

Hazardous Duty Motors

Class I, Groups C & D, Class II, Groups F & G, Division 1 RGZZESDI - 6:1 Variable or 6:1 Constant Torque

Inverter Duty High Efficiency Explosion-Proof motors are ideal for both variable torque and constant torque loads, designed for inverter or vector applications; are UL® listed for dust ignition proof environments, and are suitable for use in Class I, Groups C & D, Class II, Groups F & G, Division 1 hazardous areas. These motors are well suited to be used in adjustable speed applications such as chemical processing, mining, foundry, pulp and paper, waste management, and petro/chemical.

Performance Specifications

- 1 to 200 HP
- 6:1 variable or 6:1 constant torque speed range
- 1.0 service factor
- 40°C ambient
- T3C temperature code
- 3600, 1800, 1200, or 900 RPM
- 3 phase, 60 Hz; 460 volt; 200, 230 & 575 volt available
- Class F insulation
- Continuous Duty
- 143T through 449T frame

Features for Long Life

Frame & End Shields – Cast iron construction for exceptional structural integrity, with UL® listed breather drains on 404T to 449T frames. Lifting eyebolts are included for frames 213T to 449T.

Rotor – A unique offset rotor bar design provides improved efficiency while larger bars and end rings reduce resistance for lower rotor losses. Each die cast aluminum rotor assembly is dynamically balanced for extended bearing life, and includes a high-strength carbon steel (C1045) shaft for maximum rotor performance.

Stator/Windings – Manufactured with premium electrical grade steel laminations and copper electrical magnet wire to lower losses for improved efficiencies. A unique stator core design lowers flux density while increasing cooling capacity. Large conductor cross section reduces resistance, also lowering stator losses.

Insulation – Proprietary inverter-rated Class F non-hygroscopic (corona resistant) insulation system with NEMA Class B temperature rise, provides an extra margin of thermal life. All motors are equipped with two series connected, normally closed, Class B thermostats for detection of overload conditions and/or excessive heating. Suitable for operation from adjustable speed drives with an insulation system that meets or exceeds NEMA MG1-2006, Part 31.

Cooling – A bi-directional, non-sparking fan is locked and keyed to the shaft. Its low-inertia design reduces windage losses, improves airflow, reduces noise and provides dependable cooling. Cast iron fan covers are provided on all frame sizes.

Bearings – Regreasable, oversized single shielded with cast iron inner caps. Alemite grease fittings on the inlets and pipe plugs on the relief ports for ease of routine maintenance. For added bearing protection, 143T-256T frames have a drive end shaft seal and 284T-449T frames have a drive end shaft V-ring slinger.

Lubrication – A specially formulated, high temperature tested, polyurea based grease is used to provide more than four times the lubrication life of other polyurea greases.



Oversized Conduit Box – Cast iron construction that is larger than industry standards, diagonally-split and rotatable in 90° increments for quick and easy connections. Includes a ground lug and non-wicking, clearly and permanently marked leads.

Corrosion Resistance – Cast iron construction, zinc-plated hardware, epoxy enamel paint and stainless steel nameplate resist rust and corrosion.

Modifiable – All Siemens motors are available with a wide variety of modifications to meet your specific motor needs.



Specifications table begins on the next page →

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Class I, Groups C & D, Class II, Groups F & G, Division 1 Custom Build
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HP	RPM	Frame	Voltage	Type	DE Bearing	Part Number	List Price \$	Multiplier Symbol	FL Amps 460V	FL Nom. Eff. (%)	Weight (lbs.)	Stock Model
1	3600	143T	460	RGZZESDI	Ball	1PC29411AA112AG3	912	SA-7XXP	1.5	82.5	65	
1	1800	145T	460	RGZZESDI	Ball	1PC29411AB512AG3	927	SA-7XXP	1.7	83.6	70	
1	1200	182T	460	RGZZESDI	Ball	1PC29411CC612AG3	1034	SA-7XXP	1.7	85.5	125	
1	900	184T	460	RGZZESDI	Ball	1PC29411CD712AG3	1712	SA-7XXP	1.9	78.5	130	
1.5	3600	145T	460	RGZZESDI	Ball	1PC29411AA512AG3	989	SA-7XXP	1.9	84	70	
1.5	1800	145T	460	RGZZESDI	Ball	1PC29411AB312AG3	968	SA-7XXP	2.5	84	70	
1.5	1200	184T	460	RGZZESDI	Ball	1PC29411CC712AG3	1124	SA-7XXP	2.6	86.2	130	
1.5	900	213T	460	RGZZESDI	Ball	1PC29412AD912AG3	1047	SA-7XXP	2.8	80	170	
2	3600	182T	460	RGZZESDI	Ball	1PC29411CA512AG3	1050	SA-7XXP	2.6	86.5	100	
2	1800	182T	460	RGZZESDI	Ball	1PC29411CB512AG3	1047	SA-7XXP	3	87.5	100	
2	1200	213T	460	RGZZESDI	Ball	1PC29412AC912AG3	1330	SA-7XXP	2.8	88.5	170	
2	900	215T	460	RGZZESDI	Ball	1PC29412AD012AG3	2350	SA-7XXP	3.5	82.5	180	
3	3600	184T	460	RGZZESDI	Ball	1PC29411CA712AG3	1206	SA-7XXP	3.6	87.5	115	
3	1800	184T	460	RGZZESDI	Ball	1PC29411CB712AG3	1192	SA-7XXP	4.6	87.5	115	
3	1200	215T	460	RGZZESDI	Ball	1PC29412AC012AG3	1618	SA-7XXP	4.4	89.5	180	
3	900	254T	460	RGZZESDI	Ball	1PC29412BD912AG3	2503	SA-7XXP	5.5	84	290	
5	3600	213T	460	RGZZESDI	Ball	1PC29412AA912AG3	1412	SA-7XXP	6.2	88.5	160	
5	1800	213T	460	RGZZESDI	Ball	1PC29412AB912AG3	1417	SA-7XXP	7.3	89.5	160	
5	1200	254T	460	RGZZESDI	Ball	1PC29412BC912AG3	2052	SA-7XXP	7	90.2	290	
5	900	256T	460	RGZZESDI	Ball	1PC29412BD012AG3	2457	SA-7XXP	9	86.5	360	
7.5	3600	215T	460	RGZZESDI	Ball	1PC29412AA012AG3	1557	SA-7XXP	9.2	89.5	180	
7.5	1800	215T	460	RGZZESDI	Ball	1PC29412AB012AG3	1579	SA-7XXP	10.7	89.5	180	
7.5	1200	256T	460	RGZZESDI	Ball	1PC29412BC012AG3	2345	SA-7XXP	10	90.2	360	
7.5	900	284T	460	RGZZESDI	Ball	1PC29412CD712AG3	3800	SA-7XXP	12	87.5	450	
10	3600	254T	460	RGZZESDI	Ball	1PC29412BA912AG3	2012	SA-7XXP	11.8	90.2	265	
10	1800	254T	460	RGZZESDI	Ball	1PC29412BB912AG3	1980	SA-7XXP	13.7	91.7	265	
10	1200	284T	460	RGZZESDI	Ball	1PC29412CC712AG3	3165	SA-7XXP	14.5	91	450	
10	900	286T	460	RGZZESDI	Ball	1PC29412CD812AG3	4664	SA-7XXP	17	91	525	
15	3600	256T	460	RGZZESDI	Ball	1PC29412BA012AG3	2317	SA-7XXP	17.6	90.2	325	
15	1800	256T	460	RGZZESDI	Ball	1PC29412BB012AG3	2299	SA-7XXP	20	91.7	325	
15	1200	286T	460	RGZZESDI	Ball	1PC29412CC812AG3	3632	SA-7XXP	20	91.7	525	
15	900	324T	460	RGZZESDI	Ball	1PC29413AD912AG3	5657	SA-7XXP	25	91	660	
20	3600	284TS	460	RGZZESDI	Ball	1PC29412DA512AG3	2979	SA-7XXP	23.4	91.7	410	
20	1800	284T	460	RGZZESDI	Ball	1PC29412CB712AG3	2892	SA-7XXP	24	93	410	
20	1200	324T	460	RGZZESDI	Ball	1PC29413AC912AG3	4569	SA-7XXP	28	92.4	660	
20	900	326T	460	RGZZESDI	Ball	1PC29413AD012AG3	7467	SA-7XXP	33	91	690	
25	3600	286TS	460	RGZZESDI	Ball	1PC29412DA612AG3	3307	SA-7XXP	28.5	91.7	460	
25	1800	286T	460	RGZZESDI	Ball	1PC29412CB812AG3	3195	SA-7XXP	30	93	460	
25	1200	326T	460	RGZZESDI	Ball	1PC29413AC012AG3	5048	SA-7XXP	33	92.4	690	
25	900	364T	460	RGZZESDI	Ball	1PC29413CD912AG3	7656	SA-7XXP	41	91	900	
30	3600	324TS	460	RGZZESDI	Ball	1PC29413BA512AG3	4418	SA-7XXP	35.3	93.6	589	
30	1800	324T	460	RGZZESDI	Ball	1PC29413AB912AG3	4290	SA-7XXP	34	93.6	589	
30	1200	364T	460	RGZZESDI	Ball	1PC29413CC912AG3	6796	SA-7XXP	41	93.6	900	
30	900	365T	460	RGZZESDI	Ball	1PC29413CD012AG3	8965	SA-7XXP	52	91	915	

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RGZZESDI - 6:1 Variable or 6:1 Constant Torque

HP	RPM	Frame	Voltage	Type	DE Bearing	Part Number	List Price \$	Multiplier Symbol	FL Amps 460V	FL Nom. Eff. (%)	Weight (lbs.)	Stock Model
40	3600	326TS	460	RGZZESDI	Ball	1PC29413BA612AG3	5301	SA-7XXP	45	93.6	645	
40	1800	326T	460	RGZZESDI	Ball	1PC29413AB012AG3	4947	SA-7XXP	48	93.6	645	
40	1200	365T	460	RGZZESDI	Ball	1PC29413CC012AG3	7527	SA-7XXP	55	93.6	915	
40	900	404T	460	RGZZESDI	Ball	1PC29414AD712AG3	10854	SA-7XXP	53	91.7	1290	
50	3600	364TS	460	RGZZESDI	Ball	1PC29413DA512AG3	6895	SA-7XXP	57	93.6	865	
50	1800	364T	460	RGZZESDI	Ball	1PC29413CB912AG3	6851	SA-7XXP	60	93.6	865	
50	1200	404T	460	RGZZESDI	Ball	1PC29414AC712AG3	9566	SA-7XXP	61	94.1	1290	
50	900	405T	460	RGZZESDI	Ball	1PC29414AD912AG3	12835	SA-7XXP	66	91.7	1420	
60	3600	365TS	460	RGZZESDI	Ball	1PC29413DA612AG3	8204	SA-7XXP	69	94.1	915	
60	1800	365T	460	RGZZESDI	Ball	1PC29413CB012AG3	8209	SA-7XXP	71	94.1	915	
60	1200	405T	460	RGZZESDI	Ball	1PC29414AC912AG3	10742	SA-7XXP	74	94.5	1420	
60	900	444TS	460	RGZZESDI	Ball	1PC29414PD112AG3	16439	SA-7XXP	77	91.7	1740	
75	3600	405TS	460	RGZZESDI	Ball	1PC29414BA512AG3	11440	SA-7XXP	81	94.1	1335	
75	1800	405T	460	RGZZESDI	Ball	1PC29414AB912AG3	10775	SA-7XXP	86	94.5	1335	
75	1200	444TS	460	RGZZESDI	Ball	1PC29414PC112AG3	14042	SA-7XXP	88	94.5	1740	
75	900	445TS	460	RGZZESDI	Ball	1PC29414PD212AG3	19399	SA-7XXP	95	93	1930	
100	3600	444TS	460	RGZZESDI	Ball	1PC29414PA112AG3	14627	SA-7XXP	111	94.5	1740	
100	1800	444TS	460	RGZZESDI	Ball	1PC29414PB112AG3	13831	SA-7XXP	118	95	1740	
100	1200	445TS	460	RGZZESDI	Ball	1PC29414PC212AG3	16478	SA-7XXP	118	94.5	1930	
100	900	447TS	460	RGZZESDI	Ball	1PC29414PD312AG3	20876	SA-7XXP	124	94.1	2415	
125	3600	445TS	460	RGZZESDI	Ball	1PC29414PA212AG3	16893	SA-7XXP	137	95	1930	
125	1800	445TS	460	RGZZESDI	Ball	1PC29414PB212AG3	15532	SA-7XXP	143	95.8	1930	
125	1200	447TS	460	RGZZESDI	Ball	1PC29414PC312AG3	18592	SA-7XXP	142	95	2415	
125	900	449TS	460	RGZZESDI	Ball	1PC29414PD412AG3	25991	SA-7XXP	159	93.6	2625	
150	3600	447TS	460	RGZZESDI	Ball	1PC29414PA312AG3	21544	SA-7XXP	159	95	2415	
150	1800	447TS	460	RGZZESDI	Ball	1PC29414PB312AG3	18907	SA-7XXP	171	95.8	2415	
150	1200	449TS	460	RGZZESDI	Ball	1PC29414PC412AG3	21777	SA-7XXP	170	95	2625	
200	3600	449TS	460	RGZZESDI	Ball	1PC29414PA412AG3	25626	SA-7XXP	213	95.4	2625	
200	1800	449TS	460	RGZZESDI	Ball	1PC29414PB412AG3	22102	SA-7XXP	223	95.8	2625	