

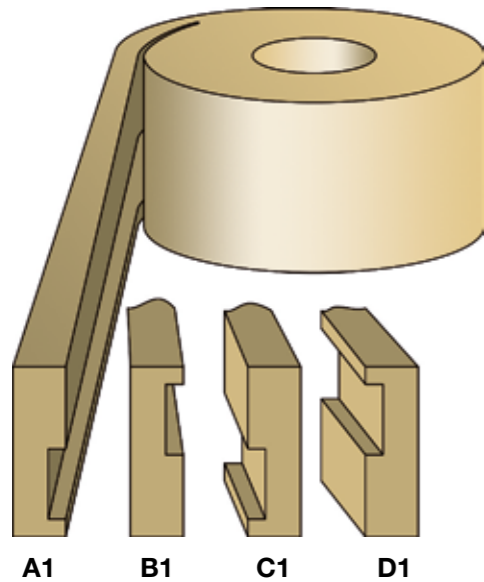
Status of strips delivered to us

The strips delivered to us must be plane, without bends, waves and of good cutting quality.

- The coils delivered to us should be as large as possible
- Special coil weight possible up to 14 kg/mm strip breadth
- Max. outside diameter of coil: 1500 mm
- Max. coil weight: ~1000 kg
- Dividing of the strips is possible
- Spools – max. delivery weight: 1200 Kg
- Spool core diameter: 300 mm min.

Drawing 2:

Possible position of the milling with regard to the coil and the pallet:



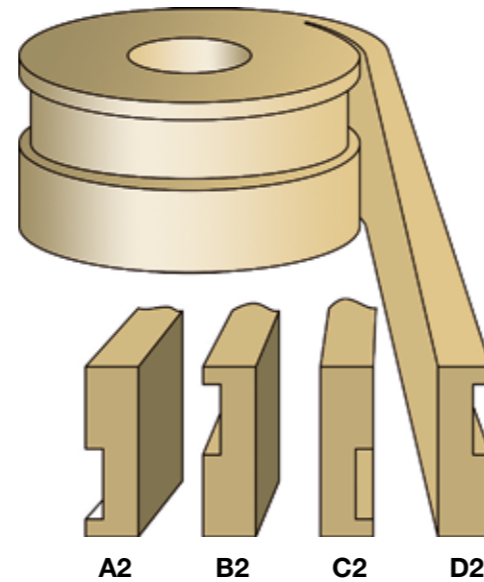
Exterior end of the strip anticlockwise

Delivery forms of our products

The strips can be delivered as coils, on cardboard coils, if needed also with paper interlayer or as spool material on flange spools.

On corresponding geometry the singular strips can also be connected when being milled and be delivered in transversally coiled execution, resp. be milled from spool to spool.

On ordering it is necessary to indicate the position of the milling in the coil and the position of the coil on the pallet (see drawing 2):



Exterior end of the strip clockwise

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Technical Data Sheet

profiltech
INNOVATION IN BEST FORM

Industriestraße 3
D-75210 Kelters-Niebelsbach

Phone: +49 70 82 92 38-0
Fax: +49 70 82 92 38-50

E-Mail: info@profiltech.de
Homepage: www.profiltech.de

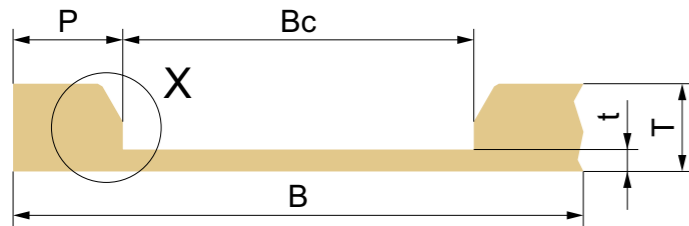
Dimensioning

For dimensioning of milled precision profiled strips some directions have to be observed.

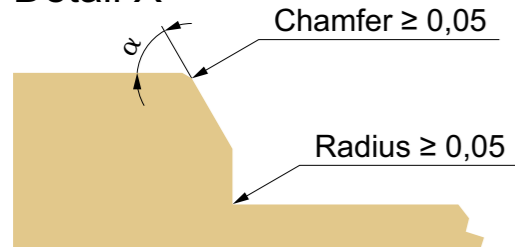
For the exact positioning during the milling process it is necessary to put the strip to a side guidance. This position is to be used as reference side for dimensioning.

All measures then result from this positioning as follows. (see Drawing 1)

Drawing 1:



Detail X



Breadths of channel (Bc) are given by the milling tooling. Position measure (P) starting from reference side. Thicknesses are defined from rest thickness of strip (t).

Other technological characteristics

When material is milled, tensions may develop according to condition – surface evenness, coilset, edge-bow, cutting quality – of the delivered material and milling geometry. These can influence twist, cross-bow and edge-bow.

In many cases, a straightening procedure before/during milling improves these values.

Design

For the design of the precision profile strips we recommend the following to be taken into account for a favourable manufacture and in order to facilitate handling:

- When material is milled, a cutting burr develops in dependence on the alloy and the milling geometry. To reduce, respectively to avoid this burr, a flank angle of $\leq 65^\circ$ or a flank angle of $86/87^\circ$ and a chamfer or radius of approx. $\geq 0,05$ mm are necessary at the milling flanks (drawing X).

Further geometries are possible on demand.

More detailed information on inquiry, resp. sampling.

Tolerances of manufacturing

Measures of position

This data refers to an ideal, plane strip

Standard	Precision	Super precision*
$\pm 0,10$ mm	$\pm 0,05$ mm	$\pm 0,02$ mm

* milled edges

Tolerances of Thickness

The tolerance of the rest thickness of the strip is depending on strip quality, thickness tolerance, geometry and milling depth!

	Standard	Precision	Super precision*
DIN EN 1654 Strips for springs and connectors	$\pm 0,015$ mm	$\pm 0,010$ mm	$\pm 0,004$ mm
DIN EN 1758 Strips for lead frames	$\pm 0,015$ mm	$\pm 0,010$ mm	$\pm 0,005$ mm

Quality of Surface

For standard manufacture, the surface roughness (RA) in milled section is $= 0,40 \mu\text{m}$. After milling, the strips can be brushed if demanded and/or a protection against oxidation can be applied.

Standard	Fine	Shine*
$Ra \leq 0,40 \mu\text{m}$	$Ra \leq 0,20 \mu\text{m}$	$Ra \leq 0,10 \mu\text{m}$

Ra longitudinal to strip direction

* special application

Materials

- All prevalent machineable non-ferrous metal alloys can be handled
- For special material a trial might be necessary
- Tinned strips (selective, precise removing on the tin layer)

Measures

Strip breadth (B): 1,50 to 190,00 mm
 Milling breadth (Bc): 0,15 to 160,00 mm
 Strip thickness (T): 0,10 to 4,00 mm
 Max. milling depth: $\sim 3,00$ mm
 Min. rest thickness (t): $\sim 0,05$ mm

More detailed information on inquiry.