

Hazardous Duty - P-Base Motors

Vertical Solid Shaft - Normal Thrust

Class I, Group D, Division 1

RGZZVESD

Siemens P-base vertical solid shaft explosion-proof motors are UL® listed for use in Class I, Group D, Division 1 hazardous areas and are ideal for applications such as centrifugal and turbine pumps.

Performance Specifications

- 1 to 250 HP
- 1.0 service factor, 40°C ambient
- T2D temperature code
- 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 sintered condensation 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 Class F non-hygroscopic insulation system with NEMA 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. Two series-connected normally closed Class B thermostats are supplied as standard.

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 – Regreaseable 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 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

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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)							
1	1800	143HP	230/460	RGZZVESD	380	355	1PC28411BB216TG3	816	SA-7EN	1.5	82.5	80	
1	1200	145HP	230/460	RGZZVESD	445	415	1PC28411BC316TG3	998	SA-7EN	1.6	82.5	85	
1	900	182HP	230/460	RGZZVESD	495	465	1PC28411DD116TG3	1331	SA-7EN	1.9	77	130	
1.5	3600	143HP	230/460	RGZZVESD	295	275	1PC28411BA216TG3	962	SA-7EN	1.9	82.5	80	
1.5	1800	145HP	230/460	RGZZVESD	385	330	1PC28411BB316TG3	896	SA-7EN	2.2	84	85	
1.5	1200	182HP	230/460	RGZZVESD	550	510	1PC28411DC116TG3	1124	SA-7EN	2.3	84	130	
1.5	900	184HP	230/460	RGZZVESD	615	570	1PC28411DD216TG3	1459	SA-7EN	2.6	78.5	135	
2	3600	145HP	230/460	RGZZVESD	295	275	1PC28411BA316TG3	998	SA-7EN	2.5	84	85	
2	1800	145HP	230/460	RGZZVESD	385	350	1PC28411BB416TG3	974	SA-7EN	2.7	84	85	
2	1200	184HP	230/460	RGZZVESD	550	510	1PC28411DC216TG3	1285	SA-7EN	3	85.5	135	
2	900	213HP	230/460	RGZZVESD	615	570	1PC28412AD316TG3	1681	SA-7EN	3.3	81.5	175	
3	3600	182HP	230/460	RGZZVESD	365	340	1PC28411DA116TG3	1214	SA-7EN	3.6	85.5	130	✓
3	1800	182HP	230/460	RGZZVESD	480	430	1PC28411DB116TG3	1140	SA-7EN	3.9	86.5	130	✓
3	1200	213HP	230/460	RGZZVESD	785	725	1PC28412AC316TG3	1586	SA-7EN	4	86.5	175	
3	900	215HP	230/460	RGZZVESD	875	810	1PC28412AD416TG3	2165	SA-7EN	4.7	82.5	195	
5	3600	184HP	230/460	RGZZVESD	375	330	1PC28411DA216TG3	1617	SA-7EN	5.8	86.5	135	✓
5	1800	184HP	230/460	RGZZVESD	485	425	1PC28411DB216TG3	1459	SA-7EN	6.5	86.5	135	✓
5	1200	215HP	230/460	RGZZVESD	790	720	1PC28412AC416TG3	2196	SA-7EN	6.8	87.5	195	
5	900	254HP	230/460	RGZZVESD	885	805	1PC28412BD316TG3	2550	SA-7EN	7.5	85.5	295	
7.5	3600	213HP	230/460	RGZZVESD	525	475	1PC28412AA316TG3	1923	SA-7EN	8.8	87.5	175	✓
7.5	1800	213HP	230/460	RGZZVESD	685	610	1PC28412AB316TG3	1974	SA-7EN	9.5	88.5	175	✓
7.5	1200	254HP	230/460	RGZZVESD	1130	1025	1PC28412BC316TG3	2533	SA-7EN	9.8	88.5	295	
7.5	900	256HP	230/460	RGZZVESD	1260	1150	1PC28412BD416TG3	3233	SA-7EN	11.5	86.5	365	
10	3600	215HP	230/460	RGZZVESD	530	470	1PC28412AA416TG3	2165	SA-7EN	12	88.5	195	✓
10	1800	215HP	230/460	RGZZVESD	690	605	1PC28412AB416TG3	2165	SA-7EN	12.5	88.5	195	✓
10	1200	256HP	230/460	RGZZVESD	1140	1015	1PC28412BC416TG3	3172	SA-7EN	13	88.5	365	
10	900	284HP	230/460	RGZZVESD	1275	1140	1PC28412CD316TG3	3808	SA-7EN	15	89.5	410	
15	3600	254HP	230/460	RGZZVESD	760	670	1PC28412BA316TG3	2428	SA-7EN	17	88.5	295	✓
15	1800	254HP	230/460	RGZZVESD	980	870	1PC28412BB316TG3	2869	SA-7EN	18.7	90.2	295	✓
15	1200	284HP	230/460	RGZZVESD	1170	985	1PC28412CC316TG3	4022	SA-7EN	20	89.5	410	
15	900	286HP	230/460	RGZZVESD	1310	1100	1PC28412CD416TG3	4677	SA-7EN	23	89.5	460	
20	3600	256HP	230/460	RGZZVESD	765	665	1PC28412BA416TG3	2984	SA-7EN	23	88.5	365	✓
20	1800	256HP	230/460	RGZZVESD	995	855	1PC28412BB416TG3	3157	SA-7EN	26	90.2	365	✓
20	1200	286HP	230/460	RGZZVESD	1190	965	1PC28412CC416TG3	4613	SA-7EN	26	90.2	460	
20	900	324HP	230/460	RGZZVESD	1330	1080	1PC28413AD316TG3	5781	SA-7EN	31	89.5	589	
25	3600	284HP	460	RGZZVESD	785	645	1PC28412CA312TG3	3565	SA-7EN	29	90.2	410	✓
25	1800	284HP	460	RGZZVESD	1020	830	1PC28412CB312TG3	3884	SA-7EN	29	91.7	410	✓
25	1200	324HP	460	RGZZVESD	1795	1535	1PC28413AC312TG3	5641	SA-7EN	33	91	589	
25	900	326HP	460	RGZZVESD	2000	1720	1PC28413AD412TG3	6393	SA-7EN	38	88.5	738	
30	3600	286HP	460	RGZZVESD	795	635	1PC28412CA412TG3	3803	SA-7EN	34	90.2	460	✓
30	1800	286HP	460	RGZZVESD	1035	815	1PC28412CB412TG3	4211	SA-7EN	35	91.7	460	✓
30	1200	326HP	460	RGZZVESD	1820	1510	1PC28413AC412TG3	6194	SA-7EN	39	91	738	
30	900	364HP	460	RGZZVESD	2320	1860	1PC28413CD312TG3	7898	SA-7EN	46.8	89.5	865	

Introduction

HIGH EFFICIENT
General Purpose

HIGH EFFICIENT
Severe Duty

HIGH EFFICIENT
Multi-Speed

HIGH EFFICIENT
Hazardous Duty

HIGH EFFICIENT
Definite Purpose

HIGH EFFICIENT
P-Base Vertical

NEMA PREMIUM
General Purpose

NEMA PREMIUM
Severe Duty

Hazardous Duty P-Base Motors

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Stock/Modifiable

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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	RGZZVESD	1205	1005	1PC28413AA312TG3	5069	SA-7EN	45	92.4	589	✓
40	1800	324HP	460	RGZZVESD	1570	1290	1PC28413AB312TG3	5231	SA-7EN	47	92.4	589	✓
40	1200	364HP	460	RGZZVESD	2075	1675	1PC28413CC312TG3	8135	SA-7EN	52	92.4	865	
40	900	365HP	460	RGZZVESD	2340	1840	1PC28413CD412TG3	9047	SA-7EN	63	90.2	915	
50	3600	326HP	460	RGZZVESD	1215	995	1PC28413AA412TG3	5579	SA-7EN	55	92.4	738	✓
50	1800	326HP	460	RGZZVESD	1585	1275	1PC28413AB412TG3	5880	SA-7EN	58	92.4	738	✓
50	1200	365HP	460	RGZZVESD	2095	1660	1PC28413CC412TG3	9180	SA-7EN	66	92.4	915	
50	900	404HP	460	RGZZVESD	2370	1810	1PC28414AD312TG3	11369	SA-7EN	67	90.2	1290	
60	3600	364HP	460	RGZZVESD	1410	1080	1PC28413CA312TG3	7211	SA-7EN	68	92.4	865	✓
60	1800	364HP	460	RGZZVESD	1795	1435	1PC28413CB312TG3	7426	SA-7EN	71	92.4	865	✓
60	1200	404HP	460	RGZZVESD	2155	1595	1PC28414AC312TG3	10357	SA-7EN	74	93	1290	
60	900	405HP	460	RGZZVESD	2410	1770	1PC28414AD412TG3	11369	SA-7EN	78	90.2	1420	
75	3600	365HP	460	RGZZVESD	1420	1070	1PC28413CA412TG3	8818	SA-7EN	85	93	915	✓
75	1800	365HP	460	RGZZVESD	1815	1415	1PC28413CB412TG3	8928	SA-7EN	87	93	915	✓
75	1200	405HP	460	RGZZVESD	2195	1555	1PC28414AC412TG3	11738	SA-7EN	93	93.6	1420	
75	900	444HP	460	RGZZVESD	2495	1685	1PC28414HD112TG3	15188	SA-7EN	94	91.7	1740	
100	3600	405HP	460	RGZZVESD	1475	1015	1PC28414AA412TG3	10787	SA-7EN	108	93	1420	✓
100	1800	405HP	460	RGZZVESD	1915	1315	1PC28414AB412TG3	10389	SA-7EN	113	93.6	1420	✓
100	1200	444HP	460	RGZZVESD	2315	1435	1PC28414HC112TG3	15412	SA-7EN	117	93.6	1740	
100	900	445HP	460	RGZZVESD	2565	1615	1PC28414HD212TG3	18018	SA-7EN	123	93	1930	
125	1800	444HP	460	RGZZVESD	1975	1255	1PC28414HB112TG3	13337	SA-7EN	143	94.1	1740	
125	1200	445HP	460	RGZZVESD	2385	1365	1PC28414HC212TG3	17983	SA-7EN	144	93.6	1930	
125	900	447HP	460	RGZZVESD	2670	1510	1PC28414HD312TG3	20992	SA-7EN	152	92.4	2450	
150	1800	445HP	460	RGZZVESD	2060	1170	1PC28414HB212TG3	15606	SA-7EN	170	94.5	1930	
150	1200	447HP	460	RGZZVESD	2400	1350	1PC28414HC312TG3	22068	SA-7EN	170	94.1	2450	
150	900	447HP	460	RGZZVESD	2730	1450	1PC28414HD412TG3	22899	SA-7EN	186	93	2450	
200	1800	447HP	460	RGZZVESD	2115	1115	1PC28414HB312TG3	21043	SA-7EN	225	94.5	2450	
200	1200	449HP	460	RGZZVESD	2450	1300	1PC28414HC512TG3	24041	SA-7EN	226	94.1	2650	
200	900	449HP	460	RGZZVESD	2800	1380	1PC28414HD612TG3	25719	SA-7EN	241	93.6	2650	
250	1800	449HP	460	RGZZVESD	2185	1045	1PC28414HB512TG3	23271	SA-7EN	281	94.5	2650	
250	1200	449HP	460	RGZZVESD	2520	1230	1PC28414HC612TG3	26148	SA-7EN	280	94.1	2650	

Notes:

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