Industry Interview

MICRO-MEGA: combining tradition & advanced technology
An interview with Jean-Marie Badoz, sales and marketing director of MICRO-MEGA

There are more than 1,000 manufacturers of products for dental purposes, but only a few of them have contributed to modern development with real innovations. One of them is MICRO-MEGA, founded in the beginning of the 20th century as a simple craft business manufacturing precision tools for the clock industry.

Please tell readers about the company and its history.
Jean-Marie Badoz: Located in Besançon, France, MICRO-MEGA was founded in 1905 by two workers toiling in a small shop. The company first specialized in the watch-making industry, and then adapted its production to modern needs, particularly in the field of dentistry.

In 1907, MICRO-MEGA manufactured its first nerve broaches, which brought the company worldwide recognition. In 1935, MICRO-MEGA decided to diversify by producing handpieces, which until then were the exclusive purview of the German firm KaVo. In the 1960s, in addition to nerve broaches, MICRO-MEGA began manufacturing other root canal instruments, which gave MICRO-MEGA its current reputation of being a leader in endodontics.

MICRO-MEGA innovated in 1965 by creating the GIROMATIC® and related instruments — the GiroFile®, Black® and Heligo-File® — which are used throughout the world today by hundreds of thousands of dentists. From the introduction in 1984 of the Sonic-Air MM 1500, then the Mercator — a versatile instrument that transmitted acoustic waves the length of special endodontic instruments, MICRO-MEGA has continued to be at the cutting edge of canal enlargement using the micro-bursting technique to remove mineralized tissues. Launched in 1996, the HERO 642® used continuously rotating [300 to 600 rpm] nickel-titanium instruments with different tapers to clean and shape root canals. After several years, we felt a need to take the HERO 642 further and improve its performance.

First, while preserving the principle of the instrument with a triple helix cutting edge, we made the pitch length of the blade and the cutting portions varying according to the taper. These modifications increased the flexibility of the instruments and made it possible to offer a six-instrument kit, the HERO Shaper®, files, preparing the apical zone with a 4 taper percent.

More recently, MICRO-MEGA launched R-Endo®, the first method designed for endodontic retreatments. MICRO-MEGA is now proud to announce the launch in the United States of the Revo-S®, a brand new nickel-titanium rotary system.

This new sequence, with only three nickel-titanium files, simplifies even more initial endodontic treatment and optimizes the cleaning action. The asymmetrical cross section of Revo-S facilitates penetration by creating a helical movement, and offers a root canal shaping that is adapted to the biological and ergonomic imperatives. This system promotes a thorough root cleaning, and offers apical finishing that is adapted to the anatomical and ecological criteria of the cavity. This sequence functions according to a cutting, clearance and cleaning cycle, thus allowing an active upward dentinal chips elimination.

In 2005, the company celebrated its 100th anniversary.

Please discuss your products and the advantages they offer.
MICRO-MEGA designs, manufactures and sells products in the dental and medical fields. Its range of products includes endodontics, handpieces and hygiene devices.

The area of endodontics includes root canal instruments, which are small instruments [weight: +/-0.5 g] that are mass-produced and that enable one to clean and shape root canals.


Nickel-titanium, a derivative of orthodontic nitinol, first appeared in 1988 and began to be used in endodontics in the United States in 1992.

Our handpieces and contra-angles are precision instruments with multiple components — on average 50 components with a total weight of approximately 50 g — manufactured in small to medium production runs and used to trigger a rotary or vibration movement of burs and dental instruments.

For rotation, the speed reached by the various instruments varies from 1 to 530,000 rpm.

In the hygiene range: pre-disinfec tors developed since 1990 are larger than traditional MICRO-MEGA products [approximately 8 kg and 600 components]. X-Cid® cleans, pre-disinfects and lubricates handpieces and contra-angles according to the latest hygiene standards.

MICRO-MEGA also meets other demands for derived industrial applications that are in line with its expertise.

Coming back to the dental field, MICRO-MEGA is the only manufacturer to produce by itself, in its headquarters, handpieces and linked root canal instruments. That gives MICRO-MEGA the ability to create systems having perfect ergonomics.

Working with high-rank researchers and professors ensures MICRO-MEGA products fit a clinician’s highest clinical expectation.

What are the company’s inventions and contributions to dentistry?
MICRO-MEGA is committed to the area of research and development, because we know that our strength and future is shaped by focused market-driven R&D initiatives. The research and development department is fitted with equipment that makes extensive detailed research possible.

This department has over the years created and developed products and product enhancements. MICRO-MEGA has, as a result, been able to provide a technical service specific to the dental industry.

MICRO-MEGA is always looking forward to providing dentists with the latest innovations and technologies. For example, we were the first to invent the electric micro motor.

We were also among the first companies to introduce the concept of nickel-titanium in dentistry, first with HERO 642 then HERO Shaper and now with the brand new Revo-S. Our goal is always to offer rapidity, more safety and comprehensive solutions to dentists worldwide.

Our philosophy can be expressed with the four letters MISS: Make It Simple and Safe. That is the way we designed HERO 642 and HERO Shaper, and now Revo-S with only three files. For safety, a blade design that gives great resistance, and an instrument and sequence validated through a clinical investigation according to the laws and standards in force.

“MISS spirit” is ever present with us and thus, we followed this path to creating Revo-S for more simplicity, but still with so much safety. ENDOFLARE was developed not to simplify the sequence, but to make canal access easier.

In spirit has always pushed us to the design of non-breaking files rather than to imagine solutions and means to avoid the rupture due to fragility.

Inherent as the concept of research and development is to manufacturing concerns such as ours, so too is quality assurance. MICRO-MEGA subscribes to the concept of total quality control. Our quality assurance program starts at the customer, runs through all facets of our operations and extends beyond into our suppliers base.

MICRO-MEGA spared no effort to achieve ever-increasing reliability. MICRO-MEGA is certified compliant with ISO 13485 standards and EEC directive 93/42.

What are the company’s future goals?
Our mission is to be innovators in the endodontic field, setting the standards for general dental practitioners worldwide, while providing unmatched technical and scientific expertise to the dental market. MICRO-MEGA’s technical expertise, in addition to the development and manufacturing of its own machines, has put it ahead of the competition.

In 2010, MICRO-MEGA is a traditional company with performance at its best, backed by a 100 years of experience, warranties, service and technical support.

Our will is to supply clinicians with instruments, but more importantly to provide them with high-performance operational methods that are optimized and give predictable clinical results.

Therefore, we will continue to offer easier and faster endo solutions coupled with enhancements in the fields of hygiene. With its merger with SciCan, a Canadian company specializing in infection control devices, the group is one of the 10 largest dental equipment manufacturers in the world of innovative products for the dental and medical markets.

Today I am proud to announce the name of our new group, Sanavis Group, and I am also proud to announce the creation of MICRO-MEGA USA, which you may contact toll free at (855) 563-6872.