

Price list, Calibration of references

per 08-01-2019

Mitutoyo Benelux



Shipping address:

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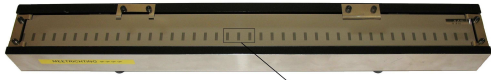
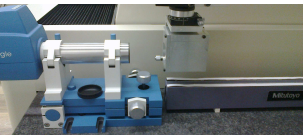
Contact:

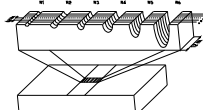
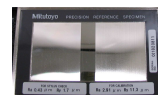
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Set Gauge blocks & reference ring for calipers ring: diameter only.	€ 350		U(k = 2)	Steel/Ceramic GB:: 0,10 µm + 0,34.10 ⁻⁶ ./ For ring: 0,2 µm
Gauge blocks >100-1500mm	€ 136		U(k = 2)	Steel/Ceramic: 0,10 µm + 0,34.10 ⁻⁶ ./ Zero glass: 0,10 µm + 0,20.10 ⁻⁶ ./
Micrometer standards till 1500mm	€ 39		U(k = 2)	Steel: 0,10 µm + 0,50.10 ⁻⁶ ./
Masterballs (0-30) diameter + roundness	€ 262		U(k = 2)	Diameter: 0,2 µm Roundness: 40 nm + 2%.RONt Special request Roundness: 10nm + 2%.RONt
Masterballs (0-30) diameter	€ 175			
Ring gauges (4-50) diameter + roundness	€ 262		U(k = 2)	Diameter: 0,2 µm Roundness: 40 nm + 2%.RONt
Ring gauges (4-50) diameter	€ 175			
CMM				
Stepgauges 32 surfaces (310mm)	€ 592		U(k = 2)	0,16 µm + 0,34.10 ⁻⁶ ./
Stepgauges 46 surfaces (450mm)	€ 851			0,17 µm + 0,34.10 ⁻⁶ ./
Stepgauges 62 surfaces (610mm)	€ 1147			0,19 µm + 0,34.10 ⁻⁶ ./
Stepgauges 76 surfaces (750mm)	€ 1409			0,21 µm + 0,34.10 ⁻⁶ ./
Stepgauges 78 surfaces (770mm)	€ 1443			0,21 µm + 0,34.10 ⁻⁶ ./
Stepgauges 102 surfaces (1010mm)	€ 1887			0,24 µm + 0,34.10 ⁻⁶ ./

Stepgauges 116 surfaces (1150mm)	€ 2146				$0,26 \mu\text{m} + 0,34 \cdot 10^{-6} /$
Stepgauges 152 surfaces (1510mm)	€ 2812				$0,30 \mu\text{m} + 0,34 \cdot 10^{-6} /$
Stepgauges 18 surfaces (300mm)	€ 333				$0,16 \mu\text{m} + 0,34 \cdot 10^{-6} /$
Stepgauges 24 surfaces (600mm)	€ 444				$0,19 \mu\text{m} + 0,34 \cdot 10^{-6} /$
Stepgauges 26 surfaces (incl. 2 GB's)	€ 559				
Stepgauges 50 surfaces (incl. 2 GB's)	€ 1003				$0,15 \mu\text{m} + 0,34 \cdot 10^{-6} /$
Stepgauges 22 surfaces (250mm)	€ 407				$0,16 \mu\text{m} + 0,34 \cdot 10^{-6} /$
Stepgauges 30 surfaces (320mm)	€ 555				$0,15 \mu\text{m} + 0,34 \cdot 10^{-6} /$
Stepgauges 26 surfaces (250mm)	€ 481				
Stepgauges 22 surfaces (420mm) KOBA	€ 407				$0,17 \mu\text{m} + 0,34 \cdot 10^{-6} /$
Stepgauges 32 surfaces (620mm) KOBA	€ 592				$0,19 \mu\text{m} + 0,34 \cdot 10^{-6} /$
Stepgauges 42 surfaces (820mm) KOBA	€ 777				$0,21 \mu\text{m} + 0,34 \cdot 10^{-6} /$
Stepgauges 52 surfaces (1020mm) KOBA	€ 962				$0,24 \mu\text{m} + 0,34 \cdot 10^{-6} /$
Straightedges till 300mm	€ 126			U(k = 2)	1,5 μm
Straightedges till 500mm	€ 146				
Straightedges till 750mm	€ 165				
Straightedges till 1000mm	€ 184				
Block square, longest leg till 300mm	€ 165			U(k = 2)	1,5 μm for the straightness of the legs (0,5 m/L)" for the angle deviation (=appr. 2,4 $\mu\text{m/L}$)
Block square, longest leg till 500mm	€ 184				
Block square, longest leg till 750mm	€ 194				
Block square, longest leg till 1000mm	€ 213				
Quadra square	€ 320			U(k = 2)	1,5 μm for the straightness of the legs (0,5 m/L)" for the angle deviation (=appr. 2,4 $\mu\text{m/L}$)
Cube square	€ 485			U(k = 2)	1,5 μm for the straightness of the legs (0,5 m/L)" for the angle deviation (=appr. 2,4 $\mu\text{m/L}$)

Optical				
Glass Scale (Projector scale) 50 mm (11 stripes, pitch 5 mm)	€ 231			$U(k = 2)$ $0,40 \mu\text{m} + 1,00 \cdot 10^{-6} \text{.l}$
Glass Scale (Projector scale) 80 mm (17 stripes, pitch 5 mm)	€ 357			
Glass Scale (Projector scale) 100 mm (11 stripes, pitch 10 mm)	€ 231			
Glass Scale (Projector scale) 150 mm (16 stripes, pitch 10 mm)	€ 336			
Glass Scale (Projector scale) 200 mm (21 stripes, pitch 10 mm)	€ 441			
Glass Scale (Projector scale) 300 mm (31 stripes, pitch 10 mm)	€ 651			
Glass Scale (Projector scale) 400 mm (41 stripes, pitch 10 mm)	€ 861			
Glass Scale (Projector scale) 600 mm (61 stripes, pitch 10 mm)	€ 1281			
Motic calibration slide	€ 100			$U(k = 2)$ $10 \mu\text{m}$
VMM				
Line standard (Vision scale) QI 105 mm (22 stripes, pitch 5 mm)	€ 462			$U(k = 2)$ Normal glass: $0,08 \mu\text{m} + 1,00 \cdot 10^{-6} \text{.l}$ Zero glass: $0,08 \mu\text{m} + 0,50 \cdot 10^{-6} \text{.l}$
Line standard (Vision scale) QI 205 mm (42 stripes, pitch 5 mm)	€ 882			
Line standard (Vision scale) QS/QV 200 mm (21 stripes, pitch 10 mm)	€ 441			
Line standard (Vision scale) 250 mm (26 stripes, pitch 10 mm)	€ 546			
Line standard (Vision scale) QS/QV 400 mm (41 stripes, pitch 10 mm)	€ 861			
Line standard (Vision scale) HQV 200 mm (21 stripes, pitch 10 mm)	€ 441			
Line standard (Vision scale) HQV 300 mm (31 stripes, pitch 10 mm)	€ 651			
Line standard (Vision scale) HQV 400 mm (41 stripes, pitch 10 mm)	€ 861			
2-D grids 200x200 mm pitch 10 mm (21 mp x-as, 21 mp, Y-as)	€ 882			$U(k = 2)$ -afstand tussen 2 punten -lineariteit -rechtheid -haaksheid -rotatie $0,8 \mu\text{m} + 0,5 \cdot 10^{-6} \text{.l}$ $0,2 \mu\text{m} + 0,5 \cdot 10^{-6} \text{.l}$ $0,2 \mu\text{m}$ 0,2" 0,4"
QV calibration charts	€ 462		like 02AKN020 	$U(k = 2)$ $0,24 \mu\text{m}$
FMI				
Straightedges till 280mm on Roundtest with reversal method (low uncertainty)	€ 291			$U(k = 2)$ $38\text{nm} + 3,5\% \cdot z$
Straightedges till 1000 mm on CMM with autocollimator (low uncertainty)	€ 388			$U(k = 2)$ $36 \text{ nm} + 0,12 \cdot 10^{-6} \cdot L$
Hemisphere with reversal or multi-step method	€ 388		like 211-016 	$U(k = 2)$ RONT (0-1 μm) $10\text{nm} + 2\% \cdot \text{RONt}$

Flick standard	€ 291			$U(k = 2)$ RONt (0-100 μm)	150nm + 2%.RONt
Roughness specimen, depth standards	€ 194		Type A1 Step standards	Type A2 Groove Depth-setting standards	
			like 178-611 & 178-610  	like Halle standards 	
				$U(k = 2)$	d (0-20 μm): 10 nm + 2%. <i>d</i> Pt (0-20 μm): 10 nm + 2%. <i>Pt</i>
Roughness specimen, 1 profile	€ 228	€ 152 in case of new sales	Type B (tip control) & C (vertical / horizontal spacing & amplitude) sine waves or saw-tooth	Type D1 roughness standards fine, middle, large	
			like Mitutoyo: 178-601 (mm) & 178-602 (inch/mm) Rubert: 178-605 (mm) & 178-606 (inch/mm) 	like Halle standards 	
Roughness specimen, 2 profiles	€ 456	€ 304 in case of new sales	Type B & C sine waves	$U(k = 2)$	Ra (0-20 μm): 3 nm + 3%. <i>Ra</i> Rz (0-80 μm): 30 nm + 2%. <i>Rz</i> Rt (0-80 μm): 40 nm + 3%. <i>Rt</i> Rsm (10-250 μm): 0.1%. <i>Rsm</i> special request: Rsm (10-250 μm): 0.01%. <i>Rsm</i>
			like 178-604 		
Temperature					
Temperature sensors	€ 97		 	$U(k = 2)$	0,03 K