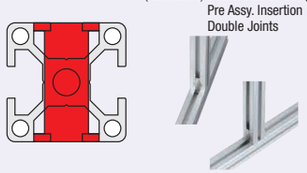
S Type Hole Alterations

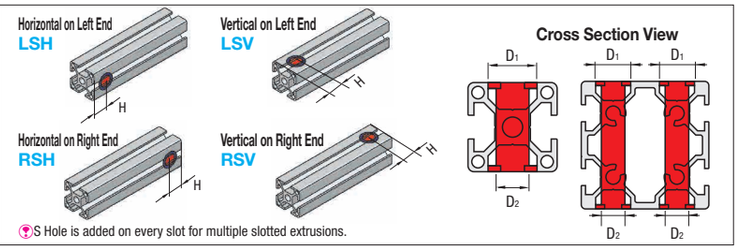
Blind Joints which require this alteration

Pre-Assembly Insertion Double Joints
P.611, etc.

Drilling of S Holes for Pre Assy. Insertion Double Joint connections.

(Reference) Corners when using Pre Assy. Insertion Double Joints



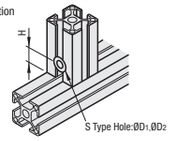


S Hole is added on every slot for multiple slotted extrusions.

Hole Position and Size

Extrusion Series	S Hole H(mm)	S Hole ØD1(mm)	S Hole ØD2(mm)
HFS6	15	16.5	11.1
HFS8	20	20	13.1
HFS8-45	22.5	20	15.1

Pre-Assembly Insertion Double Joint Drilling



Ordering Example — Part Number: HFS6-3030-2000-LSH-RSV

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

Alterations Code Features	Type	No.	Page	S Hole Dia.	S Hole Left Side Horizontally LSH	S Hole Left Side Vertically LSV	S Hole Right Side Horizontally RSH	S Hole Right Side Vertically RSV
Four-Side Slots	HFS6 EFS6 NFS6 NEFS6 GFS6 CAF6 HFSY6	3030	P.571	D1Ø16.5 D2Ø11.1				
		3060	P.573					
		3090	P.576					
		30120				-		-
		5050	P.579					
		50100						
		100100						
		6060	P.575					
		6090	P.577					
		60120						
		606030	P.578		-	-	-	-
		30300	P.576			-		-
3-Side Slot 1Side Flat	HFSF6 EFSF6 NFSF6 NEFSF6	3030	P.572			-		-
		3060	P.574		-		-	
		5050	P.579					
		6060	P.575					
Two-Side Slots Two Flats	HFST6 EFST6 NEFST6	3030	P.572		-	-	-	-
		3060	P.574					
		5050	P.579					
		6060	P.575					
Two Slots on Opposite Sides	HFSH6 EFSH6	3030	P.572					
		3060	P.574					
One-Side Slot Three Flats	HFSC6 EFSC6	3030	P.572		-	-	-	-
			P.574					
Light Type	NFSL6 HFSL6	3030	P.571					
			P.573					
		5050	P.579					
Heavy Type	HFSG6	6060	P.575					
Angled	HFS30A6 HFS45A6 HFS60A6	30	P.578		-	-	-	-
Black Anodize	HFSB6 EFSB6 NFSB6 NEFSB6	3030	P.571					
		3060	P.573					
		3090	P.576					
		30120				-		-
		5050	P.579					
		50100						
		100100						
		6060	P.575					
	HFSFB6 EFSFB6 HFSTB6 EFSTB6	3030	P.572		-	-	-	-
	HFSLB6	3060	P.573					
Curved	NFSR6 HFSR6	3030 606030	P.578		-	-	-	-
Four-Side Slots	HFS8 EFS8 NFS8 NEFS8 GFS8 CAF8 HFSY8	4040	P.631	D1020 D2013.1				
		4080	P.633					
		40120	P.636					
		40160				-		-
		8080	P.635					
		80160	P.636					
		808040	P.637		-	-	-	-
	HFSH8	8080	P.635					
3-Side Slot 1Side Flat	HFSF8 NFSF8 EFSF8 GFSF8	4040	P.632			-		-
		4080	P.634					
		8080	P.635					
Two-Side Slots Two Flats	HFST8 NEFST8 EFST8 GFST8	4040	P.632		-	-	-	-
		4080	P.634					
		8080	P.635					
Two Slots on Opposite Sides	HFSH8 EFSH8	4040	P.632					
		4080	P.634					
One-Side Slot Three Flats	HFSC8 EFSC8	4040	P.632		-	-	-	-
Light Type	HFSL8 NFSL8	4040	P.631					
		4080	P.633					
Angled	HFS30A8 HFS45A8 HFS60A8	40	P.637		-	-	-	-
Black Anodize	HFSB8 EFSB8	4040	P.631					
		4080	P.633					
		40120	P.636					
		40160				-		-
		8080	P.635					
		80160	P.636					
	HFSFB8 EFSFB8 HFSTB8 EFSTB8	4040	P.632		-	-	-	-
	HFSLB8	4040	P.631					
		4080	P.633					
Curved	HFSR8	4040 808040	P.637		-	-	-	-

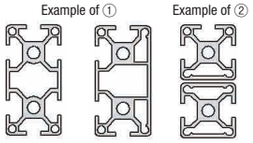
Alterations Code Features	Type	No.	Page	S Hole Dia.	S Hole Left Side Horizontally LSH	S Hole Left Side Vertically LSV	S Hole Right Side Horizontally RSH	S Hole Right Side Vertically RSV
Four-Side Slots	HFS8 EFS8 NFS8 NEFS8 GFS8 CAF8	4545	P.681	D1Ø20 D2Ø15.1				
		4590	P.684					
		45180	P.685			-		-
		5050	P.687					
		50100						
		6060	P.689					
		9090						
		90180	P.685					
		909045	P.686		-	-	-	-
		100100	P.688					
		100200						
3-Side Slot 1Side Flat	HFSF8 EFSF8 NEFSF8 GFSF8	4545	P.682					
		4590	P.684		-		-	
		5050	P.687					
		6060	P.689					
Two-Side Slots Two Flats	HFST8 EFST8 NEFST8 GFST8	4545	P.683					
		5050	P.687		-	-	-	-
		6060	P.689					
Two Slots on Opposite Sides	HFSH8 EFSH8	4545	P.683					
One-Side Slot Three Flats	HFSC8 EFSC8				-		-	
Light Type	HFSL8 NFSL8	4545	P.681					
		4590	P.684					
Four-Side Slots Three-Side Slots Two-Side Slots	HFSLF8 HFSLT8	4545	P.682					
			P.683					
Angled	HFS30A8 HFS45A8 HFS60A8	45	P.686		-	-	-	-
Black Anodize	HFSB8 EFSB8	4545	P.681					
		4590	P.684					
		45180	P.685			-		-
		5050	P.687					
		50100						
		9090	P.685					
		90180						
	HFSFB8 HFSTB8	4545	P.682			-		-
			P.683					
Curved	HFSR8	4545 909045	P.686		-		-	

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

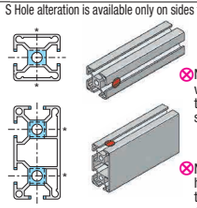
Example of ① Example of ②



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

Notes on extrusions with flat (smooth) sides

S Hole alteration is available only on sides that are not smooth.



Not applicable in vertical direction towards smooth surfaces.

Not applicable in horizontal direction towards smooth surfaces.

Notes on large extrusions and L-sectioned extrusions

Maximum length available for S Holes is 100mm. Not available in the direction over 100mm for large extrusions such as 30120.

S Hole alteration on L-sectioned extrusions is not possible, irrespective of directions.

M Type Hole Alterations

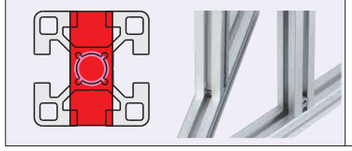
Blind Joints which require this alteration

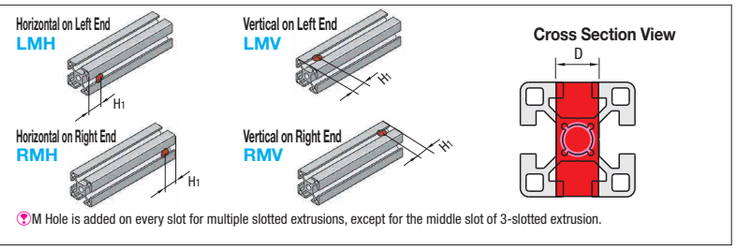
Post-Assembly Insertion Double Joints
P.554, etc.

Center Joint
P.553, etc.

Drilling of M Holes for Center Joint and Post Assy. Insertion Double Joint connections.

(Reference) Corners when using Center Jointing



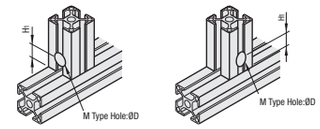


M Hole is added on every slot for multiple slotted extrusions, except for the middle slot of 3-slotted extrusion.

Hole Position and Size

Extrusion Series	M Hole H1(mm)	M Hole ØD(mm)
HFS5	10	7.1
HFS5 (25 Square)	10	7.1
HFS6	15	11.1
HFS8	20	13.1
HFS8-45	20 *(20.5)	

Post-Assembly Insertion Double Joint Drilling / Center Joint Drilling



Ordering Example — Part Number: HFS6-3030-2000-LMH-RMH

* Only for 45 Square Light Type (HFSL8-45) Series, H1 dimension is 20.5.

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

Alterations Code Features	Type	No.	Page	M Hole Dia.	M Hole Left Side Horizontally LMH	M Hole Left Side Vertically LMV	M Hole Right Side Horizontally RMH	M Hole Right Side Vertically RMV
Four-Side Slots	HFS5 NFS5 CAF5 HFSY5	2020	P.529	DØ7.1				
		2040	P.530					
		2060	P.531					
		2080						
		2525				-		-
		2550						
		4040	P.530					
		4060	P.531					
		4080						
		404020	P.532					
3-Side Slot 1Side Flat	HFSF5 NFSF5	2020	P.529					
		2040	P.530					
		4040						
Two-Side Slots Two Flats	HFST5 NFST5	2020	P.529					
		4040	P.530					
Two Slots on Opposite Sides	HFSH5	2020	P.529					
One-Side Slot Three Flats	HFSC5							
Angled	HFS30A5 HFS45A5 HFS60A5	20	P.532		-	-	-	-
Black Anodize	HFSB5 NFSB5	2020	P.529					
		2040	P.530					
		2525	P.531		-	-	-	-
		2550			-	-	-	-
		4040	P.530					
	HFSFB5 HFSTB5	2020	P.529					
Curved	HFSR5	404020	P.532		-	-	-	-
Four-Side Slots	HFS6 EFS6 NFS6 NEFS6 GFS6 CAF6 HFSY6	3030	P.571	DØ11.1				
		3060	P.573					
		3090	P.576					
		30120				-		-
		5050	P.579					
		50100				-		-
		100100						
		6060	P.575					
		6090	P.577					
		60120				-		-
		606030	P.578		-		-	
		30300	P.576			-		-
3-Side Slot 1Side Flat	HFSF6 EFSF6 NFSF6 NEFSF6	3030	P.572					
		3060	P.574					
		5050	P.579					
		6060	P.575					
Two-Side Slots Two Flats	HFST6 EFST6 NEFST6	3030	P.572					
		3060	P.574					
		5050	P.579					
		6060	P.575					
Two Slots on Opposite Sides	HFSH6 EFSH6	3030	P.572					
		3060	P.574					
One-Side Slot Three Flats	HFSC6 EFSC6	3030	P.572					
Light Type	NFSL6 HFSL6		P.571					
		3060	P.573					
		5050	P.579					
Heavy Type	HFSG6	6060	P.575					
Angled	HFS30A6 HFS45A6 HFS60A6	30	P.578		-	-	-	-
Black Anodize	HFSB6 EFSB6 NFSB6 NEFSB6	3030	P.571					
		3060	P.573					
		3090	P.576					
		30120				-		-
		5050	P.579					
		50100						
		100100						
		6060	P.575					
	HFSFB6 EFSFB6 HFSTB6 EFSTB6	3030	P.572					
	HFSLB6	3060	P.573					
Curved	NFSR6 HFSR6	3030 606030	P.578		-	-	-	-

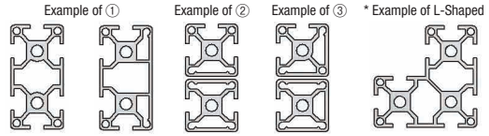
Alterations Code Features	Type	No.	Page	M Hole Dia.	M Hole Left Side Horizontally LMH	M Hole Left Side Vertically LMV	M Hole Right Side Horizontally RMH	M Hole Right Side Vertically RMV
Four-Side Slots	HFS8 EFS8 NFS8 NEFS8 GFS8 CAF8	4040	P.631	DØ13.1				
		4080	P.633					
		40120	P.636					
		40160				-		-
		8080	P.635					
		80160	P.636					
		808040	P.637		-	-	-	-
	HFSH8	8080	P.635					
3-Side Slot 1Side Flat	HFSF8 NFSF8 EFSF8 GFSF8	4040	P.632					
		4080	P.634					
		8080	P.635					
Two-Side Slots Two Flats	HFST8 NEFST8 EFST8 GFST8	4040	P.632					
		4080	P.634					
		8080	P.635					
Two Slots on Opposite Sides	HFSH8 EFSH8	4040	P.632					
		4080	P.634					
One-Side Slot Three Flats	HFSC8 EFSC8	4040	P.632					
Light Type	HFSL8 NFSL8	4040	P.631					
		4080	P.633					
Angled	HFS30A8 HFS45A8 HFS60A8	40	P.637		-	-	-	-
Black Anodize	HFSB8 EFSB8	4040	P.631					
		4080	P.633					
		40120	P.636					
		40160	P.636			-		-
		8080	P.635					
		80160	P.636			-		-
	HFSFB8 EFSFB8 HFSTB8 EFSTB8	4040	P.632					
	HFSLB8	4040	P.631					
		4080	P.633					
Curved	HFSR8	4040 808040	P.637		-	-	-	-
Four-Side Slots	HFS8 EFS8 NFS8 NEFS8 GFS8 CAF8	4545	P.681	DØ13.1				
		4590	P.684					
		45180	P.685			-		-
		5050	P.687					
		50100						
		6060	P.689					
		9090	P.685					
		90180				-		-
		909045	P.686		-	-	-	-
		100100	P.688					
		100200				-		-
3-Side Slot 1Side Flat	HFSF8 EFSF8 NEFSF8 GFSF8	4545	P.682					
		4590	P.684					
		5050	P.687					
		6060	P.689					
Two-Side Slots Two Flats	HFST8 EFST8 NEFST8 GFST8	4545	P.683					
		5050	P.687					
		6060	P.689					
Two Slots on Opposite Sides	HFSH8 EFSH8	4545	P.683					
One-Side Slot Three Flats	HFSC8 EFSC8							
Light Type	HFSL8	4545	P.681					
Four-Side Slots	NFSL8	4590	P.684					
Three-Side Slots Two-Side Slots	HFSLF8 HFSLT8	4545	P.682					
			P.683					
Angled	HFS30A8 HFS45A8 HFS60A8	45	P.686		-	-	-	-
Black Anodize	HFSB8 EFSB8	4545	P.681					
		4590	P.684					
		45180	P.685			-		-
		5050	P.687					
		50100						
		9090	P.685					
		90180				-		-
	HFSFB8 HFSTB8	4545	P.682					
			P.683					
Curved	HFSR8	4545 909045	P.686		-	-	-	-

Standard of Extrusion Position

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

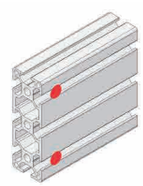
① On the vertical length
② Flat side down
③ One flat side down and another flat side right

Example of ① Example of ② Example of ③ * Example of L-Shaped



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

For extrusions with three slots, M holes cannot be drilled on the center slot.



ex.)HFS6-3090-1000-LMH