8-45 Series Aluminum Extrusions - Overview

8-45 Series

Aluminum extrusions with 10mm slot width. Available in 45mm, 50mm, 60mm, 90mm and 100mm in size. Applicable to M8 bolts. Slot Depth 13mm, T Slot Dimension 20mm, L Dimension Tolerance ±0.5mm



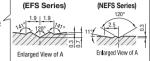
8-45 Series 10 45, 90

Slot Details (Common to HFS, CAF, GFS, NFSL Series) Slot Bottom Details (HFS, CAF Series) (HFS, CAF Series) (INFSL Series) 120° 7 Slot Dimensions Enlarged View of A Enlarged View of A Enlarged View of A

Slot Details (Common to EFS and NEFS Series)

10 Slot Bottom Details

(EFS Series) (NEFS Series)



*5.5 for Light Type (HFSL, HFSLF, HFSLT, NFSL).

Variations

| | Stand | ard Aluminum Extr | usions | Lightweight Alun | High Rigidity Aluminum Extrusions | | | |
|--|--|---|---|--|--|---|--|--|
| | HFS Series | EFS Series | NFS (NEFS) Series | HFSL Series | NFSL Series | GFS Series | | |
| Cross Section Photo | | 5-0 | | 5-0 | | | | |
| Material | EN AC-51400-T5 Equiv. | EN AC-51400-T5 Equiv. | EN AW-6063-T5 Equiv. | EN AC-51400-T5 Equiv. | EN AW-6063-T5 Equiv. | EN AW-6061-T6 Equiv. | | |
| Features | Standard cross section shape. | Have rigidity Equiv. to HFS Series yet lighter and more economical. | Significant price reduction has been achieved by material change. Strength(*) is the same as that of HFS and EFS Series. | Lightweight and economical extrusions. Suitable for use when light weight and economical price are given priority over strength. | Further price reduction has been achieved by changing the material of HFSL. Strength(*) is the same as that of HFSL Series. | These thick extrusions offer high rigidity and are suitable for use in high load. | | |
| Surface Treatment | Clear Anodize (HFS) Black Anodize (HFSB) Clear Coating (CAF) Baked Paint (Yellow) (HFSY) | Clear Anodize (EFS) Black Anodize (EFSB) | Clear Anodize Black Anodize | Clear Anodize Black Anodize | Clear Anodize | Clear Anodize | | |
| 8-45 Series Representative Product | HFS8-4545 HFSB8-4545 CAF8-4545 | EFS8-4545 EFSB8-4545 | NEFS8-4545 NFSB8-4545 | HFSL8-4545 HFSLB8-4545 | NFSL8-4545 | GFS8-4545 | | |
| Mass (Kg/m) (**) | 2.1 | 1.93 | 1.93 | 1.7 | 1.7 | 3.16 | | |
| Cross Sectional &x | 15.13x10 ⁴ | 15.42x10⁴ | 15.42x10 ⁴ | 11.73x10 ⁴ | 11.73x10 ⁴ | 23.64x10 ⁴ | | |
| Moment of Inertia (**) $\ell \mathbf{y}$ | 15.13x10⁴ | 15.42x10⁴ | 15.42x10⁴ | 11.73x10 ⁴ | 11.73x10⁴ | 23.64x10 ⁴ | | |

^{*} Cross Sectional Moment of Inertia is equal to that of HFS, EFS and HFSL Series, however proof stress and tensile strength slightly decrease.
** Mass and Cross Sectional Moment of Inertia are for 45 square extrusions.

8-45 Series Aluminum Extrusions Lineup

Number of Slots (Vertical Axis): Four-Side Slot Type can be jointed as desired; Flat Plane Type (1 - 3 sides) provides ornamental side(s).

Number of Slot Lines (Horizontal Axis):There are extrusions with one or multiple slots on one side. Ones with multiple slots are suitable where strength is required.

Also available are Angled, Outer Surface R, Milled Surface, Bending and Slot Width Mixed Type.

| Variatio | ns | | HFS Series | | | | | | | EFS Series | | | | | | | NFS Series | | | | | | |
|--|-----------------|---------------|-----------------------|-------------------|--------------------|-----------------|-----------------------|-----------------------------|-----------|----------------------|-------------------|--------------------|-----------------|-----------------------|-----------------------------|-----------|-----------------------|-------------------|--------------------|-----------------|-----------------------|-----------------------------|--|
| Number of Slots (Vertical Axis) Color | | 1 Slot | 2 Slots Rectangle | 2 Slots Square | 3 Slots or More | Other Shapes | Parallel Surfacing | Bending Slot Width Mixed | 1 Slot | 2 Slots Rectangle | 2 Slots Square | 3 Slots or More | Other Shapes | Parallel Surfacing | Bending Slot Width Mixed | 1 Slot | 2 Slots Rectangle | 2 Slots Square | 3 Slots or More | Other Shapes | Parallel Surfacing | Bending Slot Width Mixed | |
| | | Clear Anodize | • | • | • | • | • | • | | • | • | | | • | | | • | • | • | | • | | |
| _ | | Black Anodize | • | • | • | • | | | | • | • | | | | | | | | | | | | |
| Four- Side | No Flat | Clear Coating | • | • | • | | | | | | | | | | | | | | | | | | |
| Slots | Plane | Yellow Paint | | | | | | | | | | | | | | | | | | | | | |
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| | | Clear Anodize | • | • | | | | | | • | • | | | | | | • | | | | | | |
| | | Black Anodize | • | | | | | | | | | | | | | | | | | | | | |
| | One Flat | Clear Coating | | | | | | | | | | | | | | | | | | | | | |
| | One Hat | Yellow Paint | | | | | | | | | | | | | | | | | | | | | |
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| | | Clear Anodize | • | | | | | | | • | | | | | | | • | | | | | | |
| F1-4 | | Black Anodize | • | | | | | | | | | | | | | | | | | | | | |
| Flat Plane | Two Flats | Clear Coating | | | | | | | | | | | | | | | | | | | | | |
| 1 Idilo | 11101111111 | Yellow Paint | | | | | | | | | | | | | | | | | | | | | |
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| | | Clear Anodize | • | | | | | | | • | | | | | | | | | | | | | |
| | 0.0:4 | Black Anodize | | | | | | | | | | | | | | | | | | | | | |
| | 3 Sides Flat | Clear Coating | | | | | | | | | | | | | | | | | | | | | |
| | T ICC | Yellow Paint | | | | | | | | | | | | | | | | | | | | | |
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Accessories for 8-45 Series Aluminum Extrusions

MISUMI provides various types of mounting components and accessories.

| Product Name | Brackets | Blind Joint | Nut | Extrusion End Caps | Slot Cover | | |
|-----------------------------|--|---|---|--|---|--|--|
| Product Photo | | | | | | | |
| Mounted Product Photo | | | | | | | |
| Material | EN AC-46100 Equiv., EN AC-51400-T5 Equiv., etc. | EN 1.1191 Equiv., EN 1.4308 Equiv., EN 1.4301 Equiv., etc. | EN 1.0301 Equiv., EN 1.4301 Equiv., EN 1.4401 Equiv., etc. | Polyamide | Polyethylene, etc. | | |
| Features | Brackets to connect extrusions with screws and nuts. Alterations on aluminum extrusions for mounting are not required. Cover plates can be mounted by using Side Tapped Hole Type Brackets. | Suitable for locations where equipment is loaded and unloaded or doors are to be mounted. Alterations are required on the aluminum extrusions. | Nuts for mounting brackets and other accessories. Selectable from various types: Pre-Assembly Insertion Type, Post-Assembly Insertion Type, Thread Locking Adhesive Type, Spring-integrated Type convenient for vertical positioning. | Caps for protecting extrusion end faces. Can be mounted without any alterations. | Protects extrusion slots from dust. Can be cut with scissors. Various colors and materials are available. | | |
| Variations | Brackets for 1 Slot ~ 4 Slots Surface Treatment (Black Anodize, Electroless Nickel Plating, etc.) Brackets with Cover, etc. | - | Standard (Single Item, Bulk Packages, Stopper Sets) With Additional Functions (Temporary Holding, Thread Locking Adhesive, Holding Function) Screw Integrated, Long Nuts | Three-Sided Caps for Corners Screw Mounted | Elastomer Sponge Aluminum, etc. | | |
| Page No. | Brackets - Overview P.691 Screws P.751 ~ | Overview P.705 | Overview P.713 | P.723 | P.773 | | |

8-45 Series Applications

Suited for locations where forces apply, such as for larger clean booths, equipment bases and structural material, etc. Square extrusions up to 100 square are lined up. Useful when higher strength is required.

Usable in combination with different slot width extrusions

Extrusions with different slot width can be combined when integrating frames and coverings. Assembly Brackets for Different Extrusion Sizes (P.697,704) enable common use of 8-45 Series and 6 Series.

(Additional Info.) Number of Slots and Number of Slot Lines

Number of Slots (Vertical Axis) **Number of Slot Lines (Horizontal Axis)**

Four-Side Slots One Flat Two Flats 3 Sides Flat 1 Slot 2 Slots (Rectangle) 2 Slots (Square) 3 Slots or More

















| Variation | HFSL Series | | | | | | | | NFSL Series | | | | | | | | GFS Series | | | | | | | |
|--|-------------|---------------|----------------------|-------------------|--------------------|-----------------|-----------------------|-----------------------------|-------------|----------------------|-------------------|--------------------|-----------------|-----------------------|-----------------------------|-----------|-----------------------|-------------------|--------------------|-----------------|-----------------------|-----------------------------|--|--|
| Number of Slots (Vertical Axis) Color | | 1 Slot | 2 Slots Rectangle | 2 Slots Square | 3 Slots or More | Other Shapes | Parallel Surfacing | Bending Slot Width Mixed | 1 Slot | 2 Slots Rectangle | 2 Slots Square | 3 Slots or More | Other Shapes | Parallel Surfacing | Bending Slot Width Mixed | 1 Slot | 2 Slots Rectangle | 2 Slots Square | 3 Slots or More | Other Shapes | Parallel Surfacing | Bending Slot Width Mixed | | |
| | | Clear Anodize | • | • | | | | | | • | • | | | | | | • | • | • | • | | • | | |
| F | | Black Anodize | | | | | | | | | | | | | | | | | | | | | | |
| Four- Side | No Flat | Clear Coating | | | | | | | | | | | | | | | | | | | | | | |
| Slots | Plane | Yellow Paint | | | | | | | | | | | | | | | | | | | | | | |
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| | | Clear Anodize | • | | | | | | | | | | | | | | • | | | | | | | |
| | One Flat | Black Anodize | | | | | | | | | | | | | | | | | | | | | | |
| | | Clear Coating | | | | | | | | | | | | | | | | | | | | | | |
| | | Yellow Paint | | | | | | | | | | | | | | | | | | | | | | |
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| | | Clear Anodize | • | | | | | | | | | | | | | | • | | | | | | | |
| | | Black Anodize | | | | | | | | | | | | | | | | | | | | | | |
| Flat Plane | Two Flats | Clear Coating | | | | | | | | | | | | | | | | | | | | | | |
| Platte | | Yellow Paint | | | | | | | | | | | | | | | | | | | | | | |
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| | | Clear Anodize | | | | | | | | | | | | | | | | | | | | | | |
| | 3 Sides | Black Anodize | | | | | | | | | | | | | | | | | | | | | | |
| | Flat | Clear Coating | | | | | | | | | | | | | | | | | | | | | | |
| | | Yellow Paint | | | | | | | | | | | | | | | | | | | | | | |
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