

# Commercial generator set Standard Diesel™ Series SD 7.5 60 Hz/6.0 50 Hz



## Cummins Onan

Performance you rely on.™



### Features and benefits

- Smooth operation - focalized mounting system with 4-point vibration isolation
- Glow plugs for reliable all-weather starting
- Installation flexibility with remountable 90° exhaust elbow, remountable DC control and multiple oil fill/check points
- Cross-flow radiator for increased cooling efficiency
- Water resistant controls
- Low harmonic distortion for SCR loads

### Weight, size and sound level

Weight: 490 lb (223 kg), wet

Size:

- 60 Hz - Length 37.3 in (947 mm), width 21.0 in (535 mm), height 23.9 in (607 mm)
- 50 Hz - Length 38.27 in (972 mm), width 21.0 in (535 mm), height 23.9 in (607 mm)

Sound:

- 60 Hz - 76 dB(A) at 10 ft (3 m), 63 dB(A) at 50 ft (15 m) before installation, full load
- 50 Hz - 75 dB(A) at 10 ft (3 m), 61 dB(A) at 50 ft (15 m) before installation, full load

### Models and ratings

Model	Fan	Hz	Watts	Voltage	Amps	PF	Phase	Circuit breaker
7.5HDKAL-1	Pusher	60	7500	120/240	62.5/31.3	1.0	1	2-pole, 35 A
7.5HDKAL-2	Suction	60	7500	120/240	62.5/31.3	1.0	1	2-pole, 35 A
7.5HDKAL-5010 <sup>#</sup>	Suction	60	7500	120/240	62.5/31.3	1.0	1	2-pole, 35 A
7.5HDKAL-3	Pusher	60	7500	120/240*	22.6	0.8	3	3-pole, kit
7.5HDKAL-5011 <sup>#</sup>	Pusher	60	7500	120/240*	22.6	0.8	3	3-pole, kit
7.5HDKAL-5	Pusher	60	7500	100/200	75/37.5	1.0	1	2-pole, 40 A
6HDKAL-7	Pusher	50	6000	115/230	52.1/26.1	1.0	1	2-pole, 30 A
6HDKAL-8	Suction	50	6000	115/230	52.1/26.1	1.0	1	2-pole, 30 A
6HDKAL-5009 <sup>#</sup>	Suction	50	6000	115/230	52.1/26.1	1.0	1	2-pole, 30 A
6HDKAL-9	Pusher	50	6000	115/230*	18.8	0.8	3	3-pole, kit

- All 60 Hz models operate at 1800 r/min. All 50 Hz models operate at 1500 r/min.
- Ratings apply up to 500 ft (152.4 m) altitude, 104° F (40° C) ambient\*\* with No. 2 diesel fuel.
- Maximum power decreases 3.5% for each 1000 ft (305 m) above 500 ft (153 m) and 1% for each 10° F (5.5° C) increase in ambient\*\* temperature above 85° F (29° C).
- Ratings are at intermittent power output.

\* Three-phase models are 12-lead reconnectable for a broad range of voltage applications.

\*\* Ambient is defined as the air temperature measured at the cooling air inlet to the set.

<sup>#</sup> With export packaging.

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## Standard features

- 3-cylinder diesel engine
- Brush type AC alternator
- Focalized mounting system with 4-point vibration isolators
- Cross-flow radiator
- Full flow lube oil filter
- Fuel filter/water separator
- Vertically mounted fuel and oil filters
- Replaceable element air cleaner
- Remote mountable DC control box
- 4-position exhaust elbow
- 30 A battery charging DC alternator
- Lifting bracket
- Glow plugs for easy starting
- Base pan for drip control
- Electric fuel pump
- Top and side oil fill and check for platform or compartment installations

## Engine details

Model: Kubota D1105  
Design: 4-cycle, liquid-cooled diesel engine  
Cylinders: 3, inline vertical  
Bore: 3.07 in (78.0 mm)  
Stroke: 3.09 in (78.4 mm)  
Displacement: 68.53 in<sup>3</sup> (1124 cm<sup>3</sup>)  
Compression ratio: 24:1  
Lube oil capacity: 5.39 qt (5.1 L)  
Power (max): At 1800 r/min: 17.1 hp  
Cooling system capacity: 1.25 Gal (4.73 L)  
Starting system: Remote, 12 V, 1.2 kW starter  
Fuel injection pump: Bosch K mini  
Fuel pump: Electric  
Combustion chamber: Spherical

## Typical fuel consumption

No. 2 diesel fuel, Gal/hr (L/hr)	<u>No load</u>	<u>Half load</u>	<u>Full load</u>
7.5HDKAL	0.25 (0.95)	0.56 (1.93)	0.9 (3.41)
6.0HDKAL	0.23 (0.87)	0.46 (1.74)	0.8 (3.03)

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## Alternator details

Design: Cummins Onan, brush type, drip proof construction

Insulation system: Class F, per NEMA MGI-1.65 and BS 2757; insulating varnish conforms to MIL-I-24092, grade CB, Class 155 C

Three-phase models: Broad range reconnectable design for installed voltage flexibility

Exciter system: Electronic voltage regulation

Bearing: Double sealed, pre-lubricated ball bearing

Cooling: Direct drive centrifugal blower

Damper bar system: Generator set design incorporates a damper bar system for low harmonic waveform distortion. This design feature becomes significant when powering SCR type loads (converters, etc.)

Voltage regulation:

Frequency regulation:

## Generator set details

Control

- Unit mounted, drip-proof, vibration isolated console DC controls, 12 V system
- Start/stop/preheat switch
- Remote connector for start/stop/preheat switch and gauge package
- Manual reset fault relay indicating engine shutdown for high coolant temperature, low oil pressure
- Hour meter

AC controls

- Electronic voltage regulator
- Three-phase models, factory shipped reconnectable (no breaker)
- Three-phase breaker kits available for field fitted installation

No load/full load

±2.5%

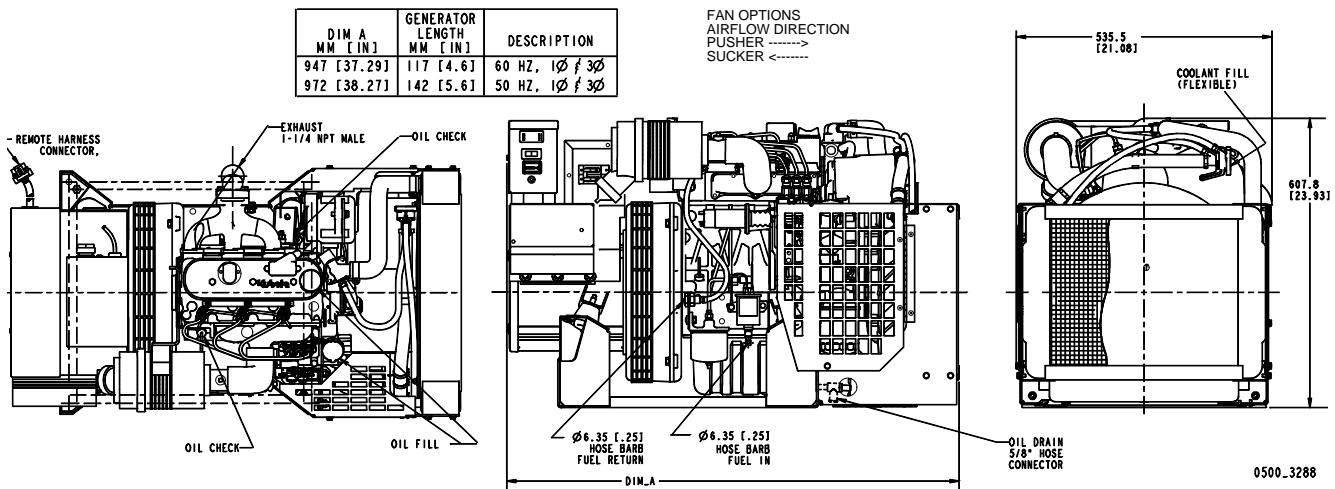
±2.5%

Constant load

±1%

±1%

## Basic dimensions



Note: This outline drawing is provided for general reference only and is not intended for design or installation. For more information see Operation and Installation manuals or obtain drawing 500-3288 and wiring diagram from your distributor/dealer.

## Options and accessories

- USDA Forest Service approved spark arrestor muffler (P/N 155-2068)
- Exhaust resonator (P/N 155-2653)
- Remote gauge package with start/stop/preheat switch, DC voltage meter, water temperature gauge, running time meter (P/N 300-5026)
- DC gauge package – DC voltage meter, water temperature gauge, oil pressure gauge; can be set mounted or remote mounted (P/N 300-4966)
- Junction harness (for use with DC gauge package and a remote control panel) (P/N 338-3526)
- Oil pressure sender (P/N 193-0244-99)
- Water temp sender (P/N 193-0318)
- Remote control panel, switch only (P/N 300-4939)
- Remote control panel, switch and hour meter (P/N 300-4940)
- Remote control panel, switch and DC voltmeter (P/N 300-4941)
- Remote harness (for use with above panels) 10 ft (P/N 338-3490-01), 30 ft (P/N 338-3490-02)
- Remote harness pigtail (P/N 300-4947)
- Remote harness pigtail at panel (P/N 338-3573)
- Engine block heater (P/N 333-0593)
- Racor® fuel filter/water separator (P/N 149-2573)
- Auxiliary alternator air cooling kit on suction fan units for compartment mounted generator sets (P/N 140-3214)

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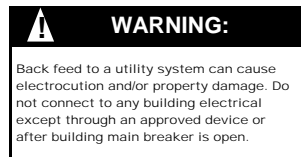
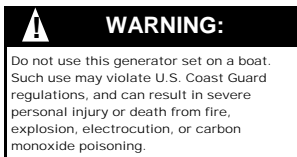
## Standards and testing

- Tested at extremes of temperature -20° F (-29° C) to 120° F (49° C) for starting and operation
- Tested with commercial loads
- Tested in high humidity conditions
- Tested in salt spray conditions
- Tested in heavy airborne dust conditions
- Field test program
- This product meets U.S. EPA Tier IV
- This generator set was designed and manufactured in facilities certified to ISO 9001
- 60 Hz 120/240V models certified for CSA C22.2 Std. 100 and Std. 14



## Warranty policy

The Cummins Onan limited warranty covers virtually everything except routine maintenance for the first two years you own your generator set, or the first 2,000 hours of operation, whichever comes first. In addition, it includes a free 90-day adjustment policy, which provides that Cummins Inc. will make minor adjustments to your new generator set during the first three months you own it - free of charge!



## After sale support

Largest distributor/dealer support network  
Cummins Onan generator sets are supported by the largest and best trained worldwide certified distributor/dealer network in the industry. This network of knowledgeable Cummins Onan distributor/dealers will help you select and install the right generator set and accessories to meet the requirements of your specific application. This same network offers a complete selection of commonly used generator set maintenance parts, accessories and products plus manuals and specification sheets. Plus, they can answer your questions regarding proper operation, maintenance schedules and more.

Manuals: Operation, installation and parts manuals ship with the generator set. To obtain additional copies or other manuals for this model, see your Cummins Onan distributor/dealer and request the following manual numbers: Operation (981-0104), Installation (981-0613), Parts (981-0289), Service (981-0523B).

To easily locate the nearest Cummins Onan distributor/dealer in your area, or for more information, contact us at 1-800-888-6626 (or 763-574-5000), or visit [www.cumminsonan.com](http://www.cumminsonan.com).

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Contact your distributor/dealer for more information

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