



# ZANITARY® Series

The ZANITARY® Series is an advanced sanitary disk designed for the biotechnology, pharmaceutical and food processing industries. The new design effortlessly fits between standard sanitary ferrules.

## Features

- Ideal for high purity and corrosion resistant service that is required from the Life Science Industry.
- Designed for non-fragmentation
- Solid metal robust design provides greater protection for low pressure rated disks
- Operating ratios up to 95% of the marked burst pressure.
- For pressures under 40 psig (2.76 barg) see table.
- Plus Testing available for a true engineering 95% operating ratio with  $\pm 5\%$  performance tolerance
- Passivation finish to reduce the possibility of contamination
- Standard surface finish 4 - 20 Ra  $\mu\text{in}$  (0.1 - 0.5 Ra  $\mu\text{m}$ )
- Disks suitable for Clean In Place (CIP) and Steam In Place (SIP)
- Withstands full vacuum without the need of a separate vacuum support
- Suitable for liquid, gas, or two-phase applications
- Damage ratio of 1.0 or less\*
- Expected cycle life of this new disk technology is 30,000 with full vacuum cycling and approximately 5,000,000 without full vacuum
- Disks available in 316L and Hastelloy
- Suitable for use with NovAseptic flange mountings
- Unique design is Patent Pending
- No dents or crevices to the process side of the disk
- Ferrule design compliant and certified to 3-A Sanitary Standard
- Sizes from 1"(25mm) through 4"(100mm)
- Cleaned for O<sub>2</sub> service available
- Nitrogen bagging available
- 3-dimensional stainless steel tag permanently laser engraved with disk information in accordance to ASME and PED
- No paint or enamel used on tagging to ensure non-contamination of the sterile environment.
- Electropolishing available meeting ASME BPE SF4
- CRN registered for use in Canada
- Complies ASME BPE Standard
- ASME UD, CE (PED) and TÜV compliance available

Hastelloy – TM Haynes International  
NovAseptic – TM Millipore Corporation

\*Hastelloy and Liner equipped disks have a damage ratio of 1.5 or less.



## Options

- ZAN-L\*** A process side PFA Teflon liner provides extra protection from corrosion or viscous process build-up (PEEK liner required for 3A compliance).
- ZAN-BI\*** Equipped with ZOOK's Integral Burst Indicator.
- ZAN95** Factory tested to 100% of the low end of the tolerance for optimized performance in demanding applications.
- ZANEP** Electropolishing available in accordance to ASME BPE SF4

Note: \*The maximum temperature rating of rupture disks supplied with liners and BI's is lower than the base disk material.

## Ferrule Standard and NovAseptic Flanges

The ZANITARY® can be installed into the Tri-Clover, BS, DIN, and ISO Standard ferrules along with the NA tank connectors as per the following:

- Tri-Clover
- ASME BPE
- BS4825-3 1991
- ISO 2852-1993 (Second Edition 1883-06-15)
- DIN 32676-2001-02

## ZANITARY® Series Specifications

### Minimum and Maximum Pressure Ratings - psig (barg) @ 72°F (22°C)

Disk Size	Minimum Burst Pressure (psig/barg)				Maximum Burst Pressure (psig/barg)	MNFA in <sup>2</sup> (mm <sup>2</sup> )	Tri-Clover Ferrule Dimensions in (mm)	
	316L	Hastelloy C276	ZAN-L*	ZAN-BI			Ferrule OD	Tube ID
1"	35	65	85	+5 psig (+0.34 barg) of base material	300	0.43	1.98	0.87
25 mm	2.41	4.48	5.86		20.7	277	50.4	22.1
1-1/2"	15	25	45		250	1.08	1.98	1.37
40 mm	1.03	1.72	3.10		17.24	696	50.4	34.8
2"	11	25	35		180	2.05	2.52	1.87
50 mm	0.76	1.72	2.41		12.41	1322	63.9	47.5
2-1/2"	11	25	35		145	3.25	3.05	2.37
64 mm	0.76	1.72	2.41		10	2096	77.4	60.2
3"	11	20	30		120	4.71	3.58	2.87
80 mm	0.76	1.38	2.07		8.27	3038	90.9	72.9
4"	11	20	30		80	8.49	4.68	3.83
100 mm	0.76	1.38	2.07		5.52	5477	118.9	97.4
Max. Temp.	Dependant on the gasket material used							

#### Notes:

- \* For PFA Liner, contact ZOOK for PEEK minimums
- For materials, sizes, burst ratings and temperatures not shown, contact ZOOK
- Contact ZOOK for higher temperatures

### Manufacturing Design Range & Total Performance Tolerance

	ASME					PED			
	Burst Pressure (psig)		Manufacturing Design Range	Burst Tolerance	Operating Ratio*	Burst Pressure (barg)		Total Tolerance	
	Minimum	Maximum				Minimum	Maximum		
Premium	11.0	<15	0%	±1.3 psig	100%	0.690	<1.034	±0.090 barg	100%
Standard	11.0	<15	0%	±1.3 psig	95%	0.690	<1.034	±0.090 barg	95%
Premium	15.0	<26	0%	±2.0 psig	100%	1.034	<1.793	±0.138 barg	100%
Standard	15.0	<26	0%	±2.0 psig	95%	1.034	<1.793	±0.138 barg	95%
Premium	26.0	<40	0%	±2.0 psig	100%	1.793	<2.758	±0.138 barg	100%
Standard	26.0	<40	0%	±2.0 psig	95%	1.793	<2.758	±0.138 barg	95%
Premium	40	Max	0%	±5 %	100%	2.758	Max	±5%	100%
Standard	40	Max	0%	±5 %	95%	2.758	Max	±5%	95%

\* Operating ratio from minimum of burst tolerance

#### Notes:

- 0% manufacturing range might not be available in all materials
- Burst tolerances are the maximum expected variation from the disk's marked burst pressure

### Gaskets (other materials on request)

Standard Gasket Materials (Stocked)			Temperature Range	
Materials	Cured	Colour	Min	Max
Viton	Bisphenol	Black	0° F (-18° C)	400° F (204° C)
Buna	Sulfur		-20° F (-29° C)	230° F (110° C)
EPDM	Peroxide		-67° F (-55° C)	347° F (175° C)
PTFE	-	White	-20 F (-29° C)	500° F (260° C)
Other Available Gasket Materials			Temperature Range	
Materials	Cured	Colour	Min	Max
Silicone	Peroxide	Red	-67° F (-55° C)	400° F (204° C)
		White		
		Black		
		Clear		
	Platinum	Clear		
Viton	Bisphenol	White	0° F (-18° C)	400° F (204° C)
Buna	Sulfur		-20 F (-29° C)	230° F (110° C)
EPDM	Peroxide		-67° F (-55° C)	347° F (175° C)

### Certified Flow Resistance Factors

Disk Type	K <sub>n</sub> (liquid)	K <sub>g</sub> (Gas)
ZANITARY	4.08	4.08

Teflon-TM The Chemours Company  
Tri-clamp/Tri-clover – TM Alfa Laval  
Torque-Rite – TM Rubber Fab

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