

ZENITH IN WORK HOLDING TECHNOLOGY

MAGNA  SLOT

a complete Magnetic Machine Bed

MAGNASLOT – AN ELECTRO PERMANENT MAGNETIC CHUCK *for holding work pieces magnetically and/or mechanically.*

Magnaslot is an invention necessitated by the growing demand for versatility in machine tool industry. Historically we have moved on from machine tools designed for a specific purpose viz. SPM, to machines tools which are universal in nature.

Development of magnetic beds has also moved on from permanent magnetic beds to electro magnetic beds and then to the EPM - Electro Permanent magnetic beds with its instantaneous clamping and electrical independence. But the journey does not end here.

The inherent drawback of a magnetic bed comes to fore when the customer wants to mount a non magnetic material. The solution is to remove the magnetic bed and clamp other forms of clamping devices to the machine bed or clamp the secondary clamping device on to the magnetic bed.

Removing the magnetic bed frequently from the machine is not always easy and may lead to damage to the original machine bed.

Another drawback of orthodox magnetic bed is that the top surface is always made up of two different materials, either steel or aluminium/brass/ stainless steel or epoxy. The dissimilar materials used at top surface leads to uneven thermal

expansion during machining creating inaccuracy in the clamping face. Secondly if there is any crack in the non magnetic materials, seepage of external liquids takes place damaging the magnet.

To overcome these and other such problems in the orthodox magnetic beds and with an eye on versatility we present MAGNASLOT

- A magnetic bed with all steel monolithic working surface.
- A magnetic bed with T- slots, facilitating clamping of magnetic and non magnetic materials.
- A magnetic bed which leaves no passage for coolant to seep in.

FEATURES

**PATENT
APPLIED**

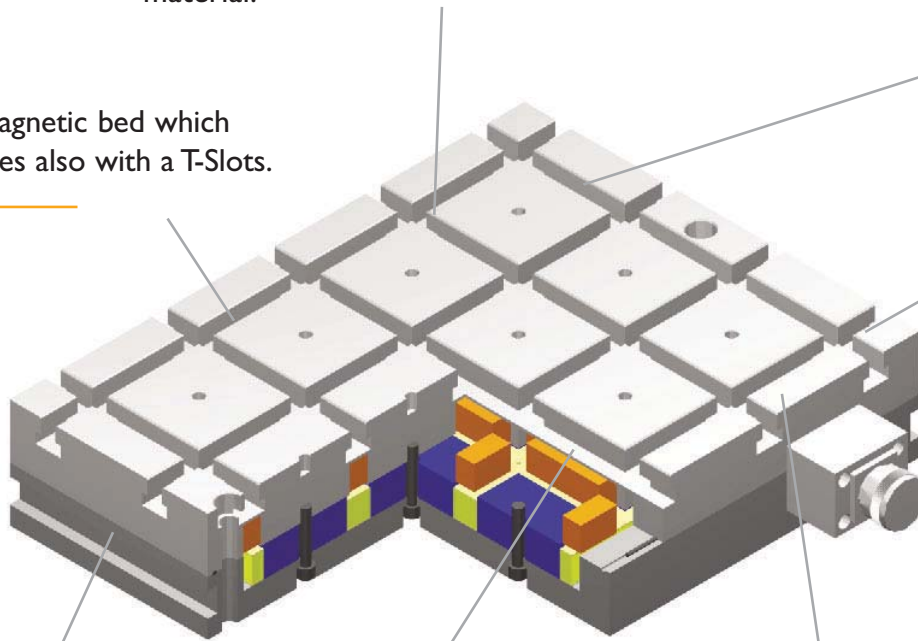
**MAGNETIC
PULL 750
daN/POLE**

2. The working surface of the magnetic chuck is machined from a single block of mild steel, wherein the poles are demarcated by making slots in the top surface obviating the need to use filler material.

1. A magnetic bed which comes also with a T-Slots.

3. Very rigid and robust construction.

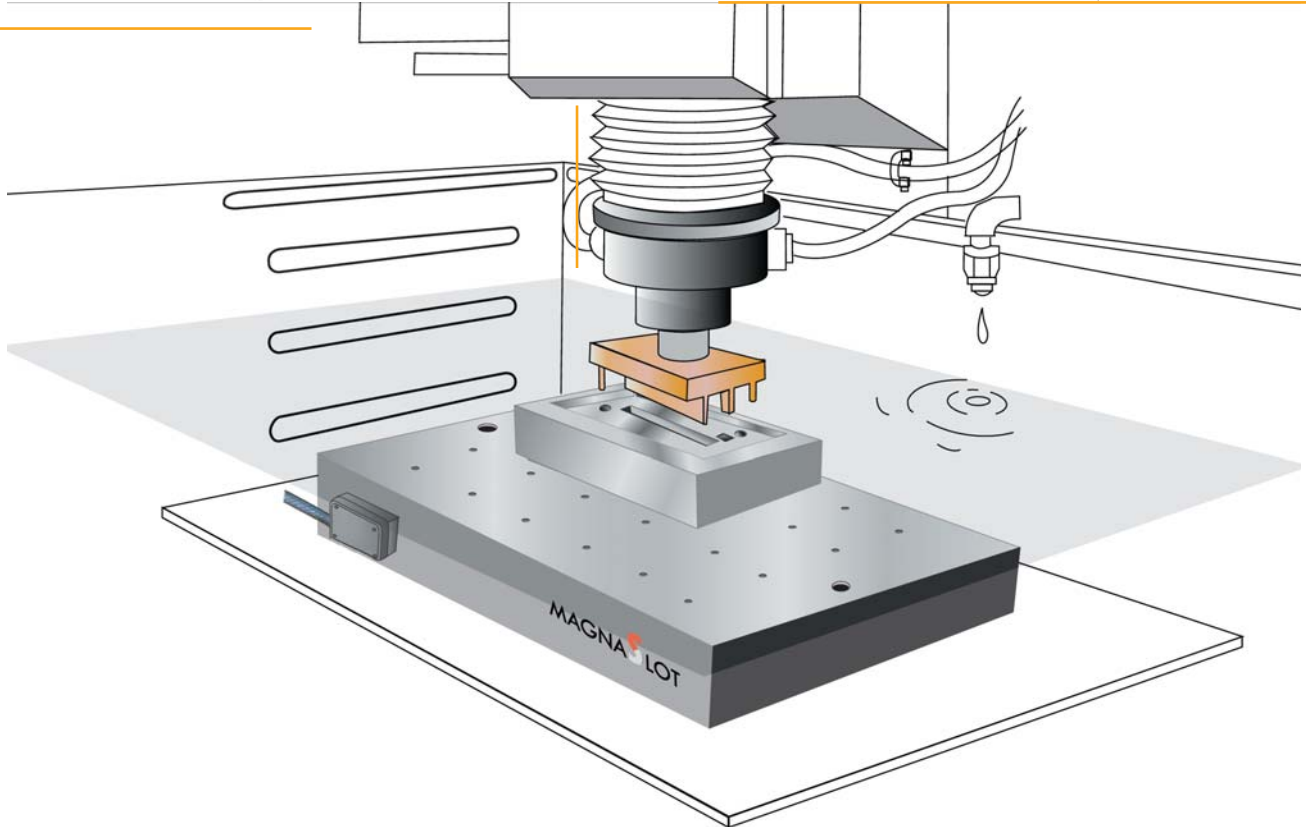
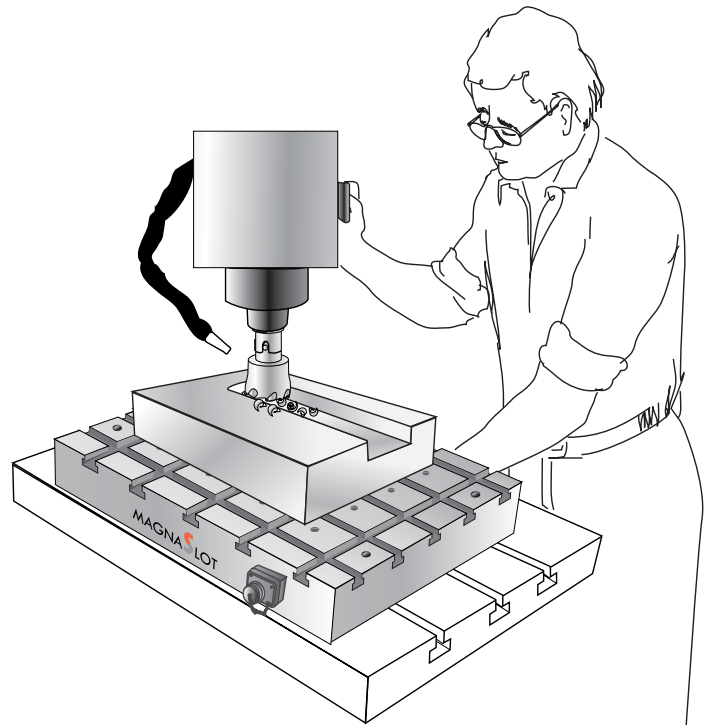
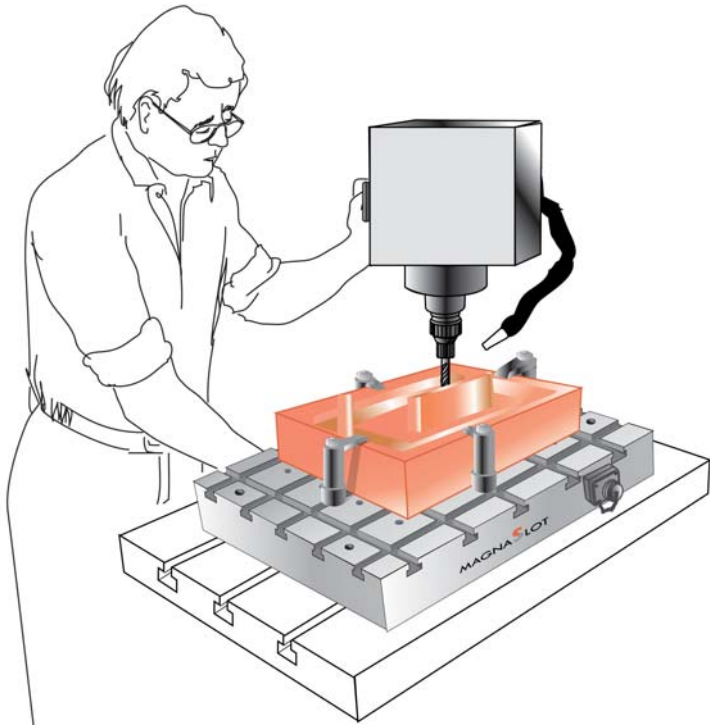
4. Universal clamping directly on Magnetic chuck.

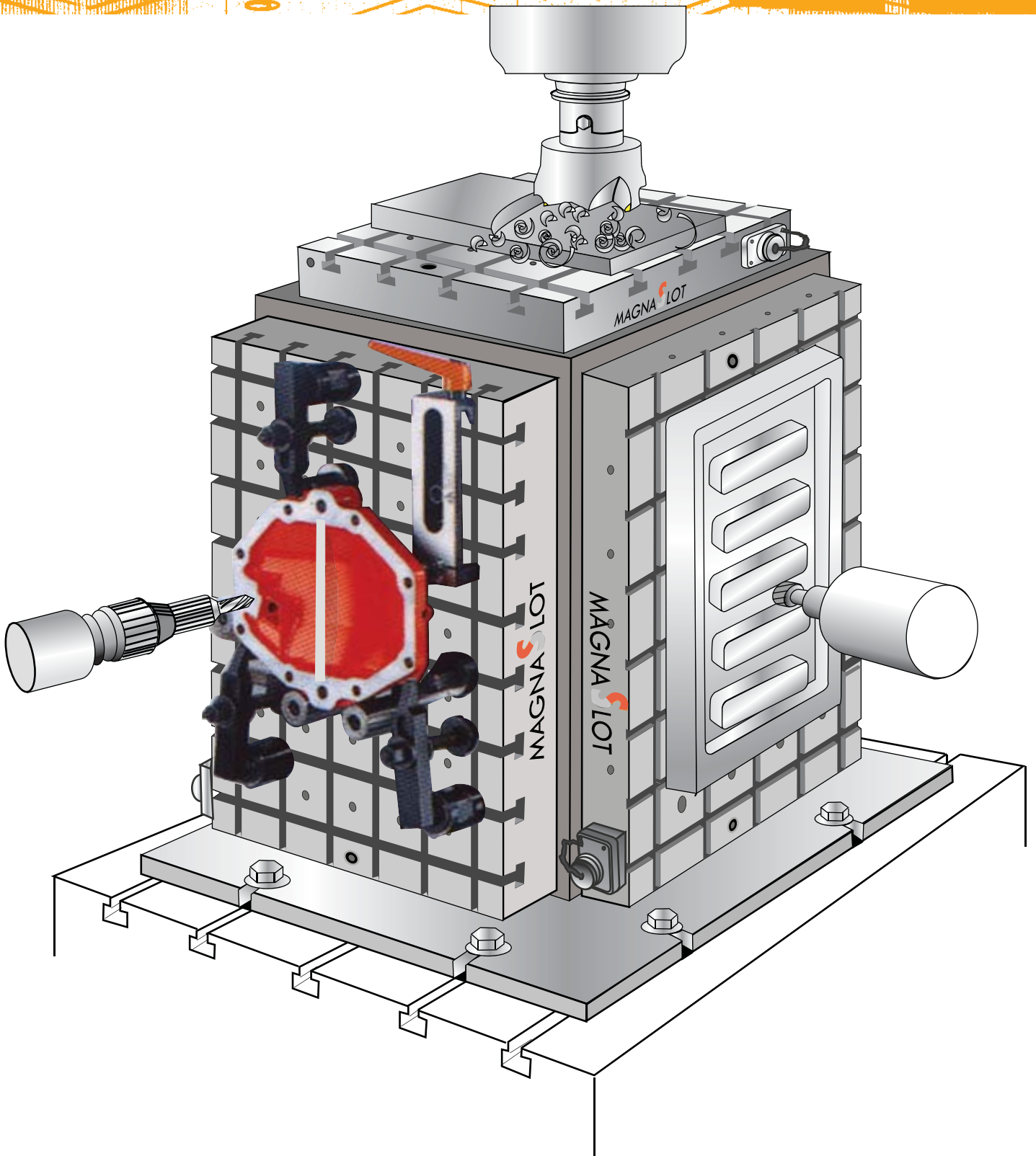


7. Once clamped on the precision machine table – assures 100% safety to the original machine bed.

6. 100% leak proof.

5. Maximum accuracy due to homogeneous surface.





COMPARISON BETWEEN AVAILABLE EPM CHUCK AND MAGNASLOT

Clamping of Ferrous Job



Can be clamped.



Can be clamped.

Clamping of non-ferrous Job



Cannot be clamped directly.
To Clamp -

- Remove the chuck and clamp job on the T-Slots of machine bed.
- Load additional clamping fixtures or vices.



Can be clamped using T-Slots directly.

Accuracy of working face



Due to heavy machining there is unequal heating of steel and epoxy resulting in inaccuracies and damage to surface.



As the working face is made of single monolithic block of steel, inaccuracies due to unequal heating is reduced and there is no damage to the surface.

Coil Burn-out

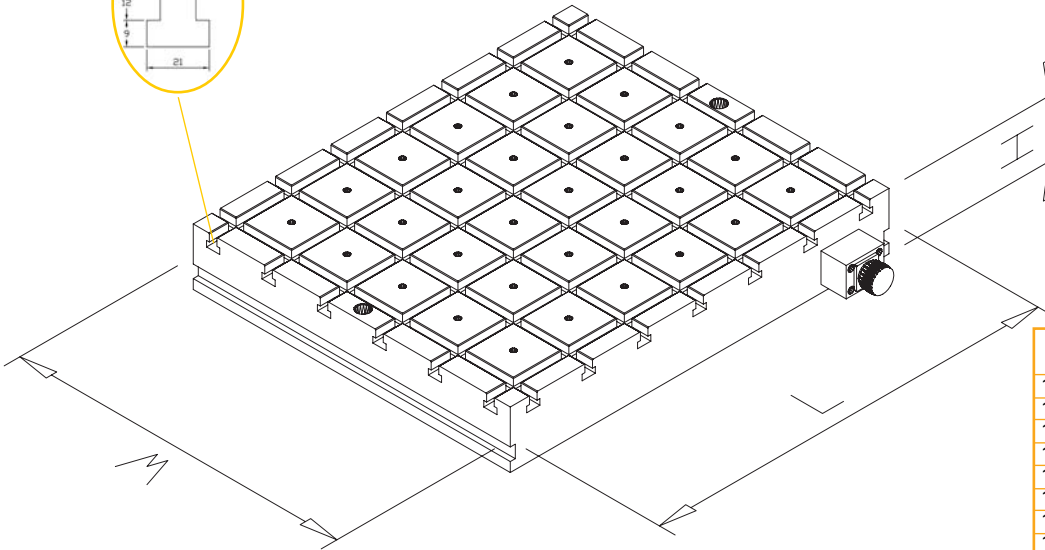
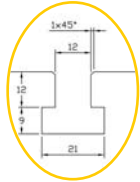


When different materials are used in the top face, due to shock/ heat and damage there is a chance of seepage of coolant/ liquid into the chuck, which results in burning of coil. Repair of coil is difficult, as no repair can begin without first destroying the chuck.



Coolant seepage is eliminated as the working face is of a single block of steel. In the unlikely event of coil burning, it can be easily repaired, after removing the bottom plate, without destruction of the chuck itself.

CHUCK STATISTICS



MAGNASLOT WITH T-SLOTS

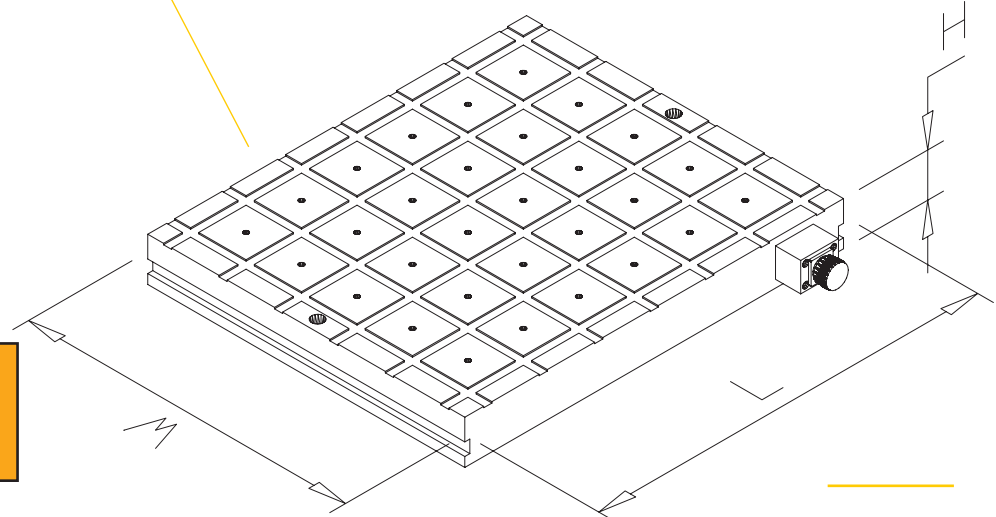
All dimensions are in mm

| Art No | W | L | H | No of Poles | Controller |
|----------|------|------|----|-------------|------------|
| 13130.01 | 250 | 400 | 85 | 8 | 93101.01 |
| 13130.02 | | 600 | | 12 | |
| 13130.03 | | 800 | | 16 | |
| 13130.04 | | 1000 | | 20 | |
| 13130.05 | 300 | 400 | | 12 | |
| 13130.06 | | 600 | | 18 | |
| 13130.07 | | 800 | | 24 | |
| 13130.08 | 1000 | 30 | | | |
| 13130.09 | 400 | 400 | | 16 | |
| 13130.10 | | 600 | | 24 | |
| 13130.11 | | 800 | | 32 | |
| 13130.12 | 1000 | 40 | | | |
| 13130.13 | 500 | 400 | | 20 | |
| 13130.14 | | 600 | | 30 | |
| 13130.15 | | 800 | | 40 | |
| 13130.16 | 1000 | 50 | | 93101.02 | |
| 13130.17 | 600 | 600 | | 36 | 93101.01 |
| 13130.18 | | 800 | | 48 | |
| 13130.19 | | 1000 | | 60 | 93101.02 |

All dimensions are in mm

| Art No | W | L | H | No of Poles | Controller |
|----------|------|------|----|-------------|------------|
| 13131.01 | 250 | 400 | 70 | 8 | 93101.01 |
| 13131.02 | | 600 | | 12 | |
| 13131.03 | | 800 | | 16 | |
| 13131.04 | | 1000 | | 20 | |
| 13131.05 | 300 | 400 | | 12 | |
| 13131.06 | | 600 | | 18 | |
| 13131.07 | | 800 | | 24 | |
| 13131.08 | 1000 | 30 | | | |
| 13131.09 | 400 | 400 | | 16 | |
| 13131.10 | | 600 | | 24 | |
| 13131.11 | | 800 | | 32 | |
| 13131.12 | 1000 | 40 | | | |
| 13131.13 | 500 | 400 | | 20 | |
| 13131.14 | | 600 | | 30 | |
| 13131.15 | | 800 | | 40 | |
| 13131.16 | 1000 | 50 | | 93101.02 | |
| 13131.17 | 600 | 600 | | 36 | 93101.01 |
| 13131.18 | | 800 | | 48 | |
| 13131.19 | | 1000 | | 60 | 93101.02 |

MAGNASLOT WITH SOLID TOP



- Due to continuous upgradation in design there could be changes in specifications.
- Other sizes on request.

- The operating voltage is 220/ 440V.
- Also available in flat surfaces design for EDM application. Ordering code - 13160.
- Also available of long pole configuration.

- T-Slots can be made on both sides on request.
- Due to continuous upgradation in design there could be changes in specifications.
- Other sizes on request.



MAGNASLOT



www.magnaslot.com