

**Master Taperlock  
Fastener Gauge Kit**

# Master TAPERLOCK Fastener Gauge Kit

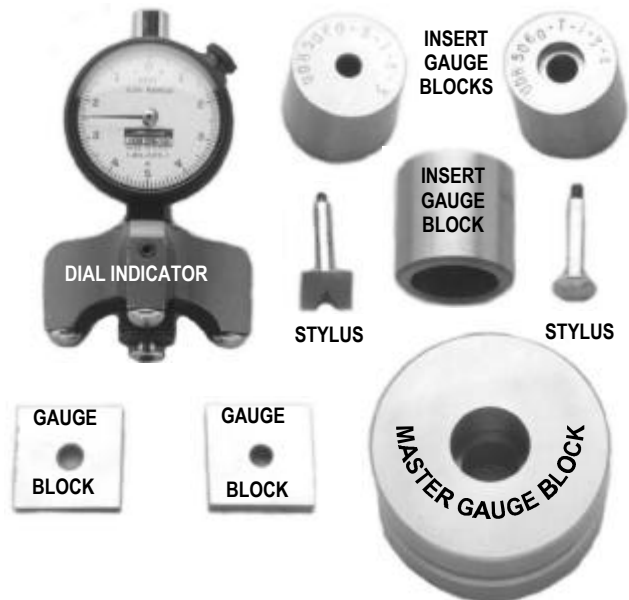
**UTK-268002-27-4 KIT, Group 1 thru 4**

UNITED'S Master Taperlock Fastener Gauge Kit contains all of the required gauges and tools to inspect Taperlock Fasteners.

Kit includes all necessary gauges to check sizes for 5/32", 3/16", 1/4", 5/16", 3/8" & 7/16" Groups 1 thru 4 for both Shear Head and Tension Head Fasteners.



**CASE SIZE IS 24" L x 24" W x 5" HEIGHT  
RIB-I STACKABLE STYLE**



**CONTENTS**

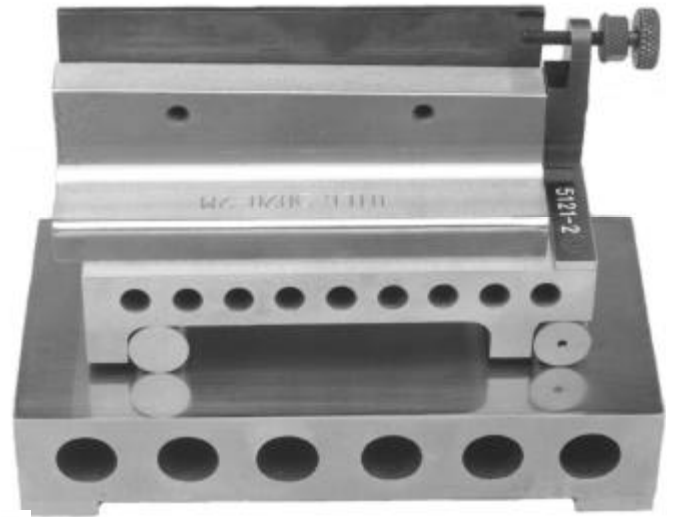
2	UDB 5060-S-I-1-05	Insert, Gauge Block, Shear Hd., 5/32", Grp. 1	2	UDB 5060-T-I-4-3	Insert, Gauge Block, Tension Hd., 3/16", Grp. 4
2	UDB 5060-S-I-2-05	Insert, Gauge Block, Shear Hd., 5/32", Grp. 2	2	UDB 5060-T-I-1-4	Insert, Gauge Block, Tension Hd., 1/4", Grp. 1
2	UDB 5060-S-I-3-05	Insert, Gauge Block, Shear Hd., 5/32", Grp. 3	2	UDB 5060-T-I-2-4	Insert, Gauge Block, Tension Hd., 1/4", Grp. 2
2	UDB 5060-S-I-4-05	Insert, Gauge Block, Shear Hd., 5/32", Grp. 4	2	UDB 5060-T-I-3-4	Insert, Gauge Block, Tension Hd., 1/4", Grp. 3
2	UDB 5060-S-I-1-3	Insert, Gauge Block, Shear Hd., 3/16", Grp. 1	2	UDB 5060-T-I-4-4	Insert, Gauge Block, Tension Hd., 1/4", Grp. 4
2	UDB 5060-S-I-2-3	Insert, Gauge Block, Shear Hd., 3/16", Grp. 2	2	UDB 5060-T-I-1-5	Insert, Gauge Block, Tension Hd., 5/16", Grp. 1
2	UDB 5060-S-I-3-3	Insert, Gauge Block, Shear Hd., 3/16", Grp. 3	2	UDB 5060-T-I-2-5	Insert, Gauge Block, Tension Hd., 5/16", Grp. 2
2	UDB 5060-S-I-4-3	Insert, Gauge Block, Shear Hd., 3/16", Grp. 4	2	UDB 5060-T-I-3-5	Insert, Gauge Block, Tension Hd., 5/16", Grp. 3
2	UDB 5060-S-I-1-4	Insert, Gauge Block, Shear Hd., 1/4", Grp. 1	2	UDB 5060-T-I-4-5	Insert, Gauge Block, Tension Hd., 5/16", Grp. 4
2	UDB 5060-S-I-2-4	Insert, Gauge Block, Shear Hd., 1/4", Grp. 2	2	UDB 5060-1	Master Gauge Block
2	UDB 5060-S-I-3-4	Insert, Gauge Block, Shear Hd., 1/4", Grp. 3	1	UDB DI-105	Dial Indicator, .0001
2	UDB 5060-S-I-4-4	Insert, Gauge Block, Shear Hd., 1/4", Grp. 4	1	UDB DI-120	Dial Indicator, .0005
2	UDB 5060-S-I-1-5	Insert, Gauge Block, Shear Hd., 5/16", Grp. 1	1	UDB DIS-30	Stylus
2	UDB 5060-S-I-2-5	Insert, Gauge Block, Shear Hd., 5/16", Grp. 2	1	UDB DIS-40	Stylus
2	UDB 5060-S-I-3-5	Insert, Gauge Block, Shear Hd., 5/16", Grp. 3	1	UDB DIS-50	Stylus
2	UDB 5060-S-I-4-5	Insert, Gauge Block, Shear Hd., 5/16", Grp. 4	1	UTLG 5020-2M	Angle Plate Assembly
2	UDB 5060-S-I-1-6	Insert, Gauge Block, Shear Hd., 3/8", Grp. 1	1	UTLG 5121-1	Parallel Block Assembly
2	UDB 5060-S-I-2-6	Insert, Gauge Block, Shear Hd., 3/8", Grp. 2	1	UTLG 5121-2	Sine Plate Assembly
2	UDB 5060-S-I-3-6	Insert, Gauge Block, Shear Hd., 3/8", Grp. 3	1	UTLG 5015-05	Gauge Block, 5/32"
2	UDB 5060-S-I-4-6	Insert, Gauge Block, Shear Hd., 3/8", Grp. 4	1	UTLG 5015-3	Gauge Block, 3/16"
2	UDB 5060-S-I-1-7	Insert, Gauge Block, Shear Hd., 7/16", Grp. 1	1	UTLG 5015-4	Gauge Block, 1/4"
2	UDB 5060-S-I-2-7	Insert, Gauge Block, Shear Hd., 7/16", Grp. 2	1	UTLG 5015-5	Gauge Block, 5/16"
2	UDB 5060-S-I-3-7	Insert, Gauge Block, Shear Hd., 7/16", Grp. 3	1	UTLG 5015-6	Gauge Block, 3/8"
2	UDB 5060-T-I-1-3	Insert, Gauge Block, Tension Hd., 3/16", Grp. 1	1	UTLG 5015-7	Gauge Block, 7/16"
2	UDB 5060-T-I-2-3	Insert, Gauge Block, Tension Hd., 3/16", Grp. 2	1	UCC 268002-635	Rib-I Case, Foam Inserts
2	UDB 5060-T-I-3-3	Insert, Gauge Block, Tension Hd., 3/16", Grp. 3			

# UTLG 5020 Series Taperlock Angle Gauge Plate Assembly

*Taperlock Angle Gauge Plate Assy*

UNITED'S Taperlock Angle Gauge Plate Assembly is designed to ensure the customer with the proper Taperlock Gauging Tooling. The correct inspection method is outlined in Taperlock Inspection Specifications and Procedures.

Taperlock Fastener Diameter Specifications require the use of a Angle Gauge Plate, Sine Plate, Parallel Block and various special angle taper pins.



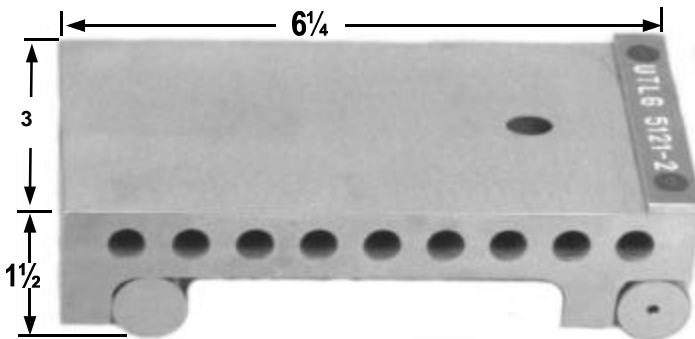
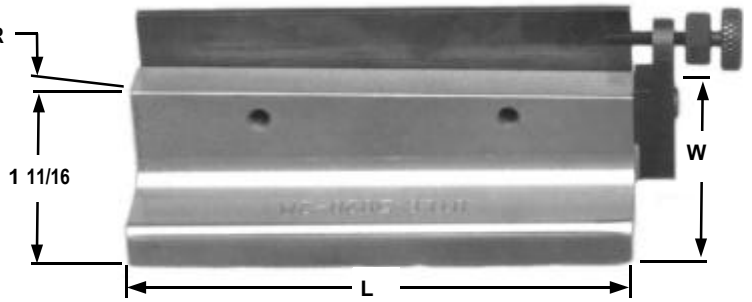
**UTLG 5020-2M ANGLE GAUGE PLATE**  
WITH ADJUSTABLE MICROMETER HEAD



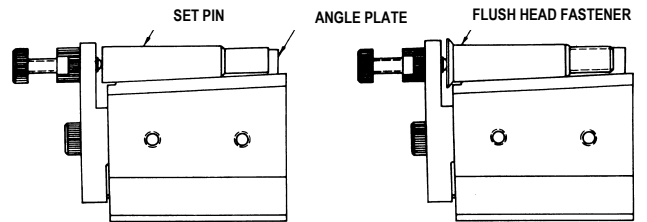
GAUGE NUMBER	W – WIDTH	L – LENGTH
UTLG 5020-1	2.0	4.0
UTLG 5020-2	3.0	6.0

ADD THE LETTER 'M' TO TOOL NUMBER FOR ADJUSTABLE MICROMETER HEAD STYLE AS SHOWN ABOVE

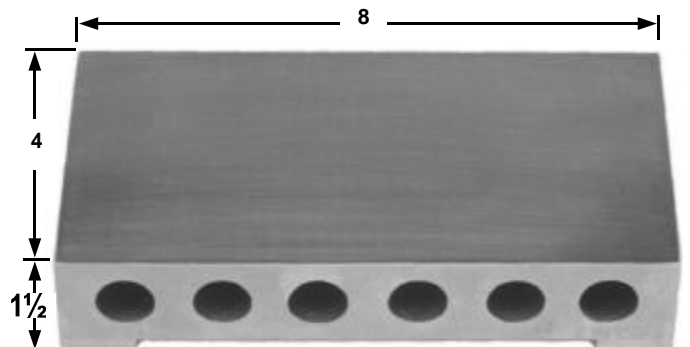
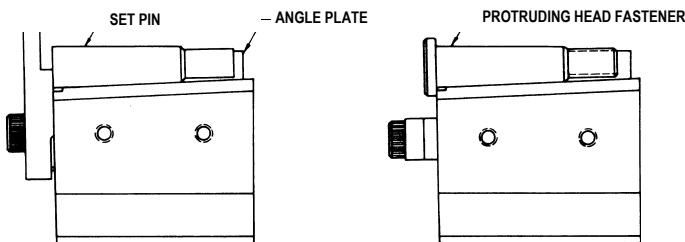
**UTLG 5020-2 ANGLE GAUGE PLATE**  
WITH ADJUSTABLE BOLT HEAD STOP



**UTLG 5121-2 SINE PLATE**



**UTLG 5121-1 PARALLEL GAUGE BLOCK**

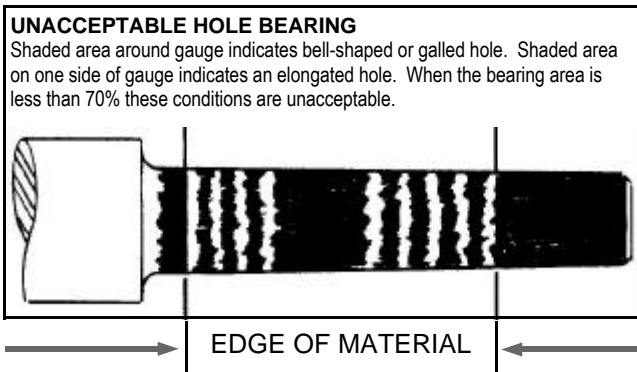
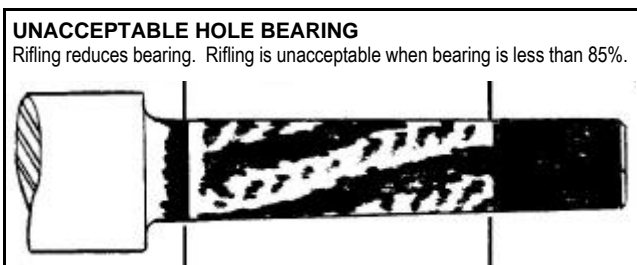
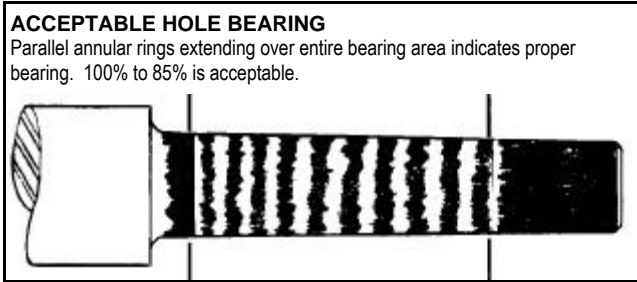
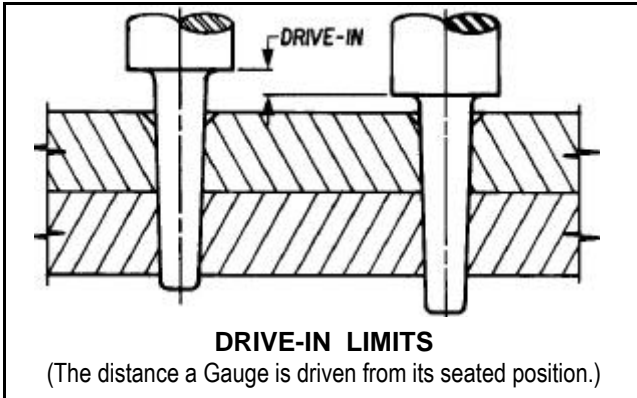


# Taper Hole Gauges

# Taper Hole Gauges

## UNITED TAPER HOLE GAUGES

A TAPERED HOLE CANNOT BE MEASURED WITH BALL GAGES AND MICROMETERS!



USE **UNITED'S** TAPER HOLE GAUGE TO INSPECT THE CONDITION OF THE TAPERED HOLE AND INDICATE PROPER BEARING.

### INDICATIONS:

Out of round, bell-shaped or rifled holes reduce the bearing area and must be detected.

### TECHNIQUE:

Apply a thin coat of blue dye to the Shank of the Checking Gauge. Apply blue dye to a pad of cheese cloth and rotate Gauge on dyed cloth until shank bearing area is coated.

Smooth out light dye coating by rubbing in longitudinal direction with light finger pressure.

Excessive dye will cover hole discrepancies.

Insert dyed Gauge into hole until seated. Drive the Gauge into the hole with the hammer tool. Three or four solid strokes are normally sufficient.

Be careful not to rotate the tool during installation.

Then remove and read. Remove the Gauge by reversing the direction of the impact hammer.

NOMINAL FASTENER SIZE	DRIVE-IN LIMIT	
	MIN	MAX
5/32 3/16 1/4	1/64	3/64
5/16 3/8 7/16	1/32	1/16
1/2	3/64	5/64
9/16	3/64	3/32
5/8	1/16	3/32
3/4	1/16	3/32
7/8 1"	5/64	1/4

These are approximate values. Maximum value applies to initial hole preparation. Minimum value applies to holes which have been reworked by hand reaming or burnishing.

The minimum bearing for acceptable holes is 85%.

# Assure Full Bearing Fastener Holes

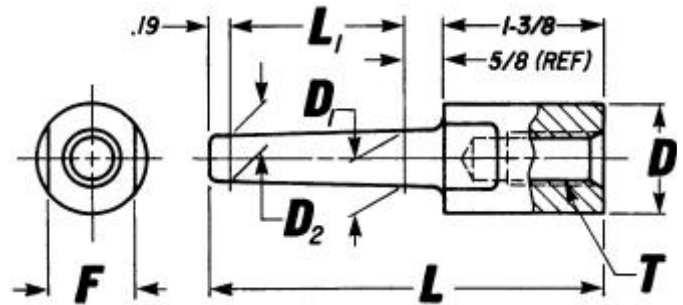
## Taper Hole Gauge Selection

SELECT THE PROPER TAPER HOLE GAUGE TO  
CORRESPOND WITH THE FASTENER YOU ARE  
INSTALLING.

SELECT THE GAUGE IMPACT TOOL FROM THE NEXT  
PAGE WHICH FITS THE TAPER HOLE GAUGE.

INSPECTED to .000080 PER INCH  
.2500 ±.001 INCLUDED TAPER PER FOOT (±.200833  
PER INCH. TANGENT OF INCLUDED ANGLE .000083)

### UNITED TAPER HOLE GAUGES



The Finest Ground Taper Finish Available!

**AUTOMATIC WEAR CHECK**

**RETURN TO UNITED TO REFURBISH**

**UNITED TAPER HOLE GAUGES** provide you with an automatic wear check. The Fastener Size and Group number are etched on the Shank of the Gauge to a depth of .0001 to .0002.

When the marking wears and becomes faint, the Gauge is out of size.

When the marking has faded completely, the Gauge has been worn .0002 or more and should be replaced or returned to **UNITED** and refurbished.

#8 RMS  
FINISH



PATENTED

PART NO. *	FASTENER SIZE and GROUP	D	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L	F	T THREAD
UDB-756072	5/32 1-3	9/16	.188	.163	1.200	3.5	1/2	5/16 - 24
UDB-756074	5/32 4-5	9/16	.204	.171	1.584	3.5	1/2	5/16 - 24
UDB-756076	3/16 1-3	9/16	.220	.189	1.488	3.7	1/2	5/16 - 24
UDB-756078	3/16 4-5	9/16	.241	.200	1.968	4.2	1/2	5/16 - 24
UDB-756080	1/4 1-3	45/64	.288	.249	1.872	4.1	5/8	7/16 - 20
UDB-756082	1/4 4-5	45/64	.314	.262	2.496	4.7	5/8	7/16 - 20
UDB-756084	5/16 1-3	29/32	.354	.311	2.064	4.3	3/4	7/16 - 20
UDB-756086	5/16 4-5	29/32	.382	.325	2.736	4.9	3/4	7/16 - 20
UDB-756088	3/8 1-3	29/32	.420	.373	2.256	4.4	3/4	7/16 - 20
UDB-756090	3/8 4-5	29/32	.451	.388	3.024	5.2	3/4	7/16 - 20
UDB-756092	7/16 1-3	1-3/16	.490	.435	2.640	4.8	1"	9/16 - 18
UDB-756094	7/16 4-5	1-3/16	.526	.453	3.504	5.7	1"	9/16 - 18
UDB-756096	1/2 1-3	1-3/16	.560	.497	3.024	5.2	1"	9/16 - 18
UDB-756098	1/2 4-5	1-3/16	.602	.518	4.179	6.4	1"	9/16 - 18
UDB-756100	9/16 1-3	1-3/16	.651	.560	4.368	6.6	1"	9/16 - 18
UDB-756102	9/16 4-5	1-3/16	.713	.591	5.856	8.0	1"	9/16 - 18
UDB-756104	5/8 1-3	1-3/16	.721	.622	4.752	6.9	1"	9/16 - 18
UDB-756106	5/8 4-5	1-3/16	.790	.656	6.432	8.6	1"	9/16 - 18
UDB-756108	3/4 1-3	1-3/16	.862	.747	5.520	7.7	1"	9/16 - 18
UDB-756110	3/4 4-5	1-3/16	.940	.786	7.392	9.6	1"	9/16 - 18
UDB-756112	7/8 1-3	1-5/16	1.015	.877	6.640	8.8	1-3/16	9/16 - 18
UDB-756114	7/8 4-5	1-5/16	1.109	.971	6.640	8.8	1-3/16	9/16 - 18
UDB-756116	1" 1-3	1-5/16	1.157	1.003	7.400	9.6	1-3/16	9/16 - 18
UDB-756118	1" 4-5	1-5/16	1.260	1.106	7.400	9.6	1-3/16	9/16 - 18

\* FOR HARD CHROME FINISH ADD 'HC' TO PART NO.

1-1/8 AND 1-1/4 FASTENER SIZE GAUGES ARE AVAILABLE.

# Taper Gauge Impact Tools

# Taper Gauge Impact Tools

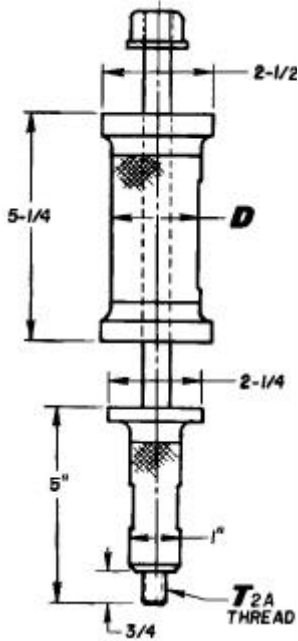
## UNITED TAPER GAUGE IMPACT TOOLS



FOR USE WITH THE  
TAPER HOLE GAUGE



Keep fingers away  
from impact area!



USE **UNITED'S** TAPER GAUGE IMPACT TOOL WITH THE TAPER HOLE GAUGE SHOWN ON THE PREVIOUS PAGE.

THE GAUGE IMPACT TOOL DELIVERS

**STRAIGHT  
UNIFORM  
PRESSURE  
WITH  
EACH  
BLOW**

**PROVIDING CONSISTENT GAUGE READINGS.**

**REMOVE THE GAUGE FROM THE HOLE BY REVERSING THE DIRECTION OF IMPACT.**

**Keep fingers away from impact area!**

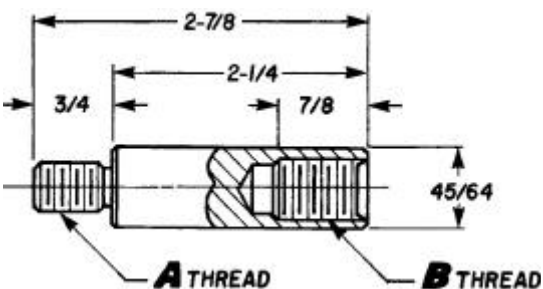
PART NO.	D	T 2A THD	USE WITH GAUGE NO.
UDB-755460	1-1/4	5/16 - 24	UDB-756072 THRU UDB-756078
UDB-755461	1-1/4	7/16 - 20	UDB-756080 THRU UDB-756090
UDB-755462	2-1/16	9/16 - 18	UDB-756092 THRU UDB-756118

Available in two weights, one for the smaller gauges and a heavier model for the larger gauges.

UDB-755460 has an aluminum impact handle.

PATENTED

## UNITED THREADED ADAPTER



**UNITED** offers this Threaded Adapter to allow the Impact Tool to be used with ALL Groups of Taper Hole Gauges.

PART NO.	A THREAD	B THREAD
UDB-755364	7/16 - 20	9/16 - 18
UDB-755365	9/16 - 18	7/16 - 20
UDB-755366	5/16 - 24	7/16 - 20

# Taper Countersink Gauge

**The Scratch Test!**

## UNITED TAPER COUNTERSINK GAUGES

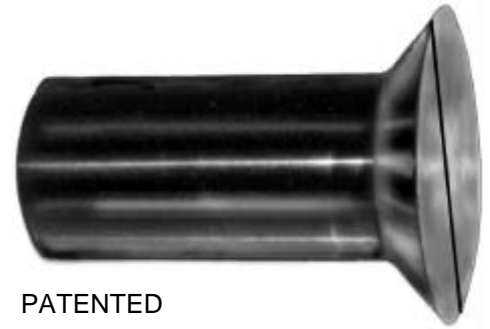
UNITED'S TAPER COUNTERSINK GAUGE CHECKS THE COUNTERSINK OF TAPERED FASTENER HOLES.

IT IS USED ON INCLINED SURFACES.

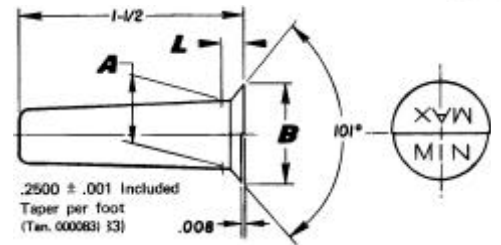
The two varying surfaces on the head are for the high and low tolerances. Always check on the lowest point of any incline so there will be no protrusion of the head after fastener installation.

Made of tough Heat Treated Stainless Steel  
Finished Ground with a Protective Coating.

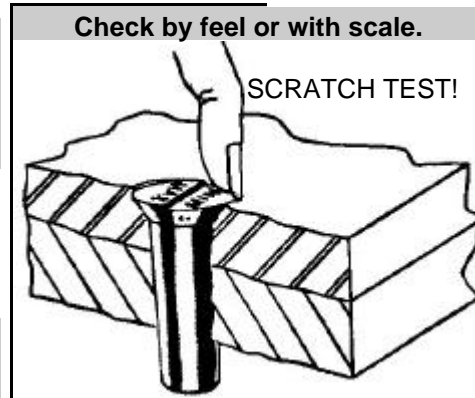
Taper Countersink Gauges are available for nominal Fastener Sizes From 1/4 thru 5/8 diameter and Fastener Groups 1 thru 5.



PATENTED



PART NO.	FASTENER SIZE & GROUP	A	B	L
UDB-756340	1/4 1	.256	.433	.123
UDB-756342	1/4 2	.269	.446	.123
UDB-756344	1/4 3	.282	.459	.123
UDB-756346	1/4 4	.295	.472	.123
UDB-756348	1/4 5	.309	.485	.126
UDB-756350	5/16 1	.319	.514	.132
UDB-756352	5/16 2	.334	.528	.132
UDB-756354	5/16 3	.348	.542	.132
UDB-756356	5/16 4	.362	.557	.132
UDB-756358	5/16 5	.377	.572	.133
UDB-756360	3/8 1	.383	.603	.145
UDB-756362	3/8 2	.398	.618	.145
UDB-756364	3/8 3	.414	.633	.145
UDB-756366	3/8 4	.429	.650	.145
UDB-756368	3/8 5	.446	.667	.146
UDB-756370	7/16 1	.447	.713	.168
UDB-756372	7/16 2	.465	.731	.168
UDB-756374	7/16 3	.483	.749	.168
UDB-756376	7/16 4	.501	.768	.168
UDB-756378	7/16 5	.520	.787	.167
UDB-756380	1/2 1	.511	.802	.177
UDB-756382	1/2 2	.532	.823	.177
UDB-756384	1/2 3	.553	.844	.177
UDB-756386	1/2 4	.574	.865	.177
UDB-756388	1/2 5	.594	.886	.173
UDB-756390	9/16 1	.583	.945	.224
UDB-756392	9/16 2	.614	.976	.224
UDB-756394	9/16 3	.645	1.007	.223
UDB-756396	9/16 4	.676	1.038	.223
UDB-756398	9/16 5	.708	1.069	.224
UDB-756400	5/8 1	.648	1.046	.224
UDB-756402	5/8 2	.682	1.080	.224
UDB-756404	5/8 3	.716	1.114	.224
UDB-756406	5/8 4	.750	1.148	.223
UDB-756408	5/8 5	.783	1.182	.225



The two varying surfaces on the head are for the high and low tolerances.

Always check on the lowest point of any incline so there will be no protrusion of the head after fastener installation.

### TAPER COUNTERSINK GAUGES IN A KIT!

Taper Countersink Gauges may be purchased in sets containing the FIVE GROUP SIZES FOR EACH FRACTIONAL SIZE FASTENER Provided in a sturdy protective handy Kit.

