

# ATTACHMENT 1 TO APPENDIX 4 TO ANNEX B

## C22 MODULAR PISTOL PROJECT

### TECHNICAL EVALUATIONS



Solicitation Number: W8476-216392

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Number of Mandatory Requirements Being Reviewed at SAT	48
Number of Mandatory Requirements Evaluated as Compliant at SAT	0

TO BE COMPLETED BY EVALUATOR				
Col 1	Column 2	Column 3	Column 4	Column 5
Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.1.1	The C22 FF pistol must be chambered for all 9 x 19 mm Parabellum cartridges dimension IAW Annex A to STANAG 4090.	Testing in accordance with Appendix 4 to Annex B Attachment 2, Test 2.		
3.1.2	The C22 FF pistol must be rated to fire all 9 x 19 mm Parabellum ammunition manufactured to the technical performance specifications governing design and acceptance of NATO 9 mm ammunition IAW Annex C to STANAG 4090.	Testing in accordance with Appendix 4 to Annex B Attachment 2, Test 2.		
3.1.3	The C22 FF pistol must be rated to fire 9 x 19 mm Parabellum ammunition set to the Sporting Arms and Manufacturers Institute (SAAMI) pressure limit for 9 x 19 mm Parabellum +P ammunition without degradation of safety, performance or reliability.	Testing in accordance with Appendix 4 to Annex B Attachment 2, Test 2.		
3.3.1	The C22 FF pistol barrel must have a minimum length of 105 mm.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.3.2	The C22 FF pistol barrel must have a maximum length of 125 mm.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		

Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.3.3	The C22 FF pistol length must not exceed 220 mm when measured from the furthest forward point to the furthest rearward point on the assembled pistol. This measurement is typically from either the front of the slide assembly or barrel to the rear of the grip and frame housing (beavertail).	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.3.4	The C22 FF pistol configured with a medium grip size and an empty magazine that holds a minimum of 17 rounds must weigh less than or equal to 840 g.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.3.5	The C22 FF pistol vertical height must not exceed 145 mm when measured from the bottom of the magazine to the top of the rear sights.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.3.7	The C22 FF pistol must have a sight radius of 155 mm or greater when measured from the back of the front sight to the back of the rear sight blade.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.4.1	The C22 FF pistol front and rear sights must allow the shooter to acquire proper sight alignment.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.4.2	The C22 FF pistol must have square-notch horizontal three dot sights IAW Figure 1.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.4.3	The proper alignment of the C22 FF pistol sights must be consistent with equal height and equal light sight alignment.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.4.4	The C22 FF pistol sights must have an etched vertical 1.0 mm alignment mark to facilitate rapid sight picture engagement IAW Figure 1 <b>unless the pistol is being delivered with hi-visibility tritium dot front and rear sights.</b>	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		

Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.4.6	The C22 FF pistol rear sight must allow the shooter to perform immediate action drills where the front edge of the rear sight is supported against the edge of a belt or holster or edge of a ballistic shield to cycle the slide.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.4.7	The C22 FF pistol sights must be black and non-reflective.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.4.8	The vertical alignment mark must be the same contrasting colour as the front and rear dots <b>unless the pistol is being delivered with hi-visibility tritium dot front and rear sights in which case the alignment mark is not required.</b>	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.4.9	The front and rear sights must be removable using common tools or special tooling available from the Original Equipment Manufacturer (OEM).	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.4.10	The windage adjustment must allow for a range of sight adjustment to move the point of impact by at least 75 mm from the point of impact when fired from 25 m.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.4.12	The C22 FF pistol must be delivered from the factory zeroed for shooting at 25 m using Cartridge 9mm Ball Cdn Mk 1, NSN 1305-20-000-6943 provided as GSM.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		

Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.5.2	The C22 FF pistol <del>trigger group</del> must be <del>permanently</del> stamped or engraved with a unique serial number using YYKANNNNN format unless an alternative format is approved by the TA. Where YY designates the last two digits of the year of manufacture. KA designates the C22 FF pistol. NNNNN is the unique serial number which starts at 00001 and increments by 1 for each C22 FF pistol delivered to Canada (21KA00001 would be the first pistol manufactured in 2021).	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.5.5	The C22 FF pistol barrel must be <del>stamped or laser</del> engraved with “C22 9 x 19 mm” to designate the pistol frame size designation and calibre.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.5.6	The C22 FF pistol slide must be <del>stamped or laser</del> engraved IAW Figure 2 to identify it as a Canadian Armed Forces pistol.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.7.6	The trigger pull weight must be no less than 2.5 kgs and not exceed 3.2 kgs.	Testing in accordance with Appendix 4 to Annex B Attachment 2, Test 5.		
3.7.7	<del>When the C22 FF pistol is loaded the</del> trigger must automatically return to its normal forward most position upon release after partial or complete trigger pull.	Testing in accordance with Appendix 4 to Annex B Attachment 2, Test 5.		
3.7.9	The trigger pull weight for each pistol must be consistent with a maximum deviation of <del>+/-</del> 0.2 kgs measured over 10 trigger pulls from each pistol.	Testing in accordance with Appendix 4 to Annex B Attachment 2, Test 5.		

Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.9.1	The C22 FF pistol must have a visible and tactile loaded chamber indicator that is visible to personnel standing immediately to the right and immediately to the left of the shooter when the shooter is in the shooting position as illustrated in Figure 3. <del>The C22 FF pistol must have a visible and tactile loaded chamber indicator on the top of the slide.</del>	Testing in accordance with Appendix 4 to Annex B Attachment 2, Test 3.		
3.9.2	The C22 FF pistol must have a striker deactivation button or other mechanical mechanism that will allow the shooter to disassemble the pistol without having to pull the trigger.	Testing in accordance with Appendix 4 to Annex B Attachment 2, Test 3.		
3.9.3	If a tool is required to allow the shooter to activate the striker deactivation button this tool must be delivered with each pistol.	Testing in accordance with Appendix 4 to Annex B Attachment 2, Test 7.		
3.10.1	The magazine must have a minimum of 6 numerically marked witness holes that permit viewing the number of rounds remaining. It is preferred that witness holes exist for each cartridge contained in the magazine starting with cartridge number 4 and showing every cartridge contained in the magazine thereafter.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.10.2	The magazine must positively lock in the magazine well and remain locked until such time as the shooter fully depresses the magazine catch.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.10.3	The follower must move freely in the body of the magazine and it must positively align and feed the top cartridge into the C22 FF pistol to be fired.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		

Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.10.4	The magazine must release and fall free from the magazine well when the magazine catch is completely depressed regardless of the number of cartridges contained within the magazine and regardless of the position of the slide (forward or locked to the rear). This is required when the pistol is held with the C22 FF pistol pointed such that the magazine base plate is oriented directly towards the ground.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.10.5	The magazine base plate must be removable to permit the disassembly and cleaning of the magazine assembly.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.10.7	The slide lock must retain the slide to the rear position when the slide is manually pulled to the rear and a fully seated empty magazine is in the pistol.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.10.8	The slide lock must not engage and allow the slide to move into battery when the slide is manually pulled to the rear and a fully seated loaded magazine is in the pistol.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.10.10	The C22 FF pistol must hold a minimum of 17 rounds in a double stacking single feed magazine.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.10.11	The C22 FF pistol must be able to fire a chambered cartridge when the magazine is removed.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		

Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.12.12	The C22 FF pistol must be delivered in a medium grip frame housing size achieved with a medium grip frame size housing or a grip housing to which a medium back strap has been installed.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1  and  Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 7.		
3.13.1	The exposed parts including grip frame housing, back straps, frame, slide and magazine base plate of the C22 FF pistol must have a non-reflective matte finish that is equivalent in colour to Cerakote GEN II Flat Dark Earth (FDE) HIR-265 <b>and</b> approved by the Technical Authority which can be achieved through any colouring process (such as but not limited to base colour, nitrate coating process, anodizing).	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.13.2	All exterior parts must be devoid of gouges, sharp edges or rough areas that could snag on holsters, clothing or cause injury or discomfort to a shooter while manipulating or shooting the pistol.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.13.3	The finish must be durable, <b>meaning that it is</b> abrasion, rust and saltwater corrosion resistant.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		



Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.16.1	The C22 FF pistol must achieve a maximum extreme spread of 12 cm when a 5 round grouping is fired from 25 m <del>in an indoor range at 20 deg C ambient temperature</del> using Cartridge 9mm Ball Cdn Mk 1, NSN 1305-20-000-6943 provided as GSM.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1  and  Testing in accordance with Appendix 4 to Annex B Attachment 2, Test 4.		
3.17.5	The precision of the C22 FF pistol must meet the precision requirements at 3.16.1 both with and without the suppressor installed.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.18.1	Every assembled C22 FF pistol must be proof tested IAW Commission internationale permanente pour l'épreuve des armes à feu portatives <del>ested</del> (C.I.P.) or SAAMI standards using a high pressure test (proof) cartridge at 130% of the design pressure of a cartridge that meets the requirements of paragraph 3.1.3 or an alternative test standard approved by the technical authority.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.18.2	On completion of proof testing all components exposed to the pressure event must <del>subjected to pass a</del> Magnetic Particle Inspection or an alternative non-destructive test approved by the TA, to ensure that they have not been deformed or damaged.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		
3.18.3	Every C22 FF pistol that successfully passes proof testing must be marked IAW the requirements of 3.5.1.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1		

Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.19.1	The C22 FF pistol sub-assemblies with identical part numbers must be completely interchangeable for the service life of the pistol without affecting fit, form, function, precision and safety when tested IAW AC/225(LG/3-SG/1)D/14, section 2.18 Interchangeability (1) New Weapon and (2) Worn Weapon or an alternative test approved by the technical authority.	Testing in accordance with Appendix 4 to Annex B Attachment 2, Test 6 (new Pistols).		
3.22.10	The shipping and storage case must securely store items 1, 2 and 4 as defined in Annex B Figure 1.	Testing in accordance with Appendix 4 to Annex B Attachment 2, Test 7.		

Number of Mandatory Requirements Being Reviewed at SAT	24
Number of Mandatory Requirements Evaluated as Compliant at SAT	0

TO BE COMPLETED BY EVALUATOR				
Col 1	Column 2	Column 3	Column 4	Column 5
Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.1.2	The Holster must securely attach to a drop leg thigh mounting position.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.3	The Holster must securely attach to a chest PALS mounting position.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.4	The Holster must utilize a quick detach mechanism whereby the Holster can be detached from its current mounting position and reattached to both the mounting positions described in paragraphs 3.1.2 and 3.1.3 in less than 90 seconds.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.5	The quick detach mechanism must allow the operator to adjust the cant angle of the mounted Holster through a minimum of 180 degrees range with access to a minimum of 5 locking positions to cater to the users preferred method of carry at the chest PALS mounting position at paragraph 3.1.3 without the use of tools.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		

Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.1.6	The quick detach mechanism must allow the operator to mount the Holster where one locking position is at zero degrees of rotation at the drop leg thigh mounting position at paragraph 3.1.2 without the use of tools. <del>Within the cant angle rotation the operator must have access to a minimum of 5 locking positions.</del>	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.7	Where quick detach mounting flexibility is not necessary it must be possible for the operator to remove the quick detach mechanism and mount the Holster directly to the mounting positions at paragraphs 3.1.2 and 3.1.3 using the same or alternate mounting hardware.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.9	The Holster must mount to an in-service duty belt that ranges from 5.1 cm to 5.7 cm in width and up 0.5 cm thick.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.10	The Holster must mount to a PALS with a maximum of four columns and two rows where the rows are manufactured with 2.5 cm, A-A 55301 Type III nylon webbing, spaced 2.5 cm apart, and reattached to the backing at 3.8 cm intervals.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.11	The Holster must mount to the drop leg thigh mounting position using an in-service duty belt belt fed loop adapter, a single adjustable drop leg strap, a molded leg shroud and a maximum of two adjustable thigh straps.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		

Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.1.12	The adjustable thigh strap(s) must poses elasticity to expand with changes in thigh circumference that occur with leg movement and flexion.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.13	The adjustable thigh strap(s) must adjust to accommodate a range of thigh circumferences from 400 mm to 800 mm.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.14	The adjustable thigh strap(s) must fasten with acetal double side release buckles, or acetal double side release buckles with a rotational knuckle or acetal center push release rotational buckles.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.15	The adjustable thigh strap(s) must be rubberized or possess silicone strips to improve grip to eliminate sliding.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.16	The adjustable thigh strap(s) must mount through or to the molded leg shroud.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.17	The adjustable drop leg strap must detach from the in-service duty belt belt fed loop adapter using an acetal double side release buckle, or an acetal double side release buckle with a rotational knuckle or an acetal center push release rotational buckle <del>an acetal side release buckle</del> so the Soldier is not required to unfasten/open and without having to adjust gear on the in-service duty belt or the molded leg shroud.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.1.18	The adjustable drop leg strap must adjust to accommodate placement of the moulded leg shroud at the optimal natural draw position on the leg.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		

Technical Purchase Description Paragraph Number	Evaluation Criterion Description	Evaluator Instructions	Evaluator's Assessment	Evaluator's Comments
3.2.1	The Holster's first level of retention must be passive whereby due to its design; it securely grips the C22 FF pistol and this friction holds it in place in all holster mounting positions.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.2.2	The Holster must have a mechanism that allows the user to adjust the level 1 retention forces on the C22 FF pistol.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.2.7	The Holster's second level of retention must automatically lock once the C22 FF pistol is re-holstered.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.3.1	The C22 FF Holster System must be a close visual match to the colour of the C22 FF pistol with a Delta-E value of less than or equal to 8 unless approved otherwise by the Technical Authority (TA).	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.3.2	When the C22 FF pistol is holstered, the trigger must be inaccessible.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.3.4	The Holster bottom must have a drain hole(s) or be opened.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		
3.3.5	The Holster must come in a right hand and left hand draw configuration to cater to left and right-handed soldiers.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.  Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 7.		
3.3.7	The weight of Holster System Configurations 1 and 2 as defined in Annex B Table 1 must not exceed 825 grams.	Visual inspection in accordance with Appendix 4 to Annex B Attachment 2, Test 1.		