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ChemPharma Flow Solutions

DEPA®

Cast Metal, Plastic, Stainless Steel, High-Pressure,
Drum, Dual and Powder Pumps
Accessories and Automation

ELRO®

Series IP, XP, M300, GP20/10 EX, GUP3-1,5 Pumps
Accessories and Automation



Pneumatic Quarter-Turn Actuators

RESISTOFLEX®

Plastic Lined Piping Products and Teflon®-Lined Hose



High-Purity Hoses of Teflon® and Silicone



Plastic Lined Pipe, Fittings, and Valves



HC4 Diaphragm Valves and Industrial Diaphragm Valves



Sleeved Plug, Fully Lined, Butterfly and Metal Ball Valves
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STRATUS™ Silicone Hose Lined with Teflon®



**One Hose,
One Solution
for the Life Sciences**

CRANE

ChemPharma Flow Solutions

STRATUS™

Teflon® PTFE-Lined Silicone Hose



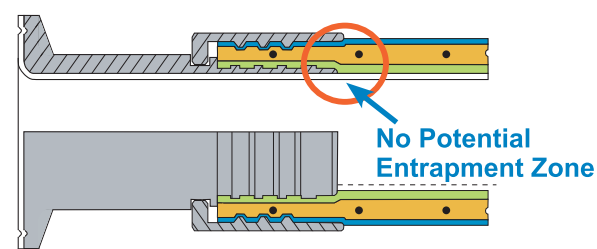
Approved Materials Throughout —

USP Class VI <88>
USP MEM Elution <87>
21 CFR 177.1550 (Teflon®)
21 CFR 177.2600 (Silicone)
ISO 10993

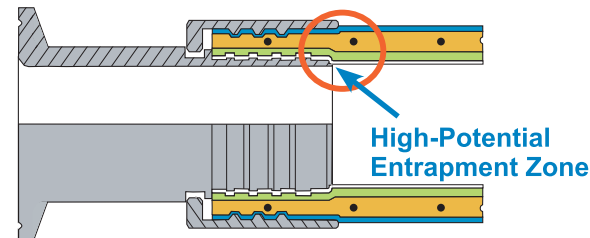
Features —

Flare Through Design - Zero Entrapment
Excellent Drainability - Better Product Recovery
Extended Life Cycle - Reduced Ownership Cost
One Wetted Part (Teflon®) - Universal SIP, CIP and Product Compatibility

Flare-Through Hose



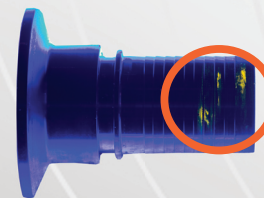
Crimped End Hose



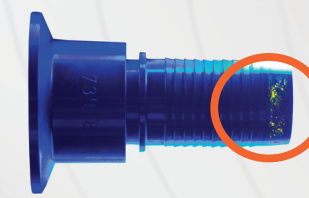
Key Comparisons

HIDDEN CONTAMINATION

Silicone Hose 1
Crimped End



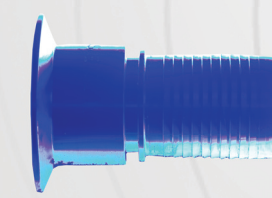
Silicone Hose 2
Crimped End



PTFE-Lined
Rubber-Covered Hose
Crimped End



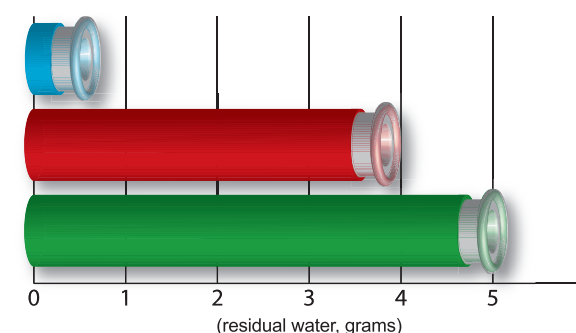
STRATUS™
Teflon® PTFE-Lined
Silicone Hose



Could your crimped fitting hose be a source of contamination?

1" dia. x 24" long hoses were tested per ASTM F1545 steam/cold water cycling. After the steam/cold water test, the hoses were filled with a riboflavin/water mixture, pressurized, and drained. These photographs, taken under UV light, show the amounts of riboflavin that remained trapped underneath the crimped fitting area that cannot be sterilized.

RESIDUAL PRODUCT AFTER DRAINING

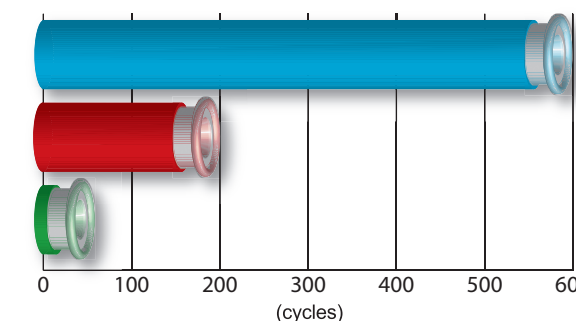


How much product remains in your crimped fitting hose?

1" dia. x 24" long hoses with hygienic clamp fittings were filled with water and then drained at a 0.6 degree slope angle. Stratus had the least amount of liquid remaining inside the hose.

STRATUS™ FEP-Lined Rubber Covered Hose w/Sanitary Crimp Fittings Wire-Reinforced Silicone Hose w/Sanitary Crimp Fittings

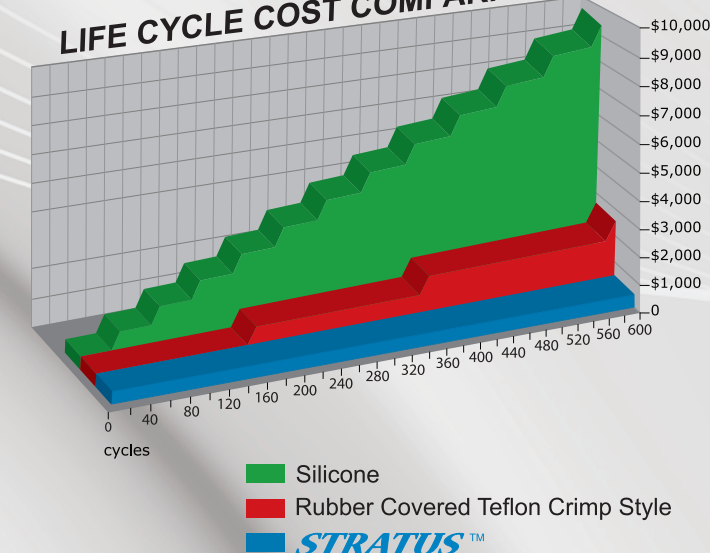
STEAM SANITATION CYCLING



What life do you expect from your crimped fitting hose?

1" dia. x 24" long hoses were tested per ASTM F1545 steam/cold water cycling. Stratus hose never leaked under these conditions, and was still performing long after the others failed.

LIFE CYCLE COST COMPARISON



How much are your crimped fitting hoses costing you?

Life cycle data based on steam testing per ASTM F1545 steam/cold water cycling shows Stratus performing with the longest life of the three competing hoses. Each "step" on the graph is a replaced hose. The dollar values were calculated by adding the market price of a representative hose and \$500 per changeout for work order and labor costs. At the time this brochure was printed, Stratus reached 600 cycles without failure and was still running.

STRATUS™ General Hose Data

Size (in.)	Actual I.D. (in.)	O.D. (in.)	Hose Working Pressure (70 °F - 280 °F)	Fitting Working Pressure (70 °F - 280 °F)	Vacuum Rating (70 °F - 280 °F)	Minimum Bend Radius (in.)	Force to Bend (lbs.*)
1/2	0.370	0.895	475 psig	200 psig	Full	2.375	6.0
3/4	0.620	1.145	450 psig	200 psig	Full	2.937	7.0
1	0.870	1.410	425 psig	200 psig	Full	4.156	9.5
1 1/2	1.370	1.895	400 psig	200 psig	Full	7.062	10.0
2	1.870	2.395	350 psig	200 psig	Full	11.812	8.7

* Hose bent 90° over a mandrel at the minimum bend radius