

RUAG

Aerospace Defence Technology



120 mm Compact Tank Gun

RUAG Land Systems' 120 mm Compact Tank Gun allows improving the fire power of many battle tanks to today's standard. This new gun is a logical development from 105 mm tank guns. With a specifically designed muzzle brake the 120 mm Compact Tank Gun is also suitable for lighter combat vehicles of the 20 to 30 t class.

- The required weight and space of the weapon system is almost equal to the 105 mm system
- Full compatibility with current and future 120 mm ammunition



Fire power of a main battle tank on a light armoured vehicle



Advantages

- Mobility of a light armoured vehicle with the fire power of a 120 mm main battle tank gun
- The compact gun design enables installation on lightweight platforms (>20 t)
- Low vehicle response due to muzzle brake and extended gun recoil
- The dispersion pattern performance is equal to the performance of the most modern MBTs if not higher
- Adaptive layout for future ammunition

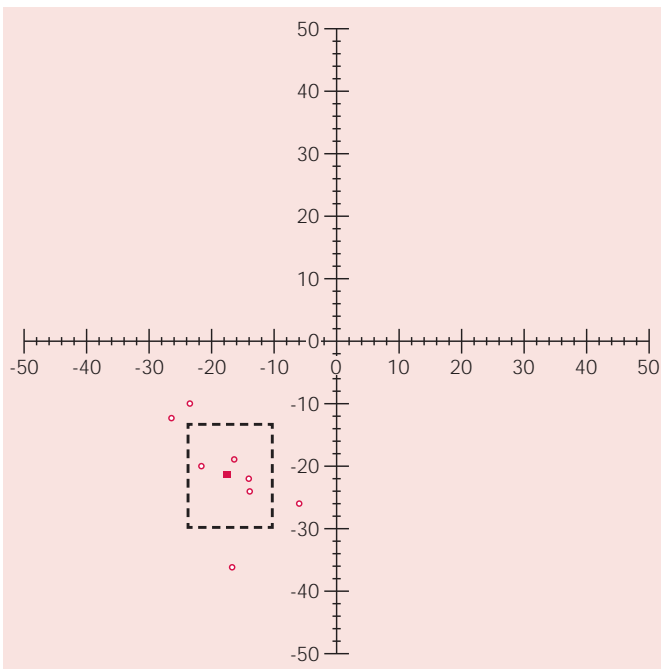
Upgunning of existing main battle tanks to 120 mm fire power



Advantages

- 120 mm NATO standard calibre fire power on an existing main battle tank of older generation
- 120 mm NATO calibre fire power for T-series tanks
- Dimensions fit within a standard 105 mm tank gun envelope
- Only minor turret-rework
- The dispersion pattern performance is equal to the performance of the most modern MBTs if not higher
- Adaptive layout for future ammunition

Technical data

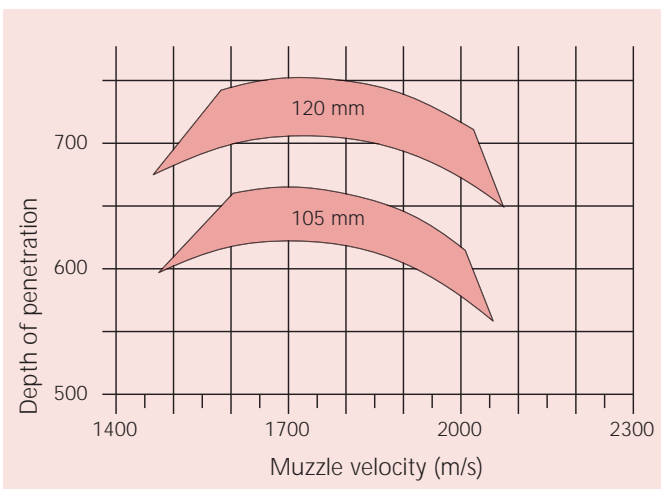


Dispersion pattern

Target distance 1'000 m
Number of rounds 8

Standard deviation

Elevation 0.17 mils
Azimuth 0.14 mils



The performance diagram shows the DOP increase attainable with the 120 mm calibre.

Gun parameters CV90120

Dropping block breech (semi-automatic)	
Mean recoil travel	480 mm
Max. recoil travel	500 mm
Mean recoil force	200 kN
Max. recoil force (with muzzle brake)	260 kN
Rate of fire 6–10 rounds/min (manual)	
Muzzle velocity (DM 33 L-50) 1'680 m/s	
Design gas pressure	7'400 bar
PIMP	7'100 bar

Masses

Elevating mass	2'600 kg
Recoiling mass	1'860 kg
Barrel mass L-50 (plus bore evacuator)	1'120 kg

Ammunition

The gun fires all 120 mm ammunition available today

The latest types of KE rounds have been fired, the related muzzle velocities are still classified

Performance comparison

The 105 mm potential is exhausted in view of

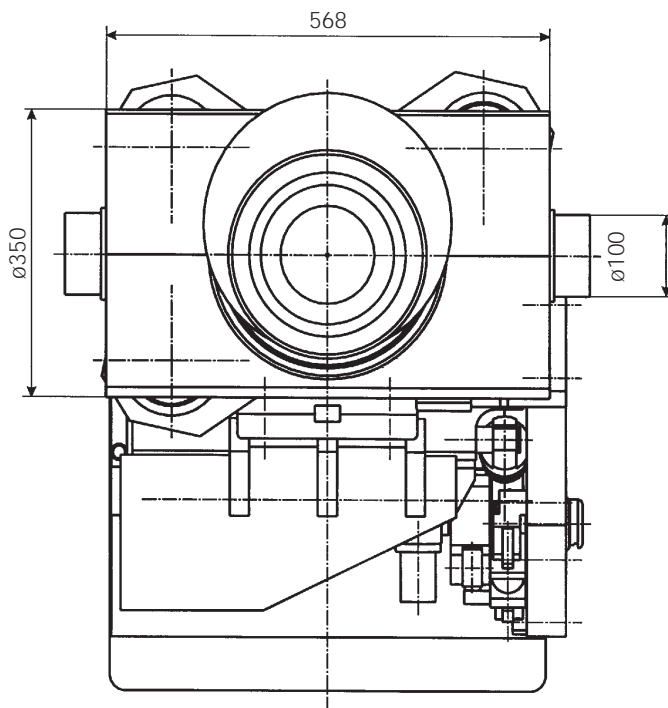
- gas pressure
- barrel length
- projectile fineness ratio

Dimensions



Barrel length

Cal	with muzzle brake	without muzzle brake
L 50	6'000 mm	
L 44	5'765 mm	5'280 mm



RUAG Land Systems proposes to extend slim 120 mm gun barrels to max. L52.

Cradle

The design of cradle and muzzle brake as well as the length of the recoil travel may be adapted to the individual characteristics of the overall system.

RUAG Land Systems

Allmendstrasse 86
CH-3602 Thun/Switzerland
www.ruag.com

Tel. +41 332 284 550
Fax +41 332 284 783
info.landsystems@ruag.com

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