



SPOT WELDING DATA CONTINUED
OPTIMUM CONDITIONS
FOR WELDING GALVANIZED LOW CARBON STEEL

Spot welding galvanized low-carbon steel

Material Thickness <i>notes 1, 2, & 3</i>	Electrode Diameter and Shape <i>note 4</i>			Net Electrode Force Lb.	Welding Current (Approx.) Amps.	Weld Time Cycles	Weld Nugget Size In.	Minimum Tension-Shear Strength Lb.	Minimum Weld Spacing Inches	Minimum Contacting Overlap Inches
	D In.	d In.	Oc Deg.							
0.022	5/8	3/16	120	300	13000	8	0.15	550	5/8	5/8
0.030	5/8	3/16	120	400	13000	10	0.16	1000	5/8	5/8
0.036	5/8	1/4	120	500	13500	12	0.16	1180	3/4	5/8
0.039	5/8	1/4	120	650	14000	13	0.21	1400	3/4	5/8
0.052	5/8	1/4	120	725	14500	18	0.22	1700	7/8	11/16
0.063	3/4	1/4	120	850	15500	22	0.24	2500	1-1/8	3/4
0.078	3/4	5/16	120	1200	19000	24	0.28	3200	1-1/4	7/8
0.093	3/4	3/8	120	1400	21000	30	0.34	4200	1-1/2	1
0.108	7/8	3/8	120	1750	20000	37	0.40	5900	1-3/4	1-1/8
0.123	7/8	3/8	120	2000	20000	42	0.48	7200	2	1-1/8

NOTES:

1. Material must be free from dirt, grease, paint etc. prior to welding, but may have light oil.
2. Two equal metal thicknesses of each gage.
3. Commercial coating weight is 1.25 oz. per square foot.
4. Electrode Material-RWMA Group A, Class 2. CMW[®]3.
5. Water Cooling: 2 gallons per minute.

Projections should be larger in diameter for galvanized than for uncoated material.

Projection welding galvanized low-carbon steel

Material Thickness <i>notes 1, 2, & 3</i>	Electrode Diameter and Shape <i>note 4</i>			Net Electrode Force Lbs.	Welding Current (Approx.) Amps.	Weld Time Cycles	Weld Nugget Size In.	Minimum Tension-Shear Strength (For Single Projections Only) Lb.	Projection Size	
	D In.	d In.	Oc Deg.						Diameter Inches	Height Inches
0.039	5/8	3/8	250	10000	15	0.15	0.15	925	0.187	0.041
0.063	5/8	7/16	400	11500	20	0.25	0.25	2050	0.218	0.048
0.078	3/4	1/2	550	16000	25	0.25	0.25	2700	0.250	0.054
0.093	3/4	1/2	750	16000	30	0.30	0.30	4300	0.250	0.054
0.108	7/8	1/2	950	22000	33	0.31	0.31	4900	0.250	0.054

Seam welding galvanized low-carbon steel

Material Thickness <i>notes 1, 2, & 3</i>	Electrode Width and Shape <i>note 4</i>		Net Electrode Force Lb.	Welding Current (Approx.) Amps.	Weld Time		Welding Speed In. / Min.	Welds Per Inch	Minimum Contacting Overlap Inches
	W In.	E In.			Heat Time Cycles	Cool Time Cycles			
0.015	3/8	1/4	900	15000	2	2	120	7.5	3/8
0.036	1/2	1/4	1100	18000	4	2	60	10.0	1/2
0.039	1/2	1/4	1200	19000	4	3	60	9.0	1/2
0.052	1/2	1/4	1350	20000	5	1	90	7.0	9/16
0.063	1/2	5/16	1500	19800	8	2	54	7.0	5/8
0.078	5/8	5/16	1850	23000	10	7	30	7.0	11/16

NOTES:

1. Material must be free from dirt, grease, paint etc. prior to welding, but may have light oil.
2. Two equal metal thicknesses of each gage.
3. Commercial coating weight is 1.25 oz. per square foot.
4. Electrode Material-RWMA Group A, Class 2. CMW[®]3.
5. Pressure-tight joints require stripping the zinc coating prior to welding.
6. Nominal electrode diameter ranges between 8 to 10 inches.

From American Welding Society "Recommended Practices for Resistance Welding."