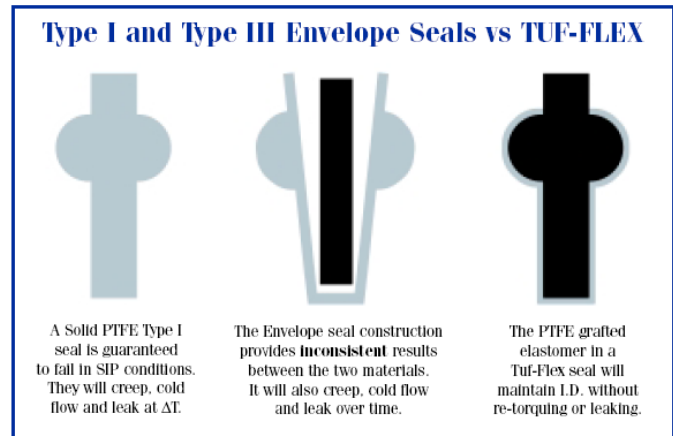


TUF-FLEX®



Introducing a technologically advanced new hygienic seal, TUF-FLEX®. This revolutionary new seal from Rubber Fab Technologies Group is the world's only unitized seal, setting new standards for purity, performance and flexibility. Designed to meet critical requirements in pharmaceutical, biotechnology, ultrapure water, WFI (water-for-injection) WFI (water-for-injection) and difficult food and beverage processing, **Tuf-Flex outperforms other hygienic seals while eliminating costly process interruptions.**

Performance Based on a Revolutionary Composition

A Tuf-Flex hygienic seal's contact surface is a layer of PTFE grafted to an EPDM rubber inner core. This **totally bonded construction** provides an **exceptionally pure and incredibly flexible seal**. By grafting the elastomer with a layer of PTFE, **Tuf-Flex will behave like an elastomer but will prevent the product contamination, service interruptions and clean-up costs** associated with elastomer seals.

Performance With Exceptional Purity

Because its elastomer core is protected by a unitized layer of PTFE, Tuf-Flex hygienic seals will not **release elastomer extractables** or **particulates** totally **eliminating spalling**. The result is an **exceptionally maintained sanitary tubing I.D. with no I.D. invasiveness or system contamination.**

Achieve higher performance under SIP/CIP Conditions

- Uniting the flexibility of an elastomer with the chemical resistance of PTFE
- Seats perfectly
- Superior resistance to cold flow and creep
- Minimal thermal expansion
- Outstanding service life
- Exceptional flexibility
- Excellent **chemical resistance**
- Leak-proof performance
- Outstanding service life

Tuf-Flex Is Ultra-Pure

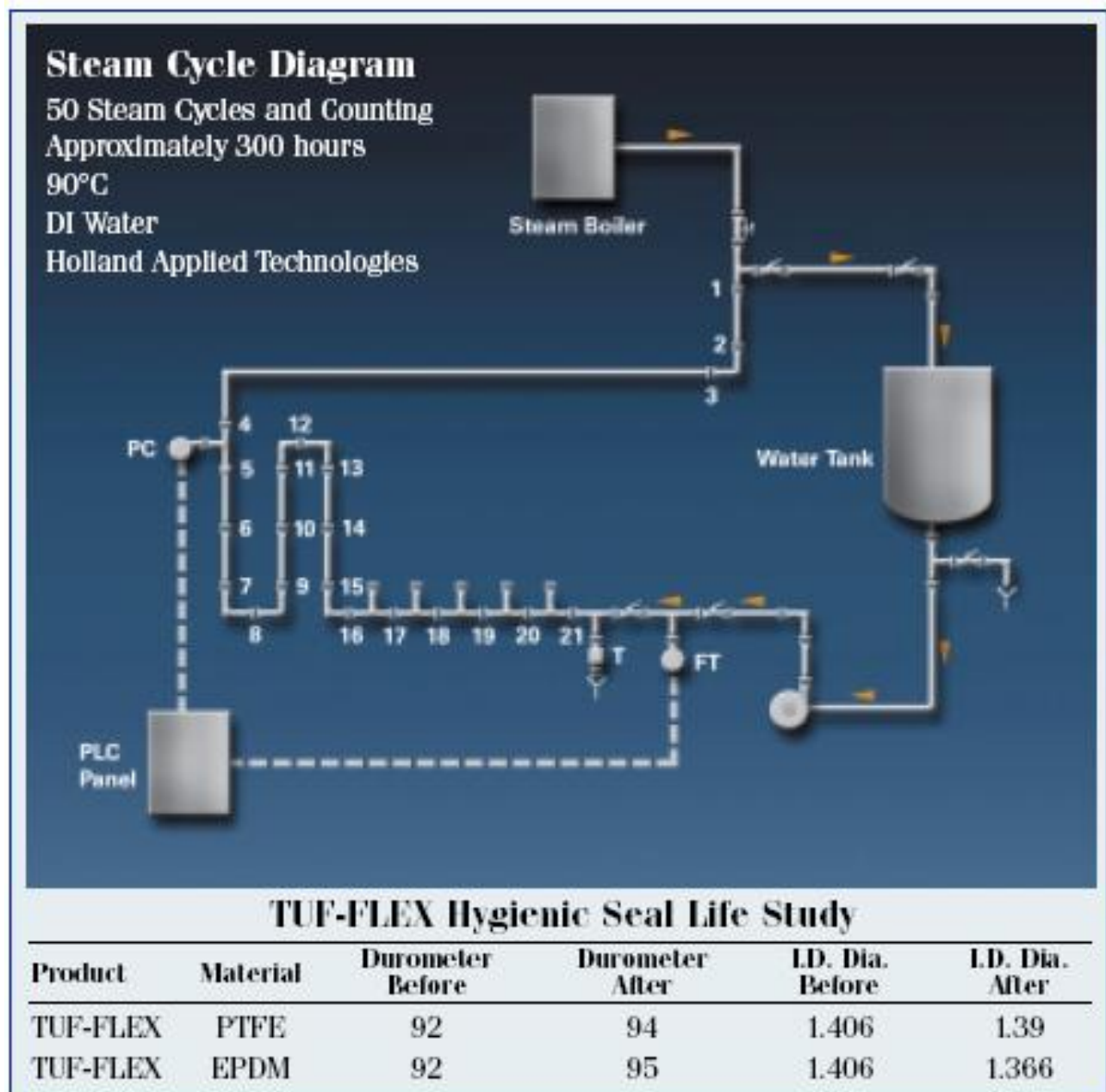
- No extractables, TOCs or particulates to contaminate product stream
- No-pigment
- No gasket I.D. invasion
- Exceptional cleanability response
- Non-stick surfaces
- Maintains seal @ 30 in./lbs.
- Temperature Range: -20°F to 400°F

Tuf-Flex Prevents Process Interruptions

- Perfect cleanability
- No re-torquing
- Up to 100 SIP cycles guaranteed

TUF-FLEX® meets stringent standards

- U.S. Pharmacopeia Class VI Certification
- Cytotoxicity Criteria
- Title 21 CFR 177.2600 and Title CFR 177.1550
- USDA and 3-A Sanitary Standards
- Current Good Manufacturing Practices (CGMP)
- ASME-BPE Standards
- Animal Derived Ingredient Free



TUF-FLEX Hygienic Seal

Item	Unit	Spec.	"A" Type	"B" Type
Normal Condition Test				
Hardness	HS (JIS A)	80±5	82	77
Tensile Strength	M Fa	9.8 Min.	18.5	16.7
Elongation	%	150 Min.	160	310
Aging Test				
Hardness Change	POINTS	+5 Max.	+1	+2
Tensile Strength Change	%	-15 Max.	-3.2	-7.2
Elongation Change	%	-25 Max.	-11.6	-19.4
Compression Set Test				
Compression Set	%	+25 Max.	+7	+13

1/2"	A42MPGR-TF-050-E
3/4"	A42MPGR-TF-075-E
1"	A40MPGR-TF-100-E
1-1/2"	A40MPGR-TF-150-E
2"	A40MPGR-TF-200-E
2-1/2"	A40MPGR-TF-250-E
3"	A40MPGR-TF-300-E
4"	A40MPGR-TF-400-E