

**POWERED BY  
MITSUBISHI**

**PRIME POWER (P.R.P.)  
(ISO 8528):**

Prime Power is available for an unlimited number of annual hours in variable load application in accordance with ISO 8528, A 10% overload capacity is available for a period of 1 hour within a 12-hour period of operation.

**STAND-BY POWER (L.T.P.)  
(ISO 8528):**

Standby Power rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload, limited to 500 operation hours per year

**NOTE:**

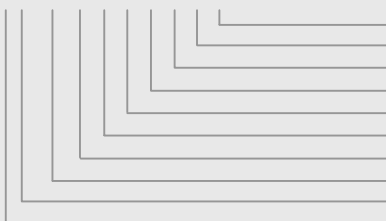
All parameters are given for reference conditions: ambient air temperature up to 40 °C and site altitude above sea level 1000m.

**STANDARD WARRANTY**

Prime Power – 12 months

**GENERATING SET DESCRIPTION**

**FM20N A S C G P L**



GENERAL DATA		
Standby Power L.T.P. (cos φ = 0,8)	kVA / kW	22 / 17,6
Prime Power P.R.P. (cos φ = 0,8)	kVA / kW	20 / 16
Nominal current	Amps	28,8
Nominal voltage	V	230/400
Frequency	Hz	50
ENGINE	MITSUBISHI	S4Q2-Z261SD
Emission standard	STAGE	3A
Engine speed	rpm	1500
Class 8528 / engine governor	G2	MECHANICAL
Engine speed regulation	%	± 2
Cylinder configuration	4	IN LINE
Fuel	-	Diesel EN 590
Cooling type	LIQUIDE / AIR	ANTIFREEZE + AIR
Displacement	l	2,5
Engine power PRP ISO 3046	kW	19,5
Battery charging alternator voltage	V	12
ALTERNATOR	MECC ALTE ECO 28-1LN/4	SINCRO SK 160 MB
Type	Brushless self exciting, synchronous	Brushless, self exciting, synchronous
Pole / Connecting type	4 / star Y	4 / star Y
Insulation class	H	H
Protection grade	IP 23	IP 21
Voltage regulation type	ELECTRONIC AVR SR7/2	ELECTRONIC AVR BL4
Voltage regulation	±1,5 %	±1 %
Short circuit current capacity	> 300 % In	> 300 % In
Waveform distortions THD	< 3,6 %	< 3 %
Reactances Xd"	9,6 %	13,5 %

L - Light tower  
P - Generating set mounted on a trailer  
G - Engine preheating for cold start (glow plugs)  
C - Silent canopy, CC – Super silent canopy, no letter open version mounted on a base frame  
S - With Automatic Transfer Switches (ATS)  
A - Automatic start, R - Manual start  
N – Synchronization with main, P – Synchronization with other genset  
Prime power kVA  
Engine: V -Volvo, I - Iveco, M - Mitsubishi, B - JCB, U - MTU, P-Perkins, D-Doosan  
FOGO Generating set

# FM 20

## INSTALLATION GUIDELINE

Power output connection	3 phase plug	Amps	32
Power output cables	elastic cable	mm <sup>2</sup>	5x10(≤30m)
ATS control connection	elastic cable	mm <sup>2</sup>	7x1,5 (≤30m)
Preheating, battery charger ect	elastic cable	mm <sup>2</sup>	3x2,5 (≤30m)
Above 30 m connection cables– please contact technical department *** NOTE: For reference only***			
ATS box overall size (connection from the bottom)	mm		700/500/250 wall mouthed
Engine exhaust outlet diameter	mm		48,3
Exhaust pipe diameter (max. 7m, 4 elbows)	mm		48,3
Exhaust pipe diameter (max. 15m, 4 elbows)	mm		60,3

## OPEN VERSION

Dimensions(LxWxH)	mm	1900x850x1230
Weight (without fuel)	kg	540
Fuel tank capacity	liters	105
Autonomy (100% load, full tank)	hours	17,5
Radiator high	mm	440
Radiator width	mm	420
Radiator distance from the floor	mm	600
Air outlet surface	m <sup>2</sup>	0,20
Air inlet surface	m <sup>2</sup>	0,25
Noise level (LWA)	dB	112 **



## CANOPY VERSION

Dimensions (LxWxH)	mm	1900x850x1330
Weight (without fuel)	kg	700
Fuel tank capacity	liters	105
Autonomy (100% load, full tank)	hours	17,5
Noise level (LWA)	dB	90 ***



Pictures for reference only

## OPERATION DATA

Engine oil type	15W40	Rimula R3X
Total oil capacity	l	6,5
Oil consumption (per 1 kW)	l/h	-*
Oil change intervals	hours/year	100 (first time) 250 / 1
Coolant type (glycol)	- 38°C Antifreeze	Glicoshell
Coolant quantity	l	8,1
Coolant change intervals	hours/years	500 / 2
Starting battery capacity	Ah	60
Fuel type	Diesel	EN 590
Fuel consumption 100% load	l/h	6,0
Fuel consumption 75% load	l/h	4,5
Fuel consumption 50% load	l/h	3,0
Fuel filters change interval	hours	250
Oil filters change interval	hours	250
Foundation concrete slab (for reference only) L/W	mm	2100x1050

\* - please contact technical department  
\*\* - for installation, noise protection required  
\*\*\* - according to 2005/88/EC

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## STANDARD EQUIPMENT:

- diesel engine
- alternator
- starting batteries
- on engine wiring
- fuel tank with on engine fuel installation
- elastic engine and alternator mountings
- exhaust compensators
- silencer
- on engine liquids (engine oil and cooling liquid, without fuel)
- generating set terminal box
- main circuit bracer
- generating set control panel with engine and alternator parameters indication
- emergency stop
- acoustic warning signal

## Version:

- R** - open version, manual start
- standard equipment,
- AG** - open version, automatic start
- standard equipment,
- + battery charger,
- + with external start command
- ASG** - open version, automatic start, AMF+ATS
- standard equipment,
- + battery charger,
- + AMF+ATS Automatic Transfer Switches with Automatic Mains Failure
- RC** - soundproof, manual start,
- standard equipment,
- + soundproof canopy
- ACG** - soundproof, automatic start
- standard equipment,
- + soundproof canopy,
- + battery charger,
- + with external start command,
- ASCG** - soundproof, automatic start, AMF+ATS
- standard equipment,
- + soundproof canopy,
- + battery charger,
- + AMF+ATS Automatic Transfer Switches with Automatic Mains Failure,

## ACCESSORY:

- external fuel tank,
- synchronization with other generator set,
- ventilation,
- exhaust piping system,
- differential protection,
- other voltage application,
- individual ATS,
- spark arrestor,
- remote control,
- maintenance contract,
- others\*