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Factsheet - The Singapore Light Weight Howitzer (SLWH) Pegasus

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Weighing 5.4 tons, the 155mm Singapore Light Weight Howitzer *Pegasus* is both self-propelled and heli-portable by the CH-47D "Chinook" helicopters. This 39-calibre howitzer offers better range and firepower than the 105mm Light Guns which it will replace. The SAF's artillery systems will all be standardised (at 155mm) after the *Pegasus* is fully phased into the SAF's artillery units.

The *Pegasus* was jointly developed by the Singapore Armed Forces (SAF), the Defence Science & Technology Agency (DSTA) and Singapore Technologies Kinetics (ST Kinetics) to meet the Army's operational requirements. It is a highly automated and efficient system that delivers range and firepower comparable to heavier systems such as the Primus and the FH88.

Key Technological Features

The Pegasus incorporates several sophisticated sub-systems in its design. Some significant features are:

Auxiliary Power Unit (APU)

The APU is an independent engine unit on the Pegasus, which provides the gun with a short-range self-propelled capability. With the APU, the system is able to manoeuvre over terrain at a speed of 12 km/h. The Pegasus is the world's first heli-portable 155mm howitzer with a

self-propelled capability.

Ammunition Loading System (ALS)

Powered by the APU, the ALS automatically loads ammunition to reduce crew fatigue. This allows the gun crew to operate the Pegasus for a longer period while maintaining a burst rate of 3 rounds in 24 seconds.

Mechanical Sight

Each gun is also equipped with an advanced mechanical sight that can withstand firing shocks of up to 90Gs. This is critical for sustained operations given the system's lightweight structure.

Ease of Deployment

As a complex system that needs to be readily deployed for mobility, firing and heli-lifting, the Pegasus is easy to configure without any lifting support in the field. Through a simple seesaw action that shifts the gun's centre of gravity to suit the different missions, the Pegasus can be rapidly engaged for deployment in less than 2.5 minutes with a detachment of 8 men.

Lightweight Materials

The Pegasus employs lightweight materials like titanium and high alloy aluminium that provides the strength and stability required to withstand the recoil force of a 155mm system.

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Innovative Recoil Management

The recoil of the Pegasus is a third lower than conventional 155mm howitzers. This is achieved through innovative recoil management design.

Technical and Performance Specifications

Range

Maximum Range: 19 km (Conventional); 30 km (Extended Range)

Rate of Fire

Burst Rate: 3 rounds in 24 seconds

Maximum Rate: 4 rounds per minute for 3 minutes Sustain Rate: 2 rounds per minute for 30 minutes

<u>Manpower</u>

No. of crew: 6-8

Mobility

Self-Propelled: 12 km/h (maximum)

Towed (Cross-country): 50 km/h (maximum)

Towed (Paved): 70 km/h (maximum) Towing Vehicle Type: 5 ton; 7 ton Engine: 21kW Lombardini 9LD625-2

Air Transportability
Fixed Wing: C130

Rotary Wing: CH-47D/SD

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