## Star Tool Supply / Grand Tool Supply

PRECISION SQUARES SERIES 229:

Accurately made of fine grade tool steel. Ground and polished blade and beam. Hardened and tempered blade. Suitable for precise layout and measuring. Length of blade is measured from inner edge of beam to end of blade.

| In/mm | In/mm |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Size \& Lgth. of Blade | $\begin{array}{\|c\|} \hline \text { Lgth. } \\ \text { of Beam } \end{array}$ | Squareness of Blade | Order No. | Price |
| 2"/50mm | 2/50 | .001"/25 microns | 1580002 |  |
| 3 "/75mm | 2-1/2/63 | .001"/25 microns | 1580003 |  |
| 4"/100mm | 3/75 | .001"/25 microns | 1580004 |  |
| 6"/150mm | 4/100 | .001"/25 microns | 1580006 |  |
| 9"/225mm | 6/150 | .001"/25 microns | 1580009 |  |
| $12^{\prime \prime} / 300 \mathrm{~mm}$ | 8/200 | .002"/50 microns | 1580012 |  |
| $18 \% / 450 \mathrm{~mm}$ | 10/250 | .0038"/90 microns | 1580018 |  |
| $24 " / 600 \mathrm{~mm}$ | 13/33 | .0038"/90 microns | 1580024 |  |



## BEVEL EDGE SQUARES

 SERIES 230:> Made from a single piece of high grade tool steel.
> Entire square is hardened, accurately ground, and lapped for straightness and parallelism. Blades are beveled on both edges of each side.

| Size \& Lgth. <br> of Blade | Lgth. of <br> Beam | Order <br> No. | Price |
| :---: | :--- | :---: | :---: |
| $1-3 / 8$ | 1 | 1585001 |  |
| $2-3 / 8$ | $1-3 / 8$ | 1585002 |  |
| $3-1 / 8$ | 2 | 1585003 |  |
| 4 | $2-1 / 2$ | 1585004 |  |
| 5 | 3 | 1585005 |  |
| $6-3 / 4$ | 4 | 1585006 |  |
| $8-1 / 2$ | $5-1 / 8$ | 1585008 |  |
| $10-1 / 2$ | $6-3 / 8$ | 1585010 |  |

## DIE MAKERS' SQUARE SET

SERIES 231:


Especially made for precise miniature layout. Set consists of three hardened bevel edged squares $3 / 4^{\prime \prime}, 1-1 / 4^{\prime \prime}$, and $2-3 / 8^{\prime \prime}$ long, plus a $1-1 / 2^{\prime \prime}$ triangular straight edge with a removable handle. Includes fitted case.

## PRECISION SQUARES

MASTER STARRETT SERIES 20:

| Size | Order <br> No. | Outside <br> Dimensions | Square- <br> ness | Price |
| :--- | :--- | :--- | :--- | :--- |
| 2 | 916100 | $2 \times 1.6$ | .00010 |  |
| 3 | 916101 | $3 \times 2$ | .00011 |  |
| 4 | 916102 | $4 \times 2-3 / 4$ | .00012 |  |
| 6 | 916103 | $6 \times 4$ | .00014 |  |
| 8 | 916104 | $8 \times 5$ | .00018 |  |

Regular Squares

| Size | Order <br> No. | Outside <br> Dimensions | Square- <br> ness | Price |
| ---: | :--- | :--- | :--- | :--- |
| 3 | 916401 | $3 \times 2$ | .00026 |  |
| 4 | 916402 | $4 \times 2-2 / 3$ | .00028 |  |
| 6 | 916403 | $6 \times 4$ | .00032 |  |
| 8 | 916404 | $8 \times 5$ | .00036 |  |
| 10 | 916405 | $10 \times 6-1 / 2$ | .00040 |  |
| 12 | 916406 | $12 \times 8$ | .00044 |  |
| 16 | 916407 | $16 \times 10$ | .00052 |  |
| 20 | 916408 | $20 \times 12$ | .00059 |  |
| 30 | 916409 | $30 \times 16$ | .00080 |  |
| 40 | 916410 | $40 \times 20$ | .00116 |  |

STEEL SQUARES MIT SERIES 916:


All edges are hardened and precision ground.
Beveled Edge Squares

Recommended for use where extreme accuracy is required. Beams and blades are of high quality tool steel hardened, ground and lapped to insure parallelism and straightness. Beam is grooved at inner corner for clearance of burr or dirt. Squareness accuracy to .0001"/ 0.0025 mm every 6 " ( 150 mm ).


| Length of <br> Blade $^{*}$ | Length of <br> Beam | Catalog <br> No. | EDP <br> No. | Price |
| :--- | :--- | :--- | :--- | :--- |
| $1-1 / 2^{\prime \prime} / 40 \mathrm{~mm}$ | $1-1 / 2^{\prime \prime} / 40 \mathrm{~mm}$ | $20-1-1 / 2$ | 50128 |  |
| $33^{\prime \prime} / 75 \mathrm{~mm}$ | $2-3 / 8^{\prime \prime} / 60 \mathrm{~mm}$ | $20-3$ | 50130 |  |
| $4-1 / 2^{\prime \prime} / 115 \mathrm{~mm}$ | $3-1 / 2^{\prime \prime} / 90 \mathrm{~mm}$ | $20-4-1 / 2$ | 50132 |  |
| $6^{\prime \prime} / 150 \mathrm{~mm}$ | $4-5 / 16^{\prime \prime} / 110 \mathrm{~mm}$ | $20-6$ | 50134 |  |
| $12^{\prime \prime} / 300 \mathrm{~mm}$ | $7 " / 180 \mathrm{~mm}$ | $20-12$ | 50136 |  |
| $24^{4 \prime} / 600 \mathrm{~mm}$ | $12-5 / 16^{"} / 310 \mathrm{~mm}$ | $20-24$ | 50140 |  |
| $36^{\prime \prime} / 910 \mathrm{~mm}$ | $20 " / 500 \mathrm{~mm}$ | $20-36$ | 50142 |  |

[^0]Star Tool Supply / Grand Tool Supply CYLINDER SQUARES SERIES 236:

These squares are hardened, and the ends are lapped to $90^{\circ}$ angular accuracy with the cylinders as follows: 6 " square to $\pm .00010^{\prime \prime}, 12^{\prime \prime}$ square to $\pm .00015^{\prime \prime}$. Includes fitted case.

| Height | Diameter | Order <br> No. | Price |
| :---: | :---: | :---: | :--- |
| 6 | 3 | $\mathbf{1 6 2 0 0 0 3}$ |  |
| 12 | 4 | $\mathbf{1 6 2 0 0 0 4}$ |  |

## GRADUATED STEEL SQUARES <br> SERIES 229:

Superior Import

- Made of tool steel.
- Square accurate both inside and outside
- Etched fine graduations in inches and millimeters


| Order No. | Length of blade |  |  |
| :---: | :---: | :---: | :--- |
|  | Inch | mm |  |
| $\mathbf{2 2 9 4 1 0 0}$ | 4 | 100 |  |
| $\mathbf{2 2 9 6 1 5 0}$ | 6 | 150 |  |
| $\mathbf{2 2 9 6 2 0 0}$ | 8 | 200 |  |
| $\mathbf{2 2 9 9 2 2 5}$ | 9 | 225 |  |
| $\mathbf{2 2 9 1 2 3 0}$ | 12 | 300 |  |

## CENTER SQUARE <br> SERIES 229:



- Made from ground tool steel.
- Hardened and tempered blade.
- Useful square for rapid location of round bar or disc center.
- To execute, place the round bar between the centre square. Scribe different lines on the work piece each time changing its position. Center of the scribed lines will give the accurate center of the work piece.

| Max. Work Diameter |  |  |  |
| :--- | :---: | :---: | :---: |
| Inch | mm | Order No. | Price |
| $1-1 / 2$ | 38 | $\mathbf{2 2 9 0 1 1 2}$ |  |
| 3 | 75 | $\mathbf{2 2 9 0 3 7 5}$ |  |

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## DOUBLE SQUARES

STARRETT SERIES 13:
Starrett


Double squares are popular with machinists, tool and pattern makers. Hardened, sliding blades are adjustable for a wide variety of uses. Faces of head are ground square. 6 " $1 / 150 \mathrm{~mm}$ size is equipped with a level, head is approximately $3-1 / 2^{\prime \prime}$ ( 90 mm ) long, and the faces approximately $9 / 16^{\prime \prime}(14 \mathrm{~mm})$ wide.

Blades are graduated in 8 ths, 16 ths, 32 nds, 64 ths ( 1 mm both Edges one Side; and 1 mm and $1 / 2 \mathrm{~mm}$ Reverse Side). Bevel blade has octagon angle at one end and hexagon angle at other end clearly marked. Drill grinding blade is beveled to $59^{\circ}$ and $41^{\circ}$ and both ends have quick reading machine-divided graduations in 64ths, and graduation is located to measure perpendicularly to axis of the drill.
By reading graduations, center point can be easily and accurately located.

| Size | Description | Catalog No. | $\begin{aligned} & \hline \text { EDP } \\ & \text { No. } \end{aligned}$ | Price |
| :---: | :---: | :---: | :---: | :---: |
| 4" | With graduated blade only | 13A | 50109 |  |
| 4 | With graduated and bevel blades | 13B | 50110 |  |
| 6 | With graduated blade only | 13C | 50111 |  |
| 6 | With graduated and bevel blades | 13E | 50112 |  |
| 6 | Complete with graduated, bevel, and drill grinding blades | 13F | 50113 |  |
| 100 mm | With Graduated Blade only | 13MA | 56278 |  |
| 100 mm | With Graduated and Bevel Blades | 13MB | 56279 |  |
| 150 mm | With Graduated blade only | 13MC | 56280 |  |
| 150 mm | With Graduated and Bevel Blades | 13ME | 56263 |  |

# MASTER PRECISION Starreti SQUARES WITH BEVELED EDGES STARRETT SERIES 55: 

Similar to Starrett hardened squares except that blades are beveled on both edges of each side, providing practically a line contact with work. Beam and blade are hardened, ground and lapped to insure parallelism and straightness. The beam is grooved at inner corner for clearance of burr and dirt.


| Length of <br> Blade | Length of <br> Beam | Catalog <br> No. | EDP <br> No. | Price |
| :--- | :--- | :--- | :--- | :--- |
| $1-1 / 2^{\prime \prime} / 40 \mathrm{~mm}$ | $1-1 / 2^{\prime \prime} / 40 \mathrm{~mm}$ | $55-1-1 / 2$ | 50277 |  |
| $33^{\prime \prime} / 75 \mathrm{~mm}$ | $2-3 / 8^{\prime \prime} / 60 \mathrm{~mm}$ | $55-3$ | 50279 |  |
| $4-1 / 2^{\prime \prime} / 115 \mathrm{~mm}$ | $3-1 / 2^{\prime \prime} / 90 \mathrm{~mm}$ | $55-4-1 / 2$ | 50281 |  |
| $6 " / 150 \mathrm{~mm}$ | $4-5 / 16^{\prime \prime} / 110 \mathrm{~mm}$ | $55-6$ | 50283 |  |
|  |  |  |  |  |

[^1]
# Star Tool Supply / Grand Tool Supply 

 DIE MAKERS' SQUARES STARRETT SERIES 453:

Larger knurled thumb screw locks sliding blades at any position, and smaller one tilts blades at an angle. To set blades, release blade clamp screw, and tilt blade to desired angle by turning small knurled screw. Blade held in position by tightening clamping screw. Head and blades hardened and ground. Offset blade, used where it would be impossible to sight straight blade, protrudes from square about $1-1 / 2 "(38 \mathrm{~mm})$ and is $1 / 8 "(3 \mathrm{~mm})$ wide. Both sides of each edge are beveled to give line contact.

The inch reading blade is graduated on one side, upper edge in 32nds, lower edge in 64ths and the millimeter reading blade is graduated in millimeter and $1 / 2$ millimeter. The bevel blade is approx. 2-1/2" (63mm) long $x$ $1 / 2^{\prime \prime}(12.5 \mathrm{~mm})$ wide and is beveled to $30^{\circ}$ on one end and $45^{\circ}$ on the other.

The narrow graduated blade has 32nds graduation on one side, and 64ths on the other. It is $5 / 32$ " ( 4 mm ) wide over a length of approx. $1-5 / 8^{\prime \prime}(41 \mathrm{~mm})$ and cut away at one end to a width of $3 / 32$ " ( 2.4 mm ).

| Description | Catalog No. | EDP No. | Price |
| :---: | :---: | :---: | :---: |
| Inch Reading - Graduation 32nds, 64ths |  |  |  |
| With standard graduated blade | 453A | 52345 |  |
| Complete with standard, bevel narrow, and offset blades in case | 453EZ | 52351 |  |
| Millimeter Reading - Graduation mm and 1/2 mm |  |  |  |
| With standard graduated blade | 453MA | 52346 |  |

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## DIE MAKERS' SQUARES

Sturretif WITH ANGULAR ADJUSTMENT STARRETT SERIES 457:


This is a highly useful tool for tool and diemakers, especially for measuring die clearances. It is also very handy for pattern makers to check angles and drafts on patterns.

The beam of this square is graduated to show the setting in degrees of the blades. Blades can be set for any angle up to $10^{\circ}$, either side of $0^{\circ}$ and the angle is indicated by the line on the pointer.

The graduated blade has 32nds of an inch on one side, and 64ths on the other. It is $5 / 32$ " ( 4 mm ) wide over a length of approximately $1-5 / 8^{\prime \prime}$ ( 41 mm ) and cut away at one end to a width of $3 / 32$ " ( 2.4 mm ).

The offset blade, which is used where it would be impossible to insert the straight blade, protrudes form the square about $1-1 / 2^{\prime \prime}(38 \mathrm{~mm})$. It is $1 / 8^{\prime \prime}$ 3 mm ) wide and both sides of each edge are beveled to give visual line contact.

The beam is beveled adjacent to the blade so that the blade is readily visible when checking in holes, slots, etc. Blades and beams are hardened and ground.
Angular Range $10^{\circ}-0^{\circ}-10^{\circ}$

| Description | Catalog No. | EDP No. | Price |
| :--- | :--- | :--- | :--- |
| With Straight Blade Only | 457 A | 52428 |  |
| Complete, With Straight <br> and Offset Blades | 457 C | 52429 |  |

## DOUBLE STEEL SQUARES WITH HARDENED

## AND GROUND HEAD AND BLADES

STARRETT SERIES 14:


These fine precision double steel squares are designed for tool and diemakers. Blades are adjustable for use in places not possible with stationary blade squares. A knurled clamping nut accurately locks the blades in any position.

The inch reading blade is graduated on one side, upper edge in 32nds and lower edge in 64ths and the millimeter reading blade is graduated in mm and $1 / 2 \mathrm{~mm}$.

The bevel blade for checking angles is beveled $45^{\circ}$ on one end and $30^{\circ}$ on the other end.

The narrow graduated blade is $2-1 / 4$ " $(58 \mathrm{~mm})$ long with 32 nds graduation on one side, and 64ths on the other. It is $5 / 32$ " ( 4 mm ) wide over a length of approximately $1-5 / 8$ " ( 41 mm ) and cut away at one end to a width of $3 / 32$ " $(2.4 \mathrm{~mm})$. Millimeter blades are mm on one side and $1 / 2 \mathrm{~mm}$ on the other.

| Size | Grad. | Description | Catalog No. | $\begin{aligned} & \text { EDP } \\ & \text { No. } \end{aligned}$ | Price |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Inch Reading - 32nds, 64ths |  |  |  |  |  |
| 2-1/2" | 32nds, 64ths | With graduated blade only | 14A | 50117 |  |
|  |  | Complete with graduated narrow, and bevel blades | 14D | 50118 |  |
| Millimeter Reading - mm both edges One Side; 1/2 mm Reverse Side |  |  |  |  |  |
| 50 mm | $\underset{1 / 2 \mathrm{~mm}}{\mathrm{~mm}}$ | With graduated blade only | 14MA | 56260 |  |
|  |  | Complete with graduated narrow, and bevel blades | 14MD | 9956261 |  |

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DOUBLE SQUARE
SERIES 234:

Ideal for precision layout work. Blades are hardened and tempered with a satin-chrome finish.


| Size of <br> Blade | Grad. | Order <br> No. | Price |
| :---: | :---: | :---: | :---: |
| 4 | $4 R$ | 1610004 |  |
| 4 | $16 R$ | 1610014 |  |
| 4 | E/M | 1610024 |  |
| 6 | $4 R$ | 1610006 |  |
| 6 | $16 R$ | 1610016 |  |
| 6 | E/M | 1610026 |  |

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COMBINATION SQUARE SET - 4 PIECE
SERIES 233:


Hardened and Ground. Set includes 12 " stainless steel chrome plated blade with 4 R inch (8ths, 16 ths, 32 nds, 64 ths) graduations, double indexed and reversible Protractor Head with full $180^{\circ}$ graduation and spirit level, Square Head with level and scriber, and Center Head.
 COMBINATION SQUARES SERIES 233:

- Blades are fully hardened and tempered.
- Reversible protractor heads for hardened squares.
- Double-indexed protractor is graduated $180^{\circ}$ in both directions.
- Finished in baked enamel.
- Square Head has level and scriber point
- Micro-fine blade graduation.
- Easy to read satin chrome finished blades.
- Sets with cast heads or with hardened heads.


Blade Graduations:
4R - 8ths, 16ths, 32nds, 64ths, 16R-32nds, 64ths, 50 ths, 100ths E/M - 32nds, 0.5 mm , 64ths, mm $\mathrm{M}-\mathrm{mm}, 0.5 \mathrm{~mm}, \mathrm{~mm}, 0.5 \mathrm{~mm}$

## 4 PIECE COMBINATION SQUARE SETS



STANDARD SETS include cast Square Head, cast Center Head, non-reversible Protractor Head, and hardened chrome plated Blade.
HARDENED SETS include hardened Square Head, hardened Center Head, reversible Protractor Head and hardened chrome plated Blade.
STANDARD SETS

| Size of Blade | Grad. | Order No. | Price | Size of Blade | Grad. | Order No. | Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12" | 4R | 2331200 |  | 12 " | 4R | 2331250 |  |
| 12 | 16R | 2331201 |  | 12 | 16R | 2331251 |  |
| 12 | E/M | 2331202 |  | 12 | E/M | 2331252 |  |
| 18 | 4R | 2331800 |  | 18 | 4R | 2331850 |  |
| 18 | 16R | 2331801 |  | 18 | 16R | 2331851 |  |
| 18 | E/M | 2331802 |  | 18 | E/M | 2331852 |  |
| 24 | 4R | 2332400 |  | 24 | 4R | 2332450 |  |
| 24 | 16R | 2332401 |  | 24 | 16R | 2332451 |  |
| 24 | E/M | 2332402 |  | 24 | E/M | 2332452 |  |
| 300 mm | M | 2331203 |  | 300 mm | M | 2331253 |  |
| 450 mm | M | 2331803 |  | 450 mm | M | 2331853 |  |
| 600 mm | M | 2331603 |  | 600 mm | M | 2331653 |  |

## 3 PIECE COMBINATION SQUARE SETS

Similar to 4 piece COMBINATION SQUARE SETS but without Protractor Head. Sets consist of Square Head, Center Head, and Hardened Chrome Plated Blade.

## STANDARD SETS HARDENED SETS

| Size of Blade | Grad. | Order No. | Price | Size of Blade | Grad. | Order No. | Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $6 "$ | 4R | 2330600 |  | 6 " | 4R | 2330650 |  |
| 6 | 16R | 2330601 |  | 6 | 16R | 2330651 |  |
| 6 | E/M | 2330602 |  | 6 | E/M | 2330652 |  |
| 12 | 4R | 331200 |  | 12 | 4R | 9331250 |  |
| 12 | 16R | 331201 |  | 12 | 16R | 331251 |  |
| 12 | E/M | 331203 |  | 12 | E/M | 331253 |  |
| 18 | 4R | 331800 |  | 18 | 4R | 331850 |  |
| 18 | 16R | 331801 |  | 18 | 16R | 331851 |  |
| 18 | E/M | 331803 |  | 18 | E/M | 331853 |  |
| 24 | 4R | 332400 |  | 24 | 4R | 332450 |  |
| 24 | 16R | 332401 |  | 24 | 16R | 332451 |  |
| 24 | E/M | 332403 |  | 24 | E/M | 332453 |  |
| 150 mm | M | 2330603 |  | 150 mm | M | 2330653 |  |
| 300 mm | M | 331204 |  | 300 mm | M | 331254 |  |
| 450 mm | M | 331804 |  | 450 mm | M | 331854 |  |
| 600 mm | M | 332404 |  | 600 mm | M | 332454 |  |

For 2 piece sets consisting of blade and square head see next page and order each piece separately.


[^0]:    *Measured from the inner edge of the beam to the end of the blade. Sent without case unless otherwise ordered. Cases available for squares through $12^{\prime \prime}$ ( 300 mm ) by ordering No. $20 Z Z$ and size.

[^1]:    *Measured from the inner edge of the beam to the end of the blade. Sent without case unless otherwise ordered. Cases available for squares through $12^{\prime \prime}(300 \mathrm{~mm})$ by ordering No. 55 ZZ and size.

