Comparison GH N-45 versus G 5

GENERAL

Both guns stem from the same technical basis, i.e. Gerald Bulls GC-45 (in service with the Royal Thai Marines) in particular with regard to the ballistics, but eventually underwent a different development.

WEAPON

With the exception of a slightly greater powder chamber volume for the G-5, the design of the barrel and breech are the same on both guns. However the barrel of the GH N-45 has a very good reputation for its high quality and consistent accuracy. This was again proven during firing trials 1997 in France, where a probable error (PE) of less than 0.3% in range and smaller than 1 mil in deflection was achieved.
The G-5 uses a single-baffle muzzle brake whereas the GH N-45 carries a three-baffle muzzle brake.

EQUILIBRATOR SYSTEM

The G-5 uses the same old pneumatic equilibrators as were mounted on the first version of the GC-45 and which require relatively frequent spring re-adjustments in case of temperature variations. The GH N-45 uses modern, hydro-pneumatic equilibrator cylinders which require less frequent adjustment. The adjustment, if necessary, can easily be accomplished via the gun's operating hydraulic system.

CONFIGURATION OF CARRIAGE

Basically, both carriages are of the split-trail design with 3-point support.

While the GH N-45 uses the same lower carriage for both the towed version A1 and the self-propelled APU version, on the G-5 the entire lower carriage is enlarged to accommodate the auxiliary power unit. This results in more than 1 ton greater weight of the G-5.

The GH N-45 type A1 can easily be upgraded to the APU version at any time later simply by changing the walking beams and flanging the power pack to the existing lower carriage. This is not possible with the G-5.

The GH N-45 has, in addition to the hydraulic main jack (main float), an additional hydraulic jack (auxiliary float) fitted to the lower carriage near the centre of gravity, that considerably eases the manhandling of the trails even in adverse terrain.
This feature is not available on the G-5.

MOBILITY

Towed guns are cutting curves when towed around tight bends. Consequently their mobility is restricted on narrow roads and in urban areas.

To make the gun follow exactly in the tracks of the prime mover, the GH N-45 is equipped with a special and unique steering system that is easily and quickly engaged whenever necessary.
This exceptional feature is not available on the G-5.

AUXILIARY POWER UNIT

During time both guns were equipped with auxiliary drives, yet with entirely different purposes in mind. While the GH N-45 was intended to perform automotive and independent travel on roads and in cross-country terrain, motorisation of the G-5 was to provide some type of a crawling operation to master short distances between prime mover and battery position.

The GH N-45 is also available without the APU kit, this is not possible for the G-5 which is available in APU-configuration only.

Another essential difference is the steering system on the APU. On the G-5, steering is performed through adjustable cylinders without automotive control, while the GH N-45 is steered like an automobile.

Speed in APU mode	GH N-45	25 km/h
	G-5	16 km/h
Engine	GH N-45	120 horse power air-cooled petrol
	G-5	79 horse power air-cooled diesel

WEIGHT

Total weight	GH N-45 A1	10'070 kg
	GH N-45 APU	12'400 kg
	G-5	13'750 kg
Power-weight ratio	GH N-45	9.6 HP per ton
	G-5	5.7 HP per ton
Load on towing eye	GH N-45 A1	2'460 kg
	GH N-45 APU	2'550 kg
	G-5	3'000 kg