Fastening Location Wrench Access Hole Alterations

Blind Joints which require this alteration

Screw Joints P.552, etc.

Single Joints **P.609**, etc.

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

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



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

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









■Hole Position and Size

Hole Position	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	0

■ 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. Drills two rows of wrench holes crisscross on the left side of the extrusion. -LWP

N	leaning of Option Symbol	s
First	Second	Third
L (Left) R (Right)	C (Wrench Holes in Single Line)W (Wrench Holes in Two Lines)E (Wrench Holes in Three Lines)	V (Vertical)

^{*} For additional descriptions on various options, see Alteration Overview (P.755).

Alteration Code Example

		Wrend	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)



3030 - 500 - LCH 4080 - 1200 - RCP

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

	Alterat			Wrench	h Wrench Hole Wrench Hole																	
				Access	Horizonta	al Drilling o	n the Left	Vertical	Drilling on	the Left	Crisscros	s Drilling o	n the Left	Horizonta	I Drilling or	the Right	Vertical D	Orilling on	the Right	Crisscross	Drilling on	the Right
	Cod			Hole Dia.												3 Rows						
Features	Type	No.	Page	Hole Bia.	LCH	LWH	LEH	LCV	LWV	LEV	LCP	LWP	LEP	RCH	RWH	REH	RCV	RWV	REV	RCP	RWP	REP
		2020	P.529																			
		2040	P.530																			
		2060	ļ					ļ														
	HFS5	2080	P.531																			
Four-Side Slots	NFS5	2525 2550																				
	CAF5 HFSY5	4040	P.530	l																		
	HFS15	4060		ł	-		_	-		1					_							
		4080	P.531																	_		
		404020	P.532	ł				-														
		2020	P.529	i																		
3-Side Slot	HFSF5	2040		1																		
1Side Flat	NFSF5	4040 P.5	P.530	i															1			
Two-Side Slots	HFST5	2020	P.529	1																		
Two Flats	NFST5	4040	P.530	Ø7.35																		
Two Slots on Opposite Sides	HFSH5	2020	P.529																			
One-Side Slot Three Flats	HFSC5	2020	1.020	ļ																		
	HFS30A5																					
Angled	HFS45A5	20	P.532		-	-	-	-	-	- 1	-	-	-	-	-	-	-	-	-	-	- 1	-
	HFS60A5	2020	P.529	ł																		
		2040	P.530	ł			_	-		1												_
	HFSB5	2525		ł				-														
Black Anodize	NFSB5	2550	P.531					1														
Didolt/illodiE0		4040	P.530	1																		
	HFSFB5			i																		
	HFSTB5	2020	P.529																			
Curved	HFSR5	2020		j		-									-							
ourveu	iii ono	404020	P.532																			

	Alterations			Wrench	Wrench H									Ch Hole Horizonal Orilling on the Right Vertical Drilling on the Right Crisscross Drilling on the Right 1 Row 2 Rows 3 Rows 1 Row 2 Rows 3 Rows RGH RWM REH RCV RWW REV RCP RWP REP								
	Co			Access	1 Row	2 Rows	n the Left	1 Row	Drilling on	the Left	1 Row	2 Rows	n the Left	1 Row	Drilling or	the Right	1 Row	2 Rows	3 Rows	1 Row	2 Rows	the Right
Features	Type	No.	Page	Hole Dia.	LCH	LWH	LEH	LCV	LWV	LEV	LCP	LWP	LEP	RCH	RWH	REH	RCV	RWV	REV	RCP	RWP	REP
		3030	P.571 P.573	1				1														
	HFS6 EFS6	3090 30120	P.576																			
	NFS6	5050	P.579		_			<u> </u>	-			-	-						-			
Four-Side Slots	NEFS6	50100 100100	P.575																			
	GFS6 CAF6	6060 6090 60120	P.577	ł				}														
	HFSY6	60120 606030	Demo	ł									_	_					_			
		30300	P.578 P.576 P.572 P.574 P.579 P.575 P.572					-	-	-	-	-	-				-	-	-	-	-	-
3-Side Slot	HFSF6 3030 EFSF6 3060 NFSF6 5050	3060	P.574																			
1Side Flat	NEFSF6	5050 6060	P.579 P.575	ł																		
Two-Side Slots	HFST6	3030	P.572	1																		
Two Flats	EFST6 NEFST6	3060 5050 6060 3030	P.574 P.579											1								
Two Slots on Opposite Sides	HESH6	3030 3060	P.575 P.572																			
One-Side Slot Three Flats	EFSH6 HFSC6 EFSC6		P.574 P.572					1														
One-Sub Sub Title Tibbs	NFSL6	3030	P571	Ø5 Ø8																		
Light Type	HFSL6	3060 5050	P.573 P.579 P.575	, ,,																		
Heavy Type	HFSG6	6060	P.575																			
Angled	HFSG6 HFS30A6 HFS45A6	30	P.578		-	-	-	-	-	-	-	-	-	-	-	-				-	-	-
	HFS60A6	3030	P.571	1																		
	HFSB6	3060	P.573	1																		
	EFSB6 NFSB6	3090 30120 5050	P.576																			
	NFSB6 NEFSB6	5050 50100 100100	P.579																			
Black Anodize		100100 6060	P.575																			
	HFSFB6 EFSFB6 HFSTB6																					
	HFSTB6	3030	P.572																			
	HFSLB6																					
	NFSR6	3060	P.573																			
Curved	HFSR6		P.578		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HFS8 EFS8	4040 4080 40120 40160 8080	P.631																			
	EFS8 NFS8	4080 40120	P.633 P.636	ł				-														
Four-Side Slots	EFS8 NFS8 NEFS8 GFS8 CAF8 HFSY8 HFSF8 NFSF8 GFSF8	40160 8080	P635	1	_																=	
	CAF8	8080 80160	P.635 P.636 P.637					-	-	-	-	-	-				-	-	-	-		-
	HFSH8	808040 8080 4040	P.635	l																		
3-Side Slot	HFSF8 NFSF8	4040 4080	P.632 P.634					-														
1Side Flat	GFSF8 HFST8	4080 8080 4040 4080	P.635											 								
Two-Side Slots Two Flats	HFST8 NEFST8 EFST8 GFST8 HFSH8 EFSH8 HFSC8 EFSC8	4080	P.635 P.632 P.634 P.635 P.632 P.634	ĺ																		
Two Slots on Opposite Sides	HFSH8	8080 4040	P.635 P.632 P.634															_				
One-Side Slot Three Flats	EFSH8 HFSC8	4080 4040	P.634 P.632	1				-														
	EFSC8	4040		Ø8																		
Light Type	HFSL8 NFSL8 HFS30A8	4080	P.631 P.633	90																		
Angled	HFS45A8 HFS60A8	40	P.637		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HFS60A8	4040	P.631	1																		
	HESBS	4040 4080 40120 40160	P.633 P.636 P.636	1																		
	HFSB8 EFSB8	40160	P.636																		=	
Black Anodize		80160	P.635 P.636	l				-	-	-	-	-	-				-	-	-			
DIGUN AITOUIZO	HFSFB8 EFSFB8	4040	P632																			
	EFSFB8 HFSTB8 EFSTB8	4040																				
	HFSLB8	4040 4080	P.631 P.633																			
Curved	HFSR8	4040	P.633			-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-
Odi Vou	0110		P.681 P.684																			
	HFS8	4545 4590 45180 5050 50100	P.684 P.685																-			
	EFS8 NFS8	5050	P.687																			
Four-Side Slots	NFS8 NEFS8	6060	P.689																			
	GFS8	6060 9090 90180	P.685									-	-							-		-
	CAF8	100100	P.686																			
	LIFORO	100200	P.688																			
3-Side Slot	HFSF8 EFSF8 NEFSF8	100200 4545 4590	P.682 P.684																			
1Side Flat	GESES	5050 6060 4545	P.687 P.689 P.683																			
Two-Side Slots	HEST8 EFST8 NEFST8 GFST8 HFSH8 EFSH8	4545 5050	P.687																			
Two Flats	GFST8	5050 6060	P.689																			
Two Slots on Opposite Sides	EFSH8	4545	P.683	08																		
One-Side Slot Three Flats	HFSC8 EFSC8 HFSL8			,,,,																		
Light Type Four-Side Slots	HFSL8	4545 4590	P.681 P.684 P.682 P.683																			
Three-Side Slots Two-Side Slots	NFSL8 HFSLF8 HFSLT8 HFS30A8	4590	P.682																			
	HFSLT8 HFS30A8																					
Angled	HFS45A8 HFS60A8	45	P.686		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	. II COOAG	4545 4590 45180	P.681 P.684																			
	HFSB8	45180	P.685					-	-	-	-	-	-				-	-	-	-	-	-
Black Anodize	EFSB8	50100	P.687																			
	l	9090 90180	P.685											-								
	HFSFB8 HFSTB8	4545	P.682 P.683																			
Curved	HFSTB8	4545	P.683		-	-			-		-	-									-	-
ourveu	iii ana	909045	1.000																			

Standard of Extrusion Position

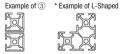
- Placing method of the extrusion, which is a basis to determine right and left is shown as follows.

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









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.604**) is recommended.

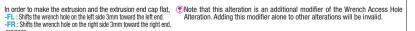


💽 When the extrusion is on the vertical length and also has a flat side, 🕦 has the priority. * For L-shaped, both vertical and horizontal hole machining are only in the long length direction.

■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)















- 3030 - 2160 - LCV - FL - RCV - FR

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.