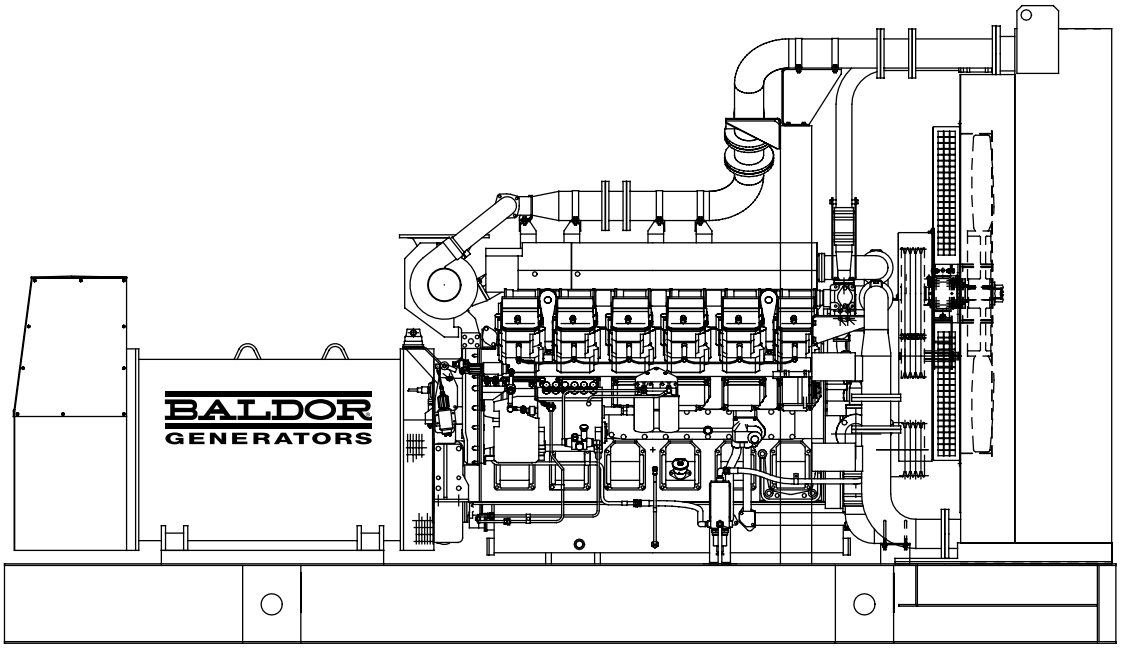
BALDOR GENERATORS

IDLC1600-M



Standby or Prime Power Features

- Heavy-duty industrial diesel engine
- Brushless synchronous alternators: four-pole construction, dynamically balanced
- Full featured microprocessor based controller: fully programmable for maximum flexibility
- Prototype tested and production tested
- Gen-set accepts rated load in one step
- UL2200 available – consult factory
- Optional weather-proof and sound attenuated enclosures available
- Full range of accessories and options available
- Heavy-duty construction for use in prime or standby application
- Manufactured in an ISO-9001 certified facility
- Backed by a world wide network of parts and service center

Gen Set Ratings

Baldor Genset Model	kW Rating Standby	kW Rating Prime	Voltage Hi-Wye	Voltage Low-Wye	Voltage Delta	Number of Leads	Phase	Hz	Power Factor
IDLC1600-MB	1600	1450	480/277	240/139	N/A	12	3	60	0.8
IDLC1600-MB	1600	1450	440/254	220/127	N/A	12	3	60	0.8
IDLC1600-MB	1600	1450	416/240	208/120	240/120	12	3	60	0.8
IDLC1600-MC	1600	1450	380/220	N/A	N/A	12	3	60	0.8
IDLC1600-MH	1600	1450	600/347	N/A	N/A	12	3	60	0.8
IDLC1600-MXB	1575	1400	380/220	N/A	N/A	12	3	50	0.8

NOTES: For ratings and voltages not listed above refer to the Gen-Set Selector or consult factory
Standby ratings do not have an overload capability but can be used for the duration of the utility failure per ISO-3046,DIN6271 and BS5514
Prime (Unlimited Running Time) ratings are continuous per DIN 6271 and ISO-3046 with 10% overload capacity
Base Load (Continuous) ratings are continuous per DIN 6271, BS5514 and ISO-8528 with no sustained overload capacity
Consult factory for Base Load ratings
Altitude derate is 4% for each 1000 feet over 5000
Temperature derate is 1% for 10°F over 100°F ambient

Controls Digital Control Module

MEC2 Features

- Large Backlit LCD with alpha-numeric readout
- Microprocessor Based Design
- 16 programmable alarms/shutdowns set points
- 4 programmable inputs
- Alarm horn
- Not in Automatic Alarm
- Digital Three Phase Voltage and Current Monitoring
- Password Protected Front Panel Programming
- 4 Programmable Outputs
- Local Emergency Stop Switch
- Optional NFPA110 Level I

Engine Protections

- Digital Oil Pressure Gauge
- Digital Water Temperature Gauge
- Digital Battery Voltmeter
- Overspeed Shutdown
- Emergency Stop Shutdown
- Loss of Speed Signal
- Overcrank Shutdown

Designed To Meet/Exceed the Standards Below:

- UL 508
- UL 2200
- NFPA 70
- NFPA 110

Engine Technical Data

Hertz	50Hz		60 Hz	
Manufacturer	Mitsubishi		Mitsubishi	
Engine Model	S16R-Y1PTA-4		S16R-Y1PTA-1	
Engine Type	4 Cycle, Water Cooled		4 Cycle, Water Cooled	
Aspiration	Turbo-Charged, After Cooler		Turbo-Charged, After Cooler	
No. of Cylinders & Configuration	16, 60˚V		16, 60˚V	
Displacement - cu. in. - liters	3989 (65.37)		3989 (65.37)	
Bore and Stroke - in. - mm	6.69 X 7.09 (170 X 180)		6.69 X 7.09 (170 X 180)	
Compression Ratio	15.0:1		15.0:1	
Air Filter Type	Dry		Dry	
Governor Type	Electronic		Electronic	
Governor Make	Woodward		Woodward	
Governor Model	Woodward Pro-Act II		Woodward Pro-Act II	
Frequency Regulation, steady state	+/- 0.25%		+/- 0.25%	
Frequency Regulation, no load to full load	Isochronous		Isochronous	
Battery Voltage	24 VDC		24 VDC	
Water Pump Type	Centrifugal		Centrifugal	
Coolant Cap. - radiator cooled - qts - liters	252 / 238		252 / 238	
Coolant Capacity - engine only - gals - liters	44.9/170		44.9/170	
Oil Pan Capacity - gals - liters	37-52.8/140-200		37-52.8/140-200	
Rec'd Oil Type - SF/CC/CD-10°F to 90°F	10W-40		10W-40	
Engine Operational Values	**English 50 Hz**	**Metric 50 Hz**	**English 60 Hz**	**Metric 60 Hz**
Maximum ambient temperature - F° - C°	104/122	40/50	104/122	40/50
Heat rejected to coolant - Btu/min - kWm	60,452	1,062	63,306	1,112
Max. power at rated rpm - bhp - kWm	2280	1701	2346	1750
Coolant flow - gpm - lpm	436	1950	489	1850
Exhaust temperature - F° - C°	967	519	987	531
Exhaust flow - cfm - m^3/min	13,954	385	14,265	404
Normal oil press. range idle/run - PSI - kgf/cm^2	29-43/71-93	2-3/5-6.5	29-43/71-93	2-3/5-6.5
Max fuel flow to injection pump - gph - Lph	135	510	148	560

Gen Set Technical Data

Alternator Technical Data			
Generator Frame	7	Voltage Regulation NL - FL	+/- 0.5%
Exciter	Brushless	Underspeed Protection	Standard
Cooling Fan	Cast alloy aluminum	Overexcitation Protection	Standard
Bearing	Single, double shielded	Overvoltage Protection	Standard
Connection Type	Reconnectable	Loss of Sensing Protection	Standard
Insulation Type	Class H	Overspeed	2250 RPM
Windings	100% copper	Standards	NEMA, IEC, IEEE, CSA, BS
Pitch	2/3	Phase Sequence	A(U), B(V), C(W)
Amortisseur Winding	Full	TIF (1960 Weightings)	<50
Voltage Regulator	MX321	Excitation System	PMG - Standard

Alternator Performance Data	Model IDLC1600-MB	Model IDLC1600-MC	Model IDLC1600-MH
Temperature rise by resistance - °C (Stand-By)	150/40	150/40	150/40
Generator model number	HCI734G	HCI734H	HCI734G
Generator kW at 130/105/80°C over 40°C ambient (480 Volt , 60Hz)	1825/1680/1400	2000/1840/1592	1825/1680/1400
SkVA output with 30% voltage dip max. 100% recovery at 60 Hz	5400	7100	5400
Maximum SkVA at 90% sustained voltage dip	Consult Baldor	Consult Baldor	Consult Baldor
Subtransient reactance at voltage listed	16.00%	14.00%	16.00%
Line - line harmonic maximum total	5.00%	5.00%	5.00%

Installation/Application Data	English 50 Hz	Metric 50 Hz	English 60 Hz	Metric 60 Hz
Ventilation requirements				
a. Cooling airflow required - cfm - m^3/min (unit mounted radiator)	68,855	1,950	68,855	1,950
b. Combustion air required - cfm - m^3/min	5,115	146	5,367	152
Total ventilation requirements - cfm - m^3/min (a. + b.)	73,970	2,096	74,222	2,102
Maximum cooling air restriction - in.H_20 - in.hg	0.5	0.037	0.5	0.037
Recommended minimum intake louver size (based on "free area")	74.0	2.1	74.2	2.1
a. Heat rejected to ambient, engine - Btu/min - kWm	7,254	127	7,597	133
b. Heat rejected to ambient, generator - Btu/min - kWm	4,482	79	4,554	80
Total heat rejection to ambient - Btu/min (a. + b.)	11,736	206	12,151	213
Exhaust system requirements				
Exhaust gas flow - cfm - m^3/min	13,954	385	14,265	404
Exhaust temperature (dry manifold) - °F - °C	967	519	987	531
Maximum back pressure - in.H_2O - mm H_2O (inclusive of silencer)	23.6	600	23.6	600
Exhaust outlet size - in. - mm	14	356	14	356
Emissions - NO_X - g/BHP-hr - g/kW-hr	Meets EPA Tier I Consult Factory for values		5.37	7.20
Emissions - HC - g/BHP-hr - g/kW-hr			0.50	0.70
Emissions - CO - g/BHP-hr - g/kW-hr			0.45	0.60
Emissions - PM - g/BHP-hr - g/kW-hr			0.16	0.21
Fuel system requirements				
Fuel consumption - 1/4 load - gph - Lph	32	121	35	132
Fuel consumption - 1/2 load - gph - Lph	55	208	59	223
Fuel consumption - 3/4 load - gph - Lph	80	303	85	322
Fuel consumption - Full load - gph - Lph	108	409	114	432
Heat Exchanger Cooling system requirements				
Minimum raw water (city water) flow - gpm - lps	Consult Baldor		Consult Baldor	
Maximum supply water temperature - °F - °C				
Remote Cooling system requirements				
Maximum coolant static head - ft. - m	Consult Baldor		Consult Baldor	
Ventilation required (based on 25°F temp rise) - cfm - lps				

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Accessories and Options

Control Panel
- ❑ Louver Relay – 10 Amp
- ❑ Run Relay – 10 Amp
- ❑ Dry Contacts For Alarms
- ❑ Remote E-Stop
- ❑ Control Panel Heater
- ❑ Tachometer
- ❑ Remote Annunciator
- ❑ Remote Communication
- ❑ Panel Lights w/Switch
- ❑ Generator Voltage Adjust
- ❑ Modem For Remote Communication

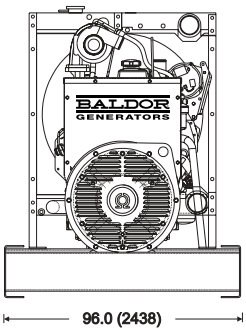
Engine Exhaust System
- ❑ Industrial Silencer
- ❑ Residential Silencer
- ❑ Critical Silencer
- ❑ Exhaust Flex
- ❑ Exhaust Extension
- ❑ Rain Cap
- ❑ _____

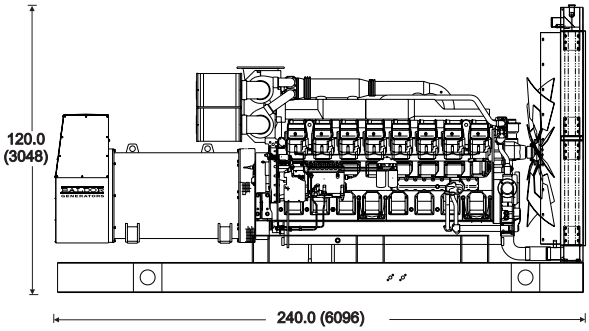
Generator Accessories
- ❑ Main Line Circuit Breaker
- ❑ Exciter Field Circuit Breaker
- ❑ Ground Fault Module w/Breaker Shunt Trip
- ❑ Ground Fault Module w/o Breaker Shunt Trip
- ❑ Reconnectable Link Bars
- ❑ Drip Cover IP22
- ❑ Manual Voltage Control
- ❑ Space Heater
- ❑ RTD's Stator Windings
- ❑ RTD's Bearing (Rear)
- ❑ PMG
- ❑ MVC300 Manual Voltage Control

Engine Electrical System
- ❑ Batteries
- ❑ Battery Rack
- ❑ Battery Cables
- ❑ Battery Charger - Automatic
- ❑ Battery Charger - Trickle
- ❑ _____

Engine Fuel System
- ❑ Day Tank
- ❑ Sub-Base Fuel Tank
- ❑ Storage Tank
- ❑ Flexible Fuel Lines
- ❑ _____

Miscellaneous
- ❑ Weather Proof Enclosure
- ❑ Sound Attenuated Enclosure
- ❑ Trailer Mounted
- ❑ Vibration Isolators
- ❑ Coolant Heater
- ❑ Oil Heater
- ❑ Bypass Oil Filter
- ❑ Export Crating
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____





Dimensions – in (mm)

Weight – lbs. (Kg)
26,254 (11908)

Cubes (Approximate)
1253 ft

*Open unit configuration, accessories not included

Distributed by:

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FM2482M

Printed in U.S.A.
10/04 FARR 5000