



**FIXED GAGE STANDARDS**

## GAGE SETS

### S4000 PRECISION STEEL PIN GAGE SETS

#### .011-1.000"

Precision gage pins are used to determine small hole sizes, for gaging slots, and finding hole distances.

S4000 Pin Gages - Plus Sets			
Range	No. of Gages	Cat. No.	EDP
.011-.060" (+)	50	S4000-060	67480
.061-.250" (+)	190	S4002-250	67482
.251-.500" (+)	250	S4004-500	67484
.501-.625" (+)	125	S4006-625	67486
.626-.750" (+)	125	S4008-750	67488
.751-.832" (+)	82	S4010-832	67490
.833-.916" (+)	84	S4012-916	67492
.917-1.000" (+)	84	S4014-1	67494
S4000 Pin Gages - Minus Sets			
Range	No. of Gages	Cat. No.	EDP
.011-.060" (-)	50	S4001-060	67481
.061-.250" (-)	190	S4003-250	67483
.251-.500" (-)	250	S4005-500	67485
.501-.625" (-)	125	S4007-625	67487
.626-.750" (-)	125	S4009-750	67489
.751-.832" (-)	82	S4011-832	67491
.833-.916" (-)	84	S4013-916	67493
.917-1.000" (-)	84	S4015-1	67495

#### FEATURES

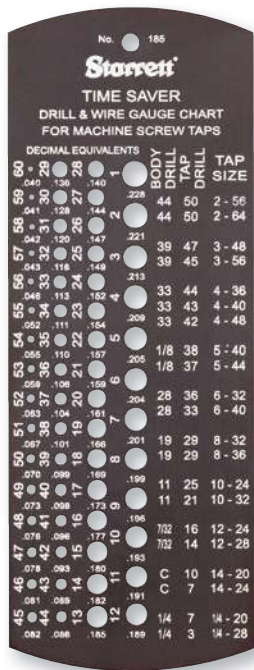
- Color coded, fully adjustable Go/No-Go gage handle furnished with each set
- Sets are supplied in rugged, high impact protective cases with each space marked for the appropriate gage
- Inspection certificate with every set
- All Starrett pin gages are manufactured to a 0.0002" tolerance
- Plus and minus tolerance sets
- Offered in 0.001" increments
- Each pin is centerless lapped and is clearly etched with the stated size
- All gages are 2 inches long and hardened to RC 60/64
- All sharp corners are broken

Handles for 4000 Pin Gages		
Description	Cat. No.	EDP
Handle for .011-.060" Pin Gages	PT45065	45060
Handle for .061-.250" Pin Gages	PT45250	45250
Handle for .251-.500" Pin Gages	PT45500	45500
Handle for .501-.625" Pin Gages	PT45625	45625
Handle for .626-.750" Pin Gages	PT45750	45750
Handle for .751-.832" Pin Gages	PT45832	45832
Handle for .833-.916" Pin Gages	PT45916	45916
Handle for .917-1.000" Pin Gages	PT45066	45001



S4002-250 190,  
piece set

# DRILL AND WIRE GAGES



FIXED GAGE STANDARDS

**185 TIME SAVER®**  
**TAP AND DRILL GAGE**  
 NOS. 1-60/.228-.040"

**186 DRILL AND**  
**STEEL WIRE GAGE**  
 NOS. 1-60/.228-.040"

**187 JOBBERS' DRILL**  
**GAGE - HARDENED**  
 1/16-1/2"

**198 STANDARD**  
**LETTER SIZE DRILL**  
**GAGE**

A-Z  
 .234-.413" DIA.

- Correct sizing of tap drill for any common size machine screw tap in "NF" National Fine or "NC" National Coarse Thread
- Leaves the right amount of stock for approximately 65% full thread
- Shows correct drill body size
- 60 holes with number sizes and decimal equivalents
- Black matte finish with information steel stamped on one side and white marked on the reverse side for quick, clear reading

- Widely used by mechanics for twist drills and steel drill rod
- Similar to 185, without the tap and drill information
- 60 holes from 1 to 60
- Marked with number sizes and decimal equivalents
- Black matte finish with gage information steel stamped on one side and white marked on reverse for quick, clear reading

- Quick sizing of any twist drill from 1/16-1/2" by 64ths
- 29 holes marked with drill size in inches and decimal equivalents
- Rigidly tested after hardening
- Black matte finish with gage information steel stamped on one side and white marked on reverse for quick, clear reading

- Quick, convenient checking of letter size drills
- Twenty-six holes provided, giving corresponding drill sizes from "A" through "Z" with decimal equivalents from .234" diameter through .413" diameter
- Hardened with a satin finish

Fixed Gages					
Cat. No.	EDP	Description		Dimensions	
		Tap Size	Tap Drill	Body Drill	Thickness x Width x Length
198	50718	Standard Letter Size Drill Gage			5/64" x 2-5/16" x 6-1/4"
186	50676	Drill and Steel Wire Gage			5/64" x 1-1/2" x 5-1/2"
187	50677	Jobbers' Drill Gage			5/64" x 2-5/16" x 6-1/4"
185 Time Saver Tap and Drill Gage					
Cat. No.	EDP	Range	Tap Drill	Body Drill	Dimensions
		Tap Size			Thickness x Width x Length
185	50675	2-56 to 1/4-28	50 to 3	44 to 1/4	5/64" x 2-5/16" x 6-1/4"



## WIRE AND STANDARD GAGES



### 286 DRILL AND STEEL WIRE GAGE - HARDENED

61-80/.039-.0135"

This gage is for selecting the correct size of twist drills and steel drill rod in smaller sizes ranging from 61 to 80. For convenience, each hole is marked with the size number and the corresponding decimal equivalent. Attractive satin finish. Small compact size, approximately 1/16" thick, 3/4" wide and 2" long.

### 188 ENGLISH STANDARD WIRE GAGE - HARDENED

(BIRMINGHAM OR STUBS' IRON WIRE GAGE)  
1-36/.300-.004"

This gage is popular for gaging iron wire, hot and cold rolled sheet steel, and in some cases, sheet iron by the English Standard Wire system also known as Birmingham or Stubs.

Gage has convenient decimal equivalents of each number on the reverse side. Satin finish.

### 281 AMERICAN STANDARD WIRE GAGE - HARDENED

(OR B.&S.) FOR NON-FERROUS METALS  
0-36/.325-.005"

This gage is the generally accepted standard for non-ferrous metals as adopted by brass manufacturers. It is especially useful for electricians and others to gage sheet, plate and wire made of non-ferrous metals like copper, brass, aluminum, etc. Screw slotting cutters are also made to this gage.

Gage has decimal equivalents on the reverse side. Satin finish.

### 287 AMERICAN STEEL AND WIRE CO. GAGE (WASHBURN & MOEN) STANDARD 0-36/.3065-.009"

This gage is designed for gaging steel wire and drill rod to the American Steel & Wire Co. (Washburn & Moen) Standard and checks sizes from 0-36. (Also known as United States Steel Wire Gage.) Decimal equivalents are given on the back. Satin finish.

### 280 PIANO TUNERS' GAGE - HARDENED

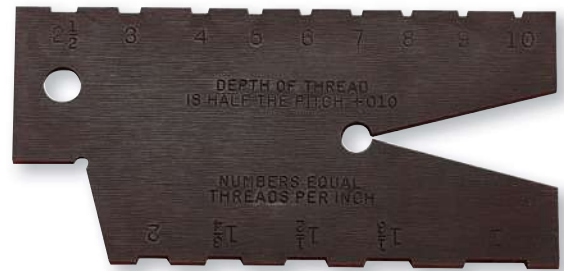
AMERICAN STEEL AND WIRE CO. STANDARD  
12-28/.029-.071"

The 280 Gage is designed for gaging steel music wire and has a range from 12 to 28. Convenient decimal equivalents on reverse side. Diameter of the gage is 1-9/16" and it has a satin finish.



### 283 U.S. STANDARD GAGE - HARDENED SHEET, PLATE IRON AND STEEL GAGE 0-36/.3125-.007"

This gage is made to the United States Standard for uncoated sheet, plate iron and steel, and is based on weights in ounces per square foot. The gage has a satin finish and decimal equivalents on the reverse side.



### 284 ACME STANDARD SCREW THREAD GAGE - HARDENED

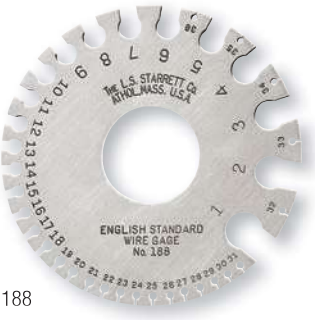
29°

This gage is a standard for grinding and setting tools when cutting Acme threads. Acme threads have the same depth as square threads but the sides of the threads are at an inclination of 14-1/2° (29° included angle). This form of thread is used extensively and has in many instances replaced the square thread in machine construction. The advantages of the Acme thread are its strength and the ease by which it can be cut compared with square threads. The angles and edges of this gage are hardened, ground and carefully tested.

In use, the angle on the thread cutting tool is checked on the large precision-ground V at the end of the gage. The tool is then ground on the end to the width of the slot of whatever pitch is being turned. It is then set in the lathe using the half angle.

**NOTE:** Like other Starrett gages, these tools are carefully tested for accuracy after hardening.

## STANDARDS FOR SHEET AND WIRE GAGES WITH CORRESPONDING STARRETT GAGES



188



281



287



283

### Fixed Gages

Cat. No.	EDP	Description
286	51320	Drill and Steel Wire Gage
188	50678	English Standard Wire Gage
281	51316	American Standard Wire Gage
287	51321	American Steel & Wire Co. Steel Wire Gage
280	51315	Piano Tuners' Gage
283	51318	U.S. Standard Gauge
284	51319	Acme Standard Screw Thread Gage

### Dimensions of Sizes in Decimal Parts of an Inch

	281	188 245	287	280		283 U.S. Standard Gage for Sheet and Plate Iron and Steel
Number of Wire Gage	American or Brown & Sharpe	Birmingham or Stubs' Iron Wire	Washburn & Moen, Worcester, MA*	American S. & W. Co's, Music Wire Gage	Stubs' Steel Wire	
00000000	.731429					
0000000	.651356					
000000	.580049			.004		.46875
00000	.516549			.005		.4375
0000	.460000	.454	.3938	.006		.40625
000	.409642	.425	.3625	.007		.375
00	.364797	.380	.3310	.008		.34375
0	.324861	.340	.3065	.009		.3125
1	.289279	.300	.2830	.010	.227	.28125
2	.257626	.284	.2625	.011	.219	.265625
3	.229423	.259	.2437	.012	.212	.250
4	.204307	.238	.2253	.013	.207	.234375
5	.181941	.220	.2070	.014	.204	.21875
6	.162023	.203	.1920	.016	.201	.203125
7	.144285	.180	.1770	.018	.199	.1875
8	.128490	.165	.1620	.020	.197	.171875
9	.114424	.148	.1483	.022	.194	.15625
10	.101897	.134	.1350	.024	.191	.140625
11	.090742	.120	.1205	.026	.188	.125
12	.080808	.109	.1055	.029	.185	.109375
13	.071962	.095	.0915	.031	.182	.09375
14	.064084	.083	.0800	.033	.180	.078125
15	.057068	.072	.0720	.035	.178	.0703125
16	.050821	.065	.0625	.037	.175	.0625
17	.045257	.058	.0540	.039	.172	.05625
18	.040303	.049	.0475	.041	.168	.050
19	.035891	.042	.0410	.043	.164	.04375
20	.031961	.035	.0348	.045	.161	.0375
21	.028462	.032	.03175	.047	.157	.034375
22	.025347	.028	.0286	.049	.155	.03125
23	.022572	.025	.0258	.051	.153	.028125
24	.020101	.022	.0230	.055	.151	.025
25	.017900	.020	.0204	.059	.148	.021875
26	.015941	.018	.0181	.063	.146	.01875
27	.014196	.016	.0173	.067	.143	.0171875
28	.012641	.014	.0162	.071	.139	.015625
29	.011258	.013	.0150	.075	.134	.0140625
30	.010025	.012	.0140	.080	.127	.0125
31	.008928	.010	.0132	.085	.120	.0109375
32	.007950	.009	.0128	.090	.115	.01015625
33	.007080	.008	.0118	.095	.112	.009375
34	.006305	.007	.0104		.110	.00859375
35	.005615	.005	.0095		.108	.0078125
36	.005000	.004	.0090		.106	.00703125
37	.004453				.103	.006640625
38	.003965				.101	.00625
39	.003531				.099	
40	.003145				.097	

\* Also called the U.S. Steel Wire Gage



## WIRE AND STANDARD GAGES

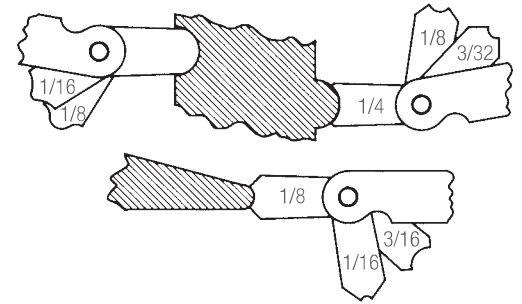
### 178, 178M FILLET OR RADIUS GAGES WITH LOCKING DEVICE

1/32-1/2"/1-15MM

These gages are very useful for tool and diemakers, machinists, screw machine operators, patternmakers and other mechanics to lay out and check radii of tools, dies, patterns, etc.

Made in two inch sizes and two millimeter sizes as listed below, each gage has leaves for measuring both concave and convex radii, with each leaf stamped with the radius size. Any one of the leaves can be securely locked in position by a locking device. Made of nicely finished, high quality steel.

Inch Reading				
Range (Concave and Convex)	Increments	Leaves	Cat. No.	EDP
1/32-1/4"	64ths	30	178A	50664
17/64-1/2"		32	178B	50666
Millimeter Reading				
1-3mm	0.25mm	34	178MA	50665
3-7mm	0.5mm			
7.5-15mm	0.5mm	32	178MB	50667

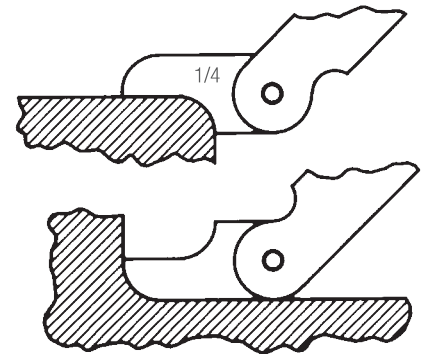


### 272, 272M FILLET OR RADIUS GAGES

1/32-33/64"/0.75-13MM

An external and internal radius on each leaf permits both concave and convex surfaces to be measured. The leaves are specially shaped for use in any position at any angle to measure fillets and radii in corners or against shoulders. Each leaf is stamped with the radius size and has an eccentric mounting for clearance between the leaf and the case when the gage is opened.

Inch Reading				
Range (Concave and Convex)	Increments	Leaves	Cat. No.	EDP
1/32-17/64"	64ths	16	272A	51296
9/32-33/64"			272B	51298
Millimeter Reading				
0.75-5mm	0.25mm	18	272MA	51297
5.5-13mm	0.5mm	16	272MB	51299



### 279 FILLET OR RADIUS GAGES

.020-.4000

This gage is similar to our 272, except that it has twenty leaves with radii from .020-.400" inclusive. Nine leaves have concave and convex radii from .020-.10" inclusive by .010", four leaves with concave and convex radii from .125-.20" inclusive by .025", one leaf with concave and convex radii of .250", three leaves with concave radii only from .300-.400" inclusive by .050" and three leaves with convex radii only from .300-.400" by .050".

Inch Reading			
Range (Concave and Convex)	Leaves	Cat. No.	EDP
.020-.400"	20	279	51314



# ANGLE AND CENTER GAGES

## 466 ANGLE GAGE

1-45°

A convenient, timesaving tool for inspectors, toolmakers, and diesinkers when checking angles. Tool also replaces a protractor in many instances. The gage has 18 leaves, each with a different angle including 14-1/2° (1/2 the Acme Standard of 29°). Leaves are made of the finest spring-tempered steel and both the angle edge and two sides are ground. Approximately 9/32" thick, 1-1/16" wide and 4-3/16" long.



466 Angle Gage				
Range	Leaves	Angles Available	Cat. No.	EDP
1-45°	18	1°, 2°, 3°, 4°, 5°, 7°, 8°, 9°, 10°, 12°, 14°, 14-1/2°, 15°, 20°, 25°, 30°, 35°, 45°	466	52463

## C391 CENTER GAGE

60° AMERICAN NATIONAL

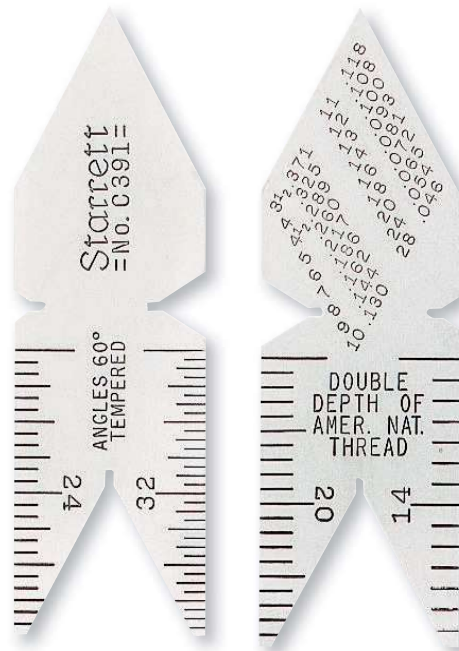
## C396 CENTER GAGE

55° WHITWORTH OR ENGLISH

## C398M CENTER GAGE

60° METRIC

- Extremely handy for use in grinding and setting screw cutting tools
- Meet American National or U.S. 60°, Whitworth or English 55°, and Metric 60° standards
- Very useful for finding number of threads per inch through graduations in 14ths, 20ths, 24ths and 32nds of an inch on C391 and C396
- Graduations on C398M are in mm and 1/2mm
- C391 Gage also has a table of double depths of threads for determining size of tap drills
- Made of spring-tempered steel with satin chrome finish
- Ground gaging surfaces



C391 Center Gage. Left: Front 60° angle side. Right: Back with double depths of threads gage.

Center Gages with Inch Graduations		
Cat. No.	EDP	Description
C391	51475	American National Standard, 60°
C396	51477	Whitworth or English Standard, 55°
Center Gages with Millimeter Graduations		
C398M	51478	Metric Standard, 60°



# SCREW PITCH GAGES

## ENGLISH AND METRIC SCREW PITCH GAGES

2-1/4-84 PITCHES (INCH)

0.25-11.5 PITCHES (MILLIMETER)

Screw pitch gages are among the most useful tools in any mechanics' tool box. They quickly determine the pitch of various threads. These gages consist of a substantial steel case with a number of folding leaves at both ends, each leaf having teeth corresponding to a definite pitch, marked on each leaf.

Starrett screw pitch gages are available in a wide range of sizes with different numbers of leaves in various pitch ranges.

V, Unified, American National 60° threads

Whitworth Standard 55° threads

International Metric Standard 60° threads

English and metric threads are similar in form, but English threads are described in threads per inch and metric threads by the distance from one crest to the next.

All screw pitch gages (except 473 and 476, which have a positive stop design) feature a locking device at both ends of the case, so leaves can be securely locked in position for use. Leaves on most gages have a special narrow design, permitting checking internal threads in nuts, etc., as well as external threads.

Various types of Starrett screw pitch gages are illustrated on the following pages, with complete specifications.



155



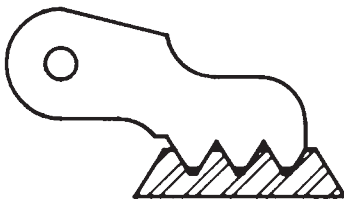
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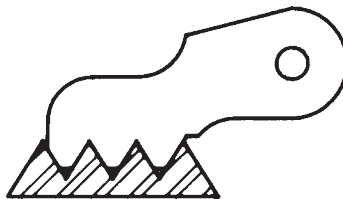
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474



NATIONAL FORM



SHARP V

Starrett Screw Pitch Gages have the tops of the teeth flattened, permitting use of a single gage for either National Form threads or Sharp V threads

### FORMULAS

American Natational V Thread

$$d = D - \frac{1.299}{N} \quad d = D - \frac{1.732}{N}$$

D = Outside diameter of tap

d = Bottom diameter of tap

N = Number of threads per inch





# SCREW PITCH GAGES

## 476 WHITWORTH STANDARD SCREW PITCH GAGES

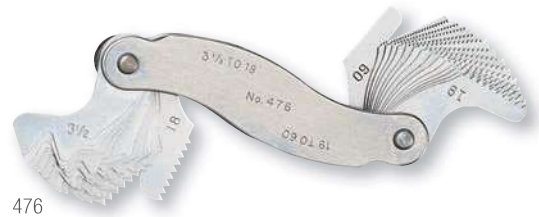
55° THREADS

3-1/2 - 60 TPI (INCH)

## 156M, 159M INTERNATIONAL METRIC STANDARD SCREW PITCH GAGES

60° THREADS

Screw Pitch Gages					
Cat. No.	EDP	No. of Leaves	TPI Range	Threads per Inch (TPI)	Description
155	50588	27	2-1/4-28	2-1/4, 2-3/8, 2-1/2, 2-5/8, 2-3/4, 2-7/8, 3, 3-1/4, 3-1/2, 4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 20, 24, 28	With Locking Device and 60° Center Gage
484	67447	28	3-1/2-36	3-1/2, 4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36	With Locking Device
6	50035	30	4-42	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42	With Locking Device and 11-1/2 and 27 Pipe Thread Pitches
474	52486	28	4-80	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 16, 18, 20, 24, 27, 28, 32, 36, 40, 44, 48, 56, 64, 72, 80	With Locking Device and 11-1/2 and 27 Pipe Thread Pitches
472	52484	51	4-84	First Corner 17 Leaves: 4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18 Second Corner 17 Leaves: 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50 Third Corner 17 Leaves: 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84	With Locking Device and 11-1/2 and 27 Pipe Thread Pitches
473	52485	30	6-60	6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42, 48, 50, 56, 60	With Positive Stop and 11-1/2 and 27 Pipe Thread Pitches
476	52488	30	3-1/2-60	3-1/2, 4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 44, 48, 50, 60	With Positive Stop
156M	50589	28	0.25-2.50mm	0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 1, 1.10, 1.20, 1.25, 1.30, 1.40, 1.50, 1.60, 1.70, 1.75, 1.80, 1.90, 2, 2.50	With Locking Device
159M	50591	28	0.5-11.5mm	0.5, 0.75, 1, 1.10, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5	With Locking Device and 60° Center Gage



476



473



156M



159M



472

FIXED GAGE STANDARDS



## RADIUS GAGES

### 167, 167M

1/64-1/2"/0.5-15MM

### 167

.010-.500

### 110 GAGE HOLDER

### S167, S167M SETS

1/64-1/2"/0.5-15MM

### SD167 SETS

.010-.500

Radii or fillets can be checked or laid out easier, faster, and more accurately with Starrett 167 Radius Gages. Available individually and in sets, fractional sizes 1/64-1/2", decimal sizes .010-.500" and in millimeters from 0.5-15mm.

Many different sets for maximum convenience. Each set is furnished in an attractive case, providing complete protection and easy, instant selection of the right gage size for the job.

#### GAGE FEATURES

- Made of satin finish stainless steel – rust and stain resistant
- Each gage is clearly marked with its radius
- Each gage has five different gaging surfaces for both convex and concave radii
- All gages have precision finished radii with extra smooth, accurate edges

#### GAGE HOLDER FEATURES

- Any gage can be used with the Starrett 110 holder which is especially useful for checking radii in confined or hard-to-reach locations
- Two slots are provided in the holder permitting gages to be held at 30° or 45°, either square in the slot or tipped to one side
- The holder is 4" (100mm) long, providing good reach and balance



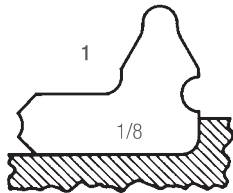
Holder 110 with  
167-3/16 attached

S167CHZ Radius Gage Set with 25  
gages and holder in case

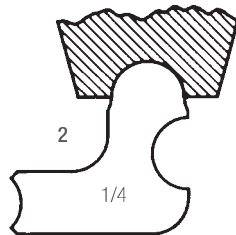


Gaging radii using gage with holder

**FIVE DIFFERENT GAGING SURFACES** – Ideal for Checking Convex and Concave Radii of All Types



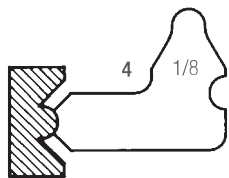
**Fig 1.** Checking concave (internal) radius with 90° arc. Also checks if sides are tangent to radius and 90° to each other.



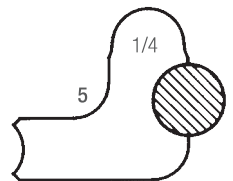
**Fig 2.** Checking concave (internal) radius with arc up to 180°. Also will check radius shown in Fig. 1 but not relationship of sides.



**Fig 3.** Checking convex (external) radius with 90° arc. Also checks if sides are tangent to radius and 90° to each other.



**Fig 4.** Checking convex (external) radius with arc of 90° or greater, or radii with sides as shown which would interfere with gage used as in Fig. 3.



**Fig 5.** Checking convex (external) radius with arc of 180°; also less than 180° if sides of radius offer no interference.

<b>S167 Radius Gage Sets – Inch</b>					
Radii Range	Increments	Gages	Description	Cat. No.	EDP
1/32-17/64"	64ths	16	Without Holder	S167AZ	50615
1/64-17/64"	64ths	17	With Holder	S167AHZ	50616
9/32-1/2"	32nds	8	Without Holder	S167BZ	50617
1/32-17/64"	64ths	24	Sets 167A and S167B Combined, without Holder	S167CZ	50618
9/32-1/2"	32nds				
1/64-17/64"	64ths	25	Sets 167AH and S167B Combined, With Holder	S167CHZ	50619
9/32-1/2"	32nds				
			Sets 167AH and S167B Combined, with Holder, Standard Letter of Certification*	S167CHZ W/SLC	66876
1/32-1/2"	32nds	16	Without Holder	S167DZ	50620
<b>S167M Radius Gage Sets – Millimeter</b>					
1-7mm	0.5mm	13	Without Holder	S167MAZ	55817
0.5-7mm	0.5mm	14	With Holder	S167MAHZ	55818
8-15mm	1mm	8	Without Holder	S167MBZ	55819
1-7mm	0.5mm	21	Sets S167MA and S167MB Combined, without Holder	S167MCZ	55820
8-15mm	1mm				
0.5-7mm	0.5mm	22	Sets 167MB and S167MAH Combined, with Holder	S167MCHZ	55821
8-15mm	1mm				
1-15mm	1mm	15	Without Holder	S167MDZ	55822
<b>SD167 Radius Gage Sets – Decimal-Inch</b>					
.020-.300	.020	19	Without Holder	SD167FZ	63464
.350-.500	.050		With Holder	SD167FHZ	63460
.010-.025	.005	26	Without Holder	SD167GZ	63433
.030-.100	.010				
.120-.300	.020		With Holder	SD167GHZ	63463
.350-.500	.050				
<b>Holder Only</b>				110	50475

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

<b>Individual Radius Gage Specifications</b>								
<b>167 – Inch</b>			<b>167M – mm</b>			<b>167 – Decimal-Inch</b>		
Radius	Cat. No.	EDP	Radius	Cat. No.	EDP	Radius	Cat. No.	EDP
1/64"	167-1/64	50646	0.5mm	167M-1/2	55795	.010	167-010	63434
1/32"	167-1/32	50622	1mm	167M-1	55796	.015	167-015	63435
3/64"	167-3/64	50623	1.5mm	167M-1 1/2	55797	.020	167-020	63436
1/16"	167-1/16	50624	2mm	167M-2	55798	.025	167-025	63437
5/64"	167-5/64	50625	2.5mm	167M-2 1/2	55799	.030	167-030	63438
3/32"	167-3/32	50626	3mm	167M-3	55800	.040	167-040	63439
7/64"	167-7/64	50627	3.5mm	167M-3 1/2	55801	.050	167-050	63440
1/8"	167-1/8	50628	4mm	167M-4	55802	.060	167-060	63441
9/64"	167-9/64	50629	4.5mm	167M-4 1/2	55803	.070	167-070	63442
5/32"	167-5/32	50630	5mm	167M-5	55804	.080	167-080	63443
11/64"	167-11/64	50631	5.5mm	167M-5 1/2	55805	.090	167-090	63444
3/16"	167-3/16	50632	6mm	167M-6	55806	.100	167-100	63445
13/64"	167-13/64	50633	6.5mm	167M-6 1/2	55807	.120	167-120	63446
7/32"	167-7/32	50634	7mm	167M-7	55808	.140	167-140	63447
15/64"	167-15/64	50635	8mm	167M-8	55809	.160	167-160	63448
1/4"	167-1/4	50636	9mm	167M-9	55810	.180	167-180	63449
17/64"	167-17/64	50637	10mm	167M-10	55811	.200	167-200	63450
9/32"	167-9/32	50638	11mm	167M-11	55812	.220	167-220	63451
5/16"	167-5/16	50639	12mm	167M-12	55813	.240	167-240	63452
11/32"	167-11/32	50640	13mm	167M-13	55814	.260	167-260	63453
3/8"	167-3/8	50641	14mm	167M-14	55815	.280	167-280	63454
13/32"	167-13/32	50642	15mm	167M-15	55816	.300	167-300	63455
7/16"	167-7/16	50643				.350	167-350	63456
15/32"	167-15/32	50644				.400	167-400	63457
1/2"	167-1/2	50645				.450	167-450	63458
						.500	167-500	63459



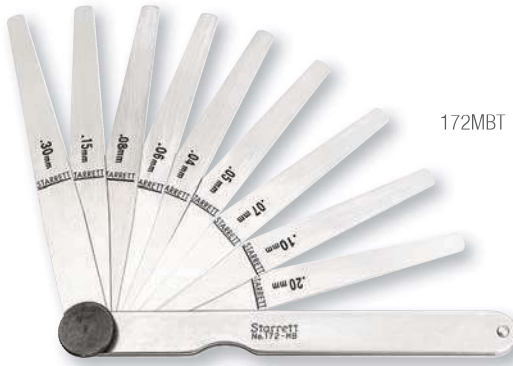
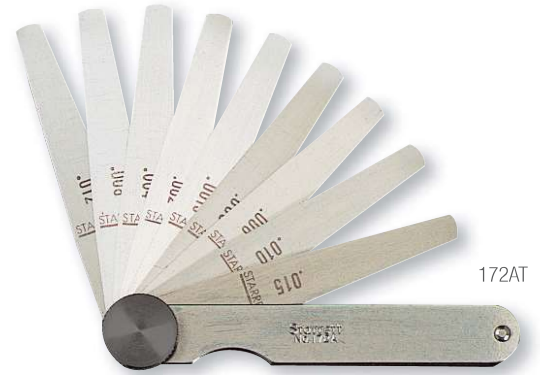
# THICKNESS GAGES

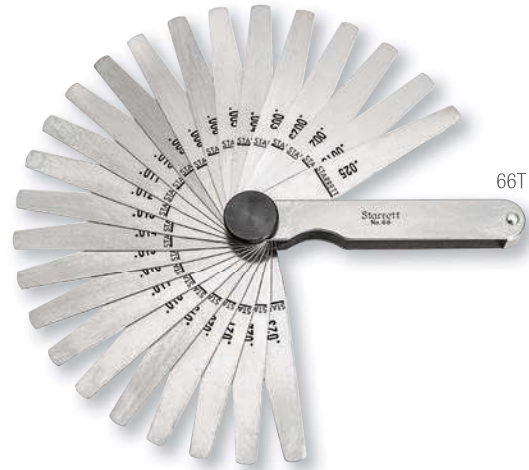
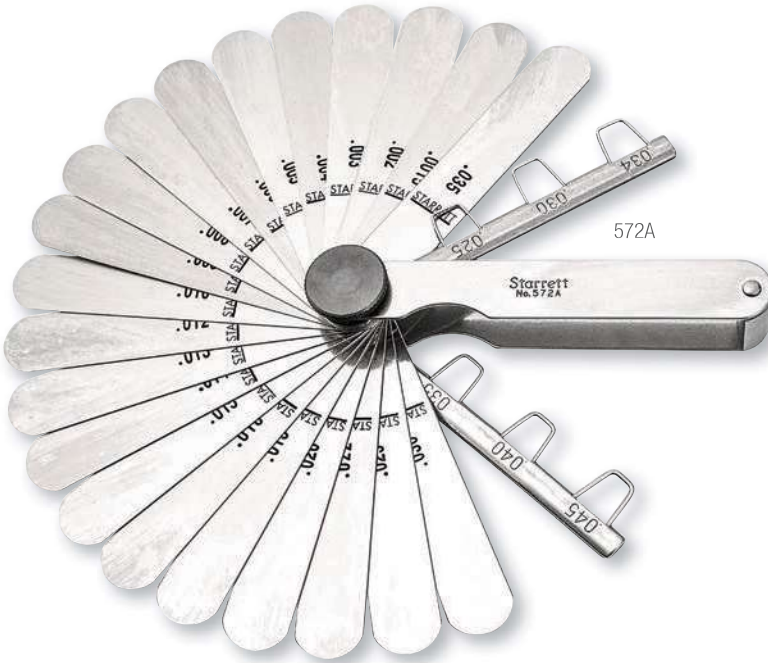
## ENGLISH AND METRIC THICKNESS GAGES

### .0015-.200"/0.03-5MM

These gages are used in automotive, aviation, diesel and farm equipment manufacture and service and also in jig, fixture, gage and experimental work. Especially useful in adjusting tappets, spark plugs, distributor points, checking bearing clearances and gear play, fitting pistons, rings and pins and gaging narrow slots. Made in a wide range of types and sizes, each having from 6 up to 26 leaves ranging in thickness from .0015-.200" and 0.03-5mm thick, straight or tapered.

- Leaves made of finest tempered-steel, carefully finished to correct thickness, individually tested and marked with thickness
- Locking device on most gages permits securely locking one or more leaves in position
- Leaves easily removed or replaced
- Rugged, substantial steel case protects leaves





**Inch Reading Thickness Gages with Straight Leaves**

Cat. No.	EDP	No. of Leaves	Size Leaves	(Range) Leaf Thickness (Inches)	Description/Remarks
172A	50649	9	1/2 x 3-1/32"	.0015, .002, .003, .004, .006, .008, .010, .012, .015	With Locking Device
66	50314	26	1/2 x 3-1/32"	.0015, .002, .0025, .003, .004, .005, .006, .007, .008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .023, .024, .025	With Locking Device
66B	57097	31	1/2 x 3-1/32"	.0015, .002, .0025, .003, .004, .005, .006, .007, .008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .023, .024, .025, .026, .028, .030, .032, .035	With Locking Device
467	52464	13	1/2 x 4-1/2"	.0015, .002, .003, .004, .006, .008, .010, .020, .030, .040, .075, .100, .200	With Locking Device
172E	50654	8	1/2 x 12"	.002, .003, .004, .005, .006, .008, .010, .015	With Locking Device
572A	57098	22	1/2 x 3-1/32"	.0015, .002, .0025, .003, .004, .005, .006, .007, .008, .009, .010, .012, .013, .014, .015, .016, .018, .020, .022, .025, .030, .035 6 Spark Plug Wire Gages: .025, .030, .034, .035, .040, .045	With Locking Device and Spark Plug Wire Gages
572B	57099	22	1/2 x 3-1/32"	.0015, .002, .0025, .003, .004, .005, .006, .007, .008, .009, .010, .012, .013, .014, .015, .016, .018, .020, .022, .025, .030, .035	With Locking Device

**Inch Reading Thickness Gages with Tapered Leaves**

66T	50315	26	1/2-1/4 x 3-1/32"	.0015, .002, .0025, .003, .004, .005, .006, .007, .008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .023, .024, .025	With Locking Device
172AT	50650	9	1/2-1/4 x 3-1/32"	.0015, .002, .003, .004, .006, .008, .010, .012, .015	With Locking Device
172CT	50652	8	1/2-1/4 x 6"	.002, .003, .004, .006, .008, .010, .012, .015	With Locking Device

**Millimeter Reading Thickness Gages with Straight Leaves**

66MA	55974	20	12.7 x 77mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.0	With Locking Device
173MA	57086	13	12.7 x 77mm	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50	With Locking Device
467M	52465	13	12.7 x 114mm	0.04, 0.05, 0.06, 0.07, 0.08, 0.10, 0.15, 0.20, 0.30, 1.0, 2.0, 3.0, 5.0	With Locking Device

**Millimeter Reading Thickness Gages with Tapered Leaves**

172MBT	50656	9	12.7-7 x 114mm	0.04, 0.05, 0.06, 0.07, 0.08, 0.10, 0.15, 0.20, 0.30	With Locking Device
173MAT	57087	13	12.7-7 x 77mm	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50	With Locking Device
173MCT	57088	13	12.7-7 x 152mm	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50	With Locking Device



## "FEELER" STOCK

### 666 THICKNESS GAGE OR "FEELER" STOCK IN ROLLS

25' DISPENSER CASES .001-.015"

20', 25' CARDBOARD BOXES .0005-.025"

### 666M THICKNESS GAGE OR "FEELER" STOCK IN ROLLS

7.6M DISPENSER CASES 0.03-0.35MM

6.1M CARDBOARD BOXES 0.40-0.50MM

This handy product includes thickness stock, housed in convenient rewindable dispenser rolls. Having the thickness stock in a case makes it very useful for cutting off the required length for adjusting tappets, spark plugs, distributor points, checking bearing clearances and gear play, fitting pistons, rings and pins, gaging narrow slots, etc. This stock is also useful for shimming in fixturing and die work.

- Handy 25' and 7.6m rolls 1/2" and 12.7mm wide, in a compact, sturdy plastic rewindable dispenser case. This case handles stock up to .015" and 0.35mm only.
- Rewind feature permits retracting thinner feeler stock into the case, preventing damage
- Roll stock in thicknesses of .016" or 0.40mm and over is furnished in 20' or 6m (nondispensable) rolls in a cardboard box. Also, the .0005", 25' size is furnished in a cardboard box.
- Made of the finest tempered steel
- Marked every 6" or 150mm with a line, thickness in thousandths of an inch or in hundredths of a mm (exception 666-1/2)
- Case provides the ability to snip off the desired length without any waste



#### Inch Reading Rolls – Dispenser Case

Thickness	Length	Cat. No.	EDP
.001"	25'	666-1	52796
.0015"		666-1 1/2	52797
.002"		666-2	52798
.0025"		666-2 1/2	52799
.003"		666-3	52800
.004"		666-4	52801
.005"		666-5	52802
.006"		666-6	52803
.007"		666-7	52804
.008"		666-8	52805
.009"		666-9	52806
.010"		666-10	52807
.011"		666-11	52808
.012"		666-12	52809
.013"		666-13	52810
.014"	666-14	52811	
.015"	666-15	52812	

#### Inch Reading Rolls – Cardboard Box

.0005"	25'	666-1/2	64210
.016"	20'	666-16	52813
.017"		666-17	52814
.018"		666-18	52815
.019"		666-19	52816
.020"		666-20	52817
.021"		666-21	52818
.022"		666-22	52819
.023"		666-23	52820
.024"		666-24	52821
.025"		666-25	52822

#### Millimeter Reading Rolls – Dispenser Case

0.03mm	7.6m	666M-3	52823
0.04 mm		666M-4	52824
0.05mm		666M-5	52825
0.06mm		666M-6	52826
0.08mm		666M-8	52827
0.10mm		666M-10	52828
0.15mm		666M-15	52829
0.20mm		666M-20	52830
0.25mm		666M-25	52831
0.30mm		666M-30	52832
0.35mm	666M-35	52833	

#### Millimeter Reading Rolls – Cardboard Box

0.40mm	6.1m	666M-40	52834
0.45mm		666M-45	52835
0.50mm		666M-50	52836

# "FEELER" STOCK

## 667 THICKNESS GAGES OR "FEELER" STOCK

.0005-.030"

## 667M THICKNESS GAGES OR "FEELER" STOCK

0.03-0.50MM

These gages are widely used in automotive, aviation, diesel and farm equipment manufacture and service and also in jig, fixture, gage and experimental work.

- Inch sizes are 12" long, 1/2" wide and furnished in 33 different thicknesses ranging from .0005-.030"
- Millimeter sizes are furnished in 300mm lengths, 12.7mm wide in 14 different thicknesses ranging from 0.03-0.50mm
- Rounded ends make stock easier to work with
- Made of the finest tempered steel
- Each piece marked every 6" with thickness (exception 667-1/2) and in individual envelope
- With convenient 3/16" (5mm) hole punched in the end for hanging



Millimeter Gages – 300mm		
Thickness	Cat. No.	EDP
0.03mm	667M-3	52869
0.04mm	667M-4	52870
0.05mm	667M-5	52871
0.06mm	667M-6	52872
0.08mm	667M-8	52873
0.10mm	667M-10	52874
0.15mm	667M-15	52875
0.20mm	667M-20	52876
0.25mm	667M-25	52877
0.30mm	667M-30	52878
0.35mm	667M-35	52879
0.40mm	667M-40	52880
0.45mm	667M-45	52881
0.50mm	667M-50	52882

## THICKNESS GAGE OR "FEELER" STOCK ASSORTMENTS

Two complete, handy thickness gage assortments:

S667A (Inch) set consists of one each of 32 different pieces, 1/2" x 12" long from .001" through .030" thick (the entire individual range, with exception of the .0005" thickness, as listed on previous page).

S667MA (Millimeter) set consists of one each of 14 different pieces, 12.5mm x 300mm long from 0.03mm through 0.50mm thick (complete range, as on previous page).

S667D Bulk inch-reading assortment consists of 108 pieces, 1/2" x 12", in nine different thicknesses from .0015" to .015" thick. Twelve pieces of a size are packed in a box and each piece in an individual envelope. The nine boxes, together with an extra box for holding odd pieces, are packed in a convenient storage carton.



Inch Gages – 12"		
Thickness	Cat. No.	EDP
.0005"	667-1/2	64209
.001"	667-1	52837
.0015"	667-1 1/2	52838
.002"	667-2	52839
.0025"	667-2 1/2	52840
.003"	667-3	52841
.004"	667-4	52842
.005"	667-5	52843
.006"	667-6	52844
.007"	667-7	52845
.008"	667-8	52846
.009"	667-9	52847
.010"	667-10	52848
.011"	667-11	52849
.012"	667-12	52850
.013"	667-13	52851
.014"	667-14	52852
.015"	667-15	52853
.016"	667-16	52854
.017"	667-17	52855
.018"	667-18	52856
.019"	667-19	52857
.020"	667-20	52858
.021"	667-21	52859
.022"	667-22	52860
.023"	667-23	52861
.024"	667-24	52862
.025"	667-25	52863
.026"	667-26	52864
.027"	667-27	52865
.028"	667-28	52866
.029"	667-29	52867
.030"	667-30	52868

Individual Assortments		
Cat. No.	EDP	Description
S667A	63274	Complete Starrett Inch Thickness Gage Assortment – One Each, 32 Different Sizes
S667MA	64949	Complete Starrett Millimeter Thickness Gage Assortment – One Each, 14 Different Sizes
Bulk Assortment		
S667D	52883	Bulk Quantity Assortment: 108 Pieces in Nine Thickness Sizes; 12 Pieces of a Size per Box; .0015, .002, .003, .004, .006, .008, .010, .012, .015"

Packed 12 pieces of a size in a box; each piece in individual envelope; 9 boxes in a carton.



## THICKNESS GAGES

### 806 THICKNESS GAGE OR "FEELER" STOCK HOLDERS

#### CLAMP AT ONE END

### 806D THICKNESS GAGE OR "FEELER" STOCK HOLDERS

#### CLAMP AT BOTH ENDS

These 806 Thickness Gage Holders provide a handy, convenient means of rigidly holding single leaves or strips of thickness gage stock of any thickness from .001-.025" (0.03-0.5mm).

Stock up to 6" (150mm) long is easily inserted in the holder and firmly gripped in the desired position by a cam lock. This permits all of the stock to be used, because as it wears from use, the defective end can be snipped off and new stock pulled out until entirely used up.

Available in two types as listed in the chart on the right, either to clamp stock at one end or both ends. Dull nickel finish. Size approximately 3/32" thick x 9/16" wide x 5-1/4" long (2.4 x 14 x 130mm). 806D holders have contrasting finish to eliminate the possible confusion on which end holds the thicker or thinner stock.



806 with stock clamped on one end

806D with stock clamped on both ends

Thickness Gage or "Feeler" Stock Holders		
Cat. No.	EDP	Description
806	53039	Holder Only - clamps stock at one end
806D	53040	Holder Only - clamps stock at both ends

### 245, 245M ENGINEERS' COMBINATION TAPER, WIRE AND THICKNESS GAGE

#### INCH/MILLIMETER

Consists of a wire gage, a taper gage for measuring slot widths, and an assortment of thickness gage leaves, all folding within a compact steel case. The gage measures 1/2" wide x 4-3/4" long (12.7 x 120mm) and has a locking device to lock any leaf or leaves in position.

Both 245 and 245M have an English Standard wire gage leaf similar to our 188, but with shorter range, sizes numbered from 19-36 (.042-.004"), plus two additional sizes, 1/16" and 1/8". The reverse side has decimal equivalents in thousandths.

245 has a taper gage leaf for measuring slot widths from 1/64-3/16" in 64ths of an inch, the reverse side having a 3" scale graduated in 8ths and 16ths. It has nine thickness or feeler leaves as follows: .002, .003, .004, .006, .008, .010, .012, .015 and 1/16".

245M has a taper gage leaf for measuring slot widths from 0.5-5mm in 0.5mm, the reverse side having an 80mm scale graduated in mm and 1/2mm. It has eleven thickness or feeler leaves as follows: 0.04, 0.05, 0.06, 0.07, 0.08, 0.10, 0.15, 0.20, 0.30, 1 and 2mm.



Inch Reading		
Cat. No.	EDP	Description
245	51170	With taper gage, English standard wire gage and 9 Inch reading thickness gage leaves
Millimeter Reading		
245M	51171	With taper gage, English standard wire gage and 11mm reading thickness gage leaves