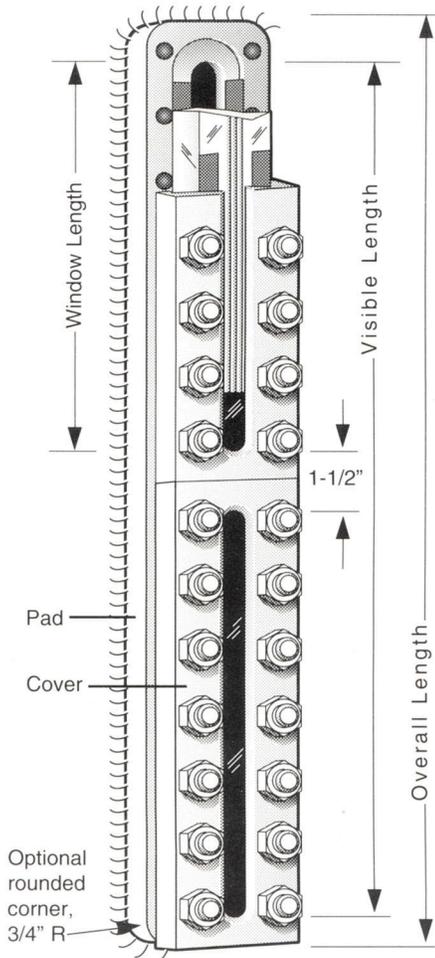


WELD PAD GAGES

- Direct view into Vessel possible using Full Slot style
- "Flush Mounting" — Low Profile
- No additional mounting fittings required



INFERNO WELD PAD NUMBERING SYSTEM

(8-letter system for Weld Pad)

	RWA	2	7	H	C	P	A	B	A	A	R
Rectangular Weld Pad Gage with Reflex Glass	RWA	Series									
Rectangular Weld Pad Gage with Transparent Glass	TWA	(No Standard)									
1 Thru 5		No. of Sections									
1 Thru 9		Glass Size									
Full Slot (recommended for Transparent style)	F	View (No standard)									
2-Hole/Channel (recommended for Reflex style)	H	Style									
Flat Back	A										
To fit outside diameter of 3" pipe	H										
To fit outside diameter of 4" pipe	B										
To fit outside diameter of 5" pipe	Y										
To fit outside diameter of 6" pipe	C	Flat/ (No standard)									
To fit outside diameter of 8" pipe	D	Curved									
To fit outside diameter of 10" pipe	E										
To fit outside diameter of 12" pipe	G										
Other curving	X										
Mild steel	A										
Steel per SA 696 (not listed in Table UCS-23, Section VIII)	B										
T-304 Stainless Steel per SA 479 or SA 240	D										
T-316 Stainless Steel per SA 479 or SA 240	E										
T-304L Stainless Steel per SA 479 or SA 240	F										
T-316L Stainless Steel per SA 479 or SA 240	G	Pad (No standard)									
Alloy 20 (Carpenter 20™)	H	Material									
Monel 400	J										
C-276 (Hastelloy C-276™)	K										
Steel per SA 516-70 (per Section VIII, ASME)	P										
Other	X										
AISI 1018 Steel	A										
Steel per SA 696 (not listed in Table UCS-23, Section VIII)	B										
T-304 Stainless Steel	D										
T-316 Stainless Steel	E										
T-304L Stainless Steel	F	Cover (A = standard)									
T-316L Stainless Steel	G	Material									
Alloy 20 (Carpenter 20™)	H										
Monel 400	J										
C-276 (Hastelloy C-276™)	K										
Steel per SA 516-70 (per Section VIII, ASME)	P										
Other	X										
Aluminosilicate, Tempered	A										
Borosilicate, Tempered	B	Glass (B = standard)									
Fused Quartz	C	Material									
Other	X										
NON-asbestos (NBR) / (Same)	A										
Teflon™, Glass-Filled / (NON-asbestos)	B										
Grafoil / (Grafoil)	C										
Viton™ / (NON-asbestos)	D										
Neoprene / (NON-asbestos)	E	Seal / Cushion (A = standard)									
Teflon™, unfilled / (NON-asbestos)	H	Material									
EPDM Rubber / (NON-asbestos)	J										
Nitrile Rubber / (NON-asbestos)	K										
NON-asbestos (SBR) / (Same)	L										
Other	X										
A-194 2H / A-193 B7	A										
Heat Treated Steel / Heat Treated Steel	B										
A-193 B7M / Steel per NACE	C										
A-194 Gr8 / A-193 B8 Cl 2 (304 SS)	D	Nut / Stud (A = standard)									
A-194 Gr8M / A-193 B8M Class 2 (316 SS)	E	Material									
Alloy 20 / Alloy 20	H										

WELDING PAD DIMENSIONS

Gage Size.....

How will you mount INFERNO welding pad to the vessel? (1) on outside of shell (2) insert through shell flush to I.D. (3) insert and project past I.D. of shell. Answer determines if curving required.

# of Sections	Nominal Glass Size	"Curved to fit..."		Vessel Diameter	Pad Thick.(T)	D _{max}	Weight	
		Visible Length	Overall Length					
		inches (mm)	inches (mm)		in (mm)	in (mm)	lbs (kg)	
1	1	3.75	95	3" pipe	1.5	38	0.68 17	10 4.5
1	2	4.75	121	4" pipe	1.5	38	0.48 12	12 5.4
1	3	5.75	146	5" pipe	1.5	38	0.37 9	13 5.9
1	4	6.75	171	6" pipe	1.25	32	0.30 8	15 6.8
1	5	7.875	200	8" pipe	1.25	32	0.23 6	17 7.7
1	6	9.125	232	10" pipe	1.25	32	0.18 5	19 8.6
1	7	10.25	260	12" pipe	1.25	32	0.15 4	21 9.5
1	8	11.875	302	20" pipe	1.25	32	0.10 2	24 10.9
1	9	12.625	321	30" pipe	1.25	32	0.06 2	25 11.3
				40" pipe	1.25	32	0.05 1	50 22.7
2	4	15	381	60" pipe	1	25	0.03 1	30 13.6
2	5	17.25	438	90" pipe	1	25	0.02 1	34 15.4
2	6	19.75	502	120" pipe	1	25	0.02 0	38 17.2
2	7	22	559	FLAT	1	25	-0 -0-	42 19.1
2	8	25.25	641					48 21.8
2	9	26.75	679					50 22.7
3	6	30.375	772					114 51.7
3	7	33.75	857					126 57.2
3	8	38.625	981					144 65.3
3	9	40.875	1038					150 68.0
4	7	45.5	1156					84 38.1
4	8	52	1321					96 43.5
4	9	55	1397					100 45.4
5	7	57.25	1454					105 47.6
5	8	65.375	1661					120 54.4
5	9	69.125	1756					125 56.7

Inferno offers Rounded Corners (OPTIONAL) on ends of welding pad to reduce stress risers and increase vessel integrity. Fabricators report faster installation time because there is no start and stop at the four corners.

Specify one or more cross ties to improve hoop strength of vessel—only applies to Full Slot style

STANDARD no cross ties "A" (mm)	Window Length		TWO CROSS TIES "C" (mm)
	ONE CROSS TIE "B" (mm)		
3.75 95	1.56 40		0.83 21
4.75 121	2.06 52		1.17 30
5.75 146	2.56 65		1.50 38
6.75 171	3.06 78		1.83 47
7.875 200	3.63 92		2.21 56
9.125 232	4.25 108		2.63 67
10.25 260	4.81 122		3.00 76
11.875 302	5.63 143		3.54 90
12.625 321	6.00 152		3.79 96
6.75 171	3.06 78		1.83 47
7.875 200	3.63 92		2.21 56
9.125 232	4.25 108		2.63 67
10.25 260	4.81 122		3.00 76
11.875 302	5.63 143		3.54 90
12.625 321	6.00 152		3.79 96
9.125 232	4.25 108		2.63 67
10.25 260	4.81 122		3.00 76
11.875 302	5.63 143		3.54 90
12.625 321	6.00 152		3.79 96

- Accessories & Options
(A = standard)
- A No Accessory/ Option
 - B Mica Shield
 - C Kel-F Shield
 - D PFA™ (See-Through Teflon™) Shield
 - E Scale - Specify English or Metric Units
 - F Non-Frost Extension
 - G Explosion Proof Illuminator
 - H Cross-Ties (for Hoop Strength—Full Slot Only)
 - J Flush / Brush Access hole (1/2" NPTF), Top & Bottom
 - K Drain Hole (1/8" NPTF) Bottom only
 - L Belleville Spring Washers
 - M 3/8" Weld Bevel— all four sides
 - R Low Stress Radius on all four corners of Pad**
 - T Extra-Thick Welding Pad
 - W Wash Nozzle, Internal
 - X Other

Example Shown: RWA-27 HCPABAAR

- RWA Reflex Series 'A'
 - 2 Two Section
 - 7 Size #7 Glass
 - H 2-Hole and Channel View style (Recommended for Reflex Glass)
 - C Curved to fit outside diameter of 6" Pipe
 - P Pad Material, Steel per SA 516-70 (per Section VIII, ASME)
 - A AISI 1018 Steel Cover Material
 - B Tempered Borosilicate Glass
 - A NBR binder NON-asbestos sheet / (Same)
 - A A-194 2H / A-193 B7 Nuts & Studs
 - R Low Stress Radius on all four corners of Pad
- Visible Length: 22"
Overall Length: 23.5"
(from Table)

Need special Series 5 or 12 sizes? Lit By Fax Code 2597 for a dimensional data sheet.

Isolable Weld Pads available with integral shut-off valves, AUTOMATIC Ball Check or NON-automatic style. Literature by Fax Code 2598

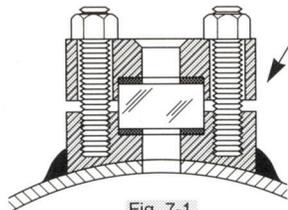


Fig. 7-1

Curved to fit shell O.D.
Flat Back, inserted through shell

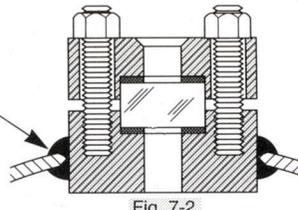


Fig. 7-2

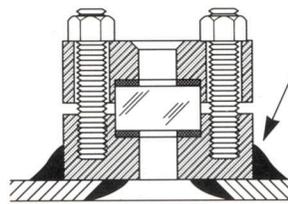


Fig. 7-3

Flat Back on flat tank
do NOT weld Flat Back on curved surface—warped seat will cause glass breakage

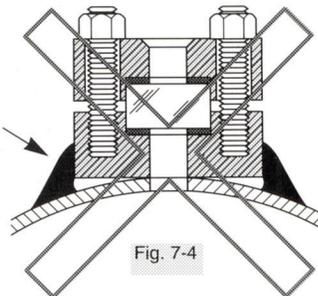


Fig. 7-4

ATTENTION Vessel Designers and Code Fabricators...

INFERNO routinely furnishes the Certificate of Conformance shown at right, on request, which states that all materials of construction meet the requirements of Section VIII, ASME B&PVC and that the Gage itself is designed to perform at the pressure & temperature listed. Design calculations for suitability of these Weld

Pads for a particular vessel is outside of our scope of expertise. However, we have attempted to show here the complete geometry of the welding pad so that these calculations can be made.

We can increase any dimension on request except the glass counterbore length, "G", to provide more vessel reinforcement. Increasing the .34", .75", and 1.5" dimensions and to a lesser extent the "T" dimension can help significantly.

INFERNO MFG. CORP.
115 Ricou St.
Shreveport, LA 71107
Phone: 318-221-8454 Fax: 318-222-4106

Date: July 7, 1994
Certificate of Compliance, Weld Pad
Customer: ABC Company
Customer Order No.: 6194
Inferno Job No. 7745

Inferno Mfg. Corp. certifies that weld pad gages supplied on this job are designed and built according to the requirements of ASME Boiler & Pressure Vessel Code, Section VIII Division I. Weld Pad material is SA-516 Gr70. Weld pad gages are suitable for the following operating pressures and temperatures:

SAMPLE
CERTIFICATE
OF
CONFORMANCE

Item 1
Model RWA-27 HCPABAAA
Serial No(s): 7184, 7185, 7186
150 PSIG/FV at 400 degrees F
Pad Heat Code: J47

Inferno Mfg. Corp. warrants that weld pad gages are suitable for the working pressures and temperatures listed above; however precaution must be taken by vessel fabricator to insure that the welding pad is installed with a minimum of heat distortion and that the gasket & glass recessed seating areas remain free of warpage after installation. Welding Installation Procedures furnished with the Weld Pads should be followed.

It is the vessel designer's responsibility to insure that the vessel is adequately reinforced. Hoop & ligament stresses should be considered.

Authorized Signature, Inferno Mfg. Corp.
Date: _____

The **FULL SLOT** style welding pad allows maximum communication of the liquid between the Vessel and the Weld Pad Gage.

Full Slot style with transparent glass is recommended to see a liquid-liquid interface.

Back lighting is possible when a pair of Full Slot Gages are set 180° apart on the vessel using transparent (plain) glass.

Transparent glass is usually specified with Full Slot style but Reflex glass may also be used.

Specify TWA for transparent glass; RWA for reflex glass.

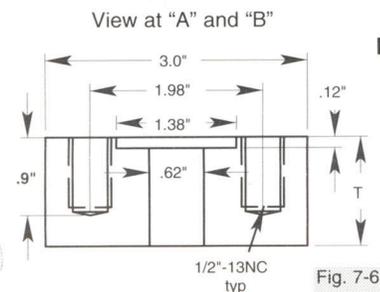


Fig. 7-6

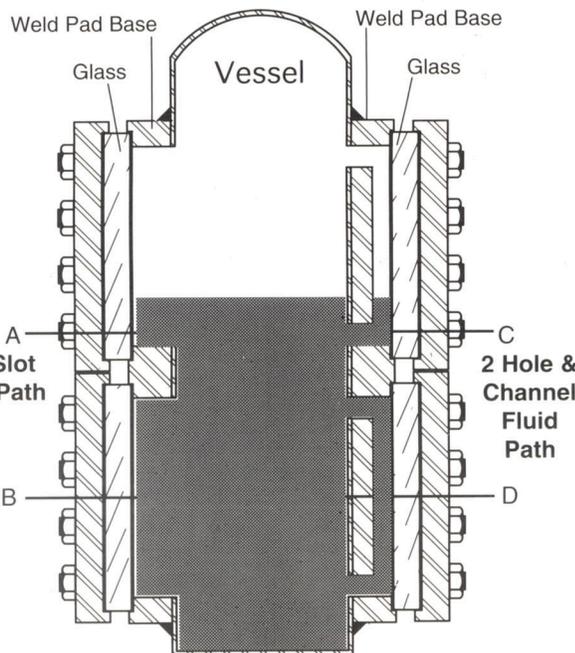


Fig. 7-5

The Vessel is frequently not slotted to match the windows in the Pad but only drilled. In such cases a **2-HOLE & CHANNEL** pad can be used with no loss of fluid flow.

Advantages are a stronger installation with more reinforcement.

Commonly used with Reflex style glass.

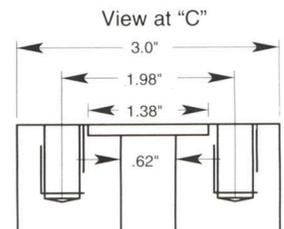


Fig. 7-7

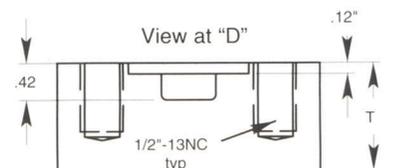


Fig. 7-8