

# Severe Duty - TEFC P-Base Motors

## Vertical Solid Shaft - Normal Thrust RGZVESD

Siemens P-base vertical solid shaft motors are ideal for applications such as centrifugal and turbine pumps.

### Performance Specifications

- 1 to 250 HP
- 1.15 service factor, 40°C ambient
- Continuous thrust:
  - Up: 355 to 1,860 lbs.
  - Down: 380 to 2,800 lbs.
- 3600, 1800, 1200, or 900 RPM
- 3 phase, 60 Hz; 230/460 volt operation under 25 HP, 460 volt 25 HP and above; 200 & 575 volt available
- Class F insulation, Class B temperature rise
- NEMA design B, continuous duty
- 143 HP through 449 HP frame

### Features for Long Life

**Frame & End Shields** – These motors feature a cast iron frame and end shields for exceptional structural integrity. A drive end T-drain, drip cover and lifting lugs are included.

**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 and lowers stator losses.

**Insulation** – Proprietary inverter-rated NEMA Class F non-hygroscopic insulation system with Class B temperature rise, provides an extra margin of thermal life. Varnish system application ensures maximum wire penetration to provide protection from moisture, corrosion and electrical shock. This insulation system meets or exceeds NEMA MG1-2006, Part 31, making all motors suitable for operation with variable frequency drives.

**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 ball bearings with cast iron caps. Alemite grease fittings on the inlets, and pipe plugs on the relief ports for ease of routine maintenance. Thrust limits are based on an L10 life of 1 year.



**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 vertical 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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Definite Purpose

HIGH EFFICIENT  
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NEMA PREMIUM  
General Purpose

NEMA PREMIUM  
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Stock/Modifiable

	HP	RPM	Frame	Voltage	Type	Cont. Thrust 1 Yr. Life Min.		Part Number	List Price \$	Multiplier Symbol	FL Amps 460V	FL Nom. Eff. (%)	Weight (lbs.)	Stock Model
						Up (lbs)	Down (lbs)							
	1	1800	143HP	230/460	RGZVESD	380	355	1PC28111BB216TA3	500	SA-7EN	1.5	82.5	70	
	1	1200	145HP	230/460	RGZVESD	445	415	1PC28111BC316TA3	678	SA-7EN	1.6	82.5	75	
	1	900	182HP	230/460	RGZVESD	495	465	1PC28111DD116TA3	1037	SA-7EN	1.9	77	85	
	1.5	3600	143HP	230/460	RGZVESD	295	275	1PC28111BA216TA3	643	SA-7EN	1.9	82.5	70	
	1.5	1800	145HP	230/460	RGZVESD	385	330	1PC28111BB316TA3	578	SA-7EN	2.2	84	75	
	1.5	1200	182HP	230/460	RGZVESD	550	510	1PC28111DC116TA3	802	SA-7EN	2.3	84	85	
	1.5	900	184HP	230/460	RGZVESD	615	570	1PC28111DD216TA3	1170	SA-7EN	2.6	78.5	100	
	2	3600	145HP	230/460	RGZVESD	295	275	1PC28111BA316TA3	678	SA-7EN	2.5	84	75	
	2	1800	145HP	230/460	RGZVESD	385	350	1PC28111BB416TA3	655	SA-7EN	2.7	84	75	
	2	1200	184HP	230/460	RGZVESD	550	510	1PC28111DC216TA3	923	SA-7EN	3	85.5	100	
	2	900	213HP	230/460	RGZVESD	615	570	1PC28112AD316TA3	1340	SA-7EN	3.3	81.5	135	
	3	3600	182HP	230/460	RGZVESD	365	340	1PC28111DA116TA3	890	SA-7EN	3.6	85.5	85	✓
	3	1800	182HP	230/460	RGZVESD	480	430	1PC28111DB116TA3	785	SA-7EN	3.9	86.5	85	✓
	3	1200	213HP	230/460	RGZVESD	785	725	1PC28112AC316TA3	1218	SA-7EN	4	86.5	135	
	3	900	215HP	230/460	RGZVESD	875	810	1PC28112AD416TA3	1685	SA-7EN	4.7	82.5	160	
	5	3600	184HP	230/460	RGZVESD	375	330	1PC28111DA216TA3	1248	SA-7EN	5.8	86.5	100	✓
	5	1800	184HP	230/460	RGZVESD	485	425	1PC28111DB216TA3	1093	SA-7EN	6.5	86.5	100	✓
	5	1200	215HP	230/460	RGZVESD	790	720	1PC28112AC416TA3	1715	SA-7EN	6.8	87.5	160	
	5	900	254HP	230/460	RGZVESD	885	805	1PC28112BD316TA3	2063	SA-7EN	7.5	85.5	245	
	7.5	3600	213HP	230/460	RGZVESD	525	475	1PC28112AA316TA3	1548	SA-7EN	8.8	87.5	135	✓
	7.5	1800	213HP	230/460	RGZVESD	685	610	1PC28112AB316TA3	1498	SA-7EN	9.5	88.5	135	✓
	7.5	1200	254HP	230/460	RGZVESD	1130	1025	1PC28112BC316TA3	2045	SA-7EN	9.8	88.5	245	
	7.5	900	256HP	230/460	RGZVESD	1260	1150	1PC28112BD416TA3	2505	SA-7EN	11.5	86.5	285	
	10	3600	215HP	230/460	RGZVESD	530	470	1PC28112AA416TA3	1685	SA-7EN	12	88.5	160	✓
	10	1800	215HP	230/460	RGZVESD	690	605	1PC28112AB416TA3	1685	SA-7EN	12.5	88.5	160	✓
	10	1200	256HP	230/460	RGZVESD	1140	1015	1PC28112BC416TA3	2310	SA-7EN	13	88.5	285	
	10	900	284HP	230/460	RGZVESD	1275	1140	1PC28112CD316TA3	3045	SA-7EN	15	89.5	485	
	15	3600	254HP	230/460	RGZVESD	760	670	1PC28112BA316TA3	1943	SA-7EN	17	88.5	245	✓
	15	1800	254HP	230/460	RGZVESD	980	870	1PC28112BB316TA3	2013	SA-7EN	18.7	90.2	245	✓
	15	1200	284HP	230/460	RGZVESD	1170	985	1PC28112CC316TA3	2693	SA-7EN	20	89.5	485	
	15	900	286HP	230/460	RGZVESD	1310	1100	1PC28112CD416TA3	3703	SA-7EN	23	89.5	520	
	20	3600	256HP	230/460	RGZVESD	765	665	1PC28112BA416TA3	2125	SA-7EN	23	88.5	285	✓
	20	1800	256HP	230/460	RGZVESD	995	855	1PC28112BB416TA3	2295	SA-7EN	26	90.2	285	✓
	20	1200	286HP	230/460	RGZVESD	1190	965	1PC28112CC416TA3	3273	SA-7EN	26	90.2	520	
	20	900	324HP	230/460	RGZVESD	1330	1080	1PC28113AD316TA3	4522	SA-7EN	31	89.5	565	
	25	3600	284HP	460	RGZVESD	785	645	1PC28112CA312TA3	2289	SA-7EN	29	90.2	485	✓
	25	1800	284HP	460	RGZVESD	1020	830	1PC28112CB312TA3	2558	SA-7EN	29	91.7	485	✓
	25	1200	324HP	460	RGZVESD	1795	1535	1PC28113AC312TA3	3830	SA-7EN	33	91	565	
	25	900	326HP	460	RGZVESD	2000	1720	1PC28113AD412TA3	5184	SA-7EN	38	88.5	710	
	30	3600	286HP	460	RGZVESD	795	635	1PC28112CA412TA3	2478	SA-7EN	34	90.2	520	✓
	30	1800	286HP	460	RGZVESD	1035	815	1PC28112CB412TA3	2878	SA-7EN	35	91.7	520	✓
	30	1200	326HP	460	RGZVESD	1820	1510	1PC28113AC412TA3	4373	SA-7EN	39	91	710	
	30	900	364HP	460	RGZVESD	2320	1860	1PC28113CD312TA3	6013	SA-7EN	46.8	89.5	800	

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HP	RPM	Frame	Voltage	Type	Cont. Thrust 1 Yr. Life Min.		Part Number	List Price \$	Multiplier Symbol	FL Amps 460V	FL Nom. Eff. (%)	Weight (lbs.)	Stock Model
					Up (lbs)	Down (lbs)							
40	3600	324HP	460	RGZVESD	1205	1005	1PC28113AA312TA3	3402	SA-7EN	45	92.4	565	✓
40	1800	324HP	460	RGZVESD	1570	1290	1PC28113AB312TA3	3428	SA-7EN	47	92.4	565	✓
40	1200	364HP	460	RGZVESD	2075	1675	1PC28113CC312TA3	5725	SA-7EN	52	92.4	800	
40	900	365HP	460	RGZVESD	2340	1840	1PC28113CD412TA3	7184	SA-7EN	63	90.2	875	
50	3600	326HP	460	RGZVESD	1215	995	1PC28113AA412TA3	4268	SA-7EN	55	92.4	710	✓
50	1800	326HP	460	RGZVESD	1585	1275	1PC28113AB412TA3	4065	SA-7EN	58	92.4	710	✓
50	1200	365HP	460	RGZVESD	2095	1660	1PC28113CC412TA3	6750	SA-7EN	66	92.4	875	
50	900	404HP	460	RGZVESD	2370	1810	1PC28114AD312TA3	8591	SA-7EN	67	90.2	1290	
60	3600	364HP	460	RGZVESD	1410	1080	1PC28113CA312TA3	5432	SA-7EN	68	92.4	800	✓
60	1800	364HP	460	RGZVESD	1795	1435	1PC28113CB312TA3	5389	SA-7EN	71	92.4	800	✓
60	1200	404HP	460	RGZVESD	2155	1595	1PC28114AC312TA3	7697	SA-7EN	74	93	1290	
60	900	405HP	460	RGZVESD	2410	1770	1PC28114AD412TA3	9742	SA-7EN	78	90.2	1420	
75	3600	365HP	460	RGZVESD	1420	1070	1PC28113CA412TA3	6715	SA-7EN	85	93	875	✓
75	1800	365HP	460	RGZVESD	1815	1415	1PC28113CB412TA3	6720	SA-7EN	87	93	875	✓
75	1200	405HP	460	RGZVESD	2195	1555	1PC28114AC412TA3	9025	SA-7EN	93	93.6	1420	
75	900	444HP	460	RGZVESD	2495	1685	1PC28114HD112TA3	12777	SA-7EN	94	91.7	1740	
100	3600	405HP	460	RGZVESD	1475	1015	1PC28114AA412TA3	8945	SA-7EN	108	93	1420	✓
100	1800	405HP	460	RGZVESD	1915	1315	1PC28114AB412TA3	8293	SA-7EN	113	93.6	1420	✓
100	1200	444HP	460	RGZVESD	2315	1435	1PC28114HC112TA3	12065	SA-7EN	117	93.6	1740	
100	900	445HP	460	RGZVESD	2565	1615	1PC28114HD212TA3	15655	SA-7EN	123	93	1930	
125	1800	444HP	460	RGZVESD	1975	1255	1PC28114HB112TA3	10857	SA-7EN	143	94.1	1740	
125	1200	445HP	460	RGZVESD	2385	1365	1PC28114HC212TA3	14585	SA-7EN	144	93.6	1930	
125	900	447HP	460	RGZVESD	2670	1510	1PC28114HD312TA3	17985	SA-7EN	152	92.4	2280	
150	1800	445HP	460	RGZVESD	2060	1170	1PC28114HB212TA3	12525	SA-7EN	170	94.5	1930	
150	1200	447HP	460	RGZVESD	2400	1350	1PC28114HC312TA3	18125	SA-7EN	170	94.1	2280	
150	900	447HP	460	RGZVESD	2730	1450	1PC28114HD412TA3	20451	SA-7EN	186	93	2280	
200	1800	447HP	460	RGZVESD	2115	1115	1PC28114HB312TA3	17120	SA-7EN	225	94.5	2280	
200	1200	449HP	460	RGZVESD	2450	1300	1PC28114HC512TA3	20650	SA-7EN	226	94.1	2600	
200	900	449HP	460	RGZVESD	2800	1380	1PC28114HD612TA3	23010	SA-7EN	241	93.6	2600	
250	1800	449HP	460	RGZVESD	2185	1045	1PC28114HB512TA3	19890	SA-7EN	281	94.5	2600	
250	1200	449HP	460	RGZVESD	2520	1230	1PC28114HC612TA3	22710	SA-7EN	280	94.1	2600	

Notes:  
1. Derate thrust capacity by 31% to obtain 3 year L10 bearing life.  
2. Non Reverse Ratchet available - contact factory.

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