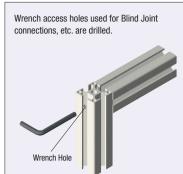
#### For **Pricing** and **Days to Ship**, Please Configure Online.)

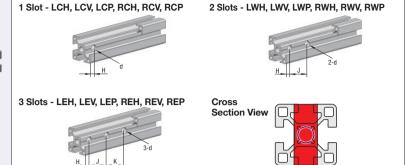
### **Fastening Location Wrench Access Hole Alterations**

Blind Joints which require this alteration

₽¥ P.662

Single Joints ₽¥ P.669





Hole Position	and Size			Wrench Hole				
Extrusion Series	H(mm)	J(mm)	K(mm)	d(mm)				
HFS5	10	20	20	7.35				
HFS5 (25 Square)	12.5	25	25	7.33				
HFS6	15	30	30	5				
HFS6 (50 Square)	15	20	20	8				
HFS8	20	40	40	8				
HFS8-45	22.5	45	45	U				

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

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

N	leaning of Option Symbol	S
First	Second	Third
	W (Wrench Holes in Two Lines)	H (Horizontal) V (Vertical) P (Crisscross)

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

#### ■ Alteration Code Example

		Wrenc	h 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)







**Configure Online** 

		Wrench Hole																				
Alterations Wre			Wrench	Horizontal Drilling on the Left		Vertical Drilling on the Left			Crisscros	s Drilling o		t   Horizontal Drilling on the Right			Vertical Drilling on the Right			Crisscross Drilling on the Right				
				Access	1 Row	2 Rows	3 Rows	1 Row	2 Rows	3 Rows	1 Row	2 Rows	3 Rows	1 Row	2 Rows	3 Rows	1 Row	2 Rows	3 Rows	1 Row	2 Rows	3 Rows
	Code			Hole Dia.	LCH	LWH	LEH	LCV	LWV	LEV	LCP	LWP	LEP	RCH	RWH	REH	RCV	RWV	REV	RCP	RWP	REP
Feature	Type	No.	Page		LOIT	Levil	LEIT	LOV	Love	LLV	LOF	LVVI	LLF	HOIT	110011	HEIT	NOV	11000	HEV	HOP	Itter	HEF
		2020	P.511																			
		2040	P.512																			
		2060	P.513	1				1									1					
	HFS5 CAF5	2080	P.513	]																		
4-Side Slots		2525	P.513																			
4-3ide 3idis	NFS5	2550	P.513	1				1									1					
	HFSY5	4040	P.512	1																		
		4060	P.513																			
		4080	P.513	1				1 1														
		404020	P.514	1																		
3-Side Slot	HFSF5	2020	P.511																			
1-Side Flat	at NFSF5	2040	P.512	-																		
		4040	P.512																			
2-Side Slots	HFST5	2020	P.511	1																		
2 Flats	NFST5	4040	P.512	Ø7.35																		
2 Slots on Opposite Sides	HFSH5	2020	P.511																			
1-Side Slot 3 Flats	HFSC5	2020	P.511	]																		
	HFS30A5	J	P.514	J																		
Angled	HFS45A5	20	P.514		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HFS60A5		P.514	J																		
		2020	P.511																			
	HFSB5	2040	P.512																			
	NFSB5	2525	P.513	J																		
Black Anodize	NI SDS	2550	P.513	J																		
		4040	P.512																			
	HFSFB5	2020	P.511																			
	HFSTB5	2020	P.511																			
Curved	HFSR5	2020 404020	P.514 P.514	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		70-7020	1.314																			

		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 Left   Horizontal Drilling on the Right   Vertical Drilli																				
	Alterati			Wrench Access	Horizonta 1 Row	l Drilling o	n the Left 3 Rows	Vertical 1 Row	Drilling on 2 Rows	the Left 3 Rows	1 Row	s Drilling of	on the Left	Horizonta	Drilling or 2 Rows	the Right 3 Rows	Vertical I	2 Rows	the Right 3 Rows	1 Row	s Drilling or 2 Rows	3 Rows
Feature	Code Type	No.	Page	Hole Dia.	LCH	LWH	LEH	LCV	LWV	LEV	LCP	LWP	LEP	RCH	RWH	REH	RCV	RWV	REV	RCP	RWP	REP
		3030 3060	P.545 P.547																			
	HFS6	3090	P.550 P.550																			
	GFS6 EFS6	30120 5050	P.553																			
4-Side Slots	NFS6 NEFS6	50100 100100	P.553 P.553					-	-	-	-	-	-				-	-	-	-	-	
	CAF6 HFSY6	6060 6090	P.549 P.551	-																		
		60120 606030	P.551 P.551 P.552																			
	EFS6 HFSF6	30300	P.550 P.546					-	-	-	-	-	-				-	-	-	-	-	-
3-Side Slot	EFSF6	3030 3060	P.548																			
1-Side Flat	NFSF6 NEFS6	5050 6060	P.553 P.549																			
2-Side Slots	HFST6 EFST6	3030 3060	P.546 P.548	}																		
2 Flats	NEFST6	5050 6060	P.553 P.549																			
2 Slots on Opposite Sides	HFSH6 EFSH6	3030 3060	P.546 P.548	Ø5																		
1-Side Slot 3 Flats	HFSC6 EFSC6	3030	P.546	Ø5 Ø8																		
Links Tong	HFSL6	3030	P.545 P.547																			
Light Type	NFSL6	3060 5050	P.553 P.549																			
Heavy Type	HFSG6 HFS30A6	6060	P.552																			$\vdash$
Angled	HFS30A6 HFS45A6 NFS45A6	30	P.552 P.552		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HFS60A6 HFSB6	1	P.552 P.545	1																		
	EFSB6 NFSB6	3030 3060 5050	P.547 P.553																			
	NEFSB6 HFSFB6	6060	P.549																			
Black Anodize	EFSFB6	3030	P.546																			
	HFSTB6 EFSTB6	3030	P.546																			
	HFSLB6	3030 3060	P.545 P.547	-																		
Curved	HFSR6 NFSR6	3060 3030 606030	P.552 P.552	}	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HFS8 GFS8	4040 4080	P.587 P.589								-											_
	EFS8 NFS8	40120 40160	P.592 P.592																			
4-Side Slots	NEFS8 CAF8	8080	P.591																			=
	HFSY8	80160 808040	P.592 P.594					_	_		_	_	-				_	_		_		
3-Side Slot	HFSH8 HFSF8	8080 4040	P.591 P.588																			
1-Side Flat	HFSF8 GFSF8 EFSF8 NEFSF8	4080 8080	P.590 P.591	ł																		
2-Side Slots	HFST8 GFST8 EFST8 NEFST8	4040 4080 8080	P.588 P.590	-																		
2 Flats	HFSH8	8080 4040	P.591 P.588																			
2 Slots on Opposite Sides	EFSH8 HFSC8	4080	P.590														1					
1-Side Slot 3 Flats	EFSC8	4040 4040	P.588	Ø8																		
Light Type	HFSL8 NFSL8 HFS30A8	4080	P.589 P.593																			
Angled	HFS30A8 HFS45A8 HFS60A8	40	P.593 P.593		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HFSB8	4040	P.587 P.589																			
	EFSB8 NEFSB8	4080 8080	P.591																			
Black Anodize	HFSFB8	80160 4040	P.592 P.588	1				-	-		-	-	-				-	-	-	-	-	
	EFSFB8 HFSTB8	4040	P588																			
	EFSTB8 HFSLB8	4040	P.587																			
	HFSR8	4080 4040	P.589 P.594										=									
Curved	NFSR8	808040 4545	P.594 P.625		-	-	-	-	-	-	-	-	-	-	_	-	-	-	-	-	-	-
		4590 45180	P.628 P.629																			
	HFS8 GFS8 EFS8	5050 50100	P.631																			
4-Side Slots	EFS8 NFS8	50100 6060 9090	P.632 P.633																			
	NEFS8 CAF8		P.629 P.629	1				-	-	-	-	-					-	-		-	-	
	CAITO	909045 100100	P.630 P.632	-																		
	HESES	100200	P.632 P.626																			
3-Side Slot 1-Side Flat	HFSF8 GFSF8 EFSF8	4545 4590	P.628 P.631																			
	NEFSF8	5050 6060 4545	P.633																			
2-Side Slots 2 Flats	HFST8 EFST8 GFST8 NEFST8	5050 6060	P.631 P.633																			
2 Slots on Opposite Sides	HFSH8 EFSH8	4545	P.627	1																		
1-Side Slot 3 Flats	HFSC8 EFSC8	4545	P.627	Ø8																		
Light Type 4-Side Slot	HFSL8		P.625																			
4-Side Slot 3-Side Slot 2-Side Slot	NFSL8 HFSLF8 HFSLT8	4545 4590 4545 4545	P.628 P.626																			
	HFSLT8 HFS30A8 HFS45A8	4545	P.627 P.630	}																		
Angled	HFS45A8 HFS60A8		P.630 P.630		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		4545 4590 45180	P.625 P.628																			
	HFSB8	45180 5050	P.629 P.631	1				-	-	-	-	-	-				-	-	-	-	-	-
Black Anodize	EFSB8	5050 50100 9090 90180	P.632 P.629																			
		90180	P.629					-	-	-	-	-	-				-	-	-	-	-	-
	HFSFB8 HFSTB8 HFSR8	4545 4545 4545	P.626 P.627																			
Curved	HFSR8 NFSR8	4545 909045	P.630 P.630		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

### ■Standard of Extrusion Position

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

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

- On the vertical length
   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

## · Wrench access hole can be drilled using a jig on P.786.

■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 (**P667**) is recommended.



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.

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





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.