Cat. #15



Get Proper Socket Weld Fit-Up In One-Tenth the Time

# **GAP-A-LET®**

# SOCKET WELD CONTRACTION RINGS

### **PATENTED**

- Every socket weld gap, the proper 1/16" minimum required by ANSI 31.1, Section III, ASME, US Navy & Military Codes
- No more scribe and pull out procedure
- No more measuring or guessing gap distance
- And no more cracked welds due to contraction of improperly gapped joints.

# Easy to Store, Easy to Distribute

Gap-A-Let socket weld contraction rings come in packages of 20 per resealable plastic bag - no messy case of loose rings ... no spilling of rings on floor while working. Just hand your welders and fitters the number of packages they need for the day and they're ready to make perfect, premeasured socket welds to code. And the pre-counted contents make inventory and re-ordering easier, too. Helps prevent over- and under-stocking.

Every packet of Gap-A-Let® socket weld contraction rings comes with a certified test report verifying the chemical analysis and physical properties of material shipped. While we do guarantee the test reports on the product material, any product can be misused, which in this instance could result in an improper weld. This certification and the use of a Gap-A-Let® ring in no way guarantees the quality, condition or durability of the weld. G.A.L. Gage Company will assume no responsibility for damage to the piping system or to component parts due to the use or misuse of this ring.

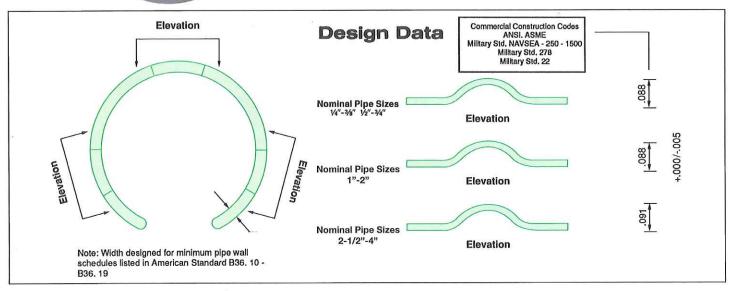


# GAP-A-LET® socket weld contraction rings

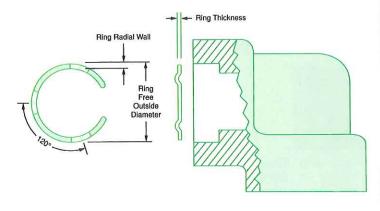


- Proper socket weld fit-up in one-tenth the time.
- Accurate 1/16" min. gap without time-consuming measuring, scribing and pull-out.
- Eliminate cracked welds resulting from improperly gapped joints.
- Meets military and commercial construction code standards.
- Patented United States, Germany, United Kingdom, Japan and Canada.
- Sizes from 1/4" NPS to 4" NPS in stock for immediate shipment.
- Instrumentation tubing sizes 3/8" to 2."
- Boiler tubing sizes as required.

Cat. #15



# In stock for immediate delivery 316L certified stainless steel



Standard GAP-A-LET Ring	Fitting	Ring Free Outside Diameter	Ring Radial Wall	Ring Thickness
1/4 NPS	.555	.600	.070	.025
3/8 NPS	.690	.730	.070	.025
1/2 NPS	.855	.880 8	.070 8	.025
3/4 NPS	1.065	1.110 <	.070 🐇	.025 🐇
1 NPS	1.330	.880 80 1.110 -/- 1.385 1.780 +	.070 .070 .070 .105 .105 .105 .105 .105 .105	.030 .030 .030 .04 .004 .004
11/4 NPS	1.675	1.780 🗜	.105 +	.030 +
11/2 NPS	1.915	2.020	.105	.030
2 NPS	2.406	2.580	.105	.030

**NEW! Heavy Duty Specs\*** 

2-1/2 NPS	2.905	2.910	.205	.091
3 NPS	3.500	3.530	은 .210 낮	S .091 4
4 NPS	4.500	4.015	.230	.091

# G.A.L. Gage Company

<sup>\*</sup> Specs are for standard sched 40 pipe. Call for larger schedule

### Standard Gap-A-Let® Rings -- 1/4" NPS - 2" NPS:

Each "Standard" Gap-A-Let® Ring is precision MACHINE-manufactured ...

Standard Ring	Fitting	Ring Free Outside Diameter	Ring Radial Wall	Ring Thickness
1/4" NPS 3/8" NPS 1/2" NPS 3/4" NPS 1" NPS 1 1/4" NPS 1 1/2" NPS 2" NPS	.555 .690 .855 1.065 1.330 1.675 1.915 2.406	.600 .730 .880 80 1.110 -/- 1.385 0.1 1.780 + 2.020 2.580	.070 .070 .070 .070 .105 .105 .105 .105	.025 .025 .025 .025 \foo:/h00: .030 + .030 .030

## Heavy Duty Gap-A-Let® Rings – 2 1/2" NPS – 4" NPS:

Each "Heavy Duty" Gap-A-Let® Ring is precision HAND-manufactured ...

Heavy Duty Ring	Fitting	Ring Free Outside Diameter	Ring Radial Wall	Ring Thickness
2 ½" NPS 3" NPS 4" NPS	2.905 3.500 4.500	2.910 o 3.530 o 4.015 <sup>+</sup>	.205 \( \omega_0 \) .210 \( \omega_1 \) .230 \( \omega_1 \)	.091 <sub>+</sub> .091 +

# Three easy steps make proper 1/16" minimum gap socket welds in seconds.



**1.** Fitter compresses Gap-A-Let® ring to fit into pipe fitting.



**2.** Fitter seats ring into fitting. Spring tension holds ring tightly in place, assuring no rattling or vibration even under extreme pressure. Ring actually becomes a permanent part of the joint.



**3.** Fitter inserts pipe into fitting. Gap-A-Let® ring automatically assures the required minimum gap (1/16') to meet the code requirements of ANSI 31.1 Section III, ASME & military codes.

# GAP-A-LET®

# **SOCKET WELD CONTRACTION RINGS**

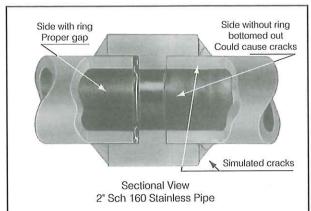
### WHAT IS IT?

Gap-A-Let® is a split ring that is engineered and designed to give you a pre-measured 1/16" minimum gap for socket welds. Made from a certified stainless steel, Gap-A-Let® resists corrosion from chemicals, radioactive materials, and water.

Gap-A-Let®'s spring tension makes it fit tightly into all standard sized fittings from 1" to 5". (Non-standard sizes are available upon request.) Once inserted into the fitting, the Gap-A-Let® ring becomes a permanent part of the joint. It will not rattle or vibrate even under extreme pressure.

### WHERE IS IT USED?

Designed for use on any socket weld application, Gap-A-Let® rings are suitable for **Power Piping (Nuclear, Conventional), Industrial Hydraulics, Welded Railroad Air Brake Piping, Petrochemical Plants, Fertilizer Plants, Shipbuilding,** and the list goes on and on.



# **WHAT DOES IT DO FOR YOU?**

Cut fit up time by 90% Save thousands of dollars in cracked weld repairs.

Socket welds that once took 15 minutes or more to fit-up now take just seconds. There is no measuring, scribing, or re-measuring. Just pop the Gap-A-Let® into the fitting and insert pipe into the fitting. Gap-A-Let® socket weld contraction rings automatically set the required 1/16" minimum gap so you're ready to weld.

And because these rings are so easy to use, they eliminate some of the problems of socket welding. No longer is there the problem of error commonly caused by guessing the gap. Nor is there the need to scribe into hard-to-mark metal pipe walls with the danger of encroaching on minimum wall thickness. With Gap-A-Let® rings quality control inspectors can concentrate on the quality of the weld and not spend all their time measuring for proper gapping. And since the costly problem of cracked welds due to improper gap is practically eliminated, your pipes can safely transport fluids the first time and every time.

# A plus for piping engineers

Gap-A-Let® rings help piping engineers determine end-to-end length of pipe without guessing. Constant, proper gap gives precise length whether in field run or fab shop assembly.

# Three easy steps make proper 1/16" minimum gap socket welds in seconds.



Fitter compresses Gap-A-Let® ring to fit into pipe fitting.



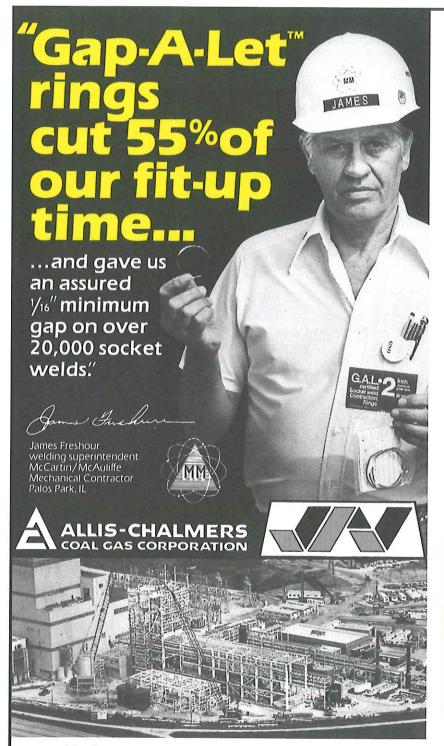
Fitter seats ring into fitting. Spring tension holds ring tightly in place, assuring no rattling or vibration even under extreme pressure. Ring actually becomes a permanent part of the joint.



Fitter inserts pipe into fitting. Gap-A-Let® ring automatically assures the required minimum gap (1/16") to meet the code requirements of ANSI 31.1 Section III, ASME & military codes.

# GET <u>PROPER</u> SOCKET WELD FIT-UP IN <u>ONE-TENTH THE TIME</u>.





J.A. Jones
recommended
Gap-A-Let rings
for A-C Coal Gas,
East Alton, IL
coal gasification
project.





Ring snaps into fitting and sets proper 1/16" minimum gap.

NEW!
Heavy Duty
GAP-A-LETS
for 2-1/2", 3"
or 4" Fittings

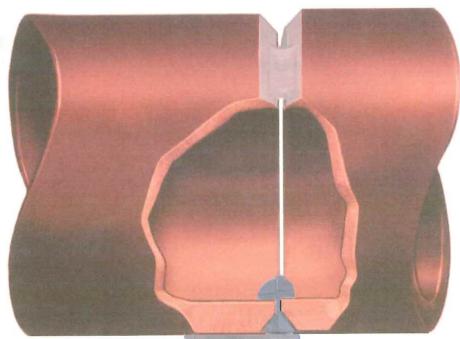
J.A. Jones, construction managers on the KILnGAS Commercial Demonstration Module coal gasification plant built for A-C Coal Gas, recommended Gap-A-Let™ rings for use in socket welds on the project.

"Gap-A-Let™ rings eliminate measuring, scribing and minute clamp adjustmnets," Freshour explained. "I'm sure they played a major role in helping to meet the start up schedule."

Gap-A-Let™ rings, available in nominal pipe sizes from 1/2" to 2", meet ANSI and ASME requirements by providing an assured 1/16" minimum gap in socket welds. Just pop the ring in the fitting, insert the pipe up to the rings and weld. And since the rings is corrosion resistant, it'll be there for the life of the pipe.

For a sample ring and more information on Gap-A-Let™ rings, contact your nearest G.A.L. distributor or G.A.L. Gage Company.

# G.A.L. 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, metric opposite side

**PATENTED** 



SATISFY FIT-UP CODES, ASME, ANSI, API & MILITARY

CAT 1

G.A.L. Gage Company



# **HI-LO Welding Gage**

MEASURES INTERNAL ALIGNMENT New slim design is 30% lighter



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

Measures internal misalignment of pipe before and after tracking

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



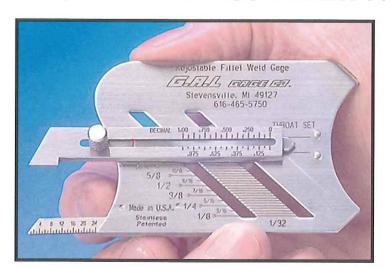
Stainless Steel Construction
Satisfy Fit-Up Codes, ASME, ANSI, API & Military

# **G.A.L. ECONOMY SINGLE** PURPOSE HI-LO WELDING GAGE Available in Standard or Metric. Specify When ordering. 1/32 or Zero Line Eliminates rejects, improves productivity Internal Rootweld misalignment space $\sqrt{//}$ s GRGE CO. G.A.L. Gage Company Phone: (269) 465-5750 • Fax: (269) 465-6385 • www.galgage.com 2953 Hinchman Road / P.O. Box 218 / Stevensville, Michigan 49127

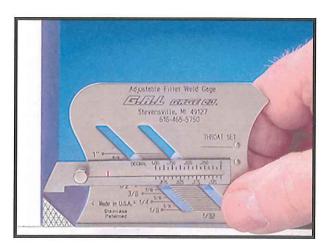
# ADJUSTABLE FILLET WELD GAUGE

# WITH UNEQUAL LEG MEASUREMENT FEATURE

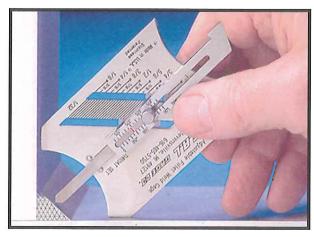
STANDARD OR METRIC



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

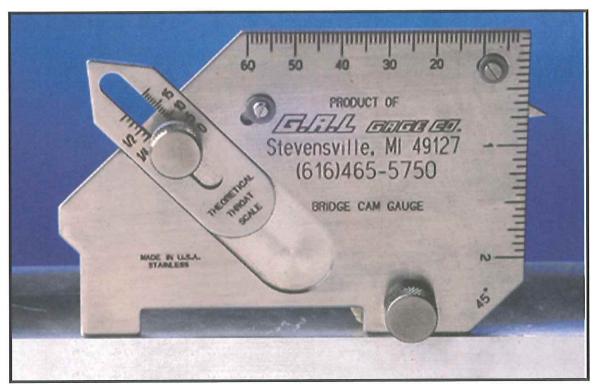


To measure fillet welds place irregular curve edge flush to horizontal toe of weld so the straight edge is in line with the horizontal member.



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

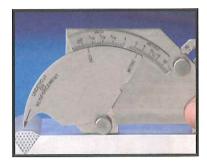
# **BRIDGE CAM GAUGE**



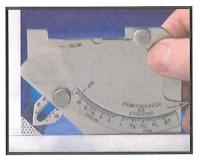
The following measurements are possible either in inches or millimeters.

- Angle of preparation, 0 to 60°
- Excess weld metal (capping size)
- Depth of undercut
- Depth of pitting

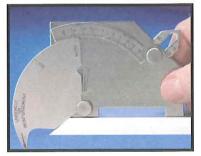
- Fillet weld throat size
- Fillet weld length
- Misalignment (high-low)



**Excess Weld Metal** 



Fillet Weld Throat

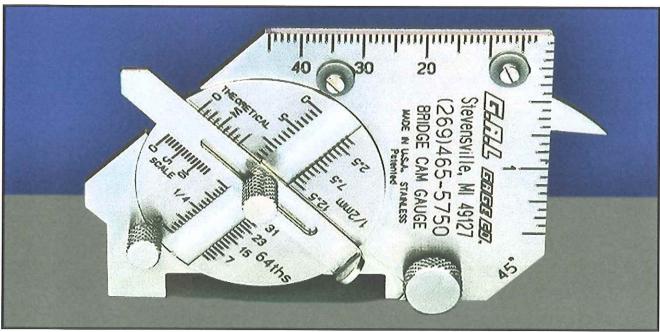


Angle of Preparation

CAT#4

G.A.L. Gage Company

# POCKET BRIDGE CAM GAUGE

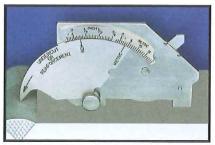


The following measurements are possible either in inches or millimeters.

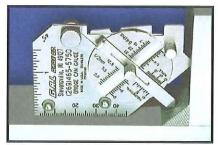
- Angle of preparation, 0 to 60°
- Excess weld metal (capping size)
- Depth of Undercut by 1/32
- Depth of pitting by 1/32

- Fillet weld throat size (1/64 or .5 mm) (Theoretical and Actual)
- Fillet weld leg length
- Misalignment (High-Low)

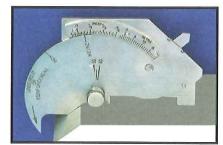
ALL STAINLESS CONSTRUCTION



**Excess Weld Metal** 



Fillet Weld Throat



Angle of Preparation

CAT#4A

# MINI BRIDGECAM



**MINI CAT 4C** 

25% Smaller than regular Bridgecam Gauge,
Capable of measuring angle of preparation (0°-60°),
Excess metal (capping size),
Depth of undercut and pitting by 1/32,
Theoretical and Actual Throat by 1/16,
Fillet leg length, plate or pipe (OD) misalignment.

Includes sturdy storage pouch.

CAT 4C

G.A.L. Gage Company



# "V-WAC" WELD GAUGE

- Checks Undercut
- Checks Crown Height
- Checks Porosity
- Checks Pits
- ► All Stainless Steel

Metric or English



CAT 5



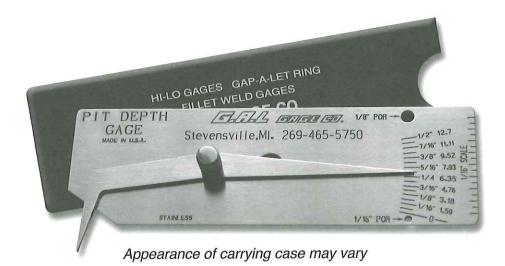
Pit Depth Gauge
Undercuts/Pits to 1/2 inch by 1/32 Increments CAT #5a



Able to reac bottom of 1/8" diameter by 1/2" deep hole.

Measurement Scale: Inch and Metric

- Checks Undercut
- Checks Porosity
- Checks Pits
- All Stainless Steel



G.A.L. Gage Company

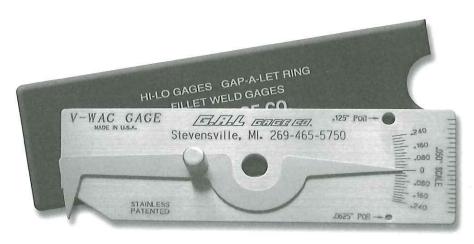


# "V-WAC" Single Weld Gauge

Undercuts/Pits to 0.240, Crowns to 0.240 by 0.020 Increments CAT #5d



- Checks Undercut
- Checks Crown Height
- · Checks Porosity
- Checks Pits
- All Stainless Steel



Appearance of carrying case may vary



# Pit Gauge

Undercuts/Pits to 0.08", Crowns to 0.04 by 0.005" Increments
CAT #5G - Standard
Undercuts/Pits to 2mm by 0.2mm Increments - no crowns
Cat #5F - Metric



- Checks Undercut
- Checks Crown Height
- · Checks Pits
- All Stainless Steel

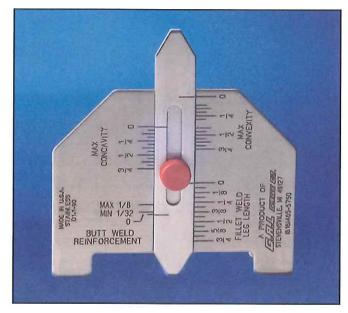


Comes in hard plastic shell

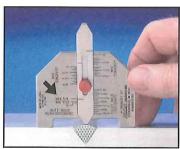


# AUTOMATIC WELD SIZE WELD GAUGE

For Accurate Calibration of Butt and Fillet Type Welds.



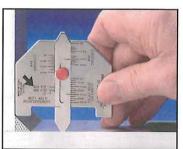
Standard or Metric



CHECK REINFORCEMENT



CHECK THE THROAT OF FILLET WELD



TO DETERMINE
THE LEG SIZE
OF THE
FILLET WELD

CAT 6



# **G.A.L. GAGE WTPS GAUGE**

MEASURE UNDERCUT .010 DEEP



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 GAL Gage, Co. WTPS Gauge is precision made from stainless steel all markings and dimensions are laser engraved for ease and clarity when reading.

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

CAT#7



# FILLET WELD GAUGES FROM 1/8" TO 3"



1/8" TO 1"

CAT #8 #8b - Metric

3"
A power of
23"
A Product of
25"
A Product of

8 PC. SET

2-1/8" TO 3"

CAT #82 #85 - Metric

METRIC & STANDARD

ALL STAINLESS STEEL
CAN BE CERTIFIED
MADE IN U.S.A.





8 PC. SET

1-1/8" TO 2"

CAT #81 #86 - Metric



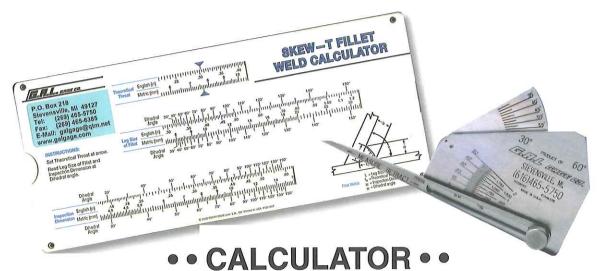
**CHECKING FILLET THROAT SIZE** 



**CHECKING FILLET LEG SIZE** 



# Patented SKEW-T FILLET WELD GAUGE



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 G.A.L. SKEW-T FILLET WELD GAUGE, (Comes Standard or Metric)

Cat# 9A - Gauge Only Cat3 9B Calculator Only Cat# 9C Both



ACUTE SIDE

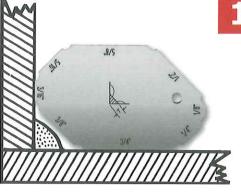


CHECKING ANGLE OF VERTICAL MEMBER

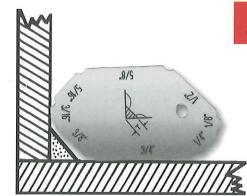


OBTUSE SIDE

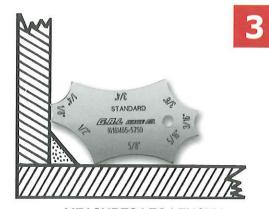




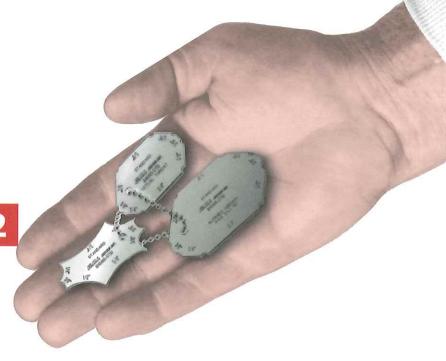
MEASURES THROAT (Allowable Convexity)



MEASURES THROAT (Theoritical)



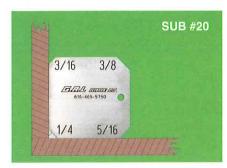
MEASURES LEG LENGTH



- New Pocket Size Measures 8 Size Fillets
- · Checks Leg Length
- Throat Size, Plus Allowable Convexity
- All Increments Permently Engraved
- Available in Standard and Metric
- Each Welder can Carry Set for Pre Inspection
- Handy Key Chain Holes Set Together
- Material Anovized Aluminum



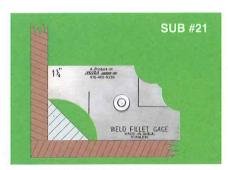
### SPECIAL GAUGE SECTION



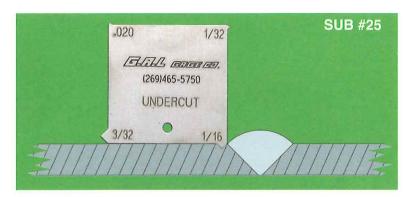
**SPECIAL DESIGN FILLET GAUGE** 



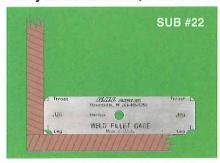
OUTSIDE FILLET GAUGES, VARIOUS SIZES AVAILABLE



DESIGN FILLET GAUGE Many Sizes Available, Please Call



SPECIAL UNDERCUT GAUGE



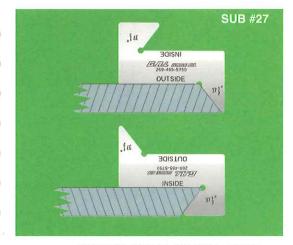
SMALL TOLERANCE FILLET GAUGE

# ALL GAUGES COME IN VARIOUS SIZES



SPECIAL FILLET GAUGE LEG LENTH ONLY

SUB #20 ......\$18.00 SUB #21 ......\$19.00 SUB #22 ......\$20.00 SUB #23 ......\$20.00 SUB #24 .....\$19.00 SUB #25 .....\$25.00 SUB #27 .....\$23.00



**END PROFILE GAUGE - PIPE** 

- Custom Gauges Fabricated to Your Design or Ours
- Tolerances to Your Specification, Logos and Identification Permanently Engraved, Quick Turnaround
- Automotive · Military · Aerospace



# Digital Pit Depth Gauge w/Probes & Rods 1" - 6"

CAT #13DPR



Measurement Scale: Reads BOTH Inch & Metric

Probes Included: .025 & .062 Diameter. CR2032 Battery Included. Certificated of Calibration Traceable to NIST. CAT #13DPR

### G.A.L. Gage Company



# 0-1" / 0-25mm Electronic Depth / Pit Gauge Cat #SPI13-749-7





- Large LCD 0.0005" (0.01mm) Resolution
- ±0.001" (0.025mm) Accuracy
- 0.06" Dia Probe
- 2-3/8" Base
- Fitted Case & Battery Included
- Certificate of Calibration Traceable to NIST

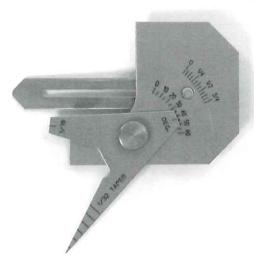
Measurement Scale: Inch / Metric

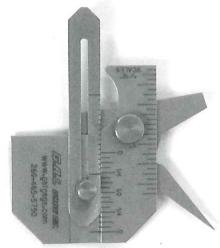
Cat #SPI13-749-7

G.A.L. Gage Company



# Caroline Inspection Welding Gauge Cat #19





This gage is composed mainly of main scale slider and multifunction gage. It is a welding inspection tool used to inspect weldment groove angle, weld bead height, gap between weldments and welding plate thickness.

It is suitable for inspecting the welding quality in boiler, bridge, chemical engineering machinery, shipbuilding and pressure vessel.

The gage is made of stainless steel and is featured with compact structure, beautiful appearance and convenient on using.

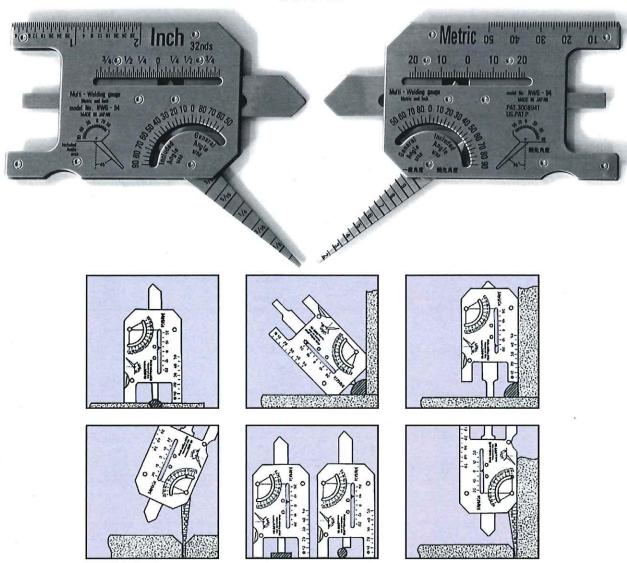
### Method of application

- The scale at the edge of the main scale can be used to measure plate thickness between 0-40mm like a straight steel gage. The multifunction gage is used to measure the height of butt weld bead. The value indicated by the multifunction gage on the main scale is the butt weld bead height. The slider is used to measure the fillet weld bead height. The value indicated by the slider on the main scale is the fillet weld bead height.
- The multifunction gage is used to measure the fillet weld bead height. The value indicated by the multifunction gage on the main scale is the fillet weld bead height.
- The slider is used to measure the butt weld bead height. The value indicated by the slider on the main scale is the weld bead height.
- Measuring 45° weld bead height: The value indicated by the slider on the main scale is the 45° fillet weld bead height. Measuring weldment groove angle. The value indicated by the multifunction gage on the main scale is the weldment groove angle.
- Measuring weldment gap: Insert the gap. gage of the multifunction gage into the gap between weldments and read directly the gap.

# **Combo-Welding Gauge**

Can Measure in Inch or Metric! • Imported by G.A.L. Gage Company

### Cat # 20

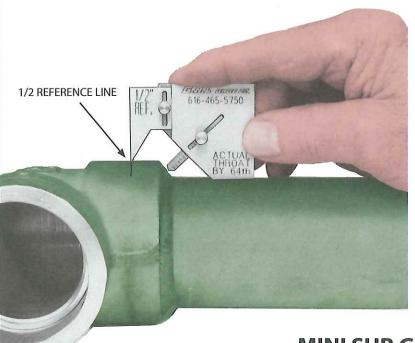


The Combo-Welding Gauge can measure in Inch or Metric all of the following:

• ROOT SIZE • FILLET WELD LEG • BUTT WELD HEIGHT • FILLET WELD THROAT • ANGLE OF PREPARATION

# **NOTES**

### Cat. #14



**SLIDING POINTER FOR** DIFFERENT PIPE SCHEDULES

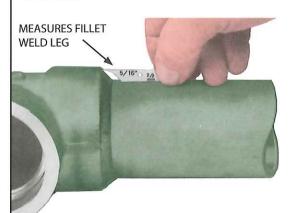


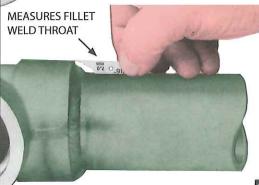
SLIDING POINTER FOR THROAT MEASUREMENT

ALL GAUGES STAINLESS STEEL

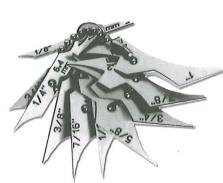
# **MINI SUB GAUGE**

### Cat. #16

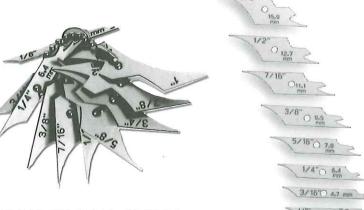




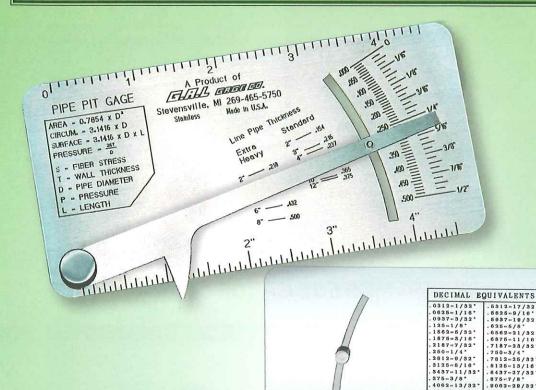
- ALL GAUGES STAINLESS STEEL
- 11 DIFFERENT SIZES IN STANDARD AND METRIC EQUIVALENT
- SET COMES WITH HANDY KEY CHAIN







# PIPE PIT GAGE



STANDARD OR METRIC

The G.A.L. PIPE PIT GAGE will give long life in the field or factory.

- Range is 0 to 1/2" in 1/64 & .020 increments.
- Arm can be locked in place at any dimension.
- All Stainless Steel
- Gage will fit in shirt pocket and comes in a pocket protector.
- Has handy formulas on front and decimal equivalents on back
- Available in Metric or English



**CAT 17** 





Digital Welding Gage

Cat #18



Measures Butt Weld Reinforcement

Measures Throat

LCD Display

IN / MM Switch

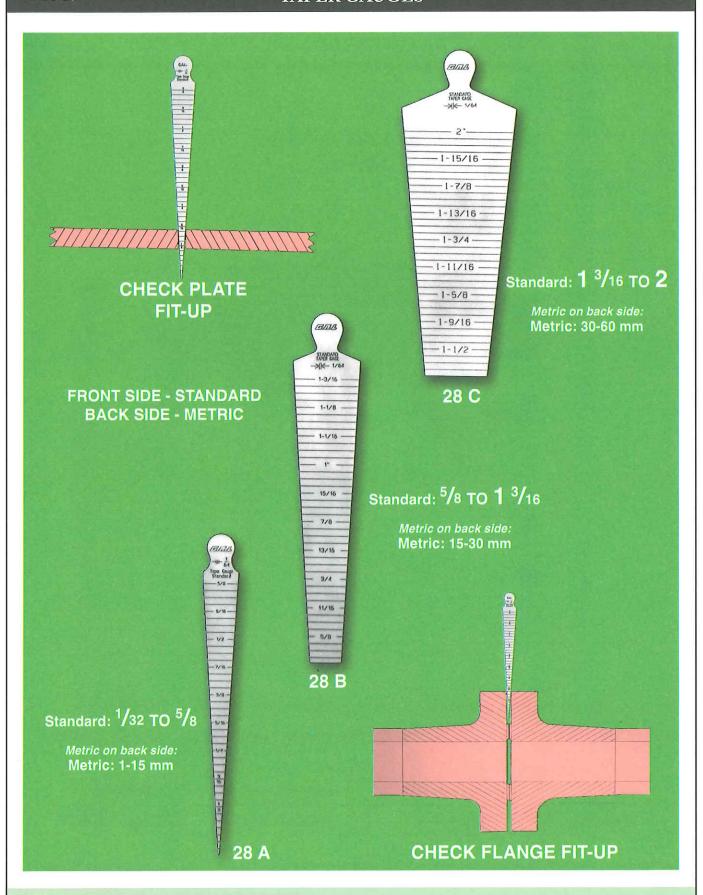
Slider Clamp Screw

**Output Connector** 

Hold Switch

ON / OFF Switch

Model No.	Range (usage 1)	Range (usage 2)	Resolution
1110-301	10mm/0.4"	20mm/0.8"	0.01mm/0.0005"

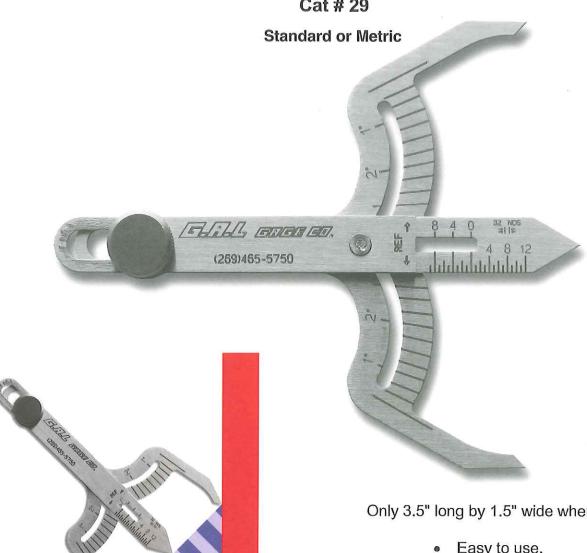




# **Weld Profile Gauge**

Quickly & easily check your welds for proper profile.

### Cat # 29



Only 3.5" long by 1.5" wide when collapsed.

- Easy to use.
- Fits in pocket!
- All Stainless Steel.

### G.A.L. Gage Company



# Welders, CWI Inspectors, Instructors All your tools in one kit. Cat #12P



# **Wrap-Around Pouch**

Measures: 9"x6-1/2" Open 6-1/2" x 4-1/4" Wrapped - Will fit in pocket.

### **Tools Included:**

VWAC/Fillet Comp\*, 6" General Scale\*, Telescoping Mirror, Flashlight & Single Purpose

Cat 12 Large

# **Tool Kit**

Measures: 13" x 8" x 3"

### **Tools Included:**

VWAC Gage\*, Magnifier, AWS Type Gauge\*, Hi-Lo Gauge, Micrometer w/Ball\*, Telescoping Mirror & 6" SPI Scale\*



\*Kits are available in Inch or Metric



# Now You Can Design Your Inspection Tool Kit

NOTE: Kit cutouts only hold gauges show Cat #12, AWS



# American Welding Society (AWS) Tool Kit

### Tools Included:

0-150mm Dial Caliper, 6" Scale w/Clip, 0-1" Micrometer, 2" Reading Glass, 7 Piece Fillet Weld Set, V-WAC Gauge\* & AWS Type Gauge\*

Cat 12 Med

# **Brief Case Type/Lock & Key**

Measures: 18" c 12-1/2" x 3"

### Tools Included:

V-WAC Gauge\*, Fillet Weld, WTPS Gauge, Bridge Cam, Single Purpose\*, 6" SPI Scale\*, Hi-Lo Gauge, Skew-T Fillet Weld w/Calc, AWS Type Gauge\*, ADJ Fillet Weld\*, Magnifier & Mag Light (not shown)

### \*Kits are available in Inch or Metric

NOTE: These are top of the line measuring tools! Prices can vary depending on the tools required.





# **ACCESSORIES**

# **Inspection Mirrors**

With Regular, Extra Long and Telescopic Handles



### INSPECTION MIRROR WITH MAGNETIC PICK-UP

**B-2TM Shown** 

Two handy tools in one! Mirror is held firmly in place at all angles. Powerful long life magnet.

P/N	Mirror Dia.	Reach
A-2TM	7/8"	5-5/8" to 19-1/2"
E-2TM	1-1/4"	5-5/8" to 19-7/8"
B-2TM	1" x 2" oval	5-5/8" to 20-3/4"



### LIGHTED TELESCOPING INSPECTION MIRROR

**HTE-2LT Shown** 

LED light illuminates dark areas for inspection. All angle ball joints hold mirror head firmly at any angle. Stainless steel handles, cushion handle will not slip in wet or oily hands.

P/N	Mirror Dia.	Reach
HTS-2LT	3-3/8"	6-3/4" to 30-1/4"
HTC-2LT	2-3/8"	6-3/4" to 37"
HTE-2LT	1-3/8"	6-3/4" to 35-1/2"



### **TELESCOPING INSPECTION MIRROR**

HT-C2

Stainless steel telescoping handle is strong, long and lightweight. 2-1/4" mirror diameter. Telescopes from 6-1/2" to 36-3/8". Comfortable textured cushion grip.

P/N	Mirror Dia.	Reach
HT-E2	1-1/4"	6-1/2" to 35"
HT-C2	2-1/4""	6-1/2" to 36-3/8""
HT-S2	3-1/4"	6-1/2" to 29-1/2""