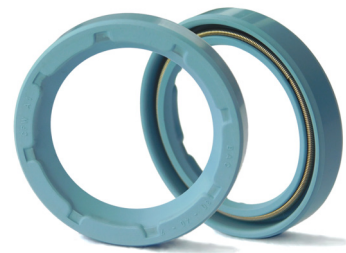


NEW GENERATION OF SIMMERRINGS FOR THE PROCESS INDUSTRY



The Simmerring® is flexible, highly loadable and reliable in its operation. Freudenberg Sealing Technologies has now further developed Simmerrings for use in the process industry – composed of materials approved for contact with foods.

Simmerring® 75 Fluoroprene® XP 45

Due to the lack of the required conformity, standard FKM Simmerrings are not suited for contact with foods. But with the development of the 75 Fluoroprene® XP 45, it is now possible to use a conforming material that, in addition, can be attached to metal. In general, seals made of Fluoroprene® XP stand out for their broad resistance. It combines the very good qualities of EPDM materials in polar media (water, acids, lye) with the outstanding performance characteristics of FKM and VMQ varieties in all nonpolar media (greases, oils and hydrocarbons). The material also withstands use in concentrated – and not just diluted – CIP/SIP media. This highly fluorinated material has also been certified in accordance with EG 1935/2004 and is conforming to FDA 21 CFR §177.2600. Thanks to the Simmerring's closed contour on its facing side, supplemented with a stainless steel spring, it is extremely well suited for use in the food and beverage industries.

Simmerring® 70 EPDM 291 and 70 EPDM 335

EPDM seals provide good chemical resistance in hot water, steam, acids and alkaline solutions. They are very well suited for use in all polar media and in CIP/SIP media. CIP media are diluted acids or alkaline solutions with cleaning additives. In SIP media, disinfectants, steam or oxidizing media (e.g. peracetic acid) or polar organic solvents (e.g. acetic acid) are used. EPDM is of limited use in products containing fats or oils. While it can be used well at low temperatures in dairy products with a fat content of up to 70%, it cannot be used in pure fats, oils or non-polar solvents. EPDM contains no plasticizers and other potential extractable ingredients. Thus, the materials EPDM 291 and EPDM 335 can be recommended for use in the manufacture of medical products.

BENEFITS AT GLANCE

- Materials tested in accordance with EU and US law
- Ideal for CIP/SIP applications
- Range of tools in conventional dimensions available
- Adaptable to customer specific needs

Simmerring® Designs



BASL



BA



BAC

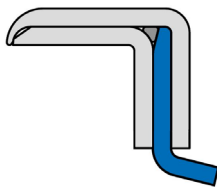
DIMENSION	BASL	BA	BAC
Shaft	7 mm to 950 mm		
Housing	16 mm to 1.000 mm		
Height	5 mm to 13 mm		

COMPOUND	EG 2023/2006	EG 1935/2004	FDA § 177.2600	USP CLASS VI
Fluoroprene® XP 45	+	+	+	
EPDM 335	+	+	+	
EPDM 291	+	+	+	+



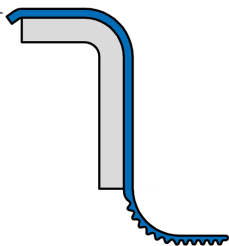
B2PT Reverse

The B2PT is a type of Simmerring® that was developed especially for higher pressures. It can withstand pressure loads of up to 10 bar without its operation being impaired. The housing of the B2PT is made of 1.4571 (V4a) stainless steel. To this point, Simmerrings could not be used for the food industry since their PTFE material has not had the required approvals. In combination with the material Quantum® PTFE F18245, a version suited to the process industry has been successfully developed. Seals made of PTFE exhibit very good resistance to media in hot water, steam, acids and lye. They are very appropriate for use in all polar and nonpolar media. The PTFE used here is conforming to FDA 21 CFR § 177.1550 and certified according to EG 10/2011. Highly wear-resistant and suited for use in temperatures between -5 °C and +150 °C, this type of Simmerring® is superbly suited for use in the food and pharmaceutical industries. In addition, the design of the B2PT can be adapted to the particular application on a customer-specific basis.



Hygienic BlueSeal

This newly developed Simmerring® design is a dead-space-free version of the original Simmerring®. It meets the standards of hygienic design and is thus ideal for use in the food and beverage industry. This hygienic shaft seal ring has a forward-mounted lip: its geometry prevents any back-migration by process media. No dead spaces are formed where bacteria can accumulate and lead to contamination of the processes. Quantum® PTFE F18245 is used here; it conforms to FDA 21 CFR § 177.1550 and EG 10/2011, which are required in the food industry. The hygienic BlueSeal can be used in low-friction applications for pressures below 1 bar; with or without a conveying helix. With adjustments to the geometry, applications with higher pressures are also possible.



BENEFITS AT GLANCE

- Materials tested in accordance with EU and US law
- Hygienic design
- Ideal for CIP/SIP applications
- Several tools in conventional dimensions available
- Available for small lot sizes up to high volume series
- Adaptable to customer specific needs

DIMENSION	B2PT	B2PT REVERSE	B2PT SPLIT
Shaft	10 mm to 140 mm		
Housing	22 mm to 170 mm		
Height	7 mm to 15 mm		

COMPOUND	EG 2023/2006	EG 10/2011	EG 1935/2004	FDA §177.1550
Quantum F18245	+	+	+	+
Quantum F53722	+	+	+	+

The information contained herein is believed to be reliable, but no representation, guarantees or warranties of any kind are made to its accuracy or suitability for any purpose. The information presented herein is based on laboratory testing and does not necessarily indicate end product performance. Full scale testing and end product performance are the responsibility of the user.

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