



SQUARES

SQUARES

Starrett squares are offered in a practical variety of styles to suit the needs of the individual, whether it be a toolmaker, mechanic, carpenter, or a "do-it-yourself" homeowner.

The Starrett name has always been associated with squares because our founder, Laroy Starrett, invented the combination square in 1877. The success of this tool led to the beginning of The L.S. Starrett Company in 1880. The combination square is one of the world's most practical and versatile tool inventions – the basic tool for every builder and craftsman.

SQUARES

In this section you will see combination squares, solid test or try squares, and special squares for tool and diemakers and carpenters.

To check squareness at the highest level of accuracy, we recommend our TS True Squares. These are available in three styles down to the amazing accuracy of 1/4 second. These are listed in the Gage Block Section of this catalog.

We also offer granite squares which are listed in the Granite Surface Plate Section of this catalog. The main purpose of these squares is for checking the X, Y, and Z axes on CNC machine tools and coordinate measuring machines.



COMBINATION SQUARES FEATURE:

- A choice of smooth-finished forged and hardened (longer wearing) steel square head and center head, or a cast iron square head and center head. All bearing surfaces are accurately ground.
- A choice of stable cast iron protractors – reversible or non-reversible style – all nicely finished with a black, durable finish
- Protractors are furnished as reversible, with shoulders on both sides of the blade, or non-reversible, with a single shoulder on one side of the blade only. All protractors also have a spirit level.
- Protractor heads have revolving turrets with direct-reading double graduations, 0-180° in opposite directions. This permits the direct reading of angles and supplementary angles.
- Most square heads have a handy spirit level and a hardened scriber
- Square blades and protractor heads come in a choice of regular or Starrett no-glare satin chrome finish
- A reversible lock bolt allows the blade to be turned over or end-for-end without removing the lock bolt or nut. This ensures true alignment of the blade and heads.
- Square blades feature easy-to-read, sharp graduations and are available in many convenient styles
- Separate parts and attachments available

TIPS FOR USING SQUARES AND CENTER HEADS

First, make sure your square is clean and that it is located against a flat surface – burrs on metal or knots and bumps on wood will throw squareness off.

Second, to scribe a line, the steel scriber can be used on any material, but usually on metal. A carpenter's pencil is normally used on wood, but if finer lines are needed, a light cut with a utility knife may be used. This is also handy when scribing cross grain.

Third, when using a center head on a piece that may not be completely round, it is good practice to scribe more than two intersecting lines.



COMBINATION SQUARES

Starrett combination squares consist of a photo-engraved, hardened and tempered steel rule (or blade) on which is mounted on an adjustable square head.

Starrett Combination Square Heads are made of cast iron or forged and hardened steel and are not to be confused with the cheap imitation plastic or die cast heads on the market. The value of Starrett tools is that they are accurate and will last.

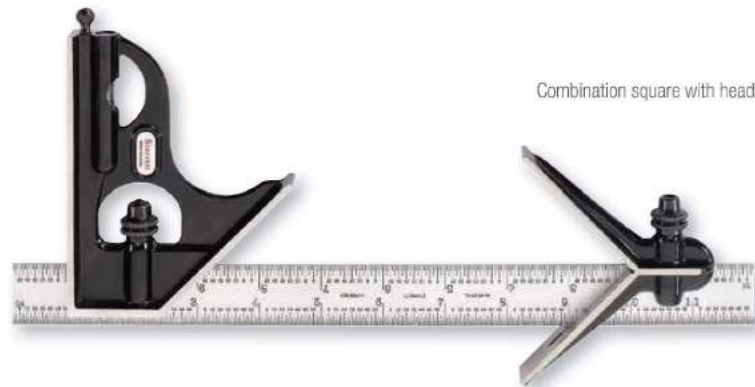
As the name indicates, these tools can be used for many different purposes – a complete substitute for a whole set of common solid try squares, a 45 degree miter, a depth gage, a height gage, a marking or scribing gage, a level, a plumb and, by withdrawing the blade, it can also be used as a precision rule. This saves littering the workbench with too many tools, each being necessary but may be used less. This results in the goal of all good craftsmen – better accuracy and greater efficiency.

The combination square with center head is a basic combination set. The center head is a convenient and accurate way to find the center of round work.

Complete combination sets feature the combination square with a center head and with either a reversible or non-reversible protractor. Details of the protractors are also included in the Protractor and Angle Measurements Section of this catalog.



Combination square



Combination square with head



Combination set



Check out our website for interactive features at starrett.com

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COMBINATION SQUARES

11H CAST IRON HEADS



With reversible lock bolt, scribe, spirit level (except 4"), and hardened steel, photo-engraved blade with regular or satin chrome finish. Cast iron head with black wrinkle finish.



C11H-12-4R

33H FORGED AND HARDENED STEEL HEADS



These squares have the same features as the 11 cast iron heads except that the square heads are forged hardened steel with smooth, black enamel finish.



C33H-12-4R

SQUARES

4-24" Combination Squares with Square Head			11H		33H	
Size	Graduation	Blade	Cast Iron Heads with Black Wrinkle Finish		Forged and Hardened Steel Heads with Smooth Black Enamel Finish	
			Cat. No.	EDP	Cat. No.	EDP
4"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	11H-4-4R	50049	33H-4-4R	50203
		Satin Chrome	C11H-4-4R	56360	C33H-4-4R	56390
6"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	11H-6-4R	50051	33H-6-4R	50205
		Satin Chrome	C11H-6-4R	56362	C33H-6-4R	56392
6"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular	11H-6-16R	50053	33H-6-16R	50207
		Satin Chrome	C11H-6-16R	56364	C33H-6-16R	56394
12"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	11H-12-4R	50055	33H-12-4R	50209
		Satin Chrome	C11H-12-4R	56366	C33H-12-4R	56396
12"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	C11H-12-4RW/SLC*	66896	C33H-12-4RW/SLC*	66897
		Satin Chrome				
12"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular	11H-12-16R	50057	33H-12-16R	50211
		Satin Chrome	C11H-12-16R	56368	C33H-12-16R	56398
18"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	11H-18-4R	50059	33H-18-4R	50213
		Satin Chrome	C11H-18-4R	56370	C33H-18-4R	56400
18"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular	11H-18-16R	50061	33H-18-16R	50215
		Satin Chrome	C11H-18-16R	56372	C33H-18-16R	56402
24"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	11H-24-4R	50063	33H-24-4R	50217
		Satin Chrome	C11H-24-4R	56374	C33H-24-4R	56404
24"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular	11H-24-16R	50065	33H-24-16R	50219
		Satin Chrome	C11H-24-16R	56376	C33H-24-16R	56406
150-600mm Combination Squares with Square Head			11MH		33MH	
150mm	mm and 1/2mm Both Sides	Regular	11MH-150	56241	33MH-150	56247
		Satin Chrome	C11MH-150	56380	C33MH-150	56410
300mm	mm and 1/2mm Both Sides	Regular	11MH-300	56243	33MH-300	56249
		Satin Chrome	C11MH-300	56382	C33MH-300	56412
600mm	mm and 1/2mm Both Sides	Regular	11MH-600	56245	33MH-600	56251
		Satin Chrome	C11MH-600	56384	C33MH-600	56414
300-600mm and 11-3/4 – 23-1/2" Combination Squares with Square Head			11MEH		33MEH	
300mm and 11-3/4"	1/2mm and 32nds One Side; mm and 64ths Reverse Side	Regular	11MEH-300	50067	33MEH-300	50221
		Satin Chrome	C11MEH-300	56386	C33MEH-300	56416
600mm and 23-1/2"	1/2mm and 32nds One Side; mm and 64ths Reverse Side	Regular	11MEH-600	56121	33MEH-600	50237
		Satin Chrome	C11MEH-600	56388	C33MEH-600	56418

* Includes redemption card for Standard Letter of Certification (SLC).



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Starrett



COMBINATION SQUARES

COMBINATION SQUARES WITH CENTER HEADS

11HC CAST IRON HEADS

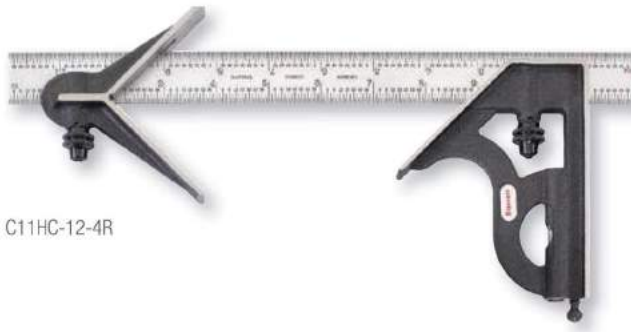


With reversible lock bolts, scribe, spirit level (except 4"), and hardened steel, photo-engraved blade with regular or satin chrome finish. Cast iron heads with black wrinkle finish.

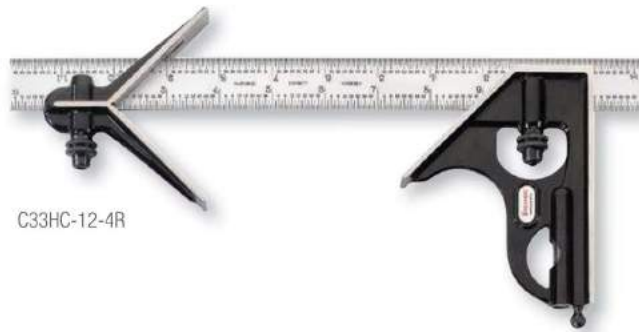
33HC FORGED AND HARDENED STEEL HEADS



These squares have the same features as the 11HC cast iron heads except that the square heads and center heads are forged hardened steel with smooth, black enamel finish.



C11HC-12-4R



C33HC-12-4R

SQUARES

4-24" Combination Squares with Square and Center Heads			11HC		33HC	
Size	Graduation	Blade	Cast Iron Heads with Black Wrinkle Finish		Forged and Hardened Steel Heads with Smooth Black Enamel Finish	
			Cat. No.	EDP	Cat. No.	EDP
4"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	11HC-4-4R	50050	33HC-4-4R	50204
		Satin Chrome	C11HC-4-4R	56361	C33HC-4-4R	56391
6"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	11HC-6-4R	50052	33HC-6-4R	50206
		Satin Chrome	C11HC-6-4R	56363	C33HC-6-4R	56393
6"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular	11HC-6-16R	50054	33HC-6-16R	50208
		Satin Chrome	C11HC-6-16R	56365	C33HC-6-16R	56395
12"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	11HC-12-4R	50056	33HC-12-4R	50210
		Satin Chrome	C11HC-12-4R	56367	C33HC-12-4R	56397
12"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular	11HC-12-16R	50058	33HC-12-16R	50212
		Satin Chrome	C11HC-12-16R	56369	C33HC-12-16R	56399
18"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	11HC-18-4R	50060	33HC-18-4R	50214
		Satin Chrome	C11HC-18-4R	56371	C33HC-18-4R	56401
18"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular	11HC-18-16R	50062	33HC-18-16R	50216
		Satin Chrome	C11HC-18-16R	56373	C33HC-18-16R	56403
24"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	11HC-24-4R	50064	33HC-24-4R	50218
		Satin Chrome	C11HC-24-4R	56375	C33HC-24-4R	56405
24"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular	11HC-24-16R	50066	33HC-24-16R	50220
		Satin Chrome	C11HC-24-16R	56377	C33HC-24-16R	56407
150-600mm Combination Squares with Square and Center Heads			11MHC		33MHC	
150mm	mm and 1/2mm Both Sides	Regular	11MHC-150	56242	33MHC-150	56248
		Satin Chrome	C11MHC-150	56381	C33MHC-150	56411
300mm	mm and 1/2mm Both Sides	Regular	11MHC-300	56244	33MHC-300	56250
		Satin Chrome	C11MHC-300	56383	C33MHC-300	56413
600mm	mm and 1/2mm Both Sides	Regular	11MHC-600	56246	33MHC-600	56252
		Satin Chrome	C11MHC-600	56385	C33MHC-600	56415
300-600mm and 11-3/4" – 23-1/2" Combination Squares with Square and Center Heads			11MEHC		33MEHC	
300mm and 11-3/4"	1/2mm and 32nds One Side; mm and 64ths Reverse Side	Regular	11MEHC-300	50068	33MEHC-300	50222
		Satin Chrome	C11MEHC-300	56387	C33MEHC-300	56417
600mm and 23-1/2"	1/2mm and 32nds One Side; mm and 64ths Reverse Side	Regular	11MEHC-600	50075	33MEHC-600	50238
		Satin Chrome	C11MEHC-600	56389	C33MEHC-600	56419



Check out our website for interactive features at starrett.com



COMBINATION SETS

COMBINATION SQUARE WITH CENTER AND REVERSIBLE PROTRACTOR HEADS

435 SQUARE, CENTER AND PROTRACTOR HEAD



CAST IRON

With reversible lock bolts, scribe, spirit level in both square head and protractor head, direct reading double 180° protractor scale, hardened steel, photo-engraved blade. Cast iron heads with black wrinkle finish. Also available with satin chrome blade and protractor head.



C435-12-4R

434 FORGED AND HARDENED STEEL SQUARE AND CENTER HEADS, CAST IRON PROTRACTOR HEAD



THE VERY BEST SETS AVAILABLE

These squares have the same features as the 435 except that the square heads and center heads are forged, hardened steel with smooth, black enamel finish.



C434-12-4R

Supplied in protective case

12-24" Combination Sets with Square, Center and Reversible Protractor Head and Blade			435 Sets		434 Sets	
Size	Graduation	Blade	Cast Iron Heads with Black Wrinkle Finish Cat. No.	EDP	Forged and Hardened Square and Center Heads, Cast Iron Protractor Head with Smooth Black Finish Cat. No.	EDP
12"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	435-12-4R	51556	434-12-4R	51542
		Satin Chrome	C435-12-4R	66682	C434-12-4R C434-12-4R W/SLC*	51548 66898
12"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular	435-12-16R	51557	434-12-16R	51543
		Satin Chrome			C434-12-16R	51549
18"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	435-18-4R**	51558	434-18-4R**	51544
		Satin Chrome			C434-18-4R**	51550
18"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular			434-18-16R**	51545
		Satin Chrome			C434-18-16R**	51551
24"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	435-24-4R**	51559	434-24-4R**	51546
		Satin Chrome			C434-24-4R**	51552
24"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular			434-24-16R**	51547
		Satin Chrome			C434-24-16R**	51553
300-600mm Combination Sets with Square, Center and Reversible Protractor Head and Blade			435M Sets		434M Sets	
300mm	mm and 1/2mm Both Sides	Regular	435M-300	66177	434M-300	56255
		Satin Chrome	C435M-300	61918	C434M-300	56420
600mm	mm and 1/2mm Both Sides	Regular	435M-600**	66681	434M-600**	56256
		Satin Chrome			C434M-600**	56421
300-600mm and 11-3/4" – 23-1/2" Combination Sets with Square, Center and Reversible Protractor Head and Blade			435ME Sets		434ME Sets	
300mm and 11-3/4"	1/2mm and 32nds One Side; mm and 64ths Reverse Side	Regular	435ME-300	51560	434ME-300	51554
		Satin Chrome			C434ME-300	56422
600mm and 23-1/2"	1/2mm and 32nds One Side; mm and 64ths Reverse Side	Regular	435ME-600**	51561	434ME-600**	51555
		Satin Chrome			C434ME-600**	56423

* Includes redemption card for Standard Letter of Certification (SLC).

** Does not include case.



COMBINATION SETS

COMBINATION SQUARE WITH CENTER AND NON-REVERSIBLE PROTRACTOR HEAD

9 COMBINATION SETS WITH SQUARE, CENTER AND NON-REVERSIBLE PROTRACTOR HEAD



CAST IRON

With reversible lock bolts, scribe, spirit level in both square head and protractor head, direct reading double 180° protractor scale, and hardened steel, photo-engraved blade. Cast iron heads with black wrinkle finish. Also available with satin chrome blade and protractor head.



Supplied in protective case



9-12-4R

12-24" Combination Sets with Square, Center and Non-reversible Protractor Head and Blade

Size	Graduation	Blade	Cast Iron Heads with Black Wrinkle Finish	
			Cat. No.	EDP
12"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	9-12-4R	50042
		Satin Chrome	C9-12-4R	50046
12"	16R – Quick Reading 32nds, 64ths, Air Craft Quick Reading 50ths, 100ths	Regular	9-12-16R	50043
18"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	9-18-4R	50044
24"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	9-24-4R	50045

300-600mm Combination Sets with Square, Center and Non-reversible Protractor Head and Blade

300mm	mm and 1/2mm Both Sides	Regular	9M-300	56253
600mm	mm and 1/2mm Both Sides	Regular	9M-600	56254

300-600mm and 11-3/4 – 23-1/2" Combination Sets with Square, Center and Non-Reversible Protractor Head and Blade

300mm and 11-3/4"	1/2mm and 32nds One Side; mm and 64ths Reverse Side	Regular	9ME-300	50047
600mm and 23-1/2"	1/2mm and 32nds One Side; mm and 64ths Reverse Side	Regular	9ME-600	50048

SQUARES



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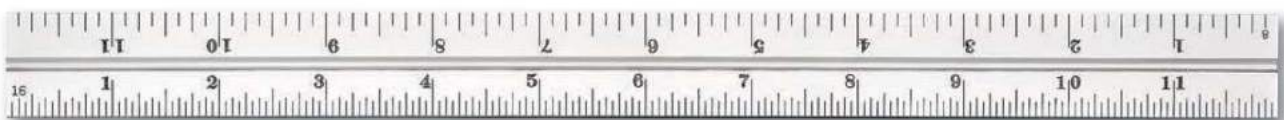
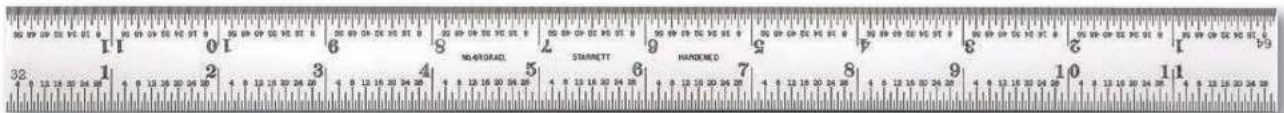
COMBINATION SETS

BLADES FOR COMBINATION SQUARES, SETS AND BEVEL PROTRACTORS INCH, MILLIMETER AND INCH/MILLIMETER

The blades listed below fit any head according to the sizes noted in the charts on all combination squares, combination sets and bevel protractors. The 12", 18", 24", 36" and 48" and 300mm and 600mm sizes are interchangeable. Exception: Starrett 33J and 8 Combination Squares. (For these, see 33J and 8 listings.)

Inch Blades Only for Combination Squares, Sets and Bevel Protractors					
Size	Approx. Width x Thickness	Graduation	Finish	Cat. No.	EDP
4"	5/8" x 1/16"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	B4-4R	50076
			Satin Chrome	CB4-4R	50077
4"	5/8" x 1/16"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Satin Chrome	CB4-16R	50078
			Regular	B6-4R	50079
6"	3/4" x 5/64"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Satin Chrome	CB6-4R	50080
			Regular	B6-16R	50081
6"	3/4" x 5/64"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Satin Chrome	CB6-16R	50082
			Regular	B12-4R	50083
12"	1" x 3/32"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Satin Chrome	CB12-4R	50084
12"	1" x 3/32"	6R – Aircraft Quick Reading 50ths and 10ths	Satin Chrome	CB12-6R	50085
12"	1" x 3/32"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular	B12-16R	50086
			Satin Chrome	CB12-16R	50087
18"	1" x 3/32"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	B18-4R	50088
			Satin Chrome	CB18-4R	50089
18"	1" x 3/32"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Regular	B18-16R	50090
			Satin Chrome	CB18-16R	50091
24"	1" x 3/32"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Regular	B24-4R	50092
			Satin Chrome	CB24-4R	50093
24"	1" x 3/32"	6R – Aircraft Quick Reading 50ths and 10ths	Satin Chrome	CB24-6R	50094
			Regular	B24-16R	50095
24"	1" x 3/32"	16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	Satin Chrome	CB24-16R	50096
			Regular	CB36-4R	50097
36"	1" x 3/32"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Satin Chrome	CB36-16R	50098
			Regular	CB48-4R	67102
48"	1" x 3/32"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	Satin Chrome	CB48-4R	67102
Millimeter Blades Only for Combination Squares, Sets and Bevel Protractors					
150mm	19mm x 2mm	35 – mm and 1/2mm Both Sides	Regular	B150-35	55985
			Satin Chrome	CB150-35	55988
300mm	25mm x 2.4mm	35 – mm and 1/2mm Both Sides	Regular	B300-35	55986
			Satin Chrome	CB300-35	55989
600mm	25mm x 2.4mm	35 – mm and 1/2mm Both Sides	Regular	B600-35	55987
			Satin Chrome	CB600-35	55990
Inch and Millimeter Blades Only for Combination Squares, Sets and Bevel Protractors					
150mm and 5-3/4"	19mm x 2mm	36 – 1/2mm and 32nds One Side; mm and 64ths Reverse Side	Regular	B150-36	55991
			Satin Chrome	CB150-36	55992
300mm and 11-3/4"	25mm x 2.4mm	36 – 1/2mm and 32nds One Side; mm and 64ths Reverse Side	Regular	B300-36	50101
			Satin Chrome	CB300-36	55993
600mm and 23-1/2"	25mm x 2.4mm	36 – 1/2mm and 32nds One Side; mm and 64ths Reverse Side	Regular	B600-36	50102
			Satin Chrome	CB600-36	55994

All sizes packed one per envelope.



COMBINATION SQUARE BLADES

SQUARE HEADS, CENTER HEADS AND PROTRACTOR HEADS FOR COMBINATION SQUARES, COMBINATION SETS AND BEVEL PROTRACTORS

The heads listed fit any blade according to the sizes noted in the charts on all combination squares, combination sets and bevel protractors. Sizes 12", 18", 24", 36", and 48" and 300mm and 600mm are interchangeable. When ordering, specify complete catalog number and length of blade. Exception: Starrett 33J and 8 Combination Squares. (For these, see 33J and 8 listings.)

Square Heads Only for Combination Squares, Combination Sets and Bevel Protractors

Fits Blade Size	Cast Iron Black Wrinkle Finish		Forged and Hardened Steel with Smooth Black Enamel Finish	
	Cat. No.	EDP	Cat. No.	EDP
4"	H11-4	50069	H33-4	50223
6"	H11-6	50070	H33-6	50224
12" (300mm)	H11-1224	50071	H33-1224	50225
18"				
24" (600mm)				

Center Heads Only for Combination Squares, Combination Sets and Bevel Protractors

4"	C11-4	50072	C33-4	50226
6"	C11-6	50073	C33-6	50227
12" (300mm)	C11-1224	50074	C33-1224	50228
18"				
24" (600mm)				

Protractor Heads – Cast Iron (Fits blades 12" and up) for Combination Squares, Combination Sets and Bevel Protractors

Finish	Reversible		Nonreversible	
	Cat. No.	EDP	Cat. No.	EDP
Black Wrinkle	PR-1224W	52525	PNR-1224W	50107
Black Wrinkle, Chrome on Turret	CPR-1224W	64601	CPNR-1224W	50108
Black Smooth	PR-1224S	52515		
Black Smooth, Chrome on Turret	CPR-1224S	52516		

For prices of lock bolts, contact the Parts Department.
 4" Center Head Max. Inspection Dia.: 3.125"
 6" Center Head Max. Inspection Dia.: 4.3"
 12"-24" Center Head Max. Inspection Dia.: 5.3"



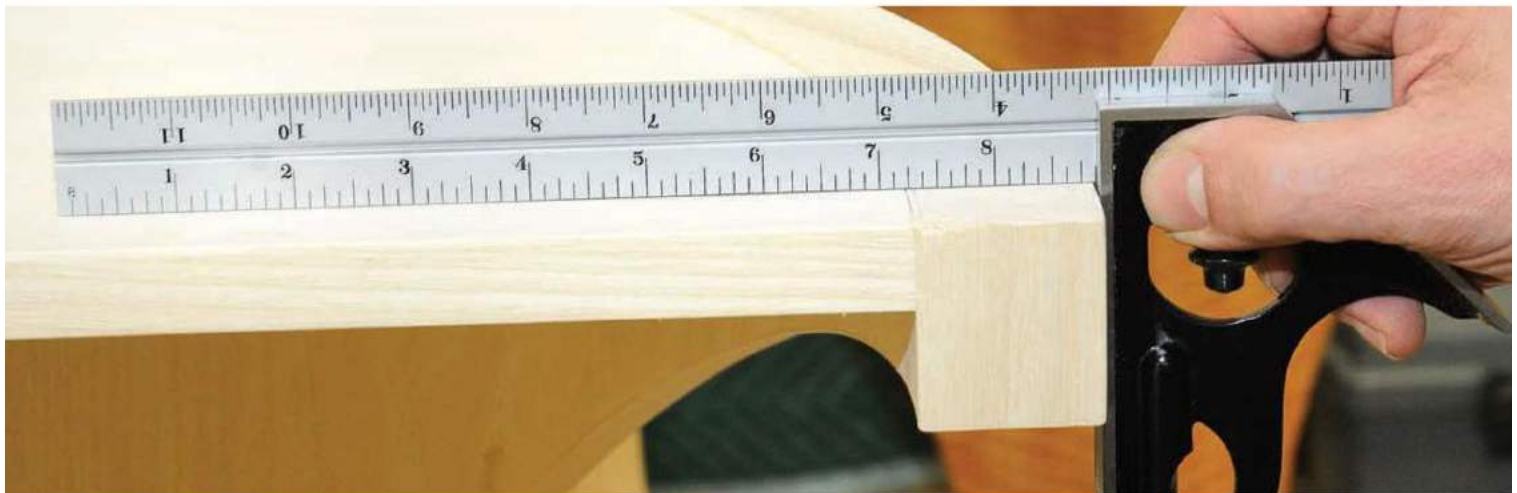
H11-1224



C33-1224



PR-1224S



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COMBINATION SQUARES

289 ATTACHMENTS FOR COMBINATION SQUARES

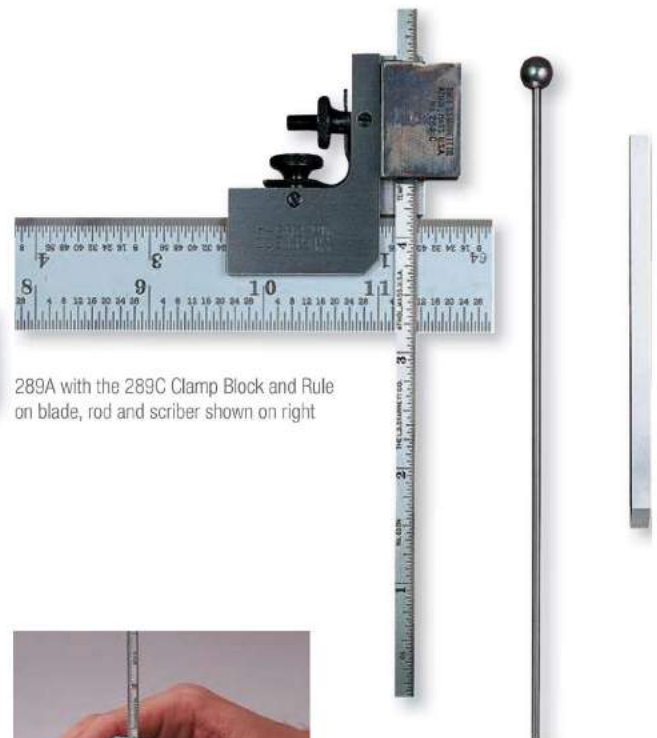
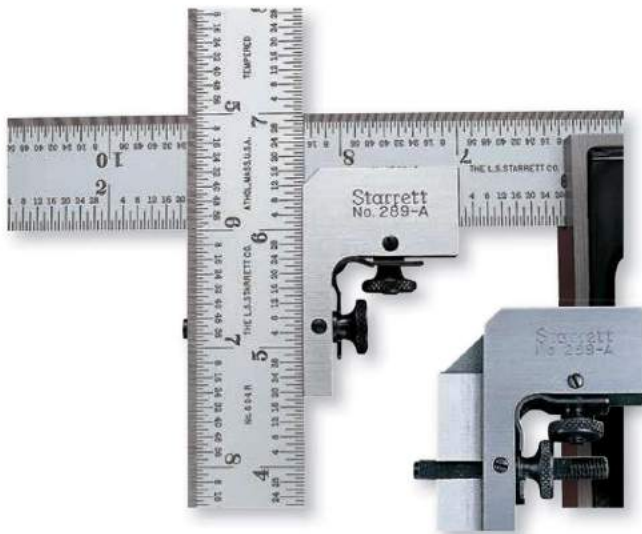
These attachments fit combination square blades 1" (25mm) wide and permit attaching rules, blades or thin steel try squares, up to 1" (25mm) wide, at right angles to the blade of the square for laying out key seats, centers, scribing horizontal lines, and measuring diameters. Available in two sizes listed below. Both sizes can also be used with 289C Height and Depth Gage Attachment.

289 Attachments for Combination Squares				
Range Blade/Rule	Seat Length		Cat. No.	EDP
	Blade	Rule		
1" (25mm)	1-9/16" (40mm)	1-11/16" (43mm)	289A	51322
	2-3/8" (60mm)	2-3/8" (60mm)	289B	51323

289C HEIGHT AND DEPTH GAGE SET FOR COMBINATION SQUARES

When combined with the 289A or 289B Attachments, this set converts any combination square or set having blades up to 1" (25mm) wide into a height gage or depth gage. In addition to a clamp block, the set has a scriber, 6" rule (610N-6) and a 6" (150mm) rod, any one of which may be inserted in the clamp and locked in position. By applying the scriber, a practical height gage results. Use of the rule converts the tool to a depth gage for measuring in 64ths of an inch. With the rod used as a depth gage, small recesses and holes can also be checked.

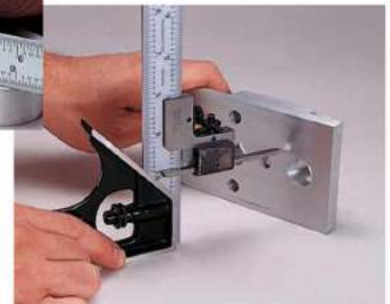
289C Height and Depth Gage Set for Combination Squares		
Cat. No.	EDP	Description
289C	51324	Clamp Block with Scriber, Rule and Rod



289A with the 289C Clamp Block and Rule on blade, rod and scriber shown on right



Measuring depth



Measuring height



COMBINATION SQUARES

8 LARGE COMBINATION SQUARES

24"

Extra large, heavy-duty construction throughout. The square head is 8-3/8" long and the center head has 4-1/4" arms. Furnished with 24" blade, 1-1/2" wide x 1/10" thick, with distinctive, photo-engraved graduations. Heads are cast iron and have black wrinkle finish.

- Reversible lock bolts
- Accurate spirit level
- Hardened steel blade

8 Large Combination Squares			
Description	Graduation	Cat. No.	EDP
With Square Head Only		8H	50037
With Square Head and Center Head	4 – 8ths, 6ths, 32nds, 64ths	8HC	50038
Blade Only for 8 Large Combination Squares			
24" Blade	4 – 8ths, 16ths, 32nds, 64ths	B824-4	50041
Heads Only for 8 Large Combination Squares			
Square Head		H8	50039
Center Head*		C8	50040

* Max. Inspect Diameter: 7.5"



8HC

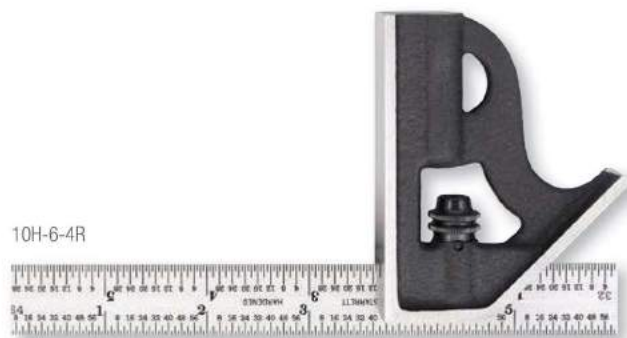
10 STUDENT COMBINATION SQUARES

These tools were designed to train and develop apprentices to lay out and check their work more efficiently. The combination square is far superior to clumsy, old-style solid workshop-grade squares that are still being used in some vocational schools and apprenticeship programs around the world. The student's advantages are:

- Rugged, cast iron square head will outlast cheap plastic and die-cast imitations
- Accurate, hardened and tempered square blade offered in inch, millimeter, and inch and millimeter combined
- Reversible lock bolt allows the blade to be turned over or end-for-end so that all four graduated edges may be used
- The combination square, as its name indicates, handles many jobs, saving the apprentice from buying more individual tools. This combination square can be used as a try square, 45° miter, a depth gage, a height gage, a layout tool, and as a rule.
- Optional center head is available to increase the versatility of this universal measuring tool

Inch			
Size	Graduation	Cat. No.	EDP
6"	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	10H-6-4R	64942
Millimeter			
150mm	mm and 1/2mm Both Sides	10MH-150	64943
Inch and Millimeter			
150mm (5-3/4")	1/2mm and 32nds One Side mm and 64ths Reverse Side	10MEH-150	64944
Center Head Only			
Description	Cat. No.	EDP	
Center Head to Fit 10 Squares	C11-6	50073	

* Max. Inspect Diameter: 4.3"



10H-6-4R



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279



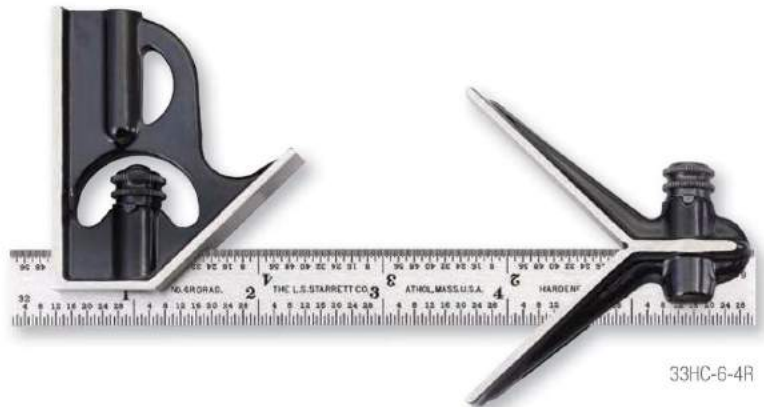
COMBINATION SQUARES

33J JUNIOR COMBINATION SQUARES

6"



These squares are used by mechanics, toolmakers and patternmakers because of their compact, small size and light weight. Both blade and heads are smaller than on regular squares. Heads are drop forged, hardened steel and have smooth, black enamel finish. Blades 4" long may be ordered individually as listed below. Blades are furnished in regular finish, except where indicated.



33HC-6-4R

33J Junior Combination Squares

Blade Length	Description	Graduation	Cat. No.	EDP
6"	With Square Head Only	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	33JH-6-4R	50229
		16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	33JH-6-16R	50231
6"	With Square Head and Center Head	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	33JHC-6-4R	50230
		16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	33JHC-6-16R	50232
Blades Only				
6"	Blade	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	B33J-4R	50235
		16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	CB33J-4R*	67100
4"	Blade	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	B33J-16R	50236
		16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	CB33J-16R*	67101
4"	Blade	4R – 8ths, 16ths, Quick Reading 32nds, 64ths	B4-4R	50076
		16R – Quick Reading 32nds, 64ths, Aircraft Quick Reading 50ths, 100ths	CB4-4R*	50077
Heads Only				
Square Head			H33-4	50223
Center Head**			C33-4	50226

* Blade in satin chrome finish.
 ** Max. Inspect Diameter - 3.125"



MASTER PRECISION SQUARES

20 MASTER PRECISION SQUARES

1-1/2-36"/40-910MM

The finest precision-checking squares – not graduated. Squareness accuracy to .0001" (0.0025mm) every 6" (150mm).

These hardened steel squares are used when extreme accuracy is required. The beams and blades are hardened, ground and lapped to ensure parallelism and straightness. The beam is grooved at the inner corner for clearance of burr or dirt. Made of high quality tool steel, with the finest of craftsmanship throughout.



20-3

20 Master Precision Squares							
Size – Length of Blade*		Length of Beam		Squares Only		Case Only	
Inch	mm	Inch	mm	Cat. No.	EDP	Cat. No.	EDP
1-1/2"	40	1-1/2"	40	20-1 1/2	50128	916	55152
3"	75	2-3/8"	60	20-3	50130	951	55153
4-1/2"	115	3-1/2"	90	20-4 1/2	50132	918	55154
6"	150	4-5/16"	110	20-6	50134	919	55155
				20-6 W/SLC‡	66899		
12"	300	7"	180	20-12	50136	20ZZ-12	55156
				20-12 W/SLC‡	66900		
24"	600	12-5/16"	310	20-24	50140	20ZZ-24†	55158
36"	910	20"	500	20-36**	50142	20ZZ-36†	55159

Larger squares can be furnished; quoted on application.
 * Length of blade from the inner edge of the beam to the end of the blade.
 ** 36" (910mm) and larger size squares have special screws to secure the blade to the beam.
 † Rack-type case.
 ‡ Includes redemption card for Standard Letter of Certification (SLC).

55 MASTER PRECISION SQUARES WITH BEVELED EDGES

1-1/2-6"/40-150MM

These 55 Hardened Steel Squares are the same as the 20 Squares described above, except that the blades are beveled on both edges of each side, which provides an excellent visual line contact with the work.



55-3

55 Master Precision Squares with beveled edges							
Size – Length of Blade*		Length of Beam		Squares Only		Case Only	
Inch	mm	Inch	mm	Cat. No.	EDP	Cat. No.	EDP
1-1/2"	40	1-1/2"	40	55-1 1/2	50277	916	55152
3"	75	2-3/8"	60	55-3	50279	951	55153
4-1/2"	115	3-1/2"	90	55-4 1/2	50281	918	55154
6"	150	4-5/16"	110	55-6	50283	919	55155

* Length of blade from the inner edge of the beam to the end of the blade.



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SQUARES

3020 TOOLMAKERS' GRADE STAINLESS STEEL SQUARES

2-31/32 - 12-1/32"/50-175MM

This high quality toolmakers' square is not graduated and offers squareness accuracy to .0002" (0.005mm) for every 6" (150mm).

They feature hardened, ground and lapped stainless steel construction on both the blade and the beam. The beam is machined at the inner corner for clearance of burr or dirt.

Packed one in a plastic case. 12" square and set of 4 squares shipped in box with fitted foam insert. Wood cases as listed may be purchased separately.

3020 Toolmakers' Grade Stainless Steel Squares

Size – Length of Blade*		Length of Beam		Squares Only		Case Only	
Inch	mm	Inch	mm	Cat. No.	EDP	Cat. No.	EDP
2-31/32"	75	1-31/32"	50	3020-3	12225	951	55153
3-31/32"	100	2-31/32"	75	3020-4	12226	918	55154
5-29/32"	150	3-29/32"	100	3020-6	12227	919	55155
12-1/32"	300	6-7/8"	175	3020-12	12228	20ZZ-12	55156
Complete Set of all 4 Squares				S3020Z	12229		

* Length of blade from the inner edge of the beam to the end of the blade.



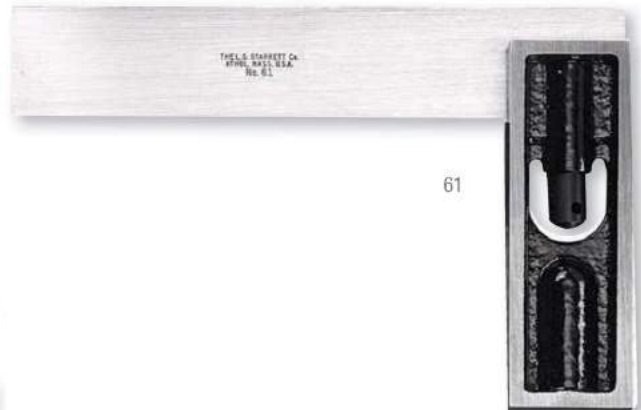
61 "RELIABLE" TRY SQUARE

6"/150MM

A very useful try square – attractively designed, light and convenient. The blade is hardened, not graduated, and is firmly held by a special bolt and nut permitting the tool to be readily taken apart, if desired, for regrinding the blade and stock.

61 "Reliable" Try Square

Cat. No.	EDP	Size – Length of Blade	Length of Beam
61	50303	6" (150mm)	3-1/2" (90mm)





DOUBLE SQUARES

13. 13M DOUBLE SQUARES WITH HARDENED BLADES 4-6"/100-150MM

These squares are very popular with machinists, toolmakers, and patternmakers. The sliding blades are adjustable making it practical for a wide variety of uses. The faces of the head are ground square, and the 6" (150mm) size has a level.

The bevel blade is available, featuring an octagon angle 45° at one end and a hexagon angle 60° at the other end, clearly marked.

A drill grinding blade, also available for 6" (150mm) squares, is beveled to 59° for drill grinding on one end and 41° (the cutting angle of countersinks for machine screws) at the other. Both ends have quick-reading 64ths grads. and the graduation is located to measure perpendicularly to the axis of the drill. By reading the graduations, the center point can be easily and accurately located.

The 6" square head used with the drill grinding blade is approximately 3-1/2" (90mm) long, and the faces approximately 9/16" (14mm) wide.

Inch Reading Double Squares – 4R Graduation – 8ths, 16ths, 32nds, 64ths			
Size	Description	Cat. No.	EDP
4"	With graduated blade only	13A	50109
6"	With graduated blade only	13C	50111
	With graduated and bevel blades	13E	50112
	Drill grinding blade only for 6" (150mm) squares	13D	50114
Millimeter Reading Double Squares – mm Both Edges One Side; mm and 1/2mm Reverse Side			
100mm	With graduated blade only	13MA	56278
	With graduated and bevel blades	13MB	56279
150mm	With graduated blade only	13MC	56280
	With graduated and bevel blades	13ME	56263



13F Double Square complete with graduated blade, beveled blade, and drill grinding blade.



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DOUBLE SQUARES

14, 14M Double Steel Squares with Hardened and Ground Head and Blades

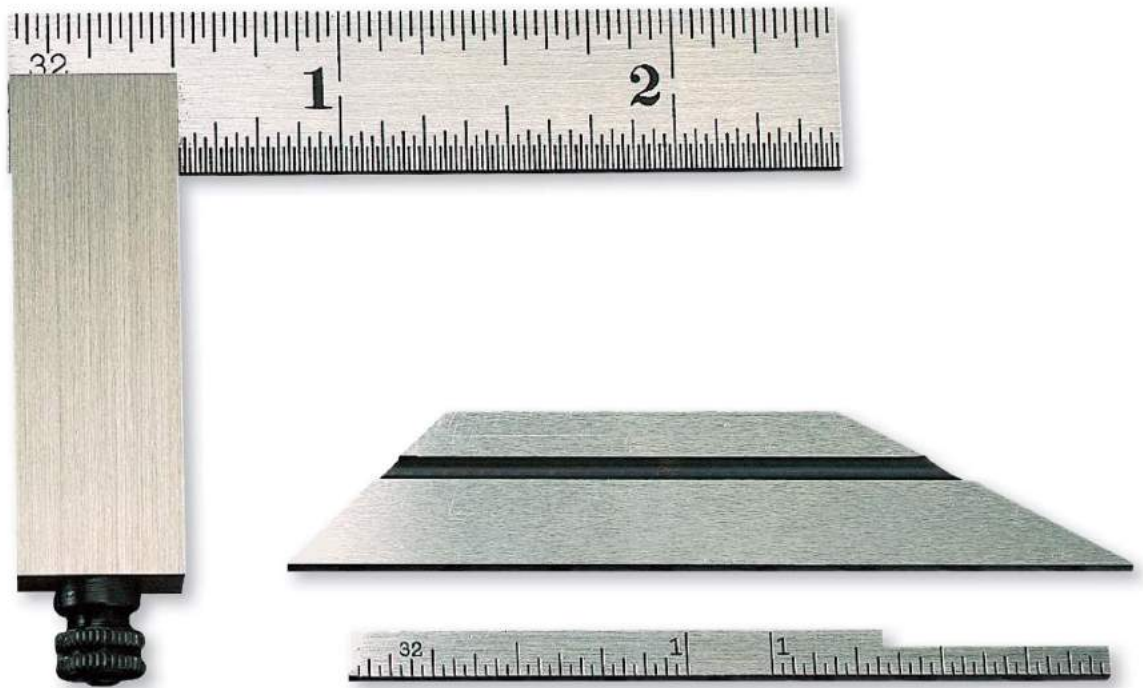
2-1/2"/50MM

Designed for tool and diemakers, these fine precision double steel squares have adjustable blades, ideal for tight fits. A knurled clamping nut accurately locks the blades in any position.

Beveled blade is 45° on one end and 30° on the other.

2-1/4" (58mm) Narrow blade has 32nds and 64ths graduations. It is 5/32" (4mm) wide over a length of approximately 1-5/8" (41mm) and cut away at one end to a width of 3/32" (2.4mm).

14 Inch Reading Double Steel Squares – 32nds, 64ths				
Size	Graduation	Description	Cat. No.	EDP
2-1/2"	32nds, 64ths	With Graduated Blade Only	14A	50117
		Complete with Graduated Narrow Blade and Bevel Blade	14D	50118
14M Millimeter Reading Double Steel Squares – mm Both Edges One Side; mm and 1/2mm Reverse Side				
50mm	mm, 1/2mm	With Graduated Blade Only	14MA	56260
		Complete with Graduated Narrow Blade and Bevel Blade	14MD	56261



14D Double Square complete with graduated, bevel and narrow blades.



DIEMAKERS' SQUARES

453, 453M DIEMAKERS' SQUARES WITH ANGULAR AND SLIDING BLADE ADJUSTMENT

2-1/2"/50MM

The sliding blades of this tool and diemakers' square can be adjusted at an angle (up to approximately 10°) with the beam for measuring the clearance in dies (see sectional view). The larger knurled thumb screw locks the blades at any position, and the smaller one tilts the blades at an angle. To set the blades at an angle, first release the blade clamp screw, then the blade may be tilted to the desired angle by turning the small knurled screw into the beam. The blade can be held in position by tightening the clamping screw. Head and blades are hardened and ground.

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 millimeters and 1/2 millimeters.

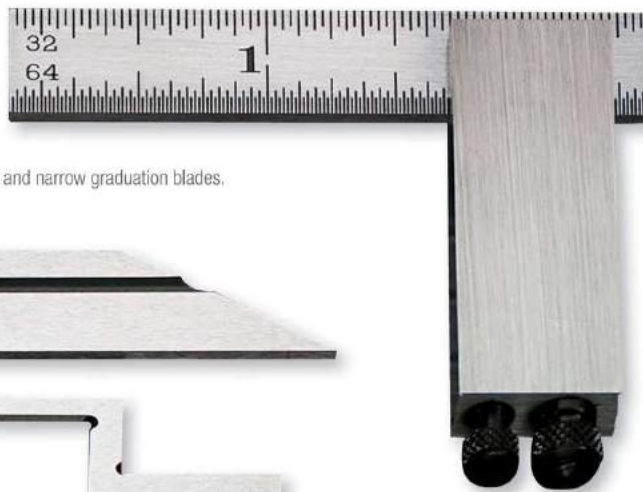
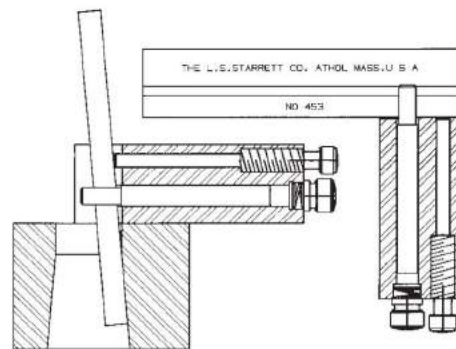
The bevel blade is approximately 2-1/2" (63mm) long x 1/2" (12.5mm) wide and is beveled to 30° on one end and 45° on the other.

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

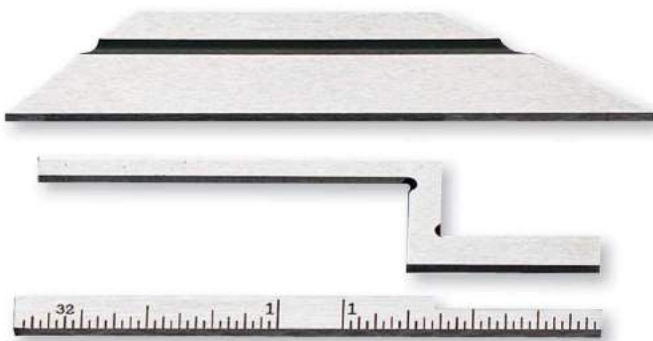
The offset blade is used where it would be impossible to sight a straight blade. It protrudes from the square about 1-1/2" (38mm) and is 1/8" (3mm) wide. Both sides of each edge are beveled to provide good visual line contact.

453 Inch Reading Diemakers' Squares – Graduation 32nds, 64ths			
Size	Description	Cat. No.	EDP
2-1/2"	With Standard Graduated Blade	453A	52345
	With Standard, Narrow Blades	453C	52347
	Complete With Standard, Bevel, Narrow and Offset Blades	453E	52349
	Complete With Standard, Bevel, Narrow and Offset Blades in Case	453EZ	52351
453M Millimeter Reading Diemakers' Squares – Graduation mm and 1/2mm			
50mm	With Standard Graduated Blade	453MA	52346
	With Metric Standard, Narrow Blades	453MC	52348

Sectional View



453E complete with standard, bevel, offset and narrow graduation blades.



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DIEMAKERS' SQUARES

457 IMPROVED DIEMAKERS' SQUARE WITH ANGULAR ADJUSTMENT

10°-0°-10°

The 457 Improved Diemakers' Square is a highly useful tool for tool and diemakers, especially for measuring die clearances. It is also very handy for patternmakers 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°, either side of 0° and the angle is indicated by the line on the pointer.

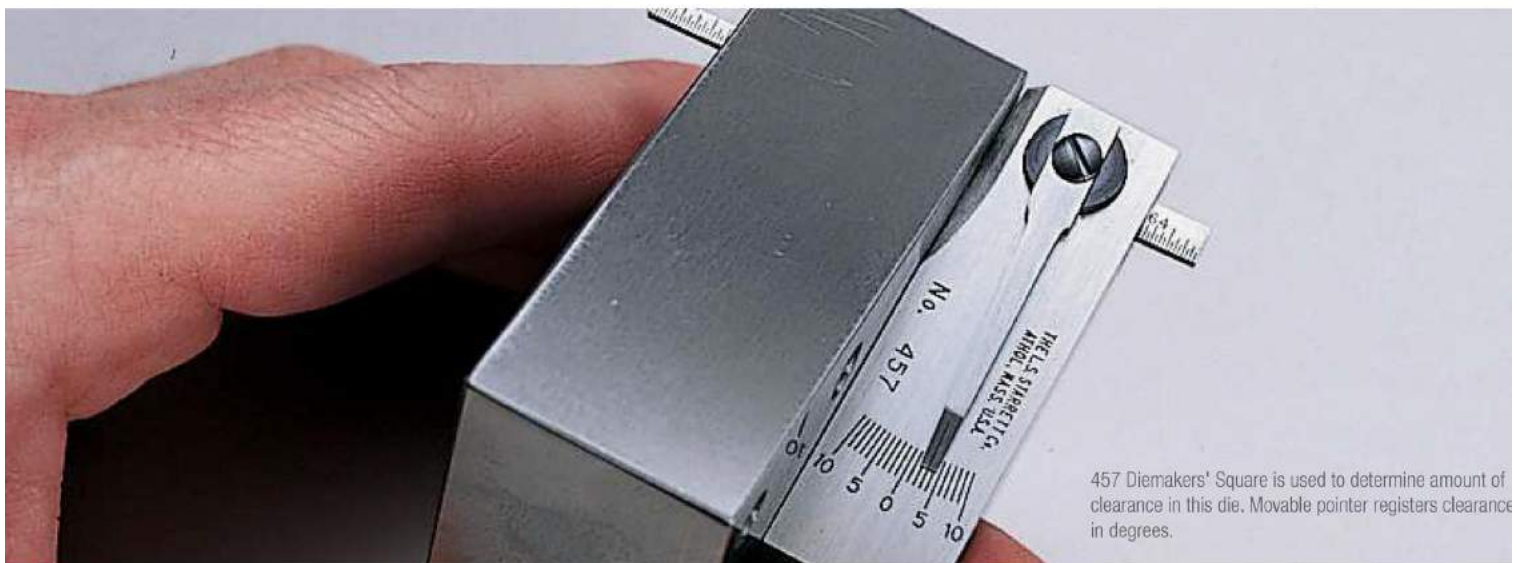
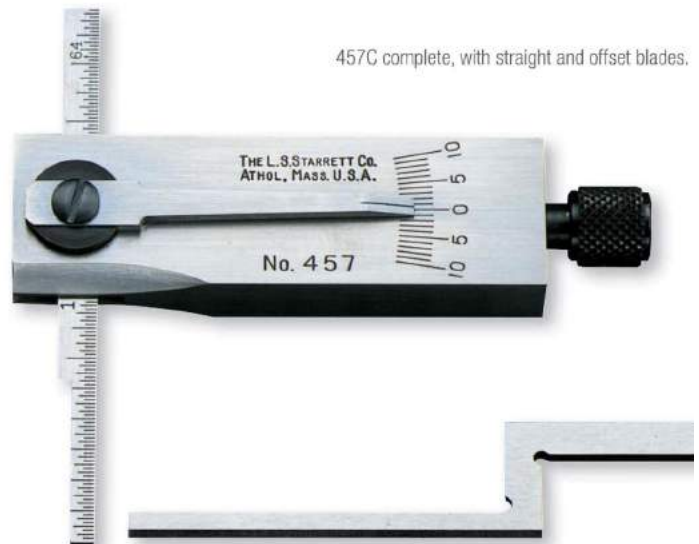
The graduated blade has 32nds of an inch on one side, and 64ths on the other. It is 5/32" (4mm) wide over a length of approximately 1-5/8" (41mm) and cut away at one end to a width of 3/32" (2.4mm).

The offset blade, which is used where it would be impossible to insert the straight blade, protrudes from the square about 1-1/2" (38mm). It is 1/8" (3mm) 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°-0°-10°		
Description	Cat. No.	EDP
With Straight Blade Only	457A	52428
Complete, With Straight and Offset Blades	457C	52429

457C complete, with straight and offset blades.



457 Diemakers' Square is used to determine amount of clearance in this die. Movable pointer registers clearance in degrees.

