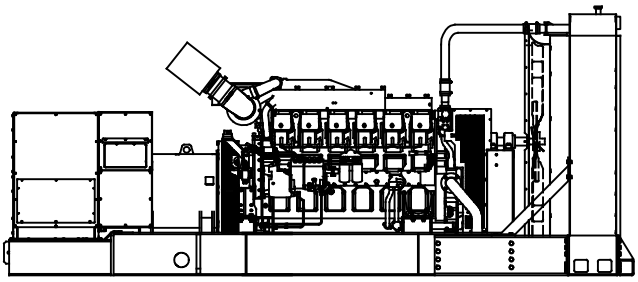
Model: 1250ROZMC

KOHLER. Power Systems **380–4160 V** **Diesel**

ISO 9001 KOHLER POWER SYSTEMS NATIONALLY REGISTERED

Ratings Range

		60 Hz	50 Hz
Standby:	**kW**	940–1280	968–1120
	kVA	1175–1600	1210–1400
Prime:	**kW**	860–1160	880–1016
	kVA	1075–1450	1100–1270



Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- A standard one-year limited warranty covers all generator set systems and components. Two-, five-, and ten-year extended limited warranties are also available.
- Alternator features:
  - The pilot-excited, permanent magnet (PM) alternator provides superior short-circuit capability.
  - The brushless, rotating-field alternator has broadrange reconnectability.
- Other features:
  - Kohler designed controllers for one-source system integration and remote communication. See Controllers on page 3.
  - Multiple circuit breaker configurations.

Generator Set Ratings

				150°C Rise Standby Rating		130°C Rise Standby Rating		125°C Rise Prime Rating		105°C Rise Prime Rating	
Alternator	**Voltage**	**Ph**	**Hz**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**
7M4046	220/380	3	60	940/1175	1785	940/1175	1785	860/1075	1633	860/1075	1633
	240/416	3	60	1180/1475	2047	1110/1388	1926	1090/1363	1891	1020/1275	1770
	277/480	3	60	1250/1563	1879	1220/1525	1834	1140/1425	1714	1120/1400	1684
	220/380	3	50	1040/1300	1975	968/1210	1838	960/1200	1823	896/1120	1702
	230/400	3	50	1064/1330	1920	1000/1250	1804	976/1220	1761	920/1150	1660
	240/416	3	50	1020/1275	1770	968/1210	1679	944/1180	1638	880/1100	1527
7M4048	220/380	3	60	1030/1288	1956	1030/1288	1956	940/1175	1785	940/1175	1785
	240/416	3	60	1250/1563	2169	1180/1475	2047	1140/1425	1978	1100/1375	1908
	277/480	3	60	1270/1588	1909	1270/1588	1909	1160/1450	1744	1160/1450	1744
	220/380	3	50	1064/1330	2021	1008/1260	1914	1000/1250	1899	944/1180	1793
	230/400	3	50	1088/1360	1963	1024/1280	1848	1000/1250	1804	960/1200	1732
	240/416	3	50	1040/1300	1804	968/1210	1679	968/1210	1679	904/1130	1568
7M4050	220/380	3	60	1160/1450	2203	1160/1450	2203	1060/1325	2013	1060/1325	2013
	240/416	3	60	1280/1600	2221	1280/1600	2221	1160/1450	2012	1160/1450	2012
	277/480	3	60	1280/1600	1925	1280/1600	1925	1160/1450	1744	1160/1450	1744
	220/380	3	50	1120/1400	2127	1120/1400	2127	1016/1270	1930	1016/1270	1930
	230/400	3	50	1120/1400	2021	1120/1400	2021	1016/1270	1833	1016/1270	1833
	240/416	3	50	1120/1400	1943	1120/1400	1943	1016/1270	1763	1016/1270	1763
7M4052	220/380	3	60	1280/1600	2431	1280/1600	2431	1160/1450	2203	1160/1450	2203
	240/416	3	60	1280/1600	2221	1280/1600	2221	1160/1450	2012	1160/1450	2012
	277/480	3	60	1280/1600	1925	1280/1600	1925	1160/1450	1744	1160/1450	1744
	220/380	3	50	1120/1400	2127	1120/1400	2127	1016/1270	1930	1016/1270	1930
	230/400	3	50	1120/1400	2021	1120/1400	2021	1016/1270	1833	1016/1270	1833
	240/416	3	50	1120/1400	1943	1120/1400	1943	1016/1270	1763	1016/1270	1763
7M4172	220/380	3	60	1270/1588	2412	1260/1575	2393	1160/1450	2203	1160/1450	2203
7M4174	220/380	3	60	1280/1600	2431	1280/1600	2431	1160/1450	2203	1160/1450	2203
7M4288	347/600	3	60	1280/1600	1540	1280/1600	1540	1160/1450	1395	1160/1450	1395
7M4366	2400/4160	3	60	1280/1600	222	1280/1600	222	1160/1450	201	1160/1450	201
	1905/3300	3	50	1104/1380	241	1104/1380	241	1000/1250	219	1000/1250	219
7M4368	2400/4160	3	60	1280/1600	222	1280/1600	222	1160/1450	201	1160/1450	201
	1905/3300	3	50	1120/1400	245	1120/1400	245	1016/1270	222	1016/1270	222

RATINGS: All three-phase units are rated at 0.8 power factor. *Standby Ratings:* The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. *Prime Power Ratings:* At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory. Obtain technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

Alternator Specifications

Specifications	Alternator
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Permanent-Magnet Pilot Exciter
Voltage regulator	Solid State, Volts/Hz
Insulation:	NEMA MG1
Material	Class H, Synthetic, Nonhygroscopic
Temperature rise	130°C, 150°C Standby
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Amortisseur windings	Full
Rotor balancing	125% 60 Hz, 150% 50 Hz
Voltage regulation, no-load to full-load	Controller Dependent
One-step load acceptance at 60 Hz	100% of Rating
Unbalanced load capability	100% of Rated Standby Current
Peak motor starting kVA:	(35% dip for voltages below)
480 V, 416 V 7M4046 (4 bus bar)	3900 (60 Hz), 3000 (50 Hz)
480 V, 416 V 7M4048 (4 bus bar)	3700 (60 Hz), 2500 (50 Hz)
480 V, 416 V 7M4050 (4 bus bar)	4500 (60 Hz), 3600 (50 Hz)
480 V, 416 V 7M4052 (4 bus bar)	5500 (60 Hz), 4700 (50 Hz)
380 V 7M4172 (4 bus bar)	2600 (60 Hz)
380 V 7M4174 (4 bus bar)	4200 (60 Hz)
600 V 7M4288 (4 bus bar)	5400 (60 Hz)
4160 V, 3300 V 7M4366 (6 lead)	3900 (60 Hz), 2450 (50 Hz)
4160 V, 3300 V 7M4368 (6 lead)	4900 (60 Hz), 2900 (50 Hz)

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Superior voltage waveform from two-thirds pitch windings and skewed stator.
- Digital solid-state, volts-per-hertz voltage regulator with ±0.25% no-load to full-load regulation.
- Brushless alternator with brushless pilot exciter for excellent load response.

Application Data

Engine

Engine Specifications	60 Hz	50 Hz
Engine manufacturer, model	Mitsubishi S12R-Y1PTA-2	Mitsubishi S12R-PTA-3
Engine type	4-Cycle, Turbocharged	
Cylinder arrangement	12 V	
Displacement, L (cu. in.)	49.0 (2992)	
Bore and stroke, mm (in.)	170 x 180 (6.69 x 7.09)	
Compression ratio	15.0:1	
Piston speed, m/min. (ft./min.)	648 (2126)	540 (1772)
Main bearings: quantity, type	7, Precision Half-Shell	
Rated rpm	1800	1500
Max. power at rated rpm, kWm (BHP)	1403 (1881)	1220 (1635)
Cylinder head material	Cast Iron	
Crankshaft material	Forged Steel	
Governor type	Electronic	
Frequency regulation, no-load to full-load	Isochronous	
Frequency regulation, steady state	±0.25%	
Frequency	Fixed	
Air cleaner type, all models	Dry	

Exhaust

Exhaust System	60 Hz	50 Hz
Exhaust manifold type	Dry	
Exhaust flow at rated kW, m^3/min. (cfm)	334 (11794)	266 (9392)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	501 (934)	486 (907)
Maximum allowable back pressure, kPa (in. Hg)	5.9 (1.7)	
Exhaust outlet size at engine hookup, mm (in.)	See ADV drawing	

Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Battery charging alternator:		
Ground (negative/positive)	Negative	
Volts (DC)	24	
Ampere rating	30	
Starter motor rated voltage (DC)	Dual, 24	
Battery, recommended cold cranking amps (CCA):		
Quantity, CCA rating each	Four, 1150	
Battery voltage (DC)	12	

Fuel

Fuel System	60 Hz	50 Hz
Fuel supply line, min. ID, mm (in.)	25 (1.0)	
Fuel return line, min. ID, mm (in.)	19 (0.75)	
Max. fuel flow, Lph (gph)	480 (127)	430 (114)
Max. fuel pump restriction, kPa (in. Hg)	10 (3.0)	
Max. return line restriction, kPa (in. Hg)	20 (5.9)	
Fuel filter: quantity, type	4, Secondary	
Recommended fuel	#2 Diesel	

Lubrication

Lubricating System	60 Hz	50 Hz
Type	Full Pressure	
Oil pan capacity, L (qt.)	150 (159)	
Oil pan capacity with filter, L (qt.)	200 (211)	
Oil filter: quantity, type	4, Cartridge	
Oil cooler	Water-Cooled	

Application Data

Cooling

Radiator System	60 Hz	50 Hz
Ambient temperature, standby rating, °C (°F)*	45 (113)	50 (122)
Ambient temperature, prime rating, °C (°F)*	50 (122)	
Engine jacket water capacity, L (gal.)	125 (33)	
Radiator system capacity, including engine, L (gal.)	322 (85)	
Engine jacket water flow, Lpm (gpm)	1850 (489)	1650 (436)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	920 (52336)	735 (41786)
Water pump type	Centrifugal	
Fan diameter, including blades, mm (in.)	1829 (72)	
Fan kWm (HP)	51 (69)	44 (59)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)	

High Ambient Radiator System	60 Hz	50 Hz
Ambient temperature, °C (°F)*	50 (122)	—
Engine water capacity, L (gal.)	125 (33)	—
Radiator system capacity, including engine, L (gal.)	322 (85)	—
Engine jacket water flow, Lpm (gpm)	1850 (489)	—
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	1112 (63306)	—
Water pump type	Centrifugal	—
Fan diameter, including blades, mm (in.)	1829 (72)	—
Fan kWm (HP)	51 (69)	—
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)	—

* Enclosure with enclosed silencer reduces ambient temperature capability by 5°C (9°F).

Remote Radiator System†	60 Hz	50 Hz
Connection sizes:	Class 150 ANSI Flange	
Water inlet, mm (in.)	191 (7.5) Bolt Circle	
Water outlet, mm (in.)	191 (7.5) Bolt Circle	
Static head allowable above engine, kPa (ft. H_2O)	98 (32.8)	

† Contact your local distributor for cooling system options and specifications based on your specific requirements.

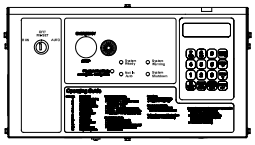
Operation Requirements

Air Requirements	60 Hz	50 Hz
Radiator-cooled cooling air, m^3/min. (scfm)‡	2095 (74000)	1982 (70000)
High ambient radiator-cooled cooling air, m^3/min. (scfm)‡	1727 (61000)	—
Cooling air required for generator set when equipped with city water cooling or remote radiator, based on 14°C (25°F) rise, m^3/min. (scfm)‡	651 (23000)	546 (19300)
Combustion air, m^3/min. (cfm)	126 (4449)	101 (3566)
Heat rejected to ambient air:		
Engine, kW (Btu/min.)	110 (6280)	88 (5014)
Alternator, kW (Btu/min.)	71 (4038)	64 (3640)

‡ Air density = 1.20 kg/m^3 (0.075 lbm/ft^3)

Fuel Consumption	60 Hz		50 Hz	
Diesel, Lph (gph) at % load	**Standby Rating**			
100%	354	(93.6)	282	(74.6)
75%	263	(69.4)	213	(56.4)
50%	184	(48.6)	148	(39.1)
25%	104	(27.6)	84	(22.1)
Diesel, Lph (gph) at % load	**Prime Rating**			
100%	319	(84.4)	257	(67.8)
75%	241	(63.7)	196	(51.7)
50%	172	(45.4)	138	(36.4)
25%	103	(27.1)	81	(21.3)

Controllers

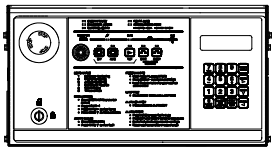


Decision-Maker® 550 Controller

Provides advanced control, system monitoring, and system diagnostics with remote monitoring capabilities.

- Digital display and keypad provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or modem configuration
- Controller supports Modbus® protocol
- Integrated voltage regulator with ±0.25% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-46 for additional controller features and accessories.



Decision-Maker® 6000 Paralleling Controller

Provides advanced control, system monitoring, and system diagnostics with remote monitoring capabilities for paralleling multiple generator sets.

- Paralleling capability with first-on logic, synchronizer, kW and kVAR load sharing, and protective relays
- Digital display and keypad provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or modem configuration
- Controller supports Modbus® protocol
- Integrated voltage regulator with ±0.25% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-107 for additional controller features and accessories.

KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the
US and Canada, phone 1-800-544-2444
KOHLERPower.com

Kohler Power Systems
Asia Pacific Headquarters
7 Jurong Pier Road
Singapore 619159
Phone (65) 6264-6422, Fax (65) 6264-6455

Standard Features

- Alternator Protection
- Alternator Strip Heater (standard on 3300 volt and above)
- Customer Connection (Decision-Maker® 6000 controller only)
- Local Emergency Stop Switch
- Oil Drain Extension
- Operation and Installation Literature
- Radiator Core Guard

Available Options

Approvals and Listings

- ❑ CSA Certified
- ❑ UL 2200 Listing

Open Unit

- ❑ Exhaust Silencer, Hospital (kit: PA-361626)
- ❑ Exhaust Silencer, Critical (kit: PA-361617)
- ❑ Flexible Exhaust Connector, Stainless Steel

Fuel System

- ❑ Flexible Fuel Lines
- ❑ Fuel Pressure Gauge
- ❑ Fuel/Water Separator

Controller

- ❑ Common Failure Relay
- ❑ Communication Products and PC Software
- ❑ Customer Connection (Decision-Maker® 550 controller only)
- ❑ Dry Contact Kit (isolated alarm)
- ❑ Prime Power Switch
- ❑ Remote Audiovisual Alarm Panel (Decision-Maker® 550 controller only)
- ❑ Remote Emergency Stop
- ❑ Remote Mounting Cable
- ❑ Remote Serial Annunciator Panel
- ❑ Run Relay

Cooling System

- ❑ Block Heater; 9000 W, 208 V, 1 Ph
- ❑ Block Heater; 9000 W, 240 V, (Select 1 Ph or 3 Ph)
- ❑ Block Heater; 9000 W, 380 V, 3 Ph
- ❑ Block Heater; 9000 W, 480 V, (Select 1 Ph or 3 Ph) Required for Ambient Temperatures Below 20°C (68°F)
- ❑ High Ambient Radiator
- ❑ Remote Radiator Cooling Setup

Electrical System

- ❑ Alternator Strip Heater (available up to 600 volt)
- ❑ Battery
- ❑ Battery Charger, Equalize/Float Type
- ❑ Battery Heater
- ❑ Battery Rack and Cables
- ❑ Line Circuit Breaker (NEMA type 1 enclosure)
- ❑ Line Circuit Breaker with Shunt Trip (NEMA type 1 enclosure)

Paralleling System

- ❑ Manual Speed Adjustment (Decision-Maker® 550 and 6000 controllers only)
- ❑ Remote Voltage Adjustment Control
- ❑ Voltage Sensing (Decision-Maker® 6000 controller only)

Miscellaneous

- ❑ Air Cleaner, Heavy Duty
- ❑ Air Cleaner Restriction Indicator
- ❑ Crankcase Emission Canister
- ❑ Engine Fluids (oil and coolant) Added
- ❑ Oil Temperature Gauge
- ❑ Rated Power Factor Testing
- ❑ Spring Isolators

Literature

- ❑ General Maintenance
- ❑ NFPA 110
- ❑ Overhaul
- ❑ Production

Warranty

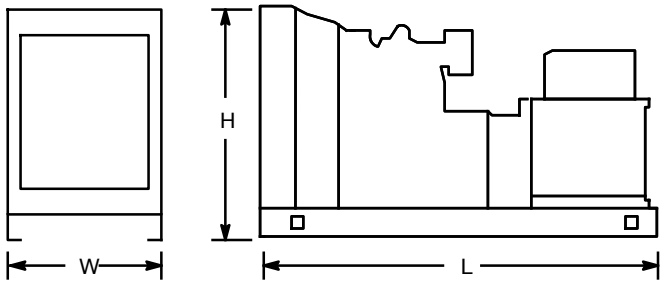
- ❑ 2-Year Basic Limited Warranty
- ❑ 2-Year Prime Limited Warranty
- ❑ 5-Year Basic Limited Warranty
- ❑ 5-Year Comprehensive Limited Warranty
- ❑ 10-Year Major Components Limited Warranty

Other Options

- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____

Dimensions and Weights

Overall Size, L x W x H, max., mm (in.):	6353 x 2232 x 2566 (250.1 x 87.9 x 101.0)
Weight (radiator model), wet, max., kg (lb.):	12020 (26500)



Note: This drawing is provided for reference only and should not be used for planning the installation. Contact your local distributor for more detailed information.

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