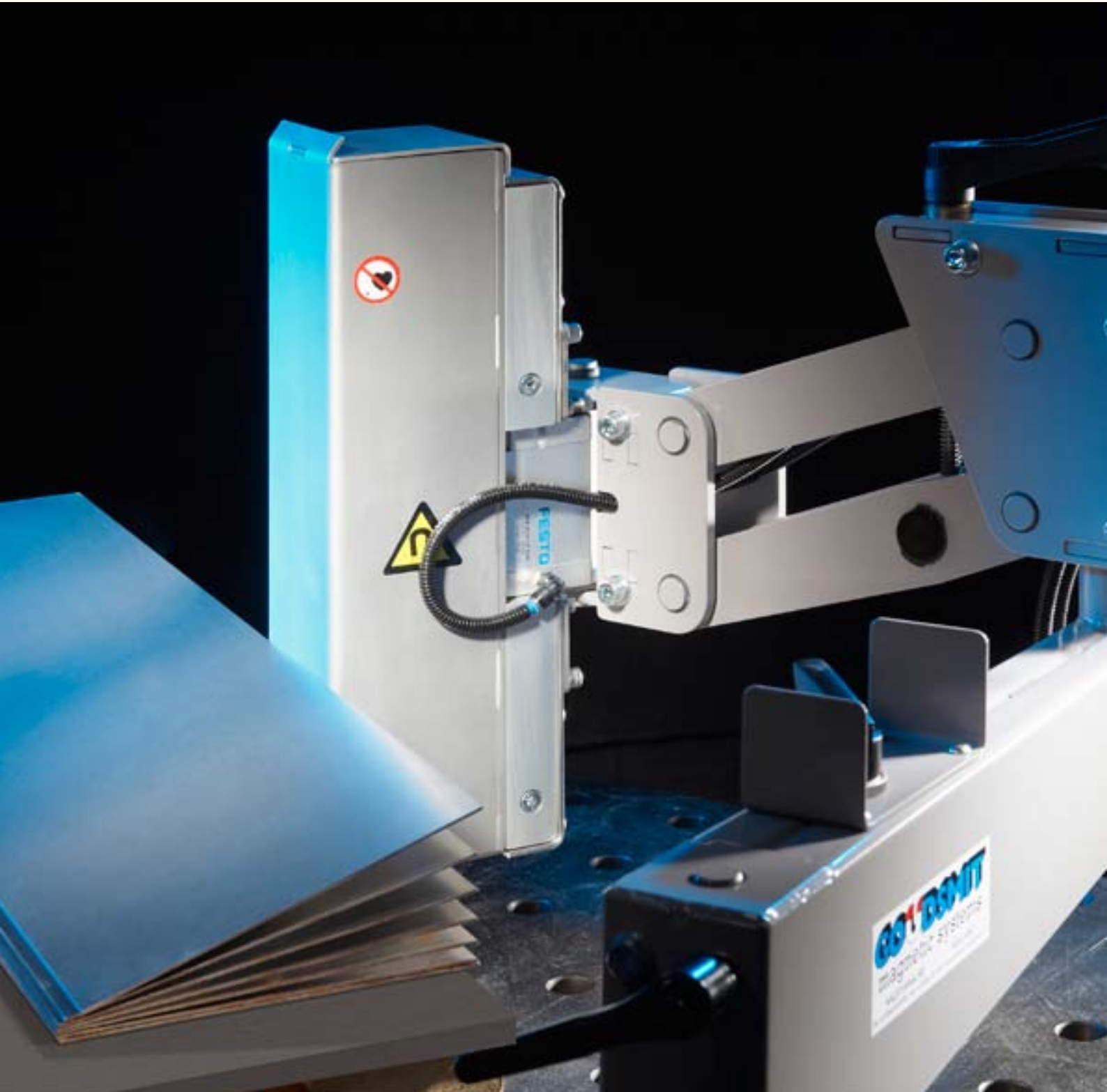


Magnetic sheet separators



Goudsmit Sheet separators



Set up permanent non-switchable sheet separator.

Application: The ability to pick up steel plates one by one in the sheet processing industry.

Switching: both manual and automatic, with a pneumatic control for automated processes.

Operation: A powerful magnetic field automatically pulls the sheets apart and separates them; when the upper sheet is taken away the next one immediately comes upwards.

Magnetic sheet separators separate adhesive or oiled steel plates and thus prevent simultaneously picking up two plates. In this way the production process runs much smoother. The permanent magnetic force does not decrease and is guaranteed for decades. There is no longer a need for expensive compressed air to blow the steel plates loose.

Suitable for: spreading ferro-magnetic sheets up to a thickness of 5 mm in almost any shape, length or width; also for round or asymmetrical shapes.



Switchable pneumatic operated sheet separator.

Goudsmit sheet separators are available:

- A: Permanent non-switchable in Ferrite or Neoflux® finish.
- B: Switchable pneumatic operation for automatic processes.
- C: In special versions if little space is available.

Permanent or switchable?

Permanent non switchable systems have the advantage that they are cheap and very easy to place. In addition the Neoflux® version is still approx. 30% more powerful, which can give the required additional spread for sheets with a lot of oil. The drawback of permanent sheet separators is that the magnetic field is always present, so that the magnets are immediately engaged when placing the steel sheets. This can lead to dangerous situations. It is possible to build in the magnets in such a way that they move slowly to and from the plates.

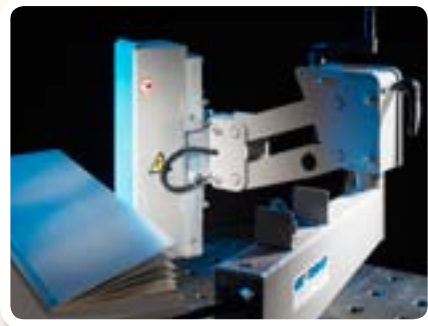
A much easier and safer solution is to make the magnet switchable. The automatic control can be adjusted in such a way that the magnetic field is present only when this is safe to do. The acquisition price of switchable sheet separators is higher, but the whole production process is accelerated considerably and therefore it is recovered immediately.

Special versions switchable sheet separators



For round sheets

Switchable sheet separators for spreading round sheets.



With adjustable boom

For a correct positioning Goudsmit has developed an adjustable boom with 3 pivoting points. Due to this the separator can be put into all positions for the sheets.



Magnetic sheet separators prevent simultaneously picking up two plates.

With air nozzles

Optionally air nozzles can be attached to blow extra air between the sheets, thereby making it easier to spread them, even when they adhere to each other.



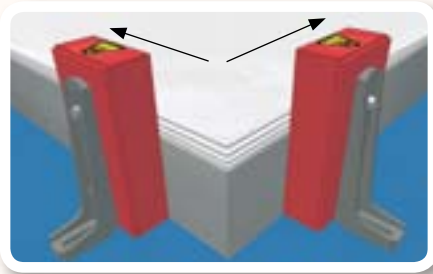
Sheet separators as Neoflux® bar

In this special application the sheet separator is manufactured in the shape of a bar. Very compact and easy to introduce in an opening in the sheet. Due to its round shape it is also suitable for special contours.

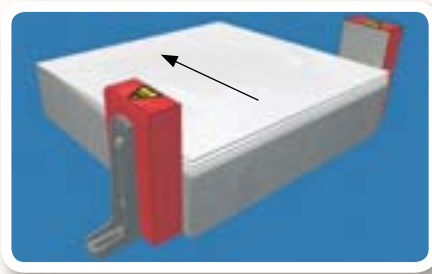
Assembly examples of permanent and switchable sheet separators

Simple assembly using tapped through holes at the backside of the sheet separators. The arrows on the photo indicate the recommended transportation direction, in which the plates can be best carried off after

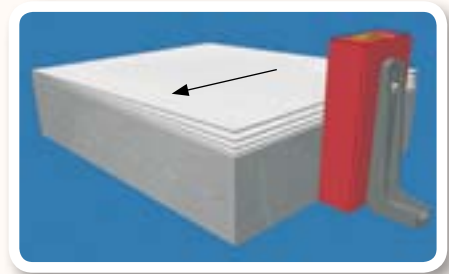
separation. To prevent disruptions in completely automated production processes we advise you to place a number of extra sheet separators.



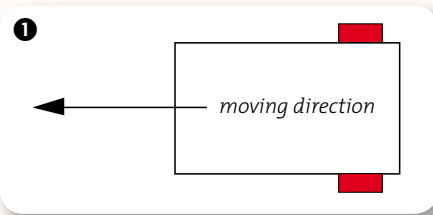
For an optimal effect the best is to place two sheet separators at the corner(s) of stacks of large steel sheets.



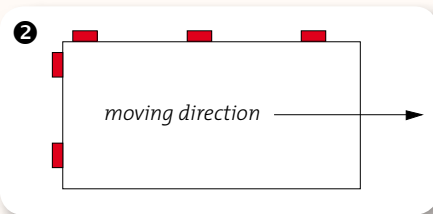
Sheet separators that are placed opposite of each other ensure that the sheets will float.



For smaller sheets the best is to place the sheet separator in the middle of the shortest side.



Steel plate dimensions = 900 x 600 mm, sheet thickness = 3.0 mm.



Steel sheet dimensions = 2500 x 1250 mm, sheet thickness = 2.2 mm.

Application example 1

In the table you will find various technical data that apply to this calculation example. At this workplace, steel sheets are manually placed in a press. The steel sheets are 900 mm long and 600 mm wide. The sheet thickness is 3.0 mm, so we take sheet separators from the series TBSP 03 that separate up to 4 mm. The sheets are oiled and stick to each other. Under these circumstances, TB SP 03 sheet separators have a recommended working surface of 26 dm².

Sheet surface area: $9 \times 6 = 54 \text{ dm}^2$.

Number of plate separators:

$54 \text{ dm}^2 / 26 \text{ dm}^2 = 2 \text{ pieces}$.

By placing the sheet separators opposite to each other the plates float and they are easy to grip.

Application example 2

In the table you will find various technical data of this calculation example. An automatic manipulator feeds steel plates to a punching machine. The steel sheets are 2500 mm long and 1250 mm wide. The sheet thickness is 2.2 mm, so we take the switchable sheet separators TPSP... which separate up to 3 mm. The sheets are quite clean and only stick slightly together.

Under these circumstances TPSP ... sheet separators have a recommended working area of 34 dm².

In most automated production processes, it is sufficient to spread 50% of the sheet. This is to ensure that only one plate is taken.

Surface to be spreaded:

$25 \times 12.5 \text{ dm}^2 = 313 \times 50\% = 157 \text{ dm}^2$.

Number of sheet separators:

$157 \text{ dm}^2 / 34 \text{ dm}^2 = 5 \text{ pieces}$. Placing two sheet separators at a corner ensures a powerful separation at that point. The other sheet separators are distributed evenly on the adjacent sides of this corner.

Technical data magnetic sheet separators

Serie	Magnetsystem	Dim. w x t (mm)	Sheet thickness (mm)	Dry sheets (dm ²)	Adhesive sheets (dm ²)
TBSP00...	Ferriet 1800 gauss	73 x 29	≤ 1	23	15
TBSP02...	Ferriet 1900 gauss	114 x 47	≤ 2,5	32	21
TBSP03...	Ferriet 1950 gauss	154 x 47	≤ 4	40	26
TGSP00...	Neoflux® 3200 gauss	43 x 22	≤ 1,4	21	14
TGSP01...	Neoflux® 3400 gauss	73 x 22	≤ 2,4	30	20
TGSP02...	Neoflux® 3600 gauss	114 x 22	≤ 3,5	38	25
TPSP...	Pneumatic switchable	120 x 175	≤ 3	34	22
TPSR...	Pneumatic switchable (round shape)	120 x 182	≤ 3	34	22
TRSP	Bar Neoflux® 3400 gauss	∅ 33.6	≤ 3	5	3

Petunialaan 19 • 5582 HA Waalre
 P.O. Box • 5580 AA Waalre
 The Netherlands
 Tel: +31 (0)40 221 32 83
 Fax: +31 (0)40 221 73 25
 e-mail: systems@goudsmit.eu

