GF Piping Systems

SurPeel™ CA Operation and Maintenance Manual

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GEORG FISCHER PIPING SYSTEMS

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Thank you for selecting Georg Fischer Central Plastics' products. GFCP strives to deliver the best technology and materials combined with rugged, durable construction to provide a productive and reliable connection for your polyethylene system.

To ensure this product lives up to all expectations, it is important to receive proper training from an authorized instructor and to read and comply with this instruction manual.

This manual is intended to provide a general introduction to the tools and steps required for proper use of the product as well as maintenance and inspection recommendations.

GFCP assumes no liability in connection with the data contained herein, nor assumes liability for the operation, safety, or use of third party tools and equipment in conjunction with this system. All data is accepted at the user's risk.

GFCP strongly recommends that its products and fittings be installed only by persons that have received training from an authorized instructor, that have a strong working knowledge of polyethylene and heat fusion, and that have demonstrated their understanding of these requirements by making fusion joints that have been qualified by destructive testing. Persons responsible for the joining of polyethylene pipe for regulated gas applications must qualify according to the requirements of Title 49 Code of Federal Regulations, Part 192.285. Other regulations may also apply depending on the application, local codes, and/or jurisdictional oversight of state and local regulating agencies.

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Safety Notes and Warning Symbols

Safety notes are included in this manual where appropriate, however this manual does not purport to address all of the safety concerns associated with its use. It is the responsibility of the user of this manual to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.

Symbols are used throughout this manual to indicate the potential for danger, injury, and/or material damage, and to alert the user of important information related to the fusion process. Symbols indicate that particular attention should be given and that an action is necessary.

Symbol	Meaning
	Attention! – Important Information! Possible danger, damage, or risk of injury.
	Best Practice – This symbol is used to indicate an instruction that is considered to be a “best practice”. This practice is highly recommended and potentially vital to success.
	Prohibited! – This symbol is used to indicate a practice, material, tool, or action that is specifically prohibited in conjunction with instructions in this manual.

- ⚠ Electrofusion fittings and fusion equipment are not to be considered as “explosion proof”.
- ⚠ Caution should be exercised when working with generators and other electrical power sources.
- ⚠ Tools may have sharp edges. Use with care to avoid injury.
- ⚠ Tools should be in good working order and inspected before use for wear and/or damage. Damaged or worn tools should not be used until repaired or replaced.

These instructions pertain solely to the operation of the subject product. These instructions must be followed carefully. Observe all safety precautions prescribed by your company, the pipeline owner, and those prescribed by equipment manufacturers whose equipment may be used in conjunction with the subject product(s).

⚠ Failure to observe these procedures may cause personal injury and/or property damage. Each Operator must be properly trained in the use of this product or equipment prior to conducting and performing the following steps in a live natural gas application.

General Information

The SurPeel™ CA (Controlled Advancing) electrofusion peeler is designed to uniformly remove the outer oxidation layer from PE tubing as part of the electrofusion pipe preparation process. The peeler removes a controlled amount of tubing surface thickness to expose virgin un-oxidized PE material that is suitable for heat fusion.

The peeler design includes:

- Threaded internal drive mechanism that advances the peeler and blades along the length of the tubing.
- Pivoting spring-loaded cutting blades.
- Anodized aluminum body.

⚠ Peelers are supplied with a protective case. Peelers should be stored in the case for protection against dirt, debris, and damage when not in use.

⚠ Inspect peeler for dirt, debris, oils, or other possible contaminants that can interfere with fusion quality before each use. Clean if necessary with an alcohol wipe. Pay particular attention to debris that may be trapped in the knurled surface of the drive mandrel end as it can become dislodged during peeling and contaminate the peeled fusion area.

⚠ Replace any worn or damaged parts prior to use. See maintenance section of this manual for further details.

Sizes:

½ CTS, ¾ CTS, 1 CTS, 1 ¼ CTS, 2 CTS

½ IPS, ¾ IPS, 1 IPS, 1 ¼ IPS, 2 IPS

Operating Instructions

Step 1: Measure and mark the tubing end for proper peel length. Hold the peeler next to the tubing as shown so that the centerline on the peeler body is aligned with the tubing end. Make a mark on the tubing at the end of peeler body. This indicates the peel length has been reached for GFCP fittings when the tubing enters the peeler to this mark.

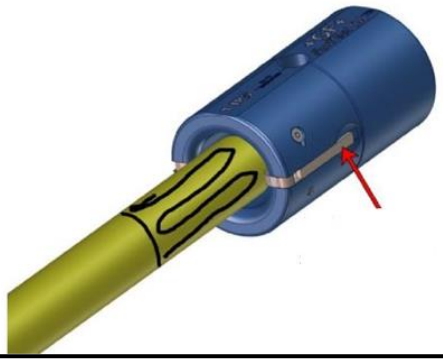
Mark the tubing surface entirely from the peel length mark to the end of the tubing. This marking is used after peeling as a visual indicator that the marks have been completely removed by peeling and no areas have been missed.

Note: For other manufacturer's fittings, use the minimum stab depth mark for that fitting design as the minimum peel length.

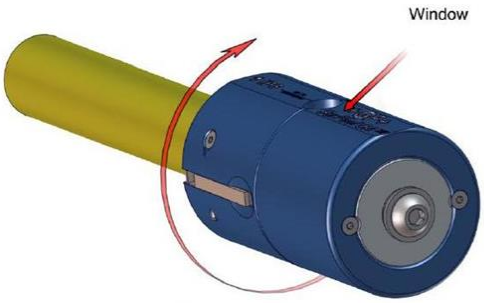
Step 2: Push drive mandrel into peeler body until it bottoms out. The drive mandrel end should be protruding from peeler so that it can be inserted into the tubing end.

Insert drive mandrel into tubing end.
Turn clockwise until blade levers contact tubing end.

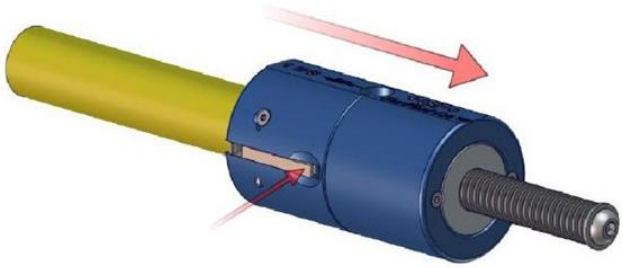
Depress blade levers and turn peeler slightly (clockwise) until blades are just over tubing ends and then release blade levers.



Step 3: Rotate peeler clockwise using only enough forward force to keep the drive mandrel inserted into the tubing. The drive mandrel controls the feed rate of the blades along the tubing length. Continue to rotate the peeler until the peel length mark made in Step 2 reaches the peeler body entrance. The tubing end should also be visible in the sight window.



Step 4: Once the tubing is visible in the sight window and the peel length mark has been reached, depress blade levers and pull the peeler from the tubing end. The drive mandrel will reset to its starting point during this action.



Inspect tubing surface for complete removal of marks made in Step 1. If any markings or original tubing surface remains, repeat Steps 1 through 4.
NOTE: If the pipeline owner's O&M requirements include that peeled pipe surfaces should be cleaned with alcohol after peeling use care that only the peeled area is wiped with a clean alcohol wipe.

- ⊘ Do not allow wipe to contact areas of the tubing that have not been peeled.

Care and Maintenance

Inspection before each use:

- Check part surfaces for foreign materials. Build-up of marker residue on the inside of the peeler body may occur over time. Clean any loose materials or marker build-up away with a new alcohol wipe.

As with any tool, it must be taken care of if it is expected to perform for an extended period of time. This tool has several items that can be replaced to extend the service life. The information below shows the proper method of removal and replacement for the items that might wear in this tool.

- Caution: DO NOT lubricate peeler with oils or other lubricants that can be transferred to scraped tubing surfaces. Lubricants will contaminate the pipe surfaces and cause fusion failures. If necessary disassemble and clean any sticking parts to regain free movement.

- Inspect cutting blades for nicks, or other damage. Replace blades when visibly damaged or when they become dull and do not remove a ribbon of plastic tubing surface consistently. A properly cutting blade will remove a plastic ribbon thickness of approximately .006" to .009" when measured with a caliper.

Pivoting Blade Removal:

1. Remove Set Screw

2. Push Dowel up through hole

3. Remove Blade and Spring

Note: Peeler has two blades. Replacement is the reverse of removal.

Replacement Parts

Description	BOM ID	Qty	Part #
Blade, SurPeel, .5CTS thru 1 CTS	1	2	360065406
Blade, SurPeel, 1 IPS thru 2 IPS	1	2	360065407
Spring	2	2	360020092
Screw	3	2	360040351
1/8 Dowel Pin	4	2	360040320
Replacement Kit		1	360065323