

An alternative to circular scrap magnets specifically suited for belt loading with Consteel technology

This customer has installed two mega scrap magnets on a spreader beam. With such a configuration it is possible to lift up to **12 tons** of pig iron for each manoeuvre.



Designed and manufactured according to European standards EN 13155.

SGM Gantry S.p.A.  
Tel. +39 030 9938400  
E-mail: m.beltrami@sgm-magnetics.com

Refer to website for your local SGM subsidiary  
www.sgm-magnetics.com



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**Solution for who needs to handle more scrap per grip.**

### Important references

ABS - Danieli Group (Italy), Ferriere Nord - Pittini Group (Italy), Riva Group (Italy), Arvedi (Italy), Seval for Ascometal (France), Sollac (France), Konecranes for Sonasid (Morocco), Deacero (Mexico), etc.

• **EOA 220/350 - 19.5 ton magnet for 25 ton crane**

• **EOA 200/330 - 15 ton magnet for 20 ton crane**

### Productivity

Resulting from the double magnetic circuit (SGM patent), with the Mega Scrap Magnet the scrap is distributed over all the magnetic surface in a more homogeneous way with respect to the traditional circular scrap magnet.

• The Mega Scrap Magnet has a lifting capacity which is 60 - 70% more than the scrap handled by a traditional circular scrap magnet.

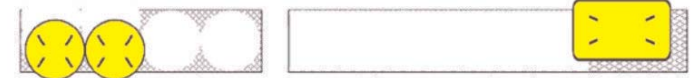
• The more homogenous pick-up of the scrap from wagons and lorries with the possibility of reaching the corners, as well as the absence of the "cone" effect of the scrap, leads to a reduction in the manoeuvres of the crane operator with respect to the use of a circular scrap magnet. The result is saving time and increasing production.



The two sketches below indicate how two circular scrap magnets unload scrap from a wagon with respect to the handling of scrap using one mega scrap magnet.

Top view

Two circular magnets      One mega scrap magnet



Side view

Two circular magnets      One mega scrap magnet



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**Customer testimonial**

Here is a comparison we have received from an Italian customer showing the difference in lifting capacities between an SGM circular scrap magnet weighing 16 tons and an SGM Mega scrap magnet weighing 19.5 ton.

Scrap type	Quantity handled per pick with a 2.14 meter - 11 ton - 35 kW circular scrap magnet [kg]	Quantity handled per pick with a 19.5 ton - 50 kW Mega Scrap Magnet [kg]	Difference [%]
Pig Iron	3200	6300	97
Proler	2030	3500	72
Scrap from Shear	1100	2000	82
Normal scrap from demolition	1140	2000	75
Heavy scrap from demolition	1700	3250	91
Turnings	1300	2260	74
Normal plate cuttings	1200	2150	79

By switching from a circular scrap magnet to an SGM Mega Scrap Magnet, the same Italian customer has reduced wagon unloading times from 35 to 20 minutes.

The loading time of 64 ton buckets has been reduced from 38 to 25 minutes. Since 2002, the customer has purchased 8 Mega Scrap Magnets.



- Loading the bucket is more efficient because it is possible to enter the bucket with a 19 ton Mega Scrap Magnet and compact the scrap thus increasing its density.

- When using Consteel technology, it is necessary to reach a level of productivity which must remain constant in order to have savings in energy. By using the Mega Scrap Magnet for loading the belt feeding the Consteel, spillages of scrap is avoided and there is a more homogeneous distribution of the scrap over the whole surface of the belt. Heaps of material which are typical when using circular scrap magnet are no longer present.



able to cut the voltage to the magnets for a very brief period) permits the operator to dose the drop of the scrap onto the belt.

Furthermore, the tipping function (electronic device

- The octagonal shape of the Mega Scrap Magnet



togetherwith the use of anodized aluminium (aluminium strip chemically transformed on its outer surface into an insulation material able to withstand temperatures beyond the melting point of the aluminium itself) permit the best possible dissipation of heat which is generated inside the magnet itself. The result is optimization of magnet duty cycle performance and longer life time.

- Energizing and de-energizing times of just a few seconds using the forcing device.

- The Mega Scrap Magnet is predisposed for the fitting of a radioactive detection device.