



HYW SERIES

Power Range	kW	kVA
Standby	31 - 42.4	31 - 53
Prime	31 - 38.8	31 - 48.5

MODEL: HYW - 45

STANDARD EQUIPMENT

Open Type Set	Accessories Available for HYW-45
<ul style="list-style-type: none"> ■ Skid with integral day fuel tank (non-UL) ■ DEESEA 5310 digital auto-start control panel ■ Dry-type replaceable element air-cleaner ■ Industrial muffler ■ Battery, battery rack, and cables ■ Fuel and lubrication oil replaceable element filters ■ Stamford AVR brushless 12-wire reconnectable alternator ■ Oil drain hand pump ■ Vibration Isolators between base and set assembly ■ Main Line Circuit Breaker for overload protection ■ Belt driven charging alternator ■ Guards for shielding all rotating parts ■ Fuel cut-off solenoid and protection switches ■ Radiator with pusher fan ■ Operation and installation manuals 	<p style="text-align: center;"><u>Mechanical Accessories Offered</u></p> <ul style="list-style-type: none"> ■ Road towing trailers to DOT standards ■ Critical grade exhaust mufflers ■ UL double wall fuel tanks to customer specification ■ Oil field type skid ■ Flexible exhaust connection for open sets ■ Oil pressure and engine temperature gauges ■ Water Jacket heater ■ Extended warranty coverage period <p style="text-align: center;"><u>Generator End Accessories Offered</u></p> <ul style="list-style-type: none"> ■ Anti-condensation heaters in alternator <p style="text-align: center;"><u>Electrical and Control Accessories Offered</u></p> <ul style="list-style-type: none"> ■ Automatic battery chargers 1.5 and 6 amp ■ NFPA 110 controls and remote annunciator ■ Transfer switch and paralleling control panels ■ Remote control from PC via hard and/or wireless link ■ Digital Timer
<p style="text-align: center;">Sound Attenuated Enclosure</p> <ul style="list-style-type: none"> ■ Fully sound attenuated enclosure (equipped as open set) ■ Powder Painted with finish that exceeds 1000-hr salt test ■ Rock wool insulation behind protective barrier ■ Curved edges and minimum outside fasteners ■ Single lifting point 	

GENERATOR RATINGS

Alternator	Voltage	Ph	Hz	Standby Rating		Prime Rating	
				kW/kVA	Amps	kW/kVA	Amps
	120 / 208	3	60	41.6 / 52.0	145	38.0 / 47.5	132
	127 / 220	3	60	41.6 / 52.0	137	38.0 / 47.5	125
	120 / 240	3	60	41.6 / 52.0	125	38.0 / 47.5	114
BCI 184J	139 / 240	3	60	42.4 / 53.0	128	38.8 / 48.5	117
	277 / 480	3	60	42.4 / 53.0	64	38.8 / 48.5	58
	347 / 600	3	60	42.4 / 53.0	51	38.8 / 48.5	47
	120 / 240	1	60	31 / 31	129	31 / 31	129

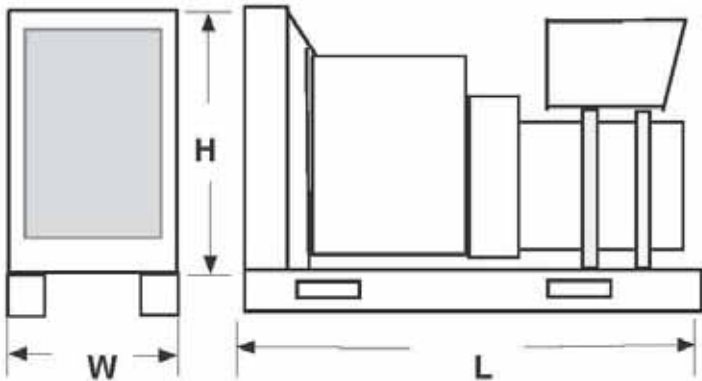
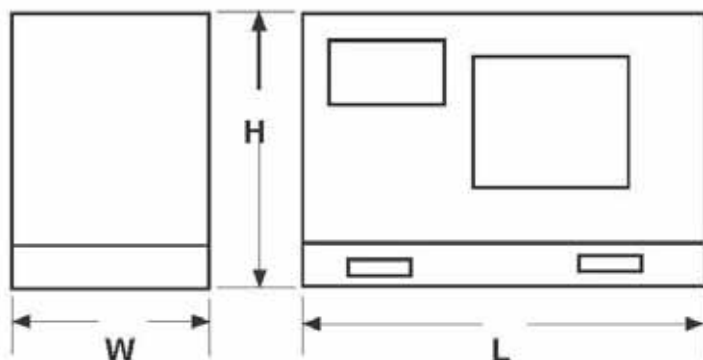
Application Data

Alternator Specifications		Engine Mechanical Specifications	
Manufacturer	Newage Stamford	Engine model	4TNV98T
Type	4-pole, rotating field	Engine type	4-cycle, Turbocharged
Exciter type	Brushless, self excited.	Cylinder arrangement	4 in line
Leads: quantity, type	12, reconnectable	EPA Certification :	TIER 3
Voltage regulator	Solid state, volts/Hz and excitation overload protection	Displacement, L (cu. in.)	3.32 (203)
Insulation:		Bore and stroke, mm (in.)	98 x 110 (3.86 x 4.33)
Material.....	Class H	Compression ratio	18.1 : 1
Temperature rise.....	150° C , standby	Piston speed, m/min. (ft./min.)	395.9 (1299)
Bearing: quantity, type	Single bearing sealed	Main bearings: quantity, type	5, replaceable insert
Coupling	Flexible disc	Rated rpm	1,800
Amortisseur Windings	Full	Max. power at rated rpm, kWm (BHP)	51.0 (68.4)
Voltage regulation, no-load to full load	± 1.5%	BMEP, gross, psi (Bar)	148.5 (10.24)
Unbalanced load capability	100% of rated standby current	Overall thermal efficiency	35.4%
Load acceptance	Per ISO - 8528	Exhaust Gas Flow, m ³ /min (cfm)	15.0 (530.3)
Peak motor starting kVA:	(30% dip)	Exhaust gas temperature °C (°F)	580 (1076)
480 V	self-excited series - 100 kVA		
480 V			
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:	Yanmar
Ground (negative/positive).	Negative	Standard:	
Volts (DC).....	12V	Frequency regulation, steady state	±4.5%
Ampere rating.....	40A	Frequency	Fixed
Starter motor rated voltage (DC)	12V	Air cleaner type	Dry
Starter motor rated kW:	2.3Kw		
Battery CCA rating:	770A		
Battery & qty, AH rating:	1 x 70 AH		
Battery Voltage (DC)	12V		
Remote Radiator System		Fuel Consumption 60 Hz	
Exhaust manifold type		Diesel gal/hr (L/hr)	Standby Rating
Connection sizes:		100%	3.79 (14.3)
Water inlet ID hose, mm (in)		75%	3.03 (11.5)
Water outlet ID hose, mm (in)		50%	2.27 (8.6)
Charge air cooling (CAC)	Not Available	25%	1.33 (5.0)
Water inlet ID hose, mm (in)		Diesel gal/hr (L/hr)	Prime Power Rating
Water outlet ID hose, mm (in)		100%	3.43 (13.0)
Static head allowable above engine, ft.H ₂ O (kPa)		75%	2.74 (10.4)
Maximum CAC restriction H ₂ O in.		50%	2.06 (7.8)
		25%	1.20 (4.5)

Application Data

Cooling		Lubrication	
Radiator Systems	60 Hz	Lubricating System	60 Hz
Ambient temperature, °C (°F)	NA	Type	Full pressure
Engine jacket water capacity L (gal)	4.2 (1.1)	Oil pan capacity, L, (qt.)	10.5 (11.1)
Radiator system capacity, including engine, L (gal.)	NA	Recommended lube oil	SAE15W40 ; API CF-4
Engine jacket water flow, L/min (g/min)	50 (13.2)	Oil pan capacity with filter, L (qt.)	NA
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	35.0 (1991)	Oil filter: quantity, type	1, cartridge
Water pump type	Centrifugal	Oil cooler	Oil to water
Fan, kWm (HP)	0.6 (0.8)	Maximum oil temperature, °C(°F)	120 (248)
Max. restriction of cooling air, intake and discharge side of radiator, Pa (in. H ² O)	62.2 (0.25)	Ventilation and Air-Flow Requirements	
dB(A) LEVEL SOUND ATTENUATED ENCLOSED	63 dB(A) @ 23 feet	Air Requirements	60 Hz
		Radiator-cooled cooling air, m ³ /min. (scfm)	NA
		Air density kg/m ³ (lbm/ft ³)	1.20 (0.075)
		Heat rejected to exhaust, kW (btu/min)	47.4 (2696)
		Heat radiated to surrounding air Engine: kW (Btu)	9.5 (540)
		Combustion air, m ³ /min. (cfm)	3.88 (137.4)

Dimensions and Weights

Open Skid Model		Sound Attenuated Enclosure	
Overall size, L x W x H, mm (ins.)	1,950 x 780 x 1,280 (76.8 x 30.7 x 50.4)	Overall size, L x W x H, mm (ins.)	2,250 x 1,100 x 1,340 (88.6 x 43.3 x 52.8)
Weight, radiator-mounted model, wet, kg (lb.):	702 (1,548)	Weight, radiator-mounted model, kg (lb.):	1,140 (2,513)
Fuel Tank Capacity, L (US gal)	91 (24.8)	Fuel Tank Capacity, L (US gal)	100 (26.4)
			

NOTE: The drawings above are only representative of the overall dimensions. For full detailed installation drawings please consult your local distributor

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 distributor for limited running time and base load ratings. Triton Power 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).



FEATURES

- **Can connect to 'Eco friendly' engine management systems of electronic engines providing engine protection and instrumentation without requiring additional senders.**
- **Comprehensive remote communication via optional RS232 port. Provides RS232 Modem link to PC via either PSTN line or GSM network (using a suitable modem). The module can also signal engineers via their cell phones using the GSM SMS messaging system to advise of system alarms.**
- **Optional RS485 'Modbus' output. Using industry standard communication protocol allows full system integration into new and existing building management and control schemes.**
- **Engine diagnostic information removes the need for both service equipment and cryptic diagnostic lamp (when used in conjunction with electronic engines)**
- **LCD 4-line text based display to provide 'at-a-glance' diagnosis of fault conditions, instrumentation and operating state.**
- **Comprehensive PC configuration and status monitoring using 5xxx PC software.**
- **PIN number protected front panel programming of selected trip points and timers, allows field changes to be made to the module settings.**
- **Built in exercise timer.**
- **'Sleep mode' to ensure very low battery power usage when in "Off" mode.**
- **Multiple LCD languages (English, French, Spanish, German etc) possible.**
- **Automatic and Manual operation modes.**
- **Six configurable auxiliary inputs for connection to external fault detection equipment.**
- **Three configurable outputs to meet demanding industry specifications**
- **Integral load switch control capability.**

DESCRIPTION

The Model 5310 is an *Autostart Control Module*. The module is used to automatically start a generator set upon application of a remote signal or by manual control. The module also provides indication of operational status and fault conditions automatically shutting down the genset and indicating failures by means of an LCD display.

Alterations to the system are made using the 5xxx PC configuration software in conjunction with the 810 interface. This interface also provides real time diagnostic facilities.

Selected timers and alarms can be altered by the customer or site engineer via the front panel. This can be PIN code protected to prevent unauthorised access.

Easy push button control

Operation of the module is via pushbutton controls (with security locking facility) mounted on the front panel with STOP/RESET, AUTO, MANUAL and START pushbuttons. The first three pushbuttons feature LED 'selected' indications. Further pushbuttons provide LCD DISPLAY SCROLL, LAMP TEST and MUTE functions.

Microprocessor control

The module features 16-Bit microprocessor control and a comprehensive list of timers and pre-configured sequences. This allows demanding industry specifications to be achieved.

Accessed via the LCD DISPLAY SCROLL push-buttons, the 5310 module provides the following instrumentation displays:

Generator Instruments:

Volts, Hz, Amps, kW, kVA, cos θ

Engine Instruments:

RPM, Oil Pressure, Coolant Temperature, Hours Run, Charging voltage, Battery Volts.

Electronic Engines:

Enhanced instrumentation and Engine ECU diagnostics via electronic engine interface.

C US **5310**

ELECTRONIC ENGINE
COMPATIBLE
AUTO-START
MODULE



Issue 3
20/01/06 AH
055-019



SPECIFICATION

DC Supply:

8V to 35V Continuous.

Cranking Dropouts:

Able to survive 0V for 50mS, providing supply was at least 10V before dropout and supply recovers to 5V. *This is achieved without the need for internal batteries.*

Max. Operating Current:

12V – 400mA

24V – 200mA

Sleep Mode Current:

12V – 70mA

24V – 45mA

Standby Current (when in auto):

12V – 230mA

24V – 120mA

Auxiliary Outputs 1-3:

Relay outputs 5A DC at supply voltage. Switches to battery negative when active.

Dimensions:

240mm x 172mm x 57mm

(9½" x 6¾" x 2¼")

Panel cutout:

220mm x 160mm

(8.7" x 6.3") Deep Sea Electronics plc. reserve the right to change specification without notice.

Operating Temperature Range:

-30°C to +70°C

Enclosure protection:

IP55 with optional gasket

Engine ECU interface:

CAN and RS485

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