




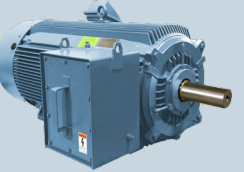


AboveNEMA Motor Features at a Glance

Medallion Series

Advantage Series

Open Motors (IP23 or IP24)		Enclosed Motors (IP54)				Specialty Products (All Type- per API data sheet) API 541 5th edition*** / API 547		Enclosed Motors (IP54)
					IEEE 841	API		

Construction Features								
Enclosure	ODP / WPI (IC01)	WPII (IC01)	TEWAC (ICW81)	TEFC (IC411)	TEAAC (IC611 or IC616)	IEEE 841	API 541 5th edition*** / API 547	TEFC (IC411)
Degree of Protection	IP23	IP24	IP54 / IP55 (SH630 / SH710)	IP54 / IP55 (SH400-880)	IP54 / IP55 (SH630 / SH710)	IP55	All	IP54
HP Range	200 - 9,000 HP	200 - 20,000 HP	200 - 20,000 HP	200 - 2,000 HP	200 - 14,000 HP	200 - 500 HP	250 - 18,000 HP	150 - 350 HP ¹
Frame Size / Shaft Height	500, 580, 680 & 800	500, 580, 680, 800, SH630 & SH710	580, 680, 800, SH630 & SH710	500, 580, SH400, SH450, SH450-880	580, 680, 800, SH630 & SH710	500 & 580	All	449 & S449
Voltage	380 - 13,200 V (460 - 690 V to 800 HP only)	380 - 13,200 V (380 - 690 V to 800 HP only)	380 - 13,200 V (380 - 690 V to 800 HP only)	380 - 11,000 V (380 - 690 V to 800 HP only)	380 - 13,200 V (380 - 690 V to 800 HP only)	460 - 4,000 V	2,300 - 13,200 V	2300 - 4000 V
Service Factor	1.0, 1.15 (optional)	1.0, 1.15 (optional)	1.0, 1.15 (optional)	1.0, 1.15 (optional)	1.0, 1.15 (optional)	1.0	1.0, 1.5 (optional)	1.0, 1.15 (optional)
Warranty	24 months from date of manufacture Deferred and / or Extended Warranty (optional)	24 months from date of manufacture Deferred and / or Extended Warranty (optional)	24 months from date of manufacture Deferred and / or Extended Warranty (optional)	24 months from date of manufacture Deferred and / or Extended Warranty (optional)	24 months from date of manufacture Deferred and / or Extended Warranty (optional)	24 months from date of manufacture Deferred and / or Extended Warranty (optional)	24 months from date of manufacture Deferred and / or Extended Warranty (optional)	36 months from shipment

Construction Materials								
Frame	Cast Iron	Cast Iron - 500 - 800 frames Fabricated Steel - SH630 / SH710	Cast Iron - 580 - 800 frames Fabricated Steel - SH630 / SH710	Cast Iron	Cast Iron - 580 - 800 frames Fabricated Steel - SH630 / SH710	Cast Iron	Cast Iron - 500-SH560 Fabricated Steel - SH630 / SH710	Cast Iron
Bearing Housings*	Cast Iron	Cast Iron - 500 - 800 frames Fabricated Steel - SH630 / SH710	Cast Iron - 580 - 800 frames Fabricated Steel - SH630 / SH710	Cast Iron - 500 - 880 frames Fabricated Steel - SH400 / SH560	Cast Iron - 580 - 800 frames Fabricated Steel - SH630 / SH710	Cast Iron	Cast Iron - 500-580 frames Fabricated Steel - SH630 / SH710	Cast Iron
Main Terminal Box	Cast Iron Fabricated Steel (optional)	Cast Iron - 500 - 800 frames Fabricated Steel (optional) Fabricated Steel - SH630 / SH710	Cast Iron - 580 - 800 frames Fabricated Steel (optional) Fabricated Steel - SH630 / SH710	Cast Iron (Fabricated Steel optional)	Cast Iron - 580 - 800 frames Fabricated Steel (optional) Fabricated Steel - SH630 / SH710	Cast Iron (ANSI Type II with standoff Insulators and oversized to NEMA MG1 optional)	Cast Iron or Fabricated Steel	Fabricated Steel
Auxiliary Boxes	Cast Iron - NEMA 4X Stainless Steel - NEMA 4X (optional)	Cast Iron - NEMA 4X Stainless Steel - NEMA 4X (optional)	Cast Iron - NEMA 4X Stainless Steel - NEMA 4X (optional)	Cast Iron - NEMA 4X Stainless Steel - NEMA 4X (optional)	Cast Iron - NEMA 4X Stainless Steel - NEMA 4X (optional)	Cast Iron - NEMA 4X Stainless Steel - NEMA 4X (optional)	Cast Iron - NEMA 4X Stainless Steel - NEMA 4X (optional)	Cast Iron
Shaft	2 Pole - AISI 4140 4 Pole and Slower AISI 1045 AISI 4140 (optional)	2 Pole - AISI 4140 4 Pole and Slower AISI 1045 AISI 4140 (optional)	2 Pole - AISI 4140 4 Pole and Slower AISI 1045 AISI 4140 (optional)	2 Pole - AISI 4140 4 Pole and Slower AISI 1045 AISI 4140 (optional)	2 Pole - AISI 4140 4 Pole and Slower AISI 1045 AISI 4140 (optional)	2 Pole - AISI 4140 4 Pole and Slower AISI 1045 AISI 4140 (optional)	2 Pole - AISI 4140 4 Pole and Slower AISI 1045 AISI 4140 (optional)	All S449 & 449T - AISI 4140 449TS - AISI 1045
Rotor	Aluminum Die Cast - 500 / 580 frames** Induction-Brazed Copper Bar - 680 / 800 frames	Aluminum Die Cast - 500 / 580 frames** Induction-Brazed Copper Bar - 680-SH710	Aluminum Die Cast - 580 frame** Induction- Brazed Copper Bar - 680 - SH710	Aluminum Die Cast - 500 / 580 frames** Induction-Brazed Copper Bar - SH400 - SH560	Aluminum Die Cast - 580 frames** Induction-Brazed Copper Bar - 680 - SH710	Aluminum Die Cast	API 541 4th ed: Induction-brazed Copper Bar API 547: Aluminum Die Cast ≤1,000 HP otherwise Induction-brazed Copper Bar (Induction-brazed Copper Bar option available for ≤1,000 HP)	Aluminum Die Cast
Lamination Material	C5 Core Plate	C5 Core Plate	C5 Core Plate	C5 Core Plate	C5 Core Plate	C5 Core Plate	C5 Core Plate	C5 Core Plate
External Cooling Fan	N/A	N/A	N/A	Aluminum - 500 / 580 (other materials available), 2 Pole plastic fan with steel hub - SH400 - SH560, 4 Pole and slower: Plastic - SH400 / SH450, Steel - SH500 / SH560	Aluminum - 580 - 800 Steel - SH630 / SH710 (other materials available)	Bronze Alloy	Aluminum if applicable (other materials optional)	449 - Anti Static Reinforced Polyamide & Polypropylene S449 - Bronze
Fan Cover	N/A	N/A	N/A	Cast Iron - 500 / 580 frames Steel - SH400-SH560	Fabricated Steel	Cast Iron	Fabricated Steel or Cast Iron	Cast Iron
Top Cover / Heat Exchanger / Tube Material	N/A - 500 frames Fabricated Steel - 580 - 800 frames / N/A / N/A	Fabricated Steel - Provisions for Filters / N/A / N/A	Fabricated Steel / Single-tube / Cu/Ni Double-tube Stainless Steel (optional)	N/A	Fabricated Steel / N/A / Aluminum Tubes, Stainless Steel (optional)	N/A	Fabricated Steel / Single-tube / Cu/Ni Double - tube	N/A
Insulation	Form-wound, Class F-VPI	Form-wound, Class F-VPI	Form-wound, Class F-VPI	Form-wound, Class F-VPI	Form-wound, Class F-VPI	Form-wound, Class F-VPI	Form-wound, Class F-VPI	Form-wound, Class F-VPI
Hardware	≤M12 - 300 Series Stainless Steel >M12 - Zinc Plated Carbon Steel (per API 541 4th ed.)	≤M12 - 300 Series Stainless Steel >M12 - Zinc Plated Carbon Steel (per API 541 4th ed.)	≤M12 - 300 Series Stainless Steel >M12 - Zinc Plated Carbon Steel (per API 541 4th ed.)	≤M12 - 300 Series Stainless Steel >M12 - Zinc Plated Carbon Steel (per API 541 4th ed.)	≤M12 - 300 Series Stainless Steel >M12 - Zinc Plated Carbon Steel (per API 541 4th ed.)	≤M12 - 300 Series Stainless Steel >M12 - Zinc Plated Carbon Steel (per API 541 4th ed.)	≤M12 - 300 Series Stainless Steel >M12 - Zinc Plated Carbon Steel (per API 541 4th ed.)	Zinc Plated Carbon Steel

General Information								
Noise Level	90 dB(A) Typical (lower on 4 pole & slower) (<85 dB(A) low noise optional on most ratings)	90 dB(A) Typical (lower on 4 pole & slower) (<85 dB(A) low noise optional on most ratings)	85 dB(A) Typical (on most ratings) (<85 dB(A) low noise optional on most ratings)	90 dB(A) Typical (lower on 4 pole & slower) (<85 dB(A) low noise optional on most ratings)	90 dB(A) Typical (lower on 4 pole & slower) (<85 dB(A) low noise optional on most ratings)	90 dB(A) Typical (lower on 4 pole & slower) (<85 dB(A) low noise optional on most ratings)	≤85 dB(A) available on most ratings)	89 dB(A) Typical (for 2 pole) 85 dB(A) Typical (or lower on 4 pole & slower)
Vertical Mounting	All Frames	All Frames	No	500 / 580 only	580 / 680 / 800	N/A	Available	N/A
Inverter Operation	VFD Duty - Consult Siemens for Specifics	VFD Duty - Consult Siemens for Specifics	VFD Duty - Consult Siemens for Specifics	VFD Duty - Consult Siemens for Specifics	VFD Duty - Consult Siemens for Specifics	VFD Duty - Consult Siemens for Specifics	VFD Duty - Consult Siemens for Specifics	VFD Duty - VT 10:1, CT 2:1
Paint	Two-part Epoxy, Special Paint (optional)	Two-part Epoxy, Special Paint (optional)	Two-part Epoxy, Special Paint (optional)	Two-part Epoxy, Special Paint (optional)	Two-part Epoxy, Special Paint (optional)	Two-part Epoxy, Special Paint (optional)	Two-part Epoxy, Special Paint (optional)	Two-part Epoxy
Paint Color	Siemens Motor Blue (other colors optional)	Siemens Motor Blue (other colors optional)	Siemens Motor Blue (other colors optional)	Siemens Motor Blue (other colors optional)	Siemens Motor Blue (other colors optional)	Siemens Motor Blue (other colors optional)	Siemens Motor Blue (other colors optional)	Siemens Motor Blue
Bearing Type	Anti-friction - 500 / 580 frames Sleeve bearings (optional) Sleeve bearings - 680 / 800 frames (Anti-friction available on some ratings)	Anti-friction - 500 / 580 frames Sleeve bearings - 680 / 800 frames 2 & 4 Pole Sleeve bearings - SH630 / SH710 6 Pole and Slower Anti-friction - SH630 / SH710 Sleeve bearings (optional)	Anti-friction - 580 frame Sleeve bearings - 680 / 800 frames 2 & 4 Pole Sleeve bearings - 680-SH710 6 Pole and Slower Anti-friction - SH630 / SH710	Anti-friction - 500 / 580 frame Sleeve bearings (optional) 2 Pole Sleeve bearings - SH400 - SH560 4 Pole and Slower Anti-friction - SH400 - SH560 Sleeve bearings (optional)	Anti-friction - 580 frame Sleeve bearings (optional) Sleeve bearings - 680 / 800 frames 2 & 4 Pole Sleeve bearings - 680-SH710 6 Pole and Slower Anti-friction - SH630 / SH710	Anti-friction bearings	Sleeve bearings	Anti-Friction
Vibration	0.12 IPS or as defined by NEMA (Special balance if required)	0.12 IPS or as defined by NEMA (Special balance if required)	0.12 IPS or as defined by NEMA (Special balance if required)	0.12 IPS or as defined by NEMA (Special balance if required)	0.12 IPS or as defined by NEMA (Special balance if required)	0.08 IPS (except 2 pole motors = 0.10 IPS)	0.10 IPS on HSG / 1.5 mils on shaft	0.12 IPS or as defined by NEMA 0.08 IPS for IEEE 841 (optional)
Hazardous Area	N/A	Class 1, Division 2 (optional)	Class 1, Division 2 (optional)	Class 1, Division 2 (optional)	Class 1, Division 2 (optional)	Class 1, Division 2 (optional)	Class 1, Division 2 (optional)	Class 1, Division 2

Consult Siemens for a complete list of clarifications, exceptions and bills of material that may apply. **The bearing housings are one-piece with ball bearings and two-piece with sleeve bearings. **Some larger 580 frames are provided with fabricated copper bar rotors. Copper bar rotors are optional for 500 and 580 frames. ***Motors built to API 541 4th Edition are still available. Preassembled stator core, unitized construction, assembled as interference fit to yoke. ¹ Up to 400 HP with Class F temperature rise. ©2019 Siemens Industry, Inc. Subject to change without prior notice. Order No.: LDAM-00006-0519. Printed in USA.