



# HIPOWER

# HFW SERIES

**Power Range**

**kW**

**kVA**

Standby

67.5 - 97.5

67.5 - 122

**MODEL:**

**HFW - 90 T6**

Prime

67.5 - 88.5

67.5 - 111

**STANDARD EQUIPMENT**

Open Type Set	Accessories Available for HFW-90 T6
<ul style="list-style-type: none"> <li>■ Skid with integral day fuel tank (non-UL)</li> <li>■ HIPOWER digital auto-start control panel (Page 4)</li> <li>■ Dry-type replaceable element air-cleaner</li> <li>■ Industrial muffler</li> <li>■ Battery, battery rack, and cables</li> <li>■ Fuel and lubrication oil replaceable element filters</li> <li>■ Stamford AVR brushless 12-wire reconnectable alternator</li> <li>■ Oil drain hand pump</li> <li>■ Vibration Isolators between base and set assembly</li> <li>■ Main Line Circuit Breaker for overload protection</li> <li>■ Belt driven charging alternator</li> <li>■ Guards for shielding all rotating parts</li> <li>■ Fuel cut-off solenoid and protection switches</li> <li>■ Radiator with pusher fan</li> <li>■ Operation and installation manuals</li> </ul>	<p style="text-align: center;"><u>Mechanical Accessories Offered</u></p> <ul style="list-style-type: none"> <li>■ Road towing trailers to DOT standards</li> <li>■ Critical grade exhaust mufflers</li> <li>■ UL double wall fuel tanks to customer specification</li> <li>■ Oil field type skid</li> <li>■ Flexible exhaust connection for open sets</li> <li>■ Oil pressure and engine temperature gauges</li> <li>■ Extended warranty coverage above the standard one year</li> </ul> <p style="text-align: center;"><u>Generator End Accessories Offered</u></p> <ul style="list-style-type: none"> <li>■ PMG excitation for enhanced motor-starting</li> <li>■ Anti-condensation heaters in alternator</li> </ul> <p style="text-align: center;"><u>Electrical and Control Accessories Offered</u></p> <ul style="list-style-type: none"> <li>■ Automatic battery chargers 5 and 10 amp</li> <li>■ NFPA 110 controls and remote annunciator</li> <li>■ Analog instrumentation in lieu of digital</li> <li>■ Transfer switch and paralleling control panels</li> <li>■ Water Jacket Heater</li> <li>■ Remote control from PC via hard and/or wireless link</li> <li>■ GPS for mobile sets</li> <li>■ Digital Timer</li> </ul>
<p style="text-align: center;"><b>Sound Attenuated Enclosure</b></p> <ul style="list-style-type: none"> <li>■ Fully sound attenuated enclosure (equipped as open set)</li> <li>■ Powder Painted with finish that exceeds 1000-hr salt test</li> <li>■ Rock wool insulation behind protective barrier</li> <li>■ Curved edges and minimum outside fasteners</li> <li>■ Single lifting point</li> </ul>	

**GENERATOR RATINGS**

**Standby Rating**

**Prime Rating**

Alternator	Voltage	Ph	Hz	kW/kVA	Amps	kW/kVA	Amps
	120 / 208	3	60	93 / 116	323	87.5 / 109	304
	127 / 220	3	60	97 / 121	318	88 / 110	289
	120 / 240	3	60	93 / 116	280	87.5 / 109	263
UCI 274C	139 / 240	3	60	97.5 / 122	293	88.5 / 111	266
	277 / 480	3	60	97.5 / 122	147	88.5 / 111	133
	347 / 600	3	60	97.5 / 122	117	88.5 / 111	106
	120 / 240	1	60	67.5 / 67.5	281	67.5 / 67.5	281
UCI 274F	120 / 240	1	60	95.8 / 95.8	399	86.2 / 86.2	359

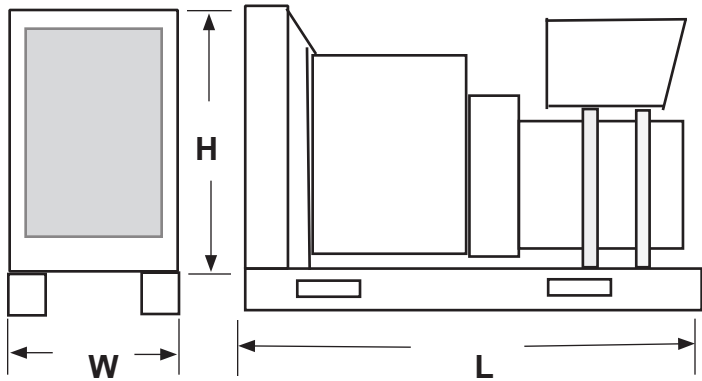
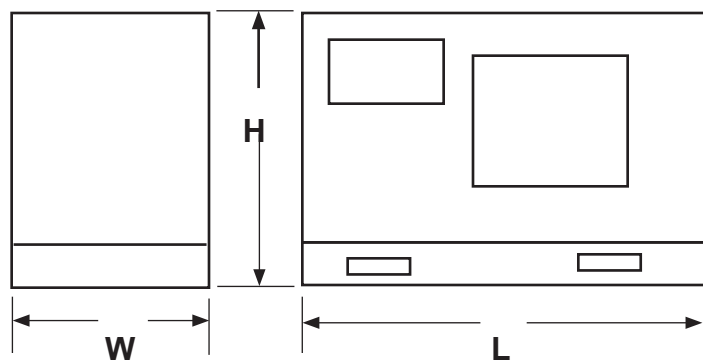
## Application Data

Alternator Specifications		Engine Mechanical Specifications	
Manufacturer	Newage Stamford	Manufacturer	Iveco Aifo
Type	4-pole, rotating field	Engine model	NEF45 TM2
Exciter type	Brushless, self excited. (PMG option)	Engine type	4 cycle, turbocharged aftercooled
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.)	4.5 (275)
Material.....	Class H	Bore and stroke, mm (in.)	104 x 132 (4.09 x 5.20)
Temperature rise.....	150° C , standby	Compression ratio	17.5 : 1
Bearing: quantity, type	Single bearing sealed	Piston speed, m/min. (ft./min.)	475.2 (1,559)
Coupling	Flexible disc	Main bearings: quantity, type	5, replaceable insert
Amortisseur Windings	Full	Rated rpm	1,800
Voltage regulation, no-load to full load	± 1.0% (with PMG) ± 1.5% (with Self Excited)	Max. power at rated rpm, kWm (BHP)	110 (147.5)
Unbalanced load capability	100% of rated standby current	BMEP, gross, psi ( Bar )	230.6 (15.9)
Load acceptance	Per ISO - 8528	Overall thermal efficiency	36.9%
Peak motor starting kVA:	(30% dip)	Exhaust Gas Flow, m <sup>3</sup> /min (cfm)	21.7 (767)
480 V	self-excited series 4 - 295 kVA	Exhaust gas temperature °C (°F)	540 (1,004)
480 V	PMG series. 3 - 430 kVA		
Engine Electrical Specifications		Frequency regulation, no-load to full load	4.5%
Engine Electrical System (12 Volt) 60 Hz		Governor: Type:	Mechanical
Battery charging alternator:		Make:	Stanadyne
Ground (negative/positive).	Negative	Standard:	ISO 3046-4 Class A1
Volts (DC).....	12V	Frequency regulation, steady state	±0.5 %
Ampere rating.....	90A	Frequency	Fixed
Starter motor rated voltage (DC)	12V	Air cleaner type	Dry
Starter motor rated kW:	3 Kw		
Battery CCA rating:	650A		
Battery & qty, AH rating:	1 x 100AH		
Battery Voltage (DC)	12V		
Remote Radiator System		Fuel Consumption 60 Hz	
Exhaust manifold type		Diesel gal/hr (L/hr)	Standby Rating
Connection sizes:		100%	7.63 (28.9)
Water inlet ID hose, mm (in)		75%	5.71 (21.6)
Water outlet ID hose, mm (in)		50%	3.94 (14.9)
Charge air cooling (CAC)	Not Available	25%	2.30 (8.7)
Water inlet ID hose, mm (in)		Diesel gal/hr (L/hr)	Prime Power Rating
Water outlet ID hose, mm (in)		100%	6.95 (26.3)
Static head allowable above engine, ft.H <sup>2</sup> O (kPa)		75%	5.18 (19.6)
Maximum CAC restriction H <sup>2</sup> O in.		50%	3.57 (13.5)
Contact the HIPOWER distributor for special cooling options		25%	2.09 (7.9)

## Application Data

Cooling		Lubrication	
<b>Radiator Systems</b>	<b>60 Hz</b>	<b>Lubricating System</b>	<b>60 Hz</b>
Ambient temperature, °C (°F)	50 (122)	Type	Full Pressure
Engine jacket water capacity L (gal)	8.5 (2.25)	Oil pan capacity, L, (qt.)	11.4 (12)
Radiator system capacity, including engine, L (gal.)	18.5 (4.89)	Recommended lube oil	ACEA E3-E5
Engine jacket water flow, L/min (g/min)	123.9 (32.7)	Oil pan capacity with filter, L (qt.)	12.8 (13.5)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	46.2 (2,626)	Oil filter: quantity, type	1, cartridge
Water pump type	Centrifugal	Oil cooler	Oil to water
Fan, kWm (HP)	3.1 (4.2)	Maximum oil temperature, °C (°F)	
Max. restriction of cooling air, intake and discharge side of radiator, Pa (in. H <sup>2</sup> O)	61.25 (0.25)	<b>Ventilation and Air-Flow Requirements</b>	
dB(A) LEVEL SOUND ATTENUATED ENCLOSED	67 dB(A) @ 23 feet	<b>Air Requirements</b>	<b>60 Hz</b>
		Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm)	206.4 (7,289)
		Air density kg/m <sup>3</sup> (lbm/ft <sup>3</sup> )	1.20 (0.075)
		Heat rejected to exhaust, kW (btu/min)	88.6 (5,038)
		Heat radiated to surrounding air Engine: kW (Btu)	5.9 (334)
		Combustion air, m <sup>3</sup> /min. (cfm)	12.2 (432)

## Dimensions and Weights

Open Skid Model		Sound Attenuated Enclosure	
Overall size, L x W x H, mm (ins.)	2,050 x 750 x 1,477 (80.7 x 29.5 x 58.2)	Overall size, L x W x H, mm (ins.)	2,750 x 1,100 x 1,500 (108.3 x 43.3 x 59.1)
Weight, radiator-mounted model, wet, kg (lb.):	1,125 (2,480)	Weight, radiator-mounted model, wet, kg (lb.):	1,670 (3,682)
Fuel Tank Capacity, L (US gal)	205 (54.2)	Fuel Tank Capacity, L (US gal)	175 (46.2)
			

NOTE: The drawings above are only representative of the overall dimensions. For full detailed installation drawings please consult your local distributor or contact Himoina Power Systems @ [www.hipowersystems.com](http://www.hipowersystems.com)

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 Himoina for limited running time and base load ratings. Himoina 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 :**

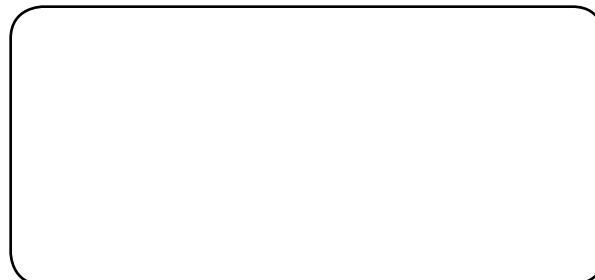
1. High coolant temperature
2. Low oil pressure
3. Emergency stop

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:**



MEMBER

