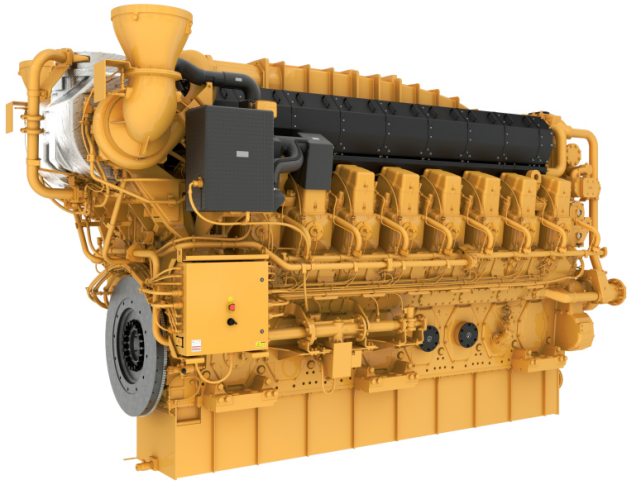
G3616 with ADEM™4 GAS ENGINE

Cat® Closed Crankcase Ventilation (CCV) System
3729 bkW (5000 bhp) & 4101 bkW (5500 bhp)
0.3 and 0.5 g/bhp-hr NOx (NTE)



Shown with optional equipment.

SPECIFICATIONS

V-16, 4 -Stroke-Cycle
Serial Prefix.....HTJ
Bore.....300 mm (11.8 in)
Stroke.....300 mm (11.8 in)
Displacement.....339 L (20,698 cu. in)
Aspiration.....Turbocharged-Aftercooled
Digital Engine Management
Governor and Protection.....Electronic (ADEM™4)
Combustion.....Low Emission (Lean Burn)
Cooling System Capacity
Total.....798 L (211 gal)
JW.....690 L (182 gal)
SCAC.....108 L (29 gal)
Lube Oil System (refill).....1329 L (351 gal)
Oil Change Interval.....5000 hours
Rotation (from flywheel end).....Counterclockwise
Flywheel Teeth.....255

FEATURES AND BENEFITS

Engine Design

- ADEM ™4 (A4) engine control system provides complete engine control, monitoring, and protection while maintaining emissions
- Widest fuel tolerance in the industry for application flexibility
- Proven reliability and durability with the lowest owning and operating costs
- Significant reduction in methane, VOC and Formaldehyde emission from engine exhaust compared to Gen 1 engine
- Up to 20% methane emissions reduction from engine with Cat Closed Crankcase Ventilation (CCV)

Emissions

Meets U.S. EPA Spark Ignited Stationary NSPS emissions for 2010 with the use of an oxidation catalyst.

Advanced Digital Engine Management

The A4 engine management system integrates speed control, air/fuel ratio control, and ignition/detonation controls into a complete engine management system. The A4 engine has an improved user interface, display system, shutdown controls, and system diagnostics.

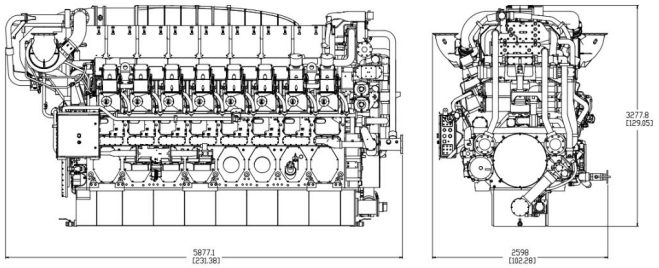
Full Range of Attachments

Large variety of factory-installed engine attachments reduces packaging time.

Testing

Every engine is full-load tested to ensure proper engine performance.

DIMENSIONS



Length	231.38 in / 5877.00 mm
Width	102.28 in / 2598.00 mm
Height	129.05 in / 3279.00 mm
Weight (wet)	7030.00 lb / 31888.00 kg

Note: Do not use for installation design. See general dimension drawings for detail. Weights and dimensions are approximations.

Full listing of equipment (standard and optional), along with additional features and benefits can be found at **www.cat.com/oilandgas** or through your local dealer.

TECHNICAL DATA

G3616 A4 Gen 2 with CCV				
Performance Number	**EM7349-00**	**EM7350-00**	**EM7347-00**	**EM7348-00**
Engine Power bkW (bhp)	3729 (5000)	3729 (5000)	4101 (5500)	4101 (5500)
Engine Speed rpm	1000	1000	1000	1000
Max Altitude without Derate @ Rated Torque and 38 °C (100 °F) m (ft)	2272 (7454)	2421 (7493)	1747 (5732)	1996 (6549)
Aftercooler Temperature				
Stage 1 (JW) °C (°F)	88 (190)	88 (190)	88 (190)	88 (190)
Stage 2 (SCAC) °C (°F)	54 (130)	54 (130)	54 (130)	54 (130)
Emissions				
NOx (as NO2) g/bkW-h (g/bhp-h)	0.40 (0.30)	0.67 (0.50)	0.40 (0.30)	0.67 (0.50)
CO g/bkW-h (g/bhp-h)	2.88 (2.15)	2.25 (1.68)	2.88 (2.15)	2.25 (1.68)
NMNEHC (VOCs (mol. wt. of 15.84) g/bkW-h (g/bhp-h)	0.23 (0.17)	0.19 (0.14)	0.21 (0.16)	0.19 (0.14)
HCHO (Formaldehyde) g/bkW-h (g/bhp-h)	0.15 (0.11)	0.20 (0.15)	0.13 (0.10)	0.20 (0.15)
Fuel Consumption (LHV) MJ/bkW-h (btu/bhp-h)	9.52 (6728)	9.39 (6636)	9.42 (6661)	9.28 (6562)
Heat Balance				
Heat rejection to Jacket Water (JW) kw (btu/min)	916 (52070)	925 (52627)	977 (55575)	989 (56219)
Heat Rejection to Lube Oil (OC) kw (btu/min)	537 (30512)	539 (30653)	541 (30768)	554 (31520)
Heat Rejection to A/C - Stage 1 (1AC) kw (btu/min)	994 (56511)	894 (50836)	1214 (69049)	1101 (62617)
Heat Rejection to A/C - Stage 2 (2AC) kw (btu/min)	254 (14455)	239 (13593)	292 (16589)	276 (15677)
Heat Rejection to Atmosphere kw (btu/min)	346 (19678)	337 (19182)	347 (19751)	339 (19273)
Exhaust System				
Exhaust Temperature - Engine Outlet °C (°F)	346 (812)	337 (825)	421 (790)	425 (797)
Gas Pressure kPag (psig)	400-485 (58.0-70.3)	400-485 (58.0-70.3)	400-485 (58.0-70.3)	400-485 (58.0-70.3)

*100F/500ft/Nat Gas 84.7 MN, 905 LHV

STANDARD EQUIPMENT

Air Inlet System
- Air cleaner - standard duty
- Inlet air adapter

Cooling System
- Compressor Oil cooler connections
- Jacket Water pump
- Aftercooler/oil cooler pump
- Jacket Water thermostats and housing
- Two-stage aftercooler
- Jacket Water heater connections
- Standard ANSI connections

Starting System
- Dual turbine starting motors

Exhaust System
- Dry exhaust manifolds
- Single vertical outlet adapter
- Dual layer heat shields
  - Layer 1: stainless steel foil
  - Layer 2: carbon steel

Fuel System
- Gas admission valves - electronically controlled fuel supply pressure

Instrumentation
- 8 inch HMI Engine Control Panel
- Interconnect Harness

Lubrication System
- Crankcase breather- top mounted
- Oil pan drain valve- front and rear

OPTIONAL EQUIPMENT

Air Inlet System
- Heavy-duty air cleaner with precleaners

Charging Alternator
- 35 Amp & 65 Amp charging alternators - CSA approved

Exhaust System
- Flexible bellows adapters

Fuel System
- Fuel filter
- Gas pressure regulator
- Flexible connection

Lubrication System
- Air or electric motor-driven prelube
- Duplex oil filter
- Oil level regulator

Rating Definitions and Conditions

Engine performance is obtained in accordance with SAE J1995, ISO3046/1, BS5514/1, and DIN6271/1 standards.
Transient response data is acquired from an engine/generator combination at normal operating temperature and in accordance with ISO3046/1 standard ambient conditions. Also in accordance with SAE J1995, BS5514/1, and DIN6271/1 standard reference conditions.
Conditions: Power for gas engines is based on fuel having an LHV of 33.74 kJ/L (905 Btu/cu ft) at 101 kPa (29.91 in Hg) and 15°C (59°F). Fuel rate is based on a cubic meter at 100 kPa (29.61 in Hg) and 15.6°C (60.1°F). Air flow is based on a cubic foot at 100 kPa (29.61 in Hg) and 25°C (77°F). Exhaust flow is based on a cubic foot at 100 kPa (29.61 in Hg) and stack temperature.