



#### DESCRIPTIVE

- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Radiator for wiring temperature of 48/50°C max with mechanical fan
- Protective grille for fan and rotating parts
- Exhaust compensators with flanges
- 24 V charge alternator and starter
- Delivered with oil and coolant -30°C
- Manual for use and installation

#### 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.

## T1650C

Engine type	S12R-PTAW
Alternator type	LSA 50.2L8

#### GENERAL CHARACTERISTICS

Frequency (Hz)	50
Reference voltage (V)	400/230
Max power ESP (kVA)	1650
Max power ESP (kWe)	1320
Max power PRP (kVA)	1500
Max power PRP (kWe)	1200
Intensity (A)	2382
Optional control panel	M80
Optional Control Panel	TELYS
Optional control panel	KERYS

#### DIMENSIONS COMPACT VERSION

Length (mm)
Width (mm)
Height (mm)
Dry weight (kg)
Tank capacity (L)

#### POWERS

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	1320	1650	1200	1500	2296
400/230	1320	1650	1200	1500	2382
380/220	1320	1650	1200	1500	2507



# T1650C

## TECHNICAL SPECIFICATIONS

### GENERAL ENGINE DATAS

Engine model	MITSUBISHI S12R-PTAW , 4- temps, TURBO , AIR/WATER 12 X V
Cylinder arrangement	V
Displacement (C.I.)	49.03
Bore (mm) x Stroke (mm)	170 x 180
Compression ratio	14.5
Speed (RPM)	1500
Pistons speed (m/s)	9
Maximum stand-by power at rated RPM (kW)	1462
Frequency regulation (%)	0.25
BMEP (bar)	21.69
Governor type	ELEC

### COOLING SYSTEM

Radiator & Engine capacity (L)	480
Max water temperature (°C)	98
Outlet water temperature (°C)	95
Fan power (kW)	44
Fan air flow w/o restriction (m3/s)	25.3
Available restriction on air flow (mm EC)	20
Type of coolant	GENCOOL
Thermostat (°C)	71-85

### EMISSIONS

Emission PM (g/kW.h)	N/A
Emission CO (g/kW.h)	N/A
Emission HCNOx (g/kWh)	N/A
Emission HC (g/kW.h)	N/A

### EXHAUST

Exhaust gas temperature (°C)	550
Exhaust gas flow (L/s)	5766
Max. exhaust back pressure (mm EC)	600

### FUEL

Consumption @ 110% load (L/h)	360
Consumption @ 100% load (L/h)	320
Consumption @ 75% load (L/h)	240
Consumption @ 50% load (L/h)	170
Maximum fuel pump flow (L/h)	N/A

### OIL

Oil capacity (L)	180
Min. oil pressure (bar)	4.9
Max. oil pressure (bar)	6.4
Oil consumption 100% load (L/h)	N/A
Carter oil capacity (L)	150

### HEAT BALANCE

Heat rejection to exhaust (kW)	1245
Radiated heat to ambient (kW)	114
Heat rejection to coolant (kW)	420

### AIR INTAKE

Max. intake restriction (mm EC)	400
Intake air flow (L/s)	2183



# T1650C

## ALTERNATOR SPECIFICATIONS

### GENERAL DATAS

Alternator brand	LEROY SOMER
Alternator type	LSA 50.2L8
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude (m)	0-1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	AREP
Insulation class / T° class, continuous 40°C	H / H-125
Regulation	R450
Harmonic factor, no load TGH/THC	<3.5
Wave form : NEMA=TIF-(TGH/THC)	INF50
Wave form : CEI=FHT-(TGH/THC)	INF2
Number of bearing	1
Coupling	DIRECT
Voltage regulation at established rating (%)	0.5
Recovery time (Delta U = 20% transient) (ms)	500

### OTHER DATAS

Continuous Nominal Rating 40°C (kVA)	1500
Standby Rating 27°C (kVA)	1650
Efficiencies 4/4 load (%)	95.4
Air flow (m3/s)	1.8
Short circuit ratio (Kcc)	0.31
Direct axis synchro reactance unsaturated (Xd) (%)	378
Quadra axis synchro reactance unsaturated (Xq) (%)	227
Open circuit time constant (T'do) (ms)	3910
Direct axis transient reactance saturated (X'd) (%)	17.4
Short circuit transient time constant (T'd) (ms)	180
Direct axis subtransient reactance saturated (X''d) (%)	14.8
Subtransient time constant (T''d) (ms)	18
Quadra axis subtransient reactance saturated (X''q) (%)	15.4
Zero sequence reactance unsaturated (Xo) (%)	3.3
Negative sequence reactance saturated (X2) (%)	15.1
Armature time constant (Ta) (ms)	27
No load excitation current (io) (A)	0.9
Full load excitation current (ic) (A)	3.9
Full load excitation voltage (uc) (V)	42
Recovery time (Delta U = 20% transient) (ms)	500
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	3701
Transient dip (4/4 load) - PF : 0,8 AR (%)	12.4
No load losses (W)	15420
Heat rejection (W)	57110

Canopy  
 Length (mm).  
 Width (mm).  
 Height (mm).  
 Dry weight (kg).  
 Tank capacity (L).  
 Acoustic pressure level @1m in dB(A)  
 Sound power level guaranteed (Lwa)

M80, transfer of information



The M80 is a dual-function control unit. It can be used as a basic terminal block for connecting a control box and as an instrument panel with a direct read facility, with displays giving a global view of your generating set's basic parameters.

Offers the following functions:

**Engine parameters:** tachometer, working hours counter, coolant temperature indicator, oil pressure indicator, emergency stop button, customer connection terminal block, CE

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.

**Communication:** remote control and operation software, USB connections, PC connection.

For more information on the product and its options, please refer to the sales documentation.



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.

Additional specifications :Website, Troubleshooting, Assistance and Maintenance, Plotting and logging, Load impact, 8 configurations available, Compliance with international standards...