




Hydraulic Squeeze Off Tool 200-315mm

Product Code: 02-31-901

Operating Instructions

REVISION: 02



Helping you make the right connections.

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01. Introduction

General Description

The tool has been designed to limit the flow in PE pipe from 160mm to 250mm pipe work in accordance with Gas Industry Standards GIS/PL2-7 Part 7 Squeeze-off tools and equipment.

The unit has rotating pre-sized limiting tubes that are used to limit the squeeze gap and prevent over compression of the PE pipe.



Important!

This tool should be used in accordance with the pipe manufacturers recommendations and in line with local codes of practice.

This manual outlines the operation of the squeeze off tooling and forms a part of the product to which it relates. It should be kept for the life of the product. Any amendments issued by Caldervale Technology Ltd should be incorporated in the text. The manual should be passed to any subsequent holder or user of this product.

It is the responsibility of the operator to ensure that the PE pipe is suitable for squeeze off application if in doubt contact the PE pipe manufacturer for confirmation.

Before Using

Check that there is adequate oil in the jack, see section "Checking Oil Level" page 09.

It is important to ensure all component parts are present and in serviceable condition. In addition, the setting of the limit stop (buffer) tubes should be checked before every operation to ensure they are correct for the pipe size and wall thickness rating. Wrongly set buffer tubes may cause insufficient or excessive pipe compression leading to pipe-wall damage, leakage or injury.

First Use Procedure

The jacks are normally supplied filled and ready for use. However before using the jack for the first time, the oil level should be checked (see page 09). The oil used should be a high-quality hydraulic oil of HVI ISO46 viscosity.

Before operating the tool for the first time, the jack must have its hydraulic circuit 'purged' to eliminate any possible air in the system.

To Purge the System

1. Open the release valve with the jack handle, turning it anti-clockwise and then, with the aid of the handle operate the hydraulic jack several times.
2. Close the release valve fully using the jack handle (it may be necessary to check the oil level in the jack) The tool is now ready for use.

02. Safety Instructions

1. Read and understand the whole booklet before using the tool
2. Read **FIRST USE** procedure before using the tool.
3. It is imperative that all possible precautions are made to avoid unexpected movement of the tool during use.
4. Never attempt to operate the jack beyond its maximum stroke.
5. The jack is fitted with a safety valve to stop overloading. This is factory set and **MUST NOT** be tampered with.
6. The tool is very heavy care should be taken when in use.
7. Lifting must be by 2 persons.
8. Operatives should wear eye protection, gloves, safety headwear & footwear when using the equipment.
9. A single squeeze tool cannot be guaranteed to provide 100% closure, where this is required users are advised to consider using 2 squeeze tools.
10. The tool can be disassembled for ease of transportation.
11. Some parts are greater than 30kg in weight.

03. Limit Stop Tubes

Limit stop tubes should be used for all squeeze off applications in order to prevent over squeezing of the pipe. Permanent damage can occur if the pipe is squeezed too far.

Below is a list incorporating our most commonly requested limit stop tubes, if the one you are looking for is not on our list please contact us at www.caldertech.com to check availability.

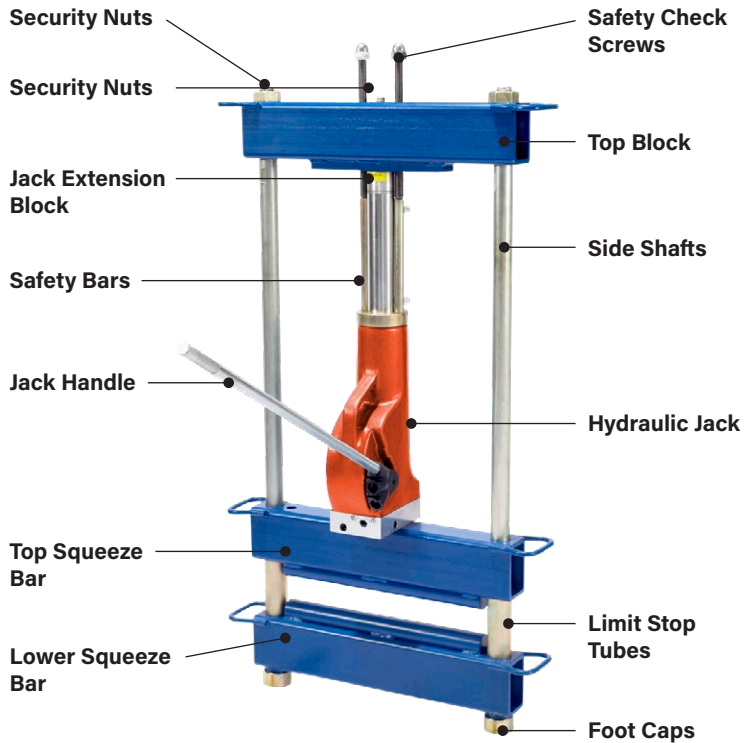
Product Code	Pipe Size	SDR	Product Code	Pipe Size	SDR
02-31-930	200mm	SDR11	02-31-903	280mm	SDR11
02-31-931	200mm	SDR17	02-31-906	280mm	SDR17
02-31-932	200mm	SDR17.6	02-31-923	280mm	SDR17.6
02-31-933	200mm	SDR21	02-31-923	280mm	SDR17.6
02-31-935	225mm	SDR11	02-31-920	280mm	SDR21
02-31-936	225mm	SDR17	02-31-904	315mm	SDR11
02-31-937	225mm	SDR17.6	02-31-945	315mm	SDR13.6
02-31-938	225mm	SDR21	02-31-907	315mm	SDR17
02-31-902	250mm	SDR11	02-31-924	315mm	SDR17.6
02-31-905	250mm	SDR17	02-31-921	315mm	SDR21
02-31-922	250mm	SDR17.6	02-31-946	315mm	SDR26
02-31-919	250mm	SDR21	02-31-947	315mm	SDR33

Limit Stop Tubes are supplied in sets of 2.



Limit Stop Tubes

04. Operation



Instructions for Use

1. Before the squeeze tool can be applied to the pipe it needs to be disassembled. See next page "Removal After Squeeze Off".
2. Locate the bottom squeeze bar under the pipe and position the two vertical shafts into place by turning them until tight.
3. Select the correct limit stop tubes for the pipe diameter and SDR rating of the pipe to be squeezed.
4. Slide the tubular limit stops over the top and down the vertical shafts.

5. Slide the top squeeze bar down over the two shafts taking care not drop the bar directly on to the pipe.
6. Fix the Top Block on to the vertical shafts.
7. Fit the top security nuts on to the shafts and make tight.
8. Locate the hydraulic powered jack in to position in the centre of the top squeeze bar.
9. If this tool is being used on pipes smaller than 250mm the large jack extension block is to be added to the top of the jack piston. For pipes above 280mm the short jack extension block is to be used.
10. Using the jack handle, pump the jack so that the cylinder begins to rise from the jack housing.
11. Insert the threaded security screw through the centre of the top bar section and tighten.
12. Continue to pump the hydraulic jack until the squeeze process is complete, it may take some time and effort to ensure the pipe is fully squeezed to the limit stops.
13. Fit the Check screws in to place and tighten down.

Removal After Squeeze Off

1. On completion of the squeeze off, apply additional pumps to the hydraulic jack to replace any minor pressure loss, and allow the safety lock screws to be released and removed.
2. Unscrew the threaded Check Screws to allow the hydraulic jack unit freedom of movement.
3. Slowly release any pressure on the hydraulic jack taking care to prevent pressure surges in the pipe-work as the squeeze is released.
4. Remove the hydraulic jack unit from the frame.
5. Remove the two security nuts on the upper section and then remove the upper section.
6. Remove the middle section / top squeeze bar.
7. Unscrew the shafts and remove the bottom squeeze bar from under the pipe work.

Transport

1. Rebuild the squeeze tool in the same method as operational use but without the pipe.
2. Release all the pressure in the hydraulic Jack unit so that the cylinder can be retracted in to the housing.
3. Lock off the hydraulic jack unit.



Storage

IMPORTANT! When not in use always:

1. Store the jack in an upright position.
2. Ensure the pressure in the jack is released.
3. It is recommended that the squeeze tool is annually tested and inspected max 12 monthly intervals.
4. Ensure the tool is clean and dry before storage.

Routine Maintenance

1. Before each operation, ensure that the jack has sufficient oil, remove the filler plug and check that the oil level is correct.
2. Lubricate all moving parts at regular intervals.
3. Grease check screw threads at regular intervals.

Note: Checking the oil level in any way other than quoted in this manual may severely limit or render the jack inoperative.

05. Checking Oil Level

The jacks are normally supplied filled and ready for use. However before using the jack for the first time, the oil level should be checked. The oil used should be a high-quality hydraulic oil of HVI ISO46 viscosity.

Fill Position

With the hydraulic jack removed from the frame, place it upright onto a solid flat surface. This is necessary as filling the jack at an angle or on one side can lead to overfilling which will severely limit the jack or render it inoperable.

Ensure that the piston is fully retracted.



Checking Oil Level

Unscrew and remove the dipstick and check the oil level. The level should be near to the middle of the dipstick. The dipstick should be screwed fully into position to determine this level. If the oil level is noticeably lower than the centre of the dipstick then a top up may be required.



06. Filling Oil

1. With the Hydraulic Jack in the fill position (page 09) release all pressure in the jack using the pump control valve and allow the piston to fully retract.

Note: Checking the oil level or filling with the piston extended can lead to overfilling, this may severely limit or render the jack inoperative.

2. Close pump control valve.
3. Remove the oil filler plug.
4. The level should be near to the middle of the dipstick, If the oil level is lower than This begin to fill the jack checking the level often so as not to overfill the jack.

Note: use a high-quality hydraulic oil of HVI ISO32 when filling the jack.

5. Replace the oil filler plug.

Note: Care should be taken when filling the jack to not overfill with oil as this can severely limit the jack or render it inoperative.

07. Troubleshooting

Some common problems that occur when using this equipment can be resolved easily, these are:

Problem	Cause	Solution
Pumping the jack has no effect	Pump control valve open	Close pump control valve fully
Pumping jack only closes squeeze bars partially	Pump control valve slightly open	Close pump control valve fully as above
	Not enough oil in the pump	Check oil level in the pump correctly and top up if necessary
	Wrong squeeze tool spacer used	Use the correct spacer for the pipe being used
Squeeze bars won't retract properly	Too much oil in the jack	Follow instructions to check oil level in the jack correctly
	Check screws still in contact with	Unscrew the check screws until the threads are clear of the check screw block
Pipe not fully round after squeeze off	This is normal for PE pipes	Leave the pipe for a few hours to return to its original shape, if this does not work we have a selection of re-rounding tools on our website
A squeezed pipe hasn't fully blocked off flow of gas or liquid in the pipe	Incorrect limit stop plates being used	Check the correct size and SDR limit stop plates are being used before squeezing the pipe
A squeezed pipe hasn't fully blocked off flow of gas or liquid in the pipe using the correct limit stop plate sizes	A single squeeze tool cannot be guaranteed to provide 100% closure	Where this is required users are advised to consider using 2 squeeze tools
Pump handle will not connect to jack	There may be debris in the coupling	Check and/or clean the couplings and use the provided caps to ensure they are free from debris in the future
Frame does not fit on the pipe	Pipe size is too large	A larger model may be required to squeeze the pipe, see our website to find a larger model

If you have a problem that is not listed please contact us, all our contact information is on our website www.caldertech.com

08. Specifications

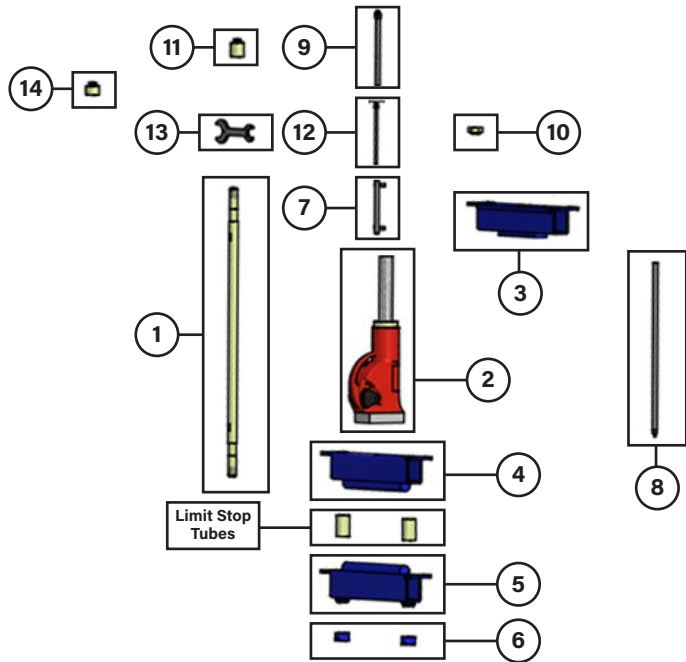
Materials:	Mild Steel EN3A, Chrome Plated Tube
Finish:	Powder Coating / Zinc Plated (Steel)
Max Pipe Size:	200mm - 315mm SDR 11, 13.6, 17, 17.6, 21, 26, 33
Dimensions (HxWxD):	1100mm x 400mm x 240mm
Weight:	118.2kg
Hydraulic Powered Jack:	25 Ton Jack
Stroke:	270mm
Oil Volume:	410cm ³
Oil Type:	HVI ISO46
Product Code:	02-31-901

This unit is design and manufactured to meet the requirements of Specifications & Requirements Applicable to the Gas, Water & Associated Industries Where Those Are Relevant and conforms to Gas Industry Standards GIS/PL2-7 Part 7 Squeeze-off tools and equipment.

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

It is the responsibility of the operator to ensure that the PE pipe is suitable for squeeze off application if in doubt contact the PE pipe manufacturer for confirmation.

09. Parts Diagram



Part	Product Code	Description
1	02-31-913	Side Bar Shaft
2	02-31-722	Hydraulic Jack 25T
3	02-31-910	Top Beam
4	02-31-911	Upper Squeeze Bar
5	02-31-912	Lower Squeeze Bar
6	02-31-916	Foot Cap
7	02-31-716	Safety Bar with Clips
8	02-31-710	Jack Handle
9	02-31-914	Check Screws
10	02-31-915	Locking Nut (top)
11	02-31- 909	Jack Extension (Pipe Sizes below 250mm)
12	02-31-917	Jack Retaining Thread
13	02-31-918	Locking Spanner
14	02-31- 908	Jack Extension (Pipe Sizes above 280mm)

10. Warranty Information

1. Extent of Warranty

- a) Subject to clauses 2 and 3, Caldervale Technology 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 Caldervale Technology Ltd receives, during the warranty period, notice of a defect in product which is covered by this warranty; Caldervale Technology 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 Caldervale Technology Ltd unless otherwise agreed. On-site warranty and repair or replacement services are available from authorised Caldervale Technology Ltd service facilities world-wide.
- d) Customers shall prepay shipping charges for products returned to Caldervale Technology Ltd for warranty service, and Caldervale Technology 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.

2. Pre-conditions for Warranty Application

Caldervale Technology Ltd's 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; and
- b) 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;
- vi) Faulty pipes.

3. Limitations of Warranty

- a) Caldervale Technology Ltd does not warrant the operation of any product to be uninterrupted or error free.
- b) Caldervale Technology Ltd makes no other warranty of any kind, whether express or implied, with respect to its products. Caldervale Technology 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 pipes available at the time of its design and development. Caldervale Technology Ltd can accept NO liability for the unit's ability or otherwise to work with new or different pipes 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 of purchaser: _____

Address of purchaser: _____

Type of tool: _____

Serial number: _____

11. Service and Repair

For service and repair please contact:

INTERNATIONAL

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Malaga WA 6090, Australia

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12. Decommissioning and Disposal

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 Environmental, Health and Safety Requirements.

- If a Caldertech 315mm Hydraulically Powered Squeeze tool has reached the end of its useful working life and cannot be refurbished it must be sent to a licensed recycling facility for treatment. That will ensure the waste hierarchy requirements are met.
- End of life treatment is the responsibility of the Customer. This can also be achieved by returning the product back to the manufacturer if required.



EU Declaration of Conformity

Certificate for Hydraulic Squeeze Tool

Manufacturer: Caldervale Technology Limited
Manufacturer's Address: Bretfield Court, Dewsbury,
 West Yorkshire WF12 9BG, United Kingdom

Declares that these goods:

- Product: Hydraulically Powered Squeeze Tool
- Model: 200 – 315mm
- Product Code: 02-31-901

This declaration is issued under the sole responsibility of the manufacturer.

The object of the declaration is in conformity with the relevant Union harmonisation legislation:

- 2006/42/EC Machinery Directive

References to the relevant harmonised standards used or references to the other technical specification in relation to which conformity is declared:

Ref. No.	Title	Edition / Date
• BS EN 12100	Safety of machinery. General principles for design. Risk assessment and risk reduction.	2010
• BS EN 4413	Hydraulic fluid power. General rules and safety requirements for systems and their components.	2010

Product Standards

- | | | |
|-------------|--|------|
| • GIS/PL2-7 | Polyethylene pipes and fittings for natural gas and suitable manufactured gas - Part 7: Squeeze-off tools and equipment. | 2013 |
|-------------|--|------|



Certificate of Conformity

This document certifies that the product detailed below fully conforms to the following standard without derogation.

**GIS/PL2-7: 2013 Squeeze Off Tool
and Equipment**

Product: 315mm Hydraulic Squeeze Tool

MARCH 2019



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Managing Director



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