

# MarGage 402 / 404

Rectangular Gage Block Set made of Steel

## FEATURES

- Vertical arrangement to save space

### Calibration class K

As primary factory standard, particularly for the calibration of subsidiary test laboratories, e.g. for gage blocks of lower tolerance classes.

### Tolerance class 0

For maximum accuracy requirements. To be used as basic standards in test laboratories and precision inspection rooms, where other gage blocks and high accuracy measuring instruments are calibrated.

### Tolerance class 1

For high accuracy requirements. As reference gage block for the measuring room. Designed to perform particularly accurate measurements. For setting indicating measuring instruments. For checking precision gages.

### Tolerance class 2

For checking production gages of quality IT 6 and IT 7. For setting indicating measuring instruments and for checking accurate dimensions in the jig and tool industry.

- Package contains: wooden case with clear labeling strips, Mahr calibration certificate
- Coefficient of linear expansion:  $11.5 \times 10^{-6} \text{ K}^{-1}$



402



404

## TECHNICAL DATA

Order no.	Product type	Quantity per set	Tolerance class	Nominal sizes	Increment	Number
		Pieces		mm	mm	
4800400	402	32	0	1.005	-	1
				1.01 - 1.09	0.01	9
				1.1 - 1.9	0.1	9
				1 - 9	1	9
				10 - 30	10	3
50	-	1				
4800401	402	32	1	1.005	-	1
				1.01 - 1.09	0.01	9
				1.1 - 1.9	0.1	9
				1 - 9	1	9
				10 - 30	10	3
50	-	1				
4800402	402	32	2	1.005	-	1
				1.01 - 1.09	0.01	9
				1.1 - 1.9	0.1	9
				1 - 9	1	9
				10 - 30	10	3
50	-	1				
4800403DKS	402	32	K	1.005	-	1
				1.01 - 1.09	0.01	9
				1.1 - 1.9	0.1	9
				1 - 9	1	9
				10 - 30	10	3
50	-	1				
4800000	404	46	0	1.001 - 1.009	0.001	9
				1.01 - 1.09	0.01	9
				1.1 - 1.9	0.1	9
				1 - 9	1	9
				10 - 100	10	10
4800001	404	46	1	1.001 - 1.009	0.001	9
				1.01 - 1.09	0.01	9
				1.1 - 1.9	0.1	9
				1 - 9	1	9
				10 - 100	10	10
4800002	404	46	2	1.001 - 1.009	0.001	9
				1.01 - 1.09	0.01	9
				1.1 - 1.9	0.1	9
				1 - 9	1	9
				10 - 100	10	10
4800003DKS	404	46	K	1.001 - 1.009	0.001	9
				1.01 - 1.09	0.01	9
				1.1 - 1.9	0.1	9
				1 - 9	1	9
				10 - 100	10	10

## ACCESSORIES

Order no.	Product name	Product type
4800130	Maintenance accessories	424
4800140	Optical flat, Ø = 45 mm	421
4800142	Wooden tongs, single, to prevent heat transfer when handling gage blocks	423

## MarGage 405 / 406

### Rectangular Gage Block Set made of Steel

#### FEATURES

- Vertical arrangement to save space

#### Calibration class K

As primary factory standard, particularly for the calibration of subsidiary test laboratories, e.g. for gage blocks of lower tolerance classes.

#### Tolerance class 0

For maximum accuracy requirements. To be used as basic standards in test laboratories and precision inspection rooms, where other gage blocks and high accuracy measuring instruments are calibrated.

#### Tolerance class 1

For high accuracy requirements. As reference gage block for the measuring room. Designed to perform particularly accurate measurements. For setting indicating measuring instruments. For checking precision gages.

#### Tolerance class 2

For checking production gages of quality IT 6 and IT 7. For setting indicating measuring instruments and for checking accurate dimensions in the jig and tool industry.

- Package contains: wooden case with clear labeling strips, Mahr calibration certificate
- Coefficient of linear expansion:  $11.5 \times 10^{-6} \text{ K}^{-1}$



405



406

#### TECHNICAL DATA

Order no.	Product type	Quantity per set	Tolerance class	Nominal sizes	Increment	Number
		Pieces		mm	mm	
4800410	405	47	0	1.005	-	1
				1.01 - 1.19	0.01	19
				1.2 - 1.9	0.1	8
				1 - 9	1	9
				10 - 100	10	10
4800411	405	47	1	1.005	-	1
				1.01 - 1.19	0.01	19
				1.2 - 1.9	0.1	8
				1 - 9	1	9
				10 - 100	10	10
4800412	405	47	2	1.005	-	1
				1.01 - 1.19	0.01	19
				1.2 - 1.9	0.1	8
				1 - 9	1	9
				10 - 100	10	10
4800413DKS	405	47	K	1.005	-	1
				1.01 - 1.19	0.01	19
				1.2 - 1.9	0.1	8
				1 - 9	1	9
				10 - 100	10	10
4800010	406	87	0	0.5	-	1
				1.001 - 1.009	0.001	9
				1.01 - 1.49	0.01	49
				1 - 9.5	0.5	18
				10 - 100	10	10
4800011	406	87	1	0.5	-	1
				1.001 - 1.009	0.001	9
				1.01 - 1.49	0.01	49
				1 - 9.5	0.5	18
				10 - 100	10	10
4800012	406	87	2	0.5	-	1
				1.001 - 1.009	0.001	9
				1.01 - 1.49	0.01	49
				1 - 9.5	0.5	18
				10 - 100	10	10
4800014DKS	406	87	K	0.5	-	1
				1.001 - 1.009	0.001	9
				1.01 - 1.49	0.01	49
				1 - 9.5	0.5	18
				10 - 100	10	10

#### ACCESSORIES

Order no.	Product name	Product type
4800130	Maintenance accessories	424
4800140	Optical flat, Ø = 45 mm	421
4800142	Wooden tongs, single, to prevent heat transfer when handling gage blocks	423

# MarGage 408 / 409

## Rectangular Gage Block Set made of Steel

### FEATURES

- Vertical arrangement to save space

#### Calibration class K

As primary factory standard, particularly for the calibration of subsidiary test laboratories, e.g. for gage blocks of lower tolerance classes.

#### Tolerance class 0

For maximum accuracy requirements. To be used as basic standards in test laboratories and precision inspection rooms, where other gage blocks and high accuracy measuring instruments are calibrated.

#### Tolerance class 1

For high accuracy requirements. As reference gage block for the measuring room. Designed to perform particularly accurate measurements. For setting indicating measuring instruments. For checking precision gages.

#### Tolerance class 2

For checking production gages of quality IT 6 and IT 7. For setting indicating measuring instruments and for checking accurate dimensions in the jig and tool industry.

- **Package contains:** wooden case with clear labeling strips, Mahr calibration certificate
- **Coefficient of linear expansion:**  $11.5 \times 10^{-6} \text{ K}^{-1}$



408



409

### TECHNICAL DATA

Order no.	Product type	Quantity per set	Tolerance class	Nominal sizes		Number
				mm	mm	
4800020	408	111	0	0.5	-	1
				1.001 - 1.009	0.001	9
				1.01 - 1.49	0.01	49
				1 - 24.5	0.5	48
				25 - 100	25	4
4800021	408	111	1	0.5	-	1
				1.001 - 1.009	0.001	9
				1.01 - 1.49	0.01	49
				1 - 24.5	0.5	48
				25 - 100	25	4
4800022	408	111	2	0.5	-	1
				1.001 - 1.009	0.001	9
				1.01 - 1.49	0.01	49
				1 - 24.5	0.5	48
				25 - 100	25	4
4800027DKS	408	111	K	0.5	-	1
				1.001 - 1.009	0.001	9
				1.01 - 1.49	0.01	49
				1 - 24.5	0.5	48
				25 - 100	25	4
4800030	409	121	0	0.5	-	1
				1.001 - 1.009	0.001	9
				1.01 - 1.49	0.01	49
				1.6 - 1.9	0.1	4
				1 - 24.5	0.5	48
				30, 40, 60, 70, 80, 90	10	6
4800031	409	121	1	0.5	-	1
				1.001 - 1.009	0.001	9
				1.01 - 1.49	0.01	49
				1.6 - 1.9	0.1	4
				1 - 24.5	0.5	48
				30, 40, 60, 70, 80, 90	10	6
4800032	409	121	2	0.5	-	1
				1.001 - 1.009	0.001	9
				1.01 - 1.49	0.01	49
				1.6 - 1.9	0.1	4
				1 - 24.5	0.5	48
				30, 40, 60, 70, 80, 90	10	6
4800033DKS	409	121	K	0.5	-	1
				1.001 - 1.009	0.001	9
				1.01 - 1.49	0.01	49
				1.6 - 1.9	0.1	4
				1 - 24.5	0.5	48
				30, 40, 60, 70, 80, 90	10	6

### ACCESSORIES

Order no.	Product name	Product type
4800130	Maintenance accessories	424
4800140	Optical flat, Ø = 45 mm	421
4800142	Wooden tongs, single, to prevent heat transfer when handling gage blocks	423

## MarGage 412 / 413

### Rectangular Gage Block Set made of Steel

#### FEATURES

- Vertical arrangement to save space

#### Calibration class K

As primary factory standard, particularly for the calibration of subsidiary test laboratories, e.g. for gage blocks of lower tolerance classes.

#### Tolerance class 0

For maximum accuracy requirements. To be used as basic standards in test laboratories and precision inspection rooms, where other gage blocks and high accuracy measuring instruments are calibrated.

#### Tolerance class 1

For high accuracy requirements. As reference gage block for the measuring room. Designed to perform particularly accurate measurements. For setting indicating measuring instruments. For checking precision gages.

#### Tolerance class 2

For checking production gages of quality IT 6 and IT 7. For setting indicating measuring instruments and for checking accurate dimensions in the jig and tool industry.

- **Package contains:** wooden case with clear labeling strips, Mahr calibration certificate
- **Coefficient of linear expansion:**  $11.5 \times 10^{-6} \text{ K}^{-1}$



#### TECHNICAL DATA

Order no.	Product type	Quantity per set	Tolerance class	Nominal sizes	Number
		Pieces		mm	
4800425	412	8	0	125 / 150 / 175 / 200 / 250 / 300 / 400 / 500	8
			Includes Mahr calibration certificate		
4800426	412	8	1	125 / 150 / 175 / 200 / 250 / 300 / 400 / 500	8
			Includes Mahr calibration certificate		
4800427	412	8	2	125 / 150 / 175 / 200 / 250 / 300 / 400 / 500	8
			Includes Mahr calibration certificate		
4800430	413	5	0	600 / 700 / 800 / 900 / 1000	5
			Includes Mahr calibration certificate		
4800431	413	5	1	600 / 700 / 800 / 900 / 1000	5
			Includes Mahr calibration certificate		
4800432	413	5	2	600 / 700 / 800 / 900 / 1000	5
			Includes Mahr calibration certificate		
4800428DKS	412	8	K	125 / 150 / 175 / 200 / 250 / 300 / 400 / 500	8
			Includes DAkkS calibration certificate		
4800433DKS	413	5	K	600 / 700 / 800 / 900 / 1000	5
			Includes DAkkS calibration certificate		

#### ACCESSORIES

Order no.	Product name	Product type
4800140	Optical flat, $\varnothing = 45 \text{ mm}$	421
4800180	Optical parallel, $\varnothing = 30 \text{ mm}$	421 P
4800142	Wooden tongs, single, to prevent heat transfer when handling gage blocks	423
4800130	Maintenance accessories	424

## MarGage 411 / 415

Rectangular Gage Block Set made of Steel

### FEATURES

- Vertical arrangement to save space

#### Tolerance class 1

For high accuracy requirements. As reference gage block for the measuring room. Designed to perform particularly accurate measurements. For setting indicating measuring instruments. For checking precision gages. For testing and calibrating calipers

- Package contains: wooden case with clear labeling strips, Mahr calibration certificate
- Coefficient of linear expansion:  $11.5 \times 10^{-6} \text{ K}^{-1}$



### TECHNICAL DATA

Order no.	Product type	Quantity per set	Tolerance class	Nominal sizes	Number
		Pieces		mm	
4800343	411	5	1	30 / 41.3 / 131.4 / 243.5 / 281.2	5
			Includes Mahr calibration certificate		
4800344	411	5	2	30 / 41.3 / 131.4 / 243.5 / 281.2	5
			Includes Mahr calibration certificate		
4800339	415	6	1	30 / 41.3 / 131.4 / 243.5 / 281.2 / 481.1	6
			Includes Mahr calibration certificate		
4800340	415	6	2	30 / 41.3 / 131.4 / 243.5 / 281.2 / 481.1	6
			Includes Mahr calibration certificate		

## MarGage 402 C / 404 C

Rectangular Gage Block Set made of Ceramic

### FEATURES

#### Advantages of ceramic:

- Resistant to impact and breakage. Damage to measuring surfaces from scratches or to edges from impact causes minimal burring. Sliding ability is retained for longer
- **Extremely wear-resistant.** The longest life and highest stability of any material currently used in measuring technology. Allows for significantly longer gage monitoring intervals
- **Corrosion-resistant.** Circonimar is extremely resistant to alkalis, acids, oil, grinding fluid and other aggressive media even without protective measures
- **Coefficient of expansion similar to that of steel.** Therefore there are no usage restrictions, even in extreme temperature conditions
- Circonimar is non-magnetizable, anti-static, anti-magnetic and non-conductive. It does not attract dust or dirt.

#### Calibration class K

As primary factory standard, particularly for the calibration of subsidiary test laboratories, e.g. for gage blocks of lower tolerance classes.

#### Tolerance class 0

For maximum accuracy requirements. To be used as basic standards in test laboratories and precision inspection rooms, where other gage blocks and high accuracy measuring instruments are calibrated.

#### Tolerance class 1

For high accuracy requirements. As reference gage block for the measuring room. Designed to perform particularly accurate measurements. For setting indicating measuring instruments. For checking precision gages.

#### Tolerance class 2

For checking production gages of quality IT 6 and IT 7. For setting indicating measuring instruments and for checking accurate dimensions in the jig and tool industry.

- **Package contains:** wooden case with clear labeling strips, Mahr calibration certificate
- **Coefficient of linear expansion:**  $9.3 \times 10^{-6} \text{ K}^{-1}$



402 C



404 C

### TECHNICAL DATA

Order no.	Product type	Quantity per set	Tolerance class	Nominal sizes	Increment	Number
		Pieces		mm	mm	
4800094DKS	402 C	32	K	1.005 1.01 – 1.09 1.1 – 1.9 1 – 9 10 – 30 50	- 0.01 0.1 1 10 -	1 9 9 9 3 1
			Includes DAkkS calibration certificate			
4800095	402 C	32	0	1.005 1.01 – 1.09 1.1 – 1.9 1 – 9 10 – 30 50	- 0.01 0.1 1 10 -	1 9 9 9 3 1
			Includes Mahr calibration certificate			
4800096	402 C	32	1	1.005 1.01 – 1.09 1.1 – 1.9 1 – 9 10 – 30 50	- 0.01 0.1 1 10 -	1 9 9 9 3 1
			Includes Mahr calibration certificate			
4800097	402 C	32	2	1.005 1.01 – 1.09 1.1 – 1.9 1 – 9 10 – 30 50	- 0.01 0.1 1 10 -	1 9 9 9 3 1
			Includes Mahr calibration certificate			
4800008	404 C	46	0	1.001 – 1.009 1.01 – 1.09 1.1 – 1.9 1 – 9 10 – 100	0.001 0.01 0.1 1 10	9 9 9 9 10
			Includes Mahr calibration certificate			
4800009	404 C	46	1	1.001 – 1.009 1.01 – 1.09 1.1 – 1.9 1 – 9 10 – 100	0.001 0.01 0.1 1 10	9 9 9 9 10
			Includes Mahr calibration certificate			
4800004	404 C	46	2	1.001 – 1.009 1.01 – 1.09 1.1 – 1.9 1 – 9 10 – 100	0.001 0.01 0.1 1 10	9 9 9 9 10
			Includes Mahr calibration certificate			
4800088DKS	404 C	46	K	1.001 – 1.009 1.01 – 1.09 1.1 – 1.9 1 – 9 10 – 100	0.001 0.01 0.1 1 10	9 9 9 9 10
			Includes DAkkS calibration certificate			

### ACCESSORIES

Order no.	Product name	Product type
4800130	Maintenance accessories	424
4800140	Optical flat, Ø = 45 mm	421
4800142	Wooden tongs, single, to prevent heat transfer when handling gage blocks	423

## MarGage 405 C / 406 C

Rectangular Gage Block Set made of Ceramic

### FEATURES

#### Advantages of ceramic:

- Resistant to impact and breakage. Damage to measuring surfaces from scratches or to edges from impact causes minimal burring. Sliding ability is retained for longer
- **Extremely wear-resistant.** The longest life and highest stability of any material currently used in measuring technology. Allows for significantly longer gage monitoring intervals
- **Corrosion-resistant.** Circonimar is extremely resistant to alkalis, acids, oil, grinding fluid and other aggressive media even without protective measures
- **Coefficient of expansion similar to that of steel.** Therefore there are no usage restrictions, even in extreme temperature conditions
- Circonimar is non-magnetizable, anti-static, anti-magnetic and non-conductive. It does not attract dust or dirt.

#### Calibration class K

As primary factory standard, particularly for the calibration of subsidiary test laboratories, e.g. for gage blocks of lower tolerance classes.

#### Tolerance class 0

For maximum accuracy requirements. To be used as basic standards in test laboratories and precision inspection rooms, where other gage blocks and high accuracy measuring instruments are calibrated.

#### Tolerance class 1

For high accuracy requirements. As reference gage block for the measuring room. Designed to perform particularly accurate measurements. For setting indicating measuring instruments. For checking precision gages.

#### Tolerance class 2

For checking production gages of quality IT 6 and IT 7. For setting indicating measuring instruments and for checking accurate dimensions in the jig and tool industry.

- **Package contains:** wooden case with clear labeling strips, Mahr calibration certificate
- **Coefficient of linear expansion:**  $9.3 \times 10^{-6} \text{ K}^{-1}$



405 C



406 C

### TECHNICAL DATA

Order no.	Product type	Quantity per set	Tolerance class	Nominal sizes	Increment	Number
		Pieces		mm	mm	
4800420	405 C	47	0	1.005	-	1
				1.01-1.19	0.01	19
				1.2-1.9	0.1	8
				1-9	1	9
				10-100	10	10
4800421	405 C	47	1	1.005	-	1
				1.01-1.19	0.01	19
				1.2-1.9	0.1	8
				1-9	1	9
				10-100	10	10
4800422	405 C	47	2	1.005	-	1
				1.01-1.19	0.01	19
				1.2-1.9	0.1	8
				1-9	1	9
				10-100	10	10
4800423DKS	405 C	47	K	1.005	-	1
				1.01-1.19	0.01	19
				1.2-1.9	0.1	8
				1-9	1	9
				10-100	10	10
4800018	406 C	87	0	0.5	-	1
				1.001-1.009	0.001	9
				1.01-1.49	0.01	49
				1-9.5	0.5	18
				10-100	10	10
4800019	406 C	87	1	0.5	-	1
				1.001-1.009	0.001	9
				1.01-1.49	0.01	49
				1-9.5	0.5	18
				10-100	10	10
4800017	406 C	87	2	0.5	-	1
				1.001-1.009	0.001	9
				1.01-1.49	0.01	49
				1-9.5	0.5	18
				10-100	10	10
4800016DKS	406 C	87	K	0.5	-	1
				1.001-1.009	0.001	9
				1.01-1.49	0.01	49
				1-9.5	0.5	18
				10-100	10	10

### ACCESSORIES

Order no.	Product name	Product type
4800130	Maintenance accessories	424
4800140	Optical flat, Ø = 45 mm	421
4800142	Wooden tongs, single, to prevent heat transfer when handling gage blocks	423

## MarGage 409 C / 408 C

Rectangular Gage Block Set made of Ceramic

### FEATURES

#### Advantages of ceramic:

- Resistant to impact and breakage. Damage to measuring surfaces from scratches or to edges from impact causes minimal burring. Sliding ability is retained for longer
- **Extremely wear-resistant.** The longest life and highest stability of any material currently used in measuring technology. Allows for significantly longer gage monitoring intervals
- **Corrosion-resistant.** Circonimar is extremely resistant to alkalis, acids, oil, grinding fluid and other aggressive media even without protective measures
- **Coefficient of expansion similar to that of steel.** Therefore there are no usage restrictions, even in extreme temperature conditions
- Circonimar is non-magnetizable, anti-static, anti-magnetic and non-conductive. It does not attract dust or dirt.

#### Calibration class K

As primary factory standard, particularly for the calibration of subsidiary test laboratories, e.g. for gage blocks of lower tolerance classes.

#### Tolerance class 0

For maximum accuracy requirements. To be used as basic standards in test laboratories and precision inspection rooms, where other gage blocks and high accuracy measuring instruments are calibrated.

#### Tolerance class 1

For high accuracy requirements. As reference gage block for the measuring room. Designed to perform particularly accurate measurements. For setting indicating measuring instruments. For checking precision gages.

#### Tolerance class 2

For checking production gages of quality IT 6 and IT 7. For setting indicating measuring instruments and for checking accurate dimensions in the jig and tool industry.

- **Package contains:** wooden case with clear labeling strips, Mahr calibration certificate
- **Coefficient of linear expansion:**  $9.3 \times 10^{-6} \text{ K}^{-1}$



409 C



408 C

### TECHNICAL DATA

Order no.	Product type	Quantity per set	Tolerance class	Nominal sizes	Increment	Number
		Pieces		mm	mm	
4800038	409 C	121	0 Includes Mahr calibration certificate	0.5	-	1
				1.001-1.009	0.001	9
				1.01-1.49	0.01	49
				1.6-1.9	0.1	4
				1-24.5	0.5	48
				30, 40, 60, 70, 80, 90 25, 50, 75, 100	10 25	6 4
4800039	409 C	121	1 Includes Mahr calibration certificate	0.5	-	1
				1.001-1.009	0.001	9
				1.01-1.49	0.01	49
				1.6-1.9	0.1	4
				1-24.5	0.5	48
				30, 40, 60, 70, 80, 90 25, 50, 75, 100	10 25	6 4
4800037	409 C	121	2 Includes Mahr calibration certificate	0.5	-	1
				1.001-1.009	0.001	9
				1.01-1.49	0.01	49
				1.6-1.9	0.1	4
				1-24.5	0.5	48
				30, 40, 60, 70, 80, 90 25, 50, 75, 100	10 25	6 4
4800036DKS	409 C	121	K Includes DAkkS calibration certificate	0.5	-	1
				1.001-1.009	0.001	9
				1.01-1.49	0.01	49
				1.6-1.9	0.1	4
				1-24.5	0.5	48
				30, 40, 60, 70, 80, 90 25, 50, 75, 100	10 25	6 4
4800028	408 C	111	0 Includes Mahr calibration certificate	0.5	-	1
				1.001-1.009	0.001	9
				1.01-1.49	0.01	49
				1-24.5	0.5	48
				25-100	25	4
4800029	408 C	111	1 Includes Mahr calibration certificate	0.5	-	1
				1.001-1.009	0.001	9
				1.01-1.49	0.01	49
				1-24.5	0.5	48
				25-100	25	4
4800026	408 C	111	2 Includes Mahr calibration certificate	0.5	-	1
				1.001-1.009	0.001	9
				1.01-1.49	0.01	49
				1-24.5	0.5	48
				25-100	25	4
4800025DKS	408 C	111	K Includes DAkkS calibration certificate	0.5	-	1
				1.001-1.009	0.001	9
				1.01-1.49	0.01	49
				1-24.5	0.5	48
				25-100	25	4

### ACCESSORIES

Order no.	Product name	Product type
4800130	Maintenance accessories	424
4800140	Optical flat, $\varnothing = 45 \text{ mm}$	421
4800142	Wooden tongs, single, to prevent heat transfer when handling gage blocks	423



# MarGage 418 C

Rectangular Gage Block Set made of Ceramic

## FEATURES

### Advantages of ceramic:

- Resistant to impact and breakage. Damage to measuring surfaces from scratches or to edges from impact causes minimal burring. Sliding ability is retained for longer
- **Extremely wear-resistant.** The longest life and highest stability of any material currently used in measuring technology. Allows for significantly longer gage monitoring intervals
- **Corrosion-resistant.** Circonimar is extremely resistant to alkalis, acids, oil, grinding fluid and other aggressive media even without protective measures
- **Coefficient of expansion similar to that of steel.** Therefore there are no usage restrictions, even in extreme temperature conditions
- Circonimar is non-magnetizable, anti-static, anti-magnetic and non-conductive. It does not attract dust or dirt.

### Tolerance class 0

For maximum accuracy requirements. To be used as basic standards in test laboratories and precision inspection rooms, where other gage blocks and high accuracy measuring instruments are calibrated.

### Tolerance class 1

For high accuracy requirements. As reference gage block for the measuring room. Designed to perform particularly accurate measurements. For setting indicating measuring instruments. For checking precision gages.

- **Pair of protective gage blocks:** As outer cover gage blocks where the same gage blocks are in frequent use
- **Package contains:** wooden case with clear labeling strips, Mahr calibration certificate
- **Coefficient of linear expansion:**  $9.3 \times 10^{-6} \text{ K}^{-1}$



## TECHNICAL DATA

Order no.	Product type	Quantity per set	Tolerance class	Nominal sizes	Number
		Pieces		mm	
4800085	418 C	2	0	2	2
			Includes Mahr calibration certificate		
4800086	418 C	2	1	2	2
			Includes Mahr calibration certificate		

## MarGage 419 C

Rectangular Gage Block Set made of Ceramic

### FEATURES

#### Advantages of ceramic:

- Resistant to impact and breakage. Damage to measuring surfaces from scratches or to edges from impact causes minimal burring. Sliding ability is retained for longer
- **Extremely wear-resistant.** The longest life and highest stability of any material currently used in measuring technology. Allows for significantly longer gage monitoring intervals
- **Corrosion-resistant.** Circonimar is extremely resistant to alkalis, acids, oil, grinding fluid and other aggressive media even without protective measures
- **Coefficient of expansion similar to that of steel.** Therefore there are no usage restrictions, even in extreme temperature conditions
- Circonimar is non-magnetizable, anti-static, anti-magnetic and non-conductive. It does not attract dust or dirt.

#### Tolerance class 1

For high accuracy requirements. As reference gage block for the measuring room. Designed to perform particularly accurate measurements. For setting indicating measuring instruments. For checking precision gages.

- For testing and calibrating outside micrometers
- **Package contains:** wooden case with clear labeling strips, Mahr calibration certificate
- **Coefficient of linear expansion:**  $9.3 \times 10^{-6} \text{ K}^{-1}$



### TECHNICAL DATA

Order no.	Product type	Quantity per set	Tolerance class	Nominal sizes	Number
4800090	419 C	Pieces 10	1  Includes Mahr calibration certificate	mm 2.5 / 5.1 / 7.7 / 10.3 / 12.9 / 15.0 / 17.6 / 20.2 / 22.8 / 25 + 421 P, ø 30 mm	10

# MarGage

## Rectangular Gage Block Set made of Steel

### FEATURES

- Long used as the practical standards of dimensional measurement in precision manufacturing
- With accuracies, materials and manufacturing methods greatly refined, gage blocks are now of highest quality and precision
- Used as comparison reference and utilization standards in the field of length measurement
- For checking gages and measuring instruments
- Used individually or in combinations by wringing several blocks together
- Mahr gage blocks are available from stock individually and as full sets in inches (rectangular only)
- Sets are manufactured to Grade 0 only, which meet or exceed ASME B89.1.9–2002 specifications
- Offered in steel to suit a wide range of service conditions - Steel blocks are extremely stable, hardened to Rc 62 minimum, and processed through a thorough seasoning cycle to relieve internal stresses before lap finishing
- All block sets are serialized and supplied in a fitted storage case (certification priced separately)
- **Package contains:** wooden case with clear labeling strips



### TECHNICAL DATA

Order no.	Quantity per set	Tolerance class	Nominal sizes	Increment	Number
	Pieces		inch	inch	
2176361	81	0 Includes Mahr calibration certificate	.1001" – .1009"	.0001"	9
			.101" – .149"	.001"	49
			.050" – .950"	.050"	19
			1.000" – 4.000"	1.00"	4
2176362	49	0 Includes Mahr calibration certificate	.1001" – .1009"	.0001"	9
			.101" – .109"	.001"	9
			.010" – .090"	.010"	9
			.110" – .190"	.010"	9
			.100" – .900"	.100"	9
			1.000" – 4.000"	1.00"	4

### ACCESSORIES

Order no.	Product name	Type
4800140	Optical flat, Ø = 45 mm	421
4800142	Wooden tongs, single, to prevent heat transfer when handling gage blocks	423
4800130	Maintenance accessories	424