

Severe Duty - TEFC & TEBC Motors

RGZESDI - 1000:1 Constant Torque

Inverter Duty High Efficiency Severe Duty TEFC & TEBC (blower cooled) motors are designed for inverter or vector applications where up to a 1000:1 constant torque speed range is required. These motors are well suited to be used in adjustable speed applications such as mixers, machine tools, chemical processing, mining, foundry, pulp and paper, waste management and petro/chemical.

Performance Specifications

- 1 to 400 HP
- 1.15 service factor on sine wave power, 40°C ambient
- 1.0 service factor on inverter power
- 3600, 1800, 1200 or 900 RPM
- 3 phase, 60 Hz, 460 volt; 200, 230 & 575 volt available
- Meets or exceeds EPA Efficiency standards
- Class F insulation, Class B temperature rise
- Continuous Duty
- 143T through S449 frame

Features for Long Life

Frame & End Shields – Cast iron construction for exceptional structural integrity with condensation T-drains. Lifting eyebolts are included for frames 213T to S449.

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-duty 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 F 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. TEBC motors will be supplied with a TENV motor to provide the cooling required for operation at low rotational speeds.

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-S449 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, neoprene gasketed 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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Stock/Modifiable

	HP	RPM	Frame	Voltage	Type	DE Bearing	Enclosure	Part Number	List Price \$	Mult. Sym.	FL Amps 460V	FL Nom. Eff. (%)	Weight (lbs.)	Stock Model
INVERTER Duty Hazardous Duty	1	1800	145T	460	RGKESDI	Ball	TEFC	1PC29111AB512AG3	805	SA-7INV	1.4	82.5	55	✓
	1	1200	182T	460	RGKESDI	Ball	TEFC	1PC29111CC612AG3	1005	SA-7INV	1.8	80	85	
INVERTER Duty Hazardous Duty	1.5	3600	182T	460	RGKESDI	Ball	TEFC	1PC29111CA612AG3	1070	SA-7INV	2	82.5	85	
	1.5	1800	182T	460	RGKESDI	Ball	TEFC	1PC29111CB612AG3	895	SA-7INV	2.2	84	85	✓
	1.5	1200	184T	460	RGKESDI	Ball	TEFC	1PC29111CC712AG3	1075	SA-7INV	2.4	85.5	100	
QuikMOD	2	3600	184T	460	RGKESDI	Ball	TEFC	1PC29111CA812AG3	1178	SA-7INV	2.5	84	100	
	2	1800	182T	460	RGKESDI	Ball	TEFC	1PC29111CB512AG3	985	SA-7INV	2.7	84	85	✓
	2	1200	213T	460	RGKESDI	Ball	TEFC	1PC29112AC912AG3	1205	SA-7INV	3.2	86.5	130	
QuikMOD	3	3600	213T	460	RGKESDI	Ball	TEFC	1PC29112KA112AG3	1395	SA-7INV	3.7	86.5	130	
	3	1800	184T	460	RGKESDI	Ball	TEFC	1PC29111CB712AG3	1085	SA-7INV	4.2	87.5	100	✓
	3	1200	215T	460	RGKESDI	Ball	TEFC	1PC29112AC012AG3	1515	SA-7INV	4.3	87.5	162	
Custom Options	5	3600	215T	460	RGKESDI	Ball	TEFC	1PC29112KA212AG3	1595	SA-7INV	5.8	87.5	162	
	5	1800	213T	460	RGKESDI	Ball	TEFC	1PC29112AB912AG3	1275	SA-7INV	6.5	87.5	157	✓
	5	1200	254T	460	RGKESDI	Ball	TEFC	1PC29112BC912AG3	1775	SA-7INV	7.1	88.5	250	
	5	900	254T	460	RGZESDI	Ball	TEBC	1PC29212BD112AG3	3817	SA-7INV	7.5	86.5	330	
Custom Options	7.5	3600	254T	460	RGKESDI	Ball	TEFC	1PC29112KA312AG3	1840	SA-7INV	8.7	88.5	250	
	7.5	1800	254T	460	RGKESDI	Ball	TEFC	1PC29112BB712AG3	1740	SA-7INV	9.5	89.5	245	✓
	7.5	1200	256T	460	RGKESDI	Ball	TEFC	1PC29112BC012AG3	2112	SA-7INV	10	90.2	300	
	7.5	900	256T	460	RGZESDI	Ball	TEBC	1PC29212BD212AG3	4140	SA-7INV	12	87.5	375	
Typical Performance	10	3600	256T	460	RGKESDI	Ball	TEFC	1PC29112KA412AG3	2191	SA-7INV	12.5	89.5	300	
	10	1800	256T	460	RGKESDI	Ball	TEFC	1PC29112BB812AG3	2105	SA-7INV	12.5	89.5	285	✓
	10	1200	256T	460	RGZESDI	Ball	TEBC	1PC29212BC212AG3	3405	SA-7INV	13	90.2	330	
	10	900	284T	460	RGZESDI	Ball	TEBC	1PC29212CD112AG3	4590	SA-7INV	15	91	460	
Dimensions	15	3600	254T	460	RGZESDI	Ball	TEBC	1PC29212BA112AG3	2972	SA-7INV	18	90.2	330	
	15	1800	254T	460	RGZESDI	Ball	TEBC	1PC29212BB112AG3	2154	SA-7INV	20	91.7	330	
	15	1200	284T	460	RGZESDI	Ball	TEBC	1PC29212CC112AG3	4285	SA-7INV	20	91	460	
	15	900	286T	460	RGZESDI	Ball	TEBC	1PC29212CD212AG3	4840	SA-7INV	23	91	530	
Dimensions	20	3600	256T	460	RGZESDI	Ball	TEBC	1PC29212BA212AG3	3265	SA-7INV	23	90.2	375	
	20	1800	256T	460	RGZESDI	Ball	TEBC	1PC29212BB212AG3	2557	SA-7INV	27	91.7	375	
	20	1200	286T	460	RGZESDI	Ball	TEBC	1PC29212CC212AG3	4319	SA-7INV	26	91.7	530	
	20	900	324T	460	RGZESDI	Ball	TEBC	1PC29213AD112AG3	5558	SA-7INV	31	91	645	
Part Number Index	25	3600	284TS	460	RGZESDI	Ball	TEBC	1PC29212DA112AG3	3816	SA-7INV	29	91.7	4600	
	25	1800	284T	460	RGZESDI	Ball	TEBC	1PC29212CB112AG3	3561	SA-7INV	29	93	460	
	25	1200	324T	460	RGZESDI	Ball	TEBC	1PC29213AC112AG3	5460	SA-7INV	33	92.4	645	
	25	900	326T	460	RGZESDI	Ball	TEBC	1PC29213AD212AG3	6220	SA-7INV	38	90.2	680	
Part Number Index	30	3600	286TS	460	RGZESDI	Ball	TEBC	1PC29212DA212AG3	4217	SA-7INV	34	91.7	680	
	30	1800	286T	460	RGZESDI	Ball	TEBC	1PC29212CB212AG3	3926	SA-7INV	35	93	680	
	30	1200	326T	460	RGZESDI	Ball	TEBC	1PC29213AC212AG3	6444	SA-7INV	39	92.4	680	
	30	900	364T	460	RGZESDI	Ball	TEBC	1PC29213CD112AG3	7088	SA-7INV	47	91	910	
Part Number Index	40	3600	324TS	460	RGZESDI	Ball	TEBC	1PC29213BA112AG3	5341	SA-7INV	46	93.6	645	
	40	1800	324T	460	RGZESDI	Ball	TEBC	1PC29213AB112AG3	4964	SA-7INV	47	93.6	645	
	40	1200	364T	460	RGZESDI	Ball	TEBC	1PC29213CC112AG3	8294	SA-7INV	52	93.6	910	
	40	900	365T	460	RGZESDI	Ball	TEBC	1PC29213CD212AG3	9578	SA-7INV	63	91.7	930	
Part Number Index	50	3600	326TS	460	RGZESDI	Ball	TEBC	1PC29213BA212AG3	6325	SA-7INV	55	93.6	680	
	50	1800	326T	460	RGZESDI	Ball	TEBC	1PC29213AB212AG3	5858	SA-7INV	58	93.6	680	
	50	1200	365T	460	RGZESDI	Ball	TEBC	1PC29213CC212AG3	9942	SA-7INV	66	93.6	930	
	50	900	404T	460	RGZESDI	Ball	TEBC	1PC29214AD112AG3	10729	SA-7INV	67	91.7	1180	

RGKESDI motors can be offered as TENV in the same frame as TEFC.

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HP	RPM	Frame	Voltage	Type	DE Bearing	Enclosure	Part Number	List Price \$	Mult. Sym.	FL Amps 460V	FL Nom. Eff. (%)	Weight (lbs.)	Stock Model
60	3600	364TS	460	RGZESDI	Ball	TEBC	1PC29213DA112AG3	8141	SA-7INV	68	93.6	910	
60	1800	364T	460	RGZESDI	Ball	TEBC	1PC29213CB112AG3	7540	SA-7INV	71	93.6	910	
60	1200	404T	460	RGZESDI	Ball	TEBC	1PC29214AC112AG3	11029	SA-7INV	72	94.1	1180	
60	900	405T	460	RGZESDI	Ball	TEBC	1PC29214AD212AG3	13655	SA-7INV	78	91.7	1330	
75	3600	365TS	460	RGZESDI	Ball	TEBC	1PC29213DA212AG3	9789	SA-7INV	85	94.1	930	
75	1800	365T	460	RGZESDI	Ball	TEBC	1PC29213CB212AG3	9038	SA-7INV	87	94.1	930	
75	1200	405T	460	RGZESDI	Ball	TEBC	1PC29214AC212AG3	12155	SA-7INV	87	94.5	1330	
75	900	444TS	460	RGZESDI	Ball	TEBC	1PC29214DD112AG3	15140	SA-7INV	94	93	1700	
100	3600	405TS	460	RGZESDI	Ball	TEBC	1PC29214BA212AG3	11936	SA-7INV	110	94.1	1330	
100	1800	405T	460	RGZESDI	Ball	TEBC	1PC29214AB212AG3	11014	SA-7INV	113	94.5	1330	
100	1200	444TS	460	RGZESDI	Ball	TEBC	1PC29214DC112AG3	15279	SA-7INV	115	94.5	1700	
100	900	445TS	460	RGZESDI	Ball	TEBC	1PC29214DD212AG3	16573	SA-7INV	123	94.1	1820	
125	3600	444TS	460	RGZESDI	Ball	TEBC	1PC29214DA112AG3	15089	SA-7INV	136	94.5	1700	
125	1800	444TS	460	RGZESDI	Ball	TEBC	1PC29214DB112AG3	13890	SA-7INV	143	95	1700	
125	1200	445TS	460	RGZESDI	Ball	TEBC	1PC29214DC212AG3	17342	SA-7INV	144	94.5	1820	
125	900	447TS	460	RGZESDI	Ball	TEBC	1PC29214DD312AG3	19777	SA-7INV	152	93.6	2080	
150	3600	445TS	460	RGZESDI	Ball	TEBC	1PC29214DA212AG3	17152	SA-7INV	160	95	1820	
150	1800	445TS	460	RGZESDI	Ball	TEBC	1PC29214DB212AG3	15765	SA-7INV	169	95.8	1820	
150	1200	447TS	460	RGZESDI	Ball	TEBC	1PC29214DC312AG3	20533	SA-7INV	169	95	2080	
150	900	447TS	460	RGZESDI	Ball	TEBC	1PC29214DD412AG3	20888	SA-7INV	186	94.1	2080	
200	3600	447TS	460	RGZESDI	Ball	TEBC	1PC29214DA312AG3	20940	SA-7INV	208	95	2080	
200	1800	447TS	460	RGZESDI	Ball	TEBC	1PC29214DB312AG3	18666	SA-7INV	223	95.8	2080	
200	1200	449TS	460	RGZESDI	Ball	TEBC	1PC29214DC512AG3	28971	SA-7INV	222	95	2380	
200	900	449TS	460	RGZESDI	Ball	TEBC	1PC29214DD612AG3	29444	SA-7INV	241	94.5	2380	
250	3600	449TS	460	RGZESDI	Ball	TEBC	1PC29214DA512AG3	25509	SA-7INV	264	95.4	2380	
250	1800	449TS	460	RGZESDI	Ball	TEBC	1PC29214DB512AG3	23417	SA-7INV	282	95.8	2380	
250	1200	449TS	460	RGZESDI	Ball	TEBC	1PC29214DC612AG3	31721	SA-7INV	285	95	2380	
250	900	S449SS	460	RGZESDI	Ball	TEBC	1PC29214GD212AG3	42555	SA-7INV	303	94.5	4130	
300	3600	449TS	460	RGZESDI	Ball	TEBC	1PC29214DA612AG3	33369	SA-7INV	330	95.8	2380	
300	1800	449TS	460	RGZESDI	Ball	TEBC	1PC29214DB612AG3	26337	SA-7INV	345	95.4	2380	
300	1200	S449SS	460	RGZESDI	Ball	TEBC	1PC29214GC112AG3	40542	SA-7INV	335	95	4130	
350	3600	S449SS	460	RGZESDI	Ball ¹	TEBC	1PC29214GA112AG3	37910	SA-7INV	370	95.4	4130	
350	1800	S449SS	460	RGZESDI	Ball	TEBC	1PC29214GB212AG3	33732	SA-7INV	390	95.8	4130	
350	1200	S449SS	460	RGZESDI	Ball	TEBC	1PC29214GC312AG3	45482	SA-7INV	396	95	4130	
400	3600	S449SS	460	RGZESDI	Ball ¹	TEBC	1PC29214GA312AG3	41945	SA-7INV	420	95.4	4130	
400	1800	S449SS	460	RGZESDI	Ball	TEBC	1PC29214GB312AG3	39205	SA-7INV	450	95.8	4130	

¹CW rotation facing opposite drive end

INVERTER Duty
Severe Duty

INVERTER Duty
Hazardous Duty

QuickMOD

Custom Options

Typical
Performance

Dimensions

Part Number
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