

Model: 833 DFHC  
 Frequency: 50  
 Fuel Type: Diesel

» Generator set data sheet  
 1041.3 kVA Standby



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|                                    |                         |
|------------------------------------|-------------------------|
| Spec sheet:                        | SS13-CPGK               |
| Noise data sheet (Open/enclosed):  | ND50-OSHHP / ND50-CS550 |
| Airflow data sheet:                | AF50-HHP                |
| Derate data sheet (Open/enclosed): | DD50-OSHHP / DD50-CSHHP |
| Transient data sheet:              | TD50-HHP                |

| Fuel consumption | Standby      |      |      |      | Prime       |      |      |      |
|------------------|--------------|------|------|------|-------------|------|------|------|
|                  | kVA (kW)     |      |      |      | kVA (kW)    |      |      |      |
| Ratings          | 1041.3 (833) |      |      |      | 938.8 (751) |      |      |      |
| Load             | 1/4          | 1/2  | 3/4  | Full | 1/4         | 1/2  | 3/4  | Full |
| US gph           | 12.0         | 21.5 | 32.9 | 44.8 | 11.2        | 20.7 | 30.5 | 40.4 |
| L/hr             | 54           | 98   | 150  | 204  | 51          | 94   | 139  | 184  |

| Engine                          | Standby rating                 | Prime rating |
|---------------------------------|--------------------------------|--------------|
| Engine manufacturer             | Cummins                        |              |
| Engine model                    | QST30-G3                       |              |
| Configuration                   | Cast Iron, 50° V12 Cylinder    |              |
| Aspiration                      | Turbo Charged and After-Cooled |              |
| Gross engine power output, kW/m | 895                            | 806          |
| BMEP at set rated load, kPa     | 2358                           | 2117         |
| Bore, mm                        | 140                            |              |
| Stroke, mm                      | 165.1                          |              |
| Rated speed, rpm                | 1500                           |              |
| Piston speed, m/s               | 8.3                            |              |
| Compression ratio               | 14:1                           |              |
| Lube oil capacity, L            | 133                            |              |
| Overspeed limit, rpm            | 2100 ±50                       |              |
| Regenerative power, kW          | 78                             |              |
| Governor type                   | Electronic                     |              |
| Starting voltage                | 24 Volts DC                    |              |

| Fuel flow                             |     |
|---------------------------------------|-----|
| Maximum fuel flow, L/hr               | 550 |
| Maximum fuel inlet restriction, mm Hg | 203 |
| Maximum fuel inlet temperature (°C)   | 66  |

| Air                                  |             |
|--------------------------------------|-------------|
| Combustion air, m³/min               | 56.2   51.8 |
| Maximum air cleaner restriction, kPa | 6.2         |



| <b>Exhaust</b>  | <b>Standby rating</b> | <b>Prime rating</b> |
|---|-----------------------|---------------------|
| Exhaust gas flow at set rated load, m <sup>3</sup> /min | 163                   | 146                 |
| Exhaust gas temperature, °C                             | 563                   | 541                 |
| Maximum exhaust back pressure, kPa                      | 10.2                  |                     |

| <b>Standard set-mounted radiator cooling</b>                          |       |       |
|---|-------|-------|
| Ambient design, °C  | 40    |       |
| Fan load, KW <sub>m</sub>   | 18.6  |       |
| Coolant capacity (with radiator), L                                   | 84    |       |
| Cooling system air flow, m <sup>3</sup> /min @ 12.7mmH <sub>2</sub> O | 15.5  |       |
| Total heat rejection, BTU/min   | 22970 | 21200 |
| Maximum cooling air flow static restriction mmH <sub>2</sub> O        | 25.4  |       |

### Open set derating factors kVA (kW)

Note: Standard open genset options running at 400V, 150m above sea level. For enclosed product derates, please refer to datasheet - DD50-CSHHP.

|                | <b>27°C</b>  | <b>40°C</b>  | <b>45°C</b>  | <b>50°C</b>  | <b>55°C</b> |
|----------------|--------------|--------------|--------------|--------------|-------------|
| <b>Standby</b> | 1041.3 (833) | 1041.3 (833) | 1041.3 (833) | 1041.3 (833) | RTF         |
| <b>Prime</b>   | 938.8 (751)  | 938.8 (751)  | 938.8 (751)  | 938.8 (751)  | RTF         |

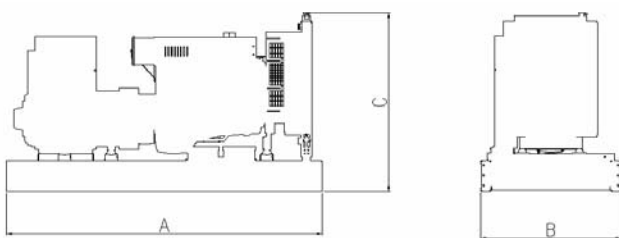
| <b>Weights*</b>     | <b>Open</b> | <b>Enclosed</b> |
|---------------------|-------------|-----------------|
| Unit dry weight kgs | 6117        | RTF             |
| Unit wet weight kgs | 6296        | RTF             |

\* Weights represent a set with standard features. See outline drawing for weights of other configurations

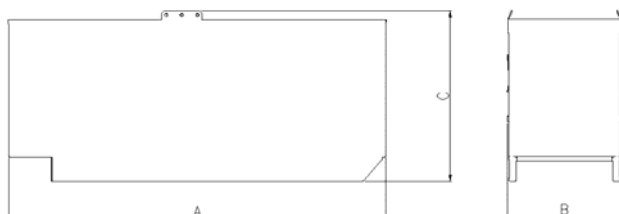
| <b>Dimensions</b>                | <b>Length</b> | <b>Width</b> | <b>Height</b> |
|----------------------------------|---------------|--------------|---------------|
| Standard open set dimensions     | 4297          | 1685         | 2079          |
| Enclosed set standard dimensions | RTF           | RTF          | RTF           |

### Genset outline

#### Open set



#### Enclosed set



Outlines are for illustrative purposes only. Please refer to the genset outline drawing for an exact representation of this model.

## Alternator data

| Feature code | Connection <sup>1</sup> | Temp rise degrees C | Duty <sup>2</sup> | Alternator | Voltage  |
|--------------|-------------------------|---------------------|-------------------|------------|----------|
| B729         | Wye, 3 Phase            | 150/125C            | S/P               | HC6J       | 380-440V |
|              |                         |                     |                   |            |          |
|              |                         |                     |                   |            |          |
|              |                         |                     |                   |            |          |

## Ratings definitions

| Emergency Standby Power (ESP)  | Limited-Time running Power   | Prime Power (PRP):  | Base Load (Continuous) Power  |
|--|--|---|---|
| Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514. | Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528. | Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514. | Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514. |

## Formulas for calculating full load currents:

### Three phase output

$$\frac{\text{kW} \times 1000}{\text{Voltage} \times 1.73 \times 0.8}$$

### Single phase output

$$\frac{\text{kW} \times \text{SingleP} \text{ haseFactor} \times 1000}{\text{Voltage}}$$

See your distributor for more information.

Cummins Power Generation  
 Manston Park, Columbus Avenue  
 Manston, Ramsgate  
 Kent CT12 5BF, UK  
 Telephone: +44 (0) 1843 255000  
 Fax: +44 (0) 1843 255902  
 E-Mail: [cpg.uk@cummins.com](mailto:cpg.uk@cummins.com)  
 Web: [www.cumminspower.com](http://www.cumminspower.com)