

SCHEDULES OF HILTI THROUGH PENETRATION FIRESTOP SYSTEMS

CONCRETE FLOORS			CONCRETE OR BLOCK WALLS		
TYPE OF PENETRANT	F-RATING (HR)	UL-CLASSIFIED SYSTEM	TYPE OF PENETRANT	F-RATING	UL-CLASSIFIED SYSTEM
CIRCULAR BLANK OPENINGS	1	FA 0006,CAJ 0055,CAJ 0090	CIRCULAR BLANK OPENINGS	1	CAJ 0055, CAJ 0090
	2	FA 0006,CAJ 0055,CAJ 0090		2	CAJ 0055, CAJ 0090
	3	FA 0006, CAJ 0055, CAJ 0086, FA 0014		3	CAJ 0055, CAJ 0086
SINGLE METAL PIPES OR CONDUIT	1	CAJ 1226, FA 1028	SINGLE METAL PIPES OR CONDUIT	1	CAJ 1226, WJ 1067
	2	CAJ 1226, FA 1028		2	CAJ 1226, WJ 1067
	3	CAJ 1226, FA 1017		3	CAJ 1226, WJ 1041, WJ 1068
	4	CBJ 1037, CBJ 1034		4	CBJ 1034, CBJ 1037, WJ 1041, WJ 1042, WJ 1068
SINGLE NON-METALLIC PIPE OR CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT)	1	FA 2053, FA 2025, CAJ 2109, CAJ 2098, CAJ 2271, CAJ 2167, CBJ 2021, CAJ 2342	SINGLE NON-METALLIC PIPE OR CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT)	1	CAJ 2109, CAJ 2098, CAJ 2167, CAJ 2371, CAJ 2342
	2	FA 2053, FA 2025, CAJ 2109, CAJ 2098, CAJ 2271, CAJ 2167, CBJ-2021, CAJ 2371, CAJ 2342		2	CAJ 2109, CAJ 2098, CAJ 2167, CAJ 2371, CAJ 2342
	3	FA 2054, CAJ 2109, CAJ 2098, CAJ 2371, CAJ 2342		3	CAJ 2109, CAJ 2098, CAJ 2371, CAJ 2342
	4	CBJ 2016, CAJ 2017		4	WJ 2057, WJ 2091
SINGLE OR BUNDLED CABLES	1	FA 3007,CAJ 3095,CAJ 3180	SINGLE OR BUNDLED CABLES	1	WJ 3036, CAJ 3095, CAJ 3180, WJ 3060
	2	FA 3007,CAJ 3095,CAJ 3180		2	WJ 3036, CAJ 3095, CAJ 3180, WJ 3060
	3	FA 3007,CAJ 3095,CAJ 3180		3	CAJ 3095, CAJ 3180
CABLE TRAY	1	CAJ 4034, CAJ 4035	CABLE TRAY	1	WJ 4027, CAJ 4034, CAJ 4035
	2	CAJ 4034, CAJ 4035		2	WJ 4027, CAJ 4034, CAJ 4035
	3	CAJ 4034, CAJ 4035		3	CAJ 4034, CAJ 4035
SINGLE INSULATED PIPES	1	FA 5015, FA 5017, CAJ 5090, CAJ 5091, CAJ 5098	SINGLE INSULATED PIPES	1	CAJ 5090, CAJ 5091, CAJ 5061, WJ 5042
	2	FA 5015, FA 5017, CAJ 5090, CAJ 5091, CAJ 5090		2	CAJ 5090, CAJ 5091, CAJ 5061, WJ 5042
	3	FA 5016, CAJ 5090, FA 5018		3	CAJ 5090, CAJ 5061
	4	CBJ 5006		4	CBJ 5006, WJ 5028
ELECTRICAL BUSWAY	1	CAJ 6006, CAJ 6017, FA 6002, CAJ 6036	ELECTRICAL BUSWAY	1	CAJ 6006, CAJ 6017, CAJ 6036
	2	CAJ 6006, CAJ 6017, FA 6002, CAJ 6036		2	CAJ 6006, CAJ 6017, CAJ 6036
	3	CAJ 6006, CAJ 6017		3	CAJ 6006, CAJ 6017
NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	CAJ 7046, CAJ 7051, CAJ 7084	NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	CAJ 7046, CAJ 7051, WJ 7021, WJ 7022
	2	CAJ 7046, CAJ 7051, CAJ 7084		2	CAJ 7046, CAJ 7051, WJ 7021, WJ 7022
	3	CAJ 7046, CAJ 7051		3	CAJ 7046, CAJ 7051
INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	N/A**	N/A**	INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	WJ 7029
MIXED PENETRANTS	1	CAJ 8099, CAJ 8056, CAJ 8143	MIXED PENETRANTS	1	CAJ 8099, CAJ 8056, WJ 8007, CAJ 8143
	2	CAJ 8099, CAJ 8056, CAJ 8143		2	CAJ 8099, CAJ 8056, WJ 8007, CAJ 8143
	3	CAJ 8099, CAJ 8056		3	CAJ 8041, CAJ 8056, WJ 8007, CAJ 8099
	4	CAJ 8095		4	CAJ 8095, WJ 8007

WOOD FLOOR			GYPSUM WALLBOARD ASSEMBLIES		
TYPE OF PENETRANT	F-RATING	UL-CLASSIFIED SYSTEM	TYPE OF PENETRANT	F-RATING	UL-CLASSIFIED SYSTEM
METAL PIPES OR CONDUIT	1	FC 1009, FC 1059	METAL PIPES OR CONDUIT	1	WL 1054, WL 1058, WL 1164
	2	FC 1009, FC 1059		2	WL 1054, WL 1058, WL 1164
NON-METALLIC PIPE OR CONDUIT	1	FC 2232, FC 2030, FC 2160, FC 2127, FC 2128		NON-METALLIC PIPE OR CONDUIT	4
	2	FC 2029, FC 2030, FC 2128, FC 2127, FC 2160	1		WL 2078, WL 2075, WL 2128
SINGLE OR BUNDLED CABLES	1	FC 3012, FC 3044	SINGLE OR BUNDLED CABLES		2
	2	FC 3012		4	WL 2184, WL 2245
INSULATED PIPES	1	FC 5004, FC 5037, FC 5036		CABLE TRAY	1
			2		WL 4011, WL 4019
	2	FC 5004, FC 5037	INSULATED PIPES	2	WL 4011, WL 4019
				4	WL 8014
NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	FC 7013	NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	WL 5028, WL 5029, WL 5047
				2	WL 5028, WL 5029, WL 5047
INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	N/A**	INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	4	WL 5073
	2	N/A**		1	WL 7017, WL 7040, WL 7042, WL 7155
MIXED PENETRANTS	1	FC 8009, FC 8014, FC 8026, FC8025	MIXED PENETRANTS	2	WL 7040, WL 7042, WL 7155
				4	WL 8014

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

NOTES:

1. Jobsite conditions of each through-penetration firestop system must meet ALL details of the UL-Classified System selected.
2. 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
3. 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.
4. Coordinate work with other trades to assure that penetration opening sizes are appropriate for penetrant locations, and vice versa.
5. For 3-hour rated gypsum walls, contact Hilti for a UL-classified system or engineer judgment drawing - 800-879-8000.