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# Calder Surprep Rotary PT1E Scraping Tool 20-90mm


Model: 01-07-001

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## Operating Instructions

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REVISION: 01



# Helping you make the right connections.

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# 01. Introduction

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## General Description

The pipe preparation tool is designed to provide a fusible surface on any PE pipe material (new, weathered or previously installed). In accordance with Gas Industry Standards GIS/PL2-5 Part 5 Electrofusion ancillary tools.

This product (Calder Surprep PT1E) has been manufactured, inspected and tested in accordance with the ISO9001 quality control systems and procedures in place at Caldervale Technology Ltd, Dewsbury.

## Before Using

It is important to ensure all component parts are present and in serviceable condition. In addition, the condition of the cutting / peeling tip should be checked for damage or excessive wearing.



## 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 pipe surface preparation tooling for the scraping of PE pipe 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.

## 02. Safety Instructions

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1. Read and understand the whole instruction booklet before using the tool.
2. It is imperative that all possible precautions are made to avoid unexpected pipe movement when the tool is being use.
3. Never use the tool on pipes that are not within the specified dimensions.
4. The tool tip holder spring tension is factory set and **MUST NOT** be tampered without adequate training or instruction.
5. Operatives should wear eye protection, gloves, safety headwear & footwear when using the equipment.
6. A single scrape / pass cannot be guaranteed to provide 100% preparation, where this is required users are advised to consider making 2 scrapes around the pipe.

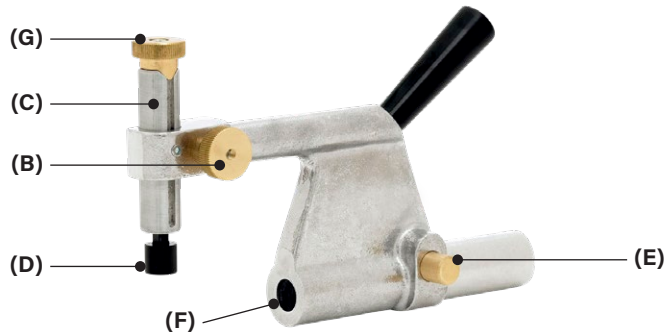
## 03. Accessories

The Calder Surprep PT1E has several accessories available to allow scraping on different sizes of pipe and different wall thicknesses, some of these are listed below and more are available at [www.caldertech.com](http://www.caldertech.com)

Product Code	Description
01-07-040	Toolbox only for standard kit with foam insert
01-07-004	Surprep mandrel pt1 16mm SDR 11
01-07-005	Surprep mandrel pt1 20mm SDR 11
01-07-006	Surprep mandrel pt1 25mm SDR 11
01-07-007	Surprep mandrel pt1 32mm SDR 11
01-07-008	Surprep mandrel pt1 40mm SDR 11
01-07-009	Surprep mandrel pt1 50mm SDR 11
01-07-010	Surprep mandrel pt1 63mm SDR 11
01-07-011	Surprep mandrel pt1 75mm SDR 11
01-07-012	Surprep mandrel pt1 90mm SDR 11



## 04. Operation



### Instructions for Use

1. Ensure that the pipe end is cut square, is free of burrs and the section to be prepared does not have any deep scores.
2. Mark the pipe outer wall at the required point. It is recommended to scrape a length of pipe at least  $\frac{1}{2}$  the length of the coupler that is to be fitted plus 25mm.
3. The tool consists of 2 main components, a **pistol hand-tool** which holds the **spring capsule (C)** and a **pipe insert mandrill**. The mandrill has a **thread**, which locates into a feed-nut inside the **body cavity (F)** of the hand-tool and an **insert**, which is sized to fit firmly into the pipe to be scraped.
4. Before using the tool, release the **capsule positioner thumb-wheel (B)** and slide the **spring capsule (C)** until it is in its uppermost position (the cutting tip should be near to thumb-wheel) tighten thumb-wheel.
5. Check the **spring tension thumb-wheel (G)**, the V should **NOT** be in the V notch, if it is rotate the thumb-wheel through a  $\frac{1}{4}$  turn to raise the V clear of the notch.
6. Push the **insert** portion of the mandrill as far as possible into the end of the pipe to be scraped.
7. While pushing in the **quick release button (E)**, slide the threaded portion of the mandrel into the **body cavity (F)** hole until the cutter tip is 1-2 mm from the end of the pipe, releasing the **quick release button** will now engage the feed-screw.

8. Release the **capsule positioner thumb-wheel (B)** and slide downward the **spring capsule (C)** till the **tip** of the **cutter (D)** is parallel with the outer pipe wall, slide back 1mm and lock in position with **thumb-screw**.
9. To apply spring pressure, make a  $\frac{1}{4}$  turn of the **spring tension thumb-wheel (G)**, V should locate in notch.
10. Start scraping pipe by turning hand-wheel clockwise. The cutter will travel away from the pipe end as scraping takes place.

## Removal

1. On completion, the scraped section should be inspected for areas of un-scraped pipe. If necessary the pipe can be scraped again.
2. On completion of the scrape, turn the spring tension thumb wheel (G) a  $\frac{1}{4}$  turn and ensure the V is raised clear from the V notch.
3. Release the capsule positioner thumb wheel (B) and slide the spring capsule (C) up away from the pipe and lock in position with the capsule positioner thumb screw (B).
4. Using the quick release button (E) remove the body of the tool from the mandrel insert.
5. Remove the mandrel insert. Should the insert portion of the mandrel become fixed into the pipe, a 4mm hexagon key can be fitted into the end of the threaded portion; gentle turning anticlockwise will release the mandrel.



## Storage

### **IMPORTANT! When not in use always:**

1. Store the tool in the tool box.
2. Ensure the tool tip tension is released.
3. Ensure the tool is clean and dry before storage.

## Routine Maintenance

1. Check for correct movement and operation and lubricate moving parts at regular intervals before using.
2. It is important to ensure all component parts are present and in serviceable condition. In addition, the condition of the cutting / peeling tip should be checked for damage or excessive wearing.
3. The cutter tip can be replaced where necessary (See Parts page 08).



## 05. Specifications

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<b>Materials:</b>	Mild Steel EN3A / Stainless steel, Aluminum / Brass / Tungsten Carbide
<b>Finish:</b>	Natural / Zinc passivate to mild steel
<b>Dimensions:</b>	L. 475mm x W. 330mm x H. 130mm
<b>Weight:</b>	5.85kg (Including Toolbox)
<b>Depth of Cut:</b>	0.30mm
<b>Length of Scrape:</b>	70mm, feed per rotation 4.5mm
<b>Min Pipe Diameter:</b>	20mm
<b>Max Pipe Diameter:</b>	90mm
<b>SDR:</b>	11, 13.6, 17
<b>Product Code:</b>	01-07-001

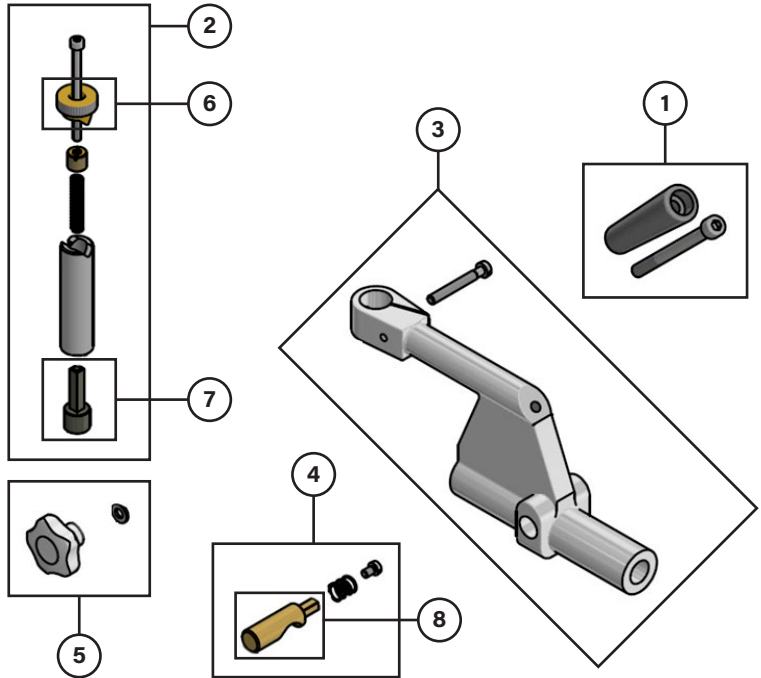
This unit is design and manufactured to meet the requirements of National Grid Gas Industry Standards GIS/PL2-5 Part 5 Electrofusion ancillary tooling.

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.

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**It is the responsibility of the operator to ensure that the PE pipe is suitable for this clamping system if in doubt contact the PE pipe manufacturer for confirmation.**

## 06. Parts Diagram



Part	Product Code	Description
1	01-07-160	Spare Handle and Screw
2	01-07-161	Spare Tool Tip Cartridge Assembled
3	01-07-095	Spare Body Only
4	01-07-162	Spare Quick Release Button Assembly
5	01-07-086	Spare Thumb Screw
6	Z01-02-011	Spare CAM 'V' Thumbscrew
7	01-07-042	Spare Tool Tip Blade
8	01-07-087	Spare Quick Release Button Only
9	01-07-163	Includes item 1, item 3 and item 5 Pre-Assembled

## 07. Warranty Information

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### 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.

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**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: \_\_\_\_\_

## 08. Service and Repair

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This product has no specific calibration period, however periodic safety inspections should be carried out by the operator as specified in this manual, if in any doubt please contact the manufacturer for further information.

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## 09. Decommissioning and Disposal

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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 pipe preparation 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



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## Certificate of Conformity

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

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**GIS/PL2-5:2018 Electrofusion Ancillary Tools**

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**Product: Calder Surprep PT1E  
Rotary Scraping Tool**

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**MARCH 2019**



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