

**Section VII. Technical Specifications**

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**STATEMENT OF COMPLIANCE  
TO TECHNICAL SPECIFICATIONS**

The bidder must state in the last column opposite each parameter and required specifications either “**Comply**” or “**Not Comply**”. All pages shall be properly signed. Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of **ITB** Clause above goods manufactured by us.

**CLARIFICATION AND SETTLEMENT OF CONFLICTING INTERPRETATION OF  
THE TECHNICAL SPECIFICATIONS**

All clarifications regarding the technical specifications stipulated in this section will be clarified by the members of the **PN TWG member; the Rocket Launcher Light (RLL) Acquisition Project of the Philippine Navy** Circular of Requirements will be referred to. In cases of conflicting interpretations, the nature and purpose of the equipment will be the basis of interpretation. The main basis for technical specifications and requirements is the nature and purpose of the equipment and its intended use as determined by the doctrinal application of the end-users represented herein by the **Project Management Team**.

**Section VII. Technical Specifications**

**TECHNICAL SPECIFICATIONS**

<b>1.0</b>	<b>GENERAL</b>	
<b>1.1 General Description</b>	1.1.1	<p>1.1.1 The procurement of (702) units of Rocket Launcher Light will fill-up the gap and raise the readiness rating of the Philippine Marine Corps in terms of firepower. This will not only enhance the operational capability of the Corps in the pursuit of Internal Security Operations but will also fulfill its tasks in the Territorial Defense Operations and Humanitarian Assistance and Disaster Response Operations to accomplish its mission. The Rocket Launcher Light will provide additional fire power for MBLT's and MARSOG Companies designed primarily for tactical movement and combat operations that will be included in the inventory of the PMC.</p> <p>RLL that is portable, reusable, direct-fire "rocket-launched" weapon to defeat the enemy in fortified positions. A shoulder fired weapon that is lightweight so as not to sacrifice the maneuverability and speed of execution of operating troops. A weapon that can be an add-on weaponry for each PMC squad.</p>
<b>2.0</b>	<b>PHYSICAL, OPERATIONAL, TECHNICAL SPECIFICATIONS AND OTHER REQUIREMENTS (TABULAR FORM)</b>	
<b>2.1 PHYSICAL REQUIREMENTS (ROCKET LAUNCHER LIGHT)</b>		
<b>SPECIFICATIONS</b>	<b>CHARACTERISTICS</b>	<b>STATEMENT OF COMPLIANCE</b>
a. Caliber	The caliber of Rocket Launcher Light must be 40mm.	
b. Barrel	The barrel must be standard smooth bore. Steel 4140 minimum and chrome plated	
c. Length	The overall length of Rocket Launcher Light must not be more than 1.0m	
d. Weight	The overall weight of Rocket Launcher Light must not be more than seven (7) kg	

**Section VII. Technical Specifications**

		including optical sight and bipod.	
e. Markings		Each rocket launcher light should have its own unique serial number and its date of manufacture.	
f. Bipod		Equipped and telescopic legs	
<b>3.0</b>	<b>OPERATIONAL CHARACTERISTICS OF ROCKET LAUNCHER LIGHT</b>		
		<b>CHARACTERISTICS</b>	<b>STATEMENT OF COMPLIANCE</b>
Capable of Launching the following ammunitions:		Can fire a variety of warheads for Anti-Personnel, Anti- Tank, Thermobaric, Fragmentation and Tandem Charges.	
Muzzle velocity		The muzzle velocity of the rocket launcher light should be at least 100 m/s	
Rate of fire		The rocket launcher light should be able to fire at least 4 rds per minute. (sustained)	
Effective range		100 to 2000 meters (ammo dependent)	
Trigger Pull		The trigger pull of the rocket launcher light must be adjustable to 5lbs	
Safety Range		The safety range of the squad rocket launcher light should not be more than 25m.	
Area of rearward blast		Maximum distance of thirty (30) meters at a maximum angle of 70 degrees	
Service Life		The Rocket Launcher Light must be able to fire a minimum 1000 rounds	
Anti-cook-off		Must not cook off when firing 4 rounds in one minute.	
<b>4.0</b>	<b>ROCKET LAUNCHER LIGHT SPARE PARTS TOOLS AND ACCESSORIES</b>		
		<b>SPECIFICATIONS</b>	<b>STATEMENT OF COMPLIANCE</b>
4.0.1 Accessories		Description	
Individual Spare parts Tools and accessories.		Brand new collapsible bipod (folding and telescopic legs)	

**Section VII. Technical Specifications**

1 Set per Weapon	Optical sight with elevating mechanism	
	Sling	
	Cleaning rod	
	Rod with washer	
	Cover with belt	
	Backpack for 3 rounds of ammunition	
	Tools for assembling and disassembling firing mechanism	
	Key-screwdriver	
	Drift	
	Striker	
	Striker spring	
	Nipple	
	Bushing	
	Nozzle	
SPTA set for every 9 weapon	Wooden crate with SPTA set for every 9 weapons	
	Striker	
	Bushing	
	Striker spring	
	Nipple	
	Lap assembly	
	Handle with nut	
	Handle with washer	
	Front ring	
	Rear ring	
	Right handle	
	Left handle	
	Spring	
	Catch spring	
	Sight testing device (cold zeroing device)	
	Cleaning rod	
	Spanner-screwdriver	
Drift		
Tool for assembling/disassembling of firing mechanism		

**Section VII. Technical Specifications**

4.0.2 Optical Sight Mechanism					
a. Magnification	At least 2.7x				
b. Field of view	At least 13 Degrees				
c. Resolution	At least 19 minutes at angular measurement				
d. Range (direct aiming)	50 to 500 meters				
e. Range (elevation)	100 to 2000 meters				
f. Sight Adjustment	Equipped with elevating mechanism; angle of elevation of at least 30 degrees				
<b>5.0</b>	<b>OPERATORS AND TECHNICAL MANUALS</b>				
5.1	OPERATORS MANUAL	Provide operating instructions for the rocket launcher light and unit level preventive and corrective maintenance procedures as applicable. Provide print out and electronic copy. One printed and e-copy each per launcher, sub caliber training device and optical sight in English language			
<b>7.0</b>	<b>PAINTING, MARKING AND PACKING OF ROCKET LAUNCHER LIGHT</b>				
<b>SPECIFICATIONS</b>					<b>STATEMENT OF COMPLIANCE</b>
7.1	Painting of Rocket Launcher Light	Painting of all Rocket Launcher Light should be similar to Philippine Marine Corps weapons.			
7.2	Marking of Rocket Launcher Light	All RLL should be marked with an engraved "AFP Property" and individual serial number in addition to the manufacturer's label.			
7.3	Packing of Rocket Launcher Light	Dimension (mm)	Volume (mm)	Weight (kg)	
7.3.1	Wooden case with 9 weapon and box SPTA sets for 9 weapons	1240x640x40	0.349	103	
7.3.2	Wooden Case with individual SPTA set	1520x630x400	0.380	62	
7.3.3	Wooden case with optical sights	102x640x325	0.212	68	
<b>8.0</b>	<b>WARRANTY</b>				<b>STATEMENT OF COMPLIANCE</b>

**Section VII. Technical Specifications**

The proponent shall guarantee the normal operation of the RLL's, warranties the parts and services for up to two (2) years from the date of delivery to the end-users. Any part found to be defective due to factory defect within the two (2) years period from date of delivery must be repaired or replaced by technical/ field service representative free of charge to include services.		
<b>9.0</b>	<b>SPARE PARTS AND REPAIR PARTS</b>	STATEMENT OF COMPLIANCE
The proponent must guarantee the availability of spare and repair parts for at least 15 years from the date of the delivery to the end-users.		
<b>10.0</b>	<b>RLL OTHER REQUIREMENTS</b>	STATEMENT OF COMPLIANCE
Condition	Must be Brand New, unused and manufactured after the signing of the contract.	

<b>11.0</b>	<b>Rocket Propelled Grenade, 40mm, High Explosive, Fragmentation, Anti-Personnel</b>		
	SPECIFICATION		STATEMENT OF COMPLIANCE
<b>11.1</b>	<b>Description</b>	Designed for destroying enemy manpower and weapon positions in the open, in trenches, in field shelters, in light-armored vehicles, and in non-armored materiel by direct fire on the embrasures of field fortification and within urban areas.	
<b>11.2</b>	<b>Weapons Application</b>	Recoilless Launcher Light Family (40mm)	
<b>11.3</b>	<b>Technical Data:</b>		
<b>11.3.1</b>	<b>Dimension and Weight:</b>		
<b>11.3.1.1</b>	Diameter of Body	40mm	
<b>11.3.1.2</b>	Round Weight, max	2kgs	
<b>11.3.1.3</b>	Grenade Weight, max	1.5 kgs	
<b>11.3.2</b>	<b>Grenade Warhead:</b>		
<b>11.3.2.1</b>	Type	Fragmentation	
<b>11.3.2.2</b>	Material	Steel	
<b>11.3.2.3</b>	Filler	High Explosive	

**Section VII. Technical Specifications**

11.4	Color	Manufacturer's Standard	
11.5	Marking (round)	Nomenclature Lot Number (Indicating Manufacturer's Code, Lot Number, Year of production)	
11.6	Type of Filler		
11.6.1	Fuze	Point Detonating with Super Quick and Graze (anti-ricochet) Function	
11.6.2	Primer:	Percussion	
11.6.3	Propelling Charge:	Low Explosive	
11.7	<b>Performance:</b>		
11.7.1	Lethal Radius	At least 22 meters	
11.7.2	Maximum Range	> 1,000 meters	
11.7.3	Direct Fire Range, min	At least 180 meters	
11.7.4	Velocity	At least 152mps	
11.8	<b>Inner Packaging:</b>	One (1) round packed in a Plastic container, sealed with self-adhesive tape. 18 rounds accommodated in a Wooden Box (Termite Treated)	
11.9	Marking (packing)	Philippine Marine Corps PH Government Property Nomenclature Lot Number (Indicating Manufacturer's Code, Lot number, Year of Production) Manufacturer	
		Quantity per Box Weight (N.E.W./Net/Gross) Dimension Hazard Classification Code	
	<b>Other Requirements</b>	<ul style="list-style-type: none"> <li>- Not valid if the product found to have alteration or erasures;</li> <li>- Palletized(Heavy duty plastic or wood), nothing higher than 1.5 meters per pallet;</li> <li>- The product must be sealed in its Original Manufacturer's Packaging;</li> <li>- Delivered HE must not be more than one year from the date of manufacture to delivery;</li> </ul>	



**Section VII. Technical Specifications**

		<ul style="list-style-type: none"> <li>- Sampling procedures and tables for inspection attributes according to MIL-STD 105E;</li> <li>- Test firing shall be conducted at the contractor's facility and shall present test and evaluation procedures: dimensions; visual inspection; and functional test firing.</li> <li>- Availability of 3 Rounds 40mm HE ammunition for 15 participants of Train the Trainer's training at no cost to the AFP; and</li> </ul> <p>One (1) year minimum warranty</p> <ul style="list-style-type: none"> <li>- For foreign bidders, they shall have a local representative with Indentor's License or License to Operate or Deal in Ammunitions issued by PNP.</li> </ul>	
<b>12.0</b>	<b>Rocket Propelled Grenade, 40/73 mm, High Explosive, Anti-Tank</b>		
	SPECIFICATIONS		STATEMENT OF COMPLIANCE
<b>12.1</b>	<b>Description</b>	Designed for destroying tanks, self-propelled guns, and other armored vehicles. It can also be used against troops, weapon emplacements in trenches, field shelters or in brick-wall fortifications.	
<b>12.2</b>	<b>Weapons Application:</b>	Recoilless Launcher Light Family (40mm)	
<b>12.2.1</b>	<b>Technical Data:</b>		
<b>12.2.2</b>	<b>Dimension and Weight:</b>		
<b>12.2.2.1</b>	Diameter of Body	40mm	
<b>12.2.2.2</b>	Diameter of Warhead	73mm	
<b>12.2.2.3</b>	Round Weight, max	2.0kgs	
<b>12.2.2.4</b>	Grenade Weight, max	1.6 kgs	
<b>12.3</b>	<b>Grenade Warhead:</b>		
<b>12.3.1</b>	Type	High Explosive Anti-Tank (HEAT)	
<b>12.3.2</b>	Material	Manufacturer's Standard	
<b>12.3.3</b>	Filler	High Explosive	

**Section VII. Technical Specifications**

12.4	Color	Manufacturer's Standard	
12.5	Marking (round)	Nomenclature Lot Number (Indicating Manufacturer's Code, Lot Number, Year of production)	
12.6	Type of Filler		
12.6.1	Fuze:	Piezoelectric Type	
12.6.2	Primer:	Percussion	
12.6.3	Propelling Charge:	Low Explosive	
12.7	<b>Performance:</b>		
12.7.1	Armor Penetration	300 mm	
12.7.2	Maximum Range	500 meters	
12.7.3	Direct Fire Range, min	300 meters	
12.7.4	Velocity	140 m/s	
12.8	<b>Inner Packaging:</b>	One (1) round per Airtight Plastic Bag One (1) Propellant Charge per plastic container Three (3) plastic containers in an airtight plastic bag	
12.9	<b>Outer Packaging:</b>	Six (6) rounds packed in Wooden Box (Termite Treated)	
		Philippine Marine Corps PH Government Property Nomenclature Lot Number (Indicating Manufacturer's Code, Lot number, Year of Production) Manufacturer Quantity per Box Weight (N.E.W./Net/Gross) Dimension Hazard Classification Code	
12.10	<b>Other Requirements</b>	<ul style="list-style-type: none"> <li>- Not valid if the product found to have alteration or erasures;</li> <li>- Palletized(Heavy duty plastic or wood), nothing higher than 1.5 meters per pallet;</li> <li>- The product must be sealed in its Original Manufacturer's Packaging;</li> <li>- Delivered HEAT must not be more than one year from the date of manufacture to</li> </ul>	

**Section VII. Technical Specifications**

		delivery; - Sampling procedures and tables for inspection attributes according to MIL-STD 105E; - Testfiringshallbeconductedatth econtractor’sfacilityandshallpre senttestandevaluationprocedur es: dimensions; visual inspection; and functional; the test firing. - Availability of 1 Round 40mm HEAT ammunition for 15 participants of Train the Trainer’s training at no cost to the AFP; and One (1) year minimum warranty For foreign bidders, they shall have a local representative with Indentor’s License or License to Operate or Deal in Ammunitions issued by PNP.	
<b>13.0</b>	<b>Rocket Propelled Grenade, 40/106mm, Thermobaric</b>		
	SPECIFICATIONS		STATEMENT OF COMPLIANCE
<b>13.1</b>	Description	Intended to defeat enemy manpower and equipment placed mainly in field type shelters, battle field fortifications, reinforced buildings, stone, brick or concrete fortifications, caves in the open, and light armored and unarmored vehicles.	
<b>13.2</b>	Weapons Application	Recoilless Launcher Light Family (40mm)	
<b>13.3</b>	<b>Technical Data</b>		
<b>13.3.1</b>	<b>Dimension and Weight:</b>		
<b>13.3.1.1</b>	Diameter of Body	40mm	
<b>13.3.1.2</b>	Diameter of Warhead	106mm	
<b>13.3.1.3</b>	Round Weight, max	4.6 kgs	
<b>13.3.1.4</b>	Grenade Weight, max	4.2 kgs	
<b>13.3.2.1</b>	<b>Grenade Warhead:</b>		
<b>13.3.2.2</b>	Type	Thermobaric	
<b>13.3.2.3</b>	Material	Manufacturer’s Standard	

**Section VII. Technical Specifications**

13.3.2.4	Filler	Thermobaric Composition	
13.3.2.5	Color	Manufacturer's Standard	
13.3.2.6	Marking (round)	Nomenclature Lot Number (Indicating Manufacturer's Code, Lot Number, Year of production)	
13.3.3	Type of Filler		
13.3.3.1	Fuze:	Point Detonating with Super Quick and Graze (anti-ricochet) Function	
13.3.3.2	Primer:	Percussion	
13.3.3.3	Propelling Charge:	Low Explosive	
13.3.4	<b>Performance:</b>		
13.3.4.1	Lethal Effect	Combined High Pressure Blast Wave with Thermal Emission (Shock and Heat)	
13.3.4.2	Maximum Range	1,200 meters	
13.3.4.3	Direct Fire Range, min	160 meters	
13.3.4.4	Velocity	70 mps	
13.4	Inner Packaging	One (1) round per Airtight Plastic Bag; One (1) Propellant Charge CP- 73 packed in Plastic container; Three (3) containers in one plastic bag;	
13.5	Outer Packaging	Six (6) rounds packed in a Wooden Box (Termite Treated) Philippine Marine Corps PH Government Property Nomenclature Lot Number (Indicating Manufacturer's Code, Lot number, Year of Production) Manufacturer Quantity per Box Weight (N.E.W./Net/Gross) Dimension Hazard Classification Code	
13.6	Other Requirements	- Not valid if the product found to have alteration or erasures;  - Palletized (Heavy duty plastic or wood), nothing higher than 1.5 meters per pallet;  - The product must be sealed in its Original Manufacturer's Packaging;	

**Section VII. Technical Specifications**

		<ul style="list-style-type: none"> <li>- Delivered Thermobaric must not be more than one year from the date of manufacture to delivery;</li> <li>- Sampling procedures and tables for inspection attributes according to MIL-STD 105E;</li> <li>- Testfiringshallbeconductedatthe contractor’sfacilityandshallpresenttestandevaluationprocedures: dimensions; visual inspection; and functional; the test firing.</li> <li>- Availability of 1 Round 40mm Thermobaric ammunition for 15 participants of Train the Trainer’s training at no cost to the AFP; and</li> </ul> <p>One (1) year minimum warranty</p> <p>For foreign bidders, they shall have a local representative with Indentor’s License or License to Operate or Deal in Ammunitions issued by PNP.</p>	
<b>14</b>	<b>RLL Cal 7.62x39mm TRAINING DEVICE</b>		
	<b>SPECIFICATIONS</b>		<b>STATEMENT OF COMPLIANCE</b>
	<b>PARAMETERS</b>		
<b>14.1</b>	<b>Description</b>	<p>Cal. 7.62mm Training Device live weapons features cold forged barrel designed to fire Cal. 7.62x39 mm Cartridges with Tracer bullet with muzzle velocity matching that of 40mm rocket launcher light rounds.</p> <p>All functions performed during normal operational use of 40mm rocket launcher light family and live rockets are performed with Training Device including the - Preparation of the grenade - proper loading and locking of the grenade, - safe handling and fire</p>	

**Section VII. Technical Specifications**

		operations - aim using iron sight - aim using optical sight with elevating mechanism - reloading  Training device provides realistic training of the gunners at firing on mobile and fixed targets at distance of 300 and 400m. Training device can operate within the temperature range of -30oC to +50oC.	
14.2	Caliber of the auxiliary barrel	Cal. 7.62 mm	
14.3	Firing range	300-400 m	
14.4	Dimensions of the training device		
14.4.1	Length - Diameter	953 90 mm	
14.4.2	Weight	3.207 kg	
14.5	Accessories	cleaning rod	
		oil can	
		Operations Manual	
		Record Book	
		wrench 17x19	
		screwdriver	
		Plastic container with the buster engine	
14.6	Spare parts	firing pin; firing spring; screw	
14.7	Packing	6 pcs. Training Devices in every wooden case.	
14.7.1	Wooden case dimensions,	791 x 447 x 250 mm	
14.7.2	Gross weight	36 kg	
14.7.3	Wooden case volume	0.09 m3	
15	<b>TRAINING AMMUNITION</b>		
	SPECIFICATIONS		STATEMENT OF COMPLIANCE
15.1		Cal. 7.62X39mm tracer cartridges  The ammunition is capable of being loaded, fired and extracted from any NATO assault rifles/light machine guns.	

**Section VII. Technical Specifications**

15.2	Shelf life	20 years, if stored in standard packing of the producer, in storeroom conditions.	
15.3	Packing	20 cartridges in a cardboard boxes (840 cartridges) in an ammunition metal box M2A1 type; Metal box M2A1 dimensions, mm: 305x155x192 metal box M2A1 Gross weight kg: 16.7 – 2 pcs Metal box M2A1 are packed in a wooden wire-bound box (total of 1680 cartridges) Wooden wire-bound box dimensions, mm: 372x328x215 Wooden wire bound box gross weight kg: 36,5,6.	
15.4	Palletizing	- 36 wooden case (60480 cartridges are stocked on the Pallet. - Loaded Pallet dimensions: 984x1120x1000mm - Pallet Gross weight 1346kg - Material of banding strip is steel	
15.5	Operational temperature range	from minus 50 C to 50 C	
15.6	TECHNICAL AND BALLISTIC DATA		
15.6.1	Bullet velocity	770÷725 V zs, mf s	
15.6.2	Average max pressure of the powder charges	≤274.6 MPa	
15.6.3	Accuracy of fire, obtained from an accuracy test barrel (radius of circle containing 50 o/o of hits when firing from 300 m)	Rso ≤75 mm	
15.6.4	Weight of the cartridge	15.8 to 16.8 g	
15.6.5	Weight of the cartridge case	6.25 to 6.8 g	
15.6.6	Weight of the bullet	7.7 to 8.05 (120-124 grains) g	
15.6.7	Length of the cartridge	55 to 56 mm	
15.6.8	Length of the cartridge case	38.36 to 38.7 mm	
15.6.9	Length of the bullet	26.28 to 26.8 mm	
15.7	CARTRIDGE	Steel	

**Section VII. Technical Specifications**

	CASE		
15.8	BULLET	bullet jacket bi-metal steel core	
15.9	PRIMER -	Berdan type	
15.10	PROPELLANT -	double-base	
15.11	Class of explosion hazard:	L.45, UN 0012	

**-- END OF TECHNICAL SPECIFICATIONS--**