

# TWLP Weld on Lifting Points

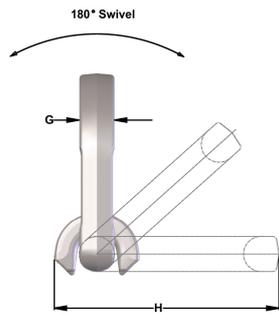
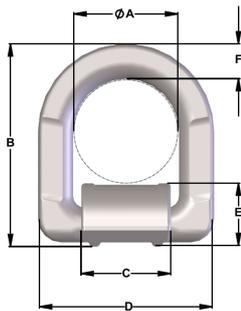
## Product Description

### Load Ring:

- High Tensile Alloy Steel
- Hardened and Tempered
- Powder Coated Finish
- Manufactured exclusively from Australian Made Steel

### Welding Lug:

- Forged from G300 Mild Steel - AS3679.1 Grade 300PLUS
- Readily weldable
- Weld procedure included
- Welding shall always be carried out by a qualified person to AS1554.1:2014



Townley Drop Forge is both NATA Accredited (Test Lab No. 13554) and AS/NZS ISO9001 Certified (Certificate number FS 604897)..

Part No.	WLL	A	B	C	D	E	F	G	H	Weight (kg)
TWLP250	2.5t	40	82	34	68	28	14	14	92	0.42
TWLP400	4t	53	104	46	90	33	18	18	116	0.87
TWLP670	6.7t	68	138	60	116	45	23	23	155	2.00
TWLP1000	10t	68	141	60	132	56	27	27	175	3.10
TWLP1600	16t	102	210	92	192	70	38	30	240	7.00

# TWLP Weld on Lifting Points

The weld on lifting point must be positioned on the load so that twisting or turning is avoided

- For single leg lift, the lifting point should be vertically above the centre of gravity of the load.
- For two leg lifts, the lifting points must be equidistant to/above the centre of gravity of the load.
- For three and four leg lifts, the lifting points should be arranged symmetrically around the centre of gravity in the same plane.

**Working Load Limits (WLL)** – Please see the Table below to determine WLL on 2, 3 or 4 leg lifts

## Working Load Limits (tonnes)

Part No.	Single Point	2, 3 or 4 point Maximum Included Angle		
				
		60°	90°	120°
TWLP250	2.5	4.3	3.5	2.5
TWLP400	4.0	6.9	5.6	4.0
TWLP670	6.7	11.6	9.5	6.7
TWLP1000	10.0	17.3	14.1	10.0
TWLP1600	16.0	27.7	22.6	16.0

## Manufacturers Specification

### Load Ring:

4140 High Tensile Alloy Steel - Hardened and Tempered.  
Powder coating to AS4506.

### Welding Lug:

AS 3679.1 Grade 300, Low Carbon Steel.

This assembly is manufactured in Australia using only heat certified Australian steel. The Working Load Limit is clearly marked on both the Load Ring and Welding Lug. Batch identification is clearly marked on both the Load Ring and Welding Lug.

## User Instructions

- Observe WLL (Working Load Limit) and ensure proper planning before lifting operation. Do not exceed the WLL.
- Only competent persons shall carry out inspections. Reference should be made to the relevant Australian Standard, equivalent Standard and other statutory regulation.
- Prior to installing and at every use, visually inspect the lifting point and check for any cracks, corrosion, nicks, gouges, deformation, etc.
- The material/substrate to which the weld on lifting point will be welded to should be of adequate strength to withstand forces during lifting without deformation.
- Ensure compatibility with other lifting components used to sling a load, both in size and capacity.
- No Modifications shall be made to the weld on lifting point.
- Do not use under chemical influence such as acids, alkaline solutions and vapours. i.e. in or around pickling baths, hot dip galvanizing plants.
- Care should be taken to calculate the WLL (Working Load Limit) when the lifting point is used in a multi-leg sling assembly. The reduction in WLL (Working Load Limit) for multi-leg assemblies should be checked with the relevant Standards e.g. AS 3775.

## Inspection Criteria

Only a competent person should undertake regular inspection and the lifting point shall be removed from service and discarded if there are any signs of wear or damage. The following inspection criteria should be adhered to:

- The WLL (Working Load Limit) and all other markings shall be clearly visible
- Impairment including deformation, notches, cracks, corrosion, nicks or any other signs of damage or wear
- Cracks or other damage to the welding or weld area

## Recommended Installation

1. Inspection of the Assembly should be carried out by a competent person before each use
2. The Lifting point should be positioned so that it may be easily accessed for inspection and for assembly/disassembly with a sling.
3. Check the material to which the weld on lifting point will be welded. It should be of adequate strength to withstand forces during lifting without deformation.
4. Check material for any cracks, corrosion, nicks or gouges.
5. The connecting surfaces must be free from dirt, oil, paint or other contaminants
6. The welding area at the base of the weld on lifting point should not be reduced or removed
7. Do not weld powder coated or painted surfaces
8. Check all fittings connected to the weld on lifting point are free moving

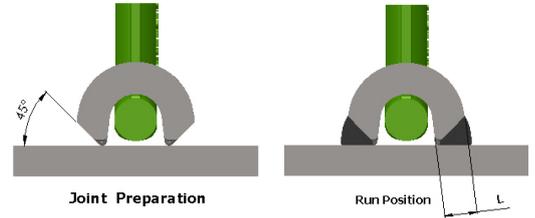
# TWLP Weld on Lifting Points

## Welding Instructions

**Important: Welding Operator to be qualified to AS1554.1: 2014 SP**

### Preparation

- Prepare material by thermal cutting and grinding.
- Remove scale from weld area by grinding.
- Align joint and tack components.
- Tack welds to be a minimum length of 6 mm.
- Tack ends and then incorporate in the main weld.
- Completely fill joints on both sides of lug



Minimum Design Throat Thickness (DTT)

Part No.	WLL (t)	DTT (L mm)
TWLP250	2.5	6
TWLP400	4.0	8
TWLP670	6.7	10.5
TWLP1000	10.0	13.5
TWLP1600	16.0	15.5

Code:	AS 1554.1 (2014) SP, "Welding of Steel Structures"
Material:	AS 3678 Grade 350, Steel Type 4
Welding Position:	Horizontal 2F

F.C.A.W – Typical Settings			
Consumable:	AS 2203.1 ETP-GC/Mp-W503A.CM1 H10 or equivalent. <b>NB. Refer to consumable manufacturer for user instructions and information.</b>		
Shielding Gas:	Argon + 16 - 18% CO2	Consumable Size:	1.2mm
Gas Flow Rate:	15 to 18.7 l/Min	Current Type:	DC Electrode +
Electrical Stick-out:	15 mm	Preheat:	50°C. minimum
Preheat Method:	Oxy-acetylene	Preheat Measurement:	Contact Thermometer
Amperage:	280 – 325	Volts:	29 - 31

G.M.A.W – Typical Settings			
Consumable:	AS 2717.1 ES6-GC/MW503AH or equivalent. <b>NB. Refer to consumable manufacturer for user instructions and information.</b>		
Shielding Gas:	Argon + 16 - 18% CO2	Consumable Size:	1.2mm
Gas Flow Rate:	15 - 18 l/Min.	Current Type:	DC Electrode +
Electrical Stick-out:	15 mm	Preheat:	50°C. minimum
Preheat Method:	Oxy-acetylene	Preheat Measurement:	Contact Thermometer
Amperage:	280 – 325	Volts:	29 - 31

M.M.A.W – Typical Settings			
Consumable:	AS 4855 B E4916 or equivalent. <b>NB. Refer to consumable manufacturer for user instructions and information.</b>		
Consumable Size:	3.2 mm / 4.0mm	Current Type:	AC / DC Electrode +
Preheat:	50°C. minimum	Preheat Measurement:	Contact Thermometer
Amperage:	3.2mm = 165 – 300	Amperage:	4.0mm = 160 - 180

Destructive Examination:	For welding operator qualification: One Macro to AS1554.1 SP requirements.
Non Destructive Examination:	
	<ul style="list-style-type: none"> <li>• 100% visual scanning and examination.</li> <li>• N.D.T. method and percentage, as agreed with client.</li> </ul>

Procedure prepared by: Ron Mays (Weld. Supv.7152, Weld. Insp.7682)