

# DIESEL GENERATOR SET



## DE13.5E3

EU t a e IIIA eD y eD a t.  
S t a b e f , M b e A c a y t e E w e a G D D t .

lD a e y D a , y t p f e q a q a a c a e

### Output Ratings

| Generator Set Model - 3 Phase | P D e*            | S a db, *         |
|-------------------------------|-------------------|-------------------|
| 400/230 V, 50 Hz              | 12.5 VA<br>10.0 W | 13.5 VA<br>10.8 W |
| 220/127V, 60 Hz               | 15.0 VA<br>12.0 W | 16.5 VA<br>13.2 W |

\* Refe t v a def t v y a e 4.  
R a a 0.8 y e , f a q y .

### Technical Data

|   |                                 |           |
|---|---------------------------------|-----------|
| Engine Make & Model:                        | Cat® C1.5                       |           |
| Generator Model:                            | LC1114D                         |           |
| Control Panel:                              | EMCP 4.1                        |           |
| Base Frame Type:                            | Hea , D t , Fab , c a e d S e e |           |
| Circuit Breaker Type:                       | 3 R e MCB                       |           |
| Frequency:                                  | 50 Hz                           | 60 Hz     |
| Engine Speed: RPM                           | 1500                            | 1800      |
| Fuel Tank Capacity: t p (US a )             | 62 (16.4)                       |           |
| Fuel Consumption, Prime: / , (US a / D )    | 3.7 (1.0)                       | 4.3 (1.1) |
| Fuel Consumption, Standby : / , (US a / D ) | 4.0 (1.1)                       | 4.9 (1.3) |

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## Engine Technical Data

| Physical Data               |                             |
|-----------------------------|-----------------------------|
| Manufacturer:               | Caterpillar                 |
| Model:                      | C1.5                        |
| No. of Cylinders/Alignment: | 3 / I L e                   |
| Cycle:                      | 4 S t r o k e               |
| Induction:                  | N a t u r a l A s p i r e d |
| Cooling Method:             | W a t e r                   |
| Governing Type:             | M e c a n i c a l           |
| Governing Class:            | ISO 8528                    |
| Compression Ratio:          | 22.5:1                      |
| Displacement: (c . )        | 1.5 (91.3)                  |
| Bore/Stroke: ( )            | 84.0 (3.3)/90.0 (3.5)       |
| Moment of Inertia: (b . )   | 2.17 (7415)                 |
| Engine Electrical System:   |                             |
| -Voltage/Ground:            | 12/N e a r e                |
| -Battery Charger Amps:      | 65                          |
| Weight: (b) - Dry:          | 197 (434)                   |
| - Wet:                      | 202 (445)                   |

| Air System                               | 50 Hz            | 60 Hz             |
|--|------------------|-------------------|
| Air Filter Type:                         | Re ce ab e E e t |                   |
| Combustion Air Flow:                     |                  |                   |
| ( / ) (cfm)                              | -Standby:        | 1.1 (38) 1.2 (43) |
|  | -Prime:          | 1.1 (38) 1.2 (43) |
| Max. Combustion Air Intake               |                  |                   |
| Restriction: Pa ( H <sub>2</sub> O)      | 6.4 (25.7)       | 6.4 (25.7)        |
| Radiator Cooling Air Flow:               |                  |                   |
| ( / ) (cfm)                              | 28.8 (1017)      | 37.2 (1314)       |
| External Restriction to                  |                  |                   |
| Cooling Air Flow: Pa ( H <sub>2</sub> O) | 125 (0.5)        | 125 (0.5)         |

| Cooling System  | 50 Hz     | 60 Hz                 |
|---|-----------|-----------------------|
| Cooling System Capacity:  |           |                       |
| (US a)  | 6.0 (1.6) | 6.0 (1.6)             |
| Water Pump Type:  | C e t a   |                       |
| Heat Rejected to Water &  |           |                       |
| Lube Oil: W ( / )   |           |                       |
|   | -Standby: | 12.9 (734) 15.2 (864) |
|   | -Prime:   | 11.6 (660) 13.6 (773) |
| Heat Radiation to Room: Heat radia ed f e e a d a t e a   |           |                       |
| W ( / )   | -Standby: | 6.0 (341) 7.1 (404)   |
|   | -Prime:   | 5.4 (307) 6.3 (358)   |
| Radiator Fan Load: W ( )  | 0.2 (0.2) | 0.3 (0.4)             |
| C v t e d e d t v e a e a b e t e d t v t 50 C (122 F). C t a q v v c a C a d e a e f v e a a e c f c t e e d t v . |           |                       |

| Lubrication System         |                |
|----------------------------|----------------|
| Oil Filter Type:           | S - O , F F    |
| Total Oil Capacity (US a): | 6.0 (1.6)      |
| Oil Pan I (US a):          | 4.5 (1.2)      |
| Oil Type:                  | API CH4 15W-40 |
| Cooling Method:            | N/A            |

| Performance               | 50 Hz         | 60 Hz         |
|---------------------------|---------------|---------------|
| Engine Speed: RPM         | 1500          | 1800          |
| Gross Engine Power: W ( ) |               |               |
| -Standby:                 | 13.5 (18.0)   | 16.2 (22.0)   |
| -Prime:                   | 12.2 (16.0)   | 14.7 (20.0)   |
| BMEP: Pa ( )              |               |               |
| -Standby:                 | 722.0 (104.7) | 722.0 (104.7) |
| -Prime:                   | 652.0 (94.6)  | 655.0 (95.0)  |
| Regenerative Power: W     | 4.1           | 5.3           |

| Fuel System  |                         |           |           |           |
|--|-------------------------|-----------|-----------|-----------|
| Fuel Filter Type:  | Re ce ab e E e t        |           |           |           |
| Recommended Fuel:  | C a A 2 D e e x BSEN590 |           |           |           |
| Fuel Consumption: / (US a / )  |                         |           |           |           |
|  | 110% Load               | 100% Load | 75% Load  | 50% Load  |
| Prime  |                         |           |           |           |
| 50 Hz  | 4.0 (1.1)               | 3.7 (1.0) | 2.8 (0.7) | 2.0 (0.5) |
| 60 Hz  | 4.9 (1.3)               | 4.3 (1.1) | 3.2 (0.8) | 2.4 (0.6) |
| Standby  |                         |           |           |           |
| 50 Hz  | 4.0 (1.1)               | 3.0 (0.8) | 2.1 (0.6) |           |
| 60 Hz  | 4.9 (1.3)               | 3.5 (0.9) | 2.5 (0.7) |           |
| (ba ed v d e e f e t a e c f c a t v f 0.85 a d e f t v BS2869, C a A 2) |                         |           |           |           |

| Exhaust System                  | 50 Hz        | 60 Hz               |
|---------------------------------|--------------|---------------------|
| Silencer Type:                  | I d t a      |                     |
| Silencer Model & Quantity:      | EXSY1 (1)    |                     |
| Pressure Drop Across            |              |                     |
| Silencer System: Pa ( H )       | 0.58 (0.171) | 0.80 (0.236)        |
| Silencer Noise Reduction        |              |                     |
| Level: dB                       | 22.8         | 10.8                |
| Max. Allowable Back             |              |                     |
| Pressure: Pa ( . H )            | 10.2 (3.0)   | 10.2 (3.0)          |
| Exhaust Gas Flow:               |              |                     |
| ( / ) (cfm)                     | -Standby:    | 2.9 (102) 3.4 (119) |
|                                 | -Prime:      | 2.7 (95) 3.1 (111)  |
| Exhaust Gas Temperature: C ( F) |              |                     |
| -Standby:                       | 490 (914)    | 505 (941)           |
| -Prime:                         | 445 (833)    | 455 (851)           |

## Generator Performance Data

| Data Item                      | 50 Hz |  |  |  | 60 Hz |  |  |  |  |
|--------------------------------|-------|--|--|--|-------|--|--|--|--|
|                                |       |  |  |  |       |  |  |  |  |
| Motor Starting Capability* kVA |       |  |  |  |       |  |  |  |  |
| Short Circuit Capacity %       |       |  |  |  |       |  |  |  |  |
| Reactances:<br>Per Unit        |       |  |  |  |       |  |  |  |  |
| Xd                             |       |  |  |  |       |  |  |  |  |
| X'd                            |       |  |  |  |       |  |  |  |  |
| X''d                           |       |  |  |  |       |  |  |  |  |

Reactance capability curve.  
\*Based on 30% transient at 0.6 efficiency.

|                                   |
|-----------------------------------|
|                                   |
| <b>LC SERIES</b>                  |
| <b>Model:</b>                     |
| <b>No. of Bearings:</b>           |
| <b>Insulation Class:</b>          |
| <b>Winding Pitch - Code:</b>      |
| <b>Wires:</b>                     |
| <b>Ingress Protection Rating:</b> |
| <b>Excitation System:</b>         |
| <b>AVR Model:</b>                 |

|                   |
|-------------------|
|                   |
| <b>Overspeed:</b> |
|                   |
|                   |
|                   |
|                   |
|                   |
|                   |

# DIESEL GENERATOR SET



## Technical Data

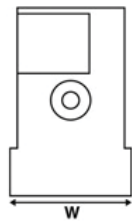
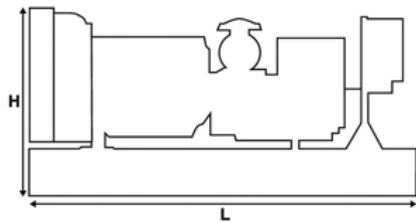
| Voltage<br>50 Hz | Prime |      | Standby |      |
|------------------|-------|------|---------|------|
|                  | kVA   | kW   | kVA     | kW   |
| 415/240V         | 12.5  | 10.0 | 13.5    | 10.8 |
| 400/230V         | 12.5  | 10.0 | 13.5    | 10.8 |
| 380/220V         | 12.5  | 10.0 | 13.5    | 10.8 |
|                  |       |      |         |      |
|                  |       |      |         |      |
|                  |       |      |         |      |
|                  |       |      |         |      |
|                  |       |      |         |      |
|                  |       |      |         |      |
|                  |       |      |         |      |

| Voltage<br>60 Hz | Prime |      | Standby |      |
|------------------|-------|------|---------|------|
|                  | kVA   | kW   | kVA     | kW   |
| 220/127V         | 15.0  | 12.0 | 16.5    | 13.2 |
|                  |       |      |         |      |
|                  |       |      |         |      |
|                  |       |      |         |      |
|                  |       |      |         |      |
|                  |       |      |         |      |
|                  |       |      |         |      |
|                  |       |      |         |      |
|                  |       |      |         |      |
|                  |       |      |         |      |

## Weights & Dimensions

| Weights: (b)               |           |
|----------------------------|-----------|
| Net (+ lube oil)           | 371 (818) |
| Wet (+ lube oil & coolant) | 377 (831) |
| Fuel, lube oil & coolant   | 430 (947) |

| Dimensions: ( ) |             |
|-----------------|-------------|
| Length          | 1400 (55.1) |
| Width           | 620 (24.4)  |
| Height          | 1054 (41.5) |



Note: Ge e a e f a x y t t b e e d f . t a a x . See e e a d d e x d a f . d e a .

## Definitions

### Standby Rating

O t t a a a e i a a e a f i e a t e a e t i e  
 0% f e t a j e a t e c a e a t e 00 t t  
 v e e a i a . e . e c t e a e f . 00 e 2 e a

### Prime Rating

O t t a a a b e t a x y a d f a u t e d t e . A e a e  
 y e x t t 70% f t e u e x e . a . T . c a e a  
 d e u a d 100% f u e a e d e W t 10% e x a d c a a b t .  
 f . e u e . e c . e f . a d a d u x f 1 x . 12 .  
 O e x a d v e a x c a x t e c e e d 25 x . e . e a .

### Standard Reference Conditions

N t e : S a d a d e f e p c e e d t v 25 C (77 F) a . e t e u ,  
 100 (328 f ) A . S . L . 30% p a e u d t . F e e u t v d a a  
 a f v a d t d e e f e t e c f c a t . x f 0.85 a d  
 e f u t v B S 2869 : 1998 , C a A 2 .

## General Data

### Documents

A f e x f v e a x a d d a t e a c e u a a a d c p t .  
 d a a d .

### Quality Standards

T e e u e t u e a t e f x t a d a d : I E C 60034-1 ,  
 I E C 60034-22 , I S O 3046 , I S O 8528 , N E M A M G 1-32 ,  
 N E M A M G 1-33 , 2004/108/EC , 2006/42/EC , 2006/95/EC .

Pe f u a c e N . : 3 , 3 1 / 2 , 3 , 3 3 / 4  
 Fe a p G d e : C O P E 0 4 C O P E 0 6 C O P E . 4  
 Ge . A . N u b e : 4 , v . 3 5  
 : c e C u a  
 LEHE0683-00 (08/14)

. C a - E e q . c R e . e u  
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 A x t p e . e d .  
 M a e . a d e c f c a x a p b e q c a e t v t v t e .  
 T e l t e . a x a S . t e u v f U t ( S I ) e d t b c a x .  
 C A T , C A T E R P I L L A R , t e p e q e v v , " C a e . a . Y e x , " t e  
 " R e . E d e t a d e d p , a e a e v a e a d v d a  
 d e t t . e d e p , a p t a d e u . v f C a e . a . a d d a . v t b e  
 e d t v t e u x .