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About ST Engineering
Land Systems

We are the land systems arm of ST Engineering, an integrated engineering group headquartered in Singapore and backed by 50 years of engineering expertise. Driven by a passion for innovation and quality, we deliver customised land systems and security solutions that meet the stringent operational requirements of defence, homeland security and commercial customers.

Our small arms and ammunition are designed to deliver high performance in all combat conditions faced by the modern warfighter. Providing superb reliability, precision, safety and ease of use, our proprietary designs are engineered to hit the mark when you need it most.
The SAR21 bullpup assault rifle offers high firing accuracy with a built-in Laser Aiming Device (LAD) for instant target acquisition even in low light conditions, and low recoil mechanism.

Lighter and more compact than an equivalent M16, SAR21 provides excellent manoeuvrability even in tight spaces. It is designed with minimal components for easy assembly, disassembly, cleaning and maintenance, with a factory-zeroed integrated 1.5x optical scope to minimise in-field zeroing.

Features
- Family of rifles with maximum commonality
- High accuracy
- Modular design
- Enhanced safety features

Specifications
- Calibre: 5.56 x 45mm
- Length: 640 – 805mm
- Weight: 3.0 – 4.0kg
Variants

SAR21 Modular Mounting System (MMS) – Standard

SAR21 MMS – Carbine

SAR21 Light Weight Carbine (LWC)

SAR21 with Under Barrel 40mm Grenade Launcher
A compact mission-configurable weapon system with a patented forward ejection system and one of the shortest bullpup rifles in the world, ST Engineering Land Systems’ BR18 is a highly accurate weapon that can be fired from both left and right sides without any modification.

It has enhanced safety features, dry lubrication coating, low recoil, dual magazine capability (SAR21/STANAG) and comes with MIL-STD-1913 Picatinny rails for optical aiming systems and other tactical accessories.

**Features**
- Robust and mission-configurable
- Compact and lightweight
- Fully ambidextrous control and firing operations
- Multi-role rifle system

**Specifications**
- Calibre: 5.56 x 45mm
- Length: 645 – 785mm
- Weight: 2.9 – 4.0kg
Variants

BR18 Assault Rifle (AR)

BR18 Marksman Rifle (MR)

BR18 Machine Gun Rifle (MGR)

BR18 with Under Barrel 40mm Grenade Launcher
Ultimax 100 Mk8

The world’s lightest machine gun that can be fired from a drum and reloaded on the move, Ultimax 100 Mk8 is extremely accurate due to its constant recoil system for greater controllability.

Features
- World’s lightest machine gun
- Low recoil
- Modular design

Specifications
- Calibre: 5.56 x 45mm
- Length: 855 – 982mm
- Weight: 5.0kg

Compatible with various magazine types for multiple operational scenarios
Variants

Ultimax 100 Mk8 Standard

Ultimax 100 Mk8 Carbine
ST Engineering Land Systems’ CPW is a cost-effective and compact sub-machine gun made of strong yet light engineering plastic and aluminum alloy.

Its unique cam recoil mitigation mechanism reduces recoil significantly with delayed blowback operation for accurate and controlled firing. The retractable buttstock allows CPW to be handled and carried like a conventional pistol for easy concealment for law enforcement and security forces.

**Features**
- Compact and lightweight
- Low recoil
- Low maintenance
- Multiple mounting options

**Specifications**
- Calibre: 9 x 19mm
- Length: 393 – 597mm
- Weight: 1.7kg
7.62mm General Purpose Machine Gun (GPMG)

The 7.62mm GPMG is a fully automatic, air-cooled, belt-fed, gas-operated weapon with a simple modular construction and disassembly procedure, making it the weapon of choice for military and paramilitary forces.

Features
- Heavy duty
- Modular design
- Low maintenance
- Adjustable rate of fire

Specifications
- Calibre: 7.62 x 51mm
- Length: 1255mm
- Weight: 11.4kg

Variant

7.62mm Co-axial Machine Gun (CMG)

This variant can be mounted on platforms such as the Remote Control Weapon Station, and on vehicles.
ST Engineering Land Systems’ 50MG quick-change barrel with fixed headspace can be changed in one action without any tools, in just seconds. It also has a left/right hand feeding system for fast switching of ammunition types, an open-bolt mechanism, and semi and automatic firing modes.

Multiple mounting options such as the M3 tripod, Pedestal Mount, 40/50 Cupola Weapon Station, Remote Control Weapon Station and Ring Mount are also available.

**Specifications**
- Calibre: 12.7 x 99mm
- Length: 1670mm
- Weight: 30.0kg

**Features**
- Tool-less quick-change barrel
- Left/Right hand feed
- Low maintenance
- Versatile
40mm Grenade Launcher (40GL) Mk1

Designed to fire 40mm low velocity and low velocity extended range grenades, ST Engineering Land Systems’ 40GL Mk1 features a patented drop down barrel design for quick loading/unloading of ammunition, and a double-action trigger mechanism that activates and releases the hammer in a single trigger pull.

40GL Mk1 is lightweight and versatile – it can be easily configured as an under barrel or stand-alone grenade launcher without any tools, or fitted with a Fire Control System for air burst programming.

Features
- Lightweight and versatile
- Ambidextrous operation
- Double-action trigger mechanism
- Modular design

Specifications
- Calibre: 40 x 46mm
- Length: 320 – 570mm
- Weight: 1.3kg
40mm Automatic Grenade Launcher (40AGL) Mk2

Features
- Low maintenance
- Enhanced safety features
- Versatile
- High ammunition compatibility

Specifications
- Calibre: 40 x 53mm
- Length: 1056mm
- Weight: 30.0kg

Designed to fire 40mm high velocity ammunition, ST Engineering Land Systems’ 40AGL Mk2 has multiple safety features such as Charging safety and Bolt Lock safety and a simple modular assembly for easy maintenance. It can be enhanced with various sight and mounting options, such as Reflex Sight, Lock and Fire Mount and Softmount to meet different tactical applications.
<table>
<thead>
<tr>
<th>Category</th>
<th>Model</th>
<th>Calibre (mm)</th>
<th>Length (mm)</th>
<th>Weight (kg)</th>
<th>Maximum Effective Range (m)</th>
<th>Rifling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rifle</td>
<td>SAR21</td>
<td>5.56 x 45</td>
<td>805</td>
<td>4.0</td>
<td>550/800 (point/area)</td>
<td>1 in 7~ 1 in 12~</td>
</tr>
<tr>
<td></td>
<td>SAR21 P-Rail</td>
<td>5.56 x 45</td>
<td>805</td>
<td>3.6</td>
<td>550/800 (point/area)</td>
<td>1 in 7~ 1 in 12~</td>
</tr>
<tr>
<td></td>
<td>SAR21 MMS Standard</td>
<td>5.56 x 45</td>
<td>755</td>
<td>3.5</td>
<td>550/800 (point/area)</td>
<td>1 in 7~ 1 in 12~</td>
</tr>
<tr>
<td></td>
<td>SAR21 MMS Carbine</td>
<td>5.56 x 45</td>
<td>680</td>
<td>3.5</td>
<td>450/600 (point/area)</td>
<td>1 in 7~ 1 in 12~</td>
</tr>
<tr>
<td></td>
<td>SAR21 LWC</td>
<td>5.56 x 45</td>
<td>640</td>
<td>3.0</td>
<td>450/600 (point/area)</td>
<td>1 in 7~ 1 in 12~</td>
</tr>
<tr>
<td></td>
<td>BR18 AR</td>
<td>5.56 x 45</td>
<td>645</td>
<td>2.9</td>
<td>450/600 (point/area)</td>
<td>1 in 7~</td>
</tr>
<tr>
<td></td>
<td>BR18 MR</td>
<td>5.56 x 45</td>
<td>785</td>
<td>3.2</td>
<td>550/800 (point/area)</td>
<td>1 in 7~</td>
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<tr>
<td></td>
<td>BR18 MGR</td>
<td>5.56 x 45</td>
<td>785</td>
<td>4.0</td>
<td>550/800 (point/area)</td>
<td>1 in 7~</td>
</tr>
<tr>
<td>Machine Gun</td>
<td>Ultimax 100 Mk8 Standard</td>
<td>5.56 x 45</td>
<td>982 + 50 (Extended)</td>
<td>5.0</td>
<td>550/800 (point/area)</td>
<td>1 in 7~ 1 in 12~</td>
</tr>
<tr>
<td></td>
<td>Ultimax 100 Mk8 Carbine</td>
<td>5.56 x 45</td>
<td>855 + 50 (Extended)</td>
<td>5.0</td>
<td>450/600 (point/area)</td>
<td>1 in 7~ 1 in 12~</td>
</tr>
<tr>
<td></td>
<td>CPW</td>
<td>9 x 19</td>
<td>393 + 204 (Extended)</td>
<td>1.7</td>
<td>100</td>
<td>1 in 10~</td>
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<tr>
<td></td>
<td>7.62mm GPMG</td>
<td>7.62 x 51</td>
<td>1255</td>
<td>11.4</td>
<td>1200</td>
<td>1 in 12~</td>
</tr>
<tr>
<td></td>
<td>7.62mm CMG</td>
<td>7.62 x 51</td>
<td>1090</td>
<td>10.1</td>
<td>1200</td>
<td>1 in 12~</td>
</tr>
<tr>
<td></td>
<td>50MG</td>
<td>12.7 x 99</td>
<td>1670</td>
<td>30.0</td>
<td>1830</td>
<td>1 in 15~</td>
</tr>
<tr>
<td>Grenade Launcher</td>
<td>40GL Mk1 Under Barrel</td>
<td>40 x 46</td>
<td>320</td>
<td>1.3</td>
<td>150/400 (point/area)* 350/600 (point/area)**</td>
<td>1 in 48~</td>
</tr>
<tr>
<td></td>
<td>40GL Mk1 Stand-alone</td>
<td>40 x 46</td>
<td>400 + 170 (Extended)</td>
<td>1.9</td>
<td>150/400 (point/area)* 350/600 (point/area)**</td>
<td>1 in 48~</td>
</tr>
<tr>
<td></td>
<td>40AGL Mk2</td>
<td>40 x 53</td>
<td>1056</td>
<td>30.0</td>
<td>1500</td>
<td>1 in 48~</td>
</tr>
</tbody>
</table>

*Low Velocity  **Low Velocity Extended Range
<table>
<thead>
<tr>
<th>Barrel Length (in)</th>
<th>Muzzle Velocity (m/s)</th>
<th>Rate of Fire (rpm)</th>
<th>Mode of Fire</th>
<th>Feeding Type</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.0</td>
<td>945 [SS109]</td>
<td>450 - 650</td>
<td>Safe, Semi &amp; Auto</td>
<td>SAR21 Magazine M16 Magazine</td>
<td>Gas operated, Closed Bolt</td>
</tr>
<tr>
<td>20.0</td>
<td>945 [SS109]</td>
<td>450 - 650</td>
<td>Safe, Semi &amp; Auto</td>
<td>SAR21 Magazine M16 Magazine</td>
<td>Gas operated, Closed Bolt</td>
</tr>
<tr>
<td>18.0</td>
<td>945 [SS109]</td>
<td>450 - 650</td>
<td>Safe, Semi &amp; Auto</td>
<td>SAR21 Magazine M16 Magazine</td>
<td>Gas operated, Closed Bolt</td>
</tr>
<tr>
<td>15.0</td>
<td>945 [SS109]</td>
<td>450 - 650</td>
<td>Safe, Semi &amp; Auto</td>
<td>SAR21 Magazine M16 Magazine</td>
<td>Gas operated, Closed Bolt</td>
</tr>
<tr>
<td>13.5</td>
<td>945 [SS109]</td>
<td>450 - 650</td>
<td>Safe, Semi &amp; Auto</td>
<td>SAR21 Magazine M16 Magazine</td>
<td>Gas operated, Closed Bolt</td>
</tr>
<tr>
<td>14.5</td>
<td>860 [SS109]</td>
<td>650 - 850</td>
<td>Safe, Semi &amp; Auto</td>
<td>SAR21 Magazine M16 Magazine</td>
<td>Gas operated, Closed Bolt</td>
</tr>
<tr>
<td>20.0</td>
<td>945 [SS109]</td>
<td>650 - 850</td>
<td>Safe, Semi &amp; Auto</td>
<td>SAR21 Magazine M16 Magazine</td>
<td>Gas operated, Closed Bolt</td>
</tr>
<tr>
<td>18.0</td>
<td>945 [SS109]</td>
<td>650 - 850</td>
<td>Safe, Semi &amp; Auto</td>
<td>SAR21 Magazine M16 Magazine</td>
<td>Gas operated, Closed Bolt</td>
</tr>
<tr>
<td>18.0</td>
<td>945 [SS109]</td>
<td>400 - 600</td>
<td>Safe, Semi &amp; Auto</td>
<td>SAR21 Magazine M16 Magazine U100 Drum Magazine</td>
<td>Gas Operated, Open Bolt</td>
</tr>
<tr>
<td>13.0</td>
<td>945 [SS109]</td>
<td>400 - 600</td>
<td>Safe, Semi &amp; Auto</td>
<td>SAR21 Magazine M16 Magazine U100 Drum Magazine</td>
<td>Gas Operated, Open Bolt</td>
</tr>
<tr>
<td>7.0</td>
<td>360</td>
<td>900 minimum</td>
<td>Safe, Semi &amp; Auto</td>
<td>CPW Magazine</td>
<td>Delayed Blowback</td>
</tr>
<tr>
<td>22.4</td>
<td>840</td>
<td>650 - 1150</td>
<td>Safe &amp; Fire</td>
<td>Belt Fed</td>
<td>Gas Operated, Open Bolt</td>
</tr>
<tr>
<td>23.1</td>
<td>840</td>
<td>700 - 1200</td>
<td>Safe &amp; Fire</td>
<td>Belt Fed</td>
<td>Gas Operated, Open Bolt</td>
</tr>
<tr>
<td>45.0</td>
<td>890</td>
<td>400 - 600</td>
<td>Safe, Semi &amp; Auto</td>
<td>Belt Fed</td>
<td>Gas Operated, Open Bolt</td>
</tr>
<tr>
<td>9.0</td>
<td>76* 100**</td>
<td>Single Shot</td>
<td>Safe &amp; Fire</td>
<td>Single Shot</td>
<td>Double Action Mechanism</td>
</tr>
<tr>
<td>9.0</td>
<td>76* 100**</td>
<td>Single Shot</td>
<td>Safe &amp; Fire</td>
<td>Single Shot</td>
<td>Double Action Mechanism</td>
</tr>
<tr>
<td>16.5</td>
<td>242</td>
<td>350 - 500</td>
<td>Safe, Semi &amp; Auto</td>
<td>Belt Fed</td>
<td>Advance Primer Ignition (API) Blowback</td>
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</tbody>
</table>