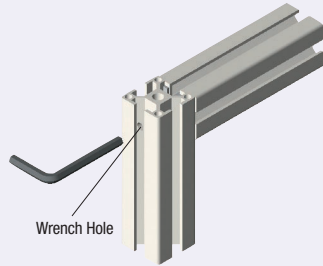


Fastening Location Wrench Access Hole Alterations

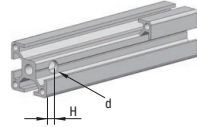
Blind Joints which require this alteration

- Screw Joints P.662
- Single Joints P.669
- Tapping Joints P.661

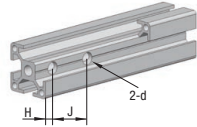
Wrench access holes used for Blind Joint connections, etc. are drilled.



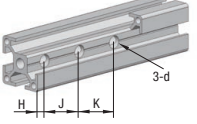
1 Slot - LCH, LCV, LCP, RCH, RCV, RCP



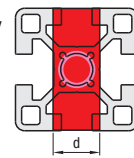
2 Slots - LWH, LWV, LWP, RWH, RWV, RWP



3 Slots - LEH, LEV, LEP, REH, REV, REP



Cross Section View



Hole Position and Size

Extrusion Series	H(mm)	J(mm)	K(mm)	Wrench Hole d(mm)
HFS5	10	20	20	7.35
HFS5 (25 Square)	12.5	25	25	7.35
HFS6	15	30	30	5
HFS6 (50 Square)	15	20	20	8
HFS8	20	40	40	8
HFS8-45	22.5	45	45	8

Wrench Hole d dim. can be selected for Extrusion Series 6. Specify with X5 or X8.

Alteration Code Specification Method

Drilling option is specifiable by combining symbols in the first, second and third column in the table.

- Drills two rows of wrench holes horizontally on the left side of the extrusion. **-LWH**
- Drills two rows of wrench holes crisscross on the left side of the extrusion. **-LWP**

Meaning of Option Symbols

First	Second	Third
L (Left)	C (Wrench Holes in Single Line)	H (Horizontal)
R (Right)	W (Wrench Holes in Two Lines)	V (Vertical)
	E (Wrench Holes in Three Lines)	P (Crisscross)

*For additional descriptions on various options, see Alteration Overview (P.679).

Alteration Code Example

Wrench Hole					
Left Side			Right Side		
One Row Horizontally (Two Rows, Three Rows)	One Row Vertically (Two Rows, Three Rows)	One Row Crisscross (Two Rows, Three Rows)	One Row Horizontally (Two Rows, Three Rows)	One Row Vertically (Two Rows, Three Rows)	One Row Crisscross (Two Rows, Three Rows)
LCH(LWH,LEH)	LCV(LWV,LEV)	LCP(LWP,LEP)	RCH(RWH,REH)	RCV(RWV,REV)	RCP(RWP,REP)

Ordering Example: Part Number HFS6 - 3030 - 500 - LCH - X5

Days to Ship Configure Online

Alterations	Code	No.	Page	Wrench Access Hole Dia.	Wrench Hole																				
					Horizontal Drilling on the Left			Vertical Drilling on the Left			Crisscross Drilling on the Left			Horizontal Drilling on the Right			Vertical Drilling on the Right			Crisscross Drilling on the Right					
Feature	Type				LCH	LWH	LEH	LCV	LWV	LEV	LCP	LWP	LEP	RCH	RWH	REH	RCV	RWV	REV	RCP	RWP	REP			
4-Side Slots	HFS5 CAFS NFS5 HFSY5	2040	P512	07.35																					
		2060	P513																						
		2080	P513																						
		2525	P513																						
		2650	P513																						
		4040	P512																						
3-Side Slot 1-Side Flat	HFSF5	2020	P511																						
		2040	P512																						
		4040	P512																						
2-Side Slots 2 Flats	HFSF5	2020	P511																						
		4040	P512																						
2 Slots on Opposite Sides	HFSH5	2020	P511																						
		4040	P511																						
1-Side Slot 3 Flats	HFSH5	2020	P511																						
		4040	P511																						
Angled	HFS30A5 HFS45A5 HFS60A5	20	P514																						
		2020	P511																						
		2040	P512																						
Black Anodize	HFSB5 NFSB5	2020	P511																						
		2040	P512																						
		2625	P513																						
		2650	P513																						
Curved	HFSR5	2020	P511																						
		4040	P512																						

Alterations	Code	No.	Page	Wrench Access Hole Dia.	Wrench Hole																			
					Horizontal Drilling on the Left			Vertical Drilling on the Left			Crisscross Drilling on the Left			Horizontal Drilling on the Right			Vertical Drilling on the Right			Crisscross Drilling on the Right				
Feature	Type				LCH	LWH	LEH	LCV	LWV	LEV	LCP	LWP	LEP	RCH	RWH	REH	RCV	RWV	REV	RCP	RWP	REP		
4-Side Slots	HFS6 GFS6 EFS6 NFS6 NEFS6 CAFS HFSY6	3030	P545	05																				
		3090	P547																					
		30120	P550																					
		5050	P553																					
		50100	P553																					
		100100	P553																					
		6060	P549																					
		6090	P551																					
		60120	P551																					
		60600	P552																					
		30300	P550																					
		3-Side Slot 1-Side Flat	HFSF6		3030	P546	08																	
3060	P548																							
5050	P548																							
2-Side Slots 2 Flats	HFSF6	3030	P546																					
		3060	P548																					
2 Slots on Opposite Sides	HFSH6	3030	P546																					
		3060	P548																					
1-Side Slot 3 Flats	HFSH6	3030	P546																					
		3060	P548																					
Light Type	HFSL6	3030	P545																					
		3060	P547																					
		5050	P553																					
Heavy Type	HFSG6	6060	P549																					
		6060	P552																					
Angled	HFS30A6 HFS45A6 HFS60A6	30	P552																					
		30	P552																					
Black Anodize	HFSB6 NFSB6 NEFSB6 HFSFB6	3030	P545																					
		3060	P547																					
		5050	P553																					
		6060	P549																					
Curved	HFSR6	3030	P546																					
		3060	P548																					
		60600	P552																					

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

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

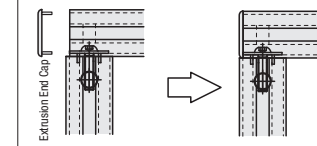
Hole(s) on Smooth Surfaces

Specifying Wrench Access Hole in the flat surface direction provides holes on the flat surface also. To maintain the smoothness of the flat surface without wrench access holes, use of Simple Joint Kits (P.667) is recommended.

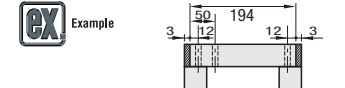


Available Alteration Combinations

Offsets the wrench access hole for the thickness of Extrusion End Cap (3mm). The extrusion end cap will be flat with the adjacent extrusion surface (Free of Charge).



- In order to make the extrusion and the extrusion end cap flat, **-FL**: Shifts the wrench hole on the left side 3mm toward the left end.
- FR**: Shifts the wrench hole on the right side 3mm toward the right end.



For HFS6-3030-194-LCV-FL-RCV-FR: The wrench access holes originally to be drilled at 15mm will be moved to 12mm to take the extrusion end cap thickness in account.

Note that this alteration is an additional modifier of the Wrench Access Hole Alteration. Adding this modifier alone to other alterations will be invalid.

Ordering Example: Part Number HFS6 - 3030 - 2160 - LCV - FL - RCV - FR