

**ANNEX D**  
**C22 MODULAR PISTOL PROJECT**  
**HOLSTER SYSTEM**  
**TECHNICAL AND PERFORMANCE SPECIFICATION**



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**NOTICE**

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## **1 INTRODUCTION**

### **1.1 Scope**

- 1.1.1 The Canadian Armed Forces personnel, when deployed in various operational scenarios and where their primary weapon, their C7 or C8 is not adequate, they will rely primarily on their C22 Full Frame (FF) pistol. Hence, a safe and secure C22 FF Holster System is required.
- 1.1.2 The C22 FF Holster System described within this Technical and Performance Specification includes the Holster and all Holster components necessary to attach the Holster to the drop leg thigh and chest Pouch and Ladder System (PALS) mounting positions.
- 1.1.3 This Technical and Performance Specification details the mandatory requirements that must be met by the C22 FF Holster Systems.
- 1.1.4 The C22 FF Holster System must meet the manufacturer's published specifications for any functional or performance parameter not specified in this Technical and Performance Specification.

### **1.2 Acronyms**

ASTM	American Society for Testing and Materials
CA	Contracting Authority
CGCS	Canadian Government Cataloguing System
CLP	Cleaner Lubricant and Preservative
cm	centimeter
DEET	N, N-Diethyl-meta-toluamide
EA	Each
FF	Full Frame
IAW	In Accordance With
In	inch
KT	Kit
Mil-Std	Military Standard
NATO	North Atlantic Treaty Organization
NCAGE	NATO Commercial and Government Entity
NIJ	National Institute of Justice
NSN	NATO Stock Number
PALS	Pouch and Ladder System
TA	Technical Authority
TOP	Test Operating Procedure
UOM	Unit of Measure

## **2 APPLICABLE DOCUMENTS**

### **2.1 Applicability**

- 2.1.1 The following documents form part of this specification to the extent specified and are supportive of the specification when referenced; all other document references are to be considered supplemental information only. In the event of a conflict between the

documents referenced and the contents of the specification, then the contents of the specification must take precedence.

## **2.2 Commercially Available Documents**

- 2.2.1 A-A-55301 Commercial Item Description Webbing, Textile, Textured or Multifilament Nylon;
- 2.2.2 AC/225 (LG/3-SG/1)D/14 NATO Small Arms Test Manual
- 2.2.3 Mil-Std. 810G Department of Defence Test Method Standard Environmental Engineering Considerations and Laboratory Tests; and
- 2.2.4 National Institute of Justice (NIJ) Duty Holster Standard for Law Enforcement dated April 2010; and
- 2.2.5 Test Operating Procedure (TOP) 03-2-045A Small Arms-Hand and Shoulder Weapons and Machine Guns.

## **3 REQUIREMENTS**

### **3.1 Performance Requirements**

- 3.1.1 The C22 FF Holster System must not require more than 5 minutes of daily operator maintenance.
- 3.1.2 The Holster must securely attach to a drop leg thigh mounting position.
- 3.1.3 The Holster must securely attach to a chest PALS mounting position.
- 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.
- 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.
- 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. Within the cant angle rotation the operator must have access to a minimum of 5 locking positions.~~

- 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.
- 3.1.8 The C22 FF pistol when in the Holster must remain securely attached to all mounting positions described in paragraphs 3.1.2 and 3.1.3 until actively drawn while allowing the Soldier to perform all duties that include but are not limited to entering/exiting vehicles, working in confined environments, running, crouching, jumping, climbing obstacles, putting on and removing clothing and during violent altercations where combatants may attempt to take the C22 FF pistol.
- 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.
- 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.
- 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.
- 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.
- 3.1.13 The adjustable thigh strap(s) must adjust to accommodate a range of thigh circumferences from 400 mm to 800 mm.
- 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.
- 3.1.15 The adjustable thigh strap(s) must be rubberized or possess silicone strips to improve grip to eliminate sliding.
- 3.1.16 The adjustable thigh strap(s) must mount through or to the molded leg shroud.
- 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 ~~an acetal side release buckle~~ 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.
- 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.
- 3.1.19 The C22 FF pistol must be drawn from the Holster in under 3 seconds from both mounting positions described in paragraphs 3.1.2 and 3.1.3.

## **3.2 Holster Retention**

- 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.
- 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.
- 3.2.3 The Holster's first level of retention must function if the Holsters mechanical levels of retention fail to function as designed.
- 3.2.4 The Holster's second level of retention must be an active mechanical locking mechanism that is manipulated by the Soldier using either their index finger or thumb.

- 3.2.5 To extract the C22 FF pistol from the Holster the Soldier must release the second level of retention then overcome the first level of retention by drawing the C22 FF pistol out of the Holster.
- 3.2.6 The Holster must be designed so that the retention devices can be activated while establishing a proper shooting grip on the holstered C22 FF pistol.
- 3.2.7 The Holster's second level of retention must automatically lock once the C22 FF pistol is re-holstered.

### **3.3 Material and Component Requirements**

- 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).
- 3.3.2 When the C22 FF pistol is holstered, the trigger must be inaccessible.
- 3.3.3 The Holster must not scratch the surface finish on the C22 FF pistol.
- 3.3.4 The Holster bottom must have a drain hole(s) or be opened.
- 3.3.5 The Holster must come in a right hand and left hand draw configuration to cater to left and right-handed soldiers.
- 3.3.6 The C22 FF Holster System less attachment hardware (screws/nuts/washers etc) and straps must be made of a thermoplastic, synthetic or polymer material in a matte finish.
- 3.3.7 The weight of Holster System Configurations 1 and 2 as defined in Annex B Table 1 must not exceed 825 grams.

### **3.4 Operating Conditions**

- 3.4.1 The C22 FF Holster System must be fully operational in MIL-STD-810G climatic conditions A1, A2, A3, B1, B2, B3, C1 and C2 (to -40 deg C) including exposure to environmental conditions ranging from blowing sand and dust of the desert to the brittle arctic cold and corrosive salt of the ocean.
- 3.4.2 The C22 FF Holster Systems must meet the Section 5 Performance Requirements when tested IAW the Section 6 Test Methods (Test 6.2.4.7 amended to "A load of at least 200 lbf shall be applied to the inert handgun.") of the draft NIJ Duty Holster Standard for Law Enforcement dated April 2010 or equivalent testing approved by the TA.
- 3.4.3 The C22 FF Holster System must withstand and not be damaged by exposure to weapon cleaning products, liquids, lubricants and insecticides when tested IAW TOP 03-2-045A section 4.6 Chemical Compatibility for products item numbers 1,5,6,7,9,10,13 and 18 or AC/225(LG/3-SG/1)D/14 section 2.17.1 Chemical Resistance for product item numbers 1,5,6,7,9,11,14 and 19.