

# **Laser Cleaning Market by Type (Solid and Gas), Conservation & Restoration (Art and Heritage Restoration, Infrastructure), Cleaning Process (Automotive, Aerospace), and Industrial Usage (Nuclear Plant, Refineries), and Geography - Global Forecast to 2023**

<https://marketpublishers.com/r/L7FE6B01A41EN.html>

Date: April 2018

Pages: 94

Price: US\$ 5,650.00 (Single User License)

ID: L7FE6B01A41EN

## **Abstracts**

“Preference toward laser cleaning over traditional approach to fuel the growth of the laser cleaning market”

The laser cleaning market is estimated to be valued at USD 588.8 million in 2018 and is expected to be worth USD 723.9 million by 2023, growing at a CAGR of 4.22% between 2018 and 2023. The growth of the laser cleaning market is because of the preference toward laser cleaning over traditional approach and the increasing demand for laser cleaning in various applications. However, high cost and lack of technical expertise are restraining the growth of the laser cleaning market.

“Increasing adoption of YAG for conservation and restoration has propelled the growth of automotive applications in the Laser cleaning market”

The laser cleaning market for conservation and restoration is expected to grow at the highest CAGR between 2018 and 2023. YAG lasers are being used predominantly for the cleaning of art and heritage sites, as well as infrastructure. As Nd:YAG laser cleaning systems have proved its potential in terms of cleaning sculptures made of inorganic materials such as marble, limestone, and sandstone without causing damage to the original substrate, it has gained a lot of traction for conservation and restoration. The use of automation is continuously increasing for laser surface preparation of

metallic surfaces in the automotive and aerospace applications to support adhesive bonding with exceptional quality, repeatability, and reliability to ensure long-term adhesion performance and excellent electrical connectivity. This has led to the overall growth of laser cleaning systems in automotive and aerospace applications.

“APAC and North America are the major markets for the laser cleaning market”

The laser cleaning market, on the basis of region, has been segmented into North America, Europe, APAC, and RoW. North America is accounted for the largest share of the laser cleaning market in 2018, followed by Europe and Asia Pacific (APAC). There is an increase in the demand for gas lasers in North America owing to the establishment of the manufacturing sector in the region. Laser cleaning systems are mainly used for the conservation and restoration of antique items and in automotive and aerospace industries and power plants. Some of the key manufacturers in the laser cleaning market in North America are Coherent (US), IPG Photonics Corporation (US), General Lasertronics (US), and LASERAX (Canada).

Major players in the laser cleaning market include Coherent, Inc. (Coherent) (US), Trumpf Group (Trumpf) (Germany), IPG Photonics Corporation (IPG Photonics) (US), Adapt Laser Systems LLC (Adapt Laser) (US), and Clean Lasersysteme GmbH (Clean Lasersysteme) (Germany).

In the process of determining and verifying the market size for several segments and subsegments gathered through secondary research, extensive primary interviews have been conducted with key experts. The breakup of the profile of primary participants is given below:

By Company Type: Tier 1 = 35%, Tier 2 = 40%, and Tier 3 = 25%

By Designation: C-Level Executives = 50%, Directors = 35%, and Others = 15%

By Region: North America = 35%, Europe = 22%, APAC = 30%, and RoW = 13%

Key players profiled in this report are IPG Photonics (US), Coherent (US), Trumpf (Germany), and Adapt Laser Systems (US).

Research Coverage:

*Laser Cleaning Market by Type (Solid and Gas), Conservation & Restoration (Art and Heritage Restoration, Infra...*

The report estimates the market size and future growth potential of the laser cleaning market across different segments such as laser type, application, and geography. Furthermore, the report also includes the industry trends, market dynamics, and competitive analysis of the key players in the market, along with their company profiles, competitive leadership mapping, and recent developments.

#### Key Benefits of Buying the Report:

The report would help the market leaders/new entrants in this market by providing them the closest approximations of the revenue numbers for laser cleaning segments and subsegments. This report would help stakeholders to better understand the competitor landscape and gain more insights to better position their businesses and make suitable go-to-market strategies. This report also helps the stakeholders to understand the pulse of the market and provides them information on key market drivers, restraints, challenges, and opportunities.

## Contents

### **1 INTRODUCTION**

- 1.1 OBJECTIVES OF THE STUDY
- 1.2 DEFINITION
- 1.3 STUDY SCOPE
  - 1.3.1 MARKETS COVERED
  - 1.3.2 YEARS CONSIDERED FOR THIS STUDY
- 1.4 CURRENCY
- 1.5 LIMITATIONS
- 1.6 STAKEHOLDERS

### **2 RESEARCH METHODOLOGY**

- 2.1 RESEARCH DATA
  - 2.1.1 SECONDARY DATA
    - 2.1.1.1 Key data from secondary sources
  - 2.1.2 PRIMARY DATA
    - 2.1.2.1 Key data from primary sources
    - 2.1.2.2 Breakdown of primaries
    - 2.1.2.3 Key industry insights
- 2.2 MARKET SIZE ESTIMATION
- 2.3 MARKET BREAKDOWN AND DATA TRIANGULATION
- 2.4 ASSUMPTIONS

### **3 EXECUTIVE SUMMARY**

### **4 PREMIUM INSIGHTS**

- 4.1 LASER CLEANING MARKET EXPECTED TO WITNESS A HUGE GROWTH IN APAC
- 4.2 LASER CLEANING MARKET, BY LASER TYPE (2018–2023)
- 4.3 LASER CLEANING MARKET, BY APPLICATION
- 4.4 LASER CLEANING MARKET, BY COUNTRY (2018)

### **5 MARKET OVERVIEW**

#### 5.1 INTRODUCTION

*Laser Cleaning Market by Type (Solid and Gas), Conservation & Restoration (Art and Heritage Restoration, Infra...*

## 5.2 VALUE CHAIN ANALYSIS

## 5.3 LASER STANDARDS AND CLASSIFICATIONS

## 5.4 COMPARATIVE ANALYSIS: DRY ICE BLASTING AND SAND BLASTING

## 5.5 MARKET DYNAMICS

### 5.5.1 DRIVERS

5.5.1.1 Laser cleaning is being preferred over traditional approach

5.5.1.2 Increasing use of laser cleaning systems in art restoration and conservation

5.5.1.3 Growing automotive industry to boost the growth of the laser cleaning market

### 5.5.2 RESTRAINTS

5.5.2.1 High cost and lack of technical expertise

### 5.5.3 OPPORTUNITIES

5.5.3.1 Increasing demand for laser cleaning across various applications

### 5.5.4 CHALLENGES

5.5.4.1 Technical complexities in high-powered lasers

## 6 LASER CLEANING MARKET, BY LASER TYPE

### 6.1 INTRODUCTION

### 6.2 GAS LASERS

#### 6.2.1 CO2 LASER

#### 6.2.2 EXCIMER LASERS

### 6.3 SOLID LASER

#### 6.3.1 YTTRIUM ALUMINUM GARNET (YAG) LASER

#### 6.3.2 FIBER LASER

## 7 LASER CLEANING MARKET, BY APPLICATION

### 7.1 INTRODUCTION

### 7.2 CONSERVATION AND RESTORATION

#### 7.2.1 ART AND HERITAGE RESTORATION

7.2.1.1 Antique collections

7.2.1.2 Art galleries and museums

#### 7.2.2 INFRASTRUCTURE

7.2.2.1 Heritage buildings

7.2.2.2 Non-heritage Properties

### 7.3 CLEANING PROCESS

#### 7.3.1 AUTOMOTIVE PARTS

#### 7.3.2 AEROSPACE AND AIRCRAFT

### 7.4 INDUSTRIAL USAGE

- 7.4.1 NUCLEAR PLANT
- 7.4.2 REFINERIES
- 7.4.3 POWER PLANT PARTS

## **8 GEOGRAPHIC ANALYSIS**

- 8.1 INTRODUCTION
- 8.2 NORTH AMERICA
  - 8.2.1 US
  - 8.2.2 CANADA
  - 8.2.3 MEXICO
- 8.3 EUROPE
  - 8.3.1 UK
  - 8.3.2 GERMANY
  - 8.3.3 FRANCE
  - 8.3.4 ITALY
  - 8.3.5 REST OF EUROPE
- 8.4 ASIA PACIFIC
  - 8.4.1 CHINA
  - 8.4.2 JAPAN
  - 8.4.3 INDIA
  - 8.4.4 SOUTH KOREA
  - 8.4.5 REST OF APAC
- 8.5 REST OF THE WORLD

## **9 COMPETITIVE LANDSCAPE**

- 9.1 OVERVIEW
- 9.2 RANKING ANALYSIS OF KEY PLAYERS IN THE LASER CLEANING MARKET
- 9.3 COMPETITIVE SITUATIONS AND TRENDS
  - 9.3.1 PRODUCT LAUNCH
  - 9.3.2 ACQUISITIONS
  - 9.3.3 PRODUCT DEVELOPMENT

## **10 COMPANY PROFILE**

(Business Overview, Products Offered, and Recent Developments)\*

- 10.1 COHERENT

- 10.2 TRUMPF
- 10.3 IPG PHOTONICS
- 10.4 CLEAN LASERSYSTEME
- 10.5 ADVANCED LASER TECHNOLOGY (ALT)
- 10.6 GENERAL LASERTRONICS
- 10.7 LASERAX
- 10.8 WHITE LION DRY ICE & LASER CLEANING TECHNOLOGY
- 10.9 ANILOX ROLL CLEANING SYSTEMS
- 10.10 LASER PHOTONICS

\*Details on Business Overview, Products Offered, and Recent Developments might not be captured in case of unlisted companies.

## **11 APPENDIX**

- 11.1 INSIGHTS OF INDUSTRY EXPERTS
- 11.2 DISCUSSION GUIDE
- 11.3 KNOWLEDGE STORE: MARKETSandMARKETS' SUBSCRIPTION PORTAL
- 11.4 INTRODUCING RT: REAL-TIME MARKET INTELLIGENCE
- 11.5 AVAILABLE CUSTOMIZATIONS
- 11.6 RELATED REPORT
- 11.7 AUTHOR DETAILS

## List Of Tables

### LIST OF TABLES

- Table 1 CLASSIFICATION CRITERIA OF DIFFERENT LASER STANDARDS
- Table 2 DIFFERENCE BETWEEN DRY ICE BLASTING AND SAND BLASING
- Table 3 LASER CLEANING MARKET, BY TYPE, 2015–2023 (USD MILLION)
- Table 4 LASER CLEANING MARKET FOR GAS LASER, BY CLEANING APPLICATION, 2015–2023 (USD MILLION)
- Table 5 LASER CLEANING MARKET FOR SOLID LASER, BY TYPE, 2015–2023 (USD MILLION)
- Table 6 LASER CLEANING MARKET FOR YAG LASER, BY APPLICATION, 2015–2023 (USD MILLION)
- Table 7 LASER CLEANING MARKET FOR FIBER LASER, BY APPLICATION, 2015–2023 (USD MILLION)
- Table 8 LASER CLEANING MARKET, BY APPLICATION, 2015–2023 (USD MILLION)
- Table 9 LASER CLEANING MARKET, BY CONSERVATION AND RESTORATION, 2015–2023 (USD MILLION)
- Table 10 LASER CLEANING MARKET FOR ART AND HERITAGE RESTORATION, BY TYPE, 2015–2023 (USD MILLION)
- Table 11 LASER CLEANING MARKET FOR ART AND HERITAGE RESTORATION, BY REGION, 2015–2023 (USD MILLION)
- Table 12 LASER CLEANING MARKET FOR INFRASTRUCTURE, BY TYPE, 2015–2023 (USD MILLION)
- Table 13 LASER CLEANING MARKET FOR INFRASTRUCTURE, BY REGION, 2015–2023 (USD MILLION)
- Table 14 LASER CLEANING MARKET FOR CLEANING PROCESS, BY TYPE, 2015–2023 (USD MILLION)
- Table 15 LASER CLEANING MARKET FOR AUTOMOTIVE PARTS, BY REGION, 2015–2023 (USD MILLION)
- Table 16 LASER CLEANING MARKET FOR AEROSPACE AND AIRCRAFT, BY REGION, 2015–2023 (USD MILLION)
- Table 17 LASER CLEANING MARKET, BY INDUSTRIAL USAGE, 2015–2023 (USD MILLION)
- Table 18 LASER CLEANING MARKET FOR NUCLEAR PLANTS, BY REGION, 2015–2023 (USD MILLION)
- Table 19 LASER CLEANING MARKET FOR REFINERIES, BY REGION, 2015–2023 (USD MILLION)
- Table 20 LASER CLEANING MARKET FOR POWER PLANT PARTS, BY REGION,



2015–2023 (USD MILLION)

Table 21 LASER CLEANING MARKET, BY REGION, 2015–2023 (USD MILLION)

Table 22 LASER CLEANING MARKET IN NORTH AMERICA, BY COUNTRY, 2015–2023 (USD MILLION)

Table 23 LASER CLEANING MARKET IN NORTH AMERICA, BY CLEANING PROCESS, 2015–2023 (USD MILLION)

Table 24 LASER CLEANING MARKET IN NORTH AMERICA, BY CONSERVATION AND RESTORATION, 2015–2023 (USD MILLION)

Table 25 LASER CLEANING MARKET IN NORTH AMERICA, BY INDUSTRIAL USAGE, 2015–2023 (USD MILLION)

Table 26 LASER CLEANING MARKET IN EUROPE, BY COUNTRY, 2015–2023 (USD MILLION)

Table 27 LASER CLEANING MARKET IN EUROPE, BY CLEANING PROCESS, 2015–2023 (USD MILLION)

Table 28 LASER CLEANING MARKET IN EUROPE, BY CONSERVATION AND RESTORATION, 2015–2023 (USD MILLION)

Table 29 LASER CLEANING MARKET IN EUROPE, BY INDUSTRIAL USAGE, 2015–2023 (USD MILLION)

Table 30 LASER CLEANING MARKET IN APAC, BY COUNTRY, 2015–2023 (USD MILLION)

Table 31 LASER CLEANING MARKET IN APAC, BY CLEANING PROCESS, 2015–2023 (USD MILLION)

Table 32 LASER CLEANING MARKET IN APAC, BY CONSERVATION AND RESTORATION, 2015–2023 (USD MILLION)

Table 33 LASER CLEANING MARKET IN APAC, BY INDUSTRIAL USAGE, 2015–2023 (USD MILLION)

Table 34 LASER CLEANING MARKET IN ROW, BY REGION, 2015–2023 (USD MILLION)

Table 35 LASER CLEANING MARKET IN ROW, BY CLEANING PROCESS, 2015–2023 (USD MILLION)

Table 36 LASER CLEANING MARKET IN ROW, BY CONSERVATION AND RESTORATION, 2015–2023 (USD MILLION)

Table 37 LASER CLEANING MARKET IN ROW, BY INDUSTRIAL USAGE, 2015–2023 (USD MILLION)

Table 38 LASER CLEANING MARKET: RANKING ANALYSIS OF KEY COMPANIES (2017)

Table 39 PRODUCT LAUNCHES (2015–2017)

Table 40 ACQUISITIONS (2016 & 2017)

Table 41 PRODUCT DEVELOPMENT (2015 & 2016)



## About

The report "Laser Cleaning Market by Type (Solid and Gas), Conservation & Restoration (Art and Heritage Restoration, Infrastructure), Cleaning Process (Automotive, Aerospace), and Industrial Usage (Nuclear Plant, Refineries), and Geography - Global Forecast to 2023", The laser cleaning market is expected to grow from USD 588.8 Million in 2018 to USD 723.9 Million by 2023, at a CAGR of 4.22% between 2018 and 2023. The preference toward laser cleaning over traditional approach and the increasing demand for laser cleaning in various applications such as conservation and restoration, cleaning process, and industrial usage are propelling the market growth. Laser cleaning provides many advantages such as chemical, thermochemical, thermal, grinding, and blasting over traditional methods and can even improve the production process in general.

### **Major players in the laser cleaning market include:**

Coherent, Inc. (Coherent) (US)

Trumpf Group (Trumpf) (Germany)

IPG Photonics Corporation (IPG Photonics) (US)

Adapt Laser Systems LLC (Adapt Laser) (US)

Clean Lasersysteme GmbH (Clean Lasersysteme) (Germany)

### **Cleaning process application dominated the overall laser cleaning market**

The laser cleaning market, on the basis of application, has been segmented into conservation & restoration, cleaning process, and industrial. The market for cleaning process held the largest market size because of the high demand for cleaning of automotive parts. Lasers are also used to remove oxide layers on aluminum prior to welding, and to remove coatings such as paint. The growing commercial aerospace sector will also be largely responsible for the overall growth of the laser cleaning market.

### **Laser cleaning market for fiber laser expected to grow at the highest CAGR during the forecast period**

The market for fiber lasers is expected to witness a significant growth during the forecast period owing to factors such as high precision cleaning, good precision of position cleaning, selective washing, and safe environment to facilitate ease-of-operation, coupled with low maintenance cost. The increasing application areas in art and heritage sites, along with automotive and aerospace parts and surface cleaning, have led to the overall growth of the fiber laser market.

### **APAC expected to hold the highest growth rate in the overall laser cleaning market**

The laser cleaning market, on the basis of region, has been segmented into North America, Europe, APAC, and RoW. North America is accounted for the largest share of the laser cleaning market in 2018, followed by Europe and Asia Pacific (APAC). The growth of this market in Asia Pacific can be attributed to the increased use of laser cleaning in automotive parts and aerospace maintenance sector.

The growth in the market for laser cleaning in APAC is also driven by the soaring infrastructure market in the region. APAC, comprising countries such as China, Japan, India, and South Korea, is likely to account for a major share of the laser cleaning market in 2018. This market growth can be attributed to the increasing demand for lasers in cleaning of cultural sites and heritage properties, along with the industrial applications (power plants, nuclear plants, and refineries) in APAC.

## I would like to order

Product name: Laser Cleaning Market by Type (Solid and Gas), Conservation & Restoration (Art and Heritage Restoration, Infrastructure), Cleaning Process (Automotive, Aerospace), and Industrial Usage (Nuclear Plant, Refineries), and Geography - Global Forecast to 2023

Product link: <https://marketpublishers.com/r/L7FE6B01A41EN.html>

Price: US\$ 5,650.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/L7FE6B01A41EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below

and fax the completed form to +44 20 7900 3970