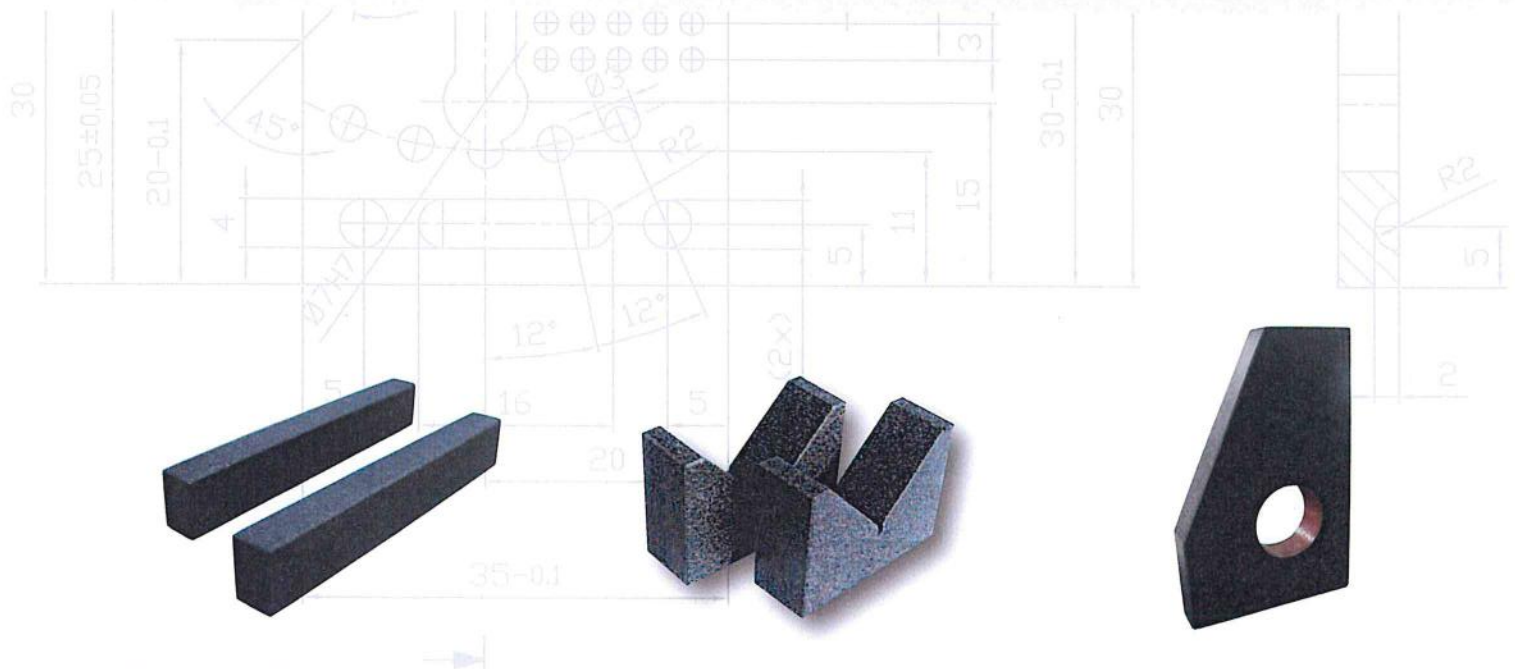


Granite Measuring Instruments




Due to its unique features, black granite has been used extensively in the field of metrology. Granite has a low temperature expansion coefficient, which is much lower than the one of metal. In addition, granite is a good electrical isolator, insensitive to scratches and resistant to corrosion, making it ideal for measurement products on the workshop floor. In addition to using granite for its machines, ZSM Metrology provides a wide range of granite measuring instruments which adhere to the German DIN 875/876 standards. All granite components, be it for our measuring machines or for the measuring instruments, are produced in-house with a highly skilled and dedicated team with years of experience and high quality standards.



Surface plates







- Suitable for use in workshop or metrological environments
- Can be supplied with holes, glued inserts, T-slots, clearing grooves, dovetail and fitting rubber feet for small sizes
- Flatness according to DIN 876

Name	Dimensions (mm)	Weight (kg)	Grade 1		Grade 0		Grade 00	
			Code	 (μm)	Code	 (μm)	Code	 (μm)
PB	300x200x50	9.0	01100	10.40	01010	5.20	01001	2.60
PB	400x250x60	18.0	02100	11.20	02010	5.60	02001	2.80
PB	400x400x60	28.0	03100	11.20	03010	5.60	03001	2.80
PB	500x315x70	33.0	04100	12.00	04010	6.00	04001	3.00
PB	500x500x80	60.0	05100	12.00	05010	6.00	05001	3.00
PB	630x400x80	60.0	06100	12.80	06010	6.52	06001	3.26
PB	630x630x100	118.0	07100	12.80	07010	6.52	07001	3.26
PB	800x500x100	120.0	08100	14.40	08010	7.20	08001	3.60
PB	1000x630x140	260.0	09100	16.00	09010	8.00	09001	4.00
PB	1000x750x150	340.0	10100	16.00	10010	8.00	10001	4.00
PB	1000x1000x160	480.0	11100	16.00	11010	8.00	11001	4.00
PB	1200x800x160	460.0	12100	17.60	12010	8.80	12001	4.40
PB	1600x1000x180	860.0	13100	20.80	13010	10.40	13001	5.20
PB	2000x1000x220	1300.0	14100	24.00	14010	12.00	14001	6.00
PB	2000x1500x250	2250.0	15100	24.00	15010	12.00	15001	6.00
PB	2500x1500x300	3300.0	16100	28.00	16010	14.00	16001	7.00
PB	3000x2000x400	7200.0	17100	32.00	17010	16.00	17001	8.00

H-type Parallels





- H-shape profile to ensure stability and lightness
- Two lapped parallel surfaces, suited for testing straightness and parallelism
- If required, handles on the heads can be supplied
- Flatness according to DIN 876

Name	Dimensions (mm)	Weight (kg)	Grade 0			Grade 00		
			Code	 (µm)	 (µm)	Code	 (µm)	 (µm)
PC	500x50x80	5.0	01010	3.00	4.50	01001	1.80	2.70
PC	750x50x100	7.5	02010	4.00	6.00	02001	2.50	3.70
PC	1000x60x140	16.0	03010	5.00	7.50	03001	3.00	4.50
PC	1250x60x160	25.0	04010	6.00	9.00	04001	3.60	5.40
PC	1500x80x180	40.0	05010	7.00	10.50	05001	4.00	6.00
PC	1750x80x200	55.0	06010	8.00	12.00	06001	4.80	7.20
PC	2000x100x220	80.0	07010	9.00	13.50	07001	5.40	8.10

Paired Parallels



- Supplied as two matching pieces
- High precision parallelism of surfaces and perpendicularity to sides
- Suitable for testing parallelism of parts and precisely jacking up parts
- Flatness according to DIN 876

Name	Dimensions (mm)	Weight (kg)	Grade 0			Grade 00		
			Code	 (µm)	Tolerance of height between a matched pair (µm)	Code	 (µm)	Tolerance of height between a matched pair (µm)
PG	160x25x16	0.4	01010	3.00	3.00	01001	1.50	1.50
PG	250x40x25	1.5	02010	4.00	4.00	02001	2.00	2.00
PG	400x63x40	6.0	03010	8.00	8.00	03001	4.00	4.00
PG	630x100x63	24.0	04010	12.00	12.00	04001	6.00	6.00

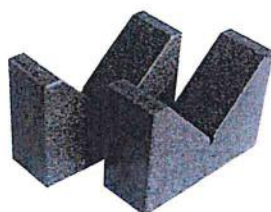
Linear Rulers



- The top working surface is perfect for high precision testing of linearity and for comparing guides or lapped surfaces
- If needed, linear rulers can be equipped with handles on the heads
- Flatness according to DIN 876

Name	Dimensions (mm)	Weight (kg)	Grade 0		Grade 00	
			Code	\square (μm)	Code	\square (μm)
ZX	300x30x50	1.3	01010	3.00	01001	1.60
ZX	400x40x60	2.2	02010	4.00	02001	2.00
ZX	500x50x80	5.0	03010	4.00	03001	2.00
ZX	630x50x80	7.0	04010	4.00	04001	2.00
ZX	800x50x100	10.5	05010	5.00	05001	3.00
ZX	1000x60x120	15.0	06010	6.00	06001	3.00
ZX	1400x60x150	35.0	07010	8.00	07001	4.00
ZX	1600x80x180	53.0	08010	8.00	08001	4.00
ZX	2000x80x200	89.0	09010	10.00	09001	5.00

V Blocks



- Suitable for testing cylindrical parts and shafts
- Flatness according to DIN 876

Name	Dimensions (mm)	Weight (kg)	Code	\square (μm)	\parallel (μm)	\perp (μm)
VX	70x70x50	0.8	01000	1.50	3.00	3.00
VX	100x70x50	1.0	02000	2.00	4.00	4.00
VX	140x100x60	2.0	03000	2.00	4.00	4.00
VX	200x140x70	6.0	04000	3.00	6.00	6.00

Angles



- With reduction holes for better handling and weight reduction
- Suitable for testing perpendicularity
- Flatness according to DIN 876 and perpendicularity according to DIN 875

Name	Dimensions (mm)	Weight (kg)	Grade 0			Grade 00		
			Code	⊥ (μm)	▭ (μm)	Code	⊥ (μm)	▭ (μm)
JC	200x150x30	1.8	01010	4.00	3.00	01001	2.00	1.00
JC	300x200x40	4.7	02010	5.00	3.00	02001	2.50	2.00
JC	400x250x50	10.0	03010	6.00	4.00	03001	3.00	2.00
JC	500x315x60	17.0	04010	7.00	4.00	04001	3.50	2.00
JC	630x400x60	28.0	05010	8.00	4.00	05001	4.00	2.00
JC	1000x630x100	117.0	06010	12.00	6.00	06001	6.00	3.00

Squares



- With reduction holes for better handling and weight reduction
- Suitable for testing perpendicularity and parallelism
- The four outer surfaces are paired parallel to each other and at right angles to one another
- Flatness according to DIN 876 and perpendicularity according to DIN 875

Name	Dimensions (mm)	Weight (kg)	Grade 0				Grade 00			
			Code	⊥ (μm)	▭ (μm)	// (μm)	Code	⊥ (μm)	▭ (μm)	// (μm)
FB	200x200x40	4.0	01010	4.00	3.00	4.00	01001	2.00	1.00	2.00
FB	250x250x40	6.5	02010	4.50	3.00	4.50	02001	2.20	2.00	2.20
FB	315x315x45	12.0	03010	5.50	3.00	5.50	03001	2.60	2.00	2.60
FB	400x400x50	21.5	04010	6.00	4.00	6.00	04001	3.00	2.00	3.00
FB	500x500x50	33.5	05010	7.00	4.00	7.00	05001	3.50	2.00	3.50

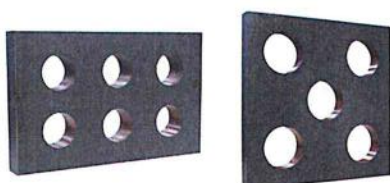
Cubes



- Suitable for component inspection and use in quality inspection, calibration, and assembling environments
- Available in two versions, each with 4 or 6 working surfaces, each parallel or at right angles to one another
- Flatness according to DIN 876 and perpendicularity according to DIN 875

	Name	Dimensions (mm)	Weight (kg)	Grade 0			Grade 00		
				Code	⊥ (μm)	▭ (μm)	Code	⊥ (μm)	▭ (μm)
4 Working Surfaces	ZF	160x160x160	12.0	0225	8.00	4.64	0226	4.00	2.32
	ZF	200x200x200	24.0	0229	9.00	4.80	0230	4.50	2.40
	ZF	250x250x250	46.0	0233	10.00	5.00	0234	5.00	2.50
6 Working Surfaces	ZF	160x160x160	12.0	0227	8.00	4.64	0228	4.00	2.32
	ZF	200x200x200	24.0	0231	9.00	4.80	0232	4.50	2.40
	ZF	250x250x250	46.0	0235	10.00	5.00	0236	5.00	2.50

Rectangular Rulers



- With reduction holes for better handling and weight reduction
- Suitable for testing perpendicularity and parallelism
- The four outer surfaces are paired parallel to each other and at right angles to one another
- Flatness according to DIN 876 and perpendicularity according to DIN 875

Name	Dimensions (mm)	Weight (kg)	Grade 0			Grade 00		
			Code	⊥ (μm)	▭ (μm)	Code	⊥ (μm)	▭ (μm)
RC	400x250x40	18.0	01010	5.00	4.00	01001	3.00	2.00
RC	500x315x60	28.0	02010	6.00	4.00	02001	3.50	2.00
RC	630x400x60	35.0	03010	6.50	4.00	03001	4.00	2.00
RC	400x160x100	18.0	04010	5.00	4.00	04001	3.00	2.00
RC	600x200x120	36.0	05010	6.00	4.00	05001	4.00	2.00
RC	900x265x130	70.0	06010	8.00	5.60	06001	5.50	2.80
RC	1100x350x160	140.0	07010	10.00	6.40	07001	6.50	3.20
RC	1300x400x180	250.0	08010	11.00	7.20	08001	7.50	3.60