



Product Information

WSI Sealing Technology for the Engine



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ISO 9001 : 2008

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WSI offers rotary seals for the automotive engine application including crankshaft seals are critical components in the automotive engine system. As nowadays the automotive engine has become more and more subtle, the requirement for better sealing of the crankshaft and camshaft has become one of the major concerns in the design of the engine system. To meet with different requirements WSI offers various seal types and styles, improved high-performance materials, and excellent hydrodynamic helix design.

Product Description

Various Seal Types and Styles for Different Design Consideration of the Engine

Traditional Engine Seal Types TC, TG with Clockwise / Counterclockwise Hydrodynamic Aid (Camshaft, Front and Rear Crankshaft Seals)

Description: Rubber covered, spring loaded sealing lip and dust lip design.

	NO	Element
	1	Rubber O.D
	2	Dust lip
	3	Main sealing lip
	4	
	Media	
	Mineral engine oils	
	Fully Semi-Synthetic engine oils	
	Linear velocity: $\leq 10\text{m/s}$	

BI Type Engine Seals (Camshaft, Front and Rear Crankshaft Seals)

Description: ACM rubber O.D., spring loaded FKM sealing lip and dust lip design.

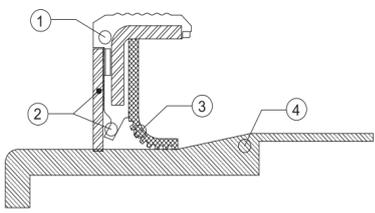
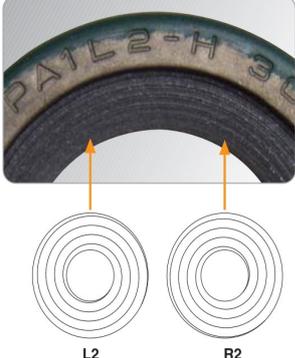
	NO	Element
	1	Rubber O.D
	2	Dust lip
	3	Main sealing lip
	4	
	Media	
	Mineral engine oils	
	Fully Semi-Synthetic engine oils	
	Linear velocity: $\leq 10\text{m/s}$	

Features

- Economy of material
- Dust prevention
- Longer service life

PA series PTFE Lip Type Engine Seals (Camshaft, Front and Rear Crankshaft Seals)

Description: PTFE main lip, and dust lip with felt composed

		NO	Element
		1	Rubber O.D
		2	Dust lip
		3	Main sealing lip
Media Mineral engine oils Fully Semi-Synthetic engine oils Linear velocity: $\leq 10\text{m/s}$		4	

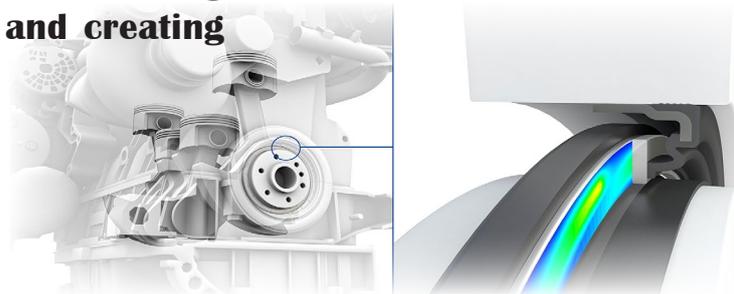
Features

- ▣ High speed capability
- ▣ High temperature capability
- ▣ Self-lubrication
- ▣ Increased dust-proof capability

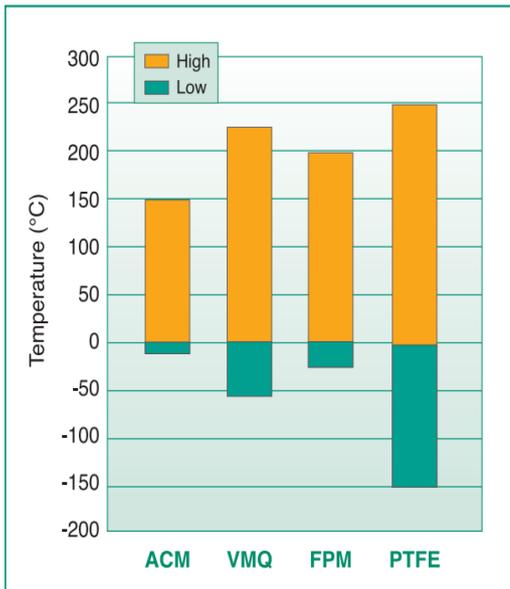
Technical Information

PTFE Material Selection

For engine seals, WSI provides a wide range of materials including ACM, Silicon, FKM and PTFE. Among different materials, PTFE are the trend for future development as nowadays the engine is running at higher speed, generation more heat and creating more friction.



Features of PTFE include



a. High Chemical Resistance

PTFE has good chemical stability. It does not react with strong acids, bases, oxidants or organic solvents.

b. Good Thermal Resistance

The dissolution temperature of PTFE is higher than 400 °C . It has exceptionally wide thermal application range from -150°C to 250°C .

c. Low Friction

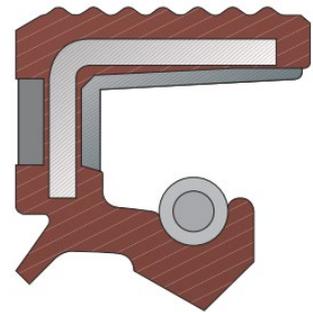
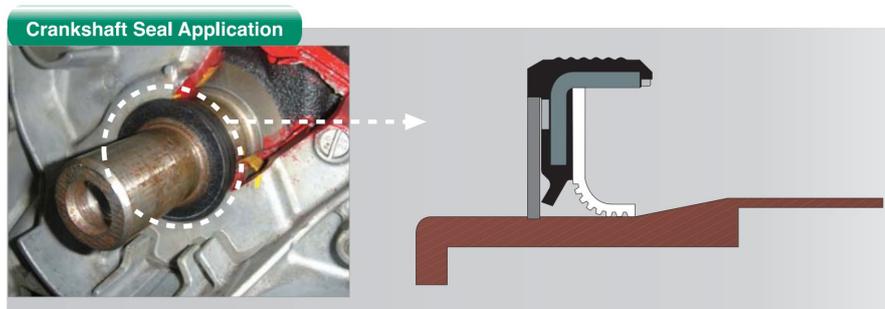
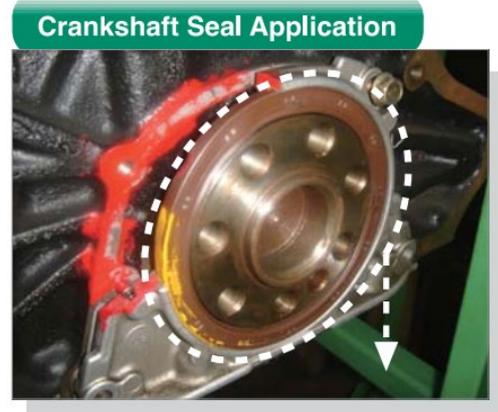
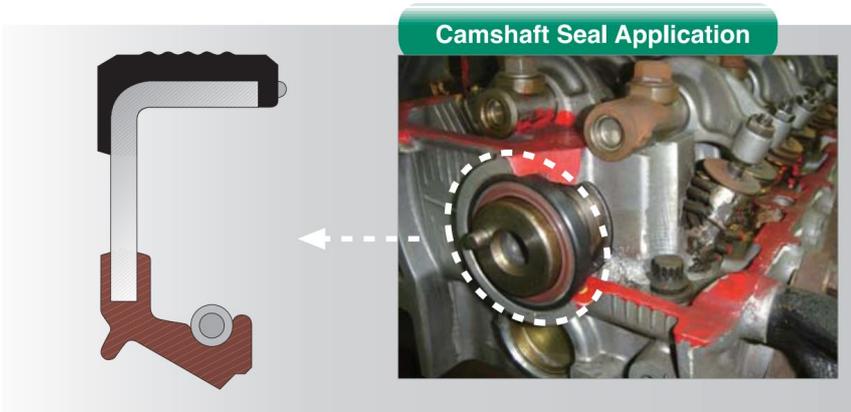
PTFE material has low friction property that results in good wear resistance and less power loss. And it has excellent performance in high-speed application.

d. Excellent Self-Lubricity

PTFE surface has self-lubricity and all solid materials and other materials show little or no adhesion to PTFE. It has good dry-running ability.

Application

WSI engine rotary seals series with better rubber sealing element and excellent quality exhibits high performance in various engine systems. They are suitable for high speed, high temperature, and mist lubrication applications of the engine systems. WSI supplies to both OEM and AF markets with various designs and materials.



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