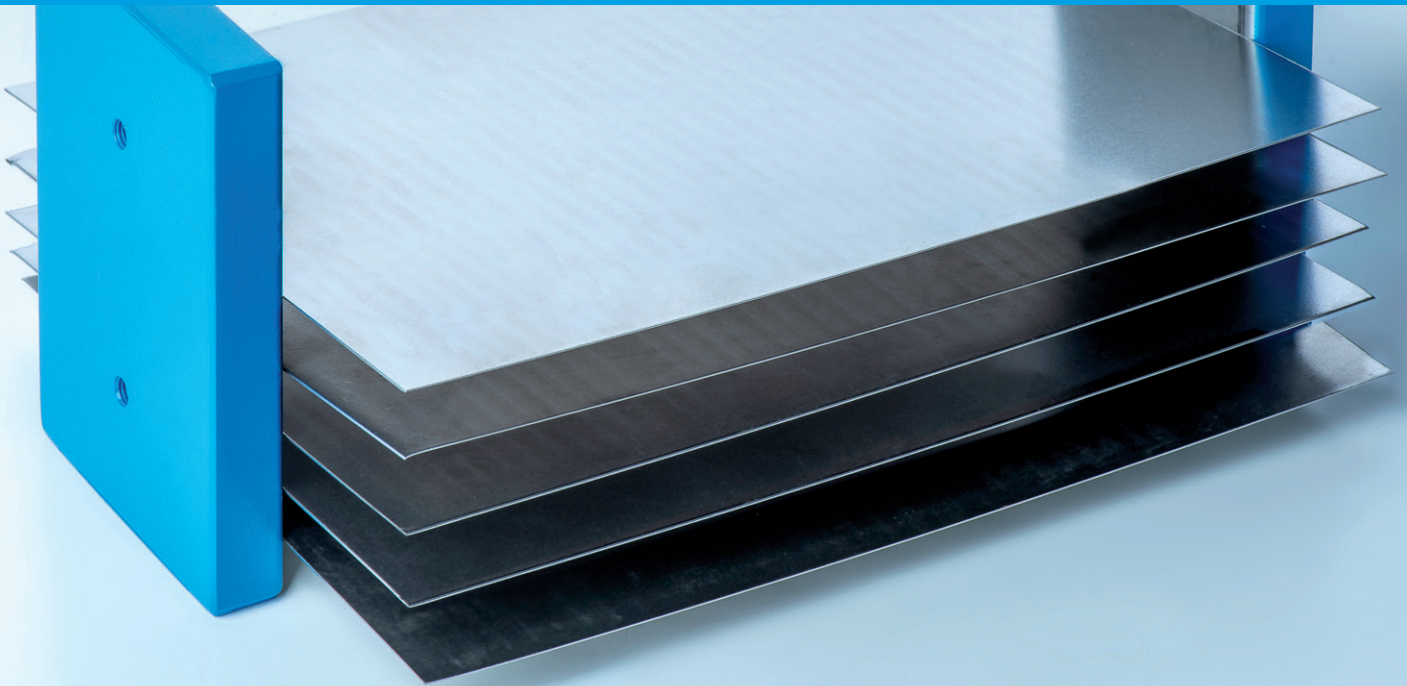


Magnetic sheet separators



Function

In the metalworking industry, magnetic sheet separators – also called sheet fanners or spreading magnets - are used for safe and damage-free separation and removal of single sheets from a stack of metal sheets. The sheet separators are positioned on the side of the stack of sheets and direct a magnetic flux into the sheets. This results in an homopolar magnetization of the sheets, which then repel each other. The topmost sheet can now be safely removed as a single sheet. Sheet separators are successfully used for both manual and automatic removal.

Design and application

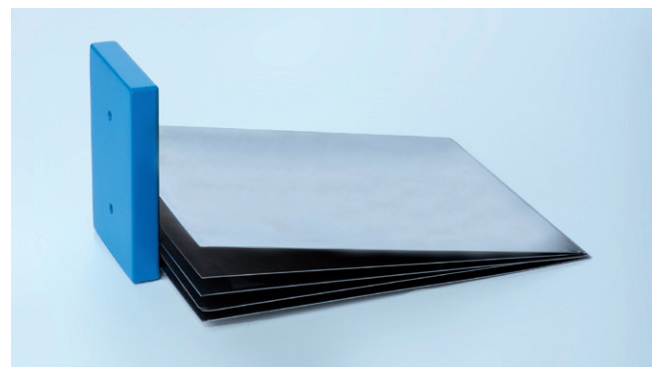
Permanent magnetic sheet separators ensure stable and easy-to-integrate system, consisting of a magnetic core, a stainless steel cover (1.4301) and a rear steel plate with mounting holes.

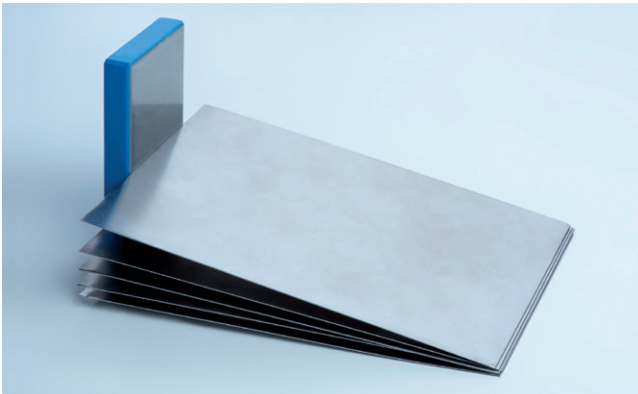
Depending on the required spreading effect, we offer sheet separators with magnets made of neodymium-iron-boron (REFeB = NdFeB) or hard ferrite (HF). The sheet thickness and size of the metal sheets are decisive factors in the selection of the right magnetic material.

A sheet separator equipped with HF magnets can spread a sheet area of up to 30 dm², while sheet separators with NdFeB magnets even achieve a spreading capacity of up to 35 dm². For larger areas, the use of several sheet separators is necessary.

In most cases, it is sufficient to spread only half of the sheet surface, as other adhering sheets peel off automatically.

It should be noted that heavily oiled and 'sticky' panels lead to a greatly reduced spreading capacity of the system. In these cases, several sheet separators should be used.





Arrangement

Sheet separators are arranged differently depending on the space available and the removal situation. One proven method is a diagonal arrangement and on opposite sides. It is recommended that the sheets are first removed horizontally from the magnets and then transported upwards. If this is not feasible in your application, vertical removal of the sheets is also possible.

The sheet separator should be 10–20% higher than the stack of sheets, but at least approx. 50 mm higher.

- ⊖ A single sheet separator arranged on the front side.

The sheet should be removed in the direction of the arrow.

- ⊖ Two sheet separators arranged opposite each other.

The sheet should be removed in the direction of the arrow.

- ⊖ Several sheet separators arranged on one long and one short side.

The sheet should be removed in the direction of the arrow.

Product range

Immediately
available

Sheet separators with hard ferrite magnets

Part no.	Height [mm]	Width [mm]	Thickness [mm]	Bores	Spacing of the bores [mm]	Weight [kg]
For sheets up to 0.7 mm thick (dry)						
M40013300B391U	340	75	30	2 x M8	250	4.5
For sheets up to 1.0 mm thick (dry)						
M40013400B391U	105	105	30	2 x M8	50	2.0
M40013600B391U	310	105	30	2 x M8	200	5.5
For sheets up to 2.0 mm thick (dry)						
M40013800B391U	145	105	50	2 x M8	100	4.0
M40013900B391U	210	105	50	2 x M8	100	5.5
M40014200B391U	410	105	50	3 x M8	150	11.0
M40014400B391U	510	105	50	3 x M8	200	13.5

Sheet separators with NdFeB magnets

Part no.	Height [mm]	Width [mm]	Thickness [mm]	Bores	Spacing of the bores [mm]	Weight [kg]
For sheets up to 3.5 mm thick						
M18207800B340U	154	104	22	2 x M8	75	3.0
M18207900B340U	254	104	22	2 x M8	100	4.0
M18208000B340U	354	104	22	2 x M8	200	5.5
M18208900B340U	404	104	22	2 x M8	250	6.3
M18206700B340U	504	104	22	3 x M8	200	8.5

- ⊖ Other dimensions are also available on request.
- ⊖ In addition to our standard program, we also offer individual solutions for permanent magnetic as well as electromagnetic sheet separators. We will be happy to advise you on this.

General information

The statements are in no way to be deemed as an advisory service of our company, but are only descriptive without guaranteeing or granting property-related qualities. Liability on the basis of the statements of this product information is specifically excluded, unless compelling legal liability facts are evident. All information is correct to the best of our knowledge, but no responsibility will be taken for any errors. We reserve the right to make technical changes. Reproduction in any form, including extracts, only with the express permission of thyssenkrupp Magnettechnik.

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