

Main Patents

■ Patents registered in 2012

Registration Number	Name	Inventor(s)
EP Patent 2157489	Motor Control System	Yuuji Ide
EP Patent 2284552	Method of Inspecting Motor Condition and Device for Inspecting Motor Characteristics	Akihiko Takahashi
U.S. Patent 8172501	Counter-Rotating Axial-Flow Fan	Toshiya Nishizawa, Yasuhiro Maruyama, Hayato Murayama
U.S. Patent 8197198	Fan System	Yoshinori Miyabara, Jirou Watanabe, Hiromitsu Kuribayashi
U.S. Patent 8198760	Linear Motor	Satoshi Sugita, Kouji Misawa, Yu Qi Tang
U.S. Patent 8283822	Small-Sized Motor	Daigo Kuraishi, Akira Shimizu
U.S. Patent 8164008	Electrical Apparatus	Haruhisa Maruyama, Tomoaki Ikeda, Takahisa Toda
U.S. Patent 8288709	Optical Encoder Device	Yoshihiro Shoji
U.S. Patent 8289713	Heat Radiation Structure of Electric Apparatus	Toshihito Miyashita, Hiroshi Hioki, Masakazu Chikyu
U.S. Patent 8358124	Magnetic Absolute Encoder	Shigeharu Katou, Kazuhiro Makiuchi, Shouji Itou, Tooru Miyajima, Tomohito Yamazaki, Masato Matsuda, Toshiaki Ayuzawa
China Patent ZL200910146361.6	Movable Assembly for Cylinder-Type Linear Motor	Yu Qi Tang, Satoshi Sugita
China Patent ZL200810170898.1	Electronic Component Cooling Apparatus	Tomoaki Ikeda, Masashi Miyazawa, Masayuki Iijima, Kouji Ueno, Co-developed with Intel Corporation
China Patent ZL200810128706.0	Control System for Synchronous Electric Motor	Yuuji Ide
China Patent ZL200810109264.5	Linear Motor	Yu Qi Tang, Satoshi Sugita
China Patent ZL200880024236.1	Counter-Rotating Axial-Flow Fan	Toshiyuki Nakamura, Atsushi Yanagisawa, Katsumichi Ishihara
China Patent ZL200910141734.0	Fan System	Yoshinori Miyabara, Jirou Watanabe, Hiromitsu Kuribayashi
China Patent ZL200910160272.7	Motor	Yukio Miura, Mitsuki Shioiri
Patent 5022479	Heat-Emitting Element Cooling Apparatus	Michinori Watanabe, Toshiki Ogawara, Haruhisa Maruyama
Patent 5211215	Electronic Component Cooling Apparatus	Tomoaki Ikeda, Masashi Miyazawa, Masayuki Iijima, Kouji Ueno, Co-developed with Intel Corporation
Patent 4988233	Linear Motor	Yu Qi Tang, Satoshi Sugita
Patent 4979256	Linear Motor	Yu Qi Tang, Satoshi Sugita
Patent 5193873	Motor Rotor and Manufacturing Method Thereof	Toshihito Miyashita, Takashi Matsushita, Kenji Tanaka
Patent 5193633	Linear Motor	Yu Qi Tang, Satoshi Sugita
Patent 5147853	Method Of Controlling Counter-Rotating Axial-Flow Fan	Honami Osawa, Kudou Naruhiko, Yoshihiko Aizawa
Patent 5171310	Airtight-Type Electric Motor	Shigenori Miyairi, Ikuo Takeshita, Kouji Nakatake, Hisayuki Miyajima
Patent 5065192	Motor Control System Including Electrical Insulation Deterioration Detecting System	Yuuji Ide
Patent 5171935	Optical Encoder Device	Yoshihiro Shoji, Yoshi Ishizuka, Shouji Itou
Patent 5129667	Axial-Flow Blower	Toshiyuki Nakamura, Masahiro Koike, Naoya Inada
Patent 4994324	Bearing Holder Mounting Structure, and Motor	Yukio Miura, Mitsuki Shioiri
Patent 5091025	Multi-Axis Driver System	Ryuuta Sugiyama, Nobutoshi Nakamura, Daisaku Furihata
Patent 4988657	Vehicle Equipped With Generator	Shinya Ootsuki

Patent 5199707	Three-Phase 3-Wire to Single-Phase 3-Wire Switching Electric Power-Generating Facility	Hiroyuki Kiuchi, Naohiko Shiokawa
Patent 5193897	Uninterruptible Power Supply System Using Electric Double-Layer Capacitor	Minoru Yanagisawa
Patent 4988796	Method of Inspecting Motor Condition and Device for Inspecting Motor Characteristics	Akihiko Takahashi
Patent 5043915	Poewr Supply Ststem for Driving Motor	Yuuji Ide
Patent 5166389	Poewr Supply Ststem for Driving Motor and Regeneration Method Using the Same	Yuuji Ide
Patent 5113862	Motor Controlling Apparatus	Yuuji Ide
Patent 5211027	Counter-Rotating Axial Flow Fan	Honami Osawa, Yoshihiko Aizawa
Patent 5194083	Method and System for Determining Deterioration of Permanent Magnets of Electric Apparatus	Akihiko Takahashi, Kouji Misawa, Manabu Horiuchi

Internal Recognition: Invention Grand Prize (Excellence Award)

May 2012 Commendations

Prize	Title of Paper	Division	Name
Excellence Award	Power Supply Systems	Power Systems Division, 1st Design Dept.	Yoshiaki Okui
Excellence Award	Spindle Motor Control Device	Servo Systems Division, 2nd Design Dept. Servo Systems Division, 2nd Design Dept.	Yuuji Ide Satoshi Yamazaki
Excellence Award	Development of the Power Conditioner with Peak-cut Function	Power Systems Division, 1st Design Dept. Power Systems Division, 1st Design Dept.	Naohiko Shiokawa Yuuji Wada

Internal Recognition: Manufacturing Grand Prize (Excellence Award)

May 2012 Commendations

Prize	Title of Paper	Division	Name
Excellence Award	Delivering Greater Productivity through Reforms in the Winding Completion Process	Servo Systems Division, 1st Design Dept. Servo Systems Division, 1st Production Dept.	Tooru Takeda Masato Kobayashi
Excellence Award	Improvements to Pre-heating for Oil-proof Fans	SANYO DENKI PHILIPPINES, INC. Production Dept. Final Assembly Line Improvement Group	—
Excellence Award	Start of Mass Production and Efforts to Reduce Work-hours for "Unit-type Power Supply H-Cabinet"	Power Systems Division, Production Dept.	Ryou Kanai

Technical Papers Published Outside the Company in General Technical Journals

April 2012 to March 2013

Title of Paper	Authors	Name of Journal	Issued	Publisher
Feature: 2012 Product and Technology Development from Member Companies and the Results Grid Management Device "SANUPS K23A (M Type)"	Sanyo Denki Co., Ltd.	Denki	2013.2	Japan Electrical Manufacturer's Association