

Swagelok® Custom Solutions and Product Modification Policy

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Swagelok® Custom Solutions and Product Modification Policy

Scope

This Custom Solutions and Product Modification Policy ensures a consistent customer experience around the world while enhancing the safety of distributor and customer associates.

Custom Solutions and product modifications must be performed by a qualified Swagelok distributor associate who has passed all of the required Swagelok certification and recertification programs. If the opportunity is beyond the ability or capacity of the distributor or has a significant amount of financial risk, the opportunity should be sent to one of the Global Technology Centers. Outsourcing of services is only to be considered when all other alternatives have been exhausted.

Custom Solutions, product modification, or disassembly by a distributor or their customer is prohibited except as outlined in this policy. All product modifications requested by end-customers should be explicitly spelled out on each end-customer's purchase order. Any purchase order received by a distributor should be referred to Swagelok for evaluation and handling of the requested modifications. If any part of a Custom Solution assembly or product modification to be performed by the distributor is not addressed in this policy, advanced written approval must be obtained from Swagelok through the ProFITS program.

Any distributor request for an exception or deviation from this policy must be requested through the ProFITS system. ProFITS approvals may be granted on a case by case basis, or as blanket approvals for a period of time defined in the approval. Blanket approvals are granted for the same assembly or part number provided to the same customer. A request for a blanket approval must be specified in the ProFITS request.

All fluid system components must be compatible with the system media, including compatibility of materials, component design, and component end connections. For help determining suitability of components, contact the appropriate Swagelok technical service group.

Distributors are required to follow the Swagelok identity system for promoting and marking assemblies as outlined in the document Brand Guidelines located on iSwagelok.

NOTE:

1. Local laws and regulations, for example CE and SEP products covered by the European Pressure Equipment Directive (PED) and TUV type approvals (TAP), may supersede the permissions listed in the modification guide.
2. Distributors must preserve the integrity of end-item part numbers of modified products. (Example: Installing a knurled nut and nylon ferrules on a SS-400-1-4 changes the end item part number to SS-400-1-4KN.)

Definitions

Assemblies – Defined as either a Basic Assembly or System Assembly

Basic Assembly – A simple combination of Swagelok and/or 3rd party products that can be depicted in a simple sketch or described in a short written statement. Basic Assemblies as defined in this policy are viewed and treated as products.

Examples of Basic Assemblies include:

- Regulators with gauges or bottle connectors
- Actuators on valves (in accordance with CP-16 Automated Valve Assembly)
- Hose assemblies with approved Swagelok end connections

System Assembly – Any assembly beyond a Basic Assembly. These often require a P&ID (Process & Instrumentation Diagram) to define. Examples of System Assemblies include:

- Any assembly where layout is important for functionality (i.e. drainage, dead legs, positioning of relief valves/check valves, etc.).
- All assemblies that contain non-Swagelok pressure containing components >3750 psig (260 bar) would be considered systems.
- Assemblies that contain logic, programming, or have combinations of electrical, pneumatic, and/or hydraulic components.

Competitive Products – Products that are any of the following:

- Manufactured products that directly compete in the same market place with Swagelok (i.e. tube fittings, ball valves, etc.)
- Branded products that directly compete in the same market place with Swagelok (i.e. gauges, flow meters, tubing, etc.).
- Products with only minor differentiating “features and benefits” that are largely the same as a Swagelok product. Examples of this would be:
 - A regulator with alternative end connections
 - Twin-ferrule tube fitting end connections that are not manufactured by Swagelok.

Products are still considered Competitive Products even if they are free issued from the customer.

Design – When Swagelok defines the system to achieve the result based on customer specified parameters (such as inlet and outlet conditions), or when the customer is asking the distributor to take ownership of a fully engineered solution. Examples of Design include:

- Responding to technical questions that are not defined in Swagelok literature or official correspondence.
- Performing engineering calculations (flow, stress, sizing, etc.).
- Selection of 3rd party product that is pressure containing, wetted, or functional.

All design activities will be completed by Swagelok or Swagelok Technology Centers.

Hazardous Media – Defined through its Material Safety Data Sheets (MSDS) that list HMIS ratings of 3 or higher for health, flammability, and/or physical hazard.

Installation – A product or system is connected into the existing infrastructure of a customer's facility. Examples of Installation include:

- Connecting a system into the facility bulk gas distribution system, compressor, or attaching media bottles to a system.
- Completing electrical connections that provide power or links to a control system such as a distributed control system.
- Coupling a subsystem into an existing and functioning larger system at a customer facility.

Installation is not permitted without ProFITS approval.

Non-Competitive Products - Catalog products for which Swagelok does not have a direct replacement. Examples of Non-Competitive Products are:

- 3rd party products (Swagelok does not offer the type of product).
- Swagelok offers a similar product but the Swagelok equivalent does not meet the pressure requirement of the application (pressure rating would typically be 10% higher than the Swagelok equivalent).
- Swagelok offers a similar product but the Swagelok equivalent does not meet the temperature rating of the application (Typically 50°F (21°C) higher or lower than the Swagelok equivalent).
- Swagelok offers a similar product but the Swagelok equivalent does not meet the flow requirement of the application (C_v would typically be more than 20% higher than the closest Swagelok equivalent).
- Swagelok offers a similar product but the Swagelok equivalent is not compatible with the system media
- Any product where Swagelok Technical Service or a Custom Solutions applications engineer confirms that a Swagelok equivalent will not work.

On-site Assembly or Repairs – When fabrication of a system is completed at a customer site and does not include hook-up into the customer's facility. Examples of On-site Assembly or Repairs:

- Coupling two or more systems at a customer location that were built in a distributor or Swagelok facility.
- Completing any element (bending, swaging, etc.) of a system at the customer's location.
- Connecting a subsystem into a new, nonfunctional larger system at a customer facility.

On-site Assembly or Repairs are not permitted without ProFITS approval.

Out of Territory – The final shipping or use destination is outside of a distributor's service area.

Shipment of these assemblies fall within one of the following categories:

Basic Assemblies - ProFITS approval is not required for fulfillment. Records, including customer approval drawings, bill of material, etc. shall be retained by the selling distributor.

System Assemblies - To ensure the proper information and service for our customers for custom solutions systems, fulfillment of these assemblies will be completed by a regional Technology Center.

Original Equipment Manufacturers (OEMs) - If the customer within the service area is an OEM that incorporates a System Assembly into its equipment, adds meaningful value (i.e. at least 35% of the total) to the final assembly prior to shipment, and maintains functional and operational responsibility for the total System Assembly. ProFITS approval is not required.

Any Basic Assembly or System Assembly that is shipped Out of Territory is subject to the Service Commission Policy on iSwagelok.

Any Out of Territory System Assembly opportunity requires prior approval through ProFITS.

Oxygen Assembly - Is either a Basic Assembly or System Assembly that has the media of oxygen that is >23.5% concentration (enriched), at any pressure.

Service - A 3rd party vendor that is being considered for a non-catalog item.

Specially Cleaned - Any product having cleanliness requirements that exceed SC-10 (i.e. SC-11, SC-06, SC-01, etc.)

Working Pressure - Is the pressure rating based on the application of the System Assembly or Basic Assembly, not the maximum allowable pressure rating of the individual components in the assembly.

Custom Solutions Activities not Requiring ProFITS

Distributors are permitted to complete any of the following without ProFITS approval:

1. Work covered by the current Swagelok distributor certification programs. This is predicated on the distributor associate passing the initial and/or recertification requirements for each program used.
2. A Basic Assembly or System Assembly using Swagelok, and Non-Competitive Products as necessary, where the Working Pressure will not exceed 3750 psig (260 bar), provided that the customer has approved in writing the product selection (manufacturer and part number) through a bill of material on a standardized drawing template.
3. A Basic Assembly or System Assembly using all Swagelok double-ferrule end connections, provided the products are rated for the application per the Swagelok catalog.
4. Assembly testing where the test pressure will not exceed 1000 psig (70 bar), provided it follows CP-19 Bubble Testing, CP-20 Pressure Change / Measurement Leak Testing, or CP-21 Mass Spectrometer Helium Leak Testing.
 - Distributors who do not hold certifications for testing are permitted to perform bubble leak and pressure decay tests with testing pressures up to 150 psig (10 bar).

5. Outsourcing of bubble leak, helium leak, hydrostatic, and pressure decay testing may be completed provided all of the following are met:
 - The customer has defined the testing protocol.
 - The customer has approved the testing vendor and their process.
 - The testing does not exceed the pressure rating of any of the components.
 - The testing is only intended to validate the assembly process.
 - The customer is informed and agrees that neither Swagelok nor the distributorship can verify that the product was tested to the protocol defined and that this is not covered by the Swagelok Warranty (testing company warranty would apply).
6. Purchase of non-pressure containing 3rd party custom machined or custom fabricated components (i.e. brackets and panels) provided all of the following are met:
 - It follows SQS-D requirements for sourcing and inspection.
 - The fabrication does not change or alter a Swagelok or 3rd party component.

These non-pressure containing products also do not need to be customer specified.

7. A Basic Assembly or System Assembly that has a media with an HMIS rating of 2 or less for any one of the categories of health, flammability, or physical hazard, provided that the assembly is tested prior to shipment in accordance to CP-19 Bubble Testing, CP-20 Pressure Change / Measurement Leak Testing, or CP-21 Mass Spectrometer Helium Leak Testing.
8. A Basic Assembly or System Assembly that has a Hazardous Media HMIS rating of 3 for any one of the categories of health, flammability, or physical hazard, provided that the assembly is tested prior to shipment in accordance to CP-21 Mass Spectrometer Helium Leak Testing.
9. A Basic Assembly or System Assembly that has <23.5% concentration of oxygen.
10. Convert a customer specified P&ID to assembly layout drawings for customer review and approval in writing. Design of System Assemblies or product selection by distributor personnel is prohibited.
11. Assist customers in the selection of Swagelok part numbers, showing products that are available.
12. Substitute any Competitive Product with a Swagelok product.
13. Review material options that are available.
14. Present Swagelok published technical information, such as compatibility information to help customers make decisions.
15. Stock and promote Basic Assemblies provided they follow the Swagelok brand guidelines located on iSwagelok.

Custom Solutions Activities Requiring ProFITS

We understand that there will be opportunities that arise, that may require an exception to this policy. The Global Technology Centers can provide additional capability and capacity support

when these instances occur. If the opportunity is still desired to be fulfilled locally, any exception to this policy must be addressed through the ProFITS system. ProFITS approvals may be granted on a case by case basis, or as blanket approvals for a 1 year term. Blanket approvals are granted for the same assembly or part number, being provided to the same customer. Please specify in your ProFITS request if you are requesting blanket approval.

Distributors are required to submit and receive ProFITS approval for ANY ONE of the following circumstances below:

1. The scope of work extends beyond the established limits of any of the Swagelok distributor certification programs.
2. Any Basic Assembly or System Assembly where the Working Pressure exceeds 3750 psig (260 bar).
3. Use of any Competitive Products, whether purchased by the distributor or free issued from the customer.
4. Any Oxygen Assembly (i.e. >23.5% concentration of oxygen).
5. A Basic Assembly or System Assembly that has a Hazardous Media HMIS rating of 4 for any one of the categories of health, flammability, or physical hazard.
6. Any in-house test when pressures exceed 1000 psig (70 bar), or exceed the pressure rating of any component in the assembly.
7. The cleaning of any component, Basic Assembly, or System Assembly.
8. Any Service requested.
 - Note: Even if approved via ProFITS, the customer must approve the vendor and the procedure in writing.
9. Any On-site Assembly or Repairs or Installation. For these requests, fill out and attach to the ProFITS the on-site assessment check list (see appendix).
 - Note: Even if the ProFITS is approved to complete the On-site Assembly or Repairs or Installation work, a distributor associate may not be included under Swagelok's insurance. Please refer to the Product Liability Insurance Coverage Policy for more information.
10. Setting of any check valves or relief valves outside the limitations of CP-10 Proportional Relief Valve Setting.
11. Any System Assembly opportunities that will be shipped Out of Territory.
12. Basic Assembly or System Assembly where the Swagelok content is less than 35% by dollar value (please reference the Out of Territory definition as it applies to Original Equipment Manufacturers, OEMs, for further clarification). The content price includes the Swagelok product price and assembly labor.
13. System Assembly opportunity (single unit) that exceeds a customer price of \$100,000 USD.
14. Electrical connections outside of CP-25 Basic Electrical Program. This includes any electrical connections that require any code approvals such as ATEX.

- Note: Assembling the fluid system connections on electromechanical devices such as a pilot valve is not considered an electrical connection, as long as the electrical leads are connected by the customer.
15. There are special customer requirements that Swagelok will need to support. Examples of these are:
- Modification to the Swagelok warranty.
 - Liability or consequential damage discussions.
 - Ownership of design or exclusivity.
 - Service agreements.
 - Special payment terms, such as liquidated damages (i.e. late delivery charges).
 - Brand or commercial risks such as long term availability of replacement parts for key customers or alliance accounts.
 - SCPC projects or opportunities that could result in significant business loss for your distributorship, another distributorship, or Swagelok in general.
16. The customer specifies compliance/certifications to external standards that are not part of the distributor quality system.
Examples of these are:
- ASTM, ANSI, NACE, Nuclear requirements, PPAP, traceability beyond standard processes, copy exact change control, or any special documentation.
17. Purchase of equipment to support custom solutions operations. Examples of this would be hose test cell, CNC tube benders, etc. Hand tools and simple measuring devices do not require approval.

Custom Solutions Quote and Order Requirements

Custom Solutions Quotes

The distributor must include the full text of the Swagelok Limited Lifetime Warranty on any basic or system assembly quote provided to a customer. You can contact Swagelok or visit the Swagelok website at www.swagelok.com for the latest Swagelok product warranty information. The actual text of the warranty is required in the quote. Referencing the customer to go to the www.swagelok.com website themselves is not acceptable. A single warranty statement for a multiple line quote is sufficient. NO OTHER WARRANTIES APPLY AND IN NO EVENT SHALL SELLER OR MANUFACTURER BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES. The United Nations Convention on Contracts for the Sale of International Goods is specifically excluded.

As a reminder, the distributor bears the financial risk associated with non-Swagelok product sales including returns, purchaser defaults, incorrect orders, and product warranty issues and recalls. Please refer to Distributors' Product Liability Insurance Coverage policy for further clarification.

Custom Solutions Orders

When receiving an order, the distributor should be careful not to accept terms and conditions or obligations that have unwarranted risks or items that only Swagelok Company can fulfill on.

Basic Assemblies – There are no customer approval requirements for basic assemblies.

System Assemblies – The customer must approve drawings and bills of materials for systems in writing using the Swagelok standardized drawing template (copy attached in appendix). At the customer's discretion the drawing can be in a P&ID or assembly format. The customer approval is intended to be a good faith review of the technical requirements (including all major products ⁽¹⁾ being used in the system), and confirm the system meets the customer's expectations. Customer supplied drawings that include complete bills of materials with P&ID, or layout are considered acceptable in lieu of customer signatures.

¹Components such as fittings, connectors, and brackets do not need to be listed in the bill of materials.

Any exceptions to the above quote and order requirements policy must be requested through the ProFITS approval process.

Approved Distributor Product Modification Activities

Fitting Products

Note: The below approvals are for standard cleaned products only (SC-10), anything defined as Specially Cleaned requires ProFITS approval.

1. Change metal ferrules to nylon or TFE on Swagelok tube fitting end connections.
2. Change regular nut to knurled nut on Swagelok tube fittings when metal ferrules are being replaced by nylon or TFE ferrules.
3. Change steel front ferrules to stainless steel front ferrules in steel Swagelok tube fitting end connections.
4. Change traditional stainless steel back ferrules to advanced geometry stainless steel back ferrules in carbon steel Swagelok tube fitting end connections.
5. Change traditional stainless steel back ferrules to advanced geometry stainless steel back ferrules in stainless steel Swagelok tube fitting end connections.
6. All other fitting modifications allowed are covered under *CP-09 Tube Fitting Pre-Installation Certification*.

Hose Products

1. Assemble Swagelok push-on multi-purpose hose to Swagelok end connections in accordance with established Swagelok-authorized procedures.
2. Install protective covers on hose assemblies.
3. All other hose modifications allowed are covered under *CP-01 Thermoplastic Hose Assembly* and *CP-05 Corflex Series Hose Assembly* in place.

Tubing

Note: The below approvals are for standard cleaned products only (SC-10), anything defined as Specially Cleaned requires ProFITS approval.

1. Cutting and deburring of tubing is permissible. After cutting and deburring, the tube may be cleaned to the extent of removing particulates from the OD and ID.

2. Capping the ends, bagging, and /or placing tubing into an appropriate shipping enclosure.
3. All other tube modifications allowed are covered under *CP-04 Tube Bending*

Valve Products

Note: The below approvals are for standard cleaned products only (SC-10), anything defined as Specially Cleaned requires ProFITS approval.

1. Assemble deflector caps to check valves.
2. Change handles on valves that do not require loosening of any pressure containing connections.
3. Install springs into R3A and R4 relief valves (pressure not set).
4. Install manual override kits to R3A, R4, RL3, and RL4 relief valves.
5. Change vinyl sleeves on 60 series ball valves.
6. Assemble color rings to Swagelok sample cylinders.
7. Assemble carrying handles to Swagelok sample cylinders.
8. Assemble mounting brackets and steam trace blocks to Swagelok manifolds.
9. Install spring return pins on toggle valves. Note: cannot be assembled in conjunction with stainless steel handles and the handle positioner option.
10. Install toggle valve positioners.
11. All other valve modifications allowed are covered under *CP-10 Proportional Relief Valve Setting*, *CP-16 Automated Ball Valve Assembly*.

Tools and Equipment

Modifications permitted only when performed by Swagelok trained distributor associates or under specific direction of the technical service group of Swagelok.

1. Disassembly and reassembly of weld heads and fixturing for purpose of cleaning or repairing in accordance with the troubleshooting chart in Swagelok Welding System user's manual.
2. Disassembly and reassembly of Swagelok welding system components for the purpose of troubleshooting as outlined in the Swagelok Welding System user's manual.
3. Upgrade of software or firmware for the Swagelok Welding System power supplies and other Swagelok electronic products containing software or firmware.

Maintenance and repair are permitted only by Swagelok certified distributorships with an authorized Swagelok Service Center to offer repair services for products listed:

1. Swagelok Orbital Welding System – Swagelok authorized maintenance, repair, calibration, and upgrade services as described in the Swagelok Service Manual (SSM).
2. Swagelok pre-swaging equipment (AHSU, MHSU, HVSU) – Swagelok authorized maintenance and repair services as described in the Swagelok Service Manual (SSM).
3. Swagelok tube bending equipment - Swagelok authorized maintenance and repair services as described in the Swagelok Service Manual (SSM).

4. Swagelok tube cutting and tube facing equipment - Swagelok authorized maintenance and repair services as described in the Swagelok Service Manual (SSM).

Appendix (Forms)

1. On Site Assessment
2. Standard Sales Drawing Template
3. Guidelines for Reporting of Custom Solutions Revenue

On Site Assessment Form:

Rev 1 – January 16, 2014

1. What is the scope of the work you will be doing on site (complete)? Of this work, what will you be doing that is outside the scope of certification programs? Who will be doing this work?
2. Will the work involve any hook-up to any energy source (i.e. electrical, pneumatic etc.)
3. Are there any unions or contractors that may be affected by the work?
4. Will any safety equipment need to be worn while the work is being performed? Any other safety concerns? Any safety training required?
5. Who is responsible for repairing the equipment if it fails to work properly once put into service?
6. Please provide any drawings or other pertinent documents.
7. Will the work on site need to be incorporated into any existing equipment?
8. What is the work area like where the work will be done?
9. Will any equipment need to be locked out and tagged out while you are doing the work. If so, who will be responsible for this?
10. What system medias will you be exposed to? Will there be any need to decontaminate prior to doing this work? If so, who will do this and how?
11. Does the assembly need to be tested? Who will do the testing? How? If there is leakage, who is responsible to resolve?
12. How long do you estimate will be the total time on site to complete this work?

Standard Sales Drawing Template

CASE NO.	THIS ASSEMBLY DESIGN, FUNCTION, AND APPLICATION ARE THE EXPRESS SOLE RESPONSIBILITY OF THE PURCHASER. PURCHASER IS SOLELY RESPONSIBLE FOR THE FIT AND FUNCTION OF ANY COMPONENTS. PURCHASER AGREES TO HOLD HARMLESS AND INDEMNIFY SWAGELOK FROM AND AGAINST ANY CLAIMS ARISING FROM OR RELATING TO ANY OF THE FOREGOING.	PART NO.
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BILL OF MATERIAL			
ITEM	PART NUMBER	DESCRIPTION	QTY
1			
2			
3			
4			
5			
6			

CONCEPT DRAWING 	DRAWING NOT TO SCALE. - DIMENSIONS ARE INCHES NEXT TO (MILLIMETERS) - DRAWING IS SUBJECT TO CHANGE WITHOUT NOTICE.	CUSTOMER APPROVAL <table style="width: 100%;"> <tr> <td style="width: 50%;">APPROVED BY</td> <td style="width: 50%;">BY/DATE:</td> </tr> <tr> <td style="height: 40px;"></td> <td></td> </tr> </table>	APPROVED BY	BY/DATE:			DRAWN BY mmonds APPROVED BY	TITLE
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Guidelines for Reporting of Custom Solutions Revenue

Below we have a definition of a Custom Solution that will guide distributors, technology centers, and company associates in recording revenue accurately.

Definition of a Custom Solution:

Assembling, welding, or fabricating products that customer(s) could otherwise complete on their own, but for which they recognize the value of such service offered by the local distributor, a Swagelok Technology Center, or an approved third-party contractor. Specified products can be produced, sourced, or supplied by Swagelok Company and/or the customer.

Examples of a Custom Solution:

- Assembling two or more products that the customer would otherwise assemble on their own
 - Can include Swagelok or third-party products
 - Can be assembled by the distributor, a Swagelok Technology Center, or an approved third-party contractor
- Tubing
 - Cutting and assembly
 - Bending only
 - Cutting, de-burring, and facing to specific customer lengths for welding or assembly
- Swaging Swagelok tube fittings onto individual tube lengths
- Welding end products together to form a sub-assembly
- Approved MPC assemblies
- Gas sticks
- Insulated hose assemblies
- Ancillary charges that support a Custom Solution
- Postponement activities performed by the distributor - only if listed below (all others excluded):
 - Assembling regulators with threaded gauges (or other added components)
 - Valve actuator assemblies built at the distributorship
 - Individual hose assemblies completed by a distributor or Technology Center
- Assemblies - completed by any Swagelok Technology Center
- Design services – completed by an approved Swagelok Technology Center
- Regulator rebuilds – completed by an approved Swagelok Technology Center

Examples that are not a Custom Solution:

- Kitting - individual components combined or organized into a package without any other value add service
- Revenue from third-party components passed through for sale
- Setting of check or relief valves
- Fitting re-assembly
- Ferrule change-out
- Training, rental, or leasing revenue
- Cutting of tubing for shipping purposes, no additional value-add
- CAD drawings
- Assembly of nuts and ferrules to a tube adapter or port connector
- Special packaging or special labeling
- Valve handle changes
- Assembly of stop-collars to Swagelok tube fittings
- Individual hose assemblies completed by the Swagelok Factory