

# Occupational Profile: Welders, Cutters, Solderers, and Brazers

## GENERAL OCCUPATION DESCRIPTION

Use hand-welding, flame-cutting, hand soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.

Source: O\*NET online. <http://online.onetcenter.org>

## REQUIRED EDUCATION

As shown in the table (right), 65% of interviewed employers reportedly required a High School diploma or less for this occupation. A further 35% required a 2-year degree or equivalent.

Required Education	
Percent of Employers Requiring HS Diploma or Less	65.3%
Percent of Employers Requiring 2-Year Degree or Equiv	34.7%
Percent of Employers Requiring BS Diploma or More	0%

Source: Bureau of Labor Statistics

## WAGES

Welder, Cutter, Solderer, and Brazer is generally considered a low to medium-wage occupation, with moderate wage advancement with experience. Employers in the Greater Phoenix region and the State of Arizona as a whole generally pay less as compared with the overall United States.

Location	Pay Period	2004				
		10%	25%	Median	75%	90%
United States	Hourly	\$9.85	\$12.01	\$14.90	\$18.21	\$22.06
	Yearly	\$20,500	\$25,000	\$31,000	\$37,900	\$45,900
Greater Phoenix	Hourly	\$9.42	\$10.92	\$13.05	\$15.87	\$19.09
	Yearly	\$19,598	\$22,722	\$27,160	\$33,020	\$39,718
Arizona	Hourly	\$9.43	\$11.40	\$14.15	\$17.97	\$21.27
	Yearly	\$19,600	\$23,700	\$29,400	\$37,400	\$44,200

Source: Bureau of Labor Statistics

As shown in the table to right, a national comparison of wages for this occupation reveals Arizona ranks 35th in terms of median hourly wages.

RANK	Location	Median Wage 2004	
		Hourly	Annual
1	District of Columbia	\$23.47	\$48,800
2	Alaska	\$23.22	\$48,300
3	Hawaii	\$20.65	\$43,000
4	Washington	\$18.58	\$38,600
5	Nevada	\$18.29	\$38,000
35	ARIZONA	\$14.15	\$29,400

Source: Bureau of Labor Statistics

The table below provides a comparison of wages by sub-industry for the Greater Phoenix region (2005). As shown, wages are comparable across the main manufacturing sectors of employment, with the exception of “Wood Product Manufacturing” firms that tend to pay slightly less.

Wages by Industry: Greater Phoenix (2005)	Rounded Employment	Mean Wage	10th Percentile Wage	25th Percentile Wage	Median Wage	75th Percentile Wage	90th Percentile Wage
Fabricated Metal Product Manufacturing	720	\$13.80	\$9.44	\$10.90	\$13.28	\$16.34	\$19.69
Machinery Manufacturing	240	\$13.98	\$9.53	\$10.85	\$13.18	\$17.07	\$19.94
Wood Product Manufacturing	220	\$12.65	\$8.91	\$9.83	\$11.75	\$14.10	\$17.89
Transportation Equipment Manufacturing	210	\$13.71	\$8.12	\$10.17	\$14.03	\$16.59	\$19.06
Primary Metal Manufacturing	100	\$14.18	\$11.35	\$12.07	\$13.27	\$16.19	\$19.01
Computer and Electronic Product Manufacturing	70	\$12.21	\$8.00	\$9.13	\$10.68	\$15.75	\$19.71
Nonmetallic Mineral Product Manufacturing	60	\$14.73	\$8.94	\$12.76	\$15.60	\$17.30	\$18.69
Electrical Equipment, Appliance, and Component Manufacturing	N/A	\$13.36	\$11.05	\$11.64	\$12.62	\$13.60	\$18.70

Source: Bureau of Labor Statistics

## EMPLOYMENT

As shown in the table below, this occupation has a projected 21% growth over 10 years (between 2003 and 2013) for the Greater Phoenix region. There are an average projected 169 job openings each year, comprised of 73 new jobs and 96 positions vacated by individuals leaving the field (due to retirement, death, career changes, or other reasons).

	10-YEAR CHANGE			AVERAGE ANNUAL		
	Employment		Percent Change	Job Openings	Growth	Separations
United States	2004	2014				
Welders, Cutters, Solderers, and Brazers	377,000	395,900	5%	12,540	n/a	n/a
Arizona	Employment		Percent Change	Job Openings	Growth	Separations
	2002	2012				
Welders, Cutters, Solderers, and Brazers	4,500	5,630	25%	240	n/a	n/a
Greater Phoenix	Employment		Percent Change	Job Openings	Growth	Separations
	2003	2013				
Welders, Cutters, Solderers, and Brazers	3,397	4,127	21%	169	73	96

Source: Bureau of Labor Statistics

\*Job Openings refers to the average annual job openings due to growth and net replacement.

Source: Bureau of Labor Statistics

\*\*N/A is displayed in cases where data is not available or cannot be published because of federal data privacy standards.

An additional source of information regarding this occupation can be provided by analysis of employer survey data collected for the Maricopa County Community Colleges by the ERISS Corporation in 2004. As shown, the ERISS survey data shows a projected 1-year growth rate of 14%, which is higher than the average of 2.1% per year reflected by the BLS data above.

Additionally, the ERISS data provides an indicator of yearly turnover for this occupation, which is reported to be moderate at 11%.

ERISS Occupational Survey Data (2004)			
Greater Phoenix	Growth	Turnover	Demand
Welders, Cutters, Solderers, and Brazers	14.0%	11.0%	25.0%

Source: 2004 ERISS occupational survey

### Comparison of employment projections for top five regions for Welder, Cutter, Solderer, and Brazer

As shown in the table to right, a national comparison reveals the State of Arizona ranks 5th in terms of projected 10-year growth for this occupation (25%).

RANK	Location	Employment		Percent Change
		2004	2014	
1	Nevada	1,410	2,120	51%
2	Wyoming	1,360	1,980	46%
3	Hawaii	960	1,330	38%
4	Utah	4,310	5,540	29%
5	<b>ARIZONA</b>	4,500	5,630	25%

Source: Bureau of Labor Statistics

### Employment by Industry

The table below shows the industries that most commonly employ Welder, Cutter, Solderer, and Brazer, and the proportion of employment accounted for at the national level. As shown, “Architectural and structural metals manufacturing” firms account for the most employment (11.1%).

Percent of Employment Nationally by Industry	
Percent	Industry
11.1%	Architectural and structural metals manufacturing
6%	Self-employed workers, primary job
5.2%	Agricultural, construction, and mining machinery manufacturing
4.8%	Commercial and industrial machinery and equipment (except automotive and electrical)
4.1%	Motor vehicle body and trailer manufacturing
4%	Motor vehicle parts manufacturing
3.5%	Other general-purpose machinery manufacturing
3.4%	Ship and boat building
3.1%	Boiler, tank, and shipping container manufacturing
2.7%	Machine shops
2.6%	Ventilation, heating, air-conditioning, and commercial refrigeration equipment

Source: Bureau of Labor Statistics

### Geo-Location Overlay of Employers with 25 or More Employees that Potentially Employ Occupation (n = 95)

