Modulex EXT Anti-Freeze Protection Requirements App. Guide

**TECHNICAL APPLICATION GUIDE**

**REQUIREMENTS FOR ALUMINUM HEAT EXCHANGERS**

**Modulex EXT Anti-Freeze Protection**

Modulating and Condensing Boilers

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<td>• MLX EXT 321</td>
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<td>• MLX EXT 481 / MLX EXT 450</td>
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<td>• MLX EXT 641 / MLX EXT 600</td>
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<td>• MLX EXT 802 / MLX EXT 800</td>
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<td>• MLX EXT 3060 / MLX EXT 3000</td>
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**Latest Update: 03/03/2017**

Technical Support
1-800-526-0288
(Mon-Fri, 8am-5pm EST)
www.aerco.com

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**ANTI-FREZE REQUIREMENTS FOR ALUMINUM HEAT EXCHANGERS**

Antifreeze HVAC glycol, where required, must be suitable for aluminum heat exchangers when used with the high efficiency AERCO Modulex boiler. This is a common requirement for all aluminum boilers and is practiced in North America and Europe. Traditional propylene glycol is not suitable for aluminum heat exchangers: the pH of the glycol at various dilutions is in excess of 9.5, whereas the pH must be lower than 8.0 (tap water is 6.5-8.0 pH) for use with aluminum.

There are several suitable aluminum safe propylene glycols available that can provide the same levels of burst, freeze and corrosion inhibiting protection as traditional propylene glycols. Listed on the next page are some options for the aluminum safe glycol:
ALUMINUM SAFE GLYCOL SUPPLIERS AND PRODUCTS:

AERCO, International
Blauvelt, NY10913
Phone: (800) 526-0288
http://www.aerco.com/Products/Accessories/Sentinal-Products/X500-Inhibited-Antifreeze
Glycol: X500 – Inhibited Antifreeze

Interstate Chemical Co.
Hermitage, PA
Phone: 724-981-3771; 724 981-8383 (Customer Service)
www.interstatechemical.com
Glycol: Intercool NFP-AA

Hercules Chemical Co.
Passaic, NJ 07055-9100
Phone: 800-221-9330; Fax: 800-333-3456
www.herchem.com
Glycol: 'cryo-tek – 100/Al'

The Noble Company
Grand Haven, MI 49417-0350
Phone: 800-878-5788; Fax: 800-272-1519
www.noblecompany.com
Glycol: NOBURST AL

Rhomar Water Management, Inc.
Springfield, MO
Phone: 1-800-543-5975, Fax: 417-862-6410
http://www.rhomarwater.com
Glycol: RhoGard Ultra

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CHANGE LOG:

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<tr>
<th>DATE</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>06/11/2013</td>
<td>Rev A: Initial release.</td>
<td>Curtis Harvey</td>
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<td>11/14/2015</td>
<td>Rev-B: Changed “Glycol: Intercool NFP” to “Glycol: Intercool NFP-AA” for Interstate Chemical reference.</td>
<td>Curtis Harvey</td>
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<tr>
<td>03/03/2017</td>
<td>Rev-C: Added new models and reformatted to new design standard.</td>
<td>Curtis Harvey</td>
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