



INDUSTRIAL · CS-600

THE FREIGHT LADDER: LIFT WHAT THE JOB NEEDS

An uncrewed VTOL cargo family — four sizes of the same machine, from toolbox to bulk lift.

CM-4 · CM-6 · CM-8 · CM-12

PATENT PENDING

RADIO AND GNSS PERMITTED — CIVIL WORK MACHINE

CARGO CARRIER — NO WARHEAD, NO FUZE, NO ENERGETIC MATERIAL

4

SIZE TIERS ON ONE AIRFRAME
GRAMMAR

2 ×

EVERYTHING CRITICAL EXISTS
TWICE

3 ×

GNSS RECEIVERS, VOTING 2-OF-3

~500 KG

PAYLOAD-CLASS CEILING — CM-12

OVERVIEW

A WORK MACHINE THAT SCALES LIKE OUR RIGS ALWAYS HAVE.

Part of the **3-system Industrial line** — shares its envelope and doctrine with Personnel Mover, Heavy-Lift Logger.

4 SIZE TIERS ON ONE AIRFRAME GRAMMAR	2 × EVERYTHING CRITICAL EXISTS TWICE	3 × GNSS RECEIVERS, VOTING 2-OF-3	~500 KG PAYLOAD-CLASS CEILING — CM-12
--	--	---	---

The Cargo Mover CS-600 is an uncrewed heavy-lift multirotor cargo family: one architecture, built in four discrete size tiers — CM-4, CM-6, CM-8 and CM-12 — scaled by motor count the way the drilling industry scales rigs by pullback. Pick the rung the load needs; the doctrine stays the same on every one.

Arms, pods and bays grow between tiers; the avionics doctrine, the safety chain and the payload interface do not. A crew trained on the CM-4 that shuttles tool kits across a work site is already trained on the CM-8 that moves site logistics — and ground kit is shared up the ladder, because the payload interface is common across tiers by design rule.

It sits in Canadian Shield's Industrial line — the civil CS-5xx/6xx family of machines bought to do actual work. And because it is a civil work machine, it carries conventional radio command-and-control and GNSS navigation, unlike the defence line: the no-radio doctrine is a defence rule, and forcing it onto a freight truck would serve nobody. This is a truck. It flies, but it is a truck.

THE IDEA

ONE MACHINE. FOUR SIZES OF IT.

Three decades of designing and operating mobile HDD rigs taught the group one lesson worth exporting to the air: don't build a new machine for every job — build one architecture in size tiers, and let the buyer climb the ladder as the work grows. The Cargo Mover is that lesson with rotors.

HOW IT WORKS

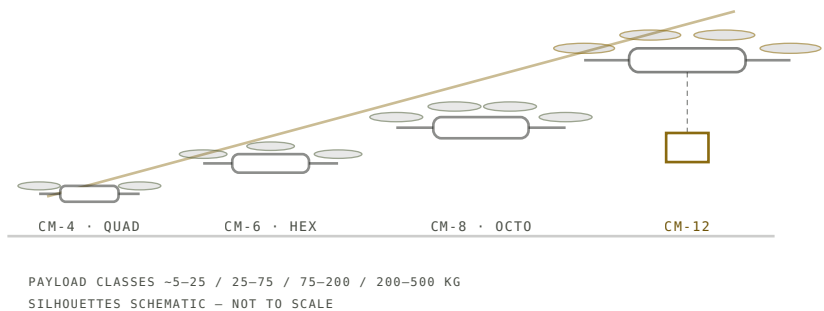
MECHANISM

FOUR RUNGS, ONE GRAMMAR

Motor count is the tier variable. Everything else — arm grammar, hub core, battery doctrine, safety chain, payload interface — is common from the smallest quad to the twelve-motor flagship.

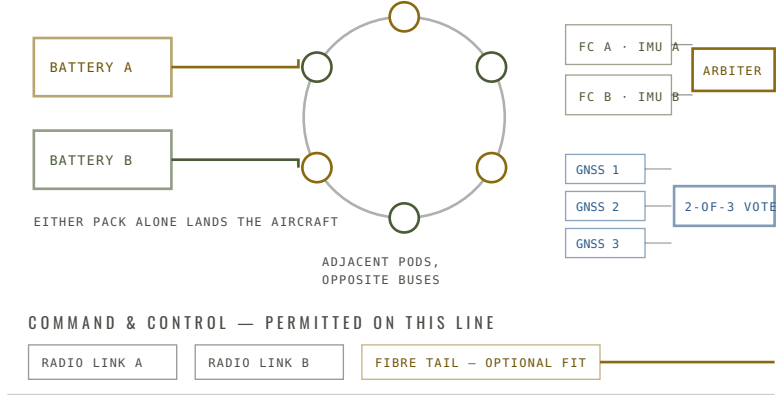
The CM-4 quad is the runabout: tool and parts resupply, light last-mile lift. The CM-6 hex takes corridor lifts, sensor pods and small material moves. The CM-8 octo is the site logistics workhorse. The CM-12 tops the ladder for bulk lift — and it is also where the engineering honesty lives: at the top of the ladder, battery energy density is the binding constraint, and the operating answer is logistics — shuttle profiles, swap-pack cycles and tether-power options, matched to the job rather than wished away.

ONE ARCHITECTURE · FOUR DISCRETE TIERS



CS-600 · THE FREIGHT LADDER — MOTOR COUNT IS THE TIER VARIABLE

EVERYTHING CRITICAL EXISTS TWICE · NAV EXISTS THREE TIMES



CS-600 · DUAL BUSES, DUAL FLIGHT CONTROL, TRIPLE NAV, DUAL RADIO

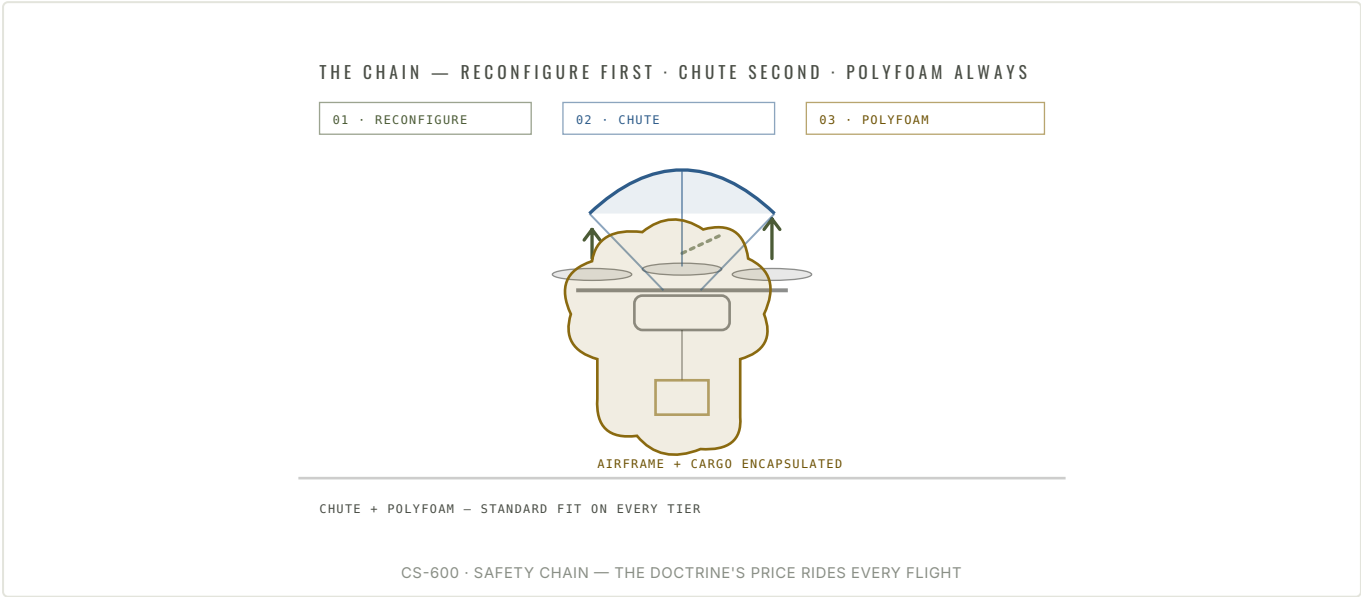
HOW IT WORKS · THE SAFETY CHAIN

RECONFIGURE, CHUTE, POLYFOAM — STANDARD ON EVERY TIER

A machine that carries hundreds of kilograms over a work site owes the people below it more than good intentions. The Cargo Mover's safety chain is standard fit on every tier — never an option.

The chain runs in order. First, reconfigure: on a detected fault the flight control arbiter re-allocates thrust and continues or diverts — the fail-operational attempt the redundancy architecture exists to make. Second, the whole-airframe ballistic parachute: if the vote declares controlled flight lost, a canopy takes airframe and cargo down together. Third, SIG AT polyfoam — a patent-pending rapid-expanding foam that encapsulates airframe and cargo on an unrecoverable failure, cutting scatter, spill and post-impact hazard where a parachute has no room to work.

Deployment envelopes, chute floors and foam behavior are set by the drop-test program, tier by tier — the chain's fit is a design rule; its numbers are earned on the range.



SPECIFICATIONS

CAPABILITIES & SPECIFICATIONS

CARGO MOVER CS-600

THE FREIGHT LADDER

CM-4 · Quad	~5–25 kg payload class — tool and parts resupply, light last-mile lift
CM-6 · Hex	~25–75 kg payload class — corridor lifts, sensor pods, small material moves
CM-8 · Octo	~75–200 kg payload class — the site logistics workhorse
CM-12	~200–500 kg payload class — bulk lift at the top of the ladder

AIRFRAME & CONFIGURATION

Configuration	One airframe grammar in four discrete size tiers — motor count is the tier variable
Structure	Bolted-root structural arms on a common hub core
Motors	4 / 6 / 8 / 12 electric motor pods by tier

POWER & TURNAROUND

Battery	Dual independent packs and buses (A/B)
Bus layout	Adjacent motors on opposite buses — a bus loss thins thrust evenly around the ring
Landing reserve	Either pack alone sized to land the aircraft
Turnaround	Swap-pack ground cycle — depleted packs out, charged packs in, the next leg loads while the batteries are still warm

FLIGHT CONTROL & NAVIGATION

Flight control	Dual flight controllers, each with an independent IMU, cross-checked through an arbiter
Navigation	3× GNSS receivers, 2-of-3 vote — the outlier is excluded, the flight continues
Command & control	Dual radio C2 — conventional, licensed, permitted on the civil Industrial line
Fibre tail	Optional fibre fly-by-wire tail for RF-quiet or heavy-EMI work — a severed fibre fails over benignly to radio

PAYLOAD & CARRIAGE

Payload interface	Common keel plate across all four tiers — ground kit bought once, shared up the ladder
Carriage — long-line	Underslung long-line with winch — pick and set without touching down
Carriage — hard deck	Hard-mounted cargo deck with tie-downs — rigid CG control for palletized loads

SAFETY CHAIN

Order of the chain	Reconfigure → whole-airframe parachute → SIG AT polyfoam
Reconfigure	The arbiter re-allocates thrust on a detected fault — continue or divert
Parachute	Whole-airframe ballistic — airframe and cargo descend together
Polyfoam	SIG AT rapid-expanding encapsulation of airframe and cargo — patent pending
Motor-out	CM-4: safety-chain descent by design. CM-6 / CM-8 / CM-12: graceful degradation — a reduced-margin event, most graceful on the twelve-motor
Fit	Standard on every tier — never an option; envelopes and floors set by the drop-test program

COMPLIANCE	
Patent status	Patent pending — including the SIG AT polyfoam system
Classification	Civil work machine — Industrial line; radio and GNSS permitted on this line
Cargo discipline	Cargo carrier only — no warhead, fuzing, energetic or terminal-effect content, ever; the chute and foam charges are safety devices and nothing else
Crewed scope	Crewed carriage is Personnel Mover CS-610 scope — nothing on the freight ladder carries a person
Aviation	Uncrewed operations subject to Transport Canada and applicable aviation-authority approval

PAYLOAD CLASSES ARE WORKING RANGES PER TIER; ENDURANCE, MTOW, DIMENSIONS AND UNIT ECONOMICS PUBLISH WHEN THE LIFT AND ENERGY MODEL CLOSES. CREWED CARRIAGE IS PERSONNEL MOVER CS-610 SCOPE AND APPEARS NOWHERE ON THIS FAMILY.

THE TRADES, STATED

THE CIVIL LINE PAYS FOR THE DISCIPLINE THE WHOLE FLEET RUNS ON.

Canadian Shield's house thesis is sovereign Canadian manufacturing with cost discipline — machines designed to be built here, priced like tools, and shared across a fleet instead of reinvented per product.

The Cargo Mover advances that thesis from the middle of the Industrial line. Its airframe grammar, avionics doctrine and safety chain are fleet property, not one-off engineering: the dual-everything rule, the 2-of-3 nav vote and the SIG AT polyfoam chain are shared with its siblings, and its motors, packs and ground kit ride the same sovereign supply chain as the rest of the CS-5xx/6xx family. The size-ladder logic itself is the group's oldest asset — three decades of building mobile drilling rigs in discrete size tiers, applied to lift. A work fleet bought by the rung, maintained from one parts bin, built in Canada: that is the civil line's argument, and the Cargo Mover is its freight deck.

FAMILY CONTEXT

BOUGHT BY THE RUNG. MAINTAINED FROM ONE BIN.

Below the Cargo Mover on the Industrial roster sit the CS-5xx work platforms — seeding, spraying, washing, dredging, spill response. Above it, the CS-610 Personnel Mover and CS-620 Heavy-Lift Logger extend the same lift doctrine to crews and to loads beyond the ladder's ceiling. One line, one grammar, one supply chain.

DEPLOYMENT

A SHIFT AT A REMOTE SITE.

Picture a work camp two hundred kilometres past the end of the road — a mine, a line camp, a research station. The resupply run is a float plane when weather allows and a very long wait when it doesn't. This is the Cargo Mover's shift — illustrative of how the family is used, not a mission record.

01 · ARRIVAL

THE LOAD ARRIVES WITHOUT A ROAD

A CM-8 lifts from the depot pad with a slung load on the long-line, climbs onto the corridor and tracks GNSS waypoints under dual radio C2 — a licensed, conventional link, watched from a console, not a trench. The crew at the far end sees it on the feed before they hear it.

02 · WORK

HOVER, PAY OUT, SET

Over the site it holds hover, pays out the winch and sets the load on the marked square without touching down — no precision pad needed, no ground handling under the rotors. Where the job calls for palletized cargo instead, the same keel plate takes the hard deck. Hook releases, line spools home, and the return leg lifts the empties out.

03 · RECOVER

SWAP PACKS, FLY AGAIN

Back at the depot it settles beside the swap-pack station; depleted packs come out, charged packs go in, and the next leg loads while the batteries are still warm. Shuttle legs, swapped packs, one machine cycling all shift — endurance bought with logistics, the way a truck fleet buys it.

THE FAMILY

RELATED SYSTEMS

CS-610 · CREWED BAR

PERSONNEL MOVER

The crewed tiers of the mover family — PM-8 and PM-12, engineered toward the certification bar.

CS-620 · BEYOND THE LADDER

HEAVY-LIFT LOGGER

The same lift doctrine extended to loads beyond the freight ladder's ceiling.

Cargo Mover CS-600 · patent pending · a civil work machine on the Industrial line — conventional radio C2 and GNSS are permitted on this family. Cargo carrier only: no warhead, fuzing, energetic or terminal-effect content, ever; the parachute and polyfoam charges are safety devices and nothing else. Crewed carriage is Personnel Mover CS-610 scope, not this family. Uncrewed aviation operations are subject to Transport Canada and applicable aviation-authority approval.



THE FREIGHT LADDER: LIFT WHAT THE JOB NEEDS

CARGO MOVER · INDUSTRIAL · CS-600

Bought by the rung. Maintained from one bin.

01 REQUEST A TECHNICAL EXCHANGE

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

02 REQUEST THE INDUSTRIAL FAMILY DATA PACK

Drawings, tolerances and test basis for Cargo Mover 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.

Cargo Mover CS-600

Cargo Mover CS-600 · patent pending · a civil work machine on the Industrial line — conventional radio C2 and GNSS are permitted on this family. Cargo carrier only: no warhead, fuzing, energetic or terminal-effect content, ever; the parachute and polyfoam charges are safety devices and nothing else. Crewed carriage is Personnel Mover CS-610 scope, not this family. Uncrewed aviation operations are subject to Transport Canada and applicable aviation-authority approval. Product specification R1.0 · 2026-08-15 · © Canadian Shield, a division of SIG (Sustainable Infrastructure Group).