

# HARMONY™

Ergonomic Scalars and Curettes

Designed with TrueFit™ Technology



 **HuFriedyGroup**  
The Best In Practice

## Details That Make A Difference

Knowing nearly 70% of RDHs experience hand, wrist, and/or arm pain,<sup>1</sup> HuFriedyGroup proactively developed an innovative and truly ergonomic hand scaling solution. Building off the success of EverEdge™ 2.0 instruments, the NEW Harmony™ Ergonomic Scalars and Curettes designed with TrueFit™ Technology are the latest addition to the best-in-class hand instrument portfolio.

### Reduces pinch force up to 65%<sup>4</sup>

This may alleviate hand fatigue and injury risk due to repetitive motions.<sup>5,6,7,8</sup>

### Sharp Matters: 72% Sharper

EverEdge™ 2.0 working ends, which are 72% sharper than the next leading competitor, allow clinicians to efficiently remove calculus.<sup>2</sup> Sharp scalars require less pressure to do the same amount of work, creating a more comfortable experience for you and your patients.

 HuFriedy

## Fit for You, with over 2.8 Million Reasons to Believe

Comfortably maneuver and roll the scaler due to the round shape of the handle and the smooth transition to the functional shank. With over **2.8 million data points measured**, this handle was designed to easily adapt to your individual grasp.

## Reduces Pressure on Tooth by 37%<sup>4</sup>

Harmony™ Ergonomic Scalers and Curettes may increase patient comfort, while reducing clinician fatigue because it requires less pressure to the tooth when scaling.



## Secure and Nimble Grasp

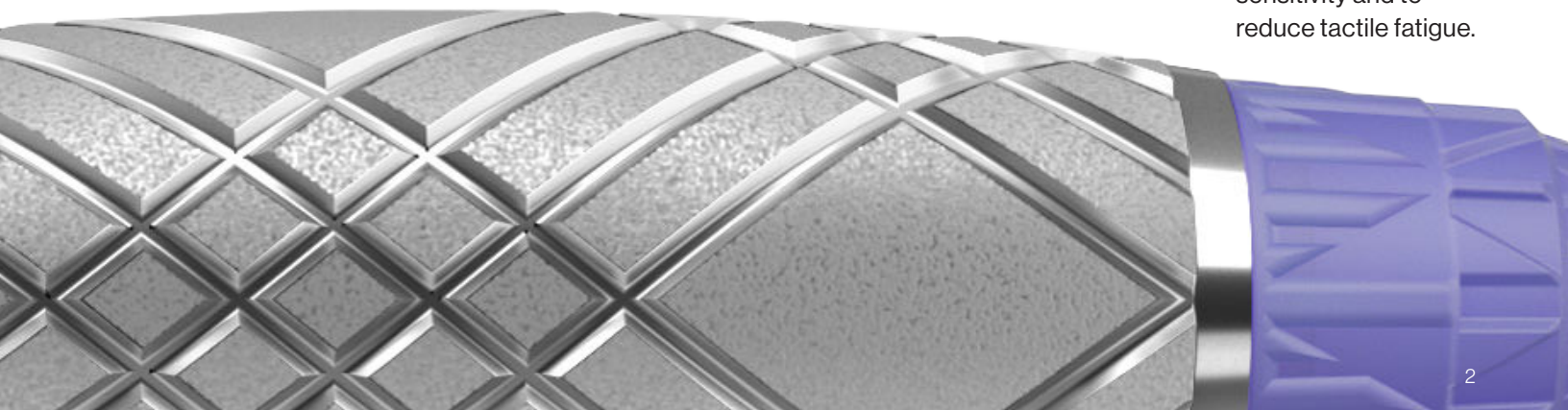
The silicone grip has been extended by 30% which can provide a secure and nimble grasp while using the instrument.<sup>3</sup> The geometric pattern is specifically designed to maximize grip in all directions.

## Not Too Heavy or Too Light

The Harmony™ Ergonomic Scaler and Curette's perfectly balanced handle is similar in weight to our best in class EverEdge™ 2.0 #9 Metal Handle.

## Confidence in Your Hand

The durable metal handle, which features a recessed double-helix texture, is designed for optimal tactile sensitivity and to reduce tactile fatigue.



# TRUEFIT™ Technology

TrueFit™ Technology is an advanced sensor-based technology system which has measured 2,878,320 data points for pinch force in the finger and pressure applied to the tooth when scaling.<sup>4</sup> HuFriedyGroup pioneered TrueFit Technology to address the need for scientific evidence in ergonomics.



## Global Influence

Hygienists spanning countries and continents around the world, with no bias to their brand or product preference, participated in testing the different designs.



## Fact Versus Fiction

HuFriedyGroup sought to distinguish factual parameters, such as pinch force and pressure on the tooth, that could be used to develop an ergonomic handle design for your instruments.





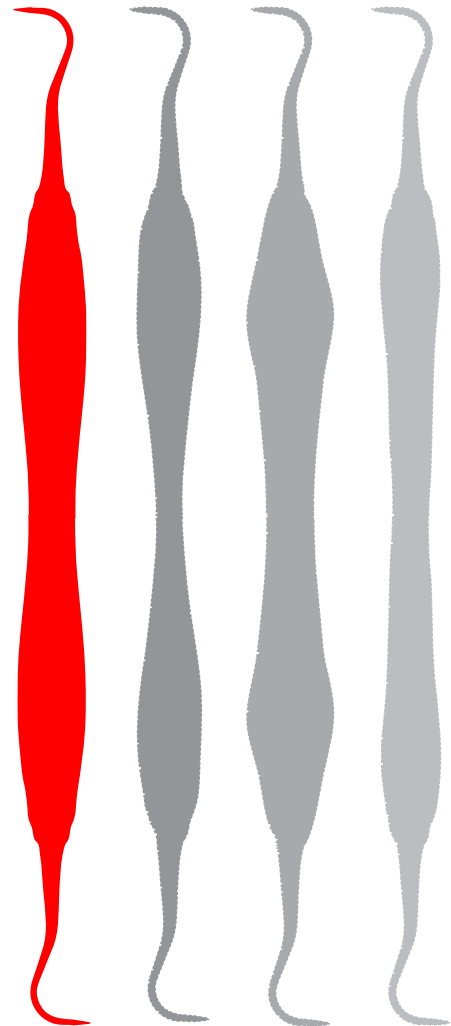
**Over  
2.8 Million  
Data Points  
Collected**

### Advanced Technology

In building the TrueFit™ Technology system, we partnered with global leaders in technology and development to design an advanced platform. HuFriedyGroup developed a system capable of measuring touch sensitivity and pressure at 40 readings per second. The system was adaptable to all users and designs, without interfering with the practitioners or instruments being tested. This enabled our engineers to create an iterative development process that refined the Harmony™ Ergonomic Scaler and Curette design for optimal performance.

### Design...Test...Revise

A development process, similar to software engineering, was adopted for the Harmony™ Ergonomic Scalers and Currettes. A gamut of handles was used as the starting point for our research. These different handle designs helped establish comparison points for iterative development. New design concepts were created, then tested, and features that showed the strongest performance were progressed whereas elements that did not perform well were removed. This step-by-step approach of design, test, and revise allowed us to make rapid progression on key factors like reduction of pinch force and reduced pressure on the tooth.

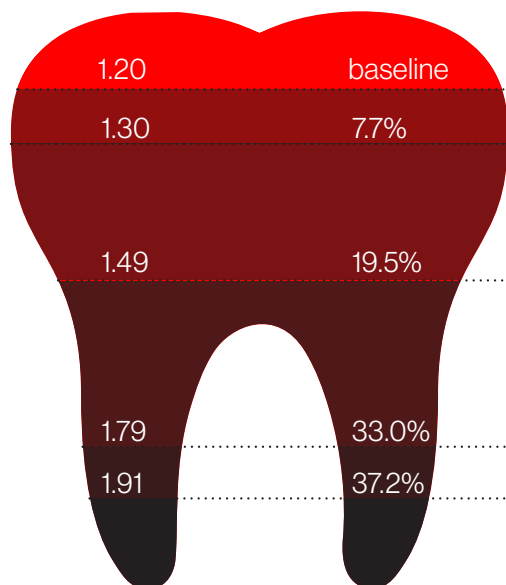


## Hand Relief Down to a Science

To keep a scientific perspective and accurate representation of the data collected, HuFriedyGroup worked with a world-renowned 3rd party analytics firm to review and analyze the 2,878,320 data points.<sup>4</sup> 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.

### Average Pressure Applied to Tooth

Average Peak Pressure Points of Fx, Fy, Fz (Newtons)	Increase in Pressure
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# 65%

### Reduction of Pinch Force

The Harmony™ Ergonomic Scaler and Curette handle, with its optimized shape and double-helix grip, reduces pinch force **up to 65%** compared to other ergonomic scaler designs.<sup>4</sup>

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

Scaler Tested

Hu-Friedy Harmony™ Scaler Handle

Competitor B

Competitor A

Competitor C

Competitor D

Average Pinch Force

Average Total Pinch Force of Thumb, Pointer, and Middle Fingers (kilopascals)

Increase in Pinch Force

86.19

63.13

63.29

61.59

29.75

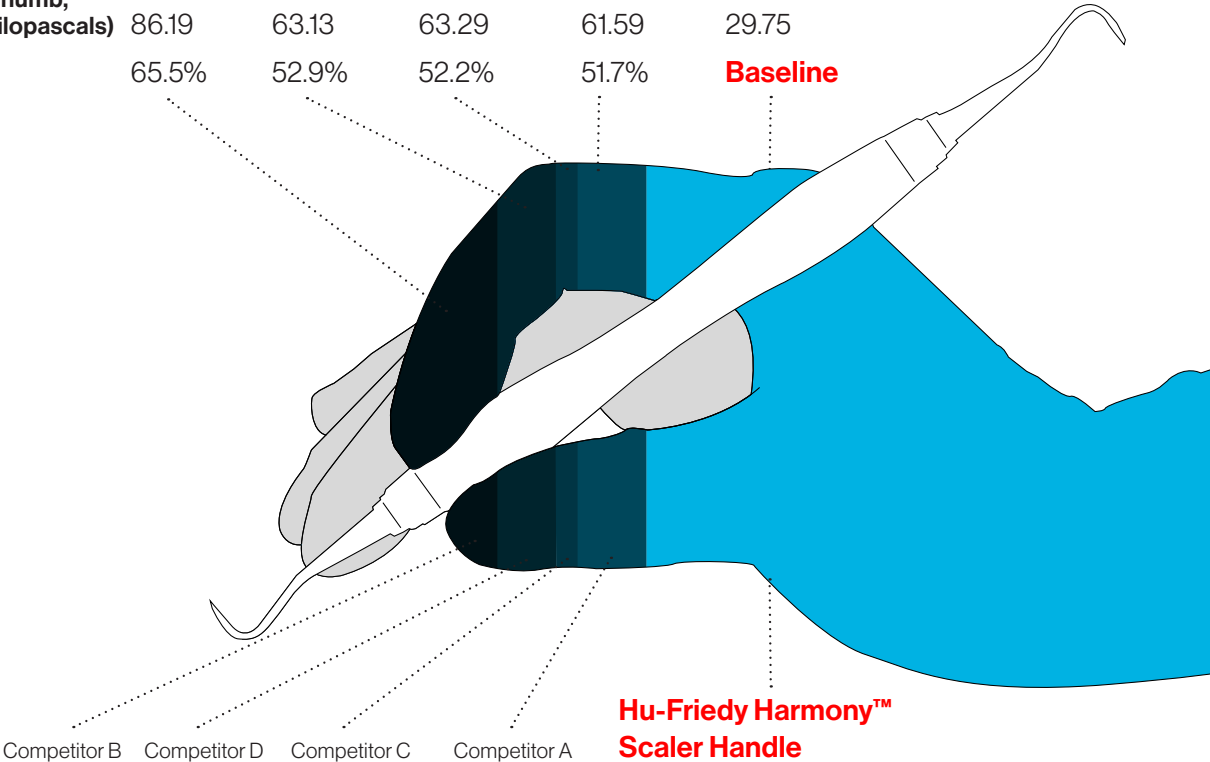
65.5%

52.9%

52.2%

51.7%

Baseline



37%

Reduction of Pressure on the Tooth

The difference to the pressure applied to the tooth was significant; **up to 37%** less pressure compared to other ergonomic scaler handle designs. <sup>4</sup>

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

# The Best In Practice

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**By using the new Harmony™ Scaler, a reduction of biomechanical stress on fingers and hands will occur compared to other available scalers on the market.**

Klaudia Kulpa-Lindgren MOT, OTR/L

Sabrina (Chia-Chun) Chang MOT, OTR/L, CHT, CKTP, CEAS

**I could feel the difference in my grasp the first time I scaled with a Harmony Scaler.**

Tami Wanless RDH, MED

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Learn how to scale in perfect Harmony at **[Hu-Friedy.com/Harmony](https://www.hu-friedy.com/Harmony)**

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1) Hayes MJ, Cockrell D, Smith DR. A systematic review of musculoskeletal disorders among dental professionals. Int J Dent Hygiene. 2009;7:159-165. 2) Data on file. Available upon request 3) Compared to the Hu-Friedy #9 metal handle, these are the nominal values. Data on file. Available on request. 4) Data on file. Available upon request. 5) Int J Dent Hygiene 7, 2009; 159-165 DOI: 10.1111/j.1601-5037.2009.00395.x. Hayes MJ, Cockrell D, Smith DR. A systematic review of musculoskeletal disorders among dental professionals. 6) Rempel, David, et al. "The Effects of Periodontal Curette Handle Weight and Diameter on Arm Pain." The Journal of the American Dental Association, vol. 143, no. 10, 2012, pp. 1105-1113., doi:10.14219/jada.archive.2012.0041. 7) Lalumandier, James A, and Scott D McPhee. "Prevalence and Risk Factors of Hand Problems and Carpal Tunnel Syndrome among Dental Hygienists." Journal of Dental Hygiene, vol. 75, no. 11, 2001, pp. 130-134. 8) Mulimani P, Hoe VCW, Hayes MJ, Idiculla JJ, Abas ABL, Karanth L., Ergonomic interventions for preventing musculoskeletal disorders in dental care practitioners. Cochrane Database of Systematic Reviews 2018, Issue 10. Art. No.: CD011261. DOI: 10.1002/14651858.CD011261.pub2.

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