

ROAD PLATE LIFTER

Heavy duty trench plate lifting made safer.



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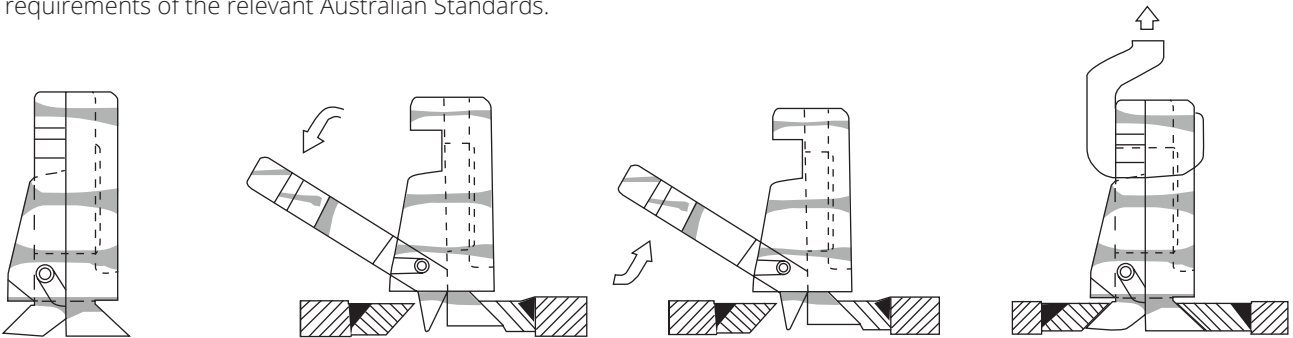
The Road Plate Lifter's revolutionary design was first patented in 1981 and has become an industry standard for lifting of all steel road plates across the world. The dovetail design gives our heavy-duty Lifters an advantage of safety, ease of use and reliability compared to any other road plate lifting designs or systems.

The Road Plate System consists of a receiver plate and a lifting tool. The receiver is flush welded into the centre of each steel trench plate. Being flush welded eliminates any potential trip hazards and, allows the plate to be stacked on top of each other creating easy storage.



The lifting tool is inserted into the receiver plate and locked into place. A hook is attached directly through the elongated hole of the lifter and your plate is ready to lift. There is no added shackle needed to attach to it allowing for easy, quick and most importantly safe use. Having the lifter connect directly into the plate also means that there are no threads to maintain or added routine maintenance programs.

Using the patented Road Plate Lifter means that there is no using a crow bar to lift up the plate making the user strain, and more importantly there is no need for the user to reach under a plate and put their hands in dangerous positions, eliminating the chance of major injury, even during the installation of the weld-in plate. The tools are heat treated to provide a Working Load Limit of 5 tonne with a minimum of 4:1 safety factor meeting all the requirements of the relevant Australian Standards.



Ranger are proud to be the sole distributors of the Road Plate Lifter in Australia and New Zealand.

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WORKING REQUIREMENTS

Road Plate Lifters are designed to be used straight up and down (in the vertical line) and, not to be used for side pull or push. If the tools are dragged or pushed to the side or along the ground while in a steel plate stress will develop on the bottom “dove tail” part of the lifter, leading to or causing it to crack or break and/or the center plate to become pinched. If a tool is abused in this fashion, tool life will be shortened and the working load limit for the tool will be unknown.

LARGE PLATES

For extra-long plates, it is recommended that two tools be used with a spreader bar for stability and to minimize stress. The plate should be measured in thirds along its longest part and a weld in plate placed on each third division. In some cases for stiffer road plates two plates have been installed next to each other.

WELD IN PLATE

The weld in plate contains the female connector for all the lifting tool and is easily welded into items that are being lifted and/or lowered. When properly installed, the weld-in plate sits flush to the surface of the item it is welded into, eliminating any trip hazard.

The plate is designed for easy welding into road plates made of Grade A36, A50 or A992 steel. It takes approximately 20 minutes to install the weld-in plate in the centre of a 25mm thick road plate.



Manufacturers’ recommendation that plates should be load tested after welding in of the plate. Rangers’ technical service representatives can come out to site once the plate has been welded in and can proof load test each plate.


MAINTENANCE AND INSPECTION

The plate requires no added routine maintenance but should be inspected (and tested if needed) at a minimum of yearly intervals as per Australian standards recommendation by a competent person (see Australian standard for competent person definition).

Once the plate has been welded into place Ranger's technical team can come to site to proof load each plate.

CODE	MODEL	WORKING LOAD LIMIT	WEIGHT
29010050	Weld in plate	5 Tonne	1kg
29010080	Road Plate Lifter	5 Tonne	2.1kg

WELDING INSTRUCTIONS

Project: Company Standard Procedure			PQR No.: 1851			WPS No.: 1851					
Welding Code: AS/NZS 1554.1-2014, 1554.5-2014			Material Grade: AS3678 Gr. 350 to AS1442 M1030								
Welding Process: GMAW			Thickness: 16 to 20mm								
Position: 1G (PA)			Material Type No. / Group No. 4 / 5 to Unassigned								
Joint Type: Single Bevel Partial Pen. (13.5mm)			Material Heat No: n/a								
Joint Preparation						Pass Sequence					
Joint Tolerances			Diameter – Thickness Range			Thermal treatment					
Bevel Angle: 40° Inc.			Pipe Diameter: n/a			Preheat °C: ≥10°C See note					
Root Gap: 1.5-3mm			Thickness Range: 8-32mm			Inter-pass °C: ≤300°C					
Root Face: 5mm			Combined Thickness: Max 64mm			P.W.H.T.: n/a					
Consumable Details and Welding Parameters											
Consumable Classification: B G 49A 3U C1/M21/M24 S6			Technique: Forehand / Push								
Trade Name: n/a			Electrode Stickout: 12-18mm								
Batch No: n/a			Metal Transfer: Globular								
Tungsten Type/Size: n/a			Purge Gas / Flow Rate: n/a								
Shielding Gas: Argon / 16% CO2 / 3% O2			Interrun Cleaning: Grind / Brush								
Flow Rate: 17-21Lpm			Flux Class / Batch: n/a								
Run No.	Side	Pos.	Electrode/Wire		Gas/FI ux Type	Amps	Volts	Polarity	Travel Speed mm/min	Interpass Temp °C	Heat Input Kj/mm
			Size	Class							
1	1	1G	0.9mm	G 49A S6	Argon / CO2 / O2	167-203	25-27	DC+	244-330	Max 300°C	0.74-1.39
2	1	1G	0.9mm	G 49A S6		176-214	27-29	DC+	296-399		0.69-1.30
3	1	1G	0.9mm	G 49A S6		179-217	27-29	DC+	234-316		0.89-1.67
Notes and Approvals											
<p>See attached PQR for evidence of qualification Welding parameters limited to Amps+/-10% - Volts +/-7% - Travel +/-15% of PQR Preheat to comply with AS/NZS1554.1-2014 Section 5.3 dependant on combined thickness At 1 kJ/mm Gr. 250/300 Combined Thickness ≤34mm 10°C, 35mm-49mm 25°C, ≥50mm 50°C Gr. 350/400 Combined Thickness ≤24mm 10°C, 25mm-34mm 25°C, 35mm-49mm 50°C, 50mm-66mm 75°C, >67mm 100°C Root face to increase proportional to material thickness, Weld depth not to increase, Weld prep qualified max. 13.5mm Unprepared abutting plate thickness qualified is unrestricted, ensure preheat complies with WPS Ensure Ranger welding instructions are followed at all times</p>											
IIW International Welding Eng. #GB/IWE/00529 IIW International Welding Tech. #GB/IWT/00284 IIW Welding Inspector Comprehensive #AU0013 CSWIP 3.2 Welding Inspector #58470 AWI Welding Inspector #AWI/B3/001  Graham Fry											
Reviewed By: Graham Fry						Date: 30/03/20					
Manufacturer Approval:											

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'Service through knowledge'

We believe in delivering service through knowledge. That means we're always developing our knowledge and expertise in lifting, rigging and safety and sharing it with our clients.




We invest time and money to provide our clients with practical resources to help them improve their businesses, save time and money and most importantly, keep them safe at work.

'Happy with our service? Don't keep that quiet!'

We're not shy in asking for referrals. If you are happy with our service and our people, please pass our details onto your colleagues and friends. We're also committed to continuous improvement so give us a call if there is something we can do to service your business better.



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