Milling Strategy

Machine iCore 450i									
Tool Description	Machining Type	Diameter	Corner Radius	Angle	Total Length	Cutting Length	Feedrate (mm/mi)	Plunge Rate (mm/mi)	Spindle RPM (rev/min)
Interna Rough<Slope 2><Portion1/2>	Pocketing	2.5	1.25	0	20	0	800	800	25000
Crown Rough<Dinco.2>	Pocketing	2.5	1.25	0	20	0	800	800	25000
External Rough<Slope2>	Pocketing	2.5	1.25	0	20	0	800	800	25000
Internal Rough<Slope 2><Portion 2/2>	Pocketing	2.5	1.25	0	20	0	800	800	25000
Iternal Finishing<SPI Ral 0/2/0.05><Spiral 2/0/0.05	3D Profile Pocketing	0.92	0.46	0	14	0	800	800	25000
External Finishing	Z-Level Profiling	1	0.5	0	14	0	800	800	2500
Bridge Finishing<IOF-0.3	Z-Level Profiling	1	0.5	0	14	0	800	800	2500
Internal Restmill0.6mm	Pencil Milling	0.6	0.3	0	2	0	300	300	2500
// Engraving0.6mm<tyeseL1,2,9,>	Pencil Milling	0.6	0.3	0	2	0	300	300	2500

Wet Milling Strategy

Flat Milling System Parameters

Milling Parameters:

	Drilling d 4	Drilling d 3	Drilling d 2	Drilling d 1	Drill. Extra d ?	Scrubbing d 4u / d 4n	Scrubbing d 3u / d 3n	Scrubbing d 2u / d 2n	Scrubbing d 1u / d 1n	Scrub.Extra d ?
Milling Diameter	2.0000	2.0000	1.0000	1.0000	1	2.0000	2.0000	1.0000	1.0000	1
Downfeed (x):	0.3500	0.2000	0.0300	0.0300	0.1000	0.3500	0.1000	0.1000	0.1000	0.1000
Downfeed (y):	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
Downfeed (z):	0.7500	0.2000	0.0300	0.0300	0.1000	0.7500	0.5000	0.3800	0.4100	0.1000
Speed:	15.0	15.0	10.0	10.0	15.0	15.0	15.0	30.0	30.0	20.0
Revolution :	20000	20000	40000	45000	30000	20000	20000	40000	45000	45000

Cooler:

Allowance: 0.0000

Allowance2: 0.0000

Material Length(L): 18.0000

Material High (H) : 16.0000

Material Wide (B) : 12.0000

Down Decrement: 1.0000

Ball/Torus/Flat:

Terrace Drill 0.0

Minimal Milling R devide d4 5.0 d3 5.0 d2 5.0 d1 5.0

Fine Enable (Extra Milling) Drilling: 1 Scrubbing: 1

BarCode: EHIN3100101701/$1QYBYBB4:

Save Load

Default Load

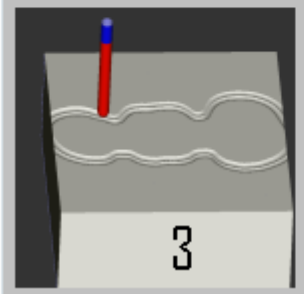
StartUp Save

StartUp Load

Custom Save

CustomLoad

Last Good



Perfect Manual Consc

3. Axes Method

Console Wide: 3.0

Membran thick: 2.0

Slot Angle: 3.0 Groud Wide: 0.3

Material: ZrO2 TZP HIP

Diamond:

Tool Test Meter: 100.00

Milling sharp: 6.0000

VHF Milling Strategy

- Use only diamond burs compatible with VHF milling machines.
- 24k RPM for the first two burs –
    - First Bur: 3.0mm
    - Second Bur: 2.0mm
- The final pass is done at 21k RPM with a 1.0mm bur

Roland® Milling Units

CAD Parameter : Roland GO2							26-Jan-15
							Shofu Inc.
Tool Diameter	Process	X&Y direction milling speed [mm/min]	Z direction milling speed [mm/min]	Spindle speed [rpm]	X&Y direction Path Interval [mm]	Z direction Cut-in amount [mm]	Finish margin [mm]
2	Rough milling	900	450	25000	0.4	0.4	0.1
1	Finish milling	700	350	28000	0.15	0.15	0
0.6	Rest milling	700	350	28000	0.03	0.03	0

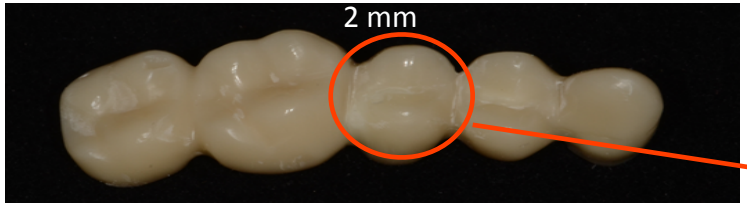
Chemical & Technical Data

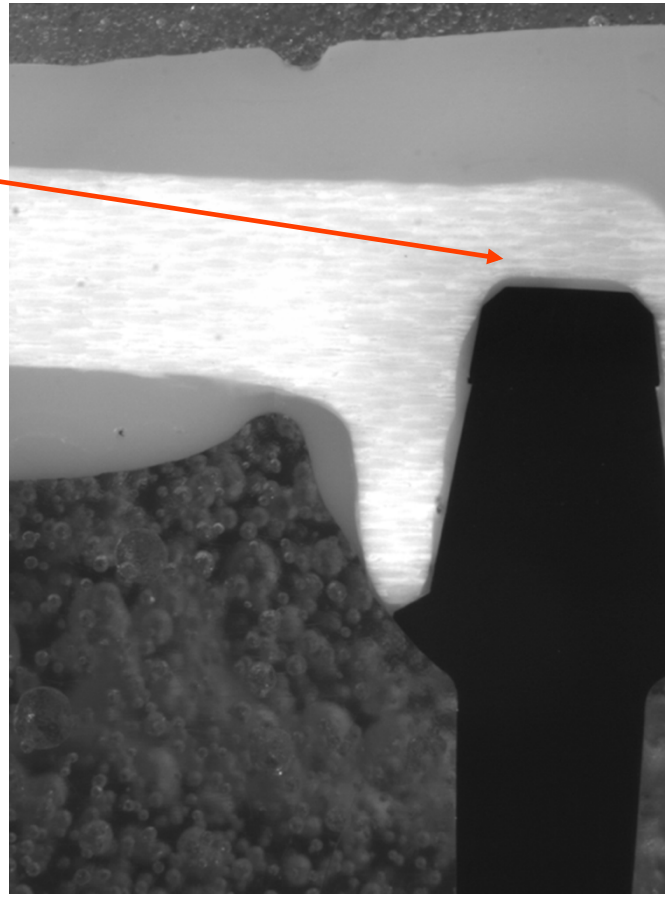
Descriptive Info	Bicon TRINIA	
Intended Use – including the indications for use	Fiber Disks and Blocks (TRINIA) are milling blanks composed of a multi-directional interlacing of fiberglass and resin in several layers. They are intended to be used solely by dental technicians and dentists for making copings, substructures, removable dentures, or frameworks for permanent and transitional anterior or posterior crowns, bridgework, and substructures that can be for either cemented or uncemented restorations (e.g. telescopic restorations).	
Composition of Materials – the chemical composition of the device	Glass fiber (50-60%) Modified epoxy resin (40-50%)	
Physical Properties – e.g., compressive strength, flexural strength, particle size range, depth of cure	Flexural strength	393 MPa (N/mm^2)
	Flexural strain at max stress	2.7%
	Flexural modulus of elasticity	18.8 GPa
	Tensile strength	169 MPa (N/mm^2)
	Tensile modulus of elasticity	18.8 Gpa
	Compression strength Parallel to laminate	347 MPa (N/mm^2)
	Compression strength Perpendicular to laminate	339 MPa (N/mm^2)
	Charpy impact	26 KJ/m^2
	Rockwell hardness (R scale)	125
	Barcol hardness	63
	Shore hardness	92.5
	Density / Specific gravity	1.68 g/cm^3
	Water absorption	0.03%
	Short beam shear	49 N/mm^2
FDA-Recognized Standards	ISO 10993-3	Non-mutagenic
	ISO 10993-5	Does not induce cytotoxicity
	ISO 10993-10	Non-irritant
	ISO 10993-11	No adverse physical symptoms after injection

Material Dimension Guidelines

Indications	Minimum wall thickness in mm (After milling, thickness can be reduced to 0.5mm)
Insisal/Occlusal Wall Thickness 2 Units	1.0
Incisal/Occlusal Wall Thickness Single Unit	0.7
Insisal/Occlusal Wall Thickness 3 Unit Anterior Bridge	1.0
Incisal/Occlusal Wall Thickness 4 Unit Bridge with 2 Pontics	1.0
Insisal/Occlusal Wall Thickness **Fixed on Short Bar**	2.0
Circular Wall Thickness 2 Units	0.7
Circular Wall Thickness Single Unit	0.7
Circular Wall Thickness 3 Unit Anterior Bridge	0.7
Circular Wall Thickness 4 Unit Bridge with 2 Pontics	0.7
Connector Area Anterior Bridge Framework with 1 Pontic	**7mm²**
Connector Area Anterior Bridge Framework with 2 Pontic	**7mm²**
Connector Area Posterior Bridge Framework with 1 Pontic	**7mm²**
Connector Area Posterior Bridge Framework with 2 Pontic	**7mm²**
Connector Area Cantilever	**7mm²**

2mm of wall height has to be provided





Material Tool and Finishing

- For finishing after milling, use a good cross cut carbide bur and then use a silicone rubber wheel Pacific Abrasive the black wheel.

- Pre-polish - The type **G** wheel leaves a very smooth surface on the material. Apply light pressure and use low speed. Apply heavier pressure for deeper scratches. No need to use compound to achieve satin finish.
  High Shine - The type **GF** is the final step in the polishing process to be used on scratch free surfaces. The **GF** leaves a final high shine finish without using any rouge. Apply light pressure at low speeds.