

## XP98 Special Product Cleaning

### Scope

SSP Fittings Company guidelines used to ensure compliance with product cleanliness requirements for wetted components per ASTM G93 Level C and CGA G4.1. Application of the document is limited to wetted system components. ASTM G93 Level C specifies that nonvolatile residues must be removed to a level of 6 mg/ft<sup>2</sup> (66 mg/m<sup>2</sup>) or less. This document must be used in conjunction with product catalogs, technical bulletins, and reports.

### Requirements

Assembly, lubrication, testing, and packaging shall be according to the practices described in this document.

- Prior to processing, all components shall meet the requirements of SSP Standard Product Cleaning .
- Nonhydrocarbon lubricants shall be used to lubricate wetted surfaces in assembled products.
- Finished products shall be individually packaged in a sealed plastic bag and labeled:

#### **Special Cleaning (XP98)**

ASTM G93 Standard Practice for Cleaning Methods and Cleanliness Levels for Material and Equipment Used in Oxygen-Enriched Environments, Level C / CGA G4.1 Cleaning Equipment for Oxygen Service

#### **Do not open until ready for installation.**

- Finish products shall be boxed for protection from contamination and damage during shipment and storage.
- Handles, actuators, tags, and other nonwetted accessories will be cleaned and lubricated according to the standard product catalog requirements.

### Cleaning Process

Multistep processes ensure that components are thoroughly cleaned, rinsed, drained, and dried. These processes include:

- Heated aqueous cleaning with cleaning agents selected in accordance with ASTM G127.
- Ultrasonic agitation techniques based on ASTM G131.
- Distilled water rinsing for complete removal of cleaning agent.
- Noncombustive drying for the removal of rinse waters from components without depositing residues.
- Visual inspection performed with the aid of bright illumination or ultraviolet light as indicated in ASTM G93 or CGA-G4.1.

### Assembly and Testing

- Cleaned components are protected from damage and contamination.
- Cleaned components are assembled in a clean, well lighted work area. Assembly work areas, equipment, and methods are designed and maintained to protect cleaned components from contamination.
- Nonhydrocarbon lubricant is applied to threads, mating surfaces, O-rings, and seals to prevent galling, reduce friction, and promote proper sealing.
- Assembled products are tested using clean, dry nitrogen or helium.



## Packaging and Identification

- Clean caps and plugs are used as needed to protect threads and other critical surfaces from damage and to maintain cleanliness.
- Finished products are packaged to protect them from contamination and damage.
  - Each product is packaged individually in a sealed plastic bag.
  - Bagged products are packed in boxes with suitable protective material.
  - Boxes are identified with the part number and quantity.

## Referenced Documents

- ASTM G93, Practice for Cleaning Methods and Cleanliness Levels for Material and Equipment Used in Oxygen- Enriched Environments
- CGA G-4.1 (2009), Cleaning Equipment for Oxygen Service