

MOOG

2021 | ANNUAL REPORT

1951–2021

In the 70 years since Bill Moog founded our company, we have extended our technology capabilities to include customized, high-performance motion control and fluid flow systems and components. We attack the most difficult technical challenges for customers who have demanding requirements, and deliver state-of-the-art solutions. We've taken this capability to markets where performance is critical and where the cost of failure is high. Our heritage and success prove that customers choose Moog when performance really matters.



FINANCIAL HIGHLIGHTS

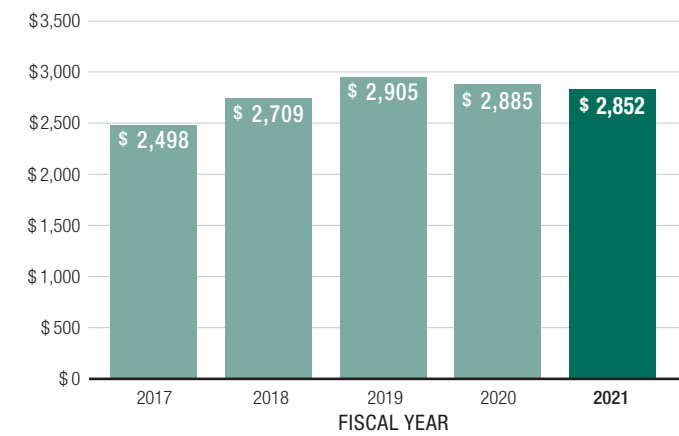
RECENT FINANCIAL PERFORMANCE

(Dollars and shares in millions, except per share data)

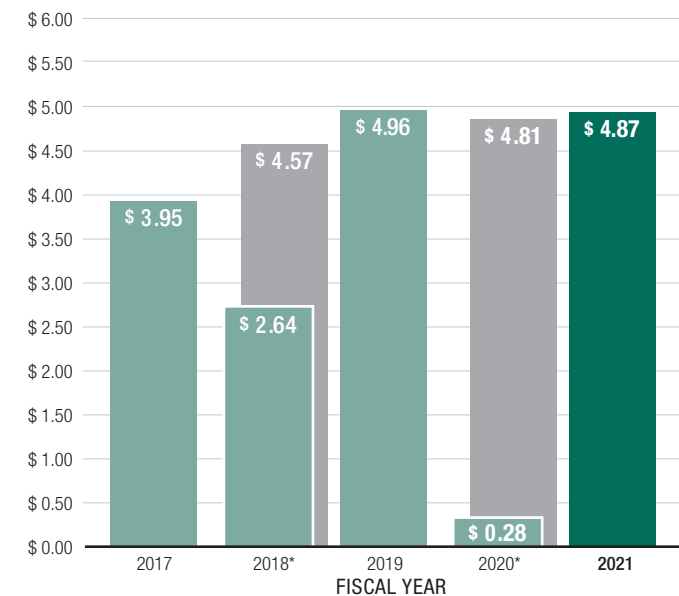
	2021	2020
NET SALES	\$ 2,852	\$ 2,885
NET EARNINGS	\$ 157	\$ 9
ADJUSTED NET EARNINGS*	N/A	\$ 157
DILUTED EARNINGS PER SHARE	\$ 4.87	\$ 0.28
ADJUSTED EARNINGS PER SHARE*	N/A	\$ 4.81
EQUITY MARKET CAPITALIZATION*	\$ 2,517	\$ 2,142
AVERAGE SHARES OUTSTANDING	32.3	33.4

* Measured as of fiscal year end

SALES (Dollars in millions)

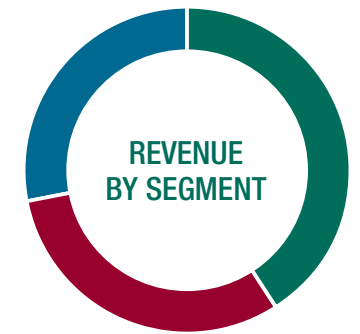


DILUTED EARNINGS PER SHARE (In dollars)

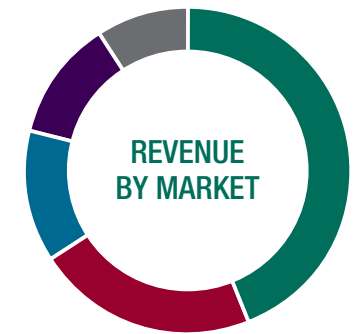


*2018 adjusted EPS of \$4.57 excludes the impact of charges associated with exiting the wind pitch control business and special impacts from the U.S. Tax Act.

*2020 adjusted EPS of \$4.81 excludes the impact of charges associated with COVID-19 pandemic (\$1.68) and pension settlement accounting (\$2.85).



● AIRCRAFT CONTROLS	41%
● INDUSTRIAL SYSTEMS	31%
● SPACE AND DEFENSE	28%



● DEFENSE	44%
● INDUSTRIAL AUTOMATION	22%
● COMMERCIAL AIRCRAFT	13%
● SPACE	12%
● MEDICAL	9%



● INDUSTRIAL AND COMMERCIAL	48%
● U.S. MILITARY AND GOVERNMENT FUNDED	44%
● FOREIGN GOVERNMENT	8%

Moog's geographic revenue distribution is 68% U.S. and 32% international.

Financial results for fiscal year 2021 are available in Moog's 10-K. The report was filed on November 15, 2021, pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended October 2, 2021. The 10-K can be viewed at www.moog.com/investors/10K.

CHAIRMAN'S LETTER

To Our Shareholders, Employees and Friends,

Our fiscal '21 was a full year of living with COVID. Moog employees around the world demonstrated resilience as they continued to serve our customers and ensure the success of our business. I have always opened my letters with a thank you to our employees. This year in particular, I am humbled by their commitment to our company and the collective results they have achieved. This report provides a small window into their accomplishments while serving as a permanent record of their dedication.

When the pandemic hit in March 2020, we set two priorities. First and foremost, we wanted to protect the health and safety of our employees and their families. Second, Moog wanted to protect the needs of our customers, thereby securing the financial well-being of the company. We successfully met both objectives. Our workplace measures to prevent infection were effective, and our business performed better than we could have imagined 12 months ago.

Coming into 2021, we assumed COVID would be with us throughout the year and that our financial performance would therefore mirror the second half of fiscal '20. That projection would have resulted in sales of \$2.73 billion and earnings per share of \$3.50. We finished the year much stronger, with sales of \$2.85 billion and earnings per share of \$4.87. Our diversity across end markets, combined with our tight management of expenses, delivered these results. In total, sales in fiscal '21 were only 2% lower than pre-COVID sales levels in 2019. As we wrap up fiscal '21 and look to a new year, I believe it's helpful for our investors to look at our business through an end market lens. We're organized in three operating segments, but our business serves five major markets: defense, industrial including energy, commercial aircraft, space, and medical.

Defense is our largest single end market, making up 44% of our sales in 2021. Sales this year were up 15% from pre-COVID fiscal '19 sales. The majority of our defense business is driven by U.S. government spending. Despite a change in administration in Washington, both sides of the aisle continue to support defense spending. The priorities for the defense establishment have not changed as concerns about near-peer threats have only increased.

Industrial systems, excluding medical products, made up 22% of sales in fiscal '21. We serve a variety of industrial sub-markets including automation, energy, simulation and test. This business contracted slightly through the initial stages of COVID as our customers cut capital spending to conserve cash. In fiscal '21, sales into industrial markets were down 8% from pre-COVID levels. However, as the year closed out, we started to see a rebound in orders as global economies opened up and capital investment spending picked up.

Our sales into the commercial aircraft market have been the hardest hit by the pandemic. In fiscal '21, sales were down almost 50% from pre-COVID levels. Sales into this market made up 23% of our total sales in fiscal '19 but dropped to just 13% in fiscal '21. Our major customers, Boeing and Airbus, continued to adjust their wide-body production rates down as international air travel remained depressed. There were some bright spots in the aftermarket as domestic travel around the world picked up and air cargo services were in demand.

Sales into space applications were very strong this year, driven by U.S. government spending, both military and civil. Over the last few years, space has emerged as the next frontier in any future global conflict. It has also become an exciting business opportunity for start-ups and billionaires. In the last two years, our space business has grown by over 50% from pre-COVID levels, and it now accounts for 12% of total sales.

Finally, our medical products had a good year, but sales were off from the peak we experienced in FY '20, the result of a demand surge in the early months of COVID. Compared to 2019 pre-COVID levels, medical sales increased 12% in 2021.

Strong cash flow throughout the year funded our balanced approach to capital allocation. We completed one acquisition: Genesys is a small company that brings new capabilities to our Aircraft Controls segment and extends our target

markets beyond flight controls. We ended the year with a healthy balance sheet, providing us tremendous flexibility as we look to the future. Long term, we believe that growth is necessary to create sustained shareholder value. However, growth simply for the sake of growth is not a sensible strategy, and return on capital must always be at the forefront of any investment decision. In the present environment of elevated acquisition prices, we are cautious not to overpay. We are also choosing to invest more in organic opportunities as well as return capital to our shareholders through our dividend and buyback programs.

I believe that managing through COVID has brought about a generational change in our workplace—something I never would have foreseen when I started in the CEO role 10 years ago. We have introduced and adapted to a hybrid working policy while continuing to design critical systems and components for aircraft, space and industry utilizing online collaboration tools and virtual meetings across our businesses. We rely on our employees to determine where they need to be to get their work done most effectively to best support our customers. While in-person meetings and trade show attendance are desirable, the tools we have in place allow us to connect with customers, demonstrate our capabilities, and meet the needs of our global customer base.

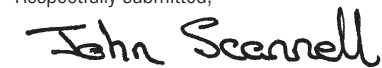
"I am excited about our business. We're forecasting both top-line growth and margin expansion in 2022. We're anticipating growth across our entire portfolio, led by stronger defense and space sales and a recovering commercial aircraft market."

I am excited about our business. We're forecasting both top-line growth and margin expansion in 2022. We're anticipating growth across our entire portfolio, led by stronger defense and space sales and a recovering commercial aircraft market. We're assuming COVID will be with us throughout the coming year and that we have the internal controls in place to manage the impact in our facilities. More concerning are the indirect effects of COVID, including challenges in the supply chain, skilled labor availability and the potential fallout from inflation. We're confident that we have the talent and resources to navigate these headwinds. Over the coming year, we'll also devote additional resources to our initiatives around diversity, equity and inclusion as well as the broader topic of sustainability.

The longer-term outlook for Moog remains very positive. Global challenges resulting from climate change and shifting demographics will drive increased demand for automation solutions. The continued rebalancing of global power between the east and the west ensures continued investment in advanced defense technologies. Finally, a recovery in the commercial aircraft market will contribute nicely to our top and bottom line.

We summarize our strategy in the tag line *When Performance Really Matters*. For us, performance includes all elements of our business. At its core is the performance of our products—as demonstrated by the successful landing of NASA's Perseverance Rover on Mars this past year, aided by Moog components. It also means performance for our customers—delivering the highest quality products on-time and ensuring we are available for engineering, program management, and post-delivery support. It means performance for our investors—focusing on increasing value over the long-term. Finally, it's the performance of our employees—who demonstrate their commitment every day to making our company an enduring success.

Respectfully submitted,



John Scannell
Chairman and Chief Executive Officer



John R. Scannell



Jennifer Walter



Paul Wilkinson



Mark J. Trabert



Maureen M. Athoe



Patrick J. Roche

OFFICERS AND DIRECTORS

Officers

John R. Scannell
Chairman of the Board
Chief Executive Officer

Jennifer Walter
Vice President
Chief Financial Officer

Paul Wilkinson
Vice President
Chief Human Resources Officer

Mark J. Trabert
President
Aircraft Controls

Maureen M. Athoe
President
Space and Defense

Patrick J. Roche
President
Industrial Systems

Michael J. Swope
Controller
Principal Accounting Officer

Robert J. Olivieri
Secretary
Partner
Hodgson Russ, LLP

Directors

Janet M. Coletti
Director
Retired Executive Vice President
M&T Bank Corporation

Donald R. Fishback
Director
Retired Vice President
Chief Financial Officer
Moog Inc.

William G. Gisel, Jr.
Director
Executive Vice Chair
Rich Products Corporation

Peter J. Gundermann
Director
Chairman and CEO
Astronics Corporation

Kraig H. Kayser
Director
Retired President and CEO
Seneca Foods Corporation

R. Bradley Lawrence
Director
Retired Chairman and CEO
Esterline Technologies

Brian J. Lipke
Director
Retired Chairman and CEO
Gibraltar Industries

Brenda L. Reichelderfer
Director
Retired Group President
ITT Inc.

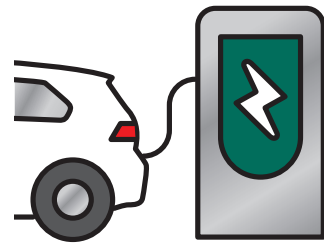
Tragically, this last year, some of our employees lost their lives to COVID and others experienced loss in their wider family or circle of friends. Our deepest sympathy goes out to all our colleagues who have experienced loss and sadness.

2021 HIGHLIGHTS



Moog Acquires Genesys Aerosystems

Moog completed the acquisition of Mineral Wells, Texas-based Genesys Aerosystems Group, Inc. in the first quarter of fiscal year 2021. The acquisition added a full suite of industry-leading avionics products to Moog's existing Aircraft Controls segment offerings. Genesys designs and manufactures electronic flight instrument systems and autopilot solutions specializing in fixed wing, rotorcraft, military, and special mission aircraft fleet support with state-of-the-art avionics and product sustainment services.



EV Charging Station Installations

Dual Electric vehicle (EV) charging stations were installed on Moog's East Aurora, NY campus. The installation removes a barrier for employees who are considering EV transportation options. Some of Moog's larger sites in the U.S. and the U.K. also feature EV charging options.



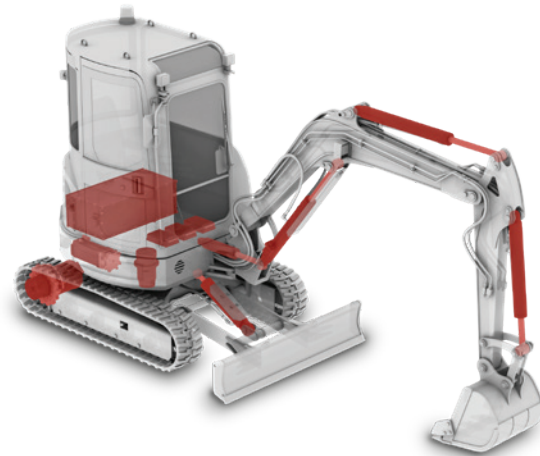
Moog Australia Opens Expanded Facility

Moog Australia Pty. Ltd., a wholly owned Australian subsidiary of Moog Inc., celebrated the official opening of its expanded facility located in Heatherton. The investment strengthens Moog's Australian in-country capabilities. The new facility can accommodate 40 additional engineering, technical and support employees. It will further develop local capabilities to design, build, and support defense systems and solutions.



SureFly® S250 Joins Agility Prime Initiative

Moog's SureFly S250 vehicle is slated to be part of the United States Air Force technology incubator AFWERX initiative. The SureFly S250 is a two-seat all-electric multi-rotor vehicle which can fly manned or unmanned, utilizing eight independent electric propulsion motors as its flight controls. The vehicle, which was developed and is owned and operated by Moog Inc., will be modified to a hybrid electric power system for the project. The Air Force expects to get a more in-depth understanding of hybrid electric power system technology and Moog's aircraft control systems. SureFly and other autonomous eVTOL derivatives offer potential solutions for military missions ranging from battlefield resupply and casualty evacuation, to humanitarian disaster response and distributed logistics.



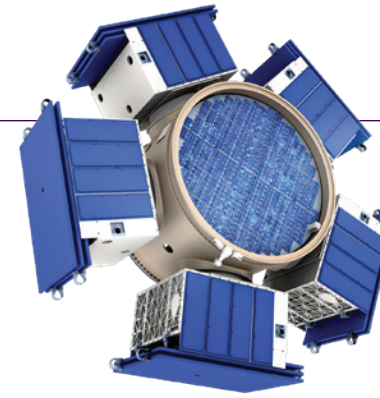
Moog Presents at EU Construction Equipment Summit

Moog engineers presented Moog's mobile machinery platforms at CECE 2021 highlighting the themes of electrification, automation and connectivity that are driving the design of Moog's mobile machinery platforms. Built for zero emissions and increased productivity, the platforms can be customized to the unique needs of most machines to accelerate electrification and automation for the construction industry. The right combination of controls and electronics will someday allow traditional machine owners to digitally tune their equipment, achieving in days what some equipment owners spend years trying to accomplish with mechanical adjustments.



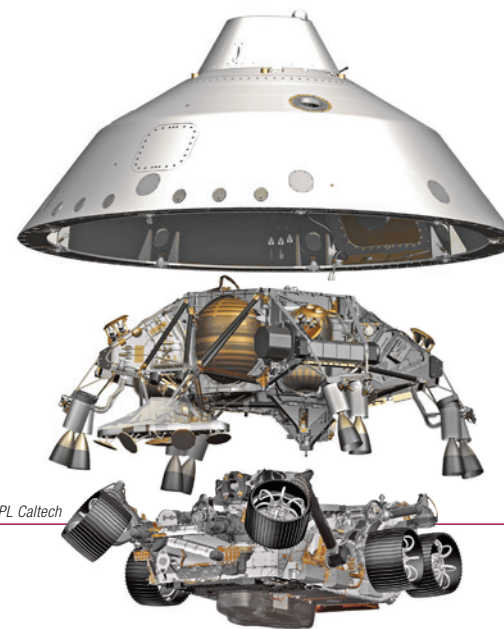
Capital Allocation

In 2021, Moog continued to return excess capital to shareholders through dividend payments and its share buyback program. The \$0.25 per share quarterly dividend, paid over the course of the fiscal year, totalled \$32 million. Including the \$30 million of shares repurchased, over \$62 million was returned to shareholders in fiscal 2021.



Spacecraft Technologies Highlighted

Moog's Small Launch Orbital Maneuvering Vehicle (SL-OMV) was on display at the 36th Annual Space Symposium and SATELLITE 2021. SL-OMV is a low-cost propulsive tug for secondary payload deployment focused on Venture Class launch vehicles. It is payload-configurable for CubeSats through ESPA-Class spacecraft. It can be used to disperse CubeSat constellations or to deliver ESPA-Class spacecraft to their different orbits. The SL-OMV has its own avionics, power, green propulsion, and communications systems that are configurable for short duration missions.



NASA/JPL Caltech

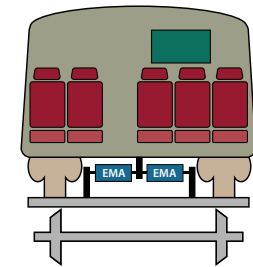
Mission Success: Mars Landing

Moog's space products played a critical role in the successful February 2021 landing of NASA's Perseverance Rover on Mars. Perseverance is NASA's latest mission to explore Mars and builds on the success of the 2012 Mars Curiosity Rover mission. The Moog team designed, built, and tested several essential components. During the final descent, Moog throttle valve assemblies controlled the entry spacecraft's engines. The spacecraft entered the atmosphere at 12,500 miles per hour, stabilized, and lowered the Perseverance Rover until it successfully touched down in the Jezero Crater. The mission blasted off from Cape Canaveral seven months earlier, with Moog actuators steering the launch vehicle out of the Earth's atmosphere. Moog rocket engines were also used to steer the spacecraft on the 350-million-mile, seven-month journey carrying the Perseverance Rover, ensuring it stayed on course while traveling 55,000 miles per hour. As the Rover digs for samples, Moog valves and filters will keep the Rover's drill clean.



787 Support Contract with Japan Airlines

Moog and Japan Airlines signed a long-term exclusive contract for comprehensive support of critical flight control and landing gear actuation components on the Japan Airlines fleet of Boeing 787 aircraft. Moog is the OEM supplier for the primary and high lift flight controls on the Boeing 787 aircraft. Moog's Total Support program contract includes maintenance, reliability management and inventory support via Moog's global repair station network and strategically located stocking facilities, providing Japan Airlines 24/7 access to spares no matter where the carrier's aircraft are located. Japan Airlines is the flag carrier of Japan and flies to 220 destinations in 35 countries worldwide, operating 280 aircraft.



Moog EMAs Cut Sway for Japan's Bullet Train Riders

East Japan Railway Company improved the comfort and stability of its Shinkansen, or bullet trains, by installing Moog electromechanical actuators, planetary roller screws and drive systems into the active sway control system on its E5 and E6 train series. East Japan Railway increased the maximum running speed of its trains to 360 km/h (225 mph). Moog's electromechanical actuator design provides a faster response and higher thrust to reduce vibration for passengers. Replacing oleo-pneumatic sway control systems with less cumbersome electromechanical systems has improved reliability and made the system easier to maintain. The fully electric Moog system reduces sway by up to 50% compared to past conventional pneumatic and hydraulic solutions.



Moog's Reconfigurable Turret Selected for M-SHORAD Inc. 1

Moog's RlWP® was selected for the U.S. Army's Maneuver Short-Range Air Defense Increment 1 program (M-SHORAD). M-SHORAD Inc. 1 is designed around the U.S. Army Stryker A1 platform, with Moog's Reconfigurable Integrated Weapons Platform being the centerpiece of the Mission Equipment Package. The modularity of the RlWP allowed Moog to provide nine prototypes in record time for the Army's evaluation, leading to the award. The field-proven RlWP is the result of commitment to unmatched capability from a dedicated team that leverages Moog's diverse and advanced technologies, and is part of Moog's commitment to equipping those who defend freedom. The M-SHORAD integrates existing guns, missiles, rockets and sensors onto a Stryker A1 vehicle and is designed to defend maneuvering forces against unmanned aircraft systems, rotary-wing and residual fixed-wing threats.

AIRCRAFT CONTROLS

Our broad technology portfolio and collaborative customer relationships deliver high value-added, tailored solutions to commercial and military customers.

“The strength of our military aircraft business has enabled us to manage these challenging times. We’ll build on that strength as the commercial market recovers. The Genesys and Surefly acquisitions, together with our technology investments, are the building blocks that will position Moog as a market leader on the next generation of aircraft. We are in this for the long-term and our investments are a reflection of that commitment.”

– Mark Trabert, President, Aircraft Controls Segment

Product Portfolio

- Integrated flight control systems
- Flight control computers and flight-critical software
- Primary and secondary flight control actuation – all technologies
- High lift flap/slat actuation systems
- Specialty actuation systems and critical control components

Military Aircraft Programs

Lockheed Martin: F-35 Lightning II, F-16 Fighting Falcon
 Boeing Military: F/A-18 E/F Super Hornet, F-15 Eagle, KC-46A Pegasus, MQ-25™
 Northrop Grumman: B-2 Spirit
 Eurofighter GmbH: EF2000 Typhoon
 Airbus Military: A400M Atlas, C295 Transport
 BAE Systems: Hawk Trainer
 Leonardo Aircraft: M-346 Master, C-27J Spartan
 Hindustan Aeronautics Limited/HAL India: Light Combat Aircraft/LCA
 Korea Aerospace Industries/KAI South Korea: T-50 Golden Eagle
 Aerospace Industrial Development Corporation/AIDC Taiwan: Advanced Jet Trainer/AJT
 Mitsubishi Heavy Industries/MHI Japan: F-2 Multirole Fighter
 Kawasaki Heavy Industries/KHI Japan: C-2 Military Transport
 Turkish Aerospace Industries/TAI Turkey: Hürjet Trainer

Military and Commercial Helicopter Programs

Bell-Boeing: V-22 Osprey Tilt-Rotor
 Sikorsky: Raider X (FARA-CP), UH-60 Black Hawk, S-76, S-92 / VH-92, CH-53
 Bell Textron: 360 Invictus (FARA-CP), B525 Relentless, V-280 Valor (FLRAA)
 Boeing Military: CH-47, AH-64 Apache
 Leonardo Helicopters: AW159 Lynx, T129 ATAK, AW609 Tilt-Rotor, AW101

Legacy Military Aircraft Sustainment

A-10, AH-64, AMX, B-1B, B-2, B-52, BAE-146, C-5, C-130, CH-46, CH-47, CH-53, E-2C, EA-6B, F-2, F-4, F-100, F/A-18C/D, F/A-22, Hawk, KC-10, KC-135, P-3, T-45, Tornado, U-2

Commercial Aircraft Programs

Airbus: A320, A330, A350, A380
 Boeing: 737, 747, 767, 777, 787
 COMAC: C919
 Embraer: E-Jets E2 Family

Business Jet Programs

Gulfstream: G280, G500, G600, G650, G700
 Bombardier: Challenger 350, 605; Global 5500, 6500, 7500, 8000

Legacy Commercial Aircraft and Business Jet Aftermarket

Airbus: A300, A340
 Boeing: 757, DC-8, DC-9, DC-10, MD-11, MD-80, MD-90
 Gulfstream: G350, G450
 Cessna: Citation X
 Bombardier: Challenger 300, 604, Global Express



Boeing MQ-25 T1 Stingray, unmanned test aircraft, refueling F/A-18 Super Hornet
 Courtesy of U.S. Navy / Boeing



MV-22B Osprey
 Courtesy of U.S. Navy / Seaman Mathew Cavenaile



Commercial aircraft flight control systems and components (Shown: Airbus A350-900)
 Courtesy of Chema Gomez



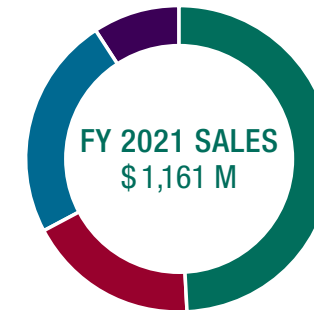
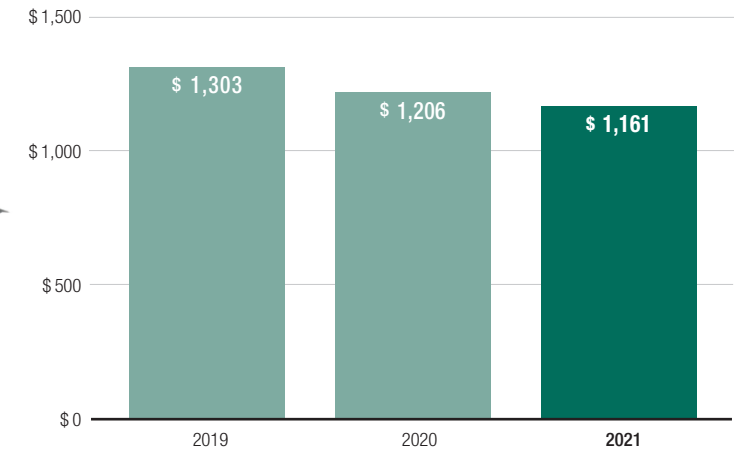
F-35C Lightning II
 Courtesy of U.S. Navy / MC Spec. 3rd Class James Hong

The F-35C carrier variant (CV) is the U.S. Navy's first stealth aircraft and its primary fighter aircraft of the future. The “C” is designed to take off and land on aircraft carriers. The F-35 is the first production aircraft whose primary flight control system exclusively uses next generation Electrohydrostatic Actuation (EHA) technology. Moog is the system integrator and supplier of EHA technology for all three F-35 variants, including actuators, electronics, and flight-critical software. Moog also supplies the maneuvering leading edge flap actuation system. On the U.S. Marine Corps F-35B, Moog's lift system components enable the Short Takeoff Vertical Landing (STOVL) capability. The carrier-based F-35C features a Moog wingfold actuation system that allows the F-35C's wingtips to fold for stowage.

Strategies and Initiatives

- Offering a broad portfolio of product technologies to design optimized control system solutions for our aircraft customers
- Partnering with our aftermarket customers to provide world class service and tailored business solutions
- Leveraging our global production and supply chain network to deliver high quality, cost competitive products

SEGMENT SALES (Dollars in millions)



● MILITARY AIRCRAFT OEM – 49%	\$ 574 M
● MILITARY AIRCRAFT AFTERMARKET – 18%	\$ 208 M
● COMMERCIAL AIRCRAFT OEM – 24%	\$ 274 M
● COMMERCIAL AIRCRAFT AFTERMARKET – 9%	\$ 105 M

Electronic Flight Instrumentation System (EFIS)

Genesys Aerosystems provides integrated avionics systems and autopilots for military and civil aircraft customers. Over 40,000 Genesys autopilot systems have been provided to global aircraft operators over the last 35 years. Its synthetic vision Electronic Flight Instrument System (EFIS) has revolutionized safety in low-level flight operations and is currently approved for use on more than 700 aircraft and helicopter models. Genesys' main flight software resides on the electronics box, which drives the system and interfaces with everything controllable on an aircraft. It contains a configurable patented technology, OASIS (Open Architecture System Integration Software), which allows the EFIS to interface and integrate with any system on an aircraft. Genesys products are hardware agnostic and can openly interface with every aircraft sub-system in the market. This includes all systems that a pilot needs to interact with: flight instrument displays, moving maps, horizontal situation indicator, flight planner, traffic, terrain, weather radar, datalink, video, radio/audio management, and engine displays.



- The EFIS system has TSO approval from the FAA.
- Enhances safety, reduces pilot workload, increases flexibility, and lowers the cost of operation.
- Approved for all classes of aircraft, the company's uniquely customizable open-architecture systems reduce integration costs and schedules for both OEM and retrofit applications.
- Support staff for integration includes electrical and mechanical engineers, A&P mechanics, avionics installers, conformity inspectors, administrators, and pilots.

Moog's 2021 acquisition of Genesys Aerosystems added a full suite of industry-leading avionics products to Moog's existing Aircraft Controls segment offerings.

Genesys' multi-function display and the primary flight display view. The system offers pilots other views during various modes of flight.

SPACE AND DEFENSE

We provide reliable hardware, integration and launch support to the space industry, and components and systems that are critical to the U.S. warfighter and our global military allies.

“Our business is solidly aligned with U.S. DOD priorities and emerging technology trends. We have a diversified and well-balanced portfolio of programs, and continue to drive strategic investments for our military and space customers. Undeniably, credit goes to our dedicated and experienced team for all that we’ve accomplished.”

– Maureen Athoe, President, Space and Defense Segment

Space Product Portfolio

- Global multi-tier provider of components, systems, and prime level integration
- Flight control actuation, avionics, propulsion controls for missiles and launch vehicles
- Integrated avionics, pointing mechanisms, vibration isolation systems, and propulsion for satellites
- Environmental systems (ECLSS) for human exploration
- Orbital Maneuvering Vehicles (OMV)

Launch Vehicle, Human Exploration, Hypersonic Vehicle, and Strategic Missile Platforms

NASA: Space Launch System, Orion, Habitation and Logistics Outpost
 Japan Aerospace Exploration Agency: H2 Transfer Vehicle
 U.S.: Boeing CST-100 Starliner, ULA Atlas V, Delta IV, Vulcan, Virgin Orbit LauncherOne
 Northrop Grumman Antares, Lockheed Martin HELLFIRE®, THAAD, Trident D-5,
 U.S. Air Force Minuteman III, Raytheon TOW, Tomahawk, MALD®, EKV

Satellite and Robotic Space Exploration Platforms

NASA: James Webb Space Telescope, Roman Space Telescope, DART, VIPER, Mars Perseverance, LUCY, Europa Clipper
 European Space Agency: Galileo, Jupiter Icy Moons Explorer, ExoMars 2022
 U.S.: MAXAR 1300-Class and Legion-Class, Lockheed Martin LM2100, Boeing 702, Northrop Grumman GEOStar, ESPAStar, Mission Extension Vehicle

Defense Product Portfolio

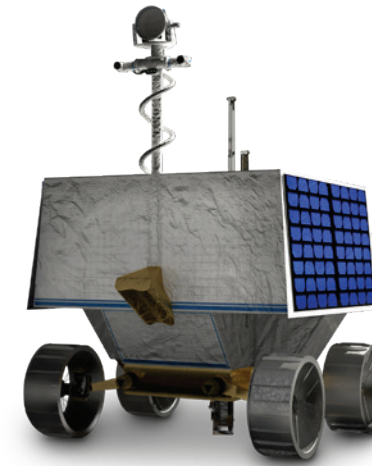
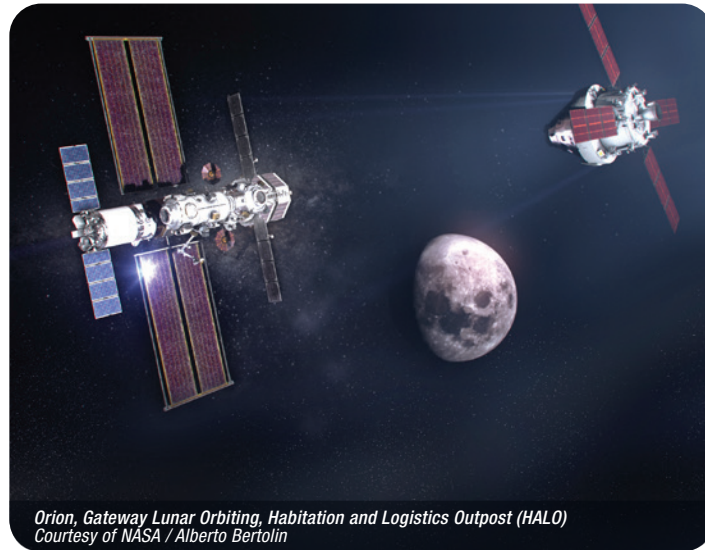
- Coordinated multi-axis motion control for military vehicles and vessels including submarines for mission critical applications
- Fin and control actuation for tactical, hypersonic, and interceptor missiles
- Fully-integrated turreted weapons systems – RIWP®
- Slip rings, motors, actuators, and electronics for military vehicles and electro-optical systems
- Weapon stores management systems and launchers

Defense Systems – Europe and Asia-Pacific Platforms

Australian Department of Defence: ASLAV, M113 (Platform Sustainment)
 CTA International: Jaguar EBRC IFV 40mm Turret
 Hensoldt: TRML-4D Surveillance Radar, PreciSR Airborne Radar
 Krauss-Maffei Wegmann: FLW 100/200 RWS, RCH155, PZH2000 Howitzer
 Leonardo: Ariete Main Battle Tank

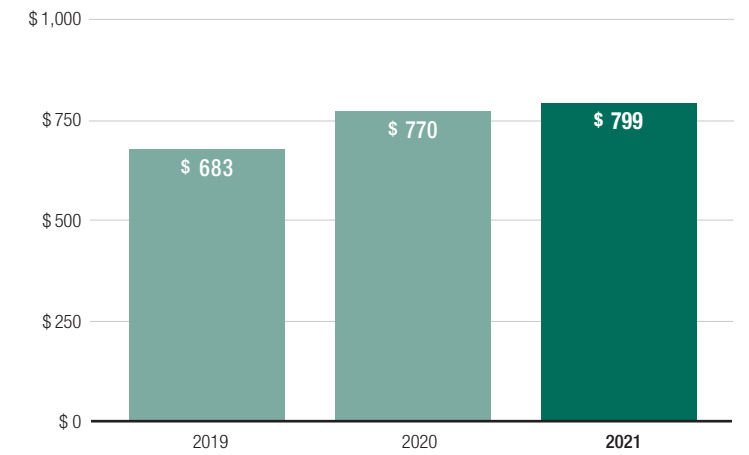
Defense and Naval Controls – U.S. Platforms

U.S. Army: MLIDS c-UAS, M-SHORAD
 General Dynamics: Abrams, LAV-25, Littoral Combat Ship MK46
 General Dynamics Electric Boat: Virginia-Class and Columbia-Class Submarines
 Lockheed Martin: Aegis Combat System, AC-130J Gunship
 Northrop Grumman: G/ATOR, Large Aircraft Infrared Countermeasures/LAIRCM
 Raytheon: LAV-AT, Multi-Spectral Targeting Sys/MTS, Commander’s Independent Viewer
 SAIC/OTS: Mark 48 Torpedo



The Volatiles Investigating Polar Exploration Rover, or VIPER, is NASA’s first mobile robotic rover mission to the Moon. Moog components will be part of the main computer and power management source for the Rover’s 2023 mission. About the size of a golf cart, the VIPER will traverse the Moon’s South Pole. The Integrated Avionics Unit (IAU) and Spacecraft Energization and Power Interfacing Assembly (SEPIA) will be the main computer and power management source for VIPER – essentially the “brains” of the Rover. The mission will determine the concentration of water and ice that could eventually be harvested to sustain human exploration.

SEGMENT SALES (Dollars in millions)



DEFENSE CONTROLS – 58%	\$ 466 M
SPACE – 42%	\$ 333 M

Strategies and Initiatives

- We are dedicated to our mission: “Equipping those who defend freedom”
- Our existing portfolio of military programs is aligned with U.S. defense priorities
- Our technologies and capabilities are supporting the return of U.S. human space flight and NASA’s deep space exploration programs
- By exploiting our expertise in critical components, we provide extraordinary solutions for our Space and Defense customers
- We are the “Agile Prime” – flexible and responsive to our customers’ needs

Gremlins Unmanned Air System (UAS)

The Defense Advanced Research Projects Agency, or DARPA, initiated the Gremlins project in 2016. Production of the initial X-61 Gremlin air vehicle was awarded to Dynetics, with Moog electromechanical actuation systems providing the precision motion control. Moog X-61 content includes the tail fin control, wing deploy, and the fin control for the attitude-controlled bullet in the drone’s recovery system, developed in collaboration with Dynetics. Moog leveraged previously flight-qualified elements to achieve program reliability and cost targets. For 70 years, Moog has provided precision steering controls for weapons programs and has been a leader in the transition from hydraulic and pneumatic actuation to robust electromechanical actuation technologies.

The DARPA-led program is developing low-cost, reusable drone swarms that can be used for intelligence, surveillance, and reconnaissance missions. The concept has swarms deploying from fixed-wing aircraft platforms out of adversary range. DARPA’s strategy includes the ability to reuse each unmanned air system (UAS) up to 20 times. The capture system has each Gremlin UAS docking to a probe extended from an aircraft and then reeled into the aircraft. Post-retrieval, the Gremlins are refueled and rearmed for next-mission capability within a 24-hour timeframe. Its modular design allows a Gremlin drone to quickly switch from sensor carrier to weapons carrier. The X-61 is 14 feet long and can fly up to 450 mph.



Releasing multiple UA systems with coordinated capabilities offers U.S. forces improved operational flexibility. The program’s testing phase is complex and involves proving technical feasibility for reeling in the Gremlin and loading it on to an in-flight C130 aircraft. DARPA oversees approximately 250 U.S. research and development programs with technology innovators like Moog to invest in and to deliver breakthrough transformational technologies often related to national security.



INDUSTRIAL SYSTEMS

We create a competitive advantage for our customers by providing unique motion control solutions.

“We demonstrated tremendous resilience responding to the pandemic and to the significant changes in customer demand. We created a safe work environment in which we could continue to meet our customer commitments. We have seen strengthening demand especially in industrial automation, and we are optimistic for the future.”

– Pat Roche, President, Industrial Systems Segment



Steel mill processing

Product Portfolio

- Hydraulic servovalves, including valves with embedded intelligence
- Controllers, servo drives and software for motion control applications
- High-performance servo pumps for a wide range of high-end industrial applications
- Brushless DC and servo electric motors for material handling and industrial automation
- Ball and roller screws for injection and blow molding machinery and harsh environment industrial systems
- Highly reliable electric, electro-hydrostatic and hydraulic actuation systems for industrial motion control, simulation, and test applications
- Medical OEM air detection sensors, surgical handpieces, ambulatory care infusion pumps and enteral feeding pumps
- Motors and blowers for sleep therapy (CPAP), ventilators and portable oxygen concentrators
- Fiber optic rotary joints, acoustic sensors, sonars, and video cameras for subsea imaging and Remotely Operated Vehicles (ROVs)
- Slip ring, fluid rotary unions and combination units for industrial automation, construction equipment and Floating Production, Storage and Offloading (FPSO) vessels

Industrial Automation Applications

Plastic injection and blow molding machine controls – both hydraulic and electric, steel production, metal forming and presses, packaging, robotics, construction, material handling and industrial automation

Medical Applications

Oxygen therapy, sleep therapy, computed tomography (CAT scan), intravenous (I.V.) pumps, enteral pumps, sensors, surgical handpieces

Simulation and Test Applications

Flight simulation motion systems including Level D certified motion bases and G-seats for realistic pilot training, hydraulic and electric automotive turnkey testing systems for component performance and structural testing, aerospace turnkey testing systems for iron bird, structural and components

Energy / Marine Applications

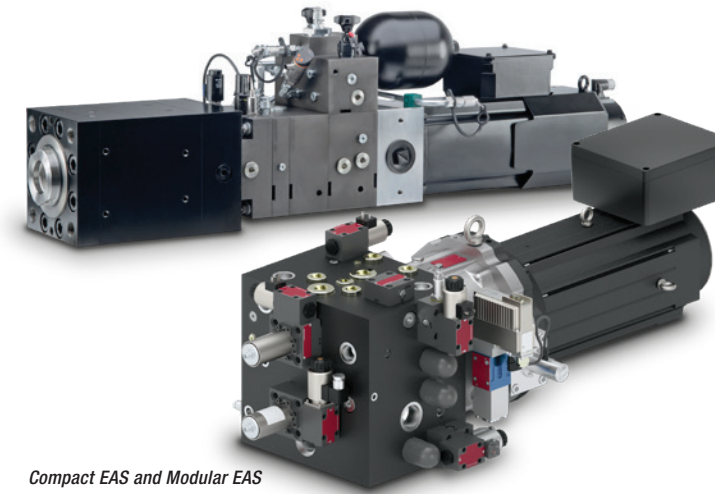
Gas and steam turbine solutions, wind energy turbine components, oil and gas exploration and production solutions, Remotely Operated Vehicles (ROVs), Floating Production, Storage and Offloading (FPSO) vessels



Oil and gas exploration and production solutions



Moog IV and enteral feeding pumps



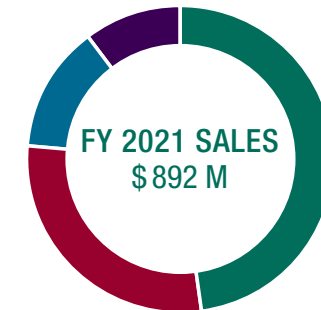
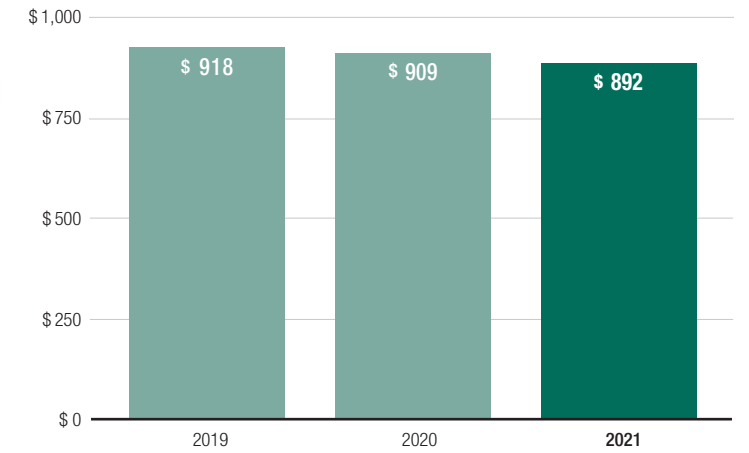
Compact EAS and Modular EAS

Moog's new compact Electrohydrostatic Actuation System (EAS) is quieter, uses less oil and less energy, and is easy to maintain. Unlike conventional hydraulic systems, everything on the compact system is integrated – there are no pipes or hoses. Moog's new modular system is highly flexible, featuring standardized modules and customization options to meet the specific requirements of machine designers. The system's basic manifold and pump module can be combined with options to build a complete motion control system for industrial manufacturing machinery. The high force capability and force density of all Moog systems provide an alternative to electrohydraulic (EH) or electromechanical (EM) systems.

Strategies and Initiatives

- Expanding our high-end hydraulic valves, pumps and hybrid solutions offering
- Creating differentiated electromechanical components and solutions
- Maintaining slip ring leadership position and building fluid rotary union offerings
- Delivering solutions with a level of performance that our customers believe is impossible and our competitors cannot replicate
- Expanding our homecare medical infusion pump business

SEGMENT SALES (Dollars in millions)



INDUSTRIAL AUTOMATION – 48%	\$ 427 M
MEDICAL – 29%	\$ 255 M
ENERGY / MARINE – 13%	\$ 120 M
SIMULATION AND TEST – 10%	\$ 90 M

Gen3 Level D Motion System

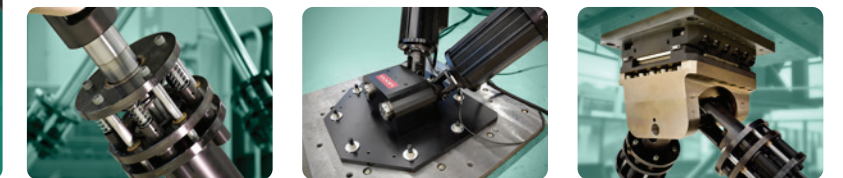
Moog motion systems provide high-fidelity motion that enhances safety and the operational effectiveness of flight crews on multiple aircraft platforms. Training simulators combine an aircraft's flight deck and controls with a real-world visual system to replicate the operating characteristics of virtually every commercial and military aircraft in operation.

In 2006, Moog designed and built the first all-electric motion system to achieve Level D Flight Certification by the U.S. Federal Aviation Authority (FAA). The Level D rating is based on the evaluation of a simulator's realism in relation to a pilot flying an actual aircraft. Since then, Moog has delivered more than 1,000 high-payload Level D electric systems.



Moog's new third generation all-electric Level D full flight motion system, the Gen3, delivers an all-electric experience that focuses on reduced cost of ownership for OEMs and flight training center operators. Customer feedback and extensive design and customer support experiences led to Gen3 system upgrades that offer improved energy use and management, field-replaceable components, and a 50% reduction in power cabinet size. Moog's service network provides support to customers in 27 countries on six continents, in each customer's local language.

Innovation and technological expertise combined with close customer collaboration make Moog a leader in the flight simulation for the global aviation training market.



FINANCIAL REVIEW

(Dollars and shares in millions, except per share data)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012*	2011*
SEGMENT SALES											
AIRCRAFT CONTROLS	\$ 1,161	\$ 1,206	\$ 1,303	\$ 1,194	\$ 1,125	\$ 1,064	\$ 1,087	\$ 1,118	\$ 1,060	\$ 964	\$ 850
SPACE AND DEFENSE ¹	\$ 799	\$ 770	\$ 683	\$ 581	\$ 529	\$ 499	\$ 381	\$ 395	\$ 396	\$ 359	\$ 356
INDUSTRIAL SYSTEMS ¹	\$ 892	\$ 909	\$ 918	\$ 935	\$ 843	\$ 849	\$ 522	\$ 591	\$ 592	\$ 634	\$ 629
COMPONENTS ¹	–	–	–	–	–	–	\$ 536	\$ 545	\$ 563	\$ 514	\$ 495
NET SALES	\$ 2,852	\$ 2,885	\$ 2,905	\$ 2,709	\$ 2,498	\$ 2,412	\$ 2,526	\$ 2,648	\$ 2,610	\$ 2,470	\$ 2,331
EARNINGS BEFORE TAXES	\$ 204	\$ 5	\$ 227	\$ 184	\$ 182	\$ 173	\$ 184	\$ 219	\$ 165	\$ 209	\$ 184
ADJUSTED EARNINGS BEFORE TAXES ²	N/A	\$ 197	N/A	\$ 221	–	–	–	–	–	–	–
NET EARNINGS	\$ 157	\$ 9	\$ 175	\$ 97	\$ 141	\$ 127	\$ 132	\$ 158	\$ 120	\$ 152	\$ 136
ADJUSTED NET EARNINGS ²	N/A	\$ 157	N/A	\$ 165	–	–	–	–	–	–	–
NET RETURN ON SALES	5.5%	0.3%	6.0%	3.5%	5.7%	5.3%	5.2%	6.0%	4.6%	6.2%	5.8%
EARNINGS PER SHARE											
BASIC EPS	\$ 4.90	\$ 0.28	\$ 5.01	\$ 2.67	\$ 3.99	\$ 3.49	\$ 3.39	\$ 3.57	\$ 2.66	\$ 3.37	\$ 2.99
DILUTED EPS	\$ 4.87	\$ 0.28	\$ 4.96	\$ 2.64	\$ 3.95	\$ 3.47	\$ 3.35	\$ 3.52	\$ 2.63	\$ 3.33	\$ 2.95
ADJUSTED EPS ²	N/A	\$ 4.81	N/A	\$ 4.57	–	–	–	–	–	–	–
DILUTED WEIGHTED-AVERAGE SHARES OUTSTANDING (in millions)	32.3	33.4	35.2	36.1	36.2	36.5	39.3	45.0	45.8	45.7	46.0
RESEARCH AND DEVELOPMENT	\$ 126	\$ 111	\$ 126	\$ 130	\$ 144	\$ 147	\$ 132	\$ 139	\$ 135	\$ 116	\$ 106
CAPITAL EXPENDITURES	\$ 129	\$ 88	\$ 118	\$ 95	\$ 76	\$ 67	\$ 81	\$ 79	\$ 93	\$ 107	\$ 84
DEPRECIATION AND AMORTIZATION	\$ 90	\$ 87	\$ 85	\$ 89	\$ 90	\$ 99	\$ 104	\$ 109	\$ 108	\$ 101	\$ 96
AT YEAR END											
TOTAL ASSETS	\$ 3,433	\$ 3,226	\$ 3,114	\$ 2,964	\$ 3,091	\$ 3,005	\$ 3,037	\$ 3,140	\$ 3,151	\$ 3,106	\$ 2,843
WORKING CAPITAL	\$ 849	\$ 903	\$ 901	\$ 798	\$ 997	\$ 938	\$ 931	\$ 849	\$ 834	\$ 885	\$ 834
INDEBTEDNESS – TOTAL	\$ 904	\$ 930	\$ 833	\$ 863	\$ 957	\$ 1,006	\$ 1,070	\$ 872	\$ 706	\$ 765	\$ 725
SHAREHOLDERS' EQUITY	\$ 1,400	\$ 1,243	\$ 1,322	\$ 1,225	\$ 1,214	\$ 988	\$ 995	\$ 1,347	\$ 1,536	\$ 1,305	\$ 1,192
BACKLOG (12 month)	\$ 2,100	\$ 1,658	\$ 1,502	\$ 1,481	\$ 1,212	\$ 1,225	\$ 1,273	\$ 1,340	\$ 1,296	\$ 1,279	\$ 1,325
NUMBER OF FULL-TIME EMPLOYEES	12,847	12,623	12,809	11,787	10,675	10,497	10,691	11,031	11,152	10,976	10,320

¹ The former Components segment has been divided and merged into the Space and Defense and Industrial Systems segments.

² 2018 adjusted EPS of \$4.57 excludes the impact of charges associated with exiting the wind pitch controls business and special impacts from the U.S. Tax Act.

² 2020 adjusted EPS of \$4.81 excludes the impact of per share charges associated with the COVID-19 pandemic (\$1.68) and pension settlement accounting (\$2.85).

* Not restated for Total Assets, Working Capital and Indebtedness.

Amounts may not equal the total due to rounding.

INVESTOR INFORMATION

Annual Meeting of Shareholders

Our Annual Meeting will be held on February 8, 2022. For more information go to www.moog.com/proxy.

Reports

Shareholders have electronic access to our annual report / Form 10-K and Proxy Statement. Hard copies of these and our other public reports are available by contacting us via email, telephone or letter at:

Investor Relations

Moog Inc.

East Aurora, New York 14052-0018

Phone: 716-687-4225

Email: investorrelations@moog.com

Shareholders who hold Moog stock with a broker or bank nominee and wish to receive press releases via e-mail should contact Investor Relations.

Transfer Agent and Registrar

Equiniti (EQ) Shareowner Services is the stock transfer agent and registrar maintaining shareholder accounting and ownership records, dividend history and tax forms.

Please direct inquiries to:

EQ Shareowner Services MAC N9173-010

1110 Centre Pointe Curve, Suite 101

Mendota Heights, MN 55120

Toll Free: 1-800-468-9716

Secure online access is available at www.shareowneronline.com.

Independent Auditors

Ernst & Young LLP

New York Stock Exchange

Our two classes of common shares are traded on the New York Stock Exchange under the ticker symbols MOG.A and MOG.B.

Electronic Information

We have a website for investors which includes:

- Press releases
- Financial results and archived webcasts
- SEC filings
- Corporate governance and ESG information
- Answers to frequently asked questions
- Transfer agent information

Please visit <http://www.moog.com/investors>

Note that not all information contained on our website is incorporated into this annual overview or our other SEC filings.

Affirmative Action Program

In recognition of our role as a contributing corporate citizen, we have adopted all programs and procedures in our Affirmative Action Program as a matter of Corporate policy.

Data Privacy

Moog Inc. is committed to protecting personal data in accordance with its responsibilities under U.S. and worldwide privacy regulations, including the General Data Protection Regulation (GDPR).

Photographic Images

The appearance of U.S. Department of Defense (DoD) visual information does not imply or constitute DoD endorsement. NASA images incorporated do not imply endorsement by NASA.

Front Cover:

Moog senior manufacturing engineer Aaron Ramos inspecting an A350 primary flight control actuation system manifold in Moog's East Aurora, NY automated manufacturing cell

Back Cover:

Moog model shop, East Aurora, NY, late 1950s



MOOG

2021 | ANNUAL REPORT

Design and production by Moog Creative Media

A teal-tinted photograph of a factory floor. In the foreground, a worker is seen from the back, focused on a task. In the background, other workers and industrial machinery are visible. The overall scene is one of a busy manufacturing environment.

Every day an
EXTRAORDINARY
group of **PEOPLE**
come together
to devote their
TIME AND ENERGY
to build the
BEST PRODUCT
of its type
built anywhere
in the world.

MOOG

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