

## Diesel Generator Sets Powered by German MTU



ISO14001



SGS



ISO9001

### ASSEMBLY

- ※ The engine and alternator are close coupled by means of an SAE flange. A full torsional analysis has been carried out to guarantee no harmful vibration will occur. Engine with radiator and alternator are on common spraying powder mounting.
- ※ Anti-vibration pads are affixed between engine alternator feet and the base frame. Thus ensuring complete vibration isolation of the rotating assemblies and enabling the machine to be placed on an uneven surface without any detrimental effects.
- ※ For durability and corrosion resistance, all iron and steel surfaces of canopy fabrications have been treated for coating by grit blast cleaning. Then covered by special three layers painting which provides an excellent corrosion resistant surface.

### WARRANTY

- ※ YICHEONG Company provides one-source responsibility for the generator set and accessories. Each YICHEONG generating set has been got through 2 hours Load test for running 0% ,25%,50%,75%,100% and 110% load, all protective devices and control function are simulated and checked before despatch.
- ※ Engine and Alternator are guaranteed for a period of 12 months from the date of commissioning or 18 months from shipping, whichever occurs first.
- ※ Convenience for operation and maintenance, backed by MTU global service network.

## GLOBAL STANDARD

### 3P4W, 50Hz@1500RPM, 400/230V

(380/220V and 415/240V are for optional)

**60hz, 1800RPM, 208V, 480V will be different technical data.**

### SCOPE SUPPLY

- Germany MTU Diesel Engine with radiator.
- Reliable alternator: Leroy Somer, Stamford, ENGGA.
- Heavy duty steel skid with vibration-damping.
- Base service fuel tank inside skid(up to 800KW)
- Lead acid batteries with cable for starter.
- Industrial silencer & flexible exhaust below.
- Mounted control panel: Digital auto controller.

### ENGINE (Industrial Powerful)

The history of MTU can be traced back to the 18th century of mechanical times. Following its good traditions, MTU comes out top among manufacturers of engines in the world owing to its unexampled advanced technology. The high quality of MTU engines is identical with the concept of reliably, advanced technology, high-class performance, environmental consciousness and long service life which is put forward by Yicheong.

#### Benefit:

- Top running capacity with unexampled advanced technology.
- Low fuel consumption. PLD with electrical injection system.
- Engines meet all relevant exhaust emission standards.
- High performance, long maintenance intervals & service life.

### ADEC(Advanced Diesel Engine Controller):

#### Multi-Functions:

- Controlling engine,
- Monitoring operating status,
- Controlling the injection quality and engine speed,
- Indication of faulty operation (Display, SAM, Dialog Unit),
- Communication with other electronic components via CAN, with ESCM system (Engine Site Condition Management).



Specifications may change without notice.

### Benefits:

- ※ Reliable service working, powerful, attractive appearance.
- ※ Low running cost (diesel fuel & oil, maintenance)
- ※ Easy for commissioning, operation and maintenance.

### CONTROL SYSTEM AND PROTECTION

※ Controllers are available for all applications. It contains Deep Sea, ComAp or other famous brands. According to their different functions, the control systems can be specified into key start controller model, automatic start control model and PCRC three remote control systems. See controller features inside.

### CRITERION

- ※ ISO8528, GB/T2820, ISO3046, BS4999, BS5514, BS5000
- ※ EN12601: 2001, EN60034-22: 1997, EN60204-1: 2006
- ※ ISO9001: 2000, ISO14001: 2004, SGS, TLC



### ALTERNATOR (Reliable)

#### Voltage regulation

Voltage regulation maintained with in  $\pm 0.5\%$  as follow:

- Power factor between 0.8-1.0 lagging.
- From no load to full load, any steady load.
- Speed droop variation under 5%.

#### Frequency/Speed undulation

- 0-100% load, Frequency/Speed Droop Ratio  $< 5\%$ .
- 25-100% load, any steady load undulation  $< 0.25\%$ .

#### Effect factor of telecom

- TIF(MAMG1-22)  $< 50$ ; THF(BS EN60034)  $< 2\%$

The 2/3 pitch design avoids excessive neutral currents. With the 2/3 pitch and carefully selected pole and tooth designs, ensures very low waveform distortion.

Brushless alternator with pilot exciter for excellent load response.

Class H insulation, easy paralleling with mains or other generators, standard 2/3 pitch stator windings avoid excessive neutral currents.

Backed by worldwide service network.

# CONTROL SYSTEM

## 1. Standard: MRS-16 (Czech ComAp), LCD

Providing the standard functions as follows:

- ※ Start/Stop controller, Emergency stop pushbutton
- ※ Ampere/Volt meter and selector switch/Frequency meter/Water temperature gauge/Oil pressure gauge/Hour counter/Battery voltage meter
- ※ Alarm: Over speed, High Engine Temperature, Low Oil Pressure.
- ※ Protection System: Over speed, High Engine Temperature, Low Oil Pressure, Emergency Stop. And the other protection function presetting.

## 2. Option: Deep Sea DES7320 Digital Auto Start (AMF)

(Option assembled with the ATS)

It can carry out auto-switching between the outer power and generating set power.

### Functions:

- ※ Automatic Start/Stop, Engine monitoring and protection
- ※ 3 start attempts failure and Automatic Crank Disconnect
- ※ Parameters display(V/A/Hz/Hour), Running hour counting
- ※ Charge alternator exciting and Charge alternator fail alarm
- ※ Settings can be adjustable via key buttons on front panel

### Shutdown:

- ※ Loss of Speed Signal
- ※ Alternator Under/Over Voltage
- ※ Alternator Under/Over Frequency
- ※ Mains Under/Over Voltage
- ※ Mains Under/Over Frequency
- ※ Under/Over Speed
- ※ Low Oil Pressure
- ※ High Engine Temperature

### Warning:

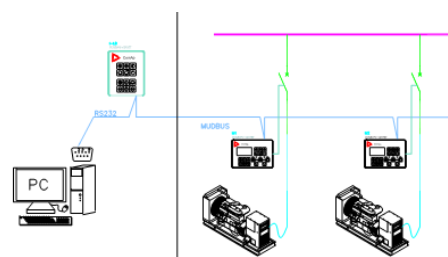
- ※ Alternator Under/Over Voltage
- ※ Alternator Under/Over Frequency
- ※ Mains Under/Over Voltage
- ※ Mains Under/Over Frequency
- ※ Under/Over Speed
- ※ Low Oil Pressure Pre-Alarm
- ※ High Engine Temp. Pre-Alarm
- ※ High/Low Battery Voltage
- ※ Over-current
- ※ Periodic maintenance



MRS-16



DSE7320



Paralleling System

## Optional Parts:

Fuel system	Canopy	Alternator
<ul style="list-style-type: none"> <li>● Separate storage fuel tank auto-fuel pump.</li> </ul>	<ul style="list-style-type: none"> <li>● Soundproof type by 20ft/40ft container (75Db@7m)</li> </ul>	<ul style="list-style-type: none"> <li>● AVR PMG with regulator</li> <li>● Anti-damp/anti-corrosion treatment</li> </ul>
Control Panel	Cooling System	Engine
<ul style="list-style-type: none"> <li>● Auto-paralleling control Cabinet</li> <li>● Auto Transfer /changeover Switch (ATS)</li> </ul>	<ul style="list-style-type: none"> <li>● Front heat protection</li> <li>● 50°C radiator</li> <li>● Coolant(-30°C)</li> </ul>	<ul style="list-style-type: none"> <li>● Heater 2KW&amp;4KW (coolant &amp; Oil)</li> <li>● Mains Electricity Battery Charger board</li> </ul>



Circuit Breaker



Paralleling/synchronizing System



ATS



Soundproof canopy

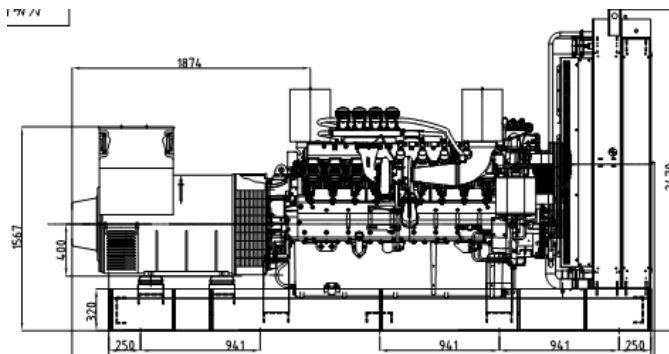
Specifications may change without notice.

### 380-415V, 1500RPM, 50HZ, 3phase 4 wire,

Genset Model	Prime power		Standby power		MTU Engine Model	Alternator model	Dimension (L*W*H mm)
	KW	KVA	KW	KVA			
JM220G	220	275	242	303	6R1600G10F	LSA46.2L9	2800*1150*1450
JM250G	250	313	275	344	6R1600G20F	LSA46.2VL12	2900*1150*1450
JM300G	300	375	330	413	8V1600G10F	LSA47.2VS2	2980*1150*1450
JM320G	320	400	352	440	8V1600G20F	LSA47.2S4	3040*1350*1760
JM360G	360	450	400	500	10V1600G10F	LSA47.2S5	3220*1350*1760
JM400G	400	500	440	550	10V1600G20F	LSA47.2M7	3320*1350*1760
JM480G	480	600	528	660	12V1600G10F	LSA47.2L9	3400*1350*1760
JM520G	520	650	572	715	12V1600G20F	LSA49.1S4	3400*1350*1760
JM520G	520	650	572	715	12V2000G25	LSA49.1S4	4200*1600*2250
JM640G	640	800	704	880	12V2000G65	LSA49.1M75	4200*1600*2250
JM728G	728	910	800	1000	16V2000G25	LSA49.1L10	4500*1800*2300
JM800G	800	1000	880	1100	16V2000G65	LSA50.2S3	4500*1800*2300
JM908G	908	1135	1000	1250	18V2000G65	LSA50.2M6	4700*1900*2350
JM1000G	1000	1250	1100	1375	12V4000G21R	LSA50.2M6	6150*2150*2400
JM1120G	1120	1400	1232	1540	12V4000G23R	LSA50.2L8	6150*2150*2400
JM1300G	1300	1625	1420	1775	12V4000G23	LSA50.2V10	6200*2150*2400
JM1450G	1450	1812	1600	2000	12V4000G63	LSA51.2S55	6200*2150*2400
JM1640G	1640	2050	1800	2250	16V4000G23	LSA51.2L70	6500*2600*2800
JM1800G	1800	2250	2000	2500	16V4000G63	LSA51.2VL85	6600*2600*2800
JM2000G	2000	2500	2200	2750	20V4000G23	LSA51.2VL90	7600*2600*3000
JM2200G	2200	2750	2400	3000	20V4000G63	EG560S-2200N	7600*2600*3000
JM2400G	2400	3000	2640	3300	20V4000G63L	EG560M-2400N	7600*2600*3000

### 480V, 1800RPM, 60HZ, 3phase 4 wire,

JM640G6	640	800	704	880	12V2000G45	LSA49.1 S4	4200*1650*2280
JM730G6	730	913	803	1004	12V2000G85	LSA49.1 M75	4200*1650*2280
JM800G6	800	1000	880	1100	16V2000G45	LSA49.1 L9	4500*2000*2300
JM900G6	900	1125	990	1238	16V2000G85	HCI634H	4500*2000*2300
JM1040G6	1040	1300	1144	1430	18V2000G85	LSA50.2 S4	4750*2000*2380
JM1344G6	1344	1680	1480	1850	12V4000G43	LSA50.2 L7	6150*2150*2400
JM1600G6	1600	2000	1760	2200	12V4000G83	LSA50.2 VL10	6150*2150*2400
JM1800G6	1800	2250	1980	2475	16V4000G43	PI734E	6500*2600*2500
JM2000G6	2000	2500	2200	2750	16V4000G83	LSA51.2 L70	6550*2600*2500
JM2200G6	2200	2750	2420	3025	20V4000G43	PI734G	7600*2600*3000



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