



Astra Duo 38

Owner's Manual

Model Number: 38SFCD

This product is proudly developed and manufactured in North America by **SUPREME FIREPLACES INC.**

3594 Jarry East, Montreal, QC H1Z 2G4

T: 877-593-4722, F: 514-593-4424

www.supremem.com

Revised: June 2023

IMPORTANT: Keep the owner's manual for future use.

CONTENTS

- 1 SAFETY 1
- 2 GENERAL INFORMATION 2
 - 2.1 Dimensions – Astra Duo 38 Traditional..... 2
 - 2.2 Dimensions – Astra Duo 38 Contemporary..... 3
 - 2.3 Specifications 4
 - 2.4 Combustion Air Control 5
 - 2.5 Cold Hand Key 5
 - 2.6 Baffle Secondary Burn Technology 5
 - 2.7 Chimney Sweeping Cap 5
 - 2.8 Door 6
 - 2.9 Certification Label..... 6
 - 2.10 Removable Ash Lip 6
 - 2.11 Cast Iron Interior..... 6
 - 2.12 Blower Kit..... 6
 - 2.13 Optional Hot Air Kit..... 6
 - 2.14 Optional Fresh Air Kit 7
 - 2.15 SUPREME Roof Radiation Plate 7
- 3 INSTALLATION INSTRUCTIONS 8
 - 3.1 Location..... 8
 - 3.2 Chimney Installation 9
 - 3.2.1 General Rules and Guidelines..... 9
 - 3.2.2 Listed UL 103 / ULC S629 Approved Chimney Models (Reference Table) 10
 - 3.2.3 Chimney Installation Instructions 11
 - 3.2.4 Offset Installation..... 12
 - 3.2.5 Angled Wall Radiation Shield 12
 - 3.2.6 Connecting to a Masonry Chimney..... 13
 - 3.3 Surround Installation..... 14
 - 3.3.1 Traditional Surround..... 14
 - 3.3.2 Contemporary Surround 15
 - 3.4 Framing..... 15

| | | |
|-------|---|----|
| 3.5 | Gravity Kit Installation..... | 16 |
| 3.5.1 | Dual Louver Gravity Ducts..... | 16 |
| 3.6 | Hearth Extension..... | 18 |
| 3.7 | Chase Installation..... | 18 |
| 3.8 | Clearances to Combustibles..... | 20 |
| 3.9 | Blower Kit..... | 20 |
| 4 | OPTIONS..... | 22 |
| 4.1 | Fresh Air Kit..... | 22 |
| 5 | OPERATION INSTRUCTIONS..... | 24 |
| 5.1 | Fuel..... | 24 |
| 5.2 | First Fires..... | 24 |
| 5.3 | Operating the Combustion Air Control..... | 24 |
| 5.4 | Starting a High Efficiency Fire..... | 25 |
| 5.5 | Adding a New Load of Wood..... | 26 |
| 5.6 | Blower Kit Operation..... | 26 |
| 6 | TROUBLESHOOTING..... | 27 |
| 6.1 | Backdraft / Smoking..... | 27 |
| 6.2 | Over Firing..... | 27 |
| 7 | MAINTENANCE..... | 28 |
| 7.1 | Disposal of Ashes..... | 28 |
| 7.2 | Chimney Maintenance..... | 28 |
| 7.3 | Cleaning of Glass..... | 29 |
| 7.4 | Replacing a Cast Iron Panel..... | 29 |
| 7.5 | Replacing the Door Gasket..... | 29 |
| 7.6 | Replacing the Glass Panel..... | 30 |
| 7.7 | Door Latch Maintenance..... | 30 |
| 7.8 | Paint..... | 30 |
| 7.9 | Replacement Parts..... | 31 |
| 8 | WARRANTY..... | 32 |
| 8.1 | Warranty Limitations..... | 32 |

1 SAFETY

SUPREME FIREPLACES INC. congratulates you on purchasing an Astra Duo wood burning fireplace. This manual describes the installation and operation of the Astra Duo non-catalytic wood heater. The Astra Duo 38 model meets the 2020 U.S. Environmental Protection Agency's cordwood emission limits for wood heaters sold after May 15, 2015. Under specific test conditions, this heater has been shown to deliver heat at rates ranging from 17,524 to 61,231 Btu/hr. In addition, this fireplace complies with the ULC-S610 and UL-127 standards.

SAFETY NOTICE: Carefully read this manual before installation and operation of this fireplace. A house fire may result if not properly installed. To reduce the risk of a fire, follow the installation instructions. Failure to follow instructions presented in this manual can lead to property damage, bodily injury or even death. Alterations or modifications made on the unit or the installation is strictly forbidden as it may predispose the user to hazardous risks. Contact your local building or fire officials for restrictions and installation inspection requirements in your area and the need to obtain a permit.

WARNING: This unit is hot during operation; keep children, pets, flammable liquids, or combustible materials at a safe distance. Ensure that all clearances to combustible materials are respected. Contact with the unit during operation may cause severe harm. Install a safety screen to keep children and pets away. To avoid the risk of damaging fireplace materials and increasing the risk of spreading a fire, do not use this fireplace to cook or warm food.

CAUTION:

- Do not connect this unit to a chimney flue serving another appliance.
- Do not connect to any air distribution duct or system.
- Never use chemicals to ignite the fire.
- Never burn waste or flammable fluids (such as gasoline, naphtha, or engine oil).
- Only burn dry natural cordwood.
- Never leave the unit unattended with the door open or unlatched.
- Only refuel this unit when the wood is reduced to embers.
- Always keep the door closed during operation.
- Do not operate this unit with a fireplace grate.
- Do not install an unvented gas log set into the firebox.
- Do not install this unit in a mobile home.
- Do not clean or service the unit while it is hot.
- Do not use a fireplace insert or other products not specified for use with this fireplace.
- Allow proper air flow by keeping the louvers/openings clear of any obstructions.

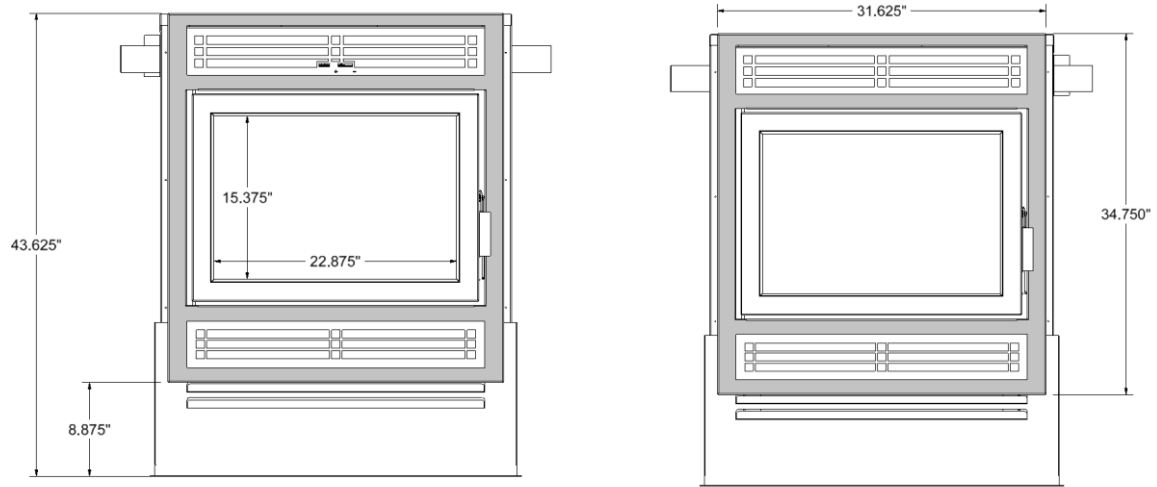
Note: Failure to respect the above cautions may cause damages to the unit, damages to personal property, bodily harm and will void the warranty. "This wood heater needs periodic inspection and repair for proper operation. It is against federal regulations to operate this wood heater in a manner inconsistent with operating instructions in this manual."



This product can expose you to chemicals including carbon monoxide, which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65warnings.ca.gov/

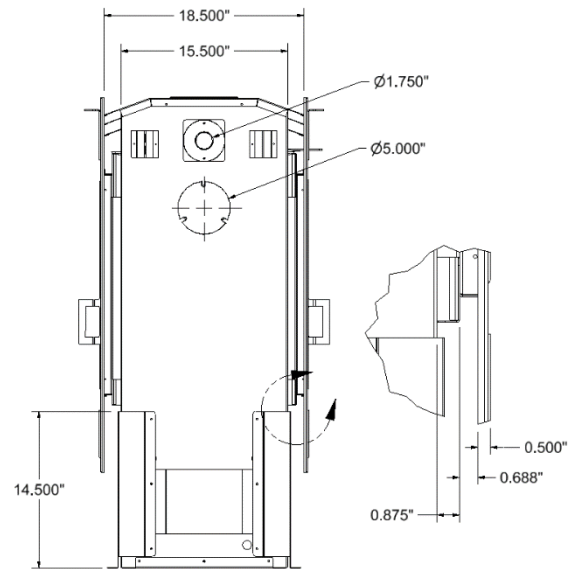
2 GENERAL INFORMATION

2.1 Dimensions – Astra Duo 38 Traditional

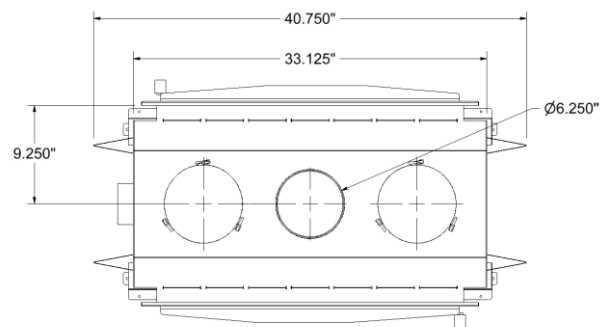


FRONT VIEW

BACK VIEW

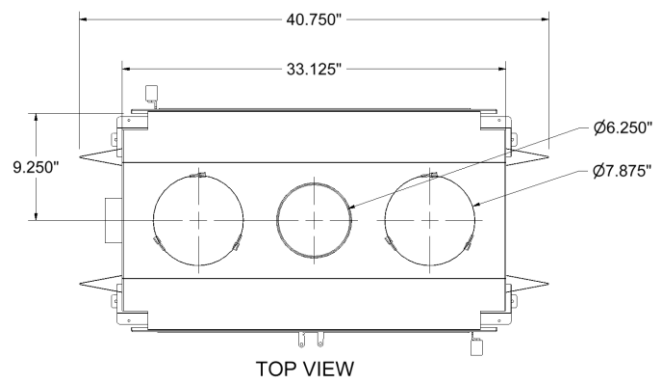
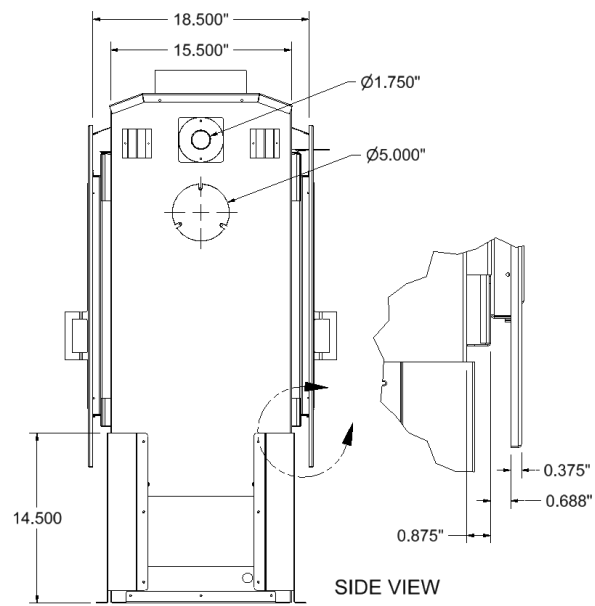
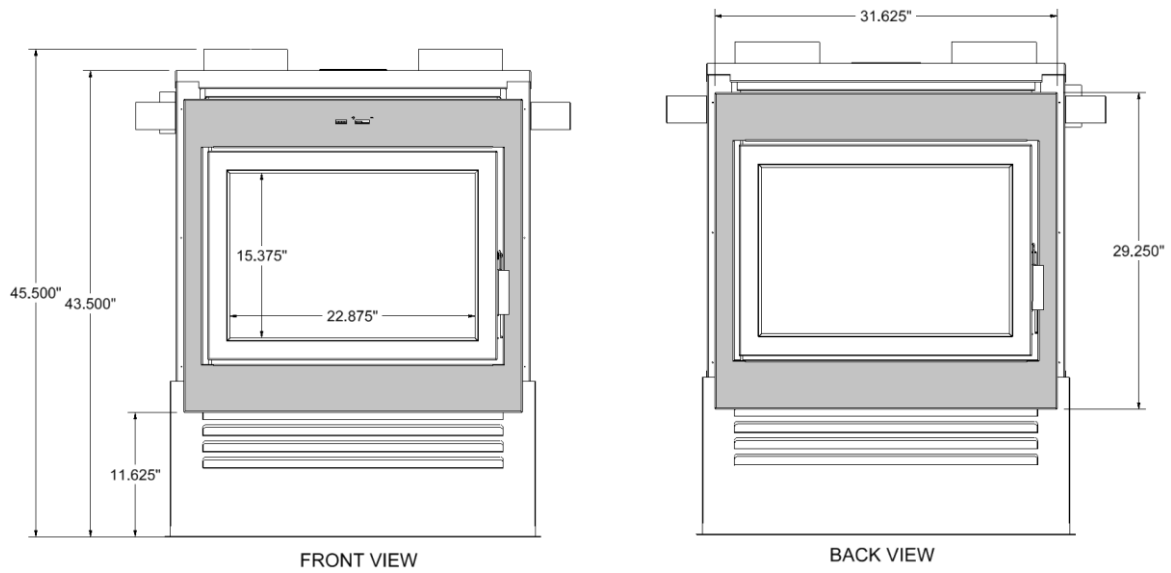


SIDE VIEW



TOP VIEW

2.2 Dimensions – Astra Duo 38 Contemporary



2.3 Specifications

| | |
|--|--|
| Model: | Astra Duo 38 |
| Appliance Type | Adjustable Burn Rate Wood Heater – Non-Catalytic |
| Fuel Type: | Dry Cordwood |
| Maximum Log Length: | 24 in (60.9 cm) |
| Burn Time¹: | 6 to 12 hrs |
| Firebox Volume²: | 3.80 ft ³ (0.108 m ³) |
| Heating Area: | 1,000 to 2,500 ft ² (93 to 232 m ²) |
| Average Particulate Emissions Rate³: | 2.16 g/hr |
| Average CO Emissions Rate⁴: | 185.7 g/hr |
| EPA Protocol: | Method ALT-125 |
| Efficiency (Crib Wood): | HHV ⁵ : 64.98% LHV ⁶ : 69.92% |
| Heat Output (Crib Wood): | 17,524 to 61,231 BTU/hr (5,136 to 17,945 W) |
| Optimum Efficiency: | 75% |
| Optimum Heat Output: | 125,000 BTU (36.6 kWh) |
| Efficiency Protocol: | CSA B415.1-10 |

WARRANTY REGISTRATION

Please register your SUPREME product online at <http://www.supremem.com/warranty.php> to ensure full warranty coverage. Proof of purchase is required for all warranty claims.

¹ Depending on combustion air control setting (see Section 5.3 for further details).

² Usable volume according to ASTM E2780-10 standard is calculated at 3.40 ft³ - figure used in EPA Method 28R testing.

³ Officially tested and certified by an independent laboratory.

⁴ Note that rate is smaller for low to medium/low burn rates.

⁵ Higher Heating Value.

⁶ Lower Heating Value.

2.4 Combustion Air Control

The Combustion Air Control is a patented mechanism (Patent No: US 7,325,541 B2) that regulates the air flow into the firebox based on the temperature of the unit. It is located on the top of the firebox, at the front center of the unit. The combustion air control of the Astra Duo has two components: the Activator and the Burn Rate Selector (see Figure 2-1). The left combustion control lever is the Activator. When starting a fire or adding a new load of wood, the Activator must be pushed in to allow a primary source of air to enter the firebox. The Activator will retract automatically with heat. The right combustion control lever is the Burn Rate Selector. The Burn Rate Selector can slide sideways to achieve different burn rates. When the Burn Rate Selector is positioned to the left, a maximum burn rate is achieved and when it is positioned to the right, a minimum burn rate is set.

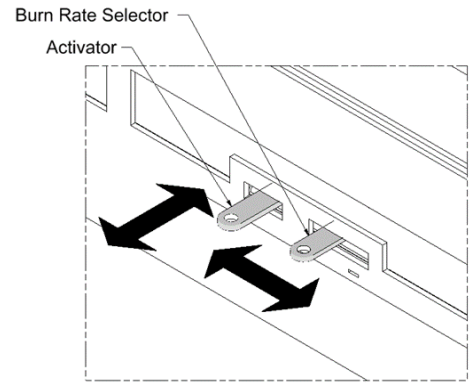


Figure 2-1: Primary Air Control

WARNING: Never manipulate the Combustion Air Control with bare hands as it gets hot when the Astra Duo is in operation. Use the Cold Hand Key (see Section 2.5) to adjust the Combustion Air Control.

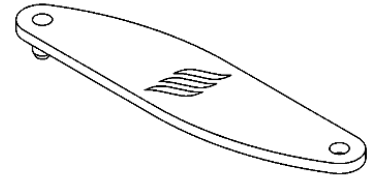


Figure 2-2: Cold Hand Key

2.5 Cold Hand Key

The Cold Hand Key is an accessory that comes standard with the Astra Duo fireplace (Figure 2-2). The Cold Hand Key is a tool used to manipulate the Combustion Air Control Levers when they are hot.

2.6 Baffle Secondary Burn Technology

The baffle system (38SFD1150) of the Astra Duo fireplace is located within the upper portion of the firebox and is fastened by 8 bolts (3/8 Hex). SUPREME baffle systems are constructed out of a specific grade of stainless steel capable of withstanding high-temperature conditions. The secondary combustion air is drawn into the baffle system, pre-heated, and distributed below the lower plate, allowing for a cluster of small flames flowing downwards. This effect is more visible in the minimum burn rates. For optimal performance, it is recommended to clean any creosote build-up on the lower plate of the baffle system.

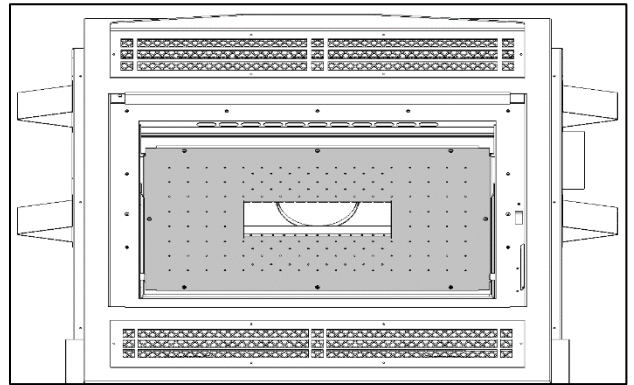


Figure 2-3: Baffle Secondary Burn Technology

2.7 Chimney Sweeping Cap

The chimney sweeping cap found at the baffle of the Astra Duo allows easy access for chimney sweeping without having to remove any components of the firebox (Figure 2-4).

WARNING: The chimney sweeping cap should be blocking the access to the chimney at all times during combustion. A chimney sweeping cap that is not blocking the baffle hole during combustion is a safety hazard, will overheat the fireplace and void the warranty.

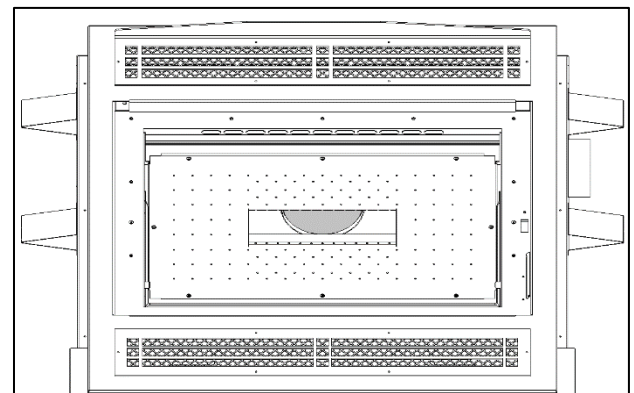


Figure 2-4: Chimney Sweeping Cap

2.8 Door

The Astra Duo wood burning fireplace comes with a Pyroceramic glass panel door. Pyroceramic is the highest grade available for fireplaces and stoves and can withstand temperatures up to 1300°F. To remove the door, open the door, lift it and pull it towards the bottom until the rod exits from the hinge holes.

2.9 Certification Label

The certification label contains important information regarding the installation and operation of the Astra Duo fireplace. In addition, the serial number of the unit is permanently embossed onto the top right corner. See Figure 2-5 for the location of the certification label.

2.10 Removable Ash Lip

The Ash Lip is a removable accessory that comes standard with the Astra Duo fireplace. It is installed on the door holder (under the two small pins below the door) and prevents ashes from falling onto the front of the hearth. The Ash Lip can be installed with the door open or closed. It is safe to operate the unit without the Ash Lip.

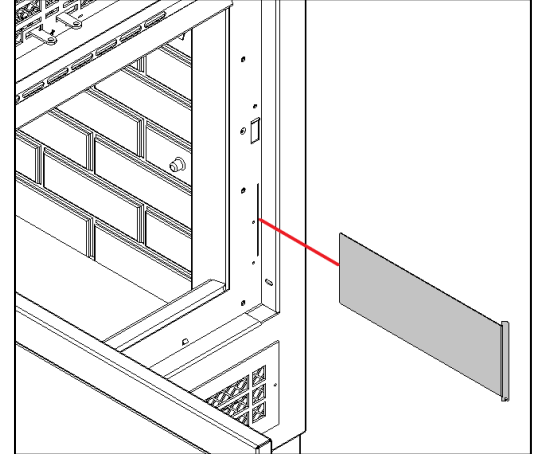


Figure 2-5: Serial Number Location

NOTE: The door of the Astra Duo must always remain closed during operation.

2.11 Cast Iron Interior

The Astra's stainless steel firebox is lined with cast iron panels for an extra layer of durability and strength. Designed to provide long-lasting heat and thermal protection, these industry-first, decoratively stamped panels also provide the added benefit of the timeless beauty of cast iron. Forged in fire, tempered with time, the Astra offers a lifetime of warmth.

2.12 Blower Kit

An AC tangential blower (electrical rating: 115V, 60Hz, and 56W) with a variable speed control is installed into the Astra Duo wood burning fireplace to maximize efficiency. Refer to Section 3.9 for installation instructions.

WARNING: Make certain that the fireplace is not in operation and the blower is unplugged (breaker off) before accessing the electrical wiring of the blower kit.

CAUTION: Only a blower provided by SUPREME FIREPLACES INC. can be installed into the fireplace. Substituting the blower kit may result in overheating, will void the warranty and can be hazardous.

2.13 Optional Hot Air Kit

The Optional Hot Air Kit (kit number SU250) allows heat to be drawn from the unit by a thermostatically controlled blower (electrical rating: 115 V and 60 Hz) and dispersed to different areas of the house. This option is recommended when the fireplace is installed in an area below the maximum heating space. A total of three kits can be installed onto one unit with a maximum distance of 25 feet each. Note that a 5 inch insulated duct (part number UCAC5) is required for the installation (item ordered separately). Refer to Section 4.1 for installation instructions.

WARNING: Make certain that the fireplace is not in operation and that hot air blower is not powered (breaker off) before accessing the electrical wiring of the hot air kit.

CAUTION: Only a hot air kit provided by SUPREME FIREPLACES INC. can be installed onto the fireplace. Substituting the hot air kit may result in overheating, will void the warranty and can be hazardous.

2.14 Optional Fresh Air Kit

The Optional Fresh Air Kit (kit number UPEA4) allows for exterior air (outdoors) to be drawn into the fireplace during operation of the unit. Note that a 4 inch insulated duct is required for the installation (item ordered separately). Refer to Section 4.2 for installation instructions. Contact your local building official regarding mandatory fresh air kit installations within your area.

CAUTION: Only a fresh air kit provided by SUPREME FIREPLACES INC. can be installed onto the fireplace. Substituting the fresh air kit may result in overheating and will void the warranty.

2.15 SUPREME Roof Radiation Plate

The SUPREME Roof Radiation Plate is a standard component for the Astra Duo fireplace. Prior to installing the chimney, the SUPREME Roof Radiation Plate is fastened on the four sides of the chimney opening in roof.

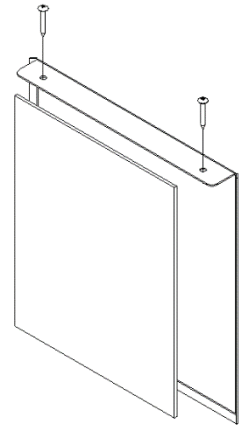


Figure 2-6: SUPREME Roof Radiation Plate

3 INSTALLATION INSTRUCTIONS

Before installing the unit, consult an authority having jurisdiction (such as your municipal building department, your fire department, your fire prevention department...) for any local codes and whether a permit is required. In the absence of local codes, refer to the CSA B365 Installation Code for Solid Burning Appliances and Equipment (Canada) or the ANSI NFPA 211 Standard for Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances (USA).

CAUTION: Modifications/alterations to the unit/installation without written authorization from SUPREME FIREPLACES INC. are strictly forbidden and will void the warranty. Refer to Section 1 for further safety information. Carefully read the instructions below before installing your Astra Duo.

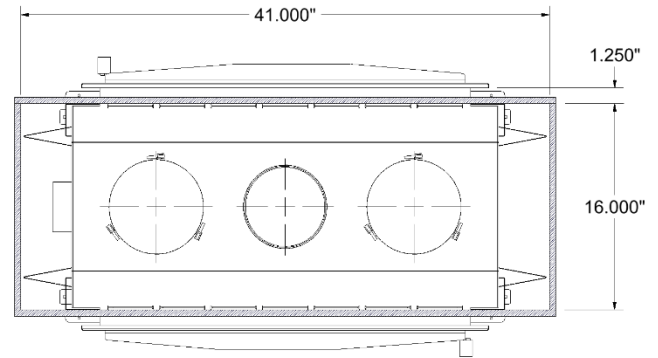


Figure 3-1: Straight Wall Installation

3.1 Location

Determine the location of the Astra Duo by taking into consideration the following criteria:

- The size of the room with respect to the heat output of the fireplace.
- The proximity of windows, doors, and traffic flow.
- The necessary amount of space in front of the unit for the hearth extension and mantel (Refer to Sections 3.6 and 3.8).
- The clearances to combustible materials.
- The passage of the chimney.

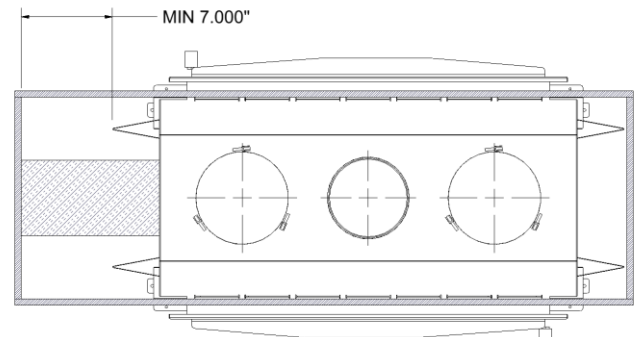


Figure 3-2: Space Requirement for Fresh Air Kit
Refer to Section 4.2

If possible, select a location for the fireplace that will minimize the number of offsets in the chimney course. Offsets will reduce the draft, complicate the chimney sweeper's work, and increase installation costs. Do not install an offset directly onto the unit/anchor plate. Technical drawings outlining the chimney route should be prepared prior to the installation. NOTE: The cutting of joists and rafters for floor, ceiling, and roof chimney penetrations will affect the load bearing capacities of the dwelling structure. To determine whether additional support is required, consult your local building codes. Improper cutting of chimney openings in the attic and roof will affect the bearing and thermal insulating capacity, as well as the weather tightness of the dwelling. Avoid incorrect workmanship by consulting a professional engineer or a certified installer.

Through examination of the floor construction, ensure that the fireplace and chimney system is resting on a surface capable of withstanding its weight. Consult your building codes to see whether additional structural supports are required (applicable for rare and isolated cases).

Avoid having the chimney outlet near any obstructions (such as trees and roof offsets) as the draft of the chimney may be affected by wind turbulence. Ideally position the outlet of the chimney at the highest area of the roof.

NOTE: Install a carbon monoxide (CO) and smoke detector near the location of the unit with respect to the requirements of the authority having jurisdiction in your area.

3.2 Chimney Installation

The Astra Duo is approved with a 6" chimney that is listed under the UL 103 / ULC S629 standards (refer to Table 3-1). **WARNING: Mixing chimney components from different brands is a safety hazard and will void the warranty on the unit.** When connecting the unit to an existing chimney, thoroughly inspect the condition of the chimney and that the installation conforms to the requirements of the chimney manufacturer and the building codes. **Note that to avoid any unnecessary risk, it is often recommended to replace the chimney system.** Always respect the clearances to combustibles from the chimney manufacturers; a minimum clearance of 2 inches is usually required for prefabricated chimneys.

3.2.1 General Rules and Guidelines

1. Carefully read the instructions from the chimney manufacturer prior to installation (manuals can be obtained from the chimney manufacturer's website or from the vendor). Unless specified, follow the chimney manufacturer's instructions for proper installation.
2. For optimal performance of the unit, it is recommended to install the chimney system in an interior setting. To prevent drafting issues and creosote buildups, avoid exterior installations of the chimney system in regions that experience extreme cold conditions.
3. The minimum and the maximum height of the chimney from the base of the unit are 15 and 35 feet respectively.
4. A minimum length of 12 inches of straight chimney is required from the top of the unit before having an offset.
5. Only chimneys approved under the UL 103 / ULC S629 standards can be installed onto the unit (refer to Table 3-1 in Section 3.2.2).
6. A 6 inch anchor plate is required to connect the fireplace to the chimney system. The anchor plate can be secured onto the unit with 4 self-tapping screws.
7. The chimney installed onto the unit cannot be connected to another appliance.
8. Enclose any portion of the chimney that extends to accessible spaces.
9. The clearance of the chimney to any combustible material cannot be less than 2 inches. **WARNING: The 2 inch clearance cannot be filled with insulation or any non-combustible material.**
10. At least one support is to be incorporated in any chimney installation.
11. A firestop is required in the joists/frames where the chimney goes through (ceilings, floors, walls, and attic). Assure that the joist opening is constructed in a way that the firestop is overlapping by a minimum 1" (25 mm) on all 4 sides. A spacer shall provide for substantial continuous interference with the framed joist opening for a height or depth of not less than 1" (25 mm). A joint between factory-made parts which provide for firestopping is not to have a through opening greater than 1/8" (3 mm) wide. Refer to chimney manufacturer's installation instructions.
12. A roof assembly shall resist the accumulation of soot and debris therein when such accumulation obstructs flue-gas or cooling-air passages. An opening, other than one for flue gas passage, shall not have an entrance of a 1/2" (12.7 mm) diameter rod.
13. A roof and a vented flashing are required in the installation of the Astra Duo. A roof flashing assembly that provides for ventilation shall be constructed so that soot or debris shall not accumulate on the assembly to the extent that ventilation openings intended to remain open are obstructed. The ventilation shall be provided by one or more fixed openings surrounding the chimney and the assembly shall comply with all of the following:

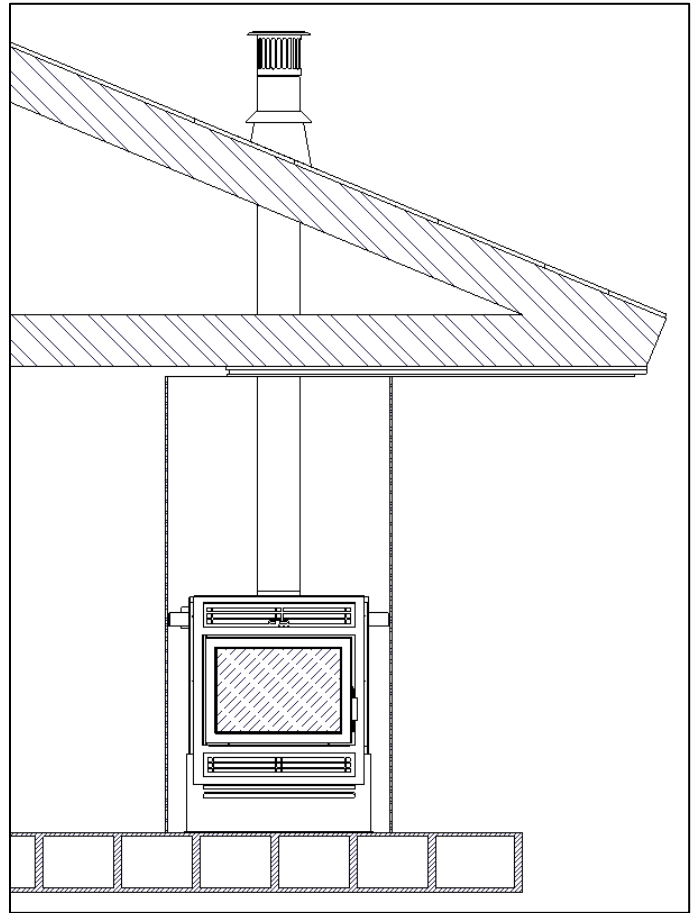


Figure 3-3: Straight Interior Installation

- a. The openings shall not permit entrance of a ¼” (6.4 mm) diameter rod.
 - b. The lowest portion of the opening in the flashing shall not be less than 6” (152 mm) above the roof, measured perpendicular to the roof.
 - c. The assembly shall incorporate a storm collar.
 - d. The intended openings shall be maintained by means of spacers factory-attached to the flashing, or designed openings in the assembly.
14. To prevent drafting issues, avoid deviations wherever possible.
 15. The chimney shall extend at least 3 feet above its point of contact with the roof and at least 2 feet higher than any wall, roof, or adjacent building within a 10 foot radius.
 16. A secure brace is to be installed if the chimney extends a minimum of 5 feet above the contact point with the roof.
 17. A rain cap must be installed on top of the chimney to resist the entrance of debris and excess rain into the flue-gas-conveying conduit and into any cooling-air passage terminating exterior to the building.
 18. A cap shall be constructed so that leaves and debris falling or blown onto it are not retained, obstructing the flue-gas or cooling-air passages. A cap shall be constructed to resist accumulation of soot that obstructs flue-gas or cooling-air passages. An opening, other than one for flue gas passage, shall not have an entrance of a ½” (12.7 mm) diameter rod.
 19. A cap shall be removable and replaceable, without bending or deforming the chimney or parts thereof, using common hand tools, such as flat blade or Phillips head screwdrivers, hand pliers, wrenches, and other tools, to meet the intent of the requirement for chimney cleaning in accordance with the operating instructions.
 20. Consult the chimney manufacturer for clearances to combustibles when installing a combustible chimney enclosure above the roof.

3.2.2 Listed UL 103 / ULC S629 Approved Chimney Models (Reference Table)

Note that only chimney models listed in Table 3-1 can be installed for the Astra Duo.

Table 3-1: List of Approved Chimney Models

| <u>Manufacturer</u> | <u>Models</u> |
|---------------------|--|
| American Metal | <ul style="list-style-type: none"> • HS, AC Triple Wall, 6” inner diameter • HSS, AC Triple Wall, 6” inner diameter |
| FMI (US only) | <ul style="list-style-type: none"> • AC, AC Triple Wall, 6” inner diameter |
| ICC | <ul style="list-style-type: none"> • Excel 2100, 1” Solid Pack, 6” inner diameter |
| Metal Fab | <ul style="list-style-type: none"> • Temp Guard, 1” Solid Pack, 6” inner diameter |
| Olympia Chimney | <ul style="list-style-type: none"> • Ventis, 1” Solid Pack, 6” inner diameter |
| Security Chimney | <ul style="list-style-type: none"> • ASHT+, 1” Solid Pack, 6” inner diameter • S-2100+, 2” Solid Pack, 6” inner diameter |
| Selkirk | <ul style="list-style-type: none"> • Super Pro (SPR), 1” Solid Pack, 6” inner diameter • Super Pro 2100 (ALT), 2” Solid Pack, 6” inner diameter • Hart & Cooley (TLC), 1” Solid Pack, 6” inner diameter • Sure-Temp (ST), 1” Solid Pack, 6” inner diameter • Super Vent (JSC), 1” Solid Pack, 6” inner diameter • Super Vent 2100 (JM), 2” Solid Pack, 6” inner diameter • Ultra-Temp (UT), 1” Solid Pack, 6” inner diameter • UltimateOne, 1” Solid Pack, 6” inner diameter • CF Sentinel (CF), 2” Solid Pack, 6” inner diameter |
| Simpson Dura-Vent | <ul style="list-style-type: none"> • Dura Tech, 1” Solid Pack, 6” inner diameter • Dura Plus HTC, 2” Solid Pack, 6” inner diameter • Dura Plus, AC Triple Wall, 6” inner diameter |

3.2.3 Chimney Installation Instructions

1. Cut and frame square openings in the floors, ceilings, and roof where the chimney will pass through while taking into consideration the minimum clearance to combustibles (refer to chimney manufacturer's manual).
2. In the ceiling/floor openings, install a chimney manufacturer's firestop and firestop spacer assembly from below. Install the chimney manufacturer's attic radiation shield and attic insulation shield from above in the chimney opening to the attic. **CAUTION: Maintain proper clearances between the chimney and the attic insulation. Please refer to the chimney manufacturer's manual and National Building Codes regarding proper and safe installation of the attic radiation shield and attic insulation shield.**
3. Install the chimney manufacturer's roof radiation shield in the opening of the roof, as well as the 4 SUPREME roof radiation plates (Figure 2-6 and Item 4 in Figure 3-4) – adjust the shield so that it is extruding approximately 1" above the roof surface. Ensure to install the appropriate firestop for ceilings and walls.
4. Install the chimney manufacturer's anchor plate onto the unit.
5. Install the chimney lengths according to the manufacturer's instructions and ensure proper fastening/locking of the joints.
6. Install the roof support once the desired height has been reached.
7. Position the vented roof flashing. Note that for sloping roofs, position the upper portion of the vented flashing under the shingles and position the lower portion of the vented flashing above the shingles. Seal the joint between the roof and the vented flashing with roofing cement or silicone. Secure the vented flashing to the roof with roofing nails.
8. Install the storm collar over the vented flashing by tightening the supplied bolt or through the flange mechanism (depends on chimney brand). Seal the joint between the storm collar and the chimney using a silicone caulking. **WARNING: Do not seal, caulk, or obstruct the ventilation openings.**
9. Install the chimney rain cap.

Refer to Figures 3-3 and 3-4 for typical chimney installations.

3.2.4 Offset Installation

An offset installation (Figure 3-4) consists of the use of elbows to deviate from unavoidable obstacles or to extend the chimney outside. The following list is a few general rules to take note when installing offsets:

- A maximum of 2 offsets (2 elbows per offset) is permitted per installation.
- A minimum length of 12 inches of straight chimney is required from the top of the unit before having an offset.
- The maximum deviation is 45° in Canada and 30° in the US.
- Secure the elbows and the chimney components according to the instructions from the chimney manufacturer.
- A support strap, a wall support, or a roof support must be installed above each offset to allow adequate support to the vertical chimney lengths.
- **Never install an elbow in an opening of a floor, wall, ceiling, or roof.** In addition, only vertical chimney sections can be installed within ceiling/floor openings.
- A minimum length of 12 inches of straight chimney is required from the top of the unit before having an offset.
- Install a support for the first 15 feet of chimney.

The following are instructions for offset installations:

1. Rotate the elbow in the required direction and secure it to the adjacent chimney section according to the chimney manufacturer's instructions.
2. Follow the chimney manufacturer's instructions to install the chimney length(s) necessary for the offset.
3. Once the desired offset length has been achieved, install the second elbow to redirect the venting to the vertical position.
4. Cut an opening in the floor/ceiling to allow the chimney to pass through.
5. Install the appropriate firestop and firestop-spacer assembly.

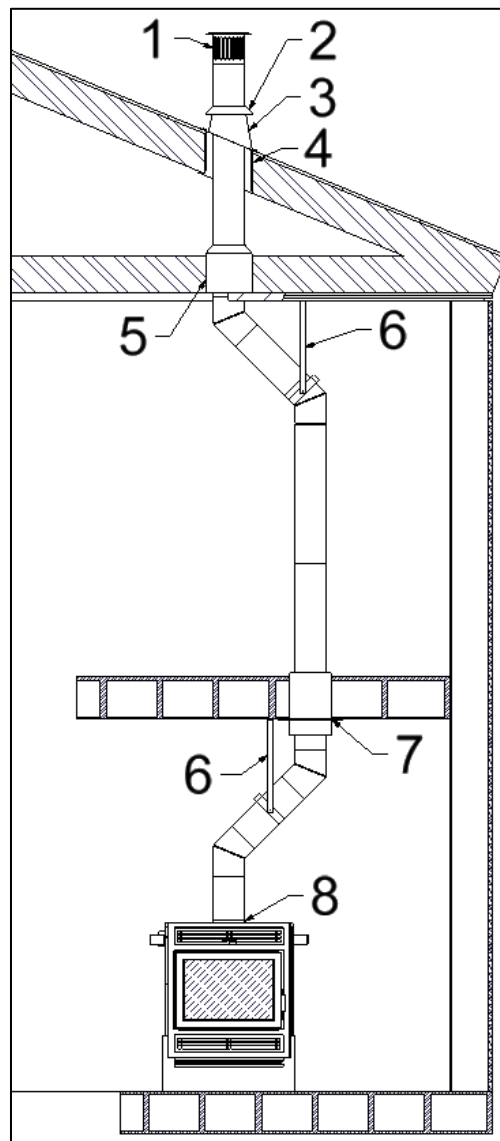


Figure 3-4: Standard Offset Installation

CAUTION: For offset installations, always install a ventilated flashing and a roof firestop unless otherwise specified by the chimney manufacturer. Never install an elbow directly onto the unit.

3.2.5 Angled Wall Radiation Shield

For chimney installations requiring to pass through a combustible wall at a 30° (Canada) or 45° (Canada and US) angle, an angled firestop or an angled wall radiation shield from the chimney manufacturer must be installed within the wall opening. Install the angled firestop and angled wall radiation shield according to the manufacturer's instructions. It is recommended to use an insulated angled wall radiation shield in areas that experience cold climates.

Table 3-2: Standard Offset Installation - Item Description

| Item | Description |
|------|------------------------|
| 1 | Rain Cap |
| 2 | Storm Collar |
| 3 | Vented Roof Flashing |
| 4 | Roof Radiation Plates |
| 5 | Attic Radiation Shield |
| 6 | Offset Support |
| 7 | Radiation Shield |
| 8 | Anchor Plate |

3.2.6 Connecting to a Masonry Chimney

The Astra Duo fireplace can be connected to a masonry chimney that complies with current national and municipal building codes. A 6 inch chimney liner that complies with ULC S635 M2000 (Canada) or UL 1777 (US) standards must be installed within the existing masonry chimney. Note that the 6CON connector (manufactured by SUPREME FIREPLACES INC.) must be installed to connect the prefabricated chimney to the liner (6CON sold separately). Refer to Figure 3-5 and Figure 3-6.

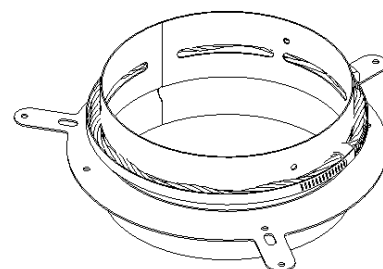


Figure 3-5: 6CON Liner Connector

Note that prior to installation, an inspection from an authority having jurisdiction is required to determine whether the masonry chimney:

- Is constructed in accordance with national and municipal building codes.
- Is in good condition. Note that repairs must be performed on any cracked or missing bricks.
- Is thoroughly cleaned of any soot or creosote.
- Is not connected to another appliance such as a furnace, hot water heater, or another fireplace.
- Has a flue of adequate size for proper installation of the venting.
- Respects minimum clearances to combustibles.

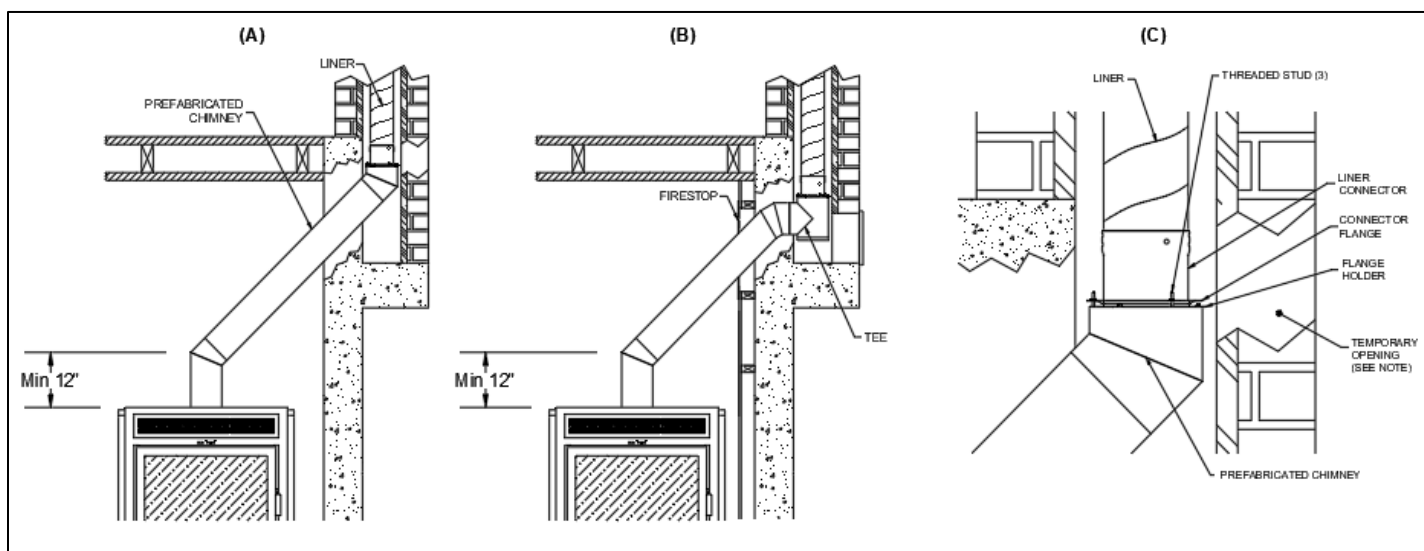


Figure 3-6: (A) Connection into a masonry chimney through an elbow/liner; (B) connection into a masonry chimney through a tee/liner; (C) detailed drawing of masonry chimney connection.

It is recommended to position the fireplace as close as possible to the masonry chimney to ensure proper venting. The prefabricated chimney must penetrate at least 3 inches within the masonry chimney before connecting the liner. Elbows can be used within the masonry chimney, with a maximum deviation of 30° in US and 45° in the Canada. **Note: A minimum length of 12 inches of straight chimney is required from the top of the unit before having an offset.**

The installation of the prefabricated chimney and the liner must comply with the manufacturer's instructions. The following are instructions in installing the venting of the Astra Duo running through a masonry chimney:

1. Install the anchor plate onto the unit.
2. Position the fireplace to the recommended location.
3. Install the initial prefabricated chimney lengths and elbows.
4. Mark the area where the prefabricated chimney will penetrate the masonry chimney.
5. Remove the fireplace to allow for sufficient space to work.

6. Make a hole to the required size to allow for the prefabricated chimney to be inserted freely in the masonry chimney. Note that the appropriate firestops need to be installed if running the prefabricated chimney through a combustible wall.
7. Install the remaining prefabricated chimney components center with the masonry chimney.
8. Align the flange holder of the 6CON connector with the studs facing upwards to the center of the prefabricated chimney section (elbow or tee) and secure it with three self-tapping screws.
9. Reposition the fireplace to its initial position.
10. Overlap by 1 inch the lower end of the liner in the expanded portion of the 6CON connector and secure the joint with 3 #8 stainless steel self-tapping screws.
11. From the roof, slide the liner down the masonry chimney until it reaches the upper end of the prefabricated chimney.
12. Install the upper portion of the 6CON liner connector to the flange holder by aligning the threaded studs to the holes and complete the connection by tightening the wing nuts.
13. Seal any openings around the prefabricated chimney and the 6CON connector with refractory cement resistant to high temperatures.

3.3 Surround Installation

The Astra Duo can be installed with either the traditional surround or the clean face surround.

3.3.1 Traditional Surround

The Traditional surround comprises louvers below (intake) and above (outtake) the door. All components and fasteners are included in the surround kit. Refer to Figure 3-7 and Table 3-3 for the instructions below.

1. Remove the door of the unit and place it on a soft surface, such as a carpet or cardboard, to avoid any scratches or damages.
2. Place the Front Traditional surround (Item 1 in Figure 3-7) within the door holder and secure it in place with four black screws (one on each corner). Make sure that the handles of the Combustion Air Control pass through the slots of the surround.
3. Repeat Step 2 with the Back Traditional surround (Item 2 in Figure 3-7).
4. Fasten the Lower Framing Brackets to the side exterior casing of the unit as illustrates in Figure 3-7. Note that these brackets can be adjusted for framing purposes.
5. Reinstall the door onto the unit.
6. Secure the Intake Swivel Covers on the bottom sides of the unit to the closed position (Figure 3-7).
WARNING: For Traditional surround installations only.

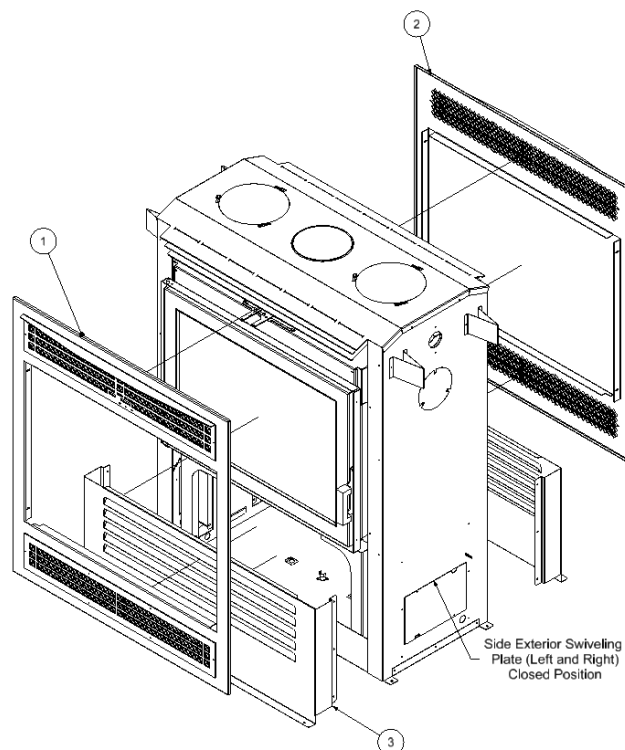


Figure 3-7: Traditional Surround

Table 3-3: 3238ATFA-11 Components

| TRADITIONAL SURROUND | | |
|----------------------|----------------------------|-----|
| ITEM | DESCRIPTION | QTY |
| 1 | Front Traditional Surround | 1 |
| 2 | Back Traditional Surround | 1 |
| 3 | Lower Framing Brackets | 2 |

3.3.2 Contemporary Surround

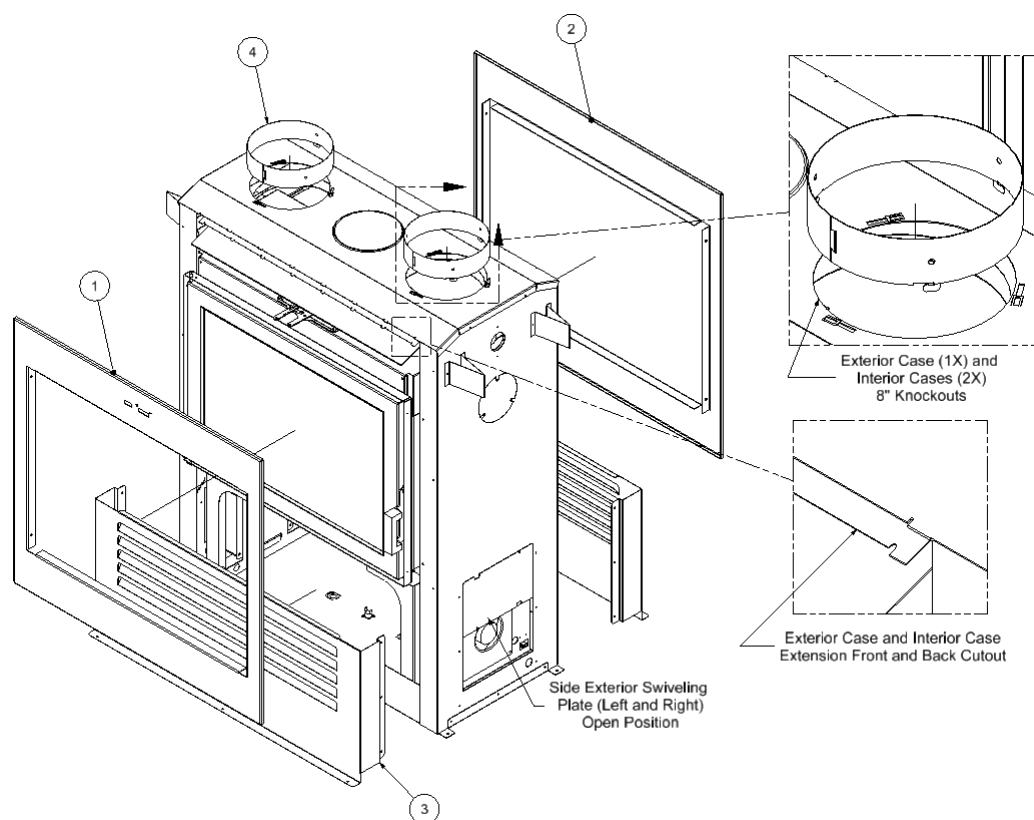


Figure 3-8: Contemporary Surround

The Contemporary surround comprises no louvers; however, an intake into the chase and an outtake through gravity ducts is required for this configuration. The instructions below describe the installation of the Contemporary surround. Refer to Figure 3-8 and Table 3-4 for the instructions below. Refer to Section 3.5 for Gravity Kit installation instructions.

Table 3-4: 3238ATFA-12 Components

| CONTEMPORARY SURROUND | | |
|-----------------------|-----------------------------|-----|
| ITEM | DESCRIPTION | QTY |
| 1 | Contemporary Front Surround | 1 |
| 2 | Contemporary Back Surround | 1 |
| 3 | Lower Framing Brackets | 2 |
| 4 | Duct Adapter | 2 |

1. Remove the door of the unit and place it on a soft surface, such as a carpet or cardboard, to avoid any scratches or damages.
2. Bend upwards the exterior and interior case extensions at the front and back of the unit. Note that these extensions can be removed by swiveling back and forth until the metal shears off.
3. Place the Front Contemporary surround (Item 1 in Figure 3-8) within the door holder and secure it in place with 4 black screws (one on each corner). Make sure that the handles of the Combustion Air Control pass through the slots of the surround.
4. Repeat Step 3 with the Contemporary Back surround (Item 2 in Figure 3-8).
5. Reinstall the door onto the unit.
6. Secure the Intake Swivel Covers on the bottom sides of the unit to the **open** position (Figure 3-8).
7. Remove the 8 inch knockouts at the top exterior case (2X), the top interior case (2X) and the top interior shield (2X) of the unit using a flat head screwdriver (Figure 3-8).
8. Install the 8 inch duct adapters (Item 4 in Figure 3-8) on the newly cut knockouts of the exterior case by aligning/inserting the tabs to the slots and turning counter clockwise to lock in place (Figure 3-8).

3.4 Framing

The Astra Duo can be placed directly onto or against normal, combustible construction materials such as lumber, plywood, millboard, particleboard, drywall, and decorative wood paneling. **WARNING: The fireplace should**

NOT be placed directly against or be in contact with an insulation material. The framing on the face of the chase, as well as above the unit, must be constructed with nominal 2" x 3" or 2" x 4" metal studs. Note that any framing exceeding the 2.75" lateral standoffs can be constructed of 2" x 3" or 2" x 4" lumber. Refer to Figure 3-9 for examples of a framing design based on the surround configuration. The framing must be nailed or screwed onto the floor and to the ceiling.

Note a minimum distance from the ceiling to the top louver frame of 2" and from the base of the unit to the bottom louver frame of 76.5".

CAUTION: Respect the minimum framing requirements outlined in Figure 3-9 as well as the chimney manufacturer's clearances to combustibles.

WARNING: Do not nail or screw framing components onto the fireplace.

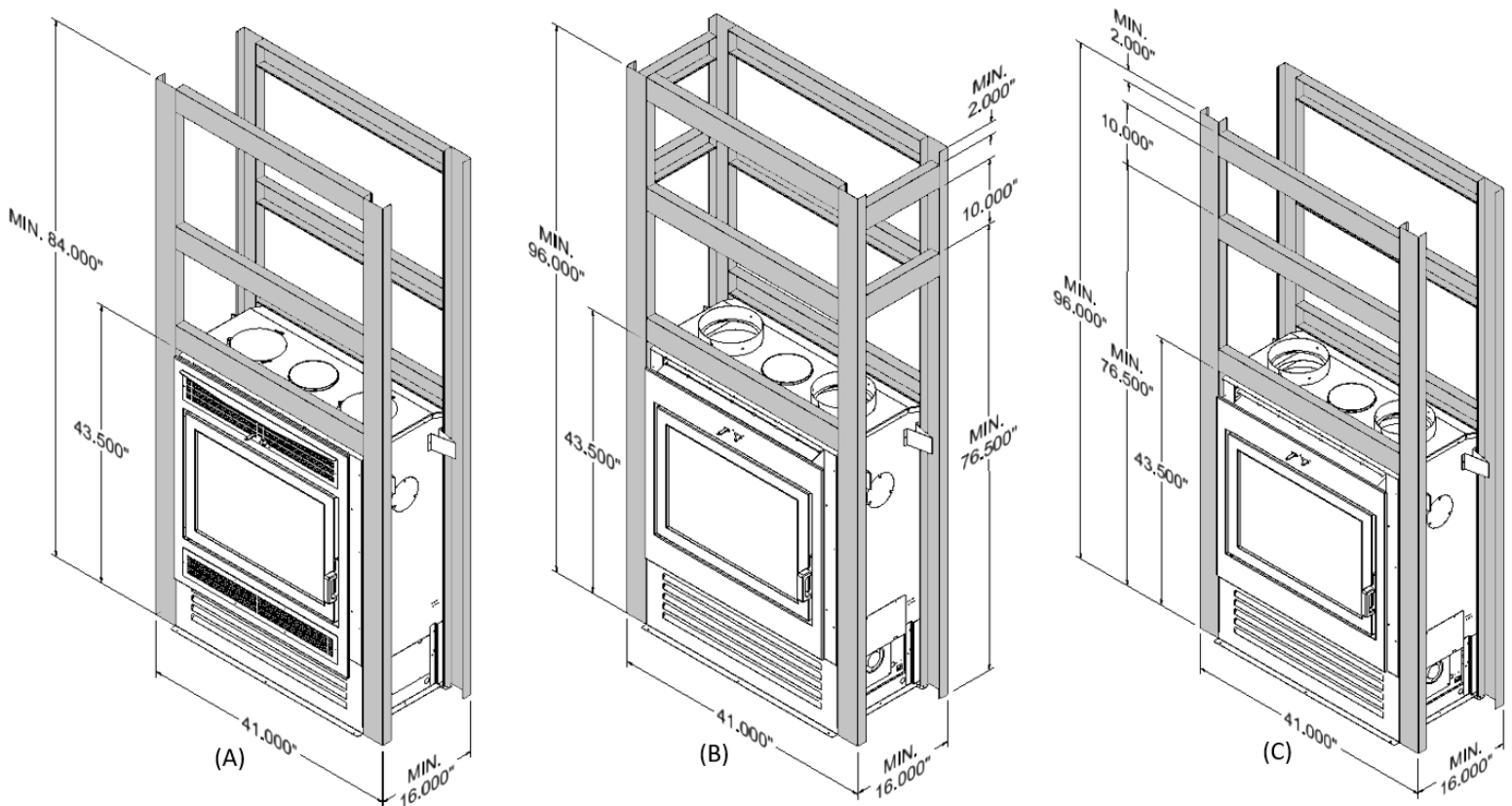


Figure 3-9: Astra Duo 38 Framing Design for (A) Traditional Surround Configuration, (B) Contemporary Surround with Side Wall 8" Gravity Ducts, and (C) Contemporary Surround Configuration with Front or Back Wall 8" Gravity Ducts

3.5 Gravity Kit Installation

The Clean Face surround comprises no louvers; however, an intake into the chase and an outtake through gravity ducts is required for this configuration. The instructions below describe the installation of the intake openings, and the gravity ducts/outtakes. Please note that the SUPREME KG550 kit is required for the Gravity Kit installation (Figure 3-10). Note that openings for the intake and the outtake are to be incorporated in the construction of the chase (refer to Section 3.7).

3.5.1 Dual Louver Gravity Ducts

1. Assure that Contemporary Surround assembly (Section 3.3.2) has been completed prior to continuing with installation of Dual Louver Gravity Ducts.
2. Determine the two locations of the air outtakes within the framing and permit 2 rectangular opening of 12" (W) and 12" (H). Note that a minimum distance of 76.5" is required from the floor and a minimum of 2" is required from the ceiling (Figure 3-9B and Figure 3-9C). Please note that the air outtakes can be installed in the same room or in different rooms from each other. It is recommended to install both outtakes at the same height for a more uniform heat output.

3. Within the outtake opening, fasten the 12" Louver Diffuser (Item 1 of Figure 3-10) to the framing with the 8" duct adapter facing the downward position. Repeat for the other outtake opening.
4. Measure the distance between the Duct Adapter on top of the unit to the Duct Adapter on the 12" Louver Diffuser and cut the 8" Flex Duct (Item 3 of Figure 3-10) to the necessary length. Repeat for the other outtake.
5. Complete the connections by sliding the 8" Flex Ducts over the Duct Adapters and secure the connections with the 8" Worm Gear Clamps (Item 3 of Figure 3-10).

WARNINGS:

- The gravity ducts must extend upwards from the top of the unit and cannot exceed 10 feet.
- The ducts should never extend downwards; only upwards.
- The air outtakes must be installed at a minimum of 76.5" from the floor.
- The gravity ducts must not be connected to a central heating system.
- A clearance must be maintained between the gravity ducts and the chimney.
- The intake swivel covers at the bottom sides must remain open for all Contemporary Surround installations (refer to Figure 3-8).

Refer to Section 3.7 and Section 3.8 for clearances to combustibles.

Table 3-4: KG550 Kit

| DUAL LOUVER GRAVITY DUCTS | | | |
|---------------------------|-------------|------------------------------|-----|
| ITEM | PART # | DESCRIPTION | QTY |
| 1 | LV3100 | 12" Louver Diffuser Assembly | 2 |
| 2 | CAC8 | 8" Flex Duct | 2 |
| 3 | WG CLAMP 8" | 8" Worm Gear Clamp | 4 |

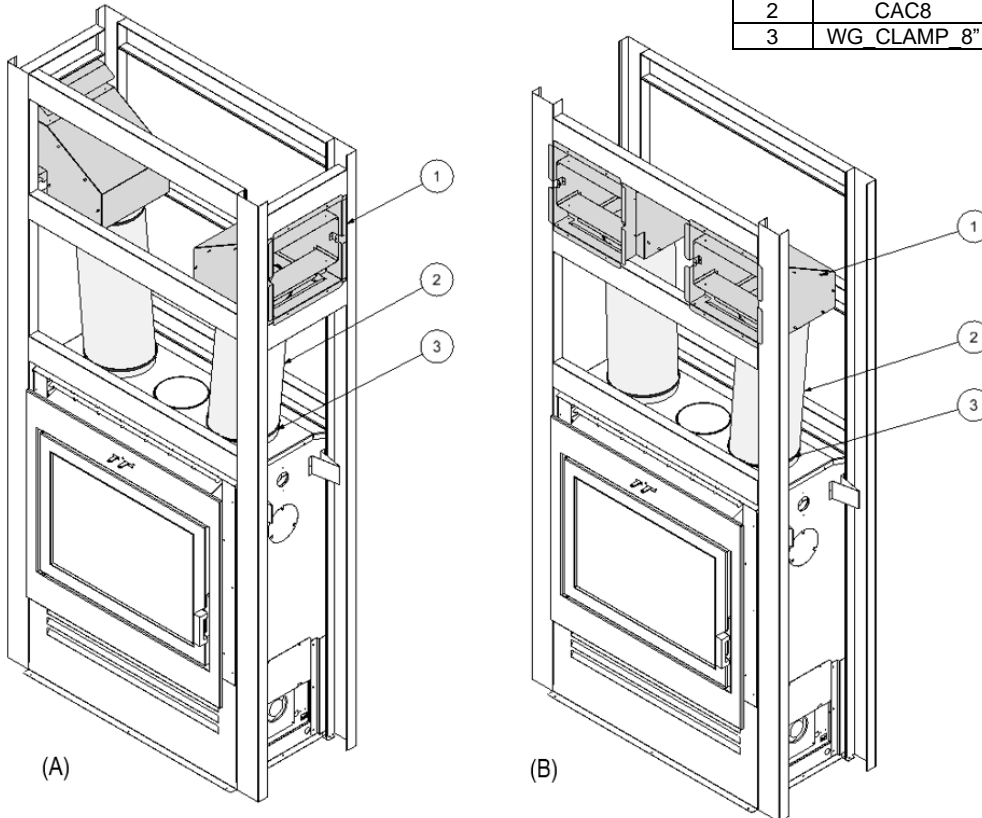


Figure 3-10: Astra Duo 8" Dual Gravity Duct Installation with Outtakes at (A) Side Wall and (B) Front or Back Wall

3.6 Hearth Extension

The hearth extension of the Astra Duo must comprise of a non-combustible material, such as steel, cement or mortar, bricks, or ceramic tiles. Note that unidentified materials may be combustible; verify product specifications prior to installation. The hearth extension must extend a minimum of 18" from the front of the door, a minimum of 16.5" from the outer edge of the door to the floor, 8" from side of the outer frame of the door and extended all the way to the unit (Figure 3-11 and Figure 3-12). Note that a hearth extension is required for the front and back of the unit.

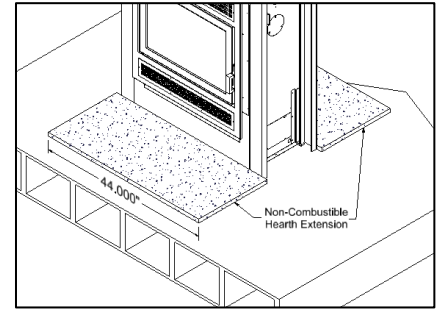


Figure 3-11: Astra Duo Hearth Extension Isometric View

A sealing strip of non-combustible material must be installed under the Astra Duo and the hearth extension (front and back). The sealing strip must cover the full length of the bottom exterior case of the fireplace and overlap a minimum of 2" of the fireplace and hearth extension (Figure 3-12); the minimum dimension of the sealing strip is 33.125" X 4.000". Note that sand-cement grout can substitute a sealing strip when installed between the fireplace and an on-site constructed hearth extension.

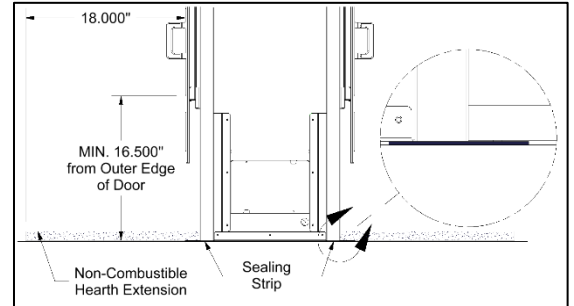


Figure 3-12: Astra Duo Hearth Extension Side View

CAUTION: Make sure to remove any carpet or fabric under the hearth extension.

3.7 Chase Installation

A portion of the front of the chase must be constructed out non-combustible material. Note the chase must be properly fastened onto the framing structure.

WARNING: Do not nail or screw the chase onto the fireplace. For the Contemporary Surround option, two intake openings must be constructed onto the chase, as well as two outtake openings. Refer to the figures and dimensions below.

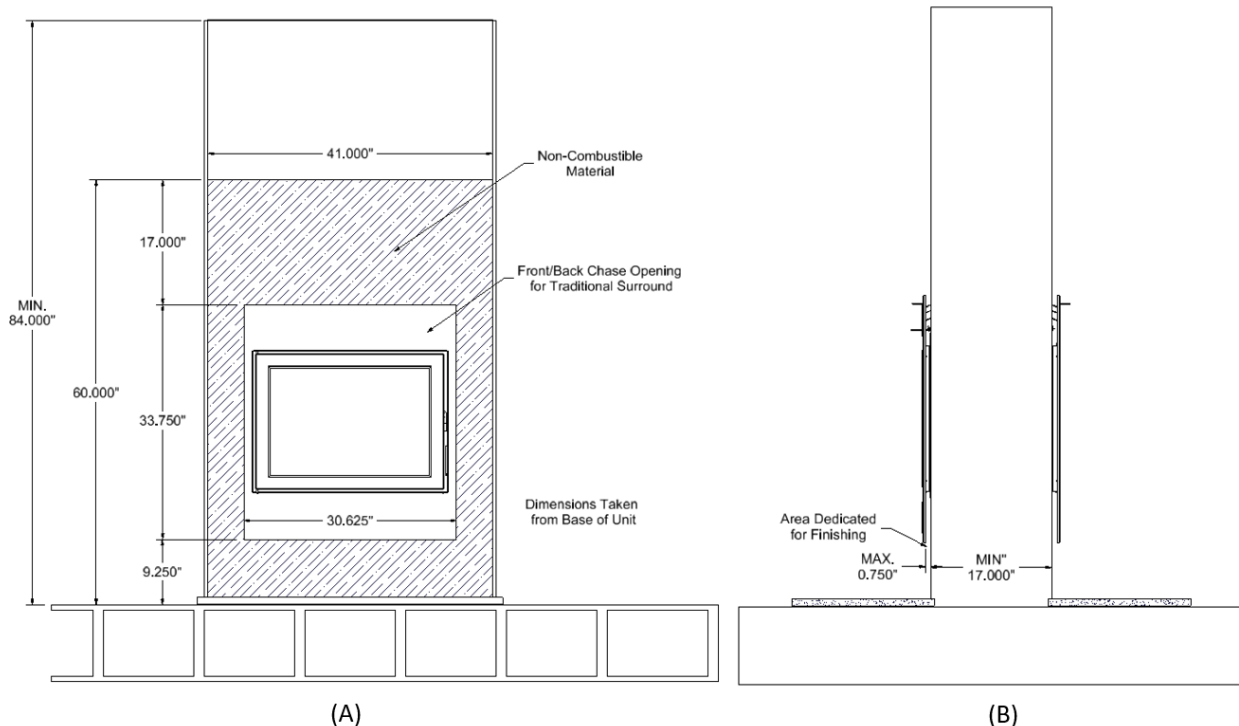


Figure 3-13: Chase Installation for Traditional Surround - (A) Front View and (B) Side View

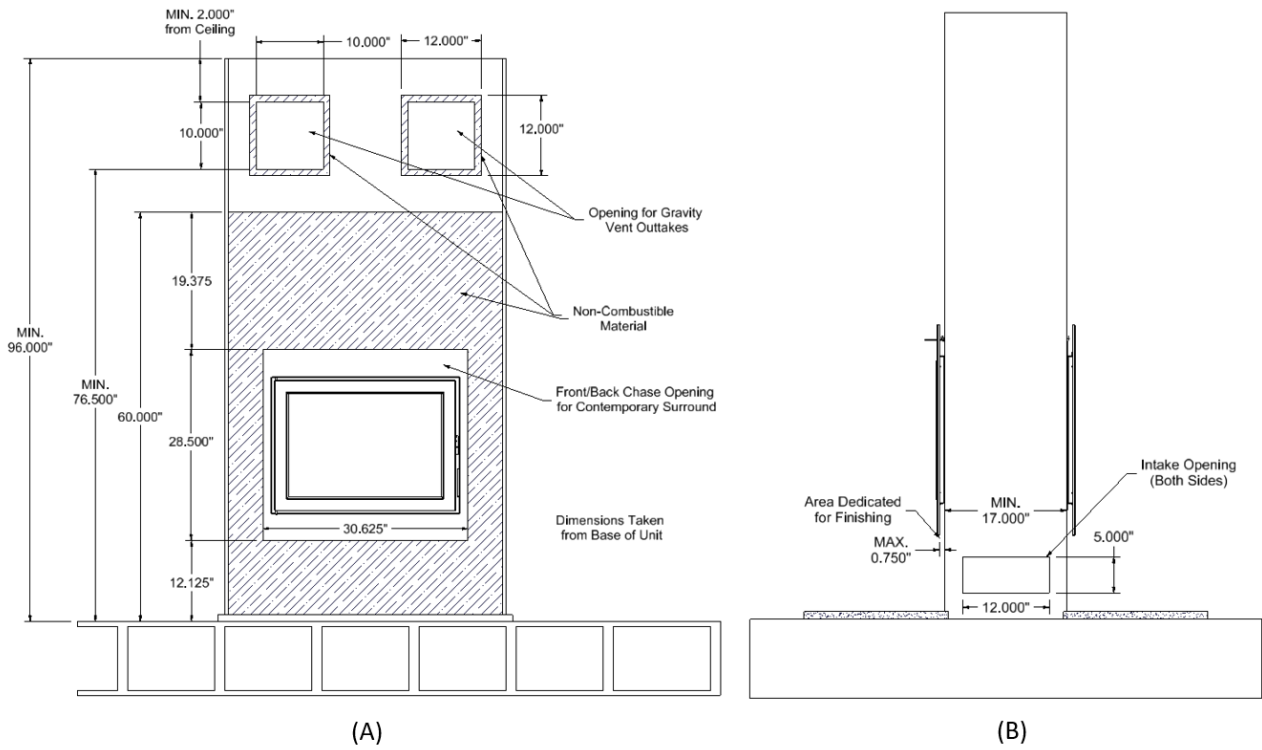


Figure 3-14: Chase Installation for Contemporary Surround with Outtakes at the Front - (A) Front View and (B) Side View

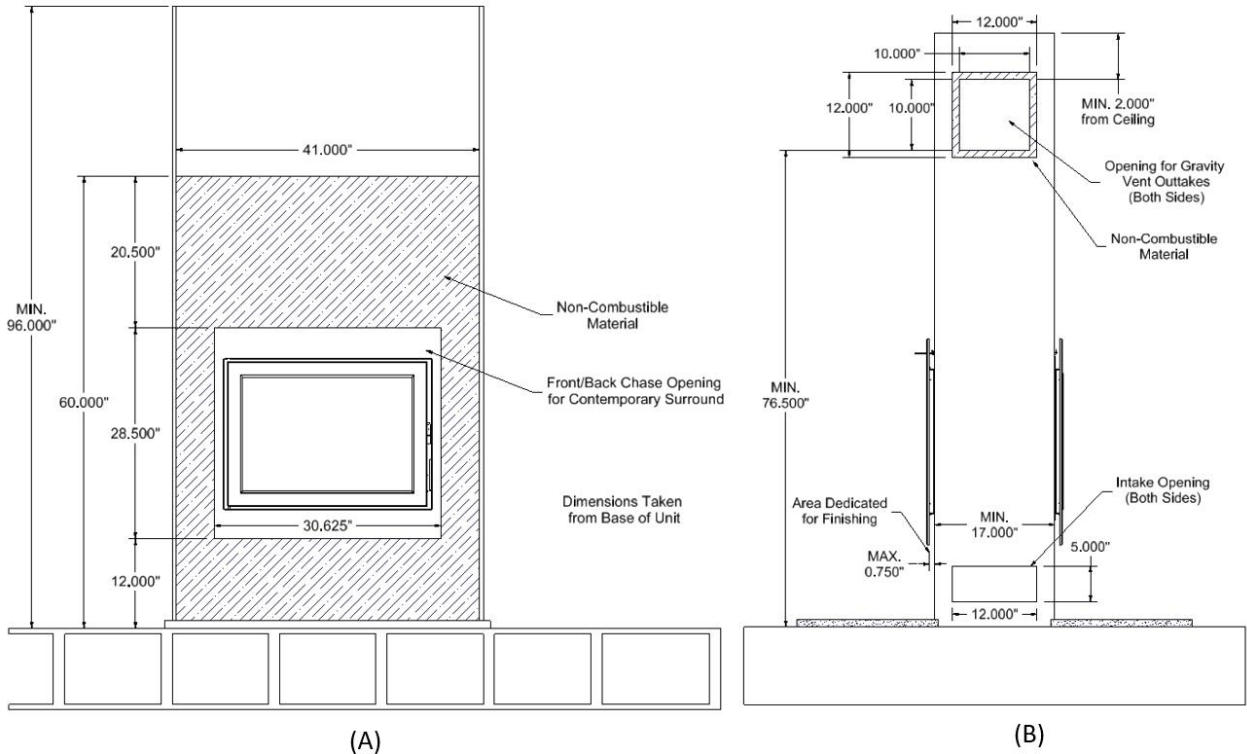


Figure 3-15: Chase Installation for Contemporary Surround with Outtakes at the Side - (A) Front View and (B) Side View

Note that all overlay intakes/outtakes are installed once the chase assembly is completed by fastening the overlay to the wall and the Diffuser Assembly.

3.8 Clearances to Combustibles

The clearances below must be respected to ensure safe operation of the unit under normal and extreme conditions. Failure to follow the information below is a safety hazard and may result in property damage.

Table 3-6: Overall Clearances

| Combustible | Clearance | Reference |
|---------------------------------|---------------|-------------------------|
| Side Wall | 10" (254 mm) | Outer edge of fuel door |
| Side Trim | 10" (254 mm) | Outer edge of fuel door |
| Ceiling – Traditional Surround | 84" (2134 mm) | Base of unit |
| Ceiling – Contemporary Surround | 96" (2438 mm) | Base of unit |

Table 3-7: Combustible Mantel Clearances

| Maximum Mantle Depth | Distance from the Base of the Astra Duo 38 to the Bottom of the Mantle |
|----------------------|--|
| 1.5" (38 mm) | 53" (1346 mm) |
| 3.5" (89 mm) | 55" (1397 mm) |
| 6.5" (165 mm) | 58" (1473 mm) |

The depth of the mantle is measured from the face of the fireplace door. When the non-combustible wall is recessed, the depth of the mantle can be increased by the amount of the recess (see Figure 3-16). Note that a combustible mantel cannot be installed below the minimum clearance of 53" (from the bottom of the mantle to the base of the unit). A non-combustible mantle doesn't require a minimum distance from the fireplace.

WARNING: A minimum clearance of 48" is required between the doors of the Astra Duo and any combustible material not specified in this document.

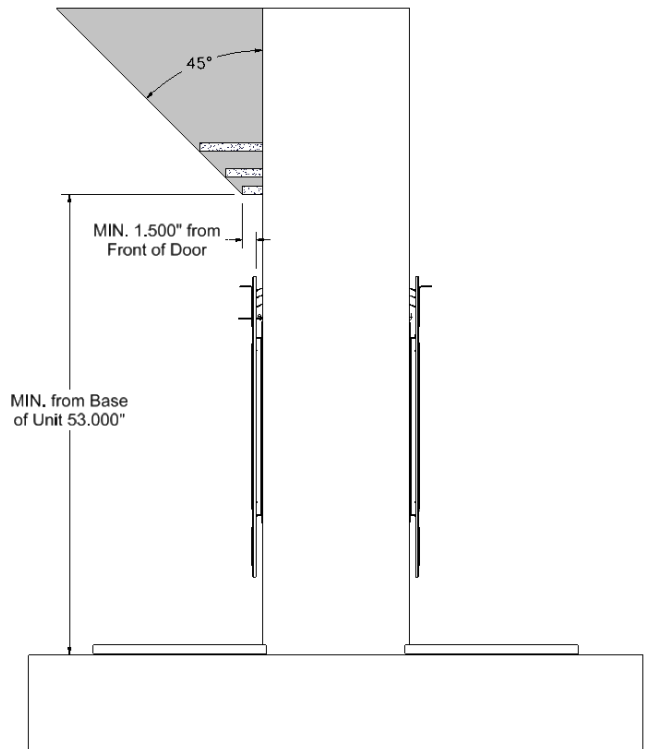


Figure 3-16: Combustible Mantel Clearances

3.9 Blower Kit

The Astra Duo comes with two 55 CFM compact blowers, which has an electrical rating of 120 V, 60 Hz, and 1.1 A. A variable speed control (rheostat) and a heat sensor (therm-o-disc) are included with the kit. **WARNING: Only a blower provided by SUPREME FIREPLACES INC. can be installed into the fireplace. Substituting the blower kit may result in overheating, will void the warranty and can be hazardous.**

The electrical connection of the blower is to be performed by a certified electrician. Note that it is recommended that the wiring of the blower be done before the installation of the surround kit. The blowers and the electric box are located respectively at the side(left-right)/bottom and at the center/bottom of the unit (Figure 3-17).

For maintenance or replacement purposes, the blower and the electrical box are accessible from within the bottom of the firebox (Figure 3-18). 1) Remove the floor plate. 2) Disassemble and remove the stainless steel cover on the bottom of the firebox by unscrewing it. Take caution to the therm-o-disc and wiring assembled onto the stainless steel bracket.

WARNING: Make certain that the fireplace is not in operation and the blower is unplugged (breaker off) before accessing the electrical wiring of the blower kit.

The following are instructions on installing the blower kit into the Astra Duo (refer to Figure 3-19 for the electrical diagram):

1. Using two screws, install the therm-o-disc onto the L bracket located under the firebox.
2. Connect the black wire of the power supply to the therm-o-disc.
3. Connect the therm-o-disc to the black wire of the rheostat (install/mount the rheostat at a convenient location).
4. Connect the white wire of the rheostat to the blower.
5. Connect the blower to the white wire (neutral) of the power supply.
6. Ground the connection with the green wire in the electric box.

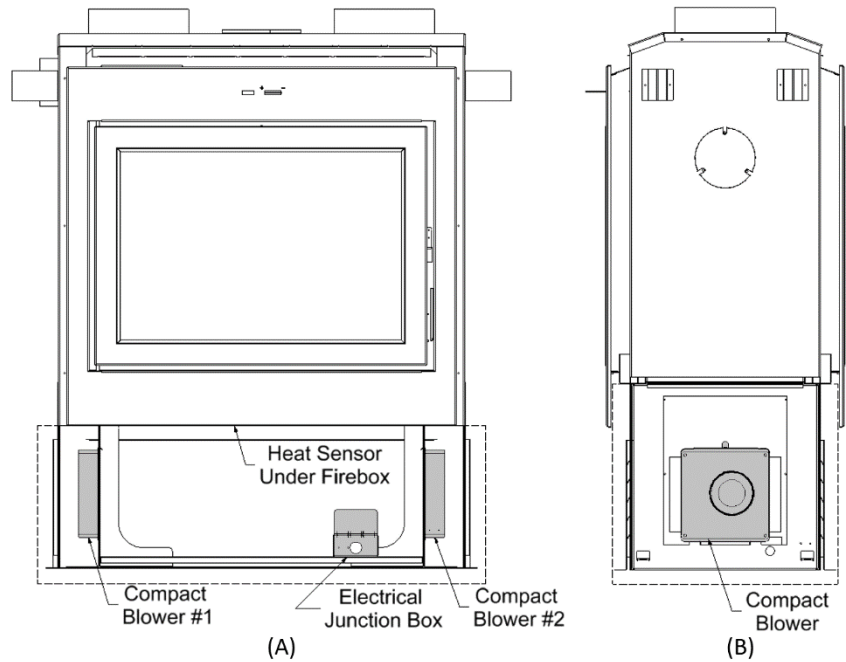


Figure 3-17: Blower Kit Location – (A) Front View and (B) Back View

Once the electrical connections are completed, the blower will turn on and turn off automatically during the operation of the unit. As the temperature of the fireplace increases and the therm-o-disc reaches 95°F, the blower will turn on. Note that the average time it takes for the blower to activate is between 30 to 45 minutes after starting a fire. The blower will turn off once the fireplace has cooled down and the therm-o-disc is 85°F. The speed of the blower can be adjusted with the variable speed control (rheostat) mounted on the wall. It is safe to operate the Astra Duo in the event of a power failure (blower not powered).

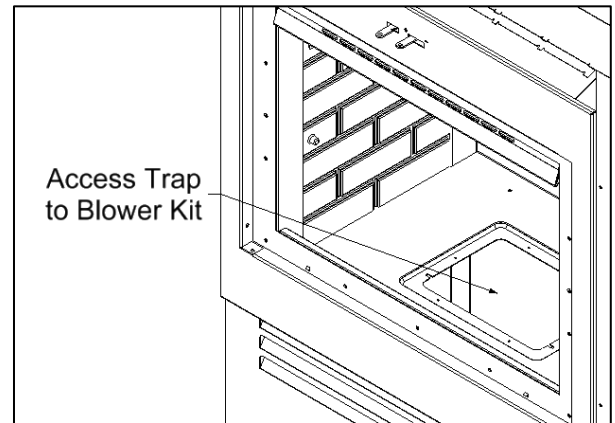


Figure 3-18: Access Trap to Blower Kit

Note: The blower sits on a fixture. If the blower needs to be removed for maintenance, the fixture’s pin needs to be unbent and the blower can then be removed by lifting it upwards, out of the fixture.

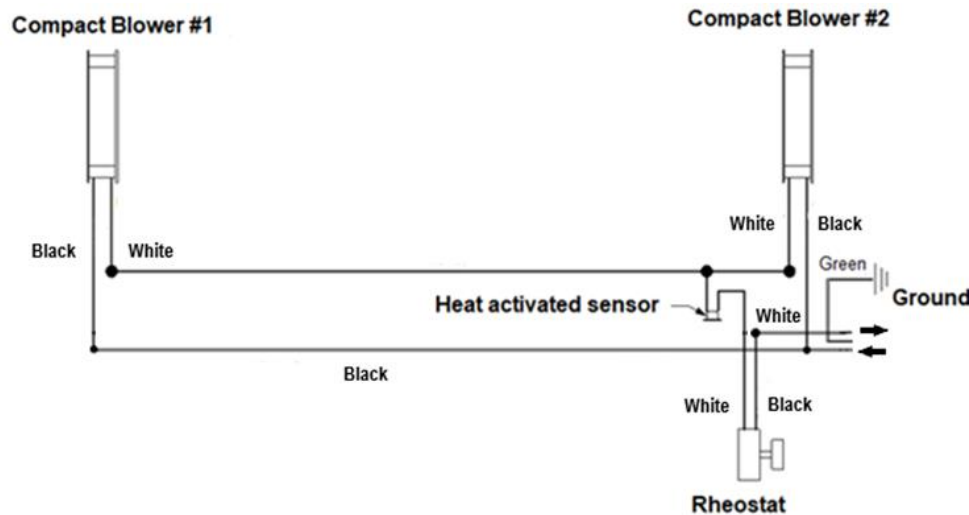


Figure 3-19: Astra Duo Electrical Diagram

4 OPTIONS

4.1 Fresh Air Kit

Sufficient air exchange is necessary for the fireplace to operate properly and to maintain a good combustion. In an airtight household, the fireplace may not function as designed due to a lack of air; it is therefore recommended to install the fresh air kit in such cases. The fresh air system is an optional kit intended to bring combustion air into the fireplace from an exterior source. Note that a minimum distance of seven inches is required between the side of the unit connecting to the fresh air kit and the framing to allow significant space (refer to Figure 3-2).

Note that the Astra Duo is designed to use a minimum amount of air during operation. Using an air exchanger or simply opening a nearby window/door during the ignition of the unit will achieve a similar result as the fresh air kit. When the fireplace is idle, there is no air escaping from the house through chimney. **Consult a local authority having jurisdiction (such as the fire department, the municipal building department, the fire prevention bureau) to determine if it is mandatory to install a fresh air kit in your area.**

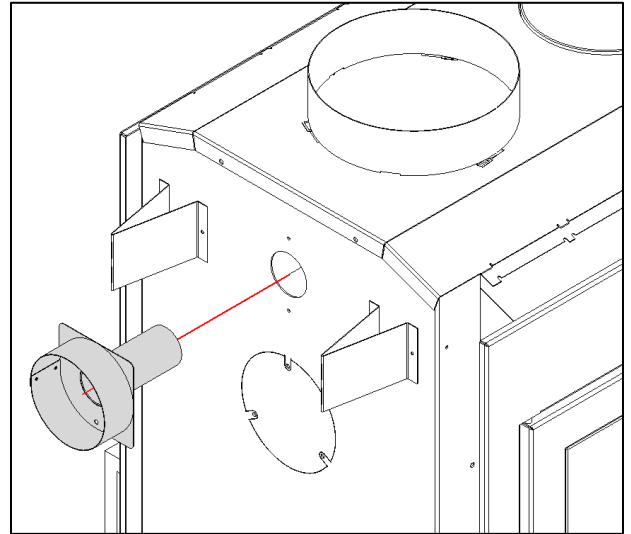


Figure 4-1: Astra Duo ADP4 Installation

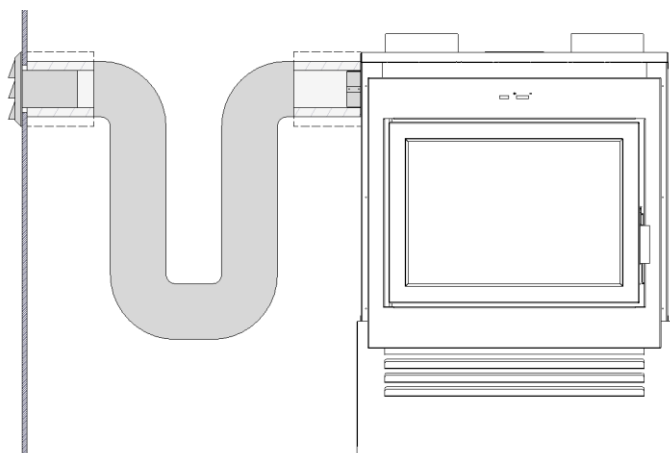
General Notes:

The outside air kit should be installed according to the following guidelines:

- The air duct must be insulated, wrapped with a vapor barrier, and have an inner diameter of 4 inches.
- The air duct must be constructed of non-combustible materials.
- The length of the air duct should not exceed 25 feet.
- The duct should not be elevated more than 10 feet from the base of the unit.
- Fresh air must come from the outside and not from another room or the attic.
- The outside register must be away from automobile exhaust fumes, gas meters, or other vents.
- The outside register must be constructed out of a minimum 20Ga wire mesh with openings not larger than ¼" X ¼" (6.4 X 6.4 mm) with the purpose of preventing any debris and rodents from entering the air duct.
- Avoid installing the air register where it will likely be covered by snow or exposed to strong winds.
- The air register can be installed above or below the level of the fireplace.
- Use the SUPREME FIREPLACES INC. Fresh Air Adapter (ADP4) provided with the unit.
- Use the SUPREME FIREPLACES INC. Fresh Air Kit (UPEA4).

Installation:

1. Cut 4 ½" diameter hole on the exterior wall of an ideal location.
2. Install the air register on the exterior wall.
3. Insert the fresh air adapter (ADP4) into the fireplace from the exterior casing. Make sure that the adapter is properly inserted into the combustion air box on top of the firebox.
4. Secure the fresh air adapter to the side of the fireplace using two screws.
5. Install the air duct and secure it with worm gear clamps.

**Figure 4-2: Astra Duo UPEA4 Installation**

5 OPERATION INSTRUCTIONS

5.1 Fuel

The Astra Duo is designed to burn natural wood only. Higher efficiencies and lower emissions generally result when burning air dried seasoned hardwoods (moisture content below 20%), as compared to softwoods or to green or freshly cut hardwoods. The following are a few signs indicating that firewood is sufficiently dry for use: (a) cracks on the ends and surface of the logs, (b) lighter in weight, and (c) color (yellow/grey). It is recommended to use a moisture meter with pin sensors for determining accurately the moisture content of firewood (read manufacturer's instruction manual before operating). The optimum log length is 18-22 inches, preferably split in halves or quarters and left to dry under a cover or away from external elements for a minimum of one year prior to use. Use good quality dry cordwood only. DO NOT burn garbage, lawn clipping, yard waste, materials containing rubber (including tires), materials containing plastic, waste petroleum products, paints, paint thinners, asphalt products, materials containing asbestos, construction debris, demolition debris, railroad ties, pressure-treated wood, manure, animal remains, coal, salt water driftwood or other previously salt water saturated materials, unseasoned wood, paper products, cardboard, plywood, particle boards, or other foreign materials in this product. The prohibition against burning these materials does not prohibit the use of fire starters made from paper, cardboard, saw dust, wax and similar substances for the purpose of starting a fire in an affected wood heater. Burning these materials may result in release of toxic fumes or render the heater ineffective and cause smoke. Do not over fire the Astra Duo fireplace. Over firing will damage the fireplace, is hazardous and will void the warranty. NOTE: Gas logs cannot be installed in the Astra Duo fireplace.

WARNING: Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this fireplace. Keep all such liquids well away from the fireplace while it is in use.

Ecological or composite logs containing chemical additives are not tested and approved to be used with the Astra Duo. Using them will overheat and damage the fireplace and void the warranty. Use only composite fire logs meeting the requirements of ANSI/CAN/UL/ULC 2115, Processed Solid Fuel Firelogs and Firestarters. Refer to the fire log warnings and caution markings on packaging prior to use. Do not poke or stir the logs while they are burning. Never use more than two of these logs at a time. Using more is not only dangerous, but will damage the fireplace and void the warranty. Follow the ecological log manufacturer's safety guidelines and recommendations and be sure that they are intended for use in fireplaces. Reload only once the previous load of wood has been consumed and only embers remain.

WARNING: Do not keep the door open while the fireplace is in operation.

5.2 First Fires

For the first three fires, burn a maximum of three logs at the medium to low burn rate (refer to Section 5.3) to allow for proper conditioning of the unit. Due to oil residues and the curing of the paint of the fireplace, it is normal to smell an odor for the first fires of the Astra Duo. Open a window or a door near the fireplace to ventilate the house during the first fires. Oil residues may cause light smoking.

5.3 Operating the Combustion Air Control

The burn rate and the heat output are related to the amount of air entering into the firebox. The combustion air control of the Astra Duo has two components: the Activator and the Burn Rate Selector (see Section 2.3). When starting the fire or when adding a new charge of wood, the fireplace needs additional air in order to establish a good fire. When the wood starts to burn properly, the amount of air can be reduced depending on the heating requirements.

The left combustion control lever is the Activator. When starting a fire or adding a new load of wood, the Activator must be pushed in to allow maximum air to enter the firebox. The right combustion control lever is the Burn Rate Selector. The Burn Rate Selector can slide sideways to achieve different burn rates. When the Burn Rate Selector is positioned to the left, a maximum burn rate is achieved and when it is positioned to the right, a minimum burn rate is set. Keeping the Burn Rate Selector to the right will burn the wood slower. Keeping the Burn Rate Selector to the left will provide a stronger fire and keep the glass of the fireplace cleaner for longer. Adjust the burn rate according to your heating requirements and the quality of your wood. The combustion air control will automatically and gradually close the primary air source to the selected burn rate setting (right lever) with the presence of heat to maximize the burn time.

NOTE: The Burn Rate Selector can remain at the same setting at all times if the burn rate is satisfactory. However, the Activator must be pushed in when starting a fire or when adding a new load of wood.

WARNING: The combustion air openings should never be obstructed.

WARNING: Never manipulate the Combustion Air Control with bare hands as it gets hot when the Astra Duo is in operation. Use the Cold Hand Key (see Section 2.7) to adjust the Combustion Air Control.

WARNING: This wood heater has a manufacturer-set minimum low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this wood heater in a manner inconsistent with operating instructions in this manual.

5.4 Starting a High Efficiency Fire

The Astra Duo has patented technologies and innovative features that make starting a fire quick and easy. Before starting a fire, assure that all the safety precautions mentioned in the owner's manual are being respected. The following instructions describe starting a fire in Astra Duo fireplace using a "top-down" approach, which results in a cleaner, more efficient, and longer burn:

- a) Place two logs in the firebox. The logs should sit directly on the hearth from left to right or east to west (parallel with the door). Do not use a fireplace grate.
- b) Place a third and fourth log above the two logs of step a) front to back or north to south.
- c) Depending on the size of the logs, a fifth log can be placed above the logs of step a) and step b). For optimal performance of the unit, leave a minimum 1" space between the logs and the baffle.
- d) Push the left combustion control lever (the Activator) inwards.
- e) Slide the right combustion control lever (the Burn Rate Selector) to the desired burn rate. Positioning the Burn Rate Selector towards the left is for maximum burn rate and towards the right is for minimum burn rate.
- f) Place and ignite a firestarter within the between the logs in step b) or below the log in step c). Make sure that the firestarter is visible from the opening (facing the front).
- g) Once the firestarter is well lit, close the door. Do not leave the door open for more than 2 minutes.

NOTE: Install a carbon monoxide (CO) and smoke detector near the location of the unit with respect to the requirements of the authority having jurisdiction in your area.

CAUTION: The wood should be placed away from the door to avoid damage to the glass.

WARNINGS: Over firing the unit may result in overheating and can damage the fireplace and/or result in fire hazards. The maximum firewood load must not exceed four medium sized logs (approximately 30 pounds). This fireplace has been designed to burn with the door closed. When the fireplace is being used, the door should remain closed at all times. Failing to do so is a safety hazard, will damage the fireplace and void the warranty.

WARNING: Do not use fire accelerants to rekindle the fire if the first attempt to start the fire failed. Do not open the door. Simply reactivate the Activator by pushing it inwards.

NOTE: Sufficient air exchange is necessary for the fireplace to operate properly. Air is required in order to maintain the combustion of the fireplace. If the house is airtight, the fireplace may not function properly. If the fireplace is deprived of air, it will be necessary to provide a source of fresh air into the dwelling. This may be done by using an air exchanger unit or simply by opening a window or a door near the fireplace partially for a few minutes. Make sure that other equipment such as the kitchen exhaust fans or oil central heating systems does not affect the fireplace functionality. Large return ducts of central heating systems located in the same room as the fireplace may affect the proper functioning of the unit and may cause smoking.

5.5 Adding a New Load of Wood

WARNING: Open the door to reload only when the wood has been reduced to embers, otherwise there is a risk of smoke infiltration into the house.

When the wood has been reduced to embers and there's no visible flame, you may add a new load.

- a) Crack the Astra Duo door open and wait a few moments before opening the door completely.
- b) Use your fireplace tools to gather the remaining embers at the center of the firebox.
- c) Activate the Activator by pushing it in.
- d) Once the embers begin to glow red, add the new load of wood in the firebox.
- e) Keep the door of the Astra Duo slightly unlatched until you see a flame in the firebox. Never leave the Astra Duo door unlatched without constant supervision.
- f) Completely latch the Astra Duo door.

Assure that a flame is maintained. Avoid wood smoldering on top of embers as this will result in a dirty glass, excessive emissions, chimney creosote buildup and poor heat output. If wood is smoldering, ensure the Activator has been activated and unlatch the door slightly with supervision until a flame has been maintained.

5.6 Blower Kit Operation

The blower kit for the Astra Duo consists of a blower mounted at the back/bottom of the unit and a heat sensory therm-o-disc; the blower will start and stop automatically in the presence and absence of heat respectively. A variable speed control allows the adjustment of the speed of the blower. Do not install a substitute kit as this may result in overheating and risk of fire. Refer to Section 3.9 for the installation instructions of the blower kit.

When the fireplace gets hot and the therm-o-disc reaches 95°F, the blower will turn on. The average time it takes for the blower to activate is 30 to 45 minutes after starting a fire as explained in Section 5.4. The blower will turn off once the insert has cooled down and the therm-o-disc reaches 85°F. The speed of the blower can be adjusted with the variable speed control.

6 TROUBLESHOOTING

6.1 Backdraft / Smoking

Draft is the force created by a difference in pressure, which moves air from the appliance up through the chimney. It is important to operate the Astra Duo with proper draft to ensure optimal performance of the unit. Draft is depended on the length of the chimney, local geography, nearby obstructions and other factors. Proper draft results in an upwards flow through chimney, which prevents smoke infiltrating into the house during operation of the unit. As the temperature of the unit and chimney rises during combustion, the draft consequently increases due to a higher difference in pressure.

In contrast, backdraft is air flow from the chimney into the house, which results in smoke infiltration from the appliance and/or the chimney joints during operation. The unit is experiencing backdraft if air is flowing out from the exhaust of the baffle system (within the firebox). Backdraft is most commonly caused by fans around the house (such as in the kitchen and bathrooms) simultaneously in operation, insufficient length of the chimney (less than 15 feet), or a blocked chimney. Refer to the following suggestions to eliminate backdraft:

- Close any fans operating around the house (specifically for the duration of ignition).
- Clean the chimney of any obtrusions (when the unit is cold).
- Open one window or one door near the Astra Duo.
- Heat the chimney by burning newspaper near the exhaust of the baffle system.

6.2 Over Firing

The appearance of a red glow on the exterior of the firebox (top and sides) and/or on the flue is a sign of over firing. Excess air entering the firebox, over fueling, or an abnormal strong draft causes the unit to reach drastic temperatures from an uncontrollable combustion. Over firing is a safety hazard and may result in permanent damage to the unit. In the occurrence of over firing:

- a) Make sure the Astra Duo door is properly closed.
- b) Manually close the Combustion Air Control by pulling the Activator (left lever).
- c) If possible, turn on the blower to the maximum speed. The red glow on the exterior of the firebox and/or the flue should gradually disappear.

WARNING: Do not touch hot surfaces with bare hands. Always wear heat protecting gloves and use fireplace tools.

Guideline to avoid over firing:

- Always keep the door closed during operation.
- Inspect regularly the door gasket/glass and replace accordingly.
- Always operate the unit with the chimney sweeping cap in position, blocking the hole in the baffle.
- Never load more than 30 lbs of wood at a time.
- Ensure that there is no excess draft.

WARNING: Failure to follow the above guideline will void the warranty. Over firing is a safety hazard, can cause irreversible damages to the Astra Duo and will void the warranty.

7 MAINTENANCE

7.1 Disposal of Ashes

Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial on soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have been thoroughly cooled. **CAUTION: Always wear heat resistant gloves when removing the ashes from the firebox.**

- a) Let the firebox cool to ambient temperature before removing the ashes. It is recommended to remove the ashes once the bed has exceeded a height of 4 inches.
- b) Slowly open the door to prevent ashes from coming into the room.
- c) Place an ash bucket (metal container) near the fireplace, onto the non-combustible hearth.
- d) Using a shovel and brush, remove the bulk of the ashes from the firebox into the ash bucket. Note that it is not necessary to keep a thin bed of ashes for the next fire.
- e) Store the ash bucket (with the tight-fitting lid) on a non-combustible surface, away from any combustible materials, pending final disposal.

7.2 Chimney Maintenance

Creosote – Formation and Need for Removal: When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapor condenses in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire. The chimney connector and chimney burning wood or coal should be inspected at least once every two months during the heating season to determine if creosote buildup has occurred. The presence in a chimney of soot or creosote in excess of 3 mm thick will indicate the need for immediate cleaning, possible modification of burning procedures, and more frequent inspections. **Never use chemical cleaners for your chimney.**

WARNING: In the case of a chimney fire: 1) close the door of the fireplace; 2) set the burn rate of the Combustion Air Control to minimum (Section 5.3); 3) call the local fire department (if assistance is needed); 4) use a dry chemical fire extinguisher (baking soda or sand) to control the fire.

CAUTION: Never use water to extinguish a fire as it may result to dangerous steam explosions. Do not use the unit until the chimney is inspected and repaired (if needed) by a qualified technician.

NOTE: Do not clean the chimney when the unit is in operation/hot. Follow the instructions below for sweeping the chimney of an Astra Duo fireplace:

- a) Open the door of the unit.
- b) From within the firebox, displace the chimney sweeping cap located in the baffle by lifting and moving it to the side.
- c) Close the door of the unit.
- d) Using an appropriate sized chimney sweeping brush, clean the chimney from any creosote buildup and other residues.
- e) Remove all the fallen/loose creosote/residues from the firebox and baffle system (a shop vacuum cleaner can be used for a thorough cleaning).
- f) Place back the chimney sweeping cap.

CAUTION: Operating the unit without the chimney sweeping cap in position will result in over firing and void the warranty.

7.3 Cleaning of Glass

It is recommended to clean the glass door with a soft cloth, dampened with a non-abrasive solution, such as soap and water.

CAUTION: Cleaning the glass with an abrasive solution will result in surface scratches, reducing glass transparency and resistance to impacts.

The glass of the door may be cleaned with commercial products intended for fireplaces and stoves. After cleaning the glass, remove any remaining solutions with a wet cloth to avoid chemical reactions at elevated temperatures ("cloudiness" on the surface of the glass).

CAUTION: Do not apply commercial cleaners onto any painted surfaces as discoloration/peeling may occur.

NOTE: Never clean the glass when the unit is in operation or hot.

7.4 Replacing a Cast Iron Panel

Two panels are assembled along the combustion chamber side walls (left and right) allowing for a longer and a constant heat output. It is recommended to perform a weekly check on the condition of the panels to ensure proper operation of the unit. The panels need to be replaced when it is gravely chipped and/or cracked. Failure to replace the panel under the mentioned conditions will alter the performance of the unit. Refer to the following instructions for replacing a panel:

- a) Order the replacement kit for the Astra Duo panel.
- b) Remove the door from the firebox and place it face down on a soft surface. NOTE: Rotate the handle to permit proper placing.
- c) Remove the bottom plate (hearth) by lifting it out of the firebox.
- d) Slide the left/right side wall panel(s) by tilting the bottom and swivelling them out of the top retainer.
- e) Replace the damaged panel and position the panels back in place by swiveling them behind the top retainer.
- f) Insert the bottom plate (hearth) and door to its original position.

WARNING: Do not operate the unit with any of the cast iron panels missing.

7.5 Replacing the Door Gasket

SUPREME FIREPLACES INC. assembles heat resistant graphite coated gaskets on the doors of all products, allowing for a proper seal of the unit at extreme temperatures (up to 1000°F). It is recommended to perform a weekly visual check on the condition of the ¾" gasket to ensure proper operation of the unit. The ¾" gasket of your door needs to be replaced when 1) the fibers of the gasket are coming loose and 2) the gasket is disintegrating. Failure to replace a gasket under the mentioned conditions can cause irreversible damage to the unit due to over firing. Refer to the following instructions for replacing the ¾" gasket:

- a) Order the replacement kit for the Astra Duo ¾" door gasket GSK_75_7.
- b) Remove the door from the firebox and place it face down on a soft surface. NOTE: Rotate the handle to permit proper placing.
- c) Cover all painted surfaces of the door to avoid damages.
- d) Using a wedging tool or flat head screwdriver, gently remove the old ¾" gasket (along with the old silicone) from the door framing.
- e) Apply a bead of high temperature silicone along the groove of the metal brackets.
- f) Place the new ¾" gasket around the door framing and cut any excess gasket with scissors. NOTE: It is recommended to tape the extremity of the gasket for a cleaner result.

Give significant amount of time to allow the silicone to cure before reinstalling the door onto the firebox. A slight resistance is expected when closing the door with the new $\frac{3}{4}$ " gasket; the door will close normally after the gasket has taken proper shape.

Table 7-1: Parts List of Door Assembly

| Item | Code | Description | Qty |
|------|---------------|-----------------------------|-----|
| 1 | DR1100 | Door Frame Assembly | 1 |
| 2 | PYRO 24.25X17 | Pyroceram Glass | 1 |
| 3 | DR 1806 | Vertical Metallic Bracket | 4 |
| 4 | DR_2525 | Horizontal Metallic Bracket | 1 |
| 5 | GSK_31_7 | Thin Gasket | 2 |
| 6 | GSK_75_7 | Thick Gasket | 1 |
| 7 | NUT 8-32 | 8-32 Nut | 8 |

7.6 Replacing the Glass Panel

SUPREME FIREPLACES INC. uses a high quality 5mm thick Pyroceram III / Keralite ceramic glass that can withstand temperatures up to 1300°F. It is recommended to perform a weekly visual check for any damages or cracks on the glass.

WARNING: Avoid striking the glass and slamming the door shut. Never operate the unit with a broken or damage glass. Wear protective gloves when handling broken glass.

Refer to the following instructions for replacing the glass:

- Order the replacement kit for the Astra Duo glass.
- Remove, clean, and dispose any broken glass from the door and the surroundings.
- Remove the door from the firebox and place it face down on a soft surface. NOTE: Rotate the handle to permit proper placing.
- Using a wedging tool or flat head screwdriver, gently remove the $\frac{3}{4}$ " gasket (along with the silicone) from the door framing.
- Using a wrench, remove the 8 nuts fastened around the door framing.
- Remove the first row of metal brackets (2 small and 2 big) and thin gasket.
- Remove the damage glass and clean thoroughly the door framing from loose glass fragments.
- Place the new glass onto the second row of thin gasket, centered with the door framing.
- Place back the first row of metal brackets (2 small and 2 big) and thin gasket.
- Using a wrench, fasten the 8 nuts around the door framing (do not over-tighten).
- Apply a bead of high temperature silicone along the groove of the metal brackets.
- Place the $\frac{3}{4}$ " gasket back into position.
- Give significant amount of time to allow the silicone to cure before reinstalling the door onto the firebox.

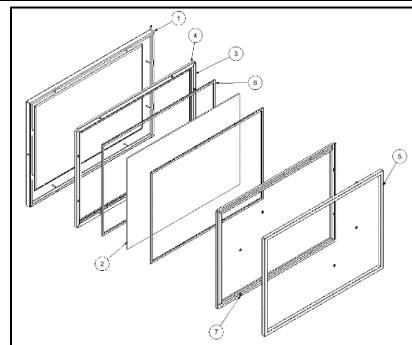


Figure 7-1: Exploded View of Door Assembly

NOTE: Replacing the glass with a non-conform substitute material may cause irreversible damage to the unit, bodily harm, and void the warranty.

7.7 Door Latch Maintenance

Lightly lubricate the hook of door latch (SFC0031) with graphite grease on a yearly basis to prevent abrasive wear. Occasionally inspect the bushing of the door latch. If required, adjust the tightness of the latch bolt using a $\frac{5}{32}$ " hex key.


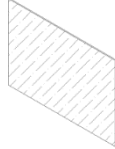


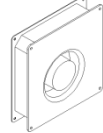

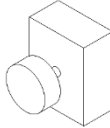
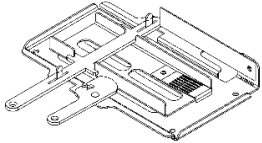

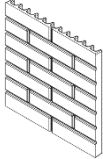
7.8 Paint

Paint touch-ups can be performed on the unit using a high temperature paint (in aerosol spray can format) by Stove Bright®. Refer to your invoice to determine the precise color of your unit. Contact your local hearth shop for further information on purchasing this paint.

NOTE: Apply the paint in a well ventilated area. If applying paint to the door, properly cover/mask the glass of the door using painters tape and cardboard. Wait for paint to dry before operating the unit. Refer to the instructions on the label of the aerosol spray can for proper paint application. **WARNING: Never apply paint to the unit during operation or when it is hot.**

7.9 Replacement Parts

Refer to the codes from the table below for any replacement parts:

| Code | Description | Illustration |
|--------------------|---|---|
| SFC0032-01 | Wood pull handle - metallic black |  |
| PYRO_ 24.25"X17" | Pyroceram III / Keralite 5mm thick glass, 24.25" X 17" |  |
| GSK_31_7 (2X) | Graphite coated square gasket, 0.3125" thick, 7" length |  |
| GSK_75_7 | Graphite coated square gasket, 0.75" thick, 7" length |  |
| 55CFM_CEN_BLW (2X) | AC centrifugal compact fan <u>Electrical rating:</u> 115VAC, 60Hz, 19W <u>Certification:</u> VDE, CSA, UL, CE |  |
| TOD | Thermo-disk <u>Electrical rating:</u> 120VAC, 15A <u>Certification:</u> UL/CSA |  |
| WALL_RHEO | Speed Control <u>Electrical rating:</u> 2.5 Amps, 115VAC – 50/60Hz <u>Certification:</u> UL, ULC |  |
| PA5000-01 | Combustion Air Control |  |
| CM0020 | Cold Hand Key |  |
| 38SFC1175 (2X) | Cast Iron Panel 16" X 12.625" X 1.25" |  |

8 WARRANTY

SUPREME FIREPLACES INC. warrants that the factory-built fireplaces, fireplace inserts, and stoves will be free from defects in material and workmanship, under normal use and service, for a period of **ten (10) years** from the date of purchase.

This warranty is only intended for the original retail purchaser and is non-transferable, given that the product was purchased from SUPREME FIREPLACES INC. or one of its authorized dealers. This warranty is conditional upon correct installation and intended use of the products and does not cover damages caused by misuse. This warranty shall be void if the fireplace, fireplace insert or wood stove is not installed by an authorized qualified technician in accordance with the installation instructions in the manual provided with this product. The installation must meet local and national building codes.

| Description | Coverage | Labour |
|---|----------|---------|
| Patented combustion air control, chimney sweeping cap, door handle (breakage only), door latch assembly, podium structure of wood stove series, legs of wood stove series, circulating chamber of fireplace insert series, bimetallic strip of combustion air control, removable ash lip, surround structure, cold hand key, wall intake and outtake grilles of gravity kit | 10 years | 2 years |
| Baffle (excluding bypass mechanism), bottom plate, stainless steel components, cast iron panel, firebox soapstone slab, exterior door frame, liner adaptor of Fusion series | 5 years | 2 years |
| Painted and plated parts, door gasket | 2 years | 1 year |
| Electrical components | 2 years | 90 days |
| Glass panel (thermal breakage only) | 90 days | 90 days |

8.1 Warranty Limitations

Abuse and improper use of the unit may cause irreversible damage and will void the warranty.

Transportation, packaging, and other related costs or expenses arising from the replacement or repair of defective parts will not be covered by this warranty, nor will SUPREME FIREPLACES INC. assume responsibility for them.

Freight related damages of products that are shipped directly from the SUPREME INC. warehouse are covered under warranty if they were indicated on the Bill of Lading from the carrier and SUPREME FIREPLACES INC. is notified within 48 hours.

This warranty is void for any fireplace, wood stove or fireplace insert that wasn't purchased from an authorized SUPREME FIREPLACES INC. dealer.

The warranty does not cover any physical or esthetic damages that were caused by glass cleaners, soap, or any other cleaning products.

Soapstone is a natural material. Normal wear and tear of the soapstone may result in surface fractures or small hairline cracks. Since these do not affect the functionality nor the integrity of the product, the warranty only covers fractures that are over 3 mm thick and spread across one extremity of the slab to the other.

Deformations, discoloration, corrosion and scratches are not covered under warranty.

All parts are limited to one replacement per warranty term.

This warranty does not cover the labor or other related costs for the removal of a product already installed, the installation of a replacement product and the shipping and handling for the return of a product or for the replacement part.

This warranty applies to normal residential use only. Damages caused by acts nature or natural disasters, accidents, over firing, misuse, abuse, negligence, improper installation, alterations or substitutions of components of the fireplace, abrasives, chemical cleaners, and negligence are not covered by this warranty. Burning anything other than natural wood will damage your fireplace and void the warranty.

This warranty is void for any product that has been moved from its original installation location.

SUPREME FIREPLACES INC. will not be responsible for environmental conditions and drafting issues such as inadequate vents or ventilation, excessive venting configurations or negative air pressures which may or may not be caused by geographic elements, exterior elements and/or mechanical systems such as exhaust fans, furnaces, clothes dryers, etc.

The noise generated by the expansion and contraction of the metallic components is normal as they heat up and cool down and are not covered under the warranty.

Labour covered under the warranty must not exceed the retail price of the part being replaced, are based on a predetermined rate amount found in the dealer program, exclude dealer travel costs and are disbursed to the dealer.

The manufacturer at its discretion may decide to repair or replace any part or unit after inspection and investigation of the defect. The manufacturer may, at its discretion, fully discharge all obligations with respect to this warranty by refunding the wholesale price of the defective part(s).

The manufacturer shall in no event be responsible for any consequential damages of any nature, which are in excess of the original purchase price of the product.

Repairs and/or replacements of parts and labor covered under warranty must be preauthorized by SUPREME FIREPLACES INC.

A proof of purchase (copy of the invoice) is required for all warranty claims, as well as the completed warranty claim form and pictures/videos of the issue.

This **Limited Warranty** is effective on all appliances sold after May 31st, 2022, and supersedes any and all warranties currently in existence.

Please register your SUPREME product online at <https://supremem.com/warranty.php> to ensure full warranty coverage. Prior to contacting your dealer, have the following information available for warranty claim processing:

- **Customer information (name, telephone number, and address)**
- **Proof of purchase**
- **Model name and serial number (see Section 2.9)**
- **Detailed description of defected component**
- **Pictures (minimum of three)**
- **Videos of the issues**

In the case of a return for repair or replacement, it is the responsibility of the customer to adequately package the component/unit to prevent further damage during transport. Items sent to SUPREME FIREPLACES INC. without an open warranty claim will be returned to the sender.