

BREECHING CHIMNEYS & STACKS

Rev01

Part 1 GENERAL

1.1 SUMMARY

- .1 Section Includes:
 - .1 Materials, accessories and installation for breechings, chimneys and stacks.

1.2 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures
- .2 Section 01 61 00 - Common Product Requirements
- .3 Section 01 74 11 - Cleaning
- .4 Section 03 33 00 - Cast-in-Place Concrete
- .5 Section 23 05 13 – Pipe Hangers and Supports for HVAC Piping & Equipment
- .6 Section 23 07 13 – Duct Insulation
- .7 Section 23 31 13.01 – Metal Ducts to 750 Pa
- .8 Section 23 34 00 – Fans General
- .9 Section 23 54 16 – Fuel-Fired Furnaces
- .10 Section 23 74 00 – Packaged Air Handling Units - Gas

1.3 REFERENCES

- .1 Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
- .2 Underwriters' Laboratories of Canada (ULC)
- .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).

1.4 SUBMITTALS

- .1 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and datasheet in accordance with Section 01 33 00 - Submittal Procedures. Include product characteristics, performance criteria, and limitations.
 - .1 Submit two copies of Workplace Hazardous Materials Information System (WHMIS) Material Safety Data Sheets (MSDS) in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop Drawings:

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- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Indicate following:
 - .1 Methods of sealing sections.
 - .2 Methods of expansion.
 - .3 Details of thimbles.
 - .4 Bases/Foundations.
 - .5 Supports.
 - .6 Guy details.
 - .7 Rain caps.
- .3 Quality assurance submittals: submit following in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .4 Closeout Submittals
 - .1 Submit operation and maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.5 QUALITY ASSURANCE

- .1 Regulatory Requirements: work to be performed in compliance with Province of Manitoba Department of Labour Mechanical & Engineering Branch Gas & Oil Program and applicable City regulations.
- .2 Certificates:
 - .1 Catalogued or published ratings: obtained from tests carried out by independent testing agency or manufacturer signifying adherence to codes and standards.

1.6 DELIVERY, STORAGE, AND HANDLING

- .1 Packing, shipping, handling and unloading:
 - .1 Deliver, store and handle in accordance with manufacturer's written instructions and Section 01 61 00 - Common Product Requirements.

Part 2 PRODUCTS

2.1 FUELS: PRESSURE CHIMNEY AND BREECHING

- .1 ULC labelled, 760 degrees C rated.
- .2 In-direct-Fired Air Handling Units: Sectional, prefabricated, double wall with mineral fibre, 25 mm with mated fittings and couplings.
 - .1 Liner: type 316 stainless steel, AL294C stainless steel for condensing appliance applications.
 - .2 Shell: mm thick, type 316 stainless steel.

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- .3 Outer seals between sections: to suit application.
- .4 Inner seals between sections: to suit application.

2.2 TYPE A GAS VENT

- .1 ULC labelled, 540 degrees C rating maximum, gas and liquid fuel fired appliances.

2.3 TYPE B GAS VENT

- .1 ULC labelled, 288 degrees C rating maximum, atmospheric gas vent only for unit heaters.
- .2 Sectional, prefabricated, double wall with 13 mm air space. Aluminum inner wall. Galvanized steel outer wall. Mated fittings and couplings.

2.4 PVC GAS VENT

- .1 ULC labelled, 288 degrees C rating maximum, atmospheric gas vent only.
 - .1 Unit shall accommodate vent pipe, fittings, cements and primers listed to ULC S636. Vent sizing must be in accordance with CAN/CSA Standard B149.1, ANSI Z223.1-NFPA 54, and local authorities having jurisdiction.
 - .2 Approved vent system: IPEX System 636, PVC/CPVC Primer, Purple Violet for Flue Gas Venting rated Class IIA, 65 °C or approved equal in accordance with B6.

2.5 ACCESSORIES

- .1 Cleanouts: bolted, gasketed type, full size of breeching, as indicated.
- .2 Barometric dampers: single double acting, 70% of full size of breeching area.
- .3 Hangers and supports: in accordance with recommendations of Sheet Metal and Air Conditioning Contractors National Association Inc. (SMACNA) and manufacturer's instructions.
- .4 Rain cap for non condensing applications, velocity cone for condensing appliance applications.
- .5 Expansion sleeves with heat resistant caulking, held in place as indicated.

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 datasheet.

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3.2

INSTALLATION - GENERAL

- .1 Follow manufacturer's and SMACNA installation recommendations for shop fabricated components.
- .2 Suspend breeching at 1.5 m centres and at each joint.
- .3 Support chimneys at bottom, roof and intermediate levels as indicated, follow guy wire recommendations of manufacturer.
- .4 Install thimbles where penetrating roof, floor, ceiling and where breeching enters masonry chimney. Pack annular space with heat resistant caulking.
- .5 Install flashings on chimneys penetrating roofs, as indicated.
- .6 Install rain caps and cleanouts, as indicated and as required by regulatory authorities.

3.3

CLEANING

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 Upon completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

END OF SECTION