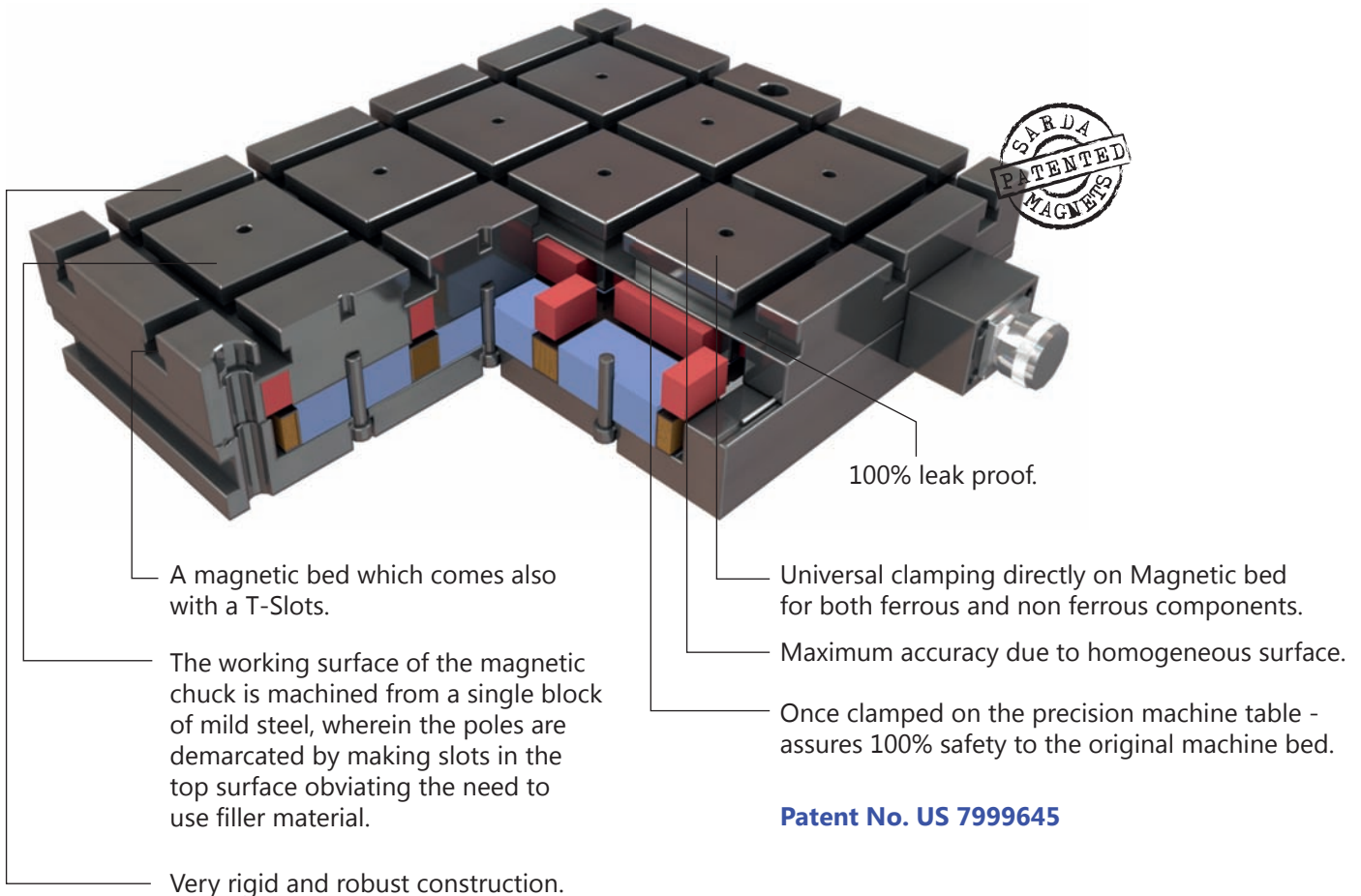


MAGNASLOT – T

MagnaSlot -An Electro Permanent Magnetic Chuck for holding work pieces magnetically and/or mechanically.



MangaSlot is an invention necessitated by the growing demand for versatility in the 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.

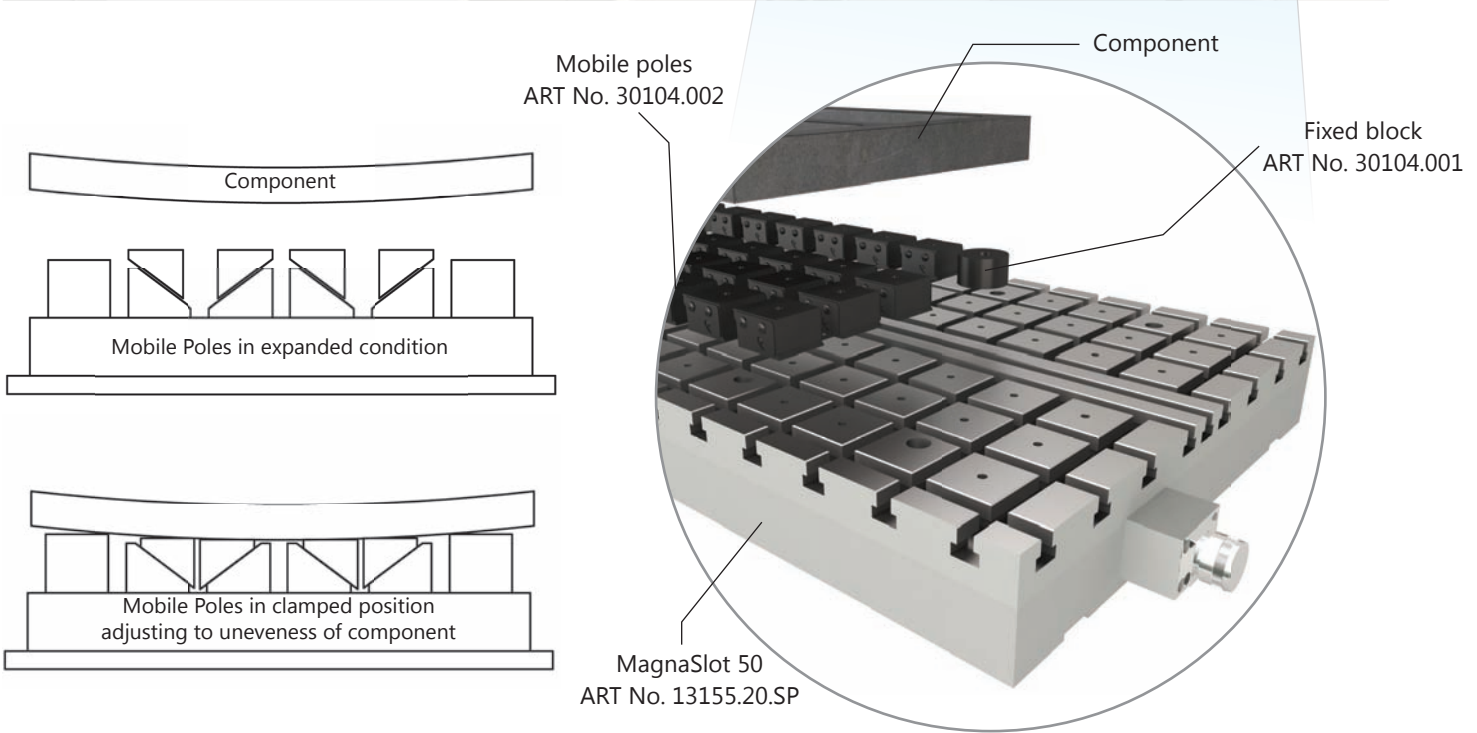
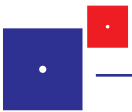
Development of magnetic beds has also moved on from permanent magnetic beds to electro magnetic beds and then to the EPM - Electro Permanent magnetic beds easing the comfort for instantaneous clamping independent of remaining ON with electric power. But the journey does not end here.

The inherent drawback of a magnetic bed comes to fore when the customer wants to clamp a non-magnetic material. The solution is to remove the magnetic bed and use 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 existing magnetic bed is that the top surface is always made up of two different materials, either steel and aluminum/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 such problems in the traditional magnetic beds and with an eye on versatility we present – **MangaSlot - Monolithic total steel working surface.**



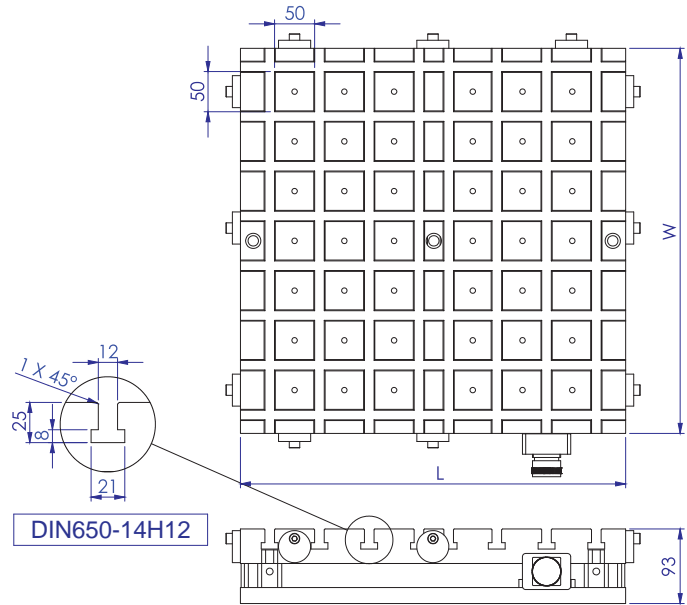
The machine is a BMV 60, with two pallets. Both the pallets are mounted with our MagnaSlot 50T beds. There is no cast iron bed in the bottom there by allowing us to get better utilisation of the machine without over loading the machine bed. Fixtures to clamp steel jobs can now be clamped directly on the bed without any need of an extra magnetic bed. Components for which mechanical clamps are needed are also clamped with the T slots of the Magnaslot.

Solution details:

SI No.	ART No.	Description	Qty
1	13155.20.SP	MagnaSlot 50T, 480x990	1
2	30104.001	Fixed pole Dia 50x32	3
3	30104.002	Mobile pole 47x47x27-32	29
4	93101.01	Controller for the magnets above	1

MangaSlot-T

This product now has a lot of variations available. We have tables with 75mm square pole and 50mm square pole. As a standard we make these Magnetic Machine beds with DIN 650-14H12 T-slot. However other T-slot standards can be manufactured. The table below just gives a basic idea of the sizes which are our standard available. However we have done several special solutions with the biggest size being 1000x2000mm single Magnetic Machine bed. The next level of development in this product range is our futuristic concept of Safeflux, where-in we sense the real time magnetic clamping force and give feedback to the machine to warn about disturbance in clamping.



- The Magnet can be designed for 220/380/400/480 VAC, 50/60 Hz.
- Custom designed solutions also available as per customer requirement
- Standard hieght of all MaganSlot-T Chucks 93 mm

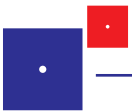
MAGNASLOT 75 T

ART No.	W	L	Poles
13130.01	250	425	8
13130.02		601	12
13130.03		815	16
13130.04		1029	20
13130.05	327	425	12
13130.06		601	18
13130.07		815	24
13130.08		1029	30
13130.09	415	425	16
13130.10		601	24
13130.11		815	32
13130.12		1029	40
13130.13	503	425	20
13130.14		601	30
13130.15		815	40
13130.16		1029	50
13130.17	591	601	36
13130.18		815	48
13130.19		1029	60
13130.22		800	800
13130.25	1000	1000	100

MAGNASLOT 50 T

ART No.	W	L	Poles
13155.01	240	430	18
13155.02		590	24
13155.03		750	30
13155.05	300	990	42
13155.25		300	16
13155.06		430	24
13155.07		590	32
13155.08	420	750	40
13155.11		430	36
13155.12		590	48
13155.13		750	60
13155.15	480	990	84
13155.16		430	42
13155.17		590	56
13155.18		750	70
13155.20	600	990	98
13155.21		590	72
13155.22		750	90
13155.24		990	126
13155.26	800	750	120
13155.69	1000	1000	196

- Due to continuous upgradation in design there could be change in specification.
- Others sizes on request.
- All dimensions are in mm.



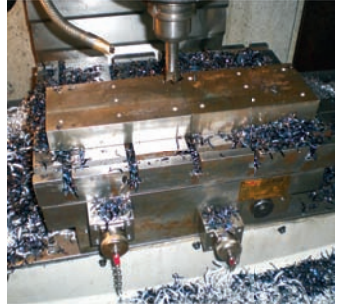
Comparison between available EPM Chuck & MagnaSlot

Clamping of Ferrous Job

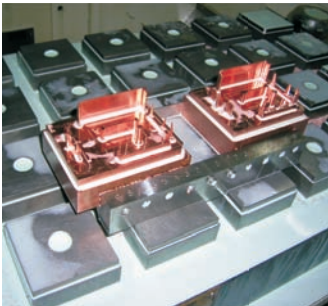


Can be clamped.

Can be clamped.



Clamping of NonFerrous Job



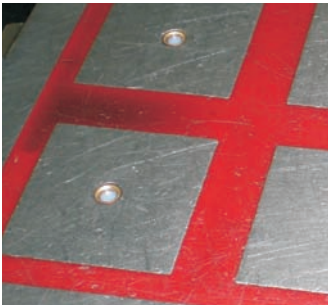
Cannot be clamped directly. To clamp:

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

Can be clamped using T-Slot directly.

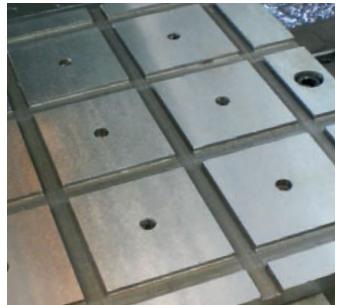


Accuracy of working face

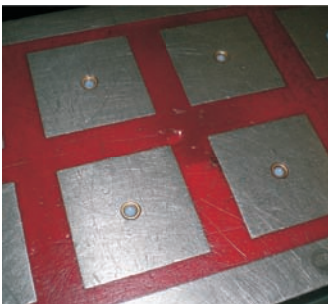


Due to heavy machining there is unequal heating of steel and epoxy resulting in inaccuracies and damage to surface.

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 heating 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 top plate, without destruction of the chuck itself.

