



Swing Invent Holdings Pty Ltd



MINING SECTOR

Slimline Swing Pedal Assembly

01

THE PROBLEM

**Your machinery
runs 24/7.
Do your controls?**

Across mining operations worldwide, operators spend 12-hour shifts inside cabs built around control systems that are decades out of date.

The cumulative toll is measurable: lost uptime, compromised safety, and output that falls short of what the machine and the operator are capable of.

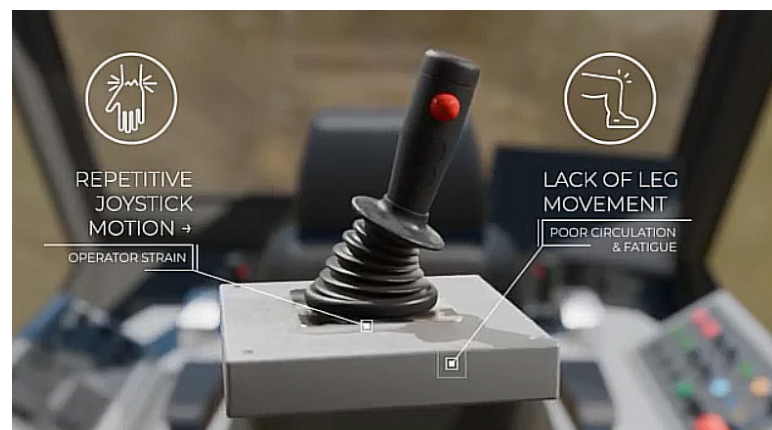


Traditional swing pedal designs were engineered for a different era. Control gear is buried in confined spaces beneath the cabin floor, spare parts are discontinued, and coupling failures happen with alarming frequency.

When something breaks, the machine stops. In mining, every hour of unplanned downtime can cost upwards of USD \$50,000.

Meanwhile, operators are forced into unnatural hand, wrist and arm positions across every shift. Achilles tendinitis, wrist and carpal tunnel injuries, lower back strain, repetitive strain injuries (RSIs).

Injuries take people off the job. They also signal to every maintenance manager that the status quo is unsustainable.



USD \$50K

Cost per hour of unplanned downtime

12×

More likely to microsleep when highly fatigued (Fatigue Science, 2.1M hours)

25%

Productivity loss linked to operator fatigue

60%

Reduction in fatigue with ergonomics programs



The three pain points maintenance teams know too well:

- ✖ Control equipment located in confined spaces, inaccessible without bringing production to a halt
- ✖ Obsolete coupling components with no OEM replacement, leading to custom workarounds that fail repeatedly
- ✖ Fixed, non-adjustable pedals that punish operators regardless of body type, experience, or shift length

The SIH Slimline Swing Pedal Assembly



Engineered from the ground up to solve the problems traditional designs never addressed.

The SIH Slimline is a self-contained, cabin-mounted pedal system that integrates seamlessly with your existing equipment.

No drilling, no specialist contractors, no production shutdown.

Developed by **Geoff Davis**, a qualified electro-mechanical engineer with over 30 years across mining and crane industries, the SIH Slimline emerged from direct field observation of the exact problems your teams face every day.

Since its first patent in **2009**, it has been refined and proven across some of Australia's most demanding mining operations.





Why the SIH Slimline is different

CONTROL GEAR INSIDE THE CABIN

All electronics are housed within the operator **cabin**. No confined space access required, no elevated work platform needed for servicing. Maintenance tasks that previously shut down production are now completed on-site in minutes.

AUTOMATIC RETURN TO NEUTRAL

The **SAFETY** auto-return mechanism brings each **pedal back to neutral automatically**.

This eliminates the sustained muscular effort that accumulates into injury across a 12-hour shift.

FULLY ADJUSTABLE FOR EVERY OPERATOR

Multi-position adjustment across forward/back reach, arm height, and pedal rotation angle.

The narrower pedal stance promotes a neutral ergonomic posture, reducing strain regardless of the operator's frame or gender.

PLUG-AND-PLAY RETROFIT

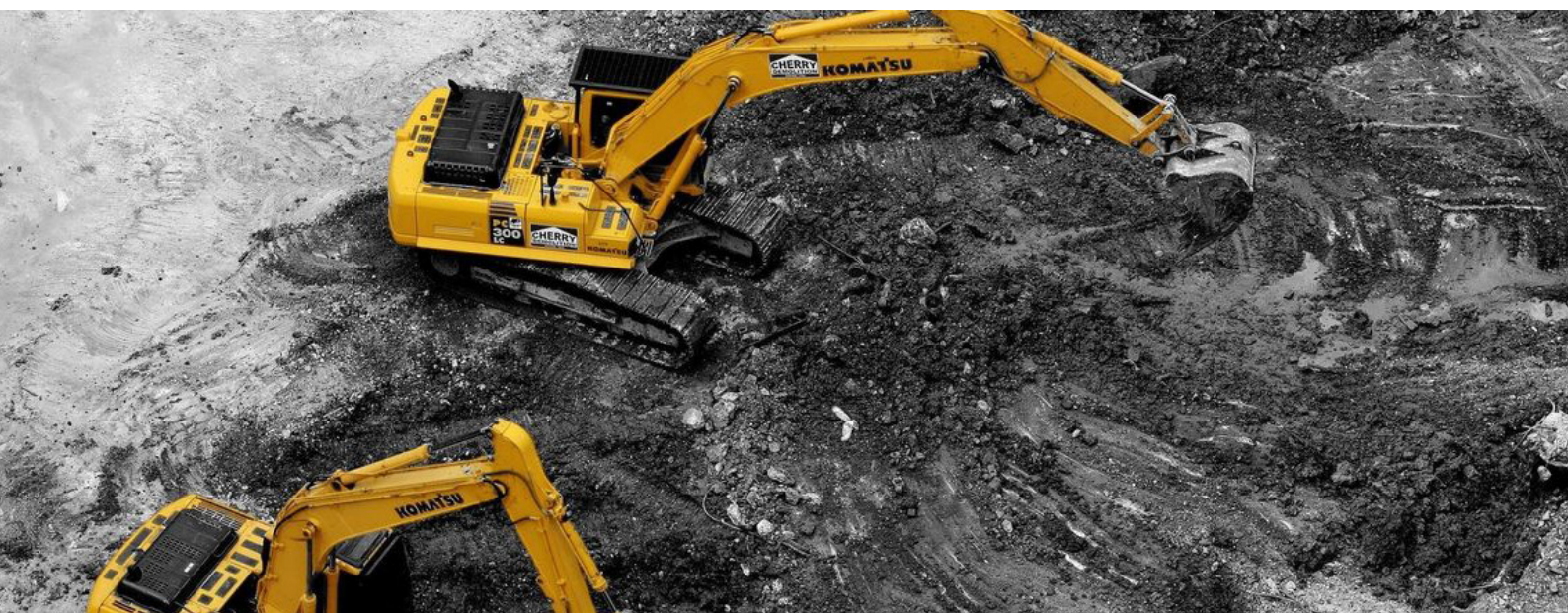
Fits Caterpillar, Marion, BE and P&H draglines
Electric Rope Shovels such as CAT, BE and P&H
using existing fixing points. No specialist skills,
no cabin floor removal, no drilling. Installation is a
straightforward, low-downtime process: tighten
the bolts and go.

COMPATIBLE WITH ALL MAJOR CONTROL SYSTEMS

Supplied ready for Potentiometer, Resolver,
Absolute Encoder, 4–20mA, 0–10V, and Hall
Effect systems, making SIH suitable for your
existing fleet and future-ready for electrified
machinery. Should your control system not be
listed, we can supply what your system requires.

SPARE PARTS AVAILABLE

Every component is documented, catalogued,
and available. Unlike legacy systems where a
single obsolete coupling can idle an entire
machine, SIH is designed for long-term
operational supportability.



Built by someone who spent years inside mining cabs



Swing Invent Holdings Pty Ltd is an Australian manufacturer specialising in ergonomic swing pedal assemblies for heavy industrial machinery.

Founded by **Geoff Davis**, electro-mechanical engineer, former crane service supervisor, and technical sales specialist to the mining and industrial sectors, **SIH was created to address a gap no major OEM had closed.**

ERGONOMIC · EFFICIENT · ENDURING · ECONOMICAL

In **2003**, while working across mining sites for Cavotec Australia, Geoff observed first-hand that existing pedal systems were causing real harm to operators and real cost to operations.

He spent six years modifying and testing designs before developing and patenting the SIH Slimline in **2009**. Since then, the system has been adopted across draglines, electric rope shovels, hydraulic shovels, and large crane swing systems, trusted by some of the most demanding mining operations in Australia.

Compatible across your entire fleet

The SIH Slimline Pedal Assembly is engineered for the most demanding machines in mining.

Three mounting configurations give you the flexibility to retrofit across mixed fleets without specialist labour or operational disruption.





ELECTRIC ROPE SHOVEL (P&H / CAT)

Swing motion control



HYDRAULIC SHOVEL (CAT / KOMATSU / LIEBHERR / HITACHI)

Swing motion control



ELECTRIC HYDRAULIC SHOVEL (KOMATSU / CAT / LIEBHERR)

Full pedal assembly
replacement



DRAGLINE (CAT / BE / MARION / P&H)

Swing, pedal replacement



Mounting Options:

- ❖ BE Floor Adapter
- ❖ Floor Frame with Slide Rotation Bracket
- ❖ Console Mount with Slide Rotation Bracket

Three Mounting Options



✦ CONSOLE SLIDE ROTATION BRACKET

Mounts directly to the console with multi-directional adjustment.

Four locked positions in each axis: forward/back reach, arm height, and pedal rotation, for precision ergonomic setup per operator.



REACH
4 POSITIONS



HEIGHT
4 POSITIONS



ROTATION
4 POSITIONS



AXIS
LOCKED

✦ BE FLOOR ADAPTER MOUNT

Uses existing BE pedal fixing holes with no measuring and no drilling required. Direct replacement in minutes. The pedal bolts onto the floor frame. This frame pivots the front side of the bracket offering operators 4 positions tilt angle of both pedals.

✦ FLOOR FRAME

Once the existing pedal assembly is removed, the SIH floor frame installs cleanly on the cabin floor then bolts the multi-directional slide rotation bracket.

Four locked positions in each axis: forward/back reach, arm height, and pedal rotation, for precision ergonomic setup per operator. The removable spacer bar assists alignment during installation, then withdraws to keep the cab floor clear.



4 POSITIONS



REMOVABLE
SPACE



CLEAR AREA
The floor frame is removed
after installation.

Technical Specifications



OVERALL DIMENSIONS	440mm (W) x 320mm (D) x 115mm (H)
PEDAL HEIGHT	272mm
CONTROL SIGNAL OPTIONS	Potentiometer, Resolver, Absolute Encoder, 4–20mA, 0–10V, Hall Effect and more.
COMPATIBILITY	Caterpillar, Marion, BE, P&H draglines and CAT, BE P&H electric rope shovels.
MOUNTING	BE Floor Adapter, Floor Frame, Console Slide Rotation Bracket.
HOUSING	Self-contained Slimline housing with sealed cable connections
SPRING RETURN	Automatic neutral return. SAFETY auto-return on each pedal.

**The upgrade your
operations team has
been waiting for**

For maintenance managers, procurement teams, and HSE officers, SIH addresses every dimension of the decision.



MAINTENANCE MANAGER

Reduce unplanned downtime with cabin-accessible controls, standardised spare parts, and a plug-and-play retrofit process that requires no confined space permits. Servicing tasks that previously took shifts now take minutes.

HSE / SAFETY OFFICER

Address musculoskeletal disorder (MSD) and repetitive strain injury (RSI) risk at the source, through preventive hardware rather than reactive monitoring. Auto-neutral return, adjustable positioning, and bio-dynamic support reduce injury accumulation across every shift.

➤ PROCUREMENT MANAGER

Low capital expenditure with measurable ROI.

Compatible with your existing mixed fleet (CAT, BE, P&H, Komatsu) without requiring invasive modifications.

Documented compatibility avoids OEM warranty concerns.

➤ SITE / PRODUCTION MANAGER

More comfortable operators work with greater precision, faster cycle times, and lower error rates. Ergonomics is a direct productivity lever.

Fewer injuries translate to fewer shift absences and lower compensation claims.



Wesfarmers Curragh & Dawson Mines (operated by Anglo American) Ryan Winter, Electrical Engineer

Since **2004**, Ryan Winter has partnered with Geoff Davis on a series of operator console upgrades across Wesfarmers Curragh and Dawson Mines.

As an early adopter of Swing Invent's slimline swing pedal and slide rotation bracket, Ryan played a key role in introducing these innovations to dragline operations within the Australian mining sector.

Following initial implementation, the solution has been progressively rolled out across the dragline fleet at Curragh, supporting improved operator ergonomics,

control precision, and long-term equipment optimisation.

Across deployment, sites have reported measurable performance improvements, including reduced operator fatigue through improved posture and lower physical strain, a reduction in maintenance interventions driven by simplified mechanical design, and increased equipment uptime through more consistent and precise swing control.

These outcomes contribute to safer operations and more efficient production cycles across dragline activities.



Proven across the
world's most
demanding mining
operations

SIH Slimline Pedal Assemblies have
been deployed by leading mining
companies across Australia and
beyond.

The following organisations have
adopted advanced swing pedal
systems across their fleets:



RioTinto

GLENCORE



08

DISTRIBUTION & CONTACT

Available globally.
Supported locally.

SIH products are available through authorised distribution partners in Australia, South Africa and Latin America, backed by full technical support and spare parts supply.



AUSTRALIA	Leveltech Engineering Pty Ltd sales@leveltec.com.au
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The operator is the site's
most valuable asset.



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