**NITIN CORPORATION**
402, 4th Floor,
BezzolaCommercial Complex,
Sion – Trombay Road,
Chembur,
Mumbai – 400071,
India.

WEB : www.corponit.com

E – MAIL : enquiry@corponit.com
nitincorporation@yahoo.com

PH (O) : +91 - 22 - 25235386
: +91 - 22 - 25234478

*THE FOLLOWING GAS ENGINE GENERATOR SET IS AVAILABLE FOR SALE WITH US WITH IMMEDIATE DELIVERY:*

**1 No. – 2240 kW, UNUSED GE Jenbacher make Gas Engine Generator Set, having the Following Technical Specifications:**

## TECHNICAL DETAILS:

### ENGINE DETAILS:

| | | |
|---|---|---|
| Make | : | GE JENBACHER GMBH & CO. |
| Year of Make | : | 2011 |
| Type | : | JMS620 |
| Capacity | : | 2240 kW |
| Speed | : | 1500 RPM |
| kVA | : | 2800 kVA |

### GENERATOR DETAILS:

| | | |
|---|---|---|
| Make | : | Stamford |
| Year of Make | : | 2011 |
| kVA | : | 2800 kVA |
| Speed | : | 1500 RPM |
| Voltage | : | 415V |
| P.F. | : | 0.8 |
| Frequency | : | 50 Hz |
| Insulation Class | : | H |
| Protection | : | IP 23 |

## TECHNICAL SPECIFICATIONS:

## 0.02 Technical data of engine

| | | |
|---|---|---|
| Manufacturer | | GE Jenbacher |
| Engine type | | J620 E62 |
| Working principle | | 4-Stroke |
| Configuration | | V 60° |
| No. of cylinders | | 20 |
| Bore | mm | 190 |
| Stroke | mm | 220 |
| Piston displacement | lit | 124,75 |
| Nominal speed | rpm | 1.500 |
| Mean piston speed | m/s | 11,00 |
| Filling capacity lube oil | lit | 670 |
| Filling capacity water | lit | 330 |
| Length | mm | 5.542 |
| Width | mm | 1.900 |
| Height | mm | 2.540 |
| Weight dry | kg | 12.000 |
| Weight filled | kg | 13.000 |
| Moment of inertia | kgm² | 69,21 |
| Direction of rotation (from flywheel view) | | left |
| Flywheel connection | | SAE 24" |
| Radio interference level to VDE 0875 | | N |
| Starter motor output | kW | 30 |
| Starter motor voltage | V | 24 |

### Thermal energy balance

| | | |
|---|---|---|
| Energy input | kW | 4.172 |
| Intercooler | kW | 291 |
| Lube oil | kW | 227 |
| Jacket water | kW | 367 |
| Exhaust gas total | kW | 1.558 |
| Exhaust gas cooled to 180 °C | kW | 1.060 |
| Exhaust gas cooled to 100 °C | kW | 1.319 |
| Surface heat | kW | 129 |
| Balance heat | kW | 42 |

### Exhaust gas data

| | | |
|---|---|---|
| Exhaust gas temperature at full load | °C [8] | 469 |
| Exhaust gas mass flow rate, wet | kg/h | 11.497 |
| Exhaust gas mass flow rate, dry | kg/h | 10.840 |
| Exhaust gas volume, wet | Nm³/h | 8.710 |
| Exhaust gas volume, dry | Nm³/h | 7.921 |
| Max.admissible exhaust back pressure after engine | mbar | 60 |

### Combustion air data

| | | |
|---|---|---|
| Combustion air mass flow rate | kg/h | 7.062 |
| Combustion air volume | Nm³/h | 5.463 |
| Max. admissible pressure drop in front of intake-air filter | mbar | 10 |

**basis for exhaust gas data:** 19-25% H2; 17-21%CH4;40-48% CO; 10-13% CO2; 0,5-1,5% N2;4-7% C2Hx

## 0.03 Technical data of generator

| | | |
|---|---|---|
| Manufacturer | | STAMFORD e) |
| Type | | LVSI 804 T e) |
| Type rating | kVA | 2,800 |
| Driving power | kW | 1,559 |
| Ratings at p.f. = 1,0 | kW | 1,518 |
| Ratings at p.f. = 0.8 | kW | 1,506 |
| Rated output at p.f. = 0.8 | kVA | 1,883 |
| Rated current at p.f. = 0.8 | A | 2,620 |
| Frequency | Hz | 50 |
| Voltage | V | 415 |
| Speed | rpm | 1,500 |
| Permissible overspeed | rpm | 2,250 |
| Power factor lagging | | 0,8 - 1,0 |
| Efficiency at p.f. = 1,0 | % | 97.4% |
| Efficiency at p.f. = 0.8 | % | 96.6% |
| Moment of inertia | kgm² | 88.70 |
| Mass | kg | 5,791 |
| Radio interference level to VDE 0875 | | N |
| Construction | | B3/B14 |
| Protection Class | | IP 23 |
| Insulation class | | H |
| Temperature (rise at driving power) | | F |
| Maximum ambient temperature | °C | 40 |
| Total harmonic distortion | % | 1.5 |

### Reactance and time constants appr.

| | | |
|---|---|---|
| xd direct axis synchronous reactance | p.u. | 1.95 |
| xd' direct axis transient reactance | p.u. | 0.149 |
| xd'' direct axis sub transient reactance | p.u. | 0.109 |
| Td'' sub transient reactance time constant | ms | 15 |
| Ta Time constant direct-current | ms | 73 |
| Tdo' open circuit field time constant | s | 4.40 |

## 0.04 Technical data of heat recovery

### General data - Hot water circuit

| | | |
|---|---|---|
| Total recoverable thermal output | kW | 679 |
| Return temperature | °C | 75,0 |
| Forward temperature | °C | 92,0 |
| Hot water flow rate | m³/h | 34,3 |
| Nominal pressure of hot water | bar | 10 |
| Pressure drop hot water circuit | bar | 1,50 |
| Maximum Variation in return temperature | °C | +0/-20 |
| Max. rate of return temperature fluctuation | °C/min | 10 |

### Mixture Intercooler (1st stage)

| | | |
|---|---|---|
| Type | | gilled pipes |
| Nominal pressure of hot water | bar | 10 |
| Pressure drop hot water circuit | bar | 0,50 |
| Hot water connection | DN/PN | 100/10 |

### Mixture Intercooler (2nd stage) (Intercooler separate)

| | | |
|---|---|---|
| Type | | gilled pipes |
| Nominal pressure of hot water | bar | 10 |
| Pressure drop hot water circuit | bar | 0,60 |
| Hot water connection | DN/PN | 65/10 |

### Heat exchanger lube oil

| | | |
|---|---|---|
| Type | | plate heat exchanger |
| Nominal pressure of hot water | bar | 10 |
| Pressure drop hot water circuit | bar | 0,40 |
| Hot water connection | DN/PN | 100/10 |

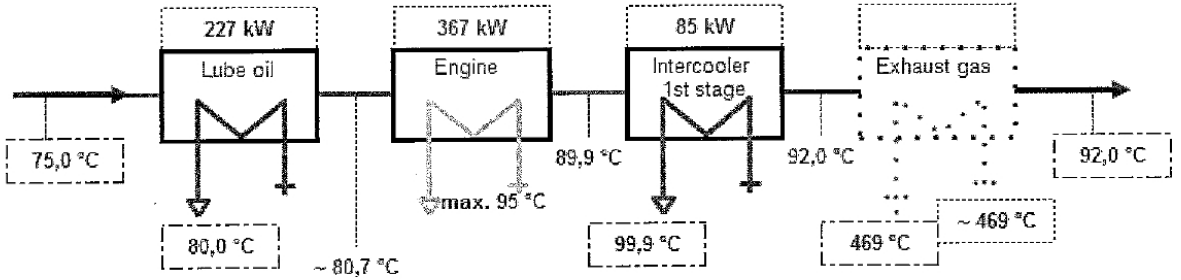
### Heat exchanger engine jacket water

| | | |
|---|---|---|
| Type | | plate heat exchanger |
| Nominal pressure of hot water | bar | 10 |
| Pressure drop hot water circuit | bar | 0,40 |
| Hot water connection | DN/PN | 100/10 |

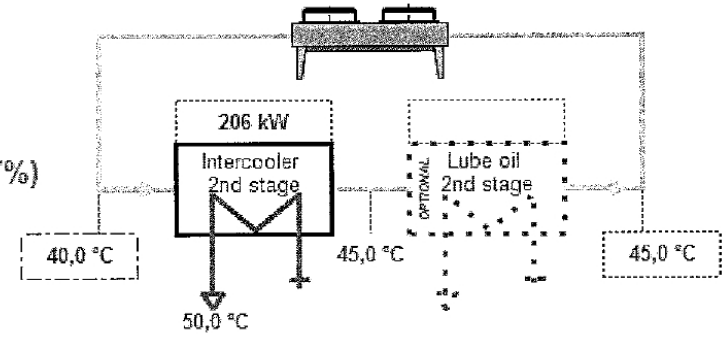
Recoverable thermal output = 679 kW

(±8% tolerance +10% reserve for cooling requirements)

Hot water flow rate = 34,3 m³/h




* Low temperature circuit (calculated with Glykol 37%)




Heat to be dissipated = 206 kW

(±8% tolerance +10% reserve for cooling requirements)

Cooling water flow rate = 40,0 m³/h

## 0.10 Technical parameters

All data in the technical specification are based on engine full load (unless stated otherwise) at specified temperatures and the methane number and subject to technical development and modifications.

All pressure indications are to be measured and read with pressure gauges (psi.g.).

(1) At nominal speed and standard reference conditions ICFN according to DIN-ISO 3046 and DIN 6271, respectively
(2) According to DIN-ISO 3046 and DIN 6271, respectively, with a tolerance of + 5 %
(3) Average value between oil change intervals according to maintenance schedule, without oil change amount
(4) At p. f. = 1.0 according to VDE 0530 REM / IEC 34.1 with relative tolerances
(5) Total output with a tolerance of +/- 8 %
(6) According to above parameters (1) through (5)
(7) Only valid for engine and generator; module and peripheral equipment not considered
(8) The exhaust gas temperature is valid according to the above stated (ref) gas composition. Other gas compositions, trace elements, and moisture can lead to exhaust gas temperatures outside the +/-5% tolerance.

**Radio interference level**
The ignition system of the gas engines complies the radio interference levels of CISPR 12 and EN 55011 class B, (30-75 MHz, 75-400 MHz, 400-1000 MHz) and (30-230 MHz, 230-1000 MHz), respectively. .

**Definition of output**

- ISO-ICFN continuous rated power:
  Net break power that the engine manufacturer declares an engine is capable of delivering continuously, at stated speed, between the normal maintenance intervals and overhauls as required by the manufacturer. Power determined under the operating conditions of the manufacturer's test bench and adjusted to the standard reference conditions.
- Standard reference conditions:

| | |
|---|---|
| Barometric pressure: | 1000 mbar (14.5 psi) or 100 m (328 ft) above sea level |
| Air temperature: | 25°C (77°F) or 298 K |
| Relative humidity: | 30 % |

- Volume values at standard conditions (fuel gas, combustion air, exhaust gas)

| | |
|---|---|
| Pressure: | 1013 mbar (14.7 psi) |
| Temperature: | 0°C (32°F) or 273 K |

**Output adjustment for turbo charged engines**
For altitudes > 350m and/or air intake temperatures > 35°C the reduction in output must be evaluated on a case by case basis.

If the actual methane number is lower than the specified, the knock control responds. First the ignition timing is changed at full rated power. Secondly the rated power is reduced. These functions are carried out by the engine management system.

**Parameters for the operation of GE Jenbacher gas engines**
The following "Technical Instruction of GE JENBACHER" forms an integral part of a contract and must be strictly observed: **TI 1100-0110 – TI 1100-0112**
The genset fulfils the limits for mechanical vibrations according to ISO 8528-9.

## 0.11 Additional Technical parameters

- Island operation will be full controlled by CEI.
- The engine room ventilation must be designed as a forced system (with intake fans), so that there is always a slight overpressure in the engine room. This ensures that any unburned exhaust gas will be forced out of the exhaust system and cannot leak back into the engine room.
- The engine room ventilation must be designed so that in case of leaks no ignitable amounts of gas can form.
- It must be insured that during any operational mode no ignitable gas mixture is evident at any of GE Jenbacher delivered components. See TA 1000-0110.
- A emergency cut off valve that can be controlled by Jenbacher shall be installed outside of the engine room.
- The gas warning system must be designed according to the gas composition
- All persons in the immediate vicinity of the site must be equipped with a suitable wearable gas warning sensor. Relevant warning and security notification boards for CO, H2 and other poisonous and flammable gases/substances must be visible positioned and in a manner that informs and motivates personal correctly.
- The gas, according to TA 1000-0302 / TA 1400-091 and at the given parameters (gas temperature < 40°C, gas pressure 130mbar) must be free of condensate and/or sublimates.

**PHOTOGRAPHS:**



J 620 GS