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Processing State of the Industry Report

EXECUTIVE SUMMARY

Insights and analysis into the
US market for food & beverage
processing machinery.

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26



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ABOUT THIS REPORT

Introduction to Research

This report was developed through a collaboration between The Association for Packaging and Processing Technologies (PMMI) and the Food Production Solutions Association (FPSA) to establish a baseline view of the US food and beverage processing machinery market. As the inaugural edition of this study, the objective is to size the market, identify key structural drivers, and provide directional insight into growth and investment trends across major industry and equipment segments.

Data Collection & Methodology

To produce this first edition, Interact Analysis combined primary and secondary research. Primary research consisted of a quantitative survey issued to **PMMI & FPSA** members. Additionally, interviews with processing equipment manufacturers and industry participants were conducted to understand how machinery shipments are distributed across end-markets and equipment categories, as well as the factors influencing demand. These interviews were supplemented with historical market datasets, proprietary industry trackers, and publicly available sources to inform market sizing and forecasting.

Given the foundational nature of this edition, data coverage varies by segment. In areas with limited direct reporting, additional datasets and proxy indicators were used to support estimates where appropriate. Forecasts reflect a combination of historical trends, interview insights, and broader macroeconomic assumptions.

Future editions of this report will continue to refine market sizing, expand segmentation detail, and incorporate additional supplier input as data coverage improves.

We thank all contributors for their participation and insights, and hope this report provides a valuable reference for understanding the US food and beverage processing machinery market.

What Does This Report Contain?

This report provides a high-level view of the US food & beverage processing machinery market. It is designed to help OEMs, and industry stakeholders understand overall market performance, key trends, and the projected outlook by industry and major machine categories.

What the Report Covers:

- Total shipment values and growth forecasts for the US market
- Breakdowns by major industries (e.g., alcoholic beverages, dairy, fruits & vegetables)
- Shipment values by primary machine categories
- Market drivers and demand signals influencing investment decisions

Processing Data Explorer Dashboard Highlight

Looking for more detailed insights? The Processing State of the Industry Dashboard complements this report by offering interactive access to the full dataset—with significantly more granularity.

Available to PMMI/FPSA members, the dashboard allows users to:

- View shipment values and growth projections by main machine types.
- Filter by specific industry sectors to view only relevant machine shipments and projections.
- Compare shipment values by industry and subcategory side by side.

To access the dashboard, visit the Processing State of the Industry Dashboard at: pmmi.org/content/soti-dashboard

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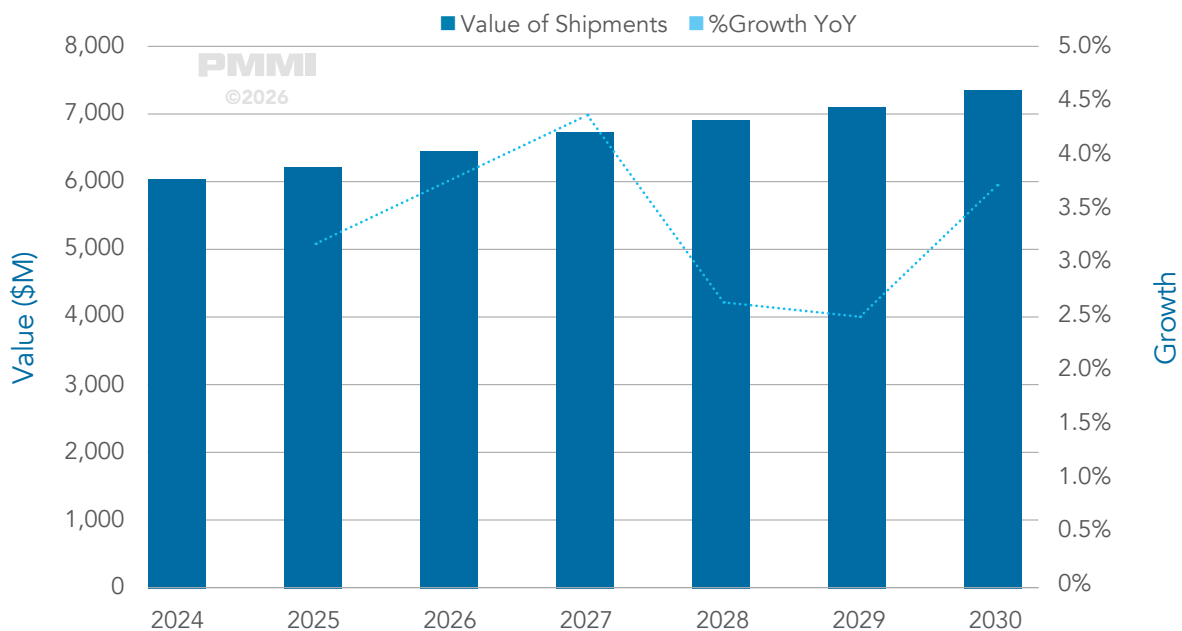
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Executive Summary

SUMMARY OF PROCESSING MACHINERY INDUSTRY

US food & beverage processing machinery market expected to reach \$6.7 bn in 2027.

Fig. 1 US Food & Beverage Processing Machinery Forecast



PMMI/FPSA members can visit <https://www.pmmi.org/content/soti-dashboard> to explore interactive forecast data by machine type, industry, and more

A Year of Waiting

2024 marked the beginning of a slowdown in the food and beverage processing machinery market, following the post-COVID investment peak. Growth softened as customers waited for interest rates to decline and clarity around the US election cycle. As pandemic-era backlogs continued to clear, new order activity slowed noticeably across much of the market.

Entering 2025, expectations improved as interest rates started to ease. However, momentum stalled by April as the introduction, removal, and reintroduction of tariffs created significant uncertainty. The resulting policy whiplash led many customers to delay capital decisions while waiting to see which tariffs would remain in place. As the year progressed, the market gradually adjusted to this volatility, allowing order activity to resume. Overall, 2025 closed with modest growth of 3.2% following the softness seen in 2024.

Looking ahead to 2026, expectations point to moderate, continued growth as US market uncertainty begins to ease after an extended period of disruption. With delayed projects moving forward, industry participants expect order activity to recover further. Growth is expected to peak around 2027 as delayed investment is released, followed by a temporary slowdown in 2028 as the market digests that activity, with added caution around large capital purchases in an election year, before stabilizing toward the end of the decade.

MACRO-ECONOMIC ENVIRONMENT

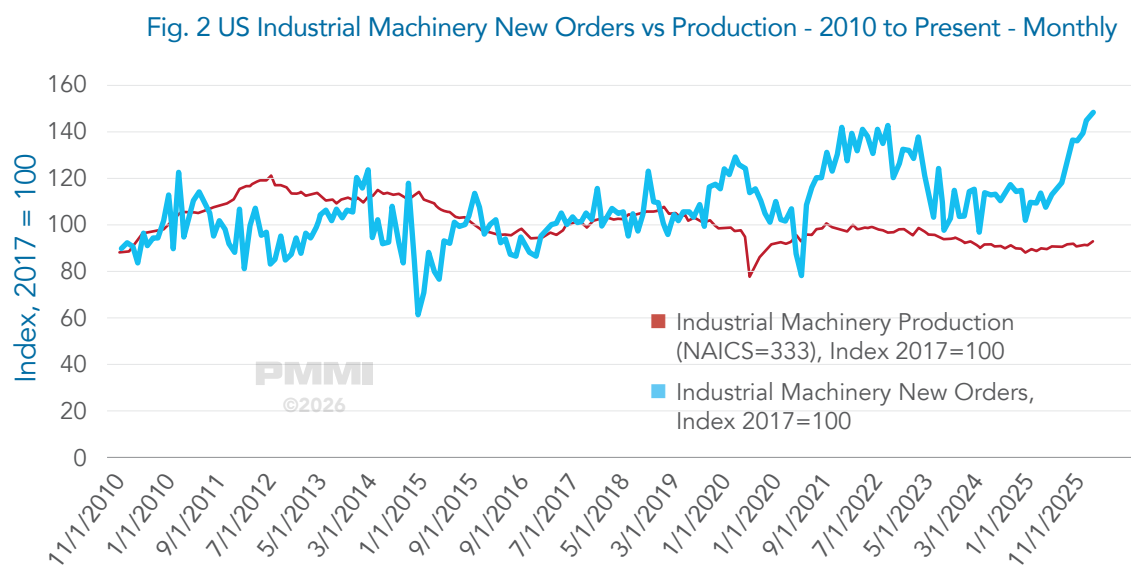
US machinery production remains outpaced by new orders

2025 was a turbulent year for US manufacturing. A new administration brought with it sweeping policy shifts which led to widespread economic policy uncertainty. This, coupled with the Federal Reserve’s reluctance to substantially decrease interest rates amidst inflation fears, led to a lack of expansionary investment by US manufacturers. Instead, many manufacturers are looking to maximize existing capacity and invest in more nimble automation to increase productivity while avoiding large investments into greenfield sites.

The Gap Between Production and New Orders is Widening Again

The graph below demonstrates the current state of US industrial machinery manufacturing. The blue line represents new orders of industrial machinery whereas the red represents the value of industrial machinery production. As you will note, the two series became heavily disconnected following the COVID-19 pandemic and subsequent surge in automation investment.

Since 2020, new orders for industrial machinery have consistently sat above the production value of industrial machinery. This would imply that machine builders have been consistently operating with inflated backlogs as order volume outpaces machine builders’ ability to produce. Historically when new orders outpace production, we see production levels increase to meet the growing demand. Since 2020 however, this has not been the case. A combination of uncertainty, lack of skilled labor, and unfavorable borrowing conditions have stifled expansionary activity from machine builders.



Source: Board of Governors of the Federal Reserve System (US), [IPG333S], and US Census Bureau, Manufacturers’ New Orders: Industrial Machinery Manufacturing [A33ENO], retrieved from FRED, Federal Reserve Bank of St. Louis.

New facility construction is lagging new orders

The graph below demonstrates the current disconnect between new facility builds and new orders. Interact Analysis' Manufacturing Building Stock Tracker dataset tracks the number of facilities built or closed across many manufacturing sectors including food & beverage processing machinery.

The blue bar shows the number of new facilities added to the count of food & beverage manufacturing facilities that year. The black line shows the average annual industrial new orders index for industrial machinery. The purpose of showing this graph is to demonstrate the pent-up need for new manufacturing capacity in the US. While new orders have risen significantly in 2025, we did not see the normal increase you would expect to see in new facility builds.

There are three reasons this is the case:

1

The borrowing environment was unfavorable and there was an expectation in 2025 that interest rates would come down during the year. This led to a holding pattern for manufacturers expansion plans.

2

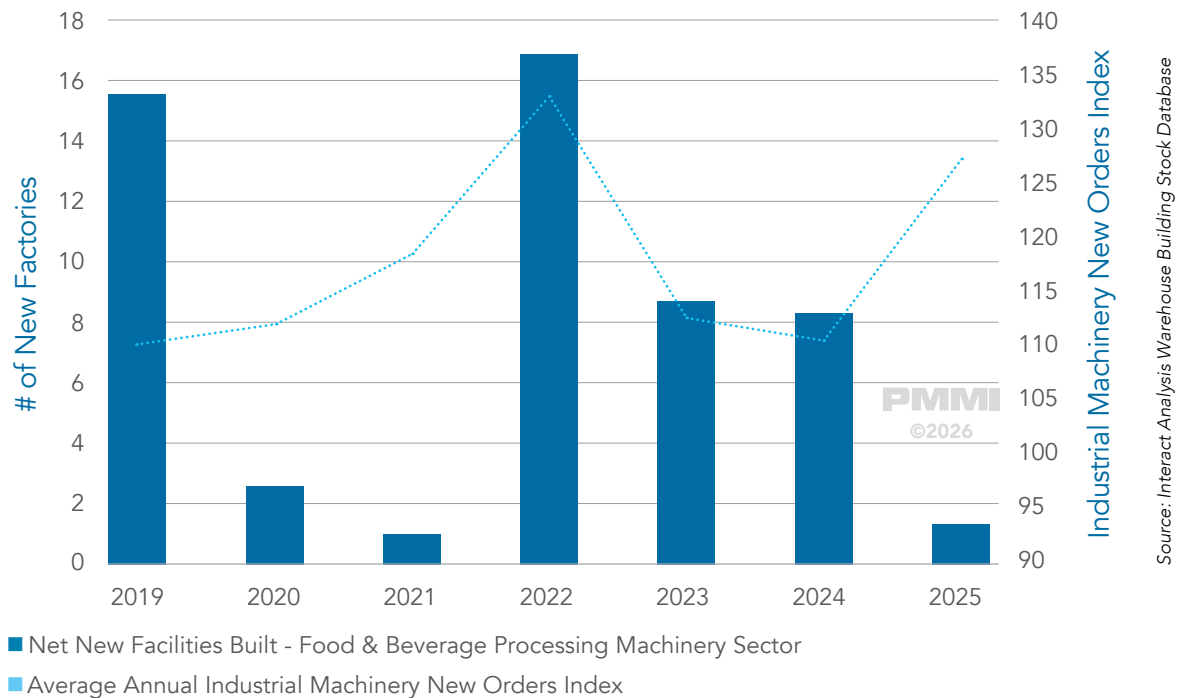
Uncertainty led to a risk-averse mentality surrounding investment timelines.

3

The lack of available skilled labor has created difficulties in staffing new facilities.

This context helps inform our expectation for 2026. As shifting tariff policy has become the new normal, uncertainty has waned. As a result, new orders have risen. While a challenging interest rate environment still exists, it has eased from earlier in the year. As we look to 2026, we can expect growth in new facility construction. However, it is likely that growth will be slightly more muted than what we would expect in a healthier economy.

Fig. 3 Net New Factories vs Industrial Machinery New Orders Index



Our forecast in context

Short Term View

With the context of the macroenvironment in mind, our short-to mid-term forecast becomes clearer. We are expecting growth in food & beverage machinery production in 2026 to be driven largely by rising order backlogs amidst new orders placed at the end of 2025. We expect new orders to continue on their upward trajectory through 2026.

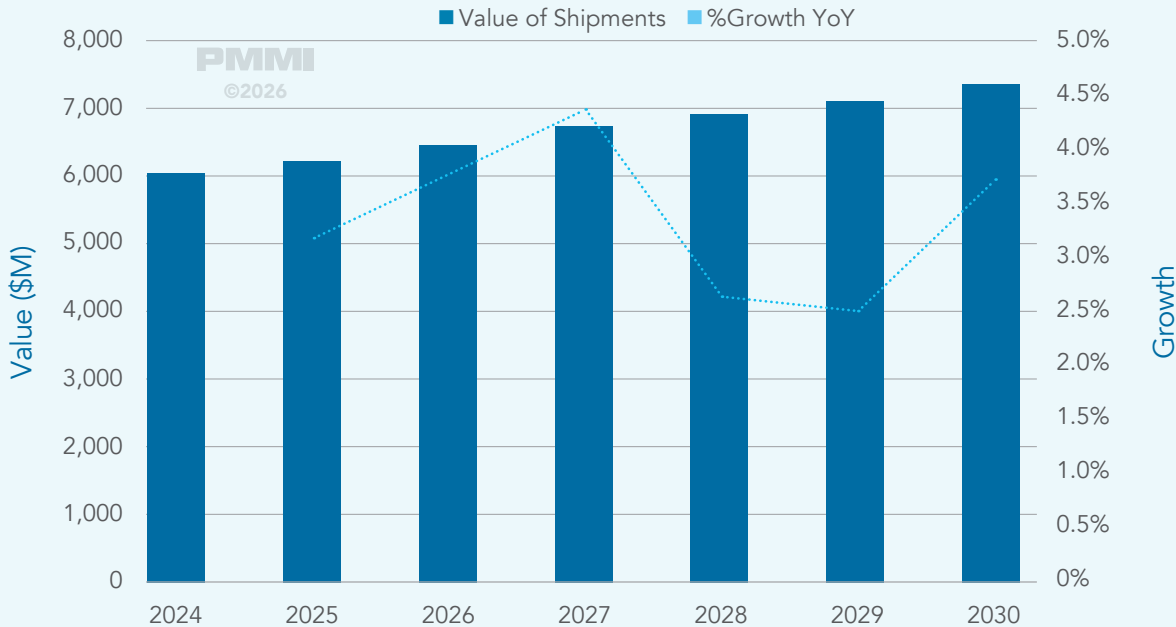
Due to relatively limited expansionary activity compared to rising demand, it is likely that demand will outstrip the industry's ability to produce machines, leading to high order backlogs. In these situations, we typically expect market growth which spreads over a longer period of time. For this reason, we are expecting 2027 to be the peak year of growth in the current market cycle, with 2026 being characterized as a ramp up year.

We are expecting new capacity to come online during 2026 which will support continued growth into 2027 before facing a slight correction in 2028 and 2029, in line with the 3 to 5 year peak to trough cycle this industry typically sees.

Risks to Forecast: Skilled Workforce Availability

While food & beverage machinery is generally viewed as more stable than other machinery sectors, there are structural factors which could tamp down production long term. Touched on throughout this report is the lack of skilled labor for OEMs. This is one of the contributing factors to the disconnect between machine orders and machine production shown earlier. This issue is difficult to overcome and could manifest as slower average growth within the food and beverage machinery space. While we have taken this into account in our forecast, a lack of available labor for machine builders could tamp down growth long term.

Fig. 4 US Food & Beverage Processing Machinery Forecast

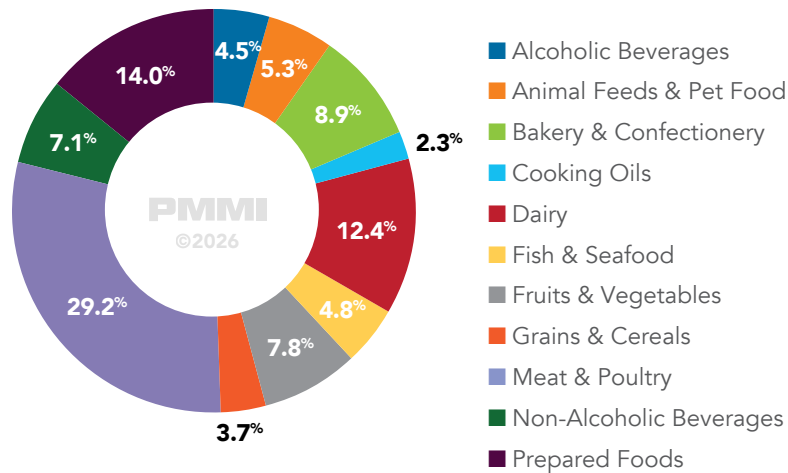


PMMI/FPSA members can visit <https://www.pmmi.org/content/soti-dashboards> to explore interactive forecast data by machine type, industry, and more

MARKET SECTOR OVERVIEW

Industry breakdown

Fig. 5 US Food & Beverage Processing Machinery Value by Industry - 2025 (\$6.2B)



PMMI/FPSA members can visit <https://www.pmmi.org/content/soti-dashboard> to explore interactive forecast data by machine type, industry, and more



Alcoholic Beverages

Alcoholic beverages remains one of the smaller end-markets for food and beverage processing machinery, accounting for approximately 4.5% of total US shipment value in 2025. Growth is expected to remain moderate over the forecast period, with the sector projected to add approximately \$57 million in shipment value by 2030 from 2024. (see Figure 6). While overall demand remains stable, capital spending is increasingly directed toward efficiency upgrades and flexible processing systems, as premium segments soften and product formats continue to diversify.



Animal Feeds & Pet Food

Representing 5.3% of total shipment value in 2025, animal feeds and pet food remains a relatively small but structurally resilient segment. The sector continues to benefit from elevated pet ownership established during the COVID-19 period, alongside sustained investment in premium pet food production. Shipment value is projected to reach approximately \$402 million by 2030, supported by capacity expansion and product differentiation within higher-margin formulations.



Bakery & Confectionery

Just under 9%, in 2025 bakery & confection is seeing capital spending supported by the need for greater versatility and sanitation upgrades. This sector is expected to gain over \$100 million in shipment value from 2024, bringing the sector up to \$641 million by 2030.





Cooking Oils

Cooking oils represent the smallest end market at approximately 2.3% of total shipment value in 2025. The segment is mature and relatively stable, with limited large-scale capacity expansion. Investment levels trail the industry average, with a projected CAGR 2.5% for the 2024 to 2030, and an expected shipment value increase of approximately \$23 million from 2024 to 2030.



Dairy

Representing roughly 12% of total shipment value in 2025 and growing at 4.0% CAGR for 2024-2030, dairy remains one of the stronger mid-to-large segments. Growth is supported by sustained demand for high-protein products as well as a stabilization of milk in the US.



Fish & Seafood

At 4.8% of 2025 shipment value, fish & seafood remains a smaller but consistently active segment. Labor constraints and food-safety requirements are supporting targeted investment in automation, inspection, and yield-protection technologies. We anticipate this market to gain \$67 million from 2024 raising the value of shipments to \$364 million by 2030.



Fruits & Vegetables

Representing approximately 7.8% of 2025 shipment value, fruits & vegetables sits in the middle tier of end markets. Steady growth supported by rising automation demand and consumers preferences for health foods, we anticipate this market to reach an estimated \$547 million by 2030.



Grains & Cereals

Representing 3.7% of shipment value, the grains and cereals sector is expected to have the flattest growth in our forecast. Investment is slowed by the shift in consumer preferences while the grains sector is also impacted by weather patterns in the US. The total value of shipments for this sector is expected to reach \$238 million by 2030.



Meat & Poultry

Meat & poultry remains the largest end-market for food and beverage processing machinery at 29.2% share of US shipment value in 2024. Investment activity is driven by an increased need for automation, as processors contend with tight labor availability and elevated livestock costs. This sector is expected to reach over \$2 billion by 2030, reflecting a CAGR of 3.2% for 2024-2030.



Non-Alcoholic Beverages

Larger than alcoholic beverages, this sector sits at 7.1% of the shipment value of 2025. This sector is anticipated to see growth driven by growing consumer preferences for health-oriented beverages. The total value of shipments for this sector is expected to reach \$514 million by 2030.



Prepared Foods

The second largest sector at 14% represents the fastest-growing segment in our forecast, supported by the complexity and demand for ready-to-eat meals. We anticipate this market to gain \$263 million from 2024 to 2030 raising the value of shipments to over \$1 billion by 2030.

MARKET SECTOR OVERVIEW

Industry forecast

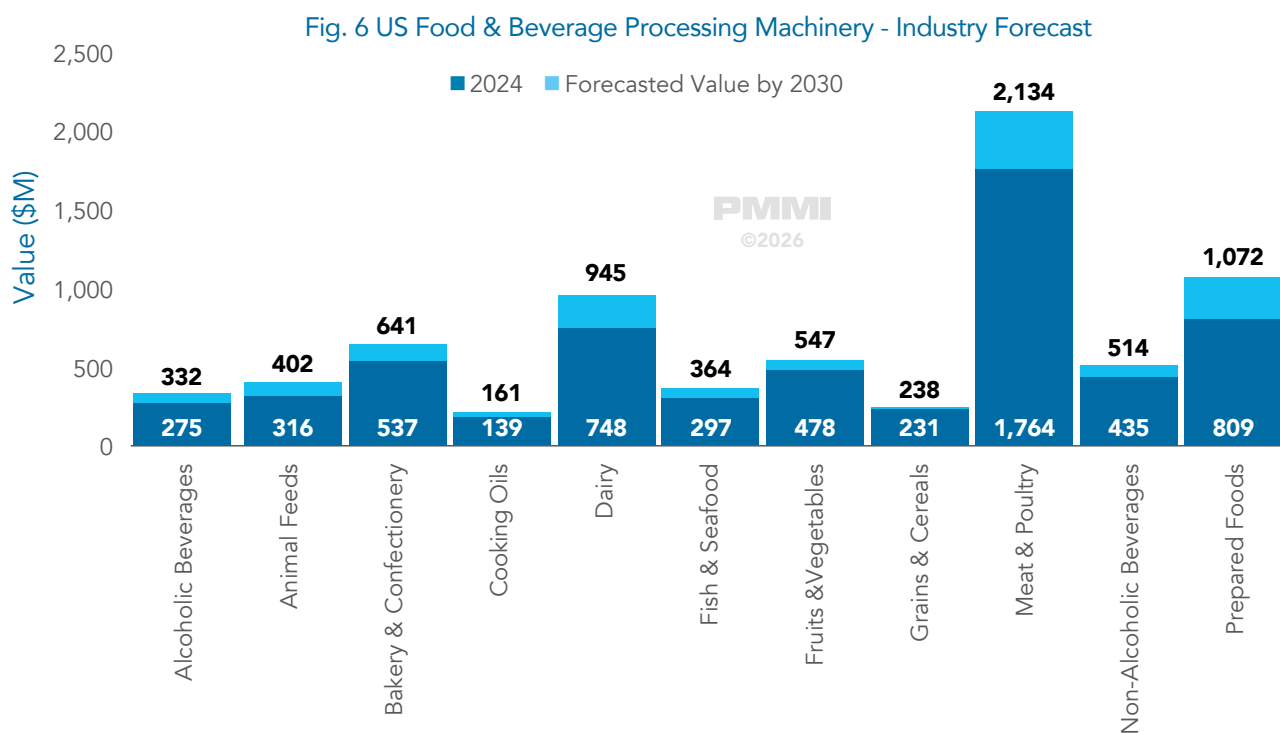


Table 1: US Food & Beverage Processing Machinery Value by End-user Sector (\$M)

	2024	2025	2026	2027	2028	2029	2030	CAGR (2024 - 2030)
Alcoholic Beverages	\$275	\$282	\$289	\$301	\$310	\$320	\$332	3.2%
		2.7%	2.6%	4.2%	2.9%	3.1%	3.7%	
Animal Feeds & Pet Food	\$316	\$329	\$344	\$362	\$373	\$384	\$402	4.1%
		3.9%	4.6%	5.2%	3.0%	3.2%	4.6%	
Bakery & Confectionery	\$537	\$551	\$568	\$587	\$602	\$619	\$641	3.0%
		2.7%	3.1%	3.5%	2.5%	2.8%	3.6%	
Cooking Oils	\$139	\$143	\$146	\$151	\$153	\$156	\$161	2.5%
		2.7%	2.5%	3.2%	1.7%	1.9%	3.2%	
Dairy	\$748	\$773	\$810	\$850	\$870	\$901	\$945	4.0%
		3.3%	4.7%	5.1%	2.3%	3.5%	4.9%	
Fish & Seafood	\$297	\$299	\$307	\$324	\$336	\$347	\$364	3.4%
		0.9%	2.5%	5.6%	3.5%	3.5%	4.7%	

Table 1: US Food & Beverage Processing Machinery Value by End-user Sector (\$M) (continued)

	2024	2025	2026	2027	2028	2029	2030	CAGR (2024 - 2030)
Fruits & Vegetables	\$478	\$486	\$493	\$516	\$525	\$535	\$547	2.3%
		1.7%	1.4%	4.6%	1.7%	1.9%	2.3%	
Grains & Cereals	\$231	\$230	\$230	\$234	\$234	\$235	\$238	0.5%
		-0.7%	0.0%	1.8%	0.2%	0.3%	1.5%	
Meat & Poultry	\$1,764	\$1,815	\$1,912	\$1,994	\$2,028	\$2,066	\$2,134	3.2%
		2.9%	5.3%	4.3%	1.7%	1.9%	3.3%	
Non-Alcoholic Beverages	\$435	\$442	\$457	\$478	\$488	\$498	\$514	2.8%
		1.8%	3.3%	4.6%	2.0%	2.2%	3.2%	
Prepared Foods	\$809	\$870	\$900	\$940	\$996	\$1,027	\$1,072	4.8%
		7.6%	3.5%	4.4%	6.0%	3.0%	4.4%	
Grand total	\$6,029	\$6,220	\$6,456	\$6,737	\$6,914	\$7,088	\$7,350	3.4%
		3.2%	3.8%	4.4%	2.6%	2.5%	3.7%	

PROCESSING EQUIPMENT OVERVIEW

Machinery breakdown

Dry Ingredient Equipment

Projected to reach \$621 million by 2030, dry ingredient equipment is expected to see modest growth throughout our forecast period with a CAGR of 2.8% for the 2024-2030 period.

Forming, Shaping, & Decorating Equipment

Slightly larger than the dry ingredient sector, this area is expected to gain \$143 million by 2030, bringing this sector to an estimated value of \$706 million by 2030.

Inspection Equipment

With one of the highest CAGRs for our forecast period at 4.0%, inspection equipment is projected to grow to \$763 million by 2030. This sector is seeing significant gains driven by rising recall anxiety, allergen control requirements, and the need to verify batch/serial data across more complex product formulations.

Liquid, Paste, & Slurry Processing Equipment

Our smallest sector of our equipment breakdown at an estimated \$379 million in 2025 is expected to grow to an estimated \$457 million by 2030, with a CAGR of 3.7% for 2024-2030. This segment is benefiting from the demand for nut butters, and alternative milks where high-precision comminution and texture control are needed.

Material Handling & Conveyance

This category represents the highest value of equipment shipped in the US for 2025, with an estimated value just over \$1 billion. The sector is projected to grow to \$1.2 billion by 2030. This sector continues to experience strong demand as processors require more sophisticated flow-control capabilities, including variable-speed systems, and multi-lane merging.

Machinery breakdown *(continued)*

Primary Meat Processing Equipment

This category has a CAGR of 2.9% for the 2024–2030 period. It is expected to have a value of \$990 million by 2030. The growth is largely driven by strong poultry growth, and processors prioritizing equipment that increases throughput while maintaining yield under tight profit margins.

Separating, Sorting, & Cutting Equipment

The second-largest category of processing equipment is estimated at \$993 million in 2025. This sector is expected to grow to nearly \$1.2 billion by 2030. This sector is largely being impacted by cyclical replacement patterns and strong growth in prepared and frozen foods, where processors are competing on product quality and consistency.

Specialized Equipment

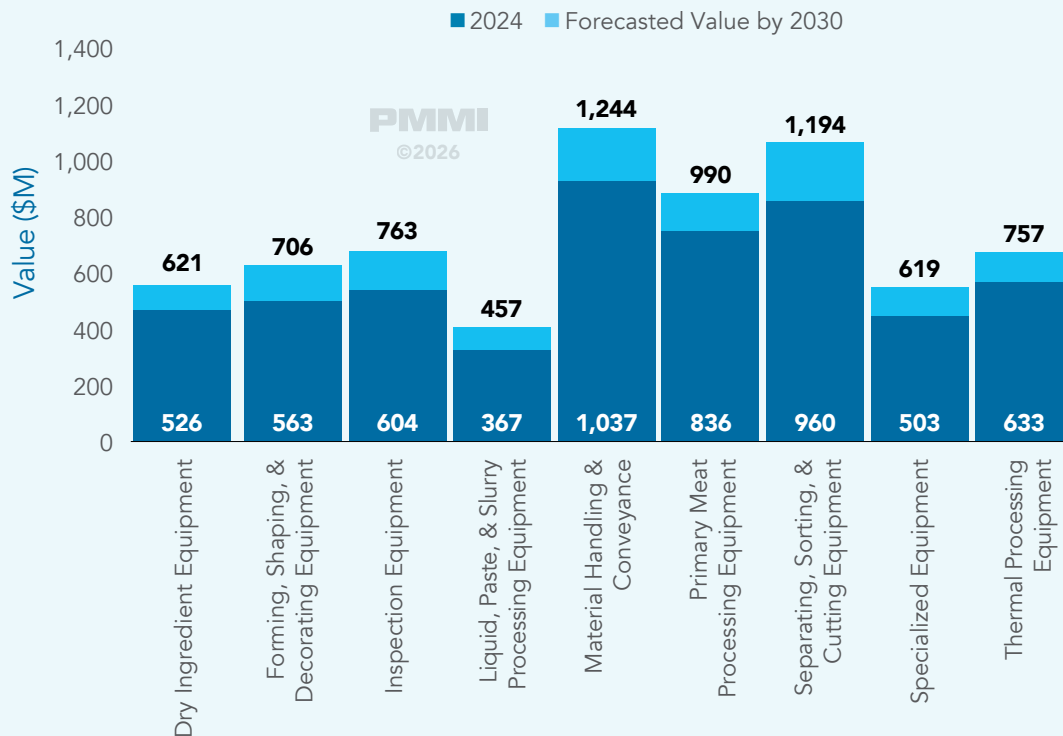
This category is represented by equipment such as retort & sterilization, as well as robotic processing equipment, and is poised to see moderate growth with a CAGR of 3.5% for 2024-2030. This sector is projected to grow to \$619 million by 2030. This sector is seeing influence from automation of repetitive manual tasks, as processors seek labor savings and more consistent throughput.

Thermal Processing Equipment

Projected to reach \$757 million by 2030, thermal processing equipment is expected to see modest growth throughout our forecast period with a CAGR of 3.0% for the 2024-2030 period. This sector is benefiting from diversification and expanded capacity requests.

Forecasted machinery growth

Fig. 7 US Food & Beverage Processing Machinery - Machinery Forecast



PMMI/FPSA members can visit <https://www.pmmi.org/content/soti-dashboards> to explore interactive forecast data by machine type, industry, and more

US MACHINERY FORECAST

Table 2: US Food & Beverage Processing Machinery Value by Equipment Type (\$M)

	2024	2025	2026	2027	2028	2029	2030	CAGR (2024 - 2030)
Dry Ingredient Equipment	\$526	\$542	\$557	\$576	\$590	\$603	\$621	2.8%
		3.0%	2.8%	3.5%	2.4%	2.1%	2.9%	
Forming, Shaping, & Decorating Equipment	\$563	\$582	\$609	\$639	\$657	\$676	\$706	3.8%
		3.4%	4.5%	5.0%	2.8%	2.9%	4.4%	
Inspection Equipment	\$604	\$630	\$657	\$686	\$711	\$735	\$763	4.0%
		4.4%	4.2%	4.5%	3.7%	3.4%	3.8%	
Liquid, Paste, & Slurry Processing Equipment	\$367	\$379	\$394	\$413	\$425	\$438	\$457	3.7%
		3.4%	3.7%	4.9%	3.0%	3.0%	4.3%	
Material Handling & Conveyance	\$1,037	\$1,071	\$1,106	\$1,148	\$1,178	\$1,206	\$1,244	3.1%
		3.2%	3.3%	3.8%	2.6%	2.3%	3.2%	
Primary Meat Processing Equipment	\$836	\$854	\$892	\$929	\$943	\$958	\$990	2.9%
		2.2%	4.4%	4.2%	1.5%	1.6%	3.3%	
Separating, Sorting, & Cutting Equipment	\$960	\$993	\$1,032	\$1,082	\$1,114	\$1,145	\$1,194	3.7%
		3.4%	3.9%	4.9%	3.0%	2.8%	4.2%	
Specialized Equipment	\$503	\$516	\$536	\$564	\$578	\$593	\$619	3.5%
		2.7%	3.8%	5.2%	2.5%	2.6%	4.5%	
Thermal Processing Equipment	\$633	\$652	\$674	\$700	\$717	\$734	\$757	3.0%
		3.1%	3.3%	3.8%	2.5%	2.3%	3.2%	
Grand total	\$6,029	\$6,220	\$6,456	\$6,737	\$6,914	\$7,088	\$7,350	3.4%
		3.2%	3.8%	4.4%	2.6%	2.5%	3.7%	

Source: Interact Analysis

6

Appendix

RISKS ASSOCIATED WITH FORECAST

Tariffs & Uncertainty

Tariff announcements and reversals in 2025 contributed to order delays as buyers paused to assess potential cost impacts. While markets have shown greater resilience to policy headlines over time, renewed escalation from recent legal developments could again disrupt material pricing and capital investment timing. Greater uncertainty could again reduce the willingness to invest in machinery, negatively impacting machinery demand.

Federal Reserve to see new Chairman

Leadership transition at the Federal Reserve in the coming cycle introduces potential variability in policy direction. Although institutional continuity typically moderates abrupt shifts, markets often respond to perceived changes in rate-setting posture. If rate policy changes rapidly, it could materially impact capital equipment demand, thus impacting processing machinery market growth.

First Edition

As the first edition of the food & beverage processing machinery forecast, coverage depth varies across subsegments. Where direct reporting was limited, we incorporated historical data, secondary research, and cross-sector comparisons to reinforce estimates. Future editions will continue to expand data continuity and segment detail.

Thank You for Your Participation

We extend our gratitude to those who participated in the survey for this report. Your responses were instrumental in helping us understand the growth patterns in this market. For those who contributed through interviews, your insights were invaluable. We recognize that your time is valuable, and your willingness to share information about the industry's current state has significantly enhanced the depth and accuracy of this report.

RESEARCH METHODOLOGY

Primary research

Our research relies heavily on primary sources of information. For this report, these sources were as follows:



PMMI & FPSA Membership
Supplier Survey



16 Interviews With Processing
Machinery Suppliers



Attending Processing
Machinery Tradeshows

These sources were used to achieve the following:

- 1 Determine market size for 2024 through a bottom up counting of revenues
- 2 Uncover sentiment relating to growth during 2025/2026
- 3 Understand challenges and opportunities facing packaging machinery suppliers
- 4 Determine relative share of machine types by industry
- 5 Understand long term drivers of growth

Secondary Data Sets Used in Modelling Process:

US Census

The US Census provides robust data on the performance of manufacturing by various industry sectors. This data was relied upon heavily to determine the relative size of end-verticals. It was also used to provide historic perspective for how processing machinery production has performed, and its relationship with machinery production.

Federal Reserve Economic Database (FRED)

Our macroeconomic commentary relies heavily on information provided by the federal reserve. The FRED provides information relating to inflation, interest rates, supply chain pressures, amongst much more. We've utilized these historic datasets to help determine the impact macroeconomic movement has on the sale of processing machinery.

US Bureau of Labor Statistics

We relied on the US Bureau of Labor Statistics for information relating to employment of service

technicians and utilized it to provide context for the workforce shortage discussion.

Processing Machinery Supplier Websites

Websites from public processing machine suppliers are utilized to gain historic perspective of growth and to better understand the drivers of growth. Investor relation reports are utilized heavily for this purpose.

The Manufacturing Industry Output Tracker

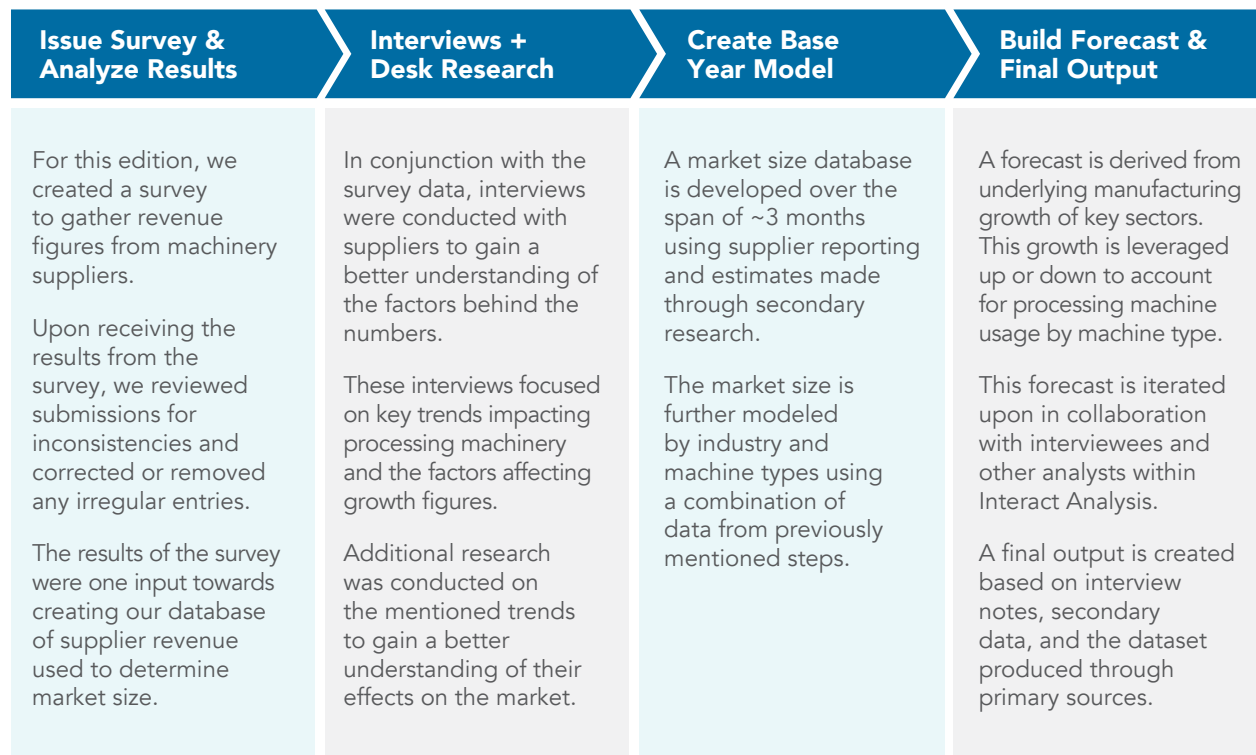
An internal dataset managed by Interact Analysis, the manufacturing industry output tracker looks at growth of manufacturing and machinery production to aid in forecasting the market by industry and machine type.

Survey + in depth interviews

Our methodology follows a multi-phase approach, detailed below. The core of our methodology is our thorough bottom-up analysis of the market. Instead of relying on modeled market sizes, our goal is to produce market sizes based on actual reported figures. As the research progresses, we will take steps to further enable this approach.

In general, the more deeply you delve into a dataset, the more modeling is needed to develop estimates. We are confident in our estimates at the total market, industry, and machine levels. While more granular data was collected at the sub-machine level (Level 3, as defined in the scope), this level of detail is not fully presented in this edition of the report. As a first edition, the focus was on establishing a consistent and reliable market baseline across higher-level segments. As the research progresses and the dataset continues to develop, future editions may incorporate more detailed sub-machine level analysis.

Feedback on our estimates will be sought as part of next year's research process. We view research as a collaborative and evolving process and take explicit steps to ensure that feedback is incorporated into updated reports.

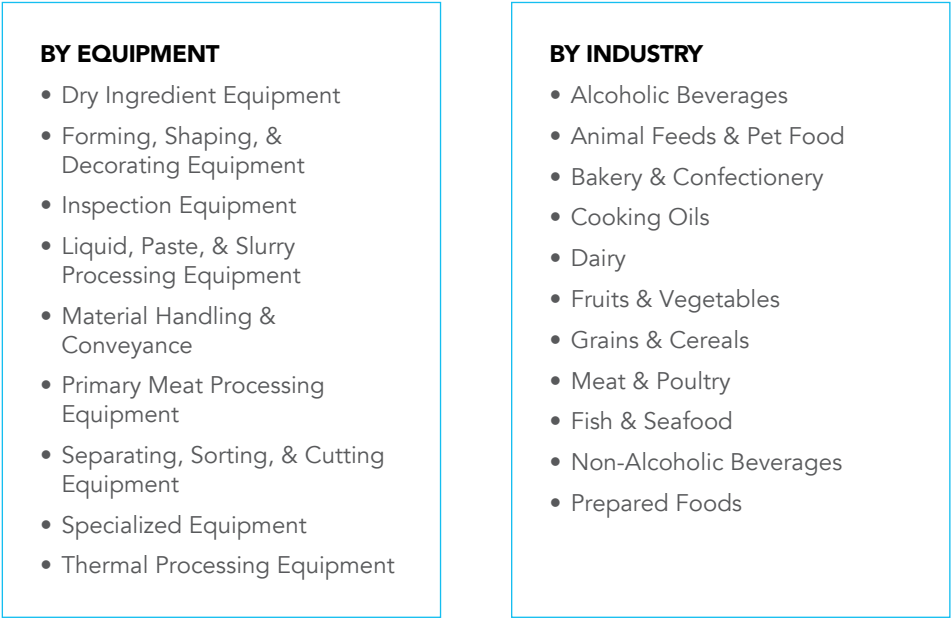


Segmentation for Processing Market Size and Forecasts

Level 1

BY COUNTRY – United States

Level 2



Data is presented in terms of total value of shipments for the calendar year 2024, represented in terms of US dollars.

A forecast for the years 2025 through 2030 is also presented.

All data is presented in terms of shipped machine sales in US dollars.

Segmentation for Processing Market Size and Forecasts



Level 3

Dry Ingredient Equipment

- Dry Product Feeders
- Dumpers & Bulk Unloading
- Dumping Stations
- Milling & Grinding Equipment

Forming, Shaping, & Decorating Equipment

- Forming & Extruding Equipment
- Coating, Enrobing, & Seasoning Machines
- Decorating Machines
- Depositors
- Injectors
- Tumblers
- Vacuum Stuffers

Inspection Equipment

- Metal Detectors
- Vision Inspection Systems
- X-rays

Liquid, Paste, & Slurry Processing Equipment

- Evaporators & Distillation Equipment
- Fermenters & Reactors
- Filtration Equipment
- Homogenizers
- Mixing & Blending Equipment
- Spray Dryers & Agglomerators

Material Handling & Conveyance

- Bulk Handling/Bulk Weighing Equipment
- Processing Conveyors/Conveyance
- Shakers

Primary Meat Processing

- Carcass Chilling Equipment
- Deboning
- Evisceration Equipment
- Skinning

Separating, Sorting, & Cutting Equipment

- Centrifuges & Separators
- Grading & Sorting Equipment
- Magnetic Separators
- Screening & Separating Equipment
- Slicing, Dicing, Cutting & Shredding Equipment
- Wet Grinding Equipment

Specialized Equipment

- High Pressure Processing (HPP)
- Raw Material Preparation Equipment
- Retort & Sterilization
- Robotic Processing Equipment

Thermal Processing Equipment

- Chillers, Freezers & Cooling Equipment
- Fryers
- Pasteurizers
- Heat Exchangers
- Ovens & Dryers

NOTE: This mapping shows which subcategories are aggregated into each equipment.

Data is **NOT** be available at the subcategory level.

Data is available by the equipment types shown in bold.

DEFINITIONS

Industries

Alcoholic Beverages – Breweries, wineries, and distilleries manufacturing beer, wine, and distilled beverages.

Animal Feeds & Pet Food – Manufacturing of livestock feeds, pet food, dog & cat food.

Bakery & Confectionery – Retail/commercial bakeries; confectionery manufacturing from cocoa beans or purchased chocolate.

Cooking Oils – Soybean & oilseed processing; fats and oils refining & blending.

Dairy – Manufacturing of milk, butter, cheese, yogurt, and dry/condensed dairy products.

Fruits & Vegetables – Frozen fruit/vegetables, canning, specialty canning, drying/dehydrating

Grains & Cereals – Flour milling, rice milling, and breakfast cereal manufacturing.

Meat & Poultry – Processing of red meat and poultry products for fresh, frozen, or preserved distribution.

Fish & Seafood – Processing of fish and shellfish products, including fresh, frozen, and preserved forms.

Non-Alcoholic Beverages – Soft drink manufacturing, bottled water, and ice.

Prepared Foods – Perishable prepared foods and other miscellaneous food manufacturing.

Equipment & sub-equipment

Dry Ingredient Equipment – Machinery for handling, measuring, and preparing powders, grains, and other dry raw materials. Includes feeders, milling and grinding equipment, dumping stations, and bulk unloading systems.

Dry Product Feeders – Used to load and feed dry products into another inline machine during food and beverage processes; includes equipment such as screw feeders for nut pieces and biscuit feeders for sandwich cookie production.

Dumpers & Bulk Unloading – Dumpers, tilts and other bulk unloaders used to discharge the contents of a material handling operation into another.

Dumping Stations – Equipment used to empty ingredients such as powders into a hopper during processing.

Milling & Grinding Equipment – Used to grind and mill raw products into fine powders and flours for consumable products; includes granulators and conching machines.

Forming, Shaping, & Decorating Equipment – Processing machinery that transforms raw or semi-processed foods into finished forms or applies coatings and decorations. Includes extruders, depositors, injectors, vacuum stuffers, enrobing and seasoning machines, and decorating equipment.

Forming & Extruding Equipment – Used in food processing to apply heat or other conditions to move food ingredients through plates or dies that create the product's final shape; includes related

equipment such as sheeters, laminators and rounding machines.

Coating, Enrobing, & Seasoning – Machinery used to apply edible coatings, batters, breading, or seasonings to food products. Includes breading and battering systems for meat and seafood, enrobers for chocolate or yogurt coatings, and seasoning systems for snacks, crackers, and nuts.

Decorating Machines – Processing machinery used to apply precise decorative or finishing touches to food products. Common applications include drizzling, striping, or depositing chocolate, icing, or glaze on bakery and confectionery items.

Depositors – Industrial food and beverage processing equipment that places ingredients of various viscosities during formation, or for positioning products for further processing, either continuously or by spot placement.

Injectors – Equipment used to inject brines, marinades, or curing solutions into meat, poultry, or fish.

Tumbling – Rotating drum systems, often operated under vacuum, used to mix, marinate, and tenderize meat, poultry, seafood, and other foods.

Vacuum Stuffers – Machines that use vacuum pressure to remove air pockets and portion ground, emulsified, or semi-solid products into casings, molds, or containers.

Equipment & sub-equipment

Inspection Equipment – Machinery that monitors and verifies product safety, quality, and integrity during processing. Includes X-rays, metal detectors, and vision inspection systems.

Metal Detectors – Equipment that uses electromagnetic fields to identify and reject ferrous and non-ferrous metal contaminants in food or beverage products. Often installed inline during processing or just before packaging to maintain product safety standards.

Vision Inspection Systems – Optical inspection equipment using cameras, lighting, and software to assess product attributes such as size, shape, color, or surface defects. In processing, these systems sort raw materials (e.g., fruits, vegetables, nuts) or check product quality (e.g., chip color, bakery uniformity).

X-rays – Inspection machines that use X-ray imaging to detect foreign objects (such as bone fragments, glass, metal, or dense plastics) in food products during or after processing.

Liquid, Paste, & Slurry Processing Equipment

– Equipment used to process liquid and semi-liquid products in food and beverage applications. Includes mixing and blending systems, homogenizers, fermenters, evaporators, spray dryers, filtration units, and related components.

Evaporators & Distillation Equipment – Food and beverage processing equipment that removes water particles from food to reduce weight, transforms liquids into gases, or separates one liquid from another.

Fermenters & Reactors – Equipment that transforms a culture medium into a food, beverage or other product for human consumption such as yogurt, whiskey, or penicillin; includes batch/tube reactors and related equipment.

Filtration Equipment – Filters, strainers and related systems that are used to separate or strain liquids from micro-sized solids using a variety of substrates during food and beverage processing.

Homogenizers – Machinery that breaks down solid particles in liquids, such as removing fat globules during milk processing.

Mixing & Blending Equipment – Any processing equipment that mixes or blends two or more ingredients for food, beverage or other processing applications.

Spray Dryers & Agglomerators – Processing equipment used to transform liquids into powders (i.e., spray dryers to make milk powder) or accumulate powdered particles into larger elements (i.e., agglomerators for instant coffee processing).

Material Handling & Conveyance – Systems used to move, guide, and stage ingredients and products throughout food and beverage processing operations.

Includes bulk handling and weighing equipment, processing conveyors, and vibratory shakers.

Bulk Handling/Bulk Weighing Equipment – Machines that transfer, transport and/or weigh bulk ingredients such as powders and pellets for food or beverage applications; includes process scales, floor scales, strain gauges and load cells.

Processing Conveyors/Conveyance – Specialized conveying equipment used to transport ingredients and finished products (not packages) through a food processing operation, including cable conveyors for small and fragile ingredients. Other examples include tubular drag/disc, aeromechanical,

Shakers – Vibratory conveyors or platforms used to move, align, and distribute food products during processing.

Primary Meat Processing – Equipment used after slaughter to convert carcasses into prepared cuts. This includes machinery for evisceration, deboning, skinning, and carcass chilling.

Carcass Chilling Equipment – Cooling systems integrated into slaughter lines to rapidly lower carcass temperature after evisceration.

Deboning – Machines that mechanically separate edible meat from bones, cartilage, or tendons in poultry, red meat, or fish processing.

Evisceration Equipment – Automated systems used to remove internal organs from slaughtered animals, including poultry, pork, and beef.

Skinning Equipment – Machines used to remove the outer layer or skin from meat, poultry, or fish products. Skinning systems use mechanical blades, rollers, or vacuum-assisted technology to separate skin or membranes.

Separating, Sorting, & Cutting Equipment

– Machinery used to size, separate, or refine raw and processed food materials. Includes slicers, dicers, shredders, centrifuges, grading systems, magnetic separators, wet grinding equipment, and screening equipment.

Centrifuges & Separators – Food and beverage processing machines that apply centrifugal force or other means to separate solids from liquids or one liquid from another in a vessel.

Grading & Sorting Equipment – Machines that sort food products (i.e., potato chips, carrots) by weight, size, shape, or other specifications; includes related food processing machinery such as aligners, orienters and scalping equipment.

Magnetic Separators – Used in food and beverage production, this equipment separates any ferrous pieces that may have been introduced through processes such as grinding from contaminating a food source.

Screening & Separating Equipment – Processing equipment used to separate products by coarseness, such as sifters for flour equipment or separators for removing clumps in powders.

Slicing, Dicing, Cutting & Shredding Equipment – Food and beverage processing equipment that prepares ingredients into a desired shape using knives, water cutting, laser and ultrasonic methods, including machines such as choppers, shredders, crumblers, crushers, fruit chunkers and fat trimmers.

Wet Grinding Equipment – Processing machines that grind or comminute solid or semi-solid materials within a liquid or moist environment to produce uniform particle sizes or emulsified mixtures. This category includes both colloid mills and meat grinders used to prepare ground, emulsified, or blended products such as sauces, spreads, batters, and processed meats

Specialized Equipment – Machinery designed for unique or high-value food and beverage processing steps. Includes robotic processing systems, raw material preparation equipment, retort and sterilization units, and high-pressure processing (HPP) machines.

High Pressure Processing (HPP) – Enclosed chambers that apply pressure in place of heat to filled and sealed food or beverage containers as a method to inactivate harmful pathogens in products while retaining nutrients and taste profile and increasing shelf life.

Raw Material Preparation Equipment – Food industry equipment used for initial food preparation processes for products, particularly fruits and vegetables, such as washing, peeling, pitting, de-clustering, and destemming.

Retort & Sterilization – A range of thermal processing equipment, typically used for processing in-container, low-acid foods, that uses heat to destroy microorganisms, rendering the product shelf stable. Includes autoclaves and other equipment that use batch, continuous process or sterilization methods.

Robotic Processing Equipment – Robotics systems used exclusively for preparation or assembly of food and beverage ingredients into processed food, such as robotic equipment for deboning, decorating or ingredient placement.

Thermal Processing Equipment – Equipment that applies heating or cooling to transform, preserve, or stabilize products. Includes ovens, fryers, dryers, heat exchangers, pasteurizers, chillers, and freezers.

Fryers – Processing equipment that cooks food by immersing it in hot oil or spraying oil in a continuous system.

Heat Exchangers – Equipment used to regulate temperatures of liquids during food and beverage processing operations, such as pasteurizers and cookers.

Ovens & Dryers – Thermal processing equipment that applies heat and airflow to cook, bake, roast, or dehydrate food products.

Pasteurizers – Equipment designed to heat food and beverage products to controlled temperatures for a specified time to destroy microorganisms and extend shelf life.

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