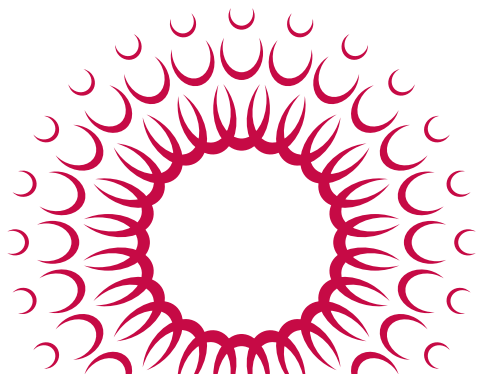




MICROSURGICAL ENDODONTIC INSTRUMENTS

DEVELOPED WITH MARWAN ABOU-RASS, DDS, MDS, PhD
A HU-FRIEDY KEY OPINION LEADER



How the best perform



THE MAR MICROSURGICAL ENDODONTIC LINE & PERSPECTIVE

“

My collaboration with Hu-Friedy began in the early 1990's when I directed the University of Southern California's Advanced Endodontic Program and saw a need for instruments which were better designed for atraumatic apical applications. Together we created a collection of explorers, condensers and burnishers. We also designed angled curettes, which are anatomically designed to elevate the marginal and interdental papillae, a task normally done by periosteals and elevators, and straight curettes, that enhance visual access to the lingual, palatal and distant root apices of posterior teeth.

Currently, therapeutic, diagnostic and preventative indications embrace Endodontic surgery and the concept of "Treatment Finalization"*. Extending care beyond performing a simple root canal to include other factors that impact success has led to a more holistic approach to endodontic and dental care with many biologic preventative and conservative merits. These include avoiding bone loss, critical size osseous defect formation, extraction and its impact on the alveolar ridge, and at a higher level, preventing tooth loss. The "wait and see" approach for the management of asymptomatic endodontic failures should be rarely advised; instead, "open and see" should reign, either thru the canal or the apex.

Today clinicians are better trained, surgery times are shorter, complications fewer, and successes greater. This progress is exciting to watch, and I am honored to have a part in enhancing the quality of life by advancing the endodontic profession.

Marwan Abou-Rass

*Marwan Abou-Rass, "Treatment Finalization", *Journal of the California Dental Association*, December, 1993.

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MARWAN ABOU-RASS
DDS, MDS, PhD

Professor Marwan Abou-Rass is Professor Emeritus at the University of Southern California, School of Dentistry where he served as Department Chairman and Director of Advanced Endodontics from 1972-1998. He also served as Director of Prince Abdul Rahman Advanced Dental Institute (PAADI) Riyadh, Saudi Arabia from 1998-2013.

As an educator and clinician with formal specialty training in fixed Prosthodontics and Endodontics, Dr. Abou-Rass has witnessed and participated in the evolution of the current trends and concepts in microsurgical endodontics. Today's Endodontists are better trained and biologically oriented with better surgical outcomes and fewer complications.

Dr. Abou-Rass continues to make significant contributions to endodontic research, education, and clinical practice.

For more information on Professor Abou-Rass, including a more in-depth discussion of historical endodontic trends visit AbouRass.com and Hu-Friedy.com.

Hu-Friedy

ENDODONTIC



FEATURES AND BENEFITS

The Marwan Abou-Rass "MAR" Microsurgical Endodontic instrument line is based on five criteria:

- **Assortment:** Explorers, condensers and burnishers with working tips matched to the shapes and sizes of apical foramina. Curettes designed for the marginal and interdental gingiva of anterior and posterior teeth.
- **Performance:** Complete access via angled and straight instrument shafts and working ends to operate on root apices with precise performance even with far distal or deep lingual and palatal positions.
- **Visualization:** Longer shafts aligned with instrument handles enable visualization of the movements of working tips at all times.
- **Preservation:** Angled and straight curettes, designed for atraumatic action and contact with the interdental papilla and precisely controlled manual bone removal for root apex exposure.
- **Straight and Angled Designs:** For passing through the thick buccal cortical plate of the maxilla and mandible to reach lingually or palatally located root apices, or the far distal of buccal bone covering the 2nd and 3rd molar roots.



The Abou-Rass Microsurgical Kit is now available, **see the back cover for details**, or visit us online to view our complete line of endodontic products: Hu-Friedy.com

CURETTES / EXCAVATORS*

MAR Currettes are used for atraumatic elevation of endodontic and periodontic flaps. In straight single-ended and angled double-ended configurations they form the “heart” of the MAR line.

PERFECT FOR DELICATE REMOVAL OR NECROTIC BONE AND INFECTED SOFT TISSUE; IN DISTANT AND CRITICAL LOCATION AREAS AND FOR SCRAPING CORTICAL BONE IN ORDER TO EXPOSE THE ROOT APEX



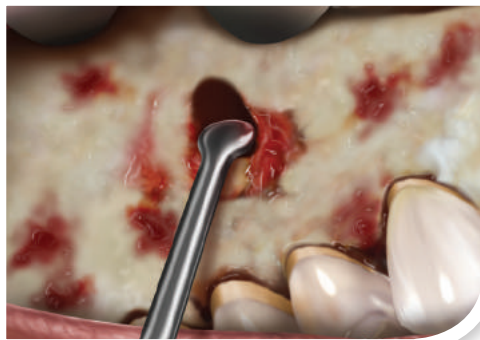
MAR-C3 ELEVATING THE INCISED INTER-DENTAL PAPILLA AND MARGINAL GINGIVA



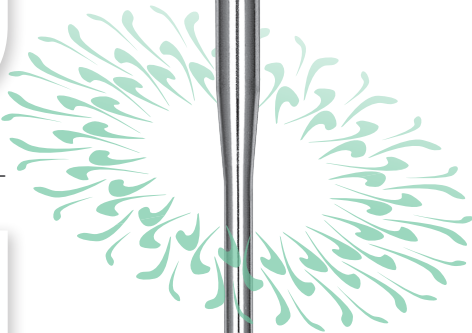
MAR-C4 USED AFTER THE MAR-C3 FOR FURTHER BLUNT DISSECTION AND ELEVATION OF THE MARGINAL GINGIVAE PRIOR TO PERIOSTEAL ELEVATION



MAR-SC2 DEBRIDING THE BUCCAL CORTICAL PLATE DEFECT TO EXPOSE THE PRE-MOLAR ROOT AND AN APICAL THIRD INCOMPLETE VERTICAL ROOT FRACTURE WHICH WAS FOUND



MAR-SC3 REMOVING THE FRACTURED ROOT FRAGMENT AND DEBRIDING THE PALATE EXTENDED DEFECT IN AN INTERIM SURGICAL ENDODONTIC CASE**



MAR-SC2

ANGLED

Used sequentially for atraumatic flap elevation, controlled dentin curettage and degranulation of bone defects.

MAR-C1

The smallest curette – Long shank and sharp tip enable the clinician to reach and debride diseased hard or soft tissue trapped in the smallest bone and dentin spaces and hard tissue structures.



MAR-C2

Round, sharp working tip is excellent for full muco-periosteal flap elevation of the mandibular lower anterior and maxillary lateral incisors.



MAR-C3

The line's most universal muco-periosteal flap elevation instrument. The long shank and sharp tip form atraumatic, controlled flaps on gingival crevices of all posterior teeth centrals, preparing gingival sulci spaces for the MAR-C4 or Allen P9A.



MAR-C4

Used for surgical curettage of large osseous (degranulation) alveolar defects and palatal flap elevation, or for initiating attached gingival elevation prior to using the Allen P9A periosteal.



STRAIGHT

For scraping thin cortical bone, exposing apices of fenestrated or thin eroded bone over pathologically involved roots. The MAR straight currettes are ideal for straight-line access and continuous tip visibility of far distal, deep lingual, palatal root tips and other anatomies.

MAR-SC1

The smallest straight curette provides straight-line control and access, especially via a buccal approach to the apices of the palatal and lingual roots of the maxillary first premolars and molars.



MAR-SC2

Useful for debriding buccal cortical plate defects and root exposure.



MAR-SC3

Excellent for removing fractured root fragments and debriding palate defects.



MAR-SC4

The largest straight curette – Perfect for debriding large defects and scraping diseased bone.



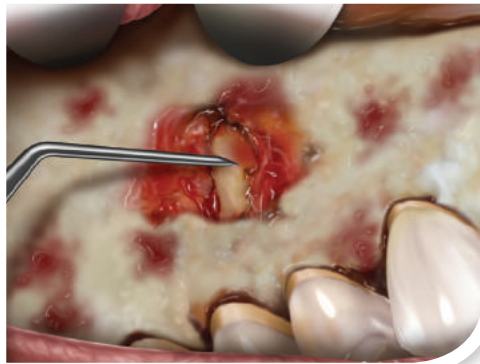
*The terms "Currettes" and "Excavators" are interchangeable. **See "Interim Endodontic Therapy for Alveolar Socket Bone Regeneration of Infected Hopeless Teeth Prior to Implant Therapy", M. Abou-Rass, *Journal of Oral Implantology*, Vol. XXXVI, No. 1, 2010.

EXPLORERS

Designed with a variety of shafts and working tip angles, sizes, and shapes to reach and assess bone density, as well as tooth structure integrity. Also used to access thin root apices, calcified apical foramen, accessory foramina, root perforations, resorption and apical fractures.



THE SHARP, RIGID TIP OF THE MAR-EX1 EXPLORING THE DENSITY AND DEGREE OF BONE DAMAGE OF THE BUCCAL CORTICAL PLATE COVERING THE ROOT END OF A MAXILLARY PREMOLAR ROOT



THE MAR-EX5 IS PROBING AND EVALUATING A FISSURE FOUND AT THE APICAL THIRD OF A PREMOLAR ROOT AFTER THE DEFECT WAS DEBRIDED WITH MAR-SC2

MAR-EX1
With two different sharp working ends it is ideal for evaluating the cortical bone surface integrity to look for underlying periradicular or periapical defects that have eroded the inner (endosteal) side of the cortical plate. Also used to survey Alveolar bone damage by creating landmark holes that outline the border of diseased versus intact bone, and for emergency incision and drainage.



MAR-EX2
A single-ended bone-file styled explorer ideal for emergency incision and drainage to enlarge the pathway made with MAR-EX1 for better exudate drainage through the buccal cortical bone plate.



MAR-EX3
All-purpose double-ended measurement probe with one blunt flat end and one round end. Used to measure osseous defects or assess the integrity of the maxillary sinus floor before, during or after alveolar socket or defect curettage.

MAR-EX4
Single-ended, its straight, sharp working tip allows the clinician to apply direct and measureable pressure to differentiate between the solid root apex and the surrounding semisolid or porous trabecular bone.



MAR-EX5
Perfect for assessing the integrity and density of alveolar bone surfaces in confined areas. Its single-ended fine tip is excellent for checking root structure for fracture lines and microscopic defects.



MAR-EX6
With its right-angled single-ended working end it's perfect for external evaluation of the apical third root segment when searching for the apical foramen iatrogenic perforations, crack lines, accessory foramina or root resorption.

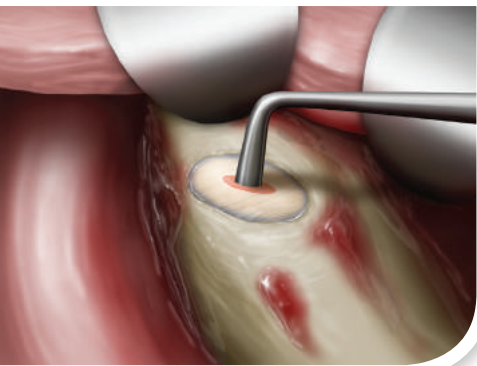


CONDENSERS / PLUGGERS*

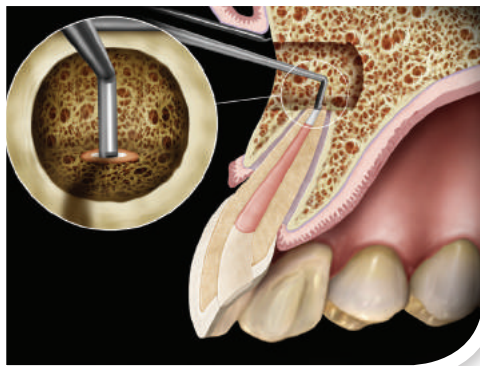
Straight handle shank and right-angled working tips provide direct access and control, plus visibility of the condenser tip when operating at or in the root end. They are ideal for use in distal or lingually positioned root apices on posterior teeth.

The double-ended oval or round cross section of the tip allows controlled condensation of retro-filling materials: round working tips for “pot hole” preparations and oval tips for “isthmus” designs.

Angled condensers are used universally for retro-filling buccal roots as they correspond to the sizes of most ultrasonic “retro-prep” instruments. The MAR-AAC2 and MAR-AAC3 are ideal for apical condensing of large retro-fill preparations with wide open apices, and for apical root resorption.

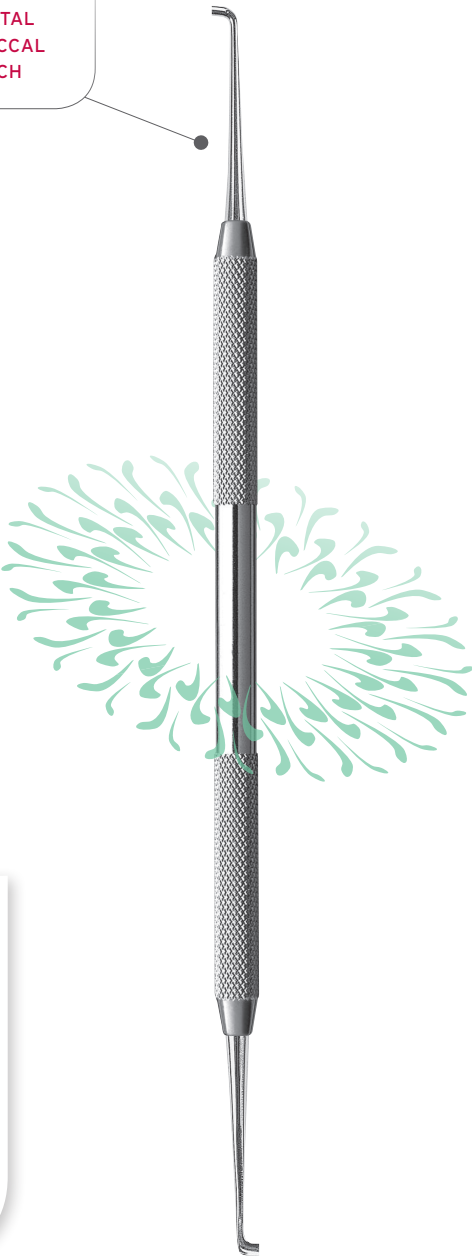


THE OVAL END OF MAR-SAC.5 CONDENSING AN ISTHMUS SHAPED APICAL FORAMIN RETRO-FILLING



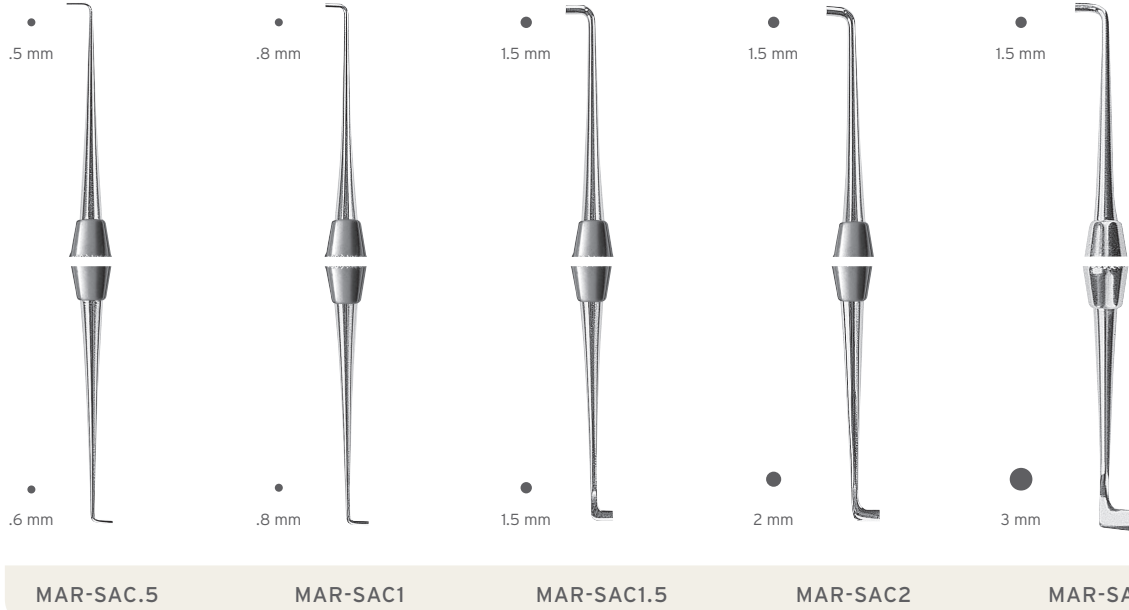
MAR-SAC2 CONDENSING A “POTHOLE” APICAL RETRO-FILLING

EXCELLENT FOR DIRECT
ACCESS TO THE ROOT END
WHEN RETRO-FILLING
LINGUAL AND PALATAL
ROOTS USING A BUCCAL
SURGICAL APPROACH

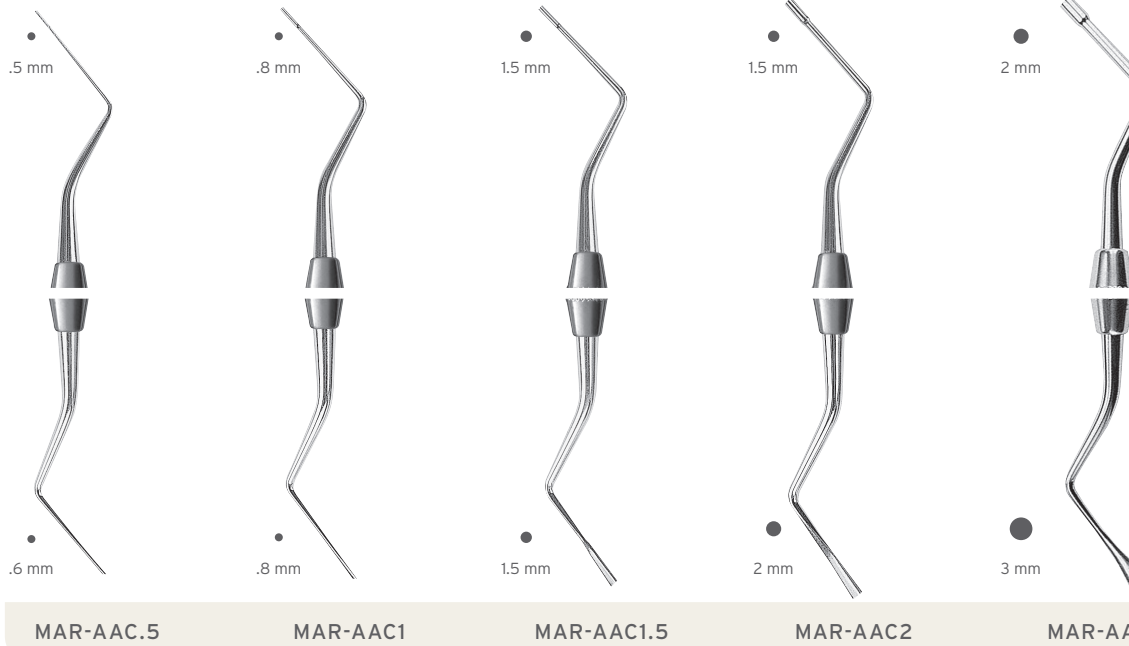


MAR-SAC2

STRAIGHT



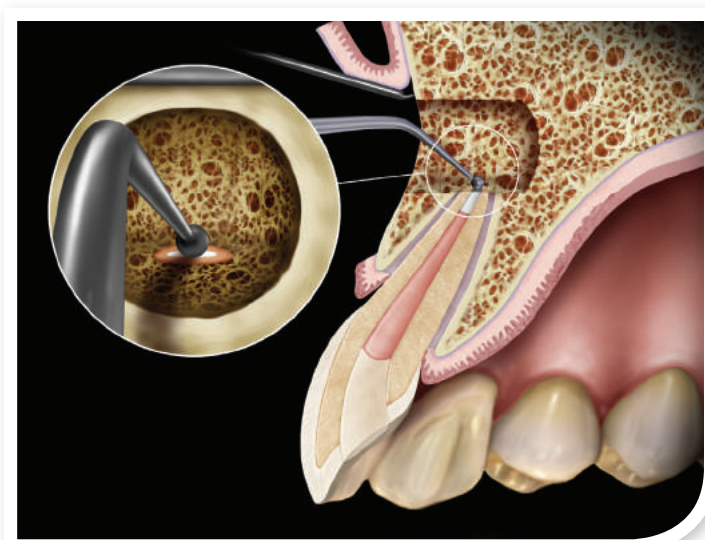
ANGLED



BURNISHERS

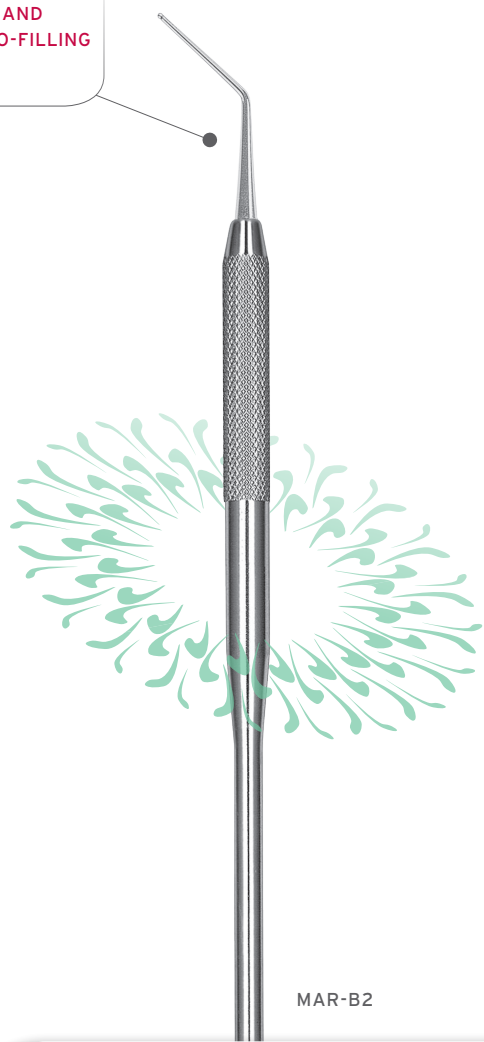
MAR burnishers are used for apical retro-fill packing, finishing and polishing, from the smallest sized retro-filling preparation to the largest apical retrograde obturation in wide-open apices. They are also useful for cold burnishing of well condensed apical gutta percha root fillings.

The angled instruments are designed for polishing anterior and buccal areas. Straight designs provide a direct, straight line to far distal, palatal or mesiolingual root apices in the maxilla or mesiolingual roots in the mandible.



MAR-B3 POLISHING AN ANTERIOR APICAL RETRO-FILLING

IDEAL FOR RETRO-FILL PACKING, FINISHING AND POLISHING OF RETRO-FILLING AND ROOT REPAIRS

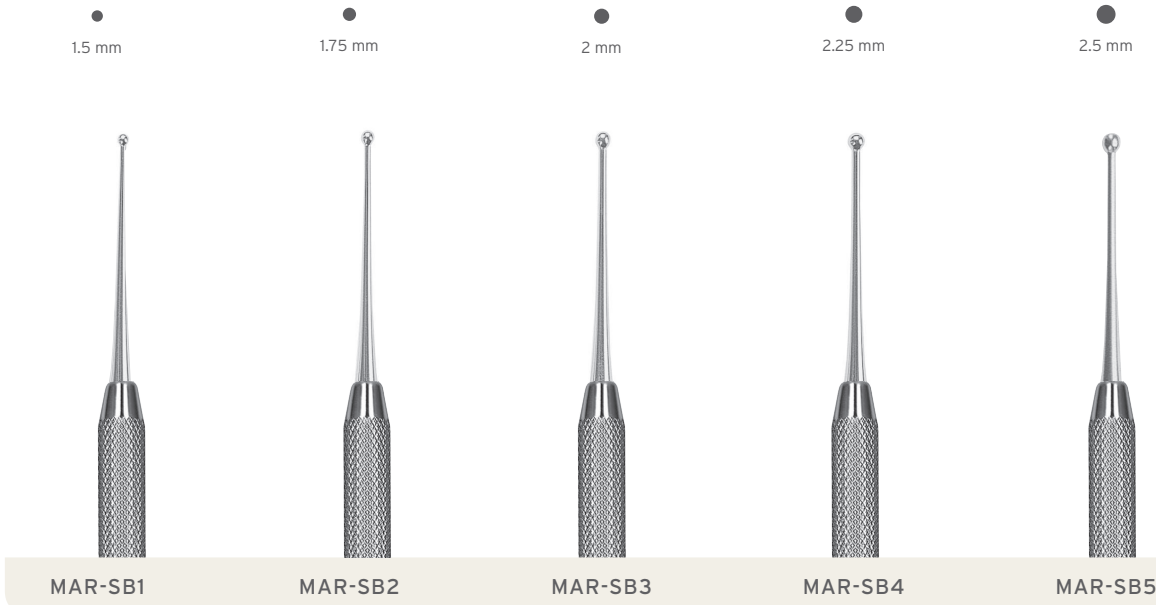


MAR-B2

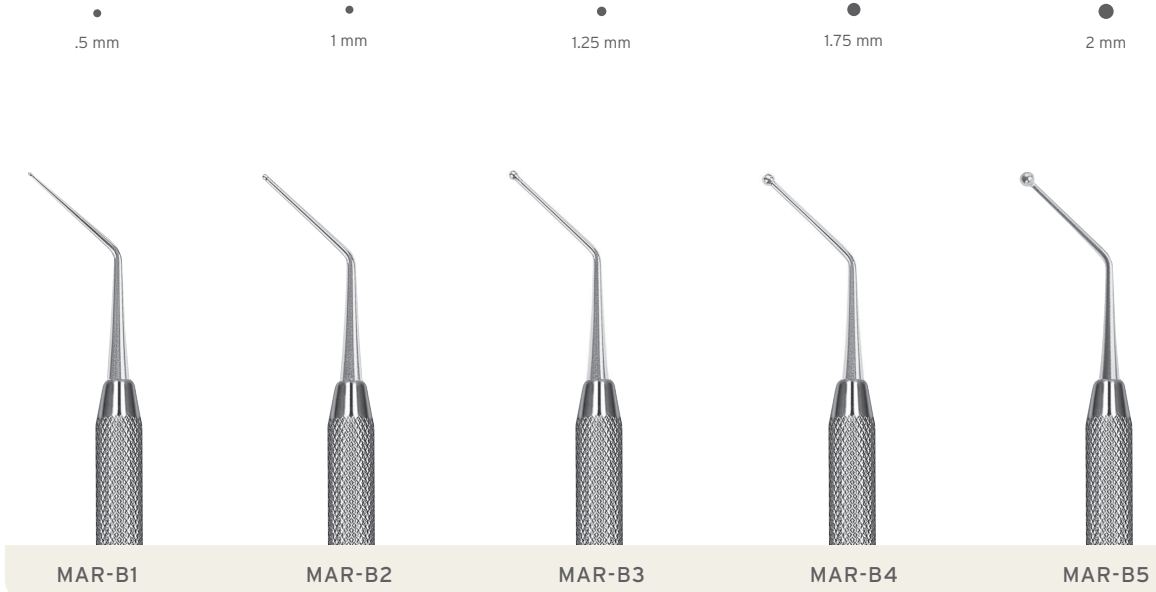


To learn about our burnishers and our complete line of endodontic instruments, call 1-800-Hu-Friedy and request our **Endo Essentials catalog.**

STRAIGHT



ANGLED



HU-FRIEDY'S KEY OPINION LEADER PROGRAM

HU-FRIEDY
PROGRAMS



Professor Abou-Rass is one of Hu-Friedy's Key Opinion Leaders.

Key Opinion Leaders' names are very recognizable and their work is renowned. They are, after all, the leaders of the dental community. Hu-Friedy is honored to be in close association with Key Opinion Leaders, and it is a pleasure to present them to you as individuals full of life, character and vision.

For more information on the program or to view other inspirational leaders' profiles, visit us online at: [Hu-Friedy.com/community](https://www.hu-friedy.com/community)

ABOU-RASS MICROSURGICAL ENDODONTIC KIT

This noninclusive kit forms the foundation of his surgical set-up.*

16 Instrument Signature Series® Cassette	IM4168 or IMDIN168
#9 Molt Periosteal Elevator	P9
#1 Henahan Retractor	TRH1
#3 Abou-Rass Endo Excavator DE	MAR-C3
#3 Abou-Rass Surgical Curette SE	MAR-SC3
#1 Abou-Rass Endo Explorer DE	MAR-EX1
#DG16/17 DE Endodontic Explorer	EXDG16/17
#1 Abou-Rass Straight Apical Condenser	MAR-SAC1
#1 Abou-Rass Angulated Apical Condenser	MAR-AAC1

*He relies on all the instruments in the MAR line, and many other hand instruments, when needed.

#3 Abou-Rass Straight Burnisher	MAR-SB3
#3 Abou-Rass Burnisher SE	MAR-B3
#50L Fox Tissue Pliers w/Lock	TP50L
#1 Velvart Endo Satin Steel Micro Mirror	MMVEL1
#2 Velvart Endo Satin Steel Micro Mirror	MMVEL2
Metzenbaum Perma Sharp® Scissors Cv/BI	S5055
Crile-Wood Perma Sharp Needle Holder	NH5038
Halsey Perma Sharp N.H., Serrated	NH5037
#4 Kramer-Nevins DE Curette	SKN4

NEW!

For more information about
Hu-Friedy's Total Solutions visit
HU-FRIEDY.COM

PERIODONTAL



RESTORATIVE



ORTHODONTIC



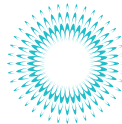
INSTRUMENT
MANAGEMENT



ENDODONTIC



SURGICAL



ULTRASONIC
SCALING



Hu-Friedy Mfg. Co., LLC: 2501 Sanders Rd., Northbrook, IL 60062 | USA
Telephone: 1-800-Hu-Friedy (1-773-975-6100) | **Website:** Hu-Friedy.com

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