

Plastic Recycling Machine Market Assessment, By Machine Type [Combines Machine, Shredders and Granulators, Grinders, Crushing Machines, Mixers, Others], By Technology [Automatic, Semi-automatic], By Application [Post-industrial Recycling, Post-consumer Recycling, PET Improvement], By Capacity [Up to 100 kg/h, >100 kg/h to 500 kg/h, >500 kg/h to 1000 kg/h, Above 1000 kg/h], By Sales Channel [Direct Sales, Indirect Sales], Region, Opportunities and Forecast, 2017-2031F

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Report description:

Global plastic recycling machine market is projected to witness a CAGR of 8.41% during the forecast period 2024-2031, growing from USD 30.59 billion in 2023 to USD 58.36 billion in 2031. The market thrives at a strong growth rate due to expanding recycling businesses, government investments, and technologically advanced machines.

Rising recycling sector, government investments, new plastic recycling technology, and efficient machines are anticipated to transform the global plastic recycling machine market. Countries across the globe are trying to focus on meeting high production capacity and automation. Advanced automatic recycling machines such as granulators and shredders are penetrating plastic recycling technology. As the plastic recycling industry has shifted from government progressive models to full-fledged business models, machines with higher production capacity are adopted. This requirement is met by the trend of high-production capacity machinery, which enables recyclers to handle greater volumes of plastic trash effectively and efficiently. These devices are built to run at peak efficiency under heavy throughput, guaranteeing a smooth workflow through the recycling process.

Recyclers can boost productivity and support a more effective circular economy by fulfilling high production capacity demands. Apart from productivity, the new technologies support the economy with reduced plastic waste and high polymer production. Companies based in Asia-Pacific focus on delivering cutting-edge plastic recycling technology.

For instance, in January 2024, Reliance Industries Limited (RIL), an Indian company, developed a chemical recycling technique to create unique circular polymers from plastic trash. The invention supports the business's objective to help the Asian nation to develop a circular economy and reduce plastic waste.

Higher Productivity and Government Support to Fuel Market Growth

The government's plan to reduce plastic waste and limit carbon emissions leads it to adopt and support the plastic recycling industry. Hence, the aid provided by government authorities is anticipated to add value to the market growth, fueling the sales of plastic recycling machines. Governments across the globe build and set up plastic recycling plants, investing major capital in the industry to limit e-waste and plastic waste.

For instance, in November 2023, Sweden opened a new facility for sorting plastic waste. The plant aims to double the quantity of plastic packaging materials recycled in the Nordic nation.

As the demand for plastic recycling surges, the highly productive recycling machines have taken center stage and are delivering favorable results. The manufacturers focus on lower energy consumption along with higher plastic recycling. These processes comprise shredding, mixing, and other recycling activities.

For instance, in June 2024, JianTai Co. Ltd. launched a new machine to boost plastic recycling efficiency. The machine has a programmable logical controller (PLC) system that is easy to operate and an energy-saving servo option in addition to superior extrusion technology. It has a diameter of 120 mm and a length-to-diameter ratio of 28:1, which guarantees that polymers melt uniformly for effective recycling. It can produce up to 300 kg of material each hour.

Automated, Sustainable, and Technologically Advanced Machines to Fuel the Global Market

With many benefits, automation has become a crucial component of contemporary plastic waste recycling equipment, changing the market demand. Automated systems are essential for increasing productivity since they simplify important tasks such as sorting, shredding, and washing. Automation minimizes manual intervention, which lowers labor costs, increases safety precautions, and boosts operational productivity. Furthermore, energy-saving motors, sophisticated control systems, and waste heat recovery are some characteristics due to which modern machinery is outfitted to cut down on energy usage and lessen the environmental effect of recycling.

The highly advanced and technologically enabled machines come with enhanced plastic cleaning solutions, eliminating any possible threat to streamlined operations and productivity. Recyclers can choose the best filter for serving requirements due to customizable choices. One developing trend in recycling equipment is the use of sophisticated self-cleaning filters. These filters optimize workflow and guarantee high-quality output by cleaning themselves automatically.

For instance, in May 2024, Genius Machinery Co. Ltd unveiled its highly sophisticated product line of plastic washing recycling machines. Both film and stiff washing plants are part of the plastic recycling washing plant series. Recyclable hard post-consumer products, including bottles, injection molding scrap or trash, pipes, e-waste, and other rigid materials, are the purpose of rigid washing plants.

Common Usage and Higher Price Range to Fuel Segmental Growth

Crushing machines, also known as pulverizing machines, are expected to lead the global plastic recycling machine market due to their crucial role in the plastic recycling process and its advantages. Crushing devices make plastic garbage into powder so that it can be later turned into new items, raising efficiency in tin utilization. By enabling quick and efficient processing of big batches of plastic scraps, they support the creation of valuable recycled materials for different purposes. Including crushers in plastic recycling is important for the environment. It is because recycling plastic waste helps decrease pollution as well as conserves natural resources while reducing the quantity of plastic littering both at landfills and in the ecosystem.

For instance, Baoding Haorui Machinery Manufacturing Co., Ltd. offers high-efficiency plastic crushing machines that deliver PET bottle crushing and come in single-crew formation. The automatic machine offers a capacity of 600 kg/h to 2000 kg/h.

North America Dominates the Global Plastic Recycling Machine Market

Based on region, North America leads the share of the global plastic recycling machine market. The introduction of plastic recycling machines has been spurred by high environmental awareness and stringent legislation in North America, especially in the United States, to reduce plastic waste. Businesses have been encouraged to invest in recycling infrastructure by initiatives such as the Save Our Seas 2.0 Act and state-level laws like California's SB 54. North America's position in the market for plastic recycling machines has been further reinforced by significant expenditures made in recycling infrastructure and research and

development by the public and private sectors. The need for plastic recycling machines has increased in North America due to the growth of circular economy efforts and corporate sustainability pledges, such as Coca-Cola and Unilever's plans to employ 50% recycled content in their packaging by 2025. Major grants are provided to the plastic recycling industry for network expansion and equipment.

For instance, in April 2023, The Department of Environmental Quality (DEQ) in North Carolina awarded grants to ten businesses totaling around USD 443,000. The DEQ's Recycling Business Assistance Center (RBAC) granted business development grants that were used to enhance materials recovery facilities (MRFs), increase the capacity of plastics recycling enterprises, and for other purposes. The grants had to be matched by at least 50% private funding.

Future Market Scenario (2024 - 2031F)

- Adoption of advanced sorting and separation technologies along with the development of compact and highly efficient recycling machines are likely to fuel the market growth in the forecast period.
- Increasing volume of recyclables and focus on sustainable machines are projected to garner market expansion.
- Rising demand for plastic recycling machines in Asia-Pacific and North America is expected to widen the plastic recycling machine market size.
- New entrants with new recycling technologies and equipment are expected to garner market expansion. For instance, in June 2024, Canon Inc. declared that it would introduce a new plastic sorting apparatus using cutting-edge material recognition technology. The equipment uses a tracking mechanism to apply Raman spectroscopy technology to moving objects to detect the various material types of plastic pieces.

Key Players Landscape and Outlook

Key participants in the global plastic recycling machine market focus on using advanced separation technology along with efficient energy consumption and extended recycling capacity. Alongside, strategic partnerships, collaboration, acquisitions, and product launches are used as the major elements of the market's strategic landscape.

In May 2023, POLYSTAR Machinery Co. Ltd. and Daisaku Co. Ltd. collaborated with Japan. A Repro-Flex 150 recycling machine from POLYSTAR is purchased as part of the cooperation to treat different HDPE, LDPE, and LLDPE packaging film, bale film, and shrink film waste. The device is incredibly effective at turning waste plastic into high-quality and consistently-sized recycled pellets.

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*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work.

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