



DENTAL EQUIPMENT MANUFACTURING



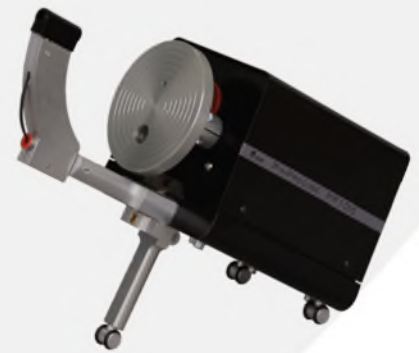
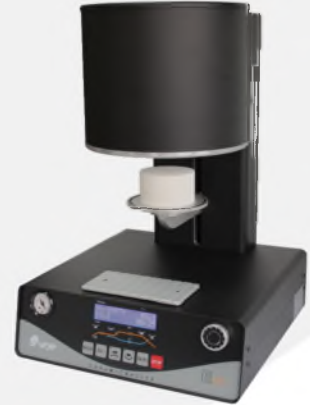
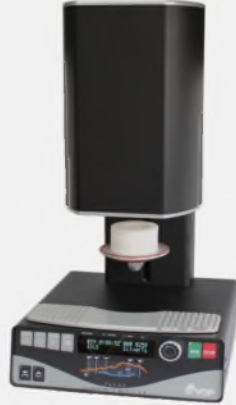
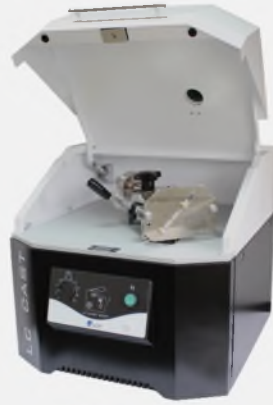
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*Quality above all*



- 1990 VOP Co. established.
- 1991 Obtained permission to manufacture technical equipment for Russia and Switzerland.
- 1992 Started producing dental lab equipment.
- 1992 Introduced the first furnace for metal ceramics on the market.
- 1993 Started the production of muffle furnaces.
- 1994 Registered in the Bulgarian Chamber of Commerce and Industry.
- 1995 Started producing machines for centrifugal casting with HF melting of the metals.
- 1996 Introduced a milling machine on the market.
- 1997 Obtained ISO 9002 Certification.
- 1999 Developed and introduced automatic manipulators for the electronic industry.
- 2002 Introduced the furnace for press ceramics Ceramicmaster Press on the market.
- 2003 Transformed from VOP Co. into VOP Ltd.
- 2004 Became a distributor of a range of world companies - manufacturers of equipment and consumables.
- 2006 Developed two new machines: new casting machine LC-Cast 600 of higher quality and new model of furnace for ceramics Ceramicmaster E1000.
- 2006 Developed a new machine: new generation of separator for plaster moulds with laser marker.
- 2011 Introduced a new machine: wet and dry polymerization unit.
- 2012 Developed a new machine: Programmable dental furnace for sintering of zirconium ZirconMaster S
- 2013 Mr. Jacek Stefan Zwiep joined the company as Marketing and Sells Director.
- 2015 Developed a new machine: table top casting machine LC-Cast 600T.
- 2015 Obtained ISO 9001:2008 Certification.
- 2016 Introduced a new model of furnace for ceramics Ceramicmaster E20.





# Ceramicmaster Press ●●●

Programmable dental furnace for metal, pure and press ceramics

- designed for all type of dental metal, pure and press ceramics
- no need of compressor for the pressing process
- can be used for metal ceramics and sintering of pure ceramics, based on aluminium oxide
- 100 operating programmes
- completely controlled process of firing
- improved system of self-diagnostics
- auto calibration of the temperature
- quartz muffle
- accessories:
  - isolation press table Ref. № 122000022
  - ceramic insert 100 g ring Ref. № 122000023
  - ceramic insert 200 g ring Ref. № 122000023
  - isolation table Ref. № 122000025
  - firing tray Ref. № 122000026
  - pins Ref. № 122000027
- vacuum pump PVM122 Ref. № 032000000

Technical data	
Power supply	110/230 V ±10%, 50/60 Hz
Power consumption Furnace with vacuum pump	1700 W
Vacuum pump data	
Suction capacity	22 l/min
Adjustable vacuum	from 0,1 to 0,92 bar
Maximum firing temperature	1200°C
Firing chamber dimensions	∅ 95 mm, h 60 mm
Dimensions	
W/D/H	370x380x740 mm
Weight	30 kg



Ref. № 122000000



# Ceramicmaster E1000 ●●●

Programmable dental furnace for metal and pure ceramics

- designed for all type of dental metal and pure ceramics
- 100 operating programs
- completely controlled process of firing
- improved system of self-diagnostics
- auto calibration of the temperature
- quartz muffle
- accessories:
  - isolation table Ref. № 122000025
  - firing tray Ref. № 122000026
  - pins Ref. № 122000027
- vacuum pump PVM122 Ref. № 032000000

Technical data	
Power supply	110/230 V ±10%, 50/60 Hz
Power consumption Furnace with vacuum pump	1700 W
Vacuum pump data	
Suction capacity	22 l/min
Adjustable vacuum	from 0,1 to 0,92 bar
Maximum firing temperature	1200°C
Firing chamber dimensions	∅ 95 mm, h 60 mm
Dimensions	
W/D/H	370x380x580 mm
Weight	27 kg



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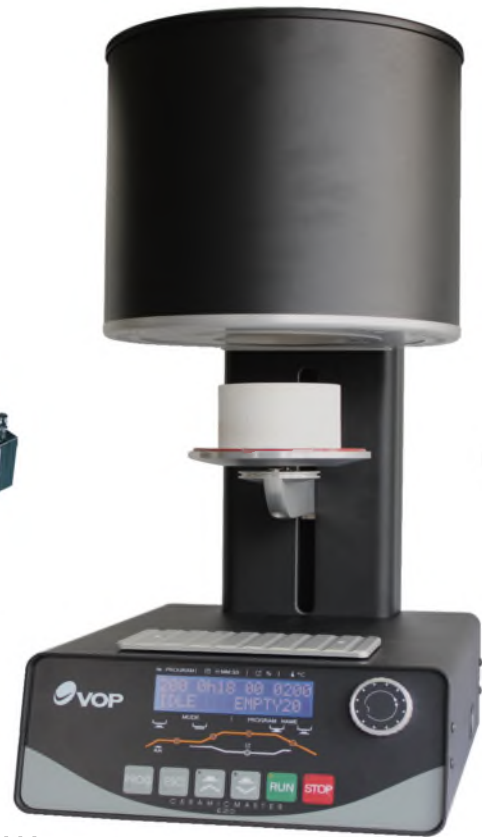


**NEW**

## Ceramicmaster E20

Automatic programmable vacuum furnace for dental ceramics.

- designed for all available types of dental metal ceramics
- 201 operating programs
- completely controlled process - 14 programmable parameters in every program: name, idle temperature, dry temperature, pre drying time, drying time, firing, first cooling time, second cooling time, vacuum control
- improved system of self-diagnostics and auto calibration
- multifunctional handle easy for operation
- a quartz muffle
- an option for automatic continuation of the program after short power breakdown
- an option for transfer of program parameters on USB
- an option for remote analysis of damage
- accessories:
  - isolation table Ref. № 122000025
  - firing tray Ref. № 122000026
  - pins Ref. № 122000027
- vacuum pump PVM122 Ref. № 032000000



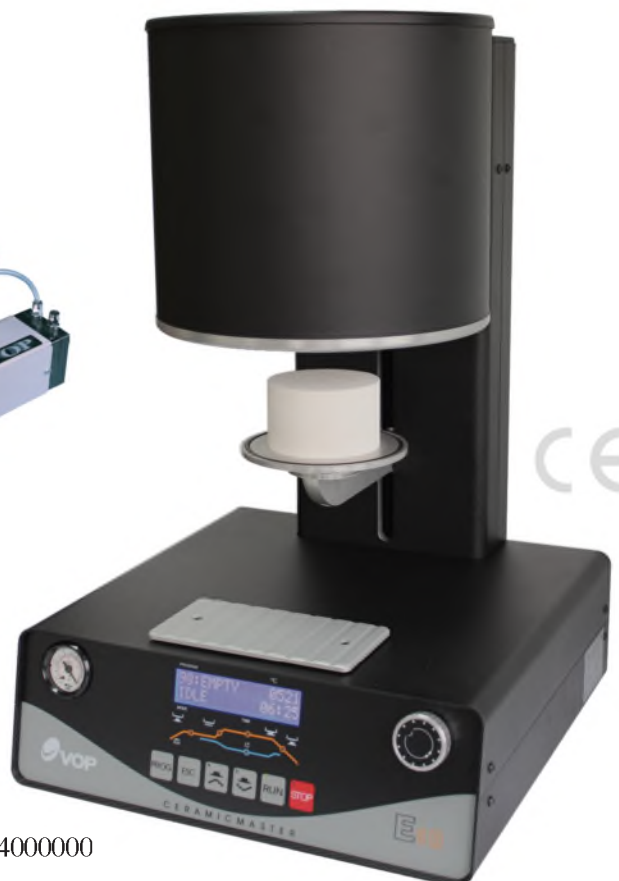
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Technical data	
Power supply	~230 V ±10%, 50/60 Hz
Power consumption	
Furnace with vacuum pump	1700 W
Furnace without vacuum pump	1550 W
Vacuum pump data	
Suction capacity	22 l/min
Adjustable vacuum	from 0,1 to 0,92 bar
Maximum firing temperature	1200°C
Firing chamber dimensions	∅ 95 mm, h 60 mm
Dimensions (W/D/H)	265/370/565 mm
Weight	24 kg

## Ceramicmaster E10

Programmable dental furnace for metal ceramics

- designed for all type of dental metal and pure ceramics
- 100 operating programs
- completely controlled process of firing
- improved system of self-diagnostics
- auto calibration of the temperature
- quartz muffle
- accessories:
  - isolation table Ref. № 122000025
  - firing tray Ref. № 122000026
  - pins Ref. № 122000027
- vacuum pump PVM122 Ref. № 032000000



Ref. № 244000000

Technical data	
Power supply	110/230 V ±10%, 50/60 Hz
Power consumption	
Furnace with vacuum pump	1700 W
Vacuum pump data	
Suction capacity	22 l/min
Adjustable vacuum	from 0,1 to 0,92 bar
Maximum firing temperature	1150°C
Firing chamber dimensions	∅ 95 mm, h 60 mm
Dimensions	
W/D/H	370x380x580 mm
Weight	26 kg

# LC-Cast 60A

Semi-automatic dental casting unit with high frequency induction melting and centrifugal casting

- designed for casting of dental Co-Cr, Ni-Cr and precious alloys
- autonomic cooling system
- robust
- accessories:
  - crucible tray Ref. № 062000035
  - ring gripper Ref. № 062000037
  - crucible Ref. № 062000038
  - silicon ring №2 Ref. № 062000039
  - silicon ring №3 Ref. № 062000040
  - silicon ring №4 Ref. № 062000041
  - graphite insert Ref. № 062000042



Ref. № 061000000

Technical data	
Power supply	110/230 V ±10%, 50/60 Hz
Power consumption	3 kW
Minimum alloy quantity in the crucible	7 g
Maximum alloy quantity in the crucible	80 g
Crucible type for dental alloys	ceramic crucible
Crucible type for precious alloys	ceramic crucible with graphite insert
Maximum time for fully melting of 30 g dental alloy	60 s
Cooling	autonomous distilled water cooling
HF power setting for melting	manual
Motor acceleration setting	manual
Casting	manual
Dimensions	
W/D/H	620x660x1060 mm
Weight	130 kg

# LC-Cast 600A

Automatic dental casting unit with high frequency induction melting and centrifugal casting

- designed for casting of dental Co-Cr, Ni-Cr and precious alloys
- both manual and automatic mode of melting
- automatic maintenance of optimum power
- autonomic cooling system
- accessories:
  - crucible tray Ref. № 062000035
  - ring gripper Ref. № 062000037
  - crucible Ref. № 062000038
  - silicon ring №2 Ref. № 062000039
  - silicon ring №3 Ref. № 062000040
  - silicon ring №4 Ref. № 062000041
  - graphite insert Ref. № 062000042



Ref. № 062000000

Technical data	
Power supply	110/230 V ±10%, 50/60 Hz
Power consumption	3 kW
Minimum alloy quantity in the crucible	7 g
Maximum alloy quantity in the crucible	80 g
Crucible type for dental alloys	ceramic crucible
Crucible type for precious alloys	ceramic crucible with graphite insert
Maximum time for fully melting of 30 g dental alloy	60 s
Cooling	autonomous distilled water cooling
HF power setting for melting	automatic/manual
Motor acceleration setting	manual
Casting	automatic
Dimensions	
W/D/H	620x620x1060 mm
Weight	135 kg

Automatic tabletop dental casting unit with high frequency induction melting and centrifugal casting.

- designed for casting of dental Co-Cr, Ni-Cr and precious alloys
- tabletop design
- both manual and automatic mode of melting
- automatic maintenance of optimum power
- automatic casting mode
- automatic cooling system
- accessories:

- crucible tray Ref. № 062000035
- ring gripper Ref. № 062000037
- crucible Ref. № 062000038
- silicon ring №2 Ref. № 062000039
- silicon ring №3 Ref. № 062000040
- silicon ring №4 Ref. № 062000041
- graphite insert Ref. № 062000042



Ref. № 080000000

	Technical data
Power supply	110/230V~, ±10%, 50/60Hz
Power consumption	2500 W
Minimum alloy quantity in the crucible	7 g
Maximum alloy quantity in the crucible	80 g
Crucible type for dental alloy	sceramic crucible
Crucible type for precious alloys	ceramic crucible, with graphite insert
Maximum time for fully melting of 30 g dental alloy	285 g
Maximum time for fully melting of 30 g dental alloy	60 s
Cooling	autonomous, distilled water cooling
HF power setting for melting	automatic
Motor acceleration setting	manual
Casting	automatic
Dimensions W/D/H	564x620x540 mm
Weight	75 kg

**LC-Cast ULTRA** ●●●

Automatic dental casting unit with high frequency induction melting, pressure injection casting in vacuum/argon atmosphere

- designed for casting of dental Co-Cr, Ni-Cr, Titanium and precious alloys
- pressure injection casting
- casting in vacuum/argon atmosphere
- compact tabletop design
- casting without crucibles or rings
- accessories:

- ring gripper Ref. № 062000037
- pentaform Ref. № 080000001
- ceramic paper Ref. № 080000002
- gasket Ref. № 080000003
- ceramic flask long Ref. № 080000004
- upper rubber base Ref. № 080000005
- metal flask long Ref. № 080000006
- lower rubber base Ref. № 080000007
- ceramic support ring Ref. № 080000008
- 2DET-769-000-MH Ref. № 080000009



Ref. № 080000000

	Technical data
Power supply	110/230 V ±10%, 50/60 Hz
Power consumption	4 kW
Output frequency	140 kHz
Melting temperature	1900°C
Maximum casting capacity of non-precious alloys	120 g
Maximum casting capacity of titanium alloys	70 g
Maximum casting capacity of precious alloys	285 g
Maximum time for fully melting of 30 g dental alloy	60 s
Cooling	autonomous distilled water cooling
HF power setting for melting	automatic
Casting	automatic
Dimensions	
W/D/H	220x200x200 mm
Weight	55 kg



## Programmable dental furnace for sintering of ZnO<sub>2</sub>

- designed for all type of dental of ZnO<sub>2</sub>
- 10 operating programs
- fast temperature increase
- controlled cooling process
- high quality MoSi<sub>2</sub> heating elements
- low energy consumption during main firing stage
- accessories:
  - tray GTS Ref. № 234000001
  - tray AG Ref. № 234000002
  - pearls AG Ref. № 234000003
  - pearls Noritake Ref. № 234000004
  - gripper tray Ref. № 234000005
  - isolation table bottom Ref. № 234020301
  - isolation table top Ref. № 234020302

Technical data	
Power supply	110/230 V ±10%, 50/60 Hz
Power consumption nom / max	1650 W /2500W
Firing chamber dimensions	120x120x100
Maximum firing temperature	1600°C
Dimensions W/D/H	420x400x870 mm
Weight	60 kg



Ref. № 234000000

# Firemagic ET400

## Preheating oven for casting rings and wax evaporation

- 10 + 1 user programs
- 5 temperature zones
- casting in vacuum/argon atmosphere
- automatic parameter control
- postponed start up to 90 h
- automatic control of steam extractor
- working with shock investment
- accessories:
  - steam extractor Ref. № 058000000
  - ceramic trays set Ref. № 054000013

Technical data	
Power supply	230 V ±10%, 50 Hz
Power consumption	2000 W
Maximum firing temperature	1100°C
Maximum program duration	100 h
Temperature speed of increase between the zones	from 1°C/min to 10°C/min
Firing chamber dimensions W/D/H	180/100/170 mm
Dimensions W/D/H	360x400x360 mm
Weight	28 kg



Ref. № 054000000



## PinPrecise PP100 ●●●

### Pin drilling unit

- drill revolution regulation
- automatic switch on system
- compact and ergonomic
- dust reduction system
- accessories:
  - pin system
  - drill

Ref. № 100000032  
Ref. № 100000033



Ref. № 100000000

Technical data	
Power supply	110/230 V ±10%, 50/60 Hz
Power consumption	100 W
Maximum drill revolutions	4000 rpm
Collet diameter	∅ 3 mm
Drilling depth	12 mm
Laser	class 3 max 5 mW
Dimensions	
W/D/H	157x410x160 mm
Weight	5 kg

## SlitPrecise SP100 ●●●

### New generation of model saw for plaster models

- laser guidance of the cutting
- cutting from the bottom up
- connection to aspiration unit is possible
- specialized safety system during cutting operation
- accessories:
  - diamond disk DFS
  - diamond disk Nuova

Ref. № 110000001  
Ref. № 110000002



Ref. № 110000000

Technical data	
Power supply	110/230 V ±10%, 50/60 Hz
Power consumption	200 W
Maximum revolutions	10000 rpm
Maximum depth of the cut	26,5 mm12 mm
Width of the cut	0,3 mm
Diamond cutting disk	∅85x∅16x0,3
Laser	class
Dimensions	
W/D/H	290x320x170 mm
Weight	10 kg

## DFM-75E ●●●

### Dental milling unit

- milling of both wax and dental alloys
- precise milling and drilling
- possibility to be used as a Parallelometer
- electromagnetic fixation of the working table
- accessories:
  - tools starting set
  - table

Ref. № 080000001  
Ref. № 086030000

	Technical data
Power supply	230 V $\pm$ 10%, 50 Hz
Power consumption	140 W
Micromotor 3M160-2 type	brushless
power output	160 W
speed	from 450 to 30000 rpm
reverse	yes
Working zone	
Y axis movement	75 mm
Z axis movement	30 mm
$\Phi$ axis rotation	360°C
Vertical travel of executive mechanism	70 mm
Dimensions	
W/D/H	245x340x520 mm
Weight	18 kg



Ref. № 080000000

## Poly AM ●●●

### Wet and dry pressure polymerization unit

- polymerization unit for wet and dry polymerization
- completely automatic process
- two stage polymerization
- microprocessor control of the temperature and polymerization time
- stainless steel chamber
- accessories:
  - sealing ring
  - metal filter
  - basket Coltene
  - basket A.gree

Ref. № 041010013  
Ref. № 041010018  
Ref. № 041010300  
Ref. № 041010400

	Technical data
Power supply	230 V $\pm$ 10%, 50 Hz
Power consumption	1220 W
Working chamber internal dimensions	$\Phi$ 140 mm, H 145 mm
Chamber volume	1,5 l
Maximum working pressure	6 bar
Programmable working pressure	from 40 up to 125°C
Programmable time for polymerization	from 1 to 99 min
Dimensions	
W/D/H	315x350x260 mm
Weight	13 kg



Ref. № 041000000

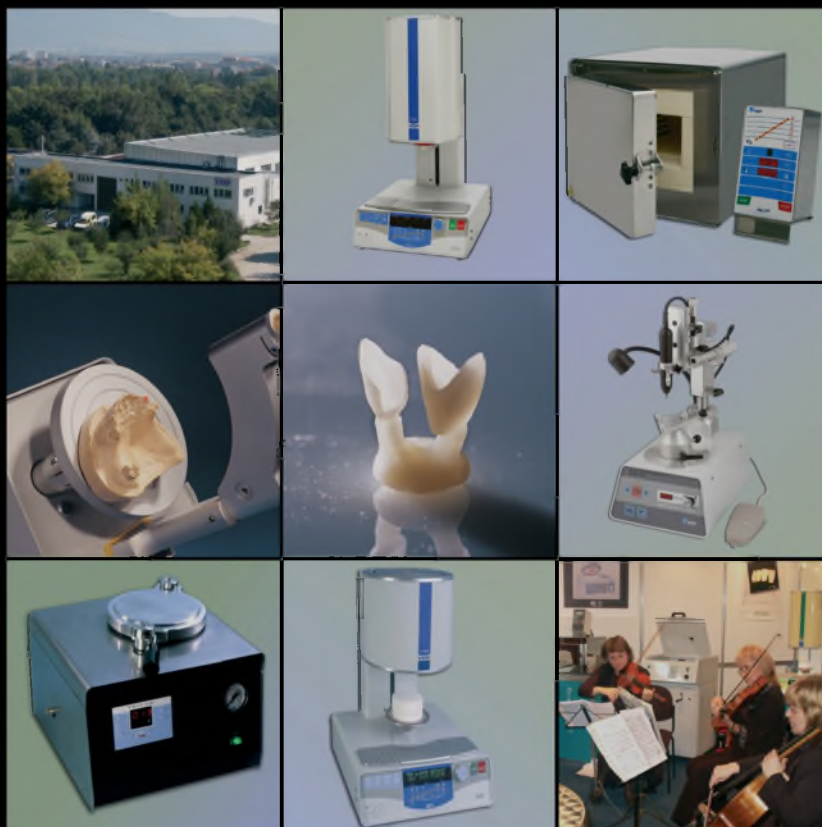
# MDT Jan Schünemann

“Modern High-Performance ceramics needs a precise firing procedure/guidance.”



## VOP

Our mission is constantly to improve what is essential in Dental by mastering science and smart technology.



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