
R&D Medical Products
Pressing Dental®
San Marino Republic
CAD CAM division

PRESSING DENTAL

R&D Medical Products
Pressing Dental
San Marino Republic

The Pressing Dental company is located in Repubblica di San Marino, our company has a good partnership with many University, dentists and dental technicians inside and outside our country. We are therefore focused on current and future developments of the dental environment.

Since 1998, the Pressing Dental company has a UNI EN ISO 13485 certification to build class IIa and IIb medical devices. With over 40 years experience and competence in the field, constanly looking for new materials and new innovative technical solutions, our aim is to replace acrylic resins and metallic materials with advanced technopolymers.

We develop and push activities and training courses about dental topics by making available our know-how and our strong experience.

Our company builds CAD CAM devices, own produced implantoprosthesis (True Max Implant System – TMI) and a wide line of products for INJECTION.

The Pressing Dental is a cooperating portner for 3D printer production with DLP technology, furthermore the company produces resins for UVA prototyping.

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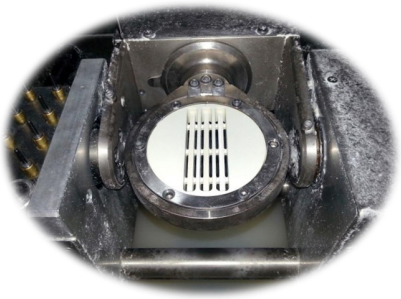
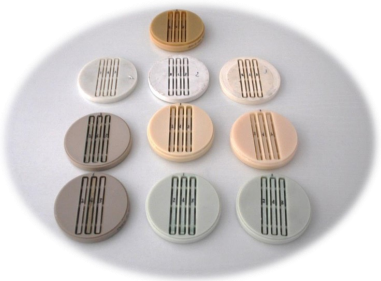
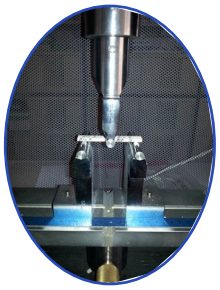
In order to provide useful information and to allow you to have technical data the most accurate and reliable, we inform you that all specimens needed to conduct the test mechanics were obtained by milling of "commercial" disks and data are referred to an average of three tests.

The tests were performed by the head of quality assurance at the onsite Pressing Dental laboratory.

Tools used:
Electronic Dynamometer Mod. Sun 5 matricola V 748
in accordance with standard UNIEN 10002-3 ISO 376
Certificate of calibration LAT 017N, 138-2013
Durometer: Galileo Mod. DIGI RS Matricola 5BCF675
Blocco di durezza certificato di taratura N° 981781







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JOLLY 5 ASSI

COMPACT, PRECISE ECONOMIC

JOLLY the professional mini center for processing is a modular equipment with 4 or 5 axis, created to meet the requirement of the most ambitious practices and milling centres.

It can carry out every type of processing on the following materials:

Waxes, Zirconium, Pmma, Resins loaded with fibres, Compound materials, Disilicate, Preformed pre titanium milling

The mechanical features, designed to ensure maximum reliability, are entirely made of carbon steel and aluminium.

Axis come with crews and recirculating precision ball slide guides.

Mechanization is based on latest-generaton digital microstepper and the numerical controil is and ISO Standard.

Tools are measured automatically by means of a digital pre-setting.

Since the machine may process various type of materials, it is equipped with a lubro-refrigerant installation and a 8-position automatic tool changin system.

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A concentrate of tecnology in dental technician service

Mechanical characteristics *JOLLY MODELL 5 AXIS*

X Axle travel (mm)	110	Digital presetting tool lenght	serial
Y Axle travel (mm)	110	Lubro-refrigeration device	serial
Z Axle travel (mm)	80	Single-phase power supply	220 V
A Axle travel (°)	continuum	Pneumatic supply (dried air)	min. 6 bar
C Axle travel	(°)± 20°	Weight in kg (ca)	110
Electro-spindle Jager 1 kw	500 W nominale	Width mm	650
Max speed electro mandrel	50.000	Length mm	770
Precision of positioning on axis (mm)	±0.01	Height mm	740
Automatic tool changing– system position	8	CAD Mod. SUM	Included
Computer	excluded	Setup for suction (optional)	Included

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SCANNER FREE&EASY SMILE EGS

MODELLO DSCAN 5

egsolutions

Scanner binocular model structured light, delivered with the software, monitors and computer integrated open operating system with ability to send STL to all CAM systems

DSCAN 5 DENTAL CAD Model

Scanner structured light model
Plate with tilting movement
PC Integrated Monitor HD 21 pollici
Including: Software modeling Dental Cad
Implants and bar management module

Power supply	110/220V 50/60Hz
File Format :	OPEN STL , OBJ, ASC, PLY
Accuracy	0,015 mm
Scanner size (cm)	25x45x45
Wheight (Kg)	14,5
USB interface	usb 2.0
Videocamera	2

Ability to include the software EXOCAD
Assistance even remotely
Free software update for 12 months

R&D Medical Products
Pressing Dental

SCANNER FREE&EASY SMILE

MODELLO OPEN TECH 3D

OPENTECH3D exocad

Scanner binocular model structured light, delivered with the software, monitors and computer open operating system with ability to send STL to all CAM systems

Model OPEN TECH 3D

Software modeling Exocad	
Implants and bar management module	
Power supply	110/220V 50/60Hz
File Format :	OPEN STL , OBJ, OFF, PLY
Accuracy (µm)	5
Repeatability(µm)	2
Resolution (µm)	5
Scanning time arch	20 sec c.a.
Scanner size (cm)	60x60x35
Weight (Kg)	15
USB Interface	usb2/usb3
Telecamere	2
Assistance even remotely	

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SMILE CAM Castable in PMMA

Use: castable structures

Cod. Smile Green : h. 12, 14, 16, 18,

Cod. Transparent : 00752 H.18

Cod. Master Model: H 12, 14, 16, 18, 20, 22

The disc **Smile Cam Castable** is produced entirely with acrylic polymer, the material is suitable for the production of structures or substructures destined for the melting process.

The elements made can be modified or further finished with a micromotor; in this case, use a low speed 10,000 / 12,000, in order to avoid possible distortions due to overheating of the material.
In case of necessity, it is possible to make additions / changes using a cold-free resin pigments.
The product is stable and stronger for all verification and control tests.
During the melting procedure, to facilitate the evaporation process of the resin is necessary to perform a slow ascent of the cylinder 10 ° C. min
The green disc provides better color vision contrast with the model, ensuring greater control over the precision / adaptation.

The disc **Smile Master Model** born as a requirement for the production of master models.
The material, based on polyurethane, offers an excellent mechanical strength and a good dimensional stability, which make it particularly suitable for the production of models to be archived, which unlike the models made with photosensitive resins, does not undergo dimensional changes with time .

The product is totally castable, therefore, by adopting the same precautions of the product Smile Cam castable, also the Master Model can be used for the production of substructures intended for the melting process

Working phase:
Use the standard method for PMMA/Composit during the milling operations.

We recommend to use a single end cutting edge for a better surface finish.

The milling can be carried out both with dry or lubro-refrigerant method.

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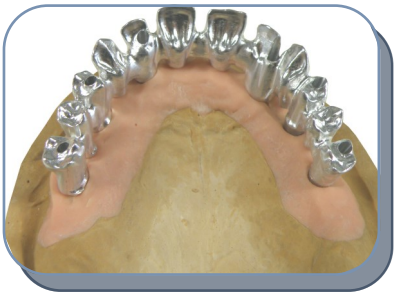


SMILE Test (product without CE)
Special aluminum alloy for precision test
Caratteristiche: easy workability
Cod. Smile test h. 12 -14 -16 -18 mm
Heights 20 –22 - 24 -26 –28 ecc.. on request

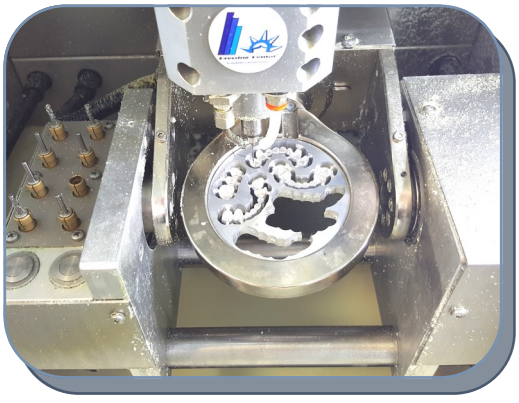
The disc **Smile Test** is made with a particular formulation of aluminum, to allow a better workability. The product is particularly suitable for verification tests on complicated structures or on bars before proceeding to the final product

Working phase:

Use the standard method for Zirconio during the milling operations

We recommend to use tungsten cutters with 2 cutting for a better surface finish

The milling can be carried out only with lubro-refrigerant method



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SMILE CAM RX Medical Device classe II a

Radiopaque disc PMMA base

Use: surgical guides Cod. 00752 h. 18 R

Colore : White

Cam disc Smile Rx is produced with acrylic polymer loaded with specific fillers to make it visible to X-rays

The product is specifically formulated for the production of surgical guides.

The elements made can be modified or further finished with a micromotor; in this case, use a low speed 10,000 / 12,000, in order to avoid possible distortions due to overheating of the material.

In case of need you can make additions / changes using a cold conventional resin.

The product is stable and stronger for all verification and control tests.

Working phase:

Use the standard method for PMMA/Composit during the milling operations.

We recommend to use a single end cutting edge for a better surface finish.

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TITAN SMILE CAM

Medical titanium grade 5
Available on request also in grade 2
Cod.T.gr.5 .98/8 -98/10 -98/12 -98/14 -98/16 –98/18
They are available on request up to h. 40 mm

LINEA TITAN SMILE
Classification : Medical devices Classe IIa Direttiva 93/42

Titanium disk, the product is the same that is used for the production of abutment and final structures for long-term (five years)
The product is available in discs Ø 98,5mm
NB. The specifications listed below to provide an example refer to the specific casting lot.
Eg. Technical data Item BU 87266d
Reference standards: ASTM 136-08 / ISO 5832-3

Technical features		Unit	values
FIELD STRESS		0,2% MPA	829
STRENGH		MPA	899
ELONGATION		5.65 A %	16.5
ELONGATION		E4D%	19.0
REDUCTION OF AREA		MPA	47
Chemical Analysis			
C %	Rif. Massimo	Max.0,8	0.011
B %			< 0.001
OT	Rif. Massimo	MAX	<0.20
O+2N%	Rif. Massimo	0.25	/
Y %			<0.001
OE %			<0.05
AL %	Rif. Massimo	5.5 -6.5	6.20
V %	Rif. Massimo	3.5 - 4.5	4.30
N %	Rif. Massimo	0.05	0.0045
FE %	Rif. Massimo	0.25	0.16
H %	Rif. Massimo	0.01	0.0050
O %	Rif. Massimo	0.13	0.13
TI %			Resto

Workin phase:

Use the standard method for metals during the milling operations.

The milling can be carried out only with lubro-refrigerant method

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SMILE PEEK

Use: Structure, substructures, bars

Colors: light beige

Cod : 00720 h. 14, 16, 20 mm

SMILE PEEK Classification : Medical devices Classe IIa Direttiva 93/42

Smile Peek is a polymer based on a polyetheretherketone, devoid of metallic oxides and monomer. Its elasticity is comparable to the bone tissue and, unlike thermoplastic materials, do not produce galvanic effects and does not induce thermal conductivity. As the TSM Acetal Dental, Smile Peek also has the ability to absorb / dissipate the compression masticatory forces, simulating somehow periodontal effect.

The product, thanks to their features, guarantee a long term use.

In the planning step it is good to consider the thickness of the edges and the connections, to avoid possible problems of "detachment" due to the elastic modulus difference between the product Smile Peek and the aesthetic coating.

Technical features	Test method	Unit	values
TENSILE TEST MAXIMUM LOAD	ISO 527	N	5095
BREAKING LOAD	ISO 527	N	4108
MAXIMUM STRESS FOR MM²	ISO 527	MPA	100.
BREAKING STRESS FOR MM²	ISO 527	MPA	81
MAXIMUM ELONGATION IN %	ISO 527	MPA	95.
ELONGATION AT BREAKIN %	ISO 527	MPA	117
TENSILE TEST MAXIMUM LOAD	ISO 178	N	468
BREAKING LOAD	ISO 178	N	377
MAXIMUM STRESS FOR MM²	ISO 178	MPA	178
BREAKING STRESS PER MM²	ISO 178	MPA	143
STRAIN AT BREAK	ISO 178	MPA	12
ELASTIC MODULE (%) 0.25	ISO 178	MPA	3805
HARDNESS ROCKWELL SCALA M	ISO 2039/2	HRD	74.1
HARDNESS SHORE D	DIN 53505	Shore D	88
ABSORPTION	ISO 10477	ug/mm ³	1.7
SOLUBILITY	ISO 10477	ug/mm³	0.1

minimum thickness
Occlusal> 1.mm
Lingual > 07mm

Area Connections
Incisors group > 12 mm²
Posterior teeth > 14 mm²

Dental bridge Max
2 missing element

Working phase:

Use the standard method for PMMA/ Composit during the milling operations.

We recommend to use a single end cutting edge for a better surface finish.

The milling can be carried out both with dry or lubro-refrigerant method.

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PLASTIC STEEL

Tecnopolymer loaded with fibers

Use: stuctures, substructures, stump pins

Colors: Monochromatic

Cod. 00702– 9815 h. 15/16 mm

PLASTIC STEEL Classification : Medical devices Classe IIa Direttiva 93/42

Plastic Steel is a polymer micro filled with a high percentage of glass fibers, in order to significantly increase its mechanical resistance to bending.

The product has been specially formulated to offer a viable alternative to metal and it is advisable to pay attention to the thickness of the edges and to the diameter of the connections, to prevent possible bending and detachments of the finishing above

It also advised to be careful when using the central part of the disc, as the data collected at this point, for the particular type of product so loaded, may be reduced by about 15% than below.

The product must be fully integrated into the structure above avoiding contact with biological parts.

Plastic Steel can be used for long-term structures (five years). If the product is to be coated with acrylic or composite resins is available the product "Acecril", which allows you to get a physical and chemical bonding.

Technical features	Test method	Unit	values
TENSILE TEST	ISO 527	N	4251
BREAKING LOAD	ISO 527	N	3427
MAXIMUM STRESS FOR MM²	ISO 527	MPA	87.
BREAKING STRESS FOR MM²	ISO 527	MPA	70
MAXIMUM ELONGATION IN %	ISO 527	MPA	39
ELONGATION AT BREAK IN %	ISO 527	MPA	39
TENSILE TEST	ISO 178	N	584
BREAKING LOAD	ISO 178	N	470
MAXIMUM STRESS PER MM²	ISO 178	MPA	227
BREAKING STRESS PER MM²	ISO 178	MPA	183
STRAIN AT BREAK	ISO 178	MPA	2.52
ELASTIC MODULE (%) 0.25	ISO 178	MPA	10129
HARDNESS ROCKWELL Scala L	ISO 2039/2	HRA	75
HARDNESS SHORE D	DIN 53505	Shore D	94
ABSORPTION	ISO 10477	ug/mm ³	11.4
SOLUBILITY	ISO 10477	ug/mm³	0.26

Minimum thickness

Occlusal > 1.mm

Lingual > 07mm

Area Connections

Incisors group > 10 mm²

Posterior teeth > 14 mm²

Dental bridge Max

Working phase:

Use the standard method for PMMA/ Composit during the milling operations.

We recommend to use a single end cutting edge for a better surface finish.

The milling can be carried out both with dry or lubro-refrigerant method.

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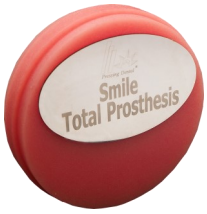

LINEA SMILE CAM Classification : Medical devices Classe IIa Direttiva 93/42

Micro– Filled discs with the same abrasion resistance of an 3 layers acrilyc tooth

The product, thanks to their features, guarantee a long term use (5 years)

SMILE CAM Enamel
Provisional elements pre-filings
Cod. 00753- H20 - S2 enamel 50
Cod. 00753- H20 - S4 enamel 100%
Dimensioni: H.20mm

SMILE CAM Monochromatic
Crown and dental bridge
Colors: A1, B1, A3, B1
H. 16, 20 mm

SMILE CAM Total Prosthesis
Total/partial dentures
Cod. 00753h –25 mm R1

Technical Features	Test method	Unit	Values
TENSILE TEST MAXIMUM LOAD	ISO 527	N	2428.
BREAKING LOAD	ISO 527	N	1958
MAXIMUM STRESS FOR MM²	ISO 527	MPA	48
BREAKING STRESS FOR MM²	ISO 527	MPA	39
MAXIMUM ELONGATION IN %	ISO 527	MPA	19
IELONGATION AT BREAK IN %	ISO 527	MPA	19
TENSILE TEST MAXIMUM LOAD	ISO 178	N	161
BREAKING LOAD	ISO 178	N	129
MAXIMUM STRESS FOR MM²	ISO 178	MPA	70
BREAKING STRESS FOR MM²	ISO 178	MPA	57
(ELASTIC MODULE %) 0.25	ISO 178	MPA	2591
HARDNESS ROCKWELL Scala M	ISO 2039/2	HRD	64.9
HARDNESS SHORE D	DIN 53505	Shore D	84
ABSORPTION	ISO 10477	ug/mm ³	8.2
SOLUBILITY	ISO 10477	ug/mm³	0.2
RESIDUAL MONOMER	GC	Mg/kg	83.3

Minimum thickness
Occlusal > 1.mm
Lingual > 07mm

Area Connections
Incisors group > 10 mm²
Posterior teeth > 15 mm²

Dental bridge
1 missing element

Working phase:

Use the standard method for PMMA/ Composit during the milling operations.

We recommend to use a single end cutting edge for a better surface finish.

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LINEA SMILE CAM MULTYLAYERS

Classification : Medical devices Classe IIa Direttiva 93/42

Micro– Filled discs with the same abrasion resistance of an 3 layers acrilyc tooth.
The product, thanks to their features, guarantee a long term use (5 years)

Multilayers 5 layers

Crown and dental bridge Colors rif. Vita 5 layers

Cod. 00763, A1, A2, A3, B3, C2, D2

H. 16 and 20 mm

Technical Features	Test Method	Unit	values
TENSILE TEST MAXIMUM LOAD	ISO 527	N	2539
BREAKING LOAD	ISO 527	N	2047
MAXIMUM STRESS FOR MM²	ISO 527	MPA	50
BREAKING STRESS FOR MM²	ISO 527	MPA	40
MAXIMUM ELONGATION IN %	ISO 527	MPA	20
ELONGATION AT BREAK IN %	ISO 527	MPA	20
TENSILE TEST	ISO 178	N	203
BREAKING LOAD	ISO 178	N	164
MAXIMUM STRESS FOR MM²	ISO 178	MPA	80
BREAKING STRESS FOR MM²	ISO 178	MPA	64
ELASTIC MODULE (%) 0.25	ISO 178	MPA	2740
STRAIN AT BREAK %	ISO 178	MPA	3.6
HARDNESS ROCKWELL Scala M	ISO 2039/2	HRD	64.9
HARDNESS SHORE D	DIN 53505	Shore D	84
ABSORPTION	ISO 10477	ug/mm ³	8.2
SOLUBILITY	ISO 10477	ug/mm³	0.2
RESIDUAL MONOMER	GC	mg/kg	83.3

Minimum thickness

Occlusal > 1.mm
Lingual > 07mm

Area Connections

Incisors group > 10 mm²
Posterior teeth > 15 mm²

Dental bridge

1 Missing Element

Working phase:

Use the standard method for PMMA/ Composit during the milling operations.

We recommend to use a single end cutting edge for a better surface finish.

The milling can be carried out both with dry or lubro-refrigerant method.

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TSM ACETAL DENTAL

COD. A, A1 , A2 , A3 , B1 , B2 , B3,
H. 16 , 20 MM

COD. 00568-9825 ROSA 25 MM

TSM ACETAL DENTAL Classification : Medical devices Classe IIa Direttiva 93/42

Indications: Partial dentures including hooks, space maintainers, bridges, bars, substructures.
The Technopolymer TSM is a compound with unique characteristics, since, according to the shape and thickness allows to alternate rigidity and elasticity depending on the specific requirements.
The excellent mechanical properties and the self-lubricating effect makes possible its use in direct contact with metal parts (eg. Attack), also decreasing the friction and abrasion.
You may want to pay attention to the thickness of the edges and to the diameter of the connections in the case of use for substructures, in order to to avoid possible drops and detachments of the aesthetic part above.
In the milling step it is important to consider that the central part of the disc, due to production treatments, can be of about 15% less of the mechanical data reported below.
If the product is to be coated with acrylic or composite resins is available "Acecril" product, which allows you to get a physical and chemical bonding.
TSM ACETAL DENTAL can be used for long-term applications (five years).

Technical features	Test method	Unit	values
TENSILE TEST MAXIMUM LOAD	ISO 527	N	3274
BREAKING LOAD	ISO 527	N	2639
STRESS MASSIMO FOR MM²	ISO 527	MPA	65
BREAKING STRESS FOR MM²	ISO 527	MPA	52
MAXIMUM ELONGATION IN %	ISO 527	MPA	63
ELONGATION AT BREAK IN %	ISO 527	MPA	63
TENSILE TEST MAXIMUM LOAD	ISO 178	N	294
BREAKING LOAD	ISO 178	N	237
STRESS MASSIMO PER MM²	ISO 178	MPA	114
BREAKING STRESS FOR MM²	ISO 178	MPA	92
STRAIN AT BREAK	ISO 178	MPA	10
ELASTIC MODULE (%) 0.25	ISO 178	MPA	3526
HARDNESS ROCKWELL SCALA M	ISO 2039/2	HRD	62
HARDNESS SHORE D	DIN 53505	Shore D	84
ABSORPTION	ISO 10477	ug/mm ³	4.9
SOLUBILITY	ISO 10477	ug/mm³	< 0.1

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Minimum thickness	Area Connections	Dental bridge
Occlusal > 1.mm	Incisors group > 10 mm²	2 missing elements

Working phase:
Use the standard method for PMMA/Composit during the milling operations.
We recommend to use a single end cutting edge for a better surface finish.
The milling can be carried out both with dry or lubro-refrigerant method

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LINEA M.H.C. Millable Hybrid Composite

MONOCHROME : COD. 00450 H.20 A1 / A2 /A3

BICROMATICO : COD. 00450 L P H25 A1 + ROSA
A2 + ROSA

MULTILAYER : H.20 COLORI: A2 - A3 - B2 - C2

Indications: Recommended for crown, dental bridge, Toronto Bridge

M.H.C. is a polymer acrylic based and nano or micro filled, due to its meccanics and estetics features, it is truly a unique of its kind. Thanks to the high flexural strenght, the M.H.C. has been designed to produce single material structure. The achrylic share shows two advantages: superficial adaptation and the possibility to add composites matherial, the result is a good cohesion between the components.
Difference: the main difference between "white" monochromatic/bichromatic discs and the one "white/pink" (see below) is that the first one is less flex resistant than the second, the "white/pink" discs are more recommended for Toronto bridge structure.
The M.H.C. discs, thanks to their features, guarantee a long term use (5 years) and the same abrasive-strength than an artificial tooth.

TECHNICAL FEATURES	Test method	Unit	values
TENSILE TEST MAXIMUM LOAD	ISO 527	N	1109
BREAKING LOAD	ISO 527	N	894
MAXIMUM STRESS FOR MM²	ISO 527	MPA	24
BREAKING STRESS FOR MM²	ISO 527	MPA	20
MAXIMUM ELONGATION IN %	ISO 527	MPA	17
ELONGATION AT BREAK IN %	ISO 527	MPA	17
TENSILE TEST MAXIMUM LOAD	ISO 178	N	272
BREAKING LOAD	ISO 178	N	219
MAXIMUM STRESS FOR MM²	ISO 178	MPA	111
BREAKING STRESS PER MM²	ISO 178	MPA	89
STRAIN AT BREAK	ISO 178	MPA	PINK 4.41 – WHITE 2.25
ELASTIC MODULE (%) 0.25	ISO 178	MPA	PINK 3521 - WHITE 3932
HARDNESS ROCKWELL Scala M	ISO 2039/2	HRD	69.9
HARDNESS SHORE D	DIN 53505	Shore D	88
ABSORPTION	ISO 10477	ug/mm ³	9.9
SOLUBILITY	ISO 10477	ug/mm³	1.5
Migration MMA a 4 and 10 days	GC	ug/cm2	0.192 - 0.208

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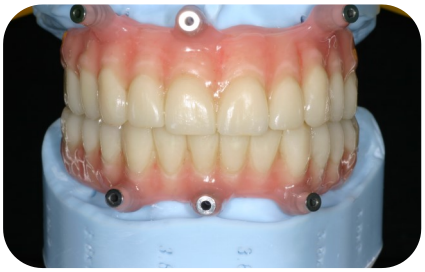

Two -Tone

Multilayer

Monochrome

Monochome

Minimum thickness	Area connections	Dental bridge
Occlusal > 1.mm Lingual > 07mm	MHC. B /Pink Incisor group > 10 mm² Diatoric > 15 mm² MHC /White Incisor group> 12 mm² Diatoric> 16 mm²	2 Missing Element 1 Missing element

Working phase:

Use the standard method for PMMA/Composit during the milling operations.

We recommend to use a single end cutting edge for a better surface finish.

The milling can be carried out both with dry or lubro-refrigerant method.

R&D Medical Products
Pressing Dental
San Marino Republic

- PRODUCTION
- TRAINING
- SALE
- AFTER SALES ASSISTANCE

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