

Firestop Schedule of Through Penetration Systems. Basis of Design: Hilti, Inc.

TYPE OF PENETRANT	F-RATING (HR)	CONCRETE FLOORS	CONCRETE OR BLOCK WALLS	GYPSUM WALLS	WOOD FLOORS	Hilti Products
		BASIS OF DESIGN UL SYSTEM		BASIS OF DESIGN UL SYSTEM		
CIRCULAR BLANK OPENINGS	1	F-A-0006, C-AJ-0055, C-AJ-0090	C-AJ-0055, C-AJ-0090	--	--	CP 680, CP 618, FS-ONE MAX, CFS-BL
	2	F-A-0006, C-AJ-0055, C-AJ-0090	C-AJ-0055, C-AJ-0090	--	--	
	3	F-A-0006, C-AJ-0055, C-AJ-0086, F-A-0014	C-AJ-0055, C-AJ-0086	--	--	
METAL PIPES OR CONDUIT	1	C-AJ-1226, F-A-1028, F-A-1017	C-AJ-1226, W-J-1067, W-J-1020	W-L-1054, W-L-1058, W-L-1164, W-L-1506	F-C-1009, F-C-1059, F-C-1168	CP 680, FS-ONE MAX, CP 606, CFS-S SIL GG, CFS-D, Mineral Wool
	2	C-AJ-1226, F-A-1028, F-A-1017	C-AJ-1226, W-J-1067, W-J-1020, W-J-1248	W-L-1054, W-L-1058, W-L-1164, W-L-1506	F-C-1009, F-C-1059, F-C-1168	
	3	C-AJ-1226, F-A-1017	C-AJ-1226, W-J-1041, W-J-1068	--	--	
	4	C-BJ-1037, C-BJ-1034	C-BJ-1034, C-BJ-1037, W-J-1041, W-J-1042, W-J-1068	W-L-1110, W-L-1111, W-L-1165	--	
NON-METALLIC PIPE OR CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT)	1	F-A-2053, F-A-2025, C-AJ-2109, C-AJ-2098, C-AJ-2271, C-AJ-2167, C-BJ-2021, C-AJ-2342	C-AJ-2109, C-AJ-2098, C-AJ-2167, C-AJ-2371, C-AJ-2342	W-L-2078, W-L-2075, W-L-2128	F-C-2232, F-C-2030, F-C-2160, F-C-2389	CP 680, CP 643N, Mineral Wool, CP 644, FS-ONE MAX, CFS-S SIL SL, CFS-S SIL GG, CP 648
	2	F-A 2053, F-A 2025, C-AJ-2109, C-AJ-2098, C-AJ-2271, C-AJ-2167, C-BJ-2021, C-AJ-2371, C-AJ-2342	C-AJ-2109, C-AJ-2098, C-AJ-2167, C-AJ-2371, C-AJ-2342	W-L-2078, W-L-2075, W-L-2128	F-C-2029, F-C-2030, F-C-2128, F-C-2160	
	3	F-A-2054, C-AJ-2109, C-AJ-2098, C-AJ-2371, C-AJ-2342	C-AJ-2109, C-AJ-2098, C-AJ-2371, C-AJ-2342	--	--	
	4	C-BJ-2016, C-AJ-2017	W-J-2057, W-J-2091	W-L-2184, W-L-2245	--	
SINGLE OR BUNDLED CABLES	1	F-A-3007, C-AJ-3095, C-AJ-3180, C-AJ-3283	W-J-3036, C-AJ-3095, C-AJ-3180, W-J-3060, W-J-3167	W-L-3065, W-L-3111, W-L-3112, W-L-3334, W-L-3414, W-L-3396	F-C-3012, F-C-3110, F-C-3044	CP 680, CP 653, FS-ONE MAX, CP 618, CP 606, CFS-D, CFS-CC
	2	F-A-3007, C-AJ-3095, C-AJ-3334, F-A-3060	W-J-3036, C-AJ-3095, C-AJ-3180, W-J-3060, W-J-3167, W-J-3189	W-L-3065, W-L-3111, W-L-3112, W-L-3334, W-L-3414, W-L-3396	F-C-3012, F-C-3110	
	3	F-A-3007, C-AJ 3095, C-AJ-3285	C-AJ-3095, C-AJ-3180, W-J-3167	--	--	
	4	N/A**	W-J-3050	W-L-3139, W-L-3334	--	
CABLE TRAY	1	C-AJ-4034, C-AJ-4035	W-J-4027, C-AJ-4034, C-AJ-4035	W-L-4011, W-L-4019, W-L-4081	--	CFS-BL, FS-ONE MAX, CP 620, CP 618
	2	C-AJ-4034, C-AJ-4035	W-J-4027, C-AJ-4034, C-AJ-4035	W-L-4011, W-L-4019, W-L-4081	--	
	3	C-AJ-4034, C-AJ-4035	C-AJ-4034, C-AJ-4035	W-L-3385, W-L-3277	--	
	4	N/A**	W-J-8007	W-L 8014	--	
INSULATED PIPES	1	F-A 5015, F-A 5017, C-AJ-5090, C-AJ-5091, C-AJ-5090, C-AJ-5048	C-AJ-5090, C-AJ-5091, C-AJ 5061, W-J-5042	W-L-5028, W-L-5029, W-L-5047	F-C-5004, F-C-5037, F-C-5036	CP 680, FS-ONE MAX, Mineral Wool
	2	F-A 5015, F-A 5017, C-AJ-5090, C-AJ-5091, C-AJ-5090	C-AJ-5090, C-AJ-5091, C-AJ-5061, W-J-5042	W-L-5028, W-L-5029, W-L-5047	F-C-5004, F-C-5037	
	3	F-A 5016, C-AJ-5090, F-A-5018	C-AJ-5090, C-AJ-5061	--	--	
	4	C-BJ-5006	C-BJ-5006, W-J-5028	W-L-5073	--	
ELECTRICAL BUSWAY	1	C-AJ-6006, C-AJ-6017, F-A-6002, C-AJ-6036	C-AJ-6006, C-AJ-6017, C-AJ-6036	--	--	CP 637, FS-ONE MAX, CP 620, CFS-BL, Mineral Wool, CFS-S Sil GG, CFS-S SIL SL
	2	C-AJ-6006, C-AJ-6017, F-A 6042, C-AJ-6036	C-AJ-6006, C-AJ-6017, C-AJ-6036	--	--	
	3	C-AJ-6006, C-AJ-6017	C-AJ-6006, C-AJ-6017	--	--	
MECHANICAL DUCTWORK WITHOUT DAMPERS (NON-INSULATED)	1	C-AJ-7046, C-AJ-7051, C-AJ-7084	C-AJ-7046, C-AJ-7051, W-J-7021, W-J-7022	W-L-7017, W-L-7040, W-L-7042, W-L-7155	F-C-7013	CFS-S SIL GG, CP 606, FS-ONE MAX
	2	C-AJ-7046, C-AJ-7051, C-AJ-7085	C-AJ-7046, C-AJ-7051, W-J-7021, W-J-7022	W-L-7040, W-L-7042, W-L-7155	--	
	3	C-AJ-7046, C-AJ-7051	C-AJ-7046, C-AJ-7051	--	--	
MECHANICAL DUCTWORK WITHOUT DAMPERS (INSULATED)	1	N/A**	W-J-7029, W-J-7124	W-L-7059, W-L-7153, W-L-7156, W-L-7151	N/A**	FS-ONE MAX, Mineral Wool
	2	N/A**	W-J-7091, W-J-7112, W-J-7124	W-L-7059, W-L-7153, W-L-7156, W-L-7151	N/A**	
MIXED PENETRANTS	1	C-AJ-8099, C-AJ-8056, C-AJ-8143	C-AJ-8099, C-AJ-8056, W-J-8007, C-AJ-8143	W-L-1095, W-L-8013	F-C-8009, F-C-8014, F-C-8026	FS-ONE MAX, CFS-BL, CP 620, CP 618
	2	C-AJ-8099, C-AJ-8056, C-AJ-8143, C-AJ-8252	C-AJ 8099, C-AJ-8056, W-J-8007, C-AJ-8143, C-AJ-8252	W-L-1095, W-L-8013	--	
	3	C-AJ-8099, C-AJ-8056	C-AJ-8041, C-AJ-8056, W-J-8007, C-AJ-8099	--	--	
	4	C-AJ-8095	C-AJ-8095, W-J-8007	W-L-8014	--	

**CONTACT HILTI FOR CURRENT UL-CLASSIFIED SYSTEM OR ENGINEERING JUDGMENT DRAWING: 800-879-6000

NOTES:

- Jobsite conditions of each through-penetration firestop system must meet ALL details of the UL-Classified System selected.
- If jobsite conditions do not match any UL-classified systems in the schedules above, contact Hilti for alternative systems or Engineer Judgment Drawings - 800-879-8000
- Where more than one applicable UL-Classified System is listed in the schedules, choose the UL System which is most economical for each through-penetration firestop system.
- Coordinate work with other trades to assure that penetration opening sizes are appropriate for penetrant locations, and vice versa.

