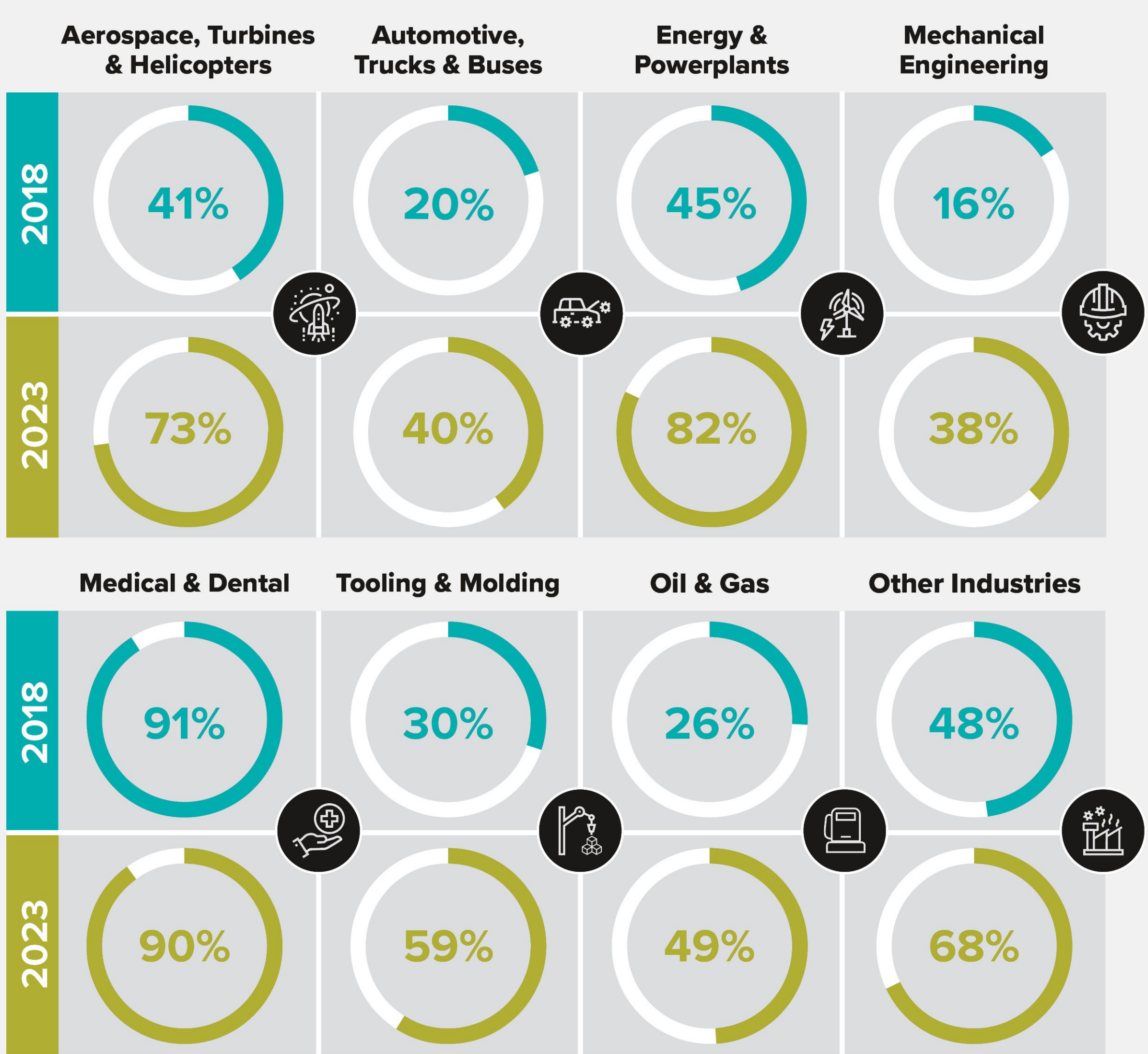


MEDICAL MARKETS EMBRACE METALS ADDITIVE MANUFACTURING SYSTEMS

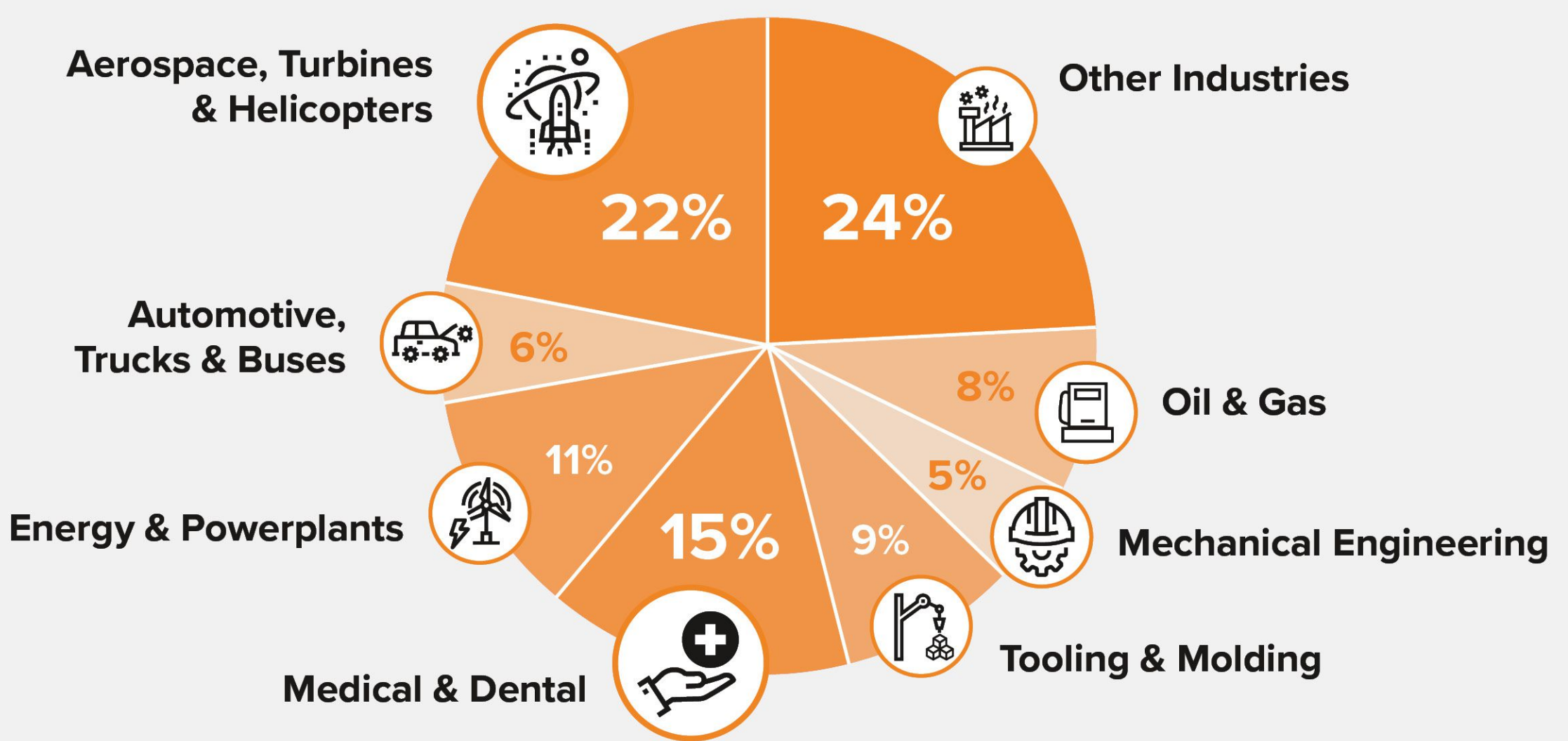
Metals additive manufacturing systems are commonly associated with one type—Laser Beam Powder Bed Fusion. While that technology has the highest distribution globally, there are another known 18 AM metals systems. In 2019, three new metal AM principals were introduced. Many are still being developed, but the global metal additive manufacturing market is valued at EUR 1.51 billion, including system, material and service sales. The **medical & dental** segment commands a strong place within the market, building on its first applications in the 2000s. **Aerospace, turbines & helicopters**, along with **automotive** and **energy** also top the rankings from a market report performed by Ampower, a Germany-based consultant, which breaks down the metals additive manufacturing markets and technologies.

APPLICATION CATEGORY OF PRINTED PARTS BY INDUSTRY 2018 AND FORECAST 2023



The analysis of the purpose and application category of printed parts yields an overview of the current state of an industry. **Medical & dental** reported a share of end parts or components of **91.3%** for 2018 and **89.9%** for 2023, respectively. These proportions of end-part production with metal additive manufacturing are unmatched in comparison to any other industry. Besides medical, the sectors of **energy & powerplants** and **aerospace, turbines & helicopters** report for 2023 the highest ratio of use of their AM capacity for end parts.

MEDICAL FIELD STRONG IN SYSTEM SALES



The global advanced manufacturing metal printing system sales in 2018 by volume is estimated at EUR 0.83 billion, with the **aerospace industry** grabbing the largest share, at **22%**. **Medical & dental**, recognized as pioneering the technology beginning in the early 2000s, takes the next largest portion, at **15%**. The installed base of metal AM machines is dominated by **medical & dental**, along with **aerospace** and **energy & powerplants**. The three account for **54.1%** of all installed metal AM systems, but their combined share is expected to drop to **41.7%** in 2023. Much of that share will be taken by **mechanical engineering**, a category that includes other machining industries. Suppliers project the largest relative annual growth of more than **68%** in installed base.

INSTALLED BASE OF METAL AM MACHINES 2018 AND SUPPLIER FORECAST 2023

BY INDUSTRY	2018	2023
Aerospace, Turbines & Helicopters	1,851	5,435
Automotive, Trucks & Buses	228	1,884
Energy & Powerplants	1,053	2,590
Medical & Dental	1,347	4,455
Tooling & Molding	257	2,190
Mechanical Engineering	126	1,718
Oil & Gas	262	1,567
Other Industries	2,731	10,092

Source: Ampower
additive-manufacturing-report.com