KOHLER POWER SYSTEMS

KV350C2

Engine type	TAD941GE
Alternator type	LSA 46.2 VL12
Performance class	G3

GENERAL CHARACTERISTICS

Frequency (Hz)	50
Reference voltage (V)	400/230
Max power ESP (kVA)	350
Max power ESP (kWe)	280
Max power PRP (kVA)	318.2
Max power PRP (kWe)	254.5
Intensity (A)	505
Standard Control Panel	DEC4000
Optional control panel	KERYS

DESCRIPTIVE

- Kohler Co. Provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- A one-year limited warranty covers all systems and components
- 24 V charge alternator and starter
- Leroy Somer single-bearing alternator with insulation class H.
- Radiator for core T° of 48/50°C max with mechanical fan.
- Skid and vibration isolators.
- Dry type air filter.
- Main line circuit breaker.
- Microprocessor controller.
- Industrial 9 dB(A) reduction exhaust silencer (loose)
- Operation and installation literature.

DIMENSIONS AND NOISE LEVELS

DIMENSIONS COMPACT VERSION

Length (mm)	3160
Width (mm)	1340
Height (mm)	1761
Dry weight (kg)	2700
Tank capacity (L)	470

DIMENSIONS SOUNDPROOFED VERSION

Canopy	M228
Length (mm).	4475
Width (mm).	1410
Height (mm).	2430
Dry weight (kg).	3830
Tank capacity (L).	470
Acoustic pressure level @1m in dB(A) ()	76 (0.82)
Sound power level guaranteed (Lwa)	97

POWER DEFINITION

PRP : Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO 8528-1.

ESP : The standby power rating is applicable for supplying emergency power in variable load applications in accordance with ISO 8528-1.
Overload is not allowed

TERMS OF USE

According to the standard, the nominal power assigned by the genset is given for 25°C Air Intlet Temperature, of a barometric pressure of 100 kPA (100 m A.S.L), and 30 % relative humidity. For particular conditions in your installation, refer to the derating table.

ASSOCIATED UNCERTAINLY

For the generating sets used indoor, where the acoustic pressure levels depends on the installation conditions, it is not possible to specify the ambient noise level in the exploitation and maintenance instructions . You will also find in our exploitation and maintenance instructions a warning concerning the air noise dangers and the need to implement appropriated preventive measures.

GENERAL CHARACTERISTICS

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	264	330	240	300	459
400/230	280	350	255	318	505
380/220	280	350	255	318	532
240 TRI	264	330	240	300	794
230 TRI	280	350	255	318	879
220 TRI	280	350	255	318	919
220/127	264	330	240	300	866
200/115	264	330	240	300	953

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ENGINE SPECIFICATIONS

GENERAL ENGINE DATAS

Engine model	VOLVO TAD941GE , 4-temps, Turbo , Air/Air DC 6 X
Cylinder arrangement	L
Displacement (C.I.)	9.36
Bore (mm) x Stroke (mm)	120 x 138
Compression ratio	17.4
Speed (RPM)	1500
Pistons speed (m/s)	6.9
Maximum stand-by power at rated RPM (kW)	323
Frequency regulation (%)	+/- 0.5%
BMEP (bar)	25.2
Governor type	Electronic

COOLING SYSTEM

Radiator & Engine capacity (L)	41
Max water temperature (°C)	103
Outlet water temperature (°C)	93
Fan power (kW)	10.3
Fan air flow w/o restriction (m3/s)	5.9
Available restriction on air flow (mm EC)	20
Type of coolant	Glycol-Ethylene
Thermostat (°C)	82-92

EMISSIONS

Emission PM (mg/Nm3)	30
Emission CO (mg/Nm3)	340
Emission HCNOx (g/kWh)	N/A
Emission HC (mg/Nm3)	30

EXHAUST

Exhaust gas temperature (°C)	519
Exhaust gas flow (L/s)	775
Max. exhaust back pressure (mm EC)	1000

FUEL

Consumption @ 110% load (L/h)	75.9
Consumption @ 100% load (L/h)	68.1
Consumption @ 75% load (L/h)	50.6
Consumption @ 50% load (L/h)	35.1
Maximum fuel pump flow (L/h)	108

OIL

Oil capacity (L)	33
Min. oil pressure (bar)	0.7
Max. oil pressure (bar)	6
Oil consumption 100% load (L/h)	0.06
Carter oil capacity (L)	28

HEAT BALANCE

Heat rejection to exhaust (kW)	224
Radiated heat to ambiant (kW)	9
Haet rejection to coolant (kW)	129

AIR INTAKE

Max. intake restriction (mm EC)	500
Intake air flow (L/s)	295

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ALTERNATOR SPECIFICATIONS

GENERAL DATAS

Alternator brand	LEROY SOMER
Alternator type	LSA 46.2 VL12
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude (m)	0 à 1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	SHUNT
Insulation class / T° class, continuous 40°C	H / H / 125°K
Regulation	N/A
Harmonic factor, no load TGH/THC (%)	<2.5
Wave form : NEMA=TIF-(TGH/THC)	<50
Wave form : CEI=FHT-(TGH/THC)	<2
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (%)	+/- 0.5%
Recovery time (Delta U = 20% transcient) (ms)	500 ms

OTHER DATAS

Continuous Nominal Rating 40°C (kVA)	318
Standby Rating 27°C (kVA)	350
Efficiencies 4/4 load (%)	93.7
Air flow (m3/s)	0.43
Short circuit ratio (Kcc)	0.5
Direct axis synchro reactance unsaturated (Xd) (%)	276
Quadra axis synchro reactance unsaturated (Xq) (%)	166
Open circuit time constant (T"do) (ms)	2253
Direct axis transcient reactance saturated (X"d) (%)	12.2
Short circuit transcient time constant (T"d) (ms)	100
Direct axis subtranscient reactance saturated (X""d) (%)	7.3
Subtranscient time constant (T""d) (ms)	10
Quadra axis subtranscient reactance saturated (X""q) (%)	9
Zero sequence reactance unsaturated (Xo) (%)	0.5
Negative sequence reactance saturated (X2) (%)	8.2
Armature time constant (Ta) (ms)	15
No load excitation current (io) (A)	1
Full load excitation current (ic) (A)	3.4
Full load excitation voltage (uc) (V)	33
Recovery time (Delta U = 20% transcient) (ms)	500 ms
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	694
Transcient dip (4/4 load) - PF : 0,8 AR (%)	12.9
No load losses (W)	4800
Heat rejection (W)	16880

DIMENSIONS AND NOISE LEVELS

CONTAINMENT

Canopy	M228 DW
Length (mm).	4527
Width (mm).	1410
Height (mm).	2700
Dry weight (kg).	4320
Tank capacity (L).	1368
Acoustic pressure level @1m in dB(A) ()	76 (0.82)
Sound power level guaranteed (Lwa)	97

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CONTROL PANEL

DEC4000, ergonomic and user-friendly

DEC4000
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

KERYS, coupling and adaptability

The KERYS control unit has been designed to fulfil the specific requirements of professionals in terms of operating and monitoring generating sets. It therefore offers a wide range of functions.
This control unit is fitted as standard to all generating sets designed to be used for coupling and is offered as an option across the rest of our range.
The KERYS can be built into the central console, fitted directly on the generating set, or in a separate cabinet, to fulfil all the requirements for low and high output power plants.

The KERYS offers the following functions:

Electrical measurements: voltmeter, frequency meter, ammeter.

Engine parameters: working hours counter, oil pressure, coolant temperature, fuel level, engine speed, battery voltage.

Alarms and faults: oil pressure, coolant temperature, failure to start, overspeed, alternator min./max., battery voltage min./max., emergency stop.

Additional functions: coupling, website, diagnostic aid, assistance and maintenance, graphs and archiving, load impact management, 8 available installation configurations, certification in line with international standards.

For more information, please refer to the sales documentation.