

[Improvement] Productivity - Welding Quality - Safety & Workshop environment

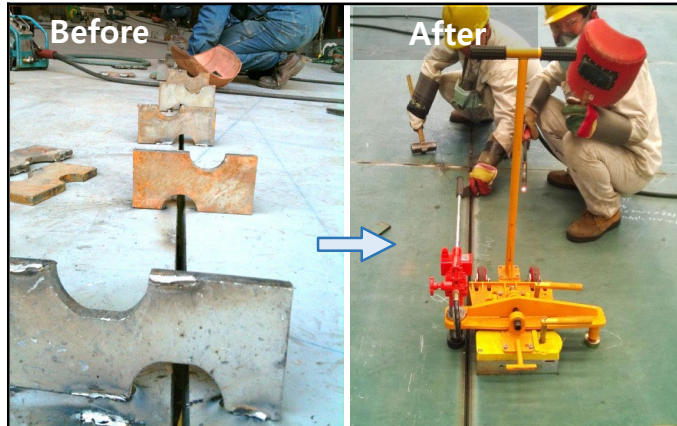




Handling Steel Pieces



Magnetic Scaffold for Slop works



Butt-Joint Hi-Lo alignment



Eliminate gaps for T-BAR, Angle/Flat-bar



SQB Series for Right Angle Alignment

HLF Series - Hand Lifters



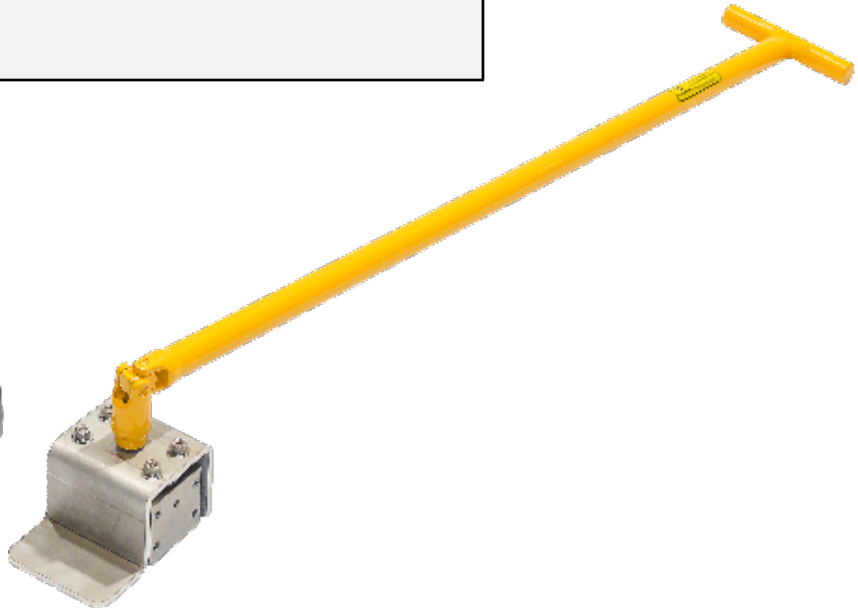
HLF-R5040-S
Weight: 1.8kg
Max Load: 50kg



HLF-M5020x20
Weight: 2.8kg
Max Load: 70kg



HLF-FBAR
Weight: 1.2kg
Max Load: 45kg



HLF-R5040-L
Weight: 3.3kg
Max Load: 50kg



SheetHDL series - Steel Plate Transporter



SheetHDL-UNI



SheetHDL-AR85

Model#	Dimension (mm)	kg	Max force (kgf)
AR50-SheetHDL-Uni	406 x 1010 x 1326	13	250
AR70-SheetHDL-Uni	406 x 1014 x 1326	15	450
AR85-SheetHDL	328 x 291 x 1200	14.5	840

MLF Series - Manhole cover Lifting / Steel plate Transporter

Demo: Transporter



Model#	Diminision (mm)		Kg	Max Load (Kg)
MLF-DOLLY	Unfolded	2,452L x 348W x 1,466H	19.8	80
	Folded	1,336L x 348W x 278H		



MLF Series - Manhole cover Lifting / Steel plate Transporter

Winch Type Manhole Cover Lifter

Model#	Dimension (mm)		Kg	Max Load (Kg)
MLF-DOLLY - WINCH	Unfolded	1,426L x 1,330W x 947H	29	300
	Folded	426L x 760W x 607H		



Place the magnet on Manhole center



Turn the magnet ON



Lift-up with Winch



Move the manhole cover

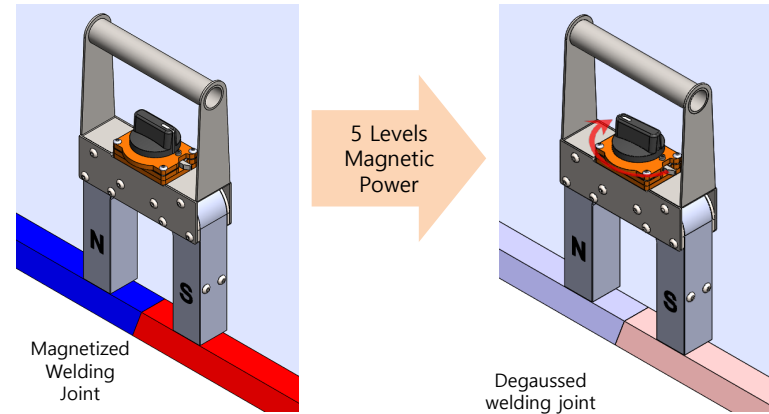
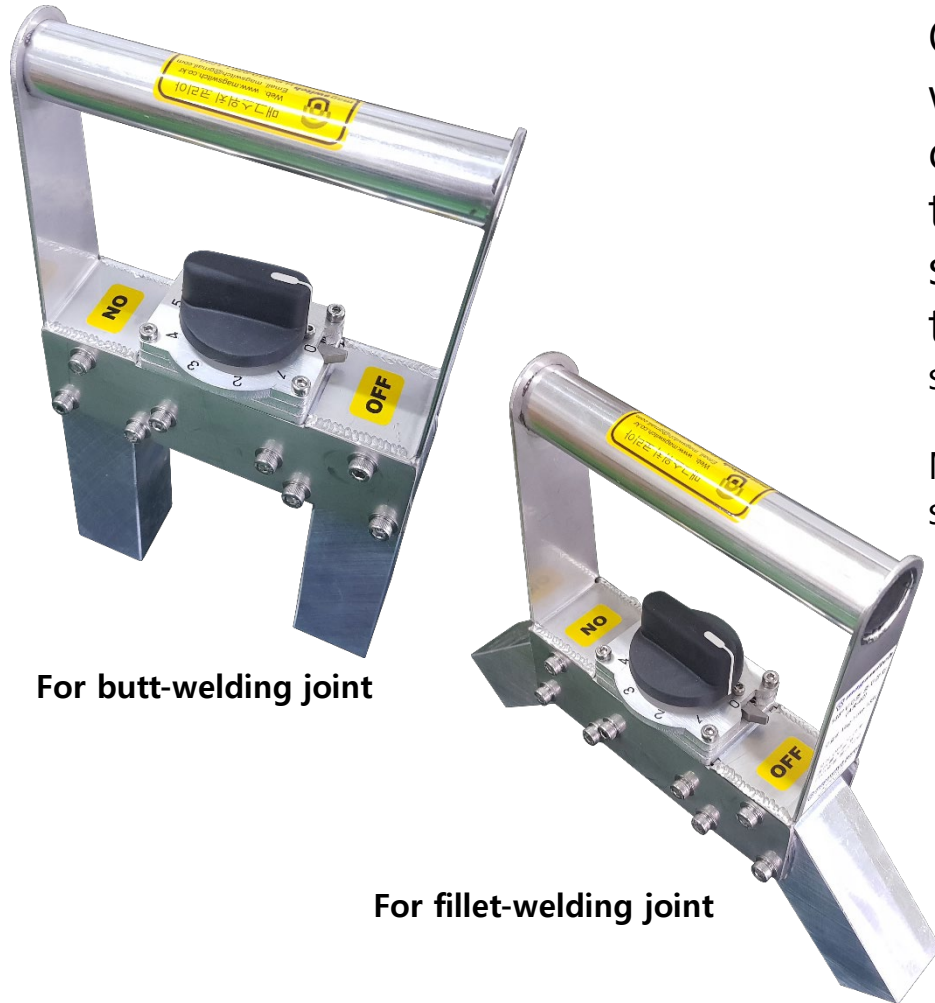
NEW

MagYoke Series – Magnetic Mitigator

Degaussing for 9% Nickel Steel for welding !!

One significant **problem** that is frequently encountered with the **nickel** steels is that of residual magnetism causing arc blow. This is a particular **problem** with the **9%Ni** steel which can become easily and very strongly magnetized, making it impossible to **weld** with the arc **welding** processes. **9%Ni** steel is widely used for LNG storage tanks

Magswitch MagYoke products allows to adjust magnet power in 5 levels so that degaussing power can be precisely controlled.





MagYoke Series – Magnetic Mitigator

Image	Description	
	MagYoke-U (Butt welding)	
	Weight (Kg)	5
	Dimension (mm)	150 x 50 x 284
	Magnet force (Kgf)	180

Image	Description	
	MagYoke-UC (Butt and Fillet welding)	
	Weight (Kg)	5
	Dimension (mm)	150 x 50 x 284
	Magnet force (Kgf)	180

	MagYoke-90Deg (Fillet welding)	
	Weight (Kg)	5
	Dimension (mm)	278 x 50 x 22
	Magnet force (Kgf)	180

	MagYoke-U-30x2 (Overhead Butt welding)		
	Weight (Kg)	5.7	
	Dimension (mm)	274 x 59 x 284	
	Magnet force	Main	180
		Sub	70 x 2EA

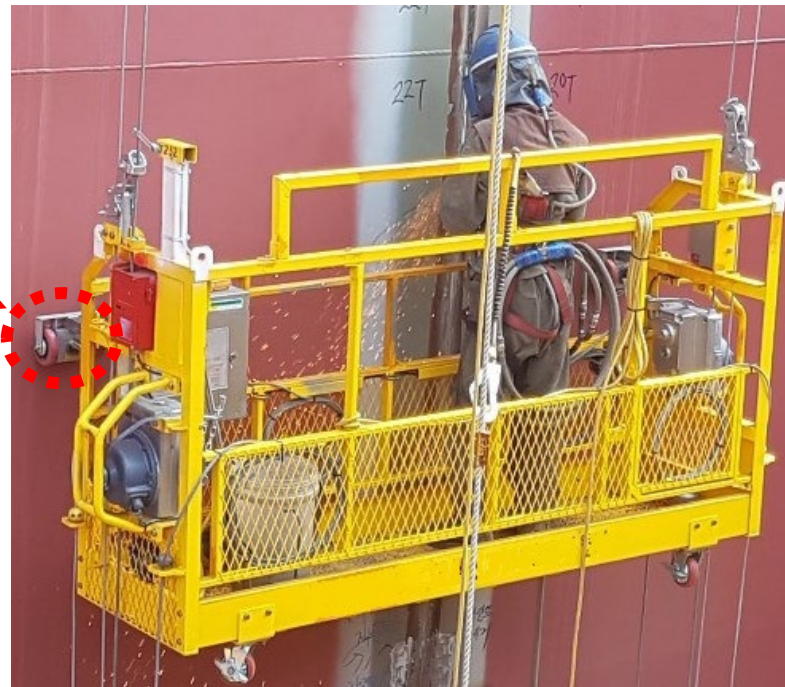
NEW

Gondola Stabilizer

- Improve workers safety under windy condition
- Prevent swing when pushing ship-hull for grinding works
- Simple installation – Compatible with existing wheels
- Adjustable magnetic force
- Corrosion-proof stainless-steel material



GON-MAG-W5-H5	
Size	L198 x W158 x H398 mm
Weight	5 kg
Max Force	50 kgf

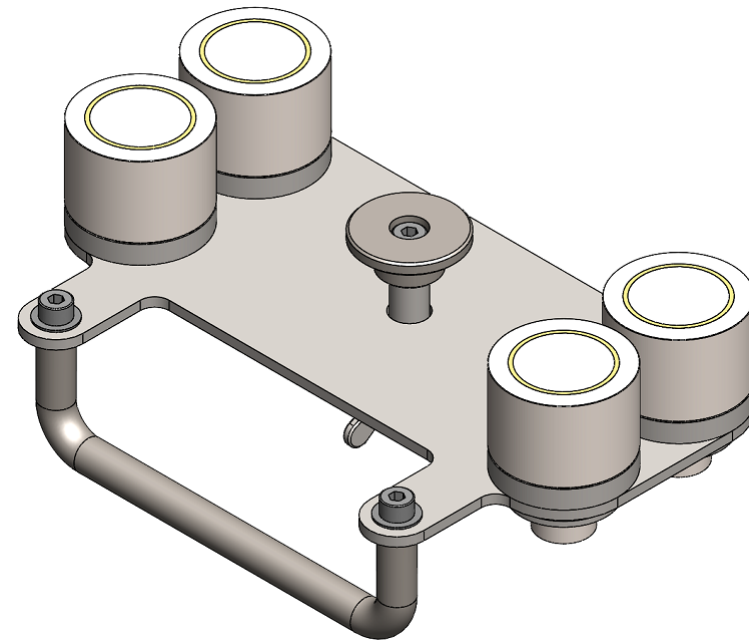
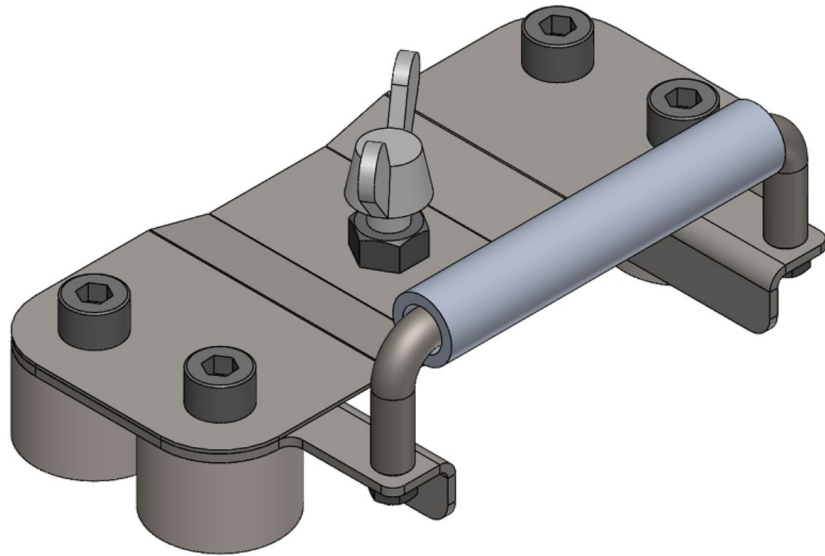




Magnetic-holder for Bond type Ceramic Backing

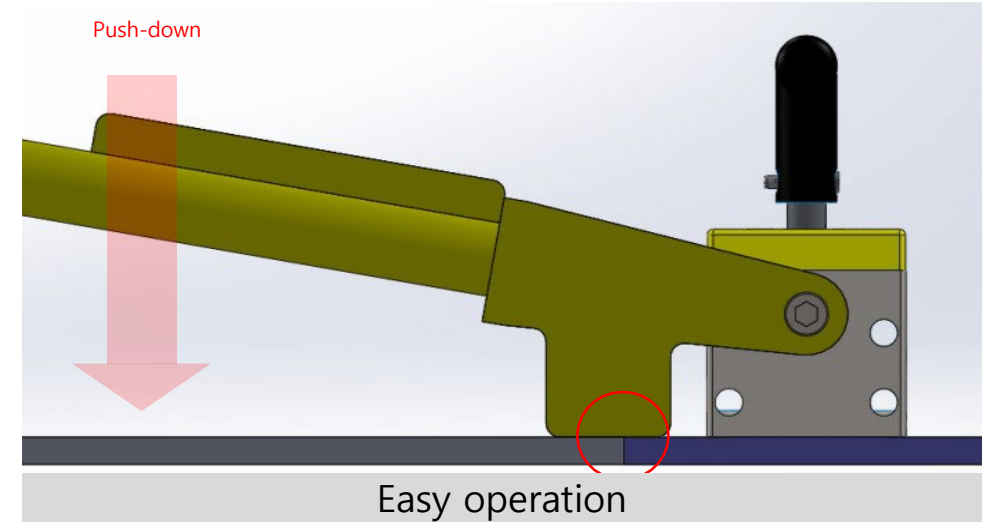
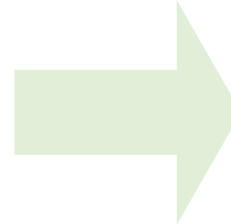
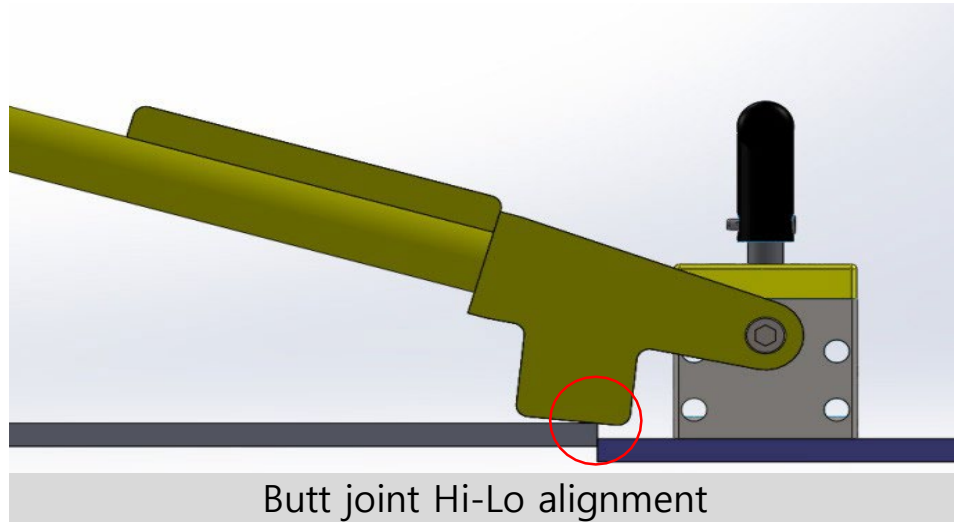
- To prevent bond-type ceramic backing from falling off due to heat during welding
- Up to 300°C heat resistant magnets are used

Model# : Backing-Magholderx4



WLA Series - Butt Joint Hi-Lo alignment tools

- Minimize temporary tap piece welding
- Minimize grinding works and improve work environment
- Improve welding quality



WLA Series - Butt Joint Hi-Lo alignment tools

- New design – Lighter and Compact design

Old model: WLA-2200-SCREW
Weight: 31.5kg
Size: 410L x 400W x 880H



Same performance
with Lighter &
Compact design

New Model: WLA-1600-RACHET-V2
Weight: 15kg
Size: 564L x 211W x 261H

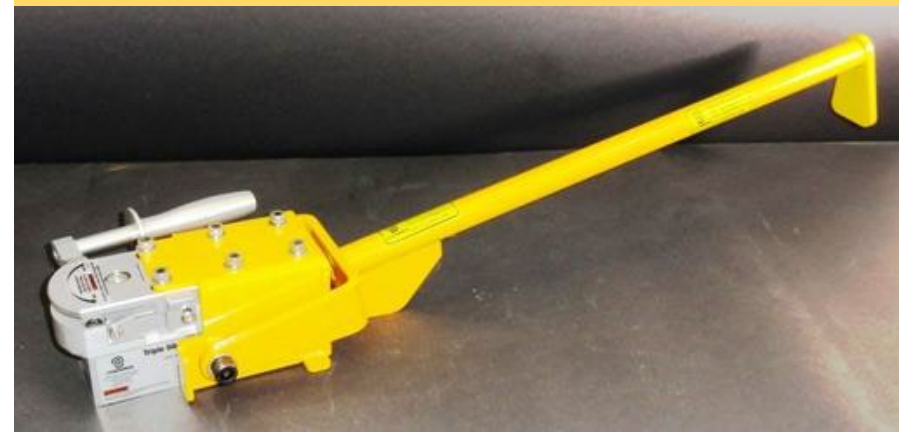


WLA Series - Butt Joint Hi-Lo alignment tools

[WLA-500] Max force 500Kgf

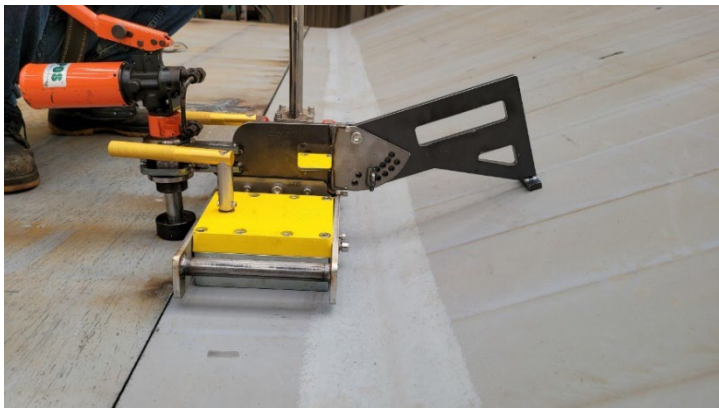


[WLA-800] Max force 800Kgf

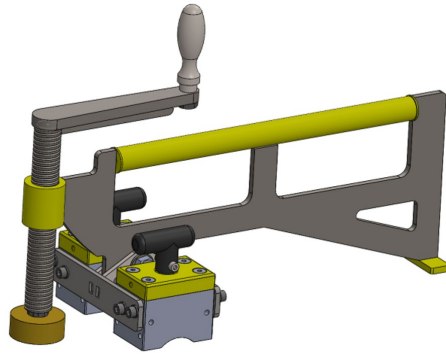


WLA Series - Butt Joint Hi-Lo alignment tools

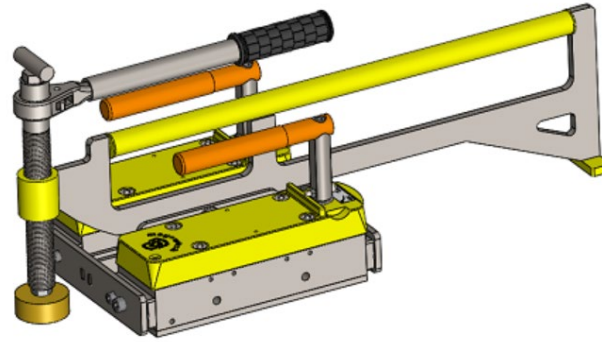
[WLA-3300] Max force 3,000Kgf



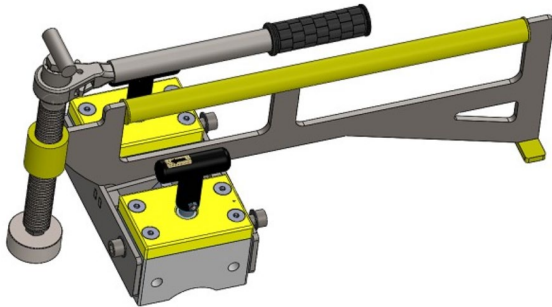
WLA Series - Butt Joint Hi-Lo alignment tools



WLA-500-Screw-V2
Max force: 500Kgf
Weight: 6.3Kg



WLA-1600-Ratchet-V2
Max force: 1,600Kgf
Weight: 16Kg



WLA-1000-Ratchet-V2
Max force: 1,000Kgf
Weight: 11.2Kg

WLA-2000-Ratchet-V2
Max force: 2,000Kgf
Weight: 20Kg



WLA-3300-Ratchet-V2
Max force: 3,000Kgf
Weight: 39Kg

Gap series - Gap remover

Eliminate gaps between steel plate and T-Bar, Angle-bar/Flat-bar under 150mm.

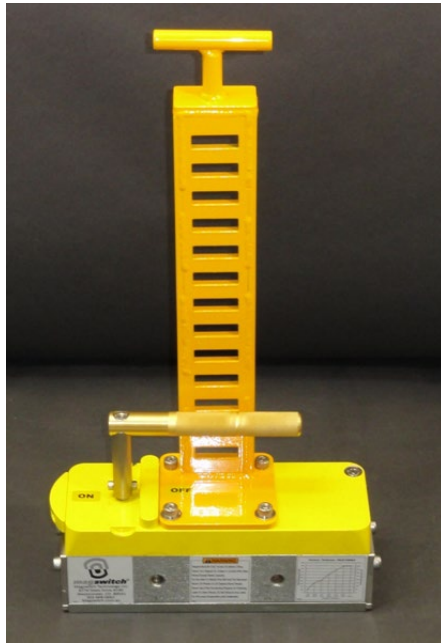
Model#: GAP-800, Max force: 800Kg



Gap series - Gap remover

Eliminate gaps between steel plate and T-Bar, Angle-bar/Flat-bar under 300mm.

Model#: GAP-1500, Max force: 1,350Kg



Gap series - Gap remover

Eliminate gaps between steel plate and Angle-bar/Flat-bar under 250mm.



Model#: GAP-1600-RACHET
(Ratchet handle type)



Model#: GAP-2000-Screw
(Screw Handle type)

Gap series - Gap remover

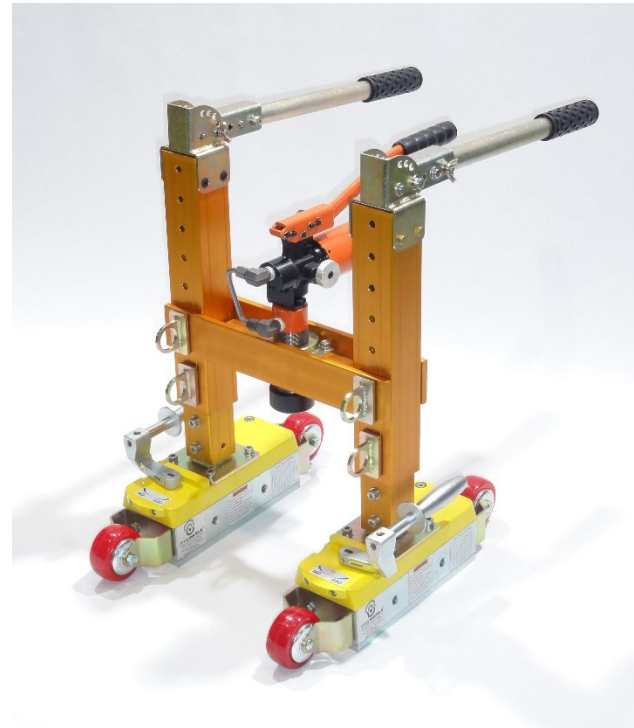
Eliminate gaps between steel plate and T-Bar up to 500mm.



GAP-3000-JACK: Max force 2,700Kgf
GAP-4000-JACK: Max force 3,500Kgf



New
Model



SQB Series - Right Angle Alignment Tool

Model#: SQB-250



Model#: SQB-500



T-Bar Setting Guide (TBR-1100)

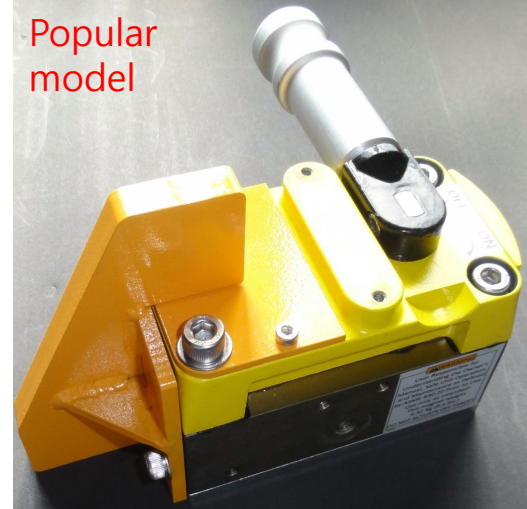


Guide-Piece Series – Positioning tools

Positioning Guide Tools for Heavy Blocks or Equipment.



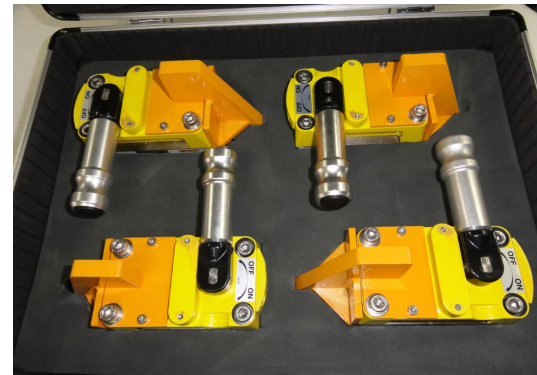
Guide-Piece-450



Guide-Piece-500

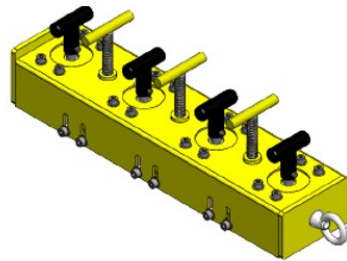


Guide-Piece-800

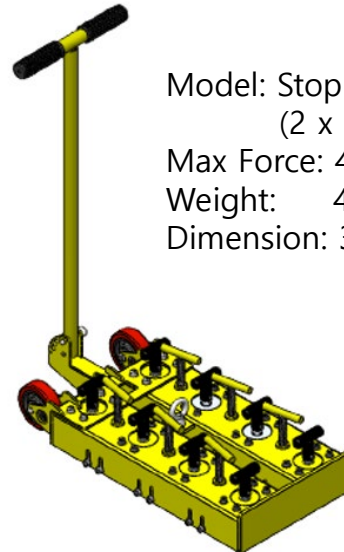


Carry case for 4 units of
Guide-Piece-500

Main Switchboard Positioning tools



Model: Stopper-2000-Bite
Max Force: 2 Ton
Weight: 23Kg
Dimension: 132W x 540L x 168H



Model: Stopper-4000-Bite
(2 x Stopper-2000-Bite)
Max Force: 4Ton
Weight: 49Kg
Dimension: 310W x 678L x 856H



Model: Ratchet-Jacky-1000
For Corner Lifting

SCFD Series – Magnetic Scaffold for Slop work



Model#	SCFD-320	SCFD-320-V
Angle Type	45° Fixed type	Adjustable
Slop Angle	45°	35 ~ 60°
Weight	3.3kg	3.9kg
Dimension	280L x 128W x 215H mm	305L x 131W x 218H mm
Max force	320kgf (Main-Magnet: 250kgf / Auxiliary-Magnet: 70kgf)	

SCFD-320 Setup procedure

1. Turn the Main-magnet ON	2. Lowering the footrest	3. Turn the Auxiliary-magnet ON
<p>Turn the main-magnet switch 180 degree clockwise.</p>	<p>Lowering the footrest until the auxiliary magnet touches the surface.</p>	<p>Turn the Auxiliary-magnet switch 180 degree clockwise.</p>



SCFD-320-V Setup procedure

1. Turn the Main-magnet ON	2. Turn the Auxiliary-magnet ON	3. Adjust the footrest angle	4. Lock the screw nut.
<p>Turn the main-magnet switch 180 degree clockwise.</p>	<p>Turn the Auxiliary-magnet switch 180 degree clockwise.</p>	<p>Move the set screw inward leveling footrest after releasing the locking</p>	<p>Move the set screw outward tighten after checking lock position.</p>

SCFD Series – Magnetic Scaffold for Slop work

Model# : SCFD-500-AL



Specification	
Model#	SCFD-500-AL
Slop Angle	25 ~ 50°
Weight	7.8kg
Dimension	526L x 128W x 130~250H mm
Max force	500kgf (250 x 2 kgf)
Material	Footrest : Aluminum
	Frame : Nickel-coate Steel
Comments	Non-slip Footrest

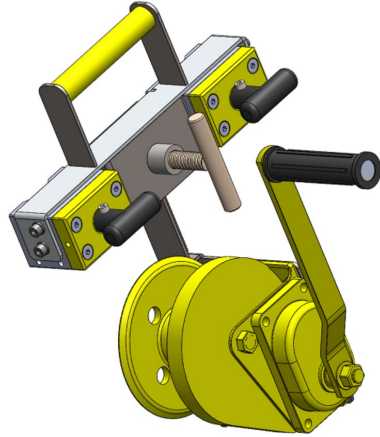


1. Turn the Magnets ON	2. Adjust footrest angle	3. Lock the Screw Nut
Turn magnet switch 180 degree clockwise	Adjust Footrest position to be flat	Lock the footrest to flat position

Portable Magnetic Winch System

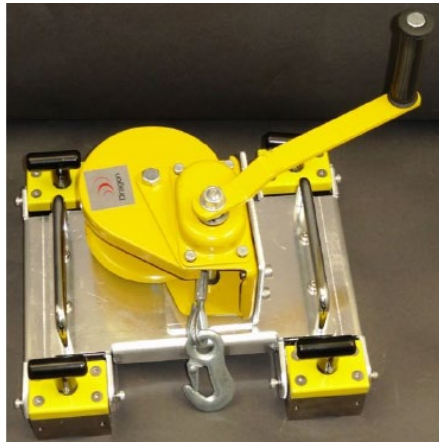
MagWinch-500

Max load = 100Kg



MagWinch-1000

Max load = 100Kg



Manetic Stopper

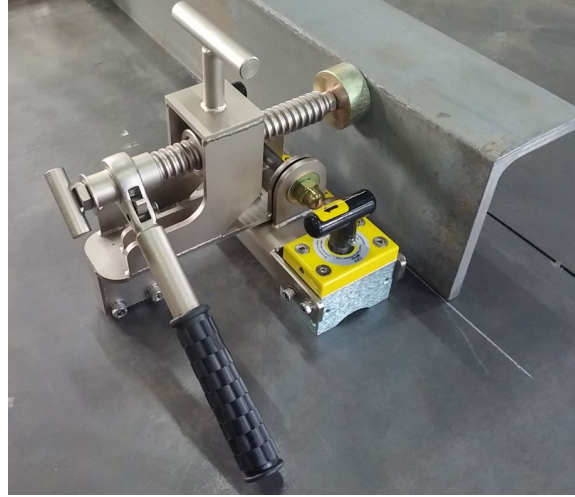


Model: STP-500-BITE
Max Force: 500Kgf
Weight: 5.5Kg
Dimension: 120W x 220L x 173H



Model: STP-1100-BITE
Max Force: 500Kgf
Weight: 11Kg
Dimension: 160W x 315L x 173H

Pusher Series



Pusher-500 (Max Load 450Kgf)
Pusher-1000 (Max Load 850Kgf)



NPJ-MA-1500
(Max Load 1,500Kgf)

STEP Series - Ladder Fall prevention

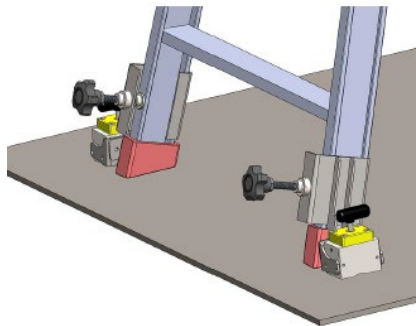
For Straight Ladder

Model#: STEP-250
Max Force : 250Kgf x 2

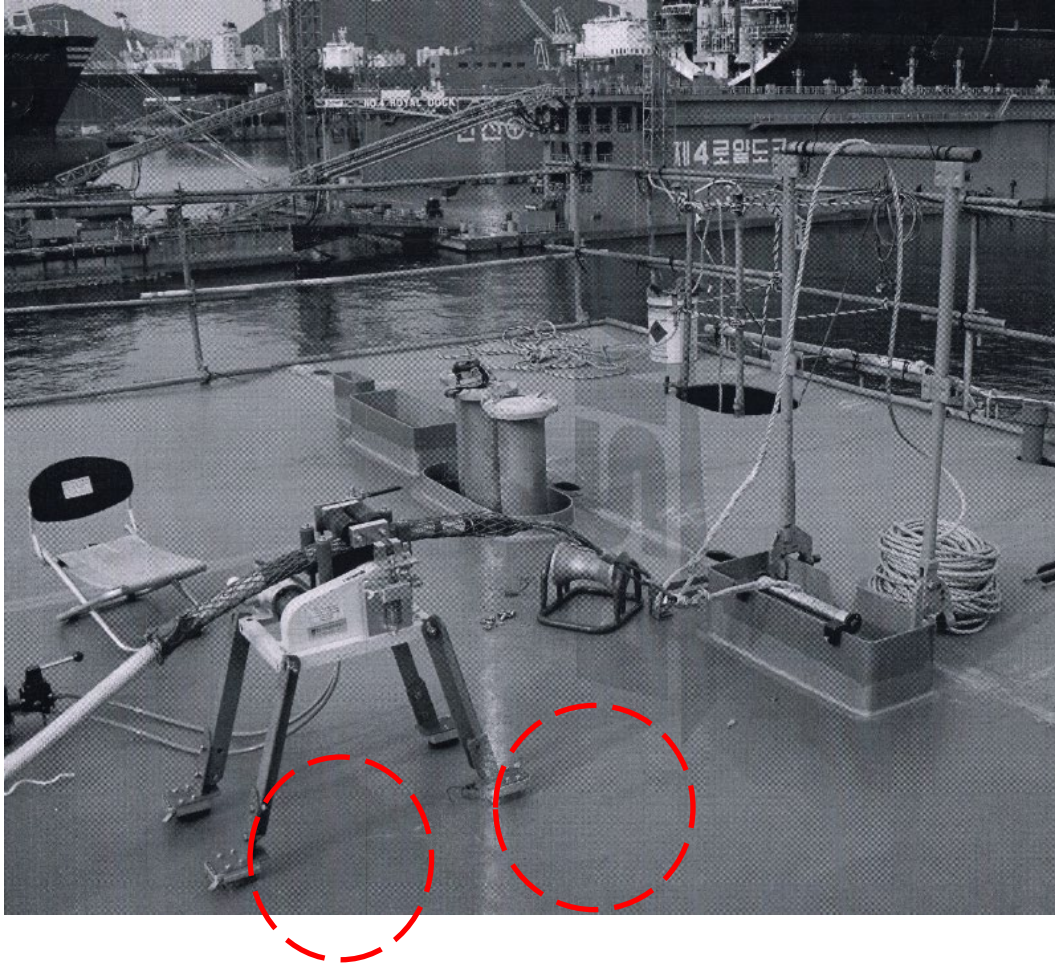


For A-Type ladder

Model#: STEP-A-400
Max Force: 180Kgf x 4



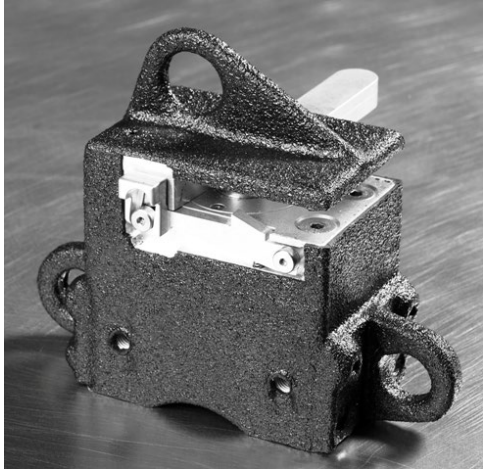
Cable Laying Machine - Magnetic Fixture



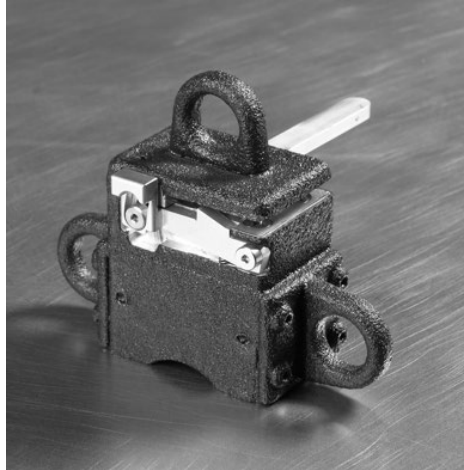
Model#: CBL-MLAY600x2-B
(Max force: 500Kg)



Pilot Ladder Magnet Clamp (Water-Proof)



For Gangway
Model: Magtether-1000



For Pilot Ladder
Model#: Magtether-600

REQUIRED BOARDING ARRANGEMENTS FOR PILOT
In accordance with SOLAS Regulation V/23 & IMO Resolution A.1045(27)
INTERNATIONAL MARITIME PILOTS' ASSOCIATION
H.Q.S. "Wellington" Temple Stairs, Victoria Embankment, London WC2R 2PN Tel: +44 (0)20 7240 3973 Fax: +44 (0)20 7210 3518 Email: office@impahq.org
This document and all IMO Pilot-related documents are available for download at: <http://www.impahq.org>

RIGGING FOR FREEBOARDS OF 9 METRES OR LESS

- HANDHOLD STANCHIONS:** Min. Diam. 32mm, Min. 120cm Above Bulwark
- Handholds:** Min. 70cm, Max. 80cm
- MAN-ROPE (without leech):** Min. Diam. 20mm, Max. Diam. 22mm, 8 REQUIRED BY THE PILOT
- SPREADER:** Min. 180cm Long
- SIDE ROPES:** Min. Diam. 18mm
- MAXIMUM 9 STEPS:** between spreaders
- ALL STEPS:** Must rest firmly against ship's side
- MIN. 40cm:** between spreaders
- 75-95cm:** between steps
- 6 METRES:** unobstructed ship's side
- Height:** Required by Pilot
- 2nd STEP:** From bottom must be a spreader

COMBINATION ARRANGEMENT FOR SHIPS WITH A FREEBOARD OF MORE THAN 9 METRES WHEN NO SIDE DOOR AVAILABLE

- PILOT LADDER:** Must extend at least 2 metres above lower platform
- ACCOMMODATION LADDER:** Secured to ship's side
- Lower platform:** horizontal
- The lower platform:** shall be a minimum of 5 metres above the sea
- Recommended 3 metres:** freeboard mark
- 45° slope:** Should lead aft
- Accommodation ladder:** should be secured to ship's side
- (Using engaged magnetic or power-assist system)**

PILOT LADDER WINCH REEL

A

- NO!** No shackles, knots or splices
- NO!** The steps must be evenly spaced
- NO!** The steps must be horizontal and checks under the steps must be tightly secured
- NO!** Spreader must not be deflected between steps
- NO!** Side ropes must be equally spaced
- NO!** The steps should not be painted, dirty or slippery

B

- All pilot ladder winch reels should have a means of operation from being accidentally operated.
- The winch and lock must be operative on manually operated winches.
- Power winches must have an operative safety device to lock the winch in position.

C

- Side opening
- Handhold: Min. 70cm, Max. 80cm
- Minimum Clearance: 220cm
- Ship's side doors used for transfer should not open outward

Handhold stanchions: rigidly secured to deck

Responsible Officer: in contact with bridge

Bulwark & Pilot ladder: secured to deck strong points

Liberty with self-lighting light

