



Waukesha* gas engines

APG1000

APG* Gas Enginator* Generating System
 1000 kWe @ 50 Hz/1100 kWe @ 60 Hz

natural gas

The APG series, first introduced in 2006, delivers flexible solutions for today's stationary, gas engine-driven power generation systems. The APG series of engines are designed for maximum efficiency, low emissions, and are built to reduce operating costs. The Waukesha patented Engine System Manager (ESM) control and diagnostics system, designed to optimize engine performance and maximize engine uptime, is standard equipment on all APG engine models.

With a reputation for rugged durability and ongoing design advancements, Waukesha engines are the sound investment you can depend on in mission-critical applications. Now a part of GE Energy, Waukesha provides enhanced support in the form of parts, service and a network of distributors to make us an even stronger partner for today's global energy industry.

reference installations

model, site	key technical data	description
APG1000 Surat, Gujarat, India	Fuel..... Natural gas Engine type..... APG1000 Electrical output..... 10 x 1000 kWe Thermal output..... 10 x 1053kW Commissioning.... September 2005 (1st engine)	Three textile facilities are producing textile from synthetic materials. The Waukesha APG1000 engines provide critical process power and facility heating and cooling through combined heat and power solutions. The operator has piece of mind knowing they are able to supply themselves with critical process power with an operations and maintenance agreement from GE Energy's local channel member.
APG1000 Arlington Heights, Illinois	Fuel..... Natural gas Engine type..... APG1000 Electrical output..... 1100 kWe Thermal output..... NA Commissioning..... 2007	Northwest Community Hospital is a busy medical center that serves Chicago's northwest suburbs. At the heart of the system are three Waukesha Engine VHP7100 Enginator® gensets rated at 1.1 MW each. The system's generating capacity was expanded with the addition of Waukesha's APG1000 Enginator unit, also rated at 1.1 MW.



technical features

feature	description	advantages
Efficiency	Miller Cycle combustion, low flow loss engine breathing, Specific turbocharger matching and high efficiency generators	Higher electrical efficiency maximizes return on investment
Emissions	Availability of two different NOx emissions settings for 50/60 Hz allows for application flexibility	Optimized efficiency at each emissions rating
Package ability	Overall engine/genset envelope supports containerization. Recent updates to Air Cleaner and Closed-loop crankcase breather system	Ability to create a compact and portable genset solution

technical data

Engine	Waukesha 16V150LTD, Four Cycle, Lean Burn
Cylinders	V16
Piston displacement	48L (2924 cu. in.)
Bore & stroke	152 x 165 mm (5.98" x 6.5")
Jacket water system capacity	159L (42 gal.)
Auxiliary water capacity	30 L (8 gal.)
Lube oil capacity	820 L (215 gal.)
Starting system	24VDC Electric
Dry weight	13,730 kg (30,200 lb.)

Dimensions l x w x h mm (inch)

Water Connection	5105 (201) x 2143 (94) x 2215 (87)
Heat Exchanger	5821 (229) x 2160 (85) x 2215 (87)

Weights kg (lb)

Water Connection	13727 (30200)
Heat Exchanger	14182 (31200)

performance data

Natural gas

NOx	Cooling system configuration	1,800 rpm/60 Hz					1,500 rpm/50 Hz				
		Pel (kW)	η_{el} (%)	Pth (kW)	η_{th} (%)	η_{tot} (%)	Pel (kW)	η_{el} (%)	Pth (kW)	η_{th} (%)	η_{tot} (%)
"TA Luft NOx 1.0 g/bhp.hr"	Standard	1,100	41.7	1,053	39.9	81.6	1,000	42.1	905	38.0	80.1
	CHP	1,100	41.7	1,260	47.7	89.4	1,000	42.1	1,067	44.9	87.0
"1/2 TA Luft NOx 0.5 g/bhp.hr"	Standard	—	—	—	—	—	1,000	40.8	976	39.9	80.7
	CHP	—	—	—	—	—	1,000	40.8	1,132	46.3	87.1
0.6 g/bhp.hr	Standard	1,100	40.8	1,095	40.6	81.4	—	—	—	—	—
	CHP	1,100	40.8	1,300	48.3	89.1	—	—	—	—	—

Biogas

"TA Luft NOx 1.0 g/bhp.hr"	Standard	1,100	40.9	995	37.0	77.9	1,000	42.0	835	35.0	77.0
	CHP	1,100	40.9	1,192	44.3	85.2	1,000	42.0	1,005	42.1	84.1



imagination at work

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