Did you know hoses can leak when there is a wide variation in underhood temperatures? This thermal expansion and contraction loosens hose clamps over time. And when leaks happen, it is usually something critical. But the engineers at Ideal Clamp Products, Inc. have solved this problem by designing a new hybrid smart clamp. Now you can purchase a hose clamp that self-adjusts to the changing underhood environment. It’s a whole new way to think about connections because WaveSeal® clamps:

- Utilize a patented sealing ring technology that self-adjusts automatically as thermal cycling occurs
- Expand or contract as the sealed joint changes, maintaining a constant, steady pressure 360 degrees around the connection
- Produce a sealing o-ring effect that prevents leakage
- Are much lighter, smarter and more compact than T-bolt and Belleville clamps
- Are all stainless steel construction

PROVEN DESIGNS, BILLIONS OF TIMES | IDEALTRIDON.COM
Discover the Holding Power of WaveSeal® Clamps

Thermal cycling, cold flow and temperature fluctuations are among the main reasons leaks occur. The uniquely engineered profile of the IDEAL-TRIDON® WaveSeal® hybrid smart clamp secures hose connections and prevents the unwanted flow of fluid and air. Through its patented hybrid technology, this next generation clamp seals in a steady 360-degree pattern in response to pressure and temperature changes. And with its compact design and lower profile, you get an optimal heavy-duty constant tension clamp without all the bulk.

**ULTRA LIGHTWEIGHT**
Weighs 1/3 of traditional clamps. Buses can save an average 15 lbs. in clamp weight alone, leading to greater fuel efficiency.

**WAVE RING SYSTEMS**
The unique “W” shaped wave ring on the WaveSeal® creates a steady 360 degree seal in response to changing temperatures and during expansion and contraction.

**ALL STAINLESS STEEL CONSTRUCTION**
Provides superior corrosion resistance and durability in harsh environments.

**VARIOUS SIZES AVAILABLE**
Clamps are available in standard sizes with custom sizes available upon request.

**5/16” HEX HEAD**
Captured screw provides trouble free tensioning.

**PATENTED W-SHAPED DESIGN**
Two inward beads form independent lines of higher pressure creating a duplication of sealing reliability. Central annular groove section, between the two beads of pressure, creates an O-ring effect, trapping a portion of the hose component to act as a spring.
How WaveSeal\textsuperscript{360} Clamp Systems Beat Standard Clamps

IDEAL-TRIDON WaveSeal\textsuperscript{360} Clamp Systems were designed in response to the leakage attributed to thermal cycling, plus today’s challenging lighter weight and space constraints.

### Integrated Two-Piece Design

WaveSeal\textsuperscript{360} Clamps are comprised of two main parts, the clamp assembly and the wave ring:

- The wave ring is high quality stainless steel and inside the clamp
- Specifically tempered, thin gauge steel reacts to temperatures
- Becomes a smart clamp on the hose, expanding or contracting with temperatures
- The clamp rides on this ring so pressure is more evenly distributed around the hose

### Tested Tough

Recent leak pressure tests show that WaveSeal\textsuperscript{360} Clamp Systems perform better in thermal cycling than typical constant tension clamps. Further testing revealed WaveSeal\textsuperscript{360} Clamp Systems perform even better over time when compared to other leading brands in the same category.

IDEAL-TRIDON WaveSeal\textsuperscript{360} Clamp Systems are engineered to last longer, and perform better than old-school clamps in the most demanding environments.

### WaveSeal\textsuperscript{360} Ideal-Tridon 36003

- **5/16” Hex Head**
- **Housing**
- **9/16” Band**
- **9/16” Spring Liner**

- **410 Stainless**
- **300 Stainless**
- **300 Stainless**
- **300 Stainless**

#### THE WAVESEAL O-RING EFFECT

- Spring compensation over 360 degrees
- Improved clamp roundness eliminates leak paths at housing juncture
- O-ring effect allows hose to act as an additional spring component
- Outside, chamfered liner edge protects hose component from cutting
A Proven Design Partner

IDEAL-TRIDON® has spent decades engineering the world’s best clamping products, but we also offer customized solutions to fit your demanding applications. We offer a wide range of materials to choose from and can engineer a custom clamping product that meets or exceeds your expectations. In fact, our engineers become your engineers. And they are ready to help you find new ways to build stronger, lighter and more compact clamping assemblies today or for a future project.

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Note: We offer custom assembly clips for easy installation via automation. Available in 1/2” and 10 mm band widths.

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