

Storage Battery Technology Supporting Transportation and Infrastructure

We develop, manufacture, and supply to the world the batteries that are essential for starting automobiles and batteries that support industrial vehicles, such as electric trains and forklifts, as well as power plants and other social infrastructure facilities. Conditions by business sector and financial performance are available on PP. 39-56.



Business sector	Breakdown of net sales	Net sales	Main product	Main applications	Main product profit models	
Automotive batteries (Japan) 		FY2019 ¥88,059 million Year-on-year change Down 3.7%	<ul style="list-style-type: none"> Lead-acid batteries 	<ul style="list-style-type: none"> Automobiles <ul style="list-style-type: none"> General Vehicles with start-stop systems (ISS: idling stop systems) Hybrid electric vehicles (HEVs) Plug-in hybrid electric vehicles (PHEVs) Electric vehicles (EVs) Motorcycles 	<ul style="list-style-type: none"> For starting For auxiliary equipment 	<ul style="list-style-type: none"> Automotive and motorcycle lead-acid batteries We sell new-vehicle lead-acid batteries to automobile and motorcycle manufacturers. Later, we sell spare lead-acid batteries to a wide-ranging sales network for replacement during vehicle inspections and maintenance and profit is generated continuously until the vehicle is no longer used. Automotive lead-acid batteries Second in the world First in Asia Motorcycle lead-acid batteries First in the world
Automotive batteries (Overseas) 		FY2019 ¥162,138 million Year-on-year change Down 8.4%				
Industrial batteries and power supplies 		FY2019 ¥84,566 million Year-on-year change Up 5.7%	<ul style="list-style-type: none"> Lead-acid batteries Lithium-ion batteries Various power supply devices Lighting equipment 	<ul style="list-style-type: none"> Social infrastructure including mobile phone base stations, office buildings, water and sewer systems, power plants and transformer stations, and railways Solar power and wind power generation systems Battery-powered forklifts, electric wheelchairs, and other electric-powered vehicles Street lighting, tunnel lighting, park and city street lighting 	<ul style="list-style-type: none"> Backup lead-acid batteries and power supplies, lithium-ion batteries We make proposals from the new facility design stage for made-to-order products that are individually designed and manufactured according to the customer's use conditions and installation location, perform subcontracting including construction, and deliver the products. After delivery, periodic inspection and maintenance are necessary, and we generate continuous profits. Lead-acid batteries for forklifts We sell new-vehicle lead-acid batteries to forklift makers. Later, we sell spare lead-acid batteries for replacement during vehicle inspections and maintenance and profit is generated continuously until the vehicle is no longer used. 	
Automotive lithium-ion batteries 		FY2019 ¥42,264 million Year-on-year change Down 7.3%	<ul style="list-style-type: none"> Lithium-ion batteries 	<ul style="list-style-type: none"> Automobiles <ul style="list-style-type: none"> HEVs PHEVs EVs General ISS vehicles 	<ul style="list-style-type: none"> For auxiliary equipment For drive force (including assist) For starting 	<ul style="list-style-type: none"> Automotive lithium-ion batteries We sell new-vehicle lithium-ion batteries to automobile manufacturers. Product life spans are long, so in principle, there is no replacement demand.
Others 		FY2019 ¥18,525 million Year-on-year change Down 2.2%	<ul style="list-style-type: none"> Lead-acid batteries Lithium-ion batteries Batteries for special applications 	<ul style="list-style-type: none"> Submarines Manned research submersibles Satellites Rockets Aircraft Other special applications 	<ul style="list-style-type: none"> Lithium-ion batteries for special applications These batteries are used under demanding environmental conditions, and as a result, maximum levels of performance and quality are needed. We seek to distinguish our products through high technology levels and sell high value-added products. 	

We pursue production in the optimal location for sale in the optimal location.

GS Yuasa automotive and motorcycle lead-acid batteries boast top-class global market shares. We conduct marketing and proposal activities in global markets tailored to the needs of each region.



Region
 ■ Head office ■ Manufacturing ■ Manufacturing & Sales
 ■ Sales ★ Research & Development

Market characteristics

Breakdown of net sales

Net sales

Main Group companies

Region	Market characteristics	Breakdown of net sales	Net sales	Main Group companies
Japan Automotive lead-acid batteries Motorcycle lead-acid batteries No.1 market share	<ul style="list-style-type: none"> Automobiles: Gradual decline in overall demand <ul style="list-style-type: none"> Electrification is advancing, primarily through HEVs Supplementary demand for ISS vehicles is gradually increasing Adoption by Japanese automobile manufacturers of batteries that comply with the European Norm (EN) is increasing Adoption of new technologies such as autonomous driving in vehicles is increasing Industrial use: Expanding social infrastructure needs <ul style="list-style-type: none"> The markets for 5G mobile communications systems and disaster prevention-related equipment are strong Adoption of renewable energy is expanding 		FY2019 ¥212,864 million Year-on-year change Up 1.8%	GS Yuasa International Ltd. GS Yuasa Battery Ltd. GS Yuasa Technology Ltd. GS Yuasa Energy Co., Ltd. Lithium Energy Japan Blue Energy Co., Ltd. GS Yuasa Power Fieldings Ltd.
Asia Automotive lead-acid batteries Motorcycle lead-acid batteries No.1 market share	<ul style="list-style-type: none"> Automobiles: Steady increase over the long term <ul style="list-style-type: none"> Demand for automobiles is growing as income levels rise and populations increase Conventional gasoline engines remain the core part of the market (including ISS vehicles) Motorcycle ownership rates are high compared to other regions 		FY2019 ¥103,210 million Year-on-year change Down 7.4%	China Yuasa Battery (Guangdong) Co., Ltd./Yuasa Battery (Shunde) Co., Ltd./Tianjin Yuasa Batteries Co., Ltd./Tianjin GS Battery Co., Ltd./GS Battery (China) Co., Ltd./Shanghai GS Toptiger Motive Power Co., Ltd. Taiwan GS Battery Taiwan Co., Ltd./Taiwan Yuasa Battery Co., Ltd. Thailand GS Yuasa Asia Technical Center Ltd./ Yuasa Battery (Thailand) Pub. Co., Ltd./Siam GS Battery Co., Ltd./Siam GS Sales Co., Ltd./Yuasa Sales and Distribution Co., Ltd./GS Yuasa Siam Industry Ltd./GS Yuasa Siam Sales Ltd. Malaysia GS Yuasa Battery Malaysia Sdn. Bhd./Yuasa Power Systems (Malaysia) Sdn. Bhd. Vietnam GS Battery Vietnam Co., Ltd. Indonesia PT. Yuasa Battery Indonesia/ PT. Trimitra Baterai Prakasa/PT. GS Battery Myanmar Siam GS Battery Myanmar Limited Pakistan Atlas Battery Ltd. India Tata AutoComp GY Batteries Private Limited
Europe and United States	<ul style="list-style-type: none"> Automobiles: Stable replacement demand <ul style="list-style-type: none"> Leading the global tightening of environmental regulations regarding automobiles Transition to next-generation vehicles is proceeding Industrial use: Demand in growth fields is increasing <ul style="list-style-type: none"> Rising demand for data centers and renewable energy Increasing demand for logistics-related equipment as a result of the spread of e-commerce 		FY2019 ¥54,845 million Year-on-year change Down 13.6%	USA GS Yuasa Energy Solutions, Inc./GS Yuasa Lithium Power, Inc./Yuasa Battery, Inc. UK GS Yuasa Battery Manufacturing UK Limited/GS Yuasa Battery Sales UK Limited Italy GS Yuasa Battery Italy S.R.L. Spain GS Yuasa Battery Iberia SA Germany GS Yuasa Battery Germany GmbH. France GS Yuasa Battery France SAS Hungary GS Yuasa Hungary Ltd. Turkey Inci GS Yuasa Aku Sanayi ve Ticaret Anonim Sirketi
Others	<ul style="list-style-type: none"> Automobiles: Sluggish demand despite continued economic growth (Australia) <ul style="list-style-type: none"> Interest in Japanese automakers is high 		FY2019 ¥24,633 million Year-on-year change Down 15.0%	Australia Century Yuasa Batteries Pty Ltd. New Zealand Century Yuasa Batteries (NZ) Ltd.