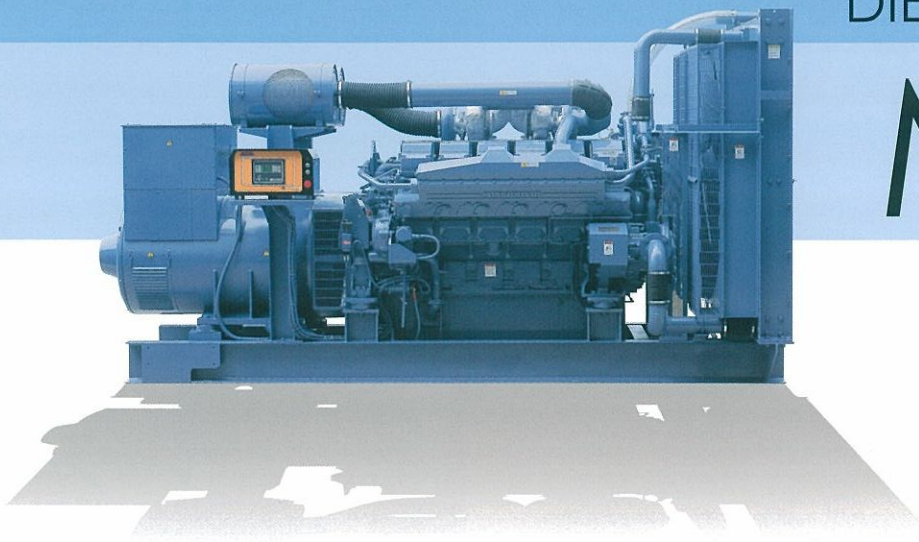




DIESEL GENERATOR SET

MGS SERIES





## RELIABILITY AND QUALITY IN POWER GENERATION

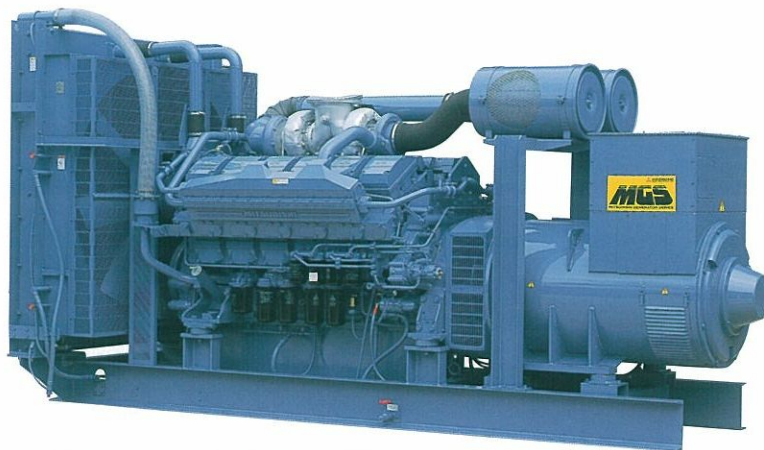
*The growing strength of the Mitsubishi Brand name: MITSUBISHI MGS SERIES DIESEL GENERATOR SET*

*The core of the MGS Gen Set is now -S typed diesel engines for MGS Power Rating*

### MITSUBISHI DIESEL ENGINES

Ranging in capacity from 0.5 to 56,400 horsepower, Mitsubishi brand diesel engines offer a series of versatile power generating systems. Mitsubishi Heavy Industries, Ltd. has continually introduced upgraded its engine products since the inception of business in 1917, and now the MITSUBISHI MGS SERIES DIESEL GENERATOR SET provides a higher generating power rating and more advanced control systems than ever before, with proven reliability based on the continued research and development.

The best performance-matched engine system configured with Mitsubishi diesel engines and Mitsubishi turbo-chargers, which are engineered and manufactured in the same facility, is certain to result in the high productivity and improved fuel economy in the MGS Power Generation. Every unit is inspected and tested before leaving the factory and the test report is sent with the Gen Set. MITSUBISHI MGS – All Mitsubishi assembled, tested and supported.



MGS1000B, with optional air-cleaner

## DEPENDABILITY & DURABILITY IN POWER GENERATION

*The best performance-matched engine and generator systems give world-class performance*

*Response and stability designed to exceed user expectations in a variety of applications*

### AC GENERATOR

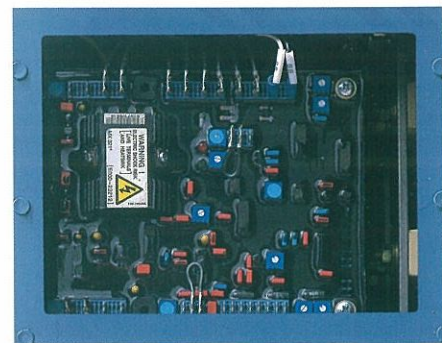
4 pole, screen protected, drip-proof IP23, self-exciting, self-regulating and brushless with fully connected damper windings, salient pole rotors, A.C. exciter and rotating rectifier unit. The insulation system is Class 'H'. All windings are impregnated in either a triple dip thermo-setting moisture, oil and acid resisting polyester varnish or vacuum pressure impregnated with a special polyester resin. Electrical design in accordance with BS5000 Part 3, VDE0530, UTE51100, NEMA MG1-32, CEMA, IEC34-1, CSA22.2 and AS1359.



6 and 12 wire\*1 reconnectable windings provide a wide range of 3 phase voltage. The exciter field system remains at full strength, sustaining a high level of short circuit current at the ac generator output terminals by means of the excitation voltage via AVR powered by the independent winding, Permanent Magnet Generator (PMG) as a standard feature in the MGS Gen Set, which is electrically isolated from the main alternator stator windings.



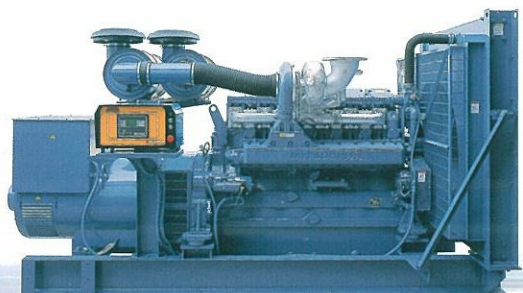
The fully sealed, three phase\*2 RMS voltage sensing AVR maintains the voltage within the limits of  $\pm 0.5\%$ \*3 from no load to full load including cold to hot variations at any power factor between 0.8 lagging and unity allowing for a 4% engine speed variation, suitable for applications with greatly unbalanced or high non-linear loads associated with UPS systems. The AVR has built-in protection against sustained over-excitation, caused by internal or external faults. This de-excites the generator after a minimum of five seconds. THF (as defined by BS4999 Part 40) is better than 2 % and a TIF (as defined by ASA C50.12) is better than 50. Radio interface: Suppression is in line with the provision of BS800 and VDE Class G and N.



Note: \*1 12 wire reconnectable windings are the features up to Code H6 models.

\*2, 3 Up to Code K5 models have single phase voltage sensing and the voltage regulation within  $\pm 1.0\%$ , for 4% engine speed variation.

Turbo-filter is standard and paper element dry type air-cleaner is available as an option.



MGS0500B, with optional air cleaner



# FIRST CHOICE IN POWER GENERATION

Meeting your needs with wide rating range and options to assure successful application

## MGS SERIES GEN SET RATING

50 Hz, 1500 rpm, With Fan, 380V				
MGS GEN SET MODEL	ENGINE MODEL	CODE Std-by: 5S- Prime: 5P-	APPROVED RATING	
			Std-by (kVA)	Prime (kVA)
MGS2500B	S16R-PTAA2	KT83	2290	2035
MGS2000B	S16R-PTA2-S	KT83	2235	2030
MGS1500B	S16R-PTA-S	7PF	2000	1800
MGS1400B	S12R-PTA2-S	7PD	1600	1450
MGS1200B	S12R-PTA-S	7PD	1500	1362.5
MGS1000B	S12H-PTA-S	7PC	1250	1125
MGS1000B	S12H-PTA-S	H6J	1050	1000
MGS0900B	S12A2-PTA2-S	H6J	1000	885
MGS0700B	S6R2-PTAA-S	H6H	880	800
MGS0650B	S6R2-PTA-S	H6G	780	700
MGS0500B	S6R-PTA-S	H5F	690	625
MGS0500B	S6A3-PTAA-S	H5E	580	530
MGS0450B	S6A3-PTA-S	H5D	515	480

60 Hz, 1800 rpm, With Fan, 480V				
MGS GEN SET MODEL	ENGINE MODEL	CODE Std-by: 6S- Prime: 6P-	APPROVED RATING	
			Std-by (kW)	Prime (kW)
MGS2500B	S16R-PTAA2	7PF	2012	1820
MGS2000B	S16R-PTA2-S	7PE	1900	1730
MGS1500B	S16R-PTA-S	7PD	1680	1550
MGS1400B	S12R-PTA2-S	7PC	1420	1280
MGS1200B	S12R-PTA-S	7PB	1260	1150
MGS1000B	S12H-PTA-S	H6J	1070	960
MGS0900B	S12A2-PTA2-S	H6H	870	790
MGS0500B	S6R-PTA-S	H5F	630	570
MGS0500B	S6A3-PTAA-S	K5D	500	460
MGS0450B	S6A3-PTA-S	H5C	480	435

60 Hz, 1800 rpm, With Fan, 380V				
MGS GEN SET MODEL	ENGINE MODEL	CODE Std-by: 6S- Prime: 6P-	APPROVED RATING	
			Std-by (kW)	Prime (kW)
MGS2500B	S16R-PTAA2	73PF	2000	1800
MGS2000B	S16R-PTA2-S	73PF	1900	1730
MGS1500B	S16R-PTA-S	73PF	1700	1550
MGS1400B	S12R-PTA2-S	73PD	1415	1280
MGS1200B	S12R-PTA-S	73PD	1265	1145
MGS1000B	S12H-PTA-S	73PD	1070	970
MGS0900B	S12A2-PTA2-S	H6J	860	785
MGS0500B	S6R-PTA-S	H6G	620	560
MGS0500B	S6A3-PTAA-S	H5E	500	460
MGS0450B	S6A3-PTA-S	H5E	480	435

### Stand-by: Code: S

Applicable for supplying emergency power at varying load in the event of normal utility power interruption. Fuel stop power in accordance with ISO15550, ISO3046/1, JISB8002-1, DIN6271 and BS5514.

Overload: not allowed

### Prime: Code: P

Applicable for supplying emergency power at varying load in the event of normal utility power interruption. 10% overload is allowed. Fuel stop power in accordance with ISO15550, ISO3046/1, JISB8002-1, DIN6271 and BS5514.

Overload: 10% allowed

### Conditions:

Engine ratings are based on SAE J1349 standard conditions and also apply at ISO3046/1, DIN6271 & BS5514 standard conditions.

Fuel rates: based on ASTM D975, BS2869 and on fuel oil of 35° API (16°C or 60°F) gravity having a LHV of 42,780 kJ/kg (18,390 Btu/lb.) when used at 29°C (85°F) and weighing 838.9 g/liter (7.001 lbs./U.S. gal.).

Note: For conditions of prime power (PRP) and additional rating requirements, please consult your nearest Mitsubishi MGS dealer.

# ADVANCED SOLUTIONS IN POWER GENERATION

"Full-sized" safety and automatic functions in the series of digital control systems  
Easy human interface in the sophisticated control system makes for an operator-friendly Gen Set

## MGS SERIES CONTROL PANEL

MGS standard Microprocessor control – automatic start/stop panel, indication of the operational status and fault conditions; automatically shutting down the engine and indicating the engine failure by means of a graphical LCD display and flashing LED on the front panel. Electrical design in accordance with BS EN 60950 Low Voltage Directive, BS EN 50081-2 and 50082-2 EMC Directive. The optional interface can provide real time diagnostic facilities.

Alarms are indicated by an LCD icon and LED illumination.





**The preferred worldwide equipment  
MITSUBISHI MGS – the way to serve customers  
Best available Products with the best possible value  
Best quality Service Support with the sense of urgency  
Beyond the customer's expectation.**

**Your local Mitsubishi MGS Gen Set dealer can advise you  
on the right selection of Gen Set for your application,  
deliver and install the units properly, and provide daily  
maintenance training, as well as the preventive maintenance  
on demand, to support higher productivity in economical way.  
Well trained and experienced professionals strive for  
excellence in all they do.**



Mitsubishi Heavy Industries, Ltd. serves customers by providing continually improved products. Therefore specifications and some materials may be changed without notice.



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