

**Waukesha**

VGf GAS ENGINATOR®
VGf18GL/GLD/GSID – VGf24GL/GLD/GSID
BASIC ENGINATOR SPECIFICATIONS

AIR CLEANER – Two stage, dry panel type with rain shield and service indicator. Engine mounted.

BARRING DEVICE – Manual.

BASE – Engine, generator and radiator or heat exchanger are mounted and aligned on a welded structural steel base, designed for solid mounting on an inertia block, with standard through-base holes for lifting.

BREATHER – Closed system.

CONNECTING RODS – Drop forged alloy steel, angle split, serrated joint, oil jet piston pin lubrication.

COOLING SYSTEM – Choice of mounted radiator with pusher fan, core guard and duct adaptor, heat exchanger with mounted surge tank or flanged connections for remote radiator cooling.

CRANKCASE – Alloy cast iron, fully ribbed, integral with cylinder frame.

CRANKSHAFT – Drop forged alloy steel with thru hardened journals, dynamically balanced and fully counterweighted. Viscous vibration dampener.

CYLINDER HEADS – Individual, interchangeable valve-in-head type with deep section alloy casting. Two hard-faced intake and two hard-faced exhaust valves per cylinder. Replaceable intake and exhaust valve seats. Mechanical valve lifters with pivoted roller followers.

CYLINDERS – Removable wet type liners of centrifugally cast alloy iron.

ENGINE PROTECTION SHUTDOWN CONTACTS – High water temperature, low oil pressure, and overspeed.

EXHAUST – Water-cooled, cast iron exhaust manifold. Single vertical flexible stainless steel exhaust connection with ANSI 125# 8" flange.

FUEL SYSTEM (GL) – One natural gas carburetor, one Fisher Y692 gas regulator, one 2" NPT flexible connection (shipped loose) and one 2" NPT Magnatrol gas solenoid valve (shipped loose). Fuel pressure - 25 PSIG minimum and 50 PSIG maximum.

FUEL SYSTEM (GLD) – One natural gas carburetor, one Maxitrol RV91 gas regulator (shipped loose), one 2" NPT flexible connection (shipped loose), and one 3" NPT Magnatrol gas solenoid valve (shipped loose). Fuel pressure - 10" H₂O minimum and 20" H₂O maximum.

FUEL SYSTEM (GSID) – One natural gas carburetor, one Maxitrol RV91 gas regulator (shipped loose), one 2" NPT flexible connection (shipped loose), and one 3" NPT Magnatrol gas solenoid valve (shipped loose). Fuel pressure - 10" H₂O minimum and 20" H₂O maximum.

GENERATOR – Open, drip-proof, direct connected, synchronous, fan cooled, AC revolving field type, 2/3 pitch, single bearing generator with PMG brushless exciter for 300% short circuit sustain (250% for 50 Hz) and motor starting. TIF and Deviation Factor within NEMA MG-1.32. Voltage: 480/277, 3 phase, 12 wire Wye, 60 Hz, and 400/230, 3 phase, 12 wire Wye, 50 Hz. Temperature rise within NEMA 105° C for continuous duty, within NEMA 130° C for stand-by duty. Voltage regulation is ± 0.5%. All generators are rated at 0.8 power factor, are mounted on the engine flywheel housing, and have multiple steel disc flexible coupling drive.

GOVERNOR – Woodward model EG3P electric actuator (mounted) and magnetic pickup (mounted). **NOTE:** Requires separate electric governor control Woodward model 2301D or similar (not included). See Code 6020D or 6022.

IGNITION – Waukesha Custom Engine Control electronic ignition system with coils, cables, hall effect pickup and spark plugs. Non-shielded. 24 V DC power required. Includes emergency stop/service engine protection switch for local override of remote controls.

INTERCOOLER – Air-to-water.

INSTRUMENT PANEL – Engine mounted, includes water temperature, oil pressure, intake manifold temperature and intake manifold pressure gauges, and emergency stop pushbutton.

JUNCTION BOXES – Separate AC & DC junction boxes for engine wiring and external connections.

KNOCK DETECTION MODULE (KDM) – Electronic detonation protection system. Includes engine mounted sensors, wiring and KDM. Meets CSA Class I, Division 2, Group D hazardous location requirements Standard on GL and GLD engines with 11:1 compression ratio.

LUBRICATION SYSTEM – Gear type pump, full flow spin-on filters and industrial base type oil pan. Engine mounted plate type oil cooler.

PAINT – Oilfield Orange.

PISTONS – Aluminum alloy, three ring, with patented high turbulence combustion bowl. Oil jet cooled with full floating piston pin. 11:1 compression ratio. (8.6:1 on GSID).

STARTING SYSTEM – 24 V DC starting motor. Crank termination switch, (shipped loose).

TURBOCHARGER – Dry-type with wastegate.

VOLTAGE REGULATOR – Automatic type.

WATER CIRCULATING SYSTEM, AUXILIARY CIRCUIT – Gear driven pump for intercooler and oil cooler. Inlet temperature of 130° F (54° C) for all models.

WATER CIRCULATING SYSTEM, JACKET WATER CIRCUIT – 180° – 190° F (82° – 88° C) thermostatic temperature regulation. Gear-driven pump.

DOCUMENTATION - The following items are supplied as standard with every order:

- Electronic notification and access to drawings for review and or approval.
- One Enginator® manual consisting of:
 - *Engine operation/service manual.
 - *Engine parts book.
 - *Generator/voltage regulator instructions.
 - *Instructions on major special items.