



PROTEC AC PTO Generators Two-Bearing Alternators

15-40 kW, 60 Hz
12-30 kW, 50 Hz



- Heavy-Duty, Field-Proven Design for Long Life
- Capped Voltage Regulation
- Environmental Protection for Adverse Conditions
- Low Harmonic Distortion
- Dual Mounting Configurations
- Remote Mountable Solid State Electronic Voltage Regulator
- 50/60 Hz Switchable

GeneratorJoe

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Model and Ratings

Single Phase Models	15 YD CR 621C		20 YD CR 621C		25 YD CR 621C		30 YD CR 621C		35 YD CR 621C	
Nominal Rating (kW)	12.0	15.0	16.0	20.0	20.0	25.0	24.0	30.0	30.0	35.0
Frequency (Hz)	50	60	50	60	50	60	50	60	50	60
Input Speed (r/min)	1500	1800	1500	1800	1500	1800	1500	1800	1500	1800
Output Voltage	115/230	120/240	115/230	120/240	115/230	120/240	115/230	120/240	115/230	120/240
Recommended Circuit Breaker	70 A, 2-pole	70 A, 2-pole	70 A, 2-pole	85 A, 2-pole	100 A, 2-pole	100 A, 2-pole	150 A, 2-pole	150 A, 2-pole	175 A, 2-pole	175 A, 2-pole
Recommended Control Panel	300-4700	300-4589	300-4700	300-4590	300-4701	300-4591	300-4702	300-4592	300-4703	300-4593
Efficiency, %	80.5	80.6	83.3	82.6	84.5	83.4	84.0	85.9	86.9	86.0
Three Phase Models	15 YD CR 622C		20 YD CR 622C		25 YD CR 622C		32 YD CR 622C		40 YD CR 622C	
Nominal Rating (kW)	12.0	15.0	16.0	20.0	20.0	25.0	25.0	32.0	30.0	40.0
Frequency (Hz)	50	60	50	60	50	60	50	60	50	60
Input Speed (r/min)	1500	1800	1500	1800	1500	1800	1500	1800	1500	1800
Output Voltage Configuration*	12-lead reconnectable broad range voltages		12-lead reconnectable broad range voltages		12-lead reconnectable broad range voltages		12-lead reconnectable broad range voltages		12-lead reconnectable broad range voltages	
Efficiency, %	85	85	85	85	85	85	86	86	87	87

*See reconnectable voltage chart on page 3.

Note: Three phase control panels currently not available.

Standard Features

- Precision balanced rotating field generator
- Epoxy impregnated windings with overcoat
- Brushless exciter
- Double-sealed, prelubricated bearings
- Air-cooled with shaft-mounted centrifugal fan
- Bi-directional rotation
- Skewed stator for low harmonic distortion
- Class H insulation, 180° C temp rating
- Reconnectable three phase and single phase

Accessories

Control Panel with voltmeter ammeter, hourmeter, frequency meter and line circuit breaker.

Rating 1Ø (kW) 50 Hz	Control Panel Part Number	Circuit Breaker	L x W x H, in (mm)
12	300-4700	70 A, 2-pole	16.4 (418) x 4.5 (114) x 10.9 (278)
16	300-4700	70 A, 2-pole	16.4 (418) x 4.5 (114) x 10.9 (278)
20	300-4701	85 A, 2-pole	16.5 (419) x 10 (254) x 15 (381)
25	300-4702	100 A, 2-pole	16.5 (419) x 10 (254) x 15 (381)
30	300-4703	150 A, 2-pole	16.5 (419) x 10 (254) x 15 (381)
60 Hz			
15	300-4589	70 A, 2-pole	16.5 (418) x 4.5 (114) x 10.9 (278)
20	300-4590	85 A, 2-pole	16.5 (419) x 10 (254) x 15 (381)
25	300-4591	100 A, 2-pole	16.5 (419) x 10 (254) x 15 (381)
30	300-4592	150 A, 2-pole	16.5 (419) x 10 (254) x 15 (381)
35	300-4593	175 A, 2-pole	16.5 (419) x 10 (254) x 15 (381)

Note: Three phase control panels currently not available.

Output Lead Kits:

12-25 kW models, single phase (part #541-0519)

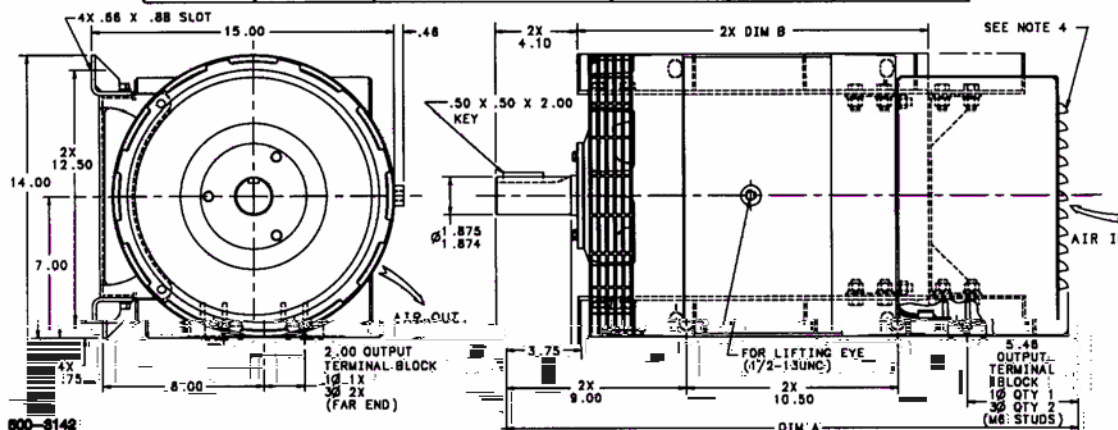
30-35 kW models, single phase (part #541-0520)

32-40 kW models, three phase (part #541-0518)

Basic Dimensions

Tabulation					
1Ø kW (50/60 Hz)	3Ø kW (50/60 Hz)	Outline Drawing Number	Dim A	Dim B	Weight (lb)
12/15	12/15	0500-3142-01	25.68	17.44	301
16/20	16/20	0500-3142-02	27.12	17.44	351
20/25	20/25	0500-3142-03	28.37	17.44	393
25/30	25/32	0500-3142-04	30.00	22.19	448
30/35	30/40	0500-3142-05	31.75	22.19	507

TABULATION					
1 Ø KW (50/60 Hz)	3 Ø KW (50/60 Hz)	OUTLINE DRAWING NUMBER	DIM A	DIM B	APPROX. WEIGHT (LBS)
12/15	12/15	0500-3142-01	25.68	17.44	301
16/20	16/20	0500-3142-02	27.12	17.44	351
20/25	20/25	0500-3142-03	28.37	17.44	393
25/30	25/32	0500-3142-04	30.00	22.19	448
30/35	30/40	0500-3142-05	31.75	22.19	507



This outline drawing is provided for general reference only and is not intended for design or installation. For more information see installation manual or obtain outline drawing 500-3142 and wiring diagram from your Distributor/Dealer.

Motor Starting Performance

Single Phase Models	15 YD CR 621C		20 YD CR 621C		25 YD CR 621C		30 YD CR 621C		35 YD CR 621C	
Max kVA at 90% Rated V	25	33	33	43	42	55	60	78	68	89
Rating (kW) at 0.9 PF										
50 Hz	9.0 at 230 V		16.0 at 230 V		16.0 at 230 V		20.0 at 230 V		25.0 at 230 V	
60 Hz	13.5 at 240 V		21.0 at 240 V		21.0 at 240 V		26.0 at 240 V		31.0 at 240 V	
Motor Starting hp/kW										
Code F	2/3		2/3		2/3		2/3		2/3	
Code H	1/2		1/2		1/2		1/2		1/2	
Voltage Dip % (at .6-.5/unit impedance) *	32.0 at .6	37.2 at .6	31.0 at .6	36.0 at .6	30.0 at .6	34.8 at .6	32.0 at .5	37.6 at .5	31.0 at .5	36.9 at .5
Three Phase Models	15 YD CR 622C		20 YD CR 622C		25 YD CR 622C		32 YD CR 622C		40 YD CR 622C	
Max kVA at 90% Rated V	26	34	35	45	44	56	56	72	68	83
Motor Starting hp/kW										
Code F	2/3		2/3		2/3		2/3		2/3	
Code H	1/2		1/2		1/2		1/2		1/2	
Voltage Dip % (at .6-.5/unit impedance) *	34.0 at 0.5	40.0 at 0.5	34.0 at 0.5	40.0 at 0.5	34.0 at 0.5	40.0 at 0.5	34.0 at 0.5	40.0 at 0.5	34.0 at 0.5	40.0 at 0.5

*Single phase based on 120/240. **Three phase based on 120/208

Reconnectable Voltage Configurations

Single Phase				
	3-wire	Parallel 2-wire	Series 2-wire	
60 Hz	120/240	120	240	
50 Hz	110/220	110	220	
	115/230	115	230	
	120/240	120	240	
Three Phase				
	3Ø Parallel Wye*	3Ø Series Wye	3Ø Series Delta	1Ø Double Delta
60 Hz	120/208-139/240	240/416-277/480	120/240	120/240
50 Hz	110/190-115/200-120/208	220/380-230/400-240/416	110/220-120/240	110/220-120/240

*Factory wiring

Alternator Detail

Design: Onan, revolving field, brushless, drip-proof construction
Insulation system rise: Class H per NEMA MG1-1.65 and BS 2757 insulating varnish conforms to MIL-I-24092, Grade CB, Class 180° C
Exciter system: Brushless with 8-pole stator mounted in endbell; rotating rectifier assemblies are encapsulated for protection from adverse environments; sized for maximum motor starting

Bearing: Double sealed prelubricated ball bearing
Cooling: Direct drive centrifugal blower
Voltage regulator: Self regulating, load circuit inductively coupled to exciter circuit for instantaneous response to load changes and boost capability for heavy loads and motor starting

Unit Performance

Frequency regulation recommendations: (not supplied by Onan - installer added)
 Operative range: 57-63 Hz
 Typical mechanical governing systems: ±5%
 Typical electronic governing system: ±1%

Voltage regulation: Steady-state voltage regulation: less than 0.5%, no load to full load, with constant speed; overall voltage regulation performance will be directly affected by the performance and accuracy of the governing system used; power ratings comply to NEMA standard MG1-22.



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Warranty Policy

The ONAN Limited Warranty covers virtually everything except routine maintenance for the first 3,000 hours of operation. In addition, it includes a free 90-day adjustment policy, which provides that Onan will make minor adjustments to your new genset during the first three months you own it - free of charge!

For complete Onan Limited Warranty details see your Certified Onan Distributor or Service Dealer.

After Sale Support

EASY TO LOCATE CERTIFIED ONAN SERVICE AND PARTS DEALERS - Onan has the largest and best-trained worldwide certified Distributor/Dealer network in the industry, offering on-time parts and service, and installation assistance. Cummins Onan Distributor/Dealers stock and sell commonly used Onan GenSet maintenance parts, accessories and products, plus operator manuals and literature on current Onan GenSets. They can help you select and install the right genset or accessories on older models, or provide answers to questions on proper operation and maintenance procedures.

MANUALS - Installation and operators manuals are shipped with the genset. To obtain additional copies or other manuals for this model, see your Cummins Onan Distributor/Dealer and request the following part numbers: Operators Manual (929-0101), Parts Manual (929-0201), Service Manual (900-0184), and Installation Manual (929-0601).

Standards and Testing

Tested at extremes of temperature -20° F to 120° F for starting and operation.

Tested with commercial loads.

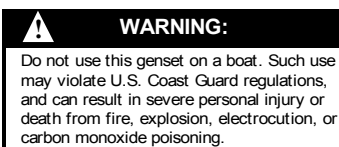
Tested in high humidity conditions.

Tested in salt spray conditions.

Tested in heavy air borne dust conditions.

Field Test Program.

This generator set was designed and manufactured in facilities certified to ISO 9001.



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WARNING: Backfeed to utility systems can cause electrocution or property damage. Do not connect to building electrical except through approved device and after building main breaker is opened.