

PREMET

TECHNOLOGIES

TVC d

DOUBLE CHAMBER PRESSURE OVER VACUUM CASTING MACHINE



INDUSTRY 4.0

TVCd is the pressure over vacuum casting machine designed to meet the more severe needs in lost wax casting production.

This revolutionary machine is the synthesis of the most advanced engineering and years of experience in casting that only **TOPCAST** will bring in your factory.

TECHNICAL DATA

	TVC3d	TVC5d	TVC10d	TVC12d
Number of casting programs	100	100	100	100
Crucible Volume	50 cc	100 cc	280 cc	380-500 cc
Crucible working capacity	200g Bronze / 250g Silver 500g Gold	400g Bronze 500g Silver / 1000g Gold	1500g Bronze 1500g Silver / 3000g Gold	2300g Bronze 2500g Silver / 5000g Gold
Flask max. diameter (mm)	90	150 / 200	150 / 200	150 / 200
Flask max. height (mm)	120	300 / 400	300 / 400	300 / 400
Induction heating power	2.5 kW	4.9 kW	10 kW	12 kW
Vacuum pump	Ext. 4 m3/h	Built-in 25 m3/h	Built-in 25 m3/h	Built-in 25 m3/h
Pressure over vacuum	3 bar	3 bar	3 bar	3 bar
Max. temperature	1250°C	1250°C / 1600°C	1250°C / 1600°C	1250°C / 1600°C

TVCs

SINGLE CHAMBER PRESSURE OVER VACUUM CASTING MACHINE



TVCs are fully automatic, robust, easy to use pressure over vacuum casting machines designed for small and medium casting laboratories.

This family of machines work with the well-known pressure over vacuum concept, thus preferring the perforated flask against the solid ones.

Melting is achieved in protective atmosphere (Nitrogen, Argon or Helium) while a strong vacuum pump is provided in order to boost the suction effect into the mould. As soon as the metal has entered the mould a strong compression takes place on top of the tree to reduce shrinkage porosity.

Crucible graphite consumption is greatly reduced thanks to the gas wash procedure which removes the oxygen in few seconds from the charge loading operation.

TECHNICAL DATA

MODEL	TVC3s	TVC4s	TVC10s
CRUCIBLE VOLUME	100 cc	280 cc	380 cc
CRUCIBLE WORKING CAPACITY	1 kg Au 0.5 kg Ag	2 kg Au 1 kg Ag	3 kg Au 1.5 kg Ag
FLASK MAXIMUM DIAMETER (MM)	Ø150	Ø150	Ø150
FLASK MAXIMUM HEIGHT (MM)	280	280	280
INDUCTION POWER	3 kW	4 kW	10 kW
VACUUM PUMP	External		
PRESSURE OVER VACUUM	3 bar		

TCC

VACUUM CONTINUOUS CASTING MACHINE



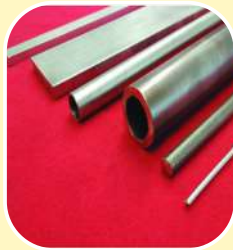
TCC Vacuum Continuous Casting machines have been design with the most up-to-date technologies to give you semi-finished products with the best quality and in the shortest time.

TCC machines are equipped with Gas Wash Purge procedure which removes oxygen with the vacuum pump and fills back the melting chamber with inert gas, preventing the oxidation of the alloy in a very fast and efficient way.

In addition, when a quicker cooling is required, semi-finished products can be cooled down by a direct water sprinkle aiming on their profile.

Hydraulic or Sawing cutting on the run is available on request, with automatic and programmable measurement of the profile length.

- 100% Fully Automatic Operation.
- Automatic & Programmable Measurement Of the Proile .
- Melting Under High Vacuum Environment.
- Proile Protection With Protective Gas Flushing.
- Cooling System by water sprinkler.
- Common crucible for all types of semi-inished products.
- 4 Roller / Quattro Drive
- Rapid replacement of the crucible-die assembly.



TECHNICAL DATA

	SMALL			MEDIUM			LARGE	
Model	TCC10-280cc	TCC12-380cc	TCC12-500cc	TCC15-1000cc	TCC15-1400cc	TCC20-2000cc	TCC35-4000cc	TCC45-7000cc
Induction power	10 kW	12 kW	12 kW	15 kW	15 kW	20 kW	35 kW	45 kW
Number of casting programs	100	100	100	100	100	100	Unlimited	Unlimited
Crucible working capacity	1,5 kg Silver - 3 kg Gold	2 kg Silver - 4 kg Gold	3 kg Silver - 5,5 kg Gold	6 kg Silver - 12 kg Gold	8,5 kg Silver - 16 kg Gold	12 kg Silver - 23 kg Gold	25 kg Silver - 46 kg Gold	44 kg Silver - 81 kg Gold
Speed of the pulling unit	min 10 mm/min max 999 mm/min							
Wire diameter	min 3 - max 15 mm Ø			min 4 - max 30 mm Ø			min 5 - max 40 mm Ø	
Simultaneous wire casting	max 2 wires			max 100 x 10 mm			max 6 wires	
Tube diameter	min 10 - max 45 mm Ø			min 10 - max 85 mm Ø			min 12 - max 85 mm Ø	
Vacuum Pump	Built-in 4 m3/h			Built-in 25 m3/h				
Max. Temperature	1500°C							

ENDURA

WAX INJECTOR



MONO ENDURA

BI ENDURA

The **MONO ENDURA** injector combines an aggressive design with an essential line, which characterizes and enhances its **strength and sturdiness**, resulting in a machine with a slender line with one workstation. The electronics reduced to a minimum, an **interface with industrial touch screen**, easy maintenance and powder-coated aluminum and stainless-steel surfaces make this injector particularly **reliable and suitable even for the most difficult environments**. It is equipped with a transparent melting tank with a constant vacuum system, a vacuum switch to check the vacuum in the mold, an RFID reader, an 8-cmc injection syringe with final temperature regulation and a self-centering clamp with 120x90mm plates.

The **BI ENDURA** injector combines an aggressive design with an essential line, which characterizes and enhances its **strength and sturdiness**, resulting in a machine with a slender line with two workstations. The electronics reduced to a minimum, an **interface with industrial touch screen**, easy maintenance and powder-coated aluminum and stainless-steel surfaces make this injector particularly **reliable and suitable even for the most difficult environments**. It is equipped with two non-expandable independent stations, a transparent melting tank with a constant vacuum system, a vacuum switch to check the vacuum in the mold, RFID readers, 8-cmc injection syringes with final temperature regulation and self-centering clamps with 120x90mm plates



STONE EXTRUDED WAX

VENICE EXTRUDED WAX

FLEXIBLE EXTRUDED WAX

FLUID EXTRUDED WAX

SUPER FLUID EXTRUDED WAX

SOLUBLE HYDRO RESIN

TECHNICAL DATA

Model	MONO ENDURA	BI ENDURA
Rubber Moulds Size	Min 50 x 30 x 12 mm Max 120 x 90 x 47 mm	Min 50 x 30 x 12 mm Max 120 x 90 x 47 mm
Weight & Dimesion	38 kg 60 x 36 x 53 cm	54 kg 90 x 38 x 53 cm
Production Capicity (Per Day)	2000 small and medium sized pieces	4,000 small and medium sized pieces

DF

REVOLVING BURNOUT FURNACE



- Ideal de-waxing and burnout furnace.
- Programmable electronic controller with digital display.
- Revolving plate with single or double-rack.
- External numerator plate indicating the flask position.
- Lost wax controller.
- Automatic fume exhaust and fast cooling system for quick loading.
- Heat Resistant Stainless Steel revolving Plate & Heating Chamber.



TECHNICAL DATA

Model	DF-421	DF-422	DF-502	DF622
FLASK CAPACITY (PLAIN Q100MM)	11	20	30	53
FLASK CAPACITY (FLANGED Q100MM)	7	13	17	32
EXTERNAL DIMENSION (W X I X H)	1075 x 950 x1915 mm	1075 x 950 x 2165mm	1200x 1070x 2165mm	1210x1320x2355mm
SMOKE OUTLET	500 mm	500 mm	500 mm	500 mm
CHAMBER DIAMENSION (D IA X H)	425 x 405 mm	425 x 650 mm	550 x 660 mm	670 x 720 mm
NUMBER OF RACKS	1	2	2	2
RACK DIAMETER	395 mm	395 mm	500 mm	620 mm
MAX FLASK HEIGHT AT UPPER RACK	300 mm	240 mm	260 mm	280 mm
MAXIMUM OPERATING TEMPERATURE	800°C	800°C	800°C	800°C
TURNATBLE SPEED (RPM)	3 3/4	3 3/4	3 3/4	3 3/4
NET WEIGHT	350 kg	430 kg	520 kg	680 kg
INSTALLED POWER	6 Kw	6.5 kw	9 kw	12 kw
POWER OF REVOLVING MOTOR	0.25 kw	0.25 kw	0.25 kw	0.37 kw
VOLTAGE	400 V AC, 3 Phase	400 V AC, 3 Phase	400 V AC, 3 Phase	400 V AC, 3 Phase
FREQUENCY	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz

VACUMIX

AUTOMATIC INVESTMENT MIXER



Automatic Investment Mixing and Vacuuming machine makes carefully preparation by sieving investment.

powder, mixing investment under vacuum and filling lasks under vacuum and vibration. Best possible.

results with homogeneous investment slurry. Superior results because of need to less water = much

better and solid embedding without any bubbles. Easy handling, very short investing cycles, easy cleaning.



TECHNICAL DATA

Model	VACUMIX -3B	VACUMIX -4B	VACUMIX -5B	VACUMIX -6B
CAPICITY (Dry Investment Powder)	8 kg	12 Kg	15 Kg	16 Kg
CAPICITY (No. Of Flask)	3	4	5	6
Maximum Flask Height	280 mm	280 Mm	280 mm	300 mm
Maximum Plain Flask Diameater	110 mm	120 mm	125 mm	125 mm
Maximium Flanged Flask Diameter	100 mm	100 mm	110 mm	110 mm
External Dimesion (W x I x H)	420 x 790 x 1410 mm	450 x 950 x 1630 mm	495 x 1075 x 1620 mm	510 x 1110 x 1650 mm
Net Total Weight	145 kg	155 kg	170 kg	175 kg
Total Installed Power	1.25 kw	1.25 kw	1.6 kw	1.6 kw
Voltage	400 VAC 3~	400 VAC 3~	400 VAC 3~	400 VAC 3~
Frequency	50/60 Hz	50/ 60 Hz	50/ 60 Hz	50/ 60 Hz

EASY

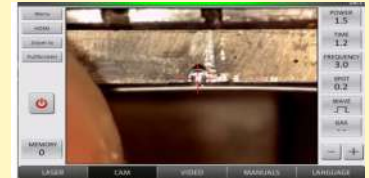
LASER WELDING MACHINE

EASY by ProLASER™ is the latest development of LASER Technology for Table-Top Manual LASER Welders.

It's designed for **High-Precision, High-Power** and **Heavy-Duty** applications, with special attention to precious metal processing.



Sustained by a 6-LITERS LIQUID TANK, DUAL-RADIATOR Cooling System



EMBEDDED CAMERA SYSTEM, 10" LCD Full- HD Touch Screen,



TECHNICAL DATA

MODEL	EASY-1	EASY-2	EASY-3	EASY-3 "PLUS"
LASER Source	Nd: YAG	Nd: YAG	Nd: YAG	Nd: YAG
Wavelength	1064nm	1064nm	1064nm	1064nm
Average Power	95W	100W	110W	140W
Peak Power	7,5kW	9,0kW	10kW	10kW
Max Energy	150 Joule	180 Joule	200 Joule	200 Joule
Pulse Frequency	up to 30Hz	up to 30Hz	up to 30Hz	up to 50Hz
Pulse Duration	0,1 ÷ 20 mS	0,1 ÷ 20 mS	0,1 ÷ 20 mS	0,1 ÷ 20 mS
Spot Dimension	0,2 ÷ 2,0mm (0,1mm Optional)	0,2 ÷ 2,0mm (0,1mm Optional)	0,2 ÷ 2,0mm (0,1mm Optional)	0,2 ÷ 2,0mm (0,1mm Optional)
External Control	10" Color TouchScreen	10" Color TouchScreen	10" Color TouchScreen	10" Color TouchScreen
Max Working Temp.	39°C	39°C	39°C	39°C
Power Requirements	1-Ph, 220/230 VAC, 50/60 Hz, 10A	1-Ph, 220/230 VAC, 50/60 Hz, 10A	1-Ph, 220/230 VAC, 50/60 Hz, 10A	1-Ph, 220/230 VAC, 50/60 Hz, 10A
Cooling System	Forced Air & Double Radiator 6L	Forced Air & Double Radiator 6L	Forced Air & Double Radiator 6L	Forced Air & Double Radiator 6L
Size (W x D x H)	W 59 x D 92 x H 65 cm	W 59 x D 92 x H 65 cm	W 59 x D 92 x H 65 cm	W 59 x D 92 x H 65 cm
Net Weight	49 Kg	49 Kg	49 Kg	49 Kg

HO-W-T

HYDROGEN GENERATOR



HO-200-W-T



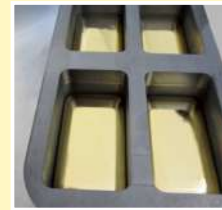
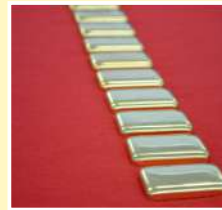
HO-500-W-T

TECHNICAL DATA

MODEL	HO-200 WT	HO-500 WT
SUPPLY VOLTAGE	180-240 VAC 1Phase 50 Hz at 8 Amp	180-240 VAC 1Phase 50 Hz at 30 Amp
POWER CONSUMPTION	1500 Watt	3500 Watt
NORMAL FREQUENCY	50/ 60 Hz	50/ 60 Hz
GAS PRODUCTION	600 Liter / Hours	2500 Liter / Hours
OPARTING PRESSURE	0.3 - 1.0 Bars with Electronic Regulator	0.3 - 1.0 Bars with Electronic Regulator
WATER TYPE	Clean Water	Clean Water
WATER FILL SYSTEM	Automatic Fill and Manual Fill	Automatic Fill and Manual Fill
COOLING SYSYTEN	Air	Water Cooling with Radiator
THE NUMBER OF TORCH	18G : 2 Torches 20G : 4 Torches 22G : 6 Torches	18G : 12 Torches 20G : 18 Torches 22G : 24 Torches
SIZE	30 x 50 x 33.5 cm	54 x 72 x 120 cm
WEIGHT	38 KG	175 KG

TCE VACUUM CENTRIFUGAL CASTING MACHINE

TIP PRECIOUS METAL INGOTS



TCE are consistent, robust and easy to use vacuum centrifugal casting machines designed for small and medium casting laboratories.

The casting cycle begins with alloys melting under vacuum or protective gas and continues with casting into the mould by centrifugal force. After casting and during the solidification phase a strong compression takes place in the cast tree.

The machine is fully automatic having more than 100 programs for different ingot sizes. The operator only has to load the graphite mould with pre-weighted grains into the holding disk, close the loading chamber and press the START button to launch the automatic cycle.

At the end of the cycle the furnace will return the gold or silver bar ready for the market stamp. In order to increase productivity, the system has been conceived with 2 loading chambers and one melting chamber.

TECHNICAL DATA

MODEL	TCE5	TCE10
CRUCIBLE WORKING CAPACITY	500 g Pt 250 g Steel	1500 g Pt 1000 g Steel
FLASK MAXIMUM DIAMETER (MM)	Ø110	Ø130
FLASK MAXIMUM HEIGHT (MM)	120	180
INDUCTION POWER	8 kW	10 kW
MAX. SPINNING SPEED	500 rpm	450 rpm
VACUUM PUMP	External	
MAX. TEMPERATURE	2000 °C	

TECHNICAL DATA

MODEL	TIP12	TIP40	TIP100
Max ingot weight	500g Silver / 1000g Gold	500g Silver / 1000g Gold	400 oz Gold
Pieces per Mould	1 x 1 kg Au 1 x 500 g Au 2 x 250 g Au 4 x 100 g 6 x 50 g	1 x 1kg Au 1 x 500g Au 2 x 250g Au 4 x 100 g 6 x 50 g	1 x 400 oz Au
Max ingot footprint	115,5 x 52,5 mm	115,5 x 52,5 mm	200 x 80 x 45 mm
Productivity	8 kilo-bars 24kt gold per hour or 32 x 100g ingots per hour	20 kilo-bars 24kt gold per hour or 80 x 100g ingots per hour	6 x 400 oz gold ingot per hour
INDUCTION POWER	12 kW	40 kW	100 kW
VACUUM PUMP	INBUILT		
GAS CONSUMPTION	20 liter / cycle		
MAX. TEMPERATURE	1200°C		



INDUSTRIAL WATER CHILLER

- * Innovative heat radiation system on the top
- * Convenient to install & disassemble for cleaning
- * Smart Controller with saving of electricity cost
- * Fast Temperature reduction Efficiency cooling

TECHNICAL SPECIFICATION

MODEL	PWC-7800
POWER	220 V-50/60Hz Single Phase
POWER INPUT	3.05 kw
COOLING CAPACITY	7800 w
REFRIGERANT	R410a
PUMP POWER	370 w
PUMP LIFT	30 m
WATAR TANK	40L



MAGNETIC POLISHER MACHINE

- * We can set the timing of reverse & forward cycle, with Speed Controller .
- * Stainless Steel Body for High Durability and Long Life.
- * Magnetic polisher can be programmed according to user's requirement.
- * Easy operating and no metal loss.
- * Automatic reverse - forward facility & stop timer.



TECHNICAL SPECIFICATION

MODEL	JZ-260B	JZ-360B	JZ-460B
VOLTEG	220 V	220 V	220 V / 380V
POWER	750 W	1500 W	2200 W
MAGNETIC SURFACE	260mm	360mm	460mm
STEEL NEEDLE QUANTITY	0-600 G	0-1000 G	0-2000 G
SPEED MINUTE	0-1800 r/Min	0-1800 r/Min	0-1800 r/Min
ITEM WEIGHT	2 Kg	3 Kg	5 Kg
MACHINE WEIGHT	28 Kg	38 Kg	80 Kg
DIMENSION (L X W X H -MM)	340 x 340 x 380	410 x 410 x 430	520 x 520 x 680

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TEKNİK DÖKÜM



PREMET TECHNOLOGIES FZE

JP 08-10 Jewelry Park, Saif Zone , POBox: 123869 SHARJAH - UAE
Ph: +971 6 5748282 Email : sales@premet.in Web: www.premet.in