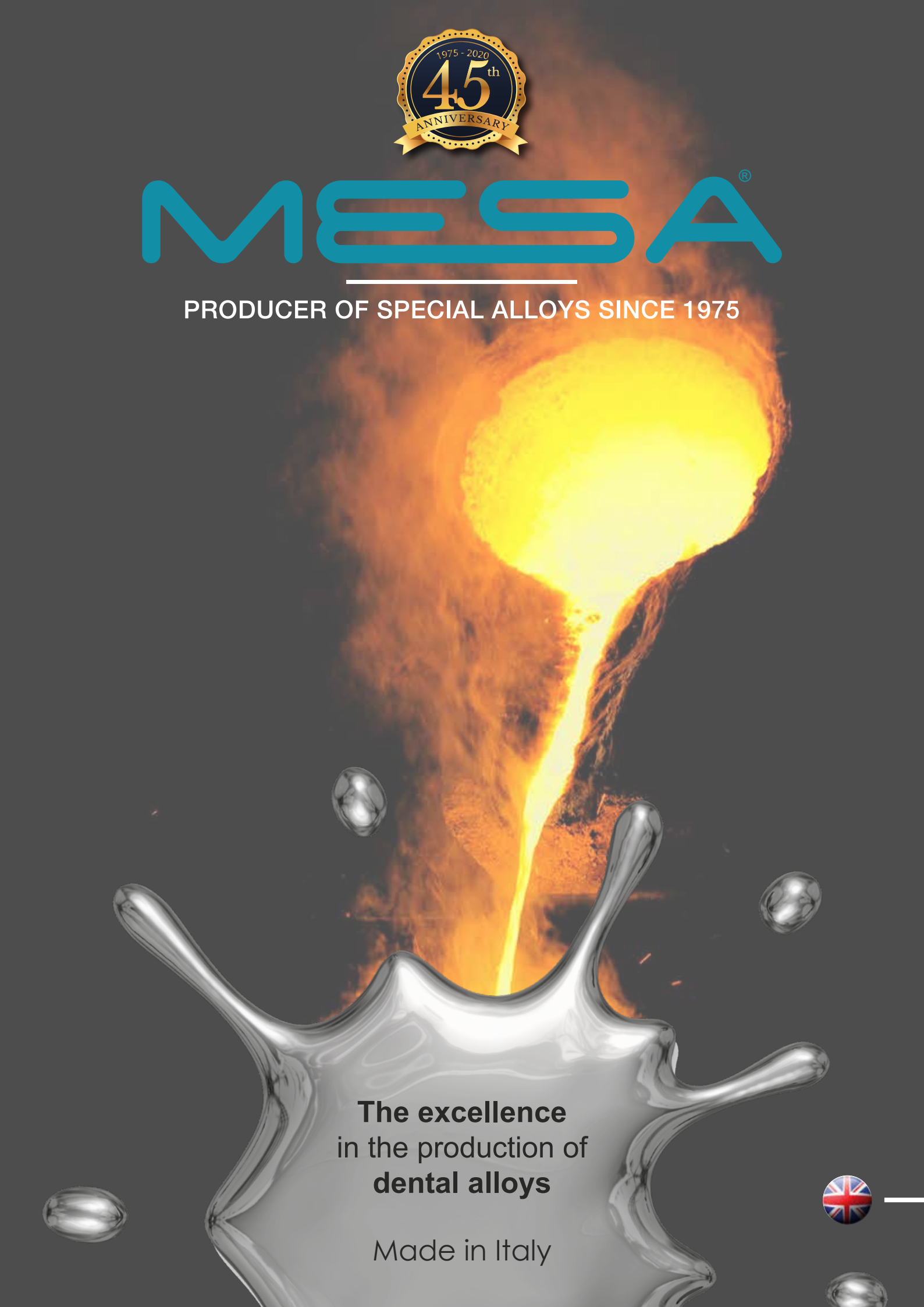
1975 - 2020
45th
ANNIVERSARY

MESA®

PRODUCER OF SPECIAL ALLOYS SINCE 1975



The excellence
in the production of
dental alloys

Made in Italy

PRODUCER OF SPECIA

AL ALLOYS SINCE 1975

For over 45 years, the company Mesa has been producing alloys for the dental sectors. During this period, Mesa has gradually changed its structure, turning from a small workshop to today's modern firm, producer of the worldwide well-known "Magnum" alloys, while always remaining a run-in family business.

Mesa stands out for its flexibility, which enables it to quickly and efficiently meet the ceaseless changing needs of the markets.

The patients' health and well-being has always been considered by the company as its major priority. Relying on its know-how and on its research and design competence, the company produces only alloys that comply with top quality, safety and reliability features.

Mesa at present produces more than 50 different types of alloys for the dental sector, divided in: **ALLOYS FOR CERAMIC, ALLOYS FOR PROSTHESES, ALLOYS FOR SOLDERING, DISCS AND BARS FOR CAD/CAM PROCESSING, RING AND CUSTOM ABUTMENT.**

As an observant producer of biomedical products, Mesa has obtained the CE marking for its alloys since the 1990s.

Before any placement on the markets, the products have all undergone severe medical tests such as biocompatibility and corrosion resistance. The elevated standards settled for each alloy fix the buying process of raw material. Only the best available materials on the market are considered.

This permits Mesa to guarantee the total absence of beryllium and cadmium in all of its products and the absence of nickel in all cobalt-based alloys.

Scheduling and improvement are targets that Mesa steadily pursues.

It is important to underline that significant investments have already been made and that other investments will be made for the next future so that Mesa can always guarantee a prompt alignment with every regulation required by the various world markets.

DENTAL ALLOYS FOR CERAMIC

Mesa's alloys for ceramic comply with standards ISO 9693-1:2012 and ISO 22674:2016.
They do not contain any toxic elements and, in the case of cobalt-based alloys, they are absolutely nickel-free.
They are all highly resistant to corrosion and heat.
They have a modulus of elasticity double if compared to noble metals and a good fluidity, which allows to obtain very thin castings.
Furthermore, thanks to their thermal expansion coefficient, they are ideal to be used with all last-generation ceramics.
Mesa can supply both nickel based and cobalt based dental alloys for ceramic.
Among the cobalt-based alloys, there is Magnum Ceramic Co, which has been on the market over the last 35 years and is widely appreciated by dental technicians.
The most recent alloys Magnum Splendidum, Magnum Solare, Magnum Lucens and Magnum Nitens, are all characterized by excellent mechanical features and low oxide formation.
Among Mesa's alloys for ceramic stand out the noble alloys Chrome-Cobalt based Magnum Fulgens and Magnum Suave, which contain respectively Platinum and Palladium in their composition.
These elements enforce the resistance, workability and brilliancy of the two alloys, granting them an exceptional biocompatibility.

MAGNUM LUCENS TYPE 4

CE 0123 ACCORDING TO: ISO 9693-1, ISO 22674

Composition in %		Physical and mechanical features	
Cobalt (Co)	63 %	Solidus-liquidus temperature	1253 ÷ 1304 °C
Chrome (Cr)	28 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14,1 x 10^{-6} K^{-1}
Niobium (Nb)	4%		(25 ÷ 600 °C) 14,5 x 10^{-6} K^{-1}
Tungsten (W)	3%	Melting point	1360°C
Others	Mn, Fe	Density	8,4 g/cmc
		Vickers hardness	324 HV10
		Percentage elongation at fracture	3 %
		Yield load strength (Rp0.2)	475 MPa
		Modulus of elasticity	194 GPa
		Ions release in 7 days	0,8 µg/cm²
		Maximium cooking temperature	950°C
		Colour	White

Why to use it?

- Excellent fluidity, which gives the dental technician the opportunity to melt even a large quantity of alloy, reading to arrive with the most precision in every part of the product.
- Very low solidus-liquidus temperature and melting temperature compared to standard Chrome-Cobalt alloys.
- Clear oxidation, good workability, simple polishing.
- It can also be used for creating bars and counter-bars.

MAGNUM CERAMIC CO TYPE 5

Composition in %		Physical and mechanical features	
Cobalt (Co)	64 %	Solidus-liquidus temperature	1309 ÷ 1417 °C
Chrome (Cr)	21 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14,1 x 10^{-6} K^{-1}
Molybdenum (Mo)	6%		(25 ÷ 600 °C) 14,6 x 10^{-6} K^{-1}
Tungsten (W)	6%	Melting point	1470°C
Others	Si, Mn, Fe	Density	8,8 g/cmc
		Vickers hardness	386 HV10
		Percentage elongation at fracture	10 %
		Yield load strength (Rp0.2)	570 MPa
		Modulus of elasticity	194 GPa
		Ions release in 7 days	0,6 µg/cm²
		Maximium cooking temperature	935°C
		Colour	White

Why to use it?

- Good workability, excellent aesthetics perfect adhesion with ceramics
- Ideal hardness.

MAGNUM SPLENDIDUM TYPE 3

CE 0123 ACCORDING TO: ISO 9693-1, ISO 22674

Composition in %		Physical and mechanical features	
Cobalt (Co)	60 %	Solidus-liquidus temperature	1308 ÷ 1384 °C
Chrome (Cr)	28 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14,2 x 10^{-6} K^{-1}
Silicon (Si)	1,5%		(25 ÷ 600 °C) 14,4 x 10^{-6} K^{-1}
Tungsten (W)	9%	Melting point	1440 °C
Others	Mn, Fe	Density	8,5 g/cmc
		Vickers hardness	273 HV10
		Percentage elongation at fracture	16 %
		Yield load strength (Rp0.2)	360 MPa
		Modulus of elasticity	183 GPa
		Ions release in 7 days	1,75 µg/cm²
		Maximium cooking temperature	980°C
		Colour	White

MAGNUM NITENS TYPE 5

Composition in %		Physical and mechanical features	
Cobalt (Co)	62,5 %	Solidus-liquidus temperature	1369 ÷ 1471 °C
Chrome (Cr)	28,5 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14,5 x 10^{-6} K^{-1}
Molybdenum (Mo)	4%		(25 ÷ 600 °C) 14,7 x 10^{-6} K^{-1}
Tungsten (W)	3%	Melting point	1530 °C
Others	Nb, Fe	Density	8,2 g/cmc
		Vickers hardness	302 HV10
		Percentage elongation at fracture	5 %
		Yield load strength (Rp0.2)	535 MPa
		Modulus of elasticity	195 GPa
		Ions release in 7 days	0.8 µg/cm²
		Maximium cooking temperature	950°C
		Colour	White

MAGNUM SOLARE TYPE 4

Composition in %		Physical and mechanical features	
Cobalt (Co)	66 %	Solidus-liquidus temperature	1307 ÷ 1417 °C
Chrome (Cr)	27 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14,3 x 10^{-6} K^{-1}
Molybdenum (Mo)	6%		(25 ÷ 600 °C) 14,5 x 10^{-6} K^{-1}
Others	Si, Mn	Melting point	1470 °C
		Density	8,4 g/cmc
		Vickers hardness	255 HV10
		Percentage elongation at fracture	11 %
		Yield load strength (Rp0.2)	395 MPa
		Modulus of elasticity	233 GPa
		Maximium cooking temperature	980°C
		Colour	White

MAGNUM FULGENS TYPE 5

CE 0123 ACCORDING TO: ISO 9693-1, ISO 22674

Composition in %		Physical and mechanical features	
Cobalt (Co)	65 %	Solidus-liquidus temperature	1346 ÷ 1414 °C
Chrome (Cr)	21 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14,4 x 10^{-6} K^{-1}
Molybdenum (Mo)	5,5%		(25 ÷ 600 °C) 14,7 x 10^{-6} K^{-1}
Tungsten (W)	5,5%	Melting point	1470 °C
Others	Si, Mn, Fe	Density	8,8 g/cmc
		Vickers hardness	274 HV10
		Percentage elongation at fracture	9 %
		Yield load strength (Rp0.2)	590 MPa
		Modulus of elasticity	218 GPa
		Ions release in 7 days	0,6 µg/cm^2
		Colour	White

MAGNUM SUAVE TYPE 5

Composition in %		Physical and mechanical features	
Cobalt (Co)	40 %	Solidus-liquidus temperature	1232 ÷ 1290 °C
Chrome (Cr)	22 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14,4 x 10^{-6} K^{-1}
Palladium (Pd)	25%		(25 ÷ 600 °C) 14,9 x 10^{-6} K^{-1}
Molybdenum (Mo)	12%	Melting point	1340 °C
Others	Si, Mn	Density	8,9 g/cmc
		Vickers hardness	288 HV10
		Percentage elongation at fracture	9 %
		Yield load strength (Rp0.2)	575 MPa
		Modulus of elasticity	181 GPa
		Ions release in 7 days	80 µg/cm^2
		Maximium cooking temperature	980°C
		Colour	White

MAGNUM SATURNO TYPE 3

CE 0123 ACCORDING TO: ISO 9693-1, ISO 22674

Composition in %		Physical and mechanical features	
Nickel (Ni)	63 %	Solidus-liquidus temperature	1190 ÷ 1303 °C
Chrome (Cr)	26 %	Thermal expansion coefficient	(25 ÷ 500 °C) 13,8 x 10^{-6} K^{-1}
Molybdenum (Mo)	9 %	Melting point	1360 °C
Silicon (Si)	1,5%	Density	8,2 g/cmc
		Vickers hardness	173 HV10
		Percentage elongation at fracture	37 %
		Yield load strength (Rp0.2)	300 MPa
		Modulus of elasticity	197 GPa
		Ions release in 7 days	2,7 µg/cm^2
		Maximium cooking temperature	950°C
		Colour	White

MAGNUM CLARUM TYPE 3

Composition in %		Physical and mechanical features	
Nickel (Ni)	63 %	Solidus-liquidus temperature	1298 ÷ 1344 °C
Chrome (Cr)	25 %	Thermal expansion coefficient	(25 ÷ 500 °C) 13,7 x 10^{-6} K^{-1}
Molybdenum (Mo)	9 %		(25 ÷ 600 °C) 14 x 10^{-6} K^{-1}
Silicon (Si)	2 %	Melting point	1400 °C
		Density	8,3 g/cmc
		Vickers hardness	180 HV10
		Percentage elongation at fracture	26 %
		Yield load strength (Rp0.2)	360 MPa
		Modulus of elasticity	191 GPa
		Ions release in 7 days	1,8 µg/cm^2
		Maximium cooking temperature	950°C
		Colour	White

MAGNUM CERAMIC S TYPE 4

CE 0123 ACCORDING TO: ISO 9693-1, ISO 22674

Composition in %		Physical and mechanical features	
Nickel (Ni)	65 %	Solidus-liquidus temperature	1312 ÷ 1369 °C
Chrome (Cr)	24 %	Thermal expansion coefficient	(25 ÷ 500 °C) 13,7 x 10^{-6} K^{-1}
Molybdenum (Mo)	10 %		(25 ÷ 600 °C) 14,1 x 10^{-6} K^{-1}
Others	Si, Fe	Melting point	1420°C
		Density	8,4 g/cmc
		Vickers hardness	188 HV10
		Percentage elongation at fracture	9 %
		Yield load strength (Rp0.2)	360 MPa
		Modulus of elasticity	190 GPa
		Ions release in 7 days	1,6 µg/cm^2
		Maximium cooking temperature	900°C
		Colour	White

DENTAL ALLOYS FOR PROSTHESES

A prosthesis is, by definition, a partial removable dental prosthesis which, exploiting the alloy's elasticity, can be attached to natural teeth by means of casted hooks.
In case there are contiguous teeth from both sides they are called "interdental prostheses". If, on the contrary, the last tooth to be used for fixing the prostheses is missing, then they are called "cantilever bridge".
Alloys for prostheses produced by Mesa are characterised by their strong resistance to traction and excellent workability, which enables to obtain smooth and compact surfaces and reduce the oxide formation.
Mesa produces more than 20 different types of alloys for prostheses, ranging from the softest to medium, medium-hard and very hard.
Those alloys have a low specific weight and excellent mechanical features, which enable also the most demanding technician to create unique products with minimal thickness.

MAGNUM VIP-A TYPE 5

CE 0123 ACCORDING TO: ISO 22674

Composition in %		Physical and mechanical features	
Cobalt (Co)	64 %	Solidus-liquidus temperature	1350 ÷ 1406 °C
Chrome (Cr)	29 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14,7 x 10^{-6} K^{-1}
Molybdenum (Mo)	6 %		(25 ÷ 600 °C) 15 x 10^{-6} K^{-1}
Others	C, Si, Mn, Fe	Melting point	1460 °C
		Density	8,4 g/cmc
		Vickers hardness	386 HV10
		Percentage elongation at fracture	6 %
		Yield load strength (Rp0.2)	580 MPa
		Modulus of elasticity	211 GPa
		Ions release in 7 days	1,1 µg/cm^2
		Colour	White

MAGNUM HBA TYPE 5

Composition in %		Physical and mechanical features	
Cobalt (Co)	62 %	Solidus-liquidus temperature	1340 ÷ 1400 °C
Chrome (Cr)	31 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14 x 10^{-6} K^{-1}
Molybdenum (Mo)	5 %		(25 ÷ 600 °C) 14,4 x 10^{-6} K^{-1}
Others	C, Si, Mn, Fe	Melting point	1450 °C
		Density	8,3 g/cmc
		Vickers hardness	389 HV10
		Percentage elongation at fracture	6 %
		Yield load strength (Rp0.2)	610 MPa
		Modulus of elasticity	200 GPa
		Ions release in 7 days	0,49 µg/cm^2
		Maximium cooking temperature	980°C
		Colour	White

MAGNUM H75 TYPE 5

CE 0123 ACCORDING TO: ISO 9693-1, ISO 22674

Composition in %		Physical and mechanical features	
Cobalt (Co)	63 %	Solidus-liquidus temperature	1322 ÷ 1400 °C
Chrome (Cr)	29 %	Melting point	1450 °C
Tungsten (W)	6,5 %	Density	8,3 g/cmc
Others	C, Si, Mn, Fe	Vickers hardness	406 HV10
		Percentage elongation at fracture	4 %
		Yield load strength (Rp0.2)	690 MPa
		Modulus of elasticity	210 GPa
		Ions release in 7 days	0,8 µg/cm²
		Colour	White

MAGNUM H60 TYPE 5

Composition in %		Physical and mechanical features	
Cobalt (Co)	63 %	Solidus-liquidus temperature	1321 ÷ 1407 °C
Chrome (Cr)	29 %	Melting point	1460 °C
Molybdenum (Mo)	6,5%	Density	8,3 g/cmc
Others	C, Si, Mn, Fe	Vickers hardness	394 HV10
		Percentage elongation at fracture	6 %
		Yield load strength (Rp0.2)	545 MPa
		Modulus of elasticity	209 GPa
		Ions release in 7 days	0.6 µg/cm²
		Colour	White

MAGNUM H50 TYPE 5

Composition in %		Physical and mechanical features	
Cobalto (Co)	64 %	Solidus-liquidus temperature	1334 ÷ 1405 °C
Cromo (Cr)	29 %	Melting point	1460 °C
Molybdenum (Mo)	6,5 %	Density	8,3 g/cmc
Others	C, Si, Mn, Fe	Vickers hardness	374 HV10
		Percentage elongation at fracture	6 %
		Yield load strength (Rp0.2)	525 MPa
		Modulus of elasticity	207 GPa
		Ions release in 7 days	0.6 µg/cm²
		Colour	White


MESA
PRODUCER OF SPECIAL ALLOYS SINCE 1975
MAGNUM VIP-A
CE 0123
Lega dentale a base di Cobalto per protesi scheletrate, tipo 5*
*In conformità a ISO 22674:2016
Cobalt based dental alloy for prostheses, type 5*
*According to ISO 22674:2016
2020-06
LOT 10578
Cylinder 5 PLS 1 kg e
Mesa di Sala Giacomo & C. S.n.C.
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DENTAL ALLOYS FOR BRIDGES AND CROWNS

A bridge, by definition, is a fixed prosthesis which enables to replace the missing teeth. A bridge involves at least two teeth, also called “pillar teeth”, usually located at both sides of the place created by the missing tooth. The bridge is anchored on those teeth (usually they are crowns), in this way the missing teeth are fixed (intermediate elements).
A bridge is usually formed by a retainer and by one or more intermediate elements.
For bridges and crowns Mesa offer the alloy Magnum Ni-Cr-Fe, Nickel-Iron basè, which is characterized by low hardness and reduced cost. Magnum Ni-Cr-Fe is distinguished by high resistance to corrosion and good biocompatibility, as assured by medical tests carried out in compliance with standards ISO 10993-5 and ISO 22674.

MAGNUM Ni-Cr-Fe TYPE 2

Composition in %		Physical and mechanical features	
Iron (Fe)	42 %	Solidus-liquidus temperature	1333 ÷ 1380 °C
Nickel (Ni)	27 %	Melting point	1430 °C
Chrome (Cr)	22%	Density	7,8 g/cmc
Silicon (Si)	4%	Vickers hardness	168 HV10
Others	C, Si, Mn, Fe	Percentage elongation at fracture	25 %
		Yield load strength (Rp0.2)	250 MPa
		Modulus of elasticity	205 GPa
		Ions release in 7 days	137 µg/cm²
		Colour	White

DENTAL ALLOYS FOR SOLDERING

All solders produced by Mesa are highly biocompatible and comply with the ISO 9333:2016 standard.
Mesa offers a wide range of solders having different chemical compositions, different intended uses and, as a consequence, a good adaptability to all kinds of alloys. The soldering sticks are available in two different refinements: the most economical is characterised by an unpolished surface; the other is well polished, totally free of impurities and perfectly circular, allowing a more accurate welding.
The available in different sizes, diameters and lengths are indicated below:

TYPE	DIAMETER	LENGTH
POLISHED STICK	1 mm	120 mm
ROUGH STICK	1,7 mm	75 mm

MAGNUM SALDATURA Co

CE 0123 ACCORDING TO: ISO 9333

Composition in %		Physical and mechanical features	
Cobalt (Co)	62 %	Solidus-liquidus temperature	1071 ÷ 1260 °C
Chrome (Cr)	29 %	Thermal expansion coefficient	(25 ÷ 500 °C) 15,5 x 10^{-6} K^{-1}
Molybdenum (Mo)	4 %		(25 ÷ 600 °C) 15,8 x 10^{-6} K^{-1}
Silicon (Si)	3 %	Melting point	1310 °C
Others	C, Mn, Fe	Density	8,2 g/cmc
		Colour	White

MAGNUM SALDATURA A

Composition in %		Physical and mechanical features	
Cobalt (Co)	52 %	Solidus-liquidus temperature	992 ÷ 1185 °C
Chrome (Cr)	20 %	Melting point	1240 °C
Nickel (Ni)	21 %	Density	8,1 g/cmc
Others	Fe, Si, C, Mn	Colour	White

MAGNUM SALDATURA B

Composition in %		Physical and mechanical features	
Cobalt (Co)	31 %	Solidus-liquidus temperature	1033 ÷ 1210 °C
Chrome (Cr)	21 %	Melting point	1260 °C
Nickel (Ni)	39 %	Density	8,2 g/cmc
Molybdenum (Mo)	4 %	Colour	White
Others	C, Mn		

COBALT-CHROME DISCS FOR CAD/CAM PROCESSING

CAD/CAM is the result of the new three-dimensional scanning technology so that a model can be obtained with an accuracy up to 20 µm.
In dental technology the CAD/CAM technology allows, through a 3D scanner, to read a model of a natural abutment, obtained from the imprint supplied by the dentist.
This technique guarantees a highly automated production with a considerable saving of time and the elimination of further corrections.
As a result, the prostheses structures do not show any stress or porosity.
An additional advantage guaranteed by the absence of melting is the lack of oxide formation on the product.
Mesa has been producing discs for CAD/CAM processing systems for over 15 years: in this phase, the discs have been supplied in different materials, meeting up the continuous changes of the market requirements.
At present Mesa's CAD/CAM discs are provided in the following alloys: Magnum Splendidum and Magnum Solare, all of them cobalt based.

The available heights and diameters are indicated below:

DIAMETER	HEIGHT
98,5 mm	8 mm
	10 mm
	12 mm
	13,5 mm
	14 mm
	15 mm
	16 mm
	18 mm
	20 mm
	22 mm
	24,5 mm
	25 mm

COBALT-CHROME BARS FOR CAD/CAM PROCESSING

Mesa has recently introduced bars for CAD/CAM processing into its range of products. The bars have been specifically designed to reduce the processing costs and to ensure lower material consumption.
The bars are available in two different materials:
Magnum Splendidum and Magnum Solare.

The available lenght and diameters are indicated below:

LENGTH	
1000	mm
3000	mm

DIAMETER	
5	mm
6	mm
6,35	mm
8	mm
10	mm
12	mm
14	mm
16	mm
18	mm
20	mm

MAGNUM SPLENDIDUM TYPE 3

CE 0123 ACCORDING TO: ISO 9693-1, ISO 22674

Composition in %		Physical and mechanical features	
Cobalt (Co)	60 %	Solidus-liquidus temperature	1308 ÷ 1384 °C
Chrome (Cr)	28 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14,2 x 10^{-6} K^{-1}
Silicon (Si)	1,5%		(25 ÷ 600 °C) 14,4 x 10^{-6} K^{-1}
Tungsten (W)	9%	Melting point	1440 °C
Others	Mn, Fe	Density	8,5 g/cmc
		Vickers hardness	273 HV10
		Percentage elongation at fracture	16 %
		Yield load strength (Rp0.2)	360 MPa
		Modulus of elasticity	183 GPa
		Ions release in 7 days	1,75 µg/cm^2
		Maximium cooking temperature	980°C
		Colour	White

Why to use it?

- Excellent polishability.
- Hardness 273 HV10, to make milling easier, excellent accuracy on the product.
- Less consumption of the cutters, which guarantees economic savings and less spindle effort.
- Thermal expansion coefficient suitable for the most widespread ceramics on the market.

MAGNUM SOLARE TYPE 4

Composition in %		Physical and mechanical features	
Cobalt (Co)	66 %	Solidus-liquidus temperature	1307 ÷ 1417 °C
Chrome (Cr)	27 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14,3 x 10^{-6} K^{-1}
Molybdenum (Mo)	6%		(25 ÷ 600 °C) 14,5 x 10^{-6} K^{-1}
Others	Si, Mn	Melting point	1470 °C
		Density	8,4 g/cmc
		Vickers hardness	255 HV10
		Percentage elongation at fracture	11 %
		Yield load strength (Rp0.2)	395 MPa
		Modulus of elasticity	233 GPa
		Maximium cooking temperature	980°C
		Colour	White

Why to use it?

- Unique disc of its kind, with excellent characteristics even in the post-milling phase.
- Hardness 255 HV10, to make milling easier, excellent accuracy on the product.
- Less consumption of cutters, which guarantees economic savings and less spindle effort and clear oxidation.


MESA
PRODUCER OF SPECIAL ALLOYS SINCE 1971
MAGNUM SOLARE
CE 0123
Lega dentale a base di Cobalto per protesi ceramiche, tipo 4*
*In conformità a ISO 22674:2016
Cobalt based dental alloy for ceramic, type 4*
*According to ISO 22674:2016
2020-07
LOT 10887
DISC PLAIN Ø98.5x10mm NR 1
Mesa di Sala Giacomo & C. S.n.C.
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COBALT CHROME AND TITANIUM RING

Mesa is pleased to present the Magnum Splendidum and Magnum Hyperone Ring in its product range.
These are Chrome-Cobalt and Titanium rings with unique characteristics, dedicated to the production of prosthesis with immediate loading.
Thanks to their extreme versatility, they feature excellent adaptability and customization.
In fact, from a single device it is possible to produce several products.
Moreover, due to its innate preforming, it is possible to adapt the device according to a wide variety of needs.

The available height and thickness are indicated below:

HEIGHT	THICKNESS
3 mm	2 mm

MAGNUM SPLENDIDUM TYPE 3

CE 0123 ACCORDING TO: ISO 9693-1, ISO 22674

Composition in %		Physical and mechanical features	
Cobalt (Co)	60 %	Solidus-liquidus temperature	1308 ÷ 1384 °C
Chrome (Cr)	28 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14,2 x 10^{-6} K^{-1}
Silicon (Si)	1,5%		(25 ÷ 600 °C) 14,4 x 10^{-6} K^{-1}
Tungsten (W)	9%	Melting point	1440 °C
Others	Mn, Fe	Density	8,5 g/cmc
		Vickers hardness	273 HV10
		Percentage elongation at fracture	16 %
		Yield load strength (Rp0.2)	360 MPa
		Modulus of elasticity	183 GPa
		Ions release in 7 days	1,75 µg/cm^2
		Maximium cooking temperature	980°C
		Colour	White

MAGNUM HYPERONE TYPE 4

CE 0123 ACCORDING TO: ASTM F136

Composition in %		Physical and mechanical features	
Titanium (Ti)	90 %	Solidus-liquidus temperature	1605 ÷ 1660 °C
Aluminium (Al)	6 %	Melting point	1710 °C
Vanadium (V)	4 %	Density	4,426 g/cmc
Others	Fe	Vickers hardness	312 HV10
		Percentage elongation at fracture	14 %
		Yield load strength (Rp0.2)	880 MPa
		Modulus of elasticity	114 GPa
		Colour	White

TITANIUM DISCS AND BARS FOR CAD/CAM PROCESSING

Mesa is pleased to present, in its product range, an innovative material, grade 23 titanium. It is a highly biocompatible material with unique characteristics and excellent milling properties. Grade 23 material has a reduced specific weight with an optimal modulus of elasticity; the finished work is therefore more stable, resistant to breakage, yielding and corrosion.
The alloy takes the name of Magnum Hyperone, inspired by the Greek mythological figure Hyperion, a historic titan of observation.

The available heights and diameters are indicated aside:

DIAMETRO	
98,5	mm
100	mm

ALTEZZA	
8	mm
10	mm
12	mm
13,5	mm
14	mm
15	mm
16	mm
18	mm
20	mm
22	mm
24,5	mm
25	mm

MAGNUM HYPERONE TYPE 4

CE 0123 ACCORDING TO: ASTM F136

Composition in %	
Titanium (Ti)	90 %
Aluminium (Al)	6 %
Vanadium (V)	4 %
Others	Fe

Physical and mechanical features	
Solidus-liquidus temperature	1605 ÷ 1660 °C
Melting point	1710 °C
Density	4,426 g/cmc
Vickers hardness	312 HV10
Percentage elongation at fracture	14 %
Yield load strength (Rp0.2)	880 MPa
Modulus of elasticity	114 GPa
Colour	White

ERGAL DISCS FOR CAD/CAM PROCESSING

Mesa is pleased to present the new ERGAL discs.
With its excellent milling performance, this alloy is excellent for the production of test products. In addition it guarantees extremely high precision and, at the same time, extremely easy production.
In fact the production process of Ergal products is easy, quick and cost-effective.

The available heights and diameters are indicated below:

DIAMETER	HEIGHT
98,5 mm	16 mm
	20 mm

ΊΧΝΟΣ
WAX DISCS FOR CAD/CAM PROCESSING

The discs are composed of a special compound in modeling wax that can be milled from CAD / CAM systems, also with PMMA strategies, obtaining smooth surfaces and precise details.
The particularity of modeling wax is such that it makes the disc unique in its kind, as it, in addition to being milled without problems, can be modeled and modified with the aid of any other laboratory wax suitable for the purpose.

The available heights and diameters are indicated below:

DIAMETER	HEIGHT
98,5 mm	20 mm

CUSTOM-MADE ABUTMENT

Mesa is pleased to present the new custom-made abutments in Magnum Splendidum alloy. These new devices, for which a patent application has been filed, allow a precise and secure connection to the implant obtained through over-casting.
The custom-made abutments in Magnum Splendidum can be used both with the lost wax technique, through digital modelling or soldered.
Custom-made abutments in Titanium Magnum Hyperone are also available.
This new line of products presents perfect compliance from the point of view of biocompatibility, mechanical performance and increased precision of engagement.

MAGNUM SPLENDIDUM TYPE 3

CE 0123 ACCORDING TO: ISO 9693-1, ISO 22674

Composition in %		Physical and mechanical features	
Cobalt (Co)	60 %	Solidus-liquidus temperature	1308 ÷ 1384 °C
Chrome (Cr)	28 %	Thermal expansion coefficient	(25 ÷ 500 °C) 14,2 x 10^{-6} K^{-1}
Silicon (Si)	1,5%		(25 ÷ 600 °C) 14,4 x 10^{-6} K^{-1}
Tungsten (W)	9%	Melting point	1440 °C
Others	Mn, Fe	Density	8,5 g/cmc
		Vickers hardness	273 HV10
		Percentage elongation at fracture	16 %
		Yield load strength (Rp0.2)	360 MPa
		Modulus of elasticity	183 GPa
		Ions release in 7 days	1,75 µg/cm^2
		Maximium cooking temperature	980°C
		Colour	White

MAGNUM HYPERONE TYPE 4

CE 0123 ACCORDING TO: ASTM F136

Composition in %		Physical and mechanical features	
Titanium (Ti)	90 %	Solidus-liquidus temperature	1605 ÷ 1660 °C
Aluminium (Al)	6 %	Melting point	1710 °C
Vanadium (V)	4 %	Density	4,426 g/cmc
Others	Fe	Vickers hardness	312 HV10
		Percentage elongation at fracture	14 %
		Yield load strength (Rp0.2)	880 MPa
		Modulus of elasticity	114 GPa
		Colour	White

OUR DENTAL TECHNICIANS

Dt. CARLO BORROMEO

He finished his dental technician studies in 1983. In 1988, he started his activity as owner of the Borromeo Dental Laboratory where he specialized in the construction of prosthesis on implants, also with CAD/CAM systems, actively participating in the system with the company Nobel Biocare Procera and currently with Sinergia and Exocad and other systems.

Over the years, he has the opportunity to meet and make professional agreements with some companies in the sector learning about the materials they produce, making him an expert in merchandise, ceramics and implant structures.

He attends and follows many conferences and specialization courses. He has been a speaker at numerous conferences in Italy and abroad and author of national and international publications.

He currently works with some Italian universities and is involved in research in the field of CAD/CAM methods.

Official speaker for Rhein83 and also actively collaborates with Mesa.

Dt. DANILO CARULLI

Born in Legnano, (MI) on 12.05.1967, he graduated as a dental technician at the M. Polo Institute in Brescia in 1985. Since 1990 he is the owner of a dental laboratory, and since 2005 he is the owner of Studio S. Stefano, first unlimited partnership and then limited partnership.

In the 90's, he attended various training courses in Italy and in Europe with the best speakers and became passionate about the micro-dental technology technique specializing in accuracy.

He follows the AFG method from the first reports of Alberto Battistelli (inventor of the technique) and from 2006 he becomes official AFG Training Lab.

As a national and international speaker, he holds courses and conferences on AFG and micro-dental technology. He in also Author of the book "COPYBOOK dental modelling technique AFG".

Since 2010 he has collaborated with several dental technician schools in Italy for the dissemination of the AFG method within the basic education of future dental technicians, managing to include the modelling module at the M. Fortuny Institute in Brescia, the first in Italy to adopt the method.

Dt. ADRIANO RICHELLI

Graduated in 1987 at the CFP Institute of Brescia and specialized in fixed prosthesis since 1988. In September 1994 he set up his “Dental-tech” laboratory in which he and his collaborators work with all types of prostheses.
Starting in 2006, he started to turn to new technologies, such as CAD/CAM systems and 3D printing.
He also follows many courses held by important names, including:
Course of occlusal morphology, Courses of bar milling and casting, Course of ceramization by DT Enrico Steger, Cad Modelling by DT Carlo Paoletti, Course of modelling and ceramization by DT Jochen Peters, Course of morphology and ceramization by DT Oliver Brix, Course of morphology and ceramization by Oscar Raffeiner, Course of advanced aesthetics by DT Daniele Rondoni, Metallurgy course by Prof. Dr. Christisn Susz, Stratification technique by DT Giovanni Artioli, Digital dental technology at Cirtyna Academy by Prof J. Van Der Zeel and Prosthesis with BOPT method by Prof. Ignazio Loi and Dt. Antonello Di Felice

Dt. SIMONE FEDI

Degree in dental technology in 1997 with marks 60 out of 60 at the I.P.S.I.A. (Professional Institute) Gaslini of Genoa, after attending up to the third school year of the experimental high school in science, biological-health specialization, of the school F. Pacini in Pistoia, after 5 years as an employee in a laboratory in Pistoia, in 2003 he became a partner in his current laboratory.
He first specialized in total prosthesis following courses on the Gerber and Passamonti method and later in composite reverse layering technique following courses in Bredent and in casting through traditional techniques.
He is an official speaker at Rhein83 and also actively collaborates with Mesa and he is author of below indicated publications:
Spectrum dialogue Vol. 15 No. 8 for the USA and Canada, A Simplified Dental Protocol For the construction of Implant/Mucosal support removable prosthesis, Protezy: funkcja, estetyka, higiena, Cosmetic Dentistry Year 5 Vol. 3 October 2016, Removable prosthesis: hygiene, function, aesthetics, Dental Dialogue Year XXIV 2017 n°1, Simplified dental technician protocol for the implementation of a removable prosthesis with implant/mucous support.

OUR DENTAL TECHNICIANS

Dt. ALBERTO BATTISTELLI

Born on 29 August 1960 in Senigallia, in the province of Ancona, in 1978 he obtained a degree in Dental Technology from the G. Eastman Institute in Rome and later also the ICOI (International Congress of Oral Implantology) certificate.
He then specialized in micro-dental technology.
Former president and founder of several international institutions, such as the Collegio Odontotecnico Italiano (CIO), GOI - National manager of SICED and AIMOD - AFG (International Dental Modeling Academy), Dr. Battistelli is a member of the scientific committee of numerous specialized magazines.
Since 1987, he has held courses on the use of the stereomicroscope in the dental sector.
He is co-author of the volume Precision in Prosthetic Restauration (Resh Editor 1993) together with Romeo Pascetta and Dr. D. Massironi.

AFG (Anatomic Functional Geometry) is a technique for acquiring and modelling dental anatomy, the result of research that Dt. Battistelli started in 1991 with the purpose of discovering and not inventing the dental form in its design aspects, namely mathematical-geometric.
His intention was to create a school that offered anyone the ability to understand and build beautiful, natural and functional teeth, emerging from the conditioning created by classic gnathological books or schools, based on unnatural forms that could not be found in human mouths.
After about 20 years of work, the book AFG Modelling (editor Teamwork Media), written with Dr. Dario Severino and Dr. Oto La Manna, was released and has been translated into 13 languages.
On 11 July 2019 with official ceremony, the AFG technique was the first in history to achieve the “Italian Excellence in the World” by the Presidential Office of the Senate of the Italian Republic.

OUR DENTAL PRACTITIONER

Dr. LUCA ORTENSI

Graduated in Dentistry and Prosthetic Dentistry in 1993 at the University of Bologna with
Master's degree in bonding at the University of Siena in 2001.
Adjunct professor for the faculty of dentistry at the University of Catania, in the Prosthesis course in the years 2016/2018.
He is a member of the Medical Association of Bologna.
He attends refresher courses with the most famous Italian and foreign prosthodontists.
He has published some scientific articles concerning fixed prosthesis in national and international journals and has participated as a speaker in numerous courses and congresses in Italy, Germany, Brazil, Spain, USA.
Since 2003, he holds a refresher course in prosthesis accredited by the Ministry of Health.
He is self-employed in Bologna, limited to prosthetics and reconstructive dentistry, in association with other colleagues.

Dt. MATTIA MABELLINI

Mattia Mabellini, born in 1986 in Brescia where he currently works. He studies Oboe at the Music Conservatory Luca Marenzio and Literature.
At age 17, he won a scholarship for Red Cross Nordic United World College in Norway and graduated from the International High School.
He continues as a scholar in the United States, Hood College, Maryland, and obtains a Bachelor's degree in Biology, studying the transfer of genes via circular DNA between organisms.
He returned to Europe and obtained his second degree in Dentistry.
He opened his dental office in 2015 in front of the Civil Hospital of Brescia where he practices Surgery and Aesthetic Dentistry.

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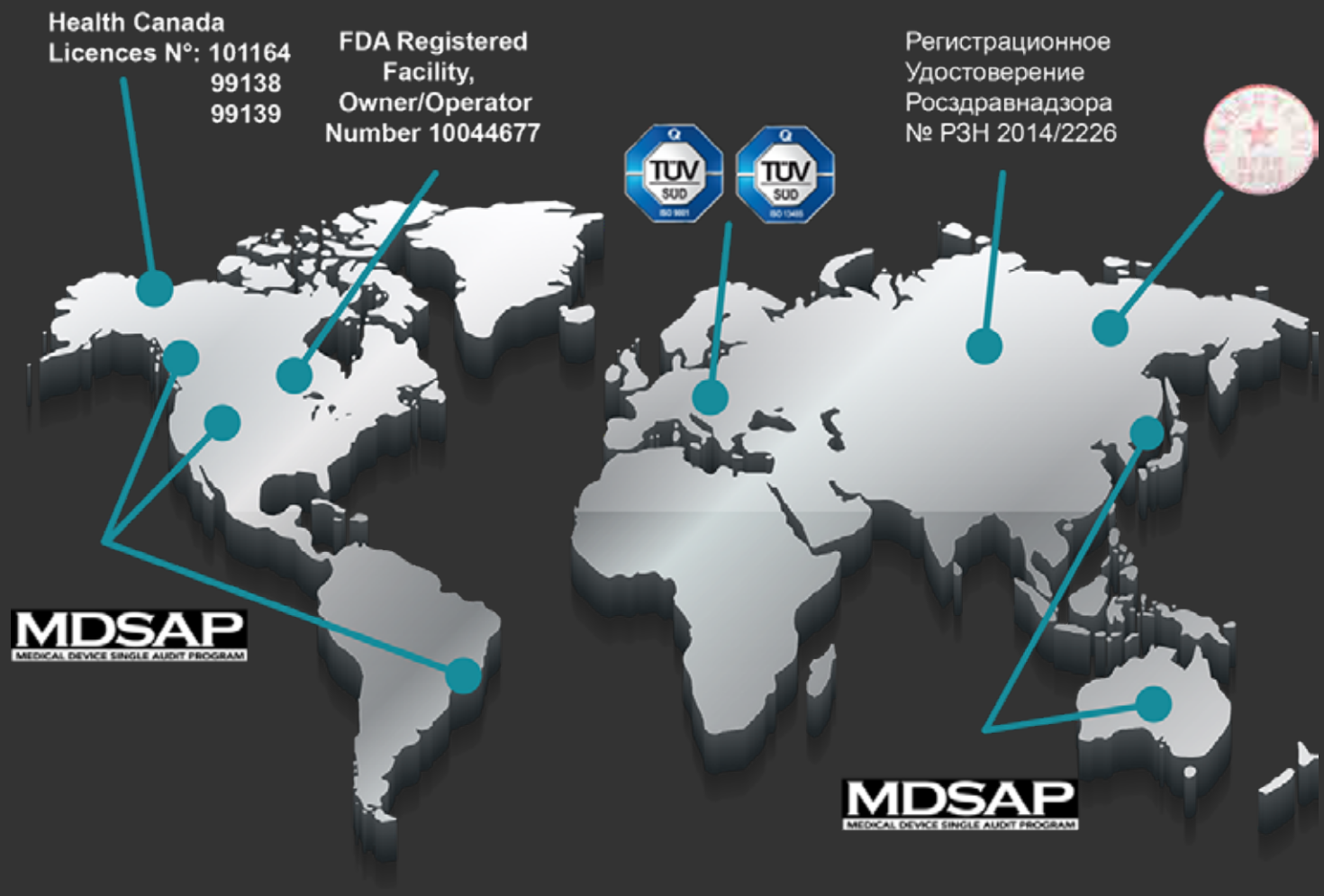

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