

Aluminum Extrusions (HFS8-45 Series)

60 mm Square

HFS8-45 Series		Fixing Parts			Others	
Brackets	Nuts	Joints	Extrusion End Caps	Alteration		
P.2816-2830	P.2831-2838	P.2842-2857	P.2839-2841	P.2862-2863		

Features: Extrusions for equipment bases or etc.

HFS8 Series Aluminum Extrusions – 60, 100 mm Square

RoHS 10

Type		Material	Surface Treatment
Configurable Length	Fixed Length		
GFS8	KGFS8	A6061SS-T6 or Equivalent	Clear Anodize
HFS8	KHFS8	A6N01SS-T5 Aluminum Alloy or	
HFS_8	KHFS_8	6005A-T5 Aluminum Alloy	

Ⓢ Cut surface and altered parts are not surface treated.

Features of Extrusions

Cross Section Shape	HFS Extrusions	Standard Cross Section Shape
	GFS Extrusions	Suitable for heavier devices due to the thick walls
Surface Treatment	Clear Anodize	Common surface treatment

Slot (HFS / GFS) Details of slot (HFS / Series) (GFS / Series)

Part Number Example Part Number - L

Example: HFS8-6060 - 800

Configurable Length Extrusions

Part Number	L 0.5 mm Increment	Mass kg/m	Sectional Area mm ²	Cross Sectional Moment of Inertia mm ⁴	
				ξ _x	ξ _y
HFS8	6060	50-4000	1478	56.44 x 10 ⁴	56.44 x 10 ⁴
GFS8 High Rigidity					
HFSF8					
HFST8					

Fixed Length Extrusion (Effective Length 4,000 mm, 1,000 mm)

Ⓢ Part numbers beginning with the character "K" indicate Fixed Length Extrusion.

Part Number	L mm	Sectional Area mm ²	Cross Sectional Moment of Inertia mm ⁴	
			ξ _x	ξ _y
KHFS8	4000	1478	56.44 x 10 ⁴	56.44 x 10 ⁴
KGFS8 High Rigidity				
KHFSF8				
KHFST8				

Measure of Allowable Load

Extrusions	Height x Width (mm)	HFS Series		GFS Series		Difference of Allowable Load from HFS Series
		Allowable Load (N)	Allowable Load (kgf)	Allowable Load (N)	Allowable Load (kgf)	
60 sq. 60 sq.	60 x 60	1,743	177	2,682	273	1.54 times

Ⓢ The value indicates the concentrated load of the extrusion on the center when the 1000mm long extrusion is supported at both ends.

Mechanical Characteristics (Reference Actual Measurement)

Series	HFS Series	GFS Series
Materials (JIS Symbol)	A6N01SS-T5 Aluminum Alloy	6061-T6 Aluminum Alloy Equivalent
Tensile Strength (N/mm ²)	245 or More	265 or more (Actual Measurement 278)
Proof Stress (N/mm ²)	205 or More	245 or more (Actual Measurement 247)
Longitudinal Elastic Modulus (N/mm ²)	69,972	69,972
Brinell Hardness (HB)	88	88
Surface Treatment	Anodize 9 μm or More	

Special Use Aluminum Extrusions

HFS8-45 Series with Milled Surfaces

HFS8-45 Series		Fixing Parts			Others	
Brackets	Nuts	Joints	Extrusion End Caps	Alteration		
P.2816-2830	P.2831-2838	P.2842-2857	P.2839-2841	P.2862-2863		

Features: Milled on upper and lower surfaces. Usable for Linear Guides. Refer to P.491

Special Use HFS8-45 Series Aluminum Extrusions – with Milled Surfaces

RoHS 10

Type	Material	Surface Treatment
HFSP8	A6N01SS-T5 Aluminum Alloy	Clear Anodize
GFS8	A6061SS-T6 Equivalent	

Ⓢ Milled and cut end surfaces are not anodized.

Details of slot on milled surface

*Due to the extrusion tolerance, the thickness tolerance of the slot on the milled surface becomes as shown above, while T dimension tolerance is ±0.1.

Ⓢ For detailed dimensions and shapes EXCEPT the slots on the milled surface, A and T dimensions, please refer to the drawing of the product of the below Part Number Without "P". (HFS8-45 series (Ex.)HFSP8-45450 → Ref. fig. HFS8-4545 (refer to P.2806))

Part Number Example Part Number - L

Example: HFSP8-4545 - 300

Part Number	L 0.5 mm Increment	Extrusions Series	T	A
				A
HFSP8	100-3000	HFS8-45	44	45
			49	50
			100	100
			99	50
			59	60
			44	90
			89	45
			89	90
			44	90
			89	90
GFS8	100-3000	GFS8-45	44	45
			49	50
			100	100
			99	50
			59	60
			44	90
			89	45
			89	90
			44	90
			89	90

Part Number Example Part Number - L

Example: HFSP8-4545 - 300

Part Number Alterations

Drilling hole at a specified position can be done. Ⓢ For details of tapping, refer to P.2864. Nuts for Extrusion Please use nuts for aluminum extrusions. For the nuts, refer to P.2831-2836.

Alterations	Counterboring					Wrench Hole						
	Code	Z Selection	XA	XB	XC	XD	XE	D Selection	AV	BV	CV	DV
Spec.	Z	d	d ₁	Distance from The Left End Plane mm			D	Distance from The Left End Plane mm				
Specifications of Hole Size & Hole Position	6	6.5	11	7 - (L-7)			8	7 - (L-7)				
	8	9	14	7 - (L-7)			8	7 - (L-7)				

Counterboring Direction

Wrench Hole Machining Direction

*1 When the cross section is rectangle (vertical), counterboring is not available for extrusions exceeding 60 mm in the longitudinal direction.

*2 When the cross section is L-shaped, counterboring is only applicable to the lower section of extrusions exceeding 60 mm in length direction.

Part Number Example

HFSP8 - 909045 - 150 - Z8 - XA20 - XB45 - XC80 - XD120
 HFSP8 - 4545 - 2000 - D8 - AV100 - BV120 - CV1000 - DV1880 - EV1900
 HFSP8 - 9090 - 800 - LTP

Ⓢ When the cross section is L-shaped, select distance from left end with lower portion in front.

Application Example

Install button bolts temporarily in reference plane, then slide the frame to fixing position, passing bolt heads through frame slot.

Put wrench in the wrench hole and tighten the bolt.

Ⓢ Being extruded sections, products can twist. It is recommended to support overall For Aluminum Extrusion Tolerance Data, refer to P.2685.