

**Part 1 General****1.1 RELATED REQUIREMENTS**

- .1 Section 09 21 16 – Gypsum Board Assemblies
- .2 Section 09 22 16 – Non-Structural Metal Framing

**1.2 REFERENCES**

- .1 American National Standards Institute (ANSI)
  - .1 ANSI A208.1-09, Particleboard, Mat-Formed Wood.
  - .2 ANSI A208.2-09, Medium Density Fiberboard (MDF) for Interior Application.
- .2 American Society for Testing and Materials International (ASTM)
  - .1 ASTM E90-04, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
  - .2 ASTM E336-05, Standard Test Method for Measurement of Airborne Sound Insulation in Buildings.
- .3 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-11.3-M87, Hardboard.
- .4 Canadian Standards Association (CSA International)
  - .1 CSA O115-M1982(R2001), Hardwood and Decorative Plywood.
  - .2 CSA O151-04, Canadian Softwood Plywood.
- .5 Forest Stewardship Council (FSC)
  - .1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.
  - .2 FSC-STD-20-002-2004, Structure and Content of Forest Stewardship Standards V2-1.
  - .3 FSC Accredited Certification Bodies.
- .6 Underwriters Laboratories' of Canada (ULC)
  - .1 CAN/ULC-S102-03, Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

**1.3 DESIGN REQUIREMENTS**

- .1 Design and fabricate folding partitions with minimum STC of 45 tested to ASTM E90.
- .2 Operation of partition shall not require a force of more than 22 N.

**1.4 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
  - .2 Product Data:
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- .1 Submit manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
  - .2 Submit WHMIS MSDS - Material Safety Data Sheets
  - .3 Shop Drawings:
    - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Province of Ontario, Canada.
      - .1 Include plans, sections, details, attachments to other construction including confirmation that existing concrete slab can safely support the folding partition assembly. Indicate installation requirements including dimensions, head and jamb conditions, track layout and support, stacking arrangement, switching, hardware, finish and colour, operating mechanism, and location. Indicate blocking to be provided by others.
  - .4 Samples:
    - .1 Submit duplicate 300 x 300mm samples of partition finish for each colour selected.
  - .5 Submit Project Materials and Cost Data: provide statement for total cost for building materials used for project.
    - .1 Include statement indicating total cost of mechanical and electrical components.
  - .6 Quality assurance/control submittals: submit following in accordance with Section 01 45 00 - Quality Control.
    - .1 Test reports: submit certified test reports for folding panel partitions from approved independent testing laboratories, indicating compliance with specifications for specified performance characteristics and physical properties.
    - .2 Submit test data indicating compliance with design requirements regarding sound transmission and fire hazard classification.
    - .3 Submit acoustical test data to ASTM E90 and ensure construction details and weight are provided.
    - .4 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
    - .5 Manufacturer's Instructions: submit manufacturer's installation instructions. Indicate special handling criteria, installation sequence, cleaning procedures and .
    - .6 Manufacturer's Field Reports: manufacturer's field reports specified.
    - .7 Site review and Post-Installation Certification: Engineer who stamped shop drawings shall provide periodic site review and reports, progress billing review and reports, and signed and stamped certification that the work of this Section has been performed in conformance with shop drawings.
  - .7 Closeout Submittals:
    - .1 Provide operation and maintenance data for folding panel partitions for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.
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**1.5 QUALITY ASSURANCE**

- .1 Forest Certification: provide operable panel partitions made from wood obtained from forests certified by FSC accredited certification body to comply with FSC-STD-01-001.
- .2 Site Meetings: as part of Manufacturer's Services described in PART 3 - FIELD QUALITY CONTROL, schedule site visits, to review Work, at stages listed.
  - .1 After delivery and storage of products, and when preparatory Work is complete but before installation begins.
  - .2 Twice during progress of Work at 25% and 60% complete.
  - .3 Upon completion of Work, after cleaning is carried out.

**1.6 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate waste materials for reuse recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

**Part 2 Products****2.1 MATERIALS**

- .1 Panel Construction:
  - .1 Panel Core: Nominal 76 mm thick panels in manufacturer's standard 1220 mm widths. All panel horizontal and vertical framing members fabricated from minimum 1.2 mm formed steel with overlapped and welded corners for rigidity. Top channel is reinforced to support suspension system components. Frame is designed so that full vertical edges of panels are of formed steel and provide concealed protection of the edges of the panel skin.
  - .2 Panel Skin: 13 mm tackable moisture resistant gypsum board, class "A" rated single material or composite layers continuously bonded to panel frame. Acoustical ratings of panels with this construction 45 STC
  - .3 Panel Finishes:
    - .1 Panel Trim: exposed panel trim of one consistent colour from Manufacturer's standard range
    - .2 Panel face finish shall be reinforced vinyl with woven backing weighing not less than 648 g per lineal metre, colour to Departmental Representative's selection from standard colour range

**2.2 COMPONENTS**

- .1 Overhead suspension system:
    - .1 Suspension Tracks: Minimum 3 mm roll-formed steel track, suitable for either direct mounting to a wood header or supported by adjustable steel hanger brackets, supporting the load-bearing surface of the track, connected to structural support by pairs of 9.5 mm diameter threaded rods. Aluminum track is not acceptable.
    - .2 Exposed track soffit: Steel, integral to track, and pre-painted off-white.
    - .3 Carriers: One all-steel trolley with steel-tired ball-bearing wheels per panel (except hinged panels). Non-steel tires are not acceptable.
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- .2 Hardware:
  - .1 Equip partition with manufacturer's standard hardware. Hardware finish selected from manufacturer's standard finishes.
  - .2 Install standard latch.
- .3 Hinges:
  - .1 Full leaf butt hinges, attached directly to panel frame with welded hinge anchor plates within panel.
- .4 Sound seals:
  - .1 Vertical Interlocking Sound Seals between panels: Roll-formed steel astragals, with reversible tongue and groove configuration in each panel edge for universal panel operation. Rigid plastic astragals or astragals in only one panel edge are not acceptable.
  - .2 Horizontal Top Seals: Continuous contact extruded vinyl bulb shape with pairs of non-contacting vinyl fingers to prevent distortion without the need for mechanically operated parts.
  - .3 Horizontal Bottom Seals: automatic operable seals providing nominal 51 mm operating clearance with an operating range of +13 mm to -38 mm which automatically drop as panels are positioned, without the need for tools or cranks.

## **2.3 ACCESSORIES**

- .1 Provide manufacturer's standard stack jamb closure panel, with lever operator.

## **2.4 OPERATION**

- .1 Partition is a series of paired flat panels hinged together in pairs, manually operated, top-supported with operable floor seals
- .2 Final closure: horizontally expanding panel edge with removable crank.

## **Part 3 Execution**

### **3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

### **3.2 INSTALLATION**

- .1 Secure and level track.
  - .2 Install folding partitions in accordance with manufacturer's printed instructions.
  - .3 Touch up damaged finishes, repair damage to partitions to match original finish.
  - .4 Clean folding partition system and protect from damage.
  - .5 Adjust and leave partitions in smooth operating condition.
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**3.3 FIELD QUALITY CONTROL**

- .1 Site Tests:
  - .1 Acoustic field testing: have field sound performance certified by independent acoustical consultant in accordance with ASTM E336.
- .2 Manufacturer's Field Services:
  - .1 Obtain written report from manufacturer verifying compliance of Work, in handling, installing, applying, protecting and cleaning of product and submit Manufacturer's Field Reports as described in PART 1 - SUBMITTALS.
  - .2 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
  - .3 Schedule site visits, to review Work, as directed in PART 1 - QUALITY ASSURANCE.

**3.4 CLEANING**

- .1 Proceed in accordance with Section 01 00 10 – General Instructions
- .2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

**END OF SECTION**

## **PART 1 - GENERAL**

### **1.1 REFERENCES**

- .1 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1 Material Safety Data Sheets (MSDS).
- .2 National Fire Protection Association (NFPA)
  - .1 NFPA (Fire) 10, Standard for Portable Fire Extinguishers, 2013 Edition.
- .3 Underwriters Laboratories of Canada (ULC)
  - .1 CAN/ULC S508-02 (R2013), Standard for the Rating and Fire Testing of Fire Extinguishers.

### **1.2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's printed product literature and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
  - .2 Submit two copies WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 00 10 - General Instructions.
- .3 Provide shop drawings.
- .4 Quality control submittals: submit following in accordance with Section 01 45 00 - Quality Control.
  - .1 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, cleaning procedures and.
  - .2 Manufacturer's Field Reports: submit manufacturer's written reports within 3 days of review, verifying compliance of Work, as described in PART 3, FIELD QUALITY CONTROL.
- .5 Closeout Submittals:
  - .1 Provide operation and maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

### **1.3 DELIVERY, STORAGE AND HANDLING**

- .1 Packing, shipping, handling and unloading:
    - .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
  - .2 Waste Management and Disposal:
    - .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
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**PART 2 - PRODUCTS****2.1 MULTI-PURPOSE DRY CHEMICAL EXTINGUISHERS**

- .1 Cartridge operated type or Stored pressure rechargeable type with hose and shut-off nozzle, ULC labelled for A, B and C class protection.
  - .1 Size 2.25 kg.

**2.2 IDENTIFICATION**

- .1 Identify extinguishers in accordance with recommendations of ANSI/NFPA 10 & CAN/ULC-S508.
- .2 Attach bilingual tag or label to extinguishers, indicating month and year of installation. Provide space for service dates.

**PART 3 - EXECUTION****3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

**3.2 INSTALLATION**

- .1 Install or mount extinguishers in cabinets or on brackets in accordance with NFPA (Fire) 10.
- .2 Install fire safety blankets as indicated.

**3.3 FIELD QUALITY CONTROL**

- .1 Manufacturer's Field Services:
  - .1 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.