

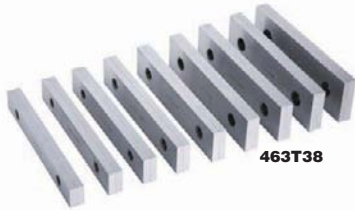


For more information on Precision Measuring Instruments, see page 2325.

Starrett
INSIZE

TESA
TECHNOLOGY

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Precision Steel Parallels & Sets

These precision steel parallel sets are comprised of rectangular blocks with highly parallel, square dimensions within tight tolerances. When a vise is too deep to hold a workpiece, parallels are commonly used to position the workpiece for accurate cutting by creating a parallel and flat base. These parallels offer certainty about the alignment of the workpiece rather than requiring guesswork and constant adjustments with a level, protractor, or indicator.

No. of Pairs	Included Sizes	L	Thickness	Parallelism	Brand	Item No.
1	1/2 in x 1 in	6 in	1/2 in	100 µin	Starrett	30A621
9	1 1/2 in, 1 1/4 in, 1 1/8 in, 1 3/4 in, 1 3/8 in, 1 1/2 in, 1 in, 3/4 in, 1/2 in	6 in	1/4 in	300 µin	Insize	463T39
10	1 1/2 in, 1 1/4 in, 1 1/8 in, 1 3/4 in, 1 3/8 in, 1 1/2 in, 1 in, 3/4 in, 3/8 in, 1/2 in, 1/4 in, 1/8 in, 1/16 in	6 in	1/8 in	300 µin	Insize	463T38
10	1 1/2 in, 1 1/4 in, 1 1/8 in, 1 3/4 in, 1 3/8 in, 1 1/2 in, 1 in, 3/4 in, 3/8 in, 1/2 in, 1/4 in, 1/8 in, 1/16 in	6 in	1/8 in	—	Tesa Brown & Sharpe	5T2U3

INSIZE
Mitutoyo



Horizontal
1ARJ9

Vertical
463H36



Single-Function Digital Scale Units with SPC Output

Linear scales with SPC output move along a beam and display the distance traveled on a digital display. They are available in horizontal or vertical designs to measure distances. They measure absolute positioning, zero-setting for relative positioning, and have built-in low battery alarms. The also have direction changeover to reverse the direction of measurement, programmable presets to display a specific value, and data hold. They are commonly used for table positioning, quill positioning, and tool presetting.

Range	Accuracy	Brand	Horizontal Digital Scale Unit Item No.	Vertical Digital Scale Unit Item No.
Not Rated				
0 in to 12 in/0 to 300 mm	±0.0016 in	Insize	463H27	463H36
0 in to 16 in/0 to 400 mm	±0.002 in	Insize	463H28	—
0 in to 16 in/0 to 400 mm	±.002 in	Insize	—	463H37
0 in to 20 in/0 to 500 mm	±.002 in	Insize	463H29	463H38
IP66 Rated				
0 in to 4 in/0 to 100 mm	±0.001 in/0.03 mm	Mitutoyo	1ARJ9	33RJ82
0 in to 6 in/0 to 150 mm	±0.001 in/0.03 mm	Mitutoyo	1ARR4	4CGX2
0 in to 8 in/0 to 200 mm	±0.001 in/0.03 mm	Mitutoyo	4CGX1	4CGX3



Grade B Toolroom
6PCV6



Grade A
463K66



Grade AA
6PCX2

Starrett INSIZE
Inspection Surface Plates

Grade B Toolroom Grade surface plates are made to a precise tolerance of flatness and repeatability suitable for smaller QA and inspection jobs on the shop floor where metrology lab-level sensitivity is not a factor. **Grade A Inspection Grade** surface plates are built to a medium tolerance of flatness and repeatability. They have either four flat edges or ledges on two sides that create an overhang for clamping, supporting, and securing objects. **Grade AA Laboratory Grade** surface plates are made to the best tolerance of flatness and repeatability. These plates are thicker than lesser-grade plates, so they have less deflection and are intended for permanent installation.

Surface Size	Color	Flatness	Weight (lb.)	Brand	Item No.
Grade B Flat Edge Style					
36 in x 36 in; 900 mm x 900 mm	Pink	0.0006 in	745	Starrett	6PCV2
36 in x 48 in; 900 mm x 1200 mm	Pink	0.0008 in	990	Starrett	6PCV3
36 in x 60 in; 900 mm x 1800 mm	Pink	0.001 in	1,650	Starrett	6PCV4
36 in x 72 in; 900 mm x 1800 mm	Pink	0.0012 in	1,520	Starrett	6PCV5
48 in x 48 in; 1200 mm x 1200 mm	Pink	0.0009 in	1,520	Starrett	6PCV6
Grade A Flat Edge Style					
12 in x 18 in; 300 mm x 450 mm	Gray	0.00012 in/0.0030 mm	93	Insize	463K63
18 in x 24 in; 450 mm x 600 mm	Gray	0.00012 in/0.0030 mm	181	Insize	463K64
18 in x 24 in; 450 mm x 600 mm	Pink	0.000150 in/0.0038 mm	248	Starrett	6PCT4
24 in x 24 in; 600 mm x 600 mm	Pink	0.000150 in/0.0038 mm	330	Starrett	6PCT5
24 in x 36 in; 600 mm x 900 mm	Gray	0.00012 in/0.0030 mm	441	Insize	463K65
36 in x 36 in; 900 mm x 900 mm	Gray	0.000300 in/0.0076 mm	745	Starrett	6PCT8
36 in x 48 in; 900 mm x 1200 mm	Gray	0.00012 in/0.0030 mm	1,268	Insize	463K66
48 in x 72 in; 1200 mm x 1800 mm	Pink	0.000700 in/0.0177 mm	3,300	Starrett	6PCU3
48 in x 96 in; 1200 mm x 2400 mm	Pink	0.001000 in/0.0254 mm	5,280	Starrett	6PCU4
Grade AA Flat Edge Style					
18 in x 18 in; 450 mm x 450 mm	Pink	0.000050 in/0.0012 mm	125	Starrett	6PCN9
18 in x 24 in; 450 mm x 600 mm	Pink	0.000075 in/0.0019 mm	248	Starrett	6PCR0
24 in x 36 in; 600 mm x 900 mm	Pink	0.000100 in/0.0025 mm	495	Starrett	6PCR2
30 in x 48 in; 750 mm x 1200 mm	Pink	0.000168 in/0.0043 mm	1,585	Starrett	6PCR3
36 in x 48 in; 900 mm x 1200 mm	Pink	0.000200 in/0.0050 mm	1,320	Starrett	6PCR5
Two Ledges Edge Style					
48 in x 96 in;	Pink	0.000500 in/0.0127 mm	6,750	Starrett	6PCX2



Horizontal
54GF40

Vertical
463D22



Optical Comparators

Mitutoyo INSIZE

■ 10X Magnification lens included

Horizontal optical comparators are suitable for shaft parts or heavy workpieces with large volume. The main axis of the comparator is perpendicular to the plane of the projection screen. **Vertical** optical comparators are suitable for flat parts or smaller workpieces. The main axis is parallel to the plane of the screen.

Projector Series	Screen Size	Table Size	Effective Table Working Area	Y-Axis Vertical Focus Travel	X-Axis Table Travel	Image Type	Res.	Brand	Item No.
Horizontal									
Mitutoyo PH-3515F	14 in	17 1/16 in x 5 1/16 in	17 1/16 in x 5 1/16 in	6 in	10 in	Erect Image	0.0001mm	Mitutoyo	54GF40
Mitutoyo PH-3515F with QM Data	14 in	17 4/64 in x 5 4/64 in	17 4/64 in x 5 4/64 in	6 in	10 in	Erect Image	0.0001 in/0.001mm	Mitutoyo	54GF82
Mitutoyo PH-A14	14 in	17 1/16 in x 5 1/16 in	17 1/16 in x 5 1/16 in	6 in	10 in	Erect Image	0.0001mm	Mitutoyo	54GF39
Mitutoyo PH-A14 with KA Counter	14 in	16 in x 6 in	16 in x 6 in	4 in	8 in	Inverted Image	0.00005 in/0.001mm	Mitutoyo	54GF47
Mitutoyo PH-A14 with KA Counter	14 in	17 in x 6 in	17 in x 6 in	3 in	8 in	Inverted Image	0.00005 in/0.001mm	Mitutoyo	4LA59
Vertical									
INSIZE ISP-A	12 in	13 3/8 in x 6 in	13 3/8 in x 6 in	3.54 in	6 in	Erect Image	0.00002 in	Insize	463D22
INSIZE ISP-A	12 in	15 15/16 in x 9 in	15 15/16 in x 9 in	3.94 in	8 in	Erect Image	0.00002 in	Insize	463D26
INSIZE ISP-Z	12 in	13 3/8 in x 6 in	13 3/8 in x 6 in	3.54 in	6 in	Erect Image	0.00002 in	Insize	463D31
Mitutoyo PJ-A3000	12.4 in	14 1/8 in x 9 1/8 in	10 1/2 in x 6 3/4 in	3.64 in	8 in	Inverted Image	0.0001 in/0.001mm	Mitutoyo	54GF42
Mitutoyo PJ-A3000	12.4 in	9 1/8 in x 9 1/8 in	7 1/4 in x 3 1/4 in	3.58 in	4 in	Inverted Image	0.0001 in/0.001mm	Mitutoyo	54GF43