

IDRA 3T

***AUTOMATIC SINTERING MACHINE mod. IDRA 3T, WITH THREE STATIONS, 240 kVA, 42TON.**

Main features

- Machine suitable for the continuous production of average/large series of diamond segments.
- Cycle subdivision into three phases / stations:
 - station 1: preheating
 - station 2: sintering
 - station 3: cooling
- The sintering process takes place in a controlled atmosphere in the 3 stations by inlet of inert/reducing gas. During the transport between the stations the mould is protected by a "shower" of the same gas.
- Temperature control with thermo-couple automatically inserted in the center of the mould.
- Type K thermo-couple for operating temperatures up to 1000°C.
- Evacuation system and smoke filtering with water filter.
- Preheating, sintering and cooling times are the same.
- Control program with cycles divided into 12 steps. Each step includes:
 - temperature
 - pressure
 - max. power limit
 - heating time
 - holding time
- From 18 up to 64 mould unloading and loading magazine.
- Automatic mould feeding from mould magazine.
- 18 special aluminium frames.
- Process data visualisation (set and real) and alarms.
- Machine complies with EEC regulations.

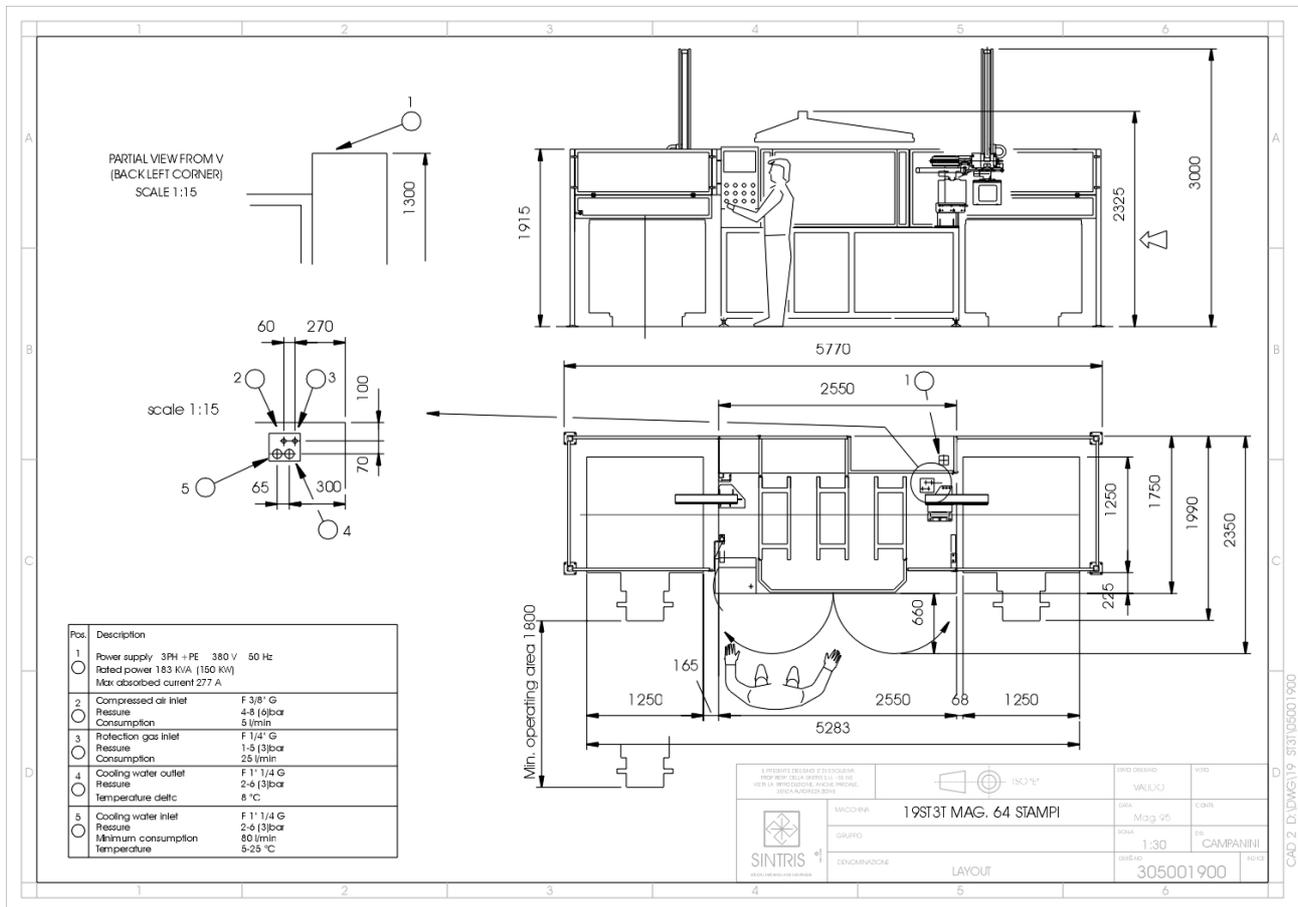
Options

- Analogic outlet for variable process recording.
- Pyrometer 350-1300°C to be used alternatively to the thermo-couple.
- Height segment reading during sintering process (linear transducer on cylinder, resolution of 0.01 mm)
- Data acquisition system on external PC.
- Barcode reading system for automatic selection of sintering cycle according to product in aluminium frame, including labelling machine.
- 18/36 moulds loading/unloading magazine.
- Aluminium frames.

- Electrodes in graphite.
- Graphite plates.
- Graphite moulds.
- Thermo-couples.
- Prearrangement for modern installation for remote assistance.

Technical Data

- | | |
|---|---|
| <input type="checkbox"/> Max. sintering area | 110 cm ² (850°C 350kg/cm ²) |
| <input type="checkbox"/> Approx. sintering cycle time | 8 minuti |
| <input type="checkbox"/> Productivity | 600-650 segm/h (40x2.8mm - 90segm/mould)
270-310 segm/h (24x10mm - 44segm/mould) |
| <input type="checkbox"/> Loading and unloading magazine | n.18 moulds |
| <input type="checkbox"/> Power supply | 380 / 400V 3phs 50Hz |
| <input type="checkbox"/> Max. power consumption | 2 x [120 kVA - (175 A)] |
| <input type="checkbox"/> Transformers | 2 x 120 kVA |
| <input type="checkbox"/> Compression force on the 3 stations (adjustable) | 3000 - 42000 kg |
| <input type="checkbox"/> Electrode dimensions | 150 x 160x60(h)mm |
| <input type="checkbox"/> Plate dimensions | 150 x 160x65(h)mm |
| <input type="checkbox"/> Aluminium frames dimensions | 193 x 158mm |
| <input type="checkbox"/> Max. mould height | 110mm |
| <input type="checkbox"/> Gas consumption | 15 - 30 l/min N ₂ /Ar ₂ (max. 5% H ₂) |
| <input type="checkbox"/> Air consumption (filtered) | 10 l/min 6 bar |
| <input type="checkbox"/> Industrial water consumption | 100-120 l/min 2-6 bar 10-20°C |
| <input type="checkbox"/> Colour | Coiche |
| <input type="checkbox"/> Overall size (approx.) | 2000x3500x2500(h) mm |
| <input type="checkbox"/> Weight (approx.) | 4000 kg |



* MGM reserve itself the right to change the characteristics described in this document without previous notice.