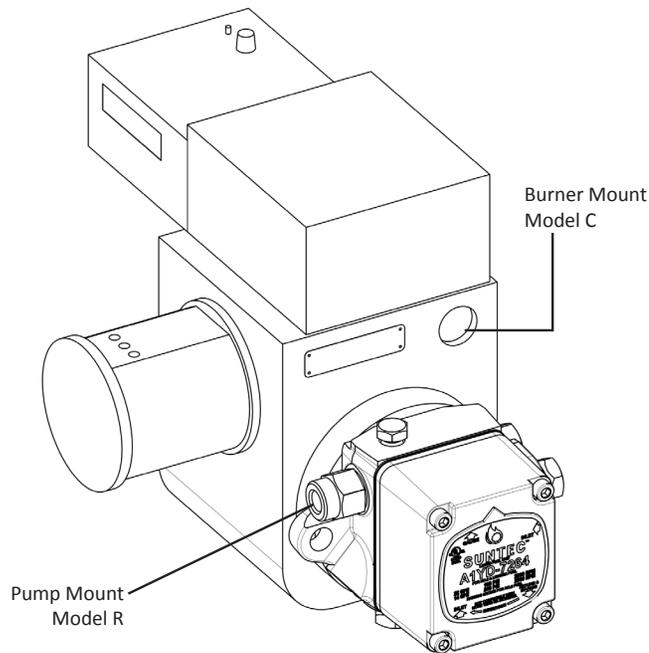


and without additional tubing. The coaxial bolt assembles the valve directly to the pump outlet. The Model C valve mounts onto the burner housing with convenient 90° porting. This permits a very concise tubing arrangement.

- ✓ **Available in a choice** of pump mount (Model R) or burner mount (Model C). Both models use the same actuating components including the coil.
- ✓ **Interchangeable.** For non-delay or delayed opening.
- ✓ **cUR recognized,** for extra assurance.
- ✓ **Economical.** A two-piece detachable coil and cordset allows greater flexibility and increased savings to customers when retro-fitting.



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Form 2140-B20 - Ed.3 - 11/12/19



**R&C SHUT-OFF VALVES**  
**INSTALLATION INFORMATION Form 2140-B20 - Ed.3 - 11/12/2019**

### IMPORTANT INFORMATION

This product is compatible with Fuel oil #2 and lighter, B6-B20 (blends from 6% up to 20% biodiesel, per ASTM D396). This product must be installed, adjusted and started only by a qualified and licensed technician and done so in accordance with all appropriate local and national codes and ordinances, such as National Fire Protection Standard for Liquid Fuel Equipment, NFPA 31, CSA B139-M91, etc.

### SHUT-OFF VALVE INSTALLATION:

#### A. GENERAL

The shut-off valve should be installed in accordance with local and national safety codes. (See Figure 3 – wiring diagrams)

#### B. INSTALLATION – R valve (See Figure 1)

1. Remove old thread sealant from pump nozzle port plug and ensure that the plug face is free from nicks and burrs.
2. Rotate valve module as shown in Figure 1 or according to the burner manufacturer's recommendations if applicable.
3. Assemble one gasket to nozzle screw and insert nozzle screw through valve module. Assemble one gasket over threaded end of nozzle screw.

**CAUTION:** Do not apply thread sealant to nozzle screw or pump nozzle port threads. Sealing is accomplished by the gaskets.

**ATTENTION :** Ne pas appliquer de produit d'étanchéité pour filetage sur les vis ou les taraudages de la pompe. L'étanchéité est faite par les rondelles.

4. Attach valve module to the pump by threading the nozzle screw into the pump nozzle port. Tighten nozzle screw 8-12 ft. lbs.
5. Apply thread sealant to nozzle line fitting and install fitting into valve module. **DO NOT USE TEFLON OR SIMILAR TYPE TAPE AS A THREAD SEALANT.**

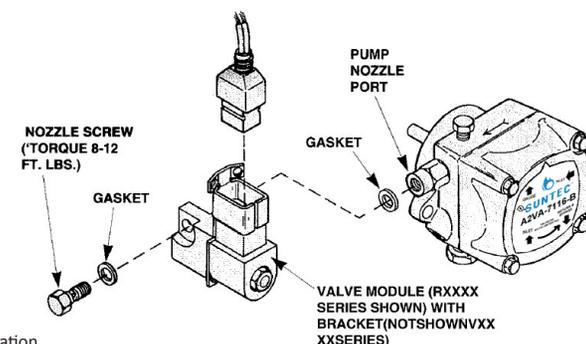


Figure 1 : Valve Installation

### C. INSTALLATION – C VALVE (See Figure 2)

1. Remove knockout or plug from burner housing.
2. Insert straight single screw BX fitting in knockout hole and assemble locking nut on chassis plug threads.
3. Apply thread sealant to two (2) nozzle line fittings and install in valve body. **Do not use Teflon tape as a sealant**
4. Remove screw from BX fitting. Insert coil wires through BX fitting and push coil flush with fitting. Replace screw through hole in base plate to BX fitting. Tighten screw to hold valve in place.
5. Attach nozzle line from pump to inlet side of valve (indicated by arrows on valve).
6. Attach nozzle from outlet side of valve to nozzle fitting on burner.
7. Connect coil leads from valve to motor supply.

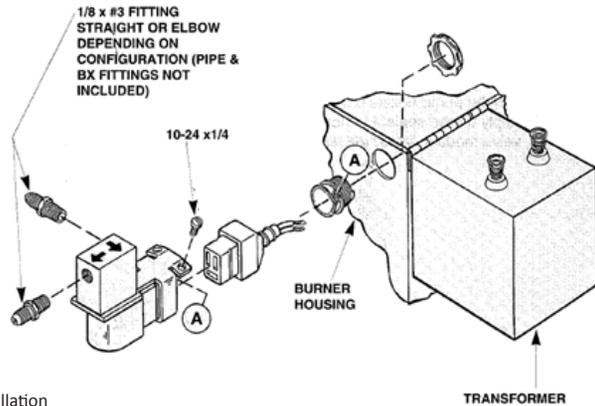


Figure 2 : Valve Installation

### SOLENOID WIRING

**⚠ WARNING:** Disconnect power to the appliance before wiring to prevent shock.

**⚠ AVERTISSEMENT :** Débrancher l'alimentation électrique avant de câbler pour éviter les décharges.

#### A. GENERAL

Wiring should be performed in accordance with local and national codes.

#### B. WIRING (See Figure 3)

1. Enclose the solenoid leads in an approved conduit in accordance with local and national codes.
2. Attach the solenoid leads according to Figure 3 and the burner or appliance manufacturer's instructions.

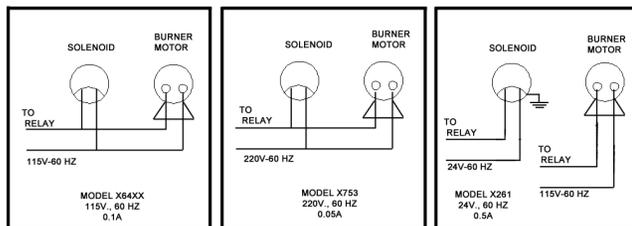


Figure 3 : Solenoid Wiring

### SHUT-OFF VALVE APPLICATION GUIDELINES

**A. PUMP MODELS:** The shut-off valve can be installed on any Suntec model series A and B pumps rated up to 300 psi. (Except for delay models which are rated to 150 psi).

**B. FUELS:** For use with No. 2 and lighter fuel at a maximum fluid temperature of 75°F (24°C). This product is not compatible with fuel blends containing more than 5% biodiesel.

**⚠ WARNING:** Different aspects of the oil fired heating system can be affected by the use of a fuel/ biodiesel blend (storage, piping system between the tank and the burner, burner components). These units are designed to handle B6 to B20 biodiesel blends (fuel oil according to ASTM D396 with 6% to 20% biodiesel according to ASTM D6751 standard). Ensure that all components of the heating system, supply line and burner components are B20 compatible. Before first start-up, ensure that the oil storage tank has been thoroughly cleaned prior to the biodiesel blend delivery. Biodiesel blends are likely to have reduced long-term storage stability performance. Aging and oxidation can lead to high acid numbers, high viscosity, and the formation of gums and sediments that may cause filter clogging and pump seizing.

**⚠ AVERTISSEMENT:** Différents aspects du système de chauffage peuvent être affectés par l'utilisation de mélanges composés de biodiesel (stockage, système d'alimentation entre le réservoir et le brûleur, composants du brûleur).

Ces éléments doivent être conçus de manière à être compatibles avec des mélanges B6 à B20 (mazout de chauffage selon l'ASTM D396 avec 6% à 20% de biodiesel selon la norme ASTM D6751). Il est nécessaire de s'assurer que tous les composants du système de chauffage, de la ligne d'alimentation aux composants du brûleur, soient compatibles au B20. Avant le premier démarrage, vérifier que le réservoir ait été complètement nettoyé avant la livraison du mélange mazout/biodiesel. Les biodiesels auront probablement une durée de stockage réduite sur le long terme. Vieillesse et oxydation peuvent conduire à des indices d'acide élevés, une importante viscosité, et à la formation de gommages et de sédiments pouvant causer le colmatage du filtre et le grippage de la pompe.

**C. AMBIENT TEMPERATURE:** Ambient temperatures not to exceed 115°F (46°C). Delay valve models R643L and C643L have specific operating requirements to ensure that the valve open within a maximum of 15 seconds. See the following chart for operating details.

MAX. PSI	MIN. AMBIENT AIR TEMP.	MIN. VOLTAGE
100	50°F	102 VAC
150	50°F	115 VAC

**D. FLOW:** For use on systems with a maximum nozzle line flow to 16 GPH.

### CHECK THESE IMPORTANT FEATURES

- ✓ **Designed to perform reliably** over an extended cycle life.
- ✓ **Field proven concept**, with years of domestic and European acceptance.
- ✓ **Easy to install.** The Model R valve is added into the circuit with simple tools