

# Titan ZG 20

No more glow plugs, even in small models!

**Battery Ignition,  
Magnesium-Crankcase.**



Displacement: 20,1 cm<sup>3</sup>  
Bore x Stroke: 32 x 25 mm  
Power: 1,73 hp / 1,27 kW  
at 11.000 RPM  
Torque: 1,23 Nm 9000 RPM  
Weight: 820 g  
incl. engine mount: 850 g  
and intake trumpet: 860 g  
and ignition: 1.040 g  
and Silencer: 1.185 g  
Ready to fly incl. our 3000 mAh  
LiPo-cell #2025: 1.250 g

**only € 289,—**

Including ignition unit,  
silencer and intake trumpet.

Prices are including **19% VAT.**

Revision November 16th 2008

**5 year guarantee!\***

- Very cheap running costs, less than 1 litre per hour with normal two stroke petrol mix.
- Digital battery ignition with automatic advance, Hall sensor triggered.
- Runs on one single LiPo cell.
- Hand starting is child's play.
- Walbro pump carburettor, can be mounted in 90 degree steps.
- Super light magnesium die-cast crankcase..
- Extremely smooth running due to crankshaft being mounted in three ball races and double counterweights.
- Very long life due to roller bearings both ends of the conrod.
- Very thin pinned piston ring allowing largest possible transfer passages with optimum exhaust and inlet ports.

\* For guarantee conditions see catalogue page 37

**NEW!**

In America known as the Zenoah G20EI this new engine has been specially designed by Komatsu Zenoah's engineers for model aircraft and to power model helicopters and racing boats. The extra mounting lugs on the crankcase are provided for the latter two purposes. The well proven piston porting has been chosen for simplicity and reliability and long life.



The ignition unit is cast in a vibration resistant block, designed to be rigidly mounted in the model.

Due to its very low weight and small size, the Titan ZG 20 is ideal for models normally powered by 10 to 20 cc glow engines, either two or four stroke.

Fuel is made up from normal grade lead-free petrol mixed with BelRay H1R in a ratio of 50:1. This fuel is certainly a lot cheaper than glow fuel. Petrol mixes do not affect the paints, so it is no longer necessary to use the expensive, glow fuel resistant model paint.

The carburettor high and low speed needles need only the initial adjustment and require no further settings ever. Due to the integral pump the tank can be fixed in any position in the fuselage. Corrosion problems as is with methanol based fuels are non-existent with petrol. Surprising is the very smooth running and low tickover speed.

For the first time Komatsu Zenoah is using a high performance micro processor battery ignition with automatic timing advancement, specially developed for this engine. This ignition unit is unusually powerful and this makes for very easy hand starting. The high tension cable is well screened with a metal plug cap. We fit the ignition module with a CNC-milled base for protecting the wires and to provide an easy installation in the model.

Ideal power source is a LiPo cell (3,7V) having a capacity of 2,000 mAh, alternatively a 3,6V (3 cells) NiMH or NiCd battery can be used. The Micro processor can operate down to 3 volts. For revs above 12,000 RPM 4 cells (4,8V) are recommended. 20,000 RPM, as sometimes required for model boats, is then possible.

The ideal propellers are the APC 17x8"N or the APC 16x8". If the ground clearance is restricted one can use the APC 15x10". Menz S propellers in the following sizes are suitable: 15x8", 16x6" and 16x8", and also the Super Silence carbon fibre propellers: 15x11", 16x8" Pro and 16x10".

The Titan ZG 20 is supplied complete with ignition unit, silencer, intake tube and aluminium motor mounting plate. The battery and the ignition switch are not included.

**TITAN ZG 20 ..... #2020 € 289,—**



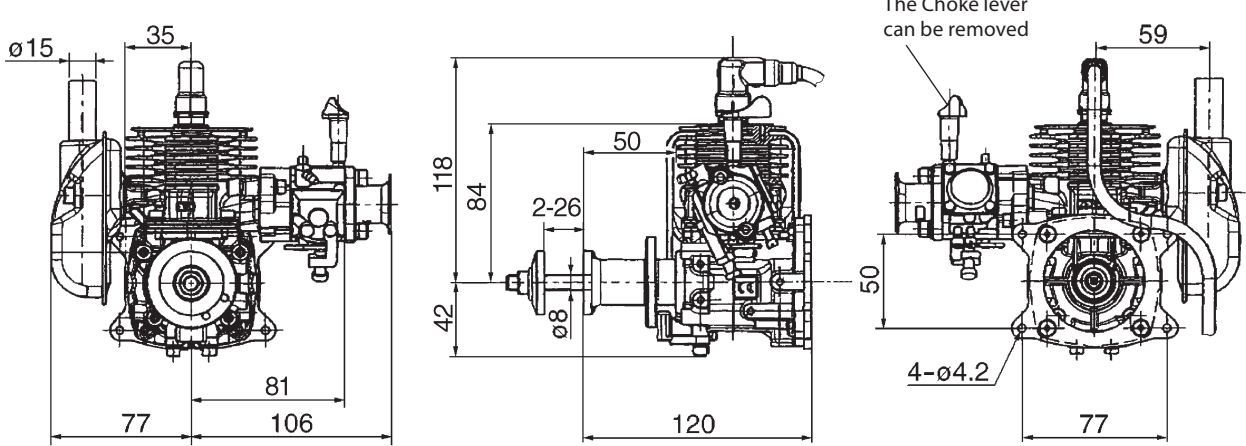
*The Titan ZG 20 with standard silencer installed in a 1,65 m ARF Velox Rev II from "The World Models". All up weight is 4,2 kg. Propeller: APC 17x8N, 7700 RPM. The vertical performance and max. flying speed of this configuration is phenomenal!*

Prices are including **19% VAT.**

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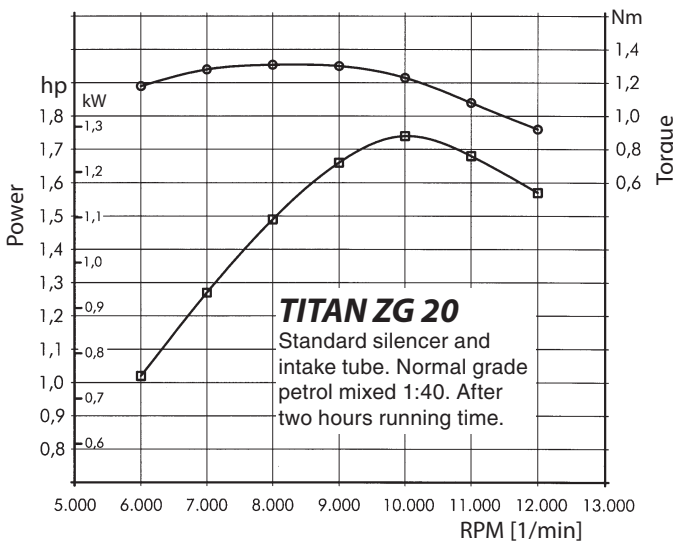


# TITAN ZG 20 Scale 1:4



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The three view drawing shows that the Titan ZG 20 will easily fit into Warbirds that have a radial engine cowl. The intake tube can be left off. The exhaust flange on the ZG 20 is identical to the flanges on the ZG 22, 23 and 26, the header pipes #2574 and #2572 will therefore fit the ZG 20.

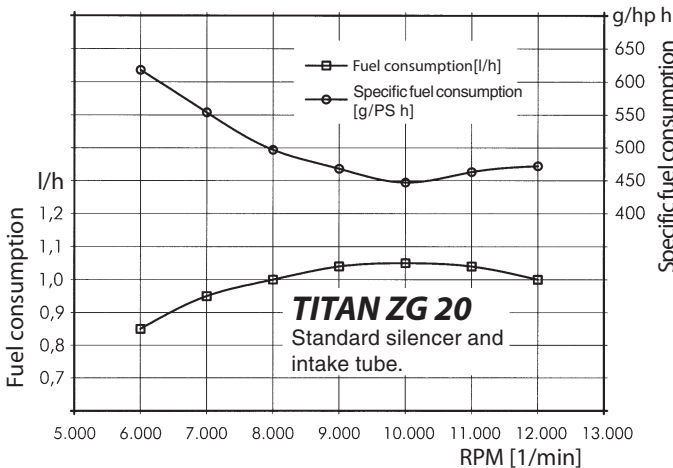


Propeller	RPM
APC 15x8"	8900
APC 15x10"	8300
APC 16x8"	8300
APC N17x8"	7700

These power curves and propeller RPM are measured with the standard silencer mounted directly onto the cylinder.

With an external silencer and a header tuned to the correct length, these figures will be 30% more. With a tuned pipe the power will be up by 40%.

Please take also into account, when comparing power with a glow plug engine using just the numbers, the more efficient propulsion is obtained by the ZG 20's ability to turn a much larger prop.



## Ignition current consumption at 3,7V:

- At tickover 1,1A.
- Above 4,500 RPM up to max. revs 1,6A.
- With engine still 45mA.

Our 3000 mAh Li-Polymer ignition battery has enough capacity for one and a half hours flying. The weight of this high capacity cell is only 64 grams, including the cable and connector.



**ZG-I 2450 Li-Po Ignition-batt. #2025 € 35,80**

Prices are including 19% VAT.

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