

FREQUENTLY ASKED QUESTIONS

HARMONY™ ERGONOMIC SCALERS & CURETTES DESIGNED WITH TRUEFIT™ TECHNOLOGY

1. What is TrueFit™ Technology?

TrueFit™ Technology is an advanced sensor-based technology system, which has measured over 2.8 million data points for pinch force in the finger and pressure applied to the tooth when scaling¹. HuFriedyGroup pioneered TrueFit™ Technology to address the need for scientific evidence in ergonomics. TrueFit™ Technology was utilized to develop the Harmony™ Ergonomic Scaler and Curette handle, which has optimal proportions and an ideal width that provides a secure and nimble grasp.

2. Who designed and developed the TrueFit™ Technology System?

In building the TrueFit™ Technology system we sought out leaders in technology and development to design an advanced platform that could adapt to practitioners and allow our engineers to create an iterative development process. In addition, to help us grow and build a database for ergonomic application, HLB, an award-winning design firm, became our partner in this process. They partnered with global leading sensor technology firms to custom develop a system capable of touch sensitivity that is adaptable to all users and designs, without interfering with the practitioners or instruments being tested.

3. Why is science so important to verifying ergonomics?

Years have been spent previously gathering feedback and qualitative data on what an “ergonomic” design should be. While this helped HuFriedyGroup in the initial development process, it also brought a lot of opinion-based input. The plethora of subjective feedback needed a solution to help sift out factual benefits. HuFriedyGroup sought to distinguish factual parameters, such as pinch force and pressure on the tooth, which could be used to develop the ideal handle design for an instrument.

4. What went into the development of the Harmony™ Ergonomic Scalers and Curettes?

A development process similar to software engineering was adopted for this project. A gamut of handles—currently available in the market globally—were used as the starting point for our research. We took the data gathered and applied it to a range of innovative new design concepts. These different handle designs helped establish comparison points for iterative development. The new design concepts were tested and features that showed the strongest influence were progressed on to future designs, whereas those elements that did not perform were removed from our designs. This step by step approach of design, test, revise allowed us to make rapid progression on key factors like reduction of pinch force and reduced pressure on the tooth. Over 50 hygienists spanning continents and countries around the world participated in this testing. The collective data gathered amounted to almost 2.8 million data points.

5. What was HuFriedyGroup’s involvement in the analysis of the data collected and how was bias removed?

To keep a scientific perspective and accurate representation of the data, HuFriedyGroup worked with a 3rd party analytics firm, Hanover, a top 50 research firm, to review and analyze the data collection. Hanover is a leader in analytics and works with clients that span global organizations, to emerging companies, to educational institutions. Founded in 2003, Hanover has over 300 employees, including a high-caliber staff of researchers, survey experts, analysts, statisticians, and grant professionals. They applied a scientific level of analyses to the data gathered with TrueFit™ Technology and assessed it without bias to determine key findings and statistical relevance among the collected data samples.

6. What were the key findings from the data collected?

There were three key findings after Hannover analyzed the data:

- a. The Harmony™ Ergonomic Scaler and Curette handle, with its optimized shape and double helix grip, reduces pinch force up to 65% compared to other leading scaler designs.¹

Pinch Force: Pressure applied by the hand to the instrument handle. Measured in kPa.

Scaler Brand	Avg. Pinch Force of Thumb, Pointer, Middle (kPa)	Increase of Pinch Force over Harmony™ Scaler
HuFriedyGroup	29.75	Baseline
Competitor D	63.13	52.9%
Competitor C	62.29	52.2%
Competitor B	86.19	65.5%
Competitor A	61.59	51.7%

- b. The difference to the pressure applied to the tooth was significant; up to 37% less pressure compared to other leading scaler handle designs.¹

Pressure Applied to the Tooth: Force applied by the scaler onto the tooth. Measured in N.

Scaler Brand	Average of Peak Pressures Applied to Tooth (Fx, Fy, Fz) (N)	Increase of Pressure Applied to Tooth over Harmony™ Scaler
HuFriedyGroup	1.20	Baseline
Competitor D	1.91	37.2%
Competitor C	1.79	33.0%
Competitor B	1.30	7.7%
Competitor A	1.49	19.5%

- c. There is a negligible relationship between the weight of a scaler and the total pinch force as well as between weight of the scaler and pressure applied to the tooth.

7. If it is made of metal, it must be heavier right?

The current marketplace perception is that light weight handles are more ergonomic. But to achieve a light weight, these handles tend to be plastic resin or silicone, which may offer less tactile sensitivity and fall short of the durability of steel handles. The development team was hyper-sensitive to ensure our new handle was not too heavy. What we learned throughout the iterative testing is weight was really more of a Goldilocks complex; it couldn't be too heavy, but it also couldn't be too light. This subjective feedback was supported by our key findings, which states that weight has a negligible relationship to total pinch force. Therefore, the Harmony™ Ergonomic Scalers and Curettes are similar in weight to our current #9 handled EverEdge™ 2.0 Instruments.

8. Will this handle be compatible with our IMS™ Cassette System?

With HuFriedyGroup being the leader in infection prevention, it was imperative to ensure these handles were compatible with our IMS™ Cassette System. These handles are the same length as a traditional #9 handle, and they fit in the rails the same way our current scalers do today. Additionally, these handles do not touch each other which ensures proper cleaning, drying and sterilization. We conducted a variety of tests to ensure a safe and secure fit in the cassette.

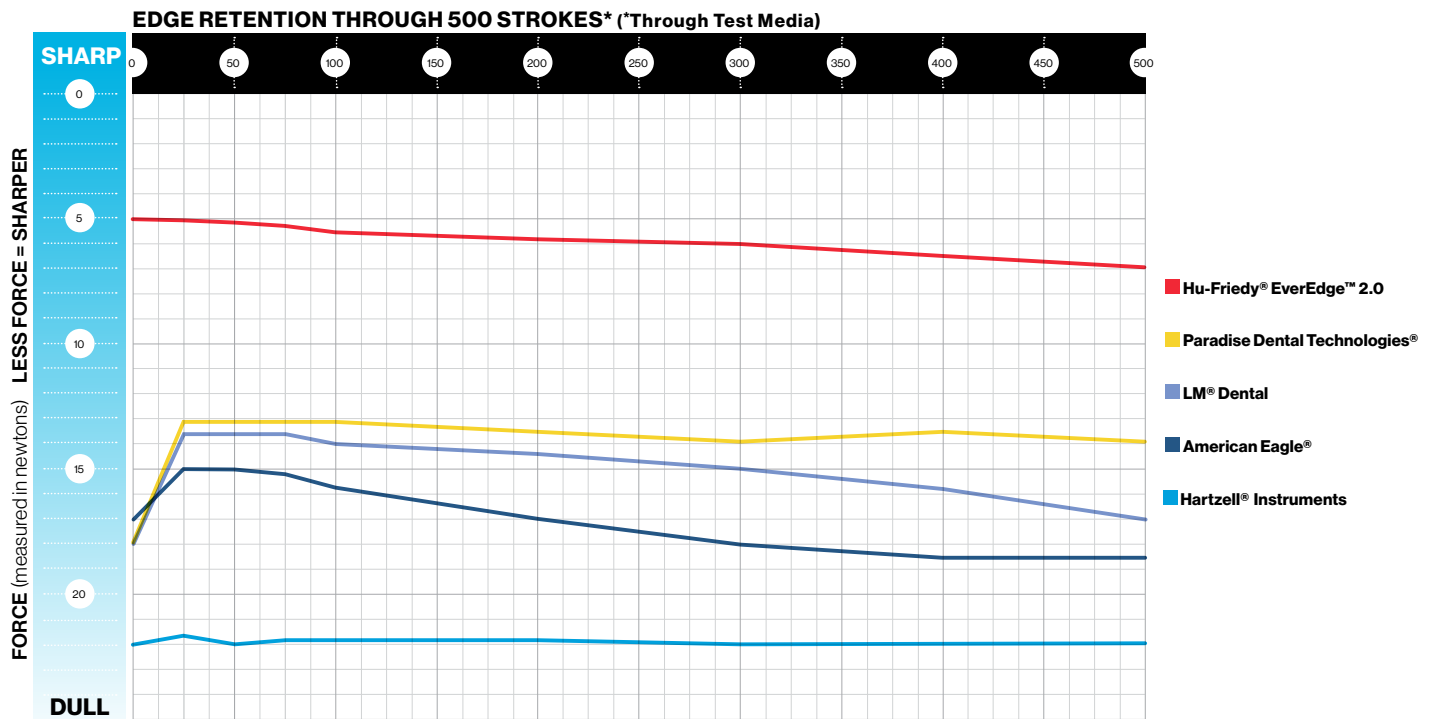
9. With this new handle, are there any special considerations for cleaning, sterilization, and/or warranty?

There are no special reprocessing instructions which deviate from the standard recommendations for cleaning and sterilization. Please follow the instructions detailed in the Reprocessing of Hu-Friedy® Dental Hand Instruments and Accessories (HF-USA-17664) document. Additionally, the warranty on the Harmony™ Ergonomic Scalers and Curettes is the same as other EverEdge™ 2.0 Instruments and handles.

10. Refresh my memory, what is the benefit of EverEdge™ 2.0 Technology?

Using an enhanced finishing process, the professional artisans at HuFriedyGroup create edges that are scientifically measured to be over 72% sharper out of the box compared to the next closest competitor.¹ Even after 500 strokes, the blade is 50% sharper than the next leading competitor.¹ How do we know they are that much sharper? Independent testing was conducted by CATRA, a specialized blade laboratory that utilized advanced test equipment to perform materials analysis in order to advise today's leading manufacturers on the art of sharpening stainless steel. They evaluated Hu-Friedy® EverEdge™ 2.0 Scalers and Curettes alongside competitive instruments. See the results of this test below:

How EverEdge™ 2.0 Technology Compares Against Competitors¹



11. Why do the competitors' scalers listed get sharper after several strokes before getting dull again?

Competitors' scalers contain a large burr formation. What this means, is that the burr (thin flap of metal that forms during the finishing process) actually covers the blade out of the box. At a certain point, the burr comes off during clinical use which causes the temporary spike in sharpness. This is considered a manufacturing flaw. It is important to note that the EverEdge™ 2.0 Scalers and Curettes are materially sharper than all competitors' scalers at every point on the graph.

12. How does EverEdge™ 2.0 instruments compare to coated scalers?

EverEdge™ 2.0 Scalers and Curettes, based on tip design, can be used for all types of calculus. However, competitive scalers with a coating cannot be used on heavy and/or tenacious calculus per the manufacturers' IFU. Due to the coating, the manufacturers recommend a "shaving" technique that is not taught in schools as it may cause burnishing of calculus.

13. What is the best way to maintain my EverEdge™ 2.0 Scalers and Curettes?

All EverEdge™ 2.0 Scalers and Curettes feature uncoated performance, which allows the clinician the ability to choose their sharpening journey. Whether the clinicians prefer to sharpen on their own, or utilize a sharpening service, HuFriedyGroup is the leading dental industry partner for all things sharpening. For the most up to date sharpening techniques, products, and resources please visit the [Hygiene Resource Page](#). Additionally, our EverCare Scaler Sharpening Service has affordable and flexible options for all offices that want fast turnaround times without sacrificing quality. For more information about the EverCare Scaler Sharpening Program, visit its dedicated website at <https://www.evercaresharpening.com>.

14. Will these new scalers be available for the Envirodent™ Redemption Program?

HuFriedyGroup value-add services play a huge role in customer conversion and retention. On average, customers who are enrolled in the Envirodent™ Redemption Program spend about 41% more than non-Envirodent™ customers. It's because customers utilize this program to try the latest and greatest that HuFriedyGroup has to offer without making a huge capital investment. We plan to make the Harmony™ Ergonomic Scalers and Curettes a redemption option for the Envirodent™ Redemption Program in 2021 as we work to build a strong inventory position through our global launch of this new product.

15. What EverEdge™ 2.0 tip designs will be available in the new Harmony™ Ergonomic Scaler and Curette handle design?

SICKLES		UNIVERSALS CONTINUED	
H6/H7 DE Scaler, EE2, Harmony™ Handle	SH6/7XE2	#YG7/8 Younger-Good, EE2, Harmony™ Handle	SYG7/8XE2
204S DE Sickle Scaler, EE2, Harmony™ Handle	S204SXE2	#17/18 McCall Curette, EE2, Harmony™ Handle	SM17/18XE2
#204SD DE Scaler, EE2, Harmony™ Handle	S204SDXE2	#1/2 Barnhart Curette, EE2, Harmony™ Handle	SBH1/2XE2
#H5/33 DE Scaler, EE2, Harmony™ Handle	SH5/33XE2	#13S/14S McCall, EE2, Harmony™ Handle	SM13/14SXE2
#23 DE Scaler EE2, Harmony™ Handle	SM23XE2	GRACEYS	
#137 Sickle Scaler, EE2, Harmony™ Handle	SN137XE2	#1/2 Gracey Curette, EE2, Harmony™ Handle	SG1/2XE2
H5/Neve #1 Sickle, DE, EE2, Harmony™ Handle	SNEV1/H5XE2	#3/4 Gracey Curette, EE2, Harmony™ Handle	SG3/4XE2
Neve Anterior DE, EE2, Harmony™ Handle	SCNEV1XE2	#5/6 Gracey Curette, EE2, Harmony™ Handle	SG5/6XE2
Neve Scaler Posterior, EE2, Harmony™ Handle	SCNEV2XE2	#7/8 Gracey Curette, EE2, Harmony™ Handle	SG7/8XE2
#3 Neve Scaler Post. DE, Harmony™ Handle	SCNEV3XE2	#11/12 Gracey Curette, EE2, Harmony™ Handle	SG11/12XE2
#4 Neve Scaler Post. DE, EE2, Harmony™ Handle	SCNEV4XE2	#11/12R Gracey Rigid, EE2, Harmony™ Handle	SG11/12RXE2
Neve 4 Scaler, Lite, EE2, Harmony™ Handle	SCNEV4LXE2	#13/14 Gracey Curette, EE2, Harmony™ Handle	SG13/14XE2
UNIVERSALS		#13/14R Curette Rigid, EE2, Harmony™ Handle	SG13/14RXE2
13/14 Columbia Curette EE2, Harmony™ Handle	SC13/14XE2	#15/16 Gracey Curette, EE2, Harmony™ Handle	SG15/16XE2
#5/6 Barnhart Curette, EE2, Harmony™ Handle	SBH5/6XE2	#12/13 Gracey Curette, EE2, Harmony™ Handle	SG12/13XE2
#4R4L Columbia Curette, EE2, Harmony™ Handle	SC4R/4LXE2	#11/14 Gracey Curette, EE2, Harmony™ Handle	SG11/14XE2

1.)Data on file. Available upon request.

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