Specification sheet

VTA28-G5

Description

The product of years of technical development and improvement, the VTA28-Series is recognised globally for its performance under even the most severe climatic conditions, and widely acknowledged as the most robust and cost-effective diesel engine in its power range.

Key design features include two large capacity aftercoolers for more efficient combustion, dual camshafts for precise control, valve and injector timing, a cooling system boasting a more even flow of coolant around the cylinder liners, valves and injectors, and Cummins PT self-adjusting fuel system for overspeed protection independent of the main governor.

Features

Aftercooled—Two large capacity aftercoolers result in cooler, denser intake air for more efficient combustion and reduced internal stresses for longer life. Aftercooler is located in engine coolant system, eliminating need for special plumbing.

Camshaft—Dual camshafts precisely control valve and injector timing. Lobes are induction hardened for long life. Fourteen replaceable precision type bushings 2.0 in. (51 mm) diameter.

Cooling System—Belt driven centrifugal water pump. Large volume water passages provide even flow of coolant around cylinder liners, valves and injectors. Dual modulating bypass thermostats regulate coolant temperature.

Cylinder Block—Alloy cast iron with removable wet liners. Cross bolt support to main bearing cap provides extra strength and stability.

Fuel System—Cummins PT™ self-adjusting system. Integral dual flyweight governor provides overspeed protection independent of main governor. Camshaft actuated fuel injectors give accurate metering and timing. Fuel lines are internal drilled passages in cylinder heads. Spin-on fuel filter.

Lubrication—Large capacity gear pump provides pressure lubrication to all bearings and oil supply for piston cooling. All pressure lines are internal drilled passages in block and heads. Oil cooler, full flow filters, and bypass filters maintain oil condition and maximize oil and engine life.

Turbocharger—Two Holset turbochargers mounted at top of engine. Turbocharging provides more power, improved fuel economy, altitude compensation, and lower smoke.

Coolpac integrated design - Products are supplied complete with cooling package and air cleaner kit for a complete power package. Each component has been specifically developed and rigorously tested for G-Drive products, ensuring high performance, durability and reliability.

Service and support - G-Drive products are backed by an uncompromising level of technical support and after sales service, delivered through a world class service network.

CE	This equipment has been built to comply with CE certification requirement subject to EU RoHS exclusion per EU 2011/65.
Registered to ISO 9001	This engine has been designed in facilities certified to ISO9001 and manufactured in facilities certified to ISO9001 or ISO9002.

©2019 Cummins Inc. | VTA28-G5 (4/19)

1500 rpm (50 Hz ratings)

Gross engine output			Net engine output			Typical generator set output					
Standby	Prime	Base	Standby	Prime	Base	Standby (ESP)		Prime (PRP)		Base (COP)	
kWm/BHP			kWm/BHP			kWe	kVA	kWe	kVA	kWe	kVA
612/820	560/750	492/660	584/783	538/721	470/630	560	700	509	636	445	556

1800 rpm (60 Hz ratings)

Gross engine output			Net engine output			Typical generator set output					
Standby	Prime	Base	Standby	Prime	Base	Standby (ESP)		Prime (PRP)		Base (COP)	
kWm/BHP			kWm/BHP			kWe	kVA	kWe	kVA	kWe	kVA
671/900	608/815	504/675	630/845	574/770	470/630	600	750	545	681	442	552

General engine data

Type	4-cycle, inline, Turbocharged and aftercooled
Bore mm	140 mm (5.50 in.)
Stroke mm	152 mm (6.00 in.)
Displacement litre	28.0 litre (1710 in.^{3})
Cylinder block	Alloy cast iron, 12 cylinder
Battery charging alternator	55 amps
Starting voltage	24 volt, negative ground
Fuel system	Direct Injection
Fuel filter	Dual, Fleetguard spin-on fuel filters
Lube oil filter type(s)	Spin-on full flow filters
Lube oil capacity (l)	83.0
Flywheel dimensions	SAE 0

Coolpac performance data

Cooling system design	Jacket Water After Cooled
Coolant ratio	50% ethylene glycol; 50% water
Coolant capacity (l)	126
Limiting ambient temp.** (°C)	50.0 (50Hz)
Fan power (kWm)	19.6 (50Hz)
Cooling system air flow (m^3/s)**	12.5 (50Hz)
Air cleaner type	Dry replaceable element with restriction indicator

**** @ 13 mm H_20**

Fuel consumption 1500 (50 Hz)

%	kWm	BHP	L/ph	g/kWh
Standby Power				
100	612	820	154	40.8
Prime Power				
100	560	750	140	37.0
75	420	563	104	27.5
50	280	375	73	19.3
25	140	188	43	11.3
Continuous Power				
100	492	660	122	32.1

Fuel consumption 1800 (60 Hz)

%	kWm	BHP	L/ph	g/kWh
Standby Power				
100	671	900	173	45.7
Prime Power				
100	608	815	154	40.7
75	456	611	118	31.2
50	304	408	84	22.2
25	152	204	50	13.1
Continuous Power				
100	504	675	128	33.9

©2019 Cummins Inc. | VTA28-G5 (4/19)

Weights and dimensions

Length mm	Width mm	Height mm	Weight (dry) kg
2371	1457	2092	3215

Ratings definitions

Emergency Standby Power (ESP):	Limited-Time Running Power (LTP):	Prime Power (PRP):	Base Load (Continuous) Power (COP):
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power to a constant electrical load for limited hours. Limited-Time Running Power (LTP) is in accordance with ISO 8528.	Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN6271 and BS 5514.

For more information contact your local Cummins distributor or visit cummins.com

Our energy working for you.™

©2019 Cummins Inc. All rights reserved. Cummins is a registered trademark of Cummins Inc. PowerCommand, AmpSentry, InPower and "Our energy working for you." are trademarks of Cummins Inc. Other company, product, or service names may be trademarks or service marks of others. Specifications are subject to change without notice.
VTA28-G5 (4/19)