



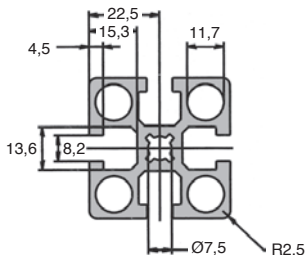
Band conveyors with adjustable longitudinal stops for height and width

Sections

Base dimension is 45mm
All profiles share same profile
All slots are identical
Any combination of profiles is possible.

Centrally drilled holes

Uniform 7.5-0.3mm
M8 thread must be tapped without producing swarf by use of a fluteless tap
Can be increased up to \varnothing M12



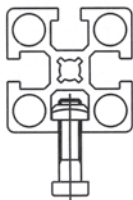
Aluminium profiles
for creating all
types of modular
structures

General information

Slot

Identical shape for all profiles from 19 to 90mm; Width of slot: 8.5-0.3mm.
Slot are designed for CHC M8 screws (head $\varnothing = 13\text{mm}$), M8 nuts
(Dimension across flats 13mm) as well as four-sided and six-sided M8 nuts.

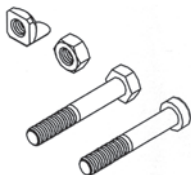
Applicable load



$F = 6000\text{N}$



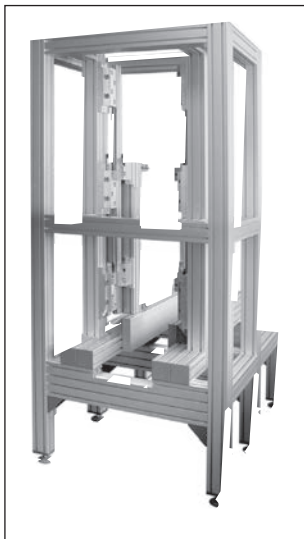
Acceptable nuts/screws



Slot accepts
M8 screwheads



Packaging line with roller conveyors



Test benches with
integrated linear systems



Test benches

Material

Material: Al Mg Si 0.5 F 25

Specific weight: 2.75 g/cm³

Material n°: 3.3206,72 tempered

Tensile strength: min. Rm = 245 N / mm²

0.2% Elastic limit: min. Rp 0.2 = 200 N / mm²

A5 Elongation: > 10%

A10 Elongation: > 8%

Elastic coefficient: E: 70000 N / mm²

G : 27000 N / mm²

Brinell hardness: ca. 75 HB 2.5 / 187.5

Expansion coefficient: 23,8 . 10⁻⁶ K⁻¹

Surface

Surface: Anodised aluminum E6/EV1,
colourless

Treatment depth: ca.10um

Hardness: 250 - 350 HV

Geometric tolerances

Geometric tolerances: DIN17615

External dimensions: 0.2 to 0.4 mm

Straightness: max. 1.5mm / 2 m

Flatness: max. 1.5mm / 2 m

As a general rule, the average tolerance values following the German standard DIN 17615 have been respected.



Very simple assembly thanks to

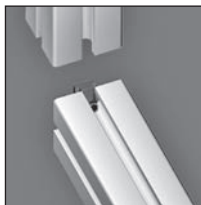
the PRF-FIX-UNI universal fixing system

- Cheap- Requires very little preparation
- Wide range of uses
- Very easy to use
- Antirotation guaranteed

No drilling



1



2

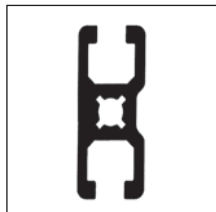


3

Standard aluminium profiles

MiniTec

- Profiles are shown at approx half-size



Profile 19 x 45: PRF1945-3



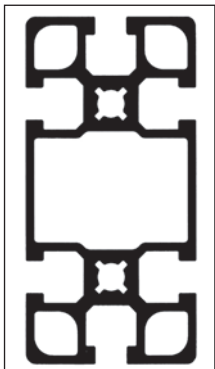
Profile 19 x 32: PRF1932-3



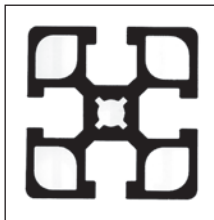
Profile 32 x 32: PRF3232-3



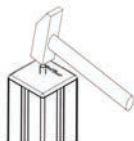
Profile 45 x 32: PRF4532-3



Profile 45 x 90: PRF4590-3



Profile 45 x 45: PRF4545-3
and PRF4545-3/SS



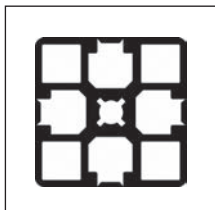
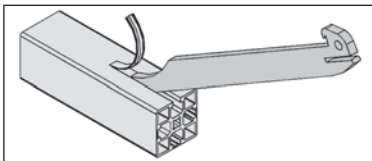
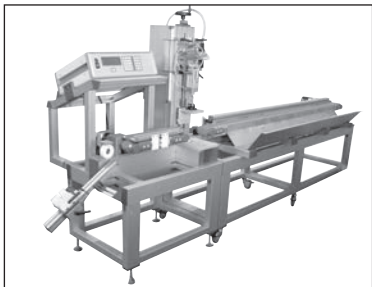
- *Fitting the cap*

- Force the pin using a mallet
To remove, drill out the pin

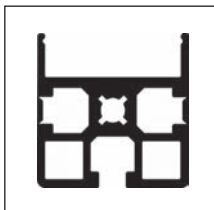
Create the slot length you need !

For uses that require the highest standards of hygiene:

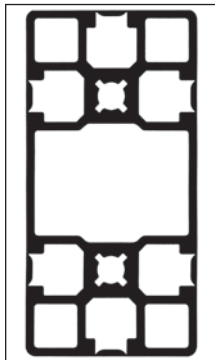
- No product retention
- Ideal for agro-food, chemical, and pharmaceutical industries



Profile 45 x 45:
PRF4545-3/P



Chute profile 45 x 45:
PRF4545-G-3

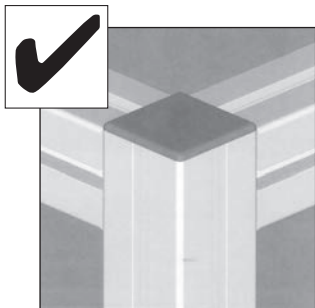
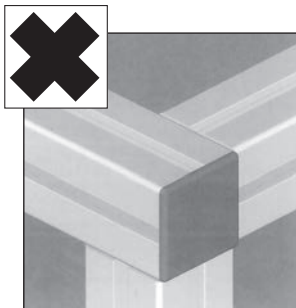


Profile 45 x 90:
PRF4590-3/P

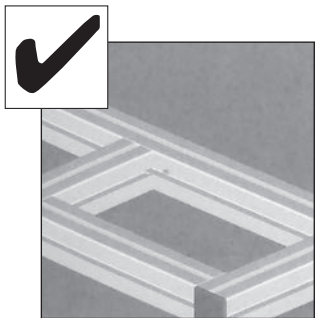
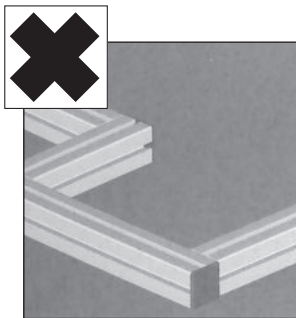
Profiles represented at the scale of about 1/2

PRF aluminium profile assembly

MiniTec



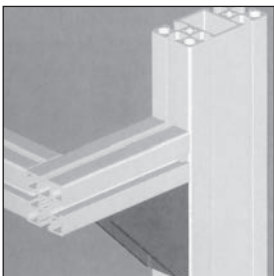
If possible join the horizontal crossheads to the vertical posts



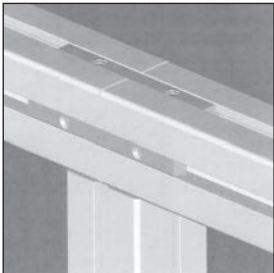
Avoid interrupting the carrying profile



To reduce prefer an deflection, favour the upwards assembly of rectangular profiles



Frames subjected to large torque can be reinforced with a right angle



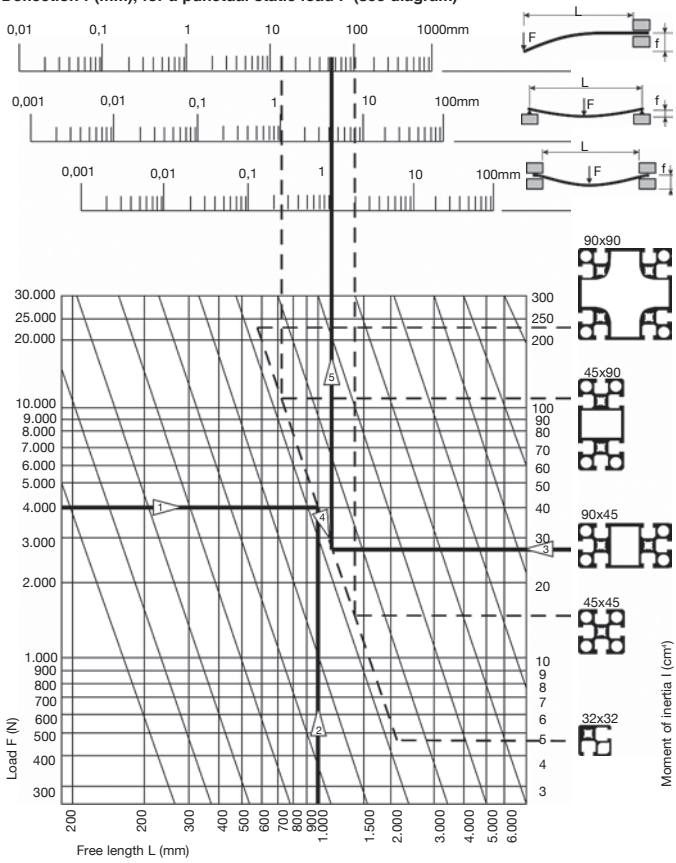
If possible join 2 profiles end to end on a support profile

Aluminium profiles

MiniTec

Calculating deflection

Deflection f (mm), for a punctual static load F (see diagram)



The different formulae and equations can only be applied to punctual static loads.

For any other kind of load, refer to appropriate methods of calculation.

The security coefficients applicable to profiles are those used all the time in mechanics.

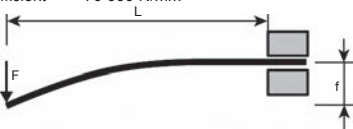
Material resistance calculation

Profile deflexion calculation

Example	f = Deflection	mm
	F = Load	8 000 N
	L = Length	700 mm
	I = Moment of inertia	30.4 cm ⁴
	E = Elastic coefficient	70 000 N/mm

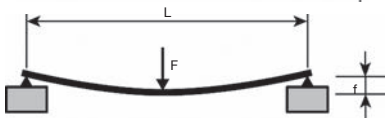
1st example:

$$f = \frac{F \times L^3}{E \times I \times 3 \times 10^4} = 42.1 \text{ mm}$$



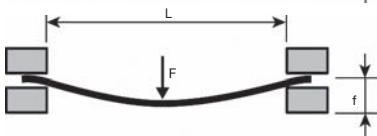
2nd example:

$$f = \frac{F \times L^3}{E \times I \times 48 \times 10^4} = 2.7 \text{ mm}$$



3rd example:

$$f = \frac{F \times L^3}{E \times I \times 192 \times 10^4} = 0.67 \text{ mm}$$



On the previous page, you can easily reference the result at the top of the table. To determine the value of the deflection, follow the order indicated by the arrows.

Deflection (f)



Load (F)



Profile section



Free length (L)

