200
516-983-10	9	1	Steel	1,001-1,009 mm (0,001 mm step / 9 blocks)	200
516-984-10	9	2	Steel	1,001-1,009 mm (0,001 mm step / 9 blocks)	200
516-986-10	9	0	Steel	0,991-0,999 mm (0,001 mm step / 9 blocks)	200
516-987-10	9	1	Steel	0,991-0,999 mm (0,001 mm step / 9 blocks)	200
516-988-10	9	2	Steel	0,991-0,999 mm (0,001 mm step / 9 blocks)	200
516-990-10	9	0	Steel	0,10-0,50 mm (0,05 mm step / 9 blocks)	200
516-991-10	9	1	Steel	0,10-0,50 mm (0,05 mm step / 9 blocks)	200
516-992-10	9	2	Steel	0,10-0,50 mm (0,05 mm step / 9 blocks)	200

Steel Gauge Blocks - Long Block Sets with ISO Inspection Certificate

With ISO Inspection Certificate



Inspection Certificate



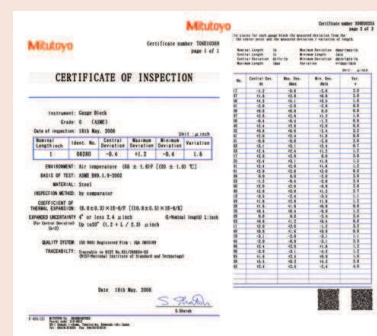
Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-702-10	8	0	Steel	125-175 mm (25 mm step / 3 blocks) 200-250 mm (50 mm step / 2 blocks) 300-500 mm (100 mm step / 3 blocks)	7200
516-703-10	8	1	Steel	125-175 mm (25 mm step / 3 blocks) 200-250 mm (50 mm step / 2 blocks) 300-500 mm (100 mm step / 3 blocks)	7200
516-704-10	8	2	Steel	125-175 mm (25 mm step / 3 blocks) 200-250 mm (50 mm step / 2 blocks) 300-500 mm (100 mm step / 3 blocks)	7200

Specifications

Accuracy

EN ISO 3650



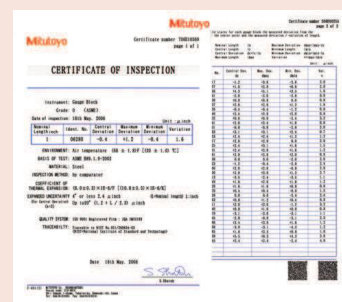
Inspection Certificate

Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.

Specifications

Accuracy

EN ISO 3650



Inspection Certificate

Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.

Carbide Wear Gauge Block Sets Metric ISO Standard

Wear Block Sets Metric with ISO Inspection Certificate

This set is made up of two gauge blocks and offers you the following benefits:

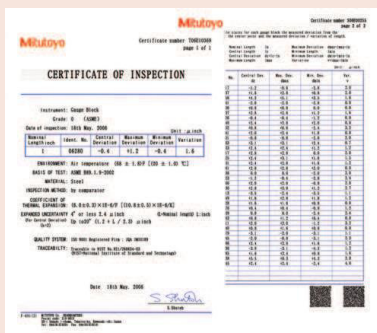
- Wear-resistant even with frequent use of individual gauge blocks



Inspection Certificate

Specifications

Accuracy | EN ISO 3650



Inspection Certificate



Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-807-10	2	0	Carbide	1 mm (2 blocks)	200
516-806-10	2	1	Carbide	1 mm (2 blocks)	200
516-803-10	2	0	Carbide	2 mm (2 blocks)	200
516-802-10	2	1	Carbide	2 mm (2 blocks)	200

Steel Caliper Inspection Gauge Block Sets Metric

Caliper Inspection Sets Metric



Inspection Certificate

Specifications

Accuracy | Accuracy EN ISO 3650
Delivered | In a wooden case with certificate of inspection (Gauge Blocks only)



516-124-10



516-527-10

Metric

No.	Blocks per set	Grade	Material	Calibration/Standard applications	Set configuration	Mass [g]
516-124-10	3	1	Steel	DIN 862:1988 VDI/VDE/DGQ 2618	3pcs.: 30, 41,3, 131,4 mm, Setting ring (ø4 mm, ø25 mm), Glove	1720
516-125-10	3	2	Steel	DIN 862:1988 VDI/VDE/DGQ 2618	3pcs.: 30, 41,3, 131,4 mm, Setting ring (ø4 mm, ø25 mm), Glove	1720
516-526-10	4	1	Steel	EN ISO 13385-1:2011	4pcs.: 10, 30, 50, 125 mm, Setting ring (ø4 mm, ø10 mm), Pin gage (ø10 mm), Glove	1720
516-527-10	4	2	Steel	EN ISO 13385-1:2011	4pcs.: 10, 30, 50, 125 mm, Setting ring (ø4 mm, ø10 mm), Pin gage (ø10 mm), Glove	1800

Steel Micrometer Inspection Gauge Block Sets Metric

Series 516 - Micro Checker

- For securely holding a stack of gauge blocks to be used for micrometer inspection.
- Can be used vertically and horizontally.
- Parallelism of micrometer measuring faces is checked by optical parallel which can be attached.



516-607

Metric Micro Checker (stand only)

No.	Applicable gauge block sets	Applicable gauge block size [mm]	Mass [g]
516-607	516-106-xx, 516-107-xx, 516-108-xx, 516-156-xx, 516-157-xx, 516-158-xx	2,5 / 5,1 / 7,7 / 10,3 / 12,9 / 15 / 17,6 / 20,2 / 22,8 / 25	1300

Micrometer Inspection Sets Metric



Inspection Certificate

Metric With inspection certificate

No.	Blocks per set	Grade	Material	Calibration/Standard applications	Set configuration	Mass [g]
516-580-10	10	0	Steel	For Micrometer with 2 mm spindle pitch. (QuantuMike)	2,2, 4,8, 7,8, 10,4, 12, 15,2, 17,4, 19,6, 22,6, 25 mm	900
516-581-10	10	1	Steel	For Micrometer with 2 mm spindle pitch. (QuantuMike)	2,2, 4,8, 7,8, 10,4, 12, 15,2, 17,4, 19,6, 22,6, 25 mm	900
516-582-10	10	2	Steel	For Micrometer with 2 mm spindle pitch. (QuantuMike)	2,2, 4,8, 7,8, 10,4, 12, 15,2, 17,4, 19,6, 22,6, 25 mm	900
516-106-10	10	0	Steel	EN ISO 3611 DIN 863 (1999) VDI/VDE/DGQ 2618	2,5, 5,1, 7,7, 10,3, 12,9, 15, 17,6, 20,2, 22,8, 25 mm, Optical parallel (t = 12 mm)	1000
516-107-10	10	1	Steel	EN ISO 3611 DIN 863 (1999) VDI/VDE/DGQ 2618	2,5, 5,1, 7,7, 10,3, 12,9, 15, 17,6, 20,2, 22,8, 25 mm, Optical parallel (t = 12 mm)	970
516-108-10	10	2	Steel	EN ISO 3611 DIN 863 (1999) VDI/VDE/DGQ 2618	2,5, 5,1, 7,7, 10,3, 12,9, 15, 17,6, 20,2, 22,8, 25 mm, Optical parallel (t = 12 mm)	1000
516-135-10	10	0	Steel	EN ISO 3611 DIN 863 (1999) VDI/VDE/DGQ 2618	2,5, 5,1, 7,7, 10,3, 12,9, 15, 17,6, 20,2, 22,8, 25 mm, Micro Checker, Optical parallel (t = 12 mm)	2900
516-136-10	10	1	Steel	EN ISO 3611 DIN 863 (1999) VDI/VDE/DGQ 2618	2,5, 5,1, 7,7, 10,3, 12,9, 15, 17,6, 20,2, 22,8, 25 mm, Micro Checker, Optical parallel (t = 12 mm)	2900
516-137-10	10	2	Steel	EN ISO 3611 DIN 863 (1999) VDI/VDE/DGQ 2618	2,5, 5,1, 7,7, 10,3, 12,9, 15, 17,6, 20,2, 22,8, 25 mm, Micro Checker, Optical parallel (t = 12 mm)	2900



516-607 with optional gauge blocks

Specifications

Accuracy	EN ISO 3650
Delivered	In a wooden case with certificate of inspection (Gauge Blocks only)



516-135-10

Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.

Steel Metric Individual Gauge Blocks

Specifications

Accuracy	EN ISO 3650
Delivered	Foamed material 0,1-500 mm in a wooden case 600-1000 mm

Metric Blocks ≤ 1.19 mm

Ordering example: To order a 0.1mm ISO Standard grade 1 block with JCSS calibration certificate, choose No. 611821-036.



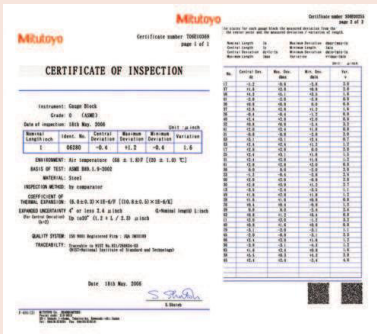
Calibration Certificate



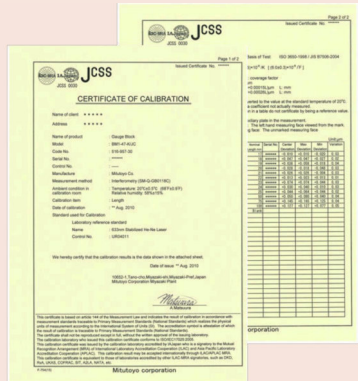
Inspection Certificate

Suffix No. (-XXX)
for Selecting Certificate Provided

ISO/DIN/JIS			
Suffix No.	Grade	Inspection Certificate	Calibration Certificate
-016	K	○	○
-021	0	○	—
-026	0	○	○
-031	1	○	—
-036	1	○	○
-041	2	○	—
-046	2	○	○



Inspection Certificate



JCSS Calibration Certificate

These Gauge Block Sets are delivered with a JCSS Certificate of Calibration (Japan Calibration Service System).

A JCSS Certificate of Calibration is comparable with e.g. DAkkS COFRAC, RVA or UKAS Certificate of Calibration.

This calibration result is accepted internationally.

Length [mm]	No.
0,1	611821
0,11	611860
0,12	611861
0,13	611862
0,14	611863
0,15	611822
0,16	611864
0,17	611865
0,18	611866
0,19	611867
0,2	611823
0,21	611868
0,22	611869
0,23	611870
0,24	611871
0,25	611824
0,26	611872
0,27	611873
0,28	611874
0,29	611875
0,3	611825
0,31	611876
0,32	611877
0,33	611878
0,34	611879
0,35	611826
0,36	611880
0,37	611881
0,38	611882
0,39	611883
0,4	611827
0,41	611884
0,42	611885
0,43	611886
0,44	611887
0,45	611828
0,46	611888
0,47	611889
0,48	611890
0,49	611891
0,5	611506
0,51	611892
0,52	611893

Length [mm]	No.
0,53	611894
0,54	611895
0,55	611896
0,56	611897
0,57	611898
0,58	611899
0,59	611900
0,6	611901
0,61	611902
0,62	611903
0,63	611904
0,64	611905
0,65	611906
0,66	611907
0,67	611908
0,68	611909
0,69	611910
0,7	611911
0,71	611912
0,72	611913
0,73	611914
0,74	611915
0,75	611916
0,76	611917
0,77	611918
0,78	611919
0,79	611920
0,8	611921
0,81	611922
0,82	611923
0,83	611924
0,84	611925
0,85	611926
0,86	611927
0,87	611928
0,88	611929
0,89	611930
0,9	611931
0,91	611932
0,92	611933
0,93	611934
0,94	611935
0,95	611936

Length [mm]	No.
0,96	611937
0,97	611938
0,98	611939
0,99	611940
0,991	611551
0,992	611552
0,993	611553
0,994	611554
0,995	611555
0,996	611556
0,997	611557
0,998	611558
0,999	611559
1	611611
1,0005	611520
1,001	611521
1,002	611522
1,003	611523
1,004	611524
1,005	611525
1,006	611526
1,007	611527
1,008	611528
1,009	611529
1,01	611561
1,02	611562
1,03	611563
1,04	611564
1,05	611565
1,06	611566
1,07	611567
1,08	611568
1,09	611569
1,1	611570
1,11	611571
1,12	611572
1,13	611573
1,14	611574
1,15	611575
1,16	611576
1,17	611577
1,18	611578
1,19	611579

Steel Metric Individual Gauge Blocks

Metric Blocks ≤ 1000 mm

Ordering example: To order a 1,2 mm ISO Standard grade K block with JCSS calibration certificate, choose 611580-016.



Inspection Certificate



Calibration Certificate

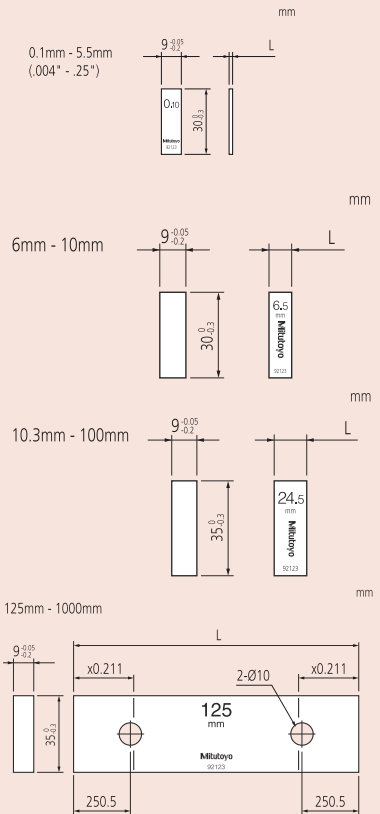
Length [mm]	No.
1,2	611580
1,21	611581
1,22	611582
1,23	611583
1,24	611584
1,25	611585
1,26	611586
1,27	611587
1,28	611588
1,29	611589
1,3	611590
1,31	611591
1,32	611592
1,33	611593
1,34	611594
1,35	611595
1,36	611596
1,37	611597
1,38	611598
1,39	611599
1,4	611600
1,41	611601
1,42	611602
1,43	611603
1,44	611604
1,45	611605
1,46	611606
1,47	611607
1,48	611608
1,49	611609
1,5	611641
1,6	611516
1,7	611517
1,8	611518
1,9	611519
2	611612
2,0005	611690
2,001	611691
2,002	611692
2,003	611693
2,004	611694
2,005	611695
2,006	611696
2,007	611697
2,008	611698
2,009	611699
2,01	611701
2,02	611702
2,03	611703
2,04	611704
2,05	611705
2,06	611706
2,07	611707
2,08	611708
2,09	611709
2,1	611710
2,11	611711
2,12	611712
2,13	611713
2,14	611714

Length [mm]	No.
2,15	611715
2,16	611716
2,17	611717
2,18	611718
2,19	611719
2,2	611720
2,21	611721
2,22	611722
2,23	611723
2,24	611724
2,25	611725
2,26	611726
2,27	611727
2,28	611728
2,29	611729
2,3	611730
2,31	611731
2,32	611732
2,33	611733
2,34	611734
2,35	611735
2,36	611736
2,37	611737
2,38	611738
2,39	611739
2,4	611740
2,41	611741
2,42	611742
2,43	611743
2,44	611744
2,45	611745
2,46	611746
2,47	611747
2,48	611748
2,49	611749
2,5	611642
2,6	611750
2,7	611751
2,8	611752
2,9	611753
3	611613
3,5	611643
4	611614
4,5	611644
5	611615
5,1	611850
5,5	611645
6	611616
6,5	611646
7	611617
7,5	611647
7,7	611851
8	611618
8,5	611648
9	611619
9,5	611649
10	611671
10,3	611852
10,5	611650
11	611621

Length [mm]	No.
11,5	611651
12	611622
12,5	611652
12,9	611853
13	611623
13,5	611653
14	611624
14,5	611654
15	611625
15,5	611655
16	611626
16,5	611656
17	611627
17,5	611657
17,6	611854
18	611628
18,5	611658
19	611629
19,5	611659
20	611672
20,2	611855
20,5	611660
21	611631
21,5	611661
22	611632
22,5	611662
22,8	611856
23	611633
23,5	611663
24	611634
24,5	611664
25	611635
25,25	611754
30	611673
35	611755
40	611674
41,3	611857
45	611756
50	611675
60	611676
70	611677
75	611801
80	611678
90	611679
100	611681
125	611802
131,4	611858
150	611803
175	611804
200	611682
250	611805
300	611683
400	611684
500	611685
600	611840
700	611841
750	611842
800	611843
900	611844
1000	611845

Suffix No. (-XXX)
for Selecting Certificate Provided

Suffix No.	Grade	Inspection Certificate	Calibration Certificate
			JCSS
-016	K	○	○
-021	0	○	—
-026	0	○	○
-031	1	○	—
-036	1	○	○
-041	2	○	—
-046	2	○	○



Ceramic Metric Gauge Block Sets Overview

Mitutoyo provides a wide selection of boxed sets of gauge blocks to meet the various needs of industry. Selecting the best set, or sets, to acquire usually depends on the accuracy required by the target applications, the level of convenience desired and the environmental conditions in which they will be used.



CERA 32-block set



CERA 34-block set



CERA 46-block set



CERA 47-block set



CERA 56-block set



CERA 76-block set



CERA 103-block set



CERA 112-block set

Ceramic Gauge Block Sets Grade 0 with Inspection Certificate

Grade 0 with Inspection Certificate



Inspection Certificate

Specifications

Accuracy

EN ISO 3650

Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-338-10	112	0	Ceramic	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3200
516-342-10	103	0	Ceramic	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3000
516-370-10	88	0	Ceramic	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	3200
516-346-10	87	0	Ceramic	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	2800
516-350-10	76	0	Ceramic	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-40 mm (10 mm step / 4 blocks) 50-100 mm (25 mm step / 3 blocks)	2400
516-354-10	56	0	Ceramic	0,5 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2200
516-358-10	47	0	Ceramic	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2000
516-362-10	47	0	Ceramic	1,005 mm (1 block) 1,01-1,19 mm (0,01 mm step / 19 blocks) 1,2-1,9 mm (0,1 mm step / 8 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2600
516-395-10	46	0	Ceramic	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2700
516-179-10	34	0	Ceramic	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-5 mm (1 mm step / 5 blocks) 10 mm (1 block)	1200
516-366-10	32	0	Ceramic	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-30 mm (10 mm step / 3 blocks) 60 mm (1 block)	1300



Inspection certificate

Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.

Ceramic Gauge Block Sets Grade 1 with Inspection Certificate

Grade 1 with Inspection Certificate

Specifications

Accuracy

EN ISO 3650



Inspection Certificate



Inspection certificate

Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.

Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-339-10	112	1	Ceramic	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3200
516-343-10	103	1	Ceramic	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3000
516-371-10	88	1	Ceramic	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	3200
516-347-10	87	1	Ceramic	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	2800
516-351-10	76	1	Ceramic	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-40 mm (10 mm step / 4 blocks) 50-100 mm (25 mm step / 3 blocks)	2400
516-355-10	56	1	Ceramic	0,5 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2200
516-359-10	47	1	Ceramic	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2000
516-363-10	47	1	Ceramic	1005 mm (1 block) 1,01-1,19 mm (0,01 mm step / 19 blocks) 1,2-1,9 mm (0,1 mm step / 8 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2600
516-396-10	46	1	Ceramic	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2700
516-180-10	34	1	Ceramic	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-5 mm (1 mm step / 5 blocks) 10 mm (1 block)	1200
516-367-10	32	1	Ceramic	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-30 mm (10 mm step / 3 blocks) 60 mm (1 block)	1300

Ceramic Gauge Block Sets Grade 2 with Inspection Certificate

Grade 2 with Inspection Certificate



Inspection Certificate

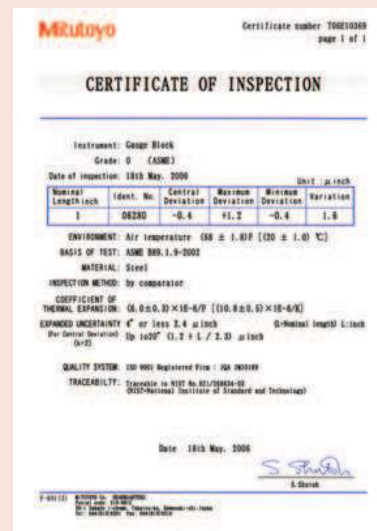
Specifications

Accuracy

EN ISO 3650

Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-340-10	112	2	Ceramic	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3200
516-344-10	103	2	Ceramic	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-24,5 mm (0,5 mm step / 49 blocks) 25-100 mm (25 mm step / 4 blocks)	3000
516-372-10	88	2	Ceramic	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	3200
516-348-10	87	2	Ceramic	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-100 mm (10 mm step / 10 blocks)	2800
516-352-10	76	2	Ceramic	1,005 mm (1 block) 1,01-1,49 mm (0,01 mm step / 49 blocks) 0,5-9,5 mm (0,5 mm step / 19 blocks) 10-40 mm (10 mm step / 4 blocks) 50-100 mm (25 mm step / 3 blocks)	2400
516-356-10	56	2	Ceramic	0,5 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2200
516-360-10	47	2	Ceramic	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-24 mm (1 mm step / 24 blocks) 25-100 mm (25 mm step / 4 blocks)	2000
516-364-10	47	2	Ceramic	1,005 mm (1 block) 1,01-1,19 mm (0,01 mm step / 19 blocks) 1,2-1,9 mm (0,1 mm step / 8 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2600
516-397-10	46	2	Ceramic	1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-100 mm (10 mm step / 10 blocks)	2700
516-181-10	34	2	Ceramic	1,0005 mm (1 block) 1,001-1,009 mm (0,001 mm step / 9 blocks) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-5 mm (1 mm step / 5 blocks) 10 mm (1 block)	1200
516-368-10	32	2	Ceramic	1,005 mm (1 block) 1,01-1,09 mm (0,01 mm step / 9 blocks) 1,1-1,9 mm (0,1 mm step / 9 blocks) 1-9 mm (1 mm step / 9 blocks) 10-30 mm (10 mm step / 3 blocks) 60 mm (1 block)	1300



Inspection certificate

Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.

Ceramic Gauge Blocks - Thin Block Sets with 0,001 mm step and ISO Inspection Certificate

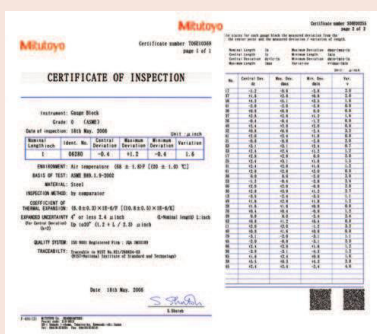
With ISO Inspection Certificate



Inspection Certificate

Specifications

Accuracy EN ISO 3650



Mitutoyo Gauge Blocks and Inspection Certificates

Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.



Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-374-10	18	0	Ceramic	0,991-0,999 mm (0,001 mm step / 9 blocks)	600
				1,001-1,009 mm (0,001 mm step / 9 blocks)	
516-375-10	18	1	Ceramic	0,991-0,999 mm (0,001 mm step / 9 blocks)	600
				1,001-1,009 mm (0,001 mm step / 9 blocks)	
516-376-10	18	2	Ceramic	0,991-0,999 mm (0,001 mm step / 9 blocks)	600
				1,001-1,009 mm (0,001 mm step / 9 blocks)	
516-382-10	9	0	Ceramic	1,001-1,009 mm (0,001 mm step / 9 blocks)	300
				1,001-1,009 mm (0,001 mm step / 9 blocks)	
516-383-10	9	1	Ceramic	1,001-1,009 mm (0,001 mm step / 9 blocks)	300
				1,001-1,009 mm (0,001 mm step / 9 blocks)	
516-384-10	9	2	Ceramic	1,001-1,009 mm (0,001 mm step / 9 blocks)	300
				1,001-1,009 mm (0,001 mm step / 9 blocks)	
516-386-10	9	0	Ceramic	0,991-0,999 mm (0,001 mm step / 9 blocks)	200
				0,991-0,999 mm (0,001 mm step / 9 blocks)	
516-387-10	9	1	Ceramic	0,991-0,999 mm (0,001 mm step / 9 blocks)	200
				0,991-0,999 mm (0,001 mm step / 9 blocks)	
516-388-10	9	2	Ceramic	0,991-0,999 mm (0,001 mm step / 9 blocks)	200
				0,991-0,999 mm (0,001 mm step / 9 blocks)	

Ceramic Gauge Blocks - Long Block Sets with ISO Inspection Certificate

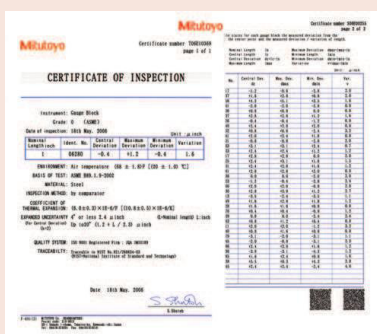
With ISO Inspection Certificate



Inspection Certificate

Specifications

Accuracy EN ISO 3650



Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.



Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-732-10	8	0	Ceramic	125-175 mm (25 mm step / 3 blocks)	6200
				200-250 mm (50 mm step / 2 blocks)	
				300-500 mm (100 mm step / 3 blocks)	
516-733-10	8	1	Ceramic	125-175 mm (25 mm step / 3 blocks)	6200
				200-250 mm (50 mm step / 2 blocks)	
				300-500 mm (100 mm step / 3 blocks)	
516-734-10	8	2	Ceramic	125-175 mm (25 mm step / 3 blocks)	6200
				200-250 mm (50 mm step / 2 blocks)	
				300-500 mm (100 mm step / 3 blocks)	

Ceramic Wear Gauge Block Sets Metric ISO Standard

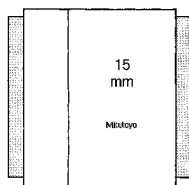
Wear Block Sets Metric ISO Standard

This set is made up of two gauge blocks and offers you the following benefits:

- Wear-resistant even with frequent use of individual gauge blocks



Ceramic 2-block set



Protection gauge blocks (highlighted in grey above) are placed at each end of the gauge block stack to absorb the wear caused by contact with workpieces.

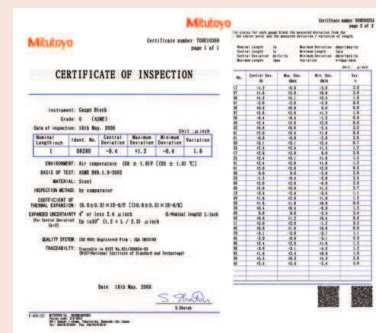


Inspection Certificate

Specifications

Accuracy

EN ISO 3650



Mitutoyo Gauge Blocks and Inspection Certificates

Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.

Metric

No.	Blocks per set	Grade	Material	Set configuration	Mass [g]
516-832-10	2	0	Ceramic	1 mm (2 blocks)	115
516-833-10	2	1	Ceramic	1 mm (2 blocks)	130
516-830-10	2	0	Ceramic	2 mm (2 blocks)	130
516-831-10	2	1	Ceramic	2 mm (2 blocks)	130

Ceramic Caliper Inspection Gauge Block Sets Metric

Caliper Inspection Sets Metric



516-566-10



Inspection Certificate

Specifications

Accuracy

Accuracy EN ISO 3650

Delivered

In a wooden case with certificate of inspection (Gauge Blocks only)

Metric

No.	Blocks per set	Grade	Material	Calibration/Standard applications	Set configuration	Mass [g]
516-566-10	4	1	Ceramic	EN ISO 13385-1:2011	4 pcs.: 10, 30, 50, 125 mm, Setting ring (ø4 mm, ø10 mm), Pin gage (ø10 mm), Glove	1750
516-567-10	4	2	Ceramic	EN ISO 13385-1:2011	4 pcs.: 10, 30, 50, 125 mm, Setting ring (ø4 mm, ø10 mm), Pin gage (ø10 mm), Glove	1750
516-150-10	3	1	Ceramic	DIN 862:1988 VDI/VDE/DGQ 2618	3 pcs.: 30, 41.3, 131.4 mm, Setting ring (ø4 mm, ø25 mm), Glove	1700
516-151-10	3	2	Ceramic	DIN 862:1988 VDI/VDE/DGQ 2618	3 pcs.: 30, 41.3, 131.4 mm, Setting ring (ø4 mm, ø25 mm), Glove	1720

Ceramic Micrometer Inspection Sets Metric

Micrometer Inspection Sets Metric

Specifications

Accuracy	EN ISO 3650
Delivered	In a wooden case with certificate of inspection (Gauge Blocks only)



Inspection Certificate



Micro checker 516-607 applicable gauge block sets 516-156-xx, 516-157-xx, 516-158-xx

Grad K/0/1/2 Gauge Block Sets with JCSS Calibration Certificate (issued by the Mitutoyo JCSS accredited laboratory) see online.



516-156-10

Metric With inspection certificate

No.	Blocks per set	Grade	Material	Calibration/Standard applications	Set configuration	Mass [g]
516-390-10	10	0	Ceramic	Especially for Micrometer with 2 mm spindle pitch. (QuantuMike)	2,2, 4,8, 7,8, 10,4, 12, 15,2, 17,4, 19,6, 22,6, 25 mm	900
516-391-10	10	1	Ceramic	Especially for Micrometer with 2 mm spindle pitch. (QuantuMike)	2,2, 4,8, 7,8, 10,4, 12, 15,2, 17,4, 19,6, 22,6, 25 mm	900
516-392-10	10	2	Ceramic	Especially for Micrometer with 2 mm spindle pitch. (QuantuMike)	2,2, 4,8, 7,8, 10,4, 12, 15,2, 17,4, 19,6, 22,6, 25 mm	900
516-156-10	10	0	Ceramic	EN ISO 3611 DIN 863 (1999) VDI/VDE/DGQ 2618	2,5, 5,1, 7,7, 10,3, 12,9, 15, 17,6, 20,2, 22,8, 25 mm, Optical parallel (t = 12 mm)	900
516-157-10	10	1	Ceramic	EN ISO 3611 DIN 863 (1999) VDI/VDE/DGQ 2618	2,5, 5,1, 7,7, 10,3, 12,9, 15, 17,6, 20,2, 22,8, 25 mm, Optical parallel (t = 12 mm)	900
516-158-10	10	2	Ceramic	EN ISO 3611 DIN 863 (1999) VDI/VDE/DGQ 2618	2,5, 5,1, 7,7, 10,3, 12,9, 15, 17,6, 20,2, 22,8, 25 mm, Optical parallel (t = 12 mm)	900
516-185-10	10	0	Ceramic	EN ISO 3611 DIN 863 (1999) VDI/VDE/ DGQ 2618	2,5, 5,1, 7,7, 10,3, 12,9, 15, 17,6, 20,2, 22,8, 25 mm, Micro Checker, Optical parallel (t = 12 mm)	2900
516-186-10	10	1	Ceramic	EN ISO 3611 DIN 863 (1999) VDI/VDE/ DGQ 2618	2,5, 5,1, 7,7, 10,3, 12,9, 15, 17,6, 20,2, 22,8, 25 mm, Micro Checker, Optical parallel (t = 12 mm)	2900
516-187-10	10	2	Ceramic	EN ISO 3611 DIN 863 (1999) VDI/VDE/ DGQ 2618	2,5, 5,1, 7,7, 10,3, 12,9, 15, 17,6, 20,2, 22,8, 25 mm, Micro Checker, Optical parallel (t = 12 mm)	2900

Ceramic Metric Individual Gauge Blocks

Metric Blocks

Ordering example: To order a 0.5mm ISO Standard grade 1 block with JCSS calibration certificate, choose 613506-036.



Calibration Certificate



Inspection Certificate



Length [mm]	No.
0,5	613506
0,991	613551
0,992	613552
0,993	613553
0,994	613554
0,995	613555
0,996	613556
0,997	613557
0,998	613558
0,999	613559
1	613611
1,0005	613520
1,001	613521
1,002	613522
1,003	613523
1,004	613524
1,005	613525
1,006	613526
1,007	613527
1,008	613528
1,009	613529
1,01	613561
1,02	613562
1,03	613563
1,04	613564
1,05	613565
1,06	613566
1,07	613567
1,08	613568
1,09	613569
1,1	613570
1,11	613571
1,12	613572
1,13	613573
1,14	613574
1,15	613575
1,16	613576
1,17	613577
1,18	613578
1,19	613579
1,2	613580
1,21	613581
1,22	613582
1,23	613583
1,24	613584
1,25	613585
1,26	613586
1,27	613587
1,28	613588
1,29	613589

Length [mm]	No.
1,3	613590
1,31	613591
1,32	613592
1,33	613593
1,34	613594
1,35	613595
1,36	613596
1,37	613597
1,38	613598
1,39	613599
1,4	613600
1,41	613601
1,42	613602
1,43	613603
1,44	613604
1,45	613605
1,46	613606
1,47	613607
1,48	613608
1,49	613609
1,5	613641
1,6	613516
1,7	613517
1,8	613518
1,9	613519
2	613612
2,5	613642
3	613613
3,5	613643
4	613614
4,5	613644
5	613615
5,1	613850
5,5	613645
6	613616
6,5	613646
7	613617
7,5	613647
7,7	613851
8	613618
8,5	613648
9	613619
9,5	613649
10	613671
10,3	613852
10,5	613650
11	613621
11,5	613651
12	613622
12,5	613652

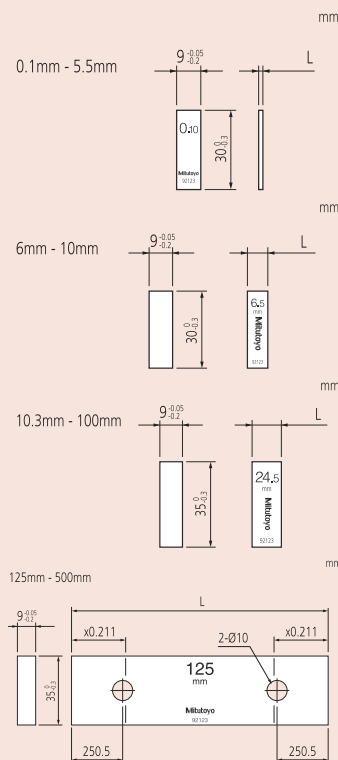
Length [mm]	No.
12,9	613853
13	613623
13,5	613653
14	613624
14,5	613654
15	613625
15,5	613655
16	613626
16,5	613656
17	613627
17,5	613657
17,6	613854
18	613628
18,5	613658
19	613629
19,5	613659
20	613672
20,2	613855
20,5	613660
21	613631
21,5	613661
22	613632
22,5	613662
22,8	613856
23	613633
23,5	613663
24	613634
25	613635
25,25	613754
30	613673
35	613755
40	613674
41,3	613857
45	613756
50	613675
60	613676
70	613677
75	613801
80	613678
90	613679
100	613681
125	613802
131,4	613858
150	613803
175	613804
200	613682
250	613805
300	613683
400	613684
500	613685

Specifications

Accuracy	EN ISO 3650
Delivered	Foamed material 0,5-100 mm in a wooden case 125-500 mm

Suffix No. (-XXX)
for Selecting Certificate Provided

ISO/DIN/JIS			
Suffix No.	Grade	Inspection Certificate	Calibration Certificate JCSS
-016	K	○	○
-021	0	○	—
-026	0	○	○
-031	1	○	—
-036	1	○	○
-041	2	○	—
-046	2	○	○



Gauge Blocks with a Calibrated CTE

Gauge Blocks with a Calibrated Coefficient of Thermal Expansion

These are metric gauge blocks with a calibrated coefficient of thermal expansion. They offer you the following benefits:

- Mitutoyo offers top-level gauge blocks (steel and ceramic) which are superior to K class blocks, with their quality supported by Mitutoyo's best technologies.
- They feature an accurately calibrated thermal expansion coefficient measured with a proprietary double-faced interferometer (DFI).
- Each gauge block is calibrated for length on a highly accurate gauge block interferometer (GBI) system.
- Uncertainty of thermal expansion coefficient: $0,035 \times 10^{-6} / K$ ($k=2$).
- Uncertainty of length measurement: 30 nm ($k=2$), for 100 mm blocks.

Mitutoyo

Page 1 of 1 / 総数1頁中の1頁
Issue No./発行 No. 050001
Date of issue/発行年月日 2005-01-20

Report of calibration
校正結果

Product name / 品名: Gauge Block / ガージブロック
Nominal Length / 呼び寸法: 500mm
Code No. / コード No.: 611685-01A
Date of calibration / 校正年月日: 2005-01-20
Serial No. / 番通 No.: 040605
Material / 材質: Steel

Calibration Item / 校正項目: Coefficient of thermal expansion / 熱膨張係数
Measurement expanded uncertainty (coverage factor: $k=2$) / 校正値の拡張不確かさ(包含係数 $k=2$): $U = 0,035 \times 10^{-6} / K$

Result of calibration / 校正結果:
Coefficient of thermal expansion / 熱膨張係数 $\alpha = 10,818 \times 10^{-6} / K$

Using DFI (Double Facing Interferometer) at each temperature (setting value) of 17 °C, 20 °C, and 23 °C, size measurement is performed after sufficient temperature stable, and a Coefficient of thermal expansion is sized from the result.

非常精密測定(DFI: Double Facing Interferometer)により、17°C、20°C、23°Cの各温度(設定値)にて、十分な温度安定後、寸法測定を行い、その結果から熱膨張係数を算出します。

Setting temperature / 設定温度 (°C)	17	20	23
Actual temperature / 実際の温度 (°C)	17.110	20.227	22.763
The amount of change of a length / 寸法変化量 (μm)	-16.860	0	13.715

It is based on a size with a setting temperature of 20 °C.
設定温度 20°Cの寸法を基準とする。

the amount of change of a size / 寸法変化量

Chief inspector: S. Shutoh
Mitutoyo Corporation

To each final dimension a factory certificate is supplied.

Uncertainty of thermal expansion coefficient : $0,035 \times 10^{-6} / K$ ($k=2$)

Uncertainty of length measurement : 30 nm ($k=2$), for 100 mm blocks.



Metric

Steel

No.	Length [mm]	Accuracy	Grade	Material	Mass [g]
611681-01B	100	EN ISO 3650, Grade K	K	Steel	245
611802-01B	125	EN ISO 3650, Grade K	K	Steel	306
611803-01B	150	EN ISO 3650, Grade K	K	Steel	368
611804-01B	175	EN ISO 3650, Grade K	K	Steel	430
611682-01B	200	EN ISO 3650, Grade K	K	Steel	490
611805-01B	250	EN ISO 3650, Grade K	K	Steel	613
611683-01B	300	EN ISO 3650, Grade K	K	Steel	735
611684-01B	400	EN ISO 3650, Grade K	K	Steel	980
611685-01B	500	EN ISO 3650, Grade K	K	Steel	1225

Ceramic

No.	Length [mm]	Accuracy	Grade	Material	Mass [g]
613681-01B	100	EN ISO 3650, Grade K	K	Ceramic	189
613802-01B	125	EN ISO 3650, Grade K	K	Ceramic	228
613803-01B	150	EN ISO 3650, Grade K	K	Ceramic	275
613804-01B	175	EN ISO 3650, Grade K	K	Ceramic	322
613682-01B	200	EN ISO 3650, Grade K	K	Ceramic	370
613805-01B	250	EN ISO 3650, Grade K	K	Ceramic	464
613683-01B	300	EN ISO 3650, Grade K	K	Ceramic	559
613684-01B	400	EN ISO 3650, Grade K	K	Ceramic	748
613685-01B	500	EN ISO 3650, Grade K	K	Ceramic	937



Calibration Certificate

ZERO CERA Blocks

Ultra-low Expansion Ceramic Gauge Blocks

These are ultra-low expansion ceramic gauge blocks. The ZERO CERA Blocks offer you the following benefits:

- Thermal expansion at $20 \pm 1^\circ\text{C}$ is less than 1/500 that of steel.
- There is almost no secular change either in the dimension or coefficient of thermal expansion.
- You will find them light and easy to handle.
- They are rust free.
- They are magnetisation free.



Calibration Certificate

Specifications

Accuracy	EN ISO 3650
Coefficient of thermal expansion	$0 \pm 0,02 \times 10^{-6}/\text{K}$ (at 20°C)*2
Density	2,5 g/cm ³ *2
Standard accessories	Inspection certificate, Calibration certificate and custom-made aluminium case

*1

If you require a grade other than K, please contact Mitutoyo.

*2

Value claimed by the material supplier.

Metric

No.	Accuracy	Blocks per set	Remarks	Length	Type	Mass [g]
617675-016	EN ISO 3650, Grade K			50 mm	Individual	40
617673-016	EN ISO 3650, Grade K			30 mm	Individual	24
617845-016	EN ISO 3650, Grade K			1000 mm	Individual	800
617844-016	EN ISO 3650, Grade K			900 mm	Individual	720
617685-016	EN ISO 3650, Grade K			500 mm	Individual	400
617843-016	EN ISO 3650, Grade K			800 mm	Individual	640
617684-016	EN ISO 3650, Grade K			400 mm	Individual	320
617683-016	EN ISO 3650, Grade K			300 mm	Individual	240
617841-016	EN ISO 3650, Grade K			700 mm	Individual	560
617682-016	EN ISO 3650, Grade K			200 mm	Individual	160
617681-016	EN ISO 3650, Grade K			100 mm	Individual	80
617840-016	EN ISO 3650, Grade K			600 mm	Individual	480
516-771-60	EN ISO 3650, Grade K	12	Zero Cera Block set. 12 blocks per set, 30 mm (1 block) 50 mm (1 block) 100 - 1000 mm (100 mm step / 10 blocks)		Set	4464

Characteristics comparison of gauge block materials

	ZERO CERA BLOCK	Low expansion glass	CERA BLOCK	Steel	Tungsten carbide
Coefficient of thermal expansion ($10^{-6}/\text{K}$)	$0 \pm 0,02$ *2) *3)	$0 \pm 0,02$ *2) *3)	$9,3 \pm 0,5$	$10,8 \pm 0,5$	$5,5 \pm 1$
Thermal conductivity (W/m*K)	3.7	1.7	2.9	54.4	79.5
Specify gravity	2.5	2.55	6	7.8	14.8
Young modulus (GPa)	130	90	206	206	618
Poisson ratio	0.3	0.25	0.3	0.3	0.2
Flexural strength (3 points) (MPa)	210	143	1270	1960	1960
Fracture toughness (MPa*m ^{1/2})	1.2	$0,69$ *4)	7	120	12
Vickers hardness (HV)	826 *3)	680	1350	800	1650

1) Material for Mitutoyo Products

2) Value at 20°C

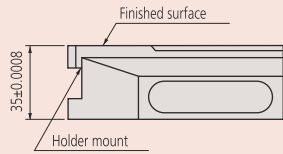
3) Claimed value by the material supplier

4) Value measured by the material supplier (reference)

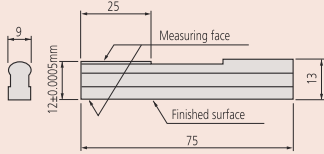
Gauge Block Accessories

Series 516

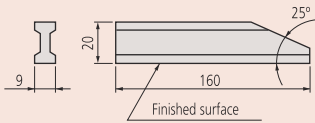
Specially designed for long gauge blocks over 100 mm which have two coupling holes on the body.



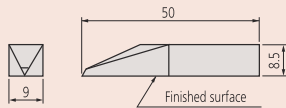
Holder base : 619009



Half-round jaw : 619013



Plain jaw : 619018



Scriber point : 619019

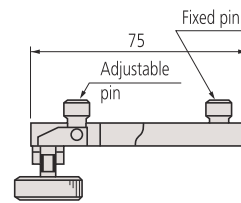


516-605

No.	Included in set	Mass [g]
516-605	Holder A (619031)-1 pc. Holder B (619032)-1 pc. Holder C (619033)-1 pc. Holder D (619034)-1 pc. Holder E (619035)-1 pc. Adapter (619036)-3 pcs. Holder base 35mm (619009)-1 pc. Half-round jaw 12mm (619013)-2 pcs. Plain jaw (619018)-2 pcs. Scriber point (619019)-1 pc.	4120



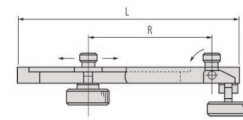
Holder A: 619031
Used for coupling two long gauge blocks.



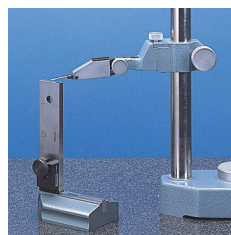
619031



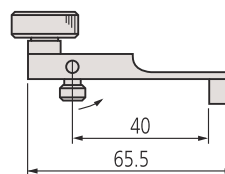
Holder B and C:
Used for coupling two long gauge blocks together with other gauge blocks up to 35 mm (Holder B) or 140 mm Holder C). Also used for attaching jaws with two adapters.
Holder B : 619032 (R max.= 90 mm- L= 126 mm)
Holder C : 619033 (R max.= 200 mm- L= 236 mm)



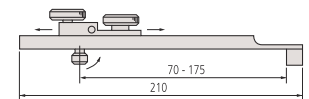
619032 / 619033



Holder D : 619034
Used for attaching to the holder base.



619034



Holder E: 619035
Used for attaching to the holder base together with other gauge blocks up to 125mm. Used for attaching jaws with one adapter.

Gauge Block Accessories

Series 619

These accessories are specially designed for long gauge blocks over 100 mm which have two coupling holes on the body.



516-601J



516-602J

1. Set

No.	Blocks per set	Included in set	Mass [g]
516-602J	14	(1 x 619002; 1 x 619003; 1 x 619004; 1 x 619005; 1 x 619009; 2 x 619010; 2 x 619011; 2 x 619012; 1 x 619019; 1 x 619020; 1 x 619022)	2590
516-601J	22	(1 x 619003; 1 x 619004; 1 x 619005; 1 x 619009; 2 x 619010; 2 x 619011; 2 x 619012; 2 x 619013; 2 x 619014; 2 x 619018; 1 x 619019; 1 x 619020; 2 x 619021; 1 x 619022; 1 x 619023)	3260

2. Holder

No.	L [mm]	Mass [g]
619005	20-250	360
619004	15-160	320
619003	5-100	170
619002	15-60	150

3. Holder base

No.	Description	Mass [g]
619009	35 mm	1200

4. Half-round jaw

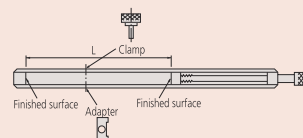
No.	A [mm]	B [mm]	C [mm]	H [mm]	Mass [g]
619010	5,5	40	7,5	2 ±0,0005	20
619011	14	45	7,5	5 ±0,0005	25
619012	18,5	50	8,5	8 ±0,0005	35
619013	25	75	13	12 ±0,0005	50
619014	25	125	20,5	20 ±0,0005	115

5. Miscellaneous jaws

No.	Description	Mass [g]
619018	Plain jaw	165
619019	Scriber point	20
619020	Centre point	20
619021	Tram point	20

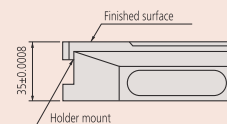
6. Triangular straight edge

No.	Length [mm]	A [mm]	L [mm]	Mass [g]
619022	100	16	100	40
619023	160	19,5	160	120



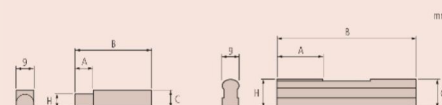
Holder : 619002 to 619005

Used to clamp plain jaws, a scriber point, etc., to a gauge block stack.



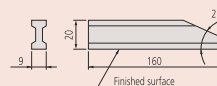
Holder base 35 mm : 619009

Acts as base for a stack of gauge blocks that carry one of the many types of point.



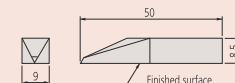
Half round jaw : 619010 to 619014

Used for gauging an outside or inside diameter if used when a pair of jaws in a holder.



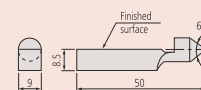
Plain jaw : 619018

Gauges outside and inside dimensions (not inside diameters) when used as a pair of jaws in a holder.



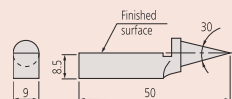
Scriber point : 619019

Scribes a straight line on a workpiece a known distance from a datum plane if used in a holder and holder base.



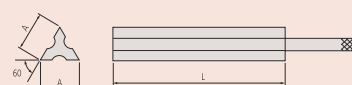
Centre point : 619020

Pushed into a small hole, or conical punch mark, this point provides the pivot for scribing a circular line with a gauge block trammel assembly.



Tram point : 619021

For checking distances between lines and points.



Triangular straight edge : 619022/619023

Can be used to indicate parallelism.

Ceraston

Accessory for Gauge Block Maintenance

This accessory for gauge block maintenance offers you the following benefits:

- Alumina-ceramic abrasive stone lets you remove burrs from hard materials such as ceramics, that ordinary stones cannot handle.
- You can use them for both steel gauge blocks and CERA Blocks.



Removing burrs

- 1 Wipe any dust and oil films from the gauge block and the Ceraston (or Arkansas stone) using a solvent.
- 2 Place the gauge block on the Ceraston so that the measuring face that has burrs is on the abrasive surface of the stone. While applying light pressure, move the gauge block to and fro about ten times (Fig. 1). Use a block rubber for thin gauge blocks to apply even pressure (Fig. 2).
- 3 Check the measuring face for burrs with an optical flat. If the burrs have not been removed, repeat step 2. If burrs are too large, they may not be removed with an abrasive stone. If so, discard the gauge block.

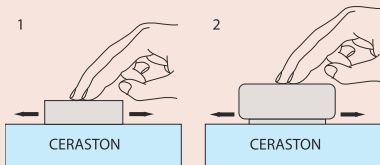


601644



601645

No.	Dimensions (WxDxH)	Length [mm]	Mass [g]
601644	150 x 50 x 20 mm	150	530
601645	100 x 25 x 12 mm	100	110



Maintenance Kit for Gauge Blocks

Series 516

This is a maintenance kit for gauge blocks that offers you the following benefits:

- It includes all maintenance tools needed for the daily care and storage of gauge blocks.
- It is supplied in a fitted wooden case for portable use.



Consumable spares

No.	Description
601645	Cerastone for Gauge Blocks, 100x25x12mm
600004	Tweezer for Gauge Blocks
600005	Blower Brush for Gauge Blocks
600006	Cleaning Paper for Gauge Blocks
600007	Artificial Leather Mat for Gauge Blocks
600008	Reagent Bottle, 100 ml
600009D	Cotton Gloves, White
158-117	Optical Flat, 12mm, D=45mm, 0,2µm

No.	Tools and accessories included	Mass [g]
516-650E	Ceraston (601645): Used for removing burrs on the measuring surface. Tweezers (600004): Used for handling thin gauge blocks. Blower brush (600005): Used for blowing dust off the measuring surface. Cleaning paper (600006): Used for wiping off rust preventive oil and contamination. Artificial leather mat (600007): Used as a gauge block mat. Reagent bottle (600008): Bottle for wiping solution (100 ml). Solution not included. Gloves (600009D) Optical flat (158-117)	2270