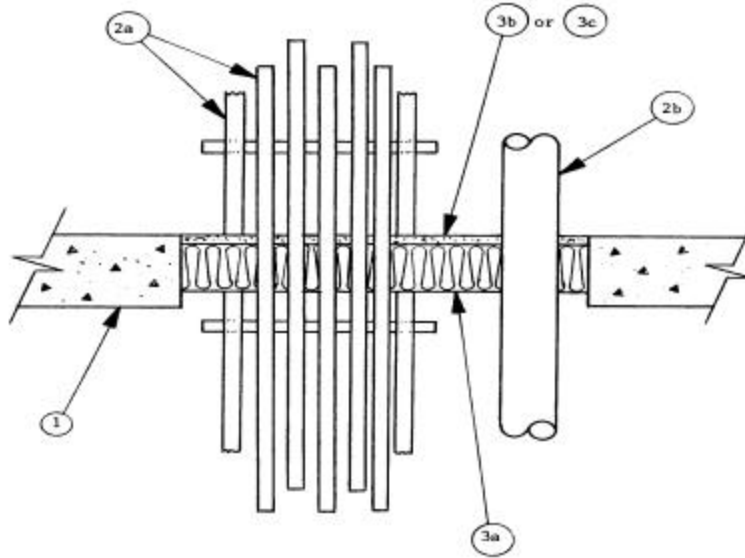


ULC SYSTEM No. SP163
(For Horizontal or Vertical Separations)
F and FH Ratings – 3 h
FT and FTH Ratings – 0, 1, 2 & 3 h (See Item 3)



1. Floor or Wall – Minimum depth or thickness as necessary for required grade of fire separation but not less than 114 mm. Normal density ($2400 \pm 50 \text{ kg/m}^3$) concrete. Wall may also be constructed of nominal 200 mm thick concrete blocks. Maximum size of opening 280 mm by 660 mm.

2. Pipes, Cables and Cable Trays – All penetrating items to be reliably supported above through-opening.

(a) Maximum size, nominal 90 mm by 620 mm steel ladder type cable tray spaced 13 mm from perimeter of opening. Maximum cable loading not to exceed 50% by area of cable tray made up of the following cable groupings:

(i) A maximum of 19 " 6 AWG/4 XLPE Teck 90 HL FIREX - 11 FT4 1000 V" or 18 "500 MCM COREFLEX II RA90 XLPE" cables. Maintain space of 13 mm between cables.

(ii) A maximum of 10 12 AWG (6.4 mm diameter) coaxial cables. A minimum space of 25 mm to be maintained between this and other cable groupings.

(iii) A maximum of 10 12 TWH communication cables. A minimum space of 25 mm to be maintained between this and other cable groupings.

(iv) A maximum of one 56 mm OD (or smaller) 1.8 mm thick (minimum) steel conduit spaced 50 mm from cables.

(v) A maximum of 7 (seven) CAROL RGII/u coaxial cables. A minimum space of 25 mm to be maintained between this and other cable groupings.

(vi) A maximum of 10 (ten) 24 AWG 100 pair telephone cables, maximum 18 mm OD. A minimum space of 25 mm to be maintained between this and other cable groupings.

(b) 90 mm diameter (maximum) Schedule 40 (or heavier), 90 mm diameter (maximum) EMT steel pipe, or 90 mm (maximum) cast or ductile iron pipe, minimum 2 mm wall thickness. Maintain minimum spaces of 25 mm between pipes and perimeter of opening, and 50 mm between pipes and other penetrating items. Pipe may be insulated with Pipe Insulation (Item 4).

(c) Individual " 6 AWG/4 XLPE TECK 90HL FIREX - 11 FT4 1000 V" cables. Maintain minimum spaces of 25 mm between adjacent cables or between cable and other penetrating items.

(d) Individual "500 MCM COREFLEX II RA 90 XLPE" cables spaced no closer than 50 mm to other penetrating items.

ULC Design SP163 continued...

- (e) Individual or bundles of seven (7) CAROL RGII/u coaxial cables, spaced no closer than 50 mm to other penetrating items.
- (f) Individual bundles of five (5) 12 TWH communication cables, spaced no closer than 50 mm to other penetrating items.
- (g) Individual or bundles of maximum 10 (ten) 24 AWG 100 pair telephone cables, maximum 18 mm OD.
- (h) Nominal 80 mm OD copper or steel pipe, or 80 mm OD steel conduit, with minimum 1.38 mm wall thickness, spaced 50 mm from other penetrating items. Pipe may be insulated with Pipe Insulation (Item 4).

•3. Firestop System Components – (Guide No. 40 U19.13).

(a) Type "A/D Firebarrier Mineral Wool" compressed 33% (minimum) between penetrating item and perimeter of opening at minimum depth of 100 mm. Minimum 6.4 mm deep space to be left above mineral wool for the installation of sealant (Item 3b or 3c).

For horizontal separations only:

(b) Type "A/D Firebarrier Silicone Sealant SL" applied over mineral wool (Item 3a) to a minimum depth for ratings indicated below, flush with top of floor.

For vertical or horizontal separations:

(c) Type "A/D Firebarrier Silicone Sealant" caulk grade applied over mineral wool to a minimum depth for ratings indicated below, flush with top of floor or symmetrically to both sides of wall assembly.

Type of Penetrating Item(s)	FT and FTH Ratings, h Min Thickness of Sealants (Items 3b and 3c)	
	6.4 mm	13 mm
No penetrating items	2	2
Item 2a (i)	0	0
Item 2a (ii)	3/4	2
Item 2a (iii)	0	2
Item 2a (iv)	0	0
Item 2a (v)	3/4	2
Item 2a (vi)	0	0
Item 2b insulated	1-1/2	1-1/2
Item 2b noninsulated	0	0
Item 2c	0	0
Item 2d	0	2
Item 2e	3/4	2
Item 2f	0	1
Item 2g	0	0
Item 2h insulated or noninsulated	0	0

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- 4. Pipe Insulation** (optional) (not shown) – Pipes (Items 2b and 2h) may be wrapped with minimum 25 mm thick ULC labelled pipe insulation (Guide No. 40 U18.15.13), with minimum 71 kg/m³ density. No pipe insulation joints to be closer than 300 mm to floor or wall surface.