

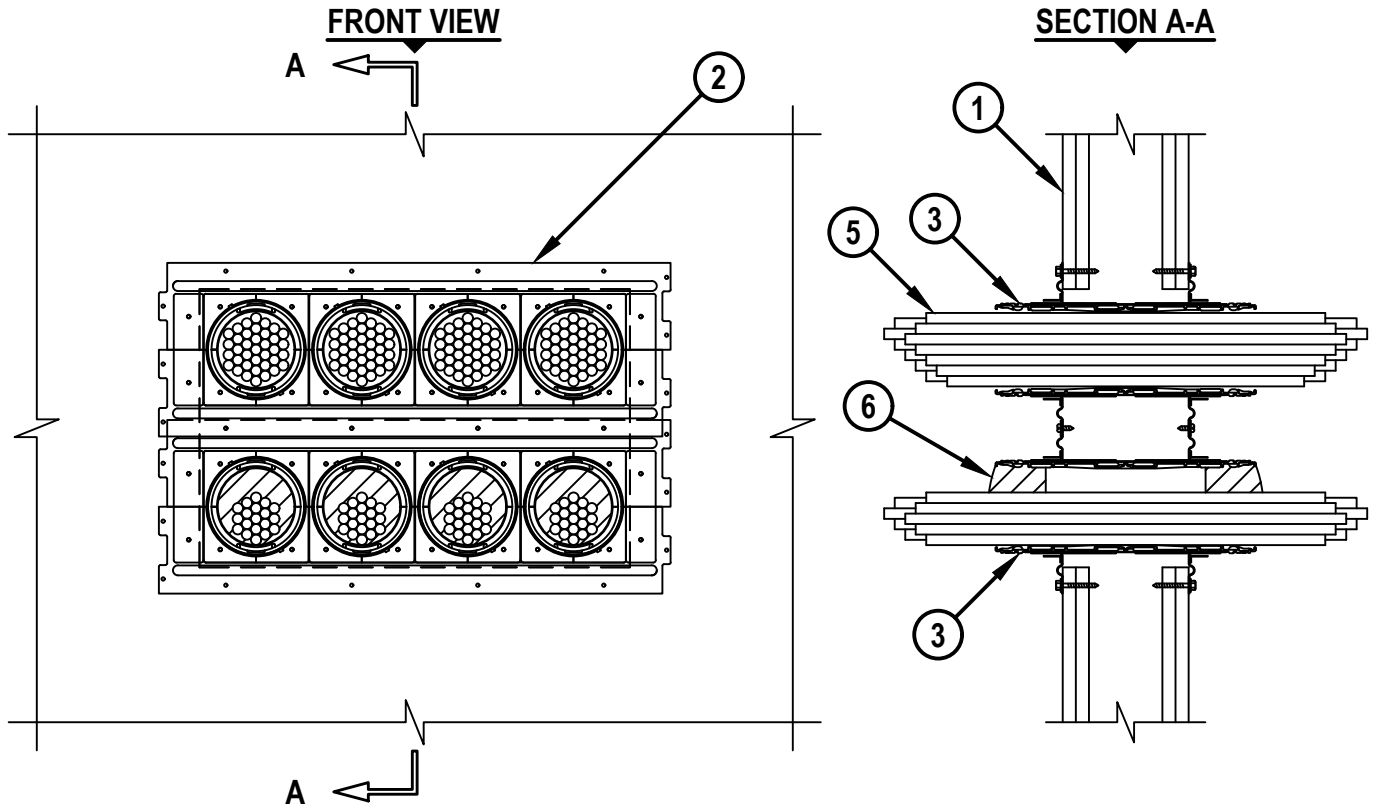
**MULTIPLE CABLE BUNDLES THROUGH GYPSUM WALL ASSEMBLY**

F-RATING = 1-HR. OR 2-HR.

T-RATING = 1/4-HR.

L-RATING = SEE TABLES BELOW

WL 3395e.091720



1. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED U400, V400, OR W400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN) TO INCLUDE THE FOLLOWING CONSTRUCTION FEATURES :
  - A. [NOT SHOWN] STEEL STUDS TO BE MINIMUM 3-1/2" WIDE (SPACED MAXIMUM 24" OC).
  - B. NOMINAL 5/8" THICK GYPSUM WALLBOARD. TYPE, NUMBER OF LAYERS, AND SHEET ORIENTATION AS SPECIFIED IN THE INDIVIDUAL UL DESIGN.
2. HILTI CFS-SL GP FIRESTOP GANGPLATE (16", 24", OR 5-SLEEVE) ORIENTED VERTICALLY OR HORIZONTALLY AND SECURED TO THE FACE OF THE WALL OR DIRECTLY AGAINST STUDS PRIOR TO INSTALLATION OF GYPSUM BOARD (SEE MAXIMUM SIZE OF OPENING TABLE FOR INSTALLATION OPTIONS). IN 1-HR. WALLS, BLANK DOUBLE STACKED GANGPLATES (NO CABLES) ARE LIMITED TO HORIZONTAL INSTALLATION WITH FASTENERS INTO WALL STUDS. HILTI CFS-SL GP 5-SLEEVE SHALL BE INSTALLED IN A COMPLETELY FRAMED OUT OPENING.
3. ONE OF THE FOLLOWING TO BE INSTALLED WITHIN EACH CIRCULAR OPENING PORT OF THE HILTI CFS-SL GP FIRESTOP GANGPLATE. THE TWO INTEGRAL SET SCREWS ARE TO BE TIGHTENED TO FIRMLY BEAR AGAINST EACH DEVICE TO RETAIN IT IN POSITION.
  - A. HILTI CP 653 SPEED SLEEVE (4") CENTERED WITHIN WALL. INNER FABRIC SEAL SHOULD BE TWISTED CLOSED.
  - B. HILTI CFS-SL RK FIRESTOP RETROFIT SLEEVE (4") CENTERED WITHIN WALL (ALSO SEE ITEM NO. 6).
  - C. HILTI CFS-SL SK FIRESTOP SLEEVE (4") CENTERED WITHIN WALL (ALSO SEE ITEM NO. 6).



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Scale	3/32" = 1"
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Drawing No.  
**WL  
3395e**

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4. [NOT SHOWN] HILTI CFS-SL CAP FIRESTOP GANGPLATE CAP TO BE INSTALLED TO CLOSE PORT OPENINGS WHERE NO DEVICES ARE INSTALLED. PLATE INSTALLED PER ACCOMPANYING INSTALLATION INSTRUCTIONS.
5. [OPTIONAL] CABLE BUNDLES TO BE A COMBINATION OF ANY OF THE FOLLOWING :
  - A. MAXIMUM 100 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC JACKET.
  - B. MAXIMUM 7/C NO. 12 AWG COPPER CONDUCTOR CONTROL CABLE WITH PVC OR XLPE JACKET AND INSULATION.
  - C. MAXIMUM 4/0 AWG TYPE RHH GROUND CABLE.
  - D. MAXIMUM 4 PAIR NO. 22 AWG CAT 5 OR 6 COMPUTER CABLE.
  - E. MAXIMUM RG 6/U COAXIAL CABLE.
  - F. MAXIMUM 1/2" DIAMETER FIBER-OPTIC CABLE (24 FIBER) WITH PVC OR PE JACKET AND INSULATION.
  - G. MAXIMUM 3/C NO. 12 AWG MC CABLE.
  - H. ANY CABLES, METAL-CLAD CABLE, OR ARMORED CABLE CURRENTLY CLASSIFIED UNDER THE THROUGH PENETRATING PRODUCTS CATEGORY.
6. HILTI CFS-PL FIRESTOP PLUG (2" OR 4") CUT TO FIT AROUND THE CABLE BUNDLE AND INSTALLED TIGHTLY WITHIN HILTI FIRESTOP RETROFIT SLEEVE OR FIRESTOP SLEEVE FLUSH WITH THE END OF THE SLEEVE ON BOTH SIDES OF THE WALL.

FIRESTOP DEVICE	MAXIMUM OPENING SIZE GANGPLATE MOUNTING	
	SURFACE MOUNTED	STUD MOUNTED
27" PLATE :	.....	.....
SINGLE	25-1/4" x 5-3/4"	25-1/4" x 5-3/4"
24" PLATE :	.....	.....
SINGLE	20-1/2" x 5-1/2"	23" x 6-3/4"
DOUBLE (STACKED)	20-1/2" x 13-1/4"	23" x 14-1/4"
16" PLATE :	.....	.....
SINGLE	15" x 5-1/2"	15-3/16" x 6-3/4"
DOUBLE (STACKED)	15" x 13-1/4"	15-3/16" x 14-1/4"

**NOTE : CABLES MAY REPRESENT 0% TO 60% OF CROSS-SECTIONAL AREA OF DEVICE FOR EACH CFS-RK AND CFS-SL SK FIRESTOP DEVICE AND 0% TO 100% VISUAL FILL FOR EACH CP 653 SPEED SLEEVE.**

 <b>Hilti Firestop Systems</b>	HILTI, Inc. Plano, Texas USA (800) 879-8000	Sheet	2 of 3	Drawing No. <b>WL 3395e</b>
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UL/cUL SYSTEM NO. W-L-3395  
**MULTIPLE CABLE BUNDLES THROUGH GYPSUM WALL ASSEMBLY**

F-RATING = 1-HR. OR 2-HR.

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L-RATING = SEE TABLES BELOW

NOTE : L-RATINGS APPLY TO THE 16" AND 24" GANGPLATES ONLY

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**GANGPLATES WITH NO CABLES WITH ANY CABLE MANAGEMENT DEVICE**

	L-RATING (AMBIENT AND 400° F)	
	CFM / GANGPLATE	CFM / SQ FT
CAP* INSTALLED IN ALL PORTS	<1	1.2
CAP* AND 1 EMPTY DEVICE	1	1.3
CAP* AND 2 EMPTY DEVICES	2	2.6
CAP* AND 3 EMPTY DEVICES (IF 16" GANGPLATE, THEN NO CAP INSTALLED)	2.5	3.2
4 EMPTY DEVICES (24" GANGPLATE ONLY)	3.5	4.5

**GANGPLATES WITH COMBINATION OF CABLES WITH ANY CABLE MANAGEMENT DEVICE**

CFS-SL RK AND CFS-SL SK ARE LIMITED TO MAX 33% AGGREGATE FILL. CP 653 ALLOWS FOR MAX 100% VISUAL FILL	L-RATING (AMBIENT AND 400° F)	
	CFM / GANGPLATE	CFM / SQ FT
CAP* AND 1 DEVICE INSTALLED	2	2.6
CAP* AND 2 DEVICES INSTALLED	4	5.1
CAP* AND 3 DEVICES INSTALLED (IF 16" GANGPLATE, THEN NO CAP INSTALLED)	6	7.7
4 DEVICES INSTALLED (24" GANGPLATE ONLY)	8	10.2

**GANGPLATES WITH CAT 5 OR CAT 6 COMPUTER CABLES ONLY WITH CP 653 SPEED SLEEVE**

CP 653 ALLOWS FOR MAX 100% VISUAL FILL OF CABLES	L-RATING (AMBIENT AND 400° F)	
	CFM / GANGPLATE	CFM / SQ FT
CAP* AND 1 DEVICE INSTALLED WITH CAT 5/6 CABLES ONLY	1.5	1.9
CAP* AND 2 DEVICES INSTALLED WITH CAT 5/6 CABLES ONLY	3	3.8
CAP* AND 3 DEVICES INSTALLED WITH CAT 5/6 CABLES ONLY (IF 16" GANGPLATE, THEN NO CAP INSTALLED)	4	5.1
4 DEVICES INSTALLED WITH CAT 5/6 CABLES ONLY (24" GANGPLATE ONLY)	5.5	7

\* INDICATES CFS-SL CAP FIRESTOP GANGPLATE CAP INSTALLED TO CLOSE ALL PORT OPENINGS WHERE NO DEVICES ARE INSTALLED.



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