WG-1 HI-LO WELDING GAGE

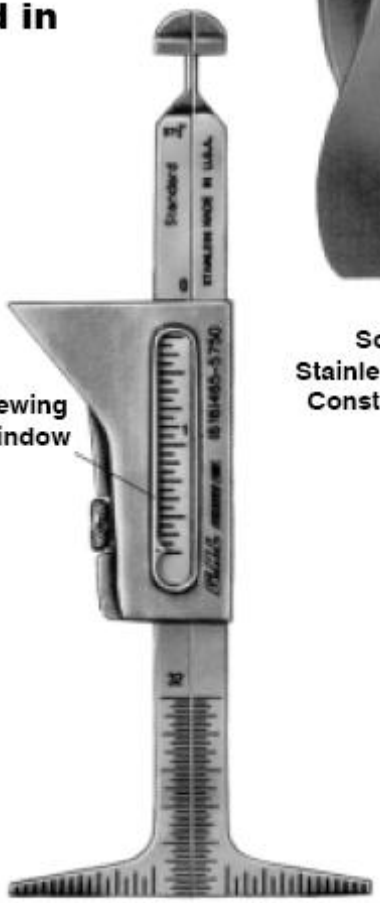
MEASURES INTERNAL ALIGNMENT

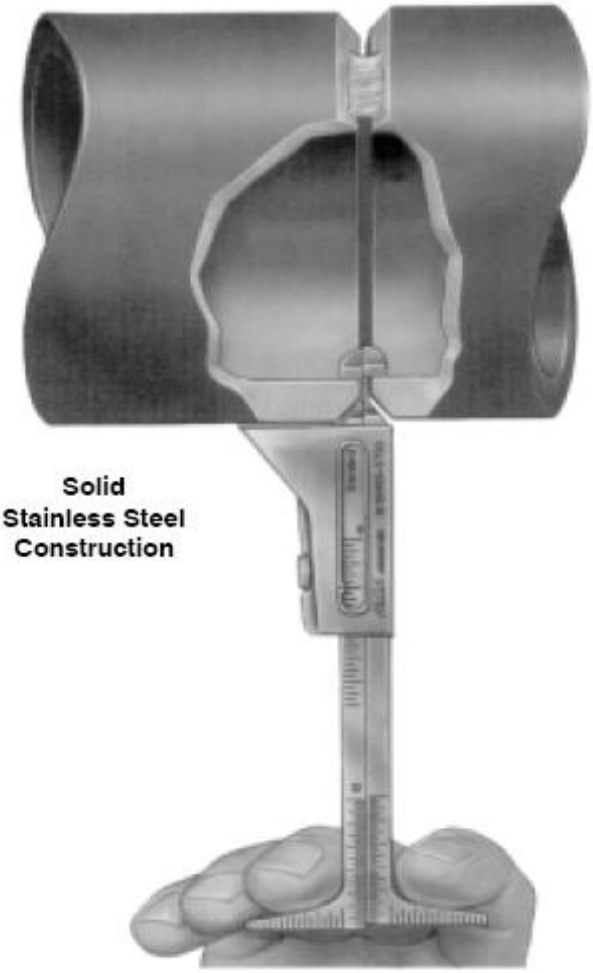
of pipe after fit-up / alignment, cuts radiographic rejects.

Measures internal misalignment of pipe before and after tacking.

Measurements read in standard one side, and metric on the opposite side.

- Changes from standard to metric, simply remove gauge body, turn scales over and replace body
- Measure internal misalignment
- Measure fit-up gap
- Measure bevel on end preparation
- Measure the crown height of welds
- Measure fillet weld size
- Measure scribe line, socket welds
- Can be calibrated to NBS standard

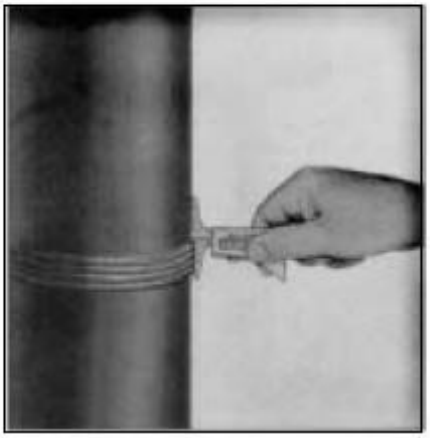




Part No.	Description
WG-1	Standard & Metric Gauge

Measure internal mismatch, pipe wall.

Measure scribe lines, weld fillet.



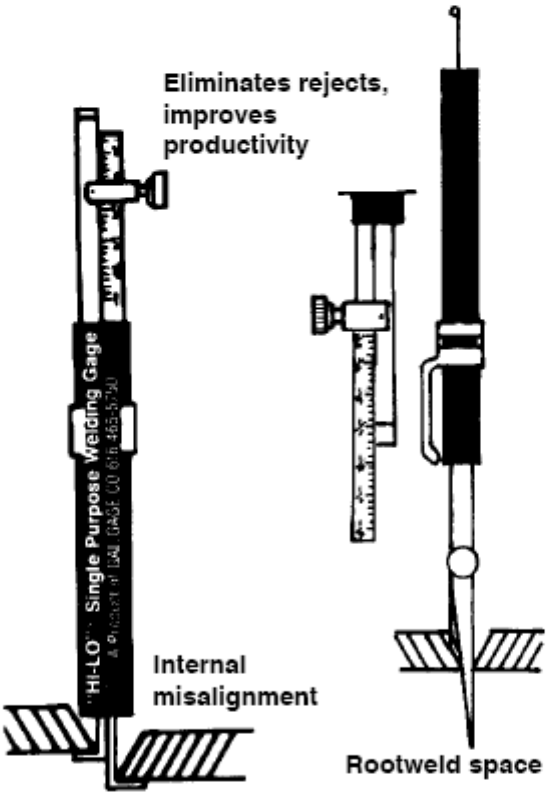
Measure crown height.

Satisfy fit-up codes ASME, ANSI, API & MILITARY

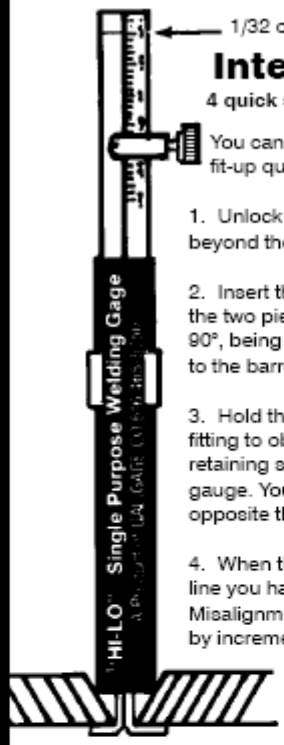
WG-2 ECONOMY

Single Purpose HI-LO Welding Gage

Available in Standard or Metric



Part No.	Description
WG-2	Standard Econo HI-LO Gauge
WG-2M	Metric Econo HI-LO Gauge



Internal HI-LO Gauge

4 quick steps check internal alignment

You can check the internal alignment of your fit-up quickly with the G.A.L. HI-LO gauge.

1. Unlock the retaining screw. Press the gauge legs beyond the barrel.

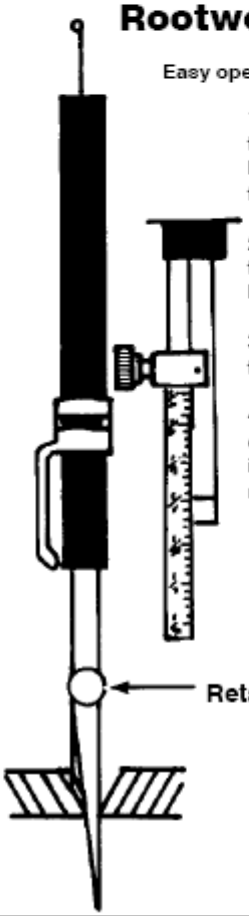
2. Insert the legs (wires) into the root gap space or the two pieces of pipe to be fitted. Turn the gauge 90°, being careful to apply a constant back pressure to the barrel.

3. Hold the gauge as square as possible with the fitting to obtain an accurate reading. Lock the retaining screw. Reverse the 90° turn and remove the gauge. You're now ready to read the increment opposite the red line.

4. When the red line aligns with the 1/32 increment line you have a good internal alignment and fit-up. Misalignment can be determined from the zero line by increment markings of 1/16 inch.

Rootweld Spacing Gauge

Easy operation determines rootweld spacing.



1. Unlock the retaining screw and insert the gauge interior alignment stops between the two pieces of pipe to be fitted.

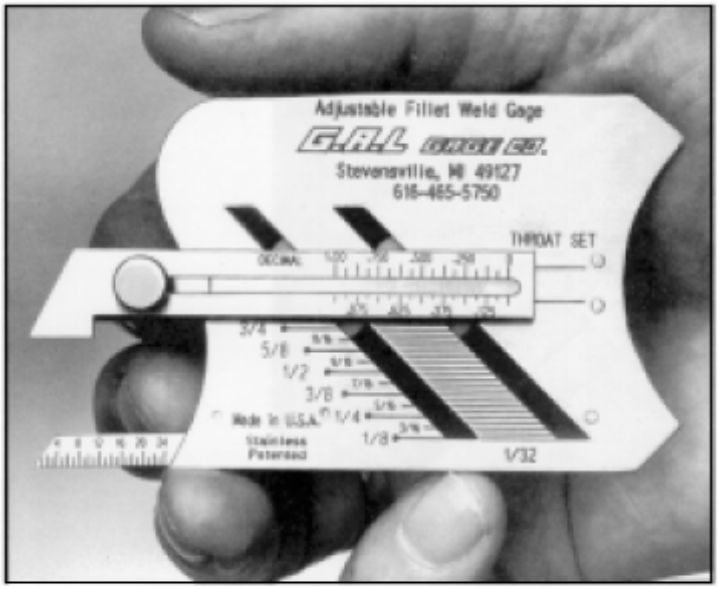
2. Insert the leg with the longer taper into the root gap until it makes contact with both sides of the gap.

3. Re-lock the retaining screw, remove the gauge and read it.

4. The scale is calibrated in fractional dimensions from 1/32 to 3/16 in 1/16 inch increments. The read-out you receive represents the amount of rootweld gap.

ADJUSTABLE FILLET WELD GAUGE

WITH UNEQUAL LEG MEASUREMENT FEATURE



Measure any fillet weld to 1/32" accuracy with just one simple to use gauge.

Measuring fillet welds used to be a trial with complicated or inaccurate gauges. Not any more. Now you can measure fillet welds from 1/8" to 1" (with ±1/32" accuracy) with one economical, simple to understand gauge.

The G.A.L. Adjustable Fillet Weld Gauge uses an offset arm which slides at a 45° angle to make fillet weld length measurements. Simply adjust the arm until it touches the toe of the vertical leg. The gauge is calibrated to 32nds, with metric equivalents given, so you get more accurate readings. Four screws hold the offset arm in position for future adjustments.

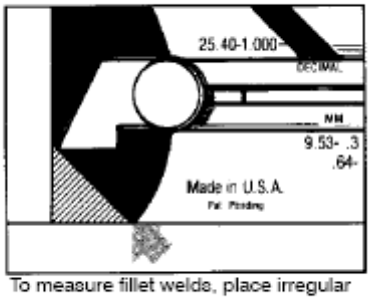
This gauge also measures weld throat thickness to 1/16" by adjusting a pointer until it touches the centre of the weld. A thumb screw holds the pointer in position for future reference. If the weld is concave, more filler material can be added to build the weld throat up to standard.

G.A.L. Adjustable Weld Gauge measures both leg lengths and weld throat fillet weld thickness.

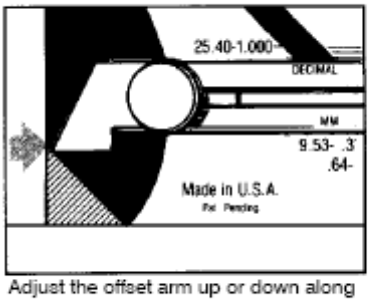
The G.A.L. Adjustable Fillet Weld Gauge is made of durable, rust resistant stainless steel. Its 2¼ x 3" slim design weighs only 1½ oz., fits easily into a shirt pocket. And because there is just one gauge needed to make all measurements, the chance of losing essential fillet weld gauge blades is eliminated. Fumbling through seven different, inaccurate gauge blades is also eliminated.

Part No.	Description
WG–3	Standard Gauge
WG-3M	Metric Gauge

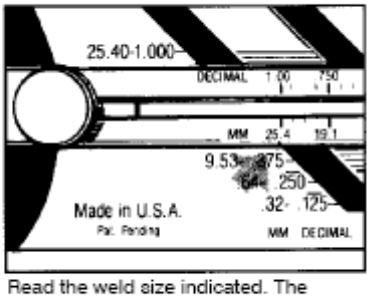
G.A.L. Adjustable Fillet Weld Gauge is easy to use.



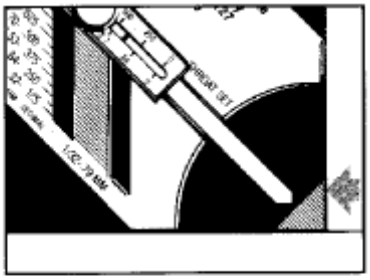
To measure fillet welds, place irregular curve edge flush to horizontal toe of weld so the straight edge is in line with the horizontal member.



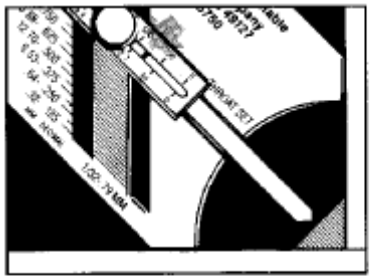
Adjust the offset arm up or down along the diagonal slots until the tip of the arm touches the top of the weld.



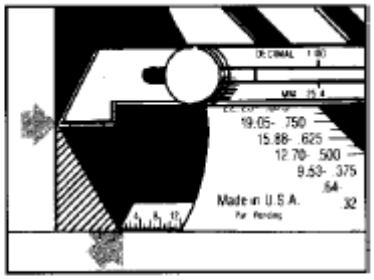
Read the weld size indicated. The increments are in 1/32" and 1/8" markings up to 1". All numerals are etched into the surface and filled for easier reading.



To measure weld throat thickness, place the 45° angle flush to the horizontal and vertical members. Loosen the thumb screw and slide the pointer until it touches the face of the weld.

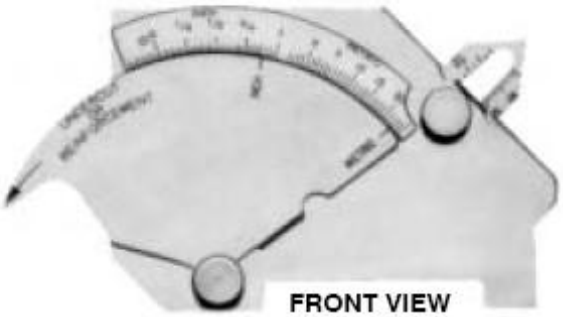


Tighten the thumb screw and read the measurement from the 1/16" calibrations along the pointer. A quick, sure way to find convex or concave welds and to correct them with additional filler material to meet standards.



NEW! Measure unequal weld leg lengths by sliding the base measurement scale so it is flush to the horizontal toe of the weld. Adjust offset arm to touch top of weld. Add or subtract to obtain length of each leg.

WG- 4 BRIDGE CAM GAUGE



FRONT VIEW

BACK VIEW

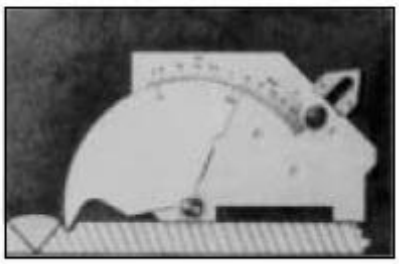
Note:
Adjustable scale to compensate for point wear.

STURDY

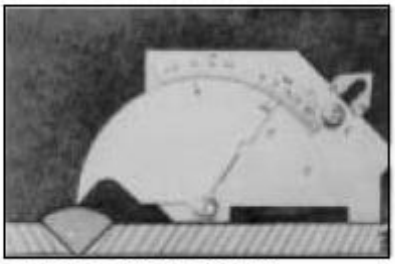
Gauge is made of stainless steel.

ACCURATE

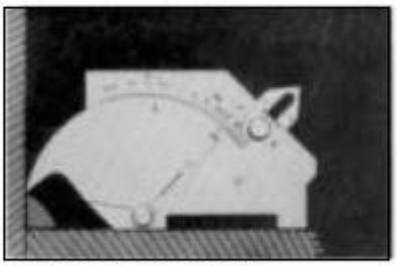
Undercut depth or crown height scale can be read to 1/32 inch.



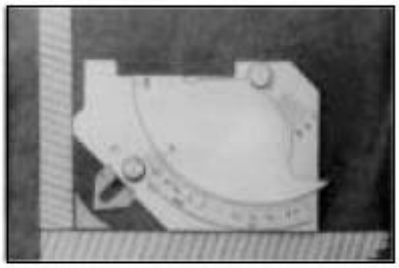
UNDERCUT



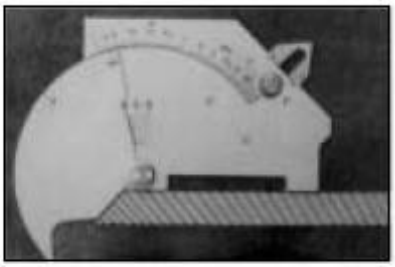
EXCESS WELD METAL



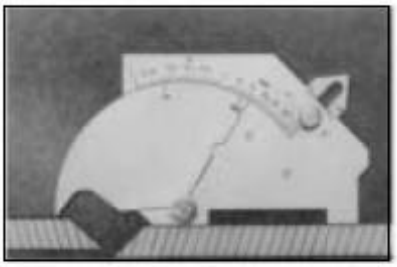
FILLET LEG LENGTH



FILLET WELD THROAT



ANGLE OF PREPARATION



MISALIGNMENT

The following measurements are possible either in inches or millimetres.

Angle of preparation, 0° to 60°
Excess weld metal (capping size)
Depth of undercut
Depth of pitting
Fillet weld throat size
Fillet weld length
Misalignment (high-low)

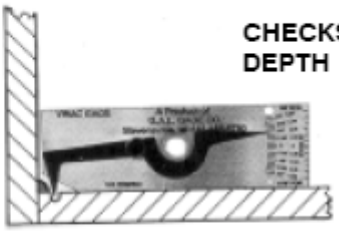
General linear measurements up to 60 mm or 2 inches.

Part No.	Description
WG-4	Standard and Metric Gauge

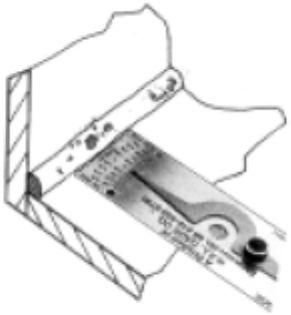
V-WAC™ GAUGE

Quickly determines if fillet welds meet NRC Visual Weld Acceptance Criteria for Structural Weldments

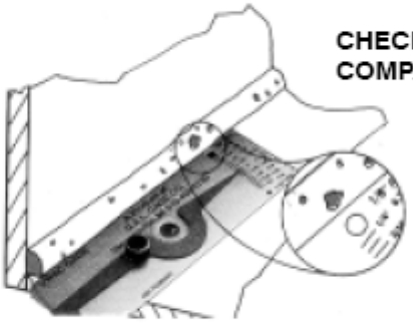
The V-WAC™ Gage easily and quickly checks the four essential measurements required for compliance with the NRC Visual Weld Acceptance Criteria. Checks undercut depth, porosity comparison, amount of porosity per linear inch and crown height.
The V-WAC™ Gage can be purchased separately or as part of a complete set of seven Fillet Weld Gaguges that determine if your welds conform to specifications (See Page 7).



CHECKS UNDERCUT DEPTH

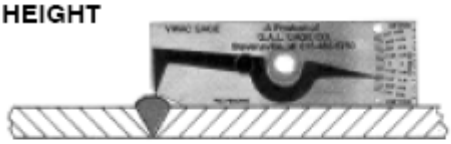


CHECKS AMOUNT OF POROSITY PER LINEAR INCH



CHECKS POROSITY COMPARISON

CHECKS CROWN HEIGHT



Features of the V-WAC™ Gage

ACCURATE

Undercut depth or crown height scale can be read to 1/32 inch.
Porosity comparison of 1/8 inch and 1/16 inch.
Linear gauge in 1/16 inch increments.

EASY TO USE

Pointer is easy to set and a locking screw holds it in position for later reference.
Figures and increments are etched into surface. They are easy to read and will not rub off.

FAST

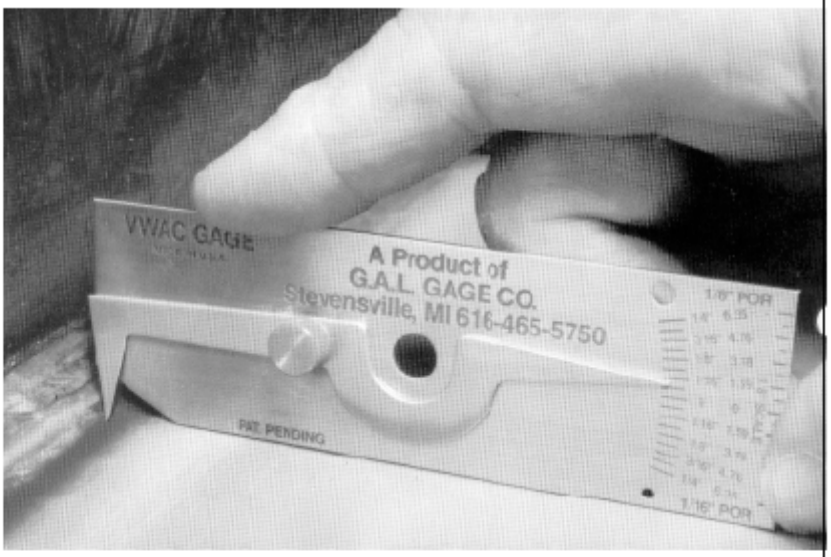
All four required measurements are made with a single gauge.

STURDY

Gauge is made of stainless steel.

HANDY

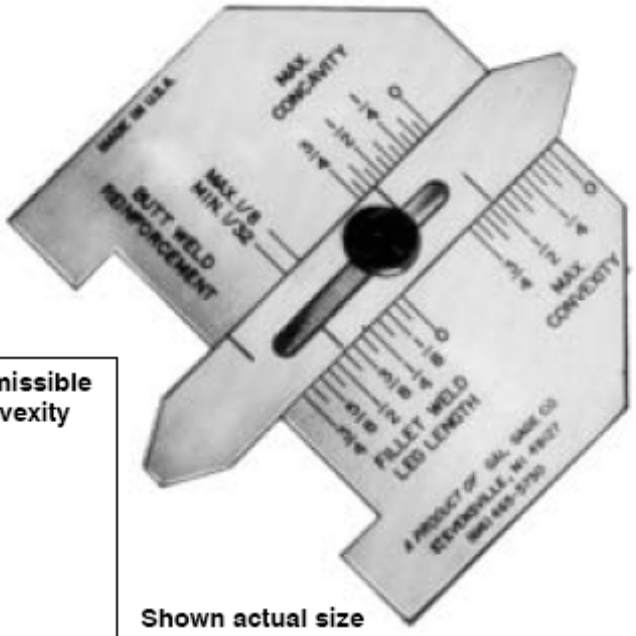
Gauge is 1¼ inches by 4 inches, and can be easily carried in your pocket.



Part No.	Description
WG–5	Gauge with 1/64" Tolerance
WG-5-7	Gauge with WTPS Gauge and Block
WG-5-8	Gauge Set
WG-5-7-8	Gauge Set with WTPS Gauge and Block
WG-5M	Metric Gauge with 1/64" Tolerance

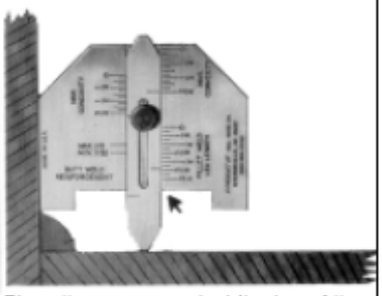
AUTOMATIC WELD SIZE GAUGE

For Accurate Calibration of Butt and Fillet Type Welds



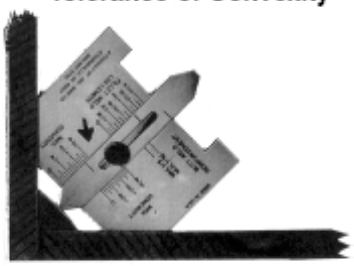
Shown actual size (2½" x 3")

1. To Determine the Size of a Fillet Weld



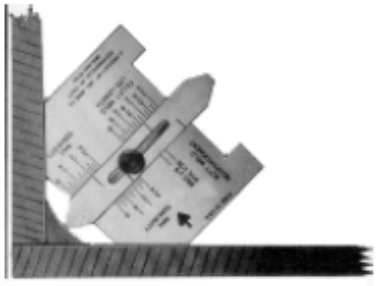
Place the gauge against the toe of the fillet weld and slide pointer out until it touches structure as shown. Read "Size of the Fillet Weld" on the face of gauge as indicated by arrow.

2. To Check the Pemissible Tolerance of Convexity



After the size of a convex weld has been determined, place the gauge against the structure and slide pointer until it touches face of fillet weld as shown. The maximum convexity should not be greater than indicated by "Maximum Convexity Scale" as indicated by arrow for the size of fillet being checked.

3. To Check the Permissible Tolerance of Concavity and Underfill



Place gauge against structure and slide pointer out until it touches the face of the fillet weld as shown. If the pointer does not touch as shown, the fillet requires additional weld metal.

4. To Check the Permissible Tolerance of Reinforcement

Place gauge so that reinforcement will come between legs of gauge and slide pointer out until it touches the face of weld as shown.

With the new improved A.W.S. Gauge shown above it is possible to meet specifications of butt and fillet type welds. New redesigned instrument is pocket sized and easy to operate, new feature includes thumb screw which replaces old hard to operate rivet type.

Diagrams at left illustrate the ease with which welders and inspectors may accurately check sizes of convex or concave fillets as well as butt weld reinforcements.

The convexity and concavity sizes have automatically been predetermined in accordance with American Welding Society DI.I. Paragraph 3.6.

Instrument is precision built of stainless steel with dimensional readings chemically etched and filled for easier reading.

Part No.	Description
WG-6	Standard Gauge
WG-6M	Metric Gauge

W.T.P.S. Gauge with Calibration Block

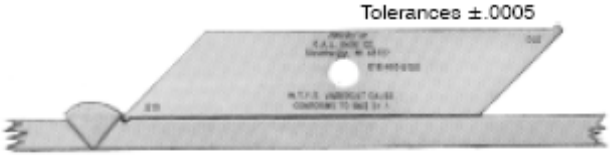
How do you measure undercut .010 deep?

American Welding Society Structural Welding Code D 1.1 Paragraph 9.25 Quality of Welds 9.25.1.5 "Undercut shall be no more than .010 in. (0.25 mm) deep when the weld is transverse to the primary stress in the part that is undercut."

From G.A.L. Cage, Co. WTPS. Gauge is precision made from stainless steel all marking and dimensions are chemically etched for ease and clarity when reading.

Gauge set comes with a precision ground calibration block as shown below, each block has been surface ground to .0005 tolerance for exceptional accuracy.

Tolerances ±.0005



Tolerances ±.0005

Part No.	Description
WG-7	Standard Gauge

Gauge is made of stainless steel

G.A.L. Fillet Weld Gauge

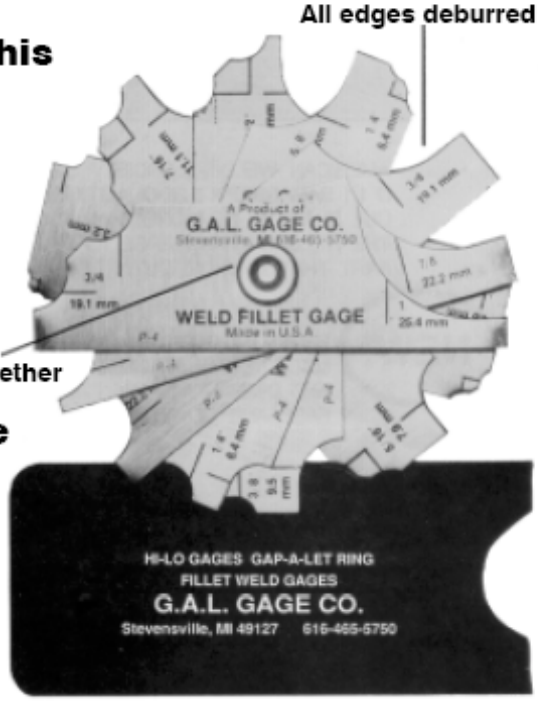
Accuracy Guaranteed
New Manufacturing Process Allows This Unsurpassed Accuracy of ±.005

The G.A.L. 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 equivalents, to determine weld sizes, either concave or convex.

Each gauge blade is made of 1-1/4" x 4" cold rolled stainless steel to resist rust and bending. Blades are deburred to remove rough edges. All sizes and numerals are engraved into the surface for easier reading. The set of seven blades comes in a handy 2" x 4 1/2" pocket case weighing only 4 oz.

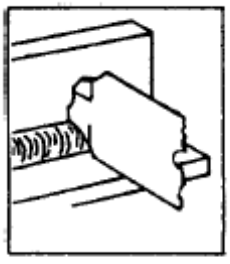
All edges deburred

Knurled nut holds set together



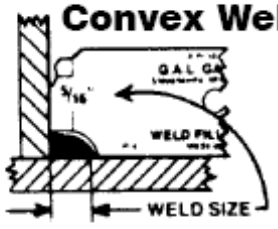
Handy Pocket Case

G.A.L. Fillet Weld Gauge is easy to use



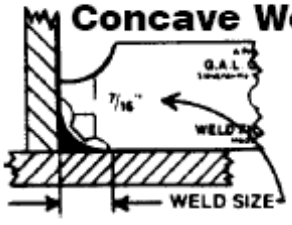
Gauge blade must be flush to the base material with the tip touching the vertical member. Use the single arc corners for measuring CONVEX welds. Use the double arc corners for determining if the welds are concave, (undersize). If they are, more filler material is required to build weld throat to the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

Convex Weld



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

Concave Weld

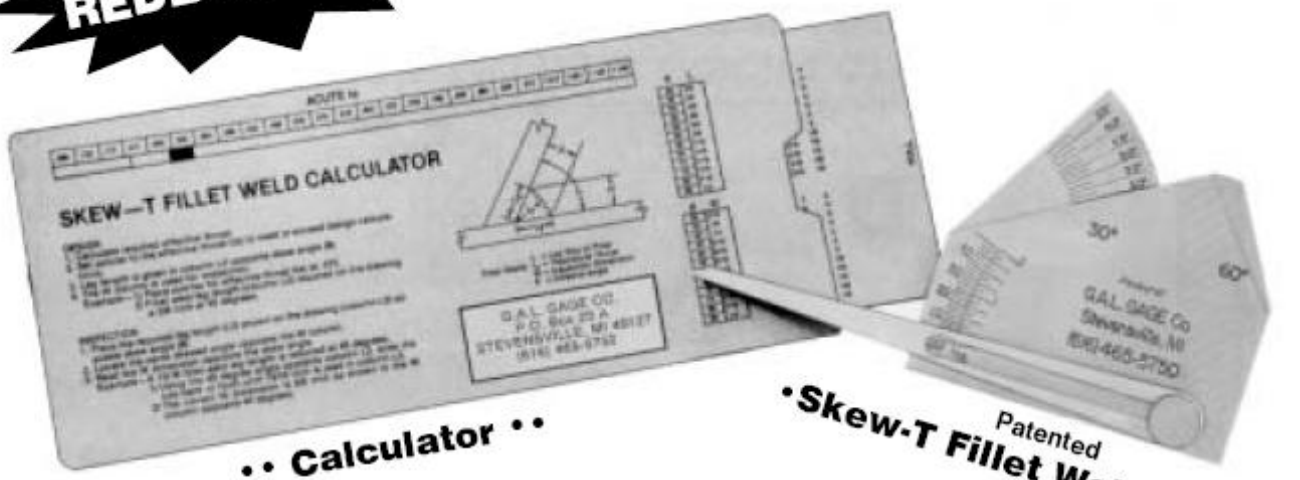


Place double arc edge flush to the base material so tip touches vertical member. If the tip between the double arc touches the centre of the weld, the weld is the profile desired and is the size indicated.

Part No.	Description
WG-8	Standard & Metric Gauge
WG-8A	Gauge w/ Markings Both Sides

G.A.L. Weld Gauge / Calculator

NEWLY REDESIGNED



•• Calculator ••

•Skew-T Fillet Weld Gauge•

Patented

A handy compilation of mathematical relationships between leg length, throats, skew angles and inspection dimensions. A must for designers and inspectors. The perfect companion to the GAL Weld Gauge.

Replaces all other sets of gauges to measure fillet or groove welds in skewed members or members at 90 degrees.

Gauge with Pointer Retracted

Checking Angle of Vertical Member

Gauge with Pointer Extended

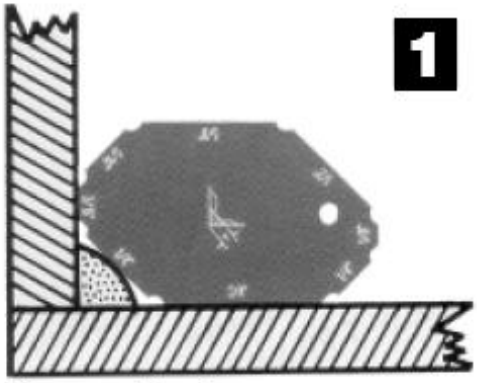
Acute

90 Degrees

Obtuse

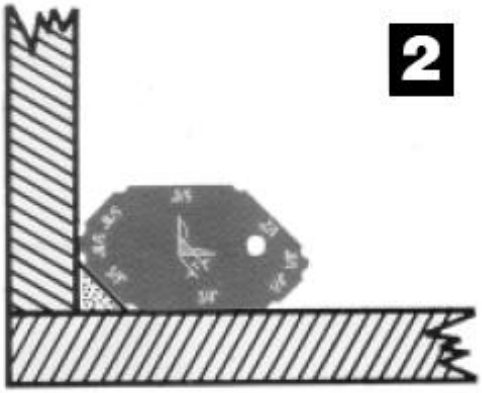
Part No.	Description
WG-9A	Weld Gauge Standard and Metric
WG-9B	Weld Calculator Standard and Metric
WG-9C	Weld Gauge and Calculator Standard and Metric

Pre Inspection Pocket Fillet Weld Gauge



1

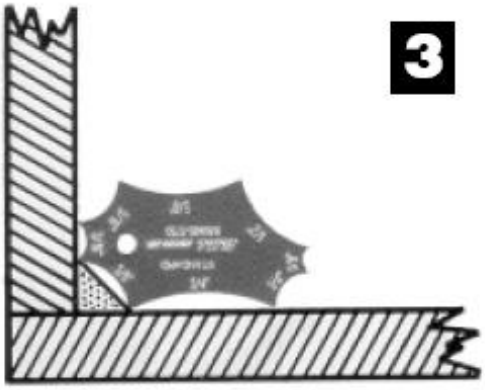
Measures Throat
(Allowable Convexity)



2

Measures Throat
(Theoretical)

- New Pocket size — Measures 8 size fillets
- Check Leg Length, Throat Size, plus Allowable Convexity
- All increments permanently engraved
- Available Standard and Metric
- Each welder can carry set for pre-inspection
- Handy key ring holds set together
- Material Anodized Aluminum



3

Measures Leg Length

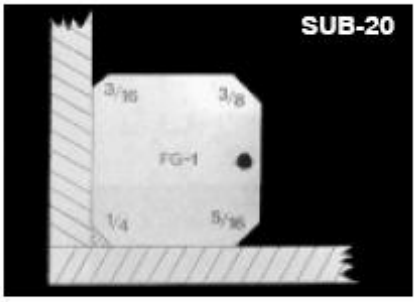
Part No.	Description
WG-10	Standard Gauge
WG-10M	Metric Gauge

Special Gauge Section

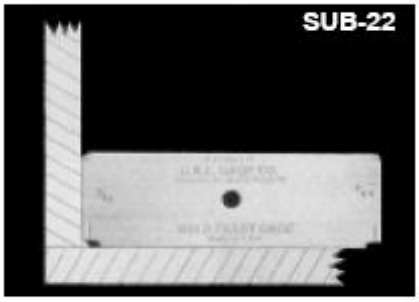
Gauges Made on Special Order

- Custom gauges fabricated to your design or ours
- Tolerances to your specification, logos and identification permanently engraved, quick turnaround

- Automotive
- Military
- Aerospace

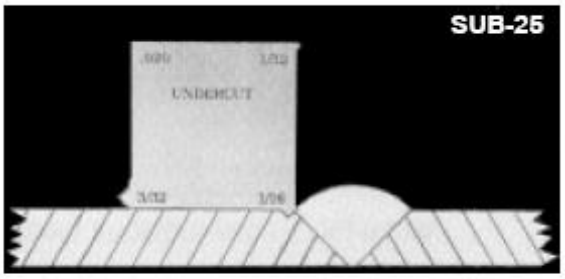


Special Design Fillet Gauge



Small Tolerance Fillet Gauge

Special Fillet Gauge
Leg Length Only



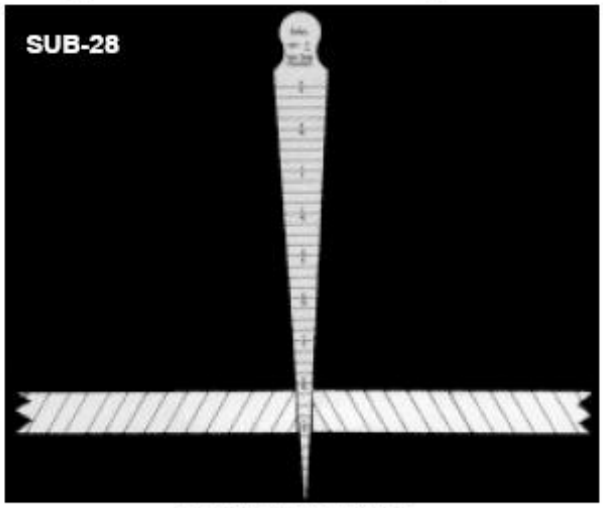
Special Undercut Gauge

End Profile Gauge - Pipe

Taper Gauge

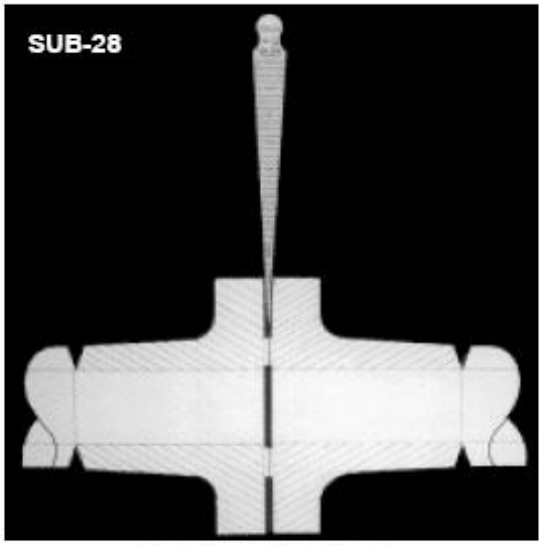
Part No.	Description
WG-SUB-20	Special Design Fillet Gauge
WG-SUB-22	Small Tolerance Fillet Gauge
WG-SUB-23	Special Fillet Gauge
WG-SUB-25	Special Undercut Gauge
WG-SUB-26	End Profile Gauge
WG-SUB-28	Taper Gauge

SUB-28
1/32 TO 5/8



Check Plate Fit-Up

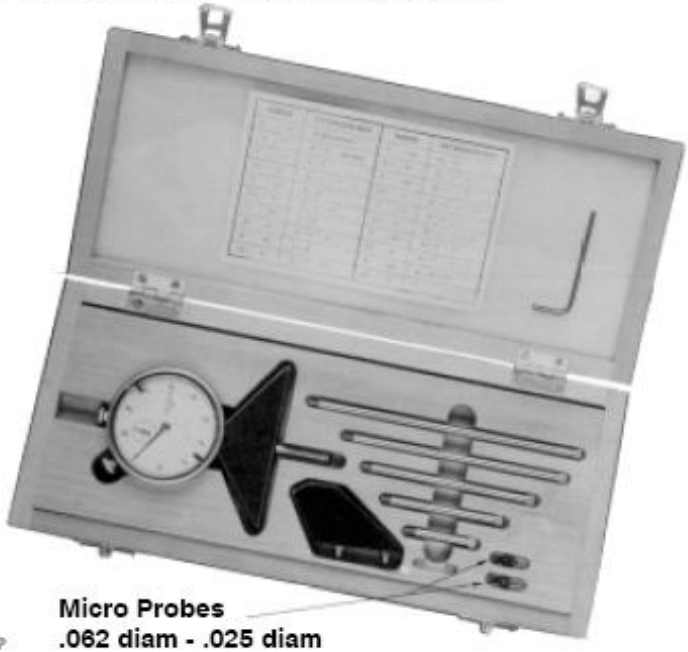
Front Side - Standard
Back Side - Metric



Check Flange Fit-Up

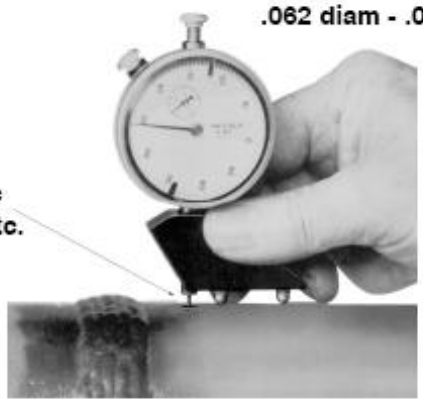
Combination 0" - 10" Dial / Pit Depth Gauge

- Measuring range 0 - 10"
- Graduations .001"
- Accuracy meets or exceeds federal specifications
- Continuous dial for 1/2" travel
- Revolution counter
- Uniform pressure over full range of travel
- Complete with 6 extension rods in fitted case
- Micro probes for small diameter pits .062 to .025
- Interchangeable bases



Gauge shown with welding base and .062 microprobe attached

Micro Probes .062 diam - .025 diam

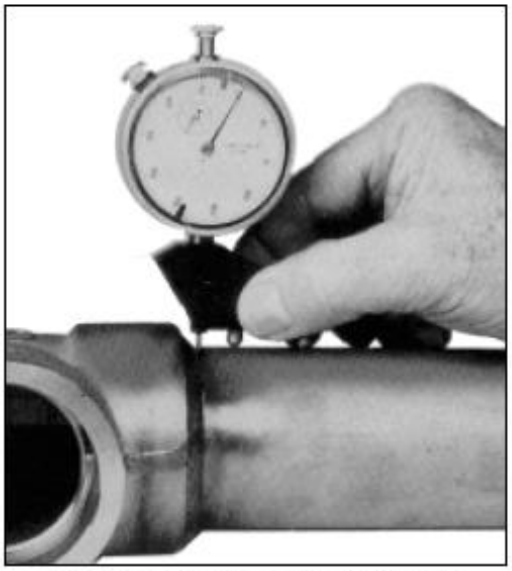


Measures pits, arc strikes, gouges, etc.

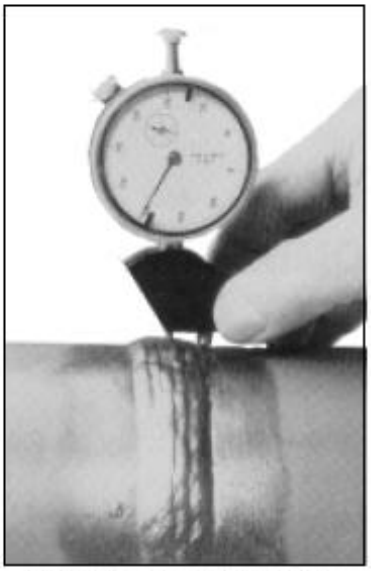
Simply change bases and it can be used as a normal depth gauge.

This kit was designed for the Quality Control department in the welding industry for pipe, structural, etc., to be used where extreme accuracy is required in determining depth of pits, gouges, undercut, crown height, etc.

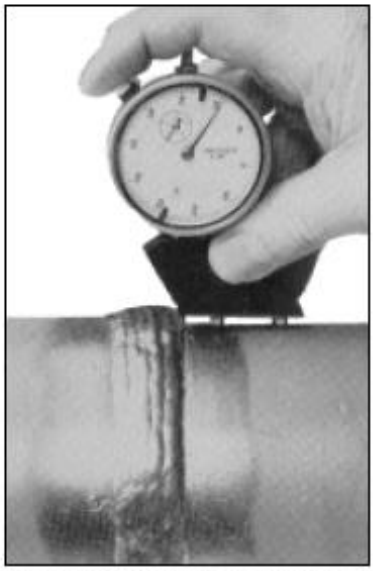
Part No.	Description
WG-13	Standard Gauge



Measures Undercut Socket Weld



Measures Undercut Butt Weld

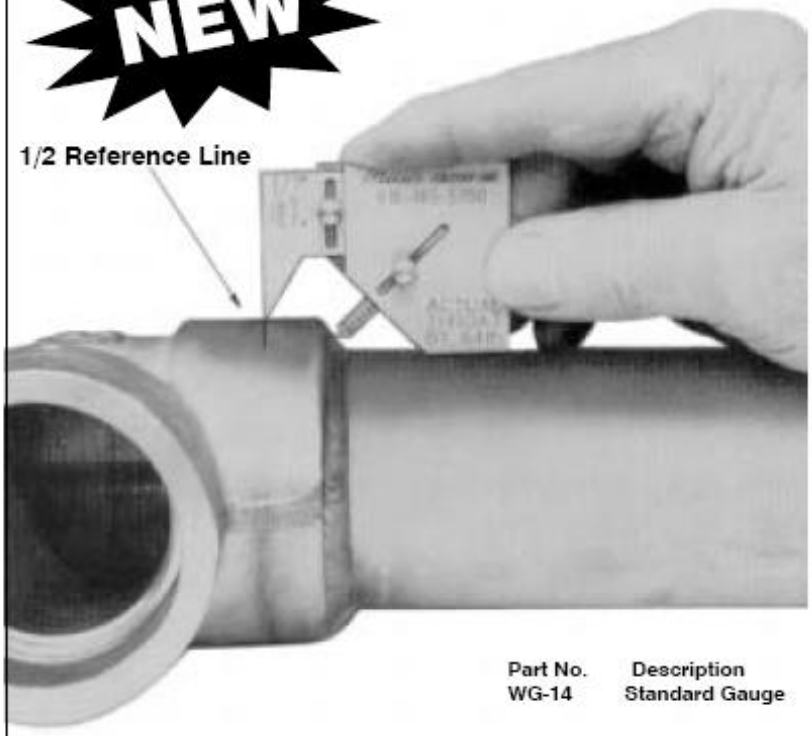


Measures Crown Height Butt Weld

Mini Sub Gauge

NEW

1/2 Reference Line



Sliding Pointer for Different Pipe Schedules

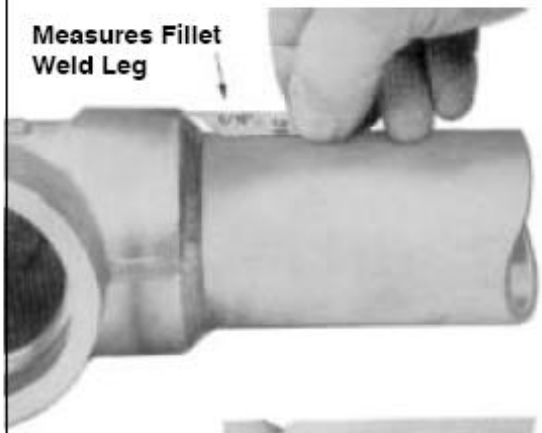
Sliding Pointer for Throat Measurement

Part No.	Description
WG-14	Standard Gauge

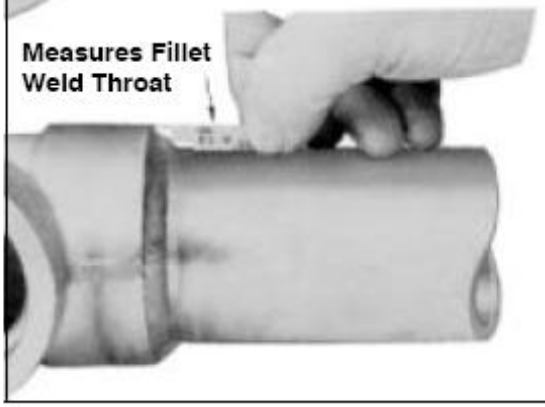
Mini Fillet Weld Keys

NEW

Measures Fillet Weld Leg

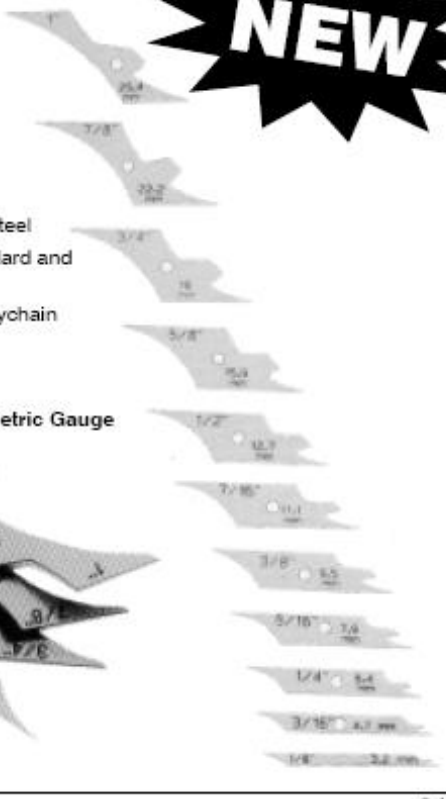


Measures Fillet Weld Throat



- All gauges are stainless steel
- 11 Different sizes in standard and metric equivalents
- Set comes with handy keychain

Part No.	Description
WG-16	Standard & Metric Gauge



Welders, CWI® Inspectors, Instructors Kits

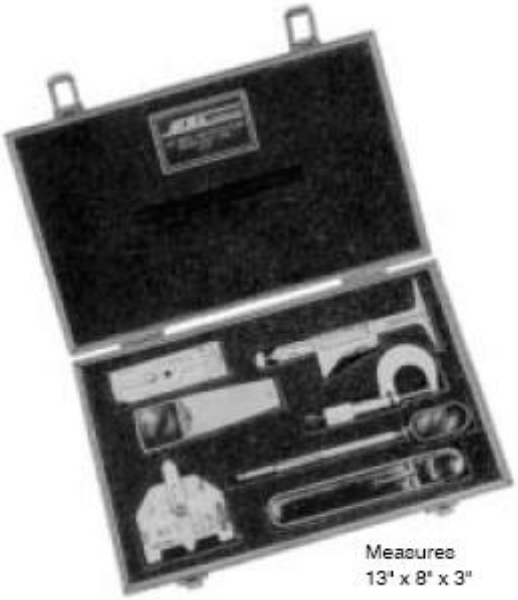
Complete kits featuring popular G.A.L. Gage gauges. Everything you need for complete weld inspections, in a convenient carrying case.

Measures 9" x 6½" open
6½" x 4¼" wrapped up
Fits in Pocket

Wrap-Around Pouch

Kit Includes:
V-Wac Gauge (GAL-5)
Econo Hi-Lo Gauge (GAL-2)
6" General Scale
Telescoping Mirror
Pen Light

Part No.	Description
WG-12WAP	Wrap-Around Pouch Kit



Measures
13" x 8" x 3"

Medium Size Kit

Kit Includes:
V-Wac Gauge (GAL-5)
AWS Gauge (GAL-6)
HI-LO Gauge (GAL-1)
Micrometer with Ball
Telescoping Mirror
6" Starrett Scale
Magnifier
Sturdy Protective Case

Part No.	Description
WG-12MBK	Medium Size Kit

Measures
18" x 12½" x 3"

Brief Case Kit

Kit Includes:
V-Wac Gauge (Gal-5)
Fillet Weld Gauge (GAL-8)
WTPS / Block (GAL-7)
Bridgecam Gauge (GAL-4)
Economy HI-LO Gauge (GAL-2)
HI-LO Gauge (GAL-1)
AWS Gauge (GAL-6)
Skew-T Fillet Weld Gauge w/ Calculator (GAL-9C)
Adj Fillet Weld Gauge (GAL-3)
6" Starrett Scale
Telescoping Mirror
Micrometer with Ball
Magnifier
Brief Case with Lock and Key

Part No.	Description
WG-12LBK	Brief Case Kit