## MONTHLY FULL REPORT ON MANUFACTURERS' SHIPMENTS, INVENTORIES AND ORDERS DECEMBER 2022

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February 2, 2023 - The U.S. Census Bureau announces the December full report on manufacturers' shipments, inventories and orders:


## Summary

New orders for manufactured goods in December, up four of the last five months, increased $\$ 10.0$ billion or 1.8 percent to $\$ 552.5$ billion, the U.S. Census Bureau reported today. This followed a 1.9 percent November decrease. Shipments, down two consecutive months, decreased $\$ 4.0$ billion or 0.7 percent to $\$ 543.3$ billion. This followed a 0.9 percent November decrease. Unfilled orders, up twenty-eight consecutive months, increased $\$ 14.4$ billion or 1.3 percent to $\$ 1,158.0$ billion. This followed a virtually unchanged November increase. The unfilled orders-to-shipments ratio was 6.07 , up from 6.01 in November. Inventories, up four consecutive months, increased $\$ 3.0$ billion or 0.4 percent to $\$ 807.8$ billion. This followed a virtually unchanged November increase. The inventories-to-shipments ratio was 1.49, up from 1.47 in November.

## New Orders

New orders for manufactured durable goods in December, up four of the last five months, increased \$15.2 billion or 5.6 percent to $\$ 286.6$ billion, unchanged from the previously published increase. This followed a 1.8 percent November decrease. Transportation equipment, also up four of the last five months, drove

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the increase, $\$ 15.6$ billion or 16.9 percent to $\$ 108.0$ billion. New orders for manufactured nondurable goods decreased $\$ 5.2$ billion or 1.9 percent to $\$ 265.9$ billion.

## Shipments

Shipments of manufactured durable goods in December, up nineteen of the last twenty months, increased $\$ 1.2$ billion or 0.4 percent to $\$ 277.4$ billion, down from the previously published 0.5 percent increase. This followed a 0.4 percent November increase. Transportation equipment, up fourteen of the last fifteen months, drove the increase, $\$ 1.5$ billion or 1.6 percent to $\$ 93.7$ billion. Shipments of manufactured nondurable goods, down two consecutive months, decreased $\$ 5.2$ billion or 1.9 percent to $\$ 265.9$ billion. This followed a 2.1 percent November decrease. Petroleum and coal products, also down two consecutive months, drove the decrease, $\$ 5.9$ billion or 9.6 percent to $\$ 55.6$ billion.

## Unfilled Orders

Unfilled orders for manufactured durable goods in December, up twenty-eight consecutive months, increased $\$ 14.4$ billion or 1.3 percent to $\$ 1,158.0$ billion, unchanged from the previously published increase. This followed a virtually unchanged November increase. Transportation equipment, up twentytwo of the last twenty-three months, led the increase, $\$ 14.3$ billion or 2.1 percent to $\$ 684.9$ billion.

## Inventories

Inventories of manufactured durable goods in December, up twenty-three consecutive months, increased $\$ 3.5$ billion or 0.7 percent to $\$ 493.6$ billion, unchanged from the previously published increase. This followed a 0.2 percent November increase. Transportation equipment, up two consecutive months, led the increase, $\$ 1.6$ billion or 1.0 percent to $\$ 158.5$ billion. Inventories of manufactured nondurable goods, down five of the last six months, decreased $\$ 0.5$ billion or 0.2 percent to $\$ 314.2$ billion. This followed a 0.2 percent November decrease. Chemical products, down three consecutive months, led the decrease, \$0.4 billion or 0.4 percent to $\$ 103.8$ billion. By stage of fabrication, December materials and supplies increased 0.6 percent in durable goods and 0.1 percent in nondurable goods. Work in process increased 1.4 percent in durable goods and decreased 0.1 percent in nondurable goods. Finished goods were virtually unchanged in durable goods and decreased 0.3 percent in nondurable goods.

The Advance Report on durable goods for January is scheduled for release on February 27, 2023, at 8:30 a.m. EST and the Full Report on March 6, 2023, at 10:00 a.m. EST. View the full schedule in the Economic Briefing Room: <www.census.gov/economic-indicators/>. The full text and tables of this release can be found at <www.census.gov/m3>.
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## EXPLANATORY NOTES

Figures in text are adjusted for seasonality, but not for inflation. Figures on new and unfilled orders exclude data for semiconductor manufacturing.
"Virtually unchanged" indicates that the change is less than 0.05 percent for a percent increase or decrease.

## Description of the survey

This report is compiled from results of the U.S. Census Bureau's Manufacturers' Shipments, Inventories, and Orders (M3) survey, which is a voluntary survey authorized by Title 13 of the United States Code. This survey provides statistics on a calendar-month basis for manufacturers' value of shipments, new orders (net of cancellations), end-of-month order backlog (unfilled orders), end-of-month total inventory (at current cost or market value), and inventories by stage of fabrication (materials and supplies, work-inprocess, and finished goods). Data published from the M3 survey are based on a panel of approximately 5,000 reporting units that represent approximately 3,100 companies and provide an indication of month-to-month change for the Manufacturing Sector. These reporting units may be divisions of diversified large companies, large homogenous companies, or single-unit manufacturers in 92 industry categories, which are combined into 65 publication levels due to the small monthly panel size. The survey methodology assumes that the month-to-month changes of the total operations of the reporting units in the M3 panel effectively represent the month-to-month movements of all establishments that make up the category. The companies for which shipments data are currently reported or imputed in the M3 survey represent approximately 60 percent of the total value of shipments for manufacturing establishments in the 2017 Economic Census, and these companies include roughly 61 percent of the manufacturing companies with $\$ 500$ million or more in shipments in the 2017 Economic Census. The companies for which shipments data are currently reported in the M3 survey represent approximately 51 percent of the total value of shipments for manufacturing establishments in the 2017 Economic Census. Statistics based on the M3 panel differ from the results that would be obtained from a complete enumeration of all manufacturing companies. The M3 panel is not based on a probability sample; therefore, the sampling errors that are normally provided with sample surveys cannot be measured. Nonsampling errors are attributable to many sources. The use of company or divisional reports to estimate the monthly change for establishments is one source of nonsampling error. The use of primarily large companies to represent the month-to-month movement of all companies is another potential source. Any corrections will be published in the full report. Corrections received after the full report will be released in the next month's advance report.

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Any revisions made later than two months will be reflected in the annual benchmark publication.
Additional survey documentation can be found on our web site:
<www.census.gov/manufacturing/m3/how the data are collected/index.html>.

## Benchmark notice

Revised historical data from the Manufacturers' Shipments, Inventories, and Orders (M3) Survey will be issued on May 12, 2023. These revisions result from

- Benchmarking the M3 shipments and inventories data to the 2021 and 2020 Annual Survey of Manufactures (ASM) data;
- Incorporating the unfilled orders to shipments ratios obtained for 2021, 2020, and 2019 from the Manufacturers' Unfilled Orders (M3UFO) Survey;
- Adjusting the new orders data to be consistent with the benchmarked shipments and unfilled orders data;
- Correcting monthly data for late receipts, reclassifications of reported data, and revisions to previously reported data;
- Updating the seasonally adjusted data based on the results of benchmarking and the recent annual review of the seasonal adjustment models.

These revisions will span the seasonally adjusted data for January 2012 through March 2023 and the data not seasonally adjusted for January 2017 through March 2023. An updated Press Release will contain revised monthly tables for January 2023 through March 2023.

## RESOURCES

API
The Census Bureau's application programming interface (API) lets developers create custom apps to reach new users and makes key demographic, socio-economic and housing statistics more accessible than ever before.
<www.census.gov/developers/>.

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## FRED Mobile App

Receive the latest updates on the nation's key economic indicators by downloading FRED the FRED App [https://fred.stlouisfed.org/fred-mobile/](https://fred.stlouisfed.org/fred-mobile/) for both Apple and Android devices. FRED, the signature database of the Federal Reserve Bank of St. Louis, now incorporates the Census Bureau's 13 economic indicators.

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Table 1. Value of Manufacturers' Shipments for Industry Groups ${ }^{1}$
[Estimates are shown in millions of dollars and are based on data from the Manufacturers' Shipments, Inventories, and Orders Survey.]

| Industry | Seasonally Adjusted |  |  |  |  |  | Not Seasonally Adjusted |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Monthly |  |  | Percent Change |  |  | Monthly |  |  |  | Year to date |  |  |
|  | $\begin{gathered} \text { Dec. } \\ 2022^{p} \end{gathered}$ | $\begin{aligned} & \text { Nov. } \\ & 2022^{2} \end{aligned}$ | $\begin{aligned} & \text { Oct. } \\ & 2022 \end{aligned}$ | Nov. Dec. | Oct. - <br> Nov. | $\begin{aligned} & \text { Sep. - } \\ & \text { Oct. } \end{aligned}$ | $\begin{gathered} \text { Dec. } \\ 2022^{p} \end{gathered}$ | $\begin{aligned} & \text { Nov. } \\ & 2022^{r} \end{aligned}$ | $\begin{aligned} & \text { Oct. } \\ & 2022 \end{aligned}$ | $\begin{aligned} & \text { Dec. } \\ & 2021 \end{aligned}$ | $2022^{\text {p }}$ | 2021 | \% Change 2022/ <br> 2021 |
| All manufacturing industries................ | 543,320 | 547,319 | 552,057 | -0.7 | -0.9 | 0.2 | 536,179 | 535,565 | 559,121 | 507,124 | 6,486,443 | 5,797,752 | 11.9 |
| Excluding transportation.................. | 449,589 | 455,081 | 460,963 | -1.2 | -1.3 | 0.2 | 437,853 | 443,529 | 468,264 | 424,408 | 5,441,709 | 4,889,907 | 11.3 |
| Excluding defense......................... | 526,138 | 530,721 | 535,587 | -0.9 | -0.9 | 0.2 | 517,070 | 517,923 | 542,872 | 490,138 | 6,291,305 | 5,615,420 | 12.0 |
| With unfilled orders....................... | 190,727 | 190,194 | 189,542 | 0.3 | 0.3 | 0.5 | 194,303 | 183,868 | 188,294 | 180,204 | 2,231,469 | 2,012,565 | 10.9 |
| Durable goods industries..................... | 277,418 | 276,262 | 275,285 | 0.4 | 0.4 | 0.3 | 279,117 | 268,364 | 276,871 | 258,935 | 3,235,204 | 2,923,246 | 10.7 |
| Wood products.. | 12,722 | 12,803 | 12,703 | -0.6 | 0.8 | -0.8 | 11,057 | 11,865 | 13,086 | 11,306 | 154,387 | 147,654 | 4.6 |
| Nonmetallic mineral products................... | 12,522 | 12,443 | 12,557 | 0.6 | -0.9 | -0.1 | 10,917 | 12,070 | 13,301 | 11,002 | 149,776 | 140,172 | 6.9 |
| Primary metals.............................. | 19,918 | 20,015 | 20,251 | -0.5 | -1.2 | -0.4 | 18,101 | 18,664 | 19,988 | 18,745 | 246,282 | 225,207 | 9.4 |
| Iron and steel mills..................... | 11,834 | 11,816 | 11,980 | 0.2 | -1.4 | -1.0 | 10,650 | 10,978 | 11,865 | 10,549 | 143,801 | 126,810 | 13.4 |
| Aluminum and nonferrous metals...... | 6,592 | 6,714 | 6,763 | -1.8 | -0.7 | 0.5 | 6,141 | 6,318 | 6,628 | 6,889 | 84,698 | 82,341 | 2.9 |
| Ferrous metal foundries................... | 1,492 | 1,485 | 1,508 | 0.5 | -1.5 | 0.3 | 1,310 | 1,368 | 1,495 | 1,307 | 17,783 | 16,056 | 10.8 |
| Fabricated metal products................... | 36,498 | 36,441 | 36,544 | 0.2 | -0.3 | -0.4 | 33,791 | 34,911 | 37,540 | 33,671 | 439,058 | 399,765 | 9.8 |
| Machinery................................. | 38,222 | 38,631 | 38,825 | -1.1 | -0.5 | 1.4 | 39,015 | 35,562 | 38,376 | 37,487 | 452,155 | 403,850 | 12.0 |
| Farm machinery............................ | 2,124 | 2,381 | 2,403 | -10.8 | -0.9 | -4.3 | 1,856 | 1,829 | 2,331 | 2,554 | 30,798 | 31,082 | -0.9 |
| Construction machinery................... | 3,946 | 3,987 | 3,966 | -1.0 | 0.5 | 2.7 | 3,664 | 3,585 | 3,973 | 2,969 | 43,651 | 34,567 | 26.3 |
| Mining, oil field, and gas field machinery | 1,576 | 1,487 | 1,577 | 6.0 | -5.7 | 3.2 | 1,787 | 1,477 | 1,609 | 1,519 | 17,780 | 15,445 | 15.1 |
| Industrial machinery..................... | 5,881 | 6,061 | 6,321 | -3.0 | -4.1 | 1.8 | 6,937 | 5,467 | 6,422 | 7,256 | 74,378 | 58,737 | 26.6 |
| Photographic equipment.................. | 543 | 517 | 522 | 5.0 | -1.0 | 3.8 | 612 | 522 | 469 | 566 | 6,258 | 6,254 | 0.1 |
| Ventilation, heating, air-conditioning, and refrigeration equipment.......... | 4,826 | 4,820 | 4,756 | 0.1 | 1.3 | 0.1 | 4,485 | 4,222 | 4,456 | 4,153 | 55,882 | 49,771 | 12.3 |
| Metalworking machinery................. | 2,668 | 2,769 | 2,624 | -3.6 | 5.5 | 2.5 | 2,979 | 2,721 | 2,672 | 2,908 | 31,548 | 30,926 | 2.0 |
| Turbines, generators, and other power transmission equipment....... | 3,516 | 3,419 | 3,511 | 2.8 | -2.6 | 2.1 | 3,359 | 3,422 | 3,604 | 3,035 | 39,693 | 38,441 | 3.3 |
| Material handling equipment............. | 3,565 | 3,606 | 3,595 | -1.1 | 0.3 | 4.0 | 3,726 | 3,467 | 3,542 | 3,307 | 41,612 | 33,993 | 22.4 |
| Computers and electronic products ${ }^{2}$......... | 29,551 | 29,592 | 29,552 | -0.1 | 0.1 | 0.6 | 32,769 | 29,830 | 29,715 | 30,791 | 347,148 | 325,376 | 6.7 |
| Computers............................. | 720 | 735 | 732 | -2.0 | 0.4 | -0.4 | 837 | 697 | 761 | 815 | 8,855 | 8,797 | 0.7 |
| Computer storage devices.................. | 637 | 650 | 664 | -2.0 | -2.1 | 1.1 | 831 | 621 | 628 | 779 | 7,703 | 6,834 | 12.7 |
| Other peripheral equipment.............. | 892 | 901 | 874 | -1.0 | 3.1 | 12.3 | 1,134 | 859 | 882 | 579 | 8,039 | 5,312 | 51.3 |
| Nondefense communications equipment. | 3,002 | 3,006 | 3,053 | -0.1 | -1.5 | 0.8 | 4,076 | 2,695 | 2,711 | 3,955 | 36,374 | 33,538 | 8.5 |
| Defense communications equipment.... | 216 | 214 | 214 | 0.9 | 0.0 | 1.4 | 217 | 238 | 213 | 199 | 2,546 | 2,390 | 6.5 |
| Audio and video equipment.................. | 340 | 366 | 357 | -7.1 | 2.5 | -3.8 | 393 | 539 | 447 | 489 | 4,567 | 3,967 | 15.1 |
| Electronic components...................... | 4,579 | 4,651 | 4,602 | -1.5 | 1.1 | 0.3 | 4,625 | 4,524 | 4,458 | 4,359 | 54,541 | 48,362 | 12.8 |
| Nondefense search and navigation equipment. $\qquad$ | ,671 | , 79 | 1,666 | -0.5 | 0.8 | 1.5 | 821 | , 87 | ,616 | 1,793 | 19,758 | 19,389 | 1.9 |
| Defense search and navigation equipment. $\qquad$ | , 41 | 286 | 3,277 | 1.7 | 0.3 | 0.3 | 3,646 | 3,475 | 3,318 | 3,492 | 38,853 | 38,312 | 1.4 |
| Electromedical, measuring, and control instruments. | 789 | 8,848 | 5 | -0.7 | . 3 | 0.5 | 0,298 | 8,601 | 3,753 | 9,95 | 105,015 | 100,201 | 4.8 |
| Electrical equipment, appliances, |  |  |  |  |  |  |  |  |  |  |  |  |  |
| and components........................... | 13,717 | 13,732 | 13,478 | -0.1 | 1.9 | 0.1 | 13,551 | 13,211 | 13,494 | 12,769 | 159,692 | 144,985 | 10.1 |
| Electric lighting equipment................... | 1,067 | 1,061 | 1,046 | 0.6 | 1.4 | -0.2 | 1,052 | 1,039 | 1,082 | 1,008 | 12,470 | 12,133 | 2.8 |
| Household appliances.................... | 2,687 | 2,661 | 2,752 | 1.0 | -3.3 | -0.1 | 2,898 | 2,643 | 2,729 | 2,967 | 32,233 | 30,628 | 5.2 |
| Electrical equipment....................... | 4,019 | 4,094 | 3,839 | -1.8 | 6.6 | -0.9 | 3,973 | 3,763 | 3,618 | 3,605 | 45,447 | 42,020 | 8.2 |
| Batteries................................. | 1,157 | 1,100 | 996 | 5.2 | 10.4 | 4.2 | 1,212 | 1,211 | 1,119 | 918 | 11,885 | 10,125 | 17.4 |
| Transportation equipment..................... | 93,731 | 92,238 | 91,094 | 1.6 | 1.3 | 0.6 | 98,326 | 92,036 | 90,857 | 82,716 | 1,044,734 | 907,845 | 15.1 |
| Automobiles............................ | 7,530 | 7,667 | 7,850 | -1.8 | -2.3 | -2.3 | 7,578 | 7,971 | 8,124 | 7,264 | 90,950 | 80,844 | 12.5 |
| Light trucks and utility vehicles............ | 24,680 | 24,030 | 23,970 | 2.7 | 0.3 | 0.8 | 25,704 | 23,825 | 24,549 | 21,604 | 271,382 | 229,317 | 18.3 |
| Heavy duty trucks ......................... | , 802 | 2,730 | 2,669 | 2.6 | 2.3 | 2.4 | 2,552 | 2,650 | 2,783 | 1,979 | 29,288 | 23,479 | 24.7 |
| Motor vehicle bodies, parts, and trailers. $\qquad$ | 27,353 | 27,393 | 27,332 | -0.1 | 0.2 | 0.0 | 24,371 | 26,595 | 27,986 | 23,175 | 321,378 | 289,704 | 10.9 |
| Nondefense aircraft and parts............ | 14,541 | 14,088 | 13,133 | 3.2 | 7.3 | 2.2 | 19,752 | 13,948 | 11,533 | 12,651 | 141,952 | 112,706 | 25.9 |
| Defense aircraft and parts............... | 5,666 | 5,425 | 5,384 | 4.4 | 0.8 | -0.3 | 6,194 | 5,793 | 5,383 | 5,687 | 64,782 | 63,834 | 1.5 |
| Ships and boats.......................... | 3,684 | 3,597 | 3,572 | 2.4 | 0.7 | 6.2 | 3,649 | 3,661 | 3,568 | 3,556 | 42,256 | 42,232 | 0.1 |
| Furniture and related products..... | 6,258 | 6,243 | 6,257 | 0.2 | -0.2 | 0.2 | 6,142 | 6,171 | 6,347 | 5,720 | 74,141 | 69,427 | 6.8 |
| Miscellaneous durable goods............... | 14,279 | 14,124 | 14,024 | 1.1 | 0.7 | 0.3 | 15,448 | 14,044 | 14,167 | 14,728 | 167,831 | 158,965 | 5.6 |
| Nondurable goods industries... | 265,902 | 271,057 | 276,772 | -1.9 | -2.1 | 0.1 | 257,062 | 267,201 | 282,250 | 248,189 | 3,251,239 | 2,874,506 | 13.1 |
| Food products.............................. | 75,990 | 75,922 | 75,961 | 0.1 | -0.1 | 0.1 | 75,221 | 77,574 | 78,743 | 72,289 | 907,139 | 866,392 | 4.7 |
| Grain and oilseed milling.................... | 9,348 | 9,186 | 9,296 | 1.8 | -1.2 | 0.2 | 9,044 | 9,289 | 9,513 | 8,247 | 109,187 | 97,972 | 11.4 |
| Dairy products........................... | 12,019 | 11,921 | 11,876 | 0.8 | 0.4 | 0.0 | 12,035 | 12,273 | 12,141 | 11,115 | 142,157 | 132,368 | 7.4 |
| Meat, poultry, and seafood products... | 22,530 | 22,644 | 22,774 | -0.5 | -0.6 | -0.2 | 21,914 | 22,592 | 23,015 | 21,533 | 272,960 | 261,017 | 4.6 |
| Beverage and tobacco products.............. | 17,349 | 16,864 | 16,753 | 2.9 | 0.7 | -1.0 | 17,075 | 16,713 | 16,902 | 14,777 | 194,868 | 168,671 | 15.5 |
| Beverages................................ | 10,401 | 10,273 | 10,281 | 1.2 | -0.1 | 1.6 | 10,127 | 10,122 | 10,430 | 9,471 | 120,039 | 113,349 | 5.9 |
| Tobacco................................... | 6,948 | 6,591 | 6,472 | 5.4 | 1.8 | -4.8 | 6,948 | 6,591 | 6,472 | 5,306 | 74,829 | 55,322 | 35.3 |
| Textile mills................................ | 2,221 | 2,232 | 2,282 | -0.5 | -2.2 | -1.6 | 1,972 | 2,104 | 2,340 | 2,071 | 27,545 | 26,983 | 2.1 |
| Textile products............................. | 1,949 | 1,925 | 1,943 | 1.2 | -0.9 | -2.8 | 1,773 | 1,826 | 1,978 | 1,781 | 23,722 | 22,922 | 3.5 |
| Apparel.................................... | 803 | 782 | 757 | 2.7 | 3.3 | 2.7 | 842 | 882 | 856 | 758 | 8,953 | 8,584 | 4.3 |
| Leather and allied products.................... | 499 | 492 | 475 | 1.4 | 3.6 | 2.8 | 476 | 463 | 472 | 386 | 5,350 | 4,699 | 13.9 |
| Paper products........................... | 16,343 | 16,282 | 16,211 | 0.4 | 0.4 | 0.0 | 15,789 | 15,793 | 16,436 | 15,943 | 195,450 | 189,708 | 3.0 |
| Pulp, paper, and paperboard mills....... | 6,046 | 6,006 | 5,862 | 0.7 | 2.5 | 1.1 | 5,914 | 5,853 | 5,925 | 5,777 | 70,918 | 68,329 | 3.8 |
| Paperboard containers.................... | 5,888 | 5,908 | 5,989 | -0.3 | -1.4 | -0.2 | 5,478 | 5,716 | 6,104 | 5,738 | 71,912 | 70,576 | 1.9 |
| Printing...................................... | 7,057 | 7,005 | 7,042 | 0.7 | -0.5 | 0.2 | 6,973 | 7,118 | 7,488 | 6,499 | 82,353 | 74,930 | 9.9 |
| Petroleum and coal products............... | 55,557 | 61,479 | 66,900 | -9.6 | -8.1 | 1.1 | 50,451 | 58,611 | 69,192 | 47,116 | 747,635 | 516,019 | 44.9 |
| Petroleum refineries...................... | 50,106 | 56,007 | 61,431 | -10.5 | -8.8 | 1.0 | 45,842 | 53,387 | 63,290 | 42,839 | 685,052 | 460,649 | 48.7 |
| Chemical products............................ | 65,898 | 65,866 | 66,255 | 0.0 | -0.6 | -0.4 | 65,964 | 64,969 | 65,300 | 66,061 | 791,475 | 746,836 | 6.0 |
| Pesticides, fertilizers, and other agricultural chemicals. | 3,263 | 3,344 | 3,528 | -2.4 | -5.2 | 4.8 | 3,303 | 3,018 | 2,913 | 3,351 | 38,951 | 35,114 | 10.9 |
| Pharmaceuticals and medicines........... | 23,240 | 22,762 | 22,521 | 2.1 | 1.1 | 0.2 | 23,898 | 23,457 | 22,537 | 21,627 | 262,569 | 238,850 | 9.9 |
| Paints, coatings, and adhesives......... | 3,828 | 3,798 | 3,822 | 0.8 | -0.6 | 1.0 | 3,259 | 3,445 | 3,764 | 3,320 | 45,409 | 43,220 | 5.1 |
| Plastics and rubber products................ | 22,236 | 22,208 | 22,193 | 0.1 | 0.1 | -0.1 | 20,526 | 21,148 | 22,543 | 20,508 | 266,749 | 248,762 | 7.2 |

## Preliminary

Revised data due to late receipts and concurrent seasonal adjustment.
Estimates of shipments and new orders are for the duration of the period, while estimates of unfilled orders and total inventories are for the end of the period. Not seasonally adjusted estimates of shipments and new orders include adjusted data for non-calendar reporters. Seasonally adjusted estimates in
model parameters. Estimates are not adjusted for price changes.
${ }^{2}$ Estimates and percent changes of shipments for the semiconductor industry are included in computers and electronic products, and all other applicable aggregate totals.
Note: Estimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey error is nonsamping error, which includes errors of coverage, response, and nonreporting. Since the ,
<www.census.gov/manufacturing/m3/how_the_data_are_collected/index.html>.

Table 2. Value of Manufacturers' New Orders for Industry Groups ${ }^{1}$
[Estimates are shown in millions of dollars and are based on data from the Manufacturers' Shipments, Inventories, and Orders Survey.]

| Industry | Seasonally Adjusted |  |  |  |  |  | Not Seasonally Adjusted |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Monthly |  |  | Percent Change |  |  | Monthly |  |  |  | Year to date |  |  |
|  | $\begin{gathered} \text { Dec. } \\ 2022^{p} \end{gathered}$ | $\begin{aligned} & \text { Nov. } \\ & 2022^{r} \end{aligned}$ | $\begin{aligned} & \text { Oct. } \\ & 2022 \end{aligned}$ | $\begin{aligned} & \text { Nov. - } \\ & \text { Dec. } \end{aligned}$ | Oct. - <br> Nov. | $\begin{aligned} & \text { Sep. - } \\ & \text { Oct. } \end{aligned}$ | $\begin{gathered} \text { Dec. } \\ 2022^{p} \end{gathered}$ | $\begin{aligned} & \text { Nov. } \\ & 2022^{r} \end{aligned}$ | $\begin{aligned} & \text { Oct. } \\ & 2022 \end{aligned}$ | $\begin{aligned} & \text { Dec. } \\ & 2021 \end{aligned}$ | $2022^{\text {p }}$ | 2021 | $\begin{aligned} & \hline \text { \% Change } \\ & 2022 / \\ & 2021 \end{aligned}$ |
| All manufacturing industries ${ }^{2}$. | 552,484 | 542,460 | 553,138 | 1.8 | -1.9 | 0.4 | 553,886 | 526,807 | 555,370 | 515,666 | 6,504,992 | 5,818,472 | 11.8 |
| Excluding transportation ${ }^{2}$.................. | 444,455 | 450,031 | 455,686 | -1.2 | -1.2 | 0.1 | 432,085 | 436,253 | 460,219 | 422,913 | 5,391,199 | 4,887,733 | 10.3 |
| Excluding defense ${ }^{2}$......................... | 535,238 | 524,602 | 536,370 | 2.0 | -2.2 | 0.2 | 529,592 | 509,248 | 540,809 | 494,842 | 6,304,073 | 5,637,400 | 11.8 |
| With unfilled orders ${ }^{2} . . . . . . . . . . . . . . . . . . . . . . . . ~$ | 205,173 | 190,510 | 195,690 | 7.7 | -2.6 | 1.0 | 216,820 | 180,921 | 190,381 | 193,041 | 2,309,942 | 2,090,583 | 10.5 |
| Durable goods industries ${ }^{2}$..................... | 286,582 | 271,403 | 276,366 | 5.6 | -1.8 | 0.7 | 296,824 | 259,606 | 273,120 | 267,477 | 3,253,753 | 2,943,966 | 10.5 |
| Primary metals............................... | 19,964 | 20,059 | 20,125 | -0.5 | -0.3 | -0.6 | 18,389 | 18,805 | 19,681 | 19,111 | 246,103 | 229,095 | 7.4 |
| Iron and steel mills........................ | 11,959 | 11,884 | 11,975 | 0.6 | -0.8 | -1.4 | 10,846 | 11,015 | 11,587 | 10,449 | 143,980 | 128,400 | 12.1 |
| Aluminum and nonferrous metals....... | 6,510 | 6,645 | 6,631 | -2.0 | 0.2 | 1.2 | 6,190 | 6,367 | 6,642 | 7,179 | 83,950 | 83,830 | 0.1 |
| Ferrous metal foundries................... | 1,495 | 1,530 | 1,519 | -2.3 | 0.7 | -1.4 | 1,353 | 1,423 | 1,452 | 1,483 | 18,173 | 16,865 | 7.8 |
| Fabricated metal products................... | 36,343 | 36,319 | 36,382 | 0.1 | -0.2 | -0.2 | 32,715 | 33,793 | 35,874 | 33,908 | 439,215 | 419,286 | 4.8 |
| Machinery.................................. | 38,320 | 38,978 | 39,199 | -1.7 | -0.6 | 1.5 | 38,120 | 35,794 | 38,353 | 37,523 | 458,277 | 420,255 | 9.0 |
| Construction machinery.................... | 3,848 | 4,028 | 3,958 | -4.5 | 1.8 | 8.4 | 3,666 | 3,721 | 3,902 | 3,081 | 43,834 | 37,521 | 16.8 |
| Mining, oil field, and gas field machinery $\qquad$ | 1,591 | 1,482 | 1,599 | 7.4 | -7.3 | 4.3 | 1,802 | 1,472 | 1,631 | 1,641 | 17,905 | 15,970 | 12.1 |
| Industrial machinery...................... | 5,989 | 6,234 | 6,305 | -3.9 | -1.1 | 2.1 | 6,677 | 5,499 | 6,548 | 7,099 | 75,913 | 60,926 | 24.6 |
| Photographic equipment................... | 522 | 559 | 532 | -6.6 | 5.1 | 18.8 | 493 | 454 | 494 | 425 | 6,205 | 6,094 | 1.8 |
| Ventilation, heating, air-conditioning, and refrigeration equipment. $\qquad$ | 4,962 | 5,036 | 4,965 | -1.5 | 1.4 | -0.8 | 4,612 | 4,303 | 4,435 | 4,528 | 58,589 | 52,251 | 12.1 |
| Metalworking machinery................... | 2,561 | 2,620 | 2,563 | -2.3 | 2.2 | -1.2 | 2,638 | 2,620 | 2,651 | 2,905 | 31,182 | 31,983 | -2.5 |
| Turbines, generators, and other power transmission equipment. | 3,535 | 3,376 | 3,561 | 4.7 | -5.2 | 3.7 | 3,378 | 3,379 | 3,654 | 2,987 | 39,533 | 39,589 | -0.1 |
| Material handling equipment............... | 3,667 | 3,716 | 3,755 | -1.3 | -1.0 | -0.1 | 4,069 | 3,514 | 3,672 | 3,621 | 43,348 | 35,672 | 21.5 |
| Computers and electronic products ${ }^{2}$.......... | 24,186 | 24,315 | 24,188 | -0.5 | 0.5 | -0.2 | 29,160 | 23,472 | 23,591 | 28,556 | 288,473 | 275,192 | 4.8 |
| Computers............................... | 719 | 717 | 733 | 0.3 | -2.2 | 1.4 | 836 | 679 | 762 | 775 | 8,816 | 8,639 | 2.0 |
| Nondefense communications equipment. $\qquad$ | 3,016 | 2,888 | 2,843 | 4.4 | 1.6 | -1.3 | 4,420 | 2,701 | 2,589 | 4,941 | 36,165 | 36,994 | -2.2 |
| Defense communications equipment....... | 199 | 206 | 216 | -3.4 | -4.6 | 3.3 | 219 | 229 | 205 | 233 | 2,500 | 2,228 | 12.2 |
| Electronic components..................... | 4,530 | 4,524 | 4,454 | 0.1 | 1.6 | -3.2 | 4,797 | 4,278 | 4,404 | 4,626 | 54,569 | 49,886 | 9.4 |
| Nondefense search and navigation equipment. $\qquad$ | 1,882 | 1,789 | 1,689 | 5.2 | 5.9 | 1.6 | 1,854 | 1,787 | 1,746 | 1,791 | 21,191 | 21,544 | -1.6 |
| Defense search and navigation equipment. $\qquad$ | 3,072 | 3,288 | 3,258 | -6.6 | 0.9 | -2.4 | 4,109 | 3,103 | 3,092 | 4,222 | 38,236 | 37,957 | 0.7 |
| Electromedical, measuring, and control instruments.. | 8,817 | 8,905 | 9,019 | -1.0 | -1.3 | 0.9 | 10,486 | 8,593 | 8,746 | 10,036 | 105,714 | 100,855 | 4.8 |
| Electrical equipment, appliances, and components. $\qquad$ | 13,956 | 13,809 | 13,678 | 1.1 | 1.0 | -0.2 | 13,507 | 13,202 | 13,814 | 13,135 | 162,534 | 151,160 | 7.5 |
| Electric lighting equipment.................. | 1,131 | 1,141 | 1,099 | -0.9 | 3.8 | 5.9 | 1,094 | 1,137 | 1,158 | 1,010 | 12,776 | 12,419 | 2.9 |
| Household appliances...................... | 2,845 | 2,838 | 2,868 | 0.2 | -1.0 | 3.9 | 3,107 | 2,817 | 2,873 | 2,974 | 32,136 | 31,565 | 1.8 |
| Electrical equipment...................... | 3,867 | 3,869 | 3,823 | -0.1 | 1.2 | -3.5 | 3,552 | 3,573 | 3,792 | 3,600 | 47,231 | 42,252 | 11.8 |
| Transportation equipment.................... | 108,029 | 92,429 | 97,452 | 16.9 | -5.2 | 1.9 | 121,801 | 90,554 | 95,151 | 92,753 | 1,113,793 | 930,739 | 19.7 |
| Motor vehicle bodies, parts, and trailers. $\qquad$ | 27,180 | 27,369 | 27,327 | -0.7 | 0.2 | 1.6 | 25,024 | 27,125 | 27,249 | 24,004 | 321,343 | 293,750 | 9.4 |
| Nondefense aircraft and parts ${ }^{3}$.............. | 28,875 | 13,401 | 19,334 | 115.5 | -30.7 | 4.7 | 37,980 | 11,935 | 18,122 | 18,834 | 204,313 | 133,693 | 52.8 |
| Defense aircraft and parts................. | 5,652 | 4,908 | 5,267 | 15.2 | -6.8 | 18.2 | 7,686 | 5,361 | 4,689 | 7,785 | 66,525 | 62,329 | 6.7 |
| Ships and boats........................... | 4,141 | 3,969 | 3,239 | 4.3 | 22.5 | 18.6 | 4,927 | 3,745 | 2,854 | 2,865 | 43,665 | 42,676 | 2.3 |
| Furniture and related products.................. | 6,252 | 6,112 | 6,084 | 2.3 | 0.5 | -0.1 | 5,701 | 5,995 | 6,128 | 5,423 | 73,185 | 71,401 | 2.5 |
| Nondurable goods industries.................. | 265,902 | 271,057 | 276,772 | -1.9 | -2.1 | 0.1 | 257,062 | 267,201 | 282,250 | 248,189 | 3,251,239 | 2,874,506 | 13.1 |

## ${ }^{\rho}$ Preliminary

Revised data due to late receipts and concurrent seasonal adjustment.

 review of the model parameters. Estimates are not adjusted for price changes.
${ }^{2}$ Data on new orders are not available for the semiconductor industry. Estimates and percent changes for new orders exclude semiconductor industry data
 since the survey panel is not a probability sample, estimates of sampling error cannot be calculated. For further details on survey design, methodology, and data limitations see [http://www.census.gov/manufacturing/m3/](http://www.census.gov/manufacturing/m3/). Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders (M3) Survey, December Full Report, February 2, 2023. Information on data sources and methodology can be found on our website at <www.census.gov/manufacturing/m3/how_the_data_are_collected/index.html>

Table 3. Value of Manufacturers' Unfilled Orders for Industry Groups ${ }^{1}$
[Estimates are shown in millions of dollars and are based on data from the Manufacturers' Shipments, Inventories, and Orders Survey.]

| Industry | Seasonally Adjusted |  |  |  |  |  | Not Seasonally Adjusted |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Monthly |  |  | Percent Change |  |  | Monthly |  |  |  | \% Change <br> December 2022/ <br> 2021 |
|  | $\begin{gathered} \text { Dec. } \\ 2022^{\mathrm{p}} \end{gathered}$ | $\begin{aligned} & \text { Nov. } \\ & 2022^{r} \end{aligned}$ | $\begin{aligned} & \text { Oct. } \\ & 2022 \end{aligned}$ | Nov. Dec. | Oct. Nov. | $\begin{aligned} & \text { Sep. - } \\ & \text { Oct. } \end{aligned}$ | $\begin{gathered} \text { Dec. } \\ 2022^{\mathrm{p}} \end{gathered}$ | Nov. <br> $2022^{r}$ | $\begin{aligned} & \text { Oct. } \\ & 2022 \end{aligned}$ | $\begin{aligned} & \text { Dec. } \\ & 2021 \end{aligned}$ |  |
| All manufacturing industries ${ }^{2}$ $\qquad$ Excluding transportation ${ }^{2}$. $\qquad$ Excluding defense ${ }^{2}$. $\qquad$ | $\begin{array}{r} 1,158,011 \\ 473,070 \\ 942,357 \end{array}$ | $1,143,565$ 472,922 927,975 | $1,143,249$ 472,797 928,919 | 1.3 0.0 1.5 | 0.0 0.0 -0.1 | 0.5 0.0 0.6 | $1,153,074$ 465,786 935,505 | $1,130,557$ 466,744 918,173 | $1,133,504$ 468,209 921,037 | $1,074,601$ 456,372 862,813 | 7.3 2.1 8.4 |
| Durable goods industries ${ }^{2}$................... | 1,158,011 | 1,143,565 | 1,143,249 | 1.3 | 0.0 | 0.5 | 1,153,074 | 1,130,557 | 1,133,504 | 1,074,601 | 7.3 |
| Primary metals............................... | 30,599 | 30,553 | 30,509 | 0.2 | 0.1 | -0.4 | 30,066 | 29,778 | 29,637 | 30,245 | -0.6 |
| Iron and steel mills......................... | 16,273 | 16,148 | 16,080 | 0.8 | 0.4 | 0.0 | 15,845 | 15,649 | 15,612 | 15,666 | 1.1 |
| Aluminum and nonferrous metals.......... | 10,104 | 10,186 | 10,255 | -0.8 | -0.7 | -1.3 | 10,067 | 10,018 | 9,969 | 10,815 | -6.9 |
| Ferrous metal foundries.................... | 4,222 | 4,219 | 4,174 | 0.1 | 1.1 | 0.3 | 4,154 | 4,111 | 4,056 | 3,764 | 10.4 |
| Fabricated metal products..................... | 117,335 | 117,490 | 117,612 | -0.1 | -0.1 | -0.1 | 114,127 | 115,203 | 116,321 | 113,970 | 0.1 |
| Machinery................................... | 133,472 | 133,374 | 133,027 | 0.1 | 0.3 | 0.3 | 131,044 | 131,939 | 131,707 | 124,922 | 4.9 |
| Construction machinery...................... | 9,747 | 9,845 | 9,804 | -1.0 | 0.4 | -0.1 | 9,448 | 9,446 | 9,310 | 9,265 | 2.0 |
| Mining, oil field, and gas field machinery. $\qquad$ | 5,192 | 5,177 | 5,182 | 0.3 | -0.1 | 0.4 | 5,192 | 5,177 | 5,182 | 5,067 | 2.5 |
| Industrial machinery........................ | 12,989 | 12,881 | 12,708 | 0.8 | 1.4 | -0.1 | 12,452 | 12,712 | 12,680 | 10,917 | 14.1 |
| Photographic equipment..................... | 3,134 | 3,155 | 3,113 | -0.7 | 1.3 | 0.3 | 3,100 | 3,219 | 3,287 | 3,153 | -1.7 |
| Ventilation, heating, air-conditioning, and refrigeration equipment. | 12,462 | 12,326 | 12,110 | 1.1 | 1.8 | 1.8 | 11,984 | 11,857 | 11,776 | 9,277 | 29.2 |
| Metalworking machinery..................... | 8,265 | 8,372 | 8,521 | -1.3 | -1.7 | -0.7 | 8,028 | 8,369 | 8,470 | 8,394 | -4.4 |
| Turbines, generators, and other power transmission equipment........... | 33,259 | 33,240 | 33,283 | 0.1 | -0.1 | 0.2 | 33,259 | 33,240 | 33,283 | 33,419 | -0.5 |
| Material handling equipment............... | 17,507 | 17,405 | 17,295 | 0.6 | 0.6 | 0.9 | 17,546 | 17,203 | 17,156 | 15,810 | 11.0 |
| Computers and electronic products ${ }^{2}$............ | 140,066 | 140,149 | 140,251 | -0.1 | -0.1 | -0.2 | 140,251 | 139,050 | 139,597 | 139,002 | 0.9 |
| Computers.................................. | 1,180 | 1,181 | 1,199 | -0.1 | -1.5 | 0.1 | 1,180 | 1,181 | 1,199 | 1,219 | -3.2 |
| Nondefense communications equipment. $\qquad$ | 20,607 | 20,593 | 20,711 | 0.1 | -0.6 | -1.0 | 20,793 | 20,449 | 20,443 | 21,002 | -1.0 |
| Defense communications equipment........ | 290 | 307 | 315 | -5.5 | -2.5 | 0.6 | 294 | 292 | 301 | 340 | -13.5 |
| Electronic components....................... | 15,795 | 15,844 | 15,971 | -0.3 | -0.8 | -0.9 | 15,800 | 15,628 | 15,874 | 15,772 | 0.2 |
| Nondefense search and navigation equipment. $\qquad$ | 32,605 | 32,394 | 32,284 | 0.7 | 0.3 | 0.1 | 32,524 | 32,491 | 32,391 | 31,091 | 4.6 |
| Defense search and navigation equipment. $\qquad$ | 38,194 | 38,463 | 38,461 | -0.7 | 0.0 | 0.0 | 38,341 | 37,878 | 38,250 | 38,958 | -1.6 |
| Electromedical, measuring, and control instruments. | 31,395 | 31,367 | 31,310 | 0.1 | 0.2 | 0.2 | 31,319 | 31,131 | 31,139 | 30,620 | 2.3 |
| Electrical equipment, appliances, and components. $\qquad$ | 40,426 | 40,187 | 40,110 | 0.6 | 0.2 | 0.5 | 39,643 | 39,687 | 39,696 | 36,801 | 7.7 |
| Electric lighting equipment................... | 2,467 | 2,403 | 2,323 | 2.7 | 3.4 | 2.3 | 2,459 | 2,417 | 2,319 | 2,153 | 14.2 |
| Household appliances...................... | 5,205 | 5,047 | 4,870 | 3.1 | 3.6 | 2.4 | 5,310 | 5,101 | 4,927 | 5,407 | -1.8 |
| Electrical equipment....................... | 16,484 | 16,636 | 16,861 | -0.9 | -1.3 | -0.1 | 15,997 | 16,418 | 16,608 | 14,213 | 12.6 |
| Transportation equipment.................... | 684,941 | 670,643 | 670,452 | 2.1 | 0.0 | 1.0 | 687,288 | 663,813 | 665,295 | 618,229 | 11.2 |
| Motor vehicle bodies, parts, and trailers $\qquad$ | 27,571 | 27,744 | 27,768 | -0.6 | -0.1 | 0.0 | 27,712 | 27,059 | 26,529 | 27,747 | -0.1 |
| Nondefense aircraft and parts.............. | 467,375 | 453,041 | 453,728 | 3.2 | -0.2 | 1.4 | 467,694 | 449,466 | 451,479 | 405,333 | 15.4 |
| Defense aircraft and parts.................. | 59,628 | 59,642 | 60,159 | 0.0 | -0.9 | -0.2 | 60,301 | 58,809 | 59,241 | 58,558 | 3.0 |
| Ships and boats............................. | 51,655 | 51,198 | 50,826 | 0.9 | 0.7 | -0.7 | 51,016 | 49,738 | 49,654 | 49,607 | 2.8 |
| Furniture and related products................. | 9,765 | 9,771 | 9,902 | -0.1 | -1.3 | -1.7 | 9,248 | 9,689 | 9,865 | 10,204 | -9.4 |

[^0]Table 4. Value of Manufacturers' Inventories for Industry Groups ${ }^{1}$
[Estimates are shown in millions of dollars and are based on data from the Manufacturers' Shipments, Inventories, and Orders Survey.]

| Industry | Seasonally Adjusted |  |  |  |  |  | Not Seasonally Adjusted |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Monthly |  |  | Percent Change |  |  | Monthly |  |  |  | \% Change <br> December 2022/ <br> 2021 |
|  | $\begin{gathered} \text { Dec. } \\ 2022^{\text {p }} \end{gathered}$ | $\begin{aligned} & \text { Nov. } \\ & 2022^{r} \end{aligned}$ | $\begin{aligned} & \text { Oct. } \\ & 2022 \end{aligned}$ | $\begin{aligned} & \text { Nov. - } \\ & \text { Dec. } \end{aligned}$ | Oct. - <br> Nov. | $\begin{aligned} & \text { Sep. - } \\ & \text { Oct. } \end{aligned}$ | $\begin{gathered} \text { Dec. } \\ 2022^{p} \end{gathered}$ | $\begin{aligned} & \text { Nov. } \\ & 2022^{r} \end{aligned}$ | $\begin{aligned} & \text { Oct. } \\ & 2022 \end{aligned}$ | $\begin{gathered} \text { Dec. } \\ 2021 \end{gathered}$ |  |
| All manufacturing industries.................... | 807,785 | 804,816 | 804,577 | 0.4 | 0.0 | 0.4 | 786,726 | 803,036 | 806,697 | 741,248 | 6.1 |
| Excluding transportation..................... | 649,264 | 647,875 | 647,801 | 0.2 | 0.0 | 0.6 | 634,008 | 645,243 | 648,171 | 592,513 | 7.0 |
| Excluding defense....................... | 780,768 | 777,834 | 777,999 | 0.4 | 0.0 | 0.4 | 759,903 | 776,103 | 780,105 | 715,621 | 6.2 |
| With unfilled orders........................ | 396,328 | 392,519 | 391,124 | 1.0 | 0.4 | 0.1 | 386,393 | 391,495 | 390,397 | 365,737 | 5.6 |
| Durable goods industries.................... | 493,578 | 490,125 | 489,302 | 0.7 | 0.2 | 0.1 | 480,308 | 489,497 | 488,842 | 454,652 | 5.6 |
| Wood products............................... | 14,579 | 14,584 | 14,630 | 0.0 | -0.3 | -0.8 | 14,509 | 14,532 | 14,492 | 14,168 | 2.4 |
| Nonmetallic mineral products................. | 16,634 | 16,610 | 16,513 | 0.1 | 0.6 | 0.7 | 16,339 | 16,212 | 16,157 | 14,887 | 9.8 |
| Primary metals............................... | 38,419 | 38,256 | 38,464 | 0.4 | -0.5 | -0.9 | 38,024 | 37,841 | 38,107 | 37,243 | 2.1 |
| Iron and steel mills........................... | 22,367 | 22,254 | 22,432 | 0.5 | -0.8 | -1.4 | 22,235 | 22,052 | 22,310 | 22,472 | -1.1 |
| Aluminum and nonferrous metals....... | 13,262 | 13,222 | 13,276 | 0.3 | -0.4 | -0.6 | 13,065 | 13,053 | 13,094 | 12,223 | 6.9 |
| Ferrous metal foundries.................... | 2,790 | 2,780 | 2,756 | 0.4 | 0.9 | 1.9 | 2,724 | 2,736 | 2,703 | 2,548 | 6.9 |
| Fabricated metal products.................... | 62,391 | 62,378 | 62,357 | 0.0 | 0.0 | -0.4 | 61,213 | 61,474 | 61,644 | 59,377 | 3.1 |
| Machinery.................................. | 88,364 | 87,111 | 86,592 | 1.4 | 0.6 | 1.1 | 86,046 | 87,637 | 86,144 | 75,600 | 13.8 |
| Farm machinery........................... | 5,700 | 5,571 | 5,912 | 2.3 | -5.8 | -2.0 | 5,688 | 5,619 | 5,692 | 5,047 | 12.7 |
| Construction machinery...................... | 7,796 | 7,655 | 7,457 | 1.8 | 2.7 | 3.2 | 7,576 | 7,668 | 7,408 | 6,195 | 22.3 |
| Mining, oil field, and gas field machinery | 6,534 | 6,493 | 6,405 | 0.6 | 1.4 | 1.7 | 6,294 | 6,522 | 6,447 | 5,609 | 12.2 |
| Industrial machinery....................... | 11,714 | 11,468 | 11,179 | 2.1 | 2.6 | 2.0 | 11,910 | 11,608 | 10,839 | 10,105 | 17.9 |
| Photographic equipment................... | 1,409 | 1,417 | 1,406 | -0.6 | 0.8 | 0.8 | 1,354 | 1,447 | 1,424 | 1,300 | 4.2 |
| Ventilation, heating, air-conditioning, and refrigeration equipment. | 8,549 | 8,322 | 8,120 | 2.7 | 2.5 | 2.3 | 7,935 | 8,083 | 7,959 | 6,238 | 27.2 |
| Metalworking machinery................... | 6,866 | 6,761 | 6,811 | 1.6 | -0.7 | 0.1 | 6,755 | 6,852 | 6,891 | 6,239 | 8.3 |
| Turbines, generators, and other power transmission equipment. $\qquad$ | 10,839 | 10,677 | 10,699 | 1.5 | -0.2 | 1.1 | 10,341 | 10,793 | 10,723 | 9,263 | 11.6 |
| Material handling equipment................ | 7,329 | 7,200 | 7,094 | 1.8 | 1.5 | 1.6 | 6,950 | 7,429 | 7,232 | 6,066 | 14.6 |
| Computers and electronic products ${ }^{2}$........... | 53,233 | 53,082 | 53,051 | 0.3 | 0.1 | 0.6 | 51,886 | 53,370 | 53,254 | 49,703 | 4.4 |
| Computers.................................. | 2,136 | 2,140 | 2,129 | -0.2 | 0.5 | -0.2 | 2,022 | 2,152 | 2,101 | 1,958 | 3.3 |
| Computer storage devices................. | 793 | 831 | 857 | -4.6 | -3.0 | -0.5 | 754 | 889 | 878 | 833 | -9.5 |
| Other peripheral equipment................. | 950 | 953 | 965 | -0.3 | -1.2 | 1.0 | 934 | 989 | 956 | 820 | 13.9 |
| Nondefense communications equipment. $\qquad$ | 4,910 | 4,798 | 4,762 | 2.3 | 0.8 | -0.3 | 4,575 | 4,881 | 4,885 | 4,271 | 7.1 |
| Defense communications equipment........ | 659 | 655 | 655 | 0.6 | 0.0 | 0.3 | 659 | 655 | 655 | 664 | -0.8 |
| Audio and video equipment................. | 1,060 | 1,071 | 1,110 | -1.0 | -3.5 | -2.3 | 1,024 | 1,075 | 1,096 | 1,018 | 0.6 |
| Electronic components....................... | 10,108 | 10,174 | 10,210 | -0.6 | -0.4 | 1.8 | 9,879 | 9,909 | 9,966 | 9,791 | 0.9 |
| Nondefense search and navigation equipment. $\qquad$ | 3,541 | 3,521 | 3,482 | 0.6 | 1.1 | 1.1 | 3,452 | 3,514 | 3,545 | 3,119 | 10.7 |
| Defense search and navigation equipment. $\qquad$ | 2,839 | 2,841 | 2,832 | -0.1 | 0.3 | -0.1 | 2,756 | 2,817 | 2,807 | 2,794 | -1.4 |
| Electromedical, measuring and control instruments. $\qquad$ | 18,226 | 18,136 | 18,064 | 0.5 | 0.4 | 0.2 | 17,792 | 18,336 | 18,170 | 16,680 | 6.7 |
| Electrical equipment, appliances, and components. | 23,930 | 23,713 | 23,419 | 0.9 | 1.3 | 0.7 | 22,969 | 23,185 | 22,955 | 20,490 | 12.1 |
| Electric lighting equipment.................. | 2,128 | 2,120 | 2,111 | 0.4 | 0.4 | 0.2 | 2,078 | 2,117 | 2,116 | 2,048 | 1.5 |
| Household appliances........................ | 3,309 | 3,209 | 3,190 | 3.1 | 0.6 | -0.3 | 2,987 | 3,093 | 3,199 | 2,710 | 10.2 |
| Electrical equipment......................... | 8,346 | 8,232 | 8,063 | 1.4 | 2.1 | 1.4 | 8,122 | 8,077 | 7,747 | 6,838 | 18.8 |
| Batteries................................... | 1,654 | 1,634 | 1,598 | 1.2 | 2.3 | 2.0 | 1,498 | 1,489 | 1,553 | 1,423 | 5.3 |
| Transportation equipment.................... | 158,521 | 156,941 | 156,776 | 1.0 | 0.1 | -0.2 | 152,718 | 157,793 | 158,526 | 148,735 | 2.7 |
| Automobiles.............................. | 6,520 | 6,713 | 6,648 | -2.9 | 1.0 | 6.6 | 6,032 | 6,787 | 6,962 | 6,169 | -2.2 |
| Light trucks and utility vehicles............. | 9,602 | 9,782 | 9,990 | -1.8 | -2.1 | -4.7 | 8,090 | 10,173 | 10,371 | 7,572 | 6.8 |
| Heavy duty trucks ......................... | 2,809 | 2,938 | 2,953 | -4.4 | -0.5 | 1.5 | 2,569 | 2,886 | 2,907 | 2,492 | 3.1 |
| Motor vehicle bodies, parts, and trailers. $\qquad$ | 32,632 | 32,397 | 32,335 | 0.7 | 0.2 | 0.2 | 31,833 | 31,940 | 32,099 | 30,546 | 4.2 |
| Nondefense aircraft and parts............. | 76,505 | 74,648 | 74,831 | 2.5 | -0.2 | -0.7 | 74,170 | 75,464 | 76,020 | 73,736 | 0.6 |
| Defense aircraft and parts.................. | 12,781 | 12,831 | 12,772 | -0.4 | 0.5 | 0.1 | 12,688 | 12,873 | 12,781 | 12,531 | 1.3 |
| Ships and boats........................... | 4,767 | 4,762 | 4,639 | 0.1 | 2.7 | 2.6 | 4,712 | 4,709 | 4,680 | 3,984 | 18.3 |
| Furniture and related products................. | 10,091 | 10,040 | 10,023 | 0.5 | 0.2 | 0.0 | 9,799 | 9,897 | 9,823 | 8,899 | 10.1 |
| Miscellaneous durable goods.................. | 27,416 | 27,410 | 27,477 | 0.0 | -0.2 | 0.4 | 26,805 | 27,556 | 27,740 | 25,550 | 4.9 |
| Nondurable goods industries.................. | 314,207 | 314,691 | 315,275 | -0.2 | -0.2 | 0.9 | 306,418 | 313,539 | 317,855 | 286,596 | 6.9 |
| Food products............................... | 64,442 | 64,177 | 63,895 | 0.4 | 0.4 | 0.5 | 64,442 | 65,666 | 67,038 | 60,589 | 6.4 |
| Grain and oilseed milling.................... | 7,818 | 7,848 | 7,812 | -0.4 | 0.5 | 0.0 | 7,813 | 7,866 | 8,085 | 7,270 | 7.5 |
| Dairy products.............................. | 9,678 | 9,567 | 9,462 | 1.2 | 1.1 | 0.9 | 9,240 | 9,145 | 9,254 | 8,256 | 11.9 |
| Meat, poultry, and seafood products....... | 10,959 | 10,999 | 11,078 | -0.4 | -0.7 | -0.2 | 10,667 | 11,062 | 11,329 | 10,046 | 6.2 |
| Beverage and tobacco products.............. | 28,448 | 28,415 | 28,466 | 0.1 | -0.2 | 0.1 | 28,447 | 28,789 | 28,763 | 27,391 | 3.9 |
| Beverages.................................... | 24,856 | 24,796 | 24,811 | 0.2 | -0.1 | 0.1 | 24,719 | 24,997 | 25,041 | 23,631 | 4.6 |
| Tobacco................................... | 3,592 | 3,619 | 3,655 | -0.7 | -1.0 | -0.1 | 3,728 | 3,792 | 3,722 | 3,760 | -0.9 |
| Textile mills................................... | 3,614 | 3,673 | 3,637 | -1.6 | 1.0 | 0.3 | 3,580 | 3,639 | 3,592 | 3,282 | 9.1 |
| Textile products.............................. | 4,241 | 4,283 | 4,317 | -1.0 | -0.8 | -0.4 | 4,196 | 4,296 | 4,318 | 4,104 | 2.2 |
| Apparel.................................... | 2,497 | 2,459 | 2,403 | 1.5 | 2.3 | 0.3 | 2,307 | 2,388 | 2,469 | 1,841 | 25.3 |
| Leather and allied products.................... | 1,240 | 1,250 | 1,258 | -0.8 | -0.6 | 3.0 | 1,200 | 1,231 | 1,238 | 865 | 38.7 |
| Paper products.............................. | 16,661 | 16,698 | 16,739 | -0.2 | -0.2 | -0.1 | 16,450 | 16,435 | 16,524 | 15,752 | 4.4 |
| Pulp, paper, and paperboard mills.......... | 5,066 | 5,062 | 5,064 | 0.1 | 0.0 | -0.1 | 5,054 | 4,996 | 4,953 | 4,854 | 4.1 |
| Paperboard containers.................... | 6,186 | 6,192 | 6,176 | -0.1 | 0.3 | 0.5 | 6,162 | 6,083 | 6,121 | 5,720 | 7.7 |
| Printing........................................... | 6,478 | 6,481 | 6,472 | 0.0 | 0.1 | -0.5 | 6,315 | 6,528 | 6,652 | 6,033 | 4.7 |
| Petroleum and coal products................... | 51,088 | 51,188 | 51,270 | -0.2 | -0.2 | 5.3 | 46,643 | 49,174 | 50,752 | 38,033 | 22.6 |
| Petroleum refineries........................ | 44,107 | 44,144 | 44,308 | -0.1 | -0.4 | 5.9 | 39,801 | 42,308 | 43,991 | 32,119 | 23.9 |
| Chemical products............................. | 103,787 | 104,188 | 104,816 | -0.4 | -0.6 | -0.2 | 101,782 | 103,691 | 104,697 | 99,024 | 2.8 |
| Pesticides, fertilizers, and other agricultural chemicals. | 6,791 | 6,827 | 6,848 | -0.5 | -0.3 | -0.4 | 6,808 | 6,756 | 6,574 | 5,868 | 16.0 |
| Pharmaceuticals and medicines............. | 42,750 | 42,890 | 43,095 | -0.3 | -0.5 | 0.2 | 41,963 | 42,897 | 43,291 | 42,539 | -1.4 |
| Paints, coatings, and adhesives............ | 5,253 | 5,296 | 5,295 | -0.8 | 0.0 | 0.9 | 5,045 | 5,153 | 5,158 | 4,238 | 19.0 |
| Plastics and rubber products.................. | 31,711 | 31,879 | 32,002 | -0.5 | -0.4 | -0.1 | 31,056 | 31,702 | 31,812 | 29,682 | 4.6 |

## ${ }^{\mathrm{p}}$ Preliminary

Revised data due to late receipts and concurrent seasonal adjustment.
${ }^{1}$ Estimates of shipments and new orders are for the duration of the period, while estimates of unfilled orders and total inventories are for the end of the period. Not seasonally adjusted estimates of shipments and new orders include adjusted data fo non-calendar reporters. Seasonally adjusted estimates include concurrent adjustments for holiday and trading-day differences, where appropriate, as well as seasonal variation, based on the results of the latest annual review of the model parameters. Estimates are not adjusted for price changes.
${ }^{2}$ Estimates of inventories for the semiconductor industry data are included in computers and electronic products, and all other applicable aggregate totals.
Note: Estimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey error is nonsampling error, which includes errors of coverage, response, and nonreporting. Since the survey panel is not a probability sample, estimates of sampling error cannot be calculated. For further details on survey design, methodology, and data limitations see <http://www.census.gov/manufacturing $/ \mathrm{m} 3 />$.

Table 6. Value of Manufacturers' Inventories, by Stage of Fabrication, by Industry Group ${ }^{1}$
[Estimates are shown in millions of dollars and are based on data from the Manufacturers' Shipments, Inventories, and Orders Survey.]


## ${ }^{\mathrm{p}}$ Preliminary

'Revised data due to late receipts and concurrent seasonal adjustment.
${ }^{1}$ Estimates of shipments and new orders are for the duration of the period, while estimates of unfilled orders and total inventories are for the end of the period. Not seasonally adjusted estimates of shipments and new orders include adjusted data for non-calendar reporters. Seasonally adjusted estimates include concurrent adjustments for holiday and trading-day differences, where appropriate, as well as seasonal variation, based on the results of the latest annual review of the model parameters. Estimates are not adjusted for price changes.
Note: Estimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey error is nonsampling error, which includes errors of coverage, response, and nonreporting. Since the surve Sen <www.census.gov/manufacturing/m3/how_the_data_are_collected/index.html>.

Table 7. Ratios of Manufacturers' Inventories to Shipments and Unfilled Orders to Shipments, by Industry Group ${ }^{1}$

| Industry | Inventory/Shipments ratio |  |  |  | Unfilled Orders/Shipments ratio ${ }^{2}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Dec } \\ 2022^{p} \end{gathered}$ | $\begin{gathered} \text { Nov } \\ { }_{2022} \end{gathered}$ | $\begin{gathered} \text { Oct } \\ 2022 \end{gathered}$ | $\begin{aligned} & \text { Sep } \\ & 2022 \end{aligned}$ | $\begin{gathered} \text { Dec } \\ 2022^{p} \end{gathered}$ | $\begin{aligned} & \text { Nov } \\ & 2022^{\prime} \end{aligned}$ | $\begin{gathered} \text { Oct } \\ 2022 \end{gathered}$ | $\begin{gathered} \text { Sep } \\ 2022 \end{gathered}$ |
| All manufacturing industries ${ }^{3}$......................... | 1.49 | 1.47 | 1.46 | 1.45 | (x) | (X) | (X) | (x) |
| Durable goods industries ${ }^{3}$... | 1.78 | 1.77 | 1.78 | 1.78 | 6.07 | 6.01 | 6.03 | 6.03 |
| Wood products........................................ | 1.15 | 1.14 | 1.15 | 1.15 | (x) | ( $)$ | (X) | (x) |
| Nonmetallic mineral products...................... | 1.33 | 1.33 | 1.32 | 1.31 | (X) | ( $)$ | ( $)^{\text {a }}$ | (x) |
| Primary metals........................................... | 1.93 | 1.91 | 1.90 | 1.91 | 1.54 | 1.53 | 1.51 | 1.51 |
| Fabricated metal products............................... | 1.71 | 1.71 | 1.71 | 1.71 | 3.29 | 3.30 | 3.30 | 3.29 |
| Machinery............................................... | 2.31 | 2.25 | 2.23 | 2.24 | 3.81 | 3.78 | 3.75 | 3.82 |
| Computers and electronic products ${ }^{3} . . . . . . . . . . . . . .$. | 1.80 | 1.79 | 1.80 | 80 | 6.28 | 6.25 | 6.23 | 6.28 |
| Electrical equipment, appliances, and components $\qquad$ | 1.74 | 1.73 | 1.74 | 1.73 | 3.22 | 3.18 | 3.21 | 3.19 |
| Transportation equipment........................ | 1.69 | 1.70 | 1.72 | 1.73 | 11.66 | 11.60 | 11.84 | 11.82 |
| Furniture and related products..................... | 1.61 | 1.61 | 1.60 | 1.61 | 1.77 | 1.78 | 1.79 | 1.82 |
| Miscellaneous products.............................. | 1.92 | 1.94 | 1.96 | 1.96 | (X) | (x) | (X) | (x) |
| Nondurable goods industries......................... | 1.18 | 1.16 | 1.14 | 1.13 | (x) | (x) | (x) | (x) |
| Food products............................ | 0.85 | 0.85 | 0.84 | 0.84 | (X) | (x) | (x) | ( ${ }^{\text {( }}$ |
| Beverage and tobacco products.................... | 1.64 | 1.68 | 1.70 | 1.68 | (x) | (x) | (x) | ( ${ }^{\text {( }}$ |
| Textiles..................................... | 1.63 | 1.65 | 1.59 | 1.56 | (X) | ( $)^{\text {a }}$ | (x) | (x) |
| Textile products......................................... | 2.18 | 2.22 | 2.22 | 2.17 | (X) | (x) | (x) | (x) |
| Apparel.............................................. | 3.11 | 3.14 | 3.17 | 3.25 | (X) | (X) | (x) | (X) |
| Leather and allied products......................... | 2.48 | 2.54 | 2.65 | 2.64 | (X) | (x) | ( $)^{\text {a }}$ | ( ${ }^{\text {( }}$ |
|  | 1.02 | 1.03 | 1.03 | 1.03 | (X) | (X) | ( $)^{\text {a }}$ | ( ${ }^{\text {( }}$ |
| Printing.................................................. | 0.92 | 0.93 | 0.92 | 0.93 | (X) | ( $)^{\text {a }}$ | (x) | (x) |
| Petroleum and coal products......................... | 0.92 | 0.83 | 0.77 | 0.74 | (X) | ( $)^{\text {a }}$ | (X) | (X) |
| Chemical products.......................................... | 1.57 | 1.58 | 1.58 | 1.58 | (X) | (x) | (X) | (x) |
| Plastics and rubber products......................... | 1.43 | 1.44 | 1.44 | 1.44 | (x) | (X) | (X) | ( ${ }^{\text {( }}$ |

${ }^{\mathrm{N}}$ Not Applicable
${ }^{9}$ Preliminary
'Revised data due to late receipts and concurrent seasonal adjustment.
${ }^{2}$ Excludes the following industries with no unfilled orders: Wood products; nonmetallic mineral products; medical equipment and supplies; office supplies; other miscellaneous manufacturing; cutlery and handtools; farm and garden machinery; computer storage and peripheral devices; audio and
video equipment; manufacturing and reproducing magnetic and optical media; batteries; automobiles; light trucks and utility vehicles; heavy duty trucks and miscellaneous furniture.
${ }^{3}$ Unfilled orders to shipments ratio excludes semiconductor manufacturing.
Note: Estimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey error is
nonsampling error, which includes errors of coverage, response, and nonreporting, Since the survey panel is not a probability sample, estimates of
sampling error cannot be calculated. For further details on survey design, methodology, and data limitations see
[http://www.census.gov/manufacturing/m3/](http://www.census.gov/manufacturing/m3/).
Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders (M3) Survev, December Full Report, February 2, 2023. Information on data
sources and methodology can be found on our website at <www.censuss.gov/manufacturing/m3/how the data are collected/index htm

Table 8. Revisions to Previously Published Monthly Percent Changes ${ }^{1}$

| [Based on Seasonally Adjusted data from the Manufacturers' Shipments, Inventories, and Orders Survey.] |
| :--- |

## X Not Applicable

${ }^{1}$ Estimates of shipments and new orders are for the duration of the period, while estimates of unfilled orders and total inventories are for the
end of the period. Not seasonally adjusted estimates of shipments and new orders include adjusted data for non-calendar reporters.
Seasonally adjusted estimates include concurrent adjustments for holiday and trading-day differences, where appropriate, as well as seasonal
variation, based on the results of the latest annual review of the model parameters. Estimates are not adjusted for price changes.
The current month revisions are the difference between the advance percent change and the percent change as shown in this publication.
${ }^{3}$ The twelve month revisions are the differences between the month-to-month percent changes of the preliminary and final estimates. The
The twelve month revisions are the differences between the month-to-month percent changes of the preliminary and final estimates. The
monthly averages are the simple averages of the absolute values of the differences for the months specified. The advance to final percent monthly averages are the simple averages of the absolute values of the differences for the month
change revisions for the durable goods industries are shown in the advance report for the month.
Note: : Sstimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey
error is nonsampling error, which includes errors of coverage, response, and nonreporting. Since the suvier error is nonsamping error, which includes errors of coverage, response, and norreporing. Since the survey yanel is on t a probe
estimates of sampling error cannot be calculated. For further details on survey design, methodology, and data limitations see [http:///www.census.gov/manufacturing/m3/](http:///www.census.gov/manufacturing/m3/).
Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders (M3) Survey, December Full Report, February 2, 2023.
swww census sov/manufacturing/m3/how the data are collected/indey htm


[^0]:    ${ }^{p}$ Preliminary
    ${ }^{r}$ Revised data due to late receipts and concurrent seasonal adjustment.
    ${ }^{1}$ Estimates of shipments and new orders are for the duration of the period, while estimates of unfilled orders and total inventories are for the end of the period. Not seasonally adjusted estimates of shipments and new orders include adjusted data for non-calendar reporters. Seasonally adjusted estimates include concurrent adjustments for holiday and trading-day differences, where appropriate, as well as seasonal variation, based on the results of the latest annual review of the model parameters. Estimates are not adjusted for price changes.
    ${ }^{2}$ Data on unfilled orders are not available for the semiconductor industry. Estimates and percent changes for unfilled orders exclude semiconductor industry data
    Note: Estimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey error is nonsampling error, which includes errors of coverage, response, and nonreporting. Since the survey panel is not a probability sample, estimates of sampling error cannot be calculated. For further details on survey design, methodology, and data limitations see
    [http://www.census.gov/manufacturing/m3/](http://www.census.gov/manufacturing/m3/).
    Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders (M3) Survey, December Full Report, February 2, 2023. Information on data sources and methodology can be found on our website at <www.census.gov/manufacturing/m3/how_the_data_are_collected/index.html>.

