jota

ORTHODONTIA

Picture by Dr. Daniel Rosa

JOTA SWITZERLAND

INTERPROXIMAL
REDUCTION

DIAMOND BURS

Interproximal reduction is one of the standard techniques in orthodontia. By grinding off the proximal contacts, more space can be created for the teeth. It is now widely accepted that 50% of proximal enamel is the maximum amount that can be removed without risk to the teeth and periodontium. [1,2]

According to Sheridan[3], the potential gain of 6.4 mm of space may be anticipated by enamel removal from five anterior contacts and eight buccal contacts in an arch respectively. Stroud et al.[4] calculated that enamel reduction of mandibular premolars and molars can provide 9.8 mm of extra space.

According to the latest scientific evidence, the appropriate amount should be 0.5 mm per proximal surface for each tooth in the anterior region. In contrast, up to 0.75 mm of the proximal surface can be removed for posterior teeth. Interproximal reduction of the lower incisors should not exceed 0.75 mm at each contact point due to the thinner proximal walls.[5]

Nonetheless, the orthodontist should not underestimate proximal enamel thickness as it varies between different teeth, and no relationship exists between the size and shape of the tooth and the enamel thickness.[6,7,8]

For interproximal reduction, Jota offers diamond burs with thin tips and thin diamond discs for straight handpieces. Also diamond burs with safe end tips prevent the formation of grooves on the proximal walls and protect the gingival margin from injury.

Please note the explanation for the instrument dimensions →

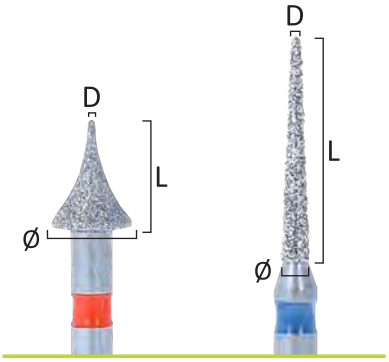

FIGURE	851L.FG.012	857.FG.014	857F.FG.014
REF	806 314 219 524 012	806 314 220 524 014	806 314 220 514 014
Ø mm	1,2	1,4	1,4
D mm	0,6	0,7	0,7
L mm	8,0	10,0	10,0
	5	5	5

FIGURE	889L.FG.009	889L.FG.010
REF	806 314 540 524 009	806 314 540 524 010
Ø mm	0,9	1,0
D mm	0,3	0,3
L mm	3,5	4,0
	5	5

FIGURE	820.FG.016	858.FG.010	858.FG.012	858.FG.014	858.FG.016	858.FGS.010	858.RA.014
REF	806 314 465 524 016	806 314 165 524 010	806 314 165 524 012	806 314 165 524 014	806 314 165 524 016	806 313 165 524 010	806 204 165 524 014
Ø mm	1,6	1,0	1,2	1,4	1,6	1,0	1,4
D mm	0,3	0,3	0,35	0,35	0,35	0,3	0,35
L mm	5,0	8,0	8,0	8,0	8,0	8,0	8,0
	5	5	5	5	5	5	5

FIGURE	859.FG.010	859.FG.012	859.FG.014	859.FG.016	898.FG.010	898.FG.012	898.FG.014
REF	806 314 166 524 010	806 314 166 524 012	806 314 166 524 014	806 314 166 524 016	806 314 164 524 010	806 314 164 524 012	806 314 164 524 014
Ø mm	1,0	1,2	1,4	1,6	1,0	1,2	1,4
D mm	0,25	0,3	0,3	0,35	0,35	0,35	0,4
L mm	10,0	10,0	10,0	10,0	6,0	6,0	6,0
	5	5	5	5	5	5	5

- High-quality natural diamond grit
- Excellent diamond grain coating
- High grinding performance
- Proofed concentricity, therefore, no vibration
- Precise burs diameters allow only the required amount of enamel to be removed
- Thinny tips

FIGURE	889LF.FG.009	889LF.FG.010	890F.FG.010	890LF.FG.008
REF	806 314 540 514 009	806 314 540 514 010	806 314 160 514 010	806 314 699 514 008
Ø mm	0,9	1,0	1,0	0,8
D mm	0,25	0,25	0,25	0,3
L mm	3,5	4,0	3,0	3,0
	5	5	5	5

FIGURE	820F.FG.016	820F.FG.031	858F.FG.010	858F.FG.012	858F.FG.014	858F.FG.016
REF	806 314 465 514 016	806 314 465 514 031	806 314 165 514 010	806 314 165 514 012	806 314 165 514 014	806 314 165 514 016
Ø mm	1,6	3,1	1,0	1,2	1,4	1,6
D mm	0,25	0,3	0,25	0,3	0,3	0,3
L mm	5,0	4,0	8,0	8,0	8,0	8,0
	5	5	5	5	5	5

FIGURE	859F.FG.010	859F.FG.012	859F.FG.014	859F.FG.016	898F.FG.012	898F.FG.014
REF	806 314 166 514 010	806 314 166 514 012	806 314 166 514 014	806 314 166 514 016	806 314 164 514 012	806 314 164 514 014
Ø mm	1,0	1,2	1,4	1,6	1,2	1,4
D mm	0,25	0,25	0,3	0,35	0,3	0,35
L mm	10,0	10,0	10,0	10,0	6,0	6,0
	5	5	5	5	5	5

FIGURE	889LEF.FG.009	890EF.FG.010	890LEF.FG.008	898UF.FG.014	858UF.FG.014	859UF.FG.014	890UF.FG.010
REF	806 314 540 504 009	806 314 160 504 010	806 314 699 504 008	806 314 164 494 014	806 314 165 494 014	806 314 166 494 014	806 314 160 494 010
Ø mm	0,9	1,0	0,8	1,4	1,4	1,4	1,0
D mm	0,2	0,2	0,25	0,2	0,2	0,2	0,25
L mm	3,5	3,0	3,0	6,0	8,0	10,0	3,0
	5	5	5	5	5	5	5

FIGURE	820EF.FG.014	820EF.FG.016	820EF.FG.031	858EF.FG.010	858EF.FG.012	858EF.FG.014
REF	806 314 465 504 014	806 314 465 504 016	806 314 465 504 031	806 314 165 504 010	806 314 165 504 012	806 314 165 504 014
Ø mm	1,4	1,6	3,1	1,0	1,2	1,4
D mm	0,2	0,2	0,3	0,2	0,2	0,2
L mm	5,0	5,0	4,0	8,0	8,0	8,0
	5	5	5	5	5	5

FIGURE	859EF.FG.010	859EF.FG.012	859EF.FG.014	859EF.FG.016	898EF.FG.014
REF	806 314 166 504 010	806 314 166 504 012	806 314 166 504 014	806 314 166 504 016	806 314 164 504 014
Ø mm	1,0	1,2	1,4	1,6	1,4
D mm	0,2	0,25	0,3	0,35	0,2
L mm	10,0	10,0	10,0	10,0	6,0
	5	5	5	5	5

INTERPROXIMAL REDUCTION

- The flexible design allows not only enamel reduction but also contouring
- High quality diamond coating
- Instrument 401D and 947D with holes for better visibility
- Disc diameter 10, 19.0 mm and 22.0 mm
- Thickness from 0,15 to 0,25 mm
- For use with low speed handpieces

DIAMOND DISCS

Important!

Use protection:

- Brass or steel wire or interdental maple to protect interdental tissue
- Tongue and lip retractor or disc guards to protect soft tissue

Recommended rotation speed:

Ø 100 - 15‘000 rpm

Ø 190 - 12‘000 rpm

Ø 220 - 10‘000 rpm

915D

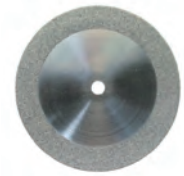

FIGURE	SHANK	REF	Ø			
915D	HP	806 104 355 524			190	220
915DF	HP	806 104 355 514	100	190		
		L mm	0.20	0.20	0.25	0.25
			1	1	1	1

401D

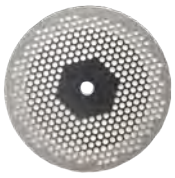

FIGURE	SHANK	REF	
401DF	HP	806 104 400 514	220
		L mm	0.20
			1

914F

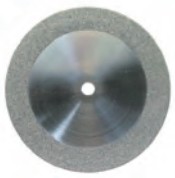

FIGURE	SHANK	REF	
914F	HP	806 104 356 514	220
		L mm	0.15
			1

947D

FIGURE	SHANK	REF	Ø		
947DF	HP	806 104 389 514	190	220	
947DEF	HP	806 104 389 504			220
		L mm	0.20	0.20	0.15
			1	1	1

921D

FIGURE	SHANK	REF	Ø		
921DF	HP	806 104 358 514			220
921DEF	HP	806 900 358 504	190	220	
		L mm	0.15	0.15	0.20
			1	1	1

DEBONDING

Debonding is one of the standard procedures in fixed orthodontics and includes removing brackets and adhesive from the tooth surface. Ideally, after debonding, the tooth's enamel surface should remain intact as before the bonding procedure. But it is almost impossible to preserve intact enamel after brackets because the acid etching of the enamel before bonding already destroys the enamel structure. There are different data on how much damage is done to the enamel after removing brackets. Koprowski et al. showed that the enamel thickness after the orthodontic treatment had decreased by approximately 125 µm.[9]

Surface irregularities and indentations occur regardless of the methods used for debonding. A roughened enamel surface can contribute to bacterial plaque retention, leading to surface staining and inflammation of the gingiva. In addition, bacterial plaque leads to a decrease in pH, which leads to demineralization of the hard tissue and contributes to the development of tooth decay. Adhesives must therefore be removed using methods that cause minimal damage to the enamel.

Various methods can be used to remove adhesive residue from the enamel surface, including **high and low-speed tungsten carbide burs, laser application, abrasive discs, arkansas stones, diamond burs, ultrasound, and air abrasion**. It has been reported that the ultrasound method is not suitable for removing all adhesive residues.[15] Additionally, it has been shown in many studies that multi-blade **carbide burs cause the most minor damage** to the enamel. In contrast, diamond burs[16] and laser application are not recommended because they produced the roughest finished enamel surface.[10,11,12,13,14,17] Furthermore, tungsten carbide burs remove adhesive **faster and more effectively** than abrasive discs, arkansas stone, ultrasonic tools, hand tools, rubber, or composite burs.[20] Thus, removing adhesive with tungsten carbide drills, mainly with 12 or 20 flutes, remains the gold standard for debonding as it creates a satisfactory finished surface.[10,24]

In scientific studies, it has been proven that **carbide burs at low speed** are **the safest** method for removing adhesive residue after debonding orthodontic brackets. [17,18,19] After removing adhesive residue with a carbide bur at high speeds results in a certain degree of enamel damage, manifested by increased surface roughness. [17]

Based on scientific evidence, **Jota** has developed a **three-stage protocol** to remove adhesive residue safely. After the brackets are removed with special pliers, a composite remains on the enamel surface. The significant excess of composite or adhesive is removed with **carbide burs or arkansas stones** in the first stage. Arkansas stones create as smooth surfaces as carbides at lower cost with slightly increased process time.[23]

An essential difference from the standard techniques is that a very **thin layer of adhesive must be left** on the enamel. [28] The reason for this is that sharp edges of carbides burs can leave tiny grooves.[21] According to the literature, we also do not recommend using carbide drills and arkansas stones at high speeds. This allows for better control of the adhesive removal process and keeps the tooth enamel intact.

JOTA PROTOCOL

3-STEP SOLUTION

STEP ONE

ADHESIVE REMOVING

STEP TWO

PRE-POLISHING

STEP THREE

HIGH-GLOSS POLISHING

STEP ONE

ADHESIVE REMOVING

- Controlled removal of bulk adhesive after brackets debonding
- Shapes for all tooth surfaces
- Safe end burs for gingiva protection
- Smooth surface after removal of the adhesive
- High grinding performance
- Twist Finisher CD379 and CD134 run highly smoothly and cut much finer due to the unique cutting geometry. They leave no grooves on the surface and achieve perfect, extremely smooth working results.

CARBIDES

The Jota assortment includes different shapes of instruments for all tooth surfaces. According to the literature, the most susceptible areas to trauma during debonding are the cervical and proximal enamel. [25] Therefore, Jota has developed instruments with a **safe end** that allow you to work in the cervical areas and keep the enamel and gingival margin intact.

Recommended rotation speed:

20‘000 rpm - 50‘000 rpm

LABIAL SURFACE
FG INSTRUMENTS

Fine burs:
8-12 blades-without ring or orange ring

Extra fine burs:
16-20 blades-yellow ring

Ultra fine burs:
30 blades-white ring

FIGURE	C48LF.FG.012	C48LU.FG.012
REF	500 314 249 042 012	500 314 249 032 012
Ø mm	1,2	1,2
L mm	8,0	8,0
	5	5

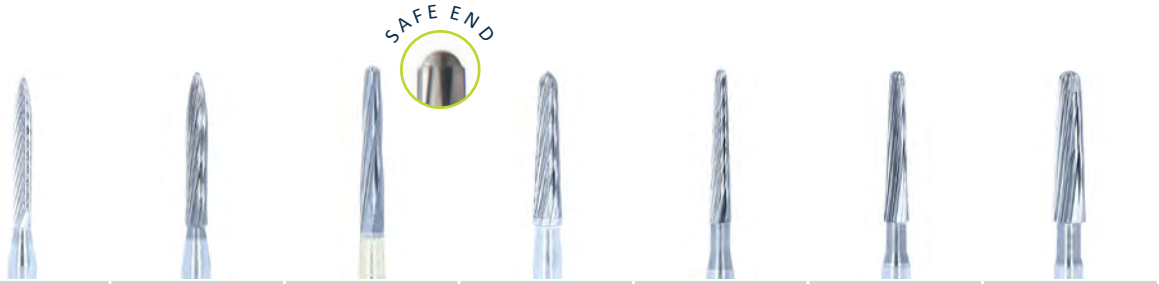

FIGURE	C48L.FG.010	C48L.FG.012	C152.FGL.014	C244K.FG.016	C375R.FG.012	C375R.FG.014	C375R.FG.018
REF	500 314 249 072 010	500 314 249 072 012	500 315 210 295 014	500 314 298 072 016	500 314 198 072 012	500 314 198 072 014	500 314 198 072 018
Ø mm	1,0	1,2	1,4	1,6	1,2	1,4	1,8
L mm	8,0	8,0	9,0	8,0	8,0	8,0	8,0
	5	5	5	5	5	5	5

Instruments C375R.FG.012 or C23R.FG.012 can be used to remove the adhesive around the perimeter of the ceramic bracket and create grooves on the cervical and incisal edges of the bracket. These grooves are necessary to secure the bracket pliers or cutters better and safely remove the bracket from the tooth surface.

RA INSTRUMENTS

FIGURE	C48L.RA.012	C152.RAL.014	C244K.RA.021
REF	500 204 249 072 012	500 205 210 295 014	500 204 298 072 021
Ø mm	1,2	1,4	2,1
L mm	8,0	9,0	8,0
	5	5	5

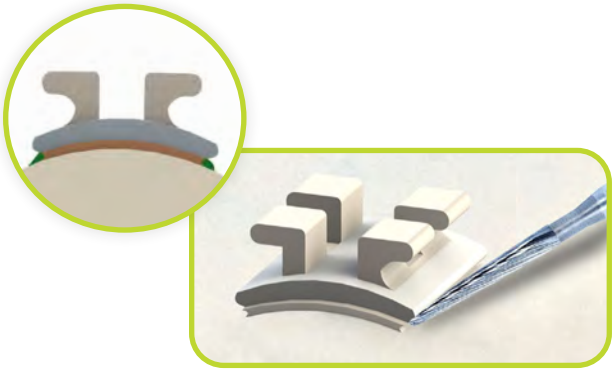


Photo by Dr. Daniel Rosa

Remove most of the resin under water cooling and turning off the water cooling when most of the composite is removed so that successful differentiation between enamel and composite is possible, thereby preventing damage to enamel.[27]

INTERDENTAL AND CLOSE TO GINGIVA REGIONS

FG INSTRUMENTS

FIGURE	C7L.FG.008	C7L.FG.010	C21R.FG.010	C21R.FG.012	C23R.FG.012	CD134.FG.014	C152.FGL.014
REF	500 314 238 006 008	500 314 238 006 010	500 314 137 006 010	500 314 137 006 012	500 314 194 006 012	500 314 164 072 014	500 315 210 295 014
Ø mm	0,8	1,0	1,0	1,2	1,6	1,4	1,8
L mm	3,6	4,1	4,1	4,1	4,1	6,0	9,0
	5	5	5	5	5	5	5

RA INSTRUMENTS

FIGURE	CD134F.FG.014	CD134U.FG.014	C23R.RA.012	C23R.RA.014	C23R.RA.016	C152.RAL.014
REF	500 314 164 042 014	500 314 164 032 014	500 204 194 006 012	500 204 194 006 014	500 204 194 006 016	500 205 210 295 014
Ø mm	1,4	1,4	1,2	1,4	1,6	1,4
L mm	6,0	6,0	4,1	4,5	4,5	9,0
	5	5	5	5	5	5

PALATAL AND LINGUAL SURFACES
FG INSTRUMENTS

FIGURE	C379.FG.018	C379.FG.023	CD379.FG.018	CD379.FG.023	C44E.FG.014	C44E.FG.023	C274U.FG.016
REF	500 314 277 072 018	500 314 277 072 023	500 314 277 972 018	500 314 277 972 023	500 314 499 072 014	500 314 499 072 023	500 314 274 032 016
Ø mm	1,8	2,3	1,8	2,3	1,4	2,3	1,6
L mm	3,5	4,2	3,5	4,2	3,3	3,8	3,7
	5	5	5	5	5	5	5

FIGURE	C379F.FG.018	C379U.FG.018	C379F.FG.023	C379U.FG.023	CD379F.FG.018	CD379U.FG.018	CD379F.FG.023	CD379U.FG.023
REF	500 314 277 042 018	500 314 277 032 018	500 314 277 042 023	500 314 277 032023	500 314 277 942 018	500 314 277 932 018	500 314 277 942 023	500 314 277 932 023
Ø mm	1,8	1,8	2,3	2,3	1,8	1,8	2,3	2,3
L mm	3,5	3,5	4,2	4,2	3,5	3,5	4,2	4,2
	5	5	5	5	5	5	5	5

RA INSTRUMENTS

FIGURE	C379.RA.018	C379.RA.023	C44.RA.023	C274.RA.016
REF	500 204 277 072 018	500 204 277 072 023	500 204 499 072 023	500 204 274 072 016
Ø mm	1,8	2,3	2,3	1,6
L mm	3,5	4,2	3,8	3,7
	5	5	5	5

STEP ONE

ADHESIVE REMOVING

- Smoothing out irregularities
- High grinding performance
- The more economical solution to carbide burs
- The surface after smoothing is comparable to carbide burs [23]

ARKANSAS STONE

Recommended rotation speed:
RA: 15‘000 rpm - 25‘000 rpm / max. 30‘000 rpm
FG: 80‘000 rpm - 100‘000 rpm / max. 120‘000 rpm

ARKANSAS STONES
FG & RA INSTRUMENTS

MATCH CODE	601	638	645	649	660
SHANK	FG | RA	FG | RA	FG | RA	FG | RA	FG | RA
Ø mm	030	025	028	025	025
L mm	3,0	6,0	7,0	6,0	7,0
	5	5	5	5	5

MATCH CODE	661	662	666	6172	6198	6298
SHANK	FG | RA	FG | RA	FG | RA	FG | RA	FG | RA	FG | RA
Ø mm	025	030	025	023	023	023
L mm	7,0	6,0	6,5	8,0	8,0	8,0
	5	5	5	5	5	5

Remove most of the resin under water cooling and turning off the water cooling when most of the composite is removed so that successful differentiation between enamel and composite is possible, thereby preventing damage to enamel.[27]

STEP TWO

PRE-POLISHING

- Reduce costs due to long service-life
- Pre-polish enamel surface
- Are less destructive than the most popular tungsten carbide burs [22,26]
- Leave the smoothest and most predictable surfaces [22,26]
- No risk of damage to the dental enamel[22,26]
- Reusable and sterilizable
- Very easy to use

ADHESIVE RESIDUE REMOVERS

The remaining thin layer of adhesive is removed with a specially designed **adhesive remover** in the **second step**. The adhesive remover is a glass matrix stiff rotary polisher, made of epoxy resin and glass, and does not damage tooth enamel. It has been proved that adhesive residue remover is the safest than tungsten carbide bur or Shofu One Gloss.[22,26] Using this remover alone can be time-consuming. Therefore, to shorten the procedure, we recommend not skipping the first step if there are significant adhesive residues. Adhesive remover is available in four different forms.

Recommended rotation speed:

5‘000 rpm - 7‘000 rpm / max. 20‘000 rpm

9360

FIGURE	SHANK	REF	Ø
9360	RA	635 204 030 544	060
		L mm	7,5
			5

9361

FIGURE	SHANK	REF	Ø
9361	RA	635 204 243 544	055
		L mm	9,0
			5

9362

FIGURE	SHANK	REF	Ø
9362	RA	635 204 307 544	100
		L mm	0,7
			5

9363

FIGURE	SHANK	REF	Ø
9363	RA	635 204 297 544	034
		L mm	7,5
			5

STEP THREE

HIGH-GLOSS POLISHING

- Contains micro diamond grit
- High-gloss polishing in one step
- Applicable without polishing paste
- No aerosol are created
- No risk of damage to the dental enamel
- Reusable and sterilizable
- Extraordinary durability, very economic
- Swivels: one instrument for every tooth surface, significant time saving
- Small Swivel 9837.RA.110 for small children's teeth

DIAMOND POLISHERS

To create a smooth tooth surface in the **third step**, Jota recommends using diamond polishers **JOTA EASY**, which create a very smooth enamel surface. There are 6 shapes available in the assortment. In addition to the standard shapes, we recommend using **Swivels**, which are more durable and can be used on all tooth surfaces. A significant advantage of these diamond polishers is that the **polishing paste is not needed** for polishing. Therefore **no aerosols** are created, and the paste is not dispersed to all sides. In the pictures right, you can see photos after using Jota debonding protocol. You can also see the effectiveness of the method in a video on YouTube.

Recommended rotation speed:

3'000 rpm - 8'000 rpm / max. 20'000 rpm

9831

FIGURE	SHANK	REF	Ø
9831	RA	803 204 243 502	030
		L mm	6,0
			2

9832

FIGURE	SHANK	REF	Ø
9832	RA	803 204 030 502	060
		L mm	6,5
			2

9833

FIGURE	SHANK	REF	Ø
9833	RA	803 204 304 502	100
		L mm	0,7
			2

9834

FIGURE	SHANK	REF	Ø
9834	RA	803 204 243 502	040
		L mm	6,0
			2

9837

FIGURE	SHANK	REF	Ø
9837	RA	803 204 543 503	140
		L mm	1,6
			2

9837

NEW PRODUCT

FIGURE	SHANK	REF	Ø
9837	RA	803 204 543 503	110
		L mm	1,6
			2

KITS

- Instruments for all tooth surfaces
- Effective and quick removal of adhesive
- Without damage to enamel
- Burs C152 with a safety tip
- Smooth surface after polishing
- Only one polisher shape for all surfaces

ORTHODONTIC KIT FG 1389

FIGURE	REF	MATCH	ROTATION SPEED
	500314298072016	C244K.FG.016	20.000 - 50.000
	500314499072014	C44E.FG.014	20.000 - 50.000
	500314249072012	C48L.FG.012	20.000 - 50.000
	500314277072018	C379.FG.018	20.000 - 50.000
	500314277072023	C379.FG.023	20.000 - 50.000
	500314194006012	C23R.FG.012	20.000 - 50.000
	635204297544034	9363.RA.034	7.000
	635204307544100	9362.RA.100	7.000

Play video

Watch our Video and learn all about the Orthodontic Kits on the Jota Youtube Channel.

ORTHODONTIC KIT RA 1390

FIGURE	REF	MATCH	ROTATION SPEED
	500204277072023	C379.RA.023	20.000 - 50.000
	500204194006012	C23R.RA.012	20.000 - 50.000
	500204249072012	C48L.RA.012	20.000 - 50.000
	500204277072018	C379.RA.018	20.000 - 50.000
	500205210295014	C152.RAL.014	20.000 - 50.000
	635204297544034	9363.RA.034	7.000
	635204307544100	9362.RA.100	7.000
	803204543503110	9837.RA.110	3.000 - 8.000

ACRYL DEVICES

FINISHING

- Excellent cutting efficiency
- Red-Ring cutters produce very smooth surfaces
- Instrument C251QX with special toothing for thermoforming plastics - clear aliners
- Extraordinary durability
- Smooth run

CARBIDE CUTTERS

Term explanations:

C - Normal Cut
CX - X-Cut
CQ - Cross Cut
QX - Special Cut

FIND MORE SHAPES IN
THE JOTA MAIN CATALOGUE!

ADJUSTING AND SMOOTHING
HP INSTRUMENTS

FIGURE	CX75G.HP.060	CX79G.HP.040	CX79G.HP.045	CX79G.HP.060	CX251G.HP.060
REF	500 104 260 220 060	500 104 194 220 040	500 104 194 220 045	500 104 194 220 060	500 104 274 220 060
Ø	60	40	45	60	60
L mm	12,0	14,2	12,7	12,7	14,7
	1	1	1	1	1
ROTATION SPEED	35.000	50.000	50.000	35.000	20.000

FIGURE	C71.HP.010	CX23.HP.023	C251QX.HP.060	CQ75.HP.060	CQ79.HP.040	CQ251.HP.060
REF	500 104 001 175 010	500 104 199 190 023	500 104 274 176 060	500 104 260 176 060	500 104 194 176 040	500 104 274 176 060
Ø	41	23	60	60	40	60
L mm	1,0	11,5	14,5	12,0	14,2	14,7
	1	1	1	1	1	1
ROTATION SPEED	50.000	50.000	60.000	35.000	50.000	35.000

FIGURE	CX23MF.HP.014	CX23F.HP.023	CX251F.HP.060	CX75F.HP.060	CQ79F.HP.040	CQ251F.HP.060
REF	500 104 196 140 014	500 104 199 140 023	500 104 274 140 060	500 104 260 140 060	500 104 194 134 040	500 104 274 134 060
Ø	14	23	60	60	40	60
L mm	4,8	11,5	14,7	12,0	14,2	14,7
	1	1	1	1	1	1
ROTATION SPEED	50.000	50.000	35.000	35.000	50.000	35.000

FORM CUTTERS

ACRYLIC VACUUM

- Used to quickly cut off thermoplastic splints from the plaster or plastic model
- Ideal for shaping transparent vacuum devices
- Instrument 231 in single piece stainless steel design

C290

FIGURE	SHANK	REF	Ø
C290	HP	500 104 170 377	012
		L mm	4,2
			2
		ROTATION SPEED	50.000

C515

FIGURE	SHANK	REF	Ø
C515	HP	500 104 467 211	023
		L mm	11
			2
		ROTATION SPEED	50.000

C21

FIGURE	SHANK	REF	Ø
C21	HP	500 104 107 006	014
		L mm	4,5
			5
		ROTATION SPEED	50.000

231 STEEL INSTRUMENT

NEW PRODUCT

FIGURE	SHANK	REF	Ø
231	HP	310 104 045 171	100
		L mm	0,5
			1
		ROTATION SPEED	8.000

POLISHERS

SILICONE

- Ideal for finishing, smoothing and polishing of acrylic devices
- Sterilizable
- Various shapes for different applications
- Polishers with silicon carbide grit

MATERIAL REMOVAL

FIGURE	9571G.HP.100	9572G.HP.100	9573G.HP.150	9574G.HP.055
REF	658 104 300 533 100	658 104 275 533 100	658 104 201 533 150	658 104 243 533 055
Ø	100	100	150	055
L mm	20,0	22,0	17,0	16,0
ROTATION SPEED	5.000 - 7.000	5.000 - 7.000	5.000 - 7.000	5.000 - 7.000
	5	5	5	5

SMOOTHING

FIGURE	9571M.HP.100	9572M.HP.100	9573M.HP.150	9574M.HP.055
REF	658 104 300 523 100	658 104 275 523 100	658 104 201 523 150	658 104 243 523 055
Ø	100	100	150	055
L mm	20,0	22,0	17,0	16,0
ROTATION SPEED	5.000 - 7.000	5.000 - 7.000	5.000 - 7.000	5.000 - 7.000
	5	5	5	5

POLISHING

FIGURE	9571F.HP.100	9572F.HP.100	9573F.HP.150	9574F.HP.055
REF	658 104 300 513 100	658 104 275 513 100	658 104 201 513 150	658 104 243 513 055
Ø	100	100	150	055
L mm	20,0	22,0	17,0	16,0
ROTATION SPEED	5.000 - 7.000	5.000 - 7.000	5.000 - 7.000	5.000 - 7.000
	5	5	5	5

POLISHERS

FOR PRE-POLISHING

- Instrument 9160 is used for pre-polishing of acrylic devices
- Instrument 1147 is suitable for plastics and thermoplastics
- Pre-mounted on a mandrel for perfect balance
- For use without polishing paste
- Open-pored structure therefore low heat development
- Highly flexible for finishing and polishing of contoured and curved vacuum devices

9160 Swivel

FIGURE	SHANK	REF	Ø
9160	HP	652 104 546 503	140
		L mm	1,6
			2
		ROTATION SPEED	7.000 - 12.000

9160 Swivel

FIGURE	SHANK	REF	Ø
9160	HP	652 104 546 503	260
		L mm	1,6
			2
		ROTATION SPEED	7.000 - 12.000

FINISHING AND POLISHING

ACRYLICS AND THERMOPLASTIC VACUUM FORMED MATERIALS

1147M

FIGURE	SHANK	REF	Ø
1147M	HP	030 104 045 003	250
		L mm	1,0
			5
		ROTATION SPEED	10‘000

1147F

FIGURE	SHANK	REF	Ø
1147F	HP	030 104 045 001	250
		L mm	1,0
			5
		ROTATION SPEED	10‘000

DIAMOND POLISHERS

FOR HIGH-GLOSS POLISHING

- Contains micro diamond grit
- Complete high-gloss polishing in one step
- Applicable without polishing paste
- Suitable for polishing of all plastics materials

9835

FIGURE	SHANK	REF	Ø
9835	HP	803 104 292 502	050
		L mm	16
			2
		ROTATION SPEED	3.000 - 10.000

9840

Swivel

FIGURE	SHANK	REF	Ø	
9840	HP	803 104 543 503	140	170
		L mm	1,6	1,6
			2	2
		ROTATION SPEED	7.000 - 12.000	7.000 - 12.000

9840

Swivel

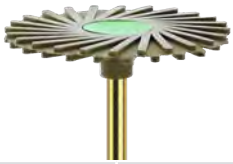

FIGURE	SHANK	REF	Ø
9840	HP	803 104 543 503	260
		L mm	1,6
			1
		ROTATION SPEED	7.000 - 12.000

Swivels:

- Flexible polishing lamellas enable optimal adaptation to any surface structure
- Significant time saving
- Extraordinary durability, very economic

REFERENCES

1. Pinheiro MLR. Interproximal Enamel Reduction. World J Orthod 2002; 3: 223-32
2. Yashwant V, Aniruddh & Arayambath, Balamani. (2016). Proximal Stripping and the Apprehension to Implement it in Contemporary Orthodontics: A Review. 18. 10.17354/cr/2016/228.
3. Sheridan JJ. Air-rotor stripping.J Clin Orthod 1985; 19 :43-59.
4. Stroud JL, English J, Buschang PH.Enamel thickness of the poste-rior dentition: its implications for nonextraction treatment. Angle Orthod 1998; 68: 141-6.
5. Chee D, Ren C, Yang Y. An overview on interproximal enamel reduction. Dent Open J 2014;1:14-8
6. Livas C, Jongsma AC, Ren Y. Enamel reduction techniques in orthodontics: a literature review. The Open Dentistry Journal. 2013 ;7:146-151.
7. Hall NE, Lindauer SJ, Tüfekçi E, Shroff B.Predictors of variation in mandibular incisor enamel thickness. J Am Dent Assoc 2007; 138: 809-15.
8. Macha Ade C, Vellini-Ferreira F, Scavone-Junior H, Ferreira RI.Mesiodistal width and proximal enamelthickness of maxillary first bicuspids. Braz Oral Res 2010; 24: 58-63.
9. Koprowski R, Machoy M, Woźniak K, Wróbel Z. Automatic method of analysis of OCT images in the assessment of the tooth enamel surface after orthodontic treatment with fixed braces. Biomed Eng Online. 2014 Apr 22;13:48.
10. Y. H. Hong, K. K. K. Lew, Quantitative and qualitative assessment of enamel surface following five composite removal methods after bracket debonding, European Journal of Orthodontics, Volume 17, Issue 2, April 1995, Pages 121–128, https://doi.org/10.1093/ejo/17.2.121
11. Ferreira JTL, Borsatto MC, Saraiva MCP, Matsumoto MAN, Torres CP, Romano FL. Evaluation of Enamel Roughness in Vitro After Orthodontic Bracket Debonding Using Different Methods of Residual Adhesive Removal. Turk J Orthod. 2020 Mar 1;33(1):43-51. doi: 10.5152/TurkJOrthod.2020.19016. PMID: 32284898; PMCID: PMC7138237.
12. Zarrinnia K, Eid NM, Kehoe MJ. The effect of different debonding techniques on the enamel surface: An in vitro qualitative study. Am J Orthod Dentofacial Orthop. 1995;108:284–93.
13. Miksic M, Slaj M, Mestrovic S. Stereomicroscope analysis of enamel surface after orthodontic bracket debonding. Coll Antropol. 2003;27(Suppl 2):83–9.
14. Kim SS, Park WK, Son WS, Ahn HS, Ro JH, Kim YD. Enamel surface evaluation after removal of orthodontic composite remnants by intraoral sandblasting: A 3-dimensional surface profilometry study. Am J Orthod Dentofacial Orthop. 2007;132:71–6.
15. Cardoso LA, Valdrighi HC, Vedovello Filho M, Correr AB. Effect of adhesive remnant removal on enamel topography after bracket debonding. Dental Press J Orthod. 2014;19:105–12.
16. Fan XC, Chen L, Huang XF. Effects of various debonding and adhesive clearance methods on enamel surface: an in vitro study. BMC Oral Health. 2017;17(1):58. Published 2017 Feb 27. doi:10.1186/s12903-017-0349-6
17. Ahrari F, Akbari M, Akbari J, Dabiri G. Enamel surface roughness after debonding of orthodontic brackets and various clean-up techniques. J Dent (Tehran). 2013;10(1):82-93.
18. Zachrisson BU, Arthun J. Enamel surface appearance after various debonding techniques. Am J Orthod. 1979 Feb;75(2):121–7.
19. Hannah CM, Smith GA. The surface finish of composite restorative materials. Br Dent J. 1973 Dec 4;135(11):483–8.
20. Mohebi S, Shafiee HA, Ameli N. Evaluation of enamel surface roughness after orthodontic bracket debonding with atomic force microscopy. Am J Orthod Dentofacial Orthop. 2017 Mar;151(3):521-527.
21. Ireland AJ, Hosein I, Sherriff M. EnamelLoss at Bond-Up, Debondand Clean-Up Following the Use of a Conventional Light-Cured Compositeand a Resin-Modifiedglass Polyalkenoate Cement. Eur J Orthod. 2005;27:413–9.
22. Janiszewska-Olszowska J, Tandecka K, Szatkiewicz T, Stępień P, Sporniak-Tutak K, Grocholewicz K. Three-dimensional analysis of enamel surface alteration resulting from orthodontic clean-up-comparison of three different tools. BMC Oral Health. 2015 Nov 18;15(1):146. doi: 10.1186/s12903-015-0131-6. PMID: 26581876; PMCID: PMC4652395.
23. Mahdavie N N, Manasse R J, Viana G, Evans C A, Bedran-Russo A B. Enamel scarring by debonding burs: an SEM and profilometric study. J Clin Orthod. 2014;48(01):14–21.
24. Webb B J, Koch J, Hagan J L, Ballard R W, Armbruster P C. Enamel surface roughness of preferred debonding and polishing protocols. J Orthod. 2016;43(01):39–46.
25. Schuler FS, van Waes H. SEM-evaluation of enamel surfaces after removal of fixed orthodontic appliances. Am J Dent. 2003 Dec;16(6):390-4. PMID: 15002953.
26. Janiszewska-Olszowska J, Tomkowski R, Tandecka K, et al. Effect of orthodontic debonding and residual adhesive removal on 3D enamel microroughness. PeerJ. 2016;4:e2558. Published 2016 Oct 11. doi:10.7717/peerj.2558
27. Bicakci AA, Kocoglu-Altan B, Celik-Ozenci C, Tekcan M, Babacan H, Gungör E. Histopathologic evaluation of pulpal tissue response to various adhesive cleanup techniques. Am J Orthod Dentofacial Orthop. 2010 Jul;138(1):12.e1-7; discussion 12-3.
28. Sigilião LC, Marquezan M, Elias CN, Ruellas AC, Sant'Anna EF. Efficiency of different protocols for enamel clean-up after bracket debonding: an in vitro study. Dental Press J Orthod. 2015;20(5):78-85.

SUBSCRIBE OUR CHANNELS

Play video

Follow

Like

Connect

Jota Händler:

Zertifiziertes QM-System mdc ISO 13485

CE 0483

xxxxxx.xxxx.xxxx - 07/2021