

Computational Fluid Dynamics Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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Abstracts

The global computational fluid dynamics (CFD) market size reached US\$ 2,286.8 Million in 2022. Looking forward, IMARC Group expects the market to reach US\$ 3,693.8 Million by 2028, exhibiting a growth rate (CAGR) of 8.1% during 2023-2028.

Computational fluid dynamics (CFD), is a scientific method of numerically analyzing fluid flow, heat transfer and other related phenomena. It utilizes applied mathematics, physics and computational software to visualize the effect of a gas or liquid on the object it flows past. CFD is a cost-effective method of testing product prototypes before their launch. Since its introduction in the 1980s, it has witnessed a range of developments which have enabled it to be used in different fields such as modeling and design, and research and development.

At present, the growth of the market can be attributed to rapid advancements in the aerospace and aeronautics industries. In these sectors, CFD is applied in the maintenance of numerous critical systems and components of an aircraft. For instance, it is used for optimizing engine cooling and fuel delivery systems. CFD can also predict the performance of new processes and designs before their production and implementation. Owing to this, it has become an integral part of the engineering analysis and design environment in several organizations.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global computational fluid dynamics (CFD) market report, along with forecasts at the global and regional level from 2023-2028. Our report has categorized the market based on deployment model and end-user.

Breakup by Deployment Model:

Cloud-Based Model

On-Premises Model

Breakup by End-User:

Automotive

Aerospace and Defense

Electrical and Electronics

Industrial Machinery

Energy

Material and Chemical Processing

Others

Breakup by Region:

Europe

Asia Pacific

North America

Middle East and Africa

Latin America

Competitive Landscape:

The report has also analysed the competitive landscape of the market along with the profiles of the key players.

Key Questions Answered in This Report

1. What was the size of the global computational fluid dynamics market in 2022?
2. What is the expected growth rate of the global computational fluid dynamics market during 2023-2028?
3. What are the key factors driving the global computational fluid dynamics market?
4. What has been the impact of COVID-19 on the global computational fluid dynamics market?
5. What is the breakup of the global computational fluid dynamics market based on the deployment model?
6. What is the breakup of the global computational fluid dynamics market based on the end-user?

7. What are the key regions in the global computational fluid dynamics market?

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