

Others

Air-Conditioning & Refrigeration Systems



Masahiko Arihara
Head of
Air-Conditioning & Refrigeration Systems



The "Q-ton" commercial-use CO₂ refrigerant heat pump water heater (ESA30)

Basic Strategy

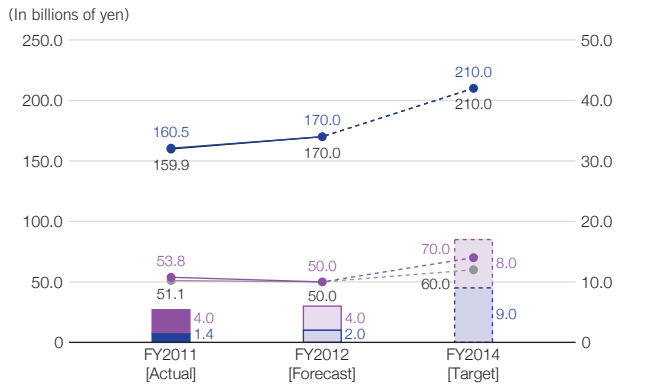
Air-Conditioning & Refrigeration Systems

- Establish a light, nimble business structure
- Develop business as a dominant niche player

Machine Tool

- Strengthen businesses as pillars of profit
- Expand new growth businesses
- Upgrade process technologies

FY2014 targets



Air-Conditioning & Refrigeration Systems

● Orders received (left scale) ● Net sales (left scale) ■ Operating income (right scale)

Machine Tool

● Orders received (left scale) ● Net sales (left scale) ■ Operating income (right scale)

Air-Conditioning & Refrigeration Systems

Fiscal 2011 Review

Air-Conditioning & Refrigeration Systems saw lower orders for Automotive Thermal Systems, tracking lackluster automobile production in Japan due to the lingering impact of the Great East Japan Earthquake, a strong yen and other negative factors. Orders increased, however, for Residential Air Conditioners and Commercial Air Conditioners on the back of demand from Europe. As a result, the total value of consolidated orders and consolidated net sales for Air-Conditioning & Refrigeration Systems rose to ¥160.5 billion and ¥159.9 billion, respectively, with operating income of ¥0.5 billion.

Future Initiatives

MHI is taking steps to spur business-scale expansion in the run-up to completion of the 2012 Business Plan by accelerating the overseas development of air-conditioner products and Automotive Thermal Systems. For air-conditioner products, MHI will promote sales expansion in China and other Asian markets, as well as a shift to overseas production for Commercial Air Conditioners. In Automotive Thermal Systems in fiscal 2011, in addition to preparing to bring a new factory built in

Relationship Between Air-Conditioning & Refrigeration Systems, Machine Tool and Business Domains

Business domain	Customers/ Markets	Segment					Others (Air-Conditioning/ Machine Tool)
		Shipbuilding & Ocean Development	Power Systems	Machinery & Steel Infrastructure Systems	Aerospace Systems	General Machinery & Special Vehicles	
Energy & Environment	<ul style="list-style-type: none"> • Power companies • Gas companies • Resource companies (oil, chemicals, steel) 		<ul style="list-style-type: none"> • GTCC • Large-sized thermal power plants • Nuclear energy 	<ul style="list-style-type: none"> • Environmental plants • Chemical plants 			
Machinery, Equipment & Systems	<ul style="list-style-type: none"> • Core industries (steel, etc.) • Automotive industry • Logistics, etc. 		<ul style="list-style-type: none"> • Stationary engines 	<ul style="list-style-type: none"> • Compressors • Iron and steel machinery • Crane and material handling systems 		<ul style="list-style-type: none"> • Turbochargers • Forklift trucks • Engines 	<ul style="list-style-type: none"> • Air-conditioning equipment • Machine tools
Transportation	<ul style="list-style-type: none"> • Airlines (air) • Shipping companies (sea) • Railways (land), etc. 	<ul style="list-style-type: none"> • Commercial ships 		<ul style="list-style-type: none"> • Transportation systems 	<ul style="list-style-type: none"> • Commercial aircraft 		
Defense & Aerospace	<ul style="list-style-type: none"> • Ministry of Defense (land, sea, air) • JAXA 	<ul style="list-style-type: none"> • Destroyers and submarines for the Ministry of Defense 			<ul style="list-style-type: none"> • Defense aircraft • Missiles • Space systems 	<ul style="list-style-type: none"> • Special vehicles 	

Machine Tool



Yukio Kodama
Head of
Machine Tool



Gear Grinding Machine

Thailand online, full-scale mass production has resumed at MHI's base in the U.S. The establishment of an operating company for Automotive Thermal Systems in 2013, meanwhile, is another action that will enhance cost competitiveness by quickening the pace of global business development. In Heat-Pump Hot Water systems, MHI has a dominant lineup of products that it will leverage to grow sales in Europe and China.

Machine Tool

Fiscal 2011 Review

Orders for machine tools increased domestically and globally, reflecting vigorous capital investment overseas by Japanese automakers and construction machinery manufacturers, along with order growth from China and Southeast Asia. The total value of consolidated orders and net sales for the Machine Tool segment rose to ¥53.8 billion and ¥51.1 billion, respectively. Operating income rose year on year to ¥3.6 billion, buoyed by growth in sales of machine tools.

Future Initiatives

MHI will strengthen businesses identified as pillars of profit. The objective here is to build a business structure based on two businesses with different market characteristics—machine tools and precision machinery products—that is resistant to market fluctuations. In gear-cutting machines, MHI will establish a production site in India equipped with sales and service functions. Meanwhile, China-based Mitsubishi Heavy Industries (Changshu) Machinery Co., Ltd. will serve as a key base for increased production capacity, as MHI expands operations in China. In precision cutting tools, MHI is establishing MHI-India Precision Tools Ltd. (MHI-IPT) as its main base in India, and will augment production capacity and take steps to reduce product delivery lead times. Elsewhere, MHI is targeting a new customer base and aiming for a top three industry position following the acquisition of U.S.-based Federal Broach Holdings, LLC. In a bid to shore up its earnings potential through expansion of new growth businesses, MHI will also pursue the full-scale commercialization of hollow-head engine valves. With sights set on a business scale of ¥100.0 billion and a world-leading share in gear cutting machines and large machines, MHI is committed to making fast and steady strides in implementing its 2012 Business Plan strategy in this segment.