

(Stamford : ژنراتور)

(Cummins : موتور دیزل)

Standby		Prime		دیزل ژنراتور
KVA	KW	KVA	KW	
2063	1650	1875	1500	



موتور دیزل		
Manufacturer	Cummins	تولید کننده
Type	QSK60-G3	تیپ
Speed rpm	1500	سرعت
Number of cylinders	16	تعداد سیلندر ها
Compression ratio	14.5:1	ضریب تراکم
Displacement , Liters	60.2 liters	جا به جایی
Bore × Stroke , mm	159mm×190mm	قطر سیلندر × کورس پیستون
Fuel System	Direct injection Cummins MCRS	سیستم سوخت
Aspiration	Turbocharged and Low Temperature Aftercooled (2 Pump / 2 Loop)	سیستم تنفس
Starting Voltage	24 ولت	استارت شروع
Battery Charging System	40 آمپر	جریان شارژ باتری

Newage/Stamford PI734E Alternator

Standard Features

Winding&Electrical Performance

All generator stators are wound to 2/3 pitch. This eliminates triplen (3rd, 9th, 15th...) harmonics on the voltage waveform and is found to be the optimum design for trouble-free supply of non-linear loads. The 2/3 pitch design avoids excessive neutral currents sometimes seen with higher winding pitches, when in parallel with the mains. A fully connected damper winding reduces oscillations during paralleling. This winding, with the 2/3 pitch and carefully selected pole and tooth designs, ensures very low waveform distortion.

MX341 AVR

The PI range generators, complete with a PMG, are available with one of two AVRs. Each AVR has soft start voltage build up and built in protection against sustained over-excitation, which will de-excite the generator after a minimum of 8 seconds.

Underspeed protection (UFRO) is also provided on both AVRs. The UFRO will reduce the generator output voltage proportional to the speed of the generator below a pre-settable level.

The MX341 AVR is two phase sensed with a voltage regulation of $\pm 1\%$. Both the MX341 and MX321 need a generator mounted current transformer transformer to provide quadrature droop characteristics for load sharing during parallel operation.

Terminals&Terminal Box

Standard generators feature a main stator with 6 ends brought out to the terminals, which are mounted on the frame at the non-drive end of the generator. A sheet steel terminal box contains the AVR and provides ample space for the customers' wiring and gland arrangements. It has removable panels for easy access.

Shaft&Keys

All generator rotors are dynamically balanced to better than BS6861:Part 1 Grade 2.5 for minimum vibration in operation. Two bearing generators are balanced with a half key.

Insulation / Impregnation

The insulation system is class 'H' and meets the requirements of UL1446. All wound components are impregnated with materials and processes designed specifically to provide the high build required for static windings and the high mechanical strength required for rotating components.

Standards

Newage Stamford industrial generators meet the requirements of **BS EN 60034** and the relevant section of other international standards such as **BS5000, VDE0530, NEMA MG1-32, IEC34, CSA C22.2-100, AS1359**. Other standards and certifications can be considered on request.

Quality Assurance

Generators are manufactured using production procedures having a quality assurance level to BS EN ISO 9001.

Model	Standby		Prime	
	kVA	kW	kVA	kW
PI734E	2035	1628	1900	1520

Technical Specifications

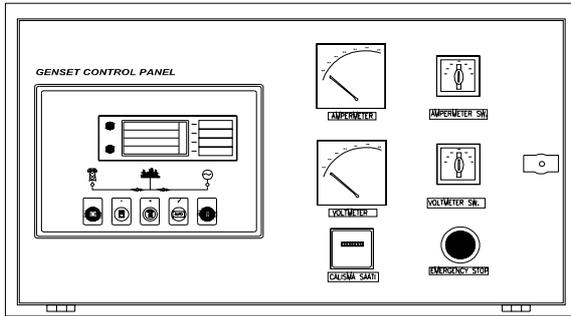
Manufacturer	NEWAGE / STAMFORD	تولید کننده
Model	PI734E	مدل
Type	4-Poles, Rotating Field, Brushless	تیپ
Standby power at rated voltage, kVA	2035	توان standby در ولتاژ نامی
Efficiency, %	95.6%	راندمان
Power factor	0.8	ضریب قدرت
Phase	3	فاز
Frequency, Hz	50	فرکانس
Speed, Rpm	1500	سرعت
Voltage, V	380/415	ولتاژ
Excitation	Self excited	سیستم تحریک
Stator windings	2/3 Pitch factor	
Regulation	AVR, Automatic Voltage Regulator	تنظیم ولتاژ
Voltage Regulator	MX341	رگولاتور ولتاژ
Voltage Regulation, %	± 1	درصد تنظیم ولتاژ
R.F.I Suppression	BS EN 61000-6-2 & BS EN 61000-6-4 VDE0875G, VDE 0875N	
Waveform distortion	No Load <1.5% Non distorting balanced linear load <5.0%	
Rotor	Dynamic balanced	روتور
Overspeed, Rpm	2250	حداکثر سرعت مجاز
Short circuit current	< 300%	جریان اتصال کوتاه
TIF	Less than 50	
Insulation class	H	کلاس عایق
Construction	Single bearing, direct coupled	نحوه کوپلینگ
Coupling	Flexible	کوپلینگ
Stator winding	Double layer concentric	
Connection	WYE	اتصال
Protection class	IP23	کلاس حفاظت
Cooling air volume, m ³ / sec	2.69m ³ /sec	دبی هوای خنک کننده

Optional Equipment

- ◊Optional Permanent Magnet Generator (PMG) provides an isolated power
- ◊supply to the excitation control system
- ◊Anti Condensation Heaters
- ◊Air Filters
- ◊Temperature Indication RTD's
- ◊Winding Protection Thermistors
- ◊Quadrature Droop kit for Parallel Operation
- ◊MX321 (PMG) with 3 Phase Sensing and improved Regulation 0.5%

Control Panel

Standard Equipments



- ◊Deeapse 5220 digital automatic control module
- ◊Hourmeter
- ◊Voltmeter
- ◊Voltmeter commutator
- ◊Ammeter
- ◊Ammeter commutator
- ◊Emergency stop button

Deepsea 5220 Control Module

Description

- ◊The model 5220 is an Automatic Mains Failure Control module.
- ◊The modul is used to monitor a mains supply and automatically start a standby generator set.
- ◊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, and appropriate flashing LED on the front panel.
- ◊Selected timers and alarms can be altered by the user from the front panel.
- ◊Alterations to the system are made using the 810 interface and a PC. This interface also provides real time diagnostic facilities

Specifications

- ◊240mm x 172mm dimensions
- ◊70mm x 40mm dimensions, 4 segment grafical LCD monitor
- ◊Developed 16-bit Microprocessor design
- ◊Easy comprehended display (Hid-Til-Lit SMD LED technology)
- ◊LED mimic diagram
- ◊SMS messaging capability with suitable GSM Modem
- ◊PC software is MS Windows based and allows the operator to control the module from a remote location (P810 Software Kit necessary)
- ◊Easy pushbutton controls
- ◊System parameters can be adjusted manually from the front panel
- ◊kVA,kW ve Cosφ measurements
- ◊Communication with MODEM

Pushbutton Controls

STOP / START
 AUTO, TEST, MANUAL
 LCD PAGE

Input Functions display on LCD

Generator Volts	Volts L1-N, L2-N, L3-N
Generator Volts	Volts L1-L2, L2-L3, L3-L1
Generator Amps	Amps L1, L2, L3
Generator Frequency	Hz
Mains Volts	Volts L1-N, L2-N, L3-N
Mains Volts	Volts L1-L2, L2-L3, L3-L1
Mains Frequency	Hz
Engine Speed	RPM
Plant Battery Volts	Volts
Engine Hours Run	Hour
Generator total power	kVA L1, L2, L3,total
Generator total power	kW L1, L2, L3,total
Generator power factor	Cosφ L1, L2, L3,total

Optional Input Functions

Engine Oil pressure	kPa
Fuel level	%
Engine Temperature	°C

Alarm Channels

Under/over generator voltage
 Over-current
 Under/over generator frequency
 Under/over speed
 Charge fail
 Emergency stop
 Low oil pressure
 High engine temperature
 Fail to start
 Low/high DC battery voltage
 Reverse power
 Generator phase rotation error
 Generator short-circuit protection
 Loss of speed sensing signal
 Mains out of limits

Environmental Testing Standards

Electromagnetic Compatibility

BS EN 50081-2:1992 and EN 61000-6-4:2000 EMC, Emission Standards for the Industrial Environment

EN 61000-6-2:1999 EMC, Immunity Standards for the Industrial Environment

Vibration

BS EN 60068-2-6 Ten sweeps (up and back down) at 1 octave/minute in each of the three major axes.

5Hz to @ +/-7.5mm constant displacement.

8Hz to 500Hz 2gn constant acceleration.

Temperature

Cold : BS EN 60068-2-1 to -30°C

Hot : BS EN 60068-2-2 to 70°C

Humidity

BS EN 2011 part 2.1 93% RH @ 40° for 48 hours

Shock

BS EN 6068-2-27 Three half sine shocks in each of the three major axes 15gn amplitude.11mS duration.

Electrical Safety

BS EN 60950 Low Voltage Dirctive/Safety of information technology equipments, including electrical business equipment