

## SINE BARS AND SINE PLATE

SERIES 253:



- Body and rolls made of hardened and precise ground tool steel.
- Perfect tool for angular inspection and measurement.
- Top parallel to bottom of rolls  $\pm .0004$ "
- Distance between center of rolls  $\pm .0004$ "

Order No.	Width	Distance Between Rollers	Price
1715005	15/16"	5"	
1715010	1"	10"	
1715050	2"	5"	
1715022	30mm	100mm	
1715222	30mm	200mm	

## 3" THIN SINE BAR

SERIES 253:



Precision ground and hardened. Two 1/4" holes are provided for mounting. 7/32" wide. Fits in bottom of vise to accurately set work piece to desired angle. Can be used for accurately setting swivel vise or angle vise, to set work piece at an angle to T-Slots of milling table, back rail of magnetic chuck, setting milling machine head etc.

Order No. 2530000	Price	
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## ECONOMY SINE BARS

SERIES 253:



Hardened and precision ground.

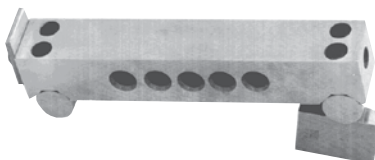
Distance Between Rollers	Width	Order No.	Price
2-1/2"	1"	1715625	
5"	1"	1715605	

## SINE BAR

SERIES 641:



Suburban's exacting Sine Bars are perfect for angular inspection and measurement. Our Sine Bars effectively 'cancel' the angle being measured to check its accuracy. Made of hardened steel. They are ground square and parallel within .0002". The end rail, included with each of Suburban's Sine Bars, can be mounted at either end.



Model No.	Dimensions	Center Dis. of rolls	Lbs. Wt.	Order No.	Price
SB-111	6 x 1 x 1-11/16"	5.000	2	6410044	
SB-1110	11 x 1-1/8 x 2-1/16"	10.000	5	6410045	

## SINE BAR & RISER SET

SERIES 247:



- Quickly measure the desired angle in a machine setup.
- Eliminate constant tables to calculate angles, and gage blocks to set angles. Simply choose the angle setting blocks required for the desired angle. Quick and simple set-up for use in grinding, milling, drilling and inspection applications.

### Includes:

- One 5" Sine Bar, 1" square, hardened and precision ground.
- 18 Risers with a range of 1/2 - 15 degrees resulting angle, including 2 risers providing "taper per foot" of 1/4 and 1/2 degree.
- Fitted molded case.



Order No. 2530100	Price	
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## PLANER AND SHAPER GAGE

SERIES 247:



Max Range 1/4 - 9-1/4" with extension rod. Makes setting of planer and shaper tools easy. Set gage with micrometer, surface gage or caliper and bring cutting tool in contact with it. Gives the operator a reliable starting point, thus eliminating trial cuts. Also use in conjunction with Dial Indicator to level large plates for planing, etc.



Order No. 2470100	Price	
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## PLANER & SHAPER GAGE

SERIES 641:



- 7/16" to 10" Range
- Extra tapped holes on sliding member for mounting indicator post or other accessories.
- 1-1/8 Wide body
- Beveled Ways eliminate side play.
- All surfaces square and parallel for use in any plane.
- .0002" Accuracy
- Weight: 4 lbs.
- Fitted wooden case and 3" extension included.

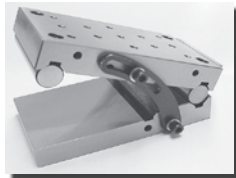


Model No.	Order No.	Price
PG-613	6410048	

## PRECISION TOOLS



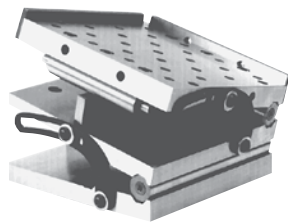
**5" SIMPLE SINE PLATES**  
SERIES 253:



All parts made of hardened tool steel and ground to highest accuracy. Squareness and parallelism are within .0002" per 5". Many 1/4"-20 holes to facilitate clamping. Two end rails included on **1715205**, one end rail on **1715105**. .200" step built into gage block roll so that gage blocks over .200" can be used to set very small angles. 5" distance between center rolls is accurate within .0002". All models have an offset hinge for added stability. **1715205** has 2 T-Slots in top plate for 1/4" T-bolts.

Dimensions	Order No.	Price
3-1/4 x 6 x 1-7/8	<b>1715105</b>	
5 x 6 x 2-7/16	<b>1715205</b>	

**5" COMPOUND SINE PLATE**  
SERIES 253:



Similar to simple sine plates above but with two offset hinges for added stability.

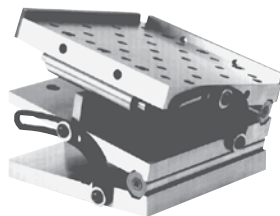
6 x 12 plate, **1715555** has 3/8"-16 tapped holes, 5" and 10" distance between center rolls accurate within .0002", and weighs 75 lbs.

Dimensions	Order No.	Price
6 x 6 x 3	<b>1715505</b>	
6 x 12 x 4-3/16	<b>1715555</b>	

**COMPOUND SINE PLATES**  
SERIES 641:

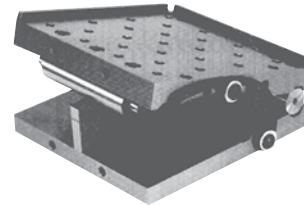


- 0-60° capacity.
- Minute angle step .200" built into the front gage block roll - eliminates steps in base plate.
- Two hardened and ground side rails and two locking straps included.
- Locking strap always remains below the top surface!
- Large hinge pins for extra strength.
- Tapped holes in top plate 6 x 6" or smaller 1/4-20, larger models have 3/8-16 tapped holes.



Model No.	Dimensions	Cen. Dis of Rolls	Lbs.	Order No.	Price
SPC-66-S1	6 x 6 x 3-1/8	5.000	27 lbs.	<b>6410009</b>	
SPC-612-S2	6 x 12 x 4-3/16	5.000&10.000	71 lbs.	<b>6410010</b>	
SPC-1212-S2	12 x 12 x 4-3/16	10.000	137 lbs.	<b>6410011</b>	

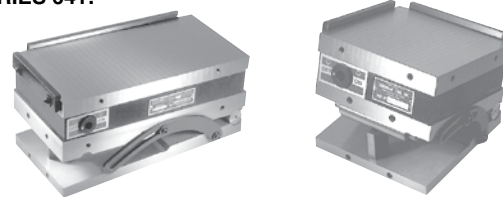
**SINE PLATES**  
SERIES 641:



- Minute angle step .200" built into the gage block roll eliminates step in base plate.
- Two hardened and ground side rails and one locking strap included.
- Locking strap always remains below the top surface!
- Large hinge pins for extra strength.
- Tapped holes in top plate 6 x 6" or smaller 1/4-20, larger models have 3/8-16 tapped holes.

Model No.	Dimensions	Cen. Dis of Rolls	Lbs	Order No.	Price
SP-136	6 x 3 x 2	5.000	9 lbs.	<b>6410001</b>	
SP-44-S0	4 x 4 x 2	3.000	9 lbs.	<b>6410002</b>	
SP-555	6 x 5 x 2-1/4	5.000	17 lbs.	<b>6410003</b>	
SP-66-S1	6 x 6 x 2	5.000	18 lbs.	<b>6410004</b>	
SP-612-S2	6 x 12 x 2-5/8	5.000	47 lbs.	<b>6410005</b>	
SP-812-S2	8 x 12 x 2-5/8	5.000	62 lbs.	<b>6410006</b>	
SP-1212-S2	12 x 12 x 2-5/8	10.000	90 lbs.	<b>6410007</b>	
SP-126-S2	12 x 6 x 2-5/8	10.000	45 lbs.	<b>6410008</b>	

**MAGNETIC SINE PLATES**  
SERIES 641:

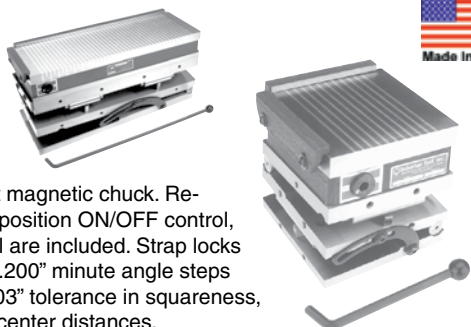


Ceramic permanent magnetic chucks can't lose their magnetism. Removable handle for ON/OFF operation, end rail and side rail all included. Sine plate angles lock rigidly with locking strap. Squareness, parallelism and roll center distances within .0002" and .0003". Unit features .200" minute angle steps.

STANDARD POLE					
Model No.	Dimensions	Cen. Dis of Rolls	Lbs.	Order No.	Price
MSP-66-S1	6 x 6 x 4-5/8	5.000	39 lbs.	<b>6410018</b>	
MSP-126-S2	12 x 6 x 5-1/4	10.000	87 lbs.	<b>6410019</b>	
MSP-612-S2	6 x 12 x 5-1/4	5.000	89 lbs.	<b>6410020</b>	
MSP-1212-S2	12 x 8 x 5-1/4	10.000	190 lbs.	<b>6410021</b>	
FINE POLE					
Model No.	Dimensions	Cen. Dis of Rolls	Lbs.	Order No.	Price
MSP-363-FP	6 x 3 x 4-1/4	5.000	22 lbs.	<b>6410025</b>	
MSP-66-FP-S1	6 x 6 x 4-5/8	5.000	43 lbs.	<b>6410026</b>	
MSP-126-FP-S2	12 x 6 x 5-1/4	10.000	92 lbs.	<b>6410027</b>	
MSP-612-FP-S2	6 x 12 x 5-1/4	5.000	94 lbs.	<b>6410028</b>	
MSP-1212-FP-S2	12 x 12 x 5-1/4	10.000	196 lbs.	<b>6410029</b>	

## MAGNETIC COMPOUND SINE PLATES

SERIES 641:



Ceramic permanent magnetic chuck. Removable handle for position ON/OFF control, side rail and end rail are included. Strap locks sine plate securely. .200" minute angle steps with .0002" and .0003" tolerance in squareness, parallelism and roll center distances.

### STANDARD POLE

Model No.	Dimensions	Cen. Dis of Rolls	Lbs.	Order No.	Price
MSPC-66-S1	6 x 6 x 5-3/4	5.000	48 lbs.	6410022	
MSPC-612-S2	6 x 12 x 6-13/16	10.000 & 5.000	113 lbs.	6410023	
MSPC-1212-S2	12 x 12 x 6-13/16	10.000	237 lbs.	6410024	

### FINE POLE

Model No.	Dimensions	Cen. Dis of Rolls	Lbs.	Order No.	Price
MSPC-66-FP-S1	6 x 6 x 5-3/4	5.000	52 lbs.	6410030	
MSPC-612-FP-S2	6 x 12 x 6-13/16	10.000 & 5.000	118 lbs.	6410031	
MSPC-1212-FP-S2	12 x 12 x 6-13/16	10.000	243 lbs.	6410032	

## PRECISION ANGLE BLOCK SET - MEIDA Superior Import

1/4 - 45°

SERIES 227:

- Made from hardened steel.
- Use for grinding and milling machine operations.
- Complete in fitted case.
- 17pc. set includes the following angles: 1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°, 35°, 40°, and 45° plus 2 riser blocks.



Order No. 1570150

Price

## UNIVERSAL ANGLE BLOCK SET

SERIES 227:

An accurate and direct method for angle set-ups in production and inspection.

Set includes:

- 3 "V" Blocks - 10°, 15°, 30°
  - 5 Angle Blocks - 1°, 2°, 3°, 4°, 5°
- Dimensions (l x w x h):  
 "V" Blocks - 3 x 1-3/16 x 1-3/16  
 Angle Blocks - 2-3/4 x 1-3/16



All blocks are made of hardened steel and precision ground to ±10 second accuracy. Includes fitted case.

Order No. 1570100

Price

454

## PRECISION ANGLE BLOCK SET - MEIDA Superior Import

1° - 30°

SERIES 227:



An accurate and direct method for angle set-ups in production and inspection.

Set Includes: 10 Blocks; 1° increments up to 5° and 5° increments up to 30°

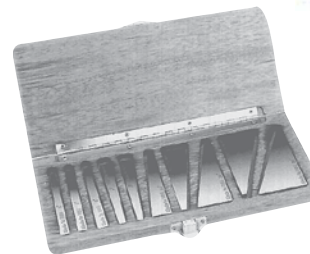
Dimensions: 3" Long x 1/4" Thick  
 Made of hardened steel and precision ground to ±.0001" accuracy.  
 Includes fitted case.

Order No. 1570010

Price

## ANGLE BLOCKS

SERIES 641:



- Set complete in fitted case. Size 3" Long x 1/4" thick.
- Furnished in 1° increments to 5 degrees and in 5° increments to 30 degrees.
- Hardened steel, precision ground.
- Accuracy ±.0001" per inch.
- With the addition of the optional 1/4° and 1/2° blocks virtually any conceivable angle to these increments can be established.

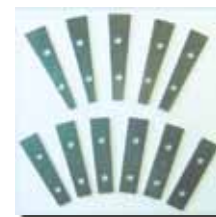
Model	Description	Lbs.	Order No.	Price
AB-10-ST	Set of 10 Angle Blocks	3 lbs.	6410069	
AB-QTR	Optional 1/4 degree block	1 lb.	6410070	
AB-HLF	Optional 1/2 degree block	1 lb.	6410071	

## THIN ANGLE BLOCK SETS

SERIES 227:



- Hardened and precision ground on working surfaces.
- Two 1/4" holes for mounting. 3-1/2" Long x 5/32" Thick.
- Fitted case.



Consists of	Order No.	Price
1/2° & 1°-5° x 1°	1570006	
6° - 10° x 1°	1570005	
All Above Blocks	1570011	

\*Using two blocks a range of 1/2° - 10-1/2° x 1/2° can be covered.