



Sanitary  
flow  
equipment



Quality  
System  
Certified  
ISO 9001

RE-FLEX Operating and Maintenance.doc  
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# **Sterile re-usable Stainless Steel Fittings for APSM 4-Ply Mandrel-Wrapped Silicone Hose**

## **Assembly and Operation manual**

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**Please read all of this information.**

If you are unsure about any aspect of this information please ask



## 1.0 WARNING

These reusable sanitary fittings are available with components of various materials, and they should be used only in service recommended in the product catalogue.

Misapplication of the product may result in injuries or property damage.

A selection of reusable sanitary fitting components of the proper material consistent with the particular performance requirement, it is important for proper application.

Examples of the misapplication or misuse of RE-FLEX Reusable Sanitary Fittings includes use in an application in which the pressure/temperature rating is exceeded or failure to maintain the reusable sanitary fitting as recommended.

If reusable fitting exhibits any indication of leakage, do not operate. Isolate reusable sanitary fitting and either repair or replace.

## 1.1 Safety

Dangers through non-observance of the safety precautions : The non-observance of the safety precautions can be result in the endangering if lives as well as the environment and the reusable sanitary fitting.

The no-observance of the safety precautions can lead to the loss of all claims for damages.

Safety awareness at work : Attention must be paid to the safety precautions in these operating instruction, the current national regulations concerning the prevention of accidents as well as any labor-, company- and safety regulations of the operating company.

if hot or cold components of the reusable fitting are a source of danger and must be secured against contact by the operating company.

Work on reusable fitting should only be carried out when the reusable fitting is removed from service.

Reusable fittings, which have been exposed to harmful media, must be decontaminated.

On completion of work, all safety and protective equipment must immediately be fitted again or reactivated.

Reconstruction or modification of the reusable fitting is only admissible after consultation with the manufacturer. Genuine spare parts and accessories authorized by the manufacturer serve to maintain safety. The use of other parts is not recommended and can annul all liability for the consequences.

## 1.2 Qualifications and training of personnel

The personnel responsible for operation, maintenance, inspection and assembly must be appropriately qualified; the operating company must precisely define the responsibilities, competence and supervision of the personnel. If the personnel lack the necessary knowledge, they are to be trained and instructed. If required, this can be carried out by the manufacturer/supplier of the reusable fitting by order of the operating company. Furthermore, the operating company is to ensure that the contents of the operating instructions have been fully understood by the personnel.

## 1.3 Warranty

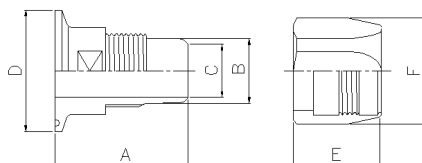
This product is warranted for a period of 180 days from the date of delivery to purchaser to be free from defects of material and workmanship when used in a normal manner, and excludes all implied warranties, including those of merchantability and providing periodic inspection is conducted to maintain Good Manufacturing practice. The liability of the warrantor excludes consequential damage to persons or property of all types and is limited, at warrantor's option, to replace or repair or refund, as applicable.

## 2.0 Overall dimensions

RE-FLEX Sterile Reusable Fittings are designed exclusively for APSM 4-Ply Mandrel-Wrapped Silicone Hose to provide a safe and dependable system for process flow in high purity applications.

They feature an internal-flush style that meets FDA and 3-A specifications and can be mounted in any direction.

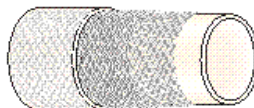
Standard Sterile Reusable Fittings are available in tube sizes from 1/2" to 1"1/2 and pressure ratings up to 150 psig.



Stainless Steel AISI 316L RE-USABLE Re-Flex for APSM 4-Ply Mandrel-Wrapped Silicone hose only									
Internal code	SIZE	ID Hose	OD Hose	A	B	C	D	E	F
RTC1/2"-FLEX 22,50	1/2"	12,70	23,36	55,00	13,50	9,40	25,20	32,50	Exag. 24
RTC3/4"-FLEX 28,90	3/4"	19,05	29,71	61,50	20,17	15,75	25,20	32,50	Exag. 32
RTC1"-FLEX 35,20	1"	25,40	36,06	55,00	26,20	22,10	50,40	32,50	Exag. 41
RTC1"1/2"-FLEX 47,90	1"1/2	38,10	48,76	60,00	39,50	34,80	50,40	37,00	Exag. 55

## APSM 4-PLY MANDREL-WRAPPED SILICONE HOSE

PLATINUM-CURED



### SPECIFICATIONS

Product Number	I.D.		O.D.		Working Pressure		Burst Pressure*		Minimum Bend Radius (in.)	Weight per	
	(in.)	(mm)	(in.)	(mm)	at 70°F (21.1°C) (PSI)	(Bar)	at 70°F (21.1°C) (PSI)	(Bar)		Foot	/ Meter
APSM-P-0500	.500	12.70	.920	23.36	150	10.3	600	41.4	2.5	.281	.418
APSM-P-0750	.750	19.05	1.17	29.71	150	10.3	600	41.4	4.5	.359	.534
APSM-P-1000	1.000	25.40	1.42	36.06	150	10.3	600	41.4	9.0	.438	.652
APSM-P-1500	1.500	38.10	1.92	48.76	150	10.3	600	41.4	12.0	.685	1.019
APSM-P-2000	2.000	50.80	2.42	61.46	125	8.6	500	34.5	CF	.875	1.302
APSM-P-2500	2.500	63.50	2.92	74.16	125	8.6	500	34.5	CF	1.050	1.562
APSM-P-3000	3.000	76.20	3.42	86.86	100	6.9	400	27.6	CF	1.230	1.830
APSM-P-4000	4.000	101.60	4.42	112.26	100	6.9	400	27.6	CF	CF	CF

Wall dimensions for all sizes and styles: 21"±5.94mm

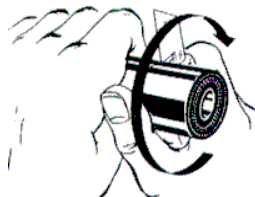
CF = Consult Factory

\*For every 100°F of temperature over 70°F, reduce the burst pressure by 5%.

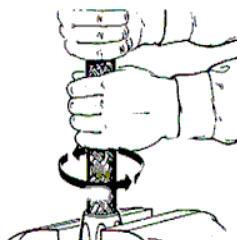
**NOTE:** When products are used as part of an assembly, the pressure ratings of fittings may be less than hose pressure ratings above. Please consult your sales representative.

### 3.0 Assembly

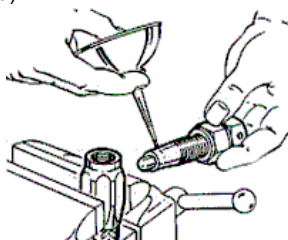
1. Measure Hose. Using a vernier calliper, measure hose I.D. and O.D. Refer to the Dimension Table for Hose measurements. **Caution!** If hose measurements are not within tolerance specifications, **STOP**- do not use hose.
2. Cut the silicone hose right angled to length. Put a small chamfer on the I.D.



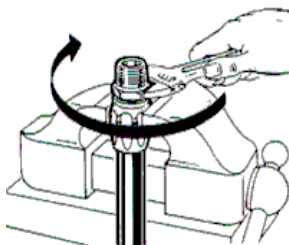
3. Clamp the hose sleeve in a bench vice. Twist the silicone hose into the hose sleeve. **Caution!** Assure that the silicone hose is dry when inserting into the hose sleeve.



4. Lubricate the I.D. of the silicone hose and the outside of the hose stem, including the threads, with ample silicone grease. (White grease FDA approved)



5. Twist the stem into the silicone hose until the threaded part is about to catch on the thread on the sleeve.  
Screw the stem clockwise into the sleeve until they are completely screwed together. **DO NOT TIGHTEN.**  
Disassemble in reverse sequence.



6. Clean and inspect the hose assembly. Clamp the assembly by the sleeve in a bench vices, tighten the stem, and sleeve firmly together.
7. All new assemblies need to be tested before they are installed.  
Test: Apply a test pressure of 60% of the burst pressure of the hose. Maintain the pressure for a minimum of 1 minute, but for a maximum of 5 minutes. While the assembly is under test pressure, check for leaks, bubbles etc.

## 4.0 Storage

The silicone hose should not be exposed to direct sunlight for extended periods. Procedures for storing large quantities of silicone hose:

- Maintain room temperature at 70°F / 21°C
- To avoid kinking, do not roll the tubing beyond its natural bend radius

## 5.0 Maintenance

Periodic maintenance and inspection of your Sterile Reusable Fittings is recommended to insure the assembly is in proper working order. The frequency of maintenance will vary with the application.

The end user must determine the appropriate maintenance schedule based upon their experience with the specific application. Realistic maintenance schedules can only be determined with full knowledge of the service and application involved.

**WARNING** Do not proceed with any maintenance if the Sterile Reusable Fittings assembly is still at operating pressure or temperature. Relieve the unit of pressure, allow it to reach ambient temperature and purge it of all fluids. Failure to do so could result in personal injury or property damage.

Routine Maintenance Activities Check:

**for signs of leaks at gaskets or process connections**

Regularly check your Sterile Reusable Fitting assembly for evidence of leaks at the gasket surface. If leaks are detected, remove the unit from service immediately. Once the assembly has reached, ambient pressure and temperature verify the assembly is firmly seated against the sanitary connections.

**for signs of internal or external corrosion.**

Evidence of either internal or external corrosion is an indication that the proper material of construction may not have been chosen for your application. The end user is responsible for determining the material that is compatible with both the process fluid and the surrounding environment. If corrosion is detected the Sterile Reusable Fittings should be removed from service and the material compatibility investigated by the end user.

## 6.0 Assistance

For assistance with your Reusable Fittings, contact your local representative or the factory. In order to answer your questions quickly and completely please have the following information available :

- Model Number, with your reference order number / Systems reference number
- Serial Number
- Date the unit was placed in service
- Process media
- Operating pressure
- Operating temperature
- Brief description of problem(s)

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К-ТЕП — Силиконовые гибкие трубы

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### Замечания

*Условия поставки DDP склад г. Киев*

#### Заметки

Время поставки рассчитано согласно дате предложения и изменяется в зависимости от даты подтверждения заказа.

Помещая заказ, Покупатель принимает предложение и все спецификации, характеристики и условия, указанные в данном документе.

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