

# Retaining Rings Roundup

compiled by the Editors at *Fastener Technology International*

**Suppliers have responded to our call for the state-of-the-art in retaining rings and retaining ring technology.**

## More Data Collected & Less Time to Control on Retaining Rings

Alex Bar of DIMAC Srl, Tortona (AL), Italy, says, "Retaining rings are crucial for automotive, aerospace, electrical engineering, precision mechanics, optics and electrical industries applications. Pre-eminently safety elements for shafts, bores or bearings, they demand authentic excellence warranty.

"The production process for these parts involves several figures/tools each cycle. Tool wear must be kept under control to prevent the production of defective parts, a real time monitoring through Statistical Process Control (SPC) is the best way to achieve top quality products, forecasting the progress of production and intervening with the logic of continuous improvement.

"The DIMAC SPC-EVO is the automatic mobile unit designed for SPC control of flat parts like retaining rings, directly in the shopfloor beside the production machinery. It is robust and mobile through its pivoting wheels, extremely user friendly and it doesn't require technical skills to be run. The measurement is automatic—fast and accurate like in the metrology room—performed on multiple parts. DIMAC SPC-EVO allows to control between five and 20 parts in a row, which are fed in by interchangeable blisters filled off-line with the parts to be controlled, introducing important savings in time and costs.

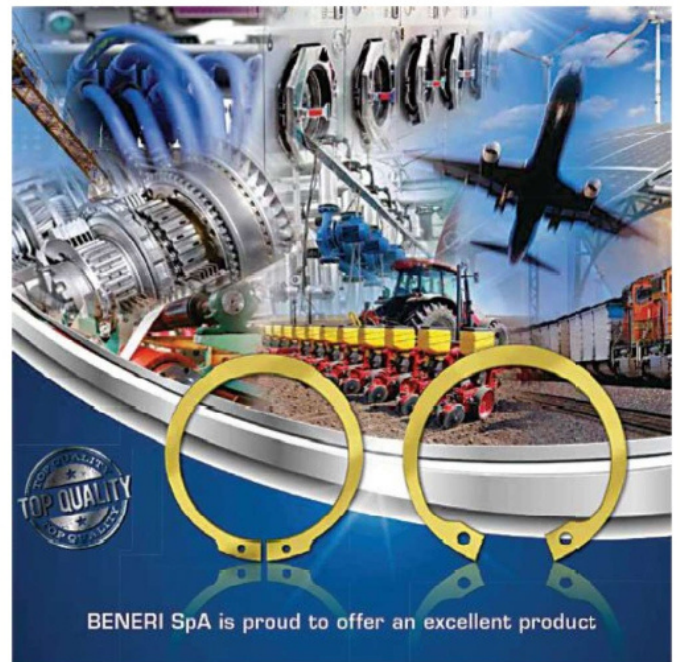


"Parts in the blister are fed into DIMAC SPC-EVO rotary glass table, where SPC dimensional and surface inspection is performed on both faces of each part by high-resolution digital cameras with bi-telecentric optics and dedicated illuminators. Real time display of the measurements trend, defects of aspect and collection of statistic data are shared in real-time with the company ERP system, allowing to detect immediately any deviation from the process trend and to apply the corrective actions." [www.dimacsrl.com](http://www.dimacsrl.com)

## New Range of Retaining Rings – Standard Parts Beyond the Standards

Ronny Limonta, Management Assistant at BENERI SpA, Valmadrera (LC), Italy, says, "BENERI SpA has been world leader in the production of Retaining Rings and Washers complying with DIN and American standards since 1958.

"For decades, the manufacturing of standard parts has been our core business,' says Patrizia Bernabeo, CEO of the company. 'We have always succeed in this and our will is keep going forward in this direction. It is clear that standard norms allow certain tolerances that can't be accepted in some specific applications (robotic or automatic-feeding) and this is the reason for we have invested in a new special line of top quality retaining rings.'



"The new range, called 'automotive', includes external and internal retaining rings, axially mounting, both in metric and inch dimensions. The question is: What makes this range different from standard?

"The regular production process has been deeply improved with several and strict quality checks and selections, with respect to main critical parameters of retaining rings such as diameter, flatness, center distance of the holes and opening,' says Eng. Michele Negri, R&D Manager of the company. 'The result is a standard-sized retaining ring, provided with extremely tight dimensional tolerances, far beyond standards requirements.'

"That's why we say they are Standard parts beyond

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the Standards,' concludes Bernabeo.

"Automotive range by BENERI is available only upon customer request (MOQ/price/delivery) and is highly recommended for assembly with automatic/robotic feeding systems, as it drastically reduces the risk of line stopping." [www.beneri.com](http://www.beneri.com)

## An Engineer's Go-To Guide for Rings and Springs

**Robert Thompson**, Vice President of Marketing at **Smalley**, Lake Zurich, IL, USA, says, "Find your next wave spring, retaining ring and constant section ring in Smalley's newest Catalog and Design Guide release. As the inventor of the edge wound wave spring with over 100 years of manufacturing excellence, Smalley has helped thousands of engineers and professionals create application-specific solutions across every industry. Smalley's Catalog is an essential resource containing easy to follow product charts with detailed specifications to engineering equations and custom product support.

"Everything you need is right here in one complete

guide. We manufacture 12 product types in 400 sizes with over 10,000 parts in stock, making the Smalley Catalog an important to have, easy and convenient way to access product information.



"Catalog features include part specifications on over 10,000 rings and springs; nested Spirawave® Series, Smalley's latest wave spring for high force applications; expanded sizes; custom design configurations and capabilities; engineering design resources and equations; and material types and finishes

"Take your designs to the next level by downloading or requesting your print copy of the Smalley Catalog at [www.smalley.com/resource-center/catalogs](http://www.smalley.com/resource-center/catalogs)."

