

Major Fastener Manufacturing Clusters in India & Their Competitive Strengths

印度主要紧固件聚落及其竞争力



Fastener HS Code: Exploring Key Clusters

India's manufacturing sector is experiencing a significant boom, and the fastener industry plays a crucial role in this growth. Renowned for its diverse product range and cost-effectiveness, India is rapidly emerging as a global player in the fastener market. Indian fastener industry encompasses a wide range of products catering to diverse applications. Here's an overview of some common types of fasteners produced within the clusters and their corresponding HS Codes under the Harmonized System nomenclature for international trade classification:

HS Code	Material	2022 Export Value (1,000 USD)
7318.15	Iron or Steel	439,874
3926.90.99	Plastic	430,130
7318.19	Iron or Steel	141,753
7318.16	Iron or Steel	92,529
7318.22	Iron or Steel	68,482
7318.29	Iron or Steel	48,205
7609.00.00	Aluminum	40,265
7415.33	Copper	33,181
9606.3	Brass	16,978
7318.11	Iron or Steel	15,726
7415.39	Copper	11,620
7318.21	Iron or Steel	11,313

HS Code	Material	2022 Export Value (1,000 USD)
7415.29	Copper	8,949
9606.21	Brass	6,537
7616.10.00	Aluminum	5,338
7318.24	Iron or Steel	4,021
7415.21	Copper	3,731
7318.23	Iron or Steel	3,648
7318.14	Iron or Steel	3,099
9606.29	Brass	2,473
7318.13	Iron or Steel	2,376
7318.12	Iron or Steel	2,341
9606.22	Brass	807
9606.1	Brass	555
7415.1	Copper	481

Explanation of the Tables:

Looking deeper into the tables, we can glean some additional insights:

- **Dominance of Iron and Steel:** Iron and steel fasteners remain the dominant category in terms of export value, reflecting the established infrastructure and expertise in these materials within the clusters.
- **Emerging Importance of Plastics:** The high export value of plastic fasteners signifies a growing trend towards lightweight and cost-effective solutions, particularly in construction and consumer goods sectors.
- **Specialized Products:** The presence of categories like high-tensile screws and bolts (HS Code 7318.16) indicates the capability of Indian manufacturers to cater to specific industry requirements for high-performance fasteners.
- **Aluminum and Copper:** While not as prominent as iron and steel, the presence of aluminum and copper fasteners (HS Codes 7609.00.00 and 7415.33) suggests diversification within the industry to meet specific needs like corrosion resistance or electrical conductivity.

The Strength of Unity: Why Clusters Matter

Geographical clusters are a defining feature of India's manufacturing landscape. These clusters bring together manufacturers, suppliers, and supporting industries within a specific region, fostering collaboration, knowledge sharing, and resource optimization. In the fastener industry, clusters offer several key advantages:

- **Specialization and Expertise:** Clusters enable specialization, where member companies focus on specific fastener types or processes, leading to economies of scale and increased product quality.
- **Infrastructure and Logistics Hubs:** Clusters often develop shared infrastructure, like transportation networks and warehouses, ensuring efficient logistics and cost reductions.
- **Skilled Workforce:** Clusters attract and retain skilled labor, creating a readily available pool of talent for fastener production.
- **Collaboration and Innovation:** The proximity of various players facilitates knowledge transfer, collaboration in research and development, and fosters a culture of innovation.



Fastener Powerhouses: Exploring Key Clusters

India boasts several major fastener manufacturing clusters, each contributing significantly to the industry's growth:

1. Ludhiana (Punjab)

- **Dominant Player:** Ludhiana reigns supreme as India's largest fastener manufacturing cluster, **accounting for an estimated 70% of the national production.**
- **Strength in Diversity:** The cluster caters to a wide range of fasteners, including nuts, bolts, screws, rivets, and washers.
- **Cost-Effectiveness:** With a strong presence of small and medium-sized enterprises (SMEs), **Ludhiana excels in cost-competitive production.**
- **Challenges:** The cluster faces challenges like fragmented production units, limited automation, and potential quality inconsistencies.

2. Jalandhar (Punjab)

- **Specialty Focus:** **Jalandhar complements Ludhiana by specializing in high-tensile fasteners, used in demanding applications like construction and automobiles.**
- **Modernization Drive:** Jalandhar actively embraces modernization, with several units adopting advanced machinery and automation for enhanced efficiency and quality.
- **Focus on Exports:** Jalandhar plays a critical role in India's fastener exports due to its focus on high-quality products.

3. Jamshedpur (Jharkhand)

- **Steel City Synergy:** **Located within the steel belt of India, Jamshedpur enjoys easy access to raw materials like steel, a crucial advantage for fastener production.**
- **Large-Scale Production:** Jamshedpur houses several large-scale fastener manufacturers, catering to the bulk requirements of major industries like infrastructure and construction.
- **Quality Focus:** Integrating quality control processes, Jamshedpur ensures its high-quality fasteners meet stringent domestic and international standards.

4. Rajkot (Gujarat)

- **Brass Bonanza:** **Renowned for its brass production, Rajkot has emerged as a significant hub for brass fasteners** – a niche segment with increasing demand in various industries.
- **Versatility and Innovation:** Rajkot boasts a mix of established players and innovative startups, offering a diverse range of brass fasteners along with continuous improvement in product design and functionality.
- **Expanding Reach:** Rajkot is actively exploring new markets and applications for its brass fasteners, contributing to product diversification within the cluster.

5. Pune (Maharashtra)

- **Automotive Advantage:** **Located in the heart of India's automotive hub, Pune caters specifically to the fastener needs of the automotive industry.**
- **Collaboration and Specialization:** Pune fosters strong

collaboration between fastener manufacturers and automotive companies, leading to the development of specialized fasteners for specific vehicle models.

- **Focus on Technology:** Recognizing the importance of technology in the automotive industry, Pune is actively adopting advanced manufacturing processes for improved precision and performance of fasteners.



Beyond the Clusters: Additional Strengths of the Indian Fastener Industry

The success of India's fastener industry extends beyond its clusters. Here are some additional key strengths:

- **Cost Competitiveness:** **With lower labor costs and efficient production processes, Indian fastener manufacturers offer competitive pricing compared to other major producers.**
- **Government Support:** **Government initiatives like "Make in India" promote domestic fastener production, boosting production capabilities and export potential.**
- **Growing Domestic Demand:** **India's booming infrastructure development, construction sector growth, and expanding automotive industry significantly increase domestic demand for fasteners.**

Challenges and Opportunities for Continued Growth

Despite its strengths, the Indian fastener industry faces some challenges:

- **Quality Control:** Ensuring consistent quality across the entire industry remains an ongoing effort, particularly in some clusters with a fragmented structure.
- **Technology Adoption:** While modernization is gaining traction, wider adoption of automation and digital technologies is crucial for enhanced efficiency and international competitiveness.
- **Skilled Workforce Development:** A focus on training and skill development programs is necessary to cater to the evolving needs of the fastener industry and future-proof the workforce.
- **Sustainability Concerns:** Implementing sustainable practices throughout the manufacturing process will become increasingly important to attract environmentally conscious customers and comply with regulations.



Opportunities for the Future

Despite these challenges, exciting opportunities lie ahead for the Indian fastener industry.

- Market Diversification: Expanding exports beyond traditional markets and exploring new applications for fasteners can drive growth.
• Innovation and Specialization: Developing niche products and focusing on high-value fasteners will cater to specific industry requirements and enhance profitability.
• Building Brand Recognition: Investing in brand building and quality certifications can establish Indian fasteners as a reliable and trustworthy source in the global market.
• Industry 4.0 Integration: Embracing Industry 4.0 principles, such as automation, data analytics, and the Internet of Things (IoT), will significantly improve efficiency, productivity, and quality control.
• Environmental Regulations: As environmental regulations become stricter globally, Indian fastener manufacturers can gain a competitive edge by adopting eco-friendly production processes and using recycled materials.
• Focus on R&D: Investing in R&D allows for the development of new and improved fasteners with enhanced performance characteristics, catering to the evolving needs of various industries.
• Collaboration Between Industry and Academia: Stronger collaboration between academic institutions and the fastener industry can foster innovation and ensure a steady stream of skilled professionals for the future.

Conclusion

India's fastener manufacturing industry stands on a solid foundation, underpinned by strong clusters, a diverse product range, and cost competitiveness. By addressing existing challenges and capitalizing on emerging opportunities, the industry is poised to further strengthen its position on the global stage. With a focus on continuous innovation, market diversification, and sustainable practices, Indian fastener manufacturers are well-equipped to become a dominant force in the global market, making a significant contribution to India's "Make in India" vision.

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