

# METROPOLITAN NY CHAPTER Refrigeration Service Engineers Society

Continued Education for the HVAC/R Industry  
"Better Service Through Knowledge"

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November 2010

[WWW.METRONYRSES.ORG](http://WWW.METRONYRSES.ORG)



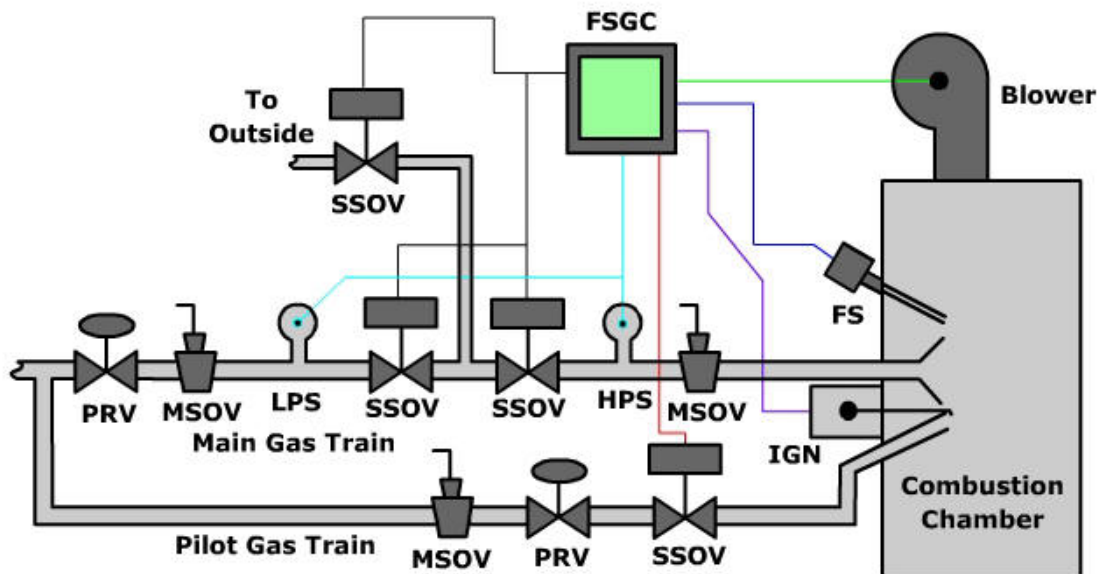
## Double Block-n-Bleed Gas Train

One potentially dangerous scenario with any heating system is a leaking gas valve allowing unburned gas to enter a combustion chamber during the off cycle. A combustion chamber filled with unburned gas could result in quite a large explosion the next time the system lights off. The larger the heating system, the more dangerous this becomes. To prevent unburned gas from entering the combustion chamber during the off cycle, larger heating systems will add some safety features to their design. One such safety feature is the "Double Block-n-Bleed" gas train. This style gas train is specifically designed to prevent unburned gas from entering the combustion chamber during the off cycle.

This main gas train consists of two gas valves (safety shutoff valves, or "SSOV") piped in series. Piped in between these two valves is a vent line leading to the outdoors. The vent line also has its own SSOV. On a call for heat both SSOVs in the main gas train will open and the SSOV in the vent line will be closed. When the system shuts down, the SSOVs in the main gas train will shut down and the SSOV in the vent line will open.

If, while the system is shut down, any gas leaks past the first SSOV, it will escape through the vent line piped outdoors. The second SSOV just downstream from the vent valve will also block any gas which is not vented. With the combustion chamber also vented to the outdoors through its exhaust system, there will be no pressure difference across the second SSOV. So even if it did leak, no gas will leak through it. Now, when the system is shut down, even for an extended period, there will be no accumulation of unburned gas in the combustion chamber.

Typically these gas trains will have additional safety components added to prevent other unsafe conditions from occurring. Normally there will be two manual shutoff valves (MSOV), one at the beginning of the gas train and one at the end. This allows a technician servicing these systems to safely shut off the gas flow to the burners. These systems will normally also have two pressure switches installed: a low pressure switch located before the gas valves to shut the system down in the event of low gas pressure, and a high pressure switch after the gas valves to shut the system down in the event of a defective regulator allowing too high of a gas pressure to the burners. Also included with these systems will be some type of flame safeguard control ("FSGC"). The FSGC will control the entire operation of the system from safely lighting off the burners to quickly shutting the system down on a loss of flame.



 <p><b>HVAC/R</b> Parts Supplies Equipment</p> <p>27-01 BROOKLYN QUEENS EXPRESSWAY WEST WOODSIDE, NY 11377</p> <p>FAX (718) 274-4972</p> <p>Large Local Stock Free Catalogue</p> <p><b>718-545-4896</b> WHOLESALE ONLY</p>	<p><i>Supco</i></p> <hr/> <p><b>SEALED UNIT PARTS CO., INC.</b></p> <p>P.O. BOX 21 2230 LANDMARK PLACE ALLENWOOD, NJ 08720 USA (732) 223-6644 FAX: (732) 223-1617</p>	 <p><i>Support Services for the HVAC Contractor</i></p> <hr/> <p>HVAC Water Treatment</p> <hr/> <p>Specialty Cleaning Pipe • Duct • Coil</p> <hr/> <p>HVAC Antifreeze</p> <hr/> <p>Lab Services</p> <hr/> <p>Indoor Air Quality</p> <hr/> <p><b>718-361-6666</b> www.csiontheweb.com</p>	 <p><b>UNITED REFRIGERATION INC.</b> Refrigeration, Air Condition- ing, Heating, Supplies, Equipment &amp; Parts</p> <p><b>Jim Herlinger</b> Branch Manager 51-05 59<sup>th</sup> Place Woodside, NY 11377-7408</p> <p>Tel: 718 476-2600 Fax: 718 476-2648 Branchv2@uri.com</p>	<p><b>HALSEY</b> SUPPLY CO. INC.</p> <p>FOR ALL YOUR</p> <ul style="list-style-type: none"> <li>AIR CONDITIONING</li> <li>REFRIGERATION</li> <li>EQUIPMENT</li> <li>PARTS SUPPLIES</li> <li>EPA-CERTIFICATION TESTING</li> </ul> <p>241 HALSEY STREET BROOKLYN, NY 11216</p> <p><b>(718) 574-4774</b> FAX (718) 574-4778</p>
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## COMING EVENTS

Refrigeration Piping: Problems & Troubleshooting  
Con Edison Rebate Program  
NYC Torch Use Regulations

If you have any suggestions or requests for future programs, please let us know!

<p><b>SEE US 1<sup>st</sup></b></p>  <p><b>WHOLESALE DISTRIBUTORS</b> Refrigeration/AC/Heating</p> <p>BROOKLYN (718) 257-4039 99-03 Foster Ave.</p> <p>JAMAICA (718) 526-0330 139-29 Queens Blvd.</p> <p>MT. VERNON (914) 668-3631 551 S. Columbus Ave.</p> 	<p><b>Fire Ice Mechanical Inc.</b></p> <p>HVAC/R Service Contractors</p> <p><b>KURT J. EGGERT</b></p> <p>Vogt Tube-Ice Authorized Dealer/ Sales &amp; Factory Certified Technicians Goldenrod Distributor; The Newest in Water Treatment Technology Air Conditioning &amp; Refrigeration</p> <p>Tel (718) 631-1503 Fax (718) 279-4686</p>	<p><b>ThermatiX Supply</b></p> <p>Plumbing, Heating, and Air Conditioning Supplies</p> <p><i>"We keep you supplied"</i></p>  <p>73 Broadway, Hicksville, NY 11801 toll free: (877) 390-9421 tel: (516) 513-0985 / 0986 fax: (516) 620-5942 email: sales@thermatixsupply.com</p>	 <p>49-70 31st STREET L.I.C., NY 11101 Phone: 718-937-9000 Fax: 718-392-1296 1-800-937-9000</p> 	 <p><b>WEDDINGS OUR SPECIALTY</b></p> <p><i>Special Attention Given To</i> Dinner Dances • Company Parties Cocktail Parties • Business Meetings Fund Raisers • Fashion Shows Engagement Parties • Christenings <i>Special Discounts Given to Senior Citizens</i></p> <p><i>Riccardo's by the bridge</i></p> <p>21-01 24th Avenue, Astoria, NY 11102 718 721-7777 ANTHONY M. CORBISIERO RICHARD F. CORBISIERO</p>
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# Metro NY Chapter RSES HVAC Training Courses

The Metropolitan New York Chapter RSES will offer the RSES Technical Institute Courses – 1 & 2 on Tuesday & Thursday evenings, starting January 11th in Long Island City, New York

**Dates:** For 11 weeks on Tuesdays & Thursdays

1/11 & 1/13	1/18 & 1/20	1/25 & 1/27
2/1 & 2/3	2/8 & 2/10	2/15 & 2/17
3/1 & 3/3	3/8 & 3/10	3/15 & 3/17
3/22 & 3/24	3/29 & 3/31	

**Time:** 6:00 PM – 10:00 PM

**Location:** Long Island City High School  
14-30 Broadway  
Long Island City, NY 11106

**Cost for Course 1 or 2:**

\$849.00 for RSES members  
\$949.00 non-RSES members (also includes 1 year membership in RSES)

**Includes:** Technical Institute 1 or 2 course manual, course tuition, Certificate of Completion after passing final exam, 72 hours toward NATE Recertification, for those eligible.

Register by December 15<sup>th</sup> by mailing or Emailing the form below

FOR ADDITIONAL INFORMATION VISIT:

<http://www.metronyrses.org>

or Email: [school@metronyrses.org](mailto:school@metronyrses.org)

or Phone Stan Hollander: 718 232-6679

by Mail: Metro NY Chapter RSES

c/o Stan Hollander, 1837 61<sup>st</sup> Street, Brooklyn, NY 11204

–Checks and Charges Welcome –

Please make checks payable to "Metro NY RSES"



## TRAINING COURSE OVERVIEWS

### TECHNICAL INSTITUTE COURSE 1:

This course begins with a comprehensive introduction to refrigeration and air conditioning. Topics covered include: basic physics, major system components including hermetic, semi-hermetic and open compressors, condensers, evaporators and refrigerant metering devices. It also covers the fundamental concepts of electricity and magnetism as they pertain to resistors, resistance, conductors, power supplies, circuit protection devices and transformers. Detailed information on lessons and content for Course 1 can be found at:

<http://metronyrses.org/ti1.html>

### TECHNICAL INSTITUTE COURSE 2:

Beginning with tools-of-the-trade this course covers refrigeration system accessories, desiccants and driers, defrosting methods, refrigeration system controls and piping. It also includes instruction on compressor replacement and system evacuation, electric motors in refrigeration systems, motor capacitors and protectors, thermostats, relays, contactors and starters, test equipment and troubleshooting, pressure and enthalpy diagrams, psychrometrics, heat transfer and estimating heat loads, residential air conditioning, humidification and a review of safety codes. Detailed information on lessons and content for Course 2 can be found at:

<http://metronyrses.org/ti2.html>

————— RETURN THIS SECTION WITH PAYMENT – BE SURE TO KEEP COPY FOR YOUR RECORDS —————

### REGISTRATION FORM

Name: \_\_\_\_\_ Company: \_\_\_\_\_  
Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Email: \_\_\_\_\_ Phone: \_\_\_\_\_  
Check / Credit Card Number: \_\_\_\_\_ Exp: \_\_\_\_\_  
Name on Credit Card: \_\_\_\_\_

Which course are you registering for? Technical Institute Course 1 or 2: Choose only ONE \_\_\_\_\_

Are you an RSES Member: If Yes, RSES Membership Number: \_\_\_\_\_

Please register by December 15<sup>th</sup> - space is limited.

Check or Credit Card Accepted for Payment

Make check to "Metro NY RSES" and mail w/ registration to: Metro NY RSES, c/o Stan Hollander, 1837 61<sup>st</sup> Street, Brooklyn, NY 11204

To register by Email submit this form with Credit Card information to [school@metronyrses.org](mailto:school@metronyrses.org)

**METROPOLITAN NEW YORK CHAPTER, RSES**

**For Information Call: Stan Hollander, CMS (718) 232-6679**

**Con Edison's Heating and Cooling "Rebates for Homes" Program**

New York utilities Con Edison (serving NYC and Westchester) and Central Hudson Gas & Electric (serving the Hudson Valley) are now offering rebates of up to \$600 to customers that install high efficiency central air conditioning systems. Systems must be installed by a participating contractor to qualify for the rebates. To become a participating contractor, you must be licensed and insured in New York State and attend a one-day training session. Participating contractors may also be eligible for an additional \$200 incentive, if they meet certain other criteria.

**This program, and other details, will be presented—in depth—at our November 10th meeting**

**Wednesday November 10th, 2010 at 7:30pm**

at

**RICCARDO'S**

**21-01 24th Avenue, Astoria NY 11102**

**Con Edison Heating and Cooling "Rebates for Homes" Program**

**Toby Simpson—Honeywell / Con Edison**

PLACE LABEL HERE

**EDUCATIONAL PROGRAM**  
**Wednesday November 10th, 2010**  
**at 7:30pm**  
**SEE DETAILS THIS PAGE**

