

## MC series program controlled tabletop casting machines



The compact MC series was developed to provide jewellery designers, goldsmiths, development departments and dental laboratories with a cheap yet highly professional casting machine. Our most important aims were: extremely short processing time from mould manufacturing to completed casting; simple, safe operation; high quality and, above all, reproducible casting results; and low operating costs. The overwhelming global success of the MC series in numerous industries – including some not originally envisaged – emphatically confirms the MC concept.

### Ingeniously simple = simply ingenious

With the MC machines, you can easily cast by hand from the crucible to your mould and feel what you are doing – just as it has been done for thousands of years. So that this works consistently and safely, the entire melting/casting unit is tilted together through a 90° angle. For perfect balance and to make do with as few moving parts as possible, almost the whole machine moves during tilting: being cylindrical in design, the whole moving section rotates as if in a halfpipe – ingeniously simple and stylishly designed on high-quality rollers. However, unlike manual casting, the process takes place in an enclosed chamber under a vacuum or inert gas atmosphere, to prevent air pockets and oxidation. You can check the melting and pouring-off process through the sight glass.



### Full text LCD display for fine adjustment and serial programming

The new operating system features individual setting of parameters to achieve maximum performance from every pattern mould and every alloy. Thanks to the transparent layout of the menu structure and full text display, all settings are quick and easy to program. Of course all process parameters can be saved for repeated castings.



### Vibration technology for excellent casting quality

The MC machines with the “V” suffix are equipped with the Indutherm vibration system (see page 20). Vibration switched on directly after casting is a decisive factor in enhancing mould filling with very filigree parts. It prevents porosity, ensures a finer grain structure and allows greater and more constant density. Parts have measurably higher elasticity and this increases the scope for further processing significantly.

Vibration technology is a compelling alternative to the frequently used and relatively delicate centrifugal systems, especially when casting platinum or palladium.



### Handling the mini casting system is extremely simple:

- 1] Fill in the material and heat up.
- 2] Take the flask from oven and insert into the machine. The device itself looks after all additional functions – until we get to the stroke of genius:
- 3] Pouring off takes place using a 90° rotation of the casting unit. After pouring, the MC machine automatically switches to overpressure in order to optimise the mould filling even for delicate parts.

# MC series – choose the version perfectly fitting to your needs



## MC 16, the new MC series basic model

- Run of process with controller
- LCD-display with all program data (20 programs)
- For graphite and for ceramic crucibles, temperature up to 2000° C
- Very easy to use, short training period
- Perfectly suited for small castings and small series
- 3.5 KW induction generator for fast heating
- Even for the casting of steel and platinum

## MC 20 V with vibration technology

- Systematically designed for intricate casting projects and for continuous operation
- Equipped with our vibration system – for better form filling, creating casts with greater, more consistent densities, higher elasticity and greatly reduced porosity
- Overpressure of up to 3 bars (casting under vacuum also possible)
- Optical pyrometer for temperature measurement up to 2000° C

## MC 60 V for gold and silver casting

- Basing on the same technology as the MC 16, but larger melting/casting unit with much higher capacity
- Hence reduced maximum temperature (1300° C), perfect for gold and silver casting
- LCD-display with all program data
- Vibration technology
- Excellent ratio machine size to capacity: flasks up to Ø 100 mm x 120 mm h

## MC 100 V – high temperature plus capacity

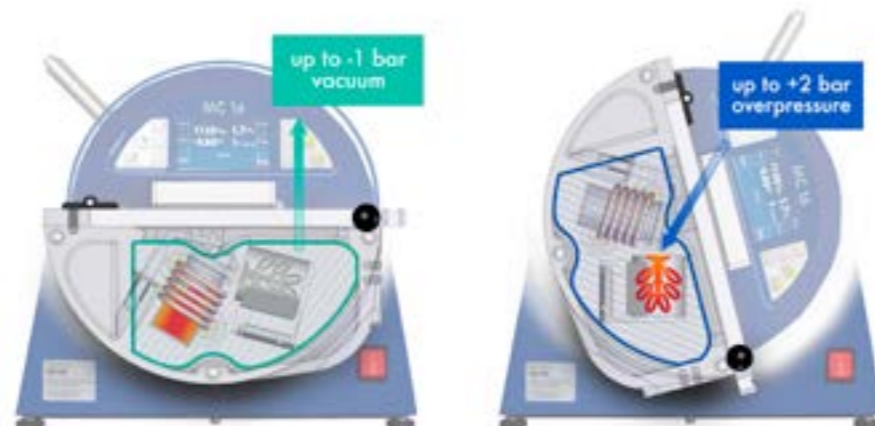
- 8 kW (3x400 V) power generator for maximum temperature up to 2000° C
- High capacity: crucibles with casting volume of up to 450 g Au 18ct or 500g Pt, for use of flasks up to Ø 100 mm x 120 mm h
- Vibration system
- Overpressure of up to 3 bars (casting under vacuum also possible)
- Optical pyrometer for temperature measurement up to 2000° C

## A complete casting system covering just a few square feet

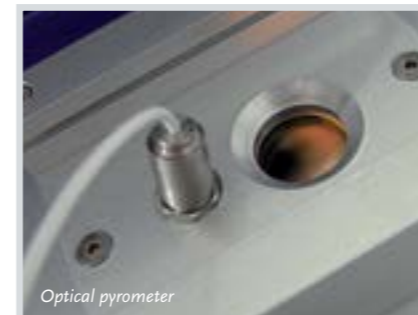
- 1) Vacuum investment machine INDU MIX for bubble-free mixing of the investment compound and filling of the flask. The integrated vibrator eliminates any possible air bubbles.  
Indumix 2+ for 1 flask 100 x 120mm (Ø x h)  
Indumix 3+ for up to 3 flasks 100 x 120mm (Ø x h)  
Indumix 4+ for 1 flask 130 x 250 mm (Ø x h)
- 2) 1,000°C furnace AK 20 for melting out the wax and burning out the form. Temperature pre-selection, high-quality insulation.  
Furnace interior size: ~ 300 x 300 x 200 (h) mm  
Also available AK 50: ~ 300 x 450 x 315 (h) mm  
Also available AK 135: ~ 410 x 620 x 575 (h) mm
- 3) MC series casting machine
- 4) Sand blasting cabinet for easy removal of plaster: air pressure requirement: 270 l/min at 10 bar, 150 l/min at 5 bar, connection for suction system, foot switch for adjusting pressure.



A significant factor for the economic efficiency is the low quantity of metal that must be calculated for button.



After pouring, the MC series automatically switch to overpressure in order to optimise the mould filling even for delicate parts. Alternatively it is also possible to keep the vacuum.



## Main benefits of all MC machines

- Very simple and safe to operate, short training periods
- All process parameters can be set individually and saved for repeated castings
- Excellent mould filling thanks to high overpressure and vibration system

## MC series small high temperature casting machines

## MC for gold and silver

## MC series large high temperature casting machine



	MC 16	MC 20 V	MC 60 V	MC 100 V
<b>performance</b>				
power max. / electrical connection	3.5 kW 230 V single phase	3.5 kW 230 V single phase	3.5 kW 230 V single phase	8 kW 3x400 V
temperature max.	2000° C	2000° C	1300° C	2000° C
<b>capacity</b>				
casting volume	100 g Au 18 ct 110 g steel / 200 g Pt	100 g Au 18 ct 110 g steel / 200 g Pt	450 g Au 18 ct 300 g Ag 935	450 g Au 18 ct 250 g steel / 500 g Pt
for use of flasks	up to ø 30/50/65/80 mm x 80 mm h	up to ø 30/50/65/80 mm x 80 mm h	up to ø 80/100 mm x 120 mm h	up to ø 80/100 mm x 120 mm h
<b>handling+control</b>				
control panel	by LCD-Display, full text readout	by LCD-Display, full text readout	by LCD-Display, full text readout	by LCD-Display, full text readout
automatic vacuum function	■	■	■	■
automatic overpressure function	■	■	■	■
casting also under vacuum only	■	■	■	■
vacuum or overpressure after casting	■ -1 up to +2 bar	■ -1 up to +3 bar	■ -1 up to +2 bar	■ -1 up to +3 bar
function washing by inert gas	■	■	■	■
vibration system	-	■	■	■
supply: cooling water, inert gas argon or nitrogen	■	■	■	■
temperature measurement/control	■ up to 1,300°C ○ up to 1,600°C	■ up to 2,000°C	■ up to 1,300°C	■ up to 2,000°C
<b>quality management</b>				
RS 232, Ethernet, USB interface, diagnostic system	■	■	■	■
GSM-modem for remote service	○	○	○	○
<b>accessories</b>				
vacuum investment mixer Indumix 2+/Indumix 3+	○	○	○	○
furnace AK 20/AK 50	○	○	○	○
sand blasting cabinet	○	○	○	○
vacuum pump, up to 8 m³/h / up to 21 m³/h	○ / -	○ / -	○ / ○	- / ○
floor unit	-	-	-	○



The MC 100 V as standalone version. The floor base offers enough space to accommodate accessories, for example the vacuum pump.