

YOUR NEXT ERA OF RACK CLEANING

Automation, debris handling and gate-picking
continuity for Central Hudson Gas & Electric

CENTRAL HUDSON GAS & ELECTRIC



Olympus Dam, Colorado · Cross Machine project archive

LESS ROUTINE INTERVENTION. MORE OPERATIONAL CONFIDENCE.

Central Hudson has two Cross Machine nested tube rack cleaners. With Dashville’s boom recently rehabilitated and its gantry rubber hoses replaced, the next investment can focus on automation, farther debris placement and continued gate picking.

24/7/365

The requested operating objective

BEYOND THE RACK

Move removed debris to a more useful receiving location

ONE ACCOUNTABLE PARTNER

Mechanical equipment, hydraulics, controls and field integration

RECENTLY RENEWED. READY FOR THE NEXT STEP.

Cross Machine confirms the boom was recently rehabilitated and all gantry rubber hoses replaced. Build on that work when defining the next investment.

Credit the completed work

Retain the renewed boom and hoses where compatible. Target controls and specific mechanical refinements.

Gate picking is required

Survey the picking beam, receptacle, lifting interfaces and later site modifications. Preserve a viable method in either path.

Verify both machines

Confirm today's debris route and required discharge reach. The second machine needs its own condition and interface assessment.



Dashville archive photo · not a current condition assessment

CHOOSE THE PLATFORM THAT EARNS ITS INVESTMENT

Decision factor	A / Targeted modernization	B / New articulating system
Best fit	Build on Dashville’s recently renewed boom and hoses	Farther debris placement is worth a new operating platform
Mechanical scope	Retain renewed assemblies; add specific mechanical and control upgrades	New articulated boom and site-specific support/travel package
Debris-handling reach	Existing envelope remains unless a separate handling solution is added	Design the reach and payload around the desired receiving point
Gate-picking requirement	Preserve and validate the existing method and interfaces	Retain a compatible lift arrangement or engineer a separate solution
Primary uncertainty	Retrofit interfaces and downstream material handling	Loaded reach, reactions, clearances and gate-picking integration

Both paths target unattended routine cleaning with defined exceptions. A boom-only gantry conversion is an engineering alternate, not a priced drop-in replacement.

BUILD ON THE WORK ALREADY COMPLETED.

Dashville's recent rehabilitation makes a controls-led modernization a credible path. Specify the remaining work against its current condition.

Preserve the renewed asset

Verify the recent boom work and hose routing, then target remaining wear, interfaces and service-access needs.

More controllable motion

Evaluate proportional hydraulics, position feedback, operating limits and compatible retained components.

Resolve material handling

Automation alone does not extend reach. Assess a separate transfer arrangement if the current discharge point remains a constraint.



Supplied Dashville hose-site photograph · September 2026 folder

MOVE DEBRIS FARTHER. MAKE REMOVAL MORE USEFUL.

The driver is what happens after debris leaves the racks: reach a more useful receiving location and reduce secondary handling.

Design backward from the destination

Measure the receiving point, discharge height, travel path and required loaded reach—not just maximum unloaded reach.

Carry and place the load

Match boom capacity, rake retention and clearances to representative wet debris along the full route.

Keep gate picking available

Check interference with existing lifting arrangements. Select a retained or separate engineered method before choosing the boom.



Olympus Dam archive photograph · articulating rack-cleaning arrangement

OLYMPUS GIVES US A DOCUMENTED FOUNDATION

The Olympus Dam operating manual describes an integrated mechanical, hydraulic and PLC-controlled system with automatic operation.

Automatic initiation

Water-level differential, scheduled timer and remote start commands.

Position-aware motion

Three absolute encoders for swing, main boom and knuckle boom; station limit switches and motion interlocks.

Operator visibility

Manual and semi-automatic operation, HMI water-level and timer screens, alarms and encoder maintenance functions.



Olympus system in shop assembly · 2009 project archive

AUTOMATE THE WHOLE CLEANING CYCLE

Proposed automatic cleaning sequence for either platform. Gate picking remains a separate, operator-controlled mode with agreed interlocks.

01 / Request

Differential level or a scheduled cycle requests cleaning.

02 / Verify

Confirm cleaning mode, attachment, machine position, protected area and debris destination are ready.

03 / Clean

Follow the approved motion path while monitoring position and hydraulic response.

04 / Discharge

Follow the verified loaded-reach path and place debris at the agreed receiving point.

05 / Confirm

Record cycle outcome, recheck the intake condition and repeat within approved limits.

06 / Park or alert

Return to a known state. Escalate exceptions with clear instructions for the operator.

THE RIGHT FEEDBACK FOR DEPENDABLE AUTOMATION

Know where the machine is

Position feedback for critical axes, travel references, endpoint checks and feedback plausibility.

Know how the system is behaving

Hydraulic pressure, oil level and temperature, motor health, water levels and cycle-completion monitoring.

Control access and exceptions

Risk-assessed guarding, emergency stops, mode/attachment checks, fault latching and authorized recovery.

Keep operations informed

Local PLC/HMI, alarm priorities, event logs and integration with Central Hudson's SCADA standards.

PLAN THE ABNORMAL CONDITIONS

Condition	Proposed response
Overload or stalled movement	Stop or hold in a verified safe state; allow only validated, bounded recovery attempts.
Position or level-sensor disagreement	Inhibit affected automatic movement and issue a diagnostic alarm.
Ice, unusual debris or out-of-envelope load	Suspend automatic operation and request an operator assessment.
Bin full or discharge path unavailable	Inhibit the cycle and notify operations before moving more debris.
Loss of power or communications	Apply the defined local fallback and restart permissives; avoid uncontrolled restart.
Protected area entered or emergency stop	Execute the engineered safety response; require authorized reset and revalidation.

Responses are design proposals to validate. Mechanical load holding and the safe state must be resolved for each failure mode.

DEFINE SUCCESS BEFORE EQUIPMENT IS ORDERED

Cleaning & debris placement

Demonstrate rack coverage, the agreed receiving point, loaded reach, retention and secondary-handling effort.

Sustained operation

Agree a witnessed trial duration, representative debris/water conditions, allowable interventions and seasonal follow-up.

Gate picking & fault response

Validate the selected lifting method, interfaces, limits and mode separation; test jams, invalid feedback and power loss.

Maintainable ownership

Deliver manuals, drawings, program backups, spares, training and a maintenance schedule.

A CLEAR INVESTMENT FOR EACH PATH

Base-scope planning ranges per machine, September 2026 USD. Path A credits Dashville’s recent work. Required gate-picking changes remain unpriced; not a quotation.

Budget component	A / Modernize	B / Articulating
Scope + equipment, supply only	\$246.5–\$448k	\$612.5–\$947.5k
Freight, install & commissioning	\$45–\$80k	\$75–\$125k
Installed base-scope total / machine	\$291.5–\$528k	\$687.5–\$1,072.5k
Second machine / program total	Survey & quote	Survey & quote

TARGETED MODERNIZATION + AUTOMATION

Scope / USD thousands	Low	High
Condition assessment & mechanical design	22.4	39.2
Targeted boom checks & mechanical refinements	11.2	22.4
Travel, structure & drive repairs	22.4	50.4
Hydraulic motion-control upgrades	39.2	72.8
Automation hardware & panel integration	56	95.2
Controls software & verification	78.4	140
Final shop acceptance, documentation & spares	16.9	28
Freight, installation & site commissioning	45	80
Installed base-scope total	291.5	528

NEW ARTICULATING SYSTEM

Scope / USD thousands	Low	High
Site survey, structural review & mechanical design	44.5	72.5
Articulating boom, slew & pedestal package	245	334.4
Base, trolley & support steel	50.1	89.2
Rake head & debris-retention assembly	27.8	50.2
Hydraulic power, valves & hose package	44.5	72.5
Automation hardware & panel integration	61.2	100.3
Controls software & verification	89.1	150.5
Final assembly, shop acceptance, documents & spares	50.3	77.9
Freight, installation & site commissioning	75	125
Installed base-scope total	687.5	1,072.5

MARKET CHECKS INFORM THE COMPONENT ALLOWANCES

Public supplier listings reviewed September 21, 2026. These inform the estimate; customer budget allowances also cover integration and project delivery.

Parker PAVC65-family piston pump	\$7,317–\$8,145 each	LIFCO Hydraulics
25 hp IronHorse motor	\$2,368 each	AutomationDirect catalog
10-inch operator touchscreen	\$785 each	AutomationDirect
Radar water-level sensor	\$1,180 each	ControlByWeb
3/4-inch hydraulic hose	\$5.91/ft	Hydraulics Direct
A36 plate, 1 × 48 × 48 inches	\$1,495.30 per plate	OnlineMetals

Supplier names link to the pricing references. See the website estimate detail for part numbers and applicability.

KEEP THE CAPITAL COMPARISON CONSISTENT

Included in the model

Assessment, defined mechanical/automation scope, shop tests, freight/rigging, installation and commissioning. Path A credits Dashville’s recent renewal.

Excluded from these totals

Tax, financing, generation losses, major civil/foundation work, site-wide rail/power upgrades and a new conveyor/bin system.

Required scope still to price

Gate-picking modifications or a separate lift system; any new debris-transfer equipment. Assess first, then add priced scope to the selected path.

Two-machine program

Budget each unit against its actual condition and interfaces. Dashville’s recent work is not assumed to apply to the second machine.

Ranges cover the modeled scope and are not price ceilings. Both options must deliver a viable gate-picking method in the final project scope.

ASSESS BOTH. PROVE THE FIRST. THEN REPEAT.

Sequence work around Central Hudson's outage constraints and the serviceability of each machine.

01 / Assess & define

Survey both units, recent work, debris destination and gate-picking arrangements. Define operating boundaries.

02 / Select & quote

Confirm loaded reach, lifting duty and reuse. Price all required interfaces before comparing final options.

03 / Engineer & build

Approve the control narrative, gate-picking method, mode interlocks and acceptance plan before fabrication.

04 / Factory acceptance

Witness normal sequences and simulated fault cases before the first machine ships.

05 / Site acceptance

Commission in supervised service, validate site conditions and authorize unattended operation in stages.

06 / Second machine

Apply accepted lessons to the second unit. Confirm spares, training and ongoing service requirements.

MEASURE VALUE IN THE WORK YOUR TEAM GETS BACK

Operator & handling time

Measure attendance, interventions and the labor/equipment needed to move debris after rack removal.

Maintenance effort

Track leaks, wear, unplanned repairs, downtime and spare-parts consumption.

Cleaning effectiveness

Track differential head and successful cleaning cycles under comparable water and debris conditions.

Material-handling result

Compare receiving-point reach, rehandling moves, debris containment and continued gate access.

EQUIPMENT KNOWLEDGE. PROJECT DELIVERY.

We can evaluate the modernization path and the replacement path with the same understanding of how the machine must work at the intake.

Your equipment history

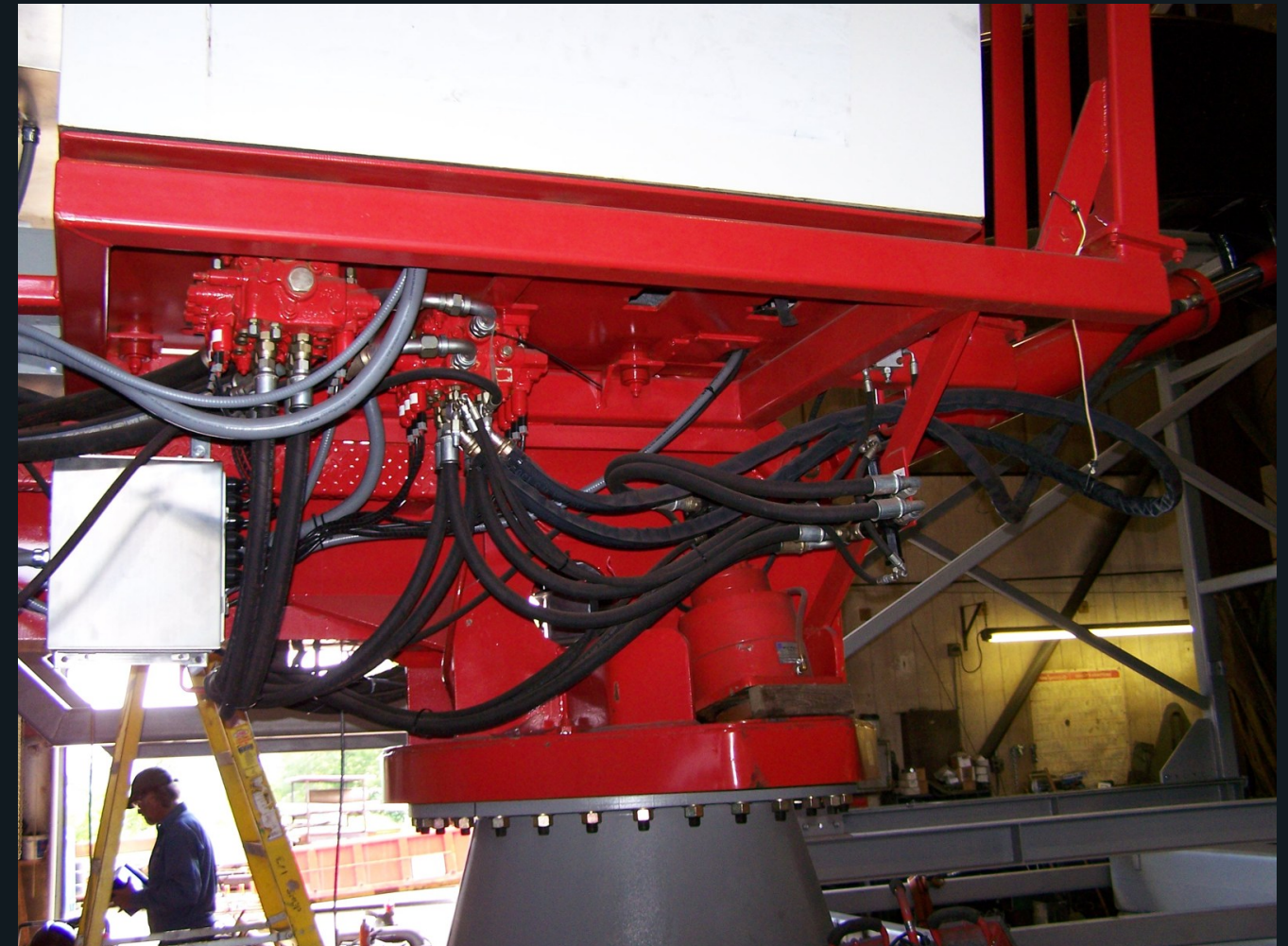
Existing Cross Machine cleaners, recent Dashville boom rehabilitation and gantry hose replacement.

Relevant automation experience

Olympus combines articulated mechanics, hydraulics, position feedback and automatic cycle initiation.

Execution across disciplines

Mechanical design, fabrication, hydraulic and electrical integration, shop testing, installation and commissioning.



Olympus hydraulic integration · Cross Machine project archive

LET'S DEFINE THE RIGHT UPGRADE FOR CENTRAL HUDSON

Begin with a joint assessment and a budget-to-quote package for both machines.

Bring the operating history

Recurring faults, cleaning workload, ice/debris conditions and the desired unattended service window.

Confirm the interfaces

Desired debris destination, gate loads and picking interfaces, rails/foundations, SCADA and outage windows.

Leave with a decision

A recommended path for each machine, clear inclusions and exclusions, and an updated commercial proposal.

WHAT SUPPORTS THIS PROPOSAL

Supplied project evidence

Cross Machine’s recent-work and operating-needs updates; Dashville picking-beam/receptacle photos and hydraulic gate-lift record; historical overhaul scope. Olympus O&M pp. 6–12 and mechanical, hydraulic, electrical and steel lists.

Revisions and applicability

Early Olympus documents show 75 hp and different pump/travel arrangements. The later manual records a 25 hp-class system. The estimate does not add both designs together or assume Olympus dimensions apply to Central Hudson.

Current cost reference

Cross Machine supplied the \$500k–\$650k new traditional-machine supply benchmark. Selected public supplier listings provide component checks; all labor rates, labor hours beyond historical scope, custom packages and site allowances are estimating assumptions.

Items to firm up

Loaded reach to the receiving point, wet-debris payload, gate weight/lifting duty and interfaces, boom quotation, current condition, control/safety design and unpriced gate/debris-handling work.