marathon®

marathon®
Generators

MAGNAPLUS® GENERATORS PRODUCT GUIDE

KVA 5 TO 420 (50 HERTZ) ISO 9001:2008 CERTIFIED

MARATHON® GENERATORS

HISTORY & FOUNDATION

Regal Beloit Corporation was established in Wisconsin in 1955 where they set up operations in a Beloit Roller Rink manufacturing cutting tools and gearboxes. Since then its product line has expanded to include motors, generators, drive control systems and power transmission products. It was officially listed on the New York stock exchange in 2005.

Today Regal is a truly global company with presence in Canada, United States of America, Mexico, Brazil, Germany, Italy, India, China, Japan, Thailand, New Zealand, Australia, and other countries including manufacturing sites in 63 locations and 16 design centres around the globe.

Regal Beloit Australia offer a broad product range of products from motors, motor control & drives, gearboxes, brakes and couplings through to winding wire, insulation material, cables, varnishes and air systems to name a few. With strong brands such as Marathon, CMG, Fasco, Durst and Emerson to name a few, Regal Australia can assist with all your electro mechanical, power transmission, speed control and air system needs.

- INDUSTRIAL MOTORS & GENERATORS
- MOTOR STARTERS & CONTROL
- SINGLE PHASE & DC MOTORS
- GEARBOXES
- COUPLINGS, BRAKES & CLUTCHES
- INSULATORS & CONDUCTORS
- AIR SYSTEMS
- DIE CASTING
- REWIND, SERVICE & REPAIR

MAGNAPLUS®

INNOVATION • PERFORMANCE • RELIABILITY

WHAT MAKES THE MARATHON GENERATORS APPROACH UNIQUE?

Proven top performers in every respect, MagnaPLUS® generators offer powerful performance, reliable power generation and easy installation. With a full range of voltage regulator configurations, MagnaPLUS® generators provide application flexibility to meet unique installation requirements. Ruggedly constructed with solid state technology, Marathon's SE350 voltage regulator, included with all standard equipment, is a solid performer.

MARATHON; THE EXPERTS IN YOUR FIELD

As an independent manufacturer with more than fifty years of experience as a leading supplier to the generator market, Marathon is dedicated to designing and manufacturing the highest quality electrical products.

MAGNAPLUS® GENERATORS

MagnaPLUS® offers a field-adaptable, permanent magnet generator, coupled with the PM300 or DVR®2000E voltage regulator, for installations requiring fault current support or for applications involving non-linear loads. These regulators enhance generator performance and offer additional features, meeting the needs of the most difficult applications.

These unique design features make MagnaPLUS® the ideal general purpose generator for standby and prime power markets such as:

- Agricultural
- Marine
- Commercial
- Construction
- Telecommunications
- Rental Markets

Marathon's commitment to long term customer support and an intensive product development program means you get more:

- Design & Application Experience
- Broad Product Line
- Technical Support Staff
- Advanced Testing Facilities

PRODUCT FEATURES

CHOICE
Abound with more than 34 stock models ranging from 5–420 kVA (50 Hz). All three-phase generators are 12-lead econnectable, providing voltage and phase flexibility. For applications requiring pricesensible, dedicated single-phase generators, Marathon stocks 26 models. Standard and optional conduit box designs are available to meet all customer requirements and to ease installation of accessories.

EASY MOUNT SAE ADAPTERS
Provided with every generator, these adapters are designed with easy drive disc access to simplify the mounting to all popular engines. Generator foot mounting location is unaffected by adapter changes. Special adaptations for automotive engines are available.

CLASS H INSULATION SYSTEM
The class H insulation system utilizes an unsaturated polyester varnish for optimal insulation life and superior moisture protection. An epoxy overcoat is added for increased environmental protection. Field windings are wet wound with epoxy and designed to withstand overspeeds of 125%. All windings are 100% copper with class H insulation.

LINKBOARDS
Linkboards are standard to simplify voltage reconnection and support lead termination.

SE350 VOLTAGE REGULATOR
The SE350 voltage regulator is encapsulated for reliable performance in all environments. This SE350 regulator provides 1% regulation, underspeed protection, stability adjustment to optimise transient performance, and EMI filtering to commercial standards.

OPTIMISED ELECTRICAL DESIGN
Optimised Electrical Design with four pole, brushless features, utilizes a 2/3 pitch winding to minimize harmonic distortion. The main rotor, utilizing Marathon's unirotor construction, provides exceptional waveshape and voltage balance. The unirotor construction method incorporates full amortisseur windings facilitating parallel operation and non-linear loads.

ENHANCED VENTILATION
Enhanced Ventilation created by a high efficiency cast aluminum fan and optimized internal air flow patterns, maximizes heat transfer and minimizes hot spot differentials for extended winding life. Durable aluminium alloy fans avoid breakage problems associated with steel weldments or plastic fans.

FULLY GUARDED
Fully Guarded for operator safety and generator protection. No rotating or electrically energized parts are exposed. All openings are covered by louvres or screens.

HEAVY DUTY BEARINGS
These generators bearings are double shielded and pre-lubricated for the life of the bearing. This helps resist contamination and ensures a maximum bearing life.

DESIGN SPECS AND AGENCY APPROVALS
Design Specs and Agency Approvals are important at Marathon. All MagnaPLUS® units meet NEMA MG1-32, BS5000, and IEC 34-1 requirements. MagnaPLUS® generators are also CE Certified, CSA Certified and fully UL Listed. Marine versions are available to meet American Bureau of Shipping, Lloyds, Det Norske Veritas, or Nippon Kaiji Kyokai requirements.

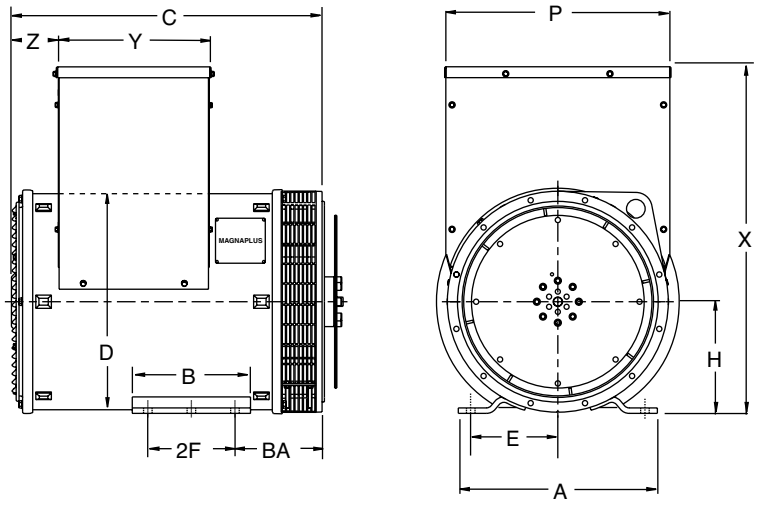
PERFORMANCE DATA

- **KVA RATINGS**
- **50 HERTZ THREE PHASE 12 LEADS [4]**
- **1500 RPM**
- **0.8 POWER FACTOR**
- **40°C AMBIENT TEMPERATURE**

Base Model	Bolt-on PMG option avail.	kVA Continuous Duty				kVA Standby Duty			
		Class F 105°C		Class H 125°C		Class F 130°C		Class H 150°C	
		415Y/208Y	380Y/190Y	415Y/208Y	380Y/190Y	415Y/208Y	380Y/190Y	415Y/208Y	380Y/190Y
Standard Models									
281CSL1502	No	12.0	11.3	12.5	12.0	12.5	12.0	13.1	12.5
282PSL1703 (3)	(2)	12.0	13.1	13.1	13.8	13.8	14.4	14.4	15.0
282CSL1504	No	16.3	16.3	17.5	17.5	17.5	17.5	18.8	18.8
282CSL1505	No	21.3	22.5	23.1	25.0	23.1	25.0	25.0	26.3
283CSL1506	No	23	25	25	26	25	26	28	29
283CSL1507	No	28	29	30	31	30	31	33	34
284CSL1508	No	31	36	35	40	35	40	38	43
284CSL1542	No	36	38	40	41	40	41	43	44
361CSL1600 (1)	Yes	45	44	50	45	50	45	53	50
361CSL1601 (1)	Yes	50	54	56	58	56	58	60	63
361CSL1602 (1)	Yes	60	65	65	70	65	70	73	75
362CSL1604 (1)	Yes	81	80	90	85	90	85	96	91
362CSL1606 (1)	Yes	90	94	100	100	100	100	110	110
363CSL1607 (1)	Yes	113	113	130	130	130	130	133	133
431CSL6202 (1)	Yes	140	143	150	151	150	155	155	160
431CSL6204 (1)	Yes	165	166	175	176	176	180	183	185
431CSL6206 (1)	Yes	185	200	200	211	205	215	211	225
431CSL6208 (1)	Yes	206	210	225	225	225	230	235	235
432CSL6210 (1)	Yes	240	256	260	275	265	280	275	290
432CSL6212 (1)	Yes	270	270	300	300	300	300	310	303
433CSL6216 (1)	Yes	320	345	350	370	360	376	375	390
433PSL6220 (1)	Yes	355	375	400	400	400	410	410	423
Alternate Models									
281PSL1722	(2)	9.0	10.6	9.8	11.3	9.8	11.3	10.5	12.0
282PSL1704	(2)	12.5	14.4	13.8	16.3	13.8	16.3	15.0	17.5
282PSL1705	(2)	16.3	18.8	18.8	21.3	18.8	21.25	20.0	22.5
283PSL1706	(2)	23	25	25	28	25	28	26	29
283PSL1707	(2)	26	26	30	30	30	30	33	33
284PSL1708	Yes	29	33	33	35	33	35	35	39
284PSL1742	Yes	34	35	38	40	38	40	40	43
285PSL1700	Yes	38	41	43	46	43	46	45	50
286PSL1701	Yes	50	50	55	55	55	55	58	58
287PSL1702	Yes	53	54	60	60	60	60	62	62

(1) 361 to 431 PSL (single bearing) or PDL (double bearing) models are the alternate to CSL models and have equivalent performance and dimensions.
(2) PMG option available as build-up only.
(3) Specialty and two bearing orders utilise these windings in place of 280 frame CSL models.
(4) All MagnaPlus® models have linkboard as standard.

DIMENSIONS



Frame Size	A	B	BA	C	C with PMG	D	E	2F	H	P	X	Y	Z
281PSL	356	178	167	405	N/A	349	159	127	203	344	471	174	89
281CSL	356	178	167	415	N/A	349	159	127	203	344	471	174	89
282PSL	356	178	167	470	587	346	159	127	203	344	471	227	87
282CSL	356	178	167	466	N/A	349	159	127	203	344	471	227	87
283PSL	356	178	167	521	638	346	159	127	203	344	471	227	87
283CSL	356	178	167	529	N/A	349	159	127	203	344	471	227	87
284PSL	356	178	167	578	696	346	159	127	203	344	471	227	87
284CSL	356	178	167	580	N/A	349	159	127	203	344	471	227	87
285PSL	356	178	294	635	752	346	159	127	203	344	471	227	87
286PSL	356	178	294	686	803	346	159	127	203	344	471	227	87
287PSL	356	178	294	737	853	346	159	127	203	344	471	227	87
361	406	241	178	634	764	441	178	178	229	462	707	316	89
362	406	241	178	726	856	441	178	178	229	462	707	316	89
363	406	241	267	806	935	441	178	178	229	462	707	316	89
431	545	381	254	861	972	575	229	279	330	634	917	406	68
432	545	381	254	950	1061	575	229	279	330	634	917	406	68
433	545	381	254	1077	1188	575	229	279	330	634	917	406	68

All dimensions are in millimeters.
All dimensions are approximate.
Refer to dimension section of the Generator catalogue for full dimensional data.