

- .1 Common Work Results for HVAC Section 23 05 00

## 1.2 RELATED WORK SPECIFIED IN OTHER SECTIONS

- |    |                                   |                  |
|----|-----------------------------------|------------------|
| .1 | Roofing Details                   | Division 7       |
| .2 | Ductwork and Breeching Insulation | Section 23 07 00 |

### 1.3 PRODUCT OPTIONS AND SUBSTITUTIONS

- .1 Refer to Division 01 for requirements pertaining to product options and substitutions.

## 1.4 SHOP DRAWINGS

- .1 Comply with requirements of Section 01 33 10.

## 1.5 DEFINITIONS

- .1 Vent: an enclosed passageway for conveying flue gases from the appliances to outdoors.
- .2 Breeching: the portion of vent from the appliance to the chimney.
- .3 Chimney: a primarily vertical portion of vent.
- .4 Draft: the flow of air or combustion products or both, through an appliance and its venting system.
- .5 Mechanical Draft: a draft produced by a mechanical device such as a fan, blower or aspirator which may supplement natural draft.
- .6 Forced Draft: a mechanical draft produced by a device upstream of the combustion zone of an appliance.
- .7 Induced Draft: a mechanical draft produced by a device downstream from the combustion zone of an appliance.
- .8 Natural Draft: a draft other than mechanical draft.

## 1.6 QUALITY ASSURANCE

- .1 Vents and accessories forming part of the venting system shall be ULC labelled.

## **Part 2 Products**

### **2.1 VENTS**

- .1 Type B Vent: to CAN4 S605, Gas Vents.
  - .1 Application: gas fired appliances certified with draft hoods or diverters.
  - .2 Service Temperature: maximum flue gas temperature of 243°C.
- .2 Type BW Vent: to CAN4 S605, Gas Vents.
  - .1 Application: gas fired recessed heaters.
  - .2 Service Temperature: maximum flue gas temperature of 243°C.
- .3 Type L Vent: to ULC-S609, Low Temperature Vents, Type L.
  - .1 Application: fuel burning appliances certified for use with Type L vents.
  - .2 Service Temperature: maximum flue gas temperature of 298°C.

### **2.2 BREECHING**

- .1 Breeching Type 1: Natural Draft, Gas Burning Appliances with Draft Hoods, one of the following:
  - .1 Galvanized steel with thickness to the following schedule:

<i>Vent Diameter mm</i>	<i>Minimum Thickness mm</i>
smaller than 125	0.4
125 to 200	0.5
larger than 200	0.6
  - .2 Breeching constructed of same vent components as chimney.
- .2 Breeching Type 2: Forced/Induced/Natural Draft (with dilution), Gas or Liquid Fuel Fired Appliances, one of the following:
  - .1 Mild steel, all welded construction with thickness to the following schedule:

<i>Vent Diameter mm</i>	<i>Minimum Thickness mm</i>
300 and smaller	1.2
325 to 600	1.6
625 to 900	2.0
925 and larger	3.0
  - .2 Breeching constructed of same vent components as chimney.

- .3 Breeching Type 3: Solid Fuel Fired Appliances, one of the following:
  - .1 Material: mild steel, minimum thickness of 3 mm, all welded constructed, lined with 50 mm thick castable refractory.
  - .2 Breeching constructed of same vent components as chimney.

## **2.3 ACCESSORIES**

- .1 Cleanouts: bolted, gasketed type, full size of breeching area.
- .2 Barometric Damper: double acting sized to 70% of full size of breeching area.
- .3 Breeching Damper: motor operated damper with 3.5 mm thick steel, ball bearings on full length shaft, 80% maximum closure.
- .4 Appurtances: raincap, thimbles, support brackets and guys, flashing and counterflashings, fly ash screen and other materials required to complete the assembly.

## **Part 3 Execution**

### **3.1 VENT INSTALLATION**

- .1 Install vents, complete with accessories and appurtances, in accordance with CAN/CGA B149.1, Alberta Building Code (latest edition), manufacturer's instructions and as follows:
  - .1 Type B: to CAN4 S605.
  - .2 Type BW: to CAN4 S605.
  - .3 Type L: to ULC S609.
- .2 Do not install breeching connections from multiple appliances to a common vent at the same elevation.
- .3 Do not penetrate flue gas chamber of vent with screws or mechanical fasteners.
- .4 Install breeching with positive slope upward from appliance.
- .5 Suspend breeching using trapeze hangers at 1520 mm centers.
- .6 Install cleanout at base of chimney.
- .7 Provide barometric damper as shown on drawings.
- .8 Provide breeching damper as shown on drawings.
- .9 Support chimney at bottom, roof and intermediate levels.
- .10 Install thimbles where penetrating roof, floor, ceiling and where breeching enters masonry chimney.

- .11 Refer to Division 7 for penetrations through roofing.
- .12 Install fly ash screen on all chimneys serving solid fuel fired appliances.
- .13 Install raincap on chimney outlet.
- .14 Install counterflashing where chimneys pass through roof. Coordinate counterflashing work with flashing work specified in Division 7.
- .15 Provide for expansion and contraction of chimney and breeching.

**END OF SECTION**