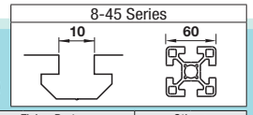
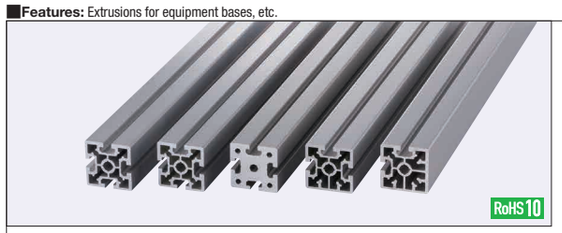
8-45 Series Aluminum Extrusions 60 mm Square



Fixing Parts			Others	
Brackets	Joints	Nut	Extrusion End Caps	Alterations
P.691 ~ P.704	P.705 ~ P.710	P.713 ~ P.722	P.723	P.755 ~ P.768

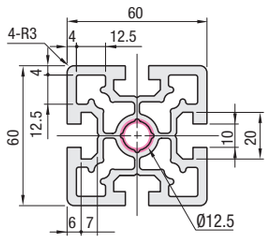
■**Features:** Extrusions for equipment bases, etc.



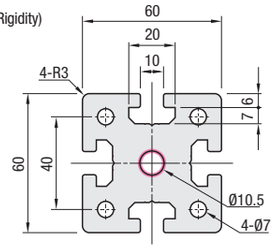
Type		Material	Surface Treatment
Configurable Length	Fixed Length		
GFS8	KGFS8	EN AW-6061-T6 Equiv.	Clear Anodize
NFS8	KNFS8	EN AW-6063-T5 Equiv.	
HFS8 HFS□8	KHFS8 KHFS□8	EN AC-51400-T5 Equiv.	

Cut surface and altered parts are not surface treated.

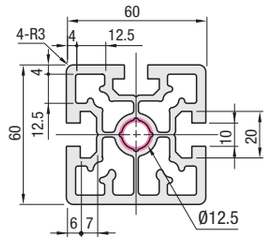
NFS8-6060
HFS8-6060



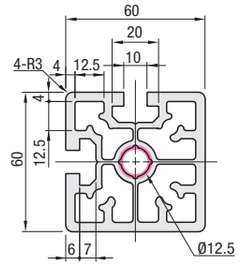
GFS8-6060 (High Rigidity)



HFSF8-6060



HFST8-6060



■Configurable Length Extrusions

Part Number		L 0.5mm Increment	Mass kg/m	Sectional Area mm²	Cross Sectional Moment of Inertia mm⁴ ℓx	Cross Sectional Moment of Inertia mm⁴ ℓy	Unit Price (Less than 300mm) 1 ~ 9 pc(s).	Volume Discount Rate Less Than 300mm 10~49	Volume Discount Rate Less Than 300mm 50~160	Unit Price/m (300mm or More) 1 ~ 9 pc(s).	Volume Discount Rate 300mm or More 10~49	Volume Discount Rate 300mm or More 50~160
NFS8	6060	50~4000	4.17	1478	56.44x10⁴	56.44x10⁴						
HFS8		■Applicable to 6000mm depending on products. Refer to Information of Special Orders (P.103) and contact the person in charge of Special Orders at MISUMI QCT Center. Some extrusions are not applicable.										
GFS8 (High Rigidity)			6.96	2577	79.86x10⁴	79.86x10⁴						
HFSF8			4.16	1509	58.16x10⁴	56.19x10⁴						
HFST8			4.14	1519	57.90x10⁴	57.90x10⁴						

■Fixed Length Extrusions (Effective Length 4000mm ☞ P.526)

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

Part Number		L mm	Sectional Area mm²	Cross Sectional Moment of Inertia mm⁴ ℓx	Cross Sectional Moment of Inertia mm⁴ ℓy	Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20
KNFS8	6060	4000 (Effective Length)	1478	56.44x10⁴	56.44x10⁴		
KHFS8							
KGFS8 (High Rigidity)			2577	79.86x10⁴	79.86x10⁴		
KHFSF8			1509	58.16x10⁴	56.19x10⁴		
KHFST8			1519	57.90x10⁴	57.90x10⁴		

Ordering Example: Part Number - L
HFS8-6060 - 800

Alterations: Alterations are available for Configurable Length Extrusions. For details of alterations, see P.755.

■Measure of Allowable Load

Extrusion	Height x Width (mm)	NFS, HFS Series Allowable Load (N)	NFS, HFS Series Allowable Load (kgf)	GFS Series Allowable Load (N)	GFS Series Allowable Load (kgf)	Difference of Allowable Load from HFS Series
60 sq. x 60 sq.	60x60	1,743	177	2,682	273	1.54 times

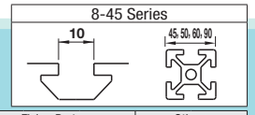
The value indicates the concentrated load of the extrusion on the center when the 1000mm long extrusion is supported at both ends.

■Mechanical Characteristics (Reference Actual Measurement)

Series	NFS Series	HFS Series	GFS Series
Material (JIS Symbol)	EN AW-6063-T5 Equiv.	EN AC-51400-T5 Equiv.	EN AW-6061-T6 Equiv.
Tensile Strength (N/mm²)	155 or more	245 or more	265 or more (Actual Measurement 278)
Proof Stress (N/mm²)	110 or more	205 or more	245 or more (Actual Measurement 247)
Longitudinal Elastic Modulus (N/mm²)	69,972	69,972	69,972
Brinell Hardness (HB)	88	88	88
Surface Treatment	Anodize 9μm or more		

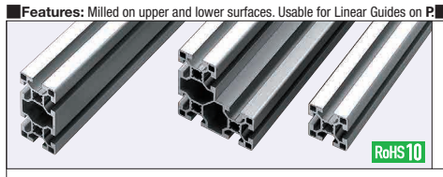
Special Use: 8-45 Series Aluminum Extrusions

Aluminum Extrusions with Parallel Surfacing

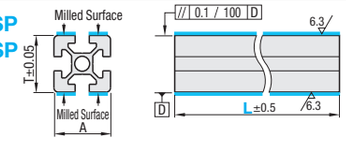


Fixing Parts			Others	
Brackets	Joints	Nut	Extrusion End Caps	Alterations
P.691 ~ P.704	P.705 ~ P.710	P.713 ~ P.722	P.723	P.755 ~ P.768

■**Features:** Milled on upper and lower surfaces. Usable for Linear Guides on P.■ -519~.



HFSP
GFSP

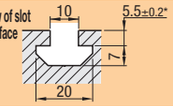


Milled surfaces and cut surfaces are not anodized.

Type	Material	Surface Treatment
HFSP8	EN AC-51400-T5 Equiv.	Clear Anodize
GFSP8	EN AW-6061-T6 Equiv.	

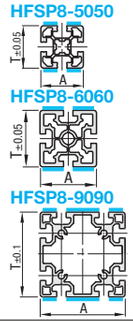
For detailed dimensions and shapes EXCEPT the slots on the milled surface, A and T dimensions, please refer to the drawing of the product of the below Part Number without "P". ((Ex.) HFSP8-4545→ Ref. fig. HFS8-4545 on P.681))

Detailed view of slot on milled surface Slot Details

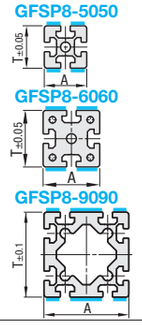


*Due to the extrusion tolerance, the thickness tolerance of the slot on the milled surface becomes as shown above, while T dimension tolerance is ±0.1.

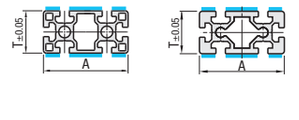
Square Type
HFSP8-4545
HFSP8-5050
HFSP8-6060
HFSP8-9090



GFSP8-4545
GFSP8-5050
GFSP8-6060
GFSP8-9090

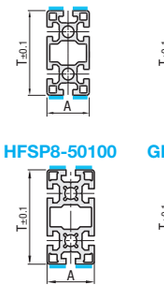


Rectangle Type (Horizontal)
HFSP8-9045
HFSP8-10050

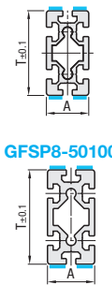


GFSP8-9045
GFSP8-10050

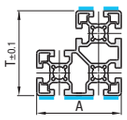
Rectangle Type (Vertical)
HFSP8-4590
HFSP8-50100



GFSP8-4590
GFSP8-50100



L-Shaped Type
HFSP8-909045



Part Number		L 0.5mm Increment	Extrusion Series	T	A	Unit Price (Less than 300mm)	Unit Price/m (300mm or More)	Alteration Charge (Main Body +) Counterboring XA ~ XE (per Row)	Alteration Charge (Main Body +) Wrench Hole Drilling AV ~ EV (per Row)	Tapping (Refer to P.757) Tap Shape	Left LTP	Right RTP	Both TPW
HFSP8	4545	100~3000	HFS8-45	44	45			Z6 d6.5 d111		M12 Depth 18 (Heli-coil is inserted to Ø12.5)			
	5050			49	50								
	10050				100								
	50100			99	50								
	6060			59	60								
	9045			44	90								
	4590			89	45			Z8 d9 d114	-				
	9090				90					M8 Depth 24			
	909045									M12 Depth 18 (Heli-coil is inserted to Ø12.5)			
GFSP8	4545		GFS8-45	44	45			Z6 d6.5 d111		M12 Depth 18 (Heli-coil is inserted to Ø12.5)			
	5050			49	50								
	10050				100								
	50100			99	50				-				
	6060			59	60								
	9045			44	90			Z8 d9 d114					
	4590			89	45				-				
	9090				90					M12 Depth 36			

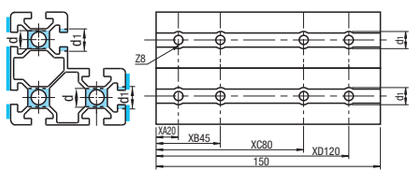
Ordering Example: Part Number - L
HFSP8-4545 - 300

Alterations: Adds a hole at a specified position. For details of tapping, refer to P.757.

- Nuts for Extrusions Use nuts for aluminum extrusions on P.713~722.

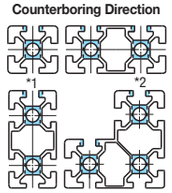
Alterations	Counterboring							Wrench Hole				
Code	Z Selection			XA	XB	XC	XD	XE	D Selection	AV	BV	CV	DV	EV
Spec.	Z	d	d1	Distance from the Left End Plane mm					D	Distance from the Left End Plane mm				
Specifications of Hole Size and Position	6	6.5	11	7~(L-7)					8	7~(L-7)				
	8	9	14											

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

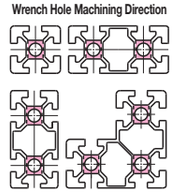


When the cross section is L-shaped, select distance from left end with lower section in the back.

Counterboring Direction

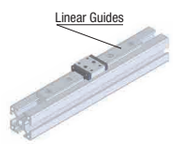


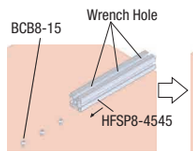
Wrench Hole Machining Direction



*1 When the cross section is rectangle (vertical), counterboring is not available for extrusions exceeding 60mm in the longitudinal direction.
*2 When the cross section is L-shaped, counterboring is not available for extrusions exceeding 60mm in longitudinal direction, except for the lower portion.

ex. Example





Installed button screws temporarily in reference plane, then slide the frame to fixing position, passing screw heads through frame slot.

Put wrench in the wrench hole and tighten the screw.

Being extruded sections, products can twist. Supporting overall length of extrusion for use is recommended. See Aluminum Extrusion Tolerance Data on P.514.