

Wrench Hole in Specified Position

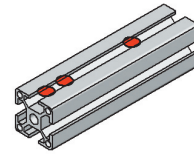
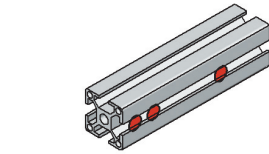
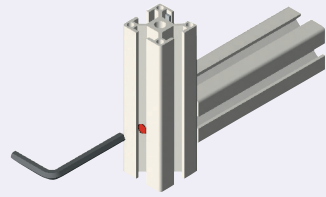
Blind Joints which require this alteration

- Screw Joints P.552, etc.
- Single Joints P.609, etc.
- Tapping Joints P.552, etc.

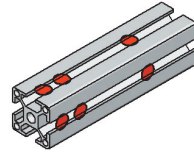
Adds drilled holes for Blind Joint (mainly for beams) connections at specified locations.

Horizontal AH, BH, CH, DH, EH

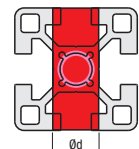
Vertical AV, BV, CV, DV, EV



Crisscross (Horizontal + Vertical) AP, BP, CP, DP, EP



Cross Section View



Alteration Code Specification Method

Alteration Code specified in 0.5mm increments (from Left End)	Extrusion Series	Ød
AH, BH, CH, DH, EH (Horizontal)	5 Series	7.35
AV, BV, CV, DV, EV (Vertical)	6 Series	5,8
AP, BP, CP, DP, EP (Crisscross)	8 Series	8
	8-45 Series	8

* Wrench Hole d dim. can be selected for Extrusion Series 6. Specify with X5 or X8.
 † For additional descriptions on various options, see Alteration Overview (P.755).
 ‡ Up to 5 locations in Vertical, Horizontal, and Crisscross directions can be specified.

Alteration Code Example

Horizontal			Vertical			Crisscross		
AH (1 Location Horizontal)	AH BH (2 Locations Horizontal)	AH BH CH (3 Locations Horizontal)	AV (1 Location Vertical)	AV BV (2 Locations Vertical)	AV BV CV (3 Locations Vertical)	AP (1 Location Crisscross)	AV BV (2 Locations Crisscross)	AP BP CP (3 Locations Crisscross)

Ordering Example **Part Number**
HFS6-3030-300-X8-AH30-BH280
HFS8-4040-300-AH30-BH280-AV100-BV280

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

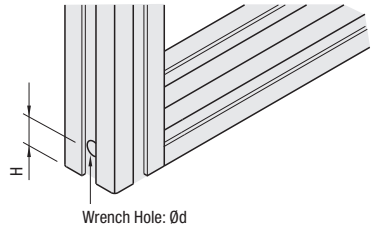
Features	Type	Code	No.	Page	Wrench Hole in Specified Position			
					Wrench Access Hole Dia.	Horizontally	Vertically	Crisscross
Four-Side Slots	HFS5 EFS5 NFS5 GFS5 CAFS5 HFSY5		2020	P529	Ø7.35			
			2040	P530				
			2060					
			2080	P531				
			2525					
			4040	P530				
			4060	P531				
			4080					
			404020	P532				
			404020	P529				
3-Side Slot 1Side Flat	HFSF5 NFSF5		2020	P529	Ø7.35			
			2040	P530				
Two-Side Slots Two Flats	HFSY5 NFSY5		2020	P529	Ø7.35			
			4040	P530				
Two Slots on Opposite Sides	HFSH5 NFSH5		2020	P529	Ø7.35			
			2040					
One-Side Slot Three Flats	HFSL5 NFSL5		2020	P529	Ø7.35			
			2040					
			2060					
Angled	HFS30A5 HFS45A5 HFS60A5		20	P532	Ø7.35			
			2020	P529				
			2040	P530				
Black Anodize	HFSB5 EFSB5 NFSB5 GFSB5 CAFB5		2020	P531	Ø7.35			
			2550	P531				
			2550	P531				
			4040	P530				
			4060	P531				
Curved	HFSR5		2020	P529	Ø7.35			
			404020	P532				

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

Features	Type	Code	No.	Page	Wrench Hole in Specified Position										
					Wrench Access Hole Dia.	Horizontally	Vertically	Crisscross							
Four-Side Slots	HFS6 EFS6 NFS6 GFS6 CAFS6 HFSY6		3030	P571	Ø5 Ø8										
			3060	P573											
			3090												
			30120	P576											
			5050												
			50100	P579											
			6060	P575											
			6090	P577											
			60120	P578											
			606030	P576											
3-Side Slot 1Side Flat	HFSF6 EFSF6 NFSF6 GFSF6		3030	P572	Ø5 Ø8										
			3060	P574											
			5050	P579											
			6060	P575											
			6060	P575											
Two-Side Slots Two Flats	HFSY6 NFSY6		3030	P572	Ø5 Ø8										
			3090	P574											
			5050	P579											
Two Slots on Opposite Sides	HFSH6 NFSH6		3030	P572	Ø5 Ø8										
			3060	P574											
One-Side Slot Three Flats	HFSL6 NFSL6		3030	P572	Ø5 Ø8										
			3060	P571											
Light Type	HFSL6 NFSL6		3060	P573	Ø5 Ø8										
			5050	P579											
Heavy Type	HFSG6		3060	P575	Ø5 Ø8										
			6060	P575											
Angled	HFS30A6 HFS45A6 HFS60A6		30	P578	Ø5 Ø8										
			3030	P571											
			3060	P573											
Black Anodize	HFSB6 EFSB6 NFSB6 GFSB6 CAFB6		3030	P576	Ø5 Ø8										
			3090	P576											
			30120	P576											
			5050	P579											
			50100	P579											
			6060	P575											
			Curved	HFSR6						3030	P572	Ø5 Ø8			
										4040	P578				
										606030	P578				
										4040	P631				
4080	P632														
Four-Side Slots	HFS8 EFS8 NFS8 GFS8 CAFS8 HFSY8		4040	P631	Ø8										
			4080	P632											
			40120	P636											
			40160	P636											
			8080	P635											
			80160	P636											
			808040	P637											
			8080	P635											
			4040	P632											
			4080	P634											
3-Side Slot 1Side Flat	HFSF8 EFSF8 NFSF8 GFSF8		4040	P632	Ø8										
			4080	P634											
			8080	P635											
			8080	P635											
			4040	P632											
Two-Side Slots Two Flats	HFSY8 NFSY8 GFSY8		4080	P634	Ø8										
			8080	P635											
			4040	P632											
			4080	P634											
			8080	P635											
Two Slots on Opposite Sides	HFSH8 NFSH8 GFSH8		4040	P634	Ø8										
			4080	P632											
			4080	P634											
			4080	P634											
			4080	P634											
One-Side Slot Three Flats	HFSL8 NFSL8		4040	P632	Ø8										
			4040	P631											
			4080	P633											
Light Type	HFSL8 NFSL8		4040	P637	Ø8										
			4080	P633											
			4080	P633											
Angled	HFS30A8 HFS45A8 HFS60A8		40	P637	Ø8										
			4040	P631											
			4080	P632											
Black Anodize	HFSB8 EFSB8 NFSB8 GFSB8 CAFB8		4040	P632	Ø8										
			4080	P636											
			40120	P636											
			40160	P636											
			8080	P635											
			80160	P636											
			4040	P631											
			4080	P632											
			4040	P631											
			4040	P633											
Curved	HFSR8		4040	P637	Ø8										
			4545	P681											
			4590	P684											
			45180	P685											
			5050	P687											
			50100	P689											
			6060	P689											
			9090	P685											
			909045	P686											
			100100	P688											
100200	P682														
Four-Side Slots	HFS8 EFS8 NFS8 GFS8 CAFS8		4545	P681	Ø8										
			4590	P684											
			45180	P685											
			5050	P687											
			50100	P689											
			6060	P689											
			9090	P685											
			90180	P685											
			909045	P686											
			100100	P688											
100200	P682														
3-Side Slot 1Side Flat	HFSF8 EFSF8 NFSF8 GFSF8		4545	P684	Ø8										
			4590	P687											
			5050	P687											
			6060	P689											
			6060	P689											
Two-Side Slots Two Flats	HFSY8 NFSY8 GFSY8		4545	P683	Ø8										
			4545	P683											
			5050	P687											
			5050	P687											
			6060	P689											
Two Slots on Opposite Sides	HFSH8 NFSH8 GFSH8		4545	P683	Ø8										
			4545	P683											
			4545	P683											
			4545	P683											
			4545	P683											
One-Side Slot Three Flats	HFSL8 NFSL8		4545	P681	Ø8										
			4590	P684											
			4590	P684											
Light Type	HFSL8 NFSL8		4545	P682	Ø8										
			4590	P684											
			4545	P683											
Angled	HFS30A8 HFS45A8 HFS60A8		45	P686	Ø8										
			4545	P681											
			4590	P684											
Black Anodize	HFSB8 EFSB8		45180	P685	Ø8										
			5050	P687											
			50100	P687											
			9090	P685											
			90180	P685											
Curved	HFSR8		4545	P682	Ø8										
			909045	P686											

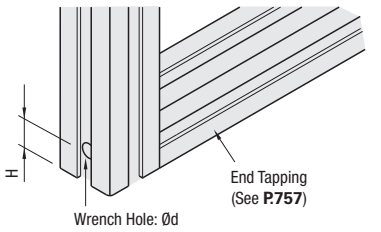
Alterations Needed for Various Joints

Tapping Joint Drilling



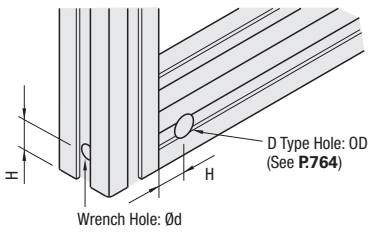
A wrench access hole is needed for a Tapping Joint.

Screw Joint Drilling



For a Screw Joint, a wrench access hole on one extrusion, and a hole tapping (P.757) on the other extrusion are needed.

Single Joint Drilling

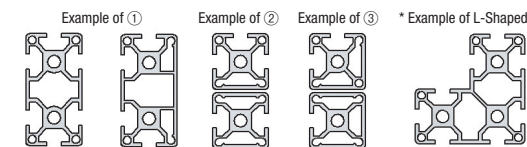


For a Single Joint, a wrench access hole on one extrusion, and a D Hole (P.764) on the other extrusion are needed.

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.

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.

Wrench access hole can be drilled using a jig on P.846.

