

ULC S101 LISTED WITH VANGUARD'S PEX LISTED BY ULC (UNDERWRITERS OF CANADA) DESIGN NUMBER W316

**WOOD FRAME ASSEMBLIES - FIRE RESISTIVE CONSTRUCTION VANGUARD PEX TUBING - FLAME SPREAD SMOKE DEVELOPED CAN/ULC S102.2 STANDARD INTERTEK TESTING SERVICES**

FLAME SPREAD < 25 / SMOKE DEVELOPMENT < 50 - FOR 1/4" TO 1" VANGUARD'S PEX TUBING (IF INSTALLED IN EXPOSED OR PLENUM AREA SPACING - MUST BE 18" APART)

**VANGUARD INSTALLED IN ULC S101 RATED WOOD FRAME FLOOR CEILING ASSEMBLIES ULC (UNDERWRITERS OF CANADA) DESIGN # M516**

- 1) TOPPING OPTIONAL
- 2) SUB-FLOORING—MIN 5/8" PLYWOOD. IF TOPPING IS USED, SUB-FLOOR MAY BE 5/8" OSB.
- 3) STRUCTURAL MEMBERS—NOMINAL 2" X 10" SOLID SAWN WOOD, OPEN WEB WOOD, OR WOOD I-JOISTS (10" TO 24" DEPTH) INSTALLED AT 24" ON CENTERS MAXIMUM.
- 4) RESILIENT CHANNELS (OPTIONAL) - MINIMUM 24 GAUGE
- 5) GYPSUM BOARD - MINIMUM ONE LAYER OF 5/8" TYPE X GYPSUM WALL BOARD WHEN SOLID SAWN WOOD JOISTS ARE USED.
  - TWO LAYERS OF 1/2" TYUPE X OR 5/8" TYPE X GYPSUM WALL BOARD WHEN WOOD JOISTS (10" TO 24" DEPTH) ARE USED.
- 6) COMBUSTIBLE PIPE - ONE OR MORE VANGUARD PEX TUBING RUNS, SIZED FROM 1/4" TO 2", SUCH THAT THE WEIGHT OF THE PEX TUBING PER JOIST CAVITY DOES NOT EXCEED 0.31KG/M
  - SUPPORT PIPES WITH METAL CLIPS 16" ON CENTRES FOR PIPES UP TO 1" DIAMETER, METAL CLIPS 24" ON CENTER FOR PIPES OVER 1" DIAMETER.

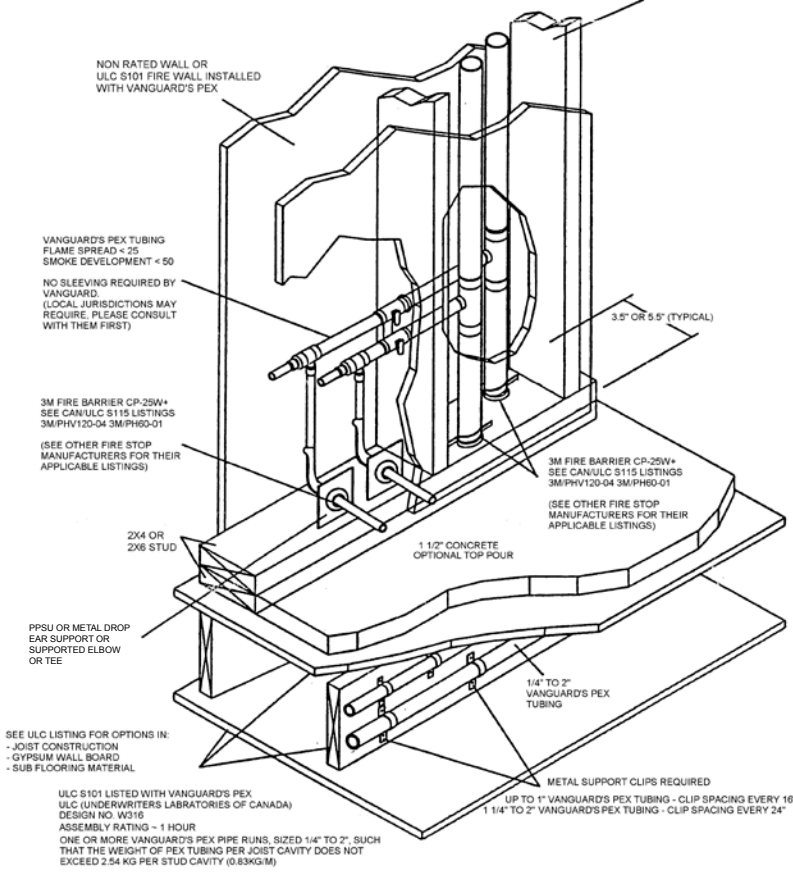
**VANGUARD INSTALLED IN ULC S101 - 1 HOUR RATED LOAD BEARING WOOD STUD WALL ASSEMBLIES**

**ULC (UNDERWRITERS OF CANADA) DESIGN # W316**

- 1) 2" X 4" WOOD STUDS ON 16" CENTERS
- 2) 1/4" TO 2" DIAMETER VANGUARD PEX TUBING ATTACHED TO CROSS BRACING WITH STEEL OR COPPER FASTENERS. THE MAXIMUM AMOUNT OF TUBING PER STUD CAVITY SHALL BE 2.54 KG.
- 3) THE TUBING MAY BE CONNECTED TO STANDARD COPPER OR BRASS PLUMBING COMPONENTS, TEES, BEND SUPPORTS AND MANIFOLDS WITHIN THE CAVITY. PLASTIC MAINFOLDS WITH A WEIGHT NOT EXCEEDING 2.13KG PER CAVITY MAYBE USED IN LIEU OF OR IN ADDITION TO COPPER OR BRASS MANIFOLDS
- 4) PPSU FITTINGS MAY BE USED. AS LONG AS THE TOTAL WEIGHT OF PEX TUBING AND PPSU FITTINGS COMBINED DO NOT EXCEED 2.54KG.
- 5) CROSS BRACING - NOMINAL 2 BY 4 IN. LUMBER CUT TO FIT WITHIN THE STUD CAVITY, CROSS BRACING IN THE CAVITY CONTAINING PEX RISERS SHALL BE AT MIDSTOREY AND TOP AND BOTTOM FOR UP TO A 10 FOOT WALL.

**VANGUARD'S FIRE STOPPING INTERTEK TESTING SERVICES - 3M LISTINGS**

- 1) 3M/PHV 120-04
  - SINGLE AND MULTIPLE PENETRATIONS
  - HORIZONTAL OR VERTICAL (FLOORS OR WALLS)
- 2) 3M/PHV60-01, 3M/PHV120-11 (SEE DIRECTORY)
  - SINGLE PENETRATIONS
  - HORIZONTAL (FLOOR/CEILING)



SEE ULC LISTING FOR OPTIONS IN:  
 - JOIST CONSTRUCTION  
 - GYPSUM WALL BOARD  
 - SUB FLOORING MATERIAL

ULC S101 LISTED WITH VANGUARD'S PEX ULC (UNDERWRITERS OF CANADA) DESIGN NO. W316  
 ASSEMBLY RATINGS - 1 HOUR  
 ONE OR MORE VANGUARD'S PEX PIPE RUNS, SIZED 1/4" TO 2", SUCH THAT THE WEIGHT OF PEX TUBING PER JOIST CAVITY DOES NOT EXCEED 2.54 KG PER STUD CAVITY (0.83KG/M)