



INDUSTRIAL · CS-570

SMALL WATER, MOVED.

A trailerable uncrewed dredger for ponds, marinas, lagoons and channels.

SET THE SPUD · SWING THE CUT · PUMP ASHORE · PROVE THE DEPTH

PATENT PENDING

RADIO AND GNSS PERMITTED — CIVIL WORK MACHINE

3.0 M

HULL LENGTH ON A 1.5 M BEAM —
ROAD-TRAILERABLE

~30 M³/H

SLURRY RATE THROUGH A ~3 KW
ELECTRIC PUMP

~50 M

FLOATING DISCHARGE LINE TO
THE SHORE STATION

2

BATHYMETRIC SURVEYS PER JOB
— BEFORE AND AFTER, THE
DELIVERABLE

OVERVIEW

THE WATER TOO SMALL FOR A BARGE. THE JOB TOO REAL TO SKIP.

Part of the **3-system Industrial line** — shares its envelope and doctrine with Skimmer, Recovery.

3.0 M HULL LENGTH ON A 1.5 M BEAM — ROAD-TRAILERABLE	~30 M³/H SLURRY RATE THROUGH A ~3 KW ELECTRIC PUMP	~50 M FLOATING DISCHARGE LINE TO THE SHORE STATION	2 BATHYMETRIC SURVEYS PER JOB — BEFORE AND AFTER, THE DELIVERABLE
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Every stormwater pond, marina basin, irrigation channel and aeration lagoon silts in. The machines that fix big water don't fit; the crews that fix small water work wet, slow and blind. The Dredger CS-570 is the third option: an uncrewed working craft sized to the job.

It is a twin-pontoon surface craft — a 3.0 m hull on a 1.5 m beam, towing behind a pickup without permits — that moors itself on a bed spud, swings a ladder-mounted auger-suction head through the cut, and pumps the slurry ashore through a floating line to a dewatering point. The operator stays dry on the bank; the survey kit proves the depth before and after. It is the cutting member of the Industrial Series water trio: the Skimmer CS-520 finds and measures, the Recovery CS-580 collects what floats, and the Dredger removes what settled. It shares the water-trio hull and station-keeping library with both.

THE PREMISE

SELL THE DEPTH RESTORED, NOT THE MACHINE HOURS.

A dredging customer doesn't want a boat; they want their design depth back, with a record that proves it. The CS-570 is built around that transaction: bathymetry before, a logged cut, bathymetry after, and a turbidity trace for the regulator — all from a machine one technician tows in.

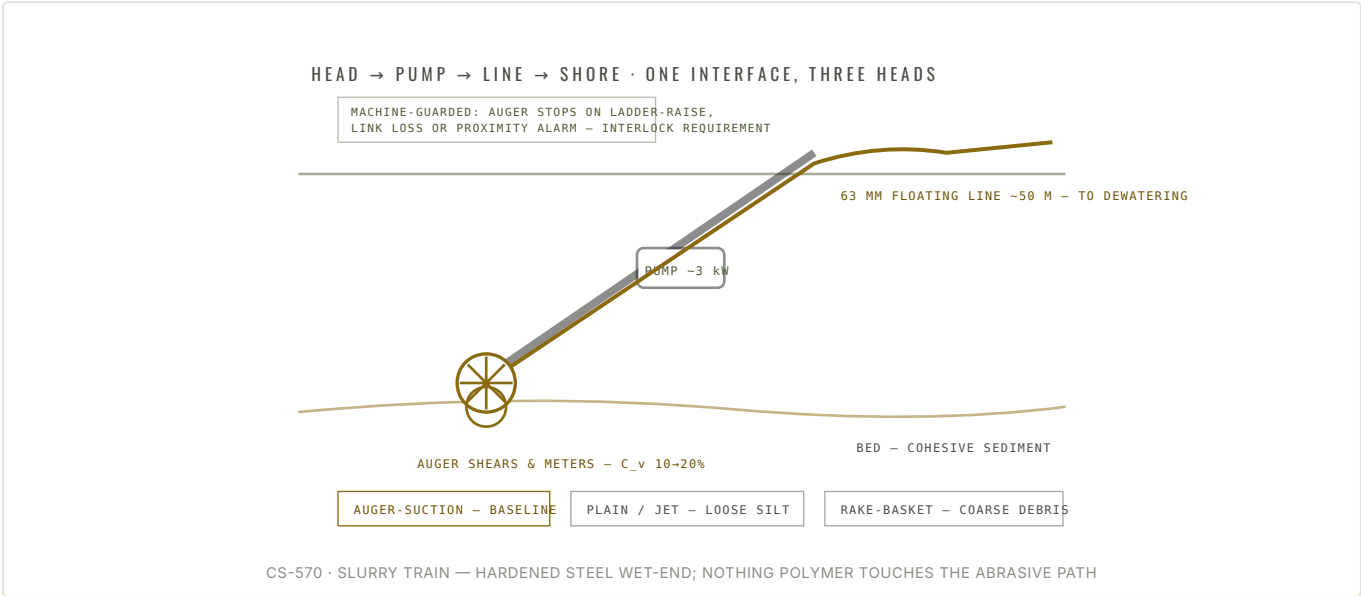
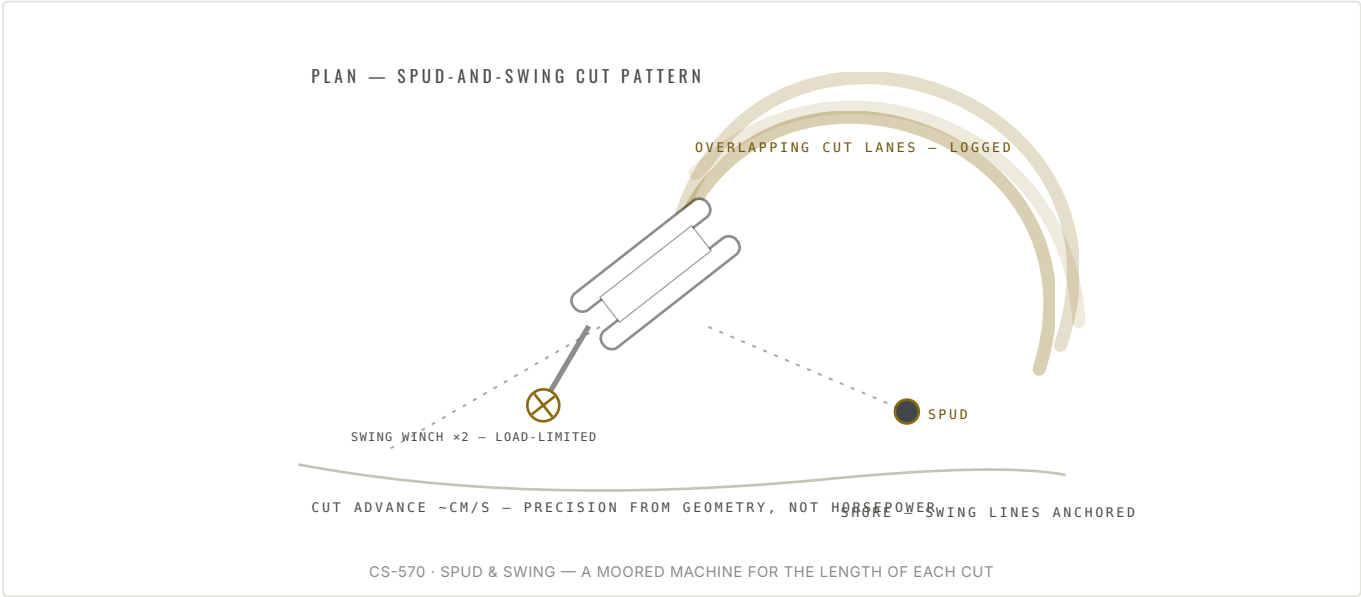
HOW IT WORKS

MECHANISM

MOOR TO THE BED, SWING THE CUT

Thrusters can't hold a dredge head on line economically — so the CS-570 doesn't try. It drops a spud through the deck into the bed and becomes, for the length of each cut, a moored machine.

Two swing winches walk the hull through slow, overlapping arcs around the spud — centimetres per second of cut advance, which is what precise dredging actually looks like. The ladder angle sets the cut depth; the load-limited hinge and stay protect the craft in the snag case, shedding load at a ~1 kN limit before the bow buries. Where thrust would fight the water all day, the spud simply stands in it. Precision comes from geometry, not from horsepower.

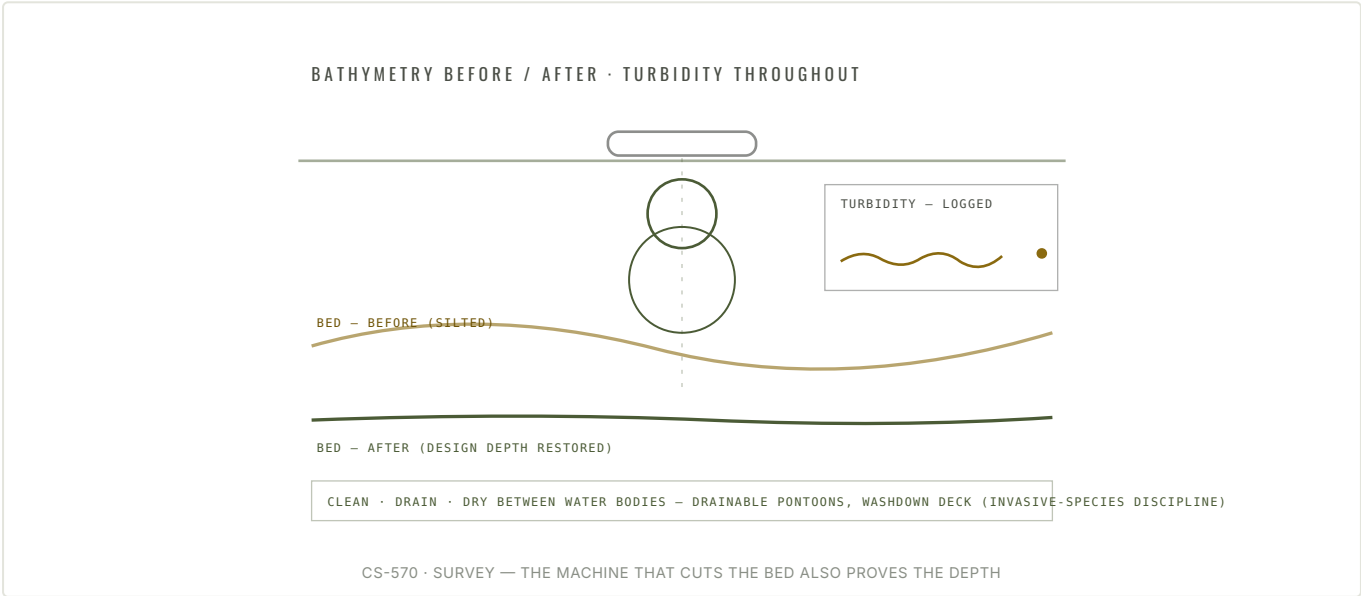


THE DELIVERABLE · SURVEY & COMPLIANCE

THE PRODUCT IS THE PROOF

A dredging job is finished when the customer can see it: design depth restored, documented. The CS-570 carries its own survey kit so the machine that does the work also produces the evidence.

A single-beam echosounder maps the bed before the first cut and after the last one — the before-and-after bathymetry is the deliverable, not an extra. A turbidity sensor logs the water column throughout, building the compliance trace environmental permits increasingly demand. Between water bodies the craft is designed for clean-drain-dry decontamination — drainable pontoons, washdown-tolerant deck — because moving invasive species between ponds is how a service company loses its licence.



SPECIFICATIONS

CAPABILITIES & SPECIFICATIONS

DREDGER CS-570	
DIMENSIONS & MASS	PERFORMANCE
Length overall	3.0 m
Beam overall	1.5 m — road-trailerable without permits
Hull depth / loaded draft	0.45 m / ≈0.26 m
Displacement, lightship / max	450 kg / 700 kg
Configuration	Twin-pontoon uncrewed surface work craft; ladder-mounted dredge head
STATION-KEEPING & CONTROL	SLURRY TRAIN & HEADS
Station-keeping	Working spud through deck guide + 2× load-limited swing winches
Snag protection	Load-limited ladder train, ~1 kN limit; ≈4.3° trim at limit — hull-protective by arithmetic
Command & control	Commercial RF control, telemetry and GNSS — permitted on the civil Industrial line
Guarding interlocks	Auger stops on ladder-raise, link loss and proximity alarm
MATERIALS & CONSTRUCTION	ENERGY & DECONTAMINATION
Wet end	Hardened steel and elastomer linings only — no polymer in the abrasive path
Wear parts	Run as consumables — off the group's own tooling floor
Pontoons	Moulded bodies, recycled-PET where structure allows; in-shop weldments where loads demand
Shared platform	Water-trio hull & station-keeping library with Skimmer CS-520 and Recovery CS-580
Energy	Onboard transit pack, ~150 kg class for full-day energy, or bundled shore-power umbilical riding the discharge line
Emissions at the pond	Electric drive — quiet, emission-free at the water
Decontamination	Clean-drain-dry between water bodies: drainable pontoons, washdown-tolerant deck fittings
Survey & compliance kit	Single-beam echosounder (pre/post bathymetry) + turbidity logging
COMPLIANCE	
Patent status	Patent pending
Classification	Civil work machine — Industrial line; commercial radio, telemetry and GNSS permitted on this line
Energetic content	None — carriers and working tools, not munitions; no energetic content in any variant
Trio scope	Survey-and-mark is Skimmer CS-520; floating collection is Recovery CS-580 — not this craft

SLURRY RATE IS STATED AT ~12 M TOTAL DYNAMIC HEAD. DREDGING, SEDIMENT DISPOSAL, TURBIDITY LIMITS AND INTER-WATERBODY DECONTAMINATION ARE REGULATED ACTIVITIES THAT VARY BY JURISDICTION — PERMITS AND APPROVALS BELONG TO EACH JOB AND ARE NEVER IMPLIED BY THIS PAGE.

THE TRADES, STATED

SAME STACK, ANTENNAS ON.

The Industrial line is the civil sibling of the defence fleet: the same autonomy stack, the same moulded-structure manufacturing, the same owned Canadian shop floor — pointed at work instead of at threats.

Up here the doctrine bends exactly once, and we publish it in both directions: radio and GNSS are permitted on the civil surface line — a pond is not a jammed battlespace — and never on the defence, underground or tethered platforms. The CS-570 also carries the fleet's manufacturing thesis in miniature: moulded pontoon bodies with recycled-PET where structure allows, in-shop weldments where loads demand, and a consumables line — wear plates, liners, impellers, grille bars — that keeps every support conversation attached to the group's own tooling floor. Sovereign supply chain, auditable custody, one design language across forty-two machines.

THE WATER TRIO

SKIMMER FINDS IT.
RECOVERY LIFTS IT.
DREDGER CUTS IT.

Three craft on one shared shallow-draft hull and station-keeping library: the CS-520 is the information layer, the CS-580 the collection layer, and the CS-570 the excavation layer. One incident, one family, one custody chain — from the spill edge to the dewatering bag.

DEPLOYMENT

A WORKING DAY AT THE POND.

One technician, one trailer, one dry shoreline — a service day, not a marine operation, and illustrative of how the machine is used rather than a job record.

01 · ARRIVE & SET

TOW IN, SPLASH, SURVEY

The craft arrives behind a pickup and launches from the ramp or the bank. The shore station stands up — dewatering point set, discharge line floated out, swing lines anchored — and the echosounder maps the bed for the “before” record the invoice will point to. Then the spud drops, the craft moors itself on station, and the operator never leaves the bank.

02 · WORK THE CUT

SWING, CUT, PUMP ASHORE

The ladder lowers to the programmed depth and the head walks its winch-swung arcs at centimetres-per-second advance, logged against the survey grid. Slurry runs at ~30 m³/h up the ladder, through the floating line, into the dewatering bag. The machine protects itself — blockage auto-reverse, snag load-shedding, auger interlocks — so faults stop the head, not the day.

03 · PROVE & RECOVER

SURVEY, DRAIN, DRIVE AWAY

The job ends with evidence, not with an estimate. The “after” bathymetry demonstrates design depth against the morning's baseline; the turbidity log accompanies the record; dewatered solids transfer at the shore custody point. Pontoons drain and the deck gets washed — clean-drain-dry — and the craft leaves ready for the next water body.

THE FAMILY

RELATED SYSTEMS

CS-520 · INFORMATION LAYER

SKIMMER

Finds and measures — the survey-and-mark craft that tells the trio where the work is.

CS-580 · COLLECTION LAYER

RECOVERY

Collects what floats — funnel booms, a between-hulls channel and a custody-logged cassette.

Dredger CS-570 · patent pending · a civil waterway-maintenance work machine on the Industrial Series charter — commercial radio, telemetry and GNSS permitted on this line. Carriers and working tools, not munitions: no warhead, fuzing or energetic content of any kind, in any variant, ever. Dredging, sediment disposal, turbidity limits and inter-waterbody decontamination are regulated activities; permits and approvals belong to each job and are never implied by this page.



SMALL WATER, MOVED.

DREDGER · INDUSTRIAL · CS-570

Skimmer finds it.
Recovery lifts it.
Dredger cuts it.

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 Dredger 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. The civil Industrial line is the surface exception where radio and GNSS are permitted.

Dredger CS-570

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