



# Perkins RENTAL SERIES

Power Range	kW	kVA
Standby	62.5 - 81	62.5 - 101.2
Prime	62.5 - 73	62.5 - 91.2

**MODEL: HPW - 80R**

### STANDARD EQUIPMENT

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| <ul style="list-style-type: none"> <li>■ Heavy duty steel, fully sound-attenuated enclosure</li> <li>■ Powder Painted with finish that exceeds 1000-hr salt test</li> <li>■ Fired-proof Rock wool insulation</li> <li>■ Key Lockable doors</li> <li>■ Fuel tank with full spill containment</li> <li>■ Single lifting point</li> <li>■ Stainless steel hardware</li> <li>■ Residential muffler built into enclosure</li> <li>■ Oil drain pump</li> </ul> | <ul style="list-style-type: none"> <li>■ Radiator pusher fan with full guarding</li> <li>■ Dry type air-cleaner, fuel filter, and lube oil filter</li> <li>■ 67 dBA at 23 feet @ full prime load</li> <li>■ 12 volt starter motor and charging alternator</li> <li>■ Battery, battery rack, and cables</li> <li>■ Digital auto start control panel (see page 4)</li> <li>■ 3 position voltage selector switch</li> <li>■ Adjustable Main line circuit breaker</li> <li>■ Class H, brushless Newage alternator</li> </ul> |
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### OPTIONAL EQUIPMENT

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| <ul style="list-style-type: none"> <li>■ Road towing trailers to DOT standards</li> <li>■ Double wall Sub-base fuel tanks in lieu of standard</li> <li>■ Oil Field Skid base for dragging</li> <li>■ Sensor for leakage inside containment base</li> <li>■ 2 way valve for quick connection to external fuel source</li> <li>■ Different colors for volume orders. (Standard color is Off-white paint)</li> <li>■ Extended warranty period</li> </ul> | <ul style="list-style-type: none"> <li>■ Automatic battery charger 5 amps</li> <li>■ Water Jacket heater</li> <li>■ Kw reading</li> <li>■ Twist lock and duplex receptacles with GFI</li> <li>■ GPS for mobile sets</li> <li>■ Anti-condensation heaters in generator</li> <li>■ PMG excitation system</li> </ul> |
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### GENERATOR RATING

Alternator	Voltage	Ph	Hz	Standby Rating		Prime Rating	
				kW/kVA	Amps	kW/kVA	Amps
UCI 224G	120 / 208	3	60	80 / 100	277	72 / 90	250
	277 / 480	3	60	81 / 101.2	122	73 / 91.2	110
	120 / 240	3	60	80 / 100	240	72 / 90	216
	120 / 240	1	60	62.5	260	62.5	260
		HP	KW	SKVA			
Maximum Motor Starting		61.9	46.2	390			

Motor starting is based on a 35% voltage dip at 480VAC 3Ph 60hz with a code G motor

## Application Data GEHPW-80R

Alternator Specifications		Engine Mechanical Specifications	
Manufacturer	Newage Stamford	Manufacturer	Perkins
Type	4-pole, rotating field	Engine model	1104D 44TAG1
Exciter type	Brushless, self excited.	Engine type	4-cycle, Turbocharged After-cooled
Leads: quantity, type	12, reconnectable	Cylinder arrangement	4 in line
Voltage regulator	Solid state, volts/Hz and excitation overload protection	EPA Certification :	TIER 3
Insulation:		Displacement, L (cu. in.)	4.4 (269)
Material.....	Class H	Bore and stroke, mm (in.)	105 x 127 (4.1 x 5.0)
Temperature rise.....	150° C , standby	Compression ratio	18.3 : 1
Bearing: quantity, type	Single bearing sealed	Piston speed, m/min. (ft./min.)	457 (1,500)
Coupling	Flexible disc	Main bearings: quantity, type	4, replaceable insert
Amortisseur Windings	Full	Rated rpm	1,800
Voltage regulation, no-load to full load	± 1.5%	Max. power at rated rpm, kWm (BHP)	94 (126)
Unbalanced load capability	100% of rated standby current	BMEP, gross, psi ( Bar )	206.5 (14.2)
Load acceptance	Per ISO - 8528	Overall thermal efficiency	38.7%
Peak motor starting kVA: 480 V	(30% dip) self-excited series - 270kVA PMG - 315kVA	Exhaust Gas Flow, m <sup>3</sup> /min (cfm)	16.5 (584)
		Exhaust gas temperature °C (°F)	476 (889)
Engine Electrical Specifications		Frequency regulation, no-load to full load	0.25%
Engine Electrical System (12 Volt) 60 Hz		Governor: Type:	Electronic Isochronous
Battery charging alternator:		Make:	Perkins
Ground (negative/positive).	Negative	Standard:	ISO 8528 Class G3
Volts (DC).....	12V	Frequency regulation, steady state	± 0.5%
Ampere rating.....	55A	Frequency	Fixed
Starter motor rated voltage (DC)	12V	Air cleaner type	Dry
Starter motor rated kW:	3.0Kw		
Battery CCA rating:	810A		
Battery & qty, AH rating:	1 x 90 AH		
Battery Voltage (DC)	12V		
Remote Radiator System		Fuel Consumption 60 Hz	
Exhaust manifold type		Diesel gal/hr (L/hr)      Prime Power Rating	
Connection sizes:		100%	5.8 (21.9)
Water inlet ID hose, mm (in)		75%	4.5 (17.0)
Water outlet ID hose, mm (in)		50%	3.1 (11.7)
Charge air cooling (CAC)	<b>Not Available</b>	25%	1.7 (6.4)
Water inlet ID hose, mm (in)		Unit autonomy (hours)	
Water outlet ID hose, mm (in)		100%	24
Static head allowable above engine, ft.H <sup>2</sup> O (kPa)		75%	31
Maximum CAC restriction H <sup>2</sup> O in.		50%	46
Contact the HIMOINSA distributor for special cooling options			

## Application Data GEHPW-80R

Cooling		Lubrication	
Radiator Systems	60 Hz	Lubricating System	60 Hz
Ambient temperature, °C (°F)	46 (115)	Type	Full pressure
Engine jacket water capacity L (gal)	7.0 (1.8)	Oil pan capacity, L, (qt.)	5.5 (5.8)
Radiator system capacity, including engine, L (gal.)	12.6 (3.3)	Recommended lube oil	API CH-4/CG-4
Engine jacket water flow, L/min (g/min)	170 (45)	Oil pan capacity with filter, L (qt.)	8.0 (8.5)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	51.0 (2,901)	Oil filter: quantity, type	1, cartridge
Heat rejected to charge cooler at rated kW, dry exhaust, kW (Btu/min.)	11.0 (626)	Oil cooler	Oil to water
Water pump type	Centrifugal	Normal oil temperature, °C (°F)	110 (230)
Fan, kWm (HP)	4.7 (6.3)	<b>Ventilation and Air-Flow Requirements</b>	
Max. restriction of cooling air, intake and discharge side of radiator, Pa (in. H <sup>2</sup> O)	62.2 (0.25)	Air Requirements	60 Hz
dBA LEVELS SOUND ATTENUATED ENCLOSED	Within (under) 70dBA @ 21 feet	Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm)	225.6 (7,966)
		Air density kg/m <sup>3</sup> (ibm/ft <sup>3</sup> )	1.20 (0.075)
		Heat rejected to exhaust, kW (btu/min)	79.4 (4,516)
		Heat radiated to surrounding air Engine: kW (Btu)	7.5 (427)
		Combustion air, m <sup>3</sup> /min. (cfm)	7.5 (263)

## Dimensions and Weights

Sound Attenuated Set Model: GEHPW-80R	
Skid mounted unit. L x W x H, mm (in)	2,750 x 1,100 x 1,850
	(108.2 x 43.3 x 72.8)
Skid mounted dry Weight, kg (lb.):	1,969 (4,333)
Skid mounted operating Weight, kg (lb.):	2,434 (5,355)
Trailer mounted unit. L x W x H, mm (in)	4,242 x 1,676 x 2,175
	(167 x 66 x 85.6)
Trailer mounted dry Weight, Kg (lb.)	2,500 (5,500)
Trailer mounted operating Weight, Kg (lb.)	2,964 (6,521)
20 hour Fuel Tank Capacity, L (US gal) :	540 (142)

RATINGS: Power factor three-phase is 0.8 and single-phase unity. Standby Ratings: Standby ratings assume installation normally served by reliable utility power. The standby rating is available for varying loads for the length of the power outage. No overload is available with the standby rating. Ratings are in accordance with ISO-3046/1 and DIN 6271. Prime Power Ratings: Prime power ratings assume no or unreliable utility power. For varying loads the generator set has unlimited operating hours. A 10% overload capacity is available for any 1 hour in a 12 hour continuous running period. Ratings are in accordance with ISO-3046/1 and DIN 6271. Consult Himoinsa for limited running time and base load ratings. Himoinsa reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. DERATION GUIDELINES: Altitude: Derate 1.3% per 100 m (328 ft) elevation above 1000 m (3280 ft). Temperature: Derate 1.0% per 10°C (18°F) temperature above 40°C (104°F).



**CONTROLLER DISPLAY :**

1. Voltage between each Phase & Neutral
2. Voltage between Phases
3. Current (amps) on each Phase
4. Frequency
5. Active, Aparent & Reactive Power
6. Power Factor
7. Instant Power (KwH) and Accumulative power (day, month & year)
8. Fuel reserve
9. Oil pressure, coolant temperature
10. Battery voltage, battery charging alternator voltage
11. Engine Speed
12. Hours running

**ENGINE ALARMS :**

1. High coolant temperature
2. Low oil pressure
3. Emergency stop

4. Battery charging alternator failure
5. Low coolant level
6. Low fuel level
7. Over speed
8. Under speed
9. Battery low voltage

**GENERATOR ALARMS :**

1. Over-load
2. Unbalanced voltage
3. Over-voltage
4. Under-voltage
5. Over-frequency
6. Under-frequency
7. Short-circuit
8. Inverse Power
9. Incorrect phase sequence



**Distributor:**

