

MODEL: VG40-ICS



| Genset Model | VG40-ICS |
|------------------|----------------------------------|
| Prime Power | 30KW / 38KVA |
| Standby Power | 33KW / 41KVA |
| Frequency/Speed | 50Hz/1500rpm |
| Standard Voltage | 230V/400V |
| Phases | Three phases, four wires |
| Manufacturer | Vega Power International PTE.LTD |

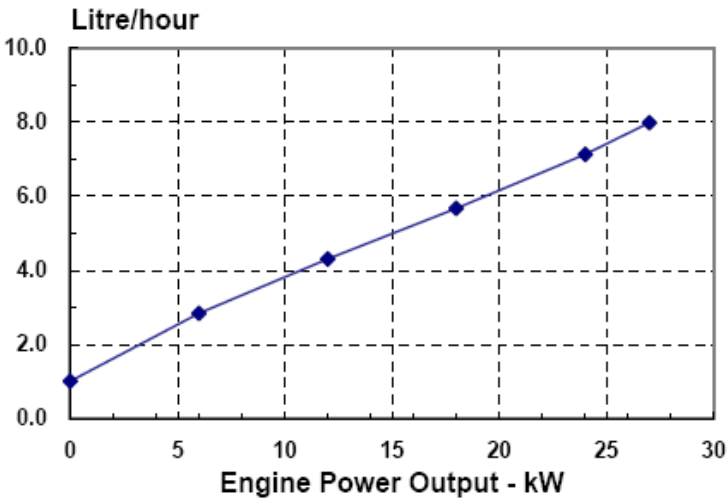
- ◆ Assembled by Cummins diesel engine and Stamford alternator.
- ◆ Three filters as standard, fuel and water separator as optional.
- ◆ Radiator and fan with safety guard.
- ◆ Single bearing alternator IP 23, Insulation Class H.
- ◆ Heavy duty steel as base frame and 8hrs operation base fuel tank.
- ◆ Automatic control panel and 3 poles circuit breaker, internal cable.
- ◆ 12V or 24V battery, battery wires.
- ◆ Battery charger and float battery charger as standard supply scope.
- ◆ Optional soundproof canopy, ATS, synchronization panel, movable trailers.

Engine Specification:

| | |
|------------------------|-----------------------------------|
| Manufacturer | Dongfeng Cummins Engine Co., Ltd. |
| Model | 4BT3.9-G1 |
| Engine speed | 1500rpm |
| Engine power | |
| Standby power | 40kw /54HP |
| Base output power | 36kw / 48HP |
| Air intake way | Turbo-charged |
| Cylinder quantity | 4 |
| Bore * Stroke | 102*120mm |
| Displacement | 3.9L |
| Fuel system | BYC A/RSV Mechanical |
| Governor Regulation | ≤8% |
| Low idle | 950-1050 rpm |
| Piston speed | 6.0 m/s |
| Friction energy output | 8.2 kw |

Fuel Consumption:

| output power | | | fuel consumption | |
|-------------------|-----|-----|------------------|------|
| % | KW | HP | g/KWm.h | L/h |
| standby power | | | | |
| 100 | 40 | 54 | 228 | 11,1 |
| base output power | | | | |
| 100 | 36 | 48 | 229 | 10,0 |
| 75 | 27 | 36 | 241 | 7,9 |
| 50 | 18 | 24 | 270 | 5,9 |
| 25 | 9 | 12 | 263 | 4,0 |
| continuse power | | | | |
| TBD | TBD | TBD | TBD | TBD |



Exhaust system:

| | |
|---|-------------|
| Maximum Back Pressure | 10kPa |
| Exhaust Pipe Size Normally Acceptable | 75 mm |
| Maximum Static Supported Weight at the Turbocharger Outlet Flange | 13.5 N.m |
| Exhaust temperature (prime power - standby power) | 463-487 °C |
| Exhaust Gas Flow | 101-108 L/s |

Lubrication system:

| | |
|--|-------------|
| Minimum Engine Oil Pressure for Engine Protection Devices: | |
| -----Low idle | 207 kPa |
| -----Rated speed | 345 kpa |
| Max. oil temperature permitted in oil pan | 121 °C |
| Oil Capacity with OP 9006 Oil Pan : High - Low | 9.5 - 8.5 L |
| Minimum Required Lube System Capacity - Sump plus Filters | 10.9L |
| Angularity of Standard Oil Pan: (Values stated are for intermittent operation only): (any direction) | 40 ° |

Fuel system:

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|--|------------------------|
| Type Injection System | BYC A Direct Injection |
| Maximum Restriction at Lift Pump | 102 mmHg |
| Maximum Allowable Head on Injector Return Line (Consisting of Friction Head and Static Head) | 508 mmHg |
| Total Drain Flow (constant for all loads) | 30 L/h |

Electric system:

| | | |
|--|-------------|-------------|
| Cranking Motor (Heavy Duty, Positive Engagement) | 12V | 24V |
| Battery Charging System, Negative Ground | 63A | 40A |
| Maximum Allowable Resistance of Cranking Circuit | 0.00075 Ω | 0.002 Ω |
| Minimum Recommended Battery Capacity • Cold Soak @ 10 °F (-12 °C) and Above | 625 0°F CCA | 312 0°F CCA |

Air intake system:

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|--|------------|
| Maximum Intake Air Restriction with Heavy Duty Air Cleaner | |
| Dirty Element | 6kPa |
| Clean Element | 4kPa |
| Minimum Dirt Holding Capacity with Heavy Duty Air Cleaner | 53g/cfm |
| Maximum Temperature Rise from Ambient to the Inlet of the Turbocharger | 17 °C |
| Recommended intake piping size (inner diameter) | 76 mm |
| Air intake flow (prime power _ standby power) | 44-45L/sec |

Cooling system:

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|--|--------------|
| Coolant capacity – engine only | 7.2L |
| Maximum Coolant Friction Head External to Engine | 28 kPa |
| Maximum Static Head of Coolant Above Engine Crank Centerline | 14m |
| Standard Thermostat (Modulating) Range | 82-95 °C |
| Minimum Pressure Cap | 69 kPa |
| Maximum Top Tank Temperature for Standby / Prime Power | 104 / 100 °C |
| Engine coolant flow (prime power- standby power) | 2.2L/sec |
| Heat Rejection to Coolant (prime power- standby power) | 25.9kW-29 kW |

Alternator Specifications:

| | |
|------------------------|---|
| Manufacturer | Cummins Generator Technologies(China) Co. Ltd |
| Model | PI 144J |
| Output power | 32KW |
| AVR model | AS480 |
| Number of phase | 3 |
| Power factor (Cos Phi) | 0,8 |
| Altitude | ≤ 1000 m |
| Overspeed | 2250RPM |
| Number of Pole | 4 |
| Exciter type | Shunt |
| Insulation class | H |
| Protection | IP23 |
| Voltage regulation | ±1% |
| Waveform distortion | no load < 1.5% non-distorting balanced linear load < 5.0% |
| Telephone interference | THF< 2% |
| Bearing | single |
| Coupling | Direct |

Control system:



The **DSE6120** is made by DEEPSEA and is a new control module for single gen-set applications, and it is an Automatic Start Control Module and is simple to operate, and the module includes USB, RS232 and RS485

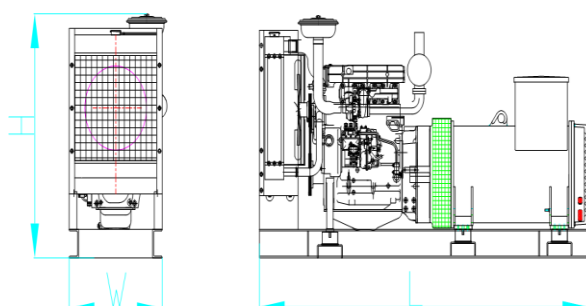
for expansion device connectivity.

Specifications: Frequency meter, Ammeter, Voltmeter Alarms and faults Oil pressure, water temperature, No start-up, Overspeed, Min/max alternator, Min/max battery voltage, Low fuel level, Emergency stop.

Engine parameters: Hours counter, Oil pressure, Water, temperature, Engine speed, Battery voltage, Fuel level.

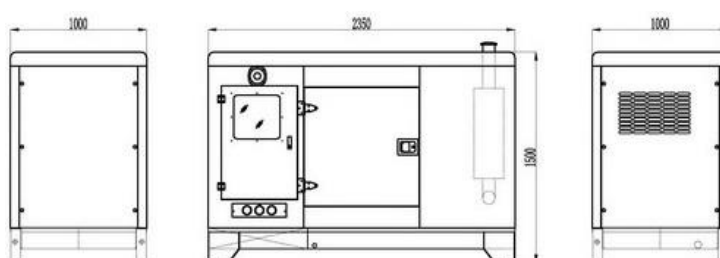
Weight and Dimensions

1.Open Version:



Open Type (Standard Configuration)
Overall Size: $1675 \times 730 \times 1285\text{mm}$ (L*W*H)
Weight: 695kg

2. Soundproof Version:



Soundproof Type
Overall size: $2250 \times 1000 \times 1550\text{mm}$ (L*W*H)
Weight: 1025kg