Kongsberg Gruppen ASA (KONGSBERG) is an international technology corporation that delivers advanced and reliable solutions that improve safety, security and performance in complex operations and during extreme conditions.

KONGSBERG is a customer focused organization with a worldwide performance culture. KONGSBERG works with demanding customers in the global defence, maritime, oil and gas and aerospace industries.
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KONGSBERG is the world’s leading provider of Remote Weapon Stations (RWS) providing flexible system solutions that meet our customer’s specific requirements. Through world class innovation, program execution and customer understanding we aim to provide high-tech systems for enhanced situational awareness and protection of personnel and property in high-risk areas.

The PROTECTOR Family of Remote Weapon Stations are systems suitable for any mission whether on land or at sea, on mobile or static platforms for remote operation of payloads ranging from small caliber weapons to medium caliber automatic cannons. The system is modular, and all of the different variants of the PROTECTOR RWS share the same baseline technology.

PROTECTOR capabilities allow soldiers to operate from a protected position using stabilized precision optics and laser to observe, detect and engage targets with increased accuracy and reduced collateral damage. The feature of the PROTECTOR’s aim and fire function is the Detached Line of Sight. It enables the gunner to keep his sights on target, independent of the ballistic solution for the weapon and ammunition in use.

The PROTECTOR is in full scale production and is qualified for global operations. PROTECTOR is a mature and proven product based on millions of hours of operational experience in combat zones combined with a close cooperation with Defence Forces worldwide.

THE PROTECTOR HAS AN UNPRECEDENTED OPERATIONAL READINESS RATE (ORR) OF 99%
SUPPORT IN THE EXTREME
Fully qualified and compliant with multiple nations’ performance requirements, the M151 PROTECTOR is built for operation in extreme environmental conditions. Logging more than 30 million hours of operation and more than 20 million hours in combat, the M151 PROTECTOR has extremely high reliability with a proven Operational Readiness Rate (ORR) of 99%.

THE INTEGRATED SMOKE GRENADE LAUNCHERS ALLOW THE OPERATOR TO LAUNCH SMOKE INDEPENDENT OF THE VEHICLE’S ORIENTATION
In August 2007, KONGSBERG was awarded the prestigious contract of CROWS II (Commonly Remotely Operated Weapon Station) by the US Army. CROWS is a joint acquisition program for weapon stations for the US Army vehicle programs.

The M153 PROTECTOR is based on the proven M151 PROTECTOR, tailor made to meet the specific requirements from the US Government.

In August 2012, KONGSBERG was awarded the follow-on CROWS contract, enabling KONGSBERG to continue the well-established cooperation with the the US Army.
The PROTECTOR Nordic is chosen and developed in close cooperation with the Norwegian and Swedish Armed Forces.

The system reflects the most technically advanced PROTECTOR RWS ordered to date, and is a key element in the foundation for cooperation in the Nordic material programs.

The extended functionality includes the Day Camera VIS 95 with 95 field of view and the Infrared Aim Laser (850 nm), both developed by KONGSBERG.
The PROTECTOR Dual Remote Weapon Station (DRWS) is based on the existing PROTECTOR Family of Remote Weapon Stations. This innovative system features, amongst other things, a coaxial weapon adaptor for 7.62 mm and 5.56 mm and dual user functionality. The coaxial weapon is on the same axis as the main gun, and the system automatically compensates for the parallel axis between the sights and the axis.

The PROTECTOR DRWS was chosen by the Canadian Army for the Tactical Armoured Vehicle Programme in 2012.

THE DUAL WEAPON ALLOWS SOLDIERS TO QUICKLY AND EASILY SWITCH FROM LARGER TO SMALLER CALIBER WEAPONS ON THE ASYMMETRIC BATTLEFIELD
The PROTECTOR with Non Lethal Effectors, closes a capability gap in peace keeping, peace enforcement and humanitarian operations as well as today’s asymmetric warfare.

The capabilities enable soldiers to fulfill the major tenet of counter-insurgency warfare “First protect the population”, providing flexible options from shine to shoot as dictated by the rules of engagement and local situation.

**FEATURES:**
- **Shine:** Green Veiling Glare Laser, High Powered White Light.
- **Shout:** Long Range Acoustic Device for hailing and warning in the language and dialect of the local population.
- **Shove:** 66 mm or 40 mm Flash Bang Launchers.
- **Show:** Lethal and Non-Lethal capability.
- **Shoot:** Engage hostile targets with lethal force from integrated weapons.
Equipped with Sea PROTECTOR, increased naval dominance will be achieved over opposing forces. On Interceptors and small patrol boats, the Sea PROTECTOR serves as the main armament. On ships, it provides self-defence and increased capability to counter asymmetric threats, at sea or in harbour. All this while the ships crew remains safe and protected from hostile fire.

The fielded Sea PROTECTOR provides exceptional capabilities for harbor defence and is well suited for naval ships and patrol crafts of all types and classes. Multiple weapon stations can be networked and operated from the Combat and Bridge Systems.

The SEA PROTECTOR PROVIDES INCREASED PROTECTION AGAINST THE CORROSIVE ENVIRONMENT AT SEA WITH AN INTEGRATED CLEANING SYSTEM TO REMOVE SEA SPRAY AND SALT FROM THE SENSOR LENSES.
PROTECTOR Super Lite is the extension of the highly successful PROTECTOR Family with the cost effective, lightweight and man portable PROTECTOR Super Lite Remote Weapon Station. The highly accurate PROTECTOR Super Lite is an efficient alternative to legacy weapon systems such as ringmounts and pintle mounted weapon systems.

The low weight and modularity allows soldiers to easily transfer the system between platforms based on Mission, Enemy, Terrain, Troops, Time, Civilians (METTT-C) conditions. The combat proven system can also be used in the dismount on a tripod in a hasty and deliberate defensive position.

This low weight system can be operated both remotely and manually.

**FEATURES:**
- High degree of commonality with the rest of the PROTECTOR Family
  - High safety standards
  - Common vehicle interface
  - Common Fire Control Unit and Control Grip
  - Day and night capability
  - Classroom and embedded trainer available
  - Low life cycle cost
  - Add on functionalities such as:
    - Thermal imaging
    - Stabilization
The PROTECTOR Lite is a low weight system designed for low recoil weapons with more than 80% commonality with the M151 PROTECTOR and the M153 PROTECTOR; identical User Interface and similar Operation and Training Procedures.

The PROTECTOR Lite has been fielded in Afghanistan and Iraq and is also integrated with integrated acoustic Anti Sniper Systems.

The soldier can fire on the move or in fixed installations in both day and night conditions in situations calling for small caliber weapons.
The stabilized, high precision PROTECTOR Medium Caliber RWS, with its high-end sensor solutions and servo systems makes it a state of the art remote turret system.

HIGH EFFECT AND MULTIPLE EFFECTORS
The medium caliber automatic cannon and coaxial machine gun provides the necessary tools to engage in a wide spectrum of situations. The availability of having two ammunition types simultaneously gives the flexibility to configure the system to engage both soft and hard targets beyond 3,000 meters.

The optional commander’s sight independent Weapon Station gives the commander an independent surveillance and lethal/non-lethal engagement capability and enables the hunter/killer capability.

FEATURES:
- High degree of commonality
- High safety standards
- Highly reliable
  - Low profile
  - Low weight
  - Modular armour protection
  - Flexible integration on wheeled and tracked vehicles
  - Additional space inside the vehicle compared to traditional turrets
    - Reduced signature
    - Loading and access to sub-systems from under armour
    - Increased mobility
EXTREME PERFORMANCE FOR EXTREME CONDITIONS
PROTECTOR TRAINING SYSTEM

Sometimes you have to recognize that you have a position in the market that is unique. KONGSBERG Simulation & Training has through decades simulated all aspects of the PROTECTOR Remote Weapon Station.

The level of fidelity in our Gunner Skill Trainer is a result of close co-operation with the development and production of the live system. PROTECTOR Training System is the system of choice when it comes to education of your soldiers. PROTECTOR Training System covers every aspect of training for the PROTECTOR Remote Weapon Stations and PROTECTOR Remote Turrets.

This includes:
- Remote Weapon Station (RWS) Gunner Skill Trainer for land and marine environments
- Medium Caliber Turret (MCT) Gunner Skill Trainer
- Medium Caliber Turret Crew Trainer
- Vehicle Crew Trainer.

PREPARING SCENARIOS

PROTECTOR Training System contains a variety of entities and 3D terrain databases to make the virtual training realistic. The instructor station can be used to create mission specific scenarios to train as realistic as possible. A mission can be planned in a given area by placing entities in the map, and giving the entities certain tasks.

The scenario can be tested and adjusted in dry runs on the instructor station. With this possibility to customize scenarios for specific missions, soldiers can practice on similar situations like those faced in combat operations.
**MULTIPLE WEAPON**
The PROTECTOR Weapon Station Trainer family consists of Medium Caliber, Medium Weight, Lite, Super Lite and Sea PROTECTOR Weapon Station simulators. PROTECTOR Training System supports all different weapon stations, weapons, munitions and platforms.

**TRAINING MODES**
PROTECTOR Training System can be delivered for different training modes of various fidelity levels. The combination of COTS hardware and operational equipment makes this a cost effective and realistic solution.

In Standalone mode the student perform Gunner Skill Training on one single computer. Appended training is done inside the vehicle in realistic surroundings using the live Fire Control Unit and control grip. A portable compact computer runs the simulator inside the vehicle.

Classroom mode is configured for several trainee positions set up in a network with an instructor station. The instructor can manage the trainee position, for instance by monitoring students on the instructor display and generate evaluation reports for specific trainees after completion of exercises.

In Classroom mode the simulator can be configured to perform individual skill training, turret crew training (gunner and commander) and vehicle crew training (gunner, commander and driver).

The fidelity level is based on customer needs. To achieve a more realistic vehicle crew training experience, the PROTECTOR Training system supports cabin mock-ups and motion platforms.
With focus on customer satisfaction, KONGSBERG has established a Through Life Support concept to provide world class support to PROTECTOR customers worldwide. When procuring a PROTECTOR Remote Weapon Station, lifetime support is guaranteed. KONGSBERG offers a range of After Sales product support options specifically tailored to keep the PROTECTOR at the very forefront of weapon systems. Training is a natural part of our customer services, and provides users with training courses whenever they need, wherever they are.

The objectives of our Customer Services is to maintain the availability and readiness of the PROTECTOR and keeping it an world class and state of the art RWS.

YOU WILL FIND THE KONGSBERG AFTER SALES CUSTOMER SUPPORT OUTSTANDING. OUR CUSTOMIZED SERVICES WILL ENSURE THAT YOUR INVESTMENTS ARE OPTIMIZED FOR THE FULL SERVICE ON YOUR PROTECTOR
PROTECTOR INTEGRATED MOBILE MAINTENANCE STATION (PIMMS) - THE FLEXIBLE SYSTEM FOR MAINTENANCE AND REPAIRS

The PROTECTOR Integrated Mobile Maintenance Station (PIMMS) has been designed to provide responsive technical and maintenance field service support. This unit is a proven military self-contained solution that can be deployed to any desired location to complement logistic capabilities.

The PIMMS is provided with a self-contained lifting capability for the PROTECTOR RWS. Saved time and costs are a direct result of using this system, critical factors when out in the field.

FEATURES:
- Technical support
- Field service support
- Training
- Repair & Overhaul services
- Periodic maintenance
- Spare part provisioning and sales
- Configuration and change management
- Obsolescence management

IN REAR ECHELONS FOR PRE-DEPLOYMENT CHECKS, IN TRAINING EXERCISES AND IN OPERATIONAL DEPLOYMENTS FOR OPERATOR AND MAINTENANCE TRAINING AIMED AT ALL LEVELS FOR GARRISON UNITS
### TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>Weight excl. weapon and ammunition</th>
<th>Height excl. weapon and ammunition</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M151 PROTECTOR</strong></td>
<td>135 kg (298 lbs)</td>
<td>774 mm (30.47 inches)</td>
<td>Smoke grenade launchers</td>
</tr>
<tr>
<td><strong>M153 PROTECTOR</strong></td>
<td>168 kg (370 lbs)</td>
<td>762 mm (30 inches)</td>
<td>Ballistic Protection</td>
</tr>
<tr>
<td><strong>PROTECTOR Nordic</strong></td>
<td>174 kg (383 lbs)</td>
<td>765 mm (30.2 inches)</td>
<td>KONGSBERG VIS 95 Day Camera 95° FoV, KONGSBERG Infrared Aim Laser (850 nm)</td>
</tr>
<tr>
<td><strong>PROTECTOR WITH NON LETHAL EFFECTORS</strong></td>
<td>198 kg (437 lbs)</td>
<td>1067 mm (42 inches)</td>
<td>Green Veiling Glare Laser, High Powered White light, long range acoustic device, Flash Bang launchers hardware</td>
</tr>
<tr>
<td><strong>Sea PROTECTOR</strong></td>
<td>135-156 kg (297-333 lbs)</td>
<td>762 mm (30 inches)</td>
<td>Multiple RWS’s can be operated from the combat and bridge system</td>
</tr>
<tr>
<td><strong>PROTECTOR Dual</strong></td>
<td>189 kg (416 lbs)</td>
<td>766 mm (30.2 inches)</td>
<td>Dual weapon operations</td>
</tr>
<tr>
<td><strong>PROTECTOR Super Lite</strong></td>
<td>30 kg (65 lbs)</td>
<td>507 mm (19.7 inches)</td>
<td></td>
</tr>
<tr>
<td><strong>PROTECTOR Lite</strong></td>
<td>74 kg (163 lbs)</td>
<td>610 mm (24 inches)</td>
<td></td>
</tr>
<tr>
<td><strong>PROTECTOR Medium Caliber</strong></td>
<td>1 800 kg (3 970 lbs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Integrated Weapons</strong></td>
<td>M151, M153, Nordic, Non Lethal, Dual and Sea PROTECTOR</td>
<td></td>
<td>Browning M2 (12.7 mm), M249 (5.56 mm) M240 (7.62 mm), MK19 (40 mm Grenade Launcher), Javelin, MK47, Heckler &amp; Koch GMG 40 mm AGL and M134 Airburst</td>
</tr>
<tr>
<td><strong>Ammunition Capacity</strong></td>
<td>M151, M153, Nordic, Non Lethal, Dual and Sea PROTECTOR</td>
<td></td>
<td>M2 &gt; 600 rounds M240 &gt;1000 rounds</td>
</tr>
<tr>
<td><strong>Lite and Super Lite</strong></td>
<td>M249 and M240</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dynamic Capabilities</strong></td>
<td>M151, M153, Nordic, Non lethal, Dual &amp; Sea PROTECTOR:</td>
<td></td>
<td>Azimuth 360° unlimited range, 90° /s Elevation 360° unlimited range, 90° /s</td>
</tr>
<tr>
<td><strong>Lite and Super Lite</strong></td>
<td>M249 and M240</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cameras /Sensors</strong></td>
<td></td>
<td></td>
<td>Flexibility to meet customer requirements</td>
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</table>
NOTES //:
WORLD WIDE OPERATIONS

KONGSBERG is an international corporation with strong Norwegian roots. Collaboration with our customers, partners and suppliers, and a commitment to understand the context where our technology is applied, are important driving forces behind the corporation's international development and growth.

DETERMINED INNOVATIVE COLLABORATIVE RELIABLE///: