

Positioning Blocks



- Matched pairs
- Tapped holes are provided for clamping operations
- Precision ground and hardened on all 6 sides
- Versatile for precision grinding layout work, etc.
- Squareness of all sides is within 0.0001"

Size (Inch)	Tapped Hole	Code
1-2-3	3/8-16	440415
2-4-6	5/8-11	460170

Toolmaker's V-Block & Clamp Sets

Chrome Steel



- Made from finely selected tool steel fully hardened to 55-60 HRC
- Manufactured and numbered in matched pairs - each pair has two 90 degree V's of different capacities which are identical to the V's of its matching block
- V's are ground central, parallel and square with the ends and sides
- Used for holding work securely during drilling, milling and grinding applications and also in layout and inspection work
- Each pair supplied with rigid and robust clamps

Height (Inch)	Width (Inch)	Length (Inch)	V1 Width of Small "V" (Inch)	V2 Width of Large "V" (Inch)	Capacity (Inch)	Code
1-1/4	1-1/4	1-19/32	7/16	13/16	1	384801
1-1/2	1-1/2	2	1/2	1-3/32	1-1/4	384802
1-7/16	1-3/4	2-3/4	11/16	1-5/16	1-1/2	384803
3	3	4	1-3/16	2-5/32	3	384804

V-Blocks



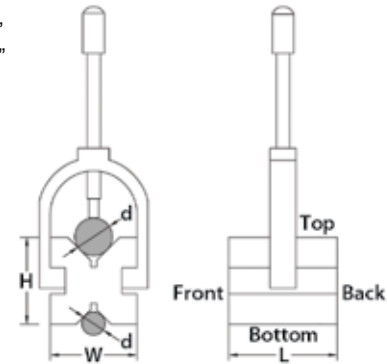
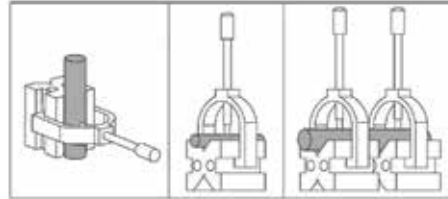
- All V-blocks are parallel, square and centered within 0.0002"
- Each block comes with one clamp
- Sold in pairs

Height (Inch)	Width (Inch)	Length (Inch)	Minimum V-Block Capacity (Inch)	Maximum V-Block Capacity (Inch)	Code
1-3/16	1-3/8	1-3/8	1/8	19/32	302242
2	2-3/8	2-3/8	13/64	1-3/16	302243
3-1/16	4-1/8	3-1/8	9/32	2-9/16	302244

V-Blocks



- Hold cylindrical work pieces for inspection and machining
- Hardened to HRC 60±2
- Parallelism of both v-grooves to top and bottom: 0.0002"
- Squareness of both v-grooves to front and back: 0.0002"
- Height difference of a matched pair: 0.0002"
- V-groove on top for large shafts
- V-groove on bottom for small shafts



Description	Length x Width x Height (Inch)	d Range of Shafts (Inch)	INSIZE No.	Code
Matched pair	1.97 x 1.57 x 1.57	Ø0.2 to 1.18	6896-11	889455
Matched pair	3.15 x 2.48 x 2.48	Ø0.28 to 2.48	6896-12	889456
Matched pair	3.94 x 3.15 x 3.15	Ø0.28 to 3.15	6896-13	889457

V-Blocks

Machined Faces



- Matched and numbered pairs
- V-Blocks provide a useful means of holding cylindrical work for layout, inspection, drilling and machining
- Each pair is accurately machined with 90° V which is centered in true and square and parallel with the base to within .001" (0.03mm)

Width Inch (mm)	Height Inch (mm)	Thickness/Pair Inch (mm)	Capacity Inch	Weight (kg)	Code
2 (51)	1-1/4 (32)	1-7/8 (48)	1-1/4	0.9	390822
3 (76)	2-3/8 (60)	2-5/8 (67)	2-1/2	2.5	390823
4 (102)	2-5/8 (67)	3-1/4 (82)	3	5.0	390824
5 (127)	3-1/8 (79)	4 (102)	3-1/2	8.0	390825
6 (152)	3-1/2 (89)	5 (127)	4	15.0	390826
7 (178)	4-1/2 (114)	6 (152)	5	28.0	390827
8 (203)	5-1/2 (140)	8 (203)	6	44.0	390828
10 (254)	6-1/2 (165)	10 (254)	6-1/2	69.0	390830
12 (305)	8 (203)	12 (305)	7	127.0	390832

Magnetic V-Blocks



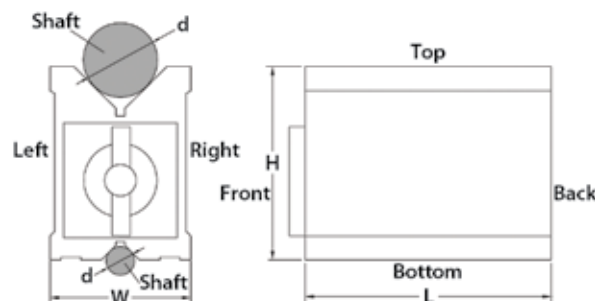
Description	Length x Width x Height (Inch)	Code
Single	4 x 3 x 3-3/4	435541
Matched pair	4 x 3 x 3-3/4	435542



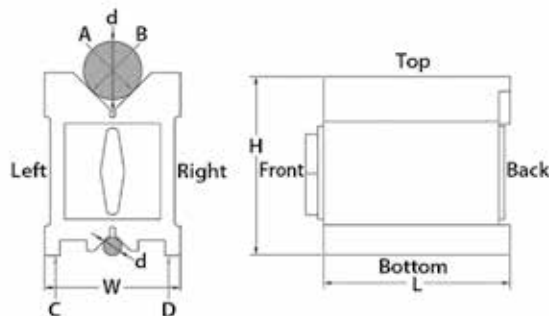
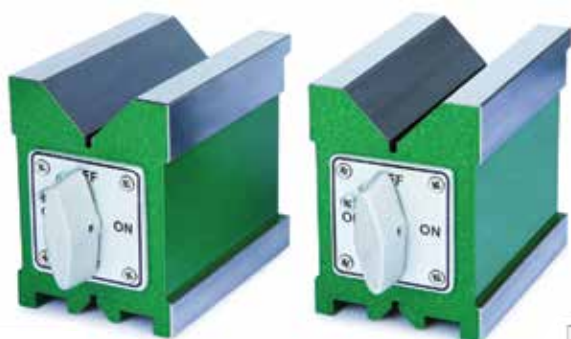
Magnetic V-Blocks



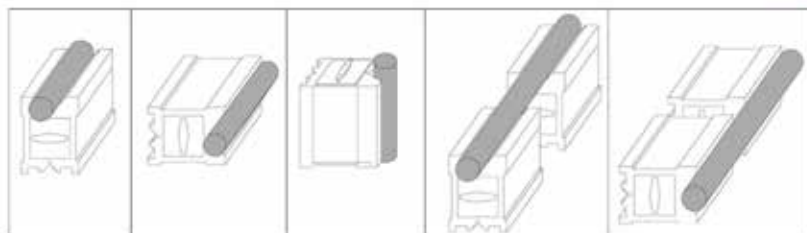
- Hold cylindrical workpieces for inspection and machining
- Not hardened
- Parallelism of both v-grooves to top, bottom, left, and right side: 0.00039"
- Squareness of both v-grooves to back side: 0.00039"
- V-groove on top for large shafts
- V-groove on bottom for small shafts
- Not suitable for cast iron surface plates



Description	Length x Width x Height (Inch)	d Range of Shafts (Inch)	Magnetic Force	INSIZE No.	Code
Single block	3.15 x 2.76 x 3.74	Ø0.24 to 2.64	627N	6801-1201	877035



- Hold cylindrical work pieces for inspection and machining
- Surface A, B, C, D are hardened to HRC60±2
- Magnetic force on top, bottom and two v-grooves
- Parallelism of both v-grooves to top, bottom, left, and right side: 0.0002"
- Squareness of both v-grooves to back side: 0.0002"
- Height difference of a matched pair: 0.0002"
- V-groove on top for large shafts
- V-groove on bottom for small shafts
- Suitable for cast iron and granite surface plates

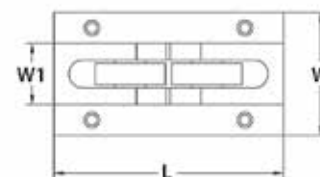
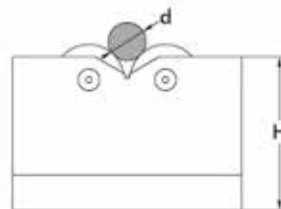
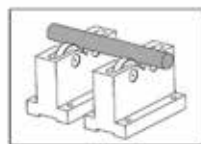


Description	Length x Width x Height (Inch)	d Range of Shafts (Inch)	Magnetic Force	INSIZE No.	Code
Matched pair	2.95 x 2.2 x 2.95	Ø0.2 to 1.57	735N	6889-1	877036

Roller Bearing V-Blocks

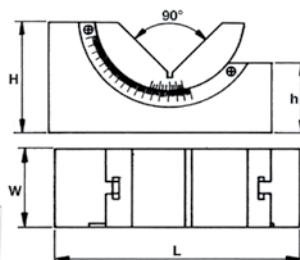
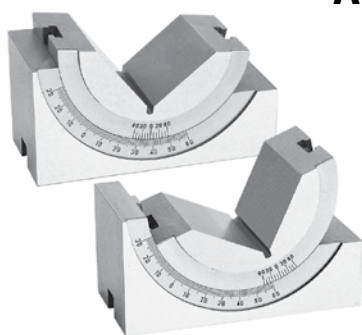


- Bearings prevent damage to the work piece
- Suitable for heavy work pieces (load capacity: 1100 lbs)
- Parallelism of bearings to bottom (when two v-blocks are closed): 0.0002"



Description	Length x Width x Height (Inch)	d Range of Shafts (Inch)	W1 (Inch)	INSIZE No.	Code
Matched pair	5.91 x 2.36 x 3.94	Ø0.98 to 2.76	0.87	6888-1	877034

Adjustable V-Blocks



- Hardness: 50-54 RC
- Squareness: within 0.005mm
- Tolerance of angle: ±10"
- Adjustable: 0° to 60°

Model	H Height (mm)	W Width (mm)	L Length (mm)	h Height (mm)	Weight (kg)	Code
AP1	47	46	102	28	1.5	547601
AP2	47	30	102	28	1.0	547602
AP3	32	25	75	22	0.5	547603

Ultimate V-Block & Clamp



- An improved v-block and clamp with extra features
- Overall Length: 3-1/2" (89mm)
- Length of V-Block Surface: 2" (50mm)
- Overall Width: 1-7/8" (48mm)
- Height of V-Block: 1-7/8" (48mm)
- Height of V-Block with Clamp: 4-1/4" (107mm)
- Maximum Capacity: 1-5/16" (33mm)

Code

180300

Parallels

Ground Steel – 4-Way – In Pairs



Tolerances			
Length	Width & Height Ground to Size Within	Total Parallelism & Straightness Over Entire Length	Total Size Tolerance Between a Pair
6"	0.0002"	0.0001"	0.0001"
8"	0.0002"	0.0001"	0.0001"
12"	0.0002"	0.0002"	0.0002"

BLOCKS & PARALLELS

Dimensions (Inch)	Code	Dimensions (Inch)	Code	Dimensions (Inch)	Code
1/4 x 3/8 x 6	420101	1/2 x 1-1/4 x 6	420117	5/8 x 1-1/4 x 8	420133
1/4 x 1/2 x 6	420102	9/16 x 13/16 x 6	420119	5/8 x 1-1/2 x 8	420134
1/4 x 5/8 x 6	420103	9/16 x 1-1/16 x 6	420121	11/16 x 1-1/4 x 8	420135
1/4 x 3/4 x 6	420104	5/8 x 7/8 x 6	420122	3/4 x 1 x 8	420136
1/4 x 7/8 x 6	420105	5/8 x 1 x 6	420123	3/4 x 1-1/4 x 8	420137
1/4 x 1 x 6	420106	5/8 x 1-1/8 x 6	420124	3/4 x 1-5/8 x 8	420138
3/8 x 1/2 x 6	420107	3/4 x 1 x 6	420125	1/2 x 1 x 12	420139
3/8 x 5/8 x 6	420108	3/4 x 1-1/8 x 6	420126	11/16 x 1-1/8 x 12	420140
3/8 x 3/4 x 6	420109	3/4 x 1-3/8 x 6	420127	3/4 x 1 x 12	420141
3/8 x 7/8 x 6	420110	3/4 x 1-1/2 x 6	420128	7/8 x 1-3/4 x 12	420142
3/8 x 1 x 6	420111	1/2 x 7/8 x 8	420129	1 x 1-1/2 x 12	420143
1/2 x 5/8 x 6	420112	1/2 x 1 x 8	420130	1 x 2 x 12	420144
1/2 x 3/4 x 6	420113	1/2 x 1-1/8 x 8	420131	1-1/2 x 2 x 12	420145
1/2 x 7/8 x 6	420114	1/2 x 1-3/8 x 8	420132	1-1/2 x 3 x 12	420146
1/2 x 1 x 6	420115				
1/2 x 1-1/8 x 6	420116				

Sets – 1/8", 1/4" & 1/2"



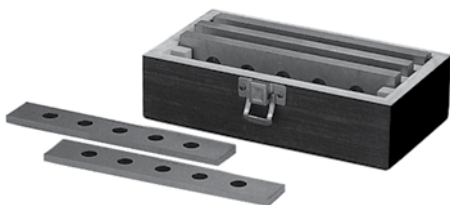
1/8" Thick - 10 Pair Parallel Set		1/4" Thick - 9 Pair Parallel Set		1/2" Thick - 8 Pair Parallel Set	
Dimensions (Inch)	Hole Size (Inch)	Dimensions (Inch)	Hole Size (Inch)	Dimensions (Inch)	Hole Size (Inch)
1/8 x 1/2 x 6	13/64	1/4 x 3/4 x 6	5/16	1/2 x 7/8 x 6	5/16
1/8 x 5/8 x 6	1/4	1/4 x 7/8 x 6	5/16	1/2 x 1 x 6	5/16
1/8 x 3/4 x 6	5/16	1/4 x 1 x 6	5/16	1/2 x 1-1/8 x 6	3/8
1/8 x 7/8 x 6	5/16	1/4 x 1-1/8 x 6	3/8	1/2 x 1-1/4 x 6	3/8
1/8 x 1 x 6	5/16	1/4 x 1-1/4 x 6	3/8	1/2 x 1-3/8 x 6	7/16
1/8 x 1-1/8 x 6	3/8	1/4 x 1-3/8 x 6	7/16	1/2 x 1-1/2 x 6	7/16
1/8 x 1-1/4 x 6	3/8	1/4 x 1-1/2 x 6	7/16	1/2 x 1-5/8 x 6	1/2
1/8 x 1-3/8 x 6	7/16	1/4 x 1-5/8 x 6	1/2	1/2 x 1-3/4 x 6	1/2
1/8 x 1-1/2 x 6	1/2	1/4 x 1-3/4 x 6	1/2		
1/8 x 1-5/8 x 6	1/2				

Description	Code
1/8" Thick - 10 Pairs	427007
1/4" Thick - 9 Pairs	427009
1/2" Thick - 8 Pairs	427010

Parallels

Utility, Ultra Thin & Value Parallel Sets

Utility Parallel Sets



3/16" Thick - 4 Pairs		1/2" Thick - 4 Pairs	
Dimensions (Inch)	Hole Size (Inch)	Dimensions (Inch)	Hole Size (Inch)
3/16 x 1 x 6	5/16	1/2 x 1 x 6	5/16
3/16 x 1-1/4 x 6	3/8	1/2 x 1-1/4 x 6	3/8
3/16 x 1-1/2 x 6	7/16	1/2 x 1-1/2 x 6	7/16
3/16 x 1-3/4 x 6	1/2	1/2 x 1-3/4 x 6	1/2

Description	Code
3/16" Thick 4 Pairs	427003
1/2" Thick 4 Pairs	427005



Ultra Thin Parallel Set

- Ultra thin parallels are 1/32" thick, 6" long, and range in height from 1/2" to 1-11/16" (in 1/16" increments)
- ± 0.0001 " in parallelism
- Paired in height to ± 0.0001 "
- Height matched to within ± 0.001 "

Description	Code
1/32" Thick 20 Pair Set	425490



Value Set

- Hardened steel, 6" in length by 1/8" thick.
- Heights: 1/2", 5/8", 3/4", 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1-1/2", 1-5/8"
- Parallel within 0.0008" each pair (± 0.0004 ")
- Height matched within ± 0.001 " each pair

Description	Code
1/8" Thick 10 Pair Set	425491



Set

- Set in custom fitted plastic box with carrying handle
- Hardened steel, 6" in length by 1/4" thick
- Heights: 3/4", 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1- 1/2", 1-5/8", 1-3/4"
- Parallel within 0.0005" each pair. Height matched within ± 0.001 " each pair

Description	Code
1/4" Thick 9 Pair Set	425492

Laminated Parallels

Aluminum – Steel



- Made of steel and aluminum strips
- Can be machined
- Supplied in matched pairs
- Used in conjunction with a magnetic plate to transfer the magnetism when machining or grinding awkward shaped parts

Size (Inch)	Code
1 x 2 x 4	430380

Adjustable Parallels



- Set of six adjustable parallel sizes: 3/8" to 1/2"; 1/2" to 11/16"; 11/16" to 15/16"; 15/16" to 1-5/16"; 1-5/16" to 1-3/4"; 1-3/4" to 2-1/4"
- Use in layout, gauging, inspection work and for setup on various machine tools
- Can be quickly inserted in openings and then expanded to size
- Each parallel consists of two dovetail mated pieces
- Can be used in pairs as regular parallels

Code
840530

Angle Block Sets



- No sine vise, sine plate, angle vise or gauge blocks are needed
- Set includes: V-Block - 10°, 15°, 30° Angle Plate - 1°, 2°, 3°, 4°, 5°
- All hardened to 56 to 58 RC
- Precision ground
- Tolerance $\pm 1^\circ$

Code
820301



- Hardened and precision ground
- Simple, quick angle set-up
- Lightly magnetized for better holding
- Eliminates calculation and avoids making errors
- Dimensions: 3" length x 1/4" thick
- Accuracy: 0.0001"

Description	Code
8 Piece Set	820301
10 Piece Set	820305
12 Piece Set	820303