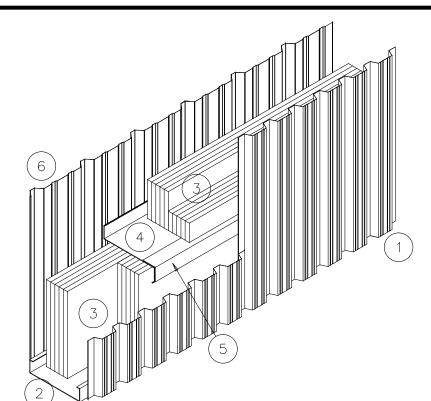
FIREGUARD WALL SYSTEM

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LEGEND - Non bearing Wall

1 HOUR FIRE-RESISTANCE RATING - ULC W605

Equivalent Opening Factor at 2 h (F_{EO}) = 0.02

- 1) 26ga (0.46mm) EXTERIOR CLADDING
- 2) U CHANNEL
- 3) MINERAL WOOL INSULATION
- 4) 18ga (1.22mm) GIRT STRUCTURAL SUPPORT
- 5) CERAMIC FIBER STRIP
- 6) 24ga (0.61mm) LINER PANEL

2 HOUR FIRE-RESISTANCE RATING - ULC W606

- 1) 24ga (0.61mm) EXTERIOR CLADDING
- 2) U CHANNEL
- 3) MINERAL WOOL INSULATION
- 4) 18ga (1.22mm) GIRT STRUCTURAL SUPPORT
- 5) CERAMIC FIBER STRIP
- 6) 24ga (0.61mm) LINER PANEL

THE FIREGUARD WALL SYSTEM IS BASED ON A ULC DESIGNATED NON-LOAD BEARING FIRE RATED WALL SYSTEM DESIGNED WITH THE STEEL CLADDING ENCLOSING A MINERAL WOOL INSULATION THAT PROVIDES A 1 OR 2 HOUR FIRE RATED WALL. Testing based on CAN/ULC-S101 Standard Fire Endurance Tests of Building Construction Material.

ONE-HOUR FIRE RATED WALL ASSEMBLY (MEETS ULC DESIGN NO. W605)

- 26 GAUGE (0.46mm) MINIMUM EXTERIOR WALL PANEL C/W TEK SCREWS AT 12" (305mm) O.C. AND STITCH SCREWS AT 12" (305mm) O.C.
- * GIRT STRUCTURAL SUPPORT MINIMUM 18ga (1.22mm) NOMINAL THICKNESS.
- * GIRT SPACING OF 48" (1220mm) TO MATCH MINERAL WALL BATT SIZE OR TO A MAXIMUM OF 60" (1524mm) O.C.
- * 1/2" (13mm) CERAMIC FIBER STRIP LOCATED ON OUTSIDE GIRT FACE (FLANGE)
- * 24 GAUGE (0.61mm) MINIMUM FULL HEIGHT LINER PANEL WITH MASTIC SEALER TAPE ON SEAM LINES AND ENDS, C/W TEK SCREWS AT 12" (305mm) O.C. AND STITCH SCREWS AT 12" (305mm) O.C.

TWO-HOUR FIRE RATED WALL ASSEMBLY (MEETS ULC DESIGN NO. W606)

- * 24 GAUGE (0.61mm) MINIMUM EXTERIOR WALL PANEL C/W TEK SCREWS AT 12" (305mm) O.C. AND STITCH SCREWS AT 12" (305mm) O.C.
- * GIRT STRUCTURAL SUPPORT MINIMUM 18ga (1.22mm) NOMINAL THICKNESS.
- * GIRT SPACING OF 48" (1220mm) TO MATCH MINERAL WOOL BATT SIZE OR TO A MAXIMUM OF 60" (1524mm) O.C.
- * 1/2 " (13mm) CERAMIC FIBER STRIP LOCATED ON OUTSIDE GIRT FACE (FLANGE)
- * 24 GAUGE (0.61mm) MINIMUM FULL HEIGHT LINER PANEL WITH MASTIC SEALER TAPE ON SEAM LINES AND ENDS, C/W TEK SCREWS AT 12" (305mm) O.C. AND STITCH SCREWS AT 12" (305mm) O.C.

NOTES:

- Design No. W605 1 h can be used with an Equivalent Opening Factor at 2 h (F_{EO}) = 0.02
- See CSSBI FPB-20: Fire Protection Bulletin #20: Fire-Rated Exterior Sheet Steel Walls & FPB-24: Fire Protection Bulletin #24: New (and Better) Limiting Distance Requirements in 1995 NBCC, for additional information on Limiting Distance Requirements for NBCC
- Thermal modeling of fire rated assemblies completed See MH Building Envelope Thermal Bridging Guide, for Zones based on NECB & CSSBI-B20-15 Thermal Transmittance of Insulated Sheet Steel Wall and Roof Assemblies
- See UL Product IQ BXUVC for other assemblies, including: bearing exterior walls; Design No. U418 & U425 and interior partitions; Design No. W610 1h & W611 2h

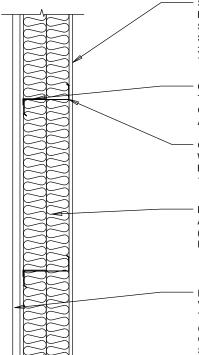




FIREGUARD WALL SYSTEM

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ONE-HOUR FIRE RATED WALL ASSEMBLY (MEETS ULC DESIGN NO. W605)



STEEL LINER: PANELS FABRICATED FROM MINIMUM 24 Gauge (0.61mm) THICK SHEET, FASTENED TO GIRTS BY 1" (25mm) LONG (USE 1 1/2" (38mm) LONG @ CLOSURE LOCATIONS) SELF DRILL TEK SCREWS SPACED MAXIMUM 12" (305mm) ON CENTER. SIDE LAP JOINTS SEALED WITH 1/8" x 1/2" (3 x 13mm) FIELD APPLIED TAPE SEALER AND SECURED WITH 3/4" (19mm) LONG STITCH SCREWS 12" (305mm) ON CENTER. ENDS AND SPLICES TO BE SEALED WITH 1/8" x 1/2" (3X13mm) FIELD APPLIED TAPE SEALER TO FORM AIR BARRIER.

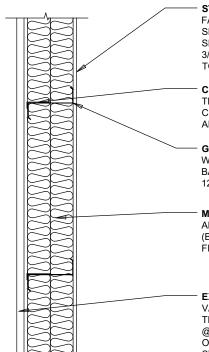
CERAMIC FIBRE STRIP: 128kg/m³ DENSITY, MINIMUM 4" (100mm) WIDE x 1/2" (13mm) THICK STRIPS, ATTACHED TO GIRT WITH STICK PINS SPACED 9 3/4" (250mm) ON CENTER (BY OTHERS) REQUIRED ON OUTSIDE FACE (FLANGE) OF ALL GIRTS AND PERIMETER OF FRAMED OPENINGS.

GIRT: MINIMUM 18ga (1.22mm) NOMINAL THICKNESS. MINIMUM 6" (152mm) DEEP STEEL GIRT WITH 1 1/2" (38mm) MINIMUM FLANGES, 48" (1220mm) ON CENTER TO MATCH INSULATION BATT SIZE OR TO A MAXIMUM OF 60" (1525mm) ON CENTER. (GIRT MAY BE 8" (203mm), 10" (254mm) OR 12" (305mm) DEEP DEPENDING ON BAY SPACING).

MINERAL WOOL BATTS: 96kg/m³ NORMAL DENSITY, PROCESSED FROM ROCK AND SLAG, SUPPLIED IN 3" (76mm) THICK SHEETS 24" x 48" (610mm x 1220mm) (BY OTHERS). LAYERS INSTALLED WITH VERTICAL AND HORIZONTAL JOINTS STAGGERED TO FILL CAVITY.

EXTERIOR CLADDING: CORRUGATED PREPAINTED SHEET STEEL PANELS TO VARIOUS PROFILES AND WIDTHS. PANELS MINIMUM 26 Gauge (0.46mm) THICK, FASTENED TO GIRTS BY 1" (25mm) LONG (USE 1 1/2" (38mm) LONG @ CLOSURE LOCATIONS) SELF DRILLING TEK SCREWS MAXIMUM 12" (305mm) ON CENTER. LAP JOINTS OF ADJACENT PANELS FASTENED BY 3/4" (19mm) LONG STITCH SCREWS 12" (305mm) ON CENTER.

TWO-HOUR FIRE RATED WALL ASSEMBLY (MEETS ULC DESIGN NO. W606)



STEEL LINER: PANELS FABRICATED FROM MINIMUM 24 Gauge (0.61mm) THICK SHEET, FASTENED TO GIRTS BY 1" (25mm) LONG (USE 1 1/2" (38mm) LONG @ CLOSURE LOCATIONS) SELF DRILL TEK SCREWS SPACED MAXIMUM 12" (305mm) ON CENTER. SIDE LAP JOINTS SEALED WITH 1/8" x 1/2" (3 x 13mm) FIELD APPLIED TAPE SEALER AND SECURED WITH 3/4" (19mm) LONG STITCH SCREWS 12" (305mm) ON CENTER. ENDS AND SPLICES TO BE SEALED WITH 1/8" x 1/2" (3X13mm) FIELD APPLIED TAPE SEALER TO FORM AIR BARRIER.

CERAMIC FIBRE STRIP: 128kg/m³ DENSITY, MINIMUM 4" (100mm) WIDE x 1/2" (13mm) THICK STRIPS, ATTACHED TO GIRT WITH STICK PINS SPACED 9 3/4" (250mm) ON CENTER (BY OTHERS) REQUIRED ON OUTSIDE FACE (FLANGE) OF ALL GIRTS AND PERIMETER OF FRAMED OPENINGS.

GIRT: MINIMUM 18ga (1.22mm) NOMINAL THICKNESS. MINIMUM 8" (203mm) DEEP STEEL GIRT WITH 1 3/4" (45mm) MINIMUM FLANGES, 48" (1220mm) ON CENTER TO MATCH INSULATION BATT SIZE OR TO A MAXIMUM OF 60" (1525mm) ON CENTER. (GIRT MAY BE 10" (254mm) OR 12" (305mm) DEEP DEPENDING ON BAY SPACING).

MINERAL WOOL BATTS: 72kg/m^3 NORMAL DENSITY, PROCESSED FROM ROCK AND SLAG, SUPPLIED IN 4" (102 mm) THICK SHEETS 24" x 48" (610 mm x 1220 mm) (BY OTHERS). LAYERS INSTALLED WITH VERTICAL AND HORIZONTAL JOINTS STAGGERED TO FILL CAVITY.

EXTERIOR CLADDING: CORRUGATED PREPAINTED SHEET STEEL PANELS TO VARIOUS PROFILES AND WIDTHS. PANELS MINIMUM 24 Gauge (0.61mm) THICK, FASTENED TO GIRTS BY 1" (25mm) LONG (USE 1 1/2" (38mm) LONG @ CLOSURE LOCATIONS) SELF DRILLING TEK SCREWS MAXIMUM 12" (305mm) ON CENTER. LAP JOINTS OF ADJACENT PANELS FASTENED BY 3/4" (19mm) LONG STITCH SCREWS 12" (305mm) ON CENTER.

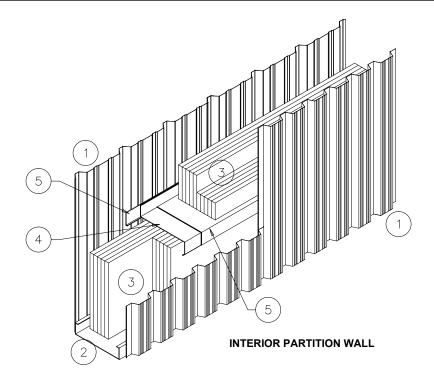






FIREGUARD INTERNAL PARTITION WALL SYSTEM

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LEGEND - Non bearing Interior Partition Wall

1 HOUR FIRE-RESISTANCE RATING - ULC W610

Fire side at either side of partition

- 1) 24ga (0.61mm) EXTERIOR CLADDING
- 2) U CHANNEL
- 3) MINERAL WOOL INSULATION
- 4) 18ga (1.22mmm) GIRT STRUCTURAL SUPPORT
- 5) CERAMIC FIBER STRIP
- 6) 24ga (0.61mm) LINER PANEL

2 HOUR FIRE-RESISTANCE RATING - ULC W611

Fire side at either side of partition

- 1) 22ga (0.76mm) EXTERIOR CLADDING
- 2) U ČHÀNNEL
- 3) MINERAL WOOL INSULATION
- 4) 18ga (1.22mm) GIRT STRUCTURAL SUPPORT
- 5) CERAMIC FIBER STRIP
- 6) 22ga (0.76mm) LINER PANEL

THE FIREGUARD WALL SYSTEM IS BASED ON A ULC DESIGNATED NON-LOAD BEARING FIRE RATED WALL SYSTEM DESIGNED WITH THE STEEL CLADDING ENCLOSING A MINERAL WOOL INSULATION THAT PROVIDES A 1 OR 2 HOUR FIRE RATED INTERIOR PARTION WALL. Test based on CAN/ULC-S101 Standard Fire Endurance Tests for Building Construction Material.

ONE-HOUR FIRE RATED WALL ASSEMBLY (MEETS ULC DESIGN NO. W610)

- * 24 GAUGE (0.61mm) MINIMUM LINER PANEL WITH MASTIC SEALER TAPE ON SEAM LINES AND ENDS, C/W TEK SCREWS AT 12" (305mm) O.C. AND STITCH SCREWS AT 12" (305mm) O.C.
- * GIRT STRUCTURAL SUPPORT MINIMUM 18ga (1.22mm) NOMINAL THICKNESS.
- * GIRT SPACING OF 48" (1220mm) TO MATCH MINERAL WALL BATT SIZE OR TO A MAXIMUM OF 60" (1525mm) O.C.
- * CERAMIC FIBER STRIP INSTALLED TO ENVELOP THE TOP SURFACE AND BOTH GIRT FACES (FLANGES) OF THE GIRT
- * 24 GAUGE (0.61mm) MINIMUM LINER PANEL WITH MASTIC SEALER TAPE ON SEAM LINES AND ENDS, C/W TEK SCREWS AT 12" (305mm) O.C. AND STITCH SCREWS AT 12" (305mm) O.C.

TWO-HOUR FIRE RATED WALL ASSEMBLY (MEETS ULC DESIGN NO. W611)

- * 22 GAUGE (0.76mm) MINIMUM LINER PANEL WITH MASTIC SEALER TAPE ON SEAM LINES AND ENDS, C/W TEK SCREWS AT 12" (305mm) O.C. AND STITCH SCREWS AT 12" (305mm) O.C.
- * GIRT STRUCTURAL SUPPORT MINIMUM 18ga (1.22mm) NOMINAL THICKNESS.
- * GIRT SPACING OF 48" (1220mm) TO MATCH MINERAL WOOL BATT SIZE OR TO A MAXIMUM OF 60" (1525mm) O.C.
- * CERAMIC FIBER STRIP INSTALLED TO ENVELOP THE TOP SURFACE AND BOTH GIRT FACES (FLANGES) OF THE GIRT
- * 22 GAUGE (0.76mm) MINIMUM LINER PANEL WITH MASTIC SEALER TAPE ON SEAM LINES AND ENDS, C/W TEK SCREWS AT 12" (305mm) O.C. AND STITCH SCREWS AT 12" (305mm) O.C.

NOTES:

 See UL Product IQ BXUVC for other assemblies, including; Design No. W605 1h & W606 2h for exterior walls, Design No. W447 for 1h & 2h Interior Drywall Partitions



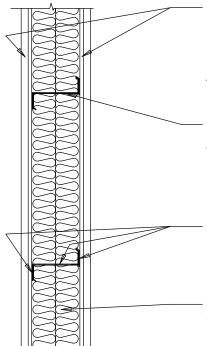




FIREGUARD INTERNAL PARTITION WALL SYSTEM

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ONE-HOUR FIRE RATED PARTITION WALL ASSEMBLY (MEETS ULC DESIGN NO. W610)



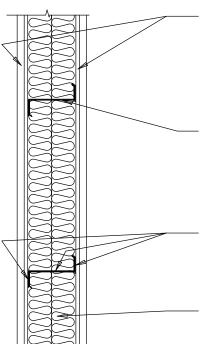
LINER PANEL: CORRUGATED PREPAINTED SHEET STEEL PANELS TO VARIOUS PROFILES AND WIDTHS. PANELS MINIMUM 24 Gauge (0.61mm), FASTENED TO GIRTS BY 1" (25mm) LONG (USE 1 1/2" (38mm) LONG @ CLOSURE LOCATIONS) SELF DRILL TEK SCREWS SPACED MAXIMUM 12" (305mm) ON CENTER. SIDE LAP JOINTS SEALED WITH 1/8" x 1/2" (3 x 13mm) FIELD APPLIED TAPE SEALER AND SECURED WITH 3/4" (19mm) LONG STITCH SCREWS 12" (305mm) ON CENTER. ENDS AND SPLICES TO BE SEALED WITH 1/8" x 1/2" (3X12mm) FIELD APPLIED TAPE SEALER TO FORM AIR BARRIER.

GIRT: MINIMUM 18ga (1.22mm) NOMINAL THICKNESS. MINIMUM 6" (152mm) DEEP STEEL GIRT WITH 1 1/2" (38mm) MINIMUM FLANGES, 48" (1220mm) ON CENTER TO MATCH INSULATION BATT SIZE OR TO A MAXIMUM OF 60" (1525mm) ON CENTER. (GIRT MAY BE 8" (203mm), 10" (254mm) OR 12" (305mm) DEEP DEPENDING ON BAY SPACING).

CERAMIC FIBRE STRIP: 128kg/m³ DENSITY, 1/2" (13mm) THICK STRIPS, ATTACHED TO GIRT WITH STICK PINS SPACED 9 3/4" (250mm) ON CENTER (BY OTHERS) REQUIRED TO BE INSTALLED TO ENVELOP THE TOP SURFACE AND ON BOTH FACES (FLANGES) OF ALL GIRTS AND PERIMETER OF FRAMED OPENINGS.

 MINERAL WOOL BATTS: 96kg/m³ NORMAL DENSITY, PROCESSED FROM ROCK AND SLAG, SUPPLIED IN 3" (76mm) THICK SHEETS 24" x 48" (610mm x 1220mm) (BY OTHERS). LAYERS INSTALLED WITH VERTICAL AND HORIZONTAL JOINTS STAGGERED TO FILL CAVITY.

TWO-HOUR FIRE RATED PARTITION WALL ASSEMBLY (MEETS ULC DESIGN NO. W611)



- LINER PANEL: CORRUGATED PREPAINTED SHEET STEEL PANELS TO VARIOUS PROFILES AND WIDTHS. PANELS MINIMUM 22 Gauge (0.76mm), FASTENED TO GIRTS BY 1" (25mm) LONG (USE 1 1/2" (38mm) LONG @ CLOSURE LOCATIONS) SELF DRILL TEK SCREWS SPACED MAXIMUM 12" (305mm) ON CENTER. SIDE LAP JOINTS SEALED WITH 1/8" x 1/2" (3 x 13mm) FIELD APPLIED TAPE SEALER AND SECURED WITH 3/4" (19mm) LONG STITCH SCREWS 12" (305mm) ON CENTER. ENDS AND SPLICES TO BE SEALED WITH 1/8" x 1/2" (3X12mm) FIELD APPLIED TAPE SEALER TO FORM AIR BARRIER.

GIRT: MINIMUM 18ga (1.22mm) NOMINAL THICKNESS. MINIMUM 8" (203mm) DEEP STEEL GIRT WITH 1 3/4" (45mm) MINIMUM FLANGES, 48" (1220mm) ON CENTER TO MATCH INSULATION BATT SIZE OR TO A MAXIMUM OF 60" (1525mm) ON CENTER. (GIRT MAY BE 10" (254mm) OR 12" (305mm) DEEP DEPENDING ON BAY SPACING).

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