

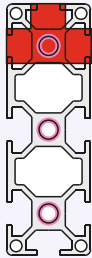
# L Hole Alterations

Blind Joints which require this alteration

Parallel Joints  
P554, etc.

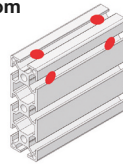
## Drilling of L Holes for Parallel Joint Connections.

(Reference) Corner section when using Parallel Joints

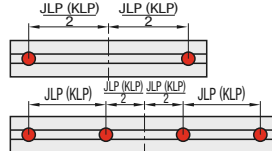


## L Holes Crisscross on Bottom

JLP

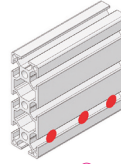


When 2 and 4 holes are specified, they will be symmetrically placed about a center point.

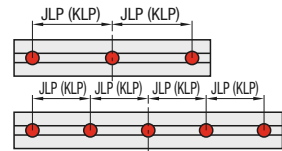


## L Holes Crisscross on Top

KLP



When 3 and 5 holes are specified, there will be one hole at the center and the rest will be symmetrically placed about the center hole.



For extrusions with multiple slots on one surface, only a slot on each end will be hole machined.

Alteration	Hole Pitch (1mm Increment)	H (Number of Holes)	No.	D
JLP	D+4.9~	2 3 4 5	5	7.1
KLP	L-D-10 H-1		6	11.1
			8	13.1



Ordering Example

Part Number

HFS6 - 3090 - 1200 - JLP1100 - H2  
HFS8 - 4080 - 1800 - KLP870 - H3  
HFS8 - 4080 - 1800 - JLP870 - KLP870-H3

Hole pitch on Top/Bottom can be separately specified, but the number of holes will be equal on top and bottom.

See the table below for the applicable extrusions and alteration charges. Indicated with "-" in the table are not applicable.

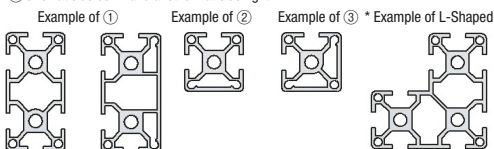
Alterations				L Hole (Charge per 1 Hole Location)		
Code				Crisscross on Top Section   Crisscross on Bottom Section		
Features	Type	No.	Page	L Hole Dia.	JLP	KLP
Four-Side Slots	HFS5	2020	P529	Ø7.1	-	-
	NFS5	2040	P530		-	-
	CAF5	2080	P531		-	-
	HFSY5	2525	P532		-	-
		2550	P533		-	-
		4040	P534		-	-
		4080	P535		-	-
		4080	P536		-	-
		4040/20	P537		-	-
		2020	P538		-	-
3-Side Slot 1 Side Flat	HFSF5	2040	P539	Ø11.1	-	-
	NFSF5	2040	P540		-	-
Two-Side Slots Two Flats	HFSF5	2020	P529		-	-
	NFSF5	2040	P530		-	-
Two Slots on Opposite Sides	HFSF5	2020	P529		-	-
	NFSF5	2040	P530		-	-
One-Side Slot Three Flats	HFSF5	2020	P529		-	-
	NFSF5	2040	P530		-	-
Angled	HFS30A5	20	P532		-	-
	HFS45A5	20	P532		-	-
Black Anodize	HFSB5	2020	P529		-	-
	NFSB5	2040	P530		-	-
Curved	HFSR5	2020	P529		-	-
	NFSR5	2040	P530		-	-
Four-Side Slots	HFS6	3030	P576	Ø11.1	-	-
	EF6	3030	P577		-	-
	NFS6	3030	P578		-	-
	EF6	3030	P579		-	-
	NFS6	3030	P580		-	-
	EF6	3030	P581		-	-
	NFS6	3030	P582		-	-
	EF6	3030	P583		-	-
	NFS6	3030	P584		-	-
	EF6	3030	P585		-	-
3-Side Slot 1 Side Flat	HFSF6	3030	P576		-	-
	NFSF6	3030	P577		-	-
Two-Side Slots Two Flats	HFSF6	3030	P578		-	-
	NFSF6	3030	P579		-	-
Two Slots on Opposite Sides	HFSF6	3030	P580		-	-
	NFSF6	3030	P581		-	-
One-Side Slot Three Flats	HFSF6	3030	P582		-	-
	NFSF6	3030	P583		-	-
Light Type	HFSL6	3030	P576		-	-
	NFSL6	3030	P577		-	-
Heavy Type	HFSG6	3030	P578		-	-
	NFSG6	3030	P579		-	-
Angled	HFS30A6	30	P578		-	-
	HFS45A6	30	P578		-	-
Black Anodize	HFSB6	3030	P576		-	-
	NFSB6	3030	P577		-	-
Curved	HFSR6	3030	P578		-	-
	NFSR6	3030	P579		-	-

\* Number of holes determines the alteration fee. (Price in the Table x Number of Holes)

## Standard of Extrusion Position

Placing method of the extrusion, which is a basis to determine right and left is shown as follows.

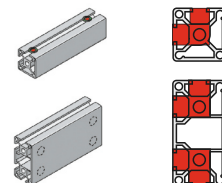
- On the vertical length
- Flat side down
- One flat side down and another flat side right



When the extrusion is on the vertical length and also has a flat side, ① has the priority.

## Additional Info. on Smooth Sided Extrusions

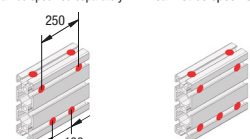
Holes in smooth side direction are blind holes, and do not penetrate through the smooth side.



## Notes on JLP / KLP Combination Use

Hole pitch on Top/Bottom can be separately specified, but the number of holes will be equal on top and bottom.



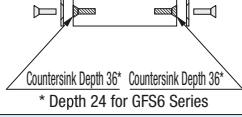
- Hole pitch on Top/Bottom can be specified separately.
- Uneven number of holes cannot be specified.



# Other Special Alterations

## ■ End plates mounting for GFS series

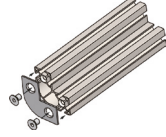
Machines countersink and tapped hole in order to mount the end plate for high rigidity aluminum extrusions.

Alterations		Hole Machining for End Plate Mounting		
Code		LTS	RTS	TSW
Spec.		Machined on the Left End 	Machined on the Right End 	Machined on both ends. 
Applicable Extrusion	Applicable Screw			
GFS6-3030	SHFBS8-15 x 1 pc.			
GFS6-3060	SHFBS8-15 x 2 pcs.			
GFS8-4040	SHFBS12-20 x 1 pc.			
GFS8-4545				
GFS8-5050				
GFS8-6060				
GFS8-4080	SHFBS12-20 x 2 pcs.			
GFS8-4590				
GFS8-50100				
GFS8-9090				
GFS8-100100				
GFS8-100200				

☞ Screws are not included.

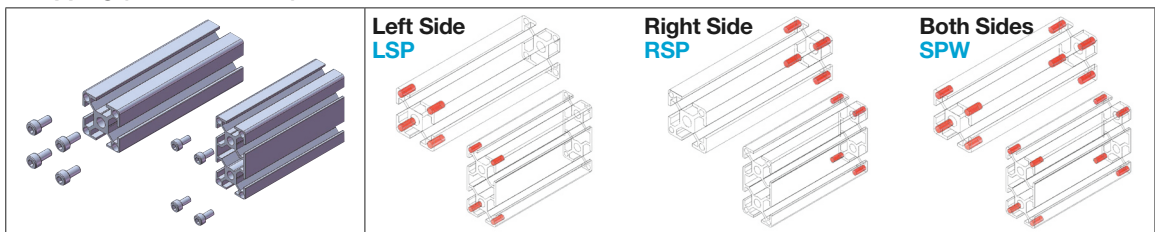
## ■ End plates mounting for HFSR5-404020 and HFSR6-606030

Machines countersunk and tapped holes to mount the plates on P555, 568, 615, 628.

Alterations		Hole Machining for End Plate Mounting		
Code		LTS	RTS	TSW
Spec.		The diagram below shows the basic extrusion position. LTS: Machined on the Left End RTS: Machined on the Right End TSW: Machined on Both Ends 		
Applicable Extrusion	Applicable Screw			
HFSR5-404020	SHFBS5-6			
HFSR6-606030	SHFBS8-12			

☞ Screws are not included.

## ■ Tapping (Corner Section)



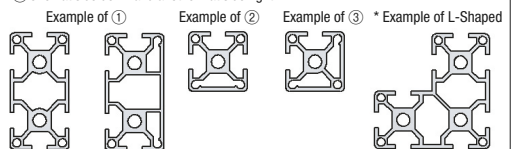
Alterations				Tapping			
Code				End Tapping			
Extrusion	Features	Type	No.	Page	Tap Shape	Number of Tapped Holes (per End)	Left LSP
HFS6 Series	Four-Side Slots	CAF6	3030	P571	M5 Depth 10		
			3060	P573			
			3030	P571			
			3060	P573			
			3090	P576			
		HFS6	30120				
			6090	P577			
			60120				
			606030	P578			
			3030	P580			
	3-Side Slot 1-Side Flat	HFSV6	3060	P572			
			3060	P574			
		HFSF6	3030	P572			
			3060	P574			
	Two-Side Slots Two Flats	HFST6	3030	P572			
			3060	P574			
	Two Slots on Opposite Sides	HFSH6	3030	P572			
			3060	P574			
	One-Side Slot Three Flats	HFSC6	3030	P572			
			3060	P574			
		HFSB6	3030	P571			
			3060	P573			
	Black Anodize	HFSFB6	3030	P572			
			3030	P572			

Ordering Example  
 HFS6 - 3030 - 500 - LSP  
 HFST6 - 3060 - 500 - SPW

## ■ Standard of Extrusion Position

Placing method of the extrusion, which is a basis to determine right and left is shown as follows.

- ① On the vertical length
- ② Flat side down
- ③ One flat side down and another flat side right



☞ When the extrusion is on the vertical length and also has a flat side, ① has the priority.

☞ For center section tapping, see P.757.