

Delivering Exceptional Results



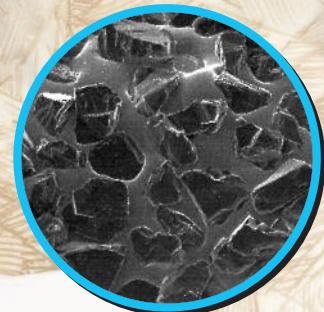
Proper Tooth Preparation

Proper tooth preparation, as related to the definitive form of the restoration and the soft tissues of the patient, improves the clinician's ability to deliver an optimal result during prosthetic dentistry. The preparation influences the appearance of the definitive restoration as well as its long-term prognosis. It also provides room for the laboratory technician to layer dental porcelains for natural light transmission, reflection, and absorption. Furthermore, proper tooth preparation ensures the restoration will be able to withstand the occlusal forces of the intraoral environment.

Goals of Tooth Preparation¹

- Preserve existing tooth structure
- Retention and resistance
- Structural durability
- Marginal integrity
- Preserve the periodontium

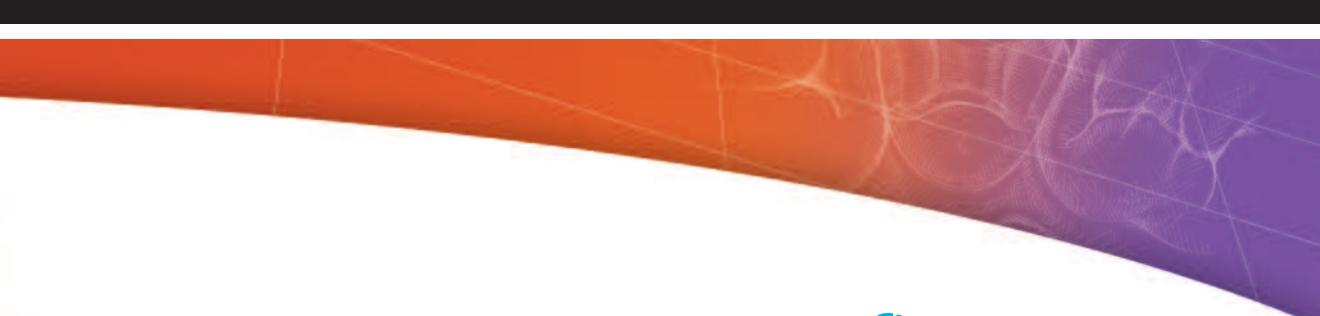
SEM of cutting surface shows particle distribution that prevents clogging.



Robot® Diamond

1. Shillingburg HT, Hobo S, Whitsett LE, et al. Fundamentals of Fixed Prosthodontics. 3rd ed. Carol Stream, IL: Quintessence Publishing, 1997.





For more than 80 years, Shofu Dental Corporation has been recognized worldwide for its achievements and reputation as an experienced provider of quality dental materials and equipment, distinctions that have resulted in the development of the ROBOT Diamond.

These products, with clear benefits for restorative and esthetic procedures, promise to further evidence the commitment of Shofu to successful dental treatment

Benefits

- Multilayer technique with special surface treatment for durability
- Exact, uniform distribution of diamond particles
- Durability
- Precise operation
- Vibration-free action

—Experience The Difference!

and patient satisfaction. In the Winter of 2006, the ROBOT Diamond received an exceptional rating in a noteworthy research study conducted independently by the ADA. The multi-coating technique used to create the most durable surface for the ROBOT Diamonds results in an efficient bur with less clogging. This satisfies the precision requirements for today's CAD/CAM technology products.

Indicated for all cavity and crown preparation, the ROBOT Diamond rotary instruments are made in a computer-automated environment that guarantees an even distribution of diamond particles onto a one-piece stainless steel shank.

*Research study conducted by the ADA and published in the Professional Product Review, Vol. 1, Winter 2006.

INLAY/ONLAY

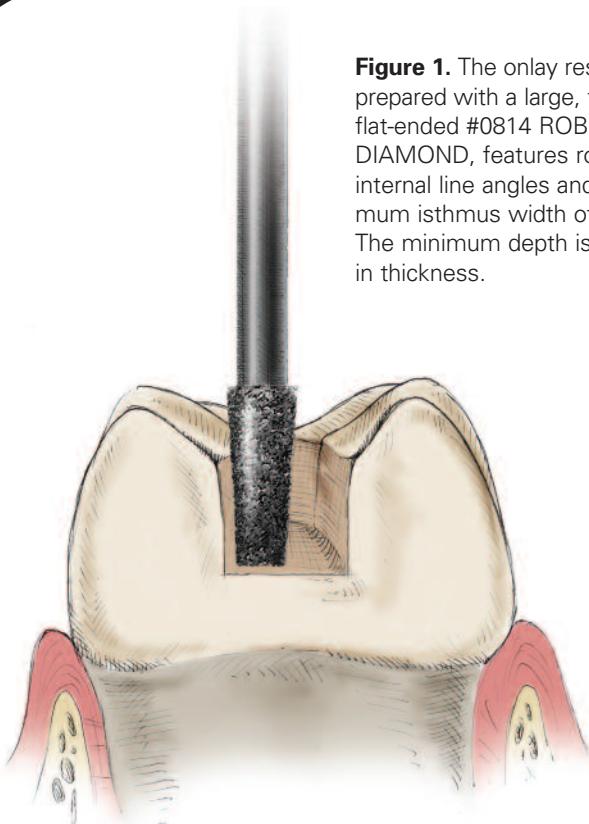
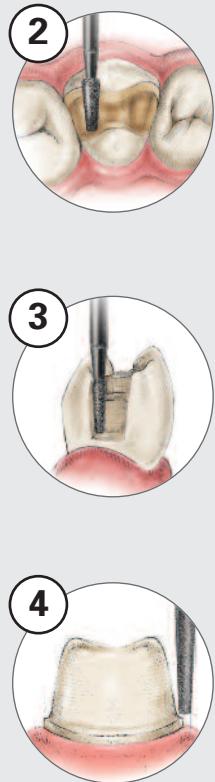


Figure 1. The onlay restoration, prepared with a large, tapered flat-ended #0814 ROBOT FG DIAMOND, features rounded internal line angles and a minimum isthmus width of 2.0mm. The minimum depth is 1.5mm in thickness.



Most recently, principles of tooth preparation have been influenced not by the contour of the existing tooth structure but rather by the intended restoration. Whereas bevels and various forms of retention are necessary for gold restorations, resistance form is generally unnecessary except for large ceramic or composite onlay restorations. The cavity walls for ceramic or composite preparations are flared between 5 and 15 degrees, and the gingival floor can be prepared with a butt joint.

Inlay/Onlay

INLAY/ONLAY

Figure 2. Less extensive restorations can be prepared first with a smaller flat-end bur with rounded corners (#0812 ROBOT FG DIAMOND).

Figure 3. The smaller #0810 ROBOT FG DIAMOND is used to taper proximal areas where access is more challenging. Preservation of sound tooth structure is a requisite throughout the approach.

Figure 4. A smooth butt joint gingival margin should be created through the preparation sequence.

Product Information and Conversion Table

DESCRIPTION	LENGTH	GRIT	SHOFU	BRASSELER	AXIS NTI	Premier	SS WHITE
TAPERED CYLINDER (Flat End)							
	4.0	R	0810-1	ISO 170/012	n/a	845-014	722.6
	4.4	R	0812-1	ISO 170/017	6846-012	845-016	722.8
	5.0	R	0813-1	ISO 170/017	6846-016	846-016	846-016
	5.0	R	0814-1	ISO 170/022	n/a	845-014	701.7
	7.0	R	0816-1	ISO 171/016	6847-012	847-016	703.8
	9.0	C	817C-1	ISO 172/019	5848-016	847-018	701.9
	9.0	R	0818-1	ISO 172/021	6848-023	848-018	n/a
	10.0	R	0820-1	ISO 173/017	6848-016	848-016	848-016
	10.0	F	820F-1	ISO 173/015	6848-016	848-016	700.8
	12.0	R	0822-1	ISO 174/020	n/a	848-018	798.10
	10.0	R	0824-1	ISO 173/022	6848-018	848-018	727.10

Many clinicians opt to use Corner Rounded burs for this indication; please refer to the Shoulder or Knife-Edge Margin tab for information on these instruments.

Recommended speed:

 less than 450,000 RPM  less than 300,000 RPM  less than 160,000 RPM  less than 120,000 RPM

Grit:

 R=Regular  C=Coarse  F=Fine
 SC=Supercoarse  SF=Superfine

SHOULDER MARGINS



Figure 5. The shoulder preparation is frequently used for anterior/posterior crown and bridge indications and is characterized by its 90-degree margin.

The labial ceramic butt margin was developed to enhance aesthetics in **porcelain-fused-to-metal crown restorations**. In essence, this margin design consists of a full shoulder on the buccal aspect of the tooth and a beveled shoulder on the lingual side. By creating space for a 2.0mm "cut-back" on the lingual, shoulder porcelain materials could be used on this surface and thereby achieve greater translucency and light transmission through the laboratory fabrication process and delivery.

The least conservative of all margin designs, the full shoulder margin, is produced by a broad, flat-ended tapered or cylindrical diamond bur. This

margin is intended to prepare the tooth such that the gingival floor intersects the axial surface of the tooth at a 90-degree angle. Primary indications for the shoulder margin are **all-ceramic crowns and veneer restorations**.

The width requirements, which range from approximately 0.5mm to 1.0mm for veneer and full-coverage crown restorations, respectively, ensure that the margin will be well defined for use in subsequent laboratory procedures. The completed shoulder margin must be closely adapted to the cavosurface finish line of the preparation in order to ensure the long-term integration of the prosthetic restoration.

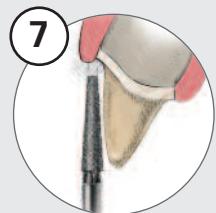
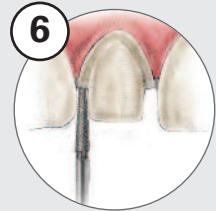


Figure 6. The facial shoulder and lingual beveled margins are rendered with the #0816 and #0845 ROBOT FG DIAMOND, respectively.

Figure 7. The incisal aspect of the tooth is then prepared faciolingually using a #0816 ROBOT FG DIAMOND to achieve two-plane reduction and smooth, rounded line angles for the preparation.

Figure 8. The labial ceramic butt margin is used to improve the esthetics of the porcelain-fused-to-metal restoration.

Product Information and Conversion Table

DESCRIPTION	LENGTH	GRIT	SHOFU	BRASSELER	AXIS NTI	Premier	SS WHITE	
TAPERED CYLINDER (Flat End)								
	7.0	R	0816-1	ISO 171/016	6847-012	847-016	703.8	847-016
TAPERED CYLINDER (Corner Round)								
	4.0	R	0789-1	ISO 544/018	846KR-016	846KR	585.5KR	n/a
	4.0	SF	789V-1	ISO 544/018	846KR-016	846KR	585.5KR	n/a
	5.0	R	0790-1	ISO 544/021	846KR-016	846KR	575.7KR	n/a
	5.0	SF	790V-1	ISO 544/021	846KR-016	846KR	575.7KR	n/a
	7.0	R	0791-1	ISO 545/018	847KR-018	847KR-018	703.8KR	n/a
	7.0	SF	791V-1	ISO 545/018	847KR-018	847KR-018	703.8KR	n/a
	10.0	R	0792-1	ISO 553/019	850KR-014	850KR-014	722.8KR	n/a
	10.0	SF	792V-1	ISO 553/019	850KR-014	850KR-014	722.8KR	n/a
	10.0	R	0793-1	ISO 553/023	850KR-018	850KR-018	588.10KR	n/a
	10.0	SF	793V-1	ISO 553/023	850KR-018	850KR-018	588.10KR	n/a
	3.5	R	0825-1	ISO 544/027	n/a	845KR-018	708.4KR	n/a
	3.5	SF	825V-1	ISO 544/027	n/a	845KR-018	708.4KR	n/a
	3.5	R	0826-1	ISO 544/031	n/a	845KR-025	708.4KR	n/a
	3.5	SF	826V-1	ISO 544/031	n/a	845KR-025	708.4KR	n/a
GUIDE GROOVE CUTTER								
	3.6	R	0896-1	ISO 552/026	834-016	834-016	DC0.3	n/a
	4.0	R	0897-1	ISO 552/036	834A-031	834A-031	DC0.5	n/a

Recommended speed:

	less than 450,000 RPM		less than 300,000 RPM		less than 160,000 RPM		less than 120,000 RPM
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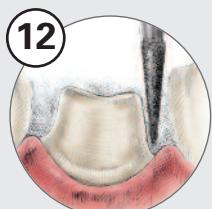
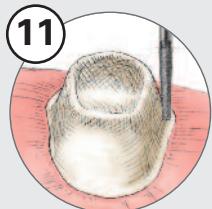
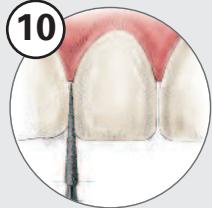
Grit:

	R=Regular		C=Coarse		F=Fine
	SC=Supercoarse		SF=Superfine		

KNIFE-EDGE MARGIN



Figure 9. The knife-edge margin is often useful on the lingual surfaces of mandibular posterior teeth, on those with convex axial surfaces, and on tilted teeth.



For periodontally compromised cases where **cast-metal or resin-veneered crowns** will be placed, the knife-edge margin can be used. While an extremely conservative margin, this design should be used in select instances only. Its narrow axial reduction can fade instead of terminating in a definitive finish line, which makes waxing and casting more challenging. As feasible, this margin should be placed where it can be easily cleaned and kept free of debris by the patient.

Knife-Edge Margins

Figure 10. Preservation of the patient's existing tooth structure is priority with the knife-edge margin design.

Figure 11. It is important that axial reduction yields a definitive finish line during tooth preparation.

Figure 12. Achieved with the use of a #0848 ROBOT FG DIAMOND, the knife-edge margin permits the development of an acute margin.

Recommended speed:			
less than 450,000 RPM	less than 300,000 RPM	less than 160,000 RPM	less than 120,000 RPM
Grit:			
■ R=Regular	■ C=Coarse	■ F=Fine	
■ SC=Supercoarse	■ SF=Superfine		

Product Information and Conversion Table

DESCRIPTION	LENGTH	GRIT	SHOFU	BRASSELER	AXIS NTI	Premier	SS WHITE
TAPERED CYLINDER (Needle)							
	6.0	F	847F-1	ISO 164/014	68852-012	858-014	207.7
	8.0	R	0848-1	ISO 165/013	6858-014	859-014	608.9
	8.0	F	848F-1	ISO 165/012	6858-014	859-014	608.9
	10.0	R	0850-1	ISO 166/016	6859-018	859-016	207.10
	10.0	SC	850X-1	ISO 166/018	6859-018	859-016	207.10
	10.0	F	850F-1	ISO 166/015	6859-018	859-016	207.10
	10.0	R	0852-1	ISO 166/022	6859-021	859-021	209.10
TAPERED CYLINDER (Corner Round)							
	4.0	R	0789-1	ISO 544/018	846KR-016	846KR	585.5KR
	4.0	SF	789V-1	ISO 544/018	846KR-016	846KR	585.5KR
	5.0	R	0790-1	ISO 544/021	846KR-016	846KR	575.7KR
	5.0	SF	790V-1	ISO 544/021	846KR-016	846KR	575.7KR
	7.0	R	0791-1	ISO 545/018	847KR-018	847KR-018	703.8KR
	7.0	SF	791V-1	ISO 545/018	847KR-018	847KR-018	703.8KR
	10.0	R	0792-1	ISO 553/019	850KR-014	850KR-014	722.8KR
	10.0	SF	792V-1	ISO 553/019	850KR-014	850KR-014	722.8KR
	10.0	R	0793-1	ISO 553/023	850KR-018	850KR-018	588.10KR
	10.0	SF	793V-1	ISO 553/023	850KR-018	850KR-018	588.10KR
	3.5	R	0825-1	ISO 544/027	n/a	845KR-018	708.4KR
	3.5	SF	825V-1	ISO 544/027	n/a	845KR-018	708.4KR
	3.5	R	0826-1	ISO 544/031	n/a	845KR-025	708.4KR
	3.5	SF	826V-1	ISO 544/031	n/a	845KR-025	708.4KR
FLAME							
	4.0	SF	841V-1	ISO 243/009	6860-010	889-009	260.3
	7.5	R	0842-1	ISO 249/017	6862-016	863-016	260.8
	7.5	F	842F-1	ISO 249/016	6862-016	863-016	260.8
	6.0	SF	843V-1	ISO 243/012	8860-012	860-012	260.6.5
	9.0	R	0844-1	ISO 249/023	6888-012	888-012	263.8

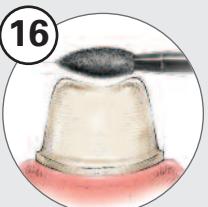
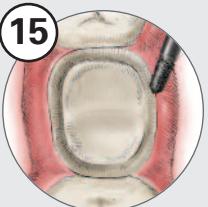
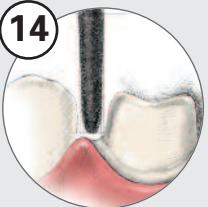
CHAMFER MARGIN



Figure 13. The chamfer margin is popular for various fixed prosthodontic restorations and is characterized by its tapered shape and smooth internal line angles.

Proper treatment planning is necessary to ensure that all aesthetic and functional considerations are addressed in the anticipated margin design. When designed for placement subgingivally, such as for an **all-ceramic crown** (eg, IPS Empress, Procera) or for the facial margin of a PFM crown, restorations with a thinner margin can be more predictably created when a deep chamfer is used.

The chamfer margin also permits the clinician's selected impression material to be applied subgingivally, thus supporting the needs of the laboratory technician. With a deep chamfer margin, scanning devices (eg, **CAD/CAM** technology) can also accurately record the parameters of the prepared tooth and improve the marginal adaptation of the restoration upon delivery and cementation.



Chamfer Margins

Figure 14. The facial reduction (approximately 1.2mm to 1.5mm) of the tooth surface is completed using the bullet-shaped #845C ROBOT FG DIAMOND.

Figure 15. The bullet-shaped rounded cylinder #0846 ROBOT FG DIAMOND is used for more extensive reduction of the labial tooth surface; both the #845C and the #0846 can also be used for gingival curettage.

Figure 16. The occlusal or lingual reduction of 1.0mm to 1.5mm is performed using a football-shaped #0883 ROBOT FG DIAMOND. Rounded internal line angles complete the preparation design.

Product Information and Conversion Table

DESCRIPTION	LENGTH	GRIT	SHOFU	BRASSELER	AXIS NTI	Premier	SS WHITE	
STRAIGHT CYLINDER								
	4.0	R	0800-1	ISO 107/010	6836-012	835-010	514.3	835-008
	4.5	R	0801-1	ISO 109/013	6836-014	835-012	514.4	835-012
	7.0	R	0803-1	ISO 110/015	6837-014	836-014	514.7	837-014
	7.0	R	0805-1	ISO 110/016	6837-016	837-014	515.7	837-016
	7.0	R	0807-1	ISO 110/018	6837-016	837-016	515.8	n/a
	8.0	SF	808V-1	ISO 158/013	837KR-014	837KR-014	586.8	507
STRAIGHT CYLINDER (Round End)								
	8.0	SC	845X-1	ISO 289/016	5885-014	878-012	248.8	878K-014
	8.0	C	845C-1	ISO 289/015	5885-014	878-012	248.8	878K-014
	8.0	R	0846-1	ISO 130/016	6885-014	885-014	250.9	886-016
	8.0	F	846F-1	ISO 130/014	6885-014	885-014	250.9	886-016
TAPERED CYLINDER (Flat End)								
	5.0	R	0830-1	ISO 196/013	n/a	849-010	767.7	855-014
TAPERED CYLINDER (Round End)								
	9.0	R	0831-1	ISO 198/013	6850-014	850-014	781.8	n/a
	7.0	R	0832-1	ISO 222/016	6855-012	855-014	767.9	856-016
	7.0	SC	832X-1	ISO 222/018	6855-012	855-014	767.9	856-016
	7.0	F	832F-1	ISO 222/015	6855-012	855-014	767.9	856-016
	9.0	R	0833-1	ISO 223/017	856-014	856-014	767.8/782.8	755 (1DT)
	9.0	SF	833V-1	ISO 198/018	856-014	856-014	767.8/782.8	755 (1DT)
	10.0	R	0834-1	ISO 193/016	6850-014	850-014	777.8	854-016
	9.0	R	0835-1	ISO 223/018	6850-016	850-018	770.9	856-018
	9.0	SC	835X-1	ISO 223/019	6850-016	850-018	770.9	856-018
	9.0	C	835C-1	ISO 223/018	6850-016	850-018	770.9	856-018
	9.0	F	835F-1	ISO 223/016	6850-016	850-018	770.9	856-018
	9.0	R	0836-1	ISO 198/021	856-016	856-016	770.8/767.8	775/776
	9.0	SF	836V-1	ISO 198/021	8850-016	856-018	784.10	n/a
	9.0	R	0837-1	ISO 223/023	6850-023	856-021	784.10	n/a
	11.5	R	0838-1	ISO 223/023	6850-018	856-021	799.11	854-021
	9.0	R	0839-1	ISO 198/023	856L-018	856L-018	780.9/770.8	765 (1 1/8DT)
	9.0	SF	839V-1	ISO 198/023	856L-018	856L-018	780.9/770.8	765 (1 1/8DT)
FLAME								
	7.5	R	0840-1	ISO 249/014	6862-014	862-010	261.8	n/a
	7.5	SC	840X-1	ISO 249/016	6862-014	862-010	261.8	n/a
	7.5	C	840C-1	ISO 249/015	6862-014	862-010	261.8	n/a
	7.5	F	840F-1	ISO 249/013	6862-014	862-010	261.8	n/a
	7.5	SF	840V-1	ISO 249/012	6862-014	862-010	261.8	n/a

Recommended speed:

less than 450,000 RPM less than 300,000 RPM less than 160,000 RPM less than 120,000 RPM

Grit:

R=Regular	C=Coarse	F=Fine
SC=Supercoarse	SF=Superfine	

MINIMALLY INVASIVE

Note the differences in size between regular shank and minimally invasive shank.

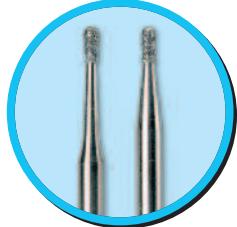
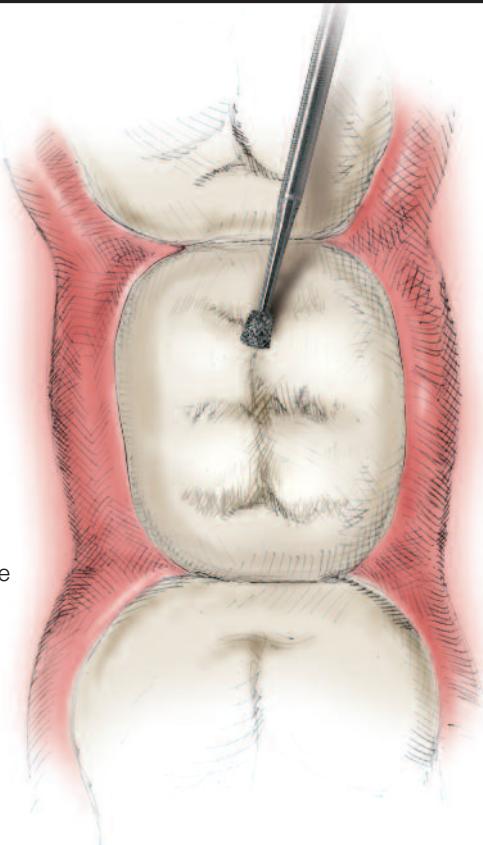


Figure 17. The selection of restorative procedures and materials is increasingly based on the clinician's ability to visualize the treatment site and to create a minimally invasive preparation design.

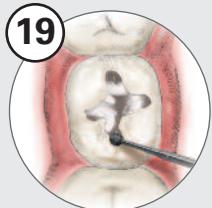
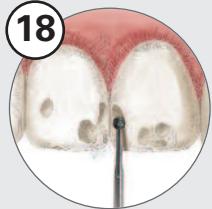


The evolution of adhesive dentistry and restorative materials continues to expand the treatment options available to today's dental professionals. Consequently, tooth preservation is becoming increasingly important as patients are educated on the advantages afforded by maintenance of their natural tooth structures.

Shofu has designed a set of the ROBOT FG DIAMOND for expressed use in minimally invasive therapy.

MI-DIA Conventional Diamond Point

- 20% harder metal shank
- 30% greater flexural strength
- Smaller heads
- Improved visibility and access



Minimally Invasive

Figure 18. For minute discolorations in the anterior, beveled preparations are rendered to aid in the transition of the restorative material.

Figure 19. Minimally invasive preparation with burs such as the #0947 ROBOT Diamond is indicated for fractures in adolescent teeth with posterior amalgam, enamel, composite, or sealant restorations.

Figure 20. Enamel and dentin are removed selectively with the MI ROBOT Diamond Burs to facilitate an environment conducive to resin bonding or similar restorative care.

Recommended speed:			
 less than 450,000 RPM	 less than 300,000 RPM	 less than 160,000 RPM	 less than 120,000 RPM
Grit:			
 R=Regular	 C=Coarse	 F=Fine	
	 SC=Supercoarse		 SF=Superfine

Product Information Table

DESCRIPTION	LENGTH	GRIT	SHOFU
MI-PREPARATION			
	0.7	R	0944-1 ISO 001/009
	0.9	R	0945-1 ISO 001/011
	1.1	R	0946-1 ISO 001/013
	2.0	R	0947-1 ISO 237/008
	2.0	R	0948-1 ISO 237/010
	2.0	R	0949-1 ISO 237/012
FLAME-FINISHING AND POLISHING			
	7.5	F	840F-1 ISO 249/013
	4.0	SF	841V-1 ISO 243/009
	6.0	SF	843V-1 ISO 243/012
BUD-FINISHING AND POLISHING			
	3.4	SF	880V-1 ISO 243/014
	5.0	SF	883V-1 ISO 243/019
ROUND-FINISHING AND POLISHING			
	1.3	SF	874V-1 ISO 001/015

Product Information Table

DESCRIPTION	LENGTH	GRIT	SHOFU
TPE			
	9.0	C	680C-1 ISO 150/010
	9.0	F	680F-1 ISO 150/010
	9.0	C	682C-1 ISO 150/012
	9.0	F	682F-1 ISO 150/012
	6.0	C	682S-1 ISO 150/012
	9.0	C	684C-1 ISO 150/014
	9.0	F	684F-1 ISO 150/014
	6.0	C	684S-1 ISO 150/014
	9.0	C	686C-1 ISO 150/016
	9.0	F	686F-1 ISO 150/016

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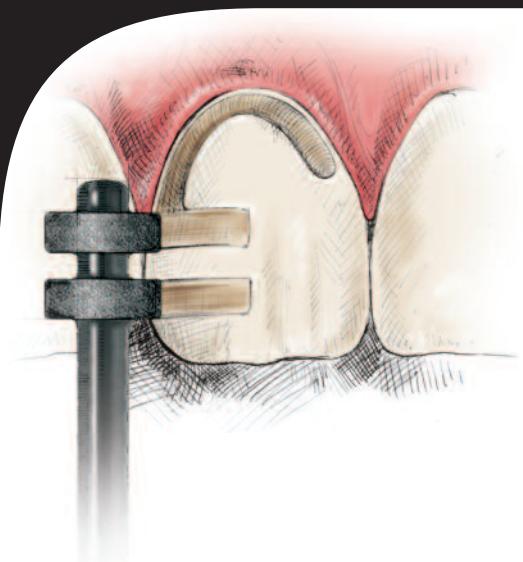
HYBRID POINTS

	1.0	R	0901-3	ISO 001/010
	1.0	R	0903-3	ISO 001/014
	1.6	R	0905-3	ISO 001/018
	1.0	R	0907-3	ISO 010/008
	0.8	R	0909-3	ISO 010/010
	3.0	R	0911-3	ISO 238/008
	1.4	R	0913-3	ISO 237/010
	2.9	R	0915-3	ISO 108/009
	4.0	R	0917-3	ISO 107/010
	4.5	R	0919-3	ISO 107/012
	3.7	R	0921-3	ISO 170/010
	3.7	R	0923-3	ISO 170/012

T&F HYBRID POINTS

	1.6	SF	0925-3	ISO 001/018
	3.0	SF	0927-3	ISO 254/014
	3.5	SF	0929-3	ISO 254/018
	3.0	SF	0931-3	ISO 277/014
	3.5	SF	0933-3	ISO 277/018
	4.0	SF	0935-3	ISO 499/012
	3.7	SF	0937-3	ISO 243/009
	4.2	SF	0939-3	ISO 243/012
	6.0	SF	0941-3	ISO 164/013
	8.0	SF	0943-3	ISO 165/011

MULTIPLE USE



The robotic manufacturing process used to develop the Shofu ROBOT Diamond burs distributes precise amounts of natural diamond particles onto a one-piece, stainless steel shank. In addition to standard grit (R, plain shank), a selection of fine grit (F, red-banded shank), superfine grit (SF, yellow-banded shank), coarse grit (C, green-banded shank) and super-coarse grit (SC, black-banded shank) are available. There are many FG shapes available to suit any clinical indication, including PFM crowns and bridges, all-ceramic crowns and bridges, inlays/onlays, composite restorations, porcelain laminate veneers, as well as minimally invasive restorations.

Product Information and Conversion Table

DESCRIPTION	LENGTH	GRIT	SHOFU	BRASSELER	AXIS NTI	Premier	SS WHITE	
ROUND								
	1.0	R	0872-1	ISO 001/014	6801-014	801-014	115	801-014
	1.2	R	0874-1	ISO 001/016	6801-016	801-016	120	n/a
	1.3	SF	874V-1	ISO 001/015	6801-016	801-016	120	n/a
	1.4	R	0875-1	ISO 001/018	6801-018	801-018	125	801-018
	1.4	F	875F-1	ISO 001/017	6801-018	801-018	125	801-018
	1.8	R	0876-1	ISO 001/022	6801-023	801-021	130	801-021
	1.8	SC	876X-1	ISO 001/024	6801-023	801-021	130	801-021
PEAR								
	4.5	R	0878-1	ISO 237/015	6830L-014	830L-014	362.3	n/a
	4.5	R	0879-1	ISO 237/018	6830L-016	830L-016	364.5	n/a
	6.5	R	0891-1	ISO 237/025	n/a	n/a	365.4	n/a
	5.0	R	0892-1	ISO 237/033	35010-031	830-016	287.4	n/a
	5.0	SC	892X-1	ISO 237/034	35010-031	830-016	287.4	n/a
WHEEL								
	1.4	R	0885-1	ISO 042/044	820-060	818-040	863	820-042
	0.8	R	0886-1	ISO 041/052	818-050	818-035	n/a	n/a
WHEEL (Knife Edge)								
	0.8	R	0888-1	ISO 304/028	825-023	n/a	n/a	n/a
	1.2	R	0890-1	ISO 304/050	825-050	n/a	n/a	n/a
WHEEL (Round End)								
	1.3	R	0894-1	ISO 068/034	909-040	909-037	860	909-035
	1.8	R	0895-1	ISO 068/046	6909-040	909-040	862	909-042
	1.9	SC	895X-1	ISO 068/047	6909-040	909-040	862	909-042
	1.8	C	895C-1	ISO 068/046	6909-040	909-040	862	909-042
EGG								
	4.9	R	0893-1	ISO 277/029	379-023	379-023	n/a	n/a
	4.9	SF	893V-1	ISO 277/029	38010-024	379-023	287.4	n/a
GUIDE GROOVE CUTTER								
	3.6	R	0896-1	ISO 552/026	834-016	834-016	DC0.3	n/a
	4.0	R	0897-1	ISO 552/036	834A-031	834A-031	DC0.5	n/a

Multiple Use

Product Information and Conversion Table, cont'd

DESCRIPTION	LENGTH	GRIT	SHOFU	BRASSELER	AXIS NTI	Premier	SS WHITE	
CORN								
	5.0	R	0898-1	ISO 039/033	6811-033	811-033	234	n/a
	5.0	SC	898X-1	ISO 039/034	6811-033	811-033	234	n/a
	5.7	R	0899-1	ISO 031/035	n/a	n/a	n/a	n/a
	5.7	SF	899V-1	ISO 031/035	n/a	n/a	n/a	n/a
BUD								
	3.0	R	0880-1	ISO 243/017	8368-016	368-016	292.3	n/a
	3.4	SF	880V-1	ISO 243/014	8368-016	368-016	292.3	n/a
	3.5	R	0881-1	ISO 257/022	6368-016	368-018	283.4	868-024
	5.0	R	0883-1	ISO 243/022	6368-023	368-023	285.5	868-024
	5.0	SC	883X-1	ISO 243/023	6368-023	368-023	285.5	868-024
	5.0	C	883C-1	ISO 243/022	6368-023	368-023	285.5	868-024
	5.0	F	883F-1	ISO 243/020	6368-023	368-023	285.5	868-024
	5.0	SF	883V-1	ISO 243/019	6368-023	368-023	285.5	868-024
INVERTED CONE S TYPE								
	1.5	R	0855-1	ISO 032/013	6813-014	813-012	1210	n/a
	2.0	R	0856-1	ISO 032/018	6813-016	813-014	1220	n/a
	2.3	R	0858-1	ISO 032/021	6813-016	813-016	1220	n/a
	2.2	R	0859-1	ISO 019/010	806-009	806-010	n/a	n/a
	3.6	R	0860-1	ISO 019/015	806-016	806-012	n/a	n/a
	3.5	R	0861-1	ISO 019/017	806-018	806-014	1250	806-016
INVERTED CONE								
	1.4	R	0864-1	ISO 012/014	805-016	805-010	310.1	805-016
	1.6	R	0865-1	ISO 012/016	805-018	805-012	315.1.75	n/a
	1.7	R	0866-1	ISO 013/025	805-023	805-018	324.1	n/a
	4.4	R	0868-1	ISO 225/020	807-016	807-016	n/a	n/a
	7.0	R	0870-1	ISO 226/024	807-018	807-018	n/a	n/a

Recommended speed:

less than 450,000 RPM	less than 300,000 RPM	less than 160,000 RPM	less than 120,000 RPM
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Grit:

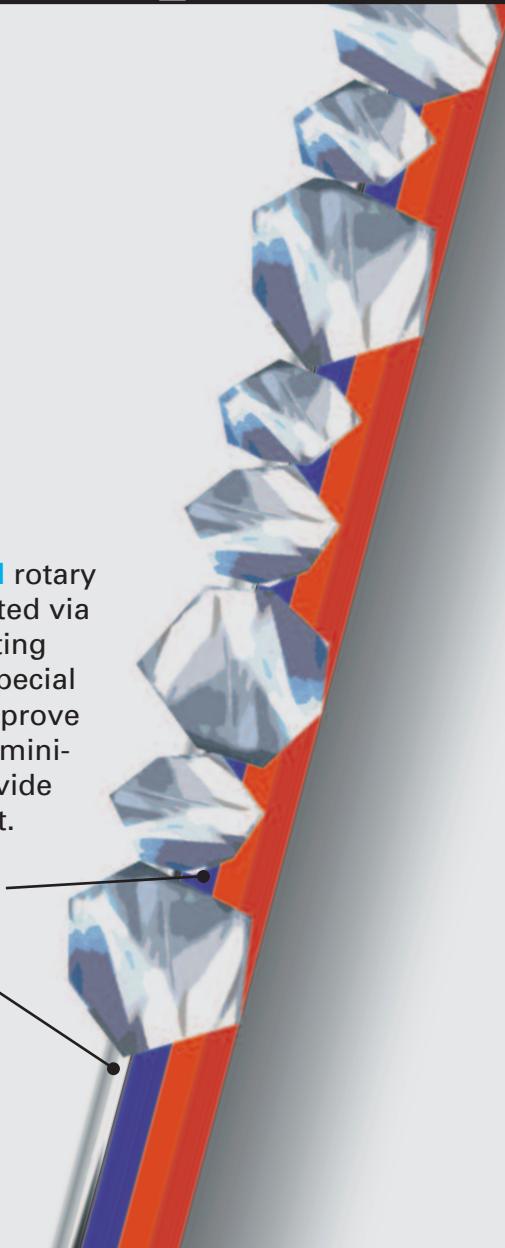
R=Regular	C=Coarse	F=Fine
SC=Supercoarse	SF=Superfine	

Note: Charts are provided for comparison purposes only and may not represent an exact match.

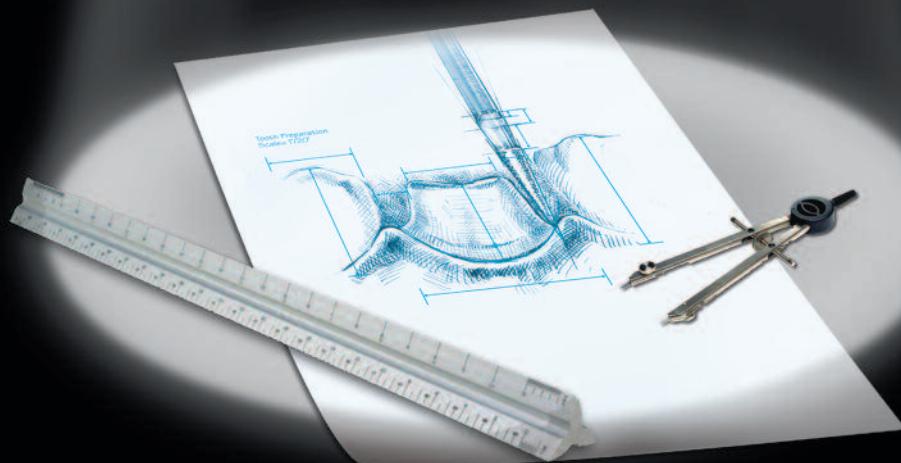
Shofu ROBOT Diamond rotary instruments are fabricated via a proprietary multi-coating technique that uses a special surface treatment to improve their cutting efficiency, minimize clogging, and provide durability in every point.

Diamond-Retaining Layer

Special Coating Layer



Precision-Crafted Equipment



ROBOT Diamond rotary instruments are made in a computer-automated environment that guarantees an even distribution of diamond particles onto a one-piece stainless steel shank that provides smooth, effortless, and efficient cutting.

Excellent clinical rating for:^{*}

- Cutting ability
- Cutting accuracy
- Lack of clogging
- Surface integrity

*Research survey conducted by the ADA and published in the Professional Product Review, Vol. 1, Winter 2006.

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