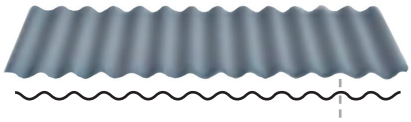
CURVE GASKET

New powertrain modules, with a focus on lightweight designs and reduced material usage, are challenging the limitations of traditional press-in-place (PIP) gaskets.

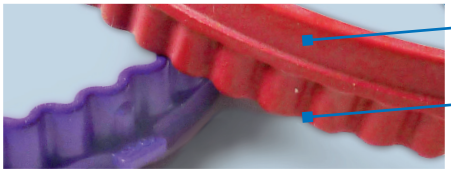
Freudenberg Sealing Technologies' Curve Gasket with greater stability, lower reaction forces and wider compression ranges supports the trend of using thermoplastic engine covers over other materials. The innovative geometry supports engine weight reduction by minimizing the amount of structural plastic required at the cover flange.

The design principles The design principles used to stabilize metallic sheets with corrugated waves are applied to the design of the Curve Gasket. Corrugated waves on the gasket provide stability against buckling.



The patented* Curve Gasket uses a combination of constant and undulated cross-sections to achieve dimensional stability and lower reaction forces, while maintaining the highest standards of sealing performance and durability required for all Freudenberg Sealing Technologies gaskets in extreme conditions.

Combinations of cross-sections are fine tuned to optimize the gasket performance depending on the sealing application.



*Patent pending

VALUES TO THE CUSTOMER

The Curve Gasket helps overcome the design challenges for PIP gaskets, especially for thermoplastic covers.

Curve Gasket meets all the new design requirements for these applications:

- Extends the engineering specifications for PIP gaskets in a groove
- Increases the sealing performance under low compression level
- Provides a better use of material

Curve Gasket allows smaller grooves and achieves perfect sealing while supporting our customers efforts to use less material on their components.

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Sealing Technologies

CURVE GASKET

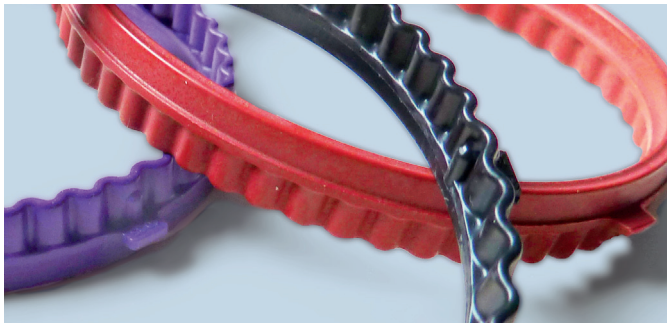
FEATURES AND BENEFITS

The Curve Gasket design comprises at least one portion with a constant section and at least one portion with an undulated, continuously variable section.

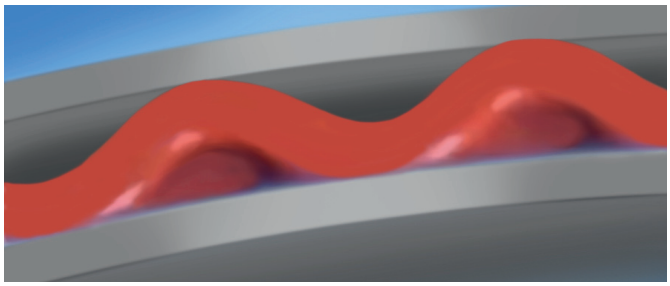
- **Void Volume**—even at elevated temperatures that typically cause gasket expansion issues, the Curve Gasket design prevents the gasket from exceeding the void volume limit.
- **Reaction Forces**—Curve Gasket's unique design produces lower reaction forces even at extreme compression levels (e.g., MMC, Maximum Material Condition) and consequently reduces any potential deformation of the mating components.
- **Compression Set Lifetime**—the Curve Gasket design allows a shift of compression range to a higher level while reducing reaction forces, allowing selection of the most suitable material for a longer lifetime.

The Curve Gasket's undulated cross-section achieves lower reaction forces while maintaining the highest standards of sealing performance and durability required for all Freudenberg Sealing Technologies gaskets in extreme conditions.

The Curve Gasket offers our customers more press-in-place gasket solutions than ever before.



Constant and variable sections achieve dimensional stability



Unique design prevents exceeding the void volume limit even at elevated temperatures