

Welding Power Supply Market Forecasts to 2032 – Global Analysis By Type (Transformer, Inverter, Engine-Driven, Rectifier and Other Types), Welding Process (Arc Welding, Resistance Welding, Laser Beam Welding, Plasma Welding and Other Welding Processes), Output Current Range, Power Supply Phase, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Welding Power Supply Market is accounted for \$4.9 billion in 2025 and is expected to reach \$14.5 billion by 2032 growing at a CAGR of 16.8% during the forecast period. A welding power supply is an essential component in welding systems that delivers controlled electrical energy to generate the heat required for fusing metals. It regulates current, voltage, and duty cycle based on the welding process, such as MIG, TIG, or arc welding. These units can be transformer-based, inverter-based, or engine-driven, each offering distinct advantages in efficiency, portability, and precision for industrial, construction, or repair applications.

Market Dynamics:

Driver:

Industrial automation and industry 4.0 adoption

The widespread implementation of industrial automation and Industry 4.0 technologies serves as a primary growth driver for the welding power supply market. Advanced manufacturing processes increasingly demand precise, consistent, and digitally controlled welding operations to meet stringent quality standards and production

efficiency targets. Additionally, the integration of IoT and AI technologies in welding systems enables real-time process optimization, predictive maintenance capabilities, and enhanced operational efficiency across manufacturing facilities.

Restraint:

High initial investment costs

The sophisticated systems, while offering long-term benefits through improved efficiency and durability, demand considerable upfront investment that can strain financial resources of budget-conscious organizations. Additionally, the high costs of incorporating the latest technologies, such as inverter-based systems and digital controls, create affordability challenges for companies operating in developing regions. Moreover, this financial constraint forces many enterprises to delay equipment upgrades, limiting their access to energy-efficient and technologically advanced welding solutions.

Opportunity:

Growth in renewable energy projects

Major renewable energy installations, including wind farms, solar power plants, and hydroelectric facilities, require extensive welding operations for construction and maintenance of energy generation equipment. Government initiatives worldwide promoting sustainable energy solutions drive significant investments in green infrastructure projects, creating sustained demand for reliable welding systems. Moreover, the transition toward renewable energy sources necessitates specialized welding applications for assembling advanced materials and components used in clean energy technologies.

Threat:

Skilled labor shortage in welding operations

According to industry projections, the welding workforce shortage could reach approximately 400,000 welders by 2024, creating significant operational challenges for manufacturing and construction sectors. Additionally, the COVID-19 pandemic exacerbated this shortage as many welders shifted to alternative careers due to work-from-home trends and industry disruptions. The lack of skilled operators limits the

effective utilization of advanced welding power supply systems, potentially reducing overall productivity and quality standards in welding-dependent industries.

Covid-19 Impact:

The COVID-19 pandemic initially created neutral to negative impacts on the welding power supply market through reduced consumer demand and halted construction activities. Manufacturing disruptions, particularly in automotive and aerospace sectors, significantly decreased welding equipment utilization during lockdown periods. Additionally, workforce shortages emerged as many welders transitioned to remote-compatible careers, creating operational challenges for on-site welding requirements. However, the market demonstrated resilience through adaptation strategies and gradual recovery as industries resumed operations with enhanced safety protocols and automation adoption.

The automotive segment is expected to be the largest during the forecast period

The automotive segment is expected to account for the largest market share during the forecast period due to its extensive welding requirements throughout vehicle manufacturing processes. Automotive production relies heavily on welding operations for assembling car bodies, chassis components, and various structural elements, creating substantial demand for reliable power supply systems. The industry's shift toward electric vehicles and lightweight materials necessitates sophisticated welding technologies capable of handling advanced alloys and precision requirements. Additionally, mass production environments in automotive manufacturing require high-performance welding power supplies that ensure consistent quality, speed, and reliability across automated assembly lines.

The inverter segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the inverter segment is predicted to witness the highest growth rate, driven by superior energy efficiency and advanced technological capabilities compared to traditional transformer-based systems. Inverter-based welding power supplies offer significantly reduced power consumption, with comparable TIG inverters requiring only 32 amps compared to 128 amps for conventional 350-amp systems. Additionally, these systems provide improved power factor correction, compact design, and precise welding parameter control, making them ideal for modern manufacturing environments.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to rapid industrialization and extensive infrastructure development across emerging economies. The region benefits from substantial government investments in large-scale infrastructure projects, construction activities, and manufacturing expansion, particularly in countries like China, India, and Southeast Asian nations. Additionally, the presence of numerous local manufacturers and the region's position as a global manufacturing hub drive consistent demand for welding power supplies across diverse industries.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, driven by accelerating industrialization and significant investments in manufacturing infrastructure. The region's expanding automotive production, particularly in electric vehicle manufacturing, creates substantial demand for advanced welding power supply systems with sophisticated technological capabilities. Additionally, government-supported infrastructure development programs and renewable energy initiatives across the region generate consistent welding equipment requirements for construction and maintenance operations. Moreover, the increasing adoption of automation and digitalization in manufacturing processes supports the demand for energy-efficient inverter-based welding systems, positioning Asia Pacific as the fastest-growing regional market.

Key players in the market

Some of the key players in Welding Power Supply Market include Lincoln Electric Holdings, Inc., ESAB Corporation, Illinois Tool Works Inc., Fronius International GmbH, Kemppi Oy, Panasonic Corporation, Osaka Transformer Co., Ltd, Amada Miyachi Co., Ltd., Migatronik A/S, Telwin S.p.A., Comelz S.p.A., Jasic Technology Co., Ltd., Hangzhou Huayuan Electric Co., Ltd., Shanghai Riland Industry & Commerce Co., Ltd., Denyo Co., Ltd., GYS, Kjellberg Finsterwalde Plasma und Maschinen GmbH, and Step Systems s.r.o.

Key Developments:

In October 2024, ESAB has introduced the Renegade ES 210i inverters for MMA and Live TIG welding and the Renegade ET 210iP and ET 210iP Advanced inverters for

pulsed TIG welding with high frequency (HF) TIG arc starts. These units offer an industry-leading combination of premium arc performance, power, portability, and full-feature controls. They use 1Ph, 115/220 VAC mains power $\pm 15\%$, 50/60 Hz for location flexibility. Renegade units have a built-in active Power Factor Correction (PFC) circuit that allows the machine to work perfectly even on a poor-quality power supply and on very long extension cables (up to 100m).

In July 2024, Lincoln Electric Holdings, Inc. announced that it has acquired Vanair Manufacturing, LLC (“Vanair”), and a privately held, Michigan City-based, manufacturer of mobile power solutions serving the U.S. service truck market. Vanair offers the industry’s most comprehensive portfolio of mobile power solutions, including vehicle-mounted compressors, generators, welders, hydraulics, chargers/boosters, and electrified power equipment. Their extensive equipment portfolio complements Lincoln Electric’s maintenance and repair consumable offering and builds upon the joint development equipment initiatives that the two companies have been pursuing.

In November 2022, ESAB, part of ESAB Corporation and a world leader in welding and cutting equipment and consumables, unveiled the industry-changing Renegade VOLT™ ES 200i Stick/TIG battery-powered welding system as it closed out SparkWeek, the brand’s week-long, virtual launch event highlighting new welding and fabrication products, automation and robotics solutions, and industry-shaping PPE.

Types Covered:

Transformer

Inverter

Engine-Driven

Rectifier

Other Types

Welding Processes:

Arc Welding

Resistance Welding

Laser Beam Welding

Plasma Welding

Other Welding Processes

Output Current Ranges Covered:

Up to 200 Amperes

201-400 Ampere

Above 400 Amperes

Power Supply Phases Covered:

Single Phase

Three Phase

End Users Covered:

Automotive

Construction

Shipbuilding & Marine

Aerospace

Oil & Gas

Manufacturing

Energy & Power Generation

Heavy Machinery

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations

- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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