

# IDRA 1T

**\*AUTOMATIC SINTERING MACHINE mod. IDRA 1T, WITH ONE STATION, 120 kVA, 42TON.**

**Main features**

- ☐ Machine suitable for the continuous production of average/large series of diamond segments.
- ☐ The sintering process takes place in a controlled atmosphere in the sintering stations by inlet of inert/reducing gas in the sintering station.
- ☐ 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.
- ☐ Control program with cycles divided into 12 steps. Each step includes:
  - ☐ temperature
  - ☐ pressure
  - ☐ max. power limit
  - ☐ heating time
  - ☐ holding time
- ☐ Memory allows for storing of up to 120 sintering programs.
- ☐ 18 mould unloading and loading magazine.
- ☐ Automatic mould feeding from mould magazine.
- ☐ 18 special aluminium frames.
- ☐ process data visualisation (set and real) and alarms.

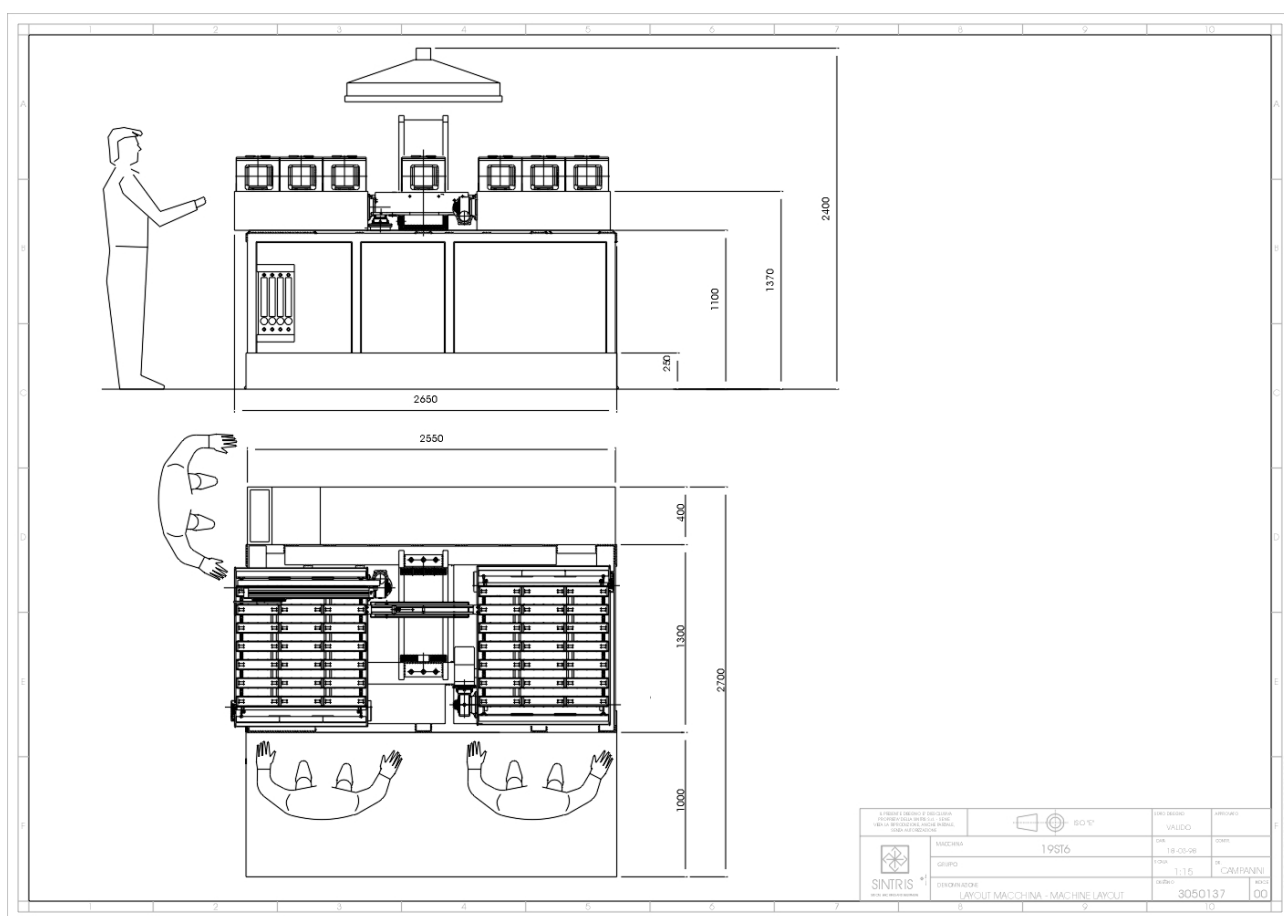
**Options**

- ☐ 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) with possible cycle interruption according to feedback. The system allows for pressure control during the liquid phase of sintering.
- ☐ Data acquisition system on external PC.
- ☐ Barcode reading system for automatic selection of sintering cycle according to product in aluminium frame, including labelling machine.
- ☐ 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 <sup>2</sup> (850°C 350kg/cm <sup>2</sup> )                                 |
| <input type="checkbox"/> Approx. sintering cycle time   | 11 - 12 min.   |
| <input type="checkbox"/> Productivity                   | 400-450 segm/h (40x2.8mm -90segm/mould)<br>200-220 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         | 120 kVA (175 A)  |
| <input type="checkbox"/> Transformer                    | 120 kVA  |
| <input type="checkbox"/> Compression force (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                | 10 - 20 l/min N <sub>2</sub> /Ar <sub>2</sub> (max. 5% H <sub>2</sub> )            |
| <input type="checkbox"/> Air consumption (filtered)     | 10 l/min 6 bar   |
| <input type="checkbox"/> Industrial water consumption   | 60-80 l/min 2-6 bar 10-20°C  |
| <input type="checkbox"/> Colour                         | Choice   |
| <input type="checkbox"/> Overall size (approx.)         | 2700x2000x2500(h) mm   |
| <input type="checkbox"/> Weight (approx.)               | 3000 kg  |



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