

The Magnetic Interface.

A new approach to ferrous material handling and hand safety — from retrieval to application-engineered load control.

LoadGrab™ — Handle the material.

RiggerLock™ — Control everyday loads.

Load-It® MagHead — Engineer the interface.

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Steel Has No Handle.

So workers create one — with their hands.

A steel plate. A fabricated bracket. A maintenance cover. A pipe section. None of them arrive at the point of use with a formed grip or a lifting eye. To pick them up, workers create a temporary handling interface at the point of use.

That interface is usually the hand. Fingers under the edge. Fingers wrapped around a corner. A grip wherever the material allows.

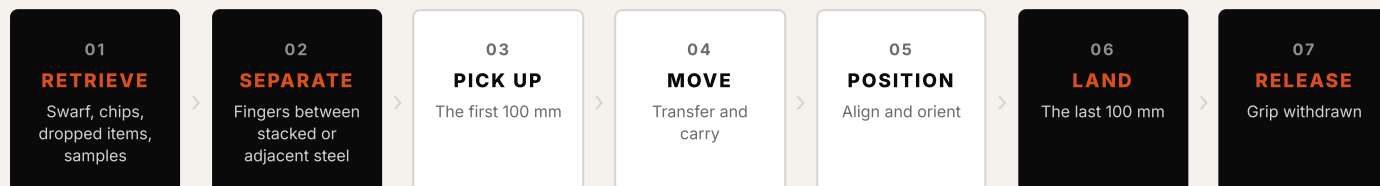
This is not carelessness. It is the natural solution to the problem the task presents. The component needs to move. The hand is available. **The hand becomes the tool.**

For ferrous material,
there is another option.

When the material is ferrous, magnetism can create an alternative interface — a temporary handle or control point where the material itself provides none. The task remains unchanged. The hand's relationship to it changes.

Hand exposure in ferrous material handling is not limited to the lift.

Standard assessments ask: how heavy is it? Hand-safety engineering asks: where do the hands go — at every stage of the sequence.



Highlighted stages — retrieve, separate, pick up, land and release — are where fingers typically approach the closest point of contact with steel surfaces, edges or the load-support interface.

THE TRADITIONAL QUESTION

How heavy is it?

THE HAND-SAFETY ENGINEERING QUESTION

Where do the fingers go?

Create a handle where the material has none.

A System of Interfaces, Not a Catalogue of Products.

Different tasks require different magnetic interfaces. The PSC and Hand Safety First portfolio is organised around what the worker needs to do with the ferrous material — not around a hierarchy of products.

L1

RETRIEVE

Special-Purpose Magnetic Tools

Samples · Swarf · Dropped items · Housekeeping

L2

HANDLE

LoadGrab™ Magnetic Hand Lifters

Pick up · Move · Position · Place suitable ferrous components

L3

GUIDE

LoadGrab™ MagHead Push/Pull

Push · Pull · Guide · Steady ferrous loads from a defined distance

L4

CONTROL

RiggerLock™

Lock onto loads for everyday hands-free guidance and control

L5

ENGINEER

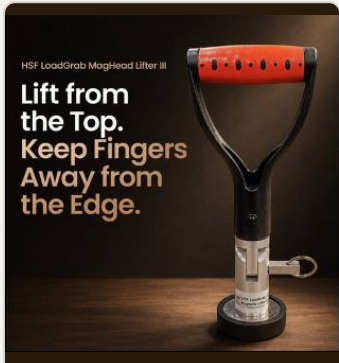
PSC Load-It® MagHead

Application-engineered interface for specific task requirements

The right magnetic interface starts with the task — not with the magnetic force rating. PSC evaluates the application before selecting or engineering the interface.

Create a Handle Where the Material Has None.

The LoadGrab family creates a top-side magnetic grip on suitable ferrous components — so workers can pick up, move, position and place steel without putting fingers underneath an edge, around a sharp corner, or between adjacent components. Four configurations; one principle.

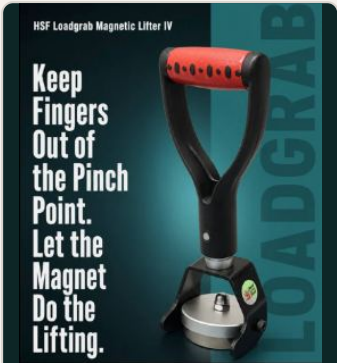


MAGHEAD LIFTER III

Engage. Lift. Turn. Position. Release.

Part No.	HSF-LG-001
Rotation	360°
Pivot	180°
Body	Aluminium
Release	Lever quick-release

Articulation system allows the operator to rotate and pivot after engagement — without detaching and re-gripping.

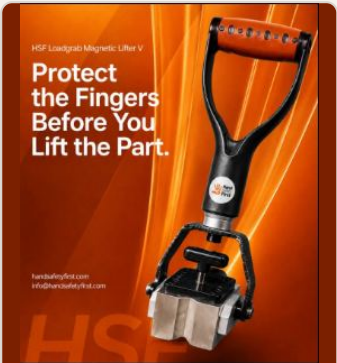


MAGNETIC LIFTER IV

Grip from above. Keep fingers away from the edge.

Part No.	HSF-MG004
Force	550 lb / 250 kg
Body	Alloy steel
Finish	Powder-coated
Operation	Manual lever

Glove-friendly D-handle. Operates in environments where hand protection is required throughout.



MAGNETIC LIFTER V

Pick up the steel. Keep your hands clear.

Part No.	HSF-MG005
Force	550 lb / 250 kg
Body	Alloy steel
Finish	Powder-coated
Operation	Manual lever

Application range: ferrous scrap, plates, pipes, fabricated components, maintenance parts and covers.



ELECTROMAGNET LIFTER

Controlled engagement and release. No mechanical lever required.

Capacity	50 kg
Type	Rechargeable
Release	Electrical on/off

Where permanent magnetic engagement is not the appropriate interface. Positive on/off without mechanical lever operation.

MANUAL HANDLING GUIDELINE — ALL LOADGRAB MODELS: **30 kg / 66 lb per person**

Magnetic holding-force ratings and manual-handling guidelines are different measurements. The 550 lb capacity figure is not a manual-lift limit. Tasks remain subject to site procedure and risk assessment.

Which LoadGrab Interface Fits the Task?

Each LoadGrab configuration addresses a different aspect of ferrous material handling. The selection begins with the task — not the catalogue.

MODEL	BEST SUITED WHEN	DOCUMENTED APPLICATIONS
MagHead Lifter III HSF-LG-001	The task requires orientation change — rotating, pivoting or guiding the component into position after engagement. Fewer re-grips mean less hand return to the load.	Steel sheet · Fabricated assemblies · Scrap handling · Construction · Manufacturing · Automotive
Magnetic Lifter IV HSF-MG004	Straightforward pick-up, move and place tasks. Manual engage/disengage lever gives positive operator control. Glove-friendly handle for PPE environments.	Plates · Pipes · Scrap · Fabrication & welding · Rigging & construction · Maintenance · Offshore & energy
Magnetic Lifter V HSF-MG005	Pick-up and placement of ferrous scrap, covers, fabricated parts and maintenance components. Same robust construction as IV — application range includes maintenance parts and access covers.	Scrap · Plates & pipes · Maintenance parts · Access covers · Fabrication · Offshore & energy
Electromagnet Lifter 50 kg	Where positive electrical on/off engagement is preferred over a mechanical lever — for example, where release timing needs to be deliberate and operator-controlled without mechanical force.	Ferrous components requiring positive electrical release · Applications where mechanical lever release is not preferred

550 lb

MAGNETIC HOLDING FORCE

Tool's rated capacity · LoadGrab III, IV and V

≠

30 kg

MANUAL HANDLING GUIDELINE PER PERSON

Per LoadGrab documentation · Not a universal safe-lifting limit · Tasks remain subject to site procedures and risk assessment

Lock On. Control. Hands Off.

RiggerLock is a magnetic load-control family built around a single principle: lock the magnetic interface onto suitable ferrous material so the operator can influence the load through the tool — rather than placing a hand directly on it.

Practical and application-focused. Designed for everyday industrial tasks where workers currently reach toward ferrous loads to make small corrections — and where a reliable magnetic engagement and release cycle can reduce those repeated contacts.



QUICK DETACH

Lock on. Control. Release. Repeat.

Built for repeated engage-control-release cycles. Applications include plates, beams, billets, long steel sections and sharp plate-edge control. Where the task requires frequent attach, control and release in sequence, the Quick Detach head is designed not to slow that cycle.



FLEX

Lock on. Move naturally.

The articulated joint between shaft and magnetic head allows natural wrist movement through changing working angles. Where a load rotates, swings or needs to be followed through a changing orientation, the Flex joint accommodates the movement rather than forcing the operator's wrist to compensate.



SWITCH

Lock on when required. Switch off when finished.

Manually controlled magnetic ON/OFF engagement. Relevant where supported for alignment, fit-up, tack welding and assembly positioning — where the operator needs positive engagement during the task and equally positive disengagement when it is complete.

SELECT BY TASK TYPE

Repeated cycles

— plates, beams, billets, sharp edges → Quick Detach

Changing angles

— rotating or swinging loads, wrist-friendly guidance → Flex

Hold and release

— fit-up, tack welding, assembly → Switch

Engineer the Interface Around the Application.

A magnet on a pole is easy to compare on price. An engineered hands-free method should be compared on the application.

PSC Load-It® MagHead is not a catalogue product. It is an application-engineered magnetic load-control platform — developed around the specific requirements of a task rather than selected from a standard range.

The distinction is not about stronger magnets or longer poles. It is about building the right interface for the specific interaction the operator needs to have with the ferrous material.

What if the task requires one-handed operation?

PSC engineers short-reach configurations — including ~12 inch and ~18 inch tools — where the operator holds a pendant or remote in one hand and controls the load with the other. The tool length is selected around the task, not maximised.

What if standard reach doesn't fit the working envelope?

Handle, shaft, head geometry and articulation are configured together. A tool engineered around the operator's position, the surrounding equipment and the load movement — not around a standard catalogue length.

When does a task need Load-It rather than a standard tool?

When geometry, one-hand requirements, working distance, task frequency or operator position mean that an off-the-shelf configuration creates its own problems rather than solving the original one.

A LOAD-IT CONFIGURATION MAY BE ENGINEERED AROUND:

Working length	Handle design	Grip geometry
Magnetic strength	Head geometry	Articulation
Tool weight	Balance point	Working distance
Task frequency	Operator posture	Other hand controls



Crane-side pipe guidance — operator at defined working distance while crane supports the load



Short-reach positioning — one-handed load control in congested manufacturing environment



Magnetic head engaging ferrous surface — articulated connection detail

One Hand on the Remote. One Hand on the Load. Neither Hand on the Steel.

An industrial application required an operator to control lifting and positioning equipment using a remote control in one hand. That left only a single hand free for ferrous load control.

The task did not call for a conventional long two-handed push/pull tool. In the constrained operating position, a standard-length configuration would have introduced ergonomic and controllability problems rather than solving them.

PSC developed short-reach Load-It configurations — approximately 12 inches and 18 inches — engineered specifically around the one-hand operation requirement.

ENGINEERING OBJECTIVE

Application-selected separation — not maximum reach.

TOOL CONFIGURATIONS

~12 inch and ~18 inch short-reach Load-It

DESIGN REQUIREMENTS

One-handed control · weight · balance · magnetic engagement · task geometry

The right working distance is the distance the application requires — not the maximum available.

WHY SHORT-REACH MATTERS

Maximum reach is not the engineering objective. A 12-inch tool that allows one-handed controllability in the correct operator position solves the problem. A longer tool may create a different one — adding wrist, elbow and shoulder loading that undermines the hand-safety objective.

WHAT WAS ENGINEERED AROUND

One-handed grip

Tool weight

Balance point

Magnetic head

Natural operating geometry

Remote compatibility

THE PRINCIPLE

The correct working distance is determined by the identified hazard, task geometry, operator position and ergonomics — not by the maximum length available from a catalogue.

Why Magnet Rating Alone Does Not Select the Tool.

A headline magnetic force figure is a starting point, not a complete application specification. Many variables affect how much of that rated force is available in practice.

550 lb

MAGNETIC HOLDING FORCE

Tool's rated capacity under controlled conditions

≠

Complete application specification

Real-world performance depends on surface, geometry, contact area, orientation, contamination and task sequence simultaneously

SURFACE & MATERIAL	GEOMETRY & FORCE	TASK & OPERATOR
Ferrous grade and thickness	Component geometry	Task sequence
Available contact area	Magnet orientation	Operator position
Surface condition	Direction of applied force	Surrounding obstructions
Paint and coatings	Required working distance	Other simultaneous controls
Scale and contamination	Movement required	Task frequency
Stainless response (varies by grade)		

Select the application first. Then select — or engineer — the magnetic interface.

550 lb

Magnetic capacity

≠

30 kg

Manual handling guideline per person

The LoadGrab product documentation specifies 30 kg / 66 lb per person as the manual handling guideline — not a universal safe-lifting limit. The magnetic holding-force rating and this manual handling guideline are entirely different measurements and must never be conflated.

Application Environments.

The following environments represent sectors where workers regularly interact with ferrous material in ways that create direct hand contact — and where a magnetic interface may offer a practical alternative, subject to application assessment.

Steel Plants & Service Centres Plates, sheets, billets, beams — landing, positioning, alignment and separation at high frequency. Fingers repeatedly enter the load-surface interface during stacking and unstacking operations. Magnetic handling tools can reduce direct finger contact across the full material movement cycle — from separation through to final placement. HANDLE · GUIDE · CONTROL	Fabrication Shops Sheet and plate pickup, fit-up, tack-weld positioning and scrap handling. Finger contact at cut edges and between adjacent components during assembly is a consistent exposure point. Short-reach Load-It configurations support one-handed load control where the other hand holds a pendant or jig control. HANDLE · CONTROL · ENGINEER	Machine Shops Swarf retrieval, small ferrous part handling and chip collection on isolated, non-moving equipment. Sharp material and small contact areas create significant cut exposure even at low load mass. Special-purpose magnetic retrieval tools create separation between the hand and sharp ferrous material during housekeeping tasks. RETRIEVE · HANDLE
Manufacturing & Automotive Steel component handling, ferrous sub-assembly pickup and positioning at production pace. Repetitive handling across shift patterns means cumulative exposure is a key risk consideration. LoadGrab hand lifters create a top-side magnetic grip — reducing repeated finger-to-edge contact on components with no formed handle. HANDLE · GUIDE · ENGINEER	Oil & Gas / Offshore Deck plates, maintenance covers and ferrous component handling in restricted areas where working distance is constrained by surrounding equipment and structures. Compact Load-It configurations are engineered for restricted working envelopes — where standard-length tools would create rather than solve the problem. HANDLE · CONTROL · ENGINEER	Mining Maintenance covers, equipment components and ferrous structural members in congested underground or surface environments, often in poor lighting with limited access. Magnetic retrieval tools extend reach into confined spaces — reducing the need for hand entry to locate and retrieve dropped or displaced ferrous items. RETRIEVE · HANDLE · ENGINEER
Construction & Infrastructure Steel member alignment, rebar handling, plate and section positioning. Load guidance during crane and hoist operations where hands are currently used to make directional corrections. RiggerLock magnetic load-control tools allow operators to guide and steady ferrous loads from a defined working distance without placing hands on the load. HANDLE · GUIDE · CONTROL	Shipyards Steel plate and structural-member handling in congested working areas. Large steel sections often require guidance during assembly — with limited space for two-person operation. Extended-reach MagHead push/pull tools allow load guidance from a safe working distance while the crane or hoist supports the load weight. HANDLE · GUIDE · ENGINEER	Power & Maintenance Access panels, covers and ferrous equipment components that sit flush against surfaces with no formed grip point. Repeated handling across maintenance cycles creates consistent pinch and edge exposure. Magnetic hand lifters create a temporary top-side grip on flush-mounted ferrous components — reducing the need to insert fingers beneath covers or panels. RETRIEVE · HANDLE

Applicable product layers are indicative. Application assessment is required for each specific task and component.

APPLICATION LIMITATIONS

Magnetic Tools Are Not Suitable for Every Application.

Magnetically receptive surfaces only

Magnetic tools require a magnetically receptive surface. Aluminium, copper and brass are not receptive in the same way as ferrous steel. Stainless-steel response varies by grade, composition and condition — suitability must be established on the actual component before use.

Surface condition

Paint, scale, rust, oil and contamination can reduce magnetic holding force. Actual engagement should be assessed on the specific surface before relying on rated force figures.

Temperature

Magnetic performance can be affected by temperature. Confirm suitability for the actual surface and operating temperature before use.

Hazardous areas

Unless a specific model is expressly approved or certified for the classified area, hazardous-area suitability must be confirmed before use.

Not a substitute for lifting equipment

Magnetic hand-lifter tools operate within documented manual-handling limits. Push/pull and RiggerLock tools provide a guidance and control interface — they do not support the suspended load.

These tools do not replace

Formal lifting plans · Rigging assessment · Exclusion zones · Risk assessment · Site procedures · Competent operators · Appropriate PPE · Mechanical lifting equipment where required.

WHERE TO BEGIN — A STARTING POINT

What does the worker need to do with the ferrous material?

Retrieve · swarf · samples · dropped items	→ Special-Purpose Magnetic Tools
Pick up · move · position · place	→ LoadGrab™ III · IV · V
Controlled electrical engagement	→ LoadGrab™ Electromagnet
Push · pull · guide · steady	→ LoadGrab™ MagHead Push/Pull
Lock on · repeat control · everyday tasks	→ RiggerLock™
Complex · custom geometry · demanding application	→ PSC Load-It® MagHead

This is an initial orientation — it does not replace formal risk assessment, task analysis or application review.

REQUEST AN APPLICATION MAPPING REVIEW

Share the task, the component, how it moves, where the hazard exists and what working distance is available. PSC can evaluate whether an existing interface fits — or whether the interface needs to be engineered around the application.

If the material is ferrous, does the hand actually need to touch it?

Steel does not always give the worker a safe place to put a hand. When a component has no handle — when it sits flat on a surface, stacked against other steel, or suspended and swinging — the hand becomes the interface by default.

A suitable magnetic interface can create a temporary handle or control point where the material itself provides none. That is the engineering idea behind the PSC and Hand Safety First magnetic portfolio: not a catalogue of products, but a family of interfaces designed around the specific way the worker needs to interact with the steel.

Retrieving, separating, picking up, moving, guiding, rotating, aligning, positioning, landing and releasing are different tasks. Each creates a different hand-to-material relationship. Therefore the interface should be selected — or engineered — around the application rather than a headline magnetic-force number alone.

LoadGrab™ — Create a handle where the material has none.

LoadGrab™ MagHead — Guide the load without placing hands on it.

RiggerLock™ — Lock on. Control. Hands off.

Load-It® MagHead — Engineer the interface around the application.

*In many cases, with the
right interface, the answer
can be no.*

REQUEST AN APPLICATION MAPPING REVIEW

Show us the task. Tell us what the worker currently does with their hands, what the ferrous component is, how it moves, where the hazard exists and what working distance is available.

PSC can help evaluate whether an existing magnetic interface fits the task — or whether the interface itself needs to be engineered around the application.

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HANDLE IT.
GUIDE IT.
CONTROL IT.
ENGINEER AROUND IT.
**WITHOUT MAKING THE HAND THE
TOOL.**