



Version Full Rental Power

BASE

- Analog engine
- Connection terminal box rental type
- Four-pole circuit breaker
- 2 points lifting ring with integrated ladder
- soundproofed enclosure dedicated to rental
- Fuel low level
- AREP Leroy-Somer alternator
- Easy access to the radiator
- Swing valve

ADDITIONAL EQUIPMENT - FULL

- Containment fuel tank and large autonomy
- Central lifting eye
- Inlet air preheating
- Voltage adjustment potentiometer
- Adjustable earth fault protection and earthing rod
- Battery isolating switch



Prime Power

PRP : Prime Power is available for an unlimited number of annual operating hours in variable load applications (Mitsubishi Engines are limited to 2000 hours a year), in accordance with ISO8528-1. The average power output shall not exceed x% of the prime power rating, in accordance with ISO 3046-1.

Standby power

ESP : The Standby Power Rating is applicable for supplying emergency power in variable load applications for up to 200 hours per year (Mitsubishi Engines are limited to 100 hours a year) in accordance with ISO8528-1. Overload is not allowed.

R450C2 (CE)

Motor type	TAD1242GE
Alternator type	LSA472VS3-AR
Canopy Type	M228

GENERAL CHARACTERISTICS

Frequency (Hz)	50
Reference voltage (V)	400/230
Max power (kVA)	440
Max power ESP (kWe)	352
Max power ESP (kVA)	400
Max power PRP (kWe)	320
Intensity (A)	635
Standard Control Panel	TELYS
Optional control panel	KERYS Rental

DIMENSIONS

Length (mm)	4527
Width (mm)	1410
Height (mm)	2780
Dry weight (kg)	4870
Tank capacity (L)	1368
Autonomy @ 50% of load (h)	30.4
Autonomy @ 75% of load (h)	20.7

DIMENSIONS BASE VERSION

Length (mm)	4475
Width (mm)	1410
Height (mm)	2690
Dry weight (kg)	4360
Tank capacity (L)	470
Autonomy @ 50% of load (h)	11.6
Autonomy @ 75% of load (h)	7.9

NOISE LEVEL

dB(A)@1m (50Hz)	79.7
dB(A)@7m (50Hz)	70
dB(A)@15m (50Hz)	66
LWA (50Hz)	96

ENGINE SPECIFICATIONS

GENERAL CHARACTERISTICS

Description	TAD1242GE
Motor model	VOLVO
Cylinder arrangement	L
Number of cylinders	6
Bore (mm)	131
Stroke (mm)	150
Displacement (C.I.)	12.13
Compression ratio	17.5 : 1
Speed (RPM)	1500
Pistons speed (m/s)	7.5
Maximum stand-by power at rated	387
Governor type	Electronic
Frequency regulation (%)	+/- 0.5%
BMEP (bar)	23.21

COOLING SYSTEM

Radiator & Engine capacity (L)	44
Max water temperature (°C)	103
Outlet water temperature (°C)	93
Fan power (kW)	11
Fan air flow w/o restriction (m ³ /s)	8.5
Available restriction on air flow (mm)	43
Type of coolant	Glycol-Ethylene
Thermostat (°C)	82-95

EXHAUST

Exhaust gas flow (L/s)	1050
Exhaust gas temperature (°C)	505
Max. exhaust back pressure (mm CE)	1000

FUEL

Consumption @ 110% load (L/h)	89.6
Consumption @ 100% load (L/h)	81.5
Consumption @ 75% load (L/h)	59.5
Consumption @ 50% load (L/h)	40.5
Maximum fuel pump flow (L/hr)	130

OIL SYSTEM

Oil capacity (L)	35
Min. oil pressure (bar)	2.5
Max. oil pressure (bar)	5.5
Oil consumption 100% load (L/h)	0.12
Carter oil capacity (L)	31

HEAT BALANCE

Heat rejection to exhaust (kW)	250
Radiated heat to ambient (kW)	17
Heat rejection to coolant (kW)	123

AIR INTAKE

Intake air flow (L/s)	416
Max. intake restriction (mm CE)	500

ALTERNATOR

GENERAL CHARACTERISTICS

Description	LSA 47.2 VS3
Alternator brand	LEROY SOMER
Number of phase	3
Altitude (m)	0 à 1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	AREP
Insulation class	H
Regulation	R448
Sustained short circuit current	3 IN" 10s
#Taux d'harmonique à vide TGH/THC	< 1.5%
#Taux d'harmonique en charge	< 2%
Wave form : CEI=FHT-(TGH/THC)	< 2%
Wave form : NEMA=TIF-(TGH/THC)	< 50
Number of bearing	1
Coupling	Direct
#Régulation de tension à régime	+/- 0.5%
Air flow (m3/s)	0.9

OTHER CHARACTERISTICS

No load excitation current (io) (A)	0.9
Full load excitation current (ic) (A)	3.9
Full load excitation voltage (uc) (V)	39
Recovery time (Delta U = 20%)	500
Motor start (Delta U = 20% perm. or	880
Transient dip (4/4 charge) - PF : 0,8	15.1
No load losses (W)	5150
Heat rejection (W)	23340

REACTANCES (R) - TIME CONSTANT(CT)

Short circuit ratio (Kcc)	0.29
Direct axis synchro reactance	393
Quadra axis synchro reactance	235
Open circuit time constant (T'do)	1771
Direct axis transient reactance	22.1
Short circuit transient time constant	100
Direct axis subtransient reactance	15.5
Subtransient time constant (T"d) (ms)	10
Quadra axis subtransient reactance	20.9
Zero sequence reactance unsaturated	0.8
Negative sequence reactance	18.2
Armature time constant (Ta) (ms)	15

POWERS

Power factor (Cos Phi)	0.8
Continuous Nominal Rating 40°C	400
Standby Nominal Rating 40°C (kVA)	420
Standby Rating 27°C (kVA)	440
Efficiencies 4/4 load (%)	93.1

CONTROL PANELS

TELYS (ergonomic and user-friendly)



The highly versatile TELYS control unit is complex yet accessible, thanks to the particular attention paid to optimising its ergonomics and ease of use. With its large display screen, buttons and scroll wheel, it places the accent on simplicity and communication.

The TELYS 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, fuel level.

Ergonomics: wheel for navigating around the various menus.

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:

Coupling: pre-programmed coupling mode selector.

Electrical measurements: voltmeter, frequency meter, ammeter.

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