



OPERATING INSTRUCTIONS FOR Top loading Clamps (Pillar & Strap types)

- 1. Machine to be operated by trained personnel.**
- 2. Instructions to be read before use.**

Hy-Ram Mansfield
Pelham Street
Mansfield
Nottinghamshire
NG18 2EY

Hy-Ram Bury
9 Portland
Industrial Estate
Portland Street
Bury
Lancashire
BL9 6EY

Hy-Ram Enfield
Unit 2, Riverwalk
Business Park
Riverwalk Road
Enfield
EN3 7QN

Hy-Ram Livingston
18 Napier Square
Houstoun Road
Trading Estate
Livingston
West Lothian
EH54 5DG

Tel: 01623 422982
Fax: 01623 661022

Tel: 0161 7641721
Fax: 0161 7620577

Tel: 0208 805 8010
Fax: 0208 805 6010

TEL: 01506 440233
Fax: 01506 440266

This unit is design and manufactured to meet the requirements of National Grid Gas Industry Standards GIS/PL2-5:2006 Part 5: Electrofusion ancillary tooling.

Hy-Ram Engineering Co Ltd has a policy of continuous improvement in product quality and design. Hy-Ram Engineering Co Ltd therefore reserves the right to change the specification of its models at any time, without prior notice.

Important!

This manual outlines the operation of the electrofusion tooling.

This manual forms a part of the product to which it relates. It should be kept for the life of the product. Any amendments issued by Hy-Ram Engineering Co Ltd should be incorporated in the text. The manual should be passed to any subsequent holder or user of this product.

General Description.

Hy-Ram's top loading clamps are designed for welding Tapping Tee / Branch Saddle fittings to varying types and diameters of plastic pipe.

These clamps are for tapping tees/branch saddles that are designed to be held in position during installation/welding/cooling, by means of a downward force applied to the top of the 'stack'. They come in two forms, pillar and strap

A force of between 1.4 kN to 1.5kN is created by the Loading Cell and this is indicated by turning the handle clockwise until the top of the indicator cap is level with the tightening handle top face. An adapter foot is available to permit the clamps to fit onto Branch Saddles with outlets that are greater than 32mm, fitting sizes 63 - 90mm O/D.

Note : *Welding of Tapping Tee / Branch Saddle Fittings: Each different installation of pipe type, diameter and composition requires different welding times. Check the manufacturers specifications for further in-depth technical specifications*

Maintenance Procedure and Calibration

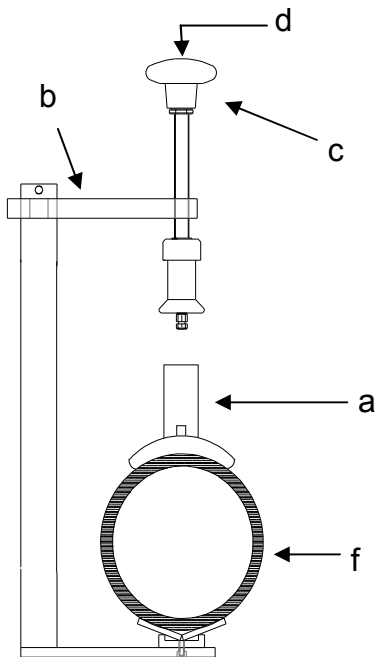
- (a) The condition of the webbing straps should be inspected thoroughly prior to use, worn or frayed straps must be replaced immediately.
- (b) Correct safety clothing including gloves and eye protection should be worn when operating this tool.
- (c) The unit should be periodically re-calibrated at least once every year. Please fill-in and date the warranty card and return for our records. You (the owner/user) are responsible for returning the unit for re-calibration at the specified date (from two years of purchase, or if the unit is damaged, suspected damaged, or fails to give consistent weld's due to normal wear and tear)

IMPORTANT NOTICE

The **Loading Cell** is a **CALIBRATED UNIT** designed and tested to a pre-set pressure rating to ensure all fitting types are correctly pressured during welding and cooling cycles. In the event that the unit is damaged (i.e. the loading handle breaks or the retaining nut underneath the handle becomes loose) **DO NOT CONTINUE TO USE THE UNIT!** Return the unit to Hy-Ram Engineering Co Ltd at the address contained at the end of this booklet, or telephone for advice on + 44 (0)1623 422982 before continuing to use this unit

Failure to follow the above statement could result in a weld failure at a critical point in any system, whether pressurised or not, and Hy-Ram Engineering Co Ltd cannot accept liability in any way whatsoever if the unit is used when damaged or not used in the way described herein in this manual. It is the owner(s) / user(s) responsibility to return the unit for repair as soon as the fault/damage is recognised

Please note: There is a charge payable for re-calibration (available on request and not including P&P) unless the unit is within the warranty period of 12 months, whereby only P&P and return is payable.



Tapping Tee Fitting

NOTE: It is important that the electrofusion service fittings are stored at all times in their protective plastic bags.

IMPORTANT: If the pipe has been coiled then it may be oval. If this is the case, a rerounding tool will have to be used first, to make the pipe circular prior to welding the saddle.

Instructions for use.

1. Position the saddle (a) on to the main (f) whilst still in its protective plastic bag, and mark around the base at the point where the joint is to be made.
2. Scrape the area of the pipe where the joint is to be made.
3. Unscrew the plastic handle (c) fully anti-clockwise so that the load cell (that fits into the top of the stack) is touching the underside of the arm.
4. Remove the tapping tee from its plastic bag and unscrew the cap from the top of the stack.
5. Check that the top face of the steel cutter is just below the top of the stack.
6. Remove the protective cardboard cover and plastic red caps. Place the tapping saddle (a) onto the clean scraped area of the main pipe.
7. Adjust the arm of the clamp (b) upwards so that it can be positioned over the saddle.
8. Lower the arm and press the nose of the clamp into the hexagonal hole in the top of the saddle cutter as shown in the diagram above. The O ring seal will ensure a good fit.
9. The arm will lock in position automatically
10. Screw down the handle (c) clockwise until the indicator pin (d) in the centre of the handle is flush with the surface of the handle.
11. The tapping saddle is now clamped to the main at the required pressure and is ready to be welded.
12. Follow the instructions supplied with the electrofusion unit to weld the saddle to the pipe.
13. Once the cooling period has elapsed, release the pressure by unscrewing the plastic handle (c) fully anti-clockwise. Raise the clamp arm. Now remove the Top Loader Clamp from the welded saddle and main



Method of Operation

NOTE: It is important that the electrofusion service fittings are stored at all times in their protective plastic bags.

IMPORTANT: If the pipe has been coiled then it may be oval. If this is the case, a rerounding tool will have to be used first, to make the pipe circular prior to welding the saddle.

1. Unscrew the pressure hand wheel by rotating in an anticlockwise direction.
2. Remove the looped end of the webbing straps from their locating lugs on the body block.
3. Depress a cam buckle and pull down on the associated webbing strap but **do not** pull it through the cam buckle, do this with both straps.
4. Taking care not to touch the fusion surface of the fitting or the pipe, push the interface foot into the hexagonal hole in the tapping saddle cutter.
5. Place the clamp and tapping saddle onto the pipe, passing both webbing tapes under the pipe, and fixing the looped ends onto the lugs on the body block.
6. Depressing each cam buckle in turn, pull down on the free end of the appropriate webbing tape so that the clamp and branch fitting are held loosely onto the pipe.
7. Rotate the pressure hand wheel in a clockwise direction until the tapes are tightened and the load spring becomes compressed.
8. Observe the load indicator in the middle of the hand wheel, as the spring becomes more compressed the load indicator pin will come level with the top of the hand wheel.
9. When the load indicator pin is level with the top of the hand wheel, the branch fitting has the correct load applied. The electro-fusion process can now proceed.
10. As the power is applied to the fitting, the load indicator pin may sink back into its hole, this is acceptable as plastic is being displaced at the fusion surfaces.
11. On completion of the fusion and cooling cycle, the clamp can be removed by counter clockwise rotation of the pressure hand wheel, so that remaining spring pressure is released.
12. The clamp can be removed from the tapping saddle by depressing the cam buckles sufficiently to allow the webbing straps to be removed from their locating lugs.

Top Loading Clamps



TLC Pillar Type

Branch Saddle Adaptor

TLC250, TLC315 & TLC400 Pillar Type; Top Loading Clamp

The Hy-Ram Pillar Clamps locate in the 12mm Hexagonal drive on the cutter of the tapping saddle. They are extremely easy to use, requiring no locking-off after height adjustment. Robust design incorporates a correct load indicator and a 'swivel' vee base for pipe location.

(For saddles without an integral cutter, an Adaptor is available)

Product code	Description	Size Diameter Range	
089-000429	TLC 250	Up to 250mm dia. pipe	Ⓜ
089-000430	TLC315	Up to 315mm dia. pipe	Ⓜ
089-000431	TLC400	Up to 400mm dia pipe	Ⓜ
089-000343	Adaptor	63, 90mm Branch Saddles	
089-000344	Adaptor	63, 90, 125mm Branch Saddles	

* Important: Top Loading Clamps should be periodically calibrated in line with manufacturers' recommendations. Refer to Hy-Ram Portable Saddle Clamp tester for more information see below.



TLC 500 Strap Type

Branch Saddle Adaptor

TLC500 Strap Type; Top Loading Clamp

The Hy-Ram Strap Clamp locates in the 12mm Hexagonal drive on the cutter of the tapping saddle and is especially useful where trench space is tight.

The straps and 'easy-operating' strap clamps make adjustment for any size of pipe quick and efficient (up to 500mm diameter).

(For saddles without an integral cutter, an Adaptor is available)

Product code	Description	Size Diameter Range	
089-000432	TLC 500 (Strap type)	Up to 500mm dia. pipe	Ⓜ
089-000343	Adaptor	63, 90mm Branch Saddles	
089-000344	Adaptor	63, 90, 125mm Branch Saddles	

* Important: Top Loading Clamps should be periodically calibrated in line with manufacturers' recommendations. Refer to Hy-Ram Portable Saddle Clamp Tester for more information see below.

Portable Saddle Clamp Tester



Portable Saddle Clamp Tester

Hy-Ram developed portable Calibration / Test Unit for ensuring that Top Loading Pillar Clamps and Strap Type Clamps for Electrofusing Tapping Tees are applying the correct load in compliance with the relevant Gas Industry Specification (GIS).

Saddle Clamps are extensively used in both the Gas and Water industry in order to ensure the optimum interface force between the Electrofusion fitting (tapping, branch and purge saddle) and the pipe.

Common types of Saddle Clamps include the Pillar Clamp and the Strap Type Clamp. Both designs include a 'load cell' which should deliver the optimum interface force (1.4 – 1.5 kN), once the unit is adjusted in accordance with the instructions. (Normally the indicator pin becoming 'flush' with the top surface of the hand-wheel). In time, the spring within this load cell can weaken and in line with manufacturers recommendations clamps should be recalibrated.

Being battery operated for 'field' use, the Hy-Ram Portable Saddle Clamp Tester is supplied in a bespoke plastic carry-case and can be used to recalibrate any manufacture of Clamp.

Product code	Description	
189-000019	Portable Saddle Clamp Tester	Ⓜ

Certificate of calibration.

- This product has been inspected and tested in accordance with the ISO9001 quality control systems and procedures in place at Hynam Engineering Co Ltd.
- This product has been calibrated using equipment traceable to national and international standards, by a NAMAS (National Accreditation of Measurement and Sampling) accredited laboratory. NAMAS is a service of UKAS (United Kingdom Accreditation Service).

Decommissioning & Disposal Instructions

These give the instructions for decommissioning and disposal of the equipment and confirm how it is to be taken out of service safely, in respect of the Essential Health and Safety Requirements.

- If a Uniprep1 tool has reached the end of its useful working life and cannot be refurbished it must be disposed of through a licensed scrap or waste disposal facility. Alternatively, a reverse engineering company could be used to strip the equipment for recycling purposes.
- Disposal is the responsibility of the Customer this can also be achieved by returning the product back to the manufacturer.



Warranty Information.

1. Extent of Warranty.

- (a) Hy-Ram Engineering Co Ltd warrants to the end-user customer that its products will be free from defects in materials and workmanship, for six months after the date of purchase by the end-user customer, subject to providing proof of purchase.
- (b) If Hy-Ram Engineering Co Ltd receives, during the warranty period, notice of a defect in product which is covered by this warranty, Hy-Ram Engineering Co Ltd shall either repair or replace the product, at its option. Any replacement product may be either new or like-new, provided that it has functionality at least equal to that of the product being replaced.
- (c) All warranty work will be carried out by Hy-Ram Engineering Co Ltd unless otherwise agreed. On-site warranty and repair or replacement services are available from authorised Hy-Ram Engineering Co Ltd service facilities world-wide.
- (d) Customers shall prepay shipping charges for products returned to Hy-Ram Engineering Co Ltd for warranty service, and Hy-Ram Engineering Co Ltd will charge for return of the products back to the customer.
- (e) This warranty statement gives the customer specific legal rights. The customer may also have other rights which vary from country to country in the world.

Pre-conditions for Warranty Application.

Hy-Ram Engineering Co Ltd' warranty covers only those defects which arise as a result of normal use of the product, and this warranty shall only apply in the following circumstances:

- (a) All the instructions contained in the operating manual have been complied with
- (b) And none of the following apply:
 - (i) Improper or inadequate maintenance;
 - (ii) Physical abuse;
 - (iii) Unauthorised modification, misuse or any use not in accordance with the operating manual and good industry practice;
 - (iv) Operation outside the products specifications;
 - (v) Improper site preparation or maintenance; and
 - (vi) Faulty pipe or fittings.

Limitations of Warranty.

- (a) Hy-Ram Engineering Co Ltd does not warrant the operation of any product to be uninterrupted or error free.
- (b) Hy-Ram Engineering Co Ltd makes no other warranty of any kind, whether express or implied, with respect to its products. Hy-Ram Engineering Co Ltd specifically disclaims the implied warranties of satisfactory quality and fitness for a particular purpose.
- (c) To the extent that this warranty statement is inconsistent with the law of the locality where the customer uses the product, this warranty statement shall be deemed modified by the minimum necessary to be consistent with such local law.
- (d) To the extent allowed by local law, the remedies provided in this warranty statement are the customer’s sole and exclusive remedies.
- (e) This tool has been designed for the range of fittings available at the time of its design and development. Hy-Ram Engineering Co Ltd can accept NO liability for the unit’s ability or otherwise to work with new or different fittings that subsequently appear in the market place.

Please complete this information and keep it safely with your proof of purchase receipt. You will require it for any warranty claim.

Where purchased

Date of purchase

Name & address
Of purchaser

.....

.....

Type of tool

Serial number

For Service and repair please contact:

Hy-Ram Mansfield
Pelham Street
Mansfield
Nottinghamshire
NG18 2EY
Tel: 01623 422982
Fax: 01623 661022