

GPB180D Gas Turbine



- // PROVEN INDUSTRIAL DESIGN
- // HIGH EFFICIENCY
- // IMPROVED RAM
- // DRY LOW EMISSIONS
- // LOW MAINTENANCE

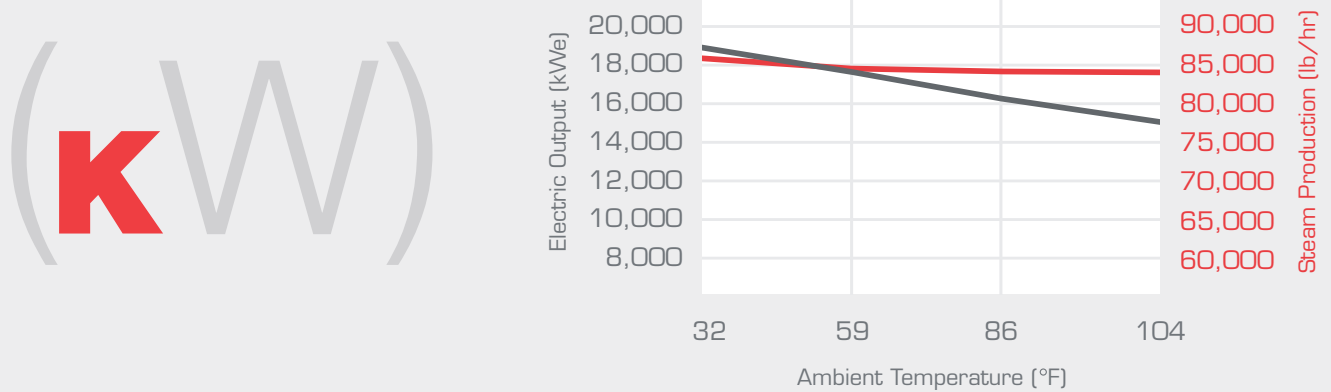
A CLOSER LOOK

- // Ideal for installation in hospitals, universities, institutions, district heating and cooling, pharmaceutical, LNG Terminals, and other facilities with significant thermal and electrical loads
- // Offers electrical efficiency of 35% and an overall efficiency of over 80%

- // Combined-cycle power plant with the GPB180D and a steam turbine will realize electrical efficiency of over 48%
- // Design assures better RAM (reliability, availability, maintainability) and greater durability with 30,000 HRS TBO (Time Between Overhauls)

- // Reduced NOx emissions of under 23 ppm at O₂=15%
- // Split case design allows for ease of inspection and maintenance on site, reducing costly downtime
- // Exhaust gas temperature raised to the optimum 1013°F for optimum heat recovery

GPB180D Performance



GPB180D

| Amb. Temp | CHP | | | | | | | | Gas Turbine | | |
|-----------|-----------------|------------------|-----------|-------------------|-------|-----------------------|---------------------|--------------------|-------------|--------------|--------------|
| | Electric Output | Fuel Consumption | Heat Rate | Steam Production* | | Electrical Efficiency | Recovery Efficiency | Overall Efficiency | Air Flow | Exhaust Flow | Exhaust Temp |
| | °F | kWe | MMBtu/hr | BTU/kWH | lb/hr | MMBtu/hr | % | % | % | lb/s | lb/s |
| 32 | 19,132 | 192.28 | 10,050 | 85,429 | 85.3 | 34.0 | 44.9 | 78.9 | 133.33 | 137.07 | 996 |
| 59 | 17,859 | 181.99 | 10,190 | 84,437 | 84.3 | 33.5 | 46.9 | 80.4 | 128.34 | 131.91 | 1,007 |
| 86 | 16,258 | 170.83 | 10,520 | 83,952 | 83.8 | 32.5 | 49.7 | 82.2 | 121.88 | 125.24 | 1,027 |
| 104 | 14,792 | 162.63 | 10,994 | 84,172 | 84.0 | 31.1 | 52.3 | 83.4 | 116.39 | 119.59 | 1,050 |

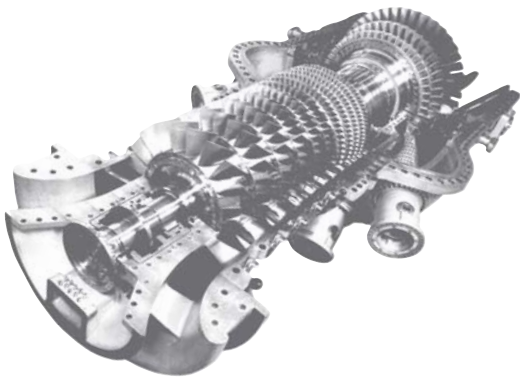
Fuel: Gas (905 BTU/scf), NOx Reduction: Dry Low Emission, NOx: 23 ppm, CO: 25 ppm, VOC: 2.0 ppm

Note:

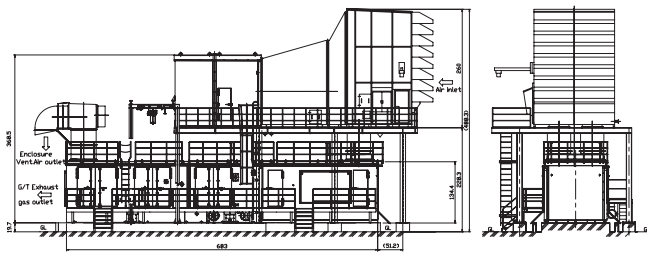
no intake/exhaust losses
 DLE is available from 50-100% load
 Sea level
 Required gas pressure: 360 psig
 Generator efficiency 97.5%

* Contact Kawasaki Application Engineering for site-specific performance
 * Not for guarantee

PACKAGE LAYOUT



Engine Configuration



Generator Set Package

STANDARD EQUIPMENT

- // L20A single-shaft gas turbine engine with eleven compressor stages and three-stage air-cooled turbine – cold end drive
- // Dry low emissions system
- // Reduction gearbox with main lube oil pump and turning motor
- // VFD starting system
- // Indoor enclosure, sound attenuated to 85 dBA, with lighting, ventilation, chain block, and rail for maintenance
- // 13.8 kV generator
- // Heavy-duty steel base-frame, primed and painted
- // Lube oil tank integrated into the base-frame with oil heater, lube oil filter, and lube oil cooler
- // Fuel gas system
- // Fire and gas detection and suppression systems
- // State-of-the-art PLC control
- // Exhaust gas flexible joint

FOR MORE INFORMATION:

Kawasaki Gas Turbines–Americas
 8829 North Sam Houston Parkway West
 Houston, Tx 77064
 P 281 970 3255
 F 281 970 6465
 www.kawasakigasturbines.com