



ACG/AIR CONSULTING

**WE CARE FOR
SAFETY AND SIMPLICITY**





FLIGHT SAFETY

starts and ends on the ground



We care of a „skin of your airport or road“



FOD under control



SAFE TO
LAND



Contaminants removal

Friction testing



www.sarsys-asft.se



www.sibproducts.com



www.sollau.cz



www.smets-technology.com



MAGNETIC SWEEPERS FOR CLEANING OF AIRPORTS AND ROADS

Unique design
Modular concept
High performance

SOLLAU / Magnetic solutions

Designing > Engineering > Customization ..

Foodstuff industry

Automotive industry

Aviation and road industry ..

[Sollau company – video](#)



SOLLAU s.r.o.
Hřivínův Újezd 212
763 07 Velký Ořechov
Česká republika

SOLLAU / Magnetic solutions


90 % of Sollau products
are customized ...

MAGNETIC SEPARATORS
MAGNETIC SYSTEMS
METAL DETECTORS



SOLLAU / Magnetic solutions




KNOWledgE
is POWER 



MAGNETIC CLEANING / Knowledge

REGULAR MAGNETIC SWEEPING ROUTINE..

- + For runways with panels, grooving or damaged concrete or asphalt
- + For application after maintenance jobs (shot blasting, milling, grinding)

KNOWledgE
is POWER 

Metal FOD is continuously present at all airports. The risk is growing during:

- 1] operational peaks (concentration of FOD risk – people, vehicles)
- 2] winter seasons (intense operation of sweepers)
- 3] runway maintenance works

For more information see [ACG – FOD THREATS PRESENTATION](#)

MAGNETIC CLEANING / Knowledge

Paved and grassy airport runways and aprons
Racing circuits & Testing polygons
Parking locations, logistics grounds, ports
Roads and expressways
Dumps and mining sites

We clean magnetically – we MITIGATE
the PROBLEM of punctured tires



MAGNETIC CLEANING / Knowledge

CERAMIC MAGNETS (1952)

>> ferrite

RARE-EARTH MAGNETS (1984)

>> neodymium

permanent magnets - retain magnetism and deliver stable magnetic field

RARE-EARTH MAGNETS: Samarium-Cobalt (SmCo) and Neodymium-Iron-Boron (NdFeB) - the lanthanide series of elements



DIFFERENCES - rare earth and ceramic magnets

CERAMIC MAGNETS: strontium or barium ferrites (oxide of iron and one or more other metals)



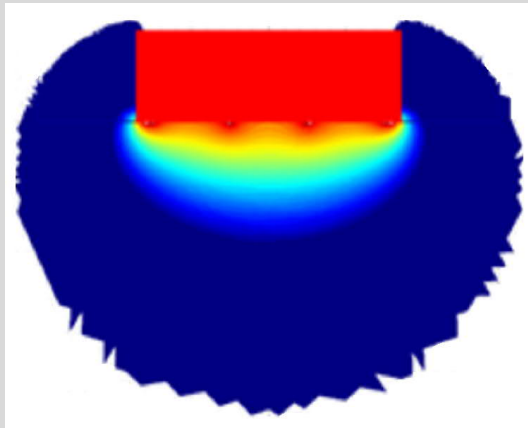
MAGNETIC CLEANING / Knowledge



NEODYMIUM MAGNETIC FIELD

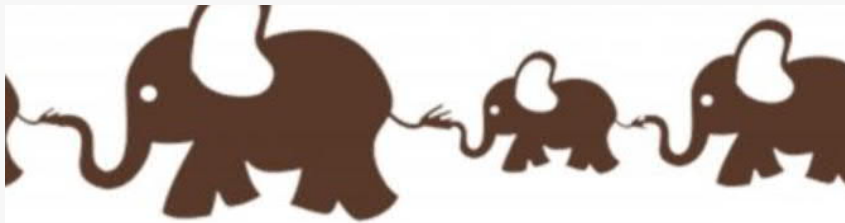
Sweeping is performed in heights of 3-4 centimeters over surface !!

Neodymium provides VERY strong cleaning power at a short distance and the magnetic field rapidly declines with distance from magnets



[Neodymium magnets - features](#)

MAGNETIC CLEANING / Knowledge



Neodymium: collects more FOD and hold it with the chain attraction effect

[What is Neodymium – video](#)


[Neodymium force – video](#)



MAGNETIC CLEANING / Knowledge

- The lower and slower >> the better sweeping results
- Neodymium is extra strong on short distances ONLY
- BASIC SWEEPING (steel bristles and dust)
- THOROUGH SWEEPING (any other metallic fragments and objects)
- Manufacturer's manuals and guides
- Common sense

**SWEEPING SPEED
SWEEPING HEIGHT
SURFACE CONDITIONS
MASS OF MAGNETS (NEODYMIUM)**

KNOWledge
is poWER 

SMART MAGNETIC SWEEPER / MS 2000

SMART & SIMPLE DESIGN

Easy handling & fast demagnetizing procedure

Modular design concept

Magnets adjustable in height 30 mm – 200 mm

Speed up to 25 km/h

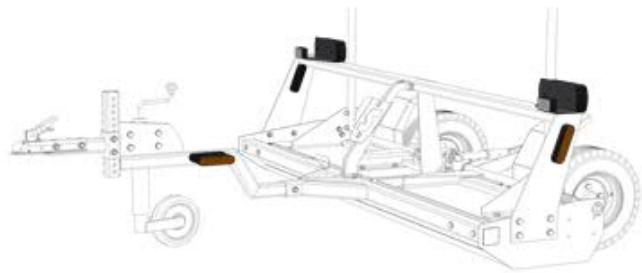
MS 2000 is ideal for use by regional and domestic paved & grassy airport and road operators.



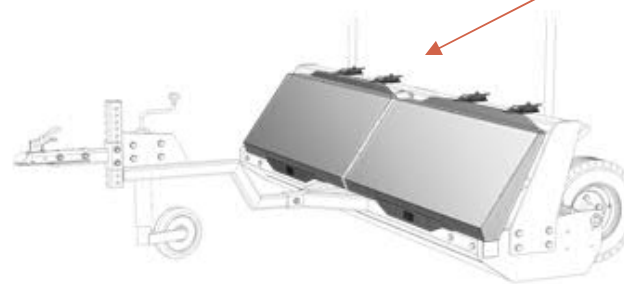
SMART MAGNETIC SWEEPER / MS 2000

You will never dispose FOD on ground !!

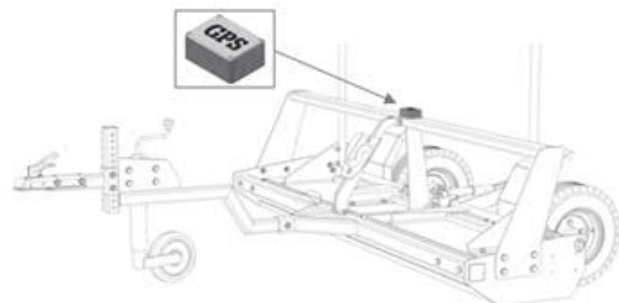
Lights module



FOD boxes module



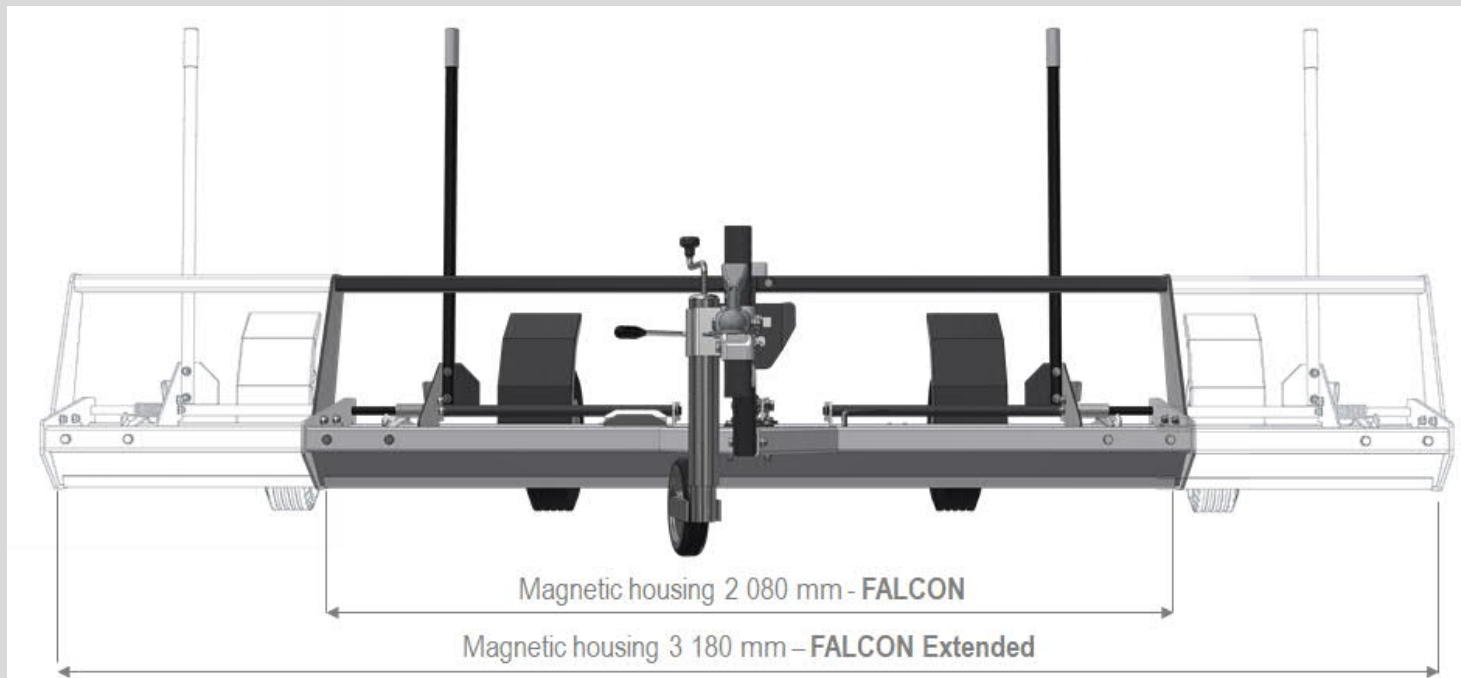
GPS tracking module



Debris container module



SMART MAGNETIC SWEEPER / MS 3000, 6000




Triple trailer MS 6000 (6 240 mm) is ideal for use by midsize and large airport operators.

NEODYMIUM MAGNETIC SWEEPER / MSA 3000

1984 ... Neodymium magnetic material was born

2020 ... First 45 km/h magnetic sweeper was born


KNOWledge
is POWER 



For pioneering, you need
„overcome the dogmas“

NEODYMIUM MAGNETIC SWEEPER / MSA 3000



KNOWledgE
is poWER 

NEODYMIUM MAGNETIC SWEEPER / MSA 3000

MSA 3000 „GLADIATOR“ /
3 METERS OF NEODYMIUM



Gladiator

SMART & HEAVY DUTY DESIGN



[MSA operation – video](#)

[MSA demagnetizing – video](#)

NEODYMIUM MAGNETIC SWEEPER / MSA 3000

HEAVY DUTY DESIGN

Easy handling & fast demagnetizing procedure

Durable chassis & extraordinary performance

NO scissors handles, NO complicated multiple
tilting of housing, NO FOD left on the ground

Magnets adjustable in height 30 mm – 130 mm

Speed up to 45 km/h

Ideal for use by military and big international
airports.



available as manual or „automatic and
remotely (cabin) controlled“ magnetic trailer

NEODYMIUM MAGNETIC SWEEPER / MSA - RAC 3000



„MODULAR DESIGN CONCEPT“
„FULL DEMAGNETIZING CYCLE“
Fully automatic remote control RAC model

Electric power module



Winches module



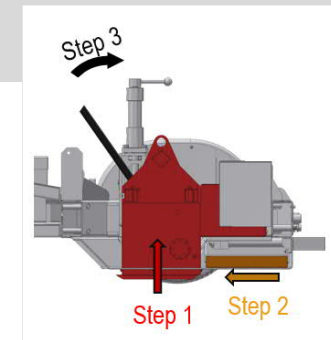
Hydraulic power pack module



FOD module



Hydraulic module for FOD boxes





Emperor

NEODYMIUM MAGNETIC SWEEPER / MSA 9000

	Magnetic bar dimensions	Magnetic housing area	Maximum speed	Magnetic performance area	Neodymium effect
MSA 9000	918 cm (x 30 cm)	27 540 cm²	45 km/h	413 100 m²	YES !!

MSA 9000 „EMPEROR“ /
9 METERS OF NEODYMIUM



THE GREATEST MAGNETIC SWEEPER IN THE WORLD

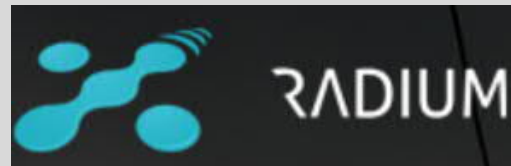
SOLLAU MAGNETIC SWEEPERS / Performance



FOD SWEEPING TELEMATICS

Precise control of magnetic sweeping activity via GPS

Off-line data stored in the computer interface (customized application)



Operated by Radium company, Czech Republic

SOLLAU MAGNETIC SWEEPERS / Performance

„FOD HARVEST“ WITH OUR MSA MAGNETIC SWEEPER

Kunovice regional airport, Czech Republic
2000 x 30 m concrete runway

134 grams of metal debris collected on about a half of
runway during operations in 40 km/h

Majority of debris consists of sharp corroded dust and
wires



SOLLAU MAGNETIC SWEEPERS / Performance



For huge performance, you need „MSA sweepers“

2,5 TIMES HIGHER PERFORMANCE THAN OUR COMPETITORS

	Magnetic bar dimensions	Magnetic housing area	Maximum speed	Magnetic performance area	Neodymium effect
MSA 3000	306 cm (x 30 cm)	9 180 cm²	45 km/h	137 700 m²	YES !!
Our competitor	244 cm (x 19 cm)	4 697 cm ²	24 km/h	58 560 m ²	
MSA 9000	918 cm (x 30 cm)	27 540 cm²	45 km/h	413 100 m²	YES !!
Our competitor	732 cm (x 19 cm)	14 091 cm ²	24 km/h	175 680 m ²	

SOLLAU MAGNETIC SWEEPERS / Performance

CLEANING ESTIMATION - MSA 9000
(PRAGUE AIRPORT 3715 x 61 m)

8 cleaning strips of 8 meters (over 1 meter
for overlaps)

5,5 min per cleaning lane
>> 44 minutes

10 x 2 x 3 min for turnings at both ends
>> 60 minutes

reserve time for FOD boxes disposal
and night cleaning circumstances

COMPACT AIRPORT SWEEPERS operate up to
40 km/h, clean area of up to 140 000 m²/h.

MSA 9000 Emperor
The biggest runways CLEANING IN 2 HOURS



SOLLAU MAGNETIC SWEEPERS / Performance

FACING THE CHALLENGES !!

MSA SWEEPER: sweeping speeds of 40 - 45 km/h

WE CAN CLEAN UP TO 413 000 SQUARE METERS IN AN HOUR

We use Neodymium permanent magnets
- 10 times stronger than conventional ferrite magnets



SOLLAU MAGNETIC SWEEPERS / Performance

METALLIC FOD = REASON FOR MAGNETIC SWEEPING ROUTINE



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