Dear customer,
Thank you for placing your trust in OML products and purchasing one of our high quality products.
The safety and accuracy of our products is dependent on their proper application. Please follow the instructions very carefully.

1) MANUFACTURER'S DETAILS:

O.M.L. S.R.L.
Via C. Colombo 5 - 27020 Travacò Siccomario (PV) - Italy
Tel. +39 (0)382/559613 - Fax +39 (0)382/559942

2) INTENDED USE:

SinterGrip is suitable for clamping unmachined parts, sawn materials and parallel-milled workpieces.

3) SAFETY PRECAUTIONS:

SinterGrip can be used with all the mechanical, mechanical-hydraulic or hydraulic clamping systems.
⚠ For all the other clamping systems, please check the compatibility of these systems with grippers.
Persons using **SinterGrip** must read the operating instructions before commencing any work.
Flexible workpieces only generate a low level of clamping power and represent a danger to persons and surroundings.
Workpieces may fall off if too little clamping pressure is supplied.
Please, follow all accident prevention instructions applicable to this machine.
Avoid all hazardous working practices.

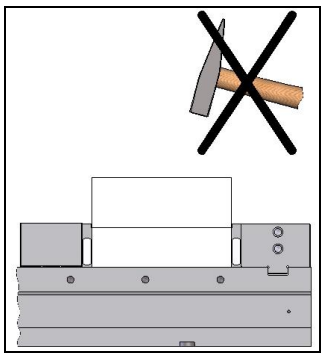
4) APPLICATION:

1) Screw the jaws **SinterGrip** "All in One", "Standard" or "Starter Kit" (suggested clamping force = 40 Nm/30 ft-lb) to the vise. Each model (Allmatic, OML, Gressel, etc.) has its own different kind of screw.
   The length of the screw is very important for a good result. Therefore, check the depth of the thread of your own vise, considering the thickness of the **SinterGrip** jaws and then proportion consequently the length of the screws (ex. Depth of the thread = mm 10 and jaw thickness = mm 12 → right length of the screw = mm 22)
   ⚠ Too long or too short screws don't allow a correct clamping.

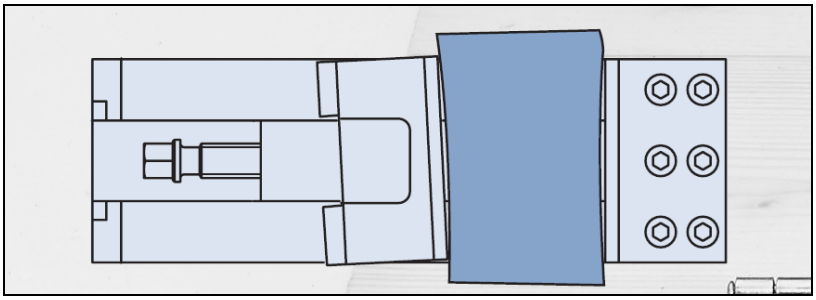
2) Tighten (2 Nm/1,5 ft-lb) the inserts **SinterGrip** at the jaw using the screws TORX T9 included, taking care to place the inserts in parallel to the dovetail seat.

The following factors should be taken into account when selecting suitable clamping points on the workpiece:

1) Clamping should not be effected in the vicinity of any mould joints or dressed areas. Large discrepancies can occur in these areas;
2) ⚠ Grind flame cut contours with hard regions with an angle grind;
3) ⚠ Make sure that the teeth of the insert are in grip on the workpiece;
4) ⚠ It is not necessary and it is forbidden to hit the workpiece with a hammer after the clamping. This may break the inserts;



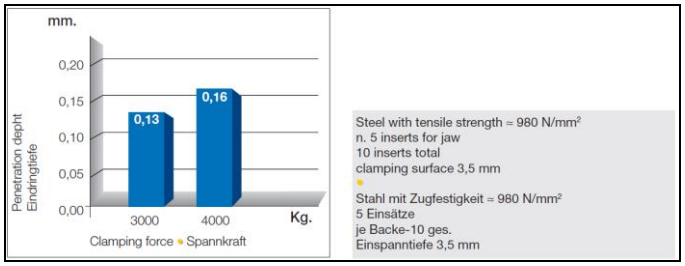
5) In case the workpiece is strongly irregular, we suggest to use a floating jaw.

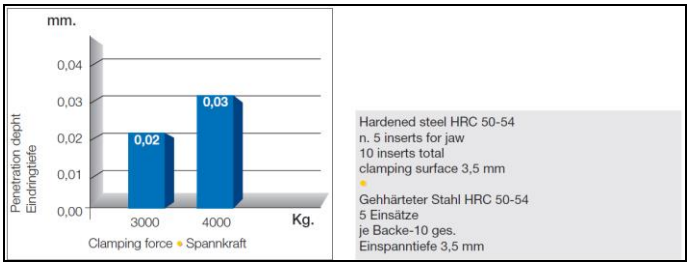


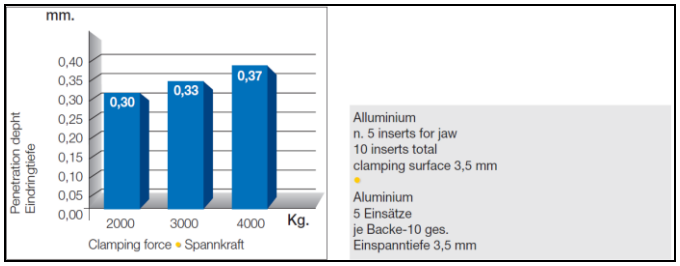
5) PENETRATION DEPTH OF THE INSERTS:

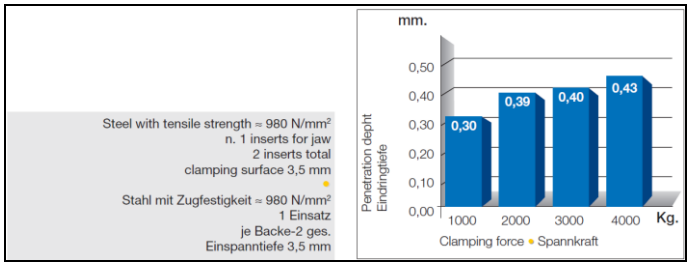
<u>The ratio between inserts and penetration depth is inversely proportional, that is, fewer inserts = more penetration</u>

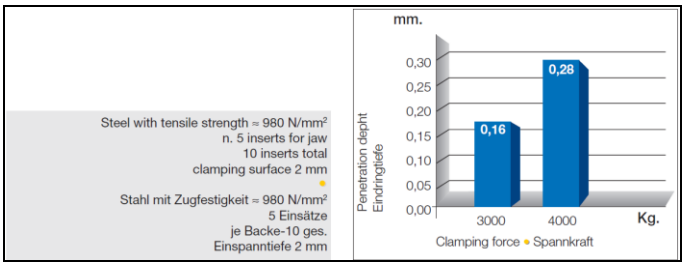
The values indicated in the chart are those of the penetration of each tooth of the insert, in relation to the number of inserts used, the type of material and the clamping force.











6) CLAMPING FORCE FOR EACH INSERT :

The maximum clamping force for each Sintergrip insert is 400daN.

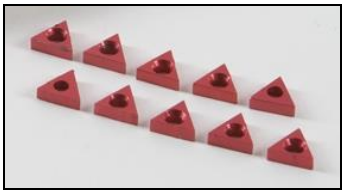
We suggest to reduce this force by 30% for the clamping with 2mm.

7) CLAMPING FORCE AND WORKPIECE DEFORMATION:

In case it is necessary to reduce the clamping force in order to avoid the deformation of the workpiece, it can be possible to reduce the clamping force of which see point n. 6) after the first punching.

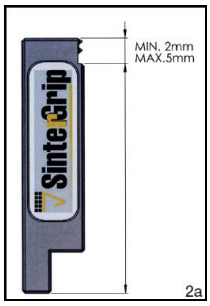
8) PROTECTION OF THE SEAT OF THE INSERT:

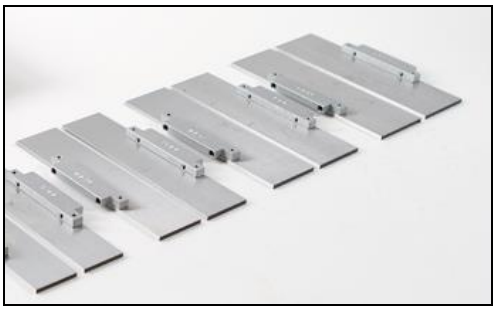
We suggest the use of the protection inserts in aluminum art. 58450519 in order to protect the seats of the inserts not used.



9) USE OF PARALLELS CLAK SYSTEM:

The jaws **SinterGrip** can be used with our exclusive system CLAK SYSTEM for the support of the piece. At this proposal, the insert **SinterGrip** can be used for a clamping surface of minimum 2 mm and maximum 5 mm.





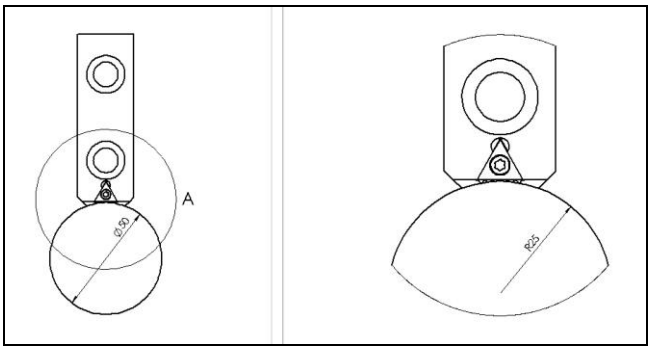
Together with the jaws, we supply the pair of parallels for a clamping surface of 3 mm, while into the set of 6 pairs of parallels (see our catalogue page 19) we supply the first 4 pairs of each model for the second operation of the workpiece, and the last 2 pairs (those with the asterisk), for the clamping surface of 2 mm or 5 mm depending on each model of jaws.
For example, OML TC/MC 150 jaws height H50 mm:

- Pair of parallels H48 mm = clamping surface 2 mm
- Pair of parallels H45 mm = clamping surface 5 mm

Being the insert seat backward from the body jaw, **it is not necessary to disassemble the inserts for the second operation.**

10) USE OF **SinterGrip** WITH CHUCKS:

For the use of **SinterGrip** with chucks, apply steps 1) to 8). The minimum diameter of the piece for a better use of the same is shown below.

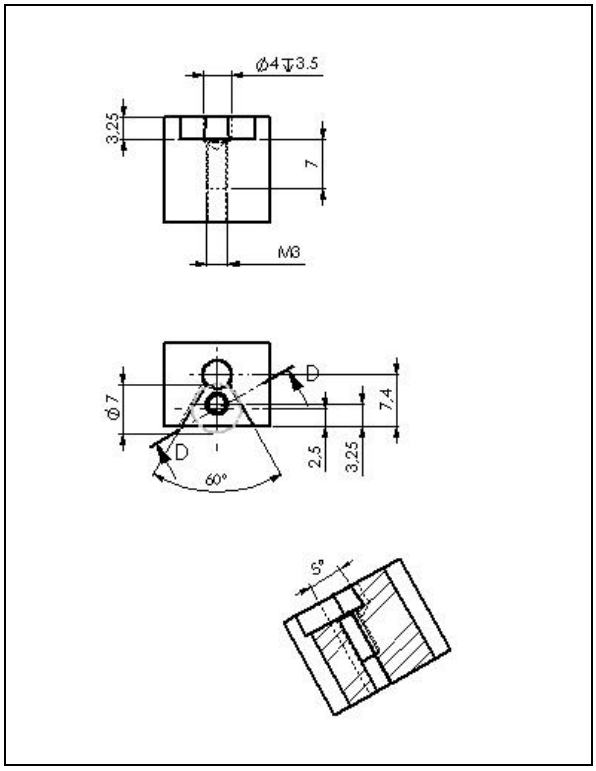


11) INSERT SEAT:

In case of personal execution of jaws and / or clamping devices, use suitable material (steel Rm 800 N/mm^2 or higher).
It's not recommended to use unsuitable materials, such as cast iron and aluminum.

The seat of the insert must be pre-machined and the finishing of the tapered seat (see drawing) requires the use of the finishing cutting tool art. 58450410.

The parameters of the cutting tool Diam 3.3 mm are:
V = from 80 to 120 m/min
Fz= 0,02 mm per tooth (the cutting tools is 3 flute)



You can ask for the 3D version of this drawing to omlspa@omlspa.it .

For any further information, please, contact us directly or visit our website: www.omlspa.it

5 axis m.t.

Horizontal m.t.

Vertical m.t.