

Diesel Generator Set

S400

400 kW / 500 kVA

Standby Power @ 60Hz

364 kW / 455 kVA

Prime Power @ 60Hz

STANDARD FEATURES

- Diesel engine, EPA and CARB certified, electric starter, battery charging alternator, 24V, electronic governor
- Single bearing alternator IP 21, Class H insulation
- High Ambient Radiator – 50° C
- Integral vibration isolation
- Dry type air filter
- Main line circuit breaker
- 24V battery, rack and cable
- User manual
- CSA Certified



- Ingersoll-Rand provides a full line of products with high quality recognized engines and alternators.
- All generator sets are factory tested. All generator set models are prototype tested.
- A two-year/2000-hour limited warranty included. Extended warranty option available.
- Service and parts are available from Ingersoll-Rand distributors.

GENERATOR RATINGS

Voltage	Hz	Phase	P.F	Standby Amps	Standby Ratings kW/kVA	Prime Ratings kW/kVA
277/480	60	3	0.8	601	400 / 500	364 / 455
254/440	60	3	0.8	643	392 / 490	364 / 455
127/220	60	3	0.8	1286	392 / 490	364 / 455
120/208	60	3	0.8	1284	370 / 463	352 / 440

Standby ratings are available for the duration of any power outage. No overload capacity is specified at these ratings. Prime ratings are available per BS 5514, DIN 6271, ISO-3046 and IEC 34-1 with 10% overload capacity one hour in twelve hours.

Ratings are per standard environmental conditions. Please consult factory for deration.



S400 APPLICATION DATA

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ENGINE DATA

Manufacturer	VOLVO
Model	TAD1242GE, 4-cycle, Turbocharged
Cylinder arrangement	6 In-Line
Displacement	740.2 in ³ (12.13 L)
Bore and stroke	5.2 in (131 mm)X 5.9 in (150 mm)
Compression ratio	17.5:1
Rated rpm	1,800
Piston speed	29.5 ft/s (9 m/s)
Max stand by power at rated rpm	576.2 bhp (430 kW)
Frequency regulation, no load to full load	NA
Speed regulation, steady state	+/- 0.5%
BMEP	326.0 psi (22.5 bar)
Governor type	Electronic

OPERATING DATA

EXHAUST SYSTEM

Exhaust gas flow	Exhaust temperature	Max back pressure
2648 cfm (1250 L/s)	941 °F (505°C)	2.87 in Hg (9.7 kPa)

FUEL CONSUMPTION – STANDBY RATING

100% (Load)	75% (Load)	50% (Load)	25% (Load)
24.5 gal/hr (92.7 L/h)	17.9 gal/hr (67.8 L/h)	12.0 gal/hr (45.5 L/h)	NA gal/hr (NA L/h)

LUBRICATION SYSTEM

Total oil capacity w/filters	Oil pressure low idle	Oil pressure rated RPM	Oil consumption 100% load
9.2 gal (35 L)	36.2 psi (2.5 bar)	79.7 psi (5.5 bar)	0.0 gal/hr (0.14 L/h)

AIR INTAKE

Max intake restriction	Engine air flow
20 in H ₂ O (4.98 kPa)	2648.9 cfm (1250 L/s)

COOLING SYSTEM

Radiator & engine capacity Max	Water temperature	Outlet water temperature	Fan power	Fan air flow	Engine heat rejection
11.6 gal (44 L)	217.4 °F (103 °C)	199.4 °F (93 °C)	19 kW	21,826 cfm (10.3 m ³ /s)	7,903.5 btu/mn (139 kW)



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ALTERNATOR DATA

Manufacturer	LERROY SOMER
Type	LSA471M6
Poles	4
Exciter type	AREP
Insulation — class/temperature rise	H / 150°C/40°C (Standby)
Voltage regulator	R448
Bearing	1
Coupling	Direct
Voltage regulation 0 to 100% load	+/-1.5%
Recovery time (20% Volt dip) ms	500
Peak motor starting kVA@480V	1230 (35% voltage dip)

- Compliance with NEMA (IEC 34.1/34.2 MG1.22, UTE: NFC 51.111, VDE 0530 BS 4999 & 5000, CSA, ISO 8528.3)
- 2/3 pitch, 12 leads reconnectable
- Vacuum-impregnated windings with epoxy varnish. IP21 drip proof
- Generator allows as standard sustained short circuit current of up to 300% of rated current for up to 10 seconds

CONTROL PANEL

Intellisys™ Standard features

- Powerful & flexible Microprocessor-based digital control panel for easy genset operation
- 8-line 21-character backlit LCD screen for convenient operator access
- Quick access to all generator and engine measurements and status
- User-friendly and non-volatile alarm & fault history with date-time stamp
- Built-in generator and engine protection parameters
- Field-proven and well-documented control panel components
- Supports engine pre-glow, battery charger, coolant heater, auto-start options.
- Capable of local or remote monitoring & control of genset via dedicated RS485 port.

Intellisys™ digital control panel is available on all models. Compatible with 12 or 24 Volt engine electrical system.



Options

- Software for remote management
- NFPA 110, Level 1 Control Panel



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OPTIONS

Engine and Radiator

- Heat shield protection
- Oil drain extension
- Heavy duty air filter
- Lube oil drain pump
- Radiator core guard
- Battery charger, equalize/float type
- Block heater

Enclosed Unit

- Sound attenuated enclosure (73dba @ 23 Ft-full load)

Alternator

- Anti-condensation heater
- Enforced impregnation
- Oversized alternator

Exhaust

- Industrial silencer exhaust kit
- Residential silencer exhaust kit
- Critical silencer exhaust kit

Fuel

- Day tank
- Sub base fuel tanks UL-142
- Fuel/water separator filter

Control panel

- NFPA 110, level 1 control panel
- Remote annunciator

Literature

- Parts manual
- Maintenance manual
- Operation manual

Service & Extended Warranty

- Trained service personnel providing IR parts, service and maintenance packages
- Extended Warranty

WEIGHT AND MEASUREMENTS

Open model	S400
Weight	6,543 lb Net 7,821 lb Gross (2,969 Kg Net 3,549 Kg Gross)
Overall size — l x w x h	131" x 50" x 74" (3,328 mm x 1,262 mm x 1,892 mm)



Sound attenuated	Silencer mounted inside
Weight	10,313 lb Net 11,393 lb Gross (4680 Kg Net 5170 Kg Gross)
Overall size — l x w x h	175" x 58" x 88" (4,440 mm x 1,470 mm x 2,230 mm)



Distributed by:

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