

## TRADE, TURBULENCE AND POLYMERS



As India negotiates new trade deals with the EU and the US amid global conflicts, the plastics industry finds itself at a pivotal moment.

**INTERVIEW:**

MILACRON LAUNCHED THREE NEW TECHNOLOGIES WHILE OUTLINING STRONG INDIA GROWTH

**INTERVIEW:**

ENGEL PRESENTS ITS ADVANCED MACHINE PORTFOLIO EMPHASISING INCREASING IMPORTANCE OF THE INDIAN MARKET



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# POLYMERS AT THE CROSSROADS OF TRADE AND TRANSFORMATION

**T**he plastics industry has always been a quiet indicator of economic momentum. Rarely in the spotlight, polymers nonetheless sit inside nearly everything that defines modern life, from food packaging and medical devices to automobiles, electronics and infrastructure. When trade accelerates, plastics demand rises. When global uncertainty grows, the industry feels the tremors almost immediately.

Today, India's plastics sector finds itself at the intersection of opportunity and disruption.

As explored in our cover story, a combination of evolving trade agreements, shifting geopolitics and tightening sustainability expectations is reshaping the global polymer landscape. The recently concluded India-European Union trade agreement and the discussions around an India-United States trade deal could open doors that were once only partially accessible for Indian manufacturers.

For a sector that exported more than \$12 billion worth of products last year and supplies over 200 global markets, the stakes are significant.

Lower tariffs and improved market access in Europe could make Indian plastic products, from packaging films and laminates to moulded industrial components, more competitive. At the same time, easier access to European machinery, specialty polymers and advanced additives may help Indian manufacturers upgrade production capabilities and improve quality standards.

Yet opportunity rarely arrives without responsibility.

European markets are among the most environmentally regulated in the world. Sustainability, circularity and carbon accountability are no longer optional themes. They are central pillars of global trade. For Indian exporters, meeting these standards will require investment in recycling technologies, energy efficient manufacturing and material innovation.

The industry is also navigating a world where geopolitics increasingly shapes supply chains. Conflicts that disrupt energy markets, tensions that alter shipping routes and freight costs that fluctuate with global uncertainty all ripple directly into polymer production and exports. Petrochemicals remain deeply tied to oil and gas markets, meaning the plastics sector often absorbs the shockwaves of geopolitical events before many other industries.

Within this turbulence lies a significant strategic advantage for India.

Global companies are actively diversifying supply chains. Overdependence on a few manufacturing hubs has proven risky, prompting multinational firms to look for reliable alternatives. India, with its strong network of small and medium manufacturers, skilled workforce and competitive cost structure, is emerging as a compelling production base.

For the plastics industry, this moment could define the next decade.

Domestic demand is rising across packaging, consumer goods, electronics and electric vehicles. International markets are opening through trade diplomacy. At the same time, sustainability pressures are accelerating innovation across materials and manufacturing processes.

The path ahead will require agility. Indian polymer manufacturers must embrace technology, strengthen compliance and invest in greener solutions while continuing to compete globally on cost and quality.

Happy Reading !

Amit Shanbaug  
Editor.



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- 41** igus Unveils First Online Cleanroom Cable Design Tool



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## SUSTAINABILITY AT SCALE: CALCO'S RENEWABLE GROWTH STRATEGY

From engineering polymers to renewable energy applications, Calco aligns sustainability, recycled innovation, and global expansion to position itself as a future-ready industry leader.

By Team ET Now Polymers

**E**stablished in 1999 with masterbatch manufacturing as its foundation, the company's trajectory shifted significantly after 2010, when it entered the engineering polymers segment. Since then, Calco has consistently aligned its growth strategy with three central themes: safety, sustainability, and emerging energy sectors. Recently, **Varun Gupta, Founder and Managing Director of Calco Poly Technik Pvt Ltd**, shared some strategic insights at Plast India 2026, thereby highlighting the company's evolution and strategic priorities.

The company is actively preparing for increased demand from solar energy and battery storage systems (BSS), recognizing these segments as key drivers of industrial growth over the next decade in India. Calco has adopted sustainable methods not only in production but also in logistics and resource management. Currently, 15% of its engineering compound product lines are transported using electric vehicles, reducing the environmental footprint of its supply chain. Similarly, energy efficiency is also a priority, with nearly 15% of its electricity sourced from solar power. These initiatives demonstrate a systematic approach to environmental responsibility that permeates daily operations.

The company is equally committed to supporting customers

in achieving their own sustainability goals. Its recently launched product line, ReViveX, is based on post-consumer recycled (PCR) and post-industrial recycled (PIR) materials, incorporating up to 20% recycled content. This enables customers to accelerate their sustainability targets by up to 20% through innovative applications and backward integration strategies. Calco is also GRS certified under the Global Recycling Standard and works closely with international partners, particularly European companies.

Global disruptions have further

strengthened Calco's outlook. Post-COVID diversification away from China has increased opportunities for Indian manufacturers. With offices in Turkey, Vietnam, and Brazil, the company is strategically positioned to serve international markets. Looking ahead, Calco envisions a shift from "Make in India for the world" to Indian companies leading global production with advanced technology and expertise. Through continued investment and innovation, Calco aims to establish itself as a global leader in the polymer and chemical industries 



Varun Gupta, Founder and Managing Director of Calco Poly Technik Pvt Ltd



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# ENGINEERING THE FUTURE OF POLYOLEFINS

From a regional packaging venture to a global masterbatch innovator, JJ Plastalloy exemplifies strategic vision, sustainability-driven innovation, and institutional ambition in modern plastics manufacturing.

By Team ET Now Polymers

**J**J Plast Alloy's journey is a compelling example of entrepreneurial vision, technical adaptability, and long-term commitment to sustainable manufacturing. Speaking at Plast India 2026, **Jagdish Jhunjunwala, Managing Director of JJ Plastalloy Pvt Ltd, and Shivam Bansal, Director**, reflected on an evolution that began with a humble transition from paper conversion to plastics nearly 25 years ago. What started with blow-moulded HDPE containers—replacing traditional 15 kg tin containers for ghee packaging—gradually laid the foundation for a diversified and globally competitive plastics enterprise.

From its early association with GAIL as a distribution channel associate for over 25 years, the company earned recognition as the top-selling DCA across India despite operating from Varanasi. This achievement marked an important milestone in its growth story. A decisive turning point came when Shivam Bansal, an IIT Delhi graduate with an MBA from France, chose entrepreneurship over employment, setting the direction for the company's entry into masterbatches. Beginning with filler masterbatches, JJ Plast Alloy steadily expanded its capabilities and established itself as a leading producer in its region.

To overcome logistical challenges posed by being landlocked, the company strategically relocated

operations to Gujarat near port access, enabling it to compete more effectively in global markets. Today, JJ Plast Alloy exports to more than 40 countries and serves clients across the US, Europe, the Middle East, Russia, and other regions. The organization's vision, as articulated by its leadership, is to build an institution rather than merely a profit-driven enterprise. Supporting this philosophy, it established an in-house R&D center approved by the Department of Science and Technology, Government of India, for the past five years.

At Plast India 2026, the company emphasized innovation aligned with market demands for sustainability, recyclability, and cost optimization. A key focus is import substitution and delivering engineering-grade properties in polyolefins, enabling replacement of traditional engineering polymers in automotive

and electronic components. This shift results in weight reduction and overall cost savings while maintaining performance standards.

Their sustainability initiatives follow the principles of reduce, reuse, and recycle. Addressing the industry's sorting challenge, particularly with black plastics, the company has introduced near-infrared-detectable black materials that allow more efficient polymer separation and recycling.

Looking ahead, JJ Plast Alloy plans capacity enhancements, expanded product development in masterbatches and compounds, a UAE warehouse and distribution center for the Middle East, and a forthcoming greenfield compounds plant in Gujarat. With clear targets set for the next seven to eight years, the company is positioning itself as a global leader dedicated to making plastics more sustainable and integral to modern times. 



Jagdish Jhunjunwala, Managing Director of JJ Plastalloy Pvt Ltd





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## REDEFINING COMPACT RESIN DRYING

By Team ET Now Polymers

**T**he Conair Small Wheel Dryer (PSD Series) represents a significant advancement in resin-drying technology, offering a compact yet highly efficient alternative to traditional desiccant-bed drying systems. Engineered with a sealed, continuously rotating desiccant wheel, the system delivers precise and consistent drying performance while reducing energy consumption and operational complexity.

Designed to address the needs of processors that require reliable drying without the capacity of larger systems, the Small Wheel Dryer provides the efficiency and dependability associated with Conair's established desiccant wheel technology in a significantly smaller package. As the most compact dryer of its type currently available, it offers an ideal solution for applications that demand a small yet capable dryer and hopper combination.

The introduction of the Small Wheel Dryer also resolves a longstanding challenge in plastics processing, where smaller jobs often required oversized dryers and hoppers. Such systems consumed excess energy and occupied unnecessary space. In many cases, smaller applications relied on twin-tower drying or compressed air solutions. By leveraging its proven desiccant wheel technology, Conair has introduced a more efficient alternative that can deliver up to 40% energy savings compared with twin-tower drying systems.

The PSD Series incorporates a four-stage circuit that enables lower and adjustable dewpoint levels for precise moisture control. Each dryer can be configured with a hopper sized to suit specific application requirements. PSD1 models are available with 0.2–1.0 ft<sup>3</sup> (6–30 l) hoppers, while PSD2 models support 1.0–1.75 ft<sup>3</sup> (30–100 ltr) hopper capacities. Together, these features ensure repeatable performance, energy efficiency, and a reliable drying solution within a space-saving installation. 

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## ECON BOOSTS PELLETISING EFFICIENCY

**ECON highlighted next-generation pelletizing solutions with advanced thermal stability, automation, and servo-driven precision while outlining plans to expand its manufacturing presence in India.**

By Team ET Now Polymers

One of the major highlights presented at PlastIndia 2026 was ECON's latest technology designed to enhance pelletizing performance while ensuring precise thermal control. During the exhibition, **Ram Dayama, CEO, ECON** highlighted several key innovations designed to address evolving industry requirements and strengthen ECON's presence in global markets.

The company introduced an advanced solution that focuses on maintaining a uniform temperature in the die section without compromising structural integrity. This technology enables consistent heat distribution across the die, preventing heat loss and ensuring stable processing conditions. According to the company, the system can maintain a temperature variation of less than five degrees, even when the die comes into contact with water. This level of thermal stability is critical in pelletizing operations, as it helps maintain consistent pellet quality and prevents process disruptions.

The technology is designed to work with a wide range of polymers, covering materials from low melt flow index (low LMI) to high melt flow index (high LMI). This flexibility allows processors to handle different polymer types while maintaining uniform processing conditions. By delivering consistent temperature control throughout the process, ECON's system ensures reliable performance across various applications and material specifications.

A key differentiating aspect of ECON's offering lies in its focus on thermal insulation technology. The



Ram Dayama, CEO, ECON

company explained that maintaining stable temperatures in the die section is a core component of its engineering approach. By preventing heat loss in this critical area, the technology improves processing efficiency and ensures better pellet quality. In addition to thermal control, ECON has also integrated a servo-driven cutting mechanism that delivers uniform force on the die during pellet formation. This ensures that the pellets are produced with consistent quality without compromising the integrity of the material.

Sustainability and automation also remain central to the company's strategy. ECON highlighted its fully automated palletizing solution, which significantly reduces the need for manual intervention on the production floor. The system operates through robotic control, enabling automated handling and packaging processes without dependence on plant-level operators. The company noted that it has already supplied a couple of such automated lines to

customers in Japan, demonstrating the technology's reliability and acceptance in advanced manufacturing environments.

Looking ahead, ECON is preparing for a significant expansion of its manufacturing capabilities in India. The company recently acquired **41,000 square meters of land** and is in the process of building a new factory in the country. This facility is expected to strengthen ECON's ability to meet growing demand not only within India but also in international markets. In particular, the expansion will support the company's plans to serve customers across the **Middle East and Africa**, further enhancing its regional supply capabilities.

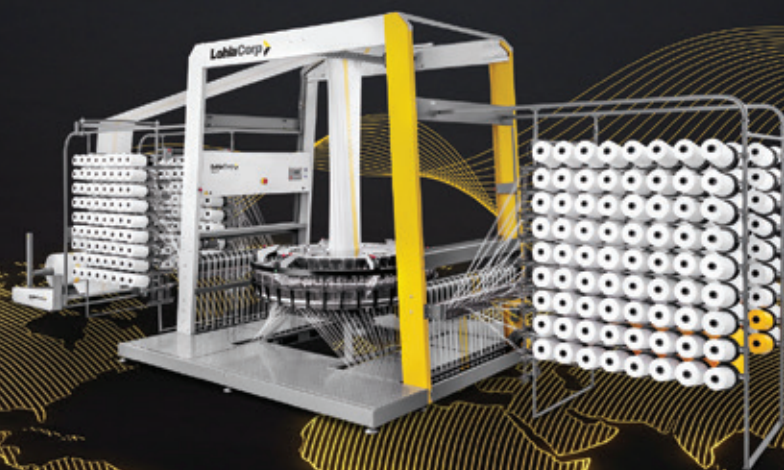
Through these technological advancements and strategic investments, ECON aims to reinforce its commitment to innovation, automation, and sustainable manufacturing while expanding its global footprint in the polymer processing industry. 



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## BIRLANU UNVEILS FUTURE-READY PIPE SOLUTIONS

Expanding its pipes portfolio, BirlaNu highlighted its TrueFit technology, sustainable UPVC innovations, and upcoming PVCO solutions driving future plumbing transformation.

By Team ET Now Polymers

Recently, at the **Plast India 2026** exhibition, **Arun Kumar Magoo**, Chief Business Officer of BirlaNu presented a comprehensive overview of the company's expanding portfolio and future growth strategy. The company operates as part of the CK Birla Group, a multi-billion-dollar conglomerate with diversified interests spanning technology, home and building solutions, infrastructure, and automotive sectors. As a global provider of home and building solutions, Birla Nu has established a strong presence across pipes, construction chemicals, walls, roofs, and floors.

At the event, the spotlight was firmly on Birla Nu's pipes division. With offerings across 20 categories serving plumbing, agriculture, and infrastructure segments, it continues to strengthen its market position through consistent product innovation and expansion. The leadership emphasized that the brand derives its core strength from the trust and legacy associated with the Birla name, which has long been synonymous with quality and reliability.

A key differentiator highlighted was the company's proprietary TrueFit technology. This unique innovation ensures dimensional accuracy and advanced design precision, resulting in completely leak-proof piping systems. The company further distinguishes itself through a comprehensive range of innovative and sustainable solutions tailored to evolving industry demands.

Addressing the growing



Arun Kumar Magoo, Chief Business Officer, BirlaNu

emphasis on sustainability, Birla Nu underscored its strong R&D capabilities. A significant milestone in this direction has been the recent launch of India's safest UPVC pipes, developed using an organic-based stabilizer system. These stabilizers are entirely free from heavy metals, making Birla Nu the only company in the country currently offering such a product. This advancement enhances safety standards, particularly for potable water applications, reinforcing the company's commitment to health and environmental responsibility.

On the growth front, Birla Nu described itself as a growth-centered organization. In the previous year

alone, the company recorded a remarkable 76% growth in volume terms within the pipes business. Building on this momentum, Birla Nu is preparing to commercialize a new product line—PVCO (oriented PVC) pipes. Positioned as a transformative solution for infrastructure, PVCO technology is expected to facilitate the transition from traditional metal piping systems, such as ductile iron pipes, to advanced polymer-based alternatives. As one of the first companies to introduce this technology in India, Birla Nu expressed strong optimism about its potential to redefine infrastructure piping standards in the country. 



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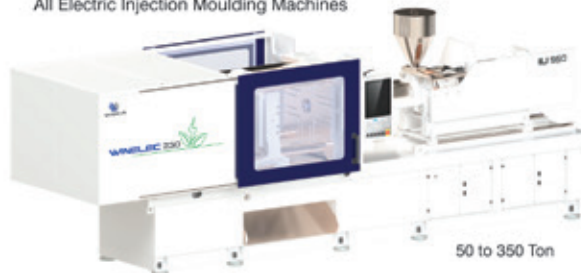


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# ADEKA ADVANCES INNOVATION IN ADVANCED MATERIALS

Highlighting strategic transformation, sustainability-driven material innovation, ADEKA aims at expanding polypropylene applications globally.

By Team ET Now Polymers

At PlastIndia 2026, leaders from across the global plastics and chemical industry gathered to discuss emerging market opportunities. Among them was **Hidetaka Shirozume, President & CEO of Adeka Corporation**, who shared insights into the company's long-term evolution and growing engagement with the Indian market.

Over this period, ADEKA has undergone several strategic transitions as it adapted to changing industrial and market conditions. Historically known for producing caustic soda from salt, the company eventually made the decision to discontinue that product line around fifteen years ago. The move demonstrated the organization's willingness to reassess its traditional strengths and shift focus toward areas with stronger long-term potential.

Strategic decision-making within the company is closely tied to market dynamics and the pace of research and development. He emphasized that one of the most critical considerations when entering new business segments is the expected growth rate of the market and the time required to bring innovations to commercial maturity. Aligning the speed of R&D with market expansion opportunities enables the company to respond effectively to emerging demand while ensuring that technological investments remain viable.

Sustainability has increasingly become a key focus within the



Hidetaka Shirozume, President & CEO, Adeka Corporation

company's product development strategy. As a materials manufacturer, ADEKA does not operate solely at the end-product level but rather supplies materials that enable downstream industries to develop new applications. This requires a deep understanding of which industries require advanced materials and how those materials can address evolving technological and environmental challenges. In this context, the company is placing strong emphasis on solutions that support sustainable production practices and recycling initiatives.

One of the most significant recent developments highlighted during the discussion was the company's new clarifier technology, Transparex. Developed after nearly ten years of research, the innovation

enhances the transparency of polypropylene, enabling the material to achieve significantly improved performance characteristics. By improving optical clarity, the technology expands the potential applications of polypropylene beyond conventional uses.

Transparex is expected to play an important role in the growing polypropylene market, particularly in applications such as food packaging, medical devices, and other high-performance products. The company emphasized that its objective extends beyond competing with existing commercial benchmarks; the broader goal is to develop technologies that contribute meaningfully to society and industrial sustainability.

Collaboration with universities and academic institutions also plays a vital role in shaping the company's future technologies. These partnerships, both in Japan and internationally, provide valuable insights that help guide next-generation research and development. Such academic interactions, he explained, serve as an important source of inspiration for scientific progress and innovation within the company.

Through sustained investment in research, a flexible approach to business strategy, and growing engagement with emerging markets like India, ADEKA continues to position itself at the forefront of advanced materials development in the global plastics and chemical industry. 



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Catalogue of all Plastic Additives

## MAMATA INNOVATES RECYCLABLE FLEXIBLE PACKAGING

**Introducing RECTEC, a recyclable monomaterial packaging concept combining nine-layer blown film technology and high-speed pouch making to address India's non-recyclable packaging challenge.**

By Team ET Now Polymers

**M**amata Machinery marked a significant milestone in its long-standing association with the PlastIndia 2026, participating for the 12th time since 1990 and celebrating 36 years of engagement with the platform. At the event, **Apurva Kane, CEO of Mamata Machinery Limited** presented a transformative concept that has the potential to redefine India's flexible packaging ecosystem.

A substantial portion of India's current flexible packaging, nearly all of which relies on PET and PE laminates, remains non-recyclable and is produced at approximately Rs. 200 per kilogram. Mamata's research and development efforts have been directed toward creating a solution with equivalent barrier properties that does not exceed this price point, a requirement they identify as the 'need of the hour.'

This pursuit led to the development of RECTEC, a recyclable film concept around which Mamata has built an integrated system. While the company does not manufacture film itself, it has engineered a complete demonstration built on a nine-layer blown film plant—an innovation exhibited for the first time in the history of

PLASTINDIA.

The nine-layer blown film line produces a recyclable barrier structure that is later laminated with MDO PE, creating a monomaterial structure designed for the circular economy. The film is then tested on Mamata's high-speed stand-up zip-up pouch maker and its horizontal form-fill seal machine to demonstrate machinability, seal integrity and production efficiency at industrial speeds.

Although the final film is priced at around Rs. 240 per kilogram,

slightly higher than the current PET-based option, Mamata emphasized that it not only outperforms PETP in barrier properties but also achieves complete recyclability. Positioned as a breakthrough innovation, the solution has the potential to shift the packaging sector toward a more sustainable future.

Mamata reinforced its long-standing commitment to sustainability by highlighting that India generates nearly 1.35 million tons of non-recyclable flexible packaging annually. The innovation showcased at PLASTINDIA 2026 represents the culmination of several years of focused research aimed at resolving this national challenge. Over the next 12 to 24 months, the company intends to actively promote this solution among brand owners and government agencies responsible for solid waste management. Their objective is to create large-scale industry awareness and establish RECTEC-based packaging as a one-to-one replaceable alternative to PETP structures. Through this initiative, Mamata hopes to catalyze a transformative shift in India's packaging landscape. 🌱



Apurva Kane, CEO, Mamata Machinery Limited

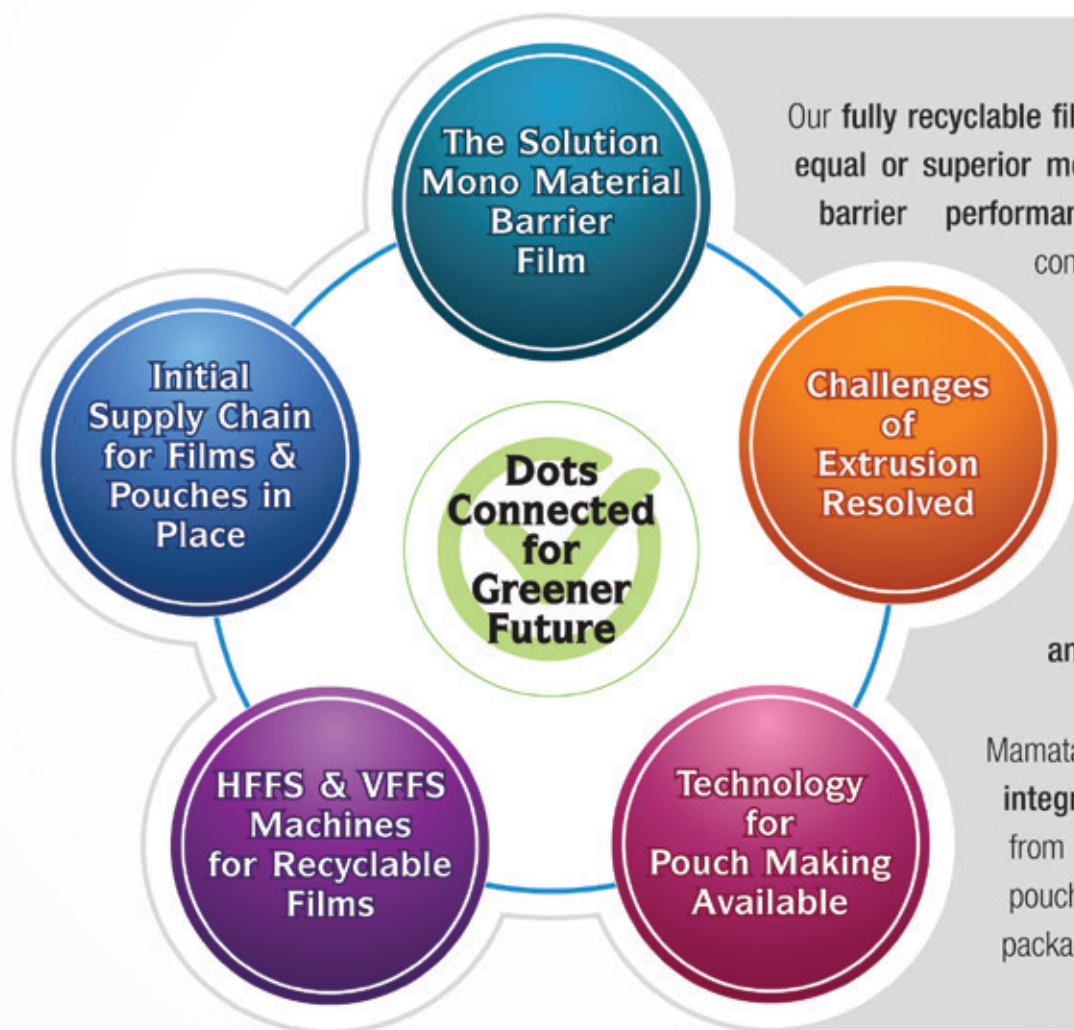


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## INNOVATION TAKES CENTER STAGE

Milacron launched three new technologies while outlining strong India growth, capacity expansion plans, and continued investments to strengthen its innovation footprint.

By Team ET Now Polymers

With a presence in

India for the past 30 years, Milacron continues to leverage its deep-rooted footprint to introduce advanced solutions tailored to evolving industry demands. At Plast India 2026, **Mac Jones, CEO of Milacron Pvt Ltd** the senior leadership of Milacron outlined the company's latest technological advancements and strategic growth plans, reinforcing its long-standing commitment to the Indian market.

This year marks the launch of three significant product innovations. The first is the **all-electric E-series**, available in nine variants, designed to deliver enhanced efficiency and performance. The company also unveiled a redesigned B-series, which replaces its earlier Omega position, reflecting Milacron's focus on continuous improvement and modernization of its injection molding portfolio. Complementing these launches is the introduction of the **TP117 twin-parallel extruder line** under its extrusion technology segment. The TP117 represents a major milestone for the company, and its debut at Plast India underscores the strategic importance of the Indian market in Milacron's global roadmap.

As a global organization led from the United States, Milacron has navigated a complex operating



Mac Jones, CEO of Milacron Pvt Ltd

environment over the past several months. However, recent developments have brought greater clarity and predictability to the global business climate. In India, the company has continued to perform strongly despite global volatility, maintaining a robust position with nearly double-digit growth. After targeting more than double-digit growth last year, the outlook remains highly positive for the current year as well. While certain regions such as the United States and Europe have experienced less consistency, the improving global outlook is expected to restore customer confidence and stimulate renewed activity across these markets.

Looking ahead, Milacron's focus in India centers on capacity expansion and sustained investment. The company has already

implemented several upgrades over the past few years and has outlined significant expansion plans extending through 2026 and into 2027. A key enabler of this forward momentum is the company's new primary ownership, which brings a stronger investment appetite and a greater willingness to support both organic growth initiatives and inorganic opportunities. This dual strategy positions Milacron to enhance its operational capabilities while exploring strategic expansions.

With three major product launches, consistent growth performance in India, and ambitious investment plans for the coming years, Milacron's participation at Plast India 2026 reflects a company set for sustained advancement in both domestic and global markets. 



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# QUALITY, CUSTOMISATION & GROWTH

**Bharat Carbonates supplies tailored coated and uncoated calcium carbonate grades backed by strong quality controls and close technical collaboration with customers.**

**By Team ET Now Polymers**

**B**harat Carbonates manufactures two primary product families: coated calcium carbonate and uncoated calcium carbonate powder, serving industries such as paper, plastics, pharmaceuticals, rubber, paints and construction. Coated grades improve compatibility, dispersibility and performance in polymer and paint systems, while uncoated powders act as economical mineral fillers for PVC pipes, paper, and other industrial applications.

To ensure consistency across grades and batches, the company follows a rigorous quality programme. Raw limestone is inspected at intake for feedstock purity, while micronisation and classification systems control particle-size distribution, moisture and morphology. Whiteness and brightness are measured to meet optical requirements for paper and coatings, and chemical testing verifies purity and composition. Packaging and storage protocols maintain product stability during transport and handling.

## Product Differentiation

Bharat Carbonates differentiates itself through investments in particle engineering and coating technologies. Precision micronisation and fine grinding produce narrow particle-size distributions and controlled morphology, enabling grades to be engineered for specific applications.

For coated grades, the company uses imported stearic acid and specialty coating chemistries that improve dispersibility, impart hydrophobic properties and enhance compatibility with polymer systems. Analytical

testing and surface-modification techniques verify coating coverage and performance consistency.

Automation and continuous monitoring further maintain uniform quality while enabling faster customisation when required.

## Application Advantages

The company's calcium carbonate grades are developed to deliver targeted benefits across industries.

In **plastics**, coated calcium carbonate improves filler dispersion, enhances mechanical properties, and supports cost-effective formulations in PVC profiles, cables and masterbatches.

In **paints and coatings**, surface-treated grades increase whiteness, opacity and dispersibility, helping achieve smoother finishes and improved adhesion.

For **rubber applications**, tailored particle-size distributions and coating chemistries reduce agglomeration while improving elasticity and compound strength.

In **adhesives and sealants**, coated powders support bonding performance and formulation stability through uniform particle distribution. Paper applications benefit from high-purity grades that improve brightness, opacity and printability.

## R&D and Customer Collaboration

Research and development play a central role in refining product performance and manufacturing efficiency. Bharat Carbonates invests in analytical laboratories and surface-modification research to optimise coating chemistry and

evaluate parameters such as coating coverage and particle interaction with polymers.

The company also works closely with customers through site visits, diagnostics, and pilot-scale trials to address production challenges and refine grades before large-scale adoption. Analytical testing and field validation help ensure that laboratory results translate effectively into industrial performance.

## Growth and Sustainability

Bharat Carbonates is pursuing measured growth alongside sustainability initiatives. In 2025, the company expanded production capacity from **84,000 MT per year to 150,000 MT per year** by adding new production lines.

Renewable energy investments, including a **2.1 MW windmill and a 1.35 MW solar facility**, are helping reduce carbon intensity and operational emissions. Combined with process optimisation and waste-reduction efforts, these initiatives support responsible industrial expansion as the company looks to grow its presence across the **Asia-Pacific region**.

In conclusion, Bharat Carbonates continues to strengthen its position as a reliable supplier of high-quality calcium carbonate solutions through a combination of advanced particle engineering and rigorous quality control. With expanding production capacity and growing investments in renewable energy, the company is well positioned to support evolving industrial demands while advancing sustainable growth across regional markets. 





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PRIVATE LIMITED

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## YIZUMI HPM SHOWCASES EXPANSION PLANS

**Yizumi recently announced a Rs. 150 crore expansion to strengthen its manufacturing and R&D footprint in India.**

**By Team ET Now Polymers**

**R**ecently, **Yizumi HPM**, a global injection molding technology provider showcased a range of advanced solutions aimed at strengthening manufacturing efficiency, automation, and sustainability in the Indian plastics processing industry. Speaking at Plast India 2026, **Ramesh Varadhan, Managing Director of Yizumi HPM**, highlighted the company's technological innovations, sustainability initiatives, and expansion plans for the Indian market.

Providing an overview of the company's footprint, Varadhan noted that Yizumi HPM operates as a global enterprise with manufacturing facilities in the United States, China, and India. The company began its operations in India seven years ago and has since established a strong presence across the country. With more than **5,000 machines** already installed in India, Yizumi HPM has built a robust customer base supported by a manufacturing facility in **Ahmedabad** and multiple branch offices nationwide. At the event, the company occupied nearly 300 square metres of exhibition space, using the platform to unveil several advanced technologies tailored to evolving industry requirements.

Among the key highlights was the introduction of PET freeform multicolour technology, a solution that Varadhan described as completely new to the Indian market. The technology enables complex multicolour PET applications, offering manufacturers enhanced design flexibility and product differentiation. Another significant launch focused on the medical industry, where the company

presented a fully automated petri dish manufacturing solution. The system is designed to operate in a completely automated environment, ensuring the product remains unmanned and untouched throughout the process, including final packaging, thereby meeting stringent hygiene and quality standards required for medical applications.

In addition to these solutions, Yizumi HPM introduced cap moulding technology capable of achieving a 3.9-second cycle time, supported by a hybrid system that ensures high productivity while maintaining energy efficiency with energy consumption below 0.39 kilowatt per kilogram. The company also displayed two-platen machines for automotive applications, reflecting its focus on addressing the performance and precision requirements of the automotive sector.

Sustainability remains a core focus area for the company. To support technology development and local adoption, Yizumi HPM has already installed two systems at its Ahmedabad facility to assist customers and tool makers in developing molds and refining the process. The company is also planning to introduce **MuCell microcellular foam technology** by setting up a dedicated R&D laboratory machine to enable customers to explore lightweight and material-efficient manufacturing solutions.

Looking ahead, the company is preparing for significant expansion



**Ramesh Varadhan, Managing Director, Yizumi HPM**

in India. Yizumi HPM currently operates a 2 lakh square-foot facility spread across 25 acres, and plans to invest Rs. 150 crore this year to nearly double its infrastructure by constructing an additional 2 lakh square-foot facility. The expansion will include new automated manufacturing lines as well as a dedicated automated painting line. According to Varadhan, the company's global management remains highly confident about India's growth potential, and the investment will also lead to an increase in manpower by more than 50 percent.

Through these initiatives, Yizumi HPM aims to deepen its technological and manufacturing presence in India while supporting the industry's shift toward automation, sustainability, and high-precision production. 📺



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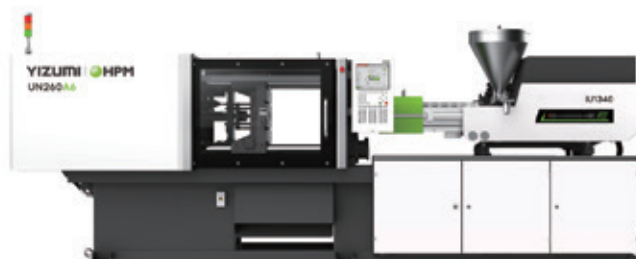
The India Gujarat factory, located in the GIDC Industrial Park adjacent to Mitsubishi Electric, covers 81,000 square meters and will meet an annual output demand of Rs. 10 billion upon completion of Phase II. The existing 20,000-square-meter Phase I facility manufactures SKIII and A6 series three-platen servo hydraulic injection molding machines, DP/D1 series large two-platen injection molding machines, and P series high-speed packaging machines for the Indian market, with an annual capacity of 2,000 units and a maximum clamping force of 4,000T.



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# STPM ACCELERATES LOCAL MANUFACTURING WITH A CLEAR VISION FOR INDIA

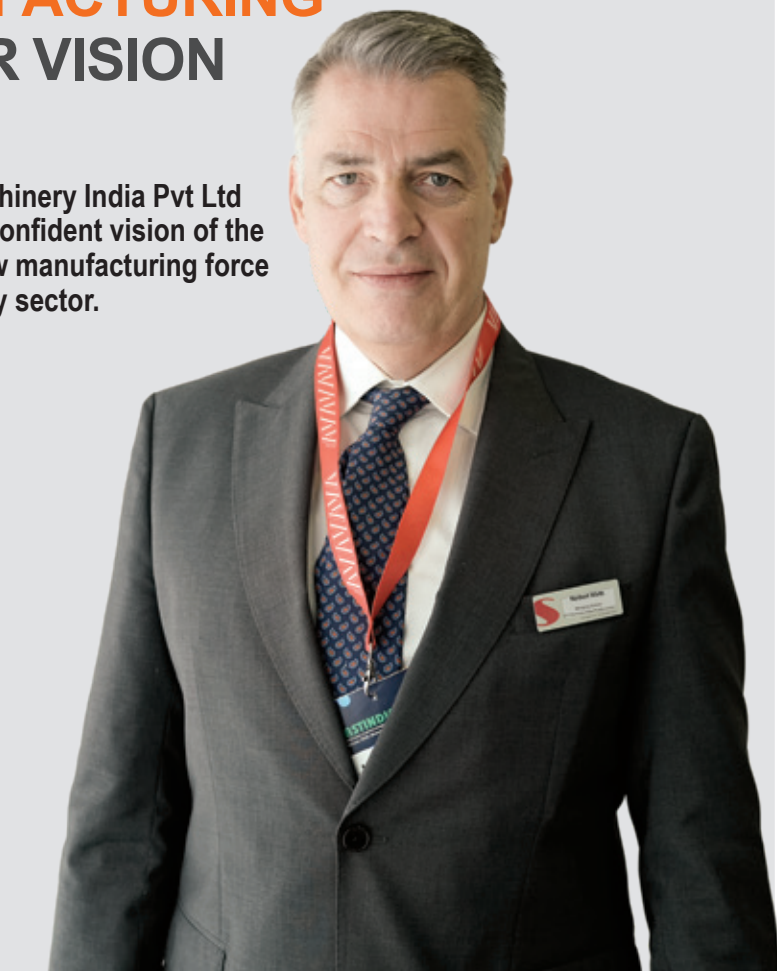
**Norbert Wirth**, CEO of STP Machinery India Pvt Ltd (STPM) presented a clear and confident vision of the company's emergence as a new manufacturing force in the Indian plastics machinery sector.

By Team ET Now Polymers

Entering the market just two years ago, STPM has moved with notable speed and determination. In this short period, under the leadership of Norbert Wirth, CEO of STP Machinery India Pvt Ltd (STPM), the company has established a complete manufacturing facility, built a strong team, and commenced full-scale production.

Although STPM is a recent entrant, the Stalinger brand itself has been active in India since the 1980s, and the formation of STPM marks a strategic step toward deepening that presence through localized production and customer-centric operations. Located in Bavla, Ahmedabad, where the plant has already delivered its first machines to customers. This rapid progress, achieved within only two years, reflects both operational efficiency and the company's commitment to serving the Indian market directly.

The response from customers due to Stalinger's longstanding reputation has helped create strong trust among Indian clients, many of whom have worked with the brand for years. By manufacturing machines "in India for India", STPM has reinforced its dedication to the local market, demonstrating not only proximity but also accountability. Beyond production, the new facility strengthens after-sales support through the establishment of a dedicated spare parts center



Norbert Wirth, CEO of STP Machinery India Pvt Ltd (STPM)

and an integrated service setup for all its machines. This infrastructure ensures faster response times, reliable maintenance, and a state-of-the-art service experience, significantly enhancing customer confidence.

From an innovation standpoint, the company has adopted a measured and systematic approach. Rather than introducing multiple technologies simultaneously, STPM has chosen to proceed step by step. Its first major introduction is 'TE1600', a high-performance PP tape extrusion line tape, which is a new system now being produced in India. For the company, the priority has been to ensure that this machine

performs fully in accordance with Stalinger's global standards while being manufactured locally.

The Bavla facility spans approximately 9,000 square meters and has been designed with room for future expansion. Currently operated by a team of around 50 professionals, the plant supports present manufacturing needs and also provides capacity for upcoming developments as demand grows. With strong foundations, proven brand credibility, and a clear roadmap for growth, STPM is positioning itself as a reliable and forward-looking partner for India's plastics machinery industry. 



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## ENGINEERING SMARTER PIPE SOLUTIONS

Reinforcing a legacy of precision and partnership through innovative, energy-saving pipe machinery built for evolving global demands.

By Team ET Now Polymers

Established in 1962, Sica Italy now marks 64 years in the market, with a reputation built on selling machines and fostering long-term partnerships. Looking ahead, the company remains focused on strengthening its domestic presence while expanding across diverse global markets. With growing demand for specialized and high-end pipe solutions, Sica aims to continue filling critical gaps through innovation, support, and customer-centric engagement.

At PLAST India 2026 exhibition, Sica Plastic Machinery showcased their innovative products and long-term customer partnership to delivering specialized solutions for the evolving pipe manufacturing industry. The company was represented by **Jay Sanghvi - Sica Plastic Machinery** and **Claudio Costa - Regional Sales Manager**, who outlined both the technologies on display and the broader strategic direction of the organization.

This year, Sica introduced two key machines from its product range. The first is a ring-fit machine designed to insert rings into specific types of pipes, primarily SWR pipes, ensuring tight fittings and eliminating the risk of loose joints. The second is a specially developed cutter engineered to process multi-layer pipes, particularly PP pipes. Both



Jay Sanghvi, Regional Sales Manager, Sica Plastic Machinery and Claudio Costa

machines were demonstrated live at the exhibition, allowing visitors and long-standing customers to experience their performance and application capabilities firsthand.

Sustainability emerged as a defining theme across Sica's global initiatives. For several years, the company has been investing in what it

describes as "green machines," aimed at reducing hydraulic dependency and increasing the use of pneumatic and electrical systems to lower power consumption. These measures are intended to enhance operational efficiency while minimizing environmental impact.

Among the recent technological developments are a new range of belling machines that utilize infrared shortwave lamps instead of traditional hot air ovens, enabling significant energy savings. Additionally, electric applications have been integrated into all cutting machines, eliminating the need for oil-based hydraulics. The company has also developed a swarfless cutting machine capable of cutting and chamfering pipes without removing material, resulting in cleaner and more efficient processes.

Addressing global disruptions, the leadership noted that while rising costs and reduced availability of spare and mechanical parts have posed challenges, such disruptions have also created opportunities. As certain markets face production constraints, new regions open up that require machinery solutions. Sica approaches these opportunities by supplying equipment and collaborating closely with customers to understand their specific needs and customize solutions accordingly. 



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## FIFTY YEARS OF ENGINEERING EXCELLENCE

**Celebrating golden jubilee milestone, PIMCO Machines showcases energy-efficient solutions while strengthening its global expansion ambitions.**

**By Team ET Now Polymers**

**A**s part of the Golden Jubilee celebrations, PIMCO unveiled a wide range of newly developed machines at the PLAST India 2026 exhibition. Represented by **Vinay Nandwana, Director, N. Chandrakant, Managing Director, and Vipul Nandwana, Director of PIMCO Machines Pvt Ltd**, the company marked a significant milestone while reinforcing its long-standing position as an industry leader.

Their machines cater to diverse industrial applications and varying customer requirements, highlighting the company's emphasis on customer-centric engineering.

Having served the market for decades, the organization has cultivated deep insight into industry demands, enabling it to offer highly customizable solutions designed to address specific operational challenges.

Addressing the broader business environment, Nandwana acknowledged the global disruptions that have influenced operations in recent times. The Indian market initially experienced considerable pressure due to fluctuations in the dollar, shortages of raw materials, and rising input costs, particularly steel and copper. These factors created temporary instability for manufacturers. However, he noted

that the situation has gradually stabilized, with businesses adapting and continuing operations steadily. Reflecting the resilient spirit of the domestic industry, he emphasized that progress continues despite challenges, underscoring the belief that the "show must go on."

Looking ahead, PIMCO Machines remains focused on continuous R&D to stay aligned with technological advancements and market expectations. The company is actively developing higher-output machinery designed for greater efficiency, lower power consumption, and reduced labour dependency. These innovations aim to improve productivity while optimizing operational costs for customers.

Strategically, the company is also setting its sights on expanding its global footprint. While acknowledging that entry into mature markets such as Europe and the United States presents challenges, PIMCO has identified these regions as key targets over the next five years. With a combination of innovation, efficiency, and experience, the organization is positioning itself to compete on an international scale while continuing to strengthen its foundation at home. 



**Vinay Nandwana, Director, N. Chandrakant, Managing Director, and Vipul Nandwana, Director of PIMCO Machines Pvt Ltd**



# ACCELERATING SUSTAINABLE PLASTICS MANUFACTURING

With cutting-edge recycling systems and high-performance sheet and bag technologies, Starlinger reinforced its commitment to enabling a truly circular plastics economy.

By Team ET Now Polymers

**R**ecently, at Plast India 2026 exhibition, Starlinger presented a comprehensive overview of its technological capabilities and sustainability-driven innovations, reaffirming its position in plastics machinery manufacturing. Represented by **Harald Neumüller, Chief Sales Officer and Executive Board Member of Starlinger**, highlighted its nearly 190-year legacy while demonstrating how it continues to adapt to the changing demands of global packaging and recycling markets.

Starlinger specializes in packaging applications that span the entire production chain, from tape lines and tape extrusion to the manufacturing of finished bags. At the exhibition, the company showcased two major divisions. The first focused on recycling solutions, offering systems for post-consumer recycling, in-house recycling, and PET recycling, including bottle-to-bottle applications. The second division, viscotec, presented advanced sheet line technologies and decontamination systems, marking their company's strong and expanding presence in this segment.

Innovation at Starlinger is closely tied to sustainability, which remains a central strategic focus. The company offers solutions that enable materials to be reused and reintegrated into packaging applications, including tape production, with recycled content ranging between 30, 40, and even 50 percent, depending on



**Harald Neumüller, Chief Sales Officer and Executive Board Member of Starlinger**

material quality. In food packaging, they have developed solutions such as BUPB lamination to enhance barrier properties against oxygen, humidity, and fats.

In the recycling segment, the company has received FTE approval for the reuse of polyolefin post-consumer recycled materials. For the Indian market specifically, the company unveiled the viscotec SE sheet line, a special edition engineered to meet local application requirements. This highly automated

system is designed to deliver strong performance and customer experience while maintaining cost efficiency.

Addressing the global business environment, Mr Neumüller acknowledged that while market activity is picking up, uncertainty remains due to tariffs, sanctions, and embargoes. In response, Starlinger is placing increased emphasis on service excellence, machine uptime, reduced waste, and minimized downtime to help customers navigate operational challenges effectively.

When it comes to sustainability, Starlinger provides recycling solutions for a wide range of materials, including PET, PP, PE, and PS, across both food-grade and non-food-grade applications. A notable example presented at the event was a block bottom cement bag containing 40 percent post-consumer recycled content, offering the same strength and quality as virgin material—an achievement described as unique globally. The company also enables 100 percent recycled material usage in sheet lines and supports thermoforming applications.

Looking ahead, Starlinger is advancing developments in polyolefin recycling with FDA approval for food packaging applications. This capability represents a significant differentiator, particularly in India, as the company continues to strengthen its role in building a circular plastics economy. 

# ADVANCED PLASTIC RECYCLING SOLUTIONS

**GMS Plastic Machinery highlighted de-printing innovations and new high-output systems while accelerating its global expansion strategy.**

By Team ET Now Polymers

At the recently held PLASTINDIA 2026, GMS Plastic Machinery Pvt Ltd presented a comprehensive lineup of advanced recycling technologies, underscoring its position as one of India's leading manufacturers in the sector. Represented by **Director Harin Sanghvi and CEO Sabyasachi Pattnayak**, the company highlighted its commitment to offering a full spectrum of high efficiency recycling machines.

Among the technologies showcased was the force feeding type recycling machine, further complemented by advanced systems such as densifier equipped models and mother baby configurations. Through a joint venture with **Gama Mechanica of Italy**, GMS aims to introduce global standard recycling solutions that cater to diverse customer demands.

A key highlight of their portfolio is the low power consumption achieved across their machines, resulting in improved productivity, higher quality granules and efficient utilization of plastic waste. The granules produced are suitable for a wide range of applications, from thinner wall products to those requiring higher thickness, enabling manufacturers to maximize the value derived from their production waste. The leadership reiterated that GMS does not merely offer off the shelf equipment but instead focuses on



Harin Sanghvi, Director & CEO, GMS Plastic Machinery Pvt Ltd

designing machinery customized to customer requirements, ensuring operational relevance and long term sustainability.

An area of notable innovation includes the company's work on de printing technologies for film waste. By removing surface print before recycling, GMS enables the production of virgin like pellets, significantly reducing raw material wastage and making these pellets viable for premium product manufacturing. Complementary advancements such as de metallizing and enhanced polymer handling capabilities further strengthen their

sustainability agenda. Their extruders are engineered to run a wide variety of plastics—including lightweight, heavyweight and non woven materials—within a single system. These machines are nearly universal across polymers such as polypropylene, polyethylene, ABS and polycarbonate, with only a few exceptions like nylon, PVC and PET, which require specialized designs.

With more than **530 machines operating across India and 25-30 units installed internationally**, GMS Plastic Machinery has already established itself as a dominant force domestically. However, the company's ambitions are now set firmly on global expansion. To support this vision, they are manufacturing high technology equipment at competitive prices through

their international joint venture. Furthermore, GMS is developing two new models with significantly higher output capacities, scaling up from the current 500 kg per hour to new systems capable of 750 kg per hour and up to 1100 kg per hour. These designs are underway and expected to be introduced within the coming months, reflecting the company's commitment to continuous innovation and market diversification. With sustainability, technology and global competitiveness at the forefront, GMS Plastic Machinery is positioning itself for a transformative next phase of growth. 



## ENGEL EXPANDS TECHNOLOGY PORTFOLIO FOR INDIA

**ENGEL presented its advanced machine portfolio with partner EPM at Plast India 2026, emphasising technology collaboration and the increasing strategic importance of the Indian market.**

By Team ET Now Polymers

At Plast India 2026, ENGEL showcased its latest technologies and strengthened collaborations while highlighting the growing importance of the Indian market in its global strategy. Senior leadership, **Dr. Gerhard Dimmler, Chief Technical Officer of ENGEL Holding GmbH** shared his insights on how the event has evolved into a significant platform for industry engagement and technological exchange.

For the company's leadership, the exhibition marked their first participation at Plast India, and the response exceeded expectations. Reflecting on the experience, they expressed positive surprise not only at the scale of the exhibition but also at the quality of interactions with industry stakeholders. The show attracted many visitors, but what stood out most was the depth and technical level of discussions with customers.

One of the key highlights of ENGEL's participation this year was the joint presentation with its partner EPM, marking the first time both companies showcased their combined portfolio at a single exhibition. The display reflected a comprehensive offering designed to address a wide range of manufacturing requirements in the Indian market. Among the technologies on display was the Ventura machine from EPM, representing the classical machine platform within the portfolio. The company also presented

its two-platen machine, developed in cooperation with EPM, highlighting the strength of the partnership and the technological synergies between the two organizations.

In addition to these solutions, ENGEL showcased its EVIN all-electric machine, emphasizing the company's commitment to advanced and energy-efficient manufacturing technologies. The exhibition also featured the Victory machine from

ENGEL, one of the company's well-established machine platforms. By presenting these systems together, the company demonstrated its ability to cover a wide spectrum of applications and manufacturing requirements across industries.

The joint showcase was designed to illustrate how the combined portfolio of ENGEL and EPM can support the evolving needs of manufacturers in India. From classical machine platforms to advanced electric solutions, the technologies presented at the exhibition reflected the company's focus on flexibility, performance, and energy-efficient production.

Looking ahead, the company highlighted the growing strategic importance of India in its global growth plans. While the Indian market is already a significant contributor to the company's operations, particularly due to its strong presence in the automotive sector, the leadership sees substantial growth potential in the coming years. This expectation of continued expansion has also been a key factor behind the company's decision to increase its investments in the country.

According to the company, India is expected to emerge as one of the most rapidly growing markets in the future. By strengthening partnerships, expanding its technology portfolio, and increasing investments, ENGEL aims to further deepen its presence in the region and support the evolving needs of the Indian manufacturing ecosystem. 



**Dr. Gerhard Dimmler, Chief Technical Officer, ENGEL Holding GmbH**

## SHOWCASING ADVANCED EXTRUSION INNOVATIONS

**Rajoo Engineers highlighted indigenous technology development, energy-efficient extrusion systems, and strategic expansion across flexible packaging and agricultural film applications.**

By Team ET Now Polymers

At the recently held PlastIndia 2026, **Rajoo Engineers** presented a range of advanced technologies and strategic developments, reaffirming its position as a leading global manufacturer of plastic extrusion machinery. During an exclusive interaction at the exhibition, **Jinesh Shah, Chief Sales Officer** highlighted latest product innovations, sustainability initiatives, and future expansion plans aimed at strengthening its presence in both domestic and international markets.

With over 40 years of experience in the plastic extrusion machinery industry, Rajoo Engineers has established a strong global footprint across 70 countries, catering to customers with diverse application requirements. The company's core product portfolio includes blown film lines, sheet extrusion lines, thermoforming machines, and extrusion lamination and coating lines.

At the exhibition, Rajoo Engineers introduced its latest four-station thermoforming machine, a high-performance system that is completely manufactured in India. The machine has been developed to compete directly with imported technologies while delivering high-speed performance for applications such as retail packaging and food packaging. The launch reflects the company's commitment to advancing indigenous manufacturing



Jinesh Shah, Chief Sales Officer, Rajoo Engineers

capabilities under initiatives such as Make in India and BharatNext.

Another major highlight was the company's expertise in its core area of blown film technology. Rajoo Engineers showcased its five-layer POD blown film line, a high-performance system designed with a strong focus on energy efficiency. The company also demonstrated its capability in lamination film production, achieving an output of 700 kilograms on a 450 mm die. According to the company, such performance levels were previously considered achievable only through equipment imported from Europe or other overseas markets, making this development a significant milestone for domestically

manufactured machinery.

Sustainability continues to play a central role in the company's operational and technological strategy. Rajoo Engineers emphasized that its focus on sustainability is not a recent development, but a long-standing commitment embedded across its product design and manufacturing processes. The blown film line displayed at the exhibition is regarded as one of the most energy-efficient lines globally, a claim validated through certification from TÜV Germany. Beyond product innovation, the company has also taken significant steps toward sustainable manufacturing operations. Notably, 87 percent of the energy consumed in its production processes is generated through solar power, positioning the company as a green energy-driven organization.

Looking ahead, Rajoo Engineers is focused on strengthening its position as a one-stop solution provider for the flexible packaging industry.

In addition to packaging, the company is also expanding its focus toward agricultural applications, particularly in technologies for wide-width mulch films, greenhouse films, and silo bags. Several lines have already been delivered in this segment, reflecting the company's growing emphasis on supporting agricultural productivity through advanced plastic processing solutions. 🌱



# WINDSOR MACHINES STRENGTHENS GLOBAL POSITION

**Leveraging decades of engineering expertise, strategic technology partnerships and a new large-scale manufacturing facility, Windsor Machines is reinforcing its global competitiveness.**

By Team ET Now Polymers



Vinay Bansod, Executive Director & CEO, Windsor Machines Limited

With more than six decades of experience in plastics processing machinery, Windsor Machines has built a strong reputation as a technology-driven manufacturer with a deep understanding of customer requirements. Over the years, the company has supplied more than 40,000 machines across India and international markets, establishing a significant installed base that reflects its long-standing engagement with diverse segments of the plastics industry.

A defining aspect of the company's philosophy has been its emphasis on understanding the operational challenges faced by processors and addressing them with tailored technological solutions. Windsor engages in detailed discussions with customers to develop machinery configurations that enhance production efficiency while minimising energy consumption. This approach has enabled the company to differentiate itself in an increasingly competitive global landscape.

The company is now entering a new phase of

expansion with the establishment of India's largest machine manufacturing facility in Rajkot. The new facility has an annual production capacity of 10,000 machines, marking a significant milestone in Windsor's manufacturing capabilities. This large-scale infrastructure investment is expected to enable the company to respond more effectively to the growing demand for advanced plastics processing equipment.

Balancing domestic growth with export expansion remains a key element of Windsor's strategy. The company maintains a healthy mix of domestic and international business, allowing it to respond to rising demand across various business verticals while continuing to strengthen its presence in overseas markets. This balanced approach helps the organisation navigate shifting global dynamics while ensuring stable and sustainable growth.

Technology partnerships have played a crucial role in shaping Windsor's product development journey. Over the years, the company has built long-term collaborations with global technology leaders, particularly in Europe, which have significantly contributed to its ability to deliver advanced machinery solutions. One such partnership has been with Kuhne, Germany, with whom Windsor has been associated for more than three decades for film plant technology.

A major milestone in Windsor's technology roadmap came in 2013 with the acquisition of Italtech. This strategic move brought the company access to one of the world's most innovative two-platen injection moulding technologies, covering machine capacities from 350 to 8000 tons. The acquisition significantly strengthened Windsor's product portfolio and enabled it to cater to demanding applications in sectors such as automotive, industrial and

logistics component moulding.

Today, supported by its global partnerships and engineering capabilities, Windsor offers a comprehensive range of advanced machinery solutions across multiple processing technologies. Its multilayer blown film plants can produce up to nine-layer films with output capacities reaching 1000 kg per hour. In the extrusion segment, the company provides pipe plants for multilayer, HDPE and PVC applications with outputs of up to 900 kg per hour. Complementing these offerings is a wide range of injection moulding machines spanning capacities from 75 to 3200 tons, allowing Windsor to serve a broad spectrum of industrial applications.

As sustainability and energy efficiency increasingly influence manufacturing decisions, Windsor has placed significant emphasis on developing technologies that enhance productivity while reducing resource consumption. The company's engineering philosophy focuses on delivering machines that achieve maximum output within the smallest possible footprint. This approach not only improves operational efficiency for manufacturers but also contributes to more sustainable production environments.

One example of this focus is the company's two-platen injection moulding machines, which require 15–20 percent less floor space compared to conventional machines. These systems also offer approximately 10 percent higher productivity and reduce energy demand by 10–15 percent, making them particularly attractive for manufacturers seeking to optimise both space and energy usage. In the blown film segment, Windsor's Maximiser die concept has been developed to significantly enhance output efficiency. For instance, a three-layer machine with a 250

mm lip size can achieve an output of 450–500 kg per hour, effectively delivering double the output relative to the lip size.

Demand dynamics across Windsor's three primary business verticals— injection moulding, blown film and pipe extrusion—continue to be shaped by evolving industrial requirements. India's large and growing population provides a strong foundation for sustained demand in plastics processing. With a population of 1.44 billion and one of the lowest per capita plastic consumption levels in the world, the country offers considerable growth potential across a wide range of applications.

Through its diverse product portfolio, Windsor serves multiple end-use industries including automotive, packaging, construction, industrial applications, water transportation and medical sectors. Government initiatives such as Jal Jivan Mission and Swachh Bharat are also contributing to increased demand for infrastructure-related plastic products, particularly in the pipe and water management segments.

International markets continue to represent another important growth avenue for Windsor. The company has built a strong presence across Africa, the Middle East, South East Asia and Eastern Europe, where it has been supplying machinery for several decades. As global demand for advanced plastics processing technologies continues to evolve, Windsor Machines is positioning itself at the intersection of manufacturing scale, technological innovation and customer-centric engineering. By combining decades of industry experience with strong international collaborations and expanded production capacity, the company is reinforcing its ability to serve both established and emerging markets. 



# ENGINEERING THE FUTURE

From plastics machinery to clean energy solutions, Kabra Extrusiontechnik is redefining what it means to be a future ready Indian manufacturing company.

By Team ET Now Polymers

In Indian manufacturing, longevity is rarely accidental. It is built through reinvention, patience, and the ability to see the future before it becomes obvious. For Kabra Extrusiontechnik, this journey has unfolded over decades, transforming the company from a domestic plastics extrusion machinery supplier into a globally recognised technology driven manufacturing group.

At the centre of this transformation is a leadership philosophy that blends engineering depth with long term thinking. Over nearly three decades of leadership, the company has navigated changing technologies, evolving markets and new industrial expectations while steadily expanding its global footprint.

Today, Kabra Extrusiontechnik equipment operates in more than 100 countries, serving customers in highly competitive markets. That global presence did not happen overnight. It was built through consistent focus on quality, reliable engineering and the trust developed with customers across industries.

Yet perhaps the most interesting part of the Kabra story is not where it began but how it evolved.

## From Machines to Manufacturing Intelligence

Kabra Extrusiontechnik started with a clear focus on plastics extrusion technologies. Over time the company developed deep expertise across applications such as blown film, pipes, sheets and compounding systems.

For years, success in this sector meant building machines that worked reliably. But the expectations of manufacturers began to change.



Anand Kabra, Chairman and Managing Director, Kabra Extrusiontechnik Limited & Geon - Green Energy ON

Customers were no longer just looking for equipment. They were looking for productivity, efficiency and automation.

That shift required a different mindset.

Kabra responded by investing heavily in research, advanced controls and high precision manufacturing. Automation and digital monitoring began to become part of its solutions long before these ideas became standard across Indian manufacturing.

The transformation was gradual but significant. The company moved from being a machinery provider to becoming a technology partner for manufacturers.

Customers were no longer buying machines alone. They were buying performance, reliability and operational intelligence.

## The Leap Into Clean Energy

One of the most important chapters in Kabra Extrusiontechnik's journey

came with its entry into the energy storage sector.

In 2018 the company launched Battrix, its electric vehicle battery division, recognising early that lithium ion technology would play a central role in the future of transportation and energy systems.

At the time, electric mobility in India was still in its early stages. Many companies were cautious about entering the space. Kabra, however, saw the opportunity through the lens of engineering capability.

The same expertise in precision manufacturing, systems integration and industrial design that had powered its extrusion business could also be applied to energy storage technologies.

As the energy landscape evolved, the scope of this business expanded far beyond electric vehicles. Energy storage was increasingly being used in homes, commercial establishments and large scale grid applications.

Recognising this broader opportunity, the company

transitioned from Battrixx to GEON Energy Solutions. The new name reflects a wider mission to build reliable and scalable clean power solutions across multiple sectors.

From residential storage systems to industrial applications and large battery energy storage projects, the business now supports a growing energy ecosystem.

## Balancing Innovation With Discipline

In many manufacturing organisations, innovation and operational efficiency are often seen as competing priorities. Kabra's leadership believes the two must work together.

Innovation without execution rarely creates lasting value. At the same time, operational discipline without innovation can limit long term growth.

To balance these forces, the company has built strong processes while encouraging experimentation in product design and technology development.

Each business segment operates with its own leadership teams and performance frameworks. This allows the organisation to innovate in new areas while maintaining operational consistency across manufacturing.

The goal is simple. Growth should be sustainable and repeatable rather than driven by short term experimentation.

## Lessons From Global Markets

Expanding into international

## 7-LAYER BLOWN FILM PLANT



markets has also shaped the company's philosophy.

Operating globally demands a high level of discipline. Customers across different countries expect consistent quality, reliable delivery and long term service support.

Technology may open doors to new markets, but trust keeps them open.

For Kabra Extrusionstechnik, this has meant building strong local teams, understanding regional customer needs and supporting products throughout their lifecycle.

Global growth is not simply about exporting machines. It is about building partnerships that last.

## The Next Phase: Energy and Advanced Manufacturing

Looking ahead, Kabra Extrusionstechnik sees its role expanding beyond equipment manufacturing.

On the industrial side, the company continues to push automation, energy efficiency and

digital integration across its extrusion and compounding technologies. These capabilities help Indian manufacturers improve productivity and compete globally.

On the energy side, the focus is on building a robust energy storage ecosystem in India through GEON.

Lithium ion batteries currently account for more than 90 percent of battery energy storage systems deployed in India. Chemistries such as LFP and LMFP are gaining preference due to their safety, long cycle life and suitability for Indian conditions.

The future of energy storage will also be shaped by intelligent technologies. Advanced battery management systems, predictive analytics and modular storage architectures will play a critical role in how renewable energy is integrated into the grid.

Emerging technologies such as sodium ion and flow batteries may also find specialised applications as they mature. 





# IGUS UNVEILS FIRST ONLINE CLEANROOM CABLE DESIGN TOOL

New e-skin flat configurator enables engineers to design certified cleanroom cable guide systems in minutes with automated drawings and data downloads.

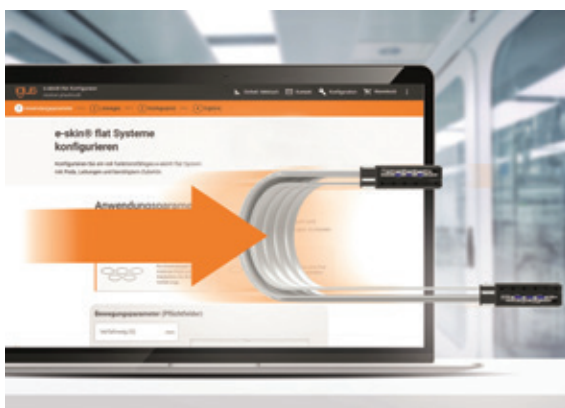
By Team ET Now Polymers

Designing cable management systems for cleanrooms has traditionally been a meticulous and time-intensive process. Engineers must balance strict contamination standards, limited installation space and complex technical requirements while ensuring reliability in sensitive manufacturing environments such as semiconductor fabrication. Recognising these challenges, igus has introduced a new digital solution aimed at simplifying the process.

The company has launched the **e-skin flat configurator**, the first online tool designed to automate the design of flat cable guide systems for cleanroom applications. With this tool, engineers can configure complete systems within minutes and instantly download technical drawings, parts lists and STEP files, significantly reducing the manual effort previously required.

Cleanrooms used in industries such as microchip and semiconductor manufacturing demand extremely strict environmental control. Even the smallest particles can disrupt production processes, making reliable and low-particle cable guidance essential. igus developed the **e-skin flat** specifically to address these needs, offering a clean, flat and abrasion-resistant system made from high-performance plastics.

The new configurator builds on this technology by guiding users step by step through the design process. According to **Kira Weller, Product**



**Manager** for e-chains and cleanroom expert at igus, the tool was developed to streamline what has historically been a complex engineering task.

“The online tool is the first of its kind for configuring cable guide systems for cleanrooms,” she explains. “It leads users step by step through the design of their system, checks feasibility and immediately provides all relevant data. This ensures planning security without waiting times or lengthy coordination.”

The configuration process begins with the user entering key application parameters such as speed, acceleration and travel distance.

Once the application parameters are set, users select the cables required for their design. The tool provides access to igus’ extensive **chainflex** cable portfolio, including pre-harnessed readycables with connectors. Customers can also add their own cables to the system if required.

One of the configurator’s most powerful features is its **automatic filling function**. Using an integrated algorithm and product

data stored within the system, the tool analyses the input parameters and recommends the most suitable configuration based on predefined engineering rules. If a design is not feasible, the system alerts the user immediately, allowing adjustments to be made before finalising the configuration.

Once the design is complete, users can instantly download all relevant documentation from the results page. This includes technical drawings, parts lists and installation instructions. A STEP file can also be generated, enabling seamless integration into existing design workflows.

If customers wish to proceed further, they can request a quotation directly through the platform. At this stage, igus engineers conduct a final verification of the configured system.

“We wanted to make the configuration process for cleanroom cable guide systems as simple as possible,” says Weller. “With the e-skin flat configurator, customers receive a complete package that allows them to continue their design work immediately while significantly reducing manual effort.”

This innovation has also won the **Best of Industry Award 2025** from trade magazine *MM MaschinenMarkt* in the category of battery development and production. For igus, the launch reflects its broader strategy of combining advanced materials with intelligent digital tools. 



If there is one industry that quietly mirrors the global economy, it is plastics and polymers. Every automobile, medical device, electronic product, packaging material or consumer appliance carries a piece of the polymer value chain. When trade flows smoothly, plastics manufacturing expands. When geopolitics turns uncertain, the ripple effects travel quickly through the industry.

Today the Indian plastics sector sits at the intersection of three powerful global developments. First is the landmark India European Union trade agreement. Second is the ongoing conversation around an India United States trade deal. Third is a world increasingly shaped

by geopolitical tensions, wars and supply chain disruptions.

For an industry that exports billions of dollars worth of products every year, these shifts matter deeply.

### A Growing Global Player

India's plastics industry has grown steadily over the past decade. From small moulding units to globally competitive packaging and engineering plastics manufacturers, the sector has expanded both domestically and internationally.

The numbers tell the story. India's plastics exports reached about **\$12.5 billion in FY 2024-25**, registering an **8 percent increase over the previous year**. Growth was driven by

strong demand for products such as plastic films, woven sacks, laminates and floor coverings.

The industry exports to more than **200 countries**, with the **United States remaining the largest market** for Indian plastic products.

In fact, India exported **around \$1.62 billion worth of plastics to the United States in 2024**, according to global trade data.

These exports include packaging materials, sheets, films and a wide range of moulded plastic products that feed into industries from logistics to food processing.

The European Union is another major trading partner. At the same time, Europe exports significant volumes of plastic raw materials and





# TRADE, TURBULENCE AND POLYMERS

As India negotiates new trade deals with the EU and the US amid global conflicts, the plastics industry finds itself at a pivotal moment.

By Team ET Now Polymers



specialty polymers to India. In 2024 alone, **EU plastic exports to India** were valued at about **\$2.35 billion**.

This two way trade highlights how interconnected global polymer supply chains have become.

## The India EU Trade Deal

Against this backdrop, the recently concluded **India European Union Free Trade Agreement** is being closely watched by the plastics industry.

The agreement, finalised after nearly two decades of negotiations, aims to reduce or eliminate tariffs on a vast range





of goods traded between the two markets. It is considered one of the most significant trade pacts India has signed in recent years.

Under the agreement, the European Union will remove tariffs on about **90 percent of Indian goods**, gradually expanding to around **93 percent within seven years**.

For sectors like chemicals, rubber and plastics, the implications are substantial. The EU imports enormous volumes of polymer and chemical products. Estimates suggest that the bloc's rubber and plastics import market alone is worth more than **€255 billion**.

India's current exports to the EU in these segments remain relatively modest, which means the scope for expansion is considerable.

Lower tariffs can make Indian plastic products more competitive in European markets. At the same time, Indian manufacturers may gain easier access to high quality European machinery, specialty polymers and additives that improve production efficiency.

However, the agreement also introduces new challenges. European markets are known for strict environmental regulations,

sustainability requirements and compliance standards.

For Indian polymer exporters, meeting these standards will become increasingly important.

### The US Trade Equation

While Europe offers one opportunity, the United States remains the most important export destination for Indian plastics.

American industries depend heavily on plastic packaging, consumer goods components and industrial polymer products. For many Indian manufacturers, the US market has been a reliable source of demand.

But trade relations between the two countries have not always been smooth.

Tariffs, regulatory requirements and shifting geopolitical priorities have sometimes complicated trade flows. For example, certain sectors have faced tariff pressures in recent years, prompting Indian exporters to diversify their markets.

This is why discussions around a **potential India US trade agreement** are being closely monitored by industry leaders.

A bilateral trade deal could reduce tariff barriers, streamline

regulations and improve market access for Indian polymer products.

For a sector that is highly export oriented, such agreements could significantly expand growth opportunities.

### A World in Conflict

Trade deals alone do not define the future of the plastics industry. The broader geopolitical climate also plays a crucial role.

Over the past few years, global conflicts have reshaped supply chains. The Russia Ukraine war disrupted energy and petrochemical markets across Europe. Meanwhile tensions in West Asia have affected shipping routes and freight costs.

For the plastics industry, these developments have direct consequences.

Petrochemicals, which form the backbone of polymer production, are closely tied to global oil and gas markets. When geopolitical tensions push up energy prices, the cost of raw materials rises.

Shipping disruptions also add another layer of complexity. Routes through key maritime corridors such as the Red Sea have faced disruptions in recent years, forcing vessels to take





longer routes and increasing freight costs.

For Indian exporters, this translates into higher logistics expenses and longer delivery timelines.

### Supply Chains Are Being Rewritten

At the same time, global manufacturers are rethinking supply chains in response to geopolitical uncertainty.

For decades, many industries depended heavily on a few manufacturing hubs. Today companies are increasingly looking to diversify their sourcing locations.

India stands to benefit from this

shift.

With a strong base of small and medium enterprises, skilled engineering talent and competitive manufacturing costs, the country is positioning itself as an alternative production hub.

The plastics industry, which includes thousands of MSMEs across states like Gujarat, Maharashtra and Tamil Nadu, plays a crucial role in this transformation.

Trade agreements with large markets such as the EU and the US can further accelerate this shift.

### Opportunities and Responsibilities

For the Indian polymer industry,

the coming decade could be transformative.

Trade agreements promise new export markets. Global supply chain shifts create fresh opportunities. Growing domestic demand for packaging, electronics and electric vehicles adds another layer of growth.

But the industry will also need to adapt to a changing global environment.

Sustainability is becoming central to global trade. European markets in particular are introducing stricter regulations around plastic waste, recycling and carbon emissions.

Indian manufacturers will increasingly need to invest in recyclable materials, energy efficient processes and circular economy solutions.

At the same time, technological upgrades in automation and digital manufacturing will be necessary to remain globally competitive.

### A Defining Moment

The Indian plastics industry has always been resilient.

It has weathered oil price shocks, global financial crises and the disruptions of the pandemic. Each time it has adapted and continued to grow.

Today the sector stands at another important crossroads.

Trade deals with the European Union and potentially the United States could unlock new markets. Global conflicts are reshaping supply chains. Sustainability pressures are redefining how plastics are produced and used.

For Indian manufacturers, the message is clear.

The future of polymers will not be shaped by technology alone. It will be shaped by geopolitics, trade policy and the ability of industries to adapt to a rapidly changing world.

And in that evolving global landscape, India's plastics industry may find itself playing a far bigger role than ever before. 🌐



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