



AIR · CS-110

UNPOWERED BY DESIGN. NOTHING TO JAM.

No battery. No motor. No receiver. A kinetic carrier launched at ~189 m/s on shop air.

PNEUMATIC LAUNCH · KINETIC DEFEAT · SALVO DEPTH

PATENT PENDING	EXPORT-CONTROLLED — INTERNATIONAL TRANSFER SUBJECT TO CANADIAN GOVERNMENT PERMITS
KINETIC CARRIER — NO WARHEAD, NO FUZE, NO ENERGETIC MATERIAL	

1.6 KG ALL-UP ROUND MASS	Ø90 MM BORE · AIRFRAME OD	~189 M/S MUZZLE EXIT VELOCITY	0 BATTERIES, MOTORS OR RECEIVERS ABOARD
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OVERVIEW

A KINETIC CARRIER. THE ANCHOR OF THE AIR FAMILY.

Part of the **4-system Air line** — shares its envelope and doctrine with Encapsulator, Matrix, Gyrfalcon.

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Goose CS-110 is a fully unpowered, tube-launched round that stops a small uncrewed aircraft by collision alone — no chemistry, no electronics, nothing aboard for an adversary to detect, hack or burn out. It is the lead round of the Air family and the cheapest way to put a hit downrange.

Guidance is set once, at the barrel, before the round ever leaves the tube: four adjustable trim fins are bent to their preset angle by a guide cam in the muzzle as the round passes through it — a mechanical step, not a servo, not a link. What launches is an inert moulded body until the instant shop air is behind it, and what flies afterward is entirely ballistic. There is no chip to find and no signal to follow.

Goose shares its envelope and launcher with the rest of the family's capture tier — Encapsulator rides the same tube with a capture nose, Matrix hand-launches a tethered net for the last few metres — and gives up its powered-flight scope entirely to Gyrfalcon, the family's premium interceptor. Goose stays simple on purpose: it is the round built to be bought in numbers, not the round built to do everything.

THE CLAIM

NOTHING ABOARD. NOTHING TO JAM.

No battery to die, no motor to fail, no receiver to jam — because none of the three exist on the round. Every joule the round carries came from the tube, not from itself, and every ounce not spent on electronics is an ounce spent on more rounds in the magazine.

HOW IT WORKS

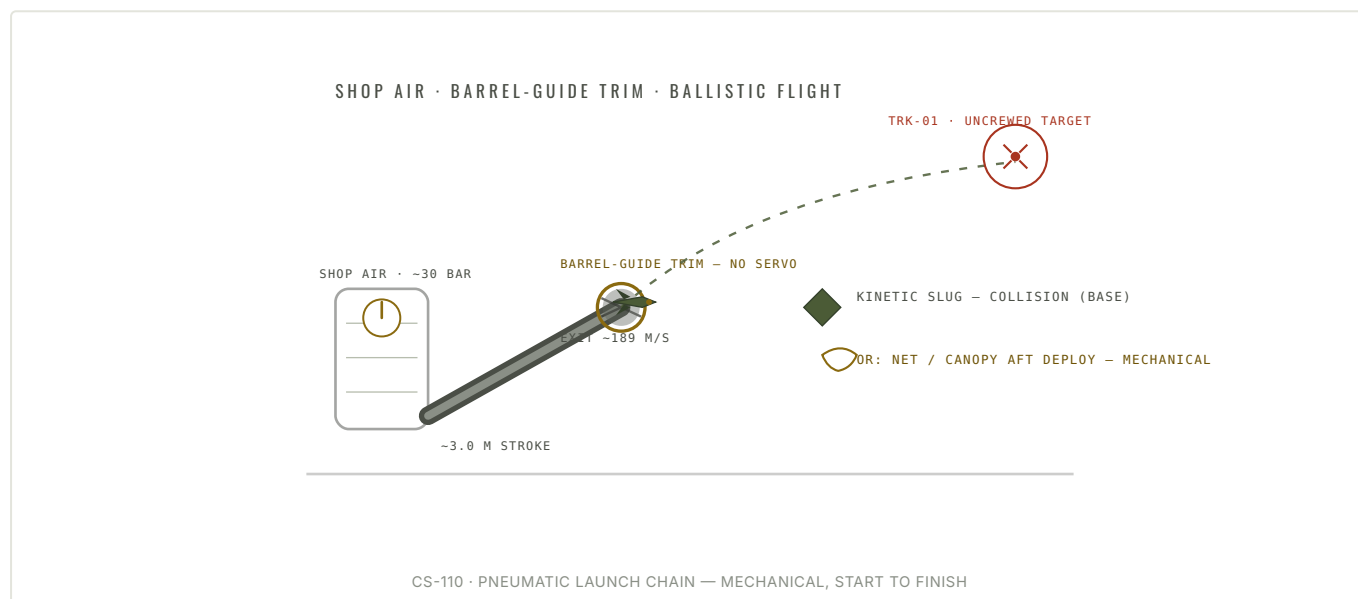
MECHANISM

TUBE, PUFF, BALLISTIC FLIGHT, TARGET

Four steps, and every one of them is mechanical. Shop air pressurises an accumulator bank; a valve releases it behind the chambered round; the round rides that pressure out the tube at ~189 m/s; and from the muzzle guide onward, physics does the rest.

As the round passes through the muzzle, a fixed cam bends its four hinged trim-fin tips to a preset angle — the fine trim for that shot, set by the barrel, not by a servo. There is no correction after that: the round's flight from the tube to the target is ballistic, the way a preset artillery round's is, and that is precisely the point. A round with nothing to correct has nothing to jam.

Terminal effect follows one of two mechanical paths, chosen by nose configuration rather than by any onboard decision. In the base configuration a dense metal kinetic slug in the nose defeats the target by collision alone. Behind the needle nose variant, the same collision instead trips a rod that releases a rear payload bay — a textile net or parachute canopy — for a controlled descent rather than a free-fall crash. Both paths are pure mechanism: no fuze, no sensor, no stored electrical energy anywhere in either chain.



SPECIFICATIONS

CAPABILITIES & SPECIFICATIONS

GOOSE

CS-110

DIMENSIONS & MASS	
All-up round mass	1.6 kg
Bore / airframe OD	Ø90 mm
Configuration	Tube-launched, fully unpowered kinetic carrier

PERFORMANCE	
Muzzle exit velocity	~189 m/s
Launch pressure	~30 bar class (shop air)
Launch-tube stroke	~3.0 m class
Launch acceleration	~5,950 m/s² ≈ ~607 g, average over stroke
Flight profile	Ballistic, muzzle to target

LAUNCH & GUIDANCE	
Launch method	Pneumatic accumulator on shop air
Trim / flight control	4× adjustable fins, preset by barrel guide at the muzzle — no servo
Guidance tier	Tier 1 — set at the barrel, fully ballistic
Correction in flight	None, by design

PAYLOAD & EFFECT	
Nose — base	Dense metal kinetic slug — solid, no chemistry, no mechanism
Nose — needle variant	“Stinger” collapse-on-impact needle
Rear payload bay	Textile net / parachute canopy — mechanical or stored-gas eject
Energetic material	None — no warhead, no fuze, no primer, no propellant

MATERIALS & CONSTRUCTION	
Body / airframe	Moulded GF-nylon shell
Nose mass	Dense metal
Tooling	Dies cut in Canadian Shield’s own 5-axis shop
Shared envelope	Common tube and round envelope with Encapsulator CS-111

SIGNATURE & POWER	
Powered subsystems	None — no battery, no motor, no bow-thruster ring, no receiver
Emissions	None — no radio aboard, nothing to detect or geolocate
Jamming surface	None — no receiver exists to jam

COMPLIANCE	
Patent status	Patent pending
Export control	Export-controlled — international transfer subject to Canadian government permits; export posture is counsel-first
Munitions classification	Carrier, not a munition — non-explosive
Powered-flight scope	Gyrfalcon CS-120 — not on this round

LAUNCH ACCELERATION IS STATED AS AN AVERAGE OVER THE LAUNCH-TUBE STROKE. BOW-THRUSTER RING AND TAIL SUSTAIN MOTOR ARE GYRFALCON CS-120 SCOPE AND APPEAR NOWHERE IN THIS ROUND.

THE TRADES, STATED

NOT JAM-RESISTANT. JAM-PROOF, BY CONSTRUCTION.

Most counter-UAS rounds harden a link. Goose deletes it. There is no receiver aboard for an adversary to find, no navigation computer to spoof, no radio to detect and geolocate. The vulnerability most systems try to protect does not exist here to protect.

That emptiness is also the economics. A round with no battery, no motor and no electronics is a round built almost entirely from moulded GF-nylon and a metal nose mass — cheap to shoot, cheap to miss with, and cheap enough to buy in the volume that salvo doctrine requires. The bodies mould on dies cut in Canadian Shield's own 5-axis shop, the same tooling that lets the Forward Manufacturing Cell put an allied nation's magazine on its own soil, from its own feedstock, without a transoceanic supply line in the way.

THE ECONOMICS

CHEAP TO SHOOT. CHEAP TO MISS WITH.

A miss costs a moulded round, not a magazine. Moulded GF-nylon and a metal nose mass, priced for salvo depth: a magazine an adversary cannot empty by broadcasting, reloaded from stock made on Canadian Shield's own tooling.

DEPLOYMENT

A SHOT, WALKED THROUGH.

One engagement, walked end to end — illustrative of how the round is used, not a mission record.

01 · ARRIVAL

CHAMBERED, NOT ARMED

The round arrives moulded, sealed and inert — nothing to load, nothing to spool up, nothing to arm. It is chambered directly into the tube. There is no propellant to check, no battery to charge and no arming sequence, because none of those steps exist for this round.

02 · ENGAGE

AIR BEHIND IT, FINS SET AT THE MUZZLE

On the operator's call the accumulator releases; the round exits at ~189 m/s with its trim fins bent to preset by the barrel guide. From there it is ballistic — kinetic collision in the base configuration, or a rear net and canopy deploying mechanically for a controlled descent behind a capture nose.

03 · ACCOUNT

A SHELL SPENT, NOT A MISSION LOST

A miss costs a moulded round, not a magazine. Spent rounds and any recovered wreckage are logged; the tube reloads from cheap, salvo-priced stock. That arithmetic — a shot an adversary cannot answer by broadcasting — is the entire point of the round.

THE FAMILY

RELATED SYSTEMS

CS-111 · CAPTURE NOSE

ENCAPSULATOR

The same round envelope and the same tube, with a capture nose for a controlled take-down.

CS-112 · LAST METRES

MATRIX

A hand-launched tethered net for the final few metres — the capture tier's close-in tool.

CS-120 · POWERED INTERCEPTOR

GYRFALCON

The family's premium interceptor — carries the tail motor and bow-thruster scope that Goose gives up to stay cheap.

Goose CS-110 · patent pending · export-controlled — international transfer requires Canadian government permits; export posture is counsel-first. A non-explosive kinetic carrier — no warhead, no fuze, no primer, no propellant, no energetic material anywhere in the round or any nose variant. Fully unpowered: no battery, no motor, no bow-thruster ring, no receiver — that hardware belongs to Gyrfalcon CS-120, not this round.



UNPOWERED BY DESIGN. NOTHING TO JAM.

GOOSE · AIR · CS-110

Cheap to shoot. Cheap to miss with.

01

REQUEST A TECHNICAL EXCHANGE

A working session with engineering, not sales — bring your engagement problem, we bring the mechanism.

02

REQUEST THE AIR FAMILY DATA PACK

Drawings, tolerances and test basis for Goose and its siblings, gated behind export screening.

03

DISCUSS A TRIAL QUANTITY

Tell us end-user, jurisdiction, quantity band and timeline — we respond against your program, not a price list.

SALES

sales@cdnshield.ca

GENERAL

info@cdnshield.ca

WEB

cdnshield.ca

Direct lines, named points of contact and facility details are shared with qualified programs following screening — not withheld, sequenced.

Canadian Shield is a defence and industrial drone company, backed by SIG: four-domain uncrewed systems built for jammed, GPS-denied environments — no-radio by design, manufactured for cost and salvo depth.

Goose CS-110

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Product specification R1.0 · 2026-08-15 · © Canadian Shield, a division of SIG (Sustainable Infrastructure Group).