

INSTRUCTIONS

MANUAL

Kit of Gauges for Inspection of welds

Model: TTSG01



File No.: TEST- V2.3-EN

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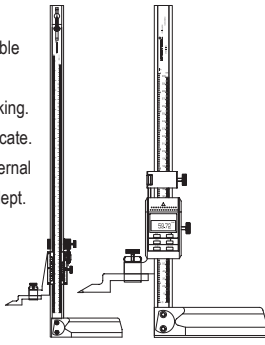
Print Date: Oct 5, 2021

GAUGE USER MANUAL

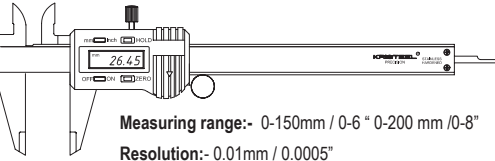
DIGITAL HEIGHT GAUGE

- Features:-**
- 1) Large LCD Screen
 - 2) Inch / Metric Conversion available
 - 3) Large base for rigidity.
 - 4) Carbide Tipped scriber for marking.
 - 5) Supplied with Calibration certificate.
- Uses:** To check and mark any external dimension . In tool room, quality dept.

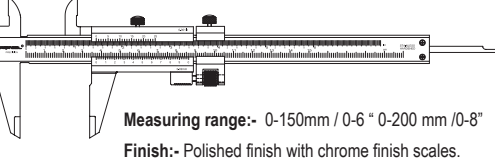
Range:- Digital 12" & 24"
Plain 12", 18" & 24"



DIGITAL VERNIER CALLIPER

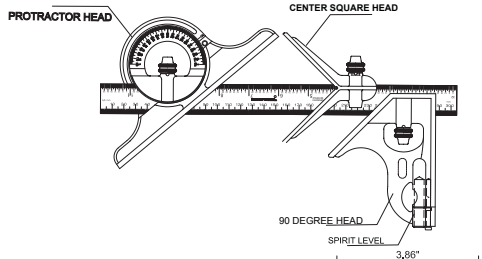


Measuring range:- 0-150mm / 0-6" 0-200 mm / 0-8"
Resolution:- 0.01mm / 0.0005"
Power:- SR44, One 1.55v button cell

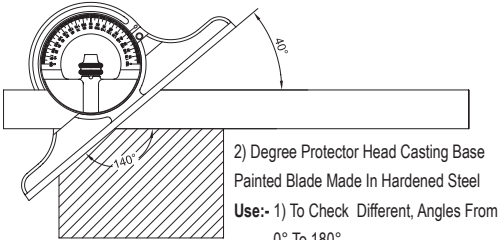


Measuring range:- 0-150mm / 0-6" 0-200 mm / 0-8"
Finish:- Polished finish with chrome finish scales.

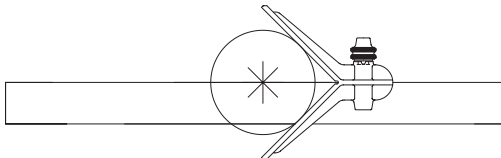
4PC COMBINATION TRY & METER SQUARE



- 1) 90 Degree head Casting base painted Blade made in hardened steel Graduation Type : Metric & English Leastcount :- 0.5mm / 1/32"
- 2) To check and mark 90° and 45° angles.
- 3) To check surface level by spirit level. 3) To check Length / Depth in mm/inches.

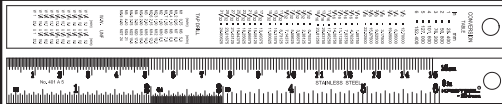


- 2) Degree Protector Head Casting Base Painted Blade Made In Hardened Steel
- Use:- 1) To Check Different Angles From 0° To 180°
2) To Check Surface Level By Spirit Level



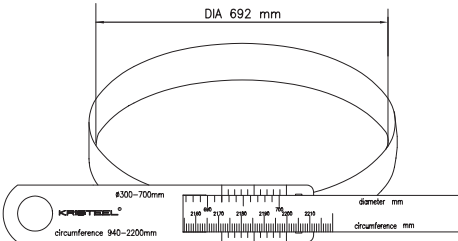
- 3) Center Head ,casting Base Painted, Blade Made In Hardened Steel
- Use:- Finding And Marking Center Point Of Round Discs And Shafts
- Range:- Upto 100 Mm Diameter

STAINLESS STEEL RULERS



Material :- Stainless Steel
Graduation :- mm/inch
Range :- 6", 12", 18", 24", 39", 48", 72", 118" (6" to 3 Meter)

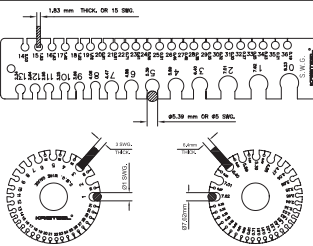
CIRCUMFERENCE GAUGE (PIE TAPE)



To check circumference and OD Diameters of Cylindrical surfaces

Model (1215)	Circumference	Diameter	Model (1215)	Circumference	Diameter
A	60-950	20-300	I	9730-10990	3100-3500
B	940-2200	300-700	J	10980-12250	3500-3900
C	2190-3460	700-1100	K	12240-13510	3900-4300
D	3450-4720	1100-1500	L	13500-14760	4300-4700
E	4710-5980	1500-1900	M	14750-162020	4700-5100
F	5970-7230	1900-2300	N	161010-17280	5100-5500
G	7220-8490	2300-2700	O	17270-18540	5500-5900
H	8480-9740	2700-3100	P	18530-19790	5900-6300

S.W.G ROUND/ RECTANGULAR WIRE GAUGE



Use:- To determine the sheet thickness and Diameters in S.W.Gauge Nos. & Milimeter.

- Other Available Models:-**
- 1) Standard SWG Round Wire Gauge
 - 2) Rectangular Metric Wire Gauge
 - 3) American Wire Gauge For Ferrous Material
 - 4) American Wire Gauge For Non Ferrous Material

DIGITAL TYRE DEPTH GAUGE

Uses:- This rugged gauge, fabricated in stainless steel, will measure the depth of tyre tread depth in mm / inch.

Range:- 0 upto 20 mm

TYRE DEPTH GAUGE

Uses:- To check tyres tread depth.

Material:- Stainless Steel

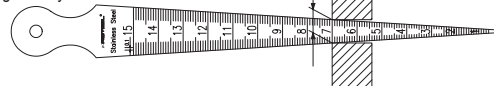
Range:- Upto 54 mm (Small)
Upto 100 mm (Big)

Least count:- 0.1 mm

Finish:- Polished

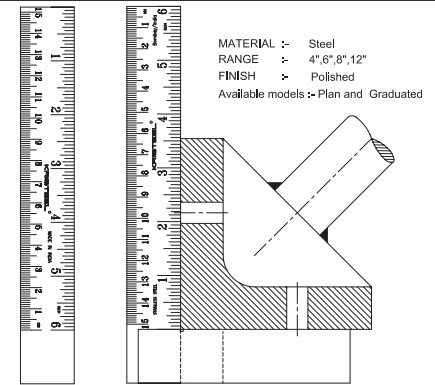
BORE GAUGES

Uses:- to determine the Diameters of any bore, insert the Bore Gauge in the hole to be checked, the point where gauge contacts the bore given the dimension of the hole. Its measure the dimension from 1 mm to 15 mm with increment of 0.1 mm also use full gage to check plate gap in welding geometry.



Model	ACF	A	B	C	D
Range	1-15mm (Chrome finish)	1-15mm	15-30mm	30-45mm	(4 Leaf) 1/16" To 1 1/16"

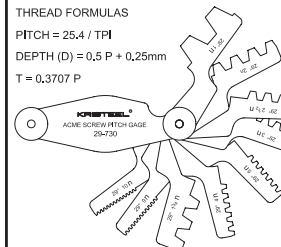
ENGINEERS SQUARE



ACME SCREW PITCH GAGUE

THREAD FORMULAS

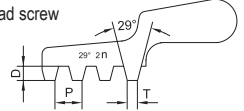
PITCH = 25.4 / TPI
DEPTH (D) = 0.5 P + 0.25mm
T = 0.3707 P



SR. NO.	T.P.I. n	THREAD PITCH mm	THREAD DEPTH mm
1	1	25.4	12.95
2	1 1/2	19.05	9.775
3	1 1/2	16.933	8.716
4	1 3/4	14.514	7.507
5	2	12.7	6.6
6	2 1/2	10.16	5.33
7	3	8.466	4.483
8	3 1/2	7.257	3.878
9	4	6.35	3.425
10	5	5.08	2.79
11	6	4.233	2.366
12	7	3.628	2.064
13	8	3.175	1.837
14	9	2.822	1.661
15	10	2.54	1.52
16	12	2.116	1.308

Range:- 10n to 1n (16 blades)

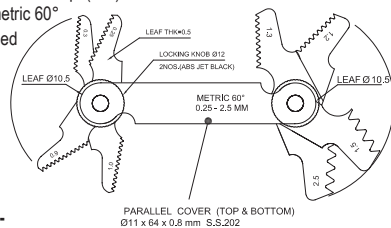
Uses:- To Check thread profile of lead screw
n= threads per inch (TPI)



SCREW PITCH GAUGE

Material :- Carbon Steel & Stainless Steel
Range:- 30 leaves 4-80 tpi (55°) and metric 60°

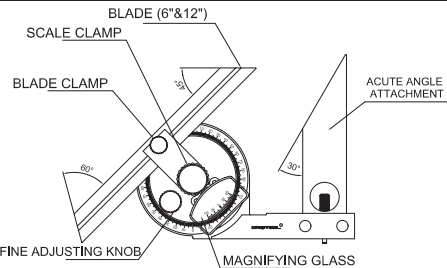
Finish:- Polished



Feature /USE:-
To check and determine the screws pitches for ISO metric threads and with worth 55 degree and United Nations threads unf/unc 60°
Available models:

- SPG
SPG SS
1) Metric 60° 0.25 to 6.0mm
2) English 4 to 84 tpi (55° and 60°)

UNIVERSAL BEVEL PROTRACTOR



Uses:- KRISTEEL Universal Bevel Protractor is a high precision angle gauge for setting and inspection all types of machines, metal moulds and jigs, fixtures. Blade are available in 150 mm (6") and 300 mm (12") .
Features:- 1) Minimum reading (least count) in 5 minutes. 2) Main Scale and Vernier scale are on the same plane to eliminate reading parallax. 3) Fine adjustment of the blade insures precision measuring and laying out of angle. 4) Main parts are of hardened stainless steel to prevent rust. Combined with an attachment or height Gauge, a wide range of measurement is available.

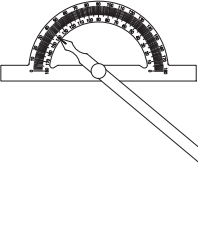
DEGREE PROTRACTOR

Range:- 0° to 180°

Least count :- 1 Degree

Available Models:

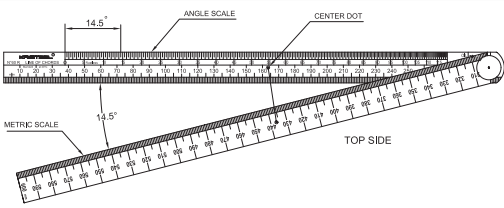
- 1) Round Head Degree Protractor.
- 2) Rectangular Head Degree Protractor



DEGREE PROTRACTOR GAUGE - HEAVY DUTY

Use :- To check angles from 0° to 180°
Range :- 6" Arm & 8" Arm

600mm FOLDING RULE WITH ANGLE CALCULATION CHORD



Material:- Stainless Steel | Range:- Upto 24" (600mm) | Finish:- Polished

Leastcount:- Linear 0.1mm to Angular 0.5°

Rule incorporates a scale from 0° to 120° in 1/2°

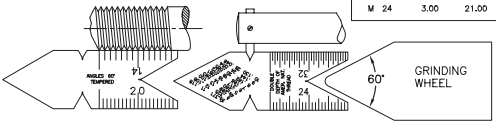
Two center dots are provided, one on each blade and with the aid of dividers, the rule can be set at any angle, or an existing angle can be determined line of chords. The circumference scale indicates the circumference by measuring the diameter.

CENTER GAUGE 55° / 60°

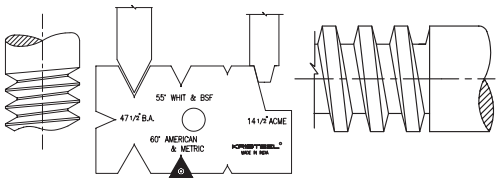
Uses:- The Center gauge is used to set thread cutting tools. For scales on the gauge are used for determining the number of threads per inch. The gauge is also used to check out threads. Useful tool to check grinding wheel angles.

DETAIL OF CARD

TAP SIZE	STD. PITCH	DRILL SIZE
M 1.6	0.35	1.25
M 2	0.40	1.60
M 3	0.50	2.50
M 4	0.70	3.30
M 5	0.80	4.20
M 6	1.00	5.00
M 8	1.25	6.75
M 10	1.50	8.50
M 12	1.75	10.50
M 14	2.00	12.00
M 16	2.00	14.00
M 18	2.50	15.50
M 20	2.50	17.50
M 22	2.50	19.50
M 24	3.00	21.00



SCREW CUTTING GAUGE



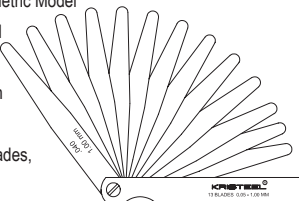
Uses:- This gauge is used for checking tool angles while machining threads in metal turning lathes. Whitworth, BSF, BA Metric, American National and Acme thread angles are clearly etched on the plate for easy recognition.

FEELER GAUGE ASSY AND STRIPS

Available in both English & Metric Model

Uses:- To check flatness and get between mating parts
Range:- 0.025 mm to 1.0 mm
(0.001" to 0.39)

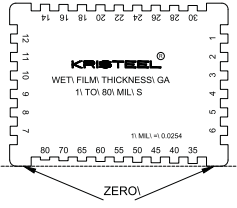
- Available Models:-
- 1) 27 Blades,
 - 2) 12 Blades, 3) 9 Blades
 - 4) Also Available Strips in 12" Length.



WET FILM THICKNESS GAUGE

Range:- 1 to 80 Mil

Uses:- Wet Film Thickness gauges desired to quickly & easily measure the thickness of coatings immediately after they have been applied to a substrate. The Gauge incorporate a series of notches including paints, resins, lacquers, varnishes, gel coat etc. may be measured. The thickness of powder type coatings may be measured before curing.



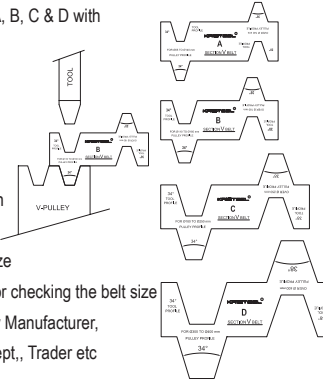
PULLEY GAUGE

Range:- Profile Type – A, B, C & D with 34 & 38 Degree.

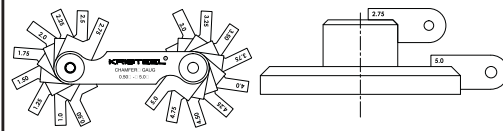
Finish:- Polished

Feature/Use:-

- 1) This Gauge is Made set of 4 Sizes
- 2) Same Gauge Leaf can check Pulley Groove as well as tool angle and size
- 3) Gauge can be used for checking the belt size and type Useful to pulley Manufacturer, Maintain dept. Quality dept., Trader etc



CHAMFER GAUGE

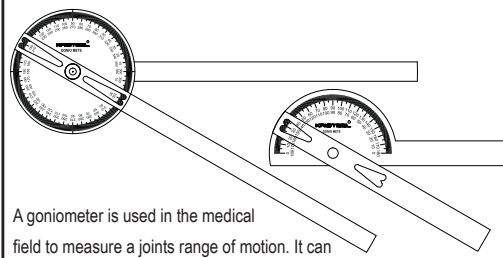


USES:- To determine and check the chamfer of any round or rectangle part Gauges have 18 blades Duty fine edge profiled, numbered six on each blade Useful gauge in Tool Room, Workshop, Quality Control department

Range:- 0.5 to 5.0 mm (18 blades)

Finish:- Polished

GONIOMETER

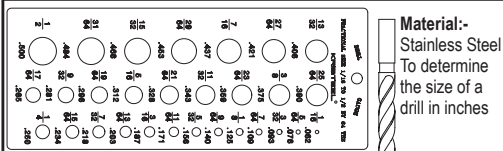


A goniometer is used in the medical field to measure a joints range of motion. It can be helpful in determining if a patient is lacking in mobility due to an injury, or how well he is recovering after sustaining an injury. The term "goniometer" comes from two Greek words that mean "angle" and "measure". This is essentially what you are doing when you measure range of motion—measuring an angle. There are three types Goniometer. 6" & 8" have 180° protractor scale half round model 12" have full round 360° protractor scale

Range:- 6", 8" & 12"

Finish:- Polished

DRILL GAUGE



- Available Models:-
- 1) No. 14 (0.06" To 0.5")
 - 2) No. 15 (0.04" To 0.228"

Material:- Stainless Steel
To determine the size of a drill in inches



GEAR TOOTH PITCH GAUGE

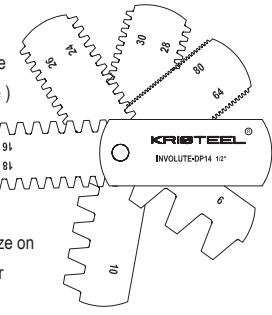
Model	Product Description
GTPG-2722	Gear Tooth Pitch Gauge - (DP 14.5°) 6 - 80 DP
GTPG-2813	Gear Tooth Pitch Gauge - (DP 20°) 6 - 80 DP
GTPG-3115	Gear Tooth Pitch Gauge - (MMP 14.5°) 0.35 - 4.5MM
GTPG-2666	Gear Tooth Pitch Gauge - (MMP 20°) 0.35 - 4.5MM
GTPG-3121	Gear Tooth Pitch Gauge - (DP 14.5°) 2 - 5 DP
GTPG-3122	Gear Tooth Pitch Gauge - (DP 20°) 2 - 5 DP
GTPG-3123	Gear Tooth Pitch Gauge - (MMP 14.5°) 5 - 12MM
GTPG-3124	Gear Tooth Pitch Gauge - (MMP 20°) 5 - 12MM

Use:- To determine the gear diametral pitch for 14.5° pressure angle (tooth profile- involute type)
Gauge made of stainless Steel by EDM wire cutting and fine blanking process.

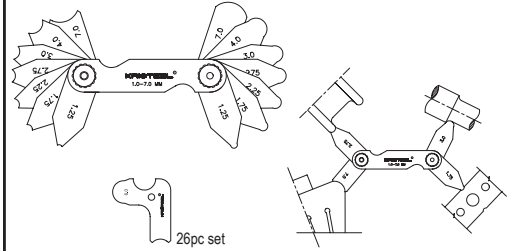
Gauge have 14 blades duly fine edge profiled, numbered pitch size on each blade. Useful gauge in gear manufacturing and inspection. Available in Diameter pitch at 20° Pressure angle

Range:- 6 to 80 (22 pitches)

Finish:- Polished



RADIUS GAUGES

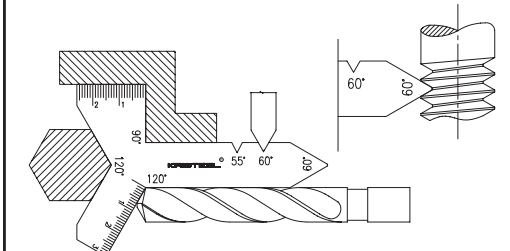


MODEL	A	B	C	ABC	D	26L
1512						
RANGE	1-7mm	7.5-15mm	15.5-25mm	3pc set 1-25mm	25-40mm	26pc set 0.5 to 13mm

Finish:- Polished

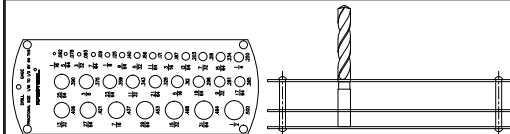
Uses:- To check the radius of concave and convex of any radial part. Usefull in workshop General Purpose, Tool & Die Maker, Wood Working Industries, Quality Dept. etc

UNIVERSAL GAUGE



Uses:- Gauge is combined Screw cutting gage + Twist drill gage + right angle to check cutting tool angle of with worth thread 55° and metric thread 60° Use as a right Angle, can check Drill point angle of 120° with Lip length upto 25 mm.

DRILL STAN



Material:- Steel

Range:- Drills from 1/16" To 1/2" (29 Drills)

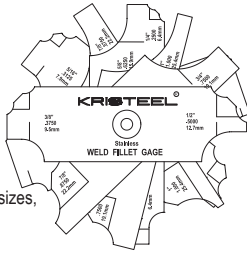
Finish:- Top plate chrome or nickel plated

Feature / Use:-

To keep drills in their specified size hole
This will help to identify quickly require dia drills
Hands drills stand keep 29 drills
Top plate has permanent etched drill sizes in decimal / fractional
All drill size holes are exact require drill dia.

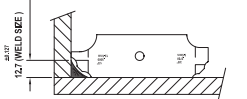
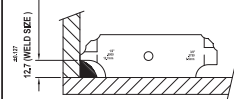
7LEAF FILLET WELD GAUGE

For inspection of concave or convex fillet welds. Fillet weld gauge allows fast, accurate measurement of eleven (11) fillet weld sizes:- 1/8, 3/16, 1/4, 5/16, 3/8, 7/16 1/2, 5/8, 3/4, 7/8 and 1" and their metric equivalent, to determine weld sizes, either concave or convex.



TO CHECK CONVEX WELD FILLET SIZE

TO CHECK CONCAVE WELD FILLET SIZE

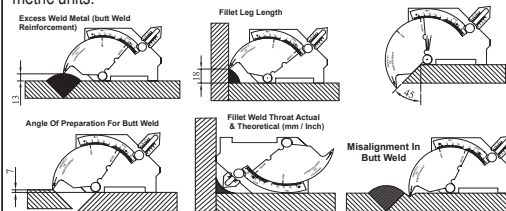
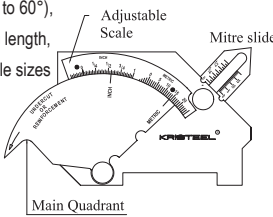


Place single arc edge flush to base material so blade tip touches vertical member. If tip touches the weld as it touches the vertical member, the weld is the size indicated.

Place double arc edge flush to the base material so tip touches vertical member. If the tip between the double arc touches the center of the weld, the weld is the profile desired and is the size indicated.

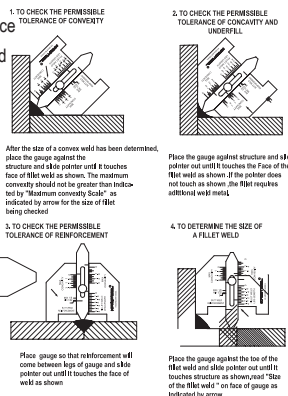
BRIDGE CAM TYPE WELD GAUGE

Features: angle of preparation (0 to 60°), excess weld metal, fillet weld leg length, throat size, misalignment and hole sizes for butt weld and butt weld reinforcement. General linear measurements up to 60mm or 2 inches Scales graduated in metric units.



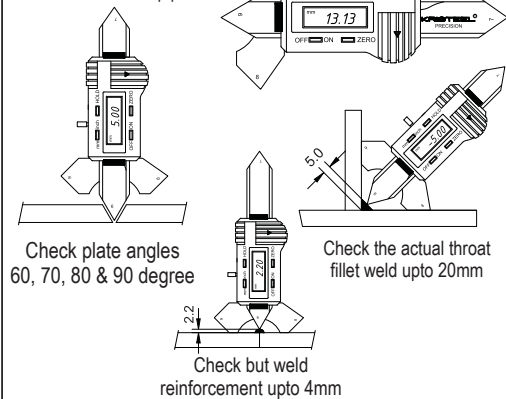
AUTOMATIC WELD GAUGE

Tolerance of convexity, tolerance of reinforcement, concavity and under fill, determine size of fillet weld. Scales graduated in metric units.



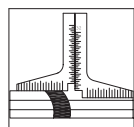
DIGITAL WELDING GAUGE

Range:- Throat upto 20 mm & butt reinforcement upto 4.0 mm

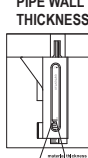


HI-LO WELDING GAUGE

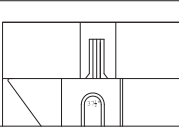
MEASURE THE CROWN HEIGHT OF THE BUTT WELDS



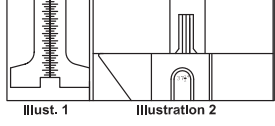
MEASURE PIPE WALL THICKNESS



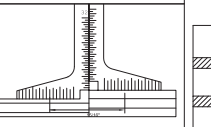
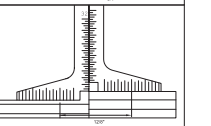
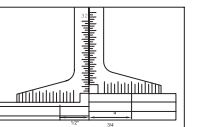
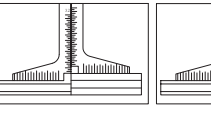
MEASURE FIT-UP GAP



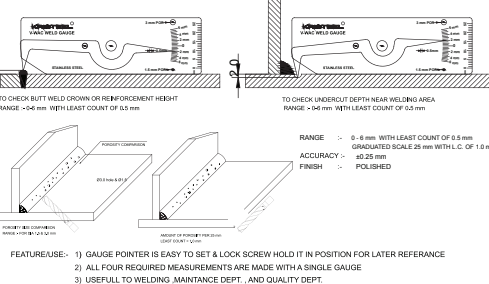
MEASURE BEVEL ON END PREPARATION



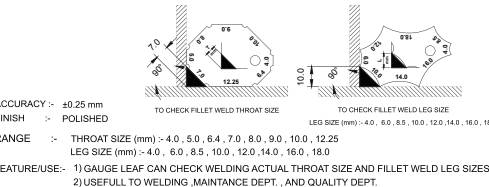
MEASURE FILLET WELD SIZE TWO (2) WAYS



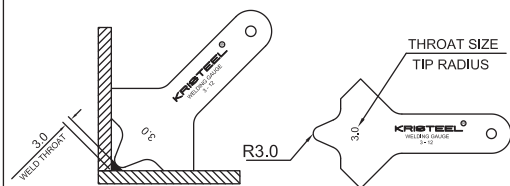
V-WAC WELDING GAUGE



POCKET FILLET WELD GAUGE



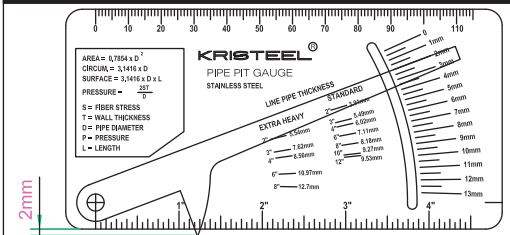
12 LEAVES WELD CUM RADIUS GAUGE SET



Feature:-

- 1) This Gauge Is Made Set Of 12 Sizes
- 2) Same Gauge Leaf Can Check Welding Throat Size And Concave Radius Also
- 3) Gauge Can Be Used For Checking Any Profiles Radius 3-12mm Useful To Welding, Maintenance Dept. Quality Dept. Trader Etc.

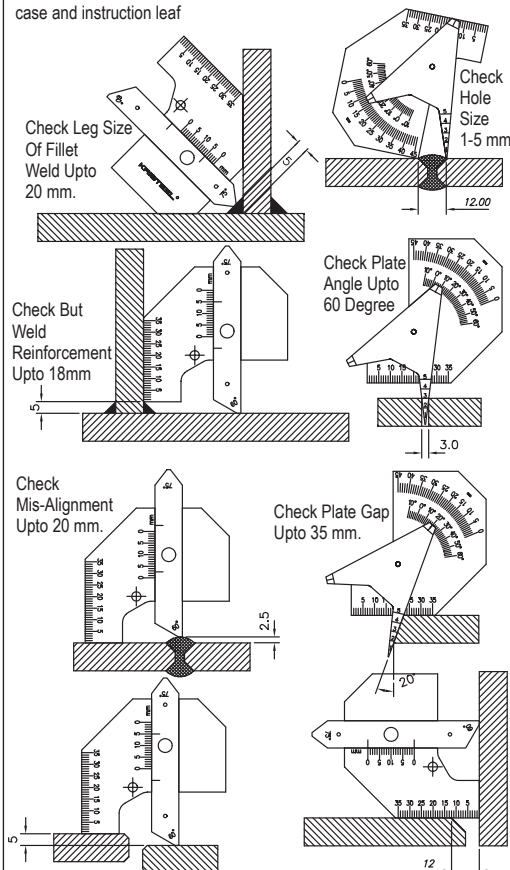
PIPE PIT GAUGE



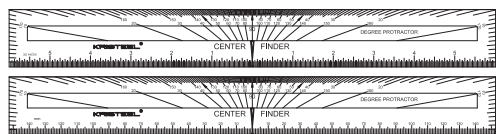
Material:- Stainless steel | Range:- 0 To 13 mm. | Finish:- Polished
 Feature /Use:- This is small pocket sized gauge designed to identify the condition a pipe. The Gauge is placed horizontally on the surface of the pipe and the stylus/ arm is Positioned into the base of the corrosion pit. The gauge shows the depth of pit also Can be check the pipe wall thickness and compared with nominal wall thickness. Data printed on the body of the gauge includes 4.5" long scale in inch & Metric Useful conversion table on back side and formulas on top This gauge is useful for pipe welders, pipe coaters.

MULTI PURPOSE WELD GAUGE (WG-A)

Features : angle of preparation, excess weld metal, fillet weld leg length, throat size, misalignment and hole sizes for butt weld and butt weld reinforcement. Scales graduated in metric units, supplied in a protective case and instruction leaf



CENTER FINDER CUM PROTRACTOR RULE



Material:- Stainless Steel

Range:- 0 to 300mm. / 0 to 12", 0 to 180 Degree

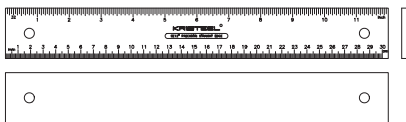
Least count:- 0.5 mm / 1/64", 1 Degree

Finish:- Polished Finish

Features:- This is a very precise polished rule having metric and English graduations and also angle protractor markings upto 180°

This scale is useful in fabrication to mark angles for cutting the sheet make different joints useful in wood working industries for marking useful in pipe fabrication to mark on sheet

STRAIGHT EDGES



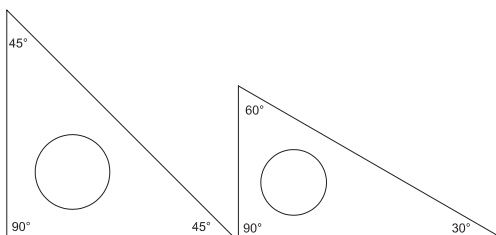
Feature/ Use:-

This Is A Very Precise Graduated Thick Ruler / Straight Edge Used To Check Straightness/ Flatness Of Surfaces

Range:- 12", 24", 36"

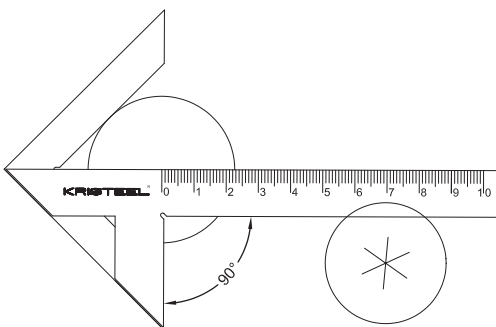
Finish:- Chrome Plated

SETS SQUARE



This gauge can be use as master gauge to setting angles 45°, 45°, 90° & 30°, 60°, 90° This gauge is useful in tool room, die makers, mould makers, woodworking industry & quality control

CENTRE SQUARE

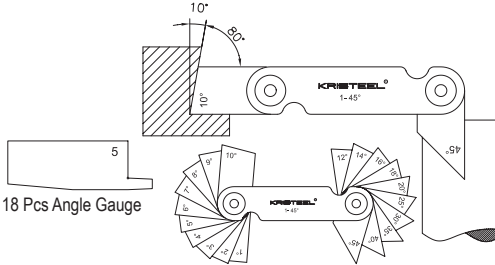


Range:- Find centre upto 75 mm diameter disc scale up to 100 mm

Least count:- 1mm

Used:- Designed for rapid and accurate location of the centre of disc/ the face of round bar. Place the vee of the centre square on the object and scribe a line along its graduated edge. Repeat the same at some other distant point on the said object. The intersection point of two lines is the centre Can check length upto 100 mm. By scale given on blade Square base can be used as a try Square for 90°

ANGLE GAUGE



18 Pcs Angle Gauge

Uses:- To check the angle of any fabricated part and also Dove Tail angles of shafts gauge made of stainless steel with fine blanking. Usefull in workshop General Purpose, Tool & Die maker, Wood working industries, Quality Dept. etc.

Available Models:- 1) 1° to 45° (20 Leaves Assembled

Incremental of 1°, 2° & 5°)

2) 5° to 90° set (18 Individual Leaves Incremental of 5°)

MULTI USE RULE AND GAUGE

Range:- English Rule upto 5" and Metric Rule upto 90 mm and Angle 0-180°

Least count:- 1.0 mm/1/64" on Rule and 1° on Protractor

Finish:- Polished

Uses:-

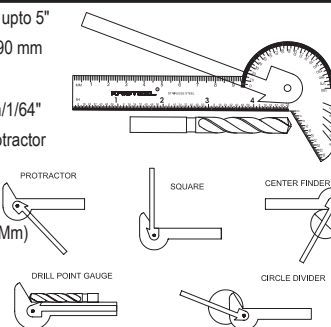
Multi Use 4-3/4" (120 Mm)

Rule and Gauge Six

Tools in One

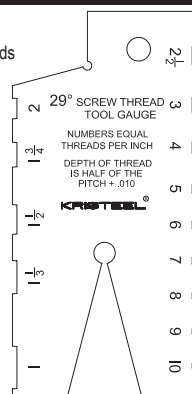
Graduated in 64th

and mm, Stainless Steel.



29° SCREW THREAD TOOL GAUGE

RANGE :- 1 To 10 TPI (14 Sizes)
USES :- To Cut an Acme Threads

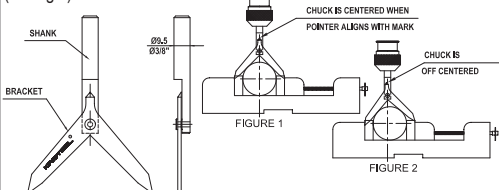


CENTRE FINDER ASSEMBLY - ROUND BAR STYLE

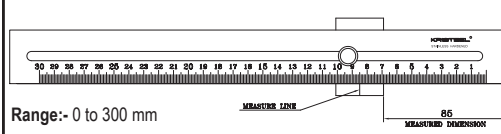
Material:- Carbon steel | **Range:-** upto 6" Dia Shaft

Finish:- Satin Chrome Plated | **Uses:-** this is hard chrome plated setting gauge useful in workshop for drilling on round bar/ pipe exactly At center of work piece. Setting instruction as below:-

- 1) Place center finder in drill chuck or collet located in machine spindle.
- 2) Align legs of center finder perpendicular to work piece held in vice.
- 3) Move machine spindle down until legs contact work piece.
- 4) Look at pointer & Line scribed on Shaft / Shank of center finder.
- 5) If not in line as in fig.2 move machine X or y axis until aligned properly (see fig.1)



MARKING GAUGE



Range:- 0 to 300 mm

Least Count:- 1.0 mm.

Finish:- Polished

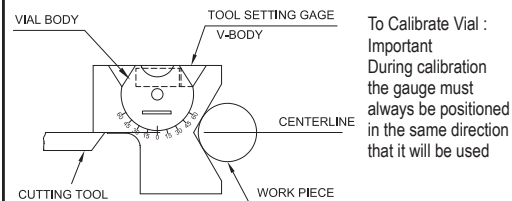
Uses:- This Gauge Is Useful For Marking And Measuring Jobs From One Side Which Is Base Line For Marking. This Gauge Is Useful In Tool Room, Fabrication Work, Wood Working Industry.

DELUXE CNC TOOL SETTING GAUGE

Accurately sets turning, boring a facing tools on the centreline of the work piece.

Also used to:-

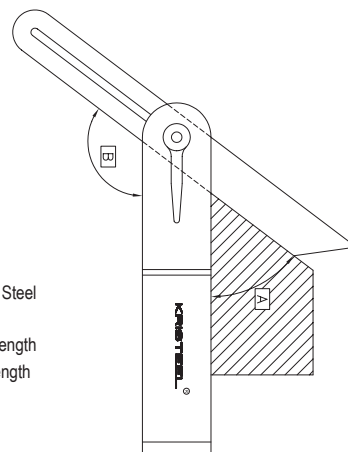
Set up grinding wheel on centreline of tooth rest for cutter grinding. Set table stops on horizontal mills. Index hex, squares, etc., shapes on milling machines.



To Calibrate Vial : Important During calibration the gauge must always be positioned in the same direction that it will be used

Place the V-body on a machine component whose angle is parallel to the cutter in feed path. (This may be the machine bed, cross slide, turret top, etc.) Now zero and lock the level vial. The gauge is ready to use.

SLIDING T BEVAL



A & B- Set Angle

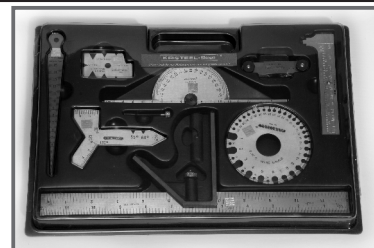
Material:- Stainless Steel

Range:- 6" Blade Length
4" Base Length

Finish:- Polished

Uses:- This Gauge Can Be Set At Any Angle Using Master Angle Gauge Or Protractor Blade Is Adjustable That Is Useful To Mark A Long Line. Adjustable Blade Rest In Metal Base While Not In Use Hence Safety Packing This Gauge Is Useful In Tool Room, Die Makers, And Mould Markers & Woodworking Industry.

ENGINEER KIT



7 LEAF FILLET WELD GAGE

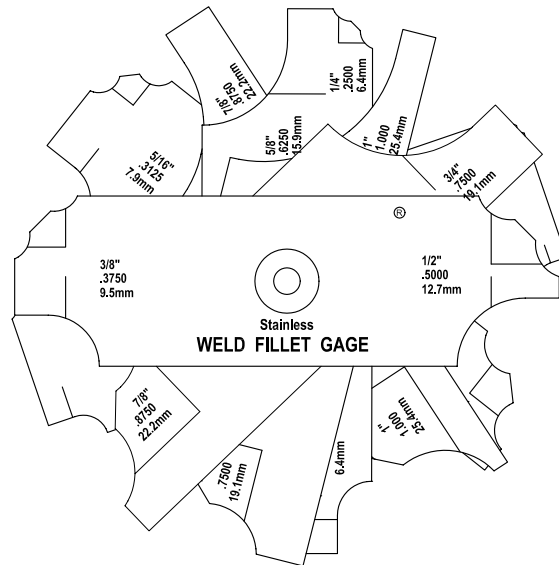
I

R

For Inspection of concave or convex fillet welds.

Fillet weld gage allows fast, accurate measurement of eleven (11) fillet weld sizes :- 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, and 1" and their metric equivalent, to determine weld sizes, either concave or convex.

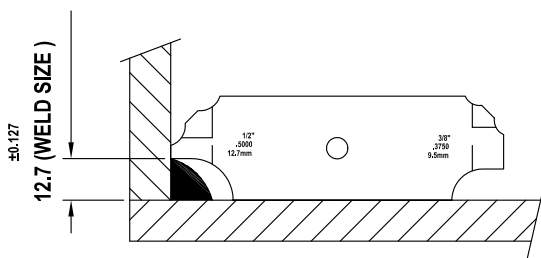
Each gage blade is made of 1.25" x 4" cold rolled stainless steel to resist rust and bending. blades are deburred to remove rough edges. All the sizes and numerals are chem etched permanent. The set of eleven blades comes in a handy 2" x 2.5" pocket case with the user manual weighing only 4 oz.



Fillet weld gage is easy to use.

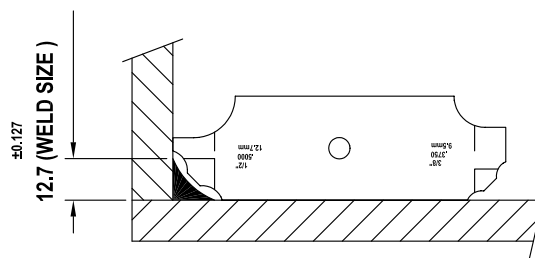
Gage blade must be flush to the base material with the tip touching the vertical member. Use the single arc corners for measuring CONVEX welds. Use the double arc corners for determining if the welds are CONCAVE (under size). If they are, more filler material is required to build weld throat to the size where the tip between the double arcs touch.

TO CHECK CONVEX WELD FILLET SIZE



Place single arc edge flush to base material so blade tip touches vertical member. If tip touches the weld as it touches the vertical member, the weld is the size indicated.

TO CHECK CONCAVE WELD FILLET SIZE



Place double arc edge flush to the base material so tip touches vertical member. If the tip between the double arc touches the center of the weld, the weld is the profile desired and is the size indicated.