

Industrial Maintenance Mechanic Technology Occupational Group

California and the Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside and San Bernardino counties combined)

Job Opportunities

In 2016, there nearly 38,400 industrial maintenance mechanic technology jobs in California. About 11% or more than 4,000 of these job opportunities were located in the Riverside-San Bernardino-Ontario MSA. Across the local region, industrial maintenance mechanic technology occupational employment is projected to increase by 11% through 2021; growing slightly faster than California overall at 10%. Local employers will need to hire more than 1,000 more new and replacement industrial maintenance mechanic technology workers over the next five years (includes retirements).

Exhibit 1: Five-year projections for the industrial maintenance mechanic technology occupational group in the Riverside-San Bernardino-Ontario MSA and California

Region	2016 Jobs	2021 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Riverside-San Bernardino-Ontario MSA	4,054	4,511	457	11%	1,009	202
California	38,396	42,291	3,895	10%	8,928	1,786

Earnings

The combined average entry-level wage for this occupational group is \$16.42 per hour, above the MIT Living Wage estimate of \$12.10 for a single adult living in the Riverside-San Bernardino-Ontario MSA. The average annual earnings for this occupational group in the region is \$51,900 per year, assuming full-time employment. The combined average entry-level hourly wage in California is \$15.58 per hour, also above the living wage of \$13.21 for the state. Hourly wages and annual average earnings for each occupation in this group within the Riverside-San Bernardino-Ontario MSA can be found in Appendix A.

Exhibit 2: Average earnings for the industrial maintenance mechanic technology occupational group in the Riverside-San Bernardino-Ontario MSA and California

Region	Entry to Experienced Hourly Earnings Range*	Avg. Annual Earnings
Riverside-San Bernardino-Ontario MSA	\$16.42 to \$35.13	\$51,900
California	\$15.58 to \$40.60	\$55,600

*Entry Hourly is 10th percentile wage, experienced is 90th percentile wage.

Job Ads, Top Employers, Skills, and Education in the Local Region

In 2016, there were a total of 210 job advertisements (ads) for the industrial maintenance mechanic technology occupational group in the Riverside-San Bernardino-Ontario MSA. There were 156 job ads for the same group of occupations in 2015, and 151 job ads in 2014.

Top employers posting job ads in the last 12 months (June 2016 – May 2017) for industrial maintenance mechanic technology occupational group included (181 total job ads, 41 job ads did not list and employer name):

- C&W Services (9 job ads)
- Under Armour (9)
- Medline Industries (7)
- Anheuser-Busch Companies, Inc. (5)

The top worksite cities in the region were Ontario, Riverside, San Bernardino, Rialto, and Rancho Cucamonga.

Exhibit 3 lists the top specialized and soft skills that employers are seeking when looking for workers to fill industrial maintenance mechanic technology positions.

Exhibit 3: Top skills for the industrial maintenance mechanic technology occupational group in the Riverside-San Bernardino-Ontario MSA

Occupations	Specialized skills	Soft skills
Control and Valve Installers and Repairers, Except Mechanical Door	<ul style="list-style-type: none"> • Programmable Logic Controller (PLC) Programming • Variable Frequency Drives (VFDs) • Electrical Schematics • HMI • Wiring 	<ul style="list-style-type: none"> • Troubleshooting • Writing • Computer Skills • Organizational Skills • Communication Skills
Industrial Machinery Mechanics	<ul style="list-style-type: none"> • Schematic Diagrams • Forklift Operation • Programmable Logic Controller (PLC) Programming • Repair 	<ul style="list-style-type: none"> • Preventative Maintenance • Detail-Oriented • Troubleshooting • Physical Demand
Maintenance Workers, Machinery	<ul style="list-style-type: none"> • Photovoltaic (PV) Systems • Commercial Construction • Process Improvement • Electrical Troubleshooting 	<ul style="list-style-type: none"> • Positive Disposition • Troubleshooting • Preventative Maintenance

Exhibit 4 displays the education level requested by employers in online job ads. The majority of employers over the previous 12 months (June 2016-May 2017) were looking for a candidate with a high school diploma or vocational training.

Exhibit 4: Online job ads with minimum advertised education requirements for the industrial maintenance mechanic technology occupational group in the Riverside-San Bernardino-Ontario MSA

Occupations	High school diploma or vocational training	Associate degree	Bachelor's degree or higher
Control and Valve Installers and Repairers, Except Mechanical Door	95%	5%	-
Industrial Machinery Mechanics	97%	3%	-
Maintenance Workers, Machinery	100%	-	-

Student Completions and Student Outcomes

Exhibit 5 shows the annual average regional community college awards (associate degrees and certificates) conferred during the three academic years between 2013 and 2016, as well as other awards granted outside the California Community Colleges from 2012-2015, with the relevant TOP code. Please note an award is not equivalent to a single person in search of a job opening since a student may earn more than one award, such as an associate degree in addition to a certificate.

Community College student outcome information was obtained from the CTE LaunchBoard based on the selected TOP code(s) and region.

Exhibit 5: Annual average community college student completions for the industrial systems technology program in the Riverside-San Bernardino-Ontario MSA

0945.00 – Industrial Systems Technology and Maintenance	Headcount (2014-2015)	CC Annual Avg. Awards (2013-16)	Annual Avg. Certificates or Other Credit Awards (2012-15)
Barstow	31	-	-
Victor Valley	3	-	-
TOTAL Headcount	34		
TOTAL CC Awards		-	-



0945.00 Industrial Systems Technology and Maintenance program outcomes in the Riverside-San Bernardino-Ontario MSA:

*No program outcome data available for this TOP code

Summary

Industrial maintenance mechanic technology occupational employment is projected to grow by 11% over the next five years within the Riverside-San Bernardino-Ontario MSA, which will yield approximately 1,000 jobs over the next five years, or 200 job openings per year. Further, the entry-level wages for this occupational group is \$16.42 per hour, higher than the MIT Living Wage estimate for the local region. Almost all employers searching for workers in this occupational group are looking for a candidate with a high school degree or vocational training. Only two community colleges in the local region have students that are currently enrolled in the TOP code program listed above, and no corresponding completion data is available at this time.

Sources

O*Net Online
Labor Insight/Jobs (Burning Glass)
Economic Modeling Specialists International (EMSI) Class of Worker 2017.2
CTE LaunchBoard
Statewide CTE Outcomes Survey
Employment Development Department Unemployment Insurance Dataset
Living Insight Center for Community Economic Development
California Community Colleges Chancellor's Office Management Information Systems (MIS)

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June 2017



Appendix A: Occupation definitions, five-year projections, and earnings for the industrial maintenance mechanic technology occupational group

Occupation Definitions (SOC code), Education and Training Requirement, Community College Education Attainment

Control and Valve Installers and Repairers, Except Mechanical Door (49-9012)

Install, repair, and maintain mechanical regulating and controlling devices, such as electric meters, gas regulators, thermostats, safety and flow valves, and other mechanical governors.

Entry-Level Educational Requirement: High school diploma or equivalent

Training Requirement: One to 12 months

Percentage with Community College Award or Some Postsecondary Coursework: 49%

Industrial Machinery Mechanics (49-9041)

Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems.

Entry-Level Educational Requirement: High school diploma or equivalent

Training Requirement: More than 12 months

Percentage with Community College Award or Some Postsecondary Coursework: 42%

Maintenance Workers, Machinery (49-9043)

Lubricate machinery, change parts, or perform other routine machinery maintenance.

Entry-Level Educational Requirement: High school diploma or equivalent

Training Requirement: One to 12 months

Percentage with Community College Award or Some Postsecondary Coursework: 35%

Table 1. Job growth and wages for the industrial maintenance mechanic technology occupational group in the Riverside-San Bernardino-Ontario MSA

Occupations (SOC code)	2016 Jobs	5-Yr Openings to 2021 (New + Replacement Jobs)	Annual Openings to 2021	Entry to Experienced Hourly Earnings Range*	Avg. Annual Earnings
Industrial Machinery Mechanics (49-9041)	2,428	683	137	\$16.66 to \$35.66	\$52,000
Maintenance Workers, Machinery (49-9043)	996	174	35	\$12.75 to \$28.41	\$41,900
Control and Valve Installers and Repairers, Except Mechanical Door (49-9012)	629	152	30	\$21.24 to \$43.66	\$67,000
Total	4,054	1,009	202	\$16.42 to \$35.13	\$51,900

*Entry is 10th percentile and experienced is 90th percentile hourly earnings