Waukesha* gas engines VGF* F18SE

with emPact* Emission Control System
310-400 BHP (230-300 kWb)

Image is representative of engine model.

The VGF series of high-speed engines are built with the durability expected from a medium-speed engine. The SE family of VGF engines with ESM* features the most advanced and comprehensive control capability in its class. Multiple options for AFR control, GE catalysts, and NOx ratings are available. Non-road EPA mobile and stationary certification is available direct from GE as part of the mobileFLEX* product line. Additionally, system reliabilty and performance upgrades have been integrated into the turbocharging/wastegate, oil filtration, oil cooling, crankcase breathing, and cylinder heads.

Waukesha's emPact Emission Control System combines an engine, catalyst, and air/fuel ratio control, factory-designed for enhanced interaction and improved performance. It consists of a GE-supplied catalyst, pre- and post-catalyst oxygen sensing, and differential temperature and pressure sensors.

The emPact display panel provides real-time engine operating parameters, including faults, alarms, logs, and shutdowns. Waukesha's emPact Emission Control System provides a one-stop shop for compliance and a simple method of obtaining and meeting emission permits.

The VGF Series simplifies maintenance procedures. The engine design allows easy access to the oil pump, main bearings and rod bearings—without the need to lower the oil pan or remove the engine from the site. Commonality of parts between VGF models reduces the amount of inventory needed for servicing a fleet. Standard design features, such as independent heads, simplify maintenance work.

technical data

Cylinders	Inline 6
Piston displacement	1096 cu. in. (18 L)
Compression ratio	8.6:1
Bore & stroke	5.98" x 6.5" (152 x 165 mm)
Jacket water system capacity	16 gal. (60 L)
Lube oil capacity	44 gal. (166 L)
Fuel pressure range	1.5-5.0 psig (0.1 - 0.34 bar)
Starting system	120 psi max. air/gas or 24V DC electric

Dimensions l x w x h inch (mm)
80.5 (2043) x 48 (1218) x 68.4 (1737)

Weights lb (kg)
6,900 (3,136)

standard features

Air inlet system
- single, high capacity air filter
- service indicator
- rain shield

Cooling systems
- gear-driven jacket & auxiliary water pumps
- engine-mounted thermostats
- jacket circuit at 200° F outlet
- auxiliary circuit at 130° F inlet

Engine control system
- Engine System Manager (ESM)
- Start/stop, governing, electronic throttle and fuel valve control, AFR, ignition, individual cylinder detonation protection, fault logging
- CSA class 1, division 2
- HMI (shipped loose)
- Modbus RS-485 communications
- ESP laptop software

Exhaust system
- high altitude turbocharger
- water-cooled wastegate
- water-cooled manifolds

Fuel system
- 24V on/off valve
- mounted pressure regulator
- full flow control valve
- carburetor (850-2350 Btu/scft LHV)

Lubrication system
- high capacity main filters
- mounted centrifuge
- high efficiency oil cooler
- closed crankcase breather
- high capacity oil pan

Mounting system
- SAE 0 flywheel housing
- SAE18 flywheel
- base-style oil pan with four-point mount

Miscellaneous
- viscous vibration damper
- two access doors per cylinder
- oil pan access doors

optional equipment

- SAE14 flywheel
- CSA B149-compliant fuel system
- multiple length customer control harnesses
- exhaust flex & silencers
- emPact emissions control at 0.15gr NOx +0.3gr CO
- emPact emissions control at 0.5gr NOx +1.0gr CO
- front and rear stub shafts
- 24V electric starter
- air/gas turbine air starter
- 24V, 50A engine-driven alternator
- inertial precleaner for air filter
- 24Vdc, 240Vac, and air/gas pre- and post-lube
- jacket water heating and circulation
- knockdown gas pressure regulator
- removal of engine driven water pumps
- oil leveler
- extra magnetic pickup
- field gas & liquid propane (LP) dual-fuel autoswitching system included engine-mounted vaporizers
- CE mark
- crankshaft pulley
- exhaust thermocouples, including all harnesses & hardware to provide data via Modbus
- EPA non-road/mobile & stationary certification
- low Btu fuel system for 650-850 Btu LHV applications
- capability for NFPA110 Type 10

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