



## Swing Pedal Technology



**Ergonomic . Efficient . Enduring . Economical**



Experience Swing Invent...  
the new generation in  
swing pedal design that  
repays in every way.



# SWING INNOVATION

## Resolving the problems of traditional swing pedals.

- ▶ No more costly downtime to perform repairs on difficult-to-access fixtures
- ▶ No awkward underfloor controls or obstructions in the confined console area
- ▶ No injuries arising from repetitive use of non-adjustable, non-ergonomic equipment
- ▶ No decline in control or performance caused by wearing parts
- ▶ No more waiting for specialist skills and parts when servicing is required

For users of Marion, BE and P&H draglines and shovels, the innovative Swing Invent Holdings (SIH) Pedal Assembly is an investment that will repay many times over.

No other pedal configuration presents such a complete solution to the costly challenges of traditional swing pedal technologies.

With Swing Invent Holdings' smarter design and seamless integration, the benefits are instantaneous and translate directly to the bottom line.



### MORE STREAMLINED, DURABLE DESIGN

Swing Invent Holdings' advanced, fully self-contained housing is suitable for console or floor mounted applications... simply plug and play.

#### **Durable cast aluminium housing with heat treated pedals**

For long-life performance in tough industrial conditions.

#### **Unique tension stroke operation**

Engineering and parts afford extra strength, are less susceptible to failure as the unit is worn in, and deliver consistent control.

#### **Accessible, unobtrusive componentry**

Allows for easy, on-the-spot servicing from within the cabin, yet remains protected from impact and interference during daily activity.

#### **Replaceable, non-perishable parts**

Fully replaceable bearings perform reliably and are easily maintained.

#### **Adjustable resistance**

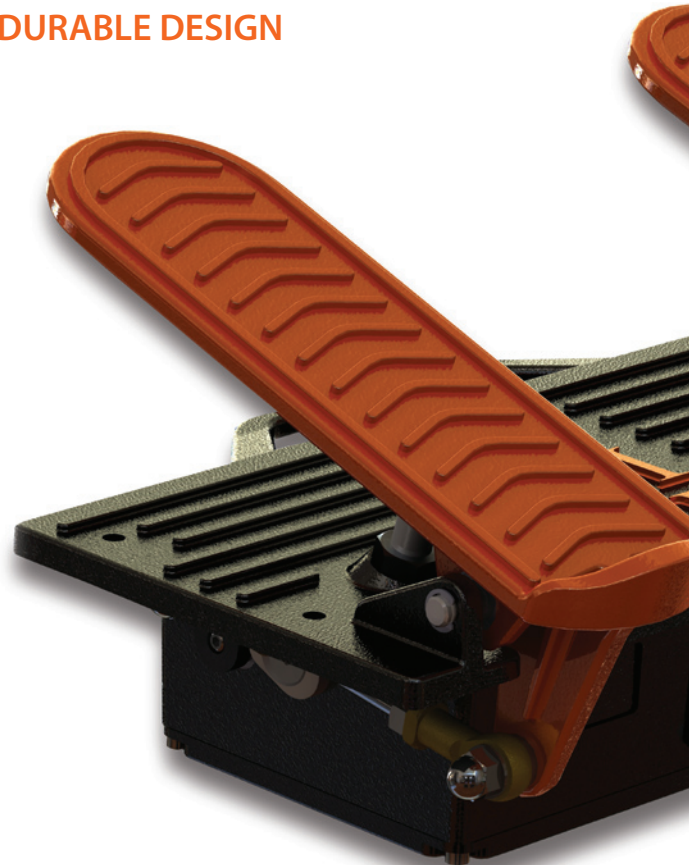
Pedals can be fine-tuned for different users and applications by simply replacing the patented spring return mechanism.

#### **Recessed connection points**

Electrics are protected by the housing of the unit, and do not infringe on the control space, yet are readily accessible.

#### **Return to neutral pedal position**

Industry's only genuine automatic return to neutral feature (see back page for more information).



### Easy Deployment, Economical Maintenance, Thorough Support

Swing Invent Holdings Pedal Assemblies are designed to promote self-sufficiency. With easy access to industry's most comprehensive product resources and spare parts support, you're in control of the deployment and servicing process.

- ▶ Our online support centre features 24 hour access to detailed product descriptions. This includes animated pedal demonstrations and downloadable parts manuals - in fact, much of the installation can be done from your desk.
- ▶ Swing Invent Holdings provides full spare parts support, ensuring precision and reliability for all maintenance tasks.
- ▶ No specialised technical skills or equipment are required for servicing and installation. Accessories are easily retrofitted to your existing equipment. Please see next page for more details.

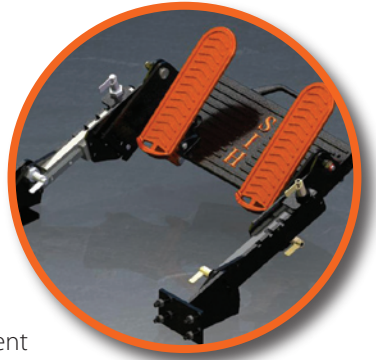
**Visit our website today at [www.swinginvent.com.au](http://www.swinginvent.com.au) and start planning your Swing Innovation**

## EASY CUSTOM RETROFITTING

With their self-contained design and plug and play interface, Swing Invent Holdings (SIH) Pedal Assemblies can be retrofitted seamlessly with your existing equipment. In fact, our range of accessories has been designed with users of Marion, P&H and BE configurations in mind.

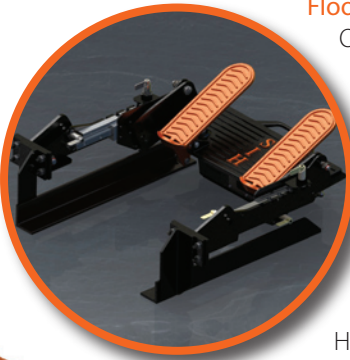
### Console Mounted Applications

The Swing Invent Holdings Slide Bracket is applied directly to the console. Once it is in place, operators can make multi-directional adjustments to the position of the pedals to achieve a customised, comfortable and ergonomic fit.



### Floor Mounted Applications - Floor Frame

Once the older pedal assembly is removed, the whole Swing Invent Holdings Floor Frame is simply applied to the floor of the cabin. This can be performed accurately with minimal planning, thanks to a temporary spacer bar, which is removed after installation to minimise clutter in the cabin.



### Floor Mounted Applications - BE Adapter Mount

A quick and simple retrofit means minimal downtime for BE pedal users. With drill holes positioned to match the original BE floor plate, the units are easily swapped. Your Swing Invent Holdings Pedal Assembly can be up and running immediately.



## BUILT FOR SAFETY

Swing Invent Holdings Pedals are designed to minimise risks, promote ergonomic work practices and increase productivity.

### Ergonomic pedal action

Narrow pedal stance and pivoting pedal action create a more comfortable and natural working position, reducing the need for awkward biomechanical manoeuvres that can cause repetitive strain injuries. This is of particular benefit in shovels and draglines with right hand rotation controls.

### Streamlined, uncluttered profile

By minimising obstructions and maximising circulation space, the confined console area becomes a safer and more efficient workspace.

### Customised operator settings

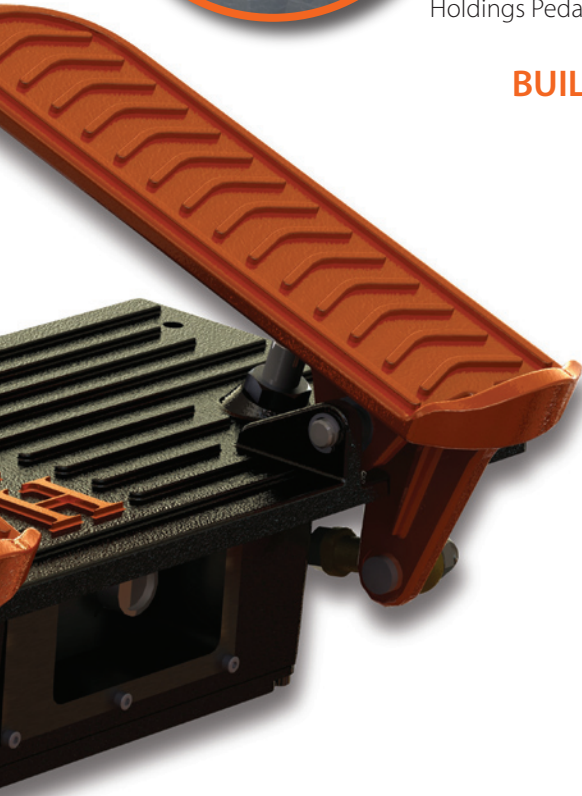
Pedals can be rotated to create a custom ergonomic fit for all operators, regardless of who takes the controls.

### One-Foot operation

This more responsive style of operation requires less physical force and leads to fewer repetitive strain injuries for operators. It is made possible by the return to neutral feature of the pedal design.

### Automatic signal shut off

Should both feet leave the pedals at any time, they will automatically return to neutral, eliminating signals to the dragline. This addresses safety concerns for all workers in the vicinity, should an incident occur in the cabin.



## Return on Investment In Two Hours...

Your investment in Swing Invent Holdings Pedals will pay itself off and show positive returns very quickly.

- ▶ Just two hours of saved dragline downtime will recoup the cost of a pedal assembly.
- ▶ All of the critical parts on your pedal assembly are hard wearing, replaceable and accessible while in situ. This reduces downtime, minimises the cost of labour and parts, and optimises production in one easy step.
- ▶ Workplace injuries carry insurance and productivity costs. Swing Invent Holdings Pedal Assemblies protect the well-being of your workers and reduce injury-related losses.

**Contact Leveltec today on +61 2 6558 9264 to discuss your solution**

# SWING IMPROVEMENT



## Superior to competitors in its class.

The Swing Invent Holdings (SIH) pedal design represents a quantum leap forward from even its most contemporary competitors, delivering unprecedented cost-efficiency, control and durability.

### Tension vs. Compression Stroke

- ▶ The unique Swing Invent Holdings tensioning action preserves the integrity of the assembly components, ensuring they perform more reliably over a longer period. In contrast, the compression action of competing models applies more force to fundamental parts. This is known to lead to premature wear, flexing and even failure when under pressure.
- ▶ Swing Invent Holdings connecting rods are made from heavier gauge stainless steel, promising prolonged performance, especially when used in tension.

### Non-Perishable vs. Perishable Parts

- ▶ The Swing Invent Holdings concept uses non-perishable parts, including bearings and a mechanical stop. Unlike the various combinations of bushes, leather and rubber components used by competitors, these will not fail or cause over-travelling of the control gear as the unit is worn in.
- ▶ Unlike other models on the market, most of the parts used in our pedal assemblies are standard mechanical components that are widely used. This means they are easy to source and replace, using the skills already available in your organisation.

### Industry's Only Genuine Return to Neutral Pedal Position

- ▶ Though it has been attempted, to date no other pedal configuration has achieved a 100% reliable return to neutral capability. This has to do with the Swing Invent Holdings patented spring return mechanism. Visit us online at [www.swinginvent.com.au](http://www.swinginvent.com.au) to view an animated demonstration of the spring return mechanism in action.

### Electrical Flexibility and Protection

- ▶ Extra electrical contact points can be added to Swing Invent Pedal Assemblies without the need for secondary connector boxes.
- ▶ Electrics are neatly recessed into the rear of the unit, reducing obstruction and risk of damage or injury.

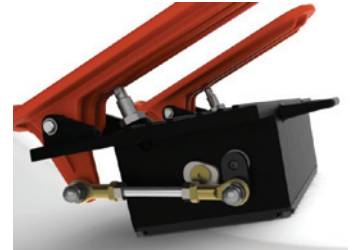
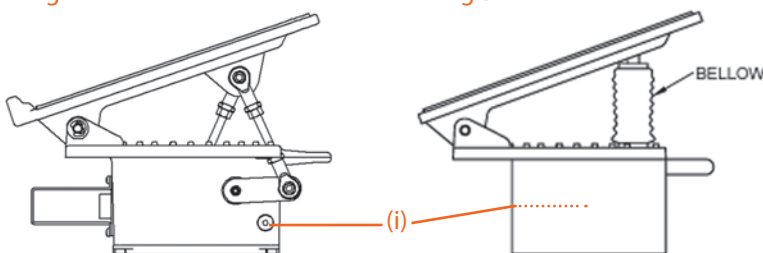


Fig A

Fig B



Detailed diagrams are available to demonstrate the differences between Swing Invent Holdings Pedal Assemblies and competing models.

Fig A & B: Competitor swing pedal assemblies that are mobilised by compression.

(i) Pin point contacts used as a stop mechanism wear easily, causing over-travelling of the control gear and potential loss of dragline control.

Fig A: Protruding electrical connector box can be hazardous in confined spaces.

Fig B: Rubber or leather bellows are susceptible to perishing and failure, which can in turn expose the control gear to damaging contaminants.

**Manufactured by:**  
**SWING INVENT HOLDINGS Pty Ltd**



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